

INSTALLATION AND MAINTENANCE INSTRUCTIONS FOR MOUNTING MODEL 11 TWIN BEACON RAY LIGHT

1. Remove Packing Disk - To remove packing disk from each light unhook draw-pull catch on retaining band and remove plastic dome. Remove cardboard packing disk and replace plastic dome, securing draw-pull catch. See figure 1.

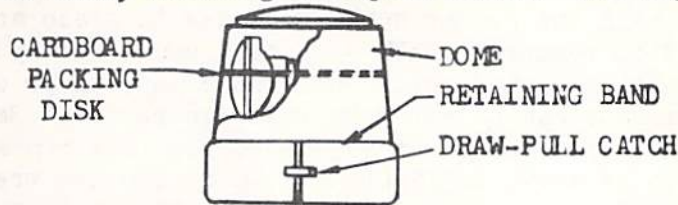


FIGURE #1

2. Installation of Accessories - If your Twin is to be equipped with a loudspeaker, siren or sign, it should be installed before the light is mounted on the vehicle. Follow the instructions included with the accessory.
3. Installation of Mounting Bracket Assemblies to Bar - To install gutter mounting bracket assemblies on the bar, turn the unit over to expose the bottom of the bar. Remove the end cap retaining screws and end caps. See figure 2. Now slide a clamp block into the end of the bar (the end which the light lead is connected) so its (2) tapped holes are completely visible through the slot. Next place the bottom half of the mounting bracket clamp on the bar over the clamp block. Then place the gutter mounting bracket tube assembly in the bottom half of the clamp (as shown in figure 2) and place the top half of the clamp over the tube. Insert a 3/8-16x2" stainless steel bolt and split lockwasher into the terminal on the ground wire and then into the inner hole of the clamp. Place the other bolt and lockwasher in the remaining hole and snug up both bolts (not tight). Follow the same procedure on the other end of the bar (except there is no ground wire). Then replace the end caps and their retaining screws.

