

City of Easton, Bureau of Fire Proposal Specification

RENEGADE "EXCEL" MFD

CAB TYPE:

- FULL TILT
- MEDIUM FOUR DOOR (MFD) STYLE
- ALUMINUM CONSTRUCTION
- CONTOUR WINDSHIELD

The cab will be fully enclosed, capable of comfortably seating six (6) fire fighters in full fire fighting turnout gear. Cab will be of the cab over engine design, with integral tilt mechanism and engine access.

Cab will be a four (4) door design with four (4) side opening doors. (No Exceptions)

OPEN SPACE DESIGN

The cab interior will be the "Open-Space" design with no wall or window between the front and rear crew area to allow direct communication, better visibility and air circulation in the cab.

DIMENSIONS

Minimum Cab Dimensions:

Overall width	96"
Inside width across ceiling	89-1/4"
Front area floor to ceiling	58-1/4"
Top of front seat to ceiling	40" (depending on seat type)
Seat back to steering wheel	16-1/4"
Inside width from door to engine enclosure at floor	25-1/2"
Forward door opening	75"H x 37-1/4"W
Forward door recessed step	28"W x 9"D
Rear door opening	79"H x 33-3/8"W
Rear door recessed step	22-3/4"W x 9"D
Crew seat area width	89-1/4"
Crew area floor to ceiling	56"
Top of crew seat to ceiling	40-1/2" (depending on seat type)
Outer crew seat risers to rear wall	36"
Center crew seat risers to rear wall	30"

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ENGINE

Engine will be a Detroit, Model Series 60, diesel, turbocharged and intercooled, per the following specifications.

Max. Horsepower	-	400 HP @ 2100 RPM
Governed Speed	-	2100 RPM
Peak Torque	-	1450 lb. ft. @ 1200 RPM
Cylinders	-	Six (6)
Operating Cycles	-	Four (4)
Bore & Stroke	-	5.12 x 6.32 in.
Displacement	-	778 cu. in.
Compression Ratio	-	15.0:1
Governor Type	-	Limiting Speed
Controls	-	DDEC III
Driveline	-	1810 Series
Radiator	-	1200 sq. in.

Engine will be installed in accordance with engine manufacturer's instructions, and the chassis manufacturer will be able to furnish proof of engine installation approval by the engine manufacturer.

A Jacobs engine brake six (6) cylinder will be furnished for increased braking capabilities. It will be controlled by an on/off and lo/hi switch on the dash and activated by releasing the throttle pedal to idle.

The engine brake shall be wired in such a manner so as to illuminate the chassis brake lights when the engine brake is engaged and operating.

An emergency air shutdown will be provided, controlled mechanically with a cable operated flapper valve. *C.A.S. must be tuned to RS - SET.*

A fast idle for all electronic engines will be provided on the dash.

A vertical exhaust stack will be provided, to run up through the right side of the rear pump enclosure. *MOVE PUMP 2" FORWARD TO ALLOW FOR STACK.*

An engine air cleaner will be provided and will include a dry type element. Air cleaner will be installed in accordance with the engine manufacturer's recommendations.

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TRANSMISSION

The transmission will be an Allison HD-4060P, five speed automatic with lock-up for pumping operation and will be installed in accordance with the transmission manufacturer's specifications. Transmission ratios will be as follows:

First	3.51:1
Second	1.91:1
Third	1.43:1
Fourth	1.00:1
Fifth	0.74:1
Reverse	4.80:1

*60 MONTH
WARRANTY*

The transmission shall be electronically controlled, with a push pad console on the dash. Transmission will be readily and easily removable for repairs or replacement. Shift controls will be as approved by the transmission manufacturer.

DRIVELINES

Drivelines will be Dana (Spicer) series. The chassis manufacturer will utilize an electronic type balancing machine to statically and dynamically balance all drive shafts. The chassis manufacturer will be able to provide proof of compliance with all drive shaft manufacturer's standards and specifications. (No Exceptions)

* EXHAUST SYSTEM

The aluminized exhaust system will be installed in accordance with the engine manufacturer's requirements and meet all Environmental Protection Agency and State noise level requirements. Exhaust system components will be securely mounted and easily removable.

The muffler will be fabricated from steel sheet and of a size compatible with the engine exhaust discharge.

*Exhaust
Steel
SS*

Exhaust tubing will be a minimum of 16 gauge cold rolled steel. Any flexible exhaust tubing will be HDT-1 stainless steel type. All flex tubing clamps will be Flex-Seal II, packed with a pliable sealant, creating an emission type joint. To minimize heat build-up, exhaust tubing within the engine compartment will be wrapped with an insulating material.

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PUMP TYPE

- HALE QSMG-150

- 1500 G.P.M.

- Single Stage

The pump will be of a size and design to mount on the chassis rails of commercial and custom truck chassis, and have the capacity of **1500** gallons per minute (U.S. GPM), NFPA-1901 rated performance.

The pump must deliver the percentage of rated capacity at the pressure listed below:

100% of rated capacity at 150 P.S.I. net pump pressure

100% of rated capacity at 165 P.S.I. net pump pressure

70% of rated capacity at 200 P.S.I. net pump pressure

50% of rated capacity at 250 P.S.I. net pump pressure

When dry, the pump will be capable of taking suction and discharge water with a lift of 10 feet in not more than 30 seconds through 20 feet of appropriate size suction hose.

