

Ram 5500 1500 GPM Mini Pumper

RAM 5500 CAB & CHASSIS

Chassis, Crew Cab

4x4 Crew Cab

Powertrain

Cummins 6.7L I-6 OHV diesel direct injection 24 valve intercooled turbo diesel engine * 220 amp dual alternator * 730 amp battery with run down protection * Engine oil cooler, transmission oil cooler * 6-speed electronic sequential shift control automatic transmission with overdrive, lock-up, driver selection * Part-time four-wheel drive with electric shift-on-the-fly transfer case, auto locking hubs * Limited slip differential, ABS & driveline traction control, power take-off provision * 4.88 axle ratio * Stainless steel exhaust

Steering and Suspension

Hydraulic power-assist re-circulating ball steering * 4-wheel disc brakes with front and rear vented discs * HD ride suspension, with electronic stability * Non-independent front suspension * Front leading link suspension * Front anti-roll bar * HD front coil springs * HD front shocks * Rigid rear axle * Rear leaf suspension * HD rear anti-roll bar * HD rear leaf springs * HD rear shocks * Front and rear 19.5" x 6.00" polished forged aluminum wheels with chrome hub covers * 225/70R19.5 BSW AS front tires * AT rear tires

Safety

4-wheel anti-lock braking system * Dual airbags, seat mounted driver and passenger side-impact airbags, airbag occupancy sensor * Front height adjustable seatbelts with front pre-tensioners * Sentry Key immobilizer, panic alarm

Comfort and Convenience

Air conditioning, underseat ducts * AM/FM/Satellite-prep, clock, seek-scan, external memory control, console mounted single remote CD, 6 speakers, fixed antenna * Cruise control with steering wheel controls * Power door locks with 2 stage unlock, key fob (all doors) keyless entry, child safety rear door locks * 2 12V DC power outlets, retained accessory power * Analog instrumentation display includes tachometer, oil pressure gauge, engine temperature gauge, voltmeter gauge, oil temperature gauge, transmission fluid temp gauge, engine hour meter, systems monitor, redundant digital speedometer, trip computer, trip odometer * Warning indicators include oil pressure, engine temperature, battery, low oil level, low coolant, lights on, key, low fuel, low washer fluid, lighting malfunction, door ajar, service interval, brake fluid, turn signal on, transmission fluid temp * Steering wheel with tilt adjustment * Power front and rear windows with light tint, driver and passenger 1-touch down * Variable intermittent front windshield wipers * Passenger side vanity mirror * Day-night rearview mirror * Interior lights include dome light with fade, illuminated entry * Partial floor console with storage, glove box, front cupholder, instrument panel bin, dashboard storage, driver and passenger door bins, rear door bins * Upfitter switches

Seating and Interior

Seating capacity of 6 * 40-20-40 split-bench front seat with adjustable head restraints, delete center seat * 4-way adjustable driver seat * 4-way adjustable passenger seat * Full folding rear bench seat with fold-up cushion, 3 adjustable rear head restraints * Vinyl faced front seats with vinyl back material * Vinyl faced rear seats with carpet back material * Full cloth headliner, full vinyl/rubber floor covering, deluxe sound insulation, urethane gear shift knob

Exterior Features

1 skid plate, side impact beams, front license plate bracket, fully galvanized steel body material * Black fender flares * Black side window moldings, black front windshield molding * Black door handles * Chrome grille * 4 doors * Driver and passenger power remote black heated convex spotter folding manual extendable trailer outside mirrors with turn signal indicators * Front chrome bumper with front tow hooks * Aero-composite halogen fully automatic headlamps with multiple headlamps, delay-off feature * Additional

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exterior lights include cab clearance lights, remote activated perimeter/approach lights * Chrome tubular side steps * Clearcoat monotone paint

Additional Options

Code INJ Fog Lamps

Code XAC ParkView Rear Back-Up Camera

Warranty

Basic 36 month/36,000 miles

Powertrain 60 month/60,000 miles

Corrosion Perforation 60 month/unlimited mileage

Roadside Assistance 36 month/36,000 miles

Diesel Engine 60 month/100,000 miles

Front GAWR: 7,000 lbs

Rear GAWR: 13,500 lbs

GVWR: 19,500 lbs

One (1) LED Ground Lights, (4) Cab Mtd, Below Each Door, Crew Cab, Ford/Ram
CAB GROUND LIGHTING

One (1) 4" round LED light shall be mounted beneath each door. These lights shall be designed to provide illumination on areas under the driver, officer and each rear crew area entry/egress. All cab ground lights shall automatically activate when any cab exit door is opened and the apparatus is in park

One (1) A single switch shall be provided in the cab to activate all of the apparatus ground lights manually.
RAM Standard Crew Seating
Interior and Seating
Seating capacity of 5

Driver Position

40-20-40 split-bench front seat with center seating position removed for the console

Crew Seating Positions

Full folding rear bench seat with fold-up cushion, 3 adjustable rear head restraints

One (1) Cab Console (Ford and RAM)

The driver/officer 40-20-40 split-bench front seat center seating position is removed to allow the installation of the center console.

CAB CONSOLE

A heavy-duty angled console shall be installed in the cab between the driver and officer seats. The console shall be finished in black powder coat for durability and low reflection. The console shall be designed with a versatile mounting rail system that accommodates commercially available panels for installation of items such as radio equipment. The design shall allow for a total of sixteen (16) inches of mounting space. This option requires the center seating position to be removed from the cab.

The console shall contain the following items as standard:

Siren control head in a 3" Equipment Mounting Plate

Pump Shift in a 4" custom laminate panel

Three (3) Blank 3" Filler Plates

One (1) Back-Up Camera - Ford/RAM Chassis supplied

BACK-UP CAMERA

The OEM chassis shall be supplied with a rear back-up camera system.

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The camera shall be mounted by the final apparatus manufacturer in a location dictated by the final build configuration.

- Immediately below the hosebed for Ford chassis configuration.
- In the rear bumper for RAM chassis configuration.

One (1) Tire Pressure Monitoring Device - 2 Axles - LED Alert
TIRE PRESSURE MONITORING DEVICE

Each tire installed on the apparatus shall be equipped with a tire pressure monitoring device. The device shall consist of a valve stem cap to with an LED tire alert to indicate tire pressure conditions. The LED will flash when the tire drops 8 psi below the factory setting.

One (1) Drivelines
DRIVELINES

Universal joints and driveshafts shall be modified for midship pump installation. The driveshaft slip joints shall be coated to reduce sliding friction and thrust under high torque loads. Shafts shall be balanced to prevent vibration.

One (1) Buckstop Front Bumper / Brush Guard / Driving Lights
FRONT BUMPER / BRUSH GUARD / WINCH RECEIVER

The front of the chassis shall be equipped with a Buckstop, heavy duty plate 'ranch' style bumper. The black hammertone powdercoated assembly features a full replacement bumper with full grill guard and outback grill. There shall be a standard winch mount for up to a 16,500 lb winch beneath a winch access cover plate. (winch not included) The OE tow hooks shall be installed on the new bumper arrangement.

DRIVING LIGHTS

Two (2) Maxxima model MWL-01HP, 1200 lumen, LED white lights shall be provided, mounted recessed in openings in the front bumper. These lights shall be controlled with a switch in the driver's compartment.

One (1) Door Reflective Material, SecuriTrim - 4 Door
REFLECTIVE MATERIAL - INTERIOR CAB DOORS

The cab front and crew doors shall have a SecuriTrim aluminum backed inside door chevron affixed to the inside of each door. The reflective material shall be red/yellow-green diamond grade 3M 983.

One (1) Speaker, Siren - 100w
SIREN SPEAKER

Behind the grille there shall be a Whelen model SA315 100 watt siren speaker.

