



Agenda

**San Mateo Consolidated Fire Department
Board of Directors
Regular Meeting
Wednesday, January 13, 2021 – 4:00 P.M.**

Consistent with the Governor's Executive Order N-29-20 promoting social distancing, there will be no physical or in-person meeting location available to the public. Instead, the meeting will be accessible, and members of the public may participate and give public comment, via video teleconference by accessing the following website link:

**Video Teleconference Information:
Via Personal Zoom Web Link**

<https://zoom.us/j/94441666775?pwd=TG5lR3dsWVZQcWxLZ0M1b1hicXVFZz09>

1. OPENING

- 1.1. Call to Order & Determination of a Quorum
- 1.2. Pledge of Allegiance
- 1.3. Fire Board Member Catherine Mahanpour Recognition
- 1.4. Swearing in new Fire Board Member Richa Awasthi
- 1.5. Roll Call

2. AGENDA CHANGES

The Chair/Board Member may change the order of the Agenda or request discussion of a Consent Item. A member of the public may request discussion of a Consent Item by emailing the Acting Board Clerk Nicole Morales at nmorales@smcfire.org prior to Public Comment.

3. SPECIAL PRESENTATIONS

- [3.1](#) Retirement Resolution Honoring Battalion Chief Michael Towns.
- [3.2](#) Retirement Resolution Honoring Deputy Fire Marshal Vorisia Henderson

4. PUBLIC COMMENT

Public Comment is limited to 15 minutes, with a maximum of three (3) minutes per speaker. If you wish to address the hearing body, please notify the Department as soon as practical by emailing the Clerk of the Fire Board at nmorales@smcfire.org. If you are addressing the Board of Directors on a non-agenda item, the Board of Directors may, but is not required to, briefly respond to statements made or questions posed as allowed by the Brown Act (GC 54954.2). The Board of Directors may refer items to staff for attention, or have a matter placed on a future Board of Directors Meeting, for more comprehensive action or report.

5. CONSENT

- [5.1](#) Approval of Fire Board Meeting Minutes from December 9, 2020.

6. NEW BUSINESS

- [6.1](#) Adopt a resolution approving revised Compensation and Benefit Plan, Salary Adjustments and Classification Update.
- [6.2](#) Adopt a resolution authorizing a supplemental budget appropriation in the amount of \$178,709 for the grant awarded by the Gilead Corporate Giving Program and authorizing the Fire Chief to approve all purchase orders.
- [6.3](#) Adopt a resolution approving the purchase of three (3) new Pierce fire engines from Golden State Fire Apparatus and authorizing the Fire Chief to sign the purchase agreement.
- [6.4](#) Receive the 2020-21 Mid-Year Budget Update and adopt a resolution appropriating \$1.0 million in reimbursement revenues in the General Fund to account for the cost of overtime incurred in response to mutual aid reimbursement revenue.
- [6.5](#) Adopt a resolution approving State Mandated Fire Inspections Compliance Report

7. OLD BUSINESS

- [7.1](#) Adopt a resolution approving the trade-in of nine (9) LifePak (LP) 12 monitors and one (1) Lucas device for a value of \$29,950 from Stryker Corporation (Stryker).

8. REPORTS AND ANNOUNCEMENTS

- 8.1 Board Members and Department Management Staff will have an opportunity to make announcements.

- [8.1.1](#) Strategic Plan Update

- [8.1.2](#) Operations Update

- [8.1.3](#) CRR Update

- 8.1.4 Fire Chief Update (verbal only)

9. ADJOURNMENT

I, Nicole Morales, Acting Clerk of the San Mateo Consolidated Fire Department, hereby declare that the foregoing Agenda was posted in compliance with the Brown Act prior to the meeting date.

In compliance with the Americans with Disability Act, if you need special assistance to participate in this meeting, please contact the Acting Fire Board Clerk at (650) 522-7900 no less than 72 hours prior to the meeting. Notification in advance of the meeting will enable the Fire Department to make reasonable arrangements to ensure accessibility to this meeting.

Copies of documents distributed at the meeting are available in alternative formats upon request. Any writing or documents provided to a majority of the Board regarding any item on this Agenda will be made available for public inspection at the Department Fire Administration Office located at 1040 E. Hillsdale Blvd., Foster City, CA 94404, during normal business hours. In addition, most documents will be posted on the Department's website at <https://www.smcfire.org/fire-board-meeting-agendas>.

Resolution of Appreciation & Gratitude for Battalion Chief Michael Towns

WHEREAS, The Board of Directors of the San Mateo Consolidated Fire Department desires to commemorate and honor the career and accomplishments of its Battalion Chief, Michael Towns; and,

WHEREAS, Michael Towns began his fire service career as a Firefighter/Paramedic September 17, 1990 with the Foster City Fire Department; and,

WHEREAS, Michael Towns, while serving Foster City from January 1994 through June 1998, he also served as a Paid On-call Firefighter with East Diablo Fire Protection; and,

WHEREAS, Michael Towns was promoted with Foster City Fire Department to Fire Captain/Paramedic in March 2002; and,

WHEREAS, Michael Towns was promoted to Administration Battalion Chief on December 1, 2014 managed and oversaw Information Technology and Communications, backed up our Operations Battalion Chiefs, assisted in Budget Management and prepared and participated in several committees at Agency, City, County and State levels; and,

WHEREAS, Michael Towns headed our Policy & Procedure Committee and possesses exemplary computer knowledge, budgetary knowledge, and communicative skills; and,

WHEREAS, Michael Towns provided through the consolidation and beyond, project management skills that has been a great value to our organization; and,

WHEREAS, Michael Towns was selected for temporary assignment as Acting Deputy Fire Chief for the Community Risk Reduction Division on February 10, 2020; and,

WHEREAS, Michael Towns retired on December 30, 2020, after dedicating over 30 years to public safety.

NOW, THEREFORE, BE IT RESOLVED that the San Mateo Consolidated Fire Department Board of Directors hereby unanimously express, on behalf of the San Mateo Consolidated Fire Department and the residents and businesses of the Cities of Belmont, Foster City, and San Mateo which it serves, its deepest appreciations and gratitude to Battalion Chief Michael Towns for his dedicated and distinguished public service.

Dated: January 13, 2021


Joe Goethals, Fire Board President



Resolution of Appreciation & Gratitude for Deputy Fire Marshal Vorisia Henderson

WHEREAS, The Board of Directors of the San Mateo Consolidated Fire Department desires to commemorate and honor the career and accomplishments of its Deputy Fire Marshal Vorisia Henderson; and,

WHEREAS, Vorisia Henderson started her career in Public Safety with the South San Francisco Police Department in 1983 for a year and a half as Police Service Technician; and,

WHEREAS, Vorisia Henderson started as a Community Service Officer for the City of Porterville in 1985 and was promoted to Police Officer in 1987 through 1990; and,

WHEREAS, Vorisia Henderson served as a Reserve Officer with Exeter Police Department from May 1993 to June 1996 and May 1999 to Aug 2000; and,

WHEREAS, Vorisia Henderson worked at the Tulare County Fire Department between July 1991 and May 1992 as Communications Operator and promoted to Fire Inspector from May 1992 to April 2001 as a Fire Inspector and promoted to Senior Fire Inspector for Visalia Fire Department from April 2001 through July 2008; and,

WHEREAS, Vorisia Henderson worked as per diem on Ambulances in Tulare County for American Medical Response and Exeter Ambulance between 1993 and 1998 while working for the Tulare County Fire and as Reserve Officer with Exeter Police Department; and,

WHEREAS, Vorisia Henderson was in the South San Francisco Fire Department as a Safety Inspector III between July 2008 to September 2010; and,

WHEREAS, Vorisia Henderson began her service with San Mateo Fire Department in the Bureau as a per-diem Fire Inspector January 2013; and,

WHEREAS, Vorisia Henderson became a full-time permanent Fire Inspector July 7, 2013; and,

WHEREAS, Vorisia Henderson was appointed to the position of Deputy Fire Marshal July 1, 2015 with the San Mateo Fire Department assigned to initially serve Foster City under the new Fire Prevention Services Contract; and,

WHEREAS, Vorisia Henderson retired on December 30, 2020, after dedicating over 30 years to public safety.

NOW, THEREFORE, BE IT RESOLVED that the San Mateo Consolidated Fire Department Board of Directors hereby unanimously express, on behalf of the San Mateo Consolidated Fire Department and the residents and businesses of the Cities of Belmont, Foster City and San Mateo which it serves, its deepest appreciations and gratitude to Deputy Fire Marshal Vorisia Henderson for her dedicated and distinguished public service.

Dated: January 13, 2021



Joe Goethals, Fire Board President





Meeting Minutes

San Mateo Consolidated Fire Department Board of Directors Regular Meeting Wednesday, December 9th, 2020 – 4:00 P.M. Zoom Video Teleconference

1. OPENING

The meeting was called to order at 4:00 pm by Board Chair Goethals.

1.3. Fire Board Member Herb Perez Recognition

1.4. Swearing in new Fire Board Member Jon Froomin

1.5. Roll Call

Board Members Present: Goethals, Lieberman & Froomin

Board Members Absent: None

2. AGENDA CHANGES

Board Chair Goethals requested to move 1.4 “Swearing in new Fire Board Member Jon Froomin” to the beginning of the meeting. Board Member Lieberman approved.

3. PUBLIC COMMENT

None

4. CONSENT

Board Chair Goethals made a motion to approve the Consent calendar, which was seconded by Board Member Lieberman. The Acting Board Secretary took a roll call vote and the Consent calendar items were approved 3-0.

5. NEW BUSINESS

Item 5.1 - Accept report on Fund 37 Cost Recovery Plan.

During the October Fire Board meeting, Treasurer Rich Lee delivered a Comprehensive Annual Financial Report (CAFR) that daylighted concerns for Prevention’s Fund 37. Chief Iverson stated we’ve enacted a correction plan that will be delivered and presented by Fire Marshal Marshall (attached).

Fund 37 is based on cost recovery for the bureau of fire protection. In 2019, it was identified that fees were too low, by about 30%, but reserves were high. A conscious decision was made to reduce the reserves. With the COVID-19 pandemic, the decline was faster than originally anticipated and prior the pandemic, it was identified a fee study was needed which we will move forward with. Marshal Marshall shared a history of Fund 37 from 2016 to 2020 and fee increase scenarios ranging from no increase, 10%, 15%, and 30% increases. Knowing the fees were low by about 30%, a list of solutions for consideration were shared.

- Board Member Lieberman requested clarification regarding the distribution of the fees. Marshall stated the fees can be broken down in three categories. First is new construction, which tend to be significantly higher. These fees pay for inspector’s time on a project. The second is the

operational permit fees, which are lower. The third is “other/miscellaneous” type fees which are minimal cost. Board Member Lieberman asked if there are significant risk if reserves are drained too low. Treasurer Lee shared that the goal is to reach 25% and we’ll continue to monitor the trends and will act accordingly. CAO Corbett shared that with a fund that should be self-sustaining, keeping a quarter in reserve is a prudent policy for economic cycles, so we are running a risk by not keeping the fund at a 25% reserve, but in balance of where we are now, we are requesting a 15% recommendation as it allows us to step into an increase. If we got into a situation where the reserve becomes depleted, the department’s general fund could assist with Fund 37. The recommendation being made strikes the best balance at this time.

Board Member Froomin requested clarification regarding residential fees and what is the actual change of 15% versus 30% and what happens most often on a residential level. Marshal Marshall shared that the sprinkler fees would have the most impact but does not occur often. He also detailed various scenarios of increases on residential and commercial fees.

Report on Fund 37 Cost Recovery Plan was accepted by the Fire Board.

Item 5.2 - Adopt a resolution approving revision to the San Mateo Consolidated Fire Department’s Master Fee Schedule.

In addition to the report of Fund 37 Cost Recovery Plan, Fire Marshal Marshall provided an overview on the revisions to the Master Fee Schedule. Recommended updates include an increase of 15% for all non-development fees effective immediately as well as an increase of 15% for all development fees effective within 60 days.

Board Member Lieberman asked that a report be made once we are at \$300,000 in reserves. Marshal Marshall shared that we are monitoring the fund on a week-by-week basis which includes monthly meetings with Finance. Board Member Lieberman stated he approves of the 15% increase given that we are still in the midst of a pandemic and we understand there are financial issues but will be kept informed. Motion made by Board Member Lieberman to accept the 15% increase, which was seconded by Board Member Froomin with concern that we will continue to reduce the reserves. Board Chair Goethals stated we will monitor closely and will adjust again if needed. The Board Secretary took a roll call vote and the resolution was approved 3-0.

Item 5.3 - Adopt a resolution recognizing the American Federation of State, County and Municipal Employees (AFSCME) as the exclusive employee bargaining agent for employee classifications in the Department’s General and Management groups

A petition for recognition for general and management units came from AFSCME requesting to be recognized with labor representation. The Chief stated the resolution attached required direction for a vote for approval. Board Chair Goethals had no questions. Board Member Lieberman had no questions Motion made by Board Member Froomin to adopt the resolution of the board of directors to recognize the American Federation of State, County and Municipal Employees local 829 as the exclusive collective bargaining unit for select job classifications, which was seconded by Board Member Lieberman. The Board Secretary took a roll call vote and the resolution was approved 3-0.

Item 5.4 - Adopt a resolution authorizing a Gilead Grant application.

Chief Iverson provided an overview of the application for grant funds from the Gilead Corporate Giving Program in the amount of \$178,709. This grant application will be used to fund our training facility at the Foster City training site. This is something we’re continuing to work on with the City of Foster City to make this a regional opportunity for training facility for the Department, our allied agencies, and cities as well as the City of Foster City, College of San Mateo and the four agencies that make up our essential training consortium. This recommendation is to allow us to apply for this grant and if the board approves recommendation, we will be coming back to the board in January for approval to accept the

funds with budget appropriation. Board Member Froomin asked if this facility would become permanent as a regional facility or if it will go someplace else. The Chief stated that is correct, we were looking for a stopgap 2-5-year plan to have this location utilized for a training facility. We aspire to look for a different location that's a much larger footprint to allow for a regional facility for San Mateo County which is also working in parallel with this plan. This is a catalyst plan to jumpstart that regional training concept and give us something to be able to operate in while we work on that long-term vision and long-term plan. Board Member Lieberman expressed his gratitude and thanked staff for applying for such grants. Motion by Board Member Liberman, which was seconded by Board Member Froomin. The Board Secretary took a roll call vote and the resolution was approved 3-0.

Item 5.5 - Adopt a resolution authorizing the Fire Chief to approve all purchase orders associated with the Assistance to Firefighters PPE Grant.

Chief Iverson provided an overview regarding the successful AFG grant award. As we started to expend the funds, it was identified we needed the board to authorize the Fire Chief to approve all purchase orders, including individual purchases exceeding \$100,000 associated with this grant for personal protective equipment (PPE). This grant is for all 12 fire agencies within the County, and SMC Fire is the administrator of the grant and is facilitating all purchases for the grant. This recommendation will allow us to spend the money and purchase the PPE which will help us combat the COVID-19 pandemic. Motion by Board Member Liberman, which was seconded by Board Member Froomin. The Board Secretary took a roll call vote and the resolution was approved 3-0.

6. REPORTS & ANNOUNCEMENTS

Board Member Lieberman and Board Chair Goethals welcomed Council Member Froomin.

Fire Chief Update

Chief Iverson provided an updated on the department:

- The County's transition to purple status and high rate of infection has affected our personnel. We've had five members test positive for COVID-19 and through contract tracing we've tested 25 additional members. We are working with that tracing and making sure that this is under control and does not continue to spread. Our members are recovering and there have not been any significant impacts to our operations as far as being able to deploy resources.
- We are looking forward to taking delivery two Type-6 fire engines from OES which will be here any day.
- Deputy Fire Chief Mike Towns retiring effective December 30th. Chief Towns has been with the Foster City fire Department and San Mateo Consolidated a combined total of over 30 years. Chief Towns will be missed in his retirement and we want to acknowledge his service dedication and commitment to the organization. We will officially recognize him at our next board meeting in January.
- OES Manager Jenelle Masterson will be relocating out of state later this month. This is a bittersweet ending for us as she has been a well valued member of organization over the last 5-plus years. Other staff are being trained up to help with this transition. We wish her well on her future endeavors. All Board members thanked her for her service. Jenelle expressed her gratitude and stated the team will do an excellent job of carrying forward the mission and will continue to keep the community resilient. Board Chair Goethals shared that Jenelle provided a training in San Mateo for how to deal with the crisis early on this year, and that we would have had a hard time without that training, so we appreciate it very much.
- Lastly, Chief Iverson recognized and welcomed new Board Member Jon Froomin to SMC Fire.

7. ADJOURNMENT

The Board Secretary reminded the participants that next meeting is scheduled for January 13th at 4:00pm and the meeting was adjourned at 4:53pm.



STAFF REPORT

To: San Mateo Consolidated Fire Department Board of Directors

From: Ray Iverson, Fire Chief

Meeting Date: January 13, 2021

Subject: Revised Compensation and Benefit Plan, Classification and Compensation Updates

RECOMMENDATION

Adopt a resolution to approve the following:

- Establish salary ranges for the classifications of Fleet and Facilities Technician and Division Chief;
- Revise the Deputy Chief salary range;
- Revise the Deputy Chief Compensation & Benefits Plan;
- Reallocate a vacant Deputy Chief position to Division Chief and an Administrative Assistant position to Fleet and Facilities Technician in alignment with the adopted reorganization plan as vacancies occur;
- Adjust the salary ranges for the classifications of Emergency Services Manager and Emergency Medical Services (EMS) Clinical Education Specialist.

BACKGROUND

On October 14, 2020, the San Mateo Consolidated (SMC) Fire Department Board adopted resolution RES 2020-035 approving a reorganization plan with the objectives of maximizing organizational effectiveness and efficiencies, providing career development opportunities, and reducing overhead and redundancies. Included in that reorganization plan was creation of new job classifications of Fleet and Facilities Technician and Division Chief. The reorganization plan further included elimination of one Deputy Chief position to coincide with an anticipated retirement. Components of this plan are in progress with full implementation expected to take up to 24 months.

IMPLEMENTATION

The newly created Fleet and Facilities Technician salary will be \$6,708.63- \$7,998.85 per month. The salary range for the newly created Division Chief will be set at 10% above Battalion Chief, \$16,953.13- \$18,737.67 per month. In order to maintain a separation of at least 10% between the Division Chief and the Deputy Chief, the Deputy Chief salary range will be increased by 8%, to \$18,648.44 - \$20,611.44 per month. We are not proposing an increase to the Fire Chief salary at this time. The salary of the Fire Chief is 8% above the salary of the Deputy Chief.

The EMS Clinical Education Specialist salary had not been surveyed since prior to the inception of SMC Fire Department. The Emergency Services Manager salary was re-set to align with the EMS Clinical Education Specialist in July 2019. We recently surveyed other agencies that have similar classifications

and recommend the salary range for these two highly skilled positions increase by 12%, to \$9,508.76 - \$11,343.71 per month.

The reallocation of one Administrative Assistant to Fleet and Facilities Technician and one Deputy Chief position to Division Chief can be effective immediately based on an existing vacancy and a recent retirement. The Deputy Chief Compensation & Benefits Plan is being revised to include references to the newly created Division Chief and to make minor housekeeping changes.

FISCAL IMPACT

Once the reorganization plan is fully implemented, it will result in approximately \$157,168 in an annual savings.

	CURRENT FTE	CURRENT ANNUAL COST *	PROPOSED FTE	PROPOSED ANNUAL COST *	FTE DIFFERENCE	ANNUAL COST DIFFERENCE *
FUND 13						
DEPUTY FIRE CHIEF	1.25	401,067	1.00	347,825	(0.25)	(53,242)
DIVISION CHIEF	-	-	2.25	746,708	2.25	746,708
FIRE MARSHAL	-	-	-	-	-	-
BATTALION CHIEF/40	4.00	1,283,864	2.00	638,640	(2.00)	(645,224)
ADMINISTRATIVE ASSISTANT	1.00	98,558	-	-	(1.00)	(98,558)
FLEET & FACILITIES TECHNICIAN	-	-	1.00	128,377	1.00	128,377
	6.25	1,783,490	6.25	1,861,551	-	78,061
FUND 37						
DEPUTY FIRE CHIEF	0.75	193,262	-	-	(0.75)	(193,262)
DIVISION CHIEF	-	-	0.75	248,903	0.75	248,903
FIRE MARSHAL	1.00	290,869	-	-	(1.00)	(290,869)
BATTALION CHIEF/40	-	-	-	-	-	-
ADMINISTRATIVE ASSISTANT	-	-	-	-	-	-
FLEET & FACILITIES TECHNICIAN	-	-	-	-	-	-
	1.75	484,131	0.75	248,903	(1.00)	(235,228)
NET IMPACT	8.00	2,267,621	7.00	2,110,453	(1.00)	(157,168)

*Fully Loaded Costs

The EMS Clinical Education Specialist salary revision will result in an annual increase of \$14,000 and the Emergency Services Manager salary revision will result in an annual increase of \$12,500. The salary revisions will have a net impact of \$26,500 to the General Fund.

ATTACHMENTS

- A. Resolution
- B. Deputy and Division Chief Compensation & Benefits Plan

RESOLUTION NO.

**A RESOLUTION OF THE BOARD OF DIRECTORS OF THE SAN MATEO
CONSOLIDATED FIRE DEPARTMENT APPROVING REVISIONS TO
COMPENSATION AND BENEFIT PLAN, CLASSIFICATION AND COMPENSATION
UPDATES**

WHEREAS, on October 14, 2020, the San Mateo Consolidated Fire Department (SMC Fire) Board of Directors adopted resolution RES 2020-035 approving a Reorganization Plan with the objectives of maximizing organization effectiveness and efficiencies, providing career development opportunities, and reducing overhead and redundancies; and

WHEREAS, included in that Reorganization Plan was creation of new job classifications of Fleet and Facilities Technician and Division Chief; and

WHEREAS, other agencies were surveyed with similar classifications and recommend the EMS Clinical Education Specialist and the Emergency Services Manager salaries increase by 12%; and

WHEREAS, the Deputy Chief Compensation & Benefits Plan is being revised to include references to the newly created Division Chief and to make minor housekeeping changes; and

NOW, THEREFORE, the Board of Directors of the San Mateo Consolidated Fire Department resolves as follows:

1. Authorize revised Compensation and Benefit Plan, Classification and Compensation Updates:
 - a. Establish salary ranges for the classifications of Fleet and Facilities Technician and Division Chief; and
 - b. Revise the Deputy Chief salary range; and
 - c. Revise the Deputy Chief Compensation & Benefits Plan; and
 - d. Reallocate a vacant Deputy Chief position to Division Chief and an Administrative Assistant position to Fleet and Facilities Technician in alignment with the adopted reorganization plan as vacancies occur; and
 - e. Adjust the salary ranges for the classifications of Emergency Services Manager and Emergency Medical Services (EMS) Clinical Education Specialist.

PASSED AND ADOPTED as a resolution of the Board of Directors of the San Mateo Consolidated Fire Department at the regular meeting held on the 13th day of January, 2021, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

Acting Board Secretary

Board President

APPROVED AS TO FORM:

William D. Ross, General Counsel

**SAN MATEO CONSOLIDATE FIRE DEPARTMENT
RESOLUTION NO. _____(20192020)**

**A RESOLUTION OF THE BOARD OF DIRECTORS OF THE
SAN MATEO CONSOLIDATED (SMC) FIRE DEPARTMENT
APPROVING REVISIONS TO THE DEPUTY FIRE CHIEFS
COMPENSATION & BENEFITS PLAN TO INCLUDE THE
ADDITION OF DIVISION CHIEF JOB CLASSIFICATION**

WHEREAS, the Deputy Fire Chiefs are not represented by a bargaining group, and compensation is determined by the Board of Directors; and

WHEREAS, a revised-consolidated-compensation and benefits plan specific to for the Deputy Fire Chiefs is being set forth in this resolution was approved by resolution at the January 9, 2019 Fire Board meeting; and

WHEREAS, this compensation and benefits plan is the base document for both salary and benefits as well as leaves, seniority and other provisions of employment provided by the department; and,

WHEREAS, as part of the department's reorganization approved by the Board of Directors at the October 14, 2020 board meeting, this compensation and benefits plan must be revised to incorporate the new Division Chief job classification;classification: and,

WHEREAS, staff has also identified several housekeeping and grammatical edits necessary within the original plan document; and,

WHEREAS, these revisions is is are projected to result in a salary savings of approximately within the amount budgeted for salary increases for Deputy Fire Chiefs \$000,000 in the fiscal year 2018/2019 FY 20-21 adopted budget;:

NOW, THEREFORE, the ~~board~~Board of ~~directors~~Directors of the ~~san-San mateo-Mateo consolidated-Consolidated fire-Fire department~~Department, resolves ~~that~~as follows:

1. The Deputy Fire Chief Compensation Plan are approved as follows, and salaries as set forth in Exhibit A attached hereto. Approve revisions to the Deputy Fire Chiefs Compensation and Benefits Plan.;

SALARY

Successful employee performance is a key factor in determining compensation.

A three-step salary range has been established for the Deputy Fire Chief classification and the -Division Chief classification. Salary ranges are listed on the salary schedule. The current salary ranges are listed in Exhibit A. Salary placement is based upon performance review and experience.

TEMPORARY UPGRADE PAY

Deputy Fire Chief -Comp and Benefit
Plan

In the event the Fire Chief determines that it is necessary to assign a Deputy Fire Chief [or Division Chief](#) to perform all of the duties of a higher paid classification for two or more consecutive workweeks, he/she shall receive payment for the higher classification for the entire duration of the assignment. The Fire Chief shall set the salary within the established salary range. Except with the approval of the Fire Chief, a temporary upgrade assignment shall not continue for longer than one year.

When an employee performs a significant portion but not all of the duties of a higher paid classification, the employee may petition the Fire Chief for a differential in pay of up to 10%, to be determined by duties assigned for this work out of class.

EDUCATIONAL INCENTIVE PAY

A Deputy Fire Chief [or Division Chief](#) in possession of a BA Degree shall receive one hundred twenty dollars (\$120) per pay period. To be eligible for educational incentive pay, the Deputy Fire Chief [or Division Chief](#) must also complete a minimum of 24 hours of approved Level II or Level III California Fire Service Training and Educational System training or other equivalent formal training each year.

Equivalent formal training is defined as training pre-approved by the Fire Chief. Training must be designed to enhance the management skills of the Deputy Fire Chief or Division Chief. The failure of an individual to obtain the required training during a fiscal year shall then terminate educational incentive payment for that person in the following fiscal year. If the employee is unable to complete the training within the fiscal year due to situations clearly beyond his/her control, the Fire Chief may waive the requirement.

PERSONAL TRAINING

Deputy Fire Chiefs and Division Chiefs are encouraged to attend instructional programs, ~~conferences~~conferences, and seminars as available in the Department's budget. If the cost to attend exceeds \$2,000, attendance must be pre-approved by the Fire Chief.

LEAVE ACCRUALS

Employees shall accrue vacation leave, sick ~~leave~~leave, and holiday leave on a pro-rata basis in proportion to regular hours on the payroll. Credit shall not be received for time off without pay. Vacation leave, sick leave, and holiday credits shall accrue from date of appointment

Absences of less than four hours shall not be deducted from leave balances. Employees are expected to work a minimum of 40 hours per week, with schedules that may vary from day to day based on workplace needs.

HOLIDAYS

The holidays to be observed are as follows:

- New Year's Day, January 1
- Martin Luther King, Jr. Day, January 15 or its legal substitute (third Monday in January)
- President's Day, February 22 or its legal substitute (third Monday in February)
- Memorial Day, May 31 or its legal substitute (last Monday in May)
- Independence Day, July 4
- Labor Day, first Monday in September
- Veteran's Day, November 11
- Thanksgiving Day, fourth Thursday in November
- Day after Thanksgiving, fourth Friday in November
- Christmas Eve, December 24
- Christmas Day, December 25
- New Year's Eve, December 31
- Every day approved by the Board of Directors as a public holiday, public fast, or a day of mourning
- ~~One (1) floating holidays to be taken on working days mutually agreeable to the employee and the department.~~

If a holiday falls on Sunday, the following Monday shall be observed. If a holiday falls on Saturday, the preceding Friday shall be observed as the holiday. With regard to the holidays on Christmas Eve (December 24) and New Year's Eve (December 31), should either date fall on a Saturday or Sunday, the preceding Friday shall be observed. In the case where Christmas Day and/or New Year's Day are observed on Friday, the corresponding Eve holiday

shall be observed on Thursday.

If a holiday falls on ~~one's~~ an employee's regularly scheduled day off, holiday time of eight (8) hours shall be granted, regardless of the employee's regularly scheduled hours for that day. Depending on their work schedule, employee may need to utilize hours of discretionary leave to make up the difference between eight (8) hours and their regularly scheduled hours for that day.

Employees required to work on an observed holiday shall be granted holiday leave or paid at the employee's established rate of pay. The employee shall be allowed to select the type of compensation granted

In addition to the above listed holidays, after completing one (1) year of continuous merit full time service, employees shall earn one (1) Floating Holiday each year to be used at any time convenient to the Department and the employee. Once employee has designated the date they choose to use this floating holiday, employee will notify HR and Payroll staff by email. Floating Holidays will only be usable as time off and may not be paid out upon separation from the Department. Floating Holidays must be used within one year of being earned. -

In the event holidays fall while an employee is on vacation leave, such holidays shall not be charged as vacation leave.

~~Realizing that not all Deputy Fire Chiefs are able to take holidays when they fall, as determined by the Fire Chief, such managers shall be compensated for thirteen (13) holidays a year by being placed on a bi-weekly holiday factor. Holiday leave shall never accumulate to more than eighty (80) hours.~~

VACATION

Vacations are essential to the employee's welfare and they are granted by the Department to allow employees relaxation and rest from their duties. It is the policy of the Department not to allow the excess accumulation of vacation leave. All full-time employees shall be entitled to vacation leave with pay as provided below after completion of continuous service with the Department. The time at which an employee may take vacation shall take into consideration the needs of the Department.

Employees shall accrue a vacation allowance at the rate of 20 days per year for the first 12 years of service, 22.5 days per year for 13 through 23 years of service, and 25 days per year at the beginning of 24 years of service. The above allowances shall be pro-rated for employees beginning employment or leaving employment with the Department during a biweekly pay period.

The Fire Chief can provide new Deputy Fire Chiefs and Division Chiefs with a balance of up to 80 hours of vacation leave upon hire.

Deputy Fire Chiefs and Division Chiefs may not accrue more than two times (2x) their vacation leave.

~~Employees who leave employment shall be paid the straight-time salary equivalent in a lump sum for all accrued vacation leave earned. Such compensation for prorated vacation of separated employees shall be paid by adding or deducting from his or her final paycheck.~~

VACATION SELL BACK

An employee may make an irrevocable election to sell back to the eighty (80) hours of accumulated vacation at the employee's established rate of pay per calendar year. At the time of election, the employee must already have taken a minimum of two (2) weeks' vacation in the preceding twelve (12) months.

Requests must be received by Payroll no later than December 31 for the following year elections. No employee can elect to sell back more than their annual vacation accrual. An employee must have the designated number of accumulated vacation available for sell back at the designated time frame. Employees may receive a cash payment for up to 40 hours of accumulated vacation during June of each year and the employee may receive a cash payment for up to 40 hours of accumulated vacation during November of each year for a maximum of 80 hours.

SICK LEAVE

The purpose of sick leave is to continue the compensation of employees who must remain off their jobs because of illness or disability. Such sick leave is a privilege which employees can exercise in the event of his/her bona fide illness or disability or in the event their presence away from work is essential because of illness, death or disability of their immediate family.

For full-time employees, leave shall be accrued at the rate of 3.7 hours for each biweekly pay period (12 days per year). Unused sick leave shall be accumulated. Any employee who is on paid leave shall continue to earn sick leave. An employee who is on leave without pay shall not accrue sick leave. Sick leave shall accrue during an absence due to a work-related disability.

The Fire Chief can provide new Deputy Fire Chiefs or Division Chiefs -with up to 80 hours of sick leave upon hire.

The Fire Chief is responsible for determining that only bona fide personal or family sick leave is taken, consistent with standards established by the Department. This may include the submission of a doctor's certificate with prior notice.

Protected Sick Leave

Protected sick leave may be taken and if taken, shall be charged to sick leave, vacation, holiday, or executive leave for the following reasons:

- The diagnosis, care, or treatment of an existing health condition of, or preventative care for, an employee.
- The diagnosis, care or treatment of an existing health condition of, or preventative care for, an employee's family member.
- An employee who is a victim of domestic violence, sexual assault, or stalking.

Employee family member means parent, spouse, domestic partner, son, daughter, domestic partner's child, sibling, stepchildren, mother-in-law, father-in-law, grandparents and grandchildren.

Not more than six (6) days of such protected sick leave shall be granted in any one (1) calendar year. However, if extenuating circumstances exist in the opinion of the Fire Chief, a reasonable extension of the six (6) day limit may be granted. Any additional leave so granted shall be charged against the worker's sick leave accumulation.

Family Care Leave

In accordance with the Federal Family and Medical Leave Act and the California Family Rights Act, the Department will grant job protected unpaid family and medical leave to eligible workers for up to 12 weeks per rolling 12-month period.

Bereavement

In the event of a death in the immediate family, employees may take up to three (3) paid days (two (2) shifts for 56-hour employees). Bereavement Leave shall be tracked separately from Protected Sick Leave. In this context, immediate family shall be defined as: spouse, domestic partner, child, foster child who resided with the employee at the time of his/her death, stepchild, mother, father, stepmother, stepfather, mother-in-law, father-in-law, brother, stepbrother, sister,

stepsister, brother-in-law, sister-in-law, grandmother, grandfather, spouse's grandmother, spouse's grandfather, son-in-law, daughter-in-law or grandchildren.

INDUSTRIAL DISABILITY LEAVE

~~Any permanent or probationary employee covered by this document who has suffered any disability arising out of and in the course of his/her employment, as defined by the Workers' Compensation Laws of the State of California shall be entitled to temporary disability benefits in accordance with Labor Code 4850, along with other benefits as provided by the California Labor Code. The purpose of this Section is to continue the compensation of employees who must remain off their jobs as a result of disability occasioned or injury received as a result of the discharge of their duties as employees of the Department. The Fire Chief is responsible for determining that only bona fide disability leave is taken.~~

~~For each disability, employees shall be allowed disability leave up to and including sixty (60) working days. Such disability leave shall be at full pay, less the amount paid by Workers' Compensation. Disability in excess of that provided in this Section shall be compensated for only under the provisions of the Workers' Compensation Act of the State of California~~

~~If the sixty (60) working days is exhausted, additional time off may be charged to sick leave with the following exception; employees shall not be charged sick leave for that portion of their salary for which temporary disability payments are received under the State Worker's Compensation Law.~~

Additional compensation may be awarded by Resolution of the Board of Directors to employees disabled or injured in line of duty, if recommended by the Fire Chief.

JURY LEAVE

Employees required to report for jury duty shall be granted a leave of absence with pay from their assigned duties until released by the court, provided the employee notifies their Fire Chief immediately of the notice of jury duty.

MILITARY LEAVE

Military leave shall be granted by the Department in accordance with the provisions of State and Federal laws.

LEAVE OF ABSENCE WITHOUT PAY

Regardless of the combination of paid and unpaid leave used, a leave of absence shall not exceed twelve (12) months in duration, unless otherwise required by law.

Leaves of absence may be granted in cases of illness; in cases of personal emergencies, including childbirth; for education and training; or when such absences would not be contrary to the best interests of the Department. Any request for leave of absence shall be made in writing for review and approval by the Fire Chief.

LONG TERM DISABILITY INSURANCE

~~The Department shall provide long term disability insurance providing for a sixty (60) day~~

~~elimination period, subject to prior exhaustion of accrued sick leave or other applicable benefits, and payment of a monthly benefit equivalent to sixty-six and two-thirds percent (66⅔%) of full basic monthly salary less any deductible benefits.~~

RETIREMENT

Retirement benefits shall be compensated for under applicable legislation pertaining to the California Public Employees’ Retirement System (CalPERS).

Classic members, as defined in Section 7522.05 of the Government Code, with the 3% @ 50 Formula or 3% @ 55 Formula pay 50% of the total normal cost rate. The contributions toward employer rate will be pre-tax under 414(h)2. All local safety members hired on or after January 12, 2019 and new members of PERS hired on or after January 1, 2013 with the 2.7% @ 57 Formula pay 50% of the normal cost rate. The contributions toward employer rate will be pre-tax under 414(h)2.

EMPLOYEE RETIREMENT CONTRIBUTIONS

- Classic Employee will pay the entire employee’s share (9.0%)
- Effective January 13, 2019, employees will pay 4.0% of the Employer share for a combined total of 13.0%.
- Effective July 14, 2019, employees will pay 4.5% of the Employer share for a combined total of 13.5%.

Effective July 12, 2020 all employees will pay 50% of the normal cost/Classic employees’ maximum payment will be 14.0% (EE share and ER share).

FLEXIBLE BENEFITS PLAN

The Department shall contribute up to the amounts listed below (inclusive of the \$160 maximum Department contribution or CalPERS MEC whichever is greater, towards group medical insurance or No Plan) per month towards the flexible benefit plan.

	Effective January 2019	Effective January 2020	Effective January 2021	Effective January 2022
No Plan	\$380	\$380	\$380	\$380
Employee Only	\$827	\$876	\$929	\$985
Employee +1	\$1,654	\$1,753	\$1,858	\$1,969
Family	\$2,152	\$2,281	\$2,418	\$2,563

- No Plan Eligibility - If an employee is eligible for alternative group medical insurance through a spouse or domestic partner’s employer-sponsored medical plan, or through a parent’s insurance, the employee may waive the Department’s medical insurance coverage and select such alternate plan. Proof of such alternate coverage is required prior to waiving coverage through the Department plan. If an

- employee selects the No Plan option the Department's contribution shall be deposited to the employees deferred compensation account.
- Minimum contribution to be set at \$160 per month or the PERS MEC, whichever is greater. (this establishes the minimum retiree medical contribution at \$160 month)
 - The maximum monthly out of pocket premium payment of an employee who selects Kaiser will not exceed 10% of the monthly premium for Kaiser at the level selected (employee only, employee + 1 or Family).
 - If Local 2400 reopens the section regarding medical contributions, the Fire Chief or designee will meet with the Deputy Chiefs [and Division Chiefs](#) to inform them of any modifications to the Local 2400 Flexible Benefit Department contributions and discuss the impacts of the modifications.
 - If an employee selects a plan, other than Kaiser whose monthly premium exceeds the amounts listed above, the employee will be responsible for payment of the month premium that exceeds the amounts listed above through pay roll deduction.
 - If the Kaiser monthly premium exceeds the negotiated flat dollar monthly contribution above, and an employee selects a plan whose monthly premium is less than the Kaiser premium, then the employee's contribution shall be 10% of the selected plan's monthly premium.

Employees who opt out of health plan coverage through the Department must annually provide proof of insurance through a spouse, parent or state-registered domestic partner in order to be eligible for the "no plan" contribution amount.

LIFE INSURANCE

The Department shall provide \$200,000 life insurance and \$200,000 accidental death and dismemberment insurance without regard to membership in any health plan.

DENTAL INSURANCE

The Department shall provide for one hundred percent (100%) coverage on routine maintenance and eighty percent (80%) on minor and major dental work with a maximum payment of three thousand dollars (\$3,000) per eligible employee and covered dependent per year. A lifetime orthodontic benefit of three thousand five hundred dollars (\$3,500) shall be provided to eligible employee and dependents. The Department may self-insure to provide equal or better benefits.

VISION INSURANCE

Vision Benefits include an annual exam, lenses, and frames with an annual deductible of twenty-five dollars (\$25).

UNIFORM ALLOWANCE

The Deputy Fire Chief [and Division Chief](#) shall receive \$38.46 per pay period.

DAMAGE REIMBURSEMENT

Deputy Fire Chiefs and Division Chiefs shall be reimbursed the reasonable value of any personal equipment or clothing damaged or destroyed in discharging duties under stress or strain where normal caution cannot be exercised.

DEFERRED COMPENSATION AND RETIREMENT HEALTH SAVINGS ACCOUNT (RHSA)

Employees are eligible to participate in the Department-offered 457 deferred compensation plans. All contributions to deferred compensation plans and retirement health savings accounts are contingent upon compliance with state and federal rules and regulations.

~~On~~All employees in the Unit will be enrolled in the RHS Account. The monthly contributions shall be by all employees and the Department shall make contributions on behalf of all employees.

Months of Service	Department Contribution	Employee Contribution
1 – 72	2.0%	1.0%
73 – 131	2.0%	1.0%
132 – 191	2.5%	2.0%
192 – 239	3.0%	2.0%
240 – 299	3.5%	2.5%
300+	4.0%	2.5%

Months of Service is defined as continuous service with the Department only. It does not include service time with City of San Mateo, Belmont Fire Protection District or City of Foster City/Estero Municipal Improvement District.

Separation pay shall be contributed to this account in accordance with the Plan design. Any employee separating within the term of this contract will have all of his/her eligible accrued leave balances paid out into his/her RHS account. The administration costs of maintaining this RHS account will be borne by the Department.

PROFESSIONAL DUES

Upon request, the Department shall pay a reasonable amount for membership dues for one professional organization for each employee.

PERFORMANCE EVALUATIONS

Employee performance goals are set early in the evaluation year. A mid-year review of the employee’s progress towards completing the performance goals should occur. A written evaluation shall be completed by the supervisor and reviewed with the employee at the end of the evaluation year.

PROBATIONARY PERIOD

The probationary period is the length of time required for an employee to become proficient in his/her position, and for the Fire Chief to adequately judge the proficiency. The standard probationary period shall be twelve months, but the Fire Chief may shorten or lengthen it by up to six months depending on the proven proficiency of the probationer.

CONTINUOUS SERVICE

Continuous service shall mean service since original appointment with the Department, excluding any time prior to a break in service. One (1) year of completed continuous service shall include, but not be limited to, all time while the employee is on sick leave and/or vacation leave. Neither military leave nor leave of absence without pay of less than two (2) pay periods shall constitute an interruption in computing continuous service. However, leaves of absence without pay of over one month shall not be included when computing length of continuous service for vacation purposes.

EXECUTIVE LEAVE

~~Battalion Chiefs~~ Deputy Chiefs and Division Chiefs shall be credited with executive leave on a pay period basis (the actual accrual rate shall be 3.7 hours per pay period).

Executive leave shall be taken at the discretion of the ~~e~~Employee contingent upon approval by the Fire Chief or his/her designee.

An employee shall not accumulate more than 80 hours of executive leave.

Employees may make an irrevocable election to receive cash payment for up to eighty (80) hours of accrued executive leave each year.

Requests must be received by Payroll no later than December 31 for the following year elections. No employee can elect to sell back more than eighty (80) hours of executive leave. An employee must have the designated number of accumulated executive leave hours available for sell back at the designated time frame. Employees may receive a cash payment for up to 40 hours of accumulated executive leave during June of each year and the employee may receive a cash payment for up to 40 hours of accumulated executive leave vacation during November of each year for a maximum of 80 hours.

REEMPLOYMENT

Any permanent employee, separated from a position through resignation and without fault of delinquency on their part, may be reemployed to the former position, or to another position in the same class, within two (2) years, provided there is an authorized vacancy and the employee meets the requirements for employment. Reemployed employees shall be subject to a probationary period, and may receive credit for former employment in the determination of the amount of vacation allowance, sick leave, other benefits and their salary step.

DISCIPLINARY ACTION

Employees who are safety personnel covered by the Firefighter Bill of Rights (FBOR) shall continue to have those rights afforded them.

Provisions regarding discipline and discharge are found in the Department Personnel Rules.

Exhibit A: Salary and Classifications

~~Effective September 9, 2018, the Deputy Fire Chiefs shall receive monthly salaries for their respective positions at a step within the monthly ranges indicated below.~~

JOB-CODE	TITLE	E=Exempt NE=Non-Ex	STEPS	HOURLY	BI-WEEKLY	MONTHLY	ANNUAL
2410	DEPUTY FIRE CHIEF	E	STEP 1	96.25	7,699.62	16,682.54	200,190.12
			STEP 2	101.06	8,084.60	17,516.63	210,199.56
			STEP 3	106.11	8,488.83	18,392.47	220,709.64

~~Salary is based on a 40-hour work week.~~ Salary ranges for each classification are listed in the Merit Salary Schedule.

Classifications covered by this Plan:

Deputy Fire Chief

Division Chief

**SAN MATEO CONSOLIDATE FIRE DEPARTMENT
 RESOLUTION NO. ____ (2018)
 APPROVING DEPUTY FIRE ~~CHIEFS~~ CHIEFS AND DIVISION
CHIEFS COMPENSATION PLAN**

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STAFF REPORT

To: San Mateo Consolidated Fire Department Board of Directors

From: Ray Iverson, Fire Chief

Meeting Date: January 13, 2021

Subject: Gilead Grant Budget Appropriation and Purchase Authorization

RECOMMENDATION

Adopt a resolution authorizing a supplemental budget appropriation in the amount of \$178,709 for the grant awarded by the Gilead Corporate Giving Program and authorizing the Fire Chief to approve all purchase orders, including individual purchases that may exceed \$100,000.

BACKGROUND

The Gilead Corporate Giving Program offers grants to organizations that hold important social service roles and have areas of unmet need. Some of the efforts previously funded by Gilead include local programs, social services, and community initiatives. San Mateo Consolidated Fire Department's Training Division has articulated a need for a temporary training facility while our fire service partners throughout San Mateo County develop a plan for a regional training facility. Staff is considering all sources of funding including the Central San Mateo County Training Division, the College of San Mateo Fire Technology Program, and various grant programs.

ANALYSIS

SMC Fire staff had a preliminary discussion with the Gilead Corporate Giving Program staff on November 4, 2020. During the discussion, Gilead staff showed enthusiasm for the training facility project and encouraged a timely grant application prior to the Thanksgiving Holiday. On November 19, 2020, SMC Fire staff applied for funding through Gilead's Corporate Giving Program in the amount of \$178,709. On December 9, 2020, the Fire Board approved Resolution RES-2020-040 in support of staff's application for grant funds, which have been awarded.

FISCAL IMPACT

The initial setup of this innovative training facility and the first year of ongoing operations and maintenance costs are estimated as follows:

- Site Preparation Cost: \$68,000
- Structure, Installation, First Year Lease, and Furnishings Cost: \$42,125
- Utilities, Communications, and Security Cost: \$53,510
- Permits/Insurance Cost: \$15,074

Total Start-up Cost: \$178,709

The Gilead Corporate Giving Program does not require any matching funds, and the mere submission of the application does not obligate SMC Fire to commit funds or complete the project within any specified timeline.

ATTACHMENTS

A. Resolution

RESOLUTION NO.

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE SAN MATEO CONSOLIDATED FIRE DEPARTMENT AUTHORIZING A SUPPLEMENTAL BUDGET APPROPRIATION IN THE AMOUNT OF \$178,709 FOR THE GRANT AWARDED BY THE GILEAD CORPORATE GIVING PROGRAM AND AUTHORIZING THE FIRE CHIEF TO APPROVE ALL PURCHASE ORDERS, INCLUDING INDIVIDUAL PURCHASES THAT MAY EXCEED \$100,000

WHEREAS, the Gilead Corporate Giving Program offers grants to organizations that hold important social service roles and have areas of unmet need; and,

WHEREAS, on November 19, 2020, SMC Fire staff applied for funding through Gilead's Corporate Giving Program in the amount of \$178,709 for the initial setup of a temporary training facility and the first year of ongoing operations and maintenance costs; and,

WHEREAS, WHEREAS, on December 9, 2020, the Fire Board approved Resolution RES-2020-040 in support of staff's application for grant funds

WHEREAS, Gilead has notified SMC Fire that they have been awarded the grant funds; and

WHEREAS, the Gilead Sciences Corporate Giving Program does not require any matching funds, and the submission of the application does not obligate SMC Fire to commit funds or complete the project within any specified timeline; and,

NOW, THEREFORE, the Board of Directors of the San Mateo Consolidated Fire Department resolves as follows:

1. Authorize a supplemental budget appropriation in the amount of \$178,709 for the grant awarded by the Gilead Corporate Giving Program and authorizing the Fire Chief to approve all purchase orders, including individual purchases that may exceed \$100,000 and to take such other actions necessary for the receipt and use of the grant funds

PASSED AND ADOPTED as a resolution of the Board of Directors of the San Mateo Consolidated Fire Department at the regular meeting held on the 13th day of January, 2021, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

Acting Board Secretary

Board President

APPROVED AS TO FORM:

William D. Ross, General Counsel



STAFF REPORT

To: San Mateo Consolidated Fire Department Board of Directors

From: Ray Iverson, Fire Chief

Meeting Date: January 13, 2021

Subject: Purchase of Three (3) Replacement Fire Engines

RECOMMENDATION

Adopt a resolution approving the purchase of three (3) new Pierce fire engines from Golden State Fire Apparatus and authorizing the Fire Chief to sign the purchase agreement. The Fire Department will utilize the service of the Houston-Galveston Area Council (HGAC) to purchase the replacement fire engines in the amount of \$796,808.99 each (\$2,390,426.97 total) including sales tax and destination charges. The purchase order will be through Golden State Fire Apparatus, who will honor the HGAC price.

BACKGROUND

Research through the Texas purchasing consortium (HGAC) reveals that Pierce Manufacturing of Appleton, Wisconsin continues to offer the best pricing for fire apparatus vehicles that meet the needs of our community. Discounts totaling \$216,141 are achieved by the HGAC discount contract, the multiple vehicle discount, and by utilizing Pierce Manufacturing Inc. pre-payment option.

The Fire Department maintains a fleet of 10 frontline engines and 6 reserve engines to protect our geographically diverse community. This purchase will replace three of our oldest frontline vehicles built in 2006 and 2007. These vehicles have reached their expected service lifespan and will be moved to reserve status and our current reserves (2000, 2001 and 2003 Hitech and Crimson brand engines) will transition to surplus equipment and be sold or donated in accordance with our purchasing policy.

In 2020, the Apparatus and Equipment Committee completed its assignment to create specifications for new fire engines using the following criteria:

- Capable of maneuvering the varied terrain of the community, including engineered traffic calming controls, while responding to emergency incidents;
- Operable for the longest possible service life;
- Operable with high reliability and minimal operating costs;

Additionally, the Committee was tasked with designing a fire engine that could serve as a model for future group purchases on a county-wide basis or for a larger geographical area.

The Committee recommends the use of the purchasing co-op known as the Houston-Galveston Area Council (HGAC), which operates in the state of Texas and is a verified consortium for public agency contracts. All items processed by the HGAC are put out to bid bi-annually to assure a low price and that competitive bidding has been achieved with the best prices available to its members. This process is available to other states and municipalities. The HGAC purchase plan was determined to be viable and addressed the best interests of the department in acquiring the desired qualities in an apparatus at the lowest cost. Additional benefits include a reduced time frame for delivery.

Justifications for the cost and for the Pierce product include:

- The Fire Department currently has ten (10) Pierce fire engines and two (2) Pierce aerial ladder trucks in our fleet. The addition of three (3) new Pierce fire engines will create a fleet where thirteen fire engines and two ladder trucks will have a common manufacturer. The goal of a standardized fleet will be closer to attainment.
- Standardization of the fleet will create efficiencies with vehicle operator training, emergency scene standardization, fleet maintenance, and parts acquisitions.
- Our current maintenance provider, Bus and Equipment of California, is an authorized Pierce maintenance facility capable of making repairs under factory warranty.
- This provides a model specification for other agencies to utilize, and it should be noted that at least 9 of the 13 fire agencies in the county currently use Pierce fire apparatus.

ANALYSIS

A request for bid with fire engine specifications and delivery requirements was sent by HGAC to Pierce Fire Engine manufacturers. Staff is recommending the purchase of the following Fire Department fire engine:

Vehicle	Dealer	Amount
(3) Pierce Manufacturing Inc. Enforcer 1750 GPM Pumpers	Golden State Fire Apparatus	\$2,390,426.97

FISCAL IMPACT

Acquisition of this fire apparatus is a planned expenditure, and funds have been accumulated through the Vehicle and Equipment Replacement Fund and appropriated in the 2020-21 adjusted budget. Sufficient funding is available to meet the requirements of this purchase.

ATTACHMENTS

- A. Resolution
- B. Purchase Proposal
- C. HGAC Agreement

RESOLUTION NO

**A RESOLUTION OF THE BOARD OF DIRECTORS OF THE SAN MATEO CONSOLIDATED FIRE DEPARTMENT AUTHORIZING PARTICIPATION IN A COOPERATIVE PURCHASING PROGRAM AUTHORIZING EXECUTION OF A PURCHASE CONTRACT WITH GOLDEN STATE FIRE APPARATUS FOR PURCHASE OF THREE FIRE ENGINES IN AN AMOUNT NOT TO EXCEED TWO MILLION THREE HUNDRED NINETY THOUSAND FOUR HUNDRED TWENTY SIX DOLLARS AND NINETY SEVEN CENTS
(\$2,390,426.97)**

WHEREAS, the San Mateo Consolidated Fire Department (SMC Fire) maintains a fleet of 10 frontline engines and 6 reserve engines to protect our geographically diverse community; and,

WHEREAS, this purchase will replace three of SMC Fire's oldest frontline vehicles built in 2006 and 2007; and

WHEREAS, current reserves (2000, 2001, and 2003 Hitech and Crimson brand engines) will transition to surplus equipment and be sold or donated in accordance with our purchasing policy; and,

WHEREAS, research through the Texas purchasing consortium (HGAC), a verified consortium for government and public agency contracting, reveals that Pierce Manufacturing of Appleton, Wisconsin continues to offer the best pricing for fire apparatus vehicles that meet the needs of our community; and

WHEREAS, purchasing multiple vehicles at the same time, utilizing HGAC discount contract and utilizing Pierce pre-payment option results in discounts totaling \$216,141; and

WHEREAS, as detailed more fully in the accompanying Staff Report, purchasing engines manufactured by Pierce is advantageous because SMC Fire already owns Pierce engines, standardization of the fleet will create efficiencies with vehicle operator training, will allow SMC Fire to maintain a standardized supply of parts, and SMC Fire's current maintenance provider is an authorized Pierce maintenance facility; and

WHEREAS, all items processed by the HGAC are put out to bid bi-annually to assure a low price and that competitive bidding has been achieved with the best prices available to its members.

NOW, THEREFORE, the Board of Directors of the San Mateo Consolidated Fire Department resolves as follows:

1. Authorize the purchase of three (3) new Pierce fire engines from Golden State Fire Apparatus and authorize the Fire Chief to sign a purchase agreement for the fire engines in an amount not to exceed of \$2,390,426.97.

2. Authorize SMC Fire to utilize the service of the Houston-Galveston Area Council (HGAC) to purchase the replacement fire engines.

PASSED AND ADOPTED as a resolution of the Board of Directors of the San Mateo Consolidated Fire Department at the regular meeting held on the 13th day of January, 2021, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

Acting Board Secretary

Board President

APPROVED AS TO FORM:

William D. Ross, General Counsel



**GOLDEN
STATE**
FIRE APPARATUS

PROPOSAL PREPARED FOR

San Mateo Consolidated Fire
Department
Pierce Manufacturing, Inc.
Three (3) Enforcer 1750 GPM
Pumpers
HGAC FS12-19, Code FS19VC07
December 29, 2020

SALES CONSULTANT

Rich Myers
Golden State Fire Apparatus, Inc.
7400 Reese Road
Sacramento, CA 95828
831.251.8931 Cell
rich@goldenstatefire.com

PARTS, SERVICE & SUPPORT

Golden State Emergency Vehicle Service, Inc.
7400 Reese Road
Sacramento, CA 95828
916.330.1638 Office
parts@goldenstatefire.com

PROPOSAL PREPARED FOR:

San Mateo Consolidated Fire Department
1040 E. Hillsdale Blvd
Foster City, CA 94404

Submitted Date:	December 29, 2020
Proposal Number:	41229-20
Expiration Date:	January 31, 2021
Sales Consultant:	Rich Myers

We hereby propose and agree to furnish, after your acceptance of this proposal and the proper execution by the SAN MATEO CONSOLIDATED FIRE DEPARTMENT, hereinafter called "Customer" and an officer of Golden State Fire Apparatus, Inc., hereinafter called "GSFA", the following fire apparatus and equipment, hereinafter called "Product":

#	Description	Price
A	Three (3) Pierce Manufacturing, Inc. Enforcer 1750 GPM Pumps	2,273,806.71
B	Discount for HGAC FS12-19, Product Code FS19VC07 (3 Enforcer Pumps)	(125,556.00)
C	Pierce Multiple Unit Discount (3 Enforcer Pumps)	(16,350.00)
D	Intercom / Radio Package (Metro Mobile Communications SO #45003) - 3 Enforcer Pumps	54,625.95
E	Fire Hose Package (LN Curtis) - 3 Enforcer Pumps	52,500.00
F	Mounting Bracket Package (LN Curtis SO #173062) - 3 Enforcer Pumps	5,213.34
G	Equipment Mounting Allowance - 3 Enforcer Pumps	18,000.00
H	Discount For 100% Pre-Payment at Time of Order (3 Enforcer Pumps)	(74,235.00)
SUBTOTAL		2,188,005.00
<i>State Sales Tax @ 9.25%</i>		<i>202,390.47</i>
<i>California Tire Fee</i>		<i>31.50</i>
GRAND TOTAL		2,390,426.97



PROPOSAL SUMMARY

This proposal includes the following items in accordance with the specifications hereto attached:

- Fire apparatus and equipment described herein
- Delivery to GSFA service center in Sacramento
- Pre-delivery inspection/services by GSFA
- Final delivery from service center to Customer
- Demonstration and familiarization of the Product

PRODUCT COMPLETION

Product shall be built in accordance with the specifications hereto attached, delays due to acts of God, strikes, war, or intentional conflict, failures to obtain chassis, materials, unusual weather conditions or other causes beyond GSFA's control not preventing, within approximately **365 to 395 CALENDAR DAYS** after receipt of this order and the acceptance thereof at our Sacramento, California office. Within thirty (30) calendar days after receipt of this order and acceptance thereof, GSFA shall submit to Customer a production schedule including tentative pre-construction conference, final inspection and final delivery dates.

DELIVERY LOCATION

Product shall be shipped in accordance with the specifications hereto attached and be delivered to you at **FOSTER CITY, CALIFORNIA**. Proof of insurance must be demonstrated by the Customer to GSFA prior to transferring of the Product(s).

ACCEPTING THIS PROPOSAL

In the event Customer wishes to purchase the Product described in this Proposal and the attached specifications, then, prior to the expiration date listed on page 2 of this Proposal, Customer shall sign and return this Proposal. Thereafter, GSFA and Customer will endeavor to enter into a purchase agreement incorporating this Proposal and including additional terms (a "Purchase Agreement"). If Customer returns a signed copy of this Proposal alone, GSFA will send Customer its form of Purchase Agreement for Customer's review and signature. **If Customer desires to use its standard form of purchase order as the Purchase Agreement, then Customer should return a signed copy of this Proposal along with a copy of such purchase order. All purchase orders shall be made out to GSFA.** GSFA will review such purchase order and contact the Customer regarding any required revisions. Only upon a full execution of a Purchase Agreement shall GSFA and Customer be obligated to purchase and sell the Product set forth in this Proposal.

TERMS AND CONDITIONS

The following Terms and Conditions are hereby made part of this Proposal:

1. Payment Terms, 100% Pre-Payment at Time of Order – Customer shall pay the amount listed on page one of this Proposal, which includes: (i) the total price for the Product (the "Purchase Price"), (ii) the estimated state sales tax on the Product, and (iii) the California tire fee (together with the Purchase Price and estimated state sales tax, the "Grand Total") within fifteen (15) calendar days from the date on which the Purchase Agreement is fully executed. The proposed delivery timeframe for the Product, which is outlined on page one of this Proposal, shall not begin until full payment of the Grand Total is received. In the event Customer does not pay GSFA the Grand Total in the timeframe set forth in this Section 1, GSFA may, in its sole discretion, cancel the Purchase Agreement entered into between the parties.

2. Multiple Unit Purchase – If the Purchase Price includes pricing for multiple units, the price stated on this Proposal shall only be valid if the quantity of Products being proposed are purchased at the same time, pursuant to the same Purchase Agreement.

3. Stock / Demo Units – If applicable, any stock/demo units, including those identified by this Proposal, are available for sale on an as-is, first-come and first served-basis. Regardless of this Proposal, the first Customer to enter into a Purchase Agreement identifying any such stock/demo unites shall obtain said units.

4. Order Changes – The Customer may request that GSFA incorporate a change to the Product or the Specifications for the Product by delivering a written change order to GSFA, which shall include a description of the proposed change sufficient to permit GSFA to evaluate the feasibility of such change (a "Change Order"). GSFA will provide Customer a written response (a "Response") stating (i) whether GSFA will accommodate such Change Order (which GSFA may decide in its sole and absolute discretion) and (ii) the terms of the modification to the order, including any increase or decrease in the Purchase Price resulting from such Change Order, and any effect on production scheduling or Delivery resulting from such Change Order. Customer shall have seven (7) days after receipt of the Response to notify GSFA as to whether Customer desires to make the changes GSFA has approved in the Response. In the event Customer counter-signs GSFA's Response, Customer shall pay the increase (or be refunded the decrease) in the Purchase Price prior to final delivery to Customer location.

5. Force Majeure – GSFA shall not be responsible nor deemed to be in default on account of delays in performance due to causes which are beyond GSFA's and manufacturer's control and which make GSFA's performance impracticable, including but not limited to wars, insurrections, strikes, riots, fires, storms, floods, other acts of nature, explosions, earthquakes, accidents, any act of government, delays in transportation, inability to obtain necessary labor supplies or manufacturing facilities, allocation regulations or orders affecting materials, equipment, facilities or completed products, failure to obtain any required license or certificates, acts of God or the public enemy or terrorism, failure of transportation, epidemics, quarantine restrictions, failure of vendors (due to causes similar to those within the scope of this clause) to perform their contracts or labor troubles causing cessation, slowdown, or interruption of work.

