

INCH-POUND

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SUPERSEDING  
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## MILITARY SPECIFICATION

### LARYNGOSCOPE SET, MACINTOSH

This specification is approved for use by all Departments and Agencies of the Department of Defense.

#### 1. SCOPE

1.1 Scope. This specification covers a detachable laryngoscope of the MacIntosh design, suitable for use in medical procedures concerning the human larynx.

#### 2. APPLICABLE DOCUMENTS

##### 2.1 GOVERNMENT DOCUMENTS

2.1.1 Specifications and standards and handbooks. The following specifications, standards, and handbooks form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of these documents shall be those listed in the issue of the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto, cited in the solicitation (see 6.2).

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Headquarters, Defense Personnel Support Center, ATTN: Directorate of Medical Materiel, DPSC-MST, 2800 South 20th Street, Philadelphia, PA 19101, by using the self-addressed Standardization Document Improvement Proposal, (DD Form 1426) appearing at the end of this document or by letter.

AMSC/NA

FSC 6515

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## SPECIFICATIONS

## Federal

- |           |  |
|-----------|--|
| GG-I-526  | - Instruments, Dental and Surgical;<br>General Specifications. |
| PPP-B-556 | - Boxes, Folding, Paperboard.                                  |
| PPP-B-601 | - Boxes, Wood, Cleated-Plywood.                                |
| PPP-B-621 | - Boxes, Wood, Nailed and Locked-Corner.                       |
| PPP-B-636 | - Box, Shipping, Fiberboard.                                   |
| PPP-B-676 | - Boxes, Setup   |

## Military

- |             |   |
|-------------|---|
| MIL-P-116   | - Preservation, Methods of.   |
| MIL-L-10547 | - Liner, Case and Sheet, Overwrap, Water<br>Vaporproof or Waterproof, Flexible. |

## STANDARDS

## Military

- |             |   |
|-------------|---|
| MIL-STD-105 | - Sampling Procedures and Tables for<br>Inspection by Attributes. |
| MIL-STD-129 | - Marking for Shipment and Storage.                               |
| MIL-STD-147 | - Palletized Unit Loads.  |
| MIL-STD-794 | - Parts and Equipment, Procedures for<br>Packaging of.            |

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from Standardization Documents Order Desk, Building 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 shall be those cited in the solicitation.

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## DRAWINGS

## Defense Personnel Support Center (DPSC)

- 1249 - Lamp, Incandescent, 2.5 Volt, 0.28 Ampere,  
Bulb T-1-1/2 Frosted.
- 20182 - Lamp, Incandescent, 2.7 Volt, 0.31 Ampere,  
Bulb T-1, Frosted.
- 20473 - Laryngoscope, Infant-Child-Adult, MacIntosh.
- 24276 - Handle, Laryngoscope, Battery Type, Universal,  
Large.

(Copies of these drawings may be obtained from the Defense Personnel Support Center, ATTN: Directorate of Medical Materiel, DPSC-MST, 2800 South 20th Street, Philadelphia, PA 19101.

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).

## ASTM STANDARDS

- E 18 - Rockwell Hardness and Rockwell Superficial Hardness of Metallic Materials, Tests for.
- E 92 - Vickers Hardness of Metallic Material, Tests for.
- E 140 - Hardness conversion Tables for Metals (Relationship Between Brinell Hardness, Vickers Hardness, Rockwell Hardness, Rockwell Superficial Hardness and Knoop Hardness.
- F 899 - Stainless Steel Billet, Bar and Wire for Surgical Instruments.
- F 965 - Rigid Laryngoscope for Tracheal Intubation.
- F 1089 - Standard Test Method for Corrosion of Surgical Instruments.

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

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(Non-Government standards and other publications are normally available from the organizations that prepare or distribute the documents. These documents also may be available in or through libraries or other informational services.)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein (except for related associated detail specifications, specification sheets, of MS standards), the text of this specification shall take precedence. Nothing in this document, however, shall supersede applicable laws and regulations unless a specific exception has been obtained.

