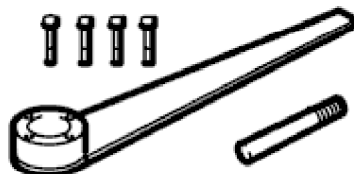


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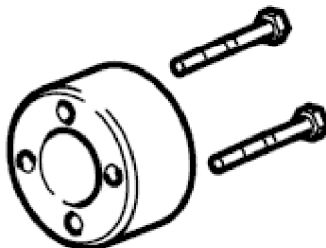
Engine Front Cover 12.65.01

Special Service tools



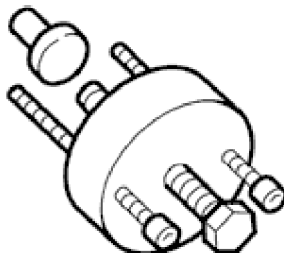
DWST038

Crankshaft locking, main tool
303-191



DWST075

Adapter
303-191-02



WST090

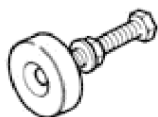
Crankshaft pulley/damper remover
303-588

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J.WST.082

Crankshaft front seal remover
303-541

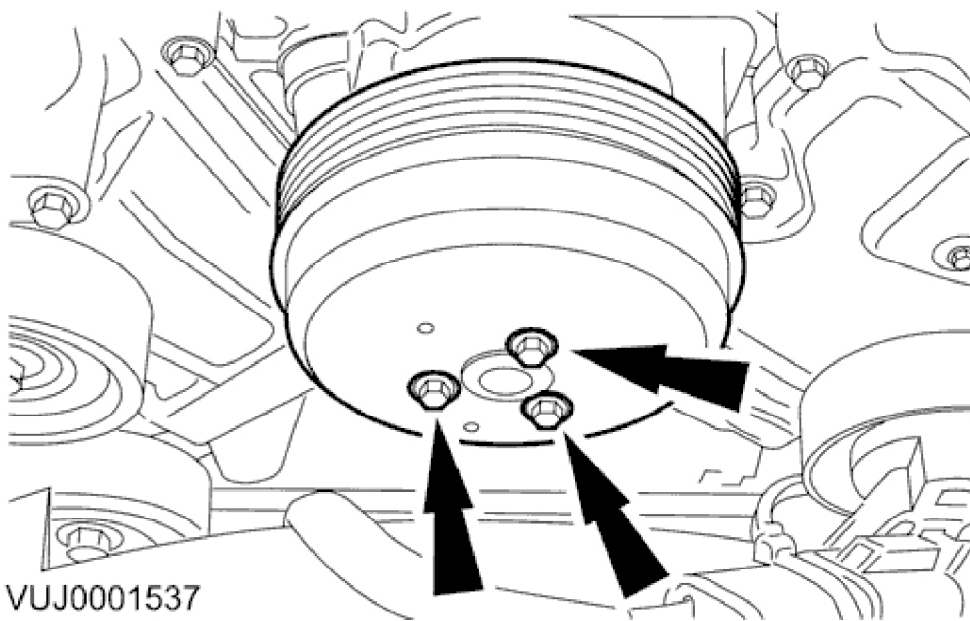


J.WST.083

Crankshaft front seal replacer
303-542

Removal

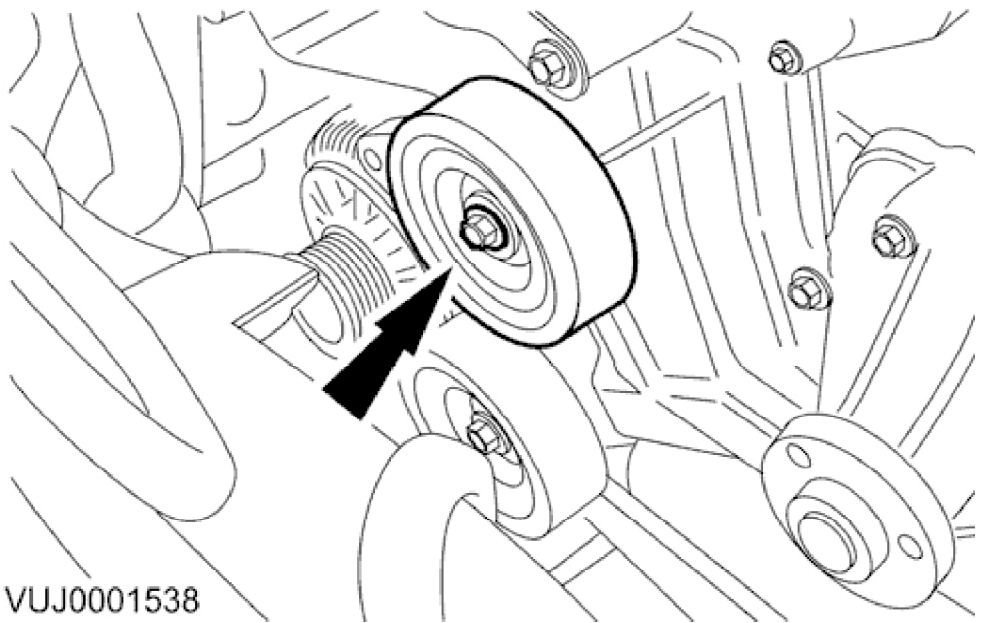
1. Remove the crankshaft pulley. For additional information, refer to <<Crankshaft Pulley>>
2. Remove the left-hand valve cover. For additional information, refer to <<Valve Cover—LH>>
3. Remove the right-hand valve cover. For additional information, refer to <<Valve Cover—RH>>



VUJ0001537

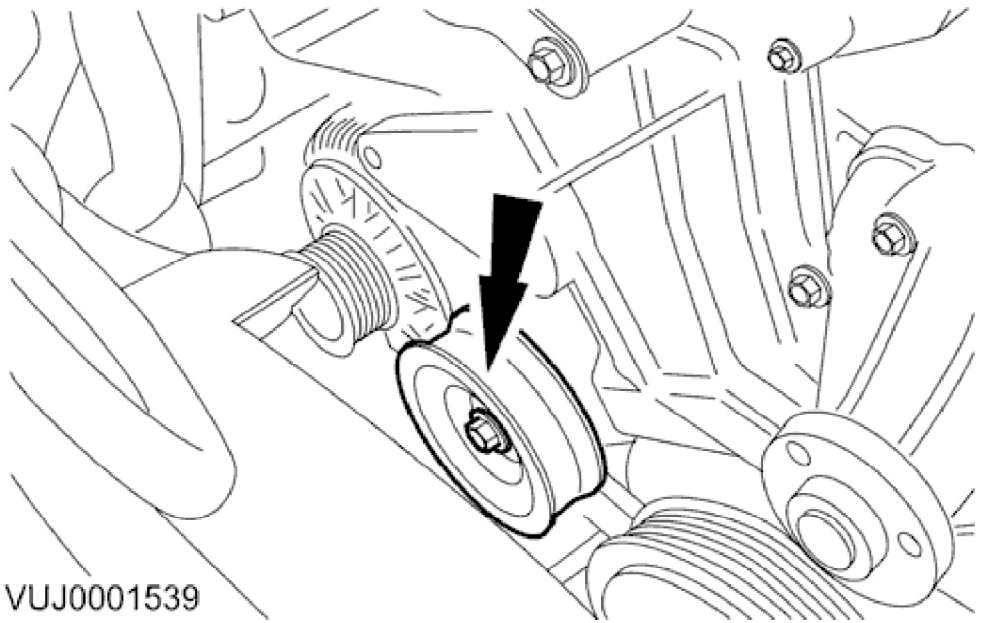
4. Remove the water pump pulley.

