Downloaded from http://www.everyspec.com

INCH-POUND

A-A-59108
27 JUNE 1997

COMMERCIAL ITEM DESCRIPTION

TRUCK, FIRE FIGHTING (AIRCRAFT RESCUE) (ARFF)

The General Services Administration has authorized the use of this Commercial Item Description (CID) by all federal agencies.

1. **SCOPE.** This Commercial Item Description (CID) describes commercially available, diesel engine driven, four person, ARFF trucks, in accordance with the requirements listed herein, the guidelines of Federal Aviation Administration (FAA), and the National Fire Protection Association (NFPA), for Classes 1, 2, 3 or 4.

2. **SALIENT CHARACTERISTICS.**

2.1 Classes 1, 2, 3, and 4 ARFF trucks shall be built in accordance with the performance requirements listed herein, and the higher performance requirements of either Chapters 1, 2, and 3 of (FAA) Advisory Circular No: 150/5220-10B or Chapters 1, 2, and 4 of NFPA 414, Standard for Aircraft Rescue and Fire Fighting Vehicles, 1995 edition. Class 1 ARFF trucks and Class 2 ARFF trucks, except when specified with a High Reach Extendible Turret (HRET), shall have structural panel features and shall be air transportable. All Classes of trucks shall conform to the more stringent of any state or federal law or safety standard as applied to flightline/off-road use. ARFF trucks shall be an assembly of new materials, free of defects affecting appearance, operability, durability and serviceability. All ARFF truck features shall be represented in the manufacturer's sales literature as either standard or optional equipment. Each ARFF truck shall meet the performance parameters listed and shall be equipped as specified. Failure to meet the requirements of this CID or the referenced documents herein shall be cause for rejection.

Beneficial comments, recommendations,additions, deletions, clarifications, etc., and any data which may improve this document should be sent to: WR-ALC/TILBA, 420 SECOND STREET, SUITE 100, ROBINS AFB GA, AFB GA. 31098-5609

AMSC N/A **FSC 4210**

DISTRIBUTION STATEMENT A. Approved for public release: distribution is unlimited.

Downloaded from http://www.everyspec.com

2.1.1 General.

a. All handles, latches, controls, mounted equipment, compartments and access panels shall be arranged and sized to avoid interference occurring during operations.

b. All steps exposed to the elements shall be fabricated of open tread.

c. Systems operation switches shall be protected from inadvertent activation by simple contact. External switches and switches within compartments shall be water resistant. All relays shall be waterproofed.

d. Major assemblies in the agent systems, except the tanks, shall be removable without the necessity for draining entire systems or dismantling other assemblies. Major agent and driveline components exceeding 150 pounds shall have lifting eyes or lugs attached.

e. All metal parts requiring removal for inspection, servicing or operation, such as pins, plugs, caps, dip-sticks, and safety guards, shall be secured by cable or chain so they cannot become separated from the truck. Removable panels, if required, shall retain the securing fasteners to either the panel or the structure of the truck.

2.1.2 Performance.

a. Class 1 trucks and Class 2 trucks, except when specified with a HRET, shall have structural features and shall be capable of discharging water or foam selectively from draft or the agent tanks, through any agent outlet at its specified capacity. Roof turret, preconnected woven jacket handline, and ground sweep discharge rates shall be consistent with NFPA 414. Side outlet discharge rates shall be 250 gallons per minute (GPM) each. When a bumper turret is specified, the agent pump performance shall be increased 250 GPM. All flow rates are for water and unexpanded foam. When a HRET is specified on a Class 2 truck, the turret discharge rates shall be identical to that of the basic roof turret, less the structural and air transportable features.

b. Classes 3 and 4 trucks shall be capable of discharging water or foam selectively from the agent tanks through any outlet at its specified capacity. Roof turret, preconnected woven jacket handline, and ground sweep discharge rates shall be consistent with NFPA 414. All flow rates are for water and unexpanded foam. When a HRET is specified, the discharge rates shall be identical to the basic roof turret rates. When a bumper turret is specified, the agent pump performance shall be increased 250 GPM.

2.1.3 Chassis components.

a. The diesel engine shall be a liquid cooled design and shall have a driver controlled emergency engine shutdown.

b. The engine shall be accessible for service and maintenance from all sides.

