
* METRIC *

OO-S-875G
March 25, 1994

SUPERSEDING
OO-S-875F
March 02, 1989

FEDERAL SPECIFICATION

SWEEPERS, STREET, MECHANICAL (CONVEYOR TYPE), SELF-PROPELLED

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

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers three-wheel and four-wheel street sweepers, diesel engine driven, self-propelled, utilizing a mechanical (conveyor type) debris pick-up system with effective hopper debris holding volume (sizes) of not less than as indicated herein.

1.2 Classification. Sweepers covered by this specification will be of the following types, styles, classes, and sizes, as specified (see 6.2):

- Type I - Three-wheel sweeper
- Type II - Four-wheel sweeper

- Style A - Single side brush (right side)
- Style B - Dual side brush (right and left side)

- Class 1 - High dump
- Class 2 - Low dump

- Size A - 1.5 cubic meters (m3)
- Size B - 2.3 m3
- Size C - 3 m3

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, *
*1000 23rd Avenue, Port Hueneme, CA 93043-4301, by using the Standardization *
*Document Improvement Proposal (DD Form 1426) appearing at the end of this *
*document or by letter. *

AMSC N/A

FSC 3825

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

OO-S-875G

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications, standards, and handbooks. 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).

Federal Standards

FED-STD-123 - Marking for Shipment (Civil Agencies)
FED-STD-297 - Rustproofing of Commercial (Nontactical) Vehicles
FED-STD-595 - Colors used in Government Procurement

Military Specification

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

Military Standards

MIL-STD-129 - Marking for Shipment and Storage
MIL-STD-209 - Slings and Tiedown Provisions for Lifting and Tying Down Military Equipment
MIL-STD-889 - Dissimilar Metals
MIL-STD-1223 - Nontactical Wheeled Vehicles Treatment, Painting, Identification Marking and Data Plate Standards

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

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

Code of Federal Regulations (CFR):
Department of Transportation (DoT):

49 CFR 325 - Compliance with Interstate Motor Carrier Noise Emission Standards
49 CFR 393 - Parts and Accessories Necessary for Safe Operation
49 CFR 570 - Vehicle in Use Inspection Standards
49 CFR 571 - Federal Motor Vehicle Safety Standards

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

OO-S-875G

Code of Federal Regulations (CFR):
Environmental Protection Agency (EPA):

- 40 CFR 86 - Control of Air Pollution from New Motor Vehicles and New Motor Vehicle Engines: Certification and Test Procedure
- 40 CFR 202 - Motor Carriers Engaged in Interstate Commerce
- 40 CFR 205 - Transportation Equipment Noise Emission Controls

(Application for copies should be addressed to the Public Affairs Office, Environmental Protection Agency, Rockville, MD 20852; or to the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.)

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).

ASTM:

- ASTM E380 - Standard Practice for Use of the International Systems of Units (SI) (the Modernized Metric System)

(Application for copies should be addressed to ASTM, 1916 Race Street, Philadelphia, PA 19103.)

Society of Automotive Engineers, Inc. (SAE):

- SAE J534 - Lubrication Fittings
- SAE J551 - Performance Levels and Methods of Measurement of Electromagnetic Radiation from Vehicles and Devices

(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, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

OO-S-875G

3. REQUIREMENTS

3.1 Description. The sweeper shall consist essentially of diesel fuel powered engine, complete with chassis mounted equipment such as hopper, conveyor type debris pick-up assembly, main (pickup) brush, side brush(es) or gutter broom(s), water spray system, and when applicable, shall include an auxiliary diesel engine.

3.2 First article. When specified in the contract or purchase order (see 6.2), the contractor shall furnish a sweeper for first article inspection (see 4.2.1 and 6.4).

3.3 Standard commercial product. The sweeper 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 sweeper 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.

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

3.4.1 Dissimilar metals. Unless protected against electrolytic corrosion, dissimilar metals shall not be used in direct contact with each other. Dissimilar metals are defined in MIL-STD-889.

3.5 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.