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VUJ0001538

5. Remove the upper idler pulley.

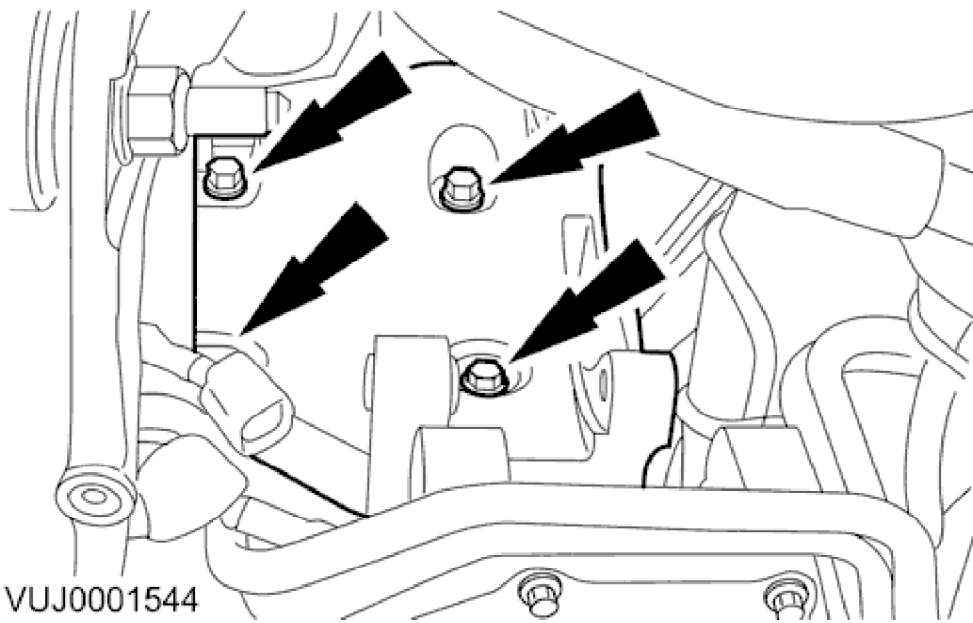


VUJ0001539

6. Remove the lower idler pulley.

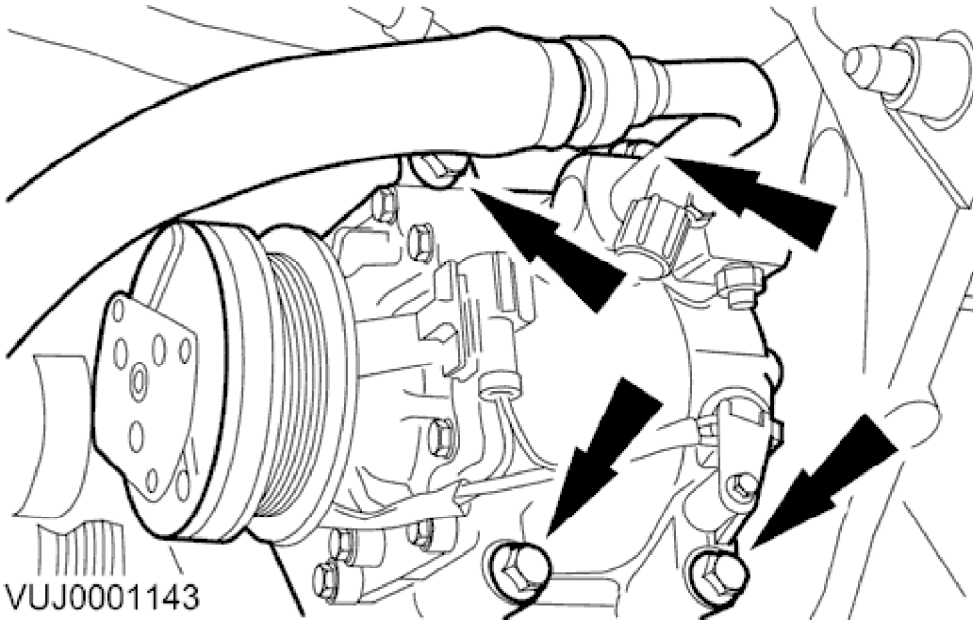
7. Remove the generator. For additional information, refer to <<414-02>>

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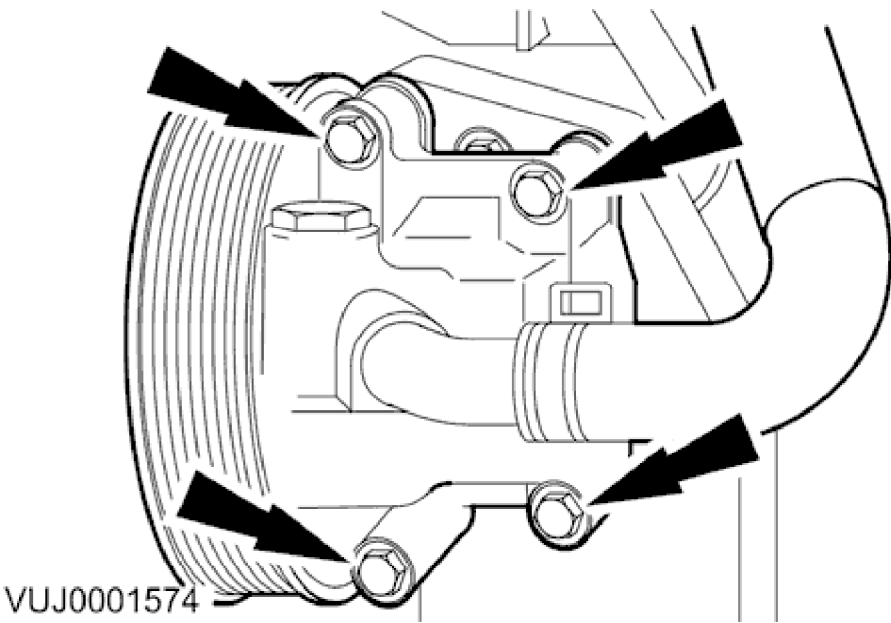
VUJ0001544

