Idle Speed Inspection/Adjustment

Carbureted Engine: [KS model]

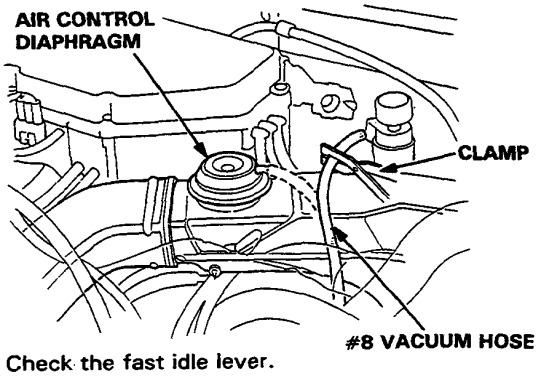
Inspection/Adjustment

Propane Enrichment Method

WARNING Do not smoke during this procedure. Keep any open flame away from your work area.

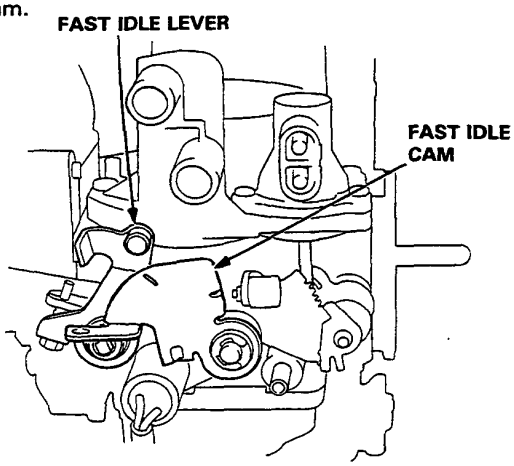
NOTE:
- This procedure requires a propane enrichment kit.
- Check that the carburetors are synchronized properly, self diagnosis indicator before making idle speed and mixture inspections.

1. Start the engine and warm up to normal operating temperature (the cooling fan comes on).
2. Disconnect the #8 vacuuum hose from the intake air control diaphragm and clamp the hose end.



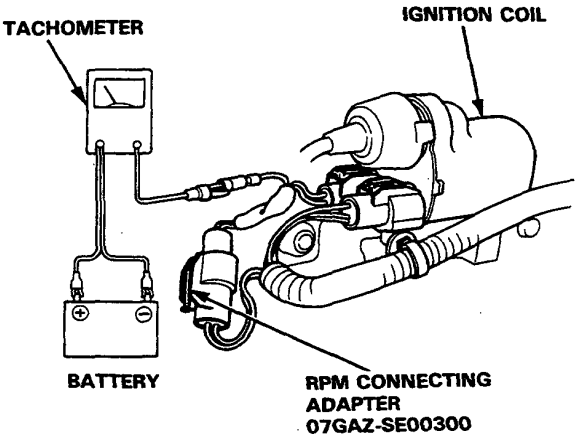
3. Check the fast idle lever.

Fast idle lever should not be seated against fast idle cam.



- If not, replace the left carburetor (page 6-46).

4. Connect a tachometer.



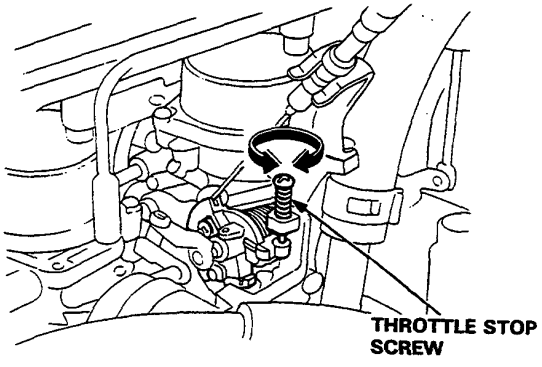
5. Check idle speed with the headlights, heater blower, rear window defogger, cooling fan and air conditioner off.

Idle speed should be:

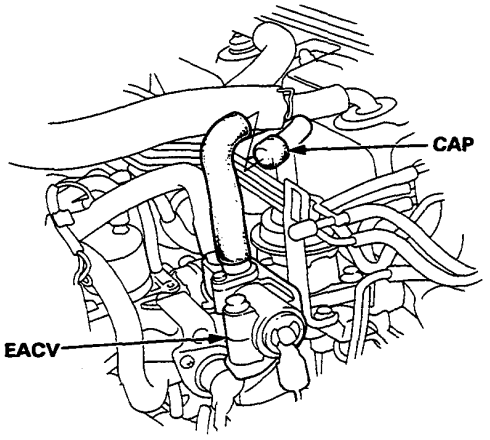
Manual	800 ±50 min^{-1} (rpm)
Automatic	750 ±50 min^{-1} (rpm) (except "N" or "P")

Adjust the idle speed, if necessary, by turning the throttle stop screw.

