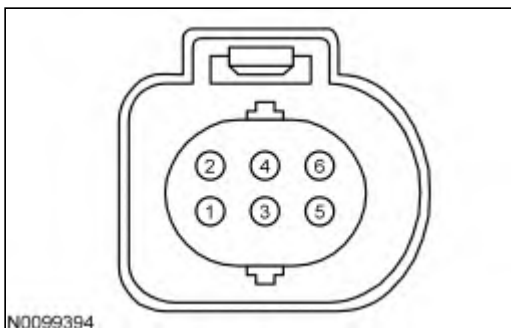
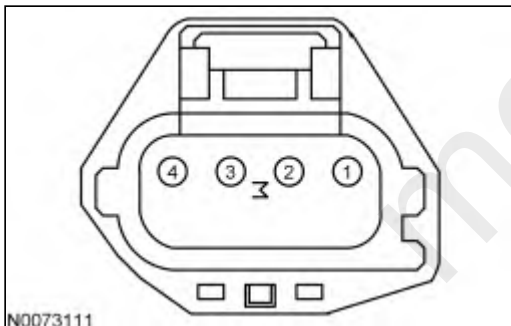
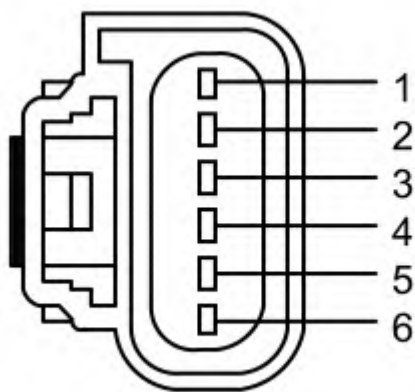


QA: Unable To Activate Self-Test/Network Communication Error

This pinpoint test is intended to diagnose the following:

- unable to communicate with the PCM
- unable to activate the PCM self-test
- incorrect self-test procedure
- harness circuits: ISP-R, PCMRC, PWRGND and VPWR

Electronic Throttle Body Throttle Position Sensor (ETBTPS) Connector**A****B****C**



A0094772

Vehicle	Connector	Pin	Circuit
EcoSport 1.5L, EcoSport 1.0L, Escape/Kuga 1.5L, Fusion 1.5L, KA, Transit Connect 1.0L	A	3 1	ETCRTN ETCREF
F-650 / F-750, Flex GTDI 3.5L	B	3 2	ETCRTN ETCREF
All other vehicles	C	4 5	ETCRTN ETCREF

Powertrain Control Module (PCM) Connector

For PCM connector views or reference values, refer to Section 6, Reference Values.

Vehicle	Connector	Pin	Circuit
Continental 2.0L, Continental 2.7L, Continental 3.0L, EcoSport 1.0L, EcoSport 2.0L, Flex GTDI 3.5L, Ford GT, Fusion 1.5L, Fusion 2.0L, Fusion 2.7L, MKZ	198 PIN	B96, B97, B98, B99 B101, B102, B103 B58 B48	PWRGND VPWR PCMRC ISP-R

