

ROTO RAYS[®] WARNING LIGHTS

DIV. OF EASTERN FIRE EQUIP. SERVICES, INC., 440 OAK STREET LEMOYNE, PA 17043 800-504-2044

The OPERATION and CARE of YOUR NEW **ROTO RAYS[®]** WARNING LIGHTS

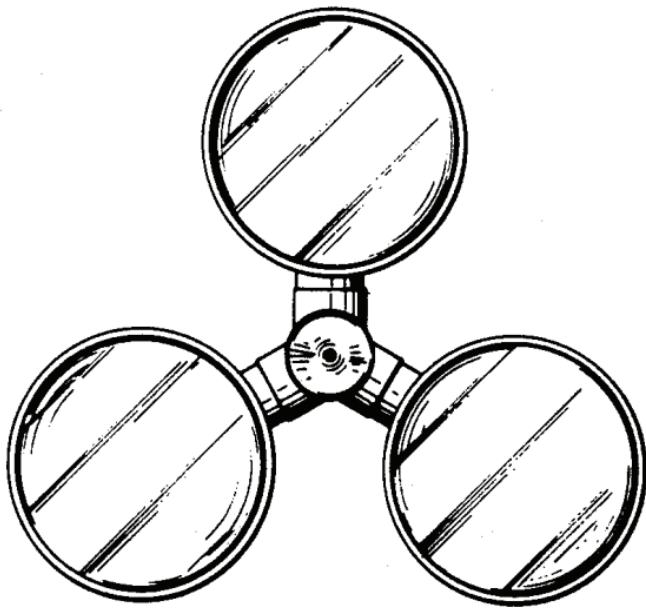


FIG. 1

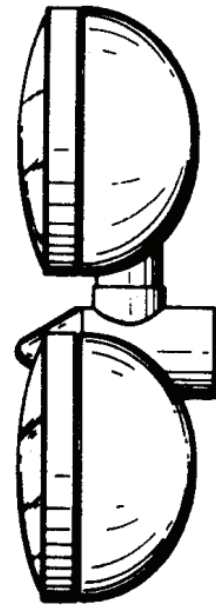


FIG. 2

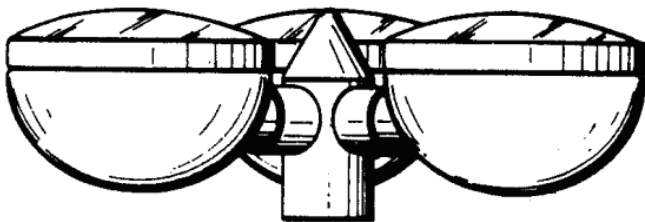


FIG. 3

SEE INSIDE

- ★ ILLUSTRATED PARTS LIST
- ★ INSTALLATION INSTRUCTIONS
- ★ WARRANTY INFORMATION

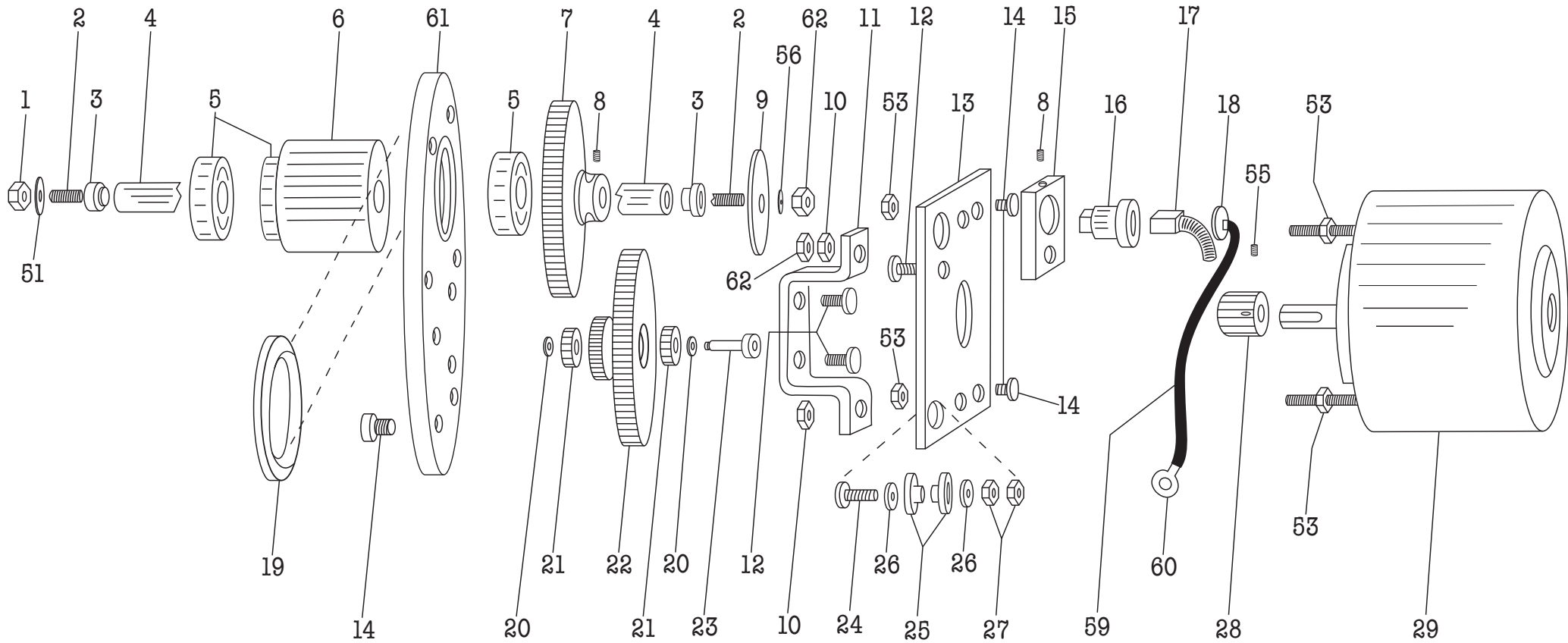
HOW TO ORDER YOUR VERY OWN ROTO RAYS[®] WARNING LIGHT

