



28<sup>th</sup> FEBRUARY 1995

REF.

**1** No XM 220-00/4

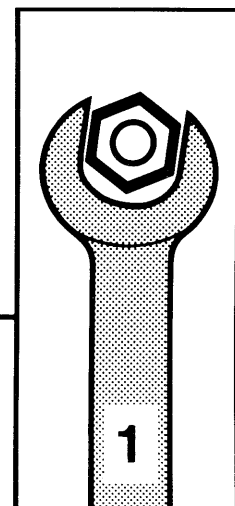
ABONNEMENT GME

CANCELS AND REPLACES

# DK5 ENGINE

## ● LUBRICATION SYSTEM

MAN 058931



GB



**AUTOMOBILES CITROËN**  
DIRECTION COMMERCE EUROPE  
DOCUMENTATION APRÈS VENTE

# CONTENTS

---

## LUBRICATION

DATA – IDENTIFICATION : LUBRICATION SYSTEM .....	3
CHECKS : OIL PRESSURE .....	7
REMOVING – REFITTING THE OIL PUMP .....	8

## DATA – IDENTIFICATION : LUBRICATION SYSTEM

### 1 – OIL CAPACITY

No oil filter change : 7.5 litres.

Oil filter change : 8 litres.

Capacity of the gauge between the min. and max. marks : 3 litres.

### 2 – OIL FILTER CARTRIDGE

Filter cartridge :

- first fitting : PURFLUX LS 483
- second fitting : PURFLUX LS 520 C

### 3 – OIL TEMPERATURE AND LEVEL SENSOR

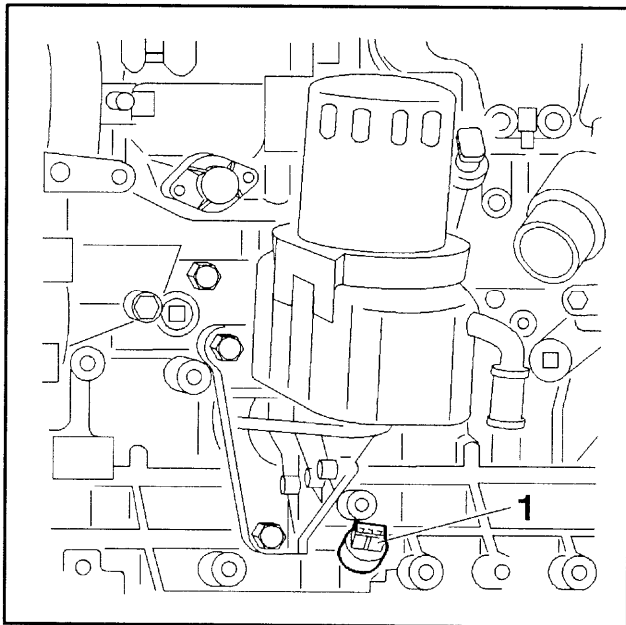


Fig : B1FP018C

(1) : oil temperature and level sensor.

Code : green connector.

### 4 – OIL PRESSURE SWITCH

Setting in bars : 0.5 bar.

Code : grey connector.

### 5 – OIL PRESSURE

The values given are in bars for an engine which is run-in, at an oil temperature of 90° C.

