

## IDLE AND OR 2500 RPM CO HC CHECK

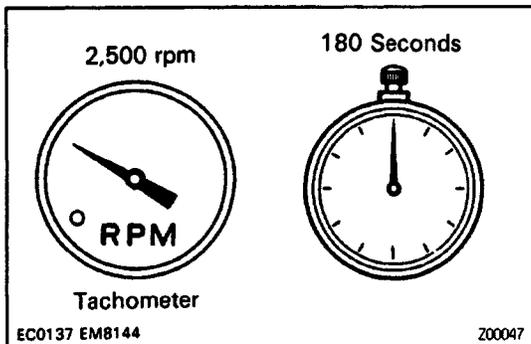
HINT: This check is used only to determine whether or not the idle CO/HC complies with regulations.

### 1. INITIAL CONDITIONS

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

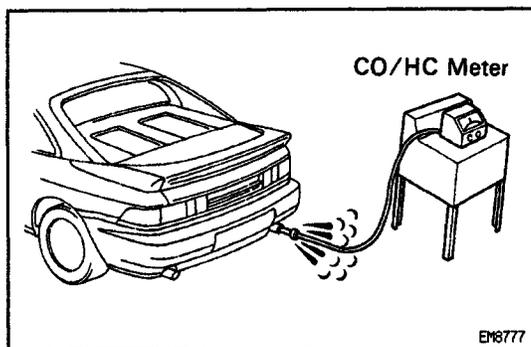
HINT: All vacuum hoses for EGR systems, etc. should be properly connected.

- (f) SMPI system wiring connectors fully plugged
- (g) Ignition timing set correctly
- (h) Transmission in neutral range
- (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. 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 CO/HC concentration does not comply with regulations, perform troubleshooting in the order given below.

- (a) Check oxygen sensor operation.  
(See Main Oxygen Sensor Inspection under SMPI System)
- (b) See the table below for possible causes, and then inspect and correct the applicable causes if necessary.

HC	CO	Problems	Causes
High	Normal	Rough idle	<ol style="list-style-type: none"> <li>1. Faulty ignitions: <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> </li> <li>2. Incorrect valve clearance</li> <li>3. Leaky EGR valve</li> <li>4. Leaky intake and exhaust valves</li> <li>5. Leaky cylinder</li> </ol>
High	Low	Rough idle (Fluctuating HC reading)	<ol style="list-style-type: none"> <li>1. Vacuum leaks: <ul style="list-style-type: none"> <li>• PCV hose</li> <li>• EGR valve</li> <li>• Intake manifold</li> <li>• T-VIS valve</li> <li>• Throttle body</li> <li>• IACV</li> <li>• Brake booster line</li> </ul> </li> <li>2. Lean mixture causing misfire</li> </ol>
High	High	Rough idle (Black smoke from exhaust)	<ol style="list-style-type: none"> <li>1. Restricted air filter</li> <li>2. Faulty SMPI systems: <ul style="list-style-type: none"> <li>• Faulty pressure regulator</li> <li>• Clogged fuel return line</li> <li>• Defective ECTS</li> <li>• Defective MAP</li> <li>• Faulty PCME</li> <li>• Faulty injector</li> <li>• Faulty cold start injector</li> <li>• Faulty throttle position sensor</li> <li>• Faulty air flow sensor</li> </ul> </li> </ol>