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One (1)
00-12-1100

FINANCIAL STABILITY SPECIFICATIONS

With high-profile instances of fire apparatus manufacturers encountering financial difficulties, it is imperative that fire departments be diligent in evaluating the financial position of the companies they solicit to build on their emergency response vehicles. A contact entered into with a company on shaky ground is a dangerous prospect, since conducting business with a manufacturer in such condition could open the department to monumental problems.

Take, for instance, the growing theme of manufacturers *requiring* as opposed to *offering* pre-payment and progressive payment options with a corresponding discount off the price of a vehicle. Such offers are made with an ulterior motive in mind, as it can be generally inferred that manufacturers requiring pre-payments and progressive payments do so because they need your cash *today* to fund production of other vehicles already in the backlog.

Should problems arise, as has been the case in situations too numerous to mention, your department risks losing any down payments already made or even the entire cost of a piece of equipment should certain pre-pay discount situations go awry.

While pre-payment discounts may be enticing, it is important to know just how stable the manufacturer seeking your funds is before you make that commitment. If you enter into one of these agreements and the manufacturer hits a rough patch, it is you that will be hurting, because your funds may not be recoverable. However, if you enter into a contract with a financially sound manufacturer, you will reap all of the benefits of a well-built truck at a lower cost. You may equally, by taking advantage of the time-value of money, be able to afford more truck than initially thought, because funds saved by leveraging pre-payment options could allow you get some added features that you might not necessarily have been able to afford.

With this in mind, it must be noted that Rosenbauer is a company with rock-solid financial stability. This is a statement not made lightly, as we can prove it to you. We can provide language that you can insert into your bid specifications that stipulates that in order for bids to be accepted by a fire department, the company bidding must meet several fiscal criteria.

The first criteria call for the successful bidder to meet a debt-to-equity ratio not exceeding a 2.0 rating. Rosenbauer presently stands at a 1.51 rating, which is well-below the accepted rating. This low number results from Rosenbauer owning more assets with a marginal debt service. This means we are not using lenders to fund our operations, nor our growth.

The second requirement is that the debt coverage ratio of the successful body builder exceeds a 100 rating. The higher the number, the better able a company is to meet its payment obligations with banks

and creditors. Rosenbauer's number is at 279.6, which is nearly three times the required amount. The higher the debt coverage ratio, the easily and more fluidly a company is positioned to pay its monthly obligations and operating costs.

The third criteria require that the equity ratio of the successful bidder must exceed .30 rating. A higher equity ratio indicates that the body builder has increased flexibility to meet its financial obligations which translates into greater financial stability. Rosenbauer currently has an equity ratio of .387 which is well above the accepted rating and an excellent indicator of financial strength.

When exploring and evaluating various manufacturers to consider for building your apparatus, there is little doubt you will find one that stands on as firmly a financial ground as Rosenbauer. While others are experiencing stressful issues that raise doubts as to the companies long-term viability, Rosenbauer continues to demonstrate a strengthening of its financial position in the apparatus manufacturing industry. Because Rosenbauer meets and exceeds all the above-stated financial bid requirements, we are best positioned to ensure customers of a strong relationship with the company, which cannot be claimed by most of our competitors in this volatile market.

The Rosenbauer America Dun and Bradstreet number is 02-447-3584. To acquire a Dun and Bradstreet report, telephone them at 1-800-234-3867 or visit their web site address at www.dnb.com. Dun and Bradstreet is nationally-recognized, independent financial analysis company.

One (1)
01-06-0650

TILT TESTING FACILITIES AND REQUIREMENTS

The apparatus, prior to acceptance, will be required to meet the performance tests of the applicable NFPA Automotive Fire Apparatus Standard. As such, ROSENBAUER shall have the facilities to perform these tests at our manufacturing site. These tests shall include, but not limited to, acceleration, braking and tilt table testing for stability, all specified pump tests, a brake hold test with break away percentages documented, and turn radius tests.

ROSENBAUER has the facilities to perform any of the above tests, and shall not contract with an outside agency to have these tests performed on this apparatus.

ROSENBAUER shall, upon completion of the vehicle, tilt-test and photograph the unit to ensure that this procedure is within acceptable and sound engineering standards and the shall be part of the final delivery manuals.

One (1)
02-00-0500

PERFORMANCE BOND

A 100% Performance Bond, which guarantees delivery AND performance must be supplied by the successful bidder within 20 days of award of the contract. Supply Bonds will not be accepted in place of the requested Performance Bond. Bond must be supplied by the manufacturer of the apparatus. Bonds furnished by salesman or other agents will not be accepted.

One (1)
02-02-0100

PRE-CONSTRUCTION CONFERENCE (AT FIRE DEPARTMENT)

A pre-construction conference shall be conducted at the Fire Department Headquarters, at which time all final designs and equipment mounting locations will be approved, prior to any sheet metal being cut. A factory-trained dealer shall be present during the pre-construction conference to answer any design

questions relating to the layout of the apparatus. All expenses for travel, meals, and lodging shall be included.

One (1)
02-03-0100

QUALITY CONTROL-ISO COMPLIANCE

The body builder must have a implemented policy, detailing its own internal criteria for meeting and exceeding the requirements of ISO 9001 for documenting and establishing a quality control management system for our company.

This system consists of, but is not limited to: extensive product quality control, continuous improvement of business systems, manufacturing processes and supplier relationships. Documented inspection procedures for each manufacturing process are maintained, including internal and external component testing, parts inventory control, regularly scheduled manufacturing training, health and safety training, warranty and customer service management. An active human resources department maintains EOE and EEOC status and an aggressive research and development program is in place to keep the body builder abreast of the changing environment of emergency services vehicles.

The body builder shall be a active member of the Fire Apparatus Manufacturers Association (FAMA). The goal is to provide the highest level of customer support and satisfaction, a working environment that provides for the growth of our employees, promotes teamwork, is flexible yet disciplined, performance driven and committed to the achievement of our goals.

A complete package of all documentation demonstrating the criteria each apparatus must meet during manufacture and before delivery is available at time of bid opening. A summary page or pages shall be included in the bidder's proposal.

One (1)
02-03-0200

SINGLE SOURCE SERVICE / MANUFACTURER

The body builder shall be a "Single Source" manufacturer meeting the requirements specified by the bid specifications. The body builder shall maintain an integrated approach to all aspects of manufacturing including, but not limited to, the chassis and cab, engineered assemblies, apparatus body, pump module, fabricated components, aerial devices, and all related appurtenants. The body builder take sole responsibility of each apparatus we manufacture, guaranteeing parts and service availability within your specified time frames.

Final assembly of the proposed apparatus shall take place on the body builder premises. The chassis and aerial device shall be engineered and manufactured within wholly or partially owned body builder facility eliminating split warranty responsibility.

ONE CALL SERVICE RESPONSE

The body builder assumes the total responsibility for warranty services for each apparatus we build. These services include, but are not limited to, all components used in the manufacture of the apparatus, the specified chassis, cab, and body. A designated factory staff is employee shall maintain a "One Call" warranty and repair service coverage. The local service and sales dealer authorized dealer shall also provide and maintain service facilities and on-site service response capabilities.

In addition, the purchaser may elect to perform warranty services and repairs in the purchasers own service facility while this vehicle is within a warranty coverage period, The body builder will provide all necessary support and consideration. A established policy for customer provided "In House" warranty

service and repair shall be provided. A copy of this policy will be forwarded upon request. A stock a full line of support parts at the factory, which can be expedited to the purchaser's location if necessary.

One (1)
02-06-0100

DELIVERED UNITS

The vehicle manufacturer shall provide a listing of forty (40) recently delivered units of similar design. The list shall include a contact person and phone number who represents the purchaser.

One (1)
02-06-0200

CENTRAL COMPANY OVERVIEW

Please allow us to share with you a brief summary of the history and condition of Central States Fire Apparatus, LLC.

Central States Fire App., LLC is located in Lyons, S.D., where it manufactures a complete line of fire apparatus including pumpers, tankers, rescue units, etc. The company operates in modern facilities consisting of 105,000 sq.ft., which features computer controlled fabricating equipment, down-draft paint booths and CAD system. Production currently averages forty-nine (49) units per month.

Central States began manufacturing fire apparatus in 1979 and incorporated under the laws of South Dakota in 1982. The company specializes in extruded aluminum construction that has been field proven for over twenty-one years.

In view of the changes that our industry has gone through in the past few years, we felt it was important to take advantage of economies of scale, yet be aligned with an organization that is 100% committed to the fire service. Thus, on 5-1-98 Central States merged with Rosenbauer, International of Leonding, Austria and General Safety of Wyoming, Minnesota. Central States looks forward to the opportunity of expanded growth in the domestic and international markets.

Central States is a profitable, financially secure company, and is listed and rated by Dun & Bradstreet. For your convenience, Central States' Duns number is 10-229-2117. Central States Bank is the Home Federal Savings Bank in Crooks, SD. The contact person at the bank is Mr. Mike Fjerstad. Central States Federal ID# is 46-0448012.

Thank you for considering a Central States unit. We are sure that you will be more than pleased with a quality apparatus from Central States.

Feel free to contact us with any questions or concerns you may have regarding our proposal for fire apparatus.

One (1)
02-13-5020

DEMONSTRATION

Fire Department personnel shall be properly instructed as to the proper use of the entire apparatus including, but not limited to, chassis, fire pump system, the apparatus and all equipment. The demonstration shall be made by a factory trained Specialist who shall be responsible for complete instruction as to operation and maintenance of the chassis, and the completed vehicle.

The demonstration specialist shall remain at the Fire Department LOCATION for a sufficient amount of time to provide thorough instructions to all personnel, or as instructed by Chief of the Department. All meals, motel and travel costs shall be the responsibility of the successful bidder.

One (1)
02-13-5030

DELIVERY

The apparatus shall be delivered complete and ready for operation. The apparatus, to insure proper break-in of all components, shall be delivered under its own power - rail or truck freight is not acceptable.

One (1)
01-16-0150

BUMPER TO BUMPER WARRANTY

We warrant each new motorized fire apparatus manufactured by ROSENBAUER AMERICA, LLC for a period of ONE YEAR from the date of delivery, except for chassis and other components noted herein.

Under this warranty we agree to furnish any parts to replace those that have failed due to defective material or workmanship where there is no indication of abuse, neglect, unusual or other than normal service providing that such parts are, at the option of ROSENBAUER AMERICA, LLC, made available for our inspection at our request, returned to our factory or other location designated by us with transportation prepaid within thirty days after the date of failure or within one year from the date of delivery of the apparatus to the original purchaser, whichever occurs first, and inspection indicates the failure was attributed to defective material or workmanship.

