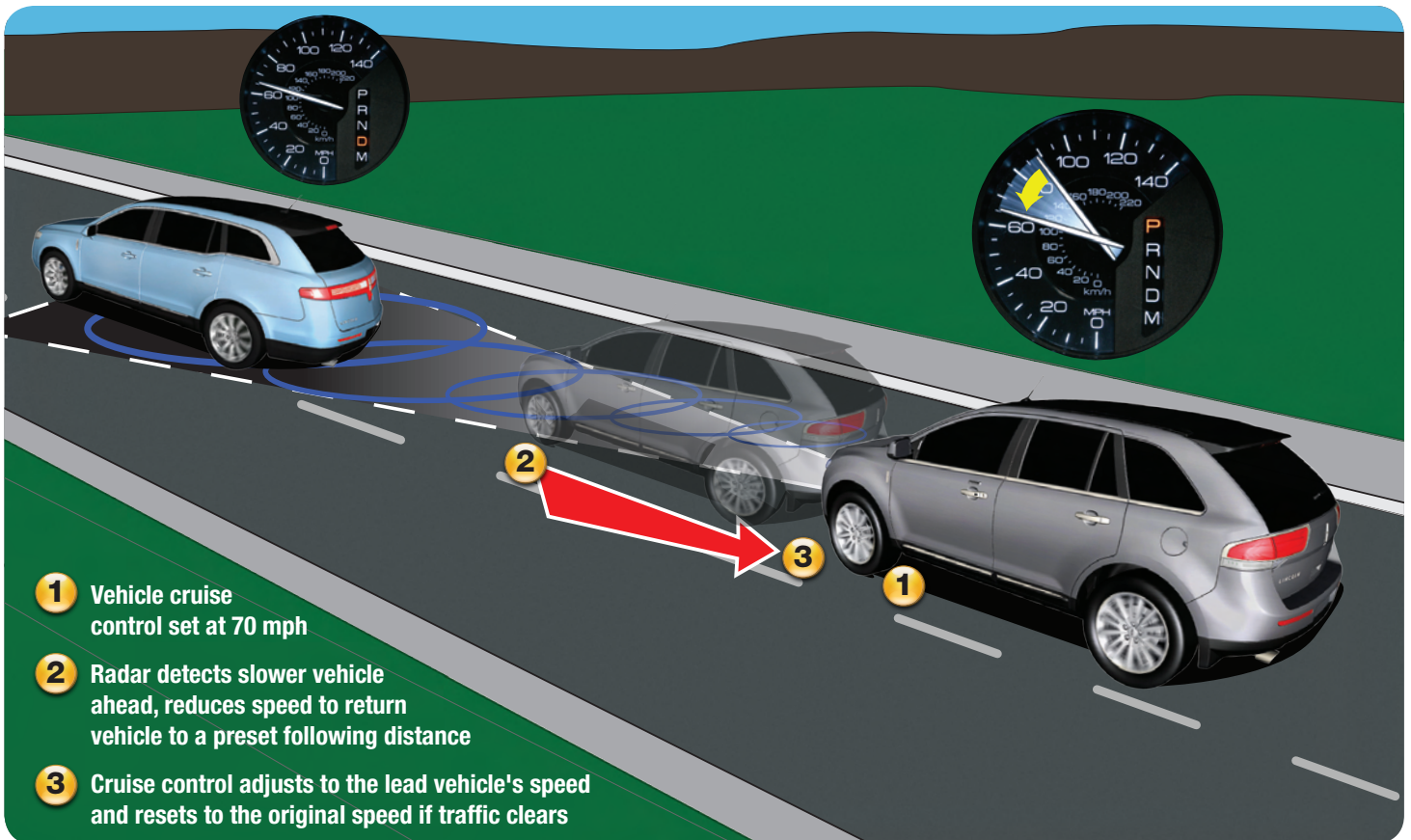




Adaptive Cruise Control and Collision Warning with Brake Support

The adaptive cruise control and collision warning with brake support integrated system allows the driver to set the vehicle's speed and maintain it without using the accelerator pedal. It uses radar sensors to detect moving vehicles ahead and warns the driver of collision risks.

ADAPTIVE CRUISE CONTROL



- 1** Vehicle cruise control set at 70 mph
- 2** Radar detects slower vehicle ahead, reduces speed to return vehicle to a preset following distance
- 3** Cruise control adjusts to the lead vehicle's speed and resets to the original speed if traffic clears

How It Works

- Adaptive cruise control is a radar-based system that can monitor the vehicle in front (up to 600 feet) and adjust the speed of the vehicle to keep it at a preset distance behind the lead vehicle, even in most fog and rain conditions.
- The system measures distance as a function of speed and can monitor the traffic ahead while ignoring stationary objects such as road signs and telephone poles.
- It also can determine how fast the vehicle is approaching the vehicle ahead. For example, when approaching a lead vehicle at a high rate of speed, the system will activate sooner than when approaching slower.

Driver Accommodations

- Four distance settings accommodate a range of driving styles and road conditions. The driver can set distance, speed and the time gap between vehicles.
- With speed settings as low as 20 mph, the driver can set the system to work as well during normal commuting as it does on the highway.
- Offers three programmable alert time settings ranging from approximately 1.5 to 2.5 seconds.

