
* NOT MEASUREMENT *
* SENSITIVE *

KKK-T-2820
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SUPERSEDING
MIL-T-28553D(YD)
19 August 1988

FEDERAL SPECIFICATION

TRUCKS, TIRE SERVICING; 10,000 POUNDS
GROSS VEHICLE WEIGHT, 4 BY 2 AND 4 BY 4

This specification is approved by the Commissioner, Federal Supply Service, General Services Administration, for the use of all Federal agencies.

1. SCOPE

1.1 Scope. This specification covers commercial, diesel-engine-driven trucks equipped with tire servicing facilities.

1.2 Classification. Truck shall be one of the following types, as specified (see 6.2):

- Type I - 4 by 2 truck chassis
- Type II - 4 by 4 truck chassis

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: *
*Commanding Officer (Code 156), Naval Construction Battalion Center, *
*621 Pleasant Valley Road, Port Hueneme, CA 93043-4300, by using the *
*Standardization Document Improvement Proposal (DD Form 1426) appearing at *
*the end of this document or by letter. *

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

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Federal Specification

W-B-131 - Battery, Storage (Vehicular, Ignition, Lighting, and Starting)

Federal Standards

FED-STD-297 - Rustproofing of Commercial (Nontactical) Vehicles
FED-STD-307 - Trucks, Light Commercial, Gasoline Diesel Fueled,
Two Wheel Driven 4 x 2, 1,800 to 6,500 Pounds KG
4,000 to 14,500 Lbs GVW
FED-STD-595 - Colors

Military Specification

MIL-V-62038 - Vehicles, Wheeled: Preparation for Shipment and Storage of

Military Standard

MIL-STD-1223 - Nontactical Wheeled Vehicles Treatment, Painting,
Identification Marking & Data Plate Standards

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Standardization Documents Order Desk, Bldg. 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

2.1.2 Other Government documents and publications. The following other Government documents 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 Transportation (DoT):

Federal Motor Vehicle Safety Standards and Regulations
Federal Motor Carrier Safety Regulations

(Application for copies should be addressed to the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.)

Environmental Protection Agency (EPA):

Control of Air Pollution from New Motor Vehicles and New Motor Vehicle
Engines: Certification and Test Procedures
Interstate Motor Carrier Noise Emission Standards
Motor Vehicle Air Pollution Standards

(Application for copies should be addressed to the Public Affairs Office, Environmental Protection Agency, Rockville, MD 20852.)

State of California:

California Vehicle Code

(Application for copies should be addressed to the Department of Motor Vehicles, 2570 24th Street, Sacramento, CA 95809.)

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2.2 Non-Government publications. The following document(s) 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 which are current on the date of the solicitation (see 6.2).

American Society of Mechanical Engineers (ASME):

ASME Boiler and Pressure Vessel Code Section VIII

(Application for copies should be addressed to the American Society of Mechanical Engineers, 345 East 47th Street, New York, NY 10017.)

Society of Automotive Engineers, Inc. (SAE):

SAE J534 - Lubrication Fittings
SAE J537 - Storage Batteries
SAE J551 - Performance Levels and Methods of Measurement of
Electromagnetic Radiation from Vehicles and Devices
(30-1000 MHz)
SAE J682 - Rear Wheel Splash and Stone Throw Protection
SAE J1349 - Engine Power Test Code - Spark Ignition and Diesel

(Application for copies should be addressed to the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096.)

Tire and Rim Association, Inc. (TRA):

TRA Yearbook

(Application for copies should be addressed to the Tire and Rim Association, Inc., 175 Montrose West Avenue, Suite 150, 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 (except for associated detail specifications, specification sheets, or MS standards), the text of this specification takes precedence. Nothing in this specification, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 Description. A truck maintenance type body shall be mounted on a diesel-engine-driven chassis with cab of not less than 10,000 pounds (lb) gross vehicle weight (gvw), and shall conform to FED-STD-307, type VIII, class F as specified. The truck shall be equipped with a diesel-engine-driven air compressor, hydraulic tailgate, and hydraulic type crane as required.

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3.2 First production vehicle. The contractor shall furnish a truck for first production vehicle inspection.

