
* NOT MEASUREMENT *
* SENSITIVE *

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SUPERSEDING
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FEDERAL SPECIFICATION

SEMITRAILERS, TILT DECK: COMMERCIAL

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 tandem axle tilt deck semitrailers.

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

- Type I - 10-ton, tandem axle, deck between wheels
- Type II - 12-ton, tandem axle, deck over wheels
- Type IV - 6-ton, tandem axle, deck between wheels
- Type V - (see 6.5)
- Type VI - 9-ton, tandem axle, deck over wheels
- Type VII - 6-ton, tandem axle, deck over wheels

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, Port *
*Hueneme, CA 93043-5000, by using the self-addressed Standardization *
*Document Improvement Proposal (DD Form 1426) appearing at the end of this *
*document or by letter. *

FSC 2330

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2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications and standards. The following specifications and standards 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).

Military Specifications:

MIL-W-3912 - Wood Parts and Wood Substitutes, Fabricated for Transport Vehicle Bodies.

MIL-V-62038 - Vehicle, Wheeled, Preparation for Shipment and Storage of.

Federal Standards:

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

Military Standards:

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

MS51336 - Lunette & Coupler, Drawbar, Ring.

(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.)

(Copies of specifications, standards, handbooks, publications, and other Government documents required by contractors in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting activity.)

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2.2 Other publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation.

Society of Automotive Engineers, Inc. (SAE):

SAE Standards and Recommended Practices

- SAE J318 - Trucks, Truck Tractors, & Trailers, Air Brake Gladhand Service (Control) & Emergency (Supply) Line Couplers
- SAE J534 - Fittings, Lubrication
- SAE J560 - Connector, Seven-Conductor Electrical, for Truck-Trailer Jumper Cable
- SAE J697 - Chain, Safety of Full Trailers or Converter Dollies
- SAE J702 - Truck Tractor & Truck Trailer, Brake & Electrical Connection Locations
- SAE J1067 - Seven Connector Jacketed Cable for Truck Trailer Connector
- SAE J1402 - Automotive Air Brake Hose & Assemblies

(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, 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 Standard commercial product. The semitrailer shall, as a minimum, be in accordance with the requirements of this specification and shall be the manufacturer's standard commercial product. Additional or better features which are not specifically prohibited by this specification but which are a part of the manufacturer's standard commercial product, shall be included in the semitrailer being furnished. A standard commercial product is a product which has been sold or is being currently offered for sale on the commercial market through advertisements or manufacturer's catalogs, or brochures, and represents the latest production model.

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* 3.2 First production vehicle. When specified (see 6.2), the contractor shall furnish one semitrailer for first production vehicle inspection (see 4.2.1 and 6.2).

3.3 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. Unless otherwise specified, none of the above shall be interpreted to mean that the use of used or rebuilt products are allowed under this specification.

3.4 Interchangeability. All units of the same classification furnished with similar options under a specific contract shall be identical to the extent necessary to insure interchangeability of component parts, assemblies, accessories, and spare parts.

3.5 General design. The semitrailer shall comply with all Federal Motor Vehicle Safety Standards in effect at time of manufacture.

3.5.1 Net weight. The net weight of the fully equipped semitrailer shall include the weight of all attachments, accessories, and equipment, and shall be the minimum practical.

3.5.2 Rated payload capacity. The rated payload capacity, with the payload centered in the load space, shall be not less than that shown in Table I. Semitrailer shall withstand the concentrated loads encountered in transporting wheeled and tracked vehicles having a weight equal to the rated payload capacity of the semitrailer.

TABLE I. Rated payload capacity.

* TYPE	Rated payload capacity (pounds)	*
* I	20,000	*
* II	24,000	*
* IV	12,000	*
* VI	18,000	*
* VII	12,000	*

3.5.3 Gross weight. The gross vehicle weight (gvw) shall consist of the net weight of the semitrailer, and the rated payload (see Table I). Distribution of the gvw shall be as follows: Tires, 90 percent; drawbar, 10 percent.