One (1) Electronic Siren, SoundOff - 500 Series
ELECTRONIC SIREN

A SoundOff 500 series electronic siren control, model ENGSA582RSR full feature with 500 series remotesirenwith knob control for two (2) 100 watt speakers.

- Mechanical siren tones
- Radio rebroadcast input

-Console Sirens feature eight auxiliary buttons for one-touch programming and a three-position slide switch to allow convenient switching for the most frequently used warning modes.

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-Button Console Siren features a four-push button switch

-Features an eight-second buzzer alert to notify users that the level or auxiliary buttons are activated

-Horn ring scroll provides ability to quickly change tones with the tap of the horn

One (1)

SounOff Signal BluePrint

SoundOff BluePrint Lighting Control

The lighting control shall made up of the following componets:
500 Series Siren- Built-in bluePRINT Functionality

- Load Shed
- Matrix programming
- Scalable architecture allows the addition of up to 40 discrete inputs, 24 OBD inputs and 50 outputs
- Control of two lightbars without the need for an external breakout box, or control additional lightbars using external BOBs
- USB programmability
- Enhanced I/O Capability
- 20 outputs
- 15 of the outputs are solid state, which can be flashed/dimmed and include diagnostic and self-protection features

Up to 75 amps total internal switching

Two (2) Remote Node #ENGND04101

The Remote Node provides 10 outputs for connection to vehicle devices (up to 50 Amps max).

- (4) 10-amp solid state switchable outputs
- (6) 5-amp solid state switchable outputs

One (1) shall be mounted on each side of body.

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One (1) RAM Single Color Paint
CAB PAINT

One (1) The cab on the vehicle shall be painted by the factory at RAM.
40 Amp - Battery Charger - ProMariner 1240
BATTERY CHARGER

A PRO MARINER / ON BOARD SOLUTIONS, 1240, advanced electronic 4-step battery charger/power supply with a 40 amp output shall be provided.

Since shoreline power is not always stable the charger shall be equipped with Auto-Ranging AC Input to automatically accept global voltages of 90 VAC to 270 VAC at 45-440 Hz.

Field Selectable - Use with lead/acid or gel batteries (AGM factory option). Select length of absorption charge cycle based on size of batteries.

In the 4-step charging system the charger will provide the following sequence.

Step 1: Fast Charge - Charger will deliver its maximum amperage rating to the connected batteries for the fastest charge (current regulation mode) until battery voltage is raised to 14.6V (lead acid factory setting). At this time, the ProTech will shift to step 2.

Step 2: Absorption Charge - Maximizes charge and holds voltage (voltage regulation mode) at 14.6V (lead acid factory setting) for 1 to 4 hours (selectable based on battery size), while letting the batteries determine the amount of amps they can accept. This mode creates activity in the batteries, reducing sulfate buildup, and conditions the batteries for an extended life. After the programmed 1 to 4 hours have elapsed, the ProTech will shift to step 3.

Step 3: Float Mode - A precision 13.3V (lead acid factory setting) finishing voltage that maintains each battery (step-down voltage regulation mode), which is perfect for short or long storage periods and will never overcharge your batteries. ProTech will deliver its full rated output for house loads including: lighting, electronics and pumps.

Step 4: Recycle - If there are very large loads on the battery while the charger is on, the unit will recycle to the first step, ensuring that batteries stay fully charged.

One-Year Warranty - Includes lifetime repair guarantee.

Certified to - UL Marine 1236/SA

One (1) The charger shall be mounted on the ceiling of the L1 compartment.
Kussmaul 20 AMP - 120v - Super Auto Eject
SHORELINE AUTO-EJECT

A KUSSMAUL Super Auto Eject, model 091-55-20-120, with a yellow weatherproof cover shall be provided.

The Super Auto Eject is to be completely sealed to prevent internal contamination of the working components.

The internal switch arrangement of the Super Auto Eject shall be designed to close and open the 120-volt AC circuit after the mating connector is inserted and before the connector is removed. This design shall prevent arcing at the connector contacts to provide long life.

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The electrical connection shall be provided as a 120-volt AC - 20 amp type using a NEMA 5-20P connector.

- One (1) The auto eject shall be mounted high on the front exterior wall of the left front compartment.
Pump Enclosure, Side Mount, 24" Wide

PUMP COMPARTMENT

- One (1) For durability the pump compartment shall be constructed entirely of brushed stainless steel.
Running Boards, L/S, R/S w/Laser Grip S/S Step Surface

RUNNING BOARDS

The running board step surface shall be covered in Laser Grip stainless steel meeting the current revision of NFPA 1901 for step requirements.

- One (1) Bolt on running boards and support structure shall be provided to provide field service of the running board without major repairs to the pump compartment in the event of an accident.

Pump Service Access

PUMP SERVICE ACCESS

The intake panels on the sides of the pump module shall be fastened with quick release latches to provide access to the pump at the intake piping area.

- One (1) The floor of the crosslays shall be removable for access to the top of the pump module.
Control Panel, Side Mount Module

PUMP CONTROL PANEL

All pump controls and gauges shall be located at the left (street) side of the apparatus and properly identified. The layout of the pump control panel shall be ergonomically efficient and systematically organized.

- One (1) All push-pull valve controls shall have quarter turn locking control rods with chrome plated zinc tee handles. Guides for the push-pull control rods shall be chrome plated zinc castings securely mounted to the pump panel. Push-pull valve controls shall be capable of locking in any position. The control rods shall pull straight out of the panel and shall be equipped with universal joints to eliminate binding.

Identification Labels - Metal Tags

PUMP PANEL IDENTIFICATION TAGS

- One (1) The identification tag for each valve shall be recessed in the face of the control handle. All discharges shall have color-coded metal identification tags, with each discharge having its own unique color scheme. Color-coding shall include the labeling of the outlet and the drain for each corresponding discharge.

Pump Panel Finish, Brushed Stainless Steel

PUMP PANEL FINISH

- One (1) All stainless panels used in the construction of the pump house shall have a brushed finish.
Controls & Gauges, Side Mount

CONTROLS AND GAUGES

- One (1) The following shall be provided on the pump and gauge panels in a neat and orderly fashion. The gauge panel shall include the following:

FRC In Control 400 Pressure Governor, Engine Monitor and Pressure Display

PRESSURE GOVERNOR, MONITORING, and MASTER PRESSURE DISPLAY

Fire Research InControl series TGA400-A00 pressure governor and monitoring display kit shall be installed. The kit shall include a control module, intake pressure sensor, discharge pressure sensor, and

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cables. The control knob shall be 2" in diameter with no mechanical stops, have a serrated grip, and a red idle push button in the center. It shall not extend more than 1-3/4" from the front of the control module. Inputs for monitored information shall be from a J1939 databus or independent sensors. Outputs for engine control shall be on the J1939 databus or engine specific wiring.

The following continuous displays shall be provided:

Pump discharge; shown with four daylight bright LED digits more than 1/2" high

Pump Intake; shown with four daylight bright LED digits more than 1/2" high

Pressure / RPM setting; shown on a dot matrix message display

Pressure and RPM operating mode LEDs

Throttle ready LED

Engine RPM; shown with four daylight bright LED digits more than 1/2" high

Check engine and stop engine warning LEDs

Oil pressure; shown on a dual color (green/red) LED bar graph display

Engine coolant temperature; shown on a dual color (green/red) LED bar graph display

Transmission Temperature; shown on a dual color (green/red) LED bar graph display

Battery voltage; shown on a dual color (green/red) LED bar graph display.

The dot-matrix message display shall show diagnostic and warning messages as they occur. It shall show monitored apparatus information, stored data, and program options when selected by the operator. All LED intensity shall be automatically adjusted for day and night time operation.

