

## Remove and install injection pumps (Motorpal)



### Tools

- Commercial tools

### - Special tools

- 100 710 - Setting bolt
- 103 030 - Test template
- 101 100 - Marking pin



### References

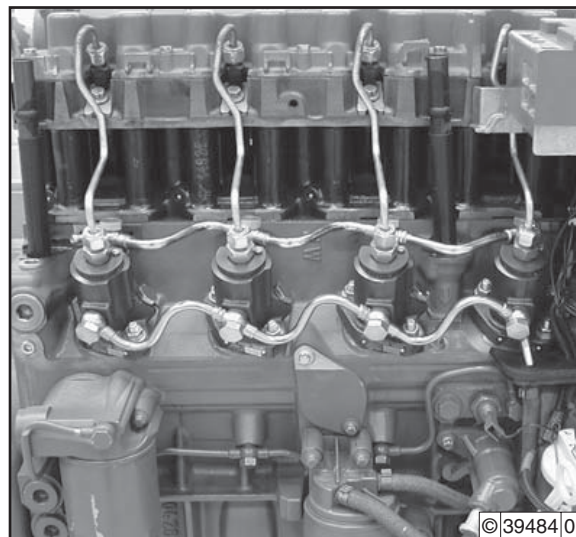
- W 07-03-01
- W 07-06-03
- W 07-06-04
- W 07-10-06



### Note

Distinguishing features for the Motorpal injection pump:

- Long injection pump housing.
- Overflow line on the injection pump.



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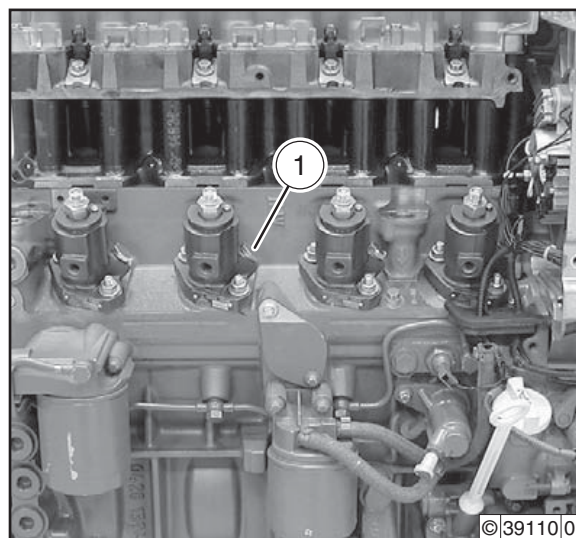
### Remove injection pump

- Remove injection lines  
→ Job card **W 07-03-01**.
- Remove fuel lines  
→ Job card **W 07-10-06**.
- Loosen locking screw (1).



### Note

The locking screw must be unscrewed for later locking of the injection pump.

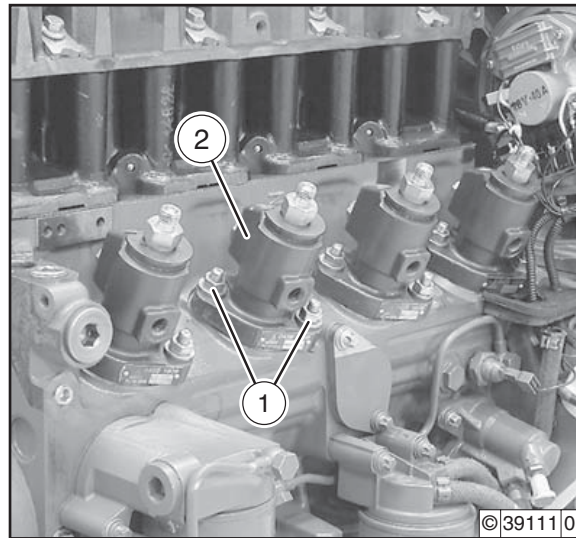


- Unscrew nuts (1), remove injection pump (2) and compensation gaskets.



### Note

- Loosen nuts evenly to avoid jamming the injection pump.
- Put down the components in the order of installation, note order of cylinders.



