

REPAIRS : CLUTCH ACTUATOR

1. Rules to be respected

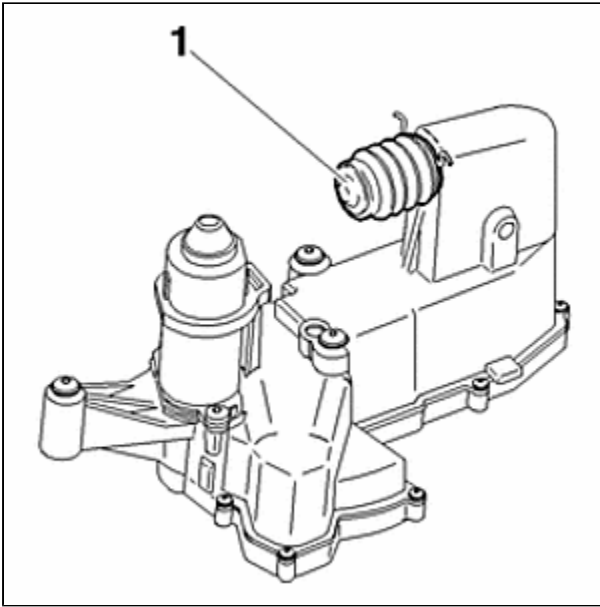


Figure : B2BP051C

1.1. Prohibited operations

- Manipulating the clutch actuator via the push rod (1).
- Compressing and releasing the push rod (1).
- Directly supplying the clutch actuator with a 12V supply source.
- Piloting a removed actuator using a diagnostic tool.
- Putting your fingers on the connector contacts (risk of electrostatic discharge).

1.2. Compulsory operations

CAUTION : Each time you refit the clutch actuator, do a position adjustment (pre-load) and an initialisation (see the relevant operations).

Fitting a clutch actuator that is not adjusted (without pre-compression) causes the following problems :

- Reduction of clutch life
- Rapid destruction of the clutch bearing

2. Preliminary operations

2.1. Closing of the clutch

CAUTION : Ensure that the clutch is closed before removing the clutch actuator (see figure B).

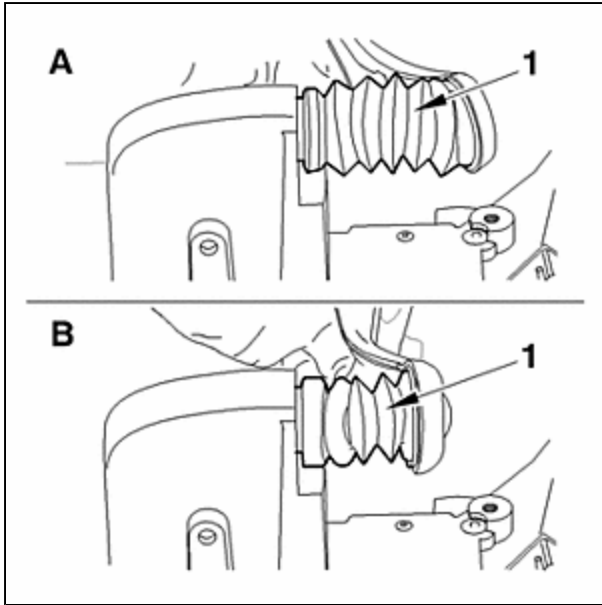


Figure : B2BP052C

Figure A : Rod out = Clutch open (clutch in declutched position).

Figure B : Rod in = Clutch closed (clutch in clutched position).

Perform the following operations :

- Switch on the ignition
- Engage position " N" using the gear selector
- See that the indication " N" appears on the instrument panel
- Switch off the ignition

N.B. : Wait 1 minute for the piloted manual gearbox ECU to deactivate.

CAUTION : Hand-tighten.

Check that the push rod (1) is in the recessed position (clutch closed) (figure B).

If the push rod (1) is in the out position (figure A), close the clutch using the diagnostic tool (see following paragraph).

