

## REMOVING - REFITTING : ENGINE AND GEARBOX ASSEMBLY

**URGENT** : Observe the safety and cleanliness recommendations.

**CAUTION** : After switching off the ignition: wait 15 minutes before disconnecting the battery, to ensure that the initialisations of the various ECUs are memorised.

**URGENT** : Wait at least one hour before carrying out any work on the exhaust line.

### 1. Recommended tools

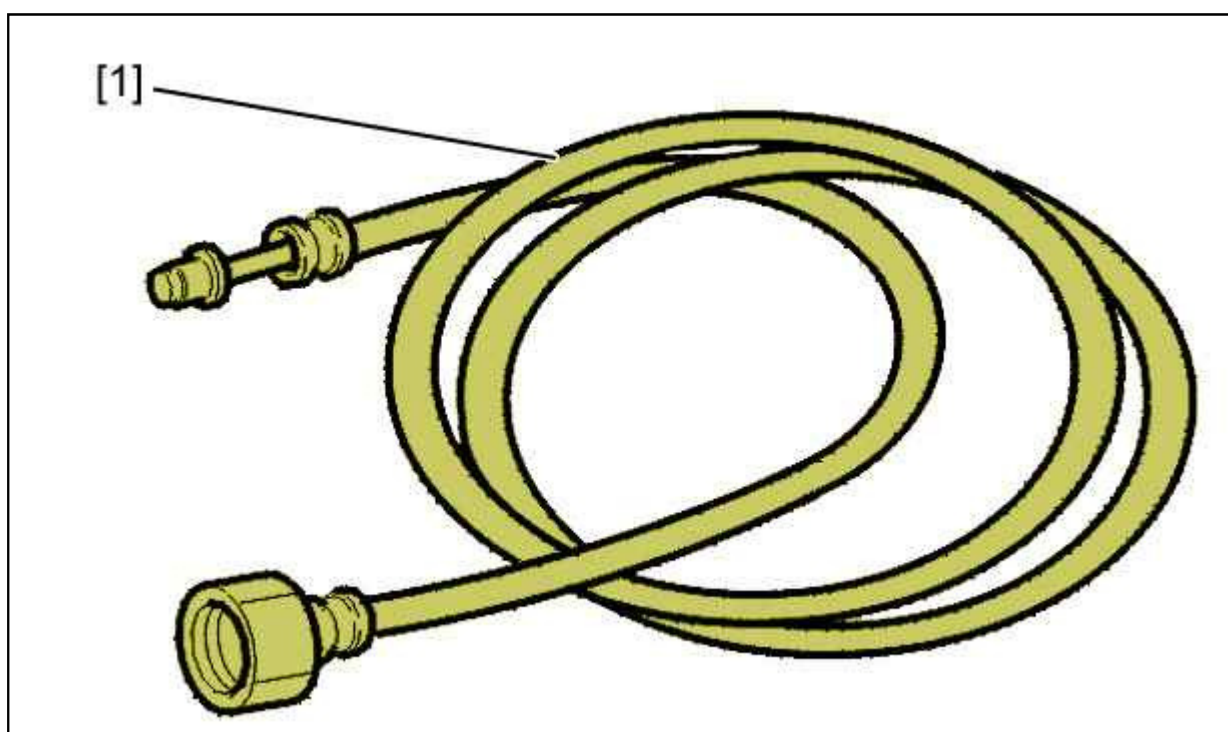


Figure : E5AP377D

[1] Pipe with adaptor for SHRADER valve (-).0141-T1.

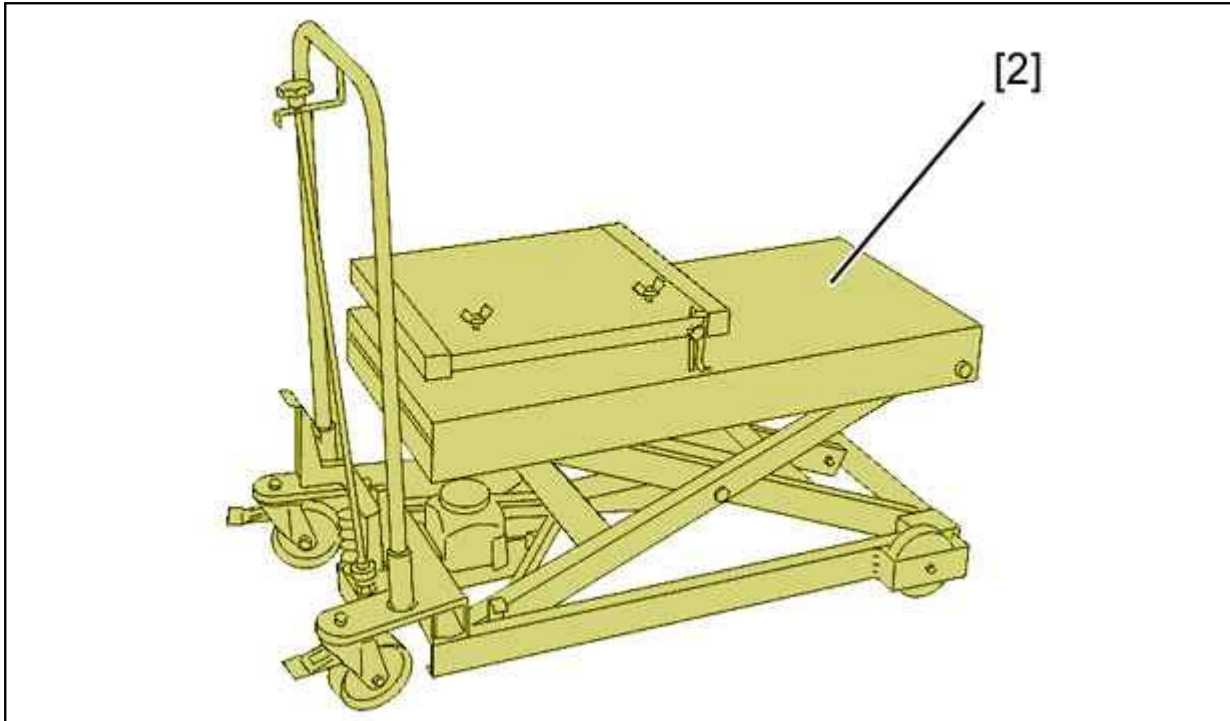


Figure : E5AP3T7D

[2] lifting bench (-).0004.

