



SPOTLIGHT INSTALLATION PROCEDURES FOR FORD CROWN VICTORIA AFTER-MARKET POST INSTALLATION

3751
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This instruction sheet is divided into **PART I** and **PART II**, which respectively cover the spotlight installation procedures for Ford Crown Victoria vehicles with and without DSO Prep Packages. *Read all instructions before proceeding with spotlight installations. To protect your eyes, always wear American National Standards Institute (A.N.S.I.) approved safety glasses or goggles when working with tools.*

PART I: VEHICLES WITH DSO PREP PACKAGES

When you receive your vehicle with a DSO PREP Package, the screw and shaft holes should be pre-drilled in the "A" pillar with the bracket mounted to the vehicle. The bracket is located inside the vehicle behind the garnish trim. Follow the below procedure for spotlight installation.

1. TOOLS REQUIRED FOR INSTALLATION

3/8" SOCKET AND WRENCH
#2 PHILLIPS SCREWDRIVER

1/8" AND 5/32" ALLEN HEX WRENCHES
TAPE MEASURE

2. REMOVE COVER PLATE AND GARNISH TRIM (FIG. 1)

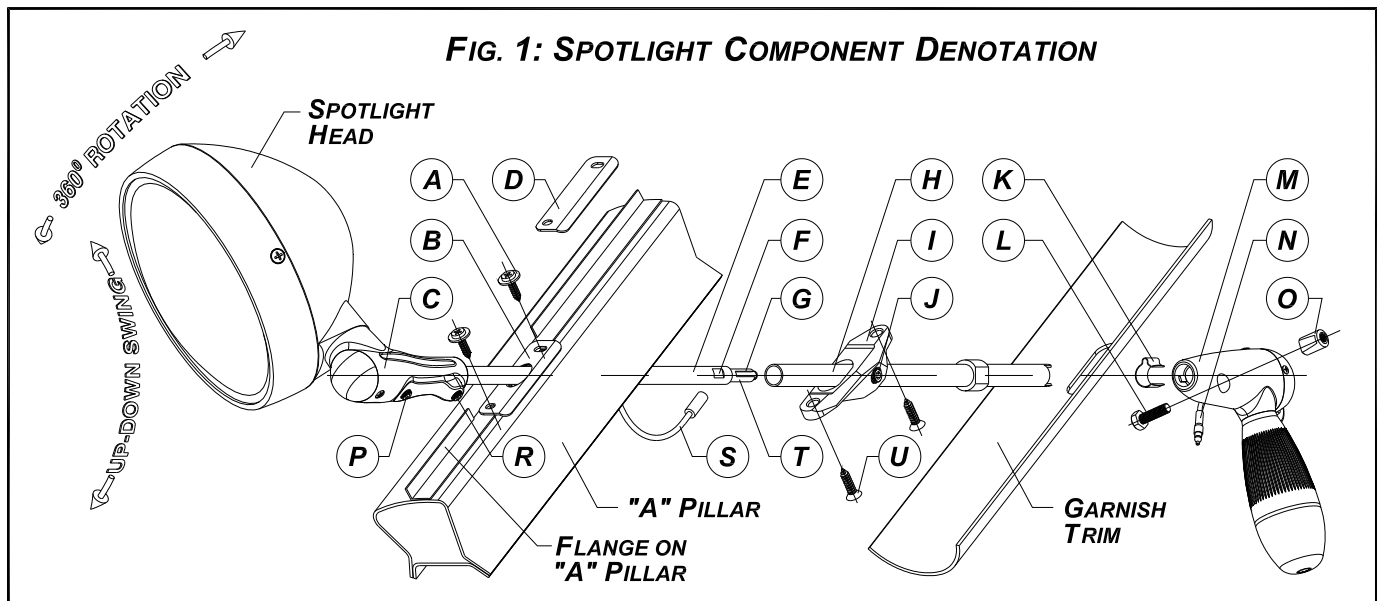
- Using a #2 Phillips screwdriver, remove two screws **A** and cover plate **D**. Save the screws to attach outside retainer plate **B** later on.
- Pull the weather seal out away from the garnish trim. Grab the garnish trim near the top and pull towards the rear of the vehicle to disengage its spring clips. Bracket **I** is located behind the garnish trim.

