

Fire Department of _____
CUSTOM PUMPER

CUSTOM - SIDE CONTROL PUMPER

Fire Department of _____
 CUSTOM PUMPER

	SPECIFICATIONS	YES	NO	DETAILS
A.1	ADMINISTRATIVES REQUIREMENTS:			
A.1.1	Delivery conditions from Dealer			
A.1.2	Training to be provided			
A.2	Documents to be provided with bid			
A.2.1	Proof of insurance coverage			
A.2.2	Drawings			
A.2.3	Weight repartition			
A.2.4	ISO certificate			
A.2.5	CWB certificates			
A.2.6	Weldon V-Mux certificates			
A.2.7	Other...			
A.2.8	Other...			

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	SPECIFICATIONS	YES	NO	DETAILS
1.1	TECHNICAL REQUIREMENTS			
1.1.1	This fire apparatus shall conform to this specification, and to the most recent CAN/ULC-S515 standard. The vehicle shall meet the NFPA 1901-2009 standard.			
1.1.2	The fire apparatus shall be ULC certified. A pump test shall be made by ULC at the apparatus manufacturer plant, and all costs incurred to perform this test shall be covered by the bidder. A ULC certificate shall be provided prior to delivery.			
1.1.3	The vehicle shall meet the Canadian Motor Vehicles Safety Standards (CMVSS).			
1.1.4	All components used to manufacture the vehicle shall be brand new and of high quality. The choice of all elements or all parts shall correspond to the best-recognized quality standards in the fire apparatus vehicle manufacturing industry. When a part number is specified, no substitute shall be accepted.			
1.1.5	The vehicle should have no more than 375" in overall length and 128" in height.			
1.2	DOCUMENTATION UPON DELIVERY			
1.2.1	Two (2) digital copies of chassis operation manuals.			
1.2.2	Two (2) digital copies of wiring, for the chassis and the body. The diagram shall be « As Built Wiring Diagrams ».			
1.2.3	Two (2) digital copies of engine and transmission operation manuals.			
1.2.4	Two (2) digital copies of ULC documentation (CD or USB flash drive).			
1.2.5	One (1) copy of warranties, instruction and/or maintenance manuals of equipments added to the vehicle.			
1.2.6	Two (2) operation manuals of the truck, including operation of the pump, the foam system and a troubleshooting guide.			

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	SPECIFICATIONS	YES	NO	DETAILS
2.1	CUSTOM CHASSIS WITH TILT CAB			
2.1.1	A "CUSTOM" chassis developed and designed for the application of a fire vehicle, by a recognized manufacturer in the market, and having dealers established in CANADA. YEAR : 2017 or more recent TYPE : Tilt cab, four door			
2.1.2	The chassis shall be designed for Canada. The apparatus shall be a pumper vehicle designed for emergency service use which shall be equipped with a permanently mounted fire pump.			
2.2	CAB			
2.2.1	The crew cab section will have a 10' raised roof, with an overall cab height of approximately 110.00".			
2.2.2	The cab shall have successfully completed the preload side impact, static roof load application and frontal impact without encroachment to the occupant survival space when tested in accordance with ECE-29.			
2.2.3	The front fascia shall include a stainless steel front grille.			
2.2.4	Minimum of 60" from the center of the front axle to the backwall of crew cab. Minimum 7" of interior space behind the rear door and the rear wall.			
2.2.5	Minimum of 96" of cab width.			

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2.3	VEHICLE DATA RECORDER			
2.3.1	<p>The chassis shall have a Vehicle Data Recorder (VDR) system installed to meet NFPA 1901 requirements.</p> <p>The following data shall be monitored:</p> <ul style="list-style-type: none"> -Vehicle speed; -Acceleration; -Deceleration; -Engine speed : RPM; -Engine throttle position : % of full throttle; -ABS Event : On/Off; -Seat occupied status : Yes/No by position; -Seat belt buckled status : Yes/No by position; -Master Optical Warning Device Switch : On/Off; -Time : 24 hour time; -Date : Year/Month/Day; 			
2.4	ENGINE			
2.4.1	Cummins L9 engine shall offer a rating of 450 HP at 2000 RPM. The torque rating shall be 1250 lb-ft at 1400 RPM.			
2.4.2	There shall be one (1) control for the diesel particulate regeneration.			
2.4.3	Manual high idle switch. Engine preset at 1250 RPM.			
2.4.4	A compression brake, for the six (6) cylinder engine shall be provided.			
2.5	COOLING			
2.5.1	<p>A Horton fan clutch shall be provided. The fan clutch shall be constantly engaged when in the "Pump" position.</p> <p>A switch shall be provided on the instrument panel to turn the fan off when in "Pump". The fan clutch shall return to normal operation when either the override switch or ignition is turned off.</p>			
2.5.2	The cooling package shall include Extended Life Coolant (ELC). Freeze-up protection: -34°F (-37 °C).			

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2.5.3	A heat exchanger shall be installed between the engine and the radiator. This shall allow the use of water from the discharge side of the fire pump to assist in cooling the engine.			
2.5.4	Rubber hoses shall be used for all engine coolant lines.			
2.6	AIR INLET			
2.6.1	Air intake with NFPA compliant ember screen.			
2.7	EXHAUST			
2.7.1	The exhaust system shall be mounted below the frame for pumper application. The system shall be mounted as not to reduce the depth of the R1 compartment in any way.			
2.8	TRANSMISSION			
2.8.1	Allison 5th generation, model EVS 3000.			
2.8.2	5-speed, with "Package 198".			
2.8.3	The transmission fluid shall be monitored electronically.			
2.8.4	The transmission shall include a cooler system.			
2.9	PTO			
2.9.1	Space intended for future installation on the side of the transmission.			
2.10	DRIVELINE			
2.10.1	All drivelines shall be equipped with Spicer 1710 universal joints.			
2.11	FUEL SYSTEM			
2.11.1	Fuel/water separator required. A valve shall be installed close to the primary filter to avoid fuel loss in the fuel pump when the filter has to be changed.			
2.11.2	A 65 gallon fuel tank shall be provided and mounted at the rear of the chassis.			
2.11.3	The fuel tank straps shall be constructed of STAINLESS STEEL.			
2.11.4	No fuel pump for repriming fuel system.			