Downloaded from http://www.everyspec.com

c. All engine coolant hoses shall be silicone rubber. Temperature controlled engine cooling accessories must be fail-safe in an operational mode.

d. The engine exhaust shall be constructed of stainless steel.

e. The fuel tank shall have a minimum three inch fill opening.

f. The primary fuel filtering system shall include two parallel piped filtering elements and an electric fuel priming pump. Fuel filter cartridge elements shall be replaceable without losing engine prime.

g. The truck shall have a 12 volt electrical and starting system.

h. The truck shall be equipped with two battery systems. Each battery system shall be rated at not less than the CCA requirement for the engine. Batteries shall be mounted in acid-resistant trays. If the battery's terminals of an operationally ready truck are not accessible for connection of jumper cables, then labeled and covered electrical lugs, sized for the starting load of the engine, shall be located at an exterior point on the truck body.

i. The truck shall be equipped with a battery charger. The charger shall be powered from a covered, polarized, insulated, labeled, recessed, male, 120 volt AC receptacle, located next to the driver's side door. A weatherproof charge meter shall be installed next to the receptacle. A 50 foot long, three wire, 15 amp rated, 120 volt, AC power cable, with straight blade (non twist-lock) connectors, shall be provided.

j. The truck shall have a single alternator charging system. The alternator output, at idle or high idle, shall exceed the simultaneous operational load of the driveline, instruments, lights and air conditioning systems by 10%. Reel rewind motors need not be considered in calculations of alternator output.

k. A high idle switch may be provided to increase alternator, air compressor or air conditioning compressor output to meet the minimum load requirements. A lighted switch, within reach of the seated driver, shall activate the high idle control unit. High idle shall operate only when the truck is out of gear and the parking brake is engaged.

l. A labeled, checked, quick disconnect air fitting shall be located adjacent to the driver's side door. The air fitting shall maintain chassis air pressure during non-use periods.

m. The truck shall be equipped with dual forward facing air horns. The air horns shall be mounted below the cab floor, above the truck approach angle, and guarded from damage. The air horns shall be actuated by foot switches for the driver and the turret operator.

n. Single steel disc wheels, with tubeless steel radial tires, shall be located at each wheel position. Tire and wheel assemblies shall be interchangeable at all positions. Tread design shall be non-directional, on/off-highway, type.

Downloaded from http://www.everyspec.com

o. An identical spare wheel and tire assembly shall be provided.

2.1.4 Cab.

a. The steering column shall be adjustable for length and tilt.

b. Cab seating shall include only a driver and a turret operator. When specified, added crew seats shall be provided. Grab handles/bars shall be provided within the cab, in order for cab passengers to stabilize themselves during cross country operations. Projections and sharp edges within the cab ingress/egress path and operational movement areas shall be padded.

c. Seats shall be high back air suspension type. The driver and turret operator's seats shall have fore-aft and vertical adjustments. Seat backs, except for the driver's, shall be provided with a holder for a one-hour self-contained breathing apparatus (SCBA). A quick release adjustable strap shall secure the SCBA to the seat back. Each seat shall have automatic locking seat belts, with retractors and provisions to restrict belt cinching during rough terrain operation. Retracted seat belt ends shall not lie on the cab floor.

d. The truck shall be equipped with an electric operated windshield wiping system. The wiper arms and blades shall be of sufficient length to clear, not less than, the windshield area described by SAE J198. Individual wiper controls shall include a minimum of two speed settings, an intermittent setting and shall return the wiper blades to a park position, out of the line of vision.

e. The truck shall be equipped with a powered windshield washer system. The system shall include an electric fluid pump, a minimum one gallon fluid container, washer nozzles mounted to the wiper arms (wet arms), and a momentary switch.

f. The truck shall be equipped with a powered windshield deluge system. The deluge system shall be supplied from the agent water tank and shall have an independent pumping system. The deluge system activation switch shall be located within reach of the seated driver and turret operator.

g. The truck shall be equipped with a rear viewing capability, equivalent to 90 square inches of flat mirrored surface, on each side of the cab. Additional viewing capability shall provide a view of the ground directly in front of the truck. If the side rear viewing devices project beyond the nominal width of the truck, they shall be mounted on fold-back brackets. The rear viewing capability shall afford the driver a view of the road a minimum of 12 feet outside the rear corners of the truck.

h. When specified, trucks equipped with rear view mirrors shall have the heads heated.

i. Instruments and controls shall be grouped by relationship and arranged by criticality. For example, engine instruments and controls shall be in a group directly in front of the

Downloaded from http://www.everyspec.com

driver, the agent system controls in the center of the cab, and so on. Controls having similar functions shall have similar actions. Indicator lights shall be green to indicate proper operation, amber to indicate caution and red when warning is intended. The headlight high beam indicator may be blue. Liquid filled gauges shall be surface lighted. Instruments with warning lights shall also have audible alarms. In addition to standard instrumentation, the following shall be provided:

1). Engine hourmeter.