The program shall store the accumulated operating hours for the pump and engine to be displayed with the push of a button. It shall monitor inputs and support audible and visual warning alarms for the following conditions:

High Battery Voltage

Low Battery Voltage (Engine Off)

Low Battery Voltage (Engine Running)

High Transmission Temperature

Low Engine Oil Pressure

High Engine Coolant Temperature

Out of Water (visual alarm only)

No Engine Response (visual alarm only)

The program features shall be accessed via push buttons and a control knob located on the front of the control panel. There shall be a USB port located at the rear of the control module to upload future firmware enhancements.

Inputs to the control panel from the pump discharge and intake pressure sensors shall be electrical. The discharge pressure display shall show pressures from 0 to 600 psi. The intake pressure display shall show pressures from -30 in. Hg to 600 psi.

The governor shall operate in two control modes, pressure and RPM. No discharge pressure or engine RPM variation shall occur when switching between modes. A throttle ready LED shall light when the interlock signal is recognized. The governor shall start in pressure mode and set the engine RPM to idle. In pressure mode the governor shall automatically regulate the discharge pressure at the level set by the operator. In RPM mode the governor shall maintain the engine RPM at the level set by the operator except in the event of a discharge pressure increase. The governor shall limit a discharge pressure increase in RPM mode to a maximum of 30 psi. Other safety features shall include recognition of no water conditions with an automatic programmed response and a push button to return the engine to idle.

The pressure governor, monitoring and master pressure display shall be programmed to interface with a specific engine.

One (1) 2-1/2" Pressure Gauges, 0-400 psig - English

PRESSURE GAUGES

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Each line pressure gauge shall be mounted immediately above the control for the corresponding valve. The individual line pressure gauges for the discharges shall be 2-1/2" in diameter with white dial face gauges with black lettering and markings. The gauges shall be a compound style gauge with a vacuum/pressure range of 0 - 400 psig.

The gauges shall be fluid filled with pulse and vibration dampening Interlube to lubricate the internal mechanisms to prevent lens condensation and to ensure proper operation to -40 degrees F. The cases shall be temperature compensated with an internal breathing diaphragm to permit fully filled cases and to allow a rigid lens with a distortion free viewing area. The gauge accuracy for the gauge shall be plus or minus 2% mid-scale, plus or minus 3% balance, per ANSI B40.1, Grade 1A.

To prevent internal freezing and to keep contaminants from entering the gauge, the stem and bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage.

One (1) All line pressure gauges shall be mounted adjacent to the corresponding discharge control tee handles.
2-1/2" Pressure Gauge LED Lighting

LED GAUGE LIGHTING

One (1) The 2-1/2" pressure gauges shall be equipped with LED back lighting.
Pump Panel LED Lighting - WHITE/RED

PUMP PANEL LIGHTING

The pump operator's panel shall be supplied with a LED light system. LED strip lights with a stainless steel hood shall be mounted across the top of the pump panel gauges and controls.

LED strip lights with a stainless steel hood shall be provided on each side of the pump module above the side panels.

One (1) All pump module lighting shall illuminate when the parking brake is engaged. There shall be a white/red color selector switch in the cab that controls the color of this lighting.

Pump, Midship, Hale "DSD", 750-1500 GPM

PUMP MANUFACTURER AND MODEL

The pump shall be a Hale DSD model midship pump.

PUMP CONSTRUCTION AND ASSEMBLY

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 specs as outlined by the latest NFPA Pamphlet No. 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 metal parts in contact with water shall be of high quality bronze or stainless steel. Pump body shall be vertically split on a single plane for easy removal of entire impeller assembly including wear rings and bearings without disturbing piping or the mounting of the pump in chassis. Pump shaft to be rigidly supported by three bearings for minimum deflection. The bearings shall be heavy-duty, deep groove ball bearings in the gearbox and they shall be splash lubricated.

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 eyes shall be of sufficient size and design to provide ample reserve capacity utilizing minimum horsepower.

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Removable, non-corrosive material clearance rings shall be provided.

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 TRANSMISSION

The pump transmission shall be assembled 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 in road operating conditions. The pump transmission shall be designed with ample capacity for lubrication reserve and to maintain the proper operating temperature.

The transmission drive shafts shall be of heat-treated chrome nickel 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. All gears drive and pump, shall be of highest quality electric furnace chrome nickel steel. Bores shall be ground to size and teeth integrated, shaved, hardened and ground 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. If gearbox is 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.

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.

One (1) Hale Pump Grey Metal Surcharge - DSD RSD MBP

One (1) Pump Rating, Hale, 1500 GPM

PUMP RATING AND TEST REQUIREMENTS

The pump shall be of a size and design to mount on the chassis rails of commercial and custom truck chassis, and have the capacity of 1500 gallons per minute (U.S. GPM), NFPA 1901 rated performance. The pump shall deliver the percentage of rated discharge at pressures indicated below:

100 percent of rated capacity at 150 pounds net pressure
70 percent of rated capacity at 200 pounds net pressure
50 percent of rated capacity at 250 pounds net pressure
100 percent of rated capacity at 165 pounds net pressure

The entire pump shall be assembled 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.

One (1) Altitude Requirements, 0' to 2000 Feet Above Sea Level

ALTITUDE REQUIREMENTS

The apparatus shall be designed to meet the specified rating at 0 to 2000' altitude.

One (1) Primer, Oil-less, Hale ESP

PRIMING PUMP

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The priming pump shall be a positive displacement vane type, oil-less, electrically driven, and conform to standards outlined in NFPA 1901. One priming control shall both start the priming motor and open the priming valve.

One (1) Pump Shift, Pneumatic w/Label, Indicator Lgts, Mtd Cab/PPnl

PNEUMATIC PUMP SHIFT

The pump shift shall be air operated and shall incorporate an air double action piston to shift from road to pump and back. A manual or electric operated pump shift mechanism is not acceptable. The pump shift switch shall be mounted in the cab and identified as "AIR PUMP SHIFT" and include instructions permanently inscribed on the pump shift switch plate. The in-cab operating valve uses a spring loaded locking collar to prevent it from accidentally being moved.

The pump shift control assembly shall incorporate an indicating light system, which will notify the operator when the shift has been completed to PUMP and when the chassis transmission is in correct pumping gear.

The switch that activates the lights must be mounted on the pump transmission and positioned so that the pump shift arm activates the switch only when the shift arm has completed its full travel into PUMP position. An additional indicator light shall be provided adjacent to the throttle control at the pump operator's panel to indicate a completion of the pump shift.

One (1) Mechanical Seal, Inboard Side, Spring Loaded, Self Adjusting

MECHANICAL SEAL

The fire pump shall be provided with a mechanical pump seal. One (1) 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) Anode, Water Pump, Indicator Weep Hole

ANODE SYSTEM

To reduce the effect of galvanic action the pump shall be equipped with two alloy (2) anodes. One anode is to be installed on the inlet (suction) side of the system and one anode is to be installed on the pressure (outlet) side of the system.

The anode brass cap is to be drilled with a 1/8" diameter hole to provide an indicator when the anode alloy element is to be replaced.

One (1) Intake Pressure Relief Valve, TFT

SUCTION PRESSURE RELIEF VALVE

Task Force Tips model #A1820 pressure relief valve shall be provided. The valve shall have an easy to read adjustment range from 90 to 300 PSI in 90, 125, 150, 200, 250, 300 PSI increments. For corrosion resistance the cast aluminum valve shall be hardcoat anodized with a powder coat interior and exterior finish. The valve shall be configured for either a Waterous or Hale pump, and have a 2" male NPT threaded discharge outlet. The unit shall be covered by a five-year warranty.

