

**INSTRUCTION SHEET  
FOR  
MODELS 501924, 501926, & 501928 REAR DECK  
SOLARIS™ INTERNAL LIGHT PACKAGE**

**SAFETY MESSAGE TO INSTALLERS AND USERS**

**⚠ WARNING**

People's lives depend on your safe installation of our products. It is important to read, understand and follow all instructions shipped with the products. In addition, listed below are some other important safety instructions and precautions you should follow:

- To properly install lighting system, you must have a good understanding of automotive systems, along with proficiency in the installation and use of safety warning equipment.
- This product contains high intensity LED devices. To prevent permanent eye damage, DO NOT stare into the light beam at close range.
- DO NOT install equipment or route wiring in the deployment path of an air bag.
- When drilling into a vehicle structure, be sure that both sides of the surface are clear of anything that could be damaged.
- A light system is a high current device. In order for it to function properly, a separate ground connection must be made. If practical, it should be connected to the negative battery terminal. At a minimum, it may be attached to a solid metal body or chassis part that will provide an effective ground path as long as the light system is used.
- Locate the light system controls so the VEHICLE and CONTROLS can be operated safely under all driving conditions.
- The mounting system should be periodically inspected to ensure that it is securely attached to the vehicle.
- File these instructions in a safe place and refer to them when maintaining and/or reinstalling the product.

Failure to follow all safety precautions and instructions may result in property damage, serious injury, or death to you or others.

**A. GENERAL.**

The Model 501924 is a 10 head LED flashing lighting system for the rear deck of the Ford Crown Victoria. The Model 501926 is the 8 head SignalMaster™ variant, with two independently controlled outboard flashing heads. The Model 501928 is the 6 head SignalMaster variant, with four independently controlled outboard flashing heads. The Solaris LEDs are housed in a polyparabolic reflector for maximum light output. The unit is designed for use with Federal Signal lightbar controllers, SignalMaster controllers, and/or single switches rated at 12 amps and above. Flashing heads are controlled by the internal Intelli-Flash™ electronic flasher. The base is stamped aluminum and the cover is vacuum-formed ABS. The unit is supplied with mounting hardware and an eighteen-foot cable. It has an operating temperature range of -40°C to +65°C.

**B. UNPACKING.**

After unpacking the kit, inspect it for damage that may have occurred in transit. If the unit has been damaged, do not attempt to install or operate it. File a claim immediately with the carrier, stating the extent of damage. Carefully check all envelopes, shipping labels, and tags before removing or destroying them. Ensure that the parts listed in the appropriate KIT CONTENTS LIST are included in the package.

**C. KIT CONTENTS LIST.**

Qty.	Description	Part No.
2	Screw, Hex Hd., #10 Self-Drill	7011221-24
2	Screw, Mach., 10-32	7000A070-07
2	Lockwasher, Ext Tooth, #10	7075A031
2	Nut, Acorn, 1/4-20	7054A010
2	Washer, Flat, 1/4" Black	7072230
1	Bracket, Center	8624114
2	Bracket Assy, Rear Deck Support	8624112
2	Strip, Sealing, Extruded Rubber	205003

**D. INSTALLATION.**

**⚠ WARNING**

When installing equipment inside air bag equipped vehicles, the installer **MUST** ensure that the equipment is installed **ONLY** in areas recommended by the vehicle manufacturer. Failure to observe this warning will reduce the effectiveness of the air bag, damage the air bag, or potentially damage or dislodge the equipment, causing serious injury or death to you or others.

**⚠ WARNING**

**Vehicles equipped with this system must not be used for transporting children in child safety seats. The child safety seat will not be properly secured and the child can be injured in a sudden stop or accident. Failure to follow this warning will result in serious injury or death.**

**CAUTION**

Before drilling holes in ANY part of vehicle, be sure that both sides of the mounting surface are clear of parts that could be damaged, such as brake lines, fuel lines, electrical wiring or other vital parts.