6. Cancellation/Termination – In the event Customer and GSFA enter into a Purchase Agreement and Customer thereafter cancels or terminates the Purchase Agreement, GSFA will charge a cancellation fee as follows: (a) 10% of the Purchase Price after order is accepted and entered by GSFA; (b) 20% of the Purchase Price after completion of the pre-construction phase of the order process; and (c) 50% of the Purchase Price after the requisition of any materials or commencement of any manufacturing or assembly of the Product by either GSFA or the manufacturer of the Product. The tier of cancellation fee applicable to any cancellation shall be in the sole and absolute discretion of GSFA.

7. State Sales Tax – Customer shall be responsible for the cost of state sales tax associated with, or attributable to the Product. The taxes owed by Customer for the Product is subject to adjustment for the applicable state sales tax rate in effect when the Product is delivered to the Customer. Therefore, the sales tax will be increased or decreased at the time of delivery if a change in the sales tax rate has occurred, in which case Customer shall pay GSFA (or be refunded by GSFA) the applicable change in sales tax.

8. Proposal Expiration – After the Expiration Date shown on page one of this Proposal, Customer shall require GSFA's written consent to accept this Proposal.

9. Governing Law – This Proposal is to be governed by and under the laws of the state of California.

Thank you for providing Golden State Fire Apparatus, Inc. with the opportunity to provide this proposal. If you have any questions regarding the options presented or need additional options, please contact me.

Sincerely,

I, _____ authorized representative of **SAN MATEO CONSOLIDATED FIRE DEPARTMENT** agrees to purchase the proposed Product(s) and agree to the terms and conditions of this proposal and the specifications hereto attached.

Rich Myers
Golden State Fire Apparatus, Inc.

SIGNATURE: _____

TITLE: _____ DATE: _____



Proposal Details Report

12/29/2020

Customer: SAN MATEO CONSOLIDATED FIRE DEPT
Representative: Myers, Rich
Requirements Manager:
Description: Three (3) San Mateo Consolidat
Chassis: Enforcer Chassis
Body: Pumper, Medium, Aluminum, 2nd Gen
Bid Number: 679
Job Number:
Organization: Golden State Fire Apparatus, Inc

OptionCode	Type	Option	ProposalText
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0766611		Boiler Plates, Pumper	
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GSFA is pleased to submit a proposal to the San Mateo Consolidated Fire Department for a **Pierce® triple combination pumper** per your request for quotation. The following paragraphs will describe in detail the apparatus, construction methods, and equipment proposed. This proposal will indicate size, type, model and make of components parts and equipment, providing proof of compliance with each and every item (except where noted) in the departments advertised specifications.

PIERCE MANUFACTURING was founded in 1913. Since then we have been building bodies with one philosophy, "BUILD THE FINEST". Our skilled craftsmen take pride in their work, which is reflected, in the final product. We have been building fire apparatus since the early "forties" giving Pierce Manufacturing over 75 years of experience in the fire apparatus market. Pierce Manufacturing has built and put into service more than 62,500 apparatus, including more than 33,900 on Pierce custom chassis designed and built specifically for fire and emergency applications. Our Appleton, Wisconsin facility has over 870,000 total square feet of floor space situated on approximately 105 acres of land. Our Bradenton, Florida facility has 300,000 square feet of floor space situated on approximately 38 acres of land.

Our beliefs in high ethical standards are carried through in all of our commitments and to everyone with whom we do business. Honesty, Integrity, Accountability and Citizenship are global tenets by which we all live and work. Consequently, we neither engage in, nor have we ever been convicted of price fixing, bid rigging, or collusion in any domestic or international fire apparatus market.

Pierce has only one brand of fire apparatus "Pierce", ensuring you are receiving top of the line product that meets your specification.

In accordance with the current edition of NFPA 1901 standards, this proposal will specify whether the fire department, manufacturer, or apparatus dealership will provide required loose equipment. Images and illustrative material in this proposal are as accurate as known at the time of publication, but are subject to change without notice. Images and illustrative material is for reference only, and may include optional equipment and accessories and may not include all standard equipment.

GENERAL DESIGN AND CONSTRUCTION

To control quality, ensure compatibility, and provide a single source for service and warranty, the custom cab, chassis, pump module and body will be entirely designed, assembled/welded and painted in Pierce owned manufacturing facilities. This includes, but not limited to the cab weldment, the pumphouse module assembly, the chassis assembly, the body and the electrical system.

QUALITY AND WORKMANSHIP

Pierce has set the pace for quality and workmanship in the fire apparatus field. Our tradition of building the highest quality units with craftsmen second to none has been the rule right from the beginning and we demonstrate that ongoing commitment by: Ensuring all steel welding follows American Welding Society D1.1-2004 recommendations for structural steel welding. All aluminum welding follows American Welding society and ANSI D1.2-2003 requirements for structural welding of aluminum. All sheet metal welding follows American welding Society B2.1-2000 requirements for structural welding of sheet metal. Our flux core arc welding uses alloy rods, type 7000 and is performed to American Welding Society standards A5.20-E70T1. Furthermore, all employees classified as welders are tested and certified to meet the American welding Society codes upon hire and every three (3) years thereafter. Pierce also employs an American Welding Society certified welding inspector in plant during working hours to monitor weld quality.

Pierce Manufacturing operates a Quality Management System under the requirements of ISO 9001. These standards sponsored by the International Organization for Standardization (ISO) specify the quality systems that are established by the manufacturer for design, manufacture, installation and service. A copy of the certificate of compliance is included with this proposal. In addition to the Quality Management system, we also employ a Quality Achievement Supplier program to insure the vendors and suppliers that we utilize meet the high standards we demand. That is just part of our overall "Quality at the Source" program at Pierce.

To demonstrate the quality of our products and services, a list of at least twenty five (25) fire departments/municipalities that have purchased vehicles for a second time is provided.

DELIVERY

The apparatus will be delivered under its own power to insure proper break-in of all components while the apparatus is still under warranty. A qualified delivery representative shall deliver the apparatus and remain for a sufficient length of time to instruct personnel in proper operation, care and maintenance of the equipment delivered.

MANUAL AND SERVICE INFORMATION

At time of delivery, complete operation and maintenance manuals covering the apparatus will be provided. A permanent plate will be mounted in the driver's compartment specifying the quantity and type of fluids required including engine oil, engine coolant, transmission, pump transmission lubrication, pump primer and drive axle.

SAFETY VIDEO

At the time of delivery Pierce will also provide one (1) 39-minute, professionally produced apparatus safety video, in DVD format. This video will address key safety considerations for personnel to follow when they are driving, operating, and maintaining the apparatus, including the following: vehicle pre-trip inspection, chassis operation, pump operation, aerial operation, and safety during maintenance.

PERFORMANCE TESTS

A road test will be conducted with the apparatus fully loaded and a continuous run of no less than

ten (10) miles. During that time the apparatus will show no loss of power nor will it overheat. The transmission drive shaft or shafts and the axles will run quietly and be free of abnormal vibration or noise. The apparatus when fully loaded will not have less than 25 percent nor more than 50 percent on the front axle, and not less than 50 percent nor more than 75 percent on the rear axle. The apparatus will meet NFPA 1901 acceleration and braking requirements.

SERVICE AND WARRANTY SUPPORT

Pierce dealership support will be provided by GSEVS by operating a Pierce authorized service center. The service center will have factory-trained mechanics on staff versed in Pierce fire apparatus. The service facility will be located within one hundred (100) miles of the fire department.

In addition to the dealership, Pierce has service facilities located in both, Weyauwega, Wisconsin and Bradenton, Florida. Pierce also maintains a dedicated parts facility of over 100,000 square feet in Appleton, Wisconsin. The parts facility stocks in excess of \$5,000,000 in parts dedicated to service and replacement parts. The parts facility employs a staff dedicated solely for the distribution and shipment of service and replacement parts.

Service parts for the apparatus being proposed can be found via Pierceparts.com which, is an interactive online tool that delivers information regarding your specific apparatus as well as the opportunity to register for training classes.

As a Pierce customer you have the ability to view the complete bill of materials for your specific apparatus, including assembly drawings, piece part drawings, and beneficial parts notations. You will also have the ability to search the complete Pierce item master through a parts search function which offers all Pierce SKU's and descriptions offered on all Pierce apparatus. Published component catalogs, which include proprietary systems along with an extensive operators manual library is available for easy reference.

Pierce Manufacturing maintains a dedicated service and warranty staff of over 35 personnel, dedicated to customer support, which also maintains a 24 hour 7 day a week toll free hot line, four (4) on staff EVT's, and offers hands-on repair and maintenance training classes multiple times a year.

LIABILITY

The successful bidder will defend any and all suits and assume all liability for the use of any patented process including any device or article forming a part of the apparatus or any appliance furnished under the contract.

INSURANCE PROVIDED BY BIDDER

COMMERCIAL GENERAL LIABILITY INSURANCE

The successful bidder will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of commercial general liability insurance:

Each Occurrence \$1,000,000

Products/Completed Operations Aggregate \$1,000,000

Personal and Advertising Injury \$1,000,000

General Aggregate \$2,000,000

Coverage will be written on a Commercial General Liability form. The policy will be written on an occurrence form and will include Contractual Liability coverage for bodily injury and property damage subject to the terms and conditions of the policy. The policy will include Owner as an additional insured when required by written contract.

COMMERCIAL AUTOMOBILE LIABILITY INSURANCE

The successful bidder will, during the performance of the contract, keep in force at least the following minimum limits of commercial automobile liability insurance and coverage will be written on a Commercial Automobile liability form:

Each Accident Combined Single Limit: \$1,000,000

UMBRELLA/EXCESS LIABILITY INSURANCE

The successful bidder will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of umbrella liability insurance:

Aggregate: \$3,000,000

Each Occurrence: \$3,000,000

The umbrella policy will be written on an occurrence basis and at a minimum provide excess to the bidder's General Liability and Automobile Liability policies.

The required limits can be provided by one (1) or more policies provided all other insurance requirements are met.

Coverage will be provided by a carrier(s) rated A- or better by A.M. Best.

All policies will provide a 30-day notice of cancellation to the named insured. The Certificate of Insurance will provide the following cancellation clause: Should any of the above described policies be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.

Bidder agrees to furnish owner with a current Certificate of Insurance with the coverages listed above along with the bid. The certificate will show the purchaser as certificate holder.

INSURANCE PROVIDED BY MANUFACTURER

PRODUCT LIABILITY INSURANCE

The manufacturer will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of Product Liability insurance:

Each Occurrence \$1,000,000

Products/Completed Operations Aggregate \$1,000,000

Coverage will be written on a Commercial General Liability form. The policy will be written on an occurrence form. The manufacturer's policy will include the owner as additional insured when required by written contract between the Owner and a Pierce authorized dealer.

UMBRELLA/EXCESS LIABILITY INSURANCE

The manufacturer will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum

limits of umbrella liability insurance:

Each Occurrence: \$25,000,000

Aggregate: \$25,000,000

The umbrella policy will be written on an occurrence basis and provide excess to the manufacturer's General Liability/Products policies.

The required limits can be provided by one (1) or more policies provided all other insurance requirements are met.

Coverage will be provided by a carrier(s) rated A- or better by A.M. Best.

All policies will provide a 30-day notice of cancellation to the named insured. The Certificate of Insurance will provide the following cancellation clause: Should any of the above described policies be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.

Manufacturer agrees to furnish owner with a current Certificate of Insurance with the coverages listed above along with the bid. The certificate will show the purchaser as the certificate holder.

0661794 Single Source Compliance

SINGLE SOURCE MANUFACTURER

Pierce Manufacturing, Inc. provides an integrated approach to the design and manufacture of our products that delivers superior apparatus and a dedicated support team. From our facilities, the chassis, cab weldment, cab, pumphouse (including the sheet metal enclosure, valve controls, piping and operators panel) and body will be entirely designed, tested, and hand assembled to the customer's exact specifications. The electrical system either hardwired or multiplexed, will be both designed and integrated by Pierce Manufacturing. The warranties relative to these major components (excluding component warranties such as engine, transmission, axles, pump, etc.) will be provided by Pierce as a single source manufacturer. Pierce's single source solution adds value by providing a fully engineered product that offers durability, reliability, maintainability, performance, and a high level of quality.

0584456 Manufacture Location, Appleton, Wisconsin

Your apparatus will be manufactured in Appleton, Wisconsin.

0584452 RFP Location: Appleton, Wisconsin

0588609 Vehicle Destination, US

0610784 Comply NFPA 1901 Changes Effective Jan 1, 2016, With Exceptions

NFPA 2016 STANDARDS

This unit will comply with the NFPA standards effective January 1, 2016, except for fire department directed exceptions. These exceptions will be set forth in the Statement of Exceptions.

Certification of slip resistance of all stepping, standing and walking surfaces will be supplied with delivery of the apparatus.

All horizontal surfaces designated as a standing or walking surface that are greater than 48.00" above the ground must be defined by a 1.00" wide line along its outside perimeter. Perimeter markings and designated access paths to destination points will be identified on the customer approval print and are shown as approximate. Actual location(s) will be determined based on materials used and actual conditions at final build. Access paths may pass through hose storage areas and opening or removal of covers or restraints may be required. Access paths may require the operation of devices and equipment such as the aerial device or ladder rack.

A plate that is highly visible to the driver while seated will be provided. This plate will show the overall height, length, and gross vehicle weight rating.

The manufacturer will have programs in place for training, proficiency testing and performance for any staff involved with certifications.

An official of the company will designate, in writing, who is qualified to witness and certify test results.

0533347 Pumper/Pumper with Aerial Device Fire Apparatus

0588611 Vehicle Certification, Pumper

0661778	Agency, Apparatus Certification, Pumper/Tanker, U.L.	NFPA COMPLIANCE	Apparatus proposed by the bidder will meet the applicable requirements of the National Fire Protection Association (NFPA) as stated in current edition at time of contract execution. Fire department's specifications that differ from NFPA specifications will be indicated in the proposal as "non-NFPA".
		VEHICLE INSPECTION PROGRAM CERTIFICATION	To assure the vehicle is built to current NFPA standards, the apparatus, in its entirety, will be third party, audit-certified through Underwriters Laboratory (UL) that it is built and complies to all applicable standards in the current edition of NFPA 1901. The certification will include: all design, production, operational, and performance testing of not only the apparatus, but those components that are installed on the apparatus.
			A placard will be affixed in the driver's side area stating the third party agency, the date, the standard and the certificate number of the whole vehicle audit.
		PUMP TEST	Underwriters Laboratory (UL) will test, approved, and certify the pump. The test results and the pump manufacturer's certification of hydrostatic test; the engine manufacturer's certified brake horsepower curve; and the pump manufacturer's record of pump construction details will be forwarded to the Fire Department.
		GENERATOR TEST	If the unit has a generator, Underwriters Laboratory (UL) will test, approved, and certify the generator. The test results will be provided to the Fire Department at the time of delivery.
		BREATHING AIR TEST	If the unit has breathing air, Pierce Manufacturing will draw an air sample from the air system and have the sample certified that the air quality meets the requirements of NFPA 1989, <i>Standard on Breathing Air Quality for Fire and Emergency Services Respiratory Protection</i> .
0000000	STF GSFA, Pre-Construction, ATW Factory, Major Airport, 4 Days and 3 nights	PRE-CONSTRUCTION, FACTORY TRIP	A pre-construction trip to the manufacturing facility will be provided for four (4) Customer representative(s). The intent of this trip is to review and finalize, in detail, the specifications prior to the start of production. The pre-construction trip will have a duration of four (4) days and three (3) nights and be scheduled at times mutually agreed upon between Golden State Fire Apparatus (GSFA), and the Customer. Costs for airfare, lodging, meals and ground transportation while at the manufacturers location will be the responsibility of GSFA. Air travel will be from one of the following airports: Sacramento, San Francisco or San Jose. Costs such as Customer ground transportation in California, Customer airport parking, Customer luggage fees and Customer incidentals while traveling to the factory will be the responsibility of the Customer. Flight reservations are non-refundable and in the event of a cancellation after booking, the Customer will be responsible for all costs associated with this cancellation, which may include not only the original ticket cost but also any change or cancellation fees imposed by the airline and/ or travel agency. Flight reservations are also non-transferable.
0000000	STF GSFA, Final Insp, ATW Factory, Major Airport, 4 Days and 3 nights	FINAL INSPECTION FACTORY TRIP	A final inspection trip to the manufacturing facility will be provided for four (4) Customer representative(s). The intent of this trip is to ensure that the apparatus is built to specification and to detect any deficiencies that require correction. The final inspection trip will have a duration of four (4) days and three (3) nights and be scheduled at times mutually agreed upon between Golden State Fire Apparatus (GSFA), and the Customer. Costs for airfare, lodging, meals and ground transportation while at the manufacturers location will be the responsibility of GSFA. Air travel will be from one of the following airports: Sacramento, San Francisco or San Jose. Costs such as Customer ground transportation in California, Customer airport parking, Customer luggage fees and Customer incidentals while traveling to the factory will be the responsibility of the Customer. Flight reservations are non-refundable and in the event of a cancellation after booking, the Customer will be responsible for all costs associated with this cancellation, which may include not only the original ticket cost but also any change or cancellation fees imposed by the airline and/ or travel agency. Flight reservations are also non-transferable.
0000000	STF GSFA, Midpoint, ATW Factory, Major Airport, 3 Days and 2 nights	MIDPOINT, FACTORY TRIP	A midpoint inspection trip to the manufacturing facility will be provided for four (4) Customer representative(s). The intent of this trip is to monitor the progress of construction. The midpoint inspection trip will have a duration of three (3) days and two (2) nights and be scheduled at times mutually agreed upon between Golden State Fire Apparatus (GSFA) and the Customer. Costs for airfare, lodging, meals and ground transportation while at the manufacturers location will be the responsibility of GSFA. Air travel will be from one of the following airports: Sacramento, San Francisco or San Jose. Costs such as Customer ground transportation in California, Customer airport parking, Customer luggage fees and Customer incidentals while traveling to the factory will be the responsibility of the Customer. Flight reservations are non-refundable and in the event of a cancellation after booking, the Customer will be responsible for all costs associated with this cancellation, which may include not only the original ticket cost but also any change or cancellation fees imposed by the airline and/ or travel agency. Flight reservations are also non-transferable.
0092138	Highly Customized Product (HCP)	PRODUCT CHANGES AND IMPROVEMENTS	Our components and processes, as described in this proposal document, are as accurate as known at the time of bid submission, but are subject to change for the purpose of product or process improvements, or changes in industry standards providing the change does not affect the meaning or definition of the bid specifications.

AFTERMARKET SUPPORT WEBSITE

Pierceparts.com will provide Pierce authorized dealer access to comprehensive information pertaining to the maintenance and service of their customer's apparatus. This tool will provide the Pierce authorized dealer the ability to service and support their customers to the best of their ability with factory support at their fingertips.

Pierceparts.com is also accessible to the end user through the guest login. Limited access is available and vehicle specific parts information accessible by entering a specific VIN number. All end users should see their local authorized Pierce dealer for additional support and service. The website will consist of the following screens at the dealer level:

My Fleet Screen

The My Fleet screen will provide access to truck detail information on the major components of the vehicle, warranty information, available vehicle photographs, vehicle drawings, sales options, applicable vehicle software downloads, etc.

Parts Screens

The Parts screens will provide parts look-up capability of Pierce Manufacturing sourced items, with the aid of digital photographs, part drawings and assembly drawings. The parts search application will permit the searching of parts by item description or function group (major system category). The parts application will provide the ability to submit electronically a parts order, parts quote, or parts return request directly to Pierce Manufacturing for processing.

Warranty Screen

The Warranty screens will provide dealers the ability to submit electronically warranty claims directly to Pierce Manufacturing for reimbursement.

My Reports Screens

The My Reports screens will provide access to multiple dealer reports to allow the dealership to maintain communication with the customer on the status of orders, claims, and phone contacts.

Technical Support Screens

The Technical Support screens will provide access to all currently published Operation and Maintenance and Service Publications. Access to Pierce Manufacturing Service Bulletins and Work Instructions, containing information on current service topics and recommendations will be provided.

Training

The Training screens will provide access to upcoming training classes offered by Pierce Manufacturing along with interactive electronic learning modules (Operators Guides) covering the operation of major vehicle components will be provided. Access to training manuals used in Pierce Manufacturing training classes will be provided.

About Pierce

Access to customer service articles, corporate news, quarterly newsletters, and key contacts within the Customer Service Department will be provided. The current Customer Service Policy and Procedure Manual, detailing the operation of the Customer Service group will also be accessible.

0620362 Consortium, HGAC

0537375 Unit of Measure, US Gallons

0030006 Bid Bond Not Requested

BID BOND NOT REQUESTED

A bid bond will not be included. If requested, the following will apply:

All bidders will provide a bid bond as security for the bid in the form of a 5% bid bond to accompany their bid. This bid bond will be issued by a Surety Company who is listed on the U.S. Treasury Departments list of acceptable sureties as published in Department Circular 570. The bid bond will be issued by an authorized representative of the Surety Company and will be accompanied by a certified power of attorney dated on or before the date of bid. The bid bond will include language, which assures that the bidder/principal will give a bond or bonds as may be specified in the bidding or contract documents, with good and sufficient surety for the faithful performance of the contract, including the Basic One (1) Year Limited Warranty, and for the prompt payment of labor and material furnished in the prosecution of the contract.

Notwithstanding any document or assertion to the contrary, any surety bond related to the sale of a vehicle will apply only to the Basic One (1) Year Limited Warranty for such vehicle. Any surety bond related to the sale of a vehicle will not apply to any other warranties that are included within this bid (OEM or otherwise) or to the warranties (if any) of any third party of any part, component, attachment or accessory that is incorporated into or attached to the vehicle. In the event of any contradiction or inconsistency between this provision and any other document or assertion, this provision will prevail.

0050066 Performance Bond, 100% Req'd
(Statement by Rep)**PERFORMANCE BOND**

Notwithstanding any document or assertion to the contrary, any surety bond related to the sale of a vehicle will apply only to the Basic One (1) Year Limited Warranty for such vehicle. Any surety bond related to the sale of a vehicle will not apply to any other warranties that are included within this bid (OEM or otherwise) or to the warranties (if any) of any third party of any part, component, attachment or accessory that is incorporated into or attached to the vehicle. In the event of any contradiction or inconsistency between this provision and any other document or assertion, this provision will prevail.

000007	Approval Drawing	<p>APPROVAL DRAWING</p> <p>A drawing of the proposed apparatus will be prepared and provided to the purchaser for approval before construction begins. The Pierce sales representative will also be provided with a copy of the same drawing. The finalized and approved drawing will become part of the contract documents. This drawing will indicate the chassis make and model, location of the lights, siren, horns, compartments, major components, etc.</p> <p>A "revised" approval drawing of the apparatus will be prepared and submitted by Pierce to the purchaser showing any changes made to the approval drawing.</p>
0739732	Electrical Diagrams, 12V As-Built on USB, Custom Chassis Pumper, Multiple Unit	<p>ELECTRICAL WIRING DIAGRAMS</p> <p>There will be three (3) USB flash drives containing "As-Built" electrical wiring diagrams specifically prepared for the apparatus provided. The diagrams will consist of information pertaining to the 12 volt DC systems only.</p> <p>Due to the complexity of each custom unit built and possible changes that may occur, the design of the "As Built" electrical wiring diagrams will begin after the apparatus is shipped from the manufacturer's facility. The USB flash drives will be shipped to the customer no more that 75 days after the apparatus is shipped from the manufacturer's facility. There will be two (2) flash drives shipped to the customer and one (1) flash drive stored at the apparatus manufacturer's facility for future reference.</p> <p>Each USB flash drive will include the following capabilities:</p> <ul style="list-style-type: none"> The capability of viewing each separate diagram. The capability of zooming in on any section of each separate diagram. The capability of printing each separate diagram. The capability of printing each zoomed in area of each separate diagram. <p>Each CD will include the following items:</p> <ul style="list-style-type: none"> Title page, identifying the job number and chassis model. Table of contents. Truck specific electrical compartment and instrument layouts for the chassis. Truck specific electrical compartment layouts for the body. Applicable drawings from the appropriate standard wiring diagrams. All truck specific wiring diagrams (special drawings). Harness drawings for all wiring harnesses used on the chassis. Harness drawings for all wiring harnesses used on the body. All truck input and output programming sheets (multiplexed trucks only). <p>There will be no hard copies of these diagrams required for this unit.</p> <p>The spiral bound, clear plastic covered hard copies will included everything from the USB printed on 11" x 17" white paper.</p> <p>Two (2) truck order (includes verification and CD costs) in this order for multiple order credit.</p>
0649754	Enforcer Chassis	<p>ENFORCER CHASSIS</p> <p>The Pierce Enforcer™ is the custom chassis developed exclusively for the fire service. Chassis provided will be a new, tilt-type custom fire apparatus. The chassis will be manufactured in the apparatus body builder's facility eliminating any split responsibility. The chassis will be designed and manufactured for heavy-duty service, with adequate strength, capacity for the intended load to be sustained, and the type of service required. The chassis will be the manufacturer's first line tilt cab.</p>
0000110	Wheelbase	<p>WHEELBASE</p> <p>The wheelbase of the vehicle will be 187.50".</p>
0000070	GVW Rating	<p>GVW RATING</p> <p>The gross vehicle weight rating will be 43,500.</p>
0649713	Frame Rails, 10.25" x 3.50" x .375", Saber FR/Enf	<p>FRAME</p> <p>The chassis frame will be built with two (2) steel channels bolted to five (5) cross members or more, depending on other options of the apparatus. The side rails will be heat-treated steel measuring 10.25" x 3.50" x 0.375".</p> <p>Each rail will have a section modulus of 16.00 cubic inches, yield strength of 120,000 psi, and a resisting bending moment (rbm) of 1,921,069 inch-pounds.</p>
0020018	Frame Liner Not Req'd	

0630705	Axle, Front, Oshkosh TAK-4, Non Drive, 19,500 lb, Enforcer	<p>FRONT NON DRIVE AXLE</p> <p>The Oshkosh TAK-4® front axle will be of the independent suspension design with a ground rating of 19,500 lb.</p> <p>Upper and lower control arms will be used on each side of the axle. Upper control arm castings will be made of 100,000-psi yield strength 8630 steel and the lower control arm casting will be made of 55,000-psi yield ductile iron.</p> <p>The center cross members and side plates will be constructed out of 80,000-psi yield strength steel.</p> <p>Each control arm will be mounted to the center section using elastomer bushings. These rubber bushings will rotate on low friction plain bearings and be lubricated for life. Each bushing will also have a flange end to absorb longitudinal impact loads, reducing noise and vibrations.</p> <p>There will be nine (9) grease fittings supplied, one (1) on each control arm pivot and one (1) on the steering gear extension.</p> <p>The upper control arm will be shorter than the lower arm so that wheel end geometry provides positive camber when deflected below rated load and negative camber above rated load. Camber at load will be zero degrees for optimum tire life.</p> <p>The ball joint bearing will be of low friction design and be maintenance free.</p> <p>Toe links that are adjustable for alignment of the wheel to the center of the chassis will be provided.</p> <p>The wheel ends must have little to no bump steer when the chassis encounters a hole or obstacle.</p> <p>The steering linkage will provide proper steering angles for the inside and outside wheel, based on the vehicle wheelbase.</p> <p>The axle will have a third party certified turning angle of 45 degrees. Front discharge, front suction, or aluminum wheels will not infringe on this clamp angle.</p>
0030264	Suspension, Front TAK-4, 19,500 lb, Qtm/AXT/Imp/Vel/Dash CF/Enf	<p>FRONT SUSPENSION</p> <p>Front Oshkosh TAK-4™ independent suspension will be provided with a minimum ground rating of 19,500 lb.</p> <p>The independent suspension system will be designed to provide maximum ride comfort. The design will allow the vehicle to travel at highway speeds over improved road surfaces and at moderate speeds over rough terrain with minimal transfer of road shock and vibration to the vehicle's crew compartment.</p> <p>Each wheel will have torsion bar type spring. In addition, each front wheel end will also have energy absorbing jounce bumpers to prevent bottoming of the suspension.</p> <p>The suspension design will be such that there is at least 10.00" of total wheel travel and a minimum of 3.75" before suspension bottoms.</p> <p>The torsion bar anchor lock system allows for simple lean adjustments, without the use of shims. One can adjust for a lean within 15 minutes per side. Anchor adjustment design is such that it allows for ride height adjustment on each side.</p> <p>The independent suspension was put through a durability test that simulated 140,000 miles of inner city driving.</p>
0087572	Shock Absorbers, KONI, TAK-4, Qtm/AXT/Imp/Vel/DCF/Enf	<p>FRONT SHOCK ABSORBERS</p> <p>KONI heavy-duty telescoping shock absorbers will be provided on the front suspension.</p>
0000322	Oil Seals, Front Axle	<p>FRONT OIL SEALS</p> <p>Oil seals with viewing window will be provided on the front axle.</p>
0582936	Tires, Front, Goodyear, G289 WHA, 315/80R22.50, 20 ply	<p>FRONT TIRES</p> <p>Front tires will be Goodyear® 315/80R22.50 radials, 20 ply G289 WHA tread, rated for 20,400 lb maximum axle load and 68 mph maximum speed.</p>
0019575	Wheels, Front, Alcoa, 22.50" x 9.00", Aluminum, Hub Pilot	<p>The tires will be mounted on Alcoa 22.50" x 9.00" polished aluminum disc wheels with a ten (10) stud, 11.25" bolt circle.</p>
0530457	Axle, Rear, Meritor RS23-186, 24,000 lb Saber/Enforcer	<p>REAR AXLE</p> <p>The rear axle will be a Meritor™, Model RS-23-186, with a capacity of 24,000 lb.</p>
0544253	Top Speed of Vehicle, 68 MPH	<p>TOP SPEED OF VEHICLE</p> <p>A rear axle ratio will be furnished to allow the vehicle to reach a top speed of 68 mph.</p>
0565379	Suspen, Rear, Single Slipper Spring, 24,000 lb, Saber/Enforcer	<p>REAR SUSPENSION</p> <p>The rear suspension will be Standens, semi-elliptical, 3.00" wide x 53.00" long, 12-leaf pack with a ground rating of 24,000 lb. The spring hangers will be castings.</p> <p>The two (2) top leaves will wrap the forward spring hanger pin, and the rear of the spring will be a slipper style end that will ride in a rear slipper hanger. To reduce bending stress due to acceleration and braking, the front eye will be a berlin eye that will place the front spring pin in the horizontal plane within the main leaf.</p> <p>A steel encased rubber bushing will be used in the spring eye. The steel encased rubber bushing will be maintenance free and require no lubrication.</p>

0000485	Oil Seals, Rear Axle	REAR OIL SEALS Oil seals will be provided on the rear axle(s).
0627626	Tires, Rear, Goodyear, G751 MSA, 12R22.50, LRH, Single	REAR TIRES The rear tires will be four (4) Goodyear 12R22.50 radials, load range H, all position, G751 MSA tread, rated for 27,120 lb maximum axle load and 68 mph maximum speed.
0019625	Wheels, Rear, Alcoa, 22.50" x 8.25", Aluminum, Hub Pilot, Single	The tires will be mounted on Alcoa 22.50" x 8.25" polished aluminum disc wheels with a ten (10) stud 11.25" bolt circle.
0589368	Tire Balancing, All, Single Axle	TIRE BALANCE All tires will be dynamically balanced with wheel weights.
0602747	No Tire Pressure Indicator, Fire Department Omits, Non-NFPA 2016 Compliant	TIRE PRESSURE INDICATOR NFPA 1901, 2016 edition, section 4.13.4 requires each tire be equipped with a visual indicator or monitoring system that indicates tire pressure. Per Fire Department specification, a tire pressure indicator is not on the apparatus as manufactured. This apparatus will be non-compliant to NFPA 1901 standards effective at time of contract execution.
0003245	Axle Hub Covers w/center hole, S/S, Front Axle	FRONT HUB COVERS Stainless steel hub covers will be provided on the front axle. An oil level viewing window will be provided.
0001960	Axle Hub Covers, Rear, S/S, High Hat (Pair)	REAR HUB COVERS A pair of stainless steel high hat hub covers will be provided on rear axle hubs.
0057936	Covers, Lug Nut, Chrome	CHROME LUG NUT COVERS Chrome lug nut covers will be supplied on front and rear wheels.
0002045	Mud Flap, Front and Rear, Pierce Logo	MUD FLAPS Mud flaps with a Pierce logo will be installed behind the front and rear wheels.
0798017	SP Chocks, Wheel, Worden HWGY, Super Gripper	WHEEL CHOCKS There will be two (2) pairs of Worden Safety Products, Model HWGY, wheel chocks provided. Heavy Duty, large molded aluminum wheel chock, yellow powder coat finish.
0646364	Mounting Brackets, Chocks, Worden Safety, Model U815T	WHEEL CHOCK BRACKETS There shall be two (2) pairs of Worden Safety model U815T mounting wheel chock brackets provided. The brackets shall be mounted one pair under D3, one chock under P3, ship one chock loose.
0010670	ABS Wabco Brake System, Single rear axle	ANTI-LOCK BRAKE SYSTEM The vehicle will be equipped with a Meritor WABCO 4S4M, anti-lock braking system. The ABS will provide a 4-channel anti-lock braking control on both the front and rear wheels. A digitally controlled system that utilizes microprocessor technology will control the anti-lock braking system. Each wheel will be monitored by the system. When any particular wheel begins to lockup, a signal will be sent to the control unit. This control unit then will reduce the braking of that wheel for a fraction of a second and then reapply the brake. This anti-lock brake system will eliminate the lockup of any wheel thus helping to prevent the apparatus from skidding out of control.
0030185	Brakes, Knorr/Bendix 17", Disc, Front, TAK-4	BRAKES The service brake system will be full air type. The front brakes will be Knorr/Bendix disc type with a 17.00" ventilated rotor for improved stopping distance. The brake system will be certified, third party inspected, for improved stopping distance.
0000740	Brakes, Meritor, Cam, Rear, 16.50 x 8.63"	The rear brakes will be Meritor™ 16.50" x 8.63" cam operated with automatic slack adjusters. Dust shields cannot be provided.
0731553	Air Compressor, Brake, Cummins/Wabco 25.9 CFM	BRAKE SYSTEM AIR COMPRESSOR The air compressor will be a Cummins/WABCO with 25.9 cubic feet per minute output.

0644232	Brake Reservoirs, 4,272 Cubic Inch Minimum Capacity, Saber FR/Enforcer	<p>BRAKE SYSTEM</p> <p>The brake system will include:</p> <ul style="list-style-type: none"> Brake treadle valve Heated automatic moisture ejector on air dryer Total air system minimum capacity of 4,272 cubic inches Two (2) air pressure gauges with a red warning light and an audible alarm, that activates when air pressure falls below 60 psi Spring set parking brake system Parking brake operated by a push-pull style control valve A parking "brake on" indicator light on instrument panel Park brake relay/inversion and anti-compounding valve, in conjunction with a double check valve system, with an automatic spring brake application at 40 psi A pressure protection valve to prevent all air operated accessories from drawing air from the air system when the system pressure drops below 80 psi (550 kPa) 1/4 turn drain valves on each air tank <p>The air tank will be primed and painted to meet a minimum 750 hour salt spray test. To reduce the effects of corrosion, the air tank will be mounted with stainless steel brackets.</p>
0630489	Air Dryer, Bendix, AD-9, With Wet Tank, Heated, Saber FR/Enforcer	<p>BRAKE SYSTEM AIR DRYER</p> <p>The air dryer will be a Bendix AD-9 air dryer, with spin-on coalescing filter cartridge and 100 watt heater.</p>
0000790	Brake Lines, Nylon	<p>BRAKE LINES</p> <p>Color-coded nylon brake lines will be provided. The lines will be wrapped in a heat protective loom in the chassis areas that are subject to excessive heat.</p>
0000856	Air Inlet, with Kussmaul Air Eject	<p>AIR INLET WITH AUTOMATIC EJECT</p> <p>One (1) air inlet with Kussmaul Air Eject will be provided. It will allow station air to be supplied to the apparatus brake system through a shoreline hose. The inlet will automatically disconnect the air line when the truck is started. It will be equipped with a male coupling and be located on the driver side exterior of cab, above the front wheel, behind the cab door, recessed into the cab. A check valve will be provided to prevent reverse flow of air. The inlet will discharge into the "wet" tank of the brake system. A mating female coupling will also be provided with the loose equipment.</p>
0000860	Outlet, Air, with shut off valve	<p>AIR OUTLET</p> <p>One (1) air outlet will be installed with a female coupling and shut off valve, located on the driver side pump panel. This system will tie into the "wet" tank of the brake system and include an 85-psi pressure protection valve in the outlet line to prevent the brake system from losing all air. Female coupling and male fitting will be .25" thread. A mating male fitting will be provided with the loose equipment.</p>
0646276	Box, Recessed, Smooth Alum, for Air Fitting	<p>RECESSED BOX FOR AIR FITTING</p> <p>One (1) air inlet will have an smooth aluminum recessed box provided. The box(es) will allow the air fitting to be recessed inside the stepwell to prevent damage. DS cab between front and crew doors.</p>
0675244	All Wheel Lock-up, Single Prk Brk Control	<p>ALL WHEEL LOCK-UP</p> <p>An all wheel lock-up system will be installed which will apply air to the front brakes and use the spring brake at the rear. Front brakes will apply when standard rear parking brake control valve is activated.</p>
0582244	Drain, Remote Air Tank, w/Pull Cable, Location	<p>REMOTE AIR TANK DRAIN</p> <p>There will be a remote cable controlled drain valve installed on each air supply reservoir. The drain valve will be actuated from the side of the vehicle and be a vinyl covered stainless steel cable, firmly attached to the underside of the vehicle. A loop will be provided at the cable end for ease of pulling the drain. All loops for the remote drains will be located under LS3.</p>

0736410	Engine, Cummins X12, 500 hp, 1695 lb-ft, W/OBD, EPA 2021, Enforcer	<p>ENGINE The chassis will be powered by an electronically controlled engine as described below: Make: Cummins Model: X12 Power: 500 hp at 1900 rpm Torque: 1695 lb-ft at 1000 rpm Governed Speed: 2000 rpm Emissions Level: EPA 2021 Fuel: Diesel Cylinders: Six (6) Displacement: 729 cubic inches (11.9L) Starter: Delco 39MT™ Fuel Filters: Spin-on style primary filter with water separator and water-in-fuel sensor. Secondary spin-on style filter. The engine will include On-board diagnostics (OBD), which provides self diagnostic and reporting. The system will give the owner or repair technician access to state of health information for various vehicle sub systems. The system will monitor vehicle systems, engine and after treatment. The system will illuminate a malfunction indicator light on the dash console if a problem is detected.</p>
0730962	Filters, Remote Mounted, Oil, Fuel, X12, VEL/AXT, ENF, QTM	<p>REMOTE MOUNTED ENGINE FILTERS The engine fuel and oil filters will be remote mounted for ease of maintenance.</p>
0745684	SP High Idle w/Electronic Engine, Auto On, 90 sec Delay, Custom	<p>HIGH IDLE An automatic high idle will be provided that will automatically maintain a preset engine rpm whenever the engine has been idling for 90 seconds and the interlocks are met. A momentary switch will be installed, at the cab instrument panel, for deactivation. The high idle will reactivate whenever the ignition switch or an interlock is reset and the engine has been idling for 90 seconds. The high idle will be operational only when the parking brake is on and the truck transmission is in neutral. This will only occur when the pump is not engaged.</p>
0687994	Engine Brake, Jacobs Compression Brake, Cummins Engine	<p>ENGINE BRAKE A Jacobs® engine brake is to be installed with the controls located on the instrument panel within easy reach of the driver. The driver will be able to turn the engine brake system on/off and have a high, medium and low setting. The engine brake will activate when the system is on and the throttle is released. The high setting of the brake application will activate and work simultaneously with the variable geometry turbo (VGT) provided on the engine. The engine brake will be installed in such a manner that when the engine brake is slowing the vehicle the brake lights are activated. The ABS system will automatically disengage the auxiliary braking device, when required.</p>
0644227	Clutch, Fan, Air Actuated, Saber FR/Enforcer	<p>CLUTCH FAN A fan clutch will be provided. The fan clutch will be automatic when the pump transmission is in "Road" position, and constantly engaged when in "Pump" position.</p>
0640477	Air Intake, Metal Screen, Saber FR/Enforcer	<p>ENGINE AIR INTAKE The engine air intake will be located above the engine cooling package. It will draw fresh air from the front of the apparatus through the radiator grille. A stainless steel metal screen will be installed at the inlet of the air intake system that will meet NFPA 1901 requirements. The air cleaner and stainless steel screen will be easily accessible by tilting the cab.</p>
0794743	Exhaust System, 5", X12/X15, MX13, Engine, Horizontal, Right Side	<p>EXHAUST SYSTEM The exhaust system will include a Single Module™ aftertreatment device to meet current EPA standards. The exhaust system will be stainless steel from the turbo to the inlet of the aftertreatment device, and will be 5.00" in diameter. An insulation wrap will be provided on all exhaust pipes between the turbo and aftertreatment device to minimize the heat loss to the aftertreatment device. The exhaust will terminate horizontally ahead of the right side rear wheels. A tailpipe diffuser will be provided to reduce the temperature of the exhaust as it exits. Heat deflector shields will be provided to isolate chassis and body components from the heat of the tailpipe diffuser.</p>

0683310	Diffuser, Exhaust, Modified For Extraction, 5"x7"x5", Flush With Rub Rail, CARE	<p>EXHAUST MODIFICATION</p> <p>The exhaust pipe will be 90 degrees to the body. The diffuser will be reduced to 5.00" in the center to accommodate the fire department's air recovery system. The 5.00" extension pipe coming out of the end of the diffuser will be flush with the body rub rail. There will be a minimum of 4.00" clearance between the top of the 5.00" extension and the bottom of the body. There will be a minimum of 2.50" from the exhaust pipe to the under side of the body heat shield. The last 7.00" of the exhaust will be free of hangers and/or clamps.</p>
0788765	Radiator, Saber FR/Enforcer	<p>RADIATOR</p> <p>The radiator and the complete cooling system will meet or exceed NFPA and engine manufacturer cooling system standards. For maximum corrosion resistance and cooling performance, the entire radiator core will be constructed using long life aluminum alloy. The radiator core will consist of aluminum fins, having a serpentine design, brazed to aluminum tubes. The radiator core will have a minimum front area of 1060 square inches. Supply tank will be made of heavy duty glass-reinforced nylon and the return tank will be made of aluminum. Both tanks will be crimped onto the core assembly using header tabs and a compression gasket to complete the radiator core assembly. There will be a full steel frame around the inserts to enhance cooling system durability and reliability. The radiator will be compatible with commercial antifreeze solutions. The radiator assembly will be isolated from the chassis frame rails with rubber isolators to prevent the development of leaks caused by twisting or straining when the apparatus operates over uneven terrain. The radiator will include a de-aeration/expansion tank. For visual coolant level inspection, the radiator will have a built-in sight glass. The radiator will be equipped with a 15 psi pressure relief cap. A drain port will be located at the lowest point of the cooling system and/or the bottom of the radiator to permit complete flushing of the coolant from the system. Shields or baffles will be provided to prevent recirculation of hot air to the inlet side of the radiator.</p>
0001090	Cooling Hoses, Rubber	<p>COOLANT LINES</p> <p>Gates, or Goodyear, rubber hose will be used for all engine coolant lines installed by Pierce Manufacturing. Hose clamps will be stainless steel constant torque type to prevent coolant leakage. They will expand and contract according to coolant system temperature thereby keeping a constant clamping pressure on the hose.</p>
0041125	Fuel Tank, 65 Gallon, Dual Fills	<p>FUEL TANK</p> <p>A 65 gallon fuel tank will be provided and mounted at rear of chassis. The tank will be constructed of 12-gauge, hot rolled steel. It will be equipped with swash partitions and a vent. To eliminate the effects of corrosion, the fuel tank will be mounted with stainless steel straps. A .75" drain plug will be provided in a low point of the tank for drainage. A fill inlet will be located on the left hand and right hand sides of the body and be covered with a hinged, spring loaded, stainless steel door that is marked "Ultra Low Sulfur - Diesel Fuel Only." A .50" diameter vent will be provided running from top of tank to just below fuel fill inlets. The tank will meet all FHWA 393.67 requirements including a fill capacity of 95 percent of tank volume. Servicing the fuel tank pick-up tubes and fuel gauge sending unit will be capable of being accomplished by draining fuel and dropping tank.</p>
0001129	Lines, Fuel	All fuel lines will be provided as recommended by the engine manufacturer.
0770723	DEF Tank, 8.0 Gallon, LS Fill, Rear of Rear Axle, Triple Door	<p>DIESEL EXHAUST FLUID TANK</p> <p>An 8.0 gallon diesel exhaust fluid (DEF) tank will be provided and mounted in the driver's side body rearward of the rear axle. A 0.50" drain plug will be provided in a low point of the tank for drainage. A fill inlet will be provided and marked "Diesel Exhaust Fluid Only". The fill inlet will be located adjacent to the engine fuel inlet behind a triple, painted door on the left side of the vehicle. There will be a South Co. C2 non locking latch provided. The tank will meet the engine manufacturers requirement for 10 percent expansion space in the event of tank freezing. The tank will include an integrated heater unit that utilizes engine coolant to thaw the DEF in the event of freezing.</p>
0552793	Not Required, Fuel Priming Pump	
0582243	Shutoff Valves, Fuel Line @ Primary Filter, Cummins	<p>FUEL SHUTOFF</p> <p>A fuel line shutoff valve will be installed on both the inlet and outlet of the primary fuel filter.</p>
0553019	Cooler, Engine Fuel, Imp/Vel, AXT/Qtm/Sab/DCF/SFR/Enf	<p>FUEL COOLER</p> <p>An air to fuel cooler will be installed in the engine fuel return line.</p>

0011125	Door, Fuel Fill Painted Job Color	FUEL FILL DOOR Fuel fill door will be painted job color.
0578959	Fuel/Water Separator, Racor Inline	FUEL SEPARATOR The engine will be equipped with a Racor in-line spin-on fuel and water separator in addition to the engine fuel filters.
0798744	Trans, Allison 5th Gen, 4500 EVS P, Imp/Vel/DCF/Enf	TRANSMISSION An Allison 5th generation, Model EVS 4500P, electronic, torque converting, automatic transmission will be provided. Two (2) PTO openings will be located on left side and top of converter housing (positions 8 o'clock and 1 o'clock). A transmission temperature gauge with red light and buzzer will be installed on the cab instrument panel.
0644809	Transmission, Shifter, 6-Spd, Push Button, 4500 EVS, 4+2 Mode, AXT/Qtm/DCF/Enf	TRANSMISSION SHIFTER A six (6)-speed push button shift module with four (4) + two (2) "Mode" selector will be mounted to right of driver on console. Shift position indicator will be indirectly lit for after dark operation. The transmission ratio will be 1st - 4.70 to 1.00, 2nd - 2.21 to 1.00, 3rd - 1.53 to 1.00, 4th - 1.00 to 1.00, 5th - 0.76 to 1.00, 6th - 0.67 to 1.00, R - 5.55 to 1.00.
0684459	Transmission Oil Cooler, Modine, External	TRANSMISSION COOLER A Modine plate and fin transmission oil cooler will be provided using engine coolant to control the transmission oil temperature.
0535530	Mode, Downshift, Aggressive downshift to 2nd, w/engine brake, 6 speed	DOWNSHIFT MODE (w/engine brake) The transmission will be provided with an aggressive downshift mode. This will provide earlier transmission downshifts to 2nd gear from 6th gear, resulting in improved engine braking performance.
0027844	Fluid, 4000 Series Trans, Allison Approved TES-295 Synthetic, IPOS, Custom	TRANSMISSION FLUID The transmission will be provided with TranSynd, or other Allison approved TES-295 heavy duty synthetic transmission fluid.
0001375	Driveline, Spicer 1810	DRIVELINE Drivelines will be a heavy-duty metal tube and be equipped with Spicer® 1810 universal joints. The shafts will be dynamically balanced before installation. A splined slip joint will be provided in each driveshaft where the driveline design requires it. The slip joint will be coated with Glidecoat® or equivalent.
0669988	Steering, Sheppard M110 w/Tilt, TAK-4, Eaton Pump, w/Cooler	STEERING Dual Sheppard, Model M110, steering gears, with integral heavy-duty power steering, will be provided. For reduced system temperatures, the power steering will incorporate an air to oil cooler and an Eaton, Model VN20, hydraulic pump with integral pressure and flow control. All power steering lines will have wire braded lines with crimped fittings. A tilt and telescopic steering column will be provided to improve fit for a broader range of driver configurations.
0605356	Steering Wheel, 4 Spoke without Controls, Saber FR/Enforcer	STEERING WHEEL The steering wheel will be 18.00" in diameter, have tilting and telescoping capabilities, and a 4-spoke design.
0550144	Logo/Emblem, on Horn Button	LOGO AND CUSTOMER DESIGNATION ON HORN BUTTON The steering wheel will have an emblem containing the Pierce logo and customer name. The emblem will have three (3) rows of text for the customer's department name. There will be a maximum of eight (8) characters in the first row, 11 characters in the second row and 11 characters in the third row. The first row of text will be: San The second row of text will be: Mateo The third row of text will be: Consolidated

0603947	Bumper, 16" Extended, Polished S/S, "Chicago" Style, Saber FR/Enforcer	<p>BUMPER A one (1) piece bumper manufactured from 8 gauge formed stainless steel with a 0.38" bend radius will be provided. The bumper will be a minimum of 10.00" high with a 1.50" top and bottom flange, and will extend 16.00" from the face of the cab. The bumper will be bright polished finish. The bumper will be bright polished finish. To provide adequate support strength, the bumper will be mounted directly to the front of the C channel frame. The frame will be a bolted modular extension frame constructed of 50,000 psi tensile steel.</p> <p>Gravel Pan A gravel pan, constructed of bright aluminum treadplate, will be furnished between the bumper and the cab face. The pan will be properly supported from the underside to prevent flexing and vibration.</p>
0640199	Tray, Hose, Center, 16" Bumper, Outside Air Horns	<p>CENTER HOSE TRAY A hose tray, constructed of aluminum, will be placed in the center of the bumper extension. The tray will have a capacity of 100' of 1.75" double jacket cotton-polyester hose. Black rubber grating will be provided at the bottom of the tray. Drain holes are also provided.</p>
0616872	Cover, Aluminum Treadplate, Drop Down Bumper	<p>Center Tray Cover A bright aluminum treadplate cover will be provided over the center tray. The cover will be attached with a stainless steel hinge. The drop down bumper will secure the cover in the closed position and a pneumatic stay arm will hold the cover in the open position.</p>
0638008	Tray, (1) Hose Left Side of Bumper	<p>LEFT SIDE HOSE TRAY A hose tray will be placed in the left side of the extended bumper. The tray will have a capacity of 65' of 1.50" double jacket cotton-polyester hose. Black rubber grating will be provided at the bottom of the tray. Drain holes will be provided.</p>
0768567	SP Cover, Aluminum Treadplate, Two (2) Southco C2 Chrome Latches, Hose Tray	<p>LEFT SIDE HOSE TRAY COVER A bright aluminum treadplate cover will be provided over the left side mounted hose tray. The cover will be attached with a stainless steel hinge. There will be two (2) Southco C2 chrome latches provided to secure the cover in the closed position and a pneumatic stay arm will hold the cover in the open position.</p>
0614646	No Lift & Tow Package, Imp/Vel, AXT, SFR/Enf	
0061058	Tow Eyes, Below Deck, S/S	<p>TOW EYES Two (2) .75" thick stainless steel tow eyes will be installed under the bumper and attached to the front frame members. The tow eyes will be designed and positioned to allow up to a 6,000 lb straight horizontal pull in line with the centerline of the vehicle. The tow eyes will not be used for lifting of the apparatus. The tow eyes will not be painted.</p>
0770330	SP Bumper, Center Section Hinged, Two (2) Southco C2 Latches, Non Locking	<p>HINGED CENTER SECTION The center section of the bumper will be hinged at the bottom. Two (2) Southco C2 chrome non locking latches will hold the section in the closed position.</p>
0689308	Notch, Front For Recessing Of Q2B, Stainless Bumper	<p>FRONT BUMPER NOTCH The front bumper will be notched for recessing of the Q2B siren. The notch will be designed so that the bumper is one (1) continuous piece. The notch will be welded in place for strength with a continuous top and bottom flange. All areas will be polished for appearance. The siren will be located right side of the bumper.</p>
0692444	Recess, Front/Side Warning Light, In Angled Corner of Extended Bumper	<p>SIDE ZONE LIGHT MOUNTING The front warning lights on each side will be recessed into the angled portion of the bumper extension to protect the light from damage. The recessed bracket will be made of polished stainless steel.</p>
0532853	Recess, Side Zone Warning Light, In Side of Extended Bumper	<p>SIDE ZONE LIGHT MOUNTING The front lower warning lights on each side will be recessed into the side of the bumper extension to protect the light from damage. The recessed bracket will be made of polished stainless steel.</p>
0660435	Coating, Top Flange, Front Bumper, Outside Exterior, Rhino Lining, Black	<p>RHINO COATING - FRONT BUMPER Protective black Rhino Linings® coating will be provided on the outside exterior of the top front bumper flange. It will not be sprayed on the underside of the flange. The lining will be properly installed by an authorized Rhino Linings® dealer.</p>

CAB

The Enforcer cab will be designed specifically for the fire service and manufactured by the chassis builder.

The cab will be built by the apparatus manufacturer in a facility located on the manufacturer's premises.

For reasons of structural integrity and enhanced occupant protection, the cab will be a heavy duty design, constructed to the following minimal standards.

The cab will have 12 main vertical structural members located in the A-pillar (front cab corner posts), B-pillar (side center posts), C-pillar (rear corner posts), and rear wall areas. The A-pillar will be constructed of solid A356-T5 aluminum castings. The B-pillar and C-pillar will be constructed from 0.13" wall extrusions. The rear wall will be constructed of two (2) 2.00" x 2.00" outer aluminum extrusions and two (2) 2.00" x 1.00" inner aluminum extrusions. All main vertical structural members will run from the floor to 4.625" x 3.864" x 0.090" thick roof extrusions to provide a cage-like structure with the A-pillar and roof extrusions being welded into a 0.25" thick corner casting at each of the front corners of the roof assembly.

The front of the cab will be constructed of a 0.13" firewall plate, covered with a 0.090" front skin (for a total thickness of 0.22"), and reinforced with a full width x 0.50" thick cross-cab support located just below the windshield and fully welded to the engine tunnel. The cross-cab support will run the full width of the cab and weld to each A-pillar, the 0.13" firewall plate, and the front skin.

The cab floors will be constructed of 0.125" thick aluminum plate and reinforced at the firewall with an additional 0.25" thick cross-floor support providing a total thickness of 0.375" of structural material at the front floor area. The front floor area will also be supported with two (2) triangular 0.30" wall extrusions that also provides the mounting point for the cab lift. This tubing will run from the floor wireway of the cab to the engine tunnel side plates, creating the structure to support the forces created when lifting the cab.

The cab will be 96.00" wide (outside door skin to outside door skin) to maintain maximum maneuverability.

The forward cab section will have an overall height (from the cab roof to the ground) of approximately 99.00". The crew cab section will have a 10.00" raised roof, with an overall cab height of approximately 109.00". The overall height listed will be calculated based on a truck configuration with the lowest suspension weight rating, the smallest diameter tires for the suspension, no water weight, no loose equipment weight, and no personnel weight. Larger tires, wheels, and suspension will increase the overall height listed.

The floor to ceiling height inside the crew cab will be 64.50" in the center and outboard positions. The crew cab floor will measure 46.00" from the rear wall to the back side of the rear facing seat risers.

The medium block engine tunnel, at the rearward highest point (knee level), will measure 61.50" to the rear wall. The big block engine tunnel will measure 51.50" to the rear wall.

The crew cab will be a totally enclosed design with the interior area completely open to improve visibility and verbal communication between the occupants.

The cab will be a full tilt cab style.

A 3-point cab mount system with rubber isolators will improve ride quality by isolating chassis vibrations from the cab.

CAB ROOF DRIP RAIL

For enhanced protection from inclement weather, a drip rail will be furnished on the sides of the cab. The drip rail will be painted to match the cab roof, and bonded to the sides of the cab. The drip rail will extend the full length of the cab roof.

INTERIOR CAB INSULATION

The cab will include 1.00" insulation in the ceiling, 1.50" insulation in the side walls, and 2.00" insulation in the rear wall to maximize acoustic absorption and thermal insulation.

FENDER LINERS

Full circular inner fender liners in the wheel wells will be provided.

PANORAMIC WINDSHIELD

A one (1)-piece safety glass windshield will be provided with over 2,775 square inches of clear viewing area. The windshield will be full width and will provide the occupants with a panoramic view. The windshield will consist of three (3) layers: outer light, middle safety laminate, and inner light. The outer light layer will provide superior chip resistance. The middle safety laminate layer will prevent the windshield glass pieces from detaching in the event of breakage. The inner light will provide yet another chip resistant layer. The cab windshield will be bonded to the aluminum windshield frame using a urethane adhesive. A custom frit pattern will be applied on the outside perimeter of the windshield for a finished automotive appearance.

WINDSHIELD WIPERS

Three (3) electric windshield wipers with washer will be provided that meet FMVSS and SAE requirements.

The washer reservoir will be able to be filled without raising the cab.

0747442

Engine Tunnel, X12, MX13, Enforcer

ENGINE TUNNEL

Engine hood side walls will be constructed of 0.375" aluminum. The top will be constructed of 0.125" aluminum and will be tapered at the top to allow for more driver and passenger elbow room.

The engine hood will be insulated for protection from heat and sound. The noise insulation keeps the dBA level within the limits stated in the current NFPA 1901 standards.

The engine tunnel will be no higher than 17.00" off the crew cab floor.

0633594

Rear Wall, Interior, Adjustable Seating

INTERIOR CREW CAB REAR WALL ADJUSTABLE SEATING (PATENT PENDING)

The interior rear wall of the crew cab will have mounting holes every 2.75" to allow for adjustability of the forward facing crew cab seating along the rear wall. Seats will be adjustable with use of simple hand tools allowing departments flexibility of their seating arrangement should their department needs change.

0632103	Rear Wall, Exterior, Cab, Saber FR/Enforcer	CAB REAR WALL EXTERIOR COVERING The exterior surface of the rear wall of the cab will be overlaid with bright aluminum treadplate except for areas that are not typically visible when the cab is lowered.
0622582	Cab Lift, Elec/Hyd, Manual Override, Control Loc Feature, Sab FR/Enf	CAB LIFT A hydraulic cab lift system will be provided consisting of an electric powered hydraulic pump, dual lift cylinders, and necessary hoses and valves. Hydraulic pump will have a manual override for backup in the event of electrical failure. Lift controls will be located D/S pump panel. The cab will be capable of tilting 43 degrees to accommodate engine maintenance and removal. The cab will be locked down by a 2-point normally closed spring loaded hook type latch that fully engages after the cab has been lowered. The system will be hydraulically actuated to release the normally closed locks when the cab lift control is in the raised position and cab lift system is under pressure. When the cab is completely lowered and system pressure has been relieved, the spring loaded latch mechanisms will return to the normally closed and locked position. The hydraulic cylinders will be equipped with a velocity fuse that protects the cab from accidentally descending when the control is located in the tilt position. For increased safety, a redundant mechanical stay arm will be provided that must be manually put in place on the left side between the chassis and cab frame when the cab is in the raised position. This device will be manually stowed to its original position before the cab can be lowered. Cab Lift Interlock The cab lift system will be interlocked to the parking brake. The cab tilt mechanism will be active only when the parking brake is set and the ignition switch is in the on position. If the parking brake is released, the cab tilt mechanism will be disabled.
0709260	SP Stay Arm, Cylinder, Cab Tilt, Additional, Pinned, Portable	An additional reduced height stay-arm will be supplied to be pinned around the passenger side lift cylinder. The stay arm will be used in addition to the standard stay arm. The stay arm is removable and can be stored on the vehicle or in the maintenance shop.
0695930	Grille, Bright Finished, Front of Cab, Dash CF/Enforcer	GRILLE A bright finished aluminum mesh grille screen, inserted behind a bright finished grille surround, will be provided on the front center of the cab.
0769753	Emblem, American Flag Painted on Cab Grille, All Custom Chassis	CAB GRILLE DESIGN An American flag design will be painted on the cab grille.
0512716	Scuffplate, Rear of Engine Tunnel	SCUFFPLATE A brushed stainless steel scuffplate will be provided on the entire rear vertical surface of the engine tunnel.
0002224	Scuffplates, S/S At Cab Door Jambs, 4-Door Cab	DOOR JAMB SCUFFPLATES All cab door jambs will be furnished with a polished stainless steel scuffplate, mounted on the striker side of the jamb.
0012226	Scuffplates, S/S Corner Guard, Polished, Rear Cab Corners	SCUFFPLATES, REAR CAB CORNER GUARDS Both rear cab corners will be furnished with a full height, polished stainless steel corner guard scuffplate. The guard will extend 1.00" from the corner to protect paint from damage when pulling items (such as booster hose) around the cab.
0647932	Not Required, Trim, S/S Band, Across Cab Face, AXT/Dash CF/Saber/Enforcer	
0015440	No Chrome Molding, On side of cab	
0521669	Mirrors, Retrac, West Coast Style, Htd/Rmt, w/Htd/Rmt Convex	MIRRORS A Retrac, Model 613423, dual vision, motorized, west coast style mirror, with chrome finish, will be mounted on each side of the front cab door with spring loaded retractable arms. The flat glass and convex glass will be heated and adjustable with remote control within reach of the driver.