The discharge side of the intake relief valve shall be plumbed to the right side below the running boards, away from but, visible to the pump operator, and shall terminate with an unthreaded pipe. The adjustment control shall be located behind the street side pump panel.

One (1) Master Drain, Manual Mtd Pump Panel

MASTER DRAIN

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The apparatus shall be equipped with a Manual Master Pump Drain for draining of the lower pump cavities, volute and selected water-carrying lines and accessories. The all brass and stainless steel construction allows for operation up to 600 psi.

- One (1) Certified NFPA Pump Test, Completed Apparatus Certificate
PUMP CERTIFICATION TEST

The pump shall undergo pump test with line and/or low voltage requirements of NFPA 1901 prior to delivery of the completed apparatus. The certificate shall be furnished with the apparatus on delivery.

- One (1) Pump Warranty, Hale, Five Year
FIRE PUMP WARRANTY

Standard 5 year warranty (Parts and Labor for the first two years, parts only years 3 - 5). See Hale warranty for full details.

- One (1) Electronic Manuals, Pump Service and Operation
ELECTRONIC PUMP MANUALS

Two (2) sets of electronic fire pump service and operation manuals shall be provided with the completed apparatus.

- One (1) Steamer Inlet, 6" NST Thread, L/S w/Strainer - No Intake Valves
LEFT SIDE STEAMER INLET

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

- One (1) Steamer Inlet, 6" NST Thread, R/S w/Strainer - No Intake Valves
RIGHT SIDE STEAMER INLET

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

- One (1) Pump Side Intake, Left Side
LEFT SIDE INTAKE

There shall be an intake located on the left (street) side of the pump and shall contain:

- One (1) Suction Inlet, Side 2.5" - Side Operated Module
A 2-1/2" intake shall be provided. The inlet shall have a 2-1/2" quarter-turn swing-out valve. The inlet shall be provided with a 2-1/2" NST female swivel that extends through the pump panel.

- One (1) Suction Valve Control, Swing Type, Side, Adj To Valve

The inlet valve shall have a swing type control handle located adjacent to the valve.

- One (1) Discharge, Left Side

LEFT SIDE DISCHARGE #2

The second from the forward discharge on the left (street) side of the pump panel shall contain:

- One (1) Discharge, Right Side Front
RIGHT SIDE FRONT DISCHARGE

The forward discharge on the right (curb) side of the pump panel shall contain:

- One (1) Discharge, Right Side Rear
RIGHT SIDE REAR DISCHARGE

The second from the forward discharge on the right (curb) side of the pump panel shall contain:

- One (1) Discharge, Side, 2.5" - 30 degree Elbow - Manual Control
A 2-1/2" discharge shall be provided. The discharge outlet shall have a 2-1/2" quarter-turn swing-out valve. The discharge shall be provided with chrome plated 30-degree discharge elbow with 2-1/2" NST male threads that extends through the pump panel.

- One (1) Discharge, Side, 3" - 30 degree Elbow - Manual Control

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A 3" discharge shall be provided. The discharge outlet shall have a 3" quarter-turn swing-out valve. The discharge shall be provided with chrome plated 30-degree discharge elbow with 3" NST male threads that extends through the pump panel.

One (1) Discharge, Side, 4" - Straight - Electric Control

A 4" discharge shall be provided. The discharge outlet shall have a 4" quarter-turn swing-out valve. The discharge shall be provided with chrome plated straight discharge with 4" NST male threads that extends through the pump panel.

One (1) Controller, Elkhart Apex 200 Controller (Pressure Only)

200 SERIES VALVE CONTROLLER

An Elkhart Brass APEX Electric Valve Controller shall be provided. The controller shall be no greater than 3.75" in width and utilize a 3.5" LCD capable of displaying valve position and pressure depending on user preference. The controller shall be rated to IP67 and operate the electric valve from a supply voltage of 12-24 VDC. Controllers shall have CAN network capability. Valve position shall be monitored and displayed via true position feedback. Pressure shall be displayed using a digital "gauge style" format in PSI, bar or kPa. The pressure gauge scale shall be user selectable either 0-400 or 0-600 psi and shall include a quick-reference pressure target indicator. The controller shall include OPEN/CLOSE buttons, a one-touch programmable preset valve position and auto-open/auto-close function. A MENU button shall be included which allows access to set-up, calibration and diagnostics. The display shall feature valve identification, editable by the user, to match the color and name of the valve/discharge. The screen shall offer daytime and nighttime modes, configurable by the user for brightness in either mode.

One (1) Pump House Crosslay, (2) Beds, 1-1/2 double stacks

PUMP CROSSLAYS

There shall be two (2) hose storage crosslay areas mounted on top of the pump module. They shall be arranged in a double stack design with a divider in the center. Each hose storage area shall be provided with dimensions of 9" wide x 57" deep x 13" tall [4 cu. ft. each].

DISCHARGE VALVES

There shall be one (1) discharge outlet in each hose storage compartment.

The discharge outlet shall have a 2" quarter-turn swing-out valve with a push pull type control handle adjacent to the valve. The discharge shall be provided with a swivel head with 1-1/2" NH male threads that extend through the hose compartment floor.

CROSSLAY HOSE GUIDES

Brushed stainless steel hose guides shall be provided on the left and right side of each hose bed.

One (1) Cover, Crosslay, Vinyl w/End Flaps

CROSSLAY HOSEBED COVER

A vinyl coated nylon hosebed cover shall be provided over the crosslay hosebeds.

One (1) Cover Color, Crosslay, Vinyl, Midnight Black

The vinyl crosslay cover shall be Midnight Black in color.

One (1) Ball Valves, Elkhart, Brass

ELKHART BALL VALVES

All discharge ball valves shall be Elkhart heavy duty swing out valve with stainless steel ball unless specified otherwise.

One (1) Tank Fill Tower, 8" x 8", w/4" Vent

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TANK LID & FILL TOWER

The tank shall have a combination vent and fill tower. The fill tower shall be constructed of 1/2" thick Polyprene & Mac226 and shall be a minimum dimension of 8"x 8" outer perimeter. The tower shall be located in the center front the tank unless otherwise specified by the purchaser. The tower shall have a 1/4" thick removable Polyprene & Mac226; screen and a Polyprene & Mac226 hinged-type cover. Inside the fill tower, there shall be a combination vent overflow pipe. The vent overflow shall be a minimum of schedule 40 pipe with a minimum ID of 4" that is designed to run through the tank, and shall be piped behind the rear axle beneath the tank.

The tank cover shall be constructed of recessed 1/2" thick Polyprene & Mac226, stress relieved, UV stabilized material. A minimum of two lifting dowels shall be drilled and tapped to accommodate the lifting eyes.

OVERFLOW AND VENT PIPE

The fill tower shall be fitted with an integral 4" ID, Schedule 40 PVC combination overflow/vent pipe running from the fill tower through the tank to a 4" coupling flush mounted into the bottom of the tank to allow water to overflow beneath the chassis.

One (1) Water Tank Capacity, T-Tank, 400 US Gallons - Mini

WATER TANK CAPACITY

The water tank shall be rectangular shaped, and shall have a capacity of 400 US gallons. Cubic Ft, Body 139/Hsbd 40, Hosebed Height, 44", 108" OAL

One (1)

BODY MODULE CAPACITIES AND HOSEBED HEIGHT

The total capacity of the body module exterior compartments shall be 139 cubic feet.

The total capacity of the body hosebed shall be approximately 40 cubic feet.

The hosebed shall be approximately 44" from the bumper.

The body shall have an overall length of 108".

One (1) Piping, Tank To Pump, 3" w/3" Air Operated Ball Valve

TANK TO PUMP

The tank to pump piping shall be capable of delivering water to the pump at a rate of five hundred (500) gallons per minute. This flow shall be sustained while pumping to a minimum of 80% of the certified tank capacity with the apparatus on level ground.

