

Rosenbauer – Central States Division

One (1)
BS-10-3200

CUSTOM CHASSIS

A HME custom fire truck chassis shall be furnished per the specifications located in the Chassis section of this proposal.

One (1)
CC-39-1900

BUMPER EXTENSION

The chassis front bumper extension shall be supplied with the chassis.

One (1)
CC-50-0109

STIRRUP STEPS

To meet NFPA step requirements, stirrup type steps shall be located under all cab entrance areas.

One (1)
CC-50-0520

REAR MOUNT FUEL TANK

There shall be a rear mounted fuel tank furnished with the chassis.

One (1)
CC-50-0540

CAST ALUMINUM FUEL FILL ASSEMBLY WITH HINGED DOOR

There shall be a cast aluminum fuel fill assembly furnished in the driver's side behind rear axle for the rear mount fuel tank. The fuel fill assembly shall consist of a polished cast aluminum housing with a spring loaded fill door. The fill neck and cap assembly shall be located behind the spring-loaded door.

No external drain is required on the fuel fill assembly.

One (1)
CC-50-5000

HUB AND LUG NUT COVERS

Chrome plated lug nut and center hub covers shall be provided on all four outside wheels of the apparatus.

One (1)
CC-50-6000

REAR MUD FLAPS

Heavy-duty, black colored, rubber mud flaps shall be furnished and installed behind the rear wheels of the vehicle. Mud flaps shall extend the full width of the rear duals and are to be attached with stainless steel fasteners.

One (1)
CC-50-6000

REAR MUD FLAPS

Heavy-duty, black colored, rubber mud flaps shall be furnished and installed behind the rear wheels of the vehicle. Mud flaps shall extend the full width of the rear duals and are to be attached with stainless steel fasteners.

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One (1)
CC-51-1300

CHASSIS EXHAUST HEAT SHIELD

The chassis exhaust system shall have a heat shield installed where the exhaust pipe passes below the side compartments.

One (1)
CC-51-1600

CHASSIS EXHAUST

The chassis exhaust system shall be equipped with a Ward "No Smoke" filtration system, and be extended to the front of the right rear wheel.

System components consist of a "Porous" ceramic material type filter encased in stainless steel with a high temperature cushioning material between the ceramic and stainless steel. Filter measures approximately 11.25" in diameter and 14" long. Filters shall last for at least 30 filter operating hours. Also included is an Electronic Control Module and a Diverter Unit.

The system shall remove all vehicle smoke from the exhaust for an adjustable time period of 10 to 99 seconds after the vehicle has been started. The system shall also remove all visible smoke from the exhaust whenever the vehicle is in reverse gear. After the vehicle's transmission is shifted out of reverse gear the system shall continue the filter mode for a preset time period.

The whole system shall be completely automatic with a fully operational manual override option. Normal functioning of the system shall be in no way detrimental to the operations of the vehicle.

The system shall protect the engine by automatically preventing itself from activating when backpressure exceeds 1.5 PSI. When this happens, an indicator light on the cab dash shall light up showing that the filter requires changing. The system shall be all self-contained therefore allowing the system to be operated at any time, regardless of the vehicles location.

The ceramic filter shall be capable of being regenerated indefinitely providing no physical damage to the filter is incurred.

The diverter unit shall be installed in the existing exhaust pipe and shall direct the engine exhaust either through the filter element or through the muffler. The diverter shall be operated by a double acting air cylinder controlled by an electrically activated, four way, single solenoid valve.

The electronic control module (ECM) circuit board shall be enclosed in a metal enclosure and conveniently mounted for easy access. The circuit board holds the timer control where the duration of the filter cycle is set. The board also shall feature a series of LED lights that monitors each function of the system, also an hour meter to be used as a guide to determine when a filter is nearing replacement.

The above-defined system shall be installed only by a factory trained and authorized technician of the company manufacturing the exhaust filtering system.

The system shall be installed at the Kirkwood V.F.D. An allowance of \$9,652.00; which includes California Sales Tax, shall be included in the bid price for this installation.

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Five (5)
CC-60-2000

SCBA BRACKETS IN CAB

There shall be an SCBA bracket with collision restraint strap mounted in each chassis seating position as specified by the Fire Department.

Five (5) brackets shall be provided. Three (3) shall be provided and mounted in the officer's and rear facing crew seats. Two (2) shall be mounted on the rear wall of the crew cab next to the inboard forward facing canopy seats.

One (1)
CC-60-2089

INSTALL FIRE DEPT. SUPPLIED RADIO AND ANTENNA

Install customer supplied radio and antenna as directed by Fire District.

CSFA to provide and mount a universal antenna base on the chassis roof with cable run to under the doghouse until the location of the radio mount is determined.

Provide a swivel mounting base on top of the doghouse for the department supplied Motorola CDM 1550 radio. Placement will be behind the console and finalized during the pre-paint inspection.

One (1)
CC-60-2099

INSTALL FIRE DEPT. SUPPLIED RADIO CHARGERS

Install two (2) customer supplied 12V portable radio chargers as directed by the Fire Department.

Wiring for portable radios to be routed behind the front seats. The chargers will be delivered during the pre-paint inspection trip and mounted as determined at that time.

Four (4)
CC-61-5000

12-VOLT POWER LEADS

There shall be a 12-volt power lead provided on the apparatus.

Four (4) power points shall be provided. Two (2) of the power points shall be used for fire department supplied Liteboxes.

Locations of the power points shall be determined prior to construction.

One (1)
CC-65-0400

ALTERNATOR

The alternator shall be of adequate size to meet the NFPA requirements and to accommodate the specific apparatus electrical load.

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PUMP AND PLUMBING SPECIFICATIONS

One (1)
DH-00-1200

HALE DSD-1500 GPM SINGLE STAGE FIRE PUMP

The centrifugal type fire pump shall be a Hale model DSD midship mounted with a rated capacity of 1500 GPM. The pump shall meet NFPA 1901 requirements.

Pump to be rated at 1250 GPM at 7500 feet altitude.

One (1)
DH-01-2500

SINGLE STAGE FIRE PUMP

A Hale model DSD single stage centrifugal fire pump shall be midship mounted on the frame rails of the chassis.

At time of delivery the pump shall be UL tested and rated as follows:

- 100% of rated capacity at 150 pounds net pressure.
- 70% of rated capacity at 200 pounds net pressure.
- 50% of rated capacity at 250 pounds net pressure.
- 100% of rated capacity at 165 pounds net pressure.

The entire pump shall be cast, manufactured and tested at the pump manufacturer's factory. The pump shall be driven by a driveline from the truck transmission. The engine shall provide sufficient horsepower and RPM to enable pump to meet and exceed its rated performance.

The entire pump, both suction and discharge passages shall be hydrostatically tested to a pressure of 600 PSI. The pump shall be fully tested at the pump manufacturer's factory to the performance spots as outlined by the latest NFPA Standard 1901.

Pump shall be free from objectionable pulsation and vibration. The pump body and related parts shall be of fine grain alloy cast iron, with a minimum tensile strength of 30,000 PSI. All moving parts in contact with water shall be of high quality bronze or stainless steel. Pump utilizing castings made of lower tensile strength cast iron not acceptable.

Pump body shall be vertically split, on a single plane, for easy removal of impeller assembly, including clearance rings. Pump shaft to be rigidly supported by two bearings for minimum deflection. The bearings shall be heavy-duty, deep groove ball bearings in the gearbox and they shall be splash lubricated.

The pump shaft shall have only one mechanical seal. The mechanical seal shall be spring loaded, maintenance free and self-adjusting. The pump shaft shall be heat-treated, electric furnace, corrosion resistant, stainless steel. Pump shaft must be sealed with double lip oil seal to keep road dirt and water out of gearbox.

Pump impeller shall be hard, fine grain bronze of the mixed flow design; accurately machined, hand-ground and individually balanced. The vanes of the impeller intake eye shall be hand-ground and polished to a sharp edge, and be of sufficient size and design to provide ample reserve capacity utilizing minimum horsepower. Impeller clearance rings shall be bronze, easily renewable without replacing impellers or pump volute body.

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PUMP TRANSMISSION

The pump transmission shall be cast, manufactured and tested at the pump manufacturer's factory. Pump transmission shall be of sufficient size to withstand up to 16,000 lbs. Ft. of torque of the engine in road operating condition. The pump transmission shall be designed of ample capacity for lubrication reserve and to maintain the proper operating temperature.

The transmission drive shafts shall be of heat-treated chromium steel and at least 2 3/4 inches in diameter, on both the input and output drive shafts. They shall withstand the full torque of the engine in both road and pump operating conditions.

All gears, both drive and pump, shall be of highest quality electric furnace chrome nickel steel. Bores shall be ground to size and teeth integrated, crown-shaved and hardened, to give an extremely accurate gear for long life, smooth, quiet running and higher load carrying capability. An accurately cut spur design shall be provided to eliminate all possible end thrust.