<i>INSTRUCTIONS: Pick One from each section below to create an ordering code. See example below in red.</i>		<u>Model</u>	<u>Motor Housing</u>	<u>Light Color 1</u>	<u>Light Color 2</u>	<u>Light Color 3</u>	<u>Hot Post Circuit</u>
<u>SEE EXAMPLE:</u>		4000	E1C	R	R	G	D
<u>Ordering Code</u>	<u>Description</u>	<u>Price</u>					
4000-E1C-RRG-D	4000 LED Emergency Warning Light E-1 Front Mount Chrome Red/Red/Green Dual Circuit						
Model: (Pick One)							
4000	4000 LED Emergency Warning Light						
200	200 Sealed Beam Emergency Warning Light						
Motor Housing: (Pick One)							
FFC	Front Mount Chrome			<i>Recommended for Pierce, Sutphen Rosenbauer, Ferrara</i>			
PCB	Pedestal Bullet Mount Chrome			<i>Recommended for Spartan</i>			
E1C	E-1 Front Mount Chrome			<i>Recommended for E-One</i>			
FFR	Front Mount Raw (Unfinished for Customer Painting)			<i>Recommended for Pierce, Sutphen Rosenbauer, Ferrara</i>			
E1R	E-1 Front Mount Raw (Unfinished for Customer Painting)			<i>Recommended for E-One</i>			
H2	2" Shaft Hidden Mount Painted Black			<i>Recommended for through the grill for Seagrave</i>			
H4	4" Shaft Hidden Mount Painted Black			<i>Recommended for through the grill for Pierce and Rosenbauer</i>			
H2R	2" Shaft Hidden Mount Raw (Unfinished for Customer Painting)			<i>Recommended for through the grill for Seagrave</i>			
H4R	4" Shaft Hidden Mount Raw (Unfinished for Customer Painting)			<i>Recommended for through the grill for Pierce and Rosenbauer</i>			
PMA	Pole Mount Raw (Unfinished for Customer Painting)						
PMC	Pole Mount Chrome						
Light Color 1: (Pick One)							
R	Red Warning Light						
W	White Warning Light						
B	Blue Warning Light						
G	Green Warning Light						
A	Amber Warning Light						
Light Color 2: (Pick One)							
R	Red Warning Light						
W	White Warning Light						
B	Blue Warning Light						
G	Green Warning Light						
A	Amber Warning Light						
Light Color 3: (Pick One)							
R	Red Warning Light						
W	White Warning Light						
B	Blue Warning Light						
G	Green Warning Light						
A	Amber Warning Light						
Hot Post Circuit: (Pick One)							
S	Single Circuit			<i>Light stops spinning and does not illuminate when parking brake is engaged.</i>			
D	Dual Circuit			<i>Light stops spinning and goes into flash mode when parking brake is engaged.</i>			

