

**MODEL 371/371L**  
**INSTRUCTION SHEET FOR COMMANDER®**  
**MODEL 371/371L ROTATING LIGHTS**

Address all communications and shipments to:



**FEDERAL SIGNAL CORPORATION**  
Electrical Products Division  
Service Department  
2645 Federal Signal Drive  
University Park, IL 60466-3195

# **INSTRUCTION SHEET FOR COMMANDER® MODEL 371/371L ROTATING LIGHTS**

## **SAFETY MESSAGE TO INSTALLERS, USERS AND MAINTENANCE PERSONNEL**

It is important to follow all instructions shipped with this product. This device is to be installed by a trained electrician who is thoroughly familiar with the National Electric Code/ Canadian Electric Code and will follow the NEC/CEC Guidelines as well as local codes.

The selection of mounting location for the device, its controls and the routing of the wiring is to be accomplished under the direction of the facilities engineer and the safety engineer. In addition, listed below are some other important safety instructions and precautions you should follow:

- Read and understand all instructions before installing or operating this equipment.
- Do not connect this light to the system when power is on.
- After installation, ensure that the threaded dome ring joint is fully engaged.
- After installation, test the light system to ensure that it is operating properly.
- After testing is complete, provide a copy of this instruction sheet to all operating personnel.
- Establish a procedure to routinely check the light installation for integrity and proper operation.

Failure to follow all safety precautions and instructions may result in property damage, serious injury, or death to you and others.

## **I. INSTALLATION**

### **A. Unpacking**

After unpacking the light, examine it for damage that may have occurred in transit. If the equipment has been damaged, do not attempt to install or operate it. File a claim immediately with the carrier stating the extent of the damage. Carefully check all envelopes, shipping labels and tags before removing or destroying them.

### **B. Mounting**

The Model 371 lights are designed for mounting on a flat horizontal surface or on a 1" NPT pipe. Mounting on a vertical surface can be accomplished using a separately purchased Model LWMB2 (wall mounting bracket) or LCMB2 (corner mounting bracket) mounting kit. For surface mounting on solid substrates, a separately purchased Model 371BRCKT (3-point mounting bracket) may be used. If mounting conditions are unusually severe, a shock mount kit (for mounting on a flat horizontal surface) may also be separately purchased. If conduit side entries are to be used, disassemble light as described in section IE.1 and remove knockout(s) with a blunt tool prior to mounting light.

#### **1. Pipe Mounting**

- a. Attach light to pipe by turning clockwise.
- b. Refer to section E for information on making electrical connections.

## 2. Surface Mounting (See figure 1)

- a. Using the gasket as a template, scribe four drill position marks on the mounting surface. Drill a 9/32" (7.1mm) diameter hole at each of the outside drill position marks for mounting. Drill or punch a 1-3/8" (34.9 mm) diameter hole at the center drill position mark for conduit entry.
- b. Set light on gasket and attach to the mounting surface using the provided 1/4" screws and washers.
- c. Attach suitable 1" NPT hub or connector to conduit entrance in bottom of light. For Type 4X/IP66 applications, the hub or connector must be suitably rated (Myers ST-3 or T&B H100-TB hubs are recommended.)
- d. Refer to section E for information on making electrical connections.

## C. Beam Adjustment

The angle of the sealed beam lamp can be altered if desired. The light is shipped from the factory with the lamp in the horizontal position. To change the lamp's angle proceed as follows:

1. Remove dome assembly by grasping the die-cast ring attached to the dome and turning it counter-clockwise.
2. See figure 2. The lamp is locked in place with three 10-32 screws. Remove the locking screw. Loosen the two pivot screws and adjust the lamp to the desired position. Tighten the two pivot screws to secure the lamp in position.
3. Replace the dome assembly by turning clockwise until it is seated securely against the gasket.

## D. Specifications

Model	371	371L
Operating Voltage	120 VAC 50/60 Hz	120 VAC 50/60 Hz
Lamp Wattage	200W	100W
Candlepower	36,000	20,000
Flash Rate	60 FPM	60 FPM
Environmental Ratings	Type 4X, IP66	Type 4X, IP66

## E. Electrical Connections

The model 371/371L comes assembled from the factory with two color-coded leads for wiring to a junction box. If desired, the factory leads can be removed and the supply connections can be directly made to the terminal block located on the back-side of the motor mounting base as described below.

