

## REMOVING - REFITTING : VARIABLE TIMING ACTUATORS

### 1. Location

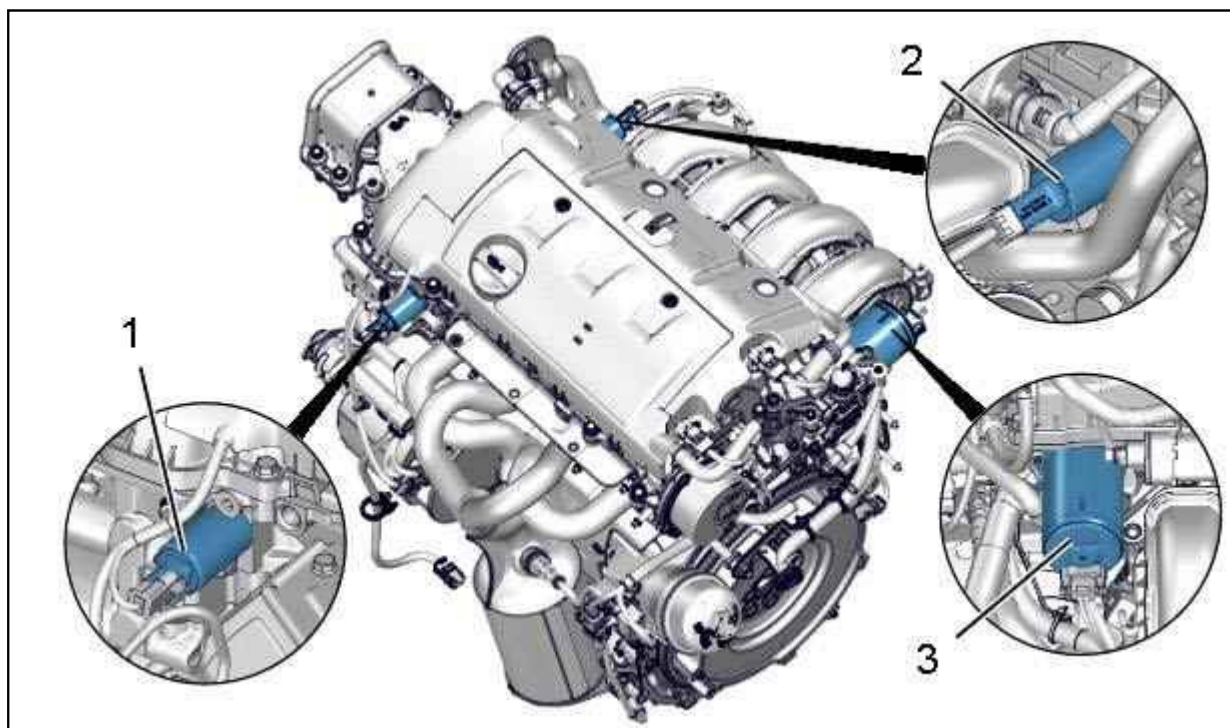


Figure : B1BM0DRD

- (1) Variable timing electrovalve (/) (Exhaust).
- (2) Variable timing electrovalve (/) (Inlet).
- (3) Eccentric shaft actuator .

**N.B. :** Removal of the electrovalve (2) or of the actuator (3) requires removal of the air filter housing.

### 2. Variable timing electrovalve (1) (Exhaust)

#### 2.1. Removing

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

Disconnect the battery.