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

The pump transmission shall be equipped with a power shift. The shifting mechanism shall be a heat treated, hard-anodized aluminum power cylinder, with stainless steel shaft. An in-cab control for rapid shift shall be provided that locks in Road or Pump.

For automatic transmissions, three green warning lights shall be provided to indicate to the operator when the pump has completed the shift from Road to Pump position. Two green lights to be located in the truck driving compartment and one green light on pump operator's panel adjacent to the throttle control. All lights to have appropriate identification/instruction plates.

PRIMING PUMP

The priming pump shall be a positive displacement vane type, electrically driven, and conform to standards outlined in NFPA Pamphlet no. 1901. One priming control shall both open the priming valve and start the priming motor.

One (1)
DH-04-1000

PNEUMATIC PUMP SHIFT

The pump shift shall be air operated and shall incorporate an air cylinder with an electric actuating switch to shift from road to pump and back.

The pump shift switch shall be mounted in the cab and identified as "Pump Shift" and include instructions permanently inscribed on the pump shift switch plate. The In-Cab operating switch uses a spring loaded lock to prevent it from accidentally being moved.

*A "Pump Engaged" indicator shall be provided in the driving compartment to indicate that the pump shift has been successfully completed.

*An "Ok to Pump" indicator shall be provided in the driving compartment to indicate that the pump is engaged, the chassis transmission is in pump gear, and the parking brake is engaged.

*A "Throttle Ready" indicator shall be provided at the pump operator's panel that indicates that the apparatus is in "OK to Pump" mode or that the chassis transmission is in neutral and the parking brake is engaged.

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*An interlock system shall be provided to prevent advancement of the engine speed at the pump operators panel unless the chassis transmission is in neutral and the parking brake is engaged, or the apparatus is in "OK to Pump" mode.

*Controls for the pump shift are to be in the cab, and easily accessible.

One (1)
DH-04-3000

OILLESS PRIMER

The pump shall be furnished with the Hale ESP oil-less priming system.

One (1)
DH-04-5000

MECHANICAL SEALS

The fire pump shall be provided with a mechanical pump seal. One only required on the suction, inboard, side of the pump. The mechanical seal shall be two inches in diameter and shall be spring loaded, maintenance free and self-adjusting. Mechanical seal construction shall be a carbon sealing ring, stainless steel coil spring, Viton rubber boot, and a tungsten carbide seat with Teflon backup seal.

One (1)
DH-04-7120

CLASS ONE GOVERNOR

Class 1, pressure governor for electronic engines shall be furnished and installed on the apparatus. The system shall include an alpha/numeric display to show pump pressure and engine RPM. The control panel shall include a RPM/PSI mode switch, an on/off power switch, increase and decrease switches for throttle control, a preset switch to select preset pressure or RPM, and an idle switch to return to idle. The pressure governor shall be connected to the electronic engine and maintain the specified preset discharge pump pressure or a preset engine speed.

The device will be furnished, installed and tested by the apparatus body builder.

One (1)
DH-15-7500

MANIFOLD DRAIN

A manifold drain valve shall be furnished with all pump drains connected to it so that the entire pump system may be drained by one control. Drain valve assembly shall consist of a stainless steel plunger and a bronze body.

A control handle is to be provided and located below the driver's side running board of the pump house, properly identified MASTER DRAIN.

One (1)
DH-20-1000

UL TEST

The pump shall undergo an Underwriters Laboratories Incorporated test per Class A requirements of NFPA #1901 prior to delivery of the completed apparatus. The UL acceptance certificate shall be furnished with the apparatus on delivery.

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One (1)
DH-20-1200

ALTITUDE REQUIREMENTS

The apparatus shall be designed to meet the specified rating at 7600 feet altitude.

One (1)
DH-20-2000

PUMP COOLING LINE

A 3/8" cooling line shall be installed to recirculate water from the pump back to the water tank, to cool the pump during pro-longed pumping operations. The cooling line shall be controlled at the operator's position with a quarter turn valve.

One (1)
DH-20-5000

HEAT EXCHANGER

A heat exchanger shall be provided on the pump driving engine cooling system. The heat exchanger shall not allow mixing of the pump driving engine coolant and water from the fire pump.

A gated line shall be installed to provide water from the fire pump to the pump driving engine heat exchanger to assist in engine cooling during pumping operations. The heat exchanger line shall be controlled at the pump operator's panel.

One (1)
DH-99-0500

FIRE PUMP WARRANTY

The Hale fire pump shall carry the manufacturer's two (2) year warranty covering defective parts and workmanship. A copy of the pump manufacturer's warranty policy shall be provided with the completed apparatus.

One (1)
EE-02-1000

INTAKE RELIEF VALVE

A 2-1/2" intake relief valve preset at 125 psi shall be permanently installed on the suction side of the fire pump. The valve shall have an adjustment range of 75 psi to 250 psi, and shall be designed to automatically self-restore to a non-relieving position when excessive pressure is no longer present.

Discharge side of the intake relief valve shall be plumbed to the right side below the running boards, away from the pump operator, and shall terminate with a 2-1/2" NST male chrome threaded adapter, marked with an engraved tag "Intake pressure relief outlet - Do Not Cap".

One (1)
EE-02-5100

HOT DIP GALVANIZED INTAKE MANIFOLD

The suction manifold 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.

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

One (1)
EE-02-5600

DRIVER SIDE STEAMER INLET

There shall be one (1) steamer inlet furnished on the driver side of pump panel. The suction inlet shall have 6" NST thread. The suction inlet shall have a removable strainer provided inside the external inlet.

Steamer inlet to be as short as possible to allow suction fittings to be attached without extending past the side running boards.

One (1)
EE-02-5700

PASSENGER SIDE STEAMER INLET

There shall be one (1) steamer inlet furnished on the passenger side of pump panel. The suction inlet shall have 6" NST thread. The suction inlet shall have a removable strainer provided inside the external inlet.

Steamer inlet to be as short as possible to allow suction fittings to be attached without extending past the side running boards.

One (1)
EE-20-0500

SUCTION CAP DRIVER'S SIDE

The driver's side suction inlet shall be equipped with a chrome-plated, long handled, cap capable of withstanding 500 PSI.

One (1)
EE-20-1000

SUCTION CAP PASSENGER SIDE

The passenger's side suction inlet shall be equipped with a chrome-plated, long handled, cap capable of withstanding 500 PSI.

One (1)
ES-02-1500

2-1/2" GATED SUCTION INTAKE DRIVER SIDE

A 2-1/2" independent gated suction intake shall be provided on the driver's side pump panel. Intake shall be provided with a quarter-turn valve and control. The intake shall have a 3/4" drain valve with handle. Each intake shall have chrome-plated female swivel adapter with removable internal screen and a chrome-plated plug type cap with end chain.

One (1)
ES-02-1510

SUCTION VALVE CONTROL

Suction valve shall have swing type control handle located adjacent to valve.

One (1)
ES-02-2000

2-1/2" GATED SUCTION INTAKE PASSENGER SIDE

A 2-1/2" independent gated suction intake shall be provided on the passenger's side pump panel. Intake shall be provided with a quarter turn-valve and control. The intake shall have a 3/4" drain

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valve with handle. Each intake shall have chrome-plated female swivel adapter with removable internal screen and a chrome-plated plug type cap with end chain.

One (1)
ES-02-2010

SUCTION VALVE CONTROL

Suction valve shall have swing type control handle located adjacent to valve.

One (1)
FA-00-1000

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 suction 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)
FA-01-0000

PUMP DISCHARGES

Each gated discharge outlet shall include an Akron heavy-duty brass, quarter-turn, swing-out ball valve. All lines to have victaulic couplings or hose with stainless steel fittings installed where flex may occur to prevent cracking of the plumbing system. Each discharge shall have 3/4" cast bronze 1/4 turn drain valve complete with reinforced Teflon seals, and blowout proof stem rated to 600 psi. A chrome-plated zinc handle shall be provided on each drain valve, complete with a 1" X 1 1/2" recessed identification label. Drains shall be aligned in a straight horizontal row at the lower edge of the corresponding pump panel so as to allow for ease of identification and operation. Each drain shall be labeled and numbered to correspond to the respective discharge outlet and coloring.

Individual discharge controls are to be aligned in a straight horizontal row across the pump operator's control panel, directly in-line with the corresponding discharge outlet line pressure gauges.

One (1)
FA-01-0010

GALVANIZED PLUMBING

All rigid piping five-inch diameter or less shall be galvanized type with tapered thread or victaulic type couplings.

Two (2)
FA-01-0500

DRIVER SIDE DISCHARGE OUTLET

Each 2-1/2" discharge outlet on the driver's side pump panel shall have a 2-1/2" quarter turn valve with control on pump operator's panel. There shall be a chrome plated 2-1/2" NST adapter that extends through the pump panel. Each discharge shall be provided with chrome-plated 30-degree discharge elbow.

