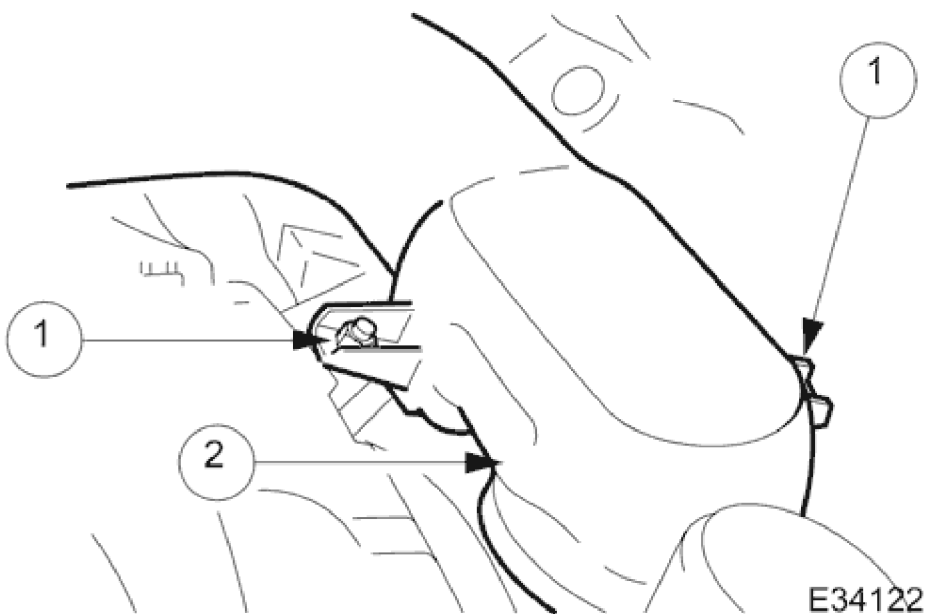


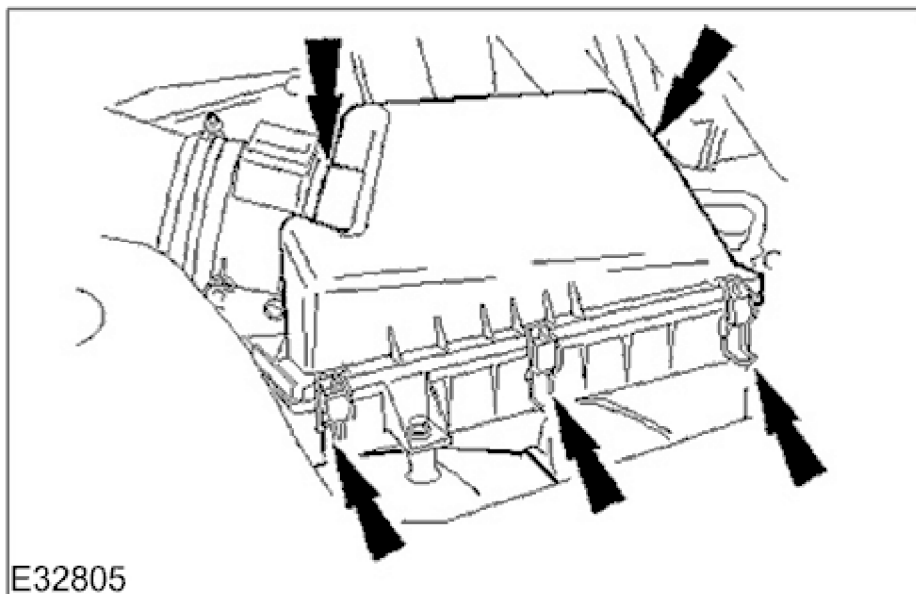
Valve Cover RH 12.29.44

Removal

1. Open the engine compartment and fit paintwork protection sheets.



2. Disconnect the intake tube from the throttle body.
 1. Remove the two bolts which secure the intake tube to the throttle body.
 2. Disconnect the intake tube from the throttle body.