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	SPECIFICATIONS	YES	NO	DETAILS
2.12	FRONT AXLE			
2.12.1	DANA front axle shall be rated to 18,000 lb.			
2.13	FRONT SUSPENSION			
2.13.1	The front axle shall be furnished with shock absorbers.			
2.13.2	The parabolic front suspension spring capacity shall be rated at 18,000 lb.			
2.14	STEERING			
2.14.1	The steering wheel shall be 18.00" in diameter, have tilting and telescoping capabilities, and a 2-spoke design.			
2.14.2	The chassis shall have a front axle cramp angle of 50-degrees to the left and right.			
2.14.3	Power steering fluid level electronic indicator.			
2.15	REAR AXLE			
2.15.1	DANA rear axle shall have a rated capacity of 24,000 lb.			
2.15.2	The top speed of the vehicle shall be approximately 110 km/h (68 MPH) +/-3 Km/h.			
2.15.3	The axle ratio shall be 5.22.			
2.16	REAR SUSPENSION			
2.16.1	A multi-leaf spring suspension shall be provided. The rear suspension capacity shall be rated for 24,000 lb.			
2.17	TIRES			
2.17.1	Front tires shall be Goodyear, G291, 315/80R22.50, 20 Ply. Capacity of 18,180 lb per axle with a speed rating of 110 km/h when inflated to 120 psi.			
2.17.2	Rear tires shall be Goodyear, G622, 11R22.5, 16 Ply "H" tubeless. Capacity shall be 24,040 lb per axle with a speed rating of 112 km/h when inflated to 120 psi.			
2.17.3	Front and rear RealWheels LED AirSecure™ tire pressure sensors.			
2.17.4	All tires shall be balanced with Counteract balancing beads. The beads shall be inserted into the tire and eliminate the need for wheel weights.			

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	SPECIFICATIONS	YES	NO	DETAILS
2.18	WHEELS			
2.18.1	Polished aluminum, front wheels 9.00 x 22.5.			
2.18.2	Polished aluminum, ALCOA DURABRIGHT rear wheels 8.25 x 22.5			
2.18.3	Front and rear wheels shall have chrome nut covers on each nut. Rear wheels shall have a “high hat” style center chrome cover.			
2.19	BRAKE			
2.19.1	Meritor WABCO, anti-lock braking system shall be supplied.			
2.19.2	Front brakes shall be Model ADB22X™, disc type with 17.00" rotors.			
2.19.3	Rear brakes shall be drum, dimension 16.5" x 7.00", with automatic slack adjusters. The rear brakes shall be equipped with brake dust shields.			
2.20	AIR SYSTEM			
2.20.1	Air compressor shall be a Cummins/WABCO with a capacity of 18.7 CFM.			
2.20.2	Manual petcock type drain valves shall be installed on all reservoirs of the air supply system.			
2.20.3	The air dryer shall be a WABCO System Saver 1200 IWT, with heater.			
2.20.4	The air system on the chassis shall be plumbed with color coded nylon tubing air lines.			
2.21	FRAME			
2.21.1	Each simple rail shall have yield strength of 110,000 psi.			
2.21.2	Frame components shall be treated with epoxy E-coat protection.			
2.22	FRONT BUMPER			
2.22.1	Painted steel front bumper.			

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	SPECIFICATIONS	YES	NO	DETAILS
2.22.2	<p>The bumper will be extended 19" from front face of cab. Fabricated "U" shaped channel shall support the weight of the bumper and provide the main strength in frontal crash. ¼" steel is formed into "C" shaped backing plates for mounting of the bumper and providing protection to the cab.</p> <p>The front bumper will have a compartment with a hose capacity of 100' of 1¾" double jacket cotton-polyester hose with a nozzle. Drain holes will be provided in the bottom of hose bed.</p> <p>Two (2) straps will be installed on the top to retain hoses.</p>			
2.22.3	Two (2) air horns «EMERGENCY TONE» shall be recessed in the front bumper and controlled with two (2) push buttons, driver and officer.			
2.22.4	Two (2) chromed steel tow hooks shall be installed under the bumper and attached to the front frame members.			
	SPECIFICATIONS	YES	NO	DETAILS
2.23	CAB TILT			
2.23.1	<p>Lift controls shall be located on the right side of the pump panel or front area of the body, in a convenient location.</p> <p>An instruction plate shall be installed near the control.</p>			
2.23.2	An incandescent NFPA compliant light shall be mounted under the engine tunnel for area work lighting on the engine. The light shall activate automatically when the cab is tilted.			
2.23.3	An access hatch shall be provided to allow engine oil level checking.			
2.24	WINDOWS			
2.24.1	According to manufacturer's standard.			
2.24.2	All cab entry doors shall contain a conventional roll down window.			
2.25	CLIMATE CONTROL			

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	SPECIFICATIONS	YES	NO	DETAILS
2.25.1	<p>Heater-defroster units shall be provided inside the cab.</p> <ul style="list-style-type: none"> - One (1) 43,500 BTU heater-defroster unit with 350 CFM of air flow. - Two (2) 44,180 BTU auxiliary heaters with 276 CFM (each unit) of air flow shall be provided inside the crew cab, one (1) in each outboard rear-facing seat riser. 			
2.25.2	<p>The heater/defroster and crew cab heaters shall be controlled by a single integral electronic control panel. The heater control panel shall allow the driver to control heat flow to the front and rear simultaneously. The control panel shall include highly visible, progressive LED indicators for both fan speed and temperature.</p>			
2.25.3	<p>In addition to the standard heating system, a customized air conditioning system will be furnished inside the cab and crew cab on the roof interior cab. The condenser shall be mounted on the roof, outside, behind the lightbar.</p> <p>At minimum, 10 adjustable air outlets shall be strategically located on the cab. The air conditioner refrigerant shall be R-134A and shall be installed by a certified technician. For ease of operation, the control panel shall include variable adjustment for temperature and fan control and be conveniently located on the dashboard in clear view of the driver.</p>			
2.26	INTERIOR			
2.26.1	<p>One (1) 12V, 15 amp, power point plug with rubber cover.</p>			
2.26.2	<p>The door panels shall include stainless steel mirror finish.</p>			
2.26.3	<p>Each front door shall include one (1) chromed handle.</p>			
2.26.4	<p>Each rear door shall include one (1) chromed handle.</p>			
2.26.5	<p>Interior cab color shall be gray.</p> <p>The engine tunnel, not covered shall be painted to match to the interior cab color.</p>			
2.26.6	<p>A 12 V wiring shall be located in the dashboard for future radio installation. An antenna wire shall also be installed on the roof and the wiring will be located near the 12 V wiring in the dashboard.</p>			

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2.27	SEATS			
2.27.1	A NFPA compliant seat belt monitoring system (SBMS) shall be provided.			
2.27.2	Air driver seat without SCBA rack, Seats Incorporated, 911 Series.			
2.27.3	Officer seat with SCBA rack, Seats Incorporated, 911 Series.			
2.27.4	One (1) rear facing seat (behind driver’s seat) with SCBA rack, Seats Incorporated, 911 Series.			
2.27.5	<p>A rear facing EMS compartment shall be provided in the crew cab at the passenger side outboard position. The compartment shall be 22.00" wide x 44.00" high x 26.75" deep. The clear inside, rear facing opening of the compartment shall be 15.00" wide x 33.75" high.</p> <p>A shelf shall be installed in the compartment.</p> <p>The compartment shall be constructed of smooth aluminum, and painted to match the cab interior.</p> <p>There shall be two (2) lights controlled by an automatic door switch. Zolatone paint matching the vehicle color for the inside and the outside of the compartment. The rear facing of the compartment shall include a braided mesh barrier net made from “automotive safety belts” fabric.</p>			
2.27.6	Two (2) rear seats with SCBA racks. The two (2) seats shall be front facing, positioned in center of the cab.			
2.27.7	All SCBA type seats in the cab will have an IMMI, Model SMARTDOCK, SCBA holder, except driver seat.			
2.27.8	All seating positions shall be furnished with three (3)-point shoulder type red seat belt including “ready reach” device.			
2.27.9	All seat upholstery shall be gray Turnout Tuff material.			
2.27.10	No helmet holders.			
2.28	CAB EXTERIOR			
2.28.1	Windshield wiper control shall have high, low, and intermittent modes.			
2.28.2	Winshield washer tank can be filled without raising the cab.			
2.28.3	Exterior slip-resistant handrails.			

