

NOT MEASUREMENT SENSITIVE

A-A-52467
15 July 1993
SUPERSEDING
MIL-S-62293C
28 September 1988

COMMERCIAL ITEM DESCRIPTION

SCOOTERS, MOTOR: ELECTRIC MOTOR DRIVEN, THREE- AND FOUR-WHEEL, MODIFIED COMMERCIAL

This commercial item description is approved for use by the US Army Tank-Automotive Command, Department of the Army, and is available for use by all Departments and Agencies of the Department of Defense.

1.1 Scope. This commercial item description (CID) covers electric motor driven, three and four wheel scooters. The scooters are for on-station transport of personnel and cargo under both indoor and outdoor operating conditions. Over-highway operation is not intended.

1.2 Classification. The scooter shall be one of the following types, payloads and models as specified (see 6.2). Unless a specific model is specified (see 6.2), the vehicle may be either a model 3 (3-wheel) or a model 4 (4-wheel), at the manufacturer's option. Combinations specified will be limited to those shown in table I.

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-UED, 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-2340

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

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TABLE I. Body type, payload capacity and model combinations.

Type	Body type	Rated speed loaded					
		Payload capacity		model 3	model 4		
		kilograms (kg) (pounds)		km/h (mph)	km/h (mph)		
I	Stake and platform	454	(1000)	10	(6)	29	(18)
		680	(1500)	10	(6)	19	(12)
		910	(2000)	14	(9)	14	(9)
		1360	(3000)	-		14	(9)
II	Pickup	454	(1000)	10	(6)	29	(18)
		680	(1500)	10	(6)	19	(12)
		910	(2000)	14	(9)	14	(9)
		1360	(3000)	-		14	(9)
III	Personnel carrier, open	454	(1000)	-		16	(10)
		680	(1500)	-		16	(10)
IV	Deleted	-		-		-	
V	Deleted	-		-		-	
VI	Refuse collection	454	(1000)	-		14	(9)
VII	Burden carrier	1815	(4000)	-		10	(6)
		2720	(6000)	-		10	(6)

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).

SPECIFICATIONS
STANDARDS
FEDERAL

FED-STD-297

- Rustproofing of Commercial (Nontactical)
Vehicles.

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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

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 19111-5 093.)

DEPARTMENT OF TRANSPORTATION (DoT)

Federal Motor Vehicle Safety Standards (FMVSS).

(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.)

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)

Occupational Safety and Health Standards.

(Application for copies of OSHA publications should reference the Code of Federal Regulations 29 CFR, Part 1910, 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).

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THE EUROPEAN TYRE AND RIM TECHNICAL ORGANIZATION (ETRTO)
Standards Manual.

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

SOCIETY OF AUTOMOTIVE ENGINEERS, INC. (SAE)

SAE Standards and Recommended Practices

- J551 - Performance Levels and Methods of Electromagnetic Radiation from Vehicles and Devices (30-1000 MHz).
- J560 - Seven-Conductor Electrical Connector for Truck-Trailer Jumper Cable.
- J695 - Turning Ability and Off Tracking - Motor Vehicles.

(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 shall take precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3.1 Salient characteristics. The vehicle described by this CID is an electric motor driven scooter. The vehicle shall be procurable as an "off-the-shelf", commercially produced, readily available item. The vehicle manufacturer shall have built similar model vehicles, as offered to the Government, for commercial sales for at least the past two years, at a rate of not less than 200 units a year. The manufacturer shall have multiple branches or dealers. The vehicle shall comply with listed applicable documents or their respective commercial counterparts.

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3.1.1 Painting and marking. Treatment, painting, identification marking and data plates per MIL-STD-1223. Exterior color and identification markings per MIL-STD-1223 (see 6.2), for the military service identified by the procuring activity.

3.1.2 Rustproofing. To the truck requirements of FED-STD-297.

3.1.3 Towing devices. When specified (see 6.2), not less than two towing devices, for towing the vehicle, on the front of the vehicle.

3.1.4 Pintle. When specified (see 6.2), a pintle assembly on the rear of the vehicle. Pintle of the fixed type, five-ton capacity, with locking pin and chain, Holland Hitch Model T60AL, or equal. Installed on the chassis or reinforced bumper with reinforcements to transfer pintle loads directly to the chassis. Rearmost part of the pintle not more than 100 millimeters (mm) (four inches) forward of the rearmost part of the vehicle. Pintle hook height to the centerline of the pintle hook on an unloaded vehicle from 300 to 460 mm (12 to 18 inches). Two trailer safety chain attachment devices, one adjacent to each side of the pintle. Each attachment providing an ultimate strength not less than the gross vehicle weight of the vehicle furnished. Pintle secured with a minimum of four 1/2-inch bolts.