**CAUTION :** Allow the exhaust line to cool.

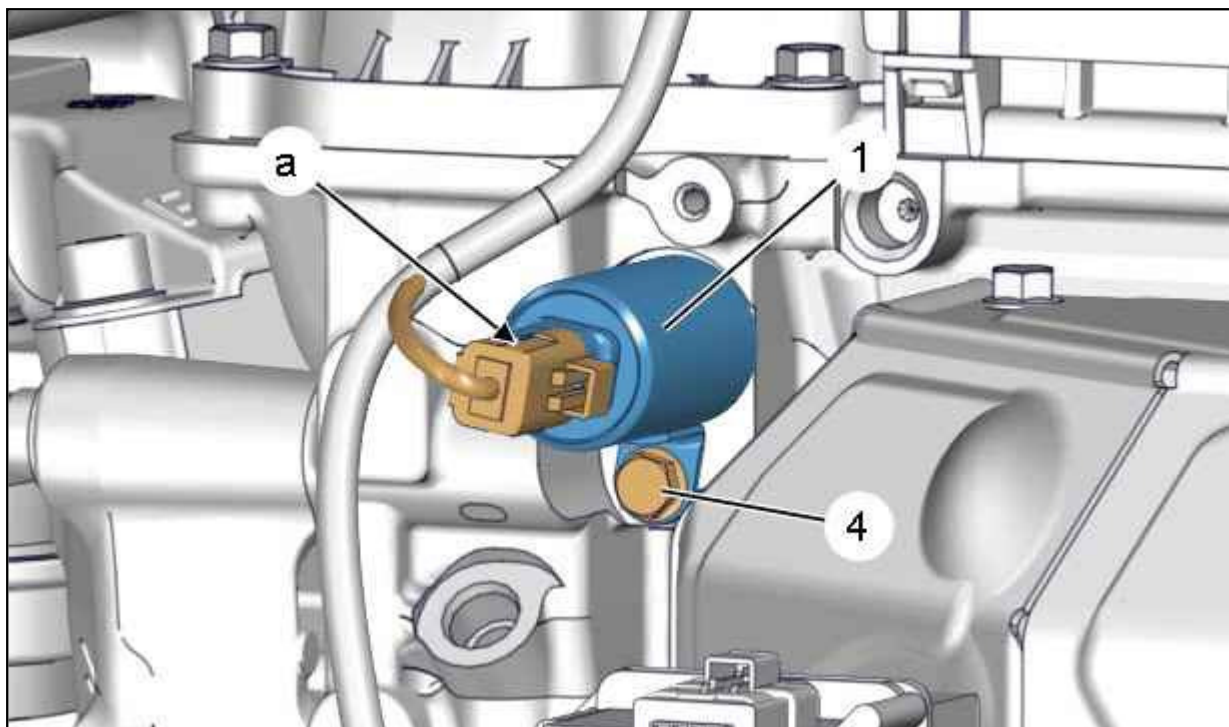


Figure : B1EM044D

Disconnect the connector (at "a").

**N.B. :** Protect the surrounding area using a cloth on removal to absorb the oil which flows out of the opening.

Remove :

- The (4) bolt
- The solenoid valve (1)

## 2.2. Refitting

**N.B. :** Clean the sensor sealing zone and check that it is free of knocks and scratches.

Fit :

- The solenoid valve (1) (equipped with a new seal)
- The (4) bolt ; Tighten to  $0,9 \pm 0,1$  daN.m

Connect the connector (at "a").

Connect the battery.

Check the oil level.

## 3. Variable timing electrovalve (2) (Inlet)

### 3.1. Removing

Disconnect the battery.