Installation can be accomplished using the supplied hardware. All the conductors necessary for control of the functions are contained in the cable. Plan the cable routing prior to installation. The basic light functions of the unit must be controlled by a user-supplied control head and/or switches.

Determine the mounting position appropriate for installation and proceed as follows:

1. *Center Bracket (see figure 1).*

a. Remove the two screws retaining the Center High Mount Stoplight (CHMSL). Unplug connector and remove CHMSL.

b. Position the center bracket as shown in figure 1, centered behind and butted against the CHMSL mount. Using the bracket as a template, mark the mounting hole locations.

c. Use an awl to pierce the carpet and insulation at the previously made marks.

**CAUTION**

Do not over-tighten the screws.

d. Secure bracket with two #10x1-1/2" self-drilling screws. {Alternatively, center punch the marks and drill two 9/64" holes prior to securing bracket.}

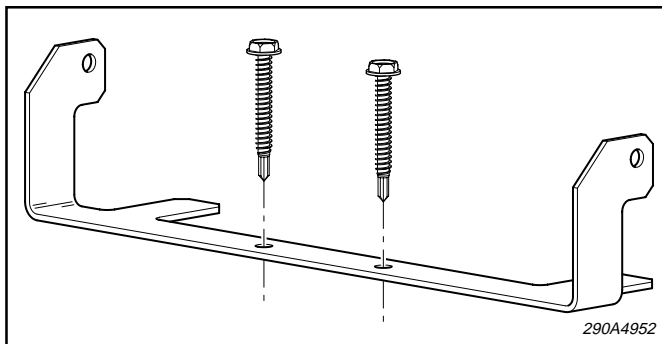


Figure 1.

e. Reconnect and reinstall CHMSL. Verify CHMSL operation before proceeding.

2. *Rear Deck Support Bracket Assemblies.*

**⚠ WARNING**

**Vehicles equipped with this system must not be used for transporting children in child safety seats. The child safety seat may not be properly secured and the child can be injured in case of a sudden stop or accident. Failure to follow this warning may result in serious injury or death.**

a. Remove the plastic trim surrounding the two outboard child safety seat tether anchors and the child safety seat tether anchors. Retain bolts. Store the anchors in a safe place so the car can be returned to the factory configuration when the light system is removed.

b. See figure 2. Install the rear deck support bracket assemblies with the bolts from the tether anchors. Orient as shown in figure 3 and finger tighten bolts.

c. Slide the light head assemblies into position to verify correct angle. Remove light head assemblies and tighten bolts securely.

3. *Light Head Assemblies.*

a. See figure 4. Slide the light head assemblies into position with the U-notch over the stud in the rear deck support bracket assembly.

b. Attach the light head assemblies to the center bracket with the #10-32 Phillips machine screws and external tooth lockwashers. Adjust for level and tighten securely.

c. Route cable through car to the location of the controller.

**NOTE**

Before installing the cover, proceed to Paragraph E. Electrical (Model 501924) or Paragraph F. Electrical (Model 501926 & 501928) of this instruction sheet for wiring and programming.

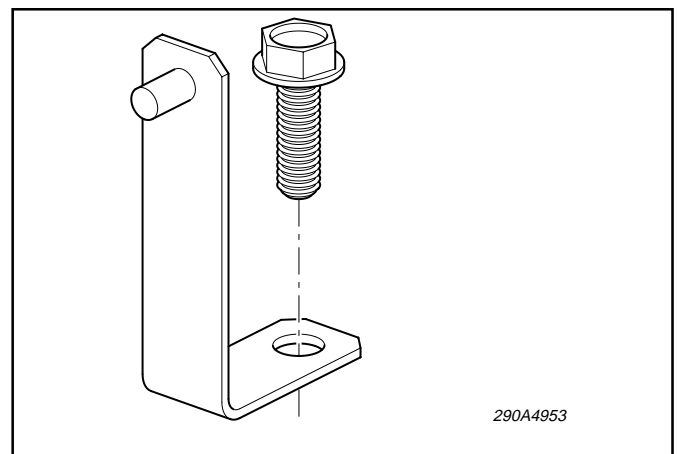


Figure 2.

