

Trailer Lamps Malfunction (With U1D)

Diagnostic Instructions

- Review Strategy Based Diagnostics for an overview of the diagnostic approach.
- Diagnostic System Check Instructions provides an overview of each diagnostic step.
- Continue through the Diagnostic System Check until you are directed to follow a particular diagnostic or repair procedure. Once a repair has been completed, perform the Diagnostic Repair Verification and verify the customer concern has been corrected.

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Trailer Backup Control	B3890 02	B3890 04	B3890 01	-
Trailer Park Lamp Control	B3885 02, B3886 02	B3885 04, B3886 04	B3885 01, B3886 01	-
Left Trailer Turn Signal/Stop Lamp Control	B3887 02, B3889 02	B3887 04, B3889 04	B3887 01, B3889 01	-
Right Trailer Turn Signal/Stop Lamp Control	B3888 02, B3889 02	B3888 04, B3889 04	B3888 01, B3889 01	-
Ground	-	1	-	-
1. Trailer lamps malfunction				

Scan Tool Functions

K68 Trailer Lighting Control Module – Control Functions

Control Function	Description
Left Trailer Turn Signal/Stop Lamp Command	This control function will command the left trailer turn signal/stop lamp control circuit On/Off at the X88 Trailer Connector.
Right Trailer Turn Signal/Stop Lamp Command	This control function will command the right trailer turn signal/stop lamp control circuit On/Off at the X88 Trailer Connector.
Trailer Tail Lamp	This control function will control the trailer tail lamp control circuit On/Off at the X88 Trailer Connector.
Trailer Backup Lamps	This control function will control the trailer backup lamp control circuit On/Off at the X88 Trailer Connector.

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The K68 Trailer Lighting Control Module receives serial data messages indicating what lamps have been activated on the vehicle. The Trailer Lighting Control Module responds by applying voltage to the appropriate control circuits illuminating the lamps on the attached trailer. The total combined trailer stop/turn signal lamp control circuits must draw at least 55mA of total current to be detected as a trailer or the Trailer Lighting Control Module will not control the lighting circuits.

Diagnostic Aids

Vehicles equipped with UJD use pulse width modulation voltage (PWM) to control trailer stop/turn signals and backup lamps. The combined trailer park lamps and stop/turn signal lamps and must draw at least 55mA of total current to be detected as a trailer or the K68 Trailer Lighting Control Module will not control the lighting circuits. Some LED lamps do not draw enough current for trailer lighting to operate properly. A load resistor can be added to the trailer lighting circuit on the trailer if necessary to obtain the correct load. Some aftermarket accessories are also incompatible with PWM voltage and may not function correctly when connected to the trailer lighting circuits of the vehicle.

The K68 Trailer Lighting Control Module constantly monitors trailer connection status, this is accomplished through the park lamps and stop/turn signal lamps lighting circuits of the trailer to determine if a trailer is connected. With the key OFF, the Trailer Lighting Control Module will periodically pulse the lighting circuits of the trailer to verify it is still connected. The lights on the trailer may flash at different intervals with the key OFF depending on which type of lights the trailer is built with. If a trailer is disconnected with the key ON, the vehicle will display a trailer disconnected message until a trailer is reconnected or the ignition is cycled.

Some trailers utilize a trailer control module to control the trailer lighting of the trailer. These trailers may require the B+ circuit to the trailer connector to control trailer lighting when equipped with a separate trailer control module. These trailers will not be detected by the K68 Trailer Lighting Control Module and may require an additional trailer adaptor for the vehicle to recognize the trailer is connected.

Fuse F74UA and F82UA are the power supply fuses to the K68 Trailer Lamp Control Module. If a fuse is found to be open, an electrical fault likely exists on the customers trailer causing the fuse to open.

Reference Information

Schematic Reference

- Trailer Systems Schematics
- Exterior Lights Schematics

Connector End View Reference

Master Electrical Component List

Description and Operation

Trailer Description and Operation

Electrical Information Reference

- Circuit Testing
- Connector Repairs
- Testing for Intermittent Conditions and Poor Connections
- Wiring Repairs

Scan Tool Reference

Control Module References for scan tool information

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