3.3 Standard vehicles and accessories. Except as specified herein, 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. Chassis items shall be as represented in the chassis manufacturer's technical data, and the body and mounted equipment shall be as represented in the body and the equipment manufacturer's technical material, identical to that furnished to the authorized company representatives for selection of vehicle models and components.

3.3.1 DoT Federal Motor Vehicle Safety Standards. Vehicle shall comply with all DoT Federal Motor Vehicle Safety Standards in effect on the date of manufacture.

3.3.2 Heavy-duty cooling system. A heavy-duty cooling system shall be furnished that shall maintain engine coolant at a temperature below the boiling point with truck loaded to rated gvw, and operated at an altitude of 10,000 feet above sea level or in an ambient air temperature of not less than 125 degrees Fahrenheit (oF).

3.3.3 Coolant recovery system. An overflow coolant recovery system shall be furnished. The coolant recovery system shall include an unbreakable translucent reservoir of not less than 2-quart capacity.

3.3.4 Outside rearview mirrors. A low-mount style outside rearview mirror having not less than 50 square inches of reflective area shall be provided on each side of the truck.

3.3.5 Electromagnetic radiation. Electromagnetic radiation from the truck shall be within the limits of SAE J551.

3.3.6 Towing devices. Not less than two hooks or loops, mounted to the frame or to rigid members which are attached to the frame, shall be furnished in front of the truck for towing purposes.

3.3.7 Splash guards. Splash guards shall be furnished at the rear of the rear wheels. Splash and stone throw protection shall be in accordance with SAE J682.

3.3.8 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.

3.3.9 Exterior sound level. The vehicle exterior sound level shall conform to the Interstate Motor Carrier Noise Emission Standards of the EPA.

3.3.10 Interior sound level. The interior sound level in the driver's area, shall conform to DoT Federal Motor Carrier Safety Regulations, section 393.94.

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3.4 Materials. Materials used shall be free from defects which would adversely affect the performance or maintainability of individual components or of the overall assembly. Materials not specified herein shall be of the same quality used for the intended purpose in commercial practice. Unless otherwise specified herein, all equipment, material, and articles incorporated in the work covered by this specification are to be new and fabricated using materials produced from recovered materials to the maximum extent possible without jeopardizing the intended use. The term "recovered materials" means materials which have been collected or recovered from solid waste and reprocessed to become a source of raw materials, as opposed to virgin raw materials. None of the above shall be interpreted to mean that the use of used or rebuilt products is allowed under this specification unless otherwise specified.

3.5 Vehicle weights, ratings, and dimensions.

3.5.1 Curb weight. Curb weight shall include weight of chassis and cab, with all attachments, accessories, equipment, body, full complement of fuel, lubricants, and coolant.

3.5.2 Vehicle weight rating. The gwv rating shall consist of curb weight, operator (weight computed at 175 lb), and payload to provide not less than 10,000 lb gwv.

3.5.3 Weight distribution. The distribution of the gwv for the purpose of establishing suspension, axle, and tire capacities, shall be determined with the payload uniformly distributed over the load area.

3.5.4 Ratings. Component and vehicular ratings shall not be raised to meet the requirements of this specification. Minimum gwv shall be 10,000 lb.

3.5.5 Cab-to-axle. The cab-to-axle dimension shall be not less than 54 inches for type I truck and not less than 47 inches for type II truck.

3.6 Performance.

3.6.1 Speeds. High and low speed requirements shall be met with truck loaded to specified gwv.

3.6.2 Speeds and gradeability. Type I and type II trucks shall maintain a high speed of not less than 55 miles per hour when driven on smooth, approximately level, hard surfaced roads. Type I truck shall be capable of ascending grades of at least 20 percent in low speed range. Type II truck shall be capable of ascending a 30 percent grade in low speed range.

3.6.3 Brake performance. Service brakes shall comply with performance requirements specified in DoT Federal Motor Carrier Safety Regulations, section 393.52. Service brakes shall control and hold the truck, loaded to the rated gwv, on a 30 percent grade. Parking brake shall hold the truck, loaded to the rated gwv, headed either up or down the grade, without slipping on a 30 percent grade.