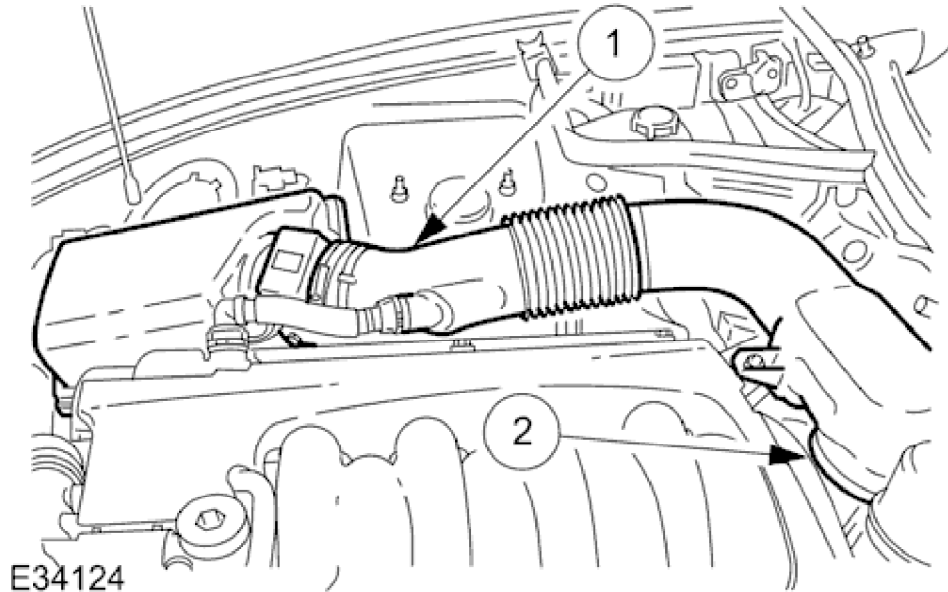


3. Disconnect the air cleaner cover.

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- Release the five clips which secure the air cleaner cover.

4. Disconnect the air flow meter electrical connector.



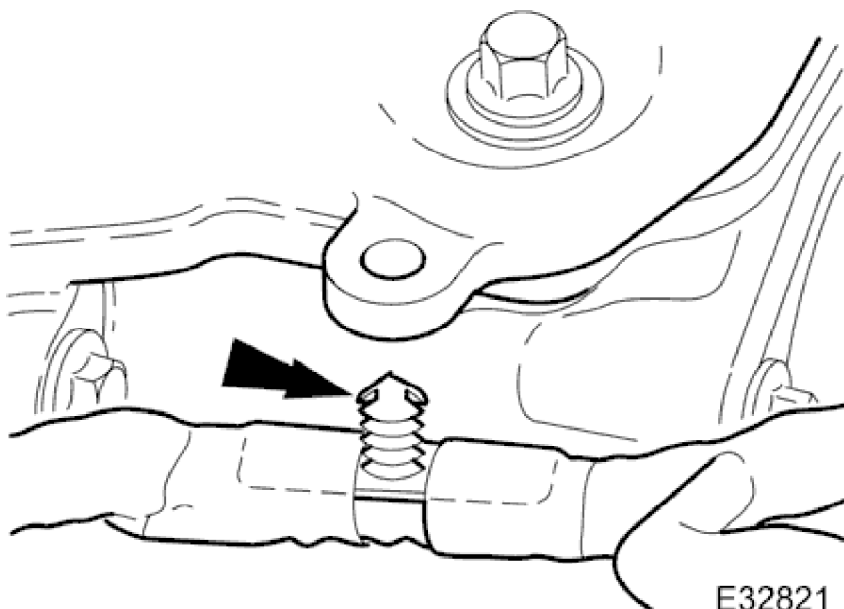
E34124

5. Remove the intake tube / air flow meter / air cleaner cover assembly.

1. Remove the intake tube / air flow meter / air cleaner cover assembly.
2. Remove and discard the rubber seal; air intake tube to throttle body.