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2.28.4	Retrac model #613423 "West coast" style mirrors, heated and remote controlled shall be installed on each side of the front cab doors. Convex mirrors shall be also heated and remote controlled.			
2.28.5	Full circular inner fender liners in the wheel wells shall be provided.			
2.28.6	Mud flaps shall be installed behind the front wheels and behind cab.			
2.29	CHARGING SYSTEM			
2.29.1	There shall be four (4) Group 31 batteries.			
2.29.2	Battery jumper studs shall be located in the front step.			
2.29.3	Leece Neville, 320 amp, 12V alternator			
2.30	ELECTRICAL POWER DISTRIBUTION			
2.30.1	Kussmaul model 1200 battery charger/conditioner. The charger shall be connected to the vehicle batteries. It shall be located in the cab, behind the driver seat. A Kussmaul battery indicator shall be installed on the front driver side. Kussmaul Pump 12V air compressor to maintain air in the brake system. . It shall be located in the cab, behind the driver seat.			
2.30.2	Install between front doors, above the wheel, one (1) 20 amp AUTO EJECT electrical receptacle with a red cover. It shall automatically eject the electrical plug when the starter button is released.			
2.31	LIGHTS			
2.31.1	Sides and front of cab shall include LED marker lights.			
2.31.2	Whelen 600 LED turn flashers shall be installed near the front emergency flashers.			
2.32	OPTICAL WARNING DEVICE			
2.32.1	A flashing red light clearly labeled "Do Not Move Apparatus". In addition to the flashing red light, an audible alarm shall be included which shall sound while the light is activated.			

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2.33	BACKUP SAFETY DEVICE			
2.33.1	PRECO, Model 1040, back-up alarm.			
2.33.2	A FEDERAL SIGNAL model CCD with night vision rearview camera shall be installed to the rear of the vehicle. The 7" color LCD monitor shall be installed close to the driver. A protective aluminum cover shall be installed above the camera.			
2.34	INSTRUMENTATION			
2.34.1	Instrumentation and gauges shall have metric measurements.			
2.34.2	Engine hour meter required.			
2.35	ADDITIONAL EQUIPMENT			
2.35.1	One (1) cab fire extinguisher and three (3) safety triangles.			
2.35.2	One (1) emergency road safety kit.			
2.35.3	A total of four (4) door keys for the manual door locks.			

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	SPECIFICATIONS	YES	NO	DETAILS
3.1	PUMP			
3.1.1	<p>A brand new current year HALE DSD150 pump rated at 1500 GPM.</p> <p>The pumping system shall have an Elkhart 40-20 pressure relief valve. The pump shall have mechanical type seal.</p> <p>Pump shall be Class A and shall provide the following ratings at an altitude of less than 600 meters (2000 ft):</p> <p>A chrome plate indicating the serial number (engraved) shall be installed on the pump operator’s panel (Panel placard option).</p>			
3.1.2	<p>Pump shall be Class A and shall provide the following ratings at an altitude of less than 600 meters (2000 ft):</p> <p>1500 GPM (1250 IGPM) - 100% of rating at 165 PSI.</p> <p>1500 GPM (1250 IGPM) - 100% of rating at 150 PSI</p> <p>1050 GPM (875 IGPM) - 70% of rating at 200 PSI</p> <p>750 GPM (625 IGPM) - 50% of rating at 250 PSI</p>			
3.2	PUMP SHIFT			
3.2.1	<p>Pump shift shall be pneumatically-controlled and activated from inside.</p> <p>All indicators lights and pump engagement shall be NFPA 1901 compliant.</p>			
3.3	PRESSURE GOVERNOR			
3.3.1	<p>A Class 1 pressure governor «TPG» shall be installed on the operator control panel.</p> <p>The pressure governor shall be calibrated by the manufacturer in mode « pressure/preset » and the pressure specified by the customer, which is about 120 PSI.</p>			
3.4	PRIMER			
3.4.1	<p>One (1) 12V positive displacement type rotary vane primer of a fluid-less design shall be provided for the fire pump priming system. The priming pump shall be same brand as the water pump.</p>			
3.5	HEAT EXCHANGER			

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	SPECIFICATIONS	YES	NO	DETAILS
3.5.1	Water flow from the fire pump shall be used to cool the engine coolant. The control, «¼ turn type» shall be located on pump panel and equipped with a ¾" valve.			

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	SPECIFICATIONS	YES	NO	DETAILS
3.6	DRAIN SYSTEM			
3.6.1	<p>A manual master drain valve shall be installed on the pump panel. The master pump drain assembly shall consist of a Trident Emergency bronze master drain with a rubber disc seal. The master drain shall have a rubber seal to prevent water from running out on the running board.</p> <p>The master drain shall provide independent ports for low point drainage of the fire pump and auxiliary devices.</p>			
3.6.2	<p>An Innovative Control brand ¾" bleeder valve with lift-up handle shall be provided for each inlet and discharge. The drain shall be located at lowest point drainage of the fire pump.</p>			
3.7	PLUMBING			
3.7.1	<p>All fabricated piping shall be a minimum of Schedule 10 stainless steel for superior corrosion resistance and decreased friction loss. The pump system shall utilize a stainless steel discharge manifold system and flexible high pressure hoses with stainless steel ends that allows a direct flow of water to discharge valves. The manifold is "foam ready" for Hale Foam Logix or FoamPro system with 3" plumbing.</p> <p>The specified foam system shall be plumbed to 1½" first speedlay, 1½" second speedlay, 2½" rear discharge and center bumper front jumpline.</p>			
3.7.2	<p>All the valves on the truck shall be Akron 8800 series.</p> <p>When flexibility is needed, a "Victaulic" fitting shall be installed.</p>			
3.7.3	<p>The pump and steel accessories shall be painted black. Stainless steel plumbing components are not painted.</p>			
3.8	INTAKES AND DISCHARGES (GENERAL)			
3.8.1	<p>All intake and discharge valves shall be mechanically activated from the pump operator's panel. Control handles for tank-to-pump, tank fill and all discharges shall be «push-pull» style, including a «T» handle with sufficient space to allow the valve identification. The assembly shall be Innovative Controls brand.</p>			