0648170	Door, Half-Height, Saber FR/Enforcer 4-Door Cab, Raised Roof	<p>DOORS</p> <p>To enhance entry and egress to the cab, the forward cab door openings will be a minimum of 37.50" wide x 63.37" high. The crew cab doors will be located on the sides of the cab and will be constructed in the same manner as the forward cab doors. The crew cab door openings will be a minimum of 34.30" wide x 73.25" high.</p> <p>The forward cab and crew cab doors will be constructed of extruded aluminum with a nominal material thickness of 0.093". The exterior door skins will be constructed from 0.090" aluminum. A customized, vertical, pull-down type door handle will be provided on the exterior of each cab door. The exterior handle will be designed specifically for the fire service to prevent accidental activation, and will provide 4.00" wide x 2.00" deep hand clearance for ease of use with heavy gloved hands.</p> <p>Each door will also be provided with an interior flush, open style paddle handle that will be readily operable from fore and aft positions, and be designed to prevent accidental activation. The interior handles will provide 4.00" wide x 1.25" deep hand clearance for ease of use with heavy gloved hands.</p> <p>The cab doors will be provided with both interior (rotary knob) and exterior (keyed) locks exceeding FMVSS standards. The keys will be Model 751. The locks will be capable of activating when the doors are open or closed. The doors will remain locked if locks are activated when the doors are opened, then closed.</p> <p>A full length, heavy duty, stainless steel, piano-type hinge with a 0.38" pin and 11 gauge leaf will be provided on all cab doors. There will be double automotive-type rubber seals around the perimeter of the door framing and door edges to ensure a weather-tight fit.</p> <p>A chrome grab handle will be provided on the inside of each cab door for ease of entry. A red webbed grab handle will be installed on the crew cab door stop strap. The grab handles will be securely mounted.</p> <p>The bottom cab step at each cab door location will be located below the cab doors and will be exposed to the exterior of the cab.</p>	
0655543	Door Panel, Brushed Stainless Steel, Saber/Enforcer 4-Door Cab	<p>Door Panels</p> <p>The inner cab door panels will be constructed out of brushed stainless steel.</p>	
0733346	SP	Controls, Electric Roll-Up Windows, 4dr, 3 Add'l Switches, SFR/Enf	<p>ELECTRIC OPERATED CAB DOOR WINDOWS</p> <p>All four (4) cab doors will be equipped with electric operated windows with one (1) flush mounted automotive style switch on each door.</p> <p>There will be an additional set of three (3) switches located on the instrument panel, one (1) to control the officer window, one (1) to control the left side crew cab window and one (1) to control the right side crew cab window.</p> <p>Each switch will allow intermittent or auto down operation for ease of use. Auto down operation will be actuated by holding the window down switch for approximately 1 second.</p>
0762273	SP	Steps, 4-Door Cab, Dual, 2" Larger Bottom Step, Saber FR/Enforcer	<p>CAB STEPS</p> <p>A dual step will be provided below each cab and crew cab door. The steps will be designed with a grip pattern punched into bright aluminum treadplate material providing support, slip resistance, and drainage. The steps will be a bolt-in design to minimize repair costs should they need to be replaced. The forward cab steps will be a minimum 25.00" wide, and the crew cab steps will be 21.65" wide with a 7.00" minimum depth. The bottom step will protrude past the middle step 3.00". The step design raises the middle step higher and closer to the cab floor, resulting in a 12.00" distance from the step to cab floor in the cab and a 10.25" distance from the step to cab floor in the crew cab. Stepping distances from the ground to first step will be approximately 11.90" and from first step to middle step will be approximately 12.00".</p> <p>The vertical surface of the upper step well will be aluminum treadplate.</p> <p>The first step will be lit by a white 12 volt DC LED light provided on the step.</p>
0770194	Handrail, Exterior, Knurled, Alum, 4-Door Cab	<p>CAB EXTERIOR HANDRAILS</p> <p>A 1.25" diameter slip-resistant, knurled aluminum handrail will be provided adjacent to each cab and crew cab door opening to assist during cab ingress and egress.</p>	
0634786	Lights, Cab & Crw Cab Acs Stps, P25, LED w/Bezel, 1Lt Per Step 6lts	<p>STEP LIGHTS</p> <p>There will be six (6) white LED step lights installed for cab and crew cab access steps.</p> <p>One (1) light for the driver's access steps.</p> <p>Two (2) lights for the driver's side crew cab access steps.</p> <p>Two (2) lights for the passenger's side crew cab access steps.</p> <p>One (1) light for the passenger's side access step.</p> <p>In order to ensure exceptional illumination, each light will provide a minimum of 25 foot-candles (fc) covering an entire 15" x 15" square placed ten (10) inches below the light and a minimum of 1.5 fc covering an entire 30" x 30" square at the same ten (10) inch distance below the light. The lights will be activated when the battery switch is on and the adjacent door is opened.</p>	
0002141	Fenders, s/s on cab - Saber/Enforcer	<p>FENDER CROWNS</p> <p>Stainless steel fender crowns will be installed at the cab wheel openings.</p>	
0557023	Handrail, 10", Below Cab Windshield, Pair	<p>HANDRAILS BELOW CAB WINDSHIELD</p> <p>A 10.00" long x 1.25" diameter handrail will be mounted below the front cab windshield, one (1) on each side. The handrails will be extruded aluminum with a ribbed design to provide a positive gripping surface.</p>	

0794831	SP	Handrail, Extra - 21-30" Long, Hansen With Rubber Inserts	HANDRAILS (ADDITIONAL) There will be two (2) handrail(s) provided each side of cab at rear corner - height and length to mirror the front body handrails. Each handrail will have rubber inserts placed at three (3) equidistant locations (parallel to centerline) around the circumference of the extrusion to provide a positive gripping surface.
0637984		Window, Side of C/C, Fixed, Saber FR/Enforcer	CREW CAB WINDOWS One (1) fixed window with tinted glass will be provided on each side of the cab, to the rear of the front cab door. The windows will be sized to enhance light penetration into the cab interior. The windows will measure 18.70" wide x 23.75" high.
0012090		Not Required, Windows, Front/Side of raised roof	
0779033		Not Required, Windows Rear of Crew Cab, Saber FR/Enforcer	
0651515		Window Protector Bars, Knurled, Crew Doors, 2" Above Window Sill Plate	WINDOW PROTECTOR BARS, CREW CAB DOORS A knurled window protector bar will be installed on each crew cab door, 2.00" above the bottom of the window opening. The bar will extend from the front of the crew cab door to the rear of the crew cab door, mounted as close to the door frame as possible.
0734681		Compt, Storage, 12.75 W x 24 H x 15 D, (1) Ea Side C/C, Single Pan, 70" SFR/Enf	STORAGE COMPARTMENTS Provided on each side of the cab, to the rear of the crew cab access doors, will be a storage compartment. The compartments will be 12.75" wide x 24.00" high x 15.00" deep. The clear door opening will be 11.75" wide. The doors will be two (2) single pan doors painted to match the cab exterior with a locking D-ring latch with #751 key, one (1) on each side of the cab. A pneumatic stay arm for each exterior door will be used as a doorstop. The compartment interior will be painted to match the cab interior. Compartment Light There will be two (2) white LED strip lights provided, one (1) horizontally above each compartment door opening.
0604171		Scuffplate, Brushed S/S, Bottom of Door Frame, Each	DOOR FRAME SCUFFPLATE There will be two (2) scuffplate(s) provided for the bottom of the door frame of cab aux compartment each side. Each scuffplate will be brushed stainless steel with a 0.38" lip down.
0729269	SP	Door, External Cab Access, RS, 34" H, Lift Up, Saber FR/Enf	ACCESS DOOR There will be one (1) lift up double pan door painted to match the cab exterior with a non-locking D-Ring latch, provided over the front wheel well on the right side of the cab. A two (2) pneumatic stay arms will be provided as a door stop. The clear door opening will be 17.00" wide x 34.00" high.
0077581		Tag, Special	SPECIAL TAG There will be four (4) special tag(s) provided. The tag(s) will read "RADIO #1 PTT" QTY 2 "RADIO #2 PTT" QTY 2 SHIP ALL FOUR LOOSE WITH TRUCK
0727685	SP	Tray, Equipment Mounting, Aluminum, Special Lip	EQUIPMENT MOUNTING TRAY There will be a tray for mounting of equipment located rear cab wall. The front and sides of the tray will be 2.0" high and the rear of the tray will be 9.0" high. The size of the tray will be per the attached photo. Each tray will be fabricated from aluminum and will be brushed aluminum. Tray not intended for storage of loose equipment. Items stored on tray will be permanently attached to meet NFPA requirements.
0629228	SP	Mounting Provisions, 1/4" Alum, Full Engine Tunnel, Line-X, Enforcer	MOUNTING PLATE ON ENGINE TUNNEL Equipment installation provisions will be installed on the engine tunnel. A 0.25" smooth aluminum plate will be bolted to the top surface of the engine tunnel. The plate will follow the contour of the engine tunnel and will run the entire length of the engine tunnel. The plate will be spaced off the engine tunnel 1.00" to allow for wire routing below the plate. Only the top surface of the mounting plate will be sprayed with Line-X® polyurethane/polyurea elastomer abrasive resistant material to match the cab interior.

0729946	SP Shelf, Equip Mounting, Alum, Rr Fcng,FW,3-Piece,Wall,Line-X,SFR/Enf DD13/MX13	<p>EQUIPMENT MOUNTING SHELF</p> <p>There will be a shelf provided in the crew cab for permanent mounting of equipment. The shelf will be divided into three (3) pieces; left, center and right. The shelves will extend across the crew cab from the left side cab wall to the right side cab wall.</p> <p>The left and right side of the shelf will be 17.75" deep and start at the crew cab door jamb. The left and right side of the shelf will have a 2.00" lip around the four (4) sides. They will be mounted 17.00" above the rear facing seat risers. The area under the left and right of the shelf will be open.</p> <p>There will be a wall provided below the rear of the shelf on the left and right side to enclose the area below the shelf.</p> <p>The center of the shelf will be 40.25" wide x 21.00" deep. It will angle down 12.00" to be mounted to the top of the engine tunnel on the rear, flat portion. The shelf will stick out past the engine tunnel. The front and back of the center shelf will have a lip to match the left and right side shelves. The left and right sides of the center shelf will be 12.00" high and mount to the left and right side shelves.</p> <p>The shelf will be fabricated from 0.188" aluminum and sprayed with black Line-X® polyurethane/polyurea abrasive resistant material.</p>
0750824	Cab Interior, Vinyl Headliner, Saber FR/Enforcer, CARE	<p>CAB INTERIOR</p> <p>The cab interior will be constructed of primarily metal (painted aluminum) to withstand the severe duty cycles of the fire service.</p> <p>The officer side dash will be a flat faced design to provide easy maintenance and will be constructed out of painted aluminum.</p> <p>The instrument cluster will be surrounded with a high impact ABS plastic contoured to the same shape of the instrument cluster.</p> <p>The engine tunnel will be padded and covered, on the top and sides, with dark silver gray 36 ounce leather grain vinyl resistant to oil, grease, and mildew.</p> <p>For durability and ease of maintenance, the cab interior side walls will be painted aluminum. The rear wall will be painted aluminum.</p> <p>The headliner will be installed in both forward and rear cab sections. Headliner material will be vinyl. A sound barrier will be part of its composition. Material will be installed on an aluminum sheet and securely fastened to interior cab ceiling.</p> <p>The forward portion of the cab headliner will permit easy access for service of electrical wiring or other maintenance needs.</p> <p>All wiring will be placed in metal raceways.</p> <p>CAB INTERIOR UPHOLSTERY</p> <p>The cab interior upholstery will be 36 oz dark silver gray vinyl.</p>
0753903	Cab Interior, Paint Color, Saber FR/Enforcer	<p>CAB INTERIOR PAINT</p> <p>The cab interior metal surfaces, excluding the rear heater panels, will be painted gray, vinyl texture paint.</p> <p>The rear heater panels will be painted black, vinyl textured paint.</p>
0052100	Floor, Rubber Padded, Cab & Crew Cab, Saber/Enforcer	<p>CAB FLOOR</p> <p>The cab and crew cab floor areas will be covered with Polydamp™ acoustical floor mat consisting of a black pyramid rubber facing and closed cell foam decoupler.</p> <p>The top surface of the material has a series of raised pyramid shapes evenly spaced, which offer a superior grip surface. Additionally, the material has a 0.25" thick closed cell foam (no water absorption) which offers a sound dampening material for reducing sound levels.</p>

DEFROST/AIR CONDITIONING SYSTEM

A ceiling mounted combination heater, defroster and air conditioning system will be installed in the cab above the engine tunnel area.

Cab Defroster

A 54,000 BTU heater-defroster unit with 690 SCFM of air flow will be provided inside the cab. The heater-defrost will be installed in the forward portion of the cab ceiling. Air outlets will be strategically located in the cab header extrusion per the following:

One (1) adjustable will be directed towards the left side cab window

One (1) adjustable will be directed towards the right side cab window

Six (6) fixed outlets will be directed at the windshield

The defroster will be capable of clearing 98 percent of the windshield and side glass when tested under conditions where the cab has been cold soaked at 0 degrees Fahrenheit for 10 hours, and a 2 ounce per square inch layer of frost/ice has been able to build up on the exterior windshield. The defroster system will meet or exceed SAE J382 requirements.

Cab/Crew Auxiliary Heater

There will be one (1) 31,000 BTU auxiliary heater with 560 SCFM of air flow provided in the left side rear facing seat riser with a dual scroll blower. An aluminum plenum incorporated into the cab structure used to transfer heat to the forward left side position.

Air Conditioning

A condenser will be a 59,644 BTU output that meets and exceeds the performance specification will be mounted on the radiator.

The air conditioning system will be capable of cooling the average cab temperature from 100 degrees Fahrenheit to 75 degrees Fahrenheit at 50 percent relative humidity within 30 minutes. The cooling performance test will be run only after the cab has been heat soaked at 100 degrees Fahrenheit for a minimum of 4 hours.

The evaporator unit will be installed in the rear portion of the cab ceiling over the engine tunnel. The evaporator will include one (1) high performance heating core, one (1) high performance cooling core with (1) plenum directed to the front and one (1) plenum directed to the rear of the cab.

The evaporator unit will have a 52,000 BTU at 690 SCFM rating that meets and exceeds the performance specifications.

Adjustable air outlets will be strategically located on the forward plenum cover per the following:

Four (4) will be directed towards the seating position on the left side of the cab

Four (4) will be directed towards the seating position on the right side of the cab

Adjustable air outlets will be strategically located on the evaporator cover per the following:

Five (5) will be directed towards crew cab area

A high efficiency particulate air (HEPA) filter will be included for the system. Access to the filter cover will be hinged with two (2) thumb latches.

The air conditioner refrigerant will be R-134A and will be installed by a certified technician.

Climate Control

An automotive style controller will be provided to control the heat and air conditioning system within the cab. The controller will have three (3) functional knobs for fan speed, temperature, and air flow distribution (front to rear) control.

The system will control the temperature of the cab and crew cab automatically by pushing the center of the fan speed control knob. Rotate the center temperature control knob to set the cab and crew cab temperature.

The AC system will be manually activated by pushing the center of the temperature control knob. Pushing the center of the air flow distribution knob will engage the AC for max defrost, setting the fan speeds to 100 percent and directing all air flow to the overhead forward position.

The system controller will be located within panel position #12.

Gravity Drain Tubes

Two (2) condensate drain tubes will be provided for the air conditioning evaporator. The drip pan will have two (2) drain tubes plumbed separately to allow for the condensate to exit the drip pan. No pumps will be provided.

0624005

Sun Visor, Vinyl/Fabric, AXT, Dash CF, Qtm, Saber FR/Enforcer

SUN VISORS

There will be two (2) vinyl covered sun visors provided. The sun visors will be located above the windshield with one (1) mounted on each side of the cab.

There will be a black plastic thumb latch provided to help secure each sun visor in the stowed position.

0634328

Grab Handles, Driver and Officer Door Posts, Saber FR/Enforcer

GRAB HANDLES

A black rubber covered grab handle will be mounted on the door post of the driver and officer's side cab door to assist in entering the cab. The grab handles will be securely mounted to the post area between the door and windshield.

0730590

SP Lights, Engine Compt, Custom, Auto Sw, TecNiq E10-W000-1 LED

ENGINE COMPARTMENT LIGHTS

There will be one (1) TecNiq®, Model E10-W000-1, 12 volt DC, white LED light(s) installed under the cab to be used as engine compartment illumination.

These light(s) will be activated automatically when the cab is raised.

0602841	Fluid Check Access, Not Required, Non-NFPA 2016 Compliant	ACCESS TO ENGINE DIPSTICKS The cab will be tilted for access to the engine oil and transmission fluid dipsticks. NFPA 1901, 2016 edition, section 4.16.1 requires the fire apparatus to be designed so all manufacturer's recommended routine maintenance checks of lubricant and fluid levels can be performed by the operator without lifting the cab of a tilt-cab apparatus or without the need for hand tools. The fire apparatus purchaser will realize that by requesting an exception to this aspect of NFPA 1901, this fire apparatus will not contribute to the national standardization initiative. Per the purchaser's specification, this apparatus will not be compliant to NFPA 1901 standards in this regard.
0583039	Not Required, Side Roll and Frontal Impact Protection	
0622619	Seating Capacity, 4 Seats	SEATING CAPACITY The seating capacity in the cab will be four (4).
0636957	Seat, Driver, Pierce PSV, Air Ride, High Back, Saber FR/Enforcer	DRIVER SEAT A seat will be provided in the cab for the driver. The seat design will be a cam action type, with air suspension. For increased convenience, the seat will include a manual control to adjust the horizontal position (6.00" travel). The manual horizontal control will be a towel-bar style located below the forward part of the seat cushion. To provide flexibility for multiple driver configurations, the seat will have an adjustable reclining back. The seat back will be a high back style with side bolster pads for maximum support. For optimal comfort, the seat will be provided with 17.00" deep foam cushions designed with EVC (elastomeric vibration control). The seat will be furnished with a 3-point, shoulder type seat belt.
0632923	Seat, Officer, Pierce PSV, Air Ride, High Back, Saber FR/Enforcer	OFFICER SEAT A seat will be provided in the cab for the passenger. The seat design will be a cam action type, with air suspension. The seat back will be a high back style with 9 degree fixed recline angle and side bolster pads for maximum support. For optimal comfort, the seat will be provided with 17.00" deep foam cushions designed with EVC (elastomeric vibration control). The seat will be furnished with a 3-point, shoulder type seat belt.
0002517	Not Required, Radio Compartment	
0102788	Not Required, Seat, Rear Facing C/C, DS Outboard	
0102783	Not Required, Seat, Rr Facing C/C, Center	
0102790	Not Required, Seat, Rear Facing C/C, PS Outboard	
0632949	Seat, Forward Facing C/C, DS Outboard, Pierce PSV, Hi-Back, Foldup, Saber FR/Enf	FORWARD FACING DRIVER SIDE OUTBOARD SEAT There will be one (1) forward facing, foldup seat provided at the driver side outboard position in the crew cab. The seat back will be a high back style with 9 degree fixed recline angle. For optimal comfort, the seat will be a minimum of 15.00" from the front of the cushion to the face of the seat back and designed with EVC (elastomeric vibration control). The seat will be furnished with a 3-point, shoulder type seat belt.
0103319	Not Required, Seat, Forward Facing C/C, Center	
0632875	Seat, Forward Facing C/C, PS Outboard, Pierce PSV, Hi-Back, Foldup, Saber FR/Enf	FORWARD FACING PASSENGER SIDE OUTBOARD SEAT There will be one (1) forward facing foldup seat provided at the passenger side outboard position in the crew cab. The seat back will be a high back style with 9 degree fixed recline angle. For optimal comfort, the seat will be a minimum of 15.00" from the front of the cushion to the face of the seat back and designed with EVC (elastomeric vibration control). The seat will be furnished with a 3-point, shoulder type seat belt.
0753973	SP Rack, Storage, Alum, Latex Gloves (3), Side Load	STORAGE BOX There will be two (2) storage rack(s) provided, designed to hold and dispense three (3) boxes of latex gloves. The rack will be constructed of aluminum and located rear cab wall and engine tunnel, exact location at final inspection. The rack will be painted to match the cab interior. Each individual storage box will be 5.00" wide x 3.50" deep x 10.00" high. A slot will be provided on the front of each box to dispense the gloves.

0796013	Compt, Storage, (2) Rear Facing, Overhead, 21 W x 9 H x 20 D, Saber FR/Enforcer	<p>REAR FACING OVERHEAD STORAGE COMPARTMENT</p> <p>There will be two (2) overhead rear facing storage compartments installed at the raised roof within the crew cab, on each side of the air conditioner. The compartments will be approximately 21.00" wide x 9.00" high x 20.00" deep at the bottom. Each compartment will include one (1) lift up compartment door. Non-locking latch, paddle handle, and gas operated stay arms will be provided. The compartment will be constructed of smooth aluminum and painted to match the cab interior.</p> <p>Compartment Light</p> <p>The storage compartment lighting will consist of one (1) white LED strip light installed horizontally above each compartment door opening.</p>
0766467	Upholstery, Seats In Cab, All Vinyl, Seats Inc, CARE	<p>SEAT UPHOLSTERY</p> <p>All seat upholstery will be leather grain 36 oz dark silver gray vinyl resistant to oil, grease and mildew. The cab will have four (4) seating positions.</p>
0511471	No SCBA Brackets Required In Cab Seats, Imp/Vel, AXT 2010, Qtm 2010, Dash CF	
0603866	Seat Belt, Dual Retractor, ReadyReach, Saber FR/Enforcer	<p>SEAT BELTS</p> <p>All cab and tiller cab (if applicable) seating positions will have red seat belts. To provide quick, easy use for occupants wearing bunker gear, the female buckle and seat belt webbing length will meet or exceed the current edition of NFPA 1901 and CAN/ULC - S515 standards. The 3-point shoulder type seat belts will include height adjustment. This adjustment will optimize the belts effectiveness and comfort for the seated firefighter. The 3-point shoulder type seat belts will be furnished with dual automatic retractors that will provide ease of operation in the normal seating position. The 3-point shoulder type belts will also include the ReadyReach D-loop assembly to the shoulder belt system. The ReadyReach feature adds an extender arm to the D-loop location placing the D-loop in a closer, easier to reach location. Any flip up seats will include a 3-point shoulder type belts only. To ensure safe operation, the seats will be equipped with seat belt sensors in the seat cushion and belt receptacle that will activate an alarm indicating a seat is occupied but not buckled.</p>
0602464	Helmet Storage, Provided by Fire Department, NFPA 2016	<p>HELMET STORAGE PROVIDED BY FIRE DEPARTMENT</p> <p>NFPA 1901, 2016 edition, section 14.1.7.4.1 requires a location for helmet storage be provided. There is no helmet storage on the apparatus as manufactured. The fire department will provide a location for storage of helmets.</p>
0604209	SP Lights, Dome, FRP Dual LED 4 Lts, Crew Cab Light Location	<p>CAB DOME LIGHTS</p> <p>There will be four (4) dual LED dome lights with black bezels provided. Two (2) lights will be mounted above the inside shoulder of the driver and officer and two (2) lights will be installed, one (1) on each side of the crew cab, located determined at precon. The color of the LED's will be red and white. The white LED's will be controlled by the door switches. The color LED's will be controlled by the lens switch. In order to ensure exceptional illumination, each white LED dome light will provide a minimum of 10.1 foot-candles (fc) covering an entire 20.00" x 20.00" square seating position when mounted 40.00" above the seat.</p>
0727540	Spotlight, Golight/RadioRay, Model 20**4GT, LED, 1 Lt	<p>CAB SPOTLIGHT</p> <p>There will be one (1) Golight/RadioRay®, Model 20**4GT, white LED spotlight located on the cab roof, Centered on the roof behind the light bar.. The spotlight will be mounted on a painted Z bracket. This light may be load managed when the parking brake is applied.</p>
0650074	Controller, Spotlight, Golight, Wired Dash Mount, 1 Lt	<p>SPOTLIGHT CONTROLLER</p> <p>There will be one (1) wired dash mounted remote provided for the spotlight.</p>
0649964	Location, Spotlight Controller, Officer's Side	<p>SPOTLIGHT CONTROLLER LOCATION</p> <p>The remote to control each spotlight will be located within reach of the officer.</p>
0589669	Handlts, (4) Pelican, 9410L, 12v DC, Shoulder Strap	<p>HAND HELD SPOTLIGHT</p> <p>There will be four (4) Pelican Products, Model 9410L LED, 12v DC rechargeable lights mounted D1, D3, P3, one ship loose. Exact location provide at post paint visit. The color will be yellow. Each charger will be hard wired to the 12 VDC system.</p>
0622803	Cab Instruments, Black Gauges, Black Bezels, Enforcer MUX	<p>CAB INSTRUMENTATION</p> <p>The cab instrument panel will be a molded ABS panel and include gauges, an LCD display, telltale indicator lamps, control switches, alarms, and a diagnostic panel. The function of the instrument panel controls and switches will be identified by a label adjacent to each item. Actuation of the headlight switch will illuminate the labels in low light conditions. Telltale indicator</p>

lamps will not be illuminated unless necessary. The cab instruments and controls will be conveniently located within the forward cab section, forward of the driver. The gauge assembly and switch panels are designed to be removable for ease of service and low cost of ownership.

Gauges

The gauge panel will include the following ten (10) black faced gauges with black bezels to monitor vehicle performance:

Voltmeter gauge (volts):

Low volts (11.8 VDC)

Amber caution indicator on the information center with intermittent alarm

Amber caution light on gauge assembly

High volts (15.5 VDC)

Amber caution indicator on the information center with intermittent alarm

Amber caution light on gauge assembly

Very low volts (11.3 VDC)

Red warning indicator on the information center with a steady alarm

Amber caution light on gauge assembly

Very high volts (16.0 VDC)

Red warning indicator on the information center with a steady alarm

Amber caution light on gauge assembly

Engine Tachometer (RPM)

Speedometer MPH (Major Scale), KM/H (Minor Scale)

Fuel level gauge (Empty - Full in fractions):

Low fuel (1/8 full)

Amber caution indicator on the information center with intermittent alarm

Amber caution light on gauge assembly

Very low fuel (1/32 full)

Red caution indicator on the information center with steady alarm

Amber caution light on gauge assembly

Engine Oil pressure Gauge (PSI):

Low oil pressure to activate engine warning lights and alarms

Red caution indicator on the information center with steady alarm

Amber caution light on gauge assembly

Front Air Pressure Gauges (PSI):

Low air pressure to activate warning lights and alarm

Red warning indicator on the information center with a steady alarm

Amber caution light on gauge assembly

Rear Air Pressure Gauges (PSI):

Low air pressure to activate warning lights and alarm

Red warning indicator on the information center with a steady alarm

Amber caution light on gauge assembly

Transmission Oil Temperature Gauge (Fahrenheit):

High transmission oil temperature activates warning lights and alarm

Amber caution indicator on the information center with intermittent alarm

Amber caution light on gauge assembly

Engine Coolant Temperature Gauge (Fahrenheit):

High engine temperature activates an engine warning light and alarms

Amber caution indicator on the information center with intermittent alarm

Amber caution light on gauge assembly

Diesel Exhaust Fluid Level Gauge (Empty - Full in fractions):

Low fluid (1/8 full)

Amber indicator light in gauge dial

All gauges will perform prove out at initial power-up to ensure proper performance.

Indicator Lamps

To promote safety, the following telltale indicator lamps will be located on the instrument panel in clear view of the driver. The indicator lamps will be "dead-front" design that is only visible when active. The colored indicator lights will have descriptive text or symbols.

The following amber telltale lamps will be present:

Low coolant

Trac cntl (traction control) (where applicable)

Check engine

Check trans (check transmission)

Aux brake overheat (Auxiliary brake overheat)

Air rest (air restriction)

Caution (triangle symbol)

Water in fuel

DPF (engine diesel particulate filter regeneration)

Trailer ABS (where applicable)

Wait to start (where applicable)

HET (engine high exhaust temperature) (where applicable)

ABS (antilock brake system)

MIL (engine emissions system malfunction indicator lamp) (where applicable)

Side roll fault (where applicable)

Front air bag fault (where applicable)

The following red telltale lamps will be present:

Warning (stop sign symbol)

Seat belt

Parking brake

Stop engine

Rack down

The following green telltale lamps will be provided:

Left turn

Right turn

Battery on

The following blue telltale lamp will be provided:

High beam

Alarms

Audible steady tone warning alarm: A steady audible tone alarm will be provided whenever a warning message is present.

Audible pulsing tone caution alarm: A pulsing audible tone alarm (chime/chirp) will be provided whenever a caution message is present without a warning message being present.
Alarm silence: Any active audible alarm will be able to be silenced by holding the ignition switch at the top position for three (3) to five (5) seconds. For improved safety, silenced audible alarms will intermittently chirp every 30 seconds until the alarm condition no longer exists. The intermittent chirp will act as a reminder to the operator that a caution or warning condition still exists. Any new warning or caution condition will enable the steady or pulsing tones respectively.

Indicator Lamp and Alarm Prove-Out

A system will be provided which automatically tests telltale indicator lights and alarms located on the cab instrument panel. Telltale indicators and alarms will perform prove-out at initial power-up to ensure proper performance.

Control Switches

For ease of use, the following controls will be provided immediately adjacent to the cab instrument panel within easy reach of the driver. All switches will have backlit labels for low light applications.

Headlight/Parking light switch: A three (3)-position maintained rocker switch will be provided. The first switch position will deactivate all parking and headlights. The second switch position will activate the parking lights. The third switch will activate the headlights.

Panel back lighting intensity control switch: A three (3)-position momentary rocker switch will be provided. Pressing the top half of the switch, "Panel Up" increases the panel back lighting intensity and pressing the bottom half of the switch, "Panel Down" decreases the panel back lighting intensity. Pressing the half or bottom half of the switch several times will allow back lighting intensity to be gradually varied from minimum to maximum intensity level for ease of use.

Ignition switch: A three (3)-position maintained/momentary rocker switch will be provided. The first switch position will turn off and deactivate vehicle ignition. The second switch position will activate vehicle ignition and will perform prove-out on the telltale indicators and alarms for 3 to 5 seconds after the switch is turned on. A green indicator lamp is activated with vehicle ignition. The third momentary position will temporarily silence all active cab alarms. An alarm "chirp" may continue as long as alarm condition exists. Switching ignition to off position will terminate the alarm silence feature and reset function of cab alarm system.

Engine start switch: A two (2)-position momentary rocker switch will be provided. The first switch position is the default switch position. The second switch position will activate the vehicle's engine. The switch actuator is designed to prevent accidental activation.

Hazard switch: will be provided on the instrument panel or on the steering column.
Heater, defroster, and optional air conditioning control panel: A control panel with membrane switches will be provided to control heater/defroster temperature and heater, defroster, and air conditioning fan speeds. A green LED status bar will indicate the relative temperature and fan speed settings.

Turn signal arm: A self-canceling turn signal with high beam headlight and windshield wiper/washer controls will be provided. The windshield wiper control will have high, low, and intermittent modes.

Parking brake control: An air actuated push/pull park brake control valve will be provided.

Chassis horn control: Activation of the chassis horn control will be provided through the center of the steering wheel.

High idle engagement switch: A momentary rocker switch with integral indicator lamp will be provided. The switch will activate and deactivate the high idle function. The "OK To Engage High Idle" indicator lamp must be active for the high idle function to engage. A green indicator lamp integral to the high idle engagement switch will indicate when the high idle function is engaged.

"OK To Engage High Idle" indicator lamp: A green indicator light will be provided next to the high idle activation switch to indicate that the interlocks have been met to allow high idle engagement.

Emergency switching will be controlled by a single Emergency Master switch which controls all emergency warning lights including lightbars, cab warning lights, body warning lights and high beam flash if applicable.

An additional "Emergency Master" button will be provided on the lower left hand corner of the gauge panel to allow convenient control of the "Emergency Master" system from inside the driver's door when standing on the ground.

Custom Switch Panels

The design of cab instrumentation will allow for emergency lighting and other switches to be placed within easy reach of the operator thus improving safety. There will be positions for up to four (4) switch panels in the lower instrument console and up to six (6) switch panels in the overhead visor console. All switches have backlit labels for low light conditions.

Diagnostic Panel

A diagnostic panel will be accessible while standing on the ground and located inside the driver's side door left of the steering column. The diagnostic panel will allow diagnostic tools such as computers to connect to various vehicle systems for improved troubleshooting providing a lower cost of ownership. Diagnostic switches will allow ABS systems to provide blink codes should a problem exist.

The diagnostic panel will include the following:

Engine diagnostic port

Transmission diagnostic port

ABS diagnostic port

Roll sensor diagnostic port

Command Zone USB diagnostic port

ABS diagnostic switch (blink codes flashed on ABS telltale indicator)

Diesel particulate filter regeneration switch (where applicable)

Diesel particulate filter regeneration inhibit switch (where applicable)

Cab LCD Display

A digital four (4)-row by 20-character dot matrix display will be integral to the gauge panel.

The display will be capable of showing simple graphical images as well as text. The display will be split into three (3) sections. Each section will have a dedicated function.

The upper left section will display the outside ambient temperature.

The upper right section will display the following, along with other configuration specific

information:

Odometer

Trip mileage

PTO hours

Fuel consumption

Engine hours

The bottom section will display **INFO**, **CAUTION**, and **WARNING** messages. Text messages will automatically activate to describe the cause of an audible caution or warning alarm. The LCD will be capable of displaying multiple text messages should more than one caution or warning condition exist.

0509511	Air Restriction Indicator, Imp/Vel, AXT, Dash CF, Enf MUX	AIR RESTRICTION INDICATOR A high air restriction warning indicator light LCD message with amber warning indicator and audible alarm will be provided.
0668061	Light, Do Not Move Apparatus, WIn VTX609R Red LED	"DO NOT MOVE APPARATUS" INDICATOR There will be a Whelen, Model VTX609R, red LED indicator light with chrome trim located in the driving compartment. This light will be illuminated automatically per the current NFPA requirements. The light will be labeled "Do Not Move Apparatus If Light Is On." The same circuit that activates the Do Not Move Apparatus indicator will activate a pulsing alarm when the parking brake is released.
0509042	Messages, Open Dr/DNMT, Color Dsply,	DO NOT MOVE TRUCK MESSAGES Messages will be displayed on the Command Zone™, color display located within sight of the driver whenever the Do Not Move Truck light is active. The messages will designate the item or items not in the stowed for vehicle travel position (parking brake disengaged). The following messages will be displayed (where applicable): Do Not Move Truck DS Cab Door Open (Driver Side Cab Door Open) PS Cab Door Open (Passenger's Side Cab Door Open) DS Crew Cab Door Open (Driver Side Crew Cab Door Open) PS Crew Cab Door Open (Passenger's Side Crew Cab Door Open) DS Body Door Open (Driver Side Body Door Open) PS Body Door Open (Passenger's Side Body Door Open) Rear Body Door Open DS Ladder Rack Down (Driver Side Ladder Rack Down) PS Ladder Rack Down (Passenger Side Ladder Rack Down) Deck Gun Not Stowed Lt Tower Not Stowed (Light Tower Not Stowed) Fold Tank Not Stowed (Fold-A-Tank Not Stowed) Aerial Not Stowed (Aerial Device Not Stowed) Stabilizer Not Stowed Steps Not Stowed Handrail Not Stowed Any other device that is opened, extended, or deployed that creates a hazard or is likely to cause major damage to the apparatus if the apparatus is moved will be displayed as a caution message after the parking brake is disengaged.
0622798	Switching, Cab Instrument Lower Console & Overhead, Rocker MUX, Enforcer	SWITCH PANELS The built-in switch panels will be located in the lower console or overhead console of the cab. The switches will be rocker-type and include an integral indicator light. For quick, visual indication the switch will be illuminated whenever the switch is active. A 2-ply, scratch resistant laser engraved Gravoply label indicating the use of each switch will be placed below the switches. The label will allow light to pass through the letters for improved visibility in low light conditions. Switches and light source are integral to the switch panel assembly.
0768139	SP Wiper Control, 2-Speed with Intermittent, Saber FR/Enforcer, Above Ign Switch	WIPER CONTROL Wiper control will consist of a two (2)-speed windshield wiper control with intermittent feature and windshield washer controls. The control will be located above the ignition switch.
0585913	Wiring, Spare, 20 A 12V DC, 6 Circuit Fuse Block, Blue Sea 5025 2nd	SPARE CIRCUIT There will be one (1) pair of wires, including a positive and a negative, installed on the apparatus. The above wires will have the following features: The positive wire will be connected directly to the battery switched power. The negative wire will be connected to ground. Wires will be protected to 20 amps at 12 volts DC. Power and ground will terminate RS rear facing overhead compartment, leave loose until final inspection. Termination will be to a Blue Sea System, Model 5025, 6 circuit with negative bus bar. The terminal block will include a cover with circuit labels. Wires will be sized to 125% of the protection. This circuit(s) may be load managed when the parking brake is set.

0585914		Wiring, Spare, 20 A 12V DC, 6 Circuit Fuse Block, Blue Sea 5025 1st	<p>SPARE CIRCUIT</p> <p>There will be three (3) pair of wires, including a positive and a negative, installed on the apparatus.</p> <p>The above wires will have the following features:</p> <p>The positive wire will be connected directly to the battery power.</p> <p>The negative wire will be connected to ground.</p> <p>Wires will be protected to 20 amps at 12 volts DC.</p> <p>Power and ground will terminate LS1, RS3, loose with a 5' coil, one behind the driver seat with a stainless cover, all exact locations provided at precon.</p> <p>Termination will be to a Blue Sea System, Model 5025, 6 circuit with negative bus bar. The terminal block will include a cover with circuit labels.</p> <p>Wires will be sized to 125% of the protection.</p> <p>This circuit(s) may be load managed when the parking brake is set.</p>
0579884	SP	Wiring, Spare, 50 A 12V DC, 12 Circuit Fuse Block, Blue Sea 5026 1st	<p>SPARE CIRCUIT</p> <p>There will be one (1) pair of wires, including a positive and a negative, installed on the apparatus.</p> <p>The above wires will have the following features:</p> <p>The positive wire will be connected directly to the battery power.</p> <p>The negative wire will be connected to ground.</p> <p>Wires will be protected to 50 amps at 12 volts DC.</p> <p>Power and ground will terminate P/S crew cab rear facing overhead compartment.</p> <p>Termination will be to a Blue Sea System, Model 5025, 12 circuit with negative bus bar. The terminal block will include a cover with circuit labels.</p> <p>Wires will be sized to 125% of the protection.</p> <p>This circuit(s) may be load managed when the parking brake is set.</p>
0560535		Wiring, Spare, 15 A 12V DC 4th	<p>SPARE CIRCUIT</p> <p>There will be two (2) pair of wires, including a positive and a negative, installed on the apparatus.</p> <p>The above wires will have the following features:</p> <p>The positive wire will be connected directly to the battery power.</p> <p>The negative wire will be connected to ground.</p> <p>Wires will be protected to 15 amps at 12 volts DC.</p> <p>Power and ground will terminate In a box mounted to the inside of each forward facing outboard seat riser.</p> <p>Termination will be with 15 amp, power point plug with rubber cover.</p> <p>Wires will be sized to 125 percent of the protection.</p> <p>This circuit(s) may be load managed when the parking brake is set.</p>
0548004		Wiring, Spare, 15 A 12V DC 1st	<p>SPARE CIRCUIT</p> <p>There will be two (2) pair of wires, including a positive and a negative, installed on the apparatus.</p> <p>The above wires will have the following features:</p> <p>The positive wire will be connected directly to the battery power</p> <p>The negative wire will be connected to ground</p> <p>Wires will be protected to 15 amps at 12 volts DC</p> <p>Power and ground will terminate Two in P1, match provided picture and mount on a stainless steel plate</p> <p>Termination will be with 15 amp, power point plug with rubber cover</p> <p>Wires will be sized to 125 percent of the protection</p> <p>The circuit(s) may be load managed when the parking brake is set.</p>
0548007		Wiring, Spare, 15 A 12V DC 3rd	<p>SPARE CIRCUIT</p> <p>There will be four (4) pair of wires, including a positive and a negative, installed on the apparatus.</p> <p>The above wires will have the following features:</p> <p>The positive wire will be connected directly to the battery power.</p> <p>The negative wire will be connected to ground.</p> <p>Wires will be protected to 15 amps at 12 volts DC.</p> <p>Power and ground will terminate 3 officers dash area per switch panel layout, one driver side per layout.</p> <p>Termination will be with 15 amp, power point plug with rubber cover.</p> <p>Wires will be sized to 125 percent of the protection.</p> <p>This circuit(s) may be load managed when the parking brake is set.</p>
0594194		Radio, AM/FM/CD/WB/Aux in, Panasonic	<p>RADIO WITH CD PLAYER</p> <p>There will be a Panasonic™, AM/FM/Weather Band stereo radio with compact disc player and auxiliary input jack installed.</p> <p>The compact disc stereo radio will be mounted per switch panel layout.</p> <p>The quantity and location of the speakers will be one (1) pair of 5.25" speakers in the cab and one (1) pair of 5.25" speakers in the crew cab.</p> <p>The type and location of the antenna will be a roof-mounted rubber antenna located in an open space, on the cab roof.</p>
0679284		Switch, 12V (Inst Pnl), AM/FM Radio, Off Switch, Auto On	<p>SWITCH, MASTER, AM/FM RADIO</p> <p>There will be a remote switch provided inside the cab to control the AM/FM radio. The switch will be installed panel #9. The radio will automatically turn on with when the battery switch is turned on.</p>

0767722

SP

Bracket, Mounting, 3 Push Buttons and 1 PTT Button, Horizontally, PS

PUSH BUTTON MOUNTING BRACKET

There will be a mounting bracket provided officer side engine tunnel, leave loose until construction review for exact location for the mounting of electric controls. The mounting bracket will be large enough for three (3) push buttons and one (1) intercom push to talk button. The controls and labels will be mounted horizontally, side by side. The bracket will be fabricated from smooth aluminum and finished the same color as the instrument panel.

0615386

Vehicle Information Center, 7" Color Display, Touchscreen, MUX

INFORMATION CENTER

An information center employing a 7.00" diagonal touch screen color LCD display will be encased in an ABS plastic housing.

The information center will have the following specifications:

Operate in temperatures from -40 to 185 degrees Fahrenheit

An Optical Gel will be placed between the LCD and protective lens

Five weather resistant user interface switches

Grey with black accents

Sunlight Readable

Linux operating system

Minimum of 1000nits rated display

Display can be changed to an available foreign language

A LCD display integral to the cab gauge panel will be included as outlined in the cab instrumentation area.

Programmed to read US Customary

General Screen Design

Where possible, background colors will be used to provide "At a Glance" vehicle information. If information provided on a screen is within acceptable limits, a green background will be used.

If a caution or warning situation arises the following will occur:

An amber background/text color will indicate a caution condition

A red background/text color will indicate a warning condition

The information center will utilize an "Alert Center" to display text messages for audible alarm tones. The text messages will be written to identify the item(s) causing the audible alarm to sound. If more than one (1) text message occurs, the messages will cycle every second until the problem(s) have been resolved. The background color for the "Alert Center" will change to indicate the severity of the "warning" message. If a warning and a caution condition occur simultaneously, the red background color will be shown for all alert center messages.

A label for each button will exist. The label will indicate the function for each active button for each screen. Buttons that are not utilized on specific screens will have a button label with no text or symbol.

Home/Transit Screen

This screen will display the following:

Vehicle Mitigation (if equipped)

Water Level (if the water level system includes compatible communications to the information center)

Foam Level (if the foam level system includes compatible communications to the information center)

Seat Belt Monitoring Screen Seat Belt Monitoring Screen

Tire Pressure Monitoring (if equipped)

Digital Speedometer

Active Alarms

On Scene Screen

This screen will display the following and will be auto activated with pump engaged (if equipped):

Battery Voltage

Fuel

Oil Pressure

Coolant Temperature

RPM

Water Level (if equipped)

Foam Level (if equipped)

Foam Concentration (if equipped)

Water Flow Rate (if equipped)

Water Used (if equipped)

Active Alarms

Virtual Buttons

There will be four (4) virtual switch panel screens that match the overhead and lower lighting and HVAC switch panels.

Page Screen

The page screen will display the following and allow the user to progress into other screens for further functionality:

Diagnostics

Faults

Listed by order of occurrence

Allows to sort by system

Interlock

Throttle Interlocks

Pump Interlocks (if equipped)

Aerial Interlocks (if equipped)

PTO Interlocks (if equipped)

Load Manager

A list of items to be load managed will be provided. The list will provide a description of the load. The lower the priority numbers the earlier the device will be shed should a low voltage condition occur.

The screen will indicate if a load has been shed (disabled) or not shed.

"At a glance" color features are utilized on this screen.

Systems

Command Zone

Module type and ID number

Module Version

Input or output number
 Circuit number connected to that input or output
 Status of the input or output
 Power and Constant Current module diagnostic information
 Foam (if equipped)
 Pressure Controller (if equipped)
 Generator Frequency (if equipped)
 Live Data
 General Truck Data
 Maintenance
 Engine oil and filter
 Transmission oil and filter
 Pump oil (if equipped)
 Foam (if equipped)
 Aerial (if equipped)
 Setup
 Clock Setup
 Date & Time
 12 or 24 hour format
 Set time and date
 Backlight
 Daytime
 Night time
 Sensitivity
 Unit Selection
 Home Screen
 Virtual Button Setup
 On Scene Screen Setup
 Configure Video Mode
 Set Video Contrast
 Set Video Color
 Set Video Tint
 Do Not Move
 The screen will indicate the approximate location and type of item that is open or is not stowed for travel. The actual status of the following devices will be indicated
 Driver Side Cab Door
 Passenger's Side Cab Door
 Driver Side Crew Cab Door
 Passenger's Side Crew Cab Door
 Driver Side Body Doors
 Passenger's Side Body Doors
 Rear Body Door(s)
 Ladder Rack (if applicable)
 Deck Gun (if applicable)
 Light Tower (if applicable)
 Hatch Door (if applicable)
 Stabilizers (if applicable)
 Steps (if applicable)
 Notifications
 View Active Alarms
 Shows a list of all active alarms including date and time of the occurrence is shown with each alarm
 Silence Alarms - All alarms are silenced
 Timer Screen
 HVAC (if equipped)
 Tire Information (if equipped)
 Ascendant Set Up Confirmation (if equipped)
 Button functions and button labels may change with each screen.

0734854 Collision Mitigation, Not Requested

0730766 Disable Notifications, Vehicle Information Center

INFORMATION CENTER NOTIFICATIONS DISABLED
 The Command Zone™ information center notifications will be disabled.

0606249	Vehicle Data Recorder w/CZ and Overhead Display Seat Belt Monitor	<p>VEHICLE DATA RECORDER There will be a vehicle data recorder (VDR) capable of reading and storing vehicle information provided. The information stored on the VDR can be downloaded through a USB port mounted in a convenient location determined by cab model. A USB cable can be used to connect the VDR to a laptop to retrieve required information. The program to download the information from the VDR will be available to download on-line. The vehicle data recorder will be capable of recording the following data via hardwired and/or CAN inputs: Vehicle Speed - MPH Acceleration - MPH/sec Deceleration - MPH/sec Engine Speed - RPM Engine Throttle Position - % of Full Throttle ABS Event - On/Off Seat Occupied Status - Yes/No by Position Seat Belt Buckled Status - Yes/No by Position Master Optical Warning Device Switch - On/Off Time - 24 Hour Time Date - Year/Month/Day</p>
		<p>Seat Belt Monitoring System A seat belt monitoring system (SBMS) will be provided on the Command Zone™ color display and in the center overhead of the cab instrument panel. The SBMS will be capable of monitoring up to 10 seating positions indicating the status of each seat position per the following: Seat Occupied & Buckled = Green LED indicator illuminated Seat Occupied & Unbuckled = Red LED indicator with audible alarm No Occupant & Buckled = Red LED indicator with audible alarm No Occupant & Unbuckled = No indicator and no alarm The seat belt monitoring screen will become active on the Command Zone color display when: The home screen is active: and there is any occupant seated but not buckled or any belt buckled with an occupant. and there are no other Do Not Move Apparatus conditions present. As soon as all Do Not Move Apparatus conditions are cleared, the SBMS will be activated. The SBMS will include an audible alarm that will warn that an unbuckled occupant condition exists and the parking brake is released, or the transmission is not in park.</p>
0067116	Bracket, Johnny Ray Swivel, 7 Lb. Rating	<p>BRACKET, JOHNNY RAY There will be one (1) Johnny Ray, radio swivel bracket rated for 7 lbs. and will be provided and installed ship loose.</p>
0764625	SP Remote Push-To-Talk, David Clark, Dash Mount @ PU	<p>REMOTE RADIO PUSH-TO-TALK @ PICK UP There will be two (2) David Clark, remote radio Push-To-Talk switch installed at driver and officer located per Customer instructions. This switch is being installed at customer pick up. The following will be included: 15.00' of two (2) conductor cable One (1) 18352G-07 five (5) pin MS connector One (1) DC Push To Talk button</p>
0734049	SP Camera, FRC, Mux, Inview360HD	<p>VEHICLE CAMERA SYSTEM There will be a FRC/Seon InView 360 HD™ degree surround view four (4) high definition camera system provided. The system will have a built-in Digital Video Recorder (DVR) with built in GPS and accelerometer to record all connected cameras. The camera images will be displayed on the driver's vehicle information center display. The camera image will be a split screen: The left side of the screen will always show the 360-degree view The right side of the screen will show: The rear camera when the transmission is in reverse The right side camera when the right turn signal is active The left side camera when the left turn signal is active the forward camera with no triggers active. A switch will be installed per switch panel layout that will activate the camera image on the driver's vehicle information center display when no triggers are present. System calibration will be provided by an FRC/Seon third party vendor. The following components will be included: One (1) SNB100-C00 InView 360 HD kit One (1) XE-BCAAD7-C0A 4P Male to 5P female adapter XE-BCAA402-C0A 5 pin to RCA adapter</p>
0653350	Guards, Vehicle Camera(s), Painted Smooth Aluminum	<p>VEHICLE CAMERA GUARDS There will be three (3) smooth, tapered aluminum guard(s) fastened over the cab / body camera (s) located front camera, both side cameras. The guards will be painted to match the surface they are attached to.</p>
0615112	Pierce Command Zone, Advanced Electronics & Control System, Enforcer, WiFi	<p>ELECTRICAL POWER CONTROL SYSTEM The primary power distribution will be located forward of the officer's seating position and be easily accessible while standing on the ground for simplified maintenance and troubleshooting. Additional electrical distribution centers will be provided throughout the vehicle to house the vehicle's electrical power, circuit protection, and control components. The electrical distribution centers will be located strategically throughout the vehicle to minimize wire length. For ease of</p>

maintenance, all electrical distribution centers will be easily accessible. All distribution centers containing fuses, circuit breakers and/or relays will be easily accessible. Distribution centers located throughout the vehicle will contain battery powered studs for supplying customer installed equipment thus providing a lower cost of ownership. Circuit protection devices, which conform to SAE standards, will be utilized to protect electrical circuits. All circuit protection devices will be rated per NFPA requirements to prevent wire and component damage when subjected to extreme current overload. General protection circuit breakers will be Type-I automatic reset (continuously resetting). When required, automotive type fuses will be utilized to protect electronic equipment. Control relays and solenoid will have a direct current rating of 125 percent of the maximum current for which the circuit is protected per NFPA.

Solid-State Control System

A solid-state electronics based control system will be utilized to achieve advanced operation and control of the vehicle components. A fully computerized vehicle network will consist of electronic modules located near their point of use to reduce harness lengths and improve reliability. The control system will comply with SAE J1939-11 recommended practices.

The control system will operate as a master-slave system whereas the main control module instructs all other system components. The system will contain patented Mission Critical software that maintains critical vehicle operations in the unlikely event of a main controller error. The system will utilize a Real Time Operating System (RTOS) fully compliant with OSEK/VDX™ specifications providing a lower cost of ownership.

For increased reliability and simplified use the control system modules will include the following attributes:

Green LED indicator light for module power

Red LED indicator light for network communication stability status

Control system self test at activation and continually throughout vehicle operation

No moving parts due to transistor logic

Software logic control for NFPA mandated safety interlocks and indicators

Integrated electrical system load management without additional components

Integrated electrical load sequencing system without additional components

Customized control software to the vehicle's configuration

Factory and field re programmable to accommodate changes to the vehicle's operating parameters

Complete operating and troubleshooting manuals

USB connection to the main control module for advanced troubleshooting

To assure long life and operation in a broad range of environmental conditions, the solid-state control system modules will meet the following specifications:

Module circuit board will meet SAE J771 specifications

Operating temperature from -40C to +70C

Storage temperature from -40C to +70C

Vibration to 50g

IP67 rated enclosure (Totally protected against dust and also protected against the effect of temporary immersion between 15 centimeters and one (1) meter)

Operating voltage from eight (8) volts to 16 volts DC

The main controller will activate status indicators and audible alarms designed to provide warning of problems before they become critical.

Circuit Protection and Control Diagram

Copies of all job-specific, computer network input and output (I/O) connections will be provided with each chassis. The sheets will indicate the function of each module connection point, circuit protection information (where applicable), wire numbers, wire colors and load management information.

On-Board Electrical System Diagnostics

Advanced on-board diagnostic messages will be provided to support rapid troubleshooting of the electrical power and control system. The diagnostic messages will be displayed on the information center located at the driver's position.

The on-board information center will include the following diagnostic information:

Text description of active warning or caution alarms

Simplified warning indicators

Amber caution indication with intermittent alarm

Red warning indication with steady tone alarm

Prognostics

A software based vehicle tool will be provided to predict remaining life of the vehicles critical fluid and events.

The system will send automatic indications to the Command Zone, color display and/or wireless enabled device to proactively alert of upcoming service intervals.

Prognostics will include:

Engine oil and filter

Transmission oil and filter

Pump oil (if equipped)

Foam oil (if equipped)

Aerial oil and filter (if equipped)

Advanced Diagnostics

An advanced, Windows-based, diagnostic software program will be provided for this control system. The software will provide troubleshooting tools to service technicians equipped with a Windows-based computer or wireless enabled device.

The service and maintenance software will be easy to understand and use and have the ability to view system input/output (I/O) information.

Tech Module With WiFi

An in cab module will provide WiFi wireless interface and data logging capability. The WiFi interface will comply with IEEE 802.11 b/g/n capabilities while communicating at 2.4 Gigahertz. The module will provide an external antenna connection allowing a line of site communication range of up to 300 feet with a roof mounted antenna.

The module will transmit a password protected web page to a WiFi enabled device (i.e. most smart phones, tablets or laptops) allowing two levels of user interaction. The firefighter level will allow vehicle monitoring of the vehicle and firefighting systems on the apparatus. The technician level will allow diagnostic access to inputs and outputs installed on the Command Zone, control and information system.

The data logging capability will record faults from the engine, transmission, ABS and Command

Zone, control and information systems as they occur. No other data will be recorded at the time the fault occurs. The data logger will provide up to 2 Gigabytes of data storage. A USB connection will be provided on the Tech Module. It will provide a means to download data logger information and update software in the device.

Indicator Light and Alarm Prove-Out System

A system will be provided which automatically tests basic indicator lights and alarms located on the cab instrument panel.

Voltage Monitor System

A voltage monitoring system will be provided to indicate the status of the battery system connected to the vehicle's electrical load. The system will provide visual and audible warning when the system voltage is below or above optimum levels.

The alarm will activate if the system falls below 11.8 volts DC for more than two (2) minutes.

Power and Ground Studs

Spare circuits will be provided in the primary distribution center for two-way radio equipment.

The spare circuits will consist of the following:

One (1) 12-volt DC, 30 amp battery direct spare

One (1) 12-volt DC ground and un-fused switched battery stud located in or adjacent to the power distribution center

Enhanced Software

The solid-state control system will include the following software enhancements:

All perimeter lights and scene lights (where applicable) will be deactivated when the parking brake is released.

Cab and crew cab dome lights will remain on for 10 seconds for improved visibility after the doors close. The dome lights will dim after 10 seconds or immediately if the vehicle is put into gear.

Cab and crew cab perimeter lights will remain on for 10 seconds for improved visibility after the doors close. The dome lights will dim after 10 seconds or immediately if the vehicle is put into gear.

EMI/RFI Protection

To prevent erroneous signals from crosstalk contamination and interference, the electrical system will meet, at a minimum, SAE J551/2, thus reducing undesired electromagnetic and radio frequency emissions. An advanced electrical system will be used to ensure radiated and conducted electromagnetic interference (EMI) or radio frequency interference (RFI) emissions are suppressed at their source.

The apparatus will have the ability to operate in the electromagnetic environment typically found in fire ground operations to ensure clean operations. The electrical system will meet electromagnetic susceptibility conforming to SAE J1113/25 Region 1, Class C EMR for 10KHz-1GHz to 100 Volts/Meter. The vehicle OEM, upon request, will provide EMC testing reports from testing conducted on an entire apparatus and will certify that the vehicle meets SAE J551/2 and SAE J1113/25 Region 1, Class C EMR for 10KHz-1GHz to 100 Volts/Meter requirements.

EMI/RFI susceptibility will be controlled by applying appropriate circuit designs and shielding. The electrical system will be designed for full compatibility with low-level control signals and high-powered two-way radio communication systems. Harness and cable routing will be given careful attention to minimize the potential for conducting and radiated EMI/RFI susceptibility.

0624253

Electrical System, Enforcer MUX

ELECTRICAL

All 12-volt electrical equipment installed by the apparatus manufacturer will conform to modern automotive practices. All wiring will be high temperature crosslink type. Wiring will be run, in loom or conduit, where exposed and have grommets where wire passes through sheet metal.

Automatic reset circuit breakers will be provided which conform to SAE Standards. Wiring will be color, function and number coded. Function and number codes will be continuously imprinted on all wiring harness conductors at 2.00" intervals. Exterior exposed wire connectors will be positive locking, and environmentally sealed to withstand elements such as temperature extremes, moisture and automotive fluids.

Electrical wiring and equipment will be installed utilizing the following guidelines:

All holes made in the roof will be caulked with silicon. Large fender washers, liberally caulked, will be used when fastening equipment to the underside of the cab roof.

Any electrical component that is installed in an exposed area will be mounted in a manner that will not allow moisture to accumulate in it. Exposed area will be defined as any location outside of the cab or body.

Electrical components designed to be removed for maintenance will not be fastened with nuts and bolts. Metal screws will be used in mounting these devices. Also a coil of wire will be provided behind the appliance to allow them to be pulled away from mounting area for inspection and service work.

Corrosion preventative compound will be applied to all terminal plugs located outside of the cab or body. All non-waterproof connections will require this compound in the plug to prevent corrosion and for easy separation (of the plug).

All lights that have their sockets in a weather exposed area will have corrosion preventative compound added to the socket terminal area.

All electrical terminals in exposed areas will have silicon (1890) applied completely over the metal portion of the terminal.

All lights and reflectors, required to comply with Federal Motor Vehicle Safety Standard #108, will be furnished. Rear identification lights will be recessed mounted for protection. Lights and wiring mounted in the rear bulkheads will be protected from damage by installing a false bulkhead inside the rear compartments.

An operational test will be conducted to ensure that any equipment that is permanently attached to the electrical system is properly connected and in working order.

The results of the tests will be recorded and provided to the purchaser at time of delivery.

