

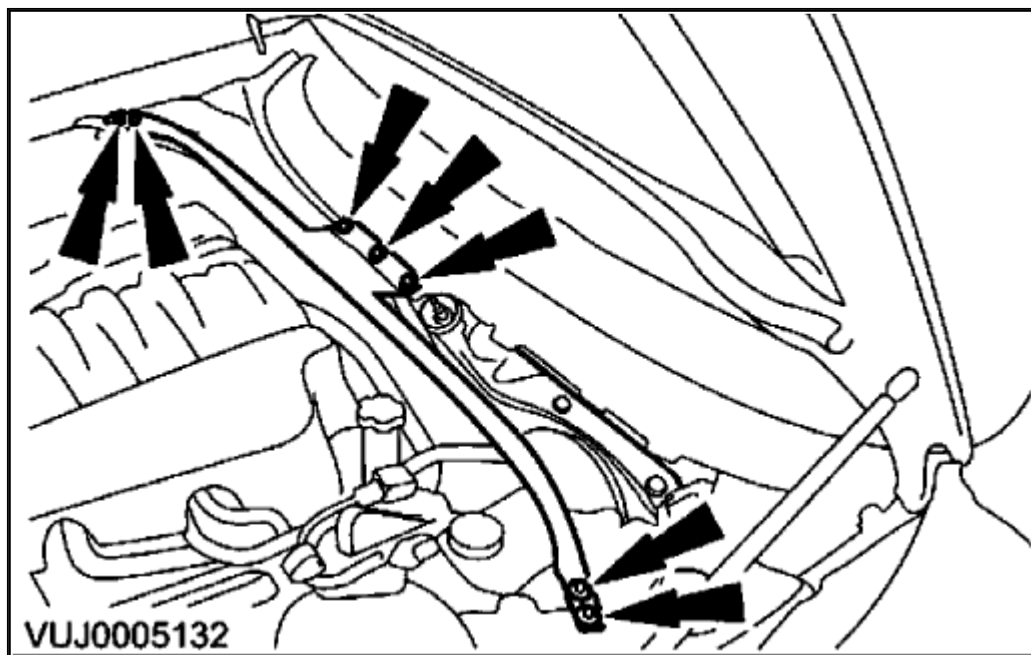
## Intake Manifold Removal

1. Disconnect the battery ground cable.
2. **WARNING: NEVER REMOVE THE COOLANT EXPANSION TANK PRESSURE CAP UNDER ANY CIRCUMSTANCES WHILE THE ENGINE IS OPERATING. FAILURE TO FOLLOW THIS INSTRUCTION MAY RESULT IN PERSONAL INJURY.**

**WARNING: TO AVOID HOT COOLANT OR STEAM BLOWING OUT OF THE [COOLING SYSTEM](#), USE EXTREME CARE WHEN REMOVING THE COOLANT EXPANSION TANK PRESSURE CAP. WAIT UNTIL THE ENGINE HAS COOLED DOWN, THEN INSULATE THE COOLANT PRESSURE CAP WITH A SUITABLE CLOTH AND SLOWLY LOOSEN THE COOLANT EXPANSION TANK PRESSURE CAP UNTIL THE COOLING SYSTEM PRESSURE IS RELEASED. DO NOT REMOVE THE COOLANT EXPANSION TANK PRESSURE CAP. STEP BACK WHILE THE PRESSURE IS RELEASED FROM THE SYSTEM. WHEN ALL OF THE PRESSURE HAS BEEN RELEASED SLOWLY REMOVE THE COOLANT EXPANSION TANK PRESSURE CAP (STILL WITH THE SUITABLE CLOTH IN POSITION) FROM THE COOLANT EXPANSION TANK. FAILURE TO FOLLOW THIS INSTRUCTION MAY RESULT IN PERSONAL INJURY.**

Release the [cooling system](#) pressure.

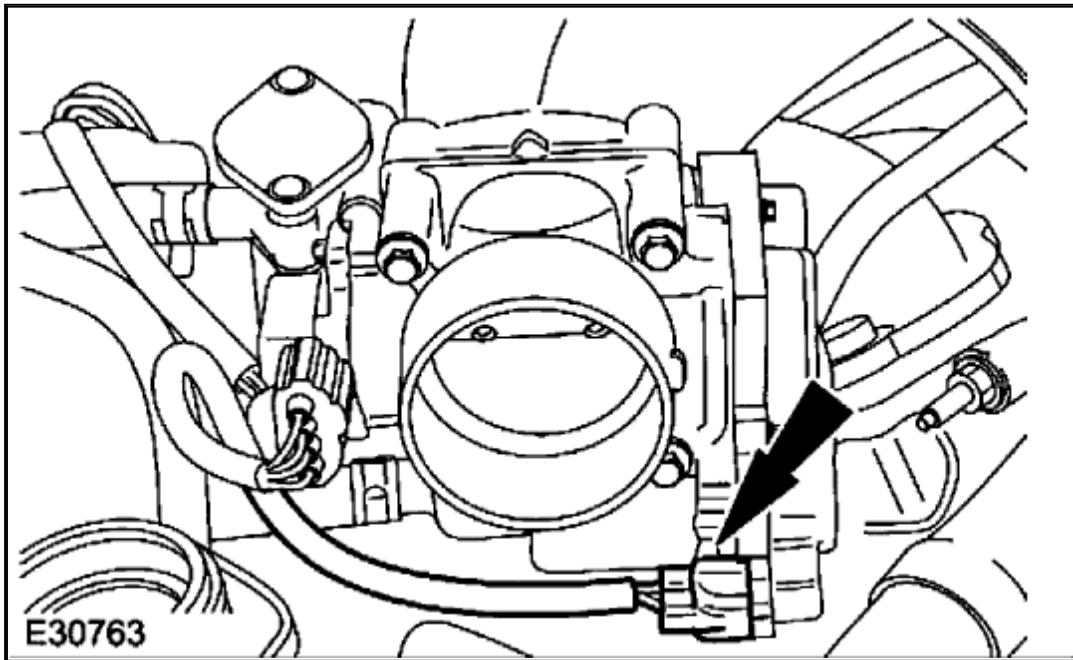
- Remove the coolant expansion tank pressure cap.
3. Remove the cowl vent screen.



