

Cruise Control

DTC Charts

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices.

REFER to: [Diagnostic Methods](#) (100-00 General Information, Description and Operation).

DTC Chart: Powertrain Control Module (PCM)

PCM DTC Chart

DTC	Description	Action
P0504	Brake Switch A/B Correlation	GO to Pinpoint Test B
P0572	Brake Switch A Circuit Low	GO to Pinpoint Test B
P0573	Brake Switch A Circuit High	GO to Pinpoint Test B
P1703	Brake Switch Out Of Self-Test Range	GO to Pinpoint Test B
All other Diagnostic Trouble Codes (DTCs)	—	Refer to the appropriate section in Group 303 for the procedure.

DTC Chart: Steering Column Control Module (SCCM)

SCCM DTC Chart

DTC	Description	Action

B137F:09	Steering Wheel Left Switch Pack: Component Failure	GO to Pinpoint Test A
B137F:11	Steering Wheel Left Switch Pack: Circuit Short to Ground	GO to Pinpoint Test A
B137F:17	Steering Wheel Left Switch Pack: Circuit Voltage Above Threshold	GO to Pinpoint Test A
All other Diagnostic Trouble Codes (DTCs)	—	REFER to: Steering Wheel and Column Electrical Components (211-05 Steering Wheel and Column Electrical Components) .

DTC Chart: IPMA

IPMA DTC Chart

DTC	Description	Action
C1A67:08	Forward Looking Sensor: Bus Signal/Message Failure	GO to Pinpoint Test D
All other Diagnostic Trouble Codes (DTCs)	—	REFER to: Lane Keeping System (419-07 Lane Keeping System, Diagnosis and Testing).

DTC Chart: CCM With Pre-Collision Assist

CCM DTC Chart

DTC	Description	Action
B142E:78	Forward Looking Sensor Horizontal Alignment: Alignment or Adjustment Incorrect	GO to Pinpoint Test C

B1432:78	Forward Looking Sensor Vertical Alignment: Alignment or Adjustment Incorrect	This DTC can only be set at the assembly plant during the plant alignment process. If DTC B1432:78 sets, a reflash of the CCM and the vertical and horizontal aim procedure must be performed. REFER to: Cruise Control Radar Alignment (419-03 Cruise Control - Vehicles With: Adaptive Cruise Control) .
B1433:54	Forward Looking Sensor Alignment: Missing Calibration	GO to Pinpoint Test C
C1001:08	Vision System Camera: Bus Signal/ Message Failure	This DTC sets when the CCM receives invalid network data from the IPMA, which disables the adaptive cruise control system. To diagnose the IPMA, REFER to: Lane Keeping System (419-07 Lane Keeping System) .
C1A67:96	Forward Looking Sensor: Component Internal Failure	GO to Pinpoint Test E
C1A67:97	Forward Looking Sensor: Component or System Operation Obstructed or Blocked	GO to Pinpoint Test F
C1A67:98	Forward Looking Sensor: Component or System Over Temperature	The CCM was over-temperature. This may occur during extended use in extremely high weather temperatures. The adaptive cruise control system operation resumes after the CCM cools.
U2100:00	Initial Configuration Not Complete: No Sub Type Information	This DTC sets when the CCM configuration has not been completed. CARRY OUT the PMI (when the original module is not available) for the module in question as directed by the diagnostic scan tool. REFER to: Module Programming (418-01 Module Configuration, General Procedures).

U2300:55	Central Configuration: Not Configured	This DTC sets when the CCM detects the BCM is not configured correctly. CARRY OUT the PMI procedure (when the original module is not available) for the module in question as directed by the diagnostic scan tool. REFER to: Module Programming (418-01 Module Configuration, General Procedures).
U3000:41	Control Module: General Checksum Failure	CLEAR the Diagnostic Trouble Codes (DTCs). RETEST the adaptive cruise control system. REPEAT the self-test. If DTC U3000:41 is retrieved again, INSTALL a new CCM. REFER to: Cruise Control Module (CCM) (419-03 Cruise Control - Vehicles With: Adaptive Cruise Control) .
U3000:42	Control Module: General Memory Failure	CLEAR the Diagnostic Trouble Codes (DTCs). RETEST the adaptive cruise control system. REPEAT the self-test. If DTC U3000:42 is retrieved again, INSTALL a new CCM. REFER to: Cruise Control Module (CCM) (419-03 Cruise Control - Vehicles With: Adaptive Cruise Control) .
U3000:44	Control Module: Data Memory Failure	CLEAR the Diagnostic Trouble Codes (DTCs). RETEST the adaptive cruise control system. REPEAT the self-test. If DTC U3000:44 is retrieved again, INSTALL a new CCM. REFER to: Cruise Control Module (CCM) (419-03 Cruise Control - Vehicles With: Adaptive Cruise Control) .
U3000:49	Control Module: Internal Electronic Failure	CLEAR the Diagnostic Trouble Codes (DTCs). RETEST the adaptive cruise control system. REPEAT the self-test. If DTC U3000:49 is retrieved again, INSTALL a new CCM. REFER to: Cruise Control Module (CCM) (419-03 Cruise Control - Vehicles With: Adaptive Cruise Control) .

U3002:62	Vehicle Identification Number: Signal Compare Failure	This DTC sets when the stored VIN in the CCM does not match the VIN defined in the BCM. This may indicate that the original CCM is not installed in the vehicle, and has not been configured correctly. CARRY OUT the PMI (when the original module is not available) for the module in question as directed by the diagnostic scan tool.
U3003:16	Battery Voltage: Circuit Voltage Below Threshold	GO to Pinpoint Test Q
U3003:17	Battery Voltage: Circuit Voltage Above Threshold	GO to Pinpoint Test R

DTC Chart: CCM Without Pre-Collision Assist

CCM DTC Chart

DTC	Description	Action
B142E:78	Forward Looking Sensor Horizontal Alignment: Alignment or Adjustment Incorrect	GO to Pinpoint Test C
B1432:78	Forward Looking Sensor Vertical Alignment: Alignment or Adjustment Incorrect	This DTC can only be set at the assembly plant during the plant alignment process. If DTC B1432:78 sets, a reflash of the CCM and the vertical and horizontal aim procedure must be performed. REFER to: Cruise Control Radar Alignment (419-03 Cruise Control - Vehicles With: Adaptive Cruise Control) .
B1433:54	Forward Looking Sensor Alignment: Missing Calibration	GO to Pinpoint Test C
C0072:00	Brake Temperature Too High: No Sub Type Information	REFER to: Anti-Lock Brake System (ABS) and Stability Control (206-09 Anti-Lock Brake System (ABS) and Stability Control, Diagnosis and Testing).

C1001:08	Vision System Camera: Bus Signal/Message Failure	This DTC sets when the CCM receives invalid network data from the IPMA, which disables the adaptive cruise control system. To diagnose the IPMA, REFER to: Lane Keeping System (419-07 Lane Keeping System) .
C1132:4B	Head Up Display: Over Temperature	REFER to: Collision Warning and Collision Avoidance System (419-03C Collision Warning and Collision Avoidance System, Diagnosis and Testing).
C1A67:96	Forward Looking Sensor: Component Internal Failure	GO to Pinpoint Test E
C1A67:97	Forward Looking Sensor: Component or System Operation Obstructed or Blocked	GO to Pinpoint Test F
C1A67:98	Forward Looking Sensor: Component or System Over Temperature	The CCM was over-temperature. This may occur during extended use in extremely high weather temperatures. The adaptive cruise control system operation resumes after the CCM cools.
U0001:88	High Speed CAN Communication Bus: Bus Off	This DTC sets when the CCM detects a CAN bus off fault or indicates a signal fault occurred at a point in time. The fault is not currently present since the module had to communicate with the diagnostic scan tool to report this DTC. VERIFY the integrity of the connectors and wiring. Refer to Wiring Diagrams Cell 14 for schematic and connector information.
U0100:00	Lost Communication With ECM/PCM "A": No Sub Type Information	GO to Pinpoint Test H
U0121:00	Lost Communication With Anti-Lock Brake System (ABS) Control Module: No Sub Type Information	GO to Pinpoint Test I
U0140:00	Lost Communication With Body Control Module: No Sub Type Information	GO to Pinpoint Test J

U0151:00	Lost Communication With Restraints Control Module: No Sub Type Information	GO to Pinpoint Test K
U0155:00	Lost Communication With Instrument Panel Cluster (IPC) Control Module: No Sub Type Information	GO to Pinpoint Test L
U0158:00	Lost Communication With Head Up Display: No Sub Type Information	GO to Pinpoint Test M
U0212:00	Lost Communication With Steering Column Control Module: No Sub Type Information	GO to Pinpoint Test N
U0265:00	Lost Communication With Image Processing Module Sensor A: No Sub Type Information	GO to Pinpoint Test G
U0401:86	Invalid Data Received From ECM/PCM "A": Signal Invalid	RETRIEVE and FOLLOW non-network Diagnostic Trouble Codes (DTCs) from the PCM. Refer to Powertrain Control/Emissions Diagnosis (PC/ED) manual. If no Diagnostic Trouble Codes (DTCs) are present in the PCM, DIAGNOSE the observable symptom.
U0418:86	Invalid Data Received From Brake System Control Module: Signal Invalid	RETRIEVE and FOLLOW non-network Diagnostic Trouble Codes (DTCs) from the ABS module. REFER to: Anti-Lock Brake System (ABS) and Stability Control (206-09 Anti-Lock Brake System (ABS) and Stability Control, Diagnosis and Testing). If no Diagnostic Trouble Codes (DTCs) are present in the ABS module, DIAGNOSE the observable symptom.
U0423:82	Invalid Data Received From Instrument Panel Cluster Control Module: Alive/Sequence Counter Incorrect/ Not Updated	GO to Pinpoint Test P

