

Republic Fire Equipment



FOUTS F.O.U.R.
(First Out Utility Rescue)

INITIAL ATTACK

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Republic Fire Equipment

SCOPE AND GENERAL REQUIREMENTS

It is the intent of the manufacturer to provide a new fire apparatus that will withstand the continuous use encountered in the emergency firefighting service. The apparatus is of the latest type, symmetrically proportioned and constructed with due consideration of the load to be sustained.

All parts not specifically mentioned herein, but which are necessary to furnish a complete fire apparatus, is furnished and will conform to the best practices known to the fire apparatus industry.

The unit is to be of current year manufacture and is to be new and unused. The bid price will not include any local, State, or Federal taxes. The Bidder will not be liable for any State or Federally mandated tax or program after the sale of this apparatus.

These specifications are construed as minimum. Should the manufacturer's current published data or specifications exceed these, they are to be considered minimum and be furnished.

PROPRIETARY PARTS

The proposed apparatus is manufactured with major parts commonly used by the heavy-duty truck manufacturers and open market vendors whereas replacement parts are more readily available and at reduced cost. The use of proprietary parts may not be acceptable to the purchaser.

MANUFACTURER'S DISCRETION

Materials, parts, or procedures used are subject to change at manufacturer's discretion at any time to provide equal or better products.

COOPERATIVE PURCHASING

Republic Fire Equipment is pleased to allow other public agencies to use the purchase agreement resulting from this transaction. The condition of such use by other agencies is that any such agency must make and pursue contact, purchase order/contract, and all contractual remedies with the successful bidder. Such tag-ons is done so that the purchaser has no responsibility for performance by either the manufacturer or the agency using the contract.

PRODUCT QUALITY AND WORKMANSHIP

The components provided and workmanship performed is of the highest quality available for this application. Special consideration is given to the following areas:

- A). Accessibility to various components that require periodic maintenance or lubrication checks.
- B). Ease of vehicle and pump operation.

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C). Features beneficial to the intended operation of the apparatus.

Construction of the complete apparatus is designed to carry the loads intended to meet the road and terrain conditions and speed requirements desired when specified by the purchaser.

Welding will not be employed in the assembly of the apparatus in a manner that will prevent the removal of any major component part for service and/or repair.

PAYMENT TERMS

Full payment for the apparatus is made at time of delivery of the completed vehicle. Due to insurance liability, the apparatus will not be left at the purchaser's location without full acceptance and payment or prior agreement between the Purchaser and Bidder.

Final delivery price will not include any Local, State or Federal taxes. The manufacturer will not be liable for any State or Federal mandated tax or program after sale or delivery of the apparatus.

VEHICLE ACCEPTANCE AND DELIVERY

The apparatus is delivered under its own power to the buyer. Full payment will due upon delivery and acceptance of the apparatus.

FUEL TANK FILLED AT DELIVERY

The fuel tank and DEF tank (if applicable) is filled upon final delivery at the factory.

APPARATUS DIMENSIONS

These are standard truck dimensions. Changes in configuration or additional options may affect these dimensions. The contract specification will contain the exact dimensions.

OVERALL, HEIGHT

The overall height is approximately 7'- 6".

OVERALL LENGTH

The overall length is approximately 26'.

OVERALL WIDTH

The overall width of the body is 101" wide; chassis mirrors will extend out past this width.

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PUMP HOUSE DIMENSIONS

The pump module is 24.00" wide.

NFPA 1901, 2016 STANDARDS

This apparatus specification includes a commercial chassis that has not been certified to meet the requirements of NFPA 1901, 2016 edition by the chassis manufacturer. Although this chassis may comply with certain aspects of the standard, the apparatus manufacturer has not received certification from this chassis manufacturer that all criteria have been met. The body as built by the manufacturer must comply with the NFPA standards effective January of 2016.

ROAD TEST CERTIFICATION

A road test is conducted with the finished apparatus fully loaded. During this time, the apparatus will not show loss of power and/or overheating. The transmission driveshaft or shafts and rear axle will run free from abnormal vibration or noise throughout the operating range of the apparatus. The apparatus, when loaded, will have not less than 25% or more than 45% of the weight on the front axle and not less than 55% or more than 75% on the rear axle.

- A). The apparatus must be capable of accelerating to 35 mph from a standing start within 25 seconds on a level concrete highway without exceeding the maximum governed RPM of the engine.
- B). The apparatus must be capable of accelerating from a steady speed of 15 mph to a true speed of 35 mph within 30 seconds. This is accomplished without moving the gear selector.
- C). The fully loaded apparatus is capable of obtaining a speed of 60-65 mph on a level concrete highway.
- D). The manufacturer will furnish copies of the engine installation approvals signed by the appropriate engine company upon delivery of the chassis to the Fire Department.
- E). The manufacturer will furnish copies of the transmission approval signed by the transmission manufacturer upon delivery of the chassis to the Fire Department.
- F). The manufacturer will furnish copies of the front and rear axle approvals upon delivery of the apparatus to the Fire Department.

SEATED AND BELTED WARNING LABEL - FAMA# 07

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A permanent label is provided that is visible to all occupants that states that they should be seated and belted while the apparatus is in motion. The label will also state potential injuries or death that could be caused if the safety belts are not used properly.

CAB INTERIOR EQUIPMENT MOUNTING DANGER LABEL - FAMA# 10

A permanent label is provided inside of the cab warning of the dangers of unsecured equipment inside the cab. The label will state that all equipment is properly secured and also warn of potential injury or death that could be caused by failing to do so.

DO NOT WEAR HELMET LABEL - FAMA# 15

A permanent label is provided inside of the cab in view of all seated positions stating that helmets should not be worn in cab. The label will also warn of potential injury or death that could be caused by wearing helmet in cab.

VEHICLE BACKING LABEL - FAMA17

A permanent label is provided inside of the cab in view of the driver advising of proper procedures to following when the apparatus is in reverse motion. The label will also warn of potential injury or death that be caused by failing to follow proper procedures.

CHASSIS DATA LABELS

The following information is on labels affixed to the vehicle:

Fluid Data:

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

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Chassis Data:

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

Location is in the driver's compartment of the chassis cab.

OVERALL HEIGHT, LENGTH, GVW DATA PLAQUE

A "high visibility" plate is permanently mounted in the cab, visible to driver when seated.

The plate will show the overall height of the completed apparatus in feet and inches, the overall length of the completed apparatus in feet and inches.

The plate will also show the gross vehicle weight rating (GVWR) in tons.

Text will also be supplied on the plate, indicating that the information shown is current upon completion of the apparatus. If the overall height of the apparatus changes after the apparatus is put into service, then the purchaser must revise the dimensions on the plate.

"NO RIDE" LABEL

A label is located on the vehicle at the rear step areas, and at any cross walkways, if they exist. The label(s) will warn personnel that riding in or on these areas while the vehicle is in motion is prohibited.

COMMERCIAL CHASSIS SPECIFICATION

CHASSIS PROVIDER

The chassis, as detailed in these specifications, is ordered and supplied by the apparatus manufacturer.

CHASSIS

One (1) new FORD F-550 rear axle drive 4x4, dual rear wheels (DRW), four (4) door crew cab and chassis with XL trim.

Wheelbase: 203.70"
Cab to Axle: 84.00"

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PAYLOAD PLUS UPGRADE PACKAGE (68M)

- Increases GVWR from 18,000 lbs. to 19,500 lbs.
- Increases max RGAWR to 14,706
- Low Deflection/High-Capacity Rear Springs
- Upgraded frame
- Upgraded rear-axle

ELECTRONIC SHIFT ON THE FLY (213)

- Electronic Shift-On-the-Fly (ESOF)

SKID PLATE

Transfer Case Skid Plate Shield

POWERTRAIN (99T)

- 6.7L Power Stroke V8 Turbo Diesel Engine, OHV (32-valve)
- Horsepower: 330 HP @ 2600 RPM
- Rated Torque: 825 lb.-ft. @ 2,000 rpm
- Stationary Elevated Idle Control, SEIC

Exhaust System: horizontally mounted, discharge on right side aft of wheels

TRANSMISSION

Torq-Shift 10-speed automatic with selectable drive modes.

FIRE/ RESCUE PREP PKG w/EPA SPECIAL EMISSIONS (LPO)

Includes 7,000 lbs. max front springs/GAWR rating for configuration selected. Incomplete vehicle package - requires further manufacture and certification by a final stage manufacturer. Ford urges Fire/Rescue Vehicle manufacturers to follow the recommendations of the Ford Incomplete Vehicle Manual and the Ford Truck Body Builders Layout Book (and pertinent supplements). NOTE 1: Stationary Elevated Idle Control (SEIC) is integrated into the engine control module. NOTE 2: Engine calibration significantly reduces the possibility of depower mode when in stationary PTO operation. NOTE 3: Operator commanded regen allowed down to 30% of DPF filter full, instead of 100%. NOTE 4: Must meet the definition of an Emergency Vehicle, an Ambulance or Fire Truck per 40 CFR 86.1803.01 in the Federal Register. NOTE 5: California Code of Regulations allows for the sale of Federally certified emergency vehicles in California.

Includes:

- Dual Extra Heavy-Duty Alternators (Total 377-Amps)

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- Operator Commanded Regeneration (OCR) Includes active regeneration inhibit.

MANUAL REGENERATION

A push button switch is located on the dash to initiate manual DPF regeneration.

Fuel Tank: 40 gallon aft-axle with auxiliary fuel tap, to provide fuel to an auxiliary truck body mounted diesel engine.

NFPA 1901, 2016 edition, section 12.3.4.7 requires a means for draining the tank without removing the tank.

REAR AXLE RATIO

The ratio of the rear axle is 4.88 limited slip.

Engine Block Heater

PTO PROVISION

Transmission Power Take-Off Provision

CAB TYPE

Conventional, engine forward, four (4) door crew cab

Construction: Welded steel

Accessories:

- Solar Tinted glass in all windows
- Dual sun visors
- Electric windshield washer
- Dome light
- Fresh air heater and defroster
- Dual electric horns
- Driver and passenger air bags
- Gray Vinyl Upholstery
- Roof Clearance Lights
- Black vinyl full floor covering
- 12V Auxiliary Power Point

Headlamps: dual beam jewel effect

Climate Controls: controls for heat, defroster, and air conditioning

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Mirrors: black manually telescope fold-away in/out for view adjustment.