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3.8.2	All discharges and intake located at the sides and rear panels shall be provided with an Innovative Controls brand chrome bezel with color identification. These bezels shall be screwed into the panel without nuts at the back.			
3.8.3	All discharges, except the 1½" and 2" discharges shall have a 30 degree chrome droop adapter.			
3.8.4	The hoses threads on the vehicle shall be: 1½ ": NPSH 2½ ": QST (3.031" X 7 tpi) 6 ": NH			
3.9	INTAKES			
3.9.1	Two (2) 6" diameter suction ports with 6" NST male threads and removable zinc screens shall be provided, one (1) each side.			
3.9.2	One (1) 2½" suction inlet shall be installed on the left side. It shall be equipped with a strainer and a chrome plug with a retaining chain. It shall be a manual integrated control valve, "up and down" type. A ¾" bleeder valve assembly shall be installed for this entry..			
3.9.3	One (1) 6" inlet with 6" NH thread adapter and 5" piping shall be installed on the right front side of the vehicle. This inlet shall provide an Elkhart, model 40-20, 2½" pressure relief valve. There shall be an Elkhart EB5B butterfly type 5" valve to feed the pump with an electric type controller model UBEC1 installed on the pump operator's panel. One (1) ¾", ¼ turn valve shall be installed on the pump operator's panel to bleed the air from the inlet and an independent priming valve shall be added to the 5" inlet.			
3.10	DISCHARGES			
3.10.1	All 2½" discharges shall be equipped with a 2½" female chrome-plated reducer to a male 1½" with a 1½" chrome plug retained by a chrome chain.			

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3.10.2	<p>Four (4) 2½" discharges, with 2½" valves, 30 degree chrome droop adapter shall be installed on each side and rear of the apparatus.</p> <p>These discharges shall be located as follows:</p> <p>Two (2) discharges left side with control on pump panel operator.</p> <p>One (1) discharge right side with control on pump panel operator.</p> <p>One (1) discharge rear, left side with control on pump panel operator.</p>			
3.10.3	<p>Two (2) speedlay discharges shall be provided. Each speedlay section shall include one (1) 2" brass swivel above each hose compartment with a 1½" hose connection to allow the use of the hose from either side of the apparatus.</p> <p>The speedlay piping shall consist of two (2) 2" heavy duty hoses coming from the pump discharge manifold to the 2" swivel.</p>			
3.10.4	<p>One (1) discharge, 3" valve shall be installed on the top of the truck, for a deck gun, with the control on the pump panel.</p> <p>Flange #ANSI 150 shall be installed on this discharge.</p>			
3.10.5	<p>One (1) LDH, 30 degrees, 4" Storz discharge with a cap and a 3" valve shall be located on the right side with control on the pump operator's panel.</p>			
3.10.6	<p>One (1) pre-connect outlet shall be located in the middle compartment's of the bumper. This outlet shall provide a 2" diameter valve and a 90 degree, 1½" swivel that shall exit in the middle of the compartment.</p> <p>There shall be a Class 1 automatic drain installed at all lowest points in the plumbing.</p>			
3.11	TANK FILL AND TANK-TO-PUMP			
3.11.1	<p>One (1) 2" valve to fill water tank shall be provided and installed.</p> <p>The adapter on the tank shall be in stainless steel.</p>			
3.11.2	<p>The tank shall be connected to the pump with 4" piping and one (1) 3" valve. This pipe shall have a check valve, an anti-swirl mechanism to avoid pump cavitation and shall be connected to the tank.</p>			

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3.12	FOAM			
3.12.1	There shall be no foam system. The manufacturer must provide, for the future installation, the space for the controller and for the foam level on the pump panel.			

	SPECIFICATIONS	YES	NO	DETAILS																										
4.1	PUMP OPERATOR CONTROL PANEL																													
4.1.1	<p>Controls and gauges shall be located on driver side.</p> <p>The side intake/discharge pump panels shall be 14-gauge stainless steel with a brushed finish. Each panel shall be removable for easier maintenance access to plumbing components.</p> <p>Pump operator control panel shall be 14-gauge stainless steel with a brushed finish. The panel section shall be full hinged on one side for easier maintenance access to electrical components.</p> <p>The 2 (two) inspection doors shall open from the top and they shall be held in the open position with gas cylinders.</p> <p>Color coded pump panel labels shall be in accordance with the recommendations of NFPA 1901 as follows:</p> <table border="1"> <thead> <tr> <th>Discharge</th> <th>Color</th> </tr> </thead> <tbody> <tr> <td>Preconnect #1 or front bumper jump line</td> <td>Orange</td> </tr> <tr> <td>Preconnect #2</td> <td>Red</td> </tr> <tr> <td>Preconnect #3 or discharge #1</td> <td>Yellow</td> </tr> <tr> <td>Preconnect #4 or discharge #2</td> <td>White</td> </tr> <tr> <td>Discharge #3</td> <td>Blue</td> </tr> <tr> <td>Discharge #4</td> <td>Black</td> </tr> <tr> <td>Discharge #5</td> <td>Green</td> </tr> <tr> <td>Deluge/deck gun</td> <td>Silver</td> </tr> <tr> <td>Large-diameter hose</td> <td>Yellow with white border</td> </tr> <tr> <td>Foam line(s)</td> <td>Red with white border</td> </tr> <tr> <td>Booster reel(s)</td> <td>Gray</td> </tr> <tr> <td>Inlets</td> <td>Burgundy</td> </tr> </tbody> </table>	Discharge	Color	Preconnect #1 or front bumper jump line	Orange	Preconnect #2	Red	Preconnect #3 or discharge #1	Yellow	Preconnect #4 or discharge #2	White	Discharge #3	Blue	Discharge #4	Black	Discharge #5	Green	Deluge/deck gun	Silver	Large-diameter hose	Yellow with white border	Foam line(s)	Red with white border	Booster reel(s)	Gray	Inlets	Burgundy			
Discharge	Color																													
Preconnect #1 or front bumper jump line	Orange																													
Preconnect #2	Red																													
Preconnect #3 or discharge #1	Yellow																													
Preconnect #4 or discharge #2	White																													
Discharge #3	Blue																													
Discharge #4	Black																													
Discharge #5	Green																													
Deluge/deck gun	Silver																													
Large-diameter hose	Yellow with white border																													
Foam line(s)	Red with white border																													
Booster reel(s)	Gray																													
Inlets	Burgundy																													

