DR-39 BASIC TIMING & FUEL SYSTEM

Perform Driveability Test 38, before proceeding.

1. Connect a tachometer and ignition timing light to engine, then start engine and let stabilize for two minutes.
2. Disconnect engine coolant temperature sensor, then check engine timing.
3. If engine timing is not within 2° of basic, adjust timing, then proceed to Test 45.
4. If engine timing is within 2° of specifications, reconnect coolant sensor and raise engine speed to 2000 RPM.
5. If engine timing is not 15---35° BTDC, replace SMEC, then proceed to Test 45.
6. If engine timing is 15---35° BTDC, remove tachometer and timing light.
7. Loosen gas cap to release any tank pressure, then disconnect injector harness connector from throttle body.
8. Install a jumper from one wire of injector connector to ground, then connect a second jumper from terminal of connector to positive battery post for 10 seconds.
9. Remove jumpers and reconnect injector connector at throttle body.
10. Install pressure gauge in fuel supply hose at throttle body, then set diagnostic readout box to ``Actuate Outputs'' and ``Ignition Coil.''
11. If fuel pressure at 13.5---15.5 psi, proceed to Test 40.
12. If fuel pressure is below 13.5 psi, proceed as follows:
    a. Turn ignition switch Off and disconnect injector harness connector from throttle body.
    b. Install a jumper from one wire of injector connector to ground, then connect a second jumper from terminal of connector to positive battery post for 10 seconds.
    c. Remove jumpers and reconnect injector connector at throttle body.
    d. Move fuel pressure gauge and install between fuel filter and tank, then reconnect fuel line to throttle body.
    e. Set diagnostic readout box to ``Actuate Outputs'' and ``Ignition Coil.''
    f. If fuel pressure increased more than 5 psi, replace fuel filter, then proceed to Test 45.
    g. If fuel pressure did not increase, gently squeeze rubber portion of fuel return line while watching gauge. **Do not exceed over 25 psi or fuel regulator damage will occur.**
    h. If fuel pressure exceeds 16 psi, replace fuel pressure regulator, then proceed to Test 45.
    i. If fuel pressure does not exceed 16 psi, check fuel tank electrical connections for corrosion.
    j. If corroded connections are found, clean connections, then proceed to Test 45.
    k. If connections are not corroded, remove fuel pump from fuel tank and inspect filter sock for contamination.
    l. If contamination is found in the fuel tank, remove fuel tank, clean and replace fuel filter, then perform Test 45.
    m. If no contamination is found, replace fuel pump, then proceed to Test 45.
13. If fuel pressure is above 15.5 psi, turn ignition switch Off and disconnect fuel return hose from throttle body.
14. Install an additional return hose to throttle body fuel return and put open end in a safety fuel can.
15. Turn ignition switch On and set diagnostic readout box to ``Actuate Outputs'' and ``Ignition Coil.''
16. If fuel pressure is not 13.5---14.5 psi, replace pressure regulator valve, then proceed to Test 45.
17. If fuel pressure is now 13.5---14.5 psi, inspect fuel lines for any kinks or restrictions. Repair or replace as necessary, then proceed to Test 45.
18. If there are no restrictions or kinks, replace in-tank return line check valve, then proceed to Test 45.
19. Gently squeeze rubber portion of fuel return line while watching gauge. **Do not exceed 25 psi or fuel regulator damage will occur.**
20. If fuel pressure exceeds 16 psi, replace fuel pressure regulator, then proceed to Test 45.
21. If fuel pressure does not increase above 16 psi, check fuel tank electrical connections for corrosion.
22. If corroded connections are found, clean connections, then proceed to Test 45.

23. If connections are not corroded, remove fuel pump from fuel tank and inspect filter sock for contamination.
24. If contamination is found in the fuel tank, remove fuel tank, clean and replace fuel filter, then proceed to Test 45.
25. If no contamination is found, replace fuel pump, then proceed to Test 45.