

INCH-POUND

OO-S-256J/GEN

3 May 2006

SUPERSEDING

OO-S-256H/GEN

August 5, 1986

FEDERAL SPECIFICATION

SEWING MACHINE, INDUSTRIAL, GENERAL SPECIFICATION FOR

The General Services Administration has authorized the use of this Federal specification by all Federal agencies.

1. SCOPE

1.1 Scope. This specification covers the general requirements for commercial, industrial sewing machines used in the textile and leather industry. The specific requirements for the individual sewing machines are covered by the detail specifications listed in 6.6.

2. APPLICABLE DOCUMENTS

2.1 Government publications. The following documents, of the issues in effect on the date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein.

Federal Regulation

29 CFR 1910 – Occupational Safety and Health Act (OSHA) Standards

(The Code of Federal Regulations (CFR) and the Federal Register (FR) are for sale on a subscription basis by the Superintendent of Documents, US Government Printing Office, Washington, DC 20402. When indicated, reprints of certain regulations may be obtained from the Federal Agency responsible for issuance thereof.)

Comments, suggestions, or questions on this document should be addressed to: Defense Supply Center Philadelphia, ATTN: DSCP-ITAA, 700 Robbins Avenue, Philadelphia, PA 19111-5096 or emailed to dscpg&ispeccomments@dla.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <http://assist.daps.dla.mil>.

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2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless a specific issue is identified, the issue in effect on the date of invitation for bids or request for proposal shall apply.

American National Standard Institute, Inc. (ANSI)

ANSI A208.1 Mat-Formed Wood Particleboard

(Application for copies should be addressed to the American National Standards Institute, 11 West 42nd Street, New York, NY 10036.)

American Society for Quality Control (ASQC)

ASQC Z1.4 - Sampling Procedures and Tables for Inspection
by Attributes

(Application for copies should be addressed to the American Society for Quality Control, 611 East Wisconsin Avenue, Milwaukee, WI 53202.)

American Society for Testing and Materials (ASTM)

ASTM A1008/A1008M	Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Solution hardened, and Bake Hardenable
ASTM D3955	Standard Specification for Electrical Insulating Varnishes
ASTM D4388	Standard Specification for Nonmetallic Semi-Conducting and Electrically Insulating Rubber Tapes
ASTM D6193	Standard Practice for Stitches and Seams

(Application for copies should be addressed to the American Society for Testing and Materials, 100 Barr Harbor Drive, W. Conshohocken, PA 19428-2959.)

National Electrical Manufacturers' Association (NEMA)

NEMA MG 1 Motors and Generators
NEMA ICS6 Industrial Control and Systems Enclosures

(Application for copies should be addressed to the National Electrical Manufacturers' Association, 1300 N. 17th Street, Suite 1847, Rosslyn, VA 22209.)

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National Fire Protection Association (NFPA)

NFPA 70 National Electrical Code

(Application for copies should be addressed to the National Fire Protection Association, 1 Battery March Park, Quincy, MA 02269-9101.)

Underwriters Laboratories, Inc.

UL 508 UL Standard for Safety Industrial Control Equipment
UL 1004 UL Standard for Safety Electric Motors

(Application for copies should be addressed to the Underwriters Laboratories, Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096.)

Master Painters Institute (MPI)

MPI 28 Exterior Marine Spar Varnish, Gloss

(Application for copies should be addressed to the Master Painters Institute, Burnaby, BC Canada V5C3T6 or www.paintinfo.com/mpi)

IPC - Association Connecting Electronics Industries

J-STD-004 Requirements for Soldering Fluxes

(Application for copies should be addressed to the IPC - Association Connecting Electronics Industries, 3000 Lakeside Drive, Suite 309S, Bannockburn, IL 60015.)

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

3. REQUIREMENTS

3.1 Detail specifications. The individual item requirements shall be as specified herein and in accordance with the applicable detail specifications.

3.2 First article. When specified in the contract or purchase order, a sample shall be subjected to first article inspection (see 4.3, 6.2, and 6.4).