	SPECIFICATIONS	YES	NO	DETAILS
4.1.2	<p>Innovative Controls gauges reading in psi and kPa. All 4½" and 2½" pressure gauges shall be filled with interlube.</p> <p>There shall be one (1) 4½" diameter, 30"-0-400 psi (100-0-2800 kPa) gauge connected to the pressure manifold and another one (1) connected at the pump inlet, the whole thing in a single assembly with chrome bezel and colored labels.</p> <p>There shall also be one (1) 2½" diameter, 30"-0-400 psi (100-0-2800 kPa) connected to every discharge.</p>			
4.1.3	<p>Pump control panel shall include the following elements:</p> <ul style="list-style-type: none"> ➤ Instruments showing battery voltage, engine temperature, engine oil pressure and engine RPM. ➤ An LED 4-lights CLASS 1 water level. ➤ A vacuum and pressure port for pump performance testings. ➤ Four (4) rocker watertight switches in a chrome switch bank for scene lights (if option selected), hose bed light, pump heater and pump lights. The heater shall have a red pilot light. ➤ Water tank drain valve control. ➤ Auxiliary heat exchanger control. 			
4.2	COLD PACKAGE			
4.2.1	<p>A 42,000 BTU heater shall be installed in the pump compartment. This heater shall use the truck coolant system.</p> <p>The heater shall have two (2) fans.</p>			
4.2.2	<p>A 2-section aluminum heat pan shall be installed below the pump house to prevent freezing and shall be removable without any tools.</p> <p>The heat pan shall have approximately 48'' wide x 72'' long and cover all the pump and plumbing. The front and the back of the heat pan shall be protected by an aluminum plate around the drive shaft.</p> <p>The clearance between ground and the heat pan shall be minimum 10''</p>			

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	SPECIFICATIONS	YES	NO	DETAILS
5.1	TANK			
5.1.1	A 1000 gallon (U.S.) booster tank and a 30 gallon (U.S.) foam tank shall be supplied. The booster tank shall be completely removable without disturbing or dismounting the apparatus body structure.			
5.1.2	The booster tank shall be entirely in ½" thick copolymer polypropylene with 3/8" swash partitions. The assembly shall be welded utilizing thermoplastic welding technology. The booster tank shall have lifting eyelets for facilitating the removal.			
5.1.3	The water/foam tank design shall be in accordance with CAN/ULC-S515 and NFPA 1901 requirements. The foam tank shall have one (1) air intake installed on the top of the foam tank. The tank shall provide two (2) openings, one (1) for the injection system supply and the second one to allow tank cleaning with a 1" hose with Class 1, model BV10, 1" valve.			
5.1.4	At the front, under the tank, there shall be a dirt collector with a 1½" drain and a 3" plug. The drain shall be installed at the bottom of the collector to allow fully draining of the tank. This drain control shall be on the operator pump panel, not in a compartment. The valve shall be enclosed in the heat pan assembly to prevent freezing.			
5.1.5	One (1) manual fill tower shall be located to the left forward area of the tank. The tower shall be 14"x14" and a 6" vent/overflow pipe shall be installed halfway-up the tower. This pipe shall empty behind rear wheels.			

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	SPECIFICATIONS	YES	NO	DETAILS
6.1	GENERAL (BODY AND PUMP HOUSE)			
6.1.1	<p>The aluminum used to build the body and pump house shall be 5052-H32 marine grade and 6061-T6/6063-T5 for aluminum extrusions.</p> <p>The thickness of the aluminum shall be 3/16" for the bottom and the back of each compartment and for the front and back of the body. Only the wall between compartments shall be 1/8" thick.</p> <p>The aluminum tread plates shall be 3003-H22, 1/8" thick and shall meet NFPA slip resistance, when specified.</p>			
6.1.2	<p>All joints that may corrode or degrade by calcium and water infiltration shall be sealed by a continuous welding cord outside.</p> <p>Where there is a possibility of water infiltration between aluminum tread plates and painted aluminum, gray silicon sealer shall be applied.</p> <p>All joints and weldings shall be polished and so leave no sharp edge.</p>			
6.1.3	<p>The design of the body is such that the water tank of the truck shall not be visible outside. Any type of "WET SIDE" design shall be refused.</p>			
6.1.4	<p>All compartments shall be "sweep out" design, which means the floor is raised by at least 1" to avoid water infiltration.</p>			
6.1.5	<p>The aluminum components of the body and pump house shall be manufactured by using CNC (Computer Numeric Control) machine tools. Each individual assembly parts shall be cut and bended for an optimum precision.</p>			
6.2	PUMPHOUSE			
6.2.1	<p>A step shall be installed each side of the pump house, on its full width. The step shall have 1 1/4" in depth built from aluminum grip-strut.</p>			
6.2.2	<p>The top of the pump house shall be made of aluminum tread plates and shall meet ULC requirements.</p> <p>The front of the pump house shall be covered by tread plates. Between the cab and the pump house there shall be an access door to access to the pump without any tools.</p>			

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	SPECIFICATIONS	YES	NO	DETAILS
6.2.3	<p>The pump module shall have a total width of 26" and two upper storage areas. The lower transverse storage area shall accommodate two preconnected handlines (150' of 1¾" hose with nozzle). The bottom of this compartment shall at approx 65" from the ground.</p> <p>The speedlay areas shall include two storage trays. The trays shall be constructed of 3/16" (.187") smooth aluminum plate with an exterior sanded finish. The walls and floor of the tray shall be slotted to prevent the accumulation of water and allow for ventilation of wet hose.</p> <p>A protective strip of 0.375" UHMW Polyethylene shall be bolted to the bottom of outside edge speedlay tray.</p> <p>Two (2) 1" stainless steel rolls, one on each side, to facilitate the removal and insertion of the trays in this compartment.</p> <p>The speedlay side access shall have a restraint system consist of a vinyl tarp with Velcro along the entire perimeter.</p> <p>Pump service access doors shall be provided four (4) access to the pump. One (1) in L1, One (1) in R1, one (1) in the front pump house when the cab is open and one (1) on the top in front of the body. The doors shall be secured with tool-free hardware.</p>			
6.2.4	<p>A «P» shaped rubber gasket of about 1" shall be installed between the pumphouse and the body to avoid friction of the modules.</p>			
6.2.5	<p>The pumphouse shall be attached to the chassis with rubber insulation between the pump house and the chassis.</p>			
6.2.6	<p>An enclosed compartment shall be built above the pump side panels.</p> <p>Two (2) aluminum tread plates doors shall be built to give access to this compartment, one each side. The doors shall be equipped with a D-Ring handle. Doors shall open from the top and they shall be held in the open position with a gas cylinder.</p> <p>The compartment shall be lit by two (2) LED lights Amdor Lumabar, 12".</p>			
6.2.7	<p>The pumphouse shall have the same height as the body.</p>			

	SPECIFICATIONS	YES	NO	DETAILS
6.3	BODY ATTACHMENT			
6.3.1	The main body shall be attached to the chassis frame rails with six (6) U-bolts. U-bolts shall be made of two (2) 5/8" diameter steel bolts and two (2) 1/2" thick x 2" width steel plates. There shall be insulation between U-bolts and body. The mounting shall allow easy removal of the body in case of major repair.			
6.3.2	There shall be a rubber insulation to avoid contact between the aluminum body and the steel frame rails.			
6.4	BODY			
6.4.1	The wheel well shall have monohull fiberglass fenders.			
6.4.2	A "P" shaped fenderette shall be built from polished aluminum semi-circular moulding with a mirror finish.			
6.4.3	The wheel well outer side face shall be made of 3/16" aluminum thick and shall be painted the same color as the body.			
6.4.4	The body shall have rubrails mounted along the sides and at the rear. The rubrail shall be C-channel in design and constructed of 3/16" thick aluminum extrusion. The rubrail shall be 2-1/4" height x 1-1/4" deep and shall extend beyond the body width to protect compartment doors and the body sides. The depth shall allow marker and/or warning lights to be recessed inside for protection.			
6.4.5	The body structure shall be made from aluminum extrusion 2" x 3" x 1/4" and 3" x 3" x 1/8". The body design shall allow the booster tank to be completely removable without disturbing or dismounting the apparatus body structure in case of repair.			

