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No	The system is operating correctly at this time. The DTC (diagnostic trouble code) may have been set due to high network traffic, or an intermittent fault condition.

BI7 CHECK FOR OTHER CAUSES OF COMMUNICATION NETWORK CONCERN

- CHECK the vehicle service history for recent service actions related to the APIM (SYNC module) module or IPMA (image processing module A) . If recent service history is found:
  - verify correct replacement module was installed
    - vehicle parts build may be used to verify correct part fitment
  - verify the configuration of replacement module was correct
    - re-configure module using as-built data if prior configuration is suspect
  - verify the module was not obtained from a like vehicle and installed into customer vehicle
    - return the swapped module to source vehicle and obtain new replacement module
    - if a new replacement module is installed, CARRY OUT PMI (programmable module installation) using as-built data
- Operate the system and determine if the observable symptom is still present.

Is the observable symptom still present?

Yes	GO to BI8

No	The system is operating correctly at this time. The concern may have been due to incorrect parts replacement procedures or incorrect module configuration.

BI8 CHECK FOR CORRECT APIM (SYNC MODULE) MODULE OPERATION

- Ignition OFF.
- Disconnect and inspect the APIM (SYNC module) module 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 APIM (SYNC module) module connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Yes	INSTALL a new IPMA (image processing module A) module. REFER to: Image Processing Module A (IPMA) (419-07 Lane Keeping System, Removal and Installation).

No	TEST the system for normal operation.

PINPOINT TEST BK : B1385:68

Normal Operation and Fault Conditions

REFER to: Lane Keeping System - System Operation and Component Description(419-07 Lane Keeping System, Description and Operation).

DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
IPMA (image processing module A) B1385:68	Lane Keeping Aid System: Event Information	A continuous memory DTC (diagnostic trouble code) that sets in the IPMA (image processing module A) if messages from the PSCM (power steering control module) over the FD-CAN (Flexible Data Rate Controller Area Network) are invalid.

Possible Sources

- IPMA (image processing module A) concerns

BK1 CHECK THE COMMUNICATION NETWORK

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

Does the PSCM (power steering control module) module pass the network test?

Yes	GO to BK2

No	REFER to: Ethernet Module Communications Network(418-00C Ethernet Module Communications Network, Diagnosis and Testing).

- IPMA (image processing module A)

BL1 CHECK FOR DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE MODULE SENDING INVALID DATA

- Ignition ON.
- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs) for the module in question.

Is DTC B1385:82 still present?

Yes	RETRIEVE and FOLLOW non-network Diagnostic Trouble Codes (DTCs) from the IPMA (image processing module A) . REFER to: Controller Area Network (CAN) Module Communications Network (418-00A Controller Area Network (CAN) Module Communications Network, Diagnosis and Testing). REFER to: Ethernet Module Communications Network (418-00C Ethernet Module Communications Network, Diagnosis and Testing).

No	DIAGNOSE the observable symptom present. REFER to the appropriate Symptom chart in this section.

PINPOINT TEST BM : U0594:86

Normal Operation and Fault Conditions

REFER to: Lane Keeping System - System Operation and Component Description(419-07 Lane Keeping System, Description and Operation).

DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
IPMA (image processing module A) U0594:86	Invalid Data Received From Hybrid/EV Powertrain Control Module 'A': Signal Invalid	This continuous memory DTC (diagnostic trouble code) that set in the IPMA (image processing module A) when invalid data messages received from the PCM (powertrain control module) through GWM (gateway module A) .

Possible Sources

- Communication network concern

Yes	DIAGNOSE all non-network Diagnostic Trouble Codes (DTCs). REFER to the IPMA (image processing module A) DTC (diagnostic trouble code) Chart in this section.

No	GO to BM4

BM4 PERFORM THE GWM (GATEWAY MODULE A) SELF-TEST

- Using a diagnostic scan tool, perform the GWM (gateway module A) self-test.

Are any Diagnostic Trouble Codes (DTCs) recorded?

Yes	REFER to: Controller Area Network (CAN) Module Communications Network(418-00A Controller Area Network (CAN) Module Communications Network, Diagnosis and Testing). REFER to: Ethernet Module Communications Network (418-00C Ethernet Module Communications Network, Diagnosis and Testing).

No	GO to BM5

BM5 RECHECK THE IPMA (IMAGE PROCESSING MODULE A) DIAGNOSTIC TROUBLE CODES (DTCS)

- Using a diagnostic scan tool, clear the IPMA (image processing module A) Diagnostic Trouble Codes (DTCs).
- Ignition OFF.
- Ignition ON.
- Wait 10 seconds.
- Using a diagnostic scan tool, perform the continuous memory self-test.
- Check the IPMA (image processing module A) Diagnostic Trouble Codes (DTCs).

Is DTC (diagnostic trouble code) U0594:86 still present?

Yes	GO to BM6

No	The system is operating correctly at this time. This DTC (diagnostic trouble code) may have been set due to high network traffic or an intermittent fault condition.

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,   Guided Routine available in the on-line Workshop Manual.