If the push rod (1) is in the in position (figure B), the clutch actuator can be removed.

2.2. Closing the clutch actuator using the diagnostic tool

Connect a diagnostic tool to the vehicle's diagnostic socket.

Select :

- MA piloted manual gearbox
- Actuator test
- Closing of the clutch
- Switch off the ignition

CAUTION : Hand-tighten.

N.B. : Wait 1 minute for the piloted manual gearbox ECU to deactivate.

Disconnect the battery.

CAUTION : If it is not possible to close the clutch, remove the clutch actuator with caution, the push rod being out due to compression on the clutch fork (figure A) (progressively slacken the fixing screws, holding the actuator at the bottom to prevent it from falling).

3. Removing the clutch actuator

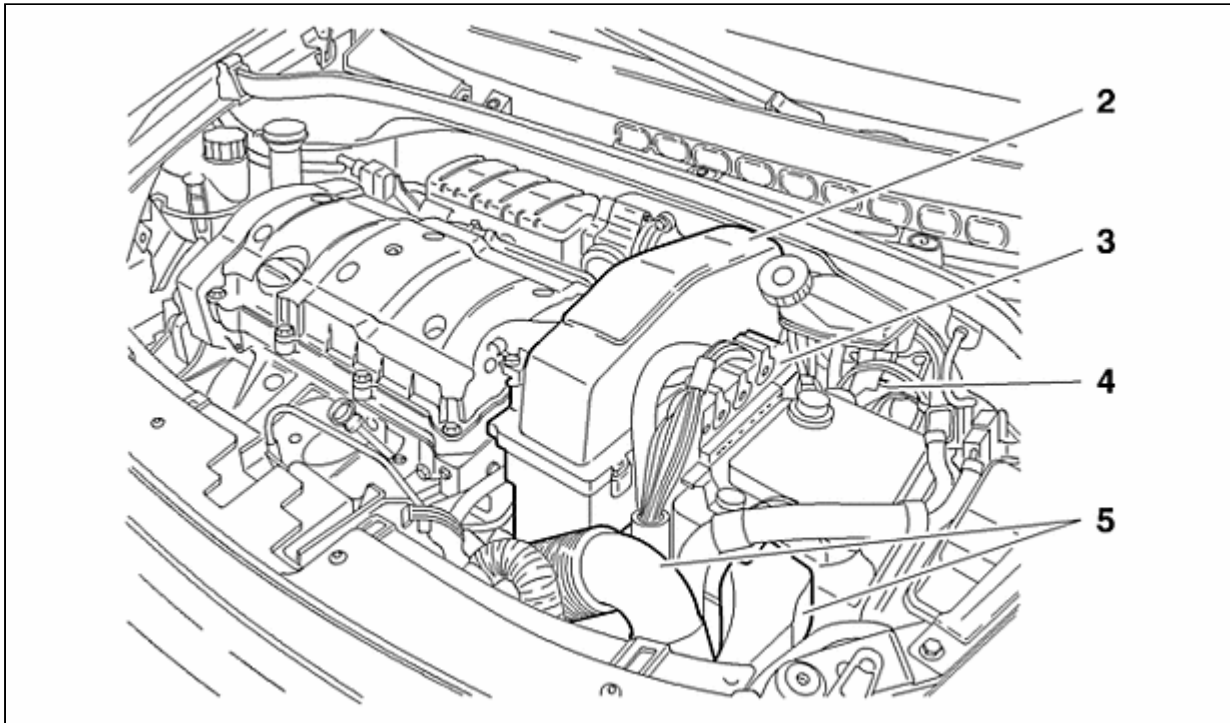


Figure : B1BP2RUD

Disconnect :

- The battery
- The injection ECU (3)
- The electric power steering ECU (4)

Remove :

- Air filter (2)
- The injection ECU (3)
- The battery
- The air duct (5)
- The resonator (5)

