FUNCTION : LANE DEPARTURE WARNING SYSTEM

1. Principle of operation

The lane departure warning system uses the information collected continuously by the multifunction video camera t detect crossing of continuous or broken traffic lane marker lines on the road.
The multifunction video camera detects the unintentional crossing of a line on the left or on the right.
The multifunction video camera controls the audible warnings and lighting of the dedicated warning lamp if a line is crossed unintentionally.
If the unintentional crossing of a line is detected, the buzzer integrated in the steering wheel controls emits an audible signal to warn the driver.
The driver's intention to change lane is deduced from the activated direction indicator information.
If a warning is in progress and the driver indicates to change direction, the warning stops.
The lane wandering alert function is active from 60 km/h.
The warning is maintained if a warning is in progress and the vehicle speed drops below 60 km/h.
The lane departure warning is interrupted if the driver deactivates the lane departure warning system, switches off the ignition or activates a direction indicator.
The minimum duration of the alert if there is a detection is 3 seconds.
The maximum duration of the alert is 7 seconds.
The function deactivates the alert for approx. 20 seconds after the direction indicator has stopped.

CAUTION : The effectiveness of the lane departure warning system may be affected temporarily by conditions outside the vehicle (Detection of a road marking difficult in poor weather conditions, Fading of a road marking by wear, Slight contrast between a road marking and the road surface, Dirt on the windscreen). If the camera detects a roadworks area (several markings, etc.), the lane departure warnings are inhibited.

The lane departure warning system filters the different types of road marking (detected markings and filtered markings) using the following parameters :

- Trajectory with a radius of curvature of the road more than 250 m
- A trajectory with angles below 4°
- Activation of the lane warning departure system
- The vehicle speed exceeds 60 km/h

2. Warning activation and deactivation conditions

2.1. Activating warnings

The conditions for activating a warning are as follows :

- The lane departure warning system is in "selected" mode
- An unfiltered road marking to the left or right is recognised
- The vehicle speed exceeds 60 km/h
- No direction indicator is activated
- A period of at least 20 seconds has elapsed since the last activation of either the RH or the LH direction indicator

2.2. Deactivating warnings

The conditions for deactivating a warning are as follows :

- The driver has activated one of the direction indicators
- End of detection of the marking on the ground
- The warning has been active for more than 7 seconds
- The lane warning departure system is inhibited by the driver
- In the event of a malfunction of the system

N.B. : If one of these conditions is confirmed the warning is deactivated.