Instrumentation:

- Tachometer
- Speedometer
- Turbo boost (diesel only)
- Oil pressure
- Coolant temperature
- Fuel gauge
- Transmission temperature gauge
- Indicator lights & Message Center/odometer, trip odometer, engine hour meter & warning messages.

POWER EQUIPMENT GROUP

- Accessory delay
- Manual-folding and manual telescoping power trailer-tow mirrors with heated glass.
- Heated convex spotter mirror
- Integrated clearance lamps/ turn signals
- Perimeter alarm
- Power first-row windows with one-touch up/ down
- Power second-row windows
- Power locks
- Remote keyless entry
- Upgraded door-trim panel
- Advanced Security Pack (includes SecuriLock Passive Anti-Theft System (PATS) and Inclination/ Intrusion Sensors)

CAB SEATING

The front seating will consist of a heavy-duty vinyl 40/20/40 split front bench seat w/center armrest, cup holder, storage and manual driver-side lumbar support

REAR CAB SEATING

The rear seating will consist of a heavy-duty vinyl 60/40 bench flip-up/fold-down rear seat.

XL VALUE PACKAGE

4.2" center stack screen
AM/FM stereo MP3 player w/ six speakers
Chrome front bumper
Cruise control
Ford SYNC

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WHEELS

Six (6), 10-hole Disc, 19.50" x 6.00" RW Steel

TIRES

Six (6) 225/70Rx19.5G black side wall traction tires will come supplied from ford with the chassis.

FORD SUPERDUTY WARRANTY

Description	Months/Distance
Basic.....	36 month/36,000 miles
Powertrain.....	60 month/60,000 miles
Corrosion Perforation.....	60 month/unlimited mileage
Roadside Assistance	60 month/60,000 miles
Diesel Engine	60 month/100,000 miles

CHASSIS PAINT COLOR

The cab is painted a single color by the chassis manufacturer.

Color: Ford Race Red

Paint Number: PQ

RUNNING BOARDS

One (1) set of running boards is mounted to each side of the chassis. The running boards will exceed the NFPA requirements for stepping surface and slip resistance

GRILLE GUARD

A winch mount grille guard is provided and installed on the front of the chassis. The grille guard is constructed of 304 stainless steel and have a black powder coated finish. It is capable of mounting a winch with ratings up to 12,000 lbs.

FRONT MOUNTED WINCH

An electric winch with 12,000 pound (5,440 kg) rated line pull is installed in the brush guard. The winch is equipped with 3/8" diameter wire rope, clevis hook and a 4-way roller fairlead. The winch is operated through a pendant with a handheld control.

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TOWING HITCH RECEIVER

A trailer towing hitch receiver with safety chain anchors is installed at the rear of the apparatus.

The hitch receiver is constructed of heavy steel tubing and reinforced to the apparatus framework. The hitch receiver will have a Class V rating of 16,000 pounds towing and 1,600 pounds tongue weight when used with a weight distributing hitch assembly.

The receiver will accept a 2.00" hitch.

One (1) 7-prong connector with a weatherproof cover is supplied and mounted near the rear receiver tube.

SEATING MODIFICATION

The center portion of the 40/20/40 split bench seat is removed to accommodate the installation of the specified console.

SEATING CAPACITY

The seating capacity in the cab is four (4).

REAR CREW AREA SEATS

The Ford factory seats is removed in the rear crew area. Two (2) VALOR SCBA style seats with ZICO EZ Lock brackets and seat riser is provided and installed.

The seats have been installed with one (1) in the passenger's side outboard position and one (1) in the driver's side outboard position. There is no seat in the center position. Seats will utilize the existing shoulder safety belt system.

SCBA SEAT CRASH HAZARD - FAMA# 11

Safety sign FAMA # 11 sign is visible to the occupants of the SCBA seats in the cab. "SCBA Seat Crash Hazard. Only occupy SCBA seat with pack or seat insert in place. Sitting in an SCBA seat without an SCBA pack or seat insert may cause injury in the event of a crash."

SEAT BELT WEB LENGTH

NFPA 1901, 2016 edition, Section 14.1.3.1 and 14.1.3.2 requires effective seat belt web length for a Type 1 lap belt for pelvic restraint to be a minimum of 60.00", and a Type 2 pelvic and upper torso restraint-style seat belt assembly to be a minimum of 110.00".

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Per specification of a commercial chassis, this apparatus may not have seat belts of the required length. These belts may not provide sufficient length for large firefighters in bunker gear. This apparatus is non-compliant to NFPA 1901 standards effective at time of contract execution.

SEAT BELTS

NFPA 1901, 2016 edition, section 14.1.3.3 requires the seat belt webbing to be bright red or bright orange in color, and the buckle portion of the seat belt is mounted on a rigid or semi-rigid stalk such that the buckle remains positioned in an accessible location.

The seat belt color is not available in red or orange from the commercial chassis manufacturer. Per specification of a commercial chassis, the seat belt color is non-compliant. This apparatus is non-compliant to NFPA 1901 standards effective at time of contract execution.

TIRE PRESSURE MANAGEMENT

There is a RealWheels LED AirSecure tire alert pressure management system provided, that will monitor each tire's pressure. A sensor is provided on the valve stem of each tire for a total of six (6) tires.

The sensor will calibrate to the tire pressure when installed on the valve stem for pressures between 10 and 200 psi. The sensor will activate an integral battery-operated LED when the pressure of that tire drops 5 to 8 psi.

Removing the cap from the sensor will indicate the functionality of the sensor and battery. If the sensor and battery are in working condition, the LED will immediately start to flash.

WHEEL COVERS

Each wheel will have one (1) stainless steel wheel cover installed.

CHASSIS EXHAUST EXTENSION - RIGHT HAND SIDE

The chassis exhaust is modified and relocated to the right side of the apparatus and will terminate behind of the rear wheel.

EXHAUST HEAT SHIELD

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

HOT EXHAUST DANGERS LABEL - FAMA# 04

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A permanent label is provided near any hot exhaust surface that warns of potential injury or death that could be caused by contact with the surface. The label will also state precautions that should be taken while working on or around the surface.

CHASSIS PREPARATION

Prior to installation of the fire pump, apparatus body, or cab steps, all components which extend out beyond the chassis frame rails is removed and relocated to the area within the frame rails

CHASSIS TOW HOOKS

The front tow hooks are provided as detailed in the chassis specifications.

VEHICLE DATA RECORDER

NFPA 1901, 2016 edition, section 4.11.1 requires all apparatus be equipped with an on-board vehicle data recorder. The VDR is intended to be used by the fire department to monitor seat belt use as a tool for enforcing a seat belt policy that enhances the safety of apparatus occupants.

The vehicle data recorder is not available as required from the commercial chassis manufacturer. Per Fire Department specification of a commercial chassis, there is no vehicle data recorder on the apparatus. This apparatus is non-compliant to NFPA 1901 standards effective at time of contract execution.

SEAT BELT MONITORING SYSTEM

NFPA 1901, 2016 edition, section 14.1.3.9 requires a seat belt warning system be provided. The seat belt warning device is intended to assist the driver or officer in determining whether all occupants are seated and belted before the vehicle is driven. Without this device, the driver must manually determine that all occupants are seated and belted before the apparatus is placed in motion.

The seat belt warning system is not available as required from the commercial chassis manufacturer, or not requested by the customer. Per Fire Department specification of a commercial chassis, there is no seat belt warning system on the apparatus. The purchasing authority is consciously choosing to accept an apparatus without a tool that the NFPA Technical Committee on Fire Department Apparatus believes all fire departments should use to promote and enforce seat belt compliance. This apparatus is non-compliant to NFPA 1901 standards effective at time of contract execution.

CENTER CONSOLE

A center console fabricated from 0.125" aluminum is furnished and is located between the driver and officer's seats.

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The forward area of the console will have a mounting surface for emergency lighting switch panels and/or electronic siren control boxes within reach of the driver or officer.

The rear portion of the console is provided with an open top storage area for notebooks or maps.

CUP HOLDERS

Two (2) cup holders are provided and installed in the console.

MASTER BODY DISCONNECT SWITCH

A master body disconnect on/off switch is provided in the cab, near the driver's door. The switch will disconnect the power to the apparatus body when the ignition switch is in the off position.

One (1) reset breaker is installed between the solenoid output and any electrical load.

One (1) indicator light is provided to indicate the apparatus 12-volt system is on. The light is located in the chassis cab and be visible from the driver's positions. The light is green in color and labeled "Master Battery".

BATTERY CONDITIONER

A Kussmaul Chief 4012 Series battery conditioner is supplied. The battery conditioner will provide a 40-amp output for the chassis batteries and a 20-amp output circuit for accessory loads.

BATTERY CHARGER LOCATION

The battery charger is located in the L2 compartment high on the rear wall.

120 VOLT SHORELINE CONNECTION - "SUPER" AUTO EJECT

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

AUTO-EJECT MATING PLUG

A Kussmaul model # 5-20P-H, 20-amp mating female cord end is shipped loose with the apparatus to allow the Fire Department to connect cord end to a Fire Department provided charging cord.

BATTERY CHARGER DISPLAY/ COVER

One (1) Kussmaul model 091-55-266-YW battery charger status center/ auto eject cover is supplied with the charger.

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The cover is yellow in color.

SHORELINE RECEPTACLE LOCATION

The shoreline receptacle is located on the left-hand side of the apparatus in a pre-determined location by the manufacturer.

AUXILIARY AIR COMPRESSOR

A Kussmaul 12V air compressor is supplied. The compressor system is designed to maintain the air pressure in the air system while not in use. A pressure switch will sense air pressure drop and engage the compressor which will run until the pressure is restored.

AUXILIARY AIR COMPRESSOR LOCATION

The auxiliary air compressor is located in a pre-determined location by the manufacturer.

BACK-UP ALARM

One (1) 97 DB back up alarm is provided and installed at the rear of the unit. It is wired to activate when the transmission is placed in reverse.

DUAL USB PORT

One (1) Kussmaul model # 091-219-5 is installed in the console. It will contain two (2) 2.4-amp USB charging ports.