NOTE: If the idle speed is excessively high, check the throttle control (page 6-72).

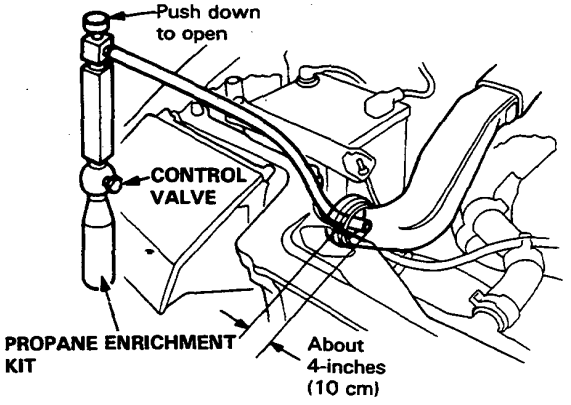


6. Disconnect the 2P connector from the EACV and disconnect the hose from vacuum hose manifold, then cap the hose end.



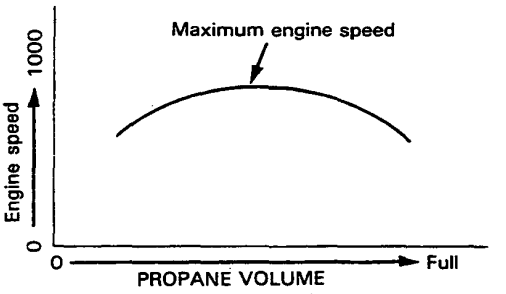
7. Disconnect the vacuum hose from the A/C idle boost throttle controller. Disconnect air cleaner intake tube from air intake duct.
8. Insert the hose of the propane enrichment kit into the intake tube about 4-inches (10 cm).

   NOTE: Check that propane bottle has adequate gas before beginning test.



9. With engine idling, depress push button on top of propane device, then slowly open the propane control valve to obtain maximum engine speed.
   Engine speed should increase as percentage of propane injected goes up.

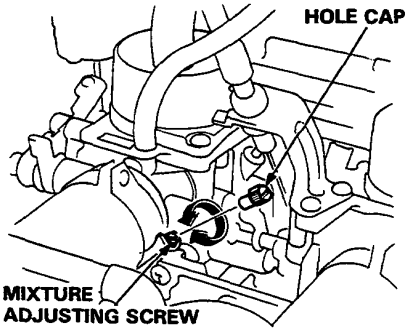
   NOTE: Open the propane control valve slowly; a sudden burst of propane may stall the engine.



Engine speed increase should be:
M/T: 170 ± 20 min^{-1} (rpm)
A/T : 50 ± 10 min^{-1} (rpm)

- If engine speed does not increase per specification, mixture is improperly adjusted. Go to step 10.
- If engine speed increases per specification, go to step 11.

10. Remove the mixture adjusting screw hole caps, and recheck maximum propane enriched engine speed.



- If the propane enriched speed is too low, mixture is too rich: turn both mixture screws 1/4-turn clockwise and recheck.
- If the propane enriched speed is too high, mixture is too lean: turn both mixture screws 1/4-turn counterclockwise and recheck.

11. Reconnect the connector and hose. Close the propane control valve.
12. Remove EFI•ECU fuse for 10 seconds to reset control unit and recheck idle speed.

Idle speed should be:

Manual	800 ±50 min^{-1} (rpm)
Automatic	750 ±50 min^{-1} (rpm) (except "N" or "P")

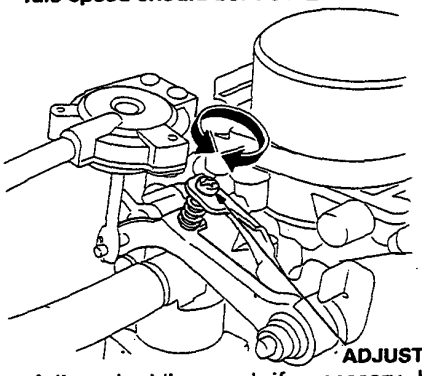
- If idle speed is as specified (step 5), go to step 13.
- If idle speed is not as specified, adjust by turning throttle stop screw, then repeat step 10.

