

US Department of Interior (DOI)
Interior Business Center (IBC)
Acquisition Services Directorate (AQD)
Office of Wildland Fire (OWF)
Slip-On Tanker Units Competitive Bid Requirements
Attachment 1- Slip-on Firefighting Unit- Minimum Specifications
UTV's



Category	Sub-Category	Additional	Requirement
Slip-On Unit Manufacture Requirements			Slip-on Firefighting Unit- Minimum Specifications Specifically for UTVs
Slip-On Unit Manufacture Requirements			The following specifications are for a complete slip-on firefighting unit to be mounted in any UTV.
Slip-On Unit Manufacture Requirements			Each unit requested shall have a specifications sheet included that clearly indicates compliance with all of the requirements.
Slip-On Unit Manufacture Requirements			The entire slip-on unit, including water tank, shall be mounted on a platform that can accommodate forklift blades or has integral lifting points to allow the unit to be removed from the host chassis.
Slip-On Unit Manufacture Requirements			The fully loaded weight of the completed unit shall not exceed the gross vehicle weight rating (GVWR) of the host chassis.
Slip-On Unit Manufacture Requirements			All tubing shall use metal fittings, rated to 500 pounds per square inch and requiring no special tools.
Slip-On Unit Manufacture Requirements			No underside nuts or bolts shall be used. Non-slit corrugated loom shall cover all water lines.
Slip-On Unit Manufacture Requirements			The electrical function of the slip-on unit shall be wired to operate only when the master switch is ON.

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Pump Motor			The pump shall be driven by a four-cycle gasoline or diesel-powered auxiliary air-cooled 4- cycle California Air Resources Board (CARB) compliant electric start engine with backup recoil starter, fixed mounted on the rear and integrated on the slip-on unit.
Pump Motor			The pump motor exhaust shall include a US Forest Service (USFS) qualified spark arrestor.
Pump Motor			The pump motor shall include a fuel tank with a two-gallon (minimum) capacity.
Pump Motor			The pump unit shall be equipped with a low-pressure shutdown switch set at manufacturer's recommended safe pressure.
Pump Motor			The pump motor shall be equipped with low oil protection.
Pump Motor			All serviceable items such as air filters, oil filters, drains, and fuel pumps shall be accessible for routine maintenance.
Pump Motor			There shall be custom fabricated tread plate safety shield(s) to prevent damage or injury if the potential exists for loose clothing, hands, or foreign objects to enter any other moving parts of the auxiliary pump.
Pump Motor	Pump		The pump shall be capable of delivering the minimum performance requirements from the tank, and at a 5-foot lift through 24 feet of 1 ½-inch suction hose and a suction strainer.

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Pump Motor	Pump		The pump shall be capable of achieving the same minimum performance criteria when water supply is from the water tank through the tank to the pump valve.
Pump Motor	Pump	Pump Certification	The pump, when dry, shall be capable of taking suction and discharging water in compliance with National Fire Protection Association (NFP A) 1900 (previously 1906).
Pump Motor	Pump	Pump Certification	The pump shall be tested at the manufacturer's facility.
Pump Motor	Pump	Pump Certification	The conditions of the pump test shall occur as outlined and in accordance with current NFP A 1901 (previously 1906).
Pump Motor	Pump	Pump Certification	The pump shall deliver the percentage of rated capacities at pressures indicated: 100% of rated capacities at 150 PSI (1000KPA) net pump pressure.
Pump Motor	Pump	Pump Certification	The pump manufacturer shall certify that the pump can deliver the following minimum capacities as measured at the pump head:
Pump Motor	Pump	Pump Certification	50 GPM at 100 psi net pump pressure
Pump Motor	Pump	Pump Certification	30 GPM at 150 psi net pump pressure
Pump Motor	Pump	Pump Certification	200 psi shutoff pressure
Pump Motor	Pump	Pump Certification	The pump shall have a self-adjusting mechanical pump seal.
Foam System			Optional selection by ordering entity.
Plumbing			All plumbing components shall be fabricated from stainless steel or brass and high pressure, flexible hose where appropriate.