Two (2) 2-1/2" discharges shall be provided on the driver's side pump panel.

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Two (2)
FA-01-0501

MANUAL VALVE

Discharge valve shall be swing-out type with manual control handle located on pump operator's panel.

Two (2)
FA-01-1000

PASSENGER SIDE DISCHARGE OUTLET

Each 2-1/2" discharge outlet on the passenger's side pump panel shall have a 2-1/2" quarter turn, swing-out valve with control on pump operator's panel. There shall be a chrome-plated 2-1/2" NST adapter that extends through the pump panel. Each discharge shall be provided with chrome-plated 30-degree discharge elbow.

Two (2) 2-1/2" discharges shall be provided on the passenger's side pump panel.

Two (2)
FA-01-1001

MANUAL VALVE

Discharge valve shall be swing-out type with manual control handle located on pump operator's panel.

One (1)
FA-01-2000

PASSENGER SIDE REAR DISCHARGE OUTLET

There shall be one (1) 2-1/2" discharge outlet located on the passenger's side rear of the body below the hose bed. The discharge outlet shall have a 2-1/2" quarter turn, swing-out valve with control on pump operator's panel. There shall be a chrome-plated 2-1/2" NST adapter that extends through the rear of the body. The discharge shall be provided with a chrome-plated 30-degree discharge elbow.

One (1)
FA-01-2001

MANUAL VALVE

Discharge valve shall be swing-out type with manual control handle located on pump operator's panel.

One (1)
FA-01-2010

MANUAL DRAIN VALVE

The passenger's side rear 2-1/2" discharge outlet shall have a 3/4" drain with individual control on side pump panel.

Four (4)
FA-01-3220

2-1/2" CAPS AND CHAINS

The following discharge outlets shall be equipped with a 2-1/2" chrome-plated cap and chain.

All 2-1/2" discharges shall have chrome plated caps and chains.

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One (1)
FB-02-2500

MONITOR PROVISION

There shall be a three-inch (3") deluge discharge above fire pump. Deluge outlet shall be plumbed with 3" quarter turn, swing out valve and 3" I.D. pipe with 3" NPT male thread. The three-inch valve shall have a slow close device. Deluge outlet shall have control on pump operator's panel.

The monitor piping shall be left short to accommodate a fire department supplied TFT 12" Extend-A-Gun.

One (1)
FB-02-2502

MANUAL VALVE WITH SLOW CLOSE

Discharge valve shall be swing out type, with slow close and manual control handle located on pump operator's panel.

One (1)
FB-02-2505

MANUAL DRAIN VALVE

Monitor shall have a 3/4" drain with individual control on side pump panel.

Two (2)
FC-31-0100

1-3/4" CROSSLAY(S) ASSEMBLY ABOVE PUMP

Crosslay hose bed(s) shall be designed to carry 200 feet of 1-3/4" double jacket fire hose. Crosslay hose bed(s) shall be located above the fire pump. The floor of the crosslay hose bed(s) shall be perforated to allow for drainage. Polished stainless steel hose roller assemblies shall be provided at the sides and lower edges of the crosslay opening on each side of the apparatus body.

Crosslay discharge(s) shall be plumbed using rigid pipe or flexible high-pressure hose coupled with stainless steel fittings. The crosslay shall be provided with 2" brass valve, and a 2" 90 degree swivel adapter with 1-1/2" NST male outlet thread.

Two (2) 1-3/4" crosslays shall be provided.

Two (2)
FC-31-0101

MANUAL VALVE

Each discharge valve shall be swing out type with manual control handle located on pump operator's panel.

Two (2)
FC-31-0108

MANUAL DRAIN VALVE

Each crosslay/speedlay shall have a 3/4" drain with individual control on side pump panel.

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One (1)
FC-31-4200

CROSSLAY HOSEBED COVER

A .125 polished aluminum treadplate hinged cover shall be provided over the crosslay hose bed(s) complete with full length stainless steel piano hinge and with chrome plated lift handles provided on each side of the cover. Stops shall be provided to hold the cover in the open position or to protect cab or other adjacent body components. The hinge shall be located on the forward section of the cover, closest to the chassis cab.

One (1)
FF-26-1000

FOAM SYSTEM

A Foam Pro Model #1600 built in foam injection system shall be provided with the controls at the operator's panel.

The foam system shall be a fully automatic, electronic, direct injection foam proportioning system. The system shall be capable of Class A foam concentrate. The foam proportioning operation shall be based on an accurate direct measurement of water flows with no water flow restriction. The foam system shall be installed in accordance with the manufacturer's recommendations.

The system shall be equipped with a control module. It shall be installed on the pump operator's panel and enable the pump operator to perform the following functions;

1. Activate the foam system
2. Change foam concentrate proportioning rates of .1% to 1%.
3. Flash a "low concentrate" warning light when the foam concentrate tank runs low of concentrate and in two minutes if foam concentrate is not added to tank, shut the foam concentrate pump down.

The foam system shall have a 12-volt, 1/3 hp electric motor driven positive displacement piston type foam concentrate pump with a rated capacity of .01 to 1.6 gpm with operating pressures up to 400 psi.

The FoamPro system shall be plumbed to the following discharge outlet.

The foam system shall be plumbed to both crosslays and front 1-1/2" discharge.

One (1)
FF-27-0100

SINGLE FOAM TANK PLUMBING SYSTEM

The foam tank shall be plumbed with three-quarter inch (3/4") valve and corrosion resistant hose from the foam tank to the foam inlet. There shall be a three-quarter inch (3/4") drain line furnished on the foam tank. Drain valve to be located on foam tank with corrosion resistant hose piped to below the frame level of the chassis.

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One (1)
FF-27-3000

FOAM TANK

A 30-gallon foam concentrate tank shall be furnished as an integral component of the booster tank. The foam tank shall have a separate fill tower provided in a location to allow easy access for filling. Fill tower shall be equipped with a pressure/vacuum vent and have a sealed airtight cover. Tank shall be plumbed to the on board "Class A" foam system. A valved drain shall be provided at the lowest point of the foam tank. The drain shall be plumbed to drain directly to the surface below the apparatus without contacting other body or chassis components.

The following labels shall be attached to the foam tank:

"CLASS A FOAM TANK FILL"

"WARNING: DO NOT MIX BRANDS AND TYPES OF FOAM"

One (1)
FH-03-0100

TANK TO PUMP PLUMBING

A 3" *Akron* ball type gated suction valve shall be furnished from the tank to the pump, complete with a flexible connection and enclosed in the pump compartment.

A check valve shall be provided and installed in the line between the tank and the pump to prevent the possibility of backfilling the booster tank through the tank to pump suction line.

Tank suction shall be located in a sump assembly located below the bottom of the tank, properly baffled to prevent surging of water. A 3" cleanout plug shall be provided in the bottom of the tank sump.

One (1)
FH-03-6000

TANK FILL/COOLING LINE

A gated discharge line from the pressure side of the pump to the tank shall be furnished so the tank can be filled from draft or hydrant. Valve shall have control on the operator's panel. The valve is to be one and one-half inch, (1-1/2") swing out type ball valve and be plumbed to tank with flexible type hose.

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One (1)
FJ-00-0202

POLY BOOSTER TANK

The booster tank shall be of a specific configuration and is so designed to be completely independent of the body and compartments. All joints and seams shall be nitrogen welded and tested for maximum strength and integrity.

The transverse swash partitions shall be manufactured of polypropylene and extend from approximately 4" off the floor to just under the cover. The longitudinal swash partitions shall be constructed of polypropylene and extend from the floor of the tank through the cover to allow for positive welding and maximum integrity. All partitions shall be equipped with vent and air holes to permit movement of air and water between compartments. The partitions shall be designed to provide maximum water flow. All swash partitions interlock with one another and are welded to each other as well as to the walls of the tank.

A forward mounted sump shall be provided in the tank. The sump shall be constructed of polypropylene and be located in the left front quarter of the tank. A polypropylene pipe shall be installed that will sweep from the front of the tank to the sump location. The sump shall have a 3" N.P.T. threaded coupling on the bottom for a plug. This shall be used as a combination clean out and tank drain. An anti-swirl plate shall be located above the sump.

There shall be two standard tank outlets; one for tank-to-pump suction lines, and one for a tank fill line. All tank couplings shall be backed with flow deflectors to break up the stream of water entering the tank.

The tank shall carry a lifetime warranty from its manufacturer.

One (1)
FJ-01-0208

FILL TOWER

The tank shall have a combination vent and manual fill tower. The fill tower shall be constructed of polypropylene and with a minimum dimension of 8" x 14" outer perimeter. The fill tower shall be located in the left front corner of the tank. The fill tower shall have a polypropylene screen and a polypropylene hinged cover. Inside the fill tower, shall be fastened a combination vent overflow pipe. The vent overflow shall be polypropylene pipe that is designed to run through the tank and shall be piped behind the rear wheels.

