Component Procedures: Brake Warning Indicator

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Components (itype_392)

A red
warning lamp
is used for the service brake portion of the
hydraulic system
. The lamp is located in the
instrument cluster
. The red warning light alerts the driver if a pressure differential exists between the front and rear
hydraulic systems or the
parking brake
s are applied.
The lamp is turned on momentarily when the ignition switch is turn to the ON position. This is a self test to verify the lamp is operational.

Technician Safety Information (itype_15)

WARNING: ON VEHICLES EQUIPPED WITH AIRBAGS, REFER TO RESTRAINT SYSTEMS / AIRBAG SYSTEMS BEFORE ATTEMPTING AN
STEERING WHEEL, STEERING COLUMN, OR
INSTRUMENT PANEL
COMPONENT DIAGNOSIS OR SERVICE. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND POSSIBLE PERSONAL INJURY
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Component Tests and General Diagnostics (itype_383)

Each of the lamps depends upon a hard wired circuit input to the
instrument cluster
for proper operation. The following procedures will help to diagnose conditions that may cause an inoperative hard wired lamp circuit condition.
WARNING: ON VEHICLES EQUIPPED WITH AIR-BAGS, REFER TO AIRBAG AND SEAT BELTS/AIR BAGS BEFORE ATTEMPTING ANY
STEERING WHEEL, STEERING COLUMN, OR
INSTRUMENT PANEL
COMPONENT DIAGNOSIS OR SERVICE. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIR-BAG DEPLOYMENT AND POSSIBLE PERSONAL INJURY
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INOPERATIVE LAMP
1. Check the fused ignition switch output (run/ start) fuse in the fuseblock module. If OK, go to Step 2. If not OK, repair the shorted circuit or component as required and replace the faulty fuse.
2. Turn the ignition switch to the On position. Check for battery voltage at the fused ignition switch output (run/start) fuse in the fuseblock module. If OK, go to Step 3. If not OK, repair the open fused ignition switch output (run/start) circuit to the ignition switch as required.
3. Turn the ignition switch to the Off position. Disconnect and isolate the battery negative cable. Disconnect the wire harness connector at the
park brake switch
. With the
park brake
released, check for continuity between the park brake switch terminal and a good ground. There should be no continuity. If OK, go to Step 4. If not OK, adjust or replace the faulty park brake switch.
4. Disconnect the wire harness connector at the brake warning switch. Check for continuity between the two terminals of the brake warning switch. There should be continuity. If OK, go to Step 5. If not OK, replace the faulty brake warning switch.
5. Check for continuity between each of the two brake warning switch terminals and a good ground. In each case, there should be no continuity. If OK, go to Step 6. If not OK, replace the faulty brake warning switch.
6. With both the park brake switch and the brake warning switch wire harness connectors still disconnected, check for continuity between the red
brake warning indicator
driver circuit cavity of the park brake switch wire harness connector and a good ground. There should be no continuity If OK, go to Step 7. If not OK, repair the shorted red brake warning indicator driver circuit as required.

7. With the ignition switch held in the Start position, check for continuity between the red brake warning indicator driver circuit cavity of the park brake switch wire harness connector and a good ground. There should be continuity If OK, go to Step 8. If not OK, repair the open red brake warning indicator driver circuit to the ignition switch as required.
8. Turn the ignition switch to the Off position. Remove the instrument
cluster
. Check for continuity between the red brake warning indicator driver circuit cavity of the instrument cluster wire harness connector A and a good ground. There should be no continuity If OK, go to Step 9. If not OK, repair the shorted red brake warning indicator driver circuit as required.
9. Check for continuity between the red brake warning indicator driver circuit cavities of the instrument cluster wire harness connector A and the brake warning switch wire harness connector. There should be continuity If OK, replace the faulty bulb. If not OK, repair the open red brake warning indicator driver circuit as required.
LAMP STAYS ON
The
red brake warning lamp
will illuminate under the following conditions:
- Self test at start-up.
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Parking brake
s are applied.
- Leak in front/rear brake hydraulic circuit.
If the red light remains on after start-up, first verify that the parking brakes are fully released. Then check pedal action and fluid level. If the lamp is on and the
brake pedal
is low, this indicates the pressure differential switch and valve have been actuated due to a leak in the hydraulic system
On models with
ABS
brakes, the amber
warning lamp
only illuminates during the self test and when an ABS malfunction has occurred. The ABS lamp operates independently of the red warning lamp.