The warranty on the chassis and chassis supplied components, storage batteries, generators, electrical lamps and other devices subject to deterioration is limited to the warranty of the manufacturer thereof and adjustments for the same are to be made directly with the manufacturer by the customer.

This warranty will not apply to any fire apparatus that has been repaired or altered outside our factory in any way, which in our opinion might affect its stability or reliability.

This warranty shall not apply to those items that are usually considered normal maintenance and upkeep services: including, but not limited to, normal lubrication or proper adjustment of minor auxiliary pumps or reels.

This warranty is in lieu of all other warranties, expressed or implied, and all other obligations or liabilities on our part. We neither assume nor authorize any person to assume for us any liability in connection with the sales of our apparatus unless made in writing by ROSENBAUER AMERICA, LLC.

One (1)
01-19-0250

ALUMINUM BODY WARRANTY - FIVE YEAR

Rosenbauer America, LLC warrants to the original purchaser only, that the all aluminum body, fabricated by Rosenbauer America, LLC, under normal use and with reasonable maintenance, be structurally sound and will remain free from corrosion perforation for a period of FIVE (5) years.

This warranty does not apply to the following items that are covered by a separate warranty: paint finish, hardware, moldings, and other accessories attached to this body. In addition, this warranty does not apply to any part or accessory manufactured by others and attached to this body.

ROSENBAUER AMERICA, LLC MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT TO THE ALUMINUM BODY AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND HEREBY DISCLAIMED.

Rosenbauer America, LLC will replace without charge, repair or make a fair allowance for any defect in material or workmanship demonstrated to its satisfaction to have existed at the time of delivery or not due to misuse, negligence, or accident. If Rosenbauer America, LLC elects to repair this body, the extent of such repair shall be determined solely by Rosenbauer America, LLC, and shall be performed solely at the Rosenbauer America, LLC factory, or at an approved facility. The expense of any transportation to or from such repair facility shall be borne by the purchaser and is not an item covered under this warranty.

Rosenbauer America, LLC will not be liable for damages and under no circumstances will its liability exceed the price for a defective body. The remedies set forth herein are exclusive and in substitution for all other remedies to which the purchaser would otherwise be entitled.

Rosenbauer America, LLC will be given a reasonable opportunity to investigate all claims. The purchaser must commence any action arising out of, based upon or relating to agreement or the breach hereof, within twelve months from the date the cause of the action occurred.

Note: Surety bond, if required, will cover standard one year warranty period only and will not cover any extended warranties allowed by seller or other component manufacturers.

One (1)
01-20-0250

PAINT WARRANTY FIVE YEAR

The PPG paint performance guarantee will cover the areas of the vehicle finished with the specified product for a period of FIVE (5) years beginning the day the vehicle is delivered to the purchaser.

The areas as outlined on the guarantee certificate will be covered for the following paint failures:

Guarantee Inclusions:

Full apparatus body manufactured and painted by Rosenbauer America. LLC:

1. Peeling or delaminating of the topcoat and/or other layers of paint.
2. Cracking or checking.
3. Loss of gloss caused by cracking, checking, or hazing.
4. Any paint failure caused by defective PPG Fleet Finishes, which are covered by this guarantee.

All guarantee exclusions, limitations, and methods of claims are covered in the full certificate provided to the original purchaser.

Note: Surety bond, if required, will cover standard one year warranty period only and will not cover any extended warranties allowed by seller or other component manufacturers.

One (1)
01-21-0250

LETTERING WARRANTY

Rosenbauer America, LLC warrants to the original purchaser only, that the lettering and striping, installed by Rosenbauer America, LLC, will remain free from defects for a period of two (2) years under normal use.

Rosenbauer America, LLC will replace without charge, repair or make a fair allowance for any defect in material or workmanship demonstrated to its satisfaction to have existed at the time of delivery or not due to misuse, negligence, or accident. If Rosenbauer America, LLC elects to repair this item, the extent of such repair shall be determined solely by Rosenbauer America, LLC, and shall be performed solely at the Rosenbauer America, LLC factory, or at an approved facility. The expense of any transportation to or from such repair facility shall be borne by the purchaser and is not an item covered under this warranty.

Note: Surety bond, if required, will cover standard one year warranty period only and will not cover any extended warranties allowed by seller or other component manufacturers.

One (1)
01-17-0150

FIRE PUMP WARRANTY

A five (5) year warranty for the Darley fire pump shall be provided.

One (1)
01-17-1000

GALVANIZED PLUMBING WARRANTY

Subject to the provisions, limitations and conditions set forth in this warranty, Rosenbauer America, LLC (hereby referred to as "seller"), hereby warrants to each original purchaser only that galvanized plumbing components and ancillary brass fittings used in the construction of the water/foam plumbing system shall be warranted for a period of ten (10) years. This covers structural failures caused by defective design or workmanship, or perforation caused by corrosion, provided the apparatus is used in a normal and reasonable manner. This warranty is extended only to the original purchaser for a period of five years from the date of the delivery and shall terminate upon the transfer of possession or ownership by original purchaser.

This warranty is conditioned upon normal use and reasonable maintenance of such plumbing; prompt written notice of all defects to seller or one of the seller's then authorized dealers in the area; no repair or additions there to except by seller or authorized by it; said defect not resulting from misuse, negligence, accident, remount, overloading beyond applicable weight rating by customer or third parties. If any such conditions are not complied with, this warranty shall become void and unenforceable.

Should repairs become necessary under the terms or the warranty, the extent of that repair shall be determined solely by the seller and shall be performed solely at Rosenbauer America, LLC or a repair facility designated by the seller. The expense of any transportation to or from such repair facility shall be that of the purchaser and is not an item covered by this warranty.

Seller reserves the unrestricted right at any time from time to time to make changes in the design of and/or improvements on its products without thereby imposing any obligation on itself to make corresponding changes or improvements in or on its products theretofore manufactured.

EXCLUSIONS AND LIMITATIONS: THIS MANUFACTURER'S WARRANTY IS PROVIDED IN PLACE OF ANY AND ALL OTHER REPRESENTATIONS OR IMPLIED WARRANTIES. NO PERSON IS AUTHORIZED TO MAKE ANY REPRESENTATIONS OR WARRANTY ON BEHALF OF ROSENBAUER AMERICA, LLC OR ANY OF ITS DISTRIBUTORS OTHER THAN SET FORTH IN THIS MANUFACTURER'S WARRANTY. YOUR RIGHT TO SERVICE AND REPLACEMENT OF PARTS ON THE TERMS EXPRESSLY SET FORTH HERIN ARE YOUR EXCLUSIVE REMEDIES AND NEITHER THE MANUFACTURER NOR ANY OF ITS DISTRIBUTORS SHALL BE LIABLE FOR DAMAGES, WHETHER ORDINARY, INCIDENTAL OR CONSEQUENTIAL.

One (1)
01-33-3100

COMPLETE PRINTED MANUAL

ROSENBAUER shall provide with the vehicle upon delivery, one (1) complete delivery manual. This manual shall be in a notebook type binder, with reference tabs for each section of the vehicle. A companion compact disk (CD) with all of the printed material in an electronic format (Adobe Acrobat PDF) shall be provided.

Within each section shall be:

1. Individual component manufacturer instruction and parts manuals
2. Warranty forms for the body
3. Warranty forms for all major components
4. Warranty instructions and format to be used in compliance with warranty obligations
5. Wiring diagrams
6. Installation instruction and drawings for major parts
7. Visual graphics and electronic photos for the installation of major parts
8. Necessary normal routine service forms, publications and components of the body portion of the apparatus
9. Technical publications for training and instruction on major body components
10. Warning and safety related notices for personnel protection
11. Cab and chassis manuals on parts, service and maintenance shall be provided

One (1)
01-33-3400

"ON-LINE" SERVICE MANUAL SUPPORT

As part of the standard delivery manual, ROSENBAUER shall give a password-protected link to the end user, allowing access to the manufacturers' database on service parts. The internet-based system shall allow the end user to access the major component supplier's service parts listing such as Hale, Waterous, Akron, etc. This shall be accomplished with simplistic point and click features on the manufacturer line item within the "stripper" or "line item sheet". This will include automatic updates, printable schematics and manufacturer's web links and is available in the commercially available format of Adobe Acrobat Reader to access these documents. Rosenbauer America, LLC shall submit with the bid proposal, a sample set of on line Adobe formatted material that has been printed from the manufacturer's website.

Parts Listings within Manuals

The manuals will include cross-reference part numbers from the ROSENBAUER part number to the vendor parts. Example: ROSENBAUER Hydraulic Ladder Rack, Part #LR-MN-0002 cross-referenced to Ziamatic Corporation Part 098-MN2345. This will allow for reference between individual parts and complete installation assemblies as completed by the body builder. The manuals will list all components of the vehicle that includes a vendor part utilized in a complete installation via the manufacturers "line item sheet" or "stripper" utilized to manufacture the completed vehicle. These are "As Built" and proposals with "typical" or "generic" manuals will be rejected.

Illustrative Schematics within Manuals

ROSENBAUER shall include installation diagrams and drawings of all major sub assemblies. This will include components such as hydraulic ladder rack assemblies, pump panels, tanks, fire pumps, etc. The drawings shall be linked via an Internet based service program, in an electronic format from the manufacturers "stripper" (line item listing) of the manufacturing document. ROSENBAUER shall submit, upon request, a sample schematic.

Digital Images within Manuals

In addition to two and three-dimensional installation drawings, ROSENBAUER shall make accessible, via an internet based link, the actual photos of the installed components listed within the "stripper" or line sheet. This will include, but not limited to wiring terminals, main body distribution strips, fire pump shifting, auxiliary components, etc. ROSENBAUER shall submit a sample of these upon request.

Installation Instructions within Manuals

ROSENBAUER "work instructions" or "installation instructions" shall be included with the service manuals. These documents shall be accessible via a web-based link to the individual vehicle manufactured. The work instructions shall give systematic instructions of the component installation process. ROSENBAUER shall submit, upon request, a sample set of instructions.

Automatic Updates of Manuals and Parts Listings

The online manuals will include automatic updates that are accessible via the web link. When clicking on the part within the manufacturer's stripper or line sheet, it will allow the end user to access the component manufacturer website for updated information. This will allow for latest parts and service components from the individual part manufacturer or vendor.

Electrical Schematics

To maintain the vehicles electrical systems, the manufacturer shall provide to the purchaser the instructional manuals, complete electrical information and schematics on the vehicle. The electrical information shall be provided as follows:

Wiring Systems 12 and 120 Volt:

1. Graphic symbols for electrical diagrams.
2. Wire labeling, imprinting codes and index.
3. Computer generated electrical schematics indicating the circuit number, wire size, switches, circuit breaker and terminals on the vehicle.