One (1)
FJ-01-1000

BOOSTER TANK

A 500-gallon capacity polypropylene booster tank shall be provided.

One (1)
FJ-02-7600

HOT DIP GALVANIZED BOOSTER TANK SUBFRAME

The booster tank shall be mounted on a steel sub frame. Steel sub frame shall consist of two (2) longitudinal 3" x 4 pound channels and two (2) 3" x 4 pound channels welded together to form a tank retention cradle. The tank retention cradle shall prevent fore and aft, and side to side movement of the tank. Additional 3" x 4 pound transverse cross member channels shall be installed to support the floor of the booster tank. The cross members shall have a maximum spacing of 20" for the polypropylene tanks. There shall be an additional full-length longitudinal

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member installed in the center of the tank support area. The booster tank shall rest on heavy rubber channels that isolate the polypropylene tank from the sub frame.

The booster tank sub frame shall be hot dip galvanized after fabrication.

One (1)
FK-01-0500

DRIVER SIDE MOUNTED OPERATOR'S CONTROL PANEL

All pump suction and discharge controls are to be mounted on the driver side pump operator's panel so as to permit operation of the pump from a central location.

All of the pump controls shall be clearly identified with permanently engraved plate type labels.

A full panel width polished light hood with a minimum of three Weldon model 2025 light assemblies shall be provided to illuminate the entire pump operator's control panel.

An additional polished light hood with a minimum of two Weldon model 2025 light assemblies shall be provided to illuminate the right side pump panel. Lights shall be controlled by the operator's panel light switch.

GAUGE PANEL

All gauges shall be suitably enclosed and mounted on a full pump compartment width "hinged" gauge panel constructed of the same material as the pump operators control panel, allowing access to the backside of all gauges and gauge lines. Panel is to include a stainless steel piano hinge, flush mounted chrome plated trigger latch, and stainless steel cable end stops. Electrical wiring and all gauge lines shall be properly tie wrapped to prevent kinking or cutting of the lines when the panel is opened.

One (1)
FK-01-1600

EXTRUDED ALUMINUM PUMP HOUSE STRUCTURE

The pump house structure shall be fabricated of extruded aluminum. The structure shall be welded together and have gusset plates on each corner. The pump house shall be mounted separate from the body and chassis and be bolted to the chassis frame rails.

The exposed areas of the pump house structure shall be overlaid with polished aluminum treadplate.

One (1)
FK-01-2200

PUMP PANELS

The right and left side pump panels shall be constructed entirely of 14-gauge type 304 brushed stainless steel material. The panels are to be completely "bolted" in place for ease of removal.

One (1)
FK-01-3100

PUMP COMPARTMENT ACCESS DOOR

The passenger's side pump panel shall be provided with a full panel width vertically hinged access door located in the upper portion of the side panel. This door shall be approximately 18" high and as wide as possible, and shall be constructed of brushed stainless steel. Two (2) flush mounted, push type latches shall be furnished to hold the door closed. The inspection door

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shall be attached with a stainless steel hinged and have a retainer cable attached to prevent the door from opening too far.

One (1)
FK-01-3500

PUMP COMPARTMENT ACCESS PANEL

A removable access panel constructed of .125 aluminum treadplate material is to be provided at the front of the pump compartment, accessible when tilting the chassis cab. The access panel is to be flush mounted in the forward wall of the pump compartment. Door shall be a minimum of 60" wide by 25" high, and shall have easily accessible D-ring latch for quick removal.

One (1)
FK-01-5500

DUNNAGE OVER PUMP

There shall be a dunnage compartment furnished above the pump. The dunnage compartment shall be as wide as possible from side to side, and be a minimum of 12" deep. The floor shall be bolted in place and removable for access to the pump.

One (1)
FK-05-2000

RECESSED HOSEWELL IN DRIVER SIDE RUNNINGBOARD

A recessed hose well storage area shall be installed in the driver's side running board, below the main pump for storage of preconnected soft suction hose.

The tray to hold 25' of 6" soft suction hose with 4-1/2" adapters.

One (1)
FK-05-2500

RECESSED HOSEWELL IN PASSENGER SIDE RUNNINGBOARD

A recessed hose well storage area shall be installed in the passenger's side running board, below the main pump for storage of preconnected soft suction hose.

The tray to hold 25' of 6" soft suction hose with 4-1/2" adapters.

One (1)
FK-10-0000

PUMP OPERATORS PANEL

The following equipment shall be installed on the pump operator's panel.

Customer must approve a layout drawing before construction of panel.

One (1)
FK-10-1200

MASTER GAUGES

Class One #LFP410, 4-1/2" diameter pressure gauge registering up to 600-lbs per square inch with 1/4" pipe thread connection. The gauge shall be of the type that will not be injured when subjected to a vacuum. The gauge is to have a white face with black lettering. The gauge is to be located at the right of the gauge panel and labeled "DISCHARGE" with an engraved label.

Class One #LFP410, 4-1/2" diameter compound gauge shall be provided on the suction side of the pump registering at least 600-lbs pressure and 30-inches of vacuum. The gauge shall have a

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white face with black lettering. The gauge is to be located to the left of the master discharge gauge and labeled "INTAKE" with an engraved label.

The gauges shall utilize LED's for the back lighting of the gauges.

One (1)
FK-10-2600

PRESSURE GAUGES

Class One #LFP220, 2-1/2" diameter pressure gauges shall be provided. The gauges are to have white faces with black lettering. The gauges shall be back lit with LED lights. The gauges shall read -30 to 600 lbs. Line pressure gauges shall be individually identified with engraved labels.

Individual line pressure gauges are to be mounted adjacent to the corresponding discharge valve control.

Three (3)
FK-10-2900

There shall be one (1) pressure gauge for each 1-1/2" discharge outlet.

Five (5)
FK-10-3000

There shall be one (1) pressure gauge for each 2-1/2" discharge outlet.

One (1)
FK-10-3100

There shall be one (1) pressure gauge for each deck gun outlet.

One (1)
FK-11-2520

CLASS ONE GOVERNOR

Class 1, pressure governor for electronic engines shall be furnished and installed on the apparatus. The system shall include an alpha/numeric display to show pump pressure and engine RPM. The control panel shall include a RPM/PSI mode switch, an on/off power switch, increase and decrease switches for throttle control, a preset switch to select preset pressure or RPM, and an idle switch to return to idle. The pressure governor shall be connected to the electronic engine and maintain the specified preset discharge pump pressure or a preset engine speed.

The device will be furnished, installed and tested by the apparatus body builder.

One (1)
FK-12-0900

INFORMATION CENTER

A Class 1 Enfo IV master engine gauge and warning device shall be furnished and installed on the pump operator's panel. The Class 1 Enfo IV is equipped with super bright displays for maximum visibility during daytime hours. The device will monitor the following engine systems;

- Engine RPM display
- System voltage display
- Engine oil pressure display
- Engine water temperature display

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One (1)
FK-12-5200

PUMP PANEL IDENTIFICATION LABELS

All discharges shall be provided with color-coded labels. Identification labels shall be provided at the discharge control, the discharge outlet, and at the discharge drain valve control, color-coded according to NFPA recommended standards.

One (1)
FK-12-7100

PUMP PANEL WATER TANK LEVEL GAUGE

A Class One ITF Intelli-tank water tank level gauge shall be provided on the pump operator's panel. The Intelli-tank display features wide angle viewing and four (4) ultra-bright LED's for high visibility, even in direct sunlight. The Intelli-tank utilizes a pressure transducer, ILO of probes, to provide nine (9) accurate levels of indication.

One (1)
FK-13-1500

UL TEST CONNECTIONS

A pump pressure and vacuum test block assembly shall be provided and mounted at the pump operator's control panel. The test block assembly shall include plug type caps.

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APPARATUS BODY SPECIFICATIONS

One (1)
HA-00-0200

HOSEBODY

The apparatus hose body is to be properly reinforced without the use of angles or structural shapes, and free from all projections that might injure the fire hose.

The main apparatus hose body shall run the full length of the apparatus body from behind the pump panel area to the rear face of the body.

The upper rear interior of the beavertail extrusions on the right and left side shall be overlaid with brushed stainless steel to protect the painted surface from damage by hose couplings

One (1)
HA-00-0320

HOSE BED CAPACITY

The hose bed will be configured to be 55 cubic feet, unless the desired hose load requires more area.

The hose bed shall hold the following:

500' of 4" LDH hose
1500' of 2-1/2" hose
150' of 2-2/1" preconnected hose

The hose bed shall be a minimum of 13" deep.

One (1)
HA-00-0400

HOSEBED FLOORING

Floors of the hose beds are to be provided with removable slat style extruded aluminum hose bed gratings, spaced 1/2" apart for proper hose ventilation. Hose bed gratings are easily lifted out of the main hose bed for access to the top of the specified booster water tank.

