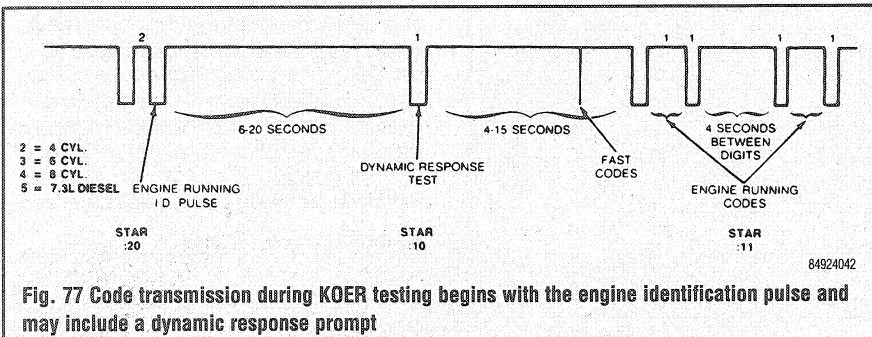
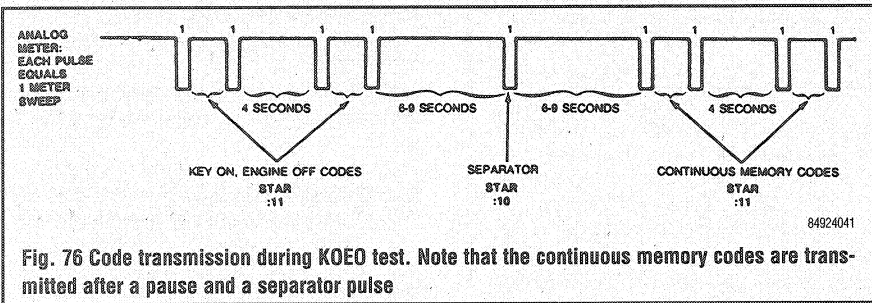


4-20 DRIVEABILITY AND EMISSIONS CONTROLS



code will be transmitted. This is a single digit number representing 1/2 the number of cylinders in a gasoline engine. On the STAR tester, this number may appear with a zero, such as 20 = 2. The code is used to confirm that the correct processor is installed and that the self-test has begun.

6. If the vehicle is equipped with a Brake On/Off (BOO) switch, the brake pedal must be depressed and released after the ID code is transmitted.

7. If the vehicle is equipped with a Power Steering Pressure Switch (PSPS), the steering wheel must be turned at least 1/2 turn and released within 2 seconds after the engine ID code is transmitted.

8. Certain Ford vehicles will display a Dynamic Response code 6-20 seconds after the engine ID code. This will appear as one pulse on a meter or as a 10 on the STAR tester. When this code appears, briefly take the engine to wide-open throttle. This allows the system to test the throttle position, MAF and MAP sensors.

9. All relevant codes will be displayed and should be recorded. Remember that the codes refer only to faults present during this test cycle. Codes stored in Continuous Memory are not displayed in this test mode.

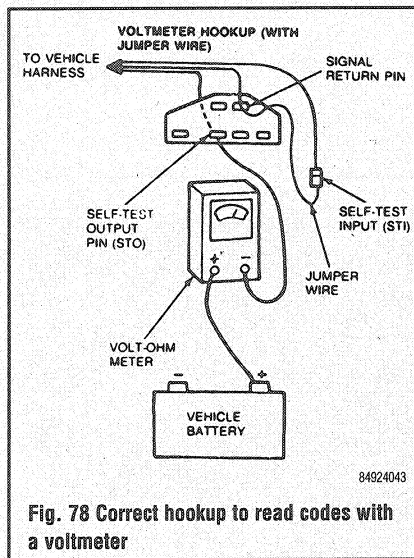
10. Do not depress the throttle during testing unless a dynamic response code is displayed.

Reading Codes With Analog Voltmeter

See Figures 78 and 79

In the absence of a scan tool, an analog voltmeter may be used to retrieve stored fault codes. Set the meter range to read DC 0-15 volts. Connect the + lead of the meter to the battery positive terminal and connect the - lead of the meter to the self-test output pin of the diagnostic connector.

Follow the directions given previously for performing the KOEO and KOER tests. To activate the tests, use a jumper wire to connect the signal return pin on the diagnostic connector to the self-test



input connector. The self-test input line is the separate wire and connector with or near the diagnostic connector.

The codes will be transmitted as groups of needle sweeps. This method may be used to read either 2 or 3-digit codes. The Continuous Memory codes are separated from the KOEO codes by 6 seconds, a single sweep and another 6-second delay.

Malfunction Indicator Lamp Method

See Figures 80 and 81

The Malfunction Indicator Lamp (MIL) on the dashboard may also be used to retrieve the stored codes and does not allow any system investigation. It should only be used in field conditions where a quick check of stored codes is needed.

Follow the directions given previously for performing the scan tool procedure. To activate the tests, use a jumper wire to connect the signal return pin on the diagnostic connector to the Self-Test Input (STI) connector. The self-test input line is the separate wire and connector with or near the diagnostic connector.

Codes are transmitted by place value with a pause between the digits; for example, code 32 would be sent as 3 flashes, a pause and 2 flashes. A slightly longer pause divides codes from each other. Be ready to count and record codes; the only way to repeat a code is to recycle the system. This method may be used to read either 2 or 3-digit codes. The Continuous Memory codes are separated from the other codes by 6 seconds, a single flash and another 6-second delay.