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3.5.4 Dimensions. Semitrailer dimensions and clearances, uncoupled from the towing vehicles resting on level ground, and the platform level, shall conform to the dimensions specified in Table II. Deck tilt angle shall be the minimum practical.

TABLE II. Dimensions.

	Types				
	I	II	IV	VI	VII
* Overall length, feet (minimum)	20	22	20	22	20
* Overall width, inches, + 1 inch	95	95	95	95	95
* Deck length, feet (minimum)	16	16	16	18	16
* Deck width, inches, + 1 inch	74	95	74	95	95
* Deck height with payload, inches	27	37	25	37	37
* (maximum)					
* Ground clearance, inches (minimum)	7	10	9	9	9
* Deck tilt angle, degrees (maximum)			9	17	

3.6 Performance. The semitrailer, fully equipped and loaded with rated payload (see Table I), shall be capable of being towed at speeds as great as 10 miles per hour (mph) over unimproved roads and over reasonably hard uneven terrain; and at speeds as great as 50 mph over improved roads (see 6.4).

3.6.1 Turning ability. When coupled to a towing vehicle operating in its minimum turning circle, the semitrailer shall follow without cramping. The semitrailer shall be capable of moving through an angle of not less than 70 degrees (o) in relation to a 96 inch wide towing vehicle without interference between vehicles. The angle shall be measured between the longitudinal axis of the towing vehicle and the lunette/drawbar centerline.

3.6.2 Tracking ability. The semitrailer shall conform to the tracking requirements of DoT Federal Motor Carrier Safety Regulations, section 393.70(a).

* 3.6.3 Brake performance. The semitrailer furnished with electric type braking system shall comply with the performance requirements of DoT Federal Motor Vehicle Safety Regulations, section 393.52.

3.7 Tilt platform operation. With the semitrailer resting on level ground, the semitrailer platform shall be capable of being tilted to allow the underside of the rear edge of the platform to rest on the ground. The platform shall reposition itself from the tilt position to the travel position when a vehicle, having weight not exceeding the rate payload of the semitrailer, is driven onto the platform. All tilting functions of the platform shall be accomplished at a controlled speed without external motivation from any source other than the operator and the payload. Any positioning of the platform, from travel position to full tilt position, shall be attainable without disconnecting the semitrailer from the towing vehicle.

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3.8 Semitrailer components.

3.8.1 Frame and tow bar. The frame and tow bar shall be of all steel construction and shall have structural capacity to resist bending and twisting, without permanent deformation or part failure, when subjected to performance requirements of 3.6 through 3.6.3. When the semitrailer is loaded with rated payload, or while being loaded with rated payload with platform in tilted position, the maximum fiber stress in any frame member shall be not greater than 50 percent of the yield strength of the materials used. When frame members are spliced, joint shall be reinforced to fulfill the dynamic and static loading requirements. All splice welds shall be continuous, and splices shall be designed to avoid stress concentration. Tow bar shall conform to DoT Federal Motor Carrier Safety Regulations, section 393.71(h).

* 3.8.1.1 Stress analysis. A stress analysis for the semitrailer, loaded as specified in 3.5.2, shall be furnished. The stress analysis shall include shear and moment diagrams and deflection calculations. The strength of the floor, cross members, and outside frame members shall not be included in the calculations to compute the main frame maximum fiber stress, but the weight of the floor, cross members and outside frame members imposed on the main frame shall be included in the total load imposed on the main frame.

3.8.2 Lunette. A lunette, conforming to MS51336, shall be provided. Unless otherwise specified (see 6.2), the lunette shall have a vertical range of adjustment of from 26 to 32 inches. The towing hitch and lunette shall conform to DoT Federal Motor Carrier Safety Regulations, section 393.70(d), and be capable of withstanding a drawbar pull of not less than 60,000 pounds (lb) without deformation.

3.8.3 Safety chains. Safety chains, conforming to the requirements of DoT Federal Motor Carrier Safety Regulations, section 393.70(d), and SAE J697 shall be furnished.