PUMP, MODULE, AND RELATED ITEMS

NFPA 1901 COMPLIANT PUMP

The fire pump and related plumbing on the specified apparatus is installed in accordance with applicable NFPA 1901 guidelines at the time the contract was placed.

HALE DSD SIDE MOUNT PUMP

The pump is of a size and design to mount on the chassis rails of commercial and custom truck chassis.

The entire pump is assembled and tested at the pump manufacturer's factory.

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The pump is driven by a drive line from the truck transmission. The engine will provide sufficient horsepower and RPM to enable pump to meet and exceed its rated performance.

The entire pump is hydrostatically tested to a pressure of 600 PSI. The pump is fully tested at the pump manufacturer's factory to the performance spots as outlined by the latest NFPA Pamphlet No.1901. Pump is free from objectionable pulsation and vibration.

The pump body and related parts is of fine grain alloy cast iron, with a minimum tensile strength of 30,000 PSI (2069 bar). All metal moving parts in contact with water is of high-quality bronze or stainless steel. Pump utilizing castings made of lower tensile strength cast iron not acceptable.

Pump body is vertically split on a single plane for easy removal of entire impeller assembly including clearance rings.

Pump shaft to be rigidly supported by two (2) bearings for minimum deflection. The bearings is heavy duty, deep groove ball bearings in the gearbox and they is splash lubricated.

The pump impeller is hard, fine grain bronze of the mixed flow design; accurately machines, hand ground and individually balanced. The vanes of the impeller intake eye is 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 is bronze, easily renewable without replacing impeller or pump volute body.

The pump shaft is 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.

GEARBOX

Pump gearbox is of sufficient size to withstand up to 16,000 lbs. ft. of drive through torque of the engine system. The drive unit is designed of ample capacity for lubrication reserve and to maintain the proper operating temperature.

The gearbox drive shafts is of heat-treated chrome nickel steel and at least 2.75 inches in diameter, on both the input and output drive shafts. They will withstand the full torque of the engine.

All gears, both drive and pump, is of highest quality electric furnace chrome nickel steel. Bores is ground to size and teeth integrated and hardened, to give an extremely accurate gear for long life, smooth, quiet running, and higher load carrying capability. An accurately cut spur design is provided to eliminate all possible end thrust. (No exceptions.)

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

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If the gearbox is equipped with a power shift, the shifting mechanism is a heat treated, hard anodized aluminum power cylinder, with stainless steel shaft. An in-cab control for rapid shift is provided that locks in road or pump.

MECHANICAL SEAL

The pump will have a mechanical seal. One (1) only required on the suction (inboard) side of the pump. The mechanical seal is two (2) inches in diameter and is spring loaded, maintenance free and self-adjusting. Mechanical seal construction is a carbon sealing ring, stainless steel coil spring, Viton rubber cup, and a tungsten carbide seat with Teflon backup seal.

PUMP WARRANTY

The pump is covered by the Hale Pro-Tech 5-year pump warranty against workmanship and materials. Both parts and labor are covered for the first 2 years and years 3-5 will have parts only coverage.

1500 GPM FIRE PUMP SPECIFICATIONS

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

The pump is certified to meet the following deliveries:

1500 gpm (5678 L/M) @ 150 psi (10.3 bar)
1050 gpm (3974 L/M) @ 200 psi (13.8 bar)
750 gpm (2839 L/M) @ 250 psi (17.2 bar)

ALTITUDE REQUIREMENTS

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

LEFT SIDE INTAKE

One (1) 6.00" steamer intake with a screen and male NST threads is provided on the left-hand side of the pump module.

INLET CAP

One (1) 6.00" chrome plated cap with long handles and NST threads is supplied. The cap is capable of withstanding 500 PSI and be trimmed with the apparatus manufacturer's logo in the center of the cap.

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RIGHT SIDE MASTER INTAKE

One (1) 6.00" steamer intake with screen and male NST threads is provided on the right-hand side of the pump module.

INLET CAP

One (1) 6.00" chrome plated cap with long handles and NST threads is supplied. The cap is capable of withstanding 500 PSI and be trimmed with the apparatus manufacturer's logo in the center of the cap.

DRIVELINE MODIFICATION

The chassis driveline is modified to accommodate any changes required by the installation of the fire pump.

AIR COMPRESSOR - PUMP SHIFT

Since the Ford Superduty chassis does not have an onboard chassis air system, an alternate air system is provided. This system will include a 12-volt air compressor and a small capacity tank. The compressor and tank is installed in a location that does not interfere with other equipment.

The compressor will maintain air system pressure. A pressure switch will sense when the system pressure drops and automatically start the compressor, (providing the battery switch is "on") which then will run until pressure is restored.

PUMP SHIFT

An air operated pump shift is pneumatically controlled using a power shifting cylinder. The power shift control valve is mounted in the cab.

Since the apparatus is equipped with an automatic chassis transmission and the fire pump is driven through the automatic transmission, an interlock system is provided to ensure that the pump drive system components are properly engaged in the pumping mode of operation so that the pumping system can be safely operated from the pump operator's position.

The pump shifting device used between the engine and the pump is equipped with a means to prevent unintentional movement of the control device from its set position.

A GREEN indicator light is located in the driving compartment. This indicator light is energized when the pump shift is completely and is marked "PUMP ENGAGED".

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A second GREEN indicator light in the driving compartment is provided and energized when both the pump shift is completed and the chassis transmission is engaged in pump gear.

SHIFT INTERLOCK MODULE

A Class1 shift interlock module is installed on the pump transmission. The module is capable of the following:

1. Prevents the pump from being shifted from pump mode to road mode unless the apparatus is in neutral, ensuring the apparatus is not put into road mode creating a runaway condition.
2. Prevents the pump from being shifted from road mode to pump mode while the apparatus is in gear. Protect transmission from costly damage caused by hot shifting.
3. Internal delay allows the driveshaft to stop to minimize mis-shifts.

PIPING AND MANIFOLDS

All the plumbing and/or piping in the pump module is of 304 stainless steel or flexible piping for long life. All stainless-steel castings are a minimum of schedule 40. All NPT pipe thread connections larger than 0.75" connections have been avoided in the construction of the plumbing system. The following valves will have groove connection: rear discharge, tank fill, all 2.00" and 2.50" pre-connect valves.

The flexible piping is black SBR synthetic rubber hose with 300 working pounds and 1200 pounds burst pressure for sizes 1.50 through 4.00". Sizes 0.75", 1.00" and 5.00" are rated at 250-pound working and 1000 pound burst pressure. All sizes are rated at 30 HG vacuum. Reinforcement consists of two plies of high tensile strength tire cord for all sizes and helix wire installed in sizes 1 through 5.00" for maximum performance in tight bend applications. The material has a temperature rating of -40 degrees F to 210 degrees F. Full flow couplings are precision machined from high tensile strength stainless steel. All female couplings are brass. 0.75" and 1.00" male and Victaulic couplings are brass.

SYNFLEX SUCTION, DISCHARGE, PRESSURE AND CONTROL LINES

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

PLUMBING SYSTEM

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The plumbing system is left unpainted by the apparatus manufacturer.

HOSE THREADS- NST

All hose threads are National Standard Thread (NST) on all base threads on the apparatus intake and discharges, unless otherwise specified.

CAPS AND ADAPTERS SAFETY TETHER

All applicable discharge and suction caps, plugs and adapters are equipped with chrome plated ball chain and secured to the vehicle.

PUMP CERTIFICATION

The fire pump is tested to meet the flow requirements of the pump. A written certification is provided with the completed vehicle.

PRESSURE RELIEF VALVE-NONE

Pressure controlled by electronic governor.

U.L. TEST POINTS

Two (2) U.L. test plugs are mounted on the pump panel for testing of the vacuum and pressures.

MASTER PUMP DRAIN

The pump is equipped with a Class 1 Master Pump drain to allow draining of the lower pump cavities, volute and selected water carrying lines and accessories. The drain will have an all brass body with a stainless steel return spring.

FUSE BLOCK- PUMP MODULE

A Blue Sea Systems model # 5026 ST blade fuse block is installed in the pump module for the pump electrical circuits. The fuse block is protected with a 125-amp fusible link.

VALVES

The valves are Akron Brass with stainless balls. The valves are bi-directional with full flow capability. The valves are of fixed pivot ball design with a flow pressure rating to meet NFPA-1901 standards. All 3.00" discharge valves are supplied with a true slow close mechanism per NFPA specifications.

INDIVIDUAL DRAINS

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One (1) individual Class1 lift-up drain valve is furnished for each 1.50" or larger discharge port and each 2.50" gated auxiliary suction.

DISCHARGE GAUGES

Individual Class 1 2.50"-line gauges for each 2.00" or larger discharge is provided and mounted adjacent to the discharge valve control handle. The gauges will indicate pressure from 0 to 400 PSI. The pressure gauge is fully filled with pulse and vibration dampening Interlube to lubricate the internal mechanisms to prevent lens condensation and to ensure proper operation to minus 40 degrees F. To prevent internal freezing and to keep contaminants from entering the gauge, the stem and Bourdon tube is filled with low temperature material and be sealed from the water system using an isolating Sub Z diaphragm located in the stem.

HALE MODEL ESP-PVG OIL LESS PRIMING SYSTEM

The priming pump is a positive displacement, oil-less rotary vane electric motor driven pump conforming to NFPA-1901 rated performance requirements. The pump body is manufactured of heat-treated anodized aluminum for wear and corrosion resistance. The pump is capable of producing a minimum of 24 Hg vacuum at 2,000 feet (609.6m) above sea level. The electric motor is a 12 VDC totally enclosed unit. The priming pump will not require lubrication. The priming pump will operate by a push button switch mounted on the pump operator's panel. The switch controls an air cylinder on the PVG control valve, which is located behind the panel and manufactured of bronze construction.

PRIMER FUSE

The primer is protected with a 250-amp fusible link that is designed to protect the apparatus 12 volt electrical system if the primer motor malfunctions.

ANODES

The fire pump is equipped with replaceable alloy anodes. The pump will have one (1) anode on each intake section and one (1) anode on the discharge section of the fire pump, for a total of three (3).

THERMAL RELIEF VALVE

A Hale Model TRV120 Thermal Relief Valve is provided on the pump. If water temperature in the pump exceeds 120 degrees Fahrenheit, the thermal relief valve will automatically open and discharge pump water to the ground, through a 0.375" discharge line, routed below the pump module. The thermal relief valve will automatically close when the water temperature is lowered.