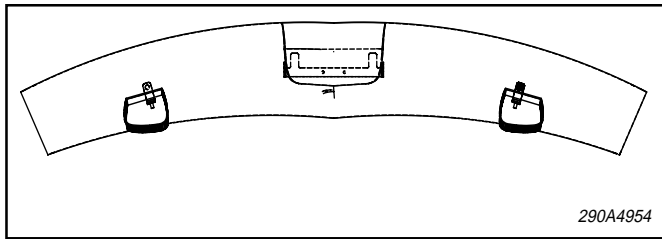


Figure 3.

### CAUTION

Do not over-tighten the Acorn Nuts.

#### 4. Cover Installation.

See figure 5. Since minor variations in manufacture and installation can affect cover fit, some trimming of the cover may be required to relieve tight spots. This can be accomplished with tin snips or a belt sander. Using a paper strip as a feeler gauge to identify tight spots, mark and trim accordingly. Additionally, the extruded rubber sealing strips may be cut to fit and installed on the edge of the cover to tighten up the cover-to-glass fit for minimized flashback. Position the cover as shown and secure with the 1/4" acorn nuts and flat washers.

### E. ELECTRICAL - MODEL 501924 NON-SIGNALMASTER.

#### ⚠ WARNING

**Light system controls must be located so that the VEHICLE and CONTROLS can be operated safely under all driving conditions.**

#### ⚠ WARNING

**To provide safe operation, the control switch must be capable of handling a minimum of 12-amperes DC, and fused with a user-supplied 15-ampere fuse at the source.**

### CAUTION

Reverse polarity may damage any power supply and prevent operation. Ensure that the correct polarity is observed.

#### 1. Wiring (see figure 6).

a. Connect the black wire to a known good vehicle ground point.

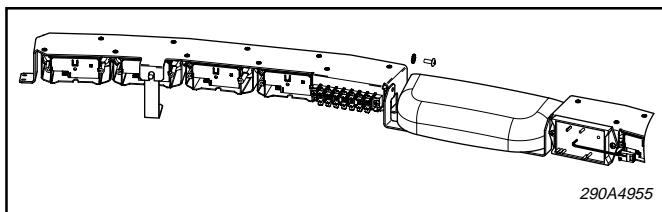


Figure 4.

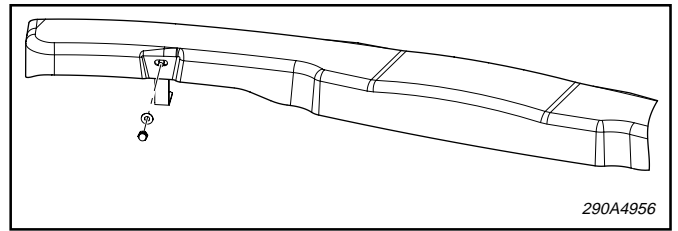


Figure 5.

b. Connect the red wire to a user-supplied slide switch, position 1 or single pole, single-throw switch (SW1). Connect the other side of the switch to a fused 12VDC source. If two modes of operation are desired, connect the white/red wire to the user-supplied slide switch, position 2 or a single pole, single-throw switch (SW2). Connect the other side of the switch to the fused 12VDC source as shown.

#### 2. Programming.

See figure 7. The flasher will provide the end user with two pre-selected flash patterns. The pre-selected flash patterns are to be chosen from the eight factory programmed patterns provided with each flasher. It is recommended that the pre-selected flash patterns be determined and programmed during installation. See figure 6 for proper wire colors for power inputs. Apply power to the Mode 1 input of the flasher. Momentarily short pins 1 & 2 of the white connector on the Intelli-Flash flasher until the desired pattern is running. Allow the pattern to run for 15-seconds; Mode 1 is now programmed. Apply power to both Mode 1 and Mode 2 inputs of the flasher. Momentarily short pins 1 & 2 of the white connector until the desired pattern is running. Allow the pattern to run for 15-seconds; Mode 2 is now programmed.

