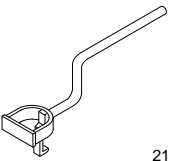
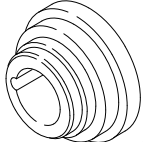
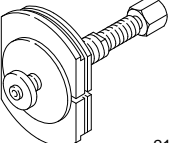
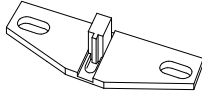
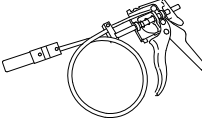


Oil Seal – Crankshaft Front – Renew (21 467 0)

Special Tools

 <p>21051</p>	<p>21-051 Oil seal remover</p>
 <p>21137</p>	<p>21-137 Oil seal installer/aligner, crankshaft front</p>
 <p>21147</p>	<p>21-147 Vibration damper remover</p>

 <p>21168</p>	<p>21-168 Crankshaft locking tool</p>
 <p>24003</p>	<p>24-003 Installer/remover, coolant hose clamp</p>

Materials

Sealer	SPM-2G-3121-A
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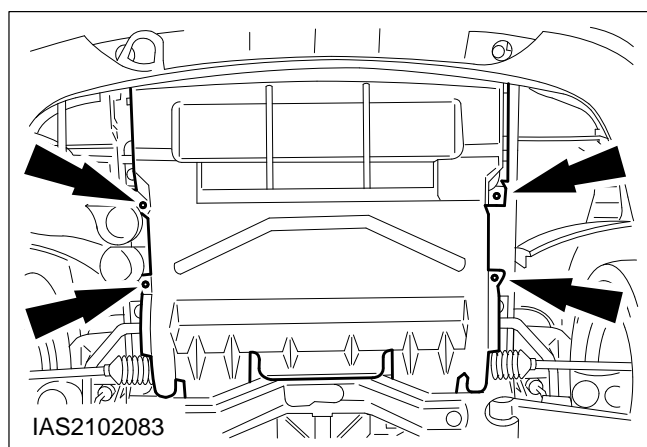
Remove

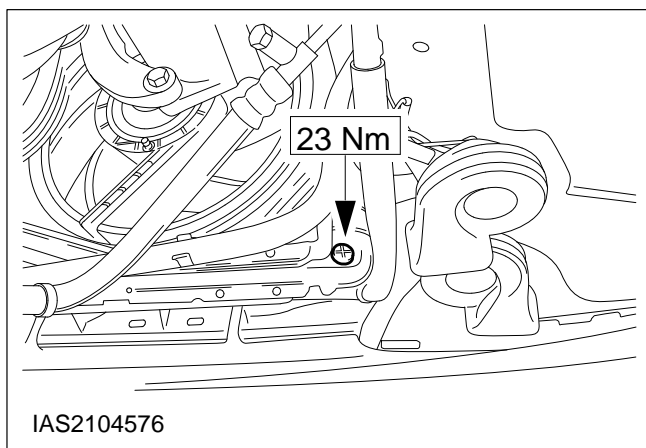
1. Preparatory measures:

- Make a note of the radio keycode.
- Make a note of the preset radio stations.
- Remove the battery cover (one nut).
- Disconnect the battery negative lead.
- Open the coolant expansion tank.

2. Raise the vehicle.

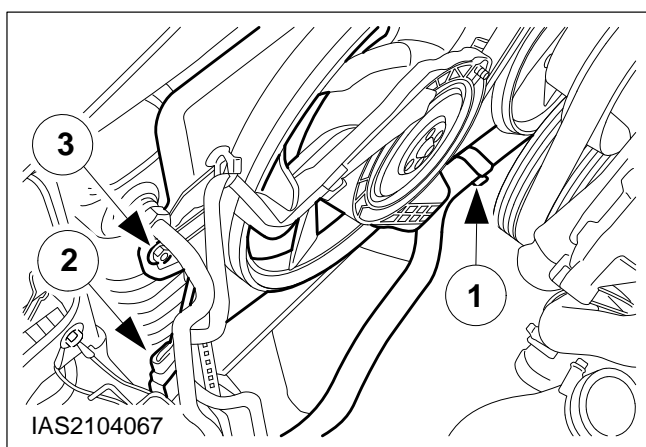
3. Detach the engine undershield.