### **WARNING**

**To avoid electrical shock hazards, do not connect to supply circuit when power is applied.**

1. Disassemble the light as follows:
  - a. Remove dome assembly by grasping the die-cast ring attached to the dome and turning it counter-clockwise.
  - b. Remove three no. 10 hex head screws that secure motor mounting base to housing.
  - c. Remove motor mounting base.
  - d. If desired, remove factory supplied leads from the terminal block.
2. If conduit side entries are to be used, attach either Myers STNTB-2 or T&BH075-TBH 3/4" N.P.T. conduit hub with 3/4" N.P.T. close nipple (all user-supplied) to housing and tighten securely. When side entries are used, the bottom 1" N.P.T. conduit entry must be plugged with threaded plug (user-supplied).
3. Route supply wires (10 AWG to 16 AWG) into the light housing taking care to keep wires clear of motor fan.
4. Strip a maximum of .28" (7 mm) of wire insulation from the ends of the power leads. Connect wires to terminal block by inserting the stripped ends of the wire into the connector as far as they can travel and tightening the clamping screw (max. tightening torque = 7.0 in-lbs { .8 N-m}).

### **IMPORTANT**

#### **Proper grounding of the light requires two connections to a solid earth ground.**

5. See figure 3. Connect earth ground to terminal block and green ground screw located in light housing.
6. Re-assemble the light and test for proper operation.

## **II. MAINTENANCE**

### **SAFETY MESSAGE TO MAINTENANCE PERSONNEL**

Listed below are some important safety instructions and precautions you should follow:

- Read and understand all instructions before operating this system.
- Any maintenance to the light system must be done with the power turned off.
- Any maintenance to the light system must be performed by a trained electrician in accordance with NEC/CEC Guidelines and local codes.
- Never alter the unit in any manner. Safety may be endangered if additional openings or other alterations are made to units.
- The nameplate, which contains cautionary or other information of importance to maintenance personnel, should not be obscured.
- If the dome is damaged in any way, the complete dome assembly **MUST** be replaced.
- After performing any maintenance, test the light system to ensure that it is operating properly.

## A. Lamp Replacement (See figure 4)

### WARNING

**To avoid electrical shock hazards, do not replace lamp when power is applied.**

1. Remove the dome assembly by grasping the die-cast ring attached to the dome and turning it counter-clockwise. If difficulty occurs removing the dome assembly, place a screwdriver blade against one of the four bosses on the die-cast ring attached to the dome. Gently tap the screwdriver handle to loosen the dome assembly from the housing.

### WARNING

**To maintain the watertight enclosure, do not damage dome or threads while disassembling or reassembling the unit. Lubricated threaded joints exposed for long periods of time may attract small particles of dirt or other foreign materials. Re-assemble joint immediately after performing maintenance.**

2. Lift the connector from the lamp terminals.
3. Lift the spring clip at the top of the lamp and rotate the curved lamp retainer toward the front of the lamp. Lift out the lamp.
4. Install the replacement lamp by placing the edge of the lamp into the groove of the die-cast lampholder. Rotate the lamp so that its prongs point straight up.
5. Rotate the lamp retainer up until the spring clip snaps over the edge of the lamp. Replace the connector on the lamp terminals.
6. Replace the dome assembly by turning clockwise until it is seated securely against the gasket.
7. Test light for proper operation.

## B. Lubrication

1. Lubricate the lamp shaft bearings with a light machine oil every 12 months or 5000 hours of service, whichever comes first.
2. The worm and worm gear rarely require lubrication. However, if lubrication is required use a light high quality grease.
3. The motor is equipped with sealed bearings and requires no maintenance.
4. The threaded dome ring joint should be well lubricated with petroleum or a soap-thickened mineral oil. If corrosive products have accumulated on joints and cannot readily be removed with solvents, the parts should be discarded and replaced.