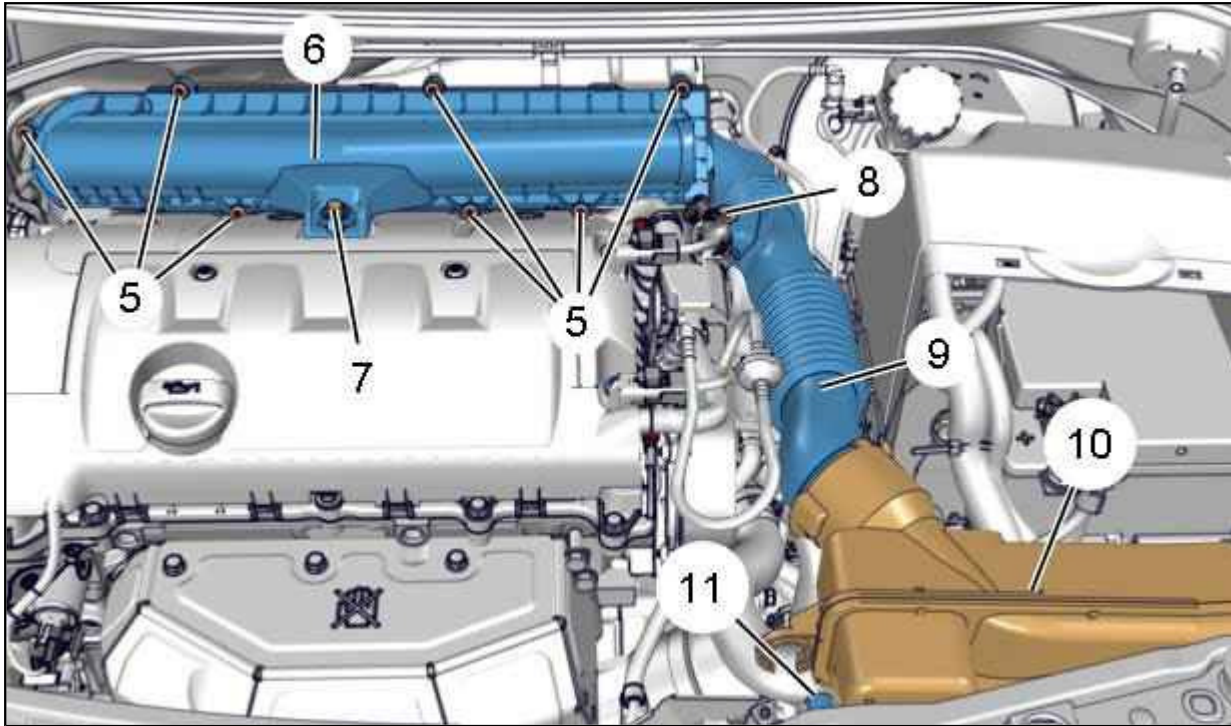


Figure : B1EM04GD

Unscrew :

- The bolts (5)
- The (7) bolt

Remove :

- The air filter cover (6)
- The filter element
- The (8) bolt
- The air union (9)
- The fixing (11)
- The resonator (10)

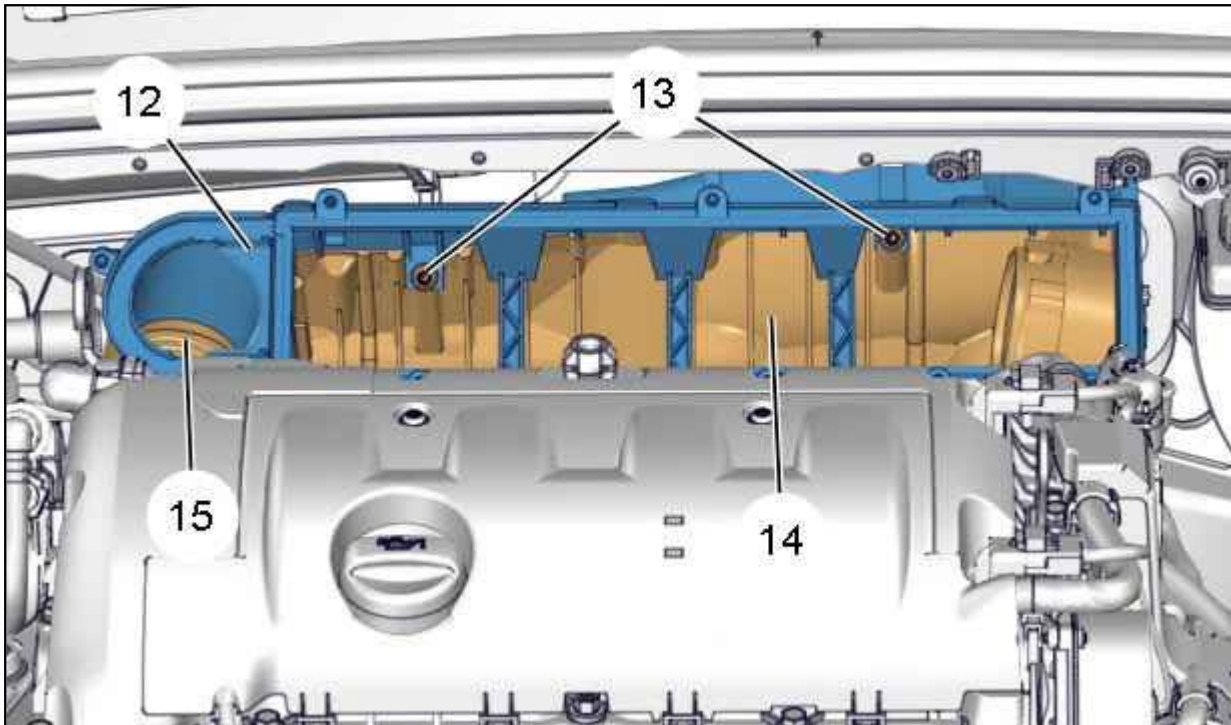


Figure : B1EM046D

Remove :