### 3. REQUIREMENTS

#### 3.1 Material.

3.1.1 Laryngoscope blade, housing lock, lamp carrier and lamp socket. The laryngoscope blade, housing lock, lamp carrier and lamp socket shall be fabricated from class 3, austenitic stainless steel in accordance with ASTM F899 or chromium over nickel plated copper alloy.

The plating and corrosion requirements for the alternate copper alloy shall be in accordance with GG-I-526 for class 8, type 260 material. Corrosion requirements for class 3 material shall be in accordance with ASTM F1089.

3.1.2 Battery handle. The battery handle shall be fabricated from chromium plated over nickel plated copper alloy. As an alternate, the sleeve or shaft of the battery handle shall be fabricated from class 3, austenitic stainless steel in accordance with ASTM F899. As an alternate, the internal surfaces of the handle, excluding removable threaded end cap, shall be nickel plated.

The plating and corrosion requirements for the copper alloy shall be in accordance with GG-I-526 for class 8, type 260 material.

3.1.3 Lamps. The lamp shell base, and contact sleeve shall be fabricated from nickel plated, or chromium plated over nickel plated copper alloy.

The insulators for the lamps shall be fabricated from hard rubber, phenolic plastic or other material suitable for the purpose intended. The plating and corrosion tests shall be as specified for class 8, type 360 material in accordance with GG-I-526.

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3.2 Hardness. Rockwell hardness of class 3 material shall be B 75 minimum, when tested as specified in 4.4.1.

3.3 Style, design, and dimensions. The complete laryngoscope set shall consist of the following components in the quantities specified:

| <u>Component</u>  | <u>Size</u> | <u>Quantity</u>                   |
|---|-------------|-----------------------------------|
| BLADE, LARYNGOSCOPE, Infant, MacIntosh,<br>87 mm (When furnished separately,<br>National Stock Number<br>(NSN) 6515-00-913-4605)        | 1           | 1                                 |
| BLADE, LARYNGOSCOPE, Child, MacIntosh,<br>108 mm (When furnished separately,<br>National Stock Number<br>(NSN) 6515-00-955-8836)        | 2           | 1                                 |
| BLADE, LARYNGOSCOPE, Medium Adult,<br>MacIntosh, 130 mm (When furnished<br>separately, National Stock Number<br>(NSN) 6515-00-955-8865) | 3           | 1                                 |
| BLADE, LARYNGOSCOPE, Large Adult,<br>MacIntosh, 158 mm (When furnished<br>separately, National Stock Number<br>(NSN) 6515-00-913-4607)  | 4           | 1                                 |
| HANDLE, LARYNGOSCOPE, Battery Type,<br>Universal, Large (When furnished<br>separately, NSN 6515-00-890-2190)                            | -           | 1                                 |
| LAMP, INCANDESCENT, 2.7 volt, 0.31<br>Ampere, Bulb T-1, Frosted (When<br>furnished separately,<br>NSN 6240-00-797-0420)                 | Type 1      | 4 1/<br>(Includes<br>extra lamps) |

1/ Each laryngoscope set shall be furnished with one lamp assembled to each blade and one extra lamp for each blade. When laryngoscope blades are ordered as separate items of supply, no extra lamps shall be furnished.

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3.3.1 Laryngoscope blade assemblies. The laryngoscope blade assemblies shall be fabricated from material specified in 3.1.1 and shall be furnished in the sizes and quantities specified in 3.3. The blade assemblies shall be of the MacIntosh design, and of the detachable and hook-on type suitable for use in medical procedures concerning the human larynx. The blades shall be capable of insertion onto the battery handle and designed to light at the distal end. The infant (size 1) and child (size 2) blades shall be furnished with Type I lamps; the medium adult (size 3) and large adult blades shall be furnished with Type II lamps. Lamps shall be specified in 3.3.3. The blade assemblies shall be in strict accordance with DPSC Drawing 20473.

3.3.1.1 Internal threads of lamp socket. Internal threads of the lamp sockets for the size 1 and 2 blades shall allow the "GO" thread plug gage to be inserted and turned freely and shall not allow entry of the "NO GO" thread plug gage when tested as specified in 4.4.2. The same requirements shall apply for the lamp sockets of the size 3 and size 4 blades when tested as specified in 4.4.2.