ROTO RAYS[®] WARNING LIGHTS

DIV. OF EASTERN FIRE EQUIP. SERVICES, 440 OAK STREET LEMOYNE, PA 17043 800-504-2044

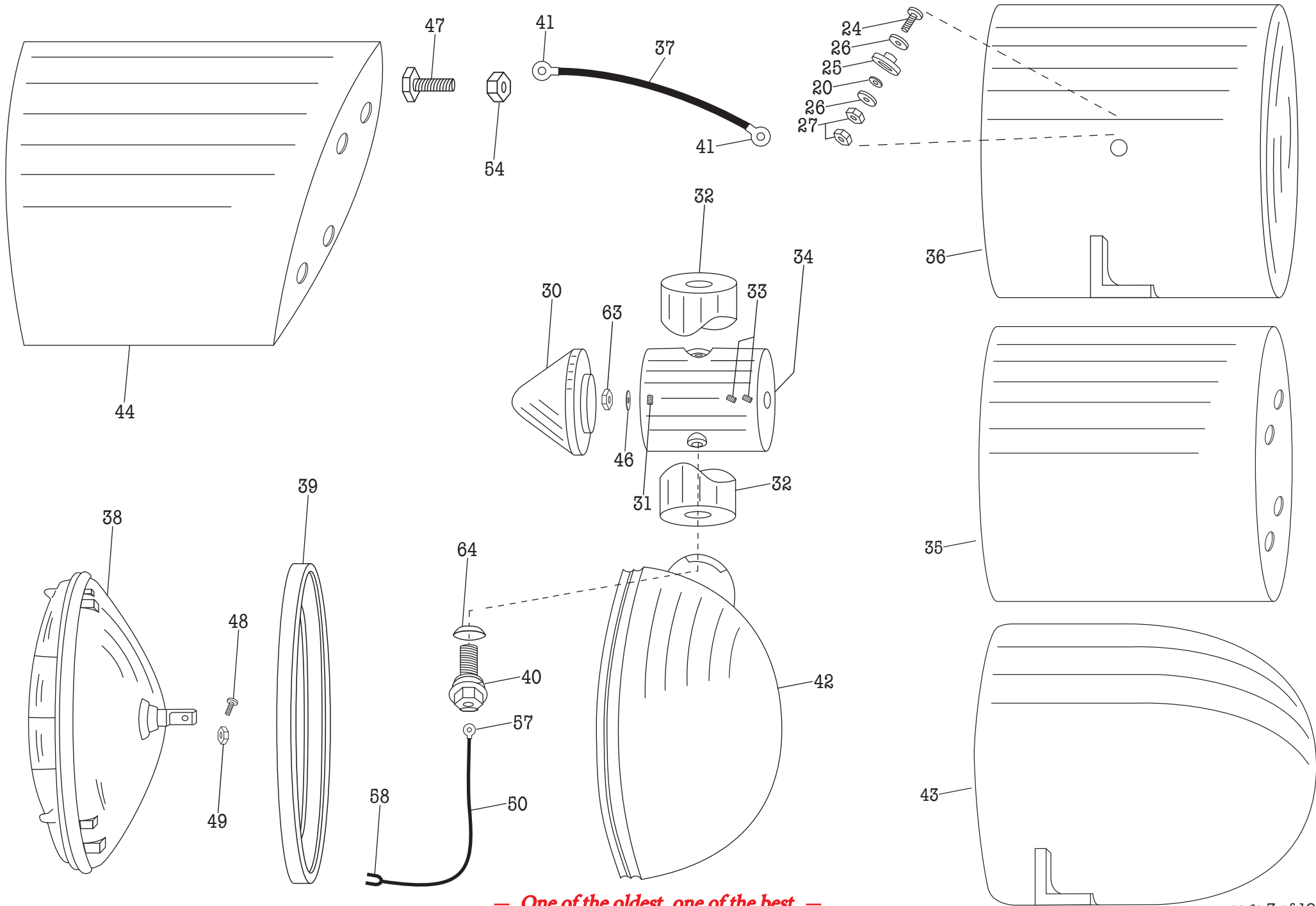
PARTS INDEX FOR ALL MODELS



— One of the oldest, one of the best —

ROTO RAYS® WARNING LIGHTS

DIV. OF EASTERN FIRE EQUIP. SERVICES, 440 OAK STREET LEMOYNE, PA 17043 800-504-2044



— One of the oldest, one of the best —

ROTO RAYS[®] WARNING LIGHTS

DIV. OF EASTERN FIRE EQUIP. SERVICES, 440 OAK STREET LEMOYNE, PA 17043 800-504-2044

PARTS LIST FOR ALL MODELS

1	200101	Brass Nut, 8-32 (One W/5/16")
2	200102FP	Brass Elect. Contact Rod, 1"
2	200102H	Brass Elect. Contact Rod, 4"
2	200102H2	Brass Elect. Contact Rod, 2"
3	200103	Delrin Insulating Shoulder Washer (#3)
4		Main Shaft, 3" (4.875) - No Longer Used
4	200104FP	Main Shaft, 2" (3.873)
4	200104H2	Main Shaft, 1" (2.718)
4	200104H4	Main Shaft, 4" (5.875)
5	200105A	Bearing, Main Shaft (Large Bearing)
6	200106FP	2" Bearing Shaft/Housing, (Polished)
6	200106FPR	2" Bearing Shaft/Housing, (Raw)
6	200106HP	1" Bearing Shaft/Housing, (Polished)
6	200106HR	1" Bearing Shaft/Housing, (Raw)
6	200106P	4" Bearing Shaft/Housing, (Polished)
6	200106R	4" Bearing Shaft/Housing, (Raw)
6	N/A	3" Bearing Shaft/Housing
7	200107A	Main Drive Gear (Red Gear)
8	200108A	Set Screw, 8-32 x 5/32"
9	200109A	Copper Washer, 1 1/4", Elect. Contact
10	200110A	Nut, 8-32, SS (Angle Bracket)
11	200111A	Motor Mount Angle Bracket, SS
12	200112A	Machine Screw, 8-32 x 3/8", SS (Brush Holder/Angle Bracket)
13	200113A	Motor Brush Mount (Square Plate With Holes)
14	200114A	Machine Screw, 8-32 x 1/2", SS (Face Plate)
15	200115A	Brush Holder Bracket (Small Rectangle)
16	200116A	Brush Holder
17	200117A	Elect. Contact Brush W/Spring
18	200118A	Brush Holder Cap
19	200119H	Rubber Grommet (Pedestal Mounts)
20	200120A	Delrin Insulating Washer (#1)
21	200121A	Bearing, Cluster Gear (Small Bearing)
22	200122A	Cluster Gear (Brass Gear)
23	200123A	Shoulder Screw For Cluster Gear
24	200124A	Brass Machine Screw, Elect. Post
25	200125A	Delrin Insulating Shoulder Washer (#2)
26	200126A	Brass Washer For Elect. Post
27	200127A	Brass Nut, 10-32 (Motor Plate)
28	200128A	Pinion Gear
29	200129A	Elect. Motor, 12 Volt
30	200130P	Lamp Spider Nose Cone (Polished)
30	200130R	Lamp Spider Nose Cone, (Raw)