Engine speed	2000 rpm	4000 rpm
Oil pressure	3 bars	3.5 bars

6 – LUBRICATION SYSTEM

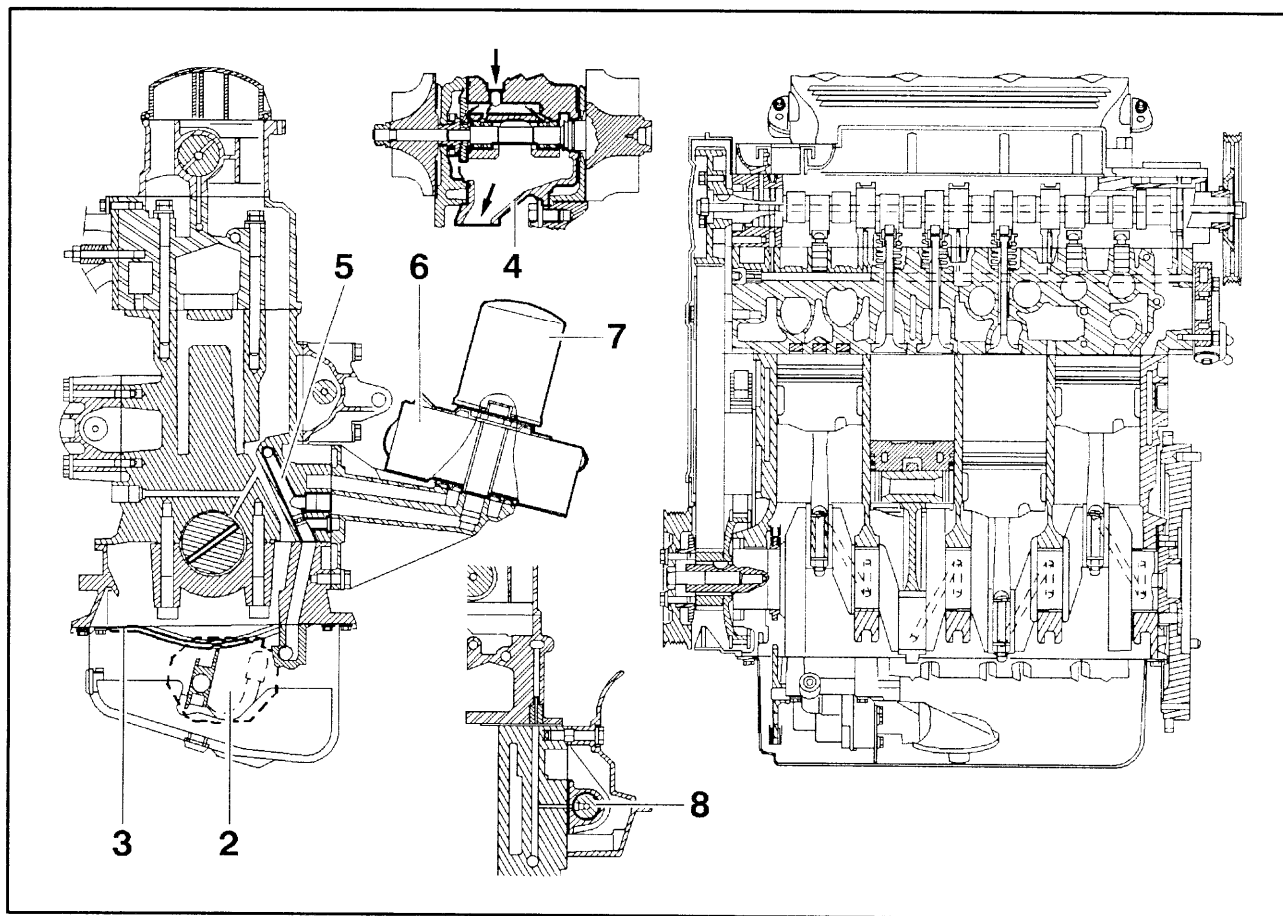


Fig. B1FP019D

- (2) oil pump.
- (3) anti-oil splashing steel plate.
- (4) turbocharger.
- (5) main oil feed line.
- (6) water-to-oil heat exchanger.
- (7) oil filter.
- (8) balance shaft.

Lubrication under pressure supplied by a gear type oil pump.

The oil pump is driven by a chain.

The oil sump is made of steel.