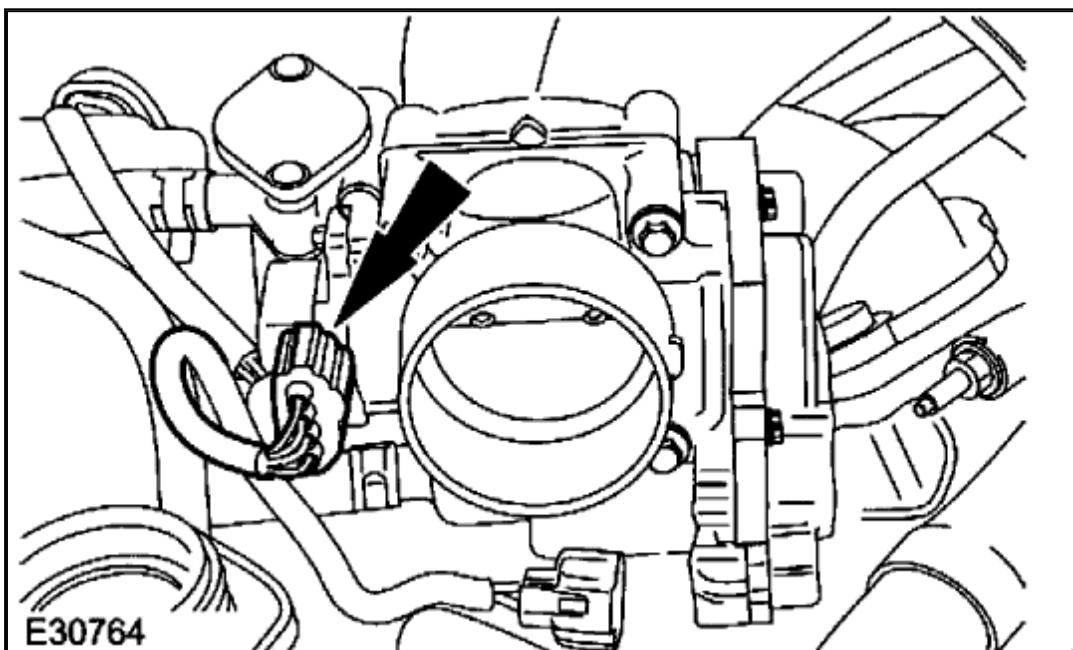
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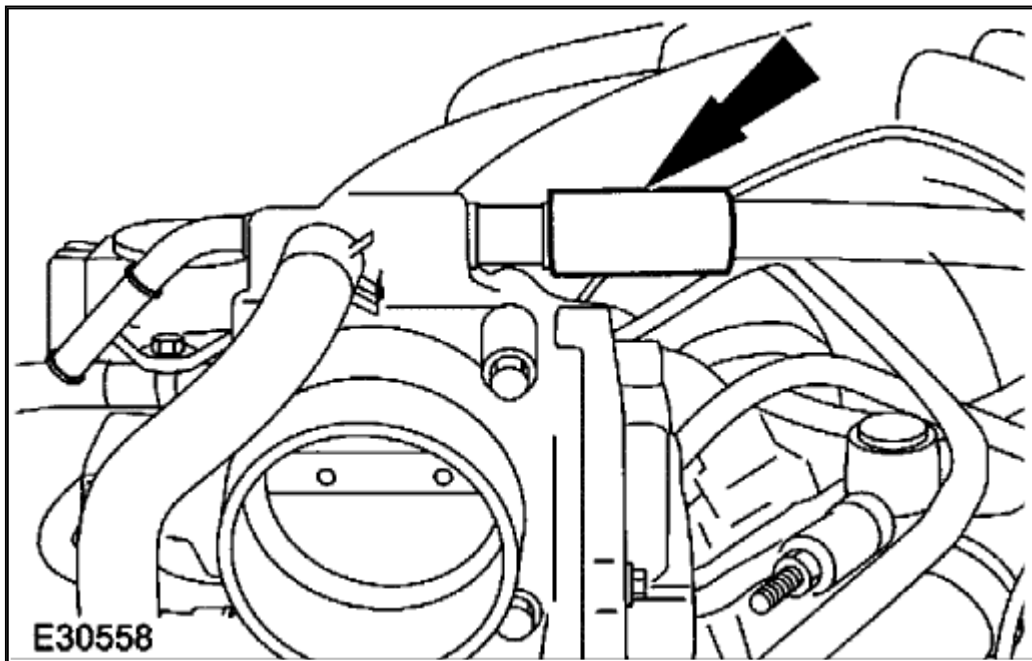
4. Remove the engine compartment support.
5. Remove the air cleaner outlet pipe.