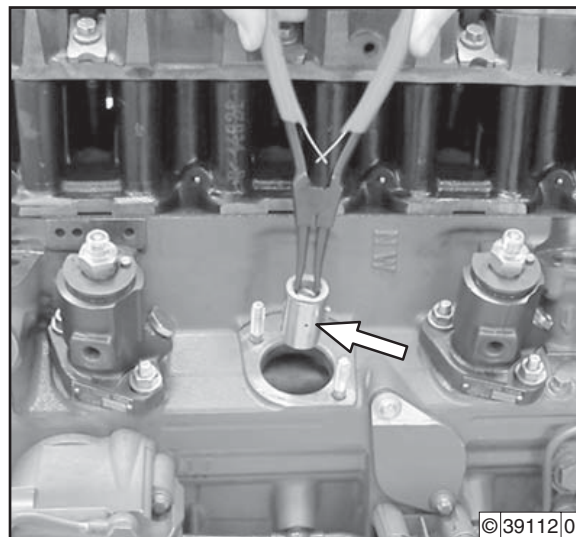
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- Pull out roller tappet (arrow) using a suitable tool, e.g. outside locking pliers.

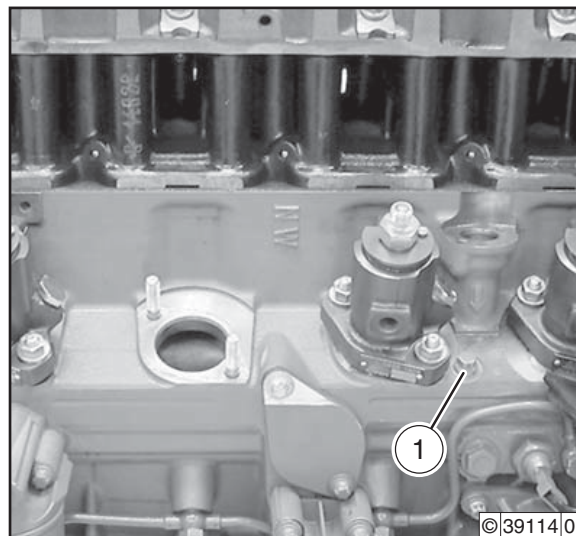


### Note

- Put down the components in the order of installation, note order of cylinders.
- Do not damage the roller tappet.



- Unscrew cap (1) and remove sealing ring.



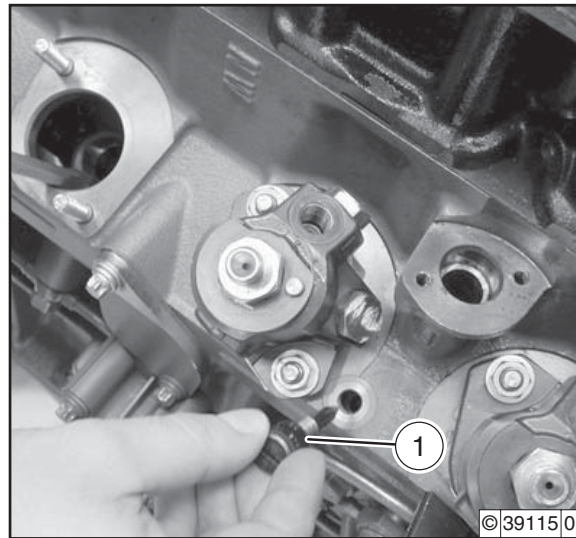
- Move control linkage to mid position.



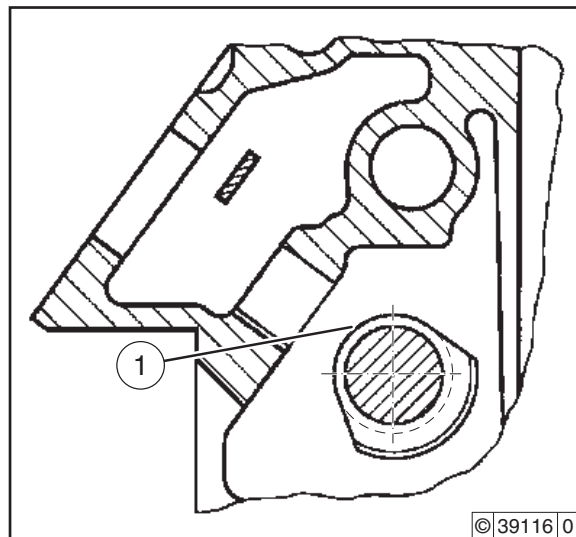
**Note**

Ignition off / stop magnet free.

