

AMSCO

EQUIPMENT MANUAL

**Examiner Examination
Lighting Fixture**

- *Wall Mount*
- *Mobile Floor Stand*
- *Ceiling Mount*

(5/20/83)

P-84079-085

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A WORD FROM AMSCO

The Examiner 10 Examination Lighting Fixture features an advanced, state-of-the-art design ... it produces a quality and quantity of light required for the most demanding of diagnostic examinations.

Cool, glare-reduced light ... ease of positioning ... versatile mounting configurations ... simplicity of operation ... all combine to provide a superior examination light system.

You, the owner, will want to derive the greatest in benefits from this system. The information in this manual can be of assistance to you in making this an assured reality.

Routine "preventive maintenance" inspections, adjustments, and replacement of worn parts will prevent untimely equipment malfunctions which often cause inconvenience or costly interruptions of schedules.

AMSCO maintains a nationwide service organization staffed with factory-trained, well-equipped technicians who can provide expert "preventive maintenance" as well as corrective maintenance services for you promptly and efficiently. Ask your AMSCO representative for full details about our Preventive Maintenance Agreement (PMA) program.

Thank you for choosing this fine AMSCO product ... you may be confident of our continued interest in your satisfaction with it.

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1. BEFORE OPERATING THIS EQUIPMENT

Review the following information before using the lighting fixture. The precautions will be repeated, where applicable, throughout the manual.

WARNING

- I. THIS LIGHT SHOULD NEVER BE OPERATED IF THE DIFFUSER IS DAMAGED OR BROKEN. USE OF THE FIXTURE WITHOUT THE DIFFUSER OR WITH A DAMAGED DIFFUSER COULD CAUSE PERSONAL INJURY.**
- II. BE SURE POWER TO LIGHTHEAD IS OFF BEFORE CLEANING, RELAMPING OR MAKING ADJUSTMENTS. BE SURE INNER REFLECTOR CASTING, REFLECTOR OUTER COVER, LAMP HOLDER AND FRONT GLASS ARE COOL BEFORE TOUCHING.**
- III. DO NOT USE BEZEL MOUNTED HANDLE TO MOVE MOBILE FLOOR STAND UNIT. USING THE HANDLE TO PUSH OR PULL THE UNIT MAY CAUSE IT TO TIP, AND MAY RESULT IN INJURY TO PERSONNEL.**
- IV. BEFORE REMOVING SPRING(S) FROM ARM, BE SURE THAT ARM IS SECURELY HELD IN THE FULL "UP" POSITION.**

CAUTION

- I. Do not touch glass portion of lamp with bare fingers while relamping. Skin oils on glass are detrimental to lamp life. If lamp is touched, clean with alcohol. Wipe with clean white cloth.**
 - II. To prolong lamp life, avoid rough treatment of lighthead while lamp is lighted.**
 - III. To prevent damaging equipment, do not use abrasive pads or cleansers. Do not spray cleaner or disinfectant directly on equipment.**
 - IV. Take care to prevent leakage of water or cleaning agents into interior of lighthead. Do not attempt to clean the internal glassware as degradation may result.**
 - V. Excessive braking friction will increase wear and can cause noisy operation. Proper braking friction is defined as that amount of friction which is just enough to prevent drifting when lighthead is placed in selected position.**
 - VI. Only use recommended lubricant. Oil will cause loss of braking friction. Do not grease sides of arms, plates, or friction washers.**
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1. BEFORE OPERATING THIS EQUIPMENT

IMPORTANT

UNCRATING INSTRUCTIONS, INSTALLATION INSTRUCTIONS, AND EQUIPMENT DRAWING. Complete instructions for uncrating and installing this fixture, as well as an equipment drawing, have been furnished. If you cannot find them ... write, wire, or telephone the nearest AMSCO Regional Office giving the serial and model numbers of the fixture ... replacement copies will be sent to you promptly. The clearance space shown on the equipment drawing is required for proper installation, operation, and maintenance of fixture.

2. OPERATING THE EQUIPMENT

WARNING: THIS LIGHT SHOULD NEVER BE OPERATED IF THE DIFFUSER IS DAMAGED OR BROKEN. USE OF THE FIXTURE WITHOUT THE DIFFUSER OR WITH A DAMAGED DIFFUSER COULD CAUSE PERSONAL INJURY.