3.3.2 Battery handle. Shall be a large size universal type laryngoscope battery handle with removable spring contact cap, capable of accommodating two "D" size batteries. Shall be suitable for use as a component or replacement handle for MacIntosh laryngoscope blade assemblies specified in 3.3.1. Material shall be as specified in 3.1.2. The battery handle shall also be suitable to accept laryngoscope blades of the Miller and Wisconsin designs. Style, design and dimensions of the handle shall be in strict accordance with DPSC Drawing 24276, for Type I or Type II design.

3.3.3 Lamps. Each laryngoscope blade specified in 3.3.1 shall contain one assembled frosted lamp. The lamps shall be fabricated from material specified in 3.1.3. When the complete laryngoscope set is furnished, two extra lamps, one each of Type I and Type II shall be supplied as specified in 3.3 and Table I.

Table I. Lamp characteristics.

| Type<br>size | Volts | Amperes | Bulb Type | Use with laryngoscope |
|--------------|-------|---------|-----------|-----------------------|
| I            | 2.7   | 0.31    | T-1       | 1 and 2               |
| II           | 2.5   | 0.28    | T-1-1/2   | 3 and 4               |

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Each lamp shall have a minimum 20 hour average life span and shall be designed to fit into the lamp sockets of the laryngoscope blades. The measured current through the lamp filament shall be within  $\pm 10$  percent of the ampere values specified in Table I, when tested as specified in 4.4.4. The lamps shall be capable of sterilization without impairing their function or appearance when tested as specified in 4.4.5. The Type I lamps shall be in accordance with DPSC Drawing 20182, and the Type II lamps in accordance with DPSC Drawing 1249.

3.3.3.1 External threads of lamps. External threads of the required Type I lamps shall allow the "GO" thread ring gage to pass over the full length of the lamp threads and turn freely and shall not allow the "NO GO" thread ring gage to pass over the external lamp threads when tested as specified in 4.4.3. The same requirements shall apply for the Type II lamps when tested as specified in 4.4.3.

3.3.3.2 Interchangeability and Illumination. The hook-on fitting of both handle and blades shall be in accordance with ASTM F965. Further, the lamp shall illuminate provided that the handle contains new batteries and the blade has a new lamp.

3.4 Finish. Finish of the laryngoscope blade assemblies shall be mirror and satin as designated on DPSC Drawing 20473. The battery handle shall have a bright finish and shall be knurled as shown on DPSC Drawing 24276. Finish on all edges and surfaces shall be uniform, free from burrs, sharp edges, pits, crevices, cracks, rough areas, grind marks, scale and corrosion.

3.5 Identification marking. Laryngoscope blade assemblies and battery handle shall be permanently and legibly marked with the contractor's name or registered trademark and country of origin when manufactured in countries outside of the United States. Blade assemblies shall be permanently and legibly marked with the blade name "MACINTOSH" or "MAC" and applicable blade size. Laryngoscope blades manufactured from class 3 material shall also be marked "stainless".

3.6 Workmanship. Workmanship shall be first class throughout. The laryngoscope blade assemblies, lamps and battery handles shall be free from defects which detract from their appearance or impair their serviceability.

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## 4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements (examinations and tests) as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in this specification where such inspections are deemed necessary to ensure supplies and services conform to the 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 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 Records. Records of examinations and tests performed by or for the contractor shall be maintained by the contractor and made available to the Government, upon the Government's request, at any time, or from time to time, during the performance of the contract and for a period of three years after delivery of the supplies to which such records relate.

4.1.3 Inspection. Inspection, as used in this specification, is defined as both examination (such as visual, auditory, etc. investigation without the use of special laboratory appliances or procedures) and testing (determination by technical means of physical and chemical properties), of the item.



