INCH-POUND

MIL-DTL-16938D
22 April 2010
SUPERSEDING
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30 July 1973

DETAIL SPECIFCATION

SEARCHLIGHTS, INCANDESCENT, SIGNALING, 8-INCH

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

1. SCOPE

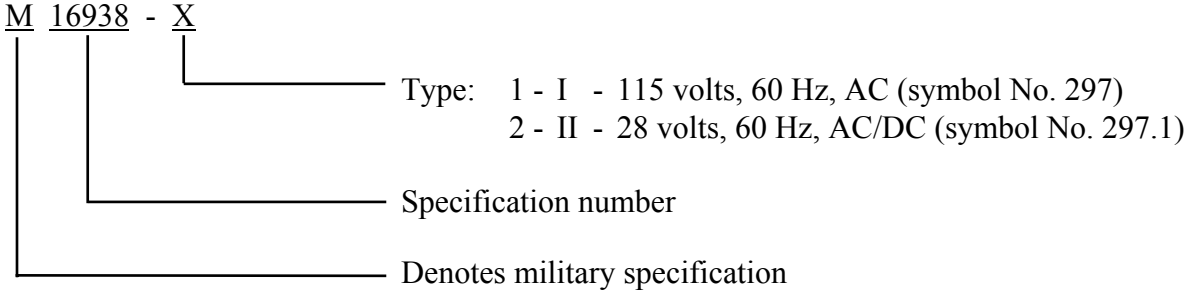
1.1 Scope. This specification covers 8-inch incandescent signaling searchlights for Naval shipboard use.

1.2 Classification. The searchlights are of the following types as specified below (see 6.2).

1.2.1 Type. The types of searchlights are as follows:

Type I - 115 volts, 60 hertz (Hz), alternating current (AC) (symbol No. 297)
Type II - 28 volts, 60 Hz, AC/direct current (DC) (symbol No. 297.1)

1.3 Part or identifying number (PIN). The PIN to be used for searchlights acquired to this specification is created as follows:



Comments, suggestions, or questions on this document should be addressed to Defense Supply Center Richmond, ATTN: DSCR-VEB, 8000 Jefferson Davis Highway, Richmond, VA 23297-5616, or e-mailed to STDZNMGT@dla.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST database at https://assist.daps.dla.mil/.

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3 and 4 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of the documents cited in sections 3 and 4 of this specification, whether or not they are listed.

2.2 Government documents.

2.2.1 Specifications and standards. The following specifications and standards form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

FEDERAL SPECIFICATION

TT-P-645	- Primer, Paint, Zinc-Molybdate, Alkyd Type

FEDERAL STANDARDS

FED-STD-3	- Colors, Aeronautical Lighting
FED-STD-H28	- Screw-Thread Standards for Federal Services

DEPARTMENT OF DEFENSE SPECIFICATIONS

MIL-S-901	- Shock Tests, H.I. (High-Impact) Shipboard Machinery, Equipment, and Systems, Requirements for
MIL-E-917	- Electric Power Equipment Basic Requirements
MIL-DTL-15024	- Plates, Tags, and Bands for Identification of Equipment, General Specification for
MIL-P-15024/5	- Plates, Identification
MIL-PRF-24635	- Coating Systems, Weather-Resistant, Exterior Use
MIL-PRF-24712	- Coatings, Powder (Metric)
MIL-DTL-24784	- Manuals, Technical: General Acquisition and Development Requirements, General Specification for
MIL-DTL-24784/7	- Technical Repair Standards (TRS) for Hull, Mechanical, and Electrical (HM&E) Equipment, Electronic Equipment, and Ordnance Equipment

DEPARTMENT OF DEFENSE SPECIFICATIONS - Continued

MIL-DTL-24784/22	- Technical Content Development Requirements for Combat System Technical Operations Manuals (CSTOMS); Hull, Mechanical, and Electrical (HM&E) System and Equipment Manuals; Electronic [Including Service Test Electronic, Experimental Electronic and Interior Communication (IC)] System and Equipment Manuals; and Weapon Systems and Weapon Equipment Manuals
MS25242	- Lamp, Incandescent, Par-64 Bulb, Screw Terminal Base

DEPARTMENT OF DEFENSE STANDARD

MIL-STD-167-1	- Mechanical Vibrations of Shipboard Equipment (Type I - Environmental and Type II - Internally Excited)

(Copies of these documents are available online at https://assist.daps.dla.mil/ or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.3 Non-government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

ASME INTERNATIONAL

ASME Y14.24	- Types and Applications of Engineering Drawings
ASME Y14.34	- Associated Lists
ASME Y14.35M	- Revision of Engineering Drawings and Associated Documents
ASME Y14.100	- Engineering Drawing Practices

(Copies of these documents are available online at http://www.asme.org/ or from ASME International, Three Park Avenue, New York, NY 10016-5990.)

AMERICAN SOCIETY FOR QUALITY (ASQ)

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

(Copies of this document are available online at http://www.asq.org/ or from American Society of Quality, 600 North Plankinton Avenue, Milwaukee, WI 53203.)

2.4 Order of precedence. Unless otherwise noted herein or in the contract, 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.

3. REQUIREMENTS

3.1 First article. When specified (see 6.2), a sample shall be subjected to first article inspection and testing in accordance with 4.2 and 6.4. Production shall not be started until the contractor has furnished evidence that the sample has passed the first article tests.

3.2 General requirements.

3.2.1 Material. Material shall be as specified herein or shall meet the performance requirements as specified herein.

3.2.2 Metals. Metals shall be nonmagnetic material and shall have a permeability of 2.0 or less after fabrication. All materials used shall be corrosion resistant.

3.2.3 Design. The signaling searchlight shall be designed in general conformance with figures 1 and 2. It shall be a device which produces a relatively narrow beam of light for use as a searchlight or for visual communication when the light beam is mechanically interrupted by means of a shutter mechanism. The device shall be suitable for use as a portable searchlight or for mounting on an adjustable mounting stand, and shall include suitable means for sighting and hand training the light beam on the desired target. The searchlight shall consist of the following assemblies:

a. Filter and cover frame.
b. Shutter.
c. Backshell.
d. Mounting.
e. Lamp.

3.2.4 Construction. The searchlight shall be constructed for long service, without frequent overhaul, under severe conditions of shock, vibration, temperature, humidity, and salt atmosphere. The construction shall be simple and sturdy, and be such that the continued operation and ordinary maintenance in service do not require special tools or excessively precise workmanship. Special tools are defined as those tools not listed in the Federal Supply Catalog.

3.2.5 Painting of searchlight equipment. Prior to painting, all metal surfaces shall be thoroughly cleaned in accordance with MIL-E-917 and given a corrosion-resistant treatment for the application of the paint finish specified herein. Metal surfaces shall be given two coats of zinc-chromate primer conforming to TT-P-645. The first priming coat shall be applied after all machine work has been completed and after all surfaces to be covered have been thoroughly cleaned and dried. The priming coats shall be followed by two coats of paint as specified in

3.2.5.1. A powder coating using Rohm Haas Powder Coating, Corvel Grey, Polyester, 30-7241 or 30-7186, in accordance with MIL-PRF-24712, may be used instead of paint.

3.2.5.1 External surfaces. Painting of external surfaces shall conform to the color, gloss, flexibility, resistance to water immersion, and reflectance of Navy Haze Gray No. 27 (26270) in accordance with MIL-PRF-24635. The paint shall not discolor or become soft when the searchlight is operated at rated voltage for a period of 2 hours with the shutter closed. Internal surfaces shall be painted a dull black, unless surface has power coating.

3.3 Interchangeability. All similar parts, including repair parts, of corresponding apparatus furnished on the same order or built to the same manufacturer's drawings shall be strictly interchangeable without the necessity of further machining or hand fitting of any kind.

3.4 Threaded parts. Screw threads shall conform to the requirements in FED-STD-H28.

3.5 Detail requirements.

3.5.1 Light tightness. The searchlight shall be light tight when the lamp is energized, the shutter closed or open, and the front glass covered (no light shall be visible at any time from any part of the searchlight from a distance of 100 feet).

