

IDLE AND/OR 2,500 RPM HC/CO CONCENTRATION CHECK METHOD

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

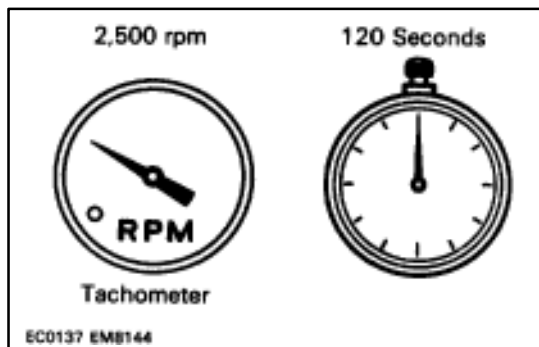
1. INTIAL CONDITIONS

- (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.

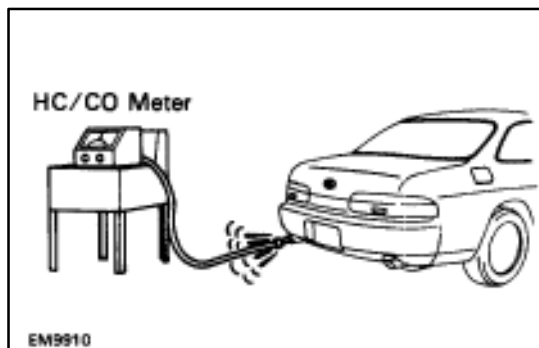
HINT: All vacuum hoses for EGR systems, etc. should be properly connected.

- (f) EFI system wiring connectors fully plugged.
- (g) Transmission in neutral range.
- (h) Tachometer and HC/CO meter calibrated at hand.

2. START ENGINE



3. RACE ENGINE AT 2,500 PRM FOR APPROX. 120 SECONDS



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

5. CHECK HC/CO CONCENTRATION AT IDLE AND/OR 2,500 PRM

Complete the measuring within three times.

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

If the HC/CO concentration at 2,500 rpm does not comply with regulations, try the following procedure.

Race the engine again at 2,500 rpm for approx. 1 minute and quickly repeat steps 4 and 5 above.

This may correct the problem.

Troubleshooting

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

(a) Check oxygen sensor operation.

(See page [FI-113](#))

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

HC	CO	Symptoms	Cause
High	Normal	Rough idle	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 cylinders
High	Low	Rough idle (Fluctuating HC reading)	1. Vacuum leaks: <ul style="list-style-type: none"> • PCV hoses • EGR valve • Intake manifold • Air intake chamber • Throttle body • ISC valve • Brake booster line 2. Lean mixture causing misfire
High	High	Rough idle (Black smoke from exhaust)	1. Clogged air filter 2. Faulty EFI systems: <ul style="list-style-type: none"> • Faulty pressure regulator • Clogged fuel return line • Defective water temp. sensor • Defective air temp. sensor • Faulty ECU • Faulty injectors • Faulty cold start injector • Faulty throttle position sensor • Faulty air flow meter