

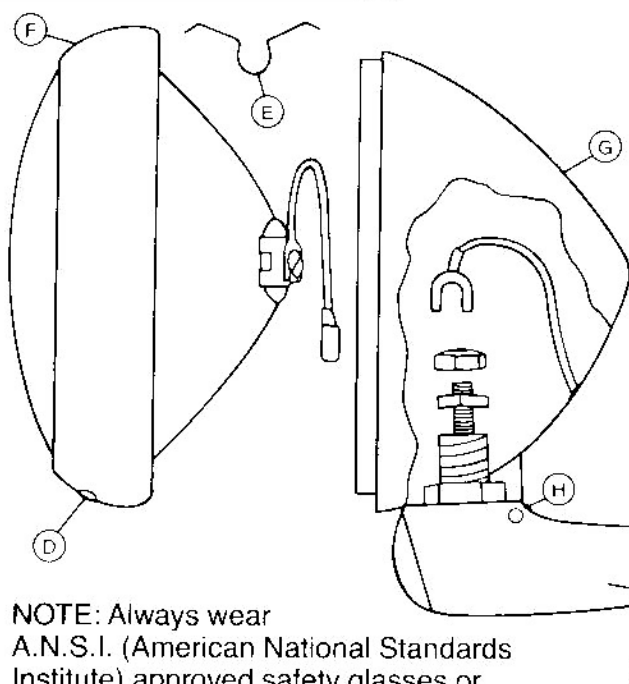


spotlight trouble-shooting guide for professional installers

THE BEAM™ post-mount and roof-mount spotlights are relatively easy to install by following the illustrated instructions which are included with each installation kit. There is even a video available designed to teach the proper procedures used to install these spotlights.

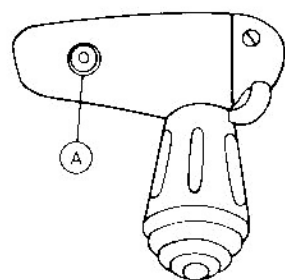
Occasionally, however, a vehicle will come in with a malfunctioning spotlight. It could be a new vehicle with a factory-installed spotlight, a dealer-installed spotlight, a spotlight you just installed, or a vehicle with a spotlight that did work but is not working now.

The important thing is that the spotlight is not working, and you need to fix it as quickly, easily and economically as possible. This handy trouble-shooting guide has been prepared for just that reason.

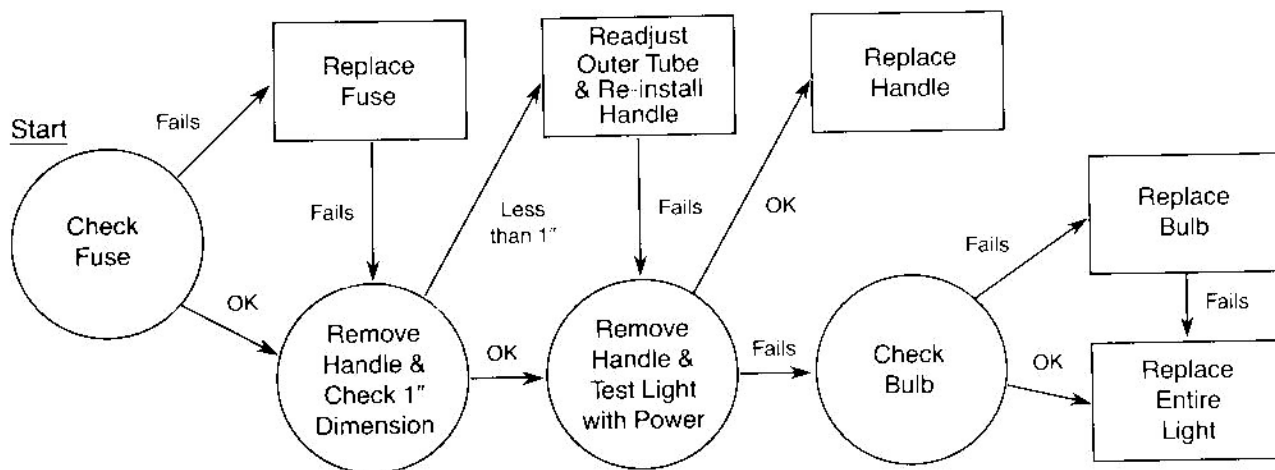


This illustration points out the various parts that are referenced in this trouble-shooting guide. It represents a typical 5" or 6" round post-mount spotlight. 4" x 6" rectangular spotlights have foam gaskets instead of bulb retaining springs, and the bezel locking-screw enters the bottom of the head instead of the bottom of the bezel. The 10300 series spotlights have a 2-sided spring disc to hold both bulbs in position under pressure.

