IDLE AND OR 2500 RPM CO HC CHECK

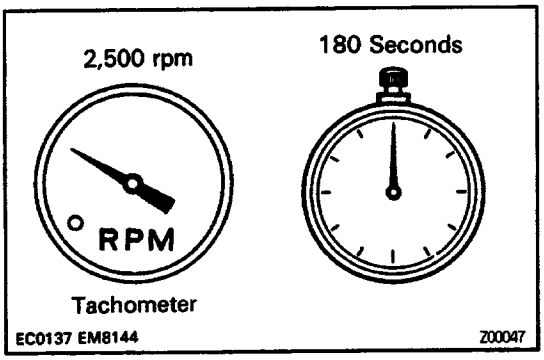
HINT: This check method is used only to determine whether or not the idle and/or 2,500 rpm CO/HC
complies with regulations.

1. INITIAL CONDITIONS

(a) Engine at normal operating temperature
(b) Air cleaner installed
(c) All pipes and hoses of air intake system connected
(d) All accessories switched OFF
(e) All vacuum lines properly connected

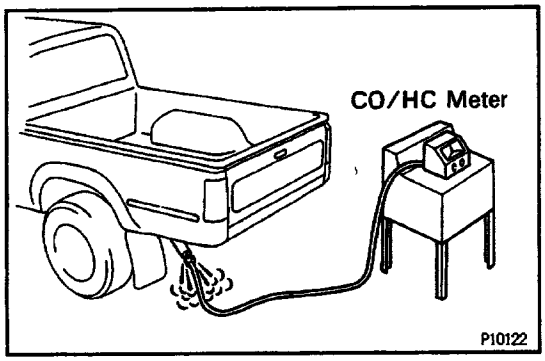
HINT: All vacuum hoses for the air suction, EGR systems, etc. should be properly connected.

(f) MFI system wiring connectors fully plugged
(g) Ignition timing set correctly
(h) Transmission in neutral position
(i) Idle speed set correctly
(j) Tachometer and CO/HC meter calibrated by hand



2. START ENGINE

3. RACE ENGINE AT 2,500 RPM FOR APPROX. 180 SECONDS



4. INSERT CO/HC METER TESTING PROBE AT LEAST 40 cm (1.3 ft) INTO TAILPIPE DURING IDLING

5. IMMEDIATELY CHECK CO/HC CONCENTRATION AT IDLE AND/OR 2.500 RPM

HINT:
When doing the 2 mode (2,500 rpm and idle) test, follow the measurement order prescribed by the applicable local regulations.

TROUBLESHOOTING

If the CO/HC concentration does not comply with regulations, troubleshoot in the order given below.

(a) Check oxygen sensor operation

(See heated oxygen sensor inspection in MFI System)

(b) See the table below for possible cause, and then inspect and correct the applicable causes if necessary.

CO	HC	Phenomenon	Causes
Normal	High	Rough idle	1. Faulty ignitions: • Incorrect timing • Fouled, shorted or improperly gapped plugs. • Open or crossed high–tension cords • Cracked distributor cap 2. Incorrect valve clearance 3. Leaky EGR valve 4. Leaky intake and exhaust valves 5. Leaky cylinder
Low	High	Rough idle (Fluctuating HC reading)	1. Vacuum leaks: • PCV hose • EGR valve • intake manifold • Air intake chamber • Throttle body • Brake booster line 2. Lean mixture causing misfire
High	High	Rough idle (Black smoke from exhaust)	1. Restricted air filter 2. Plugged PCV valve 3. PAIR system problems 4. Faulty MFI systems: • Faulty pressure regulator • Clogged fuel return line • Defective ECT sensor • Defective intake air temperature sensor • Faulty ECM • Faulty injector • Faulty cold start injector • Faulty throttle position sensor • Faulty volume air flow meter