

WATER TENDER



KME FIRE APPARATUS

Chelan County Fire District #3

WATER TENDER

WATER TENDER

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WATER TENDER

PROPOSED BY - CASCADE FIRE AND SAFETY

QTY: 1

Cascade Fire and Safety is pleased to offer the proposed vehicle to meet the intent of the fire department specifications.

KME Fire Apparatus is a leading manufacturer in custom and commercial fire fighting vehicles.

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

Mark Merritt
Cascade Fire & Safety
123 South Front Street
Yakima, WA 98901

Phone: (800) 572 3939 / (509) 453 6527
Cell: (509) 930 1786
Fax: (509) 457 2890

Email: markm@cfireinc.com
Web: www.cfireinc.com

GENERAL CONSTRUCTION

QTY: 1

The complete apparatus, assemblies, subassemblies, component parts, etc., shall be designed and constructed with the due consideration to the nature and distribution of the load to be sustained and to the general character of the service to which the apparatus is to be subject.

All parts of the apparatus shall be designed with a factor of safety, which is equal to or greater than that which is considered standard and acceptable for this class of equipment in firefighting service.

All parts of the apparatus shall be strong enough to withstand general service under full load.

The apparatus shall be so designed that the various parts and readily accessible for lubrication, inspection, adjustment and repair.

Bidder's specifications must meet minimum requirements of N.F.P.A. Pamphlet #1901; Underwriters Laboratories, Inc.; and all State and Federal Department of Transportation vehicle regulations at time of sale of unit.

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

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PROPOSED SERVICE BY - CASCADE FIRE & SAFETY

QTY: 1

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KME Fire Apparatus is a leading manufacturer in custom and commercial fire fighting vehicles.

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

Cascade Fire and Safety

123 South Front Street
Yakima, WA 98901

Phone: (800)-572-3939
Cell: (509) 930-1786
Fax: (509) 457 2890

Email: info@cfireinc.com
Web: www.cfireinc.com

SERVICE CENTER CAPABILITIES

Cascade Fire & Safety is a full service EVT Certified facility for all makes and models of emergency vehicles and fire apparatus.

Fleet Preventative Maintenance
Safety Inspections
Custom Installation Services
Plumbing and Foam Systems
Full Service Chassis and Drive Line Repair
Steel, Stainless Steel and Aluminum Welding repair and Fabrication
24 Hour 7 days a week Emergency Repairs
NFPA Pump Testing
NFPA Lighting upgrades
Wildland / Brush Truck construction
Washington and Oregon Fire Apparatus and Equipment Mechanics Association member
Same day service provided for any "Truck Down" situation

INSTRUCTION MANUALS - TWO (2) SETS - USB/CD

QTY: 1

In accordance with standard commercial practices, applicable to each vehicle (including body and special equipment) furnished under the contract, the following listed manuals and schematics, in the quantity specified, shall be provided at time of delivery of each vehicle.

The contractor shall supply at time of delivery, two (2) USB/CD copies of a complete operation and service manual covering the complete apparatus as delivered and accepted.

The manual shall contain the following:

- Descriptions, specifications, and ratings of chassis, pump (if applicable), and aerial device.

WATER TENDER

- Wiring diagrams.
- Lubrication charts.
- Operating instructions for the chassis, any major components such as a pump and any auxiliary systems.
- Instructions regarding the frequency and procedures recommended for maintenance.
- Parts replacement information.

AS-BUILT WIRING SCHEMATICS

QTY: 1

In accordance with standard commercial practices, the manufacturer shall supply two (2) copies of "AS BUILT" wiring schematics/diagrams for the entire vehicle at the time of delivery.

VEHICLE FLUID PLATE

QTY: 1

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

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

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

AMP DRAW REPORT

QTY: 1

The bidder shall provide with their bid proposal and at the time of delivery, an itemized print out of the expected amp draw of the entire vehicle's electrical system.

A written load analysis, which shall include the following:

- The rating of the alternator.
- The minimum continuous load of each component that is specified per: Applicable NFPA-1901.
- Additional loads that, when added to the minimum continuous load, determine the total connected load.
- Each individual intermittent load.

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All of the above listed items shall be provided by the bidder per the applicable NFPA-1901.

KME WARRANTY, STARTING ON DELIVERY DATE

QTY: 1

Warranty coverage by KME will begin on the date of delivery to the customer.

GENERAL INFORMATION - NFPA 1901

QTY: 1

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

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

All items of these proposal specifications will conform to the fullest extent possible with the National Fire Protection Association Pamphlet No. 1901, latest edition, except as noted in the Statement-of-Exceptions.

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

NFPA TREADPLATE CERTIFICATION

QTY: 1

All stepping, standing, and walking surfaces on the body shall meet NFPA #1901 anti-slip standards.

Aluminum tread plate utilized for stepping, standing, and walking surfaces shall be Alcoa No-Slip type.

This material shall be a minimum 3/16 (0.1875") in thickness.

Upon request by the purchaser, the manufacturer shall supply proof of compliance with this requirement.

All vertical surfaces on the body, which incorporate aluminum tread plate material, will utilize the same material pattern to provide a consistent overall appearance.

WATER TENDER

MOBILE WATER SUPPLY FIRE APPARATUS NFPA CHAPTERS OF COMPLIANCE

QTY: 1

The unit shall be designed to conform fully to the "Mobile Water Supply Fire Apparatus" requirements as stated in the NFPA 1901 Standard (2016 Revision), which shall include the following required chapters as stated in this revision:

- Chapter 1 Administration
- Chapter 2 Referenced Publications
- Chapter 3 Definitions
- Chapter 4 General Requirements
- Chapter 7 Mobile Water Supply Fire Apparatus
- Chapter 12 Chassis and Vehicle Components
- Chapter 13 Low Voltage Electrical Systems and Warning Devices
- Chapter 14 Driving and Crew Areas
- Chapter 15 Body, Compartments and Equipment Mounting
- Chapter 18 Water Tanks

NFPA "CHAPTER 16" FIRE PUMP REQUIREMENTS

QTY: 1

Chapter 16 Fire Pump and Associated Equipment

NFPA "CHAPTER 17" {AUXILIARY PUMP} REQUIREMENT - 2016

QTY: 1

Chapter 17 Auxiliary Pump and Associated Equipment

NFPA "CHAPTER 18" {WATER TANKS} REQUIREMENTS - 2016

QTY: 1

Chapter 18 Water Tanks

SAFETY SIGNS (NFPA REQUIRED)

QTY: 1

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

UL TESTING

QTY: 1

If required by the specific chapters of NFPA-1901, the proposed unit shall be tested and certified by Underwriters Laboratories Inc.

(UL) Underwriters Laboratories Inc. (UL) is recognized worldwide as a leading third-party product safety certification organization for over 100 years.

UL has served on National Fire Protection Association (NFPA) technical committees for over thirty years.

UL is a nationally recognized testing laboratory recognized by OSHA.

UL complies with the American Society for Testing and Materials (ASTM) Standard ASTM E543 "Determining the Qualifications for Nondestructive Testing Agencies."

UL has more than 40 years of automotive fire apparatus safety testing experience and 16 years of factory aerial device testing and Certification experience.

WATER TENDER

UL has more than 100 years of experience developing and implementing product safety standards.

UL does not represent, is not associated with, nor is in the manufacture or repair of automotive fire apparatus.

All test work for fire pumps outlined in NFPA 1901, Edition shall be conducted.

UL has included a list of all factory aerial device manufacturers for whom testing is currently being conducted on a regular basis.

UL carries ten million dollars in excess liability insurance for bodily injury and property damage combined.

UL provides the manufacturer a complete written examination and test report for each inspection performed at the manufacturer's facility.

This report specifies the points of inspection and results of such examinations and tests.

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

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

The apparatus manufacturer shall designate, in writing, who is qualified to witness and certify these test results.

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

When the unit successfully meets all the requirements outlined in NFPA 1901, 2016 Edition, UL shall issue a Certificate of Automotive Fire Apparatus Examination and Test stating the unit's compliance with NFPA- 1901.

GRAB RAILS EXTERIOR, REAR OF CAB

QTY: 1

Two (2) knurled bright anodized aluminum horizontal grab rails will be provided one each side on the rear of the cab, on the outer corners. The grab rail will be approximately 18" long between the stanchions. The grab rails will be mounted to protect the rear cab corners from damage from the crosslay hose deployment.

GRIP-STRUT INSERTS IN CAB STEPS 2 DOORS

QTY: 1

Grip-Strut, anti-slip material shall be inserted in each cab step treadplate overlay below each cab door.

WHEEL TRIM KITS, CHROME BABY MOONS/LUG NUT COVERS - TANDEM AXLE

QTY: 1

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

WATER TENDER

FRONT MUD FLAPS NO LOGO

QTY: 1

Black rubber mud flaps shall be provided on the front fenders. NO KME LOGOS TO BE PROVIDED ON FLAPS.

CORNERING LIGHTS - WHELEN # 5VC03ZCR LED

QTY: 1

A pair of Whelen #5VC03ZCR LED lights shall be provided and shall be mounted vertically, (1) one each side of the commercial chassis front bumper, in a Whelen #5TSMAC chrome plated flange.

The lights shall be wired to activate with the turn signals.

FREIGHTLINER - EMBER SEPARATOR FOR COMMERCIAL CHASSIS

QTY: 1

An air inlet shall be equipped with a stainless mesh screen for separating water and burning embers from the air intake system such that particulate matter larger than 0.039" (1.0 mm) in diameter cannot reach the air filter element.

FREIGHTLINER - SEAT BELT CLARIFICATION FOR NFPA 1901, REV 2003

QTY: 1

Red seat belts shall be provided if available from the chassis manufacturer.

FREIGHTLINER - COMMERCIAL CHASSIS STANDARD FRONT BUMPER EXTENSION

QTY: 1

FREIGHTLINER - ONE (1) AUX. AIR INLET SYSTEM NEAR LEFT DOOR

QTY: 1

A quick disconnect male auxiliary air inlet shall be provided at the driver's side door area at a location to be determined at a pre-construction conference.

A mating quick disconnect female connector shall be shipped loose with the apparatus.

This shall allow a Purchaser furnished external air supply to be connected to the chassis air system.

COVER LEFT CAB STEP WITH TREAD PLATE OVERLAY

QTY: 1

The driver side cab step area shall be overlaid with polished aluminum tread plate.

Step areas shall be fabricated from Alcoa "No-Slip" tread plate.

WATER TENDER

CENTER CONSOLE FOR 2 DOOR - BRUSHED

QTY: 1

A center console fabricated from 1/8" aluminum shall be furnished and shall be located between the driver and officer's seats.

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

In addition, the console shall be equipped with two (2) map/notebook storage pockets at the rear of the console.

The console shall be finished with a brushed aluminum finish with a hinge face

Console dimensions are based on current International cab models.

Other cabs (or changes to the cab) may result in varied dimensions.

COVER FUEL TANK WITH TREAD PLATE OVERLAY

QTY: 1

The step type fuel tank shall be overlaid with polished aluminum tread plate.

This shall include the top, front and both ends. Step areas shall be provided for access to the cab.

Step areas shall be fabricated from Alcoa "No-Slip" tread plate.

COVER OFFICER CAB STEP WITH TREAD PLATE OVERLAY

QTY: 1

The officer side cab step area shall be overlaid with polished aluminum tread plate.

Step areas shall be fabricated from Alcoa "No-Slip" tread plate.

FREIGHTLINER M2 112 TWO DOOR - TANDEM AXLE

QTY: 1

2020 FREIGHTLINER M2 112 CONVENTIONAL CHASSIS

SET BACK AXLE - TRUCK

STRAIGHT TRUCK PROVISION

LH PRIMARY STEERING LOCATION

General Service

TRUCK CONFIGURATION

DOMICILED, USA 50 STATES (INCLUDING CALIFORNIA AND CARB OPT-IN STATES)

FIRE SERVICE

EMERGENCY VEHICLES BUSINESS SEGMENT

LIQUID BULK COMMODITY

TERRAIN/DUTY: 100% (ALL) OF THE TIME, IN TRANSIT, IS SPENT ON PAVED ROADS

MAXIMUM 8% EXPECTED GRADE

SMOOTH CONCRETE OR ASPHALT PAVEMENT - MOST SEVERE IN-TRANSIT (BETWEEN SITES) ROAD SURFACE

FREIGHTLINER LEVEL II WARRANTY

EXPECTED FRONT AXLE(S) LOAD: 18000.0 lbs.

EXPECTED REAR DRIVE AXLE(S) LOAD: 46000.0 lbs.

EXPECTED GROSS VEHICLE WEIGHT CAPACITY: 64000.0 lbs.

WATER TENDER

Truck Service

FIRE TANK/PUMPER - MAIN DRIVELINE DRIVEN SPLIT-SHAFT PTO/PUMP
EXPECTED BODY/PAYLOAD CG HEIGHT ABOVE FRAME "XX" INCHES : 32.0 in

Engine

CUM L9 450EV HP @ 2100 RPM; 2200 GOV RPM, 1250 LB/FT @ 1400 RPM, RV/FIRE/EM

Electronic Parameters

60 MPH ROAD SPEED LIMIT
CRUISE CONTROL SPEED LIMIT SAME AS ROAD SPEED LIMIT
PTO MODE ENGINE RPM LIMIT - 1100 RPM
PTO RPM WITH CRUISE SET SWITCH - 700 RPM
PTO RPM WITH CRUISE RESUME SWITCH - 800 RPM
PTO MODE CANCEL VEHICLE SPEED - 5 MPH
PTO GOVERNOR RAMP RATE - 250 RPM PER SECOND
PTO MINIMUM RPM - 700
CUMMINS EMERGENCY VEHICLE THROTTLE CONTROL OPTION
REGEN INHIBIT SPEED THRESHOLD - 0 MPH

Engine Equipment

2016 ONBOARD DIAGNOSTICS/2010 EPA/CARB/FINAL GHG17 CONFIGURATION
2008 CARB EMISSION CERTIFICATION - EXEMPTED VEHICLE; NO CLEAN IDLE LABEL
REQUIRED
STANDARD OIL PAN
ENGINE MOUNTED OIL CHECK AND FILL
OIL SAMPLE TEST FITTING ON OIL FILTER MODULE
ONE PIECE VALVE COVER
SIDE OF HOOD AIR INTAKE WITH NFPA COMPLIANT EMBER SCREEN AND FIRE
RETARDANT DONALDSON AIR CLEANER
LN 12V 320 AMP 4962PA PAD MOUNT ALTERNATOR
(2) DTNA GENUINE, FLOODED STARTING, MIN 2250CCA, 390RC, THREADED STUD
BATTERIES
BATTERY BOX FRAME MOUNTED
STANDARD BATTERY JUMPERS
SINGLE BATTERY BOX FRAME MOUNTED LH SIDE UNDER CAB
WIRE GROUND RETURN FOR BATTERY CABLES WITH ADDITIONAL FRAME GROUND
RETURN
NON-POLISHED BATTERY BOX COVER
CAB AUXILIARY POWER CABLE
AUXILIARY POWER NET DISTRIBUTION BLOCK FOR BODY BUILDER USE
POSITIVE LOAD DISCONNECT WITH CAB MOUNTED CONTROL SWITCH MOUNTED
OUTBOARD DRIVER SEAT
POSITIVE AND NEGATIVE POSTS FOR JUMPSTART LOCATED ON FRAME NEXT TO
STARTER
CUMMINS TURBOCHARGED 18.7 CFM AIR COMPRESSOR WITH INTERNAL SAFETY
VALVE
STANDARD MECHANICAL AIR COMPRESSOR GOVERNOR
AIR COMPRESSOR DISCHARGE LINE
GVG, FIRE AND EMERGENCY SERVICE VEHICLES ENGINE WARNING
C-BRAKE BY JACOBS WITH LOW/OFF/HIGH BRAKING DASH SWITCH, ACTIVATES STOP
LAMPS
RH OUTBOARD UNDER STEP MOUNTED HORIZONTAL AFTERTREATMENT SYSTEM
ASSEMBLY WITH RH HORIZONTAL TAILPIPE EXITING FORWARD OF REAR TIRES

WATER TENDER

ENGINE AFTERTREATMENT DEVICE, AUTOMATIC OVER THE ROAD ACTIVE
REGENERATION AND DASH MOUNTED SINGLE REGENERATION REQUEST/INHIBIT
SWITCH
STANDARD EXHAUST SYSTEM LENGTH
RH HORIZONTAL TAILPIPE, EXIT FORWARD OF REAR TIRES AT 90 DEGREES
6 GALLON DIESEL EXHAUST FLUID TANK
100 PERCENT DIESEL EXHAUST FLUID FILL
LH MEDIUM DUTY STANDARD DIESEL EXHAUST FLUID TANK LOCATION
STANDARD DIESEL EXHAUST FLUID PUMP MOUNTING
STANDARD DIESEL EXHAUST FLUID TANK CAP
HORTON DRIVEMASTER ADVANTAGE ON/OFF FAN DRIVE
AUTOMATIC FAN CONTROL WITHOUT DASH SWITCH, NON-ENGINE MOUNTED
CUMMINS SPIN ON FUEL FILTER
COMBINATION FULL FLOW/BYPASS OIL FILTER
1300 SQUARE INCH ALUMINUM RADIATOR
ANTIFREEZE TO -34F, OAT (NITRITE AND SILICATE FREE) EXTENDED LIFE COOLANT
GATES BLUE STRIPE COOLANT HOSES OR EQUIVALENT
CONSTANT TENSION HOSE CLAMPS FOR COOLANT HOSES
ALUMINUM FLYWHEEL HOUSING
ELECTRIC GRID AIR INTAKE WARMER
DELCO 12V 39MT HD/OCP STARTER WITH THERMAL PROTECTION AND INTEGRATED
MAGNETIC SWITCH