PUMP COOLER VALVE

Republic Fire Equipment

A pump cooler valve is installed in the instrument panel. The valve is a 0.25" multi-turn valve installed thru the instrument panel and labeled.

SENTRY GOVERNOR PRESSURE SYSTEM

The apparatus is equipped with the Class1 Sentry Pressure Governor System. The Sentry Pressure Governor System (SPGS) is a J1939 CAN based pressure governing system that consists of a Sentry display, Twister throttle, pressure transducers and associated wiring.

The Sentry display utilizes Class1's UltraView technology. It is a custom tooled and programmed, 4.30", full color LCD display with (8) buttons. The Sentry display provides the interface to the Engine Control Module (ECM) mounted on the engine.

The following parameters are visible at all times:

- Pump Intake Pressure
- Pump Discharge Pressure
- Engine RPM
- Engine Oil Pressure
- Engine Coolant Temperature
- Transmission Temperature
- System Voltage
- Throttle Ready Interlock Status
- Pump Engaged Interlock Status
- OKAY to Pump Interlock Status
- Operating Mode Status (RPM or Pressure)
- Target Pressure Indication (when in pressure mode)

LEFT SIDE AUXILIARY SUCTION

One (1) 2.50" intake is located on the left side panel. The valve will come equipped with an inlet strainer and a 2.50" NST chrome inlet swivel.

The side auxiliary inlet will incorporate a quarter-turn ball valve with a swing-type manual control located adjacent the intake.

One (1) 2.50" chrome plated plug is provided. The plug is equipped with MNST threads, rocker lugs, and chain.

TANK TO PUMP LINE

One (1) 3.00" tank to pump line is provided for connection between the water tank and the fire pump.

Republic Fire Equipment

The quarter turn valve is manually operated with a Class 1 locking push pull control rod. It will have a chrome plated zinc handle with a recessed area for 1.00" x 3.00" identification tag. The controls can be locked in any position.

TANK FILL/ RECIRULATION LINE

One (1) 2.00" discharge is plumbed to the tank.

The quarter turn valve is manually operated with a Class 1 locking push pull control rod. It will have a chrome plated zinc handle with a recessed area for 1.00" x 3.00" identification tag. The controls can be locked in any position.

LEFT SIDE PANEL DISCHARGE

One (1) 2.50" discharge is located on the left side panel.

The quarter turn valve is manually operated with a Class1 locking push pull control rod.

The discharge is equipped with an integral, stainless steel, 30-degree elbow terminating with 2.50" MNST threads.

One (1) 2.50" chrome plated cap with self-venting lungs is provided. The cap is equipped with FNST threads, rocker lugs, and chain.

The discharge will **NOT** be foam capable.

RIGHT SIDE FRONT PANEL DISCHARGE

One (1) 3.00" discharge is located on the right-side front panel.

The quarter turn valve is manually operated with a Class1 locking push pull control rod.

The 3.00" outlet is equipped with an integral, stainless steel, 30-degree elbow terminating with 3.00" MNST threads.

One (1) 3.00" chrome plated cap with self-venting lungs is provided. The cap is equipped with FNST threads, rocker lugs, and chain.

The discharge will **NOT** be foam capable.

RIGHT SIDE REAR PANEL DISCHARGE

Republic Fire Equipment

One (1) 3.00" discharge with a 4.00" outlet and 3.00" manual valve is located on the right-side rear panel.

The quarter turn valve is manually operated with a Class1 locking push pull control rod.

The 3.00" valve will terminate with a straight flange terminating with 4.00" MNST threads.

ELBOW ADAPTER

One (1) Task Force Tips model # AH3ST-NP 30-degree elbow is provided and attached to the 4.00" discharge. The elbow is configured with a 5.00" swivel Storz coupling and a 4.00" female NST swivel rocker lug coupling.

STORZ CAP

One (1) TFT model #A01ST 5.00" Storz cap with lanyard is provided.

The discharge will **NOT** be foam capable.

HOSE BED PRECONNECT - RH SIDE

One (1) 2.50" discharge is plumbed to the front of the hose bed, on the right hand side. Discharge will terminate with 2.50" NST thread.

The quarter turn valve is manually operated with a Class1 locking push pull control rod.

The discharge will **NOT** be foam capable.

CROSSLAY PRE-CONNECT DISCHARGE #1

One (1) 1.75" crosslay pre-connect with a 2.00" Akron Brass valve is installed in the pump module above the pump. The crosslay is plumbed using 2.00" stainless steel pipe, and/or flexible piping. The crosslay discharge will terminate below the hose bed floor with a 1.50" NSTM chiksan swivel adapter.

The quarter turn valve is manually operated with a Class1 locking push pull control rod.

The discharge is foam capable.

CROSSLAY PRE-CONNECT DISCHARGE #2

One (1) 1.75" crosslay pre-connect with a 2.00" Akron Brass valve is installed in the pump module above the pump. The crosslay is plumbed using 2.00" stainless steel pipe, and/or flexible piping.

Republic Fire Equipment

The crosslay discharge will terminate below the hose bed floor with a 1.50" NSTM chiksan swivel adapter.

The quarter turn valve is manually operated with a Class1 locking push pull control rod.

The discharge is foam capable.

MASTER PUMP GAUGES

The master pump intake pressure and vacuum, and the main pump discharge pressure is indicated on the pressure governor display.

LED WATER LEVEL GAUGE (PUMP PANEL)

One (1) Hale model # "ITL-40B" Tank Level Gauge for indicating water level is installed on the pump operator's panel. The tank level gauge will indicate the liquid level or volume on an easy-to-read LED display with a visual indicator at nine (9) precise levels, using one (1) color. The system will include the ability to display "text messages" and have built-in diagnostic capabilities. Additional secondary displays (if requested) are to be easily integrated and will receive data from the same source as the Master Display.

The LED display is blue in color.

PUMP, MODULE, AND RELATED ITEMS

ALUMINUM PUMP MODULE CONSTRUCTION

The pump module is constructed entirely of extrusions and aluminum plate. The framework is formed from beveled aluminum alloy extrusions. The pump module design must allow normal frame deflection through isolation mounts without imposing stress on the pump module structure or side running boards. The pump module will consist of a welded framework, properly braced to withstand chassis frame flexing. The pump module support is bolted to the frame rails of the chassis.

INDEPENDENT PUMP MODULE

The pump module is fabricated as individual unit independent from the body.

FRONT PUMP HOUSE ENCLOSURE

The front of the pump enclosure is enclosed with 0.125" aluminum tread plate.

PANEL FASTENERS

Republic Fire Equipment

Stainless steel machine screws and lock washers is used to hold these panels in position.

The panels are easily removable to provide complete access to the pump for major service.

PUMP SERVICE ACCESS - CROSSLAYS

The top third of the pump module (crosslay area) is removable for access to the top of the pump module.

PUMP MODULE WIDTH

Pump Module to be 24.00" side (side to side).

PUMP PANEL - SIDE MOUNT

The pump operator's control panel is located on the driver side of the apparatus. The pump enclosure side panels are completely removable and designed for easy access and servicing.

HINGED GAUGE PANEL

A full width, horizontally hinged gauge access panel is located on the left-hand side of the pump module above the main control panel. Two (2) push type latches are provided along with chain holders to prevent the front of the gauge panel from coming in contact with other panels when open.

VERTICALLY HINGED, SPLIT PUMP RIGHT HAND SIDE

The right-hand side pump panel is split, vertically hinged, to provide complete access to the pump and plumbing on the right-hand side of the pump enclosure. The panels are equipped with stainless steel hinges and secured with black powder coated Southco push type locks to hold the panels closed.

The drains located on the right-hand panel are fastened to a lower drain panel, which is stationary.

PUMP PANEL MATERIAL

The pump module panels are fabricated from 14-gauge 304L stainless steel with a brushed finish.

CROSSLAY HOSEBED

The crosslays are arranged on top of the pump module with the #1 crosslay toward the front of the pump house and the #2 crosslay immediately behind the first.

Republic Fire Equipment

They are arranged in a double stack design with a divider in the center. Each hose storage area is provided with dimensions of 7.65" wide x 66.00" deep x 16.00" tall [4.67 cu. ft. each].

The crosslay hose bed floor is slotted to allow the swivels to extend up through the floor, allowing the pre-connected hoses to be pulled off either side of the apparatus without kinking the hose at the coupling connection.

Each crosslay is designed to have a minimum total capacity of 3.5 cubic feet as required by NFPA - 1901 to accommodate a minimum of 200 feet of 1.75" fire hose.

There is one (1) divider in the crosslay area. The divider is constructed from 0.188" thick abraded aluminum plate. There is a hand hole on each side of the divider to assist the firefighter.

VINYL CROSSLAY COVER

The crosslays are equipped with a heavy duty 18 oz. vinyl cover with side flaps. The top portion is fastened to the pump house with Velcro and the side flaps are held in place with a hook and bungee system.

The vinyl cover is red in color.

PUMP PANEL LIGHT SHIELD, LH SIDE PANEL

One (1) LED strip light is installed under an instrument panel light hood on the left-side pump panel.

PUMP PANEL LIGHT SHIELD, RH SIDE PANEL

One (1) LED strip light is installed under an instrument panel light hood on the right-side pump panel.

PUMP COMPARTMENT LIGHT

One (1) 60.00" LED strip light is installed inside the pump compartment area. It is located at the front of the module. The light is switched with the pump panel lights.

A weather resistant switch, located on the pump operator's panel is provided to activate the lights.

LEFT SIDE RUNNING BOARD - TAPPERED

The left pump panel is equipped with a side running board. The running board is constructed of 0.125" embossed fire apparatus bright aluminum treadplate. It is the full width of the module and tapers from front to rear to blend with the width of the cab and body. It is approximately 6.75" deep at the front of the module and 11.00" deep at the rear. The running board will have an upward bend on the inside edge to act as a kick plate. The running board is attached to a frame mounted outrigger support structure.

Republic Fire Equipment

RIGHT SIDE RUNNING BOARD - TAPPERED

The right pump panel is equipped with a side running board. The running board is constructed of 0.125" embossed fire apparatus bright aluminum treadplate. It is the full width of the module and taper from front to rear to blend with the width of the cab and body. It is approximately 6.75" deep at the front of the module and 11.00" deep at the rear. The running board will have an upward bend on the inside edge to act as a kick plate. The running board is attached to a frame mounted outrigger support structure.