8. Remove the generator mounting bracket.

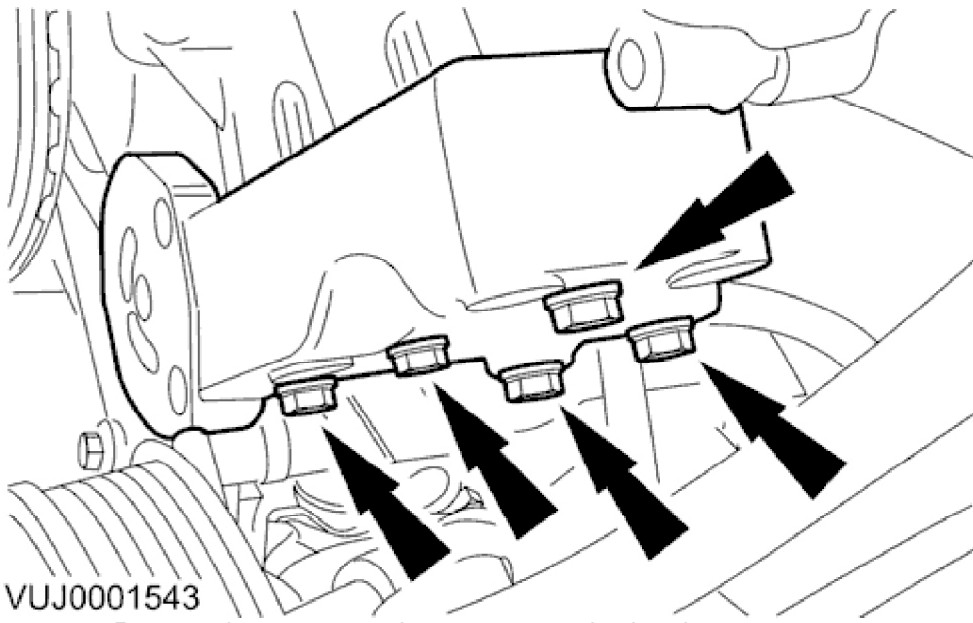


VUJ0001143

9. Detach the air conditioning compressor.

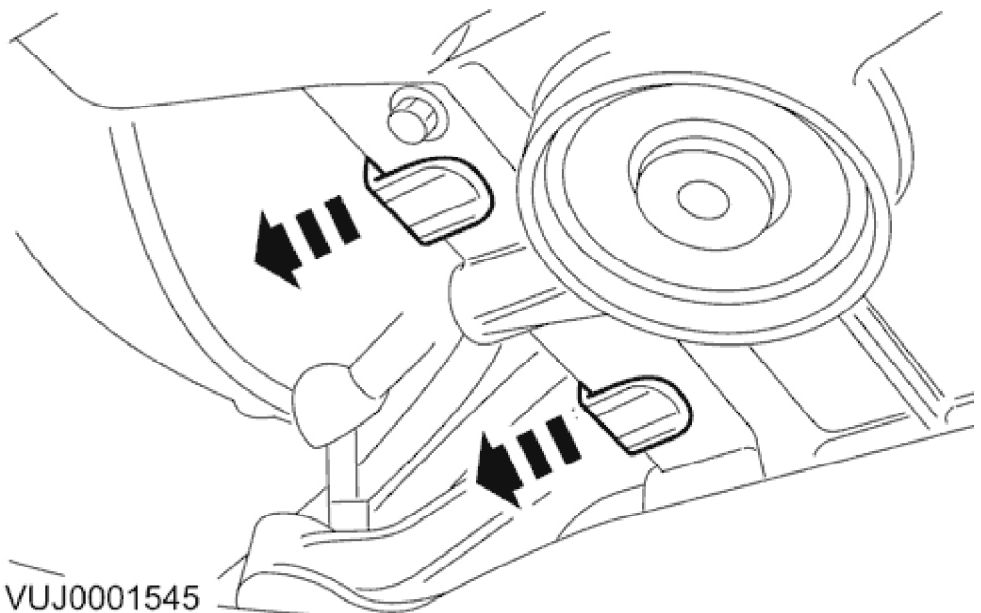


VUJ0001574
10. Detach the power steering pump.



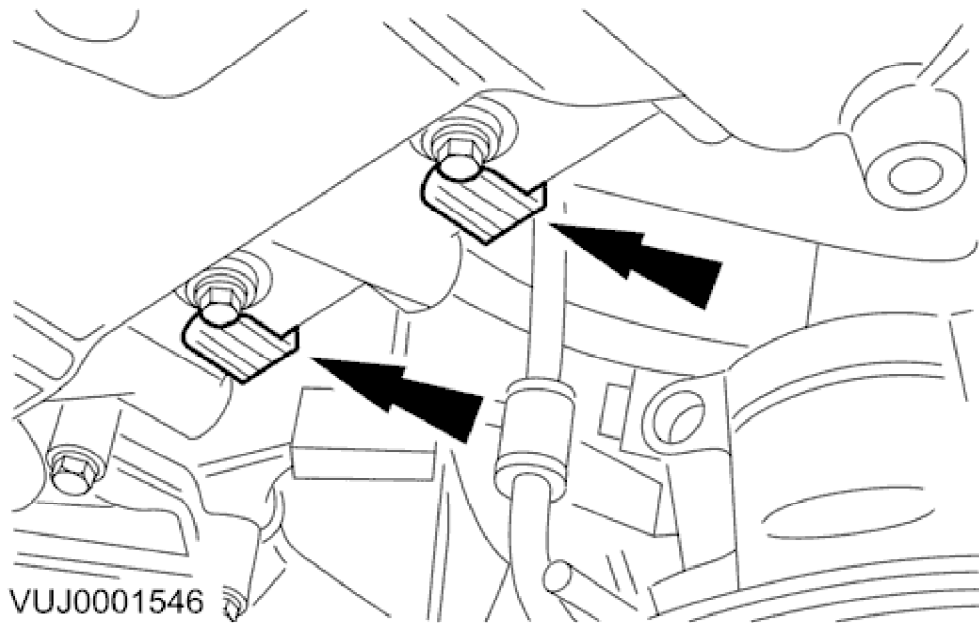
VUJ0001543
11. Remove the power steering pump mounting bracket.

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VUJ0001545

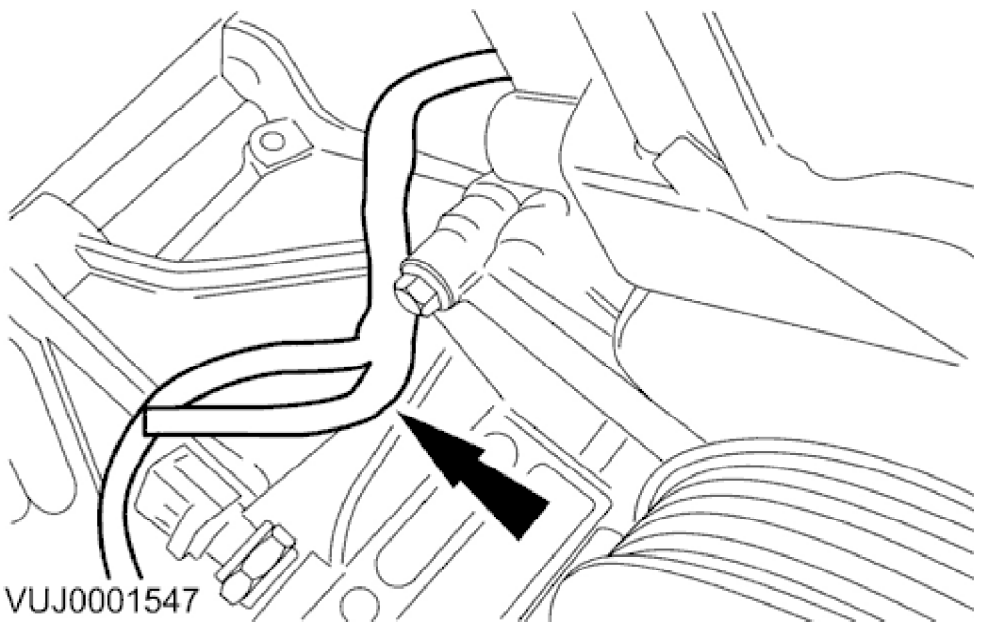
12. Detach the engine harness.



