

Wheels: A reader has a 1992 Dodge with no brake lights. The turn signals work correctly and “the wiring has been replaced.” What do you think the problem is?

Halderman: I have a couple of ideas but it is difficult to diagnose problems with such a limited amount of information. I would like to know when the problem first occurred. Did it occur after some other work was performed? What wiring has been replaced? For example, if the exhaust system had a leak, the heat could have melted the wiring leading to the rear of the vehicle. This wiring could have been replaced incorrectly causing the problem. Most vehicles use dual-filament taillight bulbs. The low-intensity filament is used for taillights and the high-intensity filament is used for the brake lights and the turn signals. Because the turn signals work, I will have to assume that the bulbs and wiring are okay and that they operate the high-intensity filament. This leads to another possibility – the brake switch. The brake switch can be easily checked by a technician. The technician can use a test light or voltmeter to check for battery voltage at the switch. Battery voltage should also be present out of the switch when the brake pedal is depressed.

Wheels: Besides the brake switch, are there any other parts that may be defective?

Halderman: The turn signal switch assembly may also be defective. When the brake pedal is depressed, the electrical current flows through the brake switch and up to the turn signal switch. If the switch is turned on to the left for example, the current flows through a flasher unit and then to the left rear taillight bulb. The right side taillight bulb gets constant current. A break in the wiring between the brake switch and the turn signal can also cause the reader problems of no brake lights. Even though I do not think this could be the reader’s problem, I have seen many incidents where the taillight bulbs have been incorrectly installed. The bright (high-intensity) filament lights when the taillights are on and the low-intensity filaments light when the brakes are applied.

Wheels: Any more ideas for the reader to check?

Halderman: I just keep thinking about the fact that poor electrical grounds are the most common cause of electrical problems. If the ground(s) for the rear taillights were loose or corroded, I think this could cause the brake lights to fail yet allow the turn signals to function correctly. The ground connection may be good enough to conduct electrical current for one bulb (turn signal) but not enough to light two bulbs (brake lights).

Have an assistant observe the other lights when the brake pedal is depressed. If there is a drop in intensity or some lights go out, a poor ground is indicated.

Wheels: Where should the reader start with the diagnosis?

Halderman: The first thing that should be checked is the fuse for the brake lights. If the wiring had been damaged, then the fuse may have blown to prevent excessive electrical current from overheating the brake circuit wires. A service technician or the owner should be able to quickly check the brake fuse. The blown fuse could explain the reader’s problem and if the wiring has been correctly repaired, the replacement fuse should solve the root cause of the problem.

