

Preventative Maintenance for Light Duty 4 and 6-Way Connections

Light duty 4 and 6-way connections are used for smaller trailer applications such as tagalong, equipment, landscape and utility trailers, and the vehicles that tow them such as SUVs and pick-up trucks. These plugs and sockets are just as susceptible to corrosion as any other type of electrical connection. Plugs and sockets made with a zinc die-cast housing and with open backs that are not sealed, should be maintained regularly. The following steps can be taken to help avoid damage to these connections and ultimately the electrical system.

Upon inspecting the connections, if damage or corrosion is significant, replacing the plug and socket are strongly suggested to avoid loss of power and/or further damaged caused to the electrical system. If plugs and sockets show signs of typical "wear-and-tear" and minimal corrosion buildup, cleaning the connections should be enough to help prolong the life of these connections.

Tools Needed:

6-Way Connections

6-Way Plug and Socket Brush
OR

For Socket: Small/mini brass wire bristle brush (We found that a 3/8" diameter tube brush works well.)

For Plug: Brass wire bristle tube brush. (Suggested sizes: 1/8" to 1/4" diameter.)

4-Way Connections

For Socket: Small/mini brass wire bristle brush (We found that a 3/8" diameter tube brush works well.)

For Plug: Brass wire bristle tube brush. (Suggested sizes: 1/8" to 1/4" diameter.)

Steps:

1. It is recommended that light duty plug and socket interfaces be cleaned at every preventive maintenance interval. Phillips recommends every 6 months or more frequently if the vehicle is exposed to magnesium or calcium chloride in cold weather areas.

2. Inspect electrical assembly cables for any type of damage. Replace if cracks or deep nicks in the jacketing are found that would allow for corrosion causing moisture and contaminants to enter and "wick" their way into the electrical system. Sagging coiled cables with poor recoil memory may need to be replaced or require additional cable support to prevent damage from dragging. Straight cables should also be supported properly as well to avoid dragging.
3. Clean the pins on all plugs with the appropriate brush and water, (no soap!) (Fig 1)
4. Clean the pins on the vehicle and/or trailer sockets with the appropriate brush and water, (no soap!) (Fig 2)
5. Ensure the plugs and sockets are completely dry before re-coupling back together.



Fig 1



Fig 2

To help further prevent corrosion buildup, weatherproof plugs and sockets, that are completely sealed at the back because they are molded to cable, are available on the market. They offer better corrosion protection than those of their zinc die-cast counter parts. Moisture and contaminants cannot enter at the back of the plug or socket and "wick" their way into the electrical system creating the potential for failure.



Have technical questions? Get the latest tips from a skilled Phillips engineer! Call: 888-959-0995
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TIPS

- Light duty socket and plug connections are just as susceptible to corrosion as any other connection on a vehicle and should be cleaned at every preventive maintenance interval.
- It is recommended to use a wire brush and water (no soap) to clean the socket and plug union.
- It is equally important to check the cable for any damage and replace where necessary.
- Weatherproof plugs and sockets that are completely sealed offer better corrosion protection than those of their zinc die-cast counterparts.

PRODUCT INFORMATION related to this article is available [here](#).

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