

INCH-POUND

A-A-59683A

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SUPERSEDING

A-A-59683

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COMMERCIAL ITEM DESCRIPTION TRUCK, FIRE FIGHTING (WILDLAND)

The General Services Administration has authorized the use of this commercial item description for all federal agencies.

1. **SCOPE.** This commercial item description covers a commercial wildland fire truck. It will have a 4x4 chassis with a diesel engine, an automatic transmission, and a five person cab with four doors. The wildland fire truck will have a mounted utility body, containing a modular agent and pump and roll delivery system, as well as fire fighting tools and equipment. The truck will be equipped with a compressed air foam system (CAFS). The wildland fire truck is intended to combat wildland and brush type fires.

2. **SALIENT CHARACTERISTICS.** The wildland fire truck shall meet or exceed the applicable requirements of the most current edition of National Fire Protection Association (NFPA) 1906.

Chapter/Title

1. Administration
2. General Requirements
3. Chassis and Vehicle Components
4. Pumps
5. Pump Engines
6. Water Tanks
7. Body and Compartmentation
8. Equipment Carried on Wildland Fire Apparatus
9. Class A Foam Concentrate Proportioning Systems
10. Compressed Air Foam Systems (CAFS)
11. Line Voltage Electrical Systems
12. Vehicle Protection Systems
13. Test and Delivery Data Requirements

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data that may improve this document should be sent to: WR-ALC 542 CSW/CBSSS, 295 Byron Street, Robins AFB, GA 31098-1611. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <http://assist.daps.dla.mil>

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2.1 Administration.

2.1.1 Environmental conditions.

2.1.1.1 Altitude. Unless otherwise specified (see 6.2), the truck, including the pumping system, shall be designed for operation at 2,000 feet above sea level. When specified (see 6.2), the truck, including the pumping system, shall be designed for operation at the altitude specified.

2.1.1.2 Temperature range. The vehicle shall be capable of satisfactory storage and operation in temperatures ranging from 32° to 125° F. The vehicle shall be equipped with a winterization system that includes an engine coolant heater and a battery heater (a blanket type battery heater is not acceptable). The winterization system shall be powered through the electrical shoreline connection (see 2.10.2).

2.1.2 Foreign object damage. All loose metal parts shall be securely attached to the vehicle with wire ropes or chains. "Dog tag" style beaded chains shall not be provided. Removable panels, if provided, shall be attached with captive fasteners. Tire valve stem caps shall be made of plastic.

2.1.3 Roadability.

2.1.3.1 Operating terrain. The truck shall operate on paved and graded gravel roads and off-road (cross country) terrain.

2.1.3.2 Acceleration. The fully loaded truck shall accelerate from 0 to 35 miles per hour (MPH) within 25 seconds on a level, paved road.

2.1.3.3 Maximum speed. The fully loaded truck shall attain a minimum top speed of 60 MPH on a level, paved road.

2.1.3.4 Gradeability. The fully loaded truck shall be able to maintain a speed of at least 30 MPH while ascending any paved slope up to and including 8.0 percent. The fully loaded truck shall also be able to maintain a speed of at least 5.0 MPH while ascending any paved slope up to and including 30 percent.

2.1.4 Overall dimensions. Overall dimensions shall be the minimum consistent with the operational performance and the design constraints necessary to achieve the specified performance. Overall dimensions shall not exceed:

Length 360 inches
Width 96 inches (excluding mirrors)
Height 124 inches

2.1.5 Turning diameter. The truck shall have a wall to wall turning diameter of 70 feet maximum in both directions.

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2.1.6 Manuals. Two sets of operation, maintenance, and parts manuals shall be provided with each truck. The parts manuals shall list the component part numbers and any subcomponent manufacturer's part numbers, as applicable. The manuals shall be provided for review 30 days prior to the demonstration. The offeror/contractor shall provide written reproduction rights to the U.S. Air Force for technical manuals.