VUJ0001546

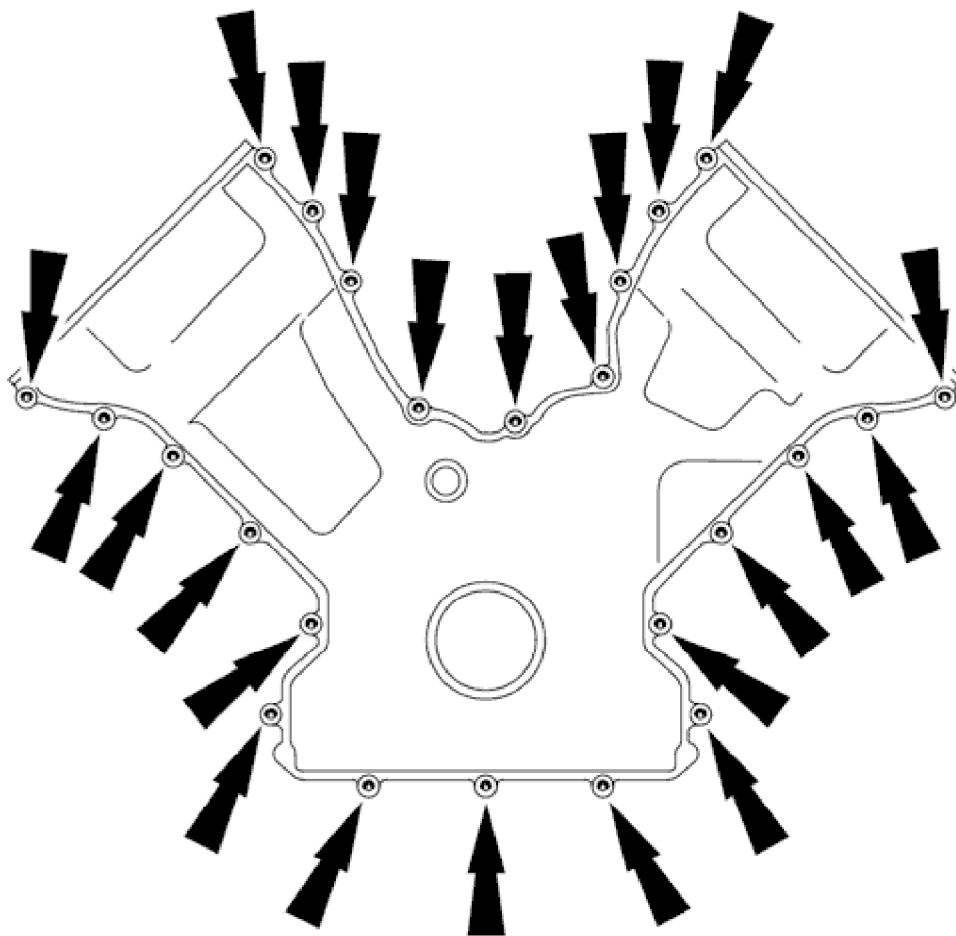
13. Detach the engine harness.

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VUJ0001547

14. Detach the engine harness.

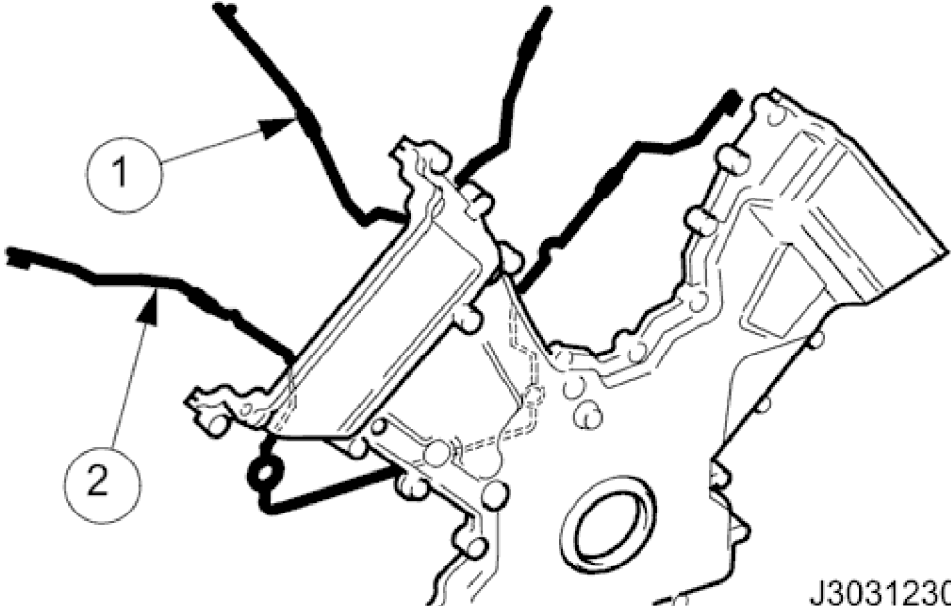


VUJ0002018

- 15. Remove the timing cover bolts
- 1. Remove the timing cover.