The tank to pump line shall run from the pump to the front face of the water tank and down into the tank sump. A rubber coupling shall be included in this line to prevent damage from vibration or chassis flexing. The tank to pump line shall be 3" I.D. piping with a 3" ball valve.

One (1) Tank Refill, 2" Line w/ 1/4 Trn Bll Vlv

TANK REFILL

A 2" tank refill line shall be provided using a 2" quarter-turn full flow ball valve controlled from the pump operator's panel with a manual locking handle. The tank refill shall be plumbed with stainless steel plumbing and flexible Victaulic couplings.

One (1) Gauge, (1) Water Tank Level - FRC Tank Vision

WATER TANK INDICATOR

Fire Research TankVision model WLA300-A00 tank indicator kit shall be installed. The kit shall include an electronic indicator module, a pressure sensor, and a 10' sensor cable. The indicator shall show the

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volume of water in the tank on nine (9) easy to see super bright LEDs. A wide view lens over the LEDs shall provide for a viewing angle of 180 degrees. The indicator case shall be waterproof, manufactured of aluminum, and have a distinctive blue label.

The program features shall be accessed from the front of the indicator module. The program shall support self-diagnostics capabilities, self-calibration, and a data link to connect remote indicators. Low water warnings shall include flashing LEDs at 1/4 tank, down chasing LEDs when the tank is almost empty, and an output for an audio alarm.

The indicator shall receive an input signal from an electronic pressure sensor. The sensor shall be mounted from the outside of the water tank near the bottom. No probe shall place on the interior of the tank. Wiring shall be weather resistant and have automotive type plug-in connectors.

One (1) Cap, 6" Long Handle – with manufacturer's logo.

LARGE DIAMETER CAP

A six (6) inch chrome plated cap with long handles shall be supplied. The cap shall be capable of withstanding 500 PSI and be trimmed with the apparatus manufacturer's logo in the center of the cap.

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LARGE DIAMETER CAP

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One (1) Intake Plug, (Qty) 2.5" w/Cap & Chain

One (1) 2-1/2" chrome plated rocker lug plug with chain shall be supplied.

One (1) 4" NST F to 5" Storz - 30degree - Swvl Rkr Lug - (Qty)

STORZ ADAPTER

One (1) 4" NST Female swivel thread 30-degree down to 5" Storz hard coated aluminum adapter shall be provided. (ref. TFT AH3ST-NP)

One (1) (Qty) 5" Storz w/Cap & Lanyard

One (1) 5" Storz cap and lanyard with a suction gasket shall be provided. (ref. TFT A01ST)

One (1) Discharge Cap, (Qty) 2.5" Chrome Vented Rocker Lug w/Chain

DISCHARGE CAP

One (1) chrome plated, 2-1/2" rocker lug cap with lug vent and chain shall be furnished.

One (1) Discharge Cap, (Qty) 3" Chrome Vented Rocker Lug w/Chain

DISCHARGE CAP

One (1) chrome plated, 3" rocker lug cap with lug vent and chain shall be furnished.

One (1) Body Design and Construction, Utility/Mini, Stainless Steel

PURCHASE INTENT

The apparatus being purchased is expected to have an 18 to 20 year service life. Based on this requirement, the department is extremely concerned that the apparatus remains structurally sound and the outward appearance remains in a "like new" condition, with minimal maintenance and upkeep, throughout the intended service life.

Aluminum apparatus bodies and differing construction designs will be reviewed and considered ONLY if the builder / manufacture provides in the respondent specifications adequate proof that procedures and materials employed in the design prevent corrosion over the intended service life. Burden of proof is on the bidder and final determination of acceptability will be solely determined by the department.

The entire body design shall be of a laser machined, bolted design to allow for ease of removal for repair or replacement, without cutting welds.

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APPARATUS BODY DESIGN AND CONSTRUCTION

The apparatus body shall be built of stainless steel and shall be designed exclusively for Fire Service use. The overall body width shall be 95 inches wide. All metal work shall be free of sharp edges, objects or corners. No exceptions are allowed to this requirement.

The body design shall be fully tested with proven engineering and test techniques such as finite element analysis, stress coating, and strain gauging. Engineering and test techniques shall have been performed with special attention given to fatigue life and structural integrity of compartments and body support system.

The apparatus body shall be designed with the use of parametric modeling engineering software to ensure proper design of panel cuts and alignment of holes in mating parts. The entire apparatus body shall be a precision laser machined, bolted construction, properly reinforced with integral flanges eliminating the need for additional structural shapes. Hose body fabrications shall be free of all internal projections which might injure personnel or fire hose.

MODULAR BODY REQUIREMENTS

The body shall be completely modular in design allowing transfer of body components to a new chassis in the event of an accident or wear. Body components shall be removable from chassis without cutting or bending. The modular design shall also facilitate ease of repair or replacement of major or minor body parts. The mounting of the apparatus body shall be separate and distinct from the water tank mounting and the pump module mounting.

All body panels are to be laser machined on a CAM controlled laser to ensure accuracy (+/- .010"). This shall greatly enhance assembly and matching of repair parts. The body compartment floors, rear walls and roof areas shall be constructed of 12-gauge stainless steel. The vertical front and rear walls are designed with 14-gauge stainless steel. These front and rear walls are designed as a structural beam with the inclusion of the design.

Interior stainless steel panels shall be #4B finish to eliminate the need for high maintenance painted surfaces in the compartments. All exterior stainless steel panels shall have #4B finish.

The entire body shall be fabricated using precision holding fixtures to ensure accurate dimensions. Body front and rear vertical flanges shall be triple broken, providing a mounting area for rear hand rails. Major body components shall consist of right and left body sides, and rear facing compartments.

COMPARTMENT ROOF CONSTRUCTION

Each compartment top shall have a bolt in 12-gauge stainless roof section for supporting roof loads of up to 500 pounds per square foot without permanent roof deformation. The stainless roof sections shall attach the compartment rear wall and compartment vertical sides through a fastened joint creating a full perimeter compartment attachment of the stainless roof section.

One (1)

Compartment Interior Finish

COMPARTMENT INTERIOR FINISH

For better interior visibility, to reflect light better, ease of maintenance and prevent the masking of poor welds and questionable workmanship the interior of the body compartments shall remain uncoated.

One (1)

Hosebed, S/S w/5" Extnd Sds/Rmvbl HD Ext Alm Firbrds

APPARATUS BODY HOSEBED

The hose bed shall be constructed in such a manner that will prevent damage to fire hose. The hosebed shall comply with the current NFPA requirements. The interior of the hosebed shall be free of projections

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such as nuts, sharp edges or brackets that may damage hose. The hosebed and walls shall be manufactured from stainless steel. No exceptions to this requirement are allowed.

An aluminum extrusion shall be installed over the rear opening of the hosebed to protect the body from wear. The hosebed bottom shall be fitted with removable slatted, ribbed 6" heavy-duty extruded aluminum floorboards.

One (1) Divider, Hosebed, Adjustable, Smth Alum w/Radius Crnr

ADJUSTABLE HOSE BED DIVIDERS

An adjustable hosebed divider shall be provided. The divider shall be fabricated from .250" thick smooth aluminum plate, 5052-H32 alloy. The rear end of each divider shall have a 3" radius corner and shall be sanded and deburred to prevent damage to hose.

There shall be two hand hold openings provided. One (1) at the rear in a vertical position and one (1) approximately 24 inches in from the rear in a horizontal position.

One (1) Hosebed Cover, Black

HOSEBED COVER

A black vinyl hosebed cover shall be provided and designed to cover the entire main hosebed area. The cover shall be installed with "stretch cord type" fasteners along each side of the hosebed. A weighted flap shall be incorporated into the rear edge of the cover.