## 6.1 – Underside of piston cooling

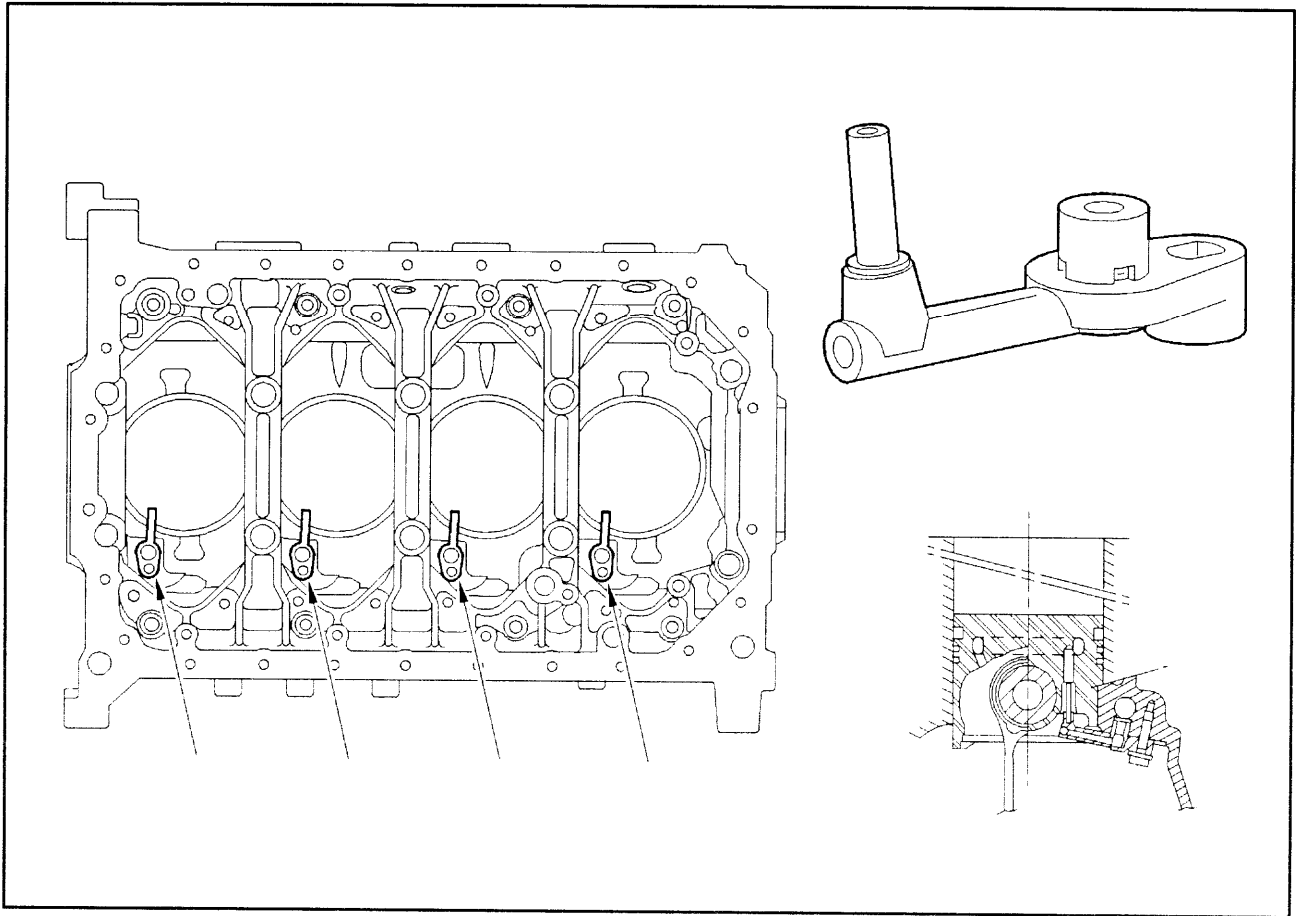


Fig : B1FP01AD

The undersides of pistons are cooled by 4 oil jets attached to the main oil gallery.

The DK5 engine pistons are equipped underhead with a circular passage which facilitates their cooling.