4. Drain off the coolant.

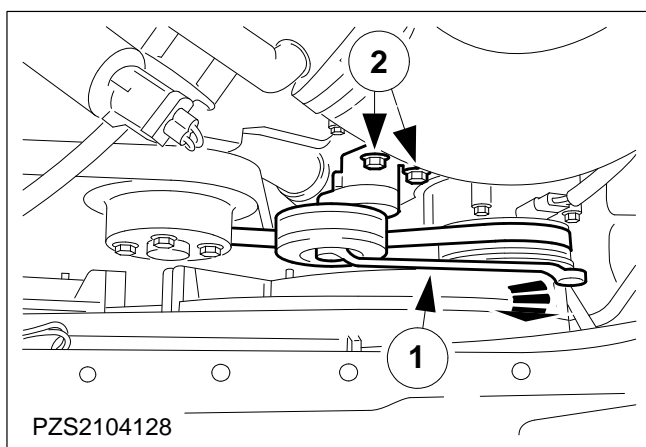
Tighten the drain plug again.



5. Lower the vehicle.

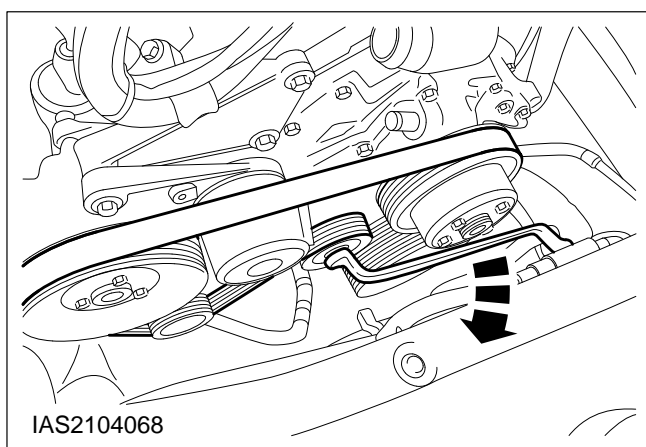
6. Remove the fan motors complete with the retaining plate.

- 1 Unclip the lower coolant hose.
- 2 Disconnect the two parts of the plug and unclip the wiring.
- 3 Unscrew one nut on each side.

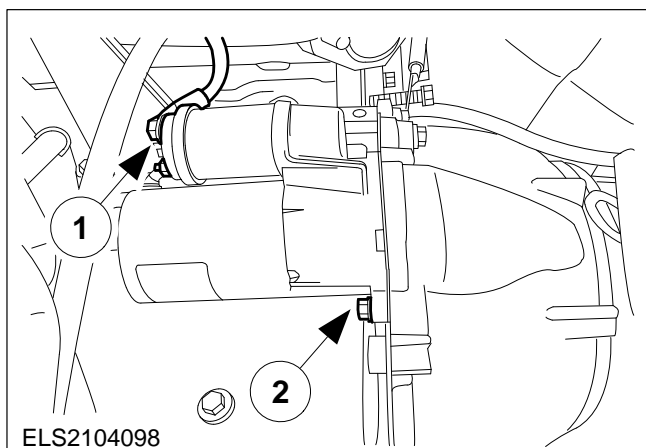


7. Detach the belt tensioner for the air conditioning drive belt.

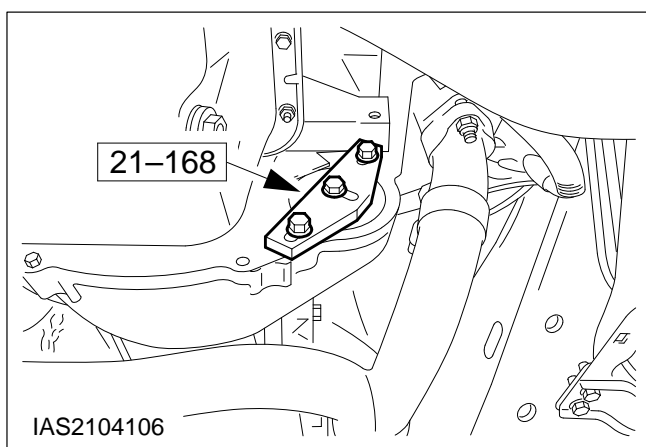
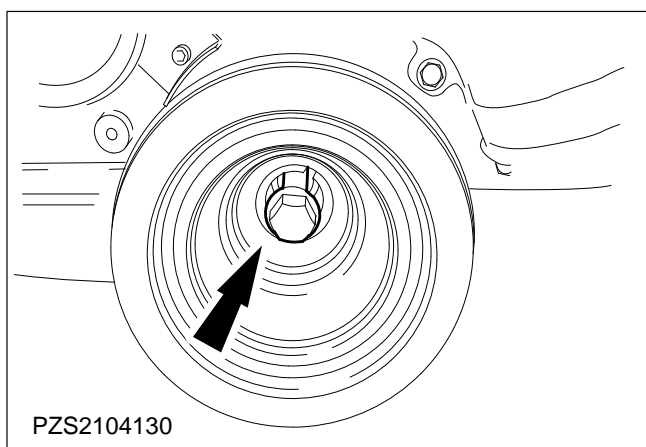
- 1 Slacken the drive belt and remove it.
- 2 Remove the belt tensioner.