Three (3)
HA-00-1600

MAIN HOSEBED DIVIDER

Adjustable hose bed dividers shall be provided in the main hose bed.

The hose bed divider(s) shall be fabricated of 1/4" smooth aluminum sheet stock, welded into a "T" shaped aluminum extrusion for added strength along the bottom edge of the divider.

The divider shall be fully adjustable, mounted using aluminum "C" channel tracks at the front and rear of the divider for full side to side adjustment.

Three (3) hose bed dividers shall be provided.

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One (1)
HA-01-0800

HINGED ALUMINUM HOSEBED COVERS

Polished aluminum treadplate hose bed covers shall be furnished, extending the full-length and width of the main hose bed.

Covers shall be fabricated of polished aluminum treadplate with cross bracing for maximum strength, and to support the weight of a firefighter standing on the covers when closed. The covers shall be of the sloped design for proper water runoff. Each cover to be equipped with a full length stainless steel piano hinge with chrome plated grab handles at front and rear of each cover. Hose bed covers shall include heavy-duty stops to support them when in the opened position.

One (1)
HA-01-0900

REAR VINYL FLAPS FOR ALUMINUM COVER

There shall be a vinyl flap attached to each aluminum hose bed cover. The vinyl flaps shall cover the area on the rear of the hose bed from top to bottom. The flaps shall be independent of each other but attachable with Velcro in the center. The bottom edge of the flap shall be secured with alligator clips.

The flaps shall be red in color.

One (1)
HA-01-1000

LIGHTS BELOW ALUMINUM HOSE BED COVER

There shall be two lights furnished below each hose bed cover. The lights shall switch on automatically when the hose bed cover is opened. The lights shall also be connected to the hazard light in the chassis cab to indicate when the hose bed covers are in the open position.

One (1)
HB-00-0099

BACK BOARD STORAGE

A transverse storage compartment shall be provided in front of the crosslay compartment. This compartment shall hold four (4) fire department supplied back boards (8" x 10" x 18").

One (1)
HD-00-1300

LADDER MOUNTINGS

The ladders shall be mounted in a compartment, beside the water tank and below the hose bed, on individual poly scratch resistant slides. There shall be an aluminum treadplate door on the rear with push button latch for access to the interior of the compartment.

The ladder compartment shall be located on the passenger's side of the body.

One (1)
HD-00-2520

GROUND LADDERS FURNISHED BY PURCHASER

The purchaser shall furnish the ground ladders.

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One (1)
HD-00-5100

HARD SUCTION HOSE TRAYS

Hard suction hoses shall be mounted in extruded aluminum, self-draining carrier trays with hold down device. The carrier trays shall be mounted one on each side of body.

The hard suction hoses shall be provided by the purchaser.

Two (2)
HD-01-0500

PIKE POLE(S) MOUNTED IN LADDER COMPARTMENT

There shall be room for the pike pole(s) to be mounted in the compartment, along with the specified ladders.

One (1)
HD-01-7020

PIKE POLES FURNISHED BY PURCHASER

The pike poles shall be furnished by the purchaser.

One (1)
KB-02-0200

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 and specially designed extrusions 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, hose beds, and floors. All aluminum material shall be welded together using the latest mig spray pulse arc welding system.

Compartments to be sweep out design and to be water and dust proof. All compartments shall be made to the maximum practical dimensions to provide maximum storage capacity.

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 double break formed smooth 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.

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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)
KB-02-0300

CS 1/8" ALUMINUM BODY

The aluminum sheet material used in fabricating the body shall be a minimum of .125 (1/8") in thickness.

One (1)
KB-10-0500

BODY DIMENSIONS

Apparatus body shall be up to 144" long and 102" wide, reference drawing for actual body length. Body compartments shall be full depth from top to bottom. Each compartment shall be approximately twenty-six inches in depth. The hose bed shall be 68" wide.

One (1)
KK-01-1000

APPARATUS BODY SUB-FRAME

The apparatus body sub frame shall be constructed entirely of heavy steel structural channel material.

Two full frame lengths, three-inch (3") 4 pound per foot longitudinal steel channels shall form the sides of the body sub frame and sides of the water tank cradle. Sub frame cross members shall be fabricated with three inch (3") 4 pound per foot heavy steel channel cross members welded to the longitudinal body sub frame sides and the full length frame pads.

Two full frame length 1/2" x 3" flat steel frame pads shall be attached to the body sub frame and rest on top of the chassis frame rails for proper frame weight distribution.

The steel frame pads, longitudinal steel channels and sub frame cross members shall be attached to the chassis frame rails using heavy "U" bolt fasteners to allow removal of the sub frame and body assembly from the chassis. There shall be a barrier provided between the sub frame and body to prevent electrolysis.

The rear sub frame and lower body platform support members shall be of the "two piece" design, fabricated of 4.3 lb. per foot heavy channel and welded to the full length sub frame channel liners at the rear.

A minimum of two rear platform support channels shall be provided and constructed of 4.3 lb. per foot heavy steel material. Each support channel shall have welded in gusset where the support meets the rear sub frame rails.

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After fabrication the entire sub frame assembly shall be hot dip galvanized to prevent corrosion. The hot dip galvanized sub frame shall have a lifetime warranty.

One (1)
KK-02-0400

COMPARTMENT VENTS

All body compartments shall have a minimum of one (1) louvered panel bolted into a wall to provide the proper airflow inside the compartment. There shall be a filter installed behind the louvered panel. The filter shall be accessible for cleaning by removing the louvered panel on the interior of the compartment.

One (1)
KK-02-0500

BODY AND PUMP HOUSE FLEX JOINT

When equipped with a fire pump, the body and pump house shall be a separate freestanding component forming a true flex joint between the body and pump house. The intent is to allow either to be easily removed as a single unit without disturbing the other and to provide a flex joint between the two modules. Designs where the pump house and body are interjoined as a common unit do not meet the technical requirement of providing a flex joint or the repairability requirement of these specifications.

One (1)
KK-02-0652

WHEEL WELL LINER AND FENDERETTES

For ease of accessibility and maintenance, wheel well panels shall be double break formed painted smooth plate that is welded in place.

To fully protect the wheel well area from road debris and to aid in cleaning, a full depth (minimum of 25") radius wheel well liner shall be provided. Wheel well liner shall be smooth aluminum to prevent corrosion.

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)
KK-02-3700

REAR TOW EYES

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)
KK-02-5000

RECEIVER HITCH

There shall be a 2" receiver hitch assembly attached to the rear of the apparatus directly below the rear step. The receiver shall be connected to the chassis and body sub frame assembly.

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Two (2)
KK-02-5200

RECEIVER HITCH

There shall be a 2" receiver hitch assembly attached to the side of the apparatus, behind the rear wheels. The receiver shall be connected to the chassis and body sub frame assembly.

Two (2) receiver hitches shall be provided behind the rear wheels, one on each side of the body.

One (1)
KK-03-0050

APPARATUS COMPARTMENTATION

There shall be large enclosed compartments on both sides of the body, starting at the front of the hose body and continuing to the rear of the apparatus. These compartments shall be as large as possible, using all available space.

The aluminum treadplate compartmentation tops on each side of the body shall be extended out and downwards a minimum of .50" over the compartment doors forming a drip rail. Corners shall be TIG welded.

Lower or rear face compartments, if specified shall be provided with polished aluminum drip rails.

One (1)
KK-03-0065

HINGED COMPARTMENT DOOR CONSTRUCTION

All hinged compartment doors shall be of the flush style so that the entire door fits flush against the apparatus body sides. Doors shall be designed, in the closed position, to have the painted edges protected from damage on the tops by forming the treadplate compartment tops into a extended drip edge, on the bottoms by the rub rail.

Doors shall be a minimum 2" thick, fabricated of a minimum of .125 smooth aluminum. Full panel inner compartment door liners shall be provided and constructed of smooth aluminum. The compartment doors shall have a foam panel glued in place between the exterior and interior door skin. Exterior door panels shall be smooth with no welds visible on the exterior skin. Double door compartments shall be equipped with a secondary latch to hold the secondary door in position.

All compartment door hinges shall be full-length piano type constructed of a minimum 14-gauge type 304 polished stainless steel with 3/16" stainless steel hinge pin with dual directional bolt holes for ease of adjustment.

When horizontally hinged lift-up doors are specified, they shall be equipped with heavy-duty gas filled props to hold the doors in the open position. All other hinged doors shall be equipped with spring loaded hold open device specifically designed for use on vertically hinged doors. Door holders shall be bolted in position. The door ajar switches shall be fully enclosed within structural members and shall not extend into the clear door opening.

All compartment doors shall be provided with hollow core weather stripping to provide a weather tight seal at the door opening and to prevent road spray and debris from entering the compartment.