31	200131A	Set Screw, 8-32 x 3/8" SS
32	200132P	Lamp Spider Spacer/Mounting Cups (Polished)
32	200132R	Lamp Spider Spacer/Mounting Cups (Raw)
33	200133A	Set Screw, 10-32 x 5/8" SS

ROTO RAYS[®] WARNING LIGHTS

DIV. OF EASTERN FIRE EQUIP. SERVICES, 440 OAK STREET LEMOYNE, PA 17043 800-504-2044

PARTS LIST FOR ALL MODELS CONT.

34	200134P	Lamp Spider Base/Center, (Polished)
34	200134R	Lamp Spider Base/Center, (Raw)
35	200135C	Housing, Front Mount, (Chrome)
35	200135R	Housing, Front Mount, (Raw)
35	200135SP	Pierce Dash Front Mount Housing; (Chrome)
36	200136FPC	Full Pedestal Mount, (Chrome)
36	200136FPDR	Full Pedestal Mount (Welded/Raw)
36	200136H	Housing, Hidden Mount, (Raw)
36	200136HBK	Housing, Hidden Mount, (Painted Black)
43	200143PMB	Housing, Pedestal Mount (Chrome)
37	200137H	Connector Wire, Hidden Mount
38	200138 B	Sealed Beam, Model 200 Blue
38	200138A	Sealed Beam, Model 200 Amber
38	200138G	Sealed Beam, Model 200 Green
38	200138R	Sealed Beam,- Model200 Red
38	200138WR	Sealed Beam, Model200 White
38	PAR46A	LED Amber
38	PAR46B	LED Blue
38	PAR46G	LED Green
38	PAR46R	LED Red
38	PAR46W	LED White/Clear
39	200139A	Retaining Ring (Sold W/ Light Shell)
40	200140A	Light Shell Attaching Bolt
41	2001041	#10 16-14 Eyelet Insulated
42	200142A	Light Shell/Housing With Ring (Chrome)
42	200142AR	Light Shell/Housing (Raw/Stripped)
43	200143PC	Housing, Pole Mount, (Chrome)
43	200143PR	Housing, Pole Mount, (Raw)
43	200143PMB	Housing, Pedestal Mount, Bullet (Chrome)
44	200144OC	Housing, E1 Front Mount, (Chrome)
44	200144OR	Housing, E1 Front Mount, (Raw)
46	200146A	Brass Washer, 3/8" #8
47	200147FH	Attaching Bolt, Front Mount /E1 Mount Drilled W/Hole
47	200147F	Attaching Bolt
48	200148A	Brass Machine Screw, 6-32 (Sealed Beam)
49	200149A	Brass Nut, 6-32 (Sealed Beam)
50	200150A	12" Red 18 Awg Connecting Wire For LED or Sealed Beam
51	200151A	Brass Washer, 5/16" W/ #6 Hole
53	200153A	10-32 Motor Mount Nut
54	200154F	Nut For Front Mount Attaching Bolt
55	200155	6/32 X 3/16" Cpss (Pinion Gear)
56	2001056	Internal Lock Washer Ss (4Mm)
57	200157	#8 Uninsulated Ring Terminal
58	200158	#10 Uninsulated Spade Terminal
59	2001059	5" Red 16 Awg Wire

ROTO RAYS[®] WARNING LIGHTS

DIV. OF EASTERN FIRE EQUIP. SERVICES, 440 OAK STREET LEMOYNE, PA 17043 800-504-2044

PARTS LIST FOR ALL MODELS CONT.