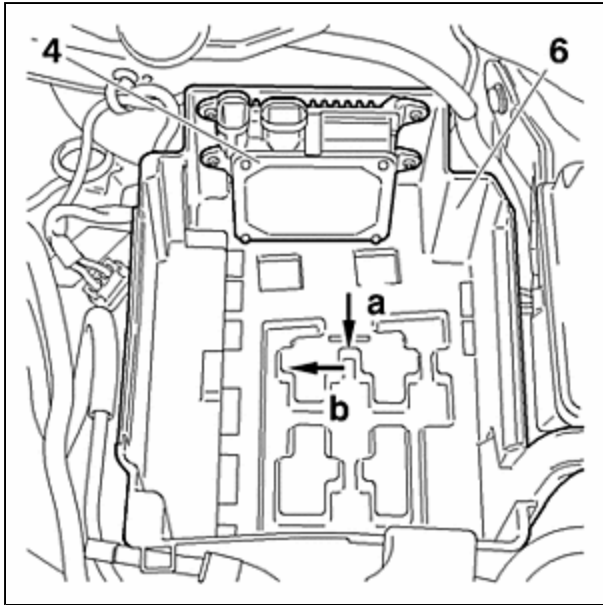


Figure : B1BP2RVC

Detach the electrical harnesses joined to the battery tray (6).
Remove the battery tray assembly (6) and the electric power steering ECU (4).

N.B. : To remove the battery tray, pull at " a" and push at "b" (as per arrows).

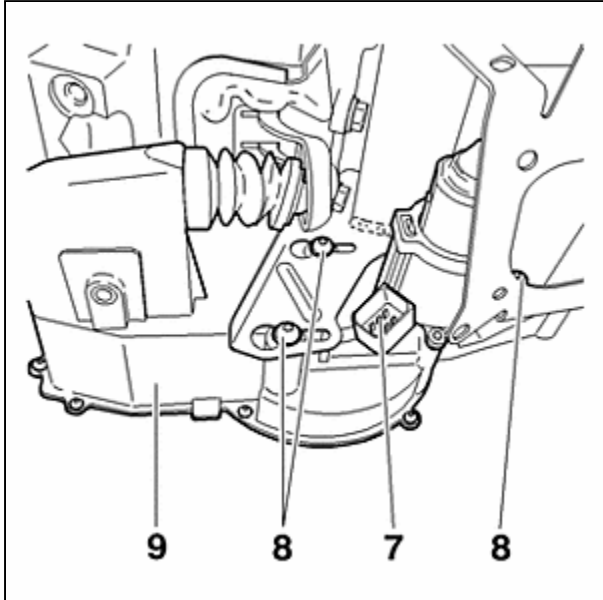


Figure : B2BP053C

Disconnect the connector (7).
Unscrew the bolts (8) without removing them (4 turns maximum).
Move the clutch actuator (9) to release the bolts (8) from the oblong holes.
Remove the clutch actuator (9).

4. Refitting

4.1. Recommended tools

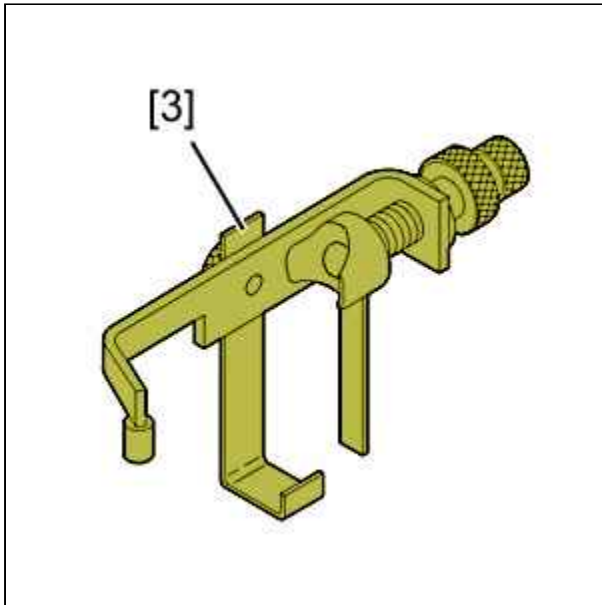


Figure : E5AP265C

Tool for adjusting the piloted manual gearbox clutch actuator G-0317-T.

