



## Screw Plugs in the Crankshaft

**M43**

It is in the interest of our customers as well as of Caterpillar to continuously check the operating reliability of our engines and, where necessary, improve it.

In this connection, during routine check of the screw plugs in the crank webs of new engines as well as of those that have already been running it was ascertained that their torque did not always correspond to the design requirements.

The cause is a large spread of the screw pretension when inserting the liquid screw-locking device in use.

The following tests have shown that the required pretension of the crankshaft screw plugs is for certain achieved when tightening with oil and a defined angle of rotation.

To ensure the engine operating reliability also in the long run the torque of the crankshaft screw plugs should be checked at the next opportunity during crankcase inspections or other operations on the engine according to the testing and tightening instructions.

### Check and if required retightening of screws according to instruction

1. Unscrew the plug using a torque of 300 Nm.

**Note:** If the screw plug cannot be loosened with 300Nm it is left in the crankshaft. After 3000 running hours it should be rechecked. If the screw plug still remains non-detachable, no further inspection is necessary (see attached table).

2. If the screw plug gets loose with 300 Nm unscrew it completely and carefully clean the threads of plug and crankshaft from Loctite.

Note:

By heating the unscrewed plug on a hot plate Loctite can easily be removed from the plug.

3. Screw the plug in only with oil, finger tight.
4. First tightening step: Pretighten screw plug with 100 Nm; mark the position of one edge of the hexagon insert.
5. Second step: Continue tightening the screw plug with 180 ° angle of rotation.
6. Third step: Check tight fit of the screw plug by applying a tightening torque of 200 Nm.

**Please note!** On this occasion the angle of rotation may rise up to 240 °.

Tightening of the screw plug is correct with an angle of rotation between 180 ° and 240 °.

# Service Information No. 03 / 03

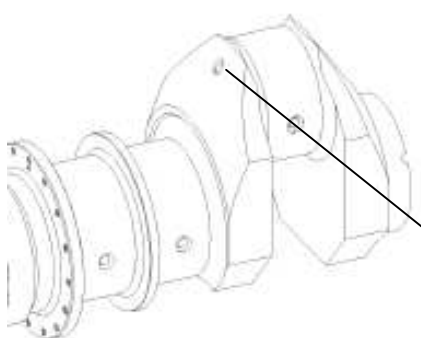
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### Enclosure



Screw plug, one piece per cylinder;  
Identification #: 432520, item 6

	Cyl. 1	Cyl. 2	Cyl. 3	Cyl. 4	Cyl. 5	Cyl. 6	Cyl. 7	Cyl. 8	Cyl. 9
Date of Inspection									
Engine Running Hours									
Recheck on									
Engine Running Hours									