

Engine Tune-up

Tailpipe Emissions Inspection

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

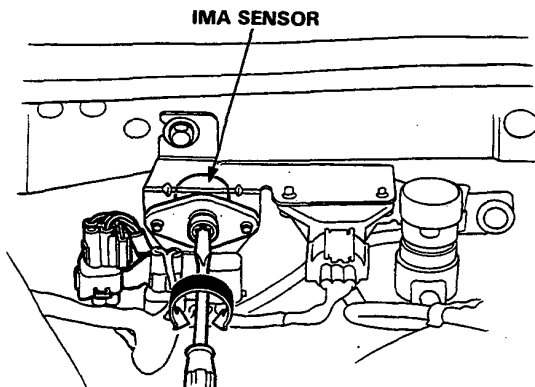
1. Start the engine and warm up to normal operating temperature (cooling fan comes on).
2. Connect tachometer.
3. Check idle speed and adjust the idle speed, if necessary (page 11-180).
4. Warm up and calibrate the CO meter according to the meter manufacturer's instructions.
5. Check idle CO with the headlights, heater blower, rear window defogger, cooling fan, and air conditioner off.

Specified CO%:

KX, KS, KZ: 0.1% maximum

Other models: $1.0 \pm 1.0\%$

- If unable to obtain this reading:
On KX, KS, KZ, see ECU troubleshooting (page 6-134).
On other models, adjust by turning the adjusting screw of the IMA sensor.

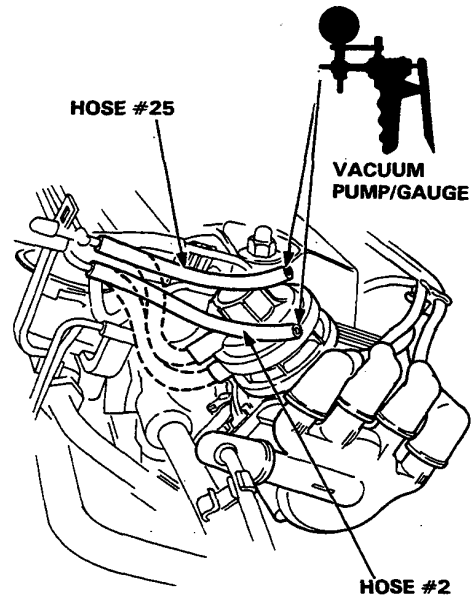


- If unable to obtain a CO reading of specified % by this procedure, check the engine tune-up condition.

Ignition Timing Inspection and Setting

Carbureted Engine:

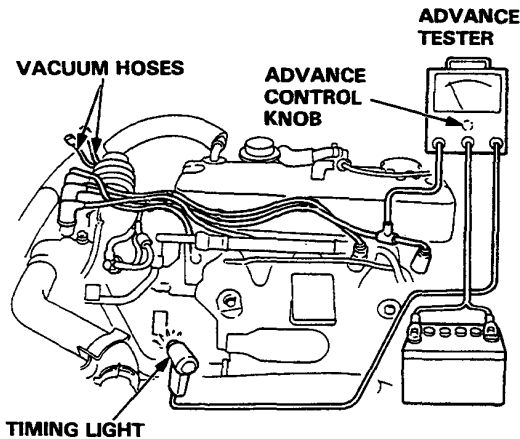
1. Disconnect the vacuum hoses from the vacuum advance diaphragm, then connect the vacuum pump/gauges to the vacuum hoses.