CEILING MOUNTED FIXTURE (Single & Dual Lightheads)

1. Positioning the lighthead — The following movements can be made by each lighthead using the bezel-mounted handle:

a. For single lighthead — rotate 360° around vertical suspension tube. For dual lightheads — rotate 180° around vertical suspension tube.

b. Rotate clockwise or counterclockwise about horizontal suspension arm (within limits of stops).

c. Tilt forward or backward in yoke.

d. Move up or down by pivoting at horizontal suspension arm mounting point.

When examination light is not in use, raise suspension arm(s) above the horizontal position.

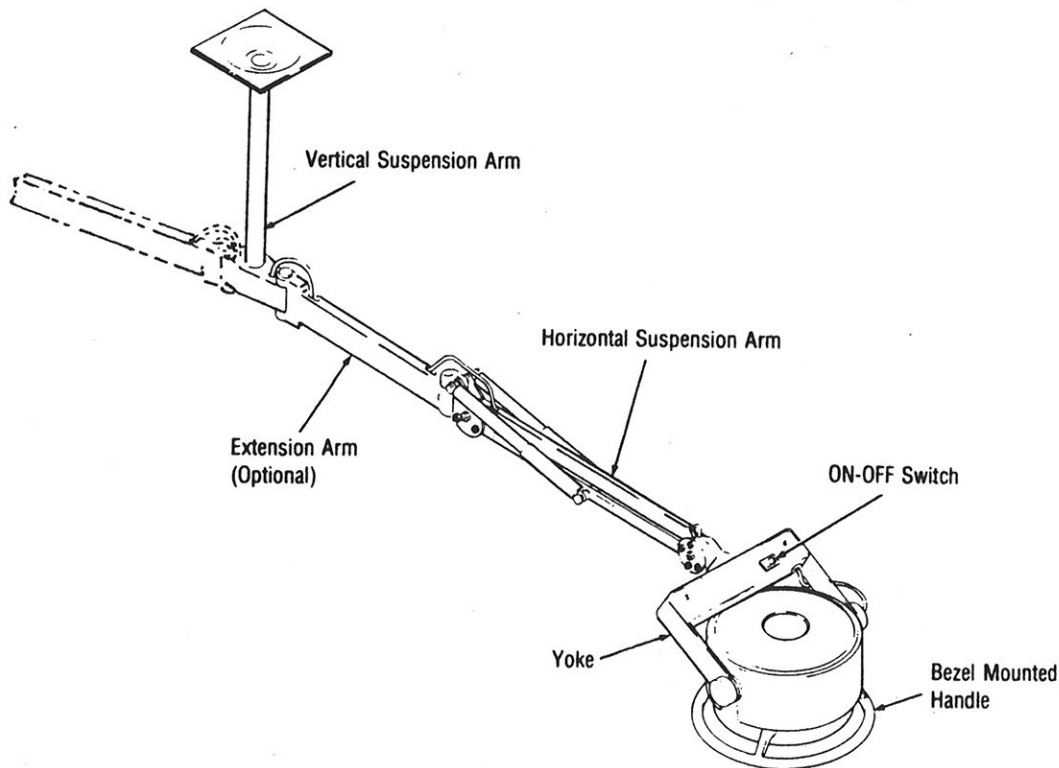
This relieves some tension and prolongs the life of the springs.

2. Operating Light —

a. Be sure electrical power is supplied to ceiling junction box.

b. Use the rocker-type ON-OFF switch on the yoke to switch the light on.

When not using the examination light, be sure to switch the light off. This will save energy and prolong life of lamp.



Operating Ceiling-mounted Lighthead.

2. OPERATING THE EQUIPMENT

WALL-MOUNTED FIXTURE

1. **Positioning Lighthead** — The following movements can be made by using the bezel mounted handle:

(1) Rotate 180 degrees around wall mounting bracket; (2) rotate clockwise or counterclockwise about horizontal suspension arm (within limits of stops); (3) tilt forward or backward in yoke; and (4) move up or down by pivoting at horizontal suspension arm mounting point.

When examination light is not in use, raise suspension arm above the horizontal position.

This relieves some tension and prolongs the life of the springs.