3.6 Safety. With the exception of rotating brooms, all rotating or moving parts and parts subject to high operating temperature, shall be insulated, enclosed or guarded. Sweepers shall be furnished with backup lights and audible alarm, both activated when transmission is shifted into reverse gear. When shifted into reverse gear, all sweeping components shall automatically retract from operating position to not less than 125 millimeters (mm) clear above ground.

3.7 Operational characteristics. The operational characteristics in table I are shown in meter (m), kilometer per hour (kph), and liter (L).

OO-S-875G

Table I. Operational characteristics.

Description	Size A	Size B	Size C
Sweeping width (swath) with one side brush (not less than)	1.47 m	2.22 m	2.28 m
Sweeping width (swath) with two side brushes (not less than)	2 m	3 m	3 m
3-wheel sweeper's turning radius (not to exceed)	5 m	5 m	5 m
4-wheel sweeper's turning radius (not to exceed)	6 m	6 m	6 m
Sweeping speed (not less than)	8 kph	8 kph	8 kph
3-wheel sweeper's travel speed at full load (not less than)	32 kph	32 kph	32 kph
4-wheel sweeper's travel speed at full load (not less than)	88 kph	88 kph	88 kph
Spray water storage capacity (not less than)	645 L	680 L	760 L

3.8 Performance.

3.8.1 Speed. When driven on a paved public highway with varying grades up to 3 percent, the sweeper shall be able to be driven safely at speeds as specified in table I, with the hopper filled to capacity with sand or gravel.

3.8.2 Sweeping. When tested in accordance with the sweeping test of 4.4.2, the sweeper shall in one pass, pick up and retain not less than 94 percent by weight, a mixture of 16 kilograms (kg) of commercial sand and 16 kg of 9.5 mm aggregate pea gravel and not less than 95 percent (95 pieces) of miscellaneous debris listed in table II.

OO-S-875G

Table II. Miscellaneous debris.

* ITEM *	DESCRIPTION	* QTY *
* 1 *	* Cans, aluminum, soft drinks, 0.355 L capacity (empty)	* 10 *
* 2 *	* Cans, aluminum, soft drinks, 0.355 L capacity, compressed * longitudinally to 15 mm thick	* 10 *
* 3 *	* Exhaust pipe, steel, 50 mm diameter by 2 mm thick * by 300 mm long	* 10 *
* 4 *	* Cups, styrofoam, 0.236 L capacity	* 10 *
* 5 *	* Cups, waxed paper, soft drinks, 0.355 L capacity	* 10 *
* 6 *	* Nails, steel, box 8-D by 63 mm long	* 10 *
* 7 *	* Machine bolts, steel, 12.7 mm diameter by 50 mm long	* 10 *
* 8 *	* Washers, flat, steel, standard, 12.7 mm inside diameter	* 10 *
* 9 *	* Stones, 50 mm nominal size	* 10 *
* 10 *	* Lumber, pine, 40 by 90 by 140 mm (nominal size)	* 10 *
* *		Total = 100 *

3.9 Design and construction.

3.9.1 Ambient temperatures. The sweeper, including all components, accessories, and auxiliaries, shall be capable of being stored, started and operated satisfactorily at ambient temperature from as low as -29 degrees Celsius (oC) to as high as +49oC.

3.9.2 Vehicle and components. The vehicle, including all required vehicle components and accessories, shall comply to the provisions of EPA 40 CFR 86, EPA 40 CFR 202, EPA 40 CFR 205, DoT 49 CFR 325, DoT 49 CFR 393, DoT 49 CFR 570, and DoT 49 CFR 571, as applicable, in effect on date of vehicle manufacture.

3.9.3 Cab. The cab shall be manufacturer's standard cab, metal construction, fully enclosed, and insulated. Seat(s) shall be upholstered and furnished with seat belt(s). Operator's seat shall be adjustable for height, forward and rearward position. The window controls shall be manually operated. Windshield and windows shall be tinted safety glass. The cab shall be designed to provide the driver easy access to the cab compartment. All exterior step surfaces shall be non-skid or grated type. The cab defrosting and heating shall be thermostat controlled with multispeed fan, capable of maintaining the cab temperature to not less than +12oC and the defroster shall keep at least 75 percent of the windshield surface clear at -29oC ambient temperature. When specified (see 6.2), manufacturer's standard cab air-conditioning unit with driver comfort controls shall be furnished.

3.9.4 Engine(s). The propulsion (truck) engine shall be a diesel fuel powered engine. When the unit furnished is of the two-engine type, the auxiliary engine shall also be diesel fuel powered. The auxiliary engine shall be protected from severe weather with removable metal housing. The housing doors and latches shall be designed to allow easy access to the engine.

3.9.5 Transmission. The chassis power train shall include a hydrostatic drive system or an automatic transmission with not less than four forward speeds.

OO-S-875G

3.9.6 Steering. The vehicle shall have hydraulic assisted power steering. When a full cab is furnished, a dual steering wheel for left hand and right hand operation of the sweeper shall be furnished. Failure of the hydraulic system shall not prevent manual steering of the vehicle.

3.9.7 Brakes. The sweeper shall be equipped with foot operated hydraulic power service brakes and hand operated, positive locking parking brakes. Style B sweepers shall be provided with dual brake controls, if necessary. Service and parking brake controls shall be independent of each other. Brakes shall be protected against entry of dirt, grease, and water. Service brakes shall safely stop the sweeper within a distance of 4.6 m from an 8 kph speed when traveling forward, fully loaded, down a 15 percent, dry, paved ramp. Parking brake shall be capable of holding the fully loaded sweeper on a 20 percent, dry, paved ramp, while heading either up or down the ramp, without evidence of slippage.

3.9.8 Hydraulic system. The hydraulic system shall be furnished complete with all necessary safety devices, alarms, and controls for a safe operation of the driven hydraulic equipment. No high-pressure hydraulic flexible hoses shall be used inside the truck cab. Threaded pipe fittings shall not be used in the hydraulic lines.

3.9.9 Operating controls. All controls required to operate the vehicle and sweeping components shall be located inside the cab and within reach from the driver's normal driving position. Controls shall be properly identified by a securely attached nameplate using universal symbols or English language, or both. All controls, including the applicable instruments, shall be illuminated with non-glare lighting to be readily visible for night operation.

3.9.10 Electrical and starting system. The truck engine and auxiliary engine (when furnished) shall have keyed starting switches and shall operate on the main truck engine's 12-volt negative ground battery(s). Battery(s) shall be of the maintenance-free type with sufficient cold cranking amperes for the designed ambient temperature conditions. Heat sensing ether injection system or glow plugs shall be provided for cold weather starting. The charging alternator shall have no less than 80 ampere rating. Wiring harness shall be heavy-duty, weatherproof, and identifiable by means of color codes, numbers, or letters.

3.9.11 Wheels and tires. Wheels shall be disc type. Tires shall be tubeless steel belted radial. When specified (see 6.2), tires shall be furnished with traction tread. Wheels and tires shall conform to TRA recommendation. Tires on 4-wheel sweepers shall be of the same size and rating. When specified (see 6.2), a fully inflated spare tire and spare tire carrier shall be furnished.

3.9.12 Outside rearview mirrors. Outside rearview mirrors shall be conveniently located on each side of the driver's location. The mirrors shall be of the combination type having flat and convex areas enclosed in a common housing. The flat portion shall have not less than 322 square centimeters (cm²) and the convex portion shall have not less than 130 cm² of reflective surface.

3.9.13 Panel instruments. Panel instruments shall be centrally located and visible from the driver's location and shall include, but not be limited to, the following:

OO-S-875G

- a. Voltmeter or ammeter.
- b. Lube oil pressure gauge.
- c. Engine coolant temperature gauge.
- d. Tachometer.
- e. Hour meter (9999 reading).
- f. Fuel tank(s) level indicator(s).
- g. Speedometer with odometer.
- h. Low dust spray water reservoir level warning light.
- i. Hopper full load indicator.
- j. Hydraulic oil filter restriction indicator.
- k. Keyed ignition/starting switch.

When an auxiliary engine is furnished, it shall include the instruments listed in items (b) through (f) above.

