

NOT MEASUREMENT SENSITIVE

MIL-T-62088B
10 October 1991
SUPERSEDING
MIL-T-62088A
10 December 1981

MILITARY SPECIFICATION

TRUCKS, ARMORED: PAYROLL DISTRIBUTION, 8600 KILOGRAMS
(19,000 POUNDS) GVW, 4x2, MODIFIED COMMERCIAL

This specification is approved for use by all departments and agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers diesel and gasoline engine driven, four-wheel, two-rear-wheel drive, 8600 kilograms (19,000 pounds) gross vehicle weight (GVW), trucks with an armored body. Vehicles procured under this specification are commercial items which are warranted by the manufacturer as specified in acquisition documents.

2. APPLICABLE DOCUMENTS

2.1 Government documents.

* 2.1.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: US Army Tank-Automotive Command, ATTN: AMSTA-URED, Warren, MI 48397-5000, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC-2320

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

MIL-T-62088B

SPECIFICATIONS

FEDERAL

- * A-A-393 - Extinguisher. Fire, Dry Chemical (Hand Portable).
- W-B-131 - Battery, Storage: Vehicular. Ignition, Lighting and Starting.
- * VV-F-800 - Fuel Oil, Diesel.

MILITARY

- * MIL-P-514 - Plates, Identification, Instruction and Marking Blank.
- * MIL-T-5624 - Turbine Fuel, Aviation, Grades JP-4 and JP-5.
- * MIL-T-83133 - Turbine Fuel, Aviation, Kerosene Type, Grade JP-8.

STANDARDS

FEDERAL

- * FED-STD-297 - Rustproofing of Commercial (Nontactical) Vehicles.

MILITARY

- * MIL-STD-1223 - Nontactical Wheeled Vehicles Treatment. Painting, Identification Marking and Data Plate Standards.

* (Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Naval Publications and Forms Center, Military Specifications and Standards, Bldg. 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

* 2.1.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation.

* DEPARTMENT OF DEFENSE (DOD)

Department of Defense Index of Specifications and Standards (DODISS).

(Copies of the DODISS are available on a yearly subscription basis either from the Government Printing Office for hard copy, or microfiche copies are available from the Director, Navy Publication and Printing Service Office, 700 Robbins Avenue, Philadelphia, PA 19111-5093.)

DEPARTMENT OF TRANSPORTATION (DOT)

Federal Motor Carrier Safety Regulations.

Federal Motor Vehicle Safety Standards.

MIL-T-62088B

* (Application for copies of DoT publications should reference the Code of Federal Regulations, 49 CFR, and the Federal Register, and should be addressed to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.)

ENVIRONMENTAL PROTECTION AGENCY (EPA)

Control of Air Pollution from New Motor Vehicles and New Motor Vehicle Engines.

Noise Emission Standards for Transportation Equipment - Medium and Heavy Trucks.

• (Application for copies of EPA publications should reference the Code of Federal Regulations, 40 CFR, and the Federal Register and should be addressed to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.)

* 2.2 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DoD adopted are those listed in the issue of the DODISS cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS are the issues of the documents cited in the solicitation (see 6.2).

AMERICAN NATIONAL STANDARDS INSTITUTE, INC. (ANSI)

ANSI Standards

ANSI/UL752

- Standard for Bullet Resistant Equipment.

(Application for copies of ANSI publications should be addressed to the American National Standards Institute, Inc., 1430 Broadway, New York, NY 10018.)

* AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 4985

- Standard Specification for Low Silicate Ethylene Glycol Base Engine Coolant for Heavy Duty Engines Requiring an Initial Charge of Supplemental Coolant Additive.

(Application for copies of ASTM publications should be addressed to American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.)

* THE EUROPEAN TYRE AND RIM TECHNICAL ORGANISATION (ETRTO)

Standards Manual

(Application for copies of ETRTO publications should be addressed to the European Tyre and Rim Technical Organisation, 32, Avenue Brugmann, 1060 Brussels, Belgium.)

MIL-T-62088B

SAE, INC.

SAE Standards and Recommended Practices.

- * J350 - Spark Arrestor Test Procedure for Medium Size Engines (DOD Adopted).
- J537 - Storage Batteries.
- * J551 - Performance Levels and Methods of Measurement of Electromagnetic Radiation from Vehicles and Devices (30-1,000 MHz).
- J588 - Turn Signal Lamps.
- J589 - Turn Signal Switch.
- J688 - Truck Ability Prediction Procedure (DOD Adopted).
- * J1349 - Engine Power Test Code - Spark Ignition and Diesel.

(Application for copies of SAE publications should be addressed to SAE, Inc., 400 Commonwealth Drive, Warrendale, PA 15096.)

THE TIRE AND RIM ASSOCIATION, INC.

Year Book.

* (Application for copies of Tire and Rim Association publications should be addressed to The Tire and Rim Association, Inc., 175 Montrose West Ave., Copley, OH 44321.)

* (Non-Government standards and other publications are normally available from the organizations that prepare or distribute the documents. These documents also may be available in or through libraries or other informational services.)

* 2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

* 3.1 Standard vehicle and accessories. Except as specified in 3.1.1 through 3.1.1.8, the vehicle, components, assemblies, and accessories to be delivered under the contract shall be standard or optional items, which meet or exceed the requirements of this specification. Except as specified in 3.1.1 through 3.1.1.8, no removal, substitution or alteration of the chassis manufacturer's standard or optional chassis model components shall be made. All chassis items shall be as represented in the chassis manufacturer's technical data book. Special bodies or mounted equipment shall be as represented in the body and equipment manufacturer's technical data. Technical data shall be limited to specifications and technical material, identical to that furnished to the authorized company representatives for

MIL-T-62088B

selection of vehicle models and components, and shall be available to the engineering offices of the procuring activity, prior to delivery of the items. The chassis model furnished shall be not older than the chassis manufacturer's current model on the date of invitation for bids.

3.1.1 Special requirements. In addition to the standard vehicle and components specified in 3.1, the vehicle shall be furnished with special equipment as specified herein.

* 3.1.1.1 Treatment and painting. The vehicle shall be treated and painted in accordance with MIL-STD-1223. As specified by the procuring activity for the appropriate military service (see 6.2), the exterior color shall be in accordance with MIL-STD-1223. Body interior surfaces shall be treated and painted as specified in 3.5.1.4.

* 3.1.1.2 Markings and data plates. As specified by the procuring activity for the appropriate military service (see 6.2), identification marking and data plates shall be in accordance with MIL-STD-1223. When specified (see 6.2), concealed markings shall be furnished.

* 3.1.1.3 Instruction plates. A plate showing a schematic of the air conditioner and the heater and complete operating instructions shall be fastened on the inside of the vehicle. The plates shall conform to Composition A (Class 1 or 2) or Composition C of MIL-P-514.

* 3.1.1.4 Rustproofing. When specified (see 6.2), the vehicle shall be rustproofed in accordance with FED-STD-297. When specified (see 6.2), tropical rustproofing in accordance with FED-STD-297 shall be furnished.

* 3.1.1.5 Drain plugs. Drain plugs installed in manual transmissions and rear axles shall be of the permanent magnet type.

* 3.1.1.6 Towing devices. Towing devices consisting of two hooks, loops, eyes or pins or the chassis manufacturer's standard single center mounted eye or pin shall be mounted on the front of the vehicle. All towing devices shall be frame rail mounted or reinforced back to each frame rail.

3.1.1.7 Spark arrester. As specified herein (see 3.4.4), the vehicle shall be furnished with an exhaust system spark arrester.

* 3.1.1.8 Brake lights. At least one pair of brake lights shall override the four-way emergency flasher or the two systems shall be independent of each other. Modifications to the manufacturer's standard product to accommodate this requirement shall not compromise conformance to any Federal Motor Carrier Safety Regulation referenced herein or to any Federal Motor Vehicle Safety Standard. If additional lights are added to the vehicle, the lights shall be selected from the chassis manufacturer's standard matching hardware.

MIL-T-62088B

3.2 General design.

3.2.1 Federal Motor Vehicle Safety Standards. The vehicle and furnished accessories shall comply with all Federal Motor Vehicle Safety Standards in effect on the date of manufacture.

3.2.2 Air pollution control. The vehicle shall comply with EPA Regulations governing Control of Air Pollution from New Motor Vehicles and New Motor Vehicle Engines in effect on the date of manufacture. In addition, vehicles destined for California shall comply with State of California regulations governing air pollution control in effect on the date of manufacture.

* 3.2.3 Sound level. The entire vehicle interior area sound level shall not exceed 84 db(A) when measured in accordance with Federal Motor Carrier Safety Regulation 393.94. The vehicle exterior sound level shall conform to EPA Noise Emission Standards for Transportation Equipment, Medium and Heavy Trucks.

3.2.4 Curb weight. The curb weight shall include the weight of the chassis and body, with all attachments, accessories, and equipment: full complement of fuel, lubricants, and coolant.

3.2.5 Gross vehicle weight. Gross vehicle weight (GVW) shall consist of curb weight, operator and assistant weight (computed at 80 kg) (175 pounds) each, and a payload evenly distributed in the vehicle body load area, to provide not less than the specified GVW.

3.2.5.1 Payload and gross vehicle weight. The distribution of GVW for the purpose of establishing suspension, axle and tire capacities shall be determined with the payload uniformly distributed over the truck body load area. The minimum GVW rating shall be 8600 kg (19,000 pounds), and the minimum payload capacity shall be 1130 kg (2,500 pounds). The actual GVW rating of the vehicle furnished shall exceed 8600 kg (19,000 pounds), if required, to provide the 1130 kg (2,500 pound) payload capacity.

3.2.6 Ratings. Component and vehicular ratings shall not be raised to meet the requirements of this specification. Vehicle ratings shall be manufacturer's published ratings.

3.2.7 Wheelbase. The wheelbase shall be not less than 3200 millimeters (mm) (125 inches).

* 3.2.8 Accessibility. The design of the vehicle and optional equipment shall permit access for routine servicing and shall permit access for replacement and adjustment of component parts and accessories with minimal disturbance of other components and systems.

MIL-T-62088B

* 3.2.9 Prohibited materials. Asbestos materials shall not be used in any form in any part of the vehicle. No item, part or assembly shall contain radioactive materials in which the specific activity is greater than 0.002 microcurie per gram or activity per item equals or exceeds 0.01 microcuries.

3.3 Performance.

3.3.1 Speeds. High and low speed requirements shall be met with vehicle loaded to required GVW.

* 3.3.1.1 High speed gradeability. The vehicle shall ascend a continuous grade of 3.0 percent at 80 kilometers per hour (km/h) (50 miles per hour (mph)). Gradeability requirements shall be met with the transmission in direct drive and, when a multispeed axle is furnished, with the axle in high speed range. Gradeability shall be verified with calculations in accordance with SAE J688 (see 6.3).

3.3.1.2 Low speed. Low speed shall be calculated with engine operating at not less than 35 percent of recommended governed speed, and shall provide a vehicle speed of not more than four mph.

* 3.3.1.3 Maximum geared speed. The maximum geared speed at engine governed speed shall be not less than 93 km/h (58 mph). Conformance to geared speed specified shall be determined by calculating in accordance with the following formula:

$$\text{Maximum geared speed (mph)} = \frac{\text{Governed speed (rpm)}}{\text{Total gear reduction x tire factor (see 6.3)}}$$

3.3.2 Service brakes. The service brakes shall control and hold the vehicle, when loaded to required GVW, on a 30 percent grade. The service brakes shall stop the vehicle, loaded to required GVW, within the stopping distance requirements of Federal Motor Carrier Safety Regulation 393.52.

3.4 Chassis components.

3.4.1 Engine. The engine furnished shall be the chassis manufacturer's standard, or optional engine for the commercial model truck which meets or exceeds the requirements of this specification.

* 3.4.1.1 Diesel engine. Unless otherwise specified (see 3.4.1.2), the vehicle shall be equipped with a liquid cooled, compression ignition, two-stroke or four-stroke cycle diesel engine. Engine net power used in performance prediction calculations shall be determined in accordance with SAE J1349. The engine shall demonstrate the performance characteristics specified herein when using diesel fuel conforming to VV-F-800. In addition, when specified (see 6.2), the engine shall operate satisfactorily on grade JP-4 and grade JP-5 fuel conforming to MIL-T-5624 under emergency, short

MIL-T-62088B

duration conditions and on grade JP-8 fuel conforming to MIL-T-83133 under normal conditions. A power loss when operating on JP-4, JP-5 or JP-8 is acceptable.

* 3.4.1.2 Gasoline engine. When specified (see 6.2), the vehicle shall be equipped with a liquid cooled, internal combustion, four-stroke cycle gasoline engine. The engine furnished shall produce the required vehicle performance when operated on unleaded fuel with a research octane rating of 91, at engine speed not more than the manufacturer's recommended operating speed. The engine shall be capable of continuous, warranted operation on unleaded fuel. Engine net horsepower used in performance calculations shall be determined in accordance with SAE J1349. Unless otherwise specified or required by foreign laws, vehicles for overseas use shall be capable of accepting and operating on leaded gasoline.

* 3.4.1.3 Oil and fuel filters. A full flow or combination full flow and bypass oil filter with replacement element shall be furnished. Engine manufacturers standard fuel filter(s) shall be furnished.

3.4.1.4 Governor. An engine governor shall be furnished and set and sealed to limit the engine to the manufacturer's maximum recommended operating speed.

* 3.4.1.5 Cooling system. The cooling system shall maintain the engine coolant at a temperature below the boiling point with the vehicle loaded to GVW and operated at an altitude of 3050 meters (m) (10,000 feet) above sea level or in an ambient air temperature of not less than 52° Celsius (°C) (125 degrees Fahrenheit (°F)). The coolant system shall include a surge tank or a coolant recovery reservoir of not less than 1.89 liters (L) (two-quart) capacity. For cooling system servicing, see 3.4.21.1.

* 3.4.1.6 Coolant temperature control. Thermostatic control of engine coolant temperature shall be provided. On diesel engine driven vehicles, the control shall include complete thermostatic control of all coolant flow through the radiator.

* 3.4.1.7 Fan clutch. A fan clutch shall be provided. The fan clutch shall reduce the fan speed automatically when the fan is not required for engine cooling. The fan clutch shall be asbestos free.