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3.3 Codes and standards. The sewing machines shall comply with the applicable requirements of OSHA, NFPA, NEMA and UL.

3.3.1 Compliance. Prior to approval of the first article, if one is submitted, or prior to commencing production, the contractor shall submit to the contracting officer or his authorized representative satisfactory evidence that the machine he proposes to furnish meets the applicable requirements of OSHA, NFPA, NEMA and UL (where applicable).

3.3.2 OSHA. Acceptable evidence of meeting the requirements of OSHA shall be a certificate of compliance certifying that the sewing machines comply with the applicable requirements of 29 CFR 1910, including a belt guard and a finger guard or shield.

3.3.3 NFPA. Acceptable evidence of meeting the requirements of NFPA shall be a certificate of compliance certifying that the sewing machines comply with the applicable requirements of NFPA No. 70 for the wiring and installation of electrical components (except requirements for mounting shall not apply).

3.3.4 NEMA. Acceptable evidence of meeting the requirements of NEMA shall be a certificate of compliance certifying that the sewing machines, and motor starter enclosure comply with requirements of NEMA ICS 6, Type I and also that the sewing machine motors comply with the requirements of NEMA MG 1, when applicable.

3.3.5 UL. Acceptable evidence of meeting the requirements shall be a certificate of compliance that the sewing machine motors comply with UL 1004 and UL 508, when applicable.

3.4 Materials and components. The materials and components shall be as specified herein. Materials not specifically specified shall be of the quality normally used by the manufacturer for the specified equipment, provided the completed item complies with all the provisions of this specification (see 6.5).

3.4.1 Alternate materials and components. Components and materials offered as equivalents to those specified herein and on the applicable drawings shall be equal in form, fit and function to the specified component or material. The incorporation of such a component or material into the design of the specified sewing machines shall not require modification or change in location of any other component or material, unless such modification is specifically approved in writing by the contracting officer. The contractor shall submit with his bid for the contracting officer's approval, a list identifying each alternate material or component, together with proof that each listed component complies with the requirements listed herein. Approval of the submitted listing, together

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with the necessary supporting data does not relieve the contractor of the responsibility that these components or materials perform in accordance with specified requirements. The contracting officer, at his/her discretion may require a physical sample and/or testing of the proposed substitution. Testing will be done during first article or if no first article is required, prior to acceptance of the first production unit.

3.5 Design and construction. All sewing machines to be furnished under this specification shall be of the type normally used for industrial purposes (see 4.4.5). Unless otherwise specified (see 6.2), all machines provided shall include head, stand, table top, electric light fixture, motor or electric transmitter, drive belt, motor control, switch, thread stand, bobbin winder, oil drip pan, and knee or foot lifter, as applicable. The commercial feed mechanisms shall be as shown in table I. The applicable feed mechanisms for the machines shall be as specified in the detail specifications. Unless otherwise specified (see 6.2), the machine shall operate on nominal 120 volts, 60 hertz, single phase. When specified (see 6.2), all electrical components and circuit elements, including terminal and circuit connections, shall be coated for fungus-resistance with varnish conforming to ASTM D3955, except that the current-carrying contact surfaces, such as switch contact points, shall not be coated. Motors shall have windings impregnated to resist moisture. Machine stitching shall conform to the applicable class of ASTM D6193. All wiring methods shall conform to NFPA 70. All connections shall be soldered, taped, or have staked connections. The solder shall conform to type RO of J-STD-004 and the tape shall conform to ASTM D4388.

TABLE I. Feed mechanisms, styles

- A - Drop feed
- B - Drop feed with alternating pressers
- E - Drop feed with differential feed
- F - Needle feed with feeding foot
- G - Compound feed
- H - Compound feed with alternating pressers
- J - Upper feed
- K - Gear driven feed
- L - Ratchet and pawl feed
- O - Universal upper feed

3.5.1 Motors. All motors including those used in transmitter shall conform to NEMA MC 1 or UL 1004. They shall be a minimum 1/2 horsepower except where noted in detail specifications. Motors shall be mounted or suspended so the pulleys of motor or clutch and machine head are in straight belt alignment.

