

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.

■ Steering input assist

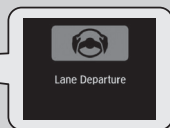
The system applies torque to the steering to keep the vehicle between the left and right lane lines. The applied torque becomes stronger as the vehicle gets closer to either of the lane lines.



■ Front Sensor Camera
Monitors the lane lines.

■ Tactile and visual alerts

Rapid vibrations on the steering wheel and a warning display alert you that the vehicle is drifting out of a detected lane.



When you operate the turn signals to change lanes, the system is suspended, and resumes after the signals are off.

If you make a lane change without operating the turn signals, the LKAS alerts activate, and torque is applied to the steering.

⊠ Lane Keeping Assist System (LKAS)

Important Safety Reminders

The LKAS is for your convenience only. It is not an autonomous driving system and always requires driver attention and control. The system does not work if you take your hands off the steering wheel or fail to steer the vehicle.

⊠ Driver Information Interface Warning and Information Messages P. 109

The LKAS is convenient when it is used on freeways.

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

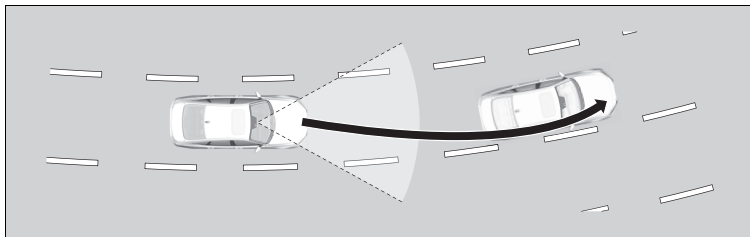
⊠ LKAS Conditions and Limitations P. 491

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

⊠ Front Sensor Camera P. 504

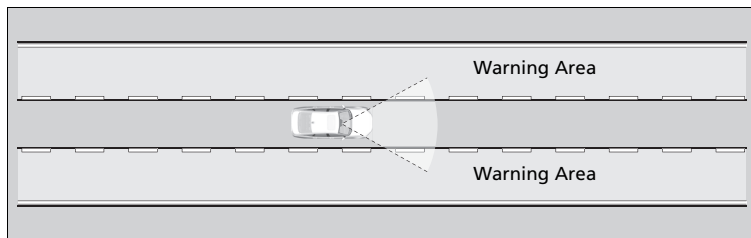
■ Lane Keep Support Function

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.



▶▶ Lane Keeping Assist System (LKAS)

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

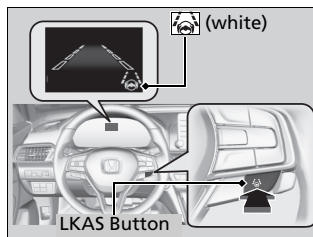
When it fails to detect lanes, the system will temporarily be canceled. When a lane is detected, the system will recover automatically.

■ 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 is traveling 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 high speed operation.

■ How to activate the system



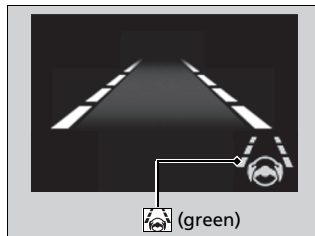
1. Press the LKAS button.

▶  indicator (white) and lane outlines appear on the driver information interface.


The system is activated.

⊠ When the System can be Used

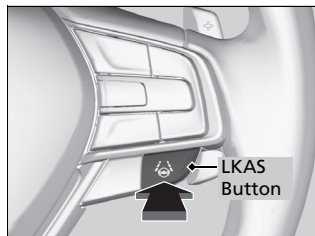
If the vehicle drifts toward either left or right lane line due to the system applying torque, turn off the LKAS and have your vehicle checked by a dealer.



2. Keep your vehicle near the center of the lane while driving.

- ▶ The  indicator changes from white to green and the lane outlines change to solid ones once the system starts operating after detecting the left and right lane markings.

■ To cancel



Press the 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.



When the LKAS is suspended, the lane lines on the driver information interface change to lane outlines, and the beeper sounds (if activated).

■ **The system operation is suspended if you:**

- Set the wipers to high speed.
 - ▶ Turning the wipers off, setting it to **LO**, or the wipers are operating intermittently resumes the LKAS.
- Decrease the vehicle speed to about 40 mph (64 km/h) or less.
 - ▶ Increasing the vehicle speed to about 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.
- Your vehicle is driving to the right or the left of the lane.

■ **The LKAS may be automatically suspended when:**

- The system fails to detect lane lines.
 - The steering wheel is quickly turned.
 - You fail to steer the vehicle.
 - Driving through a sharp curve.
 - Driving at a speed in excess of approximately 90 mph (145 km/h).
- Once these conditions no longer exist, the LKAS automatically resumes.

⌘ **The system operation is suspended if you:**

You can change the setting for the LKAS. LKAS suspended beep ON and OFF can be selected.

➤ **Customized Features** P. 351

■ **The LKAS may be automatically canceled when:**

- The camera temperature gets extremely high or low.
- The camera behind the rearview mirror, or the area around the camera, including the windshield, gets dirty.
- The ABS or VSA® system engages.

The beeper sounds if the LKAS is automatically canceled.

■ LKAS Conditions and Limitations

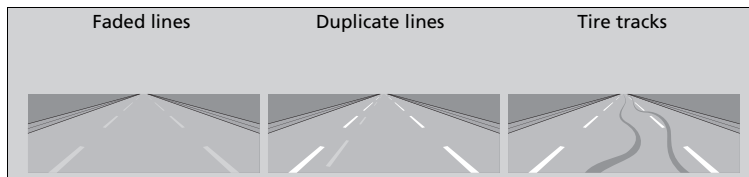
The system may not detect lane markings and therefore may not keep the vehicle in the middle of the lane under certain conditions, including the following:

■ **Environmental conditions**

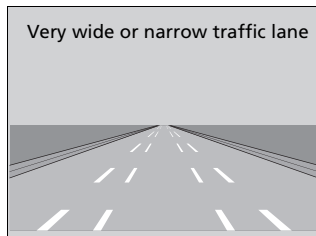
- Driving in bad weather (rain, fog, snow, etc.).
- Sudden changes between light and dark, such as an entrance or exit of a tunnel.
- There is little contrast between lane lines and the roadway surface.
- Driving into low sunlight (e.g., at dawn or dusk).
- Strong light is reflected onto the roadway.
- 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 markers.
- Reflections on the interior of the windshield.
- Driving at night or in a dark condition such as a tunnel.

■ 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.

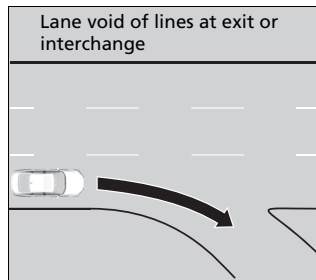


- The roadway has merging, split, or crossing lines (e.g., such as at an intersection or crosswalk).
- The lane markings are extremely narrow, wide, or changing.



- 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).
- 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 (incorrect sizes, varied sizes 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*.