## 6.2 – Hydraulic tappets with automatic adjustment

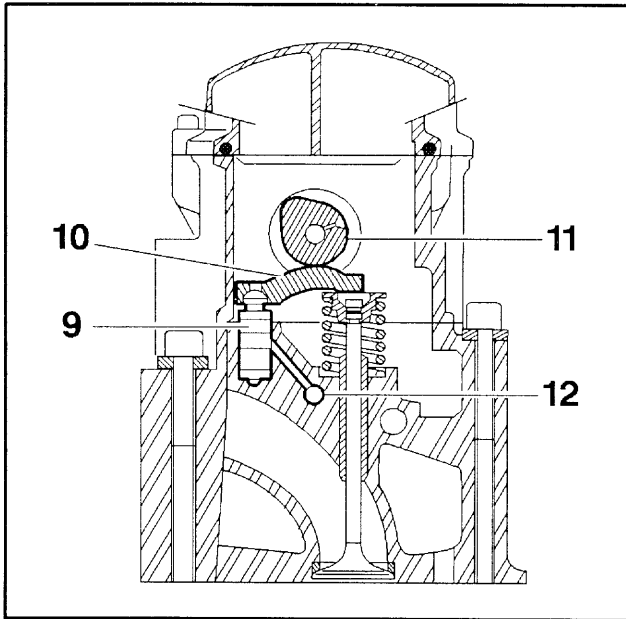


Fig : B1FP01BC

- (9) hydraulic tappet.
- (10) cam follower.
- (11) camshaft.
- (12) valve tappets oil feed gallery.

## 7 – ENGINE DRAINING

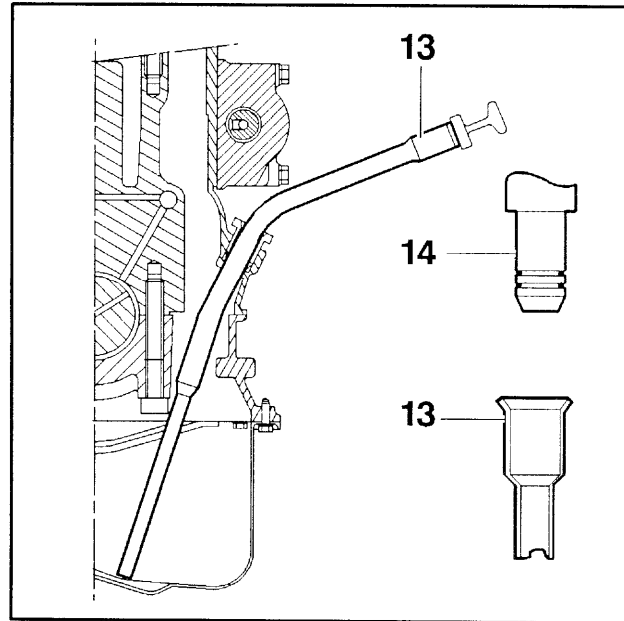


Fig : B1FP01CC

- (13) dipstick guide tube extremity.
- (14) 16 mm dia. funnel.

**IMPERATIVE** : The draining operation should be carried out when the gearbox is hot, immediately after the engine has been switched off.

It is possible to drain the engines via a suction device. The end of the dipstick guide tube has been widened out, which enables a funnel to be connected to a suction draining equipment.

**NOTE** : Engines can still be drained by taking out the oil sump drain plug.

## CHECKS : OIL PRESSURE

### 1 - RECOMMENDED TOOLS

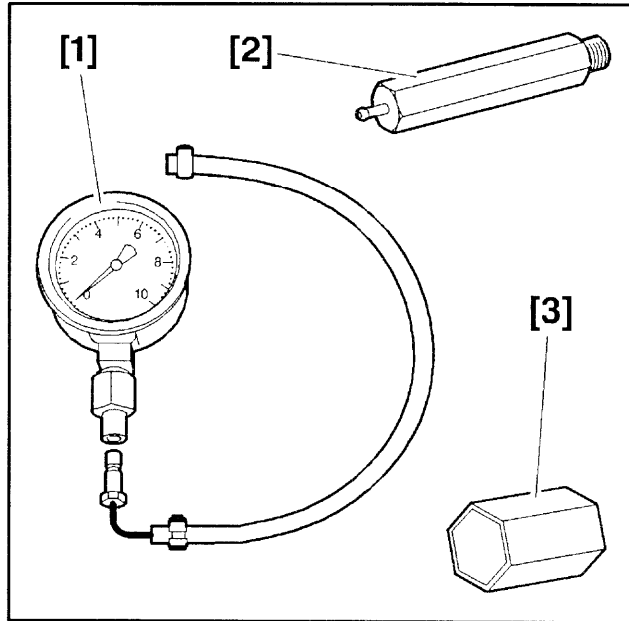


Fig : E5-P047C

[1] pressure gauge for checking the oil pressure (2279-T bis) (tool box 4103-T).

