

REMOVING - REFITTING : CRANKSHAFT RING SEAL

URGENT : Observe the safety and cleanliness recommendations ⓘ .

Leave the sealing ring on its fitting support ; in the event of handling, refit the ring on its support and leave the assembly for 30 minutes before refitting.

CAUTION : The sealing faces of the ring seal must show no trace of impact or scratches; if the lip is deformed or slightly cut ; Replace the ring seal.

The ring seals form a seal onto the crankshaft on the timing side and on the flywheel side. They have a lip in preformed Teflon.

When the engine is started, the oil pressure exerts a force on the lip which makes contact leaving a film of oil on the shaft thus creating sealing.

1. Recommended tools

1.1. Crankshaft ring seal fitting drift flywheel side

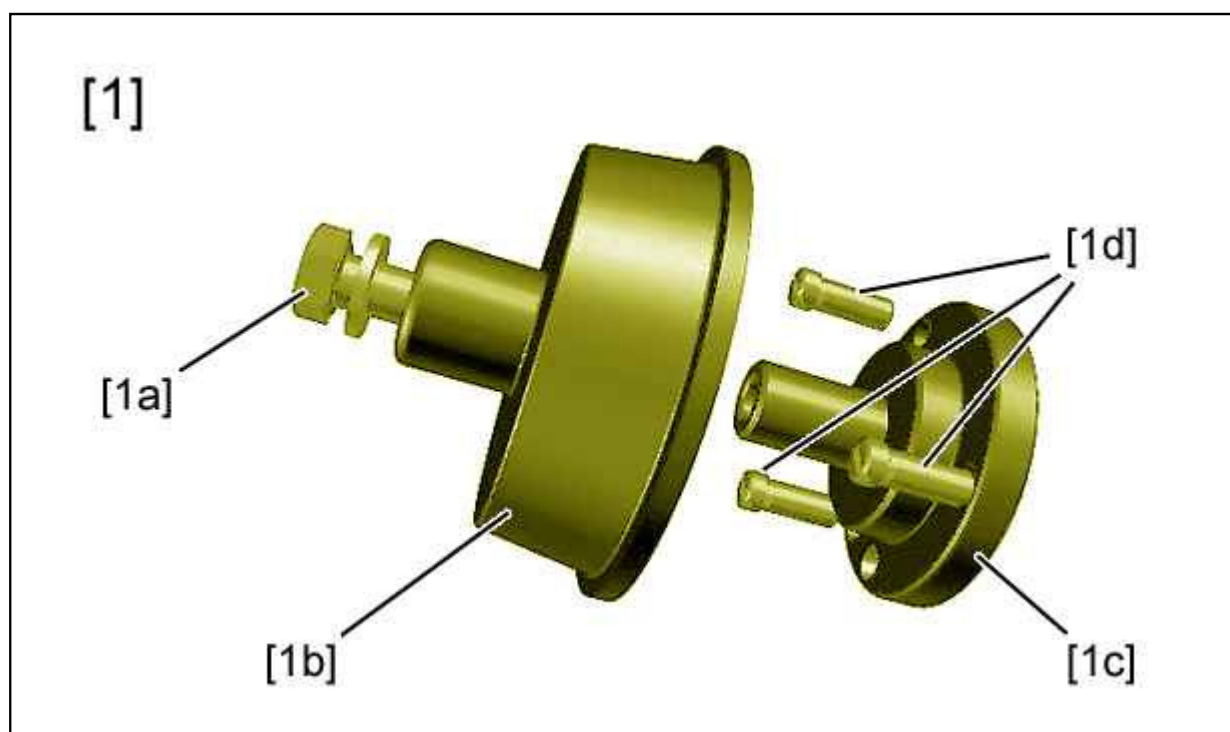


Figure : E5AP39ZD

[1] Crankshaft ring seal fitting drift flywheel side (-).0197-C :

- [1a] Bolt for tightening the ring seal fitting drift [1b]
- [1b] Seal fitting mandrel
- [1c] Fitting guide for the drift [1b] and the ogive of the ring seal
- [1d] Guide assembly bolt [1c]