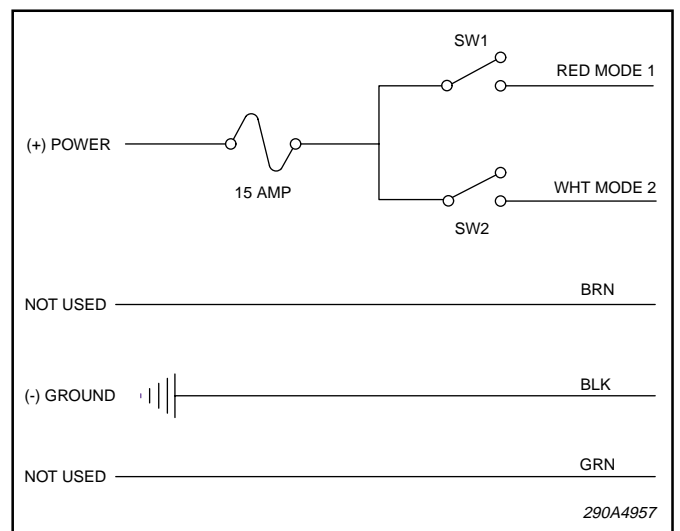


Figure 6.

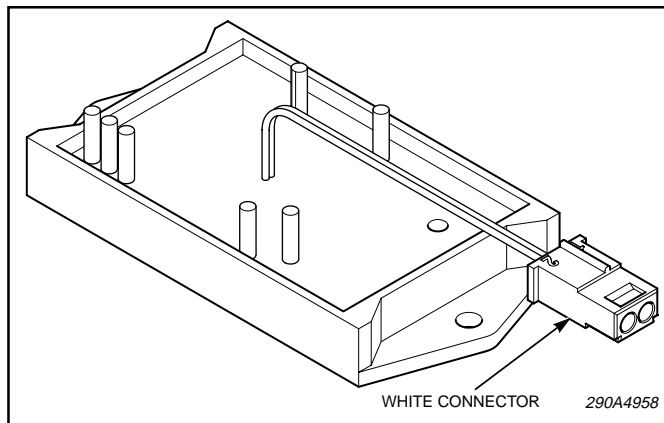


Figure 7.

## F. ELECTRICAL - MODELS 501926 & 501928 SIGNALMASTER.

### ⚠ WARNING

Light system controls must be located so that the **VEHICLE** and **CONTROLS** can be operated safely under all driving conditions.

### ⚠ WARNING

To provide safe operation, the control switch for the Intelli-Flash must be capable of handling a minimum of 12-amperes DC, and fused with a user-supplied 15-ampere fuse at the source.

### CAUTION

Reverse polarity may damage any power supply and prevent operation. Ensure that the correct polarity is observed.

#### 1. Intelli-Flash Wiring (see figure 8).

- Connect the white/green wire to a good vehicle ground point.
- Connect the white/orange wire to a user-supplied slide switch, position 1 or single pole, single-throw switch (SW1). Connect the other side of the switch to a fused 12VDC source. If two modes of operation are desired, connect the white/red wire to the user-supplied slide switch, position 2 or a single pole, single-

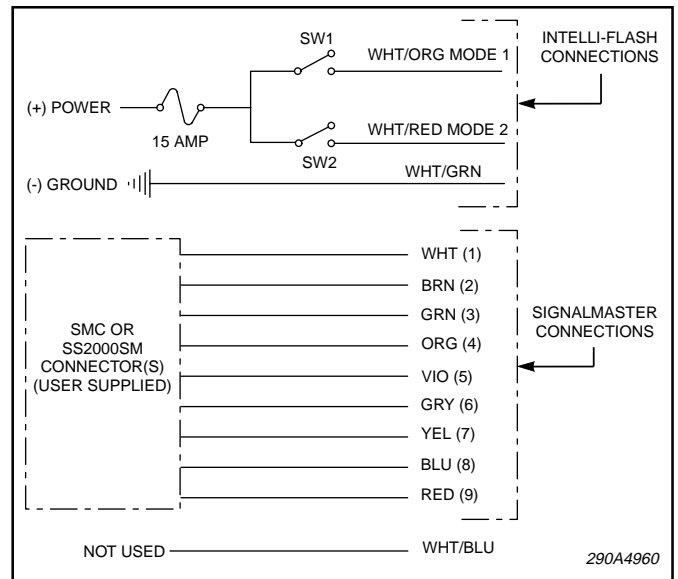


Figure 8.

throw switch (SW2). Connect the other side of the switch to the fused 12VDC source as shown.