3.1.5 Trailer lighting receptacle. When specified (see 6.2), on pintle-equipped vehicles, a 12-volt trailer lighting receptacle adjacent to the pintle, conforming to SAE J560 with its conductors connected and color-coded as specified therein.

3.2 Design standards. Conform to electric vehicle requirements set forth in OSHA standards, section 1910.178 for powered industrial trucks, type E designation.

3.2.1 Dimensions. Dimensions as specified in table II.

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TABLE II. Dimensions.

Feature	Vehicle type											
	I (Stake and platform)		II (Pickup)		III (Open personnel)		VI (Refuse collection)		VII (Burden carrier)			
	Model 3 mm (inches)	Model 4 mm (inches)	Model 3 mm (inches)	Model 4 mm (inches)	Model 3 mm (inches)	Model 4 mm (inches)	Model 3 mm (inches)	Model 4 mm (inches)	Model 3 mm (inches)	Model 4 mm (inches)		
Wheelbase (minimum)	1450 (57)	1370 (54)	1450 (57)	1370 (54)	-	1370 (54)	-	1370 (54)	-	1400 (55)		
Width (minimum)	1070 (42)	1070 (42)	1070 (42)	1070 (42)	-	1070 (42)	-	1070 (42)	-	1040 (41)		
Overall length	1250 (49)	1250 (49)	1250 (49)	1250 (49)	-	1250 (49)	-	1250 (49)	-	1250 (49)		
Cab overall height (maximum)	3020 (119)	2690 (106)	3020 (119)	2690 (106)	-	2690 (106)	-	2800 (110)	-	3000 (118)		
Platform area (sq. area minimum)	1.77 (19) m ² (sq.ft.)	1.77 (19) m ² (sq.ft.)	1.77 (19) m ² (sq.ft.)	1.77 (19) m ² (sq.ft.)	-	0.93 (10) m ² (sq.ft.)	-	1.77 (19) m ² (sq.ft.)	-	1.95 (21) m ² (sq.ft.)		

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3.3 Performance. Meet the performance requirements specified herein with the tires inflated to the rated tire pressure and vehicle operated on smooth, dry, level (except for gradeability requirements), hard surfaced, paved roads, and under standard temperature conditions that will allow for full battery capacity.

3.3.1 Speed. Capable of transporting the operator at the rated speed for the specified scooter type and specified payload capacity (see table I) for a duration of not less than three minutes.

3.3.2 Range. Capable of transporting the operator, a front seat passenger, and the specified payload capacity over the range specified in table III at an average speed of not less than 70 percent of the rated speed (see table I).

3.3.3 Gradeability. Capable of transporting the operator, a front seat passenger, and the specified payload capacity up the grade specified in table III for a duration of not less than three minutes.

TABLE III. Performance (minimum).

Body type	Payload capacity		Range		Gradeability (percent grade)			
			Model 3	Model 4	Model 3	Model 4		
	kg (pounds)		km/h(miles)	km/h (miles)				
I	454	(1000)	32	(20)	32	(20)	7	7
	680	(1500)	40	(25)	40	(25)	7	7
	910	(2000)	32	(20)	32	(20)	5	5
	1360	(3000)	-		24	(15)	-	3
II	454	(1000)	32	(20)	32	(20)	7	7
	680	(1500)	40	(25)	40	(25)	7	7
	910	(2000)	32	(20)	32	(20)	5	5
	1360	(3000)	-		24	(15)	-	3
III	454	(1000)	-		32	(20)	-	7
	680	(1500)	-		32	(20)	-	7
VI	454	(1000)	-		24	(15)	-	4
VII	1815	(4000)	-		10	(6.5)	-	11
	2720	(6000)	-		11	(7)	-	11

3.3.4 Turning clearance. Turn within a SAE J695 vehicle clearance circle of not more than 7010 mm (23 feet) for types I to VI, and not more than 7600 mm (25 feet) for type VII.

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3.4.1 Construction. Type I and II, 3-wheel type with single front and two rear wheels, or 4-wheel type. Type III, VI and VII, 4-wheel type only. Steering tiller or automotive steering wheel, except when specified (see 6.2), automotive type steering only.

