

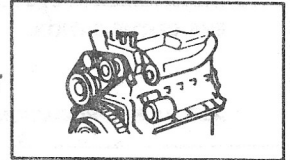
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**SEPTEMBER 1987
ENGLISH EDITION**

**1987 Jeep J/10 J/20 Trucks
With 4.2L Engines and
1987 Jeep Grand Wagoneer
J/10 J/20 Vehicles
With 5.9L Engines**



ENGINE

Attention: Workshop, Parts Department

ALTITUDE PERFORMANCE ADJUSTMENTS

This I.S. Note outlines adjustments for improved engine performance on 1987 Jeep Grand Wagoneer, J/10, J/20 vehicles being operated at elevations above or below that which the engine was originally certified.

When necessary, perform the engine adjustments outlined in the adjustment procedure portion of this I.S. Note. Any 1987 Jeep Grand Wagoneer, J/10, J/20 vehicles that is so adjusted, must have a unique Vehicle Emission Control Information Update Label installed. The part numbers for these labels are provided in the following adjustment procedures.

The adjustment procedures information and Vehicle Emission Control Information Update Labels must be made available at no cost to independent repair facilities and to the general public.

Owner Notification

A notification is provided in the current Owner's Manuals to make customers aware of these adjustments.

Vehicle Emission Control Information Update Label

The Vehicle Emission Control Information Update labels are available from:

MYRIAD SERVICES
8835 General Drive
Plymouth, MI 48170
1-800-AMC-CARS
Operator 43

PROCEDURE

This adjustment procedure is written to coincide with the specifications found on the Vehicle Emission Control Information label.

VEHICLE EMISSION CONTROL INFORMATION	ENGINE/FAMILY DISPLACEMENT	EMISSION CONTROL SYSTEM			ENGINE EMISSION SCHEMATIC
EPA CERTIFICATION		SEQUENCE	SPECIFICATIONS	TRANS	
ALTITUDE APPLICATION			IGNITION TIMING @ RPM FAST IDLE RPM CURB IDLE RPM BASE IDLE RPM IDLE CO SPARK PLUG GAP	SPEC SPEC SPEC SPEC SPEC	
IGNITION TIMING FAST IDLE ADJUSTMENT CURB IDLE ADJUSTMENT BASE IDLE ADJUSTMENT					

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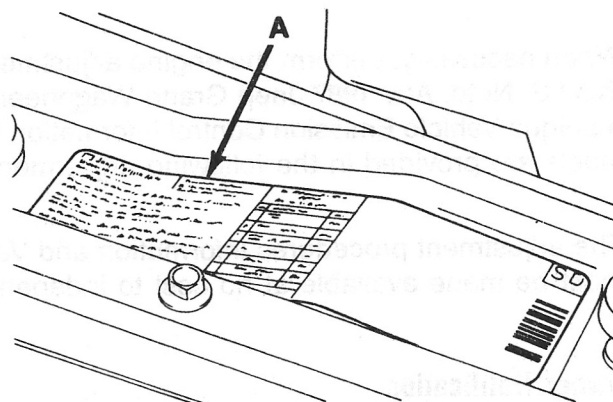
Specified positions on the label are called out on sample labels in these instructions. The positions (1) (2) (3) and (4) list the vehicle specifications that determine the particular adjustment.

The following information can be identified at these positions on the sample label:

Position	Information
1	Engine Type
2	EPA Certification
3	Altitude Application
4	Transmission Type

Vehicles With 4.2L Engines and Automatic Transmissions Built for Operation BELOW 4,000 Feet Now Being Operated ABOVE 4,000 Feet

1. Open the hood and attach the support rod.
2. Check the Vehicle Emission Control Information label (A) located underhood on the passenger side of the radiator upper crossmember.