2.1.7 Painting, plating, and corrosion control

2.1.7.1 Dissimilar metals. Dissimilar metals, as defined in MIL-STD-889B, shall not be used in intimate contact with each other.

2.1.7.2 Finish. Exterior surfaces shall be prepared, primed, and painted with polyurethane paint in accordance with all of the paint manufacturer's instructions and recommendations. Unless otherwise specified (see 6.2), the exterior finish color shall be Candy Apple Red, Sikkens Color Number FLNA3021, DuPont Color Number 97902U or 4737U, PPG Color Number 71528 (the PPG name for this color is Cardinal Red), or equal. The cab upper body (from the bottom of the windshield) and roof shall be painted White, Color Number 17875 of FED-STD-595. Compartment interiors shall have a standard commercial finish. All bright metal and anodized parts, such as mirrors, horns, light bezels, and treadplate, shall not be painted. Roll-up compartment doors may be painted or unpainted.

NOTE: Specification of Sikkens, DuPont, and PPG color numbers is not meant to imply a requirement or preference for Sikkens, DuPont, or PPG paint.

2.1.7.3 Reflective stripes. Vehicles shall be uniformly marked with reflective striping to comply with the surface area of coverage as prescribed by National Fire Protection Association (NFPA) Standard 414, Aircraft Rescue and Fire Fighting Vehicles, and NFPA Standard 1901, Automotive Fire Apparatus. Perimeter horizontal striping will be located below the body centerline, covering at least 60 percent of the length (or as space permits) of each facing surface (length or width). Bright metal trim or anodized parts may interrupt the reflective stripes. The pattern shall be a 10-inch pattern: 1-inch stripe, 1-inch body color, 6-inch stripe, 1-inch body color, 1-inch stripe (1-6-1). The reflective stripes shall be white for vehicles painted Candy Apple Red and Desert Sand.

2.1.7.4 Lettering. Vehicles shall have the letters "UNITED STATES" and "AIR FORCE" applied in synthetic or encapsulated gold leaf, with outline and black shadow, on the front door on both sides in long radius elliptical arches above and below the lettering center line. The size of the lettering shall be a minimum of 2½-inches to a maximum of 6-inches.

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2.1.8 Identification plate. An identification plate, permanently marked, shall be securely mounted at the driver's compartment. The identification plate shall contain the following information:

NOMENCLATURE
 MANUFACTURER'S MAKE AND MODEL
 MANUFACTURERS SERIAL NUMBER
 REGISTRATION NUMBER
 NATIONAL STOCK NUMBER (NSN)
 VEHICLE CURB WEIGHT: kg (pounds)
 PAYLOAD, MAXIMUM: kg (pounds)
 GROSS VEHICLE WEIGHT (GVW): kg (pounds)
 FUEL TYPE AND CAPACITY: gal (gallons) / L (liters)
 DATE OF DELIVERY (month and year)
 WARRANTY (months and km (miles))
 CONTRACT NUMBER
 PAINT NUMBER AND COLOR
 LENGTH, WIDTH, AND HEIGHT OF VEHICLE IN INCHES AND
 CENTIMETERS.

2.1.9 Hose storage.

2.1.9.1 Hose storage area. The truck body shall have a hose bed with at least 44 cubic feet of storage space. A red vinyl hose bed cover shall be provided. An elastic webbing material to secure the hose shall be provided

2.1.9.2 Cross lay hose bed. The truck shall have a total of 3 cross lay hose beds, with removable covers, capable of carrying 150 feet of 1 ¾-inch hose each. Two shall be pre-connected. Sufficient clearance shall be provided between the hose and cover to allow the pre-connected hose nozzle to be pulled through from either side of the truck. Red vinyl hose bed covers with end flaps shall be provided on the cross lays.