3.8.4 Support leg. Unless otherwise specified (see 6.2), a support leg shall be mounted on the semitrailer tow bar. The leg shall be vertically adjustable, hinged to fold into travel position, and shall be arranged for positive locking into parking or travel position. Leg shall be capable of raising or lowering its portion of the weight of the semitrailer, loaded to rated payload, throughout the full extension without evidence of binding or other damage. Extension mechanism shall be operated by means of a handcrank. Leg adjusting mechanism shall be protected from exposure to foreign matter which would impair functional efficiency. The adjustments shall permit coupling and uncoupling the semitrailer, loaded with rated payload, to or from the towing vehicle without the use of auxiliary equipment. Leg shall be provided with substantial ground bearing plate.

* 3.8.5 Platform. Platform frame shall be of welded steel construction provided with full length longitudinal main frame members, and shall be reinforced with a sufficient number of crossmembers to insure stability. The platform shall be level deck type with hardwood flooring. The flooring shall be of uniform thickness of not less than 1-3/4 inches, fabricated from the types of hardwood specified in MIL-W-3912. Flooring shall be laid lengthwise or transversely in accordance with manufacturer's standard practice, as close together as practical, and securely attached with countersunk corrosion

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resistant screws or bolts. Top of countersunk screw or bolt head shall be not less than 1/8 inch and not more than 1/4 inch below top of wood surface. Butt joints shall be centered over crossmembers and staggered. For deck over wheel type semitrailers, the area above each wheel may be covered with steel plates not less than 5/16-inch thick, flush with the floor. Exposed ends and edges of flooring shall be protected with metal reinforcements. When specified (see 6.2), rear bottom edges of the platform on Type I and IV semitrailers shall be tapered to not more than 1-inch transverse thickness. The platform ramp shall permit self-loading of forklift trucks fitted with small solid rubber tires.

3.8.6 Fenders. Unless otherwise specified (see 6.2), wheel fenders shall be provided for Type I and IV trailers. Fenders shall have sufficient clearance above the tires to provide for wheel articulation as specified in 3.8.11.1. Wheel fenders shall have sufficient structural strength to withstand loads of 200 pounds per square foot without evidence of permanent deformation. Fenders shall be covered with a safety tread plate. A flange or lip shall be provided on the outside of the fenders. Fenders shall be inclosed on platform side of fender.

3.8.7 Tilt control. When specified (see 6.2), tilt control mechanism shall be provided and shall consist of one or two hydraulic, double acting, retarding cylinders in accordance with manufacturer's standard practice.

3.8.8 Tilt lock. A locking device to secure the front of the deck in the travel position shall be installed. Release of the lock shall be accomplished manually without tools.

3.8.9 Stake pockets. When specified (see 6.2), not less than three stake pockets, of manufacturer's nominal size, shall be provided on each side of the deck, suitably located inside the outer edges of the loading space.

3.8.10 Lashing D-rings. Lashing D-rings shall be of the heavy-duty type and shall not protrude beyond the outer edges of the deck. Not less than four lashing rings shall be furnished, arranged in accordance with manufacturer's standard practice. Lashing ring and its accessories shall be capable of withstanding a pull of 10,000 lbs.

3.8.11 Axles and suspension. Axle and suspension system shall be of the rated capacity at least equal to the load imposed at the ground when the semitrailer is loaded with its rated payload (see 3.5.2). Wheel bearings shall be of antifriction type. Semitrailers shall be provided with a tandem axle.

3.8.11.1 Tandem axle. Tandem axle suspension shall be individually suspended or walking beam construction, which will provide positive alinement. When applicable, spring suspension is acceptable for semitrailer Types IV, VI and VII. Sufficient articulation shall be provided to maintain equal loading on each wheel, with semitrailer loads with rated payload under any of the following conditions:

- a. With two diagonally opposite wheels elevated 5 inches.
- b. With forward pair of wheels elevated 6 inches above rear pair.
- c. With rear pair of wheels elevated 6 inches above forward pair.

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3.8.12 Wheels, rims and tires. Unless otherwise specified (see 6.2), Type I, IV and VII semitrailers shall be equipped with single wheels, and Type II and VI semitrailers equipped with dual wheels. Tire and rim sizes shall be the same for all wheels on each semitrailer. When specified (see 6.2) disc type wheels shall be furnished.

