Lane Keeping Assist System (LKAS)

Provides steering input to help keep the vehicle in the middle of a detected lane and provides tactile and visual alerts if the vehicle is detected drifting out of its lane.

**Important Safety Reminders**

The LKAS is for your convenience only. It is not a substitute for your vehicle control. The system does not work if you take your hands off the steering wheel or fail to steer the vehicle.

Do not place objects on the instrument panel. Objects may reflect on the windshield and prevent correct detection of the traffic lanes.

The LKAS only alerts you when lane drift is detected without a turn signal in use. The LKAS may not detect all lane markings or lane departures; accuracy will vary based on weather, speed, and lane marker condition. It is always your responsibility to safely operate the vehicle and avoid collisions.

The LKAS is convenient when it is used on freeways.

The LKAS may not work properly or may work improperly under the certain conditions:

- **The LKAS Conditions and Limitations**

You can read about handling information for the camera equipped with this system.

- **Front Sensor Camera**
When Driving

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- **Lane Keep Support Function**
  Provides assistance to keep the vehicle in the center of the lane, when the vehicle nears a white or yellow line, steering force of the electric power steering will become stronger.

- **Lane Departure Warning Function**
  When the vehicle enters the warning area, the LKAS alerts you with slight steering wheel vibration as well as a warning display.

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The LKAS may not function as designed while driving in frequent stop and go traffic, or on roads with sharp curves.

When it fails to detect lanes, the system will temporarily be canceled. When a lane is detected, the system will recover automatically.
When the System can be Used

The system can be used when the following conditions are met.

- The lane in which you are driving has detectable lane markers on both sides, and your vehicle is in the center of the lane.
- The vehicle speed is between about 45 and 90 mph (72 and 145 km/h).
- You are driving on a straight or slightly curved road.
- The turn signals are off.
- The brake pedal is not depressed.
- The wipers are not in continuous operation.

How to activate the system

1. Press the MAIN button.
   - The LKAS is on in the driver information interface.
   - The system is ready to use.

2. Press the LKAS button.
   - Lane outlines appear on the driver information interface.
   - The system is activated.
3. Keep your vehicle near the center of the lane while driving.
   - The dotted outer lines change to solid ones once the system starts operating after detecting the left and right lane markings.

When the System can be Used

The LKAS temporarily deactivates when it fails to detect lane lines. When the system detects the lines again, it comes back on automatically.

To cancel

To cancel the LKAS:
Press the MAIN or LKAS button.
The LKAS is turned off every time you stop the engine, even if you turned it on the last time you drove the vehicle.

Pressing the MAIN button also turns ACC with Low Speed Follow on and off.
The system operation is suspended if you:

- Set the wipers to continuous operation.
  - Turning the wipers off resumes the LKAS.
- Decrease the vehicle speed to 40 mph (64 km/h) or less.
  - Increasing the vehicle speed to 45 mph (72 km/h) or more resumes the LKAS.
- Depress the brake pedal.
  - The LKAS resumes and starts detecting the lane lines again once you release the brake pedal.

**Models with automatic intermittent wipers**

- Set the wiper switch to AUTO and the wipers operate continuously.
  - The LKAS resumes when the wipers stop or operate intermittently.
When Driving

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- The LKAS may automatically be suspended when:
  - The system fails to detect lane lines.
  - The steering wheel is quickly turned.
  - You fail to steer the vehicle.
  - The vehicle runs on a curved road over the speed limit.

Once these conditions no longer exist, the LKAS automatically resumes.

- The LKAS may automatically be canceled when:
  - The camera temperature gets too high.
  - The camera behind the rearview mirror, or the area around the camera, including the windshield, gets dirty.
  - When driving through a sharp curve.
  - When driving at a speed in excess of approximately 90 mph (145 km/h).
  - When the ABS or VSA® systems engage.

A beeper will sound if the LKAS is automatically canceled.
The system may not detect lane markings and therefore may not keep the vehicle in the middle of a lane under certain conditions, including the following:

- **Environmental conditions**
  - Driving in bad weather (rain, fog, snow, etc.).
  - Sudden changes between light and dark, such as an entrance or exit of a tunnel.
  - There is little contrast between lane lines and the roadway surface.
  - Driving into low sunlight (e.g., at dawn or dusk).
  - Strong light is reflected onto the roadway.
  - Driving in the shadows of trees, buildings, etc.
  - Shadows of adjacent objects are parallel to lane markings.
  - Roadway objects or structures are misinterpreted as lane markings.
  - Reflections on the interior of the front windshield.
Roadway conditions
- Driving on a snowy or wet roadway (obscured lane marking, vehicle tracks, reflected lights, road spray, high contrast).
- Driving on a road with temporary lane markings.
- Faint, multiple, or varied lane markings are visible on the roadway due to road repairs or old lane markings.
- The roadway has merging, split, or crossing lines (e.g., such as at an intersection or crosswalk).
- The lane markings are extremely narrow, wide, or changing.
- The vehicle in front of you is driving near the lane lines.
- The road is hilly or the vehicle is approaching the crest of a hill.
- Driving on rough or unpaved roads, or over bumpy surfaces.
- When objects on the road (curb, guard rail, pylons, etc.) are recognized as white lines (or yellow lines).
- When driving on roads with double lines.

Vehicle conditions
- Headlight lenses are dirty or the headlights are not properly adjusted.
- The outside of the windshield is streaked or blocked by dirt, mud, leaves, wet snow, etc.
- The inside of the windshield is fogged.
- The camera temperature gets too high.
- An abnormal tire or wheel condition (wrong sized, varied size or construction, improperly inflated, compact spare tire, etc.).
- The vehicle is tilted due to a heavy load or suspension modifications.
- The vehicle is towing a trailer.