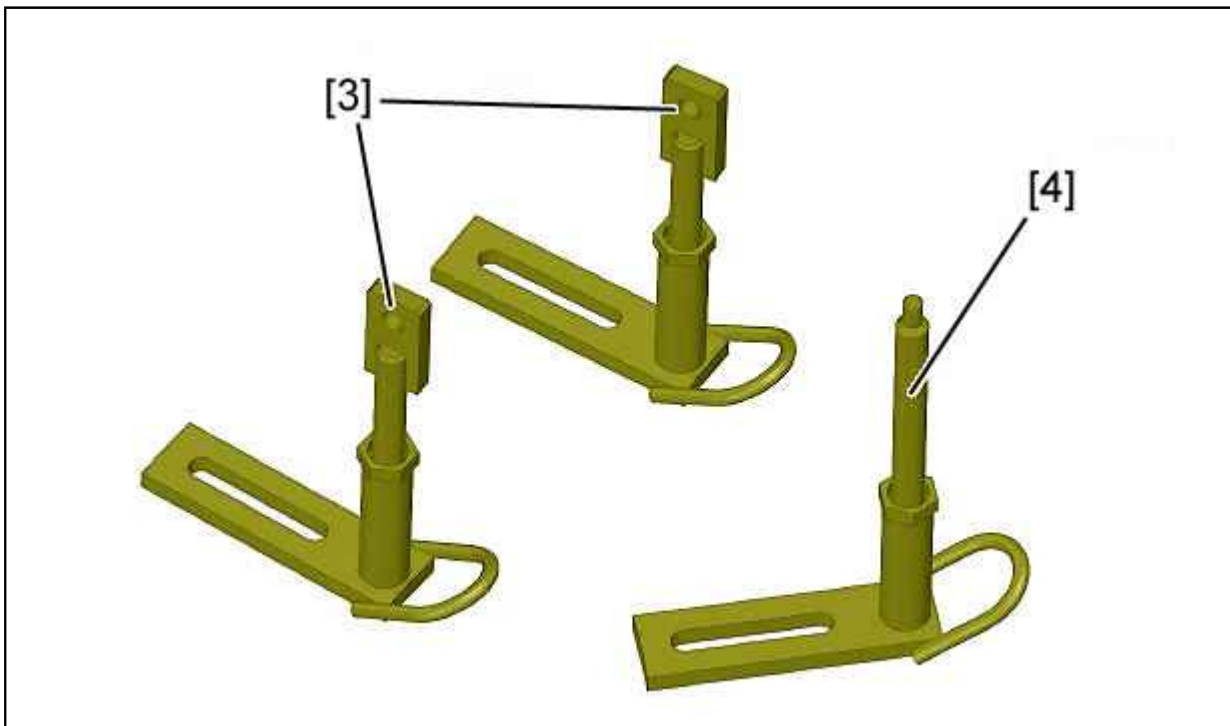


Figure : E5AM001D

[3] set of retaining supports (-).0005-C.

[4] Engine bearing support (-).0005-G.

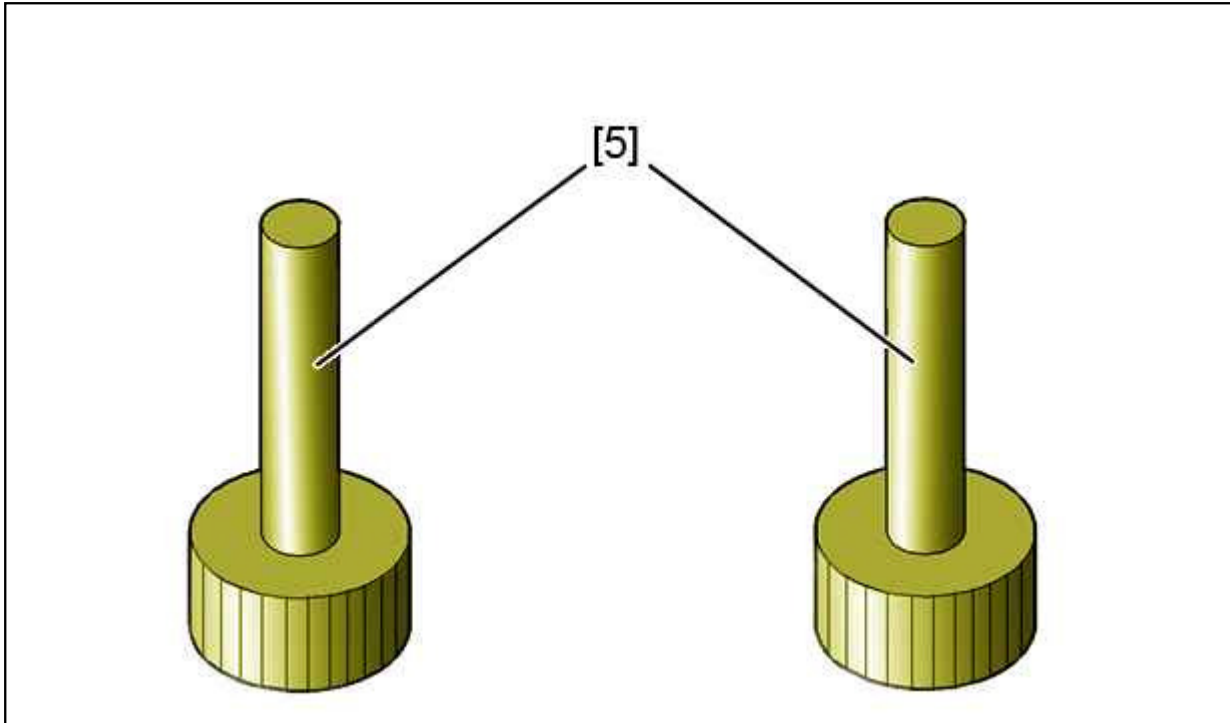


Figure : E5AP2QWD

[5] 2 plugs for click-fit unions (-).1520.

## 2. Removing

Place the vehicle on a 2 -post lift.