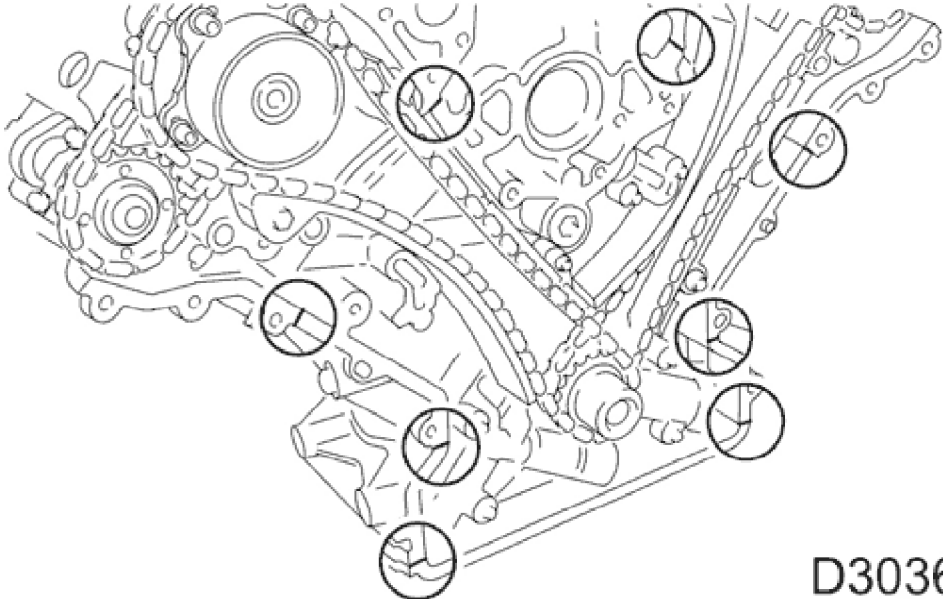
Installation

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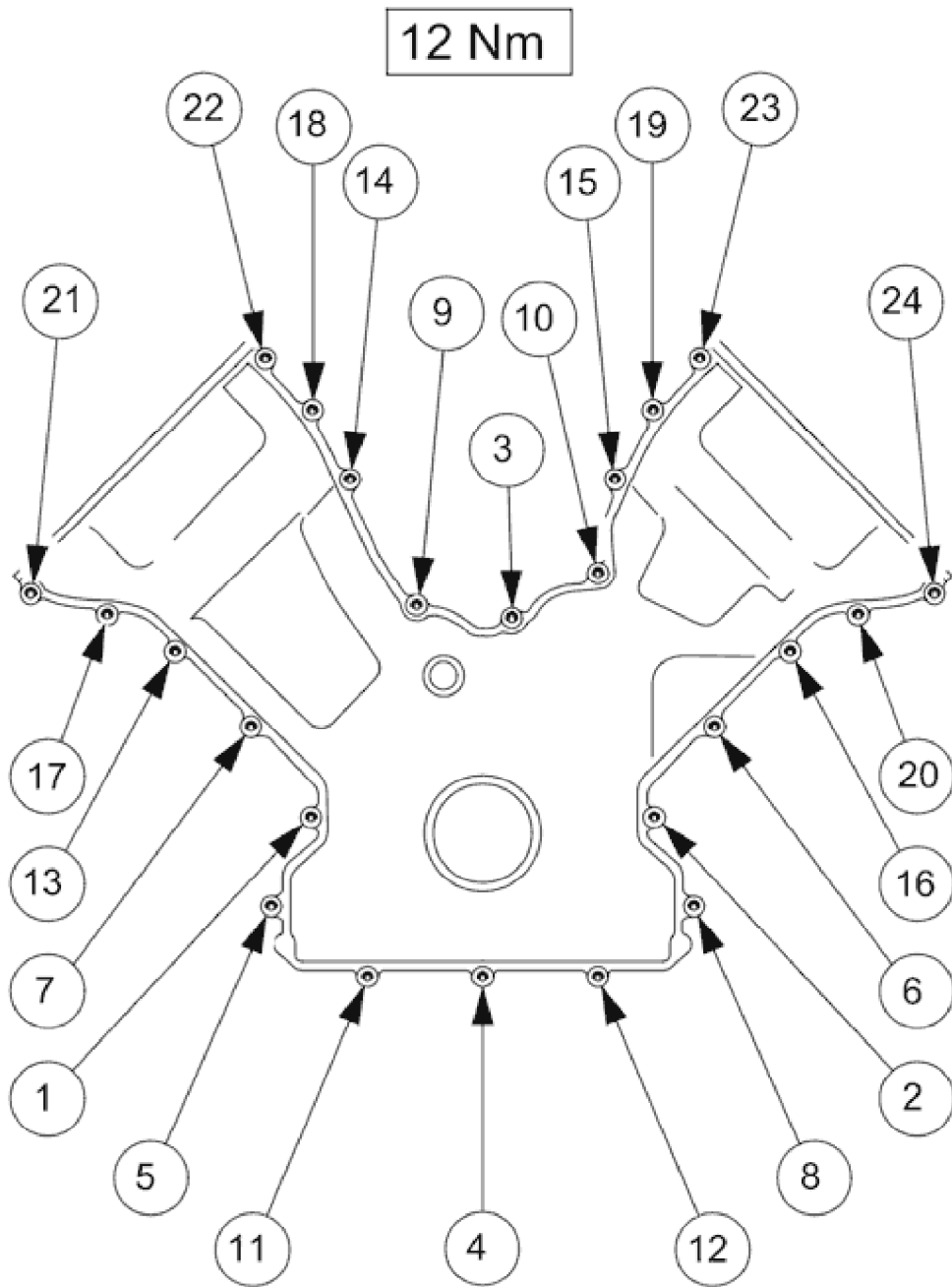
J3031230

- 1. Install new seals to the timing cover.
 - 1. Install the new seal to the inner groove on the face of the timing cover.
 - 2. Install the new seal to the outer groove on the face of the timing cover.
- Remove the transit ring and check that the oil seal is not damaged.
- 3. Install and fully locate, a new seal for the idler pulley.



D303669

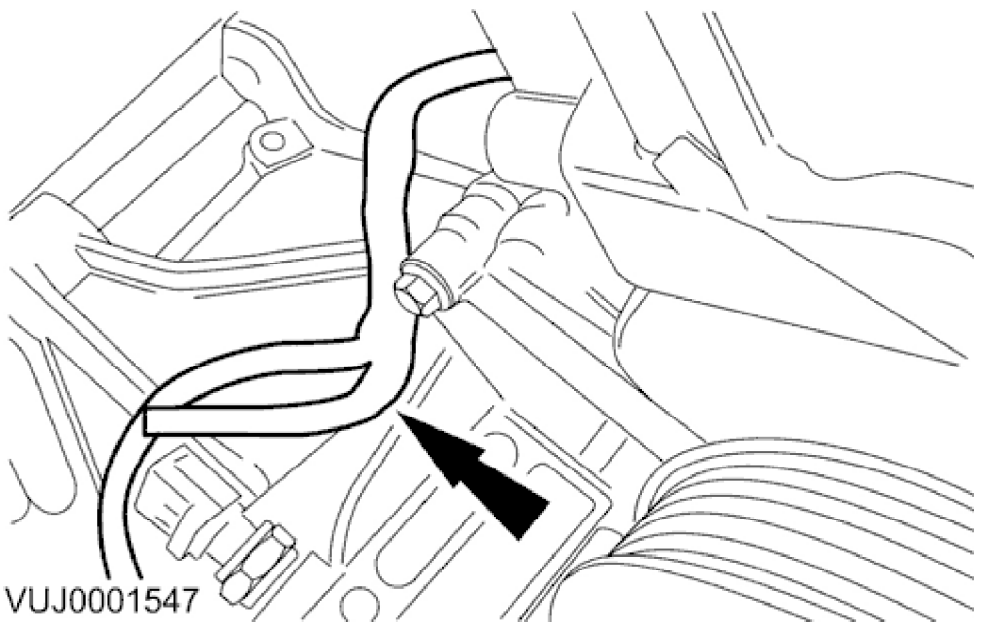
- 2. Apply sealant to the eight joints on the engine face.
 - Sealant beads to be 3mm diameter and 12mm long. Cut the nozzle of the sealant tube to produce a 3 mm (0.12 in) bead. (Install and tighten the securing bolts within twenty minutes of sealant application).