ROSENBAUER shall submit, upon request, a sample set of diagrams.

One (1)
02-90-1000

FORD F-Series CHASSIS

A Ford F-Series chassis per the attached specifications shall be furnished:

2011 Ford Super Duty F550 4x4 Regular Cab Chassis

19,500 g.v.w.r. payload package
141" wheelbase / 60" cab to axle
2-door regular cab, XL work series trim level
6.7 liter 4v PowerStroke v/8 Turbo Diesel engine
TorqShift 6-speed SelectShift automatic overdrive transmission w/ tow haul
4.88 axle ratio with limited slip rear differential
ambulance prep package
-dual hd alternators, 357 amp combined
225/70Rx19.5G bsw max-traction radials
spare tire, wheel, 6-ton hydraulic jack & lug wrench
engine block heater
dual 78-ah, 750 c.c.a. batteries
2-speed transfer case with manual locking hubs
power 4-wheel anti-lock disc brakes
front & rear stabilizer bars & steering damper
front tow hooks
40-gallon aft of axle fuel tank

stationary elevated idle control
manual telescoping trailer tow mirrors with manual glass & convex spotter
XL Value package
-cruise control
-chrome front bumper
-am/fm stereo cd/clock
hd vinyl 40/20/40 split bench seat
black vinyl floor covering
air conditioning
tilt adjustable steering wheel
12-volt auxiliary power point
tachometer, trip odometer, engine hour meter & turbo boost gauge
coolant temperature, transmission temperature & fuel gauge
upfitter switches (4) on i/p
driver & passenger frontal & side air bag/curtain

One (1)
10-02-1100

FLUID DATA PLAQUE

One (1) fluid data plaque containing required information shall be provided based on the applicable components for this apparatus, compliant with NFPA Standards:

1. Engine oil
2. Engine coolant
3. Chassis transmission fluid
4. Drive axle lubricant
5. Power steering fluid
6. Pump transmission lubrication fluid
7. Paint manufacturer and color numbers
8. Other NFPA applicable fluid levels or data as required

Location shall be in the driver's compartment or on driver's door.

One (1)
10-02-1200

APPARATUS DIMENSION DATA

One (1) highly visible label indicating the overall height, length, and weight of the vehicle shall be installed in the cab dash area.

One (1)
10-02-1300

NO RIDE LABEL

One (1) "NO RIDERS" label shall be applied on the vehicle at the rear step area or other applicable areas. The label shall warn personnel that riding in or on these areas, while the vehicle is in motion is prohibited.

One (1)
10-02-2100

CAB SEATING POSITION LIMITS

One (1) label shall be installed in the cab to indicate seating positions for firefighters. A weight allowance of 250 pounds for each shall be factored into the gross vehicle weight rating of the chassis.

One (1)
10-02-2500

HELMET WARNING TAG

One (1) label shall be installed in the cab, visible from each seating position. The label shall read "DO NOT STORE HELMETS IN CAB WHILE VEHICLE IS IN MOTION." Helmets must be stored in a body compartment.

One (1)
10-03-6000

REAR TOWING PROVISIONS

There shall be two tow eyes furnished under the rear of the body and attached directly to each chassis frame rail. There shall be a reinforcement spreader bar connecting the two tow eyes. Tow eyes are to be constructed of 3/8" plate steel with a 4" I.D. hole, large enough for passing through a tow chain end hook.

One (1)
80-43-2400

The tow plates shall be painted black.

One (1)
10-04-2100

CUSTOMER SUPPLIED BRUSH GUARD

A customer supplied brush guard and winch assembly shall be installed by the apparatus body builder. The brush guard and assembly shall be a Buck Stop Model B-5 classic. The winch assembly shall be a Warn model 15,000 pound winch.

One (1)
10-06-1600

TIRE PRESSURE INDICATOR

There shall be a tire pressure indicator at each tire's valve stem on the vehicle that shall indicate if there is insufficient pressure in the specific tire.

One (1)
10-07-1300

EXHAUST SYSTEM

The chassis exhaust shall be modified and redirected to the right side of the apparatus and will exit behind the rear wheel.

One (1)
10-07-1500

EXHAUST HEAT SHIELD

A heat shield shall be installed under the body in the areas where the exhaust system is routed.

One (1)
10-08-2100

REAR MUD FLAPS

One (1) pair of black mud flaps shall be installed behind the rear wheels.

One (1)
20-01-1450

AUXILIARY FIRE PUMP SPECIFICATIONS

Darley model number 1-1/2AGE18H gasoline powered, skid mounted centrifugal portable pump shall be provided. The high pressure, medium volume pump shall meet the following performance requirements:

120 GPM @ 130 PSI

75 GPM @ 205 PSI

25 GPM @ 300 PSI

Pump Construction

Cast solid bronze renewable double labyrinth impeller seal rings. A balanced bronze alloy impeller splined to the pump shaft for a precision fit. The impeller shall have a double seal ring designed to eliminate end thrust. Oversized deep groove radial ball bearings shall be utilized for longer life.

All openings shall be protected from road dirt and water with oil seals and water slinger. The precision ground, corrosion resistant stainless steel splined pump shaft shall be designed to resist wear, vibration, corrosion and withstand the effects of torque. The pump casing shall be constructed from hard anodized aluminum with bronze fittings.

Pump Packing

The plunger injection packing glands shall have the ability to be repacked in less than 10 minutes and feature a long wearing ceramic coating to minimize friction and power loss. Plastallic injected packing supplied through an external supply cylinder shall allow for equalized pressure around the pump shaft and minimize friction.

Engine Specification

The pump shall be powered by a 18 horsepower, Honda GX 618 gasoline engine with a 20 amp regulated alternator and 12 volt electric starter. The engine shall be supplied with all cables, solenoids, starter button, and other items required for connection to the chassis battery system with a recoil rope starter provided as a backup. An adjustable mechanical governor and throttle control lever shall be provided.

The unit shall have dimensions of 24" long x 24" wide x 23" high and weight of 145 pounds.

Warranty

The pump shall carry a three (3) year parts replacement warranty.

One (1)
21-00-2000

PUMP ANODES

There shall be sacrificial, zinc anodes in the pump steamer ports which shall protect the pump and piping from electrolysis. These anodes shall also act as screens.

One (1)
21-00-3150

PUMP PLUMBING SYSTEM

The fire pump plumbing system shall be of rigid Schedule 40 galvanized piping/brass or flexible piping with stainless steel fittings. Mechanical grooved couplings shall be installed, where necessary, to permit flexing of the plumbing system and allow for quick removal of piping or valves for service. Flexible hose couplings shall be threaded stainless steel or mechanical grooved coupling connections.

The fire pump and plumbing shall be hydrostatically tested in compliance to applicable sections of NFPA standards. The test results shall be included in the delivery documentation.

One (1)
21-01-0200

FIRE PUMP MASTER DRAIN

The fire pump plumbing system and fire pump shall be piped to a single push-pull type master pump drain assembly.

ADDITIONAL LOW POINT DRAINS

The plumbing system shall be equipped with additional low point manually operated drain valves to allow total draining of the fire pump plumbing system. These valves shall be accessible from the side of the vehicle and labeled.

One (1)
21-01-5100

HOT-DIP GALVANIZED INTAKE MANIFOLD

The suction and intake manifold for the pedestal pump shall be fabricated from heavy-duty tubular steel. The suction manifold shall have radiused sweep elbows to minimize water turbulence into the suction volute. The suction manifold shall be welded and pressure tested prior to the galvanizing process. After testing the entire suction manifold shall be hot-dip galvanized to minimize corrosion. The hot-dip galvanized suction manifold shall be attached to the pump intake volute with a heavy-duty, flexible Victaulic coupling.

The hot-dip galvanized manifold assembly shall have a ten (10) year warranty.

One (1)
21-01-6100

HOT DIP GALVANIZED DISCHARGE MANIFOLD

The discharge manifold shall be fabricated from heavy-duty tubular steel. The discharge manifold shall be fabricated, welded, all fittings attached and pressure tested prior to the galvanizing process. After testing the entire discharge manifold shall be hot dip galvanized to minimize corrosion. The hot dip galvanized discharge manifold assembly shall be bolted to the pump and have stabilizer arms attached to reinforce the discharge manifold.

The hot dip galvanized manifold assembly shall have a ten (10) year warranty.

One (1)
21-01-7100

FIRE PUMP & PLUMBING SYSTEM PAINTING

The fire pump and plumbing system shall be painted by the fire apparatus manufacturer. The fire pump and the plumbing shall be painted metallic silver.

One (1)
21-01-8009

AKRON VALVES

All specified valves shall be an Akron 8800 Series valves with a stainless ball.

There shall be no exceptions to this requirement.

SHOP NOTES

Akron Valve must be used

One (1)
21-01-8100

HOSE THREADS

The hose threads shall be National Standard Thread (NST) on all base threads on the apparatus intakes and discharges.

One (1)
27-02-1500

One (1) 2-1/2" Noshok pressure gauge rated at 0-400 PSI shall be provided. The gauge shall include a color coded label and be installed on the pump instrument panel. The face of the gauge shall have a white dial with black letters.

SHOP NOTES

At Rear Panel

One (1)
20-32-2100

MUFFLER & EXHAUST

The auxiliary fire pump and engine assembly shall have a muffler and exhaust pipe. The exhaust pipe shall be directed out of the compartment and away from the pump operator. Additional guards shall be installed where the pipe is exposed to touch by an operator.

One (1)
20-32-3300

MUFFLER/EXHAUST PRIMER

The auxiliary fire pump shall have a combination muffler and exhaust-type primer. The combination muffler and exhaust jet, eductor, type primer shall have a quarter turn bronze shutoff valve with automatic check valve in primer line to allow for one hand operation.

One (1)
20-32-4200

FUEL TANK

A remote mounted fuel tank shall be furnished for the auxiliary fire pump assembly. The fuel tank shall be mounted in a bracket with detachable hold down device. The fuel tank shall have capacity of approximately six (6) US gallons.

There shall be a fuel hose with plug in connections and primer bulb furnished between the fuel tank and carburetor assembly for the auxiliary pump.

One (1)
20-32-5100

ELECTRIC START SYSTEM FOR AUXILIARY FIRE PUMP

The electric start system for the auxiliary fire pump shall be connected to the chassis electrical system. There shall be an on/off switch and push to start switch located near the pump operator's position.

One (1)
20-32-6199

SCOTTY FOAM SYSTEM

A Scotty around the pump foam system shall be provided.

One (1)
22-10-1400

2-1/2" GATED INTAKE

One (1) 2-1/2" gated suction intake shall be installed on the plumbing system to supply the auxiliary fire pump from an external water supply. The valve shall be a quarter turn ball valve and shall have 2-1/2" NST male threads of brass, chrome plated brass, or stainless steel material.