Transmission

ALLISON 3000 EVS AUTOMATIC TRANSMISSION WITH PTO PROVISION

Transmission Equipment

PDI INSTALLED TRANSMISSION OIL SAMPLE VALVE FITTING
ALLISON VOCATIONAL PACKAGE 198 - AVAILABLE ON 3000/4000 PRODUCT FAMILIES
WITH VOCATIONAL MODEL EVS
ALLISON VOCATIONAL RATING FOR FIRE TRUCK/EMERGENCY VEHICLE APPLICATIONS
AVAILABLE WITH ALL PRODUCT FAMILIES
PRIMARY MODE GEARS, LOWEST GEAR 1, START GEAR 1, HIGHEST GEAR 6,
AVAILABLE FOR 3000/4000 PRODUCT FAMILIES ONLY
SECONDARY MODE GEARS, LOWEST GEAR 1, START GEAR 1, HIGHEST GEAR 6,
AVAILABLE FOR 3000/4000 PRODUCT FAMILIES ONLY
PRIMARY SHIFT SCHEDULE RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY
ENGINE AND VOCATIONAL USAGE
SECONDARY SHIFT SCHEDULE RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED
BY ENGINE AND VOCATIONAL USAGE
PRIMARY SHIFT SPEED RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY
ENGINE AND VOCATIONAL USAGE
SECONDARY SHIFT SPEED RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY
ENGINE AND VOCATIONAL USAGE
ENGINE BRAKE RANGE PRESELECT RECOMMENDED BY DTNA AND ALLISON, THIS
DEFINED BY ENGINE AND VOCATIONAL USAGE
ENGINE BRAKE RANGE ALTERNATE PRESELECT RECOMMENDED BY DTNA AND
ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE
FUEL SENSE 2.0 DISABLED - MAXIMUM PERFORMANCE - TABLE BASED
DRIVER SWITCH INPUT - DEFAULT - NO SWITCHES
PUMP MODE INPUT ENABLED 3RD/4TH LOCKUP WIRED ON TCM INPUT AJ/BQ - ALLISON
5TH GEN TRANSMISSIONS
4TH RANGE INDICATION ON TCM OUTPUT C - ALLISON 5TH GEN TRANSMISSIONS

WATER TENDER

VEHICLE INTERFACE WIRING CONNECTOR WITH PDM AND NO BLUNT CUTS, AT BACK OF CAB
ELECTRONIC TRANSMISSION CUSTOMER ACCESS CONNECTOR FIREWALL MOUNTED
(2) CUSTOMER INSTALLED CHELSEA 277 SERIES PTO'S
PTO MOUNTING, LH AND RH SIDES OF MAIN TRANSMISSION
MAGNETIC PLUGS, ENGINE DRAIN, TRANSMISSION DRAIN, AXLE(S) FILL AND DRAIN
PUSH BUTTON ELECTRONIC SHIFT CONTROL, DASH MOUNTED
TRANSMISSION PROGNOSTICS - ENABLED 2013
WATER TO OIL TRANSMISSION COOLER, IN RADIATOR END TANK
TRANSMISSION OIL CHECK AND FILL WITH ELECTRONIC OIL LEVEL CHECK
SYNTHETIC TRANSMISSION FLUID (TES-295 COMPLIANT)

Front Axle and Equipment

DETROIT DA-F-18.0-5 18,000# FL1 71.0 KPI/3.74 DROP SINGLE FRONT AXLE
MERITOR 16.5X6 Q+ CAST SPIDER CAM FRONT BRAKES, DOUBLE ANCHOR, FABRICATED SHOES
FIRE AND EMERGENCY SEVERE SERVICE, NON-ASBESTOS FRONT LINING
CONMET CAST IRON FRONT BRAKE DRUMS
FRONT BRAKE DUST SHIELDS
FRONT OIL SEALS
VENTED FRONT HUB CAPS WITH WINDOW, CENTER AND SIDE PLUGS - OIL
STANDARD SPINDLE NUTS FOR ALL AXLES
MERITOR AUTOMATIC FRONT SLACK ADJUSTERS
TRW TAS-85 POWER STEERING
POWER STEERING PUMP
4 QUART POWER STEERING RESERVOIR
OIL/AIR POWER STEERING COOLER
ORGANIC SAE 80/90 FRONT AXLE LUBE

Front Suspension

18,000# TAPERLEAF FRONT SUSPENSION
GRAPHITE BRONZE BUSHINGS WITH SEALS - FRONT SUSPENSION
FRONT SHOCK ABSORBERS

Rear Axle and Equipment

RT-46-160P 46,000# R-SERIES TANDEM REAR AXLE
6.14 REAR AXLE RATIO
IRON REAR AXLE CARRIER WITH STANDARD AXLE HOUSING
MXL 176T MERITOR EXTENDED LUBE MAIN DRIVELINE WITH HALF ROUND YOKES
MXL 17T MERITOR EXTENDED LUBE INTERAXLE DRIVELINE WITH HALF ROUND YOKES
DRIVER CONTROLLED TRACTION DIFFERENTIAL - BOTH TANDEM REAR AXLES
(1) INTERAXLE LOCK VALVE, (1) DRIVER CONTROLLED DIFFERENTIAL LOCK FORWARD-REAR AND REAR-REAR AXLE VALVE
BUZZER AND BLINKING LAMP WITH EACH INTERAXLE LOCK SWITCH, INTERAXLE UNLOCK DEFAULT WITH IGNITION OFF
BUZZER AND BLINKING LAMP WITH EACH MODE SWITCH, DIFFERENTIAL UNLOCK WITH IGNITION OFF, ACTIVE <5 MPH
MERITOR 16.5X7 Q+ CAST SPIDER CAM REAR BRAKES, DOUBLE ANCHOR, FABRICATED SHOES
FIRE AND EMERGENCY SEVERE SERVICE NON-ASBESTOS REAR BRAKE LINING
STANDARD BRAKE CHAMBER LOCATION
CONMET CAST IRON REAR BRAKE DRUMS
REAR BRAKE DUST SHIELDS
REAR OIL SEALS

WATER TENDER

WABCO TRISTOP D LONGSTROKE 2-DRIVE AXLE SPRING PARKING CHAMBERS
HALDEX AUTOMATIC REAR SLACK ADJUSTERS
ORGANIC SAE 80/90 REAR AXLE LUBE

Rear Suspension

HENDRICKSON HAULMAAX @46,000#REAR SUSPENSION
HENDRICKSON HAULMAAX/ULTIMAAX - 9.50" RIDE HEIGHT
54 INCH AXLE SPACING
HENDRICKSON HN, HAULMAAX AND ULTIMAAX SERIES STEEL BEAMS WITH BAR PIN
FORE/AFT AND TRANSVERSE CONTROL RODS
REAR SHOCK ABSORBERS - TWO AXLES (TANDEM)

Brake System

AIR BRAKE PACKAGE
WABCO 4S/4M ABS WITH TRACTION CONTROL, WITH ATC OFF-ROAD SWITCH
REINFORCED NYLON, FABRIC BRAID AND WIRE BRAID CHASSIS AIR LINES
FIBER BRAID PARKING BRAKE HOSE
STANDARD BRAKE SYSTEM VALVES
STANDARD AIR SYSTEM PRESSURE PROTECTION SYSTEM
STD U.S. FRONT BRAKE VALVE
RELAY VALVE WITH 5-8 PSI CRACK PRESSURE, NO REAR PROPORTIONING VALVE
BW AD-9SI BRAKE LINE AIR DRYER WITH HEATER
AIR DRYER MOUNTED INBOARD ON RH RAIL
STEEL AIR TANKS MOUNTED AFT INSIDE AND/OR BELOW FRAME JUST FORWARD OF
REAR SUSPENSION
CLEAR FRAME RAILS FROM BACK OF CAB TO FRONT REAR SUSPENSION BRACKET,
BOTH RAILS OUTBOARD
BW DV-2 AUTO DRAIN VALVE WITHOUT HEATER - WET TANK

Trailer Connections

UPGRADED CHASSIS MULTIPLEXING UNIT
UPGRADED BULKHEAD MULTIPLEXING UNIT

Wheelbase & Frame

6000MM (236 INCH) WHEELBASE
7/16X3-9/16X11-1/8 INCH STEEL FRAME (11.11MMX282.6MM/0.437X11.13 INCH) 120KSI
1/4 INCH (6.35MM) C-CHANNEL INNER FRAME REINFORCEMENT
2550MM (100 INCH) REAR FRAME OVERHANG
FRAME OVERHANG RANGE: 91 INCH TO 100 INCH
SQUARE END OF FRAME
FRONT CLOSING CROSSMEMBER
STANDARD WEIGHT ENGINE CROSSMEMBER
STANDARD CROSSMEMBER BACK OF TRANSMISSION
STANDARD MIDSHIP #1 CROSSMEMBER(S)
STANDARD REARMOST CROSSMEMBER
STANDARD SUSPENSION CROSSMEMBER

Chassis Equipment

THREE-PIECE 14 INCH CHROMED STEEL BUMPER WITH COLLAPSIBLE ENDS
REMOVABLE FRONT TOW HOOKS STORED ON THE CHASSIS FRAME
BUMPER MOUNTING FOR SINGLE LICENSE PLATE
FENDER AND FRONT OF HOOD MOUNTED FRONT MUDFLAPS
GRADE 8 THREADED HEX HEADED FRAME FASTENERS

WATER TENDER

LEVEL FRAME RAILS (+1%, -0%) WHEN CHASSIS IS LOADED TO FRONT AND REAR
SUSPENSION RATINGS
TANK BODY 1501 TO 3000 GALLONS

Fuel Tanks

50 GALLON/189 LITER SHORT RECTANGULAR ALUMINUM FUEL TANK - LH
RECTANGULAR FUEL TANK(S)
PLAIN ALUMINUM/PAINTED STEEL FUEL/HYDRAULIC TANK(S) WITH PAINTED BANDS
FUEL TANK(S) FORWARD
POLISHED STEP FINISH
FUEL TANK CAP(S)
DETROIT FUEL/WATER SEPARATOR WITH WATER IN FUEL SENSOR
EQUIFLO INBOARD FUEL SYSTEM
NO NATURAL GAS VEHICLE FUEL TANK VENT LINE/STACK
HIGH TEMPERATURE REINFORCED NYLON FUEL LINE
FUEL COOLER MOUNTED LEFT HAND IN RAIL

Tires

MICHELIN X WORKS XDY 315/80R22.5 20 PLY RADIAL FRONT TIRES
MICHELIN X WORKS XDY 11R22.5 16 PLY RADIAL REAR TIRES

Hubs

CONMET PRESET PLUS PREMIUM IRON FRONT HUBS
CONMET PRESET PLUS PREMIUM IRON REAR HUBS

Wheels

ALCOA ULTRA ONE 89U64X 22.5X9.00 10-HUB PILOT 5.99 INSET ALUMINUM FRONT WHEELS
ALCOA LVL ONE 88367X 22.5X8.25 10-HUB PILOT ALUMINUM DISC REAR WHEELS
POLISHED FRONT WHEELS; OUTSIDE ONLY
POLISHED REAR WHEELS; OUTSIDE OF OUTER WHEELS ONLY
FRONT WHEEL MOUNTING NUTS
REAR WHEEL MOUNTING NUTS

Cab Exterior

112 INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL CAB
AIR CAB MOUNTING
CAB ROOF REINFORCEMENTS FOR ROOF MOUNTED COMPONENTS
NONREMOVABLE BUGSCREEN MOUNTED BEHIND GRILLE
BOLT-ON MOLDED FLEXIBLE FENDER EXTENSIONS
SAFETY YELLOW LH AND RH INTERIOR GRAB HANDLES AND LH AND RH EXTERIOR NON-SLIP GRAB HANDLES
HOOD MOUNTED CHROMED PLASTIC GRILLE
CHROME HOOD MOUNTED AIR INTAKE GRILLE
FIBERGLASS HOOD
HOOD LINER, ADDED FIREWALL AND FLOOR HEAT INSULATION
FACTORY PREP DUAL 25 INCH ROUND STUTTER TONE HOOD MOUNTED AIR HORNS WITH DUAL LANYARDS HORNS SHIP LOOSE FOR PDI INSTALL
DUAL ELECTRIC HORNS
DUAL HORN SHIELDS
DOOR LOCKS AND IGNITION SWITCH KEYED THE SAME
REAR LICENSE PLATE MOUNT END OF FRAME
INTEGRAL HEADLIGHT/MARKER ASSEMBLY WITH CHROME BEZEL
LED AERODYNAMIC MARKER LIGHTS

WATER TENDER

DAYTIME RUNNING LIGHTS
TRUCK-LITE 3 CHAMBER MODULES WITH 45 SERIES SEALED BEAM LAMPS
STANDARD FRONT TURN SIGNAL LAMPS
DUAL WEST COAST BRIGHT FINISH HEATED MIRRORS WITH LH AND RH REMOTE
DOOR MOUNTED MIRRORS
102 INCH EQUIPMENT WIDTH
LH AND RH 8 INCH BRIGHT FINISH CONVEX MIRRORS MOUNTED UNDER PRIMARY
MIRRORS
RH DOWN VIEW MIRROR
STANDARD SIDE/REAR REFLECTORS
RH AFTERTREATMENT SYSTEM CAB ACCESS WITH PLAIN DIAMOND PLATE COVER
ELECTRIC HORN WARNING SYSTEM FOR PARK BRAKE NOT SET WITH DOOR OPEN
AND ALL IGNITION KEY POSITIONS
63X14 INCH TINTED REAR WINDOW
TINTED DOOR GLASS LH AND RH WITH TINTED NON-OPERATING WING WINDOWS
RH AND LH ELECTRIC POWERED WINDOWS, PASSENGER SWITCHES ON DOOR(S)
TINTED WINDSHIELD
2 GALLON WINDSHIELD WASHER RESERVOIR WITHOUT FLUID LEVEL INDICATOR,
FRAME MOUNTED

Cab Interior

OPAL GRAY VINYL INTERIOR
MOLDED PLASTIC DOOR PANEL WITHOUT VINYL INSERT WITH ALUMINUM KICKPLATE
LOWER DOOR
MOLDED PLASTIC DOOR PANEL WITHOUT VINYL INSERT WITH ALUMINUM KICKPLATE
LOWER DOOR
BLACK MATS WITH SINGLE INSULATION
NO DASH MOUNTED ASH TRAYS AND LIGHTER
FORWARD ROOF MOUNTED CONSOLE WITH UPPER STORAGE COMPARTMENTS AND
ADDITIONAL CENTER COMPARTMENT WITHOUT NETTING
IN DASH STORAGE BIN
LH DOOR MAP POCKET
(2) CUP HOLDERS LH AND RH DASH
GRAY/CHARCOAL FLAT DASH
SMART SWITCH EXPANSION MODULE
HEATER, DEFROSTER AND AIR CONDITIONER
STANDARD HVAC DUCTING
MAIN HVAC CONTROLS WITH RECIRCULATION SWITCH
STANDARD HEATER PLUMBING
VALEO HEAVY DUTY A/C REFRIGERANT COMPRESSOR
BINARY CONTROL, R-134A
PREMIUM INSULATION
SOLID-STATE CIRCUIT PROTECTION AND FUSES
12V NEGATIVE GROUND ELECTRICAL SYSTEM
DOME DOOR ACTIVATED LH AND RH, DUAL READING LIGHTS, FORWARD CAB ROOF
LH AND RH ELECTRIC DOOR LOCKS
(1) 12V POWER SUPPLY (1) DUAL 2.1 AMP USB CHARGER IN DASH
SEATS INC 911 UNIVERSAL SERIES HIGH BACK AIR SUSPENSION DRIVER SEAT WITH
NFPA 1901-2009/2016 COMPLIANT SEAT SENSOR
SEATS INC 911 UNIVERSAL SERIES HIGH BACK AIR SUSPENSION PASSENGER SEAT
WITH NFPA 1901-2009/2016 COMPLIANT SEAT SENSOR
LH AND RH INTEGRAL DOOR PANEL ARMRESTS
BLACK CORDURA PLUS CLOTH DRIVER SEAT COVER
BLACK CORDURA PLUS CLOTH PASSENGER SEAT COVER

WATER TENDER

NFPA 1901-2009 HIGH VISIBILITY ORANGE SEAT BELTS
ADJUSTABLE TILT AND TELESCOPING STEERING COLUMN
4-SPOKE 18 INCH (450MM) STEERING WHEEL
DRIVER AND PASSENGER INTERIOR SUN VISORS