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4.1.4 Certificates of quality. Certificates of quality, supplied by the manufacturer of the blades, handles, and lamps may be furnished in lieu of actual performance of such testing by the contractor, provided lot identity has been maintained and can be demonstrated to the Government. The certificate shall include the name of the contractor, the contract number, the name of the manufacturer or supplier, the NSN, the item identification, the name of the material, the lot number, the lot size, the sample size, the date of testing, the test method, individual test results, and the specification requirements.

## 4.2 Sampling.

4.2.1 For examination. Sampling for examination shall be conducted in accordance with MIL-STD-105 and Table II. The unit of product for examination purposes shall be one complete laryngoscope set, or one battery handle, or one laryngoscope blade, as applicable (see 3.3 and 6.2).

Table II. Sampling for examination.

| Type defect | Inspection level | AQL (percent defective) |
|-------------|------------------|-------------------------|
| Major       | II               | 1.0                     |
| Minor       | II               | 2.5                     |

4.2.2 For tests. Sampling for tests shall be conducted in accordance with MIL-STD-105 and Table III. The unit of product for test purposes shall be one complete laryngoscope set, or one battery handle, or one laryngoscope blade, as applicable (see 3.3 and 6.2). Where feasible, the same sample unit shall be used for the determination of two or more test characteristics.

Table III. Sampling for tests.

| Component                     | Characteristic | Requirement | Test procedure | Inspection level | AQL (% defective) |
|-------------------------------|----------------|-------------|----------------|------------------|-------------------|
| Laryngoscope blade assemblies | Dimensions     | 3.3.1       | ---            | S-1              | 2.5               |

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Table III. Sampling for tests. Con't

| Component      | Characteristic                     | Requirement        | Test procedure | Inspection level | AQL (% defective) |
|----------------|------------------------------------|--------------------|----------------|------------------|-------------------|
| Battery Handle | Internal Thread Test               | 3.3.1.1            | 4.4.2          | S-2              | 2.5               |
|                | Hardness (For class 3 material)    | 3.2                | 4.4.1          | S-2              | 2.5               |
|                | Plating Test (for copper alloy)    | 3.1.1              | GG-I-526       | S-2              | 2.5               |
|                | Salt Spray test (For copper alloy) | 3.1.1              | GG-I-526       | S-2              | 2.5               |
|                | Boil Test (for all material)       | 3.1.1              | ASTM-F1089     | S-2              | 2.5               |
|                | Dimensions                         | 3.3.2              | ---            | S-1              | 2.5               |
|                | Hardness (For class 3 material)    | 3.2                | 4.4.1          | S-2              | 2.5               |
|                | Plating Test                       | 3.1.2 and GG-I-526 | GG-I-526       | S-2              | 2.5               |
|                | Salt spray For copper alloy        | GG-I-526           | GG-I-526       | S-2              | 2.5               |
|                | Boil test (For all material)       | ASTM F1089         | ASTM F1089     | S-2              | 2.5               |

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Table III. Sampling for tests. Con't

| Component        | Characteristic              | Requirement | Test procedure | Inspection level | AQL (% defective) |
|------------------|-----------------------------|-------------|----------------|------------------|-------------------|
| Lamps            | Plating test                | 3.1.3       | GG-I-526       | S-1              | 2.5               |
|                  | Resistance to sterilization | 3.3.3       | 4.4.5          | S-2              | 2.5               |
|                  | Electrical properties       | 3.3.3       | 4.4.4          | S-2              | 2.5               |
|                  | External thread test        | 3.3.3.1     | 4.4.3          | S-2              | 2.5               |
| Blade and Handle | Interchangeability          | 3.3.3.2     | ASTM F965      | *                | *                 |
|                  | Illumination                | 3.3.3.2     | ASTM F965      | *                | *                 |

\* Defects are not permissible.

4.2.3 Raw materials. Four ounces of each lot of each metal used in the manufacture of the laryngoscope sets, battery handle, or laryngoscope blade, as applicable, shall be selected for chemical analysis (see 3.3 and 6.2).