The control handle shall be installed directly on the valve, with a labeled handle. The intake shall be provided with a removable screen and a 2-1/2" NST rocker cap with retaining cable or chain installed.

One (1)
22-50-1400

WATER TANK TO PUMP LINE

One (1) 2-1/2" water tank to fire pump line shall be provided with a full flow quarter turn ball valve, 2-1/2" piping, flex hose and stainless steel hose clamps. The valve control shall be accessible from the pump operation area and equipped with a nameplate on the handle.

One (1)
23-01-1300

FIRE PUMP TO WATER TANK FILL LINE

One (1) 1-1/2" fire pump to water tank refill and pump bypass cooler line shall be provided. The valve shall be a full flow quarter turn ball valve with 1-1/2" piping and flex hose to tank. The valve control handle shall have a nameplate located near the valve control.

One (1)
23-03-2600

ELECTRIC REWIND HOSE REEL

One (1) Hannay unpainted aluminum hose reel with leak proof ball bearing swing joint, adjustable friction brake, electric and crank rewind shall be installed. The discharge shall be controlled by a quarter turn ball valve located at the pump. The reel shall be plumbed with wire reinforced, high-pressure hose coupled. The reel shall be designed to hold 125% of the specified hose capacity. The reel shall be bolted to a mounting system for easy service or removal.

The hose reel is to be mounted on top of the driver's side compartments.

One (1)
24-31-1000

ELECTRIC REWIND HOSE REEL

One (1) Hannay unpainted aluminum hose reel shall be installed. The reel shall be designed to hold 125% of the specified hose capacity. The reel shall be bolted to a mounting system for easy service or removal.

The hose reel is to be mounted on top of the passenger's side compartments.

Two (2)
24-31-2100

A push button hose reel rewind switch shall be installed to control the electric rewind hose reel. The exact location shall be determined at construction.

SHOP NOTES

One (1) driver's side & One (1) pass side

Two (2)
24-33-1600

100' foot length(s) of 1" water hose with pin lug couplings and 800 PSI working pressure shall be provided and mounted on the specified hose reel.

One (1)
24-33-9100

One (1) stainless steel roller assembly shall be provided on the left side hose reel.

One (1)
24-33-9200

One (1) stainless steel roller assembly shall be provided on the right side hose reel.

One (1)
23-03-2200

1-1/2" DISCHARGE

One (1) 2" discharge shall be installed on the left side cat walk area. The discharge shall be controlled by a quarter turn ball valve located in the pump compartment. The manually operated swing type control shall be located adjacent to the valve. The discharge shall have 2" NPT x 1-1/2" NST male hose threads. An engraved nameplate label shall be provided adjacent to the control handle.

SHOP NOTES

Inside Location; See Top View Drawing

One (1)
23-03-2250

LEFT SIDE CAT WALK HOSE BED

One (1) hose bed compartment shall be fabricated and installed on top of the driver's side catwalk. The hose bed shall be at least eight (8) inches deep, with black modular floor tiles installed on the floor of the compartment. The hose bed shall be large enough to accommodate at least 150-ft of 1-3/4-in DJ fire hose and nozzle. The compartment shall be constructed of smooth material painted to match the body and shall be equipped with an NFPA approved retention device to hold the hose in the hosebed.

This hosebed shall be divided into two sections with a adjustable divider.

One (1)
23-11-2200

VINYL CATWALK HOSEBED COVER

The catwalk hosebed shall be equipped with a vinyl cover and shall be secured with VELCRO fasteners.

The hose bed openings shall be equipped with hose and nozzle securement devices to comply to applicable NFPA standards.

One (1)
23-03-2350

RIGHT SIDE CAT WALK DUNNAGE AREA

One (1) catwalk dunnage area compartment shall be fabricated and installed on top of the passenger's side catwalk. The hose bed shall be at least eight (8) inches deep, with black modular floor tiles installed on the floor of the compartment. The compartment shall be constructed of smooth aluminum painted to match the apparatus body.

One (1)
23-11-2200

VINYL CATWALK HOSEBED COVER

The catwalk hosebed shall be equipped with a vinyl cover and shall be secured with VELCRO fasteners.

The hose bed openings shall be equipped with hose and nozzle securement devices to comply to applicable NFPA standards.

One (1)
24-11-1100

FRONT BUMPER MONITOR DISCHARGE

One (1) 2" discharge shall be piped to the front center bumper area with 2" NPT male threads. The quarter turn ball valve shall be controlled in the chassis cab. The monitor shall be supplied by a flexible high pressure hose mounted with adequate support brackets and abrasion resistant mountings.

Low point drains shall be installed where necessary. A color coded nameplate label shall be provided.

Two (2)
21-01-2200

A Class 1 automatic type 3/4" bleeder valve shall be installed on discharges larger than 1-1/2" in size.

One (1)
24-16-1000

FRONT BUMPER MONITOR

One (1) Akron "FireFox" #3463 electrically controlled remote monitor shall be furnished and installed on the front bumper of the apparatus. The monitor is to be an all electric single waterway monitor constructed of lightweight pyrolite.

The monitor shall have a fully enclosed 12-volt motor and gears with a manual override for both horizontal and vertical rotation and may be operated simultaneously. The vertical travel shall be from 45-degrees below to 90-degrees above horizontal with adjustable stops at -20 degrees and +45 degrees. The horizontal rotation shall be 320-degrees with adjustable stops at +-90-degrees.

The logic box shall include coated, solid state components to resist water corrosion. The control box shall control the vertical and horizontal rotation of the monitor and the pattern of the nozzle.

The controls for the deck gun shall be mounted inside the chassis cab. There shall be a 3/4" automatic drain furnished in the supply line to the monitor.

SHOP NOTES

ARFF UNITS: The turret is to be tested to 60 gpm at 150' straight stream distance.

One (1)
24-16-1100

One (1) Akron "FireFox" model monitor shall provided and includes a weather-tight enclosure for the joystick controls suitable for mounting inside or outside the apparatus. The joystick control shall include a valve trigger.

Water Valve: ON/OFF
Monitor: RIGHT/LEFT
Monitor: UP/DOWN
Pattern Control: STRAIGHT/FOG

One (1)
24-16-1300

The Akron "FireFox" model monitor shall be supplied with a 2" NPT quick disconnect inlet for installation and engine maintenance on the cab forward trucks.

One (1)
24-18-3100

BUMPER MONITOR NOZZLE

The bumper monitor shall be equipped with a Akron remote controlled combination nozzle. This nozzle shall have a 12 volt electric motor to control the pattern of straight stream to wide fog. The nozzle shall have an adjustable flow with settings of 30-90-95-125 GPM. The motor shall be totally enclosed and sealed for protection. The lightweight, nozzle shall have a 1-1/2" NST swivel inlet.

One (1)
27-03-5000

MONITOR SPOTLIGHT

A cab controlled spotlight shall be mounted on the monitor. The light shall be a Collins FX-12. The light shall be controlled from inside the chassis cab. The light shall be mounted to the Akron Firefox monitor.

The bidder shall supply photos and engineering information as to the mounting of this light. The light and assembly shall be a proven mounting method.

One (1)
27-03-5100

One (1) 2-1/2" pressure gauge rated at 0-400 PSI shall be provided. The gauge shall include a color coded label and be installed in the chassis cab. The face of the gauge shall have a white dial with black letters.

SHOP NOTES

Locate Inside chassis cab in view of driver & officer

One (1)
23-03-1800

1 1/2" DISCHARGE

One (1) 1 1/2" discharge shall be piped to the rear of the apparatus body. The discharge shall be controlled by a quarter turn ball valve located at the pump. The manually operated swing type control shall be located adjacent to the valve. An engraved nameplate label shall be provided adjacent to the control handle.

One (1)
23-03-1700

1" DISCHARGE

One (1) 1" discharge shall be installed at the rear of the apparatus body. The discharge shall be controlled by a quarter turn ball valve located at the pump. The manually operated swing type control shall be located adjacent to the valve. An engraved nameplate label shall be provided adjacent to the control handle.

One (1)
23-03-1200

3/4" DISCHARGE

One (1) 3/4" discharge shall be installed at rear of apparatus. The discharge shall be controlled by a quarter turn ball valve located at the pump. The manually operated swing type control shall be located adjacent to the valve. An engraved nameplate label shall be provided adjacent to the control handle.

One (1)
25-25-2000

WATER TANK - 500 GALLON

The apparatus shall be equipped with a five-hundred (500) gallon polypropylene water tank and equipped with a 3.0" overflow pipe.

One (1)
25-44-1200

WATER TANK FILL TOWER

A fill tower measuring approximately 10" x 10" square shall be provided on the water tank up to and including 500 gallons total capacity.

One (1)
25-50-2300

DIRECT TANK FILL

One (1) 2-1/2" diameter direct tank fill inlet shall be provided, including a 2-1/2" female NH swivel, plug and screen.

The valve shall be located and controlled on the right side pump panel.

One (1)
25-50-1999

BACKBOARD STORAGE NEXT TO TANK

A backboard storage compartment shall be supplied next to the booster tank. The storage compartment shall be enclosed on a sides and have space for two (2) fire district supplied backboards.

One (1)
26-55-1100

LABELS

Safety, information, data, and instruction labels for apparatus shall be provided and installed at the operator's instrument panel.

The labels shall include rated capacities, pressure ratings, and engine speeds as determined by the certification tests. The no-load governed speed of the engine, as stated by the engine manufacturer, shall also be included.

The labels shall be provided with all information and be attached to the apparatus prior to delivery.

One (1)
26-55-2050

COLOR CODED PUMP PANEL LABELING AND NAMEPLATES

Discharge and intake valve controls shall be color coded in compliance to guidelines of applicable sections of NFPA standards.

Permanent type nameplates and instruction panels shall be installed on the pump panel for safe operation of the pumping equipment and controls.

One (1)
27-35-6300

WATER TANK SIGHT LEVEL GAUGE

One (1) sight type tank level gauge system shall be located on the pump operator's panel. The unit shall have an all stainless steel assembly exposed on the pump panel with clear plastic tubing. The gauge shall be piped to the top and bottom of the tank with synflex hose and shall include isolator valves at the tank.

SHOP NOTES

Order built in with tank

One (1)
31-04-5100

1/8" ALUMINUM BODY

The body shall be fabricated of aluminum extrusions, smooth aluminum sheet and aluminum treadplate.

The aluminum extrusion alloy shall be 6061 with a temper rating of T6, and have a tensile strength of 45,000 PSI and yield strength of 40,000 pounds. The aluminum extrusions shall 3" x 3" aluminum tubing, 1-3/4" x 3" aluminum tubing and 3" x 3" aluminum angle and specially designed extrusions, up to .250" wall thickness where applicable.

