

**Evan Groenke**

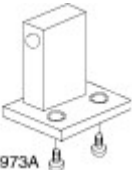


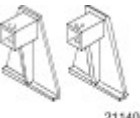

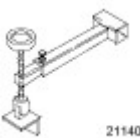
**From:** Daniel Lelovic [dlelovic@rogers.com]  
**Sent:** May 8, 2005 12:08 PM  
**To:** 'Evan Groenke'  
**Subject:** 2.5L Engine Installation

SECTION 303-01B: Engine — 2.5L  
 INSTALLATION

2000 Contour/Mystique Workshop Manual  
 Procedure revision date: 09/14/2001

**Engine — Vehicles with Manual Transaxle**

Special Tool(s)

 <p>ST1973A</p>	<p>Gauge, Powertrain Alignment                      502-003 (T94P-6000-AH)</p>
 <p>T70P6000</p>	<p>Lifting Bracket, Engine                      303-050 (T70P-6000)</p>
 <p>21140</p>	<p>Support Bar, Engine                      303-290A</p>
 <p>2114001</p>	<p>Adapter for 303-290A                      303-290-01</p>
 <p>2114002</p>	<p>Adapter for 303-290A                      303-290-02</p>
 <p>2114003</p>	<p>Adapter for 303-290A                      303-290A-03A</p>

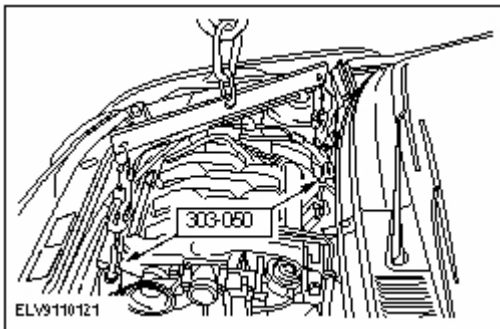
Material

<p>Transmission fluid</p>	<p>ESD-M2C186-A</p>
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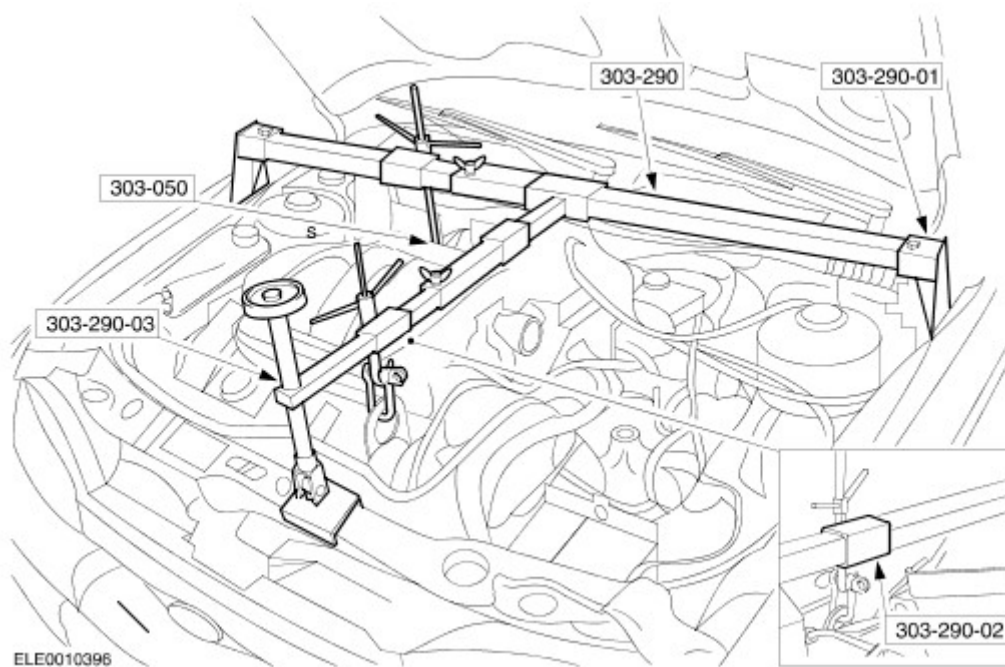
## Installation

1. **NOTE:** The locations of the engine mountings and the engine support insulators are described looking from the transaxle to the engine.

Use the floor crane to bring the engine into installation position and lower it.