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

PINPOINT TEST BN : U2101:00

Normal Operation and Fault Conditions

The IPMA (image processing module A) as well as all control modules that are programmable must have the correct As-Built data installed.

DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
IPMA (image processing module A) U2101:00	Control Module Configuration Incompatible: No Sub Type Information	This continuous memory DTC (diagnostic trouble code) sets when the IPMA (image processing module A) As-Built data installation was not installed completely or incorrectly.

Possible Sources

- IPMA (image processing module A)

BN1 CONFIRM THE DTC RESETS

- Check vehicle service history for recent service actions related to the IPMA (image processing module A) .
- Ignition ON.

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
IPMA (image processing module A) U0264:00	Lost Communication With Camera Module- Rear: No Sub Type Information	This continuous memory DTC (diagnostic trouble code) sets in IPMA (image processing module A) when data messages missing from CMR (Camera Module - Rear) .

Possible Sources

- Communication network concern
- IPMA (image processing module A)
- CMR (Camera Module - Rear)

BO1 VERIFY THE CUSTOMER'S CONCERN

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

Is an observable symptom present?

Yes	GO to BO2

No	REFER to: Controller Area Network (CAN) Module Communications Network(418-00A Controller Area Network (CAN) Module Communications Network, Diagnosis and Testing). REFER to: Ethernet Module Communications Network (418-00C Ethernet Module Communications Network, Diagnosis and Testing).

BO2 PERFORM THE CMR (CAMERA MODULE - REAR) SELF-TEST

- Using a diagnostic scan tool, perform the CMR (Camera Module - Rear) self-test.
- Clear the Diagnostic Trouble Codes (DTCs).
- Wait 10 seconds.
- Repeat the CMR (Camera Module - Rear) self-test.

Are any Diagnostic Trouble Codes (DTCs) present?

Yes	DIAGNOSE all non-network Diagnostic Trouble Codes (DTCs). REFER to the CMR (Camera Module - Rear) DTC Chart in this section. REFER to: Interior Camera System

Is the observable symptom still present?

Yes	GO to BO5

No	The system is operating correctly at this time. The concern may have been caused due to incorrect parts replacement procedures or incorrect module configuration.

BO5 CHECK FOR CORRECT CMR (CAMERA MODULE - REAR) OPERATION

- Ignition OFF.
- Disconnect and inspect all CMR (Camera Module - Rear) 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 CMR (Camera Module - Rear) connectors. Make sure they seat and latch correctly.
- Operate the system to 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 new CMR (Camera Module - Rear) . REFER to: Driver Status Monitor Camera Module [CMR] (419-04B Interior Camera System, Removal and Installation).

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

PINPOINT TEST BP : U0565:82, U0565:83 OR U0565:86

Normal Operation and Fault Conditions

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

Is an observable symptom present?

Yes	GO to BP2

No	REFER to: Controller Area Network (CAN) Module Communications Network(418-00A Controller Area Network (CAN) Module Communications Network, Diagnosis and Testing). REFER to: Ethernet Module Communications Network (418-00C Ethernet Module Communications Network, Diagnosis and Testing).

BP2 PERFORM THE CMR (CAMERA MODULE - REAR) SELF-TEST

- Using a diagnostic scan tool, perform the CMR (Camera Module - Rear) self-test.
- Clear the Diagnostic Trouble Codes (DTCs).
- Wait 10 seconds.
- Repeat the CMR (Camera Module - Rear) self-test.

Are any Diagnostic Trouble Codes (DTCs) present?

Yes	DIAGNOSE all non-network Diagnostic Trouble Codes (DTCs). REFER to the CMR (Camera Module - Rear) DTC Chart. REFER to: Interior Camera System (419-04B Interior Camera System, Diagnosis and Testing).

No	GO to BP3

BP3 PERFORM THE IPMA (IMAGE PROCESSING MODULE A) SELF-TEST

- Using a diagnostic scan tool, perform the IPMA (image processing module A) self-test.
- Clear the Diagnostic Trouble Codes (DTCs).
- Wait 10 seconds.
- Repeat the IPMA (image processing module A) self-test.

Are any Diagnostic Trouble Codes (DTCs) present?

- 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 CMR (Camera Module - Rear) connectors. Make sure they seat and latch correctly.
- Operate the system to 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 the new CMR (Camera Module - Rear) . REFER to: Driver Status Monitor Camera Module [CMR] (419-04B Interior Camera System, Removal and Installation).
No	The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector. ADDRESS the root cause of any connector or pin issues.

PINPOINT TEST BQ : U100B:64

Normal Operation and Fault Conditions

REFER to: Lane Keeping System - System Operation and Component Description(419-07 Lane Keeping System, Description and Operation).

DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
IPMA (image processing module A) U100B:64	Semi-Automatic Parallel Parking System: Signal Plausibility Failure	This continuous memory DTC (diagnostic trouble code) sets in IPMA (image processing module A) when signal failure from semi-automatic parallel parking system.

Possible Sources

- Communication network concern
- IPMA (image processing module A)