2.1.10 Suction hose.

2.1.10.1 Hard suction hose. Two 10-foot light weight 5-inch hard suction hoses shall be provided. Each hard suction hose shall have 5-inch National Hose thread long handle female couplers on one end and 5-inch National Hose thread long handle male couplers on the other. The hoses shall be mounted on the truck above the left side compartments. A suction strainer shall also be mounted on the truck. The hose and suction strainer mounting system design shall be subject to approval by the procuring activity.

2.1.10.2 Soft suction hose. The truck shall be equipped with a 15 foot long, 5-inch soft suction hose, with a 5-inch National Hose thread long handle female coupler on both ends. The soft suction hose and couplers shall be securely stored in a compartment between the truck cab and the extended front bumper.

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2.2 Chassis and vehicle components.

2.2.1 Capacity. The truck shall have a minimum Gross Vehicle Weight Rating (GVWR) of 31,000 pounds.

2.2.2 Engine. The truck shall have a diesel engine.

2.2.2.1 Fuel filters. Primary and secondary fuel filters and a fuel/water separator shall be provided. The fuel/water separator shall include a water coalescer and a drain valve, and shall be in accordance with SAE J1839. A combination fuel filter and fuel/water separator may be provided. Fuel filter elements shall be replaceable without loss of engine prime.

2.2.3 Brake system. The truck shall be equipped with an all-wheel antilock brake system; the brakes shall be fully air-actuated.

2.2.3.1 Compressed air shoreline. A checked, auto-eject compressed air shoreline connection shall be provided to maintain brake system pressure while the vehicle is not running. The shoreline shall be flush mounted (not to extend outside the body line). It shall be located on the exterior of the vehicle, between the driver's door and the left side crew member cab entry door. A minimum 50 foot long air supply hose equipped with an appropriate mating shoreline connector and an air fitting shall be provided with the vehicle. The shoreline connection's location shall not pose a tripping hazard to pedestrians walking by the vehicle when the shore line is connected.

2.2.3.2 Retarder. An engine or transmission retarder shall be provided.

2.2.4 Tires and wheels. The truck shall be equipped with tubeless steel radial tires with on/off road type tread mounted on steel disc wheel assemblies. Tire and wheel assemblies shall be identical at all positions. A spare tire and wheel assembly shall be provided and shipped loose with the unit. No lug nut covers, baby moons, or any other type of wheel trim kit shall be provided.

2.2.5 Tow hooks. The truck shall be equipped with front and rear tow hooks or tow eyes in accordance with NFPA 1906.

2.2.6 Transmission. A fully automatic transmission with a hydraulic torque converter shall be provided. The normal driving range selector position shall provide at least four gear ratios without movement of the selector. The net torque capacity and the net power rating of the transmission shall exceed the output ratings of the engine.

2.2.7 Fuel tank. Fuel tank(s) in accordance with NFPA 1906 shall be provided. The fuel tank(s) shall have a minimum total capacity of 75 gallons.

2.2.8 License plate bracket. A lighted license plate bracket shall be provided at the left rear.

2.3 Low-voltage electrical systems. The truck shall have a 12 volt electrical and starting system. The system shall be multiplexed.

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2.3.1 Alternator. A single or dual alternator charging system in accordance with NFPA 1906 shall be provided. The minimum continuous electrical load shall include operation of the air conditioning system.

2.3.2 Batteries. Batteries shall be of the maintenance-free type; addition of water shall not be required during normal service life. The battery cover and vent system shall be designed to prevent electrolyte loss during service and to keep the top of the battery free from electrolyte.

2.3.2.1 Battery compartment. The batteries shall be mounted in an acid-resistant tray and shall be enclosed in a weatherproof box or compartment,

2.3.3 Battery charger or conditioner. The truck shall have a DC taper type battery charger or an automatic battery conditioner, providing a minimum 15 amp output. The charger/conditioner shall be permanently mounted on the truck in a properly ventilated, accessible location. The charger/conditioner shall be powered from the electrical shoreline receptacle (see 2.10.1). A charging indicator shall be installed next to the receptacle. When a battery conditioner is provided, it shall monitor the battery state of charge and, as necessary, automatically charge or maintain the batteries without gassing, depleting fluid level, overheating, or overcharging.