2). Voltmeter.

3). Fuel level gauge with low level warning light and alarm.

4). Siren controls.

5). Winterization system controls (when specified).

6). Master warning light control switch.

7). Individual warning light control switches.

8). Turret light switch.

9). Work light switch.

10). Rear spotlight switch.

11). Water tank low level alarm, 30 second time limited.

12). Foam tank low level alarm, 30 second time limited.

13). Fire pump temperature gauge with high limit warning light and alarm.

14). Dry chemical system charge indicator.

15). Dry chemical system discharge valve control.

16).Compartment “Door Open” warning light and alarm.

j. The climate control system shall provide heat, defrost and fresh air to the truck cab. The system shall include: heater core(s), blower(s), plumbing, ducting, dampers, controls and any other components necessary to meet the performance requirements of SAE J382 and SAE J1503. The climate control system shall induce at least 60 cubic feet per minute of filtered, fresh air into the cab under normal operating conditions. A manual emergency damper shall shut off flow of outside air when operating in a hazardous environment. In-

Downloaded from http://www.everyspec.com

cab components shall be protected from damage from personnel foot gear. The minimum design ambient temperature shall be -40 degrees F.

k. When specified, trucks shall be equipped with a cab air conditioning system meeting the performance requirements of SAE J169 and SAE J1503. The design temperature shall be 125 degrees F. Air conditioning performance shall be met while operating at engine idle or high idle speed (standby condition). The evaporator coil drain shall be protected against backflow.

l. If alternative chassis suspension components or systems are offered as vehicle options, each enhancement must be described as to which dynamic feature is being improved and to what degree the improvement is predicted to perform.

2.1.5 Lights, warning devices and electrical circuits.

a.. Non-glare white lighting shall be provided at all ladder steps and walkways where personnel are required to work during night operations. Ladder, step, and area lights shall be controlled by switches on the cab instrument panel and near the light location.

b. The cab and all compartments shall be provided with white lighting. Switches shall automatically illuminate the lights in the cab or a compartment when the respective door is opened. Cab interior light levels shall be high enough for reading maps or manuals at each seated position. Two switched, red tinted, cab interior lights shall be provided.

c. A 50,000 minimum candlepower light, with diffused lens, shall be installed at the top rear corners of the truck. The floodlights shall have a lens guard, shall adjust vertically and shall limit rotation at 350 degrees. Light control handles and switches shall be within reach from the ground. A light switch shall be located on the instrument panel.

d. Two high-mounted floodlights shall be provided to illuminate the work areas on each side of the truck. Individual side switches shall be located in the work areas and on the instrument panel.

e. Spotlight(s) of a total 1,000,000 candlepower shall be attached to the roof turret assembly. The light(s) shall align with the agent stream and shall rotate and elevate with nozzle movement. The light(s) shall be switched from the instrument panel.

f. When specified, two 6 inch forward flashing, red strobe warning lights shall be provided. The lights shall be not more than 48 inches above the ground. The lights shall flash alternately at a rate of 60 cycles per minute. A separate switch on the instrument panel shall activate the forward warning lights.

g.. When specified, two 6 inch rearward flashing, red strobe warning lights shall be provided. The lights shall be not less than 72 inches above the ground. The lights shall

Downloaded from http://www.everyspec.com

flash alternately at a rate of 60 cycles per minute. A separate switch on the instrument panel shall activate the rearward warning lights.

h. When specified, four red strobe intersection lights shall be provided. The lights shall be side facing and shall be mounted at the lower front and rear corners of the truck. The lights shall flash at a rate of 60 cycles per minute. A separate switch on the instrument panel shall activate the intersection lights.

i. When specified, an alternating flashing headlight system shall be provided. The high beam headlights shall flash alternately. A separate switch on the instrument panel shall activate the flashing headlights.

j. When specified, the rearward red strobe light lenses shall be replaced with amber.

k. When specified, all red warning and strobe light lenses shall be replaced with blue.

l. An electronic siren system shall be provided. The siren shall have selections for: siren, public address, and re-broadcast, from a radio, through a speaker. The amplifier and its controls shall be installed inside the cab in a location accessible to the driver and the turret operator. Siren activating foot switches shall be located in front of the driver and turret operator's seats. A magnetic noise canceling microphone shall be provided. The amplifier unit shall include volume control and selection of "Radio", "PA", "Manual", "Yelp", "Wail", and "Hi-Lo" (European) modes. The speaker shall be guarded, weather resistant, forward facing, and below the cab floor.

m. Two dedicated 30 ampere electrical circuits, with breakers shall be provided for powering owner installed radio gear.

2.1.6 Truck body.

a. All compartment doors shall be roll-up style. Service access doors shall be forward edge or top hinged. Winterization panels, if provided, shall be no larger or heavier than one mechanic can manage. Switches and wiring, located within compartments, shall not be damaged by pressure washing or loose equipment.

b. Operational and service access ladders, catwalks or deckplates shall be provided. Ladder first steps shall not exceed 22 inches above the ground and rung spacing shall not exceed 14 inches. Catwalks shall be a minimum of 18 inches wide, constructed of open grating, and raised above the surrounding surfaces.

c. Compartment floors shall support a load of 250 pounds without permanent deflection. Additional, adjustable and removable, shelves shall be provided for every 18 inches of door opening in all non-dedicated compartments. Shelving adjustments shall not require removal of fasteners. Shelves shall support a minimum of 200 pounds without permanent deflection. Compartment floors shall be accessible while standing on the ground.

Downloaded from http://www.everyspec.com

d. Roll-up compartment doors shall be fabricated of clear anodized aluminum, and shall be a spring counterbalanced, non-locking design. Latch handles shall be full-width bar type. Pull straps shall be provided where the open door height exceeds six feet.

e. Compartments shall have replaceable threshold plates attached with through fasteners.

f. Drip rails shall be provided over each or combined compartment doors.

g. Compartment lighting shall be by incandescent bulbs within vertical shatterproof tube protectors at each side of the compartment door opening. Lights shall automatically activate when the doors open and from the instrument panel.

h. Storage for four, one-hour SCBA, air bottles shall be provided. The storage racks shall have cushions, guides and restraining straps to prevent damage to the cylinders when loading and transporting. The top of the highest horizontally arranged rack, or the top edge of a vertically arranged rack shall be less than 66 inches above the ground.

i. When specified, the chassis air system shall be upgraded to produce a minimum of 32 SCFM at 100 pounds per square inch gauge (PSIG) at a high idle engine setting. An air hose reel, with 200 feet of one inch inside diameter (ID), 600 PSIG or better rated, air hose shall be provided. The air hose reel shall be located in a compartment. A four-way hose guide shall be provided. The air connection to the hose reel shall be valved. An air pressure regulator shall deliver 24 SCFM at 100 PSIG at the end of the hose. The air hose shall be restricted to prevent it from pulling through the guide during rewind. A female style quick disconnect shall be attached to the end of the hoseline. The hose reel shall have both electric and manual rewind provisions. The manual handle shall be stored in the compartment.

j. A lighted license plate bracket shall be located at the left rear of the truck.

2.1.7 Agent system.

a. The rated capacity of the water tank shall be not less than the respective truck Class volumes. The minimum rated capacity of the foam concentrate tank shall be not less than 10% of the water tank volumes. Each tank shall be designed so that the entire rated capacity can be discharged, with the truck on level ground, and at least 75 percent of the rated capacity with the truck at side slope and grade limits.

b. Each agent tank shall be vented to relieve pressure during maximum fill rate and combined discharge operations, and shall be capable of relieving excess liquid in the event of tank overfill. Vents shall not be fabricated of collapsible hose. The agent tank relief system shall minimize leakage of agent when the tank is full, while operating on maximum slopes and grades. Drainage shall not flow over the outer body panels nor in the tracks of the tires and shall be below the lowest body panel or structural member.

