

## Balance Shaft: Service and Repair

### Balance Shaft

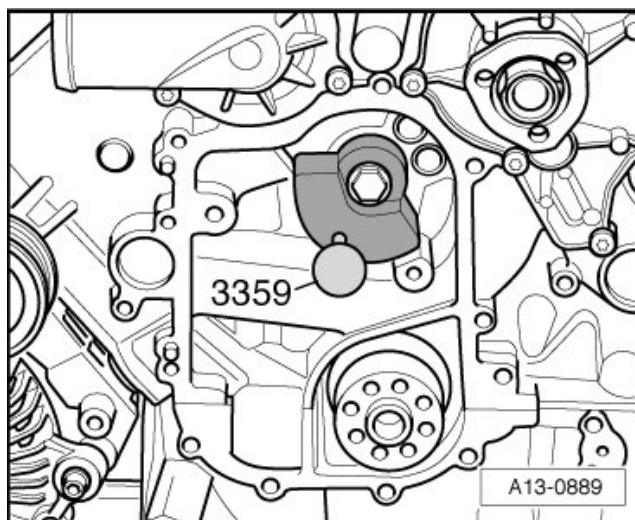
#### Balance Shaft

##### Special tools, testers and auxiliary items required

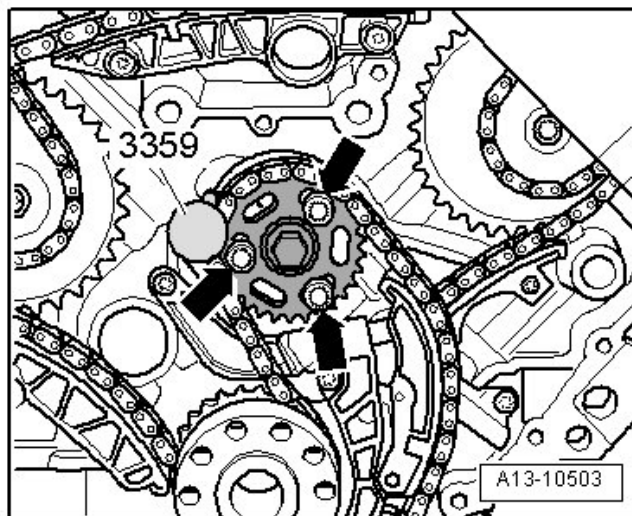
- ◇ Diesel Injection Pump Locking Pin (3359)

##### Removing

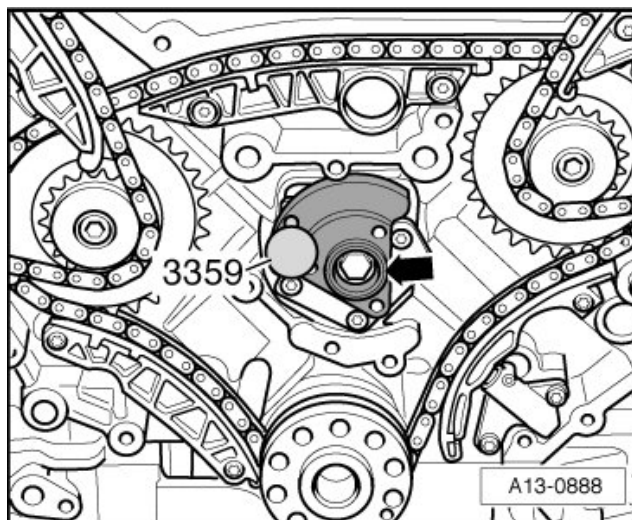
- ◇ Transmission removed.
- Remove the belt pulley side sealing flange. Refer to => [ Sealing Flange, Belt Pulley Side ] See: Front Engine Plate/Service and Repair.
- Remove timing chain lower cover. Refer to => [ Lower Timing Chain Cover ] See: Timing Components/Timing Cover/Service and Repair/Lower Timing Chain Cover.
- Remove the power take-off drive chain. Refer to => [ Power Take-Off Drive Chain ] See: Accessory Drive/Service and Repair/Power Take-Off Drive Chain.
- Lock the front balance shaft to the engine with the (3359).



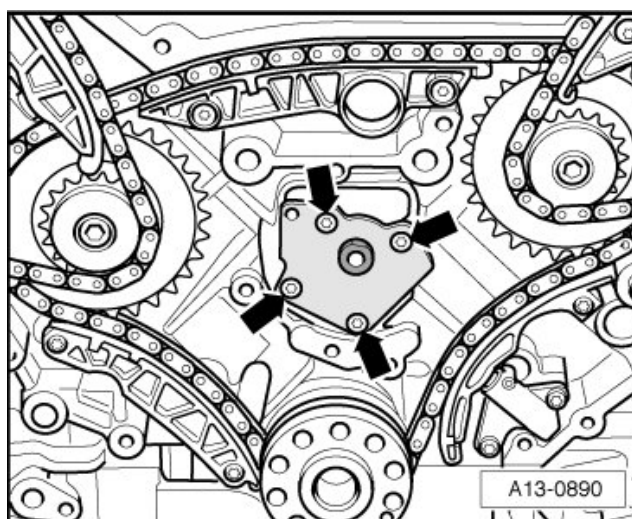
- Remove the bolt and remove the balance weight from the balance shaft.
- Remove the bolts - **arrows** - at the back of the motor and remove the chain sprocket from the balance weight.



- Remove the bolt - **arrow** - at the back of the engine and remove the balance weight from the balance shaft.



- Remove the bolts - **arrows** - and remove the balance shaft bearing end bracket.

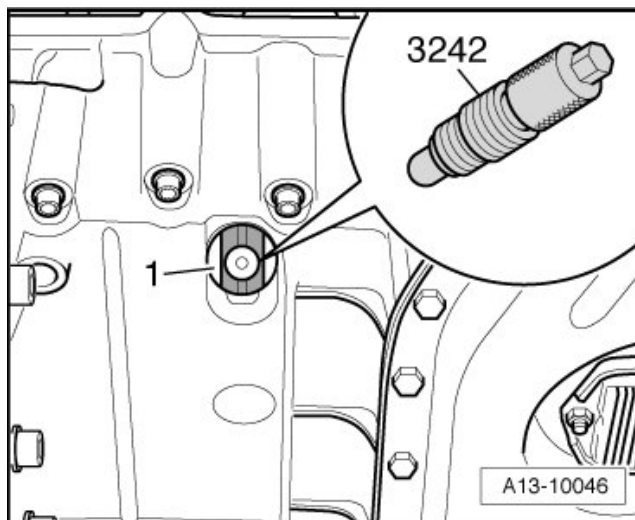


- Remove the balance shaft from the cylinder block.

## Installing

Install in reverse order of removal. Note the following:

- ⟨ For the correct tightening specifications, refer to => [ Balance Shaft Overview ] See: Balance Shaft Overview.
- ⟨ Secure crankshaft - **1** - in TDC position using (3242).



- Install the power take-off drive chain. Refer to => [ Power Take-Off Drive Chain ] See: Accessory Drive/Service and Repair/Power Take-Off Drive Chain.
- Install timing chain lower cover. Refer to => [ Lower Timing Chain Cover ] See: Timing Components/Timing Cover/Service and Repair/Lower Timing Chain Cover.
- Install the belt pulley side sealing flange. Refer to => [ Sealing Flange, Belt Pulley Side ] See: Front Engine Plate/Service and Repair.
- Fill engine oil and check oil level.