HOSE RESTRAINT LABEL - FAMA# 22

A permanent label is provided near any hose storage area. The label will instruct the operator to insure that all hose is properly secured prior to placing the apparatus in motion and to provide warning of potential dangers, including injury or death, in failing to do so.

INTAKE/DISCHARGE CAP PRESSURE LABEL - FAMA# 18

A permanent label is provided in all areas that intakes and discharges are capped. The label will give instruction on how to properly remove the cap. The label will also warn of potential dangers, injury or death that be caused by failing to follow proper cap removal procedures.

TRAINED OPERATOR ONLY LABEL - FAMA# 25]

A permanent label is provided on the pump panel that states that only properly trained personnel should operate the apparatus and will indicate that injury or death could occur as a result.

PUMP PANEL ID PLATE

An identification plate is installed on the pump operator control panel to identify the fire pump serial number, model number, and performance.

COLOR CODED PUMP PANEL LABELING AND NAMEPLATES

Discharge and intake valve controls are color coded in compliance to guidelines of applicable sections of NFPA standards. Innovative Controls permanent type nameplates and instruction panels are installed on the pump panel for safe operation of the pumping equipment and controls.

FOAM SYSTEM

The apparatus is equipped with a Hale 2.1A SmartFOAM system. The foam system is equipped with a Class1 UltraView SmartFOAM Controller and a foam induction pump.

Republic Fire Equipment

The foam induction pump is a Class1 2.1A piston style foam induction pump (12VDC) for use with Class A concentrates at a rated output of up to 2.1 gpm and a maximum operating pressure of 250 psi.

The SmartFOAM Controller will show the water flow per minute, foam percentage, total water flowed, and total foam flowed on the main screen without having to press any buttons. The SmartFOAM Controller will maintain a running total of the amount of water and foam used during the current power cycle.

The SmartFOAM Controller will allow push-button modification of the foam proportioning rate from 0.1% to 10.0% in 0.1% increments. The SmartFOAM Controller will always begin operation at the preset foam proportioning rate which is configured with a password protected set-up screen.

The foam concentrate pump discharge line is equipped with a bubble tight check valve, rated at 500 psi to prevent water flow into the concentrate pump from the apparatus fire pump. This valve is made from brass or 300 series stainless steel. This valve will have a cracking pressure of 4-6 psi to prevent flowing concentrate through the pump due to head pressure from the concentrate reservoir.

In-line, field serviceable foam concentrate strainer(s) is installed in the foam concentrate suction line(s).

Single tank foam systems will include flushing capabilities via a three-way flush valve. A switch provided integral to the three-way valve will indicate when the valve is in the "FLUSH" position. The "FLUSH" position will provide fresh water-flushing capabilities to prevent foam concentrate deterioration of the foam pump.

The SmartFOAM Controller will protect the foam pump from being run "dry" by showing a "low foam" warning when the low-level tank switch is activated and only allowing the foam pump to run for another sixty (60) seconds before turning off the foam pump and showing a "no foam" warning.

LED FOAM LEVEL GAUGE, CLASS A (PUMP PANEL)

One (1) Hale model # "ITLF-40G" tank level gauge for indicating foam level is installed on the pump operator's panel. The tank level gauge will indicate the liquid level or volume on an easy-to-read LED display with a visual indicator at nine (9) precise levels, using one (1) color. The system will include the ability to display "text messages" and have built-in diagnostic capabilities. Additional secondary displays (if requested) are to be easily integrated and will receive data from the same source as the Master Display.

The LED display is green in color.

WATER TANK - POLYPROPYLENE

Republic Fire Equipment

Tank capacity is 300 US gallons.

The Booster tank is constructed of Polypropylene, and properly baffled.

Baffles will have openings at both the top and bottom to permit movement of air and water between spaces to allow maximum flow requirements. Baffles will form an integral part of the tank, and design is to provide and maintain safe road stability regardless of water level.

The tank is constructed of Polypropylene sheet stock. This material is non-corrosive, stress relieved thermoplastic, black in color and U.V. stabilized for maximum protection.

There is one (1) sump standard per tank. The sump is located at the front of the tank. The sump will have a 4.00" FNPT threaded outlet on the bottom for a drain plug. This is used as a combination cleanout and drain.

FILL TOWER

Fill tower is installed on front corner of the tank in tank top, not to interfere with removability of the lid. It is of adequate size, minimum 8.00" X 8.00", to accommodate overflow and vents, to have a hinged cover and screen installed.

TANK OVERFLOW

The tank will have a 6.00" overflow and air vent designed to prevent damage to the tank under high flow conditions and enclosed in front tank filler. Tank filler to extend upward from hose bed the same height as body sides. Overflow is designed and located to prevent water loss on fast stops or starts and is also to be located not to affect traction on the rear tires.

FOAM CELL

One (1) internal foam cell is manufactured as part of the water tank.

The foam cell capacity is 15 US gallons.

The foam tank is integral with the water tank and will have a rectangular fill tower with a hinged cover, pressure relief vent and a removable screen.

DO NOT MIX FOAM LABEL

A FAMA19 warning label is placed near the foam tank fill that reads "Foam Failure Hazard. Do NOT mix brands and types of foam concentrate. Mixed concentrate may fail to perform properly. Poor foam can fail to suppress fire leading to death".

Republic Fire Equipment

FIRE BODY & RELATED COMPONENTS

OVERALL DIMENSIONS

The body is 108.00" Long x 95.00" wide x 64.00" high with fender well positioned for a 84.00" cab-to-axle dual rear wheel chassis. The body is designed to accommodate a 24.00" wide pump module.

FLOOR AND UNDERSTRUCTURE

The compartment floor is a single piece design made of .1875" aluminum tread bright. The floor is supported by front and rear extruded 6061 aluminum alloy 2.00" x 4.00" x .250" wall structural tube crossmembers and incorporating flange style direct body mounting plates. The center section of the floor is supported by two (2) additional crossmembers of 2.00" x 2.00" x .250" structural aluminum tube, interlocked with three (3) longitudinal 2.00" x 2.00" x .250" sections of structural aluminum tube, connecting the front most and rearmost crossmembers.

COMPARTMENT CONFIGURATION

The compartments are completely formed of .125" 5052-H32 aluminum alloy and will have a tested floor area load of 300 pounds.

COMPARTMENT VENTS

Each body side compartment is properly vented in a manner that will minimize the possibility of moisture and road dirt entering the compartment. Venting is to atmosphere for front and rear side compartments. The center wheel well compartments is vented to the front and rear compartments.

ADJUSTABLE SHELVING TRACKS

All side body compartments be furnished with Adjustable shelving track installed. The shelving track will include a minimum of four (4) aluminum Uni-strut style channel tracks, mounted vertically on compartment side walls or vertical partitions. There is one (1) formed aluminum shelf angle bracket per shelving track to mount each shelf, tray, or adjustable storage module. Shelving hardware is heavy-duty commercial quality, providing unlimited vertical position adjustments.

ADJUSTABLE TRAYS

Adjustable trays are installed as directed by the Purchaser. Trays is made of 0.125" smooth aluminum with a 2.00" high perimeter retaining lip with welded corners. Trays will have a rated capacity of 300-lbs. and is supported by a minimum of two (2) heavy-duty shelf brackets. Trays will have a maintenance free mill finish.

BODY SIDE RUB RAILS

Republic Fire Equipment

Replaceable extruded aluminum channel rub rails, 2.00" high x 1.00" deep x 0.125" wall, is provided below the lower side compartments. Each rub rail will have a black rubber bumper strip and mounting stand-off spacers. All rub rail ends are angle cut, back toward the body to eliminate the possibility of snagging crew clothing or equipment.

FENDER PANELS

A single piece wheel well panel made of .125" aluminum is installed with no sharp edges to cut or damage cleaning equipment used in the wheel well area. The wheel well design will provide for maximum wheel jounce and for use of tire chains without contacting the fender panel.

REAR WHEEL WELL LINERS

The rear wheel wells is equipped with replaceable circular liners to prevent road debris damage to adjacent side compartments. The liners are made from a single circular panel of .090" smooth aluminum and is the full depth of the side compartments. They are bolted in place and will feature end flange bottom drains.

REAR FENDERETTES

A roll-formed, polished stainless steel fenderette is installed around the outboard edge of the rear wheel well openings to protect the body sides from road debris. They are bolted to the body and is replaceable.

BODY FRONT WALL OVERLAY

There is .125" polished aluminum tread brite provided for the entire front of the body to protect the paint from road debris and paint chipping.

TOP PROTECTION

There is .125" aluminum tread brite overlay provided for entire top of the body.

COMPARTMENT TOP WARNING LABEL - FAMA# 26

A permanent label is provided on the front and rear of the compartment tops on both sides warning that the area is not designed, constructed or intended to be a stepping, standing or walking surface. The label will state that the surface is not intended for this purpose and indicate potential injury or death in doing so.

REAR MUD FLAPS

Republic Fire Equipment

A pair of black rubber mud flaps, with the Manufacturer's logo, is provided and installed behind the rear wheels.

REAR PLATFORM STEP

A modular bolt-on rear platform step made of .188" embossed aluminum tread brite is installed on the rear of the apparatus to provide a full width step area with sufficient support to prevent deflection when in use by several crew members. The outside edge of the rear platform is flush with the side body rub rails to maintain a uniform appearance. The step will protrude 10.00" back from the rear of the body and is spaced away from the body to allow water run-off.

ROLL-UP DOORS

All lower compartment doors are equipped with AMDOR brand roll-up doors. The slats are 1.00" double wall aluminum with continuous ball and socket hinge joints designed to prevent water ingress and weather tight recessed dual durometer seals.

The interior door curtains are smooth to prevent equipment hang-ups. The door tracks and side frames will each be one-piece aluminum. Each side seal is recessed, and non-marring with UV stabilizers to prevent warping.

The bottom panel flange will have cut-outs for ease of access with gloved hands. The door strikers will provide support beneath the lift bar to prevent door curtain bounce and potential false door ajar indications.