**Drain the cooling system** ⓘ .

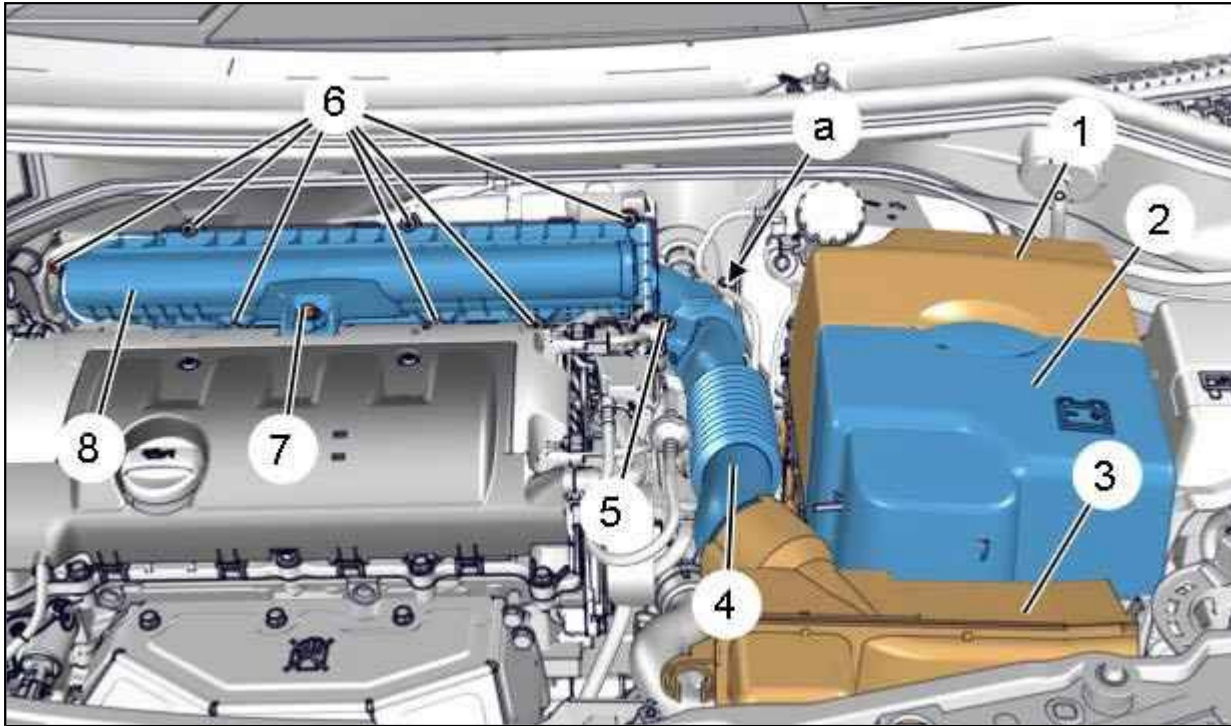






Figure : B1BM0GYD

Remove : The battery cover (2).

Disconnect the battery.

Remove :

- **The front bumper** 
- **The headlamps** 
- **The drive shafts** 
- **The gearbox controls** 
- The protective casing (1)

Unclip : The vacuum circuit pipe (at "a").

Remove :

- The air resonator (3)
- The air inlet hose fixing bolt (5)
- The air entry union (4)
- The air filter cover fixing bolts (6), (7)
- The air filter cover (8)

Disconnect the connectors (Engine management ECU supply harnesses ).

Remove :

- The engine management ECU
- The battery

Unclip the electrical harnesses from the battery tray.

Remove the battery tray .

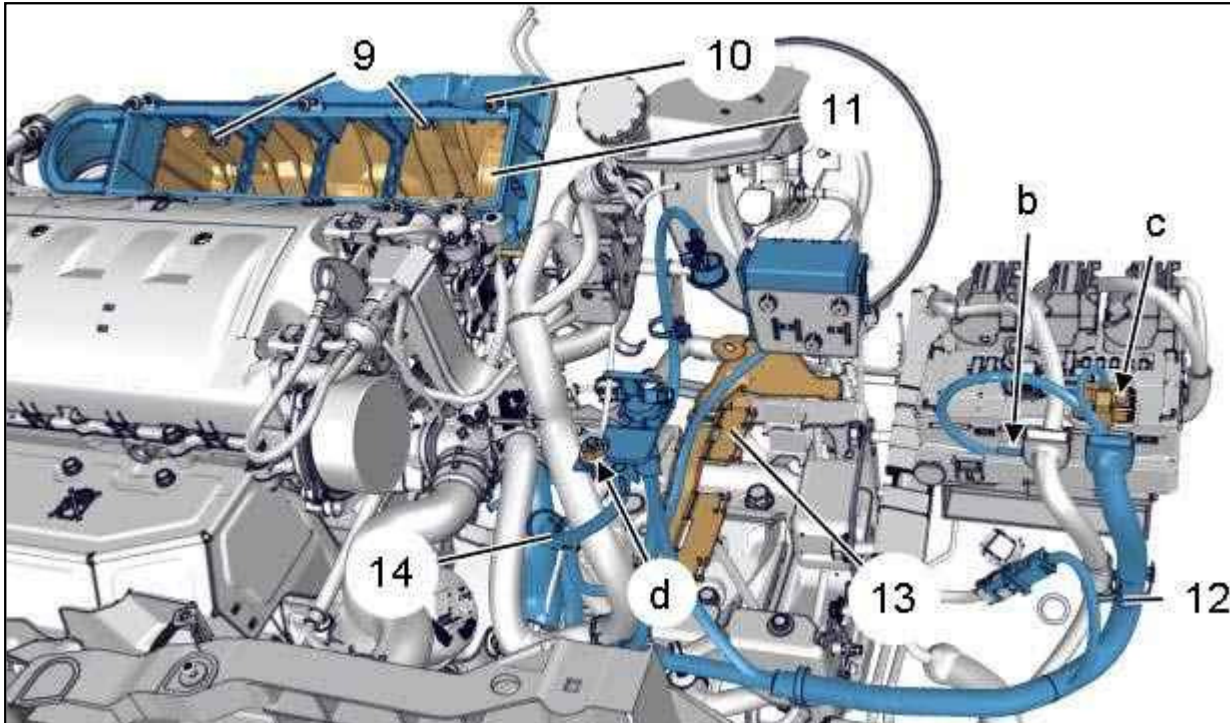


Figure : B1BM0GZD

Remove :

- The bolts (9)
- The intermediate mounting (10)
- The air filter housing (11)

**CAUTION :** Fit plugs at the inlet manifold air inlet.

Disconnect :

- The terminal block harness (12) (at "b", "c")
- The engine electrical harness (14) (at "d")

Remove the harness support (13).