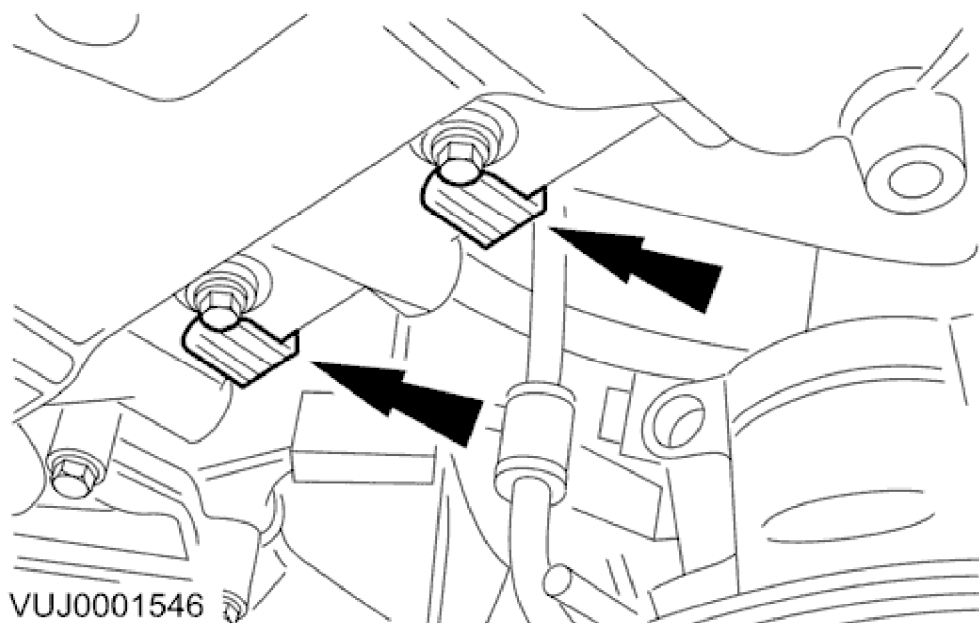
VUJ0002003

3. Install the timing cover.

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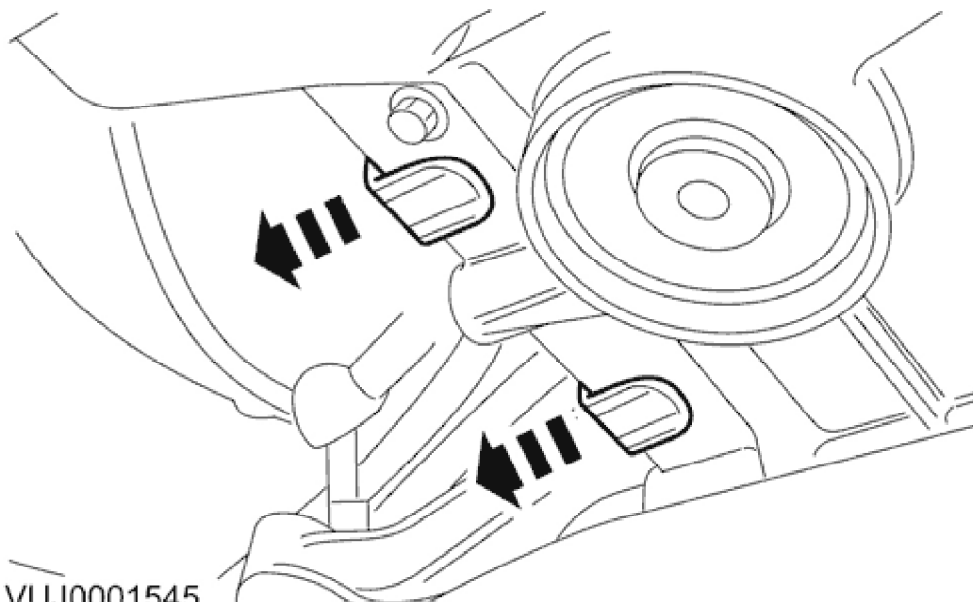


4. Attach the engine harness.



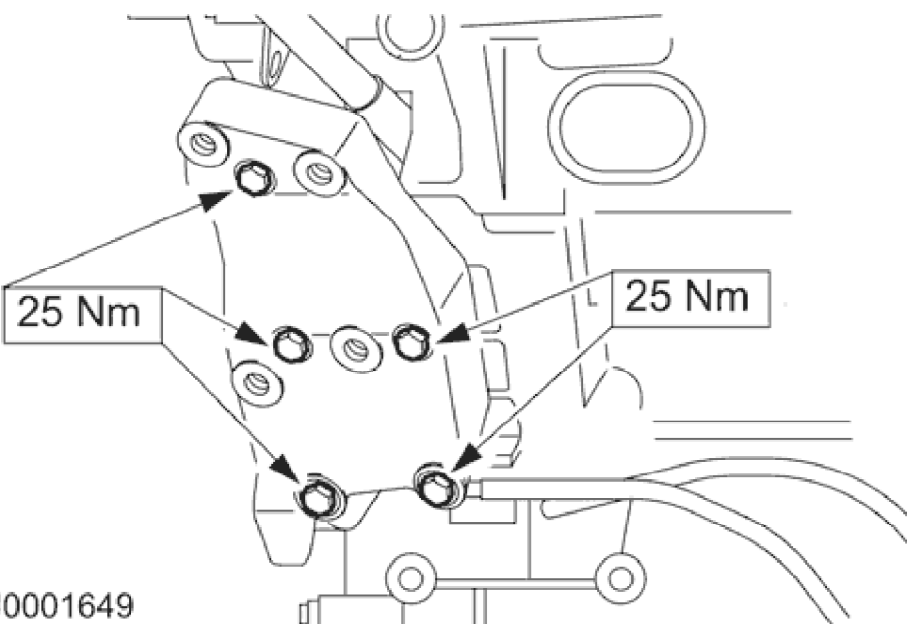
5. Attach the engine harness.