- Turn in setting bolt (1) to stop.



- Turn crankshaft until the cam for the respective injection pump is standing on the cam basic circuit (1).



- Oil lightly and insert the roller tappet.



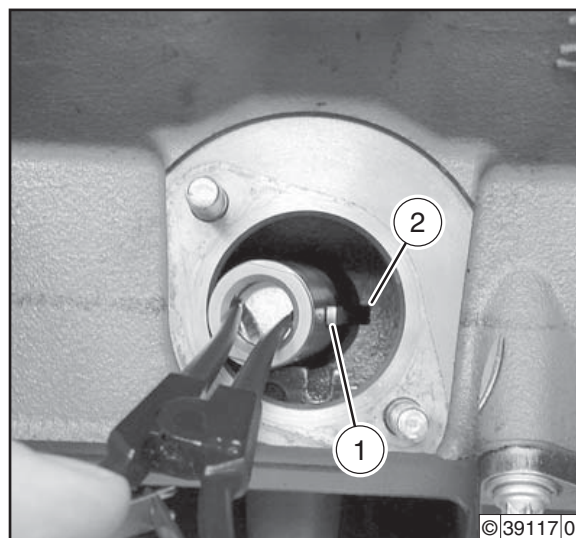
**Note**

- Note the assignment of the roller tappet.  
- The guide pin (1) on the roller tappet must engage in the groove (2).

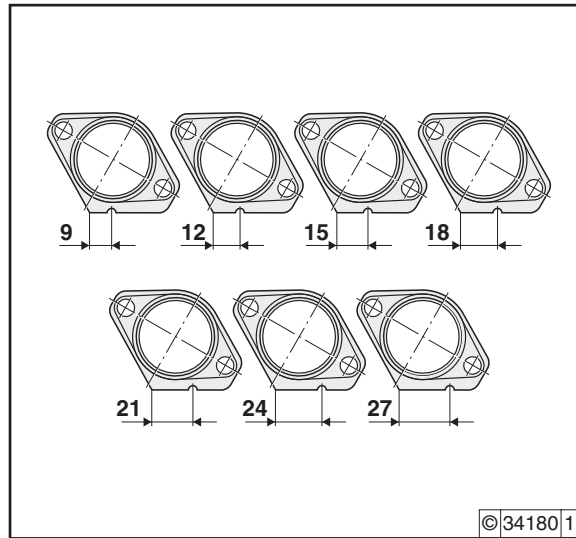


**Note**

When replacing the roller tappet, the assignment of the injection pump to the roller tappet must be observed.



- Determine the thickness of the shim gasket  
→ Job card **W 07-06-03**.
- Select compensation gasket according to table.

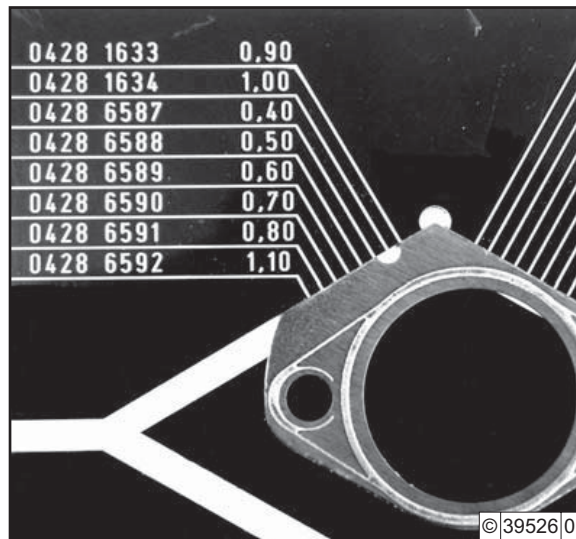


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### Note

Since the part number and the gasket thickness are not specified on the compensation gasket, the gasket thickness can be checked with the test template.