3.8.12.1 Tires. Unless otherwise specified (see 6.2), tires shall be tube or tubeless type with highway tread. Tires shall have individual rated load-carrying capacities at least equal to the maximum individual tire loading imposed in operation with rated payload (see 3.5.2). Tires shall be rated in accordance with TRA recommendations. When specified (see 6.2) bias ply tire shall be furnished.

3.8.12.2 Tubes. When tube type tires are furnished, tubes shall be of the heavy-duty type, and shall be of proper size for the tires furnished. Tire flaps shall be provided for tube type tires as recommended by TRA.

3.8.13 Brakes. Brakes shall conform to DoT Federal Motor Carrier Safety Regulations, sections 393.40 through 393.43 and 393.45 through 393.48, as applicable. No part of the braking system shall extend below the bottom of the wheel rim. Brakes shall be furnished on all wheels of the semitrailer. Unless otherwise specified (see 6.2), Type I, IV and VII semitrailers shall have electric type service brakes and Type II and VI semitrailers shall have full air type service brakes.

3.8.13.1 Electric service brakes. Electric service brakes shall be complete with brake controller operable from the driver's compartment of the towing vehicle, and an (automatic) controller kit for synchronizing the semitrailer electric brakes with the brakes of the towing vehicle. Unless otherwise specified, the synchronizing controller shall be for use with hydraulic-brake-equipped-towing vehicles. When specified (see 6.2), the synchronizing controller shall be for use with air-brake-equipped towing vehicles. The electric service brakes shall be 12-volt potential and connection with the towing vehicle shall be through the SAE J560 receptacle specified in 3.8.14. The kits shall be complete with all accessory parts and shall be boxed, marked and securely attached to the semitrailer and will be installed in the towing vehicle at the receiving activity. A complete set of servicing and installation instructions shall be provided.

3.8.13.2 Air service brakes. The air service brakes shall be of the full air, internal expanding type. The brake systems shall include piping, hose connections and couplings, air reservoir, slack adjusters and all other parts required for a complete air brake system. Air hose coupling configuration shall conform to SAE J702. Gladhands shall conform to SAE J318. All components of the braking system shall be installed to provide sufficient road clearance on rough terrain, and shall be shielded from damage caused by striking objects. Air hoses shall be provided with hooks or other fastening devices to secure hoses adjacent to semitrailer frame when not in use.

3.8.13.2.1 Air hose assemblies. When specified (see 6.2), two air hose assemblies shall be furnished with each semitrailer, packaged and secured to the semitrailer for shipment. Air hoses shall be in accordance with SAE J1402, equipped with SAE J318 "gladhand" couplers at each end. Air hoses shall be

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provided with hooks or fastening devices to secure hoses adjacent to semitrailer frame when not in use. Each hose shall be not less than three feet longer than the distance from the semitrailer air connectors to the lunette.

3.8.13.3 Emergency brake system. Semitrailers equipped with electric type service brakes shall be provided with an emergency brake system as specified in 3.8.13.3.1. Semitrailers equipped with full air type service brakes shall be provided with an emergency brake system as specified in 3.8.13.3.2.

3.8.13.3.1 Electric emergency brake system. Electric brake systems shall be provided with a standard breakaway feature that will automatically apply the semitrailer brakes if semitrailer separates from towing vehicle. Breakaway system shall include wiring and recommended storage battery mounted in weatherproof location in accordance with DoT Federal Motor Carrier Safety Regulations, section 393.30. Design shall provide for automatic or ready disconnection of storage battery when semitrailer is manually separated from the towing vehicle.

3.8.13.3.2 Full air emergency brake system. Spring or air diaphragm mechanical lock type parking brakes shall be provided. The parking brakes shall be automatically applied upon disconnection of the emergency air lines and under emergency braking conditions. The parking brakes shall remain in the applied conditions with no additional application and despite the depletion of all air pressure. Parking brakes shall conform to DoT Federal Motor Carrier Safety Regulations, section 393.41.