[2] engine oil pressure inlet union 4156-T.

[3] 22 mm socket 5709T.B2 (tool box 5709-T).

### 2 - PRESSURE CHECKING

Oil pressure is checked with the engine hot after checking the oil level.

Disconnect the oil pressure switch.

Remove the oil pressure switch, using tool [3].

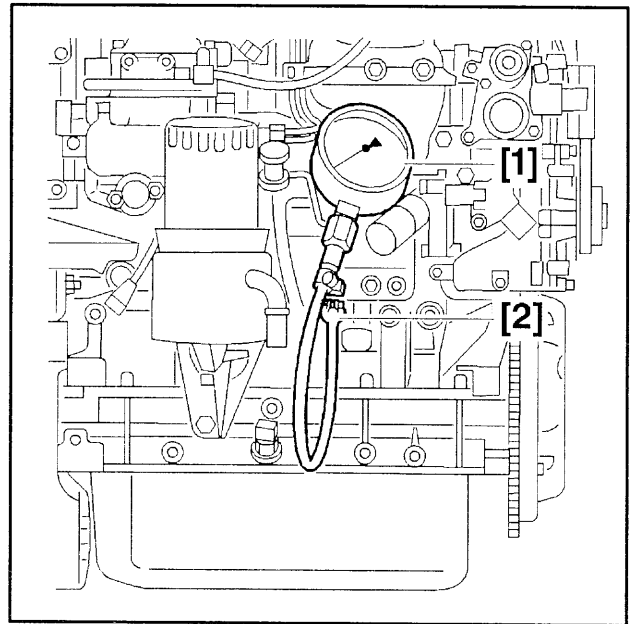


Fig : B1FP00YC

Position :

- union [2]
- the flexible hose

Connect pressure gauge [1].

Connect a tachometer.

Read the pressures.

Remove :

- pressure gauge [1]
- the flexible hose
- union [2]
- the tachometer

Refit the oil pressure switch using a new joint. Utilise tool [3]. Tighten to 2.25 m.daN.

Remove tool [3].

Reconnect the pressure switch.

## REMOVING – REFITTING THE OIL PUMP

Tooling – engine mounting assembly (\*) :

- setting rod 5714-TP2
- spacer 5714-TP1

Tooling – auxiliary equipment drive belt (\*) :

- setting rod 5714-TQ
- spanner 5714-TR
- tensioning spanner 5714-TS

**NOTE :** (\*) tool box 5711-T.

### 1 – REMOVAL

Lift and support the vehicle with the front wheels suspended.

Unclip the battery trim cover :

- 2 attachment points, front side end
- 1 attachment point marked by an arrow towards the air filter (using a screwdriver)

Disconnect the battery negative terminal.

Remove :

- the protective plate from under the engine
- the RH front road wheel
- the engine protection plate situated under the R.H. front wheelarch
- the R.H. front mud shield

Drain the engine oil off.