3. REMOVE BRACKET (FIG. 1)

- Remove two bracket mounting screws **U** with a #2 Phillips screwdriver. Save these screws to re-attach the bracket **I** later on. Remove the bracket and loosen set screw **J** with a 5/32" Allen hex wrench until the set screw does not protrude inside the large hole in the bracket.
- At this point, inspect the bracket to determine which of the following two types of brackets is used on your vehicle. Most of the vehicles have the second type of brackets.

TYPE 1: Brass - Gold color bracket with a counterbored hole. The larger diameter hole faces the occupant compartment.

TYPE 2: Die cast - Silver color bracket with a "D" shaped hole on the back side of the bracket, against the "A" pillar.



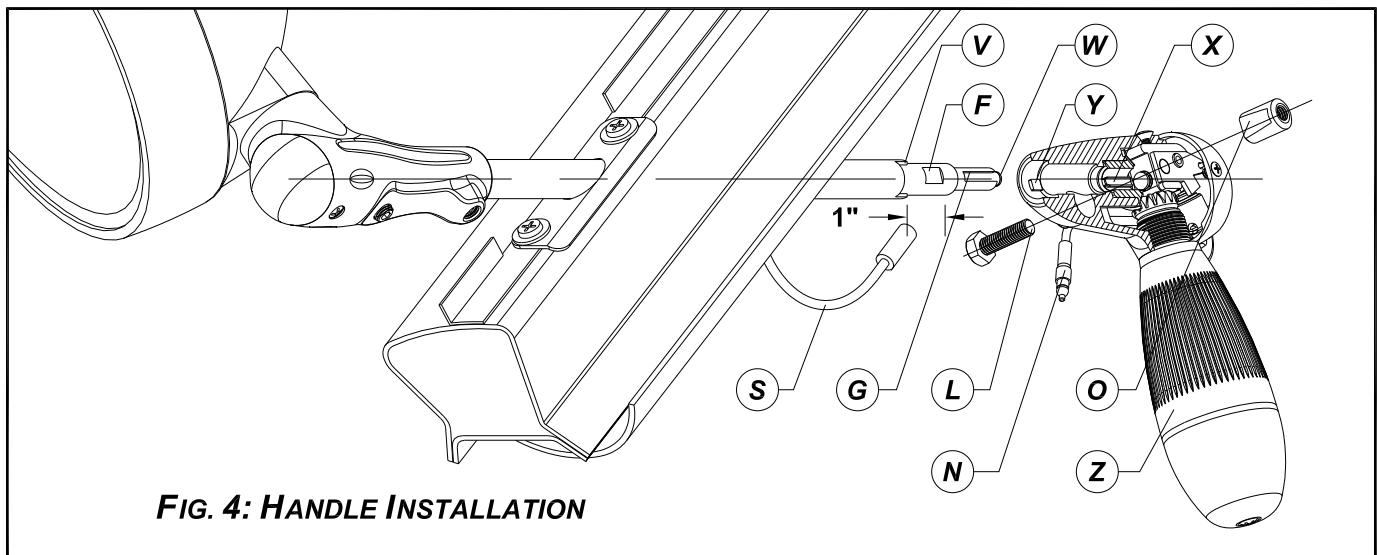
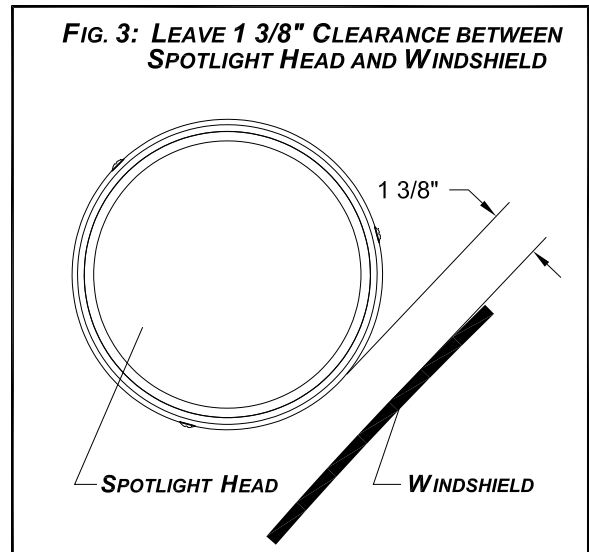
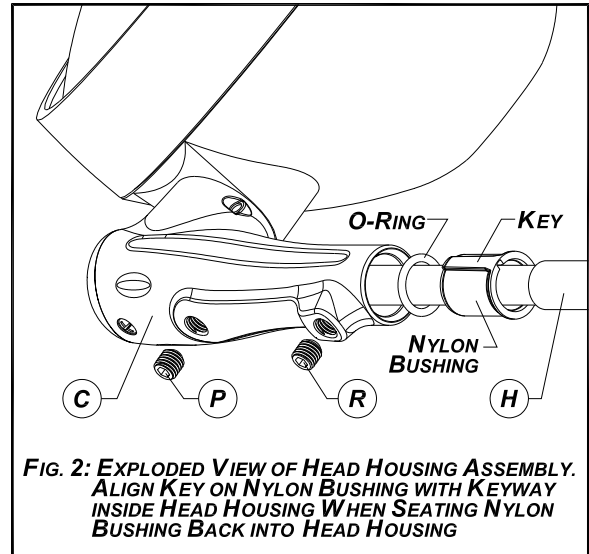