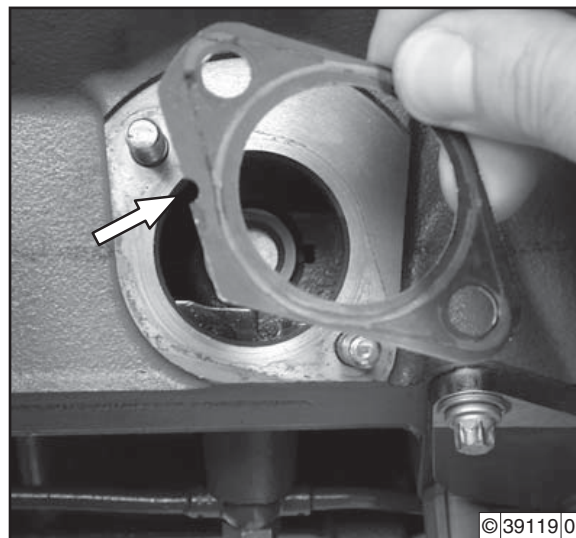


- Mount the appropriate compensation gasket.



### Note

Note installation position, the recess (arrow) must face the flywheel.



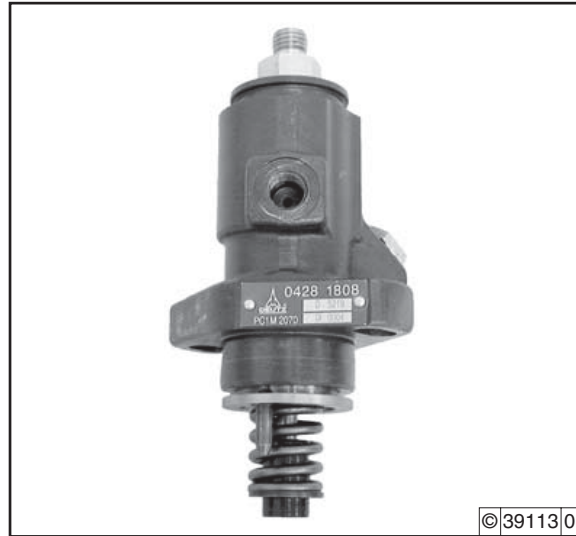


**Install the injection pump**



**Note**

When replacing the injection pump the assignment of the injection pump to the roller tappet must be observed.



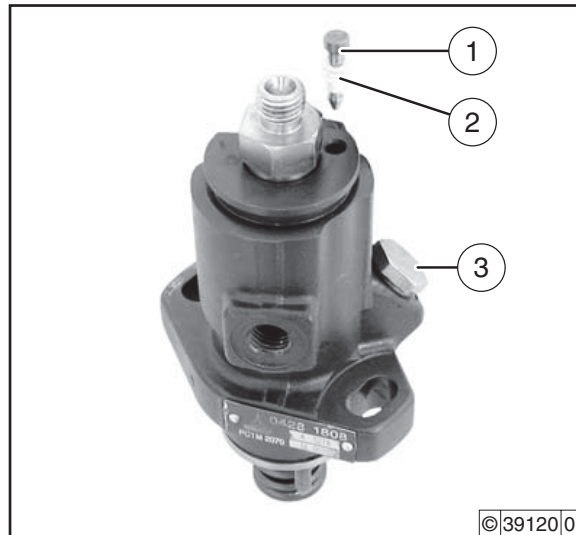
- Pull out locking pin (1).



**Note**

Remove the gasket (2) together with the locking pin.

- Unscrew cap (3) and remove sealing ring.