Instruments & Controls

GRAY DRIVER INSTRUMENT PANEL
GRAY CENTER INSTRUMENT PANEL
ENGINE REMOTE INTERFACE WITH PARK BRAKE INTERLOCK
BLACK GAUGE BEZELS
LOW AIR PRESSURE INDICATOR LIGHT AND AUDIBLE ALARM
2 INCH PRIMARY AND SECONDARY AIR PRESSURE GAUGES
DASH MOUNTED AIR RESTRICTION INDICATOR WITH GRADUATIONS
ELECTRONIC CRUISE CONTROL WITH SWITCHES IN LH SWITCH PANEL
IGNITION SWITCH WITH NON-REMOVABLE KEY
ICU3S, 132X48 DISPLAY WITH DIAGNOSTICS, 28 LED WARNING LAMPS AND DATA LINKED
HEAVY DUTY ONBOARD DIAGNOSTICS INTERFACE CONNECTOR LOCATED BELOW LH DASH
2 INCH ELECTRIC FUEL GAUGE
ENGINE REMOTE INTERFACE WITH PRESET FAST IDLE
ENGINE REMOTE INTERFACE CONNECTOR IN ENGINE COMPARTMENT
ELECTRICAL ENGINE COOLANT TEMPERATURE GAUGE
2 INCH TRANSMISSION OIL TEMPERATURE GAUGE
ENGINE AND TRIP HOUR METERS INTEGRAL WITHIN DRIVER DISPLAY
(1) DASH MOUNTED PTO SWITCH WITH INDICATOR LAMP
ELECTRONIC STABILITY CONTROL
ELECTRIC ENGINE OIL PRESSURE GAUGE
NFPA VEHICLE DATA RECORDER AND SEATBELT DISPLAY
ELECTRONIC MPH SPEEDOMETER WITH SECONDARY KPH SCALE, WITHOUT ODOMETER
STANDARD VEHICLE SPEED SENSOR
ELECTRONIC 3000 RPM TACHOMETER
IGNITION SWITCH CONTROLLED ENGINE STOP
(2) OVERHEAD MOUNTED LANYARD CONTROLS: (1) OFFICER AIR HORN AND (1) DRIVER AIR HORN
DIGITAL VOLTAGE DISPLAY INTEGRAL WITH DRIVER DISPLAY
SINGLE ELECTRIC WINDSHIELD WIPER MOTOR WITH DELAY PROGRAMMED TO SLOWEST SPEED WITH PARK BRAKE SET
MARKER LIGHT SWITCH INTEGRAL WITH HEADLIGHT SWITCH
ALTERNATING FLASHING HEADLAMP SYSTEM WITH BODY BUILDER CONTROLLED ENGAGEMENT
ONE VALVE PARKING BRAKE SYSTEM WITH DASH VALVE CONTROL AUTONEUTRAL AND WARNING INDICATOR
SELF CANCELING TURN SIGNAL SWITCH WITH DIMMER, WASHER/WIPER AND HAZARD IN HANDLE
INTEGRAL ELECTRONIC TURN SIGNAL FLASHER WITH HAZARD LAMPS OVERRIDING STOP LAMPS

FREIGHTLINER - ON SPOT TIRE CHAINS, TANDEM AXLE

QTY: 1

One (1) set of On Spot tire chains for a tandem axle chassis shall be installed. A switch shall be provided to control the activation of the chains.

WATER TENDER

FREIGHTLINER - AUXILIARY AIR MANIFOLD - COMMERCIAL CHASSIS

QTY: 1

All auxiliary, air devices on the commercial chassis shall be fed from a common manifold. The common manifold shall be installed at an accessible location near the chassis air tanks. The manifold shall be fed by a 3/8" Synflex air line plumbed from the primary air tank using a pressure protection valve. Unused ports shall be closed off using an appropriately sized plug.

COMMERCIAL CHASSIS ELECTRICAL SYSTEM DESCRIPTION

QTY: 1

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

AKRON/WELDON VEHICLE DATA RECORDER DOWNLOAD HARNESS

QTY: 1

A Weldon model #0L40-2597-00, VDR download harness shall be supplied with the system to allow the data to be downloaded to a computer.

TIRE PRESSURE MONITORING - LED VALVE STEM CAPS - TEN TIRES

QTY: 1

Each tire shall be equipped with an LED tire alert pressure management system (Vecsafe equal) that shall monitor tire pressure. A chrome plated brass sensor shall be provided on the valve stem of each tire.

The sensor shall calibrate to the tire pressure when installed on the valve stem for pressures between 20 and 120 psi. The sensor shall activate an integral battery-operated LED when the pressure of that tire drops 8 psi.

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

KUSSMAUL AUTO AIR EJECT INLET WITH WATERPROOF KIT

QTY: 1

A Kussmaul Auto Air Eject #091-28 inlet shall be provided on the driver side of the cab. The Air Eject shall be mounted using a Kussmaul Weatherproof Adapter Kit #091-28AK.

AIR EJECT LOCATION - DRIVER'S STEP WELL

QTY: 1

The air eject shall be located in the driver's cab step well in a pre-determined location by KME.

TRANSMISSION LOCK-UP

QTY: 1

The automatic transmission furnished in the chassis shall have a lock-up assembly which brings the transmission to direct drive and prevents the transmission from shifting gears while in the pumping mode.

A positive braking system shall be provided to prevent vehicle movement during pumping operations.

The air brakes furnished must satisfy this requirement.

WATER TENDER

FAST IDLE RETROFIT, ELECTRONIC ENGINES

QTY: 1

A fast for the electronic controlled engine shall be provided. An ON/OFF switch on the dash shall control the fast idle.

An electronic interlock system shall prevent the fast idle from operating unless the transmission is in "Neutral" (or "Park" if so equipped) and the parking brake is fully engaged.

If the fast-idle control is used in conjunction with a specified engine/transmission driven component or accessory, the fast-idle control shall be properly interlocked with the engagement of the specified component or accessory.

12 VOLT ELECTRICAL SYSTEM TESTING - ALL UNITS

QTY: 1

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

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

The engine shall be started and kept running until the engine and engine compartment temperatures are stabilized at normal operating temperatures and the battery system is fully charged. The engine shall be shut off and the minimum continuous electrical load shall be activated for 10 minutes.

All electrical loads shall be turned off prior to attempting to restart the engine. The battery system shall then be capable of restarting the engine. Failure to restart the engine shall be considered a test failure.

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

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

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

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

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

- Documentation of the electrical system performance test

WATER TENDER

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

CLASS-1 ES-KEY MULTI-PLEXED ELECTRICAL SYSTEM - COMMERCIAL

QTY: 1

A Class 1 ES-Key Electrical Management System shall be utilized on the chassis for all functions applicable. The system shall consist of the following components:

The High Density I/O Node (Super Node) shall have the ability to perform the following functions:

A modem with an RS232 computer interface and standard telephone jack used to not only program the multiplex system but also serve as a factory direct gateway into the vehicle from any Class 1 multiplex authorized service facility.

A Universal System Manager (USM), which acts as the main controlling component of the multiplexing system shall be provided and factory programmed to DOT, NFPA, SAE, the manufacturer and {Company} specifications.

The programming shall be done by the manufacturer's engineering department. The ES-Key system installation shall comply with SAE J 551 requirements regarding Electromagnetic and Radio Frequency Interference (EMI, RFI), as well as utilize components and wiring practices that ensure the system is protected against corrosion, excessive temperatures, water, excessive physical, and vibration damage by any equipment installed on the vehicle at the time of delivery.

A series of Multiplexing Input/Output jacks shall be provided. The Input/Output jacks shall permit the multiplexing system to reduce the amount of wiring and components used as compared to non-multiplexed apparatus. These jacks shall vary in I/O configuration and shall possess individual output internal circuit protection.

The System shall also consist of programmable switches that shall be installed and allow the operator to control the programmed functions of each individual switch.

Diagnostic software shall be provided to download data from the onboard ES-KEY system. This software shall have the ability to view system input/output (I/O) information and include a connection from a computer to the vehicle.

TANKER BODY ELECTRICAL SYSTEM

QTY: 1

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

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

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

WATER TENDER

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

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

120 VOLT 20 AMP SUPER AUTO EJECT FOR BATT CHARGER - CUSTOM

QTY: 1

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

The disconnect shall be equipped with a NEMA 5-20 P male receptacle, which shall automatically eject the shoreline when the vehicle starter is energized.

The mating connector shall be included with the auto eject and shall be provided as loose equipment.

A label shall be provided indicating voltage and amperage ratings.

SHORELINE RECEPTACLE LABEL - NFPA

QTY: 1

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

Type of Line Voltage

Current Rating in Amps Power Inlet Type (DC or AC).

YELLOW COVER FOR KUSSMAUL AUTO-EJECT RECEPTACLE

QTY: 1

The Kussmaul auto-eject connection shall be equipped with a Yellow weatherproof cover.

SHORELINE LOCATION - DRIVER'S STEP WELL

QTY: 1

The shoreline receptacle shall be located in the driver's cab step well in a pre-determined location by KME.

PROMARINER PRONAUTIC, 40 AMP, BATTERY CHARGER

QTY: 1

A ProMariner, ProNautic 1240P, fully automatic battery charger shall be provided for maintaining the vehicle battery system.

The charger shall feature a four (4) stage automatic charging system that shall extend the battery life and usage with multi-stage charging featuring a fast charge and a float/maintenance mode.

A LED status center, built into the charger, shall provide at-a-glance status of fast charge, conditioning, ready (float/maintenance) and battery type selection.

Output current shall be 40 amperes @ 12-volt DC.

KUSSMAUL UNIVERSAL SINGLE CHARGE INDICATOR

QTY: 1

WATER TENDER

A Kussmaul # 091-189-12 universal single indicator shall be installed to monitor the battery voltage and indicate the following conditions of the battery via LED's: Hi Voltage, Fully Charged,

Charging and Low Voltage. In addition to the LED status indicators, a 3-digit indicator shall display the battery voltage.

BATTERY DISCONNECT SWITCH, ALL UNITS

QTY: 1

The chassis batteries shall be wired in parallel to a single 12-volt electrical system, controlled through a heavy-duty master disconnect switch.

The master disconnect switch shall be located within easy access of the driver upon entering or exiting the cab.

STANDARD #MATM RADIO ANTENNA INSTALLED ROUTED TO CENTER CONSOLE

QTY: 2

An antenna mounting base(s) model #MATM with 17' of coaxial cable shall be provided and installed on the lower cab roof, behind the light bar.

The attached antenna wire(s) shall be run to the center console.

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

CONTROL SWITCHING - EATON MULTIPLEX SWITCHES - 6 N

QTY: 1

The commercial cab shall be equipped with an area for component switching within easy reach of the driver and or officer. This switch package shall separate the emergency / auxiliary electrical functions from the regular chassis functions. A minimum of six (6) programmable CAN Bus Eaton model #E33 switches with integral indicator lights shall be provided.

The six (6) switches shall be located in the cab near the driver for warning lights and auxiliary controls. A master warning switch shall be provided, which shall allow pre-setting of emergency light switches and shall have a red integral indicator light.

CONTROL SWITCHING LABELING

QTY: 1

All switches, (other than the master switch), shall have switch function labeling and an integral indicator light.

HOSE BED WORK LIGHT - SWITCH

QTY: 1

The hose bed work light shall have a protected 12-volt switch at the rear body panel.

The switch will be labeled "HOSE BED WORK LIGHTS."

CONTROL SWITCH IN CAB FOR REAR OF BODY LIGHTS

QTY: 1

A switch shall be provided in the cab warning, light switch console to turn the rear of body lights on and off.

CONTROL SWITCH ON PUMP PANEL FOR REAR OF BODY LIGHTS

QTY: 1

A switch shall be provided on the pump panel to turn the rear of body lights on and off.

WATER TENDER

CONTROL SWITCH IN CAB FOR DRIVER SIDE OF BODY LIGHTS

QTY: 1

A switch shall be provided in the cab warning, light switch console to turn the driver side of body lights on and off.

CONTROL SWITCH ON PUMP PANEL FOR DRIVER SIDE OF BODY LIGHTS

QTY: 1

A switch shall be provided on the pump panel to turn the driver side of body lights on and off.

CONTROL SWITCH IN CAB FOR OFFICER SIDE OF BODY LIGHTS

QTY: 1

A switch shall be provided in the cab warning, light switch console to turn the officer side of body lights on and off.

CONTROL SWITCH ON PUMP PANEL FOR OFFICER SIDE OF BODY LIGHTS

QTY: 1

A switch shall be provided on the pump panel to turn the officer side of body lights on and off.

ENGINE COMPARTMENT WORK LIGHTS - TECNIQ LED

QTY: 1

Two (2) Tecniq model #E18 LED lights shall be provided inside the engine enclosure that will provide 800 lumens each.

Each light shall have their own independent switch incorporated into the light head.

AUTOMATIC FAST IDLE OPTION FOR CLASS-1 ES-KEY ELECT MANAGER

QTY: 1

This feature automatically increases engine rpm and the available alternator output current.

Chassis voltage is monitored at all times by the ES-Key system and when it drops to or below 12.8VDC for more than 10 seconds, the hi-idle output of the ES-Key system is activated.

As long as the proper interlocks are present; transmission in NEUTRAL, park brake SET, and additional drive line assessors (Pump & PTO's) are NOT engaged; the engine rpms shall increase to a specified set point.

At any time, the ES-Key system's hi-idle command can be canceled by a loss of any of the specified required interlocks.

Also, at any time, the ES-Key system's hi-idle command can be paused for 30 seconds by a foot brake depression or momentary start switch activation (in the situation where the engine has been off for some time).

The ES-Key system's automatic hi-idle command shall remain active until the chassis voltage rises above 12.8VDC and remains there for 3 minutes.

When the hi-idle command is requested by the ES-Key system due to the lower chassis voltage described, the ES-Key dashboard display shall read "Auto Hi-Idle" to clearly indicate to the apparatus operator that the engine is at a, or shall go to, a hi-idle state.

When all interlocks are preset and the engine is at a hi-idle state, the red "FAST IDLE" indicator in the dashboard shall illuminate.

WATER TENDER

12 VOLT POWER PORT LOCATED NEAR DRIVER

QTY: 1

A 12-volt power port accessory outlet(s) shall be installed in the cab of the truck for the fire departments accessory devices.

The port(s) shall be located as directed near the driver's seating position for devices such as cellular phones.

12 VOLT POWER PORT LOCATED NEAR OFFICER

QTY: 1

A 12-volt power port accessory outlet(s) shall be installed in the cab of the truck for the fire departments accessory devices.

The port(s) shall be located as directed near the officer's seating position for devices such as cellular phones.

KUSSMAUL USB CHARGING PORT LOCATED NEAR DRIVER

QTY: 1

A Kussmaul USB charging port(s) shall be installed in the cab of the truck for the fire departments accessory devices.

Each port shall have two (2) USB connections and shall have a 5-volt, 4.2-amp max output.

The port(s) shall be located as directed near the driver's seating position for devices such as cellular phones.

12 VOLT POWER AND GROUND CIRCUIT, IN CAB CONSOLE

QTY: 1

One (1) dedicated bus bar style switched circuit 12-volt, 75 Amp, power and ground fused at battery shall be provided in the cab console. The circuit shall be for future installation of radios or accessories.

KUSSMAUL USB CHARGING PORT LOCATED NEAR OFFICER

QTY: 1

A Kussmaul USB charging port(s) shall be installed in the cab of the truck for the fire departments accessory devices.

Each port shall have two (2) USB connections and shall have a 5-volt, 4.2-amp max output.

The port(s) shall be located as directed near the officer's seating position for devices such as cellular phones.

12 VOLT POWER AND GROUND CIRCUIT, BEHIND OFFICERS SEAT

QTY: 2

One (1) dedicated circuit; 12-volt, 40 Amp, power and ground on 3/8 stud and fused at battery shall be behind the officer seat.

The circuit shall be for future installation of radios or accessories.

FEDERAL SIGNAL CAMERA SYSTEM, 7.0" COLOR LCD - REAR CAMERA

QTY: 1

WATER TENDER

A Federal Signal model # CAMSET70-NTSC-4B rear vision camera system shall be provided to allow the driver to visually see the rear of the apparatus while in the cab.

The system shall include a Federal 7.0" flat panel LCD color monitor mounted adjacent to the driver and a Federal rear vision color camera that shall be mounted at the rear of the vehicle.

The system shall also feature a microphone on the camera and speaker built into the monitor.

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

REAR VISION MONITOR MOUNTED ON CAB CEILING

QTY: 1

The monitor for the rear vision system shall be mounted ceiling of the cab in easy view of the driver.

Note: This will be a separate screen, this will not be part of the ES-Key screen.

COMMERCIAL CHASSIS MARKER LIGHTS AND REFLECTORS

QTY: 1

Cab marker lights and signaling devices shall be as provided on the commercial chassis cab from the original chassis manufacturer. FMVSS reflectors shall be also be provided as required.

CAB STEP LIGHTS, TECNIQ EON 3 LED, ALL DEVICES

QTY: 2

Polished, stainless steel, TecNiq Eon, 3-LED, horizontal surface mounted chassis step lights shall be provided and controlled with marker light actuation.

Step lights shall be located to properly illuminate all chassis access steps and walkway areas and shall include a mounting gasket to provide a watertight seal.

NFPA COMPLIANT WARNING LIGHT PACKAGE

QTY: 1

The following warning light package shall include all of the minimum warning light and actuation requirements for the current revision of the NFPA 1901 Fire Apparatus Standard.

The lighting as specified shall 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 - NFPA FLASH PATTERN

QTY: 1

All of the perimeter warning lights shall be set to a default NFPA compliant flash pattern as provided by the light manufacturer.