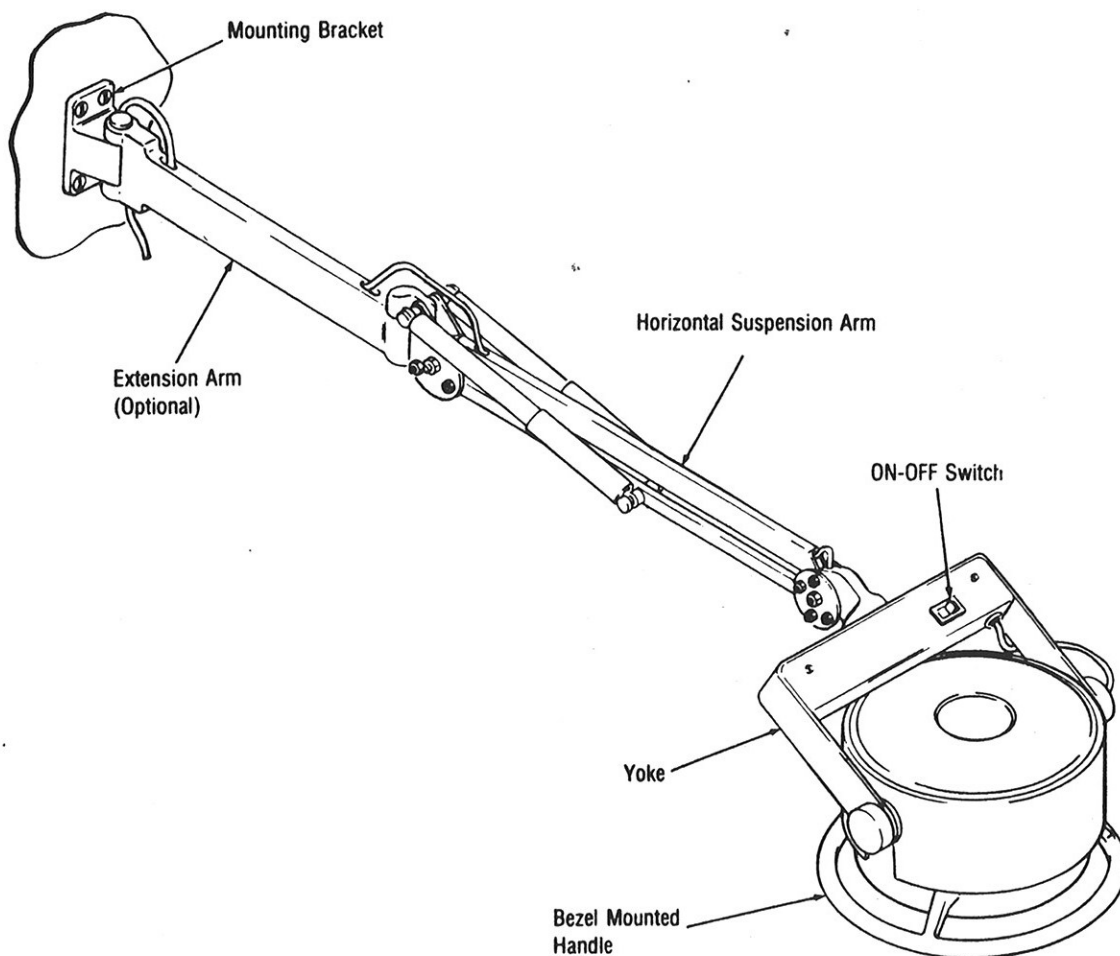
2. Operating Light —

a. Be sure three-prong plug of lighthead is plugged into 110 volt receptacle.

b. Be sure electrical power is supplied to the receptacle.

c. Use the rocker-type ON-OFF switch on the yoke to switch the light on.

When not using the examination light, be sure to switch the light off. This will save energy and prolong life of the lamp.



Operating Wall-mounted Lighthead.

2. OPERATING THE EQUIPMENT

MOBILE (FLOOR STAND) FIXTURE

WARNING: DO NOT USE BEZEL MOUNTED HANDLE TO MOVE MOBILE FLOOR STAND UNIT. USING THE HANDLE TO PUSH OR PULL THE UNIT MAY CAUSE IT TO TIP, AND MAY RESULT IN INJURY TO PERSONNEL.

1. Positioning Floor Stand —

- a. Remove the three-prong plug from receptacle.
- b. Using the vertical support tube, move the floor stand to the desired location.