3.5.2 Waterproofness. The construction of the searchlight shall be such that no water that might interfere with the operation of the searchlight shall enter when the searchlight is subjected to the test specified in 4.6.2.

3.5.3 Shockproofness. The searchlight, less the lamp, shall be so designed as to withstand high impact shock as specified in MIL-S-901 without the fracturing or deformation of any parts of the assembly when tested as specified in 4.6.3.

3.5.4 Vibration proofness. The searchlight shall be designed to operate during vibration tests specified in 4.6.4. All fasteners (bolts, screws, screw clamps, rivets, ect.) shall remain tight and rigidly fixed and no damage shall be sustained by the assembly or its components.

3.5.5 Corrosion resistance. The searchlight shall not be impaired when tested as specified in 4.6.5.

3.5.6 Insulation resistance. The insulation resistance between all current-carrying and non-current-carrying parts shall be not less than 1 megohm (see 4.6.6).

3.5.7 Dielectric strength. There shall be no evidence of breakdown when the searchlight is subjected to the dielectric test specified in 4.6.6.

3.5.8 Safety. Particular care shall be taken in the design and construction of the searchlight to insure safety of the operating personnel from the dangers of electric shock and of contact with high temperatures. Effective electric grounding of the assembly shall be maintained as all times to prevent electric shock to personnel in contact with any parts of the unit.

3.5.8.1 Electric shock. Means shall be provided for automatically de-energizing the lamp terminals when the searchlight is opened for re-lamping.

3.5.8.2 High temperatures. Points, which may at any time become hot enough to cause personal injury, shall be heat insulated or the temperature shall be maintained below 131 °F (55 °C) assuming an ambient temperature of 77 °F (25 °C).

3.6 Performance. The searchlight with the signaling shutter shall be capable of manually transmitting messages at speeds up to 15 words (300 operating cycles of the shutter) per minute. The beam spread shall not be less than 8 degrees horizontal by 7 degrees vertical.

3.6.1 Inclination. The searchlight shall be designed to provide for vertical adjustment of the beam axis of at least 60 degrees above and 45 degrees below the horizontal plane, and for turning the searchlight through a horizontal angle of at least 360 degrees. There shall be adjustments for securing the searchlight in all positions.

3.6.2 Operation. The searchlight shall give no indication of electrical or mechanical faults when tested in accordance with 4.6.9.

3.7 Component parts. The following assemblies of the searchlight shall be constructed so that the fitting dimensions insure interchangeability with the corresponding assemblies of any searchlight furnished under this specification, without further machining or hand fitting of any kind.

3.7.1 Filter frame. The filter frame assembly shall conform to figure 3 and shall support the glass filter. The filter frame shall be easily attached and detached from the cover frame without the use of tools. Three filter frames, each containing one glass filter of the following color and grade of glass in accordance with FED-STD-3 shall be furnished:

a. Aviation green, grade D.
b. Signal red, grade A.
c. Aviation yellow, grade B.

The glass shall be able to withstand a 1 foot-pound impact blow (see 4.6.3.1).

3.7.2 Cover frame. The cover frame shall conform to figure 4. The cover frame shall be capable of securing the cover glass to the shutter housing, and for supporting the filter frame. A locking device shall be employed to secure the filter frame to the cover frame.

3.7.2.1 Cover glass. The cover glass shall be flat and not less than 3/16 inch thick. It shall be made of clear glass, free from bubbles, striae, checks, wrinkles, or other defects and blemishes, and shall be tempered for heat and shock resistance.

3.7.3 Shutter. The shutter assembly shall consist of a metal housing containing the shutter blades and their operating mechanism. The shutter assembly when installed, but fully opened, shall not reduce the peak beam candle power more than 25 percent.

3.7.3.1 Shutter housing. The housing shall conform to figure 5 and shall independently retain the shutter and shutter operating mechanism. The back end of the housing shall fit tightly to the gasketed lamp and backshell to form a watertight seal. Means shall be provided to insure proper alignment between the backshell, lamp gasket, and shutter housing. The housing shall be clamped to the backshell by means of a circular clamp ring with a quick release toggle lever for ease of lamp replacement (see figure 6). The front end of the housing shall be sealed with the cover frame and glass. Means shall be provided on the outside of the housing for supporting the searchlight in it mounting assembly.

3.7.3.2 Sight. A simple "V" notched type rear sight and bead front sight shall be mounted on the shutter housing between the operating levers.

3.7.3.3 Shutter operating mechanism. The shutter shall be operated by a small, finger-operated lever conforming to figure 7. The design shall be such that the shutter shall be completely opened from its closed position by the moving of the operating point of the trigger approximately 45 degrees in a downward-backward motion and employing a torque of 1.5 inch-pounds. The shutter shall have a spring return, automatically forcing the shutter to its closed position when the operating lever is released.

3.7.3.4 Adjustments. One lever shall be located on each side of the shutter housing, and the levers shall be interconnected through the operating mechanism. A method shall be provided to adjust the tension of the return springs. Stops shall be provided for both levers to avoid twisting of the drive shaft beyond the open position of the shutter. One of the levers shall be provided with an easily manipulated locking device which shall positively lock the shutter in the open position. The locking device shall not function when the shutter is in operation.

3.7.4 Backshell. The backshell assembly shall consist of a housing and lamp conforming to figure 8 and a lamp gasket conforming to figure 9. The front of the housing shall be shaped to fit the gasketed lamp. The lamp cabling shall penetrate the bottom of the backshell assembly. A handle shall be mounted on the backshell assembly for controlling the direction to the light beam. A stuffing tube suitable for the size LSTHOF-9 cable shall be provided for the cable entrance into the backshell. A contact for the grounding lead of the cable shall be provided within the backshell.

3.7.5 Mounting. The mounting base shall conform to figures 10 and 11 and shall be suitable for holding the searchlight mounting pivot in the vertical position and for clamping the searchlight in all horizontal positions. A grooved friction clamp will be considered a suitable method. The diameter of the bore shall permit a loose fit of the mounting pivot. The design shall be such that the mounting pivot shall not turn due to the inertia of the searchlight, and the searchlight shall not fall out of the mounting base when it is held in an inverted position or when subjected to the shock tests of 4.6.3. Rail clamps (see figure 12) to which the base can be secured shall be provided to mount the searchlight on a 1-1/4 inch iron pipe rail.

3.8 Voltage.

3.8.1 Type I. Type I searchlights shall be designed for operation at the 115 volts, 60 Hz AC with provisions of voltage reduction to 23 to 28 volts, 60 Hz lamp operation.

3.8.2 Type II. Type II searchlights shall be designed for operation at 28 volts, 60 Hz AC/DC.

3.9 Lamp. The lamp shall be an incandescent type in accordance with part number MS25242-4552 of MS25242.

3.10 Receptacle and searchlight cable plug. The receptacle, plug, and connecting cables between components shall be shipbuilder furnished equipment.

3.11 Repair parts. Onboard repair parts shall be furnished in accordance with MIL-DTL-24784 and MIL-DTL-24784/7, and shall consist of the following items unless otherwise specified (see 6.2):

1 - Glass cover
1 - Operating lever
3 - Springs, right side
3 - Springs, left side
1 - Lamp gasket
3 - Incandescent lamps

3.12 Weight (searchlight). The searchlight, exclusive of the filter assembly, shall not exceed 18 pounds.

3.13 Drawings. Drawings shall be furnished and shall conform to ASME Y14.24, ASME Y14.34, ASME Y14.35M, and ASME Y14.100 and shall contain:

a. Name and model number assigned to the searchlight. Upon acceptance of the preliminary drawings the Naval Ship Engineering Center (NAVSEC) will assign the model number, which shall appear on the searchlight identification plate, all repair parts boxes, all manuals, and the assembly drawing. NAVSEC will also assign a model number for the signaling shutter, which shall appear on the shutter, all manuals and on the assembly drawing.

b. A list of repair parts, the name of each item, the quantity of each item being furnished in each set of repair parts and the manufacturer's ordering identification. This list shall be a duplicate of the list which is placed inside the repair parts box.

c. Table of weights:
   (1) Weight of searchlight assembly, complete.
   (2) Weight of repair parts, including boxes.
   (3) Weight of searchlight, created with repair parts box.

d. Dimensioned assembly outline (to scale) showing all principal dimensions in at least front view and a side view.

e. Mounting plate or foot with detailed dimensions for mounting.

f. Painting instructions, including method of treatment of searchlights for painting, color, and applicable specification of paint. If powder coating is used, include the method of treatment of searchlights for powder coating, color, and applicable specification of powder coating.

g. Data which will appear on the searchlight identification plate to be supplied in accordance with the drawing.