(cont'd)

Idle Speed Inspection/Adjustment (cont'd)

Carbureted Engine:

13. Remove propane enrichment kit and reconnect air cleaner intake tube on the air intake duct.
14. Reinstall the mixture adjusting screw hole cap.
15. If equipped with air conditioner, check the idle speed with the A/C on.
    Idle speed should be: 750 ± 50 min^{-1} (rpm)



Adjust the idle speed, if necessary, by turning the adjusting screw.

[Except KS model]

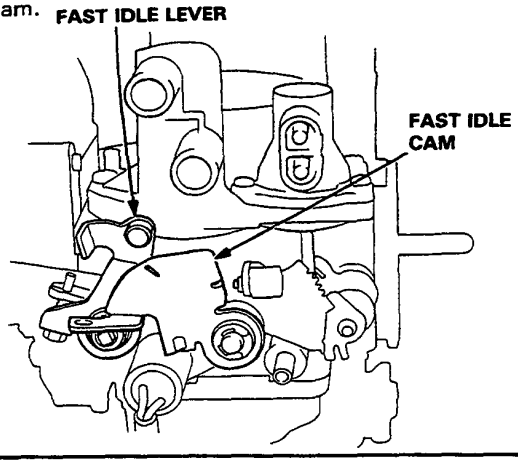
CO Meter Method

WARNING Do not smoke during this procedure. Keep any open flame away from your work area.

NOTE: Check that the carburetors are synchronized properly, self-diagnosis indicator (KX model) before making idle speed and mixture inspections.

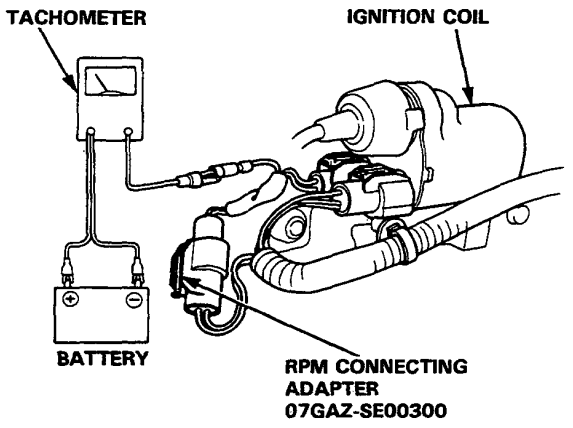
1. Start the engine and warm it up to normal operating temperature (the cooling fan comes on).
2. Check the fast idle lever.

   Fast idle lever should not be seated against fast idle cam.



- If not, replace the left carburetor (page 6-46).

3. Connect a tachometer.



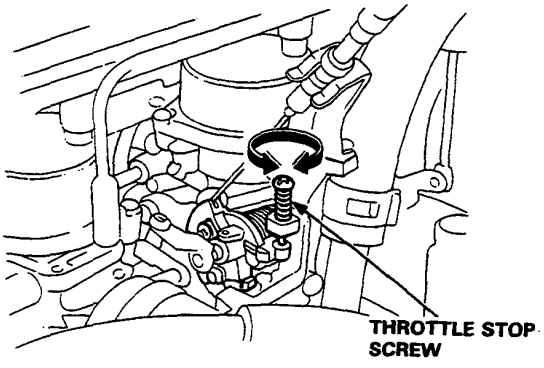
4. Check idle speed with the headlights, heater blower, rear window defogger, cooling fan and air conditioner off.

   Idle Speed should be:

Manual	800 ± 50 min^{-1} (rpm)
Automatic	750 ± 50 min^{-1} (rpm) (except N or P)

   Adjust the idle speed, if necessary, by turning the throttle stop screw.

   NOTE: If the idle speed is excessively high, chek the dashpot system (page 6-72).



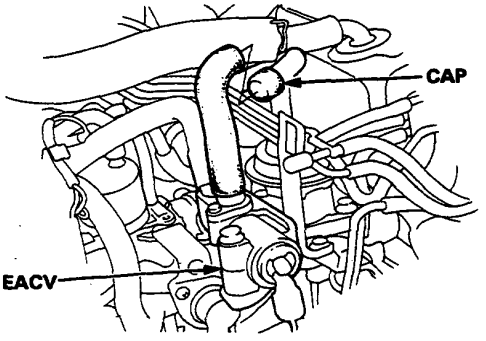
5. Calibrate the NDIR CO Meter in accordance with the manufacturer's recommended procedures. Incert exhaust gas sampling probe into the tailpipe at least 40 cm.