#### 2. SignalMaster Wiring (see figure 8).

Following the directions for the user-supplied Signalmaster or Smart Siren controller, connect the wires as shown. The 12 gauge red is the lamp common power (+) lead.

#### 3. Programming.

See figure 7. The flasher will provide the end user with two pre-selected flash patterns. The pre-selected flash patterns are to be chosen from the eight factory programmed patterns provided with each flasher. It is recommended that the pre-selected flash patterns be determined and programmed during installation. See figure 8 for proper wire colors for power inputs. Apply power to the Mode 1 input of the flasher. Momentarily short pins 1 & 2 of the white connector on the Intelli-Flash flasher until the desired pattern is running. Allow the pattern to run for 15-seconds; Mode 1 is now programmed. Apply power to both Mode 1 and Mode 2 inputs of the flasher. Momentarily short pins 1 & 2 of the white connector until the desired pattern is running. Allow the pattern to run for 15-seconds; Mode 2 is now programmed.

## G. TESTING.

### WARNING

**This product contains high output LED devices. To prevent permanent eye damage, do not stare into the light beam at close range.**

After Installation, check the entire system to be sure the lights are flashing properly and all light system functions are operating properly.

## SAFETY MESSAGE TO OPERATORS

### WARNING

**People's lives depend on your safe use of our products.**

**Listed below are some important safety instructions and precautions you should follow:**

- **Although your warning system is operating properly, it may not be completely effective. People may not see or heed your warning signal. You must recognize this fact and continue driving cautiously.**
- **Also, situations may occur which obstruct your warning signal when natural or manmade objects are between your vehicle and others, such as: raising your hood or trunk lid. If these situations occur, be especially careful.**
- **This product may obstruct your vision. Use due caution, especially when changing lanes and backing.**
- **At the start of your shift, you should ensure that the light is securely attached and operating properly.**

**Failure to follow these safety precautions may result in property damage, serious injury, or death to you, to passengers, or to others.**

## RETAIN AND REFER TO THIS MESSAGE

### WARNING

**Vehicles equipped with this system must not be used for transporting children in child safety seats. The child safety seat may not be properly secured and the child can be injured in a sudden stop or accident. Failure to follow this warning may result in serious injury or death.**

## H. MAINTENANCE.

### CAUTION

After prolonged operation, the unit gets hot and can cause burns. Do not touch the unit while or shortly after it has been operating. Always allow the unit to cool before handling.

#### 1. *Cleaning Reflector Assemblies.*

Use a soft tissue to clean the reflectors. Avoid heavy pressure and the use of caustic or petroleum base solvents which will scratch or dull the surface.

#### 2. *Intelli-Flash Replacement.*

- a. Remove the acorn nuts, washers, and the cover.
- b. Note connections then disconnect the Intelli-Flash leads.
- c. Remove the two Phillips head screws retaining the Intelli-Flash and remove flasher.
- d. Assembly is reverse of disassembly.

#### 3. *Reflector Assembly Replacement.*

- a. Remove the cover per Step a in Intelli-Flash replacement, above.
- b. Remove the 10-32 Phillips machine screw and external tooth lockwasher from the center bracket and remove light assembly.
- c. Disconnect lead from reflector assembly, then remove the two #6 Plastite screws retaining reflector assembly.
- d. Assembly is reverse of disassembly.

#### 4. *PCB Replacement (see figure 9).*

- a. Follow Steps a, b, & c in reflector assembly replacement, above.