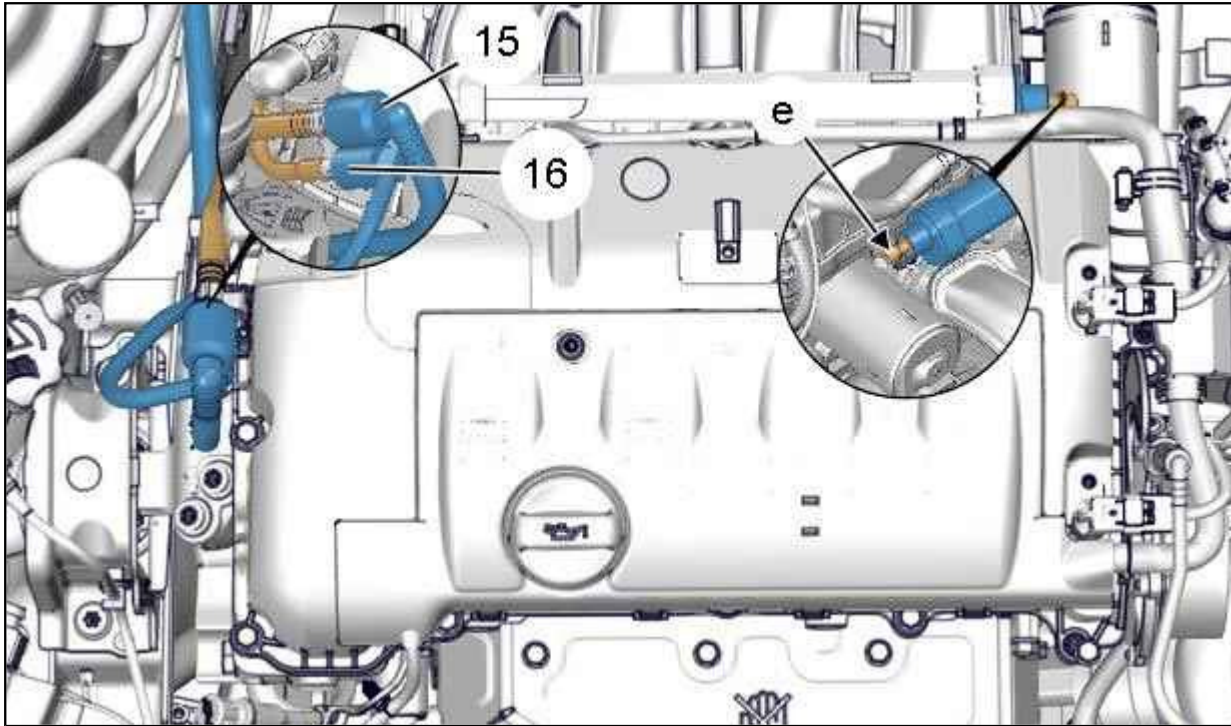


Figure : B1BM0H0D

**URGENT** : Drop the fuel pressure by coupling the end of tool [1] on the SCHRADER valve and collect the petrol in a container (at "e").

**CAUTION** : Before uncoupling, clean all the unions on the low pressure circuit .

Uncouple the fuel pipes (15), (16).

**CAUTION** : Plug the fuel supply and return pipes (15), (16) ; Using tool [5].

Disconnect :

- The earth braid of the gearbox onto the chassis
- The brake servo unit vacuum pipe

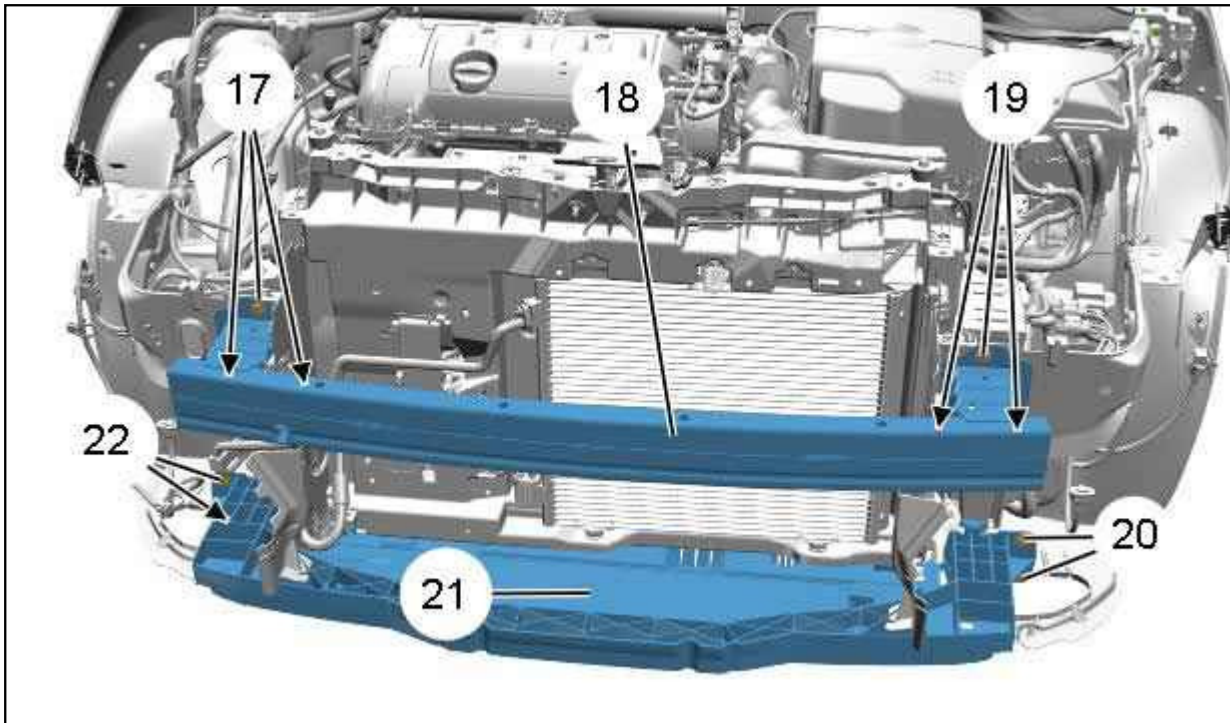


Figure : B1BM0H1D

Remove :

- The bolts (17), (19)
- The cross beam (18)
- The bolts (20), (22)
- The cross beam (21)