60	2001060	#10 22-18 Awg Ring Terminal Insulated
61	2001061BK	Face Plate (Painted Black)
61	2001061P	Face Plate (Polished)
61	2001061R	Face Plate (Raw)
62	2001062	8-32 Hexnut Brass (Angle Bracket)
63	2001063	8-32 Nylon L/N SS
64	200164	Large Washer Used W/ #40

NOT SHOWN:

200141	Light Spacer
200165	Metal Hole Plug (Seagrave H2 Hidden Mount)
200166	Serial Number Plate
200167	3' Red 14 Awg Wire
200168	3' Blk 14 Awg Wire
MBPA	Motor/Pinion Gear/Brush Plate Assembly

*Parts 24 thru 27 May Be Replaced By a Voltage Reducer, 200145

****IMPORTANT!** When replacing sealed beams and LEDs, replacement bulbs must be identical weight to the one being replaced as all par 46 bulbs are not the same weight. This could cause the unit to be out of balance causing premature wear or damage.

All ROTO RAYS are warranted to the purchaser for twenty-four months from the date of service against defects in material or workmanship. During the warranty period products found to be defective will be repaired or replaced (at ROTO RAYS option) without charge. The defective light units (minus housing) must be returned to ROTO RAYS, INC., Div. of Eastern Fire Equip. Services, 440 Oak Street, Lemoyne, PA 17043. The light will be returned to the purchaser prepaid. The warranty does not cover the cost of removal or installation of the light. Any alterations, misuse, incorrect application, installation, wiring, water damage, tampering, or repair voids the warranty. The warranty does not cover any damage caused by return shipment due to inadequate packaging or mishandling.

IMPORTANT NEW MOUNTING INSTRUCTIONS **MUST READ!**

To prevent water from collecting within the motor housing and causing rust and damage to the internal components, we have added two weep holes with rubber stoppers on both the top and the bottom of the housing. Depending on how the light is mounted, you must remove one of the rubber stoppers from whichever hole will face downwards after being mounted.

To remove a stopper and open the weep hole:

1. Determine how the light will be mounted and identify which rubber stopper will face downwards - this is the hole from which you must remove one rubber stopper.
2. Use a flat-head screwdriver to gently lift the edge of the stopper. Twist a bit and it will pop right out.

NOTE: Failure to remove the proper weep hole stopper will result in water damage over time, thus negating the two-year warranty.

CHROME CARE

Chrome is a durable strong plate that does not need any chemicals or abrasives to clean or shine

WHAT TO DO

Always use a soft material as a cleaning cloth , such as a microfiber towel or very soft flannel , nothing coarse. Even an inexpensive paper towel can scratch chrome

Use a mild cleaner (No Chemicals) such as windex or comparable. A liquid or spray wax is fine to help give it luster , but again no abrasives in the wax being used

