



FIRST LIGHT
SAFETY PRODUCTS

FULLY ILLUMINATED STOP ARM

Part #: 100949, 100950

INSTALLATION INSTRUCTIONS ► Air, Front or Rear

WARNING: Turn the pressure regulator by adjusting nut counterclockwise and confirm that no air is provided when the upstream air valve is on before proceeding.

This stop arm is equipped with a low friction hinge. Rapid deployment due to high pressure can result in immediate damage to the stop arm. Please follow the instructions.

Example:

Rapid deployment can cause immediate damage to the clevis pin (Part #100734).

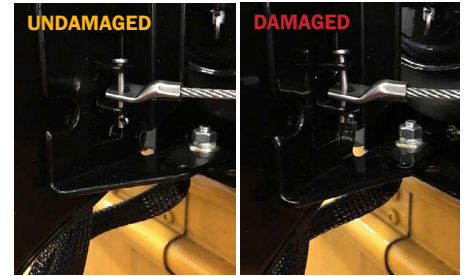


Fig 1 - Example of the potential damage caused by rapid deployment of the stop arm.

Tools Required:

- Drill
- 25/64" drill bit
- Rivet nut installation tool
- 1/4 - 20 rivet nut installation tool tip for steel rivets
- 5/32" hex (Allen) bit socket
- Torque wrench (90 in-lbs)
- Wire strippers (16 gauge)
- Crimper for insulated connectors (10-12ga, yellow), (14-16ga, blue)
- 5/16" nut driver or similar

WARNING: Ensure pressure regulator is turned to zero and any existing pressure within the stop arm(s) is safely released before proceeding with installation.

1. Remove existing stop arm from the side of the bus.
2. Rivet nuts are required for mounting the new stop arm. Unless rivet nuts have already been installed and are in good condition, the following steps must be followed:
 - A) Drill each of the 4 mounting holes with a 25/64" drill bit.
 - B) Install each of the 4 supplied rivet nuts using the appropriate tool.
3. Inspect the airline. Replace as necessary.

Note: If your bus is equipped with copper air lines, a portion of the line may be replaced with a plastic line to ease installation.

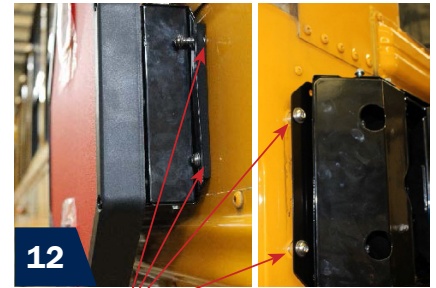
4. Clean the mounting surface to ensure a watertight seal.
5. For 2 wire operation, join the red and blue wire and crimp under the yellow jacket female spade connector. Crimp the blue jacket female connector onto the black wire.



For 3 wire operation, the red wire may be connected to a constant +12Vdc instead of joining with the required blue (deploy signal) wire.

AIR, FRONT OR REAR

6. An air fitting is not included. Transfer the fitting from your previous stop arm or otherwise provide and install a new fitting. Do not overtighten (max 40 in-lbs).
7. Locate and prepare the 4 mounting screws by ensuring each screw is equipped with a washer and lock washer.
8. You are now ready to mount your new stop arm.
9. Lift and hold the stop arm parallel and away from the bus wall. Connect the wires first. Ensure the connections are locked together and feed the wires into the bus wall.
10. Connect the airline to the fitting.
11. Install the 4 mounting screws with washers and lock washers through the mounting flange and the spacers behind. Ensure the spacers are included. Tighten to 90 in-lbs.
12. Remove the protective film from the lamps.



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SPACERS

WARNING: Only proceed with the next step once all stop arms (i.e. front and rear if available) on the vehicle has been properly installed. Ensure air pressure regulator is still turned down.

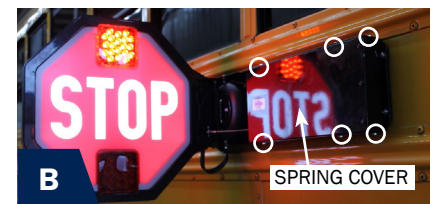
13. Activate the stop arms from the bus controls. At this point, the stop arm lights should be flashing and the arms should remain retracted, undeployed.
14. Ensure the bus air tank pressure is above 90 psi. Slowly adjust the pressure regulator until it takes approximately 2 seconds for the arm to move from retracted to deployed. Test the rate of deployment a few times to ensure the proper deployment speed is reached.
15. Lock the air pressure regulator by pressing up on the adjusting nut to prevent further adjustment.
16. Perform a final inspection of the stop arm. Ensure the lights are flashing or strobing according to your local legal requirements. If not, the lighting mode may be changed using the following instruction.



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SETTING FLASH OR STROBE LIGHTING MODE

- A) Activate or hold the stop arm in the deployed position.
- B) Remove the spring cover by removing the 6 screws from the perimeter.
- C) Remove the small Phillips head screw on the controller.
- D) Rotate the switch 90 degrees.
- E) Install the small Phillips head screw back in the controller. Do not overtighten.
- F) Reinstall the spring cover and screws. Do not overtighten (10.5 in-lbs).
- G) Deactivate or release the stop arm to allow it to return to the retracted position.
- H) Power must be removed and resupplied to the stop arm for the change to take effect.



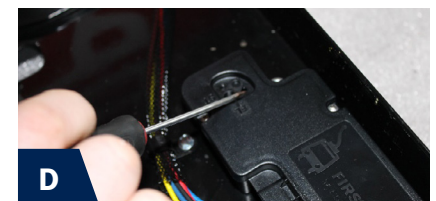
B

SPRING COVER



C

REMOVE SCREW



D