The hosebed cover rear flap shall have a positive locking device to meet the requirements of NFPA.

One (1) Frame Extension, Class IV Hitch Rear

CHASSIS FRAME EXTENSION

There shall be a rear three (3) inch x four (4) inch x 1/4 inch wall ASTM A-500 grade B rectangular tubing frame extension to provide frame support for the rear of the apparatus body.

Two vertical mounting plates are to be welded to the tubing to provide a drop frame connection to the truck chassis. This extension assembly is to be bolted to the truck chassis with eight (8) 1/2 grade 8 bolts with hardened flat washers to form an integral part of the truck frame assembly.

RECEIVER HITCH

There shall be a Class IV receiver hitch assembly as an integral part of the chassis rear frame extension that is located at the rear of the apparatus below the rear step.

EXTENSION PAINT FINISH

The rear frame extension assembly and hitch assembly is to be black powder coated prior to installation.

One (1) Ext Compartment Design and Construction

COMPARTMENT DESIGN AND CONSTRUCTION

All compartments shall be manufactured from 12-gauge stainless steel with the vertical front and rear corner walls from 14-gauge, shall be of sweep out design and shall be bolted together. Stainless recessed round head bolts and stainless aircraft style "ESNA" nuts shall be applied with proper torque rating for each fastener. This type of construction shall greatly enhance the strength and ease of parts replacement in the event of damage and future modifications. Wherever possible, body bolts shall be hidden from plain view for appearance and ease of apparatus cleaning.

One (1) Compartment Ventilation w/Filtration

COMPARTMENT VENTILATION

Each compartment shall be provided with a laser cut louver to provide adequate ventilation.

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VENT FILTRATION

There shall be filters provided for compartments L1, L3, R1 and R3. The protective louver covering the filter shall be removable to allow for filter changing.

The filter shall be 100% virgin nylon fiber in an open web design that is USDA approved. The filter shall be chemically treated with Dimethyl Benzyl Ammonium Saccharinate to aid in the reduction of bacteria and fungi.

One (1) Compartment Body - 400 gallon - Mini Pumper

One (1) Left Side Compartments - Mini Pumper

LEFT SIDE COMPARTMENT DIMENSIONS

FORWARD OF WHEEL WELL

There shall be one (1) rescue style, full height, full depth compartment ahead of the rear wheels. The compartment dimensions shall be 35-1/2" wide x 57" high x 22" deep with the door closed. The door opening shall be 26-1/2" wide x 49-1/2" tall.

ABOVE WHEEL WELL

There shall be one (1) high side full depth compartment centered over the rear wheels. The compartment dimensions shall be 44" wide x 40" high x 22" deep with the door closed. The door opening shall be 42" wide x 34-1/2" tall.

REAR OF WHEEL WELL

There shall be one (1) rescue style, full height, full depth compartment behind the rear wheels. The compartment dimensions shall be 23-1/2" wide x 57" high x 22" deep with the door closed. The door opening shall be 19" wide x 49-1/2" tall.

One (1) Roll Up Doors, L/S, Painted Finish - Mini Pumper

ROLLUP DOOR CONSTRUCTION - LEFT SIDE

All left side compartments shall be provided with painted roll up doors.

One (1) Door Latches, L/S, Non-Locking Lift Bar w/Door Ajar Switch

The left side door latches shall be non-locking stainless steel lift bars and shall be provided with a magnetic door ajar switch system.

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One (1) Wheel Area, Single Axle

FENDER SIDE SKIRTS

There shall be stainless steel fender side skirts located in the area of the rear wheels. The design of the fender sides shall be a minimal length to provide maximum compartment space in the apparatus.

One (1) Right Side Compartments - Mini Pumper

RIGHT SIDE COMPARTMENT DIMENSIONS

FORWARD OF WHEEL WELL

There shall be one (1) rescue style, full height, full depth compartment ahead of the rear wheels. The compartment dimensions shall be 35-1/2" wide x 57" high x 22" deep with the door closed. The door opening shall be 26-1/2" wide x 49-1/2" tall.

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One (1) Roll Up Doors, R/S, Painted Finish - Mini Pumper
ROLLUP DOOR CONSTRUCTION - RIGHT SIDE

One (1) All right side compartments shall be provided with painted roll up doors.
RR1, Ext Compt, Rear, 33-1/2" H x 48" W x 27" D, Full Height
REAR COMPARTMENT DIMENSIONS

One (1) There shall be one (1) full height compartment at the rear of the body. It shall have approximate dimensions of 48" wide x 33-1/2" high x 27" deep. The door opening shall be 45-1/2" x 24" tall.
Roll Up Door, Rear, Satin Anodized Finish, Full Height
ROLLUP DOOR CONSTRUCTION - REAR

One (1) The rear compartment shall be provided with an anodized roll up door.
Door Latch, Rear, Non-Locking Lift Bar w/Door Ajar Switch
The rear door latch shall be a non-locking stainless steel lift bar and shall be provided with a magnetic door ajar switch system.
One (1) Fuel Fill, L/S Rr Fndr w/Door, Label
FUEL FILL - SIDE BODY

One (1) The fuel fill shall be located in the rear fender area on the left side of the apparatus body. The spring loaded fuel fill door shall have "Diesel Fuel" laser cut in the face of the door.
Fenderettes and Wheel Well Liners - Stainless
BODY FENDERS - POLISHED

One (1) The apparatus body fenders shall be made from 16 gauge polished stainless steel and shall be rolled, die stamped and fully removable. The stainless steel fenders and stainless fender liners shall be fastened with stainless bolts and ESNA nuts to the outer fender panel.
Mud Flaps, Rear
REAR AXLE MUD FLAPS

One (1) Two (2) black, anti-sail, mud flaps shall be mounted behind the rear wheels.
Tray, (2) 9' Suction, L/S, Abv Cmpt - Utility
HARD SUCTION TRAYS - LEFT SIDE

Two (2) stainless steel hard suction trays shall be installed on the top of the compartment on the left (driver's) side of the apparatus.

One (1) Each tray shall be designed to accommodate hard suction hose in a nine (9) foot length. The suction shall be held in place with straps attached to the tray with footman loops.
Lights, Compartment, LED Strip, Armor Protected - White/Red
APPARATUS COMPARTMENT LIGHTING

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Two (2) LED, armor protected, strip lights shall be provided one (1) each side of the compartment at the door frame for each body compartment. Each body door shall have an automatic compartment light switch.

One (1) There shall be a white/red color selector switch in the cab that controls the color of this lighting.
Lights, Underbody, LED Strip, Armor Protected
UNDERBODY LIGHTING

One (1) Underbody ground lights shall be provided under the apparatus body. These ground lights shall be LED strips mounted in armor guards. The lights shall illuminate when the parking brake is set.
Steps, Folding, Rear of Body - Three
FOLDING STEPS

Three (3) Three (3) folding steps shall be provided on the left rear of the apparatus body.
Standard Folding Step

One (1) Beveled Rear Tailboard, 8", LaserGrip Stainless Steel
BEVELED REAR TAILBOARD

One (1) A rear tailboard 8" deep shall be provided at the rear from "Laser Grip" stainless steel. The tailboard shall provide recessed for the rear ICC marker lights. It shall be bolted to the rear support structure. The corners of the rear bumper shall be beveled back to reduce the rear bumper swing of the vehicle.
STANDARD Shelf, Tray, Toolboard Package

One (1) Shelf Package, Deep - One (1) each in R1, L1, R3, L3
ALUMINUM SHELVES - ADJUSTABLE

