



MOTORCYCLE ABS

Why you want
to ride with it



HOW ABS WORKS

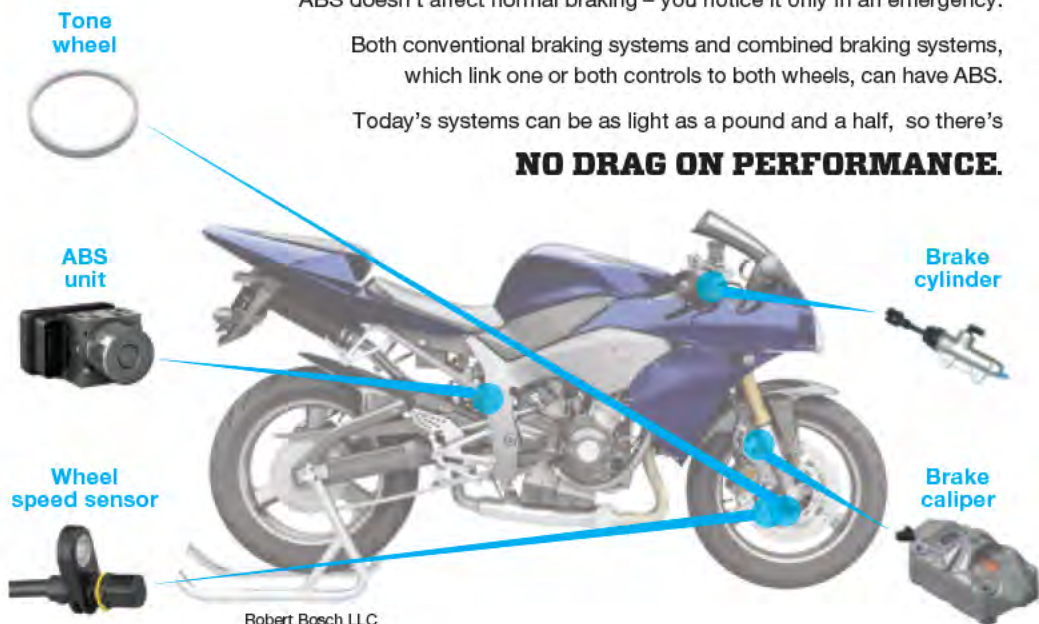
An antilock braking system works by constantly measuring wheel speed. One common way to do this is with a small grooved ring near the brake disc often called a **tone wheel**. The **wheel speed sensor** sends the tone wheel readings to the **ABS unit**, which can determine whether the wheel is about to stop rotating. If it is, wheel speed information is used to adjust the pressure from the **brake cylinder** on the **brake caliper** multiple times per second.

ABS doesn't affect normal braking – you notice it only in an emergency.

Both conventional braking systems and combined braking systems, which link one or both controls to both wheels, can have ABS.

Today's systems can be as light as a pound and a half, so there's

NO DRAG ON PERFORMANCE.



WHAT ABS ADDS TO MOTORCYCLE BRAKING

As any rider knows, stopping a motorcycle isn't as simple as stopping a car.

Most bikes have separate brake controls for the front and rear wheels, and either wheel can lock up during hard braking. On a car, a lockup might result in a skid. On a motorcycle, it often means a serious fall.

No matter how skilled a rider you are, you can't predict when a driver ahead of you will cut you off, forcing you to brake hard. Road surfaces can be unexpectedly sandy or more slippery than they look.

With ABS, riders can brake fully without fear of locking up. Antilocks automatically reduce brake pressure when a lockup is about to occur and increase it again after traction is restored.

More than 4,000 people died in motorcycle crashes in 2009. It makes sense to cut your risk with ABS.

PROVEN BENEFITS

Studies of fatal crashes, insurance claims, and test track performance all confirm the importance of antilock brakes.

Fewer deaths:

The rate of fatal crashes is 37 percent lower for motorcycles equipped with optional ABS than for those same models without ABS (Insurance Institute for Highway Safety, 2011).

Fewer crashes:

Collision insurance claims for motorcycles with ABS are filed 22 percent less frequently than for motorcycles without it (Highway Loss Data Institute, 2009).

Shorter stopping distances:

On the test track, both new and experienced riders stop more quickly with ABS. Stopping distances improve on wet and dry surfaces alike (Austrian Road Safety Board, 2004; National Highway Traffic Safety Administration, 2006).

ANTILOCK BRAKING SYSTEMS MAKE RIDING SAFER.



**INSURANCE INSTITUTE
FOR HIGHWAY SAFETY**

1005 North Glebe Road
Arlington, VA 22201
703/247-1500
www.iihs.org