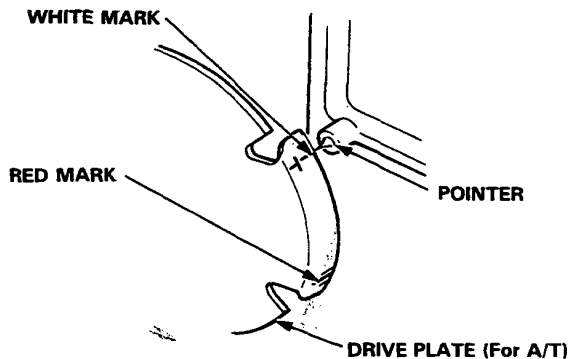
2. Start the engine and let it idle.
3. When the engine is cool (coolant temperature is below 140°F), check each hose for vacuum. The #2 and #25 hoses should have vacuum.
 - If the #2 hose has no vacuum, check the #2 hose of proper connection, cracks, blockage or disconnected hose.
 - If the #25 hose has no vacuum, check the #24 and #25 hoses for proper connections, cracks, blockage or disconnected hoses, and the check valve is not clogged.
If the #24 and #25 hoses, and the check valve have no problem, replace the thermovalve and recheck the #25 hose for vacuum.
4. Connect the vacuum hoses to the vacuum advance diaphragm and allow the engine to warm up. (cooling fan comes on).



5. Disconnect the #25 hose from the vacuum advance diaphragm and connect the vacuum pump/gauge to the #25 hose.
6. Check the #25 hose for vacuum.
The #25 hose should have no vacuum.
 - If the #25 hose has vacuum, replace the ther-mo-valve and recheck it.
7. Disconnect the vacuum hoses from the vacuum advance diaphragm and plug them.
8. Connect a timing light and an advance tester, and remove the rubber cap from the inspection window of the cylinder block.



9. While the engine idles, point a timing light toward the flywheel (for M/T), or the drive plate (for A/T).
10. Align the timing mark (White) on the flywheel (for M/T) or the drive plate (for A/T) to the pointer by turning the advance control knob of the advance tester.

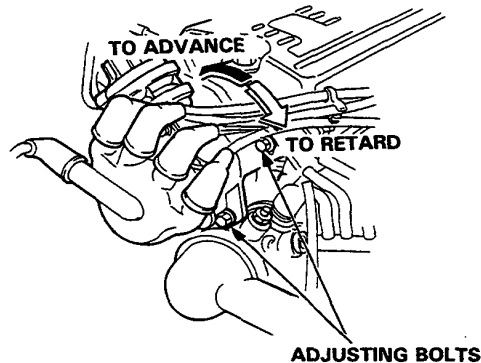


11. Read initial timing when timing mark (white) is aligned to the pointer.

Initial Timing

- **Manual Transmission [at 800±50 min⁻¹ (rpm) in neutral]**
KX, KS, KT, KY, KZ models: 4° BTDC
KG, KE, KB, KF, KW models: 10° BTDC
- **Automatic Transmission [at 750±50 min⁻¹ (rpm) in neutral]**
KX, KS, KT, KY, KZ models: 4° BTDC
KG, KE, KB, KF, KW models: 10° BTDC

12. Adjust as necessary by loosening the distributor adjusting bolts, and turn the distributor housing clockwise to retard the timing, or counterclockwise to advance the timing.



13. Tighten the distributor adjusting bolts, then recheck the timing.

Engine Tune-up

Ignition Timing Inspection and Setting

Carbureted Engine:

14. Connect the vacuum hoses to the vacuum advance diaphragm and inspect ignition timing at idle.

Ignition Timing

- **Manual Transmission** [at $800 \pm 50 \text{ min}^{-1}$ (rpm) in neutral]

KT, KY models: $15 \pm 2^\circ$ BTDC (Red)
KG, KE, KB, KF, KW models: $16 \pm 2^\circ$ BTDC (Red)
KX, KS, KZ models: $20 \pm 2^\circ$ BTDC (Red)

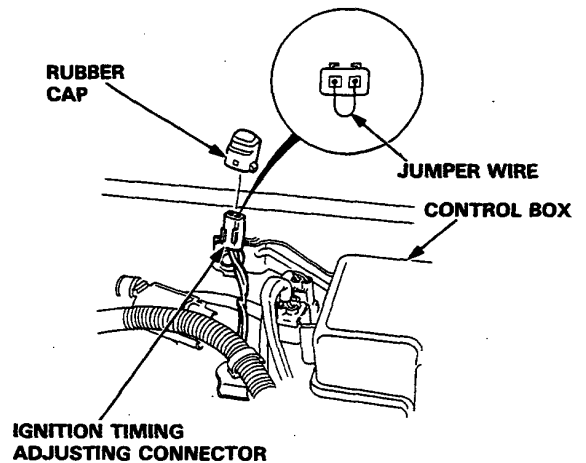
- **Automatic Transmission** [at $750 \pm 50 \text{ min}^{-1}$ (rpm) in neutral]