3.13.1 Product drawings/models and associated lists. Product drawings/models and associated lists shall be prepared to provide the design, engineering, manufacturing, and quality assurance requirements information necessary to enable the procurement or manufacture of an item essentially identical to the original item. The product shall be defined to the extent necessary for a competent manufacturer to produce an item, which duplicates the physical, interface, and functional characteristics of the original product, without additional design engineering effort or recourse to the current design activity. Product data shall reflect the approved, tested, and accepted configuration of the defined delivered item.

3.14 Manuals. Manuals shall be furnished in accordance with MIL-DTL-24784/22.

3.15 Identification and marking plates. Identifications plates and other designating marking plates shall be made of corrosion-resisting steel, brass, or aluminum, in accordance with MIL-DTL-15024 and MIL-P-15024/5. These plates shall be of sufficient size, and shall be installed on and furnished as a part of the searchlight for which they are intended. They shall be attached to a part which will not ordinarily be renewed during its service life, and shall be located in a readily accessible position.

3.15.1 Data marked on the identification plate shall include the following:

a. Manufacturer's name.
b. Identification symbols.
c. Searchlight serial number.
d. Contract number.
e. Date of manufacture (year).
f. "Eight-inch signaling searchlight, Model_____" (as assigned).
g. The marking "NM" stamped or embossed on the identification plate to designate nonmagnetic material.
h. Blank space for Defense Contract Administrative Service stamping.

3.16 Recycled, recovered, or environmentally preferable materials. Recycled, recovered, or environmentally preferable materials should be used to the maximum extent possible, provided that the material meets or exceeds the operational and maintenance requirements, and promotes economically advantageous life cycle costs.

4. VERIFICATION

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

a. First article inspection (see 4.2).

b. Conformance inspection (see 4.4).

4.2 First article inspection. First article inspection shall consist of examinations and tests specified in 4.5 and 4.6.

4.3 Sampling.

4.3.1 Lot. For purposes of sampling, a lot shall consist of not more than 100 searchlights offered for delivery at one time.

4.3.2 Sampling for conformance inspection. A random sample of searchlights shall be selected from each lot and shall be subjected to each of the inspections specified in 4.4. Sampling shall be in accordance with ASQ Z1.4, inspection level III, with the acceptance quality limit (AQL) as specified in the contract (see 6.2).

4.4 Conformance inspection. Each of the sample searchlights selected in accordance with 4.3.2 shall be subjected to the examinations and tests in table I. The results of each test shall be compared with this specification.

TABLE I. Conformance inspection.

Examinations and tests	Reference paragraph
General examination	4.5.1 - 4.5.4
Safety	4.5.5
Inclination	4.5.6
Light tightness	4.6.1
Operation	4.6.9
Insulation resistance	4.6.6
Dielectric strength	4.6.6

4.5 General examination.

4.5.1 Visual and dimensional examination. Each sample searchlight shall visually and dimensionally examined to determine conformance with this specification and applicable drawings.

4.5.2 Adjustments, fit, and materials. The sample searchlights shall be subjected to a thorough examination to ascertain that the design, materials, workmanship and weight are in strict conformity with this specification. Each component part of the searchlight shall be

inspected for it general ruggedness, apparent shockproofness, and reliability with respect to its probable service life. The fit of parts shall be observed with particular reference to the interchangeability of such parts as are likely to require replacement during normal service life of equipment.

4.5.3 Interchangeability. Examination shall be made to verify compliance with the requirement of 3.3.

4.5.4 Repair parts. All repair parts of sample searchlights shall be subjected to a careful examination to ascertain that the materials, workmanship, and finish comply fully with the manufacturer's accepted drawing.

4.5.5 Safety. Each sample searchlight shall be examined to determine conformation to 3.5.8.

4.5.6 Inclination. The sample searchlight shall be examined to verify compliance with the requirements of 3.6.1.

4.6 Test.

4.6.1 Light tightness. The light tightness of the searchlight, with the lamp burning at rated voltage, shall be checked to determine compliance with 3.5.1 both with and without the shutter in operation. This test shall be made with the cover glass completely covered.

4.6.2 Waterproofness. Compliance with 3.5.2 shall be checked by applying a stream of water from a hose 1 inch in diameter under a head of approximately 35 feet from a distance of 10 feet on the searchlight for 60 minutes. The stream shall be projected against the searchlight from all direction, including the bottom. During this test the searchlight shall be operated in the horizontal position.

4.6.3 Shock. The searchlight, less the lamp, shall be tested for shockproofness in accordance with MIL-S-901 (see 3.5.3). The classification of the shock test shall be type A for the lightweight equipment.

4.6.3.1 Impact. Samples of glasses with all surfaces fully abraded shall be placed on a wooden block and arranged concentrically over a hole in the block having an approximate diameter of 7 inches. Breakage of samples tested shall not exceed 20 percent when a 1 foot-pound impact blow is applied with a steel ball, weighing 1/2 pound, striking the approximate center of the plate.

4.6.4 Vibration. The searchlight shall be tested for environmental vibration in accordance with type I of MIL-STD-167-1.

4.6.5 Salt spray test. The searchlight unit, complete with the signaling shutter and with lamp burning at rated voltage in cycles of operation consisting of 12 minutes on and 12 minutes off, shall be placed in a salt spray machine, and subjected to the following tests:

a. The searchlight shall be subjected to the action of a salt spray for 200 hours. This salt spray shall consist of a spray of a 20 percent solution by weight of commercially pure sodium chloride in distilled water. The spray shall be at 131 °F (55 °C) and shall be applied alternately with a 3-minute drying period of air at 131 °F (55 °C) producing a 3-minute wet and a 3-minute dry condition continuously under ultra violet light. Upon completion of the test, the searchlight shall be washed with fresh water and examined.

b. Careful examination after the salt spray test shall show no damaging effect to the unit due to the salt spray. In addition, the searchlight shall function satisfactory after the test. Lock washers shall be thoroughly examined.

4.6.6 Insulation resistance and dielectric strength. Insulation resistance and dielectric strength tests shall be made, to determine conformance with 3.5.6 and 3.5.7 as follows:

a. Before any other tests.
b. After waterproofness test (see 4.6.2).
c. Twenty-four hours after salt spray test (see 4.6.5).

These tests shall be applied both cold and after the light has reached its maximum operating temperatures, when operated in an ambient air temperature of 77 °F (25 °C).

4.6.6.1 Insulation resistance. The insulation resistance with 500 volts applied between each conductor, where possible, without component damage (with the lamp removed) and between all conductors and the searchlight frame (with the lamp installed) shall conform with 3.5.6. The insulation resistance shall be taken before and after each dielectric strength test.

4.6.6.2 Dielectric strength. A 60 Hz voltage, whose effective potential is 1,240 volts, shall be applied between conductors, where possible, without component damage (with the lamp removed) and between all conductors and searchlight frame (with the lamp installed).

4.6.7 Life test. The life test shall include operation for 3,000,000 cycles of the shutter as a rate of 200 cycles per minute. (A cycle consists of the movement of the shutter from the completely closed to the completely open positions and return to the completely closed position.) The shutter shall be attached to the drum for this test, and the lamp shall be burned at rated voltage throughout the duration of the test. This test shall also constitute a reliability test for the complete searchlight and failure of any searchlight component (excluding the lamp) during the shutter operation and salt spray tests shall be deemed a searchlight failure and cause for rejection. All bearings of the shutter shall be lubricated at intervals of 250,000 cycles. The test shall be divided into two parts as follows.

a. 1,500,000 cycles of operation of the shutter shall be performed prior to conduction the salt spray test specified in 4.6.5.

b. 1,500,000 cycles of operation of the shutter shall be performed after conducting the salt spray test specified in 4.6.5, and the shock test specified in 4.6.3. Care shall be taken to

remove salt incrustation after the salt spray test, and to lubricate the shutter bearings prior to beginning the shutter operation test.