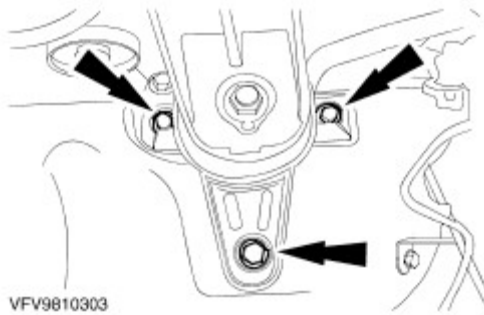


2. Position the jack under the oil pan and unhook the engine.



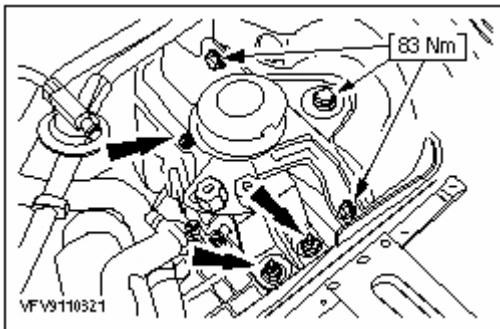
3. Install the special tool.
4. **NOTE:** Do not tighten the bolts.

Install the engine front support insulator.

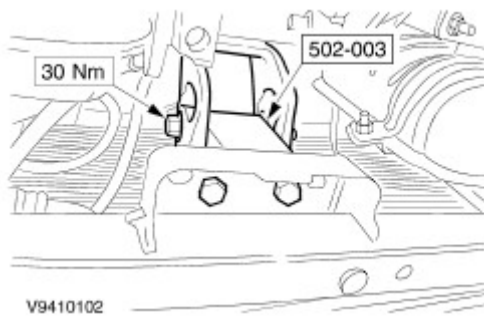


5. **NOTE:** Do not tighten the nuts from the transaxle.

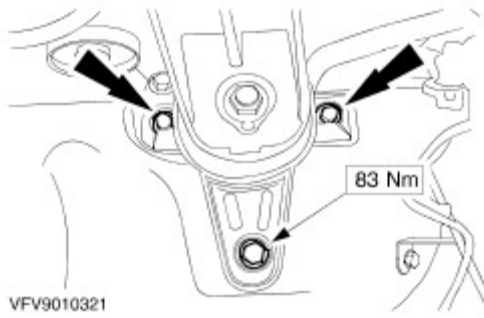
Install the engine rear support insulator.



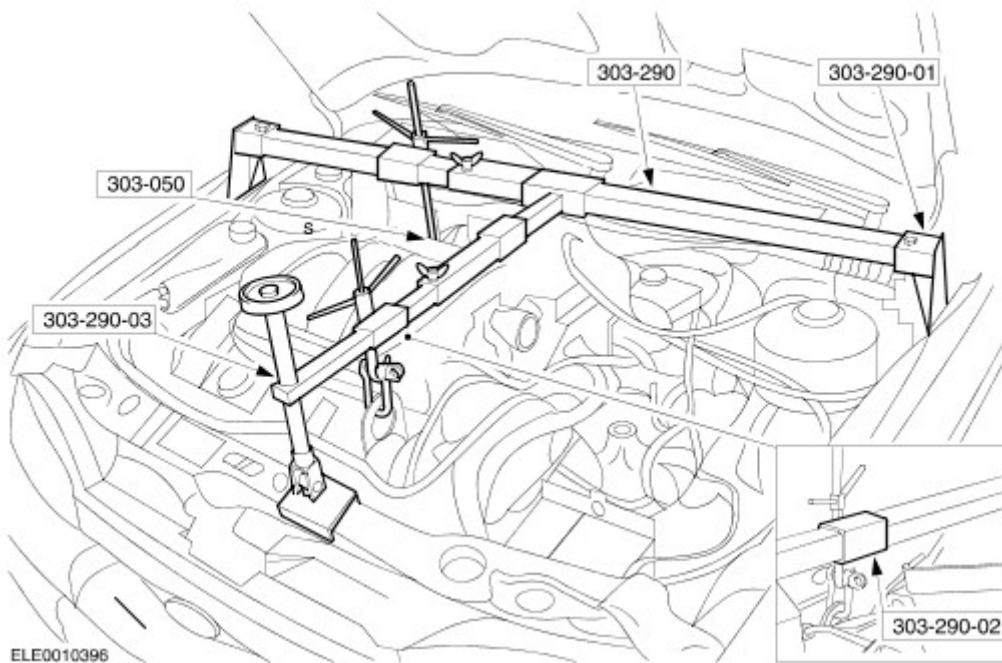
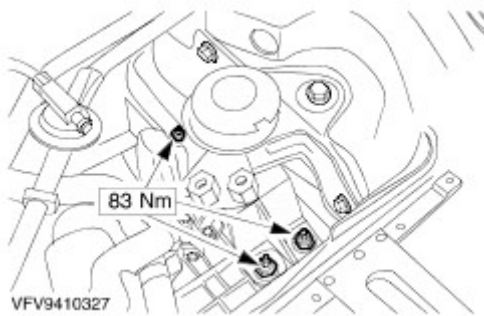
6. Raise and support the vehicle. For additional information, refer to Section [100-02](#).
7. Install the special tool to the subframe.
  - Install the center bolt into the special tool.