2.3.4 Warning lights. All warning lights shall use strobe type or light emitting diode (LED) elements. The warning light system, related components, and devices shall be in accordance with NFPA 1906.

2.3.4.1 Light bar. A six red element light bar, with both forward and side facing heads, shall be mounted on the cab roof. The light bar shall be separately switched from the warning light panel. When specified, trucks shall be equipped with a steady red front warning light as required by California state law.

2.3.4.2 Warning light color. When specified (see 6.2), the rearward, red strobe lights shall be replaced with amber. When specified (see 6.2), all red warning and strobe lights shall be replaced with blue.

2.3.5 Audible warning devices.

2.3.5.1 Siren. The truck shall be equipped with an electronic siren system. The amplifier unit shall include volume control and selection of "Radio," "PA," "Manual," "Yelp," "Wail," and "Hi-Lo" (European) modes, and a magnetic noise canceling microphone. The amplifier, microphone and controls shall be within reach of the driver and right front passenger. Siren activating foot switches shall be located in front of the driver and the right front passenger. The siren speaker shall be rated at 100 watts minimum and shall be located in a guarded position in the front bumper.

2.3.5.2 Horn. Dual air horns shall be installed in protected locations near the front of the truck. Air horn activating foot switches shall be located in front of the driver and the right front passenger.

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2.3.6 Work lighting.

2.3.6.1 Cab interior lights. Cab interior light levels shall be sufficient for reading maps or manuals.

2.3.6.2 Compartment lights. White lighting sufficient to provide an average minimum illumination of 1 .0 footcandle shall be provided in each compartment greater than 4.0 cubic feet and having an opening greater than 144 square inches. Where a shelf is provided, adequate illumination shall be provided at the rear of the compartment such that items above and below the shelf are visible. Lights shall automatically illuminate only when the respective doors are opened.

2.3.6.3 Ladder, step, and area lights. Non-glare white lighting shall be provided at ladders and access steps where personnel work or climb during night operations. Ground lights shall be provided at the front of the body. These area lights shall be controlled with switches on the cab instrument panel and near the light sources. Two manually raised 12 volt HID lights shall be , provided in the dunnage area, one on each side. These lights shall be switched from the pump panel.

2.3.7 Radio circuit. The vehicle shall have two separate 30 amp circuits, with breaker and a wires pace, routed to a space provided between the driver and crew chief for a purchaser provided radio. The wires shall be tagged for their intended purpose.

2.3.8 Auxiliary power outlet. The vehicle shall be equipped with one 12-volt auxiliary power outlet near the passenger-seated position for portable electronic equipment. There shall also be one 12-volt auxiliary power outlet near each crew cab seated position.

2.4 Driving and crew areas.

2.4.1 Cab. The truck shall have a five person, four door, non-tilting cab. At least one grab handle shall be provided for each crew member.

2.4.1.1 Seats. The truck shall have seats in accordance with NFPA 1906. The driver's seat shall be of an adjustable air suspension design. The crew member seats shall be of a non-suspension design. Each crew member seat (excluding the drive position) shall have a backrest, brackets, and pad covers designed to store a one-hour capacity SCBA. Each seat shall be provided with a Type 2 seat belt assembly (i.e., 3-point restraint) in accordance with 49 CFR 571.209.

2.4.1.2 Cab interior sound level. Cab interior sound level shall be in accordance with NFPA 1906.

2.4.1.3 Mirrors. Combination flat and convex outside rearview mirrors shall be installed on each side of the cab, mounted on fold-back west coast style brackets. The flat mirrors shall be of the motorized remote control type, providing not less than 60° horizontal rotational viewing range.

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The flat mirrors shall also have electrically heated heads. Mirror remote and heating controls shall be located on the instrument panel within reach of the seated driver.