#### 4.3 Examination.

4.3.1 Examination of laryngoscope. The laryngoscope sets shall be examined to determine compliance with all requirements contained in this specification. Examination shall be conducted as specified in Tables II and IV. Examination, however, shall not be restricted to defects listed in Table IV. Any laryngoscopes in the sample containing one or more defects shall be rejected, and, if the number of defective items in any sample exceeds the acceptance number for that sample, the lot represented by that sample shall be rejected.

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Table IV. Classification of defects.

| Categories | Defects  |
|------------|--|
| Major      |  |
| 101        | Lamps do not light when laryngoscope blade is inserted onto battery handle (when two "D" size batteries are inserted into battery handle). |
| 102        | Blades not of detachable, hook-on design with respect to battery handle.   |
| 103        | Blades do not positively seat (hook-on) when inserted into battery handle.   |
| 104        | Blades not of finish specified.  |
| 105        | Blades not free from sharp edges, crevices, burrs, grind marks, or cracks.   |
| 106        | Internal threads of lamp socket not complete or not well defined.  |
| 107        | External Threads of lamp not complete or not well defined.   |
| 108        | Extra lamps of each type not furnished with complete laryngoscope set.   |
| 109        | Battery handle finish not bright.  |
| 110        | Battery handle cannot accommodate two standard "D" size batteries.   |
| 111        | Glass envelope of lamp not properly secured to lamp base.  |
| 112        | Glass envelope of lamp cracked.  |
| 113        | Plated parts not free from flaking.  |
| 114        | Blades and battery handle not permanently and legibly marked as specified in 3.5   |
| Minor      |  |
| 201        | Battery handle inner surfaces not plated.  |
| 202        | Glass envelope of lamp not free from bubbles, dirt or other imperfections.   |

4.4 Tests shall be conducted to determine compliance with specification requirements.

4.4.1 Hardness test. Rockwell hardness of class 3 material shall be determined in accordance with ASTM E 18 or E 92. Conversion of Vickers hardness values to Rockwell values shall be in accordance with ASTM E 140.

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4.4.2 Internal thread test of lamp sockets. The contractor shall provide the necessary thread plug gages to the Government Quality Assurance Representative (QAR) for checking the internal threads of the lamp sockets in accordance with the required thread dimensions for the appropriate lamp size shown on drawing. The following dimensional parameters shall be inscribed on the gages:

For size 1 and size 2 Laryngoscope Blades:

Thread Size: 1/8-72Ns-3  
 "GO" PITCH DIAMETER - 0.1160  
 "NO GO" PITCH DIAMETER - 0.1174

For size 3 and 4 Laryngoscope Blades:

Thread Size: 8-32-UNC-2B  
 "GO" PITCH DIAMETER - 0.1437  
 "NO GO" PITCH DIAMETER - 0.1475

To perform thread tests of appropriate lamp sockets, remove lamp from lamp socket and place plug gage in lamp socket. Remove "GO" gage and place "NO GO" plug gage in lamp socket. Fit of gages into lamp sockets shall be noted.

4.4.3 External thread tests of lamps. The contractor shall provide the necessary thread ring gages to the QAR for checking the external threads of the lamps in accordance with the required thread dimensions for the appropriate NSN shown on drawing. The following dimensional parameters shall be inscribed on the ring gages:

For Type I Lamps:

Thread Size: 1/8-72NS-3A  
 Major Diameter: 0.1214 - 0.1250  
 "GO" PITCH DIAMETER - 0.1437  
 "NO GO" PITCH DIAMETER - 0.1475

For Type II Lamps:

Thread Size: 6-32 UNC-2A  
 Major Diameter: 0.1571 - 0.1631  
 "GO" PITCH DIAMETER - 0.1428  
 "NO GO" PITCH DIAMETER - 0.1399

To perform thread tests for appropriate lamps, remove lamp from lamp socket and place "GO" ring gage over external threads on lamp. Remove "GO" gage and place "NO GO" ring gage over external threads on lamp. Fits of gages onto lamp threads shall be noted.