0098841	Batteries, (6) Deka Grp 31, 1000 CCA each, Threaded Stud	<p>BATTERY SYSTEM Six (6) 12 volt, Deka, Model 1231MF, maintenance free group 31 batteries that include the following features, each, will be provided: 1000 CCA (cold cranking amps) 185 reserve capacity High cycle Ref. CA of 1190 at 0 degrees Fahrenheit 185 reserve capacity Threaded studs</p>
0591552	SP Battery System, Single Start, Cole-Hersee 75920, Lock Out	<p>BATTERY SYSTEM A single starting system will be provided. An ignition switch and starter button will be located on the instrument panel. MASTER BATTERY SWITCH There will be a Cole-Hersee, Model 75920, master battery switch to activate the battery system provided inside the cab within easy reach of the driver. An indicator light will be provided on the instrument panel to notify the driver of the status of the battery system.</p>
0002698	Battery Compartment, Saber/Enforcer	<p>BATTERY COMPARTMENTS Batteries will be placed on non-corrosive mats and stored in well ventilated compartments located under the cab. Heavy-duty, 2/0 gauge, color coded battery cables will be provided. Battery terminal connections will be coated with anti-corrosion compound. Battery solenoid terminal connections will be encapsulated with semi-permanent rubberized compound. JUMPER STUDS One (1) set of battery jumper studs with plastic color-coded covers will be included on the battery compartments.</p>
0628906	Charger, Sngl Sys, Kussmaul, 40/20, 091-216-40/20, 091-194-IND-WT-** Indicator	<p>BATTERY CHARGER There will be one (1) Kussmaul, Model 091-216-40/20, 40 amp 12 volt DC single bank chassis battery charger provided. There will be a Kussmaul, Model 091-194-IND-WT **, indicator provided. The color of the charge indicator cover will be red. The battery saver circuit will be capable of supplying up to 20 amps for external loads such as hand light or auxiliary radio batteries. The battery charger will be wired to the AC shoreline inlet through a splice box to a removable AC receptacle and connector located on the face of the charger.</p>
0091355	Location, Charger, Right Side Front Body Compartment	Battery charger will be located in the front right body compartment, mounted upper forward tank wall RS2.
0530949	Location, Bat Chrg Ind, Driver's Seat Riser	The battery charger indicator will be located on the driver's seat riser.
0016857	Shoreline, 20A 120V, Kussmaul Auto Eject, 091-55-20-120, Super	<p>AUTO EJECT FOR SHORELINE There will be one (1) Kussmaul™, Model 091-55-20-120, 20 amp 120 volt AC shoreline inlet(s) provided to operate the dedicated 120 volt AC circuits on the apparatus. The shoreline inlet(s) will include red weatherproof flip up cover(s). There will be a release solenoid wired to the vehicle's starter to eject the AC connector when the engine is starting. The shoreline(s) will be connected to the battery charger. There will be a mating connector body supplied with the loose equipment. There will be a label installed near the inlet(s) that state the following: Line Voltage Current Rating (amps) Phase Frequency</p>
0026800	Shoreline Location	The shoreline receptacle will be located on the driver side of cab, above wheel.
0560808	Cover, Protection over Battery Charger, Smooth Aluminum	<p>BATTERY CHARGER COVER A removable cover will be fabricated and installed over the battery charger for protection. The cover will be made out of smooth aluminum material.</p>
0082225	Coating, Line-X, Inside Battery Boxes, Black	<p>LINE-X COATING FOR BATTERY BOXES The battery boxes on both sides of cab will have be sprayed with black Line-X polyurethane/polyurea elastomer abrasive resistant material on all interior side walls and on the bottom surface.</p>

0647729	Alternator, 320 amp, Delco Remy 40SI	<p>ALTERNATOR A Delco Remy®, Model 40SI, alternator will be provided. It will have a rated output current of 320 amps, as measured by SAE method J56. The alternator will feature an integral regulator and rectifier system that has been tested and qualified to an ambient temperature of 257 degrees Fahrenheit (125 degrees Celsius). The alternator will be connected to the power and ground distribution system with heavy-duty cables sized to carry the full rated alternator output.</p>
0092582	Load Manager/Sequencer, MUX	<p>ELECTRONIC LOAD MANAGER An electronic load management (ELM) system will be provided that monitors the vehicles 12-volt electrical system, automatically reducing the electrical load in the event of a low voltage condition, and automatically restoring the shed electrical loads when a low voltage condition expires. This ensures the integrity of the electrical system. For improved reliability and ease of use, the load manager system will be an integral part of the vehicle's solid state control system requiring no additional components to perform load management tasks. Load management systems which require additional components will not be allowed. The system will include the following features: System voltage monitoring. A shed load will remain inactive for a minimum of five minutes to prevent the load from cycling on and off. Sixteen available electronic load shedding levels. Priority levels can be set for individual outputs. High Idle to activate before any electric loads are shed and deactivate with the service brake. If enabled: "Load Man Hi-Idle On" will display on the information center. Hi-Idle will not activate until 30 seconds after engine start up. Individual switch "on" indicator to flash when the particular load has been shed. The information center indicates system voltage. The information center, where applicable, includes a "Load Manager" screen indicating the following: Load managed items list, with priority levels and item condition. Individual load managed item condition: ON = not shed SHED = shed</p> <p>SEQUENCER A sequencer will be provided that automatically activates and deactivates vehicle loads in a preset sequence thereby protecting the alternator from power surges. This sequencer operation will allow a gradual increase or decrease in alternator output, rather than loading or dumping the entire 12 volt load to prolong the life of the alternator. For improved reliability and ease of use, the load sequencing system will be an integral part of the vehicle's solid state control system requiring no additional components to perform load sequencing tasks. Load sequencing systems which require additional components will not be allowed. Emergency light sequencing will operate in conjunction with the emergency master light switch. When the emergency master switch is activated, the emergency lights will be activated one by one at half-second intervals. Sequenced emergency light switch indicators will flash while waiting for activation. When the emergency master switch is deactivated, the sequencer will deactivate the warning light loads in the reverse order. Sequencing of the following items will also occur, in conjunction with the ignition switch, at half-second intervals: Cab Heater and Air Conditioning Crew Cab Heater (if applicable) Crew Cab Air Conditioning (if applicable) Exhaust Fans (if applicable) Third Evaporator (if applicable)</p>
0783153	Headlights, Rect LED, JW Spkr Evo 2, AXT/DCF/Enf/Imp/Sab/Vel	<p>HEADLIGHTS There will be four (4) JW Speaker®, Model 8800, 4" x 6" rectangular LED lights mounted in the front quad style, chrome housing on each side of the cab grille: the outside light on each side will contain a part number 055***1 low beam module the inside light on each side will contain a part number 055***1 high beam module the headlight to include chrome bezels The low beam lights will be activated when the headlight switch is on. The high beam and low beam lights will be activated when the headlight switch and the high beam switch is activated.</p>
0625953	Light, Directional, Wln 600 Cmb, Cab Crn, Wrp Bzl Out HD Lts, Enf, Sab FR	<p>DIRECTIONAL LIGHTS There will be two (2) Whelen 600 series, LED combination directional/marker lights provided. The lights will be located on the outside cab corners, next to the headlights. The color of the lenses will be clear.</p>
0648258	Light, Directional, Wln M6T LED Arrow, 15 Degree Angle Bracket, Additional	<p>ADDITIONAL DIRECTIONAL LIGHT There will be two (2) Whelen, Model M6T, amber LED arrow directional lights provided behind the cab each side. Each light will be surface mounted in a 15 degree angle bracket.</p>

0620054	Light, Directional/Marker, Intermediate, Weldon 9186-8580-29 LED 2lts	INTERMEDIATE LIGHT There will be two (2) Weldon, Model 9186-8580-29, amber LED turn signal marker lights furnished, one (1) each side, in the rear fender panel. The light will double as a turn signal and marker light.
0647802	Lights, Clearance/Marker/ID, Front, P25 LED 5 Lts, Saber FR/Enforcer	CAB CLEARANCE/MARKER/ID LIGHTS There will be five (5) amber LED lights provided to indicate the presence and overall width of the vehicle in the following locations: Three (3) amber LED identification lights will be installed in the center of the cab above the windshield. Two (2) amber LED clearance lights will be installed, one (1) on each outboard side of the cab above the windshield.
0563675	Lights, Clearance/Marker/ID, Rear, Truck-Lite 33050R LED 7Lts	REAR CLEARANCE/MARKER/ID LIGHTING There will be three (3) Truck-Lite®, Model 33050R, LED lights used as identification lights recessed and located at the rear of the apparatus per the following: As close as practical to the vertical centerline Centers spaced not less than 6.00" or more than 12.00" apart Red in color All at the same height There will be two (2) Truck-Lite, Model 33050R, LED lights recessed at the rear of the apparatus used as clearance lights located at the rear of the apparatus per the following: To indicate the overall width of the vehicle One (1) each side of the vertical centerline As near the top as practical Red in color To be visible from the rear All at the same height There will be two (2) Truck-Lite, Model 33050R, LED lights recessed on the side of the apparatus as marker lights as close to the rear as practical per the following: To indicate the overall length of the vehicle One (1) each side of the vertical centerline As near the top as practical Red in color To be visible from the side All at the same height There will be two (2) red reflectors located on the rear of the truck facing to the rear. One (1) each side, as far to the outside as practical, at a minimum of 15.00", but no more than 60.00", above the ground. There will be two (2) red reflectors located on the side of the truck facing to the side. One (1) each side, as far to the rear as practical, at a minimum of 15.00", but no more than 60.00", above the ground. Per FMVSS 108 and CMVSS 108 requirements.
0625210	Lights, Directional, Cab Front Side, Truck-Lite 19036Y LED, AXT/Enf	FRONT CAB SIDE CLEARANCE/MARKER LIGHTS There will be two (2) Truck-Lite®, Model 19036Y, amber LED lights installed to the outside of the chrome wrap around bezel, one (1) on each side of the cab. The lights will activate as additional directional lights with the corresponding directional circuit.
0564683	Lights, Tail, WIn M6BTT* Red LED Stop/Tail & M6T* Amber LED Dir Arw For Hsg	REAR FMVSS LIGHTING The rear stop/tail and directional LED lighting will consist of the following: Two (2) Whelen®, Model M6BTT, red LED stop/tail lights Two (2) Whelen, Model M6T, amber LED arrow turn lights The lights will be provided with clear lenses. The lights will be mounted in a polished combination housing.
0561471	Lights, Backup, WIn M6BUW, LED, For Tail Lt Housing	There will be two (2) Whelen Model M6BUW, LED backup lights provided in the tail light housing.
0657766	Bracket, License Plate & Light, P25 LED, w/Special Location	LICENSE PLATE BRACKET There will be one (1) license plate bracket mounted on the left side per the AD, mounted with AVK fasteners only. A white LED light will illuminate the license plate. A stainless steel light shield will be provided over the light that will direct illumination downward, preventing white light to the rear.
0556842	Bezels, WIn, (2) M6 Chrome Pierce, For mtg (4) WIn M6 lights	LIGHTING BEZEL There will be two (2) Whelen, Model M6FCV4P, four (4) place chromed ABS housings with Pierce logos provided for the rear M6 series stop/tail, directional, back up, scene lights or warning lights.
0747835	SP Light, Brake/Tail, TecNiq T10-R*00-1 Brk/Tail, Recessed	ADDITIONAL BRAKE/TAIL LIGHT There will be one (1) TecNiq part number T10-R*00-1, 1.28" high x 14.50" wide x 0.50" deep brake/tail light(s) with red LEDs recessed onto the rear of the body, over B1 door. The lens color (s) to be clear.

0589905	Alarm, Back-up Warning, PRECO 1040	BACK-UP ALARM A PRECO, Model 1040, solid-state electronic audible back-up alarm that actuates when the truck is shifted into reverse will be provided. The device will sound at 60 pulses per minute and automatically adjust its volume to maintain a minimum ten (10) dBA above surrounding environmental noise levels.
0613892	Synchronize, Wln Warning Lights, 2nd	SYNCHRONIZE WARNING LIGHTS The sync wires to the following two (2) lights located Rear upper warning and lower rear warning on the apparatus will be connected together to maintain the flash patterns of the lights. The lights located upper rear warning will remain on phase 1 or flash together. The lights located lower rear warning will be changed to phase 2 or flash opposite the lights selected above.
0614309	Synchronize, Wln Warning Lights, 1st	SYNCHRONIZE WARNING LIGHTS The sync wires to the following two (2) lights located front bumper on the apparatus will be connected together to maintain the flash patterns of the lights. The lights located angled portion of the front bumper each side will remain on phase 1 or flash together. The lights located lights on the end of the front bumper will be changed to phase 2 or flash opposite the lights selected above.
0626588	Lights, Perimeter Cab, TecNiq T10-LC00-1 15" LED 4Dr	CAB PERIMETER SCENE LIGHTS There will be four (4) TecNiq, Model T10-LC00-1, 15.00" lights with white LEDs and 45 degree stainless steel brackets provided per the following: one (1) under the driver's side cab access step one (1) under the passenger's side cab access step one (1) under the passenger's side crew cab access step one (1) under the driver's side crew cab access step The lights will be activated when the battery switch is on, when the respective door is open and by the same control selected for the body perimeter lights.
0617901	Lights, Perimeter Pump House, TecNiq T10-LC00-1 15" LED 2lts	PUMP HOUSE PERIMETER LIGHTS There will be two (2) TecNiq, Model T10-LC00-1, 15.00" white 12 volt DC LED weatherproof strip lights provided under the pump panel running boards, one (1) each side. The lights will be controlled by the same means as the body perimeter lights.
0626579	Lights, Perimeter Body, TecNiq T10-LC00-1 15" LED 2lts, Rear Step	BODY PERIMETER SCENE LIGHTS There will be two (2) TecNiq, Model T10-LC00-1, 15.00" 12 volt DC LED strip lights provided at the rear step area of the body, one (1) each side shining to the rear. The perimeter scene lights will be activated when a switch within reach of the driver is activated and the parking brake is applied and the headlight switch is activated.
0617802	Lights, Perimeter, TecNiq T10-LC00-1 15" LED	ADDITIONAL PERIMETER LIGHTS There will be four (4) TecNiq, Model T10-LC00-1, 1.25" high x 15.00" long white LED light(s) provided under mounted on the forward edge of the wheel wells, just behind RS3 and LS3, also at the rear edge of the wheel wells under RS1 and LS1. These additional lights will be controlled with the other body perimeter lights.
0556360	Lights, Step, P25 LED 4lts, Pump Pnl Sw	STEP LIGHTS Four (4) white LED step lights will be provided. One (1) step light will be provided on each side, on the front compartment face and two (2) step lights at the rear to illuminate the tailboard. In order to ensure exceptional illumination, each light will provide a minimum of 25 foot-candles (fc) covering an entire 15.00" x 15.00" square placed 10.00" below the light and a minimum of 1.5 fc covering an entire 30.00" x 30.00" square at the same 10.00" distance below the light. These step lights will be actuated with the pump panel light switch. All other steps on the apparatus will be illuminated per the current edition of NFPA 1901.
0619047	SP Rear Bulkhead Cup Switch, Stainless Steel	CUP SWITCH There will be a stainless steel cup switch at the rear of the truck for driver side rear bulkhead for the strip light below the rear step above R1 lights.
0640629	Light, Wln, 12V PCPSM1* Pioneer LED Fld/Spt, Surface Mount 1st	12 VOLT LIGHTING There will be two (2) Whelen, Model PCPSM1*, 12 volt surface mounted LED combination spot/flood light(s) located upper rear bulkhead, one each side. The lights will be mounted with chrome flange(s). The light(s) selected above will be controlled by the following: a switch at the driver's side switch panel a switch at the passenger's side switch panel a switch at the rear of apparatus on the driver's side no additional switch location These light(s) may be load managed when the parking brake is set.

0640941	Light, WIn, 12V PCPSM2* Pioneer LED Fld/Spt, Surface Mnt 2nd	12 VOLT LIGHTING	There will be one (1) Whelen, Model PCPSM2*, 12 volt surface mounted LED combination spot/flood light(s) located upper rear crew cab, behind the crew door, P/S. The lights will be mounted with chrome flange(s). The light(s) selected above will be controlled by the following: a switch at the driver's side switch panel a switch at the passenger's side switch panel a switch at the pump operator's panel no additional switch location These light(s) may be load managed when the parking brake is set.
0640991	Light, WIn, 12V PCPSM2* Pioneer LED Fld/Spt, Surface Mnt 1st	12 VOLT LIGHTING	There will be one (1) Whelen, Model PCPSM2*, 12 volt surface mounted LED combination spot/flood light(s) located upper rear crew cab, behind the crew door, D/S. The lights will be mounted with chrome flange(s). The light(s) selected above will be controlled by the following: a switch at the driver's side switch panel a switch at the passenger's side switch panel a switch at the pump operator's panel no additional switch location These light(s) may be load managed when the parking brake is set.
0532358	Not Required, Deck Lights, Other Hose Bed & Rear Lighting		
0645677	Lights, Not Required, Rear Work, Alt. 12 Volt Lights At Rear Body		
0776357	Light, Visor, WIn, 12V P*H2* Pioneer, Cnt Feature, 1st	12 VOLT LIGHTING	There will be two (2) Whelen® Model P*H2*, 17,750 lumens 12 volt DC light(s) with a combination of flood and spot optics provided on the front visor, one (1) on the driver's side and one (1) on the passenger's side with 15 degree outward bracket. The housing(s) painted parts of this light assembly to be white. The light(s) will be controlled by a switch at the driver's side switch panel, by a switch at the driver's side pump panel and by a switch at the passenger's side switch panel. These light(s) may be load managed when the parking brake is applied.
0729721	SP Lights, Hose Bed, Below Aluminum Cover, TecNiq E10-W000-1 LED 4lts	LIGHTS HOSE BED/HOSE BED COVER	There will be four (4) TecNiq, Part number E10-W000-1, white LED lights provided to illuminate the hose bed area. Two (2) LED lights will be installed at the front of the hose bed/storage area and will illuminate the hose bed/storage area. Two (2) LED lights will be installed on the hose bed covers. One (1) on the driver side cover, and one (1) on the passenger side cover. The lights will be mount under the covers, near the location of the handle. Both lights will have a protective tread plate shroud. The lights will be activated when the battery switch is on, and when the hosebed cover is raised.
0794961	Lights, Walk Surf, 8-P25 LED, Hose Bed Cover, Overall Height Restrictions	WALKING SURFACE LIGHT	There will be eight (8) 12 volt DC LED lights provided on the hose bed cover to illuminate the walking surface. The lights will be located near the hose bed cover hinges evenly spaced four (4) on each side. The lights will be activated when the body step lights are on.
0060115	Pumper, Medium, Aluminum, 2nd Gen		
0554271	Body Skirt Height, 20"		

0081452	SP	Tank, Water, 550 Gallon, Poly, Med	<p>WATER TANK</p> <p>Booster tank will have a capacity of 550 gallons and be constructed of polypropylene plastic by United Plastic Fabricating, Incorporated.</p> <p>Tank joints and seams will be nitrogen welded inside and out.</p> <p>Tank will be baffled in accordance with NFPA Bulletin 1901 requirements.</p> <p>Baffles will have vent openings at both the top and bottom to permit movement of air and water between compartments.</p> <p>Longitudinal partitions will be constructed of .38" polypropylene plastic and will extend from the bottom of the tank through the top cover to allow for positive welding.</p> <p>Transverse partitions will extend from 4.00" off the bottom of the tank to the underside of the top cover.</p> <p>All partitions will interlock and will be welded to the tank bottom and sides.</p> <p>Tank top will be constructed of .50" polypropylene. It will be recessed .38" and will be welded to the tank sides and the longitudinal partitions.</p> <p>Tank top will be sufficiently supported to keep it rigid during fast filling conditions.</p> <p>Construction will include 2.00" polypropylene dowels spaced no more than 30.00" apart and welded to the transverse partitions. Two (2) of the dowels will be drilled and tapped (.50" diameter, 13.00" deep) to accommodate lifting eyes.</p> <p>A sump that will be sized dependent on the tank to pump plumbing will be provided at the bottom of the water tank.</p> <p>Sump will include a drain plug and the tank outlet.</p> <p>Tank will be installed in a fabricated cradle assembly constructed of structural steel.</p> <p>Sufficient crossmembers will be provided to properly support bottom of tank. Crossmembers will be constructed of steel bar channel or rectangular tubing.</p> <p>Tank will "float" in cradle to avoid torsional stress caused by chassis frame flexing. Rubber cushions, .50" thick x 3.00" wide, will be placed on all horizontal surfaces that the tank rests on.</p> <p>Stops or other provision will be provided to prevent an empty tank from bouncing excessively while moving vehicle.</p> <p>Mounting system to be approved by the tank manufacturer.</p>
0003405		Overflow, 4.00" Water Tank, Poly	<p>Fill tower will be constructed of .50" polypropylene and will be a minimum of 8.00" wide x 14.00" long.</p> <p>Fill tower will be furnished with a .25" thick polypropylene screen and a hinged cover.</p> <p>An overflow pipe, constructed of 4.00" schedule 40 polypropylene, will be installed approximately halfway down the fill tower and extend through the water tank and exit to the rear of the rear axle.</p>
0028104		Foam Cell Required	
0729265	SP	Drain, Tank - 2.50" @ Sump, Tee Handle Below Body	<p>2.50" TANK DRAIN</p> <p>A 2.50" tank drain will be installed with a 2.50" ball valve and tee handle control. The valve shall be installed close to the water tank sump to minimize the chance of freezing. The tee handle control will be located underneath the forward section of the left front compartments and will be properly labeled. The valve and control handle will be installed in a manner that neither one could be hit during normal operation.</p>
0633066		Sleeve, Through Tank	<p>SLEEVE, PLUMBING, THROUGH TANK</p> <p>One (1) sleeve will be provided in the water tank for a 3.00" pipe to the rear.</p>
0553729		Not Required, Restraint, Water Tank, Heavy Duty	
0003429		Not Required, Direct Tank Fill	
0003424		Not Required, Dump Valve	
0048710		Not Required, Jet Assist	
0030007		Not Required, Dump Valve Chute	
0514778		Not Required, Switch, Tank Dump Master	
0126633		Hose Bed, Aluminum, Pumper	<p>HOSE BED</p> <p>The hose bed will be fabricated of .125"-5052 aluminum with a nominal 38,000 psi tensile strength.</p> <p>Upper and rear edges of side panels will have a double break for rigidity.</p> <p>The upper inside area of the beavertails will be covered with brushed stainless steel to prevent damage to painted surface when hose is removed.</p> <p>Flooring of the hose bed will be removable aluminum grating with the top surface corrugated to aid in hose aeration. The grating slats will be a minimum of 0.50" x 4.50" with spacing between slats for hose ventilation.</p>

0003481		Hose Bed Capacity, Special	Hose bed will accommodate Left to right- Deadlay compartment, 300' of 1.75", 400' of 2.50", 400' of 2.50", 800' of 5.00", backboard compartment.
0083488		Divider, Hose Bed, .25" Unpainted	HOSE BED DIVIDER Three (3) adjustable hosebed dividers will be furnished for separating hose. Each divider will be constructed of a .25" brushed aluminum sheet. Flat surfaces will be sanded for uniform appearance, or constructed of brushed aluminum. Divider will be fully adjustable by sliding in tracks, located at the front and rear of the hose bed. Divider will be held in place by tightening bolts, at each end. Acorn nuts will be installed on all bolts in the hose bed which have exposed threads.
0023469		Compt, (2) Backboards, Vertical in Hose Bed	BACKBOARD STORAGE COMPARTMENT A storage compartment, for two (2) backboards, will be located on the on the passenger's side of the hose bed. The backboard compartment will consist of a permanent hose bed divider with a vertically hinged bright aluminum treadplate door and lift and turn latch. The backboards will be stored vertically in individual stainless steel troughs. Backboard compartment size will be 2.00" x 18.00" x 76.00".
0668991	SP	Filler, Divider at Rear	FILLER A filler plate will be provided LS deadlay compartment, exact location will be provided at pre con at the rear of the hosebed.
0010133		Cross-Divider, Hose Bed	A cross-divider will be provided just behind the fill tower. The divider will be bolted to the side sheet.
0581892		Divider, Hose Bed, .25" Sheet, Unpainted, Permanent	There will be one (1) additional hose bed dividers furnished. Each divider will be constructed of a .25" brushed aluminum sheet. Partition will be permanently installed and located LS hosebed deadlay compartment. Acorn nuts will be installed on all bolts in the hose bed which have exposed threads. Flat surfaces will be sanded for uniform appearance or constructed of brushed aluminum.
0058033		Shelf, Hinged, In Hose Bed, Between Side Sheet	SHELF, HINGED IN HOSE BED There will be two (2) hinged shelves, constructed of aluminum grating, provided for hose or equipment storage inside the hose bed located LS deadlay compartment, equal vertical spacing from floor to HB cover on the left side. The shelf will be attached to the hose bed side sheet.
0730459		Cover, Hose Bed, Alum Treadplate, Bolted T-Bar	HOSE BED COVER A two (2) section hose bed cover, constructed of .125" bright aluminum treadplate, will be furnished. The cover will be hinged with full length stainless steel piano hinge. The sides will be slanted down with the center of the cover supported by a stationary modular bridgework support. The cover will be reinforced so that it can support the weight of a man walking on the cover. The cover is designed with the left cover opening first. If access to water tank fill tower is blocked by the hose bed cover, then a hinged door will be provided in it so that tank may be filled without raising cover doors. Chrome grab handles and gas filled cylinders will be provided to assist in opening and closing the cover. A handrail is provided at the rear, in the center of the support, to assist in opening the cover.
0060884		Stay Arm, Hose Bed Cover, Mechanical	HOSE BED STAY ARM COVER An additional positive stay arm will be provided at the front of the cover. The additional stay arms will be a flat bar, mechanical design.
0592478	SP	Flap, Rear of Alum Hose Bed Cover, Vinyl, Paddle Seat Belt Buckles, Split	A pair of red vinyl flaps will be installed on the rear of the bright aluminum treadplate hose bed cover, with a chain weight and paddle seat belt buckles will be provided at the rear of the cover. The two flaps will overlap at the center with velcro.
0013512		Running Boards, 12.75" Deep	RUNNING BOARDS Running boards will be fabricated of .125" bright aluminum treadplate. Each running board will be supported by a welded 2.00" square tubing and channel assembly, which will be bolted to the pump compartment substructure. Running boards will be 12.75" deep and spaced .50" away from the pump panel. A splash guard will be provided above the running board treadplate.

0689497	Tailboard, T-Shaped, 24" & 8" Deep, Angled Corners	<p>TAILBOARD</p> <p>The tailboard will also be constructed of .125" bright aluminum treadplate and spaced .50" from the body, as well as supported by a structural steel assembly.</p> <p>The tailboard area will be 24.00" deep in the center area and 8.00" deep to the rear of the side compartments. The tailboard will be T-shaped. The outboard sides of the tailboard will be angled at 45 degrees beginning at the point where the body meets the tailboard at the outboard edge angling rearward to the rear edge of the tailboard.</p> <p>The exterior side will be flanged down and in for increased rigidity of tailboard structure.</p>
0690037	Wall, Rear, Smooth Aluminum/Body Material	<p>REAR WALL, SMOOTH ALUMINUM/BODY MATERIAL</p> <p>The rear facing surfaces of the center rear wall will be smooth aluminum.</p> <p>The bulkheads, the surface to the rear of the side body compartments, will be smooth and the same material as the body.</p> <p>Any inboard facing surfaces below the height of the hosebed will be polished stainless steel.</p>
0003531	Tow Bar, Under Tailboard	<p>TOW BAR</p> <p>A tow bar will be installed under the tailboard at center of truck.</p> <p>Tow bar will be fabricated of 1.00" CRS bar rolled into a 3.00" radius.</p> <p>Tow bar assembly will be constructed of .38" structural angle. When force is applied to the bar, it will be transmitted to the frame rail.</p> <p>Tow bar assembly will be designed and positioned to allow up to a 30-degree upward angled pull of 17,000 lb, or a 20,000 lb straight horizontal pull in line with the centerline of the vehicle.</p> <p>Tow bar design will have been fully tested and evaluated using strain gauge testing and finite element analysis techniques.</p>
0590934	Hose Restraint, Running Board, Straps, FV Fastener	<p>RUNNING BOARD HOSE RESTRAINT</p> <p>A pair of 2.00" wide black nylon straps with seat belt buckle fasteners will be provided for each hose tray to secure the hose during travel. There will be Two (2) hose trays located one (1) in each side running board.</p>
0014112	Tray, Hose, Running Board, Special Capacity, Predefined	<p>HOSE TRAY</p> <p>Two (2) hose trays will be recessed one (1) in each side running board.</p> <p>Capacity of the tray will be 30' of 5.00".</p> <p>Rubber matting will be installed on the floor of the tray to provide proper ventilation.</p>

COMPARTMENTATION

Body and compartments will be fabricated of .125", 5052-H32 aluminum.

Side compartments will be an integral assembly with the rear fenders.

Circular fender liners will be provided for prevention of rust pockets and ease of maintenance.

Side compartment flooring will be of the sweep out design with the floor higher than the compartment door lip.

The side compartment door opening will be framed by flanging the edges in 1.75" and bending out again .75" to form an angle.

Drip protection will be provided above the doors by means of bright aluminum extrusion, formed bright aluminum treadplate or polished stainless steel.

The top of the compartment will be covered with bright aluminum treadplate rolled over the edges on the front, rear and outward side. These covers will have the corners welded.

Side compartment covers will be separate from the compartment tops.

Front facing compartment walls will be covered with bright aluminum treadplate.

All screws and bolts which protrude into a compartment will have acorn nuts on the ends to prevent injury.

UNDERBODY SUPPORT SYSTEM

Due to the severe loading requirements of this pumper a method of body and compartment support suitable for the intended load will be provided.

The backbone of the support system will be the chassis frame rails which is the strongest component of the chassis and is designed for sustaining maximum loads.

The support system will include .375" thick steel vertical angle supports bolted to the chassis frame rails with .625" diameter bolts.

Attached to the bottom of the steel vertical angles will be horizontal angles, with gussets welded to the vertical members, which extend to the outside edge of the body.

A steel frame will be mounted on the top of these supports to create a floating substructure which will result in a 500 lb equipment support rating per lower compartment.

The floating substructure will be separated from the horizontal members with neoprene elastomer isolators. These isolators will reduce the natural flex stress of the chassis from being transmitted to the body.

Isolators will have a broad load range, proven viability in vehicular applications, be of a fail safe design and allow for all necessary movement in three (3) transitional and rotational modes.

The neoprene isolators will be installed in a modified V three (3)-point mounting pattern to reduce the natural flex of the chassis being transmitted to the body.

AGGRESSIVE WALKING SURFACE

All exterior surfaces designated as stepping, standing, and walking areas will comply with the required average slip resistance of the current NFPA standards.

LOUVERS

Louvers will be stamped into compartment walls to provide the proper airflow inside the body compartments and to prevent water from dripping into the compartment. Where these louvers are provided, they will be formed into the metal and not added to the compartment as a separate plate.

TESTING OF BODY DESIGN

Body structural analysis has been fully tested. Proven engineering and test techniques such as finite element analysis, stress coating and strain gauging have been performed with special attention given to fatigue, life and structural integrity of the cab, body and substructure.

Body will be tested while loaded to its greatest in-service weight.

The criteria used during the testing procedure will include:

Raising opposite corners of the vehicle tires 9.00" to simulate the twisting a truck may experience when driving over a curb.

Making a 90 degree turn, while driving at 20 mph to simulate aggressive driving conditions.

Driving the vehicle at 35 mph on a washboard road.

Driving the vehicle at 55 mph on a smooth road.

Accelerating the vehicle fully, until reaching the approximate speed of 45 mph on rough pavement.

Evidence of actual testing techniques will be made available upon request.

LEFT SIDE COMPARTMENTATION

The left side compartmentation will consist of three lap door compartments.

A full height, vertically hinged, single door compartment ahead of the rear wheels will be provided. The interior dimensions of this compartment will be 34.50" wide x 66.63" high x 25.88" deep in the lower 25.00" of the compartment and 12.00" deep in the remaining upper portion. The clear door opening will be a minimum of 28.63" wide x 61.88" high.

A horizontally hinged, single lift-up door compartment over the rear wheels will be provided. The interior dimensions of this compartment will be 66.50" wide x 32.88" high x 12.00" deep. The clear door opening will be a minimum of 59.25" wide x 27.00" high.

A full height, vertically hinged, double door compartment behind the rear wheels will be provided. **The interior dimensions of this compartment will be 47.75" wide x 67.63" high x 25.88" deep in the lower 26.00" of the compartment and 12.00" deep in the remaining upper portion. The clear door opening will be a minimum of 43.50" wide x 62.88" high. The interior height of the compartments will be measured from the compartment floor to the ceiling. The depth of the compartments will be measured from the back wall to the inside of the door frame.**

Closing of the doors will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.

The vertically hinged doors will be furnished with a positive door holder.

The lift-up door will be furnished with two gas-charged cylinders to assist in the opening of the door and to maintain the door in an open position. There will be a field adjustable, three-position bracket mounted on the vertical side door opening that will allow the door to be held open at 87°, 90°, or 93°.

0063624	RS 152" Lap, Full Height Front & Rear, FDLER	RIGHT SIDE COMPARTMENTATION
		<p>The right side compartmentation will consist of three lap door compartments.</p> <p>A full height, vertically hinged, single door compartment ahead of the rear wheels will be provided. The interior dimensions of this compartment will be 34.50" wide x 66.63" high x 25.88" deep in the lower 25.00" of the compartment and 12.00" deep in the remaining upper portion. The clear door opening will be a minimum of 28.63" wide x 61.88" high.</p> <p>A horizontally hinged, single lift-up door compartment over the rear wheels will be provided. The interior dimensions of this compartment will be 66.50" wide x 32.88" high x 12.00" deep. The clear door opening will be a minimum of 59.25" wide x 27.00" high.</p> <p>A full height, vertically hinged, double door compartment behind the rear wheels will be provided. The interior dimensions of this compartment will be 47.75" wide x 67.63" high x 25.88" deep in the lower 26.00" of the compartment and 12.00" deep in the remaining upper portion. The clear door opening will be a minimum of 43.50" wide x 62.88" high. The interior height of the compartments will be measured from the compartment floor to the ceiling. The depth of the compartments will be measured from the back wall to the inside of the door frame.</p> <p>Closing of the doors will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.</p> <p>The vertically hinged doors will be furnished with a positive door holder.</p> <p>The lift-up door will be furnished with two gas-charged cylinders to assist in the opening of the door and to maintain the door in an open position. There will be a field adjustable, three-position bracket mounted on the vertical side door opening that will allow the door to be held open at 87°, 90°, or 93°.</p>
0063911	Doors, Lap w/ "D" Handles - Side Compartments	SIDE COMPARTMENT DOORS
		<p>All hinged compartment doors will be lap style with double panel construction and will be a minimum of 1.50" thick. To provide additional door strength a "C" section reinforcement will be installed between the outer and interior panels.</p> <p>Doors will be provided with a closed cell rubber gasket around the surface that laps onto the body. A second heavy-duty automotive rubber molding with a hollow core will be installed on the door framing that seals onto the interior panel, to ensure a weather resisting compartment.</p> <p>All compartment doors will have polished stainless steel continuous hinge with a pin diameter of .25" that is bolted or screwed on with stainless steel fasteners.</p> <p>All door locking mechanisms will be fully enclosed within the door panels to prevent fouling of the lock in the event equipment inside shifts into the lock area.</p> <p>Doors will be latched with recessed, polished stainless steel "D" ring handles and FMVSS approved door locking mechanisms.</p> <p>To prevent corrosion caused by dissimilar metals, compartment door handles will not be attached to outer door panel with screws. A rubber gasket will be provided between the "D" ring handle and the door.</p>
0083700	Compt, Rear, Rollup, 37.75" FF, 25.88" D	REAR COMPARTMENTATION
		<p>A roll-up door compartment above the rear tailboard will be provided.</p> <p>The interior dimensions of this compartment will be 40.00" wide x 40.63" high x 25.88" deep. The spool of the rollup door at the top of the compartment takes up some usable space. The depth of the compartment will be calculated with the compartment door closed.</p> <p>A louvered, removable access panel will be furnished on the back wall of the compartment.</p> <p>The rear compartment will be open into the rear side compartments.</p> <p>The clear door opening of this compartment will be a minimum of 33.25" wide x 30.88" high.</p> <p>Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.</p>
0777261	SP Door, Amdor, Rollup, Rear Compartment, Special Roll Location	ROLLUP REAR COMPARTMENT DOOR
		<p>The rear compartment will have a rollup door.</p> <p>The door will be double faced, aluminum construction, painted one (1) color to match the lower portion of the body and manufactured by AMDOR™ brand rollup doors.</p> <p>The door will be constructed using 1.00" extruded double wall aluminum slats which will feature a flat smooth interior surface to provide maximum protection against equipment hang-up. The slats will be connected with a structural driven ball and socket hinge designed to provide maximum curtain diaphragm strength. Mounting and adjusting the curtain will be done with a clip system that connects the curtain to the balancer drum allowing for easy tension adjustment without tools.</p> <p>The slats will be mounted in reusable slat shoes with positive snap-lock securement.</p> <p>Each slat will incorporate weather tight recessed dual durometer seals. One (1) fin will be designed to locate the seal within the extrusion. The second will serve as a wiping seal which will also allow for compression to prevent water ingress.</p> <p>The door will be mounted in a one (1)-piece aluminum side frame with recessed side seals to minimize seal damage during equipment deployment. All seals including side frames, top gutters and bottom panel are to be manufactured utilizing non-marring materials.</p> <p>Bottom panel flange of rollup door will be equipped with two (2) cut-outs to allow for easier access with gloved hands.</p> <p>A polished stainless steel lift bar with locking key latches to be provided for each roll-up door. The keys to be Model 751 to match all compartment and cab doors. The lift bar will be located at the bottom of door with striker latches installed at the base of the side frames. Side frame mounted door strikers will include support beneath the stainless steel lift bar to prevent door curtain bounce, improve bottom seal life expectancy and to avoid false door ajar signals.</p> <p>All injection molded rollup door wear components will be constructed of Type 6 Nylon.</p> <p>The door will have a 3.00 inch diameter balancer/tensioner drum to assist in lifting the door.</p> <p>The roller assembly will be located at the back wall up high.</p> <p>The header for the rollup door assembly will not exceed 4.00".</p> <p>A heavy-duty magnetic switch will be used for control of open compartment door warning lights.</p>

0554995	No Body Modification Required	
0650792	Scuffplate, S/S Around Air Bottle Compt Openings, Qty	SCUFFPLATE Three (3) scuffplates will be furnished around the opening for the air bottle compartment(s). The scuffplate(s) will be constructed of brushed stainless steel and provided for the each SCBA door air bottle compartment(s).
0045159	Guard, Drip Pan, S/S, L-Shape, Cover Bottom and Rear of Rollup Door Roll	DOOR GUARD one (1) compartment door will include an L-shaped guard designed to protect the bottom and interior side of the roll-up door from damage when in the retracted position and contain any water spray while the door is being opened. The guard will be fabricated from stainless steel and installed R1.
0003915	Keyed Locks for Latches, Lap Doors (#751 Lock to Match Cab)	KEYED LOCK(S) A keyed lock will be furnished for six (6) compartment doors. The compartmentation, to have a keyed lock, will be LS1, LS2, LS3, RS1, RS2, RS3.
0003919	Reverse Hinge Compartment Door	REVERSE HINGED DOOR The two (2) compartment doors, located D3/P3, will have the hinge at the rear of the door.
0021603	Scuffplate, Brushed S/S Bottom of Door Frame	DOOR FRAME SCUFFPLATE The Six (6) scuffplates will be provided for the lower door frame(s) each side compartment. Each scuffplate will be brushed stainless steel with a .38" lip down.
0616670	Lights, Compt, Pierce LED, Dual Light Strips, Each Side of Door, Pumper/Tanker	COMPARTMENT LIGHTING There will be seven (7) compartment(s) with two (2) white 12 volt DC LED compartment light strips. The dual light strips will be centered vertically along each side of the door framing. There will be two (2) light strips per compartment. The dual light strips will be in all body compartment (s). Any remaining compartments without light strips will have a 6.00" diameter Truck-Lite, Model: 79384 light. Each light will have a number 1076 one filament, two wire bulb. Opening the compartment door will automatically turn the compartment lighting on.
0691876	Brackets/Clamps, For Strip Lighting In Compartments, IPO Velcro	BRACKETS/CLAMPS, COMPARTMENT LIGHTS All LED light strips, in all locations will be mounted with brackets, part #64-0766-0063, in place of the standard Velcro®.
0727700	SP Lights, Compt, TecNiq T10-LC00-1 15" LED, Additional	ADDITIONAL COMPARTMENT LIGHTING There will be three (3) TecNiq, Model T10-LC00-1, 1.25" high x 15.00" long white LED light(s) provided and installed Two (2) under the rear step above B1, and the hinged side of backboard compartment running front to rear. Opening the compartment door(s) will automatically turn the compartment lighting on. These lights may be load managed when the parking brake is applied.
0739915	Hatch, (2) Liftup, Pumper	HATCH COMPARTMENT Two (2) hatch compartments will be provided above the left and right side compartments. Each hatch compartment will extend the full length of the side body compartmentation x 13.75" wide. The height of each hatch compartment will match the side sheet height. Sides of the compartment will be constructed of the same material as the body and painted job color. A 2.00" tall formed aluminum painted to match the lower body color will be provided to cover the seam between the top of the body panel and the bottom of the hatch compartment. The vertical outboard seam at the center of the compartment will be smooth weld finished and painted. The top of the compartment will be constructed of bright aluminum treadplate. Two (2) lift-up, bright aluminum treadplate doors will be provided on the top of the compartment. Doors will have lipped edges with a rubber seal for weather resistance. Each door will have a lever handle with a slam style latch. Doors will be hinged on the outboard side and will utilize a gas strut (or rubber covered chain on narrow width doors) Compartment will drain to an area below the hose bed. Ribbed rubber matting will be provided on the compartment floor to stop wet equipment from sitting in water pools.
0730092	Not Required	
0733219	Lights, Hatch Compt, 42", LED, Light Strips, 2-Sides 4 Dr	COMPARTMENT LIGHTING There will be a 42.00" 12 volt DC strip light with white LEDs mounted on the interior, hinged side of each door. The lights will be mounted with mechanical fasteners. The lights will be activated when the battery switch is on and the door is opened.

0687135	Shelf Tracks, Unpainted	MOUNTING TRACKS There will be six (6) sets of tracks for mounting shelf(s) in LS1, LS3, RS1, RS2, RS3 and B1. These tracks will be installed vertically to support the adjustable shelf(s), and will be full height of the compartment. The tracks will be unpainted with a natural finish.
0600350	Shelves, Adj, 500 lb Capacity, Full Width/Depth, Predefined Locations	ADJUSTABLE SHELVES There will be ten (10) shelves with a capacity of 500 lb provided. The shelf construction will consist of .188" aluminum with a brushed finish with 2.00" sides. Each shelf will be infinitely adjustable by means of a threaded fastener, which slides in a track. The shelves will be held in place by .12" thick stamped plated brackets and bolts. The location(s) will be in RS2 centered between the floor and the ceiling, in RS3 centered between the floor and the ceiling, in RS1 in the lower third, in RS2 in the lower third, in RS3 in the lower third, in RS1 in the upper third, in RS1 in the upper third, in LS1 centered between the floor and ceiling, in LS3 centered between the floor and ceiling and in B1 centered between the floor and ceiling.
0627222	SP Shelves, Adjustable, Special Size and Mounting, Brushed Aluminum	ADJUSTABLE SHELVES There will be one (1) shelf provided. The shelf construction will consist of .188" brushed aluminum with 2.00" sides and to be provided with photos in size. Each shelf will be infinitely adjustable by means of a threaded fastener, which slides in a track. The shelves will be held in place by .12" thick stamped plated brackets and bolts. The location will be floor of B1.
0709690	Tray, 250 lb Slide-out, 2" Sides - Adj. Height, Predefined Locations	SLIDE-OUT ADJUSTABLE HEIGHT TRAY There will be two (2) slide-out trays provided. Each tray will have 2.00" high sides and a minimum capacity rating of 250 lb in the extended position. Each tray will be constructed of aluminum with a brushed finish. Each tray will be mounted on a pair of side mounted slides. The slide mechanisms will have ball bearings for ease of operation and years of dependable service. The slides will be mounted to shelf tracks to allow the tray to be adjustable up and down within the designated mounting location. An automatic lock will be provided for both the in and out tray positions. The lock trip mechanism will be located at the front of the tray and will be easily operated with a gloved hand. The location(s) will be in LS3 in the lower third and in LS3 in the lower third
0540317	Toolboard, Swing-out, Alum, .188", Peg Board	SWING OUT TOOLBOARD A swing out aluminum toolboard will be provided. It will be a minimum of .188" thick with .281" diameter holes in a pegboard pattern with 1.00" centers between holes. A 1.00" x 1.00" aluminum tube frame will be welded to the edge of the pegboard. The board will be mounted on a pivoting device at the front of the compartment on the top and bottom to allow easy movement in and out of the compartment. The maximum tool load will be 400 pounds. The board will have positive lock in the stowed and extended position. The board will be mounted stationary within the compartment. There will be One (1) toolboard(s) provided. The toolboard(s) will be with a brushed finish and installed LS2.
0028026	Matting, Turtle Tile, Compt Shelving only	MATTING, COMPARTMENT SHELVING Turtle Tile compartment matting will be provided in 14 shelves. The locations are, all shelves and trays. The color of the Turtle Tile will be black.
0659383	Matting, Turtle Tile w/Ramp, Compt Floors	MATTING, COMPARTMENT FLOOR Turtle Tile compartment matting will be provided in nine (9) compartments on the compartment floor. The locations are, all floors including upper hatch compartments. The Turtle Tile will be black and the leading edge of the matting will include the beveled edge. The beveled edge will be yellow .
0003908	Partition, Trans Rear Compt	PARTITION, TRANSVERSE REAR COMPARTMENT Two (2) partitions will be bolted in place to separate left and right side rear compartments from the rear tailboard compartment.
0096116	Partition, Vertical Compartment, Special Height	VERTICAL COMPARTMENT PARTITION One (1) partition will be bolted in D1 centered front to rear, from the bottom of the shelf to the floor. Each partition will be the N/A vertical height of the compartment. Each partition will be DA finished.
0027090	Tracks, Equipment Mounting, Horizontal	MOUNTING TRACKS There will be three (3) sets of tracks for mounting equipment. These tracks will be installed horizontally on the back wall of the compartment(s). The compartment(s) with mounting tracks will be P3, D3, D1 with all being in the upper section.

0727025	SP	Pocket, Storage, Circular, Mounted In Compt	<p>CIRCULAR STORAGE POCKET There will be a circular storage pocket provided for storage of monitor nozzle. The pocket will be approximately per attached photos" in diameter with per attached photos" tall sides. The pocket will be constructed of aluminum and mounted LS3 per photos.</p>
0727705	SP	Pocket, Open Top/Bottom, Aluminum, Misc Storage, In Compt	<p>STORAGE POCKET There will be an open storage pocket provided for miscellaneous storage. It will be approximately per attached photo in size. It will be constructed of 0.125" aluminum and mounted RS1.</p>
0790971	SP	Storage Pocket, Aluminum, Wall Mounted, Light Tower Controller Cable	<p>STORAGE POCKET There will be a square storage pocket provided for the light tower controller cable and miscellaneous customer radio storage. It will be approximately per the attached photo in size. The storage pocket will be constructed of 0.125" aluminum and mounted LS3.</p>
0004016		Rub Rail, Aluminum Extruded, Side of Body	<p>RUB RAIL Bottom edge of the side compartments will be trimmed with a bright aluminum extruded rub rail. Trim will be 2.12" high with 1.38" flanges turned outward for rigidity. The rub rails will not be an integral part of the body construction, which allows replacement in the event of damage.</p>
0784811		Fender Crowns, Rear, Stainless, w/Removable Liner	<p>BODY FENDER CROWNS Polished stainless steel fender crowns will be provided around the rear wheel openings with a dielectric barrier will be provided between the fender crown and the fender sheet metal to prevent corrosion. The fender crowns will be held in place with stainless steel screws that thread directly into a composite nut and not directly into the parent body sheet metal to eliminate dissimilar metals contact and greatly reduce the chance for corrosion. Rubber welting will be provided between the body and crown. BODY FENDER LINER A painted fender liner will be provided. The liners will be removable to aid in the maintenance of rear suspension components.</p>
0602346		Hose, Hard Suction, Provided by Dealer, Pumper NFPA 2016 Classification	<p>HARD SUCTION HOSE PROVIDED BY DEALER NFPA 1901, 2016 edition, section 5.8.2 requires a minimum of 20 ft of suction hose or 15 ft of supply hose. Hose is not on the apparatus as manufactured. The dealer will provide suction or supply hose. There will be Two (2) lengths of 10' long x4.50" diameter hose provided and equipped with a rocker lug couplings provided on the ends. The brand will be Koheck 2P451-10.</p>
0626229		Handrails, Side Pump Panels, Per Print	<p>HANDRAILS The handrails will be 1.25" diameter anodized aluminum extrusion, with a ribbed design, to provide a positive gripping surface. Chrome plated end stanchions will support the handrail. Plastic gaskets will be used between end stanchions and any painted surfaces. Drain holes will be provided in the bottom of all vertically mounted handrails. Handrails will be provided to meet NFPA 1901 section 15.8 requirements. The handrails will be installed as noted on the sales drawing.</p>
0625975		Handrails, Beavertail, Hansen Tubing, Knurled Aluminum, LED Backlit	<p>HANDRAILS One (1) Hansen LED lit knurled aluminum vertical handrail will be located on each rear beavertail. The handrail will be lit with a blue LED light. The hand rail will be activated with the headlight switch activated and the parking brake applied.</p>
0004146		Handrail, Rear, Below Hose Bed, Full Width	<p>HANDRAIL One (1) full width horizontal handrail will be provided below the hose bed at the rear of the apparatus.</p>
0004150		Handrail, Extra - 15-20" Long	<p>ADDITIONAL HANDRAIL Two (2) handrails will be mounted (1) under each step shield on each side of the pumphouse.</p>

0636301	Compt, Extinguisher (2) in Fender Panel, Triangular Door	<p>EXTINGUISHER/AIR BOTTLE/ STORAGE (Triangular) A total of one (1) extinguisher/air bottle/storage compartments will be provided P/S front of axle. The triangular shaped compartment will be sized to fit a 8.00" diameter extinguisher in the lower area and a 8.00" diameter extinguisher in the upper area. The compartment will be approximately 25.50" deep. A partition will be provided to separate the compartment. Also inside the compartment, black Dura-Surf friction reducing material will be provided. The compartment will be furnished with a drain hole. A painted stainless steel, triangular shaped door with a Southco raised trigger C2 black lever latch will be provided to contain the air bottles. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal.</p> <p>AIR BOTTLE COMPARTMENT STRAP A strap will be provided in the air bottle compartment(s) to help contain the bottles when the vehicle is parked on an incline. The strap will wrap around the neck and attach to the wall of the compartment.</p>
0657522	Compt, Air Bottle, Triple, Fender Panel	<p>AIR BOTTLE STORAGE (Triple) A quantity of one (1) air bottle compartment designed to hold (3) air bottles up to 7.25" in diameter x 26.00" deep will be provided on the right side rearward of the rear wheels. A painted stainless steel door with a Southco raised trigger C2 black lever latch will be provided to contain the air bottle. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal.</p> <p>Inside the compartment, black Dura-Surf friction reducing material will be provided.</p> <p>AIR BOTTLE COMPARTMENT STRAP A strap will be provided in the air bottle compartment(s) to help contain the air bottles when the vehicle is parked on an incline. The strap will wrap around the neck and attach to the wall of the compartment.</p>
0648325	Compt, Air Bottle, Double, Common Triple Door, Fender Panel	<p>AIR BOTTLE STORAGE (Double) A quantity of one (1) air bottle compartment, 15.25" wide x 7.75" tall x 26.00" deep, will be provided on the left side forward of the rear wheels. A painted stainless steel door with a Southco raised trigger C2 black lever latch will be provided to contain the air bottle. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal.</p> <p>Inside the compartment, black Dura-Surf friction reducing material will be provided.</p> <p>AIR BOTTLE COMPARTMENT STRAP A strap will be provided in the air bottle compartment to help contain the air bottle when the vehicle is parked on an incline. The strap will wrap around the neck and attach to the wall of the compartment.</p>
0004205	Holder, Air Bottle, Zico Model UH-6-30-3-SF, Mounted in Compt w/Tracks	<p>AIR BOTTLE HOLDERS Four (4) brackets will be provided for mounting air bottles. Each bracket will be a Ziamatic, model UH-6-30-3-SF, be mounted on tracks, and be used for adjusting the location of the bracket within the compartment. Install two in D1, one in D3, one in P3.</p>
0512553	Ladder, 24' Duo-Safety 900A 2-Sect, w/Kernmantle Rope	<p>EXTENSION LADDER There will be a 24', two (2) section, aluminum, Duo-Safety, Series 900-A extension ladder provided. The ladder will have Kernmantle rope IPO Hemp Rope.</p>
0004230	Ladder, 14' Duo-Safety 775A Roof	<p>ROOF LADDER There will be a 14' aluminum Duo-Safety Series 775-A roof ladder provided.</p>
0787027	Ladders Btwn Tank & S.Sht, RS, Ext'd Rr, Encl'd Complete, RPH, Special Mounting	<p>LADDER STORAGE The ladders will be stored between the water tank and the right side compartments. The ladders will extend into the pump compartment just to the rear of the water pump discharges. The ladder storage area will be enclosed as practical by means of sheet metal to protect the ladders from road dirt. The ladders that extend into the pump house will also be enclosed. A black rubber boot will be provided to enclosed the ladders in the gap between the pump house and the body.</p> <p>Each ladder will be stored vertically in a separate stainless steel storage trough. Each stainless steel trough will be lined with Dura-Surf nylon slides.</p> <p>A bright aluminum treadplate enclosure will be provided at the rear of the body to properly contain the ladders. This enclosure will extend to the rear of the side body compartments.</p> <p>The ladders will be stored 24' ladder fly inboard.</p> <p>The enclosure will also include a vertically hinged smooth aluminum door with a D-handle latch to access the ladders.</p>
0014245	Ladder, 10' Duo-Safety Folding 585A, w/Mounting	<p>FOLDING LADDER One (1) 10.00' aluminum, Series 585-A, Duo-Safety folding ladder will be installed in a U-shaped trough inside the ladder storage compartment .</p>
0636772	Pike Pole, Pumper, Provided by Dealer, Additional	<p>PIKE POLE, PROVIDED BY DEALER One (1) pike pole will be provided by the dealer. The pike pole(s) will be Fire Hooks Unlimited New York Roof Hook, RH-6 and located pike pole storage.</p>

0602690		Pike Pole, Pumper, Provided by Dealer, NFPA 2016	<p>PIKE POLE PROVIDED BY DEALER NFPA 1901, 2016 edition, Section 5.9.4 requires one (1) 8' or longer pike pole mounted in a bracket fastened to the apparatus. The pike pole is not on the apparatus as manufactured. The dealer will provide and mount the pike pole. The pike pole(s) will be a Nupla 10' pike pole.</p>
0602868		Pike Pole, 6', Pumper, Provided by Dealer, NFPA 2016	<p>6' PIKE POLE PROVIDED BY DEALER NFPA 1901, 2016 edition, Section 5.9.4 requires one (1) 6' pike pole or plaster hook mounted in a bracket fastened to the apparatus. The pike pole is not on the apparatus as manufactured. The dealer will provide and mount the pike pole. The pike pole(s) will be a Fire Hooks Unlimited 6 foot roof hook.</p>
0672603	SP	Compt, Below Tank Tee, Long Handled Tools	<p>COMPARTMENT FOR LONG HANDLED TOOLS There will be one (1) compartment(s) provided on the Driver side, refer to provided pictures for correct layout side at the rear of the truck below the water tank tee. The compartment will be sized to hold long handled tools. The compartment will be Two (2) RH-6 Fire Hooks 6' NY Hook, Steel One (1) YPD-10 10' HD Classic Nuplaglass Pike Pole w/ Butt End. . At the rear of the compartment will be a polished stainless steel door with a lift and turn latch.</p>
0004361		Tubes, Alum, Pike Pole Storage	<p>PIKE POLE STORAGE Aluminum tubing will be used for the storage of three (3) pike poles and will be located in the driver side long tool storage compartment. If the head of a pike pole can come in contact with a painted surface, a stainless steel scuffplate will be provided.</p>
0768976	SP	Bell, 12" Chrome w/Eagle, Mounted on Cab Corner, Large Brkt	<p>BELL A chrome plated, 12.00" bronze cast bell, complete with an eagle, will be mounted on the passenger side radiused corner of cab face. The cab will be properly reinforced to support the weight of the bell, the reinforcement bracket allow the bell to mount toward the upper corner of the windshield. A rope pull, for the bell, will be installed inside the cab.</p>
0785102		Steps, Folding, Front of Body, Cargo Bed Access, w/LED, Trident	<p>FOLDING STEPS FRONT OF BODY Folding steps will be provided full height on the left side and right side body compartments to provide access to the cargo bed. Steps will be spaced evenly on the sales drawing. Actual quantity may vary due to pump panel interferences but will meet the NFPA required maximum stepping height. The Trident steps will be bright finished, non-skid with a black coating. The step will incorporate an LED light to illuminate the stepping surface. The steps can be used as a hand hold with two openings wide enough for a gloved hand.</p>
0592994		Steps, Folding, Rear of Body, w/LED, Trident	<p>REAR FOLDING STEPS Bright finished, non-skid folding steps with a black coating will be provided at the rear. Each step will incorporate an LED light to illuminate the stepping surface. The steps can be used as a hand hold with two openings wide enough for a gloved hand.</p>
0759854	SP	I Zone Bracket, Pair, Wildland Style, 14.00" Poles	<p>I-ZONE BRACKETS - WILDLAND STYLE A pair of I-Zone brackets will be provided and mounted at the rear of the apparatus, just below the rear scene lights, brackets to be job color and poles to be Hi Viz yellow. The brackets will be designed with adequate reinforcement to eliminate flexing of the body (oil canning) and not interfere with rear facing lights while carrying hose. The design of these I-Zone brackets will have a 45 degree receiver and a 14.00" removable extension piece that fits into the brackets for carrying hose. The brackets and removable pipes will be painted job color.</p>
0028046		Step, Spcl Width, Rear Of Body, 8", Used w/Recessed Traffic Directing Light	<p>An 8.00" deep bright aluminum treadplate step will be provided at the rear of the body above the rear compartment. The step will be sized to accommodate the mounting of a recessed traffic directing light. The step will be At the rear per print..</p>

0004465	Pump, Waterous, CMU, 1750 GPM, Two Stage	<p>PUMP</p> <p>Pump will be a Waterous CMU 1750 gpm two (2) stage midship mounted centrifugal type. Pump will be the class "A" type.</p> <p>Pump will deliver the percentage of rated discharge at pressures indicated below:</p> <ul style="list-style-type: none"> - 100% of rated capacity at 150 psi net pump pressure. - 70% of rated capacity at 200 psi net pump pressure. - 50% of rated capacity at 250 psi net pump pressure. <p>Pump body will be close-grained gray iron, bronze fitted, and horizontally split in two (2) sections for easy removal of the entire impeller shaft assembly (including wear rings).</p> <p>Pump will be designed for complete servicing from the bottom of the truck, without disturbing the pump setting or apparatus piping.</p> <p>Pump case halves will be bolted together on a single horizontal face to minimize a chance of leakage and facilitate ease of reassembly. No end flanges will be used.</p> <p>Discharge manifold of the pump will be cast as an integral part of the pump body assembly and will provide a minimum of three (3) 3.50" openings for flexibility in providing various discharge outlets for maximum efficiency.</p> <p>The three (3) 3.50" openings will be located as follows: one (1) outlet to the right of the pump, one (1) outlet to the left of the pump, and one (1) outlet directly on top of the discharge manifold.</p> <p>Impeller shaft will be stainless steel, accurately ground to size. It will be supported at each end by sealed, anti-friction ball bearings for rigid precise support. Impeller will have flame plated hubs assuring maximum pump life and efficiency despite any presence of abrasive matter in the water supply.</p> <p>Bearings will be protected from water and sediment by suitable stuffing boxes, flinger rings, and oil seals. No special or sleeve type bearings will be used.</p>
0004481	Seal, Grafoil, Waterous	<p>PUMP PACKING</p> <p>Stuffing boxes will be of the conventional two (2) piece, split-gland type, to permit adjustment or replacement of Grafoil packing without disturbing the pump. Water will be fed into stuffing box lantern rings for proper lubrication and cooling when the pump is operating.</p> <p>Lantern rings will be located at the inner ends of the stuffing boxes, to avoid having to remove them when replacing pump packing.</p> <p>Wear rings will be bronze and easily replaceable to restore original pump efficiency and eliminate the need to replace the entire pump casing due to wear.</p>
0559769	Trans, Pump, Waterous C20 Series	<p>PUMP TRANSMISSION</p> <p>The pump transmission will be made of a three (3) piece, aluminum, horizontally split casing. Power transfer to pump will be through a high strength Morse HY-VO silent drive chain. By the use of a chain rather than gears, 50% of the sprocket will be accepting or transmitting torque, compared to two (2) or three (3) teeth doing all the work.</p> <p>Drive shafts will be 2.35" diameter hardened and ground alloy steel and supported by ball bearings. The case will be designed to eliminate the need for water cooling.</p>
0635600	Pumping Mode, Stationary Only	<p>PUMPING MODE</p> <p>An interlock system will be provided to ensure that the pump drive system components are properly engaged so that the apparatus can be safely operated. The interlock system will be designed to allow stationary pumping only.</p>
0605126	Pump Shift, Air Mnl Override, Split Shaft, Interlocked, Waterous	<p>AIR PUMP SHIFT</p> <p>Pump shift engagement will be made by a two (2) position sliding collar, actuated pneumatically (by air pressure), with a three (3) position air control switch located in the cab. A manual back-up shift control will also be located on the left side pump panel.</p> <p>Two (2) indicator lights will be provided adjacent to the pump shift inside the cab. One (1) green light will indicate the pump shift has been completed and be labeled "pump engaged". The second green light will indicate when the pump has been engaged, and that the chassis transmission is in pump gear. This indicator light will be labeled "OK to pump".</p> <p>The pump shift will be interlocked to prevent the pump from being shifted out of gear when the chassis transmission is in gear to meet NFPA requirements.</p> <p>The pump shift control in the cab will be illuminated to meet NFPA requirements.</p>
0003148	Transmission Lock-up, EVS	<p>TRANSMISSION LOCK-UP</p> <p>The direct gear transmission lock-up for the fire pump operation will engage automatically when the pump shift control in the cab is activated.</p>
0004547	Auxiliary Cooling System	<p>AUXILIARY COOLING SYSTEM</p> <p>A supplementary heat exchange cooling system will be provided to allow the use of water from the discharge side of the pump for cooling the engine water. The heat exchanger will be a separate unit. The heat exchanger will be installed in the pump or engine compartment with the control located on the pump operator's control panel. Exchanger will be plumbed to the master drain valve.</p>