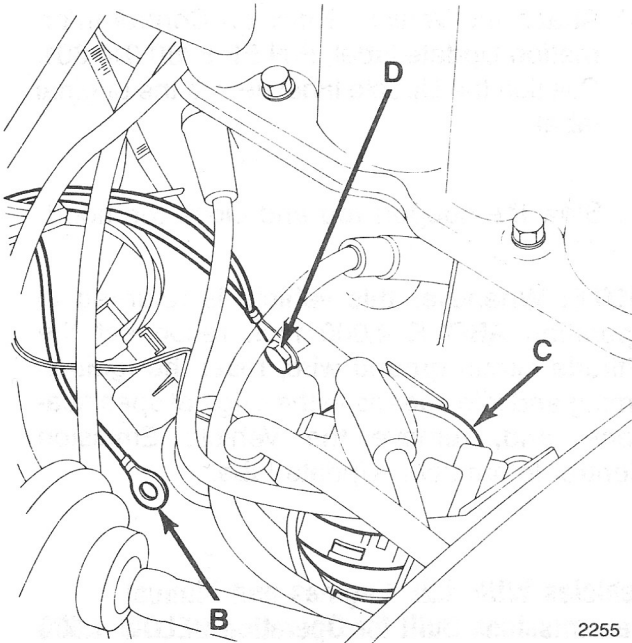


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3. Locate positions (1) (2) (3) and (4).
4. Verify that the vehicle is equipped as follows:

1. 4.2L Engine (258 cu. in.)
2. 50-State/49-State/Canada/California
3. For Operation BELOW 4,000 Feet
4. Automatic Transmission

5. Locate the black with tracer altitude circuit ground wire (B).



NOTE: The ground wire is attached to the MCU harness, which is located near the ignition coil (C).

6. Remove the tape from the wire connector eyelet.
7. Attach the wire connector eyelet to the ground screw (D).

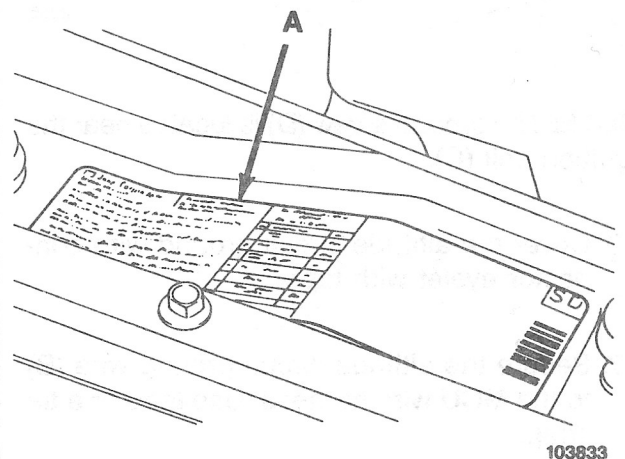
NOTE: The ground screw (D) is located next to the ignition coil (C).

8. Set the ignition timing to 16° BTDC.
9. Reset the engine idle speeds to the settings specified on the original label.
10. Attach the Vehicle Emission Control Information Update label, P/N EF 8980 010 601. Position the Update label next to the original label.
11. Stow the support rod and close the hood.

NOTE: Whenever this vehicle is returned to operation BELOW 4,000 feet, disconnect the altitude circuit ground wire, reset the ignition timing and engine idle speeds to the original specifications, and, remove the Vehicle Emission Control Information Update label.

Vehicles With 4.2L Engines and Automatic Transmissions Built for Operation ABOVE 4,000 Feet Now Being Operated BELOW 4,000 Feet

1. Open the hood and attach the support rod.
2. Check the Vehicle Emission Control Information label (A) located underhood on the passenger side of the radiator upper crossmember.