3.7 Chassis components.

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* 3.7.1 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.

* 3.7.1.1 Diesel engine. Unless otherwise specified (see 3.7.1.2), the vehicle shall be equipped with a liquid cooled, compression ignition, two-stroke or four-stroke cycle diesel engine, with not less than four cylinders. Engine net horsepower used in performance prediction calculations shall be determined in accordance with SAE J1349.

* 3.7.1.2 Gasoline engine. When specified (see 6.2), the vehicle shall be equipped with a liquid cooled, internal combustion, four-stroke cycle gasoline engine with not less than six cylinders. The engine furnished shall produce the required vehicle performance when operated on unleaded fuel with a Research Octane Number of 91. The engine net torque ratings and net horsepower figures used in performance prediction calculations shall be determined in accordance with SAE J1349.

3.7.1.2.1 Oil filter. Full flow type oil filter shall be furnished.

3.7.2 Electrical system.

3.7.2.1 Lighting. All truck lights, reflectors, and wiring shall be as specified herein and shall conform to DoT Federal Carrier Safety Regulations, sections 393.11, 393.12, and 393.19 through 393.31 and 393.33, as applicable. Rear lights shall be installed flush with or forward of the rear of the body. Two backup lights shall be furnished.

3.7.2.2 Starting system. A 12- or 24-volt direct current starting system, with a 12-volt direct current lighting system, shall be furnished. An alternator of not less than 60-ampere rated capacity shall be furnished. Diesel engines shall have a starting system that includes a glow plug or an ether system. When an ether system is provided 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 replacement reservoir of not less than 12 fluid ounces shall be furnished. A reservoir need not be furnished. When gasoline is specified (see 3.7.1.2), manufacturer's standard starting system shall be provided.

3.7.2.3 Batteries. Each battery furnished shall be of 12-volt potential. The total reserve capacity rating at 0oF shall be not less than 300 minutes, with a cold cranking rating of not less than 1,200 amperes. Cold cranking and reserve capacity ratings shall be in accordance with SAE J537. The batteries shall be of the maintenance-free type having the maintenance-free characteristics listed in W-B-131.

3.7.3 Fuel system. Fuel system shall conform to DoT Federal Motor Carrier Safety Regulations, sections 393.65 and 393.67.

3.7.3.1 Air cleaner. Manufacturer's standard air cleaner shall be furnished.

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3.7.3.2 Fuel tank. The fuel tank shall be the manufacturer's standard. When more than one tank is furnished, means shall be provided to assure an equalized fuel level in both tanks.

3.7.4 Exhaust system. Exhaust system shall conform to DoT Federal Motor Carrier Safety Regulations, section 393.83.

* 3.7.5 Transmission. Unless otherwise specified, an automatic transmission shall be provided. When specified (see 6.2), a manual transmission shall be provided. Input torque capacity of transmission shall be at least equal to the maximum torque delivered by the engine.

3.7.5.1 Automatic transmission. The automatic transmission shall be the manufacturer's standard type for the truck furnished.

* 3.7.5.2 Manually shifted transmission. The manual transmission shall have not less than four synchronized forward speeds and one reverse speed.

3.7.5.2.1 Clutch. Clutch shall be the largest capacity clutch offered for the type truck engine furnished, with torque capacity exceeding maximum delivered engine torque.

3.7.5.3 Transfer case. The type II truck shall be provided with a two-speed type transfer case. The transfer case shall incorporate an interaxle differential to constantly provide driving power to both axles at all times.

3.7.6 Drive line components. Drive line components shall be adequate to transmit the maximum delivered torque of the engine, as developed through the maximum gear train.

3.7.7 Frame. Chassis frame shall be manufacturer's standard for the truck furnished.

3.7.8 Suspension. Truck shall be equipped with suspension system, with components having a rated capacity at least equal to the load imposed on each member, measured at the ground, with truck loaded to specified gvwt. When suspension is rated at the spring pads, unsprung weight shall be deducted. Truck shall be equipped with hydraulic, double-acting, shock absorbers on the front and rear wheels. Heavy-duty springs and shock absorbers, front and rear, shall be provided on type II truck.