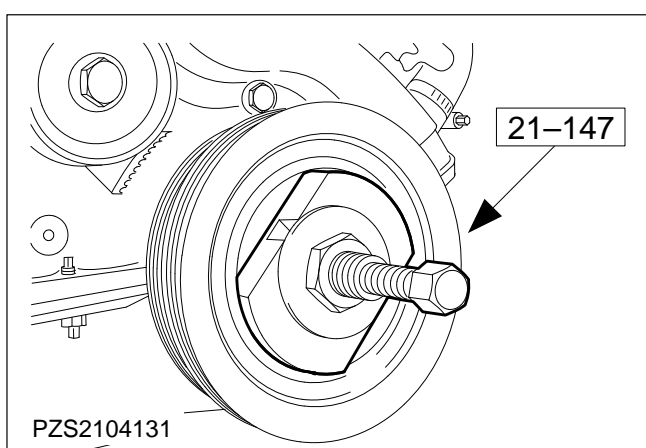
8. Detach the drive belt.

**9. Raise the vehicle.****10. Remove the starter motor.**

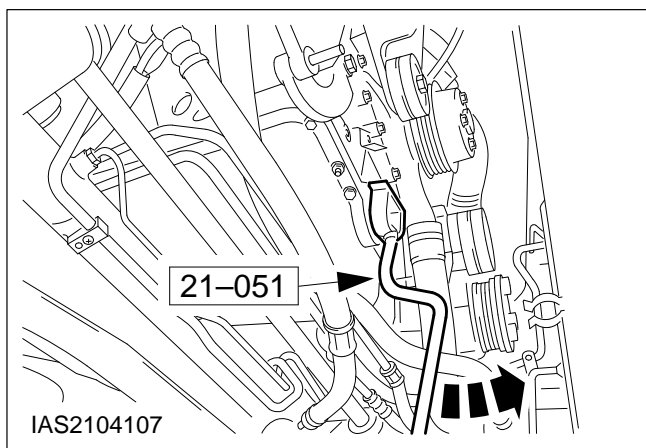
- 1 Disconnect the starter motor wiring.
- 2 Unscrew the two bolts.
 - Undo the starter motor wiring loom from the front crossmember.

**11. Fit the special tool.****12. Detach the belt pulley with the crankshaft vibration damper.**

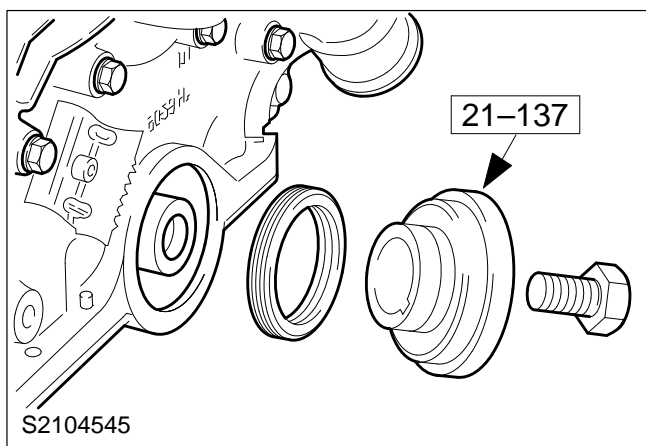
- Unscrew the bolt.
- Screw the bolt back in 15 turns.