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3.5.1.1 Motor starters. All sewing machines shall be equipped with a manual, full voltage, a/c, single phase, nonreversing starter suitable for use with fractional horsepower motors. The heater coil shall be sized for a full load current of 8 amps. The unit shall be supplied in a NEMA ISC 6, Type-I enclosure and meet or exceed the requirement of UL 508.

3.5.2 Transmitter, electric. The electric transmitter shall be an electric motor and friction clutch built into one complete self-contained driving unit. The clutch shall be actuated by a screw, or a lever, which thrusts the clutch wheel in contact with a continuous running flywheel mounted on the motor rotor, with a friction disc or lining between and mounted on either the clutch wheel or flywheel, permitting speed of the machine to be controlled by the operator. The clutch shall be ball-bearing mounted and shall have a positive acting brake arrangement to stop the machine when the clutch is disengaged by the operator. Adjustment design shall provide for regulating the tolerances between the clutch and brake actions. An adjustable pitman rod shall be provided between the clutch and foot treadle of the stand. For V-belt drive, an adequate belt adapter or arrangement shall be provided with the electric transmitter to give adjustment for proper belt tension.

3.5.3 Belts, drive. Unless otherwise specified in the detail specification, the drive belts shall be V-type.

3.5.4 Electric light fixture. The sewing machine lamp shall be constructed from UL electrical components. The lead wires shall be high temperature rated (105°C). The arm shall be a minimum of 22 inches long. It shall be constructed from a goose neck type flexible chrome plated steel. The unit shall have a metal air cooled enamel finished cone shape reflector. The light shall be supplied complete with a means for machine or table mounting. The light shall operate on 110 volt AC power. The power cord shall be permanently connected to the energized terminals of the motor starter switch. The light shall have an independent switch.

3.5.5 Stands. The stands, unless otherwise specified in the detail specifications, shall be fabricated from minimum 13-gauge steel channels. The steel shall conform to ASTM A1008/A1008M. The stands shall be supplied with heavy duty adjustable H type legs which are of welded construction. The top and feet of the stand shall be furnished with holes for fastening to wooden blocking and table tops. Each stand shall come complete with back and bottom braces. The bottom brace shall be slotted for treadle adjustment.

3.5.6 Treadles. The foot treadle or treadles shall be mounted on a bar or brace which is fastened to the stand near its base for operation control of the machine. Means shall be provided to allow the position of the treadles to be adjusted to meet the needs of the machine operator.

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3.5.7 Lifter, foot and knee. The foot lifter shall be mounted on the treadle bar. Knee lifter shall be mounted under the table. When specified in the detail specification, the foot lifter with stand or knee lifter with table shall be furnished.

3.5.8 Table top. Unless otherwise specified in the detail specification, each sewing machine shall be supplied with a type I or type II table top (see 6.2).

3.5.8.1 Type I. The top of the table shall be constructed of laminated, thermosetting, decorative sheets with a particle board or multi-plywood core, unless otherwise specified in the detail specification. Unless otherwise specified in the detail specification, the total thickness of the top shall be not less than 1-1/4 inches. Unless otherwise specified, the table top shall be not less than 20 inches wide by 42 inches long. All gluing shall be done with water-resistant adhesives. The table top shall be fastened to the stand.

3.5.8.1.1 Board, particle core. The particle board core for the top of the table shall conform to ANSI A208.1. Faces shall be flat and smooth.

3.5.8.1.2 Plywood, multiple. The multiple plywood core for the table top shall be made of nine or more plys. Crossbands, face, and back veneers shall be balanced to prevent warpage of the top of the table. Faces shall be flat and smooth.

3.5.8.1.3 Covering, plastic. The plastic covering for the table top shall consist of a laminated, thermosetting, decorative sheet bonded to multiple plywood or particle board core. The reverse side of the top shall be a phenolic laminated, kraft backing sheet not less than .020 inch thick. The edges of the table top shall be self-edged with the same material used on the top surfaces or shall be edged with plastic edging of ethycellulose material. The plastic edging shall harmonize in color and pattern with the plastic covering for the table top.