2. Positioning Lighthead — The following movements can be made by using the bezel mounted handle:

(1) Rotate 360 degrees around support tube; (2) rotate clockwise or counterclockwise about horizontal suspension arm (within limits

of stops); (3) tilt forward or backward in yoke; and (4) move up or down by pivoting at horizontal suspension arm mounting point.

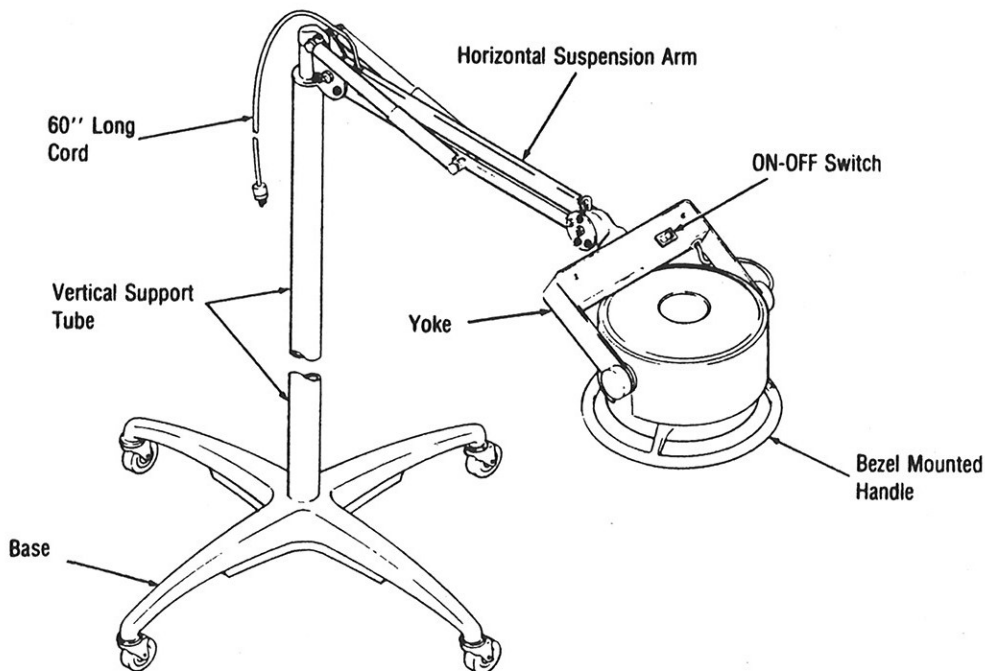
When examination light is not in use, raise suspension arm above the horizontal position. This relieves some tension and prolongs the life of the springs.

NOTE: The optional extension arm cannot be used on the Mobile (Floor Stand) Fixture.

3. Operating Light —

- a. Be sure three-prong plug of lighthead is plugged into 110 volt receptacle.
- b. Be sure electrical power is supplied to the receptacle.
- c. Use the rocker-type ON-OFF switch on the yoke to switch the light on.

When not using the examination light, be sure to switch the light off. This will save energy and prolong life of the lamp.



Operating Mobile (Floor-stand Mounted) Lighthead.

3. CLEANING THE EQUIPMENT

WARNING: BE SURE POWER TO LIGHTHEAD IS OFF BEFORE CLEANING. ALSO BE SURE LAMP HOLDER AND FRONT GLASS ARE COOL BEFORE TOUCHING.

CAUTION: To prevent damaging equipment, do not use abrasive pads or cleansers. Do not spray cleaner or disinfectant directly on equipment.

CLEANING IMPLEMENTS

Small Basins and/or Containers each with Trigger Spray (For clear water, detergent solution and disinfectant solution)