3.9.14 Accessories. Accessories shall include, but not be limited to, the following:

- a. Splash guards and stone throw protection.
- b. Tow hooks for the purpose of towing the vehicle.
- c. Two spotlights located on each side of cab and controlled at the driver's side.
- d. One amber rotating warning light conveniently located to be easily visible to traffic coming from all directions.
- e. Fuel tank(s) capacity adequate for not less than 8 hours operation.
- f. Fill hose not less than 5 m long with nominal 38 mm female brass coupling to match with standard 38 mm male fire hydrant connection, complete with truck mounted rack and standard hydrant wrench.

3.9.15 Hopper body. The dirt hopper shall be constructed of sheet steel with welded seams and shall be designed and mounted to receive, hold, transport, and dump sweepings without spillage or adversely affecting any mechanism of the sweeper. An hydraulic means, operable from the operator's position, shall be provided for dumping the hopper load in a pile without excessive spreading. The hopper door shall have a support arm/brace that will hold the door in an open position to facilitate cleaning of the hopper by personnel.

3.9.16 Conveyor pick-up assembly. The conveyor pick-up assembly shall be able to be operated at forward and reverse speed. Means shall be provided for allowing the conveyor to pass over obstructions and preventing damage to the mechanism in the event that obstructing or damaging objects are picked up. The conveyor shall be raised or lowered hydraulically and controlled from the operator's position.

3.9.17 Main (pickup) brush. The main (pickup) brush core shall be of welded steel construction, reversible, end for end, and refillable. Raising and lowering of the brush shall be hydraulically controlled from the operator's position. Means for adjusting brush pressure on the surfaces of the sweeping path shall be provided. Sufficient pressure shall be maintained on the main brush during operation, regardless of hopper loading, to produce maximum sweeping efficiency and eliminate the possibility of skipping resulting in rippled dirt trails. The brush filler shall be polypropylene material.

OO-S-875G

3.9.18 Dirt deflectors. Sweeper shall be furnished with dirt deflectors (drag shoes) designed to retain and guide sweepings into the path of the main brush. Deflectors shall be floating type, capable of clearing obstruction, and shall be fitted with renewable runners made of steel, rubber, or synthetic material.

3.9.19 Side (gutter) brush. The side (gutter) brush shall have either tempered steel wire bristles mounted in refillable metal or plastic holders or synthetic fiber bristles of the replaceable cartridge type, the flexing strength of which shall be retained after sweeping obstacles or wet dirt and sand accumulation from gutters or other wet areas. The flexing characteristics of the bristles and overall design of the brush shall be such as to preclude clogging. The side brush shall be mounted in a manner that it shall be capable of effectively sweeping all types of normally accumulated dirt and debris from the gutter curb line into the path of the main brush path when turning at the reduced travel speed. The angle of the side brush in contact with the sweeping surface shall be adjustable or set to preclude the side brush from surface contact and also for its return to contact and adjustment of surface pressure for effective sweeping. The mounting shall provide for flexibility of the brush to resist impact damage to the brush mounting or drive mechanism when striking an immovable object at a forward speed of 16 kph. The brush shall be designed to follow irregularities in the sweeping surface. The entire side brush mounting shall be designed to be quickly and easily removed or installed by use of standard mechanic's handtools. Each broom shall be furnished with adjustable floodlight.

3.9.20 Dust suppression system. A constant pressure dust suppression system shall be of such design that dust is prevented from becoming airborne during the sweeping operation. The water reservoir shall be manufactured from corrosion-resistant materials. A low level switch to automatically shut down the pump at preset reservoir water level shall be included.

3.10 Interior noise level. With the engine(s) and sweeper components at maximum running or operating condition, the noise level inside the cab shall not exceed 85 dB(A).

3.11 Air pollution control. When specified (see 6.2), the sweeper shall comply with the State of California's air pollution control regulations.

3.12 Fire extinguisher. When specified (see 6.2), a fire extinguisher, as commercially provided, shall be provided furnished and mounted in a location readily accessible to the operator.

3.13 Vandalism protection. When specified (see 6.2), vandalism protection shall be provided and as a minimum, shall include locking caps for the fuel, hydraulic oil, radiator, and engine oil fill openings.