The smooth aluminum sheet material alloy shall be 5052 with a temper rating of H32, and have a tensile strength of 33,000 PSI and yield strength of 28,000 pounds.

The aluminum treadplate alloy shall be 3003 with a temper rating of H22, and have a tensile strength of 30,000 PSI and yield strength of 28,000 pounds.

The extrusions shall be designed as structural-framing members with the smooth aluminum and treadplate fabricated to form compartments, hosebeds, and floors. All aluminum material shall be welded together using the latest mig spray pulse arc welding system.

Compartments to be sweepout design and to be water and dust proof. All compartments shall be made to the maximum practical dimensions to provide maximum storage capacity. To ensure maximum storage space, the apparatus shall be constructed without any void spaces between the body and the compartment walls. Double wall construction does not meet this requirement.

All exterior compartments shall have polished aluminum drip moldings installed above the doors where necessary to prevent water from entering the compartments.

Wheel well panels shall be formed aluminum that is welded in place. There shall be no visible bolt heads, retention nuts or fasteners on the exterior surface of the panel. To fully protect the wheel well area from road debris and to aid in cleaning, a full depth radius wheel well liner shall be provided. The frame side of the wheel well area on each side of the opening shall be attached to the frame side of the front and rear compartments. All seams on the frame side of the body shall be welded and caulked to prevent moisture from entering the compartments.

The rear wheel wells shall be radius cut for a streamlined appearance. A polished aluminum fenderette shall be furnished at each rear wheel well opening, held in place with stainless steel fasteners.

FASTENERS

All aluminum and stainless steel components shall be attached using stainless steel fasteners.

Compartment door hinges, handrails and running boards shall be attached using minimum 1/4" diameter machine bolt fasteners.

3/16" diameter fasteners shall only be used in nonstructural areas such as; door handles, trim moldings, gauge mounting, etc.

One (1)
30-01-2250

ELECTROLYSIS CORROSION CONTROL

The apparatus shall be assembled using ECK or electrolysis corrosion control, on all high corrosion potential areas, such as door latches, door hinges, trim plates, fenderettes, etc. This coating is a high zinc compound that shall act as a sacrificial barrier to prevent electrolysis and corrosion between dissimilar metals. This shall be in addition to any other barrier material that may be used.

All 1/4" diameter and smaller screws and bolts shall be stainless steel with a powdered aluminum coating. This coating shall be bonded metalurgically to the stainless screws to prevent peeling and flaking. This coating is designed to reduce the potential for electrolysis and corrosion to occur where items are assembled and attached.

Due to the expected life of the vehicle, proposals will only be acceptable from manufacturers that include these corrosion features.

One (1)
30-02-2200

COMPARTMENT FLOORS

The compartment floors shall be constructed of smooth aluminum material, to match the compartment interior walls.

One (1)
30-10-1400

ALUMINUM SUB-FRAME

The main body sub-frame shall be extruded aluminum and be fully welded to the longitudinal frame rail extrusions that are mounted parallel to the chassis frame rails.

The main body sub-frame shall be constructed of no less than four (4) extruded aluminum tubes running full width of the apparatus body. A minimum of two (2) full body width tubes shall be provided ahead of and behind the rear axle forming the main body support crossmembers. The main crosstubes shall be fully welded to the vertical and horizontal extrusions forming the body super-structure, described elsewhere herein.

For added strength and rigidity, no less than six (6) intermediate body crossmembers shall be provided constructed extruded aluminum tubes.

The intermediate structural crossmembers shall be interconnected and welded to the main body tubular crossmembers forming a fully welded support grid for the body super-structure compartments.

The subframe crossmembers shall be attached to the chassis frame rails using heavy "U" bolt fasteners to allow removal of the subframe and body assembly from the chassis. There shall be a barrier provided between the subframe and body to prevent electrolysis.

The tubular extrusion shall consist of 1-3/4" x 3" rectangular tubes of both 1/8" and 3/16" wall thickness and 3" x 3" square aluminum tubing of both 1/8" and 3/16" wall thickness.

One (1)
44-06-2500

SINGLE AXLE WHEEL AREA

For ease of accessibility and maintenance, wheel well panels shall be 3/16" aluminum treadplate that is welded in place.

One (1)
44-06-2550

WHEEL WELL LINER

To fully protect the wheel well area from road debris and to aid in cleaning, a full depth (minimum of 25.00") radius wheel well liner shall be provided. Wheel well liner shall be smooth aluminum material to prevent corrosion.

One (1)
44-06-4100

FENDERETTES

The rear wheel wells shall be radius cut for a streamlined appearance. A polished aluminum fenderette shall be furnished at each rear wheel well opening, held in place with concealed stainless steel fasteners.

One (1)
30-01-1000

BODY WIDTH

The overall width of the mini pumper body shall not exceed 96".

One (1)
31-04-1000

BODY CONFIGURATION

The formed aluminum mini body shall be up to 116" long, with a 60-in cab to axle, reference drawing for actual body length. The body compartments shall be full depth from top to bottom. Each compartment shall be approximately twenty-three and one-half inches in depth. The area between the body sides shall be 48" wide.

One (1)
31-04-6200

COMPARTMENT DEPTH

The side compartments on the pumper body shall have the maximum available height and depth dimensions. These dimensions shall remain consistent for the full height and depth of the compartment.

One (1)
30-02-1200

ROLL UP DOOR CONSTRUCTION

The roll up door(s) shall be fabricated from aluminum extrusions and be manufactured and assembled in the United States.

The door slats shall be double-wall extrusions with dimensions of 1.366" high x .315" thick. The exterior surface shall be flat and the interior surface concave to deflect loose equipment to prevent the door from jamming. Each slat shall have interlocking end shoes to prevent the slat from moving side to side resulting in binding of the door. Each slat shall be separated by a co-extruded PVC and rubber inner seal to prevent metal to metal contact and minimize dirt and moisture from entering the compartment. The inner seal shall not be visible from the exterior to maintain a clean appearance of door. The slats shall have interlocking joints with a folding locking flange to provide security and prevent penetration by sharp objects.

The track shall be a one (1) piece aluminum assembly that has an attaching flange and finishing flange incorporated into the design that facilitates installation and provides a finished look to the door without additional trim or caulking. A low profile side seal shall be utilized to maximize usable compartment space.

A drip rail designed to prevent water from dripping into the compartment shall be provided. The drip rail shall have a built in replaceable non-contacting seal to eliminate scratching of the surface of the door.

Bottom rail extrusion must have smooth back to prevent loose equipment from jamming the door and have "V" shaped double seal to prevent water and debris from entering the compartment. The door latch system shall be a full width one (1) piece lift bar that enables the user to operate with one hand.

The roll mechanism shall have a clip system that connects the curtain slats to the operator drum to allow for easy tension adjustment without tools. A four (4) inch diameter counterbalanced operator drum to shall be incorporated to assist in lifting the door.

One (1)
30-02-1150

ROLLUP DOORS

The rollup doors shall be ROM manufacturing roll up doors.

One (1)
32-10-0048

COMPARTMENT HEIGHT

The left side body compartments shall be 48" high.

One (1)
32-10-1040

LEFT FRONT COMPARTMENT

There shall be one (1) full height compartment located at the front of the apparatus body. The compartment shall be equipped with a full height single natural finish roll up door.

The compartment shall be equipped with the following:

One (1)
45-00-4210

Front of Body, Left, Compartment Provisions

One (1)
44-40-1100

One (1) louver with filter shall be installed on the back wall of the specified compartments.

One (1)
45-01-1050

ADJUSTABLE SHELVING TRACKS

The compartments shall be equipped with two (2) aluminum adjustable tracks, vertically mounted, that are bolted in place for adjustable shelving and equipment mounting.

One (1)
45-02-1200

ADJUSTABLE SHELF

One (1) adjustable shelf shall be constructed of .125" smooth aluminum plate with 1.5" formed vertical lip front & back. Shelf supports on each side to be constructed of .188" aluminum and bolted to an aluminum extrusion (mounted vertically) by use of 3/8" bolts and spring-loaded cam locks. If shelf is longer than 40" a reinforcement by aluminum gusset is to be placed full-length on bottom of shelf. Trim-Lok trim shall be installed on the front lip edge to afford protection to equipment and firefighter when loading/unloading.

One (1)
45-30-5100

The shelf/tray shall be fitted with removable vinyl Turtle Tile matting. The matting shall be interlocking modules approximately 12" square by 9/16" thick. This material shall be resistant to heat, cold, ultra-violet radiation, mechanical impacts, chemical actions and is corrosion resistant.

One (1)
45-30-1125

The floor shall be fitted with removable vinyl Turtle Tile matting. The matting shall be interlocking modules approximately 12" square by 9/16" thick. This material shall be resistant to heat, cold, ultra-violet radiation, mechanical impacts, chemical actions and is corrosion resistant.

One (1)
55-01-1900

COMPARTMENT LIGHT

One (1) incandescent light fixture shall be installed in the compartment. The compartment light shall have a clear lens.

One (1)
55-06-1300

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment lower door jam area. The switch shall be a Control Products Incorporated (CPI) brand; model numbers EC-E1329-501R for right hand switch applications and EC-E1328-501L for left hand switch applications. The switch body shall be corrosion resistant stainless steel with a rubber boot for the switch plunger mechanism.

One (1)
32-10-1330

LEFT OVERWHEEL COMPARTMENT

There shall be one (1) compartment above the rear wheels. The compartment shall be equipped with a single natural finish roll up door.

The compartment shall be equipped with the following:

One (1)
45-00-4510

Upper High Side Compartment(s), Left, Compartment Provisions

One (1)
44-40-1100

One (1) louver with filter shall be installed on the back wall of the specified compartments.

One (1)
45-01-1050

ADJUSTABLE SHELVING TRACKS

The compartments shall be equipped with two (2) aluminum adjustable tracks, vertically mounted, that are bolted in place for adjustable shelving and equipment mounting.

One (1)
45-02-1200

ADJUSTABLE SHELF

One (1) adjustable shelf shall be constructed of .125" smooth aluminum plate with 1.5" formed vertical lip front & back. Shelf supports on each side to be constructed of .188" aluminum and bolted to an aluminum extrusion (mounted vertically) by use of 3/8" bolts and spring-loaded cam locks. If shelf is longer than 40" a reinforcement by aluminum gusset is to be placed full-length on bottom of shelf. Trim-Lok trim shall be installed on the front lip edge to afford protection to equipment and firefighter when loading/unloading.

