

## FEATURED PRODUCT

### PL-3 to 3-Pin AMP Pigtail Adapter

- Converts the PL-3 connection (incandescent) to a 3 Pin AMP connection (LED)
- For use with Stop-Tail-Turn and Mid-Turn lights
- Molded connections to protect against contaminants
- 3 Pin AMP connector with STA-DRY® sealed boot adds additional protection to help seal out moisture and contaminants
- Also available with 90° 3 Pin AMP connector for use in tight spaces



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## Common Reasons for Lighting Failure

There are multiple reasons for lighting failure other than just a faulty light. Some of the more common reasons and easy solutions to prevent them are listed as follows:

### Corrosion

Road contaminants that enter the lighting electrical system can speed up the process of corrosion. Copper wiring acts as a sponge for water and contaminants. As the wiring heats up and cools down it sucks moisture in.

Any open connections in the electrical system are an open door for these corrosion causing contaminants to enter, including the lighting connection. Corrosion that builds up at this connection will eventually cause lighting failure.

To help prevent corrosion, use lights with sealed housing and di-electric grease on all connections. When making repairs, always use heat shrink terminals.

A completely sealed harness system, will also help to prevent corrosion as well.

### Electrical System Wiring

The size of the wire gauge being used in the electrical system to power the lights can play a significant role in the operation of a light. Always be sure to use the proper sized wire for your electrical system. If the wire gauge is too small it will not be able to carry the current necessary to power the light, causing a drop in voltage by "choking" the voltage capacity. This can lead to dim lighting, and even the potential risk of fire from overheated wiring.

### Voltage Fluctuation

Be sure lights are operating within their voltage range. Operating an incandescent light at an overvoltage can significantly reduce the life of the light. Operating at 5% over its designed voltage, the life is decreased by 44%, and 10% over reduces the life by 68%!

Even an intermittent spike in voltage can shorten the life of a light, whether incandescent or LED. When starting your vehicle, always make sure to do so with the lights off.

### Vibration and Shock

Incandescent lights are subject to broken bulbs and filaments from repeated shock and vibration that is inevitable when a vehicle is consistently on the road. Accidental impact into objects such as loading docks when backing up, placing a container onto a chassis, and even loading and unloading the contents being carried by a vehicle, are all additional conditions in which the impact from shock and vibration can damage incandescent lighting.

To help avoid damage from this type of impact, there are incandescent lighting products on the market today specifically designed to protect the bulb from impact, however, with the innovative introduction of LED (light emitting diode) lighting, this would be the ultimate way to go since this completely eliminates the need for a bulb.

Have technical questions? Get the latest tips from a skilled Phillips engineer!  
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- Prevent lighting failure due to corrosion by using sealed lights, di-electric grease on all lighting connections, and heat shrink terminals when making repairs.
- Always use the proper sized wire for your electrical system. Wire gauge that is too small can "choke" voltage capacity leading to dim lighting, or even fire from overheated wiring.
- Operating an incandescent light at an overvoltage can significantly reduce the life of the light.
- To help eliminate damage to the bulb from vibration and shock, you can install lighting specifically designed to protect the bulb from impact, or switch to LED lighting, which completely eliminates the need for a bulb.