6. Carefully remove the right hand engine cover, taking care not to damage the plastic fixings or the rubber inserts.

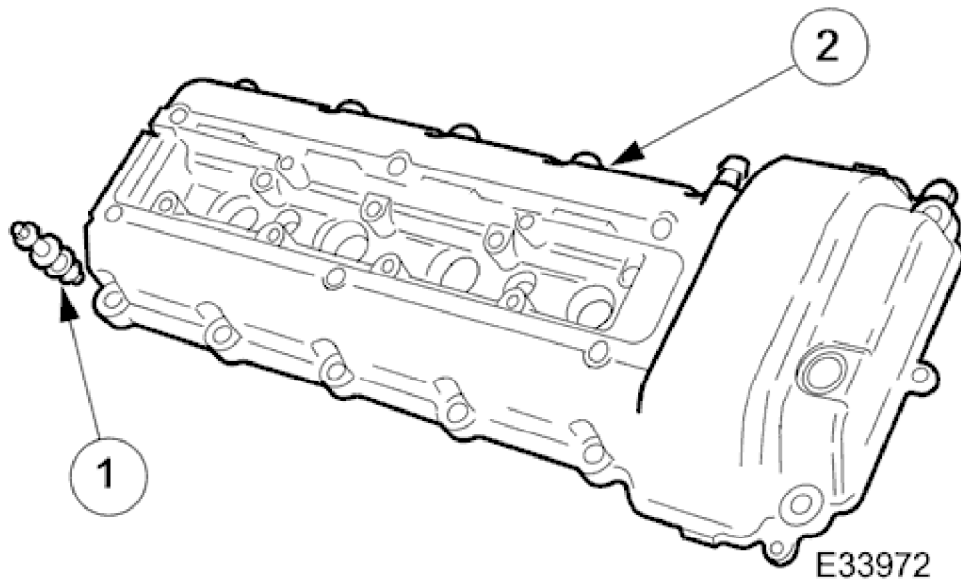
7. Remove the on-plug ignition coils from Bank 1. Refer to Operation 18.20.41.



E32821

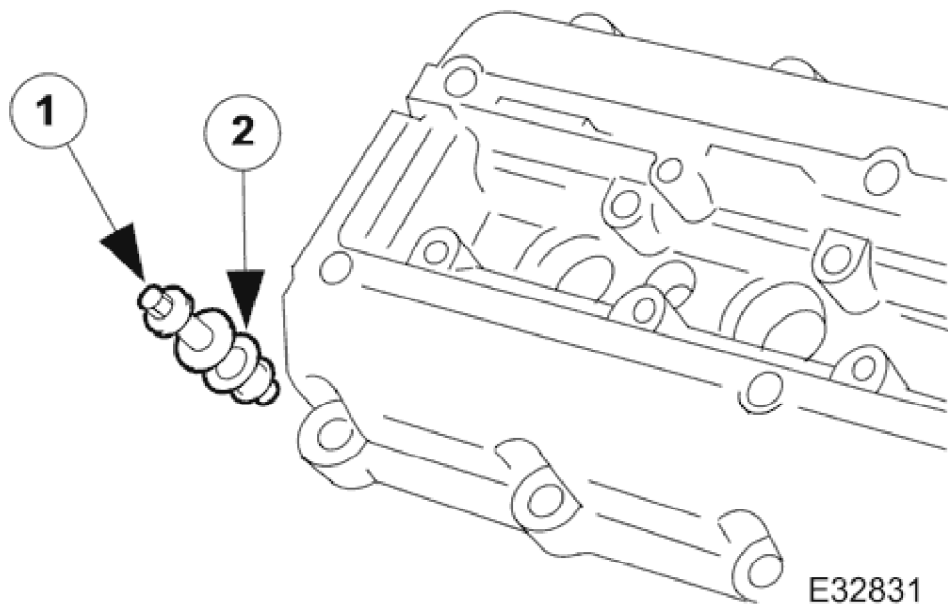
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8. Release the clips which secure the engine harness to the cam cover.