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One (1)
KK-03-0076

EXTERIOR DOOR LATCHES

Side exterior compartment doors shall be furnished with a large stainless steel spring loaded D-handle with slam type latches. D-handles shall have the large "bent" D-ring for ease of grabbing the handle even when wearing mitts or gloves.

A non-moisture absorbing gasket shall be installed between the door latch and the door skin panel.

One (1)
KK-03-0093

EXTERIOR DOOR LOCKS

The hinge door(s) shall be equipped with a keyed locking device.

The front compartment on the passenger's side (R1) shall have a keyed locking latch.

One (1)
KK-03-0099

DRIVER SIDE

The driver side of the apparatus body shall consist of the following configuration.

One (1)
KK-03-2100

DRIVER SIDE COMPARTMENTS

Three body compartments shall be furnished as follows:

- One compartment ahead of the rear wheels with single hinged door.
- One compartment above the front lower compartment and rear wheel with lift-up door.
- One compartment behind the rear wheels with full height single hinged door.

The front lower compartment door to be reversed hinged.

One (1)
KK-04-0100

PASSENGER SIDE COMPARTMENTS

The passenger side of the apparatus body shall consist of the following compartment configuration.

One (1)
KK-04-2100

PASSENGER SIDE COMPARTMENTS

Three body compartments shall be furnished as follows:

- One compartment ahead of the rear wheels with full height single hinged door.
- One compartment above rear wheel with one lift-up door.
- One compartment behind the rear wheels with full height single hinged door.

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One (1)
KK-50-0600

REAR BODY CONFIGURATION

Rear apparatus body compartments shall be as follows:

- There shall be one compartment with full height double hinged doors.

The rear compartment shall be 26" deep in the lower portion and transverse with the side compartments. The upper portion shall be as deep as possible.

One (1)
KK-50-4200

FLAT BACK BODY

The rear vertical surface of the body shall be flat from side to side.

One (1)
KL-30-0100

REAR ACCESS LADDER

The top of the apparatus shall be accessible from the ground by ladder. The ladder shall be constructed of tubing and shall have a non-slip surface. The ladder will be located on the right rear of the apparatus.

One (1)
KM-49-1002

EXTERIOR COMPARTMENT FLOOR COVERING

All enclosed compartment floors with exterior opening doors on the apparatus body and the four (4) shelves shall be covered with black colored rigid Turtle Tile for improved ventilation and added scuff protection for the compartment floor.

Ten (10)
KM-49-1604

ADJUSTABLE SHELVES

Compartment shelves shall be constructed of .125" smooth Aluminum. Shelves shall have formed edges on three sides for added strength. Shelves shall be fully adjustable, with extruded aluminum unistrut channels provided on the front and rear compartment walls.

The shelving shall be located as follows:

- One (1) in the lower compartment in front of the rear wheels on the driver's side (L1 lower),
- Two (2) in the upper portion of the compartment behind the rear wheels on the driver's side (L3 upper),
- Two (2) in the upper portion of the compartment in front of the rear wheels on the passenger's side (R1 upper),
- Two (2) in the compartment over the rear wheels on the passenger's side (R2),
- One (1) in the upper portion of the compartment in behind the rear wheels on the passenger's side (R3 upper),

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- Two (2) in the upper portion of the rear compartment.

Two (2)
KM-49-1615

SLIDE-OUT TRAY

Slide-out trays shall be constructed of 3/16" aluminum material. Trays shall have with heavy-duty roller bearing slides with a latch to hold the tray in the "open" and "closed" positions. Tray shall have capacity of 500 pounds.

- Two (2) slide-out trays shall be provided.
- One (1) tray shall hold the fire department supplied Amkus equipment on the floor of the rear compartment.
- One (1) tray shall hold the fire department supplied power fan on the floor of the compartment behind the rear wheels on the passenger's side.

One (1)
KM-49-1640

ALUMINUM ON BACK WALL OF COMPARTMENT

There shall be aluminum panel furnished on the back wall of the compartment for mounting equipment. The panel shall be bolted to the back wall of the specified compartment.

Aluminum panel(s) shall be mounted in the (LIST COMPARTMENTS TO HAVE ALUMINUM PANELS INSTALLED) compartment.

The aluminum panel shall have be peg-board style with holes for mounting fire department equipment. The aluminum panel shall be located in the upper forward compartment in front of and over the rear wheels on the driver's side of the body.

One (1)
KM-50-0100

DRIVER SIDE AIR BOTTLE COMPARTMENTS IN WHEELWELL

SCBA storage compartment shall be provided and located in the driver side rear wheel well of the apparatus body. Compartment door and frame shall be constructed entirely of cast aluminum and have hinged style door. The compartment bottom and rear wall shall be lined with rubber material to protect paint finish of the air cylinder.

The SCBA storage compartment shall be forward of the rear wheel.

Two (2)
KM-50-0250

PASSENGER SIDE AIR BOTTLE COMPARTMENTS IN WHEELWELL

SCBA storage compartment shall be provided and located in the passenger side rear wheel well of the apparatus body. Compartment door and frame shall be constructed entirely of cast aluminum and have hinged style door. The compartment bottom and rear wall shall be lined with rubber material to protect paint finish of the air cylinder.

There shall be one SCBA storage ahead of the rear wheels and one behind the rear wheels.

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One (1)
KM-50-1300

SCBA BRACKETS

SCBA mounting bracket(s) shall be provided and mounted in the enclosed storage compartments as per instructions of Fire Department.

This SCBA bracket shall be shipped loose with the apparatus.

One (1)
KR-01-0100

EXTRUDED ALUMINUM RUB RAILS

Full body length polished aluminum rub rails shall be bolted in place on the right and left body sides and in the pump panel area. The rub rails shall extend outward beyond the body sides for protection of the compartments and doors. There shall be a bolt on aluminum corner casting on each rear corner to blend the rear tailboard assembly with the side rub rails.

The side rub rails shall be a heavy extruded aluminum "C" channel.

One (1)
KR-04-0002

SIDE AND REAR OVERLAYS

Overlay panels shall be constructed of 3003 polished aluminum treadplate. Polished aluminum overlay shall be provided and installed in the following areas:

- The front face of each side compartment.
- The rear body face and vertical area above tailboard and below hose bed.
- Driver's side and passenger compartment top extending down over side to the compartment doors then forming a drip rail above doors.
- Front face of hose bed above booster tank.

Overlay shall be installed with "Aluminized" stainless steel bolts to prevent corrosion.

One (1)
KR-04-0010

POLISHED COMPARTMENT TOP WELDS:

The compartment top welds to be polished.

One (1)
KR-04-3000

SLIP-RESISTANT WALKWAY SURFACE

All exterior surfaces designated as stepping, standing, and walking areas shall have an aluminum slip-resistant overlay material installed. The slip-resistant overlay material shall have a raised serrated surface that will allow moisture to drain out either side. The recessed surface shall be one piece solid material to prevent road spray and debris from entering the top surface from below. The slip-resistant overlay material shall meet the requirements of NFPA 13-7.3. The slip-resistant surface shall be installed in the following areas of the apparatus body:

- Step areas of the side running boards.
- Rear step running board step.
- Walkway and standing platforms

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One (1)
KR-04-4902

REAR STEP/RUNNING BOARDS

The apparatus body running boards and rear step shall be constructed with slip-resistant surface and shall have bright aluminum treadplate trim around the outside edges. Side running boards and rear step shall be removable for ease of service in case of damage.

One (1)
KR-04-4908

REAR STEP/TAILBOARD

A single piece .188 rear step/tailboard shall be furnished that is a minimum of 12.00" deep and full width of the apparatus body, from rub rail to rub rail. The tailboard shall be provided with a removable casting on each corner for a pleasing appearance.

One (1)
KR-10-0000

HANDRAILS

Access handrails shall be 1 1/4" in diameter extruded aluminum with rubber insert. Access rail escutcheons and brackets shall be chrome plated and attached with stainless steel bolts. Anchoring of posts and framing members for railings of all types shall be of such construction that the completed railing structure shall be capable of withstanding a load of at least 225 pounds applied in any direction at any point along the rail.

One (1)
KR-10-0100

REAR HANDRAILS

Two (2) vertical access handrails shall be provided and mounted on the rear of the apparatus body, one on each side. Each rear handrail to be approximately 48" long.

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One (1)
NA-00-0010

ELECTRICAL

Electrical wiring, hydraulic lines, air system tubing, and control cables shall be fastened to the frame or body structure of the apparatus and shall be furnished with protective looms, grommets, or other devices, so that any such connector and/or wiring will be protected from shear or tear.

The body 12-Volt electrical system shall be designed specifically for the apparatus body. Automatic reset circuit breakers shall be provided and installed in all circuits.

Wiring data shall be provided with the completed apparatus.

The following electrical equipment and lights shall be provided and installed:

One (1)
NA-00-0080

WIRING SYSTEM

All electrical wiring shall be 14-gauge heavy strand copper with type GXL crosslink high temperature insulation, being circuit function printed every three-inches along its entire length.

