



KME FIRE APPARATUS

**WALK AROUND RESCUE
ON COMMERCIAL CHASSIS**

PROPOSAL SPECIFICATIONS

FOR THE

**AUGUSTA VOLUNTEER
FIRE DEPARTMENT**

23 July, 2011

Revised Per Contract 22 August, 2011

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

GENERAL INFORMATION

PROPOSAL

Antietam Fire Apparatus, Inc. is pleased to offer the proposed vehicle to meet the intent of the fire department specifications. KME Fire Apparatus is a leading manufacturer in custom and commercial fire fighting vehicles.

Questions or concerns pertaining to this proposal can be answered by contacting the following KME representative:

William R. Wiegel
Antietam Fire Apparatus
19932 Beaver Creek Road
Hagerstown, MD 21740

Phone: (877) 378-2781 / (301) 797-1410

Cell: (240) 674-1432

Fax: (301) 797-1412

Email: wwiegel@antietamfireapparatus.com

GENERAL INFORMATION

The proposed apparatus will be constructed to withstand the severe and continuous use encountered during emergency fire fighting services. The apparatus shall be of the latest type, carefully designed and constructed with due consideration to the nature and distribution of the load to be sustained.

These specifications detail the proposal for general design criteria of cab and chassis components, aerial device (if applicable), fire pump and related components (if applicable), water tank (if applicable), fire body, electrical components, painting, and equipment.

All items of these proposal specifications will conform to the National Fire Protection Association Pamphlet No. 1901, latest edition.

KME will furnish satisfactory evidence of our ability to construct, supply service parts and technical assistance for the apparatus specified.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

FIRE APPARATUS DOCUMENTATION

The contractor will supply, at the time of delivery, at least one (1) copy of the following documents:

The manufacturer's record of apparatus construction details, including the following information:

- Owners name and address
- Apparatus manufacturer, model and serial number
- Chassis make, model and serial number
- Front tire size and total rated capacity in pounds
- Rear tire size and total rated capacity in pounds
- Chassis weight distribution in pounds with water and manufacturer mounted equipment, front and rear
- Engine make, model, serial number, rated horsepower, rated speed and governed speed
- Type of fuels and fuel tank capacity
- Electrical system voltage and alternator output in amps.
- Battery make, model and total capacity in cold crank amps (CCA)
- Transmission make, model and serial number. If so equipped chassis transmission PTO(s) make, model and gear ratio
- Pump make, model, rated capacity in gallons per minute (liters per minute where applicable) and serial number
- Pump transmission make, model, serial number and gear ratio
- Water tank certified capacity in gallons or liters
- Paint manufacturer and paint number(s)

Certification of slip resistance of all stepping, standing, and walking surfaces.

If the apparatus has a fire pump or an industrial supply pump, the pump manufacturer's certification of suction capability.

If the apparatus has a fire pump or an industrial supply pump, a copy of the apparatus manufacturer's approval for stationary pumping applications.

If the apparatus has a fire pump or an industrial supply pump, the engine manufacturers certified brake horsepower curve for the engine furnished, showing the maximum governed speed.

If the apparatus has a fire pump or an industrial supply pump, the pump manufacturer's certification of hydrostatic test.

If the apparatus has a fire pump or an industrial supply pump, the Underwriters Laboratory certification of inspection and test for the fire pump.

If the apparatus has a fixed line voltage power source, the certification of the test for the fixed power source.

Weight documents from certified scale - showing actual loading on the front axle, rear axle(s) and overall vehicle (with the water tank full but without personnel, equipment, and hose) will be supplied with the complete vehicle to determine compliance with NFPA-1901

Written load analysis and results of electrical performance tests.

If the apparatus is equipped with a water tank, the certification of water tank capacity.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

FEDERAL MOTOR VEHICLE CERTIFICATION

The proposed chassis will be certified by KME as conforming to all applicable Federal Motor Vehicle Safety Standards (FMVSS) in effect at the date of contract. This will be attested to by the attachment of a FMVSS certify caution label on the vehicle by KME, who will be recognized as the responsible final manufacturer.

KME will be responsible for preparing and maintaining a record file of parts and assemblies used to manufacture the proposed apparatus. These records will be maintained in KME's factory for a minimum of twenty (20) years. The file will contain copies of any and all reported deficiencies, all replacement parts required to maintain the apparatus, and original purchase documents including specifications, contract, invoices, incomplete chassis certificates, quality control reports and final delivery acceptance documents. The purchaser will have access to any and all documents contained in this file upon official written request.

GENERAL CONSTRUCTION

The proposed apparatus, assemblies, subassemblies, component parts, etc., will be designed and constructed with the due consideration to the nature and distribution of the load to be sustained and to the general character of the service to which the apparatus is subjected to when placed in service. All parts of the apparatus will be designed with a factor of safety, which is equal to or greater than that which is considered standard and acceptable for this class of equipment in fire fighting service. All parts of the proposed apparatus will be strong enough to withstand general service under full load. The apparatus will be so designed that the various parts and readily accessible for lubrication, inspection, adjustment and repair.

The apparatus will be designed and constructed, and the equipment so mounted, with due consideration to distribution of the load between front and rear axles that all specified equipment, including a full complement of specified ground ladders, full water tank, loose equipment, and firefighters will be carried without overloading or injuring the apparatus.

PRODUCT LIABILITY INSURANCE

KME is providing liability and facility insurance equaling \$30,000,000.00, which is one of the highest available in the fire industry. Reference attached documentation.

SERVICE CENTER AND PARTS DEPOT

Antietam Fire Apparatus, Inc.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

KME FIRE APPARATUS SERVICE STATEMENT

The proposed KME Fire Apparatus vehicle is offered with service for in or out of warranty repairs can be promptly performed by the local KME authorized service center.

Service is provided by:

Antietam Fire Apparatus, Inc.
19932 Beaver Creek Rd.
Hagerstown, MD 21740
Phone: (877) 378-2781 / (301) 797-1410
Cell: (301) 730-4018
Fax: (301) 797-1412

Service Center Capabilities

Antietam Fire Apparatus, Inc. celebrates its 18th year of operation and employs ten (10) people and is proud to operate a Service Center in Hagerstown, MD. The privately owned operation employs four (4) full-time service mechanics to handle any service-related problems or improvements that you may desire.

Antietam Fire Apparatus, Inc. is a Hale Master Parts and Service Center that operates an on the road service truck that can offer In Station Service repairs to your apparatus if needed.

Antietam Fire Apparatus, Inc. offers twenty-four (24) hour service in which assigned service personnel carry pagers; one (1) man is always on call to handle any truck that is down and out of service.

The service facilities provide service to handle sheet metal repair and fabrication, pump and electrical repair, aerial ladder service, and effect booster tank enlarging and replacement, and minor or major refurbishment capabilities.

Service and repairs to all makes of fire apparatus including trucks with Hale, Waterous, Darley, FMC, and John Bean Pumps.

The Service Center employees are fully insured with Workman's Compensation, at 3 Million Dollar Garage Keepers Liability Insurance Coverage and a 1 Million Dollar Products Liability Insurance Policy to protect your fire department in case of injury to personnel or your fire department equipment.

PRICES AND PAYMENTS

The bid price will be **FOB Augusta, West Virginia**, on a delivered and accepted basis at the Fire Department.

Total price on KME's proposal sheet will include all items listed in these specifications.

KME has computed pricing less federal and state taxes. It is understood that any applicable taxes will be added to the proposed prices, unless the purchaser furnishes appropriate tax-exempt forms.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

DELIVERY TIME

KME is proposing to complete the apparatus delivery time based on the number of calendar days, **starting from the date the chassis is received and accepted by KME Fire Apparatus.**

Delivery Time: 115 - 150 Calendar Days

NON-COLLUSIVE BIDDING CERTIFICATION

By submission of this bid, each bidder and each person signing on behalf of any bidder, certifies, and in the case of a joint bid, each party thereof certifies as to its own organization, tender penalty of perjury, that to the best of their knowledge and belief:

- The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement, for purpose of restricting competition, as to any matter relating to sell prices with any other bidder or any competitor.
- Unless otherwise required by law, the prices that have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor
- No attempt has been made by the bidder to induce any other person, partnership, or corporation to submit or not to submit a bid for the purpose of restricting competition.
- That all requirements of the law including amendatory provisions as to non-collusive bidding have been complied with.

MATERIAL AND WORKMANSHIP

All equipment furnished will be guaranteed to be new and of current manufacture, to meet all requirements of purchaser's specifications.

All workmanship will be of high quality and accomplished in a professional manner so as to insure a functional apparatus with a pleasing, aesthetic appearance.

SALES ENGINEER

KME will designate an in house individual to perform the contractor's sales engineer functions. The sales engineer will provide a single point interface between the purchaser and KME on all matters concerning the contract.

APPROVAL DRAWING

A detailed drawing of the apparatus will be provided to the Augusta Volunteer Fire Dept. for approval before construction begins. A copy of this drawing shall also be provided to the manufacturer's representative. Upon Augusta Volunteer Fire Dept. approval, the finalized drawing shall become a part of the total contract.

The drawing shall show, but is not limited to, such items as the chassis make and model, major components, location of lights, sirens, all compartment locations and dimensions, special suction, discharges, etc. The drawing shall be a visual interpretation of the apparatus as it is to be supplied.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

INSPECTION VISITS

KME will provide three (3) factory inspection trips to KME's facility. Transportation, meals, lodging, and other requisite expenses will be the bidder's responsibility.

Accommodations will be for six (6) Fire Department representatives per trip.

The factory visits will occur at the following stages of production of the apparatus:

- Pre-construction / blueprint review.
- Completion of pump plumbing.
- Final inspection upon completion.

Travel arrangements less than 300 miles from the manufacturing facility will be via ground transportation.

The customer maintains the right to inspect the apparatus, within KME's normal business hours. At any other point during construction expenses incurred during non-specified visits will be the responsibility of the customer.

During inspection visits, the customer reserves the right to conduct actual performance tests to evaluate completed portions of the unit. Testing will be accomplished with the assistance and resources of the contractor.

DELIVERY

Delivery of the apparatus to the Fire Department will remain KME's responsibility.

A qualified and responsible representative of KME will deliver the apparatus to the Fire Department.

INSTRUCTION MANUALS/DRAWINGS, SCHEMATIC

KME will supply at time of delivery, two (2) copies of a complete operation and service manual covering the complete apparatus as delivered and accepted.

The manual will contain the following:

- Descriptions, specifications, and ratings of chassis, pump (if applicable), and aerial device (if applicable).
- Wiring diagrams.
- Lubrication charts.
- Operating instructions for the chassis, any major components such as a pump and any auxiliary systems.
- Instructions regarding the frequency and procedures recommended for maintenance.
- Parts replacement information.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

VEHICLE FLUIDS PLATE

As required by NFPA-1901, KME will affix a permanent plate in the driver's compartment specifying the quantity and type of the following fluids used in the vehicle:

A permanent plate in the driving compartment will specify the quantity and type of the following fluids used in the vehicle:

- Engine oil
- Engine coolant
- Chassis transmission fluid
- Pump transmission lubrication fluid
- Pump primer fluid
- Drive axle(s) lubrication fluid
- Air-conditioning refrigerant
- Air-conditioning lubrication oil
- Power steering fluid
- Cab tilt mechanism
- Transfer case fluid
- Equipment rack fluid
- Air compressor system lubricant
- Generator system lubricant

PRINCIPAL APPARATUS DIMENSIONS & G.V.W.R.

The principal dimensions of the completed apparatus will not exceed the following maximum acceptable dimensions:

KME PROPOSED DIMENSIONS:

- **OVERALL LENGTH:** 375" (31'-03") (Includes siren in front bumper)
- **OVERALL WIDTH:** 100"
- **OVERALL HEIGHT:** 129" (+/- 2")
- **WHEELBASE:** 229"

The axle and total weight ratings of the completed apparatus will not be less than the following minimum acceptable weight ratings:

- **MINIMUM FRONT G.A.W.R.:** 14,000 lbs.
- **MINIMUM REAR G.A.W.R.:** 23,000 lbs.
- **MINIMUM TOTAL G.V.W.R.:** 37,000 lbs.

KME will include the principal dimensions, front G.A.W.R., rear G.A.W.R., and total G.V.W.R. of the proposed apparatus. Additionally, KME will provide a weight distribution of the fully loaded, completed vehicle; this will include a filled water tank, specified hose load, miscellaneous equipment allowance in accordance with NFPA-1901 requirements, and an equivalent personnel load of 250 lbs. per seating position.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

PRE-DELIVERY SERVICE

Included in the KME proposal and after transportation from the factory or immediately prior to delivery to the fire department, the apparatus will receive a pre-delivery service consisting of: engine oil & filter change, chassis lubrication, fuel filter(s) changed, adjustment of engine to manufacturers specifications, complete inspection including all electrical and mechanical devices, for proper operation and correction of leaks or obvious problems.

KME OWNERSHIP

KME is a tightly held family owned corporation. All of the stockholders are members of the Kovatch family of Nesquehoning, PA. KME carries no (zero) long term debt and is the largest privately owned manufacturer of fire apparatus in the country.

PROPOSAL BLUEPRINT

KME is providing a scaled drawing of the specific apparatus being proposed WITH THE BID. The drawing has been generated by KME's engineering department in order to maintain the accuracy of the drawing.

FAMA MEMBERSHIP

KME Fire Apparatus is a leading and proud member of the Fire Apparatus Manufacturer's Association (FAMA).

CONTRACT

A standard Kovatch Mobile Equipment Corporation Form of Contract is included in our Bid Proposal.

U.S.A. MANUFACTURER

The entire apparatus shall be assembled within the borders of the Continental United States to insure more readily available parts (without added costs and delays caused by tariffs and customs) and service.

QUALITY MANAGEMENT

KME Fire Apparatus operates a Quality Management System under the requirements of MIL-I-45208A, a military specification for a quality inspection system established to substantiate product conformance to drawings, specifications, and contract requirements. A copy of the certificate of compliance will be included in the bid.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

STEPPING, STANDING, & WALKING SURFACES

All stepping, standing, and walking surfaces on the body shall meet NFPA #1901 anti-slip standards. Aluminum tread plate utilized for stepping, standing, and walking surfaces shall be Alcoa No-Slip type. This material shall be a minimum 3/16 (0.1875") in thickness. Upon request by the purchaser, the manufacturer shall supply proof of compliance with this requirement. All vertical surfaces on the body, which incorporate aluminum tread plate material, will utilize the same material pattern to provide a consistent overall appearance. NO EXCEPTIONS!

COOPERATIVE PURCHASING

KME is pleased to allow other public agencies to use the purchase agreement resulting from this invitation to bid. The condition of such use by other agencies will be that any such agency must make and pursue contact, purchase order/contract, and all contractual remedies with KME. Such tag-on's will be done so that the original purchasing agency has no responsibility for performance by either KME or the agency using the contract.

UNDERWRITERS LABORATORIES INC. (UL) EXAMINATION AND TEST PROPOSAL

If required by the specific chapters of NFPA-1901, the proposed unit shall be tested and certified by Underwriters Laboratories Inc. (UL) Underwriters Laboratories Inc. (UL) is recognized worldwide as a leading third party product safety certification organization for over 100 years. UL has served on National Fire Protection Association (NFPA) technical committees for over thirty years.

INDEPENDENT TESTING ORGANIZATION QUALIFICATIONS

- UL is a nationally recognized testing laboratory recognized by OSHA.
- UL complies with the American Society for Testing and Materials (ASTM) Standard ASTM E543 "Determining the Qualifications for Nondestructive Testing Agencies."
- UL has more than 40 years of automotive fire apparatus safety testing experience and 16 years of factory aerial device testing and Certification experience. UL has more than 100 years of experience developing and implementing product safety standards.
- UL does not represent, is not associated with, nor is in the manufacture or repair of automotive fire apparatus.
- All test work for fire pumps outlined in NFPA 1901, Edition shall be conducted.
- UL has included a list of all factory aerial device manufacturers for whom testing is currently being conducted on a regular basis.
- UL carries ten million dollars in excess liability insurance for bodily injury and property damage combined.