6. Check specification for idle CO with cooling fan, air conditioner OFF and headlights OFF.

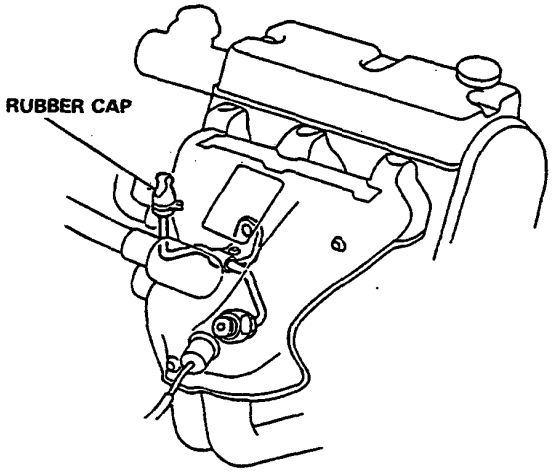
   Specified CO % :
   KX model: 0.1 %
   Except KX model: 1 ± 1 %

   - If idle CO is as specified, go to step 14.
   - If not, go to step 7 through 13.

7. KX model;
   Disconnect the 2P connector from the EACV and disconnect the hose from vacuum hose manifold, then cap the hose end.



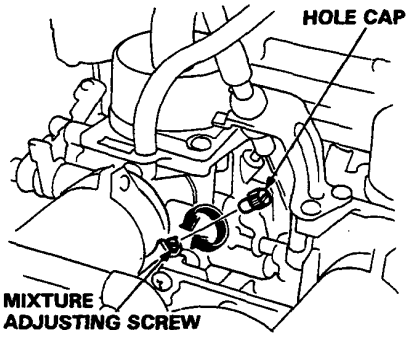
8. Remove the rubber cap from the gas pipe.



9. Check specification for idle CO.

   Specified CO % : 2.0 ± 1.0 %

   - If not within specification, remove mixture adjusting screw hole plug and adjust by turning both mixture adjusting screws to obtain proper CO reading.



   — Turning both mixture adjusting screws

   clockwise: CO reading decreases
   counterclockwise: CO reading increases

   Readjust idle speed if necessary, and recheck idle CO.

10. KX model;
    Reconnect the connector and hose.
    Remove EFI. ECU fuse for 10 seconds to reset control unit.

11. KX model:
    Recheck idle CO.

    Specified CO % : 0.1 %

    - If idle CO is as specified (step 6), go to step 11.
    - If not, check the self-diagnosis indicator (page 11-90). If not, replace the EACV, then repeat step 6.

12. Recheck idle speed.

    Idle speed should be:

Manual	800 ± 50 min^{-1} (rpm)
Automatic	750 ± 50 min^{-1} (rpm) (except "N" or "P")

(cont'd)

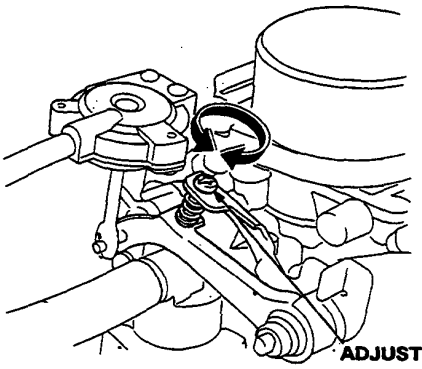
Idle Speed Inspection/Adjustment (cont'd)

Carbureted Engine:

- If idle speed is as specified (step 4), go to step 13.
- If idle speed is not as specified, adjust by turning throttle stop screw, then repeat step 6.

13. Reinstall the mixture adjusting screw hole cap.
14. If equipped with air conditioner, check the idle speed with the A/C on.