The torque in inch-pound shall be recorded at the beginning and end of each half of the operating test. Tests shall also be made to determine that messages transmitted with the searchlight at speeds up to 300 operating cycles per minute can be read by an experienced signalman. For this purpose, the variation in light output caused by the shutter shall be measured by means of an oscillograph or other suitable measuring device. This determination shall be made both prior to, and upon completion of the shutter operation test.

4.6.8 Illumination.

4.6.8.1 Method of measurement. The method of measurement shall be in accordance with the current practices of the test facility at which the tests are being made.

4.6.8.2 Measurements required. Beam candlepower data shall be taken and recorded to determine compliance with the requirements of 3.6 and 3.7.3 concerning beam speed and peak beam candlepower reduction caused by the shutter.

4.6.8.2.1 Reduction in peak beam candlepower by shutter. In determining the reduction in peak beam candlepower caused by the shutter, the cover glass shall be removed and the shutter adjusted to produce minimum reduction in beam candlepower when completely open.

4.6.9 Operation. The searchlight shall be tested for compliance with 3.6.2 when operated at rated current, voltage, and frequency in a cycle of 1/2 hour on, 1/2 hour off for 5 hours.

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

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

6.1 Intended use. The searchlights covered by this specification are intended for use as portable, lightweight, high-intensity signaling searchlights for shipboard use.

6.2 Acquisition requirements. Acquisition documents should specify the following:

a. Title, number, and date of this specification.
b. Type required (see 1.2.1).
c. First article requirement (see 3.1 and 6.4).
d. Quantity of onboard repair parts required if different from 3.11.
e. AQL (see 4.3.2).
f. Packaging requirements (see 5.1).

6.3 Departures from general features of design. Departures from the general features of design specified in this specification should be fully described in bids.

6.4 First article inspection. Invitations for bids should provide that the Government reserves the right to waive the requirement for samples for first article inspection as to those bidders offering a product which has been previously procured or tested by the Government, and that bidders offering such products, who wish to rely on such production or test, must furnish evidence with the bid that prior Government approval is presently appropriate for the pending procurement.

6.5 Sub-contracted material and parts. The preparation for delivery requirements of referenced documents listed in section 2 do not apply when material and parts are produced by the supplier for incorporation into the equipment and lose their separate identity when the equipment is shipped.

6.6 Subject term (key word) listing.

Light shutter
Colored light filter

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

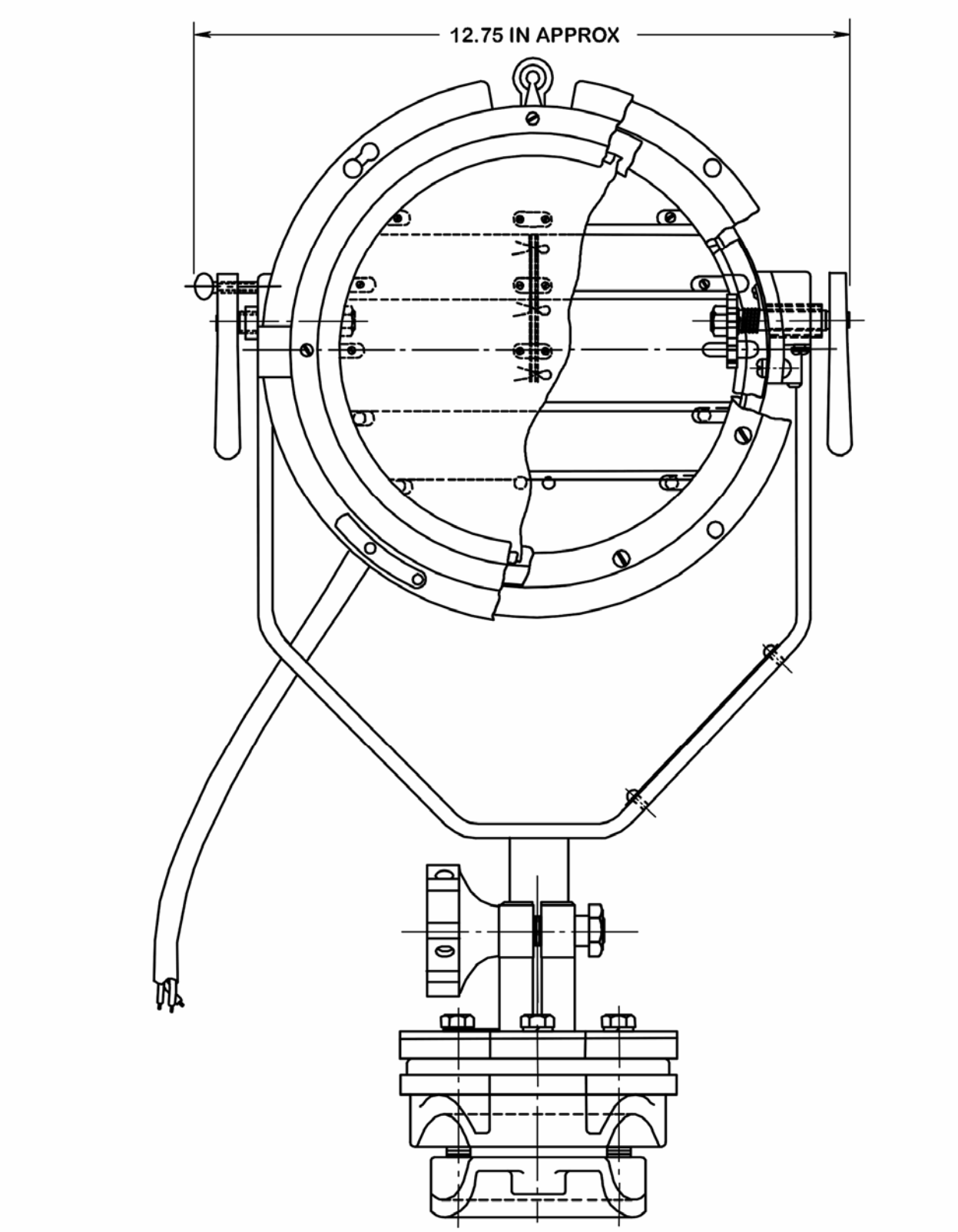


FIGURE 1. Searchlight assembly, front view, signaling, 8 inch, incandescent.