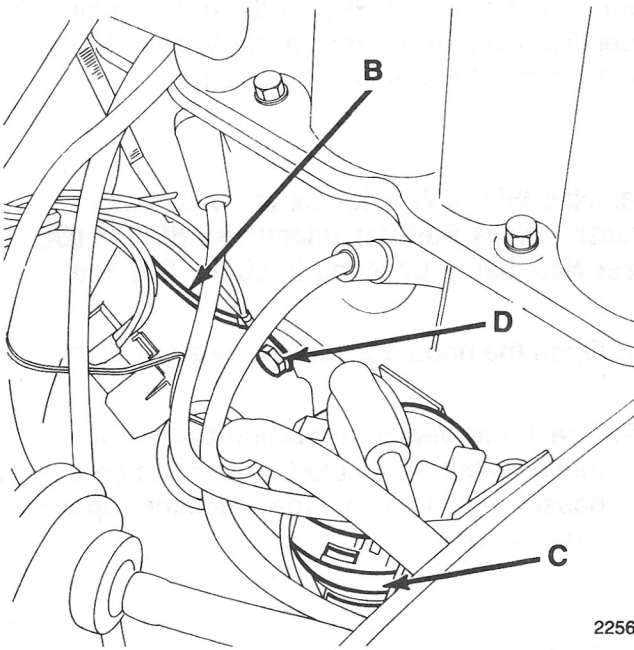


3. Locate the positions (1) (2) (3) and (4).

4. Verify that the vehicle is equipped as follows:

1. 4.2L Engine (258 cu. in.)
2. 50-State/49-State/Canada/California
3. For Operation ABOVE 4,000 Feet
4. Automatic Transmission

5. Disconnect the black with tracer altitude circuit ground wire (B) from the ground screw (D).



NOTE: The ground screw (D) is located near the ignition coil (C).

6. Cover the altitude circuit ground wire connector eyelet with tape.

7. Secure the altitude circuit ground wire (B) to the MCU wire harness. Use tape or a tie strap.

8. Set the ignition timing to 9° BTDC.

9. Reset the idle speeds to the settings on the original Vehicle Emission Control Information label.

10. Attach the Vehicle Emission Control Information Update label, P/N EF 8980 010 601. Position the Update label next to the original label.

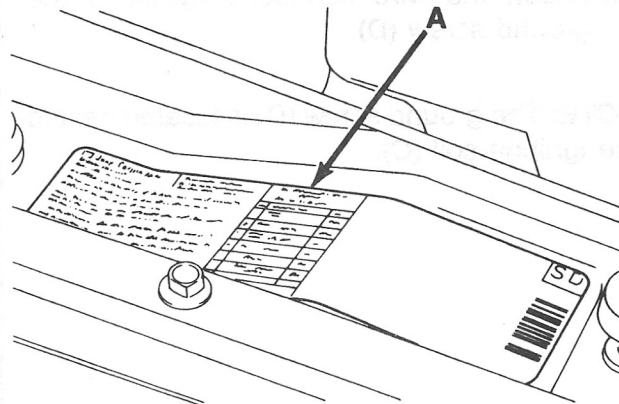
11. Stow the support rod and close the hood.

NOTE: Whenever this vehicle is returned to operation ABOVE 4,000 feet, reconnect the altitude circuit ground wire, reset the ignition timing and idle speeds to the original specifications, and, remove the Vehicle Emission Control Information Update label.

Vehicles With 4.2L Engines and Manual Transmissions Built for Operation BELOW 4,000 Feet Now Being Operated ABOVE 4,000 Feet

1. Open the hood and support with the rod.

2. Check the Vehicle Emission Control Information label (A) located underhood on the passenger side of the radiator upper crossmember.