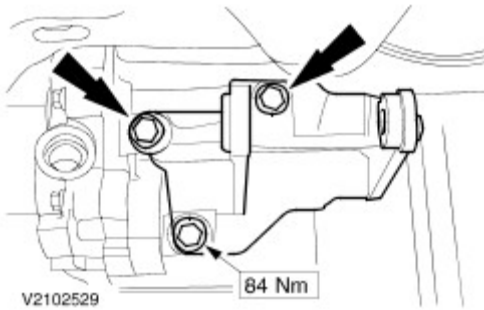
8. Lower the vehicle.
9. Tighten the engine front support insulator bolts.



10. Tighten the engine rear support insulator bolts.



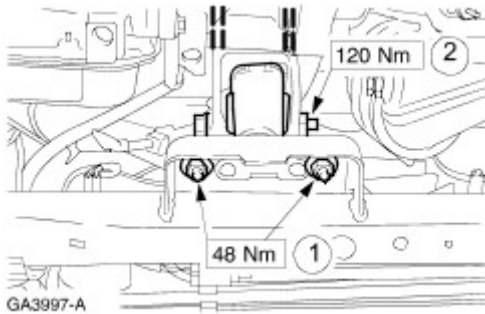
11. Remove the special tool.
12. Raise and support the vehicle. For additional information, refer to Section [100-02](#).
13. Install the right-hand engine support insulator bracket.



14. **NOTE:** The installed position of the engine support insulator must be to the center of the bracket, otherwise re-alignment of the engine and transaxle assembly will be required.

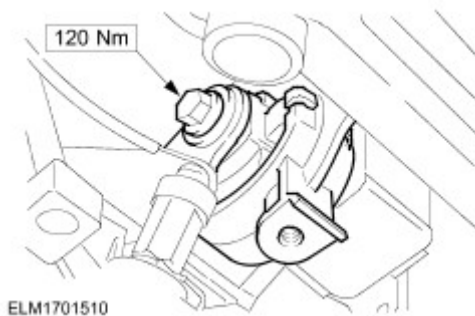
Install the left-hand engine support insulator.

- Remove the special tool.
2. Nuts
  3. Center bolt

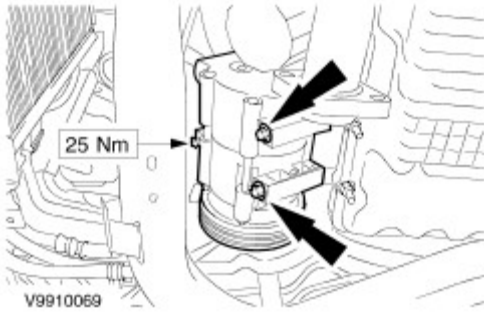


15. **NOTE:** The installed position of the engine support insulator must be to the center of the bracket, otherwise re-alignment of the engine and transaxle assembly will be required.

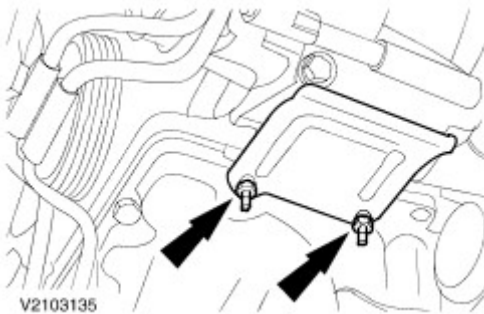
Install the right-hand engine support insulator center bolt.



16. Install the compressor.
- Connect the compressor electrical connector.

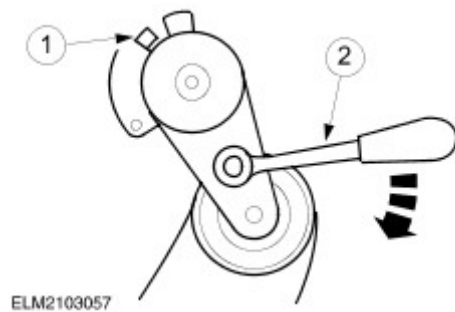


17. Install the compressor heat shield.

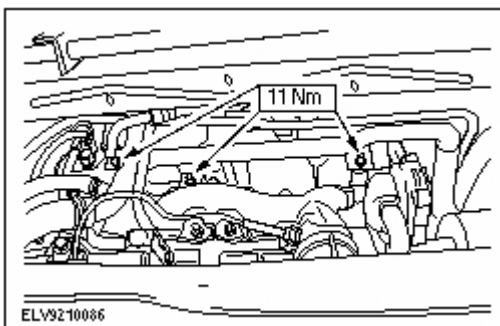


18. Install the accessory drive belt.

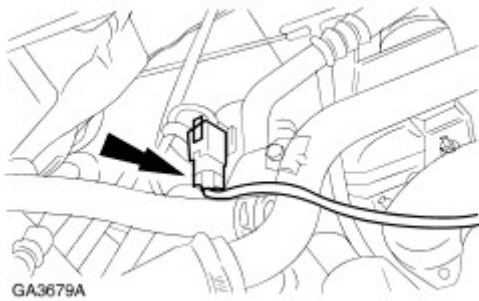
1. Left-hand moving stop
2. Square ratchet wrench 3/8 inch.
  - Using the square ratchet wrench press the belt tensioner to the left-hand moving stop and install the drive belt.