U0429:86	Invalid Data Received From Steering Column Control Module: Signal Invalid	RETRIEVE and FOLLOW non-network Diagnostic Trouble Codes (DTCs) from the SCCM. REFER to: Steering Wheel and Column Electrical Components (211-05 Steering Wheel and Column Electrical Components) . If no Diagnostic Trouble Codes (DTCs) are present in the SCCM, DIAGNOSE the observable symptom.
U0452:86	Invalid Data Received From Restraints Control Module: Signal Invalid	RETRIEVE and FOLLOW non-network Diagnostic Trouble Codes (DTCs) from the RCM. REFER to: Airbag Supplemental Restraint System (SRS) - Raptor (501-20B Supplemental Restraint System, Diagnosis and Testing). If no Diagnostic Trouble Codes (DTCs) are present in the RCM, DIAGNOSE the observable symptom.
U053B:64	Invalid Data Received From Image Processing Module A: Signal Plausibility Failure	This DTC sets when the CCM receives invalid network data from the IPMA, which disables the adaptive cruise control system. To diagnose the IPMA, REFER to: Lane Keeping System (419-07 Lane Keeping System) .
U053B:83	Invalid Data Received From Image Processing Module A: Value of Signal Protection Calculation Incorrect	This DTC sets when the CCM receives invalid network data from the IPMA, which disables the adaptive cruise control system. To diagnose the IPMA, REFER to: Lane Keeping System (419-07 Lane Keeping System) .

U2018:51	Control Module Software #3: Not Programmed	This DTC sets when the CCM configuration has not been completed. CARRY OUT the PMI (when the original module is not available) for the module in question as directed by the diagnostic scan tool. REFER to: Module Configuration - System Operation and Component Description (418-01 Module Configuration, Description and Operation).
U2100:00	Initial Configuration Not Complete: No Sub Type Information	This DTC sets when the CCM configuration has not been completed. CARRY OUT the PMI (when the original module is not available) for the module in question as directed by the diagnostic scan tool. REFER to: Module Configuration - System Operation and Component Description (418-01 Module Configuration, Description and Operation).
U2300:55	Central Configuration: Not Configured	This DTC sets when the CCM detects the BCM is not configured correctly. CARRY OUT the PMI procedure (when the original module is not available) for the module in question as directed by the diagnostic scan tool. REFER to: Module Configuration - System Operation and Component Description (418-01 Module Configuration, Description and Operation).
U2300:64	Central Configuration: Signal Plausibility Failure	This DTC sets when the CCM detects the BCM is not configured correctly. CARRY OUT the PMI procedure (when the original module is not available) for the module in question as directed by the diagnostic scan tool. REFER to: Module Configuration - System Operation and Component Description (418-01 Module Configuration, Description and Operation).

U3000:41	Control Module: General Checksum Failure	CLEAR the Diagnostic Trouble Codes (DTCs). RETEST the adaptive cruise control system. REPEAT the self-test. If DTC U3000:41 is retrieved again, INSTALL a new CCM. REFER to: Cruise Control Module (CCM) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Removal and Installation).
U3000:42	Control Module: General Memory Failure	CLEAR the Diagnostic Trouble Codes (DTCs). RETEST the adaptive cruise control system. REPEAT the self-test. If DTC U3000:42 is retrieved again, INSTALL a new CCM. REFER to: Cruise Control Module (CCM) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Removal and Installation).
U3000:44	Control Module: Data Memory Failure	CLEAR the Diagnostic Trouble Codes (DTCs). RETEST the adaptive cruise control system. REPEAT the self-test. If DTC U3000:44 is retrieved again, INSTALL a new CCM. REFER to: Cruise Control Module (CCM) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Removal and Installation).
U3000:49	Control Module: Internal Electronic Failure	If DTC U3000:49 is retrieved again, INSTALL a new CCM. REFER to: Cruise Control Module (CCM) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Removal and Installation).

U3000:63	Control Module: Circuit/Component Protection Time-Out	This DTC sets when the CCM detects too many collision mitigation by braking activation requests. INSPECT for damage to the CCM, bracket and front bumper. If any components are damaged, REFER to: Cruise Control Module (CCM) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Removal and Installation).
U3002:62	Vehicle Identification Number: Signal Compare Failure	This DTC sets when the stored VIN in the CCM does not match the VIN defined in the BCM. This may indicate that the original CCM is not installed in the vehicle, and has not been configured correctly. CARRY OUT the PMI (when the original module is not available) for the module in question as directed by the diagnostic scan tool.
U3003:16	Battery Voltage: Circuit Voltage Below Threshold	GO to Pinpoint Test Q
U3003:17	Battery Voltage: Circuit Voltage Above Threshold	GO to Pinpoint Test R

Symptom Chart(s)

Symptom Chart: Adaptive Cruise Control

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices.

REFER to: [Diagnostic Methods](#) (100-00 General Information, Description and Operation).

Symptom Chart

Condition	Possible Sources	Actions
The adaptive cruise control is inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test A

The cruise control switch is inoperative/ does not operate correctly	Refer to the Pinpoint Test	GO to Pinpoint Test A
The adaptive cruise control does not function in rain or snow conditions	Refer to the Pinpoint Test	GO to Pinpoint Test F
ADAPTIVE CRUISE NOT AVAILABLE SENSOR BLOCKED SEE MANUAL message in the IPC message center	Refer to the Pinpoint Test	GO to Pinpoint Test F
The adaptive cruise control indicator lamp is never/ always on	• Wiring, terminals and connectors • PCM • IPC	REFER to: Instrumentation, Message Center and Warning Chimes (413-01 Instrumentation, Message Center and Warning Chimes) .
Unexpected adaptive cruise control braking	• CCM • Front bumper cover	The adaptive cruise control system can occasionally detect and respond to out-of path vehicles, especially on curves, entry/exit ramps or when changing lanes. CHECK the CCM and front bumper cover for damage. RETEST the adaptive cruise control system.
Late or lack of adaptive cruise control braking	• CCM • Front bumper cover • CCM bracket alignment concerns • CCM alignment or attachment concerns	• The adaptive cruise control system may not detect and respond to vehicles carrying out close cut-ins or on tight curves (especially for vehicles on the passenger side) due to limited CCM field of view. CHECK the CCM and front bumper cover for damage. If no damage is observed, RETEST the adaptive cruise control system. • CHECK the radar attachments

		to the bracket for damage, loose grommets or attachments that have come free from the ball stud. This may cause the module to not point parallel to the ground. Incorrect alignment can cause delayed detection. If concerns are present, REPAIR attachments and CHECK for proper radar alignment. REFER to: Cruise Control Radar Alignment (419-03 Cruise Control - Vehicles With: Adaptive Cruise Control) . • If no damage is observed and bracket attachments are OK, RETEST the adaptive cruise control system.
Adaptive cruise control does not slow the vehicle down until too close to a lead vehicle, does not detect a lead vehicle or vehicle follows closer than the set gap value	• CCM • Front bumper cover • CCM bracket alignment concerns • CCM alignment or attachment concerns	• The adaptive cruise control system may not detect and respond to vehicles carrying out close cut-ins or on tight curves (especially for vehicles on the passenger side) due to limited CCM field of view. CHECK the CCM and front bumper cover for damage. If no damage is observed, RETEST the adaptive cruise control system. • CHECK the radar attachments to the bracket for damage, loose grommets or attachments that have come free from the ball stud. This may cause the module to not point parallel to the ground. Incorrect alignment can cause delayed detection. If concerns are present, REPAIR

		attachments and CHECK for proper radar alignment. REFER to: Cruise Control Radar Alignment (419-03 Cruise Control - Vehicles With: Adaptive Cruise Control) . • If no damage is observed and bracket attachments are OK, RETEST the adaptive cruise control system.
Collision warning alerts in high sensitivity setting occur on bridges	• CCM bracket alignment concerns • CCM alignment or attachment concerns	• CHECK the radar attachments to the bracket for damage, loose grommets or attachments that have come free from the ball stud. This may cause the module to not point parallel to the ground. Incorrect alignment can cause delayed detection. If concerns are present, REPAIR attachments and CHECK for proper radar alignment. REFER to: Cruise Control Radar Alignment (419-03 Cruise Control - Vehicles With: Adaptive Cruise Control) . • If no damage is observed and bracket attachments are OK, RETEST the adaptive cruise control system.
Noise during adaptive cruise control braking	• Low speeds • Brake concern	The driver can detect some noise at low speeds when adaptive cruise control braking occurs. If braking noise continues, REFER to: Brake System (206-00 Brake System - General Information) .

The cruise control cannot set above 100 kmh (65 mph), 110 kmh (70 mph), 120 kmh (75 mph), or 130 kmh (80 mph)	A MyKey® restricted key is in use and MyKey® max speed limiter is turned on	VERIFY whether a MyKey® restricted key is in use. With an admin key, VERIFY if MyKey® max speed limiter is turned on. REFER to the Owner's Literature. If necessary, VERIFY cruise control normal operation with an admin key.
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Pinpoint Tests

The Adaptive Cruise Control Is Inoperative

Refer to Wiring Diagrams Cell 31 for schematic and connector information.