UL provides the manufacturer a complete written examination and test report for each inspection performed at the manufacturer's facility. This report specifies the points of inspection and results of such examinations and tests.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

PERSONNEL

The UL inspectors performing the test work on the units are certified to Level II in the required NDT methods, under the requirements outlined in ASNT document CP-189.

The actual person(s) performing the inspection shall present for review proof of Level II Certification in the required NDT methods.

Prior to submittal to the automotive fire apparatus manufacturer, the final Report shall be reviewed by the Supervisor of Fire Equipment Services and a Registered Professional Engineer, both of whom are directly involved with the aerial device certification program at UL.

UNDERWRITERS LABORATORIES INC. (UL) EXAMINATION AND TEST PROPOSAL

If required by the specific chapters of NFPA-1901, the proposed unit will be tested and certified for KME Fire Apparatus by Underwriters Laboratories Inc. (UL) Underwriters Laboratories Inc. (UL) is recognized worldwide as a leading third party product safety certification organization for over 100 years. UL has served on National Fire Protection Association (NFPA) technical committees for over thirty years.

INDEPENDENT TESTING ORGANIZATION QUALIFICATIONS

- UL is a nationally recognized testing laboratory recognized by OSHA.
- UL complies with the American Society for Testing and Materials (ASTM) Standard ASTM E543 "Determining the Qualifications for Nondestructive Testing Agencies."
- UL has more than 40 years of automotive fire apparatus safety testing experience and 16 years of factory aerial device testing and Certification experience. UL has more than 100 years of experience developing and implementing product safety standards.
- UL does not represent, is not associated with, nor is in the manufacture or repair of automotive fire apparatus.
- All test work for fire pumps outlined in NFPA 1901, Edition will be conducted.
- UL has included a list of all factory aerial device manufacturers for whom testing is currently being conducted on a regular basis.
- UL carries ten million dollars in excess liability insurance for bodily injury and properly damage combined.

All work outlined in NFPA 1914, current Edition, including nondestructive testing, will be conducted at the manufacturer's facility.

PERSONNEL

The UL inspectors performing the test work on the units are certified to Level II in the required NDT methods, under the requirements outlined in ASNT document CP-189.

The actual person(s) performing the inspection will present for review proof of Level II Certification in the required NDT methods.

Prior to submittal to the automotive fire apparatus manufacturer, the final Report will be reviewed by the Supervisor of Fire Equipment Services and a Registered Professional Engineer, both of whom are directly involved with the aerial device certification program at UL.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

GENERAL APPARATUS DESCRIPTION "SPECIAL SERVICE FIRE APPARATUS"

The unit will be designed to conform fully to the "Special Service Fire Apparatus" requirements as stated in the NFPA 1901 Standard (2009 Revision), which will include the following required chapters as stated in this revision:

- Chapter 1 Administration
- Chapter 2 Referenced Publications
- Chapter 3 Definitions
- Chapter 4 General Requirements
- Chapter 10 Special Service Fire Apparatus
- Chapter 12 Chassis and Vehicle Components
- Chapter 13 Low Voltage Electrical Systems and Warning Systems
- Chapter 14 Driving and Crew Areas
- Chapter 15 Body, Compartments and Equipment Mounting

The unit will be designed to also conform to the requirements stated in the following chapters of NFPA 1901 (2009 Revision)

- Chapter 16 Fire Pump and Associated Equipment
- Chapter 18 Water Tanks
- Chapter 20 Foam Proportioning Systems
- Chapter 22 Line Voltage Electrical Systems
- Chapter 25 Winches

CAB SAFETY SIGNS

The following safety signs will be provided in the cab:

- A label displaying the maximum number of personnel the vehicle is designed to carry will be visible to the driver.
- "Occupants must be seated and belted when apparatus is in motion" signs will be visible from each seat.
- "Do Not Move Apparatus When Light Is On" sign adjacent to the warning light indicating a hazard if the apparatus is moved (as described in subsequent section).
- A label displaying the height, length, and GVWR of the vehicle will be visible to driver.
- This label will indicate that the fire department must revise the dimension if vehicle height changes while vehicle is in service.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

CHASSIS DATA LABELS

The following information will be on labels affixed to the vehicle:

Fluid Data

- Engine Oil
- Engine Coolant
- Chassis Transmission Fluid
- Pump Transmission Lubrication Fluid
- Pump Primer Fluid (if applicable)
- Drive Axle(s) Lubrication Fluid
- Air Conditioning Refrigerant
- Air Conditioning Lubrication Oil
- Power Steering Fluid
- Cab Tilt Mechanism Fluid
- Transfer Case Fluid (if applicable)
- Equipment Rack Fluid (if applicable)
- Air Compressor System Lubricant
- Generator System Lubricant (if applicable)
- Front Tire Cold Pressure
- Rear Tire Cold Pressure
- Maximum Tire Speed Rating

Chassis Data

- Chassis Manufacturer
- Production Number
- Year Built
- Month Manufactured
- Vehicle Identification Number

Manufacturers weight certification:

- Gross Vehicle (or Combination) Weight Rating (GVWR or GCWR)
- Gross Axle Weight Rating, Front
- Gross Axle Weight Rating, Rear

ROLLOVER STABILITY

The apparatus will meet the criteria defined in 4.13.1 for rollover stability as defined in the 2009 NFPA Standard for Automotive Fire Apparatus.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

COMMERCIAL CHASSIS

International Model 7400 SFA 4-Door 4x4 Chassis Specifications Attached.

KME CHASSIS ADDITIONS & MODIFICATIONS

REAR AXLE TOP SPEED

The rear axle/s will be geared for a vehicle top speed in accordance with NFPA sections 4.15.2 and 4.15.3.

Units with GVWR over 26,000 pounds will be limited to 68 mph. If the combined tank capacity is over 1250 gallons of foam and water or the GVWR is over 50,000 pounds, the vehicle top speed will be limited to 60 mph or the fire service rating of the tires, whichever is lower.

INTERNATIONAL SAE J2433 ROLLOVER TESTING

The International chassis will comply with SAE J2422 Cab Roof Strength Evaluation. The Cab to Chassis Mounting System will remain attached to the vehicle chassis and in an orientation similar to its original position when subjected to 20g deceleration load in the forward direction. Components in the mounting system may become distorted or broken but never dislodge from the original mounting location.

SCBA BRACKETS

Four (4) Zico Rol-Loc SCBA brackets and restraint mechanism(s) will be provided.

BUMPER EXTENSION

A 12" high, 96" wide, two (2) ribbed, bright finish stainless steel front bumper will be provided. The front bumper will be extended approximately sixteen (16) inches. A polished aluminum tread plate (3/16") gravel shield with end caps will be installed.

STORAGE WELL

One (1) storage well constructed of 1/8" aluminum will be installed in the gravel shield. This storage well will be located on the left side of the bumper extension. The bottom of the storage well will have a minimum of four (4) drain holes.

The storage well will have capacity to store a minimum of 150' x 1-3/4" DJ hose and nozzle.

The left side front bumper hose well will be furnished with Velcro straps to secure the hose stored in the well. The straps will be attached to each side of the hose well with stainless steel footman loops.

WHEEL TRIM KITS

Wheel trim kits consisting of chrome baby moon hubcaps and chrome lug nut covers will be installed on the front and rear axles of the single rear axle chassis.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

MUD FLAPS

Black rubber mud flaps will be provided on the front fenders.

REAR FUEL TANK - 50 GALLON

A fifty-gallon fuel tank will be mounted at the rear of the chassis. The fill pipe will run to the left rear fender well and will be accessed through a Cast Products aluminum fuel filler door.

BATTERY BOX TREAD PLATE

The battery box will be overlaid with polished aluminum tread plate. The cover of this box will be easily removable for inspection of the batteries.

RIGHT SIDE CAB STEP AREA TREAD PLATE

The right side cab step area will be overlaid with polished aluminum tread plate. A single cab entry step, level with the right side running board will be furnished. Step areas will be fabricated from Alcoa "No-Slip" tread plate.

LEFT SIDE CAB STEP AREA TREAD PLATE

The left side cab step area will be overlaid with polished aluminum tread plate. A single cab entry step, level with the left side running board will be furnished. Step areas will be fabricated from Alcoa "No-Slip" tread plate.

ROLL OUT TRAY

A roll out tray lined with Dri-Dek matting in the battery box will be furnished.

STORAGE COMPARTMENT - UNDER DRIVER SIDE CAB DOORS

A large weatherproof tool storage compartment will be mounted under both driver side cab doors. The compartment will be constructed of 3/16" aluminum diamond tread and 3/16" aluminum plate. This compartment will utilize the maximum amount of space available. A hinged drop-down door with "D" handles will be provided with a door switch to activate the specified compartment lights.

STORAGE COMPARTMENT - UNDER REAR CAB DOOR OFFICER SIDE

A weatherproof tool storage compartment will be mounted under the officer side rear cab door. The compartment will be constructed of 3/16" aluminum diamond tread and 3/16" aluminum plate. This compartment will utilize the maximum amount of space available. A hinged door with "D" handle will be provided with a door switch to activate the specified compartment lights.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

CENTER CONSOLE

A center console fabricated from 1/8" aluminum will be furnished and will be located between the driver and officer's seats. The console will be 21-1/2" high by 18" wide by 26" long.

The forward area of the console will have a mounting surface for emergency lighting switch panels and/or electronic siren control boxes within reach of the driver or officer. In addition, the console will be equipped with two (2) map/notebook storage pockets at the rear of the console.

The console will be finished with a gray textured paint to match the interior of the chassis.

ANTENNA INSTALLATION

One (1) antenna mounting base(s) model #MATM with 17' of coaxial cable will be provided and installed on the cab roof. The attached antenna wire(s) will be run to the right side cab dash area.

The Fire Department is responsible to have the correct antenna whip installed once the apparatus is delivered.

WINCH RECEIVER POINT- FRONT OF CHASSIS

A receiver point will be provided below the front bumper for a portable winch. The receiver point will be a 2 1/2" x 2 1/2" x 1/4" seamless steel tube welded and gusseted to 3" x 1 1/2" steel channel directly bolted to the chassis frame rails. A 12v electrical connection with a quick disconnect compatible with the port-able winch will be provided adjacent to the receiver point. A plastic end cap will be provided for the quick disconnect.

TIRE PRESSURE MONITORING DEVICES

Each tire will be equipped with an air pressure indicator cap on the valve stem. Each cap will have a visual LED indicator to show if the tire is correctly inflated.

AUTOMATIC TIRE CHAINS

One (1) set of On Spot automatic tire chains for a single axle chassis will be installed. A switch located in the master light console will control the On Spot chains.

Each interior cab door panel will be equipped with reflective ScotchLite material that will cover at least 96 in².

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

VEHICLE DATA RECORDER

An Akron/Weldon Vehicle Data Recorder (VDR) and Seat Belt monitor system will be provided. The system will include an NFPA compliant "Black Box" with reporting software that will be capable of data storage to coincide with the NFPA requirements.

Data storage capabilities will include interfaces with the following systems:

- Display module (Master Optical Warning Device)
- Seat belt monitoring (seat occupied with seat belt)
- Surface or panel mount
- VDR, date & time stamp
- Max Vehicle speed (MPH)
- Vehicle acceleration / deceleration (MPH/Sec.)
- Engine Speed (RPM)
- ABS event
- Data password protected
- Data sampled once per second, in 48-hour loop
- Data sampled min by min for 100 engine hours
- Throttle position (% of Throttle)
- Data software
- Data interface for data download
- PC / Mac Compatible
- Hours Driven
- Data summary reports
- Last Minute Log
- Idle Time

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

CHASSIS/BODY ELECTRICAL & ACCESSORIES

COMMERCIAL CHASSIS ELECTRICAL SYSTEM

The commercial chassis electrical system will be provided as furnished by the original manufacturer. A customized interface will be provided and designed, so as not to disturb any of the required chassis functions. The necessary interfaces will only be provided in areas where load management is allowed or with accessory components provided on the chassis.

12 VOLT ELECTRICAL SYSTEM TESTING

The apparatus low voltage electrical system will be tested and certified by the apparatus manufacture. The certification will be provided with the apparatus. All tests will be performed with air temperature between 0°F and 100°F.

The following three (3) tests will be performed in order. Before each test, the batteries will be fully charged:

TEST #1-RESERVE CAPACITY TEST

The engine will be started and kept running until the engine and engine compartment temperatures are stabilized at normal operating temperatures and the battery system is fully charged. The engine will be shut off and the minimum continuous electrical load will be activated for 10 minutes. All electrical loads will be turned off prior to attempting to restart the engine. The battery system will then be capable of restarting the engine. Failure to restart the engine will be considered a test failure.

TEST #2-ALTERNATOR PERFORMANCE TEST AT IDLE

The minimum continuous electrical load will be activated with the engine running at idle speed. The engine temperature will be stabilized at normal operating temperature. The battery system will be tested to detect the presence of battery discharge current. The detection of battery discharge current will be considered a test failure.

TEST #3-ALTERNATOR PERFORMANCE TEST AT FULL LOAD

The total continuous electrical load will be activated with the engine running up to the engine manufacturers governed speed. The test duration will be a minimum of 2 hours. Activation of the load management system will be permitted during this test. However, an alarm sounded due to excessive battery discharge, as detected by the system, or a system voltage of less than 11.7 volts DC for a 12 volt system, for more than 120 seconds, will be considered a test failure.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

LOW VOLTAGE ALARM TEST

Following completion of the preceding tests, the engine will be shut off. The total continuous electrical load will be activated and will continue to be applied until the excessive battery discharge alarm is activated.

The battery voltage will be measured at the battery terminals. With the load still applied, a reading of less than 11.7 volts will be considered a test failure. The battery system will then be able to restart the engine.

At time of delivery, documentation will be provided with the following information:

- Documentation of the electrical system performance test
- A written load analysis of the following;
 - Nameplate rating of the alternator
 - Alternator rating at idle while meeting the minimum continuous electrical load
 - Each component load comprising the minimum continuous electrical load.
 - Additional loads that, when added to the minimum continuous load, determine the total connected load.
 - Each individual intermittent load.

INTERNATIONAL MULTIPLEXED ELECTRICAL SYSTEM

The electrical system for the entire apparatus will feature the International® Diamond Logic® Electrical System. This industry leading solution is built on a multiplexed architecture containing technologies in components such as solid state power switches, self calibrating gauges and low current switch devices used for driver controls, like rocker switches and HVAC controls. The low current system and solid state switching results in maximum reliability and durability.

At the heart of International® Diamond Logic™ electrical system is the Electronic System Controller (ESC) which functions as the gatekeeper or central processor. The ESC continually monitors the vehicles electrical system and controls, including the engine, transmission, cab, and customer installed truck equipment, so that they all communicate and work together.

In addition the Diamond Logic® Electrical system consists of International factory installed, Remote Power Modules (RPMs), and factory installed switches and warning lights. This combination of factory installed equipment eliminates the need to cut into the chassis wiring and central wiring to one point outside the cab.

The Diamond Logic® Electrical System allows fully customizable logic to carry out functions which up until now required hard-wired circuits and component. The use of the system will enable the manufacturer to reduce; if not eliminate; conventional circuit interlock and power supply components for all body builder installed functions as specified by the customer. The programmable system allows for automation of tasks, custom features and safety interlocks to meet complex application requirements resulting in increasing functionality and reducing wiring the wiring used in equipment by up to 70%.