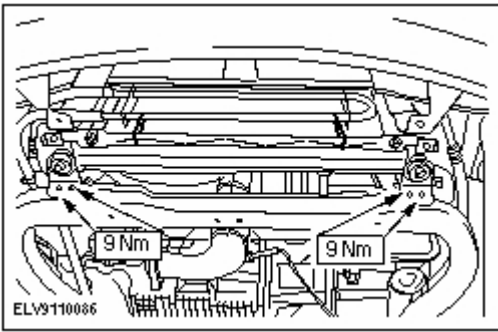
19. Install the coolant pipe.



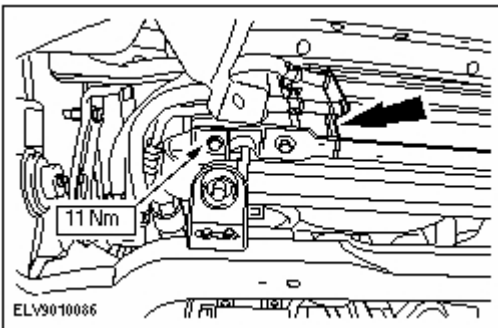
20. Connect the heated oxygen sensor (HO2S) electrical connector.




21. Install the fan.  
22. Install the radiator.




23. Install the condenser core to the radiator.
- Cut the cable tie.
  - One bolt on each side.



24.  **CAUTION:** To prevent damage to the halfshaft joints and boots, do not bend the inner halfshaft joints by more than 18 degrees, the outer one by not more than 45 degrees.


Install the left-hand halfshaft to the transaxle.



25.  **CAUTION:** To prevent damage to the halfshaft joints and boots, do not bend the inner halfshaft joints by more than 18 degrees, the outer one by not more than 45 degrees.

Install the right-hand halfshaft to the transaxle.



26.  **CAUTION:** Do not damage the boot or the wheel speed sensor ring.

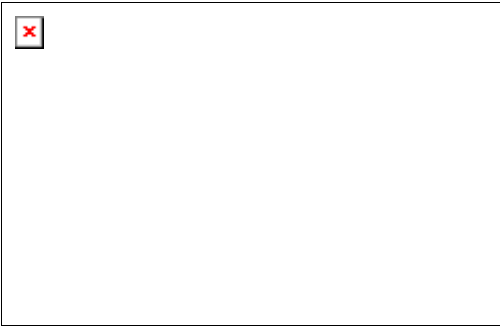
Install the right-hand lower suspension arm (left-hand side shown).

- Install the lower suspension arm ball joint to the spindle carrier.



27. Install the right-hand splash shields (shown with wheel removed).





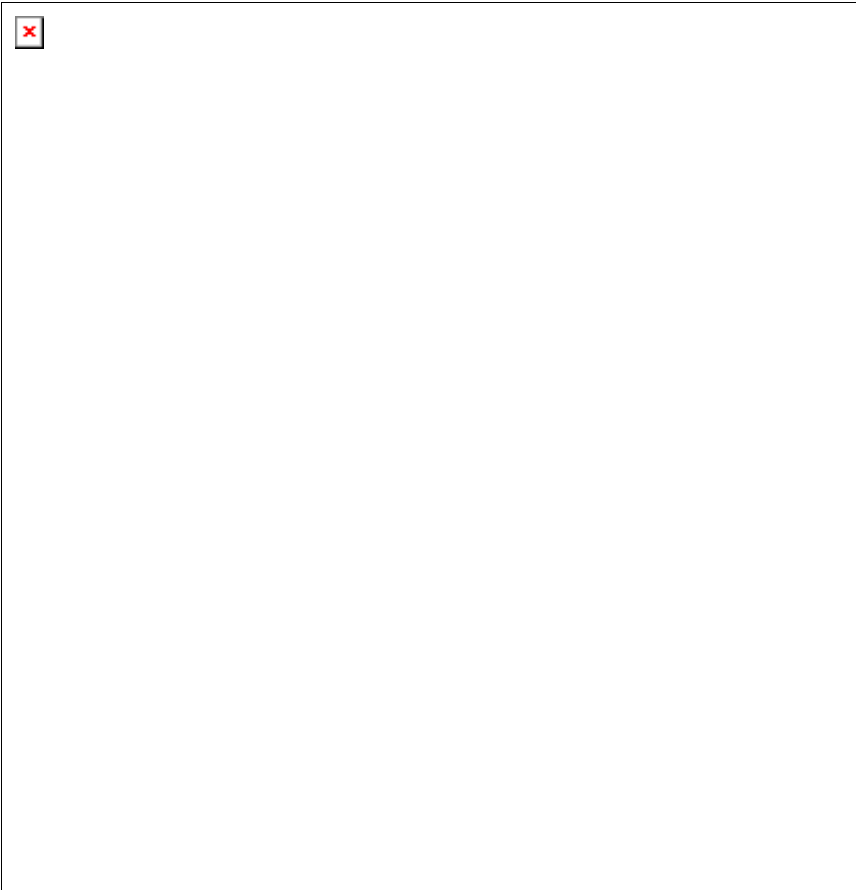
28. **NOTE:** Use a new gasket.