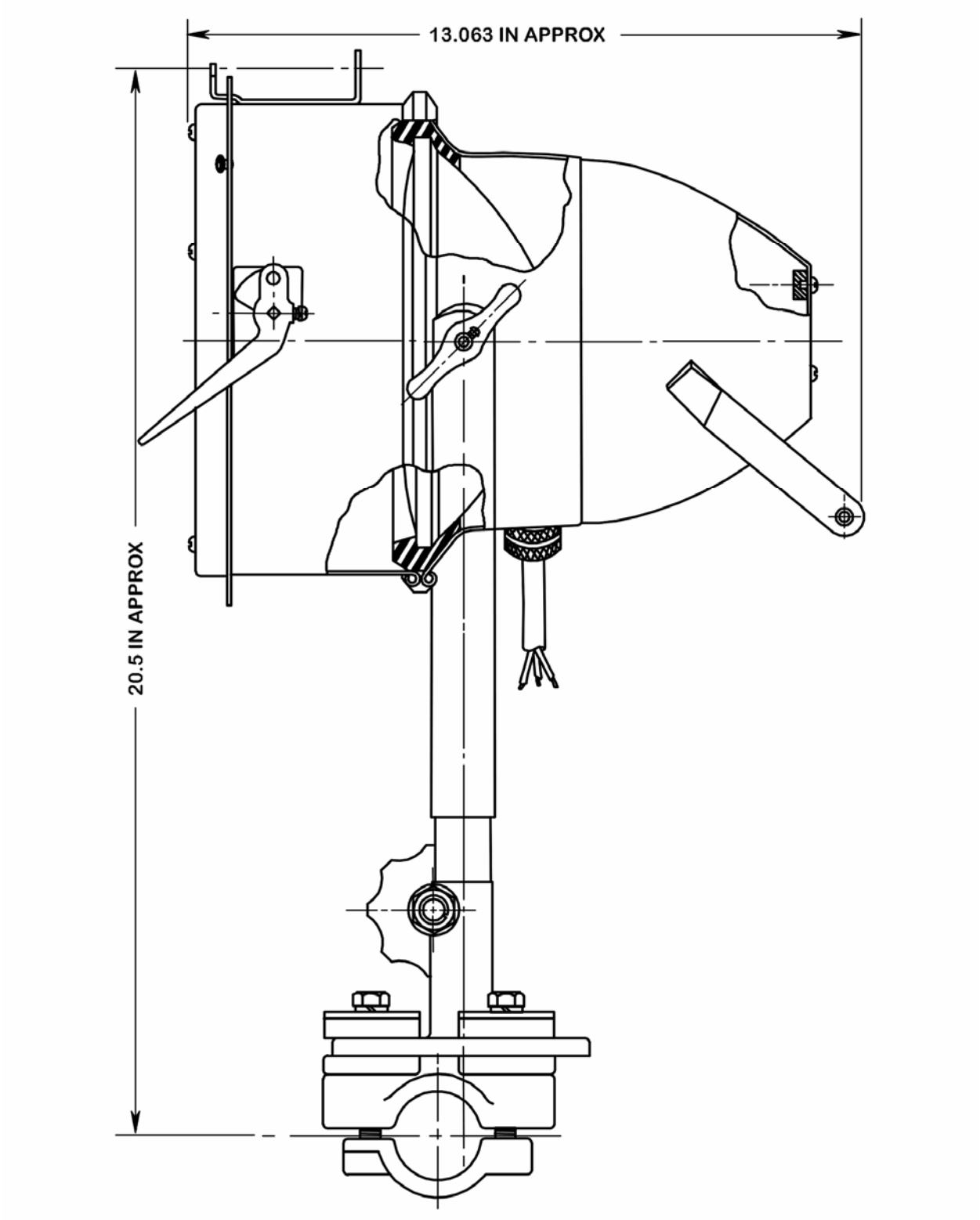


FIGURE 2. Searchlight assembly, side view, signaling, 8 inch, incandescent

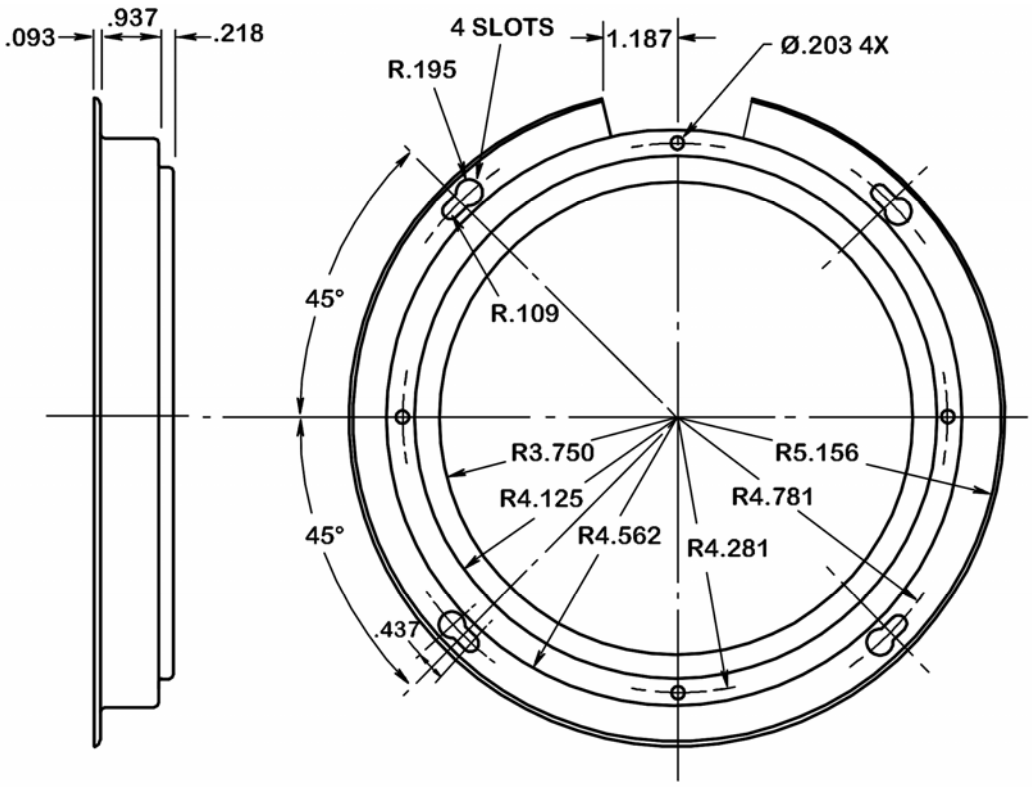


FIGURE 3. Filter frame assembly.

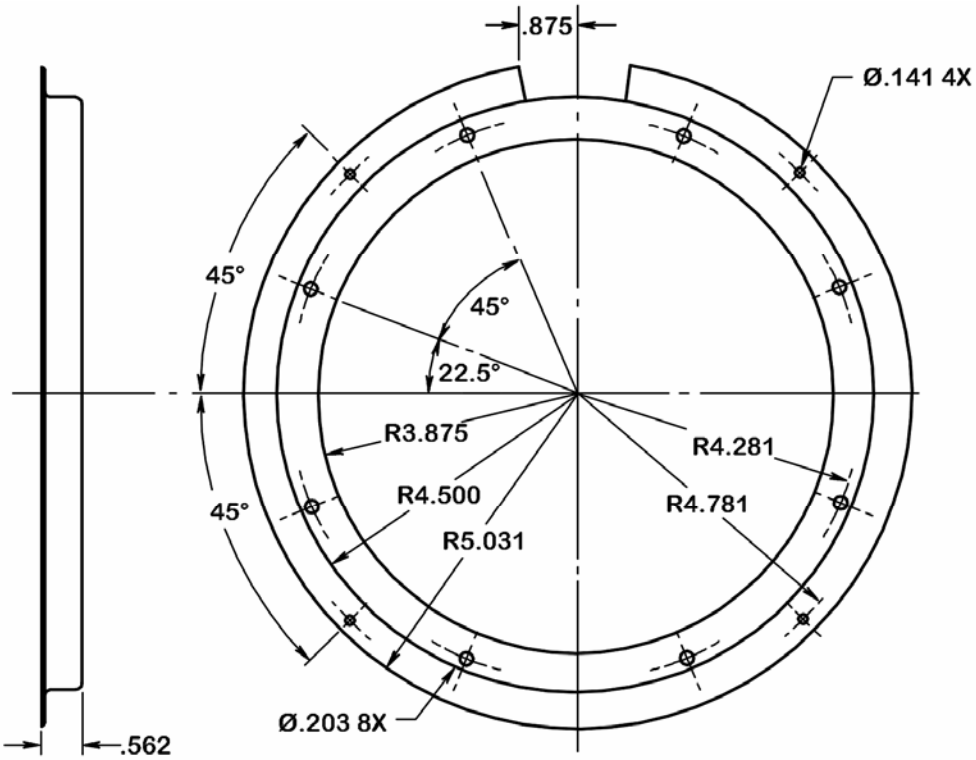


FIGURE 4. Cover frame.