- The bolts (13)
- The intermediate filter support (12)
- The air filter housing (14)
- The inlet air union (15)

**N.B. :** Remove the air filter housing between the battery and the engine.



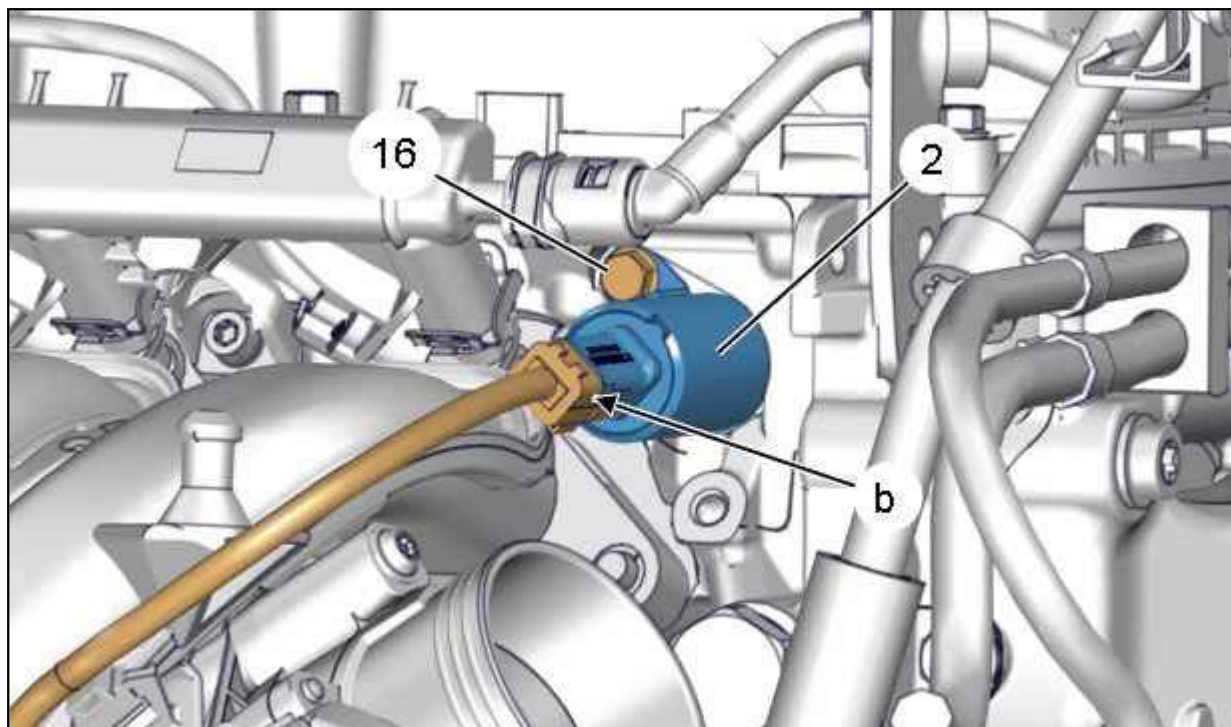


Figure : B1EM047D

Disconnect the connector (at "b").

**N.B. :** Protect the surrounding area using a cloth on removal to absorb the oil which flows out of the opening.

Remove :

- The (16) bolt
- The solenoid valve (2)

### 3.2. Refitting

**N.B. :** Clean the sensor sealing zone and check that it is free of knocks and scratches.

Fit :

- The solenoid valve (2) (equipped with a new seal)
- The (16) bolt ; Tighten to  $0,9 \pm 0,1$  daN.m

Connect the connector (at "b").

Fit :

- The inlet air union (15)
- The air filter housing (14)
- The intermediate filter support (12)
- The bolts (13)
- The filter element
- The air filter cover (6)

Tighten :

- The bolts (5)
- The (7) bolt

Fit :

- The air union (9)
- The (8) bolt ; Tighten to  $0,8 \pm 0,1$  daN.m
- The resonator (11)
- The air deflector (10)

Connect the battery.  
Check the oil level.

## 4. Eccentric shaft actuator (3)

**URGENT** : Never supply the actuator directly: risk of injury. The actuator must only be supplied by the engine management ECU with the original connector, following correct fitting on the cylinder head.

### 4.1. Removing

Disconnect the battery.