0004485	Transfer Valve, Electric, Waterous	TRANSFER VALVE	<p>Transfer valve design will be of the latest ball type, of all bronze construction and incorporate a hydraulically balanced seal assembly, minimizing leakage around the ball and assuring maximum pump efficiency.</p> <p>Transfer valve will operate smoothly and without sticking, even when exposed to sandy or dirty water.</p> <p>Transfer valve will be operated electrically with a control switch mounted on the pump operator's control panel, with two (2) indicator lights which will indicate "pressure" or "volume".</p> <p>Transfer valve will have the ability to change from series (pressure) operation to parallel (volume) operation without reducing the operating speed of the engine regardless of the operating pressure of the pump, thus maintaining an effective fire stream at the nozzle at all times.</p> <p>A manual override will be provided in the event of electrical malfunction. The manual override system operates with the use of a removable hand crank located at the left side pump panel.</p>
0746501	Valve, Relief Intake, Elkhart	INTAKE RELIEF VALVE - PUMP	<p>There will be One (1) Elkhart Style 40 relief valve(s) installed on the suction side of the pump preset at 125 psig.</p> <p>The relief valve(s) will have a working range of 75 psi to 250 psi.</p> <p>The outlet will terminate below the frame rails with a 2.50" National Standard hose thread adapter and will have a "do not cap" warning tag.</p> <p>The relief valve pressure control will be located behind behind the right side pump panel with a stainless steel access door .</p>
0536322	Controller, Pressure, Pierce, Custom Chassis	PRESSURE CONTROLLER	<p>A Pierce Pressure Governor will be provided. An electric pressure governor will be provided which is capable of automatically maintaining a desired preset discharge pressure in the water pump.</p> <p>When operating in the pressure control mode, the system will automatically maintain the discharge pressure set by the operator (within the discharge capabilities of the pump and water supply) regardless of flow, within the discharge capacities of the water pump and water supply.</p> <p>A pressure transducer will be installed in the water discharge of the pump. The transducer continuously monitors pump pressure sending a signal to the Electronic Control Module (ECM).</p> <p>The governor can be used in two (2) modes of operation, RPM mode and pressure modes.</p> <p>In the RPM mode, the governor can be activated after vehicle parking brake has been set. When in this mode, the governor will maintain the set engine speed, regardless of engine load (within engine operation capabilities).</p> <p>In the pressure mode, the governor system can only operate after the fire pump has been engaged and the vehicle parking brake has been set. When in the pressure mode, the pressure controller monitors the pump pressure and varies engine speed to maintain a precise pump pressure. The pressure controller will use a quicker reacting J1939 database for engine control.</p> <p>A preset feature allows a predetermined pressure or rpm to be set.</p> <p>A pump cavitation protection feature is also provided which will return the engine to idle should the pump cavitate. Cavitation is sensed by the combination of pump pressure below 30 psi and engine speed above 2000 rpm for more than five (5) seconds.</p> <p>The throttle will be a vernier style control, with a large control knob for use with a gloved hand. A throttle ready light will be provided adjacent to the throttle control. A large 0.75" RPM display will be provided to be visible at a glance.</p> <p>Check engine, and stop engine indicator lights will be provided for easy viewing.</p> <p>Large 0.75" push buttons will be provided for menu, mode, preset, and silence selections.</p> <p>The water tank level indicator will be incorporated in the pressure governor.</p> <p>A fuel level indicator will be incorporated in the pressure controller.</p> <p>A pump hour meter will be incorporated in the pressure controller.</p> <p>The pressure controller will incorporate monitoring for engine temperature, oil pressure, fuel level alarm, and voltage. Pump monitoring will include, pump gearcase temperature, error codes, diagnostic data, pump service reminders, and time stamped data logging, to allow for fast accurate trouble shooting. It will also notify the driver/engineer of any problems with the engine and the apparatus. Complete understandable messages will be provided in a 20-character display, providing for fewer abbreviations in the messages. An automatic dim feature will be included for night operations.</p> <p>The pressure controller will include a USB port for easy software upgrades, which can be downloaded through a USB memory stick, eliminating the need for a laptop for software installations.</p> <p>A complete interactive manual will be provided with the pressure controller.</p>
0072153	Primer, Trident, Air Prime, Air Operated	PRIMING PUMP	<p>The priming pump will be a Trident Emergency Products compressed air powered, high efficiency, multistage venturi based AirPrime System, conforming to standards outlined in the current edition of NFPA 1901.</p> <p>All wetted metallic parts of the priming system are to be of brass and stainless steel construction.</p> <p>One (1) priming control will open the priming valve and start the pump primer.</p>
0780364	Manuals, Pump, (2) Total, Electronic Copies	PUMP MANUALS	<p>There will be a total of two (2) pump manuals provided by the pump manufacturer and furnished with the apparatus. The manuals will be provided by the pump manufacturer in the form of two (2) electronic copies. Each manual will cover pump operation, maintenance, and parts.</p>

0602509	Plumbing, Stainless Steel and Hose, Two Stage Pump, Control Zone	<p>PLUMBING, STAINLESS STEEL AND HOSE</p> <p>All inlet and outlet lines will be plumbed with either stainless steel pipe, hydraulic type hose or synthetic rubber hose reinforced with hi-tensile polyester braid. All hose's will be equipped with brass or stainless steel couplings. All stainless steel hard plumbing will be a minimum of a schedule 10 wall thickness.</p> <p>Where vibration or chassis flexing may damage or loosen piping or where a coupling is required for servicing, the piping will be equipped with victaulic or rubber couplings.</p> <p>Plumbing manifold bodies will be ductile cast iron or stainless steel.</p> <p>All piping lines are to be drained through a master drain valve or will be equipped with individual drain valves. All drain lines will be extended with a hose to drain below the chassis frame.</p> <p>All water carrying gauge lines will be hydraulic or reinforced poly hose.</p> <p>All piping, hose and fittings will have a minimum of a 700 PSI hydrodynamic pressure rating.</p>
0795135	Plumbing, Stainless Steel, w/Foam System	<p>FOAM SYSTEM PLUMBING</p> <p>All piping that is in contact with the foam concentrate or foam/water solution will be stainless steel. The fittings will be stainless steel or brass. Cast iron pump manifolds will be allowed.</p>
0004645	Inlets, 6.00" - 1250 GPM or Larger Pump	<p>MAIN PUMP INLETS</p> <p>A 6.00" pump manifold inlet will be provided on each side of the vehicle. The suction inlets will include removable die cast zinc screens that are designed to provide cathodic protection for the pump, thus reducing corrosion in the pump.</p>
0004646	Cap, Main Pump Inlet, Long Handle, NST, VLH	<p>MAIN PUMP INLET CAP</p> <p>The main pump inlets will have National Standard Threads with a long handle chrome cap. The cap will be the Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.</p>
0755923	Valve, Ball Intake, Akron Revolution	<p>INLET VALVES WITH INTAKE RELIEF VALVE</p> <p>There will be Two (2) Akron Brass Revolution 7982 (30 degree swivel inlet) manually operated aluminum ball intake valve(s) provided LS/RS main inlets .</p> <p>The inlet connection will be 5.0" Storz swivel with a cap and the outlet connection will be 6.0" FNST swivel long handle .</p> <p>A 12.5" diameter handwheel will be included to operate valve open and close functions. A position indicator will be included to indicate position of the ball.</p> <p>The ball intake valve will be equipped with an adjustable pressure relief valve. The relief valve will have a working range of 50 PSI to 250 PSI.</p> <p>A 3/4" bleeder/drain valve will be provided on the ball intake valve to exhaust excess air or water from the valve.</p> <p>The Intake Valve will be constructed of lightweight, corrosion-resistant, hard-anodized aluminum and stainless steel. To protect against corrosion, the casting will be coated with a powder coat finish and all components on the wet side of the valve will be constructed from stainless steel.</p>
0014650	Pump Suction Tube(s), Short, All	<p>SHORT SUCTION TUBE(S)</p> <p>The suction tube(s) on the water pump will have short suction tube(s) installed to allow for installation of adapters, elbows or intake valves without excessive overhang.</p>
0084610	Valves, Akron 8000 series- All	<p>VALVES</p> <p>All ball valves will be Akron® Brass. The Akron valves will be the 8000 series heavy-duty style with a stainless steel ball and a simple two-seat design. No lubrication or regular maintenance is required on the valve.</p> <p>Valves will have a ten (10) year warranty.</p>
0004660	Inlet, Left Side, 2.50"	<p>LEFT SIDE INLET</p> <p>There will be one (1) auxiliary inlet with a 2.50" valve at the left side pump panel, terminating with a 2.50" (F) National Standard hose thread adapter.</p> <p>The auxiliary inlet will be provided with a strainer, chrome swivel and plug.</p>
0004680	Inlet, Right Side, 2.50"	<p>RIGHT SIDE INLET</p> <p>There will be one (1) auxiliary inlet with a 2.50" valve at the right side pump panel, terminating with a 2.50" (F) National Standard hose thread adapter.</p> <p>The auxiliary inlet will be provided with a strainer, chrome swivel and plug.</p>
0016158	Valve, Inlet(s) Recessed, Side Cntrl, "Control Zone"	<p>The location of the valve for the two (2) inlets will be recessed behind the pump panel.</p>
0034720	Anode, Zinc, Pair, Pump Inlets	<p>ANODE, INLET</p> <p>A pair of sacrificial zinc anodes will be provided in the water pump inlets to protect the pump from corrosion.</p>

0004700	Control, Inlet, at Valve	INLET CONTROL The side auxiliary inlet(s) will incorporate a quarter-turn ball valve with the control located at the inlet valve. The valve operating mechanism will indicate the position of the valve.
0092569	No Rear Inlet (Large Dia) Requested	
0092696	Not Required, Cap, Rear Inlet	
0064116	No Rear Inlet Actuation Required	
0009648	No Rear Intake Relief Valve Required on Rear Inlet	
0092568	No Rear Auxiliary Inlet Requested	
0563738	Valve, .75" Bleeder, Aux. Side Inlet, Swing Handle	INLET BLEEDER VALVE A 0.75" bleeder valve will be provided for each side gated inlet. The valves will be located behind the panel with a swing style handle control extended to the outside of the panel. The handles will be chrome plated and provide a visual indication of valve position. The swing handle will provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. The water discharged by the bleeders will be routed below the chassis frame rails.
0029043	Tank to Pump, (1) 3.00" Valve, 3.00" Plumbing	TANK TO PUMP The booster tank will be connected to the intake side of the pump with stainless steel piping and a quarter turn 3.00" full flow line valve with the control remotely located at the operator's panel. Tank to pump line will run straight (no elbows) from the pump into the front face of the water tank and angle down into the tank sump. A rubber coupling will be included in this line to prevent damage from vibration or chassis flexing. A check valve will be provided in the tank to pump supply line to prevent the possibility of "back filling" the water tank.
0004905	Outlet, Tank Fill, 1.50"	TANK REFILL A 1.50" combination tank refill and pump re-circulation line will be provided, using a quarter-turn full flow ball valve controlled from the pump operator's panel.
0004940	Outlet, Left Side, 2.50"	LEFT SIDE DISCHARGE OUTLETS There will be Two (2) discharge outlets with a 2.50" valve on the left side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter.
0092570	Not Required, Outlets, Left Side Additional	
0004945	Outlet, Right Side, 2.50"	RIGHT SIDE DISCHARGE OUTLETS There will be One (1) discharge outlet with a 2.50" valve on the right side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter.
0092571	Not Required, Outlets, Right Side Additional	
0005046	Outlet, 4" w/3.50" Waterous Valve, Right, Handwheel	LARGE DIAMETER DISCHARGE OUTLET There will be a 4.00" discharge outlet with a 3.50" Waterous valve installed on the right side of the apparatus, terminating with a 4.00" (M) National Standard hose thread adapter. This discharge outlet will be actuated with a handwheel control at the pump operator's control panel. An indicator will be provided to show when the valve is in the closed position.
0649939	Outlet, Front, 1.50" w/2" Plumbing	FRONT DISCHARGE OUTLET There will be one (1) 1.50" discharge outlet piped to the front of the apparatus and located in the center bumper tray. Plumbing will consist of 2.00" piping and flexible hose with a 2.00" ball valve with control at the pump operator's panel. A fabricated weldment made of stainless steel pipe will be used in the plumbing where appropriate. The piping will terminate with a 1.50" NST with 90 degree stainless steel swivel. There will be automatic drains provided at all low points of the piping.

0004995	Outlet, Rear, 2.50"	REAR DISCHARGE OUTLET There will be One (1) discharge outlet piped to the rear of the hose bed, left side, installed so proper clearance is provided for spanner wrenches or adapters. Plumbing will consist of 2.50" piping along with a 2.50" full flow ball valve with the control from the pump operator's panel.
0092574	Not Required, Outlet, Rear, Additional	
0004990	Outlet, Front HB, 2.50" w/2.50" Plumbing	FRONT OF HOSE BED DISCHARGE OUTLET There will be One (1) discharge outlet discharge(s) piped to the front of the hose bed and located driver side as shown on the AD. Plumbing will consist of 2.50" piping with a 2.50" full-flow ball valve controlled at the pump operator's panel. The discharge(s) will terminate with a 2.50" (M) National Standard hose thread adapter.
0752097	Caps/Plugs for 1.00" to 3.00" Discharges/Inlets, Chain	DISCHARGE CAPS/ INLET PLUGS Chrome plated, rocker lug, caps with chain will be furnished for all discharge outlets 1.00" thru 3.00" in size, besides the pre-connected hose outlets. Chrome plated, rocker lug, plugs with chain will be furnished for all auxiliary inlets 1.00" thru 3.00" in size. The caps and plugs will incorporate a thread design to automatically relieve stored pressure in the line when disconnected.
0563739	Valve, 0.75" Bleeder, Discharges, Swing Handle	OUTLET BLEEDER VALVE A 0.75" bleeder valve will be provided for each outlet 1.50" or larger. Automatic drain valves are acceptable with some outlets if deemed appropriate with the application. The valves will be located behind the panel with a swing style handle control extended to the outside of the side pump panel. The handles will be chrome plated and provide a visual indication of valve position. The swing handle will provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. Bleeders will be located at the bottom of the pump panel. They will be properly labeled identifying the discharge they are plumbed in to. The water discharged by the bleeders will be routed below the chassis frame rails.
0005091	Elbow, Left Side Outlets, 45 Degree, 2.50" FNST x 2.50" MNST, VLH	LEFT SIDE OUTLET ELBOWS The 2.50" discharge outlets located on the left side pump panel will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow. The elbow will be Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.
0035094	Not Required, Elbow, Left Side Outlets, Additional	
0025091	Elbow, Right Side Outlets, 45 Degree, 2.50" FNST x 2.50" MNST, VLH	RIGHT SIDE OUTLET ELBOWS The 2.50" discharge outlets located on the right side pump panel will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow. The elbow will be Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.
0089584	Not Required, Elbow, Right Side Outlets, Additional	
0045091	Elbow, Rear Outlets, 45 Degree, 2.50" FNST x 2.50" MNST, VLH	REAR OUTLET ELBOWS The 2.50" discharge outlets located at the rear of the apparatus will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow. The elbow will be Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.
0076593	Elbow, Rear Outlets, 45 Degree, 2.50" FNST x 2.5" MNST, VLH, Additional	ADDITIONAL REAR OUTLET ELBOWS The 2.50" discharge outlets, located at the rear of the apparatus, will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread chrome plated, 45 degree elbow. The elbow will be Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.
0650671	Elbow, Large Dia Outlet, 30 Deg, 4.00" FNST x 5.00" Storz, TFT AH3 ST-NP, w/Cap	LARGE DIAMETER OUTLET ELBOWS The 4.00" outlet will be furnished with a 4.00" (F) National Standard hose thread x 5.00" Storz elbow adapter with Storz cap. The NST end on the elbow will swivel until tightened to stay in determined positions. One (1) 5.00" Storz cap with cable will be provided.

0005080	Reducer, 2.50" FNST x 1.50" MNST, w/Cap	REDUCER There will be seven (7) adapters with 2.50" FNST x 1.50" MNST threads and a 1.50" chrome plated cap installed on each 2.50" outlet and 2 shipped loose..
0062133	Control, Outlets, Manual, Pierce HW if applicable	DISCHARGE OUTLET CONTROLS The discharge outlets will incorporate a quarter-turn ball valve with the control located at the pump operator's panel. The valve operating mechanism will indicate the position of the valve. If a handwheel control valve is used, the control will be a minimum of a 3.9" diameter stainless steel handwheel with a dial position indicator built in to the center of the handwheel. Any 3.00 inch or larger discharge valve will be a slow-operating valve in accordance with NFPA 16.7.5.3.
0095958	Deluge Outlet, Special Height/Location	DELUGE OUTLET SPECIAL INSTRUCTIONS The deluge gun outlet will be located Recessed as shown on the drawing, centered between the hose reel and the LS side sheet.
0753328	Outlet, 3.00" Deluge, Dual Control, LG HW's, w/TFT Extend-a-Gun XG18 riser	DELUGE RISER A 3.00" deluge riser will be installed above the pump in such a manner that a monitor can be mounted and used effectively. Piping will be installed securely so no movement develops when the line is charged. The riser will be gated and controlled at the pump operator's panel by a large handwheel control. DUAL CONTROL There will be a second large handwheel control installed near the deluge outlet within easy reach of the deluge appliance operator. TELESCOPIC PIPING The deluge riser piping will include a 18.00" Task Force Model XG18 Extend-A-Gun extension. This extension will be telescopic to allow the deluge gun to be raised 18.00" increasing the range of operation. A position sensor will be provided on the telescopic piping that will activate the "do not move vehicle" light inside the cab when the monitor is in the raised position.
0770359	No Monitor Requested, Customer/Dealer Furnished and Installed	MONITOR A customer/dealer supplied and installed make and model TFT monitor will be properly installed on the deluge riser.
0029304	No Nozzle Req'd	
0046857	Deluge Mount, For TFT Crossfire Monitor, TFT Manual Extend-A-Gun Only	The deluge riser Extend-a-Gun will have provisions for direct mounting a Task Force Tips CrossFire monitor.
0518764	SP Crosslays Sngl Sheet Unpainted, (2+) 1.50", Spcl. Cap	CROSSLAY HOSE BEDS Two (2) crosslays with 1.50" outlets will be provided. Each bed to be capable of carrying 200' of 2.00"DJ Hose, with 8.00" clear opening for each bed and will be plumbed with 2.00" i.d. pipe and gated with a 2.00" quarter turn ball valve. Outlets to be equipped with a 1.50" National Standard hose thread 90 degree swivel located in the hose bed so that hose may be removed from either side of apparatus. The crosslay controls will be at the pump operator's panel. The center crosslay dividers will be fabricated of .25" aluminum and will provide adjustment from side to side. The divider will be un-painted. Vertical scuffplates, constructed of stainless steel, will be provided at the front and rear ends of the bed on each side of vehicle. Crosslay bed flooring will consist of removable perforated brushed aluminum.
0029196	Not Required, 2.50" Crosslay	
0029260	Not Required, Speedlays	
0623374	Hose Restraint, Crosslays, 2" Nylon Web, Seat Belt Buckle, Tether, Bar, Sides	CROSSLAY HOSE RESTRAINT A 2.00" black nylon webbing design restraint will be provided at each of the ends of three (3) crosslay(s) to secure the hose during travel. The webbing assembly is to be attached at the bottom of the crosslays, with footman loops and a permanent attachment, and is to attach at the top outside corners with seat belt buckles. The female end of the seat buckle will be permanently attached at the top corner of the opening. A bar will be attached to the female ends of the seat belt buckles to allow a single pull release. A single black nylon strap will be attached to the bar for releasing the buckles on the webbing.
0750536	Hose Restr, Spdly, Not Required, No Spdly	

0580925	Hose Restraint, Crosslay/Deadlay, 3/16" Alum Treadplate, Top Only	CROSSLAY/DEADLAY HOSE RESTRAINT A hinged .19" aluminum treadplate cover, hinged at the front will be installed over the crosslay/deadlay(s). It will include a latch at each end of the cover to hold it securely in place, a chrome grab handle at each end for opening and closing the cover and a foam rubber gasket where the cover comes into contact to a painted surface. The cover will be provided with rubber latch hold open device.
0644843	SP Crosslays, 9.00" Lower Than Standard - with 9.00" Raised PH	CROSSLAY 9.00" LOWER THAN STD The crosslays will be lowered 9.00" from standard.
0014329	Cutouts, (2) Handhold, Crosslay Divider	CUTOUT, HANDHOLD, CROSSLAY DIVIDER Two (2) cutouts with radiused corners will be provided at side of the crosslay divider(s) one (1).
0092844	Deadlay(s), Special Cap.	DEADLAY HOSE BED One (1) deadlay bed without plumbing, will be provided above the pump compartment capable of carrying One (1) deadlay bed for (2) two 100' x 2.00" hose bundles with nozzles. Make opening 8.00" clear . Stainless steel vertical scuffplates will be provided at hose bed ends (each side of vehicle). The bottom of hose bed ends (each side) will also be equipped with a stainless steel scuffplate. above the pump compartment Deadlay bed flooring will consist of removable perforated brushed aluminum.
0038549	Hinged Shelf, In Crosslay/Deadlay, Ea	HOSE BED SHELF one (1) hinged aluminum shelf will be installed in the crosslay hose bed located above the pump area in the dead lay compartment. The shelf will be full width of the crosslay and will separate the crosslay into two (2) separate hose storage areas. It will allow for storage over the bed of the crosslay.
0015216	Reel, Booster, Aluminum - Over Pump, Right Side	BOOSTER HOSE REEL A Hannay electric rewind booster hose reel will be installed over the pump in a recessed open compartment on the right side of the apparatus. The reel will be fabricated of aluminum and have highly polished end discs. A polished stainless steel roller and guide assembly will be mounted on the reel side of the apparatus. Discharge control will be provided at the pump operator's panel. Plumbing to the reel will consist of 1.50" Aeroquip hose and a 1.50" valve.
0011060	Switch, Reel Rewind - One at Pump Panel	Reel motor will be protected from overload with a circuit breaker rated to match the motor. An electric rewind control switch will be installed on the reel side pump panel.
0075300	Hose, Booster - 100' of 1.00"/800 PSI	Booster hose, 1.00" diameter and 100 feet, with chrome plated Barway, or equal couplings will be provided. Working pressure of the booster hose will be a minimum of 800 psi.
0025244	Capacity, Hose Reel 100' of 1"	Capacity of the hose reel will be 100 feet of 1.00" booster hose.
0007122	Nozzle, Task Force Tips, B-BGH 10-125 gpm	HOSE REEL NOZZLE A Task Force, model B-BGH10-125 gpm, booster hose nozzle will be provided.
0021954	Cutout for Reel Access, One, w/ S/S Trim	HOSEREEL ACCESS A cutout will be provided in the side sheet next to the booster hose reel. This cutout will allow access to the hose and provide a window to view the reel. Stainless steel trim will be mounted horizontally and vertically around the cutout.
0085328	Nozzle Cup, Zico w/Bracket	NOZZLE CUP AND BRACKET A Zico nozzle cup and chrome plated mounting bracket will be provided for storage of the booster reel nozzle. There will be one (1) provided. The nozzle cup(s) will have a 3-1/8" inside diameter and will be located right side step shield, exact location at final.
0622237	Roller Assembly, Additional	There will be one (1) additional polished stainless steel roller and guide assembly mounted RIGHT SIDE.

HUSKY 3 FOAM PROPORTIONER

A Pierce Husky® 3 foam proportioning system will be provided. The Husky 3 is an on demand, automatic proportioning, single point, direct injection system suitable for all types of Class A and B foam concentrates, including the high viscosity (6000 cps), alcohol resistant Class B foams. Operation will be based on direct measurement of water flow, and remain consistent within the specified flows and pressures. The system will automatically proportion foam solution at rates from .1 percent to 3 percent regardless of variations in water pressure and flow, up to the maximum rated capacity of the foam concentrate pump.

The design of the system will allow operation from draft, hydrant, or relay operation.

System Capacity

The system will have the ability to deliver the following minimum foam solution flow rates at accuracies that meet or exceed NFPA requirements at a pump rating of 150 psi.

100 gpm @ 3 percent

300 gpm @ 1 percent

600 gpm @ 0.5 percent

Class A foam setting in .1 percent increments from .1 percent to 1 percent. Typical settings of 1 percent, .5 percent and .3 percent (maximum capacity will be limited to the plumbing and water pump capacity).

Control System

The system will be equipped with a digital electronic control display located on the pump operators panel. Push button controls will be integrated into the panel to turn the system on/off, control the foam percentage, and to set the operation modes.

The percent of injection will have a preset. This preset can be changed at the fire department as desired. The percent of injection will be able to be easily changed at the scene to adjust to changing demands.

Three (3) .50 tall LEDs will display the foam percentage in numeric characters. Three (3) indicator LEDs will also be included, one (1) green, one (1) red, and one (1) yellow. The LEDs will indicate various system operation or error states.

The indications will be:

Solid Green - System On

Solid Red - Valve Position Error

Solid Yellow - Priming System

Flashing Green - Injecting Foam

Flashing Red - Low Tank Level

Flashing Yellow - Refilling Tank

The control display will house a microprocessor, which receives input from the systems water flow meter while also monitoring the position of the foam concentrate pump. The microprocessor will compare the values of the water flow versus the position/rate of the foam pump, to ensure the proportion rate is accurate. One (1) check valve will be installed in the plumbing to prevent foam from contaminating the water pump.

Hydraulic Drive System

The foam concentrate pump will be powered by an electric over hydraulic drive system. The hydraulic system and motor will be integrated into one (1) unit.

Foam Concentrate Pump

The foam concentrate pump will be of positive displacement, self-priming; linear actuated design, driven by the hydraulic system. The pump will be constructed of brass body; chrome plated stainless steel shaft, with a stainless steel piston. In order to increase longevity of the pump, no aluminum will be present in its construction.

A relief system will be provided which is designed to protect the drive system components and prevent over pressuring the foam concentrate pump

The foam concentrate pump will have minimum capacity for 3 gpm with all types of foam concentrates with a viscosity at or below 6000 cps including protein, fluoroprotein, AFFF, FFFP, or AR-AFFF. The system will deliver only the amount of foam concentrate flow required, without recirculating foam back to the storage tank. Recirculating foam concentrate back to the storage tank can cause agitation and premature foaming of the concentrate, which can result in system failure. The foam concentrate pump will be self-priming and have the ability to draw foam concentrate from external supplies such as drums or pails.

External Foam Concentrate Connection

An external foam pick-up will be provided to enable use of a foam agent that is not stored on the vehicle. The external foam pick-up will be designed to allow continued operation after the on-board foam tank is empty, or the use of foam different than the foam in the foam tank.

Panel Mounted External Pick-Up Connection / Valve

A bronze three (3)-way valve will be provided. The unit will be mounted to the pump panel. The valve unit will function as the foam system tank to pump valve and external suction valve. The external foam pick-up will be one (1) 0.75" male connection GHT (garden hose thread) with a cap.

Pick-Up Hose

A 0.75" flexible hose with an end for insertion into foam containers will be provided. The hose will be supplied with a 0.75" female swivel GHT (garden hose thread) swivel connector. The hose will be shipped loose.

Discharges

The foam system will be plumbed to the center of front bumper, hose reel in right side of dunnage area, left rear outlet, front crosslay and rear crosslay.

System Electrical Load

The maximum current draw of the electric motor and system will be no more than 55 amperes at 12 VDC.

0592527	Refill, Foam Tank, Integral, Husky 3	SINGLE FOAM TANK REFILL
		The foam system's proportioning pump will be used to fill the foam tank. This will allow use of the auxiliary foam pick-up to pump the foam from pails or a drum on the ground into the foam tank. A foam shut-off switch will be installed in the fill dome of the tank to shut the system down when the tank is full. The fill operation will be controlled by a mode in the foam system controller. While the proportioner pump is filling the tank, the controller will display a flashing yellow LED to indicate that the tank is filling. When the tank is full, as determined by the float switch in the tank dome, the pump will stop and the controller will shut the yellow LED off. If it attempted to use tank fill and the refill valve and suction valve are in the wrong position(s), then a red LED will illuminate to indicate the improper valve position(s). When the valves are positioned properly, then filling will commence.
0031896	Demonstration, Foam System, Dealer Provided	
0005446	Foam Cell, 20 Gallon, Not Reduce Water	FOAM TANK
		The foam tank will be an integral portion of the polypropylene water tank. The cell will have a capacity of 20 gallons of foam with the intended use of Class A foam. The foam cell will not reduce the capacity of the water tank. The foam cell will have a screen in the fill dome and a breather in the lid.
0697589	Drain, 1.00", Foam Tank #1, Husky 3 Foam System, Quarter Turn	FOAM TANK DRAIN
		The foam tank drain will be a 1.00" quarter turn drain valve located inside the pump/plumbing compartment.
0091079	Not Required, Foam Tank #2	
0091112	Not Required, Foam Tank #2 Drain	
0007575	Pump House, Side Control, 48", Control Zone	PUMP COMPARTMENT
		The pump compartment will be separate from the hose body and compartments so that each may flex independently of the other. The pump compartment will be constructed of the same material as the body compartmentation. The pump compartment substructure will be a fabricated assembly of steel tubing, angles and channels which supports both the fire pump and the side running boards. The pump compartment will be mounted on the chassis frame rails with rubber biscuits in a four point pattern to allow for chassis frame twist. Pump compartment, pump, plumbing and gauge panels will be removable from the chassis in a single assembly.
		PUMP MOUNTING
		Pump will be mounted to a substructure which will be mounted to the chassis frame rail using rubber isolators. The mounting will allow chassis frame rails to flex independently without damage to the fire pump.
		LEFT SIDE PUMP CONTROL PANEL
		All pump controls and gauges will be located at the left (driver's) side of the apparatus and properly identified. Layout of the pump control panel will be ergonomically efficient and systematically organized. The pump operator's control panel will be removable in two (2) main sections for ease of maintenance: The upper section will contain sub panels for the mounting of the pump pressure control device, engine monitoring gauges, electrical switches, and foam controls (if applicable). Sub panels will be removable from the face of the pump panel for ease of maintenance. Below the sub panels will be located all valve controls and line pressure gauges. The lower section of the panel will contain all inlets, outlets, and drains. All push/pull valve controls will have 1/4 turn locking control rods with polished chrome plated zinc tee handles. Guides for the push/pull control rods will be chrome plated zinc castings securely mounted to the pump panel. Push/pull valve controls will be capable of locking in any position. The control rods will pull straight out of the panel and will be equipped with universal joints to eliminate binding.
		IDENTIFICATION TAGS
		The identification tag for each valve control will be recessed in the face of the tee handle. All discharge outlets will have color coded identification tags, with each discharge having its own unique color. Color coding will include the labeling of the outlet and the drain for each corresponding discharge. All line pressure gauges will be mounted directly above the corresponding discharge control tee handles and recessed within the same chrome plated casting as the rod guide for quick identification. The gauge and rod guide casting will be removable from the face of the pump panel for ease of maintenance. The casting will be color coded to correspond with the discharge identification tag. All remaining identification tags will be mounted on the pump panel in chrome plated bezels. The pump panel on the right (passenger's) side will be removable with lift and turn type fasteners. Trim rings will be installed around all inlets and outlets.

0746447	Approval Dwg, All Pump Panel(s), Includes Color And Label Tags	<p>The following drawing(s) will be provided for approval by the customer. The drawing(s) will be made for up Three (03) Truck apparatus and/or similar Pierce job number.</p> <p>PUMP OPERATOR'S PANEL DRAWING</p> <p>A detailed drawing to scale of the pump operator's panel will be provided for the customer to review. The drawing will include all of the gauges, controls, switching, etc., located on the pump operator's panel. The customer will be allowed to make changes and/or mark-ups to this approval drawing. The fire apparatus manufacturer will make revisions (If needed) to the drawing per the customer changes and/or mark-ups as long as the changes are physically possible within a specific product line.</p> <p>The finalized and signed customer approved pump operator's panel drawing will become part of the contract documents.</p> <p>Due to the way drain(s), bleeder(s), operational/maintenance tag(s) and NFPA required warning tag(s) are placed on pump panel(s), these items will NOT be shown on any pump panel approval drawing(s). These item(s) will be placed on pump panel(s) at the fire apparatus manufacturer discretion.</p> <p>REMAINING PUMP PANEL(S)</p> <p>Detailed drawing(s) to scale of the remaining pump panel(s) will be provided for the customer to review. The drawing(s) will include all of the gauges, controls, switching, etc., located on the pump panel(s). The customer will be allowed to make changes and/or mark-ups to these approval drawing(s). The fire apparatus manufacturer will make revisions (If needed) to the drawing(s) per the customer changes and/or mark-ups as long as the changes are physically possible within a specific product line.</p> <p>The finalized and signed customer approved pump panel drawing(s) will become part of the contract documents.</p> <p>Due to the way drain(s), bleeder(s), operational/maintenance tag(s) and NFPA required warning tag(s) are placed on pump panel(s), these items will NOT be shown on any pump panel approval drawing(s). These item(s) will be placed on pump panel(s) at the fire apparatus manufacturer discretion.</p> <p>COLOR CODED TAGS</p> <p>A detailed drawing/chart of the colors used on all of the inlet(s) and outlet(s) will be provided for the customer to review. The customer will be allowed to make changes and/or mark-ups to this approval drawing/chart. The fire apparatus manufacturer will make revisions (If needed) to the drawing per the customer changes and/or mark-ups as long as the changes are physically possible within a specific product line.</p> <p>The finalized and signed customer approved drawing/chart of the colors will become part of the contract documents.</p> <p>SPECIAL TEXT/VERBIAGE TAGS</p> <p>A detailed drawing/chart of the text/verbiage used on all of the inlet(s) and outlet(s) will be provided for the customer to review. The customer will be allowed to make changes and/or mark-ups to this approval drawing/chart. The fire apparatus manufacturer will make revisions (If needed) to the drawing per the customer changes and/or mark-ups as long as the changes are physically possible within a specific product line.</p> <p>The finalized and signed customer approved drawing/chart of the text/verbiage will become part of the contract documents.</p>
0032479	Pump Panel Configuration, Control Zone	<p>PUMP PANEL CONFIGURATION</p> <p>The pump panel configuration will be arranged and installed in an organized manner that will provide user-friendly operation.</p>
0629224	Material, Pump Panels, Side Control Black Line-X	<p>PUMP AND GAUGE PANEL</p> <p>The pump and gauge panels will be constructed of aluminum with a black Line-X spray-on polyurethane/polyurea material finish. A polished aluminum trim molding will be provided around each panel.</p>
0005577	Panel, Pump Access - Right Side and Front	<p>The right side pump panel will be removable and fastened with swell type fasteners.</p> <p>On the front of the pump house structure, provisions will be provided for access to the pump.</p>
0037731	Pump House Structure, Raised, Included with Ladder Storage	
0005945	Light, Pump Compt	<p>PUMP COMPARTMENT LIGHT</p> <p>A pump compartment light will be provided inside the right side pump enclosure and accessible through a door on the pump panel.</p> <p>A .125" weep hole will be provided in each light lens, preventing moisture retention.</p>
0586438	Gauges, Engine - Pump Panel, IAT Pressure Controller	<p>PUMP PANEL GAUGES AND CONTROLS</p> <p>The following will be provided on the pump and gauge panels in a neat and orderly fashion. These gauges will be in addition to what is provided with the pressure controller.</p> <ul style="list-style-type: none"> - Engine Oil Pressure Gauge: With visual and audible warning - Engine Water Temperature Gauge: With visual and audible warning - Tachometer: Electric - Master Pump Drain Control - Voltmeter - Fuel

0005601	Throttle, Engine, Incl'd w/Press Controller	
0739224	Indicator Light @ Pump Panel, Throttle Ready, Incl w/Pressure Gov/Throttle,Green	THROTTLE READY GREEN INDICATOR LIGHT There will be a green indicator light integrated with the pressure governor and/or engine throttle installed on the pump operators panel that is activated when the pump is in throttle ready mode.
0549333	Indicators, Engine, Included with Pressure Controller	
0745568	Indicator Light, Pump Panel, Ok To Pump, Green	OK TO PUMP INDICATOR LIGHT There will be a green indicator light installed on the pump operators panel that is activated when the pump is in Ok To Pump mode.
0081262	Drains, RS, Keep Area Under Main Inlet Clear	RIGHT SIDE DRAINS The drains on the right side pump panel will be located to keep the area under the main pump inlet clear for customer installed piston intake valve.
0066121	Drains, LS, Keep Area Under Main Inlet Clear	DRAINS, LEFT SIDE The drains on the left side pump panel will be located to keep the area under the main pump inlet clear for customer installed piston intake valve.
0763688	Garnish Ring(s), Color Coded, Painted, Location	PAINTED COLOR CODED GARNISH RING(S) There will be six (6) color coded garnish ring(s) provided around LS 2.50" outlets, LS 2.50" inlet, RS 2.50" outlet, RS LDH Outlet, RS 2.50" inlet. The color of the ring(s) will be match pump panel colors for selected valves and will be painted on a stainless steel garnish ring.
0025637	Pump Panel Trim Rings, Oversized for Valve Removal	OUTLET TRIM RINGS The side discharges and auxiliary inlet valves will be recessed behind the panel and have larger holes provided in the pump panel to facilitate removal of the valves without removing the complete pump panel. Stainless steel trim plates will be provided to trim the holes.
0777129	SP Speaker, Atkinson Dynamics ADSF-25-Z, 25Watt, Front Bulkhead, Switch, Wiring	RADIO SPEAKER An Atkinson Dynamics, Model ADSF-25-Z, 25 Watt, flush mount speaker will be provided and mounted in the front bulkhead near the pump panel. There will be an on/off switch located on the pump panel. The wiring from the switch will be terminated at officer side per direction.
0677893	Gauges, 6.00" Master, Class 1, Special, LED	VACUUM AND PRESSURE GAUGES The pump vacuum and pressure gauges will be liquid filled and manufactured by Class 1 Incorporated ©. The gauges will be a minimum of 6.00" in diameter and will have white faces with black lettering, with a pressure range of 30.00" 0-600 psi. The pump pressure and vacuum gauges will be installed adjacent to each other at the pump operator's control panel. The green LED backlight will be activated by the pump in gear interlock circuit. Test port connections will be provided at the pump operator's panel. One(1) will be connected to the intake side of the pump, and the other to the discharge manifold of the pump. They will have 0.25 in. standard pipe thread connections and polished stainless steel plugs. They will be marked with a label.
0511100	Gauge, 2.00" Pressure, Class 1, 30"-0-400psi	PRESSURE GAUGES The individual "line" pressure gauges for the discharges will be Class 1© interlube filled. They will be a minimum of 2.00" in diameter and have white faces with black lettering. Gauge construction will include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut. Gauges will have a pressure range of 30"-0-400#. The individual pressure gauge will be installed as close to the outlet control as practical. This gauge will include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.
0750526	Gauge, Water Level, Pierce, In pressure Controller, Lt Driver	WATER LEVEL GAUGE An electric water level gauge will be incorporated in the pressure controller that registers water level by means of 9 LEDs. They will be at 1/8 level increments with a tank empty LED. The LEDs will be a bright type that is readable in sunlight, and have a full 180-degree of clear viewing. To further alert the pump operator, the gauge will have a warning flash when the tank volume is less than 25%, and will have "Down Chasing LEDs when the tank is almost empty. The level measurement will be ascertained by sensing the head pressure of the fluid in the tank or cell. There will be a light driver module with this installation to power additional water level gauge(s) included on the apparatus.

0084763		Gauge, Ernst Sight Water Level, w/Red Ball, IATS	WATER LEVEL GAUGE, ADDITIONAL An additional water level gauge will be provided. An Ernst sight tube water level indicator with a floating red ball will be mounted on the gauge panel with an unrestricted view for the operator.
0750438		Water Level Gauge, WIn PSTANK2, LED 1-Light, 4-Level	WATER LEVEL GAUGE There will be two (2) additional water level indicator(s), Whelen®, Model PSTANK2, LED module with chrome trim, installed one (1) each side rearward of crew cab doors. This light module(s) will include four (4) colored levels, and function similar to the water level indicator located at the operators panel: First green module indicates a full water level Second blue module indicates a water level above 3/4 full Third amber module indicates a water level above 1/2 full Last red module indicates a water level above 1/4 full and empty Above 1/4 this light will be steady burning At empty this light will be flashing The flash rate will be determined by the main water level tank sensor. This module will be activated when the ignition switch and parking brake is applied.
0604354		Gauge, Foam Level, FRC, Tank Vision Pro, WLA 360-A00, Class "A"	CLASS "A" FOAM LEVEL GAUGE A Fire Research TankVision Pro model WLA360-A00 cell/tank level indicator kit shall be installed on the pump operators panel. The kit will include an electronic indicator module, a pressure sensor, a 10' sensor cable and a tank vent. The indicator will show the volume of Class "A" foam concentrate in the cell/tank on nine (9) easy to see super bright RGB LEDs. A wide view lens over the LEDs will provide for a viewing angle of 180 degrees. The indicator case will be waterproof, manufactured of Polycarbonate/Nylon material and have a distinctive green label. The program features will be accessed from the front of the indicator module. The program will support self-diagnostics capabilities, self-calibration, six (6) programmable colored light patterns to display cell/tank volume, adjustable brightness control levels and a data link to connect remote indicators. Low foam level warnings will include flashing LEDs at 1/4 cell/tank and down chasing LEDs when the cell/tank is almost empty. The indicator will receive an input signal from an electronic pressure sensor. The sensor will be mounted from the outside of the foam cell/tank near the bottom. No probe will be placed on the interior of the cell/tank. Wiring will be weather resistant and have automotive type plug-in connectors.
0772845	SP	Light Shield/Step 8" LED, TecNiq E10 Stp Lt, Pump Panel Light Switch Activation	STEP/LIGHT SHIELD There will be an aluminum treadplate stepping surface no less than 8.00" deep and properly reinforced to support a man's weight, installed over the pump operator's panel. There will be 12 volt DC white LED lights installed under the step to illuminate the controls, switches, essential instructions, gauges, and instruments necessary for the operation of the apparatus. These lights will be activated by the pump panel light switch. Additional lights will be included every 18.00" depending on the size of the pump house. One (1) pump panel light will come on when the pump is in okay to pump mode. There will be a light activated above the pump panel light switch when the parking brake is set. This is to afford the operator some illumination when first approaching the control panel. There will be one (1) TecNiq Model E10-W000-1, 12 volt DC white LED step light with a fabricated aluminum angled bracket with all wiring enclosed to angle the light downward provided above the step. The step light will be activated by the pump panel light switch.
0752576	SP	Light Shield/Step 8", PS LED, TecNiq E10-W000-1 LED Stp Lt, Full-Width	ADDITIONAL STEP/LIGHT SHIELD There will be an additional aluminum treadplate stepping surface no less than 8.00" deep and properly reinforced to support a man's weight, installed over the passenger's side pump panel, and as full-width as possible. There will be 12 volt DC white LED lights installed under the step to illuminate the controls, switches, essential instructions, gauges, and instruments necessary for the operation of the apparatus. These lights will be activated by the pump panel light switch. Additional lights will be included every 18.00" depending on the size of the pump house. There will be one (1) TecNiq, Model E10-W000-1, 12 volt DC white LED step light with a fabricated aluminum angled bracket with all wiring totally enclosed to angle the light downward provided above the step. The step light will be activated by the pump panel light switch.
0790478	SP	Air Horn, (1) Grover, 1510, 24.25" L, In Bumper, 90 psi	AIR HORN SYSTEM One (1) Grover air horn will be recessed in the front bumper. The air horn system will be piped to the air brake system wet tank utilizing 0.38" tubing. A pressure protection valve will be installed to prevent the loss of air, in the brake system. Air horn air supply will be set to 90 psi.
0606839		Location, Air Horn, Bumper, Left Side, Outside Frame, Inboard (Pos #6)	Air Horn Location The air horn will be located on the left side of the bumper, just outside of the frame rail.
0756670	SP	Control, Air Horn, Horn Ring, DS Foot Sw	AIR HORN CONTROL The air horns will be actuated by a foot switch on the driver's side, and by the horn button in the steering wheel. The driver will have the option to control the air horns or the chassis horns from the horn button by means of a selector switch located on the instrument panel.

0688049	Siren, Federal EQ2B-200, 200 Watt	ELECTRONIC SIREN There will be a Federal, Model EQ2B-200, electronic siren with noise canceling microphone provided. This siren to be active when the battery switch is on and that emergency master switch is on.
0557179	Location, Siren, Heavy Swivel Mount Center Console, Not Overhead	Siren head will be located on a heavy duty swivel bracket mounted on the center console between the driver and officer seats, located per switch panel layout. The swivel bracket will be capable of rotating a minimum of 180 degrees.
0727702	SP Control, Elec Siren, PS Push Button and Siren Head, Batt Sw and Ign	The electronic siren will be controlled on the siren head and by a push button located per switch panel layout. The siren will be powered when the battery switch is on, and the ignition switch is on.
0550216	Speaker, (1) Federal, BP200-EF, 200 watt, Stainless Steel	SPEAKER A Federal, Model BP200-EF, 200 watt speaker will be provided. A chrome-plated "EF" flat grille will be installed in front of the speaker.
0601556	Location, Speaker, Frt Bumper, Recessed, Left Side, Outside Frame, Inbrd (Pos 6)	The speaker will be recessed in the left side of the front bumper, just outside of the frame rail.
0650748	Siren, Aux, Federal RUMBLER-3	AUXILIARY ELECTRONIC SIREN There will be a Federal, Model RUMBLER-3 electronic low frequency siren provided in addition to the primary electronic siren.
0688025	Control, Aux Electric Siren, Passenger's Side Push Button	a push button located within reach of the passenger
0688027	Control, Aux Electric Siren, Driver's Side Push Button	a push button located within reach of the driver
0650543	Location, Aux Elect Siren, Behind PS Seat, Amp Only	Auxiliary Electronic Siren Location The auxiliary electric siren will be located behind the passenger's side seat.
0650747	Speaker, Aux, Siren, Federal RUMBLER-3	AUXILIARY SIREN SPEAKER The Federal Signal Model RUMBLER-3 speakers will be furnished.
0650532	Location, Aux Siren Speaker, Behind Bumper, Vent Holes Down	AUXILIARY SPEAKER LOCATION The auxiliary electric siren speaker will be installed behind the bumper with the vent holes down.
0779165	Siren, Federal Q2B, Bat Dir	AUXILIARY MECHANICAL SIREN There will be a Federal Signal Model Q2B mechanical siren furnished on the front of the apparatus. The siren will be energized from a battery direct circuit through a 2-gauge cable to a solenoid that is energized from the emergency master switch. Additional customer selectable controls will be included for the momentary activation of this siren.
0006097	Location of Siren, Recessed in Bumper	The mechanical siren will be recessed in the front bumper on the right side. The siren will be properly supported using the bumper framework.
0026161	Control, Mech Siren, DS Foot Sw	The mechanical siren will be actuated by one (1) foot switch located on the driver's side.
0734674	Sw, Siren Brake, Mom Rocker, Red Outline, RS Overhead Sw Pnl, Mux	A momentary rocker switch shall be included in the right side overhead switch panel to activate the siren brake. There will be a red outline decal around the black rocker switch.

0730722	SP Lightbar, WIn, Freedom IV-Q, 81", RRRRRRWROptRWRRRRRR	<p>FRONT ZONE UPPER WARNING LIGHTS</p> <p>There will be one (1) 81.00" Whelen® Freedom IV™ lightbar mounted on the cab roof. The lightbar will include the following:</p> <p>One (1) red flashing LED module in the left side end position. One (1) red flashing LED module in the left side front corner position. One (1) red flashing LED module in the left side first front position. One (1) red flashing LED module in the left side second front position. One (1) red flashing LED module in the left side third front position. One (1) red flashing LED module in the left side fourth front position. One (1) white flashing LED module in the left side fifth front position. One (1) red flashing LED module in the left side sixth front position. One (1) 795 LED traffic directing light set national standard high priority in the center front positions. One (1) red flashing LED module in the right side sixth front position. One (1) white flashing LED module in the right side fifth front position. One (1) red flashing LED module in the right side fourth front position. One (1) red flashing LED module in the right side third front position. One (1) red flashing LED module in the right side second front position. One (1) red flashing LED module in the right side first front position. One (1) red flashing LED module in the right side front corner position. One (1) red flashing LED module in the right side end position.</p> <p>There will be clear lenses included on the lightbar. The lightbar may be controlled per the following: A switch in the cab on the switch panel will control the lightbar. The traffic light controller will be activated by a cab switch with emergency master control. There will be no momentary switch to activate the traffic light controller The two (2) white flashing LED modules and the traffic light controller will be deactivated when the parking brake is applied.</p>
0016380	No Additional Lights Req'd, Side Zone Upper	
0624849	Lights, Front Zone, WIn M6** LED, Above Headlts 2lts	<p>FRONT ZONE LOWER LIGHTS</p> <p>There will be two (2) Whelen®, Model M6**, 4.62" high x 6.75" long x 1.38" deep flashing LED warning lights with Model M6FC, chrome flanges installed on the cab face above the headlights. The driver's side front warning light to be red The passenger's side front warning light to be red The color of the lenses will be clear There will be a switch in the cab on the switch panel to control both lights.</p>
0558676	Daytime Running Lights, Headlights, Qtm, Vel/Imp, Enf/AXT-MUX, DCF (Low Beam)	<p>DAYTIME RUNNING LIGHTS (HEADLIGHTS)</p> <p>The low-beam headlights used as daytime running lights will be activated with the following measures: Ignition switch is turned on Parking brake is released These lights will be deactivated with any one of the following measures: Headlight switch is turned on High-beam flash is turned on Parking brake is set</p>
0644252	SP Light, Front, WIn IONSMCR, RED, Steady Burn	<p>FRONT WARNING LIGHT</p> <p>There will be one (1) Whelen Model IONSMCR, 1.00" high x 4.00" wide x 1.32" deep red, steady burn LED light(s) with chrome trim mounted on the front of the truck, centered above the grille, 1.50" below the windshield. The lights will be activated with the front warning switch.</p>
0775836	Flash Pattern,WIn M6**, Inside Lights, Single 75	<p>FRONT WARNING FLASH PATTERN ADJUSTMENT</p> <p>The flash pattern of the Whelen M6** lights located in the front zone lower inside positions, will be adjusted to the SingleFlash 75, number 31pattern.</p>
0653937	Flasher, Headlight Alternating	<p>HEADLIGHT FLASHER</p> <p>The high beam headlights will flash alternately between the left and right side. There will be a switch installed in the cab on the switch panel to control the high beam flash. This switch will be live when the battery switch and the emergency master switches are on. The flashing will automatically cancel when the hi-beam headlight switch is activated or when the parking brake is set.</p>
0540679	Lights, Side Zone Lower, WIn M6*C LED, Clear Lens 2pr	<p>SIDE ZONE LOWER LIGHTING</p> <p>There will be four (4) Whelen®, Model M6*C, flashing LED warning lights with chrome trim installed per the following: Two (2) lights, one (1) each side on the bumper extension. The side front lights to be red. Two (2) lights, one (1) each side above rear wheels. The side rear lights to be red. The lights will include a clear lenses. There will be a switch in the cab on the switch panel to control the lights.</p>

0775816		Flash Pattern, Wln M6**, Side Zone Lower, SingleFlash 75	<p>SIDE ZONE LOWER WARNING LIGHT FLASH PATTERN ADJUSTMENT</p> <p>The flash pattern of the four (4) Whelen M6** light(s) located each side warning light will be adjusted to SingleFlash 75 pattern number 31.</p>
0729888	SP	Lights, Door Interior Flash, 4 Dr Cab, Wln M4** LED, SingleFlash 75, Features	<p>INTERIOR CAB DOOR WARNING LIGHTS</p> <p>There will be four (4) Whelen®, Model M4** LED flashing warning lights with chrome trim provided, one (1) on each cab and crew cab door pan. The color will be amber. The warning light lens color(s) to be clear. Each light will be set to pattern SingleFlash 75. Each light will be activated by the door jamb switch of the associated door.</p>
0540769		Lights, Side, Wln M6°C LED, Clear Lens, 1st	<p>SIDE WARNING LIGHTS</p> <p>There will be two (2) Whelen, Model M6°C LED flashing warning light(s) with bezel(s) provided in the forward angled portion of the front bumper, one per side. The color of the lights will be red. All of these lights will include a clear lens. These lights will be activated with the Side Zone Lower warning lights. White LEDs will be deactivated when the parking brake is applied.</p>
0540774		Lights, Side, Wln M9°C LED, Clear Lens	<p>SIDE WARNING LIGHTS</p> <p>There will be four (4) Whelen, Model M9°C LED flashing warning light(s) with bezel(s) provided each front corner of the upper side hatch compartments, each side of cab above the crew cab windows. The color of the lights will be red. All of these lights will include a clear lens. These lights will be activated with the Side Zone Lower warning lights.</p>
0792454		Lights, Side, Wln TLI* LED, Chrome Trim, Inserts	<p>SIDE WARNING LIGHTS</p> <p>There will be four (4) Whelen®, Model TLI*, 1.50" 5.00" long x 0.50" deep 12 volt DC flashing LED warning lights with clear lenses and chrome trim provided in the rub rail under D3, P3, D1, P1. The color of the LEDs will be red. The lights will be secured in place using the inserts. There will be a switch in the cab on the switch panel to control the lights. White LEDs will be disabled when the parking brake is applied. Colored LEDs may be load managed when the parking brake is applied.</p>
0729864	SP	Flash Pattern, Wln M9**, Side Warning, SingleFlash 75 Pattern 15	<p>SIDE WARNING LIGHT FLASH PATTERN ADJUSTMENT</p> <p>The flash pattern of the four (4) Whelen M9** light(s) located each front corner of the upper side hatch compartments, each side of cab above the crew cab windows will be adjusted to SingleFlash 75, pattern number 15.</p>
0729867	SP	Flash Pattern, Wln TLI*, Side Warning, SingleFlash 75 PH1	<p>SIDE WARNING LIGHT FLASH PATTERN ADJUSTMENT</p> <p>The flash pattern of the four (4) Whelen®, Model ITL* light(s) located in the rub rail under LS3, RS33, LS1, RS1 will be adjusted to SingleFlash 75, phase 1 pattern number 11.</p>
0729851	SP	Flash Pattern, Wln M6**, Side Warning, SignalFlash 75, Ph1	<p>SIDE WARNING LIGHT FLASH PATTERN ADJUSTMENT</p> <p>The flash pattern of the two (2) Whelen M6** light(s) located in the forward angled portion of the front bumper, one per side will be adjusted to SigaFlash 75, phase 1 pattern number 31.</p>
0564655		Lights, Rear Zone Lower, Wln M6°C LED, Clear Lens, For Tail Lt Housing	<p>REAR ZONE LOWER LIGHTING</p> <p>There will be two (2) Whelen®, Model M6°C, LED flashing warning lights located at the rear of the apparatus. The driver's side rear light to be red The passenger's side rear light to be red Both lights will include a lens that is clear. There will be a switch located in the cab on the switch panel to control the lights.</p>
0729868	SP	Flash Pattern, Wln M6**, Rear Zone Lower, SingleFlash 75, Ph 1, Ph 2	<p>REAR ZONE LOWER LIGHT FLASH PATTERN ADJUSTMENT</p> <p>The flash pattern of two (2) Whelen® M6**, rear zone lower light(s) will be adjusted to the following: The left side lower light will be set to SingleFlash 75, phase 2, pattern #32. The right side lower light will be set to SingleFlash 75, phase 1, pattern #31.</p>

0777358	SP	Lights, Rear/Side Up Zone SPFL, Wln M9K LED 2Lts, M9RC LED 2Lts,Clear Lenses	<p>REAR & SIDE ZONE UPPER WARNING LIGHTS</p> <p>There will be four (4) Whelen, Model M9**, LED lights provided at the following locations: There will be two (2) Whelen, Model M9K, LED lights provided at the rear upper bulkhead, facing the rear of the truck: The driver side light will be split red/amber LED with a clear lens. The passenger side light will be split red/amber LED with a clear lens. There will be two (2) Whelen, Model M9RC, LED lights provided at the rear side upper corners of the side sheet facing the side of the truck: The driver side light will be red with clear lenses. The passenger side light will be red with clear lenses. There will be a switch located in the cab on the switch panel to control the lights. The red/amber lights flash pattern will be set to single flash left right and the red lights will be set to single flash solid.</p>
0729854	SP	Flash Pattern, Wln M9#, Rear Zone Upper, SingleFlash 75, Ph1	<p>REAR ZONE UPPER FLASH PATTERN ADJUSTMENT</p> <p>The flash pattern of the four (4) Whelen M9** light(s) located rear facing upper and side facing rear upper M9 lights will be adjusted to SigalFlash 75, phase 1 pattern number 15.</p>
0006551		Not Required, Lights, Rear Upper Zone Blocking	
0026813		No Hose Bed Warn Light Brackets Req'd, Lights Mtd on Hatch Compts, Pumper	
0759832	SP	Light, Traffic Directing, Federal Signal 320852, 31" Long LED, 331105 Cnt	<p>TRAFFIC DIRECTING LIGHT</p> <p>There will be one (1) Federal Signal VPX SignalMaster, Model 320852, six (6) LED traffic directing light module installed at the rear of the apparatus. The traffic directing light will be 31.00" long. There will be a Federal Signal, Model 331105, universal control head included with this installation. The traffic directing light will be energized when the battery switch is on. The auxiliary flash to be activated when the emergency master switch is on .</p>
0529858		Location, Traf Dir Lt, Recessed Within Trdplt Step	This traffic directing light will be recessed within a treadplate step at the rear of the apparatus.
0530282		Location, Traf Dir Lt Controller, Overhead Switch Panel DS Right End	The traffic directing light control head will be located in the driver side overhead switch panel in the right panel position.
0766692	SP	Light Twr, W-B Pow Pr NS2.3-375, WB, 3-XL200 12 VDC Lts Cld 7.5'	<p>LIGHT TOWER</p> <p>There will be one (1) Will-Burt Powerlite Profiler, Model NS2.3-375 WB, light tower provided. There will be three (3) Will-Burt, Model XL200, 125 watt 12 volt DC LED light heads included on this tower. The painted parts of the light tower and the light heads to be white. This tower will be connected to the Do Not Move Truck Indicator in the cab.</p>
0629874		Location, Light Tower, Cab Roof, Saber FR/Enforcer	<p>Light Tower Location</p> <p>The light tower will be installed on the cab roof.</p>
0617750		Controller, Light Tower, W-B, Wired Handheld, E-STOP Chf, Chf Pr, Pow Pr	<p>Light Tower Controller</p> <p>There will be one (1) handheld wired controller included.</p>
0636539	SP	Location, Light Tower Controller, Location Feature	<p>LOCATION FOR THE LIGHT TOWER CONTROLLER</p> <p>The light tower controller will be installed in the driver's side front body compartment located, match 27904.</p>
0519934		Not Required, Brand, Hydraulic Tool System	
0649753		Not Required, PTO Driven Hydraulic Tool System	
0649752		Not Required, Hydraulic Power Supply	
0649748		Not Required, Hydraulic Hose	

0649736	Not Required, Hydraulic Tools	
0007150	Bag of Nuts and Bolts	<p>LOOSE EQUIPMENT The following equipment will be furnished with the completed unit: One (1) bag of chrome, stainless steel, or cadmium plated screws, nuts, bolts and washers, as used in the construction of the unit.</p>
0602516	NFPA Required Loose Equipment, Pumper, NFPA 2016, Provided by Fire Department	<p>NFPA REQUIRED LOOSE EQUIPMENT PROVIDED BY FIRE DEPARTMENT The following loose equipment as outlined in NFPA 1901, 2016 edition, section 5.9.3 and 5.9.4 will be provided by the fire department. 800 ft (60 m) of 2.50" (65 mm) or larger fire hose. 400 ft (120 m) of 1.50" (38 mm), 1.75" (45 mm), or 2.00" (52 mm) fire hose. One (1) handline nozzle, 200 gpm (750 L/min) minimum. Two (2) handline nozzles, 95 gpm (360 L/min) minimum. One (1) smoothbore or combination nozzle with 2.50" shutoff that flows a minimum of 250 gpm. One (1) SCBA complying with NFPA 1981 for each assigned seating position, but not fewer than four (4), mounted in brackets fastened to the apparatus or stored in containers supplied by the SCBA manufacturer. One (1) spare SCBA cylinder for each SCBA carried, each mounted in a bracket fastened to the apparatus or stored in a specially designed storage space(s). One (1) first aid kit. Four (4) combination spanner wrenches. Two (2) hydrant wrenches. One (1) double female 2.50" (65 mm) adapter with National Hose threads. One (1) double male 2.50" (65 mm) adapter with National Hose threads. One (1) rubber mallet, for use on suction hose connections. Two (2) salvage covers each a minimum size of 12 ft x 14 ft (3.7 m x 4.3 m). One (1) traffic vest for each seating position, each vest to comply with ANSI/ISEA 207, <i>Standard for High Visibility Public Safety Vests</i>, and have a five-point breakaway feature that includes two (2) at the shoulders, two (2) at the sides, and one (1) at the front. Five (5) fluorescent orange traffic cones not less than 28.00" (711 mm) in height, each equipped with a 6.00" (152 mm) retro-reflective white band no more than 4.00" (152 mm) from the top of the cone, and an additional 4.00" (102 mm) retro-reflective white band 2.00" (51 mm) below the 6.00" (152 mm) band. Five (5) illuminated warning devices such as highway flares, unless the five (5) fluorescent orange traffic cones have illuminating capabilities. One (1) automatic external defibrillator (AED). Four (4) ladder belts meeting the requirements of NFPA 1983, <i>Standard on Fire Service Life Safety Rope and System Components</i> (if equipped with an aerial device). If the supply hose carried does not use sexless couplings, an additional double female adapter and double male adapter, sized to fit the supply hose carried, will be carried mounted in brackets fastened to the apparatus. If none of the pump intakes are valved, a hose appliance that is equipped with one or more gated intakes with female swivel connection(s) compatible with the supply hose used on one side and a swivel connection with pump intake threads on the other side will be carried. Any intake connection larger than 3.00" (75 mm) will include a pressure relief device that meets the requirements of 16.6.6. If the apparatus does not have a 2.50" National Hose (NH) intake, an adapter from 2.50" NH female to a pump intake will be carried, mounted in a bracket fastened to the apparatus if not already mounted directly to the intake. If the supply hose carried has other than 2.50" National Hose (NH) threads, adapters will be carried to allow feeding the supply hose from a 2.50" NH thread male discharge and to allow the hose to connect to a 2.50" NH female intake, mounted in brackets fastened to the apparatus if not already mounted directly to the discharge or intake.</p>
0519913	Not Required, Soft Suction Hose	<p>SOFT SUCTION HOSE There will be no soft suction hose provided.</p>
0602389	Strainer, Provided by Dealer, Pumper NFPA 2016 Classification	<p>STRAINER PROVIDED BY DEALER NFPA 1901, 2016 edition, section 5.8.2.1.1 requires a suction strainer when suction hose is provided. The strainer is not on the apparatus as manufactured. The dealer will provide the suction strainer.</p>
0602538	Extinguisher, Dry Chemical, Pumper NFPA 2016 Class, Provided by Fire Department	<p>DRY CHEMICAL EXTINGUISHER PROVIDED BY FIRE DEPARTMENT NFPA 1901, 2016 edition, section 5.9.4 requires one (1) approved dry chemical portable fire extinguisher with a minimum 80-B:C rating mounted in a bracket fastened to the apparatus. The extinguisher is not on the apparatus as manufactured. The fire department will provide and mount the extinguisher.</p>
0602360	Extinguisher, 2.5 Gal. Pressurized Water, Pumper NFPA 2016, Provided by Fire Dept	<p>WATER EXTINGUISHER PROVIDED BY FIRE DEPARTMENT NFPA 1901, 2016 edition, section 5.9.4 requires one (1) 2.5 gallon or larger water extinguisher mounted in a bracket fastened to the apparatus. The extinguisher is not on the apparatus as manufactured. The fire department will provide and mount the extinguisher.</p>