	SPECIFICATIONS	YES	NO	DETAILS
6.5	HOSE BED			
6.5.1	<p>The hose bed shall be made above the water tank and shall have a width of at least 60", a length of at least 116" and a height of at least 14".</p> <p>The sides of the hose bed shall be made from aluminum tread plate.</p> <p>The hose bed floor shall be made of easily removable interlocking plastic tiles, minimum 5/8" thick.</p>			
6.5.2	<p>Two (2) adjustable hose bed dividers shall be constructed of 3/16" brushed aluminum plate with a reinforced aluminum base welded to the bottom. The rear end of the dividers shall have a 3" radius corner and a handle shall be integrated to the dividers.</p>			
6.5.3	<p>The main hose bed shall be covered by four (4) checker plate panel that meet NFPA and ULC requirements for slip resistance and allowing to walk on it. It shall be able to support weight of a man (250 lb). A device should maintain the panels firmly in place (wind resistance).</p> <p>Behind the covers, there shall be a black tarp covering the rear of the hose bed.</p> <p>The tarp for the speedlays shall be made from the same black vinyl.</p> <p>An orange strap shall be installed to visually show where to open the tarp.</p>			
6.6	COMPARTMENTS			
6.6.1	<p>Each compartment seam shall be sealed using a permanent pliable silicone caulk.</p> <p>The walls of each compartment shall have openings for adequate ventilation.</p> <p>Each compartment shall have aluminum extrusion tracks for use with adjustable shelves. The tracks shall be vertically mounted and attached to the side and/or rear walls of the compartments.</p> <p>The flooring shall have drain holes to prevent the accumulation of water.</p> <p>The flooring shall be covered by plastic interlocking tiles 5/8" thick.</p>			

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	SPECIFICATIONS	YES	NO	DETAILS
6.6.2	<p>Compartments doors shall be roll-up type with anodized aluminum finish.</p> <p>Doors shall be AMDOR brand.</p> <p>Compartments lights switch shall be located at the top of the door. The switch shall be magnetic type AMDOR brand.</p>			
6.6.3	<p>The top and the front of the compartments shall be covered by 1/8" thick aluminum tread plate.</p>			
6.6.4	<p>One (1) shelf shall be installed in each compartment lower section except in compartments above rear wheels.</p> <p>Each exterior shelve mentioned in this proposal should be built as specified in this section unless otherwise mentioned. Each shelve shall be as wide and deep as possible.</p> <ul style="list-style-type: none"> • Maximum load capacity of at least 400 lb • Constructed of 3/16" aluminum, with a 2" lip and as deep as possible according to the size of the compartment. • Bottom of the shelves are covered by rubber tiles of at least 5/8" thick. <p>One (1) shelf shall be installed in each compartment upper section and in the compartments above rear wheels.</p> <p>Each exterior shelve mentioned in this proposal should be built as specified in this section unless otherwise mentioned. Each shelve shall be as wide and deep as possible.</p> <ul style="list-style-type: none"> • Maximum load capacity of at least 400 lb • Constructed of 3/16" aluminum, with a 2" lip and as deep as possible according to the size of the compartment. • Bottom of the shelves are covered by rubber tiles of at least 5/8" thick. 			

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	SPECIFICATIONS	YES	NO	DETAILS
6.6.5	<p>Each bottom compartment shall be equipped with a roll-out tray. Each roll-out tray mentioned in this proposal should be built as specified in this section unless specified brand and model are required or otherwise mentioned. Each tray shall be as wide and deep as possible.</p> <ul style="list-style-type: none"> • Maximum load capacity of at least 400 lb when fully extended • Minimum exterior slide extension should be about 20". • Constructed of 3/16" aluminum, with a 2" lip and as deep as possible according to the size of the compartment. • Shall be maintained in open or close position with a gas cylinder or with self locking tray slides when cylinder installation is not possible. • Bottom of the shelves are covered by rubber tiles of at least 5/8" thick. <p>All trays installed on the bottom of the compartments shall have two (2) aluminum runners with nylon cover installed near the center to avoid the tray from collapsing.</p>			
6.7	LEFT SIDE COMPARTMENTS			
	(Front of rear wheels) – L1			
6.7.1	The compartment door opening shall be approximately 26" wide x 13" deep x 61" height. This compartment is the pump panel operator.			
	(Front of rear wheels) – L2			
6.7.2	The compartment door opening shall be approximately 28" wide x 28"/ 14" deep x 61" height.			
	(Above rear wheels) – L3			
6.7.3	The compartment door opening shall be approximately 58" wide x 14" deep x 22" height.			
	(Rear of rear wheels) – L4			
6.7.4	The compartment door opening shall be approximately 46" wide x 28"/14" deep x 61" height.			
6.8	RIGHT SIDE COMPARTMENTS			
	(Front of rear wheels) – R1			
6.8.1	The compartment door opening shall be approximately 58" width x 28/14" depth x 61" height.			

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	SPECIFICATIONS	YES	NO	DETAILS
	(Rear of rear wheels) – R2			
6.8.2	The compartment door opening shall be approximately 58" width x 14" depth x 22" height.			
	(Rear of rear wheels) – R3			
6.8.3	The compartment door opening shall be approximately 46" width x 28/14" depth x 61" height.			

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	SPECIFICATIONS	YES	NO	DETAILS
6.9	REAR COMPARTMENT :			
6.9.1	The compartment door opening shall be approximately 39" width x 28" depth x 31" height.			
6.9.2	A storage compartment for pike poles and folding ladder shall be built left rear side under the hose bed. It shall contain one (1) 10' folding ladder and three (3) 6' pike poles with « D handles ». This compartment door shall be covered by chevron striping.			
6.10	REAR ACCESS			
6.10.1	A full wide step shall be built above the rear compartment made of aluminum tread plate meeting NFPA requirement.			
6.10.2	A tailboard step shall be provided at the rear of the body. The tailboard shall have 11 ¾" in depth. The tailboard step shall be formed from 1/8" aluminum tread plate shall be in accordance with current ULC requirements and shall include three (3) grip strut inserts incorporated into the diamond plate.			
6.10.3	All handrails on body and pump compartment shall be 1¼" diameter aluminum extrusion knurled, to provide a positive gripping surface. Chrome plated end stanchions shall support the handrail. Plastic gaskets shall be used between end stanchions and any painted surfaces. Drain holes shall be provided in the bottom of all vertically mounted handrails. Handrails shall be provided to meet NFPA and ULC requirements.			
6.10.4	Six (6) CAST PRODUCTS with LED, 8" x 8" folding steps, shall be installed at the back, three (3) on each side to allow access to the hose bed. Each step shall have two (2) lights, one above and one below each step. The lights shall be activated when the parking brake is set, or when the vehicle marker lights are activated.			
6.10.5	The rear tires shall have a set of black mud flaps mounted behind the rear chassis wheels.			