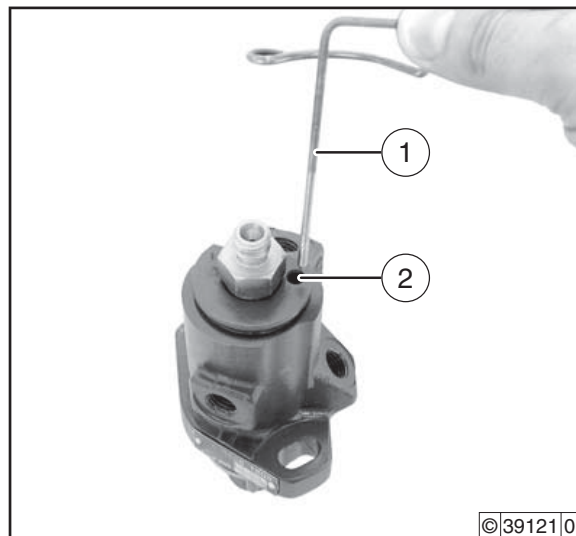


- Insert marking pin (1) in the bore (2) of the injection pump.



**Note**

Do not press in the marking pin completely.

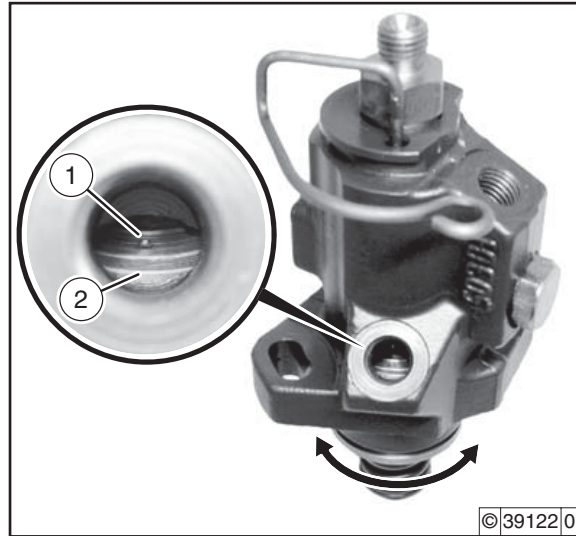


- Position the center punch point (1) on the regulating sleeve (2) (arrow) so that it is underneath the tip of the marking pin.



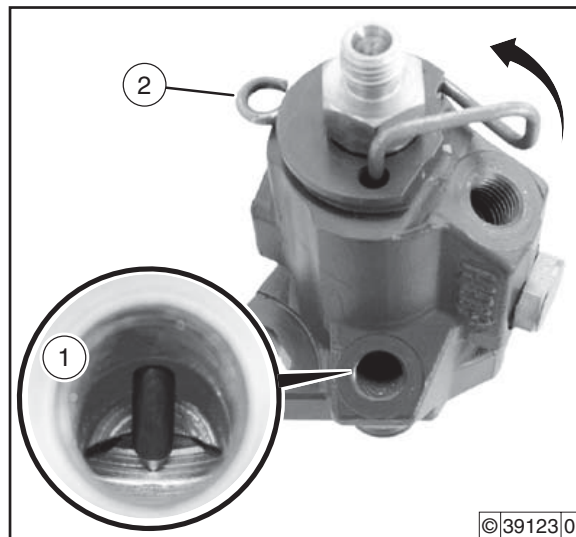
### Note

The center punch point is visible through the bore for the locking screw.