3.4.1.1 Motor(s). Direct current.

3.4.1.2 Transmission. Sufficient torque capacity.

3.4.1.3 Speed controller. Accelerator pedal.

3.4.1.4 Speed selector. Permit forward and reverse speeds. When specified (see 6.2), provisions to limit the rate of power application.

3.4.1.5 Accelerator pedal. Foot pedal, automotive type when specified (see 6.2), provisions to limit the rate of power application.

3.4.1.6 Operating key switch. Automotive ignition type.

3.4.1.7 Deadman seat switch. Operator must be in seated position to enable vehicle operation.

3.4.1.8 Motor overload protection. Manufacturer's standard.

3.4.1.9 Batteries. Deep-cycle type.

3.4.1.10 Battery condition meter. Visual type.

3.4.1.11 Battery charging system. Consisting of a charger and the accessories required to connect the vehicle batteries through the charger to a 60 Hertz alternating current (ac) power source. Fully automatic, line compensating type with voltage sensing device to automatically reduce/shut down current at near end/end of charge cycle. Capable of fully charging complete battery set within 12 hours. Chargers to be furnished as separate units. Type I, II, III and V 120 volts. Type VII 240 volt. Cable length 2030 mm (80 inches) minimum. When specified (see 6.2), chargers for type I, II, III and VI vehicles built into the scooter.

3.4.1.12 Radio interference suppression. Suppressed to limit electromagnetic radiation within the limits specified by SAE J551.

3.4.2 Accessory electrical equipment.

3.4.2.1 Accessories. 12-volt electrical equipment shall include:

- (a) At least one headlight
- (b) Taillight
- (c) Stoplight or combination stoplight and taillight

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- (d) Turn signals
- (e) Horn, and
- (f) Light switch.

When specified (see 6.2), two headlights and two taillights.

3.4.2.2 Hour meter. When specified (see 6.2), an hour meter having a totalizing mechanism of not less than 9,999 hours.

3.4.2.3 Vehicle approach warning device. Pulsating alarm warning device (beeper).

3.4.4 Suspension. Springs or manufacturer's heavy duty shear mounts on the front and springs on the rear. Shock absorber(s) both front and rear.

3.4.5 Wheels, rims, tires and tubes. Single wheels. Rims and tire ratings conforming to Tire and Rim Association or European Tyre and Rim Technical organization recommendations. Tire and rim sizes and load ratings the same for all wheels, except for type VII. No multi-piece rims.

3.4.5.1 Tires. Pneumatic, tube or tubeless type with highway tread, except for solid tires on type VII.

3.4.6 Service brakes. Hydraulic or mechanical. Brake linings of nonasbestos material.

3.4.6.1 Parking brakes. Hand operated.

3.4.7 Bumper. Manufacturer's standard full width front bumper. Type VII, not less than 4.8 mm (0.188 inch) thick diamond plate lower front panel.

3.4.8 Rearview mirrors. Adjustable. Provided on the right and left sides.

3.4.9 Light bar. When specified (see 6.2), mounted on the roof of the cab. Fabricated of not less than 16 gage (1.519 mm) (0.0598 inch) steel, not less than 810 mm (32 inches) in length and 280 mm (11 inches) in width.

3.4.10 Cab. Type I, II, III, VI and, when specified (see 6.2), type VII provided with a detachable, enclosed cab of rigid construction. Side closures on type I, II, III, VI and VII weatherproof cloth doors or, when specified (see 6.2), weatherproof, lockable rigid doors.

3.4.10.1 Windshield. Safety plate. Power operated windshield wiper.

3.4.10.2 Cab area seats. Manufacturer's standard full width front seat or individual front seats for the driver and one passenger for 4-wheeled vehicles. Type VII may have a single front seat for the driver. For 3-wheeled vehicles and for type VII or, when specified for 4-wheeled

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vehicles (see 6.2), seating for the driver only. When specified for type VII (see 6.2), one additional front seat for a passenger and need not be covered by the cab. All seat(s) of deep foam construction with padded backrest.

3.5 Bodies.

3.5.1 Type I (stake and platform). Type I provided with a diamond tread steel flatbed platform to the rear of the cab. Dimensions shall be in accordance with table II. Platform provided with stake pockets and a stake type body with front, rear, and full length side racks made of hickory, oak, ash, or southern yellow pine. A rigid headboard may be used in lieu of front racks. Removable racks. Rack height above the platform bed not less than 300 mm (12 inches).

