

4 As parts are removed, clean them in a paraffin bath. However, do not immerse parts with internal oilways in paraffin as it is difficult to remove, usually requiring a high pressure hose.

HAYNES
HINT Clean oilways with nylon pipe cleaners.

5 It is advisable to have suitable containers to hold small items according to their use, as this will help when reassembling the engine and also prevent possible losses.

6 Always obtain complete sets of gaskets when the engine is being dismantled, but retain the old gaskets with a view to using them as a pattern to make a replacement if a new one is not available.

7 When possible, refit nuts, bolts and washers in their location after being removed, as this helps to protect the threads and will also be helpful when reassembling the engine.

8 Retain unserviceable components in order to compare them with the new parts supplied.

8 Ancillary components - removal

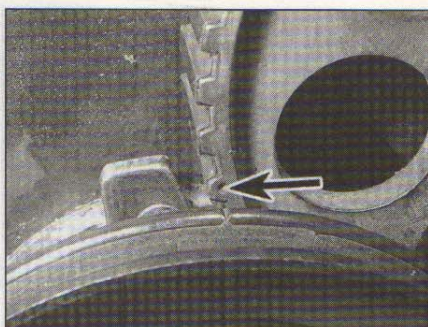
1 With the engine separated from the gearbox/transmission, the externally mounted ancillary components can now be removed.

2 Unscrew the nuts and withdraw the valve cover, noting where the packing pieces are fitted. Remove the gaskets. On later models it may be necessary to remove the timing belt upper cover first.

3 Unscrew the bolts or nuts as applicable and remove the timing belt cover. As from February 1979 a three-piece fully enclosed cover is fitted, but before this date a one-piece cover is fitted together with a guide located between the crankshaft and intermediate shaft gears. On these models it will be necessary to remove the crankshaft pulley, as described below, before the lower part of the cover is removed. Do not rotate the engine once the pulley is removed and, preferably, mark the relationship between the pulley and the timing belt.

4 It is now possible to save a lot of trouble when assembling the engine by studying the timing marks. On the intermediate sprocket for the timing belt one tooth has a centre-punch mark. Turn the engine until this mark aligns with a notch on the V-belt pulley bolted to the crankshaft sprocket (photo). The easiest way to turn the engine is to remove the plugs and turn it with a socket spanner on the crankshaft pulley nut.

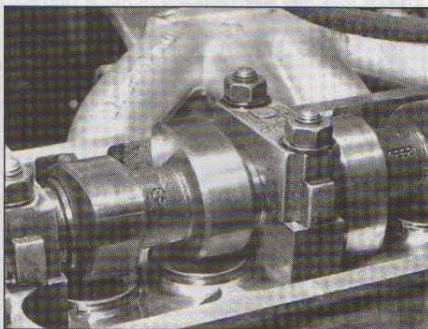
5 When these marks match, look at the sprocket on the camshaft. One tooth of this has a centre-punch mark. This should be level with the valve cover flange. Having turned the engine until these marks agree, now look at



8.4 Intermediate shaft timing mark (arrowed) aligned with the notch in the crankshaft pulley

the cams for No 1 cylinder, the one nearest the timing belt. They will both be in the 'valve closed' position (photo). Now look through the hole in which the TDC sensor goes where the timing marks show on the periphery of the flywheel and note the reading. Check where the rotor arm points on the distributor, it should point to No 1 plug lead and a mark on the edge of the rim of the base of the distributor. The distributor body is held in position by a bolt and clamp. Using a centre-punch mark the distributor body and the cylinder block in such a way that the marks are adjacent and may be used to set the distributor body at the right position on reassembly of the engine.

6 Remove the clamp, and holding the crankshaft to prevent it turning, lift the distributor body slowly out of the cylinder block. This will cause the distributor shaft to rotate slightly as its skew drive gear moves over the one on the intermediate shaft. Do not allow the distributor body to rotate. Note the amount the shaft has rotated and refit the distributor. The rotor should rotate to the mark on the rim for No 1 cylinder. When you are satisfied that you understand the method of resetting the timing, remove the distributor. If you look down the hole left in the cylinder block you will see the top of the oil pump driveshaft. This has a slot in it. Note the angle of the slot carefully so that it can be set for easy reassembly. It is quite easy to reach and turn with a finger or a screwdriver. It should be parallel to the crankshaft.



8.5 No 1 cylinder cam lobes in valve closed position

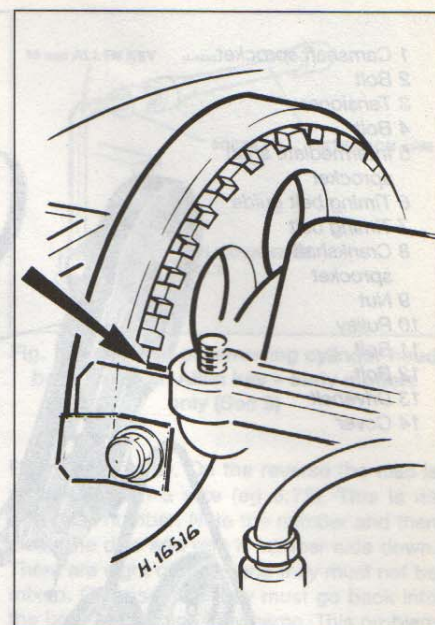


Fig. 1.6 Camshaft sprocket timing mark (arrowed) with No 1 cylinder at TDC on compression (Sec 8)

7 Remove the oil filter as described in Section 11, then unbolt the filter head from the cylinder block using an Allen key. On models fitted with an oil cooler, unscrew the supply and return hoses from the head and identify them for position (photo). Remove the gasket.

8 Remove the fuel pump as described in Chapter 3, except on fuel injection models.

9 Unscrew the oil pressure switch from the flywheel end of the cylinder head or filter head (as applicable) and remove the washer (if fitted).

10 Remove the alternator as described in Chapter 9, together with the drivebelt.

11 Remove the water pump as described in Chapter 2. Remove all hoses from the engine.

12 Before removing the timing drivebelt check its correct tension. If held between the finger and thumb halfway between the intermediate shaft and the camshaft it should be just possible to twist it through 90°. If it is too slack, adjust it by slackening the bolt holding the eccentric cam on the tensioner



8.7 Oil cooler hoses on the filter head on a Scirocco