

Tech Tips

■ The 2005 to 2006 Jeep Liberty/Cherokee vehicles, equipped with a 2.8L turbo diesel engine (sales code ENR), utilize a unique spiral cell battery. The maximum charging voltage specification for this battery must not be exceeded in order to restore the battery to its full potential. The maximum charging voltage specifications for this battery is 14.4 volts. Failure to use the following spiral cell battery charging equipment could result in damage to the battery, or personal injury.

Battery charging is the means by which the battery can be restored to its full voltage potential. A battery is fully charged when both of the following conditions are met:

- The open circuit voltage of the battery measures 12.65 volts (or above).
- The battery passes a load test.

Note: the Midtronics Micro-420 cannot be used for testing a spiral cell battery.

After the battery has been charged to 12.65 volts (or greater), perform the following load test to determine the battery condition.

Note: The battery charger must be capable of charging a spiral cell battery.

Load Test Procedure

1. Fully charge the battery.
2. Remove the surface charge by loading the battery to 300 amps for 15 seconds.
3. Load the battery to half the cold cranking amp (CCA) rating of the battery for 15 seconds. Does the voltage drop below 9.6 volts?
 - a. Yes—The battery is faulty and must be replaced.
 - b. No—The battery is good; return the battery to service.

The following approved battery chargers, with spiral cell battery capability, are available through team PSE:

- Associated W-6003A
- OTC 1 Step OT-3641
- Midtronics MT-GR-921

Note: The Associated W-6003A battery charger has a switch that indicates “valve regulated” and “lead/acid” battery. The switch must be in the “valve regulated” position when charging a spiral cell battery. Refer to DaimlerChrysler Service Bulletin no. 08-041-05 for more information.

(Contributed by Kenneth Plourde,

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■ I was working on a ‘95 Honda Odyssey, 4 cylinder, sohc. The headlights were not working consistently in daytime mode, low beams, nor high beams. It was the Canadian model so it had a ‘daytime running lights’ DRL relay. First I checked the bulbs which were OK, then I repaired the connectors which had overheated. This solved some issues, but not the problem.

I located the DRL module under the steering wheel area, pulled the circuit board out of it and noticed the two little relays on the board were soldered in place but some of their solder connections were fractured. I resoldered them, reassembled everything, and found that the lights were now working properly in every mode.

Thus, in just a few minutes, I saved the cost of a new DRL relay. It would seem that the high current plus the vibration due to the mechanical action of the relay had crystallized the solder. It then developed cracks in it. Apparently, other Honda models have issues with these DRL relays also.

(Contributed by Nathan Unger, ASI Rebuilders, Abbotsford, B.C.)