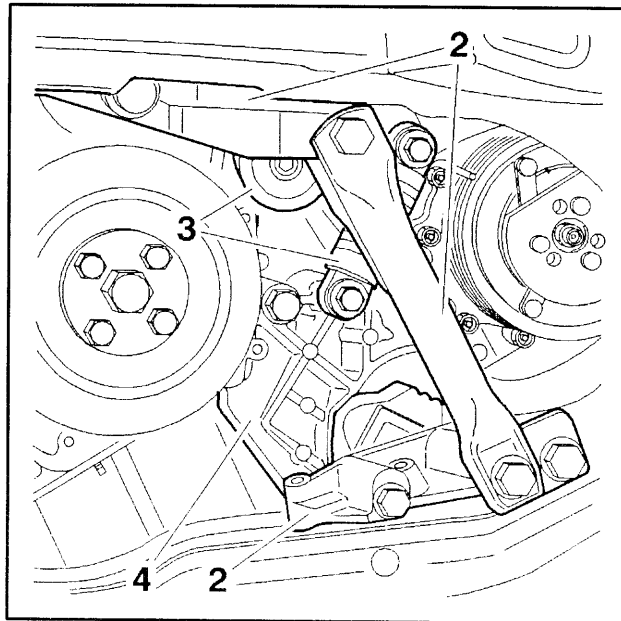


Fig : B1FP014C

Hold the engine in place with the help of a workshop crane.

Remove :

- engine mounting (2) (see the relevant operation)
- automatic roller tensioner (3)
- mounting bracket (4)

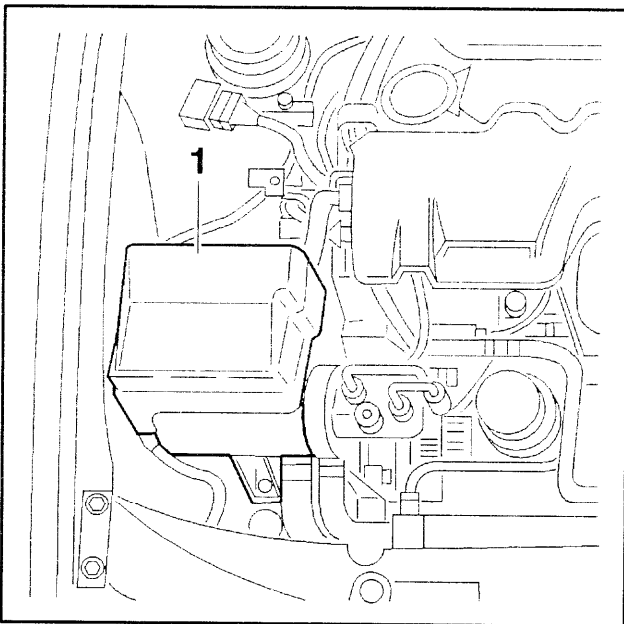


Fig : B1BP04GC

Withdraw the E.C.U.s from E.C.U. tray (1).

Remove :

- E.C.U. tray (1)
- the auxiliary equipment drive belt (see the relevant operation)

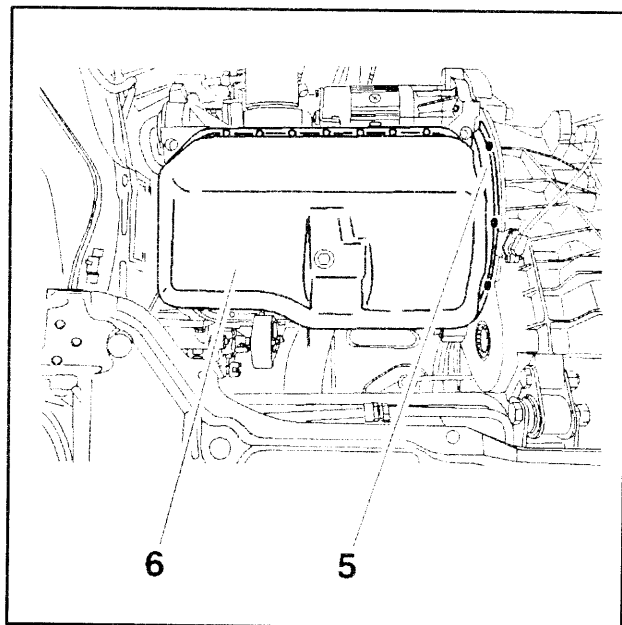


Fig : B1FP015C

Remove the flywheel protection shield (5).

Slightly lift the engine.

Withdraw oil sump (6).



