

## CO/HC (w/ TWC) INSPECTION

### HINT:

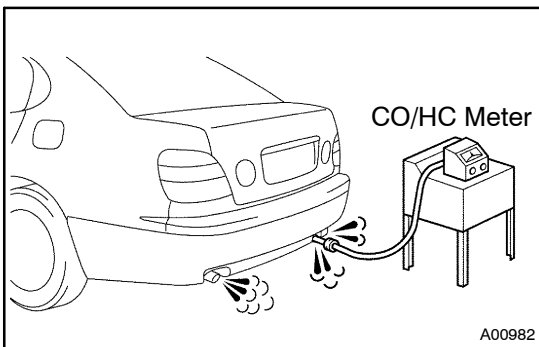
This check is used only to determine whether or not the idle CO/HC complies with specifications.

#### 1. INITIAL CONDITIONS

- (a) Engine at normal operating temperature
- (b) Air cleaner installed
- (c) All pipes and hoses of air induction system connected
- (d) All accessories switched OFF
- (e) All vacuum lines properly connected
- (f) EFI system wiring connectors fully plugged
- (g) Ignition timing check correctly
- (h) Transmission in neutral position
- (i) 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 INTO

**TAILPIPE AT LEAST 40 cm (1.3 ft) DURING IDLING**

#### 5. CHECK CO/HC CONCENTRATION AT IDLE

**Idle CO concentration: 0 – 0.5 %**

**Idle HC concentration: Applicable local regulation**

If the CO/HC concentration does not conform to specifications, perform troubleshooting in the order given below.

- (a) Check oxygen sensor operation.
- (b) See the table next page for possible causes, and then inspect and correct the applicable causes if necessary.

HC	CO	Problems	Causes
Normal	High	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> </ul> 2. Incorrect valve clearance 3. Leaky intake and exhaust valves 4. Leaky cylinders
Low	High	Rough idle (Fluctuating HC reading)	1. Vacuum leaks: <ul style="list-style-type: none"> <li>• PCV hoses</li> <li>• Intake manifold</li> <li>• Air intake chamber</li> <li>• Throttle body</li> </ul> 2. Lean mixture causing misfire
High	High	Rough idle (Black smoke from exhaust)	1. Restricted air filter 2. Plugged PCV valve 3. Faulty EFI systems: <ul style="list-style-type: none"> <li>• Faulty pressure regulator</li> <li>• Defective water temp. sensor</li> <li>• Faulty engine ECU</li> <li>• Faulty injectors</li> <li>• Faulty throttle position sensor</li> <li>• Faulty air flow meter</li> </ul>