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Plumbing			All plumbing components shall be designed to allow easy disassembly of components for repairs and maintenance.
Plumbing			Full-flow quarter turn ball valves shall be used throughout.
Plumbing			All visible quarter turn ball valves shall be in the closed position when the valve handle is perpendicular to the run of the pipe and in the open position when the handle is parallel to the run of the pipe.
Plumbing			Any blind valves shall be labeled "open" and "closed."
Plumbing			All controls shall be accessible from the ground without climbing onto the utility, platform, or pickup bed.
Plumbing	Valve Labeling		Each valve shall be labeled as to its function immediately adjacent to the valve control.
Plumbing	Valve Labeling		The valves shall be labeled in accordance with the US Forest Service valve numbering system in common use with off-road firefighting agencies.
Plumbing	Valve Labeling		A placard with an identification key shall be affixed at the rear of the unit.
Plumbing	Suction Side		A manual hand diaphragm primer.
Plumbing	Suction Side		The primer shall be equipped with an internal or external check valve.

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Plumbing	Suction Side		Overboard Suction supply (labeled #8).
Plumbing	Suction Side		A Y strainer shall be installed prior to the pump to strain water from both overboard suction and tank.
Plumbing	Suction Side		The strainer shall have a screw-off cap to allow access and easy cleaning of the filter element in the field.
Plumbing	Suction Side		Tank to Pump line with valve labeled #1.
Plumbing	Suction Side		Two (2), eight-foot sections of not collapsible, clear PVC suction hose with appropriate female fittings to attach to Overboard suction and male fittings to attach to foot valve.
Plumbing	Suction Side		One (1), foot valve barrel strainer with appropriated fitting to attach to the suction hose.
Plumbing	Discharge Side		The pump to tank line shall include a check valve prior to a quarter turn shut off (labeled #2).
Plumbing	Discharge Side		A pump cooler line shall be installed and plumbed around the pump to tank valve and into the tank fill tower.
Plumbing	Discharge Side		The cooler line shall include a shut off valve (labeled #17).
Plumbing	Discharge Side		One (1) 1.5-inch NH rear discharge valve (labeled #3) with cap and aircraft cable retainer shall be installed.
Plumbing	Discharge Side		One (1) booster hose reel shall be provided and mounted on the unit.

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Plumbing	Discharge Side		The reel shall be installed in a fashion that allows unobstructed hose deployment on both the driver and passenger side of the vehicle.
Plumbing	Discharge Side		Outriggers, spools and roller assemblies shall be installed on both sides of the reel (driver and passenger sides).
Plumbing	Discharge Side		A flexible line shall be plumbed from the discharge plumbing manifold to the hose reel, the line shall be equipped with quarter turn shut off valve (labeled #4) to turn off water supply in the event the supply line or hose on the reel is damaged.
Plumbing	Discharge Side		The reel shall be provided with a 12- volt electric rewind and brake.
Plumbing	Discharge Side		A check valve(s) shall be installed on each discharge.
Plumbing	Discharge Side		A placard shall be installed on the slip-on unit with pump operation instructions.
Plumbing	Winterization		The pump shall have a drain (labeled # 11) at the bottom of the volute that will fully drain the pump.
Plumbing	Winterization		All plumbing shall be capable of being drained for winterization by opening all valves.

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Plumbing	Winterization		The tank shall be capable of being drained with gravity (through the tank to pump and suction valves) or retaining the tank water when the plumbing is drained.
Plumbing	Winterization		A placard shall be installed on the slip-on unit with instructions for proper winterization.
Printed Materials for the Pump			One set of printed operation, service, and parts manuals shall be provided. Each manual shall be presented with a table of contents.
Printed Materials for the Pump		Manuals shall contain the following:	Operating instructions, descriptions, specifications, and ratings for the chassis, installed components, and auxiliary systems.
Printed Materials for the Pump		Manuals shall contain the following:	Warnings and cautions pertaining to the operation and maintenance of the fire apparatus and firefighting systems.
Printed Materials for the Pump		Manuals shall contain the following:	Charts, tables, checklists, and illustrations relating to lubrication, cleaning, troubleshooting, diagnostics, and inspections.
Printed Materials for the Pump		Manuals shall contain the following:	Instructions regarding the frequency and procedure for recommended maintenance.
Printed Materials for the Pump		Manuals shall contain the following:	Maintenance instructions for the repair and replacement of installed components.
Printed Materials for the Pump		Manuals shall contain the following:	Parts listing with descriptions and illustrations for identification.
Printed Materials for the Pump	Controls/Gauges/Lights		Any connection to the chassis shall provide easy access to simplify connecting and disconnecting and accommodate removal of the unit.