2001 S-TYPE - Engine - 4.0L - 303-01B



VUJ0001545

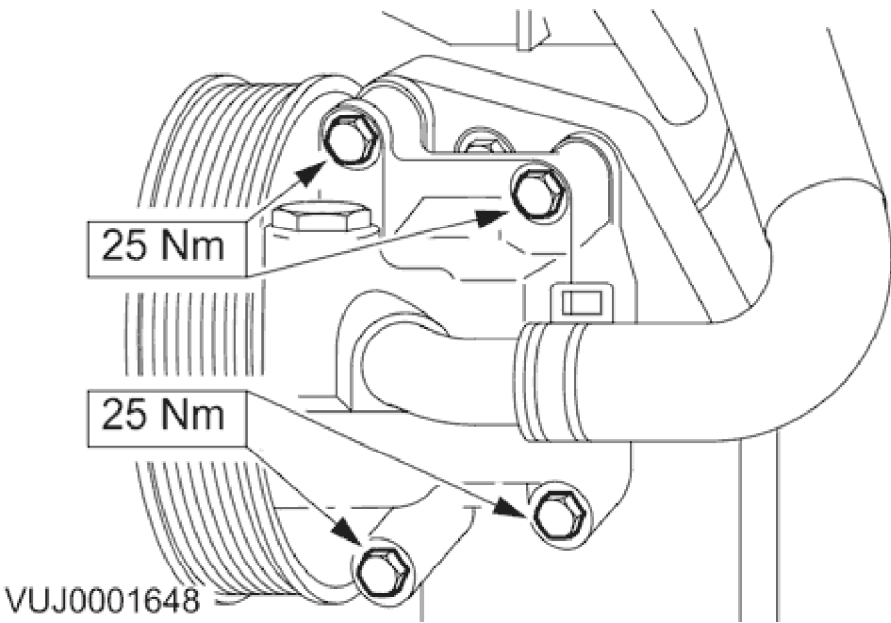
6. Attach the engine harness.