KT, KY models: $10 \pm 2^\circ$ BTDC (Red)
KG, KE, KB, KF, KW models: $16 \pm 2^\circ$ BTDC (Red)
KX, KS, KZ models: $15 \pm 2^\circ$ BTDC (Red)

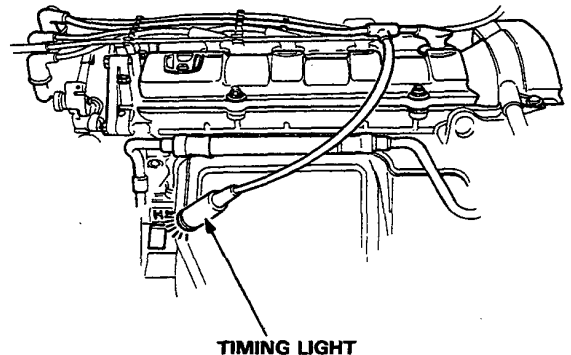
If advance is not as specified, check the vacuum advance diaphragm and distributor advance mechanism.

Fuel-Injected Engine:

1. Remove the rubber cap from the inspection window of the cylinder block.
2. Start the engine and allow it to warm up (cooling fan comes on).
3. Remove the rubber cap (BLK) from the ignition timing adjusting connector located behind the ignition coil and connect the BRN and GRN/WHT terminals with a jumper wire.



4. Connect a timing light to the engine; while the engine idles, point the light toward the pointer on the flywheel (for M/T), or on the drive plate (for A/T).

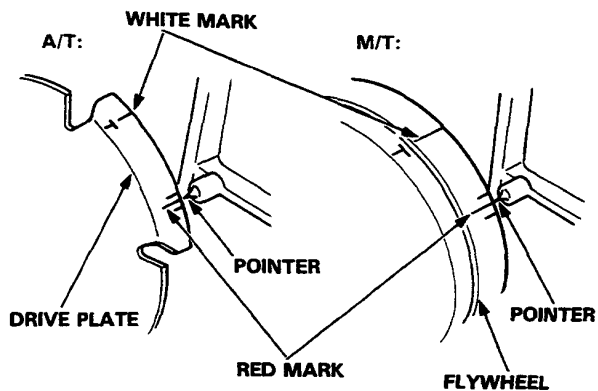




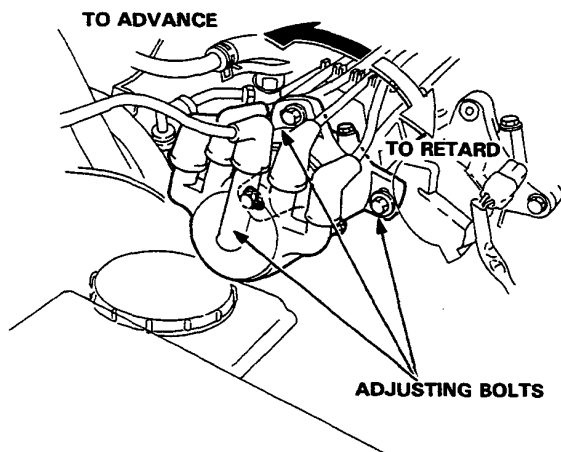
- Adjust ignition timing, if necessary, to the following specifications:

Ignition Timing

- **Manual:** All models:
15 ± 2° BTDC (RED)
at 750 ± 50 min⁻¹ (rpm) in neutral
- **Automatic:** All models:
15 ± 2° BTDC (RED)
at 750 ± 50 min⁻¹ (rpm) in neutral



- Adjust as necessary by loosening the distributor adjusting bolts, and turn the distributor housing counterclockwise to advance the timing, or clockwise to retard the timing.



- Tighten the adjusting bolts and recheck the timing.
- Remove the jumper wire and install the rubber caps to the inspection window and adjusting connector.