Install the dual converter Y-pipe.

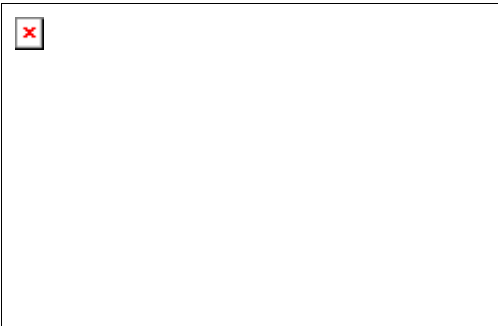


29. Connect the shifter cables.

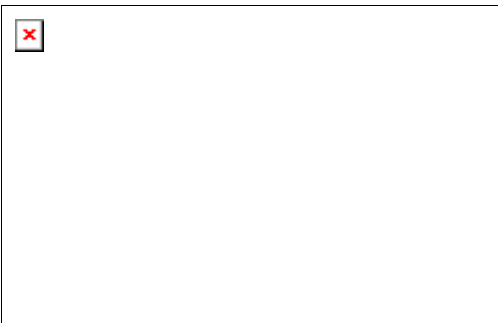
1. Install the shifter bracket.
2. Install the nuts.
3. Connect the shifter cables to the shifter lever.



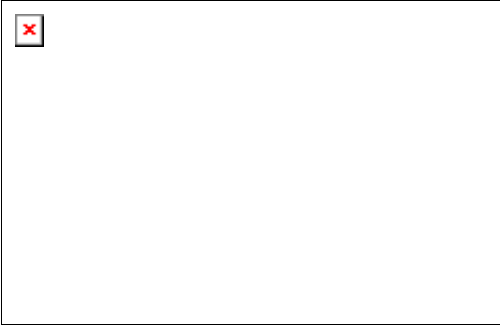
30. Connect the radiator lower hose to the radiator.



31. Install the radiator splash shield.  
• Install the coolant drain plug.

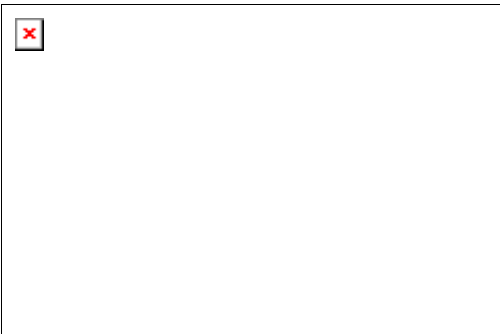


32. Install the lower engine cover (if equipped).

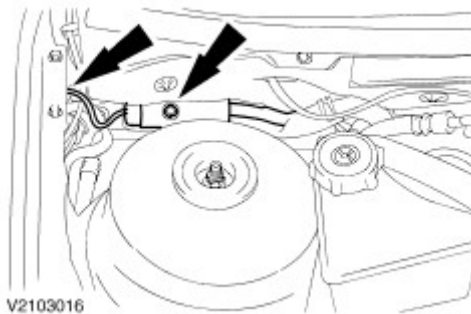


33. Lower the vehicle.

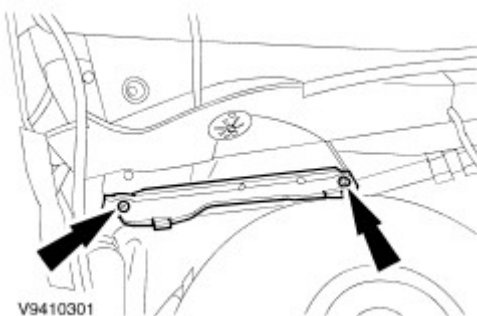
34. Connect the ground cable to the transaxle and install the electrical connector.