Vehicle	Connector	Pin	Circuit
Continental 3.7L, E-Series, F-650 / F-750, Flex TiVCT 3.5L	198 PIN	B100, B102, B103, B5 B97, B99 B20 B64	PWRGND VPWR PCMRC ISP-R
Corsair 2.0L, Corsair 2.3L, Edge 2.0L, Escape/Kuga 1.5L, Escape/Kuga 2.0L, Explorer 2.3L, Mustang 2.3L, Ranger 2.3L	198 PIN	B96, B97, B98, B99 B100, B101, B102 B25 B64	PWRGND VPWR PCMRC ISP-R
Corsair 2.5L, EcoSport 1.5L Automatic Transmission, Escape/Kuga 2.5L, Transit Connect 2.5L	198 PIN	B100, B102, B103, B5 B97, B99 B20 B41	PWRGND VPWR PCMRC ISP-R
EcoSport 1.5L Manual Transmission, KA 1.2L, KA 1.5L Manual Transmission	112 PIN	B49, B50, B51 B55, B56 B25 B43	PWRGND VPWR PCMRC ISP-R
Edge 2.7L, Nautilus 2.7L	306 PIN	B96, B97, B98, B99 B1, B16, B2 B60 B13	PWRGND VPWR PCMRC ISP-R
Expedition, Navigator	198 PIN	B96, B97, B98, B99 B101, B102, B103 B25 B48	PWRGND VPWR PCMRC ISP-R
F-150 3.5L High Output	198 PIN	B96, B97, B98, B99 B101, B102, B103 B25 B83	PWRGND VPWR PCMRC ISP-R
F-150 3.5L	306 PIN	B60 B13	PCMRC ISP-R
Fusion 2.5L	198 PIN	B50, B69, B70 B97, B99 B20 B41	PWRGND VPWR PCMRC ISP-R
KA 1.0L	128 PIN	B48, E12, T23, T31, T32 B36, E24 B37 B45	PWRGND VPWR PCMRC ISP-R

Vehicle	Connector	Pin	Circuit
KA 1.5L Automatic Transmission	198 PIN	B100, B102, B103, B5 B97, B99 B20 B43	PWRGND VPWR PCMRC ISP-R
Mustang 5.2L Supercharged	306 PIN	B46, B47, B61, B62, B76, B77 B1, B16, B2 B20 B64	PWRGND VPWR PCMRC ISP-R
Mustang TiVCT 5.2L	198 PIN	B100, B102, B103, B5 B1, B16, B2 B20 B64	PWRGND VPWR PCMRC ISP-R
Nautilus 2.0L	198 PIN	B96, B97, B98, B99 B100, B101, B102 B58 B64	PWRGND VPWR PCMRC ISP-R
Ranger 2.5L	128 PIN	B35, B36, B47, B48 B11, B12 B1 B8	PWRGND VPWR PCMRC ISP-R
Transit GTDI 3.5L	306 PIN	B46, B47, B61, B62, B76, B77 B101, B102, B103 B60 B13	PWRGND VPWR PCMRC ISP-R
Transit Connect 1.0L, Transit Connect 2.0L	198 PIN	B96, B97, B98, B99 B100, B101, B102 B25	PWRGND VPWR PCMRC
All other vehicles	306 PIN	B46, B47, B61, B62, B76, B77 B1, B16, B2 B60 B13	PWRGND VPWR PCMRC ISP-R

QA1 CARRY OUT A VEHICLE INSPECTION AND VERIFY THE SELF-TEST PROCEDURE

Note: Check for BCM DTCs. Diagnose all PCM circuit DTCs retrieved from the BCM before entering this pinpoint test. Refer to the appropriate workshop manual section for the BCM DTC diagnosis.

Note: If the self-test or communication concern occurred after a failed or an aborted reprogram, the module may be blank. Attempt to reprogram the module again before continuing with this pinpoint test.

- Visually inspect the following for obvious signs of electrical damage:
 - harness wiring
 - electrical connections
- Verify the correct procedure was used to activate the self-test for the scan tool. Refer to Section 2, [Scan Tool Setup And Functionality](#).

Was the correct self-test procedure used?

Yes GO to [QA2](#).

No	REFER to Section 2, Scan Tool Setup And Functionality .
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QA2 CARRY OUT THE NETWORK TEST

Note: The scan tool attempts to communicate with the PCM first. After establishing communication with the PCM, the scan tool then attempts to communicate with all modules on the vehicle. If a scan tool session cannot be established, the scan tool may state no communication can be established with the PCM:

- choose No when the scan tool prompts whether or not to retry communication.
 - enter a PCM part number, tear tag or calibration number to identify the vehicle and start a session. The PCM part number and 4-character tear tag are located on the PCM.
- Ignition ON, engine OFF.
 - Carry out the network test.