* 3.4.1.8 Power plant heaters and fuel warmer. When specified (see 6.2), a coolant heater, an engine oil heater, and fuel warmers (diesel engine driven vehicles only) shall be provided. Heaters shall operate on 120-volt alternating current (ac), and shall be wired through a junction block, including a fuse or circuit breaker, to a single three pronged (male), weatherproof, slave receptacle for receiving external power and grounding vehicle. The receptacle shall be located on the streetside of the vehicle, as near the cab door as possible. A three wire connecting cable, not less

MIL-T-62088B

than 7600 mm (25 feet) long and of adequate line capacity to supply power for all heater units simultaneously, shall be furnished. Connecting cable shall include a matching female connector at the vehicle end and a standard, weatherproof, three pronged (two power plus one ground) male connector at the other end. Electrical apparatus shall be in accordance with Federal Motor Carrier Safety Regulation 393.77(c)(7). The electrical insulation of the connecting cable shall withstand normal operating stresses in low ambient air temperature (down to -51°C (-60°F)) without cracking or loss of dielectric capacity. All heater lead wires shall be installed without interfering with vehicle component operation, and without loose excess wire. Provisions for stowage of the cable shall be provided in the vehicle cab. Heaters and fuel warmers shall be furnished as follows:

- (a) A coolant heater, 1000-watt (W) minimum rating, shall be installed in the engine block or lower coolant inlet hose. Engine thermostat with an operating range of 77°C (170°F) to 90°C (195°F) shall be installed.
- * (b) An oil pan heater of the permanent external surface mount, permanent in-pan mount, or immersion type that meets the following requirements, shall be installed:
 - * (1) Not less than 16 W/L (15 watts per quart) heating capacity
 - * (2) Not more than 2.8 watts per square centimeter (W/cm^2) (18 watts per square inch) heating capacity
 - (3) Thermal balance design or thermostat control providing for uninterrupted operation
 - (4) Provision for mounting below minimum service oil level.
- * (c) An in-line fuel warmer or preheater unit shall be provided on diesel engine driven vehicles to prevent clogging of fuel filters due to wax crystallization in the fuel. The unit shall use engine coolant to transfer sufficient heat to the diesel fuel to heat it from an inlet temperature of -40°C (-40°F) to an outlet temperature of -13°C ($+9^{\circ}\text{F}$), with a fuel flow rate not less than the maximum fuel demand of the engine fuel system. A coolant shutoff valve shall be provided for the coolant inlet side of the fuel warmer unit. The unit shall not cause heating of the fuel above 27°C (80°F) under any possible condition.
- * (d) An in-tank fuel warmer or preheater unit shall be provided on diesel engine driven vehicles. The unit shall use engine coolant to transfer heat to the fuel in one fuel tank. The warmer shall not cause heating of any fuel above 27°C (80°F) under any possible condition, shall not disable or cause elimination of the fuel gage sending unit and shall not violate 3.2.1 or any Federal Motor Carrier Safety Regulation. A coolant shut off valve shall be included. The units required by 3.4.1.8(c) and (d) may be combined.

3.4.2 Electrical system. The electrical system shall be in accordance with Federal Motor Carrier Safety Regulations 393.27 through 393.31 and 393.33.

MIL-T-62083B

* 3.4.2.1 Starting system (diesel engine). For diesel engine driven vehicles, a 12 or 24-volt direct current (dc) starting system, with 12-volt dc lighting system, shall be furnished. Engine starting equipment shall include an ether starting system, glow plug or electric grid heater. If an ether system is furnished in lieu of a glow plug or grid heater, it shall be of the measured shot type. The measured shot type ether system shall be key operated or manually operated from the driver's compartment and shall be inoperative with the engine warm. Complete provisions for a replaceable ether reservoir of not less than 355 milliliters (mL) (12 fluid ounces) shall be furnished. A reservoir need not be furnished. When specified (see 6.2), for diesel engines, the starting motor shall be equipped with a thermostat controlled, automatic resetting circuit breaker to protect the motor from overcrank heat damage. The circuit breaker shall not limit cranking ability for a startable engine.

* 3.4.2.2 Ignition system (gasoline engine). For gasoline engine driven vehicles, a 12-volt dc ignition system shall be furnished.

* 3.4.2.3 Alternator. Unless otherwise specified (see 6.2), a minimum 75-ampere alternator shall be furnished. The alternator output with the engine at engine idle speed shall be not less than 45 amperes.

3.4.2.4 Lighting. All vehicle lights, reflectors, and wiring shall be as specified herein and shall conform to Federal Motor Carrier Safety Regulations 393.12, 393.19, 393.20 and 393.22 through 393.26(d). Lights and reflectors shall not be mounted on vertical surface of rub rails (unless recessed and fully protected) or mounted on vehicle bumpers.

* 3.4.2.5 Turn signals. Turn signal lamps shall conform to SAE J588. Operating units shall conform to SAE J589, class A, and shall be mounted on the steering column. Turn signal units shall be installed in accordance with SAE J588. Turn signal operating units shall have a visible flash indicator.

3.4.2.6 Battery(s). Each battery shall be of a 12-volt potential. The total reserve capacity ratings and the total cold cranking ratings at -18°C (0°F), both measured in accordance with SAE J537, shall be not less than specified in table I. The batteries shall be of the maintenance free type having the maintenance free characteristics listed in W-B-131.

TABLE I. Battery(s).

	Reserve capacity (minutes)	Cold cranking (amperes)
* Diesel	480	1,875
* Gasoline	100	450

MIL-T-62088B

* 3.4.2.7 Radio interference suppression. The vehicle shall be suppressed to limit electromagnetic radiation in accordance with SAE J551. Any body equipment emitting electromagnetic radiation shall be suppressed to the same level as the vehicle chassis.

3.4.3 Fuel system. The fuel system shall conform to Federal Motor Carrier Safety Regulations 393.65 and 393.67.

3.4.3.1 Air cleaner. An air cleaner shall be furnished.

3.4.3.2 Fuel tank(s). The vehicle shall be equipped with fuel tank(s) of not less than 189 L (50 gallon) total capacity (163 L (43 gallons) for California). When more than one tank is furnished on diesel engine driven vehicles, means shall be provided to assure equalized fuel level in both tanks. When more than one tank is furnished on gasoline engine driven vehicles, a selector valve connecting either tank to engine fuel intake shall be provided and means shall be provided to monitor the fuel level of either tank from a single fuel gage; or an equalizing pump shall be used to maintain the same fuel level in both tanks. Fuel tanks shall be shielded by and fit within the perimeter of the body armor.

* 3.4.4 Exhaust system. The exhaust system shall conform to Federal Motor Carrier Safety Regulation 393.83. Unless otherwise specified (see 6.2), the vehicle shall be furnished with a spark arrester having an 80 percent arresting efficiency when rated in accordance with SAE J350, except on turbocharged engines. The exhaust system shall discharge to the side behind the rear wheels.

* 3.4.5 Transmission. Unless a manual transmission is specified, the vehicle shall be equipped with an automatic transmission. When specified (see 6.2), the vehicle shall be equipped with a manual transmission, complete with clutch. The input torque capacity of the transmission shall be at least equal to the maximum torque delivered by the engine. The transmission and axle gear ratios shall be selected to provide the performance specified in 3.3.1 through 3.3.1.3.

* 3.4.5.1 Automatic transmission. The automatic transmission shall include a hydraulic torque converter and not less than four forward gear ratios. Normal driving range selector position shall provide not less than four gear ratios without movement of the selector. The transmission shall have a power takeoff opening.

* 3.4.5.2 Manual transmission. The manual transmission shall have not less than five forward speeds and one reverse speed. The transmission shall provide for maximum ease of shifting in all speeds. SAE J704 power takeoff openings shall be provided at the right and left sides of the transmission.

MIL-T-62088B

* 3.4.5.3 Clutch. The clutch shall be of the largest capacity offered for the engine and vehicle model furnished, with clutch torque capacity exceeding maximum delivered engine torque. The clutch lining shall be asbestos free.

3.4.6 Driveline components. Driveline components shall be adequate to transmit the maximum delivered torque of the engine, as developed through the maximum gear train reduction.

3.4.7 Frame. The chassis frame shall be the manufacturer's standard for the type of vehicle furnished. The vehicle shall have a frame with reinforcements extending at least from the rear of the front-suspension, rear hanger bracket to the front of the rear spring, front hanger bracket. Reinforcements shall provide sufficient structural strength in the chassis frame through increased resisting bending moment at least equal to the loads imposed with vehicle body loaded to required GVW.

3.4.8 Suspension. The vehicle shall be equipped with a suspension system having a rated capacity at least equal to the load imposed on each member, measured at the ground, with the vehicle loaded to required GVW. Vehicle shall be equipped with hydraulic, double-acting shock absorbers at the front wheels.

* 3.4.9 Axles. Axle ratings shall be at least equal to the load imposed at each axle, measured at the ground, with the vehicle loaded to required GVW. A single reduction rear axle shall be furnished. Wheel bearings and axle spindles shall be oil lubricated. The hubcaps, except for driving axles, shall have a window for visual determination of oil level. Provisions for resting or withstanding internal pressure buildup and for replenishing the oil supply shall be provided.

3.4.9.1 Traction control. When specified (see 6.2), the vehicle shall be furnished with traction control on the rear axle. The traction control shall actuate automatically to insure that power is transmitted to the wheels having traction when the opposite wheel loses traction. Maximum traction capabilities shall be maintained at all times under each drive wheel for the life of the vehicle.

* 3.4.10 Wheels, rims, tires, and tubes. The vehicle shall be equipped with single front and dual rear wheels. Rims and tire ratings shall conform to Tire and Rim Association or European Tyre and Rim Technical Organisation recommendations. Multi-piece rims shall not be furnished. Rims and disc wheel sizes shall be the same for all wheels on the vehicle. Tire size and load range (ply rating) shall be the same for all tires on the vehicle. When specified (see 6.2), disc type wheels shall be furnished.

* 3.4.10.1 Tires. Unless otherwise specified (see 6.2), tires shall be of the tubeless type with highway tread. Unless otherwise specified, low profile or standard profile tires may be furnished. When specified (see

MIL-T-62088B

6.2), low profile tires shall be furnished. Tires shall be of the steel belted radial type or when specified (see 6.2), bias ply. Tires shall be of rated capacity at least equal to the load imposed on each tire, measured at each wheel, at the ground, with the vehicle loaded to required GVW. Tires shall conform to Tire and Rim Association or to European Tyre and Rim Technical Organisation recommendations.

* 3.4.10.2 Inner tubes. When tube type tires are specified in procurement documents, inner tubes shall be of heavy duty type, and shall be of proper size for tires furnished. Tube type radial tires shall have radial tire inner tubes. Tire flaps shall be provided for tube type tires in accordance with Tire and Rim Association recommendations.

* 3.4.10.3 Carrier for spare tire assembly. Unless otherwise specified (see 6.2), a carrier for a spare wheel or rim and tire assembly shall be installed in a readily accessible location on the vehicle. Threaded fasteners, when used to secure the spare tire in the carrier, shall be constructed of or plated with corrosion-resistant material. The carrier design shall enable safe removal or mounting of a spare wheel assembly using only the tools specified in 3.4.15. The carrier shall enable the safe removal and installation of the spare tire assembly from and to the vehicle and carrier without personnel positioning themselves or any part of their body under the spare tire assembly.

* 3.4.10.4 Spare tire assembly. Unless otherwise specified (see 6.2), a spare tire assembly shall be furnished. The spare tire assembly shall include an inflated spare tire mounted on a spare wheel or rim. The spare tire shall be of the same size, tread design and load range (ply rating) as the tires furnished on the front axle of the vehicle.

* 3.4.11 Brakes. Brakes shall conform to Federal Motor Carrier Safety Regulations 393.40 through 393.43 and 393.45 through 393.52. Brake linings shall be of nonasbestos material.

* 3.4.11.1 Power-hydraulic type. Unless otherwise specified (see 3.4.11.2), the vehicle shall be equipped with power assisted, hydraulic actuated, four-wheel, service brakes.

* 3.4.11.1.1 Split hydraulic brake system. The power-hydraulic brake system shall be so arranged as to provide separate systems for at least two wheels and so designed and constructed that rupture or leakage type failure of any single pressure component of the service brake system, except structural failures of the brake master cylinder body, effectiveness indicator body, or other housing common to the divided system, will not result in complete loss of function of the vehicle brakes when force on the brake pedal is continued. "Pressure component" means any internal component of the brake master cylinder or master control unit, wheel brake cylinder, brake line, brake hose, or equivalent, except power assist components.

MIL-T-62088B

* 3.4.11.1.2 Indicator light. The split hydraulic brake system shall be equipped with an electrically operated red light mounted on the instrument panel to indicate system effectiveness. The light shall have an area of not less than 125 mm² (0.196 square inch). It shall illuminate before or upon application of the brakes when an actuating-pressure component of the system has sustained a loss of pressure. The indicator light system shall include a means for testing by the vehicle operator to assure that the light bulb is operable.

3.4.11.2 Air or air-hydraulic type. When specified (see 6.2), the vehicle shall be equipped with four wheel, air or air-hydraulic type brakes. The braking system, complete with all necessary components, shall include:

- (a) Air compressor, unloader-head-type, engine driven and engine lubricated, air or water cooled, and having a capacity of not less than 205 L/min (7.250 cubic feet per minute (cfm))
- (b) Air storage reservoir(s), each tank equipped with drain, and with safety and check valves between compressor and last reservoir tank
- (c) Air control valves
- (d) Foot control, suspended or treadle type
- (e) Air pressure gage, visible to the driver
- (f) Low air pressure warning, visible and audible
- (g) Service brake stop lamp switch
- (h) Automatic moisture ejector
- (i) Automatic slack adjusters on cam type brakes or integral self-adjusting brakes on wedge and disc type brakes.

* 3.4.11.2.1 Air dryer. A replaceable cartridge desiccant type air dryer shall be installed in the air brake system. The dryer shall have the capability of removing not less than 95 percent of the moisture in the air being dried. The dryer shall have a precooler and a filter to screen out oil and solid contaminants. The dryer shall have an automatic self-cleaning cycle and a thermostatically controlled heater to prevent icing of the purge valve.

3.4.12 Steering. Power steering shall be provided.

* 3.4.13 Windshield wipers and washers. The vehicle shall be equipped with dual windshield wipers and windshield washers. The windshield wipers shall be multispeed type and operated by either air or electric motor(s). When specified (see 6.2), and if electric motor wipers are furnished, intermittent wipers shall be furnished.

3.4.14 Bumpers. A heavy duty channel type front bumper shall be provided. Rear end protection shall be provided and shall be in accordance with Federal Motor Carrier Safety Regulations 393.86 (see 3.5.1.5).

MIL-T-62088B

* 3.4.15 Tools. Unless otherwise specified (see 6.2), each vehicle shall be furnished with tools required for exchanging a mounted tire assembly with the spare assembly and shall include at least a jack, jack handle and wheelnut wrench. The jack shall be of such closed height as to permit its location under an axle, or other satisfactory lift point, at any wheel with the tire flat. The jack, without blocking, shall be capable of raising any wheel of the loaded vehicle to a height adequate to permit removal and replacement of wheel and tire assembly. Stowage space of sufficient size to accommodate the vehicle jack, hand tools, antiskid chains (for outside tires on duals only), warning flares and reflectors shall be furnished for retaining equipment during vehicle operation. Stowage space for these tools may be furnished in the body. When stowage space for these tools is located outside of the body, it shall be waterproof and shall provide for locking with a padlock.

