CO (1RZ–E, 3RZ–FE)

EM08P–01

INSPECTION

HINT:

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

1. INITIAL CONDITIONS

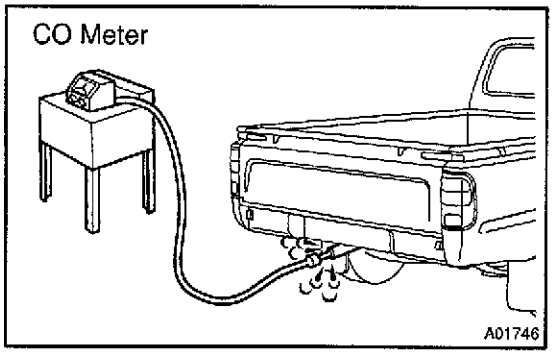
(a) Engine at normal operating temperature
(b) Air cleaner installed
(c) All pipes and hoses of air induction system connected
(d) All accessories switched OFF
(e) All vacuum lines properly connected
(f) EFI system wiring connectors fully plugged
(g) Ignition timing set correctly
(h) Transmission in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

2. CHECK AND ADJUST CO CONCENTRATION AT IDLE

NOTICE:

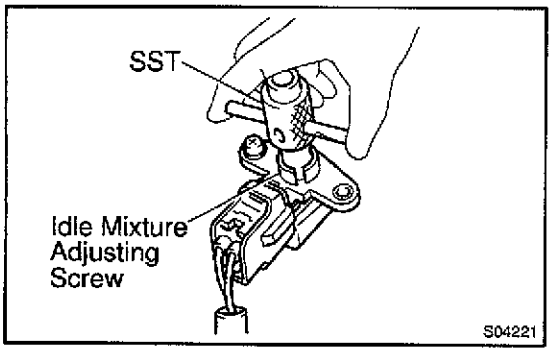
Always use a CO meter when adjusting the idle mixture. It is not necessary to adjust with the idle mixture screw in most vehicles if they are in good condition. If a CO meter is not available, DO NOT ATTEMPT TO ADJUST IDLE MIXTURE.

(a) Race the engine at 2,500 rpm for approx. 180 seconds.



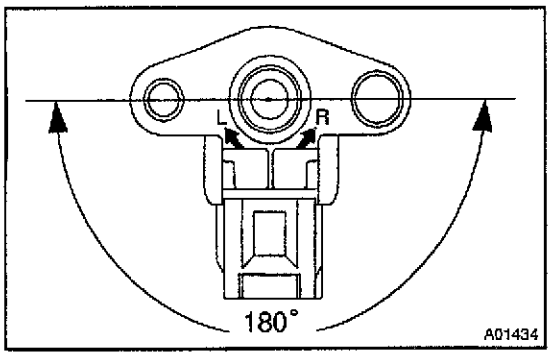
(b) Insert a tester probe at least 40 cm (1.3 ft) into the tailpipe.
(c) Wait at least 1 minute before measuring to allow the concentration to stabilize. Complete the measuring within 3 minutes.

Idle CO concentration:
1.5 ± 0.5 %



If the CO concentration does not conform to regulations, adjust by turning the idle mixture adjusting screw in the variable resistor with SST.

SST 09243–00020



HINT:
The idle mixture adjusting screw can be tightened through an angle of 260°.

- If the CO concentration is within specification, this adjustment is complete.
- If the CO concentration cannot be corrected by idle mixture adjustment, see the table below for other possible causes.

3. TROUBLESHOOTING

- 1RZ–E:

CO	Problems	Causes
High	Rough idle (Black smoke from exhaust)	1. Restricted air filter 2. Plugged PCV valve 3. Faulty EFI system: • Faulty Pressure regulator • Clogged fuel return line • Defective water temperature sensor • Defective intake air temperature sensor • Faulty engine ECU • Faulty injectors • Faulty air flow meter • Faulty throttle position sensor

- 3RZ–FE:

CO	Problems	Causes
High	Rough idle (Black smoke from exhaust)	1. Clogged air filter 2. Plugged PCV valve 3. Faulty EFI system: • Faulty Pressure regulator • Clogged fuel return line • Defective water temperature sensor • Defective intake air temperature sensor • Faulty engine ECU • Faulty injectors • Faulty air flow meter