Each vehicle will be programmed by engineering and not only stored in engineering database, but also uploaded to International which will enable any International Dealer location to maintain, troubleshoot or repair the entire system installed on the apparatus and NOT only the chassis.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

This multiplex system controls both chassis and body functions including but not limited to emergency lighting, scene lighting, compartment lighting, and door ajar circuitry. Systems that utilize a multiplexed chassis with a hard wired body, or two different multiplex systems, will not be considered.

BATTERY DISCONNECT SWITCH

The chassis batteries will be wired in parallel to a single 12 volt electrical system, controlled through a heavy duty, rotary type, master disconnect switch. The master disconnect switch will be located within easy access of the driver upon entering or exiting the cab.

120 VOLT SHORELINE CONNECTION - "SUPER" AUTO EJECT

One (1) Kussmaul "Super" Auto Eject model 091-55-20-120, automatic, 120 volt, 20 amp shoreline disconnect will be provided for the on board, 110 volt battery charging systems.

The disconnect will be equipped with a NEMA 5-20 P male receptacle, which will automatically eject the shoreline when the vehicle starter is energized. A label will be provided indicating voltage and amperage ratings.

SHORELINE POWER INLET PLATE

A shoreline power receptacle information plate will be permanently affixed at or near the power inlet. The plate will indicate the following;

- Type of Line Voltage
- Current Rating in Amps Power Inlet Type (DC or AC).

The Kussmaul auto-eject connection will be equipped with a Red weatherproof cover.

The shoreline receptacle will be located in the driver's cab step well.

BATTERY CHARGER / AIR COMPRESSOR SYSTEM

A Kussmaul model # 091-56-12, "Auto Charge 1000" high output, fully automatic battery charger will be provided for maintaining the vehicle battery system. Unique electronic sensing circuits sense the true battery voltage while eliminating the need for external sense wires. Output current will be 15 amperes @ 12 volt DC.

A Kussmaul 091-9HP air compressor will maintain the air pressure in the chassis air brake system while the vehicle is not in use. The air compressor will have a rated input at 120 volts AC @ 3.5 amps and an output of 1.4 CFM with a 125 psi max output.

A LED bar graph display will be located near the shoreline connection to monitor the battery status.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

SHORELINE POWER STRIP

A 120 volt household type power strip will be located as directed in the rear crew area of the cab. The power strip will be equipped with a minimum of six (6) outlets. The power strip will be wired into the shoreline receptacle to provide a 120 volt power source for fire department equipment.

One (1) Akron model # 8080-8000-13 combination red/white LED dome light(s) will be furnished in the forward section of the cab. Each additional dome light(s) will have an integral selector switch.

One (1) Akron model # 8080-8000-13 combination red/white LED dome light(s) will be furnished in the rear crew section of the cab. Each additional dome light(s) will have an integral selector switch.

Each side front door jamb switch will activate all of the cab dome lights.

"DO NOT MOVE APPARATUS" WARNING LIGHT WITH AUDIBLE ALARM

A red flashing warning light with an integral audible alarm, will be functionally located in the cab to signal when an unsafe condition is present such as an open cab door or body compartment door, an extended ladder rack, a deployed stabilizer, an extended light tower or any other device which is opened, extended or deployed which may cause damage to the apparatus if it is moved.

This light will be activated through the parking brake switch to signal when the parking brake is released. This light will be labeled "DO NOT MOVE TRUCK".

12 VOLT ACCESSORY CIRCUITS - CAB DASH

Two (2) dedicated circuits; 12 volt, 40 Amp, power and ground on 3/8 stud and fused at battery will be provided in the cab dash. The circuit will be for future installation of radios or accessories. **One (1) circuit will be unswitched, wired directly to the battery, and one (1) circuit will be switched through the master battery disconnect switch.**

LED MARKER LIGHTS & REFLECTORS

Truck-Lite Model # 18 red LED marker lights with integral reflectors will be provided at the lower side rear, one (1) each side.

Truck-Lite # 60115Y yellow LED side marker and turn lights will be provided on the apparatus lower side, forward of rear axle, one (1) each side.

Truck-Lite Model #19 red LED clearance lights will be provided on the apparatus rear upper, one (1) each side at the outermost practical location.

Truck-Lite Model # 33740R LED 3-lamp identification bar will be provided on the apparatus rear center. The lights will be red in color.

Truck-Lite # 98034Y yellow reflectors will be provided on the apparatus body lower side, as far forward and low as practical, one (1) each side if the apparatus is 30' long or longer.

Truck-Lite # 98034R red reflectors will be provided on the apparatus rear, one (1) each side at the outermost practical location.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

LED LICENSE PLATE LIGHT - REAR

One (1) Whelen model # 0AC0EDCR LED license plate light will be provided above the mounting position of the license plate. The light will be clear in color.

TAIL, STOP, TURN, AND BACK-UP LIGHTS

Two (2) Code 3 LED, 65PKG 4" x 6", stack will be mounted, one each side, at the rear of the body. Each stack will include a red stop/tail light, amber turn signal, and a white reverse light.

Two (2) Code 3 65STK4 mounting flanges, installed one (1) on each side, will be provided to mount the lights described above in one common mounting flange. The fourth opening will be for the lower rear warning lights.

BODY STEP LIGHTS

Chrome plated Truck-Lite model # 15055, shielded LED body step lights will be provided and controlled with marker light actuation. Step lights will be located to properly illuminate all chassis access steps and walkway areas.

GROUND LIGHTS - CAB

One (1) ROM V3 12" LED ground light will be provided under each side cab door entrance step, four (4) total. The lights will be mounted in ROM standalone aluminum mounting track with mounting slots at each end. The ground lights will turn on automatically with each respective door jamb switch and also by a master ground light switch in the warning light switch console.

Each light will illuminate an area at a minimum 30" outward from the edge of the vehicle.

GROUND LIGHTS - FRONT BUMPER

One (1) ROM V3 12" LED ground light will be provided under each side of the front bumper facing forward, two (2) total. The lights will be mounted in ROM standalone aluminum mounting track with mounting slots at each end. The ground lights will be activated by a master ground light switch in the cab and will be wired through the load management system.

GROUND LIGHTS - REAR

One (1) ROM V3 12" LED ground light will be provided under each rear body corner, two (2) total. The lights will be mounted in ROM standalone aluminum mounting track with mounting slots at each end. The ground lights will be activated by a master ground light switch in the cab and will be wired through the load management system.

GROUND LIGHT SWITCHING

The cab and body ground lights will activate by engaging the parking brake.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

FOG LIGHTS

Two (2) Grote 600 series rectangular, clear fog lamps will be provided, with stainless steel housings. The fog lights will be mounted below the front bumper of the chassis and controlled by a switch located on the cab dash.

ROOF MOUNT 155W LED BROW LIGHT - ABOVE WINDSHIELD

Fire Research Evolution LED model FCA800-V15 contour roof mount light will be installed. The mounting brackets will attach to the bottom of the lamp head and be machined to conform to the roof radius. Wiring will extend from a weatherproof strain relief at the rear of the lamp head.

The lamp head will have eight (8) ultra-bright white LEDs. It will operate at 12 volts DC, draw 13 amps, and generate 15,000 lumens. The lamp head will direct 50 percent of the light onto the action area while providing 50 percent to illuminate the working area. The lamp head will incorporate heat-dissipating fins and be no more than 4" high by 11 1/2" wide. The lamp head and mounting arm will be powder coated white. The floodlight will be for fire service use.

The Evolution brow mounted flood light will be located above the windshield in the center of the cab.

LIGHTS ABOVE WINDSHIELD MASTER POWER SWITCH

A master power switch will be provided in the cab warning light switch console to turn the lights above windshield on and off.

BODY ELECTRICAL SYSTEM

12 VOLT BODY ELECTRICAL SYSTEM

All electrical lines in the body will be protected by automatic circuit breakers, conveniently located to permit ease of service. Flashers, heavy solenoids and other major electrical controls will be located in a central area near the circuit breakers.

All lines will be color and function coded every 3", easy to identify, oversized for the intended loads and installed in accordance with a detailed diagram. A complete wiring diagram will be supplied with the apparatus.

Wiring will be carefully protected from weather elements and snagging. Heavy duty loom will be used for the entire length. Grommets will be utilized where wiring passes through panels.

In order to minimize the risk of heat damage, wires run in the engine compartment area will be carefully installed and suitably protected by the installation of heat resistant shielded loom.

All electrical equipment will be installed to conform to the latest federal standards as outlined in NFPA 1901.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

BODY ELECTRICAL JUNCTION COMPARTMENT

A weather resistant electric junction compartment will be provided in the left side lower front compartment. This compartment will be recessed through the inside rear wall of the compartment to provide an easily accessible enclosure to house all of the body wiring junction points, terminal strips, solenoids, etc. The design of this compartment will not decrease the storage capacity area of the compartment in which it is located. A removable panel will be provided for access to this compartment.

ENGINE COMPARTMENT WORK LIGHTS

Two (2) Grote model #61171 LED lights will be provided inside the engine enclosure that will provide a minimum of 20 candlepower illumination. Each light will have their own independent switch incorporated into the light head.

ROM TRACK MOUNTED COMPARTMENT LIGHTS - LED

Each individual, equipment storage compartment, **including the under cab compartments**, will be equipped with the ROM LED V3 lights on the forward and rear edge of each body door opening. The lights will be mounted in an anodized aluminum track provided by ROM either as a standalone unit or an integrated part of the roll up shutter door track. The lights will be designed and manufactured to be water proof meeting the IPX7 industry standard and will include a streamline optic lens and a fixed lumen output across 9-16vdc. Each LED module will be of interlocking design and will be able to be serviced/replaced without the removal of light assembly or shutter door. (No Exceptions)

DRIVER SIDE ROOF COMPARTMENT LIGHTING

Two (2) ROM V3 LED compartment strip light(s) will be provided, to ensure proper compartment illumination. The lights will be mounted underneath the roof compartment door opening and will be activated with a magnetic door switch that will be connected to the door ajar warning circuit.

OFFICER SIDE ROOF COMPARTMENT LIGHTING

Two (2) ROM V3 LED compartment strip light(s) will be provided, to ensure proper compartment illumination. The lights will be mounted underneath the roof compartment door opening and will be activated with a magnetic door switch that will be connected to the door ajar warning circuit.

ROOF WALKWAY LIGHTS

ROM V3 LED 12" compartment strip lights will be provided along the walkway walls and will be wired to activate when the chassis parking brake is applied.

**KME FIRE APPARATUS
WALK AROUND RESCUE – COMMERCIAL CHASSIS**

THIS PAGE INTENTIONALLY LEFT BLANK

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

WARNING LIGHTS & ACCESSORIES

NFPA LIGHTING PACKAGE

The following warning light package will include all of the minimum warning light and actuation requirements for the current revision of the NFPA 1901 Fire Apparatus Standard. The lighting as specified will meet the requirements for both "Clearing Right of Way" and "Blocking Right of Way" as noted.

LIGHT PACKAGE ACTUATION CONTROLS

The entire warning light package will be actuated with a single warning light switch located on the cab switch panel. The wiring for the warning light package will engage all of the lights required for "Clearing Right of Way" mode when the vehicle parking brake is not engaged. An automatic control system will be provided to switch the warning lights to the "Blocking Right of Way" mode when the vehicle parking brake is engaged.

UPPER LEVEL LIGHTING - CODE 3

NFPA ZONE A, UPPER

A Code 3 # 2758NFPA P1 "RX 2700 Prizm II Series", 58" LED cab roof warning light bar will be furnished and rigidly mounted on top of the cab roof. The light bar will be equipped with the following:

- Six Forward Facing Red - Eight LED Reflector Prizm II Modules
- Four Corners Red - Twelve LED Reflector Prizm II Modules.

The forward facing clear lights will be disabled automatically for the "Blocking Right of Way" mode.

NFPA ZONE C, UPPER

Four (4) Code 3 468RBZ-75, Prizm II surface mounted flashing LED lights, will be furnished and mounted two (2) each side at the rear, upper portion of the apparatus. Each light will be furnished with a chrome-plated flange. A red lens will be provided on each light.

NFPA ZONES B & D REAR, UPPER

Two (2) surface mounted Code 3 468RBZ-75 Prizm II LED light heads will be furnished and will be mounted one (1) each side on the upper side face, towards the rear of the body, facing to each side of the unit. Each upper rear LED light head will be equipped with a red lens and chrome plated flange.

NFPA ZONES B & D FRONT, UPPER

Two (2) surface mounted Code 3 468RBZ-75 Prizm II LED light heads will be furnished and mounted; one (1) each side on the upper side face, towards the front of the body, facing to each side of the unit. Each upper front LED light head will be equipped with a red lens and chrome plated flange.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

LOWER LEVEL LIGHTING - CODE 3

NFPA ZONE A, LOWER

Two (2) Code 3 # 378RBZ-75 Prizm II LED light heads will be provided and installed one (1) each side. Each light will be equipped with a red lens and chrome plated mounting flange.

The lower zone A warning lights will be mounted in the commercial chassis grille.

NFPA ZONE C, LOWER

Two (2) Code 3 #468RBZ-75 Prizm II flashing LED light heads will be provided and installed; one (1) each side directly below the DOT stop, tail, turn and backup lights. Each light will be equipped with a red lens and chrome plated mounting flange.

NFPA ZONES B & D FRONT, LOWER

Two (2) Code 3 # 378RBZ-75 Prizm II flashing LED light heads will be provided and installed one (1) each side. Each light will be equipped with a red lens and chrome plated mounting flange.

The lower zone B & D warning lights will be mounted on the sides of the commercial chassis hood.

NFPA ZONES B & D MIDSHIP, LOWER

Two (2) Code 3 # 378RBZ-75 Prizm II flashing LED light heads will be provided and installed one (1) each side. Each light will be equipped with a red lens and chrome plated mounting flange.

NFPA ZONES B & D REAR, LOWER

Two (2) Code 3 # 378RBZ-75 Prizm II flashing LED light heads will be provided and installed one (1) each side. Each light will be equipped with a red lens and chrome plated mounting flange.

WARNING LIGHT SYSTEM CERTIFICATION

The warning light system(s) specified above will not exceed a combined total amperage draw of 45 AMPS with all lights activated in either the "Clearing Right of Way" or the "Blocking Right of Way" mode.

The warning light system(s) will be certified by the light system manufacturer(s), to meet all of the requirements in the current revision of the NFPA 1901 Fire Apparatus Standard as noted in the General Requirements section of these specifications. The NFPA required "Certificate of Compliance" will be provided with the completed apparatus.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

AUXILIARY WARNING LIGHTS

Two (2) Code 3 model 378RBZ-75, surface mounted red LED lights will be furnished and will be mounted on the front bumper.

The lights specified above will be provided in addition to the NFPA required Optical Warning Light Package and will be switched independently from the light package. Additionally, wiring for the independently switched lights specified, will be run through the Load Management System to ensure that the electrical system is not overloaded by the additional amperage draw requirements.

ARROW STICK WARNING LIGHT

One (1) Code 3 LEDX, "Narrow Stik" Model #NASL847, 47" rear directional light will be installed on the rear of the body. The light will be equipped with eight (8) lamps. The light will be controlled from the cab. The control module will be conveniently located near the driver's position. The rear directional light will be wired through the load management system of the unit.

BACK-UP ALARM

A Code 3, model # D199C, 107dBA back-up alarm, will be provided and installed at the rear of the apparatus under the tailboard. The back-up alarm will activate automatically when the transmission is placed in reverse gear and the ignition is "on".

AIR HORNS

Two (2) chrome plated air horns will be at the front of the vehicle. The air horns will be mounted in full compliance with NFPA-1901. The supply lines will be dual 1/4" lines with equal distance from each horn.

Each air horn will be mounted, one (1) each side, on the side of the hood.

The air horn(s) will be controlled by a foot switch on the officer's side and the steering horn button on driver's side. An air horn/electric DOT horn selector switch will be furnished on the dash for the drivers steering horn button.