4.2. Preliminary operations

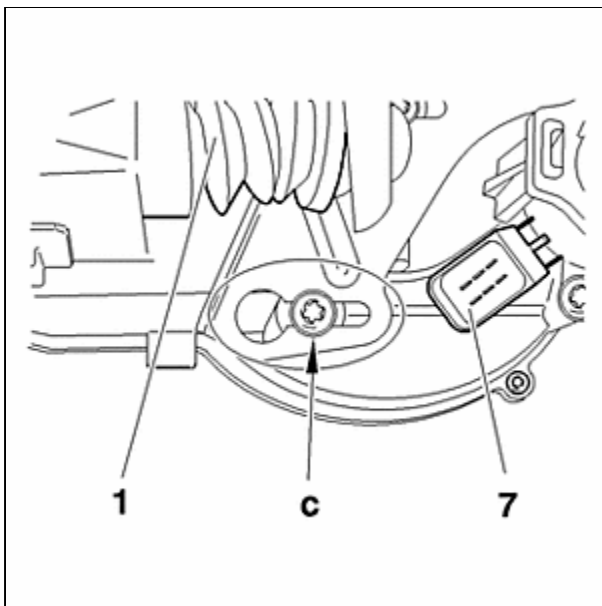


Figure : B2BP054C

Check :

- Check the condition of the push rod protection gaiter (1) (sealing)
- The connector (7) of the clutch actuator (no dampness or dust)
- The surfaces " c " of the 3 fixing screws of the clutch actuator (clean and dry)