3.7.9 Axles. Axle ratings shall be at least equal to the load imposed on each axle, measured at the ground, with truck loaded to specified gvwt. Rear axle shall be provided with positive-traction, limited-slip or automatic locking differential on type I truck.

* 3.7.10 Wheels, rims, tires. Truck shall be equipped with single front and dual rear wheels. Rim sizes shall be the same for all wheels on the truck. Tire size and ply rating shall be the same for all tires on the truck. Rim and tire rating shall conform to the TRA recommendations for the type and size of tires furnished.

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3.7.10.1 Tires. Tires shall be tubeless truck type with highway tread on type I and nondirectional mud and snow tread on type II. Tires shall have a rated capacity at least equal to the load imposed on each tire measured at each wheel, at the ground, with truck loaded to specified gw.

* 3.7.10.2 Spare tire. Unless otherwise specified (see 6.2), an inflated tire and rim assembly shall be provided and securely mounted in a spare tire carrier on the vehicle. The spare tire and rim assembly shall be identical to the other wheel assemblies provided on the vehicle, having the same size, design, tread and ply rating.

* 3.7.10.3 Spare wheel or rim. When specified (see 6.2), a spare wheel or rim shall be furnished and shall be stowed and secured in the truck body.

3.7.11 Brakes. Brakes shall conform to DoT Federal Carrier Safety Regulations, sections 393.40, 393.41, 393.42, 393.45 through 393.51, and as specified herein.

3.7.11.1 Service brakes. Truck shall be equipped with power-assisted, hydraulic actuated, four-wheel service brakes.

3.7.11.2 Parking brake. Truck shall be equipped with parking brake.

3.7.12 Cab. Conventional full-width cab shall be furnished. Cab doors shall be equipped with locks, operable from inside the cab through mechanical linkage, and with at least the curb side door equipped with an external, key-operated lock. Cab shall have upholstered, full-width, adjustable seat and back. Interior dome lighting shall be provided. Manufacturer's standard fastenings and not less than two pairs of lap type seat belts shall be installed on the truck. Windows shall be of safety glass.

3.7.13 Steering. Manufacturer's standard power steering shall be furnished.

3.7.14 Windshield wipers and washers. Truck shall be equipped with dual windshield wipers and windshield washers. Windshield wipers shall be multispeed type and operated by electric motor(s).

3.7.15 Front bumper. Manufacturer's standard front bumper shall be furnished.

3.7.16 Rear end protection. Rear end of truck shall be protected in accordance with DoT Federal Motor Carrier Safety Regulations, section 393.86.

* 3.7.17 Tools. The truck shall be furnished with tools required for exchanging mounted tire assembly with the spare assembly and shall include the following minimum: a jack, jack handle, and wheel nut wrench. The jack shall be of such closed height as to permit its location under axle or other satisfactory lift point, at any wheel with a tire flat. The jack, without blocking, shall be capable of raising any wheel of loaded truck to a height adequate to permit removal and replacement of wheel and tire assembly.

3.7.18 Heater and defroster. Hot water heater shall be provided. Heater shall have fresh air intakes. Discharge outlets shall be provided to direct

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heated air to floor and to defroster louvers. Heater shall be complete with blower and mounted controls convenient to the driver.

3.7.19 Controls and operating mechanism. 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 driver's compartment. Instruments and controls shall be identified as to their function and installed in a manner to facilitate removal and servicing. Instructions shall be panel mounted.

3.7.20 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. Inside rearview mirror
- b. Key-operated ignition switch
- c. Ammeter or charging indicator
- d. Fuel gauge
- e. Oil pressure gauge or indicator
- f. Engine temperature gauge or indicator
- g. Speedometer with recording odometer
- h. Ash receptacle
- i. Dual sunvisors
- j. Door-mounted armrest on driver's side
- k. Manufacturer's standard electric horn

* 3.8 Utility type service body. Unless otherwise specified (see 6.2), the truck shall be furnished with an open (without a roof) utility type service body, having a center load space and having cabinets along both sides. When specified, the utility type service body shall have an enclosed center load space with inside shelves on each side of the enclosed structure. The center load area shall be capable of sustaining a live load of 500 lb per square foot and the cabinetry shall be able to sustain 100 lb per square foot without any permanent deformation. Unless otherwise specified, the standard "low profile" type utility body conforming to the dimensions shown in Table A of FED-STD-307 shall be furnished. Utility bodies shall be the manufacturer's commercial model as represented in the manufacturer's current technical data. In addition, the body shall have the required structural design to accommodate the crane specified in paragraph 3.11.