Soft Lint-Free Cloths

Rubber Gloves

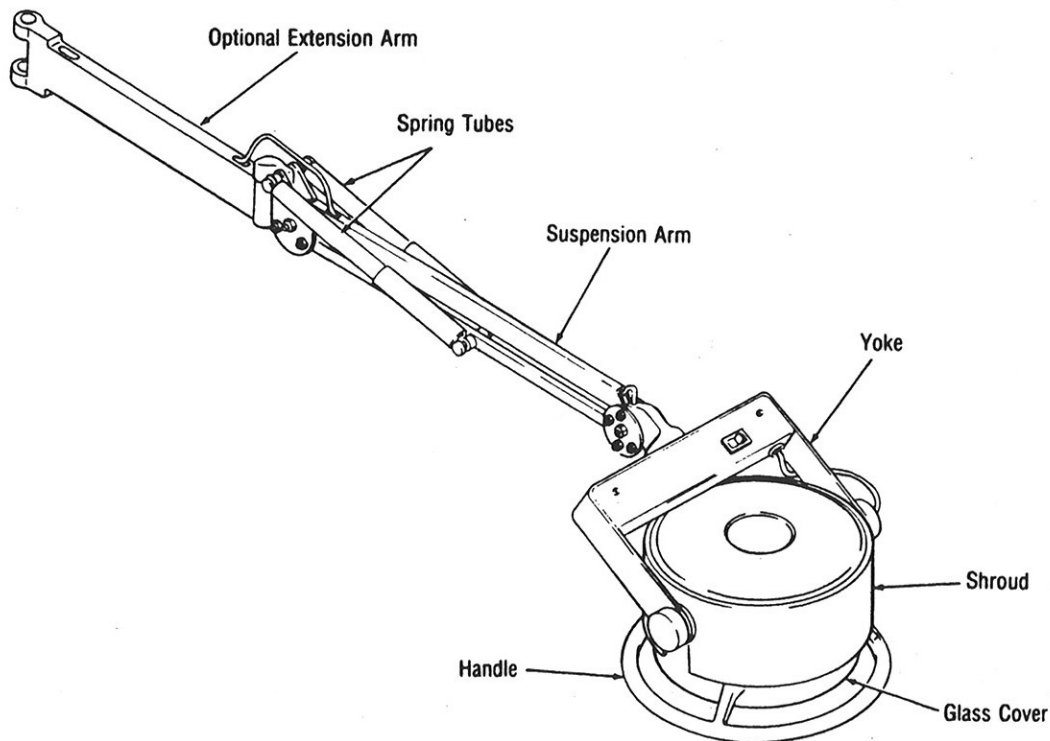
Mild Detergent Solution (e.g., Joy, Ivory)

Quarternary Ammonium Compound (e.g., Zephrian) at concentration and contact time recommended by the manufacturer

AREAS TO BE CLEANED

Clean and disinfect the following areas:

- Spring Tubes
- Suspension Arm
- Optional Extension Arm
- Yoke
- Shroud
- Glass Cover
- Handle With Bezel



Areas To Be Cleaned.

3. CLEANING THE EQUIPMENT

CAUTION: Take care to prevent leakage of water into interior of lighthouse. Do not attempt to clean the internal glassware as degradation may result.

CLEANING PROCEDURE

1. Disconnect electrical power.
2. Wear rubber gloves.
3. Dampen a soft cloth with a mild detergent and water solution. Wipe the suspension arm, optional extension arm, spring tubes, yoke, shroud, handle with bezel, and glass cover.
4. Dampen a clean soft cloth with clear water, and rinse all surfaces.

5. Wipe all surfaces dry with a clean, dry soft cloth.

DISINFECTING PROCEDURES

1. Disconnect electrical power.
2. Wear rubber gloves.
3. Dampen a soft cloth with disinfectant solution. Wipe the suspension arm, optional extension arm, spring tubes, yoke, shroud, handle with bezel, and glass cover.
4. Dampen a clean soft cloth with clear water and rinse all surfaces.
5. Wipe all surfaces dry with a clean, dry soft cloth.

4. MAINTENANCE

WARNING: TURN OFF POWER TO LAMP BEFORE RELAMPING. LAMP HOLDER AND INNER REFLECTOR CASTING REMAIN HOT AFTER LIGHT IS OFF. BE SURE REFLECTOR, OUTER COVER, AND INNER REFLECTOR CASTING ARE COOL BEFORE TOUCHING.

