

RETRIEVING TROUBLE CODES

Trouble codes may be retrieved without the use of the DIGITAL TECHNICIAN (Part No. HD-44750).

1. Remove protective cover from data link connector [91A]. Data link connector is located on left side of vehicle under fairing.
2. To activate the diagnostic feature of the check engine lamp, proceed as follows:
 - a. See [Figure 4-6](#). Create diagnostic test wire from parts shown.
 - b. See [Figure 4-7](#). Install diagnostic test wire across Terminal 1 and Terminal 2 on the data link connector [91A].
 - c. Turn the ignition/light key switch ON and wait approximately eight seconds for the check engine lamp to start flashing.
3. See [Figure 4-8](#). All trouble codes are sent out as a series of flashes. To retrieve the first digit of the trouble code simply observe the number of times the lamp flashes.
 - a. The transmission of a trouble code is always preceded by six rapid flashes (about 3 per second).
 - b. This "intermission" is followed by a 2 second pause in which the lamp is off.
 - c. The lamp will then flash one or more times to indicate the first digit of the trouble code. The length of time the lamp is illuminated and the length of time in which it is off are each about 1 second in duration.
4. The second digit follows:
 - a. Following transmission of the first digit, there is another 2 second pause in which the lamp is off.
 - b. The lamp will then flash one or more times to indicate the second digit of the trouble code. Count the number of times the lamp flashes to retrieve the second digit.
5. If more than one trouble code is sent:
 - a. Following transmission of the second digit of the first code, there is a third 2 second pause in which the lamp is off.
 - b. After the pause comes the intermission, which is followed by transmission of the next recorded trouble code.
 - c. All subsequent codes are sent in the same manner, each separated from the next by the intermission.
6. Once all codes have been sent, the data string is repeated. When you have recorded the same trouble code twice, it is an indication that the transmission has been restarted and that all trouble codes have been retrieved.