3. Types of marking detected

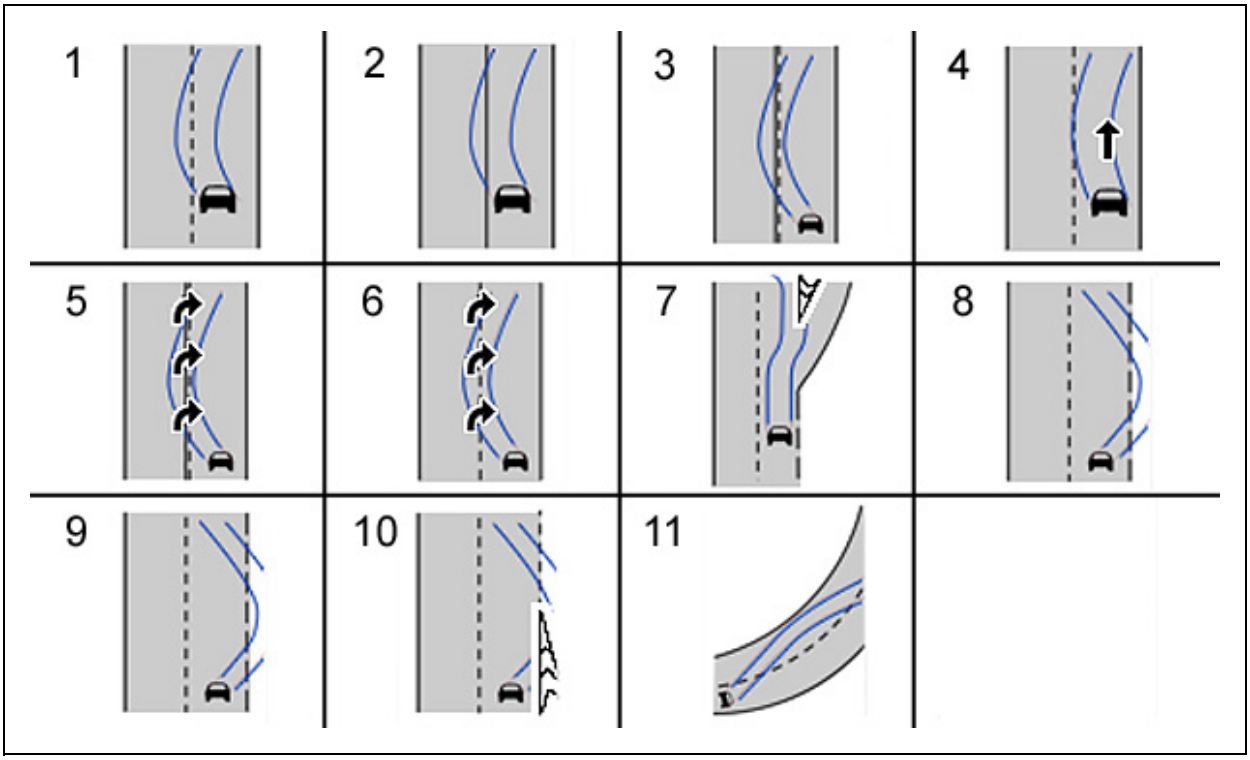

Figure : D4EA4QFD

(1) All broken lines.
(2) Continuous lines.
(3) Continuous and broken lines.
(4) One wheel on a dotted line and the other on a filtered marking.
(5) Lane change arrow.
(6) Lane change arrow.
(7) Hatching.
(8) Broken hard shoulder marking.
(9) Rumble strips on the hard shoulder marking.
(10) Hatching.
(11) Broken line in a bend.

N.B. : This list is not exhaustive but shows the types of marking detected.

4. Types of filtered marking

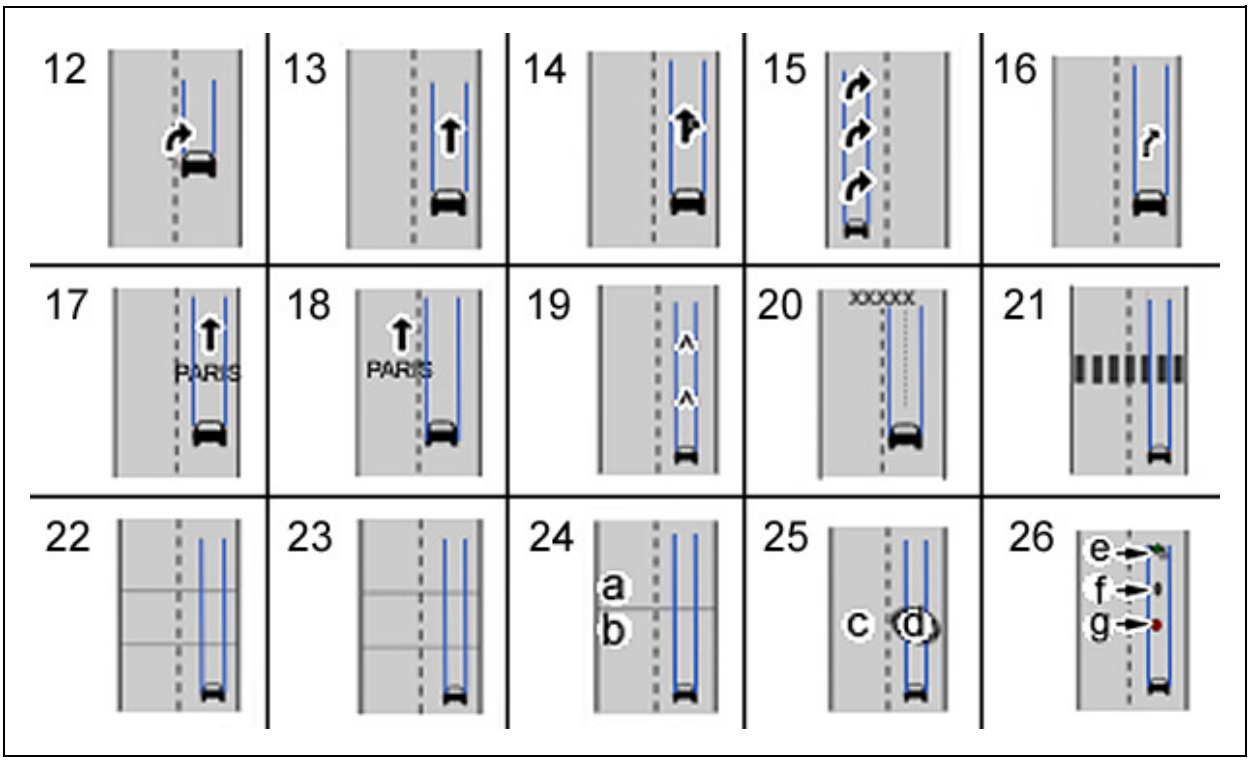

Figure : D4EA4QGD

"a", "b", "c", "d" Trims (non-exhaustive list) :

- Asphalt
- Concrete
- Cement
- Grooved, bumpy, poor quality

"e" Leaves.
"f" oil.
"g" Mud.
(12) Touch a lane change arrow.
(13) Direction arrow.
(14) Direction arrows.
(15) Lane change arrow.
(16) Direction arrow.
(17) Direction written on the road.
(18) Touch writing on the road.
(19) Safety distance chevron.
(20) Road marking in the middle of a lane in road works.
(21) Pedestrian crossing.
(22) Bridge joint.
(23) Speed bump in different colours.
(24) Change of road surface.
(25) Patching.
(26) Leaves, oil and mud on the road.

N.B. : This list is not exhaustive but shows the types of filtered markings.