LIGHT PACKAGE ACTUATION/CONTROLS

QTY: 1

The entire warning light package shall be actuated with a single warning light switch located on the cab switch panel.

The wiring for the warning light package shall engage all of the lights required for "Clearing Right of Way" mode when the vehicle parking brake is not engaged.

WATER TENDER

An automatic control system shall be provided to switch the warning lights to the "Blocking Right of Way" mode when the vehicle parking brake is engaged.

LIGHT PACKAGE NFPA CERTIFICATION

QTY: 1

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

The warning light system(s) shall be certified by the light system manufacturer(s), to meet all of the requirements in the current revision of the NFPA 1901 Fire Apparatus Standard as noted in the General Requirements section of these specifications.

The NFPA required "Certificate of Compliance" shall be provided with the completed apparatus.

Any large truck as defined by NFPA shall have the lower zone warning lights mounted no higher than 62" to the optical center of the warning light from ground level. {No Exceptions}

A-UPPER, CODE 3 LED DF58ANFPA1 LIGHT BAR

QTY: 1

A Code 3, DF58ANFPA1, "Defender Tri-Core Series", 58" LED, cab roof warning light bar shall be furnished and rigidly mounted on top of the cab roof.

The light bar shall be equipped with the following:

- Clear Lenses with a Black Top
- Eight Forward Facing Red - TriCore 6 LED Red Modules
- Four Corners TriCore 6 LED Red Modules

If equipped, the forward-facing white lights shall be automatically disabled for the "Blocking Right of Way" mode.

C-UPPER, CODE 3 PRIZM II 4X6 SERIES LED - 4 LIGHTS

QTY: 1

Four (4) Code 3 4612*BZ-75, Prizm II LED lights, shall be furnished and mounted with two (2) on each side at the rear, upper portion of the apparatus.

Each light head shall be equipped with red LEDs and a colored lens.

The lights shall be installed with a chrome plated mounting flange.

UPPER ZONE C WARNING LIGHT LENS - RED

QTY: 1

The upper zone C warning lights shall include red LEDs and a red lens.

UPPER ZONE C WARNING LIGHT BEZEL - CHROME

QTY: 1

The upper zone C warning lights shall include a chrome bezel.

B/D-UPPER FRONT, CODE 3 PRIZM II SERIES 4X6 LED

QTY: 1

WATER TENDER

Two (2) surface mounted, Code 3, 468*BZ-75 Prizm II LED light heads shall be furnished and mounted with one (1) on each side on the upper side face, towards the front of the body, facing to each side of the unit.

Each light head shall be equipped with red LEDs and a colored lens.

The lights shall be installed with a chrome plated mounting flange.

UPPER ZONE B/D FRONT WARNING LIGHT LENS - RED

QTY: 1

The upper zone B/D front warning lights shall include red LEDs and a red lens.

UPPER ZONE B/D FRT WARNING LIGHT BEZEL - CHROME

QTY: 1

The upper zone B/D front warning lights shall include a chrome bezel.

B/D-UPPER REAR, CODE 3 PRIZM II SERIES 4X6 LED

QTY: 1

Two (2) surface mounted, Code 3, 4612*BZ-75 Prizm II LED light heads shall be furnished and shall be mounted with one (1) on each side on the upper side face, towards the rear of the body, facing to each side of the unit.

Each light head shall be equipped with red LEDs and a colored lens.

The lights shall be installed with a chrome plated mounting flange.

UPPER ZONE B/D REAR WARNING LIGHT LENS - RED

QTY: 1

The upper zone B/D rear warning lights shall include red LEDs and a red lens.

UPPER ZONE B/D REAR WARNING LIGHT BEZEL - CHROME

QTY: 1

The upper zone B/D rear warning lights shall include a chrome bezel.

A-LOWER FRONT MOUNTING, COMMERCIAL CHASSIS

QTY: 1

The lower zone A warning lights shall be mounted in the commercial chassis grille no higher than 62" from ground level.

A-LOWER FRONT, CODE 3 PRIZM II SERIES 4X6 LED

QTY: 1

Two (2) Code 3, 4612*BZ-75 Prizm II, LED light heads shall be provided and installed with one (1) on each side.

LOWER ZONE A WARNING LIGHT LENS - RED

QTY: 1

The lower zone A warning lights shall include red LEDs and a red lens.

LOWER ZONE A WARNING LIGHT BEZEL - CHROME

QTY: 1

The lower zone A warning lights shall include red leds and a chrome bezel.

C-LOWER REAR, CODE 3 PRIZM II SERIES 4X6 LED

QTY: 1

WATER TENDER

Two (2) Code 3, 4612*BZ-75 Prizm II LED light heads shall be provided and installed with one (1) on each side directly below the DOT stop, tail, turn and backup lights.

WATER TENDER

LOWER ZONE C WARNING LIGHT LENS - RED

QTY: 1

The lower zone C warning lights shall include red LEDs and a red lens.

LOWER ZONE C WARNING LIGHT BEZEL - CHROME

QTY: 1

The lower zone C warning lights shall include a chrome bezel.

B/D-LOWER FRONT MOUNTING, COMMERCIAL CHASSIS

QTY: 1

The lower zone B & D warning lights shall be mounted on the sides of the commercial chassis hood at or forward of the centerline of the front axle. The light shall be mounted no higher than 62" from ground level.

B/D-LOWER FRONT, CODE 3 PRIZM II SERIES 4X6 LED

QTY: 1

Two (2) Code 3, 4612*BZ-75 Prizm II LED light heads shall be provided and installed with one (1) on each side.

LOWER ZONE B/D FRONT WARNING LIGHT LENS - RED

QTY: 1

The lower zone B/D front warning lights shall include red LEDs and a red lens.

LOWER ZONE B/D FRONT WARNING LIGHT BEZEL - CHROME

QTY: 1

The lower zone B/D front warning lights shall include a chrome bezel.

B/D-LOWER MID, CODE 3 PRIZM II SERIES 4X6 LED

QTY: 1

Two (2) Code 3, 4612*BZ-75 Prizm II, LED light heads shall be provided and installed with one (1) on each side.

LOWER ZONE B/D MID WARNING LIGHT LENS - RED

QTY: 1

The lower zone B/D mid warning lights shall include red LEDs and a red lens.

LOWER ZONE B/D MID WARNING LIGHT BEZEL - CHROME

QTY: 1

The lower zone B/D mid warning lights shall include a chrome bezel.

LOWER ZONE B/D REAR WARNING LIGHT LENS - RED

QTY: 1

The lower zone B/D rear warning lights shall include red LEDs and a red lens.

LOWER ZONE B/D REAR WARNING LIGHT BEZEL - CHROME

QTY: 1

The lower zone B/D rear warning lights shall include a chrome bezel if available from the manufacturer. If a chrome bezel is unavailable, a black bezel shall be included.

WATER TENDER

B/D-LOWER REAR, CODE 3 PRIZM II SERIES 4X6 LED

QTY: 1

Two (2) Code 3, 4612*BZ-75 Prizm II LED light heads shall be provided and installed with one (1) on each side.

NFPA (2) AMDOR H2O LED GROUND LIGHTS, BELOW CAB DOORS

QTY: 1

One (1) Amdor Luma Bar, H2O, LED 20" ground light shall be provided under each side cab door entrance step, two (2) total.

The ground lights shall turn on automatically with each respective door jamb switch and also by a master ground light switch in the warning light switch console.

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

GROUND LIGHTS, 2 LED UNDER FRONT BUMPER FACING FORWARD - H2O

QTY: 1

One (1) Amdor Luma Bar, H2O, LED 12" ground light shall be provided under each side of the front bumper facing forward, two (2) total.

The ground lights shall be activated by a master ground light switch in the cab and shall be wired through the load management system.

GROUND LIGHTS, 2 LED BELOW PUMP PANEL RUNNING BOARD - H2O

QTY: 1

One (1) Amdor Luma Bar, H2O, LED 20" ground light shall be provided under each side pump panel running board, two (2).

The ground lights shall be activated by a master ground light switch in the cab and shall be wired through the load management system.

GROUND LIGHTS, 2 LED BELOW FRONT BODY CORNERS - H2O

QTY: 1

One (1) Amdor Luma Bar, H2O, LED 20" ground light shall be provided under each front body corner, two (2) total.

The ground lights shall be activated by a master ground light switch in the cab and shall be wired through the load management system.

GROUND LIGHTS, 2 LED AT REAR BODY CORNERS - H2O

QTY: 1

One (1) Amdor Luma Bar, H2O, LED 20" ground light shall be provided under each rear body corner, two (2) total.

The ground lights shall be activated by a master ground light switch in the cab and shall be wired through the load management system.

CAB AND BODY GROUND LIGHTS ACTIVATE WITH PARKING BRAKE

QTY: 1

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

CHASSIS DIAGNOSTICS SYSTEM

QTY: 1

WATER TENDER

Diagnostic ports shall be accessible while standing on the ground and located inside the driver's side door left of the steering column. The diagnostic panel shall allow diagnostic tools such as computers to connect to various vehicle systems for improved troubleshooting providing a lower cost of ownership. Diagnostic switches shall allow engine and ABS systems to provide blink codes should a problem exist.

The diagnostic system shall include the following:

- A single port to monitor the engine, transmission and ABS system and diagnostics of the roll sensor (if applicable)
- Engine diagnostic switch (blink codes)
- ABS diagnostic switch (blink codes)
- Allison Transmission Codes (through touch pad shifter)

DOOR OPEN INDICATOR- CODE 3 #CB7265 RED BEACON CEILING MOUNTED

QTY: 1

A Code 3 model # CB7265, red LED rotating beacon shall be furnished on the cab ceiling to signal when an unsafe condition is present such as an open cab door or body compartment door, an extended ladder rack, a deployed stabilizer, an extended light tower or any other device which is opened, extended or deployed which may cause damage to the apparatus if it is moved.

This light shall be activated through the parking brake switch to signal when the parking brake is released.

This light shall be labeled "DO NOT MOVE TRUCK".

DUNNAGE AREA LIGHTING, TECNIQ EON 3 LED

QTY: 1

Two (2) stainless steel, TecNiq Eon 3-LED horizontal surface mounted lights shall be provided in the dunnage area to provide adequate illumination of this area.

These lights shall be switched in the same manner as the step lights.

COMPARTMENT LIGHT ACTIVATION

QTY: 1

Compartment lighting shall be switched either from an integral switch as provided by the roll up door manufacturer or a magnetic proximity switch if it is a KME manufactured door.

COMPARTMENT LIGHTS, AMDOR LUMA BAR LED LIGHTING - DUAL

QTY: 2

Each individual, equipment storage compartment shall be equipped with the AMDOR, Luma Bar, LED light fixture, mounted on each side of the forward (and rear) vertical door frame.

WATER TENDER

OPTRONICS MARKER/TURN LIGHTS @ EA SIDE OF BODY

QTY: 1

Optronics model MCL82RB, red, LED marker lights with integral reflectors shall be provided at the lower side rear, having one (1) on each side.

Optronics Model #STL71AMB, yellow, LED side marker and turn lights shall be provided on the apparatus lower side, forward of rear axle that puts one (1) on each side, if the apparatus is 30' long or longer.

OPTRONICS MARKER LIGHTS @ REAR OF BODY

QTY: 1

Optronics MCL65, red, LED clearance lights shall be provided on the apparatus rear upper having one (1) on each side at the outermost practical location.

Optronics MCL12, LED, 3-lamp identification bar will be provided on the apparatus rear center.

The lights shall be red in color.

TRUCK-LITE DOT AMBER REFLECTORS @ SIDE OF BODY

QTY: 1

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

TRUCK-LITE DOT RED REFLECTORS @ REAR OF BODY

QTY: 1

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

BRITAX, 6" ANGLED RUBBER LED LIGHT @ REAR BODY CORNERS

QTY: 1

Two (2) rubber, angled LED marker lights shall be mounted on the rear most corner of the body, one (1) each side.

The lights shall be mounted in a molded flexible rubber shaft that extends away from the body approximately 6".

The lights shall be equipped with an amber lens facing forward and a red lens facing to the rear of the vehicle.

The lights shall be wired to the parking light circuit.

TECNIQ #L10 LED LICENSE PLATE LIGHT @ DS REAR OF BODY

QTY: 1

One (1) Tecniq model #L10 LED license plate light shall be provided above the mounting position of the license plate.

The light shall be clear in color and shall have a chrome finish.

WATER TENDER

CODE 3, 7X9 ALL IN ONE - LED BRAKE, REVERSE, & TURN

QTY: 1

Two (2) Code 3, 79STTRBZ 7" x 9" all-in-one LED combination stop/turn/tail/reverse lights, shall be mounted one each side at the rear of the body with a mounting flange.

The lights shall be mounted so the red, LED brake lights are at the top.

BODY STEP LIGHTS, TECNIQ EON 3 LED, ALL DEVICES

QTY: 2

Polished, stainless steel, TecNiq Eon 3-LED, horizontal surface, mounted body step lights shall be provided and controlled with marker light actuation.

Step lights shall be located to properly illuminate all body access steps and walkway areas and shall include a mounting gasket to provide a watertight seal.

PUMP ENCLOSURE WORK LIGHTS - TECNIQ LED

QTY: 1

Two (2) Tecniq, model #E18 lights shall be provided inside the pump enclosure, providing 800 lumens each.

Each light shall have their own independent switch incorporated into the light head.

FIRETECH HIVIZ GUARDIAN LED SCENE LIGHTS ON REAR OF BODY

QTY: 1

Two (2) FireTech Hi-Viz Guardian FT-GSM, LED scene lights shall be provided, (1) one on each side of the rear body panel in a chrome plated flange.

Each light shall be 11 wide by 9 high by 3 deep, draw 6.25 amps, and produce 6,468 lumens.

The scene lights shall be wired through the load management system.

FIRETECH HIVIZ GUARDIAN LED SCENE LIGHTS ON DRIVER SIDE OF BODY

QTY: 1

Two (2) FireTech Hi-Viz Guardian FT-GSM, LED scene lights shall be provided.

The scene lights shall be installed, one rearward and one forward, on the driver side of the body in a chrome plated flange.

Each light shall be 11 wide by 9 high by 3 deep, draw 6.25 amps, and produce 6,468 lumens.

The scene lights shall be wired through the load management system.

FIRETECH HIVIZ GUARDIAN LED SCENE LIGHTS ON OFFICER SIDE OF BODY

QTY: 1

Two (2) FireTech Hi-Viz Guardian FT-GSM, LED scene lights shall be provided.

The scene lights shall be installed, one rearward and one forward, on the officer side of the body in a chrome plated flange.

Each light shall be 11 wide by 9 high by 3 deep, draw 6.25 amps, and produce 6,468 lumens.

The scene lights shall be wired through the load management system.

REAR SCENE LIGHTS TO BE ACTIVATED BY REVERSE LIGHTS

WATER TENDER

QTY: 1

In addition to the cab mounted switch for the rear scene lights, the rear scene lights shall illuminate when the transmission is placed in reverse gear and the apparatus is operating as an emergency vehicle (Primary Warning switch on).

CODE 3, #CA278, BACK-UP ALARM - 87 DBA

QTY: 1

A Code 3, model # CA278, 87dBA back-up alarm, shall be provided and installed at the rear of the apparatus under the tailboard.

The back-up alarm shall activate automatically when the transmission is placed in reverse gear and the ignition is "on."

DUAL CHROME AIR HORNS - GROVER

QTY: 1

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

DUAL AIR HORNS SIDE MOUNT ON HOOD, 1-DS & 1-OS

QTY: 1

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

AIR HORN CONTROL - DASH BUTTON FOR OFFICER & STEERING WHEEL

QTY: 1

The air horn(s) shall be controlled by a push button, located on the dash on the officer's side, as well as the steering horn button for the driver.

An air horn/electric DOT horn, selector switch shall be furnished on the dash for the drivers steering horn button.

SIREN, WHELEN #295SLSA1, 100W

QTY: 1

One (1) Whelen # 295SLSA1, 100-watt electronic siren shall be provided featuring: bottom mount control head in cab, "Si-Test" self-diagnostic feature, six (6) function siren, radio repeat, and public address.

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

ONE (1) WHELEN SA315P SPEAKER

QTY: 1

One (1) Whelen, model # SA315P composite black siren speaker, shall be provided, recessed in the front bumper and wired to the electronic siren.

WATER TENDER

HALE MG-100, 1000 GPM SINGLE STAGE PUMP

QTY: 1

- HALE MG-100
- 1000 GPM
- SINGLE STAGE, MID-SHIP

A Hale model MG-100 split shaft driven pump shall be provided and installed.

The pump shall be driven by the transmission through a split shaft drive shaft and have the capability of producing 1000 GPM at 150 PSI; from draft. PUMP BODY The volute shall be of fine grain alloy cast iron, with a minimum tensile strength of 30,000 pounds per square inch. The entire pump shall be hydro dynamically tested to 500 PSI.

The entire pump shall be manufactured and tested at the pump manufacturer's factory. The pump shall be driven by a drive line from the truck transmission. The engine shall provide sufficient horsepower and RPM to enable pump to meet and exceed its rated performance. The entire pump, both suction and discharge passages, shall be hydrostatically tested to a pressure of 600 PSI (41.3 BAR). The pump shall be fully tested at the pump manufacturer's factory to the performance spots as outlined by the latest NFPA Standard 1901. Pump shall be free from objectionable pulsation and vibration. The pump body and related parts shall be of fine grain alloy cast iron, with a minimum tensile strength of 30,000 PSI (2069 BAR). All moving parts in contact with water shall be of high-quality bronze or stainless steel. Pumps utilizing castings made of lower tensile strength cast iron are not acceptable. Pump body shall be vertically split, on a single plane, for easy removal of impeller assembly, including clearance rings.