LAMP REPLACEMENT

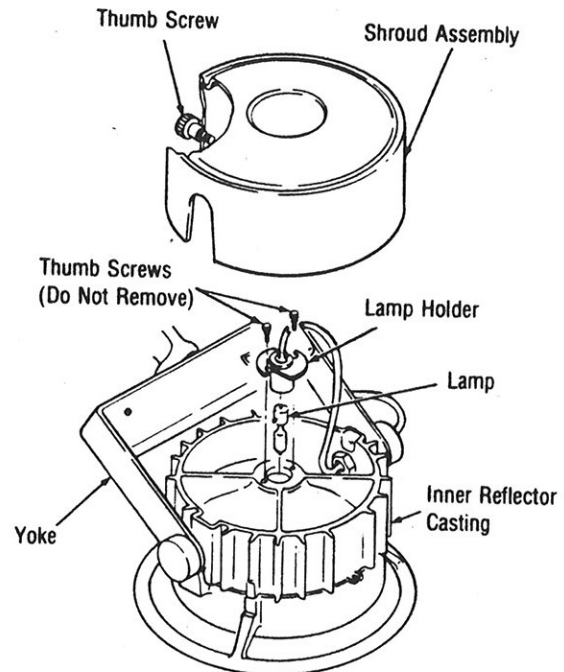
To replace burned out lamp, proceed as follows:

1. Turn off power to lighthouse, and be sure all parts of lighthouse are cool.
2. Loosen thumb screw that is restraining shroud assembly, tilt lighthouse in yoke, and remove shroud assembly from lighthouse.
3. Loosen but do not remove two thumb screws on lamp holder.
4. Rotate lamp holder counterclockwise and pull it gently from back of lighthouse.
5. While holding the base of the old lamp, push the lamp into the lamp holder; then rotate lamp to free it from lamp holder. Remove the old lamp.

CAUTION: Do not touch portion of lamp with bare fingers while relamping. Skin oils on glass are detrimental to lamp life. If lamp is touched, dampen a soft white cloth with alcohol and wipe lamp. Wipe dry with a clean, dry soft cloth.

6. Holding new lamp by its base (do not remove protective wrapper from lamp), insert lamp into lamp holder.

7. Push lamp into the lamp holder and rotate lamp to lock it in place.



Replacing Lamp.

8. Remove protective wrapper from lamp. Do not touch lamp glass.
9. Place lamp holder into back of lighthouse and rotate holder so that slots of holder engage thumb screws.
10. Secure lamp holder by tightening the thumb screws.
11. Replace shroud assembly on lighthouse and securely tighten thumb screw.

CAUTION: Excessive braking friction will increase wear and can cause noisy operation. Proper braking friction is defined as that amount of friction which is just enough to prevent drifting when lighthouse is placed in selected position.

4. MAINTENANCE

COUNTERBALANCE ADJUSTMENT

The suspension arm and lighthouse are factory adjusted to remain in balance as they pivot about the suspension arm mount. However, should slight drifting occur, adjust as follows:

1. Hold the locknut with a 3/8-inch wrench and tighten adjusting screw with a 1/8-inch Allen wrench.
2. Tighten all four screws evenly until proper braking friction is obtained. There are two screws on each end of suspension arm assembly.

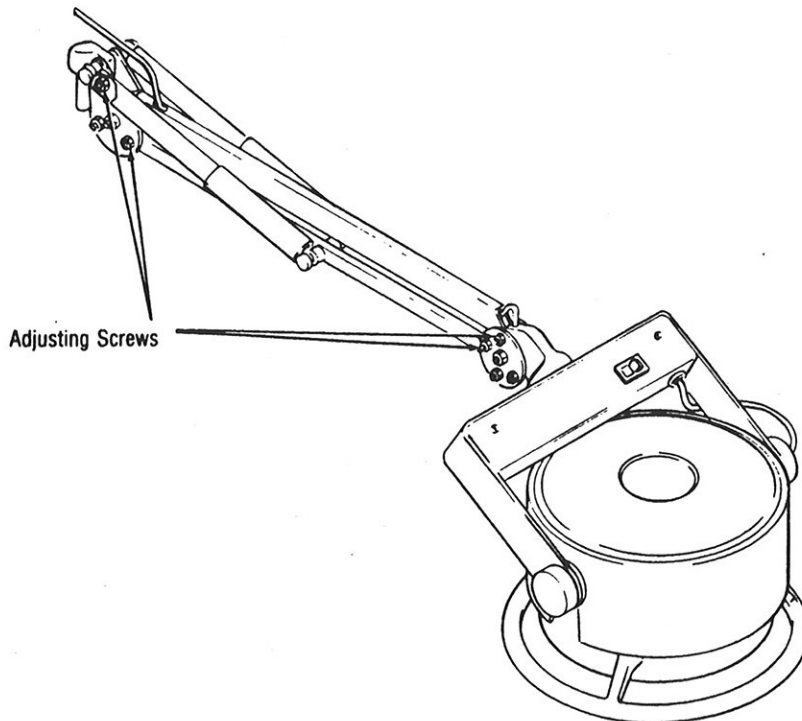
WARNING: TURN OFF POWER TO EXAMINATION LIGHTING FIXTURE BEFORE ADJUSTING YOKE PIVOT.

