

ASB[®] TECHNOLOGY

www.ntn-snr.com

NTN[®] **SNR**[®]



With You



AT THE HEART OF YOUR SAFETY

ASB[®] technology, is an essential element for the correct functioning of many embedded systems on modern vehicles.

ASB[®] bearings capture speed information from the wheel and instantly transmit it to the vehicles ECU (Electronic Control Unit).



ABS

Active Sensor Bearing

Prevents the wheels of the vehicle from locking up during emergency braking, helping the driver keep control of the vehicle and reduce the braking distance.



ESP

Allows the vehicle to maintain its stability if skidding or loss of traction on one or more wheels occurs.



SPEED

Enables the onboard computer to measure the speed of the wheels and translate it to the speedometer.



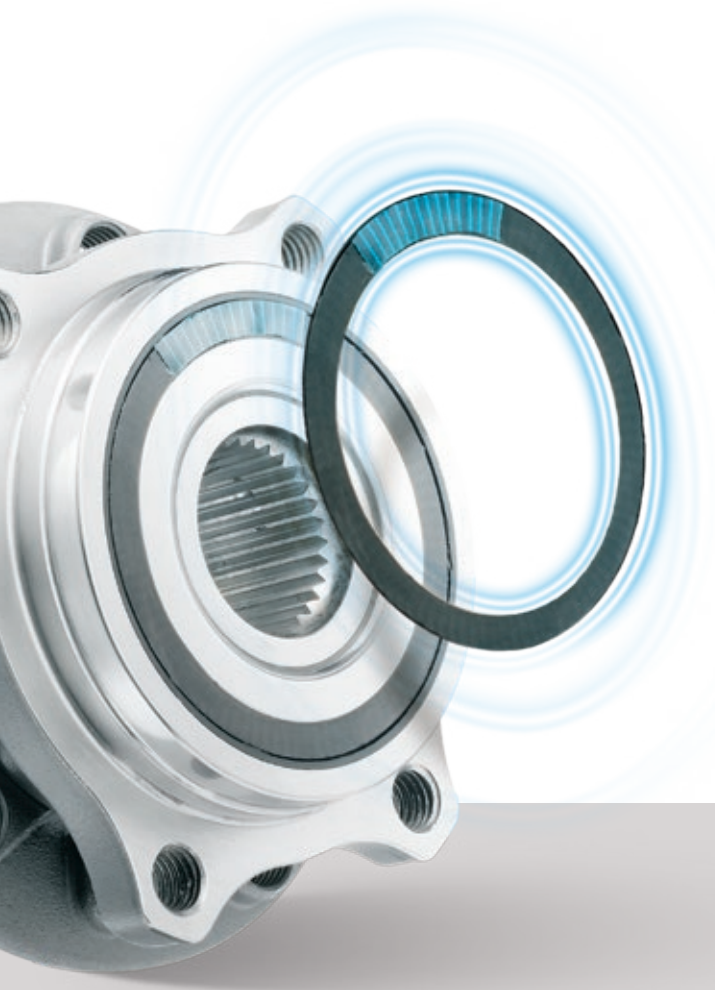
GPS

Helps sat navs keep the position of the vehicle when the GPS signal is lost, such as in a tunnel.



HILL START

Prevents the vehicle from moving, when hill start assist is in operation.





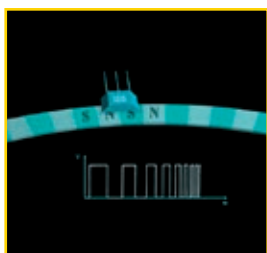
NTN-SNR, CREATOR OF ASB®

NTN-SNR introduced the ASB® speed sensing wheel bearing in 1997. It was awarded the Grand Prix de l'Innovation at EQUIP AUTO same year, and the following year, series production of OE bearings started.

This new technology made it possible for NTN-SNR to be the first to replace the passive sensor (phonic wheel and passive sensor) by an active sensor and a seal with an integrated magnetic code.



Passive Sensor



Active sensor ASB®

Technology:

The NTN-SNR ASB® wheel bearing is equipped with a magnetically encoded seal, a very precise succession of North and South poles. It actuates a sensor fixed in the vicinity, and delivers a digital signal equal to the number of revolutions of the wheel. This signal is received by the vehicle computer with needs the information for the operation of systems such as ABS, ESP, assistance with the hill start, navigation, etc.