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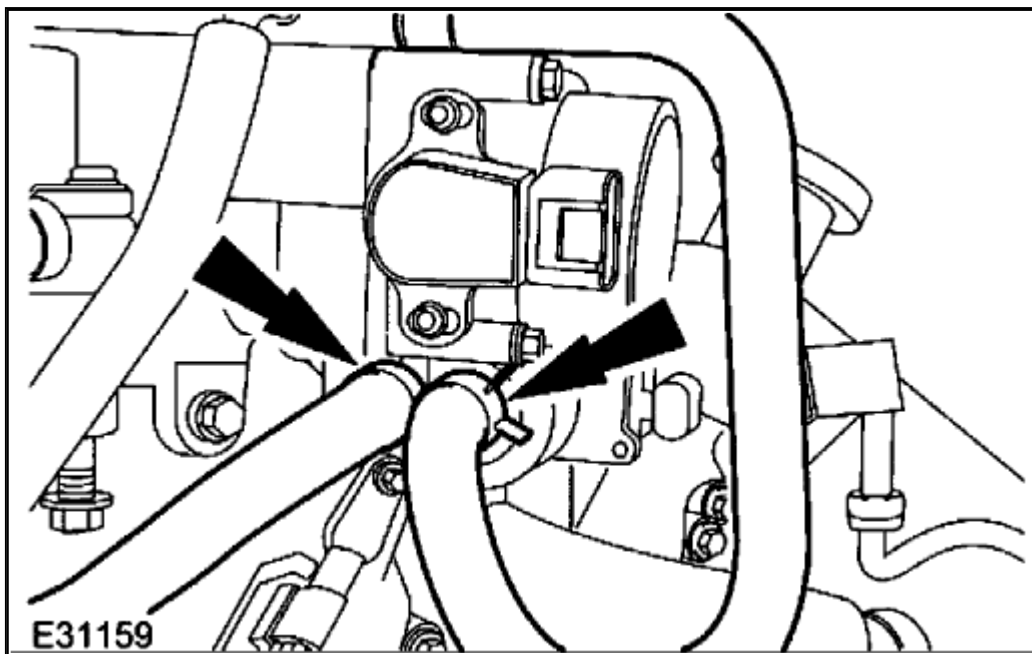
6. Disconnect the throttle motor electrical connector.

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7. Disconnect the throttle position sensor.

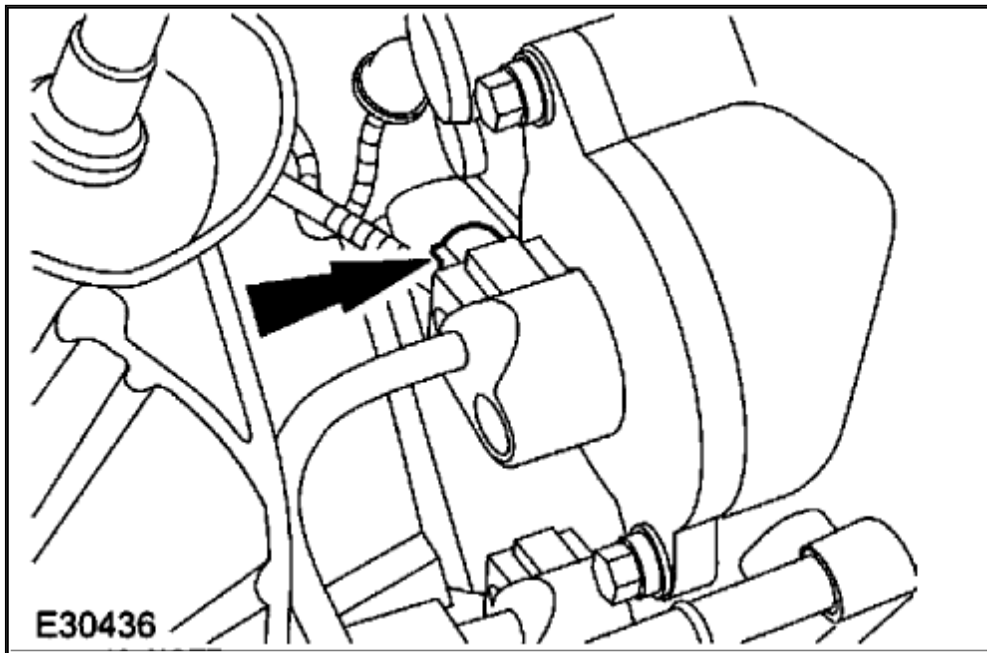
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8. Disconnect the Positive Crankcase Ventilation (**PCV**) hose.

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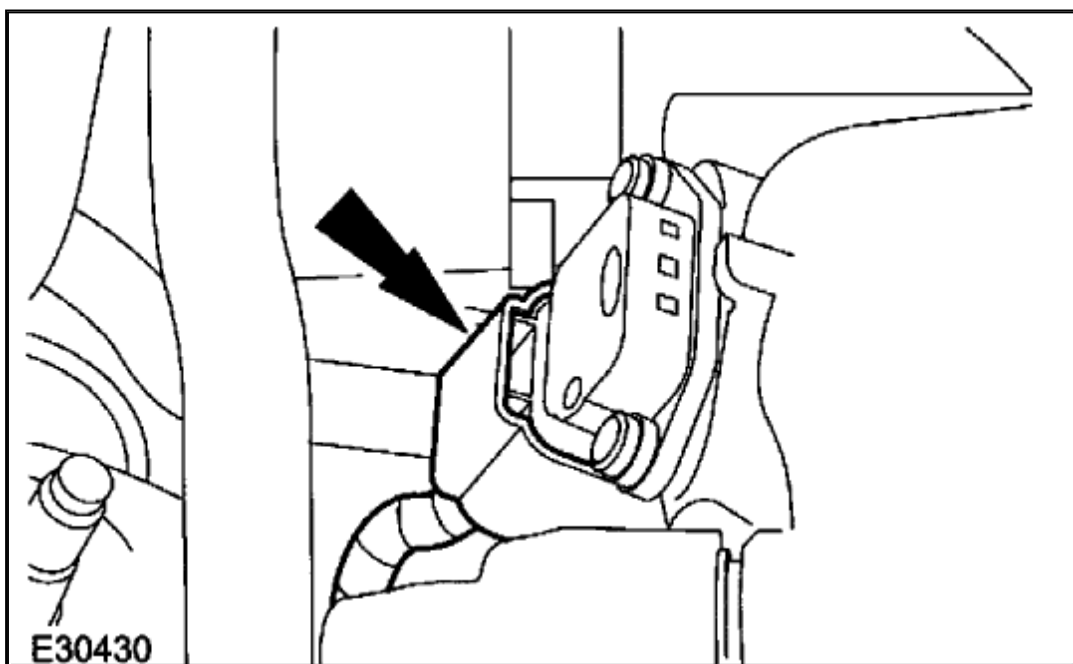
9. **NOTE:** Cap the coolant hoses to minimize coolant loss.

