

## 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

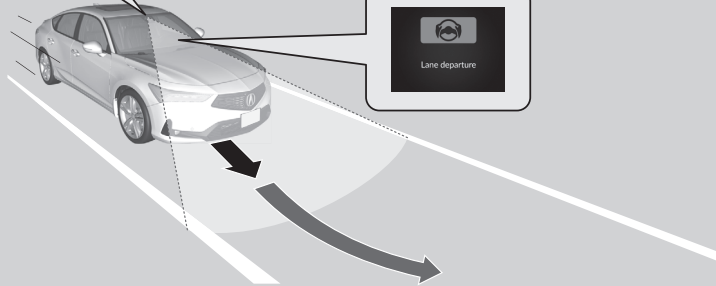
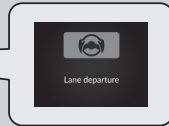
The system applies torque to the steering to keep the vehicle between the left and right lane lines. The applied torque becomes stronger as the vehicle gets closer to either of the lane lines.



### ■ Front Wide View 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.

The LKAS is convenient when it is used on expressways or 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:

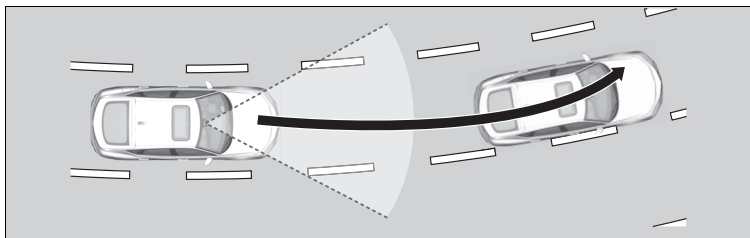
▣ **LKAS Conditions and Limitations** P. 553

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

▣ **Front Wide View Camera** P. 581

## ■ 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.



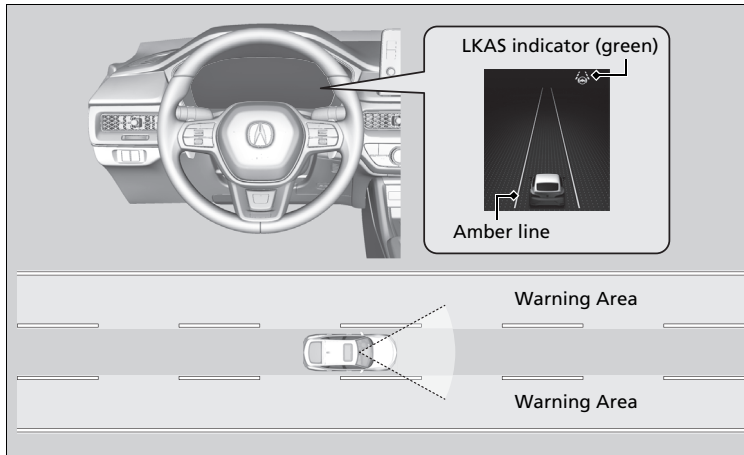
## ▣ Lane Keeping Assist System (LKAS)

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

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

## ■ 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.

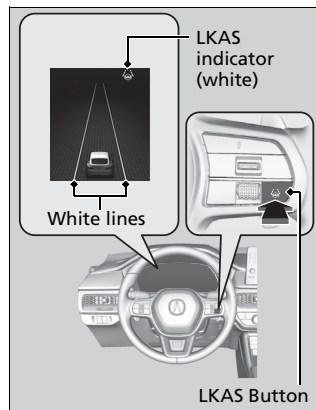


## ■ When the System can be Used

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.

## ■ How to activate the system



### 1. Press the LKAS button.

- LKAS indicator (white) appears on the gauge.

The system is standby.

- If traffic lane lines are detected, white lines appear on the gauge.

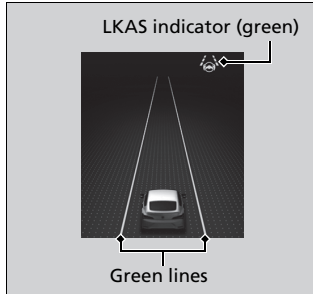
## ⌘ When the System can be Used

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.

Be sure to keep the following below to activate the system properly;

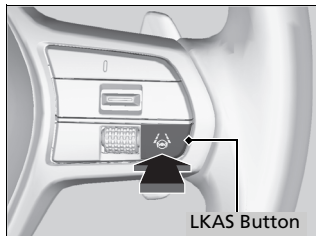
- Always keep the windshield around the camera clean.
- When cleaning the windshield, be careful not to apply windshield cleanser to the camera lens.
- Do not touch the camera lens.
- Do not attach a sticker to the area around the camera.

