

ATE Test Card for magnetic sensor gears.

Protects against installation
errors and facilitates trouble-
shooting!

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ATE Test Card for magnetic sensor gears.

Wheel sensors: the ATE Test Card keeps you from making mistakes.

You've just replaced a wheel bearing, and afterwards the ABS warning lamp lights up. What happened?

In our example, the wheel bearing was installed the wrong way round. Normally, when it is removed again, at least the magnetic sensor ring or perhaps the complete wheel bearing will be damaged. It will take much time and money to rectify this error.

For some years now, modern vehicles feature active wheel sensors. These wheel sensors normally work together with magnetic sensor rings. Magnetic sensor rings – you can think of them as a ring with magnetic north and south poles lying next to each other in its circumference (Figure A).

These magnetic poles must always lie opposite the wheel sensor. If, for example, the wheel bearing is installed improperly – that is to say, the magnetic poles are not opposite the wheel sensor – then the system wheel sensor and magnetic sensor gear cannot supply a signal (Figure B). During operation of this vehicle the ABS warning lamp will light up, but unfortunately not until the vehicle is out on the road again.

With the ATE Test Card for magnetic sensor gears you can protect yourself against an error like this!

Before you press in the wheel bearing you can determine on which side of the wheel bearing the magnetic sensor ring is fitted (Figure C).

You now only have to take care to arrange the side with the magnetic sensor ring to face the wheel sensor, and then press in the wheel bearing.

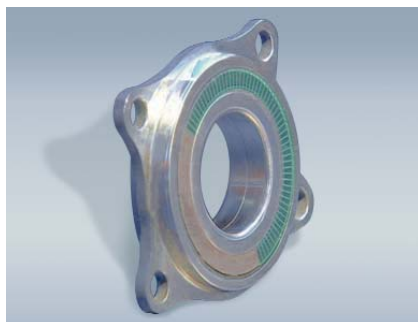


Figure A

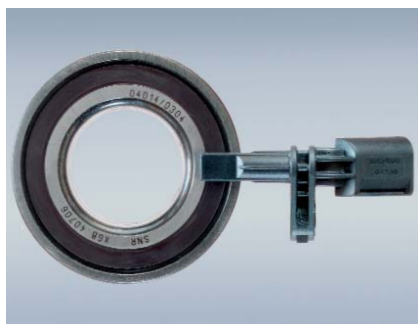


Figure B

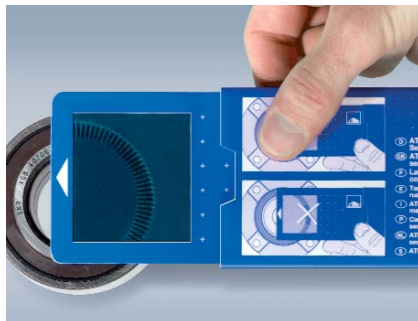


Figure C

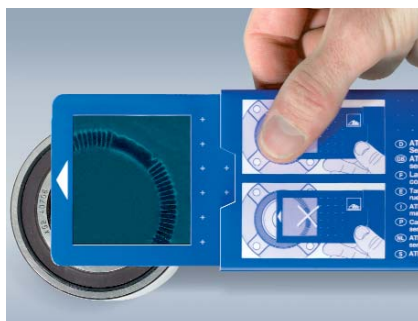


Figure D

The Test Card will also be of good service to you for troubleshooting:

If you discover during fault finding that the output signals of a sensor obviously are not correct, but the sensor circuitry including wheel sensor is okay, you can determine with the card whether one or more "teeth" (pairs of magnets) are missing (Figure D).

This may call for exposing the magnetic sensor ring or removing the wheel bearing.

Always observe these rules for handling wheel bearings with magnetic sensor rings:

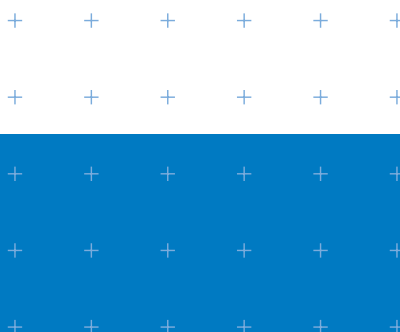
- Never place a wheel bearing with magnetic sensor rings on a dirty workbench!
- Never place a permanent magnet anywhere near the magnetic sensor ring!

Our tip for removing active wheel sensors:

- Never insert sharp-edged or pointed tools in the bore of the wheel sensor, because you might damage the magnetic sensor ring!

Our tip for fitting wheel bearings:

- Make sure that the magnetic sensor ring and the wheel sensor are opposite each other!
- Fit the wheel bearings as instructed by the wheel bearing or vehicle manufacturer!
- In any case, do not drive in the wheel bearing with a hammer and drift!
- Press in the wheel bearing using only the tools intended for the purpose!
- Whatever happens, avoid damaging the magnetic sensor ring!



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