Detach the coolant hoses from the throttle body.

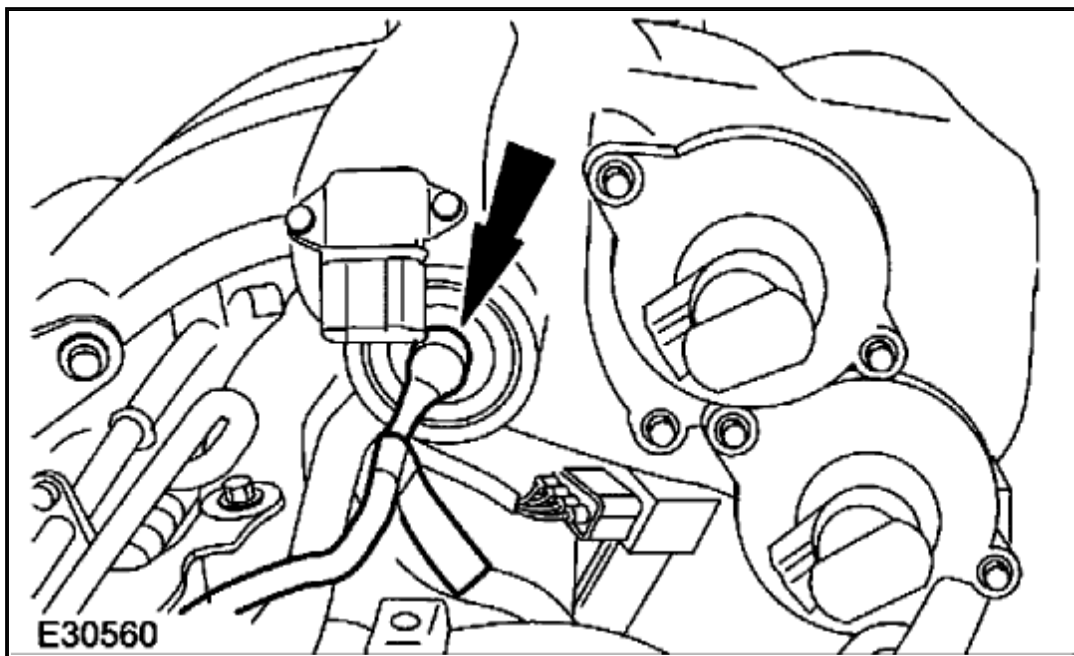
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10. **NOTE:** Left-hand Intake Manifold Tuning (**IMT**) valve shown, right-hand IMT similar.

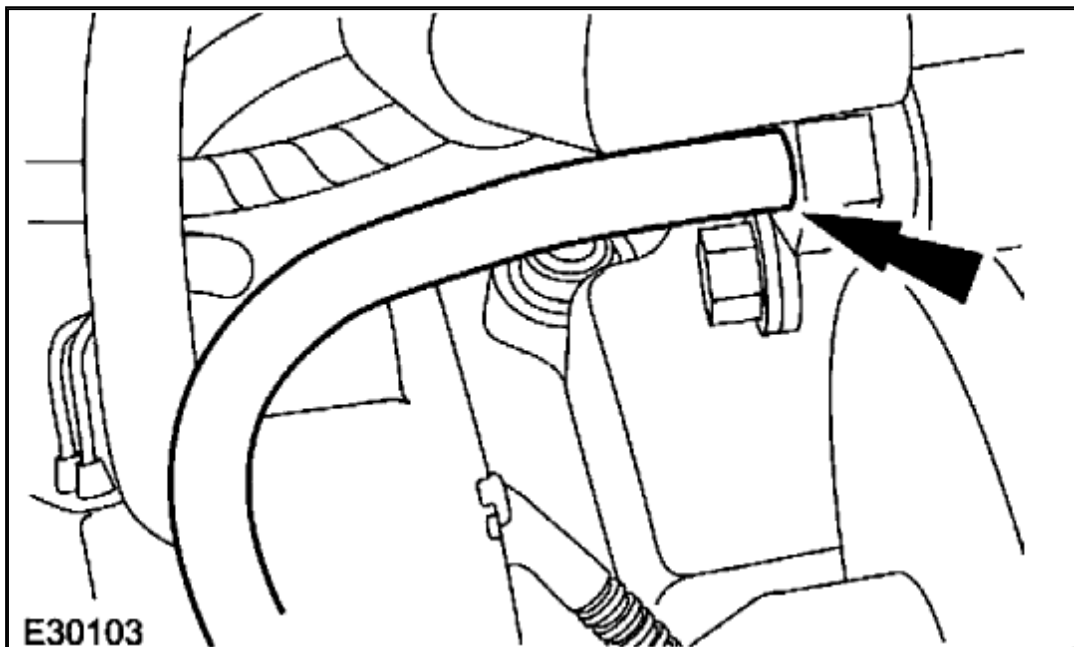
Disconnect the IMT valves electrical connectors.

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11. Disconnect the manifold absolute pressure (**MAP**) sensor electrical connector.