Do all modules indicate pass?

Yes	For DTCs U0101, U0402, U1011 or U1013, GO to QA7 . For DTC U0104, GO to QA12 . For DTCs P1935, U0121, U0415, U1012 or U1039, GO to QA8 . For DTC U0138, GO to QA13 . For DTCs U0140 or U0422, GO to QA9 . For DTCs U0155 or U0423, GO to QA10 . For DTC U0212, GO to QA11 . For DTC U0298, GO to QA14 . For all others, REFER to Section 3, Symptom Charts, GO to Pinpoint Test QT .
No	If only PCM indicates fail, GO to QA3 . For network test or all other modules indicates fail, REFER to the Workshop Manual Section 418-00, Module Communications Network, to diagnose the PCM does not respond to the scan tool or no high speed controller area network (CAN) communication, all modules are not responding symptom.

QA3 CHECK FOR VREF VOLTAGE AT THE ETBTSPS SENSOR

- Ignition ON, engine OFF.
- ETBTSPS connector disconnected.
- Measure the voltage between:

(+) ETBTSPS Connector, Harness Side	(-) ETBTSPS Connector, Harness Side
ETCREF	ETCRTN

Is the voltage between 4.5 - 5.5 V?

Yes	REFER to the Workshop Manual Section 418-00, Module Communications Network, to diagnose the PCM does not respond to the scan tool or no high speed controller area network (CAN) communication, all modules are not responding symptom.
No	GO to QA4 .

QA4 CHECK THE ISP-R VOLTAGE AT THE PCM

- Ignition OFF.
- PCM connector disconnected.
- Ignition ON, engine OFF.
- Measure the voltage between:

(+) PCM Connector, Harness Side	(-)
ISP-R	Ground

Is the voltage greater than 10.5 V?

Yes	GO to QA5 .
No	REPAIR the open circuit. Clear the PCM DTCs. REPEAT the self-test.

QA5 CHECK THE PCM VPWR CIRCUITS FOR VOLTAGE

- Ignition OFF.
- Disconnect the PCM.
- Connect a 5 amp fused jumper wire between the following:

Point A PCM Connector, Harness Side	Point B
PCMRC	Ground

- Ignition ON, engine OFF.
- Measure the voltage between:

(+) PCM Connector, Harness Side	(-)
VPWR	Ground

Is the voltage greater than 10.5 V?

Yes	GO to QA6 .
No	GO to Pinpoint Test B .

QA6 CHECK THE PCM GROUND CIRCUITS FOR AN OPEN

- Ignition OFF.
- Measure the resistance between:

(+) PCM Connector, Harness Side	(-)
PWRGND	Ground

Is the resistance less than 5 ohms?

Yes	GO to QA17 .
No	REPAIR the open circuit. Clear the PCM DTCs. REPEAT the self-test.

QA7 CHECK FOR A TRANSMISSION CONTROL MODULE (TCM) CONCERN

- Check for any TCM DTCs.
- Check for other TCM related symptoms.

Is a concern present?

Yes	REFER to the Workshop Manual Section 307-01, Automatic Transmission, DTC Charts to continue diagnosis.
No	For DTCs U1011 or U1013, GO to QA15 . For all others, GO to QA17 .

QA8 CHECK FOR AN ANTI-LOCK BRAKE SYSTEM (ABS) MODULE CONCERN

- Check for any ABS module DTCs.
- Check for other ABS related symptoms.

Is a concern present?

Yes	REFER to the Workshop Manual Section 206-09, Vehicle Dynamic Systems, DTC Charts to continue diagnosis.
No	For DTC P1935, The test is complete. Clear the PCM DTCs. REPEAT the self-test. For DTC U1012, GO to QA15 . For all others, GO to QA17 .