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4. EXTERIOR TUBE AND BRACKET ASSEMBLY (FIG. 1-2)

- A) Remove the handle assembly **M** from the spotlight by loosening screw **L** with a 3/8" socket wrench and then removing it along with wedge **O**. **Note: To remove handle assembly M, wedge O and screw L must be removed completely.**
- B) Loosen set screw **R** with a 1/8" Allen hex wrench. Remove exterior tube **H** from the spotlight. This tube has a flat on the bushing and will work with **TYPE 2** bracket. Under any circumstances, if nylon bushing is pulled out of head housing **C**, **align its key with the keyway inside the head housing** to seat it back into the head housing (Fig 2). If the key does not align with the keyway, the exterior tube cannot be reinserted into the head housing properly later on.
- C) If your vehicle has **TYPE 1** bracket, you need to order an exterior tube with dimple on the bushing (**P/N 6029-GM-5 for LH and P/N 6029-GM-6 for RH**) from your local distributor.
- D) Insert exterior tube **H** into bracket **I**. The notched end of the exterior tube should be inside the vehicle. Align the dimple on the bushing with the set screw or the flat on the bushing with the flat in the bracket. Seat the bushing completely into the bracket. When properly seated, the bushing and bracket surface should be flush and the set screw when tightened will engage the dimple on bushing for **TYPE 1** bracket. Tighten the set screw **J** with a 5/32" Allen hex wrench (**45 TO 55 inch-lbs of torque is recommended**).
- E) Insert the exterior tube and bracket assembly into the shaft hole in the "A" pillar and mount the bracket to the "A" pillar using the two mounting screws **U**.





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5. OUTSIDE RETAINER PLATE (FIG. 1)

- A) Place outside retainer plate **B** (Supplied with your spotlight kit) onto the exterior tube with the gasket material facing the "A" pillar. Using the two screws **A**, fasten this outside retainer plate to the "A" pillar using a #2 Phillips screwdriver.

6. SPOTLIGHT INSTALLATION (FIG. 1-4)

- A) Install the spotlight by inserting intermediate tubing **E** through exterior tube **H**. This should be performed gently so that electrical contact **W** (Fig. 4) at the end of inner rod **T** is not damaged.
- B) **Make sure that set screw R is loosened** and then seat exterior tube **H** completely into head housing **C** so that intermediate tubing **E** extends at least 1" beyond the end of exterior tube **H** (Fig. 4). Otherwise, the flat on wedge **O** will not engage with the flat **F** on intermediate tube **E** and handle assembly **M** cannot be installed properly later on.
- C) Tighten set screw **R** to create just enough friction between the nylon bushing and exterior tube **H** to keep the spotlight head in position. **Do not overtighten set screw R** because overtightening can make it hard to swing spotlight up and down.
- D) Rotate the spotlight head and position its outermost edge about 1 3/8" from the windshield (Fig. 3).
- E) Locate the factory installed lead wire with socket connector **S** (Fig. 1) and feed it through the hole in the garnish trim. Position the wire at the lower edge of the hole.
- F) Install the garnish trim (Fig. 1) over the shaft of the spotlight and snap it back into place, and then install the weather seal.

7. HANDLE ASSEMBLY INSTALLATION (FIG. 4)

- A) Find the flat **F** on intermediate tube **E** and make a mental note of the flat location.
- B) Gently slide handle assembly **M** onto the spotlight shaft, at the same time turn handle grip **Z** to engage gear key **X** with rod slot **G**, and rotate the whole handle assembly to engage handle housing key **Y** with exterior tube notch **V**. Then rotate the entire handle assembly to the position where the handle grip is approximately perpendicular to the flat **F** on the intermediate tube so that the flat on wedge **O** can be easily engaged with the flat on the intermediate tube in the next step.
- C) Apply pressure to the handle assembly along the spotlight shaft, insert wedge **O** into the handle housing, and wiggle the handle assembly slightly left and right so that the flat on wedge **O** will engage with the flat **F** on intermediate tube **E**. Insert and tighten screw **L** to 65 ± 5 inch pounds of torque.
- D) Plug the connectors **N** and **S** together. Place the wire into clip **K** immediately behind the connector **S**, and snap the clip onto the exterior tube.