One (1) Four (4) adjustable aluminum shelves shall be provided with one (1) each installed in R1, L1, R3 and L3 compartments. The shelves shall have a flange 1-1/2" deep with a minimum material thickness of .190". Each shelf shall be adjustable in height and held in place by four (4) extruded uprights.
Shelf Package, Deep - One (1) each in R2, L2
ALUMINUM SHELVES - ADJUSTABLE

One (1) Two (2) adjustable aluminum shelves shall be provided with one (1) each installed in R2 and L2 compartments. The shelves shall have a flange 1-1/2" deep with a minimum material thickness of .190". Each shelf shall be adjustable in height and held in place by four (4) extruded uprights.
Shelf Package, - One (1) in RR1
ALUMINUM SHELF - ADJUSTABLE

One (1) One (1) adjustable aluminum shelves shall be provided and installed in the RR1 compartment. The shelf shall have a flange 1-1/2" deep with a minimum material thickness of .190". The shelf shall be adjustable in height and held in place by four (4) extruded uprights.
Tray Package, Pullout, Floor - L1, L3, R1, R3
ALUMINUM TRAYS - PULL OUT

One (1) Four (4) heavy duty pullout trays shall be installed and shall be equipped with slides and a gas shock to hold the tray in both the in and out positions and shall be made from .190" aluminum with a maximum capacity of 250 pounds. One (1) each are to be installed on the floor of the L1, L3, R1 and R3 compartments.
Toolboards, FoxTrax, Mtd Rear Wall, L2, R2 Compartments
ALUMINUM TOOL BOARDS

The rear wall of the L2 and the rear wall of the R2 compartments shall be covered with FoxTrax aluminum extrusion tool mounting board.

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- One (1) Body - LED - ICC Lighting - Reflectors
APPARATUS ICC MARKER LIGHTING AND REFLECTORS
- Three (3) red LED clearance lights shall be supplied, mounted in the rear of the apparatus.
- ICC lighting utilized and lighting positions shall be in conformance with FMVSS 108.
- There shall be a diamond shaped amber reflector mounted on each front corner of the apparatus body and a diamond shaped red reflector mounted on each rear corner of the body.
- One (1) Rear Stop/Tail/Turn/Reverse with NFPA Lower Zone C Warning - SoundOff ICC Lights
REAR STOP/TAIL/TURN/BACKUP LIGHTS
- There shall be a SoundOff light housing provided on the rear of the apparatus that includes the stop/tail/turn and lower zone C warning lights.
- The rear of the apparatus shall be equipped with SoundOff 6x4 Series light heads.
- The top light in the assembly shall be a red LED with clear lens stop/tail light.
 - The upper middle light set shall be an amber LED lamp with a clear lens.
 - The lower middle lights shall be white LED backup lamps with clear lens.
- The lower lights shall be NFPA warning lamps as specified for lower zone C.
- One (1) Rear Stop/Tail/Turn/Reverse with NFPA Lower Zone C Warning - Bright Finish
REAR STOP/TAIL/TURN/BACKUP LIGHTS/LOWER ZONE C - BRIGHT FINISH
- The light housing shall have a chrome plated finish.
- One (1) Back Up Alarm
BACK-UP ALARM
- A solid state electronic backup alarm shall be installed on the rear of the apparatus and wired to the backup light circuit.
- One (1) License Plate Bracket w/LED Light
One (1) license plate mounting and LED light shall be provided. The light and bracket shall be located on the rear of the apparatus.
- One (1) SoundOff - LED - Package - Includes Upper Rear Warning Lights
- One (1) Lens Color - Both Clear
Both warning light lenses shall be clear in color.
- One (1) Any clear warning light(s) shall be disabled automatically for the "Blocking Right of Way" mode.
Lens Color - Both Clear
Both warning light lenses shall be clear in color.
- One (1) Any clear warning light(s) shall be disabled automatically for the "Blocking Right of Way" mode.
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Lens Color - Both Clear
Both warning light lenses shall be clear in color.

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- One (1) Any clear warning light(s) shall be disabled automatically for the "Blocking Right of Way" mode.
Lightbar, Frt, SoundOff 54"
CAB FORWARD ROOF MOUNTED LIGHTBAR
- A SoundOff Signal nRoads (ENRLB00EGW-0T7), single tier beacon shall be mounted facing forward on the cab roof centered on the front and rear doors.
- The beacon shall contain eleven (11) warning light Modules. Seven (7) facing forward and two (2) red/white modules facing each forward side of the apparatus. Two (2) red modules facing each rear side of the apparatus Shall have clear lenses.
- One (1) This lightbar fulfills the requirements for Upper Zone A and in combination with the upper rear warning devices fulfills the requirements for Upper Zones B, C, and D. Any clear warning light(s) in the lightbar shall be disabled automatically for the "Blocking Right of Way" mode
Brush Guard Front Warning, SoundOff- LED
FRONT WARNING LIGHTS
- There shall be two (2) SoundOff Signal mPower Series # EMPSA0EH0-D warning lights mounted on the front brush guard facing forward.
- 4"x2" mpower Fascia with Stud Mount
- 24 LED (Dual) 9-32 Volt SAE with 1.5' Pigtail
- Black Housing with Clear Lens
- One (1) RED/WHT
Brush Guard Side Warning, SoundOff
FRONT INTERSECTION LIGHTS
- There shall be two (2) SoundOff Signal mPower Series # EMPSA0EH0-D warning lights mounted on the front brush guard facing to the sides.
- 4"x2" mpower Fascia with Stud Mount
- 24 LED (Dual) 9-32 Volt SAE with 1.5' Pigtail
- Black Housing with Clear Lens
- One (1) RED/WHT.
Body Side Warning, SoundOff
BODY SIDE WARNING LIGHTS
- There shall be two (2) SoundOff Signal mPower Series # EMPSA0EH0-D warning lights shall be mounted on each side of the body in the forward wheel well area.
- 4"x2" mpower Fascia with Stud Mount
- 24 LED (Dual) 9-32 Volt SAE with 1.5' Pigtail
- Black Housing with Clear Lens

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RED/WHT.

One (1)

Upper Rear, SoundOff

REAR UPPER LEVEL WARNING LIGHTS

There shall be two (2) There shall be two (2) Red/Amber SoundOff Signal mPower Series # EMPSA05C2-K mounted facing the rear, one (1) each side of the body in the upper position.

There shall be two (2)Red/White SoundOff Signal mPower Series # EMPSA0EH0-D mounted, one (1) mounted on the upper rear sides of the apparatus.

4"x2" mpower Fascia with Stud Mount

24 LED (Dual) 9-32 Volt SAE with 1.5' Pigtail

Black Housing with Clear Lens

One (1)

Rear Warning - Zone C Lower, Power Rear, SoundOff - LED

REAR LOWER LEVEL WARNING LIGHTS

Two (2) SoundOff Signal mPower 6x4 EMPSB0C96-R lightheds)shall be provided. The lightheds shall be surface mounted and shall fit standard mounting holes secured with four (4) stainless steel screws. Wiring shall extend from the lighthead back. The lightheds shall be fitted with high efficiency optics and a permanently affixed lens to provide a warning light beam across all angles. The lightheds shall be installed using the sync capabilities of the lighthead. Fully sealed, submersible electronics shall be furnished on each lighthead.

These two (2) lights fulfill the requirements for Lower Zone C lower level warning devices.

One (1)

Rear Warning - Zone C Lower - Bright Finish

REAR LOWER LEVEL WARNING LIGHTS - BRIGHT FINISH

The lightheds shall have a chrome bezel.