1.2. Crankshaft ringed seal, fitting drift timing side

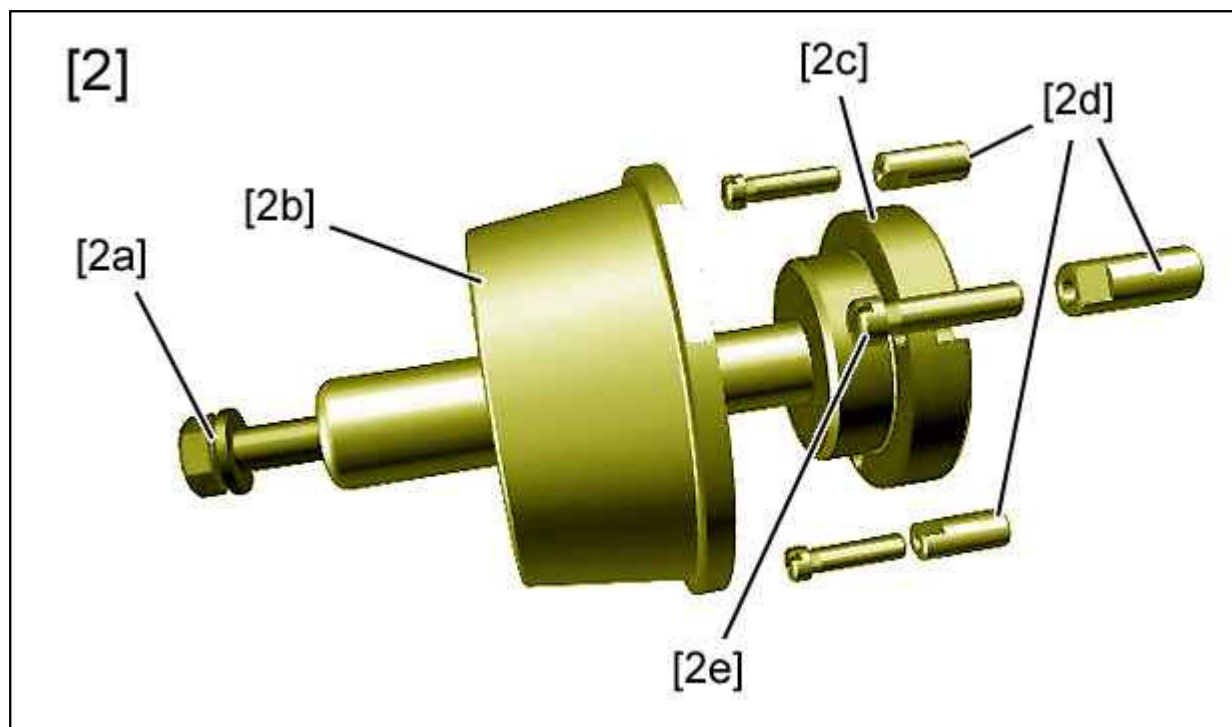


Figure : E5AP3A0D

[2] Crankshaft ringed seal fitting drift timing side (-).0197-D :

- [2a] Ring seal fitting drift [2b] tightening bolt
- [2b] Seal fitting mandrel
- [2c] Fitting guide for the drift [2b] and the ogive of the ring seal
- [2d] Guide and assembly bush [2c]
- [2e] Guide assembly bolt [2c]

2. Removing

Place the vehicle on a lift.
Disconnect the battery.

CAUTION : Check the timing setting whenever the bolt (4) fixing the crankshaft pulley hub has been loosened.