ELECTRONIC SIREN

One (1) Code 3 Model #3672 V-Con electronic siren will be provided featuring: electronic air horn, hyper yelp siren tones. A hardwired microphone will provided for the public address feature.

The electronic siren and speaker will meet the NFPA required SAE certification to ensure compatibility between the siren and speaker.

One (1) Code 3, model # FM100C chrome plated siren speaker will be provided, recessed in the front bumper, and wired to the electronic siren.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

FEDERAL Q2B MECHANICAL SIREN

One (1) Federal Model #Q2B mechanical siren will be provided to provide audible warning.

The Q2B siren will be wired through the load management system to prevent excessive amperage draw. The siren will be provided in addition to the required minimum NFPA audible warning requirements.

The Q2-B siren will be semi-recessed into the bumper on the officer's side. The siren will be recessed so the front grille portion of the siren is exposed and protruding beyond the bumper.

Two (2) Linemaster # 632 floor mounted foot switches will be provided, one (1) for the officer and one (1) for the driver. A siren brake button will be provided near the driver's position.

A second push button siren brake switch will be provided on the cab dash near the officers seating position.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

PUMP AND PLUMBING

PUMP

- **HALE CBP 250**
- **250 GPM**
- **SINGLE STAGE**
- **PTO DRIVEN**

A Hale model CBP-250 PTO driven pump will be provided and installed.

PUMP ASSEMBLY

The pump will be of a size and design to mount on the chassis rails of commercial and custom truck chassis, and have a maximum capacity of 250 gallons per minute (U.S. GPM), NFPA rated performance.

The entire pump will be cast, manufactured, and tested at the pump manufacturer's factory.

The engine will provide sufficient horsepower and RPM to enable pump to meet and exceed its rated performance.

The entire pump, both suction and discharge passages will be hydrostatically tested to a pressure of 600 PSI. The pump will be fully tested at the pump manufacturer's factory to performance specs as outlined by the latest NFPA Pamphlet No. 1901. Pump will be free from objectionable pulsation and vibration. The pump body and related parts will be of fine grain alloy cast iron, with a minimum tensile strength of 30,000 PSI. All moving parts in contact with water will be of high quality bronze or stainless steel. Pump utilizing castings made of lower tensile strength cast iron not acceptable.

PUMP SHAFT

The pump shaft will be rigidly supported by two deep groove ball bearings for minimum deflection. The pump shaft will be heat-treated, electric furnace, corrosion resistant, stainless steel.

IMPELLER

The pump impeller will be hard, fine grain bronze of the mixed flow design: accurately machined, hand ground and individually balanced. The vanes of the impeller intake eye will be hand ground. The impeller will be of sufficient size and design to provide ample reserve capacity utilizing minimum horsepower. Impeller will be keyed to pump shaft and locked in place with a stainless steel lock nut.

MECHANICAL SHAFT SEAL

Shaft seal to be sealed with a double lip oil seal to keep road dirt and water out of pump gearbox.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

PUMP RATIO

The pump ratio will be selected by the apparatus manufacturer to give maximum performance with the engine and transmission selected.

The manufacturer will supply at time of delivery copies of the pump manufacturer's certification of hydrostatic testing, the engine manufacturer's current certified brake horsepower curve.

PUMP DRIVE UNIT - POWER TAKE OFF (PTO)

A Chelsea hot shift Power Take Off will be provided to drive the pump-and-roll impeller. The PTO will be controlled by an electric "Hot-Shift" lighted rocker switch on the cab dash. This switch will activate the low volume / pump-and-roll portion of the pumping system.

PTO PUMP SHIFT INDICATOR LIGHTS

Three (3) green warning lights will be provided to indicate to the operator when the PTO has completed the shift for Road to Pump position. The PTO switch will illuminate and a light located on the instrument panel. One (1) green light will be provided on pump operator's panel adjacent to the throttle control. All lights to have appropriate identification/instruction plates.

PTO PUMP MOUNTS

Extra heavy duty pump mounting brackets will be furnished. These will be bolted to the frame rails in such a position to perfectly align the pump with the PTO, so that the angular velocity of the drive line joints will be the same on each end of the drive shaft. This will assure full capacity performance with a minimum of vibration. Mounting hardware will utilize Grade 8 bolts.

PUMP MANIFOLDS

A custom made suction and discharge manifold will be constructed from stainless steel weld pipe and/or tubing. The manifold will be designed to provide maximum efficiency for the suction inlets and the discharges. NO EXCEPTION!

PRESSURE CONTROL & ACCESSORIES

CLASS ONE "TPG" PRESSURE GOVERNOR

Apparatus will be equipped with a Class 1 "Total Pressure Governor" (TPG) that is connected to the Electronic Control Module (ECM) mounted on the engine. The "TPG" will operate as a pressure sensor (regulating) governor (PSG) utilizing the engines J1939 data for optimal resolution and response.

Programmable presets for RPM and Pressure settings will be easily configurable using the TPGs straightforward menu structure.

The "TPG" will also include indication of engine RPM, system voltage, engine oil pressure and engine temperature with audible alarm output for all. The "TPG" uses the J1939 data bus for engine information, requiring no additional sensors to be installed.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

CLASS 1 STAINLESS INTAKE RELIEF VALVE

The apparatus will be equipped with a Class 1 inlet relief valve that is of all stainless steel construction. The relief valve shall comply with NFPA 1901. It shall have an adjustable pressure relief setting from 75 psi to 285 psi and is factory preset at 125 psi. The relief valve will be used on the inlet side of the pump or on a designated LDH discharge outlet. Available with Victaulic, MNPT or MNST discharge outlet.

PRIMING PUMP

The priming pump will be a Trident air primer system. A push in primer handle will open the priming valve and prime the pump.

MASTER DRAIN VALVE

A rotary type, 12 port master drain valve will be provided and controlled at the lower portion of the side pump panel. The valve will be located in pump compartment lower than the main body and connected in such a manner as to allow complete water drainage of the pump body and all required accessories. Water will be drained below the apparatus body and away from the pump operator.

INDIVIDUAL BLEEDERS AND DRAINS

All lines will drain through the master drain valve or will be equipped with individual drain valves, easily accessible and labeled.

One (1) individual "TRIDENT" quarter turn drain valve will be furnished for each 1-1/2" or larger discharge port and each 2-1/2" gated auxiliary suction.

Drain/bleeder valves will be located at the bottom of the side pump module panels.

All drains and bleeders will discharge below the running boards.

SYNFLEX SUCTION, DISCHARGE, PRESSURE, AND CONTROL LINES

Small lines within the pump enclosure will be constructed from Synflex hose. Uses include, but are not limited to such lines as priming control, gauge lines, drain lines, air control valves, pump shift, supplemental cooling, foam flush and air bleeder valves.

INNER PUMP MODULE

The pump module will be a self-supported structure mounted within the body. The design of the module will enclose the pump and all piping. The module will also provide structure for the pre connected hose beds and control/discharge panels.

The pump module will be a welded frame work utilizing structural aluminum components properly braced to withstand the rigors of chassis frame flex.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

PUMP SUCTIONS & AUXILIARY INLETS

SUCTION INLETS

Two (2) 3" N.S.T. suction inlets will be provided, one on the driver side and one on the officer side pump panel. A removable strainer will be installed on each inlet.

PUMP SUCTION ENDS

The main pump suction inlets will be furnished with a short suction end, terminating with only the suction threads protruding through the side panel to minimize the distance an exterior appliance protrudes beyond the pump panel.

One (1) 3" NST chrome plated long handle pressure vented cap will be installed on each.

AUXILIARY SIDE SUCTION(S)

One (1) 2-1/2" auxiliary suction will be provided at the driver side pump panel, to the rear of the main inlet. The 2-1/2" auxiliary suction will terminate with a removable strainer, chrome plated 2-1/2" NST female swivel with a chrome plated plug and retaining chain.

A 2 1/2" Akron # 8800 series full flow, stainless steel ball valve will be provided for the driver side rear auxiliary suction.

A 1/4 turn swing control handle will be provide on the driver side rear auxiliary suction valve

All side gated inlet valves will be recess mounted behind the side pump panels or body panels. (No Exceptions)

TANK TO PUMP

One (1) 3" tank to pump line will be, piped through the front bulkhead of the tank with a 90 degree elbow down into the tank sump. This line will be plumbed directly into the rear of the pump suction manifold for maximum efficiency.

A check valve will be provided to prevent accidental pressurization of the water tank through the pump connection. Connection from the valve to the tank will be made by using a non-collapsible flexible rubber hose.

A 3" Akron # 8800 series full flow, stainless steel ball valve will be provided between the pump suction manifold and the water tank.

A push/pull control handle will be located on the operator's panel with function plate.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

TANK FILL

One (1) 2" gated full flow pump to tank refill line controlled at the pump panel will be provided. A deflector shield inside the tank will be furnished. Tank fill plumbing will utilize 2" high pressure hose for tank connection to accommodate flexing between components. (NO EXCEPTIONS)

A 2" Akron, # 8800 series, full flow, stainless steel ball valve will be provided between the pump discharge manifold and the water tank.

A push/pull control handle will be located on the operator's panel with function plate.

DISCHARGES & ACCESSORIES -SIDE MOUNT

DRIVER'S SIDE MAIN DISCHARGE #1

A discharge will be provided and located at the driver's side pump panel. The driver's side discharges # 1 will terminate with NST threads, through the left panel above the main pump intake.

The main pump discharge will be plumbed directly from the pump discharge manifold utilizing direct connect discharge valve flanges.

A 2 1/2" Akron, # 8800 series, full flow, stainless steel ball valve will be provided for the driver's side # 1 discharge. The valve will be equipped with the Akron "Tork-Lok" feature.

The discharge valve will be equipped with integral 2 1/2" NST, 30 degree, chrome plated elbow.

The driver's side #1 discharge cap provided as standard equipment will be deleted.

One (1) 2-1/2" NSTF X 1-1/2" NSTM reducer w/cap(s) will be provided on the driver's side # 1 discharge.

The driver's side # 1 discharge valve will be controlled by a push/pull handle located on the operator's panel.

The driver's side # 1 discharge will be equipped with a Class One 2 1/2" pressure gauge which will contain a vibration dampened internal mechanism. To prevent internal freezing, the stem and Bourdon tube will be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem. A bright metal bezel will be supplied for resistance to corrosion and to protect the lens and case from damage.

The pressure gauge will be illuminated internally using light emitting diodes, which will be wired through the pump panel light circuit. The gauge face will be white with black numerals.

The color of the illuminated Class One gauge will be Red.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

FRONT DISCHARGE

A 1 1/2" front #1 discharge will be plumbed to the front bumper of the vehicle.

The front #1 discharge will terminate on the top driver's side of the front bumper extension gravel shield with a chrome 1 1/2" NST chicksan swivel adapter.

The front #1 discharge will be plumbed utilizing 2" schedule 10, stainless steel piping, 45 degree threaded elbows and a limited number of 90 degree sweep elbows in an assembly from the pump to the front of the vehicle.

A minimum of one (1) grooved pipe coupling will be furnished in this assembly to allow for flex and serviceability. Automatic discharge drains will be provided at all low points in the plumbing.

A 2" Akron, #8800 series, full flow, stainless steel ball valve will be provided for the front #1 discharge. The valve will be equipped with the Akron "Tork-Lok" feature.

The front #1 discharge valve will be controlled by a push/pull handle located on the operator's panel.

A 1 1/2" NST chrome plated pressure vented cap will be installed the front #1 discharge.

The front #1 discharge will be equipped with a Class One 2 1/2" pressure gauge which will contain a vibration dampened internal mechanism. To prevent internal freezing, the stem and Bourdon tube will be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem. A bright metal bezel will be supplied for resistance to corrosion and to protect the lens and case from damage.

The pressure gauge will be illuminated internally using light emitting diodes, which will be wired through the pump panel light circuit. The gauge face will be white with black numerals.

The color of the illuminated Class One gauge will be Red, on the front #1 discharge.

CONCENTRATE PIPING & FOAM SYSTEM

FOAM PIPING

All foam concentrate plumbing from the tank or auxiliary foam inlet to the foam system components will be stainless steel.

The foam system piping will incorporate a check valve to prevent water from entering the foam tank; the discharge piping will also include a check valve to prevent foam solution from back feeding into the discharge side of the pump. Individual discharge piping will be as specified for each discharge.

The complete foam system will be tested in accordance with Chapter 17 of NFPA-1901.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

FOAM SYSTEM (AROUND THE PUMP)

A Scotty model 4071, or equivalent, around the pump foam system will be installed between the discharge and suction side of the pump. The adjustable unit permits various foam percentages to be inducted depending upon the nozzles in use.

The foam proportioning system will be supplied from the foam concentrate storage tank/s. The tank/s will be constructed of materials compatible with foam concentrates being used in the system. Tank capacity, venting, fill opening and foam outlet plumbing connections will be in accordance with NFPA requirements. Foam tank lid will be sealed and latched in accordance with NFPA standards. If required a provision will be made for installation of low tank level sensors and routing of the wiring for the sensors.

FOAM CONCENTRATE

The foam system will be capable of injecting the following foam concentrates:

- **Class A - Knock-Down manufactured by Kidde Fire Fighting / National Foam.**
- **No Class B foam selected or Class B foam system present.**

**KME FIRE APPARATUS
WALK AROUND RESCUE – COMMERCIAL CHASSIS**

THIS PAGE INTENTIONALLY LEFT BLANK

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

PUMP PANEL & ACCESSORIES

PUMP PANEL - SIDE MOUNT

The pump operator's control panel and module shall be located on the driver side of the apparatus in compartment L2. The pump module shall extend across the transverse portion of compartment L2/R2, at the minimum height necessary to accommodate the components. The pump enclosure top and side panels shall be completely removable and designed for easy access and servicing.

The area above the pump module will be transverse.

PUMP PANEL MATERIAL

The left side operator's panel, gauge panel, right side pump panel and right side access door will be fabricated from 14-gauge 304L stainless steel with a #4, (150/180 grit), standard brushed finish.

HINGED GAUGE PANEL

A full width, vertically hinged gauge access panel will be provided at the operator's position. Chrome plated positive locks will be provided along with chain holders to prevent the front of the gauge panel from coming in contact with other panels when open.

VERTICALLY HINGED PUMP PANEL OFFICER SIDE

The officer's side pump panel will be vertically hinged, to provide complete access to the pump and plumbing on the officer side of the pump enclosure. The panels will be equipped with stainless steel hinges and secured with push type locks to hold the panels closed. The drains located on the officer's side panel will be fastened to the lower panel, which will be stationary.

PANEL FASTENERS

Stainless steel machine screws and lock washers will be used to hold these panels in position. The panels will be easily removable to provide complete access to the pump for major service.

CAPS AND ADAPTERS SAFETY TETHER

All applicable discharge and suction caps, plugs and adapters will be equipped with chrome plated ball chain or double looped coil chain and secured to the vehicle.

PUMP PANEL TRIM PLATES

A high polish stainless steel trim plate will be provided around each discharge port and suction inlet opening to allow accessibility to the respective valve for service and repairs.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

DISCHARGE GAUGE TRIM BEZELS

Each individual discharge gauge will be installed into a decorative chrome-plated mounting bezel that incorporates valve-identifying verbiage and color labels.

COLOR CODED IDENTIFICATION TAGS

Color coded identification tags will be provided for all gauges, controls, connections, switches, inlets and outlets.

PUMP OPERATOR'S PANEL LIGHT SHIELD

The pump operator's panel will be equipped with a light shield that will be full width of the control panel, and will be positioned to cover the lights and prevent glare.

The light shield will be equipped with the following lights:

- Amdor Luma Bar H2O super bright led strip lights.