35. Connect the powertrain control module (PCM) and the ground cable.



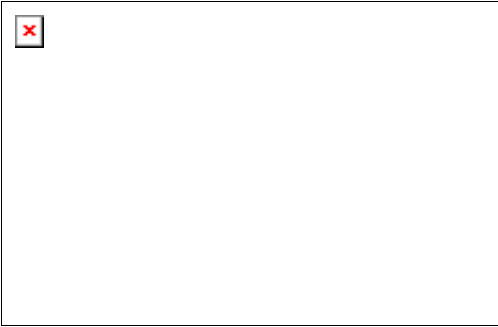
36. Install the PCM cover plate.
- Use 4 mm rivets.



37.  **CAUTION: Do not drop hydraulic oil onto the drive belt.**

Connect the power steering lines.

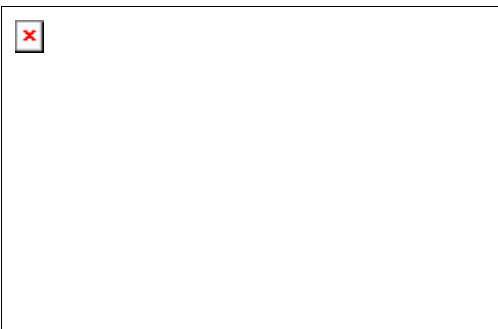
1. Pressure line bracket and ground cable.
2. Return line.
3. Power steering pressure (PSP) switch.



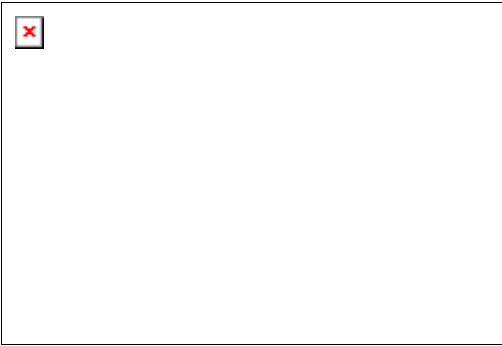
38. Install the power steering fluid reservoir.



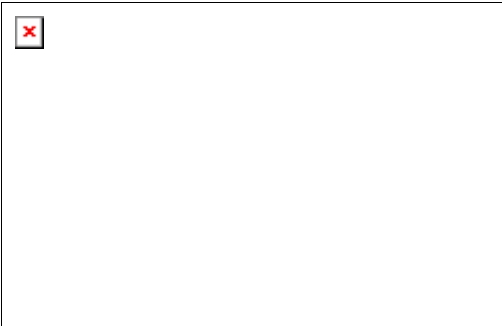
39. Connect the EVAP and heater control vacuum hoses.



40. Install the fan to the radiator.
- Install the fan wiring harness.



41. Install the fan to the radiator (continued).



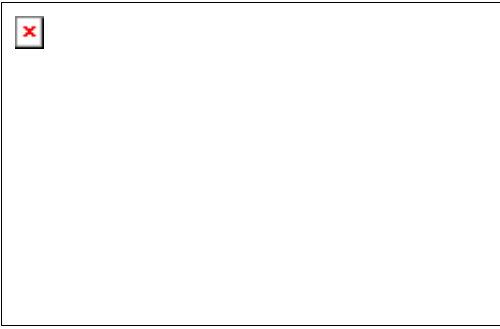
42. Install the fan ground cable to the body.



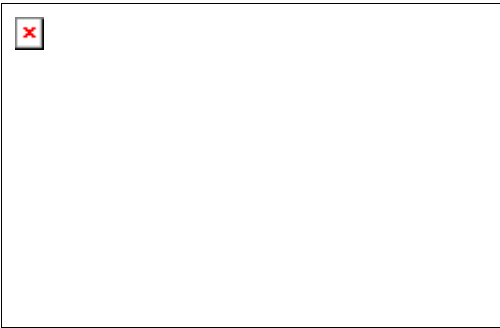
43. Connect the two fan motor electrical connectors.  
• Install the connectors and the wiring harness.



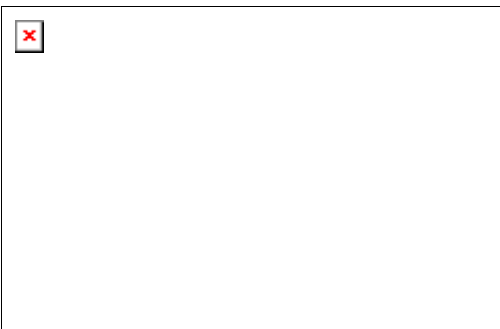
44. Connect the suction accumulator electrical connector.



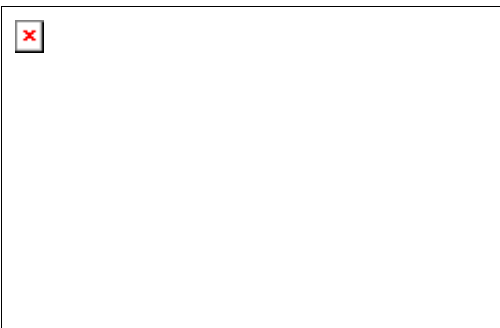
45. Tighten the right-hand suspension strut nut.



46. Tighten the right-hand suspension strut nut (continued).

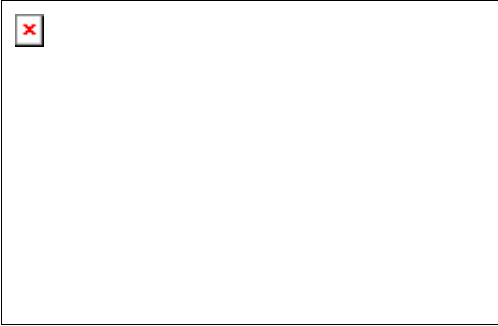


47. Install the coolant hose.



48. Install the coolant hoses.
- To the cylinder block
  - To the heater
  - Connect the heater coolant hose.

- To the thermostat housing



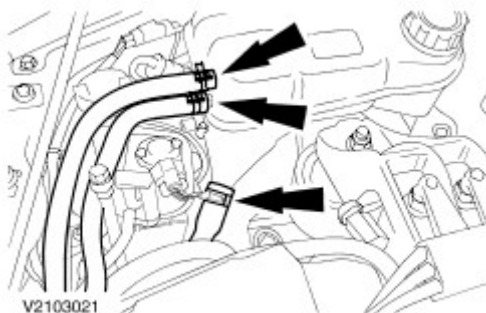
49. Install the radiator upper coolant hose to the radiator.



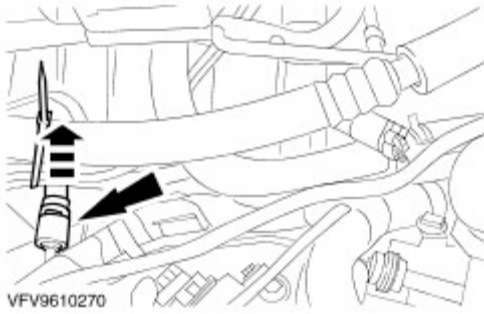
50. Install the coolant expansion tank.
- Connect the coolant level indicator electrical connector.



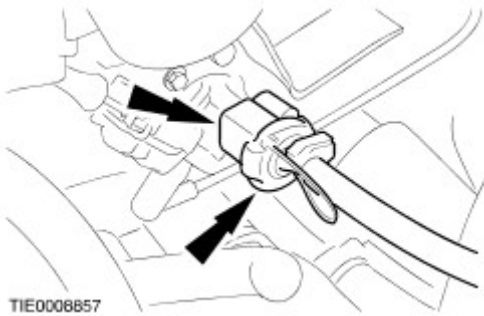
51. Install the coolant expansion tank hoses.



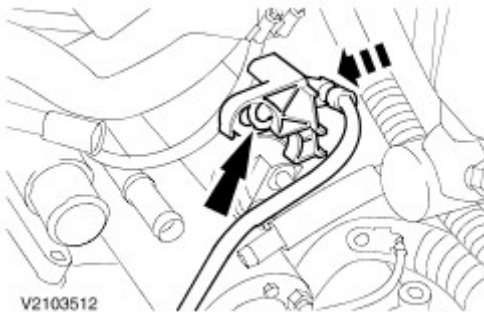
52. Install the clutch slave cylinder hydraulic line.



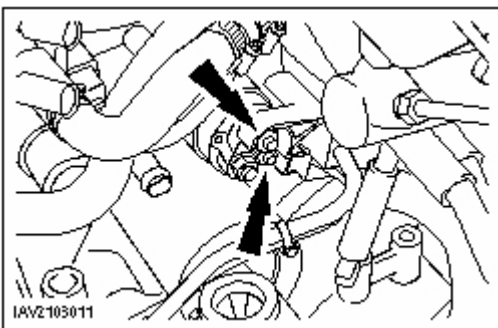
53. Connect the fuel pipe and install the clip.