2.4.1.4 Climate control system. The offeror/contractor's standard heater/defroster system shall be provided. The offeror/contractor's standard air conditioning system shall also be provided. In 100° F ambient temperature with 50 percent relative humidity and at maximum compressor speed, the air conditioning system shall cool the fully occupied cab to 75° F within 30 minutes.

2.4.1.5 Instruments and controls. Gauges shall be provided for oil pressure, coolant temperature, and automatic transmission temperature. All switches and/or controls that activate systems or system components shall be labeled as to their function. In addition to the instruments and controls required by NFPA 1906, the following shall be provided within convenient reach of the seated driver:

- a. Master warning light control switch,
- b. Work light switch(es), and
- c. Compartment "Door Open" warning light and intermittent alarm that sounds when a compartment door is open and the parking brakes are released or the transmission is in any position other than neutral.

2.5 Body, compartments, and equipment mounting.

2.5.1 Body. The truck shall have an all aluminum or all stainless steel body. Aluminum thickness shall be at least 0.125 inches; stainless steel thickness shall be at least 0.090 inches.

2.5.2 Compartments. The truck body shall have compartments with a minimum of 80 cubic feet of enclosed storage space. At least one compartment shall be of appropriate size and shape for storage of shovels, rakes, and hoses.

2.5.2.1 Compartment doors. Storage compartments shall have clear anodized aluminum, counterbalanced, non-locking, roll-up doors. Door latch handles shall be full-width bar type. Door straps shall be provided to assist in closing the compartment doors when the rolled up door height exceeds six feet above the ground.

2.5.2.2 Scuffplates. Replaceable scuffplates shall be provided to prevent body damage from sliding equipment in and out of the compartments. The scuffplates shall be attached in a manner that does not allow them to become loose during normal use.

2.5.2.3 Drip rails. Drip rails shall be provided over each compartment door. If the drip rails are not integral with the body, they shall be of bright finish anodized extruded aluminum.

2.5.2.4 Shelves. An adjustable and removable compartment shelf shall be provided for every 18 inches of vertical compartment door opening. Shelving adjustments shall require no more than common hand tools, and shall not require disassembly of fasteners. Shelves shall support a minimum of 200 pounds without permanent deformation. Each shelf shall be accessible to crew

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members standing on the ground or steps mounted on the vehicle. Each shelf shall have drain holes located so as to allow for drainage of any water from the stowed equipment.

2.5.2.5 Drainage mats. Each compartment floor and shelf shall be covered with a removable mat designed to allow for drainage of any water from the stowed equipment.

2.5.2.6 Ladder, handrails, and walkways. Ladders, stepping, standing, and walking surfaces shall be in accordance with 13-7 of NFPA 1901. Handrails shall be provided in accordance with NFPA 1901.

2.5.2.7 Wheel chocks. The vehicle shall be equipped with a set of wheel chocks in accordance with NFPA 1901.

2.5.2.8 Body and compartment lighting. All standard body and compartment lighting shall be LED type.

2.5.3 Ladder storage compartment. The truck shall have a storage compartment for a 24 foot extension ladder. The storage compartment shall be located at the rear of the vehicle and shall permit removal of the ladder by a person standing on the ground. One 24-foot extension ladder shall be manufacturer supplied.

2.5.4 Ladder, handrails, and walkways. Ladders, stepping, standing, and walking surfaces shall be in accordance with NFPA 1906. Handrails shall be provided in accordance NFPA 1906.

2.6 Pump and associated equipment. The pump and associated equipment shall be in accordance with both NFPA 1901, Latest Edition, and NFPA 1906, Latest Edition. It shall provide for both stationary and pump and roll capability.

2.6.1 Pump. The pump shall be an all bronze design capable of providing 500 gallons per minute (gpm) at 150 pounds per square inch (psi). An impeller housing drain valve shall be provided, controlled from the rear of the truck. The CAFS pump shall also be capable of providing 500 gpm at 150 psi of matched air and water flow.