No officer side pump panel lighting will be provided.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

PUMP OPERATOR'S PANEL

Particular attention is to be given to functional arrangement of all controls. The pump operator's panel will accommodate the following:

- Hinged gauge panel
- Water tank fill valve
- Auxiliary suction valve control
- All discharge valve controls
- Auxiliary engine cooler controls
- Water tank suction control valve
- Pump primer valve
- Engine throttle control
- Master compound vacuum gauge
- Master pressure gauge
- Individual discharge gauges
- Pump shift engaged indicator light
- Water tank water level indicator
- Engine tachometer
- Engine oil pressure gauge with audible alarm
- Engine water temperature gauge with audible alarm
- Low voltage light and audible alarm
- Pump panel light switch
- Speed counter (Underwriters)
- Pump performance plate (Underwriters)
- Pump serial No. plate
- Master pump drain valve
- Individual drains
- Voltmeter
- Air inlet/outlet at lower driver side panel
- Pump panel air horn actuation button.
- Class One "TPG" pressure governor control.

PUMP TEST PORTS

The pump panel will be equipped with Vacuum & Pressure test plugs to allow for test equipment to monitor pump pressure and vacuum levels. Chrome plugs and labels will be provided for the test ports.

MASTER GAUGES

One (1) 4-1/2" diameter pressure gauge (labeled: "PRESSURE") and one (1) 4-1/2" diameter compound vacuum gauge (labeled: "INTAKE") will be provided. The master gauges will be Class One and will be illuminated internally using light emitting diodes, which will be wired through the pump panel light circuit. The gauge face will be white with black numerals.

The color of the Master Pressure & Compound gauges will be the following:

- Both gauges will be Red.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

PRESSURE & COMPOUND GAUGE RANGES

All applicable pressure gauges will have a range of 0 - 400 P.S.I., and the compound gauge will have a range of -30" - 0 - 400 P.S.I.

ENGINE COOLER

An auxiliary cooler or heat exchanger will be installed in the engine compartment between the engine and the chassis radiator. The cooler will permit the use of water from the pump for cooling system. The cooling will be done without mixing engine and pump water.

TANK LEVEL GAUGE

A Fire Research, model #WLA200-A00, "TANKVISION" gauge that shows the actual volume of water in the tank will be provided on the pump operator's panel. The "TANKVISION" gauge is designed for both ease of operation and installation. The "TANKVISION" gauge utilizes ultra bright LEDs for sunlight readability and also uses 2 specially designed wide-viewing lenses for 180° of clear viewing. The "TANKVISION" gauge utilizes a pressure sender to measure the liquid volume. The gauge will be equipped self-calibration feature allows the LED's TANKVISION gauge to be used on tanks of different shapes and sizes.

Features:

- Flashes warning when the volume is less than 25%. Rapid down scrolling LED's alert the operator when the tank is almost empty. Remote audio warning available.
- One size fits all'. The self-calibration feature allows for easy calibration of any shape or size tank.
- Multiple displays are possible with a single sender through the FRC data bus.
- Rugged waterproof cast aluminum housing.
- No fitting needed for poly tank.
- Special fittings available for other tank materials.
- Connector disconnects at back of display.

The gauge will use a pressure transducer installed near the bottom of the water tank to determine the correct volume in the tank.

FOAM TANK LEVEL GAUGE - FOAM TANK "A"

A Fire Research, model #WLA260-A00, "TANKVISION" gauge that shows the actual volume of foam in the tank will be provided on the pump operator's panel. The "TANKVISION" gauge is designed for both ease of operation and installation. The "TANKVISION" gauge utilizes ultra bright LED's for sunlight readability and also uses 2 specially designed wide-viewing lenses for 180° of clear viewing. The "TANKVISION" gauge utilizes a pressure sender to measure the liquid volume. The gauge will be equipped self-calibration feature allows the TANKVISION gauge to be used on tanks of different shapes and sizes.

The gauge will use a pressure transducer installed near the bottom of the foam tank to determine the correct volume in the tank.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

WATER / FOAM TANKS

WATER TANK

The water tank will have a capacity of 250 gallons, constructed from Poly material.

FOAM TANK "A"

In addition to the water capacity of the tank, a 10 gallon integral foam storage area will be built into the water tank. The foam tank will have a latched fill tower, properly labeled as the foam fill point. A valved drain will be provided.

TANK CONSTRUCTION

The Poly water tank will be constructed from 1/2" thick polypropylene sheet stock. This material will be a non corrosive stress relieved thermo-plastic, natural in color, and U.V. stabilized for maximum protection.

The water and foam tanks will be of a specific configuration and will also designed to be completely independent of the body and compartments. All joints and seams will be nitrogen welded and tested for maximum strength and integrity. The top of the booster tank will be fitted with removable lifting eyes designed with a 3 to 1 safety factor to facilitate easy removal. The transverse swash partitions will be manufactured of 3/8" polypropylene (natural in color) and extend from approximately 4" off the floor to just under the cover. The longitudinal swash partitions will be constructed of 3/8" polypropylene (natural in color) and extend from the floor of the tank through the cover to allow for positive welding and maximum integrity. All partitions will be equipped with vent and air holes to permit movement of air and water between compartments. The partitions will be designed to provide maximum water flow. All swash partitions interlock with one another and are welded to each other as well as to the walls of the tank.

TANK LID

The tank cover will be constructed of 1/2" thick polypropylene, natural in color, and U.V. stabilized, to incorporate a multi three-piece design, which allows for individual removal and inspection if necessary. The tank cover will be recessed 3/8" from the top of the tank and will be welded to both sides and longitudinal partitions for maximum integrity. Each one of the covers will have hold downs consisting of 2" polypropylene dowels spaced a maximum of 30" apart. These dowels will extend through the covers and become welded to the transverse partitions. This will assist in keeping the cover rigid under fast filling conditions. A minimum of two lifting dowels will be drilled and tapped 1/2" X 13" to accommodate the lifting eyes.

TANK FILL TOWERS

NFPA complaint tank fill towers shall be accessible through the floor of the roof walkway. Latching, weather tight door(s) will be provided above the fill tower doors. The fill tower covers shall be marked as a water and foam tank fill points, respectively.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

OVERFLOW AND VENT PIPE

The fill tower will be fitted with an integral 4" I.D. schedule 40 P.V.C. combination overflow/vent pipe running from the fill tower through the tank to a 4" coupling flush mounted into the bottom of the tank to allow water to overflow behind the chassis rear axle.

TANK SUMP

The tank sump will be a minimum of 10" wide x 10" long x 3" deep. An anti-swirl plate will be mounted inside the sump, approximately 1" above the bottom of the sump.

A 3" drain plug will be provided.

OUTLETS

There will be two (2) standard tank outlets; one for tank-to-pump suction line which will be a minimum of 4" coupling and one for a tank fill line which will be a minimum of a 2" N.P.T. coupling. All tank fill couplings will be backed with flow deflectors to break up the stream of water entering the tank.

TANK MOUNTING

The tank will rest on the body cross members spaced a maximum of 22" apart, and will be insulated from these cross members with a minimum of 3/8" nylon webbing or 1/2" rubber, 2-1/2" wide. The tank will sit cradle-mounted using four (4) corner angles of 6 x 6 x 4 x 0.250 welded directly to the body cross members. The angles will keep the tank from shifting left to right or front to rear. The tank is designed on the free-floating suspension principle and will not require the use of hold downs. The tank will be completely removable without disturbing or dismantling the apparatus body structure. The body or hose bed cross braces will act as water tank retainers.

The tank shall be located over the rear axle between compartments L3 and R3.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

WALK-AROUND RESCUE BODY & EQUIPMENT

RESCUE BODY DESIGN CONSTRUCTION

The body side and compartment assemblies will be designed and assembled to provide maximum strength and durability under all operating conditions.

Special attention will be taken to minimize rust on all fabricated parts and structural members of the body. All bolt-on components will be provided with a dissimilar metals isolation barrier to prevent electric corrosion. The body design will also incorporate removable panels to access spring hangers, rear body mounts, and fuel tank sending units.

The body will be an all Heliarc welded construction for maximum strength and integrity for the entire life of the apparatus. The body assembly will be a single unit completely isolated from the cab.

BODY AND COMPARTMENT FABRICATION - 3/16" ALUMINUM

All compartment panels and body side sheets will be entirely 3/16" aluminum (5052-H32). Each side compartment assembly will be both plug welded and stitch welded to ensure proper weld penetration on all panels while avoiding the possible warping caused by a full seam weld. The side compartments will be welded on a fixture to ensure true body dimensions of all door openings. The side compartments and body side panels are then set into a body squaring fixture where the super structure is installed and the entire body is aligned to be completely symmetrical. The super structure is then welded to the compartment side panels and reinforcement plates are inserted which allows the compartment panels to become an integral component of the body support structure. A full seam weld will not be used due to the applied heat which will distort sheet metal and remove the protective coating from the perimeter of the welded area. All seams will be caulked prior to finish paint to ensure proper compartment seal.

100" WIDE RESCUE BODY

The rescue body will be 100" wide to provide the maximum amount of usable compartment space and to extend the body fenderettes outward for better tire tread coverage.

SUPER STRUCTURE - ALUMINUM

The body super structure will be an all welded configuration utilizing a combination of 3" x 1-1/2" 6061-T6 thick walled structural tubing and 6061 structural channel.

This structure will be designed to totally support the full length and width of the body and will be welded to the body side compartments by use of reinforcement plates to incorporate the compartments into an integral part of the body weldment.

The super structure will be bolted to the sides of the chassis frame at four (4) points.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

STEPPING, STANDING, & WALKING SURFACES

All stepping, standing, and walking surfaces on the body will meet NFPA #1901 anti-slip standards. Aluminum tread plate utilized for stepping, standing, and walking surfaces will be ALCOA No Slip type. Upon request by the Purchaser, the manufacturer will supply proof of compliance with this requirement.

All vertical surfaces on the body, which incorporate aluminum tread plate material, will utilize the same material pattern to provide a consistent overall appearance. **NO EXCEPTIONS!**

BODY ROOF COMPARTMENTS

Roof hatch style compartments will be provided rearward of the light tower well on both sides, with a center walkway aisle.

A tread plate overlay will be provided on the light tower well floor to meet NFPA 1901 standards for walking surfaces. A 1/8" aluminum panel will be provided on the outer walls to act as both a wire cover and double wall to protect the body side sheet. The Light tower will be installed on an approximate 3" riser in the event the drains become blocked.

The compartments located rearward of the light tower well will be labeled R-1 through R-4 starting with R-1 at the left front, R-2 left rear, R-3 right front, R-4 right rear.

Each roof compartment will be a maximum 27" deep (left to right). The compartment height (max. depth of 32") is dependent on the overall height limitation of the vehicle.

Each roof compartment will be equipped with an overlapping hinged lift up tread plate door. These doors will be constructed of 3/16" tread plate with a 15° break on all sides. An "L" handle latch will be provided with an automotive 2-point slam latch. Each compartment will be equipped with a floor drain with a minimum 1" diameter plastic tube to direct the water below the rescue body.

The walkway floor support will consist of a 3" x 1-1/2" channel welded full length to the back side of the compartment walls with cross supports welded on 16" centers. A 1/8" tread plate walkway floor will be provided. The walkway sides will be .083" aluminum.

LEFT SIDE COMPARTMENT #1

- 68" high x 47 1/4" wide x 29" deep
- Roll-up door
- Door opening: 64" high x 44" wide
- Clear opening: 58" high x 41" wide

Compartment L-1 will be transverse over the frame rails.

The following accessories will be installed:

- One (1) #250 floor mounted, half depth, rollout tray(s)
- One (1) floor extension

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

LEFT SIDE COMPARTMENT #2

- 68" high x 28 1/8" wide x 29" deep
- Roll-up door
- Door opening: 64" high x 26" wide
- Clear opening: 58" high x 23" wide

Compartment L-2 will be transverse over the pump module.

The following accessories will be installed:

- Pump module and controls

LEFT SIDE COMPARTMENT #3

- 35 3/4" high x 62 1/2" wide x 29" deep
- Roll-up door
- Door opening: 32" high x 58" wide
- Clear opening: 26" high x 55" wide

The following accessories will be installed.

- One (1) rollout, drop down tray(s)

LEFT SIDE COMPARTMENT #4

- 68" high x 41 1/4" wide x 29" deep
- Roll-up door
- Door opening: 64" high x 38" wide
- Clear opening: 58" high x 35" wide

The following accessories will be installed:

- Two (2) adjustable shelf(s)
- One (1) #250 floor mounted, half depth, rollout tray(s)
- One (1) rollout, drop down tray(s)

RIGHT SIDE COMPARTMENT #1

- 68" high x 47 1/4" wide x 29" deep
- Roll-up door
- Door opening: 64" high x 44" wide
- Clear opening: 58" high x 41" wide

Compartment R-1 will be transverse over the frame rails.

- The following accessories will be installed:
- One (1) #250 floor mounted, half depth, rollout tray(s)
- One (1) floor extension

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

RIGHT SIDE COMPARTMENT #2

- 68" high x 28 1/8" wide x 29" deep
- Roll-up door
- Door opening: 64" high x 26" wide
- Clear opening: 58" high x 23" wide

Compartment R-2 will be transverse over the pump module.

The following accessories will be installed:

- Pump module and controls

RIGHT SIDE COMPARTMENT #3

- 35 3/4" high x 62 1/2" wide x 29" deep
- Roll-up door
- Door opening: 32" high x 58" wide
- Clear opening: 26" high x 55" wide

The following accessories will be installed:

- One (1) rollout, drop down tray(s)

RIGHT SIDE COMPARTMENT #4

- 68" high x 41 1/4" wide x 29" deep
- Roll-up door
- Door opening: 64" high x 38" wide
- Clear opening: 58" high x 35" wide

The following accessories will be installed:

- Two (2) adjustable shelf(s)
- One (1) #250 floor mounted, half depth, rollout tray(s)
- One (1) rollout, drop down tray(s)
- Two (2) adjustable shelf(s)

REAR COMPARTMENT

- **68" high x 42" wide x 41" deep**
- Roll-up door
- **Door opening: Height reduced to accommodate the specified Code 3 Narrow Stik x 38" wide**
- **Clear opening: High as possible per above x 35" wide**

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

WINCH RECEIVER POINT - EACH SIDE OF THE BODY

A receiver point will be provided beneath the rub rail toward each side of the Rescue body for a portable winch. The receiver point will be a 2 1/2" x 2 1/2" x 1/4" full width of body seamless steel tube welded and gusseted to 3" x 1 1/2" steel channel directly bolted to four points on the chassis frame rails. A 12v electrical connection with a quick disconnect compatible with the portable winch will be provided adjacent to the receiver point. A plastic end cap will be provided for the quick disconnect.

ELECTRIC WINCH

A Warn Series XD9000i, 9000 lb. portable electric winch will be provided to mount in the specified winch receivers. The winch will be equipped with the portable framework, 12v quick connection, an automatic, direct drive cone brake, heavy duty thermally protected series wound industrial electric motor and a hardened steel 3-stage planetary gear train.

A 12' remote control head will be provided with the remote plug mounted directly on the winch housing. **The winch will be equipped with 100' of synthetic industrial grade winch line, including hook, to match the rated capacity of the winch.** A four way fair lead roller assembly will be provided at the winch opening.

The winch will meet all SAE J706 requirements as outlined NFPA -1901.

RAPPELLING HITCHES

Two (2) chrome plated eyelets, each mounted into a 2" x 2" steel tube will be provided to be inserted into the specified receivers on the apparatus for rappelling applications or other rope anchoring operations. Working load of each hitch will be 500#.

TRAILER HITCH AND RECEIVER

A trailer receiver will be provided at the rear of the body and will be constructed from 2 1/2" seamless structural steel tubing fastened to the chassis frame.

A 12 volt electrical connection with a quick disconnect compatible with a portable winch will be provided adjacent to the receiver point. A plastic end cap will be provided for the quick disconnect.