Wiring data shall be provided with the completed apparatus.

The following electrical equipment and lights shall be provided and installed:

One (1)
NA-00-2100

TAIL LIGHTS WHELEN LED

Two (2) Whelen 60R00XRR LED rectangular red stop/tail lights shall be provided and mounted at the rear of the body, one on each side.

One (1)
NA-00-3550

DIRECTIONAL LIGHTS WHELEN LED

Two (2) Whelen Model 60A00TAR amber arrow directional signal LED lights shall be provided and mounted at the rear of the body, one on each side below the stop/tail lights.

One (1)
NA-00-5100

BACKUP LIGHTS WHELEN LED

Two (2) Whelen Model 60C00WCR rectangular clear backup LED lights shall be provided and mounted, one on each side at the rear of the body. The backup lights shall be mounted below the rear stop/tail and directional lights.

One (1)
NA-00-5350

CLEARANCE LIGHTS

There shall be LED clearance marker lights installed meeting all DOT requirements. The vehicle clearance lights shall be recess mounted within the rear center tailboard step.

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One (1)
NA-00-5400

LICENSE PLATE BRACKET

A license plate mounting bracket shall be provided complete with a chrome-plated shielded indirect type light. Bracket shall be mounted at the rear of the apparatus body.

One (1)
NA-00-5700

BACK UP ALARM

Back up alarm to be furnished with chassis.

Fourteen (14)
NA-01-1000

COMPARTMENT LIGHTING

All side and rear exterior equipment compartments shall be provided with one (1) clear compartment light mounted to the top of the compartment ceiling. Compartment lights shall switch on automatically when the compartment door is opened and switch off when the door is closed.

There shall be two (2) lights mounted in each compartment.

One (1)
NA-01-3000

OPEN COMPARTMENT/HAZARD WARNING LIGHT

A red flashing, warning light shall be provided and installed in the driver's compartment to indicate an open passenger or apparatus compartment door. The hazard light shall also be attached to folding equipment racks and light towers as specified. Light shall be properly marked and identified.

One (1)
NB-02-5100

BATTERY DISCONNECT SWITCH

A master battery on/off switch shall be furnished by the chassis manufacturer and mounted in a convenient location to the driver. The master battery switch shall disconnect the batteries from all chassis and body accessories.

One (1)
NB-02-6800

AIR COMPRESSOR/BATTERY CONDITIONER

A 110-volt Kussmaul Auto-Charge 1000, single system, 15-amp, automatic battery charger and power supply shall be provided and installed within the chassis cab and wired to the battery system. Battery charger shall be 15-amp output type designed to automatically charge the battery system when shoreline power is connected. The charger shall be equipped with a bar graph type charge level indicator to indicate the charge rate. The charger shall have an electronic sensing circuit to sense the true battery voltage while eliminating the need for external sensor wires. Charging is completely automatic, when the battery is fully charged, all charging stops. There is no over charging and no water boil off.

The charger shall have a built in 3-amp battery saver for rechargeable hand lights.

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There shall be an air compressor furnished to maintain the air pressure in the vehicle brake system. The compressor shall be wired to the vehicle electrical system and plumbed to the vehicle air system.

One (1)
NB-02-7612

110 VOLT SHORELINE

A 110-volt shoreline connection shall be provided and shall be wired to the battery conditioner and the block heater.

The block heater will be supplied with the chassis

One (1)
NB-02-9500

EMERGENCY ELECTRICAL SWITCH PANEL

An electrical switch panel shall be designed and mounted in the cab dash area as furnished by the custom chassis manufacturer.

One (1)
NB-10-5000

REAR STEP LIGHTS

Two (2) chrome plated lights shall be furnished and installed on the rear face of the body to illuminate the rear step area. Lights shall be wired to the panel light switch at the pump operator's panel.

One (1)
NB-10-5600

PUMP COMPARTMENT WORK LIGHT

A pump compartment work light shall be provided and installed within the pump compartment area complete with a switch mounted on the light head.

One (1)
NB-10-6200

UNDER CAB LIGHTING

The under cab lights shall be supplied with the chassis.

One (1)
NB-10-6800

UNDER BODY LIGHTING

There shall be two (2) lights furnished below the pump house running board, one on each side. The lights shall be wired to turn on and off with a switch located on the pump operator's panel.

One (1)
NB-10-6900

UNDER BODY LIGHTING REAR STEP

There shall be two (2) lights furnished below the rear step, one on each side. The lights shall be wired to turn on and off with a switch located on the pump operator's panel.

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Two (2)
NB-30-0630

TELESCOPING 12 VOLT SPOT/FLOODLIGHTS

Fire Research 12-volt spot/flood light Model LTA540-DT-TW shall be provided and mounted on a side mount/top raise type telescopic pole. The light shall be mounted on the side of the cab. The lights shall be wired to the chassis 12-volt system with a switch provided on the light.

Two (2)
NB-30-1100

REAR SCENE LIGHT

There shall be a Weldon Model 2010, 12-volt 50-watt Scenelight provided and mounted at the rear of the body. Light shall be mounted on an 18-degree downward angled, polished aluminum casting. The light shall be wired through a switch in the chassis cab and be labeled "Rear Scene Light".

Two (2) scene lights shall be provided at the rear of the body, one each side.

Two (2)
NB-30-1200

DRIVER SIDE SCENE LIGHT

There shall be a Weldon Model 2010, 12-volt 50-watt Scenelight provided and mounted on the driver side of the body. Light shall be mounted on an 18-degree downward angled, polished aluminum casting. The light shall be wired through a switch in the chassis cab and be labeled "Driver's Side Scene Light".

Two (2) lights shall be provided on the driver's side of the apparatus. One light shall be provided behind the driver's door and one above the pump panel.

Two (2)
NB-30-1300

PASSENGER SIDE SCENE LIGHT

There shall be a Weldon Model 2010, 12-volt 50-watt Scenelight provided and mounted on the passenger side of the body. Light shall be mounted on an 18-degree downward angled, polished aluminum casting. The light shall be wired through a switch in the chassis cab and be labeled "Passenger's Side Scene Light".

Two (2) lights shall be provided on the passenger's side of the apparatus. One light shall be provided behind the front passenger's door and one above the pump panel.

One (1)
NC-02-9010

AIR HORNS

Two (2) chrome-plated Grover "Stuttertone" air horns shall be provided and recess mounted in the front bumper extension. A pressure protection valve to prevent the use of air horns or other air operated accessories when the system air pressure drops below 80 psi shall be provided.

Air horns shall be controlled from the following switch positions.

One (1)
NC-02-9030

One (1) overhead lanyard control shall be provided in the front of the cab for activation of the air horn. The lanyard control shall be accessible to both the driver and the officer when seated.

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One (1)
NC-03-0500

MECHANICAL SIREN

A TimberWolf electro-mechanical siren shall be furnished with mounting rigidly reinforced. Siren controls and siren brake shall be accessible from the following switch control location.

One (1)
NC-03-0520

One (1) foot switch shall be provided on the driver side floor for activation of the TimberWolf siren.

One (1)
NC-03-0530

One (1) foot switch shall be provided on the passenger side floor for activation of the TimberWolf siren.

One (1)
NC-03-0540

SIREN BRAKE SWITCH

There shall be a momentary switch installed on the operator's switch console to activate the Timberwolf siren brake.

One (1)
NC-03-0560

MOUNTING LOCATION

The Timberwolf siren shall be recessed mounted in the front bumper.

One (1)
NC-03-2000

ELECTRONIC SIREN

A Code 3 Model 3692 V-CON, 200-watt electronic siren with Hi-Lo and hardwired microphone shall be provided and mounted in the cab.

Mount in the fabricated console on the top of the doghouse.

One (1)
NC-04-2900

RED LIGHT

There shall be a steady burning red light furnished on the chassis cab.

The additional red light shall be provided to meet California DMV requirements.

One (1)
NC-05-1200

RADIO ANTENNA

There shall be a universal base for the radio antenna installed on the chassis cab roof. The power and ground wires for the radio shall also be installed.

One (1)
ND-01-0099

STREAMLIGHTS

There shall be two (2) Fire Department supplied Streamlight boxes and chargers mounted on the apparatus as directed by the Fire Department.

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One (1)
NE-04-0950

EMERGENCY LIGHTING

The upper and lower zones "A", "B", "C", "D" of the apparatus shall have the following emergency lighting equipment:

One (1)
NE-04-6600

LIGHT BAR

A Code 3 model 2169NFPA1 69" LED light bars mounted on chassis cab roof to meet the NFPA upper zone A lighting requirement. Light bar to have the following equipment.

- (5) Red LED x wide optic module
- (8) Red LED x directional optic modules

One (1)
NE-05-0100

REAR LIGHTS

Two (2) Code 3 model 550F rotating lights mounted on the rear of the apparatus body to meet the NFPA Zone B, C, D upper level lighting requirement. The lights shall be activated through the master emergency light switch located on the electrical console. Each light to have the following equipment.