2.6.2 Piping and associated components. All surfaces of the piping and associated components that come into contact with the water shall be of passivated stainless steel or bronze and shall be capable of storing brackish/saltwater. The discharge piping shall flow water at a minimum of 500 gpm.

2.6.3 Intake connections. The truck shall have two 2 1/2-inch intake connections, one on each side, fitted with 45 degree turn-down fittings. Each intake connection shall be gated and shall have National Hose threads.

2.6.4 Discharge connections. The truck shall be equipped with at least two 2 1/2-inch discharge connections, one on the right side, and one on the left side of the truck. Each 2 1/2-inch discharge connection shall be equipped with no less than 3-inch full flow piping and valve with a 2 1/2-inch adapter and a 45 degree turn-down fitting. The truck shall be equipped with a 1 3/4-

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inch pre-connected swivel discharge outlet to accommodate the cross lay hose. Additionally, there shall be 2 – 1 ¾ inch pre-connects within the forward portion of the main hose storage bed. All discharge connections shall have National Hose threads. All discharge caps shall have cable type retaining devices. “Dog tag” style beaded chains shall not be provided.

2.6.5 Pump engine. If the pump is driven by an auxiliary engine, it shall be a diesel engine in accordance with NFPA 1906. It shall be connected to the truck chassis electrical and fuel systems. The starter controls shall be accessible to an operator standing on the ground at the rear of the truck.

2.6.6 Monitor. The vehicle shall be equipped remote controlled bumper mounted discharge monitor (Elkhart-Brass Sidewinder or equivalent). The pattern selector and discharge valves on the monitor shall be controlled by high speed motors. A joy stick controller shall be provided to control both the movement of the monitor and the nozzle spray pattern. The controls for the monitor shall be mounted inside the cab of the vehicle and shall be easily accessible by both the passenger and driver. Fire fighting system gauges shall be located at the pump panel and in the vehicle cab to monitor water tank level, pump pressure, tank to pump activation, and foam levels.

2.7 Water tank. The truck shall have a water tank with a certified capacity of at least 750 gallons,

2.7.1 Water tank material. The water tank shall be constructed of polypropylene or passivated stainless steel.

2.7.2 Water tank baffling. The water tank shall be baffled in accordance with NFPA 1906.

2.7.3 Tank to pump intake line. All metallic surfaces of the tank to pump intake line and associated components that come into contact with the water shall be of passivated stainless steel or bronze and shall be capable of storing brackish/saltwater.

2.8 Foam proportioning system. The truck shall be equipped with an electronic, variable speed, fully automatic, discharge side, direct injection foam proportioning system for Class A foam concentrate. It shall be in accordance with NFPA 1906. With 0.5% concentration of Class A foam, the system shall properly proportion foam for flow rates of up to and including 200 gpm. The system shall also accommodate 1% Class A foam concentrate. A polypropylene tank with a minimum usable capacity of 20 gallons shall be provided for Class A foam concentrate.

2.9 Compressed air foam system (CAFS). The truck shall be equipped with a CAFS in accordance with NFPA 1906. The CAFS shall include an air compressor capable of providing 200 standard cubic feet per minute (scfm) at 125 psi of matched air and water flow. The CAFS shall be plumbed to all discharge outlets. The CAFS shall operate in the stationary and pump and roll modes.

2.10 Line voltage electrical system.

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2.10.1 Electrical shoreline connection. The battery charger/conditioner shall be powered from a covered, polarized, insulated, labeled, recessed, male, 120 volt AC auto-eject receptacle, located next to the driver's side door. A 50 foot long, three wire, 15 amp rated, 120 volt, AC power cable, with straight blade (non twist-lock) connectors, shall be provided. When equipped with a winterization system, two identical receptacles and cables shall be provided; the receptacles shall be clearly marked. The winterization system shall have a labeled activation switch with a pilot light. When specified (see 6.2), the receptacle(s) and power cable(s) shall be for 220 volts in lieu of 110 volts.