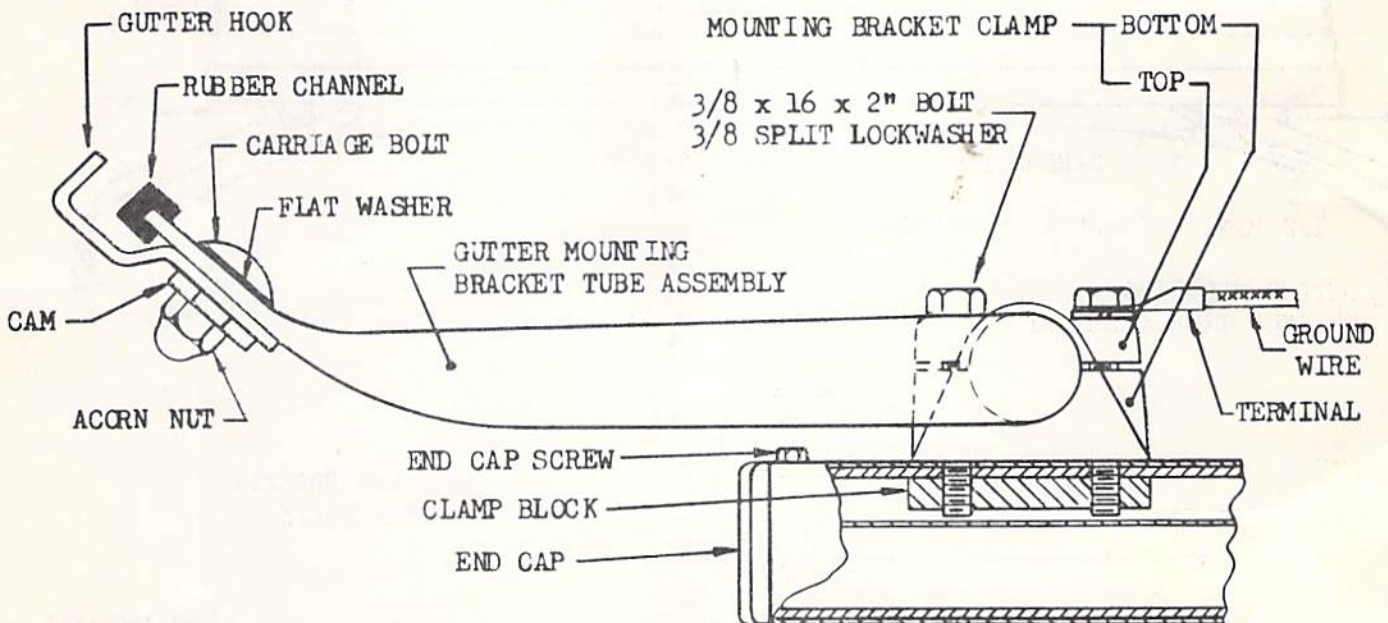
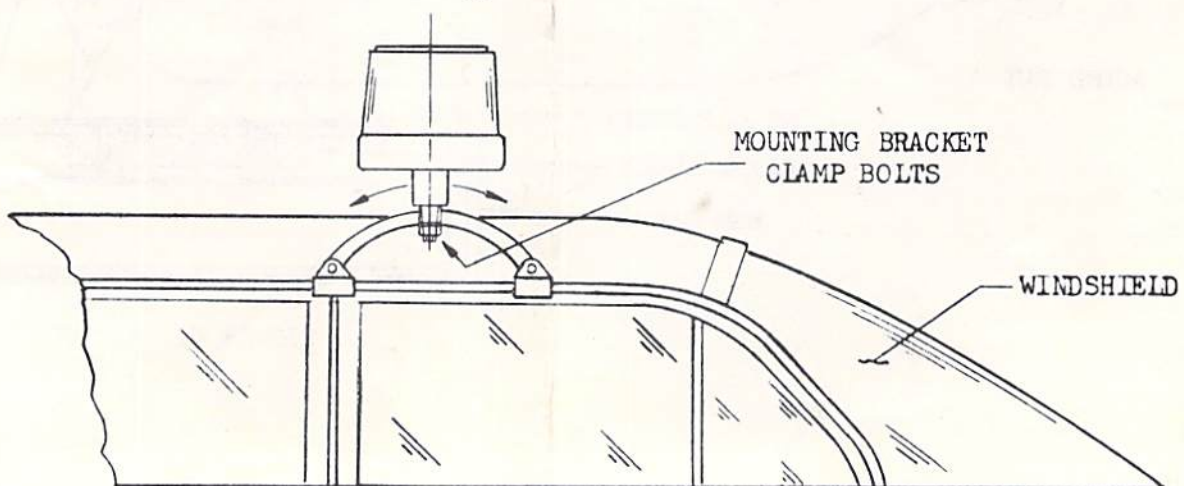
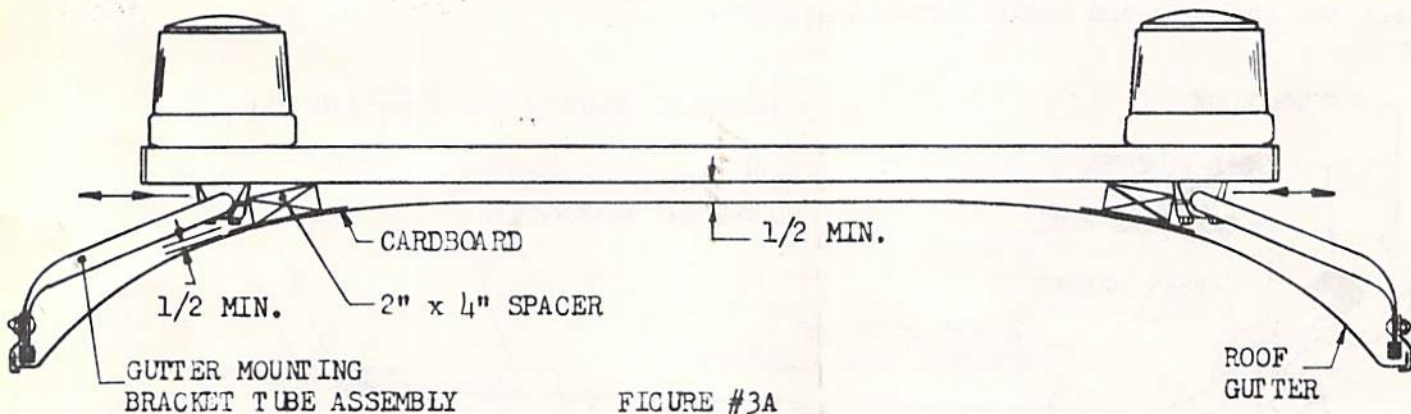