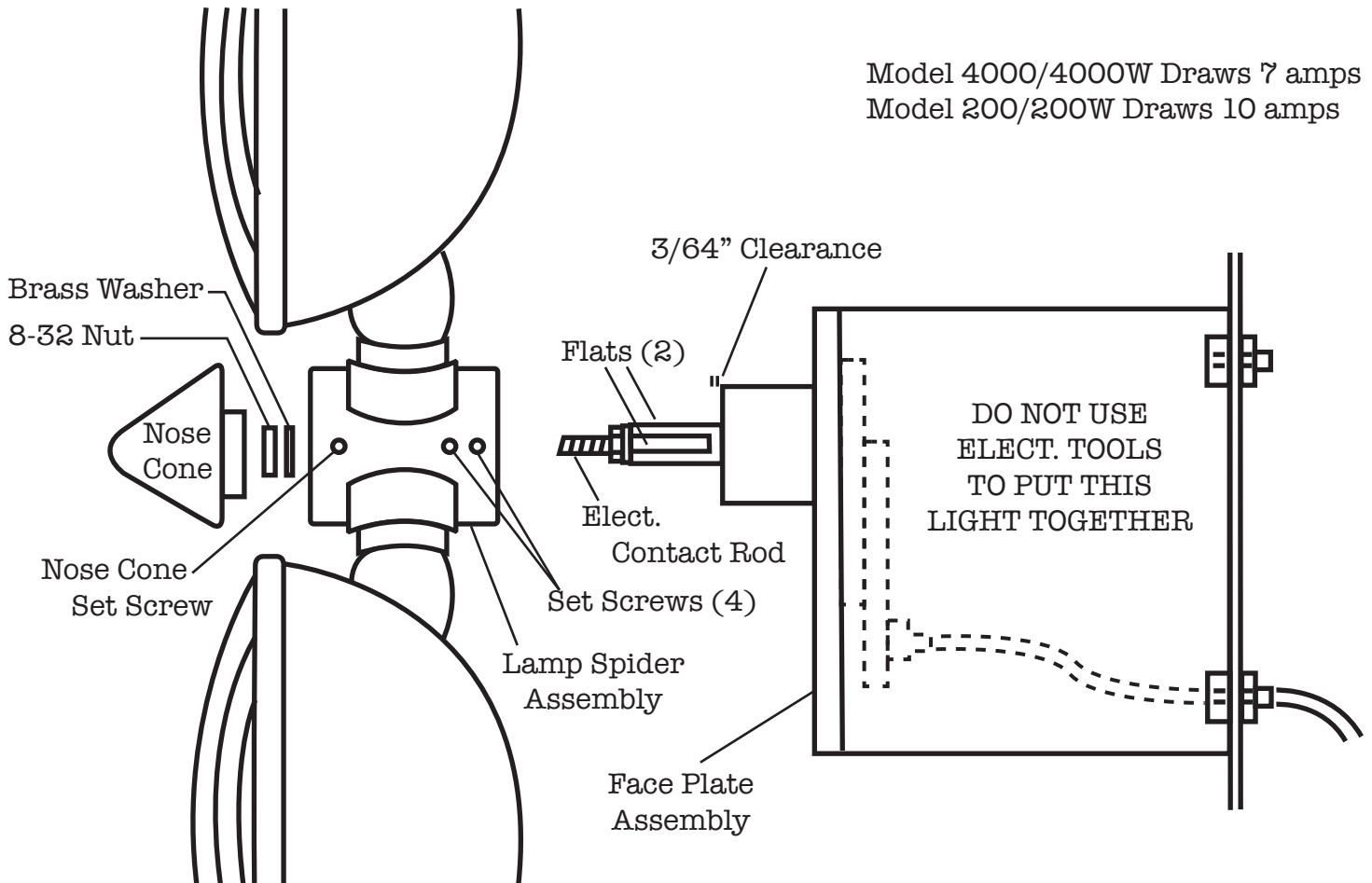
With proper care you will have years of a nice finish

ROTO RAYS® WARNING LIGHTS

DIV. OF EASTERN FIRE EQUIP. SERVICES, 440 OAK STREET LEMOYNE, PA 17043 800-504-2044

INSTRUCTIONS FOR MOUNTING ROTO RAYS WARNING LIGHT, FRONT MOUNT

1. Locate exact position where the unit will be mounted on the apparatus and mark where the four holes need to be.
2. Drill four 5/16" holes or four 17/64" holes and tap them for the bolts. Attach the housing to the apparatus.
3. Feed the electric wire thru the hollow bolt and attach it to the motor assembly hot post.
4. Attach the face plate/motor assembly to the housing. Start the assembly into the housing, rotate it clockwise until the cluster gear clears the bottom two inside brackets. Put the bottom of the assembly into the housing and rotate it back until the main gear goes between the top inside brackets. Seat the assembly to the housing and attach with the six screws.
5. Start the lamp spider assembly on to the shaft about half way. Put the wire ends on the electric contact rod. Now line up the set screws with the flats on the shaft and push the assembly the rest of the way on the shaft. **IMPORTANT! LEAVE ABOUT 3/64" CLEARANCE BETWEEN THE LAMP SPIDER ASSEMBLY AND THE BEARING SHAFT.** Tighten the four set screws down on the flats.
6. Install the brass washer, then the 8-32 nut to the electric contact rod, make sure all three wire ends are on the rod.
7. Attach the nose cone to the assembly and tighten nose cone set screw..