PUMP CONSTRUCTION

The entire pump will be cast, manufactured and tested at the pump manufacturer's factory.

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

The entire pump, both suction and discharge passages, will be hydrostatically tested to a pressure of 600 PSI. The pump will be fully tested at the pump manufacturer's factory to performance specs as outlined by the latest NFPA Pamphlet No. 1901. Pump will be free from objectionable pulsation and vibration.

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

DISCHARGES

Two and one-half (2 1/2) inch or larger discharge outlets will be provided to discharge the rated capacity of the pump in accordance with NFPA 1901. Each discharge will be controlled from the operator's panel.

The main pump side discharges will be plumbed directly from the pump discharge manifold utilizing direct connect discharge valve flanges. The valves will be equipped with integral, 30 degree, chrome plated "droop snoot" male outlets.

All discharges will have chrome plated caps and retaining chains.

All discharges will terminate with NST male thread in accordance with NFPA 1901.

- Two (2) 2-1/2" on the left side pump panel.
- One (1) 2 1/2" at the right side pump panel.
- One (1) 4" at the right side pump panel, plumbed with a 4" **Akron handwheel** control valve, with position indicator on the operators panel. The crank rod will be 1/2" dia. stainless steel.
- One (1) 2 1/2" at the rear of body, on the left side.
- One (1) 2 1/2" at the rear body, on the right side.
- One (1) 1 1/2" at the rear body, on the left side, to the inside of the 2 1/2" discharge.
- One (1) 1 1/2" at the rear body, on the right side, to the inside of the 2 1/2" discharge.

DECK GUN DISCHARGE

One (1) 3" deck gun discharge will be plumbed to the area of the left side above the pump enclosure. Piping will be firmly supported and braced. The deck gun discharge will be operated by a hand wheel crank and have indicator lights that signal closed, partially open, and full open. Crank control rod will be stainless steel 1/2" dia.

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A pedestal type, 1/4" steel plate support assembly will be provided to stabilize deck gun plumbed below deck gun mount flange.

The deck gun discharge will be outfitted with a TFT (18") Extend-a-gun, part # XG18VL-PL. The Extend-a-gun will be wired to the hazard light on the cab dash.

FRONT DISCHARGE

One (1) 1-1/2" discharge will be plumbed to the **left** side of front bumper extension with 2" piping and valve, which will be controlled from the pump operator's panel. Flexible, high pressure hose will be utilized to plumb the discharge from the valve to the hard piping located at the front bumper. The discharge will terminate with a 1 1/2" NST, 360 degree swivel.

Automatic discharge drains will be provided at all low points in the plumbing: —

BOOSTER REEL

One (1) Hannay, aluminum, Super Booster, electric rewind booster reel will be furnished. The reel will be equipped with a water lubricated, self flushing, bronze swivel joint and an adjustable brake for free wheeling, drag or full lock operation.

The booster reel will be mounted above the pump enclosure towards the right side of the unit.

Each booster reel will be equipped with 200' of 1" booster hose in 100' sections. Each length will be fitted with chrome plated, NST couplings.

Two (2) horizontal hose rollers of polished stainless steel and guide spools will be placed one (1) on each side panel.

— DRAW — A-6 #154.00

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WATER TANK

The water tank will have a capacity of 500 gallons, constructed from PolyIIE material.

WARRANTY

The UPF PolyIIE water tank will be furnished with a lifetime warranty upon delivery.

CONSTRUCTION

The UPF PolyIIE water tank will be constructed from 1/2" thick PT2E polypropylene sheet stock. This material will be a non corrosive stress relieved thermo-plastic, natural in color, and U.V. stabilized for maximum protection.

The water and foam tanks will be of a specific configuration and is also designed to be completely independent of the body and compartments. All joints and seams will be nitrogen welded and tested for maximum strength and integrity. The top of the booster tank is fitted with removable lifting eyes designed with a 3 to 1 safety factor to facilitate easy removability. The transverse swash partitions will be manufactured of 3/8" PT2E polypropylene (natural in color) and extend from approximately 4" off the floor to just under the cover. The longitudinal swash partitions will be constructed of 3/8" PT2E polypropylene (natural in color) and extend from the floor of the tank through the cover to allow for positive welding and maximum integrity. All partitions will be equipped with vent and air hoses to permit movement of air and water between compartments. The partitions will be designed to provide maximum water flow. All swash partitions interlock with one another and are welded to each other as well as to the walls of the tank.

TANK LID

The tank cover shall be constructed of 1/2" thick PT2E polypropylene, natural in color, and U.V. stabilized, to incorporate a multi three-piece design which allows for individual removal and inspection if necessary. The tank cover will be recessed 3/8" from the top of the tank and will be welded to both sides and longitudinal partitions for maximum integrity. Each one of the covers will have hold downs consisting of 2" polypropylene dowels spaced a maximum of 30" apart. These dowels will extend through the covers and become welded to the transverse partitions. This will assist in keeping the cover rigid under fast filling conditions. A minimum of two lifting dowels will be drilled and tapped 1/2" of 13" to accommodate the lifting eyes.