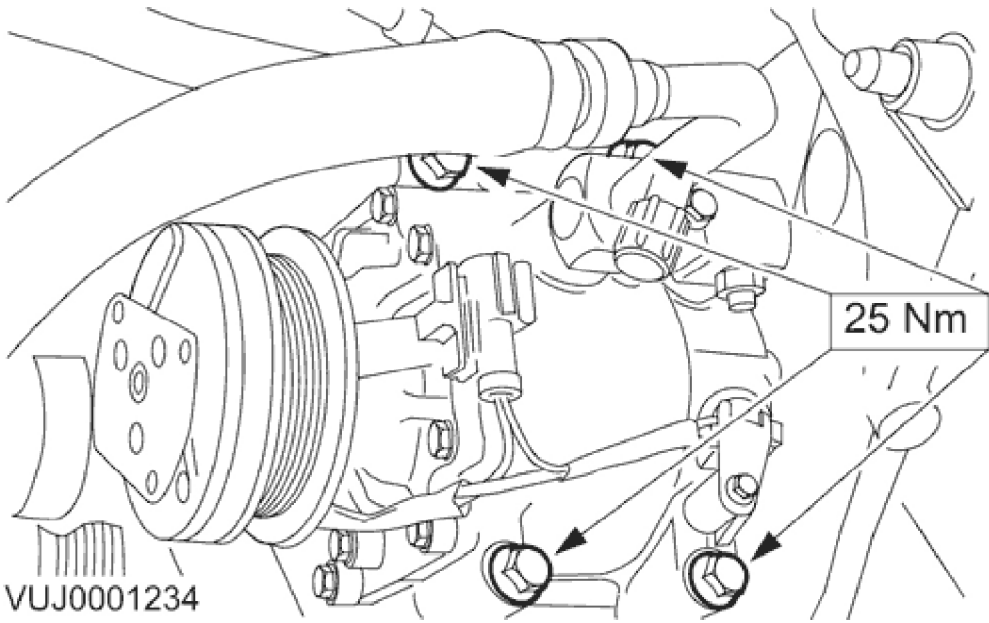
VUJ0001649

7. Install the power steering pump mounting bracket.

2001 S-TYPE - Engine - 4.0L - 303-01B

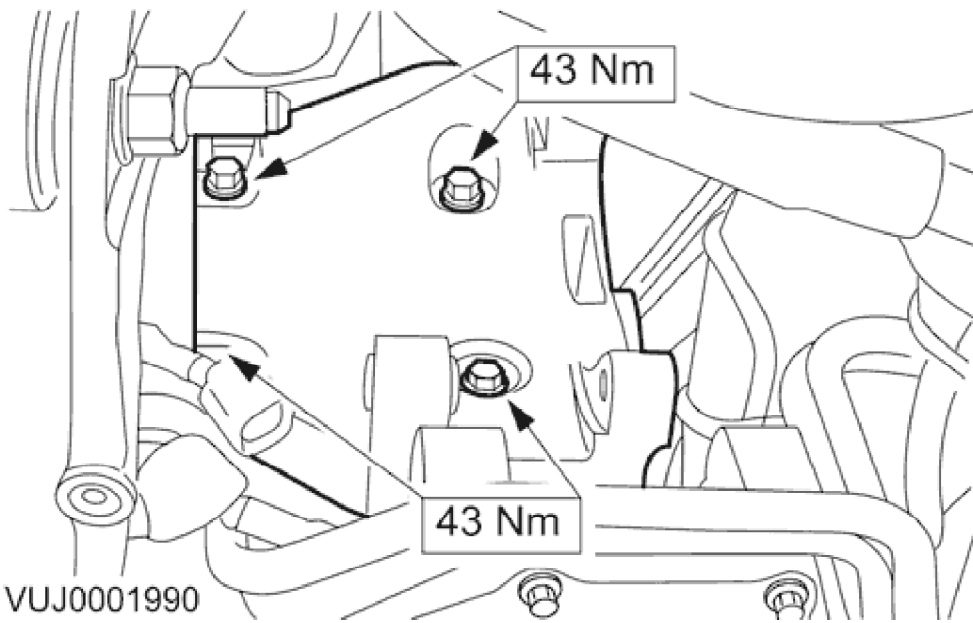


8. Attach the power steering pump.



9. Attach the air conditioning compressor.

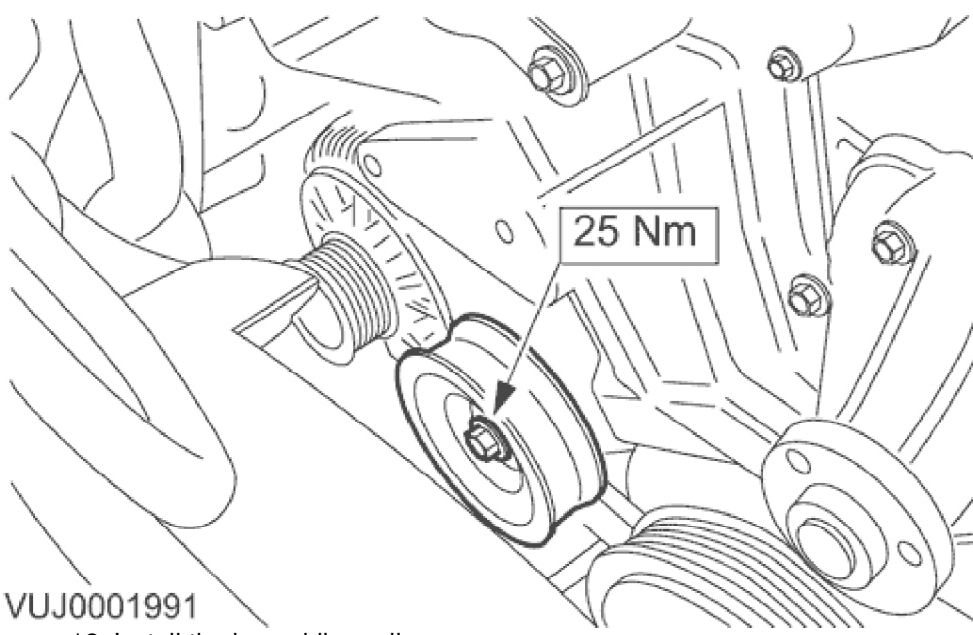
2001 S-TYPE - Engine - 4.0L - 303-01B



VUJ0001990

10. Install the generator mounting bracket.

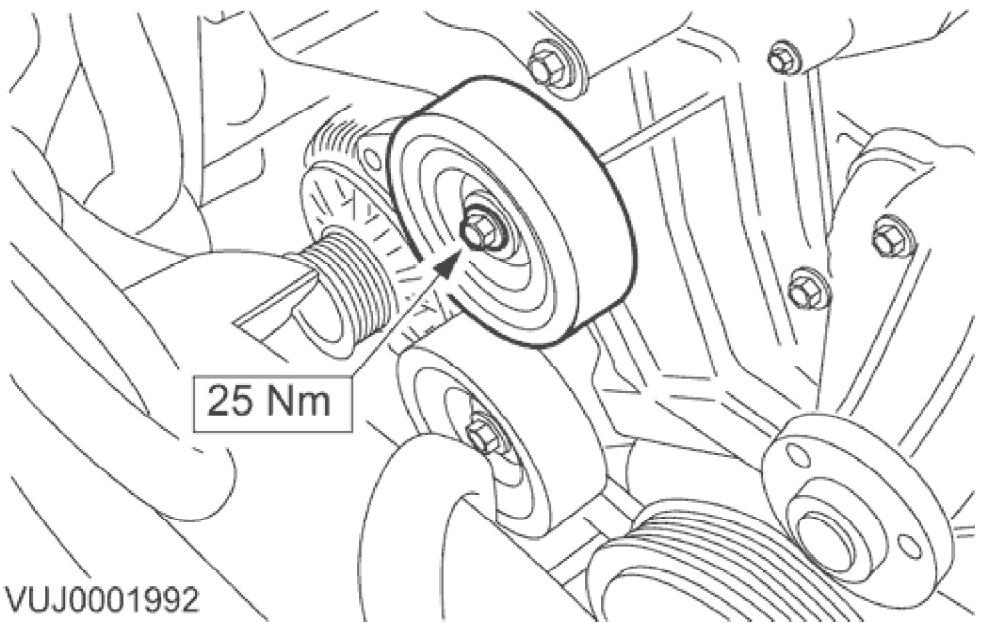
11. Install the generator. For additional information, refer to <<414-02>>



VUJ0001991

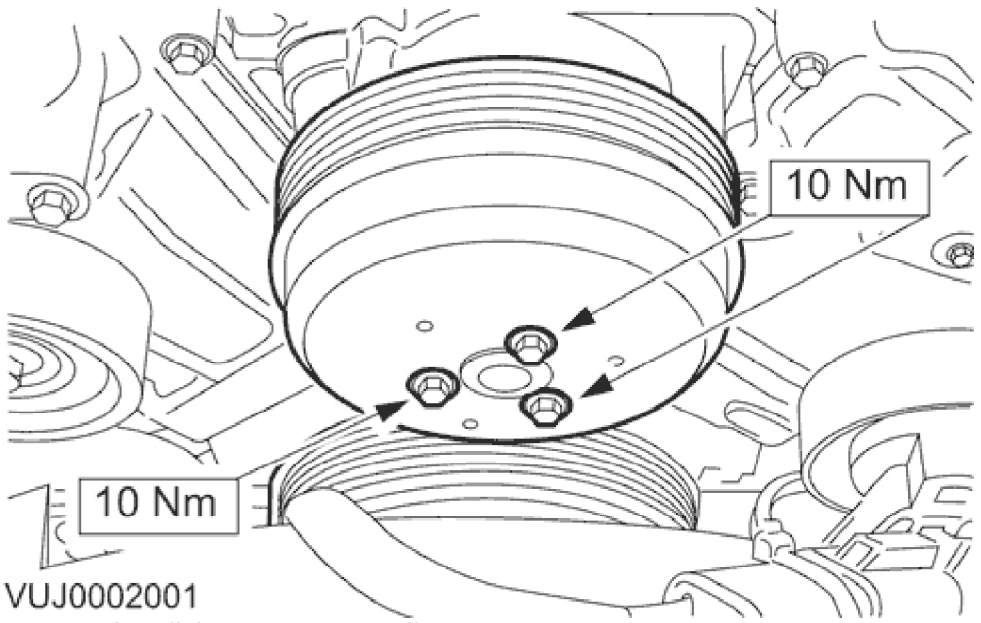
12. Install the lower idler pulley.

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VUJ0001992

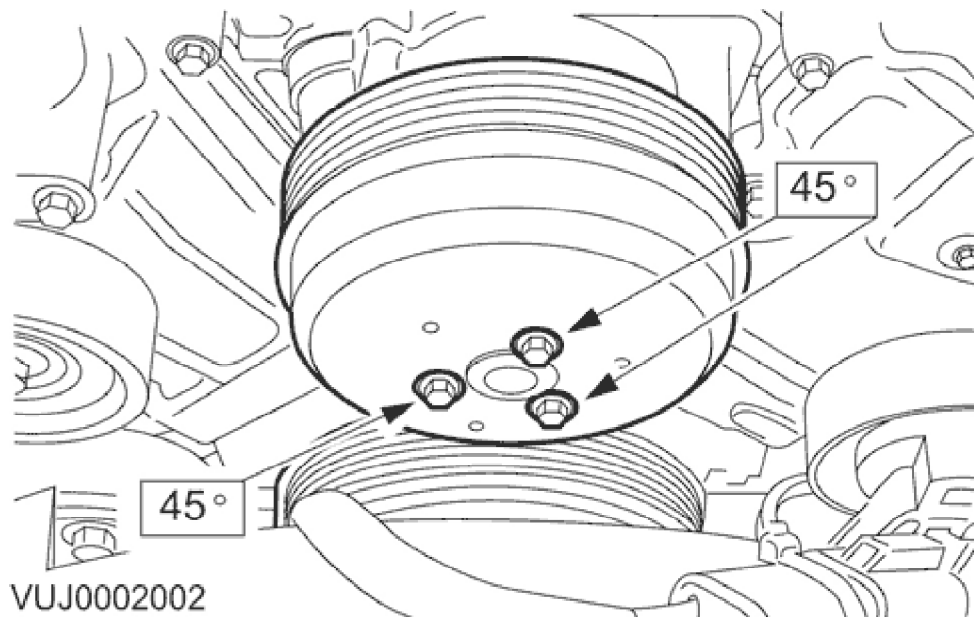
13. Install the upper idler pulley.



VUJ0002001

14. Install the water pump pulley.

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15. Install the water pump (continued).

16. Install the crankshaft pulley. For additional information, refer to <<**Crankshaft Pulley**>>

17. Install the oil cooler. For additional information, refer to <<**Oil Cooler**>>

18. Install the left-hand valve cover. For additional information, refer to <<**Valve Cover—LH**>>

19. Install the right-hand valve cover. For additional information, refer to <<**Valve Cover—RH**>>