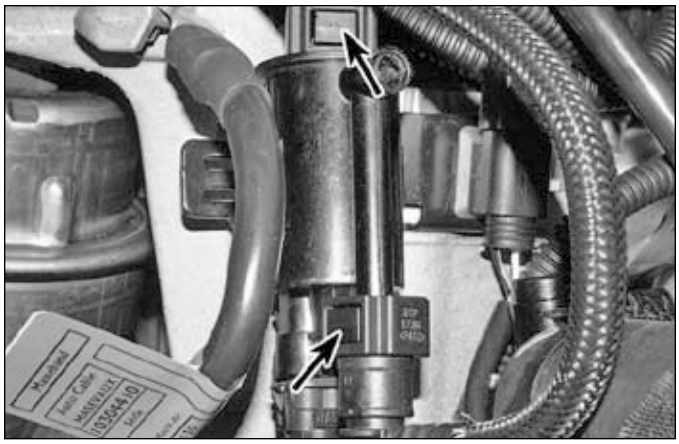
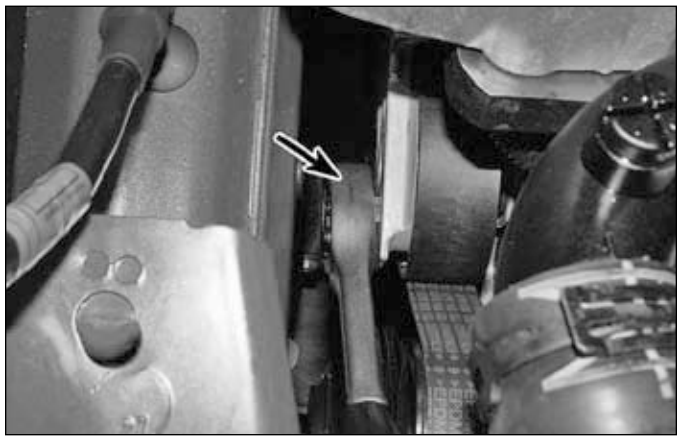


18.1 Press-in the buttons to disconnect the hoses from the tank vent valve



18.5a Engage a 3/8-inch drive ratchet with the square hole in the drivebelt tensioner arm

16 Engine management system check

1 This check is part of the manufacturer's maintenance schedule, and involves testing the engine management system using special dedicated test equipment. Such testing will allow the test equipment to read any Diagnostic Trouble Codes stored in the electronic control unit memory.
2 Unless a fault is suspected, this test is not essential, although it should be noted that it is recommended by the manufacturers.
3 If access to suitable test equipment is not possible, make a thorough check of all ignition, fuel and emission control system components, hoses and wiring for security and obvious signs of damage. Further details of the fuel system, emission control system, ignition system and engine management system can be found in Chapters 4, 5 and 6.

17 Road test

Instruments and electrical equipment

1 Check the operation of all instruments and electrical equipment.
2 Make sure that all instruments read correctly, and switch on all electrical equipment in turn, to check that it functions properly.

Steering and suspension

3 Check for any abnormalities in the steering, suspension, handling or road feel.
4 Drive the vehicle, and check that there are no unusual vibrations or noises.
5 Check that the steering feels positive, with no excessive sloppiness, or roughness, and check for any suspension noises when cornering and driving over bumps.

Drivetrain

6 Check the performance of the engine, clutch, transmission and driveaxles.
7 Listen for any unusual noises from the engine, clutch and transmission.
8 Make sure that the engine runs smoothly when idling, and that there is no hesitation when accelerating.
9 Check that the clutch action is smooth and progressive, that the drive is taken up smoothly, and that the pedal travel is not excessive. Also listen for any noises when the clutch pedal is depressed.
10 Check that all gears can be engaged smoothly without noise, and that the gear lever action is smooth and not abnormally vague or notchy.

Braking system

11 Make sure that the vehicle does not pull to one side when braking, and that the wheels do not lock when braking hard.
12 Check that there is no vibration through the steering when braking (if there is, suspect disc runout; see Chapter 9).

18 Drivebelt replacement

Mk I models

Refer to illustration 18.1

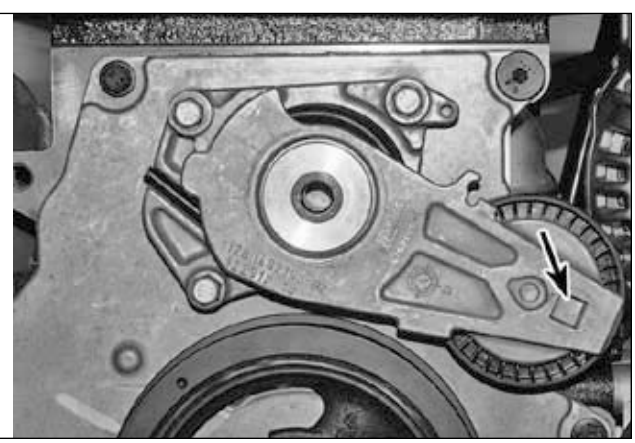
1 Open the hood, depress the retaining clips and disconnect both hoses and the electrical connector from the tank vent valve at the right-hand end of the engine **(see illustration)**.
2 Remove the right-hand front engine mount retaining bolt, and move the tank vent valve and bracket to one side.
3 Loosen the right-hand wheel bolts, then raise the front of the vehicle and support securely on jackstands. Remove the wheel, then remove the screws, pry out the plastic rivets and remove the wheelwell liner.
4 Remove the screws and remove the engine undershield**.**