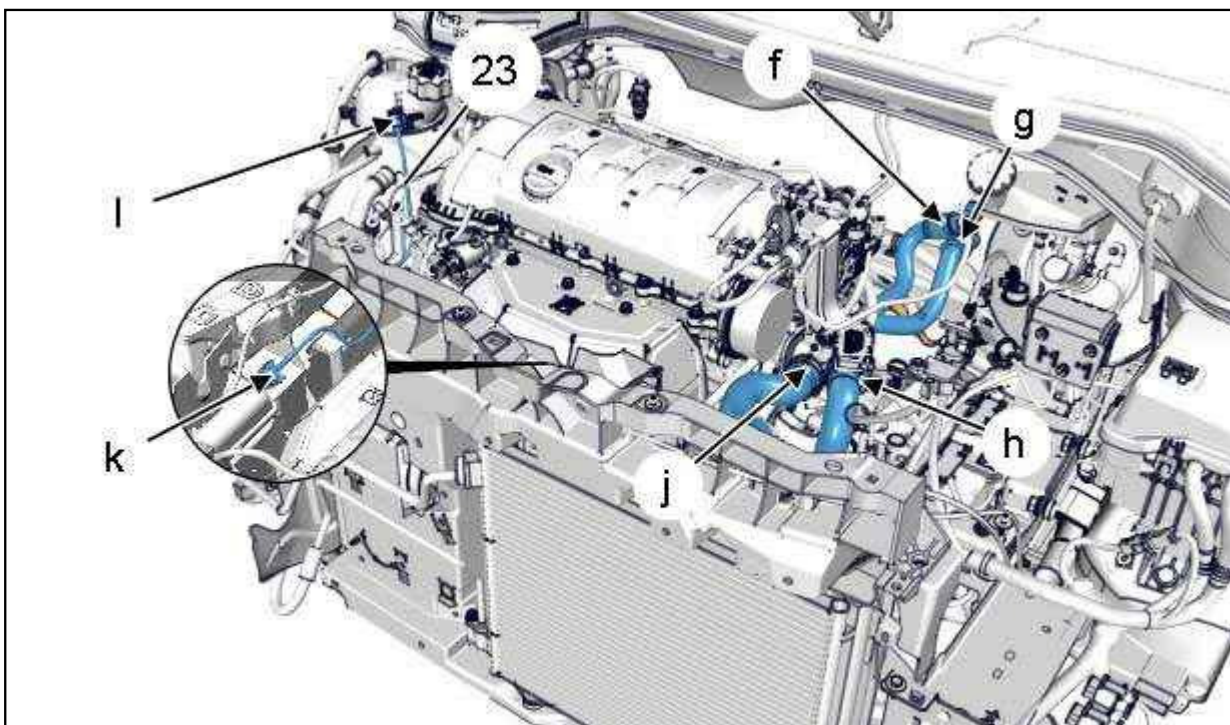


Figure : B1BM0H2D

Uncouple the radiator degas pipe (23) (at "l", "k").

Remove : The expansion pipe .

Uncouple :

- The heater matrix inlet and outlet hoses (at "f", "g")
- The bottom and top hoses from the radiator (at "h", "j")

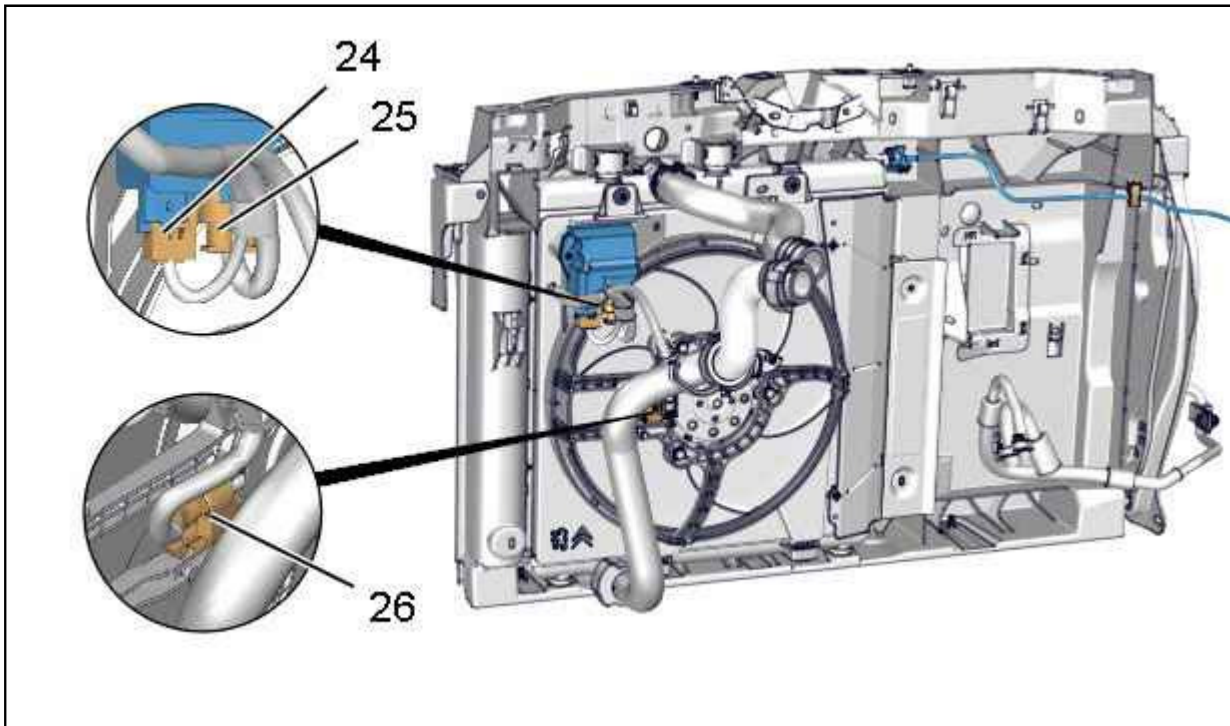


Figure : B1BM0H3D

Unplug :

- The connectors (24), (25) (Fan relay)
- The connector (26) (Fan )

Unclip the cable from its location.



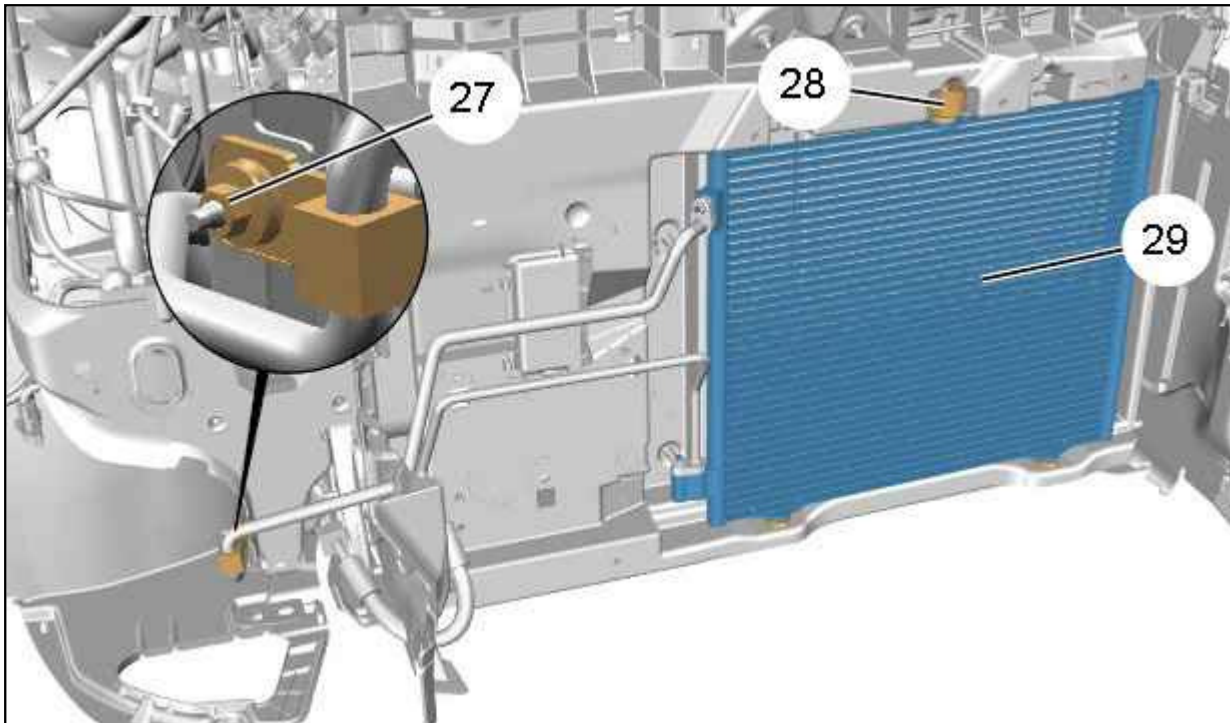


Figure : B1GM03VD

Remove : The fixing of the air conditioning condenser pipes (27).