NOTE: Always wear A.N.S.I. (American National Standards Institute) approved safety glasses or goggles when working with tools. Protective eye gear is important when removing the bulb retaining springs.



ELECTRICAL TROUBLE-SHOOTING



STEP 1. Examine the fuse to determine if it has failed. If so, replace the fuse. If the fuse is good, or fails again, then proceed to STEP 2.

STEP 2. Check the 1" dimension of exposed intermediate tube. Remove the handle assembly by loosening the wedge screw ① and gently pulling on the handle. Measure from the end of the outer tube to the end of the intermediate tube. This dimension needs to be a minimum of 1" for the handle switch to make contact. If less than 1", go to STEP 3. If as least 1", go to STEP 4.

STEP 3. Reposition the outer tube. Loosen the bracket clamping screw(s) ② and remove spotlight assembly, including the outer tube. Loosen the head housing clamping screw ③ and make sure that the outer tube is pushed into the head housing until it is completely seated and that there is at least 1" of intermediate tube exposed. Tighten the head housing clamping screw ③ just enough to hold the outer tube in place. Do not overtighten! Temporarily re-install handle assembly. If light works, re-install entire spotlight assembly per STEP 7. If light fails, go to STEP 4.

STEP 4. Test light with handle removed. Remove handle again and using a 12 volt power source, apply power to the contact on the end of the inner tube. Connect ground to outer tube. If unit lights, replace the handle assembly, following instructions in STEP 7. If light fails, go to STEP 5.

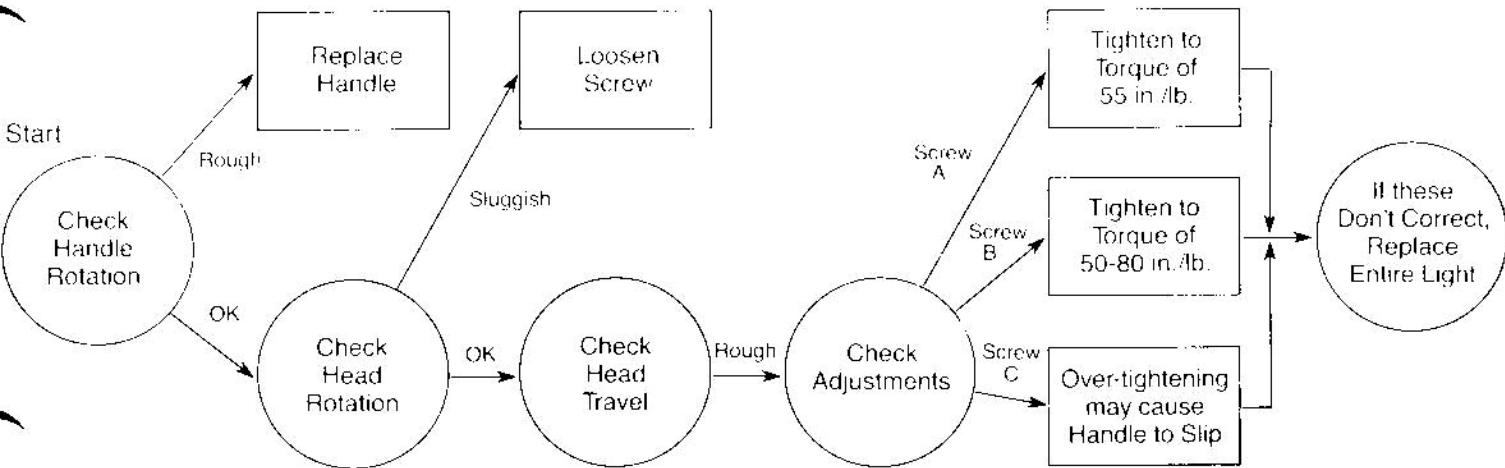
STEP 5. Check the bulb. Remove screw ④ and lift off bezel/ring and bulb assembly. Disconnect bulb wires. Using a 12 volt power source, check to see if bulb lights. If it does, replace the entire spotlight assembly, following instructions in STEP 7. If it fails, go to STEP 6.

STEP 6. Replace the bulb. On 5" and 6" round spotlights, you will need to remove the 4 retaining springs ⑤ with a needle-nose pliers. Be sure to wear protective eye gear to prevent accidental injury while removing the springs. Place new bulb into bezel/ring ⑥. Replace retaining springs at 2:00, 8:00, 4:00 and then 10:00 positions. Reconnect bulb wires. Install bezel/ring ⑥ by putting tab at top into slot at top of shell ⑦ and tighten screw ④.