* 3.8.1 Floor and bulkheads. The load compartment floor shall be not less than 12 gauge (0.1046 inches) safety tread steel plate or equal. Bulkhead shall be constructed to the height of the load space and shall be not less than 18 gauge (0.0478 inches) high-tensile steel or 16 gauge (0.0598 inches) carbon steel reinforced for rigidity. The bulkhead shall be capable of withstanding a horizontal static load equal to half the payload capacity of the vehicle without permanent distortion.

* 3.8.2 Tailgate. The tailgate shall be constructed of not less than 18 gauge (0.0478 inches) high-tensile steel, or 16 gauge (0.0598 inches) carbon steel reinforced for rigidity. Tailgate shall be hinged and equipped with supports for retention in the horizontal position, flush or slightly lower than the floor level.

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* 3.8.3 Cabinet materials and construction. Cabinet headers shall be constructed of not less than 18 gauge (0.0478 inches) high tensile steel, or 16 gauge (0.0598 inches) carbon steel. Cabinet backs, partitions and shelves shall be constructed of not less than 20 gauge (0.0359 inches) high tensile steel, or 18 gauge (0.0478 inches) carbon steel. Cabinet doors shall not be less than 20 gauge (0.0359 inches) high tensile steel, or 18 gauge (0.0478 inches) carbon steel, single thickness reinforced, or 22 gauge (0.0299 inches) carbon steel, double panel reinforced. Cabinet interiors shall be painted the manufacturer's standard compatible color with the exterior, or gloss gray, in accordance with MIL-STD-1223, for all military and civilian agencies, except that galvanized coated steel shelves need not be painted.

* 3.8.4 Cabinet arrangement. Cabinet arrangement shall include two vertical cabinets and one horizontal cabinet on each side of the body as follows:

- a. One full height vertical cabinet with not less than two removal shelves on each side of body front.
- b. One vertical cabinet located to the rear of the wheelhousing and below the horizontal cabinet on each side of the body (see 3.8.4.e).
- c. One horizontal cabinet with at least a middle shelf of small bins with adjustable partitions on the right side of the body.
- d. One horizontal cabinet with not less than one full-length tray type shelf on the left side of the body.
- e. At the manufacturer's option, a full height vertical cabinet to the rear of the wheelhousing on each side of the body may be substituted for 3.8.4.b, provided that on the left side of the body the shelves in the horizontal and vertical compartments are on the same level.

* 3.8.5 Cabinet doors. Cabinet doors shall provide access to all portions of each cabinet and door closures shall be weatherproof, incorporating an automotive type tubular neoprene sealing system. Doors shall have full-length continuous rod or hem type heavy-duty hinges with stainless steel hinge pins or stainless steel, bronze or nylon insert sockets. Latches shall have recessed handles. All doors shall be provided with cylinder type locks, operable from the same key but having various combinations of cylinders as available, between vehicles on multi-unit contracts. Moving parts of latches and locks shall be constructed of or plated with corrosion resistant material. All doors shall be provided with stays, and shall not interfere with each other when opened. Horizontal doors shall be reinforced so as to permit their use as a shelf capable of supporting a static load of not less than 25 lb per square foot.

3.9 Hydraulic tailgate. When specified (see 6.2), truck body shall be equipped with a standard, commercial elevating, and folding type hydraulic having not less than 800 lb rated capacity. The tailgate platform shall be ramping type and shall be full width of load space. Tailgate shall fold vertically against rear for traveling. The tailgate platform shall have a depth of not less than 26 inches. The tailgate shall have continuous toe clearance between rear edge of floor and tailgate platform, latches to hold the tailgate at floor level, and devices to prevent movement due to road shock. When tailgate is in line with the floor of the vehicle, the distance between the rear edge of the floor and the tailgate shall be not more than 1 inch and not less than 3/4 inch. Opening and closing of the platform may be accomplished

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manually. Tailgate operations shall be accomplished hydraulically, powered from truck power takeoff or electrical actuation from truck battery. Tailgate controls shall be mounted on rear curb side of body.