Unclip and remove : The air conditioning condenser (28) fixing .

Move forward and clip the air conditioning condenser (29) taking care not to damage the pipes .

**CAUTION :** Protect the air conditioning condenser (29).

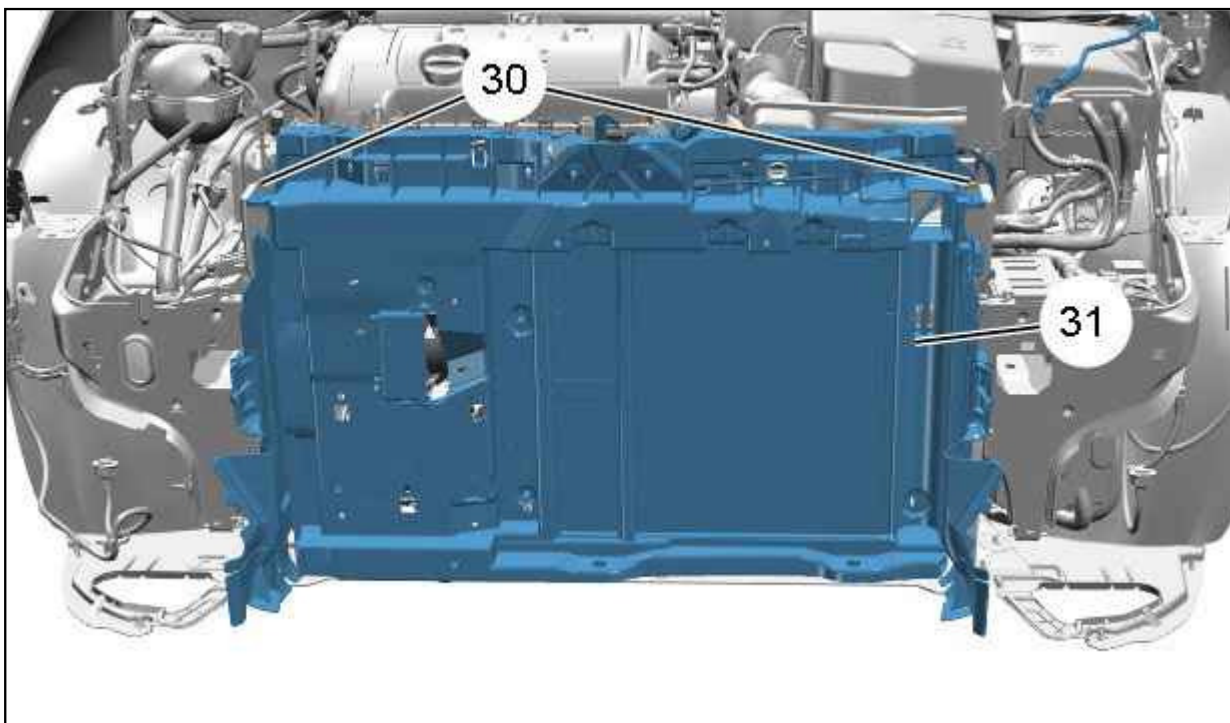


Figure : B1GM03WD

Remove :

- The mountings (30)
- The cooling box (31)
- The clip fixing the exhaust line close to the rubber pipe

Release the exhaust system from the front and intermediate mountings .

**CAUTION** : Protect the rear lower panel to prevent any damage on contact with the exhaust silencer.

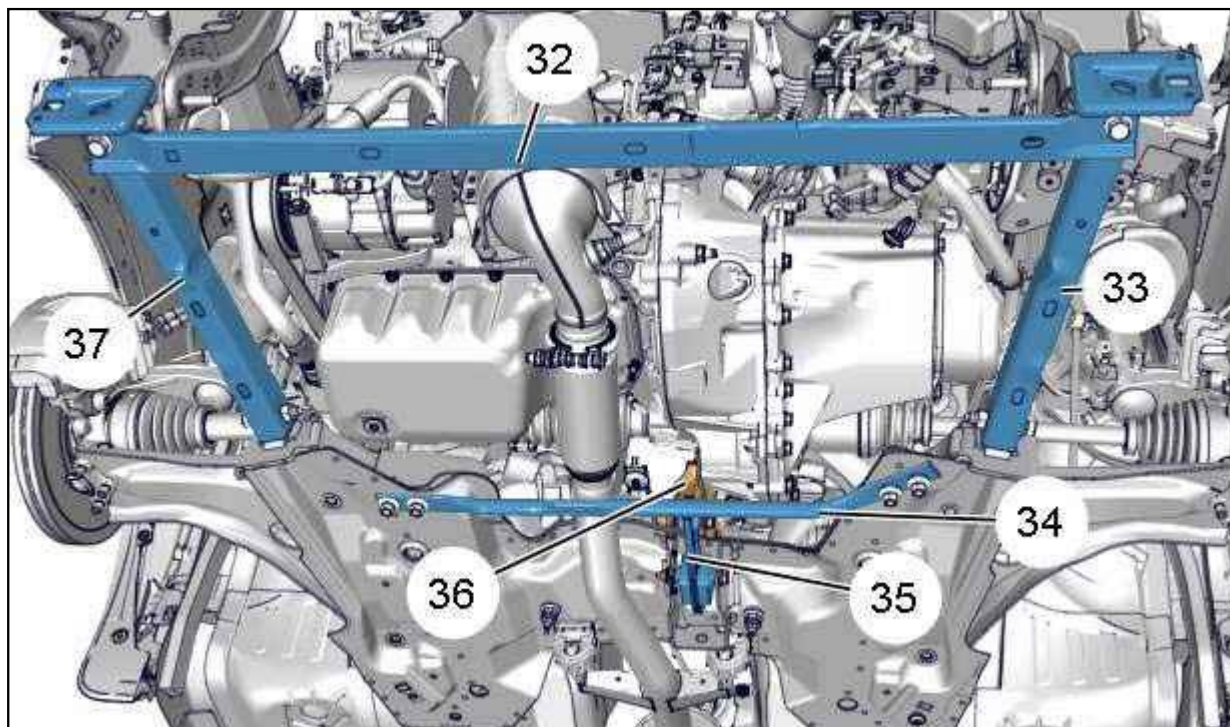


Figure : B1BM0H4D

Remove :

- The front counter-frame (32)
- The subframe extensions (33), (37)
- The spacer bar (34)
- The reaction link (35)
- The yoke fixing (36) the torque reaction rod onto the gearbox
- **The accessories drive belt** ⓘ

Move aside and clip the exhaust line (Left side of vehicle) (To remove the engine-gearbox assembly).

