



INSTRUCTIONS

ABS Sensor

Please Read These First

These instructions are intended as a guide only and are not a substitute for a workshop manual. The fitter must have a degree of mechanical competence. If you are in any doubt as to your ability to fit the part, do not undertake the job.

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ABS Sensor

Important!

There are four different design / function types of wheel speed sensors (ABS sensors). A distinction is made as regards to function between active and passive ABS sensors.

Active ABS sensors can be recognised when they are new by their being additionally packaged in a so-called ESD protection film bag. Active ABS sensors can be damaged by an electrostatic discharge. For that reason the electrical contacts of Active ABS sensors must not be touched.

During handling, the ESD protection measures as per DIN EN 100 015 must be complied with. Active ABS sensors cannot be function checked by using the conventional method with a multimeter.

A distinction is also made as regards type of fastening between screw-on and clip-in ABS sensors.

The clip-in ABS sensors are kept without additional fastening screws. In the case of the screw-on sensors, a further distinction is made between permanently screwed-on and distance adjustable active ABS sensors. In the case of distance adjustable ABS sensors, identifiable by a thread on the ABS housing and a cardboard tab on the ABS sensor head, this cardboard tab must on no account be removed or manipulated.

General replacement directions.

Never pull on the ABS sensor cables themselves. When fitting the new ABS sensor, it must be ensured that the cable routing, with the fastening points, as provided by the factory is complied with. ABS sensor leads must not be twisted during fitting.

It is important that the electrical contacts of the mating plug are clean and free

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from oxidation. During fitting, the electrical plug / socket connections must engage correctly.

ABS sensors that have to be removed on account of a suspected malfunction must be handled with the same care as new parts. If not, a conclusive error analysis in warranty cases is not assured.

After removal of the ABS sensor, the encoder ring must be checked for any mechanical damage and any excessive corrosion and if necessary replaced with a new one. Only use the specified, special tools for replacing ABS sensors.

Removing the old ABS sensors.

1. Disconnect the ABS sensor cable from the ABS sensor proper.
2. Undo the fastening screw of the ABS sensor from the wheel bearing housing.
3. Carefully remove the ABS sensor from the wheel bearing housing. Pull out clip-in ABS sensors only at the gripping surfaces of the sensors.
4. When removing corroded-in ABS sensors, ensure that the mounting surface, the hole in the wheel bearing housing and the encoder ring do not suffer mechanical damage.

Fitting of active, passive and clip-in ABS sensors.

1. Clean the inner surface of the hole and the mounting surface of the ABS sensor on the wheel bearing housing (note: a special tool maybe required). Then give it a thin all-round coating of plastilube. Corrosion prevention!
2. Carefully insert the ABS sensor into the hole in the wheel bearing housing. Engage clip-in ABS sensors properly.
3. Tighten the fastening screw on the ABS sensor with a low-strength thread locking

agent and with $8 \pm 2\text{Nm}$ torque.

4. Replace the ABS sensor cable correctly and make the plug connection.

Fitting of distance-adjustable ABS sensors.

1. Clean the inner surface of the hole and the mounting surface of the ABS sensor on the wheel bearing housing (note: a special tool maybe required). Then give it a thin all-round coating of plastilube. Corrosion prevention!
2. Undo the clamping screw for distance setting so that the ABS sensor is movable relative to the ABS sensor housing.
3. Carefully insert the ABS sensor with the ABS sensor housing into the hole in the wheel bearing housing.
4. Tighten the fastening screw on the ABS sensor with a low-strength thread locking agent and with an $8 \pm 2\text{Nm}$ torque.
5. Carefully slide in the ABS sensor inside its housing until it comes up against the encoder ring, then tighten the clamping screw with $2.4 \pm 0.6\text{Nm}$. When doing so, on no account turn the respective wheel, as otherwise there is a risk of damage to the cardboard tab on the ABS sensor head. After distance setting, the cardboard tab is destroyed during the first wheel turns. The residues do not impair the operation of the ABS sensor.
6. Lay the ABS sensor cable correctly and remake the plug cable connection.