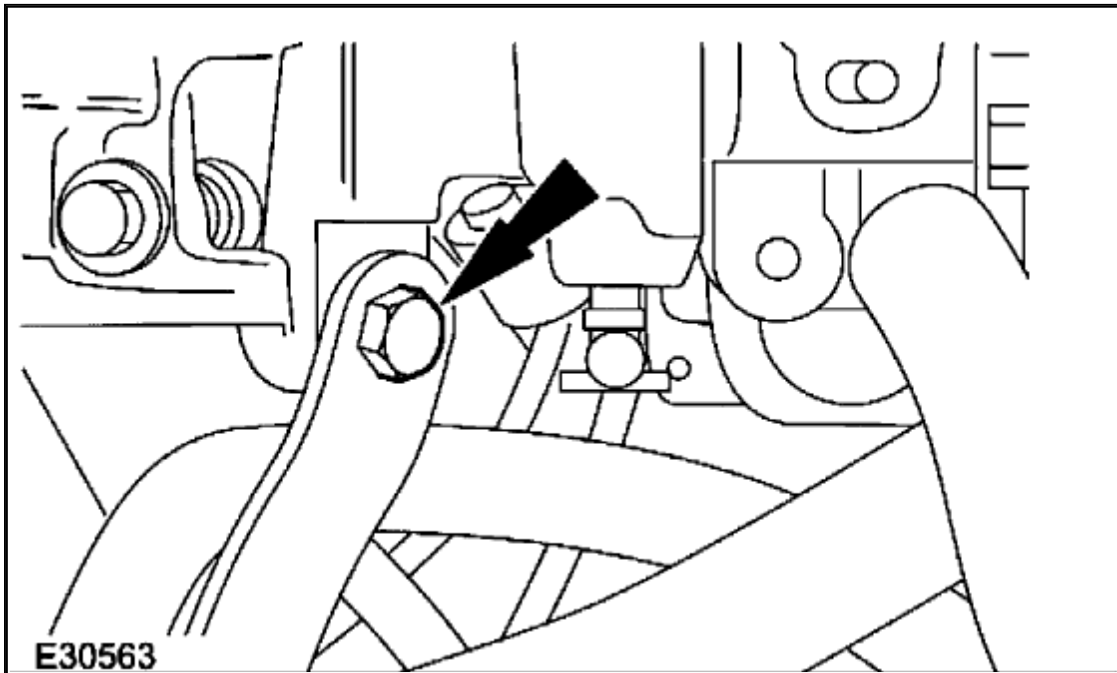
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12. Disconnect the fuel pressure regulator vacuum hose

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13. **NOTE:** The brake booster vacuum hose is attached to the induction manifold by a quick release coupling.

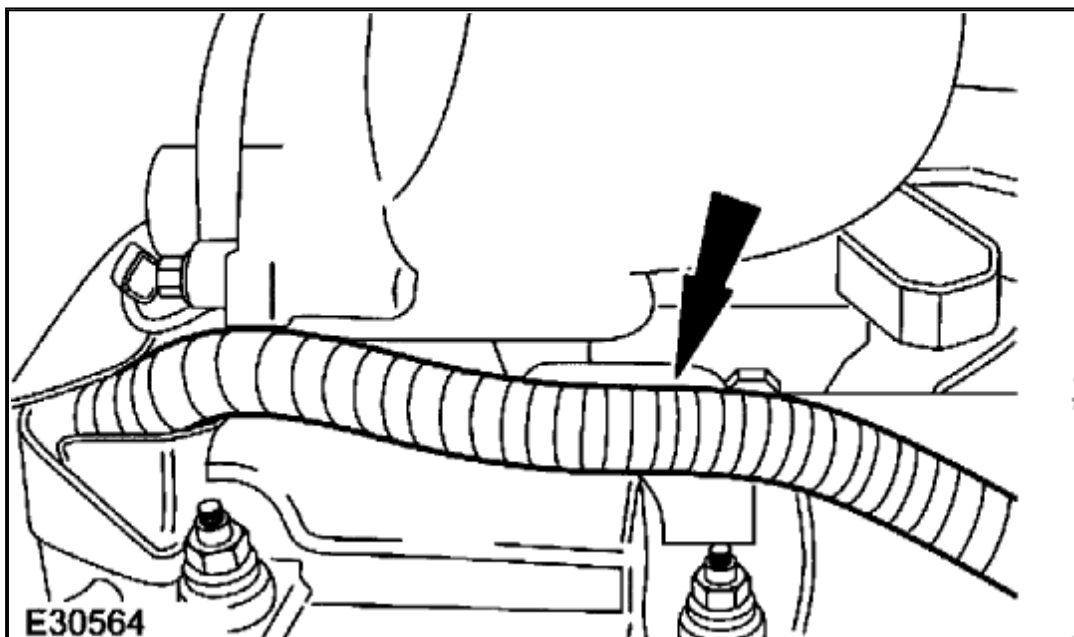
Detach the brake booster vacuum hose from the induction manifold.



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14. Detach the intake manifold front retaining bracket.