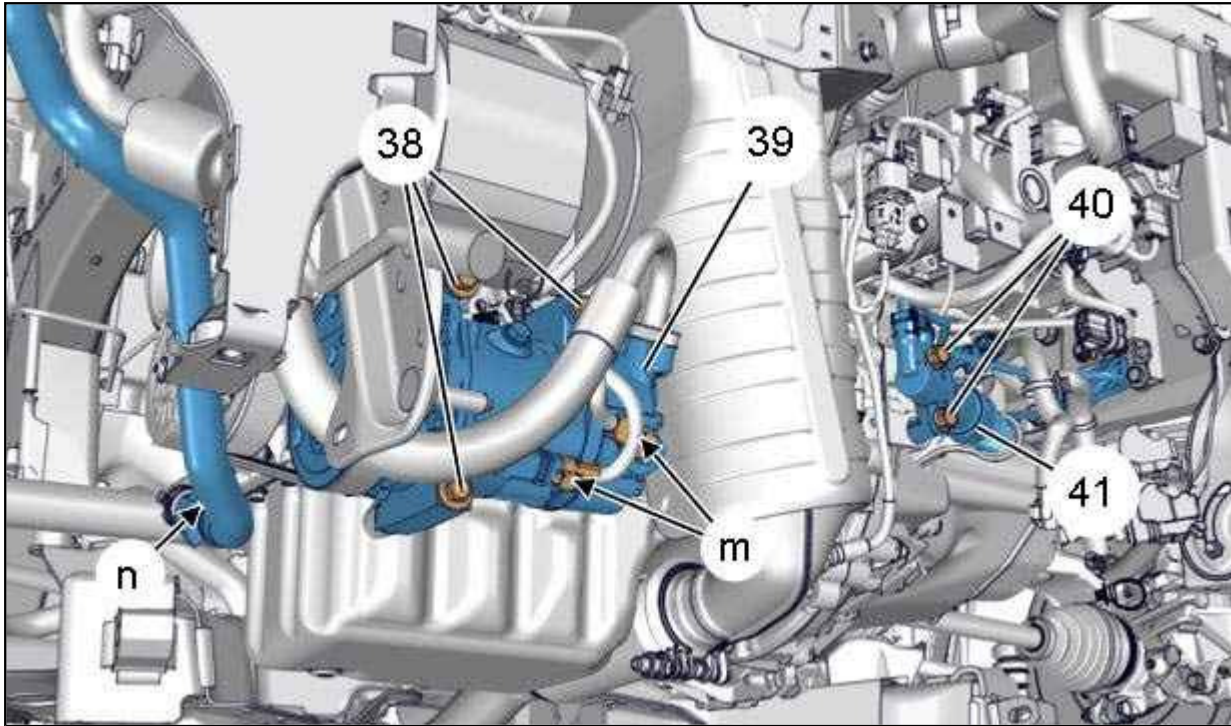


Figure : B1BM0H5D

- Remove the bolts (40).
- Remove and move aside the hydraulic clutch slave cylinder (41).
- Disconnect the air conditioning compressor (39) connectors (at "m").
- Remove the fixings (38) from the air conditioning compressor (/).
- Move aside and secure the air conditioning compressor (39).
- Uncouple the coolant inlet pipe from the coolant pump (at "n").



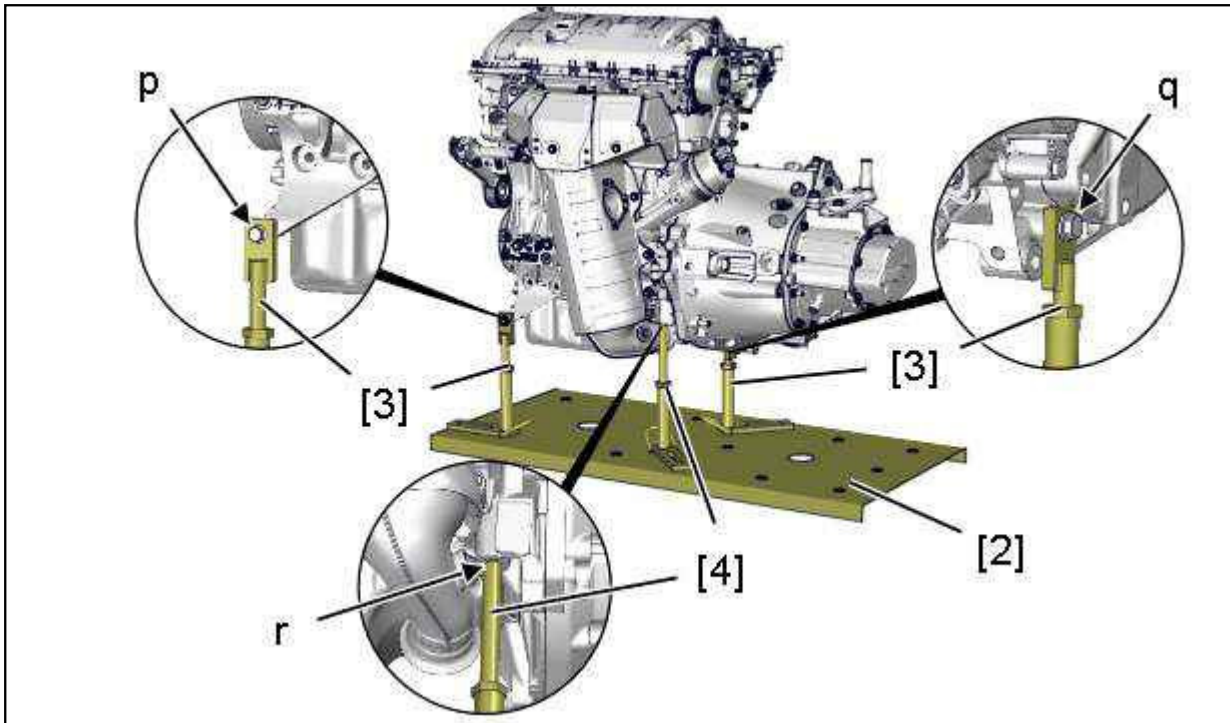


Figure : B1BM0H6D

Position :

- The tools [3] (at "p", "q")
- The tool [4] (at "r")

Centre the lifting bench [2] beneath the engine.