CAUTION: Excessive braking friction will increase wear and can cause noisy operation. Proper braking friction is defined as that amount of friction which is just enough to prevent drifting when lighthouse is placed in selected position.

YOKE PIVOT ADJUSTMENT

The yoke should rotate smoothly and should not drift after it is positioned. If drifting occurs, eliminate it as follows:

1. Disconnect power to examination light.
2. Disassemble switch box by removing two screws from back of yoke.
3. Using a 3/4-inch open end wrench, tighten locknut on suspension arm mount to



Counterbalance Adjustment.

4. MAINTENANCE

produce sufficient braking friction within the joint.

4. Install switch box with the two screws.

WARNING: TURN OFF POWER TO EXAMINATION LIGHTING FIXTURE BEFORE ADJUSTING LIGHTHEAD PIVOT.

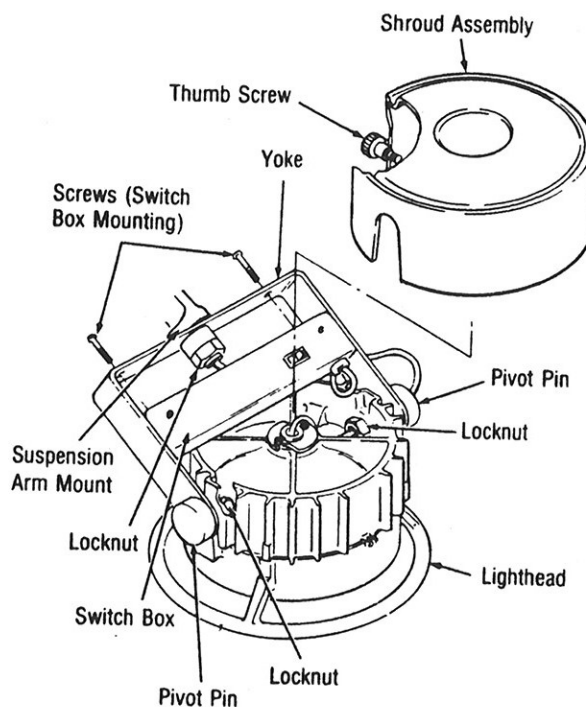
CAUTION: Excessive braking friction will increase wear and can cause noisy operation. Proper braking friction is defined as that amount of friction which is just enough to prevent drifting when lighthead is placed in selected position.

LIGHTHEAD PIVOT ADJUSTMENT

The lighthead should rotate smoothly and should not drift after it is positioned. If adjustment is required, adjust both pivot pins and locknuts as follows to equalize braking friction on sides of lighthead:

1. Disconnect power to examination light.
2. Loosen thumb screw and remove shroud assembly.
3. Using a metal disc (3/32 inch thick by 1-1/4 to 1-1/2 inches diameter, the size of a U.S. half dollar coin) to hold pivot pin to keep it from turning, tighten locknut with a 3/4-inch open end wrench to produce sufficient braking friction within the joint.
4. Replace shroud assembly.

CAUTION: Only use recommended lubricant. Oil will cause loss of braking friction. Do not grease sides of arms, plates, or friction washers.



Adjustments of Pivots.

LUBRICATION

NOTE: Do not disassemble suspension arm to lubricate. Use only enough grease to eliminate squeaking.