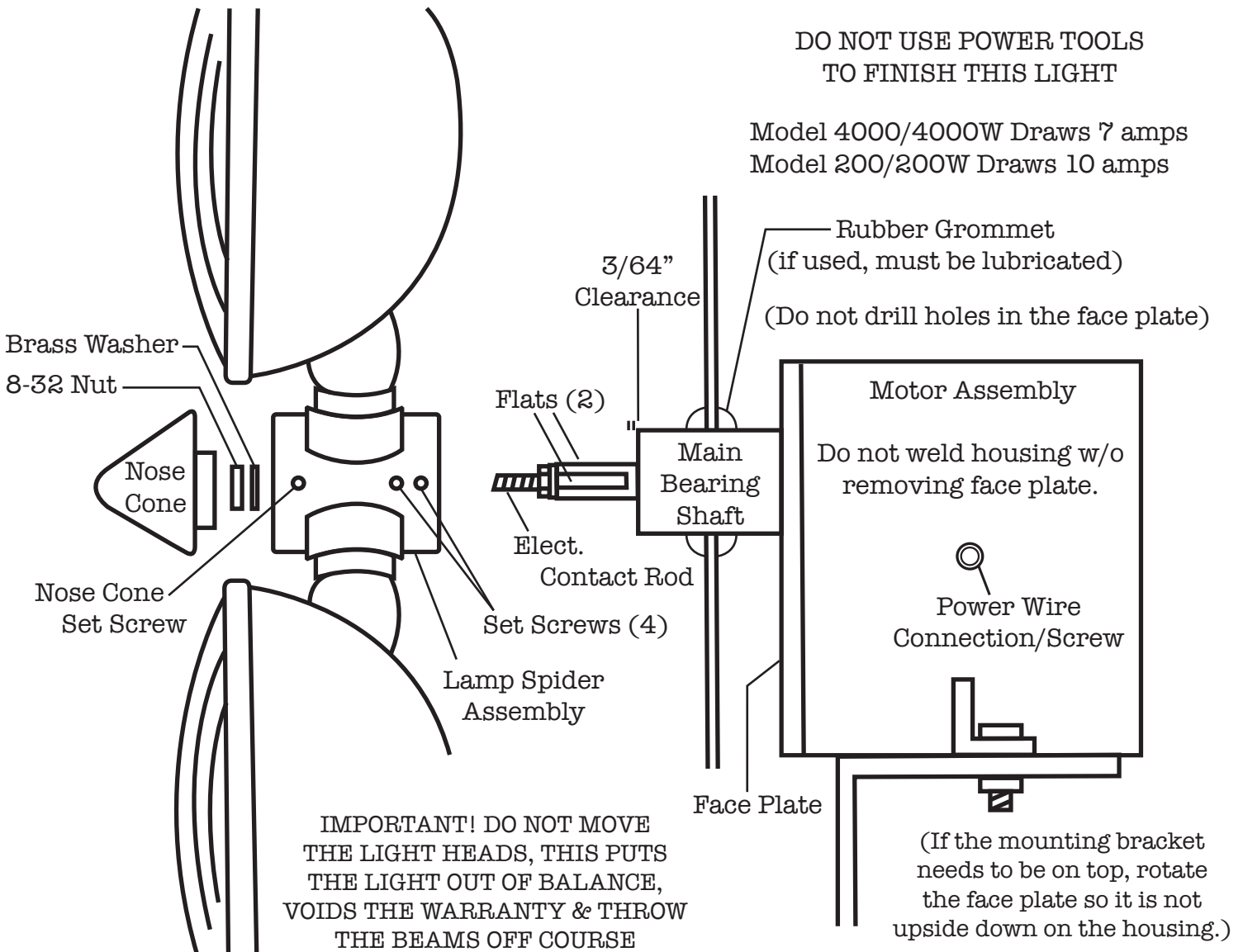
IMPORTANT! DO NOT MOVE THE LIGHT HEADS, THIS PUTS THE LIGHT OUT OF BALANCE, VOIDS THE WARRANTY & THROWS THE BEAMS OFF COURSE

ROTO RAYS[®] WARNING LIGHTS

DIV. OF EASTERN FIRE EQUIP. SERVICES, 440 OAK STREET LEMOYNE, PA 17043 800-504-2044

INSTRUCTIONS FOR MOUNTING ROTO RAYS WARNING LIGHT, HIDDEN MOUNT

1. Locate exact position where the unit will be mounted inside the cab of the apparatus.
2. Drill $\frac{3}{8}$ " hole (1 $\frac{1}{2}$ " of rubber grommet used) in front of the cowling of the apparatus for the main bearing shaft.
3. Mount the motor housing in the cab with the main bearing shaft extended thru the hole. (Main bearing shaft must extend at least 1" thru hole.)
4. Start the lamp spider assembly on to the shaft about half way. Put the wire ends on the electric contact rod. Now line up the set screws with the flats on the shaft and push the assembly the rest of the way on to the shaft. **IMPORTANT! LEAVE ABOUT $\frac{3}{64}$ " CLEARANCE BETWEEN THE LAMP SPIDER ASSEMBLY AND THE BEARING SHAFT.** Tighten the four set screws down on the flats.
5. Install the brass flat washer, then 8-32 nut to the electric contact rod, make sure all three wire ends are on the rod.
6. Attach the nose cone to the assembly and tighten the nose cone set screw.