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Printed Materials for the Pump	Controls/Gauges/Lights	All units shall be equipped with the following in an easily accessible location:	Liquid filled 2.5-inch (minimum) freeze protected 0-300 psi pressure gauge.
Printed Materials for the Pump	Controls/Gauges/Lights	All units shall be equipped with the following in an easily accessible location:	Hour meter.
Printed Materials for the Pump	Controls/Gauges/Lights	All units shall be equipped with the following in an easily accessible location:	Ignition start/stop switch,
Printed Materials for the Pump	Controls/Gauges/Lights	All units shall be equipped with the following in an easily accessible location:	Throttle control,
Printed Materials for the Pump	Controls/Gauges/Lights	All units shall be equipped with the following in an easily accessible location:	Choke, low pressure shut down switch, and
Printed Materials for the Pump	Controls/Gauges/Lights	All units shall be equipped with the following in an easily accessible location:	Primer controls.
Printed Materials for the Pump	Controls/Gauges/Lights	All units shall be equipped with the following in an easily accessible location:	The plumbing area and controls shall be equipped with weatherproof lighting.
Water Tank			Water Tank design will maximize water carrying capability while limiting negative effect on chassis center of gravity and stability.
Water Tank		Additionally, the water tank shall adhere to the following criteria:	The water tank shall be constructed from Polypropylene.

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Water Tank		Additionally, the water tank shall adhere to the following criteria:	This material shall be non-corrosive stress relieved thermoplastic.
Water Tank		Additionally, the water tank shall adhere to the following criteria:	The tank assembly shall be provided with provisions for securely attaching to the slip-on unit with accessible hardware for removal.
Water Tank		Additionally, the water tank shall adhere to the following criteria:	The tank shall be designed to be removable from the platform structure for maintenance or replacement.
Water Tank		Additionally, the water tank shall adhere to the following criteria:	All exposed edges on the tank and fill tower shall be rounded.
Water Tank		Additionally, the water tank shall adhere to the following criteria:	The tank shall have a manual fill tower (labeled WA 1ER) with debris strainer, located on the top at the rear.
Water Tank		Additionally, the water tank shall adhere to the following criteria:	The fill tower shall have a cap.
Water Tank		Additionally, the water tank shall adhere to the following criteria:	The fill tower shall be constructed of same material as the rest of the tank.
Water Tank		Additionally, the water tank shall adhere to the following criteria:	The water tank shall be vented.
Water Tank		Additionally, the water tank shall adhere to the following criteria:	The tank construction shall meet all baffling requirements of NFP A 1900 (previously NFP A 1906), latest edition.

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Water Tank		Additionally, the water tank shall adhere to the following criteria:	The tank shall be equipped with an internal piping that terminates ½ inches from the bottom of a sump.
Water Tank		Additionally, the water tank shall adhere to the following criteria:	The sump shall have an outlet on the bottom for cleanout and draining.
Water Tank		Additionally, the water tank shall adhere to the following criteria:	The tank shall be equipped with an anti-cavitation device.
Water Tank		Additionally, the water tank shall adhere to the following criteria:	The Tank shall be equipped with a sight gauge to view the level of water.
Electrical System			1 - Qwik-connector (or equivalent) for the 12volt battery to slip-on unit connection. 4-gauge (red) and 4 - gauge (black) battery cables along with male and female connectors are supplied by the manufacturer.
Slip-On Unit Warranties			The slip-on unit manufacturer shall be responsible for the costs of repairs to the apparatus that have been caused by defective workmanship or materials for a reasonable period following the receipt of the unit.