9. Remove the cam cover assembly.

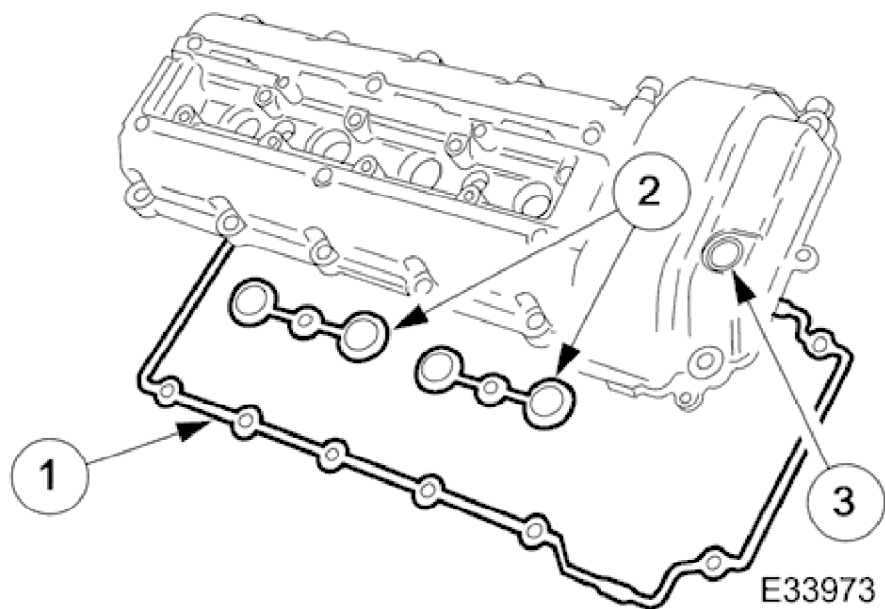
1. Release the fourteen screws which secure the cam cover. The screws stay in place within the cover, held by the seals.
2. Remove the cam cover, screws and seals, as an assembly.



10. Separate the screws and seals from the cam cover.

1. One at a time, remove each securing screw from the cam cover.
2. Remove the rubber sealing ring from each securing screw.

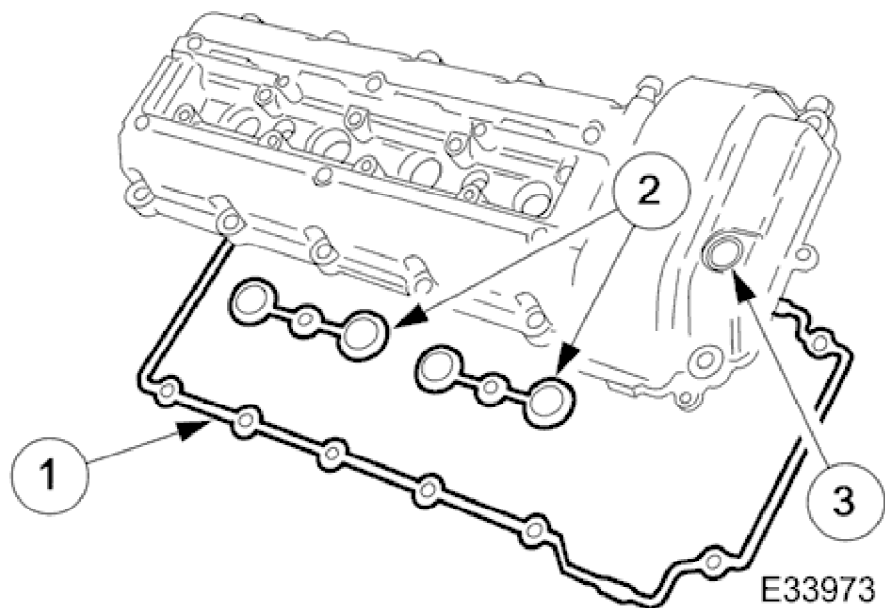
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11. Remove the main seals from the cam cover.
1. Remove and discard the outer seal.
 2. Remove and discard the two seals from around the spark plug apertures.
 3. Remove the seal for the VVT solenoid.