0602679	Axe, Flathead, Pumper NFPA 2016 Classification, Provided by Fire Department	<p>FLATHEAD AXE PROVIDED BY FIRE DEPARTMENT NFPA 1901, 2016 edition, Section 5.9.4 requires one (1) flathead axe mounted in a bracket fastened to the apparatus. The axe is not on the apparatus as manufactured. The fire department will provide and mount the axe.</p>
0602667	Axe, Pickhead, Pumper NFPA 2016 Classification, Provided by Fire Department	<p>PICKHEAD AXE PROVIDED BY FIRE DEPARTMENT NFPA 1901, 2016 edition, Section 5.9.4 requires one (1) pickhead axe mounted in a bracket fastened to the apparatus. The axe is not on the apparatus as manufactured. The fire department will provide and mount the axe.</p>
0559685	Paint, Two Tone, Cab, Custom Cab	<p>PAINT - BODY PAINTED TO MATCH CAB The exterior custom cab and body painting procedure will consist of a seven (7) step finishing process as follows: <u>Manual Surface Preparation</u> - All exposed metal surfaces on the custom cab and body will be thoroughly cleaned and prepared for painting. Imperfections on the exterior surfaces will be removed and sanded to a smooth finish. Exterior seams will be sealed before painting. Exterior surfaces that will not be painted include; chrome plating, polished stainless steel, anodized aluminum and bright aluminum treadplate. <u>Chemical Cleaning and Pretreatment</u> - All surfaces will be chemically cleaned to remove dirt, oil, grease, and metal oxides to ensure the subsequent coatings bond well. The aluminum surfaces will be properly cleaned and treated using a high pressure, high temperature 4 step Acid Etch process. The steel and stainless surfaces will be properly cleaned and treated using a high temperature 3 step process specifically designed for steel or stainless. The chemical treatment converts the metal surface to a passive condition to help prevent corrosion. A final pure water rinse will be applied to all metal surfaces. <u>Surfacer Primer</u> - The Surfacer Primer will be applied to a chemically treated metal surface to provide a strong corrosion protective basecoat. A minimum thickness of 2 mils of Surfacer Primer is applied to surfaces that require a Critical aesthetic finish. The Surfacer Primer is a two-component high solids urethane that has excellent sanding properties and an extra smooth finish when sanded. <u>Finish Sanding</u> - The Surfacer Primer will be sanded with a fine grit abrasive to achieve an ultra-smooth finish. This sanding process is critical to produce the smooth mirror like finish in the topcoat. <u>Sealer Primer</u> - The Sealer Primer is applied prior to the Basecoat in all areas that have not been previously primed with the Surfacer Primer. The Sealer Primer is a two-component high solids urethane that goes on smooth and provides excellent gloss hold out when topcoated. <u>Basecoat Paint</u> - Two coats of a high performance, two component high solids polyurethane basecoat will be applied. The Basecoat will be applied to a thickness that will achieve the proper color match. The Basecoat will be used in conjunction with a urethane clear coat to provide protection from the environment. <u>Clear Coat</u> - Two (2) coats of Clear Coat will be applied over the Basecoat color. The Clear Coat is a two-component high solids urethane that provides superior gloss and durability to the exterior surfaces. Lap style and roll-up doors will be Clear Coated to match the body. Paint warranty for the roll-up doors will be provided by the roll-up door manufacture. Each batch of basecoat color is checked for a proper match before painting of the cab and the body. After the cab and body are painted, the color is verified again to make sure that it matches the color standard. Electronic color measuring equipment is used to compare the color sample to the color standard entered into the computer. Color specifications are used to determine the color match. A Delta E reading is used to determine a good color match within each family color. All removable items such as brackets, compartment doors, door hinges, and trim will be removed and separately if required, to ensure paint behind all mounted items. Body assemblies that cannot be finish painted after assembly will be finish painted before assembly. Pierce Manufacturing paint finish quality levels for critical areas of the apparatus (cab front and sides, body sides and doors, and boom lettering panels) meet or exceed the Cadillac/General Motors GMW15777 global paint requirements. Orange peel levels meet or exceed the #6 A.C.T. standard in critical areas. These requirements are met in order for the exterior paint finish to be considered acceptable. The Pierce Manufacturing written paint standards will be available upon request. The cab will be two-tone, with the upper section painted #10 white and lower section of the cab and body painted #100 Red. PAINT - ENVIRONMENTAL IMPACT Contractor will meet or exceed all current State regulations concerning paint operations. Pollution control will include measures to protect the atmosphere, water and soil. Controls will include the following conditions: Topcoats and primers will be chrome and lead free. Metal treatment chemicals will be chrome free. The wastewater generated in the metal treatment process will be treated on-site to remove any other heavy metals. Particulate emission collection from sanding operations will have a 99.99% efficiency factor. Particulate emissions from painting operations will be collected by a dry filter or water wash process. If the dry filter is used, it will have an efficiency rating of 98.00%. Water wash systems will be 99.97% efficient Water from water wash booths will be reused. Solids will be removed on a continual basis to keep the water clean. Paint wastes are disposed of in an environmentally safe manner. Empty metal paint containers will be to recover the metal. Solvents used in clean-up operations will be recycled on-site or sent off-site for distillation and returned for reuse. Additionally, the finished apparatus will not be manufactured with or contain products that have ozone depleting substances. Contractor will, upon demand, present evidence that the manufacturing facility meets the above conditions and that it is in compliance with his State EPA rules and regulations.</p>

0646897	Paint Chassis Frame Assy, E-Coat, Standard	<p>PAINT CHASSIS FRAME ASSEMBLY</p> <p>The chassis frame assembly will be finished with primer and gloss paint to match the lower job color before the installation of the cab and body, and before installation of the engine and transmission assembly, air brake lines, electrical wire harnesses, etc.</p> <p>Components treated with epoxy E-coat protection prior to paint: Two (2) C-channel frame rails</p> <p>Components that are included with the chassis frame assembly that will be painted not e-coated are: Cross members Axles Suspensions Steering gear Battery boxes Bumper extension weldment Frame extensions Body mounting angles Rear Body support substructure (front and rear) Pump house substructure Air tanks Steel fuel tank Castings</p> <p>Individual piece parts used in chassis and body assembly The E-coat process will meet the technical properties shown.</p>
0693797	No Paint Required, Aluminum Front Wheels	
0693792	No Paint Required, Aluminum Rear Wheels	
0733739	Paint, Axle Hubs	<p>AXLE HUB PAINT</p> <p>All axle hubs will be painted black #101.</p>
0067398	Door Pans, Unpainted and D/A Finished, Alum Body	The door pans on the body will be unpainted and D/A finished.
0007234	Compartment, Unpainted, D/A Finished	<p>COMPARTMENT INTERIOR FINISH</p> <p>The interior of the compartments will be dual action finished and not painted.</p>
0544129	Reflective Band, 1"-6"-1"	<p>REFLECTIVE STRIPES</p> <p>Three (3) reflective stripes will be provided across the front of the vehicle and along the sides of the body. The reflective band will consist of a 1.00" white stripe at the top with a 1.00" gap then a 6.00" white stripe with a 1.00" gap and a 1.00" white stripe on the bottom.</p>
0007356	Reflective across Cab Face	The reflective band provided on the cab face will be at the headlight level.
0536954	Stripe, Chevron, Rear, Diamond Grade, Pumper	<p>REAR CHEVRON STRIPING</p> <p>There will be alternating chevron striping located on the rear-facing vertical surface of the apparatus. The rear surface, excluding the rear compartment door, will be covered. The colors will be red and fluorescent yellow green diamond grade. Each stripe will be 6.00" in width.</p> <p>This will meet the requirements of the current edition of NFPA 1901, which states that 50% of the rear surface will be covered with chevron striping.</p>
0082587	Folded Ribbon in Reflective Stripe, Pair With Air Brushing	<p>FOLDED RIBBON IN REFLECTIVE STRIPE</p> <p>There will be one (1) folded type ribbon/s added to the reflective stripe Located on D3 & P3 doors..</p>
0017359	Stripe, Black Outline, Vinyl on Reflective Band	<p>REFLECTIVE STRIPE OUTLINE</p> <p>A black outline will be applied on the top and the bottom of the reflective band. There will be three (3) set of outline stripes required.</p>
0671880	Stripe, Diamond Grade, Slide Out Tray, Front and Sides	<p>SLIDE OUT TRAY DIAMOND GRADE STRIPES</p> <p>There will be fluorescent yellow green diamond grade reflective stripes installed on the front and sides of two (2) slide out tray(s) located D3.</p>

0660093	Stripe, Reflective, Chevron, Body Compt Door Interior, Diamond Grade	DIAMOND GRADE CHEVRON STRIPE ON BODY COMPARTMENT DOOR INTERIOR A red diamond grade and fluorescent yellow green diamond grade reflective stripe will be provided across the interior of six (6) body compartment door(s). Located inside D1, D3, D4, P1, P3 & P4 door interiors.. The stripe will be located approximately 1.00" up from the bottom, on the door panel.
0667301	Stripe, Reflective, Body Compt Door Edge, Diamond Grade	DIAMOND GRADE STRIPE ON COMPARTMENT DOOR EDGE A fluorescent yellow green diamond grade reflective stripe will be provided on the door edge of two (2) compartment doors. D2 & P2 lap doors.
0545179	Stripe, Diamond Grade, Chevron, Front Bumper	CHEVRON STRIPING ON THE FRONT BUMPER There will be alternating chevron striping located on the front bumper. The colors will be fluorescent yellow green and red diamond grade. The size of the striping will be 6.00".
0634721	Stripe, Reflective, Chevron, Cab Doors Interior, Diamond Grade	CHEVRON, INVERTED "V" STRIPING ON CABDOORS There will be alternating chevron striping located on the inside of each cab door. The striping will consist of the following colors: The first color will be red diamond grade The second color will be fluorescent yellow green diamond grade The size of the striping will be 6.00".
0017773	Stripe, Gold Leaf, Side of Body, Over Fender Only, Single Axle	BODY STRIPE There will be a genuine gold leaf stripe provided on each side of the body, over the fender.
0680372	Stripe, Gold Leaf, Cab Sides, IPO Chrome Molding	CAB STRIPE There will be a genuine gold leaf stripe provided on both sides of the cab in place of the chrome molding.
0027372	Lettering Specifications, (GOLD STAR Process)	LETTERING The lettering will be totally encapsulated between two (2) layers of clear vinyl.
0686432	Lettering, Gold Leaf, 3.00", Each	LETTERING There will be genuine gold leaf lettering, 3.00" high, with outline and shade provided. There will be 28 letters provided.
0685979	Lettering, Reflective, 16.00", Each	LETTERING There will be reflective lettering, 16.00" high, with no outline or shade provided. There will be three (3) letters provided.
0685981	Lettering, Reflective, 14.00", Each	LETTERING There will be reflective lettering, 14.00" high, with outline and shade provided. There will be four (4) letters provided.
0685993	Lettering, Reflective, 10.00", Each	LETTERING There will be reflective lettering, 10.00" high, with outline and shade provided. There will be two (2) letters provided.
0686002	Lettering, Reflective, 8.00", Each	LETTERING There will be reflective lettering, 8.00" high, with outline and shade provided. There will be 16 letters provided.
0686013	Lettering, Reflective, 6.00", Each	LETTERING There will be reflective lettering, 6.00" high, with outline and shade provided. There will be 12 letters provided.
0686033	Lettering, Reflective, 4.00", Each	LETTERING There will be reflective lettering, 4.00" high, with outline and shade provided. There will be 42 letters provided.
0686084	Lettering, Reflective, 3.00", Each	LETTERING There will be reflective lettering, 3.00" high, with outline and shade provided. There will be six (6) letters provided.

0585190	SP	Emblem, "Star of Life", 6", Reflective, Each	EMBLEM one (1) emblem/s, showing a "Star of Life", will be installed P1 door only on the vehicle. The emblem will be made with reflective material. The size will be approximately 6.00" high x 6.00" wide.
0689407	SP	Emblem, "RIT", On Roll-up Door, Each	RIT EMBLEM An emblem consisting of the acronym RIT will be installed on the roll-up door located Rear roll-up door..
0029814		Emblem, Maltese Cross, Gold Leaf, 18"-20", Pair	MALTESE CROSS INSTALLATION There will be one (1) pair of maltese crosses, comprised of genuine gold leaf material, provided and installed Located on cab doors..
0529225		Manuals, Two (2) CD, Fire Apparatus Parts, Custom Chassis	FIRE APPARATUS PARTS CD MANUAL There will be two (2) custom parts manuals for the complete fire apparatus provided in CD format with the completed unit. The manuals will contain the following: Job number Part numbers with full descriptions Table of contents Parts section sorted in functional groups reflecting a major system, component, or assembly Parts section sorted in alphabetical order Instructions on how to locate parts The manuals will be specifically written for the chassis and body model being purchased. It will not be a generic manual for a multitude of different chassis and bodies. SERVICE PARTS INTERNET SITE The service parts information included in these manuals are also available on the factory website. The website offers additional functions and features not contained in this manual, such as digital photographs and line drawings of select items. The website also features electronic search tools to assist in locating parts quickly.
0531636		Manual, (2) CD, Chassis Service, Custom	CHASSIS SERVICE CD MANUALS There will be two (2) CD format chassis service manuals containing parts and service information on major components provided with the completed unit. The manual will contain the following sections: Job number Table of contents Troubleshooting Front Axle/Suspension Brakes Engine Tires Wheels Cab Electrical, DC Air Systems Plumbing Appendix The manual will be specifically written for the chassis model being purchased. It will not be a generic manual for a multitude of different chassis and bodies.
0531638		Manual, Two (2) CD, Chassis Operation, Custom	CHASSIS OPERATION CD MANUALS There will be two (2) CD format chassis operation manuals provided.
0030008		Warranty, Basic, 1 Year, Apparatus, WA0008	ONE (1) YEAR MATERIAL AND WORKMANSHIP A Pierce basic apparatus limited warranty certificate, WA0008, is included with this proposal.
0696698		Warranty, Engine, Cummins, 5 Year, WA0181	ENGINE WARRANTY A Cummins five (5) year limited engine warranty will be provided. A limited warranty certificate, WA0181, is included with this proposal.
0684953		Warranty, Steering Gear, Sheppard M110, 3 Year WA0201	STEERING GEAR WARRANTY A Sheppard three (3) year limited steering gear warranty will be provided. A copy of the warranty certificate will be submitted with the bid package.
0596017		Warranty, Frame, 50 Year, Custom Chassis, WA0013	FIFTY (50) YEAR STRUCTURAL INTEGRITY The Pierce custom chassis frame limited warranty certificate, WA0013, is included with this proposal.
0595698		Warranty, Axle, 3 Year, TAK-4, WA0050	FRONT AXLE THREE (3) YEAR MATERIAL AND WORKMANSHIP WARRANTY The Pierce TAK-4 suspension limited warranty certificate, WA0050, is included with this proposal.

0733306	Warranty, Single Axle, 5 Year, Meritor General Service, WA0384	SINGLE REAR AXLE FIVE (5) YEAR MATERIAL AND WORKMANSHIP WARRANTY A Meritor™ Axle 5 year limited warranty will be provided.
0652758	Warranty, ABS Brake System, 3 Year, Meritor Wabco, WA0232	ABS BRAKE SYSTEM THREE (3) YEAR MATERIAL AND WORKMANSHIP WARRANTY A Meritor Wabco™ ABS brake system limited warranty certificate, WA0232, is included with this proposal.
0019914	Warranty, Structure, 10 Year, Custom Cab, WA0012	TEN (10) YEAR STRUCTURAL INTEGRITY The Pierce custom cab limited warranty certificate, WA0012, is included with this proposal.
0595813	Warranty, Paint, 10 Year, Cab, Pro-Rate, WA0055	TEN (10) YEAR PRO-RATED PAINT AND CORROSION A Pierce cab limited pro-rated paint warranty certificate, WA0055, is included with this proposal.
0524627	Warranty, Electronics, 5 Year, MUX, WA0014	FIVE (5) YEAR MATERIAL AND WORKMANSHIP The Pierce Command Zone electronics limited warranty certificate, WA0014, is included with this proposal.
0744215	Warranty, FRC, 360 Camera System	CAMERA SYSTEM WARRANTY Manufacturer's Guarantee will be (2) two years from the manufacture date code under normal use and service. Manufacturer will provide customer service, pre-sales applications assistance, and after-sales technical assistance. Manufacturer will provide technical assistance and support by means of a toll-free telephone number (1-800-645-0074) at no extra charge
0647720	Warranty, Pierce LED Strip Lights, WA0203	COMPARTMENT LIGHT WARRANTY The Pierce 12 volt DC LED strip lights limited warranty certificate, WA0203, is included with this proposal.
0046369	Warranty, 5-year EVS Transmission, Standard Custom, WA0187	TRANSMISSION WARRANTY The transmission will have a five (5) year/unlimited mileage warranty covering 100 percent parts and labor. The warranty will be provided by Allison Transmission. Note: The transmission cooler is not covered under any extended warranty you may be getting on your Allison Transmission. Please review your Allison Transmission warranty for coverage limitations.
0685945	Warranty, Transmission Cooler, WA0216	TRANSMISSION COOLER WARRANTY The transmission cooler will carry a five (5) year parts and labor warranty (exclusive to the transmission cooler). In addition, a collateral damage warranty will also be in effect for the first three (3) years of the warranty coverage and will not exceed \$10,000 per occurrence. A copy of the warranty certificate will be submitted with the bid package.
0688798	Warranty, Water Tank, Lifetime, UPF, Poly Tank, WA0195	WATER TANK WARRANTY A UPF poly water tank limited warranty certificate, WA0195, is included with this proposal.
0596025	Warranty, Structure, 10 Year, Body, WA0009	TEN (10) YEAR STRUCTURAL INTEGRITY The Pierce apparatus body limited warranty certificate, WA0009, is included with this proposal.
0693126	Warranty, AMDOR, Roll-up Door, 10 Year/5 Year Painted, WA0185	ROLL UP DOOR MATERIAL AND WORKMANSHIP WARRANTY An AMDOR roll-up door limited warranty will be provided. The roll-up door will be warranted against manufacturing defects for a period of ten (10) years . A five (5) year limited warranty will be provided on painted roll up doors. The limited warranty certificate, WA0185, is included with this proposal.
0734463	Warranty, Pump, Waterous, 7 Year Parts, WA0382	PUMP WARRANTY The Waterous pump will be provided with a Seven (7) year material and workmanship limited warranty . A copy of the warranty certificate will be submitted with the bid package (no exception).
0648675	Warranty, 10 Year S/S Pumping, WA0035	TEN (10) YEAR PUMP PLUMBING WARRANTY The Pierce apparatus plumbing limited warranty certificate, WA0035, is included with this proposal.
0657990	Warranty, Foam System, Husky 3, WA0231	FOAM SYSTEM WARRANTY The Husky 3 foam system limited warranty certificate, WA0231, is included with this proposal.

0595820	Warranty, Paint, 10 Year, Body, Pro-Rate, WA0057	<p>TEN (10) YEAR PRO-RATED PAINT AND CORROSION A Pierce body limited pro-rated paint warranty certificate, WA0057, is included with this proposal.</p>
0595421	Warranty, Goldstar, 3 Year, Apparatus, WA0018	<p>THREE (3) YEAR MATERIAL AND WORKMANSHIP The Pierce Goldstar gold leaf lamination limited warranty limited warranty certificate, WA0018, is included with this proposal.</p>
0683627	Certification, Vehicle Stability, CD0156	<p>VEHICLE STABILITY CERTIFICATION The fire apparatus manufacturer will provide a certification stating the apparatus complies with NFPA 1901, current edition, section 4.13, Vehicle Stability. The certification will be provided at the time of bid.</p>
0736243	Certification, Engine Installation, Enforcer, Cummins X12, 2021	<p>ENGINE INSTALLATION CERTIFICATION The fire apparatus manufacturer will provide a certification, along with a letter from the engine manufacturer stating they approve of the engine installation in the bidder's chassis. The certification will be provided at the time of delivery.</p>
0686786	Certification, Power Steering, CD0098	<p>POWER STEERING CERTIFICATION The fire apparatus manufacturer will provide a certification stating the power steering system as installed meets the requirements of the component supplier. The certification will be provided at the time of bid.</p>
0631980	Certification, Cab Integrity, Saber FR/Enforcer, CD0130	<p>CAB INTEGRITY CERTIFICATION The fire apparatus manufacturer will provide a cab crash test certification with this proposal. The certification will state that a specimen representing the substantial structural configuration of the cab has been tested and certified by an independent third party test facility. Testing events will be documented with photographs, real-time and high-speed video, vehicle accelerometers, cart accelerometers, and a laser speed trap. The fire apparatus manufacturer will provide a state licensed professional engineer to witness and certify all testing events. Testing will meet or exceed the requirements below: European Occupant Protection Standard ECE Regulation No.29. SAE J2422 Cab Roof Strength Evaluation - Quasi-Static Loading Heavy Trucks. SAE J2420 COE Frontal Strength Evaluation - Dynamic Loading Heavy Trucks. Roof Crush The cab will be subjected to a roof crush force of 22,500 lb. This value meets the ECE 29 criteria, and is equivalent to the front axle rating up to a maximum of ten (10) metric tons. Side Impact The same cab will be subjected to dynamic preload where a 13,275-lb moving barrier is slammed into the side of the cab at 5.50 mph, striking with an impact of 13,000 ft-lb of force. This test is part of the SAE J2422 test procedure and more closely represents the forces a cab will see in a rollover incident. Frontal Impact The same cab will withstand a frontal impact of 32,600 ft-lb of force using a moving barrier in accordance with SAE J2420. Additional Frontal Impact The same cab will withstand a frontal impact of 65,200 ft-lb of force using a moving barrier. (Twice the force required by SAE J2420) The same cab will withstand all tests without any measurable intrusion into the survival space of the occupant area.</p>
0631973	Certification, Cab Door Durability, Saber FR/Enforcer, CD0137	<p>CAB DOOR DURABILITY CERTIFICATION Robust cab doors help protect occupants. Cab doors will survive a 200,000 cycle door slam test where the slamming force exceeds 20 G's of deceleration. The bidder will certify that the sample doors similar to those provided on the apparatus have been tested and have met these criteria without structural damage, latch malfunction, or significant component wear.</p>
0631978	Certification, Windshield Wiper Durability, Saber FR/Enforcer, CD0132	<p>WINDSHIELD WIPER DURABILITY CERTIFICATION Visibility during inclement weather is essential to safe apparatus performance. Windshield wipers will survive a 3 million cycle durability test in accordance with section 6.2 of SAE J198 <i>Windshield Wiper Systems - Trucks, Buses and Multipurpose Vehicles</i>. The bidder will certify that the wiper system design has been tested and that the wiper system has met these criteria.</p>
0631974	Certification, Electric Window Durability, Saber FR/Enforcer, CD0133	<p>ELECTRIC WINDOW DURABILITY CERTIFICATION Cab window roll-up systems can cause maintenance problems if not designed for long service life. The window regulator design will complete 30,000 complete up-down cycles and still function normally when finished. The bidder will certify that sample doors and windows similar to those provided on the apparatus have been tested and have met these criteria without malfunction or significant component wear.</p>

0631977	Certification, Seat Belt Anchors and Mounting, Saber FR/Enforcer, CD0134	<p>SEAT BELT ANCHOR STRENGTH Seat belt attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat belt anchor design will withstand 3000 lb of pull on both the lap and shoulder belt in accordance with FMVSS 571.210 Seat Belt Assembly Anchorages. The bidder will certify that each anchor design was pull tested to the required force and met the appropriate criteria.</p> <p>SEAT MOUNTING STRENGTH Seat attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat mounting design will be tested to withstand 20 G's of force in accordance with FMVSS 571.207 Seating Systems. The bidder will certify, at time of delivery, that each seat mount and cab structure design was pull tested to the required force and met the appropriate criteria.</p>
0735949	Certification, Cab HVAC System Performance, SFR/Enf, CD0165/CD0167/CD0174/CD0175	<p>PERFORMANCE CERTIFICATIONS</p> <p>Cab Air Conditioning Good cab air conditioning temperature and air flow performance keeps occupants comfortable, reduces humidity, and provides a climate for recuperation while at the scene. The cab air conditioning system will cool the cab from a heat-soaked condition at 100 degrees Fahrenheit to an average of 78 degrees Fahrenheit in 30 minutes. The bidder will certify that a substantially similar cab has been tested and has met these criteria.</p> <p>Cab Defroster Visibility during inclement weather is essential to safe apparatus performance. The defroster system will clear the required windshield zones in accordance with SAE J381 Windshield Defrosting Systems Test Procedure And Performance Requirements - Trucks, Buses, And Multipurpose Vehicles. <i>The bidder will certify that the defrost system design has been tested in a cold chamber and passes the SAE J381 criteria.</i></p> <p>Cab Auxiliary Heater <i>Good cab heat performance and regulation provides a more effective working environment for personnel, whether in-transit, or at a scene. An auxiliary cab heater will warm the cab 77 degrees Fahrenheit from a cold-soak, within 30 minutes when tested using the coolant supply methods found in SAE J381. The bidder will certify, at time of delivery, that a substantially similar cab has been tested and has met these criteria.</i></p>
0545073	Amp Draw Report, NFPA Current Edition	<p>AMP DRAW REPORT The bidder will provide, at the time of bid and delivery, an itemized print out of the expected amp draw of the entire vehicle's electrical system. The manufacturer of the apparatus will provide the following: Documentation of the electrical system performance tests. A written load analysis, which will include the following: The nameplate rating of the alternator. The alternator rating under the conditions specified per: Applicable NFPA 1901 or 1906 (Current Edition). The minimum continuous load of each component that is specified per: Applicable NFPA 1901 or 1906 (Current Edition). Additional loads that, when added to the minimum continuous load, determine the total connected load. Each individual intermittent load. All of the above listed items will be provided by the bidder per the applicable NFPA 1901 or 1906 (Current Edition).</p>
0002758	Amp Draw, NFPA/ULC Radio Allowance	
0799248	Appleton/Florida BTO	
0000018	PUMPER, 2ND GEN	
0000012	PIERCE CHASSIS	
0004713	ENGINE, OTHER	
0046396	EVS 4000 Series TRANSMISSION	
0020011	WATEROUS PUMP	
0020009	POLY TANK	
0028048	FOAM SYSTEM	

0020006 SIDE CONTROL

0020007 AKRON VALVES

0020015 ABS SYSTEM

0658751 PUMPER BASE

LOOSE EQUIPMENT

The following loose equipment list is PER UNIT and will be provided by Golden State Fire Apparatus Inc. prior to final delivery:

Qty	Item Id	Description
1	EQUIPMENT	TYPE 1 ENGINE COMMUNICATIONS EQUIPMENT PROJECT JVCK NX-5700BK5AFM Remote Mount Mobile Radio -Includes KCH-20RM Full Feature Control Panel, P25 Conventional, with Ignition Sense Kit
1	EQUIPMENT	Cradlepoint MA5-17001208-NNA IBR1700 Router -Includes 5 year NetCloud Subscription
1	OTHER	Panorama LP-IN2443-B 5G "4 In 1" Antenna (Black)
1	OTHER	David Clark U3800 Master Station
2	OTHER	U3805 Junction Box
2	OTHER	U3816 Dual Radio Headset Station
4	OTHER	09851P-28 PTT Switches
4	OTHER	26553P-01 PTT Switch Guard
80	OTHER	09815P-20 2-Conductor Cable
6	OTHER	H3432 OTH Headset
1	OTHER	C38-25 System Cable
1	OTHER	C38-12 System Cable
1	OTHER	C3820 Power Cord
6	OTHER	C3821 Radio Interface Cable
4	OTHER	18352G-17 Connector
4	OTHER	18352G-07 Connector (remote PTT)
3	OTHER	Standard VHF Whip Antenna System
1	MISC HARDW...	Miscellaneous Hardware—does not include face plates or custom mounts
1	SHIPPING	Shipping— Prepay and add (estimated)

Qty	Item Id	Description
45	SERVICE	Labor: to install 4-position, two-radio David Clark Intercom headset system; install new BK (customer to provide BK) and Kenwood single-head remote-mount mobile radios; interface pump panel speaker to "Radio 1"; install CradlePoint antenna and modem system; Metro Mobile to supply and install all new antenna kits for mobile radios, and Metro Mobile to supply complete accessory package with Kenwood radio. Place of work to be determined. Quoted labor hours are a not to exceed number. Actual hours to be billed if less than 45.

LN	QTY	UNIT	PART NUMBER	DESCRIPTION
1	1	EA	SCM5 ZICO	Quic Mount 5Stz
2	1	EA	CM2.5 ZICO	Quic Mount 2.5"
3	1	EA	BCB ZICO	Bolt Cutter Bracket
4	1	EA	KLEIN TOOLS CUSTOM	As Follows: Part #63124 Klein Tools Description: 24" Bolt Cutters
5	2	EA	QMPMHD ZICO	Double Premix Holder For 2 Ea. Qt Bottles.
6	1	EA	QM-PMH-1 ZICO	Qt Size Premixed Can Holder
7	2	EA	NPM ZICO	Nozzle Post Mount
8	1	EA	SMP50 RH	5STZ Mounting Plate;
9	1	EA	M-30N	3NH Male Aluminum Rigid Mounting Plate
10	1	EA	M-25N	2.5NH Male Aluminum Rigid Mounting Plate
11	6	EA	27 ZEPHYR	Univ Spanner
12	1	EA	14 ZEPHYR	Wrench Holder
13	1	EA	CM6.0 ZICO	Cplg Mount
14	3	EA	QMCH ZICO	Chain Hook
15	14	EA	1004-Y PERF ADV	Yellow Strap Handlelok

FIRE HOSE PACKAGE

An allowance of \$17,500.00 is included in the proposal price for the purchase of fire hose. San Mateo Consolidated Fire Department shall obtain a quote from their preferred vendor, and forward the approved quote to Golden State Fire Apparatus Inc for ordering of said hose.

LOOSE EQUIPMENT INSTALLATION

A loose equipment mounting allowance of \$6,000.00 is included in the proposal price to cover the cost of mounting equipment per the direction of the San Mateo Consolidated Fire Department. If the San Mateo Consolidated Fire Department exceeds the loose equipment mounting allowance, additional work can be performed at the current shop labor rate.

END OF SPECIFICATION

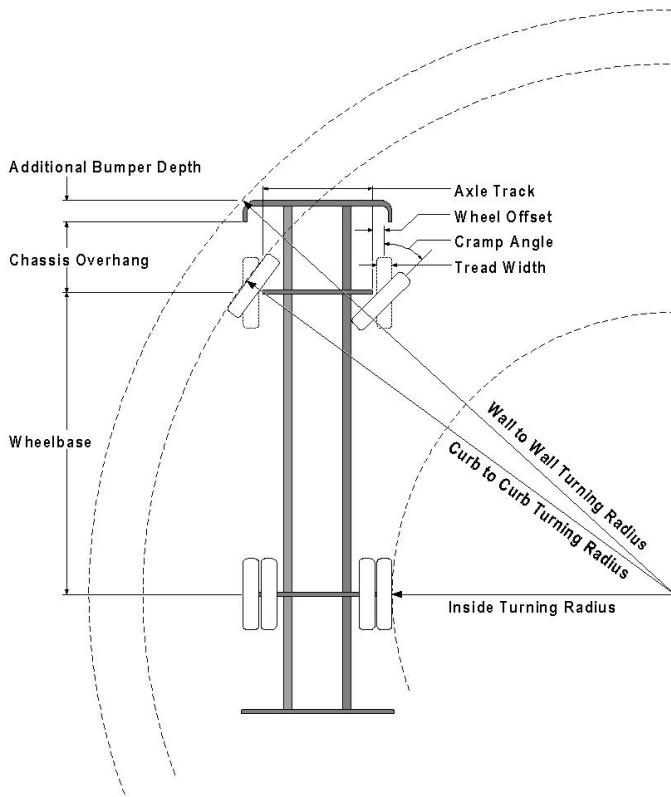


Turning Performance Analysis

12/29/2020

Bid Number: 679
Department: SAN MATEO CONSOLIDATED FIRE DEPT

Chassis: Enforcer Chassis
Body: Pumper, Medium, Aluminum, 2nd Gen



Parameters:

*Inside Cramp Angle:	45°
Axle Track:	82.92 in.
Wheel Offset:	3.12 in.
Tread Width:	12.4 in.
Chassis Overhang:	65.95 in.
Additional Bumper Depth:	16 in.
Front Overhang:	81.95 in.
Wheelbase:	187.5 in.

Calculated Turning Radii:

Inside Turn:	14 ft. 10 in.
Curb to curb:	28 ft. 2 in.
Wall to wall:	32 ft. 4 in.

Category	Option	Description
Axle, Front, Custom	0630705	Axle, Front, Oshkosh TAK-4, Non Drive, 19,500 lb, Enforcer
Wheels, Front	0019575	Wheels, Front, Alcoa, 22.50" x 9.00", Aluminum, Hub Pilot
Tires, Front	0582936	Tires, Front, Goodyear, G289 WHA, 315/80R22.50, 20 ply
Bumpers	0603947	Bumper, 16" Extended, Polished S/S, "Chicago" Style, Saber FR/Enforcer

Notes:

*Actual Inside cramp angle may be less than shown.
 Curb to Curb turning radius calculated for 9.00 inch curb.

Definitions:

Inside CrampAngle	Maximum turning angle of the front inside fire.
Axle Track	King-pin to King-pin distance of front axle.
Wheel Offset	Offset from the center line of the wheel to the King-pin.
Tread Width	Width of the tire tread.
Chassis Overhang	Distance of the center line of the front axle to the front edge of the cab. This does not include the bumper depth.
Additional Bumper Wheel	Depth that the bumper assembly adds to the front overhang.
Wheelbase	Distance between the center lines of the vehicles front and rear axles.
Inside Turning Radius	Radius of the smallest circle around which the vehicle can turn.
Curb to Curb Turning Radius	Radius of the smallest circle around which the vehicle's tires can turn. This measures assumes a curb height of 9 inches.
Wall to Wall Turning Radius	Radius of the smallest circle around which the vehicle's tires can turn. This measures takes into account any front overhang due to chassis , bumper extensions and or aerial devices.



Electrical Analysis

12/29/2020

Bid #: 679
Desc: Three (3) San Mateo Consolidated FD Pumpers
Customer: SAN MATEO CONSOLIDATED FIRE DEPT

Job #:
Sales Rep: Myers, Rich
Organization: Golden State Fire Apparatus, Inc

Option	Description	Type*	Minimum Load	Intermittent Load	Total Connected
0004485	Transfer Valve, Electric, Waterous		0.00	0.00	0.20
0005945	Light, Pump Compt		0.00	1.80	0.00
0010670	ABS Wabco Brake System, Single rear axle		0.00	6.00	0.00
0015216	Reel, Booster, Aluminum - Over Pump, Right Side		0.00	36.00	0.00
0067116	Bracket, Johnny Ray Swivel, 7 Lb. Rating		0.00	0.00	0.00
0072153	Primer, Trident, Air Prime, Air Operated		0.00	0.01	0.00
0098841	Batteries, (6) Deka Grp 31, 1000 CCA each, Threaded Stud		0.00	3.00	0.00
0540769	Lights, Side, Wln M6*C LED, Clear Lens, 1st		0.00	2.70	1.80
0540774	Lights, Side, Wln M9*C LED, Clear Lens		0.00	7.20	4.80
0549333	Indicators, Engine, Included with Pressure Controller		0.00	0.35	0.00
0561471	Lights, Backup, Wln M6BUW, LED, For Tail Lt Housing		0.00	3.20	0.00
0579884	Wiring, Spare, 50 A 12V DC,12 Circuit Fuse Block, Blue Sea 5026 1st		0.00	0.00	30.00
0585913	Wiring, Spare, 20 A 12V DC, 6 Circuit Fuse Block, Blue Sea 5025 2nd		0.00	0.00	20.00
0589669	Handlts, (4) Pelican, 9410L, 12v DC, Shoulder Strap		0.00	3.00	0.00
0589905	Alarm, Back-up Warning, PRECO 1040		0.00	0.50	0.00
0594194	Radio, AM/FM/CD/WB/Aux in, Panasonic		0.00	0.00	4.00
0604354	Gauge, Foam Level, FRC, Tank Vision Pro, WLA 360-A00, Class "A"		0.00	0.00	1.23
0622582	Cab Lift, Elec/Hyd, Manual Override, Control Loc Feature, Sab FR/Enf		0.00	180.00	0.00
0624939	Foam Sys, Husky 3, Single Agent, Multi Select Feature		0.00	55.00	0.00
0640629	Light, Wln, 12V PCPSM1* Pioneer LED Fld/Spt, Surface Mount 1st		0.00	0.00	12.00
0640941	Light, Wln, 12V PCPSM2* Pioneer LED Fld/Spt, Surface Mnt 2nd		0.00	0.00	12.00
0640991	Light, Wln, 12V PCPSM2* Pioneer LED Fld/Spt, Surface Mnt 1st		0.00	0.00	12.00
0653350	Guards, Vehicle Camera(s), Painted Smooth Aluminum		0.00	0.00	0.00
0653937	Flasher, Headlight Alternating		0.00	0.00	0.08
0679284	Switch, 12V (Inst Pnl), AM/FM Radio, Off Switch, Auto On		0.00	0.00	1.00
0687994	Engine Brake, Jacobs Compression Brake, Cummins Engine		0.00	0.42	0.00
0727540	Spotlight, Golight/RadioRay, Model 20**4GT, LED, 1 Lt		0.00	0.00	3.00
0727700	Lights, Compt, TecNiq T10-LC00-1 15" LED, Additional		0.00	0.00	2.34
0729888	Lights, Door Interior Flash, 4 Dr Cab, Wln M4** LED, SingleFlash 75,		0.00	4.00	0.00
0730590	Lights, Engine Compt, Custom, Auto Sw, TecNiq E10-W000-1 LED		0.00	0.44	0.00
0733346	Controls, Electric Roll-Up Windows, 4dr, 3 Add'l Switches, SFR/Enf		0.00	26.00	0.00
0734049	Camera, FRC, Mux, Inview360HD		0.00	1.20	0.00
0734681	Compt, Storage, 12.75 W x 24 H x 15 D, (1) Ea Side C/C,Single		0.00	0.00	0.00
0745684	High Idle w/Electronic Engine, Auto On, 90 sec Delay, Custom		0.00	1.20	0.00
0756670	Control, Air Horn, Horn Ring, DS Foot Sw		0.00	0.83	0.00
0779165	Siren, Federal Q2B, Bat Dir		0.00	100.00	0.00
0792454	Lights, Side, Wln TLI* LED, Chrome Trim, Inserts		0.00	1.97	1.31
0796013	Compt, Storage, (2) Rear Facing, Overhead, 21 W x 9 H x 20 D, Saber		0.00	0.00	0.18
0548004	Wiring, Spare, 15 A 12V DC 1st	LM	0.00	0.00	30.00
0548007	Wiring, Spare, 15 A 12V DC 3rd	LM	0.00	0.00	60.00
0560535	Wiring, Spare, 15 A 12V DC 4th	LM	0.00	0.00	30.00
0585914	Wiring, Spare, 20 A 12V DC, 6 Circuit Fuse Block, Blue Sea 5025 1st	LM	0.00	0.00	60.00
0741237	HVAC, Saber/Enforcer, CARE	LM	0.00	0.00	100.00
0766692	Light Twr, W-B Pow Pr NS2.3-375, WB, 3-XL200 12 VDC Lts Cld 7.5'	LM	0.00	7.81	23.44
0776357	Light, Visor, Wln, 12V P*H2* Pioneer, Cnt Feature, 1st	LM	0.00	0.00	26.00
0002758	Amp Draw, NFPA/ULC Radio Allowance	NFPA	5.00	0.00	0.00
0063610	LS 152" Lap, Full Height Front & Rear, FDLER	NFPA	4.50	0.00	4.50
0063624	RS 152" Lap, Full Height Front & Rear, FDLER	NFPA	4.50	0.00	4.50
0083700	Compt, Rear, Rollup, 37.75" FF, 25.88" D	NFPA	0.90	0.00	0.90
0092582	Load Manager/Sequencer, MUX	NFPA	0.56	0.56	0.00

* UDMC = User Defined Mission Critical, LM = User Defined Load Managed, S = Electrical Amperage Supply



Electrical Analysis

12/29/2020

Bid #: 679
Desc: Three (3) San Mateo Consolidated FD Pumpers
Customer: SAN MATEO CONSOLIDATED FIRE DEPT

Job #:
Sales Rep: Myers, Rich
Organization: Golden State Fire Apparatus, Inc

Option	Description	Type*	Minimum Load	Intermittent Load	Total Connected
0536322	Controller, Pressure, Pierce, Custom Chassis	NFPA	1.70	0.00	0.00
0540679	Lights, Side Zone Lower, WIn M6*C LED, Clear Lens 2pr	NFPA	3.60	5.40	0.00
0556360	Lights, Step, P25 LED 4lts, Pump Pnl Sw	NFPA	1.00	0.00	0.00
0563675	Lights, Clearance/Marker/ID, Rear, Truck-Lite 33050R LED 7Lts	NFPA	0.35	0.00	0.00
0564655	Lights, Rear Zone Lower, WIn M6*C LED, Clear Lens, For Tail Lt	NFPA	1.80	2.70	0.00
0564683	Lights, Tail, WIn M6BTT* Red LED Stop/Tail & M6T* Amber LED Dir	NFPA	0.83	2.49	0.00
0586438	Gauges, Engine - Pump Panel, IAT Pressure Controller	NFPA	0.30	0.00	0.00
0604209	Lights, Dome, FRP Dual LED 4 Lts, Crew Cab Light Location	NFPA	1.20	1.20	0.00
0605126	Pump Shift, Air Mnl Override, Split Shaft, Interlocked, Waterous	NFPA	1.00	0.00	0.00
0615386	Vehicle Information Center, 7" Color Display, Touchscreen, MUX	NFPA	1.20	0.00	0.00
0617802	Lights, Perimeter, TecNiq T10-LC00-1 15" LED	NFPA	3.12	0.00	0.00
0617901	Lights, Perimeter Pump House, TecNiq T10-LC00-1 15" LED 2lts	NFPA	0.80	0.00	0.00
0620054	Light, Directional/Marker, Intermediate, Weldon 9186-8580-29 LED 2lts	NFPA	0.10	0.90	0.00
0622803	Cab Instruments, Black Gauges, Black Bezels, Enforcer MUX	NFPA	1.26	0.00	0.00
0624849	Lights, Front Zone, WIn M6** LED, Above Headlts 2lts	NFPA	1.80	2.70	0.00
0625210	Lights, Directional, Cab Front Side, Truck-Lite 19036Y LED, AXT/Enf	NFPA	0.12	0.00	0.00
0625953	Light, Directional, WIn 600 Cmb, Cab Crn, Wrp Bzl Out HD Lts, Enf,	NFPA	0.70	0.70	0.00
0625975	Handrails, Beavertail, Hansen Tubing, Knurled Aluminum, LED Backlit	NFPA	1.00	1.00	2.00
0626579	Lights, Perimeter Body, TecNiq T10-LC00-1 15" LED 2lts, Rear Step	NFPA	0.80	0.00	0.00
0626588	Lights, Perimeter Cab, TecNiq T10-LC00-1 15" LED 4Dr	NFPA	1.60	0.00	0.00
0630489	Air Dryer, Bendix, AD-9, With Wet Tank, Heated, Saber FR/Enforcer	NFPA	7.81	0.00	0.00
0634786	Lights, Cab & Crw Cab Acs Stps, P25, LED w/Bezel, 1Lt Per Step 6lts	NFPA	1.00	0.00	0.00
0644252	Light, Front, WIn IONSMCR, RED, Steady Burn	NFPA	1.00	0.00	0.00
0647802	Lights, Clearance/Marker/ID, Front, P25 LED 5 Lts, Saber FR/Enforcer	NFPA	0.35	0.00	0.00
0648258	Light, Directional, WIn M6T LED Arrow, 15 Degree Angle Bracket,	NFPA	3.60	5.40	0.00
0648332	Cab, Enforcer, 7010	NFPA	6.80	10.20	0.00
0650748	Siren, Aux, Federal RUMBLER-3	NFPA	0.02	7.78	0.00
0657766	Bracket, License Plate & Light, P25 LED, w/Special Location	NFPA	0.07	0.00	0.00
0668061	Light, Do Not Move Apparatus, WIn VTX609R Red LED	NFPA	0.30	0.45	0.00
0688049	Siren, Federal EQ2B-200, 200 Watt	NFPA	2.01	18.13	0.00
0729721	Lights, Hose Bed, Below Aluminum Cover, TecNiq E10-W000-1 LED	NFPA	1.76	0.00	0.00
0730722	Lightbar, WIn, Freedom IV-Q, 81", RRRRRRWROptRWRRRRRRR	NFPA	6.48	2.48	12.60
0733219	Lights, Hatch Compt, 42", LED, Light Strips, 2-Sides 4 Dr	NFPA	0.84	0.84	0.00
0736410	Engine, Cummins X12, 500 hp, 1695 lb-ft, W/OBD, EPA 2021,	NFPA	10.00	0.00	0.00
0739224	Indicator Light @ Pump Panel, Throttle Ready, Incl w/Pressure	NFPA	0.10	0.00	0.00
0739915	Hatch, (2) Liftup, Pumper	NFPA	1.80	0.00	1.80
0745568	Indicator Light, Pump Panel, Ok To Pump, Green	NFPA	0.10	0.00	0.00
0747835	Light, Brake/Tail, TecNiq T10-R*00-1 Brk/Tail, Recessed	NFPA	0.06	0.54	0.00
0750438	Water Level Gauge, WIn PSTANK2, LED 1-Light, 4-Level	NFPA	1.60	0.00	0.00
0750526	Gauge, Water Level, Pierce, In pressure Controller, Lt Driver	NFPA	1.23	0.00	0.00
0752576	Light Shield/Step 8", PS LED, TecNiq E10-W000-1 LED Stp Lt, Full-	NFPA	3.50	0.00	0.00
0759832	Light, Traffic Directing, Federal Signal 320852, 31" Long LED, 331105	NFPA	0.20	1.00	0.00
0762273	Steps, 4-Door Cab, Dual, 2" Larger Bottom Step, Saber FR/Enforcer	NFPA	2.14	0.00	0.00
0763688	Garnish Ring(s), Color Coded, Painted, Location	NFPA	0.66	0.00	0.00
0768139	Wiper Control, 2-Speed with Intermittent, Saber FR/Enforcer, Above	NFPA	1.20	4.80	0.00
0770723	DEF Tank, 8.0 Gallon, LS Fill, Rear of Rear Axle, Triple Door	NFPA	0.60	11.40	0.00
0772845	Light Shield/Step 8" LED, TecNiq E10 Stp Lt, Pump Panel Light Switch	NFPA	3.50	0.00	0.00
0777358	Lights, Rear/Side Up Zone SPFL, WIn M9K LED 2Lts, M9RC LED	NFPA	4.80	7.20	0.00
0783153	Headlights, Rect LED, JW Spkr Evo 2, AXT/DCF/Enf/Imp/Sab/Vel	NFPA	4.20	4.20	0.00
0794961	Lights, Walk Surf, 8-P25 LED, Hose Bed Cover, Overall Height	NFPA	0.56	0.00	0.00
0798744	Trans, Allison 5th Gen, 4500 EVS P, Imp/Vel/DCF/Enf	NFPA	2.00	2.00	0.00

* UDMC = User Defined Mission Critical, LM = User Defined Load Managed, S = Electrical Amperage Supply



Electrical Analysis

12/29/2020

Bid #: 679
Desc: Three (3) San Mateo Consolidated FD Pumps
Customer: SAN MATEO CONSOLIDATED FIRE DEPT

Job #:
Sales Rep: Myers, Rich
Organization: Golden State Fire Apparatus, Inc

Option	Description	Type*	Minimum Load	Intermittent Load	Total Connected
0647729	Alternator, 320 amp, Delco Remy 40SI	S	0.00	0.00	0.00
Load Totals:			110.03	536.70	461.68

Note: Minimum Continuous Load is in "Blocking Right of Way" mode. (Reference current edition of NFPA 1901)
 Note: Intermittent Load items are not factored in on any alternator load comparisons. These items are included on the report for reference only and should be looked at as amp draw exclusion items. (Reference current edition of NFPA 1901)
 Note: Total Connected Load "Demand" represents Total Connected Load minus any Load Managed items

Alternator Output at Idle: 200.00

Minimum Continuous Load	
Supply:	200.00
Demand:	110.03
Variance:	89.97

Alternator Output at Governed Speed: 285.00

Total Connected Load	
Supply:	285.00
Demand:	242.27
Variance:	42.73

* UDMC = User Defined Mission Critical, LM = User Defined Load Managed, S = Electrical Amperage Supply



Fire and Rescue Apparatus

Ten (10) Year Structural Integrity

Custom Cab

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	The Pierce Custom Cab shall be free from structural failures caused by defects in material and workmanship
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Ten (10) Years - or - 100,000 Miles
Conditions and Exclusions: See Also Paragraphs 2 thru 4	This warranty applies only to the cab tubular support and mounting structures and other structural components of the cab of the vehicle model, as identified in the Pierce specifications for the Fire and Rescue Apparatus. This warranty does not apply to damage caused by corrosion.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



Fire and Rescue Apparatus

One (1) Year Material and Workmanship Basic Apparatus

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	Portions of the apparatus manufactured by Pierce shall be free from defects in material and workmanship
Warranty Begins:	The date the apparatus is placed in service, or 60 days from the original buyer invoice date, whichever comes first.
Warranty Period Ends After:	Twelve (12) months.
Conditions and Exclusions: See Also Paragraphs 2 thru 4	No specific exclusions apply

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

NEW PRODUCT WARRANTY



**PARTICIPATING OEM SALES
DISTRIBUTOR SALES**

LIMITED WARRANTY ON NEW ALLISON AUTOMATIC TRANSMISSIONS USED IN EMERGENCY VEHICLE APPLICATIONS

Allison Transmission will provide for repairs or replacement, at its option, during the warranty period of each new Allison transmission listed below that is installed in an Emergency Vehicle in accordance with the following terms, conditions, and limitations.

WHAT IS COVERED

- **WARRANTY APPLIES** — This warranty is for new Allison transmission models listed below installed in an Emergency Vehicle and is provided to the original and any subsequent owner(s) of the vehicle during the warranty period.
- **REPAIRS COVERED** — The warranty covers repairs or replacement, at Allison Transmission’s option, to correct any transmission malfunction resulting from defects in material or workmanship occurring during the warranty period. Needed repairs or replacements will be performed using the method Allison Transmission determines most appropriate under the circumstances.
- **TOWING** — Towing is covered to the nearest Allison Transmission Distributor or authorized Dealer only when necessary to prevent further damage to your transmission.
- **PAYMENT TERMS** — Warranty repairs, including parts and labor, will be covered per the schedule shown in the chart contained in section “APPLICABLE MODELS, WARRANTY LIMITATIONS, AND ADJUSTMENT SCHEDULE.”
- **OBTAINING REPAIRS** — To obtain warranty repairs, take the vehicle to any Allison Transmission Distributor or authorized Dealer within a reasonable amount of time and request the needed repairs. A reasonable amount of time must be allowed for the Distributor or Dealer to perform necessary repairs.
- **TRANSMISSION REMOVAL AND REINSTALLATION** — Labor costs for the removal and re-installation of the transmission, when necessary to make a warranty repair, are covered by this warranty.
- **WARRANTY PERIOD** — The warranty period for all coverages shall begin on the date the transmission is delivered to the first retail purchaser, with the following exception:

Demonstration Service - A transmission in a new truck or bus may be demonstrated to a total of 5000 miles (8000 kilometers). If the vehicle is within this limit when sold to a retail purchaser, the warranty start date is the date of purchase. Normal warranty services are applicable to the demonstrating Dealer. Should the truck or bus be sold to a retail purchaser after these limits are reached, the warranty period will begin on the date the vehicle was first placed in demonstration service and the purchaser will be entitled to the remaining warranty.

APPLICABLE MODELS, WARRANTY LIMITATIONS, AND ADJUSTMENT SCHEDULE

APPLICABLE MODELS	WARRANTY LIMITATIONS (Whichever occurs first)		ADJUSTMENT CHARGE TO BE PAID BY THE CUSTOMER	
	Months	Transmission Miles Or Kilometers	Parts	Labor
MT, MD 3000, 3200, 3500, 3700	0-24	No Limit	No Charge	No Charge
HT with Hydraulic Controls	0-24	No Limit	No Charge	No Charge
AT, 1000 Series™, 2000 Series™, 2400 Series™	0-36	No Limit	No Charge	No Charge
HT with Electronic Controls	0-60	No Limit	No Charge	No Charge
HD 1000 EVS, 2100 EVS, 2200 EVS 2350 EVS, 2500 EVS, 2550 EVS, 3000 EVS, 3500 EVS, 4000, 4000 EVS, 4500, 4500 EVS, 4700, 4700 EVS, 4800, 4800 EVS	0-60	No Limit	No Charge	No Charge

WHAT IS NOT COVERED

- **DAMAGE DUE TO ACCIDENT, MISUSE, or ALTERATION** — Defects and damage caused as the result of any of the following are not covered:
 - Flood, collision, fire, theft, freezing, vandalism, riot, explosion, or objects striking the vehicle;
 - Misuse of the vehicle;
 - Installation into unapproved applications and installations;
 - Alterations or modification of the transmission or the vehicle, and
 - Damage resulting from improper storage (refer to long-term storage procedure outlined in the applicable Allison Service Manual)
 - Anything other than defects in Allison Transmission material or workmanship

NOTE: This warranty is void on transmissions used in vehicles currently or previously titled as salvaged, scrapped, junked, or totaled.

- **CHASSIS, BODY, and COMPONENTS** — The chassis and body company (assemblers) and other component and equipment manufacturers are solely responsible for warranties on the chassis, body, component(s), and equipment they provide. Any transmission repair caused by an alteration(s) made to the Allison transmission or the vehicle which allows the transmission to be installed or operated outside of the limits defined in the appropriate Allison Installation Guideline is solely the responsibility of the entity making the alteration(s).
- **DAMAGE CAUSED by LACK of MAINTENANCE or by the USE of TRANSMISSION FLUIDS NOT RECOMMENDED in the OPERATOR'S MANUAL** — Defects and damage caused by any of the following are not covered:
 - Failure to follow the recommendations of the maintenance schedule intervals applicable to the transmission;
 - Failure to use transmission fluids or maintain transmission fluid levels recommended in the Operator's Manual.
- **MAINTENANCE** — Normal maintenance (such as replacement of filters, screens, and transmission fluid) is not covered and is the owner's responsibility.
- **REPAIRS by UNAUTHORIZED DEALERS** — Defects and damage caused by a service outlet that is not an authorized Allison Transmission Distributor or Dealer are not covered.
- **USE of OTHER THAN GENUINE ALLISON TRANSMISSION PARTS** — Defects and damage caused by the use of parts that are not genuine Allison Transmission parts are not covered.
- **EXTRA EXPENSES** — Economic loss and extra expenses are not covered. Examples include but are not limited to: loss of vehicle use; inconvenience; storage; payment for loss of time or pay; vehicle rental expense; lodging; meals; or other travel costs.
- **"DENIED PARTY" OWNERSHIP** — Warranty repair parts and labor costs are not reimbursed to any participating or non-participating OEMs, dealers or distributors who perform warranty work for, or on behalf of, end users identified by the United States as being a "denied party" or who are citizens of sanctioned or embargoed countries as defined by the U.S. Department of Treasury Office of Foreign Assets Control. Furthermore, warranty reimbursements are not guaranteed if the reimbursement would be contrary to any United States export control laws or regulations as defined by the U.S. Department of Commerce, the U.S. Department of State, or the U.S. Department of Treasury.

OTHER TERMS APPLICABLE TO CONSUMERS AS DEFINED by the MAGNUSON-MOSS WARRANTY ACT

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

Allison Transmission does not authorize any person to create for it any other obligation or liability in connection with these transmissions.

ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE APPLICABLE TO THESE TRANSMISSIONS IS LIMITED IN DURATION TO THE DURATION OF THIS WRITTEN WARRANTY. PERFORMANCE OF REPAIRS AND NEEDED ADJUSTMENTS IS THE EXCLUSIVE REMEDY UNDER THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY. ALLISON TRANSMISSION SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES (SUCH AS, BUT NOT LIMITED TO, LOST WAGES OR VEHICLE RENTAL EXPENSES) RESULTING FROM BREACH OF THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY.**

** Some states do not allow limitations on how long an implied warranty will last or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

OTHER TERMS APPLICABLE TO OTHER END-USERS

THIS WARRANTY IS THE ONLY WARRANTY APPLICABLE TO THE ALLISON TRANSMISSION MODELS LISTED ABOVE AND IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ALLISON TRANSMISSION DOES NOT AUTHORIZE ANY PERSON TO CREATE FOR IT ANY OTHER OBLIGATION OR LIABILITY IN CONNECTION WITH SUCH TRANSMISSIONS. ALLISON TRANSMISSION SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM BREACH OF THIS WARRANTY OR ANY IMPLIED WARRANTY.

QUESTIONS

If you have any questions regarding this warranty or the performance of warranty obligations, you may contact any Allison Transmission Distributor or Dealer or write to:

Allison Transmission, Inc.
P.O. Box 894
Indianapolis, IN 46206-0894
Attention: Warranty Administration PF-9



Fire and Rescue Apparatus

Five (5) Year Material and Workmanship

Command Zone Electronics

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	Command Zone control modules shall be free from failures caused by defects in material and workmanship
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Five (5) Years
Conditions and Exclusions: See Also Paragraphs 2 thru 4	This limited warranty applies to all of the control modules for the Command Zone system, including the full color graphic displays. Related wire harnesses, cables and connectors are not covered under this limited warranty and are instead covered under the Pierce One Year Basic Apparatus Limited Warranty.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



Fire and Rescue Apparatus

Three (3) Year Material and Workmanship

Goldstar® Gold Leaf Lamination

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	Each Goldstar® gold leaf lamination shall be free from defects in material and workmanship.
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Three (3) Years
Conditions and Exclusions: See Also Paragraphs 2 thru 4	This warranty does not cover damage from lack of maintenance and cleaning (proper cleaning and maintenance procedures are detailed in the Pierce operation and maintenance manual).

