

Normal Operation and Fault Conditions

The IPMA communicates with the BCM through the GWM.

Possible Causes

- Communication network concern
- GWM concern
- BCM
- IPMA (integral to the interior rear view mirror)

DTC	Description	Fault Trigger Conditions
U0140:87	Lost Communication With Body Control Module: Missing Message	A continuous memory DTC that sets in the IPMA if messages received from the BCM over the HS-CAN1 through the GWM are missing for 10 seconds or more.

DIAGNOSIS AND TESTING > LANE KEEPING SYSTEM > PINPOINT TESTS > PINPOINT TEST H : DTC (DIAGNOSTIC TROUBLE CODE) U0140:87 > PINPOINT TEST H : DTC (DIAGNOSTIC TROUBLE CODE) U0140:87

H1 VERIFY THE CUSTOMER CONCERN

Ignition ON.

Verify that there is an observable symptom present.

Is there an observable symptom present?

Yes	GO to H2
No	CLEAR the DTC. The system is operating normally at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

H2 CHECK THE COMMUNICATION NETWORK

Using a diagnostic scan tool, perform a network test.

Do the BCM and the GWM pass the network test?

Yes	GO to H3
No	REFER to: Communications Network .

H3 CHECK FOR RECORDED DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE BCM (BODY CONTROL MODULE) SELF-TEST

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

Are any Diagnostic Trouble Codes (DTCs) recorded?

Yes	REFER to: Body Control Module (BCM) .
No	GO to H4

H4 CHECK THE GWM (GATEWAY MODULE A) CONTINUOUS MEMORY DIAGNOSTIC TROUBLE CODES (CMDTCS)

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 .
No	GO to H5

H5 RECHECK THE IPMA (IMAGE PROCESSING MODULE A) CONTINUOUS MEMORY DIAGNOSTIC TROUBLE CODES (CMDTCS)

Using a diagnostic scan tool, clear the IPMA Diagnostic Trouble Codes (DTCs).

Ignition OFF.

Wait 10 seconds.

Ignition ON.

Wait 10 seconds.

Retrieve the IPMA Continuous Memory Diagnostic Trouble Codes (CMDTCS).

Is DTC U0140:87 still present?

Yes	GO to H6
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.

H6 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U0140 SET IN OTHER MODULES

Using a diagnostic scan tool, clear all Diagnostic Trouble Codes (DTCs).

Ignition OFF.

Ignition ON.

Wait 10 seconds.

Retrieve the Continuous Memory Diagnostic Trouble Codes (CMDTCs) from all modules.

Is DTC U0140 set in any other module?

Yes	GO to H7
No	GO to H8

H7 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

Ignition OFF.

Disconnect and inspect all BCM 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 BCM 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 Technical Service Bulletin (TSB) exists for this concern, DISCONTINUE this test and FOLLOW the Technical Service Bulletin (TSB) instructions. If no Technical Service Bulletins (TSBs) address this concern,
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.

H8 CHECK FOR CORRECT IPMA (IMAGE PROCESSING MODULE A) OPERATION

Disconnect and inspect all IPMA connectors and related in-line connectors.

Repair:

corrosion (install new connector or terminals - clean module pins)

damaged or bent pins - install new terminals/pins