- (1) 50-watt fast rotator
- 1 Red lens / 1 Amber lens

One (1)
NE-05-2150

ZONE A FRONT LIGHTS

The lower front zone "A" lights shall be furnished with the chassis.

One (1)
NE-05-5250

ZONE B & D SIDE LIGHTS

There shall be two (2) Code 3 model 45 LED lights furnished on each side of the apparatus to meet the NFPA Zone B & D lower level lighting requirement. One light mounted as far forward as possible, and one light mounted as far to the rear as possible. The lights shall be connected to a power supply and be activated through the master emergency light switch located on the electrical console.

One (1)
NE-05-8700

ZONE C REAR LIGHTS

There shall be two (2) Code 3 model 45 LED lights furnished on the rear of the apparatus body to meet the NFPA Zone C lower level lighting requirement. The LED lights shall be activated through the master emergency light switch located on the electrical console.

One (1)
NS-00-0100

12 VOLT ELECTRICAL CERTIFICATION

The low voltage electrical system shall be tested and certified per NFPA 1901 requirements.

A certificate of compliance shall be provided with the completed vehicle upon delivery.

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Minimum electrical load consists of the total amperage required to simultaneously operate the following in a stationary mode at the incident scene.

- The propulsion engine and transmission.
- All Clearance and marker lights.
- The communication radio. (Default of 5.0 amps used for testing).
- Illumination of all walking surfaces, the ground at all egress points, controls and instrument panels and 50% of the total compartment lighting load.
- Minimum warning lights required for "Blocking Right of Way" mode.
- The current to simultaneously operate any fire pump, aerial device & hydraulic pumps.
- Anything defined by the purchaser to be critical to the mission of the apparatus.

The first test for the electrical system is the **Reserve Capacity Test**. All the above listed components operate with the engine shut off. After 10 minutes all electrical loads are shut off and the battery system must have adequate reserve power to start the engine.

The second test is the **Alternator Performance Test at Idle**. All the above listed components operate with the engine at an idle. There can be no current draw from the batteries of the apparatus.

The third test is the **Alternator Performance Test at Full Load**. All electrical components shall be activated with the engine operating at governed RPM for two hours. During the test the system voltage can not drop below 11.7-volts or have excessive battery discharge for more than 120 seconds. Any loads not listed in the minimum electrical load may be load managed in order to pass the test.

All of the above tests must be conducted with the engine compartment at approximately 200 degrees.

Two (2)
OB-55-0110

HYDRAULIC REEL

An Amkus equipment compatible reel with 100-feet of dual hydraulic hose shall be supplied and installed in a compartment on the apparatus body, location to be determined at preconstruction conference. The reel(s) shall be manual rewind and be properly labeled.

Two (2) reels shall be provided. The location of the hydraulic hose reels shall be in the rear compartment. The exact locations shall be determined prior to construction.

Two (2)
OB-55-0120

One (1) Amkus pigtail hose connection for dual hydraulic hose shall be supplied.

Two (2) pigtails shall be provided, one for each reel.

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One (1)
PA-01-0002

PAINTING

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 an automotive sealant to prevent moisture from entering between any body panels.

The body and all parts shall be thoroughly washed with grease cutting solvents prior to any sanding. After the body has been sanded and the minor imperfections filled and sanded, the body shall be washed again with a solution to remove any contaminants on the surface. The first coating to be applied is a self-etching primer for maximum adhesion to the body metal. The next three coats shall be an acrylic, urethane, primer surfacer. The primer surfacer coat is to be hand sanded with 600-grit sandpaper to insure maximum gloss of the paint. The last step is the application of at least three coats of Concept Acrylic Urethane two component color.

The fire pump and all rigid discharge and suction plumbing shall be painted silver in color.

While constructing the truck body, all aluminum parts shall be properly fitted on the body. The backside of all aluminum parts shall be sanded smooth of any burrs and sharp edges.

All aluminum parts shall be bolted to the body using stainless steel fasteners. Cadmium plated fasteners are not acceptable.

During reassembly of the apparatus, care shall be exercised in fitting and fastening the parts back in their respective position on the vehicle.

One (1)
PA-01-0210

UNDERCOATING

The entire underside of the chassis cab and apparatus body is to be sprayed with an automotive type undercoating for added corrosion resistance.

One (1)
PA-01-1515

INTERIOR COMPARTMENT PAINT

The interior vertical compartment walls are to be painted white with a black colored spatter finish material.

One (1)
PA-01-3500

WHEEL PAINTING

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

The outer two-inches of each outside wheel rim shall be painted Silver in color, unless otherwise specified.

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One (1)
PA-01-5500

TWO TONE CAB PAINT

The chassis cab exterior shall be two-tone finish painted. The area to be painted shall be sanded and thoroughly prepared then refinished with PPG Concept paint.

The upper color to be white.
The lower color to be red.

Exact colors shall be determined prior to construction.

One (1)
PA-02-1910

LETTERING

Lettering shall be done in gold leaf mylar letters, shaded in black, and encapsulated in clear mylar. Lettering to be placed on each cab door as directed by fire department. Maximum of fifty (50) letters.

One (1)
PA-02-2600

LETTERING SHALL BE AS FOLLOWS:

Exact lettering requirements shall be determined at the pre-construction conference.

One (1)
PA-02-5000

REFLECTIVE SAFETY STRIPE

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 NFPA reflectivity requirements. At least 60% of the perimeter length of each side and width of the rear, and at least 40% of the perimeter width of the front of the vehicle shall have reflective stripe.

The side stripe shall be applied straight across the apparatus body.

The stripe shall be white in color.

The stripe on the cab and body shall match the Diamond Springs truck on the Full Product brochure.

One (1)
PC-00-0100

IDENTIFICATION & SAFETY LABELS

A permanent plate shall be installed in the driver's compartment to specify the quantity and type of the following fluids in the vehicle:

1. Engine oil.
2. Engine coolant.
3. Transmission fluid.
4. Pump Transmission Lubrication Fluid.
5. Pump Primer Fluid (If applicable).
6. Drive Axle Lubrication Fluid.
7. Air-conditioning refrigerant.
8. Air-conditioning lubrication oil.

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9. Power steering fluid.
10. Transfer case fluid.
11. Equipment rack fluid.
12. Air compressor system lubricant.
13. Generator system lubricant.

When trucks have been UL certified, a permanent plate with pump performance data and serial numbers shall be installed on the pump panel.

A permanent plate shall be installed in the driver's compartment specifying the maximum number of personnel the vehicle is designed to carry per NFPA standards. It shall be located in an area visible to the driver.

An accident prevention sign stating "DANGER PERSONNEL MUST BE SEATED AND SEAT BELTS MUST BE FASTENED WHILE VEHICLE IS IN MOTION OR DEATH OR SERIOUS INJURY MAY RESULT". The warning sign shall be placed so it is visible from all seating positions.

An accident prevention sign stating "DANGER DO NOT RIDE ON REAR STEP WHILE VEHICLE IS IN MOTION, DEATH OR SERIOUS INJURY MAY RESULT". The warning sign shall be placed so it is visible from the rear step of the vehicle.

If an inlet located at the pump operator's position is valved, it shall be provided with a permanent label that states "WARNING SERIOUS INJURY Or DEATH COULD OCCUR IF INLET IS SUPPLIED BY A PRESSURIZED SOURCE WHEN THE VALVE IS CLOSED".

One (1)
TA-01-0100

OPERATION / SERVICE MANUALS

The manufacturer shall provide with the vehicle upon delivery, one (1) complete delivery manual. These manuals shall be in a notebook type binder, with reference tabs for each section of the vehicle. Within each section shall be:

1. Individual component manufacturer instruction and parts manuals.
2. Warranty forms for body.
3. Warranty forms for all major components.
4. Warranty instructions and format to be used in compliance to warranty obligations.
5. Wiring diagrams.
6. Installation instructions and drawings for major parts.
7. Visual graphics, electronic photos of installations of major parts.
8. Necessary normal routine service forms, publications and components of body portion of the apparatus.
9. Technical publications on training and instructions for 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.
12. UL Pump Certification sheets, including the Manufacturer's Record of Apparatus construction details.
13. Certificate of Compliance to Electrical Warning System Low Voltage test.
14. Line Voltage Electrical System test certificate.
15. Water tank capacity certificate.

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One (1)
VA-01-0000

ADDITIONAL EQUIPMENT

The following equipment shall be furnished by the apparatus body builder.

One (1)
VA-05-7000

A pair of Zico Model SAC-44 Quic-Chok folding wheel chocks shall be provided and mounted under the apparatus running boards in model SQCH-44H horizontal mounting brackets.

The wheel chocks shall be mounted under the body in front of the rear wheels on the driver's side.