3.4.16 Heater and defroster. A hot water heater shall be provided. Heater shall be of the fresh air type or recirculating type. Discharge outlets shall be provided to direct heated air to floor and to defroster louvers. Heater shall be complete with blower and mounted controls convenient to the driver.

* 3.4.17 Controls and operating mechanism(s). All controls and operating mechanisms shall be located for left hand drive. Controls shall be complete and conveniently operable by the driver. Lever controls shall be designed and located to permit easy entrance and exit of operator to and from the driver's compartment. Instruments and controls shall be identified as to their function and installed in a manner to facilitate removal and servicing. Instruments shall be panel mounted.

* 3.4.17.1 Accessories and equipment. Chassis equipment shall be complete with all accessories furnished as standard equipment by the manufacturer. The following minimum equipment shall be furnished:

- (a) Key-operated ignition switch
- (b) Ammeter, charging indicator or voltmeter
- (c) Fuel gage
- * (d) Oil pressure gage or red indicator warning light
- * (e) Engine coolant temperature gage or high coolant temperature or low coolant level red indicator warning light
- * (f) High coolant temperature or low coolant level alarm buzzer
- (g) Speedometer with recording odometer.
- (h) Ash receptacle
- (i) Dual sunvisors
- * (j) Armrest on driver's and passenger's side
- * (k) Driver's compartment ventilator other than window
- (l) Tachometer (diesel engine driven vehicles only).

MIL-T-62088B

3.4.18 Horn. The manufacturer's standard electric horn shall be furnished.

* 3.4.19 Rearview mirrors. Outside rearview mirrors shall be mounted on both sides of the vehicle. The mirrors shall have flat and convex areas. The flat portion shall have not less than 320 square centimeters (cm²) (50 square inches) of reflective area. The convex portion shall have not less than 155 cm² (24 square inches) of reflective area and a radius of curvature of not less than 510 mm (20 inches). The mirrors shall have not less than two supporting arms. When specified (see 6.2), the curbside flat mirror shall be of the motorized type, with remote control. The mirror motor shall provide not less than 60 degrees horizontal rotational viewing range. When specified (see 6.2), the flat mirrors shall be electrically heated. Mirror remote and heating controls shall be within reach of the seated driver. An interior mirror, to monitor the rear compartment, shall be furnished.

* 3.4.20 AM/FM radio. When specified (see 6.2), the manufacturer's standard AM/FM radio shall be provided.

3.4.21 Servicing and adjusting. Prior to acceptance of the vehicle by the Government inspector, the contractor shall service and adjust the vehicle and its mounted equipment for operational use including at least the following: alinement of lights; adjustment of engine; adjustment of brake system; filling and charging of battery; alinement of front wheels; inflation of all tires; complete lubrication of chassis, engine, running gear, and mounted equipment with grades of lubricants recommended for the ambient air temperature at the delivery point; servicing of the cooling system in accordance with 3.4.21.1; and servicing of windshield washer reservoir with water and appropriate additives. The air conditioner shall be fully charged and operational.

* 3.4.21.1 Engine coolant. The engine coolant shall be a solution of ethylene glycol antifreeze and water or propylene glycol antifreeze and water, in equal parts of antifreeze and water by volume. Ethylene glycol antifreeze shall conform to ASTM D-4985 with not more than 250 parts per million silicates. Propylene glycol antifreeze shall be in the specific formulation approved by the engine and cooling system manufacturers. When specified (see 6.2), the percentage of antifreeze in the cooling system shall be increased to provide protection against freezing down to -54°C (-65°F).

3.5 Body. The armored vehicle shall be equipped with an all-steel, aluminum, or steel and aluminum body consisting of an integral driver's compartment and rear compartment. The body shall have the minimum dimensions specified in table II. The subframe and the floor of the body shall not be welded to the truck chassis frame. Exterior and interior sheet steel or aluminum lining and glass shall be bullet resistant and shall provide

MIL-T-62088B

protection against small arms fire up to and including 0.357 magnum, at a distance of 15.2 m (50 feet), when tested in accordance with ANSI/UL752. The 0.357 magnum projectile specified, refers to a 158 grain, soft point or lead projectile fired from an 215.9 mm (8.500 inch) barrel having a muzzle velocity of 442 meters per second (m/s) (1450 feet per second (fps)) with a muzzle energy of 1104.5 kilograms per meter (kg/m) (740 foot-pounds (ft-lb)).

TABLE II. Body dimensions (inches, minimum).

Location	Length		Width		Height	
	mm	in	mm	in	mm	in
Overall body (outside including skirting)	3454	(136)	2030	(80)	2438	(98)
Driver's compartment (inside)	1092	(43)	1930	(76)	1370	(54)
Rear compartment (inside)	2290	(90)	1930	(76)	1370	(54)

3.5.1 Body construction. The body design and construction shall be the manufacturer's standard for a armored payroll distribution truck as specified herein and shall be constructed in accordance with ANSI/UL752. The body, including body framing, subframing, roof bows, interior and exterior walls, roof and flooring shall be constructed of steel or aluminum. The inner and outer walls, doors, partition, roof, fire wall, kick plates, wheelwheels and flooring shall be of sufficient thickness and strength to defeat small arms fire as specified in 3.5. Effective means shall be taken to prevent electrolytic action between dissimilar metals. Bolting or riveting of body shall be avoided whenever possible. Welding techniques shall be of a quality to prevent weakening of material being welded.

3.5.1.1 Glass. Glass shall be tinted bullet resistant safety glass (see 3.5.1.1.1). Glass shall be of sufficient thickness, ply, and density so as to defeat small arms fire as specified in 3.5. Glass shall be heat treated safety plate glass. The inner layer of glass shall have a spall shield to prevent splintering of inner glass. The glass shall have a scratch resistant coating. The interlayers shall be transparent and stable without edge sealing. Front ply shall be considered the ply that receives bullet impact. Glass shall be of uniform quality without noticeable distortion and shall be optically flat within a minimum radius curvature of 152.4 m (500 feet). Bullet resistant glass shall be capable of withstanding changes in temperature from -54°C (-65°F) to 71°C (160°F), without cracking, clouding, delaminating or other evidence of deterioration.

3.5.1.1.1 Tinting. Tinted heat-absorbing, bullet resistant glass shall be furnished. All door, window, windshield, and partition glass shall be in accordance with the manufacturer's standard for tinted bullet resistant glass. Tinting of lamination is not acceptable except for the rear door.

MIL-T-62088B

Rear door glass shall be tinted to quadruple density allowing approximately 25 percent light transmission. Rear door glass with tinted lamination is acceptable.

3.5.1.2 Insulation. Insulation shall be provided in the exterior doors, walls, floor and ceiling of the body and shall provide resistance to transfer of heat equivalent to the protection afforded by a 25 mm (1-inch) thick batt having a thermal conductivity of 0.24, in normal ambient air temperatures. Insulation shall be either foamed in place, flexible or batt type, fibrous or cellular material, having a moisture absorption capacity of less than 2 percent by weight. Materials shall be odorless and fire retardent. Insulation shall not breed nor promote the growth of fungus and shall not cause nor accelerate corrosion of steel, copper or aluminum. Insulation shall be secured to the inner side of external walls and provided with means to retain insulation in place under all operating conditions. Cement, where used, shall be waterproof. The installation of the insulation shall provide shear strength sufficient to prevent sag of the insulation when the assembled vehicle is operated at speeds up to 88 km/h (55 mph) over improved roads. All insulation, to maximum practicable extent, shall be installed prior to the closing of spaces in body sides, front and rear panels, ends, doors, upright body members, roof, roof bows, and other parts.