2.1. Crankshaft ring seal (Timing gear side)

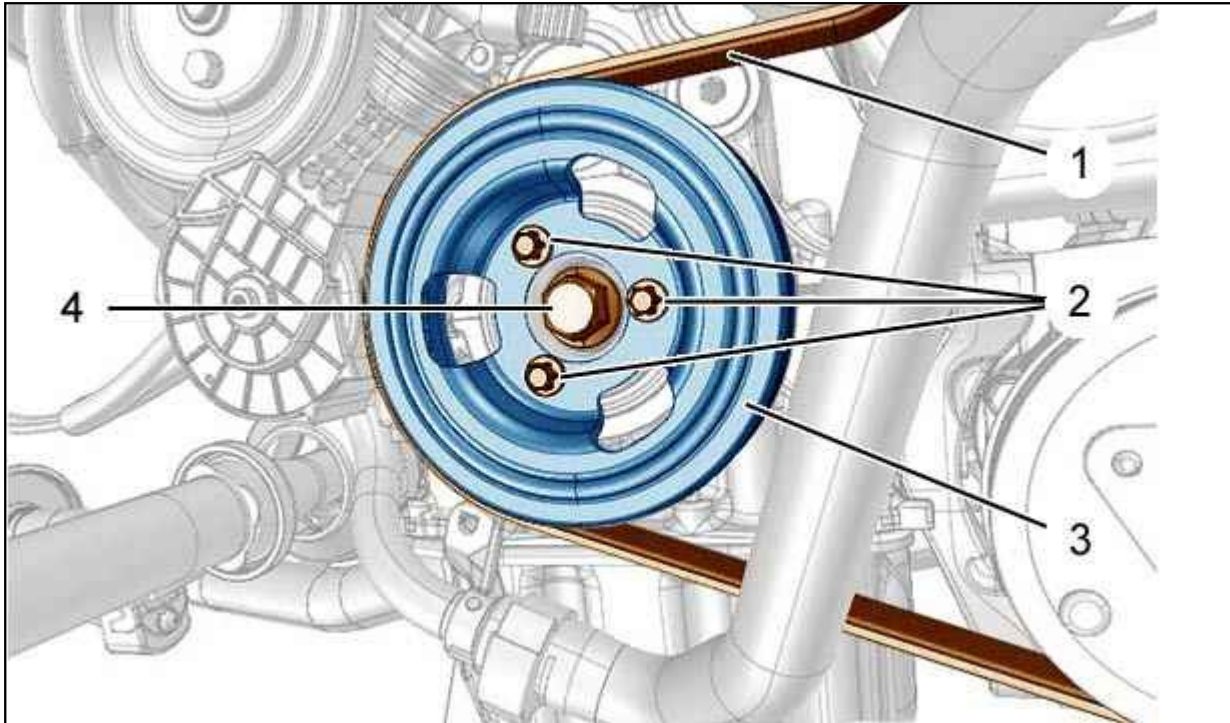


Figure : B1EP1UAD

Remove :

- **The accessories drive belt (1)** ⓘ
- The 3 ancillary drive pulley (3) bolts (2)
- The ancillary drive pulley (3)
- The sealing ring