REFER to: [Cruise Control - System Operation and Component Description](#) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Action
B137F:09	Steering Wheel Left Switch Pack: Component Failure	A continuous and on-demand DTC that sets when one or more of the cruise control switches are stuck.
B137F:11	Steering Wheel Left Switch Pack: Circuit Short to Ground	A continuous and on-demand DTC that sets when the cruise control switch circuits are shorted to ground.
B137F:17	Steering Wheel Left Switch Pack: Circuit Voltage Above Threshold	A continuous and on-demand DTC that sets when the cruise control switch circuits are shorted to voltage.

Possible Sources

- Wiring, terminals or connectors
- Cruise control switch

- Cruise control deactivator switch
- Digital TR sensor
- Stoplamp switch
- Vehicle speed signal
- PCM
- ABS module
- BCM
- CCM
- SCCM

PINPOINT TEST A : THE ADAPTIVE CRUISE CONTROL IS INOPERATIVE

A1 CHECK FOR DIAGNOSTIC TROUBLE CODES (DTCS)

- Using a diagnostic scan tool, perform PCM self-test.
- Using a diagnostic scan tool, perform SCCM self-test.
- Using a diagnostic scan tool, perform CCM self-test.
- Using a diagnostic scan tool, perform ABS module self-test.

Are any Diagnostic Trouble Codes (DTCs) recorded?

Yes	For PCM, CCM and ABS module Diagnostic Trouble Codes (DTCs), REFER to the DTC Charts in this section. If SCCM DTC B137F:09, B137F:11 or B137F:17 is set, GO to A4
No	GO to A2

A2 CHECK FOR LOST COMMUNICATION DIAGNOSTIC TROUBLE CODES (DTCS)

- Ignition ON.
- Clear Continuous Memory Diagnostic Trouble Codes (CMDTCs) from all modules.
- Ignition OFF.
- Ignition ON.
- Wait 10 seconds. Retrieve Continuous Memory Diagnostic Trouble Codes (CMDTCs) from all modules.

Are any lost communication Diagnostic Trouble Codes (DTCs) set in the CCM?

Yes	REFER to the CCM DTC Chart.
No	GO to A3

A3 CHECK THE STOPLAMP SWITCH (BOO1) AND CRUISE CONTROL DEACTIVATOR SWITCH (BOO2) PARAMETER IDENTIFICATIONS (PIDS)

- Using a diagnostic scan tool, view PCM Parameter Identifications (PIDs).
- Using the table, monitor the Parameter Identifications (PIDs) BOO1 (stoplamp switch) and BOO2 (cruise control deactivator switch) while applying and releasing the brake pedal.

Brake Pedal Position	BOO1 PID	BOO2 PID
Released	Off	Off
Applied lightly	On	Off
Applied firmly	On	On

Do the PID values agree with the brake pedal position?

Yes	GO to A4
No	GO to Pinpoint Test B

A4 CHECK THE CRUISE CONTROL SWITCH PID (PARAMETER IDENTIFICATION)

- Using a diagnostic scan tool, view SCCM Parameter Identifications (PIDs).
- Using the table, press each cruise control switch while monitoring the cruise control switch PID.

Cruise Control Switch	PID Value
Cruise On/Off (pressed/released)	On/Off
Cruise Cancel/Resume (pressed/released)	On/Off
SET + (pressed/released)	On/Off
SET - (pressed/released)	On/Off
GAP + (pressed/released)	On/Off
GAP - (pressed/released)	On/Off

Does the PID value agree with the switch position?

Yes	GO to A5
No	If only one switch does not display the correct PID value, INSTALL a new LH steering wheel switch. REFER to: Steering Wheel Multifunction Switch (211-05 Steering Wheel and Column Electrical Components, Removal and Installation). If multiple switches do not display the correct PID value, GO to A6

A5 MONITOR THE PCM (POWERTRAIN CONTROL MODULE) TR (TRANSMISSION RANGE) PID

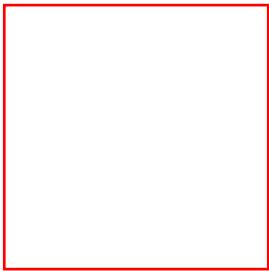
- Using a diagnostic scan tool, view PCM Parameter Identifications (PIDs).
- Monitor the PCM TR PID.
- Select DRIVE.

Does the PID value agree with the TR selector lever position?

Yes	GO to A11
No	REFER to: External Controls (307-05 Automatic Transmission External Controls, Diagnosis and Testing).

A6 CHECK FOR VOLTAGE TO THE CRUISE CONTROL SWITCHES

- Ignition OFF.
- Remove the driver airbag.
REFER to: [Driver Airbag](#) (501-20B Supplemental Restraint System, Removal and Installation).
- Disconnect LH Steering Wheel Switch C2998.
- Ignition ON.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C2998-4		C2998-5
C2998-6		C2998-5

C2998-7		C2998-5
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Is the voltage approximately 5 volts?

Yes	TURN the ignition off and WAIT one minute. INSTALL a new LH steering wheel switch. REFER to: Steering Wheel Multifunction Switch (211-05 Steering Wheel and Column Electrical Components, Removal and Installation). INSTALL the driver airbag. REFER to: Driver Airbag (501-20B Supplemental Restraint System, Removal and Installation).
No	GO to A7

A7 CHECK THE STEERING WHEEL SWITCH HARNESS FOR AN OPEN

- Ignition OFF.
- Disconnect Clockspring C218B.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C2998-4	Ω	C218B-15
C2998-5		C218B-8

C2998-6		C218B-6
C2998-7		C218B-7

Are the resistances less than 3 ohms?

Yes	GO to A8
No	Install a new steering wheel. REFER to: Steering Wheel (211-04 Steering Column, Removal and Installation).

A8 CHECK THE STEERING WHEEL SWITCH HARNESS FOR A SHORT TO GROUND

- Measure:

Positive Lead	Measurement / Action	Negative Lead
C2998-4	Ω	Ground
C2998-5		Ground

C2998-6		Ground
C2998-7		Ground

Are the resistances greater than 10,000 ohms?

Yes	GO to A9
No	Install a new steering wheel. REFER to: Steering Wheel (211-04 Steering Column, Removal and Installation).

A9 CHECK THE STEERING WHEEL SWITCH CIRCUITS THROUGH THE CLOCKSPring FOR AN OPEN

- Disconnect Clockspring C218D.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C218B-6 (component side)	Ω	C218D-5 (component side)
C218B-7 (component side)		C218D-7 (component side)

C218B-15 (component side)		C218D-8 (component side)
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Are the resistances less than 3 ohms?

Yes	GO to A10
No	Install a new clockspring. REFER to: Clockspring (501-20B Supplemental Restraint System, Removal and Installation).

A10 CHECK FOR CORRECT SCCM (STEERING COLUMN CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all SCCM connectors and related in-line 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 SCCM connectors and related in-line 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 for any applicable TSBs. If a TSB exists for this concern, follow TSB instructions. If no TSBs address this concern, INSTALL a new SCCM. REFER to: Steering Column Control Module (SCCM) (211-05 Steering Wheel and Column Electrical Components, Removal and Installation).
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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.
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A11 CHECK FOR CORRECT PCM (POWERTRAIN CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all PCM connectors and related in-line 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 PCM connectors and related in-line 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 for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, follow TSB instructions. If no Technical Service Bulletins (TSBs) address this concern, INSTALL a new PCM. Refer to the appropriate section in Group 303 for the procedure.
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.

P0504, P0572, P0573 OR P1703

Refer to Wiring Diagrams Cell 31 for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: Cruise Control (419-03 Cruise Control - Vehicles With: Adaptive Cruise Control) .

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
P0504	Brake Switch A/B Correlation	A DTC that sets when the PCM does not sense the correct sequence of the brake pedal input signal from both the cruise control deactivator and stoplamp switches when the brake pedal is pressed and released.
P0572	Brake Switch A Circuit Low	A DTC that sets when the PCM detects an open in the stoplamp switch signal. The PCM monitors the vehicle speed, the engine speed, the engine torque and the stoplamp input during start and stop driving cycles. If the stoplamp switch input to the PCM is always off during start and stop driving cycles, this DTC sets in continuous memory.
P0573	Brake Switch A Circuit High	A DTC that sets when the PCM detects a short to voltage on the stoplamp switch signal. The PCM monitors the vehicle speed, the engine speed, the engine torque and the stoplamp switch input during start and stop driving cycles. If the stoplamp lamp switch input to the PCM is always on during start and stop driving cycles, this DTC sets in continuous memory.
P1703	Brake Switch Out Of Self - Test Range	A DTC that sets in the PCM during the self-test when the stoplamp switch input signal is high or does not cycle high and low.

Possible Sources

- Wiring, terminals or connectors
- Stoplamp switch
- PCM

PINPOINT TEST B : P0504, P0572, P0573 OR P1703

NOTICE: Use the correct probe adapter(s) when making measurements. Failure to use the correct probe adapter(s) may damage the connector.

B1 CHECK THE OPERATION OF THE STOPLAMPS

- Ignition ON.
- Operate the stoplamps.

Do the stoplamps and high mounted stoplamp operate correctly?

Yes	GO to B2
No	REFER to: Stoplamps (417-01 Exterior Lighting) .

B2 CHECK THE STOPLAMP SWITCH (BOO1) AND CRUISE CONTROL DEACTIVATOR SWITCH (BOO2) PARAMETER IDENTIFICATIONS (PIDS)

- Using a diagnostic scan tool, view PCM Parameter Identifications (PIDs).
- Using the table, monitor the Parameter Identifications (PIDs) BOO1 (stoplamp switch) and BOO2 (cruise control deactivator switch) while applying and releasing the brake pedal.

Brake Pedal Position	BOO1 PID	BOO2 PID
Released	Off	Off
Applied lightly	On	Off
Applied firmly	On	On

Do the PID values agree with the brake pedal position?

Yes	GO to B8
No	For an incorrect BOO1 PID value, GO to B3 For an incorrect BOO2 PID value, GO to B4

B3 CHECK THE STOPLAMP SWITCH CIRCUIT

- Ignition OFF.
- Disconnect PCM.
- Ignition ON.
- While applying and releasing the brake pedal, measure:

2.7L GTDI

Positive Lead	Measurement / Action	Negative Lead
C1232B-8		Ground

3.3L TiVCT

Positive Lead	Measurement / Action	Negative Lead
C1551B-8		Ground

3.0L Diesel

Positive Lead	Measurement / Action	Negative Lead
C1233B-13		Ground

Is the voltage greater than 11 volts with the brake pedal applied and no voltage with the brake pedal released?

Yes	GO to B8
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No	REPAIR the circuit.
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B4 CHECK THE CRUISE CONTROL DEACTIVATOR SWITCH FOR CORRECT OPERATION

- Ignition OFF.
- Disconnect PCM.
- While firmly applying and releasing the brake pedal, measure:

Click to display connectors

3.0L Diesel

Positive Lead	Measurement / Action	Negative Lead
C1233B-46	Ω	Ground

Is the resistance less than 3 ohms with the brake pedal released and greater than 10,000 ohms with the brake pedal firmly applied?

Yes	GO to B8
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No	GO to B5
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B5 CHECK THE CRUISE CONTROL DEACTIVATOR SWITCH GROUND CIRCUIT FOR AN OPEN

- Disconnect BPP switch C278.

Is the resistance less than 3 ohms?

Yes	GO to B6
No	REPAIR the circuit.

B6 CHECK THE CRUISE CONTROL DEACTIVATOR SWITCH SIGNAL CIRCUIT FOR A SHORT TO GROUND

Is the resistance greater than 10,000 ohms?

Yes	GO to B7
No	REPAIR the circuit.

B7 CHECK THE CRUISE CONTROL DEACTIVATOR SWITCH SIGNAL CIRCUIT FOR AN OPEN

- Measure:

Click to display connectors

3.0L Diesel

Positive Lead	Measurement / Action	Negative Lead
C1233B-46	Ω	Ground

Is the resistance less than 3 ohms?

Yes	INSTALL a new BPP switch. REFER to: Stoplamp Switch (417-01 Exterior Lighting, Removal and Installation).
No	REPAIR the signal circuit for an open.

B8 CHECK FOR CORRECT PCM (POWERTRAIN CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all PCM connectors and related in-line 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 PCM connectors and related in-line 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 for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, follow TSB instructions. If no Technical Service Bulletins (TSBs) address this concern, INSTALL a new PCM. Refer to the appropriate section in Group 303 for the procedure.
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.

B142E:78 or B1433:54

Refer to Wiring Diagrams Cell 31 for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: Cruise Control (419-03 Cruise Control - Vehicles With: Adaptive Cruise Control) .

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
B142E:78	Forward Looking Sensor Horizontal Alignment: Alignment or Adjustment Incorrect	Set by the CCM as a continuous memory and on-demand DTC if the CCM detects a misalignment of the radar due to the horizontal alignment angle being out of range.
B1433:54	Forward Looking Sensor Horizontal Alignment: Missing Calibration	Set by the CCM as a continuous memory and on-demand DTC if the CCM detects a misalignment of the radar due to the alignment angle being out of range.

Possible Sources

- CCM alignment
- CCM bracket
- CCM

PINPOINT TEST C : B142E:78 OR B1433:54

C1 INSPECT THE CCM (CRUISE CONTROL MODULE) BRACKET

- Remove the front bumper trim panel.
REFER to: [Cruise Control Module \(CCM\)](#) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Removal and Installation).
- Inspect for damage to the CCM bracket and cruise control radar attachments to the bracket.

Is the CCM bracket or radar attachments to the bracket damaged?

Yes	INSTALL a new CCM bracket or radar attachments, as necessary. REFER to: Cruise Control Module (CCM) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Removal and Installation).
No	GO to C2

C2 PERFORM THE CRUISE CONTROL RADAR ALIGNMENT

- Perform the cruise control radar alignment procedure.
REFER to: Cruise Control Radar Alignment (419-03 Cruise Control - Vehicles With: Adaptive Cruise Control) .

Is the CCM aligned correctly?

Yes	The system is operating correctly at this time. The concern was caused by a misaligned CCM.
No	INSTALL a new CCM. REFER to: Cruise Control Module (CCM) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Removal and Installation).

C1A67:08

Refer to Wiring Diagrams Cell 14 for schematic and connector information.

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

Normal Operation and Fault Conditions

REFER to: [Cruise Control - System Operation and Component Description](#) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Description and Operation).

DTC Fault Trigger Conditions - IPMA

DTC	Description	Fault Trigger Conditions

C1A67:08	Forward Looking Sensor: Bus Signal/ Message Failure	This continuous memory and on-demand DTC sets in the IPMA when the pre-collision assist range status, yaw rate and vehicle velocity messages from the CCM are missing.
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Possible Sources

- Wiring, terminals or connectors
- CCM
- HUD module
- IPMA
- IPC

PINPOINT TEST D : C1A67:08

NOTICE: Use the correct probe adapter(s) when making measurements. Failure to use the correct probe adapter(s) may damage the connector.

D1 PERFORM THE NETWORK TEST

- Ignition ON.
- Using a diagnostic scan tool, perform the network test.

Do the CCM, IPMA and the HUD module pass the network test?

Yes	GO to D2
No	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

D2 CHECK THE IPMA (IMAGE PROCESSING MODULE A) DIAGNOSTIC TROUBLE CODES (DTCS)

- Using a diagnostic scan tool, perform the IPMA self-test.

Are any IPMA Diagnostic Trouble Codes (DTCs) recorded?

Yes	DIAGNOSE all IPMA Diagnostic Trouble Codes (DTCs). If DTC C1A67:08 is recorded, GO to D6 For all other Diagnostic Trouble Codes (DTCs), REFER to: Lane Keeping System (419-07 Lane Keeping System, Diagnosis and Testing).
No	GO to D3

D3 CHECK THE CCM (CRUISE CONTROL MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

- Using a diagnostic scan tool, perform the CCM self-test.

Are any CCM Diagnostic Trouble Codes (DTCs) recorded?

Yes	If DTC C1001:08 is present, GO to D6 If DTC C1132:4B is present, REFER to the CCM DTC Chart.
No	GO to D4

D4 CHECK THE HUD (HEAD UP DISPLAY) MODULE DIAGNOSTIC TROUBLE CODES (DTCS)

- Using a diagnostic scan tool, perform the HUD module self-test.

Are any HUD module Diagnostic Trouble Codes (DTCs) recorded?

Yes	REFER to: Collision Warning and Collision Avoidance System (419-03C Collision Warning and Collision Avoidance System, Diagnosis and Testing).
No	GO to D5

D5 CHECK THE MESSAGE CENTER FOR CORRECT OPERATION

- Check the IPC message center for correct operation.

Does the message center operate correctly?

Yes	GO to D6
No	REFER to: Instrumentation, Message Center and Warning Chimes (413-01 Instrumentation, Message Center and Warning Chimes, Diagnosis and Testing).

D6 CHECK THE PRIVATE CAN (CONTROLLER AREA NETWORK) CIRCUITS FOR A SHORT TO VOLTAGE

- Disconnect CCM C1897.
- Disconnect IPMA C9224.
- Ignition ON.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C1897-2		Ground
C1897-3		Ground

Is any voltage present?

Yes	REPAIR the circuit in question.
No	GO to D7

D7 CHECK THE PRIVATE CAN (CONTROLLER AREA NETWORK) CIRCUITS FOR A SHORT TO GROUND

- Measure:

Positive Lead	Measurement / Action	Negative Lead
C1897-2	Ω	Ground
C1897-3		Ground

Are the resistances greater than 10,000 ohms?

Yes	GO to D8
No	REPAIR the circuit in question.

D8 CHECK THE PRIVATE CAN (CONTROLLER AREA NETWORK) CIRCUITS FOR A SHORT TOGETHER

- Measure:

Positive Lead	Measurement / Action	Negative Lead
C1897-2	Ω	C1897-3

Is the resistance greater than 10,000 ohms?

Yes	GO to D9
No	REPAIR the circuits.

D9 CHECK THE PRIVATE CAN (CONTROLLER AREA NETWORK) CIRCUITS FOR AN OPEN

- Measure:

Positive Lead	Measurement / Action	Negative Lead
C9224-11	Ω	C1897-2
C9224-3		C1897-3

Are the resistances less than 3 ohms?