QA9 CHECK FOR A BODY CONTROL MODULE (BCM) CONCERN

- Check for any BCM DTCs.
- Check for other BCM related symptoms.

Is a concern present?

Yes	REFER to the Workshop Manual Section 419-10, Multifunction Electronic Modules, DTC Charts to continue diagnosis.
No	GO to QA17 .

QA10 CHECK FOR AN INSTRUMENT PANEL CLUSTER (IPC) CONCERN

- Check for any IPC DTCs.
- Check for other IPC related symptoms.

Is a concern present?

Yes	REFER to the Workshop Manual Section 413-01, Instrumentation, Message Center, and Warning Chimes, DTC Charts to continue diagnosis.
No	GO to QA17 .

QA11 CHECK FOR A CRUISE CONTROL CONCERN

- Check for any other PCM DTCs.
- Check for other PCM related symptoms.

Is a concern present?

Yes	Refer to the Workshop Manual Section 419-03, Cruise Control to continue diagnosis of the cruise control system.
No	GO to QA17 .

QA12 CHECK FOR A STEERING ANGLE SENSOR MODULE (SASM) CONCERN

- Check for any SASM DTCs.
- Check for other SASM related symptoms.

Is a concern present?

Yes	REFER to the Workshop Manual Section 206-09, Vehicle Dynamic Systems to continue diagnosis of the SASM system.
No	GO to QA17 .

QA13 CHECK FOR AN ALL TERRAIN CONTROL MODULE (ATCM) CONCERN

- Check for any ATCM DTCs.
- Check for other ATCM related symptoms.

Is a concern present?

Yes	REFER to the Workshop Manual Section 308-07, Four Wheel Drive 4WD Systems to continue diagnosis of the ATCM system.
No	GO to QA17 .

QA14 CHECK FOR A DC TO DC CONVERTOR CONTROL MODULE CONCERN

- Check for any DC to DC convertor control module DTCs.
- Check for other DC to DC convertor control module related symptoms.

Is a concern present?

Yes	REFER to the Workshop Manual Section 414-05, Voltage Convertor/Invertor to continue diagnosis of the DC to DC control module system.
No	GO to QA17 .

QA15 CHECK FOR A POWERTRAIN CONTROL MODULE (PCM) CONCERN

- Check for any other PCM DTCs.

Is a concern present?

Yes	DISREGARD the current diagnostic trouble code (DTC) at this time. DIAGNOSE the next DTC. GO to Section 4, Diagnostic Trouble Code (DTC) Charts and Descriptions .
No	GO to QA16 .

QA16 REFLASH THE PCM

- Clear the PCM DTCs.
- Reprogram or update the PCM calibration. Refer to Section 2, [Flash Electrically Erasable Programmable Read Only Memory \(EEPROM\)](#), Programming the VID Block for a Replacement PCM.
- Road test the vehicle.
- Carry out the PCM self-test.
- Verify the concern is still present.

Is the concern still present?

Yes	For DTC U1012, REPROGRAM or UPDATE the ABS Calibration. REFER to the Workshop Manual Section 418-01, Module Configuration. Clear the PCM DTCs. REPEAT the self-test. For all others, REPROGRAM or UPDATE the TCM Calibration. REFER to the Workshop Manual Section 418-01, Module Configuration. Clear the PCM DTCs. REPEAT the self-test.
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No	The system is operating correctly at this time.
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QA17 CHECK FOR CORRECT PCM OPERATION

- Disconnect all the PCM connectors.
- Visually inspect for:
 - pushed out pins
 - corrosion
- Connect all the PCM connectors and make sure they seat correctly.
- Carry out the network test and verify the concern is still present.
- Carry out the PCM self-test.
- Verify the concern is still present.

Is the concern still present?

Yes	INSTALL a new PCM. REFER to Section 2, Flash Electrically Erasable Programmable Read Only Memory (EEPROM) , Programming the VID Block for a Replacement PCM.
No	The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector.