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2018 FORD F-150 Super Crew OEM Service and Repair Workshop Manual

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Possible Sources

- Wiring, terminals or connectors
- Message center switch (part of the LH (left-hand) upper steering wheel switch)
- Clockspring
- SCCM (steering column control module)
-

H1 CHECK FOR THE LH (LEFT-HAND) UPPER STEERING WHEEL SWITCH IS OPERATING CORRECTLY

- Ignition ON.

Is the concern still present?

Yes	REFER to: Steering Wheel and Column Electrical Components(211-05 Steering Wheel and Column Electrical Components, Diagnosis and Testing).
No	The system is operating correctly at this time. The concern may have been caused by an intermittent fault condition.

PINPOINT TEST I : THE BLIS (BLIND SPOT INFORMATION SYSTEM) ® WITH TRAILER TOW SYSTEM IS INOPERATIVE (WHEN A TRAILER IS CONNECTED BLIS (BLIND SPOT INFORMATION SYSTEM) ® AND CTA (CROSS TRAFFIC ALERT) AUTOMATICALLY SHUT OFF)

Normal Operation and Fault Conditions

REFER to: Blind Spot Information System - System Operation and Component Description(419-04A Side and Rear Vision, Description and Operation).

Possible Sources

- The BLIS (blind spot information system) ® and the BLIS (blind spot information system) ® With Trailer Tow are disabled in the information and entertainment display unit
- There is no trailer stored in the information and entertainment display unit
- An incompatible BLIS (blind spot information system) ® With Trailer Tow compatible trailer is selected
- Trailer connect diagnostics concern

I1 CHECK THE BLIS (BLIND SPOT INFORMATION SYSTEM) ® WITH TRAILER TOW SYSTEM IS INOPERATIVE (WHEN A TRAILER IS CONNECTED BLIS (BLIND SPOT INFORMATION SYSTEM) ® AND CTA (CROSS TRAFFIC ALERT) AUTOMATICALLY SHUT OFF)

- Verify the BLIS (blind spot information system) ® with trailer tow system is inoperative.
- Possible cause:

- Incorrect trailer setup
- Target vehicle is passing at a high relative speed

- Repair:
  - Verify the trailer setup measurements. REFER to the Owner's Literature.
  - No action required, the system is operating correctly at this time.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	REFER to the Owner's Literature.

No	The system is operating correctly at this time.

PINPOINT TEST K : THE BLIS® WITH TRAILER TOW RECEIVES EARLY ALERTS. (ALERTING WHEN TARGET IS FAR BEHIND THE BLIS® WITH TRAILER TOW BLIND SPOT ZONE)

Normal Operation and Fault Conditions

REFER to: Blind Spot Information System - System Operation and Component Description(419-04A Side and Rear Vision, Description and Operation).

Possible Sources

- Incorrect trailer setup

K1 CHECK THE BLIS® WITH TRAILER TOW RECEIVES EARLY ALERTS. (ALERTING WHEN TARGET IS FAR BEHIND THE BLIS® WITH TRAILER TOW BLIND SPOT ZONE)

- Verify the BLIS (blind spot information system) ® with trailer tow system receives false alerts.

Test drive vehicle with trailer to verify if alerts are continuously occurring. If continuously alerting ?

Yes	GO to Pinpoint Test A

No	The system is operating correctly at this time.

PINPOINT TEST M : THE BLIS (BLIND SPOT INFORMATION SYSTEM) ® WITH TRAILER TOW IS MISSING TARGET VEHICLES.

NOTE

The BLIS (blind spot information system) ® With Trailer Tow may miss up to 3% of targets.

Normal Operation and Fault Conditions

REFER to: Blind Spot Information System - System Operation and Component Description(419-04A Side and Rear Vision, Description and Operation).

Possible Sources

- Incorrect trailer setup
- Target vehicle is passing at a high relative speed
- Missed targets

M1 CHECK BLIS (BLIND SPOT INFORMATION SYSTEM) ® WITH TRAILER TOW IS MISSING TARGET VEHICLES.