Availability

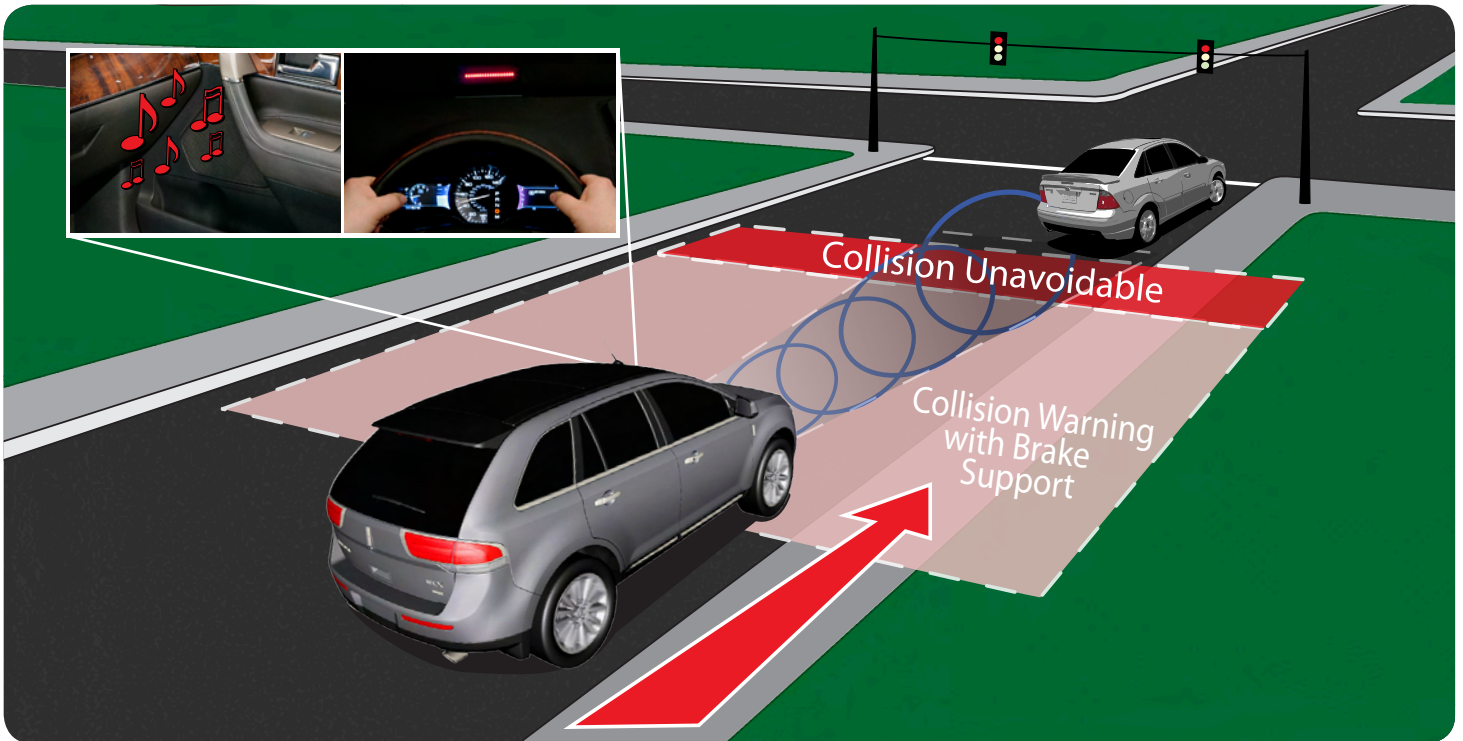
Available on the 2011 Lincoln MKX, Lincoln MKT, Lincoln MKS, 2011 Ford Edge, Ford Edge Sport, Ford Taurus, and coming to the Ford Explorer.



Collision Warning with Brake Support

Collision warning with brake support uses radar to detect moving vehicles ahead and warns the driver of danger with an alarm and warning light. The system also automatically pre-charges brakes and engages an electronic brake assist system to help drivers stop more quickly.

COLLISION WARNING WITH BRAKE SUPPORT



How It Works

- The system provides an audible alert when it senses a reduction in traffic speed in vehicles ahead.
- When the danger of a collision is detected, it provides a red warning light that flashes on the windshield.
- If the driver's response is delayed, the system will pre-charge the brakes to prepare the vehicle for more aggressive braking to help avoid rear-end accidents.
- If the driver lifts quickly off of the accelerator indicating a desire to slow down, the system will apply the brakes to a nominal level to decelerate the vehicle faster than the driver can move his foot to the brake pedal.
- If the driver hits the brakes rapidly, the system is designed to provide full braking capability to avoid or mitigate the potential threat.

Testing the System

- To test the system, engineers use balloons as target practice at Ford's test facility.
- The balloons play the role of the target vehicle, allowing engineers to prove out the feature without endangering test drivers or damaging real cars. About a dozen balloon cars, each weighing more than 40 pounds, are available in different sizes and designed to test the radar precision.
- Developed with Ford's European research teams, the balloon cars allow the tests to be conducted in a far safer manner than if real cars were involved. The tarp-like balloons – filled with air and sturdy enough to be used multiple times – offer enough give to allow impact without injury.



Adaptive cruise control and collision warning with brake support balloon-testing on Lincoln MKS.