Unscrew :

- The bolts (5)
- The (7) bolt

Remove :

- The air deflector (10)
- The resonator (11)
- The (8) bolt
- The air union (9)
- The air filter cover (6)
- The filter element

Remove :

- The bolts (13)
- The intermediate filter support (12)
- The air filter housing (14) (Remove the air filter housing between the battery and the engine)

**N.B.** : Remove the air filter housing between the battery and the engine.

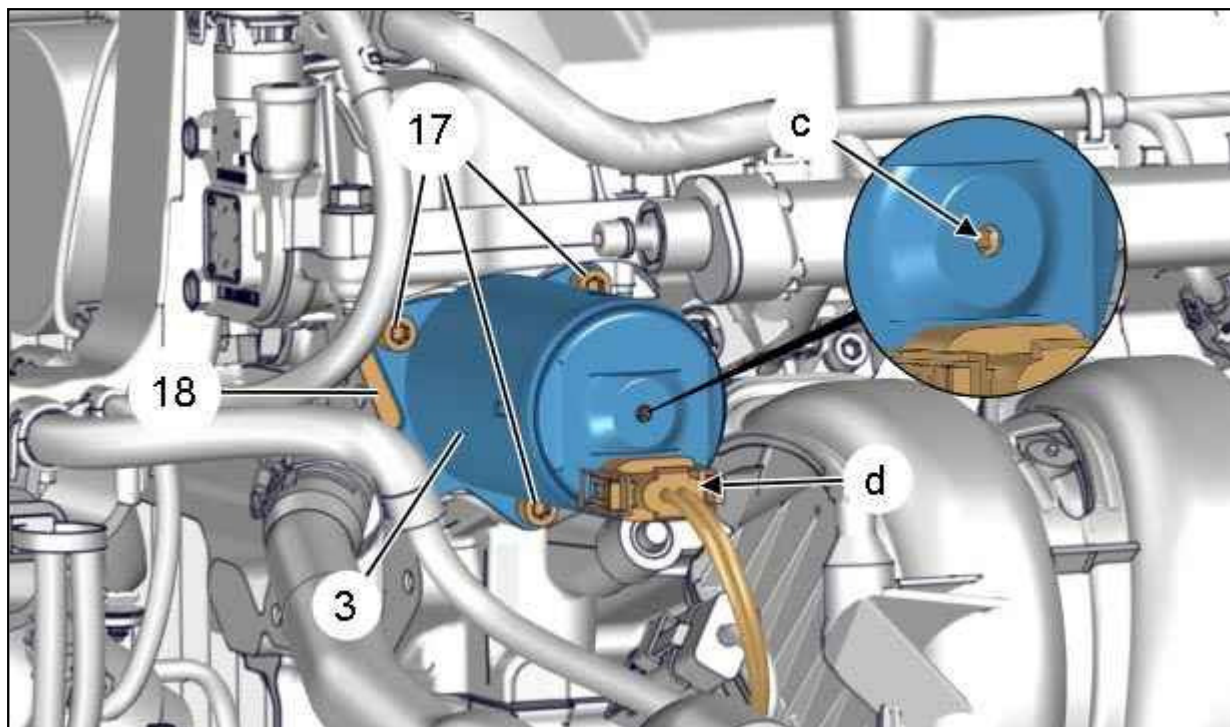


Figure : B1EM048D

Unplug : The actuator connector (at "c").

**N.B. :** Protect the surrounding area using a cloth on removal to absorb the oil which flows out of the opening.

Remove :

- The bolts (17)
- The eccentric shaft actuator (3), by turning the pin (at "c") ; Using a size 4 allen key (anti clockwise)
- The seal (18)

## 4.2. Refitting

**N.B. :** Clean the sensor sealing zone and check that it is free of knocks and scratches.

Fit :

- The seal (18) (New)
- The eccentric shaft actuator (3), by turning the pin (at "c") ; Using a size 4 allen key (clockwise)
- The bolts (17) ; Tighten to  $0,8 \pm 0,1$  daN.m

Connect : The actuator connector (at "c").

Fit :

- The inlet air union (15)
- The air filter housing (14)
- The intermediate filter support (12)
- The bolts (13)
- The filter element
- The air filter cover (6)

Tighten :

- The bolts (5)
- The (7) bolt

Fit :

- The air union (9)
- The (8) bolt ; Tighten to  $0,8 \pm 0,1$  daN.m
- The resonator (11)
- The air deflector (10)

Connect the battery.

Check the oil level.