3.14 Tools. Each sweeper shall be furnished with tools required for exchanging mounted tire assembly with the spare assembly and shall include at least a hydraulic jack, jack handle, and wheel nut wrench. The jack shall be of such closed height to permit its location under the axle, or other satisfactory lift point at any wheel with a flat tire. The jack, without blocking, shall be capable of raising any wheel of the fully loaded vehicle to a height adequate to permit removal and replacement of wheel and tire assembly.

OO-S-875G

3.15 Toolbox. When specified (see 6.2), the sweeper shall be equipped with a lockable, metallic toolbox. The toolbox shall be weathertight and of sufficient size to store all the necessary tools as required herein.

3.16 Cleaning, treatment, and painting. Surfaces normally painted in good commercial practice shall be cleaned, treated, and painted as specified herein. The color of the finish coat, conforming to FED-STD-595, shall be as specified (see 6.2). Surfaces to be painted shall be cleaned and dried to insure that they are free from contaminants such as oil, grease, welding slag and spatter, loose mill scale, water, dirt, corrosion product, or any other contaminating substances. As soon as practicable after cleaning, and before any corrosion product or other contamination can result, the surfaces shall be prepared or treated to insure the adhesion of the coating system. The painting shall consist of at least one coat of primer and one finish coat of acrylic-based enamel. The primer shall be applied to a clean, dry surface as soon as practicable after cleaning and treating. Painting shall be with manufacturer's current materials according to manufacturer's current processes and the total dry film thickness shall be not less than 0.0635 mm over the entire surface. The paint shall be free from runs, sags, orange peel, or other defects. The end item, allied equipment, and attachments shall be the same color.

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

3.18 Identification plate. An identification plate will be furnished by the contracting officer for each sweeper. The contractor shall stamp all necessary data in the blank spaces of the plate provided for that purpose, and securely affix a plate to each sweeper in a conspicuous place with nonferrous screws, rivets, or bolts not less than 3 mm in diameter. The applicable nomenclature contained in the contract item description shall be placed in the top blank.

3.19 Instruction plates. The sweeper shall be equipped with instruction plates or decals suitably located, describing any special or important procedures to be followed in operating and servicing the equipment. Plates or decals shall be of a material which will last and remain legible for the life of the equipment.

3.20 Vehicle marking. Vehicle marking shall conform to MIL-STD-1223, applicable to the departmental service or agency as specified (see 6.2).

3.21 Lifting and tiedown attachments. When specified (see 6.2), the sweeper shall be equipped with lifting and tiedown attachments. Lifting and tiedown attachments shall conform to type II or type III of MIL-STD-209. A nonferrous transportation plate shall be provided and mechanically attached to the sweeper. Transportation plates shall be inscribed with a diagram showing the lifting attachments and lifting slings, the capacity of each attachment, and the required length and size of each sling cable. A silhouette of the item furnished showing the center of gravity shall be provided on the transportation plate. Tiedown attachments may be identified by stenciling or other suitable marking. Tiedown marking shall clearly indicate that the attachments are intended for the tiedown of the sweeper on the carrier when shipped.

OO-S-875G

3.22 Electromagnetic interference characteristics. When specified (see 6.2), the sweeper shall conform to the electromagnetic characteristic requirements and test limits of SAE J551.

3.23 Lubrication. Unless otherwise specified (see 6.2), 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, 6895 kilopascals or higher, will damage grease seals or other parts, a suitable warning shall be affixed to the equipment in a conspicuous location.

3.24 Servicing and adjusting. Prior to acceptance of the sweeper by the Government, the contractor shall service and adjust the equipment 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.
- c. Proper functioning of all lighting and electrical systems.
- d. Wheel alignment (4-wheel sweepers).
- e. Adjustment of engine.
- f. Complete lubrication with grades of lubricants recommended for ambient temperature at the delivery point.
- g. Cooling system filled to capacity with recommended solution of water and antifreeze (ethylene glycol).