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

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

HALE CBP-250, 250 GPM AUXILLIARY PUMP - PTO

QTY: 1

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

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

The pump shall be of a size and design to mount on the chassis rails of commercial and custom truck chassis and have a maximum capacity of 250 gallons per minute (U.S. GPM), NFPA rated performance. The entire pump shall be manufactured and tested at the pump manufacturer's factory. The engine shall provide sufficient horsepower and RPM to enable pump to meet and exceed its rated performance. The entire pump, both suction and discharge passages shall be hydrostatically tested to a pressure of 600 PSI.

The pump shall be fully tested at the pump manufacturer's factory to performance specs as outlined by the latest NFPA Pamphlet No. 1901. Pump shall be free from objectionable pulsation and vibration. The pump body and related parts shall be of fine grain alloy cast iron, with a

WATER TENDER

minimum tensile strength of 30,000 PSI. All moving parts in contact with water shall be of high-quality bronze or stainless steel. Pump utilizing castings made of lower tensile strength cast iron not acceptable.

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

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

HALE CBP-250. PUMP CONTROL

QTY: 1

The Hale model CBP-250 PTO driven pump shall be controlled from the chassis foot throttle while in stationary mode with the parking brake set and the Captain pressure governor at the pump panel.

PUMP RATIO

QTY: 1

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

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

PUMP MOUNTS - MID-SHIP PUMPS

QTY: 1

Extra heavy-duty pump mounting brackets shall be furnished.

These shall be bolted to the frame rails in such a position to perfectly align the pump so that the angular velocity of the drive line joints shall be the same on each end of the drive shaft.

This shall assure full capacity performance with a minimum of vibration. Mounting hardware shall utilize Grade 8 bolts.

PUMP MOUNTS - PTO PUMPS

QTY: 1

Extra heavy-duty pump mounting brackets shall be furnished.

These shall be bolted to the frame rails in such a position to perfectly align the pump with the PTO, so that the angular velocity of the drive line joints shall be the same on each end of the drive shaft.

This shall assure full capacity performance with a minimum of vibration. Mounting hardware shall utilize Grade 8 bolts.

HALE MECHANICAL PUMP SEAL

QTY: 1

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The mid ship pump shall be equipped with a high quality, spring loaded, self-adjusting mechanical seal capable of providing a positive seal to atmosphere under all pumping conditions.

This positive seal to atmosphere must be achievable under vacuum conditions up to 26 Hg (draft) or positive suction pressures up to 250 PSI.

The mechanical seal assembly shall be 2 inches in diameter and consists of a carbon sealing ring, stainless steel coil spring,

Viton rubber boot, and a tungsten carbide seat with a Teflon backup seal provided.

Only one (1) mechanical seal shall be required, located on the first stage suction (inboard) side of the pump and be designed to be compatible with a one-piece pump shaft.

A continuous cooling flow of water from the pump shall be directed through the seal chamber when the pump is in operation.

HALE MG PUMP DRIVE UNIT - SPLIT SHAFT

QTY: 1

The drive unit shall be completely assembled and tested at the pump manufacturer's factory.

The drive unit shall be of sufficient size to withstand up to 16,000 lbs. ft. of torque of the engine in both road and pump operating conditions.

The drive unit shall be designed of ample capacity for lubrication reserve and to maintain the proper operating temperature.

The gearbox drive shafts shall be of heat-treated chrome nickel steel and at least 2-3/4 inches in diameter on both the input and output drive shafts.

They shall withstand the full torque of the engine in both road and pump operating conditions.

All gears, both drive and pump, shall be of the highest quality electric furnace chrome nickel steel.

Bores shall be ground to size and teeth integrated, crown-shaved and hardened, to give an extremely accurate gear for long life, smooth, quiet running and higher load carrying capability.

An accurately cut spur design shall be provided to eliminate all possible end thrust.

HALE CBP PUMP DRIVE UNIT - PTO

QTY: 1

The drive unit, as well as the entire pump, shall be completely manufactured at the pump manufacturer's factory.

The drive unit bearings shall be heavy duty and precision ground to size.

The drive unit shall be of sufficient size to withstand the full torque of the pumping operation.

The drive unit shall have ample capacity for lubrication reserve and maintaining the proper operating temperature.

All gears shall be of highest quality steel alloys.

WATER TENDER

They shall have case hardened teeth, to give long life, smooth, quiet running and higher load carrying capability.

An accurately cut spur design shall be provided to eliminate all possible end thrust.

PTO UNIT HALE INTERFACE PUMPING SYSTEM

QTY: 1

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

HALE AIR SHIFT

QTY: 1

The drive unit shall be equipped with a power shift.

The shifting mechanism shall be a heat treated, hard anodized aluminum power cylinder with stainless steel shaft.

An in-cab control for rapid shift shall be provided that locks in road or pump, with a manual override is required.

PUMP SHIFT MANUAL OVERRIDE

QTY: 1

An emergency manual pump shift control shall be furnished on the left side pump panel which may be utilized if the air shift control does not operate. A transmission, manual lock-up switch shall be furnished in the cab to ensure positive lock-up of the transmission.

HALE PUMP SHIFT INDICATOR LIGHTS

QTY: 1

For automatic transmissions, three (3) green warning lights shall be provided to indicate to the operator(s) when the pump has completed the shift for Road to Pump position.

Two (2) green lights to be located in the truck driving compartment and one (1) green light on pump operator's panel adjacent to the throttle control.

For manual transmissions, one (1) green warning light shall be provided for the driving compartment.

All lights to have appropriate identification/instruction plates.

WATER TENDER

PTO PUMP INDICATOR LIGHTS

QTY: 1

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

PTO PUMP AND ROLL INDICATOR LIGHTS

QTY: 1

Three (3) indicator lights shall be provided in the cab interior. The "PUMP ENGAGED" light shall illuminate to indicate that the PTO is engaged.

The "OK TO PUMP" light shall be illuminated when;

- 1) the PTO is engaged.
- 2) the parking brake is set.
- 3) the transmission is in neutral.

The "OK TO PUMP AND ROLL" shall be illuminated when;

- 1) the PTO is engaged.
- 2) the parking brake is released.
- 3) the transmission is in any forward gear or reverse.

When the "OK TO PUMP AND ROLL" indicator is illuminated the "OK TO PUMP" indicator shall not be illuminated.

MANIFOLD - DISCHARGE & SUCTION

QTY: 1

A custom-made suction and discharge manifold shall be constructed from stainless steel and/or flexible tubing. The manifold shall be designed to provide maximum efficiency for the suction inlets and the discharges. {No Exceptions}.

MANIFOLD - DISCHARGE & SUCTION FOR INTERFACE PUMPI

QTY: 1

A custom-made suction and discharge manifold shall be constructed from stainless steel and/or flexible tubing. The manifold shall be designed to provide maximum efficiency for the suction inlets and the discharges.

The high-volume impeller will supply all discharges. The low volume impeller will supply the Preconnects, hose reel(s), and the front discharge/turret as applicable. Check valves shall be provided between the sections of the manifold to prevent high-pressure backflow and damage to the pump. {No Exceptions}

HALE THERMAL RELIEF VALVE

QTY: 1

A Hale Model TRV120 Thermal Relief Valve shall be provided on the pump.

If water temperature in the pump exceeds 120 degrees Fahrenheit, the thermal relief valve shall automatically open and discharge pump water to the ground, through a 3/8" discharge line, routed below the pump module.

The thermal relief valve shall automatically close when the water temperature is lowered.

WATER TENDER

AUDIBLE ALARM FOR THERMAL RELIEF VALVE

QTY: 1

An audible alarm shall be provided on the operator's panel to alert the operator when the thermal relief valve is activated.

AUXILIARY ENGINE COOLER

QTY: 1

An auxiliary cooler or heat exchanger shall be installed in the engine compartment between the engine and the chassis radiator.

The cooler shall permit the use of water from the pump for cooling the engine.

The cooling shall be done without mixing engine and pump water.

CLASS ONE "CAPTAIN" GOVERNOR CONTROL

QTY: 1

A Class 1 "Captain" engine/pump governor/throttle system that is connected directly to the Electronic Control Module (ECM) mounted on the engine shall be provided on the pump operator's panel.

The "Captain" is to operate as a pressure sensor (regulating) governor (PSG) eliminating any need for a relief valve on the discharge side of the pump.

A special preset feature shall permit a predetermined pressure or RPM to be set.

The preset pressure or RPM shall be displayed on the message display of the "Captain".

The preset shall be easily adjustable by the operator.

When operating in "pressure" mode, the PSG system shall automatically maintain the discharge pressure set by the operator, regardless of flow.

The pressure shall remain with the engine's and pump's operating capabilities.

When operating in "rpm" mode, the PSG system shall automatically maintain the set engine speed, regardless of engine load.

The rpm shall remain with the engine's operating capabilities.

AKRON STYLE #59 INTAKE RELIEF VALVE

QTY: 1

A 300-psi adjustable Akron Model 591103 intake relief valve system shall be plumbed on the suction side of the pump to comply fully with NFPA-1901 requirements.

Excess pressures shall be plumbed to discharge water under the pump enclosure away from the pump operator.

WATER TENDER

HALE DEDICATED PRIMING VALVE - AUXILIARY PUMP

QTY: 1

A dedicated additional primer control valve shall be furnished for the auxiliary pump.

This priming valve shall activate the standard pump primer to minimize pump cavitation during remote suction operations and shall be located in the cab on the center console with a push button.

TRIDENT "MANUAL" AIR PRIMING SYSTEM

QTY: 1

The priming pump will be a Trident air primer system.

A push in primer handle will open the priming valve and prime the pump.

ROTARY MASTER DRAIN VALVE

QTY: 1

A rotary type, 12 port, master drain valve shall be provided and controlled at the lower portion of the side pump panel.

The valve shall be located in pump compartment lower than the main body and connected in such a manner as to allow complete water drainage of the pump body and all required accessories.

Water shall be drained below the apparatus body and away from the pump operator.

DRAINS/BLEEDER "INNOVATIVE CONTROLS" LIFT UP @ ALL 1-1/2" OR LARGER

QTY: 1

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

One (1) individual "Innovative Control" lift up drain valve shall be furnished for each 1-1/2" or larger discharge port and each 2-1/2" gated auxiliary suction.

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

All drains and bleeders shall discharge below the running boards.

SYNFLEX SUCTION, DISCHARGE, PRESSURE AND CONTROL LINES

QTY: 1

Small lines within the pump enclosure shall be constructed from Synflex hose.

Uses include but are not limited to such lines as priming control, gauge lines, drain lines, air control valves, pump shift, supplemental cooling, foam flush, and air bleeder valves.

HALE MAIN SUCTION INLET 4"

QTY: 1

Two (2) 4" N.S.T. suction inlets shall be provided, one on the driver side and one on the officer side pump panel. A removable strainer shall be installed on each inlet.

WATER TENDER

BEHIND PANEL MOUNT

QTY: 1

All side gated inlet valves shall be recess mounted behind the side pump panels or body panels. There will be no exceptions.

5" NST INTAKE CAP - DRIVER SIDE

QTY: 1

A 5" NST chrome plated long handle pressure vented cap shall be installed on driver side intake.

5" NST INTAKE CAP - OFFICER SIDE

QTY: 1

A 5" NST chrome plated long handle pressure vented cap shall be installed on officer side intake.

2-1/2" DRIVER SIDE AUX PRIMARY SUCTION INLET FORWARD OF MAIN

QTY: 1

One (1) 2-1/2" auxiliary suction shall be provided at the driver side pump panel, to the front of the main inlet.

The 2-1/2" auxiliary suction shall terminate with a removable strainer, chrome plated 2-1/2" NST female swivel with a chrome plated plug and retaining chain.

2-1/2" AKRON #8800 S.S. BALL VALVE, DRIVER SIDE FRONT AUX SUCTION

QTY: 1

An Akron Brass 2 1/2" Generation II Swing-Out Valve shall be provided for the driver's side front auxiliary suction.

The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats.

SWING CONTROL @ VALVE, DRIVER SIDE FRONT AUX SUCTION

QTY: 1

A 1/4 turn swing control handle shall be provided on the driver side, front auxiliary suction valve.

TANK TO PUMP

QTY: 1

One (1) 4" tank to pump line shall be piped through the front bulkhead of the tank with a 90-degree elbow down into the tank sump.

This line shall be plumbed directly into the rear of the pump suction manifold for maximum efficiency.

A check valve shall be provided to prevent accidental pressurization of the water tank through the pump connection.

Connection from the valve to the tank shall be made by using a non-collapsible flexible rubber hose.

3" AKRON #8800 SERIES - S.S. BALL, VALVE, TANK TO PUMP

QTY: 1

WATER TENDER

An Akron Brass 3" Generation II Swing-Out Valve shall be provided between the pump suction manifold and the water tank.

The valve shall have an all brass body with flow optimizing, stainless steel ball and dual polymer seats.

3" AIR CONTROL FOR TANK TO PUMP

QTY: 1

The tank to pump valve shall be air operated with a Class One air cylinder and control switch located on the operator's panel with function plate.

A second tank to pump control shall be provided in the cab on the center console for pump and roll with the auxiliary pump.

PUMP AND ROLL PLUMBED TO MAINT TANK

QTY: 1

The auxiliary pump-and-roll pump shall be plumbed into the main tank-to-pump line downstream of the tank-to-pump valve.

TANK FILL LINE 2" FROM PUMP - SIDE MOUNT

QTY: 1

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

2" AKRON #8800 SERIES - S.S. BALL TANK FILL, SIDE MOUN

QTY: 1

An Akron Brass 2" Generation II Swing-Out Valve shall be provided between the pump discharge manifold and the water tank.

The valve shall have an all brass body with flow optimizing, stainless steel ball, and dual polymer seats.

PUSH/PULL CONTROL FOR TANK FILL

QTY: 1

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

DRIVER SIDE MAIN DISCHARGE #1

QTY: 1

A discharge shall be provided and located at the driver's side pump panel.

The driver's side discharges # 1 shall terminate with NST threads, through the left panel above the main pump intake.

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

2-1/2" AKRON #8800 SERIES - S.S. BALL, DRIVER SIDE #1

QTY: 1

An Akron Brass 2 1/2" Generation II Swing-Out Valve shall be provided for the driver's side #1 discharge.

WATER TENDER

The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats.

DS #1 DISCHARGE - 2-1/2" STRAIGHT NST & 30-DEGREE NST ELBOW

QTY: 1

The discharge valve shall be equipped with a straight 2 1/2" NST adapter that shall be equipped with a 2 1/2" NST, 30-degree, chrome plated elbow.

2-1/2" NST PRESSURE VENTED CAP - DRIVER SIDE DISCHARGE #1

QTY: 1

A 2 1/2 " NST, chrome plated pressure vented cap shall be installed on driver's side #1 discharge.

SWING 1/4 TURN CONTROL FOR DRIVER SIDE DISCHARGE #1 -SIDE MOUNT

QTY: 1

The driver's side # 1 discharge valve shall be controlled by a 1/4 turn swing control handle located on the operator's panel.

INNOVATIVE CONTROLS LIQUID FILLED 2-1/2" PRESS GAUGE SS- DRIVER SIDE DISCHARGE #1

QTY: 1

The driver's side # 1 discharge shall be equipped with a 2.5" Innovative Controls pressure gauge.

The gauge shall have a rugged, corrosion free stainless-steel case and clear scratch resistant molded crystals with captive, O-ring seals to ensure distortion free viewing and seal the gauge.

The gauge shall be filled with glycerin to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from -40F to +160F.

The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous, bronze, bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.

A polished chrome-plated stainless-steel bezel shall be provided to prevent corrosion and protect the lens and gauge case.

The gauge shall have black graphics on a white background.

DRIVER SIDE MAIN DISCHARGE #2

QTY: 1

A discharge shall be provided and located at the driver's side pump panel.

The driver's side discharges # 2 shall terminate with NST threads, through the left panel above the main pump intake.

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

2-1/2" AKRON #8800 SERIES - S.S. BALL, DRIVER SIDE #2

QTY: 1

An Akron Brass 2 1/2" Generation II Swing-Out Valve shall be provided for the driver's side #2 discharge.

WATER TENDER

The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats.

DS #2 DISCHARGE - 2-1/2" STRAIGHT NST & 30-DEGREE NST ELBOW

QTY: 1

The discharge valve shall be equipped with a straight 2 1/2" NST adapter that shall be equipped with a 2 1/2" NST, 30-degree, chrome plated elbow.

2-1/2" NST PRESSURE VENTED CAP - DRIVER SIDE DISCHARGE #2

QTY: 1

A 2 1/2" NST, chrome plated, pressure vented cap shall be installed on driver's side # 2 discharge.

SWING 1/4 TURN CONTROL FOR DRIVER SIDE DISCHARGE #2 -SIDE MOUNT

QTY: 1

The driver's side # 2 discharge valve shall be controlled by a 1/4 turn swing control handle located on the operator's panel.