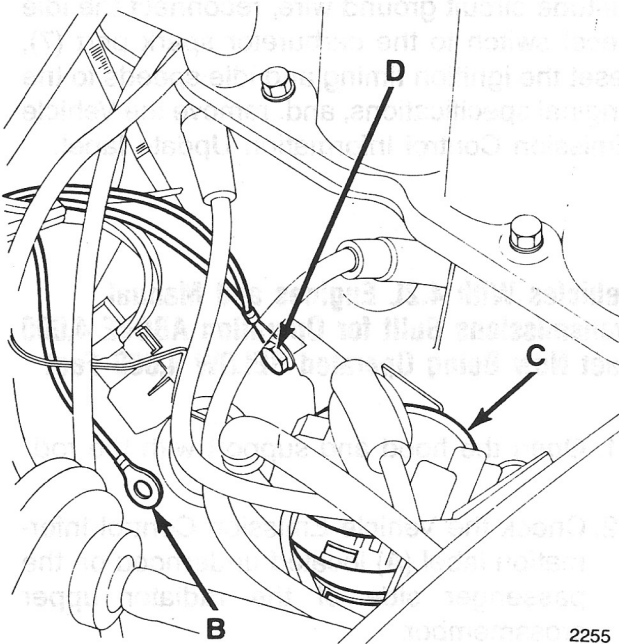


3. Locate positions (1) (2) (3) and (4).

4. Verify that the vehicle is equipped as follows:

- 1. 4.2L Engine (258 cu. in.)
- 2. 50-State/49-State/Canada/California
- 3. For Operation BELOW 4,000 Feet
- 4. Manual Transmission

5. Locate the black with tracer altitude circuit ground wire (B).



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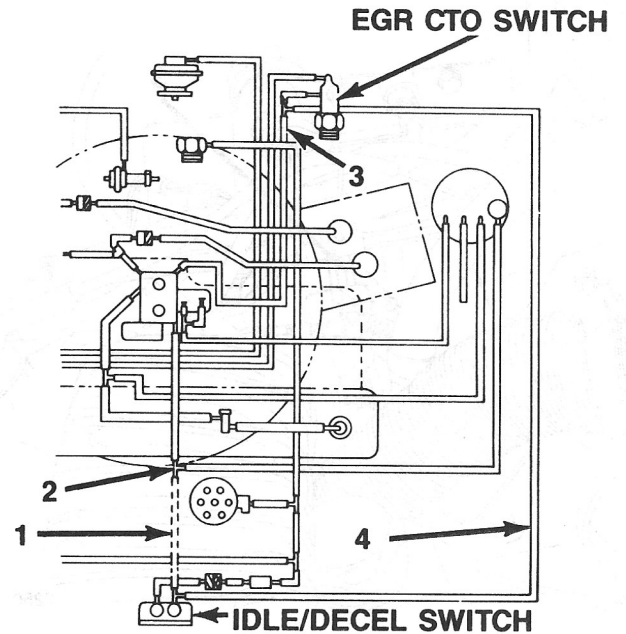
NOTE: The ground wire is attached to the MCU harness, near the ignition coil (C).

6. Remove the tape from the wire connector eyelet.

7. Attach the wire connector eyelet to the ground screw.

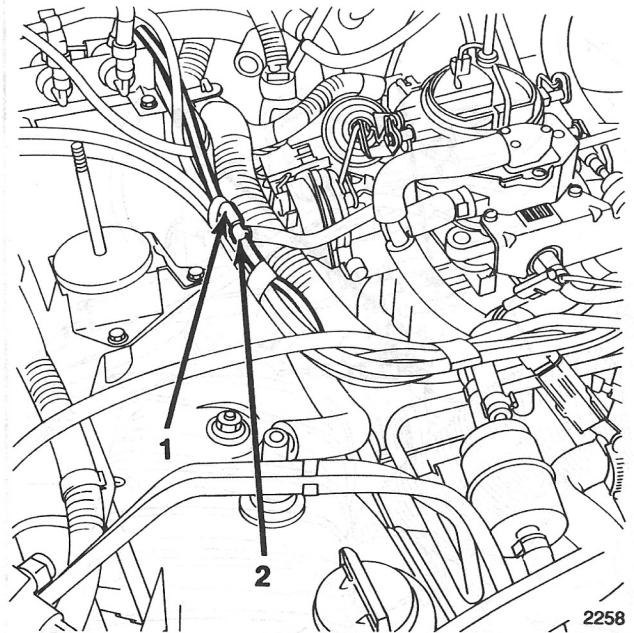
NOTE: The ground screw is located near the ignition coil (C).