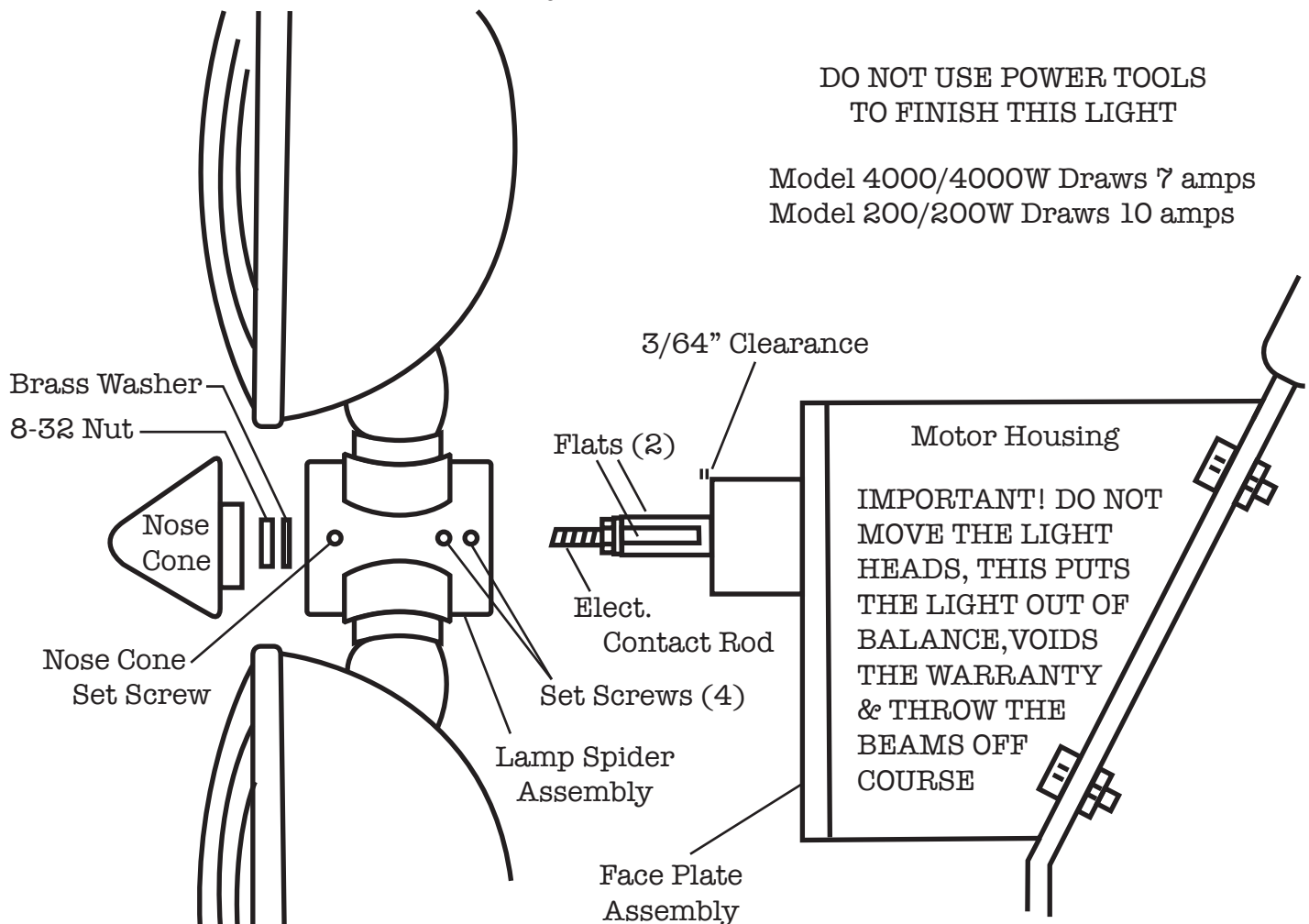


ROTO RAYS[®] WARNING LIGHTS

DIV. OF EASTERN FIRE EQUIP. SERVICES, 440 OAK STREET LEMOYNE, PA 17043 800-504-2044

INSTRUCTIONS FOR MOUNTING E1 SPECIAL FRONT MOUNT

1. Locate exact position where the unit will be mounted under the windshield of the apparatus and mark the circle.
2. Drill four, 1⁷/₆₄" holes and tap them for the 5/16"-18 bolts.
3. Attach the housing to the front of the apparatus with the 5/16" bolts. Put the hollow bolt for the wire according to where the wire needs to go either over or under the dash.
4. Feed the electric wire thru the hollow bolt and attach it to the motor assembly hot post.
5. Attach the front face plate/motor assembly to the housing.
6. Start the lamp spider assembly on to the shaft about half way. Put the wire ends on the electric contact rod. Now line up the set screws with the flats on the shaft and push the assembly the rest of the way on to the shaft. **IMPORTANT! LEAVE ABOUT 3/64" CLEARANCE BETWEEN THE LAMP SPIDER ASSEMBLY AND THE BEARING SHAFT.** Tighten the four set screws down on the flats.
7. Install the brass flat washer, then 8-32 nut to the electric contact rod, make sure all three wire ends are on the rod.
8. Attach the nose cone to the assembly and tighten the nose cone set screw.



*Start the assembly into the housing until it is almost in, rotate it clockwise until the cluster gear clears the bottom two inside brackets. Put the bottom of the face plate in the housing and rotate it back until the main gear goes between the top inside brackets and the six mounting holes line up, seat the face plate.

— One of the oldest, one of the best —