INNOVATIVE CONTROLS LIQUID FILLED 2-1/2" PRESS GAUGE SS- DRIVER SIDE DISCHARGE #2

QTY: 1

The driver's side # 2 discharge shall be equipped with a 2.5", Innovative Controls pressure gauge.

The gauge shall have a rugged, corrosion free, stainless steel case and clear, scratch resistant, molded crystals with captive, O-ring seals to ensure distortion free viewing and seal the gauge.

The gauge shall be filled with glycerin to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation, and ensure proper operation from -40F to +160F.

The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous, bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.

A polished, chrome-plated, stainless steel bezel shall be provided to prevent corrosion and protect the lens and gauge case.

The gauge shall have black graphics on a white background.

WATER TENDER

OFFICER SIDE MAIN DISCHARGE #1

QTY: 1

A discharge shall be provided and located at the officer's side pump panel.

The officer's side discharges #1 shall terminate with NST threads, through the officer's side panel above the main pump intake.

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

3" AKRON #8800 SERIES - S.S. BALL, VALVE OFFICER SIDE #1, SIDE MOUNT

QTY: 1

An Akron Brass, 3" Generation II, Swing-Out Valve shall be provided for the officer's side #1 discharge.

The valve shall have an all brass body with flow optimizing, stainless steel ball, and dual polymer seats.

OS #1 DISCHARGE - 3" STRAIGHT NST

QTY: 1

The discharge valve shall be equipped with a straight, 3" NST adapter.

3" NSTF X 4" STORZ KOCHER SKE-R 30° ADAPTER WITH CAP OFFICER SIDE DISCHARGE #1

QTY: 1

A 3" NSTF X 4" Storz Kocher, SKE-R 30 adapter with cap shall be provided on the officer's side # 1 discharge.

SWING 1/4 TURN CONTROL FOR OFFICER SIDE DISCHARGE #1 -SIDE MOUNT

QTY: 1

The officer's side, # 1 discharge valve shall be controlled by a 1/4 turn, swing control handle located on the operator's panel.

INNOVATIVE CONTROLS LIQUID FILLED 2-1/2" PRESS GAUGE SS- OFFICER SIDE DISCHARGE #1

QTY: 1

The officer's side, # 1 discharge shall be equipped with a 2.5", Innovative Controls pressure gauge.

The gauge shall have a rugged, corrosion free, stainless steel case and clear, scratch resistant, molded crystals with captive, O-ring seals to ensure distortion free viewing and seal the gauge.

The gauge shall be filled with glycerin to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from -40F to +160F.

The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous, bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.

A polished, chrome-plated, stainless steel bezel shall be provided to prevent corrosion and protect the lens and gauge case.

The gauge shall have black graphics on a white background.

WATER TENDER

CROSSLAY #1, 1-1/2" - PUMPER

QTY: 1

A crosslay hose bed shall be provided and plumbed from the pump in a transverse design, located above the pump enclosure for quick attack deployment. The crosslay hose bed flooring shall be designed to be removable and constructed from brushed finish, perforated aluminum material.

CROSSLAY #1 CAPACITY - 200 FEET OF 1-3/4" HOSE

QTY: 1

Crosslay #1 shall be 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 1-3/4" fire hose.

CROSSLAY #1 - SINGLE STACK HOSE DESIGN

QTY: 1

Crosslay #1 hose bed shall be designed to accommodate the fire hose in a single stack configuration.

1-1/2" NST STRAIGHT ADAPTER THRU DRIVER'S SIDE PANEL @ CROSSLAY

QTY: 1

The crosslay discharge shall terminate through the side panel below the crosslay hosebed, on the driver's side, allowing the hose to be pre-connected.

The crosslay discharge pipe shall be equipped with a chrome 1 1/2" NSTM straight adapter.

CROSSLAY #1, PLUMBING, 2" STAINLESS STEEL PIPING

QTY: 1

The crosslay #1 discharge shall be plumbed utilizing 2" schedule 10 stainless steel piping and/or flexible hose, 45-degree elbows and a limited number of 90 degree sweep elbows in an assembly from the pump to crosslay hose bed.

A minimum of one (1) grooved pipe coupling shall be furnished in this assembly, if necessary, to allow for flex and serviceability.

2" AKRON #8800 SERIES - S.S. BALL, VALVE CROSSLAY #1, DISCHARGE

QTY: 1

An Akron Brass 2" Generation II Swing-Out Valve shall be provided for the crosslay #1 discharge.

The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats.

PUSH/PULL CONTROL CROSSLAY #1

QTY: 1

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

WATER TENDER

INNOVATIVE CONTROLS LIQUID FILLED 2-1/2" PRESS GAUGE SS - CROSSLAY #1

QTY: 1

The crosslay #1 discharge shall be equipped with a 2.5" Innovative Controls pressure gauge.

The gauge shall have a rugged corrosion free stainless-steel case and clear scratch resistant molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge.

The gauge shall be filled with glycerin to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from -40F to +160F.

The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.

A polished chrome-plated stainless-steel bezel shall be provided to prevent corrosion and protect the lens and gauge case.

The gauge shall have black graphics on a white background.

CROSSLAY #2 1-1/2"

QTY: 1

A crosslay hose bed shall be provided and plumbed from the pump in a transverse design, located above the pump enclosure for quick attack deployment.

The crosslay hose bed flooring shall be designed to be removable, constructed from brushed finish, perforated aluminum material.

CROSSLAY #2 CAPACITY - 200 FEET OF 1-3/4" HOSE

QTY: 1

Crosslay #2 shall be 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 1-3/4" fire hose.

CROSSLAY #2 - SINGLE STACK HOSE DESIGN

QTY: 1

Crosslay #2 hose bed shall be designed to accommodate the fire hose in a single stack configuration.

1-1/2" NST STRAIGHT ADAPTER THRU OFFICER'S SIDE PANEL @ CROSSLAY #2

QTY: 1

The crosslay discharge shall terminate through the side panel below the crosslay hosebed, on the officer's side, allowing the hose to be pre-connected.

The crosslay discharge pipe shall be equipped with a chrome 1 1/2" NSTM straight adapter.

CROSSLAY #2, PLUMBING, 2" STAINLESS STEEL PIPING

QTY: 1

The crosslay #2 discharge shall be plumbed utilizing 2" schedule 10 stainless steel piping and/or flexible hose, 45-degree elbows and a limited number of 90 degree sweep elbows in an assembly from the pump to crosslay hose bed.

A minimum of one(1) grooved pipe coupling shall be furnished in this assembly, if necessary, to allow for flex and serviceability.

WATER TENDER

2" AKRON #8800 SERIES - S.S. BALL, VALVE CROSSLAY #2.

QTY: 1

An Akron Brass 2" Generation II Swing-Out Valve shall be provided for the crosslay #2 discharge.

The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats.

PUSH/PULL CONTROL CROSSLAY #2

QTY: 1

The crosslay #2 discharge valve shall be controlled by a push/pull handle located on the operator's panel.

INNOVATIVE CONTROLS LIQUID FILLED 2-1/2" PRESS GAUGE SS - CROSSLAY #2

QTY: 1

The crosslay #2 discharge shall be equipped with a 2.5" Innovative Controls pressure gauge.

The gauge shall have a rugged corrosion free stainless-steel case and clear scratch resistant molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge.

The gauge shall be filled with glycerin to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from -40F to +160F.

The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.

A polished chrome-plated stainless-steel bezel shall be provided to prevent corrosion and protect the lens and gauge case.

The gauge shall have black graphics on a white background.

VINYL END FLAPS FOR ALUMINUM TREADPLATE CROSSLAY COVER W/ QUICK RELEASE BUCKLES

QTY: 1

Vinyl flaps shall be provided at each side of the transverse cross lay compartment secured to the tread plate cross lay cover by quick release buckle and equipped with a strap to each end.

END FLAP COVER BLACK IN COLOR

QTY: 1

The crosslay end flap shall be black in color.

FRONT HINGED CROSSLAY HOSE BED COVER, TREADPLATE

QTY: 1

A 3/16" polished aluminum tread plate cross lay cover shall be provided with a full-length stainless-steel hinge at the front of the cover.

WATER TENDER

ELKHART SIDEWINDER # 8494-01 BUMPER TURRET, 125 GPM - 2"

QTY: 1

An Elkhart Brass model # 8494-01, Sidewinder Wildland Monitor shall be provided and installed on the specified front bumper extension.

The turret shall be controlled in the cab only, using a remotely operated valve, interfaced to a joy stick controller, model # 81172001, mounted in the cab.

The turret shall be equipped with a remote-controlled fog nozzle model # 6000-200E (set at 125 gpm.).

The completed installation shall allow full operation of the turret from the cab.

FRONT BUMPER TURRET @ TOP CENTER FRONT BUMPER

QTY: 1

The bumper turret shall be mounted on the top center of the front bumper.

The turret shall be mounted as tight as possible against the front face of the bumper.

BUMPER TURRET, PLUMBING, 2" STAINLESS STEEL PIPING

QTY: 1

The bumper turret discharge shall be plumbed utilizing 2" schedule 10 stainless steel piping and/or flexible hose, 45-degree elbows and a limited number of 90 degree sweep elbows in an assembly from the pump to the front of the vehicle.

A minimum of one (1) grooved pipe coupling shall be furnished in this assembly to allow for flex and serviceability.

Automatic discharge drains shall be provided at all low points in the plumbing.

ELKHART 2" VALVE FOR BUMPER TURRET

QTY: 1

2" Elkhart valve shall be provided for the bumper turret discharge.

QUICK DISCONNECT FITTING - ELKHART BUMPER TURRET

QTY: 1

The bumper turret shall be equipped with an Elkhart model 81342001.

This feature shall allow the end user to quickly disconnect the turret from the piping.

INNOVATIVE CONTROLS NITE-GLO BLUE/BLEU - 2-1/2" PRESS GAUGE- BUMPER TURRET

QTY: 1

The bumper turret discharge shall be equipped with an Innovative Controls, Nite-Glo, 2 1/2" diameter glycerin filled pressure gauge with pulse and vibration dampening.

The gauge accuracy shall comply with ANSI B40.1 Grade A requirements, temperature range shall be from -40° F to +160° F.

Gauge construction shall be a heavy duty die cast brass case.

Clear, scratch resistant molded crystals with captive O-ring seals, shall be used to ensure distortion free viewing and to seal the gauge.

WATER TENDER

The gauge shall have a white face with black lettering and shall include blue LED backlighting with a blue high operating pressure range.

GAUGE LOCATED IN CAB

QTY: 1

The front turret gauge shall be located in the cab and plumbed to the inlet of the turret valve to provide visual indication of the pump discharge pressure.

TURRET VALVE CONTROLLER

QTY: 1

The bumper turret discharge valve shall be controlled by the joystick in the cab.

SIDE MOUNT PUMP MODULE

QTY: 1

The pump module shall be a self-supported structure mounted independently from the body and chassis cab.

The design must allow normal frame deflection without imposing stress on the pump module structure or side running boards.

The pump module shall be securely mounted to the chassis frame rails.

PUMP MODULE - STEEL CONSTRUCTION

QTY: 1

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

SIDE MOUNT DUNNAGE AREA

QTY: 1

A dunnage area shall be provided above the pump enclosure for equipment mounting and storage. This area shall be furnished with a removable 3/16" aluminum tread plate floor and shall be enclosed on the sides.

NOTE: The size of this storage area may vary when top mounted Crosslays, booster reel(s), etc., are specified and located in this area.

RUNNING BOARD STEPS (NON-AERIALS)

QTY: 1

The driver and officer running board steps shall be fabricated of 3/16" polished aluminum tread plate.

The outside edge on each step shall be fabricated with a double break, return flange.

The steps shall be rigidly reinforced with a heavy-duty support structure.

The running boards shall not form any part of the compartment design and shall be bolted into place with a minimum 1/2" clearance gap between any panel to facilitate water runoff.

GRIP-STRUT INSERT IN DRIVER SIDE RUNNING BOARD STEP

QTY: 1

Grip-Strut anti-slip material insert shall be installed in the driver side running board.

GRIP-STRUT INSERT IN OFFICER SIDE RUNNING BOARD STEP

QTY: 1

WATER TENDER

Grip-Strut anti-slip material insert shall be installed in the officer's side running board.

SIDE MOUNT PUMP PANEL

QTY: 1

The pump operator's control panel shall be located on the driver side of the apparatus.

The pump enclosure side panels shall be completely removable and designed for easy access and servicing.

SIDE MOUNT PANELS - 1/8" BLACK CLAD ALUMINUM

QTY: 1

The left side operator's panel, gauge panel, right side pump panel, and right-side access door shall be fabricated from 1/8" black vinyl clad aluminum with a grained finish.

VERTICALLY HINGED GAUGE PANEL - SIDE MOUNT

QTY: 1

A full width, vertically hinged gauge access panel shall be provided at the operator's position.

Chrome plated positive locks shall be provided along with chain holders to prevent the front of the gauge panel from coming in contact with other panels when open.

OFFICER SIDE VERTICALLY HINGED PUMP ACCESS DOOR - SIDE MOUNT

QTY: 1

The officer's side pump panel shall be split and vertically hinged to provide complete access to the pump and plumbing on the officer's side of the pump enclosure.

The panels shall be equipped with stainless steel hinges and secured with push type locks to hold the panels closed.

The drains located on the officer's side panel shall be fastened to the lower panel, which shall be stationary.

PANEL FASTENERS

QTY: 1

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

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

CAPS AND ADAPTERS SAFETY TETHER - CABLES

QTY: 1

All applicable discharge and suction caps plugs and adapters shall be equipped with tether cables and secured to the vehicle.

WATER TENDER

PUMP PANEL DISCHARGE/SUCTION TRIM PLATES, HIGH POLISHED

QTY: 1

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

DISCHARGE GAUGE TRIM BEZELS

QTY: 1

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

IDENTIFICATION PLATES

QTY: 1

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

PUMP OPERATOR'S PANEL, FULL WIDTH LIGHT SHIELD/STEP

QTY: 1

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

The light shield shall be fabricated from aluminum tread plate, which shall also serve as a step.

The step shall be a minimum of 8" deep X the width of the pump panel.

(Note: On apparatus with lowered style Crosslays, the light shield shall be from the back of the Crosslays to the rear of the pump house).

The light shield shall be equipped with the following lights:

AMDOR LUMA BAR H2O SUPER BRIGHT LED - LIGHT SHIELD/STEP

QTY: 1

Two (2) 20" Amdor Luma Bar H2O super bright led strip lights.

One (1) light under the operator's panel light shield shall be actuated when fire pump is engaged in addition to the pump engaged light.

OFFICER SIDE PUMP PANEL, FULL WIDTH LIGHT SHIELD/STEP

QTY: 1

The officer side pump panel shall be equipped with a light shield/step that shall be full width of the panel and shall be positioned to cover the lights and prevent glare.

The light shield shall be fabricated from aluminum tread plate, which shall also serve as a step.

The step shall be a minimum of 8" deep X the width of the pump panel.

The light shield shall be equipped with the following lights:

WATER TENDER

AMDOR LUMA BAR H2O SUPER BRIGHT LED - LIGHT SHIELD/STEP

QTY: 1

Two (2) 20" Amdor Luma Bar H2O super bright led strip lights.

The lights shall be switched with the operator panel lights.

AIR HORN CONTROL BUTTON ON PUMP PANEL

QTY: 1

Pump panel air horn actuation button labeled "EVACUATION" in white letters with a red background.

5/8" PUMP BY-PASS COOLER ON PUMP PANEL

QTY: 1

5/8" Pump cooler (Bypass Line).

PUMP PRESSURE & VACUUM TEST PORTS @ PANEL

QTY: 1

The pump panel shall be equipped with Vacuum & Pressure test plugs to allow for test equipment to monitor pump pressure and vacuum levels.

Chrome plugs and labels shall be provided for the test ports.

4" INNOVATIVE CONTROLS NIGHT-GLO MASTER RESSURE AND COMPOUND GAUGES

QTY: 1

One (1) 4" diameter pressure gauge (labeled: "PRESSURE") and one (1) 4" diameter compound vacuum gauge (labeled: "INTAKE") shall be provided.

The master gauges shall be Innovative Controls Nite-Glo, glycerin filled.

The pressure gauge shall have a white face with black lettering and shall include white LED backlighting with a black high operating pressure range.

The intake gauge shall have a white face with black lettering and shall include white LED backlighting with a burgundy high operating pressure range.

PRESSURE & COMPOUND GAUGE RANGES - SINGLE STAGE

QTY: 1

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

CLASS ONE "ENFO IV" FOR SAE J1939 ENGINES

QTY: 1

A Class 1 "ENFO IV" display head shall be provided for the SAE J1939 engine, to display the engine oil pressure, engine water temperature, engine RPM and chassis volt meter functions.

The display head shall include the required NFPA warning lights and alarms.

WATER TENDER

PUMP OVERHEAT INDICATOR, MC PRODUCTS

QTY: 1

An MC Products pump overheat indicator with buzzer shall be provided on the pump operator's panel to provide a visual flashing signal before a critical pump temperature is reached.

The indicator shall be set to warn at +/- 125°F.

PUMP UL CERTIFICATION - 750 GPM & UP

QTY: 1

The pump shall be third party performance tested to meet the requirements of NFPA-1901.

To ensure top quality and integrity, the test company shall be Underwriters Laboratories (UL).

There will be no exceptions.