3.5.8.2 Type II. The table top shall be constructed from solid lumber sections laminated together. The lumber shall be uniformly kiln dried without brashness, case hardening, or honey combing, in such a manner as to firmly set natural pitch and resin. Moisture content at the time of assembly shall be between 8 and 12 percent. The lumber shall be further selected to eliminate such defects as knots exceeding 1/4 inch in average diameter, decay, mineral streaks, wane, shake, and splits. Any one of the following species of wood shall be used.

Ash, white	Maple, hard or soft
Beech	Hickory
Birch, yellow or sweet	Oak, red or white

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The outside dimensions of the table tops shall be as specified in the detail specifications. All tops shall be a minimum of 1-1/2 inches thick. The configuration for the openings in the tops shall conform to the machine head manufacturer's requirements, and be appropriate for their intended use. The tops shall be joined, planned, and sanded to a flat smooth surface. All surfaces shall be finished with one coat of a sealer conforming to TT-W-572, composition A. After 72-hours drying time, apply two coats of varnish conforming to MPI 28. All hardware and accessories required to mount the components including the stand shall be provided.

3.5.9 Head, mounting. The head of the sewing machine shall be mounted on or in the table as specified in the detail specification. Where mounting is in the table, the head shall be fully submerged in a recessed cut-out in the table top. The cloth plate of the head shall be flush with the top of the table. Insulating pads or bushings shall be provided between the bed of the head and table or mounting board.

3.5.10 Bobbin winder. A bobbin winder shall be provided to wind the bobbin for the sewing machine.

3.5.11 Lubricated, nonautomatically. Nonautomatically lubricated machines shall be provided with means for applying lubrication to bearings and frictional surfaces. Lubricating orifices may be identified by using the word "OIL" or high-lighting by contrasting color. Gears that are required to be packed with grease shall be covered.

3.5.12 Lubricated, automatically. Automatically lubricated machines shall be equipped with covered oil reservoirs and level gages. The reservoirs shall be sufficiently tightly covered to prevent oil from overflowing from machines that are to be furnished on ships or other moving vehicles. The oil shall be distributed to all frictional points during operation by necessary wicks, oil ducts, or direct contact by splashing. Means shall be provided to indicate that oil is circulating through when it is coming from reservoirs not readily visible. Oil in the sewing head shall return to the reservoir by siphon, wick, or capillary tube. An automatically lubricated machine may provide lubrication by other means for various parts of the machine head which are inaccessible for the automatic lubrication system.

3.5.13 Tension, adjustable. An adjustable tension arrangement shall be provided for each thread used by the sewing machine, and shall be adjustable to the amount of tension required to sew stitches. The 301 and 401 stitch type machines shall be equipped with an automatic thread tension release effective when the presser foot is raised. Guides for thread shall be polished to prevent fraying of thread.

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3.5.14 Spare parts. Spare parts shall be furnished when specified in the detail specification.

3.5.15 Lubricated semi-automatically. Semi-automatically lubricated machines shall be equipped with covered oil reservoirs and oil level gauges. The reservoirs shall be sufficiently gasketed to prevent oil from leaking out of machines used in the mobile vehicles. The rotating loop taker (hook) shall be automatically lubricated by means of an oil filler crankcase equipped with a metered control valve to regulate the oil flow to the rotating loop taker. The upper arm shaft bearings shall be lubricated by means of a reservoir and oil wick capillary action system. The lower shaft bearings shall be lubricated by means of a manual oil wick capillary action system. Manual lubrication may be provided for various parts of the machine head which are inaccessible for the semi-automatic lubrication system. These lubrication points shall be identified by using the work "oil" or by color coding oil ports.

3.6 Performance.

3.6.1 Operation. The sewing machines, unless otherwise specified in the detail specifications, shall conform to the following requirements when tested as specified in 4.5.1:

a. Stitch formation for compliance with stitch types specified for applicable types of machines.

b. Stitch range, stitches per inch and stitch widths where applicable for various kinds of feed for all machines except the buttonhole, button sewing, and tacking machines.

c. Number of stitches and make up of buttonholes, tacks, and button sewing to comply with requirements of these machines.