Downloaded from http://www.everyspec.com

c. Each agent tank shall incorporate a valved drain, accessible while standing on the ground. The water tank drain shall be a minimum of two inches ID and shall discharge below the lowest truck body panel or structural member. The foam tank shall drain into a 55 gallon drum, with the truck setting on level ground, without external assistance.

d. The water tank shall be equipped with a removable manhole cover with a minimum clear opening diameter of 20 inches. A covered top opening of not less than five inches internal diameter with a removable 0.25 inch strainer shall be provided for filling the tank from above. The fill opening may be incorporated as part of the manhole cover.

e. A water fill connection, with 30 degree turn down fitting, an adapter up to 2 ½ or 4 ½ inches, a replaceable strainer, and a rocker lug plug, shall be provided on each side of the truck. The water fill system shall be designed to operate at fill pressures up to 150 PSIG. The water fill shall allow external re-supply of the water tank during discharge pumping operations. A five light liquid level indicator shall be located adjacent to each fill connection.

f. A 1 ½ inch female foam tank fill connection, with a rocker lug plug and a replaceable strainer, shall be provided on the left side of the truck.

g. The foam proportioning system shall automatically proportion water and aqueous film forming foam (AFFF) within the ratios of one-half, one, three and six percent by volume. Foam proportioning shall be uniform within 10 %, for flow rates from the preconnect agent handline discharge rate, up to the maximum system output capacity.

h. A dual flow, power operated roof turret, with in-cab manual over-ride capability, shall be mounted near the front center of the cab roof. The nozzle shall be a non-air aspirating, constant flow, variable stream design. Turret power mode shall be joy-stick controlled, via a pistol grip handle within reach of both the driver and the turret operator. The turret nozzle shall also depress to discharge a fully dispersed pattern of agent within 30 feet of the front of the truck. The turret shall drain automatically when the discharge valve is in the “OFF” position.

i. When specified, the in-cab manual over-ride system shall be replaced with turret mounted manual controls, including a light switch, accessible through a roof hatch above the turret operator's seat. The roof hatch shall have a clear opening of not less than 24 by 24 inches. The roof hatch shall be insulated and weatherproof, latched from the inside and capable of supporting a firefighter’s weight when closed.

j. When specified, the ground sweep shall be replaced with a power operated bumper turret mounted on the cab front face, below the windshield, near the center of the cab. The nozzle shall be non-air aspirating, constant flow, variable stream design, with a flow rate of 250 GPM. The turret shall be controlled by a joy-stick with a pistol grip handle, within reach of both the driver and the turret operator. Turret nozzle controls shall include automatic oscillation capability and a depression angle to allow discharge to within

Downloaded from http://www.everyspec.com

20 feet of the front of the truck. The turret shall drain automatically when the discharge valve is in the "OFF" position.

k. The truck shall be equipped with a potassium bicarbonate dry chemical auxiliary agent system. The propellant gas cylinder shall be replaceable within fifteen minutes by two crew members standing on the ground. The propellant gas cylinder shall be secured to withstand off-road operations. A pressure indicator shall be visible to any person opening the tank fill cap. Blow-down piping shall be directed beneath the truck. The hoseline and nozzle shall have a static ground wire. The dry chemical agent tank shall include lifting rings and shall have a nameplate indicating, as a minimum, the following:

1). Extinguishing agent.

2). Capacity (pounds).

3). Weight full (pounds).

4). Weight empty (pounds).

5). Operating pressure (PSIG).

6). Hydrostatic test data (month-day-year).

l. When specified, a dry chemical discharge nozzle shall be attached to and aligned with the water/AFFF cab roof turret or the HRET. The nozzle shall not interfere with any turret movement. Dry chemical discharge control shall be within reach of the driver and the turret operator.

m. When specified, a spare forcing agent cylinder shall be provided with the truck.

n. A reel, equipped with 150 feet of dry chemical hose, shall be located in a front or front side compartment of the truck. Handline agent and purge controls shall be mounted in or adjacent to the compartment. All electrical components shall be sealed against entry of water. The hose reel shall have both electric and manual rewind provisions. The manual rewind handle shall be stored in the compartment.

o. A 200 foot, 1 ¾ inch pre-connected woven jacket hand line, with a 1 ½ inch control valve, shall be located in a front side compartment on each side of the truck.

p. Classes 1 and 2 trucks shall be equipped with an agent system structural control panel, on the left side of the truck, operable while standing on the ground. Structural panels shall not be provided on Class 2 trucks with the HRET option. Structural panel activation shall be interlocked to operate only with the truck parking brakes set and the transmission in neutral position. Controls and instruments shall be grouped by function. The control panel shall be hinged or accessible from the rear for maintenance. Instruments shall be

Downloaded from http://www.everyspec.com

lighted for night operation. The control panel shall include, as a minimum, the following instruments and controls:

1). Panel activation switch, including the panel lights.

