

SMART CITY BRAKE SUPPORT (SCBS) UNINTENTIONAL OPERATION

In certain conditions, Smart City Brake Support (SCBS) may operate unintentionally. The Owner's Manual provides 7 examples:

1. Objects on the road at the entrance to a curve.
2. Vehicles passing in the opposite lane while making a curve.
3. Metal objects, bumps, or protruding objects on the road.
4. When passing through a toll gate.
5. When passing under a vinyl curtain or flag.
6. Plastic objects such as pylons.
7. Two-wheeled vehicles, pedestrians, animals or standing trees.

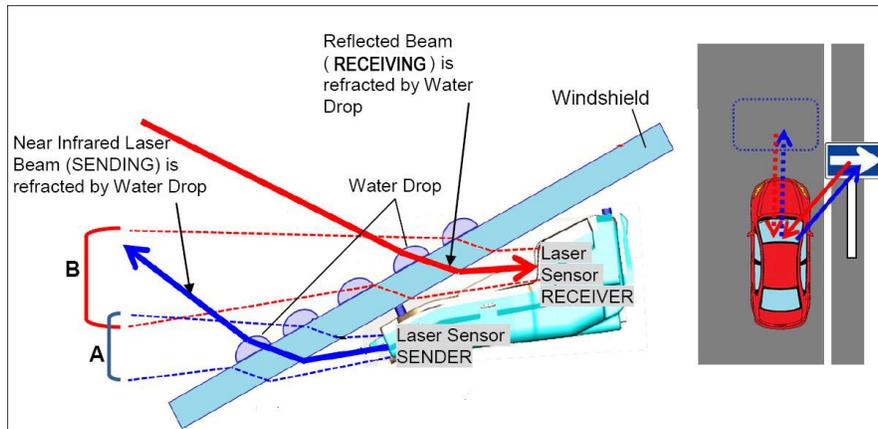
This M-Tip article provides 2 additional examples:

- A. There is fogging on the inner surface of the windshield.
- B. There is/are fogging/water drops on the outer surface of the windshield.

The near infrared laser beam is a light beam and is refracted by water drops or foreign material on the windshield. In this case, the near infrared laser beam may not detect an obstruction ahead correctly.



The near infrared laser beam (SENDING) emitted from the laser sensor (SENDER) is refracted by water drop on the windshield and reflects an object (a traffic sign in the figure) outside the normal sending range. The reflected beam (RECEIVING) by the traffic sign is also refracted by water drop and received by the laser sensor (RECEIVER). Thus, the system may detect an object outside the normal detection range as a vehicle and the SCBS operates unintentionally.



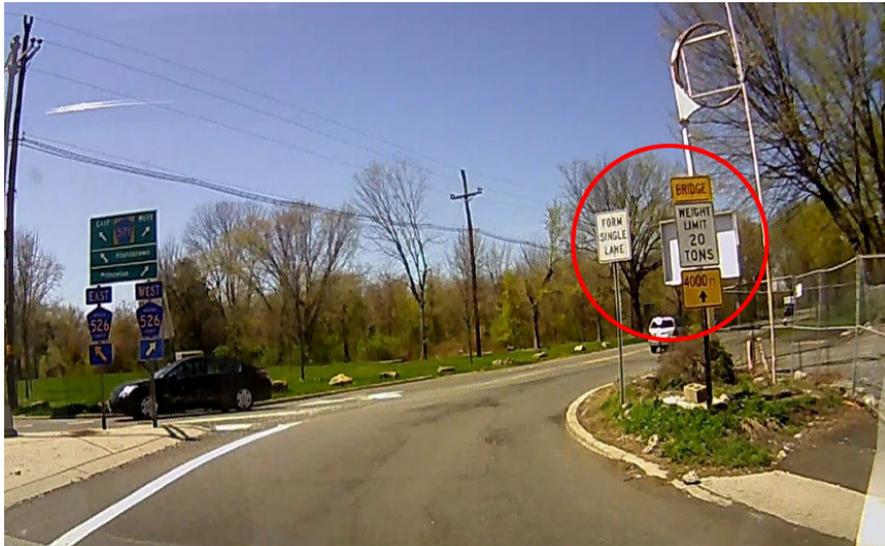
A: Normal Sending Range of Near Infrared Laser Beam
B: Normal Receiving Range of Near Infrared Laser Beam

Preventive Measures:

1. In case fogging and/or water drops is/are on the outer surface of the windshield;
 - o Operate the wiper system to remove the fogging/water drops on the windshield.
 - o Advise the customer to properly clean the windshield. Present oil films may cause rain drops to stick on the windshield.
2. In case fogging on the inner surface of the windshield;
 - o Turn on the front defroster before driving to defrost the windshield around the laser sensor.

Object examples that SCBS may detect unintentionally due to foreign material like water drop on windshield. The laser sensor may unintentionally detect reflectors or shop/traffic signs including reflector on the right side of or above the road ahead or vehicles parking on the right side of the road ahead.







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