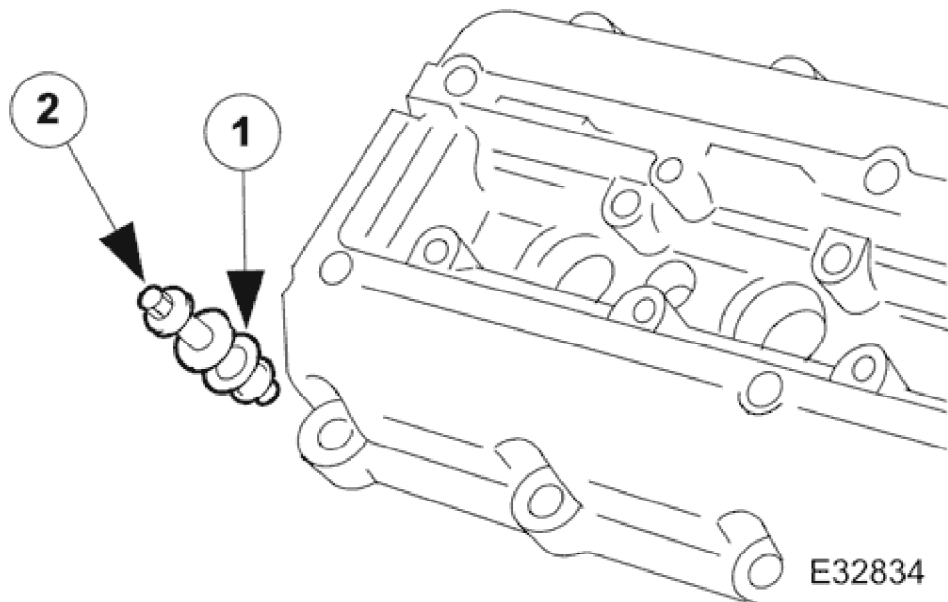
12. Clean all relevant parts and mating faces.

Installation

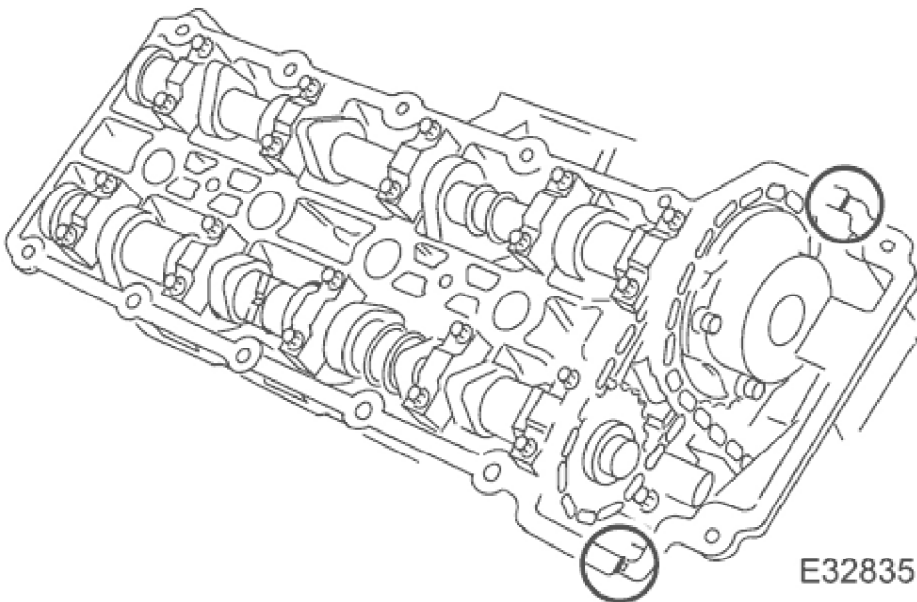


1. Install the new main seals to the cam cover.
1. Install the new outer seal.
 2. Install the two new spark plug aperture seals.
 3. Install the seal to the VVT solenoid aperture.