A seven (7) round pin connector will be provided for towing purposes and connected to an electronic brake controller.

ZICO FOLDING ROOF ACCESS LADDER

A Zico RL-2-6 Quic-Ladder, swing out & down vehicle ladder will be provided on the right rear body corner. The ladder will store parallel to the body. A spring loaded locking handle will keep the ladder stored to the body. Releasing the lock will allow the ladder to pull out to allow for climbing at a comfortable and safe angle. The ladder will automatically latch and will not retract until the scissor lock is raised.

The standard configuration has a two-rung fold-down section and a six-rung main ladder section. All rungs are cast aluminum with a flat nonskid surface for traction and safety. Handrails will be 1 1/4" heavy walled aluminum tubing, which provides a firm gripping surface.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

ROLL-UP DOORS

Roll-up doors will be provided on all compartments. The roll-up doors will be constructed from aluminum extruded slats which will have a flexible seal between each slat for proper sealing of the door.

A synthetic rubber seal will be provided at each side, top, and bottom edge of the door to prevent entry of dirt into the compartment.

The door will be equipped with a lift bar style latch mechanism which will latch at the bottom of the door mounting extrusion.

The roll-up door assembly will be furnished with a spring-loaded, counter balance assembly to assist in door actuation.

All running board and high side compartments will be equipped with roll-up doors.

ROBINSON ROLL-UP DOORS

The roll-up doors will be Robinson (ROM) brand roll-up doors. The doors and tracks will be painted to match the required color of the fire department.

A total of eight (8) painted doors will be provided.

PROTECTION PANEL(S)

Nine (9) protection panel(s) will be provided at the top of all body exterior compartments fitted with roll-up doors. The panel(s) will be installed below the roll-up area to prevent possible damage to the roll-up door by misplaced equipment. Each protection panel will be bolted in place and have a brushed plain aluminum finish.

PULL STRAPS

Pull straps will be provided for all, roll-up doors.

SWEEP-OUT COMPARTMENT FLOORS

Compartment floors will be welded to the compartment walls and have a sweep out design for easy cleaning.

Compartments with hinged doors will have the door opening flanges bend down to produce the sweep-out design.

Compartments with roll-up style doors will have the external floor flange stepped down, 1/2" high x 2" deep, to produce a sealing surface for the roll-up doors below the compartment floor. The sweep out design will also permit easy cleaning.

Compartments set on running boards, which could cause additional corrosion potential, are not acceptable.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

DRIP MOLDING

Drip molding will be provided directly over all of the compartment doors.

COATED FASTENERS - (NO EXCEPTIONS)

All exterior fasteners will be coated stainless steel screws. Screw threads will be coated with reusable, self-locking, sealing material to provide vibration resistance. Screw heads will be coated with a sealing element to prevent galvanic corrosion between dissimilar metals. Non-coated screws will only be provided as part of vendor supplied component installations.

COMPARTMENT LOUVERS

Ventilation between compartments to atmosphere will be provided and located to avoid water entry into compartments.

ACCESS PANELS

Removable access panels will be provided in all lower compartments to access spring pins, fuel tank sender, electrical junction compartment and rear body mounts.

Protective panels will be located in the rear compartments providing access to the lights and associated wiring. The covers will also serve as protective covers to prevent inadvertent damage to lights or wiring from tools or equipment located in the compartment.

BODY PROTECTION PANELS

The front face of the body side compartments, including the entire forward area of the body, will be overlaid with a polished aluminum tread plate, full height protection panel.

BODY PROTECTION PANELS

The rear surface of the body, around the rear compartment access doors will be overlaid with a polished aluminum tread plate, full height protection panel to protect the painted surfaces around the rear compartment during usage.

BODY SCUFF PANEL

A polished stainless steel scuff plate, approximately 2" x 2" will be installed on the front and rear body corners. The scuff plate will extend the full height of the body corner panel.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

BODY RUB RAILS

Sacrificial aluminum tread plate rub rails will be mounted at the base of the body, extend outward a minimum 3/4", downward 2" and flange inward 1". The rub rails will extend the full length of the main body and wrap around the rear body corners. Rub rails will be designed to bolt to the body from the bottom side of the compartment area, so as not to damage the body side panels on initial impact and to provide for ease of replacement.

REAR BUMPER

A 12" rear bumper will be provided at the rear of the body for protection. The framework will be integral to the sub frame weldment with a bolt on tread plate overlay to allow for ease of replacement or repair. The bumper will be fabricated from aluminum tread plate with mitered corners to prevent snagging.

A grip-strut insert will be installed in the lower rear step.

GRAB RAILS

All hand rails will be 1-1/4" outer diameter, knurled bright anodized aluminum extrusion, designed to meet NFPA 1901 requirements.

Molded gaskets will be installed between the handrail stanchion castings and body surfaces to prevent electrolytic reaction between dissimilar metals and to protect paint.

GRAB RAIL LOCATIONS:

Two (2) at the rear of the rescue body, one (1) each side

SAFETY SIGN(S) AT REAR STEP AND CROSS WALKWAY(S)

Safety sign(s) will be located on the vehicle at the rear step, and at any cross walkway(s), to warn personnel that riding in or on these areas while the vehicle is in motion is prohibited.

REAR WHEEL WELL LINERS

Fully removable, bolt-in, 1/8" aluminum fender liners will be provided. The wheel well liners will extend from the outer wheel well body panel, into the truck frame. Removable vertical splash shields, inward of the wheels, will be provided to give access to the hydraulic components. The completely washable fender liners will be designed to protect the front and rear compartments and main body supports from road salts, dirt accumulation, and corrosion. Fender liners which are welded in place or are only partially removable shall not be considered.

REAR FENDERETTES

The single rear fenders will be equipped with easily replaceable, polished stainless steel fenderettes. The fenderettes will be equipped with a rubber gasket molding between the body panel and the fender. Integral welded crown type liners will not be acceptable.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

AIR BOTTLE STORAGE COMPARTMENTS

A total of six (6) SCBA air bottle storage compartments (8" high x 8" wide x 26" deep) will be inserted into the body fender area on a 5 degree pitch. The compartments will be located with three (3) on the driver side and three (3) on the officer side of the rear body fender panels. The lower portion of the compartments will be non-abrasive to absorb shock and help secure the bottle.

Each storage compartment will be equipped with a polished stainless steel door.

MUD FLAPS

Heavy duty mud flaps will be provided behind the rear wheels.

REAR TOW EYES

Two (2) painted tow eyes will be furnished on the rear of the vehicle. The tow eyes will be made from plate steel and will be bolted directly to the chassis frame rails with grade 8 bolts and will extend below the body. The tow eyes will be smooth and free from sharp edges, and have a minimum eyelet hole of 2-1/2". The tow eyes will be painted.

COMPARTMENT ACCESSORIES

ADJUSTABLE SHELVING

Compartment shelving will be constructed of 3/16" brush finish aluminum with a 2" upward bend at front and rear, and side supports. Shelving will be vertically adjustable with spring nuts in aluminum strut channel.

Adjustable shelves will be located as indicated at each compartment description.

HALF DEPTH SLIDE OUT FLOOR MOUNT SHELVING

Half depth slide out floor mount compartment shelving will be constructed of 3/16" brush finish aluminum with a 2" upward bend at front and rear, and side supports attached to #250 rated slides. The half depth slide out floor mount shelving will have gas shocks to hold the tray in and out.

Half depth slide out floor mount shelving will be as indicated at each compartment description.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

ROLL-OUT/ DROP DOWN TRAYS

The roll out/tilt tray will consist of a 3/16" brushed aluminum finished aluminum tray with a minimum 2" lip on all four sides. Heavy duty aluminum Unistrut "C" channel tracking material will be utilized to securely fasten the slide tracks to the compartment walls, while allowing height adjustment.

The slide mechanism will consist of a low-weight high-strength plastic to create a robust front bracket to support the aluminum tray. The rear of the tip down tray will be mounted on a slider with an integral pivot plate. This slider and pivot plate will be mounted inside an aluminum rail for maximum strength. The tray will be released from the stowed position with the use of a push button and will be capable of auto latching to the stowed position. The front handle/latch will be designed with a double hand hold to control the tray when deployed or stowed. The roll out/tilt tray will be rated for 330# capacity.

Roll out/Tilt trays will be as indicated at each compartment description.

FLOOR EXTENSION

A floor extension constructed of 3/16" aluminum will be provided to extend the transverse floor area above the frame rails to the door opening. Installed immediately below, will be a bottom reinforcement to prevent distortion from accessories mounted on the extension.

Floor extensions will be as indicated at each compartment description.

VERTICAL PULL OUT TOOL BOARD

Two (2) vertical, pull out tool board(s) will be provided and mounted as directed by the fire department. The tool board(s) will be constructed of vertically mounted dual sided PAC-TRAC 7040 series allowing mounting of equipment on both sides of the tool board(s). The tool board will be attached to 250# roller bearing slides at the top and bottom of the tool board. 3/16" aluminum angles will be located at the top of the tool board to guide the tool board. A gas shock will be used to secure the tool board in the stored and deployed position. The tool board will be attached to tracking to allow horizontal adjustment of the tool board.

STOKES BASKET STORAGE

A storage module will be provided for one (1) stokes basket(s). The module will be constructed from 1/8" aluminum. The location will be determined by the fire department.

RESCUE JACKS STORAGE

A storage module will be provided for four (4) rescue jacks. The module will be constructed from 1/8" aluminum. The location will be determined by the fire department.

BACKBOARD STORAGE

A storage module will be provided for one (1) backboard(s). The module will be constructed from 1/8" aluminum. The location will be determined by the fire department.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

AIRBAG STORAGE

A storage module will be provided for six (6) high pressure airbag(s). The module will be constructed from 1/8" aluminum and custom designed. The location will be determined by the fire department.

TURTLE TILE

Turtle Tile brand floor material will be installed on all compartment floors. The Turtle Tile will be custom installed to provide full floor coverage.

Floor matting material will be provided on twelve (12) specified shelf(s) or roll-out tray(s).

The compartment flooring color will be red.

AMKUS EF2S POWER UNITS

Two (2) Amkus Model EF2S Simo Power Units shall be provided and installed high as possible on the forward wall in the transverse portion of compartment L1/R1. Each power unit shall be remotely switched and provided with remote bypass valves at the L1 and R1 compartment door opening respectively. Each power unit shall respectively supply the specified L1 and R1 hydraulic hose reels.

HYDRAULIC REEL

Four (4) Hannay, Model 2016-17-18 electric rewind Hydraulic reel(s) with a capacity of 100 feet of twin hydraulic hose will be provided and **mounted two (2) each side in compartment L1 and R1, respectively.**

Four (4) Hannay 4-way stainless steel roller assembly(s) will be provided on the specified reel(s). The roller assembly opening will be the full width of the reel drum. Support brackets for the roller assembly will be bolted to the hose reel.

HYDRAULIC HOSE - FEED LINE 6'

Eight (8) 6' length(s) of twin hydraulic hose with quick-connect fittings and spring hose retainer will be provided to allow the reel(s) to be powered by the hydraulic power unit.

One (1) remote bypass valve control will be provided for each reel, driver side and officer side respectively, near each hydraulic hose reel.

AMKUS HYDRAULIC HOSE

One hundred feet (100') of Parker, high pressure, twin hydraulic hose for Amkus tools **will be provided on each hydraulic reel.**

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

HYDRAULIC OIL - AMKUS

Twelve (12) gallon(s) of Amkus hydraulic oil will be provided and installed when and where it is needed as specified by the customer.

AMKUS TOOL MOUNTS

SPREADER HOLDER - HORIZONTAL MOUNTING

One (1) Heavy Duty set(s) of one (1) jaw tip holder and (1) or (2) handle brackets, Zephyr 69H-2, tough aluminum alloy castings, anti-bounce feature, with speed pin retainers will be provided and installed with stainless steel hardware as specified by the customer.

CUTTER HOLDER – AMKUS STYLE 25

One (1) cutter holder(s) Zephyr model 59 H for the Amkus style 25 tool(s) horizontal mount kit, free standing, horseshoe yoke stabilizer, speed pin retainer, twin hose guides, aluminum alloy casting, powder coat finish, will be provided and installed with stainless steel hardware as specified by the customer.

RAM HOLDER - AMKUS HORIZONTAL MOUNT

Two (2) ram holder(s) for the Amkus tool, Zephyr model 58, horizontal mounting kit, aluminum alloy casting, stainless steel speed pin retainer, powder coat finish will be installed with stainless steel hardware as specified by the customer.

POWER PACK HOLDER - HORIZONTAL

Two (2) power pack holder(s) two(2) piece rail guides, anti-bounce design, speed pin retainers, powder coated, Zephyr Model 115 series, ordered by make and model number, in-out position i.e., narrow side in-out or wide side in-out. Due to configuration of each manufacturer's model, holders will vary to accommodate each particular unit.

AIR REEL(S)

One (1) Hannay, Model 1514-17-18 electric rewind, air reel(s) will be mounted per customer requirements. The reel will be piped to an auxiliary tank on the chassis air system. A check valve will be provided to ensure the chassis air brake system is not affected.

One (1) 4-way stainless steel roller assembly(s) will be provided on the specified air reel(s). The roller assembly opening will be the full width of the reel drum. Support brackets for the roller assembly will be bolted to the hose reel.

One hundred feet (100') of 3/8" I.D. Goodyear brand air hose with hose stop will be provided on the air reel.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

110/220 VOLT A.C. ELECTRICAL AND GENERATOR SECTION

120/240 VOLT ELECTRICAL SYSTEM TESTING

All line voltage wiring and permanently connected devices and equipment will be subjected to a dielectric voltage withstand test of 900 volts for one minute. The test will be conducted between live parts and the neutral conductor and between live parts and the vehicle frame with any switches in the circuits closed. The test will be conducted after all bodywork has been completed. The dielectric tester will have a minimum 500 VA transformer with a sinusoidal output voltage that can be verified.

Electrical polarity verification will be made of all permanently wired equipment and receptacles to determine that connections have been properly made.

OPERATIONAL TESTING

The apparatus manufacturer will perform the following operation test and will certify that the power source and any devices that are attached to the line voltage electrical system is properly connected and in working order.

The generator will be started from a cold start condition and the line voltage electrical system will be loaded to 100 percent of the nameplate voltage rating.

The following items will be monitored and documented every 15 minutes:

- The cranking time until the generator starts and runs.
- The voltage, frequency, and amperes at continuous full rated load.
- The generator oil pressure, water temperature, transmission temperature, hydraulic temperature, and the battery rate charge, as applicable.
- The ambient temperature and altitude.

The generator will operate at 100 percent of its nameplate wattage for a minimum of two (2) hours.

HYDRAULIC DRIVEN GENERATOR

The generator system will be an Onan model CMHG 25000 GenSet, PTO/Hydraulic, rated at 25,000 watts, 208/104 amps @120/240 VAC, single phase generator. The generator will maintain a 60 Hz frequency between 850 and 3000 rpm.

The generator will consist of hydraulic motor, alternator, cooling fan and a heat exchanger in a stainless steel housing. The reservoir will be a 3 gallon hydraulic tank with an integral filter, gauge, temperature switch, breather, and fill port.

The Onan limited warranty covers virtually everything except routine maintenance for the first five (5) years or the first 1000 hours of operation.

120/240 VOLT WIRING

The generator output conductors will be 4 gauge and the output conductors will be routed through non-metallic conduit 1" in diameter.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

120/240 VOLT DISPLAY

The digital Onan display will be by FRC and will display Hz, voltage, amperage, oil temperature, and hours. The meter will be installed near the breaker panel.

GENERATOR PTO

A hot shift PTO will be provided on the transmission for the Onan generator. The PTO will be controlled from the cab. The control will include a PTO engagement switch and a PTO engaged indicator light.