Yes	GO to D10
No	REPAIR the circuit in question.

D10 CHECK FOR CORRECT CCM (CRUISE CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect CCM connector and related in-line 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 CCM connector and related in-line 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 for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, follow TSB instructions. If no Technical Service Bulletins (TSBs) address this concern, INSTALL a new CCM. REFER to: Cruise Control Module (CCM) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Removal and Installation). If the concern is still present, GO to D11
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.

D11 CHECK FOR CORRECT IPMA (IMAGE PROCESSING MODULE A) OPERATION

- Disconnect and inspect IPMA connector and related in-line 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 IPMA connector and related in-line 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 for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, follow TSB instructions. If no Technical Service Bulletins (TSBs) address this concern, INSTALL a new IPMA. REFER to: Image Processing Module A (IPMA) (419-07 Lane Keeping System, Removal and Installation). For the F-150 Special Vehicle Team (SVT), REFER to: Interior Rear View Mirror (501-09 Rear View Mirrors, 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.

C1A67:96

Refer to Wiring Diagrams Cell 31 for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: Cruise Control (419-03 Cruise Control - Vehicles With: Adaptive Cruise Control) .

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
C1A67:96	Forward Looking Sensor: Component Internal Failure	Sets when the CCM detects an internal failure or invalid radar data with the radar sensor.

Possible Sources

- CCM

PINPOINT TEST E : C1A67:96

E1 CHECK THE DIAGNOSTIC TROUBLE CODES (DTCS) FROM BOTH THE CONTINUOUS AND ON-DEMAND CCM (CRUISE CONTROL MODULE) SELF-TESTS

- Ignition ON.
- Clear Continuous Memory Diagnostic Trouble Codes (CMDTCs) from all modules.
- Ignition OFF.
- Ignition ON.
- Wait at least 10 seconds.
- Using a diagnostic scan tool, perform the CCM self-test.
- Check the CCM Diagnostic Trouble Codes (DTCs) from the continuous and on-demand self-tests.

Is DTC C1A67:96 recorded?

Yes	GO to E2
No	The system is operating correctly at this time. The DTC may have been set due to an intermittent fault condition.

E2 CHECK FOR CORRECT CCM (CRUISE CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all CCM connectors and related in-line 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 CCM connectors and related in-line 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 for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, follow TSB instructions. If no Technical Service Bulletins (TSBs) address this concern, INSTALL a new CCM. REFER to: Cruise Control Module (CCM) (419-03 Cruise Control - Vehicles With: Adaptive Cruise Control) .
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.

C1A67:97

Refer to Wiring Diagrams Cell 31 for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: Cruise Control (419-03 Cruise Control - Vehicles With: Adaptive Cruise Control) .

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
C1A67:97	Forward Looking Sensor: Component Or System Operation Obstructed Or Blocked	Set by the CCM as a continuous memory and on-demand DTC if the CCM detects an obstruction or if the sensor is blocked. This DTC may also set when the CCM does not see a vehicle or object on the road for an extended period.

NOTE: *If a snow plow or similar equipment is installed on the front end of the vehicle, this may obstruct the CCM radar sensor, causing the ACC to operate erratically. The ACC should be disabled using the menu options when a snow plow or similar equipment is installed.*

Possible Sources

- Front bumper
- Blockage or obstruction
- CCM mounting bracket
- CCM alignment
- CCM

PINPOINT TEST F : C1A67:97

F1 INSPECT THE FRONT BUMPER FOR DAMAGE

- Inspect for damage on the front and back of the front bumper.

Is the front bumper or front bumper trim panel damaged?

Yes	REPAIR or INSTALL a new front bumper as necessary. REFER to: Front Bumper (501-19 Bumpers, Removal and Installation).
No	GO to F2

F2 INSPECT THE CCM (CRUISE CONTROL MODULE) AND FRONT BUMPER

- Inspect for debris, moisture, snow or ice on the front and back of the front bumper and sensor.

Is the CCM obstructed or blocked?

Yes	CLEAN the front bumper and cruise control radar sensor as necessary.
No	GO to F3

F3 INSPECT THE CCM (CRUISE CONTROL MODULE) BRACKET FOR CORRECT MOUNTING

- Inspect the CCM bracket for a loose connection or damage at the connection points.

Is the CCM bracket loose, bent or damaged?

Yes	INSTALL the bracket or INSTALL new grommets as necessary. REFER to: Cruise Control Module (CCM) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Removal and Installation). Perform the cruise control radar alingment. REFER to: Cruise Control Radar Alignment (419-03 Cruise Control - Vehicles With: Adaptive Cruise Control) .
No	GO to F4

F4 INSPECT THE CCM (CRUISE CONTROL MODULE) FOR EXTREME VERTICAL MISALIGNMENT

- Visually inspect the CCM for extreme vertical misalignment. The CCM plastic face should be perpendicular to the ground.

Is the CCM visually misaligned vertically?

Yes	PERFORM vertical alignment and horizontal alignment test procedures. REFER to: Cruise Control Radar Alignment (419-03 Cruise Control - Vehicles With: Adaptive Cruise Control) .
No	GO to F5

F5 PERFORM HORIZONTAL AIM

- Using a diagnostic scan tool, follow the on-screen instructions to carry-out the CCM calibration procedure to perform the horizontal alignment procedure.
- Using a diagnostic scan tool, perform the CCM self-test.

Does horizontal aim procedure finish successfully without setting DTC C1A67:97?

Yes	The system is operating normally at this time. This condition may have been caused by debris, moisture, snow or ice build up.
No	INSTALL a new CCM. REFER to: Cruise Control Module (CCM) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Removal and Installation).

U0265:00

Refer to Wiring Diagrams Cell 14 for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: Cruise Control (419-03 Cruise Control - Vehicles With: Adaptive Cruise Control) .

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
U0265:00	Lost Communication With Image Processing Module Sensor A: No Sub Type Information	Sets in the CCM if data messages received from the IPMA are missing.

Possible Sources

- CCM
- IPMA

PINPOINT TEST G : U0265:00

G1 VERIFY THE CUSTOMER CONCERN

- Ignition ON.
- Verify there is an observable symptom present.

Is an observable symptom present?

Yes	GO to G2
No	The system is operating normally at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

G2 CHECK THE COMMUNICATION NETWORK

- Using a diagnostic scan tool, perform the network test.

Does the IPMA pass the network test?

Yes	GO to G3
No	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

G3 RETRIEVE THE RECORDED DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE CCM (CRUISE CONTROL MODULE) SELF-TEST

- Using a diagnostic scan tool, perform the CCM self-test.

Is DTC U3003:16 or U3003:17 recorded?

Yes	If DTC U3003:16 is recorded, GO to Pinpoint Test Q If DTC U3003:17 is recorded, GO to Pinpoint Test R
No	GO to G4

G4 RETRIEVE THE RECORDED DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE IPMA (IMAGE PROCESSING MODULE A) SELF-TEST

NOTE: *If new modules were installed prior to the DTC being set, the module configuration can be incorrectly set during the PMI or the PMI may not have been performed.*

- Using a diagnostic scan tool, perform the IPMA self-test.

Are any Diagnostic Trouble Codes (DTCs) recorded?

Yes	REFER to: Lane Keeping System (419-07 Lane Keeping System) .
No	GO to G5

G5 RECHECK THE CCM (CRUISE CONTROL MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

NOTE: *If new modules were installed prior to the DTC being set, the module configuration can be incorrectly set during the PMI or the PMI may not have been performed.*

- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs). Repeat the CCM self-test.

Is DTC U0265:00 still present?

Yes	GO to G6
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No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.
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G6 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U0265:00

- Clear all Diagnostic Trouble Codes (DTCs).
- Ignition OFF.
- Ignition ON.
- Wait 10 seconds.
- Using a diagnostic scan tool, retrieve the Continuous Memory Diagnostic Trouble Codes (CMDTCs) from all modules.

Is DTC U0265:00 set in other modules?

Yes	INSTALL a new IPMA. REFER to: Interior Rear View Mirror (501-09 Rear View Mirrors, Removal and Installation).
No	INSTALL a new CCM. REFER to: Cruise Control Module (CCM) (419-03 Cruise Control - Vehicles With: Adaptive Cruise Control) .

U0100:00

Refer to Wiring Diagrams Cell 14 for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: Cruise Control (419-03 Cruise Control - Vehicles With: Adaptive Cruise Control) .

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
U0100:00	Lost Communication With ECM/PCM "A": No Sub Type Information	Sets in continuous memory if data messages received from the PCM or from the GWM to the CCM are missing for more than 5 seconds.

Possible Sources

- CCM
- PCM
- GWM

PINPOINT TEST H : U0100:00

H1 VERIFY THE DIAGNOSTIC SCAN TOOL COMMUNICATES WITH THE PCM (POWERTRAIN CONTROL MODULE)

- Using a diagnostic scan tool, verify a vehicle session can be established.

Can a vehicle session be established?

Yes	GO to H2
No	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

H2 CHECK THE CCM (CRUISE CONTROL MODULE) CONTINUOUS MEMORY DIAGNOSTIC TROUBLE CODES (DTCS)

- Ignition ON.
- Clear Continuous Memory Diagnostic Trouble Codes (CMDTCs) from all modules.
- Ignition OFF.
- Ignition ON.
- Wait 10 seconds.
- Using a diagnostic scan tool, perform the CCM self-test.
- Retrieve the Continuous Memory Diagnostic Trouble Codes (CMDTCs) from the CCM.