3.5.1.3 Floor covering. The floor area in both compartments shall have a raised pattern diamond plate surface or shall be covered with insulated rubber matting, with perimeter aluminum molding. When specified (see 6.2), indoor-outdoor carpeting shall be furnished.

3.5.1.4 Treatment and painting of interior surfaces. Treatment and painting of interior surfaces shall be in general accordance with MIL-STD-1223. All surfaces within the body walls, floor, ceiling, doors and partitions shall be treated or primed and painted with a corrosion-resistant finish or paint before the insulation is installed. Interior lining surfaces that face the body walls shall be treated or primed and painted with a corrosion resistant finish or paint before installation of the interior lining.

3.5.1.5 Running boards. Running boards shall be furnished on each side of the body from the rear of the front fenders to forward of the rear wheel housing and across the back of the body. The running boards shall be not less than 150 mm (six inches) in width and covered with safety tread steel or aluminum plate. The rear running board shall form a step into the rear compartment and in addition shall be a rear bumper combination. Rear bumper combination shall be in accordance with Federal Motor Carrier Safety Regulation 393.86.

3.5.1.6 Gun ports. Not less than eleven gun ports shall be installed in the body. Gun ports shall be in accordance with the design and characteristics specified in ANSI/UL-752. Gun ports shall be spring loaded, aluminum,

MIL-T-62088B

weatherproof, heavy duty, with rubber gaskets and equipped with self-closing doors suitable for one hand operation. Gun ports shall incorporate a locking device and shall be operable after being struck by a projectile. Gun ports shall be located at least as follows:

- (a) One on each side under windshield.
- (b) One on each door, to the side of or under the window opening.
- (c) One at side of or under each curb and street side window.
- (d) One in the partition between the forward and rear compartments.

3.5.1.7 Wheelhousings. Wheelhousings shall be furnished with interior splash shields. Wheelhousings shall be waterproof. Wheel well cutouts shall be furnished with rubber rim type rear fenders around the cutout. Splash shields shall extend below wheelhousings to shed road splash. All parts and surfaces of the wheelhousings and shields shall be primed and painted before and after assembly as specified in 3.5.1.4.

3.5.1.8. Lighting. Lighting shall be provided in the driver's compartment and the rear compartment. Driver's compartment shall have an under-dash light with individual switch and a dome light with a translucent shield and a switch. Rear compartment shall have two equally spaced ceiling lights with translucent shields. Rear lights shall be on the longitudinal centerline of the ceiling. Lights shall have a three way switch operable from driver's compartment and rear compartment.

3.5.1.9 Air conditioning. A high capacity air conditioning system shall be provided for each compartment. The evaporator(s) shall be located within the body and shall be ducted to both compartments. Controls readily accessible to the driver shall be furnished to adjust temperature and blower speeds. Each compartment shall be furnished with adjustable louvers to direct the flow of air. The condensor and compressor shall be mounted under the hood or under the vehicle chassis within the body armor. The system shall be capable of maintaining not more than 27°C (80°F) dry bulb and 20°C (68°F) wet bulb temperature in both compartments in a 38°C (100°F) outside air ambient temperature under full solar radiation.

3.5.2 Rear compartment.

3.5.2.1 Partition. A partition shall be provided to the rear of the driver's compartment. The partition shall be constructed of the same materials as specified in 3.5.1.

3.5.2.1.1 Partition window. A window shall be installed in the partition, located on the longitudinal centerline of the partition 810 mm (32 inches) above the floor. Window glass shall be not less than a nominal 300 mm (12 inches) by 300 mm (12 inches) and shall be as specified in 3.5.1.1.

MIL-T-62088B

3.5.2.1.2 Partition door. A sliding door shall be provided in the partition. The door opening shall be located on the right side of the partition. The door shall be approximately 610 mm (24 inches) in width and of a height to provide for an opening above the door frame. The opening above the door frame shall be covered with bullet resistant screen wire, 150 mm (6 inches) high by the width of the door opening. Door construction shall be as specified in 3.5.1. The door shall be capable of being locked from the driver's compartment side with a cylinder type lock. The door lock shall be two-point, with top and bottom latches. A door catch shall be provided to retain the door in open position. The door shall serve as access to the rear compartment. A gun port as specified in 3.5.1.6 shall be provided.

3.5.2.2 Windows. Eight windows shall be provided in the rear compartment, three on the curb side, three on the street side and one in each rear door. The windows shall be approximately equally spaced, located 760 mm (30 inches) from the floor, and bullet-resistant as specified in 3.5.1.1. Glass area shall be approximately 460 mm (18 inches) in length and 250 mm (10 inches) in height. Molding for the windows shall be bullet resistant, as specified in 3.5.1.

3.5.2.3 Rear doors. Double rear doors shall be provided. The door opening shall be not less than 1702 mm (67 inches) in width and not less than 1250 mm (49 inches) in height. Windows shall be as specified in 3.5.1.1. Door locks shall be operable from inside only and shall be two point, with top and bottom latches. Door holders for retaining the doors in an open position of not less than 120 degrees shall be furnished. Hinges shall be tamper proof. Each rear door shall be furnished with three heavy duty hinges. If hinges are external, hinge pins shall be secured and non-removable. The curb side rear door shall open ahead of street side rear door.

3.5.2.4 Roof vent(s) in rear compartment. Fan powered roof vent(s) shall be provided at the rear of the compartment. Vent(s) shall be sized to exhaust air at not less than 16 968 L/min (600 cubic feet per minute (cfm)) with fan(s) operating or by free flow of air. Vent(s) shall incorporate multi-position louvers, intrusion guard, and rain shield and shall be operable from inside only. Vent(s) shall be watertight when closed.

3.5.2.5 Package doors. Two package doors in the body wall, one on each side, level with the inside top surface of the floor, shall be provided at the front end of the rear compartment adjacent to the partition wall. The package doors shall be not less than 510 mm (20 inches) by 510 mm (20 inches) in size and equipped with cylinder locks on the inside of the rear compartment to prevent opening from the outside of the vehicle. The doors shall be windproof and watertight. Hinges shall be tamper proof.

MIL-T-62088B

3.5.2.6 Seating. A stationary upholstered seat and back shall be provided in the center of the rear compartment. Manufacturer's standard seat belt fastenings and one pair of lap type seat belts shall be installed.

3.5.2.7 Circulating fan. An 200 mm (eight-inch) oscillating circulating fan mounted near the roof on the street side wall shall be furnished. A three-way switch shall be provided to operate the fan from the driver's compartment and from the rear compartment. The fan shall be capable of position adjustment.

3.5.2.8 Auxiliary heater. When specified (see 6.2), an auxiliary heater shall be provided for the rear compartment. The heater shall be of the engine-coolant, heavy duty type. The heater shall be located so as not to restrict movement of personnel. The heater shall be equipped with a shutoff valve for shutting off the flow of coolant. Three-way electrical switches shall be mounted in locations easily accessible to the seated driver, and to personnel in the rear compartment. Heater shall have a rated capacity of not less than 8790 W (30,000 British thermal units (Btu) per hour), which shall be exceeded, if required to maintain specified temperature. The heater shall be capable of maintaining the temperature inside of the compartment at a minimum of 21°C (70°F) midway between floor and ceiling in an outside ambient air temperature of -18°C (0°F) with no passengers, at all operating speeds.