3.25 Workmanship.

3.25.1 Metal fabrication. The metal 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 metal 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. All mechanical, hydraulic, pneumatic, and electrical lines/conduit shall be protected against chaffing when passing through, over, or under metal surroundings. All sheet metal siding/enclosures shall be reinforced to prevent any vibration that would cause immoderate noise levels and chaffing to any service lines.

3.25.2 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.

3.25.3 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.

3.25.4 Welding. Welding procedures shall be in accordance with a nationally recognized welding code. The surface of parts to be welded shall be free from

OO-S-875G

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.

3.25.5 Castings. All castings shall be sound and free from patching, misplaced coring, warping, or any other defect which reduces the casting's ability to perform its intended function.

3.26 Measurement systems. Unless otherwise specified (see 6.2), the manufacturer's standard commercial practice of measurement shall be used in the design and construction of the equipment. In this specification, all measurements (dimensions, sizes, and capacities) are given in the International Systems of Units (Metric). These measurements may be converted to U.S. Customary Systems of Units (Inch-Pound) through the use of the conversion factors and methods specified in ASTM E380.

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 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 specification 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 specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility 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 article inspection (see 4.2.1).
- b. Quality conformance inspection (see 4.2.2).

4.2.1 First article inspection. The first article inspection shall be performed on one sweeper when a first article is required (see 3.2 and 6.4). This inspection shall include the examination of 4.3 and the tests of 4.4. The

OO-S-875G

first article may be either a first production item or a standard production item from the supplier's current inventory provided the item meets the requirements of the specification and is representative of the design, construction, and manufacturing technique applicable to the remaining items to be furnished under the contract. When a first article test is specified by this contract and the contractor desires to deliver the test unit as a contract item, it shall be delivered, only after the contractor, at his own cost and expense, completely cleaned, devoid of foreign material, reconditioned, and/or overhauled, making such replacements and modifications thereto as are required to make the unit acceptable as a contract item.

4.2.1.1 Certificate of compliance. The contractor may submit for the approval of the Contracting Officer, or his authorized representative, a certificate of compliance to the first article test requirements cited in 4.4.3 through 4.4.8, or other requirements specified herein. The Government reserves the right to examine and require a retest to determine the validity of the certification.

4.2.2 Quality conformance inspection. The quality conformance inspection shall include the examination of 4.3, the operational test of 4.4.9, and the preparation for delivery inspection of 4.5.

4.3 Examination. Each sweeper 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 Tests. Failure to pass any of the following tests shall constitute cause for rejection.

4.4.1 Road and turning radius test. The road test shall be conducted by driving the sweeper at a distance of not less than 50 kilometers to verify conformance to 3.8.1. After the road test, continue with turning radius test to verify conformance to 3.7.

4.4.2 Sweeping test. On a 2 by 6 m paved or concrete test site, spread evenly the mixture of 16 kg sand and 16 kg pea gravel at a density of 2.67 kg per square meter. Using the width centerline as the reference point, create a grid pattern of 5 rows (450 mm apart) along the width and 20 rows (300 mm apart) along the length of the course. Then place each debris listed in table II on top of the sand and gravel mix by placing 5 pieces of item 1 in row No. 1, the other 5 pieces of item 1 in row No. 11; 5 pieces of item 2 in row No. 2, the other 5 pieces in row No. 12; all other items to follow the same sequence. Drive through the middle of the course with the vehicle traveling at 8 kph. The sweeper shall pick up not less than 30 kg (94 percent by weight) of sand and gravel mix and 95 pieces (95 percent) of miscellaneous debris.

OO-S-875G

4.4.2.1 Test material exclusion. When the actual sweeping width (swath) of the sweeper is less than the test grid described in 4.4.2, those materials that are beyond the sweeping capability of the sweeper shall be collected and excluded from the test. The pick-up efficiency, as stated above (94 and 95 percent), shall be applicable for the remaining test material.

4.4.3 Brake test. The service, emergency, or parking brakes shall be tested in accordance with the applicable sections of DoT 49 CFR 570 and DoT 49 CFR 571 (see 4.2.1.1).

4.4.4 Air pollution control. The vehicle shall be tested in accordance with the applicable sections of EPA 40 CFR 86, and when applicable, to California's air pollution control regulations (see 4.2.1.1).