2). Manual engine throttle with micro adjustments, or may be pilot controlled by manually regulated agent system pressure.

3). Engine tachometer.

4). Engine oil pressure gauge with low pressure warning light.

5). Engine coolant temperature gauge with high temperature warning light.

6). Liquid filled pump suction gauge, -30 inches Hg vacuum to 600 PSI.

7). Liquid filled pump pressure gauge, -0 to 600 PSI.

8). Manually adjustable pump pressure, using either a relief valve with indicator lights, or pilot controlled engine throttle.

9). Primer pump control.

10). Water and foam tank five light liquid level indicators.

11). Weather resistant speaker and microphone, and headset jack.

12). Two 2 1/2 inch discharge connections, with control valves and pressure gauges.

q. Classes 1 and 2 trucks shall be equipped with a primer pump. A primer pump shall not be provided on Class 2 trucks with HRET option. The primer pump shall have the capacity to prime the dry fire pump through 20 feet of hard suction hose at a 10 foot lift. The primer pump shall develop 22 inches Hg vacuum at an altitude of 1000 feet. Two 10 foot lengths of hard suction hose shall be carried on the top of the truck in drainable trays. A suction strainer shall be provided as equipment with the truck.

r. When specified, Classes 3 or 4 trucks shall be equipped with a HRET. The HRET shall discharge both water and foam agents. The HRET shall have a light system equal to that of the basic roof turret. The HRET shall have the vertical and horizontal reach necessary to locate the turret nozzle at the intake opening of the highest engine inlet on a DC-10 aircraft. The turret and the boom shall both be controllable from the driver and turret operator's seated positions. The turret shall stow near the longitudinal center of the cab roof. The turret shall be operational in both stowed and elevated positions. The turret and waterway shall drain automatically when the discharge valve is in the "OFF"

Downloaded from http://www.everyspec.com

position. The stowed position of the HRET shall not interfere with the function of any fire fighting system, or with re-servicing access to the agent tanks. Turret controls shall be by a joy-stick, with sweep, elevation, and stream pattern. "HI-LOW" agent flow and "ON-OFF" may be controlled from either joy-stick or from switches within reach of both the driver and the turret operator. A second joy-stick shall control boom articulation. The boom and turret control systems shall be independent of all other system on the truck. Safety relief devices shall protect the boom control system from an inadvertent build up of pressure due to forceful contact of the turret or boom with a resistive object. All electric, hydraulic, and agent lines shall disconnect at the boom base/truck interface. Fixed roof windows shall be located above the driver and turret operator's heads for observation of the HRET. Each roof window shall: be not less than 200 square inches; be equipped with a retractable sun shade; have a separate deluge spray system; support a firefighter's weight or shall be protected by an open grating capable of supporting a firefighter's weight.

s. Class 1 trucks and Class 2 trucks, except when specified with a HRET, shall be air transportable, without shoring, in a C-130 aircraft, in accordance with MIL-STD-1791. The air transportable configuration shall include all equipment, foam, dry chemical and forcing agent tanks full, and the water system drained. Removal or retraction of system components and tank draining, to meet width, height, or weight limits for air transport, shall not exceed 15 minutes for two people to perform. Any component removed for air transport shall have a stored position mounting point within the truck. The truck shall be symmetrically restrained during air transport. The ends of each tie down shall terminate separately on the truck and on the aircraft, without interference with any other tie down. All tie down points on the truck shall be rated at a minimum of 25,000 pounds and shall be marked for capacity. Tie downs must comply with MIL-T-25959 for chains or MIL-T-27260 for straps.

t. When specified, Class 2 trucks shall be fitted with an HRET system, in compliance with all the requirements of item "2.1.7.r" above. The Class 2 air transport, structural panel and pump priming requirements shall not be provided. Operational requirements shall be identical with a Class 3 or Class 4 truck.

u. When specified, the roof turret or the HRET turret shall be replaced with a combined agent turret. The combined agent turret shall have all of the ranges of motion and pattern controls as the basic turret. The combined agent turret shall be capable of discharging the dry chemical agent, concentric within the water/AFFF agent stream, at the maximum flow rates of each.