One (1)
45-30-5100

The shelf/tray shall be fitted with removable vinyl Turtle Tile matting. The matting shall be interlocking modules approximately 12" square by 9/16" thick. This material shall be resistant to heat, cold, ultra-violet radiation, mechanical impacts, chemical actions and is corrosion resistant.

One (1)
45-30-1125

The floor shall be fitted with removable vinyl Turtle Tile matting. The matting shall be interlocking modules approximately 12" square by 9/16" thick. This material shall be resistant to heat, cold, ultra-violet radiation, mechanical impacts, chemical actions and is corrosion resistant.

One (1)
55-01-1900

COMPARTMENT LIGHT

One (1) incandescent light fixture shall be installed in the compartment. The compartment light shall have a clear lens.

One (1)
55-06-1300

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment lower door jam area. The switch shall be a Control Products Incorporated (CPI) brand; model numbers EC-E1329-501R for right hand switch applications and EC-E1328-501L for left hand switch applications. The switch body shall be corrosion resistant stainless steel with a rubber boot for the switch plunger mechanism.

One (1)

32-10-1430

LEFT REAR COMPARTMENT

There shall be one (1) full height compartment located behind the rear wheels. The compartment shall be equipped with a single full height natural finish roll up door.

The compartment shall be equipped with the following:

One (1)
45-00-4610

Behind Rear Wheels, Left, Compartment Provisions

One (1)
44-40-1100

One (1) louver with filter shall be installed on the back wall of the specified compartments.

One (1)
45-01-1050

ADJUSTABLE SHELVING TRACKS

The compartments shall be equipped with two (2) aluminum adjustable tracks, vertically mounted, that are bolted in place for adjustable shelving and equipment mounting.

One (1)
45-02-1200

ADJUSTABLE SHELF

One (1) adjustable shelf shall be constructed of .125" smooth aluminum plate with 1.5" formed vertical lip front & back. Shelf supports on each side to be constructed of .188" aluminum and bolted to an aluminum extrusion (mounted vertically) by use of 3/8" bolts and spring-loaded cam locks. If shelf is longer than 40" a reinforcement by aluminum gusset is to be placed full-length on bottom of shelf. Trim-Lok trim shall be installed on the front lip edge to afford protection to equipment and firefighter when loading/unloading.

One (1)
45-30-5100

The shelf/tray shall be fitted with removable vinyl Turtle Tile matting. The matting shall be interlocking modules approximately 12" square by 9/16" thick. This material shall be resistant to heat, cold, ultra-violet radiation, mechanical impacts, chemical actions and is corrosion resistant.

One (1)
45-30-1125

The floor shall be fitted with removable vinyl Turtle Tile matting. The matting shall be interlocking modules approximately 12" square by 9/16" thick. This material shall be resistant to heat, cold, ultra-violet radiation, mechanical impacts, chemical actions and is corrosion resistant.

One (1)
55-01-1900

COMPARTMENT LIGHT

One (1) incandescent light fixture shall be installed in the compartment. The compartment light shall have a clear lens.

One (1)
55-06-1300

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment lower door jam area. The switch shall be a Control Products Incorporated (CPI) brand; model numbers EC-E1329-501R for right hand switch applications and EC-E1328-501L for left hand switch applications. The switch body shall be corrosion resistant stainless steel with a rubber boot for the switch plunger mechanism.

One (1)
32-11-1000

RIGHT SIDE BODY COMPARTMENTS

The right side body compartmentation shall be as follows:

One (1)
32-10-0148

COMPARTMENT HEIGHT

The right side body compartments shall be 48" high.

One (1)
32-11-1040

RIGHT FRONT COMPARTMENT

There shall be one (1) full height compartment located at the front of the apparatus body. The compartment shall be equipped with a full height single natural finish roll up door.

The compartment shall be equipped with the following:

One (1)
45-00-5220

Front of Body, Right, Compartment Provisions.

One (1)
44-40-1100

One (1) louver with filter shall be installed on the back wall of the specified compartments.

One (1)
45-01-1050

ADJUSTABLE SHELVING TRACKS

The compartments shall be equipped with two (2) aluminum adjustable tracks, vertically mounted, that are bolted in place for adjustable shelving and equipment mounting.

One (1)
45-02-1200

ADJUSTABLE SHELF

One (1) adjustable shelf shall be constructed of .125" smooth aluminum plate with 1.5" formed vertical lip front & back. Shelf supports on each side to be constructed of .188" aluminum and bolted to an aluminum extrusion (mounted vertically) by use of 3/8" bolts and spring-loaded cam locks. If shelf is longer than 40" a reinforcement by aluminum gusset is to be placed full-length on bottom of shelf. Trim-Lok trim shall be installed on the front lip edge to afford protection to equipment and firefighter when loading/unloading.

One (1)

45-30-5100

The shelf/tray shall be fitted with removable vinyl Turtle Tile matting. The matting shall be interlocking modules approximately 12" square by 9/16" thick. This material shall be resistant to heat, cold, ultra-violet radiation, mechanical impacts, chemical actions and is corrosion resistant.

One (1)
45-30-1125

The floor shall be fitted with removable vinyl Turtle Tile matting. The matting shall be interlocking modules approximately 12" square by 9/16" thick. This material shall be resistant to heat, cold, ultra-violet radiation, mechanical impacts, chemical actions and is corrosion resistant.

One (1)
55-01-1900

COMPARTMENT LIGHT

One (1) incandescent light fixture shall be installed in the compartment. The compartment light shall have a clear lens.

One (1)
55-06-1300

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment lower door jam area. The switch shall be a Control Products Incorporated (CPI) brand; model numbers EC-E1329-501R for right hand switch applications and EC-E1328-501L for left hand switch applications. The switch body shall be corrosion resistant stainless steel with a rubber boot for the switch plunger mechanism.

One (1)
32-11-1330

RIGHT OVERWHEEL COMPARTMENT

There shall be one (1) compartment above the rear wheels. The compartment shall be equipped with a single natural finish roll up door.

The compartment shall be equipped with the following:

One (1)
45-00-5510

Upper High Side Compartment(s), Right, Compartment Provisions

One (1)
44-40-1100

One (1) louver with filter shall be installed on the back wall of the specified compartments.

One (1)
45-01-1050

ADJUSTABLE SHELVING TRACKS

The compartments shall be equipped with two (2) aluminum adjustable tracks, vertically mounted, that are bolted in place for adjustable shelving and equipment mounting.

One (1)
45-02-1200

ADJUSTABLE SHELF

One (1) adjustable shelf shall be constructed of .125" smooth aluminum plate with 1.5" formed vertical lip front & back. Shelf supports on each side to be constructed of .188" aluminum and bolted to an aluminum extrusion (mounted vertically) by use of 3/8" bolts and spring-loaded cam locks. If shelf is longer than 40" a reinforcement by aluminum gusset is to be placed full-length on bottom of shelf. Trim-Lok trim shall be installed on the front lip edge to afford protection to equipment and firefighter when loading/unloading.

One (1)
45-30-5100

The shelf/tray shall be fitted with removable vinyl Turtle Tile matting. The matting shall be interlocking modules approximately 12" square by 9/16" thick. This material shall be resistant to heat, cold, ultra-violet radiation, mechanical impacts, chemical actions and is corrosion resistant.

One (1)
45-30-1125

The floor shall be fitted with removable vinyl Turtle Tile matting. The matting shall be interlocking modules approximately 12" square by 9/16" thick. This material shall be resistant to heat, cold, ultra-violet radiation, mechanical impacts, chemical actions and is corrosion resistant.

One (1)
55-01-1900

COMPARTMENT LIGHT

One (1) incandescent light fixture shall be installed in the compartment. The compartment light shall have a clear lens.

One (1)
55-06-1300

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment lower door jam area. The switch shall be a Control Products Incorporated (CPI) brand; model numbers EC-E1329-501R for right hand switch applications and EC-E1328-501L for left hand switch applications. The switch body shall be corrosion resistant stainless steel with a rubber boot for the switch plunger mechanism.

One (1)
32-11-1430

RIGHT REAR COMPARTMENT

There shall be one (1) full height compartment located behind the rear wheels. The compartment shall be equipped with a single full height natural finish roll up door.

The compartment shall be equipped with the following:

One (1)
45-00-5620

Behind Rear Wheels, Right, Compartment Provisions

One (1)
44-40-1100

One (1) louver with filter shall be installed on the back wall of the specified compartments.

One (1)
45-01-1050

ADJUSTABLE SHELVING TRACKS

The compartments shall be equipped with two (2) aluminum adjustable tracks, vertically mounted, that are bolted in place for adjustable shelving and equipment mounting.

One (1)
45-02-1200

ADJUSTABLE SHELF

One (1) adjustable shelf shall be constructed of .125" smooth aluminum plate with 1.5" formed vertical lip front & back. Shelf supports on each side to be constructed of .188" aluminum and bolted to an aluminum extrusion (mounted vertically) by use of 3/8" bolts and spring-loaded cam locks. If shelf is longer than 40" a reinforcement by aluminum gusset is to be placed full-length on bottom of shelf. Trim-Lok trim shall be installed on the front lip edge to afford protection to equipment and firefighter when loading/unloading.

One (1)
45-30-5100

The shelf/tray shall be fitted with removable vinyl Turtle Tile matting. The matting shall be interlocking modules approximately 12" square by 9/16" thick. This material shall be resistant to heat, cold, ultra-violet radiation, mechanical impacts, chemical actions and is corrosion resistant.

One (1)
45-30-1125

The floor shall be fitted with removable vinyl Turtle Tile matting. The matting shall be interlocking modules approximately 12" square by 9/16" thick. This material shall be resistant to heat, cold, ultra-violet radiation, mechanical impacts, chemical actions and is corrosion resistant.

One (1)
55-01-1900

COMPARTMENT LIGHT

One (1) incandescent light fixture shall be installed in the compartment. The compartment light shall have a clear lens.

One (1)
55-06-1300

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment lower door jam area. The switch shall be a Control Products Incorporated (CPI) brand; model numbers EC-E1329-501R for right hand switch applications and EC-E1328-501L for left hand switch applications. The switch body shall be corrosion resistant stainless steel with a rubber boot for the switch plunger mechanism.

One (1)
33-60-1130

REAR BODY CONFIGURATION

The rear of the apparatus body shall be of the flat back design.

One (1)
33-61-1100

REAR STEP - 8" BOLT-ON

An 8" deep step surface shall be provided at the rear of the apparatus body, bolted in place and easily removable for replacement or repair. The tailboard shall be constructed of .188" aluminum diamond plate or equal non-slip surface in compliance with NFPA #1901 standards.

The maximum height of the step assembly shall be no more than 24" from the ground when the apparatus is in the loaded condition. A label shall be provided warning personnel that riding on the rear step while the apparatus is in motion is prohibited.