**13. Detach the belt pulley with the crankshaft vibration damper (continued).**

- Fit the remover and remove the vibration damper.
- Remove the bolt.
- Remove the Woodruff key.
- Remove the locking tool.



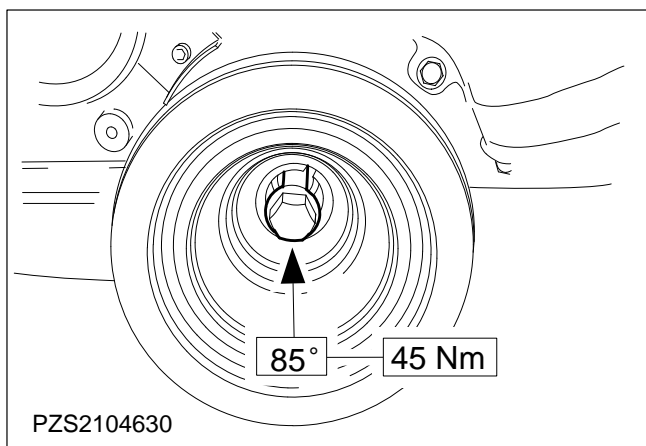
14. Prise out the oil seal.



Install

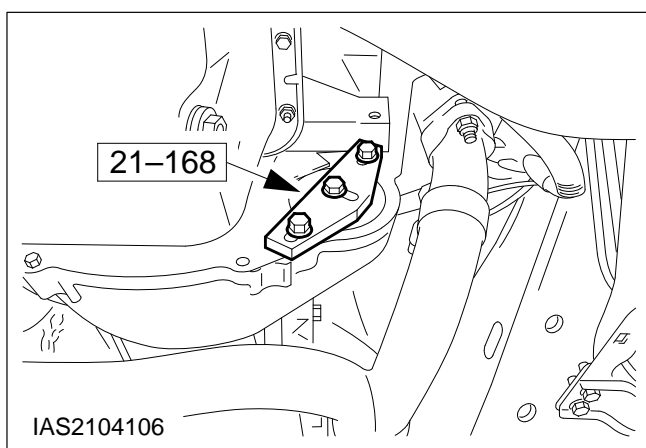
15. Fit the new crankshaft front oil seal.

- Lubricate the oil seal lip and the crankshaft with oil.
- Insert the oil seal lip as far as it will go.
- Remove the bolt and the special tool.

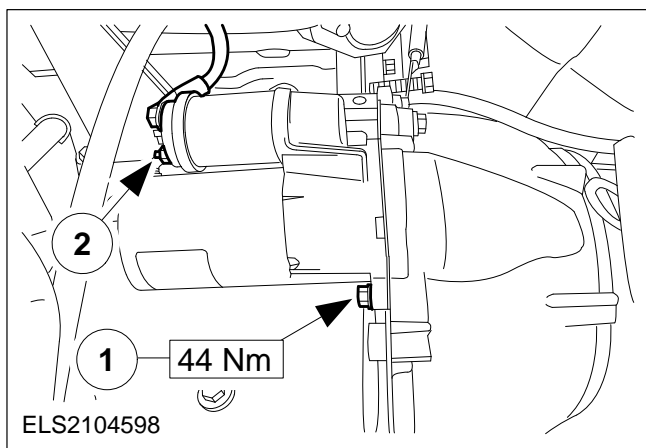


16. Fit the belt pulley with the vibration damper.

- Lubricate the belt pulley bore.
- Fit the belt pulley with the bolt by means of the Woodruff key on the crankshaft.
- Loosen the bolt, apply sealer (SPM-2G-3121-A) and re-tighten it.