4.3. Refitting

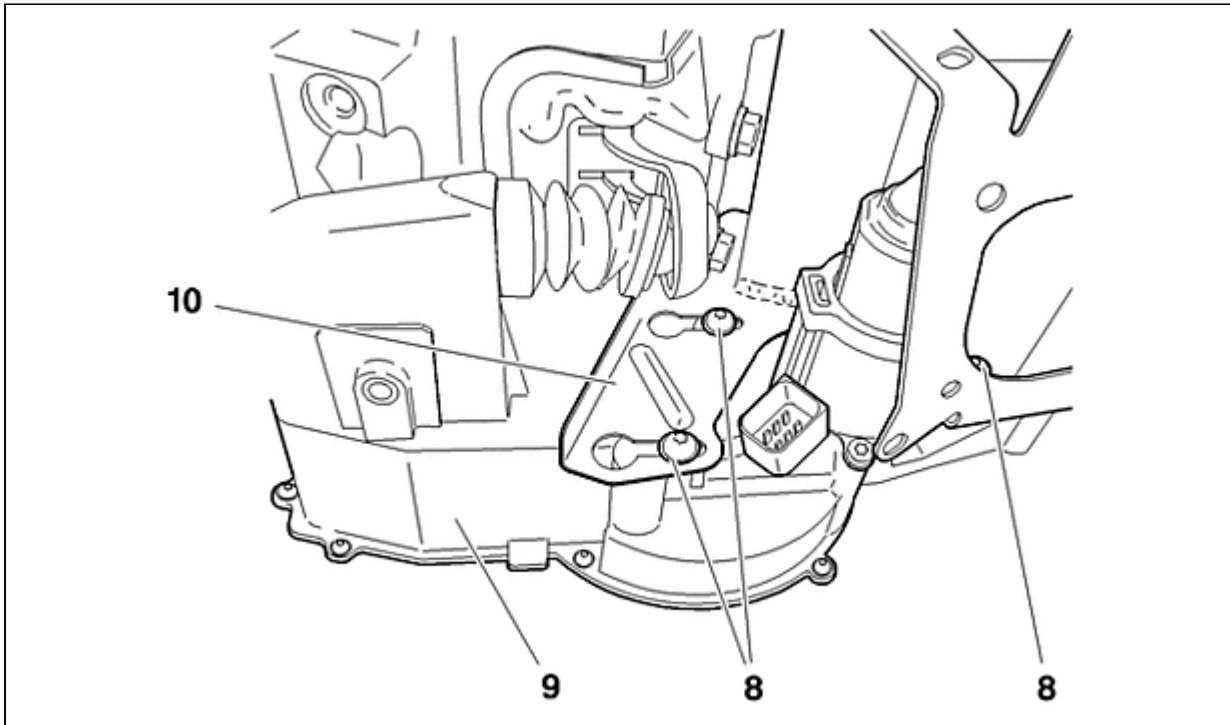


Figure : B2BP06HD

N.B. : New clutch actuator : Fit the bolts (8) on the clutch actuator (9) without tightening them (leave a clearance of 5 mm).

Under the vehicle : Refit the bolts (8) of the clutch actuator (9) in the oblong holes of the support (10).

N.B. : The bolts (8) should go easily into the oblong holes to adjust the actuator.

4.4. Adjustment

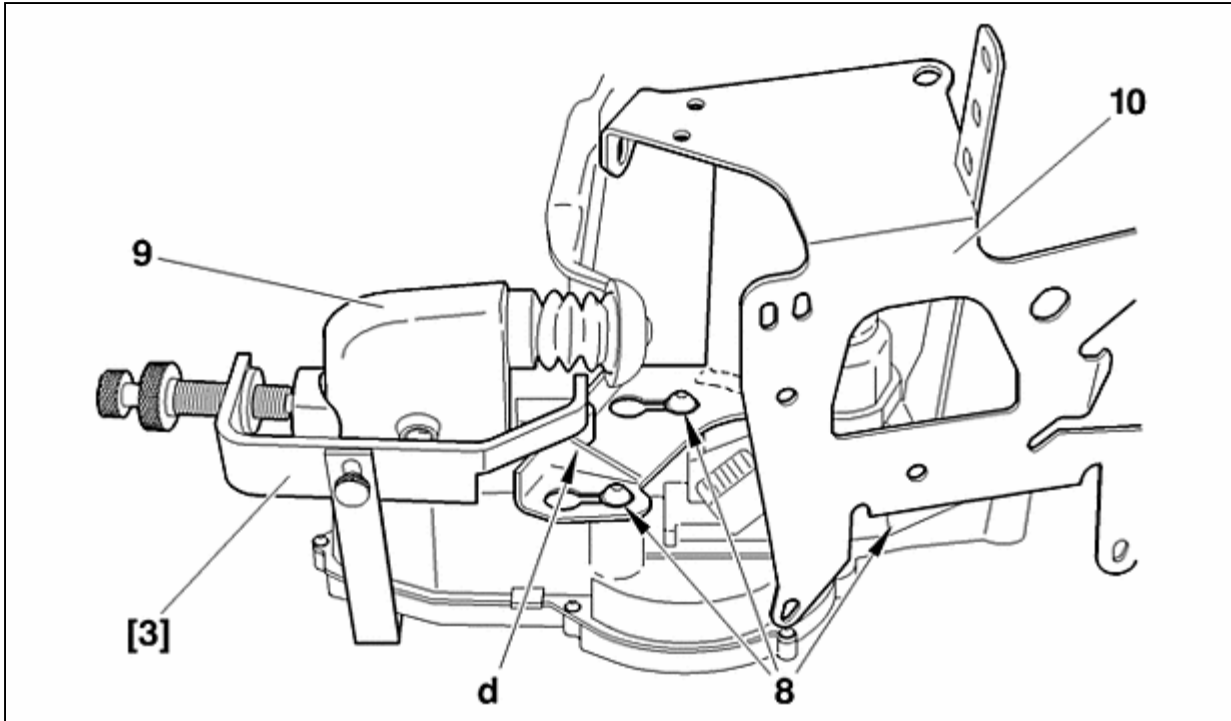


Figure : B2BP05DD

Position tool [3] on the clutch actuator (9).

N.B. : The positioning pin of the tool [3] should be positioned behind the strengthener (at " d").