**C. Replacement parts**

<u>Description</u>	<u>Part No.</u>
Plastic dome assembly, Amber	K8459125A
Plastic dome assembly, Blue	K8459125A-01
Plastic dome assembly, Clear	K8459125A-02
Plastic dome assembly, Green	K8459125A-03
Plastic dome assembly, Red	K8459125A-04
Glass dome assembly, Amber	K8459126A
Glass dome assembly, Blue	K8459126A-01
Glass dome assembly, Red	K8459126A-02
Glass dome assembly, Clear	K8459126A-03
Glass dome assembly, Green	K8459126A-04
Gasket, dome ring	K8459123A
Gasket, surface mount	K8459127A
Lamp, 100 Watt (125/130V) (100PAR46/3NSP)	K8107A130
Lamp, 200 Watt (125/130V) (200PAR46/3NSP)	K8442A039
Kit, motor replacement	K8459A113B
Assembly, worm gear	K8459A017
Brush and spring	K8442A028

**D. Accessories**

<u>Description</u>	<u>Part Number</u>
Mounting bracket, surface	371BRCKT
Mounting bracket, wall	LWMB2
Mounting bracket, corner	LCMB2
Kit, shock mount	K8459A076C
Conduit hub kit, 3/4" NPT	K8459138A
Close-up plug, 1" NPT	K8459130A

**II. SERVICE**

The Federal factory will service your equipment or provide technical assistance with any problems that cannot be handled locally.

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At this time a brief explanation of the service requested, or the nature of the malfunction, should be provided.

Address all communications and shipments to:

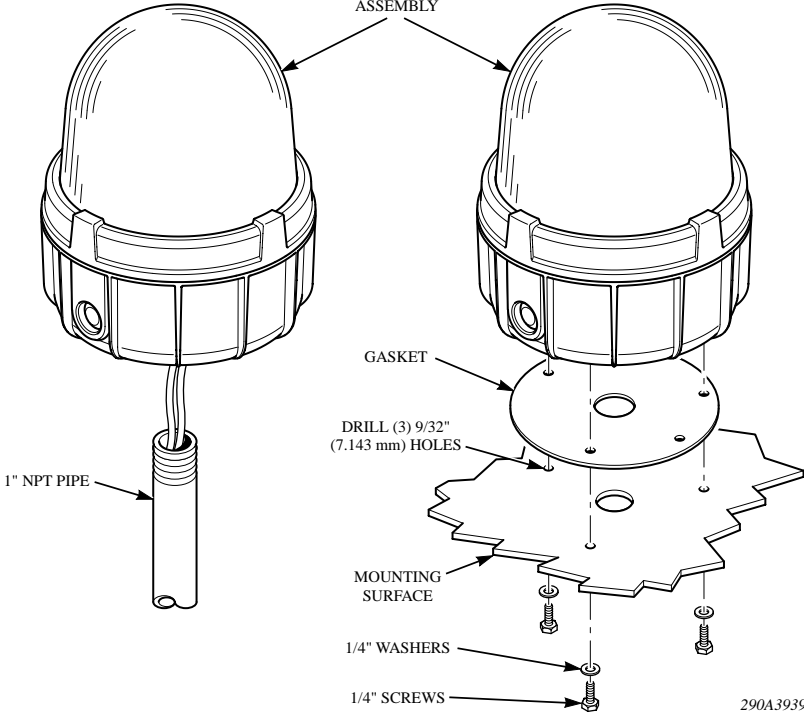
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University Park, IL 60466-3195

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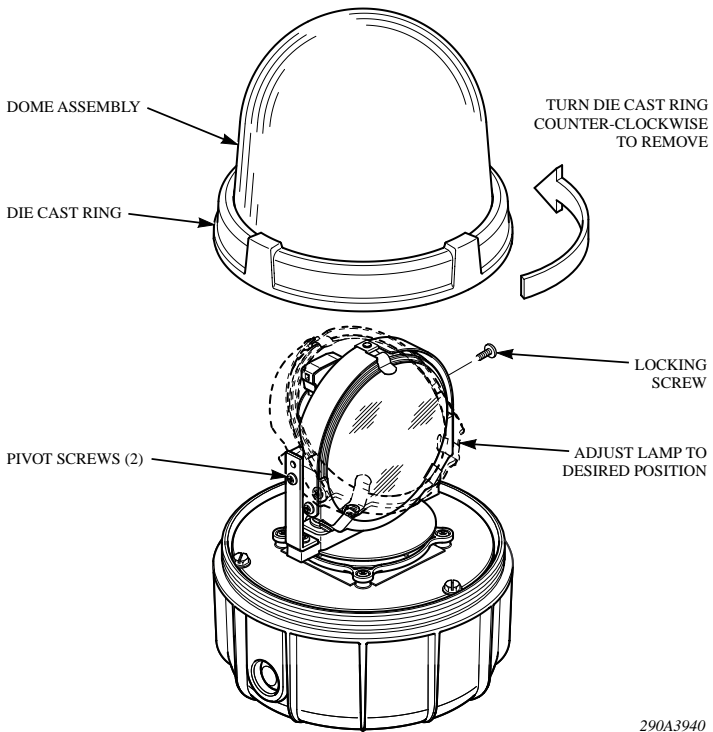
**PIPE MOUNT**