LEFT SIDE COMPARTMENT IN FRONT OF REAR WHEELS, L1

There is a full height compartment located ahead of the rear wheels on the left side of the apparatus body.

- Dimensions: 29.50" wide x 59.00" high x 22.0" deep.
- Door Opening: 24.626" wide x 45.938" high.
- Useable Depth: 19.6875".

The compartment will have an Amdor roll up door. The door will have a satin finish.

COMPARTMENT LIGHT(S)

One (1) 41.00" Luma Bar LED strip light is installed inside the compartment.

The compartment light(s) is controlled by a magnetic "On-Off" switch located on each compartment door.

Republic Fire Equipment

ADJUSTABLE SHELVING TRACKS

There is vertically mounted uni-strut shelf trac for shelving installation.

ADJUSTABLE SHELF

There is One (1) full depth adjustable shelf/ shelves located in the compartment.

LEFT SIDE ABOVE WHEEL COMPARTMENT, L2

There is a standard height compartment located above the rear wheels on the left side of the apparatus body.

- Dimensions: 47.00" wide x 38.00" high x 22.00" deep.
- Door Opening: 44.876" wide x 24.938" high.
- Useable Depth: 19.6875".

The compartment will have an Amdor roll up door. The door will have a satin finish.

COMPARTMENT LIGHT(S)

One (1) 21.00" Luma Bar LED strip light is installed inside the compartment.

The compartment light(s) is controlled by a magnetic "On-Off" switch located on each compartment door.

ADJUSTABLE SHELVING TRACKS

There is vertically mounted uni-strut shelf trac for shelving installation.

ADJUSTABLE SHELF

There is One (1) full depth adjustable shelf/ shelves located in the compartment.

LEFT SIDE COMPARTMENT BEHIND REAR WHEELS, L3

There is a standard height compartment located above the rear wheels on the left side of the apparatus body.

- Dimensions: 29.00" wide x 59.00" high x 22.00" deep.
- Door Opening: 23.50" wide x 53.00" high.
- Useable Depth: 19.6875".

Republic Fire Equipment

The compartment will have an Amdor roll up door. The door will have a satin finish.

COMPARTMENT LIGHT(S)

One (1) 41.00" Luma Bar LED strip light is installed inside the compartment. The compartment light(s) is controlled by a magnetic "On-Off" switch located on each compartment door.

ADJUSTABLE SHELVING TRACKS

There is vertically mounted uni-strut shelf trac for shelving installation.

ADJUSTABLE SHELF

There is One (1) full depth adjustable shelf/ shelves located in the compartment.

RIGHT SIDE COMPARTMENT IN FRONT OF REAR WHEELS, R1

There is a full height compartment located ahead of the rear wheels on the right side of the apparatus body.

- Dimensions: 29.50" wide x 59.00" high x 22.0" deep.
- Door Opening: 24.626" wide x 45.938" high.
- Useable Depth: 19.6875".

The compartment will have an Amdor roll up door. The door will have a satin finish.

COMPARTMENT LIGHT(S)

One (1) 41.00" Luma Bar LED strip light is installed inside the compartment. The compartment light(s) is controlled by a magnetic "On-Off" switch located on each compartment door.

ADJUSTABLE SHELVING TRACKS

There is vertically mounted uni-strut shelf trac for shelving installation.

ADJUSTABLE SHELF

There is One (1) full depth adjustable shelf/ shelves located in the compartment.

RIGHT SIDE ABOVE WHEEL COMPARTMENT, R2

Republic Fire Equipment

There is a standard height compartment located above the rear wheels on the right side of the apparatus body.

- Dimensions: 47.00" wide x 38.00" high x 22.00" deep.
- Door Opening: 44.876" wide x 24.938" high.
- Useable Depth: 19.6875".

The compartment will have an Amdor roll up door. The door will have a satin finish.

COMPARTMENT LIGHT(S)

One (1) 21.00" Luma Bar LED strip light is installed inside the compartment.

The compartment light(s) is controlled by a magnetic "On-Off" switch located on each compartment door.

ADJUSTABLE SHELVING TRACKS

There is vertically mounted uni-strut shelf trac for shelving installation.

ADJUSTABLE SHELF

There is One (1) full depth adjustable shelf/ shelves located in the compartment.

RIGHT SIDE COMPARTMENT BEHIND REAR WHEELS, R3

There is a standard height compartment located above the rear wheels on the right side of the apparatus body.

- Dimensions: 29.00" wide x 59.00" high x 22.00" deep.
- Door Opening: 21.626" wide x 45.938" high.
- Useable Width: 26.50".
- Useable Depth: 19.6875".

The compartment will have an Amdor roll up door. The door will have a satin finish.

COMPARTMENT LIGHT(S)

One (1) 41.00" Luma Bar LED strip light is installed inside the compartment.

The compartment light(s) is controlled by a magnetic "On-Off" switch located on each compartment door.

Republic Fire Equipment

ADJUSTABLE SHELVING TRACKS

There is vertically mounted uni-strut shelf trac for shelving installation.

ADJUSTABLE SHELF

There is One (1) full depth adjustable shelf/ shelves located in the compartment.

REAR BODY CONFIGURATION

The rear of the apparatus body will have a flat back design, with one compartment.

REAR CENTER COMPARTMENT, CR1

There is a compartment located at the rear of the apparatus body.

- Dimensions: 50.00" wide x 28.00" high x 28.00" deep.
- Door Opening: 47.876" wide x 18.125" high.
- Useable Depth: 27.75".

The compartment will have an Amdor roll up door. The door will have a satin finish.

COMPARTMENT LIGHT(S)

One (1) 13.00" Luma Bar LED strip light is installed inside the compartment.

The compartment light(s) is controlled by a magnetic "On-Off" switch located on each compartment door.

HOSE BED CONSTRUCTION

The body will have a bolt together removable hose bed in the upper center section of the body. The hose bed is 50.00" wide x 108.00" long x 17.00" tall. The floor of the hose bed is constructed using 6.00" wide aluminum hose bed slats. Two (2) cross car Unistrut style channels are incorporated in the design for divider mounting.

HOSE BED CROSS DIVIDER

The forward 22.00" section of the hose bed will have a bolt in cross car divider creating a dunnage area for the water and foam tank fill tower(s). The floor of the dunnage area is formed aluminum sheet.

HOSE BED DIMENSIONS

Republic Fire Equipment

The usable hose bed dimensions is 49.75" wide x 85.00" long x 15.00" tall.

HOSE BED STORAGE CAPACITY

The hose bed is designed to have a storage capacity for a minimum of 34.00 cubic feet of fire hose.

HOSE BED DIVIDER(S)

One (1) fully adjustable hose bed divider panel(s) made of .188" 5032-H22 smooth aluminum plate is installed lengthwise, in the hose bed. Each will have a natural mill finish and is supported along the full-bottom length with a single-piece aluminum foot extrusion.

There is a hand grip cut-out on the trailing edge of each hose bed divider. The cut-out is properly dressed to remove sharp edges and specifically sized for use with a gloved hand in adjusting the position of the hose bed divider.

HOSE BED COVER WITH VELCRO FASTENERS

A heavy-duty vinyl coated nylon hose bed cover is provided to protect the hose load from the weather. The cover will extend from the front of the hose bed to the rear and then extend downward to cover the exposed rear of the bed and from the left side to the right side of the hose bed.

The cover is secured to the apparatus using velcro on the sides and lift dots on front. The rear of the cover is secured to the apparatus using positive mechanical latches.

The hose bed cover is Red in color.

HARD SUCTION TRAYS - LEFT SIDE

Two (2) aluminum hard suction trays are installed on the top of the compartment on the left hand side of the apparatus.

The suction hose is held in place with straps attached to the tray with footman loops. The suction storage will have capacity for two (2) 8' sections of hard suction hose.

EXTERIOR LADDER MOUNTING

Exterior ladder mountings are provided for the specified ladders over the right-side compartments of the apparatus body.

The ladder storage will have capacity for one (1) aluminum 12 ft. two-section extension ladder.

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SCBA BOTTLE COMPARTMENTS

Three (3) SCBA bottle compartments is installed in the wheel well area of the body. One (1) is installed on the left-hand side, and two (2) on the right-hand side. Each will have a Cast Products door assembly. Each compartment will allow the storage of an SCBA cylinder up to 7.50" in diameter x 22" deep.

FUEL PIPING, CAP, & GUARD

There is a fuel filler tub & cap with a Cast Products aluminum door provided to the left side rear wheel. It is clearly marked, "ULTRA LOW SULFUR DIESEL FUEL ONLY".

DEISEL EXHAUST FLUID FILL

The diesel exhaust fluid fill is located in between the body and the chassis on the left-hand side. It is labeled "Diesel Exhaust Fluid Only".

FOLDING STEPS - LH SIDE REAR OF BODY

Two (2) Innovative Controls model 3004234 folding steps is provided on the left-hand side rear of the body. Each step will have two (2) cast-in handles, that are large enough for use while wearing gloves. The step(s) will exceed the NFPA requirements for stepping surface and slip resistance. There is a barrier material installed between the body surface and the steps.

STEP LIGHTS

There is one (1) LED light incorporated into the folding step assembly above the stepping surface.

The light(s) is wired to activate with the parking brake.

EXTERIOR GRAB RAILS

Each grab rail is non-slip, 1.25" diameter extruded polished aluminum grab rails with rubber inserts designed to provide maximum gripping ability, strength, and durability. The rails will comply with NFPA 1901-2009.

GRAB RAILS, REAR STEP, VERTICAL

Two (2) extruded aluminum non-slip grab rails, approximately 24.00" in length, is provided and vertically mounted on the rear of the apparatus, one (1) on each side of the body.

12 VOLT ELECTRICAL SYSTEM

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The truck will have a 12-Volt electrical system.

All wiring is run in convoluted high temperature plastic loom. Wiring is color and function coded and is of adequate size to handle the assigned load. All solenoids, relays, and terminal blocks is located in an easily accessible area.

All circuits provided will have properly rated low voltage over current protective devices.

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

All under side terminal junctions is fully enclosed in sealed plastic weatherproof boxes.

Electromagnetic interference suppression is provided as required to satisfy the radiation limits specified in SAE J551/1.