3.8.13.4 Parking brake. When specified for semitrailers with electric brake systems (see 6.2), manually applied parking brakes shall be furnished. Parking brakes shall conform to DoT Federal Motor Carrier Safety Regulations, section 393.41. When brake cables are used, the cables shall be of corrosion resistant steel. Provisions shall be made for slack adjustment. Lubrication fittings shall be provided.

3.8.14 Lighting system. The lighting system shall be manufacturer's standards of 12-volt direct current potential and shall comply with DoT Federal Motor Carrier Regulations, sections 393.14, 393.20, 393.25, 393.26(a), (b) and (c), 393.27, 393.28, 393.29, 393.32 and 393.33. The system shall include at least two stoplights and taillights, directional signals, front and rear marker and clearance lights, and reflector devices. The front of the semitrailer shall be equipped with a receptacle conforming to SAE J560, with the receptacle located and its conductors connected and color coded as specified therein. The receptacle shall be furnished with a spring loaded cover assembly and installed on the forward end of the drawbar.

3.8.14.1 Electrical jumper cable. When specified (see 6.2), a 7-conductor electrical jumper cable conforming to SAE J1067, with a cable plug at each end conforming to SAE J560, shall be provided. Both plugs shall be equipped with a grip for withdrawing from connector sockets. The cable shall be not less than three feet longer than the distance from the semitrailer electrical receptacle to the lunette. Stowage provisions having an anti-theft feature and means of hanging the cable with the plugs pointing downward shall be provided.

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* 3.9 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 (psi) or higher, will damage grease seals or other parts, a suitable warning shall be affixed to the equipment in a conspicuous location.

3.10 Treatment, painting, identification marking and data plates. As specified by the procuring activity for the appropriate service (see 6.2), treatment, painting, identification marking and data plates shall be in accordance with MIL-STD-1223.

3.11 Rustproofing. When specified (see 6.2), the semitrailer shall be rustproofed in accordance with FED-STD-297.

* 3.12 Servicing and adjusting. Prior to acceptance of the semitrailer by the Government, the contractor shall service and adjust the semitrailer for immediate operational use as required in the operator's manual. The servicing and adjusting shall include at least the following:

- a. Inflation of all tires.
- b. Adjustment of brakes, (when required).
- c. Proper functioning of all lighting and electrical systems.
- d. Complete lubrication with grades of lubricants recommended for ambient temperature at the delivery point.

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

3.13 Workmanship.

3.13.1 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.

3.13.2 Bolted connections. Bolt holes 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.

3.13.3 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.

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3.13.4 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 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 Classification of inspections. The inspection requirements specified herein are classified as follows:

- a. First production vehicle inspection (see 4.2.1).
- b. Quality conformance inspection (see 4.2.2).

4.2.1 First production vehicle inspection. The first production vehicle produced under the contract shall be inspected by the contract at his plant under the direction and in the presence of Government representatives. This inspection shall include the examination of 4.3 and the test of 4.4. 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 right under the provisions of the contract.

4.2.2 Quality conformance inspection. The quality conformance inspection shall include the examination of 4.3, the tests of 4.6, and the packaging inspection of 4.7.

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4.3 Examination. Each semitrailer 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 examinations 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.

4.4 First production vehicle tests.

4.4.1 Semitrailer weights. The semitrailer shall be weighed to determine net weight and distribution of net weight on lunette and axles. The weight distribution shall be computed using the net weight and the applicable rated payload (see 3.5.2). Calculated imposed loads on lunette and axles shall be utilized to ascertain that the tires, axles and suspension are of adequate capacity to meet contract requirements, and to determine conformance to 3.5.2 and 3.5.3.

4.4.2 Road test. The fully equipped semitrailer shall be towed over roads and terrain specified in 3.6, a minimum distance of 25 miles loaded with rated payload, and 25 miles without load. At least 20 percent of the distance shall be over unimproved roads and a reasonably hard terrain. Towing speeds shall be as specified in 3.6. Tracking shall be checked for conformance to the requirements of 3.6.2. Semitrailer shall be observed during the road test and examined after the test for evidence of misalignment, part failure or other defects.