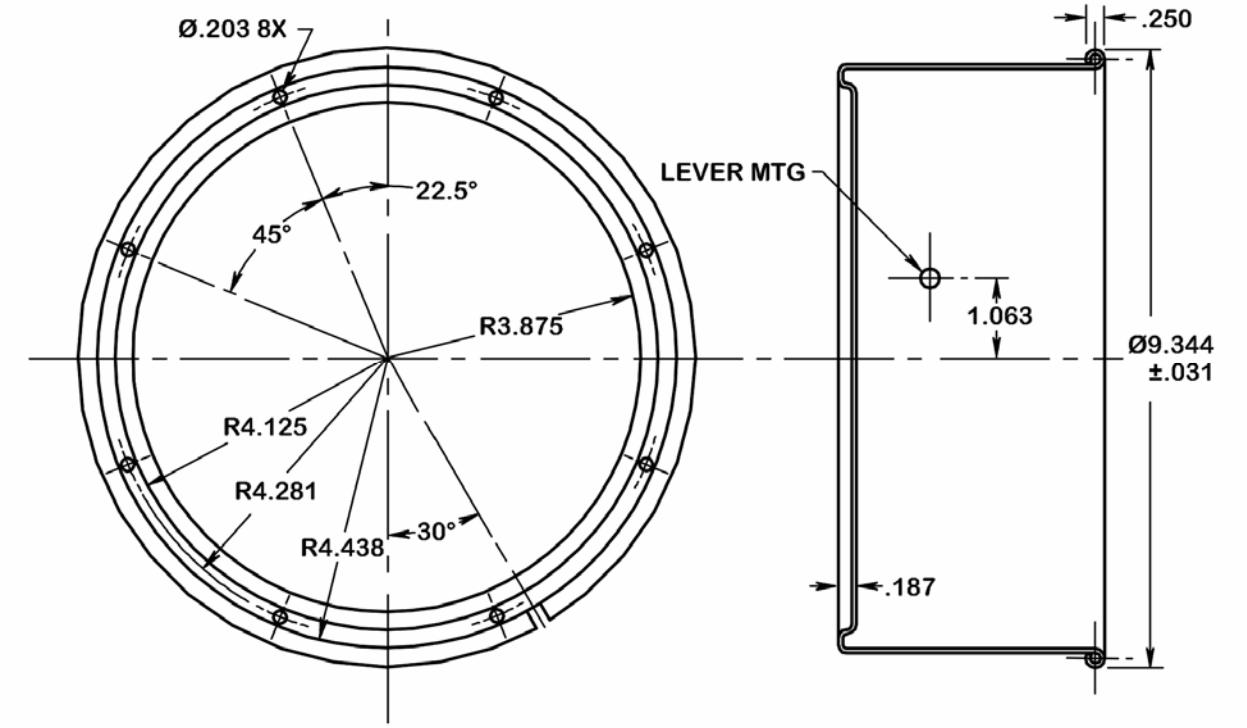


FIGURE 5. Shutter housing.

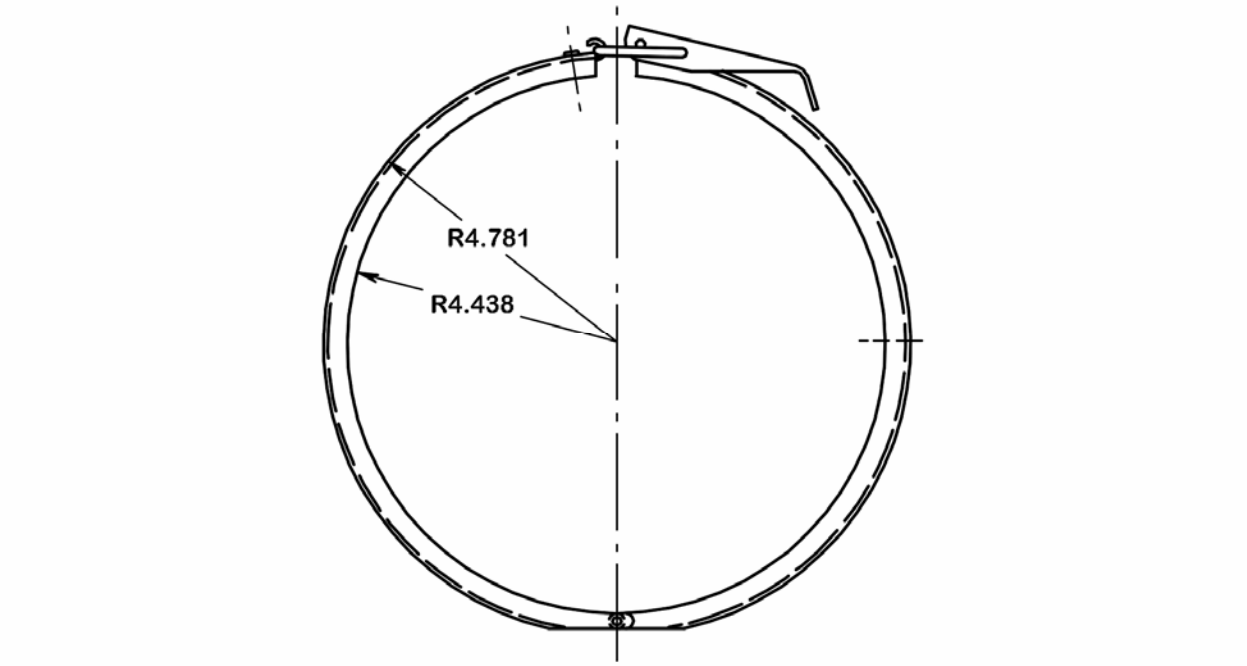


FIGURE 6. Clamp ring.