NFPA 1901 CERTIFIED 12 VOLT ELECTRICAL SYSTEM

The 12-volt apparatus body electrical system is provided and complies with NFPA 1901 testing and certification procedures as follows:

NFPA MINIMUM ELECTRICAL LOAD DEFINITION

The NFPA 1901 defined minimum electrical load will consist of the total amperage required to simultaneously operate the following in a stationary mode:

1. Propulsion engine and transmission.
2. The clearance and marker lights.
3. Communication equipment. 5-amp default.
4. Illumination of all walking surfaces, the ground at all egress points, control and instrumentation panels and 50% of total compartment lighting.
5. Minimum warning lights required for "blocking right of way" mode.

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6. The current to simultaneously operate and fire pump and all specified electrical devices.
7. Anything defined by the purchaser, in the advertised specifications, to be critical to the mission of the apparatus.

RESERVE CAPACITY TEST

The first electrical test to be performed is the Reserve Capacity Test. All items listed in NFPA Minimum Load Definition is activated with the engine shut off. After 10 minutes of operation, the items 1-7 is deactivated. After deactivation, the battery system will have ample reserve to start the engine.

ALTERNATOR PERFORMANCE TEST AT IDLE

The second electrical test to be performed is Alternator Performance Test at Full Load. All electrical loads is activated with the engine running up to the governed rpm for two hours. During the test, the system voltage will not drop below 11.7 volts or have excessive battery discharge for more than 120 seconds. Any loads not defined in the NFPA Minimum Electrical Load may be load managed to pass test.

TEST CONDITIONS

All electrical testing is performed with the engine compartment at approximately 200 degrees.

CLASS1 ES-KEY SYSTEM

The electrical system will utilize Class1 Inc. **ES-Key** technology where applicable.

The apparatus is equipped with a Class 1 ES-Key Management System for controlling electrical system devices. This management system can perform load management functions, system switching, monitoring and reporting, and be fully programmable for a standardized electrical system utilizing the ES-Key Professional software program.

SUPERNODE II

The apparatus is equipped with a Class1 ES-Key system with a Supernode II high density input output node. The Supernode II will have (24) inputs, (24) outputs, a Universal System Manager, a data logger, and programmable special utilities.

The Supernode II will have an integrated USB port to allow for direct connection to the ES-Key system without additional interface devices.

LOAD MANAGER

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The Supernode II will have an integrated Load Manager. The Load Manager Sequencer will assure that loads are applied and removed gradually, thus eliminating the possibility of inducing failures in the vehicle's equipment.

LOW VOLTAGE MONITOR

A voltage monitor is built into the ES-Key electrical system. It will activate a warning when the alternator output voltage falls below any desired voltage (usually 11.5 volts).

LOW VOLTAGE ALARM

One (1) Cole Hersee model # 4112-RC light/buzzer is in the cab and wired to the low voltage monitor on the ES-Key System.

ROCKER SWITCH PANEL - EIGHT (8) POSITION

A lighted eight (8) position rocker type switch panel is installed to provide the ability to de-activate individual lighting units. The switches are Carling Contura V series rocker switches.

A rocker switch with a blank legend installed directly below is provided for any position without a switch and legend designated by a specific option. The non-specified switches are two-position, black switches with a green LED indicator light. Each blank switch legend can be custom ordered by the department once the apparatus is in service. All switch legends will have backlighting provided.

MASTER WARNING SWITCH

A master switch is included in the main rocker switch panel. The switch will have a red-light indicator and be labeled "Master Warning" for identification. The switch will feature control over all devices wired through it. Any warning device switch left in the "ON" position will automatically power up when the master switch is activated.

UNDERBODY/CAB GROUND LIGHTS

LED ground illumination lights, with outward facing angle brackets is provided and installed in the following locations:

CHASSIS GROUND LIGHTS

Four (4) LED ground lights with outward facing angle brackets is installed, one (1) under each chassis door.

FRONT OF BODY GROUND LIGHTS

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Two (2) LED ground lights with outward facing angle brackets is installed under the front of the body. One (1) light is located on the driver side and one (1) light is located on the officer side of the apparatus.

REAR STEP GROUND LIGHTS

Two (2) LED ground lights with outward facing angle brackets is installed under the rear step of the apparatus, one (1) each side.

GROUND LIGHT SWITCHING

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

HAZARD LIGHT

One (1) Whelen model 0SR00FCR flashing red LED light, located in the driving compartment, the light is illuminated automatically whenever any compartment door is ajar.

The hazard light is marked with a sign that reads "Do Not Move Apparatus When Light is On".

The warning light is interlocked to the parking brake and will only alert the driver when the parking brake is released. The light will also be used to signal that other ancillary equipment such as racks light towers etc. are not in their "ready for transport" position.

REAR DIRECTIONALS

Rear directional lighting is supplied as follows:

Two (2) Whelen model M62BTT LED brake/taillights are installed on the rear of the body. Each light will have a red lens.

Two (2) Whelen model M62T Amber LED turn signal lights are installed on the rear of the body. Each light will have a color lens.

Two (2) Whelen model M62BU LED reverse lights are installed on the rear of the body.

HOUSINGS FOR DIRECTIONALS

The two (2) sets of Whelen rear signal lights will each be housed in a vertical chrome plated housing, designed to hold four (4) lights each. The lower section of each casting will contain the rear lower warning lights as described in the emergency lighting specifications.

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DOT MARKER LIGHTS AND REFLECTORS

LED marker lights is installed on the vehicle in conformance to the Department of Transportation requirements. All marker lights is incorporated into the headlight circuit of the cab/chassis.

The side body panels are furnished with marker lights installed as follows:

- Four (4) 0.75" amber LED marker lights, one (1) on each side at front top corner of body.
- Four (4) 0.75" red LED marker lights, one (1) on each side at rear top corner of body.

The rear body panel, centered above the bumper, is furnished with marker lights installed as follows:

- Three (3) 0.75" red LED marker lights, as close as practical to the vertical centerline. Centers spaced not less than 6.00" or more than 12.00" apart.

Four (4) red reflectors are provided on the apparatus rear, one (1) each side and two (2) on the rear.

LICENSE PLATE LIGHT

A license plate bracket with LED light is provided and installed on the rear of the body. It is wired to come on with the headlights.

TRAFFIC ADVISER WARNING LIGHT

One (1) Whelen LED "Traffic Advisor", model TAL85 48.00", rear directional light is installed. The light is equipped with eight (8) lamps. The traffic advisor is activated by the Whelen TACTL5 control head. The control head is conveniently located near the driver's position.

The traffic advisor is surface mounted at the rear of the apparatus body. It is located as close to the centerline of the body as possible.

SIDE FACING UPPER FRONT BODY SCENE LIGHTS

One (1) pair of Whelen M6 Series LED scene lights is installed, one (1) each side of the upper front portion of the apparatus body.

The driver side scene light is a Whelen model M6ZC.

The officer side scene light is a Whelen model M6ZC.

Each light is mounted with a Whelen Model M6FC chrome flange.

SIDE FACING UPPER REAR BODY SCENE LIGHTS

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One (1) pair of Whelen M6 Series LED scene lights is installed, one (1) each side of the upper rear portion of the apparatus body.

The driver side scene light is a Whelen model M6ZC.

The officer side scene light is a Whelen model M6ZC.

Each light is mounted with a Whelen Model M6FC chrome flange.

UPPER REAR BODY SCENE LIGHTS

One (1) pair of Whelen M6 Series LED scene lights is installed, one (1) each side of the upper rear portion of the apparatus body.

The driver side scene light is a Whelen model M6ZC.

The officer side scene light is a Whelen model M6ZC.

Each light is mounted with a Whelen Model M6FC chrome flange.

SCENE LIGHT SWITCHING

One (1) rocker switch with indicator is installed on the switch panel in the cab to control the left side scene light(s). The switch is labeled "LEFT SCENE".

SCENE LIGHT SWITCHING

One (1) rocker switch with indicator is installed on the switch panel in the cab to control the rear scene light(s). The switch is labeled "REAR SCENE".

SCENE LIGHT SWITCHING

One (1) rocker switch with indicator is installed on the switch panel in the cab to control the right-side scene light(s). The switch is labeled "RIGHT SCENE".

DUAL FUNCTION SCENE LIGHT(S)

The rear scene lights will activate automatically upon placing the transmission into reverse.

REAR VISION SYSTEM

One (1) complete backup camera system is provided. There is (1) camera located at the rear of the apparatus as close to the centerline as possible. The camera is capable of viewing the entire area

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not visible in the side view mirrors. The camera will have a 7.00" color display mounted in view of the driver. The system will include audio transmission from the camera.

The rear vision camera is wired to automatically activate when the chassis transmission is placed in reverse.

The monitor for the rear vision system is mounted on the dash of the cab in easy view of the driver.

NFPA AUDIBLE AND LIGHTING WARNING PACKAGE

The following warning light package will include all the minimum warning light and actuation requirements for the current revision of the NFPA 1901/ 1906. The lighting as specified will meet the requirements for both "Clearing Right of Way" and "Blocking Right of Way" which includes disabling all white warning lights when the apparatus is in "Blocking Right of Way" mode.

WARNING LIGHT FLASH PATTERN

All of the perimeter warning lights is set to the default NFPA flash pattern as provided by the warning light manufacturer.

LIGHTBAR

One (1) WHELEN model JE2NFPA 56.00" LED lightbar is supplied and mounted. The lightbar will have clear lenses and contain the following modules:

Four (4) RED LIN6 LED modules, two (2) on each corner.

Four (4) RED CON3 LED modules, across the front

Two (2) WHITE CON3 LED modules, on the front

The forward-facing white lights is automatically disabled for the "Blocking Right of Way" mode.

LIGHT BAR SWITCHING

One (1) rocker switch with indicator is installed on the switch panel in the cab to control the light bar. The switch is labeled "LIGHT BAR". The switch will only be active when the master warning switch is engaged.

SIDE FACING UPPER FRONT BODY WARNING LIGHTS

One (1) pair of Whelen model M6 series LED warning lights is installed, one (1) each side of the upper front portion of the apparatus body.

The driver side warning light is a Whelen Model M6RC red Super-LED with clear lens.

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The officer side warning light is a Whelen Model M6RC red Super-LED with clear lens.

Each light is mounted with a Whelen Model M6FC chrome flange.

SIDE FACING UPPER REAR BODY WARNING LIGHTS

One (1) pair of Whelen model M6 series LED warning lights is installed, one (1) each side of the upper rear portion of the apparatus body.