54. Connect the starter motor positive cable.
- Push the positive cable into the housing and close it.

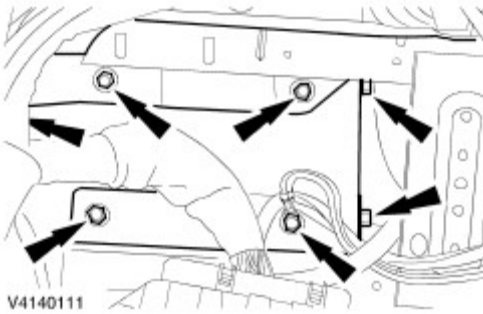


55. Install the starter motor wiring.

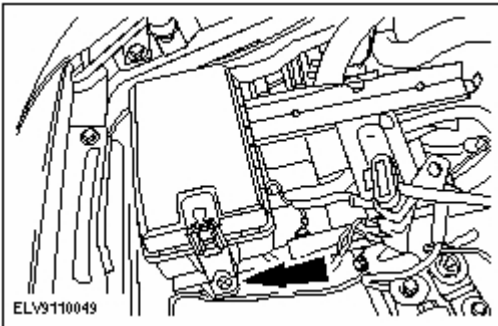


56. Install the battery bracket.

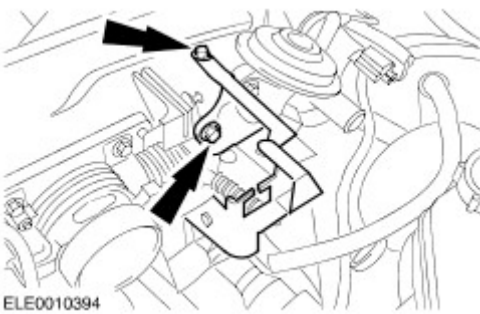




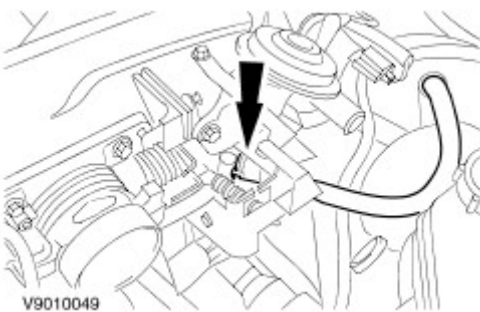
57. Install the central junction box (CJB).



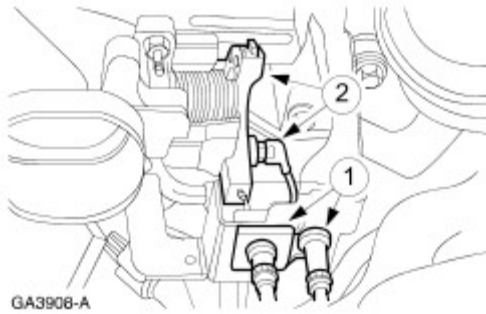
58. Install the cable bracket.



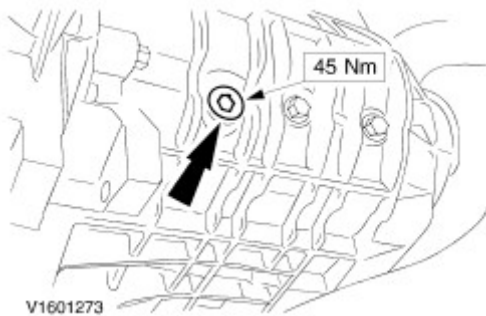
59. Connect the evaporative emission (EVAP) hose.



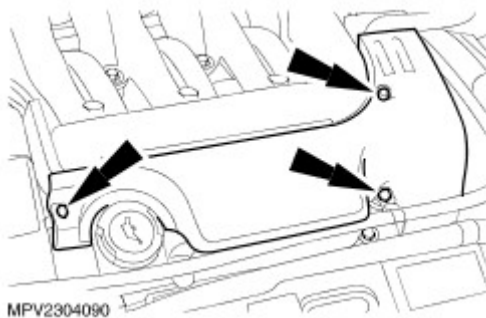
60. Connect the accelerator and speed control cables.  
1. Insert the cable into the bracket.  
2. Connect the cables.



61. Install the air cleaner (ACL). For additional information, refer to Section [303-12B](#).
62. Fill up the transaxle with Transmission fluid. For additional information, refer to Section [308-00](#).



63. Install the water pump pulley cover.
  - Install the coolant hose.



64. Fill and bleed the power steering system. For additional information, refer to Section [211-02](#).
65. Fill the engine with oil.
66. Install the hood.
67. Fill the engine cooling system. For additional information, refer to Section [303-03](#).
68. **NOTE:** When the battery has been disconnected and reconnected, some abnormal drive symptoms may occur while the vehicle relearns its adaptive strategy. The vehicle may need to be driven 16 km (10 miles) or more to relearn the strategy.

Install the battery. For additional information, refer to Section [414-01](#).

69. Check the routing of the vacuum hoses and wiring and secure them with cable ties.
  70. Check the fluid level after the road test and correct as necessary.
  71. Check the engine and cooling system for leaks (visual inspection).
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