WATER TANK 2500-GAL POLY WETSIDE

QTY: 1

The tank shall have a capacity of 2500 U.S. gallons and shall be Wet-side design. The tank shall be constructed from polypropylene material.

WATER TANK FINISH 2500-GAL POLY WETSIDE - PAINTED

QTY: 1

The exterior of the tank shall be provided with a painted finish.

WATER TANK LID - POLY

QTY: 1

The tank cover shall be constructed of 1/2" thick PT3 polypropylene and UV stabilized, to incorporate a multi-piece locking design, which allows for individual removal and inspection if necessary.

The tank cover(s) shall be flush or recessed 3/8" from the top of the tank and shall be fused to the tank walls and longitudinal partitions for maximum integrity.

Each one of the covers shall have hold downs consisting of 2" minimum polypropylene dowels spaced a maximum of 40" apart.

These dowels shall extend through the covers and will assist in keeping the covers rigid under fast filling conditions.

A minimum of two lifting dowers shall accommodate the necessary lifting hardware.

WATER TANK 6" OVERFLOW & VENT PIPE

QTY: 1

The fill tower shall be fitted with an integral 6" I.D. schedule 40 PVC combination overflow/vent pipe running from the fill tower through the tank to a 6" coupling flush mounted into the bottom of the tank to allow water to overflow behind the chassis rear axle.

WATER TENDER

WATER TANK SUMP

QTY: 1

The tank sump shall be a minimum of 10" wide x 10" long x 3" deep.

An anti-swirl plate shall be mounted inside the sump, approximately 1" above the bottom of the sump.

WATER TANK SUMP CONNECTION; ONE (1) FRONT

QTY: 1

The front bulkhead of the water tank shall be fitted with one (1) tank sump connection.

WATER TANK 3" SUMP DRAIN

QTY: 1

A 3" drain plug shall be provided.

WATER TANK FLANGES/OUTLETS

QTY: 1

There shall be two (2) standard tank outlets; one for tank-to-pump suction line which shall be a minimum of 4" coupling and one for a tank fill line which shall be a minimum of a 2" NPT coupling.

All tank fill couplings shall be backed with flow deflectors to break up the stream of water entering the tank.

WATER TANK CONSTRUCTION POLY - WETSID

QTY: 1

The Poly water tank shall be constructed of PT3 polypropylene material. This material shall be a non-corrosive stress relieved thermoplastic and UV stabilized for maximum protection. Tank shell thickness may vary depending on the application and may range from 1/2 to 1" as required. Internal baffles are generally 3/8" in thickness.

The tank shall be of a specific configuration and is so designed to be completely independent of the body and compartments. Joints and seams shall be fused using nitrogen gas as required and tested for maximum strength and integrity. The tank construction shall include PolyProSeal technology wherein a sealant shall be installed between the plastic components prior to being fusion welded. This sealing method will provide a liquid barrier offering leak protection in the event of a weld compromise. The top of the booster tank is fitted with removable lifting assembly designed to facilitate tank removal. The transverse and longitudinal swash partitions shall be manufactured of a minimum of 3/8" PT3 polypropylene. All partitions shall be equipped with vent and air holes to permit movement of air and water between compartments. The partitions shall be designed to provide maximum water flow. All swash partitions interlock with one another and are completely fused to each other as well as to the walls of the tank. All partitions and spacing shall comply with NFPA 1901. The walls shall be welded to the floor of the tank providing maximum strength as part of the tank's unique Full Floor Design. Tolerances in design allow for a maximum variation of 1/8" on all dimensions.

WATER TANK CAPACITY CERTIFICATION

All tanks shall be tested and certified as to capacity on a calibrated and certified tilting scale. Each tank shall be weighed empty and full to provide precise fluid capacity. Each Poly-Tank's III is delivered with a Certificate of Capacity delineating the weight empty and full and the resultant capacity based on weight.

WATER TANK TANKNOLOGY TAG

A tag shall be installed on the apparatus in a convenient location and contain pertinent information including a QR code readable by commercially available smart phones. The information contained on the tag shall include the capacity of the water and foam (s), the maximum fill and pressure rates, the serial number of the tank, the date of manufacture, the

WATER TENDER

tank manufacturer, and contact information. The QR code will allow the user to connect with the tank manufacturer for additional information and assistance.

WATER TANK ISO CERTIFICATION

The tank must be designed and fabricated by a tank manufacturer that is ISO 9001:2000 certified in each of its locations. The ISO certification must be to the current standard in effect at the time of the design and fabrication of the tank.

FIRE RES - TANK VISION #WLA300-A00 LED WATER TANK GAUGE - PRIMARY

QTY: 1

A Fire Research, model #WLA300-A00, "TANKVISION" gauge that shows the actual volume of water in the tank shall be provided on the pump operator's panel. The "TANKVISION" gauge is designed for both ease of operation and installation. The "TANKVISION" gauge utilizes ultra-bright multi-color LEDs for sunlight readability and also uses 2 specially designed wide-viewing lens for 180° of clear viewing. The "TANKVISION" gauge utilizes a pressure sender to measure the liquid volume. The gauge shall be equipped with a self-calibration feature that allows the LEDs TANKVISION gauge to be used on tanks of different shapes and sizes.

Features:

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

FIRE RESEARCH LED MINI GAUGE IN CAB

QTY: 1

A Fire Research model, WLA205-A00 miniature "TANKVISION" gauge that shows the actual volume of water in the tank shall be provided in the cab. The "TANKVISION" gauge is designed for both ease of operation and installation. The "TANKVISION" gauge utilizes ultra-bright LEDs for sunlight readability and also uses 2 specially designed wide-viewing lens for 180° of clear viewing. The "TANKVISION" gauge utilizes a pressure sender to measure the liquid volume. The gauge shall be equipped with a self-calibration feature allows the TANKVISION gauge to be used on tanks of different shapes and sizes.

FIRE RES WATER LEVEL - 1/4" NPT PRESS TRANS @ BOTTOM TANK

QTY: 1

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

FIRE RES WATER LEVEL - WLA290 RELAY DRIVER FOR MONSTER LIGHT

QTY: 1

A Fire Research model #WLA290, remote relay module shall be provided to provide outputs for large indicator lights on the side of the vehicle.

FIRE RESEARCH LED MAX VISION - ALL LIGHTS BLUE

QTY: 1

WATER TENDER

All MaxVision lights to be programmed with blue lights only.

MONSTER WATER LEVEL GAUGE, EA. SIDE OF BODY - FRC MAXVISION TYPICAL

QTY: 1

A large light water level gauge system shall be provided on both sides of the body.

Each side shall have one (1) Fire Research MaxVision LED light mounted on the body as directed.

The light shall have a wide-angle diffusion lens in front of the LEDs.

The light shall be mounted as to indicate the following water levels and shall be programmed to the "Typical View" to include the following colors to indicate the water level in 1/4 tank increments:

- Top light with blue LEDs Full tank
- Second light with blue LEDs 3/4 tank
- Third light with blue LEDs 1/2 tank
- Fourth light with blue LEDs 1/4 tank

The bottom LEDs shall flash red to indicate under 1/4 tank and shall show a down chasing pattern when the water level drops under 1/8 tank.

To prevent distraction to drivers, this tank level gauge shall be wired to display only when the park brake is engaged.

MONSTER WATER LEVEL GAUGE, REAR OF BODY - FRC MAXVISION TYPICAL

QTY: 1

A large light water level gauge system shall be provided on the rear of the body.

One (1) Fire Research MaxVision LED light mounted on the rear of the body.

The light shall have a wide-angle diffusion lens in front of the LEDs.

The light shall be mounted as to indicate the following water levels and shall be programmed to the "Typical View" to include the following colors to indicate the water level in 1/4 tank increments:

- Top light with blue LEDs Full tank
- Second light with blue LEDs 3/4 tank
- Third light with blue LEDs 1/2 tank
- Fourth light with blue LEDs 1/4 tank

The bottom LEDs shall flash red to indicate under 1/4 tank and shall show a down chasing pattern when the water level drops under 1/8 tank.

To prevent distraction to drivers, this tank level gauge shall be wired to display only when the park brake is engaged.

DIRECT TANK FILL, OS REAR, 4" FIREMENS FRIEND, 2-1/2" NST FITTING

QTY: 1

WATER TENDER

One (1) 2-1/2" NST direct tank fill shall be provided at the rear of the body, on the officer side, as low as possible. The direct tank fill shall be gated with a 4" Fireman's Friend (TTMA 8-bolt attachment pattern) check-type fill valve. The fill valve shall be capable of flowing at a rate in excess of 1,000 gallons per minute and will be of a self-deflecting design, requiring no additional diffusion device. The fill valve shall be constructed of stainless steel, with a spring actuated piston-type sealing mechanism to minimize seal wear and provide positive sealing of the valve. The fill shall be equipped with a 30-degree elbow terminating with a 2-1/2" NST female swivel connection.

10" SQUARE NEWTON DUMP, MANUALLY OPERATED - REAR - T TANK

QTY: 1

The rear of the water tank shall be equipped with a 10" Newton Stainless Steel Dump Valve, model #1060-34 with a left side mounted manual actuation lever. The dump valve setup shall be capable of discharging the water tank contents at a rate of at least 1800 G.P.M.

REAR DUMP SS SWIVEL AND EXTENSION CHUTE

QTY: 1

The rear dump shall be supplied with a stainless-steel swivel chute (Model #60125SW-34), and a stainless steel 36" manual telescoping chute (Model #4036-34). This shall provide the user with the ability to dump water to the rear or 10" past either side of the apparatus body.

WATER TANK MOUNTING UPF WETSIDE

QTY: 1

The tank shall be mounted to the truck chassis utilizing a structural tubular steel sub-frame, which shall provide a properly cushioned mounting surface for the tank. Captive mounting brackets adequately sized for the tank shall be provided to attach the tank to the sub-frame utilizing a cushioned isolator for positive and negative vertical retention. The sub-frame shall be bolted to brackets fastened to the side of the truck chassis. The front mounts are to be spring-loaded to allow for chassis flexing under extreme road conditions.

APPARATUS BODY GENERAL DESCRIPTION

QTY: 1

The body and side compartment assemblies shall be designed and assembled to provide maximum strength and durability under all operating conditions. Each compartment provided shall have a minimum load capacity of 500 pounds, providing a total of at least 1000 pounds of storage space.

Special attention shall be taken to minimize corrosion on all fabricated parts and structural members of the body. All bolt-on panels shall be provided with a dissimilar metals isolation barrier to prevent electric corrosion.

The apparatus design shall incorporate the vehicle requirements as specified in the latest revision of NFPA 1901 as required for a "Mobile Water Supply" type apparatus.

The body and side compartment assemblies shall be designed and assembled to provide maximum strength and durability under all operating conditions. Each compartment provided shall have a minimum load capacity of 500 pounds, providing a total of at least 1000 pounds of storage space.

Special attention shall be taken to minimize rust on all fabricated parts and structural members of the body. All bolt-on panels shall be provided with a dissimilar metals isolation barrier to prevent electric corrosion.

BODY MATERIALS

WATER TENDER

Bodies that are specified with a painted finish shall be constructed of smooth aluminum material. Bodies that are specified with an unpainted finish shall utilize smooth aluminum for the compartment section to assure a positive seal on the doors, and aluminum tread plate shall be used for the fender and rear body panel for added durability.

SWEEP-OUT COMPARTMENTS

QTY: 1

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

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

Compartment with roll-up style doors shall have the external floor flange stepped down, 1/2" high x 2" deep, to produce a sealing surface for the roll-up doors below the compartment floor.

The sweep out design shall also permit easy cleaning.

COATED FASTENERS

QTY: 1

All exterior fasteners shall be coated stainless steel screws.

Screw threads shall be coated with reusable, self-locking, sealing material to provide vibration resistance.

Screw heads shall be coated with a sealing element to prevent galvanic corrosion between dissimilar metals.

Non-coated screws shall only be provided as part of vendor supplied component installations.

There will be no exceptions.

COMPARTMENT LOUVERS

QTY: 1

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

WATER TENDER

LOUVER FILTERS

QTY: 1

To minimize dust and dirt from drafting into the compartments through the compartment louver, each louver shall be equipped with a filter material mounted on the exterior of the louver.

ACCESS PANELS

QTY: 1

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

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

BODY 3/16" ALUMINUM; WETSIDE 2500

QTY: 1

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

SUPER STRUCTURE, WETSIDE TANKER, ALUMINUM BODIES

QTY: 1

The body super structure shall be an all welded configuration utilizing a combination of 3" x 1-1/2" 6061-T6 thick walled structural tubing and 6061 structural channel. This structure shall be designed to totally support the full length and width of the body and shall be welded to the body side compartments by use of reinforcement plates to incorporate the compartments into an integral part of the body weldment. The super structure shall be bolted to the sides of the chassis frame at a minimum of four (4) points.

STEPPING, STANDING, & WALKING SURFACES

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

100" WIDE BODY WITH NO COMPARTMENT CHANGE (WETSIDE)

QTY: 1

The fire body shall be 100" wide to provide the maximum amount of usable hose bed space, approximately 76" wide, and to extend the body fenderettes outward for better tire tread coverage.

WATER TENDER

STANDARD FENDER - NO STORAGE

QTY: 1

The standard body fender shall be provided, no special storage options have been specified for the fender area.

FRONT COMPARTMENT 3/4" DRAIN HOLES

QTY: 1

Each front compartment shall have a 3/4" drain hole plugged with a rubber stopper.

TA TANK WETSIDE LE-2500-R-MODIFIED

QTY: 1

DRIVERS SIDE COMPARTMENTATION

One low side compartment, with a roll up door, forward of the rear wheels. Overall compartment dimensions 34" High x 49" Wide x 26" Deep, with a door opening of 31-1/2" High x 46" Wide. Internal compartment height 34" High in the forward 14" Deep area, 29" High in the rear 12" Deep area.

OFFICERS SIDE COMPARTMENTATION

One low side compartment, with a roll up double door, forward of the rear wheels. Overall compartment dimensions 34" High x 49" Wide x 26" Deep, with a door opening of 31-1/2" High x 46" Wide. Internal compartment height 34" High in the forward 14" Deep area, 29" High in the rear 12" Deep area.

ROLL-UP DOORS

QTY: 1

Roll-up doors shall be provided on all compartments.

The roll-up doors shall be constructed from aluminum extruded slats which shall have a flexible seal between each slat for proper sealing of the door.

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

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

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

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

AMDOR BRAND ROLL-UP DOORS. SATIN FINISH

QTY: 1

The roll-up doors shall be Amdor brand roll-up doors. They should be equipped with a satin finish and a dual durometer slat seal. The slats shall be made from a 1" double-wall aluminum and have a continuous ball and socket hinge joint. The interior of the door shall be made of a smooth interior door curtain, preventing equipment hang-ups. The bottom panel flange shall have a stainless-steel lift bar latching system. The lifting bar will have a cut out for easy access if using gloves.

WATER TENDER

REAR MUD FLAPS - NO LOGO

QTY: 1

Heavy duty mud flaps with NO logo shall be provided behind the rear wheels.

MOLDED BLACK RUBBER FENDERETTES, TANDEM AXLE BODIES

QTY: 1

The tandem rear fenders shall be trimmed with replaceable, bolt-in, molded black rubber fenderettes.

The fenderettes shall be secured to the body with stainless steel threaded fasteners along the internal perimeter of the wheel well.

Rubber welting shall be installed between the fenderettes and the body fender.

STAINLESS DOOR SILL PROTECTORS INSIDE ALL BODY

QTY: 1

A 90 deg angle door sill protector, fabricated from 18 gauge brushed finish stainless steel shall be installed on the bottom external edge of each body compartment door opening to help protect this area from paint chipping.

COMPARTMENT TOPS (TANKERS)

QTY: 1

COMPARTMENT TOPS

Compartment tops shall be covered with polished aluminum tread plate on both sides.

TREAD PLATE OVERLAY, FRONT OF SIDE COMPARTMENTS (WRAP AROUND)

QTY: 1

The front face of the side compartments, next to the driver and officer side pump panels shall be overlaid with aluminum tread plate full height protection.

The protection panel shall cover the entire front face of the compartment and shall wrap around the corner to the door opening.

REAR BODY PANEL

QTY: 1

The rear body panel shall extend the full width of the body side sheets. This panel shall extend from the base of the body to the lower portion of the water tank. The panel shall be bolted in place and shall be fully removable. The rear body panel material shall be aluminum tread plate as standard. If Chevron striping is specified for the rear of the body, then smooth aluminum shall be utilized.

REAR I-ZONE POSTS

QTY: 1

(2) Two extruded aluminum handrail sections shall be provided, with brackets assembled under the upper level rear steps. Brackets shall consist of a receiver and a removable 1 1/2" pole with restraining pin.

BODY RUB RAILS, TREAD PLATE

QTY: 1

WATER TENDER

Sacrificial, aluminum tread plate, rub rails shall be mounted at the base of the body, extending outward a minimum of 3/4", downward 2", and flange inward 1". The rub rails shall extend the full length of the main body and out to the rear step or wrap around the corners. Rub rails shall be bolted to the body from the bottom side of the compartment area, so that it does not damage the body side panels on initial impact and providing for ease of replacement.

TWO (2) VERTICAL RAILS ON REAR

QTY: 1

Two (2) vertical rails shall be mounted on the rear edge of the beavertails, one (1) each side.