**SURFACE MOUNT**

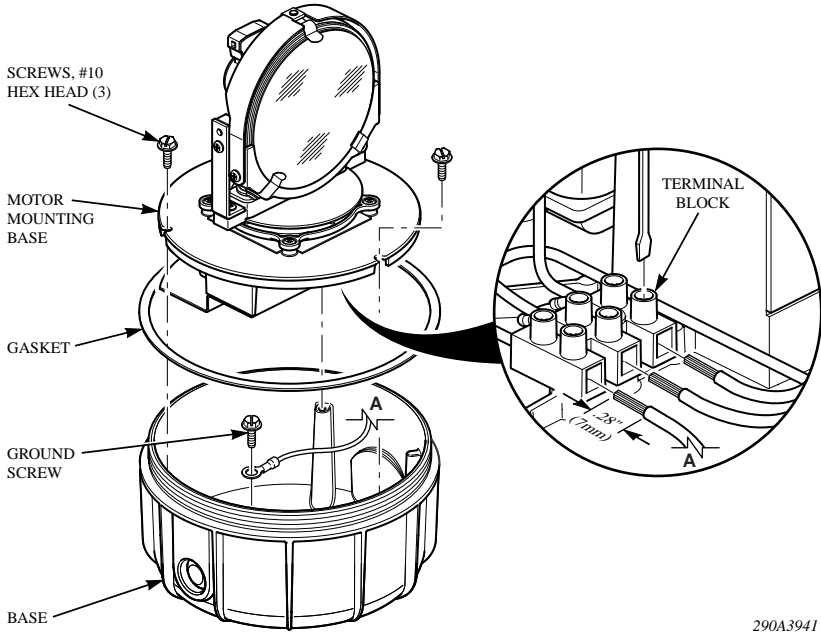
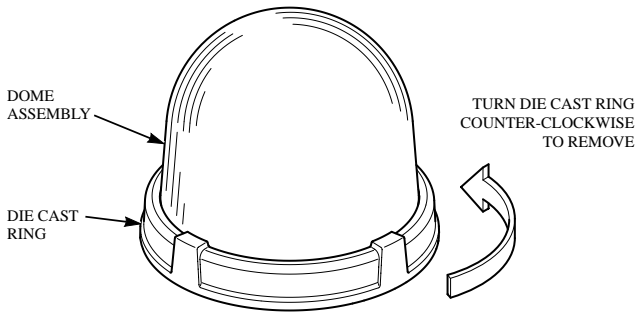
371 LIGHT  
ASSEMBLY



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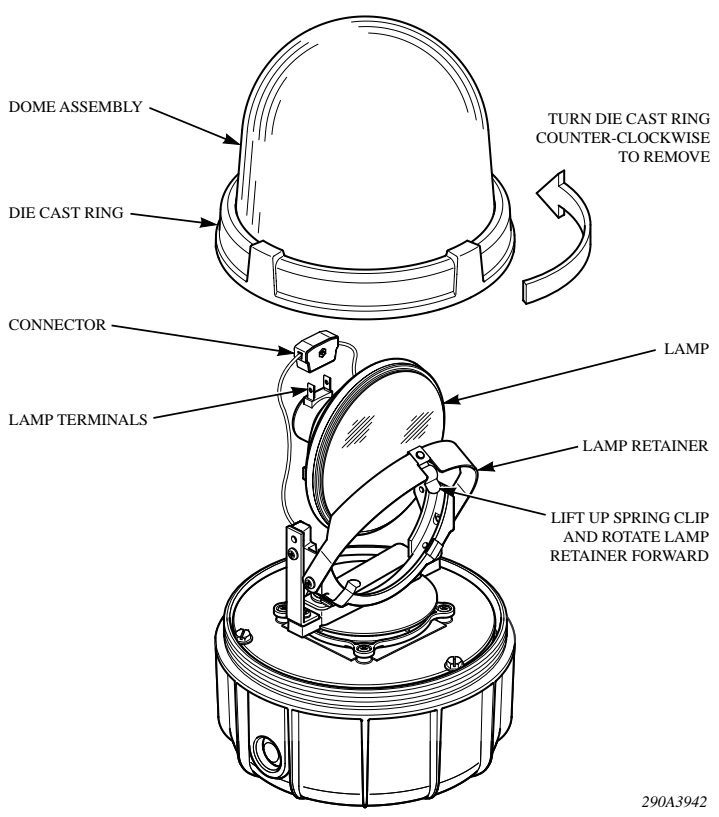