Two (2)
90-25-7200

HARD SUCTION MOUNTING

Two (2) horizontally mounted aluminum hard suction hose tray with velcro straps shall be provided above the right side body compartments.

SHOP NOTES

Inside the dunnage area on the right side.

One (1)
90-25-9115

SUCTION HOSE SOURCE

New suction hose shall be provided by the body builder.

One (1)
44-01-1450

FRONT BODY PROTECTION PANELS

Aluminum tread plate overlays and panels shall be installed on the front of the body from the lower edge to the top of the compartment doors.

One (1)
44-01-3400

REAR BODY PROTECTION PANELS

Aluminum tread plate overlays and panels shall be installed on the rear of the body from the lower edge to the top of the compartment doors. The material shall be bolted in place and sealed to prevent any moisture entry between the overlay and the body structure.

One (1)
44-01-5000

POLISHED COMPARTMENT TOP WELDS

The compartment top welds to be polished.

One (1)
44-02-1100

EXTRUDED ALUMINUM RUB RAILS

Full body length polished aluminum rub rails shall be bolted in place on the lower right and left body sides. The side rub rails shall be a heavy extruded aluminum "C" channel.

One (1)
44-11-5330

WHEEL WELL PROVISION LOCATION

The wheel well provisions shall be located on the left side of the apparatus, behind of the rear wheels.

One (1)
44-07-1200

FUEL PIPING AND FILL CAP

There shall be a fuel fill cap provided in the recessed area of the left side rear wheel well clearly marked, "DIESEL FUEL ONLY". The fill shall be piped to the fuel tank.

One (1)
50-02-1500

LOW VOLTAGE ELECTRICAL SYSTEM SPECIFICATIONS

The electrical system shall include all panels, electrical components, switches and relays, wiring harnesses and other electrical components. The electrical equipment installed by the apparatus manufacturer shall conform to current automotive electrical system standards, the latest Federal DOT standards, and the requirements of the applicable NFPA standards.

All wiring shall be stranded copper or copper alloy conductors of a gauge rated to carry 125 percent of the maximum current for the protected circuit. Voltage drops in all wiring from the power source to the using device shall not exceed 10 percent. The wiring and wiring harness and insulation shall be in conformance to applicable SAE and NFPA standards. The wiring harness shall conform to SAE J-1128 with GXL temperature properties. All exposed wiring shall be protected in a loom with a minimum 289 degree Fahrenheit rating. All wiring looms shall be properly supported and attached to body members. The electrical conductors shall be constructed in accordance with applicable SAE standards, except when good engineering practice requires special construction.

The wiring connections and terminations shall use a method that provides a positive mechanical and electrical connection and shall be installed in accordance with the device manufacturer's instructions. Electrical connections shall be with mechanical type fasteners and large rubber grommets where wiring passes through metal panels.

The wiring between the cab and body shall be joined using Deutsche type connectors or an enclosed in a terminal junction panel area. This system will permit body removal with minimal impact on the apparatus electrical system. All connections shall be crimp-type with insulated shanks to resist moisture and foreign debris such as grease and road grime. Weather-resistant connectors shall be provided throughout to ensure the integrity of the electrical system.

Any electrical junction or terminal boxes shall be weather resistant and located away from water spray conditions. In addition, the main body junction panel shall house the automatic reset breakers and relays where required.

There shall be no exposed electrical cabling, harnesses, or terminal connections located in compartments, unless they are enclosed in a junction box or covered with a removable electrical panel. The wiring shall be secured in place and protected against heat, liquid contaminants and damage. Wiring shall be uniquely identified every three-inches (3") by color coding or permanent marking with a circuit function code and identified on a reference chart or electrical wiring schematic per requirements of applicable NFPA #1901 standards.

The electrical circuits shall be provided with low voltage overcurrent protective devices. Such devices shall be accessible and located in required terminal connection locations or weather resistant enclosures. The overcurrent protection shall be suitable for electrical equipment and shall be automatic reset type and meet SAE standards. All electrical equipment, switches, relays, terminals, and connectors shall have a direct current rating of 125 percent of maximum current for which the circuit is protected. The system shall have electro-magnetic interference suppression provided as required in applicable SAE standards.

The electrical system shall include the following:

- a) Electrical terminals in weather exposed areas shall have a non-conductive grease or spray applied. A corrosion preventative compound shall be applicable to all terminal plugs located outside of the cab or body.
- b) The electrical wiring shall be harnessed or be placed in a protective loom.
- c) Holes made in the roof shall be caulked with silicone. Large fender washers shall be used when fastening equipment to the underside of the cab roof.
- d) Any electrical component that is installed in an exposed area shall be mounted in a manner that will not allow moisture to accumulate in it.
- e) A coil of wire must be provided behind an electrical appliance to allow them to be pulled away from mounting area for inspection and service work.
- f) All lights that have their sockets in a weather exposed area shall have corrosion preventative compound added to the socket terminal area.

The warning lights shall be switched in the chassis cab with labeled switches in an accessible location. Individual rocker switches shall be provided only for warning lights provided over the minimum level of warning lights in either the stationary or moving modes. All electrical equipment switches shall be mounted on a switch panel mounted in the cab convenient to the operator. The warning light switches shall be of the rocker type. For easy nighttime operation, an integral indicator light shall be provided to indicate when the circuit is energized. All switches shall be appropriately identified as to their function.

A single warning light switch shall activate all required warning lights. This switch will allow the vehicle to respond to an emergency and "call for the right of way". When the parking brake is applied, a "blocking right of way" system shall automatically activate per requirements of the applicable NFPA standards. All "clear" warning lights shall be automatically turned off upon application of the parking brake.

NFPA REQUIRED TESTING OF ELECTRICAL SYSTEM

The apparatus shall be electrically tested upon completion of the vehicle and prior to delivery. The electrical testing, certifications, and test results shall be submitted with delivery documentation per requirements of the applicable NFPA standards. The following minimum testing shall be completed by the apparatus manufacturer:

1. Reserve capacity test:

The engine shall 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 shall be shut off and the minimum continuous electrical load shall be activated for ten (10) minutes. All electrical loads shall be turned off prior to attempting to restart the engine. The battery system shall then be capable of restarting the engine. Failure to restart the engine shall be considered a failed test.

2. Alternator performance test at idle:

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

3. Alternator performance test at full load:

The total continuous electrical load shall be activated with the engine running up to the engine manufacturer's governed speed. The test duration shall be a minimum of two (2) hours. Activation of the

load management system is permitted during this test. However, if an alarm sounds due to excessive battery discharge, as detected by the system requirements in the NFPA standards, or a system voltage of less than 11.7 volts dc for more than 120 seconds is present, the test has failed.

4. Low voltage alarm test:

Following the completion of the above tests, the engine shall be shut off. The total continuous electrical load shall be activated and shall continue to be applied until the excessive battery discharge alarm activates. The battery voltage shall be measured at the battery terminals. With the load still applied, a reading of less than 11.7 volts dc for a 12 volt system shall be considered a test failure. The battery system shall then be able to restart the engine. Failure to restart the engine shall be considered a test failure.

NFPA REQUIRED DOCUMENTATION

The following documentation shall be provided on delivery of the apparatus:

- a. Documentation of the electrical system performance tests required above.
- b. A written load analysis, including:
 1. The nameplate rating of the alternator.
 2. The alternator rating under the conditions.
 3. Each specified component load.
 4. Individual intermittent loads.

One (1)
50-10-1750

LOAD MANAGER 2

The apparatus shall be equipped with a Kussmaul model 091-79 Automatic Load Shedding System for performing continuous electrical load management. The Load Manager shall have the following features:

- Monitor 12-volt system and detect low voltage.
- Capability to control two (2) loads.
- Automatic reset when voltage rises.
- Adjustable voltage setpoint.

The load manager shall be protected against reverse polarity and shorted outputs, and be enclosed in a enclosure to enhance EMI/RFI protection. Rosenbauer shall provide for all electrical loads in excess of the NFPA minimum electrical requirements that exceed the alternator output.

One (1)
50-12-1200

DASH MOUNTED EMERGENCY ELECTRICAL SWITCH PANEL

An electrical switch panel shall be designed and mounted in the cab dash area. All switches shall be provided with backlighted snap-in legend inserts.

SWITCHES

All emergency light switches shall be lighted, rocker style. Switches shall be internally lit when the switch circuit is in the on position. A plug-in identification label is to be provided and installed adjacent to each rocker switch with backlighting provided behind the label.

An internally lighted "master" switch shall be provided and wired through a heavy-duty relay to activate power to the emergency lights.

One (1)
50-15-3200

MASTER ELECTRIC SWITCH

One (1) master battery disconnect switch shall be located conveniently to the driver of the apparatus. The switch shall disconnect the 12 volt power supply from the battery system.

A green "Master On" light shall be provided. This light shall illuminate anytime the master switch is in the "ON" position.

One (1)
50-15-5600

BATTERY CHARGER

One (1) Kussmaul Autocharge 1000 model #091-56-12, 18 amp fully automatic high output battery charger shall be wired to the 12 volt battery system. The charger unit shall be mounted in a clean dry area and will be accessible for service and/or maintenance.

One (1)
50-20-1500

AUTO-EJECT

A Kussmaul "Super Auto-Eject" 20-amp automatic disconnect device shall be provided and installed on the 110 volt shoreline connection complete with weatherproof cover and matching plug. The Auto-Eject shall be activated by the chassis starter switch to disconnect the plug. The Super Auto-Eject shall be completely sealed to prevent contamination of the mechanism by inclement weather and road conditions. The Super Auto-Eject shall have an internal switch to open and close the AC circuit after the mating connector is inserted and before the connector is removed.

One (1)
50-20-1120

SHORE POWER PLUG

The shore power plug shall be located at the left front body compartment.

One (1)
51-05-6100

ENGINE COMPARTMENT LIGHT

One (1) 12 volt incandescent light with switch shall be mounted in the engine enclosure.

One (1)
51-05-6300

PUMP ENCLOSURE LIGHTS

One (1) incandescent work light shall be provided in the pump enclosure. The control switch shall be mounted on the light head.

One (1)

51-20-3500

LIGHT MOUNTING LOCATION

The mounting location for the specified light shall be on the front of the apparatus body.

One (1)
51-15-1210

12V 150 WATT FLOODLIGHT

One (1) Akron Night Breaker model 5150 lamphead shall be provided. The lamphead mounting arm shall terminate in 3/4" NPT threads. Wiring shall extend from the lamphead mounting arm bottom.

The lamphead shall have one (1) 150 watt 12 volt bulb. The lamphead shall direct 50 percent of the light onto the action area while providing 50 percent to illuminate the working area. The lamphead angle of elevation shall be adjustable at a pivot in the mounting arm and the position locked with a round knurled locking knob.