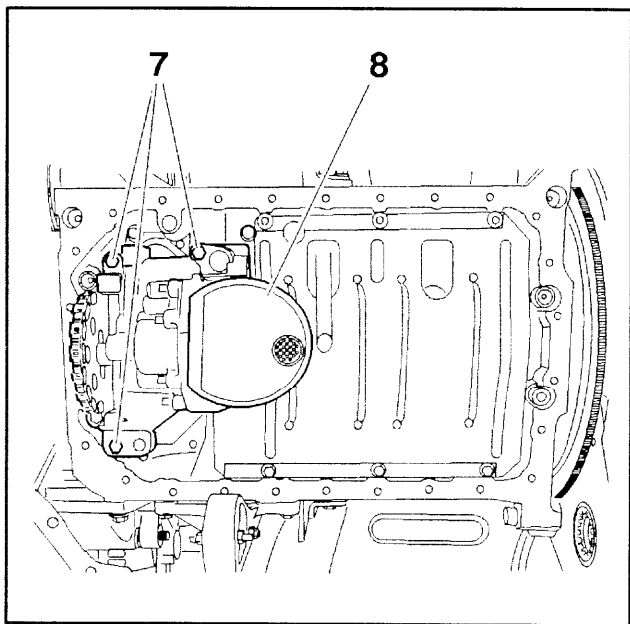


Fig : B1FP016C

Remove :

- screws (7)
- the oil pump (8)

## 2 – REFITTING

**ATTENTION** : Check that the dowel is in position.

Relocate the oil pump, engaging the drive pinion in the chain.

Tighten the bolts (7) to 0.9 m.daN.

Clean the joint faces of the sump and the cylinder block.

Do not use abrasives or sharp tools on the joint faces.

Coat the oil sump sealing surface with OR : E10 auto-joint.

Fit :

- oil sump (6) ; tighten to 0.8 m.daN
- flywheel protective plate (5)

Slightly lower the engine.

Refit bracket (4) together with the flexible stop spindle ; tighten to 5.5 m.daN.

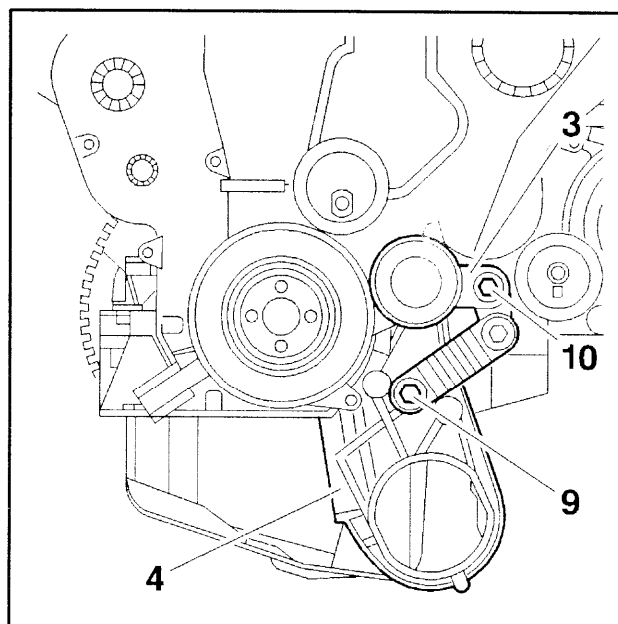


Fig : B1FP017C

Reinstall :

- automatic roller tensioner (3)
- screw (9) ; tighten to 2.3 m.daN
- screw (10) ; tighten to 7 m.daN
- engine mounting (2) (see the relevant operation)

Withdraw the workshop crane.

Fit :

- the auxiliary equipment drive belt (see the relevant operation)
- E.C.U. tray (1)
- the E.C.U.s
- the R.H. front mud shield
- the engine protection plate situated under the R.H. front wheelarch
- the RH front road wheel
- the protective plate under the engine

Return the vehicle to its wheels.

Connect the battery.

Clip in place the battery trim cover.

Refill the engine with oil and top up to level.

**NOTE** : Disconnect the injection double relay.

Rotate the engine with the starter and stop when the oil pressure warning lamp has gone out.

Reconnect the injection double relay.