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4.4.4 Operation test for lamps. A sample incandescent lamp of each type shall be installed into an appropriate receptacle and shall be illuminated by the application of voltage which shall be within  $\pm 10$  percent of the voltage specified in Table I (3.3.3). In addition, the circuit current shall be measured with the use of a suitable instrument which shall not load the circuit. The lamp shall be lighted at rated voltage for a period of not less than 20 hours. This shall be accomplished in increments of not less than 4 hours each, until 20 hours have been accumulated.

4.4.5 Sterilization test for lamp. A sample lamp shall be completely immersed in a 95 percent ethyl alcohol solution for a minimum period of 6 hours. After soaking, the lamp shall be dried and inspected for any internal absorption of the solution.

4.5 Inspection of packaging. The sampling and inspection of the preservation and interior package marking shall be in accordance with groups A and B quality conformance inspection requirements of MIL-P-116. The sampling and inspection of the packing and marking for shipment and storage shall be in accordance with the quality assurance provisions of the applicable container specification and the marking requirements of MIL-STD-129.

## 5 PACKAGING

5.1 Preservation. Preservation shall be level A or C, as specified (see 6.2).

### 5.1.1 Level A.

5.1.1.1 Cleaning and drying. Each unit shall be cleaned and dried in accordance with MIL-P-116.

5.1.1.2 Preservation applications. Preservatives shall not be used.

5.1.1.3 Unit package. Each unit shall be packaged as specified in 5.1.1.3.1, 5.1.1.3.2 and 5.1.1.3.3.

5.1.1.3.1 Laryngoscope set. Each component, as specified in 3.3, including extra lamps, shall be individually wrapped in neutral tissue or other suitable non-corrosive material and packaged in a box conforming to PPP-B-566, PPP-B-636, class domestic, or PPP-B-676. Closure shall be as specified in the applicable box specification. All individually packaged components comprising each set shall be further packaged in accordance with MIL-P-116, method IC-2. Interior container shall be a box conforming to PPP-P-636, class domestic. Closure of the box shall be as specified in the box specification.

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5.1.1.3.2 Blade. Each blade shall be wrapped in neutral tissue or other suitable non-corrosive material and packaged in accordance with MIL-P-116, method IC-2.

5.1.1.3.3 Handle. Each handle shall be wrapped in neutral tissue or other suitable non-corrosive material and packaged in accordance with MIL-P-116, method IC-2.

5.1.1.4 Intermediate package.

5.1.1.4.1 Laryngoscope set. No intermediate package is required.

5.1.1.4.2 Blade. Twelve units of one size only shall be packaged in a box conforming to PPP-B-566, PPP-B-636, class domestic, or PPP-B-676. Closure shall be as specified in the applicable box specification.

5.1.1.4.3 Handle. Twelve units shall be packaged in a box conforming to PPP-B-566, PPP-B-636, class domestic, or PPP-B-676. Closure shall be as specified in the applicable box specification.

5.1.2 Level C.

5.1.2.1 Unit package. Preservation for each unit shall conform to the requirements of MIL-STD-794 for level C.

5.1.2.2 Intermediate package.

5.1.2.2.1 Laryngoscope set. No intermediate package is required.

5.1.2.2.2 Blade. Twelve units of one size only shall be packaged in accordance with the requirements of MIL-STD-794 for level C.

5.1.2.2.3 Handle. Twelve units shall be packaged in accordance with the requirements of MIL-STD-794 for level C.

5.2 Packing. Packing shall be level A, B, or C, as specified (see 6.1).

5.2.1 Level A.

5.2.1.1 Laryngoscope set. Twenty-four units shall be packed in an exterior container designed for a type 2 load and conforming to PPP-B-601, overseas type, PPP-B-621, class 2, or PPP-B-636, class weather-resistant. Closure and strapping shall be as specified in the applicable box specification.

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5.2.1.2 Blade. Twelve intermediate packages (144 units) of one size only shall be packed in an exterior container designed for a type 2 load and conforming to PPP-B-601, overseas type, PPP-B-621, class 2, or PPP-B-636, class weather-resistant. Closure and strapping shall be as specified in the applicable box specification.