GENERATOR WARRANTY

The specified generator will have a five (5) year or one thousand (1000) hour warranty as provided by the generator manufacturer. A copy of the generator warranty will be provided at time of delivery.

GENERATOR LOCATION

The generator will be permanently mounted in the front of the upper body walkway.

Locating the generator greater than 144" from the main breaker panel may require the installation of an additional power disconnecting means.

120/240 VOLT LOAD CENTER

The generator output line conductors will be wired from the generator output connections to a Square D, model #QO120L125G breaker panel. The breaker panel will be equipped with a properly sized main breaker using two (2) of the twenty (20) spaces which leaves a total of eighteen (18) available spaces.

The generator output conductors will be sized to 115% of the main breaker rating and will be installed as indicated in the wiring section.

Ten (10) appropriately sized, 120 volt, circuit breakers will be provided.

Four (4) appropriately sized, 240 volt, circuit breakers will be installed in place of eight (8) standard 110 volt circuit breakers.

The breaker panel will be located in an enclosed compartment as directed by the fire department.

120 VOLT TRANSFER SWITCH

An automatic power relay will be installed to allow interior 120 volt accessories to be powered by the 120 volt shoreline or the generator. The transfer switch will be located in a separate box located next to the main power distribution panel. The interior accessories to be powered by the shoreline will be wired through a separate sub-panel breaker box with individual circuit breakers as required. This will allow for a continuous power supply to the interior accessories while the apparatus is parked in the station. The maximum load for the transfer / relay will be 20 amps at 120 volts.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

120/240 VOLT WIRING METHODS

Wiring/conduit will not be attached to any chassis suspension components, water or fuel lines, air or air brake lines, fire pump piping, hydraulic lines, exhaust system components, or low voltage wiring.

All wiring will be installed at a minimum of 12 inches away from any exhaust piping and a minimum of 6 inches from any fuel lines.

All wiring will be securely clamped within 6 inches of any junction box and at a minimum of every 24 inches of run. All supports will be of nonmetallic material or corrosion protected metal. All supports will not cut or abrade conduit or cable and will be mechanically fastened to the vehicle.

All power supply assembly conductors, including neutral and grounding conductors, will have an equivalent amperage rating and will be sized to carry not less than 115% of the main breaker rating.

All Type SO or Type SEO cable not installed in a compartment will be installed in wire loom. Where Type SO or Type SEO cable penetrates a metal surface, a rubber or plastic grommet or bushing will be provided.

The installation of all 120/240 wiring will meet the current NFPA-1901 Standards (NO EXCEPTIONS).

120/240 VOLT WIRING IDENTIFICATION

All line voltage conductors located inside the main breaker panel box will be individually and permanently identified. When pre-wiring for future power wiring installations, the non-terminated ends will be labeled showing function, and wire size.

120/240 VOLT GROUNDING

The neutral conductor of the power source will be bonded to the vehicle frame only at the power source.

The grounded current carrying conductor (neutral) will be insulated from the equipment grounding conductors and from the equipment enclosures and other grounded parts. The neutral conductor will be colored white or gray.

In addition to the bonding required for the lower voltage return current, each body and driving/crew compartment enclosure will be bonded to the vehicle frame by a copper conductor. The conductor will have a minimum amperage rating of 115 percent of the name plate current rating of the power source specification label.

120/240 VOLT CIRCUIT BREAKER / RECEPTACLE INSTALLATION

The system will be installed by highly qualified electrical technicians to assure the required level of safety and protection to the fire apparatus operators. When multiple circuit are required, the circuits will be wired to the breaker panel in a staggered configuration to minimize electrical loads on each breaker or generator (leg) circuit. The wiring, electrical fixtures and components will be to the highest industry quality standards available on the domestic market. The equipment will be the type as designed for mobile type installations subject to vibration, moisture, and severe continuous usage.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

120/240 VOLT RECEPTACLE INSTALLATIONS

Any receptacle installed in a wet location must be a minimum of 24 inches above the ground and provided with an approved wet location cover. Wet receptacles may not be mounted at more than 45 degrees from vertical, nor can they be mounted in a face-up position.

One (1) 110 volt, NEMA L5-20, 20 amp, Single twist-lock receptacle with a grey thermoplastic, corrosion resistant, weatherproof cover will be installed at each side of the front bumper extension end caps. (Total of two (2))

Both receptacles will require one (1) 20 amps, 110 volt circuit breaker to be installed in the load center.

Two (2) 220 volt, NEMA L6-30, 30 amp, single twist-lock receptacles with a grey thermoplastic, corrosion resistant, weatherproof cover **will be installed in compartment L1/R1 to supply the specified Amkus power units.**

Each receptacle will require one (1) 30 amp, 220 volt circuit breaker to be installed in the load center.

REMOTE SWITCHING 220-VOLT RECEPTACLES

One (1) remote switch will be provided for each 220-volt receptacle in compartment L1/R1, conveniently located near the door opening of compartment L1 and R1, respectively.

ELECTRIC CABLE REELS

Two (2) Hannay Model #ECR-1620-17-18, 120 volt, electric rewind cord reels will be provided and wired to the breaker panel. The reels will be securely mounted and equipped with a rewind control adjacent to the reel.

The cord reels will be mounted as directed by the fire department.

The circuit breaker used to protect any device attached to the cord reel will be sized to the smallest electrical connection used.

ELECTRIC CABLE

Two hundred (200) feet of Type SO yellow 10/3 heavy duty electric cable will be provided on each of the reels.

JUNCTION BOX(ES)

Two (2) Extenda-Lite, four (4) outlet junction box(es) with four (4) NEMA L5-20R twist-lock receptacles direct wired on the end of the cable will be provided.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

CABLE ROLLER ASSEMBLY

Two (2) four (4) roller assembly(s) will be provided adjacent to each cord reel to provide unobstructed deployment and rewinding of the cable.

Two (2) cable ball stop(s) will be installed on the cable to keep the cable end from passing through the roller assembly.

Two (2) holder(s) constructed from 1/8" aluminum tread plate will be provided for each cord reel(s) junction box. The location of the holder will be adjacent to the cord reel roller assembly or as directed by the fire department.

WILL-BURT NIGHTSCAN LIGHT TOWER

A Will-Burt Nightscan 3.0, model NS 3.0-6000 OPT surface mounted light tower will be provided and mounted as specified.

The light tower will be equipped with four (4) 1500-watt, 240-volt quartz halogen FRC Optimum light fixtures to provide a total of 6,000 watts of lighting. The light tower uses an RCP (Remote Control Positioner) attached to the end of the mast to allow full rotation and independent tilt (Dual Tilt) of the right and left light banks at any vertical height to ensure total scene coverage in two separate directions. The light tower extends to a maximum height of eleven (11) feet from the mounted surface and auto stows to a maximum height of 13.5 inches from the mounted surface. A 12 volt vertical look-up light will be provided on the light tower base to automatically illuminate the operational envelope of the mast.

The light tower's functions including "auto stow," are operated by a pistol grip remote control hardwired into the tower. The remote control will be mounted in a body compartment as specified.

The four (4) 1500-watt light heads will require two (2) 240-volt, two pole 15-amp circuit breakers.

The horizontal light tower will be recessed mounted on top of the rescue body, centered at the front. The well depth provided will be 12". Tread plate will be provided only on the floor of the well to maintain a walking surface. Painted covers will be provided to cover the back of all lights recessed in the body side sheets.

RECESSED WELL FOR HORIZONTAL MOUNTED LIGHT TOWER

A recessed well will be provided for light tower installation. The interior of the well will be painted job color with an aluminum tread plate floor overlay. The well will reduce the size of the specified upper body compartments. Water drainage will be provided.

LIGHT TOWER WELL TREAD PLATE OVERLAY

The light tower well interior walls will be covered with aluminum tread plate overlays.

**KME FIRE APPARATUS
WALK AROUND RESCUE – COMMERCIAL CHASSIS**

THIS PAGE INTENTIONALLY LEFT BLANK

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

MISCELLANEOUS EQUIPMENT

PIKE POLES AND HOLDERS

PIKE POLE STORAGE

Three (3) pike pole tube(s) will be provided. Each holder will be equipped with a spring type holder and will be accessible from the rear of the apparatus. Each pike pole holder will be labeled to indicate the pike pole length.

The pike pole tube(s) shall be mounted in the specified pike pole / attic ladder storage compartment.

ISOLATED PIKE POLE / FOLDING LADDER COMPARTMENT

A recessed compartment to accommodate two (2) 8' long pike poles, one (1) 6' long pike pole, and one (1) 8' folding ladder will be provided on the officer's side wall of the roof walkway. Aluminum storage tubes will be provided inside the compartment.

ADDITIONAL ITEMS SUPPLIED WITH THE VEHICLE

- 1 - Pint of touch up paint for each color
- 1 -Bag of assorted stainless steel nuts and bolts

LOOSE EQUIPMENT

The following items will be provided and **installed** with the completed apparatus at the time of delivery:

HAND LIGHTS

Two (2) Streamlight model "Vulcan" C4 LED rechargeable hand light(s) and 12 volt charger will be installed as directed by the purchaser. Charger will be wired to the chassis battery system.

Five (5) Streamlight model "Survivor" LED rechargeable hand light(s) and 12 volt charger will be installed as directed by the purchaser. Charger will be wired to the chassis battery system.

WHEEL CHOCKS

Two (2) ZICO #SAC-44 folding wheel chocks will be mounted forward of the rear wheels on the driver side below the side running board compartments.

**KME FIRE APPARATUS
WALK AROUND RESCUE – COMMERCIAL CHASSIS**

THIS PAGE INTENTIONALLY LEFT BLANK

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

PAINT SECTION

PAINT, PREPARATION AND FINISH

The PPG Delta, Low V.O.C., polyurethane finishing system, or equal, will be utilized. A "Clear Coat" paint finish will be supplied to provide greater protection to the quality of the exterior paint finish.

All removable items, such as brackets, compartment doors, etc. will be painted separately to insure finish paint behind mounted items. All compartment unwelded seams exposed to high moisture environments will be sealed using permanent pliable caulking prior to finish paint.

BODY PRIMER & PREPARATION

All exposed welds will be ground smooth for final finishing of areas to be painted. The compartments and doors are totally degreased and phosphatized. After final body work is completed, grinding (36 and 80 grit), and finish sanding will be used in preparation for priming.

BODY FINISH PAINT

The body will be finish sanded and prepared for final paint. Upon completion of final preparation, the body will be painted utilizing the highest quality, state of the art, low V.O.C., polyurethane base paint. Finish paint will be applied in multiple coats to ensure proper paint coverage with a high gloss finish.

The entire body will be buffed and detailed.

BODY PAINT

The inside and underside areas of the complete body assembly will be painted black, prior to the installation of the body on the chassis or torque box.

COMPARTMENT PAINT

The interior of the compartments will be finish painted with Zolatone #20-63 Marble Stone scuff resistant paint to provide a protective application over all of the compartment interior surfaces.

BODY PAINT

The body paint finish will be PPG Delta System in a single color, to match customer furnished paint codes and requirements.

PUMP / PIPING PAINT

The pump enclosure and pump/plumbing within the pump enclosure will be painted black.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

CHASSIS CAB PAINT

The commercial cab exterior will be finish painted in a two tone color scheme by the chassis manufacturer with Purchaser's choice of colors as available.

WHEEL PAINT

The chassis wheels will be painted as provided by the commercial chassis manufacturer.

PAINT CODES

The paint shall match the customer's 2006 KME Pumper, GSO-6384. The paint code(s) shall be as indicated below:

- **PRIMARY PAINT COLOR**

Single Color: RED Paint Code # 70853

- **SECONDARY PAINT COLOR**

Two/Tone Color: White Paint code # 8717

TOUCH-UP PAINT

One (1) pint of each exterior color paint for touch-up purposes will be supplied when the apparatus is delivered to the end user.

FINALIZATION & DETAILING

Prior to delivery the vehicle, the interior and exterior be cleaned and detailed. The finalization process detailing will include installation of NFPA required labels, checking fluid levels, sealing and caulking required areas of the cab and body, rust proofing, paint touch-up, etc.

RUST PROOFING

The entire unit will be thoroughly rust proofed utilizing rustproof and sound deadening materials applied in manufacturer recommended application procedures. Rust proofing will be applied during the assembly process and upon completion to insure proper coverage in all critical areas.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

LETTERING AND STRIPING

COMPUTER GENERATED LETTERING

The lettering and striping will be custom designed utilizing state of the art computer software and computerized cutting machines. The manufacturer will employ a full time artist / designer to generate all lettering, decals, and striping to meet the requirements of the Fire Department. The artwork for the lettering and striping will be kept on record by the apparatus manufacturer to allow for ease in duplication for the Fire Department.

The lettering and striping will be closely similar to the Fire Department's 2006 KME Pumper, GSO-6384. (See photos attached to each respective part number in this rescue quotewriter file.)

FRONT CAB DOOR LETTERING

Gold leaf, "Sign Gold", with drop shadow lettering will be provided on the cab driver's and officer's doors per the fire department requirements. The design of the lettering on the cab doors will be designed to fit in the 496 sq. inches available.

Lettering provided on the driver's and officer's cab doors will be 3" high.

REAR BODY LETTERING

Gold Scotch-Lite with drop shadow lettering will be provided on the rear body panel per the fire department requirements. The design of the lettering on the rear of the body will be designed to fit in the 167 sq. inches available.

REAR BODY

Lettering provided on the rear body panel will be custom height per Fire Department and engineering design.

BODY SIDE SHEET LETTERING

Gold leaf, "Sign Gold", with drop shadow lettering shall be provided on the body side sheet per the fire department requirements. The design of the lettering on the body side sheet shall be designed to fit in the 2500 sq. inches available.

Lettering provided on the body side sheet shall be 10" high.

The lettering will display "RESCUE 3".

LETTERING FONT

The lettering shall be designed and cut with font to match the fire department's 2006 KME Pumper, GSO-6384.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

CUSTOM FIRE DEPARTMENT LOGOS

A pair of custom fire department maltese cross logos shall be computer generated and will be no larger than the 496 sq. inches available. The logos shall match the fire department's existing KME pumper and shall be applied on the front cab doors. "HAMPSHIRE" shall display in the upper portion of the maltese cross and "COUNTY" will display in the lower portion.

A second pair of custom fire department West Virginia logos shall be computer generated and will be no larger than the 496 sq. inches available. The logos shall match the fire department's existing KME pumper and shall be applied on the rear cab doors. Exact text will be determined later.

The maltese cross shall be printed on Gold leaf, "Sign Gold", with two computer generated printed colors.

The West Virginia state outline will be white Scotchlite, with the text to be determined later.

LARGE CUSTOM FIRE DEPARTMENT LOGO

A single custom fire department Maltese cross logo will be computer generated and will be no larger than the 1200 sq. inches available.

The standard logo will be printed on Scotch-Lite with two computer generated printed colors.

The custom logo will match the fire department's existing KME pumper and be located on the rear compartment door.

NFPA REQUIRED SCOTCH-LITE STRIPING

SCOTCH-LITE STRIPE

A four (4) inch high "Scotch-Lite" stripe will be provided. The stripe will be applied on a minimum of 60 percent of each side of the unit, 60 percent on the rear of the unit and 40 percent on the front of the unit. The Scotch-Lite stripe layout will be determined by the Fire Department.

The Scotch-Lite will be white in color.

A four (4) inch simple "Z" effect shall be incorporated into the Scotch-Lite scheme on the body. Final layout of this configuration shall match the customer's 2006 KME Pumper, GSO-6384.

SCOTCH-LITE ACCENT STRIPES

A 1" high Scotch-Lite material accent stripe will be incorporated into the Scotch-Lite scheme to border the primary Scotch-Lite stripe on the top and bottom edges. Final layout of this configuration will be determined by the Fire Department.