2.11 Vehicle protection systems. The truck shall be equipped with grill guards, and skid plates, which shall be in accordance with NFPA 1906.

2.12 Workmanship. The truck, including all parts and accessories, shall be fabricated in a thoroughly workmanlike manner. Particular attention shall be given to freedom from blemishes, burns, defects, and sharp edges; accuracy of dimensions, radii of fillets, and marking of parts and assemblies; thoroughness of welding, brazing, soldering, riveting, and painting; alignment of parts; tightness of fasteners; et cetera. The truck shall be thoroughly cleaned of all foreign matter.

3. REGULATORY REQUIREMENTS.

3.1 Recycled, recovered, or environmentally preferable materials. Recycled, recovered, or environmentally preferable materials should be used to the maximum extent possible provided that the material meets or exceeds the operational and maintenance requirements, and promotes economically advantageous life cycle costs. The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with 23.403 of the Federal Acquisition Regulation (FAR). However, used, rebuilt, or refurbished items shall not be provided.

4. QUALITY ASSURANCE PROVISIONS.

4.1 Product conformance. The products provided shall meet the salient characteristics of this Commercial Item Description, conform to the producer's own drawings, specifications, standards, and quality assurance practices, and be the same product offered for sale in the commercial marketplace. The government reserves the right to require proof of such conformance.

4.2 Commercial item requirement. The vehicle furnished shall comply with the "commercial item" definition of FAR 2.101 as of the date of award. The government reserves the right to require the offeror/contractor to prove that their product complies with the referenced commerciality requirements and each salient characteristic of this CID. The offeror/contractor shall provide an itemized technical proposal that describes how the proposed model complies with each salient characteristic of this CID; **a paragraph by paragraph response to the salient characteristics section of this CID shall be provided.** The proposal shall be provided with the pricing submission. Failure to provide this information may deem a vendor as non-responsive and their proposal may be rejected. The offeror/contractor shall provide two copies of their commercial descriptive catalogs with their offer as supporting reference to the itemized technical

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proposal. The offeror/contractor shall identify all modifications made to their commercial model in order to comply with the requirements herein.

4.3 Inspection requirements.

4.3.1 General inspection requirements. Apparatus used in conjunction with the inspections specified herein shall be laboratory precision type, calibrated at proper intervals to ensure laboratory accuracy.

4.3.2 Test rejection criteria. Throughout all tests specified herein, the vehicle shall be closely observed for the following conditions, which shall be cause for rejection:

- a. Failure to conform to design or performance requirements specified herein or in the contractor's technical proposal.
- b. Any spillage or leakage of any liquid, including fuel, coolant, lubricant, or hydraulic fluid, under any condition, except as allowed herein.
- c. Structural failure of any component, including permanent deformation, or evidence of impending failure.
- d. Evidence of excessive wear
- e. Interference between the vehicle components or between the vehicle, the ground, and all required obstacles, with the exception of normal contact by the tires.
- f. Misalignment of components.
- g. Evidence of undesirable roadability characteristics, including instability in handling during cornering braking, and while traversing rough terrain.
- h. Conditions that present a safety hazard to personnel during operation, servicing, or maintenance.
- i. Overheating of the engine, transmission, or any other vehicle component.
- j. Evidence of corrosion.
- k. Failure of the firefighting system.

4.3.3 Detailed inspection requirements.

4.3.3.1 Examination of product. Each truck shall be examined to verify compliance with the salient characteristics herein. A contractor generated checklist that identifies each relevant requirement and the inspection results shall be used. Particular attention shall be given to materials, workmanship, dimensions, surface finishes, protective coatings and sealants and their application, welding, fastening, and markings. Proper operation of each vehicle function shall be verified. Each production truck shall be inspected to a reduced version of the checklist that has been approved by the procuring activity.

4.3.3.2 Road tests. The following tests shall be performed in accordance NFPA 1906.

4.3.3.2.1 Maximum speed and acceleration test. The truck shall be tested to demonstrate compliance with 2.1.3.2 and 2.1.3.3. For the first production unit, a time-distance recorder shall be used to record data for this test.