5.2.1.3 Handle. Eight intermediate packages (96 units) shall be packed in an exterior container designed for a type 2 load and conforming to PPP-B-601, overseas type, PPP-B-621, class 2, or PPP-B-636, class weather-resistant. Closure and strapping shall be as specified in the applicable box specification.

5.2.1.4 Case liner. Each level A wood box shall be lined with a waterproof case liner conforming to MIL-L-10547. Closure and sealing shall be as specified in the liner specification. Case liner shall not be required for fiberboard boxes. Each fiberboard box shall be waterproofed as specified in PPP-B-636.

5.2.2 Level B.

5.2.2.1 Laryngoscope set. Twenty-four units shall be packed in an exterior container designed for a type 2 load and conforming to PPP-B-601, load and conforming to PPP-B-601, domestic type, PPP-B-621, class 1, or PPP-B-636, class domestic. Closure shall be as specified in the applicable box specification.

5.2.2.2 Blade. Twelve intermediate packaged (144 units) of one size only shall be packaged in an exterior container designed for a type 2 load and conforming to PPP-B-601, load and conforming to PPP-601, domestic type, PPP-B-621, class 1, or PPP-B-636, class domestic. Closure shall be as specified in the applicable box specification.

5.2.2.3 Handle. Eight intermediate packages (96 units) shall be packed in an exterior container designed for a type 2 load and conforming to PPP-B-601, load and conforming to PPP-B-601, domestic type, PPP-B-621, class 1, or PPP-B-636, class domestic. Closure shall be a specified in the applicable box specification.

5.2.3 Level C.

5.2.3.1 Laryngoscope set. Twenty-four units shall be packed in accordance with the requirements of MIL-STD-794 for level C.

5.2.3.2 Blade. Twelve intermediate packages (144 units) of one size only shall be packed in accordance with the requirements of MIL-STD-794 for level C.



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5.2.3.3 Handle. Eight intermediate packages (96 units) shall be packed in accordance with the requirements of MIL-STD-794 for level C.

5.2.4 Packing variation permitted. If the required number of units to be shipped is less than the number of units specified to be overpacked in an exterior container, such units shall be packed in an exterior container of suitable size and design, acceptable to a common carrier, which will insure safe delivery to destination.

5.2.5 Unitized loads. Unitized loads, commensurate with the level of packing specified in the contract or order, shall be used whenever total quantity for shipment to one designation exceeds 250 lbs (excluding the pallet) or 20 cubic feet. Loads shall be unitized as specified in MIL-STD-147, on Type IV or Type V 4-way entry pallets. Pallet shall have a length of 40 inches and a width of 48 inches. Pallet loads, including the pallet, shall not exceed 54 inches in height, 43 inches in length and 52 inches in width. Quantity for shipment to one destination of less than 250 lbs or 20 cubic feet need not be palletized.

5.2.5.1 Levels A and B.

5.2.5.1.1 Laryngoscopes packed as specified in 5.2.1.1 and 5.2.2.1 shall be unitized on pallets as specified in 5.2.5.

5.2.5.1.2 Blades packed as specified in 5.2.1.2 and 5.2.2.2 shall be unitized on pallets as specified in 5.2.5.

5.2.5.1.3 Handles packed as specified in 5.2.1.3 and 5.2.2.3 shall be unitized on pallets as specified in 5.2.5.

5.2.5.2 Level C

5.2.5.1.1 Laryngoscopes packed as specified in 5.2.3.1 shall be unitized as specified in MIL-STD-794.

5.2.5.1.2 Blades packed as specified in 5.2.3.2 shall be unitized as specified in MIL-STD-794.

5.2.5.1.3 Handles packed as specified in 5.2.3.3 shall be unitized as specified in MIL-STD-794.

5.3 Marking.

5.3.1 Levels A, B and C.

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5.3.1.1 Laryngoscope set. Each unit pack, exterior container and unitized load shall be marked as specified in MIL-STD-129.

5.3.1.2 Blade or handle. Each unit pack, intermediate package, exterior container and unitized load shall be marked as specified in MIL-STD-129.

