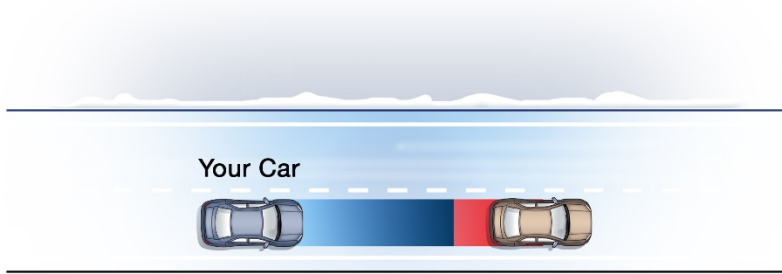


Challenge Yourself: Forward Collision Warning

Challenge: Road Conditions

Your forward collision warning system may struggle on wet or icy roads because it is not able to adjust for road conditions. Wet or slick roads may increase your stopping distance, potentially causing your



forward collision warning system to alert you too late to avoid a collision. Note in the image below that the forward collision warning system's estimated stopping distance, in blue, is far shorter than the actual stopping distance, in red, due to bad road conditions.

It's important to note that the use of forward collision warning and automatic emergency braking is not advised during inclement weather conditions.

What would you do? Road Conditions

Imagine you are driving a car equipped with forward collision warning and automatic emergency braking on an icy road following a snowstorm. Using the image to the right as a reference, think about the questions below.

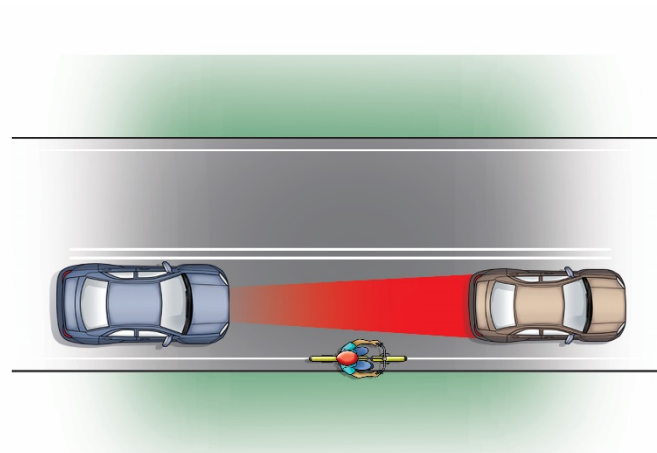


1. If the car in front of you abruptly stops, how will your forward collision warning system respond?

2. What should you do to stay safe?

Challenge: Bicycles and Pedestrians

Some forward collision warning systems are not able to detect some obstacles or even vehicles because of their size or shape. When driving in areas where bicycles, motorcycles, and other small vehicles are common, you should not rely on your forward collision warning system.



What would you do? Bicycles and pedestrians

Imagine yourself driving the blue car on the city street to the right. Think about the questions below.



1. **If the pedestrian in front of you crosses the street, how will your forward collision warning system respond?**

2. **What should you do?**

Challenge: Bad Weather

Many forward collision warning systems struggle to detect vehicles ahead of you when driving through snow, rain or fog. In these situations, your system may not be able to see through the falling snow. Similarly, your sensors may become covered by snow or ice during a storm, causing it to not function at all.



What would you do? Bad Weather

After a snowstorm, you come outside and see your car covered with snow. Using the image to the right as a reference, think about the questions below.



1. **What concerns would you have about your forward collision warning system?**

2. **What should you do?**

Challenge: Low Light and Glare

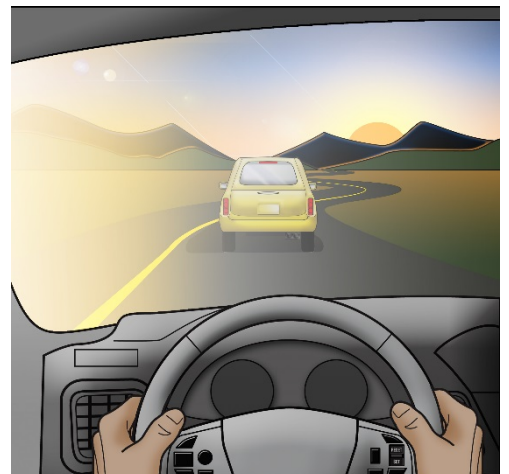
Some forward collision warning systems, particularly those that are laser- or camera-based, may not function properly during situations with glare or low light, or when lighting changes drastically.

In the image to the right, for example, your forward collision warning system may struggle to detect vehicles while driving through the tunnel, as well as when the lighting changes abruptly at either end.



What would you do? Low Light and Glare

Imagine yourself driving at dusk, as shown in the image to the right. Think about the questions below.



1. How will your forward collision warning system respond?

2. What should you do?

Expert Challenge Answers

On this page, you'll find our answers to the scenario problems you answered.

Road Conditions

Answer:

Because of the icy road conditions, my forward collision warning system may not function properly. It is not able to adjust its estimate of my stopping distance based on road conditions, and so it may warn me too late. I should always be attentive and drive cautiously in order to avoid collisions.

Bicycles and Pedestrians

Answer:

My forward collision warning system may not detect the pedestrian as he crosses the street, meaning I would not receive a warning. I should never solely depend on my forward collision warning system, but should constantly scan the road ahead to watch for pedestrians and other hazards.

Bad Weather

Answer:

My forward collision warning system's sensors are likely covered by the snow. When clearing the snow off of my vehicle, I should always make sure to clear any snow on the vehicle to ensure sensors are clear. This will allow the system to function appropriately. I should be especially mindful when using my forward collision warning system in these conditions, as emphasized by the Road Conditions challenge.

Low Light and Glare

Answer:

Because of the high glare (and overall low light) conditions, my forward collision warning system may not be able to detect the vehicles in front of me, so I should be especially cautious and constantly scan the road ahead.