

Pennsylvania Game Commission Specifications for 70 Gallon Prescribed Fire Skid Units_FY23

The following specifications are for (4) slip-on wildland fire units consisting of tank, hose reel with hose, engine and pump, to be mounted on Can-Am Defender 6x6 UTVs. The skid units must be able to slide into the bed from the rear with tailgate down. Cargo box dimensions are 72" L x 54.5" W x 10"H, however the max dimensions of the skid unit should be 68" L x 47.5" W. A low-profile design that maximizes stability and visibility for the driver is one of the most important factors to the design of this unit.

Tank

The tank shall have a 70 gallon capacity, constructed of ½" thick, UV resistant, polypropylene material on the sides, and must be made in the USA. It shall be baffled to meet NFPA standards and shall include a lifetime factory warranty. Tank will have reinforced corners and mounting flanges or other mounting points in the front and rear. The tank will be "L shaped" and the pump will be mounted in the void space on the Driver's side of the UTV. The tank shall be flushed and free of plastic debris prior to delivery. The tank and pump shall be mounted on a ¾" thick polypropylene platform. The tank shall include:

1. One (1) topside fill/overflow access on the Drivers side.
2. One (1) Clear poly tank level sight gauge, installed so it faces the Drivers side of the unit.
3. One (1) 1.5" NPT Suction Port, plumbed to the geometric center of the tank, elbowed down to just above the tank floor or otherwise sumped, maximizing water use and drafting capability
4. One (1) 1" NPT Fill Port for recirculation
5. One (1) 1" or 1.5" (whichever is common) port plugged as low as possible at the rear of the tank for drainage
6. 5" high sides around the entire top perimeter of the tank to provide maximum space for equipment storage. The sides shall have tie down/lashing holes cut out of the plastic. A solid divider should be installed to essentially separate the two parts of the "L" shape on top of the tank to separate storage areas. Bottom corners on the sides of the storage area must be cut out for water drainage.

Rear Storage Area

The area behind the tank on the passenger side should be surrounded with 5" sides similar to the top of the tank. This area will allow for storage of fuel tanks and other gear. The approximate dimensions of this area are 23.5" from tank to rear of skid, 24.5" from side to side.

Pump Engine (Gas Only)

1. 6hp, Honda GX200
2. Pull start
3. An oil drain hose with valve shall be installed
4. Integrated fuel tank

5. The pump must be mounted so the operator can easily access the engine controls while standing on the Driver's side of the UTV

Pump

1. Waterax Versax or Davey self-priming pump with two-stage impeller capable of 120 psi and 105 gpm
2. Drain petcock at the bottom of the pump housing

Hose Reel

Hose reel is to be mounted on a 14"x16"x24" underbody style storage box (Buyers 1705160 or similar) at the rear of the skid on the Driver's side, facing rear, with a 4-sided roller for ease of deployment

1. Steel hose reel with manual rewind (Hannay 1820-17-18 LT preferred)
2. The reel must have capacity for 100' of 3/4" booster hose
3. Hand crank should be positioned for ease of operation from the Driver's side of the UTV.

Booster Hose

1. 100' of 3/4" lightweight hose (Boostlite or similar) with adjustable fog nozzle with ball shut-off and field repairable couplings

Suction Hose

1. 8' section of 1.5" NPSH crush resistant suction hose (Mercedes Draflite preferred) with Mercedes footvalve and strainer

Primer

A hand primer shall be installed to draw water to the discharge side of the pump.

Plumbing

All plumbing and valves shall be stainless steel or otherwise rust and corrosion proof and made in the USA.

Suction Plumbing

1. Suction plumbing shall be 1.5"* diameter extending from the tank port to the Drivers side of the skid with a "T" installed for water intake to the pump
2. A ball valve shall be installed on both sides of this T to allow for drafting
3. The plumbing will terminate at the Drivers side with a 1.5" NPSH male connection, cap and chain
4. A 1.5" NPSH to NH double female adapter must be provided on an adapter mount mounted to the pump platform

**The Versax pump has a 2" intake to the pump so if this pump is supplied, 2" plumbing is permitted to the tank as long as it terminates with 1.5" NPSH for the suction line as spec'd above.*

Discharge Plumbing

1. 1" plumbed to the hose reel with a valve
2. 1" plumbed back to the tank for tank fill/bypass, with a valve

3. 1" NPSH male connection with valve, with 10' of 3/4" boostlite hose and D handle fan/straight stream nozzle for use a tag line from the passenger side
4. 1.5" NH male connection with valve, cap and chain, positioned to face the Driver's side. Connection should be no lower than 12" on center to clear the UTV bed side
5. A pressure gauge must be installed to capture full discharge pressure at the pump

Hardware

All hardware including but not limited to bolts, nuts, washers, screws, u-bolts etc. shall be only 100% stainless steel.

Weight

All bids must include the approximate weight of skid unit including all accessories. Total weight, full of water, must not exceed 960 lbs.

Drawing

Design drawing(s) and skid unit specifications must be submitted with the bid.

Equivalent Equipment

PGC will determine acceptable equipment substitutions at the request of the vendor, however these substitutions must be discussed in advance of the bid deadline and will be disclosed to all vendors as official Addendums to the specifications.

Subcontracting

The awarded vendor must assemble the skid units. Subcontracting of skid unit assembly/building/manufacturing is not permitted.

Inspection and Delivery

1. PGC prefers to inspect (remotely by photos is fine) the 1st unit built to ensure it meets requirements prior to the vendor completing the remainder of the units. PGC and the winning vendor will discuss details of the inspection after the bid is awarded.
2. Units should be delivered no later than May 1, 2024.
3. The vendor will deliver units to the following PGC office location.

PA Game Commission – Headquarters
ATTN: John Wakefield, johwakefie@pa.gov
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