FIGURE #2

4. Mounting of Twin on Car Roof - To mount the Twin on the car roof, first park the vehicle on a level surface. Then place something on the roof, such as cardboard, to protect it from being scratched. Now place the Twin light assembly on the roof, approximately over the driver's head. See figure 3B. Place spacers of sufficient thickness, usually pieces of 2"x4" will do, under the bar in the position shown in figure 3A. (It may be necessary to use thinner or thicker blocks so that the closest point of the light assembly is at least 1/2" from the car roof.) Now remove the acorn nuts which hold the gutter hooks and cams in place and slide them off. Next place one piece of rubber channel over each end of the gutter mounting brackets. See figure 2. Slide each mounting bracket clamp, in or out, so the ends of the gutter mounting brackets can be set down into the gutter. (Be sure both ends of the Twin are equi-distant from the front of the roof.) Now replace the gutter hooks, cams, and acorn nuts as shown in figure 4. Using the cam wrench supplied, turn the cams counter-clockwise--just snug up, don't tighten. Centralize the bar so the mounting bracket clamps are both the same distance from the ends of the bar. See figure 5. Now check to see if the unit is level (front to back) by laying a spirit level across the bar right next to a light housing. If it's not level slide the mounting bracket clamp along the gutter mounting bracket until that side is level (snug up the two clamp bolts a little). See figure 3B. Now repeat on the other side. Next turn the level so it is parallel to the bar and check to see if the bar is level from side to side. When the necessary adjustments have been made, tighten the mounting bracket clamp bolts. To secure the unit firmly to the gutter, tighten the cams (remember, turn them counter-clockwise). (If cams cannot be tightened, due to insufficient gutter thickness, then cut 2" pieces from the rubber strip supplied and place them under the rubber channel as shown in figure 4.) Hold the cams in the tight position until you tighten the acorn nut which locks the cam in position. After all four acorn nuts have been tightened the unit should be solidly anchored to the roof and the spacers and whatever was used to protect the roof can now be removed.



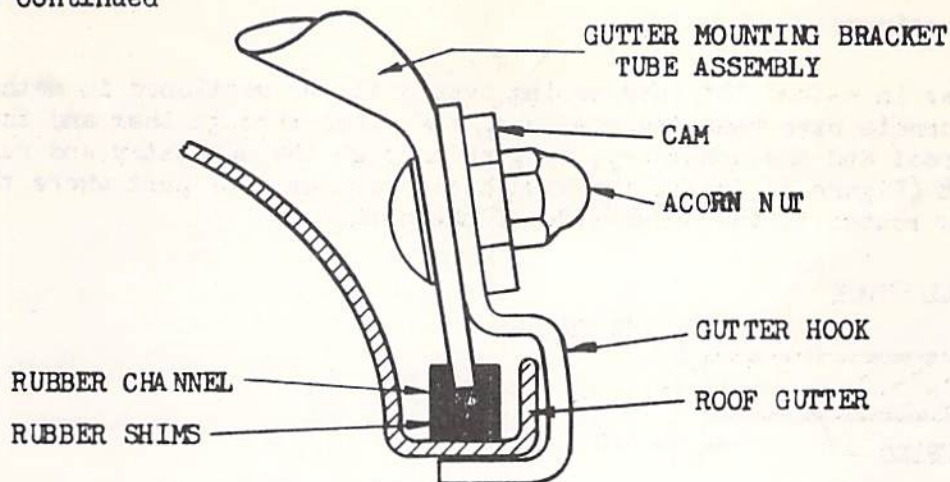
Installation - Continued

FIGURE #4

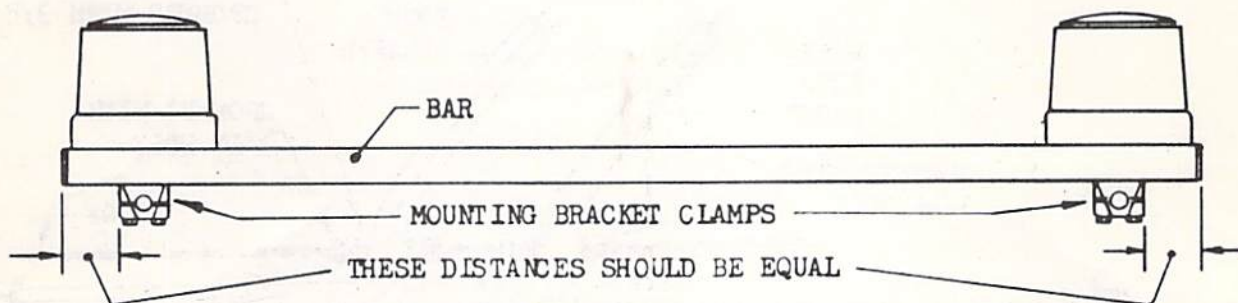


FIGURE #5

5. Wiring of Lights, Siren, and Sign - (Follow one of the methods listed below).

A. To wire the lights, siren, or sign, run the wires, which exit from the bottom of the bar and light at the left hand end, to the roof gutter and forward down the gutter to its end. Then push the wires between the fender and the cowl into the engine compartment--(on some cars it may be necessary to drill a hole and insert a rubber grommet for the wires to run through.) Once in the engine compartment connect the ground to some convenient point such as the engine block or a screw on the firewall. The remaining wires should be run through a rubber grommet in the firewall. The light wire should be run to the dash switch which is furnished. (This switch may be mounted at any convenient place on the dash.) The other terminal on the dash switch should be connected to a lead from the plus side of the battery, for example the hot lead to the ignition switch. A sign or mechanical siren should be wired up in the same manner as the rotating lights. Speaker wires should be connected to the amplifier as prescribed in the siren manual.

B. A second wiring method involves running the wires along the roof gutter toward the windshield to the corner of the roof. At this point the necessary number of 1/2" diameter holes should be drilled, (using the piece of tubing furnished to protect the upholstery, figure 6), and rubber grommets should be inserted into them. (One hole is required for each wire when using the grommets supplied.) The wires should be pushed through the grommets and once inside they can usually be run under the windshield post molding to a point under the dash. The advantage of drilling the holes at this point is that they are easier to fill if it should ever become necessary.

C. A third method of wiring involves running the wires directly into the car near where they come out of the bar and light. The number of holes and hole sizes will

Installation - Continued

be the same as in method "B" (Use tubing over drill as mentioned in method "B"). After the grommets have been inserted push the wires through them and then between the roof and the upholstery, or push through the upholstery and run them just below it (Figure 7) toward the windshield post or door post where they may be conveniently routed to the under side of the dash.