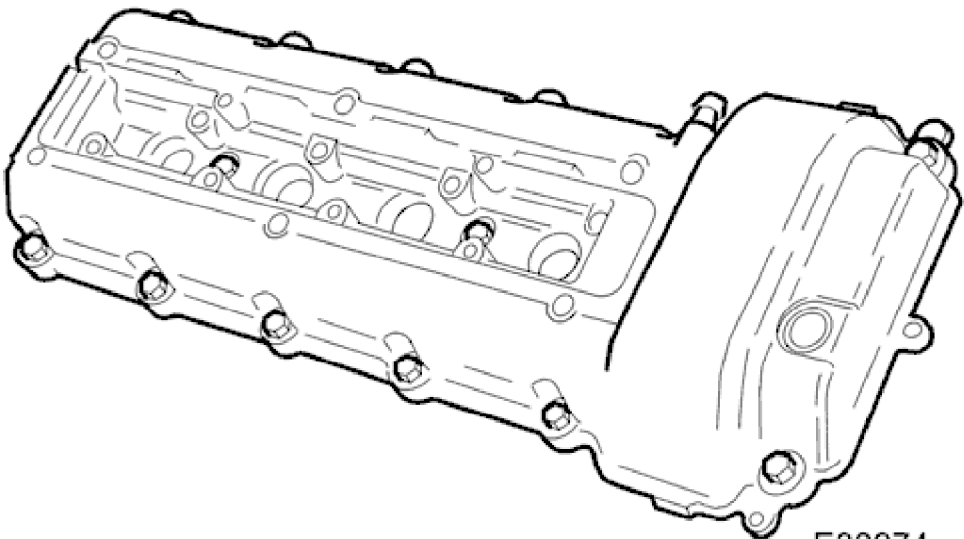
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2. Install the securing screws to the cam covers.
 1. Install a new sealing ring to each screw assembly.
 2. Install the screws to the cam covers. Each screw is retained by the cam cover gasket.
- Refer to the tightening sequence diagram for details of where to install the studs.

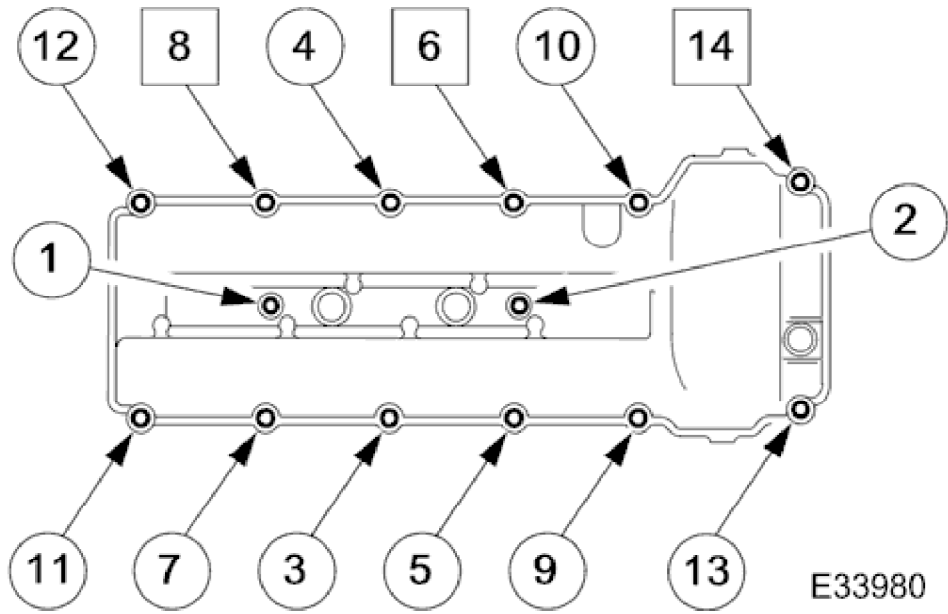


3. Apply RTV sealant WSS-M4G320-A3 to two places on the joint between the timing cover and the cylinder head.
 - The application of sealant must be 3mm diameter by 12mm long. Install the cam cover immediately after applying the sealant.
 - The cover should be installed directly to the head without smearing the sealant.