The Scotch-Lite striping shall match the fire department's existing KME pumper.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

1" REFLEX-LITE RED/WHITE ON PULLOUTS

Up to twenty (20) 1" wide reflective stripes will be installed on each side and front of the body pullout trays, shelves and the ladder rack support arms (if applicable). Material to be Reflex-Lite, Diamond Grade, with alternating RED - WHITE reflective striping.

NOTE: Approx. 60' of striping.

REAR CHEVRON STRIPING

At least 50% of the rear facing vertical surface will be covered with alternating strips of reflective striping.

Chevron striping will be applied to the driver side and officer side rear body panels.

The striping will be 6" Diamond Grade Scotch-Lite.

The Diamond Grade Scotch-Lite will be Red #983-72 and Yellow #983-71 in color.

**KME FIRE APPARATUS
WALK AROUND RESCUE – COMMERCIAL CHASSIS**

THIS PAGE INTENTIONALLY LEFT BLANK

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

WARRANTIES & REQUIRED INFORMATION

WARRANTY {ONE YEAR} INTERNATIONAL 7400 SERIES

Revised 7/2010

DISCLAIMER

NO WARRANTIES ARE GIVEN BEYOND THOSE DESCRIBED HEREIN. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. THE COMPANY SPECIFICALLY DISCLAIMS WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ALL OTHER REPRESENTATIONS TO THE USER/PURCHASER, AND ALL OTHER OBLIGATIONS OR LIABILITIES. THE COMPANY FURTHER EXCLUDES LIABILITY FOR INCIDENTAL AND CONSEQUENTIAL DAMAGES ON THE PART OF THE COMPANY OR SELLER.

No person is authorized to give any other warranties or to assume any liabilities on the Company's behalf unless made or assumed in writing by the Company; and no other person is authorized to give any warranties or to assume any liabilities on the seller's behalf unless made or assumed in writing by the seller.

Remedies under State or Provincial Law: Some States and Provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to the owner. This warranty gives the owner specific legal rights, and he may also have other legal rights which may vary by state or province.

BASIC VEHICLE

Navistar, Inc., at its option, will repair or replace any part of this vehicle which proves defective in material and/or workmanship in normal use and service, with new or renewed parts, for the first 12 months from new vehicle delivery date, regardless of distance traveled. Exceptions are listed below under What Is Not Covered. This warranty is automatically transferred to subsequent owners at no charge.

COMPONENT COVERAGE

The components described below are given additional warranty coverage of variable time periods and distance traveled limitations, as shown in the Warranty Coverage Schedule.

- Frame Side Rails.
- Cab/Cowl Structure (on-highway applications).
- The Cab/Cowl is warranted against perforation due to corrosion, except for perforation caused by industrial chemicals and/or corrosion caused by use in a corrosive industrial environment.
- Navistar Diesel Engines including: block, cylinder heads, fuel pump, high pressure pump, turbocharger, internally lubricated components, and water pump; electronic modules, relays, sensors and regulators required for electronic engine operation; glow plugs, glow plug relay and harness and associated connectors for 12 months/unlimited mileage. Excluding: attaching accessories (e.g., fan clutch, alternator, starter, etc.), thermostats, and externally mounted electrical and filtration systems.
- Spicer front & rear axles, clutch, prop shaft, and transmission; excluding brakes, wheel ends, axle shafts, controls, & attachments.
- Spicer front & rear axles and prop shaft, when used with Allison transmission; excluding brakes, wheel ends, axle shafts, controls & attachments.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

NOTE: The customer has 180 days from DTU (delivery to end user) to purchase any extended warranty on the unit. See your local International dealer for details.

BASIC VEHICLE COVERAGE

- Basic Vehicle Warranty (Feature 40010) - 12 month, Unlimited Miles
- Basic Vehicle Warranty (Durastar Only-Feature 40013) - 12 month, Unlimited Miles

COMPONENTS

- Frame Side Rails - 84 month, Unlimited Miles
- Cab/Cowl Structure - 60 month, Unlimited Miles
- Cab/Cowl Perforation Corrosion - 60 month, Unlimited Miles
- Batteries - 12 month, Unlimited Miles
- Bright work, Chassis Paint and Corrosion (other than Cab) - 6 month, Unlimited Miles
- Cab Paint and Paint Adhesion - 12 month, Unlimited Miles

ENGINE

Fire Trucks, Ambulances, and Emergency Rescue application only

- MaxxForte 7 Engine - 60 month, 100,000 Miles
- MaxxForte 7 Engine glow plugs, relay, harness/connector- 36 month, Unlimited Miles
- MaxxForte DT Engine - 60 month, 100,000 Miles
- MaxxForte 9 Engine - 60 month, 100,000 Miles

DRIVETRAIN

- Spicer axles, Propshaft, Eaton clutch, TTC Transmission - 24 month, Unlimited Miles
- Transfer Case - 24 month, Unlimited Miles
- Transfer Case (73/7400 4x4/4x6 Only) - 12 month, Unlimited Miles
- Eaton/Fuller 6206/6306 Transmission - 24 month, Unlimited Miles
- Meritor Axles (Durastar ONLY) - 36 months unlimited miles
- Meritor Axles - 12 months

Any failures resulting from improper Allied Equipment installation or Equipment compatibility with the Truck components will be the responsibility of the Equipment installer or manufacturer.

Any failures resulting from improper alteration to the original components will be the responsibility of the company or person performing the alterations.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

WHAT IS NOT COVERED

AFTER THE FIRST 90 DAYS FROM DELIVERY TO USER (DTU):

- Correction of loose fasteners, squeaks, rattles, and unusual noises.
- Towing
- Adjustments (e.g., headlights, brake/clutch adjustments, steering system adjustments, coolant levels).

COMPONENTS / ITEMS:

- Warranted by their respective manufacturers (e.g., non Navistar brand engines, tires & tubes, Allison Transmissions, radios, Lubricants, etc.)
- Bodies, equipment, and accessories installed by other than authorized Navistar Truck employees at Navistar Truck manufacturing plants.
- Front and rear axle alignment.

REPAIRS:

- Maintenance-related items/repairs or those as a result of normal wear and tear, including tune-ups, brake/clutch lining, windshield wiper blades, tire balancing, lubrication and other similar procedures/parts required to keep vehicle in good working condition.
- To any part of the vehicle subjected to misuse, negligence, improper maintenance, improper operation, or which are the results of an accident.
- Fade, runs, mismatch or damage to paint, trim items, upholstery, chrome, polished surfaces, etc., resulting from environmental causes, improper polishes, cleaners or washing solutions, or chemical and industrial fallout.
- In which all owners and operators of this vehicle do not strictly adhere to power train, prop shaft and suspension sales guidelines (specifications).

OTHER:

- Vehicles sold and/or operated outside the United States and Canada.
- Vehicles/components which have had unauthorized alterations or modifications.
- Vehicles on which the odometer reading has been altered.
- Loss of time or use of the vehicle, loss of profits, inconvenience, or other consequential or incidental damages or expenses.
- Replacement of defective parts with parts other than those provided by Navistar, Inc.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

NEW PRODUCT WARRANTY - COMMERCIAL CHASSIS

Kovatch Mobile Equipment Corporation ("KME"), hereby warrants to the original purchaser (first end users) that any new products manufactured by KME will be free from defects in material and workmanship under normal use, maintenance and service for a period of one (1) year from date of delivery, subject to the conditions and exceptions stated herein.

Under this warranty, KME'S obligation is limited to the repair or replacement at KME'S option, at its factory, by its representative, or by its authorized service facility, of any part found to be defective by KME. If KME deems it necessary, all parts for which warranty claim is made, will be returned to KME, transportation charges prepaid, for examination by KME who will be the sole judge as to whether such part was defective in material or workmanship under normal use, maintenance, or service.

BODY STRUCTURE WARRANTY

The proposed body will be warranted against structural defects for a period of ten (10) years from the date of acceptance of the unit. Details of warranty coverage, limitations, and exclusions are included in the specific warranty document.

CORROSION WARRANTY

The proposed body will be warranted against rust-through or perforation, due to corrosion from within, for a period of ten (10) years. Perforation is defined as a condition in which an actual hole occurs in a sheet metal panel due to rust or corrosion from within. Surface rust or corrosion caused by chips or scratches in the paint is not covered by this warranty.

PAINT FINISH WARRANTY

The proposed paint finish will be warranted for a period of seven (7) years from the date of acceptance of the unit. Details of warranty coverage, limitations, and exclusions are included in the specific warranty document.

HALE FIRE PUMP LIMITED STANDARD WARRANTY

Hale Products, Incorporated ("Hale") hereby warrants to the original buyer that products manufactured by Hale will be free of defects in material and workmanship for a period of five (5) years from the date product is first placed into service or five and one-half (5 1/2) years from date of shipment by Hale, whichever period will be first to expire. Within this warranty period Hale will cover parts and labor for the first two (2) years and parts only for years three (3) through five (5).

GENERATOR WARRANTY

The proposed generator will have a five (5) year or one thousand (1000) hour warranty as provided by the generator manufacturer. A copy of the generator warranty will be provided at time of delivery.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

NFPA REQUIRED LOOSE EQUIPMENT, PROVIDED BY FIRE DEPARTMENT

The following loose equipment as outlined in NFPA 1901, 2009 edition in accordance with the applicable requirements, will be provided by the fire department. All loose equipment will be installed on the apparatus before placed in emergency service, unless the fire department waives NFPA section 4.21.

Section 10.4.1 Ground Ladders.

It is the responsibility of the purchaser to ensure that all required equipment has been supplied and installed on the apparatus in order to achieve compliance with the standard prior to placing it in service.

10.4.1.1 Ground Ladders. If fire department ground ladders are carried on the apparatus, they shall meet the requirements of NFPA 1931, Standard for Manufacturer's Design of Fire Department Ground Ladders, except as permitted by 10.4.1.2.

10.4.1.2 Stepladders and other types of multipurpose ladders shall be permitted provided they meet either ANSI A14.2 or ANSI A14.5 with duty ratings of Type 1A or 1AA.

Section 10.4.2 Suction Hose or Supply Hose.

If the special service fire apparatus is equipped with a pump, the requirements in 10.4.2.1 through 10.4.2.3 shall apply. It is the responsibility of the purchaser to ensure that all required equipment has been supplied and installed on the apparatus in order to achieve compliance with the standard prior to placing it in service.

10.4.2.1 A minimum of 20 ft (6 m) of suction hose or 15 ft (4.5 m) of supply hose shall be carried.

10.4.2.1.1 Where suction hose is prodded, a suction strainer shall be furnished.

10.4.2.1.2 Where suction hose is provided, the friction and entrance loss of the combination suction hose and strainer shall not exceed the losses listed in Table 16.2.4.1 (b) or Table 16.2.4.1(c).

10.4.2.1.3 Where supply hose is provided. It shall have couplings compatible with the local hydrant outlet connection on one end and the pump intake connection on the other end.

10.4.2.2 Suction hose and supply hose shall meet the requirements of NFPA 1961, Standard on Fire Hose.

Section 10.5 Minor Equipment.

It is the responsibility of the purchaser to ensure that all required equipment has been supplied and installed on the apparatus in order to achieve compliance with the standard prior to placing it in service.

- (1) Two portable hand lights mounted in brackets fastened to the apparatus
- (2) One approved dry chemical portable fire extinguisher with a minimum 80-B:C rating mounted in a bracket fastened to the apparatus
- (3) One 2 1/2 gal (9.5 L) or larger water extinguisher mounted in a bracket fastened to the apparatus
- (4) One self-contained breathing apparatus (SCBA) complying with NFPA 1981, Standard on Open-Circuit Self Contained Breathing Apparatus (SCBA) for Emergency Services, for each assigned seating position. But not fewer than four, mounted in brackets fastened to the apparatus or stored in containers supplied by the SCBA manufacturer
- (5) One spare SCBA cylinder for each SCBA carried, each mounted in a bracket fastened to the apparatus or stored in a specially designed storage space
- (6) One first aid kit
- (7) Two or more wheel chocks. Mounted in readily accessible locations, that together will hold the apparatus. When loaded to its GVWR or GCWR, on a hard surface with a 20 percent grade with the transmission in neutral and the parking brake released
- (8) One traffic vest for each seating position, each vest to comply with ANSI/ISEA 207, Standard for High-Visibility Public Safety Vests, and have a five-point breakaway feature that includes two at the shoulders, two at the sides, and one at the front

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

- (9) Five fluorescent orange traffic cones not less than 28 in. (711 mm) in height, each equipped with a 6 in. (152 mm) retroreflective white band no more than 4 in. (102 mm) from the top of the cone, and an additional 4 in. (102 mm) retroreflective white band 2 in. (51 mm) below the 6 in. (152 mm) band
- (10) Five illuminated warning devices such as highway flares, unless the live fluorescent orange traffic cones have illuminating capabilities
- (11) One automatic external defibrillator (AED)

14.1.8.4 Fire Helmet.

It is the responsibility of the purchaser to ensure that "Fire helmets shall not be worn by persons riding in enclosed driving and crew areas any time the apparatus is placed in service.

14.1.8.4.1 A location for helmet storage shall be provided.

14.1.8.4.2 If helmets are to be stored in the driving or crew compartment, the helmets shall be secured in compliance with 14.1.11.2.

14.1.10 SCBA Mounting.

It is the responsibility of the purchaser to ensure that any SCBA equipment has been supplied and installed on the apparatus in order to achieve compliance with the standard prior to placing it in service.

14.1.10.1 Where SCBA units are mounted within a driving or crew compartment, a positive latching mechanical means of holding the SCBA device in its stowed position shall be provided such that the SCBA unit cannot be retained in the mount unless the positive latch is engaged.

14.1.10.2 The bracket holding device and its mounting shall retain the SCBA unit when subjected to a 9 G force and shall be installed in accordance with the bracket manufacturer's requirements.

14.1.10.3 If the SCBA unit is mounted in a seatback, the release mechanism shall be accessible to the user while seated.

14.1.11 Equipment Mounting.

It is the responsibility of the purchaser to ensure that any equipment installed on the apparatus by them or their subcontractor meets the following requirements prior to placing it in service.

14.1.11.1 All equipment required to be used during an emergency response shall be securely fastened.

14.1.11.2 All equipment not required to be used during an emergency response, with the exception of SCBA units, shall not be mounted in a driving or crew area unless it is contained in a fully enclosed and latched compartment capable of containing the contents when a 9 G force is applied in the longitudinal axis of the vehicle or a 9G force is applied in any other direction, or the equipment is mounted in a bracket(s) that can contain the equipment when the equipment is subjected to those same forces.

Section 15.9.3 Reflective Striping.

It is the responsibility of the purchaser to ensure that Reflective Striping has been supplied and installed on the apparatus in order to achieve compliance with the standard prior to placing it in service.

15.9.3.1 A retroreflective stripe(s) shall be affixed to at least 50 percent of the cab and body length on each side, excluding the pump panel areas, and at least 25 percent of the width of the front of the apparatus.

15.9.3.1.1 The stripe or combination of stripes shall be a minimum of 4 in. (100 mm) in total width.

15.9.3.1.2 The 4 in. (100 mm) wide stripe or combination of stripes shall be permitted to be interrupted by objects (i.e., receptacles, cracks between slats in roll up doors) provided the full stripe is seen as conspicuous when approaching the apparatus.

KME FIRE APPARATUS WALK AROUND RESCUE – COMMERCIAL CHASSIS

15.10 Hose Storage.

It is the responsibility of the purchaser to ensure that any hose storage area includes a positive means to prevent unintentional deployment in order to achieve compliance with the standard prior to placing it in service.

15.10.7 Any hose storage area shall be equipped with a positive means to prevent unintentional deployment of the hose from the top, sides, front, and rear of the hose storage area while the apparatus is underway in normal operations.