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	SPECIFICATIONS	YES	NO	DETAILS
6.10.6	Two (2) heavy duty tow eyes made from steel having 2-1/2" diameter shall be mounted below the body at the rear of the vehicle to allow towing (not lifting). The tow eyes shall be painted black. There shall be a plate specifying the capacity of the assembly.			
6.11	LADDER RACK:			
6.11.1	A ladder compartment shall be built on the right rear side. It shall contain one (1) 14' hook ladder and one (1) 2-section 24' ladder. The ladders (not supplied) shall be Duo Safety brand. This compartment door shall be covered by chevron striping.			
6.12	6" SUCTION TUBE RACK			
6.12.1	Two (2) compartments of about 12" height x 10" wide x 126" depth shall be built above left and right sides compartments. Each compartment shall contain one (1) 6" x 10' suction tube Each compartment door shall be covered by chevron striping.			
6.13	REAR WHEELS WELL OUTFITTING:			
6.13.1	Four (4) compartments for SCBA cylinders shall be installed in the wheels well. The rear left compartment shall contained two (2) cylinders whereas the three (3) others could each contain three (3) cylinders. Every cylinder compartment shall be built with aluminum pipes and the bottom shall be covered with rubber mat according to the ULC/NFPA. Every compartment shall have an aluminum door of the same color as the vehicle with a "compression type" latch. The doors shall be designed to avoid water and dust infiltration with reinforcement inside the door.			

	SPECIFICATIONS	YES	NO	DETAILS
7.1	ELECTRICAL SYSTEM			
7.1.1	<p>The electrical system shall meet CAN/ULC S515 and NFPA 1901 requirements.</p> <p>The electrical system shall include the following:</p> <ul style="list-style-type: none"> a) The wiring in the body shall be securely fastened with stainless steel bolts attached to all each 8"-10"; b) Electrical terminals in weather exposed areas shall have a non-conductive grease or spray applied; c) Adhesive device shall be not acceptable; d) Every electrical wiring shall be covered by a plastic split sleeve; e) Any electrical component that is installed in a exposed area shall be mounted in a manner that shall not allow moisture to accumulate in it; f) Heat shrink material and sealed connectors shall be used to protect exposed connections; g) A coil of wire must be provided behind an electrical appliance to allow them to be pulled away from mounting area for inspection and service work; h) All lights that have their sockets in a weather exposed area shall have corrosion preventative compound added to the socket terminal area. 			
7.1.2	The wiring of the body shall be color coded and number coded at each 3".			
7.1.3	<p>Every circuits added to the chassis shall be protected by internal electronic circuit breakers with transistor outputs. The system shall operate in accordance with the J1939 communication protocol.</p> <p>The system shall comprise three nodes of at least 8 inputs and 16 outputs, each node shall be protected by an individual breaker GROTE model 54-852PL. They shall be located to optimize the wiring, two (2) back into the compartments and one (1) in the pumphouse.</p> <p>The vehicle shall have one (1) programming plug installed near the multiplex node in the pumphouse.</p>			
7.1.4	The switches in cab and pump panel shall have an identification meets ULC and NFPA.			

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	SPECIFICATIONS	YES	NO	DETAILS
	SPECIFICATIONS	YES	NO	DETAILS
7.2	WARNING AND EMERGENCY			
7.2.1	Two (2) WHELEN M6 SERIES red light heads, shall be provided. The lights shall include chrome flanges. The lights shall be mounted facing forward of the apparatus, above the headlights.			
7.2.2	Four (4) WHELEN M6 SERIES red light heads, shall be provided. The lights shall include chrome flanges. <ul style="list-style-type: none"> ➤ Two (2) each side in the rear wheel well ➤ Two (2) each corner of the front bumper 			
7.2.3	There shall be one (1) 56.00" Whelen, Model Justice, LED lightbar mounted on the cab roof. This lightbar shall include the following: <ul style="list-style-type: none"> ➤ Four (4) red flashing forward facing LED modules. ➤ Two (2) red flashing front corner LED modules. ➤ Two (2) red flashing rear corner LED modules. The lens color shall be clear.			
7.2.4	Two (2) LED beacon Whelen # L31H shall be supplied and installed on upper of the rear body.			
7.2.5	Headlights shall be alternative on high beam position.			
7.2.6	A Whelen 295SLSA1 electronic siren shall be mounted in the cab.			
7.2.7	The siren shall feature 100-watt output, with one (1) 100w speakers.			
7.2.8	The front bumper shall include a mechanical Q2B™ siren. The siren shall be installed on top of the front bumper; on the furthest outboard section of the bumper on the driver side. The siren shall be actuated by two (2) foot switches on the driver and officer sides. A momentary siren brake switch shall be provided in the switch panel on the dashboard.			
7.3	LIGHTING			
7.3.1	LED, GROTE model 47962 / 47963 clearance/marker lights.			

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	SPECIFICATIONS	YES	NO	DETAILS
7.3.2	The center top rear marker lights shall be a GROTE model 253-4400-1 for marker light AND for brake light signal.			
7.3.3	Turn signal-lights, break-lights and reversing lights shall be WHELEN 600 SERIES LED lights. There shall be a total of two (2) break lights, two (2) back-up lights, two (2) turn-signal lights and two (2) emergency lights. It shall have a dimension of 6" x 4" and shall be mounted on a WHELEN #PLAST4V rack. The rear part of the lights, visible from the compartment shall be entirely covered with a protective aluminum cover which shall protect the rear part of the light and the electrical wiring. Two (2) amber, GROTE #47963 LED auxiliary turn lights one each side front of body shall be installed recessed in the rubrail.			
7.3.4	One (1) white LED GROTE #60681 licence plate light mounted at the rear of the body. The plate shall be mounted with four (4) stainless steel bolts.			
7.4	AUXILIARY LIGHTS			
7.4.1	Two (2) 20" AMDOR, LUMABAR # AY-9700-012 LED lights shall be mounted under the control panel light shield, one (1) each side. These lights shall automatically turn on when the pump is engaged or when the "pump light" switch is on and when the park brake is set.			
7.4.2	One (1) Amdor AY9220-032 LED light shall be installed in the pumphouse and it shall be controlled by the "pump light" switch on the pump panel.			
7.4.3	Two (2) LED lights AMDOR LUMABAR compartment light strips shall be mounted in each body compartment. Lentgh of each light is the same as the door opening height (+/- 5").			