8. Connect the idle decel switch to the EGR CTO switch as shown:



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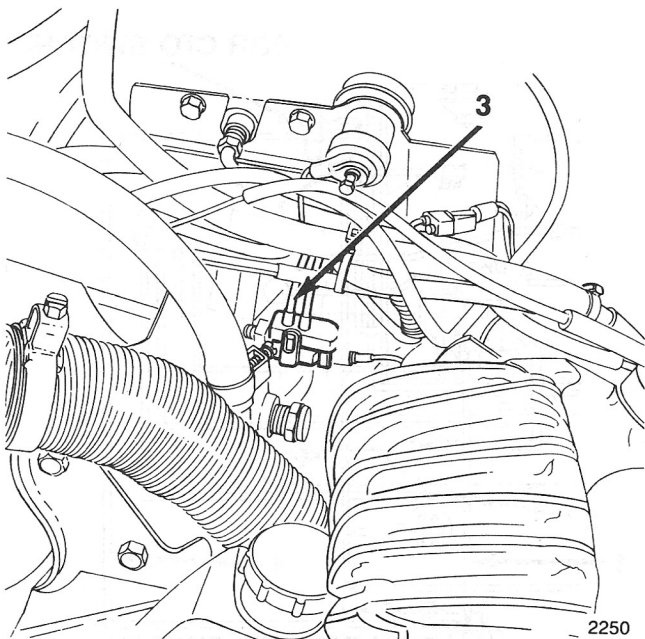
● Disconnect vacuum hose (1) from the idle decel switch and from the T-connector (2).



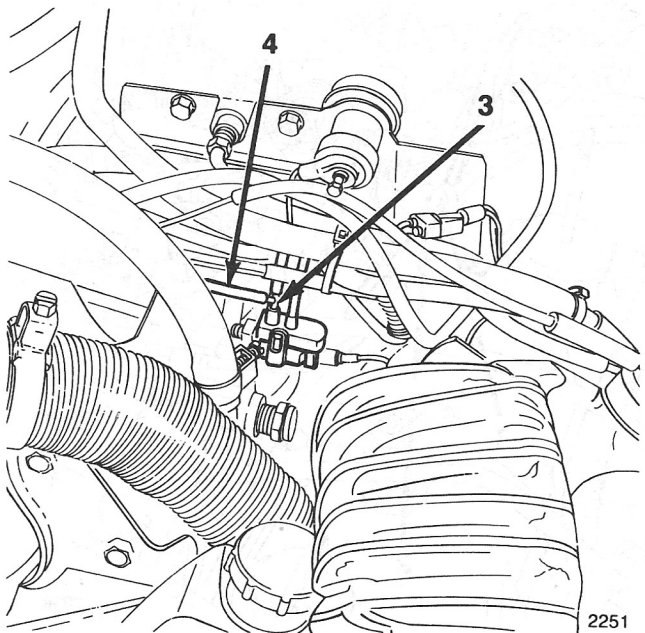
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NOTE: DO NOT DISCARD THE VACUUM HOSE (1). Place the vacuum hose (1) in the glove compartment for reinstallation when the vehicle is returned to operation BELOW 4000 feet.

- Install a vacuum cap, P/N 813 2325, over the open end of the T-connector (2).



- Cut the vacuum hose (3) approximately 31.75 mm (1 1/4 inches) from the EGR CTO switch and install a T-connector, P/N 321 0891.



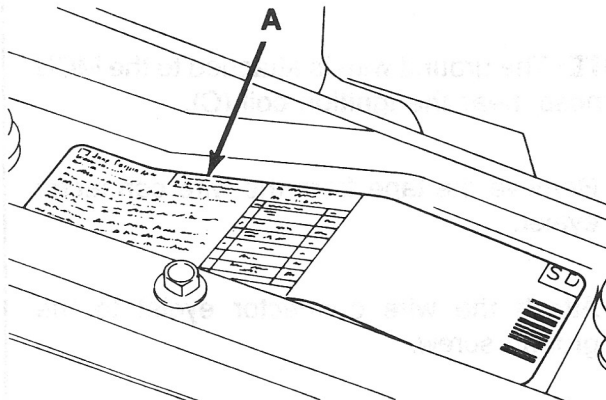
- Connect a 190.5 cm (75 inch) long vacuum hose (4) to the idle decel switch and to the T-connector just installed in the vacuum hose (3).