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# **MODEL 371**

**INSTALLATION AND SERVICE INSTRUCTIONS FOR SHOCK MOUNT  
KIT FOR COMMANDER® MODEL 371 LIGHTS**

Address all communications and shipments to:



**FEDERAL SIGNAL CORPORATION**

**Electrical Products Division**

2645 Federal Signal Drive

University Park, IL 60466-3195

# INSTALLATION AND SERVICE INSTRUCTIONS FOR SHOCK MOUNT KIT FOR COMMANDER® MODEL 371 LIGHTS

## SAFETY MESSAGE TO INSTALLERS, USERS AND MAINTENANCE PERSONNEL

It is important to follow all instructions shipped with this product. This device is to be installed by a trained electrician who is thoroughly familiar with the National Electric Code/Canadian Electric Code and will follow the NEC/CEC Guidelines as well as local codes.

The selection of mounting location for the device, its controls and the routing of the wiring is to be accomplished under the direction of the facilities engineer and the safety engineer. In addition, listed below are some other important safety instructions and precautions you should follow:

- Read and understand all instructions before installing or operating this equipment.
- Do not connect this light to the system when power is on.
- After installation, ensure that all threaded joints and bolts are properly tightened.
- After installation, test the light system to ensure that it is operating properly.
- After testing is complete, provide a copy of this instruction sheet to all operating personnel.
- Establish a procedure to routinely check the light installation for integrity and proper operation.

Failure to follow all safety precautions and instructions may result in property damage, serious injury, or death to you or others.

## I. INSTALLATION

This product is intended to be used in conjunction with either the Model 371, 371L, 371DST, or 371ST products. These instructions are intended to supplement, and not replace the installation instructions provided with each of these models. The installer should insure that all installation instructions are followed.

### A. Unpacking

After unpacking the equipment, examine it for damage that may have occurred in transit. If the equipment has been damaged, do not attempt to install or operate it. File a claim immediately with the carrier stating the extent of the damage. Carefully check all envelopes, shipping labels and tags before removing or destroying them.

### B. Mounting

The Model 371 series of lights can be mounted on a flat horizontal surface using the shock mount kit as follows (refer to figure 1).

- a. Using the gasket provided with light as a template or dimensions shown in figure 2, scribe drill position marks for the three mounting holes and center wiring hole on the mounting surface. Drill 9/32" (7.1 mm) diameter holes at the drill position marks for the mounting holes and a 3/8" (9.5 mm) diameter hole for the supply wiring.

**NOTE**

Surface mounting gasket is only to be used as a template and is not required for installation.

- b. Attach three (3) vibration mounts to the threaded holes in the bottom of the light housing.
- c. Install rubber grommet through  $\frac{3}{8}$ " (9.5 mm) diameter hole for supply wire passage.
- d. Route supply wires through grommet allowing approximately 4 to 6 inches (100 to 150mm) of additional slack between mounting surface and bottom of light. Apply silicone sealant around hole and wires to assure water tight seal.
- e. Seal conduit entrance in light with silicone sealant.
- f. Attach light to mounting surface and secure with the provided nuts and lockwashers.
- g. Complete the installation of the light by following the appropriate sections in the instruction sheet that accompanied the device.

## **II. SERVICE**

The Federal factory will service your equipment or provide technical assistance with any problems that cannot be handled locally.

Any units returned to Federal Signal for service, inspection, or repair must be accompanied by a Return Material Authorization. This R.M.A. can be obtained from a local Distributor or Manufacturer's Representative.