- Verify the BLIS (blind spot information system) ® with trailer tow is missing target vehicles.
- Possible cause:
  - Incorrect trailer setup
  - Target vehicle is passing at a high relative speed
  - Missed targets
- Repair:
  - Verify the trailer setup measurements. REFER to the Owner's Literature.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	REFER to the Owner's Literature.

No	The system is operating correctly at this time

N2 CHECK FOR BLIS (BLIND SPOT INFORMATION SYSTEM) , PCM (POWERTRAIN CONTROL MODULE) , IPMA (IMAGE PROCESSING MODULE A) , IPMB (IMAGE PROCESSING MODULE B) , ABS (ANTI-LOCK BRAKE SYSTEM) AND BCM (BODY CONTROL MODULE) DTC (DIAGNOSTIC TROUBLE CODE) S

- Verify if any BLIS (blind spot information system) , PCM (powertrain control module) , IPMA (image processing module A) , IPMB (image processing module B) , ABS (anti-lock brake system) and BCM (body control module) DTC (diagnostic trouble code) s are present.
- Using a diagnostic scan tool, perform the BLIS (blind spot information system) , PCM (powertrain control module) , IPMA (image processing module A) , IPMB (image processing module B) , ABS (anti-lock brake system) and BCM (body control module) self-tests.

Are DTC (diagnostic trouble code) s present in any of these modules?

Yes	Diagnose all the DTC (diagnostic trouble code) 's for the module in question.

No	GO to N3

N3 CHECK THE IPMA REVERSE BRAKE ASSIST FAULT HISTORY

- Using a diagnostic scan tool,
  Access the IPMA (image processing module A) and monitor the RBA_RCNT_F (Most Recent RBA Fault) PID (parameter identification)

Is the most recent fault "NONE"?

Yes	GO to N4

No	For "Vehicle speed not in range", ensure vehicle is driven in reverse at 1-12 km/h. For "Steering", drive the vehicle straight on a flat/smooth road above 50 km/h (30 mph) with minimal driver steering input for 30 seconds. For ABS_RBA (REVERSE BRAKE ASSIST) or ABS_CTA (CROSS TRAFFIC ALERT), diagnose any ABS (anti-lock brake system) module DTCs present and configure the ABS (anti-lock brake system) module as necessary. For "Camera blocked", GO to N4 For "Internal fault", GO to N6

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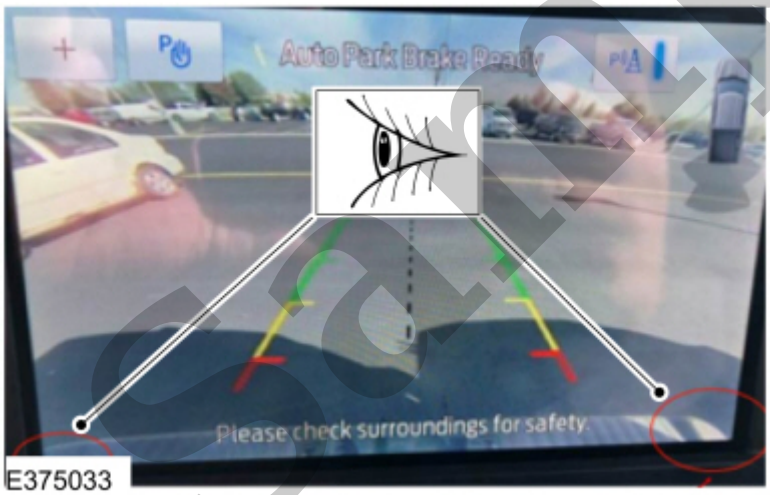
- As seen in image, camera is not centred correctly, the rear bumper corners should also be centered in the image. If the camera is pointing too far downward, apply some flock tape in between it and the tailgate handle, resecure the camera and note the effect on the image.

- 

Is the camera positioned correctly?