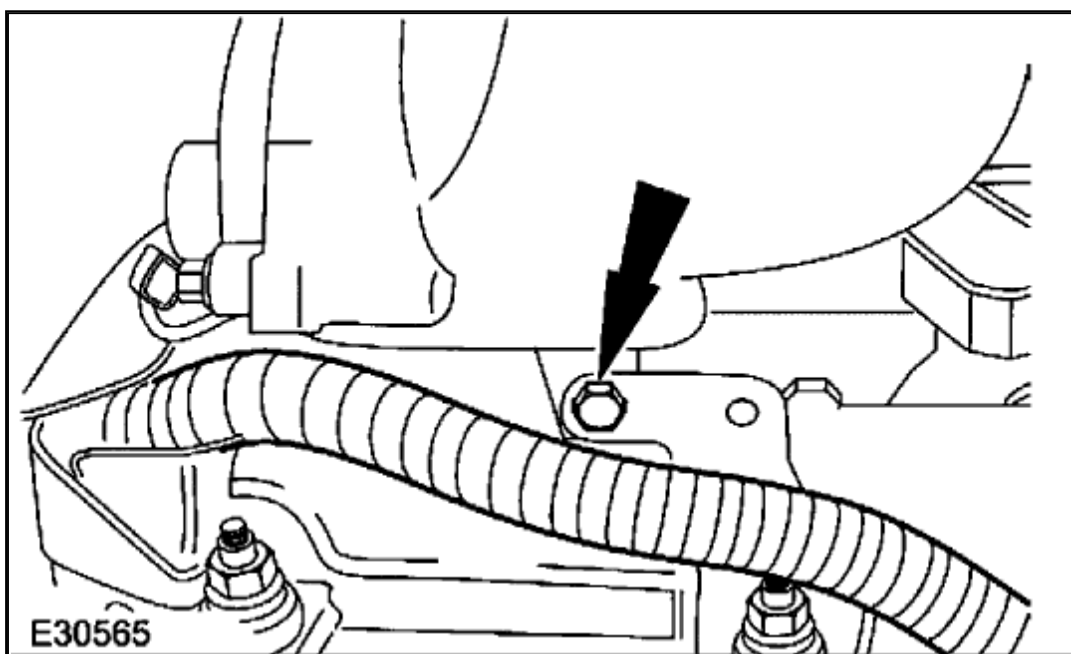


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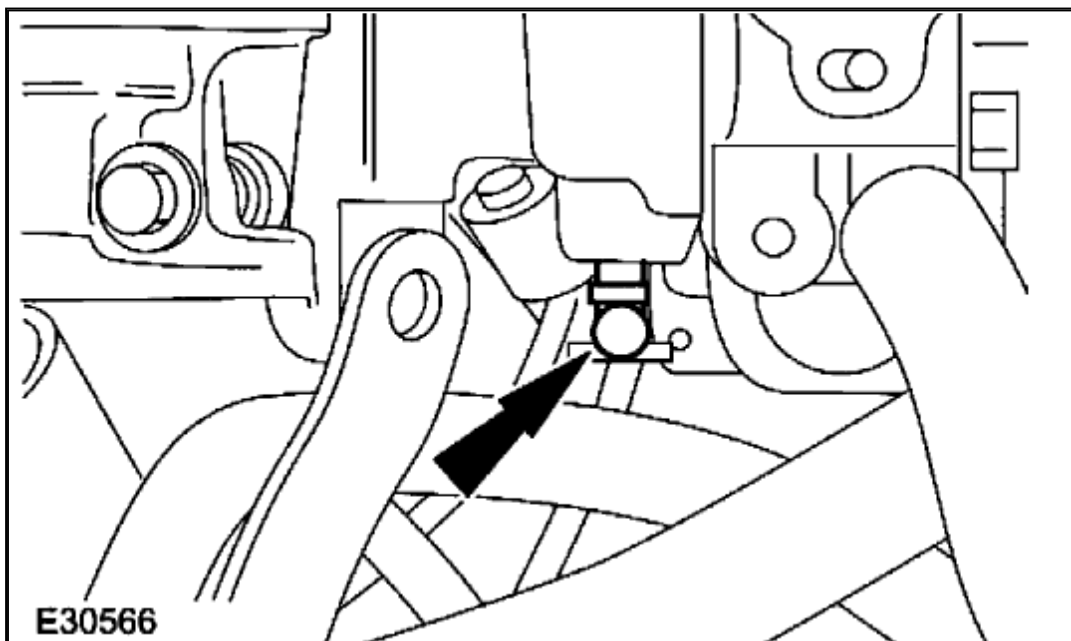
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15. Detach the engine wiring harness from the intake manifold rear retaining bracket.

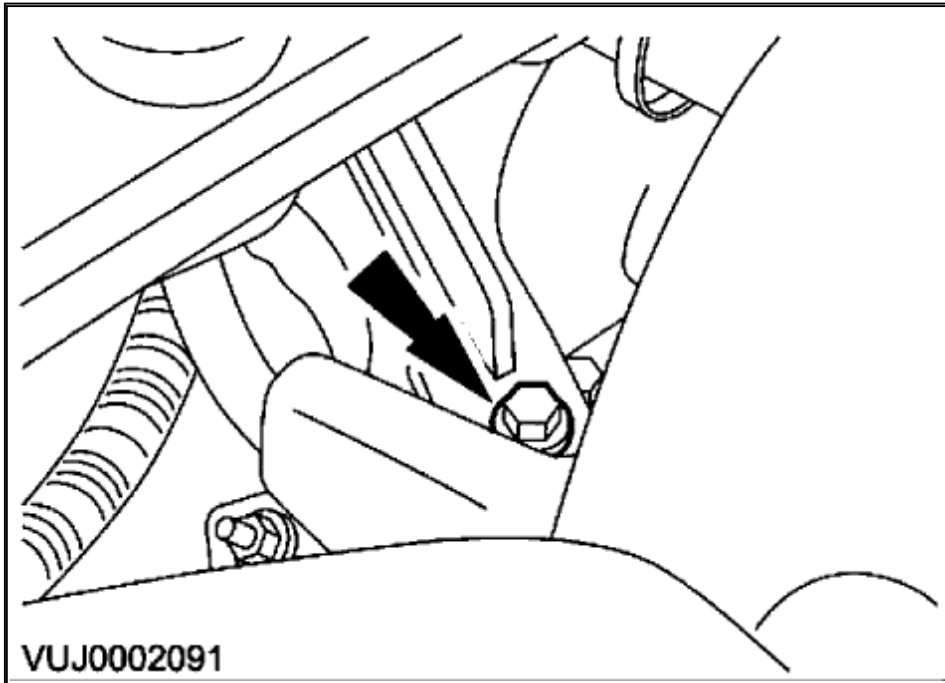
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16. Detach the intake manifold rear retaining bracket.