* 3.5.3 Driver's compartment. The driver's compartment shall be manufacturer's full width compartment. Driver's compartment doors shall be equipped with locks, each door operated electrically from a control switch(s) on the driver's side door, and with street- and curbside doors equipped with external, key operated locks. The driver's compartment shall have upholstered, adjustable seat and back for the driver and a stationary fold-down type seat for a passenger. Interior lighting (see 3.5.1.8) shall be provided. Two pair of combination pelvic and upper torso restraint seat belts shall be installed.

3.5.3.1 Driver's compartment doors. Doors shall have an opening of not less than 711 mm (28 inches) in width and not less than 1250 mm (49 inches) in height and shall be provided with bullet resistant glass (see 3.5.1.1) in the upper portion of the door. Glass size shall be approximately 635 mm (25 inches) long by 460 mm (18 inches) high but not less than 29 034 sq cm (450 square inches). Doors shall be constructed as specified in 3.5.1. Doors shall be tamper proof, watertight and windproof. If hinges are external, hinge pins shall be secured and nonremovable.

3.5.3.2 Windshield. The windshield shall consist of two pieces of glass, each not less than 910 mm (36 inches) wide by 410 mm (16 inches) high, and shall be bullet resistant glass (see 3.5.1.1). The channel between windshields shall be bullet resistant as specified in 3.5.1.

MIL-T-62088B

3.5.3.3 Roof vents (driver's compartment). Two roof vents shall be provided. Roof vents shall be mounted on roof, over the windshields with open end to the front. Vents shall be of adequate size to provide not less than 16 968 L/min (600 cfm) air flow into the truck when vehicle is not in motion and outside air is at zero wind velocity. Roof vents shall incorporate intrusion guard, rain shield operable from inside only and shall be watertight when closed. Vents shall deflect air on driver and guard.

3.5.3.4 Circulating fan. An 200 mm (eight-inch) oscillating circulating fan mounted above the dash shall be provided. The fan shall have a guard over the blades. The fan shall be capable of adjustment.

3.5.3.5 Warning light. A dash mounted red warning light shall be installed to flash a signal to the driver when any door, including package door(s), is not completely closed.

* 3.5.4 Fire extinguishers. Two dry chemical type fire extinguishers shall be furnished, one for the driver's compartment and one for the rear compartment. Fire extinguisher brackets to suspend the extinguishers in the vehicle shall be installed. Fire extinguishers shall have a capacity not less than 1.13 kg (2.5 pounds) and shall be in accordance with type I, class 2 of A-A-393.

3.5.5 Mounting. The body shall be mounted with not less than six U-bolts or twin studs, per side, having 14 mm (0.563 inch) minimum body diameter with 16 mm (0.625 inch) minimum thread diameter, or other equivalent method(s). Tieplates shall be at least 13 mm (0.5 inch) thick. Vehicle chassis frame shall be braced, using hardwood blocks at each mounting point unless mounting point is located at a full depth, frame crossmember. Blocks shall incorporate a keeper strap or groove for mounting bolt, and shall be of a width to assure retention. Two shear bolts shall be provided, one on each side of rear portion of body subframe, to maintain body alignment on vehicle chassis. A hardwood breaker strip of not less than 13 mm (0.5 inch) finished thickness shall be installed between longitudinal main sills and vehicle chassis frame. When body is secured by brackets attached to chassis frame rails, attachments shall be made to the web of the frame rails. When additional holes are required to secure mounting brackets to chassis frame rails they shall be located within the area of the rail which is designated as being safe for drilling in accordance with the chassis manufacturer's body builders layouts. When body is mounted by bolting bracket(s) to side of frame, the hardwood block at mounting point and shear bolts are not required.

3.5.6 Locks. Locks shall be of the interchangeable cylinder type having a tumbler with a minimum of 5 pins. All locks for the doors shall be keyed alike.

3.6 Dissimilar metals. All dissimilar metals throughout the vehicle shall be insulated from one another to prevent galvanic action or electrolytic action.

MIL-T-62088B

3.7 Workmanship. Defective components or parts and assemblies which have been repaired or modified to overcome deficiencies shall not be furnished. Welded, bolted, and riveted construction utilized shall be in accordance with the highest standards of the industry.

3.8 Welding. The surface of parts to be welded shall be free from rust, scale, paint, grease, or other foreign matter. Weld penetration shall provide transference of maximum design stress through basic metal juncture. Fillet welds shall be provided when necessary to reduce stress concentration.

3.9 Ballistic specimens. Ballistic specimens shall be prepared by the contractor for body and glass and shall be in accordance with ANSI/UL752. Specimens shall be used to represent the minimum acceptable in production (see 3.5). The specimens shall be prepared to represent the body cross section area and glass used in production.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract, the contractor is responsible for the performance of all inspection requirements (examination and tests) as specified herein. Except as otherwise specified in the contract, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

* 4.1.1 Responsibility for compliance. All items must meet all requirements of sections 3 and 5. The inspection set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility for ensuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling inspection, as part of manufacturing operations, is an acceptable practice to ascertain conformance to requirements, however, this does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to acceptance of defective material.

4.2 Government verification. Quality assurance operations performed by the contractor will be subject to Government verification at unscheduled intervals. Verification will consist of observation of the operations to determine that practices, methods, and procedures of the contractor's inspection are being properly applied. Failure of the contractor to promptly correct product deficiencies discovered shall be cause for suspension of acceptance until correction has been made or until conformance of product to specification criteria has been demonstrated.

MIL-T-62088B

4.3 Ballistic test. Prior to the start of production, ballistic specimens shall be furnished by the contractor (see 3.9). Upon submission of specimens by the contractor the quality level and identification shall be subject to approval by the Government. Ballistic tests shall be conducted by the contractor and observed by the Government to evaluate that the specimens meet the requirements of the contract. Specimens and testing shall be in accordance with ANSI/UL752.

4.4 First production vehicle inspection. The first vehicle produced under the contract shall be inspected by the contractor at his plant under the direction and in the presence of Government representatives. The purpose of the inspection shall be to determine vehicle conformance to the contract. Acceptance of the first production vehicle shall not constitute a waiver by the Government of its rights under the provisions of the contract.

4.4.1 Vehicle weight. The first production vehicle shall be weighed to determine curb weight and distribution of curb weight on front and rear axles. The imposed loading on front and rear axles will be computed using the curb weight, the operator and passenger weight at 80 kg (175 pounds) each, and a 1130 kg (2,500 pound) payload to provide not less than the specified GVW. The calculated imposed loads on front and rear axles will be utilized to ascertain that the suspension, axles and tires furnished are of adequate capacity to meet contractual requirements.

4.4.2 Road test. The first production vehicle shall be examined and road tested with payload. The road test shall cover not less than 48 km (30 miles) on paved highways at speeds up to 88 km/h (55 mph) and 32 km (20 miles) of stop-and-go operation on city streets.

* 4.4.3 Radio frequency suppression verification. The vehicle manufacturer shall indicate on the questionnaire (commercial vehicle engineering data) if the vehicle will be suppressed to limit electromagnetic radiation in accordance with SAE J551.

* 4.4.4 Production sample. Upon acceptance of the first production vehicle, it shall remain at the manufacturing facility as a production sample, and be the last vehicle shipped on the contract. The contractor shall maintain the vehicle in an as new condition for the duration of the contract.

* 4.4.5 Truck body treatment and painting. The certification regarding the body cleaning, treatment, prime painting and salt spray resistance testing, as required by MIL-STD-1223, shall be made to Government representatives at the first production vehicle inspection.

4.4.6 Failure. Failure of the first production vehicle to meet requirements of the contract shall be cause for the Government to refuse acceptance of all vehicles under contract until corrective action has been taken. In addition, subsequent vehicles that do not conform to the accepted production sample vehicle shall be rejected until corrected.