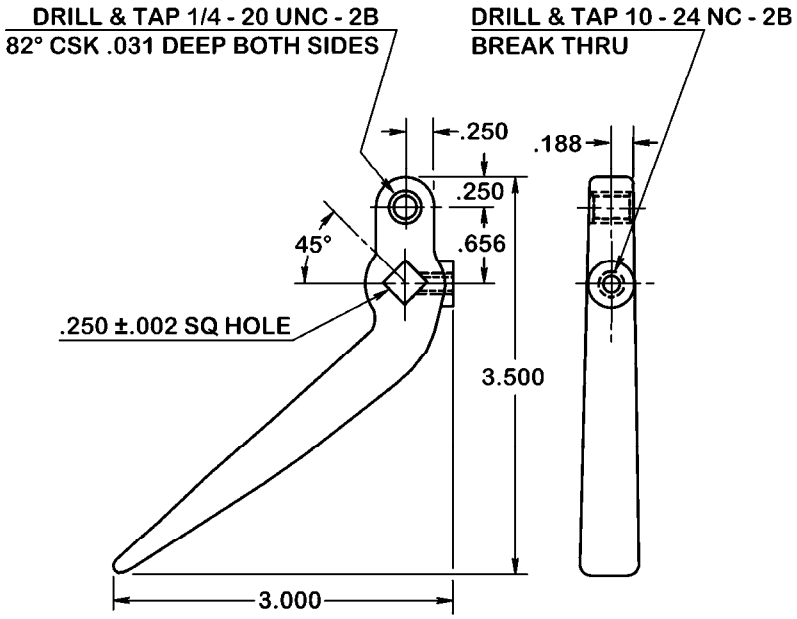
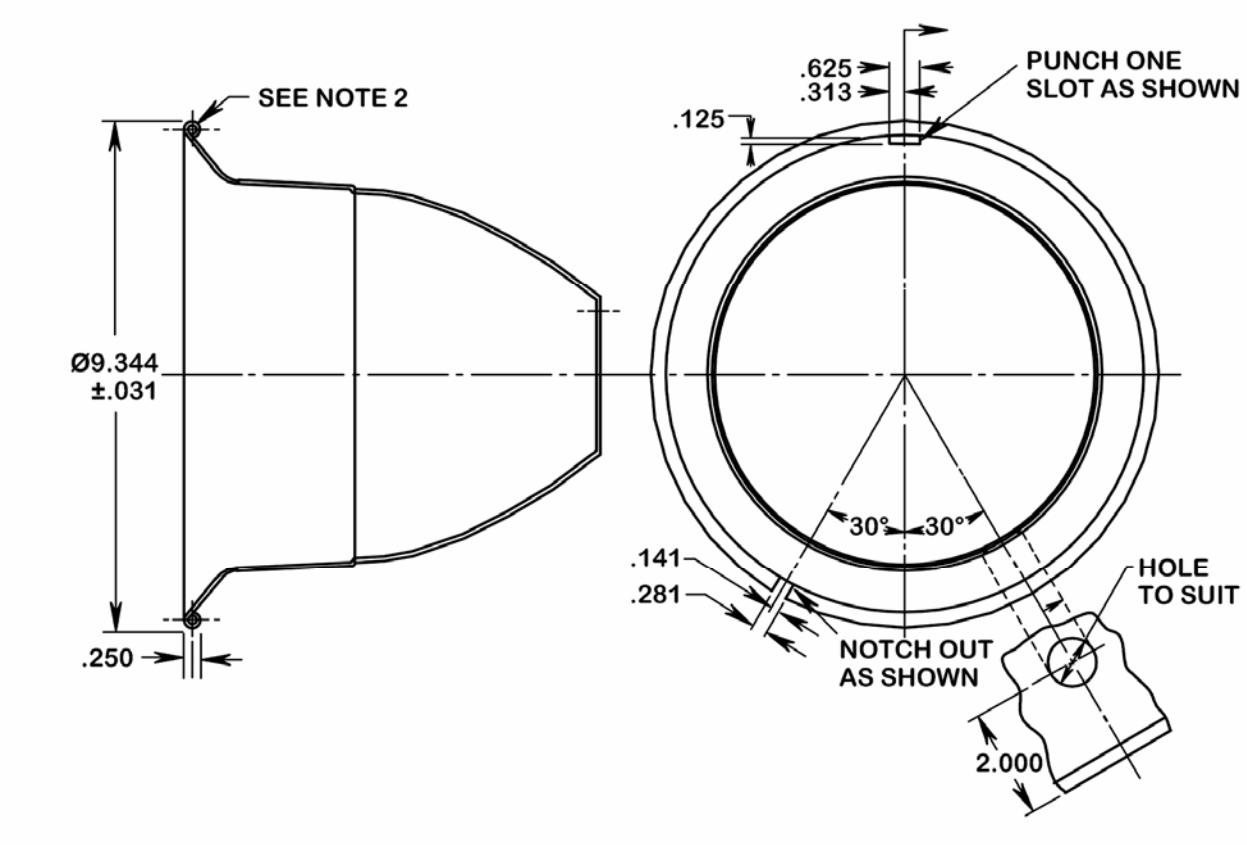
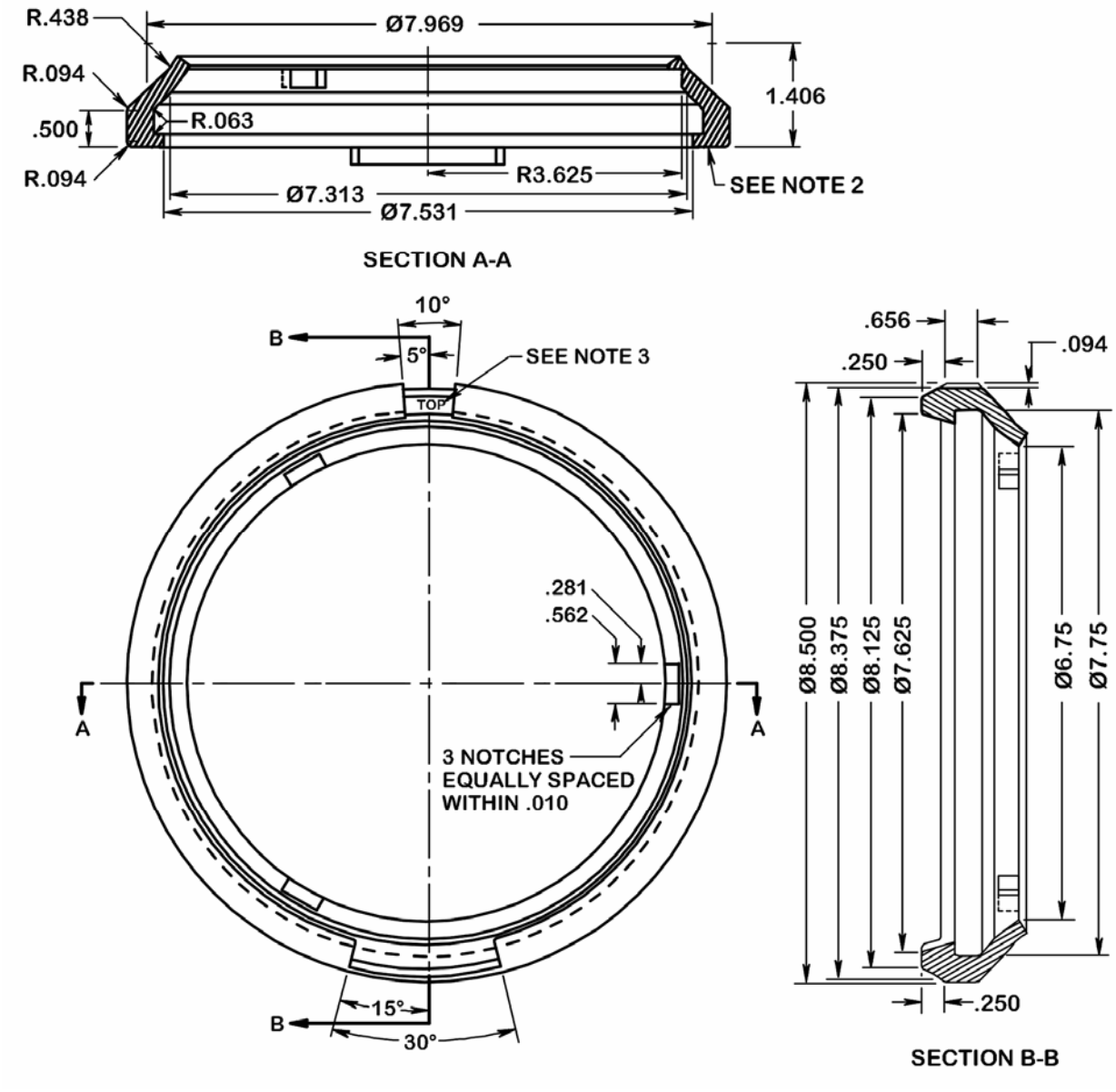


FIGURE 7. Operating lever.



NOTES:
1. Break all sharp edges.
2. Material thickness around bead to be spun to .035" to .040". Maintain .250" dimensions.

FIGURE 8. Backshell.



NOTES:
1. All corners and edges shall have a .031" radius unless otherwise shown.
2. This surface must be substantially flat after curing.
3. "Top" molded in approximately .188" raised letters .016" high, on top of lug.

FIGURE 9. Lamp gasket.