2.2. Crankshaft ring seal (Flywheel side)

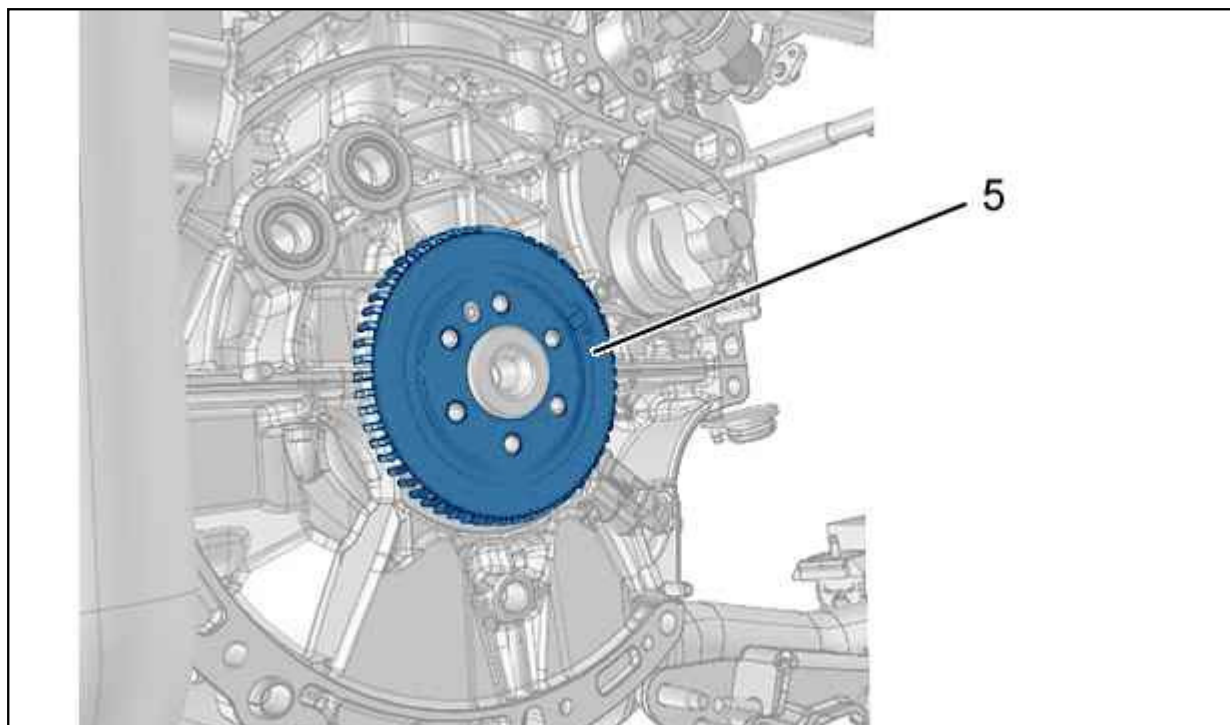


Figure : B1EP1UBD

Remove :

- The gearbox
- The flywheel (5)
- The engine speed fibre ring
- The sealing ring

3. Refitting

CAUTION : Adhere to the tightening torques.

3.1. Crankshaft ring seal (Timing gear side)

CAUTION : When the old ring seal has been removed, clean and degrease the housing in the cylinder block ; Using an approved product that is compatible with CAF50 present in the housing.

CAUTION : Do not pull on the CAF50 with your hand.

CAUTION : Before fitting a new ring seal the seal faces and surfaces must have no trace of impact nor scratches ; Do not use sharp or abrasive tools.

CAUTION : Before fitting a new ring seal in the cylinder block. Lightly and evenly coat the exterior of the new ring seal on both sides of the housing at the cylinder block/ main bearing cap housing gasket face ; With an approved sealing product of type CAF50.

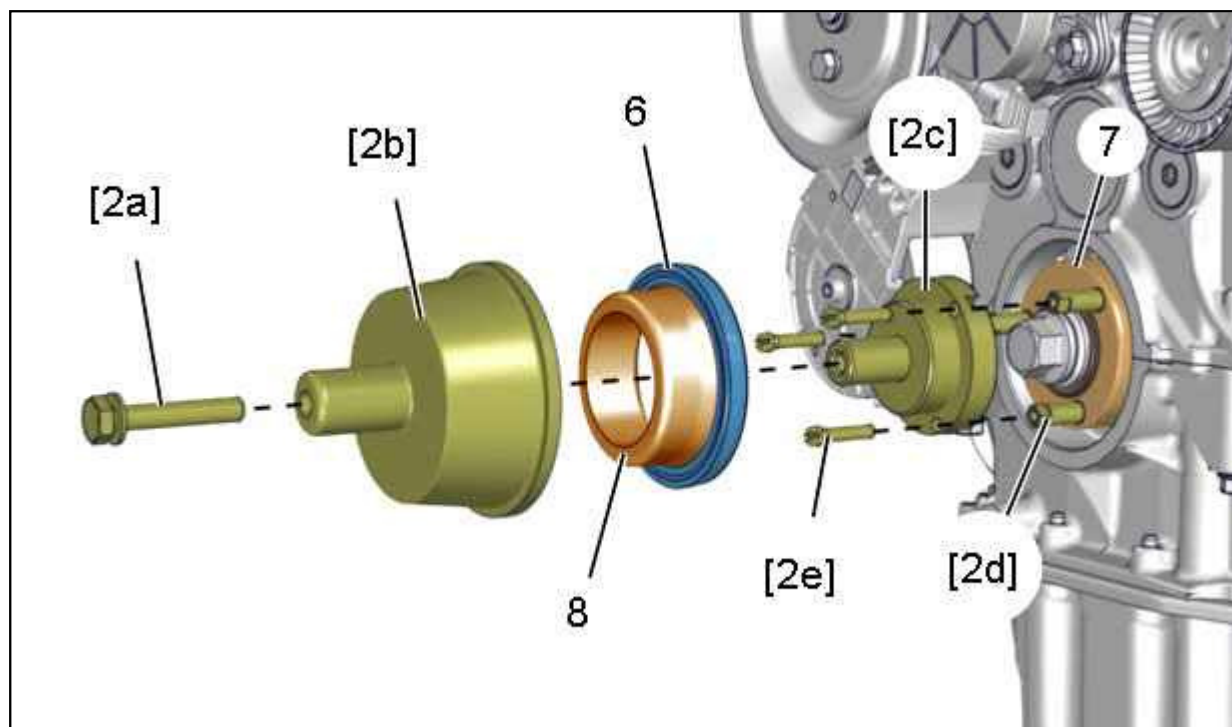


Figure : B1EM03YD

Fit :