3.6.2 Bobbin winder, operation. The sewing machines, while stitching, shall permit the winding of the bobbin when tested as specified in 4.5.2.

3.6.3 Tension release. The sewing machines shall comply with 3.5.13 when tested as specified in 4.5.3.

3.7 Fasteners and finish. Fasteners and finish shall be in accordance with manufacturers' commercial practice.

3.8 Tools and accessories. Tools and accessories normally supplied by the manufacturer shall be furnished with each machine.

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3.9 Marking. The machines shall be marked for identification in accordance with the manufacturers' commercial practice and shall include manufacturer's name, date of manufacture, model number, and electrical characteristics.

3.10 Application of finish. The finish applied to the machine shall be continuous, smooth, adherent, have no imbedded foreign matter, and contain no sags, runs, drips, creeps, laps, bubbles, or streaks. No rust or tool marks shall show through the coating.

3.11 Electrical wiring. Wiring shall not be cut or abraded or have insulation stripped and shall be joined at the terminals. Wiring shall have slack to provide strain relief.

3.12 Workmanship. The sewing machine shall be free from defects such as fractures, splits, punctures, tears, dents, creases, deterioration and malfunction. There shall be no sharp edges, slivers, burrs, or projections interfering with the movement of the material to be sewn, or sewn during the operation of the machine. Threaded fasteners shall not be broken, stripped, fractured, or loose.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. The contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified, the supplier may use his own or any other facilities suitable for the inspection requirements specified herein, unless disapproved by the Government. Inspection records of the examination and tests with itemized results shall be kept complete at the manufacturer's facility, available to the Government throughout the duration of the contract, or a minimum of two years, whichever is longer. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.1.1 Responsibility for compliance. All items 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.

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

4.1.3 Examination of preparation for delivery. An examination shall be made to determine that the packaging, packing and marking comply with the requirements in Section 5 of this specification

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

- a. First article inspection (see 4.3)
- b. Quality conformance inspection (see 4.4)

4.3 First article inspection. When a first article is required (see 3.2), it shall be examined for the defects specified in 4.4.2 and 4.4.3 and tested for the characteristics specified in 4.4.4 and as specified in the applicable test paragraph of the detail specification. The presence of any defect or failure to pass any test shall be cause for rejection of the first article.

4.4 Quality conformance inspection. Unless otherwise specified, sampling for inspection shall be performed in accordance with ASQC Z1.4. Unless otherwise specified, the Acceptable Quality Levels (AQLs) listed in this inspection shall be used to establish the sample size, however, the acceptance number shall be zero.

4.4.1 Component and material inspection. In accordance with 4.1, components and materials shall be inspected in accordance with all the requirements of the referenced specifications, documents, drawings, standards unless otherwise excluded, amended, modified, or qualified in this specification or applicable purchase document.

4.4.2 End item visual examination. The end items shall be examined for the defects listed in table II. The lot size shall be expressed in units of sewing machines of one type and class only. The sample unit shall be one sewing machine. The inspection level shall be II and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 2.5 for major defects and 6.5 for total (major and minor combined) defects.

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TABLE II. End item visual defects

Examine	Defect	Classification	
		Major	Minor
Finish	Finish not in accordance with the manufacturers' commercial practice	X	
	Not continuous, smooth, adherent	X	
	Foreign matter imbedded in finish		X
	Sags, runs, drips, creeps, laps, bubbles, or streaks		X
	Rust or tool marks	X	
Design, construction, and workmanship	Any component or part missing or not specified class	X	
	Fractured, split, torn, dented, creased, deteriorated, or malformed	X	
	Not applicable feed mechanism	X	
Table top	Not of specified material	X	
	Not fastened as specified	X	
	For type I, decorative sheet not bonded as specified	X	
	For type I, no backing sheet furnished	X	
	For type I, edges not self-edged as specified, or color does not harmonize with table top	X	
Belts	Not specified type	X	
Lubrication (where applicable)	Insufficiently lubricated		X
	Not specified type lubrication system i.e., automatic or nonautomatic	X	
	Not lubricated where required	X	
	Lubrication fitting not readily accessible for servicing	X	
Tools and accessories	Applicable tools and accessories normally supplied by the manufacturer missing	X	
Marking	Missing, incomplete, not legible, not specified data		X
Bolts, nuts, screws, studs and other types of threaded components	Broken, stripped, fractured, or not tight	X	
Electrical assembly	Wiring cut, abraded, or not properly installed or joined	X	
	Adequate slack not provided for wiring to relieve strain		X
Spare parts	Any part omitted or not in the required quantity		X

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4.4.3 End item dimensional examination. The end item shall be examined for conformance to the dimensions specified in 3.5.4, 3.5.8, and in the applicable detail specification and drawing(s). Any dimension that is not within the specified tolerance shall be classified as a defect. The lot size shall be expressed in units of sewing machines of one type and class only. The sample unit shall be one sewing machine. The inspection level shall be S-2 and the AQL, expressed in terms of defects per hundred units, shall be 6.5.

4.4.4 End item testing. Each end item shall be tested as specified in 4.5.1, 4.5.2, and 4.5.3. Any failure to conform to the requirements in 3.6.1, 3.6.2, and 3.6.3 shall be cause for rejection of the end item.

4.4.5 Certification compliance examination. Certification of OSHA, NFPA, NEMA and UL, where applicable, shall be furnished and acceptable to the Government representative for the first article when required and all production items. In addition, certification shall be furnished that the machine being furnished is of the industrial use type (see 3.5) and that the machine meets the stitches per minute requirement in the detail specification.

4.5 Methods of inspection.

4.5.1 Operational test. Each sewing machine head as specified shall be operated for not less than 10 minutes. The machine shall be operated with material comparable to the applicable kind of duty or class of the machine. The machine shall meet the operational requirements of 3.6.1. Nonconformance with 3.6.1 shall constitute failure of the test.

4.5.2 Bobbin winder test. During the operational test (4.5.1) install an empty bobbin in the bobbin winder and wind the bobbin until it has achieved full capacity. Nonconformance with 3.6.2 shall constitute failure of the test.

4.5.3 Tension control test. During the operational test (4.5.1) the thread tension shall be inspected. Nonconformance with 3.6.3 shall constitute failure of the test.

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5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When packaging of materiel is to be performed by DoD or in-house contractor personnel, these personnel need to contact the responsible packaging activity to ascertain packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activities within the Military Service or Defense Agency, or within the military service's system commands. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

6. NOTES

INFORMATION FOR GUIDANCE ONLY. (This section contains information of a general or explanatory nature that is helpful, but is not mandatory.)

6.1 Intended use. The sewing machines are intended for industrial use. The detail specification indicates the applicable intended use.

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

- a. Title, number, and date of this specification.
- b. Title, number and date of applicable detail specification.
- c. When a first article is required (see 3.2, 4.3, and 6.4).
- d. When machine is not furnished as a complete unit, specify which components are to be furnished (see 3.5 and 6.3.2).
- e. Electrical characteristics when other than specified (see 3.5).
- f. When fungus-resistance treatment is required (see 3.5).
- g. Whether type I or type II table top is required when not specified in detail specification (see 3.5.8).
- h. Packaging requirements (see 5.1).

6.3 Purchaser's objectives.

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6.3.1 Selection of industrial sewing machines. Extreme care should be used in the proper selection of machines, mechanisms, and equipment in order that successful operation and good service will result. Wherever possible, the exact sewing conditions should be specified in the invitation for bids, such as:

- a. Sewing operation to be performed.
- b. Type of material or materials to be stitched.
- c. Approximate minimum and maximum thicknesses of material to be stitched, and if machine is to be used to stitch over heavy cross seams.
- d. Type and size of sewing thread to be used.
- e. Any unusual sewing conditions.
- f. When in doubt as to the stitch type and class of machine, the feed mechanism style, or other equipment required for a particular sewing operation, the recommendations of the manufacturer should be invited.
- g. Buttonhole machines with the shortest range of cut size have the fastest operating cycle. Therefore, maximum efficiency in production is achieved in ordering the machine with the shortest range that will provide all sizes of buttonholes that are required.