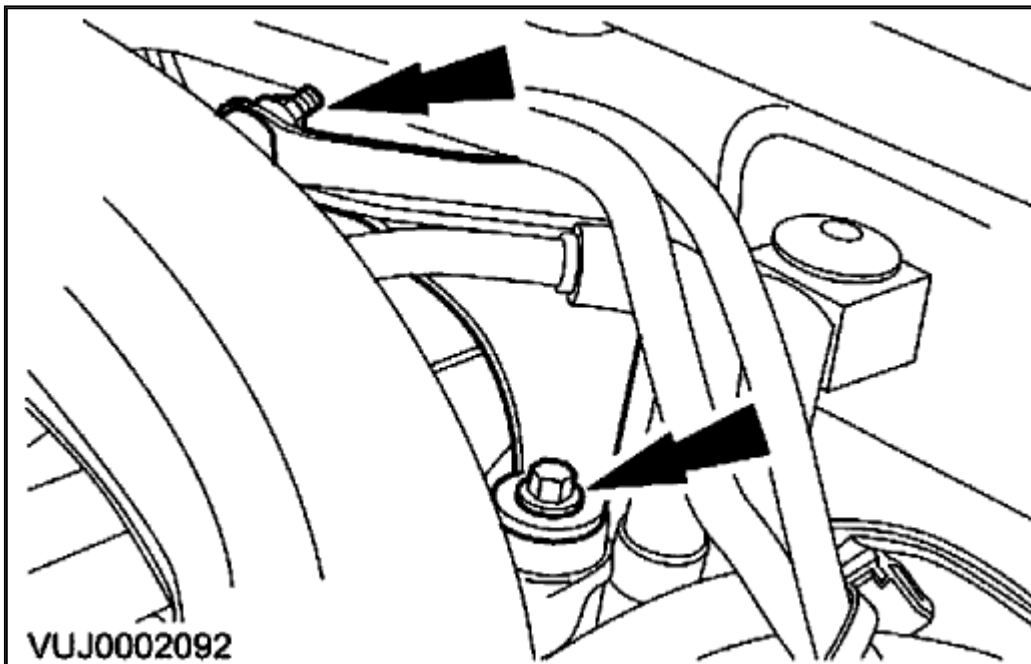
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17. **NOTE:** The evaporative emission canister purge valve transfer pipe is attached to the induction manifold by a quick release coupling.

Disconnect the evaporative emission canister purge valve transfer pipe.

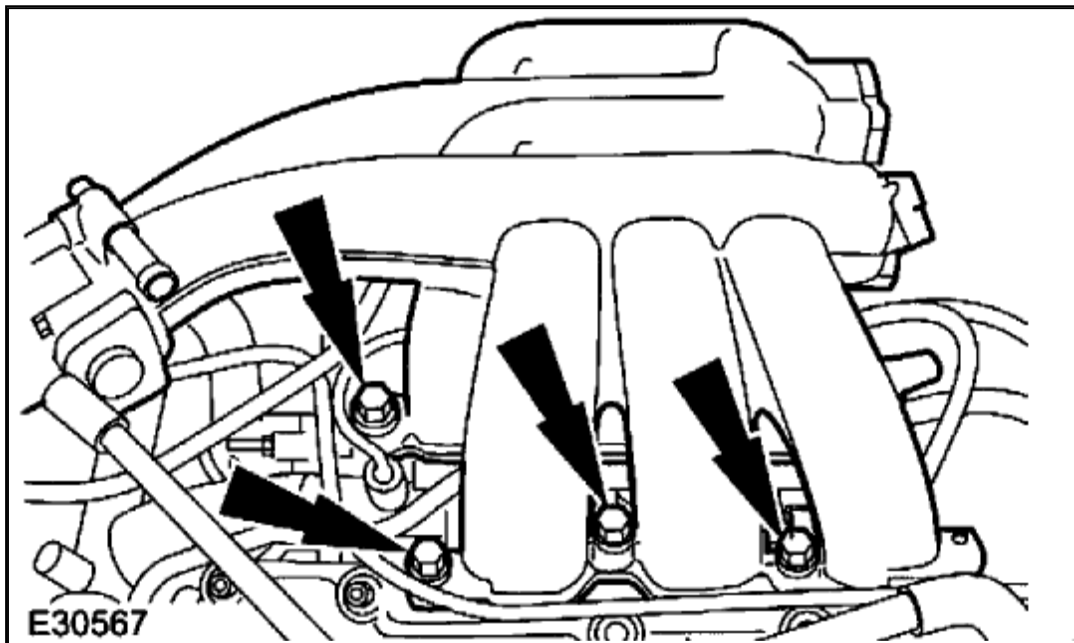
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18. Remove the fuel pressure regulator bracket retaining bolt.

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19. Remove the fuel pressure regulator bracket.

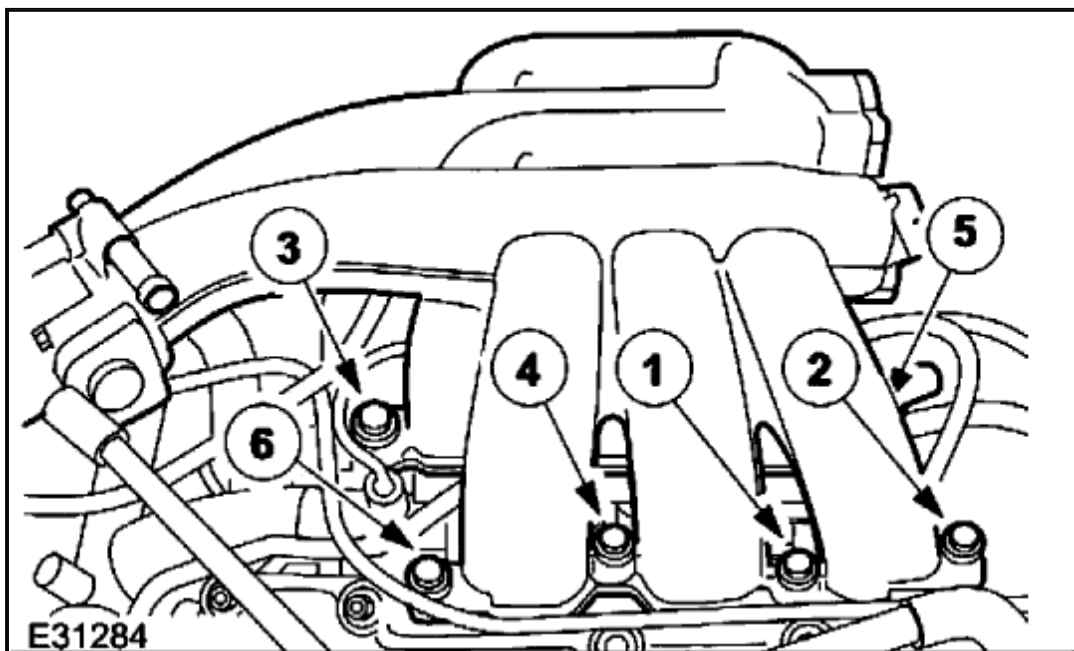


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20. Remove the intake manifold.