Is DTC U0100:00 retrieved again?

Yes	GO to H3
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

H3 CHECK THE GWM (GATEWAY MODULE A) DIAGNOSTIC TROUBLE CODES (DTCS)

- Using a diagnostic scan tool, retrieve the GWM Continuous Memory Diagnostic Trouble Codes (CMDTCs).

Are any Diagnostic Trouble Codes (DTCs) recorded?

Yes	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).
No	GO to H4

H4 CHECK FOR CONTINUOUS MEMORY DIAGNOSTIC TROUBLE CODES (CMDTCS) FROM THE PCM (POWERTRAIN CONTROL MODULE) KOEO (KEY ON, ENGINE OFF) SELF-TEST

- Using a diagnostic scan tool, perform a PCM KOEO self-test.

Are any Diagnostic Trouble Codes (DTCs) recorded?

Yes	REFER to the PCM DTC Chart.
No	GO to H5

H5 CHECK THE CCM (CRUISE CONTROL MODULE) FOR BATTERY VOLTAGE OUT-OF-RANGE DIAGNOSTIC TROUBLE CODES (DTCs)

- Using a diagnostic scan tool, perform a CCM self-test?

Is DTC U3003:16 or U3003:17 recorded?

Yes	For DTC U3003:16, GO to Pinpoint Test Q For DTC U3003:17, GO to Pinpoint Test R
No	GO to H6

H6 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U0100:00

- Ignition ON.
- Using a diagnostic scan tool, retrieve the Continuous Memory Diagnostic Trouble Codes (CMDTCs) from all modules.

Is DTC U0100:00 set in multiple modules?

Yes	INSTALL a new PCM. Refer to the appropriate section in Group 303 for the procedure.
No	INSTALL a new CCM. REFER to: Cruise Control Module (CCM) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Removal and Installation).

U0121:00

Refer to Wiring Diagrams Cell 14 for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: [Cruise Control - System Operation and Component Description](#) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Description and Operation).

DTC Fault Trigger Condition-CCM

DTC	Description	Fault Trigger Conditions
U0121:00	Lost Communication with Anti-Lock Brake System (ABS) Control Module: No Sub-Type Information	Sets in the CCM if data messages received from the ABS module are missing.

Possible Sources

- ABS module
- CCM
- GWM
- PCM

PINPOINT TEST I : U0121:00

I1	VERIFY THE CUSTOMER CONCERN

- Ignition ON.
- Verify there is an observable symptom present.

Is an observable symptom present?

Yes	GO to I2
No	The system is operating normally at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

I2 CHECK THE COMMUNICATION NETWORK

- Using a diagnostic scan tool, perform a network test.

Does the ABS module pass the network test?

Yes	GO to I3
No	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

I3 RETRIEVE THE RECORDED DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE CCM (CRUISE CONTROL MODULE) , ABS (ANTI-LOCK BRAKE SYSTEM) MODULE AND PCM (POWERTRAIN CONTROL MODULE) SELF-TESTS

- Using a diagnostic scan tool, perform a CCM self-test.
- Using a diagnostic scan tool, perform a ABS module self-test
- Using a diagnostic scan tool, perform a PCM self-test

Are any low or high voltage Diagnostic Trouble Codes (DTCs) recorded?

Yes	If DTC U3003:16 is recorded in the CCM, GO to Pinpoint Test Q If DTC U3003:17 is recorded in the CCM, GO to Pinpoint Test R If Diagnostic Trouble Codes (DTCs) were recorded in the PCM, Refer to the appropriate section in Group 303 for the procedure. If Diagnostic Trouble Codes (DTCs) were recorded in the ABS module, REFER to: Anti-Lock Brake System (ABS) and Stability Control (206-09 Anti-Lock Brake System (ABS) and Stability Control) .
No	GO to I4

I4 CHECK THE GWM (GATEWAY MODULE A) DIAGNOSTIC TROUBLE CODES (DTCS)

- Using a diagnostic scan tool, retrieve the GWM Continuous Memory Diagnostic Trouble Codes (CMDTCs).

Are any Diagnostic Trouble Codes (DTCs) recorded?

Yes	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).
No	GO to I5

I5 RECHECK THE CCM (CRUISE CONTROL MODULE) AND PCM (POWERTRAIN CONTROL MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

NOTE: *If new modules were installed prior to the DTC being set, the module configuration can be incorrectly set during the PMI or the PMI may not have been performed.*

- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs). Repeat the CCM and PCM self-tests.

Is CCM DTC U0121:00 or PCM DTC U0121 still present?

Yes	GO to I6
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

I6 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U0121:00 OR U0121

- Using a diagnostic scan tool, clear all Diagnostic Trouble Codes (DTCs).
- Ignition OFF.
- Ignition ON.
- Wait 10 seconds.
- Using a diagnostic scan tool, perform a self-test.
- Retrieve the Continuous Memory Diagnostic Trouble Codes (CMDTCs) from all modules.

Does DTC U0121:00 or U0121 set in other modules?

Yes	INSTALL a new ABS module. REFER to: Anti-Lock Brake System (ABS) Module (206-09 Anti-Lock Brake System (ABS) and Stability Control, Removal and Installation).
No	If the CCM sets DTC U0121:00, INSTALL a new CCM. REFER to: Cruise Control Module (CCM) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Removal and Installation). If the PCM sets U0121, INSTALL a new PCM. Refer to the appropriate section in Group 303 for the procedure.

U0140:00

Refer to Wiring Diagrams Cell 14 for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: [Cruise Control - System Operation and Component Description](#) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
U0140:00	Lost Communication With Body Control Module: No Sub Type Information	Sets in the CCM if data messages received from the BCM or from the GWM are missing.

Possible Sources

- BCM
- CCM
- GWM

PINPOINT TEST J : U0140:00

J1 VERIFY THE CUSTOMER CONCERN	
• Ignition ON. • Verify there is an observable symptom present.	
Is an observable symptom present?	
Yes	GO to J2
No	The system is operating normally at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.
J2 CHECK THE COMMUNICATION NETWORK	

- Using a diagnostic scan tool, perform the network test.

Does the BCM pass the network test?

Yes	GO to J3
No	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

J3 CHECK THE GWM (GATEWAY MODULE A) DIAGNOSTIC TROUBLE CODES (DTCS)

- Using a diagnostic scan tool, retrieve the GWM Continuous Memory Diagnostic Trouble Codes (CMDTCs).

Are any Diagnostic Trouble Codes (DTCs) recorded?

Yes	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).
No	GO to J4

J4 RETRIEVE THE RECORDED DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE CCM (CRUISE CONTROL MODULE) AND BCM (BODY CONTROL MODULE) SELF-TEST

- Using a diagnostic scan tool, perform the CCM and BCM self-test.

Is DTC U3003:16 or U3003:17 recorded?

Yes	If CCM, DTC U3003:16 is recorded, GO to Pinpoint Test Q If CCM, DTC U3003:17 is recorded, GO to Pinpoint Test R If the Diagnostic Trouble Codes (DTCs) are recorded in the BCM, REFER to: Body Control Module (BCM) (419-10 Multifunction Electronic Modules) .
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No	GO to J5
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J5 RECHECK THE CCM (CRUISE CONTROL MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

NOTE: *If new modules were installed prior to the DTC being set, the module configuration can be incorrectly set during the PMI or the PMI may not have been performed.*

- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs). Repeat the CCM self-test.

Is DTC U0140:00 still present?

Yes	GO to J6
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No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.
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J6 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U0140:00

- Clear all Diagnostic Trouble Codes (DTCs).
- Ignition OFF.
- Ignition ON.
- Wait 10 seconds.
- Using a diagnostic scan tool, retrieve the Continuous Memory Diagnostic Trouble Codes (CMDTCs) from all modules.

Is DTC U0140:00 set in other modules?

Yes	 Click here to access Guided Routine (BCM).
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No	INSTALL a new CCM. REFER to: Cruise Control Module (CCM) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Removal and Installation).
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U0151:00

Refer to Wiring Diagrams Cell 14 for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: [Cruise Control - System Operation and Component Description](#) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
U0151:00	Lost Communication With Restraints Control Module: No Sub Type Information	The yaw rate sensor is integral to the RCM. This DTC sets in the CCM if yaw rate sensor data messages received from the RCM are missing.

Possible Sources

- CCM
- RCM

PINPOINT TEST K : U0151:00

K1 VERIFY THE CUSTOMER CONCERN

- Ignition ON.
- Verify there is an observable symptom present.

Is an observable symptom present?

Yes	GO to K2
No	The system is operating normally at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

K2 CHECK THE COMMUNICATION NETWORK

- Using a diagnostic scan tool, perform the network test.

Does the RCM pass the network test?

Yes	GO to K3
No	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

K3 RETRIEVE THE RECORDED DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE CCM (CRUISE CONTROL MODULE) AND THE RCM (RESTRAINTS CONTROL MODULE) SELF-TEST

- Using a diagnostic scan tool, perform the CCM and RCM self-tests.

Is DTC U3003:16 or U3003:17 recorded?