3.5.1.1 Package space cover. When specified (see 6.2), a tarpaulin package space cover with tiedowns.

3.5.2 Type II (pickup). Type II rigid-construction package compartment to the rear of the cab. Floor area of the package compartment not less than 1.4 square meters (m^2) (2,100 square inches) with one dimension (either length or width) not less than 1270 mm (50 inches). The height of the package compartment not less than 300 mm (12 inches). When specified (see 6.2), a box type package compartment cover with a covered area of not less than 0.975 m^2 (1,500 square inches). Cover of rigid construction with a hinged opening equipped with a handle and lock. Inside height under the cover, measured from the floor, not less than 460 mm (18 inches). When the cover size is shorter than the total floor length, a removable bulkhead shall be provided to close off the lockable compartment.

3.5.3 Type III (open personnel carrier). Type III provided with padded personnel seat(s) with backrest(s) for passengers to the rear of the cab. Personnel seat(s) facing forward. The personnel seat(s) similar in construction to driver's seat. Stake pockets and racks behind the second passenger seat to accommodate cargo. Racks not less than 300 mm (12 inches) high, measured from the cargo bed.

3.5.4 Type VI (refuse collection). Type VI provided with a hydraulically operated refuse hopper to the rear of the cab. Hopper capacity not less than 1.2 cubic meters (m^3) (1.5 cubic yards). Hopper capable of dumping refuse into a receptacle which has an upper edge not less than 1090 mm (43 inches) above the ground. Full hydraulic dumping with hydraulic dump cylinder(s) and a hydraulic control valve. Power for hydraulic operations provided by an electrically driven hydraulic pump.

3.5.5 Type VII (burden carrier). Type VII provided with a flatbed platform with dimensions in accordance with table II. The floor area of the deck not less than 5/8-inch thick plywood or equivalent diamond tread steel.

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3.6 Serviceing and adjusting. At least the following;

- (a) Alinement of light(s);
- (b) Adjustment of the electrical and brake systems;
- (c) Filling and charging of batteries;
- (d) Inflation of all tires; and
- (e) Complete lubrication of chassis with grades of lubricants recommended for the ambient air temperature at the delivery point.

4.1 Certification. The contractor shall certify that the product offered meets the salient characteristics of this description, and that the product conforms to the producer's own drawings, specifications, standards, and quality assurance practices and is-the same product offered for sale in the commercial marketplace. The Government reserves the right to require proof of such conformance prior to first delivery and thereafter as may be otherwise provided for under the provisions of the contract.

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

6.1 Intended use. The vehicles covered by this CID are intended for general nontactical use by the Government in transporting personnel and cargo within the confines of military installations, over improved roads, and under conditions of weather encountered within the continental United States. The vehicles are to be limited to on-station operation and are not intended for over-highway use, or for use in explosive atmospheres.

6.2 Ordering data. Acquisition documents should specify the following:

- (a) Title, number, and date of this CID.
- (b) Body type and payload capacity required (see 1.2).
- (c) Model, if a specific model is required (see 1.2).
- (d) 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).
- (e) Identification of appropriate military service for painting color and marking (see 3.1.1).
- (f) Towing devices, if required (see 3.1.3).
- (g) Pintle assembly, if required (see 3.1.4).
- (h) Trailer lighting receptacle, if required (see 3.1.5).
- (i) Automotive type steering, if required (see 3.4.1).
- (j) Power application limitation during direction reversal, if required (see 3.4.1.4).
- (k) Power application limitation during starting, if required (see 3.4.1.5).
- (l) Built-in charger for types I, II, III, and VI, if required (see 3.4.1.11).

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- (m) Two headlights and two taillights, if required (see 3.4.2.1).
- (n) Hour meter, if required (see 3.4.2.2).
- (o) Light bar, if required (see 3.4.9).
- (p) Detachable cab for type VII, if required (see 3.4.10).
- (q) Rigid doors on types I, II, III and VI, if required (see 3.4.10).
- (r) Seating for driver only, if required (see 3.4.10.2).
- (s) Seating for one passenger on type VII, if required (see 3.4.10.2).
- (t) Package space cover for type I, if required (see 3.5.1.1).
- (u) Package compartment cover for type II, if required (see 3.5.2).

Custodians:

Army – AT

Navy – YD

Preparing Activity:

Army - AT

Project No. 2340-0043