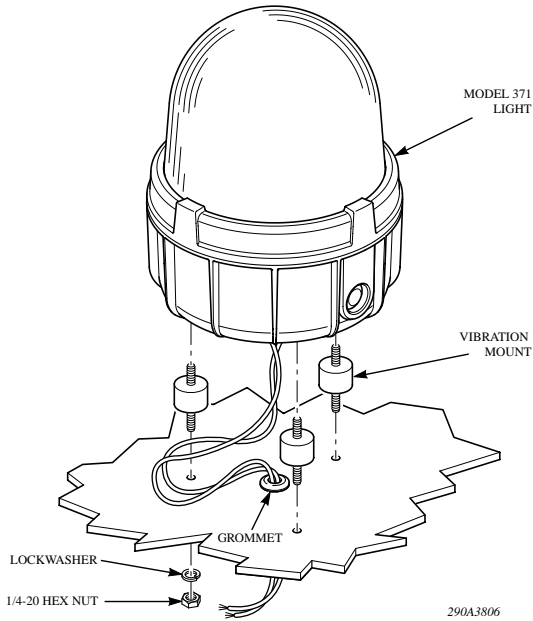
At this time a brief explanation of the service requested, or the nature of the malfunction, should be provided.

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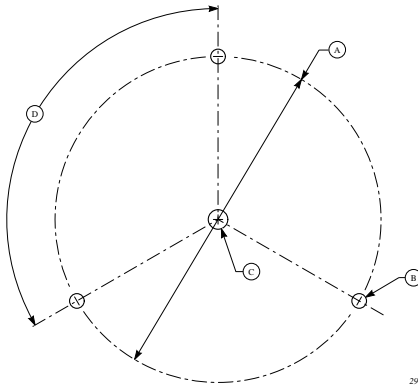
Key

A = 6.25" 158.8 mm

B = 9/32" 7.1 mm

C = 3/8" 9.5 mm

D = 120°



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**FEDERAL SIGNAL CORPORATION**  
Electrical Products Division



## INSTALLATION AND SERVICE INSTRUCTIONS FOR MOTOR REPLACEMENT KIT FOR COMMANDER® MODEL 371/371L LIGHTS

### SAFETY MESSAGE TO INSTALLERS, USERS AND MAINTENANCE PERSONNEL

It is important to follow all instructions shipped with this product. This device is to be installed by a trained electrician who is thoroughly familiar with the National Electric Code/Canadian Electric Code and will follow the NEC/CEC Guidelines as well as local codes.

The selection of mounting location for the device, its controls and the routing of the wiring is to be accomplished under the direction of the facilities engineer and the safety engineer. In addition, listed below are some other important safety instructions and precautions you should follow:

- Read and understand all instructions before installing or operating this equipment.
- Disconnect power from the unit before performing any maintenance.
- After installation, test the light system to ensure that it is operating properly.
- After testing is complete, provide a copy of this instruction sheet to all operating personnel.
- Establish a procedure to routinely check the light installation for integrity and proper operation.

Failure to follow all safety precautions and instructions may result in property damage, serious injury, or death to you and others.

### I. INSTALLATION.

This kit is to be used with Model 371 or 371L rotating lights. These instructions are intended to supplement, and not replace, the installation instructions provided with each of these models. The installer should insure that all installation instructions are followed.

#### A. *Unpacking.*

After unpacking the light, examine it for damage that may have occurred in transit. If the

equipment has been damaged, do not attempt to install or operate it. File a claim immediately with the carrier stating the extent of the damage. Carefully check all envelopes, shipping labels, and tags before removing or destroying them.

#### B. *Motor Replacement.*

### WARNING

Disconnect the unit from the supply circuit before opening the enclosure.

#### 1. Series B Model 371 & 371L Rotating Lights.

a. Remove the dome assembly by grasping the die-cast ring attached to the dome and turning it counter-clockwise. If difficulty occurs removing the dome assembly, place a screwdriver blade against one of the four bosses on the die-cast ring attached to the dome. Gently tap the screwdriver handle to loosen the dome assembly from the housing.

### WARNING

To maintain the watertight enclosure, do not damage dome or threads while disassembly or reassembling the unit. Lubricated threaded joints exposed for long periods of time may attract small particles of dirt or other foreign materials. Re-assemble joint immediately after performing maintenance.

b. Remove the three no. 10 hex head screws that secure the mounting base to the housing and remove the base.

c. Disconnect the motor wires from the terminal block.

d. Remove the motor cover plate by removing the two no. 6 screws that secure the plate to the mounting base. Remove the motor plate assembly by removing the four no. 10 screws.

e. Assemble the new motor plate assembly to the mounting base making sure that the worm on the motor shaft engages with the gear attached to the lamp shaft. Apply a small amount of light high quality grease to the gear before re-installing the motor cover plate.

f. Attach the motor leads to the terminal block. The motor is not polarity sensitive.

g. Re-assemble the light and test for proper operation.