* 3.10 Air compressor unit. An air compressor unit, consisting of a compressor, pressure control, receiver, and all the necessary accessories, shall be furnished. Compressor shall be of the tank mounted, diesel-engine-driven type with reciprocating action. The compressor and power unit shall be mounted on a base, with provision for drive belt adjustment, and secured to the air receiver tank. Weight and cube shall be held to a minimum compatible with performance requirements. The air compressor shall be provided with a dry type combination intake air filter and silencer.

3.10.1 Compressor performance. The air compressor shall be capable of satisfactory performance in ambient temperatures ranging from +120oF to -25oF. Rated capacity (free air) at continuous operating speed shall be at least 15 cubic feet per minute at not less than 175 pound-force per square inch gauge (psig).

* 3.10.2 Compressor engine. A commercial, air or water cooled, four cycle diesel engine, of the size and rating recommended by the compressor manufacturer, shall be furnished. Manufacturer's standard electric ignition and starting system shall be provided. The engine shall be equipped with multiple V-belt drive.

3.10.3 Pressure control. An adjustable, pressure actuated, mechanical control shall be furnished to stop compression of air and reduce engine speed when pressure reaches 160 psig +/-2 psig. When tank pressure has dropped to 150 psig +/-2 psig, the control shall automatically accelerate the engine and start air compression after engine has attained rated operating speed. A manual control shall be provided to override the idle control during unload periods.

3.10.4 Compressor engine fuel tank. Unless diesel required for the compressor engine operation is provided from the truck diesel tank, a fuel tank with capacity to assure a minimum of 1 hour operation at rated load and speed shall be furnished.

3.10.5 Air receiver tank. An air receiver tank of the horizontal type, with a capacity of not less than 30 gallons, and a working pressure of not less than 200 psig, shall be furnished. The tank shall be constructed in accordance with the ASME Boiler and Pressure Vessel Code, section VIII. Tank equipment shall include, as a minimum, a pressure relief valve, a globe discharge valve, a drain valve, and a pressure gauge calibrated from 0 psig to not less than 200 psig in increments no greater than 10 psig. Means shall be provided for securing air hose (see 3.10.6) on the air receiver tank. The tank, with attached compressor and power unit, shall be secured to the floor of the cargo body in a location as far forward and to one side as practicable, with regard to the free flow of air for compression and cooling.

3.10.6 Air hose. A 100-foot minimum length air hose, with nominal 3/8-inch inside diameter and burst pressure of at least 700 psig, shall be furnished. The hose connected to the air receiver tank, and the free end of the in-line tire inflator gauge shall be fitted with an air seal type quick-disconnect fittings.

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3.10.6.1 Tire inflators. A tire inflator shall be furnished with interchangeable inflator tips (one standard tire size and one large bore size). The tire inflator shall have a quick-disconnect air fitting compatible with air hose end.

3.10.6.2 Spare quick disconnects. Five each spare quick-disconnect air fittings which are compatible with air hose end shall be furnished and stowed in cabinet.

3.10.7 Hose reel. A hose reel shall be furnished to store the air hose. The hose reel shall be of the self-rewinding type with ratchet lock for work position. The reel shall be mounted inside one of the rear side cabinets in the service body with access through the cabinet door opening. The air service line from the air compressor receiver to the hose reel shall be made through the side cabinet and shall project into the load space.

* 3.11 Crane. When specified (see 6.2), a fully hydraulic, telescopic crane shall be furnished and mounted at top of the right rear corner of the maintenance body, with the following minimum salient features and capacities:

3.11.1 Capacities. The crane shall have the following lift capacities.

Radius Feet	Not Less Than	Pounds
4		4,800
8		2,400
12		1,500
15		1,200

3.11.2 Stabilizers. Stabilizers shall be furnished at the rear of truck, when a crane is specified (see 3.11). The truck stabilizers shall be installed to increase stability and reduce the load on truck springs while lifting.