9. Set the ignition timing to 16° BTDC.
10. Reset the idle speeds to the settings specified on the original Vehicle Emission Control Information label.
11. Attach the Vehicle Emission Control Information Update label, P/N EF 8980 010 601. Position it next to the original label.
12. Stow the support rod and close the hood.

NOTE: Whenever this vehicle is returned to operation BELOW 4,000 feet, remove the altitude circuit ground wire, reconnect the idle decel switch to the carburetor spark port (7), reset the ignition timing and idle speeds to the original specifications, and, remove the Vehicle Emission Control Information Update label.

Vehicles With 4.2L Engines and Manual Transmissions Built for Operation ABOVE 4,000 Feet Now Being Operated BELOW 4,000 Feet

1. Open the hood and support with the rod.
2. Check the Vehicle Emission Control Information label (A) located underhood on the passenger side of the radiator upper crossmember.



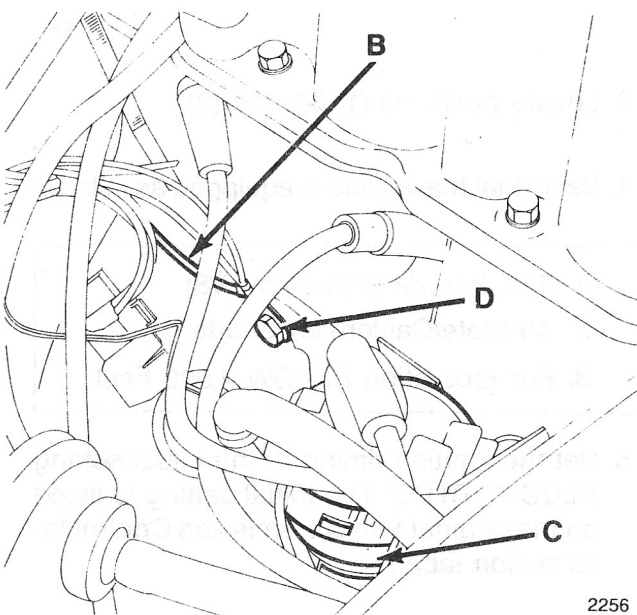
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3. Locate positions (1) (2) (3) and (4).

4. Verify that the vehicle is equipped as follows:

1. 4.2L Engine (258 cu. in.)
2. 50-State/49-State/Canada/California
3. For Operation ABOVE 4,000 Feet
4. Manual Transmission

5. Disconnect the black with tracer altitude circuit ground wire (B) from the ground screw (D).



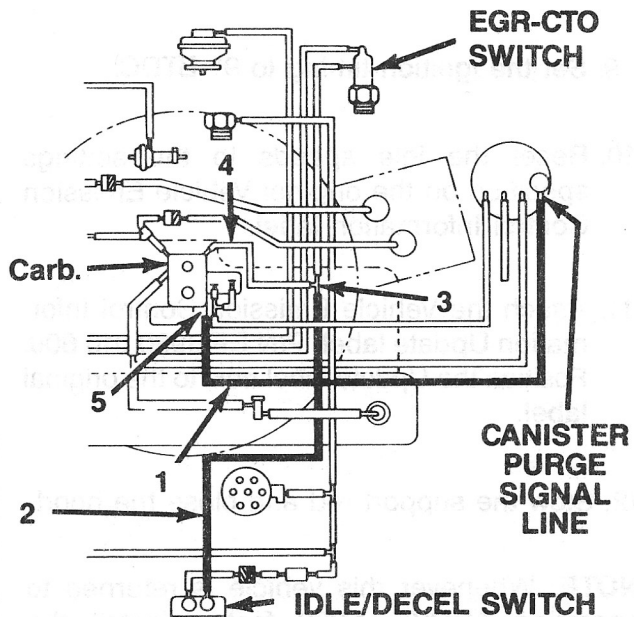
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NOTE: The ground screw (D) is located near the ignition coil (C).