Yes	If DTC U3003:16 is recorded in the CCM, GO to Pinpoint Test Q If DTC U3003:17 is recorded in the CCM, GO to Pinpoint Test R If Diagnostic Trouble Codes (DTCs) are recorded in the F-150, RCM, REFER to: Airbag Supplemental Restraint System (SRS) (501-20B Supplemental Restraint System, Diagnosis and Testing). For the F-150 Special Vehicle Team (SVT), REFER to: Airbag Supplemental Restraint System (SRS) - Raptor (501-20B Supplemental Restraint System, Diagnosis and Testing).
No	GO to K4

K4 RECHECK THE CCM (CRUISE CONTROL MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

NOTE: *If new modules were installed prior to the DTC being set, the module configuration can be incorrectly set during the PMI or the PMI may not have been performed.*

- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs). Repeat the CCM self-test.

Is DTC U0151:00 still present?

Yes	GO to K5
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

K5 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U0151:00

- Clear all Diagnostic Trouble Codes (DTCs).
- Ignition OFF.
- Ignition ON.
- Wait 10 seconds.
- Using a diagnostic scan tool, retrieve the Continuous Memory Diagnostic Trouble Codes (CMDTCs) from all modules.

Is DTC U0151:00 set in other modules?

Yes	INSTALL a new RCM. REFER to: Restraints Control Module (RCM) (501-20B Supplemental Restraint System, Removal and Installation).
No	INSTALL a new CCM. REFER to: Cruise Control Module (CCM) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Removal and Installation).

U0155:00

Refer to Wiring Diagrams Cell 14 for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: [Cruise Control - System Operation and Component Description](#) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions

U0155:00	Lost Communication With Instrument Panel Cluster (IPC) Control Module: No Sub Type Information	Sets in the CCM if data messages received from the IPC or from the GWM are missing.
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Possible Sources

- CCM
- IPC
- GWM

PINPOINT TEST L : U0155:00

L1 VERIFY THE CUSTOMER CONCERN

- Ignition ON.
- Verify there is an observable symptom present.

Is an observable symptom present?

Yes	GO to L2
No	The system is operating normally at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

L2 CHECK THE COMMUNICATION NETWORK

- Using a diagnostic scan tool, perform the network test.

Does the IPC pass the network test?

Yes	GO to L3
No	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

L3 CHECK THE GWM (GATEWAY MODULE A) DIAGNOSTIC TROUBLE CODES (DTCS)

- Using a diagnostic scan tool, retrieve the GWM Continuous Memory Diagnostic Trouble Codes (CMDTCs).

Are any Diagnostic Trouble Codes (DTCs) recorded?

Yes	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).
No	GO to L4

L4 RETRIEVE THE RECORDED DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE CCM (CRUISE CONTROL MODULE) AND THE IPC (INSTRUMENT PANEL CLUSTER) SELF-TEST

- Using a diagnostic scan tool, perform the CCM and IPC self-tests.

Is DTC U3003:16 or U3003:17 recorded?

Yes	If DTC U3003:16 is recorded in the CCM, GO to Pinpoint Test Q If DTC U3003:17 is recorded in the CCM, GO to Pinpoint Test R If Diagnostic Trouble Codes (DTCs) are recorded in the IPC, REFER to: Instrumentation, Message Center and Warning Chimes (413-01 Instrumentation, Message Center and Warning Chimes, Diagnosis and Testing).
No	GO to L5

L5 RECHECK THE CCM (CRUISE CONTROL MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

NOTE: If new modules were installed prior to the DTC setting, the module configuration can be incorrectly set during the PMI or the PMI may not have been performed.

- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs). Repeat the CCM self-test.

Is DTC U0155:00 still present?

Yes	GO to L6
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

L6 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U0155:00

- Clear all Diagnostic Trouble Codes (DTCs).
- Ignition OFF.
- Ignition ON.
- Wait 10 seconds.
- Using a diagnostic scan tool, retrieve the Continuous Memory Diagnostic Trouble Codes (CMDTCs) from all modules.

Is DTC U0155:00 set in other modules?

Yes	INSTALL a new IPC.   Click here to access Guided Routine (IPC).
No	INSTALL a new CCM. REFER to: Cruise Control Module (CCM) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Removal and Installation).

U0158:00

Refer to Wiring Diagrams Cell 14 for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: [Cruise Control - System Operation and Component Description](#) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
U0158:00	Lost Communication With Head Up Display: No Sub Type Information	Sets in the CCM if data messages received from the HUD module are missing.

Possible Sources

- CCM
- HUD module

PINPOINT TEST M : U0158:00

M1 VERIFY THE CUSTOMER CONCERN	
• Ignition ON. • Verify there is an observable symptom present.	
Is an observable symptom present?	
Yes	GO to M2
No	The system is operating normally at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

M2 CHECK THE COMMUNICATION NETWORK

- Using a diagnostic scan tool, perform the network test.

Does the HUD module pass the network test?

Yes	GO to M3
No	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

M3 RETRIEVE THE RECORDED DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE CCM (CRUISE CONTROL MODULE) AND THE HUD (HEAD UP DISPLAY) MODULE SELF-TEST

- Using a diagnostic scan tool, perform the CCM and HUD module self-tests.

Is DTC U3003:16 or U3003:17 recorded?

Yes	If DTC U3003:16 is recorded in the CCM, GO to Pinpoint Test Q If DTC U3003:17 is recorded in the CCM, GO to Pinpoint Test R If diagnostic trouble codes (DTCs) are recorded in the HUD module, REFER to: Collision Warning and Collision Avoidance System (419-03C Collision Warning and Collision Avoidance System, Diagnosis and Testing).
No	GO to M4

M4 RECHECK THE CCM (CRUISE CONTROL MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

NOTE: *If new modules were installed prior to the DTC being set, the module configuration can be incorrectly set during the PMI or the PMI may not have been performed.*

- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs). Repeat the CCM self-test.

Is DTC U0158:00 still present?

Yes	GO to M5
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

M5 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U0158:00

- Clear all Diagnostic Trouble Codes (DTCs).
- Ignition OFF.
- Ignition ON.
- Wait 10 seconds.
- Using a diagnostic scan tool, retrieve the Continuous Memory Diagnostic Trouble Codes (CMDTCs) from all modules.

Is DTC U0158:00 set in other modules?

Yes	INSTALL a new HUD module. REFER to: Head Up Display (HUD) Module (419-03C Collision Warning and Collision Avoidance System, Removal and Installation).
No	INSTALL a new CCM. REFER to: Cruise Control Module (CCM) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Removal and Installation).

U0212:00

Refer to Wiring Diagrams Cell 14 for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: [Cruise Control - System Operation and Component Description](#) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
U0212:00	Lost Communication With Steering Column Control Module: No Sub Type Information	Sets in the CCM if data messages received from the SCCM are missing.

Possible Sources

- CCM
- SCCM

PINPOINT TEST N : U0212:00

N1 VERIFY THE CUSTOMER CONCERN	
• Ignition ON. • Verify there is an observable symptom present.	
Is an observable symptom present?	
Yes	GO to N2
No	The system is operating normally at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

N2 CHECK THE COMMUNICATION NETWORK

- Using a diagnostic scan tool, perform the network test.

Does the SCCM pass the network test?

Yes	GO to N3
No	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

N3 RETRIEVE THE RECORDED DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE CCM (CRUISE CONTROL MODULE) AND SCCM (STEERING COLUMN CONTROL MODULE) SELF-TEST

- Using a diagnostic scan tool, perform the CCM and SCCM self-tests.

Is DTC U3003:16 or U3003:17 recorded?

Yes	If DTC U3003:16 is recorded in the CCM, GO to Pinpoint Test Q If DTC U3003:17 is recorded in the CCM, GO to Pinpoint Test R If diagnostic trouble codes (DTCs) are recorded in the SCCM, REFER to: Steering Wheel and Column Electrical Components (211-05 Steering Wheel and Column Electrical Components) .
No	GO to N4

N4 RECHECK THE CCM (CRUISE CONTROL MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

NOTE: If new modules were installed prior to the DTC being set, the module configuration can be incorrectly set during the PMI or the PMI may not have been performed.

- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs). Repeat the CCM self-test.

Is DTC U0212:00 still present?

Yes	GO to N5
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

N5 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U0212:00

- Clear all Diagnostic Trouble Codes (DTCs).
- Ignition OFF.
- Ignition ON.
- Wait 10 seconds.
- Using a diagnostic scan tool, retrieve the Continuous Memory Diagnostic Trouble Codes (CMDTCs) from all modules.

Is DTC U0212:00 set in other modules?

Yes	INSTALL a new SCCM. REFER to: Steering Column Control Module (SCCM) (211-05 Steering Wheel and Column Electrical Components, Removal and Installation).
No	INSTALL a new CCM. REFER to: Cruise Control Module (CCM) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Removal and Installation).

U0265:00

Refer to Wiring Diagrams Cell 14 for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: [Cruise Control - System Operation and Component Description](#) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
U0265:00	Lost Communication With Image Processing Module Sensor A: No Sub Type Information	Sets in the CCM if data messages received from the IPMA are missing.

Possible Sources

- CCM
- IPMA

PINPOINT TEST O : U0265:00

O1 VERIFY THE CUSTOMER CONCERN

- Ignition ON.
- Verify there is an observable symptom present.

Is an observable symptom present?

Yes	GO to O2
No	The system is operating normally at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

O2 CHECK THE COMMUNICATION NETWORK

- Using a diagnostic scan tool, perform the network test.

Does the IPMA pass the network test?