3.11.3 Remote control. A remote control shall be furnished with all crane functions when a crane is specified (see 3.11). The remote control shall have a pendant not less than 15 feet in length.

3.12 Lubrication. Means for lubrication shall be in accordance with the manufacturer's standard practice. The lubricating points shall be easily visible and accessible. Hydraulic lubrication fittings shall be in accordance with SAE J534. Where use of high-pressure lubricating equipment, 1,000 pound-force per square inch or higher, will damage grease seals or other parts, a suitable warning shall be affixed to the equipment in a conspicuous location. The unit shall be lubricated prior to delivery with type of lubricant specified in the operator's manual and grade of lubricant recommended for ambient temperature at the delivery point. The unit shall be conspicuously tagged to identify the lubricants and their temperature range.

* 3.13 Treatment, painting, identification marking, and data plates. As specified for the appropriate military service, identification markings and data plates are required and shall be in accordance with MIL-STD-1223, except the exterior color shall be gloss white matching color chip number 17925 of FED-STD-595. The finish coat shall be acrylic based enamel or polyurethane.

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3.14 Rustproofing. When specified (see 6.2), the truck cab, chassis, and chassis underside shall be rustproofed in accordance with FED-STD-297.

3.15 Servicing and adjusting. Prior to acceptance of the truck by the Government, the contractor shall service and adjust the truck for immediate operational use as required in the operator's manual. As a minimum, the servicing and adjusting shall include the following:

- a. Inflation of all tires
- b. Adjustment of brakes (when required)
- c. Proper functioning of all lighting and electrical systems
- d. Wheel alinement (when required)
- e. Adjustment of truck and compressor engine (see 3.10), to include tune-up (when required)
- f. Complete lubrication with grades of lubricants recommended for ambient temperature at the delivery point
- g. Cooling system filled to capacity with a clean solution of equal parts by volume of water and antifreeze (ethylene glycol)

The truck shall be conspicuously tagged to identify the lubricants and their temperature range.

3.16 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.

3.17 Workmanship.

3.17.1 Steel fabrication. The steel used in fabrication shall be free from kinks, sharp bends, and other conditions which would be deleterious to the finished product. Manufacturing processes shall not reduce the strength of the steel to a value less than intended by the design. Manufacturing processes shall be done neatly and accurately. All bends shall be made by controlled means to insure uniformity of size and shape.

3.17.2 Bolted connections. Boltholes shall be accurately punched or drilled and shall have the burrs removed. Washers or lockwashers shall be provided in accordance with good commercial practice, and all bolts, nuts, and screws shall be tight.

3.17.3 Riveted connections. Rivet holes shall be accurately punched or drilled and shall have the burrs removed. Rivets shall be driven with pressure tools and shall completely fill the holes. Rivet heads, when not countersunk or flattened, shall be of approved shape and of uniform size for the same diameter of rivet. Rivet heads shall be full, neatly made, concentric with the rivet holes, and in full contact with the surface of the member.

3.17.4 Welding. Welding procedures shall be in accordance with a nationally recognized welding code. The surface of parts to be welded shall be free from rust, scale, paint, grease, or other foreign matter. Welds shall be of sufficient size and shape to develop the full strength of the parts connected by

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the welds. Welds shall transmit stress without permanent deformation or failure when the parts connected by the weld are subjected to proof and service loadings.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements (examinations and tests) as specified herein. Except as otherwise specified in the contract or purchase order, 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 this document where such inspections are deemed necessary to ensure supplies and services conform to prescribed requirements.

4.1.1 Responsibility for compliance. All items shall meet all requirements of sections 3 and 5. The inspection set forth in this document shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in this document shall not relieve the contractor of the responsibility of 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 accept defective material.

4.1.2 Component and material inspection. Components and materials shall be inspected in accordance with all the requirements specified herein and in applicable referenced documents.

4.2 Examination. Each truck shall be examined for compliance with the requirements specified in section 3 of this specification. Any redesign or modification of the contractor's standard product to comply with specified requirements, or any necessary redesign or modification following failure to meet specified requirements shall receive particular attention for adequacy and suitability. This element of inspection shall encompass all visual examination and dimensional measurements. Noncompliance with any specified requirements or presence of one or more defects preventing or lessening maximum efficiency shall constitute cause for rejection.