Yes	GO to N6

Control Module C) B129C:54		aligned in factory or in service or service alignment failed or factory alignment failed. ACC (adaptive cruise control) is disabled and request sent to display 'Driver Intervene' or 'Cruise Malfunction' message. Collision Warning and Mitigation is disabled and request sent to display 'Collision Warning Malfunction'.
SODCMD (Side Obstacle Detection Control Module D) B129D:54	Right Front Side Sensor: Missing Calibration	Set by the SODCMD (Side Obstacle Detection Control Module D) as a continuous memory and on-demand DTC (diagnostic trouble code) if the SODCMD (Side Obstacle Detection Control Module D) detects a misalignment of the radar due to the radar has not been aligned in factory or in service or service alignment failed or factory alignment failed.
SODL (side obstacle detection control module LH) B13F3:54	Left Rear Side Sensor: Missing Calibration	Set by the SODL (side obstacle detection control module LH) as a continuous memory and on-demand DTC (diagnostic trouble code) if the SODL (side obstacle detection control module LH) detects a auto alignment (factory, service, or drive) has converged and corner horizontal alignment angle is out of range.
SODR (side obstacle detection control module RH) B13F4:54	Right Rear Side Sensor: Missing Calibration	Set by the SODR (side obstacle detection control module RH) as a continuous memory and on-demand DTC (diagnostic trouble code) if the SODR (side obstacle detection control module RH) detects a auto alignment (factory, service, or drive) has converged and corner horizontal alignment angle is out of range.
SODCMD (Side Obstacle Detection Control Module D) B157C:78	Right Front Side Sensor Horizontal Alignment: Alignment Or Adjustment Incorrect	Set by the SODCMD (Side Obstacle Detection Control Module D) as a continuous memory DTC (diagnostic trouble code) if the SODCMD (Side Obstacle Detection Control Module D) detects a auto alignment (factory, service or drive) has converged and FLR horizontal alignment angle is out of range.
SODR (side obstacle detection control module RH) B157D:78	Right Rear Side Sensor Vertical Alignment: Alignment Or Adjustment Incorrect	Set by the SODR (side obstacle detection control module RH) as a continuous memory DTC (diagnostic trouble code) if the SODR (side obstacle detection control module RH) detects a vertical alignment relative to ground during factory alignment is out side of limits.
SODCMC (Side Obstacle	Left Front Side Sensor Horizontal	Set by the SODCMC (Side Obstacle Detection Control Module C) as a continuous memory DTC (diagnostic trouble code) if the SODCMC

Possible Sources

- Side obstacle detection control module alignment
- SODCMC (Side Obstacle Detection Control Module C) bracket
- SODCMD (Side Obstacle Detection Control Module D) bracket
- Rear lamp assembly LH (left-hand)
- Rear lamp assembly RH (right-hand)
- SODCMC (Side Obstacle Detection Control Module C)
- SODCMD (Side Obstacle Detection Control Module D)
- SODL (side obstacle detection control module LH)
- SODR (side obstacle detection control module RH)

O1 INSPECT THE SODCMC (SIDE OBSTACLE DETECTION CONTROL MODULE C) , SODCMD (SIDE OBSTACLE DETECTION CONTROL MODULE D) BRACKETS AND REAR LAMP ASSEMBLY LH (LEFT-HAND) , REAR LAMP ASSEMBLY RH (RIGHT-HAND)

- Remove the front bumper upper cover trim panel and the rear lamp assemblies.
  REFER to: Radiator Grille(501-08 Exterior Trim and Ornamentation, Removal and Installation).
  REFER to: Rear Lamp Assembly(417-01 Exterior Lighting, Removal and Installation).
- Inspect for damage to SODCMC (Side Obstacle Detection Control Module C) , SODCMD (Side Obstacle Detection Control Module D) brackets and rear lamp assembly LH (left-hand) , rear lamp assembly RH (right-hand) .

Is the SODCMC (Side Obstacle Detection Control Module C) , SODCMD (Side Obstacle Detection Control Module D) brackets and rear lamp assembly LH (left-hand) , rear lamp assembly RH (right-hand) damaged?

Yes	REPAIR or INSTALL a new SODCMC (Side Obstacle Detection Control Module C) , SODCMD (Side Obstacle Detection Control Module D) brackets and rear lamp assembly LH (left-hand) , rear lamp assembly RH (right-hand) as necessary. REFER to: Side Obstacle Detection Control Module C (SODCMC) (419-04A Side and Rear Vision, Removal and Installation). REFER to: Side Obstacle Detection Control Module D (SODCMD) (419-04A Side and Rear Vision, Removal and Installation). REFER to: Side Obstacle Detection Control Module (SODCM) (419-04A Side and Rear Vision, Removal and Installation). REFER to: Rear Lamp Assembly (417-01 Exterior Lighting, Removal and Installation).