6. Cover the altitude circuit ground wire connector eyelet with tape.

7. Secure the altitude circuit ground wire to the MCU wire harness. Use tape or a tie strap.

8. Connect the idle decel switch to the carburetor spark port (5) as shown:



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NOTE: The idle decel switch is located on the dash panel above the rear of the engine.

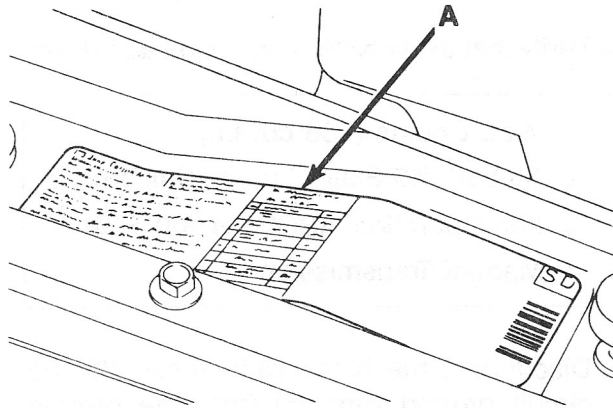
- Cut the vacuum hose (1) approximately 38.1 mm (1 1/2 inches) from the carburetor spark port and install a T-connector, P/N 321 0891, between the two ends.
- Remove the vacuum hose (2) from the T-connector (3), and connect it to the T-connector just installed in vacuum hose (1).
- Plug the open end of the T-connector (3) with a vacuum cap, P/N 813 2325.

9. Set the ignition timing to 9° BTDC.
10. Reset the idle speeds to the settings specified on the original Vehicle Emission Control Information label.
11. Attach the Vehicle Emission Control Information Update label, P/N EF 8980 010 600. Position the Update label next to the original label.
12. Stow the support rod and close the hood.

NOTE: Whenever this vehicle is returned to operation ABOVE 4,000 feet, reinstall the altitude circuit ground wire, reconnect the idle decel switch to the carburetor EGR port, reset the ignition timing and idle speeds to the original specifications, and, remove the Vehicle Emission Control Information Update label.

Vehicles With 5.9L Engines Built for Operation BELOW 4,000 Feet Now Being Operated ABOVE 4,000 Feet

1. Open the hood and support with the rod.
2. Check the Vehicle Emission Control Information label (A) located underhood on the passenger side of the radiator upper crossmember.



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3. Locate positions (1) (2) and (3).
4. Verify that the vehicle is equipped as follows:

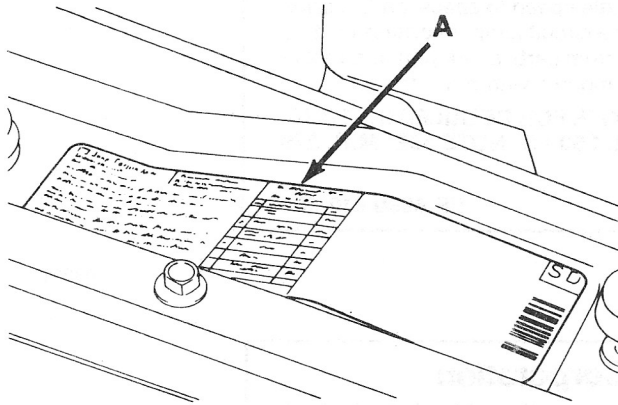
1. 5.9L Engine (360 cu.in. V8)
2. 49-State/California/Canada
3. For Operation BELOW 4,000 Feet

5. Set the ignition timing to the initial setting PLUS 7° BTDC. The initial setting is listed on the original Vehicle Emission Control Information label.
6. Reset the ignition idle speeds to the settings specified on the original label.
7. Attach the Vehicle Emission Control Information Update label, P/N EF 8980 010 600. Position the Update label next to the original label.
8. Stow the support rod and close the hood.