4.4.3 Turning ability test. The semitrailer, loaded with rated payload, shall be tested for turning ability to verify compliance with 3.6.1.

4.4.4 Tilt mechanism and deck lock. The function of tilting mechanism, deck locking and support leg operation shall be observed during loading and unloading operations to verify that the deck is correctly balanced, easy to maneuver, and that the lock and support leg are of durable and safe construction. Platform tilt mechanism and deck lock shall conform to the requirements of 3.7, 3.8.7 and 3.8.8. Support leg operation shall conform to 3.8.4.

4.4.5 Axle oscillation. Semitrailer shall be tested to verify conformance to the requirements of 3.8.11.1.

4.4.6 Failure. Failure of the first production semitrailer meet requirements of the contract shall be cause for the Government to refuse acceptance of all semitrailers under the contract until corrective action has been taken.

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

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4.6 Production semitrailer tests. The contractor's testing shall, as a minimum, assure that the semitrailer is capable of meeting the performance requirements specified herein. The semitrailer shall be exercised to assure brake operation, lights operation, support leg operation, tilt control operation and tracking ability are meeting specification requirements.

4.7 Packaging inspection. The vehicle shall be inspected to verify conformance to the requirements of section 5.

5. PACKAGING

5.1 Vehicle processing. The semitrailer shall be preserved, packed and marked in accordance with the contractor's standard practice. When specified (see 6.2), semitrailer shall be preserved, packed, and marked in accordance with the mobile 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 semitrailers covered by this specification are intended for use in self-loading and transporting tractors, light tracked vehicles, forklift trucks, machinery and other cargo.

6.2 Ordering data. Purchasers should select the preferred options permitted herein and include the following information in acquisition documents:

- a. Title, number, and date of this specification.
- b. Type of semitrailer required (see 1.2).
- c. Issue of DODISS to be cited in the solicitation, and if required the specific issue of individual documents referenced (see 2.1.1).
- e. When first production inspection is required (see 3.2).
- f. When adjustable lunette is not required (see 3.8.2).
- g. When support leg is not required (3.8.4).
- h. When rear end of platform on Type I and IV semitrailers shall be tapered to not more than 1 inch (see 3.8.5).
- i. When fenders are not required for Type I and IV Semitrailers (see 3.8.6).
- j. When tilt control mechanism is required (see 3.8.7).
- k. When stake pockets are required (see 3.8.9).
- l. Wheel arrangement if not as specified (see 3.8.12).
- m. When disc type wheels are required (see 3.8.12).
- n. When tires shall have tread different from that specified in (3.8.12.1).
- o. When bias ply tires are required (see 3.8.12.1).
- p. Type of service brakes if not as specified (see 3.8.13).
- q. When synchronizing controller for use with air-brake-equipped towing vehicle is required (see 3.8.13.1).
- r. When air hose assemblies are required (see 3.8.13.2.1).
- s. When parking brake is required (see 3.8.13.4).
- t. When electrical jumper cable is required (see 3.8.14.1).

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- u. Appropriate service requirements for treatment, painting, identification marking and data plates (see 3.10).
- v. When rustproofing is required (see 3.11).
- w. When preservation and packing in accordance with MIL-V-62038 is required, and 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 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 Definitions.

6.4.1 Improved road. An improved road is a smooth, hard surfaced road, such as a concrete or asphalt paved highway.

6.4.2 Unimproved road. An unimproved road is an unpaved, unstabilized road with an undulating surface, having occasional chuckholes and exposed rocks.

6.5 Type V elimination. The Type V, 10-ton, single axle, deck over wheels semitrailer was eliminated from the specification.

* 6.6 Changes from previous issue. The margins of this specification are marked with an asterisk to indicate where changes (additions, modifications, corrections, deletions) from the previous issue 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.

MILITARY INTERESTS:

Custodians

Army - AT
Navy - YD
Air Force - 99

User Activities

Army - ME
Navy - MC
Air Force - 84

CIVIL AGENCY COORDINATING ACTIVITIES:

GSA - FSS

PREPARING ACTIVITY:

Navy - YD

(Project 2330-0014)