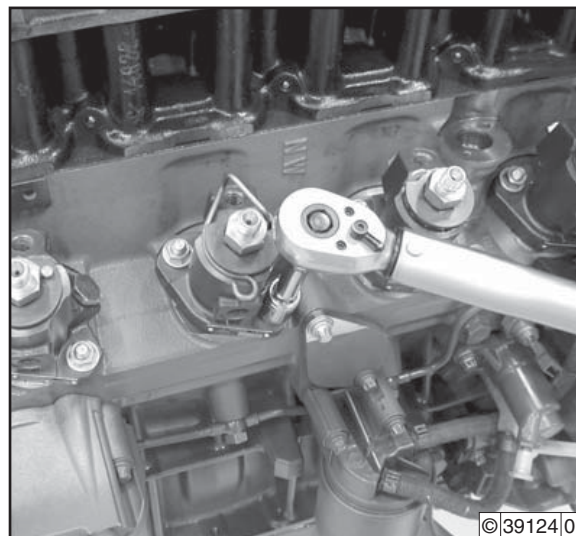


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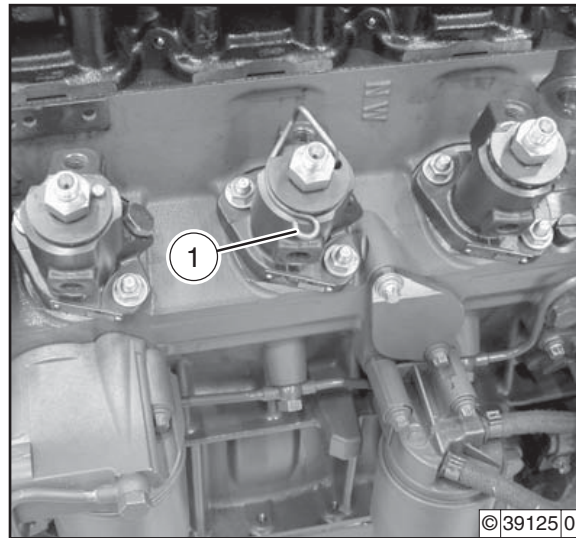
- Position the tip of the marking pin (1) in the center punch point.
- Clamp the clamping bracket (2) of the marking pin.



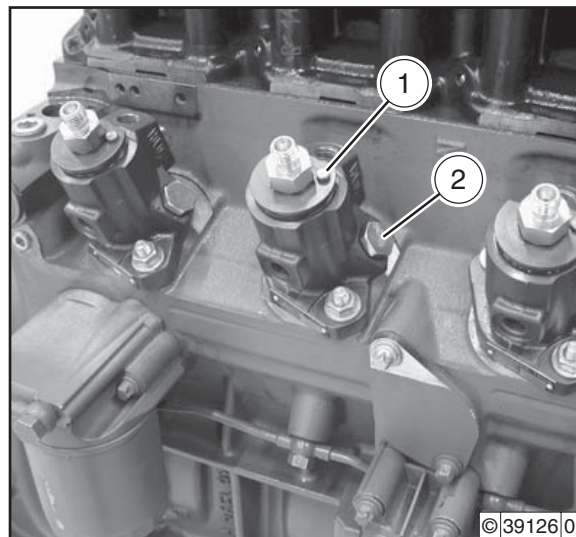
- Insert the injection pump centrally to the long holes.
- Press in injection pump to stop and tighten nuts.
- Tighten nuts.



- Loosen clamping bracket and pull out marking pin (1).



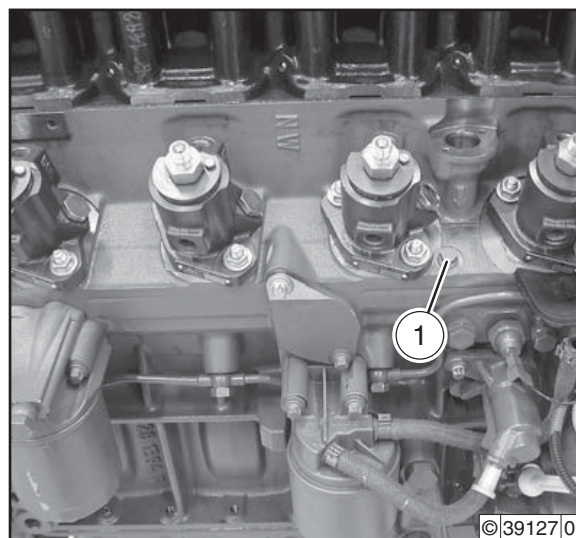
- Press in locking pin (1) with gasket to stop.
- Tighten cap (2) with new CU sealing ring.



- Unscrew setting bolt.
- Tighten locking screw (1) with new CU sealing ring.



- Check beginning of pumping if necessary  
→ Job card **W 07-06-04**.
- Install fuel lines  
→ Job card **W 07-10-06**.
- Install injection lines  
→ Job card **W 07-03-01**.





**Notes**

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