8. ADJUSTMENT

- A) Make proper adjustments (Fig. 1) to set screw **R** which controls the tension for up-down swing of spotlight head, and to set screw **P** which controls the tension for 360° rotation of spotlight head, so that they create just enough tension to hold the position of the spotlight head in wind. Over-tightening may cause difficulties to aim the spotlight as well as premature wear-and-tear of spotlight components.

9. TEST

- A) To complete the installation a test of both mechanical and electrical functions is required.
- B) The mechanical functions include 360° head rotation in both directions and a check of clearance from the door swing and windshield.
- C) The electrical functions are on/off control and maintaining electrical continuity throughout the mechanical operation.



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10. TROUBLE SHOOTING TIPS

- A) **Electrical Trouble-Shooting:** if a spotlight does not light, first read steps 6-8 to understand the spotlight installation process, and then follow the below procedures.
- a) Check fuse. If fuse failed, replace fuse. If the fuse is good or if light still does not work, go to the next step.
 - b) Disconnect lead wire from power source first, and then remove handle assembly. **Always keep lead wire disconnected from power during the removal and installation process of handle assembly.** Test light by applying 12 VDC power to rod contact **W** (Fig. 4).
If light works, replace the handle assembly with new one, and then install the new handle assembly.
If light does not work,
 - i). Check Bulb. Open spotlight head, disconnect bulb wires, and use a 12 VDC power source to check out bulb. If it lights, replace the spotlight shaft assembly with new one. If it does not, go to the next step.
 - ii). Replace bulb and test light by applying 12 VDC power to rod contact **W** (Fig. 4). If light still does not work, replace the spotlight shaft assembly with new one. If light works, reinstall the handle assembly and test light. If light still does not work, replace the handle assembly with new one.
- B) **Mechanical Trouble-Shooting**
- a) If it is hard to turn handle grip to rotate the spotlight head 360° in each direction smoothly:
 - i). Adjust set screw **R** (Fig. 1) and make sure it is not over-tightened. After proper adjustment, if it is still hard to turn, go to the next step.
 - ii). Disconnect lead wire from power source. Remove handle assembly and rotate handle grip 360° about its axis in each direction. If the rotation is not smooth, replace the handle assembly with new one. If it is, replace the spotlight shaft assembly with new one.
 - b) If it is hard to move handle assembly to swing spotlight head about the shaft axis smoothly:
 - i). Make proper adjustment to set screw **P** (Fig. 3). If rotation is still not smooth, go to the next step.
 - ii). Disconnect lead wire from power source. Remove handle assembly, loosen set screw **R**, pull out the spotlight (do not remove exterior tube), clean dirt from intermediate tube by using penetrating oil, apply white lithium grease evenly on intermediate tube, and then install the spotlight by following Steps 6-8.

11. MAINTENANCE

- A) An occasional coat of automotive wax on exposed parts of spotlight will keep it looking new.

PART II: VEHICLES WITHOUT DSO PREP PACKAGES

If your vehicle does not have a DSO PREP Package, follow the 4392 instruction sheet, supplied with the bracket kit, for both LH and RH bracket and spotlight installation.

For Step 8 in the 4392 instruction sheet, it is recommended to follow the below procedure to install the retainer plate (supplied with spotlight kit), instead of using RVT silicone or equivalent to seal around the spotlight exterior tube:

- A) Before proceeding Step 5.f. in the 4392 instruction sheet, perform the following Steps B-E.
- B) Place retainer plate **B** (Fig. 1) onto exterior tube **H** with the gasket on the retainer plate facing the "A" pillar.
- C) Mark and cut away a section on the flange of "A" pillar so that retainer plate **B** can lay flat against "A" pillar.
- D) Mark the mounting holes for the retainer plate and drill using a 1/8 drill bit.
- E) Mount retainer plate **B** to "A" pillar using two screws **A**.
- F) Proceed with Step 5.f. and the remaining steps in the 4392 instruction sheet to complete the spotlight installation.