



Innovative Products for Transportation Safety

## 9123 Strobing / Steady State LED Stop Arm Upgrade Kit

We would like to thank you for selecting the Doran Strobing / Steady State LED Stop-Arm upgrade kit to add additional safety to your fleet. When this system has been installed you will find that the Stop-Arm will be enhanced with the many benefits of ultra-bright, steady state, or rapid flashing LED technology that will grab motorists' attention.

Your Stop-Arm kit will include:

1. (2) Primary LED lamps with 6 ft of wire and 2 ft of clear protective tubing over the wire. A secondary wire with a 3-pin connector attached to the wire to connect the secondary LED lamp.
2. (2) Secondary LED lamps with a 3-pin connector.
3. (4) Gaskets for lamps.
4. (8) Phillips head mounting screws.

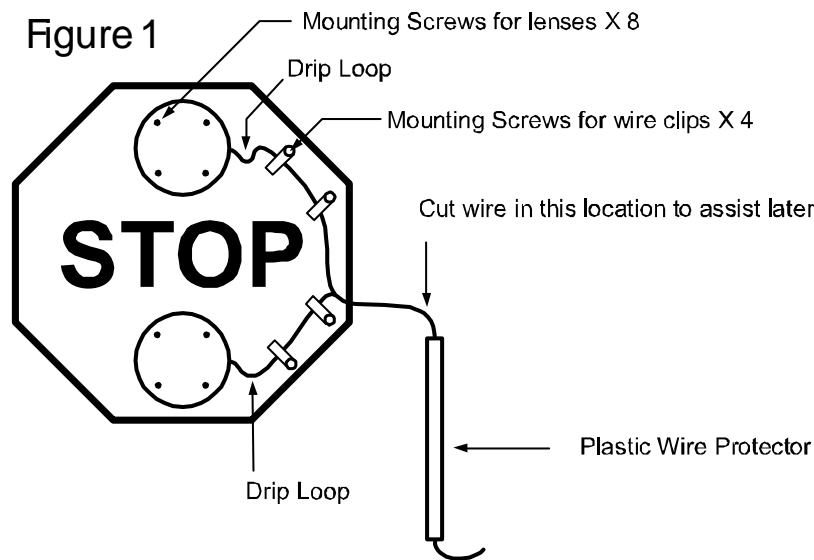
This LED upgrade is designed to replace 12Volt DC incandescent lights on air, vacuum, and electrical octagon stop-arms. **DO NOT INSTALL INTO A STOP-ARM STROBE PACK.** All rapid flash technology and precision high-tech circuitry is contained in the primary LED lamp with the 6-foot pigtail wire attached. This lamp controls the secondary lamp by means of the 3-pin connector.

### REMOVING YOUR EXISTING INCANDESCENT STOP-ARM KITS.

**PLEASE NOTE: Do not remove the existing wires from the old kit that pass through the Control Panel. These will assist you in the installation of the new kit.**

#### **Steps for the removal of the existing incandescent Stop-Arm Lights. (see Fig. 1 )**

1. Remove the existing lens and gaskets and then remove the 1156 bulb from its socket.
2. Remove the hex head screws from the incandescent bulb socket and on the wire clips for mounting the wires to the stop-arm blade. This will free the old wires for removal later.
3. Now that the socket and wires are not attached to the Stop-Arm blade you can cut the bulb socket from the wire and remove the plastic wire protector, if one is present. **(Do not remove the wires yet).**



## Steps for installing your Doran Strobing / Steady State LED Stop-Arm kit.

1. Slide the clear plastic wire protector tube (provided) up to the Primary LED lamp housing. This will protect the exposed wire once the Stop-Arm kit is installed.
2. Now is when you will use the old wiring to pull the new wires through to the control panel. Take the old wire and using a good quality tape (duct tape) attach the new wires to the old wire where the plug socket was attached using the tape (see Fig. 2). Carefully pull the old wire into the control panel area through the wire hole on the bottom of the Stop-Arm base, feeding the new wire into the control panel and/or the location of the 8-way flasher. Pull the new wire through completely except for the 2 feet of the protected tubing that covers the wire for mounting to the Stop-Arm blade. (**Be careful not to pull out the wires that are sealed into the Primary LED lamp when feeding wires into the control panel area.**)
3. **See Figure 3 for details.** Place the 4 screws provided into the Primary LED lamp and place the gasket onto the end of the screws. (Some technicians prefer to use the original hex head screws from the original lamp, which will also work well.) **Remember: the Primary LED lamp and wire must mount on the inner side of the Stop-Arm blade like the original did. Make sure the DORAN logo on the front of the lens is mounted towards the bottom position.** Pass the screws through the Stop-Arm blade and place another gasket over the screws on the other side of the Stop-Arm blade for the secondary lamp. Plug the secondary lamp's connector into the Primary lamp's connector (be sure the connectors are seated well) and be sure to align each LED lamp with the DORAN logo positioned towards the bottom. Tighten screws securely with the gaskets. **Do not over tighten screws; this could damage the LED lamp housings.**
4. Re-install the wire mounting clips that attach the wire to the Stop Arm Blade which were removed earlier. We suggest that you allow for a small drip loop in the wire to help to keep water from entering the lens housing as shown in Figure 1.

### REPEAT THESE STEPS FOR BOTH THE UPPER AND LOWER STOP ARM LIGHTS

#### Wiring of the new Strobing / Steady State LED Stop-Arm kit

Now that the lamps are fastened to the Stop-Arm blade and the wires have been routed to the control panel/8-way flasher, you are now ready to attach the wires to the 8-way flasher. This is the only connection that you will need because of the circuitry of the Primary LED lamp. Allow enough wire to attach the WHITE wires (-) to the ground and one BLACK wire (+) to the left red output terminal of the 8-way flasher, and the other BLACK (+) wire to the right red output of the 8-way flasher for STROBE state flashing. If a STEADY state flash is desired, then the RED wires will be connected to the red output from the 8-way flasher instead of the BLACK wires. Since LEDs operate on 10% of the current used by an incandescent light bulb, your new light kit will not affect the normal operation of the 8-way warning lights, but will actually help to increase the life of your existing flasher.

**Test your new Strobing LED Stop-Arm with the master switch on and the door open for proper operation. You will notice that the top and bottom lights are now ultra-bright LEDs with an attention grabbing, rapid flash that will add proven safety to the bus.**

***For technical assistance and customer service please call us at 1-866-816-7233***