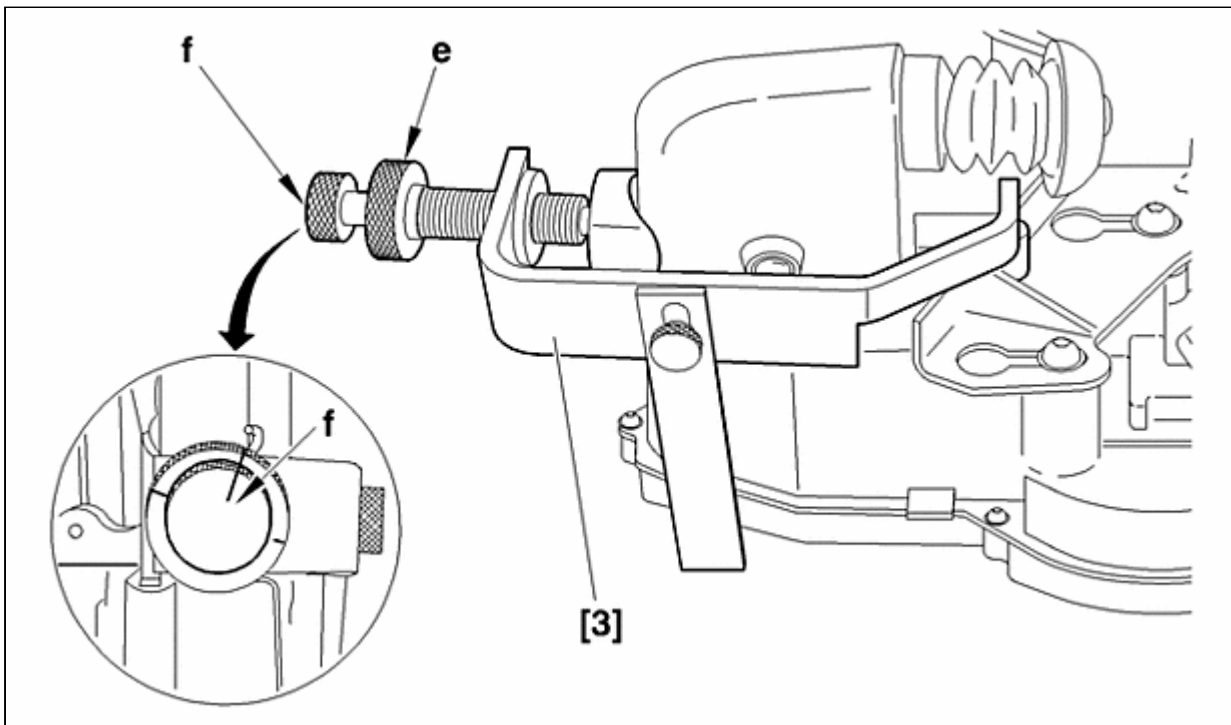


Figure : B2BP056D

Do up the closing screw " e" until the push rod is against the clutch fork.

CAUTION : The nylon shim of the push rod should be centred in the declutch fork.

CAUTION : Reference the position of the screw " f" by means of the markings engraved on it.

Turn the adjusting screw " f" 3 turns.

Check that the clutch actuator moves in the oblong holes of the support (10) (3 mm).

In the engine compartment :

- Tighten the 3 bolts (8) to $1 \pm 0,2$ daNm
- Remove tool [3]
- Connect the connector (7)

Fit :

- Air filter (2)
- The injection ECU (3)
- The battery
- The air duct (5)
- The resonator (5)

Reconnect :

- The injection ECU (3)
- The electric power steering ECU (4)
- The battery

CAUTION : After refitting the clutch actuator, it is necessary to initialise it.