2.1.8 Winterization system.

a. When specified, trucks shall be equipped with a cab, chassis, and agent winterization system, permitting starting and operation to -40 degrees F.

b. The truck chassis winterization system shall maintain the engine coolant, lubricants, fuel, and electrical systems operational to ambient temperatures of -40 degrees F.

Downloaded from http://www.everyspec.com

c. The agent winterization system shall maintain the agent system, including the tanks, pumps, waterways and control systems operational to ambient temperatures of -40 degrees F. The truck agent winterization systems shall be powered through the truck battery system from the alternator (mobile) or the on-board battery charger (stationary).

2.1.9 Finish.

a. Exterior surface finish colors will be specified as: Red, NO. 11136, Lime Yellow, NO. 13670, or Forest Green, NO. 24052 of FED-STD-595, at the time of purchase.

b. With Red or Lime Yellow finish colors, the cab upper body (from the bottom of the windshield up) and the cab roof shall be painted White, NO. 17875 of FED STD-595. Interior compartments shall be finished in accordance with commercial practice. A horizontal reflective band shall be applied around the truck at the approximate headlight elevation. Offsets in the band shall be made to maximize the length of reflective surface. The reflective band may be interrupted where bright metal trim or tread plate occurs. The reflective band pattern shall be ten inches wide with three reflective stripes (one inch white reflective, one inch body color, six inches white reflective, one inch body color and one inch white reflective). All chrome or polished metal parts, hinges, treadplate, and roll-up doors shall not be painted.

c. When Forest Green color is specified, all surfaces, including all normally bright metal and any interior surfaces visible with any compartment door open, shall be painted Forest Green. A four inch wide horizontal black reflective band shall be applied around the truck at the headlight elevation. Offsets in the band shall be made to maximize the length of reflective surface.

d. The truck shall have an applied corrosion treatment (rustproofing) to a tropical level. The first production truck shall not have the corrosion treatment applied until after the initial tests and inspections are completed.

3. REGULATORY REQUIREMENTS.

3.1 The offeror/contractor is encouraged to use recovered materials in accordance with paragraph 23.403 of the Federal Acquisition Regulation (FAR).

3.1.1 For the purpose of this requirement, recovered materials are those materials that have been collected from solid waste and reprocessed to become a source of raw materials, as distinguished from virgin raw materials. The components, pieces and parts incorporated in the vehicle may be newly fabricated from recovered materials to the maximum extent practicable, provided the vehicle produced meets all other requirements of this CID. Used, rebuilt or re-manufactured components, pieces and parts shall not be incorporated.

Downloaded from http://www.everyspec.com

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 market. The government reserves the right to require proof of such conformance.

4.2 Commercial item requirement.

The vehicle furnished must meet the "commercial item" definition, as specified in FAR 2.101, as of the date of award. The government reserves the right to ask the offeror/ contractor to prove that their product meets the referenced commerciality requirements. The offeror/contractor shall provide two copies of their commercial descriptive catalogs with their offer, as specified in Clause I106. The offeror/contractor shall identify all modifications made to their commercial model in order to meet the performance and descriptive requirements of the CID or referenced documents. In regard to the offered item, the offeror/contractor shall identify any/all variations from compliance with or modifications to the performance requirements of the CID or the referenced documents.

4.3 Contractor requirements.

4.3.1 The contractor shall provide two sets of operation, maintenance, and part's manuals, in accordance with the requirements of the Contract, with each truck delivered. The part's manuals shall list the contractor's part number for each component plus a manufacturer's part number for each purchased component, as applicable. Manuals shall be provided for review 30 days prior to the time of demonstration. The contractor shall provide a product familiarization video tape with each truck, that gives a verbal and visual description of all the information required for operation and routine maintenance of the truck and its components, plus references to the appropriate portions of the respective manuals where more detailed information can be found.

4.4 Testing:

4.4.1 The first production ARFF truck shall be tested in accordance with the Acceptance Criteria of NFPA 414, Chapter 4, paragraphs 4-1, 4-2, and 4-4, and tests 4.4.3 through 4.4.9, listed below, prior to delivery. All other production trucks shall be tested in accordance with NFPA 414, Chapter 4-4, Operational Tests.