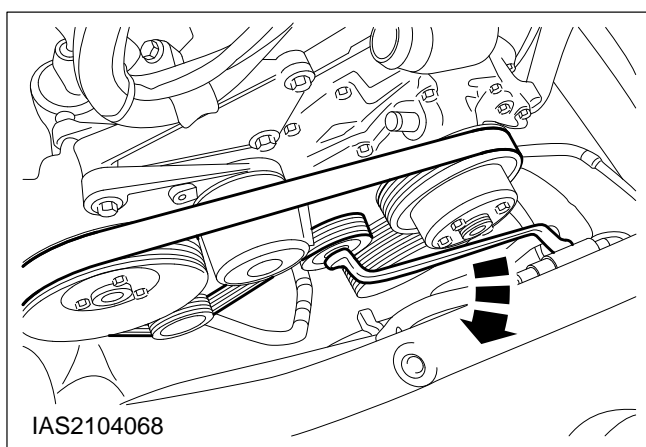


17. Remove the special tool.



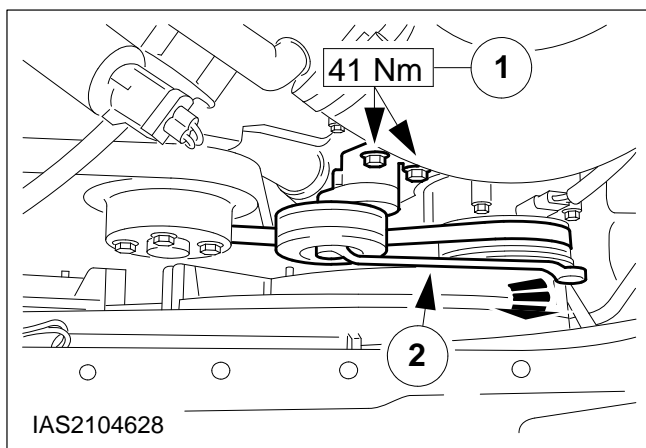
18. Fit the starter motor and connect the wiring.

- 1 Secure it with two bolts.
- 2 Connect the starter motor wiring.



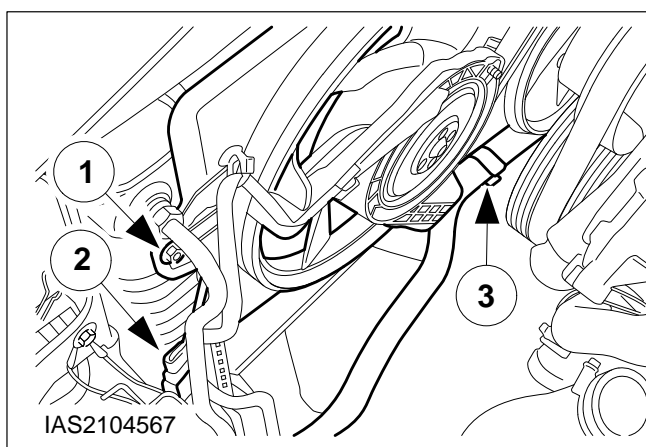
19. Lower the vehicle.

20. Fit the drive belt.



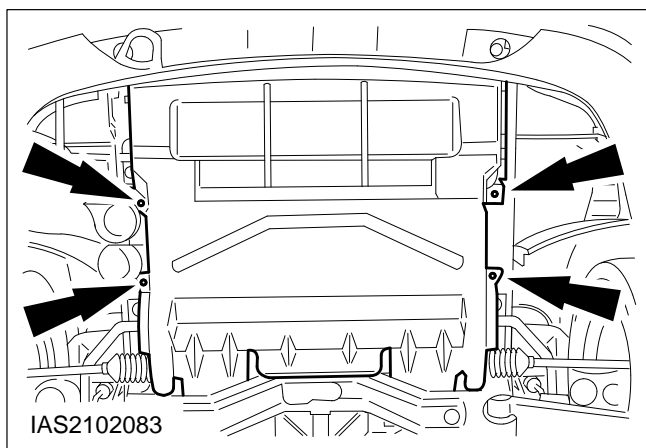
21. Fit the belt tensioner for the air conditioning drive belt.

- 1 Fit the belt tensioner.
- 2 Slacken the belt tensioner and fit the drive belt.



22. Fit the fan motors complete with the retaining plate.

- 1 Screw on one nut on both sides.
- 2 Connect the two parts of the plug and clip the wiring in place.
- 3 Clip the lower coolant hose in place.



23. Finishing operations:

- Top up the coolant.
- Check the fluid levels and rectify as necessary.
- Check the routing of the vacuum hoses and the wiring and secure them using cable ties as required.
- Enter the radio keycode.
- Reprogramme the preset radio stations.
- Reset the clock.
- Carry out a road test to enable the PCM module to collect data.
- Check the engine and cooling system for leaks (visual check).
- Attach the engine undershield.