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



Fire and Rescue Apparatus

Three (3) Year Material and Workmanship TAK-4 Independent Front Suspension

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	The TAK-4 Front Independent Suspension and Steering Gears shall be free from defects in material and workmanship.
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Three (3) Years -or- 30,000 Miles
Conditions and Exclusions: See Also Paragraphs 2 thru 4	This limited warranty excludes brake pads, brake rotors, seal boots and shock absorbers.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



Fire and Rescue Apparatus

Ten (10) Year Pro-Rated Paint and Corrosion

Cab

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	Exterior surfaces of the cab painted by Pierce shall be free from blistering, peeling, corrosion or any other adhesion defect caused by defective manufacturing methods or paint material selection.
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Ten (10) Years
Conditions and Exclusions:	<p>This limited warranty is applicable to the vehicle in the following percentage costs of warranty repair, if any:</p> <p>Topcoat Durability & Appearance: Gloss, Color Retention & Cracking 0-72 months 100% 73-96 months 50% 97-120 months 25%</p> <p>Integrity of Coating System: Adhesion, Blistering/Bubbling 0-36 months 100% 37-84 months 50% 85-120 months 25%</p> <p>Corrosion: Dissimilar Metal and Crevice 0-36 months 100% 37-48 months 50% 49-72 months 25% 73-120 months 10%</p> <p>Corrosion Perforation 0-120 months 100%</p> <p>This limited warranty applies only to exterior paint. Paint on the vehicle's interior is warranted only under the Pierce Basic One Year Limited Warranty.</p> <p>Items not covered by this warranty include: (a) Damage from lack of maintenance and cleaning (proper cleaning and maintenance procedures are detailed in the Pierce operation and maintenance manual). (b) UV paint fade. (c) Any cab not manufactured by Pierce.</p>

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



Fire and Rescue Apparatus

Ten (10) Year Pro-Rated Paint and Corrosion

Custom Body

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	Exterior surfaces of the body shall be free from blistering, peeling, corrosion or any other adhesion defect caused by defective manufacturing methods or paint material selection.
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Ten (10) Years
Conditions and Exclusions: See Also Paragraphs 2 thru 4	<p>This limited warranty is applicable to the vehicle in the following percentage costs of warranty repair, if any:</p> <p>Topcoat Durability & Appearance: Gloss, Color Retention & Cracking 0-72 months 100% 73-96 months 50% 97-120 months 25%</p> <p>Integrity of Coating System: Adhesion, Blistering/Bubbling 0-36 months 100% 37-84 months 50% 85-120 months 25%</p> <p>Corrosion: Dissimilar Metal and Crevice 0-36 months 100% 37-48 months 50% 49-72 months 25% 73-120 months 10%</p> <p>Corrosion Perforation 0-120 months 100%</p> <p>This limited warranty applies only to exterior paint. Paint on the vehicle's interior is warranted only under the Pierce Basic One Year Limited Warranty.</p> <p>Items not covered by this warranty include: (a) Damage from lack of maintenance and cleaning (proper cleaning and maintenance procedures are detailed in the Pierce operation and maintenance manual). (b) UV paint fade. (c) Any cab not manufactured by Pierce.</p>

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



Fire and Rescue Apparatus

Lifetime Fifty (50) Year Structural Integrity

Custom Chassis Frame

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	Custom chassis frame rail manufactured by Pierce shall be free from defects in material and workmanship
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Fifty (50) Years (Expected Life of Apparatus)
Conditions and Exclusions: See Also Paragraphs 2 thru 4	This warranty does not apply to damage caused by corrosion.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



Fire and Rescue Apparatus

Ten (10) Year Structural Integrity Apparatus Body

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	The apparatus body shall be free from structural failures caused by defects in material and workmanship
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Ten (10) Years - or - 100,000 Miles
Conditions and Exclusions: See Also Paragraphs 2 thru 4	This warranty applies only to the body tubular support and mounting structures and other structural components of the body of the vehicle model, as identified in the Pierce specifications for the Fire and Rescue Apparatus. This warranty does not apply to damage caused by corrosion.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



Fire and Rescue Apparatus

Ten (10) Year Material and Workmanship

Pierce 12V LED Strip Light

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	This limited warranty covers repairs to correct any defect related to materials or workmanship of the Pierce 12V LED strip lights installed on the apparatus occurring during the warranty period.
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Ten (10) Year
Conditions and Exclusions: See Also Paragraphs 2 thru 4	This limited warranty does not apply to related wire harnesses, cables, and connectors, which are covered by the Pierce one (1) year basic apparatus limited warranty.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



Ten (10) Year Material and Workmanship
Stainless Steel Piping
Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Table with 2 columns: Label (Coverage, Warranty Begins, Warranty Period Ends After, Conditions and Exclusions) and Description (Stainless steel piping shall be free from structural failures... Pierce's obligation under this warranty is limited to repairing or replacing without charge... This warranty does not cover the use of fluoroprotein (FP) type foam...)

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

- (a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce...
(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions...
(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce...
(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period...

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use.



Fire and Rescue Apparatus

Three (3) Year Material and Workmanship Meritor Wabco ABS Brake System Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	The Meritor Wabco ABS brake system shall be covered by Meritor Wabco as indicated in the attached Meritor Wabco warranty coverage description
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Three (3) Year
Conditions and Exclusions: See Also Paragraphs 2 thru 4	The exclusions listed in the attached Meritor Wabco warranty description shall apply.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.



MERITOR WABCO

Safety Strong. Efficiency Smart.

Warranty
Model Year 2018 Vehicles

SIMPLER IS BETTER

Warranty coverage is essential to protecting your investment. But understanding the full details of your coverage can be challenging. This straightforward approach allows you, our valued customer, to better understand how your specific vehicle applications will be covered in your region. Our component warranty coverage is provided according to vocation/usage categories listed below.

- Linehaul covers high mileage operation (over 60,000 miles/year) on well maintained major highways of concrete or asphalt construction.
- General Service covers moderate mileage operations (less than 60,000 miles/year) on well maintained public roads (less than 10 percent off-road) typically with less than three (3) stops per mile.
- Heavy Service (Vocational) covers vehicles with more than 10 percent off-road OR moderate to frequent starts/stops typically with more than three (3) stops per mile.
- Off-Highway Service covers lower mileage operations. Vehicles are not typically licensed for highway use.

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How to Read Warranty Coverage (Example)

Number of Years	Mileage (in thousands) Unl=Unlimited	P=Parts Only P&L=Parts & Labor
3	300	P

HEAVY SERVICE (VOCATIONAL) WARRANTY INFORMATION

Heavy Service Vehicles

- Airport Rescue Fire (ARF)
- Airport Shuttle
- Asphalt Truck
- Block Truck
- Bottom Dump Trailer Combination
- Cementing Vehicle
- City Bus
- Commercial Pick-Up
- Concrete Pumper
- Construction Material Hauler
- Crash Fire Rescue (CFR)
- Mixer
- Demolition
- Drill Rig
- Dump
- Emergency Service
- Equipment Hauling
- Flatbed Trailer Hauler
- Flatbed Truck
- Fracturing Truck
- Front Loader
- Geophysical Exploration
- Hopper Trailer Combinations
- Landscaping Truck
- Liquid Waste Hauler
- Log Hauling
- Lowboy
- Michigan Special Gravel Trains
- Michigan Special Log Hauler
- Michigan Special Steel Hauler
- Michigan Special Waste Vehicle
- Municipal Dump
- Newspaper Delivery
- Package Delivery
- Pick-up and Delivery
- Rapid Intervention Vehicle (RIV)
- Rear Loader
- Recycling Truck
- Residential Pick-Up/Waste
- Rigging Truck
- Roll-Off
- Scrap Truck
- Semi-End Dump
- Sewer/Septic Vacuum
- Shuttle Bus
- Side Loader
- Snowplow/Snowblower
- Steel Hauling
- Tanker
- Tank Truck
- Tractors with Pole Trailers
- Tractor/Trailer with Jeeps
- Transfer Dump
- Transfer Vehicle
- Transit Bus
- Trolley
- Utility Truck
- Winch Truck

Heavy Service Typically Is

- On/Off road vocations (10% or more off-road) OR
- Moderate to frequent starts/stops typically more than three (3) stops per mile

Meritor WABCO Components¹

ABS (Anti-Lock Braking System) Air	3/300/P&L
ABS (Anti-Lock Braking System) Hydraulic	2/200/P&L
Electronic Braking System (EBS)	3/300/P&L
Electronic Stability Control (ESC)	3/300/P&L
Roll Stability Control (RSC)	3/300/P&L
Air Dryers (ALL)	1/100/P&L
Leveling Valves	1/100/P&L
Air Brake Valves	1/100/P&L
Emission Valves (SCR)	2/200/P&L
Clutch Controls	2/200/P&L
Air Compressors (ALL) ²	1/100/P&L
OnGuard™	3/300/P&L
OnGuardACTIVE™	3/300/P&L
OnLane™ Lane Departure Warning	3/300/P&L
Blind Spot Detection	3/300/P&L
OptiRide™	2/200/P&L
Trailer Roll Stability Support (RSS)	3/300/P&L
Trailer Control Line Filter ³	1/100/P&L
Trailer ABS Valve ³	3/300/P&L

¹ WABCO and Meritor WABCO branded components.

² WABCO compressors installed on Cummins, Mercedes, and DDC engines are not warranted or serviced by Meritor WABCO. Please contact your respective dealer/distributor of those engines for warranty and servicing.

³ An extended warranty of 4/400/P will be applied when a Meritor WABCO Trailer Control Line Filter is used in combination with a Meritor WABCO Trailer ABS valve.



TERMS AND CONDITIONS

Coverage Exclusions

Product Description

All

The cost of any repairs, replacements or adjustments to a covered product due to the following: (1) damage to the product or its component parts caused by incorrect use, installation, maintenance or repair, including without limitation (a) improper fit of mating components or brackets, (b) damaged threads, (c) cut, broken, chafed, pinched or otherwise damaged wiring (sensors, harnesses and connectors), (d) damaged sensors from removal when seized in block, or associated with sensor adjustments/alignments, and (e) damage resulting from the use or installation of non-genuine Meritor WABCO components or materials; (2) damage to the product, its component parts, or diminished product or component part performance due to incorrect operation, deviation from approved conditions or misapplication; (3) any unauthorized disassembly of the product or its component parts including without limitation (a) obliterated, defaced or missing WABCO or Meritor WABCO name plate, serial numbers or label identifying the device as a Meritor WABCO product or WABCO component, (b) changes to sealed adjusting screws, and (c) opening or attempted repair of non-serviceable components; (4) malfunction of the component due to internal contamination out of the vehicle system including without limitation (a) water and other contamination damage that is due to the use of a non-genuine air dryer cartridge or (b) valve failures due to contamination in air system, (5) complaints associated with noise, (6) damage resulting from corrosion (including oxidation of electrical devices and connections).

Air Dryers

Mounting brackets (see vehicle OEM). Desiccant cartridge housing only.

Air System Components

Normal wear items; Gladhand seals, dash valve knobs, valve actuation handles, treadles, pedals.

ABS, Electronic Stability Control (ESC), Roll Stability Control (RSC), OptiRide™, OnGuard™ and OnLane™, collectively “Electronics”

Failure of electronic components due to overvoltage condition, improper grounding, electrostatic discharge (ESD), improper shielding, electromagnetic interference (EMI), or other wiring or installation issues.

Malfunctions and failure codes caused by other electronic subsystem failures (data bus, engine, transmission, dashboard, etc.)

Hydraulic Components

For certain components, brake fluid DOT3 or DOT4 is used as the operating medium. Use of any other fluid will void all warranties associated with that component. For hydraulic braking applications the brake fluid is considered a maintenance item. Maintenance intervals are listed in TB-1367.

Coverage Limitations

Product Description

All

Any claim beyond 60 days from date of repair will not be accepted or honored under this warranty program.

Products purchased on an incomplete vehicle (glider) are limited to one year, 1/Unl/P.

For vehicles that operate full- or part-time outside of the United States and Canada, a 1-Year/Unlimited Miles parts only (1/Unl/P) will apply.

TOOLBOX™ Software

Proper diagnostics of Meritor WABCO Electronics may require the latest version of TOOLBOX™. Additional labor due to use of an outdated version of TOOLBOX™. TOOLBOX™ software, and/or the time to purchase or install latest version of TOOLBOX™ are not covered under product warranty.

TERMS AND CONDITIONS

(1) What is Covered by this Commercial Warranty?

Meritor WABCO Vehicle Control Systems warrants to the owner ("Owner") that the components listed in this publication, which have been installed by an Original Equipment Manufacturer ("OEM") as original equipment will be free from defects in material and workmanship. This warranty coverage begins from the original in-service date to the limits provided and runs concurrently with any warranties provided by OEMs and/or any service contracts that cover the components listed in this publication, if any. If the components listed in this publication are covered by an OEM warranty and/or service contract, then the OEM's warranty and/or service contract shall supersede Meritor WABCO's warranty and Owner shall comply with all OEM's warranty and/or service contract requirements for claims under such OEM's warranty and/or service contract until those agreements expire. Once those agreements expire and provided the Meritor WABCO warranty has not expired under the terms stated above, the Meritor WABCO warranty would be in effect until its expiration date.

Warranty coverage ends at the expiration of the applicable time period from the date of vehicle purchase by the first Owner, or, the applicable mileage limitation, whichever occurs first. Duration of coverage varies by component and vocation as detailed previously in this publication. Some components are warranted for parts only and the Owner must pay any labor costs associated with the repair or replacement of the component. Other components are warranted for both parts and reasonable labor to repair or replace the subject component. Additional diagnostic time due to use of an outdated version of TOOLBOX™, time to purchase or install latest version of TOOLBOX™ are the responsibility of the authorized Meritor WABCO service location and are not covered under product warranty. Components installed as replacements under this warranty are warranted only for the remainder of the original period of time or mileage under the original warranty.

(2) Designation of Vocational Use Required.

To obtain warranty coverage, each Owner must notify Meritor WABCO through the OEM new truck and/or trailer dealer of the intended vocational use of the vehicle into which the Meritor WABCO components have been incorporated prior to the vehicle in-service date. This notification may be accomplished by registering the vehicle through your OEM new truck and/or trailer dealer or with Meritor WABCO directly. Failure to notify Meritor WABCO of (I) the intended vocational use of the vehicle or (II) a change in vocational use from that which was originally designated, will result in the application of a one year, unlimited mileage, parts only warranty (1/Unl/P) from the initial in-service date.

A second Owner and each subsequent Owner must also notify Meritor WABCO as to the intended vocational use of the vehicle. This notification can be sent directly to Meritor WABCO or through the OEM new truck and/or trailer dealer. The duration and mileage coverage of this warranty cannot exceed the coverage extended to the first Owner after his or her initial designation of vocational use.

Coverage under Meritor WABCO's warranty requires that the application of products be properly approved pursuant to OEM and Meritor WABCO, approvals.

(3) What is the Cost of this Warranty?

There is no charge to the Owner for this warranty.

(4) What is not Covered by this Warranty?

In addition to the items listed on page 7, this warranty does not cover normal wear and tear, or service items; nor does it cover a component that fails, malfunctions or is damaged as a result of

(a) improper handling, storage, installation, adjustment, repair or modification including the use of unauthorized attachments or changes or modification in the vehicle's configuration, usage, or vocation from that which was originally approved by Meritor WABCO, (b) accident, fire or other casualty, natural disaster, road debris, negligence, misuse, abuse, or improper use (including loading beyond the specified maximum vehicle weight or altering engine power settings to exceed the brake system capacity), or (c) improper or insufficient maintenance (including deviation from maintenance intervals, approved lubricants, or lube levels). This warranty does not cover any component or part that is not sold by Meritor WABCO.

(5) Remedy.

The exclusive remedy under this warranty shall be the repair or replacement of the defective component at Meritor WABCO's option. Meritor WABCO reserves the right to require that all applicable covered components are available and/or returned to Meritor WABCO for review and evaluation.

(6) DISCLAIMER OF WARRANTY.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS, IMPLIED OR STATUTORY INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE. SOME STATES LIMIT OR DO NOT ALLOW THE DISCLAIMER OF IMPLIED OR OTHER WARRANTIES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO THE EXTENT SUCH STATE'S LAW IS APPLICABLE TO THESE TERMS.

(7) LIMITATION OF REMEDIES.

IN NO EVENT SHALL MERITOR WABCO BE LIABLE FOR SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES OF ANY KIND OR UNDER ANY LEGAL THEORY, INCLUDING, BUT NOT LIMITED TO, TOWING, DOWNTIME, LOST PRODUCTIVITY, CARGO DAMAGE, TAXES, LOST PROFITS, COSTS OF PROCUREMENT OF A SUBSTITUTE COMPONENT OR ANY OTHER LOSSES OR COSTS RESULTING FROM A COVERED COMPONENT. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO THE EXTENT SUCH STATE'S LAW IS APPLICABLE TO THESE TERMS.

(8) TIME LIMIT ON COMMENCING LEGAL ACTION.

ANY LEGAL ACTION OR CLAIM ARISING FROM OR RELATED TO THIS WARRANTY, IN CONTRACT OR OTHERWISE, MUST BE COMMENCED WITHIN ONE YEAR FROM THE ACCRUAL OF THAT CAUSE OF ACTION, OR BE BARRED FOREVER.

(9) To Obtain Service.

If the Owner discovers within the applicable coverage period a defect in material or workmanship, the Owner must promptly give notice to either Meritor WABCO or the dealer from which the vehicle was purchased. To obtain service, the vehicle must be taken to any participating OEM new truck and/or trailer dealer or authorized Meritor WABCO service location. The dealer will inspect the vehicle and contact Meritor WABCO for an evaluation of the claim. When authorized by Meritor WABCO, the dealer will repair or replace during the term of this warranty any defective Meritor WABCO component covered by this warranty.

(10) Entire Agreement.

This is the entire agreement between Meritor WABCO and the Owner about warranty and no Meritor, Meritor WABCO employee, or dealer is authorized to make any additional warranty on behalf of Meritor WABCO unless in writing and signed by an authorized representative of Meritor WABCO.

For more information on
Meritor WABCO Warranty, call
our OnTrac Customer Service team
at 866-OnTrac1 (866-668-7221)
or visit meritorwabco.com.



One (1) Year Material and Workmanship Foam System & Five (5) Year Material and Workmanship Control Head

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	Limited warranty 1 year parts and labor for the foam system and 5 years parts and labor for the control head.
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	One (1) Year & Five (5) Year
Conditions and Exclusions: See Also Paragraphs 2 thru 4	<p>This warranty does not cover repair due to accidents, misuse, and excessive vibration, flying debris, storage damage (freezing), negligence or modification. This warranty is void if any modification or repairs are performed without authorization. This also voids any future warranty.</p> <p>This warranty does not cover cost of maintenance or repairs due to lack of required maintenance services as recommended. Performance of the required maintenance and use of proper fluids are the responsibility of the owner.</p>

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

R. H. SHEPPARD CO., INC.

101 Philadelphia St.

Hanover, PA 17331

Pierce Manufacturing Inc.

2600 American Drive

Appleton, WI 54912

LIMITED WARRANTY: The R. H. Sheppard Co. Inc., (“Sheppard”) warrants all M110PKG1 and M110SAU1 steering gears manufactured and sold to Pierce Manufacturing Inc. (“Pierce”) for application on Pierce TAK-4 equipped vehicles to be free from defects of workmanship and material under normal use and service for a period of thirty six months from the in service date of the vehicle to its original owner.

Vehicle applications where Sheppard product is used require an application approval before production build. If Pierce uses Sheppard product for any purpose or application which has not been approved by Sheppard in advance, including aftermarket devices (defined as a device added to the steering system directly or indirectly affecting the performance or operation of the Sheppard product in its approved application) not tested and approved by Sheppard this limited warranty **SHALL NOT APPLY AND SHALL BE VOID. SHEPPARD MAKES NO OTHER WARRANTY, EITHER EXPRESS OR IMPLIED. SHEPPARD EXPRESSLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR USE OR PURPOSE WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.**

SHEPPARD SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES OR FOR LOSS OR DAMAGE DIRECTLY OR INDIRECTLY ARISING FROM THE USE OF A PRODUCT. Pierce expressly acknowledges its obligation to inform all users (customers) of the above disclaimer.

CONDITIONS: Claims under this Limited Warranty may only be made by Pierce. In no event shall Sheppard be held liable for warranty charges by unauthorized persons. No allowance will be made for repairs or alterations, unless made with the written consent of Sheppard. Authorized Pierce dealers shall be the only authorized repair facility for Sheppard products applied to Pierce vehicles. Any warrantable repair made under this Limited Warranty must be made on or before 36 months of the in-service date for the Product to which the claim relates. Sheppard shall not be liable for claims made after such date. Sheppard product fitted to Pierce vehicles that are repaired at a repair facility other than an authorized Pierce dealer within the warranty period will be considered for payment under the guidelines of this agreement only by joint written consideration of Sheppard and Pierce warranty departments. It shall be the responsibility of the Pierce warranty department to notify Sheppard if and when this situation occurs. Sheppard will not be held responsible for damage to other steering components such as but not limited to pumps and reservoirs due to improper adjustment of steering gear relief plungers. Vehicle downtime and towing will not be considered under warranty.

REMEDIES: The sole and exclusive remedy of Pierce for Sheppard’s breach of the foregoing warranty is limited to the return and repair or reimbursement as follows:

R. H. SHEPPARD CO., INC. WARRANTY
Pierce Manufacturing Inc.
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Warranty Support: In support of the Pierce dealer network, Sheppard will provide a toll-free "Hotline" service to assist in the diagnosis and troubleshooting of steering problems. The R. H. Sheppard Co., Inc. Field Service Department can be reached at 1-800-274-7437 for assistance. Sheppard will require that Pierce dealers contact this toll-free "Hotline" for approval before product is removed from a vehicle in a warranty situation. When contacted regarding a warranty situation, the Sheppard representative will provide an authorization number for removal of the product. This Returned Goods Authorization (RGA) number must be included in all warranty correspondence and attached to all returned goods.

Procedure: In the event of a warranty situation, the servicing dealer shall contact the Sheppard Hotline and receive an RGA number before replacing any steering gear. For M110PKG1 and M110SAU1 steering gear models, the dealer will first obtain an RGA number from Sheppard, and then order the replacement gear from Pierce. Replacement M110PKG1 and M110SAU1 steering gears shall be shipped from Pierce once those models are in full production. A warranty claim for both parts and labor will then be generated by the dealer and sent to Pierce. After reviewing the claim, Pierce will submit it to Sheppard for reimbursement.

Parts Reimbursement: Sheppard agrees to reimburse Pierce at Pierce's purchase price plus 30% mark-up for parts found to be defective within the warranty period. Parts being returned for warranty consideration shall be sent to the R. H. Sheppard Company, 447 E. Middle St., Hanover, PA 17331 ATTN: Warranty Dept. Sheppard's determination as to whether the part is covered by the foregoing warranty is final and conclusive. Sheppard requires the return of complete steering gears only. Individual seals replaced under warranty **should not** be returned unless specifically requested by Sheppard. All parts being returned for warranty consideration must be clearly tagged with all pertinent warranty information including, but not limited to (1) Returned Goods Authorization number (RGA); (2) claim number; (3) date in service; (4) date of failure; (5) mileage; (6) part number; (7) labor hours; (8) dealer labor rate and; (9) dollar amount claimed. Claims submitted without prior authorization are subject to rejection under this agreement.

Labor: Labor to repair Sheppard product found to be defective within the warranty period will be reimbursed at not more than 10 hours per vehicle. Labor shall be reimbursed at the rate of \$85.00 USD per hour for M110PGK1 and M110SAU1 steering gears.

Freight: Pierce will collect M110PGK1 and M110SAU1 warranty material at a designated collection point. Inbound freight to the Pierce collection point will be the responsibility of Pierce. All warranty material should be returned from the Pierce collection point to R. H. Sheppard Co. Freight Collect by a Sheppard-specified common carrier based on location of the Pierce collection point. Sheppard does not require the return of failed seals. Any freight charges incurred for the return of seals will be the responsibility of Pierce. Parts returned for warranty consideration without prior authorization are subject to rejection under this agreement and may be subject to a charge back of inbound freight charges. Parts rejected under this warranty will be returned to Pierce Freight Collect or scrapped by Sheppard at Pierce's discretion.

R. H. SHEPPARD CO., INC. WARRANTY

Pierce Manufacturing Inc.

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Outside Purchases: Pierce authorized dealers shall be the only outlet for repair, warranty service and parts for Sheppard products applied to Pierce vehicles. Sheppard will not be responsible for consumables such as hoses, belts, fluids, fittings or miscellaneous shop material that may be required for the repair of the product.

Warranty Documentation: Warranty credit memos will be issued monthly to the Pierce Warranty Department. Monthly credit memos will include (1) claim number; (2) part number; (3) parts reimbursement; (4) labor reimbursement; (5) any applicable Pierce reference number and; (6) reason for rejection or acceptance of the claim. Credit memos will be issued in U.S. funds. Debits for warranty claims will not be accepted under this agreement. Claim disposition will constitute the final and conclusive resolution of warranty claims.

Parts Retention: Sheppard will retain parts submitted for warranty consideration for a period of sixty (60) days for any material found to be rejected for warranty. Sheppard will notify Pierce within sixty (60) days of receipt of Sheppard's determination as to whether any such part is covered by this warranty. Warranty reimbursement will be issued within thirty days of receipt of material at Sheppard.

Good-Will Requests: Good-Will requests will be considered jointly between Sheppard and Pierce for equitable compensation.

RECALLS: Sheppard retains the right to review information regarding federal motor vehicle recall and /or product repair programs if Sheppard products fitted to Pierce vehicles are alleged to be non-compliant with federal motor vehicle safety standards. Sheppard retains the right to review any claims of product defect or non-compliance before participating in reimbursement of expenses incurred as a result of alleged non-compliance or defect of its products. Sheppard agrees to negotiate in good faith for the reimbursement of expenses incurred by Pierce for all administrative, material and labor cost and expense associated with any recall where Sheppard product is found to be defective or non-compliant with federal motor vehicle standards.

MISCELLANEOUS: This writing constitutes the full complete and final statement of Sheppard's limited warranty for M110PKG1 and M110SAU1 products sold to Pierce. All prior oral or written correspondence, test data, negotiations, representations, understandings and the like regarding products are merged in this writing and extinguished by it. This limited warranty may not be altered, amended extended or modified except by a writing signed by the President or Vice President of Sheppard. No employee, vendor, dealer, distributor or other representative of Sheppard has authority to make statements to extend, expand, alter or amend the terms of this Limited Warranty. Sheppard expressly disclaims any statements contrary to the Limited Warranty. Sheppard's failure at any time to enforce any of the terms and conditions stated herein shall not constitute a waiver of any provisions herein. This Limited Warranty shall be governed by and construed in accordance with the laws of the Commonwealth of Pennsylvania.

R. H. SHEPPARD CO., INC. WARRANTY
Pierce Manufacturing Inc.
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Any legal actions which may arise as a result of disputes, controversies or claims arising out of or related to this limited warranty shall be in such forum as Sheppard and Pierce shall agree, or, in the absence of agreement, in a court of appropriate jurisdiction other than in the county in which either party is located. This Limited Warranty shall not be assigned by Pierce.

COOPERATIVE EFFORT: Sheppard and Pierce agree to work cooperatively toward expanding this warranty coverage to a period of sixty months from the in service date. These cooperative efforts shall focus on examining the effects of increased heat generated by 2007 model engines and its impact on the entire power steering system.

AGREEMENT: This agreement is effective April 3, 2006 and may be modified by mutual agreement between Sheppard and Pierce of a signed amendment to be attached to the original Limited Warranty. There are no third party beneficiaries to this Limited Warranty. This warranty agreement applies to Pierce authorized dealers only. It does not encompass any special arrangements that Pierce may now have or that Pierce may enter into, with any other segments of the trucking industry. This warranty agreement does not apply to non-conforming product removed at Pierce assembly plants.

This Limited Warranty agreement between the R. H. Sheppard Co., Inc and Pierce Manufacturing Inc. may be terminated by either party with thirty days written notice prior to termination.

Signed at Pierce Manufacturing Inc., Appleton, WI this _____ day of _____, 2006.

R. H. SHEPPARD CO., INC.

PIERCE MANUFACTURING INC.

Authorized Signature

Authorized Signature

Title

Title



Fire and Rescue Apparatus

Five (5) Year Material and Workmanship - Transmission Oil Cooler Three (3) Year Collateral Damage Coverage

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	The transmission cooler shall be free from component or structural failures caused by defects in material and/or workmanship. Collateral damage up to \$10,000 per occurrence is available for the first three (3) years.
Warranty Begins:	The date of delivery to the first retail purchaser.
Warranty Period Ends After:	Five (5) Years on Oil Cooler and three (3) years on collateral damage coverage
Conditions and Exclusions: See Also Paragraphs 2 thru 4	<p>This warranty does not cover repair due to accidents, misuse, and excessive vibration, flying debris, storage damage (freezing), negligence or modification. This warranty is void if any modification or repairs are performed without authorization. This also voids any future warranty.</p> <p>This warranty does not cover cost of maintenance or repairs due to lack of required maintenance services as recommended. Performance of the required maintenance and use of proper fluids are the responsibility of the owner.</p> <p>Towing is covered to the nearest distributor or authorized dealer only when necessary to prevent further damage to your transmission.</p> <p>Labor costs for the removal and reinstallation of goods may be covered when necessary to make repairs. Please contact your OEM for authorization.</p> <p>Replacement of cooler during the warranty period is limited to 100% of reasonable labor costs up to a maximum of \$700 to remove, replace, or repair the oil cooler.</p>

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

 **UNITED PLASTIC FABRICATING, INC.**
WARRANTY
FOR: POLY-TANK®, POLYSIDE®, INTEGRATOR™, ELLIPSE™, ELLIP-T-TANK™ & DEFENDER™

LIFETIME SERVICE WARRANTY

United Plastic Fabricating, Inc. (hereinafter called "UPF") warrants each POLY-TANK®, Booster/Foam Tank POLYSIDE® Wetside Tank, Integrator Tank/Body, ELLIPSE™ Elliptical Tank, Ellip-T-Tank Tank and DEFENDER™ Skid Tank to be free from defects in material and workmanship for the service life of the original vehicle (vehicle must be actively used in an emergency response for fire suppression). All UPF Tanks must be installed and operated in accordance with the UPF Installation and Operating Guidelines. Failure to do so can void the warranty.

Every UPF Tank is inspected and tested before leaving our facility. Should your UPF Tank require service, please notify UPF via email, fax, in writing or by calling UPF at 1-978-975-4520. Please provide the serial number, a description of the service request, the location along with the phone number and name of the contact person. Our goal is to have scheduled work completed within a reasonable time period.

Under a valid warranty claim, UPF will cover the cost to repair the UPF Tank including the customary and reasonable costs to make the tank accessible such as the removal and reinstallation of the tank if authorized in advance (pre-approved) by UPF. The warranty will not cover tanks that have been improperly installed, operated, misused, abused, or modified from its intended or designed use. Serial number must not have been altered, defaced or removed. Tanks that are not stored or installed properly which results in the tank suffering UV damage will not be covered by this agreement.

Should UPF determine that the service claim is valid under this warranty for a tank located outside of the United States and Canada, UPF will assume the costs for labor and material for the warranty repair as described above plus all travel costs to the U.S. port of embarkation. Costs for airline travel outside of the U.S. and Canada will not be the responsibility of UPF.

In the event the tank shall become stationed in an area of the world that is considered to be a war zone or where unsafe conditions exist for the safe passage of United States Nationals, as reported by the United States Department of State, (<http://www.state.gov>), and a request to perform service or warranty repairs, UPF reserves the right to refuse to honor such requests. It is the purchaser's responsibility to relocate the tank to an area where such repairs can be performed without undue risk to UPF employees or their designee. UPF will make every reasonable effort to support our products through alternative means.

For Ellipse™ elliptical tanks, a separate five year warranty provided by the subcontractor is applied to the sub-frames, chute linings (rubber isolation strips) and metal components. The stainless steel wrap provided by UPF shall be warranted by the subcontractor performing the wrap installation in accordance with their warranty in place at the time of the installation. UPF will not be liable for any warranty costs associated with the wrap, sub-frames, chute linings (rubber isolation strips) and metal components but will assist with all claims on behalf of its customer.

For PolySide® wetsided tanks and Integrator™ Tank/Body units, all polypropylene components related to the tank shall carry the standard UPF lifetime



UNITED PLASTIC FABRICATING, INC.

WARRANTY

FOR: POLY-TANK®, POLYSIDE®, INTEGRATOR™, ELLIPSE™, ELLIP-T-TANK™ & DEFENDER™

service warranty. Other polypropylene components, including but not limited to compartments, wheel wells, fenders and other body related components shall be warranted by UPF for a period of ten years. The warranty for the PolySide® and Integrator™ units excludes paint or hardware, which shall be covered by the manufacturer of the paint/hardware.

All UPF tanks 50 gallons or less utilized for non-fire applications and installed on specialty vehicles such as ATVs, trailers, boats, etc. are covered under a separate warranty policy available from UPF. Further, UPF Protector™ foam and water trailers are warranted under a separate warranty policy available from UPF.

This UPF warranty is transferable within the United States only with prior written approval by UPF (except an original apparatus manufacturer may assign this warranty to the first titled owner/lessee of the apparatus).

UPF will NOT reimburse any unnecessary work and/or work that has not been pre-approved. Any and all third party charges must be pre-authorized and approved in writing by UPF prior to commencing the work. Any unauthorized third party repairs, alterations, actions or modifications will not be covered and can void the warranty. UPF will be the sole determining authority as to whether a service claim will be valid and covered under this warranty.

In no event will UPF be liable for an amount in excess of the purchase price of the booster/foam tank at the time of manufacture or for any loss or damage, whether direct, indirect, incidental, consequential, or otherwise arising out of failure of its product. Loss of contents (water, foam, etc.) shall not be the responsibility of UPF. Further, UPF is not responsible for costs associated with service repairs to chassis, sub-frames, bodies, valves, dumps, hoses, pressure vacuum vents, and other components (i.e. liquid level transducers, etc.). Further, UPF will not cover the cost for travel of the vehicle to and from a repair facility.

This warranty contains the entire warranty. It is the sole warranty and price agreements or representation, whether oral or written, are either merged herein or expressly cancelled. UPF neither assumes, nor authorizes any person supposing to act on its behalf to change, nor assume for it, any warranty or liability concerning its product.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow exclusion or limitation or incidental or consequential damage, so the above limitation or exclusion may not apply to you. Since some states do not allow limitations on the length of an implied warranty, the above limitation may not apply to you.

THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, WHICH EXTEND BEYOND THE DESCRIPTION OF THE FACE HEREOF. THERE IS NO EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR A WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. ADDITIONALLY, THIS WARRANTY IS IN LIEU OF ALL OTHER OBLIGATION OR LIABILITIES ON THE PART OF UPF.



BULLETIN

TO: All Dealer Service Representatives

From: Kevin Hanegraaf

DATE: January 4, 2010

RE: UPF Tank Warranty Policy – Truck in Accident

Service Topic #292



To keep the UPF tank warranty valid on trucks that have been involved in a vehicular accident, it is UPF's policy that the customer must remove the tank from the truck and send it back to one of UPF's facilities for inspection. In the event that this does not take place, the warranty will be considered null and void.

The customer must remove and send the tank back to UPF for inspection in order to maintain the original warranty coverage, at which time it will be:

- Filled with water
- Visually inspected
- Ultraviolet spark tested on articulating test stand in the dark
- Recommendation for repairs if necessary provided by UPF
- Fully evaluated and repaired by UPF

If your customer chooses to leave the tank on the truck and wants a technician to inspect and/or repair the tank in the field, then **the warranty is no longer in effect.** This direction is upheld by UPF because the technician cannot inspect the entire tank when it is still installed on the truck.

Note: This memo is intended to relay the information Pierce has received on UPF's tank warranty for trucks that are in a vehicular accident. In the event of an actual claim, we direct you to consult with UPF's service Manager Maura Watts (800-638-8265 x253)



AMDOR Inc. TERMS OF BUSINESS AND GENERAL INFORMATION

Warranty:

All AMDOR Inc. roll-up door products are warranted for a period of 10 years from the date of delivery (with the exception of wet paint adhesion - please see below). AMDOR Inc. liability covers the replacement or repair of any component that fails due to defects in material and / or workmanship during the coverage period. We accept no liability for claims made for damages to any part (or parts) of a vehicle and / or machine (of any type) or injury claims by a person or persons assumed or alleged to have been brought about by the use or misuse of any product supplied by AMDOR Inc. Warranty coverage does not extend to door attachments including (but not limited to) decals, emblems, stripes and adhesives.

In order to initiate the claims process please contact your authorized representative of AMDOR Inc. Warranty claims must be accompanied by a written description providing full and reasonable details as to the nature of the defect. Upon receipt of your claim arrangements will be made to inspect the defective product (if necessary). Justified warranty claims will be repaired, exchanged, or credited to the customer's account at AMDOR Inc.'s discretion. All warranty claims must be approved in writing by the Customer Service Manager for AMDOR Inc. There are no exceptions to this clause.

Limited warranty coverage includes the labor associated with the disassembly and assembly of products deemed to be defective by AMDOR Inc. Labor allowances are based on a set time schedule as determined by AMDOR Inc. The maximum allowable hourly labor rate is \$ 50. All warranty labor claims must be approved in writing by an authorized representative of AMDOR Inc. prior to commencement of work. Allowances for removal and installation:

Curtain replacement:	3/4 hour
Balancer replacement:	1 hour
Door ajar switch	3/4 hour
Bottom Panel Assembly:	1/2 hour
Slat replacement:	3/4 hour
Door removal and replacement	1 1/2 hours

Items authorized for return must be accompanied by a Return Goods Authorization (RGA) number. We will accept collect shipments of items deemed to be defective provided that they are returned via the most economical carrier. Should items be

returned by means other than the most economical carrier the difference will be charged back to the sender.

AMDOR Inc. reserves the right to reject any claim when a product has been opened, interfered with or modified. Claims may also be rejected when damage to the product (or any sub-assembly) has been brought about by accident, misuse, abuse, vandalism, incorrect installation, temperature extremes, chemical exposure or any factor other than regular operating conditions.

Limited Wet Paint Match Adhesion Warranty

AMDOR Inc. warrants wet paint finishes applied by AMDOR utilizing our approved factory paint specification. All wet paint match colors must be approved in writing by an authorized OEM representative. AMDOR Inc. will provide a color spray out for this purpose. The time required for shipping and consideration of initial color spray outs will be considered over and above stated lead times. Warranty coverage will extend for a period of not less than 5 years from the date of delivery as determined by AMDOR Inc.'s Packing Slip. AMDOR reserves the right to determine whether individual units will be replaced and / or repaired by an AMDOR approved vendor. An allowance will be made for labor associated with the disassembly and assembly of individual units at the prescribed hourly rate of \$ 50 per hour. Compensation for labor will not exceed the maximum time allowance permitted for door removal and replacement. Written approval including specified allowance for time must be obtained from AMDOR prior to initiating work. Warranty coverage will extend to the following visible paint system defects:

- 1./ Loss of mechanical adhesion as evidenced by peeling, cracking or blistering which exposes the substrate material.
- 2./ Corrosion of the substrate due to paint system failure.
- 3./ Fading which results in a substantial departure from the primary AMDOR approved body color.

Wet paint adhesion limited warranty coverage will be excluded when damages to the system are determined by AMDOR Inc. to be a result of the following:

- 1./ Damage caused through the use of attachments including (but not limited to) decals, labels, adhesives, non factory approved coatings.
- 2./ Loss of gloss, discoloration or damage due to improper maintenance (including but not limited to) mechanical wash systems, pressure washers, steam cleaners, non approved wash or polishing agents.
- 3./ Abuse, acts of nature, excessive heat / cold, chemical exposure, vandalism and / or accidents.
- 4./ Scratches, chips, abrasions, or dents from any source.

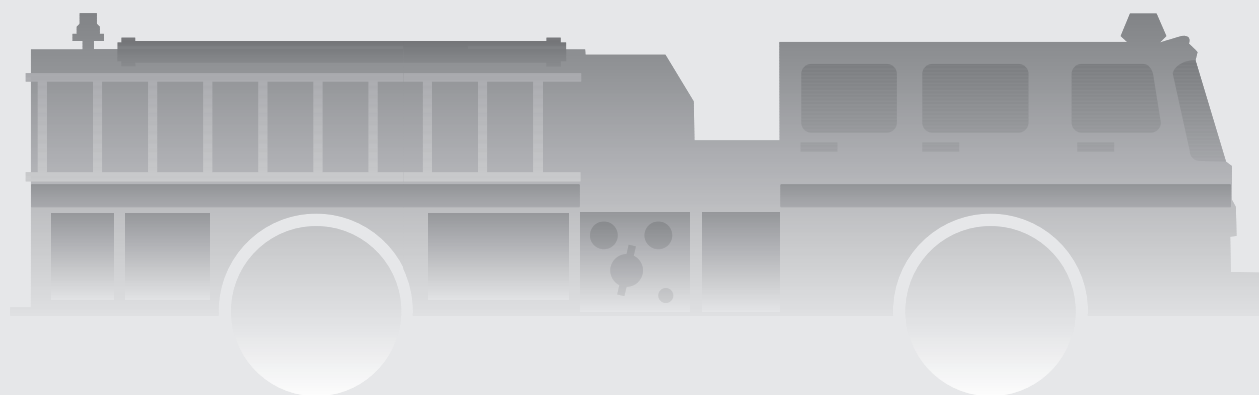
This document supercedes all previous written and / or verbal warranties provided by AMDOR Inc. and / or it's affiliates.



Cummins Warranty

Worldwide

Fire Apparatus/Crash Trucks



Coverage

Products Warranted

This Warranty applies to new diesel Engines sold by Cummins and delivered to the first user on or after April 1, 2007, that are used in fire apparatus truck and crash truck* applications Worldwide.

Base Engine Warranty

The Base Engine Warranty covers any failures of the Engine which result, under normal use and service, from a defect in material or factory workmanship (Warrantable Failure). This Coverage begins with the sale of the Engine by Cummins and ends five years or 100,000 miles (160,935 kilometers), whichever occurs first, after the date of delivery of the Engine to the first user.

Engine aftertreatment components included in the Cummins Critical Parts List (CPL) and marked with a Cummins part number are covered under Base Engine Warranty.

Additional Coverage is outlined in the Emission Warranty section.

These Warranties are made to all Owners in the chain of distribution and Coverage continues to all subsequent Owners until the end of the periods of Coverage.

Cummins Responsibilities

Cummins will pay for all parts and labor needed to repair the damage to the Engine resulting from a Warrantable Failure.

Cummins will pay for the lubricating oil, antifreeze, filter elements, belts, hoses and other maintenance items that are not reusable due to the Warrantable Failure.

Cummins will pay for reasonable labor costs for Engine removal and reinstallation when necessary to repair a Warrantable Failure.

Cummins will pay reasonable costs for towing a vehicle disabled by a Warrantable Failure to the nearest authorized repair location. In lieu of the towing expense, Cummins will pay reasonable costs for mechanics to travel to and from the location of the vehicle, including meals, mileage and lodging when the repair is performed at the site of the failure.

Owner Responsibilities

Owner is responsible for the operation and maintenance of the Engine as specified in Cummins Operation and Maintenance Manuals. Owner is also responsible for providing proof that all recommended maintenance has been performed.

Before the expiration of the applicable Warranty, Owner must notify a Cummins distributor, authorized dealer or other repair location approved by Cummins of any Warrantable Failure and make the Engine available for repair by such facility. Except for Engines disabled by a Warrantable Failure, Owner must also deliver the Engine to the repair facility.

Service locations are listed on the Cummins Worldwide Service Locator at cummins.com.

Owner is responsible for the cost of lubricating oil, antifreeze, filter elements and other maintenance items provided during Warranty repairs unless such items are not reusable due to the Warrantable Failure.

Owner is responsible for communication expenses, meals, lodging and similar costs incurred as a result of a Warrantable Failure.

Owner is responsible for non-Engine repairs and for "downtime" expenses, cargo damage, fines, all applicable taxes, all business costs and other losses resulting from a Warrantable Failure.

Owner is responsible for a \$100 (U.S. Dollars) deductible per each service visit under this plan in the 3rd, 4th and 5th years of Base Engine Warranty. The deductible will not be charged during the first 2 years of the Base Engine Warranty.

Limitations

Cummins is not responsible for failures or damage resulting from what Cummins determines to be abuse or neglect, including, but not limited to: operation without adequate coolants or lubricants; overfueling; overspeeding; lack of maintenance of lubricating, cooling or intake systems; improper storage, starting, warm-up, run-in or shutdown practices; unauthorized modifications of the Engine.

Any unauthorized modifications to the aftertreatment could negatively effect emissions certification and void Warranty.

Cummins is also not responsible for failures caused by incorrect oil, fuel or diesel exhaust fluid or by water, dirt or other contaminants in the fuel, oil or diesel



exhaust fluid.

This Warranty does not apply to accessories supplied by Cummins which bear the name of another company. Such non-warranted accessories include, but are not limited to: alternators, starters, fans, air conditioning compressors, clutches, filters, transmissions, torque converters, vacuum pumps, power steering pumps, fan drives and air compressors. Cummins branded alternators and starters are covered for the first two years from the date of delivery of the Engine to the first user, or the expiration of the Base Engine Warranty, whichever occurs first.

Failures resulting in excessive oil consumption are not covered beyond the duration of the Coverage or 100,000 miles (160,935 kilometers) or 7,000 hours from the date of delivery of the Engine to the first user, whichever of the three occurs first. Before a claim for excessive oil consumption will be considered, Owner must submit adequate documentation to show that consumption exceeds Cummins published standards.

Failures of belts and hoses supplied by Cummins are not covered beyond the first year from the date of delivery of the Engine to the first user or the duration of the Warranty, whichever occurs first.

Parts used to repair a Warrantable Failure may be new Cummins parts, Cummins approved rebuilt parts or repaired parts. Cummins is not responsible for failures resulting from the use of parts not approved by Cummins.

A new Cummins or Cummins approved rebuilt part used to repair a Warrantable Failure assumes the identity of the part it replaced and is entitled to the remaining Coverage hereunder.

Cummins Inc. reserves the right to interrogate Electronic Control Module (ECM) data for purposes of failure analysis.

CUMMINS DOES NOT COVER WEAR OR WEAROUT OF COVERED PARTS.

CUMMINS IS NOT RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

THIS WARRANTY AND THE EMISSION WARRANTY SET FORTH HEREINAFTER ARE THE SOLE WARRANTIES MADE BY CUMMINS IN REGARD TO THESE ENGINES. CUMMINS MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OR OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Emission Warranty

Products Warranted

This Emission Warranty applies to new Engines marketed by Cummins that are used in the United States** in vehicles designed for transporting persons or property on a street or highway. This Warranty applies to Engines delivered to the first user on or after September 1, 1992.

Coverage

Cummins warrants to the first user and each subsequent purchaser that the Engine is designed, built and equipped so as to conform at the time of sale by Cummins with all U.S. federal emission regulations applicable at the time of manufacture and that it is free from defects in material or factory workmanship which would cause it not to meet these regulations within the longer of the following periods: (A) Five years or 100,000 miles (160,935 kilometers) of operation, whichever occurs first, as measured from the date of delivery of the Engine to the first user or (B) The Base Engine Warranty.

If the vehicle in which the Engine is installed is registered in the state of California, a separate California Emission Warranty also applies.

Limitations

Failures, other than those resulting from defects in material or factory workmanship, are not covered by this Warranty.

Cummins is not responsible for failures or damage resulting from what Cummins determines to be abuse or neglect, including, but not limited to: operation without adequate coolants or lubricants; overfueling; overspeeding; lack of maintenance of lubricating, cooling or intake systems; improper storage, starting, warm-up, run-in or shutdown practices; unauthorized modifications of the Engine.

Any unauthorized modifications to the aftertreatment could negatively effect emissions certification and void Warranty.

Cummins is also not responsible for failures caused by incorrect oil, fuel or diesel exhaust fluid or by water, dirt or other contaminants in the fuel, oil or diesel exhaust fluid.

Cummins is not responsible for non-Engine repairs, "downtime" expenses, cargo damage, fines, all applicable taxes, all business costs or other losses resulting from a Warrantable Failure.

**CUMMINS IS NOT RESPONSIBLE FOR INCIDENTAL
OR CONSEQUENTIAL DAMAGES.**

* Airport operated crash trucks and fire department
operated trucks employed to respond to fires,
hazardous material releases, rescue and other
emergency-type situations.

** United States includes American Samoa, the
Commonwealth of Northern Mariana Islands, Guam,
Puerto Rico and the U.S. Virgin Islands.



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Fire and Rescue Apparatus



SUPPLIER

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the purchaser who first puts the product in service ("Buyer"):

Coverage:	The Meritor axle shall be covered by Meritor as indicated in the attached Meritor warranty coverage description
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Five (5) Years
Conditions and Exclusions: See Also Paragraphs 2 thru 4	The exclusions listed in the attached Meritor warranty description shall apply.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

MERITOR® COMMERCIAL VEHICLE SYSTEMS

WARRANTY/MODEL YEAR 2020 VEHICLES



MERITOR





WARRANTY INFORMATION CONTENTS

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How to Read Warranty Coverage

Number of Years	Mileage (in thousands) Unl=Unlimited	P=Parts Only P&L=Parts & Labor
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Notice:

Models or components that are approved for use by Meritor’s vocational guidelines contained in Meritor Publication TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, which are not specifically listed, are warranted for one year, unlimited miles, parts only (1/Unl/P).

Products purchased on an incomplete vehicle (glider) are limited to one year, unlimited miles parts only (1/Unl/P).

Advantage Program

Purchasing additional coverage on select components will continue to safeguard your investment against major repair costs after the initial base coverage expires. You can find out more about the Advantage Program by visiting www.meritor.com or by contacting Meritor at 866-OnTrac1 (866-668-7221).



LINEHAUL WARRANTY INFORMATION

Linehaul Vehicles

- Bulk Hauler
- Chip Hauler (Truck)*
- Doubles
- Flatbed
- General Freight
- Grain Hauler
- Livestock Hauler
- Moving Van
- Pipe Hauler
- Refrigerated Freight
- Tanker
- Triples

* Chip Hauler vehicles require specific axle models listed below and Linehaul condition to be eligible for Linehaul warranty consideration.

Linehaul Typically Is

- High mileage operation (over 60,000 miles/year)
- Well maintained major highways of concrete or asphalt construction
- Greater than 30 miles between starting and stopping

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

Front Non-Drive Steer Axles – 5/750/P&L

FD-965	FF-967	MFS-12-122B-N	MFS-12-132C-N	MFS-13-122B-N	MFS-13B-122C-N
FF-941	FG-941	MFS-12-122C-N	MFS-12E-132B-N	MFS-13-122C-N	MFS-13B-132B-N
FF-942	FG-943	MFS-12E-122A-N	MFS-12E-132C-N	MFS-13-132B-N	MFS-13B-132C-N
FF-943	MFS-10-122A	MFS-12E-122B-N	MFS-12-143A-N	MFS-13-132C-N	MFS-14-122A-N
FF-944	MFS-10-143A-N	MFS-12E-122C-N	MFS-12E-143A-N	MFS-13-143A-N	MFS-14-124A-N
FF-961	MFS-10-144A-N	MFS-12-124A-N	MFS-12-144A-N	MFS-13-144A-N	MFS-14-143A-N
FF-966	MFS-12-122A-N	MFS-12-132B-N	MFS-13-122A-N	MFS-13B-122B-N	MFS-14-144A-N

Rear Drive Single Axles – 5/750/P&L

RS-19-144/145/A	RS-21-145	RS-23-160
MS-19-14X	RS-21-160	RS-23-161
MS-21-144	MS-23-17X	RS-23-186

Rear Drive Tandem/Tridem Axles – 5/750/P&L

RT-34-144/P/A	MA-40-165	MT-40-14XHE
RT-40-145/A	MA-40-175	MT-40-144/P
RT-40-160/P ^{1,2}	MT-34-14X/P	MT-40-943
RT-46-160/P ^{1,2}	MT-40-14T/P	MT-40-943-SP
RT-46-164EH/P ^{1,2}	MT-40-14X/P	RZ-166 ²
RT-50-160/P ^{1,2}	MT-40-14X/P	RZ-188

Drivelines

RPL	5/500/P, 1/Unl/P&L
MXL	3/350/P, 1/Unl/P&L
155N	1/Unl/P
92N	1/Unl/P

¹ These models required for Chip Hauler and Linehaul warranty consideration.
² Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.



LINEHAUL WARRANTY INFORMATION

Brake Components

Cam Q Series Trailer Brakes	5/500/P, 1/100/L
Q+ Drum Brake™	5/500/P, 1/Unl/P&L
ASA	5/500/P, 1/Unl/P&L
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
STEELite X30 Drum Brake™ ²	12-Years or Wearable Life/P
EX+ Air Disc Brake™	5/500/P, 1/Unl/L
EX+ Air Disc Brake Extended Standard Warranty ³	5/500/P&L

¹ Includes: bushing, seal, cam, ASA lubrication and wear coverage of 3/500/P&L.

² Based on stamped wear diameter max.

³ Applies only to MA761 friction material code CD brake assembly i.e. EX225LXXXCDXXX

Trailer Axles

Beam and Brackets	5/500/P, 1/100/L
Wheel End Systems ¹	
Standard System ²	1/100/P&L
PreSet by Meritor ³	5/500/P&L
AxlePak5 ⁴	5P/L
AxlePak7 ⁵	7P/L

¹ Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.

² When installed by Meritor.

³ Requires approved hubcap stating PreSet by Meritor on hubcap face.

⁴ When specified with AxlePak5 wheel end system, coverage on MTIS thru-tee and stator is 5/Unl/P, 1/Unl/L.

⁵ When specified with AxlePak7 wheel end system, coverage on MTIS thru-tee and stator is 7/Unl/P, 1/Unl/L.

(For brake components and ABS coverage, refer to appropriate product warranties.)

TAG/Pusher Axles¹

TQ, TQD, TR, TRD Beam and Brackets	5/750/P&L
------------------------------------	-----------

¹ For brake components and ABS Coverage, refer to appropriate product warranties.

Meritor Tire Inflation System

MTIS Components	5/Unl/P, 1/Unl/L
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Trailer Air Suspension Systems

MPA38/40 (Tandem Axle Parallelogram) ¹	
Major Structural Components	5/500/P, 1/100/L
Curbing Damage Warranty ²	5/500/P, 1/100/L
Height Control Valve	1/100/P&L
Shock Absorbers	2/200/P&L
Air Springs	2/200/P, 1/100/L
Bushings	5/P, 3/L
PinLoc Air Controls	1/100/P&L
PinLoc Actuator	3/300/P&L
MPA20 (Single Axle Parallelogram)	
Major Structural Components	5/500/P, 1/100/L
Height Control Valve	1/100/P&L
Shock Absorbers	2/200/P&L
Air Springs	2/200/P, 1/100/L
Bushings	5/P, 3/L
MTA (Trailing Arm)	
Major Structural Components	5/500/P, 1/100/L
Height Control Valve	1/100/P&L
Shock Absorbers	2/200/P&L
Air Springs & Rebound Straps	2/200/P, 1/100/L
Bushings	5/500/P, 3/300/L

¹ Fastener torque coverage is limited to 2/Unl/P&L when torqued by Meritor (For axle and ABS coverage, refer to appropriate product warranties.)

² “Curbing damage” is defined as deformation (bending, buckling, or breakage), caused by sudden impact with a curb or similar fixed object. Damage to the RideSentry slider box (the suspension sliding subframe, consisting of the frame rails, crossmembers, and central A-frame assembly), caused by accidental trailer impact with a curb or similar fixed object, is eligible for warranty coverage. Damage to other components or damage resulting from collision with another vehicle, rollover or fire is not covered under this provision. Warranty is not transferrable to another trailer VIN, and coverage does not apply if the trailer is deemed to be a total loss, scrapped, or otherwise not salvageable.



GENERAL SERVICE WARRANTY INFORMATION

General Service Vehicles

- Auto Hauler
- Beverage Truck
- Chip Hauler
- Cross Country Coach
- Flatbed
- Front Engine Commercial Chassis
- Front Engine Integral Coach
- General Freight
- Intercity Coach
- Intermodal Chassis
- Livestock Hauler
- Meat Packer
- Moving Van
- Municipal Truck
- Newspaper Delivery
- Pick-Up and Delivery
- Pipe Hauler
- Platform Auto Hauler
- Rear Engine Integral Coach
- Recreational Vehicles
- Refrigerated Freight
- School Bus
- Stake Truck
- Tanker
- Tanker Trailer
- Tour Bus
- Wrecker

General Service Typically Is

- Lower mileage operations (less than 60,000 miles/year)
- Generally, on-road service (less than 10% off-road)
- An average of three (3) miles between starting and stopping

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

Front Non-Drive Steer Axles – 2/Uni/P&L

FD-965	FL-943	MFS-8-163B-N	MFS-12E-132B-N	MFS-13-132C-N	MFS-16-143A-N
FF-941	MFS-6-151A-N	MFS-10-122A	MFS-12-132C-N	MFS-13B-132B-N	MFS-18-133A-N
FF-942	MFS-6-153B-N	MFS-10-143A-N	MFS-12E-132C-N	MFS-13B-132C-N	MFS-18-135A-N
FF-943	MFS-6-162B-N	MFS-10-144A-N	MFS-12-143A-N	MFS-13-143A-N	MFS-18-193A-N
FF-944	MFS-6-153C-N	MFS-12-122A-N	MFS-12-144A-N	MFS-13-144A-N	MFS-20-133A-N
FF-946	MFS-6-162C-N	MFS-12E-122A-N	MFS-12E-143A-N	MFS-14-122A-N	MFS-20-135A-N
FF-961	MFS-7-113C-N	MFS-12-122B-N	MFS-13-122A-N	MFS-14-124A-N	MFS-20-192A-N
FF-966	MFS-7-153C-N	MFS-12E-122B-N	MFS-13-122B-N	MFS-14-143A-N	MFS-20-193A-N
FG-967	MFS-7-163C-N	MFS-12-122C-N	MFS-13B-122B-N	MFS-14-144A-N	MFS-22-135A-N
FG-941	MFS-8-113B-N	MFS-12E-122C-N	MFS-13-122C-N	MFS-16-122A-N	MFS-22H-135A-N
FH-941	MFS-8-143A-N	MFS-12-124A-N	MFS-13B-122C-N	MFS-16-133A-N	MFS-22-193A-N
FH-946 ¹	MFS-8-153B-N	MFS-12-132B-N	MFS-13-132B-N	MFS-16-135A-N	MFS-22H-193A-N
FL-941					

¹ Can also be used with reduced steer angles in tag position in Coach Applications.

Front Drive/Non-Drive Steer Axles – 1/Uni/P&L

MX-08-130-FV (FSD-08A)	MX-16-130-FV (FSD-16A)	MX-21-130-SD (SDA-2100)
MX-10-130-FV (FSD-10A)	MX-18-130-FV (FSD-18A)	MX-23-130-FV (FSD-23A)
MX-12-130-FV (FSD-12A)	MX-18-130-SD (SDA-1800)	MX-23-130-SD (SDA-2300)
MX-13-130-FV (FSD-13A)	MX-20-130-FV (FSD-20A)	MX-29-130-FV (FSD-29A)
MX-14-130-FV (FSD-14A)	MX-21-130-FV (FSD-21A)	

Rear Drive Tandem/Tridem - 3/Uni/P&L

RT-40-160/P	RT-50-160/P
RT-46-160/P	RZ-166
RT-46-164EH/P	

Rear Drive Axles – 1/Uni/P&L

11170	RND-14H
523	RND-16A

Rear Drive Single Axles – 2/Uni/P&L

MS-17-13X	MS-21-14X	RC-23-160	RS-24-160	MS-30-616-SP
MS-17-14X	MS-21-144	RC-23-161	RC-25-160	RS-35-380
MS-19-13X	MS-23-17X	RC-23-162 ¹	RS-26-185	71162
MS-19-14X	RS-21-145/A	RC-23-165 ¹	MS-26-616	71163
RS-17-144/145/A	RS-21-160	RS-23-160	MS-26-616-SP	79163
RS-19-144/145/A	RC-22-145	RS-23-161	RS-30-185	
MS-21-13X	RC-22-145/A	RS-23-186	MS-30-616	

¹ 3/Uni/P&L if PreSet by Meritor.

Drivelines

RPL	4/400/P, 1/Uni/P&L
MXL	3/350/P, 1/Uni/P&L
155N	1/Uni/P
92N	1/Uni/P

Transmission – 1/Uni/P&L

516	FAT 30
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PTO – 1/Uni/P&L

MPT-318	MPT-526	MPT-1702
MPT-500	MPT-531	MPT-175
MPT-510	MPT-543	MPT-185
MPT-518	MPT-170	MPT-190

Rear Drive Tandem/Tridem Axles – 2/Uni/P&L

MT-34-14X/P	MT-40-14XHE	RT-44-145/P	MT-58-616
RT-34-144/P/A	MT-40-144/P	RT-46-169	RT-58-185 ¹
MT-40-14T/P	RT-40-145/A	MT-52-616	MT-70-380
MT-40-14X/P	MT-44-14X/P	RT-52-185 ¹	RZ-188

¹ Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.



GENERAL SERVICE WARRANTY INFORMATION

Brake Components

Cam Q Series Trailer Brakes	3/Unl/P, 1/Unl/L
Cam P ³	2/200/P
Cam	3/Unl/P
Q+ Drum Brake™	3/Unl/P&L
Q+ Drum Brake™ ³	2/200/P&L
ASA	3/Unl/P
ASA ³	2/200/P
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
STEELite X30 Drum Brake™ ²	12-Years or Wearable Life/P
EX+ Air Disc Brake™	2/Unl/P&L

¹ Includes: bushing, seal, cam, ASA lubrication and wear coverage of 1/Unl/P.

² Based on stamped wear diameter max.

³ Applies to Tour Bus and Cross Country Coach only.

Trailer Axles

Beam and Brackets ¹	5/Unl/P, 1/Unl/L
Wheel End Systems ²	
Standard System ³	1/Unl/P&L
AxlePak ⁴	5/P&L
AxlePak ⁵	7/P&L

¹ 9000 Series is 3/Unl/P, 1/Unl/L

² Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.

³ When installed by Meritor.

⁴ When specified with AxlePak5 wheel end system, coverage on MTIS thru-tee and stator is 5/Unl/P, 1/Unl/L.

⁵ When specified with AxlePak7 wheel end system, coverage on MTIS thru-tee and stator is 7/Unl/P, 1/Unl/L.

(For brake components and ABS coverage, refer to appropriate product warranties.)

Chassis Axles (2000 Series/ChassiPak)

Beam & Brackets	6/Unl/P, 1/Unl/L
Wheel End Systems ¹	
Standard System	1/Unl/P&L
AxlePak7	7/P&L
Beam and Brackets	7/P, 1/L

¹ Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.

Trailer Air Suspension Systems

MPA38/40 (Tandem Axle Parallelogram) ¹	
Major Structural Components	5/Unl/P, 1/Unl/L
Curbing Damage Warranty ²	5/500/P, 1/100/L
Height Control Valve	1/Unl/P&L
Shock Absorbers	2/Unl/P&L
Air Springs	2/Unl/P, 1/Unl/L
Bushings	5/P, 3/L
PinLoc Air Controls	1/Unl/P&L
PinLoc Air Actuator	3/Unl/P&L
MPA20 (Single Axle Parallelogram)	
Major Structural Components	5/Unl/P, 1/Unl/L
Height Control Valve	1/Unl/P&L
Shock Absorbers	2/Unl/P&L
Air Springs	2/Unl/P, 1/Unl/L
Bushings	5/P, 3/L
MTA (Trailing Arm)	
Major Structural Components	5/Unl/P, 1/Unl/L
Height Control Valve	1/Unl/P&L
Shock Absorbers	2/Unl/P&L
Air Springs and Rebound Straps	2/Unl/P, 1/Unl/L
Bushings ³	5/Unl/P, 3/Unl/L

(For axle and ABS coverage, refer to appropriate product warranties.)