This solution has many advantages, among which:

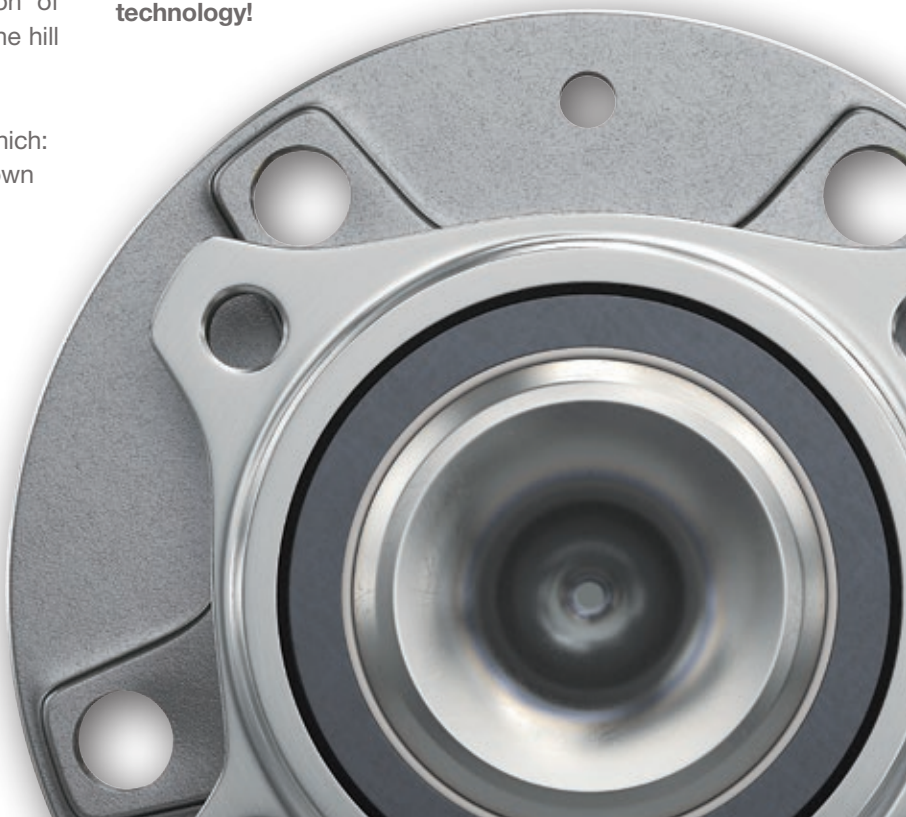
- The possibility of measuring wheel speed down to zero
- A saving in space and weight
- Assembly of wheel simplified
- Standardization of the components

On which bearings?

ASB® technology can be applied to all types of wheel bearings:

In order to create a global standard for the ASB® invention, NTN-SNR established ways of spreading this technology. By granting licensed use of NTN-SNR patents and knowledge to the leading world bearing manufacturers (recognized for their level of quality and their position as Original Equipment suppliers), NTN-SNR has today made it possible for this innovative technology to be used on almost all of the vehicles sold in Europe. Indeed, today, nearly 90% of the vehicles produced in Europe are equipped with SNR technology. The Japanese manufacturers also have almost universal adoption of the technology.

Today, 100% of the 3rd generation bearings are equipped with this technology!



A WHEEL BEARING IS A SAFETY CRITICAL PART!