STEP 7. Reinstall the spotlight assembly. Simplified instructions follow (for complete installation instruction information please contact UNITY).

- Insert shaft through the bracket.
- With spotlight head flush against bracket, tighten bracket clamping screw ②.
- Slip rubber bushing, wire clip, arm (vans and trucks only) and chrome collar on shaft inside vehicle.
- Install handle assembly.
- Maintaining pressure, tighten wedge screw ①.
- Loosen bracket clamping screw ②.
- Adjust head to desired vertical arc.
- Tighten outside and inside bracket clamping screws ②.

MECHANICAL TROUBLE-SHOOTING



STEP 1. Check handle rotation. Rotate handle 480° ($1\frac{1}{3}$ turns) in each direction. Check for smooth rotation. If the rotation is not smooth, remove the handle by loosening the handle wedge screw ① and gently pulling on the handle. Now again rotate the handle 480° ($1\frac{1}{3}$ turns) in each direction. Check for smooth rotation. If the rotation is still not smooth, replace the entire handle assembly following the instructions in STEP 5. If rotation is smooth, go to STEP 2.

STEP 2. Check head rotation. With the handle still removed, manually rotate head 480° ($1\frac{1}{3}$ turns) in each direction. Check for smooth rotation. If rotation is sluggish or restricted, loosen screw ② slightly and test again. Do not loosen screw ② too much. When head rotation is proper, re-install handle following the instructions in STEP 5, and then return to STEP 3.

STEP 3. Check head travel. Turn the handle assembly (around the axis of the shaft) to one side until you reach the stop. Now turn the handle assembly in the opposite direction until you reach the other stop. The light should move smoothly, and the light should not contact the body at either end of the arc. If it does not move smoothly, go to STEP 4. If it does move smoothly, but hits the body, go to STEP 5.

STEP 4. Check adjustments. The handle wedge screw ① should be tight to a torque setting of 55 inch/lbs. Bracket clamping screw ② should be tight to a torque setting of 50-80 inch/lbs. Head housing clamp screw ③ controls the amount of pressure required to move the handle. Overtightening can cause the handle to slip. If these adjustments do not correct the problem, replace the entire spotlight assembly, following instructions in STEP 7 on page 2.

STEP 5. To install the handle assembly, follow these instructions:

- Slide the handle assembly on the tubing gently.
- Align the key on the gear with the smaller shaft slot, and the key in the handle engages the notch on the tube.
- Maintaining pressure, tighten or lock wedge screw ①
- Loosen bracket clamping screw ②
- Adjust head to desired vertical arc
- Tighten or lock outside and inside bracket clamping screws ③

NOTE: Annual maintenance. In the fall apply white lithium grease evenly between the outer tube and the intermediate tube to prevent 'freeze-ups' due to condensation.

spotlight failure modes

ELECTRICAL

FAILURE MODE

1. BAD FUSE
2. BAD TOGGLE
3. BAD SWITCH
4. BAD ROD & GEAR
5. BAD CONTACT IN HEADPOST
6. BAD BULB
7. OUTER TUBE UNSEATED

SOLUTION

1. REPLACE FUSE
2. REPLACE HANDLE ASSEMBLY
3. REPLACE HANDLE ASSEMBLY
4. REPLACE ENTIRE LIGHT
5. REPLACE ENTIRE LIGHT
6. REPLACE BULB
7. REINSTALL OUTER TUBE

MECHANICAL

FAILURE MODE

1. STRIPPED GEAR (#6122 or #6405)
2. HANDLE SLIPPED
3. SHEARED KEY
4. STRIPPED GEAR (#6427 or #6403)
5. FROZEN TUBES

SOLUTION

1. REPLACE HANDLE ASSEMBLY
2. CHECK ADJUSTMENT PER STEP 4
3. REPLACE HANDLE ASSEMBLY
4. REPLACE ENTIRE LIGHT
5. REPLACE ENTIRE LIGHT

This Spotlight Trouble-Shooting Guide has been designed to assist you in correcting or repairing malfunctions, should they occur, as quickly and easily as possible. Other than fuses and bulbs, the most commonly occurring problems are due to the spotlight having been improperly installed.

It is important, when installing THE BEAM™ post-mount spotlights, to follow the instructions carefully and in the correct sequence. It is also very important to use the proper template and proper installation kit.

Distributed by:



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