E33974

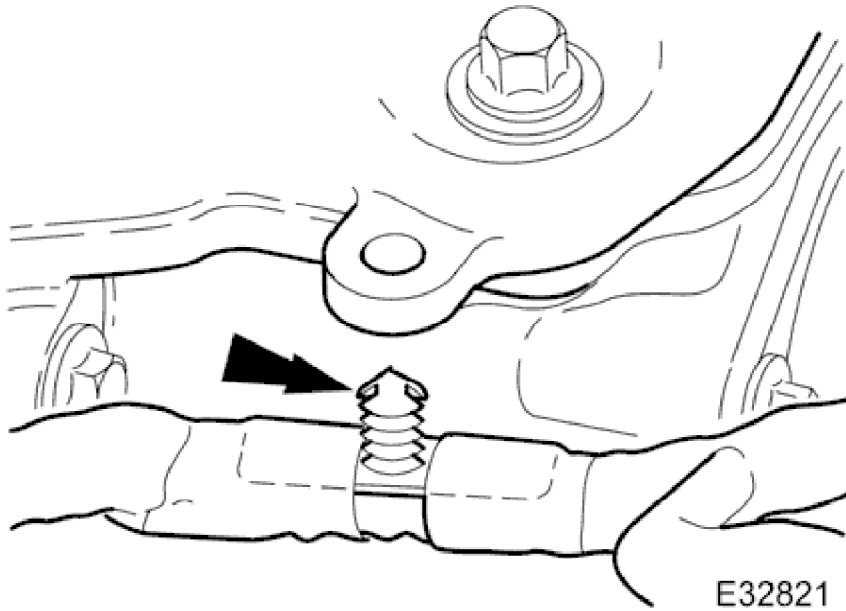
- 4. Install the cam cover.
 - Position the cam cover onto the cylinder head without smearing the sealant and start the threads of each securing screw.



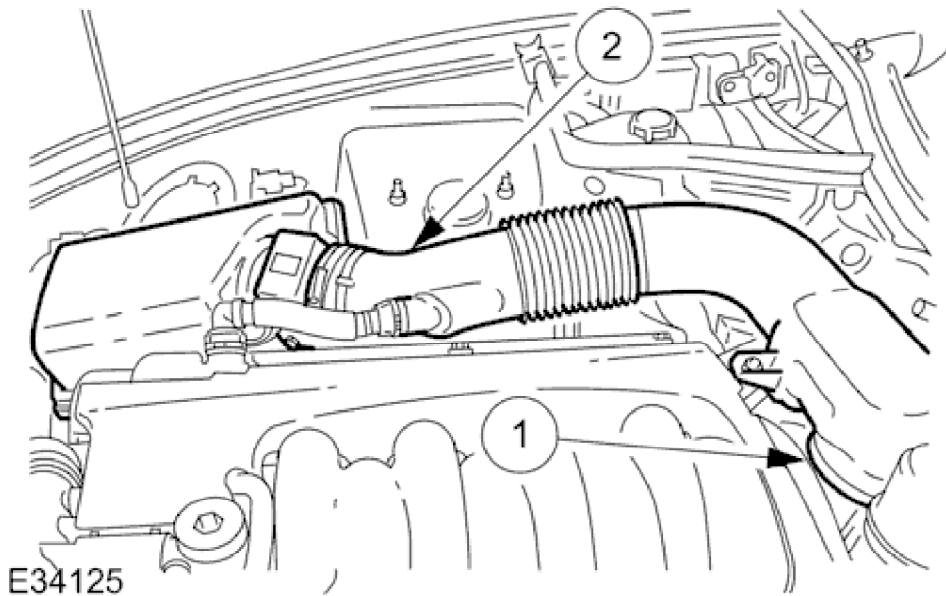
E33980

- 5. Tighten the securing screws to 9-11 Nm. Tighten in the sequence indicated.
 - Screws annotated in a square have studs to install other components onto, and must be installed in the positions shown.