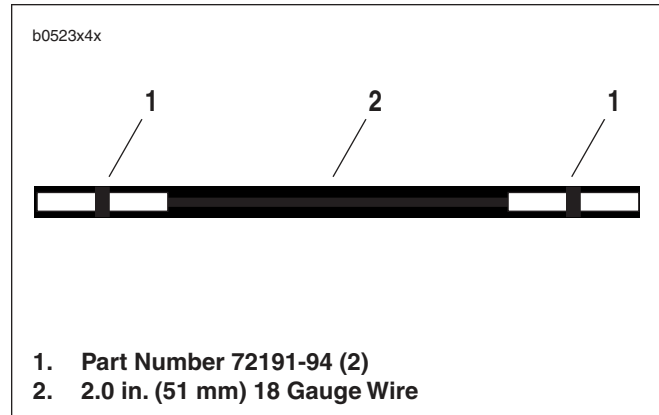


Figure 4-6. Diagnostic Test Wire

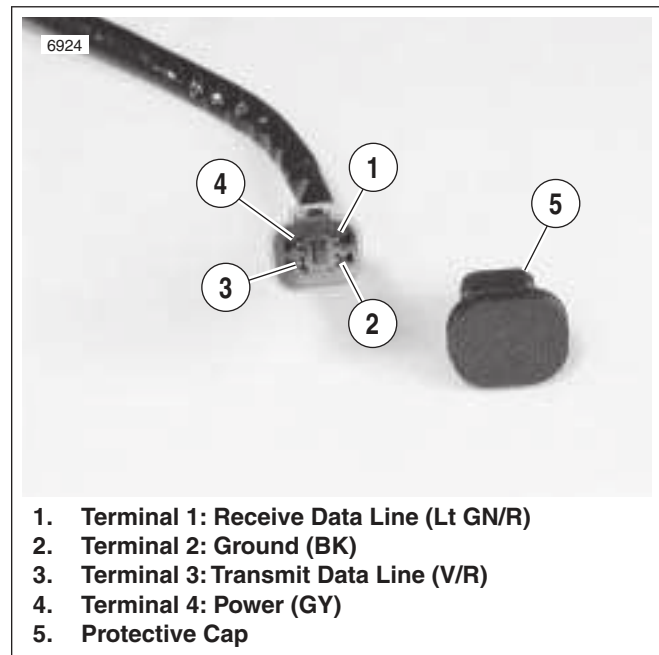


Figure 4-7. Installing Diagnostic Test Wire

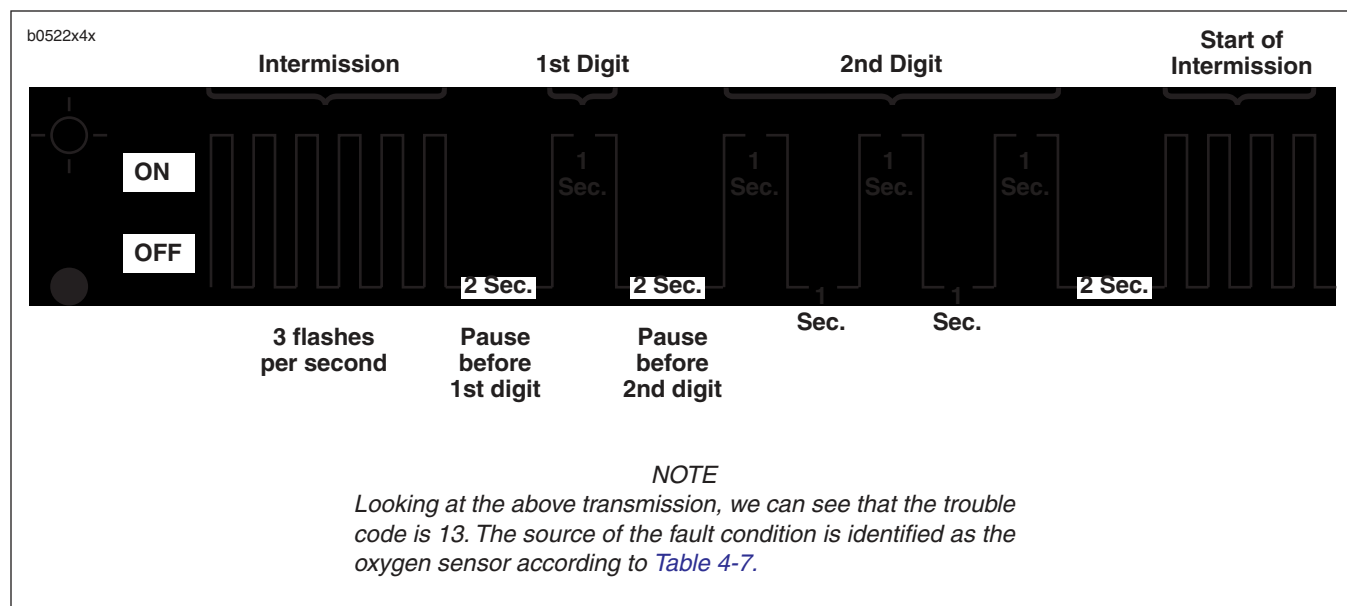


Figure 4-8. Check Engine Lamp Diagnostics

NOTE

If the lamp flashes at a rate faster than normal, then you are observing the “Intermission” only, which means that no trouble codes are present.

7. When examining trouble codes, write down all codes on a piece of paper.
 - a. If trouble codes are present, see [Table 4-7](#). Follow the applicable flow charts for each code.
 - b. If trouble codes are NOT present, but starting or driveability problems are evident, see charts under [4.8 INITIAL DIAGNOSTIC CHECK](#).
8. Turn the ignition/light key switch OFF.
9. Remove diagnostic test wire and install protective cover over data link connector. Return data link to original position.

NOTE

The engine may be started and run when the trouble codes are received using a jumper wire on Pins 1 and 2 of the data link connector. However, if the jumper wire is removed with the engine running, the check engine lamp will continue to flash trouble codes. To stop check engine lamp from flashing codes, turn engine stop switch OFF.

CLEARING CODES

After correcting system problems, clear trouble codes. If the Digital Technician (Part No. HD-44750) is not available, perform 50 start and run cycles. To execute one run cycle:

1. Start the vehicle.
2. Let it run for at least 30 seconds.
3. Turn the engine off.