4.3 First production vehicle inspection. The first production 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 conformity with the requirements of 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.

4.3.1 Truck weight. The truck shall be weighed to determine curb weight and distribution of curb weight on front and rear axle. The imposed loading on front and rear axle will be computed using the curb weight, the operator weight at 175 lb, and the payload uniformly distributed over the vehicle load area, to provide the specified gw. Calculated imposed loads on front and rear axle will

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be utilized to ascertain the suspension, axles, and tires furnished are of adequate capacity to meet specification requirements.

4.3.2 Road test. The truck, loaded to rated gvw, shall be driven not less than 20 miles on highway, reaching speeds specified in 3.6.2.

4.3.3 Tailgate test. When a tailgate is required, a load of not less than 800 lb shall be lifted and lowered at least five times to test the function of the tailgate to verify conformance to the requirements of 3.9.

4.3.4 Compressor test. The compressor unit shall be operated for 45 minutes to determine conformance to requirements specified in 3.10.1. The unit shall be cycled not less than five times as specified in 3.10.3.

4.3.5 Crane test. When crane is required, the crane shall be tested to verify conformance to the requirements of 3.11.

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

4.3.7 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.

4.4 Production truck tests. The contractor's testing system shall, as a minimum, assure that the truck is capable of meeting the performance requirements specified herein.

4.5 Preparation for delivery. The vehicle shall be inspected to verify conformance to the requirements of section 5.

5. PREPARATION FOR DELIVERY

* 5.1 Vehicle processing. The equipment shall be preserved and packed in accordance with the contractor's standard practice. When specified (see 6.2), equipment shall be preserved and packed in accordance with the requirements of MIL-V-62038 with the level of preservation and packing as specified (see 6.2).

* 6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

* 6.1 Intended use. The trucks covered by this specification are intended for use as medium duty tire servicing maintenance trucks.

* 6.2 Acquisition requirements. Acquisition documents should specify the following:

- a. Title, number, and date of this specification
- b. Type of truck chassis required (see 1.2)

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- c. Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.1.1 and 2.2)
- d. When gasoline engine is required (see 3.7.1.2)
- e. When manual transmission is required (see 3.7.5)
- f. When spare tire is not required (see 3.7.10.2)
- g. When a spare wheel or rim is required (see 3.7.10.3)
- h. When an open utility type service body is not required (see 3.8)
- i. When hydraulic tailgate is required (see 3.9)
- j. When crane is required (see 3.11)
- k. When rustproofing is required (see 3.14)
- l. When preservation and packing in accordance with MIL-V-62038 is required with the level of preservation and packing required (see 5.1)

* 6.3 Data requirements. When this specification is used in an acquisition and data are required to be delivered, the data requirements shall be developed as specified by an approved Data Item Description (DD Form 1664) and delivered in accordance with the approved Contract Data Requirements List (CDRL), incorporated into the contract. When the provisions of DoD Federal Acquisition Regulations (FAR) Supplement, Part 27, Sub-Part 27.475-1 (DD Form 1423) are invoked and the DD Form 1423 is not used, the data should be delivered by the contractor in accordance with the contract or purchase order requirements.

6.4 Subject term (key word) listing.

Air compressor
 Crane
 Maintenance vehicles
 Tires

6.5 Changes from previous issue. The margins of this specification are marked with an asterisk to indicate where changes (additions, modifications, corrections, deletions) from MIL-T-28553D(YD) were made. 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 irrespective of the marginal notations and relationship to the last previous issue.

* 6.6 Supersession data. This specification was originally written to replace military specification MIL-T-28553D(YD) dated 19 August 1988.

* 6.7 Classification cross reference. Classifications used in this specification (see 1.2) are identical to those found in the superseded military specification, MIL-T-28553D(YD).

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CIVIL AGENCY COORDINATING ACTIVITY:

GSA -FSS

PREPARING ACTIVITY:

Navy - YD

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Orders for this publication are to be placed with General Services Administration, acting as an agent for the Superintendent of Documents. See section 2 of this specification to obtain extra copies and other documents referenced herein.