¹ Fastener torque coverage is limited to 2/Unl/P&L when torqued by Meritor

² "Curbing damage" is defined as deformation (bending, buckling, or breakage), caused by sudden impact with a curb or similar fixed object. Damage to the RideSentry slider box (the suspension sliding subframe, consisting of the frame rails, crossmembers, and central A-frame assembly), caused by accidental trailer impact with a curb or similar fixed object, is eligible for warranty coverage. Damage to other components or damage resulting from collision with another vehicle, rollover or fire is not covered under this provision. Warranty is not transferrable to another trailer VIN, and coverage does not apply if the trailer is deemed to be a total loss, scrapped, or otherwise not salvageable.

³ Raw wood applications 3/Unl/P, 1/Unl/L

TAG/Pusher Axles

TQ, TQD, TR, TRD Beam and Brackets ¹	3/Unl/P, 1/Unl/L
MC14002, MC16003, FH946	2/Unl/P&L

(For brake components and ABS coverage, refer to appropriate product warranties.)

¹ 3/Unl/P&L if sold with PreSet by Meritor.

Meritor® Tire Inflation System

MTIS Components	5/Unl/P, 1/Unl/L
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HEAVY SERVICE/SPECIALTY VEHICLE WARRANTY INFORMATION

Heavy Service/Specialty Vehicle

- Airport Rescue Fire Fighting (ARFF)
- Airport Shuttle*
- Asphalt Truck
- Block Truck
- Bottom Dump Trailer Combination
- Cementing Vehicle
- Commercial Pick-Up
- Concrete Pumper
- Construction Material Hauler
- Mixer
- Demolition
- Drill Rig
- Dump
- Equipment Hauling
- Flatbed Trailer Hauler
- Flatbed Truck
- Fracturing Truck
- Front Loader
- Geophysical Exploration
- Hopper Trailer Combinations
- Landscaping Truck
- Liquid Waste Hauler
- Log Hauling
- Lowboy
- Michigan Special Gravel Trains
- Michigan Special Log Hauler
- Michigan Special Steel Hauler
- Michigan Special Waste Vehicle
- Municipal Dump
- Rear Loader (Refuse)
- Recycling Truck
- Residential Pick-Up (Refuse)
- Rigging Truck
- Roll-Off
- Scrap Truck
- Semi-End Dump
- Sewer/Septic Vacuum
- Shuttle Bus*
- Side Loader
- Snowplow/Snowblower
- Steel Hauling
- Tanker
- Tank Truck
- Tractors with Pole Trailers
- Tractor/Trailer with Jeeps
- Transfer Dump
- Transfer Vehicle
- Utility Truck
- Winch Truck

*Commercial chassis only

Heavy Service/Specialty Vehicle Typically Is

- Moderate mileage operation (less than 60,000 miles per year)
- On/Off road vocations (10% or more off-road)
- Moderate to frequent stops/starts (up to 10 stops per mile)

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

Front Drive/Non-Drive Steer Axles – 2/Unl/P&L

FD-965	FL-941	MFS-10-143A-N	MFS-12-143A-N	MFS-13-144A-N	MFS-18-193A-N	MX-12-120
FF-941	FL-943	MFS-10-144A-N	MFS-12-144A-N	MFS-13-155	MFS-20-133A-N	MX-12-120 EVO
FF-942	MFS-6-151A-N	MFS-12-122	MFS-12-155	MFS-14-122	MFS-20-135A-N	MX-14-120
FF-943	MFS-6-153B	MFS-12E-122	MFS-13-122	MFS-14-124A-N	MFS-20-192A-N	MX-16-120
FF-944	MFS-6-162B	MFS-12-122B-N	MFS-13-122B-N	MFS-14-143A-N	MFS-20-193A-N	MX-18-120
FF-946	MFS-6-162C	MFS-12E-122B-N	MFS-13B-122B-N	MFS-14-144A-N	MFS-22-135A-N	MX-17-140
FF-961	MFS-7-113C-N	MFS-12-122C-N	MFS-13-122C-N	MFS-16-122A-N	MFS-22H-135A-N	MX-19-140
FF-966	MFS-7-153C-N	MFS-12E-122C-N	MFS-13B-122C-N	MFS-16-133A-N	MFS-22-193A-N	MX-21-140
FF-967	MFS-7-163C-N	MFS-12-124A-N	MFS-13-132B-N	MFS-16-135A-N	MFS-22H-193A-N	MX-21-160
FG-941	MFS-8-113B-N	MFS-12-132B-N	MFS-13B-132B-N	MFS-16-143A-N	RF-16-145	MX-23-160
FG-943	MFS-8-153B-N	MFS-12E-132B-N	MFS-13-132C-N	MFS-18-133A-N	RF-21-160	MX-810
FH-941	MFS-8-163B-N	MFS-12-132C-N	MFS-13B-132C-N	MFS-18-135A-N	MX-10-120	
FH-946	MFS-10-122A	MFS-12E-132C-N	MFS-13-143A-N	MFS-18-192A-N	MX-10-120 EVO	

Front Drive/Non-Drive Steer Axles – 1/Unl/P&L

MX-08-130-FV (FSD-08A)	MX-16-130-FV (FSD-16A)	MX-21-130-SD (SDA-2100)
MX-10-130-FV (FSD-10A)	MX-18-130-FV (FSD-18A)	MX-23-130-FV (FSD-23A)
MX-12-130-FV (FSD-12A)	MX-18-130-SD (SDA-1800)	MX-23-130-SD (SDA-2300)
MX-13-130-FV (FSD-13A)	MX-20-130-FV (FSD-20A)	MX-29-130-FV (FSD-29A)
MX-14-130-FV (FSD-14A)	MX-21-130-FV (FSD-21A)	

Rear Drive Axles – 1/Unl/P&L

11170	RND-14H
523	RND-16A

Drivelines

RPL	3/Unl/P, 1/Unl/P&L
92N	1/Unl/P&L
MXL	1/Unl/P&L

Rear Drive Single Axles – 2/Unl/P&L

MS-17-14X	RS-21-160	RS-24-160	MS-35-380
RS-17-144/145/A	RC-22-145	RS-25-160	RS-38-380
MS-19-14X	RC-23-160	MS-26-616	RC-25-160
RS-19-144	RH-23-160	MS-26-616-SP	RC-26-633
MS-21-114	RS-23-160	RS-26-185/380	MT-58-616
MS-21-14X	RC-23-161	MS-30-616	MT-58-616-SP
RS-21-145	RS-23-161	MS-30-616-SP	
RS-21-145/A	RS-23-186/380	RS-30-185/380	

Transmission – 1/Unl/P&L

516		
FAT 30		
PTO – 1/Unl/P&L		
MPT-318	MPT-526	MPT-1702
MPT-500	MPT-531	MPT-175
MPT-510	MPT-543	MPT-185
MPT-518	MPT-170	MPT-190



HEAVY SERVICE/SPECIALTY VEHICLE WARRANTY INFORMATION

Rear Drive Tandem/Tridem Axles – 2/Unl/P&L

MT-34-14X/P	RT-44-145/P	RT-52-185/380 ^{1,2}	MT-70-380
RT-34-144/P/A	RT-46-169	MT-58-616	RZ-188
MT-40-14X/P	RT-58-160	MT-58-616-SP	
RT-40-145/A	MT-52-616	RT-58-185/380 ^{1,2}	
MT-44-14X/P	MT-52-616-SP	RT-70-380	

¹ Axle model designated will vary according to options and variations specified on these axles. Contact Meritor Axle Applications Engineering for details.

² Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

Brake Components

Cam P	3/Unl/P
Cam P ³	2/100/P
Cam Cast Plus™	2/100/P&L
Q+ Drum Brake™	3/Unl/P&L
Q+ Drum Brake™ ²	2/100/P&L
ASA	3/Unl/P
ASA ²	2/100/P
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
EX+ Air Disc Brake	2/100/P&L

¹ Based on stamped wear diameter max.

² Applies to City Bus, Trolley, Shuttle Bus and Airport Shuttle only.

³ Warranty for all non-Meritor ASAs supplied by Meritor for all Heavy Service vocations is 1/100/P.

Rear Drive Tandem/Tridem - 3/Unl/P&L

RT-40-160/P/A ³
RT-46-160/P/A ^{1,3}
RT-46-164EH/P/A ^{2,3}
RT-50-160/P/A ³
RZ-166

¹ U.S. only. Canadian warranty = 1/Unl/P for combination vehicles only.

² Axle model designated will vary according to options and variations specified on these axles. Contact Meritor Axle Applications Engineering for details.

³ Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

Meritor Tire Inflation System

MTIS Components	5/Unl/P, 1/Unl/L
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Trailer Air Suspension Systems

MTA (Trailing Arm)	
Major Structural Components ¹	5/Unl/P, 1/Unl/L
Height Control Valve	1/Unl/P&L
Shock Absorbers	2/Unl/P&L
Air Springs	2/Unl/P, 1/Unl/L
Bushings ¹	5/Unl/P, 3/Unl/L

¹ Raw wood applications 3/Unl/P, 1/Unl/L

(For axle and ABS coverage, refer to appropriate product warranties.)

Trailer Axles

Beam and Brackets ¹	5/Unl/P, 1/Unl/L
Wheel End Systems ²	
Standard System ³	1/Unl/P&L

¹ 9000 Series is 3/Unl/P, 1/Unl/L.

² Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.

³ When installed by Meritor.

(For brake components and ABS coverage, refer to appropriate product warranties.)

Gearboxes – 1/Unl/P&L

MGX-240	MGX-376	MGX-448	MGX-506	MGX-528	MGX-546
MGX-279	MGX-377	MGX-456	MGX-514	MGX-533	MGX-550
MGX-279D	MGX-378	MGX-478	MGX-519	MGX-534	
MGX-280	MGX-380	MGX-480	MGX-520	MGX-536	
MGX-285	MGX-384	MGX-487	MGX-522	MGX-537	
MGX-292	MGX-402	MGX-488	MGX-524	MGX-541	
MGX-314	MGX-413	MGX-505	MGX-527	MGX-545	

Transfer Cases – 1/Unl/P

MTC-4213	MTC-3118-CV (358)	MTC-3209-GV (RTC-60/420)
MTC-4210	MTC-3120-FV (TC-143)	MTC-3209-GV (RTC-60/380)
MTC-4208	MTC-3124 (T-2119)	MTC-3209-GV (MTC-60/420)
MTC-4206-FV (TC-38)	MTC-3205-GV (MTC-25/247)	MTC-3209-GV (MTC-60/380)
MTC-3106-FV (TC-137)	MTC-3205-GV (MTC-25/350)	MTC-3212-CV (315 & 548B)
MTC-3111 (T-2111)	MTC-3205-GV (RTC-25/350)	MTC-3312-FV (TC-270)
MTC-3112-CV (529 & 548C)	MTC-3206-FV (TC-237)	MTC-3220-FC (TC-142)
MTC-3116 (T-2111)	MTC-3206-CS (544)	MTC-2212-CV (306)
MTC-3118-FV (TC-180 & TC-180-23)	MTC-3208-GV (RTC-50)	



FIRE AND EMERGENCY WARRANTY INFORMATION

Fire and Emergency Vehicles

- Aerial Ladder Truck
- Aerial Platform
- Ambulance
- Command Vehicle
- Crash Fire Rescue (CFR)
- Pumper
- Rapid Intervention Vehicle (RIV)
- Tanker

Fire and Emergency Typically Is

- Lower mileage operations (less than 20,000 miles/year)
- Generally, on-road service (less than 10% off-road)
- An average of three (3) miles between starting and stopping

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

Front Non-Drive Steer Axles – 5/Unl/P&L

FL-941	MFS-18-193A-N	MFS-22-135A-N
FL-943	MFS-20-133A-N	MFS-22H-135A-N
MFS-18-133A-N	MFS-20-135A-N	MFS-22-193A-N
MFS-18-135A-N	MFS-20-193A-N	MFS-22H-193A-N

Front Drive Steer Axles – 2/Unl/P&L

MX-19140	MX-21160	MX-23810
MX-21140	MX-23160	

Rear Drive Single Axles – 5/Unl/P&L

RC-23-160	RS-23-186	RS-26-185	RS-25-160
RS-23-160	RS-24-160	RS-30-185	
RS-23-161	RC-25-160	RS-35-380	

¹ 3/Unl/P&L if PreSet by Meritor.

Rear Drive Tandem/Tridem Axles – 5/Unl/P&L

MT-40-14X/P	RT-44-145/P	MT-52-616
MT-40-144/P	RT-46-160/P	RT-52-185 ¹
RT-40-145/A	RT-46-164EH/P	MT-58-616
RT-40-160/P	RT-46-169	RT-58-185 ¹
MT-44-14X/P	RT-50-160/P	MT-70-380

¹ Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

Brake Components

Cam	3/Unl/P
Q+ Drum Brake™	3/Unl/P&L
ASA	3/Unl/P
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
EX+ Air Disc Brake™	2/Unl/P&L

¹ Includes: bushing, seal, cam, ASA lubrication and wear coverage of 1/Unl/P.

Drivelines

RPL	4/400/P, 1/Unl/L
MXL	3/350/P, 1/Unl/L
155N	1/Unl/P
92N	1/Unl/P

Transfer Cases – 1/Unl/P

MTC-4208	MTC-3111 (T-2111)
MTC-4210	MTC-3116 (T-2111)
MTC-4213	MTC-3124 (T-2119)



TRANSIT BUS WARRANTY INFORMATION

Transit Bus Vehicles

- Airport Shuttle
- City Bus
- Commuter Coach
- Shuttle Bus
- Transit Bus
- Trolley

Transit Bus Typically Is

- Moderate mileage operation (less than 50,000 miles per year)
- Moderate to frequent stops/starts (up to 10 stops per mile)

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

Front Drive/Non-Drive Steer Axles – 5/300/P&L

FH-946 MFS-12-155
 FH-941¹ MFS-13-155

¹ Commuter coach only – 2/Unl/P&L

Drivelines

RPL 3/Unl/P, 1/Unl/L
 92N 1/Unl/P&L
 MXL 1/Unl/P&L

Rear Drive Single Axles – 5/300/P&L

RS-23-160 79163 RS-21-160
 RC-23-161 RC-23-162¹
 71163 RC-23-165¹

¹ Commuter coach only – 2/Unl/P&L

Tag Axles – 2/Unl/P&L

MC-14002
 MC-16003
 FH-946

Brake Components

Cam Cast Plus™ 2/100/P&L
 Q+ Drum Brake™¹ 2/100/P&L
 ASA¹ 2/100/P
 Hubs/Cast Drums and
 Other Wheel-end
 Components 1/Unl/P
 All Other Brakes 1/Unl/P
 EX+ Air Disc Brake 2/100/P&L

¹ Applies to City Bus, Trolley, Shuttle Bus and Airport Shuttle only.

Center Non-drive Axles – 5/300/P&L

MC-26000
 71063
 79063



TERMS AND CONDITIONS

Coverage Exclusions

Product Description

All

The cost of any repairs, replacements or adjustments to a covered component (1) associated with noise; (2) resulting from the use or installation of non-genuine Meritor components or materials; (3) due to vibration associated with improper operation or misapplication of drivetrain components; and (4) damage resulting from corrosion.

For axle assemblies supplied by Meritor with suspension and interface brackets designed and/or attached by non-Meritor parties, Meritor warranty coverage does not apply to the brackets, bracket attachment methods, and field issues caused by brackets or bracket attachments to any covered component unless specified in a separate OEM agreement.

Front Axles

King Pin Bushings.

Rear Axles

Self-contained traction equalizers and oil filters. The use of NoSPIN differentials will result in the exclusion of axle shafts from warranty considerations. NoSPIN is a product of Eaton.

ASA

Boot and bushing. Bent, broken, over-torqued, missing or otherwise damaged pawl assemblies.

Cam Brake

Brake lining wear and brake shoe “rust-jacking.”

Disc Brake

Pad wear, rotor wear.

Coverage Limitations

Product Description

All

Any claim beyond 60 days from date of repair will not be accepted or honored under this warranty program. Products purchased on an incomplete vehicle (glider) are limited to one year, unlimited miles parts only (1/Unl/P).

Front Axles

Tie rod and tie rod ends limited to 3-year/300,000-mile or published vocational coverage, whichever is less. Wheel seals, gaskets and wheel bearings are covered for 1 year/unlimited miles if the wheel end equipment is supplied and assembled by Meritor.

Rear Axles

Pinion and through shaft seals limited to 3-year/300,000-mile or published vocational coverage, whichever is less, if yoke is installed by Meritor. If yoke is not installed by Meritor, then Meritor does not warrant pinion seals. Wheel seals, gaskets and wheel bearings are covered for 1 year/unlimited miles if the wheel end equipment is supplied and assembled by Meritor.

Rear Axles

The Meritor® breather part number A-2297-C-8765 with A-3196-J-1336 hose must be used for eligibility of any potential warranty consideration relating to contamination and/or loss of lube in axles.

Cam Brake

Limited to bracket, brake spider and camshaft structural integrity.

STEELite X30

Wearable life is up to the discard diameter of the drum.

Disc Brake

Warranty coverage for boots, seals, bushings and pins is 2/200/P. Warranty coverage for pads is 1/100/P.

Warranty coverage on vehicles with 1,850 lb-ft engine torque and over may be reduced on individual drivetrain components. Contact your Meritor representative for specific details.

TERMS AND CONDITIONS

(1) What is Covered by this Commercial Warranty?

Meritor Heavy Vehicle Systems, LLC warrants to the owner ("Owner") that the components listed in this publication, which have been installed by an Original Equipment Manufacturer ("OEM") as original equipment in vehicles licensed for on-highway use, will be free from defects in material and workmanship. This warranty coverage begins only after the expiration of the OEM's vehicle warranty for the applicable covered components. Warranty coverage ends at the expiration of the applicable time period from the date of vehicle purchase by the first Owner, or, the applicable mileage limitation, whichever occurs first. Duration of coverage varies by component and vocation as detailed elsewhere in this warranty statement.

Some components are warranted for parts only and the Owner must pay any labor costs associated with the repair or replacement of the component. Other components are warranted for both parts and reasonable labor to repair or replace the subject component. Components (whether new, used or remanufactured) installed as replacements under this warranty are warranted only for the remainder of the original period of time or mileage under the original warranty.

For certain components, coverage requires the use of specific extended drain interval or synthetic lubricants. For further information about lubrication and maintenance, see Meritor publication Maintenance Manual Number 1 and the applicable Meritor maintenance manual for the product in question. Other conditions and limitations applicable to this warranty are detailed below.

(2) Designation of Vocational Use Required.

To obtain warranty coverage, each Owner must notify Meritor through the OEM new truck and/or trailer dealer of the intended vocational use of the vehicle into which the Meritor components have been incorporated prior to the vehicle in-service date. This notification may be accomplished by registering the vehicle through your OEM new truck and/or trailer dealer or with Meritor directly. Failure to notify Meritor of (I) the intended vocational use of the vehicle or (II) a change in vocational use from that which was originally designated, will result in the application of a one year, unlimited mileage, parts only warranty (1/Unl/P) from the initial in-service date.

A second Owner and each subsequent Owner must also notify Meritor as to the intended vocational use of the vehicle. This notification can be sent directly to Meritor or through the OEM new truck and/or trailer dealer. The duration and mileage coverage of this warranty cannot exceed the coverage extended to the first Owner after his or her initial designation of vocational use.

Coverage under Meritor's warranty requires that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

(3) What is the Cost of this Warranty?

There is no charge to the Owner for this warranty.

(4) What is not Covered by this Warranty?

This warranty does not cover normal wear and tear; nor does it cover a component that fails, malfunctions or is damaged as a result of (I) improper installation, adjustment, repair or modification (including the use of unauthorized attachments or changes or modification in the vehicle's configuration, usage, or vocation from that which was originally approved by Meritor), (II) accident, natural disaster, abuse, or improper use (including loading beyond the specified maximum vehicle weight or altering engine power settings to exceed the axle and/or driveline capacity), or (III) improper or insufficient maintenance (including deviation from approved lubricants, change intervals, or lube levels). This warranty does not cover any component or part that is not branded by Meritor. For vehicles that operate full or part time outside of the United States and Canada, a one year, unlimited mileage, parts only warranty (1/Unl/P) will apply.

(5) Remedy.

The exclusive remedy under this warranty shall be the repair or replacement of the defective component at Meritor's option. Meritor reserves the right to require that all applicable failed materials are available and/or returned to Meritor for review and evaluation.

(6) Disclaimer of Warranty.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES OR CONDITIONS, EXPRESSED, IMPLIED OR STATUTORY INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE.

(7) Limitation of Remedies.

In no event shall Meritor be liable for special, incidental, indirect, or consequential damages of any kind or under any legal theory, including, but not limited to, towing, downtime, lost productivity, cargo damage, taxes, or any other losses or costs resulting from a defective covered component.

(8) To Obtain Service.

If the Owner discovers within the applicable coverage period a defect in material or workmanship, the Owner must promptly give notice to either Meritor or the dealer from which the vehicle was purchased. To obtain service, the vehicle must be taken to any participating OEM new truck and/or trailer dealer or authorized Meritor service location. The dealer will inspect the vehicle and contact Meritor for an evaluation of the claim. When authorized by Meritor, the dealer will repair or replace during the term of this warranty any defective Meritor component covered by this warranty.

(9) Entire Agreement.

This is the entire agreement between Meritor and the Owner about warranty and no Meritor employee or dealer is authorized to make any additional warranty on behalf of Meritor. This agreement allocates the responsibilities for component failure between Meritor and the Owner.

Product models, brands, names and trademarks depicted herein are the property of their respective owners and, except where otherwise indicated, are not in any way associated with Meritor Heavy Vehicle Systems, LLC, or any parent or affiliate, thereof.



Meritor Heavy Vehicle Systems, LLC
2135 West Maple Road
Troy, Michigan 48084 USA

For more information:
call Ontrac at 866-668-7221
or visit meritor.com

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Litho in USA, SP-95155
Revised 1-19 (47865/11900)

Waterous Seven-Year Limited Warranty

WATEROUS warrants, to the original Buyer only, that products manufactured by WATEROUS will be free from defects in material and workmanship under normal use and service for a period of seven (7) years from the date the product is first placed in service, or seven and one-half (7-1/2) years from the date of shipment by WATEROUS, whichever period shall be the first to expire; provided the Buyer notifies WATEROUS, in writing, of the defect in said product within the warranty period, and said product is found by WATEROUS to be nonconforming with the aforesaid warranty. When required in writing by WATEROUS, defective products must be promptly returned by Buyer to WATEROUS at WATEROUS' plant at South St. Paul, Minnesota, or at such other place as may be specified by WATEROUS, with transportation and other charges prepaid. A Returned Material Authorization (RMA) is required for all products and parts and may be requested by phone, fax, email, or mail. The aforesaid warranty excludes any responsibility or liability of WATEROUS for:

- (a) damages or defects due to accident, abuse, misuse, abnormal operating conditions, negligence, accidental causes, use in non-firefighting applications, or improper maintenance, or attributable to written specifications or instructions furnished by Buyer;
- (b) defects in products manufactured by others and furnished by WATEROUS hereunder, it being understood and agreed by the parties that the only warranty provided for such products shall be the warranty provided by the manufacturer thereof which, if assignable, WATEROUS will assign to Buyer, if requested by Buyer;
- (c) any product or part, altered, modified, serviced or repaired other than by WATEROUS, without its prior written consent;
- (d) the cost of dismantling, removing, transporting, storing, or insuring the defective product or part and the cost of reinstallation; and
- (e) normal wear items (packing, strainers, filters, light bulbs, anodes, intake screens, mechanical seals, etc.).

ALL OTHER WARRANTIES ARE EXCLUDED, WHETHER EXPRESS OR IMPLIED BY OPERATION OF LAW OR OTHERWISE, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT, WHETHER AS A RESULT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY, OR ANY OTHER CAUSE OF ACTION, SHALL WATEROUS BE LIABLE FOR ANY PUNITIVE, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, OR FOR PERSONAL INJURY OR PROPERTY DAMAGES.

The exclusive remedy of Buyer and the sole liability of WATEROUS, whether based on contract, warranty, tort or any other basis of recovery whatsoever, is expressly limited at the election of WATEROUS to:

- (a) the replacement at the agreed point of delivery of any product or part, which upon inspection by WATEROUS or its duly authorized representative, is found not to conform to the limited warranty set forth above, or
- (b) the repair of such product or part, or
- (c) the refund or crediting to Buyer of the net sales price of the defective product or part.

BUYER'S REMEDIES CONTAINED HEREIN ARE EXCLUSIVE OF ANY OTHER REMEDY OTHERWISE AVAILABLE TO BUYER.

Waterous Company
125 Hardman Avenue South
South St. Paul, MN 55075 USA
www.waterousco.com





**INTERLOCAL CONTRACT FOR
COOPERATIVE PURCHASING**

ILC No.:
ILC20-10950
Permanent Number assigned
by H-GAC

THIS INTERLOCAL CONTRACT ("Contract"), made and entered into pursuant to the Texas Interlocal Cooperation Act, Chapter 791, Texas Government Code (the "Act"), by and between the Houston-Galveston Area Council, hereinafter referred to as "H-GAC," having its principal place of business at 3555 Timmons Lane, Suite 120, Houston, Texas 77027, and **San Mateo Consolidated Fire Department**, a local government, a state agency, or a non-profit corporation created and operated to provide one or more governmental functions and services, hereinafter referred to as "End User," having its principal place of business at **1040 East Hillsdale Blvd Foster City, CA 94404**.

WITNESSETH

WHEREAS, H-GAC is a regional planning commission and political subdivision of the State of Texas operating under Chapter 391, Texas Local Government Code; and

WHEREAS, pursuant to the Act, H-GAC is authorized to contract with eligible entities to perform governmental functions and services, including the purchase of goods and services; and

WHEREAS, in reliance on such authority, H-GAC has instituted a cooperative purchasing program under which it contracts with eligible entities under the Act; and

WHEREAS, End User has represented that it is an eligible entity under the Act, that its governing body has authorized this Contract on **01/13/2019** (Date), and that it desires to contract with H-GAC on the terms set forth below;

NOW, THEREFORE, H-GAC and the End User do hereby agree as follows:

ARTICLE 1: LEGAL AUTHORITY

The End User represents and warrants to H-GAC that (1) it is eligible to contract with H-GAC under the Act because it is one of the following: a local government, as defined in the Act (a county, a municipality, a special district, or other political subdivision of the State of Texas or any other state), or a combination of two or more of those entities, a state agency (an agency of the State of Texas as defined in Section 771.002 of the Texas Government Code, or a similar agency of another state), or a non-profit corporation created and operated to provide one or more governmental functions and services, and (2) it possesses adequate legal authority to enter into this Contract.

ARTICLE 2: APPLICABLE LAWS

H-GAC and the End User agree to conduct all activities under this Contract in accordance with all applicable rules, regulations, and ordinances and laws in effect or promulgated during the term of this Contract.

ARTICLE 3: WHOLE AGREEMENT

This Contract and any attachments, as provided herein, constitute the complete contract between the parties hereto, and supersede any and all oral and written agreements between the parties relating to matters herein.

ARTICLE 4: PERFORMANCE PERIOD

The period of this Contract shall be for the balance of the fiscal year of the End User, which began **07/01/2020** and ends **06/30/2021**. This Contract shall thereafter automatically be renewed annually for each succeeding fiscal year, provided that such renewal shall not have the effect of extending the period in which the End User may make any payment due an H-GAC contractor beyond the fiscal year in which such obligation was incurred under this Contract.

ARTICLE 5: SCOPE OF SERVICES

The End User appoints H-GAC its true and lawful purchasing agent for the purchase of certain products and services through the H-GAC Cooperative Purchasing Program. End User will access the Program through HGACBuy.com and by submission of any duly executed purchase order, in the form prescribed by H-GAC to a contractor having a valid contract with H-GAC. All purchases hereunder shall be in accordance with specifications and contract terms and pricing established by H-GAC. Ownership (title) to products purchased through H-GAC shall transfer directly from the contractor to the End User.

ARTICLE 6: PAYMENTS

H-GAC will confirm each order and issue notice to contractor to proceed. Upon delivery of goods or services purchased, and presentation of a properly documented invoice, the End User shall promptly, and in any case within thirty (30) days, pay H-GAC's contractor the full amount of the invoice. All payments for goods or services will be made from current revenues available to the paying party. In no event shall H-GAC have any financial liability to the End User for any goods or services End User procures from an H- GAC contractor.

ARTICLE 7: CHANGES AND AMENDMENTS

This Contract may be amended only by a written amendment executed by both parties, except that any alterations, additions, or deletions to the terms of this Contract which are required by changes in Federal and State law or regulations are automatically incorporated into this Contract without written amendment hereto and shall become effective on the date designated by such law or regulation.

H-GAC reserves the right to make changes in the scope of products and services offered through the H-GAC Cooperative Purchasing Program to be performed hereunder.

ARTICLE 8: TERMINATION PROCEDURES

H-GAC or the End User may cancel this Contract at any time upon thirty (30) days written notice by certified mail to the other party to this Contract. The obligations of the End User, including its obligation to pay H-GAC's contractor for all costs incurred under this Contract prior to such notice shall survive such cancellation, as well as any other obligation incurred under this Contract, until performed or discharged by the End User.

ARTICLE 9: SEVERABILITY

All parties agree that should any provision of this Contract be determined to be invalid or unenforceable, such determination shall not affect any other term of this Contract, which shall continue in full force and effect.

ARTICLE 10: FORCE MAJEURE

To the extent that either party to this Contract shall be wholly or partially prevented from the performance within the term specified of any obligation or duty placed on such party by reason of or through strikes, stoppage of labor, riot, fire, flood, acts of war, insurrection, accident, order of any court, act of God, or specific cause reasonably beyond the party's control and not attributable to its neglect or nonfeasance, in such event, the time for the performance of such obligation or duty shall be suspended until such disability to perform is removed; provided, however, force majeure shall not excuse an obligation solely to pay funds. Determination of force majeure shall rest solely with H-GAC.

ARTICLE 11: VENUE

Disputes between procuring party and Vendor are to be resolved in accord with the law and venue rules of the State of purchase.

THIS INSTRUMENT HAS BEEN EXECUTED BY THE PARTIES HERETO AS FOLLOWS:

San Mateo Consolidated Fire Department

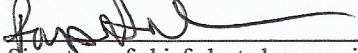
Name of End User (local government, agency, or non-profit corporation)

1040 East Hillsdale Blvd

Mailing Address

Foster City, CA 94404

City, State ZIP Code

 12-8-2020
Signature of chief elected or appointed official | Date

Ray Iverson, Fire Chief

Typed Name & Title of Signatory

Houston-Galveston Area Council

3555 Timmons Lane, Suite 120, Houston, TX
77027

By: _____

DocuSigned by:

82EC270D5D61423...
Executive Director

Date: 12/29/2020



STAFF REPORT

To: San Mateo Consolidated Fire Department Board of Directors

From: Ray Iverson, Fire Chief

Meeting Date: January 13, 2021

Subject: 2020-21 Mid-Year Budget Update

RECOMMENDATION

Receive the 2020-21 Mid-Year Budget Update and adopt a resolution appropriating \$1.0 million in General Fund reimbursement revenues to offset the additional costs incurred for mutual aid response.

BACKGROUND

The purpose of this report is to provide a mid-year update on the budget performance and financial position of SMC Fire's two operating funds – the General Fund and the Fire Protection and Life Safety Fund.

ANALYSIS

GENERAL FUND

The amended 2020-21 budget for the General Fund anticipates \$41.5 million in total revenues and \$41.6 million in total expenditures. Based on year-to-date results, the General Fund is estimated to end the year with \$43.7 million in revenues and \$42.5 million in expenditures, which would result in a net change in fund balance of \$1.2 million. The projected budget variance for expenditures is largely attributable to overtime costs incurred in response to an active fire season in which SMC Fire answered the call for mutual aid to 21 incidents, including the CSZ Lightning Complex, River, Glass, Red Salmon, and Dome incidents. As such, salary and benefits expenditures are projected to end the year at \$37.3 million, or \$1.4 million over budget. SMC Fire will be reimbursed for \$2.1 million for costs incurred from responding to mutual aid events from the California Governor's Office of Emergency Services (CalOES). The unfavorable budget variance is offset by \$0.5 million in budget savings in the operating budget, primarily in professional services, maintenance and repair for equipment, and safety supplies and equipment.

As such, staff requests a supplemental budget appropriation of \$1.0 million to account for the anticipated difference between the current amended budget of \$41.56 million and the year-end estimate of \$42.54 million in total expenditures.

With a projected net difference between total revenues and total expenditures of \$1.2 million, SMC Fire is on target to provide the \$1.0 million in relief to the member agencies through a credit in the fourth quarter invoice for member contributions, which would be allocated 60%/20%/20% to San Mateo, Foster City, and Belmont, respectively. Staff will continue to monitor General Fund performance on a monthly basis and keep the Board apprised of any notable deviations from the current projections. With a \$1.0 million credit to the member agencies, General Fund total revenues for 2020-21 would be \$42.7 million and total expenditures would be \$42.5 million, resulting in a net increase of \$0.2 million in fund balance.

FIRE PROTECTION AND LIFE SAFETY FUND

The amended 2020-21 budget anticipates \$3.2 million in total revenues and \$3.9 million in total expenditures for the Fire Protection and Life Safety Fund. Based on year-to-date results, the actions noted in the Fund's Cost Recovery Plan that was presented to the Board at its last meeting in December 2020, and the approved 15% increase to SMC Fire's Master Fee Schedule, the Fund was projected to end the fiscal year with \$2.8 million in total revenues, \$3.7 million in expenditures, resulting in a net reduction in fund balance of \$0.9 million, and leaving \$0.3 million in fund balance.

However, SMC Fire has \$0.2 million in stale invoices that have been sent to its collection agency. SMC Fire's accounts receivable is configured to be on an accrual basis, where revenues are recorded when the invoice has been issued. The amount from unpaid invoices that are sent to collections need to be expensed as bad debt in compliance with generally accepted accounting principles. While no additional budget appropriations should be necessary to account for the bad debt expense, the accounting entry will increase total expenditures for the Fire Protection and Life Safety Fund to \$3.9 million by year end, increase the net reduction in fund balance to \$1.1 million, and leave approximately \$0.1 million in fund balance. Staff anticipates that the collection agency's efforts should result in approximately 25% of the stale invoices being paid, which would offset the expense for bad debt upon payment.

FISCAL IMPACT

The General Fund began fiscal year 2020-21 with a fund balance of \$1.4 million. Accounting for a targeted credit of \$1.0 million to the member agencies in the fourth quarter of 2020-21, total revenues are projected to be \$42.7 million and total expenditures are projected to be \$42.5 million. Should the current year-end estimate come to fruition, the projected change in fund balance would be \$0.2 million, increasing total fund balance to \$1.5 million, or 3.8% of budgeted expenditures.

The Fire Protection and Life Safety Fund began fiscal year 2020-21 with \$1.2 million in fund balance. Based on the current year-end estimate of \$2.8 million in total revenues and \$3.9 million in total expenditures, the projected ending fund balance would be \$0.1 million, or 1% of budgeted expenditures.

ATTACHMENTS

A. Resolution

RESOLUTION NO.

**A RESOLUTION OF THE BOARD OF DIRECTORS OF THE SAN MATEO
CONSOLIDATED FIRE DEPARTMENT APPROPRIATING \$1.0 MILLION IN
GENERAL FUND MUTUAL AID REIMBURSEMENT REVENUES**

WHEREAS, on January 13, 2021, staff presented the 2020-21 Mid-Year Budget Update to the Board which articulated the budget performance and projected financial position of the General Fund and the Fire Protection and Life Safety Fund; and

WHEREAS, the amended General Fund budget for 2020-21 anticipated \$41.5 million in total revenues and \$41.56 million in total expenditures. Based on year-to-date results, total revenues are projected to be \$43.7 million and total expenditures of \$42.54. million, which largely accounts for reimbursement revenues from the California Governor's Office of Emergency Services and the related cost of overtime incurred in response to mutual aid events; and

WHEREAS, the General Fund projected year-end results support providing \$1.0 million in financial relief to the member agencies in the form of a credit to the fourth quarter of fiscal year 2020-21, which would be allocated 60% to the City of San Mateo, 20% to the City of Belmont, and 20% to the City of Foster City. Moving forward with the fourth quarter credit would reduce General Fund total revenues to \$42.7 million and result in a net increase in fund balance of \$0.2 million; and

WHEREAS, the amended Fire Protection and Life Safety Fund budget for 2020-21 anticipated \$3.2 million in total revenues and \$3.9 million in total expenditures. Based on year-to-date results, implementation of the Fund's Cost Recovery Plan, approved rate increase, and proper accounting for stale invoices sent to collections, total revenues are projected to be \$2.8 million in total revenues and \$3.9 million in total expenditures.

NOW, THEREFORE, the Board of Directors of the San Mateo Consolidated Fire Department resolves as follows:

1. Authorize a supplemental budget appropriation of \$1.0 million in reimbursement revenues in the General Fund to account for the cost of overtime incurred in response to mutual aid events during an active fire season.

PASSED AND ADOPTED as a resolution of the Board of Directors of the San Mateo Consolidated Fire Department at the regular meeting held on the 13th day of January, 2021, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

Acting Board Secretary

Board President

APPROVED AS TO FORM:

William D. Ross, General Counsel



STAFF REPORT

To: San Mateo Consolidated Fire Department Board of Directors

From: Ray Iverson, Fire Chief

Meeting Date: January 13, 2021

Subject: State Mandated Fire Inspections Annual Compliance Report

RECOMMENDATION

Adopt a resolution approving the Annual Fire Inspection Compliance Report from the Fire Chief and approve publishing the report as part of the 2020 Department Annual Report on the Department's website.

BACKGROUND

California state law requires that all fire departments and districts in the state conduct annual safety inspections of all public and private schools, apartments, condominiums, hotels, and motels within their jurisdiction(s). Recognizing that this law did not require local compliance reporting of such inspections, a new state law, SB 1205 (Hill), was enacted in January 2019, which now requires all fire departments to submit annual reports to their governing bodies or administering authorities regarding their compliance with these state mandated fire inspections.

Additionally, on October 8, 2019, the San Mateo Consolidated Fire Department Board of Directors adopted a resolution approving a response by the Fire Chief to the San Mateo County Grand Jury report titled Fire Safety Inspection Programs on the Road to Recovery, which was released on July 22, 2019, and addressed compliance of fire departments within San Mateo County with these state mandated fire inspections. The report made 18 findings and 4 recommendations based on both the State of California's Health and Safety Code's mandates as well as the new requirements of SB 1205. One of those recommendations was that the Department report on the State Mandated Inspection Completion Rate in accordance with SB 1205.

ANALYSIS

During calendar year 2020, all of the Department's State mandated inspections for 2020 were completed as required by the Health and Safety Code. Occupancies each received their initial inspections. As is often the case, some occupancies have violations that are being followed up on to ensure violations are abated. Attached is the 2020 Inspection Compliance Report as recommended by the San Mateo County Grand Jury.

ATTACHMENTS

- A. Resolution
- B. Annual Report of Mandated Fire Inspections

RESOLUTION NO.

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE SAN MATEO CONSOLIDATED FIRE DEPARTMENT APPROVING THE ANNUAL FIRE INSPECTION COMPLIANCE REPORT FROM THE FIRE CHIEF AND APPROVING PUBLISHING THE REPORT AS PART OF THE 2020 DEPARTMENT ANNUAL REPORT ON THE DEPARTMENT'S WEBSITE

WHEREAS, California state law requires that all fire departments and districts in the state conduct annual safety inspections of all public and private schools, apartments, condominiums, hotels, and motels with their jurisdiction (s); and

WHEREAS, recognizing that this law did not require local compliance reporting of such inspections, a new state law, SB 1205 (Hill), was enacted in January 2019, requiring all fire departments to submit annual reports to the governing bodies or administering authorities regarding their compliance with these state mandated inspections; and

WHEREAS, in addition, on October 8, 2019, the SMC Fire Board of Directors adopted a resolution approving a response by the Fire Chief to the San Mateo County Grand Jury report titled Fire Safety Inspection Programs on the Road to Recovery, which addressed compliance of fire departments within San Mateo County with these state mandated fire inspections; and

WHEREAS, the report made 18 findings and 4 recommendations based on both the State of California's Health & Safety Code's mandates as well as the new requirements of SB 1205; and

WHEREAS, one of these recommendations was that the Department report on the State mandated Inspection Completion Rate in accordance with SB 1205.

NOW, THEREFORE, the Board of Directors of the San Mateo Consolidated Fire Department resolves as follows:

1. Approve the Annual Fire Inspection Compliance Report from the Fire Chief and approve publishing the report as part of the 2020 Department Annual Report on the Department's website.

PASSED AND ADOPTED as a resolution of the Board of Directors of the San Mateo Consolidated Fire Department at the regular meeting held on the 13th day of January, 2021, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

Acting Board Secretary

Board President

APPROVED AS TO FORM:

William D. Ross, General Counsel



Robert Marshall, Fire Marshal

1040 East Hillsdale Blvd.
Foster City, CA 94404
(650) 522-7900

MEMORANDUM

To: San Mateo Consolidated Fire Department Board of Directors
From: Robert Marshall, Fire Marshal
Cc: Ray Iverson, Fire Chief
Date: January 13, 2021
Subject: Annual Report of Mandated Fire Inspections

Background

After the 2017 Ghostship Fire in Oakland California, the State Legislature passed SB 1205 which requires that a notification to the governing body of each fire department report on the status of their inspections mandated by law in section 13146 of the Health and Safety Code. Subsequent to this law, the San Mateo County Civil Grand Jury released a report entitled "Fire Safety Inspection Programs on the Road to Recovery" in which they made a number of recommendations, which we accepted. One of the recommendations was that the Fire Marshal make a report to the Board in January of each year as to the status of the inspections. The report also asked that the department report the results via an annual report no later than March of each year on the status of the inspections.

The inspections are mandated to be done annually on a calendar year basis with the exception of Jails, which are to be done every 2 years.

This document serves as the report required by the recommendations of the Grand Jury. This data will be placed into the annual report as well.

Report

<u>Occupancy</u>	<u>Total # of Buildings</u>	<u># inspected</u>	<u>Percentage Complete</u>	<u># of Buildings not inspected in 2 years</u>
High Rise	28	28	100%	0
Schools	56	56	100%	0
Residential	1834	1834	100%	0
Jails ¹	1	1	100%	0

¹ Jails are required to be inspected every 2 years. The State did not require inspection this year, but we completed the inspection anyway.



STAFF REPORT

To: San Mateo Consolidated Fire Department Board of Directors

From: Ray Iverson, Fire Chief

Meeting Date: January 13, 2021

Subject: Trade-In Surplus Properties

RECOMMENDATION

Adopt a resolution approving the trade-in of nine (9) LifePak (LP) 12 monitors and one (1) Lucas device for a value of \$29,950 from Stryker Corporation (Stryker). This trade-in value will be applied to the purchase order, which authorizes the purchase of nine Lucas Chest Compression Devices and four LifePak 1000 External Defibrillator & ECG monitoring units from Stryker.

BACKGROUND

On September 16, 2020, the Fire Board approved RES-2020-030 for a purchase order for Stryker for the purchase of nine (9) Lucas Chest Compression Devices and four (4) LifePak (LP) 1000 External Defibrillator & ECG monitoring units. On November 16, 2020, Stryker was able to offer the Department trade-in value of \$29,950 for nine (9) LP12 monitors and one (1) Lucas device which are all outdated and no longer used.

ANALYSIS

Both the LP12's and the Lucas device are outdated and no longer serviceable by the manufacturer. With this trade in credit, SMC Fire purchased one additional Lucas Chest Compression Device, a lifesaving piece of equipment.

FISCAL IMPACT

Sufficient funds have been accumulated in the Vehicle and Equipment Replacement Fund, and the purchase of the equipment was included in the adopted 2020-21 budget. The trade-in credit will be applied to offset the total cost of the new equipment.

ATTACHMENTS

A. Resolution

RESOLUTION NO.

**A RESOLUTION OF THE BOARD OF DIRECTORS OF THE SAN MATEO
CONSOLIDATED FIRE DEPARTMENT APPROVING THE TRADE-IN OF NINE (9)
LIFEPAK (LP) 12 MONITORS AND ONE (1) LUCAS DEVICE FOR A VALUE OF
\$29,950 FROM STRYKER CORPORATION (STRYKER)**

WHEREAS, on September 16, 2020, the Fire Board approved RES-2020-030 for a Purchase Order for Stryker for the purchase of nine (9) Lucas Chest Compression Devices and four (4) LifePak (LP) 1000 External Defibrillator & ECG monitoring units; and

WHEREAS, on November 16, 2020, Stryker was able to offer the Department trade-in value of \$29,950 for nine (9) LP12 monitors and one (1) Lucas device which are all outdated and no longer used; and

WHEREAS, both the LP12's and the Lucas device are outdated and no longer serviceable by the manufacturer; and

WHEREAS, with this trade in credit, the Department purchased one additional Lucas Chest Compression Device, a lifesaving piece of equipment; and

WHEREAS, sufficient funds have been accumulated in the Vehicle and Equipment Replacement Fund, and the purchase of the equipment was included in the adopted 2020-21 budget; and

NOW, THEREFORE, the Board of Directors of the San Mateo Consolidated Fire Department resolves as follows:

1. Authorize the trade-in of nine (9) LifePak (LP) 12 monitors and one (1) Lucas device for a value of \$29,950 from Stryker Corporation (Stryker).

PASSED AND ADOPTED as a resolution of the Board of Directors of the San Mateo Consolidated Fire Department at the regular meeting held on the 13th day of January, 2021, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

Acting Board Secretary

Board President

APPROVED AS TO FORM:

William D. Ross, General Counsel

SAN MATEO CONSOLIDATED FIRE DEPARTMENT

STRATEGIC PLANNING 2020



12/02/2020

Following the commencement of San Mateo Consolidated Fire Department on January 13, 2019, the department embarked on a strategic planning process. On February 20th and March 27th personnel representing FACT, Labor, Command Staff and Administration participated in a facilitated process, the goal of which was the development of a Mission Statement and Core Values of our new organization. As a result, the following was produced:

Mission Statement

Enhancing the quality of life for our community through professionalism, collaboration and public trust.

Core Values

Respect
Compassion
Integrity
Dedication
Innovation

Additionally, through this process, the group developed the following Strategic Plan outline, which included the development of four Strategic Elements within the organization with associated Initiatives, Projects and Outcomes for each. These projects were then assigned to an individual(s) and prioritized.

As they relate to the success of any organization, the importance of a Strategic Plan, Mission Statement & Core Values cannot be understated. Their true value comes when incorporating, and using them, as part of developing policy, decision making processes and ultimately resulting in creating a culture we can all be proud of.

Strategic Element	Initiatives	Projects	Outcome	Who	Priority	
		Title	Prime Objective	Unit/Task Group	A=resourced	
					B=next up	
					C=radar	
					D=ongoing	
Admin	Fire Board	FACT Orientation/Update	Steering Committee annual update	Steering Committee	D	
	Budget Management	Asset Management Plan	Comprehensive plan, including lists, maintenance & replacement schedules, and evaluation	Business Manager/ Finance	A	
		Budget Review Process	Expectations/ timelines for monitoring/ reporting	Business Manager/ Finance	A	
		Policy for Reserves	Articulation of policy	Fire Board/ Business Manager	B	
		Creating Foundation	Exploration of steps to create non-profit foundation (more to proceed in 2021)	Business Manager	A	
	New Revenue/Grants	Grants: Public & Private Options. Supplemental AFG and the Fire Prevention & Safety awarded.	Identification of possible sources	DFC/CRR	A	
		Contract Service Options	Identification of possible fee for service options	DFC/CRR	C	
	Policy & Procedures	Update/Create Policies for SMC	Articulation & approval of identified policies	FACT/Policy & Procedure Committee/ Admin BC	D	
	Work force Mgt.	Succession Planning	Mentoring Program	Process for identification & support of key successors	Training	D
			Employee Recruitment and Retention	Development of a comprehensive plan	Command Staff/Training /HR	A

Strategic Element	Initiatives	Projects	Outcome	Who	Priority	
		<i>Title</i>	<i>Prime Objective</i>	<i>Unit/Task Group</i>	<i>A=resourced</i>	
					<i>B=next up</i>	
					<i>C=radar</i>	
					<i>D=ongoing</i>	
	Office Consolidation	Provide sufficient workspaces for Administration and CRR	Identify suitable location(s) before lease ends 12/31/21	Fire Chief/Command Staff / F&F Mgr.	A	
	Fleet Maintenance Facility	Establish a central location for fleet maintenance. Station 26 currently being evaluated.	Identify suitable location	Fire Chief/Command Staff/ F&F Mgr.	A	
	Storage Plan	Consolidation of equipment and tools inventories	Identify suitable locations	F&F Mgr.	A	
	Training	Training facility/classroom		Creating a unique facility; applied for Gilead Grant	For all projects: Training BC's with HR & Business Mgr.	A
		FF County Academy		Set-up & conduct academy under new regulations		B
		Additional training staff completed		Identify resources for additional training staff. Shift Training Captains began 5/4/20.		A
		LMS Utilization & All Employee Development		Established annual membership for FY 20/21.		A
		Post Incident Analysis		Conduct protocols for PIA & AAR		D
		Probationary Program		Update entire program, including manual & testing		D
		Target Solutions based apprenticeship program		Develop a Target Solutions Program		D
	Culture	Establish Standing Committee, which covers: Missions, values, historical	Charter a new standing Special Events committee	FACT Sub-Committee	A	

Strategic Element	Initiatives	Projects	Outcome	Who	Priority	
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					<i>B=next up</i>	
					<i>C=radar</i>	
					<i>D=ongoing</i>	
		events, special events committee/milestones	to meet the descriptors			
Ops	SOP, SOG	Baseline Assessment of current SOP/G's	Comprehensive comparison of current material	DFC/FACT	D	
		New SOP/G's	Modify and/or develop new materials as needed	DFC/FACT	D	
	Hazmat	Identifying and maintaining funding sources with SM County	Maintain current contract	Hazmat BC	D	
			Identify additional funding sources through grants		D	
	Scope of Services	Current Services Evaluation	Systemic evaluation of all current SMC services	Command Staff	D	
		Future Services Needs	Recommendations for needed modifications	Command Staff	D	
	Water Rescue	Identify Current Needs	Procurement of needed equipment	F&F Mgr./Committee	A	
	CRR	Community Risk Mitigation	Long-term Disaster Recovery Plan	Implementation of all elements	For all projects: DFC/CRR	A
			Wildfire Mitigation Plan	Generate & approve plan		A
			Local Hazard Mitigation Plan (LHMP)	5-year update		A
Preemption Technologies			Traffic signal management	A		
Accreditation			Acquire accreditation for CRR	C		
Evaluation of Pub Ed Services			Analysis of current services & potential modifications	D		

Strategic Element	Initiatives	Projects	Outcome	Who	Priority
		Title	Prime Objective	Unit/Task Group	A=resourced
					B=next up
					C=radar
					D=ongoing
	Emergency MOUs <ul style="list-style-type: none"> Emergency Fuel Plan approved with San Mateo and Foster City 	Review of current; identification of needed		A	
		Protocols therein		B	
		Development of comprehensive plan		B	
	Community Risk Assessment Plan				
Outreach	General Community	Annual Report	Meet Board's expectations & interests	Fire Chief	D
	Professional Collaboration	Analysis of Current MOUs and Contracts	Review & identification of modification needs	Business Manager	D
		Updating Vendor Agreements	Consolidate accounts	Business Manager	D
		PIO Coordination with the 3 Cities	Consistent approach & messaging processes	DFC/CRR	D
	Marketing and Communications	Uniform Social Media Platform	Maintenance	DFC/CRR	D
		Website Development & Maintenance	Maintenance	Business Manager	D
		Branding Guidelines	Guidelines/policy on usage of name & logo for events, publications, etc.	Business Manager/FACT	A

GLOSSARY OF SMCFD TERMS

AAR	After Action Report
BC	Battalion Chief
CRR	Community Risk Reduction
DFC	Deputy Fire Chief
F&F Mgr.	Fleet & Facilities Manager
FACT	Fire Action Consensus Team
FFI	Firefighter I
LMS	Learning Management System
MOU	Memorandum of Understanding
OES	Office of Emergency Services
PIA	Post Incident Analysis
PIO	Public Information Officer
SMC	San Mateo Consolidated
SOG	Standard Operating Guidelines
SOP	Standard Operating Procedures



MEMORANDUM

To: San Mateo Consolidated Fire Board of Directors

From: Kent Thrasher, Deputy Fire Chief

Cc: Ray Iverson, Fire Chief

Date: January 13, 2021

Subject: Operations Division Updates

Thank you for the opportunity to provide you with an update from the SMC Fire Operations Division. To familiarize the Board with our Division, I wanted to start by laying out the segments of SMC Fire currently covered by the Operations Division:

- ✓ Operations – Made up of three shifts of 10 Engine Companies, 2 Truck Companies and one Battalion Chief reporting through the Deputy Chief. (126 FTEs)
- ✓ Training – Representative of both the CSMCTD (Central San Mateo County Training Division) and Internal Training. We have one Battalion Chief and one Clinical Education Specialist working in the CSMCTD. Our Internal Training is handled by one Battalion Chief and 3 Shift Training Captains. (3 additional FTEs)
- ✓ Hazardous Materials Response Team – This function is operated under contract with the county to provide HAZMAT response for the entire county. We operate it with one Battalion Chief managing the team of 30 incentivized certified Technicians and Specialist from our Operations Division, with Deputy Chief oversight. (0 additional FTEs)
- ✓ Fleet and Facilities- We currently have one Fleet and Facilities Manager reporting directly to the Deputy Chief, and providing oversight for all fleet and facilities maintenance, replacement and vendor relations.(1 additional FTE)
- ✓ Administration – Though our Admin folks report through a different Deputy Chief, it is important to realize the amount of work and support the Operations Division requires from them.

Now that we have a good understanding of how the Operations Division is made up, I would like to provide a brief summary of how 2020 rolled out.

It was a year that none of us could have predicted or fully prepared for as we celebrated our first year of operations at this time last year.

We started off last year fully staffed and with a new Fire Chief at the helm. Though things seemed to be moving along fairly predictably, by March the new reality of COVID 19 began to take hold. As we greeted COVID 19, we tried to identify the impacts it would have on the organization. It didn't take long to realize that the impacts would be dramatic and would not go away quickly.

Through teamwork at every level we have been able to maintain a high level of service while doing what needed to be done to keep our folks safe and equipped. Though we have been engaged in trying to accommodate a consistently changing set of guidelines and expectations, to this point we have prevailed in meeting our mission and honoring our core values.

This has happened through a collaborative effort involving every member of the organization. Through this collective effort, we have been able to put policies and guidelines in place to address things like:

- ✓ Contact Tracing
- ✓ Swab Testing program
- ✓ Exposure Reduction guidelines
- ✓ COVID Sick Leave
- ✓ Disinfecting and Decontamination processes and policies
- ✓ Return to Work guidelines
- ✓ Deployment Exposure reduction
- ✓ Return from Deployment guidelines
- ✓ Daily Health Screening
- ✓ Vaccination program
- ✓ Etc...

Through the pandemic and all the affects it has had our operations, the men and women of SMC Fire have adapted and met these incredibly stressful challenges head one. They have overcome the daily stress of responding on calls at locations we know are overrun with the virus. Our folks also have to deal with the anxiety of knowing that the other members of the crews that they live with for 48 hours at a time, could unknowingly bring the virus into the station where they train, eat, sleep and workout together. Perhaps most challenging of all for our folks, is knowing that the possibility of bringing the virus home to their families is always there.

Through all the adversity and constant change this year as delivered, the fine members of SMC Fire have adapted and persevered. The following are some examples of the work that took place in 2020 in the Operations Division:

TRAINING

- ✓ 18 Firefighters, 7 Captains and 1 Battalion Chief on probation throughout the year
- ✓ Completed 39 Probationary exams
- ✓ More than 31,647 training hours were logged
- ✓ Captains Assessment Center
- ✓ County Fire Academy
- ✓ Implementation of Shift Training Captains Position
- ✓ Secured multiple buildings pre-demolition for training
- ✓ New CAD Training
- ✓ Performance Standards drills for all Companies
- ✓ Initiated Type 6 implementation and training strategy
- ✓ Put on multiple State Certification Level Classes
- ✓ Secured \$178,000 grant from Gilead for Training Facility
- ✓ In-house training for: Driver/Operator, Water Rescue, Live Burns, Vehicle Extrication, Wildland Operations
- ✓ Participation with County Training Officers Committee
- ✓ Participation in multiple Department Committees
- ✓ EMS Certification Training

HAZMAT

- ✓ Increased HAZMAT Team by 50% from 20 members to 30
- ✓ Initial training and on boarding of all new members
- ✓ Hosted 2 week HAZMAT Specialist Series
- ✓ Hosted WMD Specialist class
- ✓ Additional 2432 HAZMAT specific training hours
- ✓ Successful “State Typing” re-inspection
- ✓ Participation in Regional HAZMAT Group
- ✓ Grant application for \$292,000 for needed equipment upgrades (Received initial approval)
- ✓ First Responder Training of other county agencies
- ✓ 22 Call for service

Fleet/Facilities

- ✓ Oversight of maintenance and repair of all SMC apparatus and light vehicles
- ✓ Oversight of Maintenance and repair of all SMC facilities
- ✓ New Station 25 over-site (anticipate opening by April 2021)
- ✓ Completed new engine specifications process
- ✓ Completed equipment inventory alignment of all Engines
- ✓ Initiated equipment inventory alignment of all Trucks
- ✓ Improved apparatus maintenance resulting in significant decrease in downtime
- ✓ Supported wildland deployments through improved maintenance program
- ✓ Spec, purchase and activate new Water Rescue Boat

- ✓ Spec, purchase and activate 2 new Personal Water Craft (Jet Skis)
- ✓ Implement Fuel delivery program with Booster Fuel
- ✓ Prep for Type 6 Engine deliveries
- ✓ RFPs/Contracts for
 - HVAC
 - Lawn Maintenance
 - Generator Maintenance
 - Vehicle Maintenance
 - Fire Sprinkler Maintenance and Inspection
 - Light duty fleet repair contract
 - Janitorial services
- ✓ Recommendation for addition of Fleet and Facilities Technician

OPERATIONS

- ✓ 12871 calls for service (down 10.6% from the 14401 last year)
- ✓ 21 Wildfire deployments
- ✓ 18387 deployment hours fighting wildfires throughout the state (39% increase over previous high of 13227 hours in 2018)
- ✓ Support and response to multiple protest and act of civil unrest
- ✓ 1834 Multi Residential Inspections
- ✓ Participated in all listed training
- ✓ Supported organizational operations through Committee work and the FACT process

In closing I would like to add, that though we realize there are fiscal impacts to COVID 19 that are being sorted through and will need to be dealt with, there are also emotional impacts to all things 2020. Though, like the fiscal impacts, I'm confident we will find a way to deal with them, they are real and they are here. I see the toll it is taking on our crews that are on the front lines, and in a different way, to those of us in support rolls. It's been a challenging year to say the least, and though there is a light starting to come through the end of the tunnel, we still have a long way to go. We appreciate the support of our Fire Board, and look forward to a brighter 2021.

That concludes my update, and I am glade to take any questions.



MEMORANDUM

To: San Mateo Consolidated Fire Department Board of Directors
From: Robert Marshall, Fire Marshal
Cc: Ray Iverson, Fire Chief
Date: January 13, 2021
Subject: Community Risk Reduction- Fire Prevention Division Updates

Fire Prevention

Fire Prevention has begun a new year and is starting to evaluate the properties subject to annual inspections, adding new ones we find. We finished the year having completed all Mandated inspections in 2020. This could not have happened without the help of the fire inspectors, fire suppression staff, and clerical staff working in concert to complete the inspections. This was especially challenging given COVID restrictions, and staff reductions.

We are moving along with the Zonehaven project. Recently, a community wide program of “Know your Zone” has been rolled out, with education of the general public occurring via San Mateo County. Education of members who will be using the systems is also underway specifically for administrators of the program, as well as those who may activate the system. The system could now be used in an emergency, though there is still a lot of work going on “Under the hood”. The next big step would be an exercise to utilize the program during a simulated disaster.

Lastly, we are moving forward with the fee study for the division. After evaluating several proposals, NBS was awarded a bid for services, and meetings with NBS are underway to direct the fee study so that we get an end result that accurately reflects our costs. We want to make sure that the division becomes and remains cost neutral.

Office of Emergency Services

OES has also been very busy since the last update.

Jenelle Masterson has moved with her family to North Carolina, and Pat Halloran, recently retired from Belmont PD has come on as a per diem to assist with the transition, and to handle the things that need to be done. Pat has a lot of experience in Emergency Management, so we are in good hands.

OES has also been helping to update the General Plan for the City of San Mateo, along with the Fire Prevention side of CRRD. The issues of main concern are to ensure that the General Plan Update does a better job of addressing the Safety Element, and to ensure the mandates for the incorporation of Wildland Fire Mitigation Planning are addressed. Currently, the plan is still being updated, but we are confident that our voice is being heard, and those necessary changes will be reflected in the final document.

CERT is continuing to move along in a COVID world, with trainings scheduled for our CERT members occurring in a virtual sense. The next training will be educating our CERT members on Zonehaven, and how they might see Zonehaven being used. They could be manning traffic control points, or shelters that are set up as a result of the use of Zonehaven, and so it is imperative that they be introduced to the topic. That meeting is occurring on January 14, 2021.