4.4.5 Cab interior noise emission test. The cab interior noise emission shall be tested in accordance with the applicable sections of DoT 49 CFR 393, with all sweeping components and engine(s) operating at maximum safe rated speed. The noise level shall not exceed 85 dB(A) (see 4.2.1.1).

4.4.6 Exterior noise emission test. The sweeper shall be tested in accordance with applicable sections of EPA 40 CFR 202, EPA 40 CFR 205, and DoT 49 CFR 325 (see 4.2.1.1).

4.4.7 Lifting and tiedown attachment tests. When lifting and tying down attachments are required, the test shall be conducted by lifting the sweeper at the designated lifting points by means of cables or chains. There shall be no evidence of structural failure in the equipment (see 4.2.1.1).

4.4.8 Test for electromagnetic interference characteristics. When electromagnetic interference characteristics are required, the sweeper shall be tested in accordance with SAE J551 (see 4.2.1.1).

4.4.9 Operational test. This test shall be conducted for not less than 1 hour. Drive the sweeper and operate each component repeatedly to demonstrate satisfactory operation of the equipment, including but not limited to ignition, service and parking brakes, electrical/lighting, debris pick-up (conveyor) assembly, auxiliary engine, dump mechanism (high or low dump), and associated hydraulic, pneumatic, and electrical control system.

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

5. PREPARATION FOR DELIVERY

5.1 Preservation, packaging, and packing. Preservation, packaging, and packing shall be in accordance with the requirements of MIL-V-62038 with the level of preservation, packaging, and packing as specified (see 6.2).

5.2 Marking.

5.2.1 Military agencies. Shipments to military agencies shall be marked in accordance with MIL-STD-129.

OO-S-875G

5.2.2 Civil agencies. Shipments to civil agencies shall be marked in accordance with FED-STD-123.

6. NOTES.

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

6.1 Intended use. Sweepers covered by this specification are intended for sweeping and cleaning streets, parking areas, and other accessible paved surfaces.

6.2 Acquisition requirements. Acquisition documents should specify the following:

- a. Title, number, and date of this specification.
- b. Type, style, class, and size of sweeper required (see 1.2).
- c. Issue of DODISS to be cited in the solicitation, and if required, specific issue of individual documents referenced (see 2.1.1 and 2.2).
- d. When first article is required for inspection and approval (see 3.2).
- e. When air conditioning unit shall be furnished (see 3.9.3).
- f. When traction tread tires are required (see 3.9.11).
- g. When a spare wheel and tire is required (see 3.9.11).
- h. When conformance to California's air pollution control regulations is required (see 3.11).
- i. When fire extinguisher is required (see 3.12).
- j. When vandalism protection is required (see 3.13).
- k. When a toolbox is required (see 3.15).
- l. Color of finish coat required (see 3.16).
- m. When vehicle rustproofing is required (see 3.17).
- n. Departmental service or agency to which vehicle marking is applicable (see 3.20).
- o. When lifting and tying down attachments are required (see 3.21).
- p. When conformance to electromagnetic interference characteristic requirements and test limits are required (see 3.22).
- q. When other than standard lubrication practice is required (see 3.23).
- r. When measurement system of units shall be manufacturer's standard practice or metric only (see 3.26).
- s. Level of preservation and level of 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 (DD Form 1423) incorporated into the contract. When the provisions of DoD Federal Acquisition Regulations (FAR) Supplement, Part 27, Sub-Part 227.405-70 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 First article. When a first article inspection is required, the item will be tested and should be a first production item, or it may be a standard production item from the contractor's current inventory as specified in 4.2.1. The first article should consist of one unit. The contracting officer should

OO-S-875G

6.8 Subject term (keyword) listing.

Diesel
Four-wheel
Gutter brush
Side brush
Three-wheel

6.9 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

MILITARY INTERESTS:

Custodians

Navy - YD1
Air Force - 99

Review Activities

Army - ME
Navy - MC
Air Force - 84

CIVIL AGENCY COORDINATING ACTIVITIES:

GSA - FSS
NHT

PREPARING ACTIVITY:

Navy - YD1

(Project 3825-0224)