

# **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
- (i) Idle speed set correctly
- (j) Tachometer and CO/HC meter calibrated and at hand

## **2. START ENGINE**

## **3. RACE ENGINE AT 2,500 RPM FOR APPROX.3 MINUTES**

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

## **5. IMMEDIATELY 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 HC/CO concentration does not comply with regulations, perform troubleshooting in the order given below.

### 1. Check oxygen sensor operation

(See page [EG1–212](#))

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

HC	CO	Symptoms	Causes
High	Normal	Rough idle	1. Faulty ignition: <ul style="list-style-type: none"> <li>• Incorrect timing</li> <li>• Fouled, shorted or improperly gapped plugs</li> <li>• Open or crossed high-tension cords</li> <li>• Cracked distributor cap</li> </ul> 2. Incorrect valve clearance 3. Leaky EGR valve 4. Leaky exhaust valves 5. Leaky cylinder
High	Low	Rough idle (Fluctuating HC reading)	1. Vacuum leak: <ul style="list-style-type: none"> <li>• Vacuum hose</li> <li>• Intake manifold</li> <li>• Intake chamber</li> <li>• PCV line</li> <li>• Throttle body</li> </ul>
High	High	Rough idle (Black smoke from exhaust)	1. Clogged air filter 2. Plugged PCV valve 3. Pulsed Secondary Air Injection (PAIR) system problems 4. Faulty MFI system: <ul style="list-style-type: none"> <li>• Faulty pressure regulator</li> <li>• Clogged fuel return line</li> <li>• Faulty volume air flow meter</li> <li>• Defective engine coolant temp. sensor</li> <li>• Defective intake air temp. sensor</li> <li>• Faulty ECM</li> <li>• Faulty injector</li> <li>• Faulty cold start injector</li> </ul>