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## #Diego Butler



so many fake sites. this is the first one which worked! Many thanks

2A4-1.6 litre engine in-car repair procedures



3.8 Insert a 5mm drill bit through the crankcase into the crankshaft sprocket hole in the oil pump housing (blue lining ball cover removed for clarity).



3.9 Insert a 5mm drill bit through the hole in the crankshaft sprocket into the cylinder head.

When the hole/slots are aligned with their corresponding holes in the cylinder head and cylinder head, suitable diameter bolts/pins can be inserted to lock the crankshaft and camshaft in position, preventing rotation.

2. Lock the fuel system and on these engines close the fuel & conventional diesel injection pumps, but ensure using a high-pressure fuel pump. Remove the fuel pump sprocket must be engaged in position in a specific fashion to the camshaft sprocket.

3. To align the engine assembly/haline timing holes, proceed as follows:

4. Apply the handbrake, then jack up the front of the vehicle and support it on axle stands (see jacking and vehicle support). Remove the right-hand front roadwheel.

5. To gain access to the crankshaft pulley, to remove the engine to be removed. The crankshaft can then be turned using a suitable socket and extension bar fitted to the pulley bolt.

6. Remove the crankshaft pulley as described in Section 6, and the timing belt covers as described in Section 6.

7. Temporarily lock the crankshaft pulley bolt, then remove the crankshaft locking tool, then turn the crankshaft until the timing hole in the crankshaft sprocket hub is aligned with the corresponding hole in the cylinder head.

Note that the crankshaft must always be turned in clockwise direction (viewed from the right-hand side of engine), use an arrow marker so that the position of the sprocket hub timing hole can be obtained. When the

oil is aligned with the corresponding hole in the cylinder head the crankshaft is positioned correctly.

8. Insert a 5mm diameter bolt, rod or drill through the hole in crankshaft sprocket flange and into the corresponding hole in the oil pump (see Illustration). If necessary, carefully turn the crankshaft either way until the rod enters the timing hole in the block.

9. Insert an Allen bolt, rod or drill through the hole in the crankshaft sprocket hub and into engagement with the cylinder head (see Illustration).

10. When refitting the timing belt, insert the Volvo rod through the hole in the fuel pump sprocket and into the corresponding hole in the fuel pump mounting. Bracket (see Illustration). If the distance of the tool over a 5mm bolt or drill bit.

11. The crankshaft and camshaft are now locked in position, preventing unwanted rotation.

4. Cylinder head cover(s) - removal and refitting

Removal

1. Disconnect the battery negative lead as described in Chapter 5A.

2. Pull the plastic cover upwards from the top of the engine.

3. Remove the fuel system as described in Chapter 5A.

4. Undo the 2 bolts and remove the engine cover mounting bracket from the left-hand end of the cylinder head, located above the fuel filter.

5. Undo the fuel feed and return hoses from their mountings above the timing belt cover (see Illustration).

6. Undo the 3 bolts and disconnect the air feed pipe from the head cover/mounting flange at the right-hand end of the cylinder head.

7. Undo the 7 retaining bolts and remove the head cover (see Illustration). Recover the rubber seal.

8. Undo the 'waterways' bolt, securing the

### 3 Engine assembly - timing holes - general information and usage

Note: Do not attempt to rotate the engine while the crankshaft and camshaft are locked in position. If the engine is to be left in this state for a long period of time, it is a good idea to place suitable warning devices inside the vehicle, and in the engine compartment. This will reduce the possibility of the engine being accidentally cranked on the starter motor, which is likely to cause damage with the timing pins in place.

1. Timing holes or slots are located only in the crankshaft sprocket flange and camshaft sprocket hub. The hole/slots are used to position the pistons halfway up the cylinder bores. This will ensure that the main timing is maintained during operations that require removal and refitting of the timing belt.



3.10 Insert the Volvo rod or a 5mm drill bit through the hole in the fuel pump sprocket into the fuel pump mounting bracket.



4.5 Depress the release buttons (arrowed) and disconnect the fuel hoses.



4.7 Undo the bolts and remove the oil separator (arrowed).

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