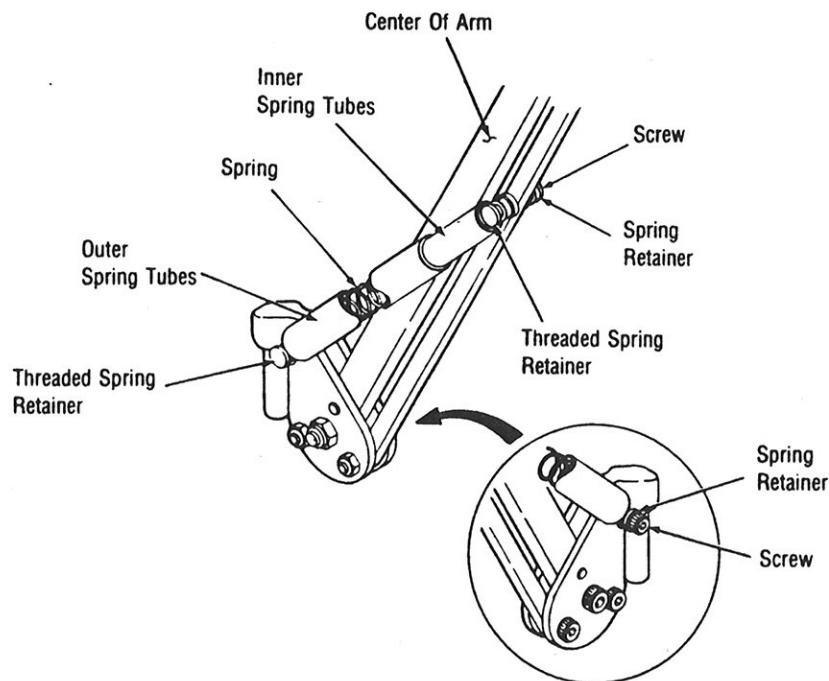
1. Using a toothpick or other small implement, apply a minute amount of Lubrelon White (TFE) Grease, or equivalent, to pivot points.
2. Work grease into pivot points from inside of tubes by moving arm up and down before applying any additional grease.
3. Apply a small amount of Lubrelon White (TFE) Grease, or equivalent, to spring pivots.

WARNING: BEFORE REMOVING SPRING(S) FROM ARM, BE SURE THAT ARM IS SECURELY HELD IN THE FULL "UP" POSITION.

4. MAINTENANCE

SPRING REPLACEMENT

1. Using several layers of strong tape, secure arm in full "up" position.
2. Remove old spring completely.
3. Slip new spring into spring tubes.
4. Slip spring loop, at end of spring that is protruding from inner spring tube, onto spring retainer nearest mounting bracket.
5. Remove screw from spring retainers in center of arm.
6. Hook these spring retainers into free ends of springs.
7. Slip screw through non-threaded spring retainer, stretching springs until screw enters hole in arm.
8. When screw is completely through the arm, apply loc-tite #222 or equivalent to threads.
9. Carefully insert an Allen wrench or small screw driver blade into outside of threaded spring retainer.
10. Stretch spring until threaded retainer engages screw.
11. Tighten retaining screw.
12. Wipe excess loc-tite from exposed surfaces.
13. Remove tape used to secure arm in "up" position.



Replacing Springs.

5. REPLACEMENT PARTS

When ordering replacement parts, please include the part numbers and descriptions listed subsequently.

To hasten service to you, include on your order the model and serial numbers of this equipment.

Send your order directly to the Regional Office which serves your area. Your AMSCO representative will give you the address as well as ordering information regarding other parts.

NAME	NUMBER	QUANTITY REQUIRED
LIGHTING FIXTURE		
Lamp, 120 Volt	P-84079-033	A/R
Lamp, 33 Volt (International only)	P-129352-157	A/R
Spring	P-84079-207	A/R

For replacement of parts other than listed above, contact your nearest AMSCO Service Representative.

NOTES

Protect your AMSCO equipment with cost-effective extended service agreements

The best way to prevent costly downtime due to equipment malfunction is with regularly scheduled maintenance performed by qualified technicians trained in the latest technology. AMSCO offers extended service **AMPLAN** and **AMPLAN plus** agreements to give your capital equipment planned maintenance that will help correct little problems before they become big ones. AMSCO Engineering Service combines the precise maintenance program and factory-trained technicians to assure you of maximum productivity.

Our AMSCO service technicians thoroughly inspect, clean, adjust and provide all necessary maintenance to keep your equipment performing according to factory specifications, all at an established economical rate that you can plan for.

We have more than 5,000 customers who are benefiting from AMSCO extended service plans. Why not join them? Obtain complete details from your AMSCO Region Office, call 1-800-333-8828, or write to:



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