2. Series A Model 371 & 371L Rotating Lights.

a. Loosen and remove the retaining band from the light. Lift off the dome.

b. Remove the three 1/4-20 KEPS nuts that secure the base plate to the light housing and remove the base.

c. Disconnect the motor wires from the terminal block.

d. Remove the motor cover plate by removing the two no. 6 screws that secure the plate to the mounting base. Remove the motor plate assembly by removing the four no. 10 screws.

f. Before installing the new motor, crimp the provided ring terminals on the new motor leads.

g. Assemble the new motor plate assembly to the mounting base making sure that the worm on the motor shaft engages with the gear attached to the lamp shaft. Apply a small amount of light high

quality grease to the gear before re-installing the motor cover plate.

h. Attach the motor leads to the terminal block. The motor is not polarity sensitive.

i. Re-assemble the light and test for proper operation.

## II. SERVICE.

The Federal factory will service your equipment or provide technical assistance with any problems that cannot be handled locally.

Any units returned to Federal Signal for service, inspection, or repair must be accompanied by a Return Material Authorization. This R.M.A. can be obtained from a local Distributor or Manufacturer's Representative.

At this time a brief explanation of the service requested, or the nature of the malfunction, should be provided.

Address all communications and shipments to:

FEDERAL SIGNAL CORPORATION  
Electrical Products Division  
Service Department  
2645 Federal Signal Drive  
University Park, IL 60466-3195

# **MODEL 371BRCKT**

**INSTRUCTION SHEET FOR MOUNTING BRACKET KIT MODEL 371BRCKT  
FOR COMMANDER® LIGHTS**

Address all communications and shipments to:



**FEDERAL SIGNAL CORPORATION**

**Electrical Products Division**

2645 Federal Signal Drive

University Park, IL 60466-3195

# INSTALLATION AND SERVICE INSTRUCTIONS FOR MOUNTING BRACKET MODEL 371BRCKT FOR COMMANDER® LIGHTS

## SAFETY MESSAGE TO INSTALLERS, USERS AND MAINTENANCE PERSONNEL

It is important to follow all instructions shipped with this product. This device is to be installed by a trained electrician who is thoroughly familiar with the National Electric Code/Canadian Electric Code and will follow the NEC/CEC Guidelines as well as local codes.

The selection of mounting location for the device, its controls and the routing of the wiring is to be accomplished under the direction of the facilities engineer and the safety engineer. In addition, listed below are some other important safety instructions and precautions you should follow:

- Read and understand all instructions before installing or operating this equipment.
- Do not connect this light to the system when power is on.
- After installation, ensure that all threaded joints and bolts are properly tightened.
- After installation, test the light system to ensure that it is operating properly.
- After testing is complete, provide a copy of this instruction sheet to all operating personnel.
- Establish a procedure to routinely check the light installation for integrity and proper operation.

Failure to follow all safety precautions and instructions may result in property damage, serious injury, or death to you or others.

### I. INSTALLATION.

This product is intended to be used in conjunction with either the Model 371, 371L, 371DST, or 371ST products. These instructions are intended to supplement, and not replace the installation instructions provided with each of these models. The installer should insure that all installation instructions are followed.

#### A. Unpacking.

After unpacking the light, examine it for damage that may have occurred in transit. If the equipment has been damaged, do not attempt to install or operate it. File a claim immediately with the carrier stating the extent of the damage. Carefully check all envelopes, shipping labels and tags before removing or destroying them.

#### B. Mounting.

The Model 371 series of lights can be mounted directly to the mounting bracket through the use of the three (3) supplied  $\frac{1}{4}$ -20 flat head screws (refer to figure 1).

- a. Thread conduit plug into the unused conduit entry in the bottom of the light housing. The plug must be tightened until it is flush with the bottom of the light housing for proper bracket mounting.
- b. Mount the bracket to the light housing using the provided  $\frac{1}{4}$ -20 flat head screws.
- c. Secure bracket to mounting surface using three (3) user supplied  $\frac{1}{4}$ -20 screws or bolts.

- d. Complete the installation of the light by following the appropriate sections in the instruction sheet that accompanied the device.

## **II. SERVICE.**

The Federal factory will service your equipment or provide technical assistance with any problems that cannot be handled locally.

Any units returned to Federal Signal for service, inspection, or repair must be accompanied by a Return Material Authorization. This R.M.A. can be obtained from a local Distributor or Manufacturer's Representative.

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