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4.3.3.2.2 Gradeability test. The first production truck shall be tested to demonstrate compliance with 2.1.3.4.

4.3.3.2.3 Service brake system test. The truck shall be tested in accordance with NFPA 1906. For the first production unit, a time-distance recorder shall be used to record data for this test.

4.3.3.2.4 Turning diameter test. The first production truck shall be tested in accordance NFPA 1901, to demonstrate compliance with 2.1.5.

4.3.3.2.5 Roadability test. The fully loaded first production truck shall be driven over 10 miles of paved and ten miles of off-road terrains. After the road test is completed, all loads shall be removed and all structure and surfaces shall be visibly inspected for failure or permanent deformation.

4.3.3.3 Cab interior sound level test. The cab interior sound levels of the first production truck shall be measured in accordance with 49 CFR 393.94(c), "Vehicular interior noise levels test procedure," except that the test shall be performed with the vehicle traveling at a steady speed of 45 MPH on a level, hard, smooth surface road.

4.3.3.4 Test of fire pump, in both the stationary and "pump and roll" modes and associated equipment.

4.3.3.4.1 Pumping tests. Each truck shall be tested in accordance with NFPA 1906.

4.3.3.4.2 Priming device test. Each truck shall be tested in accordance with NFPA 1906.

4.3.3.4.3 Tank to pump flow test. Each truck shall be tested in accordance with NFPA 1906.

4.3.3.4.4 Water tank capacity test. The water tank capacity of each truck shall be determined in accordance with NFPA 1906.

4.3.3.4.5 Piping integrity test. The pump and piping system of each truck shall be tested in accordance with NFPA 1906.

4.3.3.4.6 Foam proportioning system test. The foam proportioning system of each truck shall be tested in accordance with NFPA 1906.

4.3.3.4.7 CAFS test. CAFS installed on each truck shall be tested in accordance with NFPA 1906.

5. PACKAGING.

5.1 Preservation, packing, and marking shall be as specified in the contract or order.

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6. NOTES.

6.1 Source of documents.

6.1.1 Department of Defense and Federal documents may be obtained at <http://assist.daps.dla.mil> or from the Document Automation and Production Service, Bldg 4D (DPM-DODSSP), 700 Robbins Avenue, Philadelphia PA 19111-5094.

6.1.2 The Code of Federal Regulations (CFR) may be obtained at <http://www.gpoaccess.gov/cfr/> or from the Superintendent of Documents, U.S. Government Printing Office, Washington DC 20402.

6.1.3 SAE INTERNATIONAL documents may be obtained <http://www.sae.org/servlets/index> or from SAE, Inc., 400 Commonwealth Drive, Warrendale PA 15096.

6.1.4 NFPA documents may be obtained at <http://www.nfpa.org/index.asp> or from NFPA, Batterymarch Park, Quincy MA 02269-9101.

6.2 Ordering data. The purchaser shall specify the following at time of purchase:

- a. Altitude for which truck operation is to be designed, if greater than 2,000 feet above sea level (see 2.1.1.1).
- b. If a winterization system is required (see 2.1.1.2).
- c. Warning light color required (amber or blue in place of red) (see 2.3.4.2).
- d. If a steady red front warning light is required (see 2.3.4.1). (NOTE: Applies to deliveries in California only)
- e. Electrical shoreline voltage, 220 volts instead of 110 volts (see 2.10.1). (NOTE: Applies to USAFE only)
- f. Engine fuel type (diesel or ultra low sulfur diesel) and units of volume (gallons or liters)

6.3 Key Words.

4x4 chassis
compressed air foam system
Gallon per minute
Structural

A-A-59683A

Custodian:
Air Force - 84

Preparing activity:
Air Force - 84

Reviewer:
DLA-CC, IS

Agent:
Air Force – 99

Project 4210-2009-007

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <http://assist.daps.dla.mil> .