

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. IMMEDIATERY CHECK CO/HC CONCENTRATION AT IDLE AND/OR 2,500 RPM

HINT:

When performing 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, perform troubleshooting in the order given below.

- (a) Check oxygen sensor operation
(See page [EG1-216](#) to [EG1-218](#))
- (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	<ol style="list-style-type: none"> 1. Faulty ignitions: <ul style="list-style-type: none"> • 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)	<ol style="list-style-type: none"> 1. Vacuum leaks: <ul style="list-style-type: none"> • 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)	<ol style="list-style-type: none"> 1. Restricted air filter 2. Plugged PCV valve 3. PAIR system problems 4. Faulty MFI systems: <ul style="list-style-type: none"> • 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