Yes	GO to O3
No	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

O3 RETRIEVE THE RECORDED DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE CCM (CRUISE CONTROL MODULE) SELF-TEST

- Using a diagnostic scan tool, perform the CCM self-test.

Is DTC U3003:16 or U3003:17 recorded?

Yes	If DTC U3003:16 is recorded, GO to Pinpoint Test Q If DTC U3003:17 is recorded, GO to Pinpoint Test R
No	GO to O4

O4 RETRIEVE THE RECORDED DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE IPMA (IMAGE PROCESSING MODULE A) SELF-TEST

NOTE: *If new modules were installed prior to the DTC being set, the module configuration can be incorrectly set during the PMI or the PMI may not have been performed.*

- Using a diagnostic scan tool, perform the IPMA self-test.

Are any Diagnostic Trouble Codes (DTCs) recorded?

Yes	REFER to: Lane Keeping System (419-07 Lane Keeping System, Diagnosis and Testing).
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No	GO to O5
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O5 RECHECK THE CCM (CRUISE CONTROL MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

NOTE: *If new modules were installed prior to the DTC being set, the module configuration can be incorrectly set during the PMI or the PMI may not have been performed.*

- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs). Repeat the CCM self-test.

Is DTC U0265:00 still present?

Yes	GO to O6
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No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.
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O6 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U0265:00 SET IN OTHER MODULES

- Clear all Diagnostic Trouble Codes (DTCs).
- Ignition OFF.
- Ignition ON.
- Wait 10 seconds.
- Using a diagnostic scan tool, retrieve the Continuous Memory Diagnostic Trouble Codes (CMDTCs) from all modules.

Is DTC U0265:00 set in other modules?

Yes	INSTALL a new IPMA. REFER to: Interior Rear View Mirror (501-09 Rear View Mirrors, Removal and Installation).
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No	INSTALL a new CCM. REFER to: Cruise Control Module (CCM) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Removal and Installation).
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U0423:82

Refer to Wiring Diagrams Cell 14 for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: [Communications Network - System Operation and Component Description](#) (418-00 Module Communications Network, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
U0423:82	Invalid Data Received From Instrument Panel Cluster Control Module: Alive/ Sequence Counter Incorrect/Not Updated	Sets in continuous memory in the CCM if adaptive cruise control data received from the GWM or from the IPC is missing for 5 seconds or longer.

Possible Sources

- CCM
- IPC
- GWM

PINPOINT TEST P : U0423:82

P1 VERIFY THE CUSTOMER CONCERN

- Ignition ON.
- Verify there is an observable symptom present.

Is an observable symptom present?

Yes	GO to P2
No	The system is operating normally at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

P2 CHECK THE COMMUNICATION NETWORK

- Using a diagnostic scan tool, perform the network test.

Does the IPC pass the network test?

Yes	GO to P3
No	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

P3 CHECK THE GWM (GATEWAY MODULE A) DIAGNOSTIC TROUBLE CODES (DTCS)

- Using a diagnostic scan tool, retrieve the GWM Continuous Memory Diagnostic Trouble Codes (CMDTCs).

Are any Diagnostic Trouble Codes (DTCs) recorded?

Yes	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).
No	GO to P4

P4 PERFORM THE IPC (INSTRUMENT PANEL CLUSTER) SELF-TEST

- Using a diagnostic scan tool, perform the IPC self-test.

Are any Diagnostic Trouble Codes (DTCs) recorded?

Yes	REFER to: Instrumentation, Message Center and Warning Chimes (413-01 Instrumentation, Message Center and Warning Chimes, Diagnosis and Testing).
No	GO to P5

P5 PERFORM THE CCM (CRUISE CONTROL MODULE) SELF-TEST

- Using a diagnostic scan tool, perform the CCM self-test.

Are any Diagnostic Trouble Codes (DTCs) recorded?

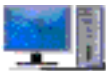
Yes	REFER to CCM DTC Chart.
No	GO to P6

P6 RECHECK THE CCM (CRUISE CONTROL MODULE) DIAGNOSTIC TROUBLE CODES (DTCs)

NOTE: *If new modules were installed prior to the DTC being set, the module configuration may be incorrectly set during the PMI or the PMI may not have been performed.*

- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs).
- Wait 10 seconds.
- Repeat the CCM self-test.

Is DTC U0423:82 still present?

Yes	INSTALL a new IPC.   Click here to access Guided Routine (IPC).
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No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.
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U3003:16

Refer to Wiring Diagrams Cell 31 for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: [Battery and Cables - System Operation and Component Description](#) (414-01 Battery, Mounting and Cables, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
U3003:16	Battery Voltage: Circuit Voltage Below Threshold	Set by the CCM as a continuous memory and on-demand DTC if the CCM detects low battery voltage below 9.5 volts for more than 500 ms.

Possible Sources

- Wiring, terminals and connectors
- Battery
- Generator
- CCM
- PCM

PINPOINT TEST Q : U3003:16

NOTICE: Use the correct probe adapter(s) when making measurements. Failure to use the correct probe adapter(s) may damage the connector.

NOTE: Failure to disconnect the battery when instructed results in false resistance readings. Refer to section 414-01, Battery Disconnect and Connect.

Q1 RECHECK THE CCM (CRUISE CONTROL MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

- Ignition ON.
- Using a diagnostic scan tool, perform the self-test.

Is DTC U3003:16 still present?

Yes	GO to Q2
No	The system is operating correctly at this time. The DTC may have been set due to a previous low battery voltage condition.

Q2 CHECK FOR CHARGING SYSTEM DIAGNOSTIC TROUBLE CODES (DTCS)

- Using a diagnostic scan tool, perform the PCM self-test.

Are any charging system Diagnostic Trouble Codes (DTCs) present in the PCM?

Yes	Refer to the appropriate section in Group 303 for the procedure.
No	GO to Q3

Q3 CHECK THE BATTERY CONDITION AND STATE OF CHARGE

- Check the battery condition and verify the battery is fully charged.
REFER to: [Battery Charging](#) (414-01 Battery, Mounting and Cables, General Procedures).

Is the battery OK and fully charged?

Yes	GO to Q4
No	INSTALL a new battery. REFER to: Battery (414-01 Battery, Mounting and Cables, Removal and Installation).

Q4 CHECK THE CCM (CRUISE CONTROL MODULE) VOLTAGE SUPPLY

- Ignition OFF.
- Disconnect CCM C1897.
- Disconnect CCM C1849 Special Vehicle Team (SVT).
- Ignition ON.
- Measure and record the voltage at the battery.
- Measure:

F-150 Base

Positive Lead	Measurement / Action	Negative Lead
C1897-1		Ground

F-150 SVT

Positive Lead	Measurement / Action	Negative Lead
C1849-1		Ground

Is the voltage within 0.2 volt of the recorded battery voltage?

Yes	GO to Q5
No	REPAIR the circuit for high resistance.

Q5 CHECK THE CCM (CRUISE CONTROL MODULE) GROUND CIRCUIT

- Ignition OFF.
- Measure:

F-150 Base

Positive Lead	Measurement / Action	Negative Lead
C1897-4	Ω	Ground

F-150 SVT

Positive Lead	Measurement / Action	Negative Lead
C1849-4	Ω	Ground

Is the resistance less than 3 ohms?

Yes	GO to Q6
No	REPAIR the circuit for high resistance.

Q6 CHECK FOR CORRECT CCM (CRUISE CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all CCM connectors and related in-line 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 CCM connectors and related in-line 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 for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, follow TSB instructions. If no Technical Service Bulletins (TSBs) address this concern, INSTALL a new CCM. REFER to: Cruise Control Module (CCM) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, 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.

U3003:17

Refer to Wiring Diagrams Cell 31 for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: [Battery and Cables - System Operation and Component Description](#) (414-01 Battery, Mounting and Cables, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
U3003:17	Battery Voltage: Circuit Voltage Above Threshold	Sets as a continuous memory and on-demand DTC if the CCM detects high battery voltage above 16.5 volts for 500 ms.

Possible Sources

- Generator
- CCM

- PCM

PINPOINT TEST R : U3003:17

NOTE: DTC U3003:17 may be stored in the module memory due to past battery charging or vehicle jump starting events.

R1 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U3003:17, P0563 OR P0626

- Ignition ON.
- Using a diagnostic scan tool, retrieve the Continuous Memory Diagnostic Trouble Codes (CMDTCs) from all modules.

Is DTC U3003:17, P0563 or P0626 set in more than one module?

Yes	Refer to the appropriate section in Group 303 for the procedure.
No	GO to R2

R2 CHECK THE BATTERY VOLTAGE

- Turn off all the interior/exterior lights and accessories.
- Start and run the engine at approximately 2,000 rpm for 3 minutes while monitoring the battery voltage.

Does the battery voltage rise to 15.5 volts or higher?

Yes	Refer to the appropriate section in Group 414 for the procedure.
No	GO to R3

R3 RECHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U3003:17

- Ignition OFF.
- Ignition ON.
- Using a diagnostic scan tool, clear the DTC Continuous Memory Diagnostic Trouble Codes (CMDTCs).
- Using a diagnostic scan tool, perform the CCM self-test.

Is DTC U3003:17 still present?

Yes	INSTALL a new CCM. REFER to: Cruise Control Module (CCM) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Removal and Installation).
No	The system is operating normally at this time. The DTC may have been set previously during battery charging or while jump starting the vehicle.