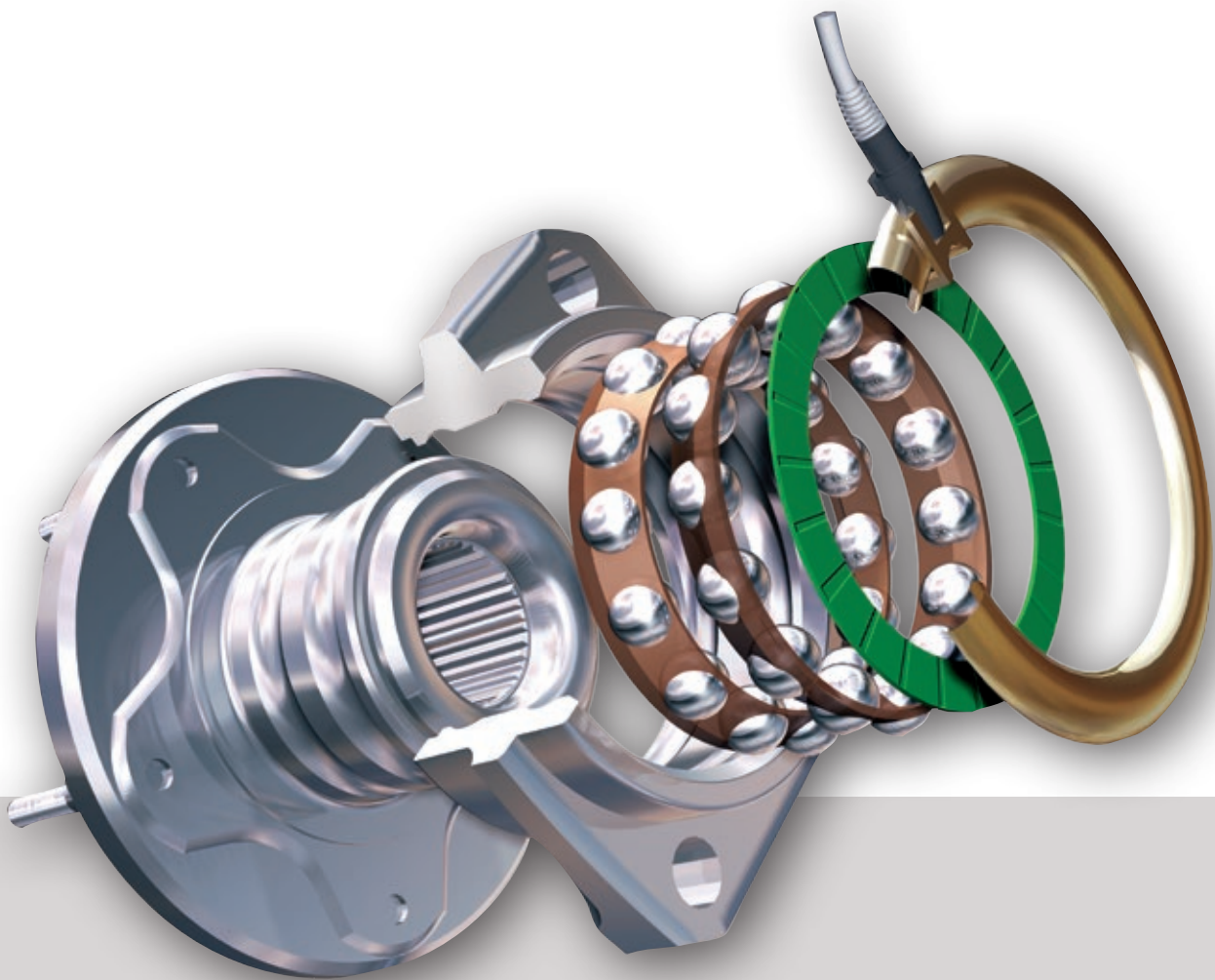
Choosing a **fake or a poor quality ASB® sensor bearing** can lead to:

- Inadvertent actuation of the ABS, which can disrupt the behavior of the vehicle
- Misinterpretation of the correct wheel speed by the ECU,



the ESP system can not guarantee the stability control

- Incorrect display of vehicle speed, consequent risk of involuntary and dangerous speeding



LOSS OF THE ASB® SIGNAL COULD BE FATAL !

- The ABS fault warning light will illuminate on the dashboard, this indicates the ABS system may not working properly.
- If the ABS system is not operating correctly it no longer ensures the correct operation of the antilock braking and the vehicle stability controls during braking.

For your safety and that of your customers, trust in NTN-SNR.

HOW TO FIT AN ASB® BEARING?

A bearing equipped with ASB® sensor technology is fitted in the same way as a traditional wheel bearing.

ASB® bearings require some additional precautions:

- 1st generation bearings (reference: XGB...):
- Note the correct alignment of the bearing: the face marked with the bearing reference is the side with the ASB® magnetically encoded seal, which must always be located on the inner side of the vehicle.
- The bearing must be fitted using the appropriate tools to enable the mounting loads to be correctly applied, so that the ASB® encoder is not be damaged
- The assembly must be handled and stored so that the ASB® encoder is not exposed to shocks (caution when stacking!) or contaminated with metal particles.
- The bearing must NOT be placed near a magnetic source of 750 Gauss
- Any bearing whose ASB® encoder is damaged/dented, in particular after being knocked, is unusable.

ASB® DETECTOR CARD

To ensure the correct alignment an ASB® detector Card is available.

It enables you to quickly and effectively see the magnetized seal and the location relative to the sensor.





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