One (1)

SoundOff mPower, Arrow Kit

REAR TRAFFIC ADVISOR

1 EMPAK0098N :

8 - EMPSCG2STS4K - mpower® 4" 3-Wire Light w/ Stud Mount, for use with mpower Arrow Kit and Connect-n-Go, SAE Class 1 & CA Title 13, 9-32 Vdc, Black Housing, 18 LED, Tri Color -Red/Amber/White

1 - 15ft Vehicle Harness

1 - Breakout Box

1 - 24 Pin Harness

1 - Mounting Hardware Kit

Featured Highlights & Terminology:

Mode Select: The lightbar is equipped with 4 selectable pattern configuration modes. The default input wire configuration allows for 2 modes and an additional 2 modes may be configured with the PC

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Application using any available input wires. Default is Mode 1 where the Mode select input is floating. Mode 2 is in use when the input activated. This feature allows up to 4 completely different sets of patterns to be programmed into the lightbar's non-volatile memory. Once programming configuration is complete, the Mode can be changed "on-the-fly" by an activation switch which applies voltage to the Mode input wire(s).

Cruise Mode: Allows the user to program any selected modules to "Glow" when this feature is activated. The LED intensity is selectable between 1 and 10% duty cycle. For dual / tri color bars, the color for each light group is selectable

Takedown Mode: Allows the user to program any selected modules to turn on steady when this feature is activated to provide steady ON takedown lighting

Directional Arrow Built-in: The directional controller is built-in with 11 arrow patterns for each of the 3 modes (left arrow, right arrow, and center out arrow) and the color is selectable for dual / tri color bars
Steady On Mode: Accessible with PC App only and allows the user to program any light module to turn on steady at 100% duty cycle.

Stop / Tail / Turn Mode: Allows the user to program any selected modules to operate in 2 levels of intensity for tail and stop/turn functions

Low Power Mode: Operates lighting at reduced intensity. Selectable between 20 and 90% duty cycle.

Scene Lighting Mode: Allows the user to program any selected modules to turn on steady when this feature is activated to provide additional scene lighting. The activation of this input also activates the Takedown function

One (1) Worklights, Whelen, (2) PFBP12, LED, Mnt Frt Body Top
BODY LED WORKLIGHTS

Two (2) Whelen PFBP12 LED hosebed floodlights shall be provided. One (1) mounted at the front right corner and one (1) on the front left corner of the body. The lights shall be controlled from a switch on the lamp head.
One (1) FRC - LF Corner - Utility
LEFT FRONT QUARTZ LIGHT

The following light shall be provided mounted on the left front corner of the body:
One (1) FRC - RF Corner - Utility
RIGHT FRONT QUARTZ LIGHT

The following light shall be provided mounted on the right front corner of the body:
One (1) FRC, Evolution II, LED DC 20K LM
Fire Research Focus model FCA100-V20 lamphead shall be provided. The lamphead shall have eight (8) ultra-bright white LEDs. It shall operate at 12/24 volts DC, draw 13/6.5 amps, and generate 20,000 lumens. 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. The lamphead shall incorporate heat-dissipating fins and be no more than 5 3/16" deep by 3 5/16" high by 11 1/2" wide. The lamphead and mounting arm shall be powder coated white. The floodlight shall be for fire service use.

One (1) FRC, Evolution II, LED DC 20K LM
Fire Research Focus model FCA100-V20 lamphead shall be provided. The lamphead shall have eight (8) ultra-bright white LEDs. It shall operate at 12/24 volts DC, draw 13/6.5 amps, and generate 20,000 lumens. 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. The lamphead shall incorporate

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- heat-dissipating fins and be no more than 5 3/16" deep by 3 5/16" high by 11 1/2" wide. The lamphead and mounting arm shall be powder coated white. The floodlight shall be for fire service use.
- One (1) Lamphead ON / OFF Switch
Fire Research -ON option switch shall be installed on the lamphead. The weatherproof on-off toggle switch shall be mounted on the lamphead.
- One (1) Lamphead ON / OFF Switch
Fire Research -ON option switch shall be installed on the lamphead. The weatherproof on-off toggle switch shall be mounted on the lamphead.
- One (1) FRC, Bottom Raise Pole - 530
The lighthouse shall be mounted on a side mount push up telescopic pole. The light pole shall be anodized aluminum and have a knurled twist lock mechanism to secure the extension pole in position. The extension pole shall rotate 360 degrees. The outer pole shall be a grooved aluminum extrusion and qualify as an NFPA compliant handrail. The pole mounting brackets shall have a 3 1/2" offset. Wiring shall extend from the pole bottom with a 4' retractile cord.
- One (1) FRC, Bottom Raise Pole - 530
The lighthouse shall be mounted on a side mount push up telescopic pole. The light pole shall be anodized aluminum and have a knurled twist lock mechanism to secure the extension pole in position. The extension pole shall rotate 360 degrees. The outer pole shall be a grooved aluminum extrusion and qualify as an NFPA compliant handrail. The pole mounting brackets shall have a 3 1/2" offset. Wiring shall extend from the pole bottom with a 4' retractile cord.
- One (1) Compartment Top Ladder Group - 8-Fold, 8-Roof, 22-3 Sec
- One (1) Ladder, 8' Roof, Duo-Safety, Channel Rail, Aluminum
ROOF LADDER
- One (1) 8' Duo-Safety model 775-A, aluminum channel rail roof ladder with folding roof hooks shall be provided with the apparatus.
- One (1) Ladder, 8' Fldng Attic, Duo-Safety, Aluminum
ATTIC LADDER
- One (1) 8' Duo-Safety model 585-A aluminum folding attic ladder shall be provided with the apparatus.
- One (1) Ladder, 22' Three-Sect Ext, Duo-Safety, Solid Beam Aluminum
EXTENSION LADDER
- One (1) 22' three-section Duo-Safety model 925-A solid beam, aluminum extension ladder shall be provided with the apparatus.
- One (1) Striping, 5" Scotchlite, Reflective, Vehicle Perimetr
REFLECTIVE SAFETY STRIPE
- A 5" wide 3M brand Scotchlite reflective stripe shall be affixed to the perimeter of the vehicle using a 1/3/1 sign gold / black / sign gold combination. The 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 25% of the perimeter width of the front of the vehicle shall have reflective stripe.
- One (1) Base Stripe Color, Black Reflective
REFLECTIVE STRIPE COLOR
- One (1) GFR emblem 13x22 inches gold sign over black background on each front door (2)
"Gilmer County Fire Rescue" 4 inch letters gold sign over black background on each rear door (2)
"Gilmer County Fire Rescue" 4 inch letters Red letters over black background on rear roll up door (1)
"Call 911" 4 inch letters gold sign over black background on passenger/driver side rear roll up doors (2)
- One (1) The apparatus body striping shall be black reflective.
Chevron, Rear Body NFPA, 6" - Pumper Tall Rear Door

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REAR BODY CHEVRON STRIPING

The rear-facing vertical surfaces of the rear taillight panels and the full height rear door, visible from the rear of the apparatus, shall be equipped with six (6) inch wide retro reflective striping in a chevron pattern sloping downward and away from the centerline of the vehicle at an angle of 45 degrees.

One (1)

Chevron Color - Red and Black Reflective

Each stripe in the chevron shall be a single color alternating between red and black reflective.

One (1)

Water Tank Warranty - Service Life

WATER TANK WARRANTY

The water tank is to be free from defects in material and workmanship for the normal service life of the apparatus in which the water tank is installed.

If a tank has a defect in material or workmanship covered by the warranty, the tank manufacturer shall repair at their cost, by authorized personnel or authorized third parties. The tank manufacturer shall make an effort to effectuate repair within 48 hours following initial notification of a covered defect. The tank manufacturer shall make a reasonable effort to repair tank at most convenient location to end user.

The tank manufacturer shall reimburse all reasonable costs associated with rendering the tank accessible for repair, including, but not limited to, removal and reassembly of the hose bed floor.