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	SPECIFICATIONS	YES	NO	DETAILS
7.4.4	<p>All perimeter lights under cab and body shall be Truck Lite 60 series LED lights, as follow: Four (4) under cab steps Two (2) under pumphouse steps Two (2) under rear bumper</p> <p>The ground lighting shall be activated by the opening of a cab door, or when the parking brake is set and when the marker lights are turned on, or when the transmission is on reverse.</p>			
7.4.5	<p>A LED TecNiq model E03 light shall be installed under each 6" inlet on pump panel for steps lighting.</p> <p>The lights shall turn on when the parking brake is set and the marker lights are turned on or with the pump light switch.</p>			
7.4.6	<p>One (1) LED light GROTE # 63F61 or JETCO # 300-3161F-8 shall be used for hose bed light and for the deck gun. It shall be installed in the front of the body.</p> <p>The hose bed light shall turn on when the parking brake is set and when the marker lights are turned on, or with the hose bed switch.</p>			
7.4.7	<p>Two (2) LED light GROTE # 63F61 or JETCO # 300-3161F-8 installed at the rear, upper body, close to the beacon warning lights.</p> <p>The rear light lights shall turn on when the parking brake is set and the rear lights switch is "on" or when the transmission is on reverse.</p> <p>The rear lights switch shall be waterproof and installed in a sealed aluminum box CAST PRODUCTS on the left rear side.</p>			
7.4.8	<p>Two (2) FRC model SPA900 LED scene lights shall be installed on the pump compartment.</p> <p>The airtight switch shall be located on the pump operator panel. These lights shall turn on when the parking brake is set.</p>			
7.4.9	<p>Two (2) FRC model SPA900 LED scene lights shall be installed near the pump compartment.</p> <p>The waterproof switch shall be located on the pump panel. These lights shall turn off when the parking brake is not set.</p>			

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	SPECIFICATIONS	YES	NO	DETAILS
7.4.10	Two (2) FRC telescopic lights model EVOLUTION II #FCA530-V20, 20,000 lumens shall be installed on the pump compartment, behind the cab, one each side. The switch of each light shall be located on the pump panel, near the light base.			

	SPECIFICATIONS	YES	NO	DETAILS
8.1	BODY FINISH DETAILS			
8.1.1	All nuts and rivets installed on the apparatus shall be stainless steel			
8.1.2	Where dissimilar metals are to be mounted together, the mounting base material shall have an isolation barrier prior to assembly to prevent dissimilar metal reaction.			
8.1.3	Caution, Warning, Danger and other safety related signs shall meet the requirement of ANSI Z535.4, Product Safety Signs and Labels.			
8.1.4	A rust preventive barrier, Sinto or Tectyl, shall be sprayed under the entire body and body substructure, before their installation on the chassis so that no area is left unprotected.			
8.2	BODY AND CHASSIS PAINT			
8.2.1	The painting shall be conducted in accordance with best practices followed in the heavy equipment industry to ensure the best protection against corrosion and abrasion.			
8.2.2	Paint and primer used shall be of good quality and type « base Coat / Clear Coat ». The painting process shall be in accordance with the paint manufacturer.			
8.2.3	All removable parts such as brackets, lights, doors, and steps shall be removed before painting the body and shall be painted separately if required.			
8.2.4	The cab shall be painted two (2) colors according to a straight breakline line and the body shall be painted one (1) single color. Colors shall be red for lower cab portion, white for upper portion. The body shall be painted red.			

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	SPECIFICATIONS	YES	NO	DETAILS
8.2.5	The interior of the compartments shall have a smooth brushed finish and shall be whitened with acid.			
8.2.6	The exterior of the pump house shall have a smooth brushed finish.			
8.2.7	All shelves and trays shall have a smooth brushed finish on the exterior facing.			
8.3	LETTERING, STRIPING			
8.3.1	A reflective stripe, 4" wide with a "Z" pattern shall be installed according to the ULC standard : <ul style="list-style-type: none"> ➤ At least 50 % of the total length of the vehicle (body and cab) each side. ➤ At least 25 % of the width of the front of the vehicle. 			
8.3.2	At minimum, 50 % of the rear body visible surface shall be covered by chevron stripes according to NFPA. The stripes shall be red and yellow, 3M-983 brand, (models 72 and 71).			
8.3.3	A 3" wide chevron type stripe shall be installed on each cab door. The covering surface shall be at minimum 200 square inches.			

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	SPECIFICATIONS	YES	NO	DETAILS
9.1	MISC LOOSE EQUIPEMENT TO BE SUPPLIED BY BIDDER			
9.1.1	Two (2) folding wheels chocks ZICO, 44" diameter tires with brackets shall be installed under L1 compartment.			
9.1.2	Two (2) 6" NH chrome caps for pump inlets.			

	SPECIFICATIONS	YES	NO	DETAILS
10.1	WARRANTY			
10.1.1	The warranty is effective upon delivery of the vehicle.			
10.1.2	One (1) Year, limited warranty, Material and Workmanship.			
10.1.3	One (1) Year, chassis manufacturer basic vehicle standard limited warranty will be provided. The chassis manufacturer fifty (50) year custom chassis frame limited warranty will be provided.			
10.1.4	A five (5) year/160,000 km limited engine warranty will be provided.			
10.1.5	A five (5) year/unlimited km parts and labor warranty will be provided for transmission.			
10.1.6	A five (5) years parts and labor warranty will be provided for front axle.			
10.1.7	A five (5) years parts and labor warranty will be provided for rear axle.			
10.1.8	A Wabco three (3) year parts and labor limited warranty on brake system ABS/ATC/RSC/ESC.			
10.1.9	Ten (10) year pro-rated limited warranty on the cab paint. This warranty will cover the paint and perforations due to corrosion, delaminating and cracking under normal use of the vehicle.			

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	SPECIFICATIONS	YES	NO	DETAILS
10.1.10	<p>Ten (10) year limited warranty on structural integrity of the cab and body.</p> <p>This warranty will cover all the structural components of the body and cabin against defects in materials and workmanship. Excluded from this warranty is hardware, mechanical and electrical items or paint finish.</p>			
10.1.11	<p>Ten (10) year pro-rated limited warranty on the body paint.</p> <p>This warranty will cover the paint and perforations due to corrosion, delaminating and cracking under normal use of the vehicle.</p>			
10.1.12	<p>The water/foam tank parts and labor warranty shall be provided for life (25 years) against any manufacturing defects.</p>			
10.1.13	<p>Ten (10) year pump stainless steel plumbing components limited warranty.</p> <p>This warranty will cover all components of the pump except the valves against defects in materials and workmanship. Excluded from this warranty are the breakage caused by freezing.</p>			
10.1.14	<p>A Hale, 5-year limited warranty covering parts and labor for the first two (2) years and only parts (no labor) for the remaining three (3) years of the warranty.</p> <p>This warranty will cover all components of the pump except the valves against defects in materials and workmanship. Excluded from this warranty are the breakages caused by freezing.</p>			