5.4 General.

5.4.1 Exterior container. Exterior container (see 5.2.1 through 5.2.1.3, 5.2.2 through 5.2.2.3, and 5.2.3 through 5.2.3.3) shall be of minimum tare and cube consistent with the protection required and shall contain equal quantities of identical stocked numbered items to the greatest extent practicable.

5.4.2

Packaging inspection. The inspection of these packaging requirements shall be in accordance with 4.5.

6. NOTES

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

6.1 Intended use. The laryngoscope is used in medical procedures concerning the human larynx.

6.2 Acquisition requirements. Acquisition documents should specify the following:

- (a) Title, number, and date of this specification.
- (b) Issue of DoDISS to be cited in the solicitation and if required, the specific issue of individual documents referenced (see 2.1).
- (c) Selection of applicable levels of packaging and packing (see 5.1 and 5.2).
- (d) National Stock Number

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6.3 National Stock Number (NSN) Coverage. This specification covers the following National Stock Numbers:

| <u>NSN</u>       | <u>ITEM IDENTIFICATION</u>                            |
|------------------|---|
| 6515-00-616-5052 | LARYNGOSCOPE, Infant-Child-Adult, MacIntosh           |
| 6515-00-890-2190 | HANDLE, LARYNGOSCOPE, Battery Type, Universal, Large. |
| 6515-00-913-4605 | BLADE, LARYNGOSCOPE, Infant, MacIntosh, 87 mm.        |
| 6515-00-913-4607 | BLADE, LARYNGOSCOPE, Large Adult, MacIntosh, 158 mm.  |
| 6515-00-955-8836 | BLADE, LARYNGOSCOPE, Child, MacIntosh, 108 mm.        |
| 6515-00-955-8865 | BLADE, LARYNGOSCOPE, Medium Adult, MacIntosh, 130 mm. |

6.4 Subject term (key word) listing.

Battery  
Blade  
Handle  
Lamps  
Hook-on fitting

MILITARY INTERESTS:

Custodians:

Army - MD  
Navy - MS  
Air Force - 03

Preparing Activity:

DoD-MB

Agent:

DLA-DM

CIVIL AGENCY COORDINATING ACTIVITIES:

VA-OSS  
USPHS  
FDA-MPQAS

Project No. 6515-4254

# STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

## INSTRUCTIONS

1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.
2. The submitter of this form must complete blocks 4, 5, 6, and 7.
3. The preparing activity must provide a reply within 30 days from receipt of the form.

NOTE: This form may not be used to request copies of documents, nor to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

|   |  |  |   |
|---|--|--|---|
| <b>I RECOMMEND A CHANGE:</b>  |  | 1. DOCUMENT NUMBER<br>MIL-L-36628C   | 2. DOCUMENT DATE (YYMMDD)<br>6 March 1992 |
| 3. DOCUMENT TITLE<br>LARYNGOSCOPE SET, MACINTOSH  |  |  |   |
| 4. NATURE OF CHANGE (Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.) |  |  |   |
| 5. REASON FOR RECOMMENDATION  |  |  |   |
| 6. SUBMITTER  |  |  |   |
| a. NAME (Last, First, Middle Initial)   |  | b. ORGANIZATION  |   |
| c. ADDRESS (Include Zip Code)   |  | d. TELEPHONE (Include Area Code)<br>(1) Commercial<br>(2) AUTOVON<br>(If applicable)   | 7. DATE SUBMITTED<br>(YYMMDD)             |
| 8. PREPARING ACTIVITY   |  |  |   |
| a. NAME<br>Defense Personnel Support Center<br>ATTN: MSE  |  | b. TELEPHONE (Include Area Code)<br>(1) Commercial<br>(215) 737-2870   | (2) AUTOVON<br>444-2870                   |
| c. ADDRESS (Include Zip Code)<br>2800 S. 20th Street<br>Philadelphia, PA 19145  |  | IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT:<br>Defense Quality and Standardization Office<br>5203 Leesburg Pike, Suite 1403, Falls Church, VA 22041-3466<br>Telephone (703) 756-2340 AUTOVON 289-2340 |   |