MIL-T-62088B

4.5 Inspection of production vehicles. The contractor's inspection system shall, as a minimum, assure that the vehicle conforms to the physical and dimensional requirements and is capable of meeting performance requirements contained herein. For each vehicle under contract, the contractor shall make available to the Government, at the point of final acceptance, records acceptable to the Government indicating that the servicing and adjusting required by 3.4.21 have been accomplished.

5. PACKAGING

5.1 Vehicle processing. The vehicle shall be processed for shipment, from manufacturer's plant to initial receiving activity, in accordance with the manufacturer's standard commercial practice.

6. NOTES

6.1 Intended use. The vehicles covered by this specification are intended for general nontactical use by the Government for the transportation and protection of payrolls and to be utilized as a mobile check cashing facility.

6.2 Ordering data. Acquisition documents should specify the following:

- (a) Title, number, and date of this specification.
- * (b) Issues of DODISS to be cited in the solicitation and if required, the specified issue of individual documents referenced (see 2.1.1 and 2.2).
- (c) Identification of appropriate service for painting and marking (see 3.1.1.1 and 3.1.1.2).
- (d) Concealed marking, if required (see 3.1.1.2).
- (e) Rustproofing, if required (see 3.1.1.4).
- * (f) Tropical rustproofing, if required (see 3.1.1.4).
- * (g) Satisfactory operation on JP-4, JP-5 and JP-8 fuels, if required (see 3.4.1.1).
- (h) Gasoline engine, if required (see 3.4.1.2).
- (i) Power plant heaters and fuel warmers, if required (see 3.4.1.8).
- * (j) Starting motor circuit breaker, if required (see 3.4.2.1).
- * (k) Alternator capacity, if other than as specified (see 3.4.2.3).
- (l) If a spark arresting muffler is not required (see 3.4.4).
- * (m) Manual transmission, if required in lieu of automatic (see 3.4.5.2).
- (n) Traction control, if required (see 3.4.9.1).
- (o) Disc type wheels, if required (see 3.4.10).
- * (p) Bias ply, low profile or other type tires, if required (see 3.4.10.1).
- * (q) If a carrier for spare tire assembly is not required (see 3.4.10.3).
- (r) If spare tire assembly is not required (see 3.4.10.4).
- (s) Air or air-hydraulic brakes, if required (see 3.4.11.2).
- * (t) Intermittent windshield wipers, if required (see 3.4.13).

MIL-T-62088B

- (u) If tools are not required (see 3.4.15).
- * (v) Remote control curbside rearview mirrors, if required (see 3.4.19).
- * (w) Heated rearview mirrors, if required (see 3.4.19).
- (x) AM/FM radio, if required (see 3.4.20).
- * (y) Cooling system protection down to -54°C (-65°F), if required (see 3.4.21.1).
- (z) Indoor-outdoor carpeting, if required (see 3.5.1.3).
- (aa) Auxiliary heater in rear compartment, if required (see 3.5.2.8).

* 6.3 Performance prediction. SAE Truck Ability Prediction Procedure computations and computations for low speed and maximum geared speed will be required by the contract. The SAE Work Sheet Item 1 should include vehicle model number and engine model number. Unless other conditions are cited in the contract, computations should be made for normal atmospheric pressure, normal ambient air temperature and still, dry, air. The factors to be used in predicting truck ability (see 3.3.1.1) are established as follows for the corresponding SAE Truck Ability Prediction Procedure Tables:

Table 1	- <u>Tire Factor.</u> This factor must relate to the size of tires furnished by the contractor in accordance with this specification.
Table 2	- <u>Altitude Factor.</u> 1.00.
Table 3	- <u>Rolling Factor.</u> 1.613.
Table 4	- <u>Area Factor.</u> 0.173.
Table 5	- <u>Velocity Factor.</u> 250.0.
Table 6	- <u>Altitude Factor.</u> 1.00.
Table 7	- <u>Chassis Friction Horsepower.</u> Use required GVW and the engine rpm (to nearest 100 revolutions) which is required for 80 km/h (50 mph) geared speed.
Table 8	- <u>Grade Factor.</u> 0.75.
Table 8A	- <u>Correction Factor.</u> Not required.
Table 9	- <u>Road Factor.</u> 0.0.

* 6.4 Subject term (keyword) listing.

Ballistic specimen
 Bullet resistant glass
 Circulating fan
 Gun ports
 Insulation
 Package doors
 Windows.

* 6.5 Identification of changes. The margins of this specification are marked with asterisks (*) to indicate where changes (additions, modifications, corrections and deletions) from the previous issue were made.

MIL-T-62088B

This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content regardless of the marginal notations and relationship to the previous issue.

Custodians:

Army - AT
Air Force - 99
Navy - YD

Preparing activity:

Army - AT

Project No. 2320-0572

* Review Activity:

* Air Force - 84

INSTRUCTIONS: In a continuing effort to make our standardization documents better, the DoD provides this form for use in submitting comments and suggestions for improvements. All users of military standardization documents are invited to provide suggestions. This form may be detached, folded along the lines indicated, taped along the loose edge (*DO NOT STAPLE*), and mailed. In block 5, be as specific as possible about particular problem areas such as wording which required interpretation, was too rigid, restrictive, loose, ambiguous, or was incompatible, and give proposed wording changes which would alleviate the problems. Enter in block 6 any remarks not related to a specific paragraph of the document. If block 7 is filled out, an acknowledgement will be mailed to you within 80 days to let you know that your comments were received and are being considered.

NOTE: This form may not be used to request copies of documents, nor to request waivers, deviations, or clarification of specification requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

(Fold along this line)

(Fold along this line)

DEPARTMENT OF THE ARMY

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE \$300



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

Commander
U.S. Army Tank-Automotive Command
ATTN: AMSTA-UED
Warren, Michigan 48397-5000

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS: This form is provided to solicit beneficial comments which may improve this document and enhance its use. DoD contractors, government activities, manufacturers, vendors, or other prospective users of the document are invited to submit comments to the government. Fold on lines on reverse side, staple in corner, and send to preparing activity. Attach any pertinent data which may be of use in improving this document. If there are additional papers, attach to form and place both in an envelope addressed to preparing activity. A response will be provided to the submitter, when name and address is provided, within 30 days indicating that the 1426 was received and when any appropriate action on it will be completed.

NOTE: This form shall not be used to submit requests for waivers, deviations or clarification of specification requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

DOCUMENT IDENTIFIER (Number) AND TITLE MIL-T-62088B TRUCKS, ARMORED: PAYROLL DIST.,
8600 KILOGRAMS (19,000 POUNDS) GVW, 4x2, MODIFIED COMMERCIAL

NAME OF ORGANIZATION AND ADDRESS OF SUBMITTER

☐ VENDOR ☐ USER ☐ MANUFACTURER

1. ☐ HAS ANY PART OF THE DOCUMENT CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE? ☐ IS ANY PART OF IT TOO RIGID, RESTRICTIVE, LOOSE OR AMBIGUOUS? PLEASE EXPLAIN BELOW.

A. GIVE PARAGRAPH NUMBER AND WORDING

B. RECOMMENDED WORDING CHANGE

C. REASON FOR RECOMMENDED CHANGE(S)

2. REMARKS

SUBMITTED BY (Printed or typed name and address — Optional)

TELEPHONE NO.

DATE

DD FORM 1426
1 OCT 76

EDITION OF 1 JAN 72 WILL BE USED UNTIL EXHAUSTED.