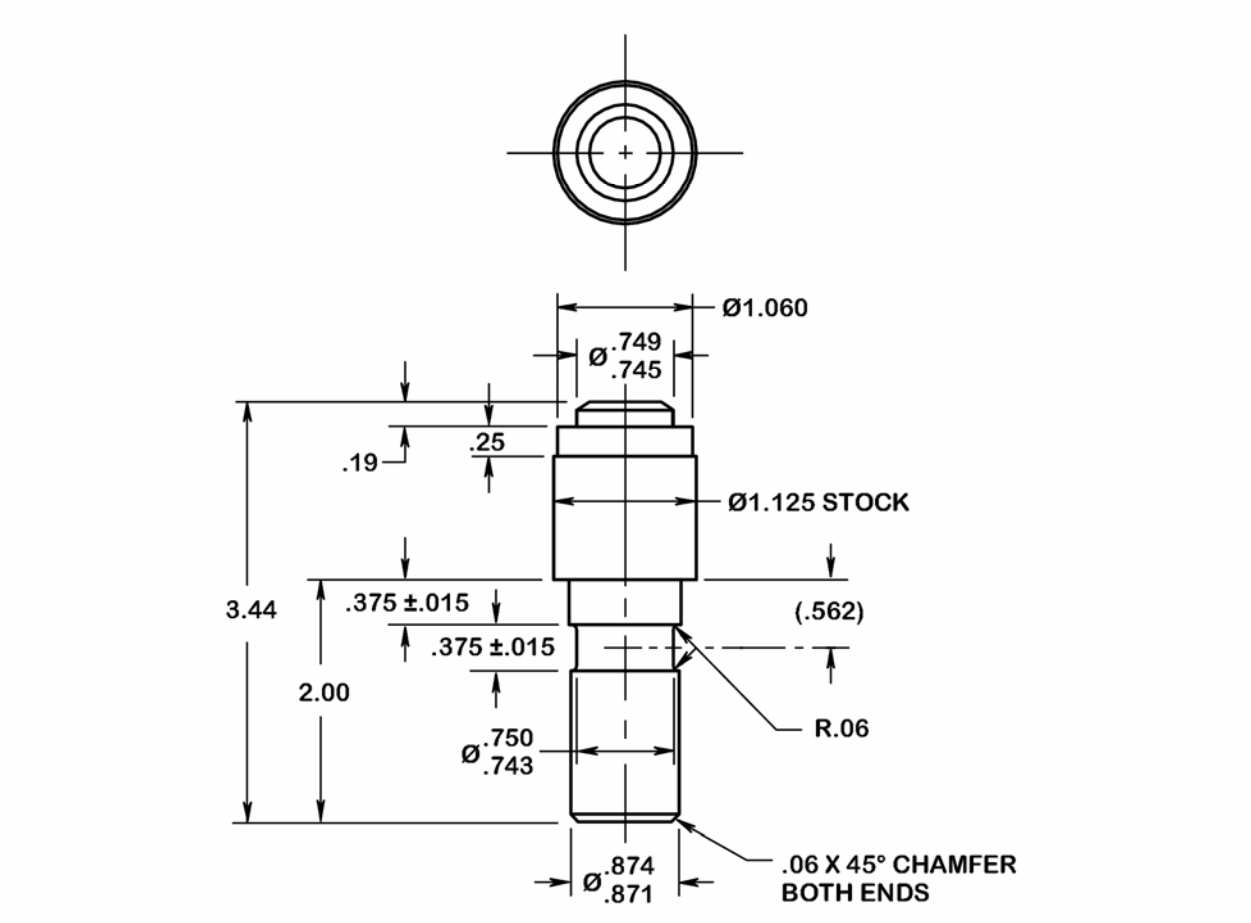


FIGURE 10. Yoke stud.

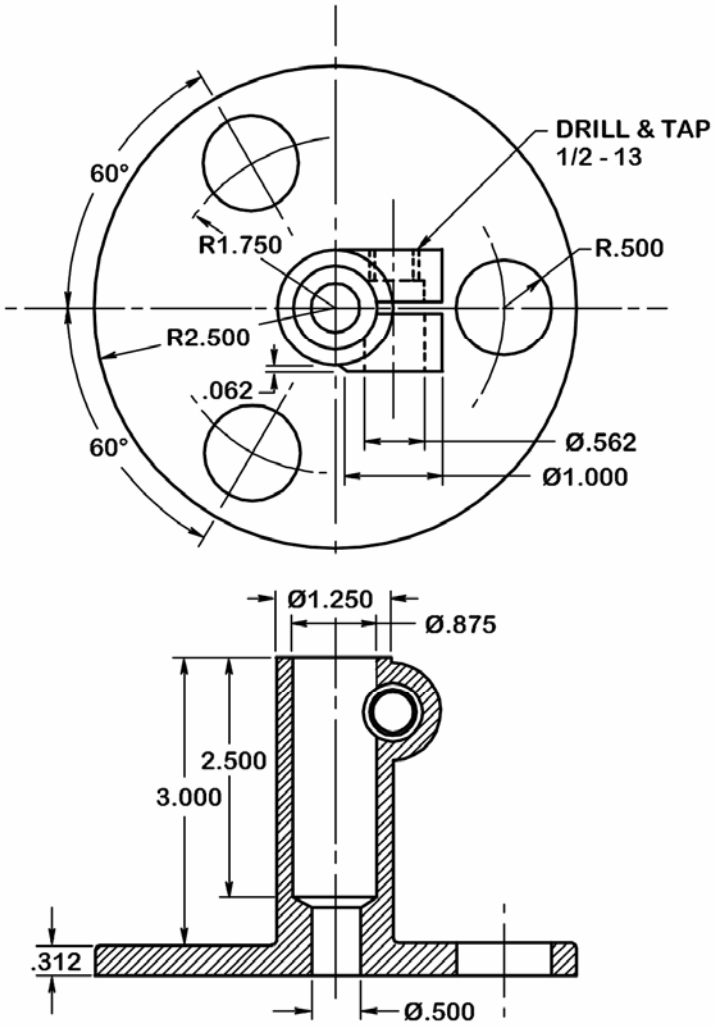


FIGURE 11. Base.

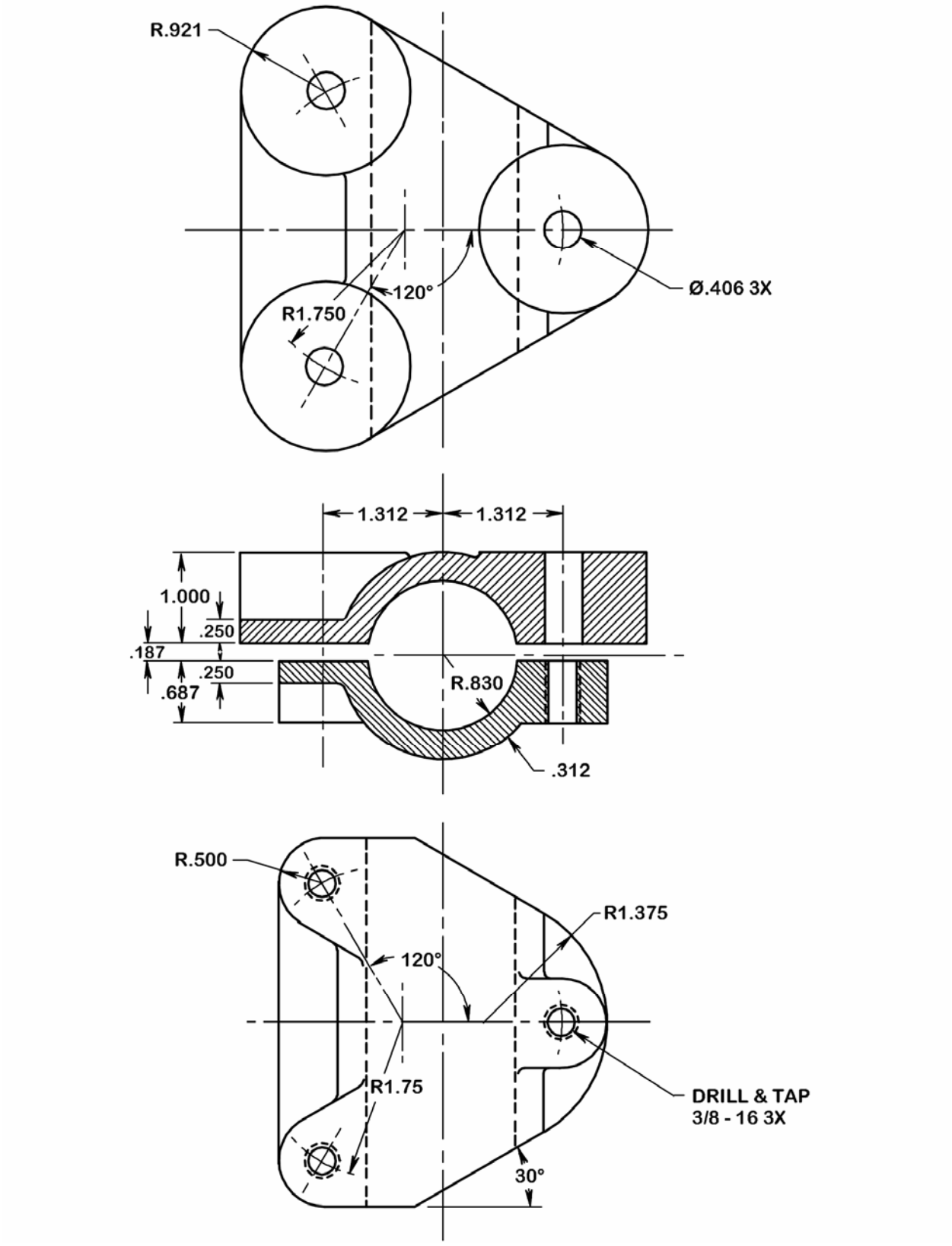


FIGURE 12. Rail clamps.

Custodians:
Navy - SH
DLA - GS

Preparing Activity:
DLA - GS2

(Project 6230-2010-004)

Review Activities:
Navy - YD
DLA - IS

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 database at https://assist.daps.dla.mil/.