One (1)
51-15-2300

TELESCOPIC POLE

One (1) Fire Research 540 series side mount top raise telescopic light pole shall be provided. The light pole shall extend approximately 40" in height and be anodized aluminum. A knurled twist lock mechanism to secure the extension pole in position shall be included with the pole.

One (1)
51-20-4100

LIGHT SWITCH ON LAMPHEAD

A switch shall be installed on the quartz light lamphead. The weatherproof on-off toggle switch shall be mounted on the lower left side of the lamphead.

One (1)
52-01-1200

BACK-UP ALARM

One (1) automatic electric back-up alarm shall be wired to the back-up light circuit, and mounted under the rear of the apparatus body.

One (1)
53-01-1200

MARKER LIGHTS

LED marker lights shall be installed on the vehicle in conformance to the Department of Transportation requirements.

One (1)
53-02-1100

LICENSE PLATE BRACKET

One (1) license plate bracket shall be provided at the rear bumper. The bracket shall have a light and shall be chrome plated.

One (1)
53-03-1700

TAIL LIGHTS

Two (2) Weldon tail/brake lights shall be provided. The rectangular light shall be 7" x 8" incandescent with a red lens.

One (1)
53-04-1700

TURN SIGNALS

Two (2) Weldon turn signals shall be provided. The rectangular incandescent light shall be 7" x 8" in dimension.

One (1)
53-06-1400

BACKUP LIGHTS

Two (2) Weldon incandescent backup lights shall be installed on the rear of the apparatus body. The dimensions shall be 7" x 8" and the lens color shall be clear.

One (1)
54-02-1200

CAB GROUND LIGHTS

Two (2) incandescent ground lights shall be installed under the two (2) cab doors.

One (1)
54-03-1300

MID BODY GROUND LIGHTS

Two (2) incandescent ground lights shall be installed under the mid-body of the apparatus. One (1) light shall be located on the driver's side and one (1) light located on the officer's side of the apparatus.

One (1)
54-03-1500

REAR STEP GROUND LIGHTS

Two (2) incandescent ground lights shall be installed under rear step of the apparatus.

One (1)
54-04-1999

The ground lights shall automatically activate when the parking brake is applied.

Two (2)
54-10-1400

REAR TAILBOARD LIGHTS

Two (2) incandescent step lights with clear lens shall be installed to illuminate the step surface(s) at rear of the apparatus body.

One (1)
54-11-2100

The step/walkway light switch shall be installed and wired to the parking brake.

Six (6)
54-15-1200

SCENE LIGHT

Six (6) Whelen Series 600 halogen 4" x 6" scene light shall be installed. The light shall be installed with a 12 degree downward angle.

Two (2)
54-15-5500

Two (2) scene lights shall be located on the left side of the apparatus body.

Two (2)
54-15-5600

Two (2) scene lights shall be located on the right side of the apparatus body.

Two (2)
54-15-5700

Two (2) scene lights shall be located on the rear of the apparatus body.

One (1)
54-15-6100

One (1) scene lights switch shall be installed on the cab dash to activate all scene lights.

One (1)
55-11-1300

DOOR OPEN LIGHT

One (1) red flashing, warning light shall be provided and installed in the driver's compartment to indicate an open passenger or apparatus compartment door. The warning light shall also be attached to folding equipment racks and light towers as specified. The light shall be a flashing LED marker light with a red lens and shall be properly marked and identified.

One (1)
56-01-1300

ELECTRIC SIREN

One (1) Code 3 Model #3692 V-Con electronic siren shall be mounted in the cab. The unit shall feature an electronic air horn, wail, yelp, hi-lo siren and shall have a hard wired microphone.

One (1)
56-02-1600

SPEAKER

One (1) Federal Signal DynaMax Model #ES100 speaker shall be installed.

One (1)
56-03-1100

SPEAKER LOCATION

The siren speaker shall be installed in the center of the apparatus bumper.

One (1)
57-03-1200

LIGHTBAR

One (1) Code 3 Model #2158NFPA2 lightbar shall be installed on the apparatus cab roof. The LED X2100 Series lightbar shall be 58" in length. The lens colors shall be red and clear.

One (1)
58-72-1200

UPPER REAR WARNING LIGHTS

One (1) pair of Code 3 series 45 red LED warning lights shall be installed, one each side on the upper rear of the apparatus body. The dimensions of the lights shall be 3" x 7".

One (1)
58-47-1200

UPPER SIDE FRONT WARNING LIGHTS

One (1) pair of Code 3 series 45 red LED warning lights shall be installed, one each side on the upper portion of the body side, towards the front. The dimensions of the lights shall be 3" x 7".

One (1)
58-62-1200

UPPER SIDE REAR WARNING LIGHTS

One (1) pair of Code 3 model 45 red LED warning lights shall be installed, one each side on the upper portion of the body side, towards the rear of the body. The dimensions of the lights shall be 3" x 7".

One (1)
58-04-1200

LOWER FRONT WARNING LIGHTS

One (1) pair of Code 3 model #45 red LED lights shall be installed, one each side on the front of the chassis cab. The dimensions of the lights shall be 3" x 7".

One (1)
58-10-2000

INTERSECTION WARNING LIGHTS

One (1) pair of Code 3 model LXEX1F red LED lights shall be installed one each side of the chassis cab. The dimensions of the lights shall be 2" x 5" and shall have a red lens.

One (1)
58-37-2000

LOWER REAR SIDE WARNING LIGHTS

One (1) pair of Code 3 series LXEX1F red LED warning lights shall be installed, one each side of the apparatus body, towards the rear of the body. The dimensions of the lights shall be 2" x 5".

One (1)
58-82-1200

LOWER REAR WARNING LIGHTS

One (1) pair of Code 3 series 45 red LED warning lights shall be installed, one each side on the lower rear of the apparatus body. The dimensions of the lights shall be 3" x 7".

One (1)
60-25-9600

POWER DISTRIBUTION STRIP

One (1) power distribution strip with six (6) receptacles shall be provided. The strip shall be powered by the chassis shore line power.

SHOP NOTES

Located in the left front body compartment, L-1, above the battery charger.

One (1)
80-05-1100

BODY PAINT PROCESS

All bright metal fittings, if unavailable in stainless steel shall be heavily chrome plated. Iron fittings shall be copper plated prior to chrome plating.

All seams shall be caulked both inside and along the exterior edges with a urethane automotive sealant to prevent moisture from entering between any body panel.

The body and all parts shall be thoroughly washed with a grease cutting solvent (PPG DX330) prior to any sanding. After the body has been sanded and the weld marks and minor imperfections are filled and sanded, the body shall be washed again with (PPG DX330) to remove any contaminants on the surface.

The first coating to be applied is a pre-treat self etching primer (PPG DX1787) (.5 to 1.0 dry film build) for maximum adhesion to the body material. The next two to four coats (depending on need) shall be an acrylic urethane primer surfacer (PPG K38). The film build shall be 4-6 mils when dry. The primer surfacer coat, after appropriate dry time, shall be sanded with 320-600 grit sandpaper to ensure maximum gloss of the paint. The last step is the application of at least three coats of PPG Concept acrylic urethane two-component color (single stage). The film build being 2-3 mils dry. The single stage acrylic urethane, when mixed with component (PPG DCX61) catalyst shall provide a UV barrier to prevent fading and chalking.

All products and technicians are certified by PPG every two (2) years.

One (1)
80-34-1100

INTERIOR COMPARTMENT FINISH

The interior compartment walls shall be coated with a heavy spray on lining material. The compartments shall be cleaned with a wax and grease remover and then caulked with a urethane caulk. The compartments are then sprayed with one coat of epoxy primer, then two to three coats of urethane bed liner. The lining material shall dry to form an impervious one piece covering to protect the compartment interiors from damage. The lining material shall be white in color and applied on six (6) compartments.

One (1)
80-40-1400

WHEEL PAINTING

The exterior faces of the front wheels and outer rear wheels only, shall be finish painted to match the apparatus body. Wheels shall be properly prepared and finished with primer coats and top coats as specified.

One (1)
80-41-1100

WHEEL TRIM PAINT

The outer one-inch edge of each outside wheel rim shall be painted silver in color unless otherwise specified. Four (4) wheels shall have edge trim paint.

One (1)
80-42-1500

TOUCH-UP PAINT

One (1) two (2) ounce bottle of touch-up paint shall be furnished with the completed truck at final delivery.

One (1)
80-44-1400

UNDERCOATING

The entire underside of the single axle apparatus body is to be cleaned and properly prepared for application of a sprayed on automotive type undercoating for added corrosion resistance. Undercoating is to be a solvent based, rubberized coating, black in color.

One (1)
80-50-1800

SIMULATED GOLD LEAF LETTERING

The lettering shall be applied in simulated gold leaf material, shaded in black and encapsulated in clear Mylar.

A quantity of seventy-five (75), four (4) inch letters are to be placed on the cab and on the body as directed by fire department.

One (1)
80-50-3600

SCOTCHLITE REFLECTIVE LETTERING

The lettering shall be applied with Scotchlite reflective material, shaded in black.

A quantity of thirty (30) letters are to be placed on the cab and on the body as directed by fire department. The letters shall be between eight and twelve inches in height.

One (1)
80-70-2000

REFLECTIVE STRIPING

A 6" wide 3M brand Scotchlite #680-10 reflective stripe shall be affixed to the perimeter of the vehicle. Striping shall be placed up to 60" above ground level and shall conform to the applicable NFPA reflectivity requirements. At least 50% of the perimeter length of each side and width of the rear and at least 25% of the perimeter width of the front of the vehicle shall have reflective stripe.

The side stripe shall be applied in a "Z" pattern.

One (1)
80-73-1100

PIN STRIPE TRIM

A single layer tape stripe shall be applied above and below the reflective striping material. The color of the stripe shall be black.

One (1)
80-75-1500

COLOR OF STRIPING MATERIAL

The color of the 3M brand striping material shall be red.

One (1)
80-72-2000

REFLECTIVE STRIPE

Reflective striping shall be installed on the interior of each chassis door.

One (1)
90-01-5400

WHEEL CHOCKS

Two (2) large aluminum wheel chocks shall be provided.

Two (2)
90-25-2100

SUCTION HOSE

Two (2) 2.5" x 10 foot lengths of Kochek PVC flexible suction hose shall be supplied. The suction hose shall have light weight couplings provided.

Two (2)
90-25-6100

HOSE COUPLINGS

Light weight aluminum couplings shall be provided on the suction hose. A long handle female swivel shall be provided on one end and a rocker lug male shall be provided for the other end.

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