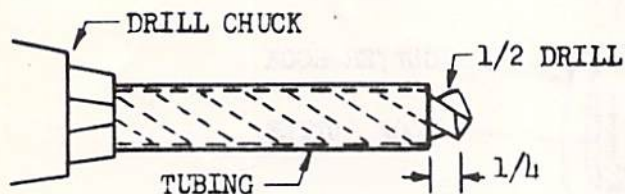


FIGURE #6

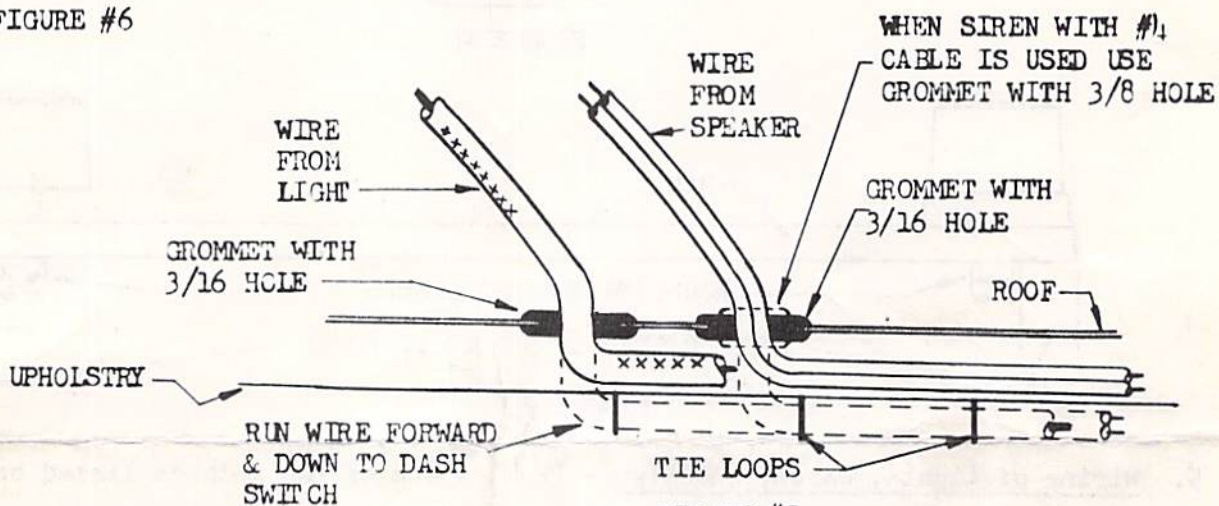


FIGURE #7

6. Maintenance - (Oiling) - The Twin Beacon Ray light mechanisms require oiling every 4 to 6 months under normal use. The light with no motor in it should have 2 or 3 drops of light machine oil on its lamp holder shaft bearings. See figure 8. The light with the motor in it should also have several drops on its lamp holder shaft bearings plus 3 drops in each of the motor bearing oil holes. A piece of thin wire may be helpful in guiding the drops of oil to the motor bearing oil holes.

(Cleaning the Plastic Domes) - Use only a mild soap and a soft rag to clean the domes. NEVER use an abrasive cleaner on them.

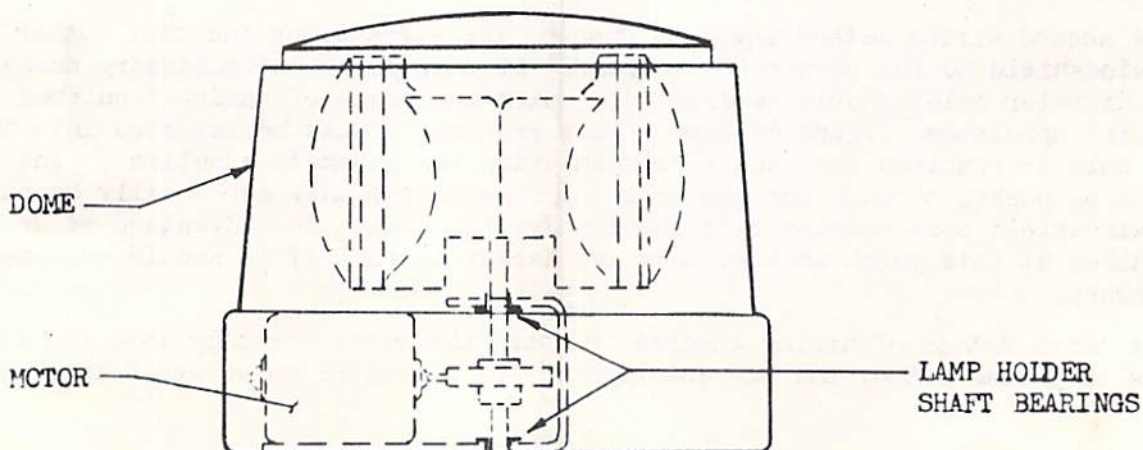


FIGURE #8