If LKAS button is pressed when the system can be used, LKAS is on without standby.



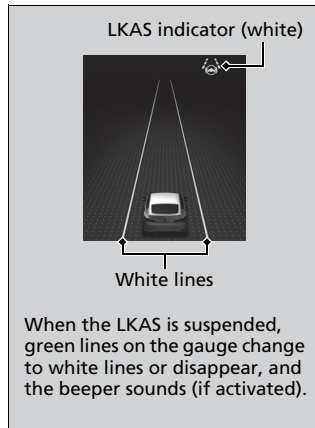
2. Keep your vehicle near the center of the lane while driving.
  - The LKAS indicator changes from white to green, and white lines change to green once the system starts operating after detecting the left and right lane markings.

## ■ 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.



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

- 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.

►► To Cancel

You can change the setting for the LKAS. LKAS suspended beep on and off can be selected.

Models with 7-in. Color Touchscreen

► **Vehicle Settings\*** P. 126

Models with 9-in. Color Touchscreen

► **Customized Features** P. 359

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

- The system fails to detect lane lines.
  - The steering wheel is turned quickly.
  - You fail to steer the vehicle.
  - Driving through a sharp curve.
  - Driving at a speed in excess of approximately 94 mph (150 km/h).
- Once these conditions no longer exist, the LKAS automatically resumes.

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

In the following cases, traffic lane lines may disappear on the gauge, the beeper may sound, and the LKAS may automatically be canceled:

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



## ■ LKAS Conditions and Limitations

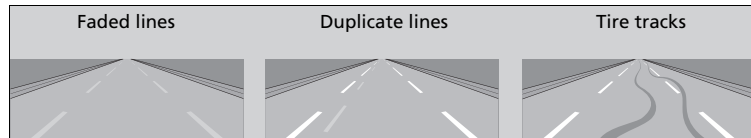
The system may not detect lane markings and therefore may not keep the vehicle in the middle of the lane under certain conditions, including the following:

### ■ Environmental conditions

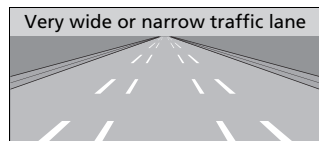
- There is little contrast between lane lines and the roadway surface.
- Driving in bad weather (rain, fog, snow, etc.).
- Driving on a snowy or wet roadway.
- Driving into low sunlight (e.g., at dawn or dusk).
- Shadows of adjacent objects (trees, buildings, guard rails, vehicles, etc.) are parallel to white (or yellow) lines.
- Sudden changes between light and dark, such as the entrance or exit of a tunnel or the shadows of trees, buildings, etc.
- Driving at night or in a dark place such as a tunnel (due to low-light conditions, lane lines or the road surface may not be illuminated).
- The distance between your vehicle and the vehicle ahead of you is too short, and lane lines and the road surface are not visible.
- Strong light is reflected onto the roadway.

### ■ Roadway conditions

- 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.

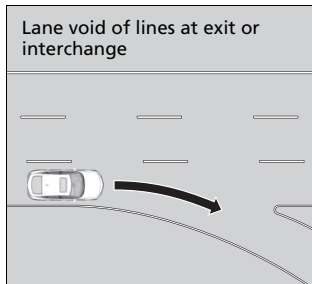


- The roadway has merging, split, or crossing lines, such as at an intersection or crosswalk.
- The lane markings are extremely narrow, wide, or changing.



- Part of the lane markings are hidden by an object, such as a vehicle.
- The road is hilly or the vehicle is approaching the crest of a hill.
- Your vehicle is strongly shaken on uneven road surfaces.

- When objects on the road (curb, guard rail, pylons, etc.) are recognized as white (or yellow) lines.
- Driving on rough or unpaved roads, or over bumpy surfaces.
- Driving on roads with double lane lines.
- Driving on snowy or slippery roads.
- The pavement is only partially visible due to snow or puddles on the road.
- There is a film of water or puddles on the road surface.
- White (or yellow) lines are not recognized correctly due to road conditions such as curves, twists, or hills.
- Driving on unpaved or rutted roads.
- Passing through an exit or an interchange.



### ■ Vehicle conditions

- When lighting is weak due to dirt covering the headlight lenses, or there is poor visibility in a dark place due to the headlights being improperly adjusted.
- The front of the camera is covered by dirt, fog, rain, mud, wet snow, seals, accessories, stickers, or film on the windshield.
- Driving at night or in a dark place (e.g., a tunnel) with the headlights off.
- There is residue on the windshield from the windshield wipers.
- 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 in the cargo area or rear seats.
- The suspension has been modified.
- Tire chains are installed.