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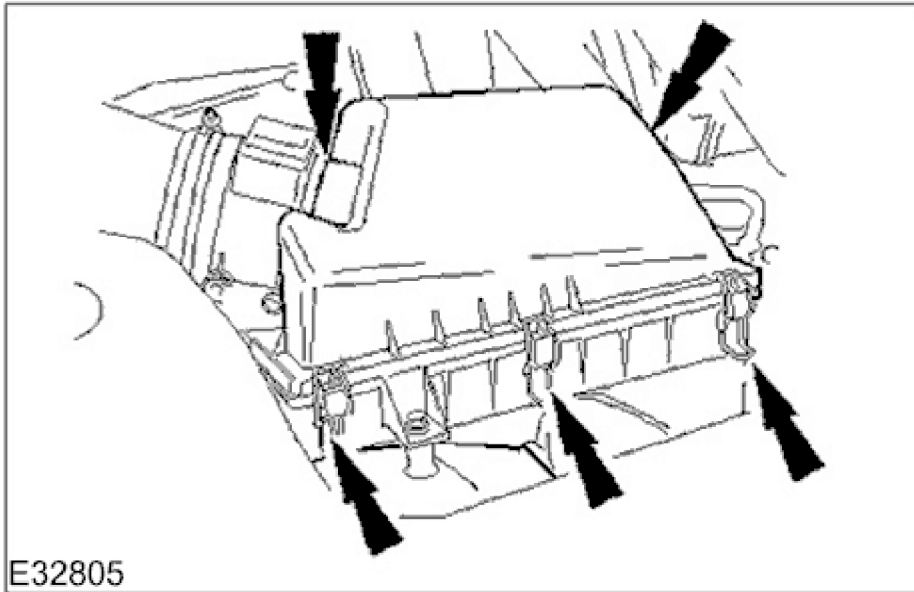


6. Reposition the clips which secure the engine harness to the cam cover.
7. Install the on-plug ignition coils and the coil cover. Refer to Operation 18.20.41.
8. Install the right hand engine cover.

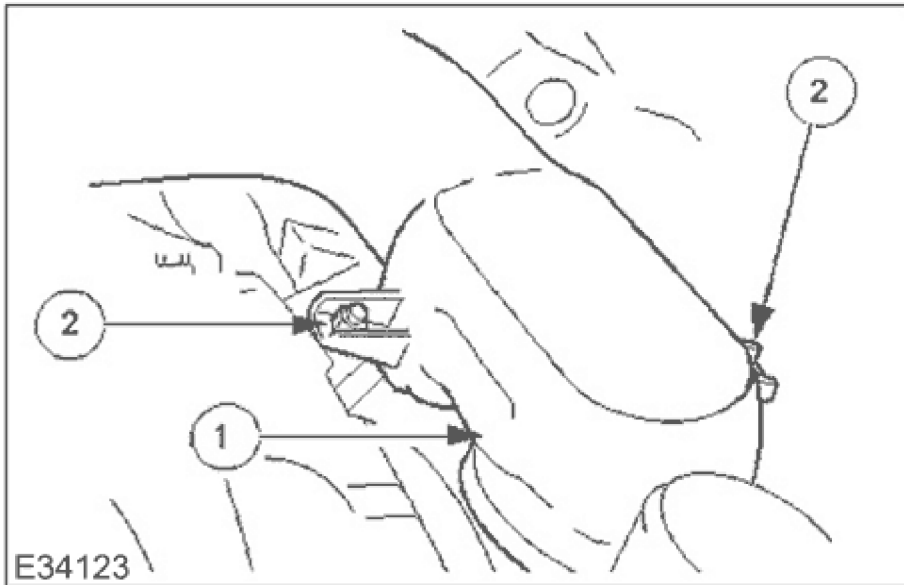


9. Install the intake tube / air flow meter / air cleaner cover assembly.
 1. Install a new rubber seal; air intake tube to throttle body.
 2. Install the intake tube / air flow meter / air cleaner cover assembly.

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10. Reconnect the air cleaner cover.
 - Install the five clips which secure the air cleaner cover.



11. Connect the intake tube to the throttle body.
 1. Connect the intake tube to the throttle body.
 2. Install the two bolts which secure the intake tube to the throttle body.

12. Reconnect the air flow meter electrical connector.

13. Remove the paintwork protection sheets and close the engine compartment.