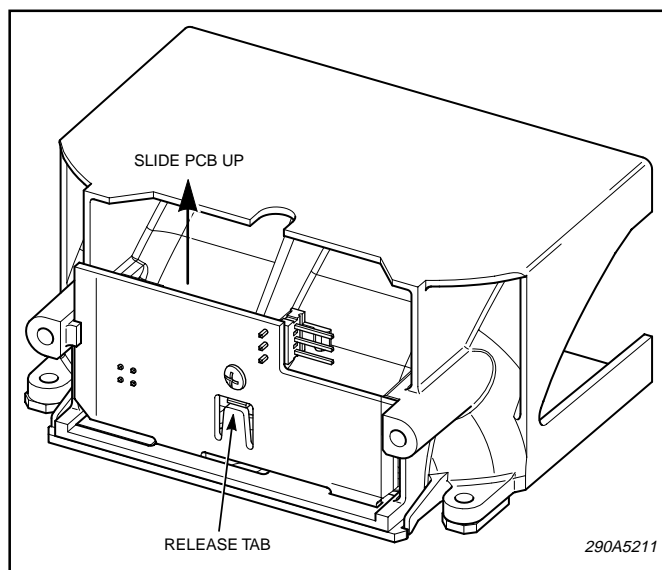


Figure 9.

b. Release locking tab by prying gently and slide PCB up.

c. Assembly is reverse of disassembly.

5. *LED Replacement (see figure 10).*

a. Follow steps a & b in PCB replacement, above.

b. Release the two locking tabs by prying gently while sliding aluminum baseplate forward.

c. Lift baseplate free and remove LED.

d. Assembly is reverse of disassembly.

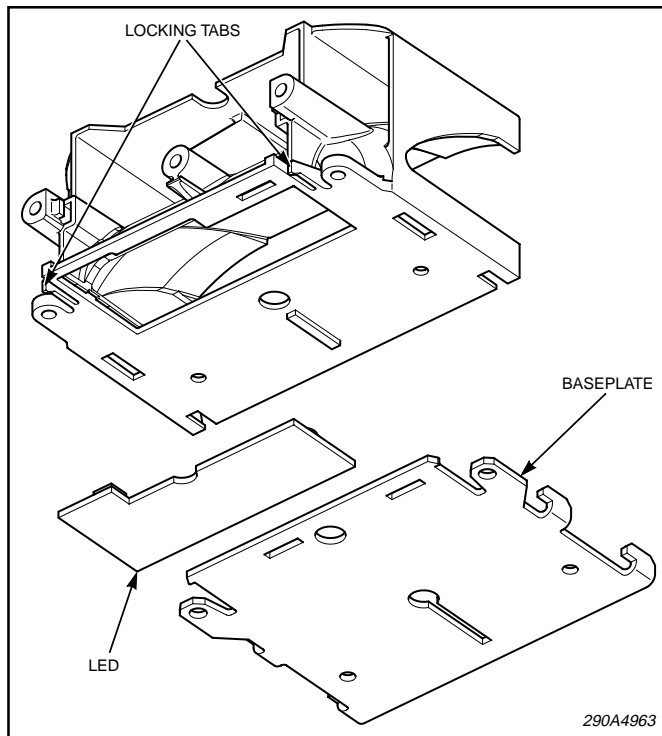


Figure 10.

## I. REPLACEMENT PARTS.

Description	Part No.
Intelli-Flash	8554057
PCB Assembly	2005272
Solaris Reflector Assembly, Amber (Includes PCB)	8654167-02
Solaris Reflector Assembly, Blue (Includes PCB)	8654167-03
Solaris Reflector Assembly, Red (Includes PCB)	8654167-04
Solaris Reflector Assembly, White (Includes PCB)	8654167-05
LED, 6 Button, Amber	8625234-A
LED, 6 Button, Blue	8625234-B
LED, 6 Button, Red	8625234-R
LED, 6 Button, White	8625234-W
Reflector, Solaris	8654165

Manufactured by:  
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