4.5. Checks

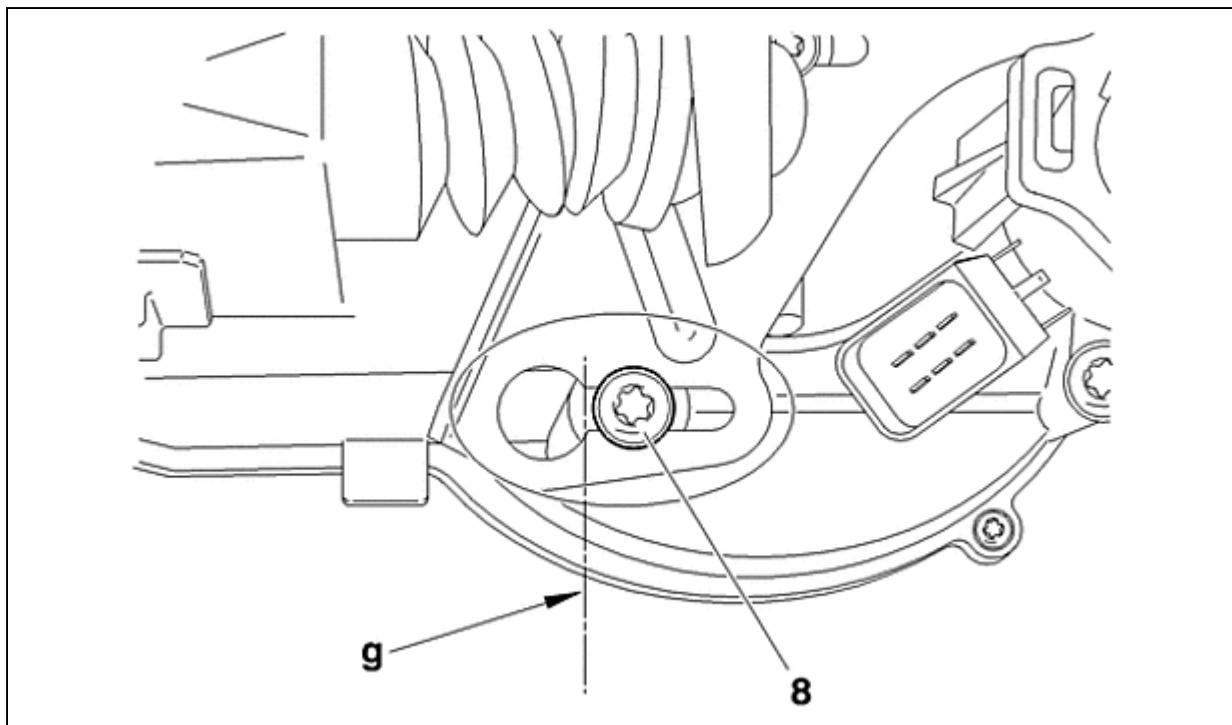


Figure : B2BP06JD

CAUTION : After adjusting the clutch actuator, the head of the bolts (8) should not protrude into the oblong holes (axis " g") (otherwise redo the adjustment).

5. Initialisation of the clutch actuator

There are 2 initialisations :

- Initialisation of the end positions
- Initialisation of the point at which the clutch takes load

This programming must be performed in the following cases :

- Removing-refitting of the clutch actuator
- Replacing of the clutch
- Each time the gearbox ECU is replaced
- If the clutch is juddering

Conditions to be observed :

- Engine stopped
- Ignition on
- Vehicle on a level surface
- Handbrake applied

5.1. Initialisation of the end positions

Perform a global test.

Select :

- Piloted manual gearbox
- Initialisations
- Initialisation of the clutch actuator
- Follow the indications provided by the diagnostic tool

When the initialisation is complete :

- Disconnect the diagnostic tool
- Switch off the ignition
- Wait at least 1 minute for the instrument panel to go out (memorisation of the initialisation)

CAUTION : Do not open the vehicle doors during this phase.

5.2. Initialisation of the point at which the clutch takes load

Start the engine.

~~Front and rear wiper arm extractor 10 :~~

- Engage 1st gear (position 1)
- Select neutral (position N)
- Wait 5 seconds

~~The parking brake is self-adjusting.~~