### Installation



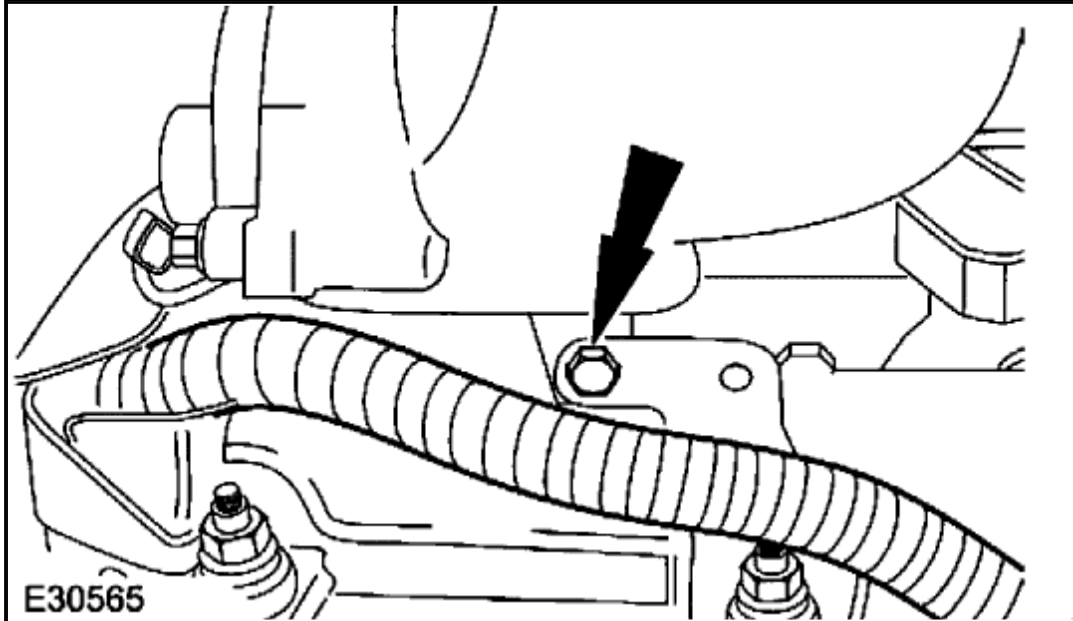
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1. **NOTE:** The intake manifold retaining bolts in position 1,2,3 and are longer than the retaining bolts in position 4,5 and 6.

To install, reverse the removal procedure.

- Install new [intake manifold gaskets](#).
- Tighten to **10 Nm** .

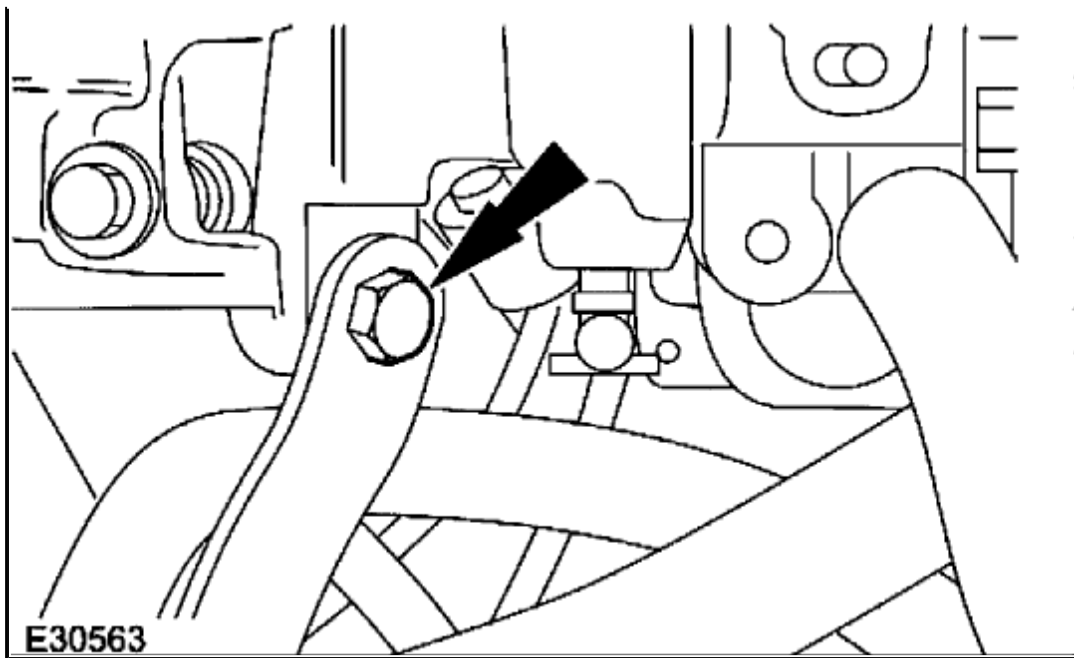


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2. Tighten to **10 Nm** .



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3. Install the intake manifold front retaining bracket.

- Tighten to **10 Nm** .