4.4.2 Failure to comply with the Salient Characteristics of the CID or the referenced documents, or any of the tests shall be cause for rejection, or reconfiguration and re-test. Failures shall also include: structural cracks; misalignment; interference; safety hazards; operational instability; spillage of agent, fuel or coolant; overheating.

Downloaded from http://www.everyspec.com

4.4.3 Examination of product. A check list of truck salient characteristics from this CID and the reference documents shall be compared to configured truck.

4.4.4 Agent tank rated capacity tests, equivalent to NFPA 414, paragraphs 4-3.1.1 through 4-3.1.5, shall be performed on the truck.

4.4.5 A 40 percent grade pump and roll test, equivalent to NFPA 414, paragraphs 4-3.6.1 through 4-3.6.5, shall be performed on the truck.

4.4.6 A radio suppression test, equivalent to NFPA 414, paragraphs 4-3.8.1 through 4.3.8.5, shall be performed on the truck.

4.4.7 A water tank fill and overflow test, equivalent to NFPA 414, paragraphs 4-3.16.1 through 4-3.16.5, shall be conducted on the truck.

4.4.8 Sound test. A sound test equivalent to NFPA 414, paragraphs 4-3.35.1 through 4-3.35.5, shall be conducted on the truck.

4.4.9 Operational test. A fully loaded truck shall be driven over 10 miles of paved and ten miles of off-road terrains. All loads shall be removed and all structure and surfaces shall be visibly inspected for failure or permanent deformation.

5. **PACKAGING.**

5.1 Preservation and packaging shall be the minimum necessary to afford protection against corrosion, deterioration and physical damage during shipment from the supply source to the first receiving activity.

5.2 Unless otherwise provided in the contract, the truck shall be prepared for delivery by common carrier. A permanently marked identification plate, shall be mounted in the truck cab. The identification plate shall contain the following information:

NOMENCLATURE
MANUFACTURER'S MAKE AND MODEL
MANUFACTURER'S SERIAL NUMBER
REGISTRATION NUMBER
NATIONAL STOCK NUMBER (NSN)
VEHICLE CURB WEIGHT: kg(pounds)
PAYLOAD, MAXIMUM: kg(pounds)
GROSS VEHICLE WEIGHT (GVW): kg(pounds)
GROSS COMBINATION WEIGHT RATING: kg(pounds)
DATE OF DELIVERY (month and year)
WARRANTY (month and km(miles))
CONTRACT NUMBER
US PROPERTY

Downloaded from http://www.everyspec.com

6. NOTES.

6.1 Options.

6.1.1 The purchaser shall specify the following at time of purchase:

a. Class of truck, (1, 2, 3, or 4), (see 1 and 2).
b. Additional crew seat (per each), (see 2.1.4.b).
c. Heated rear view mirrors, (see 2.1.4.h).
d. Air conditioning system, (see 2.1.4.k).
e. Forward flashing red strobe warning lights, (see 2.1.5.f).
f. Rearward facing red strobe warning lights, (see 2.1.5.g).
g. Side facing intersection red strobe warning lights, (see 2.1.5.h).
h. Alternating flashing headlights, (see 2.1.5.i).
i. Color of rearward facing strobe lights (amber replacing red), (see 2.1.5.j).
j. Color of strobe lights (blue replacing red), (see 2.1.5.k).
k. Chassis air upgrade with 200 foot air hose and reel, (see 2.1.6.i).
l. Direct mounted roof turret controls with roof hatch access, (see 2.1.7.i).
m. Bumper turret, (see 2.1.7.j).
n. Dry chemical turret mounted nozzle, (see 2.1.7.l).
o. Spare forcing agent cylinder, (see 2.1.7.m).
p. High reach extendible turret, (see 2.1.7.r, and see 2.1.7.t).
q. Combined agent turret in lieu of nominal turret, (see 2.1.7.u).
r. Winterization system, (see 2.1.8).
s. Finish color of truck (Red, Lime Yellow or Forest Green), (see 2.1.9).

CUSTODIAN:
AIR FORCE - 99

REVIEWER:
DLA - CS

PREPARING ACTIVITY:
AIR FORCE - 84

AGENT:
AIR FORCE - 99

Project Number: 4210-0001