6.3.2 Grouping of components. When sewing machine heads and tables are procured separately rather than as a complete unit, the following divisions of components are applicable.

- a. Table top and stand. Included with this item are the following:
 1. Transmitter.
 2. V-belt and component machine parts.
 3. Where required, a knee or foot lifter to raise presser foot of machine.
 4. Light wire connector, as applicable, that will mate with the machine head work light lead-in.
 5. Starting and stopping motor switch.
 6. Motor pulley of correct size to provide the required machine speed.
- b. Sewing machine head. Included with this item are the following:
 1. Light fixture with bulbs and means for attaching fixture.
 2. Light wiring complete with connector and sufficient length of wire to enable proper light wiring connection.
 3. Thread stand.
 4. Bobbin winder.
 5. Oil drip pan.

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6.4 First article. When a first article is required, it shall be inspected and approved under the appropriate provisions of FAR 52.209. The first article should be a preproduction sample. The contracting officer should specify the appropriate type of first article and the number of units to be furnished. The contracting officer should include specific instructions in all acquisition instruments regarding arrangements for selection, inspection, and approval of the first article.

6.5 Recycled material. It is encouraged that recycled material be used when practical as long as it meets the requirements of this specification (see 3.4).

6.6 Detail specifications. The following detail specifications form a part of this specification:

- OO-S-256/1 - Sewing Machines, Industrial; Flatbed, Single-Needle, Machines
- OO-S-256/2 - Sewing Machines, Industrial; Flatbed, Two-Needle, Machines
- OO-S-256/3 - Sewing Machines, Industrial; Cylinder Bed, Single-Needle, Machines
- OO-S-256/4 - Sewing Machines, Industrial; Post Bed, Single-Needle Machines
- OO-S-256/5 - Sewing Machines, Industrial; Zigzag, Single-Needle, Machines
- OO-S-256/6 - Sewing Machines, Industrial; Buttonhole, Straight, Barred Ends, Machines
- OO-S-256/7 - Sewing Machines, Industrial; Buttonholes, Eyelet End, Machines
- OO-S-256/8 - Sewing Machines, Industrial; Button-Sewing Machine
- OO-S-256/9 - Sewing Machine, Industrial; Tacking Machine
- OO-S-256/10 - Sewing Machine, Industrial; Overedge, Machine
- OO-S-256/11 - Sewing Machine, Industrial; Blind Stitch, Machines
- OO-S-256/12 - Sewing Machines, Industrial; Single-Needle, Heavy Leather Duty, Machine
- OO-S-256/13 - Sewing Machine, Industrial; Flatbed, Single Needle, 301 Stitch, Parachute Repair
- OO-S-256/14 - Sewing Machine, Industrial; Flatbed, Single Needle, 308 Stitch, Parachute Repair
- OO-S-256/15 - Sewing Machine, Industrial; Flatbed, Double Needle, 301 Stitch, Parachute Repair
- OO-S-256/16 - Sewing Machine, Industrial; Darning, Cylinder Bed, Single Needle, 301 Stitch, Parachute Repair

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6.7 Subject term (keyword) listing.

Buttonhole, Banned Ends
Buttonhole, Eyelet End
Cylinder bed, Single-Needle
Flatbed, Two-Needle
Post Bed, Single-Needle

6.8 Changes from previous issue. Asterisks (or vertical lines) are not used in this revision to identify changes with respect to the previous issue due to the extensive changes.

MILITARY INTERESTS

Custodians:

Army - GL
Navy - SA
Air Force - 99

Preparing activity:

DLA-IS

(Project No. 3530-2006-001)

Review Activities:

Navy - MC
Air Force - 50, 84

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <http://assist.daps.dla.mil>.