No	GO to O2 GO to O3

	(419-04A Side and Rear Vision, Removal and Installation). REFER to: Side Obstacle Detection Control Module (SODCM) (419-04A Side and Rear Vision, Removal and Installation).

No	The system is operating correctly at this time. The concern was caused by a misaligned sensor.

PINPOINT TEST P : DTC (DIAGNOSTIC TROUBLE CODE) B129C:96, B129D:96, B13F3:96 OR B13F4:96

Refer to Wiring Diagrams Cell 146for schematic and connector information.

Normal Operation and Fault Conditions REFER to: Blind Spot Information System - System Operation and Component Description
(419-04A Side and Rear Vision, Description and Operation).

DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
SODCMC (Side Obstacle Detection Control Module C) B129C:96	Left Front Side Sensor: Component Internal Failure	Set by the SODCMC (Side Obstacle Detection Control Module C) as a continuous memory and on-demand DTC (diagnostic trouble code) if the SODCMC (Side Obstacle Detection Control Module C) detects an internal failure or invalid radar data with the radar sensor.
SODCMD (Side Obstacle Detection Control Module D) B129D:96	Right Front Side Sensor: Component Internal Failure	Set by the SODCMD (Side Obstacle Detection Control Module D) as a continuous memory and on-demand DTC (diagnostic trouble code) if the SODCMD (Side Obstacle Detection Control Module D) detects an internal failure or invalid radar data with the radar sensor.
SODL (side obstacle detection control module LH) B13F3:96	Left Rear Side Sensor: Component Internal Failure	Set by the SODL (side obstacle detection control module LH) as a continuous memory and on-demand DTC (diagnostic trouble code) if the SODL (side obstacle detection control module LH) detects an internal failure or invalid radar data with the radar sensor.

P2 CHECK FOR CORRECT SODCMC (SIDE OBSTACLE DETECTION CONTROL MODULE C) , SODCMD (SIDE OBSTACLE DETECTION CONTROL MODULE D) , SODL (SIDE OBSTACLE DETECTION CONTROL MODULE LH) AND SODR (SIDE OBSTACLE DETECTION CONTROL MODULE RH) OPERATION

- Ignition OFF.
- Disconnect and inspect the SODCMC (Side Obstacle Detection Control Module C) , SODCMD (Side Obstacle Detection Control Module D) , SODL (side obstacle detection control module LH) AND SODR (side obstacle detection control module RH) connectors.
- Repair:
  - corrosion (install new connector or terminals - clean module pins)
  - damaged or bent pins - install new terminals/pins
  - pushed-out pins - install new pins as necessary
- Reconnect the SODCMC (Side Obstacle Detection Control Module C) , SODCMD (Side Obstacle Detection Control Module D) , SODL (side obstacle detection control module LH) AND SODR (side obstacle detection control module RH) connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS (Online Automotive Service Information System) for any applicable service articles TSB (Technical Service Bulletin) , GSB (General Service Bulletin) , SSM (special service message) or FSA (Field Service Action) . If a service article exists for this concern, DISCONTINUE this test and FOLLOW the service article instructions. If no service articles address this concern, INSTALL a new SODCMC (Side Obstacle Detection Control Module C) , SODCMD (Side Obstacle Detection Control Module D) , SODL (side obstacle detection control module LH) OR SODR (side obstacle detection control module RH) . REFER to: Side Obstacle Detection Control Module C (SODCMC) (419-04A Side and Rear Vision, Removal and Installation). REFER to: Side Obstacle Detection Control Module D (SODCMD) (419-04A Side and Rear Vision, Removal and Installation). REFER to: Side Obstacle Detection Control Module (SODCM) (419-04A Side and Rear Vision, Removal and Installation).

No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

PINPOINT TEST Q : DTC (DIAGNOSTIC TROUBLE CODE) B129C:97, B129D:97, B13F3:97 OR B13F4:97