NOTE: Whenever this vehicle is returned to operation BELOW 4,000 feet, reset the ignition timing and engine idle speeds to the original specifications, and, remove the Vehicle Emission Control Information Update label.

Vehicles With 5.9L Engines Built for Operation ABOVE 4,000 Feet Now Being Operated BELOW 4,000 Feet

1. Open the hood and attach the support rod.
2. Check the Vehicle Emission Control Information label (A) located underhood on the passenger side of the radiator upper crossmember.



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3. Locate positions (1) (2) and (3).
4. Verify that the vehicle is equipped as follows:

1. 5.9L Engine (360 cu.in. V8)
2. 49-State/California/Canada
3. For Operation ABOVE 4,000 Feet

5. Set the ignition timing to 7° BTDC LESS than the initial setting specified on the original Vehicle Emission Control Information label. For example, if the initial setting is 16° BTDC, set to 9° BTDC.
6. Reset the engine idle speeds to to the settings specified on the original label.
7. Attach the Vehicle Emission Control Information Update label P/N EF 8980 010 600. Position the Update label next to the original label.
8. Stow the support rod and close the hood.

NOTE: Whenever this vehicle is returned to operation ABOVE 4,000 feet, reset the ignition timing and engine idle speeds to the original specifications, and, remove the Vehicle Emission Control Information Update label.

SAMPLE VEHICLE EMISSION CONTROL INFORMATION UPDATE LABELS:

AMC Jeep Corporation Vehicle Emission Control Information Update Label
This 1987 vehicle was originally sold for principal use <u>below</u> 4000 feet. The engine has been adjusted to maintain emissions performance above 4000 feet (see below). Remove this label and reset the engine to original specifications whenever the vehicle is returned to use below 4000 feet.
Engine application: 4.2L, 5.9L <p style="text-align: center;">— ADJUSTMENTS —</p> (1) Advance ignition timing 7° (2) Reset idle speed to specs. on Emission Control Info. Label (3) Install MCU altitude circuit jumper harness on 4.2L models (4) Disconnect idle/decel switch from carb. spark port and reconnect switch to carb. EGR port on 4.2L models with man. trans. REFER TO THE APPROPRIATE I.S. NOTE FOR DETAILED INSTRUCTIONS: M.R. 251 I.S. NOTE 11E; M.R. 253 I.S. NOTE 13E; M.R. 279 I.S. NOTE 7E <p style="text-align: right;">EF 8980 010 600</p>

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AMC Jeep Corporation Vehicle Emission Control Information Update Label
This 1987 vehicle was originally sold for principal use <u>above</u> 4000 feet. The engine has been adjusted to maintain emissions performance below 4000 feet (see below). Remove this label and reset the engine to original specifications whenever the vehicle is returned to use above 4000 feet.
Engine application: 4.2L, 5.9L <p style="text-align: center;">— ADJUSTMENTS —</p> (1) Retard ignition timing 7° (2) Reset idle speed to specs. on Emission Control Info. Label (3) Remove MCU altitude circuit jumper harness on 4.2L models (4) Disconnect idle/decel switch from carb. EGR port and reconnect switch to carb. spark port on 4.2L models with man. trans. REFER TO THE APPROPRIATE I.S. NOTE FOR DETAILED INSTRUCTIONS: M.R. 251 I.S. NOTE 11E; M.R. 253 I.S. NOTE 13E; M.R. 279 I.S. NOTE 7E <p style="text-align: right;">EF 8980 010 601</p>

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FILING INSTRUCTIONS

Record this I.S. Note on the Contents Page of Chapter B — Engines in the M.R. 253 and file it in the binder.