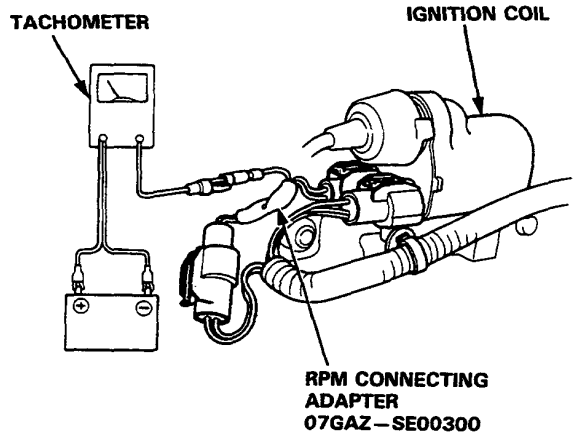
Idle speed should be : 750 ± 50 min^{-1} (rpm)



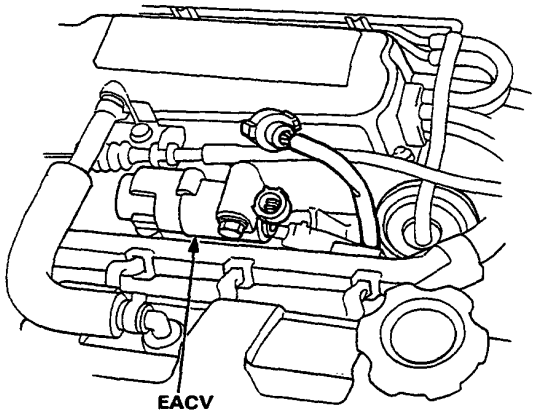
Adjust the idle speed, if necessary, by turning the adjusting screw.

Fuel-Injected Engine:

1. Start the engine and warm it up to normal operating temperature (the cooling fan comes on).
2. Connect a tachometer.



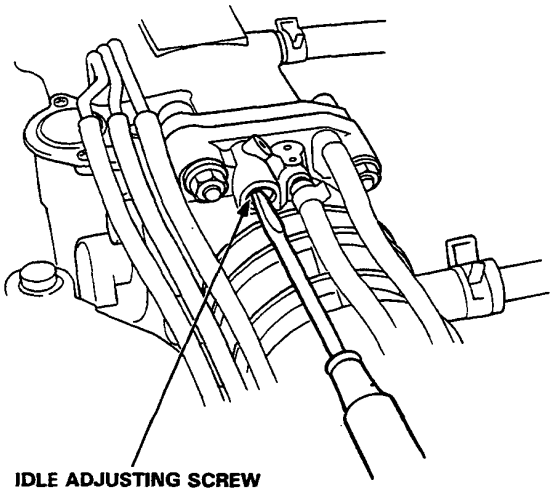
3. Disconnect the 2P connector from the EACV.



4. Set the steering in the straight forward position, and check idling in no-load conditions in which the headlights, blower fan, rear defroster, cooling fan, and air conditioner are not operating.

Idle speed should be:
- **KX, KS, KZ, KQ**
  M/T 650 ± 50 min^{-1} (rpm)
  A/T 650 ± 50 min^{-1} (rpm) in [N] or [P]
- **Other models**
  M/T 700 ± 50 min^{-1} (rpm)
  A/T 700 ± 50 min^{-1} (rpm)

Adjust the idle speed, if necessary, by turning the adjusting screw on the top of the throttle body.



IDLE ADJUSTING SCREW

5. Reconnect the 2P connector on the EACV, then remove CLOCK (10 A) fuse in the underhood relay box for 10 second to reset ECU.

6. Set the steering in the straight forward position and idle the engine with no-load conditions in which the headlights, blower fan, rear defogger, cooling fan, and air conditioner are not operating for one minute, then check the idle speed.

   Idle speed should be:
   - **KX, KS, KZ, KQ**
     M/T 750 ± 50 min^{-1} (rpm)
     A/T 750 ± 50 min^{-1} (rpm) in [N] or [P]
   - **Other models**
     M/T 800 ± 50 min^{-1} (rpm)
     A/T 800 ± 50 min^{-1} (rpm)

7. Idle the engine in the following conditions for one minute, then check the idle speed.

   - With headlights (Hi) and rear window defogger ON.
   - While the steering wheel is turning.
   - If applicable, with Automatic transmission models when shifted in gear (except [N] or [P])

   Idle should remain stable at:
   - **KX, KS, KZ, KQ**
     750 ± 50 min^{-1} (rpm)
   - **Other models**
     800 ± 50 min^{-1} (rpm)

8. Idle the engine for one minute with heater fan switch at HI (right end) and air conditioner on, then check the idle speed.

   Idle should remain stable at:
   - **KX, KS, KZ, KQ**
     750 ± 50 min^{-1} (rpm)
   - **Other models**
     800 ± 50 min^{-1} (rpm)

NOTE: If the idle speed is not within specifications, see Symptom-to-Sub System Chart on page 6-175.