PHILIPS

Qwik Tech Tips

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FEATURED PRODUCT

STA-DRY® OCMS2™

- A tight STA-DRY® seal locks out road contaminants, completely stopping the devastating effects of corrosion.
- Plugs directly into the tractor and is rarely removed, further reducing the possibility of contaminants entering the electrical system.
- Features the QCPTM (Quick-Change Plug), which is field serviceable in seconds.
- Works with the QCS® or QCS2® boot, replacing the socket.



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MAILING LIST AND
FOR ALL
PAST ISSUES

Troubleshooting Trailer Lights

DOT regulations state that any and all lights on a vehicle must be in working order. One of the most common reasons for an officer to pull a driver over is for a faulty light. Don't let this happen to you! Below are some basic guidelines on how to troubleshoot some of the problems that may arise with a trailer lighting system.

<u>Total Lighting Failure</u>: No part of the system appears to be powered.

Possible Causes: Burnt out light bulb causing a break in the system; corrosion in harness, light plug or pigtail; ground problem; hydraulic lock from too much dielectric grease; bad spot in wiring harness; issues in the 7-way plug; issues from the tractor.

- 1. Check to see if you have power at the 7-way of the trailer.
 - If there is no power there, check the back of the 7-way cable from the tractor.
 - If there is no power there, check the 7-way socket on the tractor.
- 2. Check for a good ground.
- 3. Check the condition of the 7-way connector.
 - Check for a secure connection.
 - Check to see if corrosion is present.

<u>Single Lamp Failure</u>: Problem appears to be isolated to one lamp.

Possible Causes: Burnt out light bulb; corrosion in harness, light plug or pigtail; ground problem; hydraulic lock from too much dielectric grease; bad spot in wiring harness; issues in the 7-way plug; issues from the tractor.

- 1. Check the lamp with a lamp tester.
 - If the lamp functions, try re-installing it. If the lamp is not functional, move on to step two

2. With the power on, check the pigtail for continuity.

- If the pigtail does not function, check the jumper that connects the pigtail to the harness.
- If the jumper does not function, check the main harness.
- Keep working upstream in the system until you get a connection that functions. From there you know the problem is downstream in the system.



Lamps Working Intermittently and/or Flickering: A Single Lamp or Entire Circuit

Possible Causes: Small amount of corrosion build up; ground problem; short in wiring harness; loose pins in 7-way; loose wire in 7-way; problem in the tractor.

- 1. Visually check connections and wire jacketing.
- 2. Start testing from the front of the trailer beginning with the 7-way socket. Disconnect one piece of the harness at a time and check the circuit.

<u>Lit Lamps That Should Be Off</u>: This is the most difficult failure to find.

Possible Causes: Electrical short, crossed wires, bad switch.

- 1. Visually inspect all connections and wire jacketing.
- 2. Check the harness one piece at a time starting from the rear and working your way back up to the 7-way socket.



- Always use the proper sized wire when replacing damaged or worn wire. Lighter gauge wire can heat to the point of fire and can also diminsh the current by "choking" the voltage capacity.
- Operating an incandescent lamp on an overvoltage can significantly reduce the life of the light. Operating at 5% over its designed voltage, the life is decreases by 44%, and 10% over reduces the life by 68%.
- Turn lights OFF when parked in a dock with padded frames. Heat is created from the light, reflected off the padding
 and back onto the light, which can cause lenses to melt and even shorten the life of the light bulb or LED.
- Avoid washing the trailer with harsh chemicals. This can cause the plastic lenses to weaken

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