Fix the tools [3], [4] to the lifting table [2] (Raise the tool ) (If necessary).



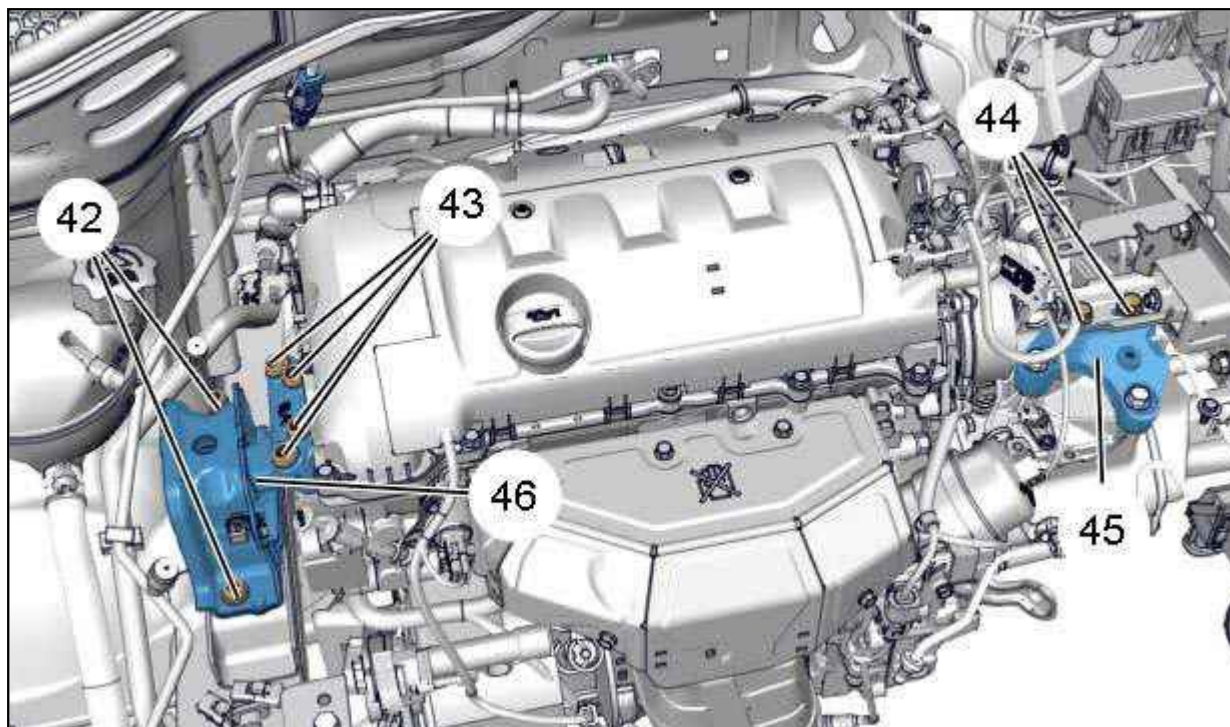


Figure : B1BM0H7D

Remove :

- The bolts (42), (43)
- Upper right-hand engine support (46)
- The bolts (44)
- The gearbox mounting (45)

**CAUTION :** Ensure that there is no fouling between the engine-gearbox assembly and the body.

Remove the power unit assembly (From below the vehicle).

### 3. Refitting

**CAUTION :** Ensure that there is no fouling between the engine-gearbox assembly and the body.

Fit :

- The power unit assembly
- The gearbox mounting (45)
- The bolts (44)
- Upper right-hand engine support (46)
- The bolts (42), (43)
- The yoke fixing (36) the torque reaction rod onto the gearbox
- The reaction link (35)

**Tighten to the specified torque ⓘ : The engine-gearbox suspension assembly ⓘ .**



Withdraw the lifting bench [2] from under the vehicle.

Remove the tools [3], [4].

Reposition the exhaust system at the front and intermediate mountings.

Fit :

- The clip of the exhaust flexible pipe ; Tightening to  $2,5 \pm 0,3$  daN.m
- The air-conditioning compressor (39)

- The air conditioning compressor (39) fixings (38) ; **Tighten to the specified torque** 
- **The accessories drive belt** 

Connect the connectors of the air conditioning compressor (39) (at "m").

Refit the hydraulic clutch slave cylinder (41).

Couple up : The coolant pump coolant inlet pipe (at "n").

Fit :

- The spacer bar (34) ; Tighten to the specified torque
- The subframe extensions (33), (37) ; Tighten to the specified torque
- The front counter-frame (32) ; Tighten to the specified torque
- The cooling box (31)
- The mountings (30)
- The air conditioning condenser (29) taking care not to damage the pipes
- The fixing of the air conditioning condenser pipes (27)

Fit - Refasten : The air conditioning condenser (29) fixing (28) (On the cooling cassette).

Clip in place : The bonnet opening control cable .

Connect :

- The connector (26) (Fan )
- The connectors (24), (25) (Fan relay)

Refit and couple : The radiator (23) degas pipe (at "l", "k").

Couple up :

- The heater matrix inlet and outlet hoses (at "f", "g")
- The bottom and top hoses from the radiator (at "h", "j")

Fit :

- The cross beam (21)
- The screws (20) and (22) ; Tightening to  $2 \pm 0,5$  daN.m
- The cross beam (18)
- The bolts (17), (19) ; Tightening to  $2 \pm 0,5$  daN.m
- The earth braid of the gearbox onto the chassis
- The brake servo unit vacuum pipe

**N.B. : Remove the protective plugs [5] on the fuel circuit supply and return unions (15), (16).**

Connect the fuel pipes (15), (16).

Refit electrical harness support (13).

Reconnect :

- The engine electrical harness (14) (at "d")
- The terminal block harness (12) (at "b", "c")

**CAUTION : Remove : The plug at the inlet manifold inlet.**

Fit :

- The air filter housing (11)
- The intermediate mounting (10)
- The bolts (9)
- The battery tray

Clip in place : The electrical harnesses from the battery tray ; Using new straps .

Fit :

- The battery
- The engine management ECU

Connect the connectors (Engine management ECU supply harnesses .

Fit :

- The air filter cover (8)
- The air filter cover fixing bolts (6), (7)
- The air entry union (4)
- The air inlet hose fixing bolt (5)
- The air resonator (3)

Clip : The vacuum circuit pipe (at "a").

Fit :

- **The gearbox controls** ⓘ
- **The drive shafts** ⓘ
- **The front bumper** ⓘ
- **The headlamps** ⓘ

### **Fill and bleed the cooling system** ⓘ .

Connect the battery.

Fit :

- The protective casing (1)
- The battery cover (2)

Perform a reading of the autodiagnostic memory ; Using the diagnostic equipment.

Start the engine.

Confirm the absence of abnormal noise.

Check that there are no leaks.

Stop the engine.