ONE (1) HANDRAIL, BELOW HOSE BED LEVEL

QTY: 1

One (1) horizontal, full width handrail shall be installed on the rear, below the level of the hose bed.

HANDRAIL ABOVE PUMP PANEL, EACH SIDE

QTY: 1

Two (2) vertical handrails shall be mounted above each pump panel, (1) each side.

GRAB RAILS, KNURLED ALUMINUM EXTRUSION

QTY: 1

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

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

Grab rails shall be provided at the following specified locations.

Additional grab rails shall be provided adjacent to any additional steps specified to comply with NFPA 1901.

AUSTIN CHROME FOLDING STEP(S), BODY FRONT, DRIVER SIDE

QTY: 1

Austin Hardware model FS-200 CHR large folding step(s), made of high strength die cast aluminum, with a textured chrome plate finish, shall be provided on driver side body front to provide NFPA compliant access (maximum 18" height between steps) to an upper horizontal walking surface (compartment cap, dunnage area, fabricated step, or upper body compartments).

AUSTIN CHROME FOLDING STEP(S), BODY FRONT, OFFICER SIDE

QTY: 1

Austin Hardware model FS-200 CHR large folding step(s), made of high strength die cast aluminum, with a textured chrome plate finish, shall be provided on officer side body front to provide NFPA compliant access (maximum 18" height between steps) to an upper horizontal walking surface (compartment cap, dunnage area, fabricated step, or upper body compartments).

WATER TENDER

AUSTIN CHROME FOLDING STEP(S). BODY REAR. DRIVER SIDE

QTY: 1

Austin Hardware model FS-200 CHR large folding step(s), made of high strength die cast aluminum, with a textured chrome plate finish, shall be provided on driver side body rear to provide NFPA compliant access (maximum 18" height between steps) to an upper horizontal walking surface (compartment cap, dunnage area, fabricated step, or upper body compartments).

AUSTIN CHROME FOLDING STEP(S). BODY REAR. OFFICER SIDE

QTY: 1

Austin Hardware model FS-200 CHR large folding step(s), made of high strength die cast aluminum, with a textured chrome plate finish, shall be provided on officer side body rear to provide NFPA compliant access (maximum 18" height between steps) to an upper horizontal walking surface (compartment cap, dunnage area, fabricated step, or upper body compartments).

PAINTED REAR TOW EYES. BELOW BODY

QTY: 1

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

ZICO 2-ARM QUIC-LIFT PORTABLE TANK SYSTEM (OFFICER SIDE)

QTY: 1

A Zico PTS-HA "Quic-Lift" Hydraulic Portable Tank System shall be provided on the officer side body compartment cap. The unit shall consist of two (2) high-strength aluminum casting sets, hydraulic actuators, capable of storing a 36" high portable tank and sustain a maximum load of 500lbs. The system shall be installed to accommodate the folding tank. The system shall include NFPA compliant flashing lights when the tank rack is deployed. Switching shall be located on the officer side pump panel in an enclosed housing, with an audible and visual alarm installed on the officer side rear body panel.

TANK RACK DESIGNED FOR 3000 GALLON FOLDING TANK

QTY: 1

The specified portable tank storage system shall be designed to carry a 3000-gallon portable water tank with approximate dimensions of 159" Long x 7" Wide x 29" Tall.

Note: If customer supplied water tank exceeds these dimensions the customer must provide tank dimensions so the tank rack can be sized properly.

ENCLOSURE FOR FOLDING TANK [PAINTED]

QTY: 1

The above specified portable tank storage shall be enclosed on the front, rear, top, and outboard side. The top and outboard side shall be 1/8" painted aluminum plate. Two (2) retaining straps shall be installed on the inside of the enclosure to secure the tank inside the rack and prevent the tank from contacting the side of the body or elliptical tank.

WATER TENDER

HOSE STORAGE ON DRIVER LOW SIDE COMPARTMENT CAP

QTY: 1

A dead lay hose storage area shall be installed on the driver's side compartment cap. The storage area shall be constructed of 1/8" aluminum and shall be open on the top and at each end. The floor shall be constructed of slatted aluminum extrusion properly spaced for ventilation. Velcro retaining straps shall be installed on each end of the storage area, as well as across the top of the well. The well shall be approximately 9" wide x 8" high x full length of the body.

SUCTION HOSE STORAGE SIDE OF BODY ON DRIVER SIDE

QTY: 1

The suction hoses shall be located on the body side panels. They will be on the driver side of the apparatus.

SUCTION HOSE TROUGHS - TWO

QTY: 1

Two (2) polished, extruded aluminum adjustable hose trough(s) shall be provided to accommodate the suction hoses. Two (2) Velcro hose holders shall be furnished on each trough.

TWO (2) 10' SECTIONS OF 6" KOHECK LIGHTWEIGHT SUCTION HOSE

QTY: 1

Two (2) 10' sections of six (6) inch Kocheck (PVC) suction hose with lightweight hard coat couplings shall be furnished. Couplings shall include a long handle with a female swivel on one end and a rocker lug male on the other. All threads shall be six (6) inch N.S.T.

6" NST. KOHECK LOW LEVEL STRAINER WITH MOUNTING BRACKET

QTY: 1

A 6" N.S.T. Kocheck LL60 low level type strainer(s) with integral jet siphon shall be provided and attached to the suction hose. A Kocheck LLMB compartment mounting bracket shall also be provided to store the strainer(s) when not in use.

MANUAL PULL OUT STEP BELOW REAR BODY

QTY: 1

A manual pull out step with a grip strut insert shall be provided. Location will be under rear of body.

ADJUSTABLE SHELF DESCRIPTION - RESCUE

QTY: 1

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

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

ADJUSTABLE SHELF(S) LOCATED L-1

QTY: 1

Located in the left side compartment #1

ADJUSTABLE SHELF(S) LOCATED R-1

QTY: 1

Located in the right-side compartment #1

GENERAL PAINT DESCRIPTION

QTY: 1

WATER TENDER

The apparatus body shall be painted with Sikkens paint product. The paint process shall meet or exceed current state regulations concerning paint operations. Pollution control shall include measures to protect the atmosphere, water, and soil. Contractor shall, upon demand, provide evidence that the manufacturing facility is in compliance with State EPA rules and regulations.

The exterior shall have no mounted components prior to painting to assure full coverage of metal treatments and paint to the exterior surfaces of the body. Any vertically or horizontally hinged smooth-plate compartment doors shall be painted separately to assure proper paint coverage on body, door jambs and door edges.

Paint process shall feature Sikkens high solid LV products and be performed in the following steps:

- Corrosion Prevention - all aluminum surfaces shall be pre-treated with the Alodine 5700 conversion coating to provide superior corrosion resistance and excellent adhesion of the base coat.
- Sikkens Sealer/Primer LV - acrylic urethane sealer/primer shall be applied to guarantee excellent gloss hold-out, chip resistance and a uniform base color.
- Sikkens High Solid LVBT650 (Base coat) - a lead-free, chromate-free high solid acrylic urethane base coat shall be applied, providing excellent coverage and durability. A minimum of two (2) coats shall be applied.
- Sikkens High Solid LVBT650 (Clear coat) - high solid LV clear coat shall be applied as the final step in order to ensure full gloss and color retention and durability. A minimum of two (2) coats shall be applied.

Any location where the material is penetrated after painting, for the purpose of mounting steps, hand rails, doors, lights, or other specified components shall be treated at the point of penetration with a corrosion inhibiting pre-treatment (ECK Corrosion Control). The pre-treatment shall be applied to the aluminum sheet metal or aluminum extrusions in all locations where the aluminum has been penetrated. All hardware used in mounting steps, hand rails, doors, lights, or other specified components shall be individually treated with the corrosion inhibiting pre-treatment.

After the paint process is complete, the gloss rating of the unit shall be tested with a 20-degree gloss meter. Coating thickness shall be measured with a digital MIL gauge and the orange peel with a digital wave scan device.

GENERAL PRIMER & PREP DESCRIPTION - "LE" ELIP TANKER

QTY: 1

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

WATER TENDER

GENERAL FINISH PAINT DESCRIPTION

QTY: 1

The body shall be finish sanded and prepared for final paint.

Upon completion of final preparation, the body shall be painted utilizing the highest quality, state of the art, low V.O.C., polyurethane base paint.

Finish paint shall be applied in multiple coats to ensure proper paint coverage with a high gloss finish.

OTHER 2-DR SINGLE COLOR BY CHASSIS MANUFACTURER

QTY: 1

The commercial cab exterior shall be finish painted in a single color by the chassis manufacturer with Purchaser's choice of color as available.

COMMERCIAL CAB PAINT FINISH - OTHER

QTY: 1

The chassis shall be painted and detailed as provided from the chassis OEM and shall meet their quality guidelines.

WHEEL AND HUB PAINT - AS PROVIDED

QTY: 1

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

BODY BUFFING & FINISH - "LE" TANKER

QTY: 1

The entire body shall be buffed and detailed.

INSIDE/UNDERSIDE BODY PAINTED BLACK

QTY: 1

The inside and underside areas of the complete body assembly shall be painted black using a Sikkens paint system, prior to the installation of the body on the chassis or torque box.

JOB COLOR COMPARTMENT INT W/SPATTER PAINT - 'LE' ELLIPTICAL

QTY: 1

The interior of the compartments shall be finish painted job color with a scuff resistant webbing type paint of a contrasting color applied over the painted surfaces.

FENDER COMPARTMENT INTERIOR - JOB COLOR

QTY: 1

The interior of the fender storage compartments (if fender compartments are specified) shall be finish painted job color.

PUMPHOUSE & PLUMBING PAINTED BLACK

QTY: 1

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

WATER TENDER

SINGLE COLOR BODY PAINT SCHEME - 'LE' ELLIPTICAL/WETSIDE

QTY: 1

The body paint finishes shall be Sikkens paint system in a single color, to match customer furnished paint codes and requirements.

"TUF-KOTE" UNDER SEAL - TANDEM AXLE

QTY: 1

Upon apparatus completion, the underside of the apparatus shall have anti corrosion film applied to help inhibit rust and the corrosion process. The semi-firm wax film shall be applied by air spray method. The film shall be applied as a minimum to the chassis major components such as: chassis frame rails and cross members, axles, springs, drive line components, lower radiator supports, fuel tank, air tanks, running boards, bumper apron and other related components.

The underside of the cab and body shall have the film applied to the following areas: cab steps, front gravel shield and underside of battery box, body substructure, underside of all body compartments, running board supports and rear step supports. No film shall be directly applied to the exhaust system or wheel wells.

NOTE: The film shall remain semi-firm to promote self-sealing. The film may leave a light tinted color to those areas treated.

PINT OF TOUCH-UP PAINT

QTY: 1

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

FINALIZATION & DETAILING - LE ELLIPTICAL/WETSIDE TANKER

QTY: 1

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

SCOTCH-CAL W/ DROP SHADOW LETTERING ON FRONT CAB DOORS

QTY: 1

Scotch-Cal with drop shadow lettering shall be provided on the cab drivers and officer's doors per the fire department requirements.

The design of the lettering on the cab doors shall be designed to fit in the 496 sq. inches available.

3" LETTERING ON FRONT CAB DOORS

QTY: 1

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

SCOTCH-CAL W/ DROP SHADOW LETTERING ON BODY SIDE SHEET

QTY: 1

Scotch-Cal with drop shadow lettering shall be provided on the body side sheet per the fire department requirements.

The design of the lettering on the body side sheet shall be designed to fit in the 2500 sq. inches available.

6" LETTERING ON BODY SIDE SHEET

QTY: 1

WATER TENDER

Lettering provided on the body side sheet shall be 6" high.

FRONT CAB DOOR TEXT LINE 1 - SEE DOOR DECAL IN PHOTO SECTION

QTY: 1

SIDE OF BODY TEXT LINE 1 - WWW.CHELANFD3.ORG

QTY: 1

SIDE OF BODY TEXT LINE 2 - FIRE

QTY: 1

SIDE OF BODY TEXT LINE 3 - LEAVENWORTH

QTY: 1

6" SCOTCH-LITE STRIPE ON CAB AND BODY - TANKER

QTY: 1

SCOTCH-LITE STRIPE

A six (6) inch high "Scotch-Lite" stripe will be provided. The stripe will be applied on a minimum of 60 percent of each side of the unit, 60 percent on the rear of the unit and 40 percent on the front of the unit. The Scotch-Lite stripe layout will be determined by the Fire Department.

WHITE/RED SCOTCH-LITE W/ CHECKERED DESIGN

QTY: 1

The Scotch-Lite shall be white/red in color and shall be in a checkered design.

REAR CHEVRON STRIPING

QTY: 1

REAR CHEVRON STRIPING

ENTIRE REAR

QTY: 1

The entire rear of the truck shall be covered with alternating strips of reflective striping.

6" FULL REAR ORALITE CHEVRON STRIPING

QTY: 1

The striping shall be 6" Oralite reflective striping.

RED & FLUORESCENT YELLOW ORALITE V98

QTY: 1

The Oralite V98 reflective tape shall be 012 red and L1 fluorescent yellow in color.

ROAD SAFETY KITS

QTY: 1

A road safety kit shall be furnished with the following equipment:

- 2 1/2 lb. B-C fire extinguisher
- Triangle safety reflectors.

TWO (2) ZICO #SAC-44 FOLDING WHEEL CHOCKS, (2) MTD DRIVER SIDE L1 COMPARTMENT

QTY: 1

Two (2) ZICO #SAC-44 folding wheel chocks shall be mounted to the floor of L1 Compartment.

WATER TENDER

COMMERCIAL CHASSIS -1 YEAR NEW PRODUCT WARRANTY

QTY: 1

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

Under this warranty, KME's obligation is limited to the repair or replacement at KME's option, at its factory, by its representative, or by its authorized service facility, of any part found to be defective by KME. If KME deems it necessary, all parts for which warranty claim is made will be returned to KME, transportation charges prepaid, for examination by KME who will be the sole judge as to whether such part was defective in material or workmanship under normal use, maintenance or service. The Commercial Chassis Warranty start date shall begin upon the departure of the completed apparatus from KME (unless chassis is customer provided, at which point the chassis warranty start period will be as agreed upon between the customer and the chassis dealership from whom it was purchased).

10 YEAR BODY STRUCTURAL WARRANTY

QTY: 1

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

10 YEAR BODY CORROSION WARRANTY. USE W/COMMERCIAL CHASSIS

QTY: 1

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

PAINT FINISH WARRANTY. TEN (10) YEAR

QTY: 1

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

WATER TENDER

5 YEAR LETTERING WARRANTY

QTY: 1

The apparatus manufacturer will provide a five (5) year warranty against defects in material and workmanship for all graphics processes. Any valid claims must be made in writing within 15 days of the determination of any defects to the manufacturer's fire apparatus. The manufacturer will at its option make any necessary repairs either at a local authorized service center or at the factory if required. The manufacturer will make the final decision as to where the repairs are to be made and any transportation cost is the owner's responsibility. The manufacturer will at its option, repair or replace any verified defects in workmanship or materials at no cost to the owner provided all the requirements of this warranty have been met.

The manufacturer will not be liable to the original purchaser or anyone else for consequential, incidental, special or direct damages, including, but not limited to, any claims for loss of profits, downtime, loss of use or inconvenience. THE COMPANY MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, AND SPECIFICALLY, DISCLAIMS ANY IMPLIED WARRANTY INCLUDING THE WARRANTY OF MERCHANTABILITY.

The manufacturer continually strives to improve its products and therefore, reserves the right to make improvements or changes without incurring any obligations to make such changes or additions to equipment previously sold.

1 YEAR BRIGHTWORK WARRANTY

QTY: 1

KME Fire Apparatus (KME) warrants all bright finish components used in the construction of KME Fire Apparatus against defects and workmanship provided the apparatus is used in a normal and reasonable manner. This warranty is extended only to the original user-purchaser for a period of one (1) year from the date of delivery/acceptance to the original user-purchaser, whichever occurs first.

The expressed warranty excludes corrosion or degradation of bright finished components caused by damage to the component.

LIFETIME POLY TANK WARRANTY - ALL TANKS

QTY: 1

The proposed water tank will be warranted by the water tank manufacturer for the "Lifetime" of the unit. A copy of the manufacturer's warranty will be supplied to define additional details of the warranty provisions.

HALE FIRE PUMP LIMITED STANDARD WARRANTY

QTY: 1

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

WATER TENDER

CLASS 1 - PRODUCT WARRANTY

QTY: 1

Class 1 warrants that any equipment of our own manufacture (or manufactured for us pursuant to our specifications) found to have defects in material or workmanship during normal use and service, will be repaired or replaced (at our opinion) free of charge, provided that written notice of such defect is received by us within two (2) years, (three 3 years on liquid filled gauges) after initial shipment.

AKRON - 5 YEAR LIMITED WARRANTY

QTY: 1

The limited warranty set forth here against defective materials or workmanship for a period of five (5) years will be given by Akron Brass Co. with respect to Akron Brass Co. products purchased and used in the United States and Canada respectively. All Akron valves are warranted for 10 years.

AKRON HEAVY DUTY VALVE - 10 YEAR WARRANTY

QTY: 1

Akron Brass warrants Heavy Duty Swing-Out Valves for a period of ten (10) years after purchase against defects in material or workmanship. Akron Brass shall repair or replace any Heavy Duty Swing Out Valve which fails to satisfy this warranty.