- The threaded bushes [2d] on the crankshaft pulley hub (7)
- The fitting guide [2c] on the crankshaft pulley (7) ; Using the 3 bolts [2e]
- Ogive (8) fitted with its new ring seal (6) onto the crankshaft (7)
- The tool [2b] ; Using the screws [2a]

Tighten the bolt [2a] of the tool [2b] until the surface of the tool [2b] comes into contact with the surface of the cylinder block .

Remove the tools [2a], [2b], [2e], [2c], [2d].

Fit :

- The ancillary drive pulley (3)
- The 3 ancillary drive pulley (3) bolts (2) ; Tighten to the specified torque
- **The accessories drive belt (1)** ⓘ

3.2. Crankshaft ring seal (Flywheel side)

CAUTION : Wipe away all the oil in the sealing ring housing and make sure that there are no marks on the sealing ring.

CAUTION : The engine speed target and sensor must have no trace of impact or scratches ; If the target is deformed replace it with a new target.

CAUTION : The surfaces and joint faces must be free of any signs of knocks and scratches ; Do not use sharp or abrasive tools.

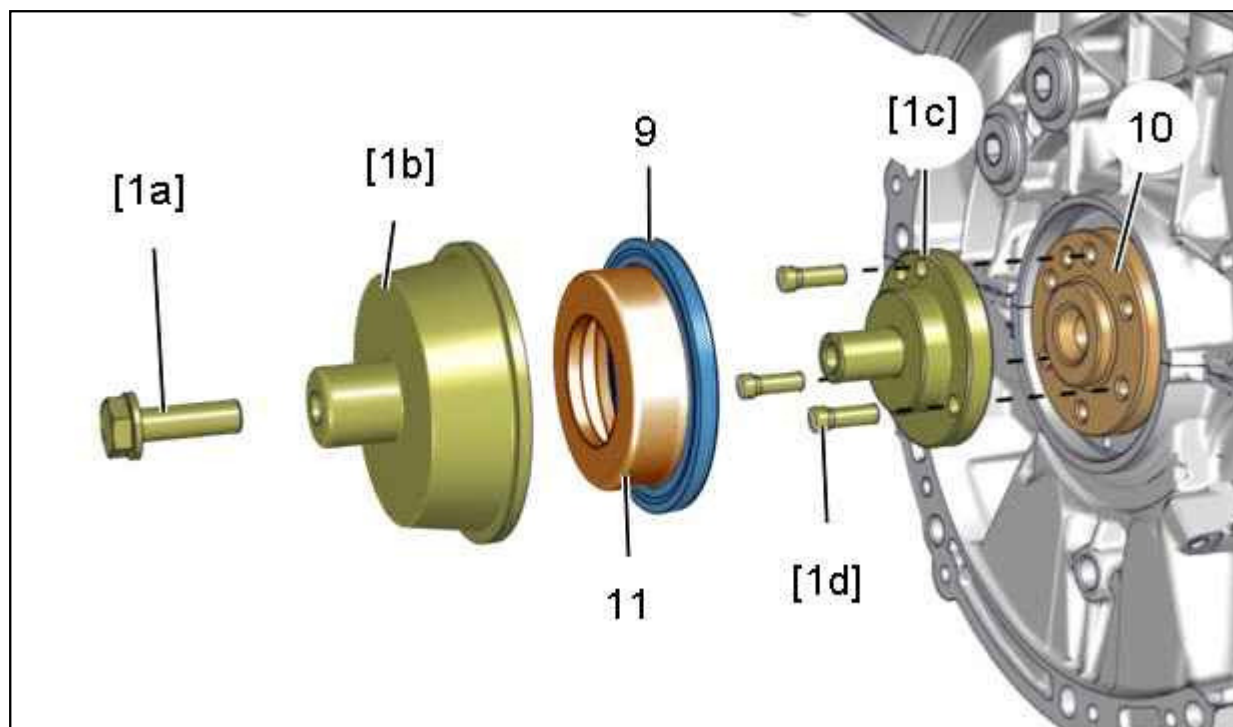


Figure : B1EM03ZD

Fit :

