

ADAPTIVE HEADLIGHTS

WHAT ARE ADAPTIVE HEADLIGHTS ?

Adaptive headlights improve your ability to see around corners and while driving over the top of hills during nighttime or low-light conditions.

When driving around a corner, standard headlights point straight ahead. They do not light up potential hazards that might lie around a curve. Adaptive headlights instead adjust the beams of light towards the direction the vehicle is heading, lighting up the vehicle's path.

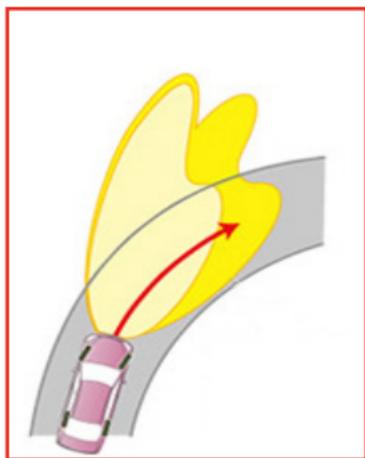
Similarly, while cresting the top of a hill, standard headlights point upward, preventing you from seeing the downward sloping road and potentially blinding oncoming drivers. Adaptive headlights help to remedy both of these problems by pointing the lights down the hill.

HOW DO ADAPTIVE HEADLIGHTS WORK?

Adaptive headlights work by continually monitoring the speed of rotation of the wheels, the amount of turning of the steering wheel and the vehicle's yaw (its side-to-side motion). When the electronic system detects changes in these three areas, it calculates which direction and how far to turn one or both headlights.

Most adaptive headlight systems also include a self-levelling system, preventing your headlights from pointing too far up or down while going over hills or large bumps. Some systems also include cornering lights, which illuminate the sides of your vehicle while making hairpin turns or while parking.

Your brain is your vehicle's most important safety feature.



Adaptive headlights can redirect beams toward the direction your vehicle is turning.

Image courtesy of Toyota Canada

WHAT ARE ITS BENEFITS AND LIMITATIONS?

Adaptive headlights can help you in situations when the road is curved or hilly, such as seeing an animal on the roadside when cornering or seeing an oncoming vehicle when driving over the top of a hill.

Drivers should be aware that adaptive headlights do not alert you to potential hazards and do not illuminate curves beyond 15 degrees. Since a driver's reaction time at night is affected by many factors, you still must drive at safe speeds to be able to respond properly to hazards or sharp turns.

Check out www.brainonboard.ca for more information on adaptive headlights.

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