The driver side warning light is a Whelen Model M6RC red Super-LED with clear lens.

The officer side warning light is a Whelen Model M6RC red Super-LED with clear lens.

Each light is mounted with a Whelen Model M6FC chrome flange.

UPPER REAR BODY WARNING LIGHTS

One (1) pair of Whelen model M6 series LED warning lights is installed, one (1) each side of the upper rear of the apparatus body.

The driver side warning light is a Whelen Model M6RC red Super-LED with clear lens.

The officer side warning light is a Whelen Model M6RC red Super-LED with clear lens.

Each light is mounted with a Whelen Model M6FC chrome flange.

UPPER WARNING LIGHT SWITCHING

One (1) rocker switch with indicator is installed on the switch panel in the cab to control the upper warning lights. The switch is labeled "UPPER WARNING". The switch will only be active when the master warning switch is engaged.

LOWER FRONT WARNING LIGHTS

One (1) pair of Whelen model M4 Series LED warning lights is installed, one (1) each side one the front of the chassis cab.

The driver side warning light is a Whelen Model M4RC red LED with clear lens

The officer side warning light is a Whelen Model M4RC red LED with clear lens.

Each light is mounted with a Whelen Model M4FC chrome flange.

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LOWER INTERSECTION WARNING LIGHTS

One (1) pair of Whelen model M4 LED warning lights is installed, one (1) each side of the chassis cab.

The driver side warning light is a Whelen Model M4RC red LED with clear lens.

The officer side warning light is a Whelen Model M4RC red LED with clear lens.

Each light is mounted with a Whelen Model M4FC chrome flange.

LOWER MID-BODY WARNING LIGHTS

One (1) pair of Whelen model M7 Series LED warning lights is installed, one (1) each side of the apparatus, mid-body.

The driver side warning light is a Whelen Model M7RC red Super-LED with clear lens.

The officer side warning light is a Whelen Model M7RC red Super-LED with clear lens.

Each light is mounted with a Whelen Model M7FC chrome flange.

LOWER REAR WARNING LIGHTS

One (1) pair of Whelen model M6 Series LED warning lights is installed, one (1) each side of the lower rear of the apparatus body.

The driver side warning light is a Whelen Model M6RC red Super-LED with clear lens.

The officer side warning light is a Whelen Model M6RC red Super-LED with clear lens.

The warning lights on the rear of the body is mounted in lower section of each taillight casting.

LOWER WARNING LIGHT SWITCHING

One (1) rocker switch with indicator is installed on the switch panel in the cab to control the lower warning lights. The switch is labeled "LOWER WARNING". The switch will only be active when the master warning switch is engaged.

ELECTRIC SIREN AND CONTROL

One (1) Whelen model #295SLSA1 electronic siren is mounted in the cab. This unit will feature an electronic air horn, wail, yelp, hi-lo and will have a hard-wired PA microphone.

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ELECTRONIC SIREN SPEAKER

One (1) Whelen model SA315P 100-watt speaker is provided. The speaker will produce a minimum sound output of 120 dB at 10 feet to meet current NFPA 1901/1906 requirements.

The speaker is located on the right-hand side of the bumper.

SIREN NOISE WARNING LABEL - FAMA# 42

A permanent label is provided inside the driver's door warning of potential injury that could be received from the noise of the siren. The label will also state safety precautions that should be taken when the siren is in use.

PAINT PROCESS

The body is totally removed from the chassis during the painting process to ensure the entire unit is covered.

The body and all parts are thoroughly washed with a grease cutting solvent PPG436 prior to any sanding. After the body is sanded, it is washed again with PPG436 to remove any contaminants on the surface.

CHASSIS PAINT

The chassis is painted by the OEM Chassis Manufacturer.

PAINT FINISH

The body is painted with a PPG Delfleet Evolution Paint System.

As part of the curing process the painted body will go through a baking process. The painted components is baked at 185 degrees for 3 hours to achieve a complete coating cure on the finished product.

After bake and ample cool down time, the coated surface is sanded using 3M 1000, 1200, and or 1500 grit sandpaper to remove surface defects. In the final step, the surface is buffed with 3M Super-duty compound to add extra shine to coated surface. No more than .5 mil is removed in this process.

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

ANTI-CORROSION PROTECTION

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Where dissimilar metals must be joined, overlaid, share perforations or otherwise come in contact with each other to achieve construction, performance or aesthetic requirements, such items is separated by a continuous contact, nonconductive coating or film to prevent or otherwise mitigate the effects of electrolysis. Only stainless-steel hardware and fasteners is used in the construction of the apparatus. Where stainless steel fasteners pass through an aluminum component, the fastener contact surfaces, including the head, washer and nut is coated with ECK anti-corrosion material.

BODY UNDERCOATING

The body underside, including the sub-frame and the inside of the wheel wells, NOT THE WHEEL WELL LINERS, is thoroughly coated with SWT commercial automotive undercoat and sound deadening material to protect the body module against corrosion. The coating is black and is tested to ASTM B117 Salt Spray test for 1,000 hours at 10-mils.

SIDE COMPARTMENT FINISH, ZOLATONE

The apparatus side compartment interiors are to be coated with Zolatone, a polychromatic, modified nitrocellulose coating with a flat background color with accenting fleck colors. The compartments are cleaned with a grease remover, and then the surface sanded and prepared for painting. The Zolatone finish is washed and waxed like paint and is resistant to man solvents and wear.

PAINT COLOR

The apparatus body paint is "cross referenced" from the chassis paint and is painted to match the main chassis color as close as possible.

WHEEL RIMS

The chassis wheels are as furnished by the chassis OEM. No additional finishes is provided by apparatus manufacturer.

REFLECTIVE STRIPING

Reflective striping is applied to the perimeter of the truck. Size and design are determined by the department.

CHEVRON STRIPING

At least 50% of the rear of the unit is covered with Red and fluorescent Yellow-Green alternating 6.00" stripe in an inverted Chevron pattern.

LETTERING

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Reflective lettering is applied to the cab doors at the direction of the purchaser.

Photos or drawings of the lettering and striping layout is provided by the purchaser prior to construction.

FOUTS BROS. LOGO PLATE(S)

Three (3) Fouts Bros. logo plate(s) is affixed to the finished apparatus.

LOOSE EQUIPMENT

The following items is provided and shipped loose with the completed apparatus at the time of delivery:

SUCTION HOSE

Two (2) 6.00" X 8' section(s) of KOCHEK, PVC type hard, suction hose is provided on the apparatus. The hose(s) is light weight type with Pyrolite, Long Handle Female x Rocker Lug Male, NST threads. The hose is black in color.

EXTENSION LADDER, 2 SECTION

One (1) 12 foot, Alco-Lite model# PEL-12, two (2) section aluminum extension Ladder is supplied with the finished apparatus.

ONE YEAR APPARATUS WARRANTY

The complete apparatus detailed herein is warranted against defects in materials and workmanship for a period of twelve (12) months, effective upon pick up or delivery of the completed apparatus to the purchaser, as detailed in the respective warranty documents. Any unauthorized alterations or modifications to the apparatus will void this warranty.

Other warranties, as provided by individual component manufacturers may extend beyond this warranty.

APPARATUS BODY WARRANTY, TEN YEAR

The apparatus body will have a structural warranty, including panels and sub-frame, against bending, cracking, twisting or otherwise deforming for a period of ten (10) years, effective upon final payment in full by the Purchaser, and pick up or delivery of the completed apparatus to the Purchaser. Any unauthorized alterations or modifications to the body will void this warranty.

PLUMBING WARRANTY, TEN YEAR

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A Stainless-Steel Plumbing/Piping warranty is provided by the apparatus manufacturer for products of its manufacture to be free from defects in material and workmanship, under normal use and service, for a period of ten (10) years effective upon final payment in full by the Purchaser and pick up or delivery of the completed apparatus to the Purchaser. Any unauthorized alterations or modifications to the plumbing will void this warranty.

PAINT WARRANTY, FIVE YEAR

The finish paint as used on the proposed apparatus is warranted against defects in materials and workmanship for a prorated period of five (5) years, effective upon final payment in full by the Purchaser, and pick up or delivery of the completed apparatus to the Purchaser. Any unauthorized alterations or modifications to the apparatus will void this warranty.

APPARATUS ELECTRICAL WARRANTY, TWO YEAR

The apparatus electrical system as detailed herein will have an electrical warranty against defects in materials and workmanship for a period of two (2) years, effective upon final payment in full by the Purchaser, and pick up or delivery of the completed apparatus to the Purchaser. Any unauthorized alterations or modifications to the electrical system will void this warranty.

AKRON BRASS WARRANTY

The Akron Brass valves is warranted by Akron Brass for a period of ten (10) years from the date of delivery. The warranty for electronics is warranted by Akron Brass for a period of five (5) years from date of delivery.

WHELEN WARNING LIGHT / SIREN WARRANTY

Whelen products is covered by a direct warranty for up to a maximum two (2) years from date of purchase (not to exceed three (3) years from date of manufacture), with proof of purchase. Whelen siren speakers, when used with a Whelen siren amplifier, are covered by a two (2) year warranty from the date of manufacture. Heavy-Duty motor assemblies (so marked) are covered by a direct warranty for up to three (3) years from date of manufacture.

WHELEN HDP / 5 YEAR WARRANTY

Whelen Automotive Non-Lightbar Strobe Power Supplies, LED Ballasts and LED Products bearing the official HDP label and manufactured to HDP standards is covered by a direct warranty for up to five (5) years from date of manufacture.

WHELEN LIMITED LIFETIME WARRANTY

The following Whelen products is covered by a lifetime warranty.

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Freedom Series Lightbars, M-Series Lights, L31 Series, B6 Series, Micro Freedom Series, Pioneer Scene Lighting (Excluded Pioneer Life), PSTANK2.

KUSSMAUL ELECTRONICS WARRANTY

All products manufactured by Kussmaul Electronics Company Inc. are warranted to be free of defects in material and/or workmanship. Kussmaul Electronics will repair or replace without charge, any material or defects which become apparent in normal use within the specified warranty period.

All Electronic items are warranted for three (3) years

Auto and Air Ejects are warranted for two (2) years

Auto Pumps are warranted for one (1) year