- Befitting guide [1c] onto the crankshaft (10) ; Using the 3 bolts [1d]
- The ogive (11) fitted with its new rings seal (9) onto the crankshaft (10)
- The tool [1b] ; Using the screws [1a]

Tighten the bolt of the tool [1a] until the surface of the tool [1b] comes into contact with the surface of the cylinder block .

Remove the tools [1a], [1b], [1d], [1c].

CAUTION : The threads on the crankshaft have to be cleaned.

Fit :

- The engine speed fibre ring
- The flywheel (5)

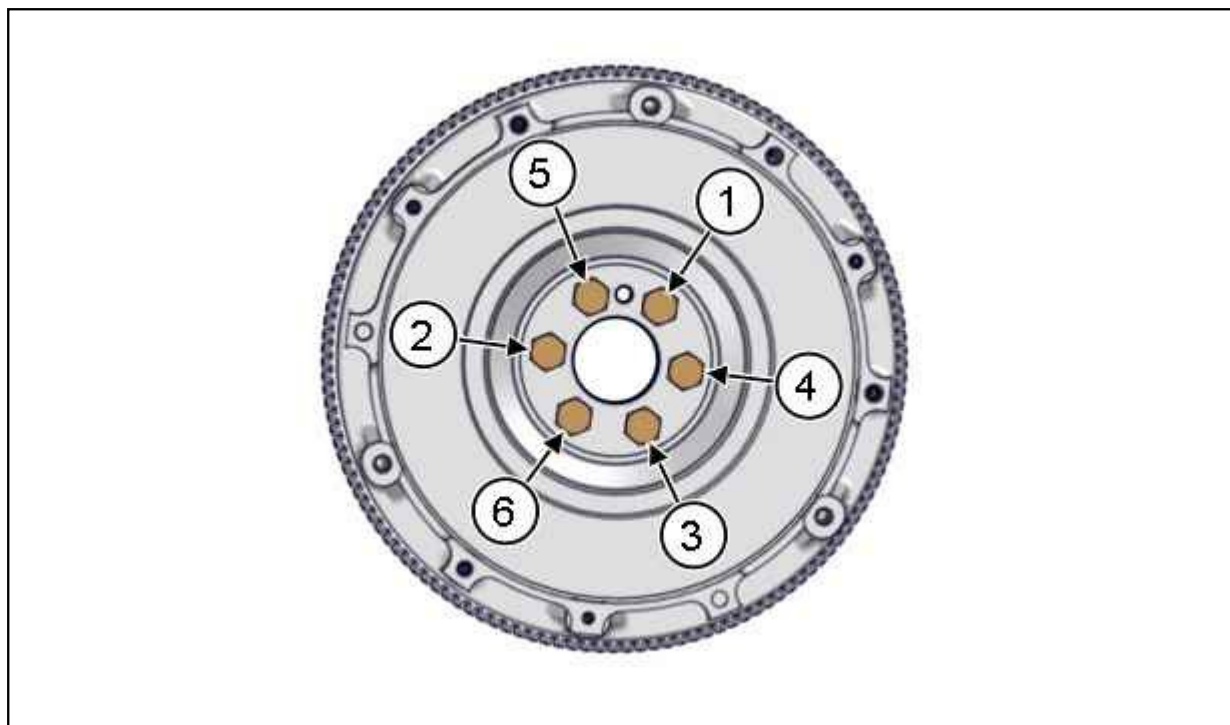


Figure : B1DM03KD

CAUTION : Always replace the flywheel fixing bolts .

CAUTION : Take care with the tightening torque and the sequence of tightening of the flywheel fixing bolts .

Flywheel bolt tightening torque : Locate the screws then tighten gradually in the order indicated (from 1 to 6).

Refit the gearbox.

Connect the battery.

CAUTION : Perform the operations to be carried out following reconnection of the battery.