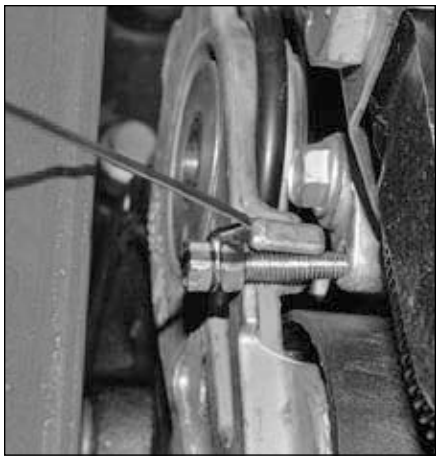
Cooper

Refer to illustrations 18.5a, 18.5b, 18.6 and 18.7

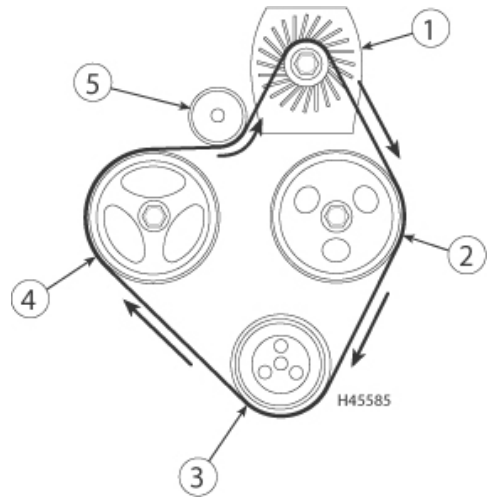
5 Insert a 3/8" drive ratchet into the square hole in the auxiliary belt tensioner arm **(see illustrations)**.
6 Using the ratchet, rotate the tensioner arm counterclockwise, until a 4 mm diameter rod/bolt approximately 30 mm long can be inserted into the hole in the casing to lock the tensioner arm in place **(see illustration)**. Access to the locking hole is restricted. Attaching a length of welding rod to the end to the rod/bolt may allow greater control when inserting the locking rod/bolt. Slide the belt from the pulleys. If the belt is to be re-used, mark its direction of rotation, and ensure it's

18.5b Drivebelt tensioner arm square hole (engine removed for clarity)





18.6 Lock the tensioner arm in place using a 4 mm bolt. We attached a length of welding rod to the bolt to give greater control in the restricted access



18.7 Drivebelt routing - 2006 and earlier Cooper models

1 Alternator
2 Water pump
3 Air conditioning compressor
4 Crankshaft pulley
5 Tensioner

installed in the same direction of travel.

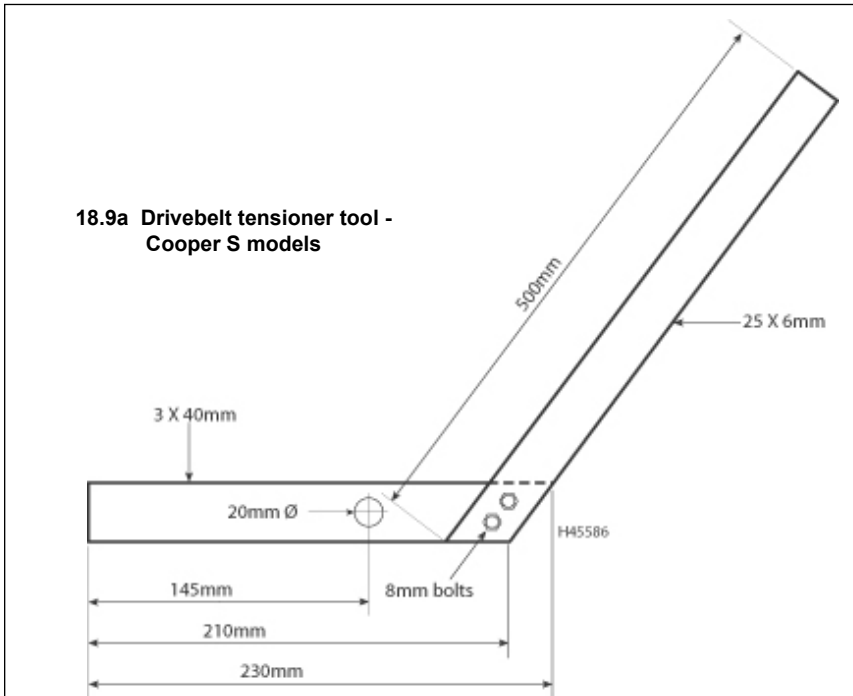
7 Install the drivebelt around the pulleys, hold the arm in place using the ratchet, then withdraw the locking rod and allow the tensioner to rotate and tension the belt **(see illustration)**.

MINI Cooper S

Refer to illustrations 18.9a, 18.9b, 18.9c, 18.9d, 18.10 and 18.12

8 Pull the engine oil level dipstick from the guide tube.

9 In order to relieve the tension on the belt, a MINI special tool (11 8 410) is available to compress the tensioner spring. In the absence of this tool, fabricate a home-made equivalent using two lengths flat steel bar. Drill a 20 mm hole and bolt the two lengths together as shown. Fit the hole in the tool over the tensioner arm pivot bolt and lever against the lower edge of the tensioner arm **(see illustrations)**. Take great care to ensure the lower end of the tool doesn't slip when compressing the spring.



18.9a Drivebelt tensioner tool - Cooper S models

18.9b The tool should look like this

18.9c Locate the tool over the tensioner arm pivot bolt head . . .

18.9d . . . ensure the lower end of the tool doesn't slip from the bottom of the arm