Back To Article

DTC SYMPTOM INDEX

Select a symptom to see recommended actions

TPMS SYSTEM CONCERN (1.2/1.3)

Possible Source	Action
• Refer to the pinpoint test	Go to PINPOINT TEST A

RKE SYSTEM CONCERN (1.2/1.3)

Possible Source	Action
• Refer to the pinpoint test	Go to PINPOINT TEST B

NO-START CONCERN (1.2/1.3)

Possible Source	Action
• Refer to the pinpoint test	Go to PINPOINT TEST C

INTERIOR LIGHTING SYSTEM CONCERN (1.2/1.3)

Possible Source	Action
• Refer to the pinpoint test	Go to PINPOINT TEST D

EXTERIOR LIGHTING SYSTEM CONCERN (1.2/1.3)

Possible Source	Action
• Headlamp concern	Go to PINPOINT TEST E
• Fog lamp concern	Go to PINPOINT TEST E
• Stoplamp concern	Go to PINPOINT TEST E
• Turn lamp concern	Go to PINPOINT TEST E

VISUAL PARKING AID SYSTEM CONCERN (1.2/1.3)

Possible Source	Action
• Refer to the pinpoint test	Go to PINPOINT TEST F

- Vehicle communication Module (VCM) or (VCM II).

AA1: INPUT REQUIRED INFORMATION

- Input the required information in the provided fields below.

  * - Indicates Mandatory Field

  Repair Order (RO) Date* [Enter value]

  Repair Order (RO) Number* [Enter value]

  Repair Order (RO) Line Number* [Enter value]

  Dealership's P & A Code* [Enter value]

  Go to AA2.

AA2: TEST ENTRY REQUIREMENTS

NOTE: **Low vehicle battery state-of-charge can affect the BCM operation and all network communications. Battery state-of-charge can be monitored on the scan tool. A red battery icon indicates low vehicle battery state-of-charge.**

NOTE: **Certain vehicles are equipped with a Battery Management System (BMS) that shuts down select electrical features to preserve the battery charge. This may affect the operation of certain systems which may be noticed by the customer. If the Battery Management System (BMS) activates, it displays Low Battery Features Temporarily Turned Off in the message center. For additional information of the electrical energy management system, refer to CHARGING SYSTEM (BATTERY, BATTERY MOUNTING AND BATTERY CABLES) .**

- Carry out the following steps:
  - connect a battery charger and set to the appropriate charge rate based on the battery SOC.
  - apply the parking brake.
  - if equipped with an automatic transmission, place the vehicle in Park (P), or if equipped with a manual transmission, place the vehicle in Neutral (N).
  - connect the VCM I or II to the IDS desktop or laptop (do not start IDS).

  Go to AA3.

AA3: CHECK THE NETWORK COMMUNICATION OPERATION

NOTE: **If the module does not communicate on the network, "Module not responding (or optional equipment module)" displays in the Description column.**

- Ignition ON, engine OFF.
- Press the Read Vehicle Information button to view the results of the modules communicating on the network.
- Retrieve the continuous memory DTCs.
- **Does the BCM and the RTM communicate on the network?**

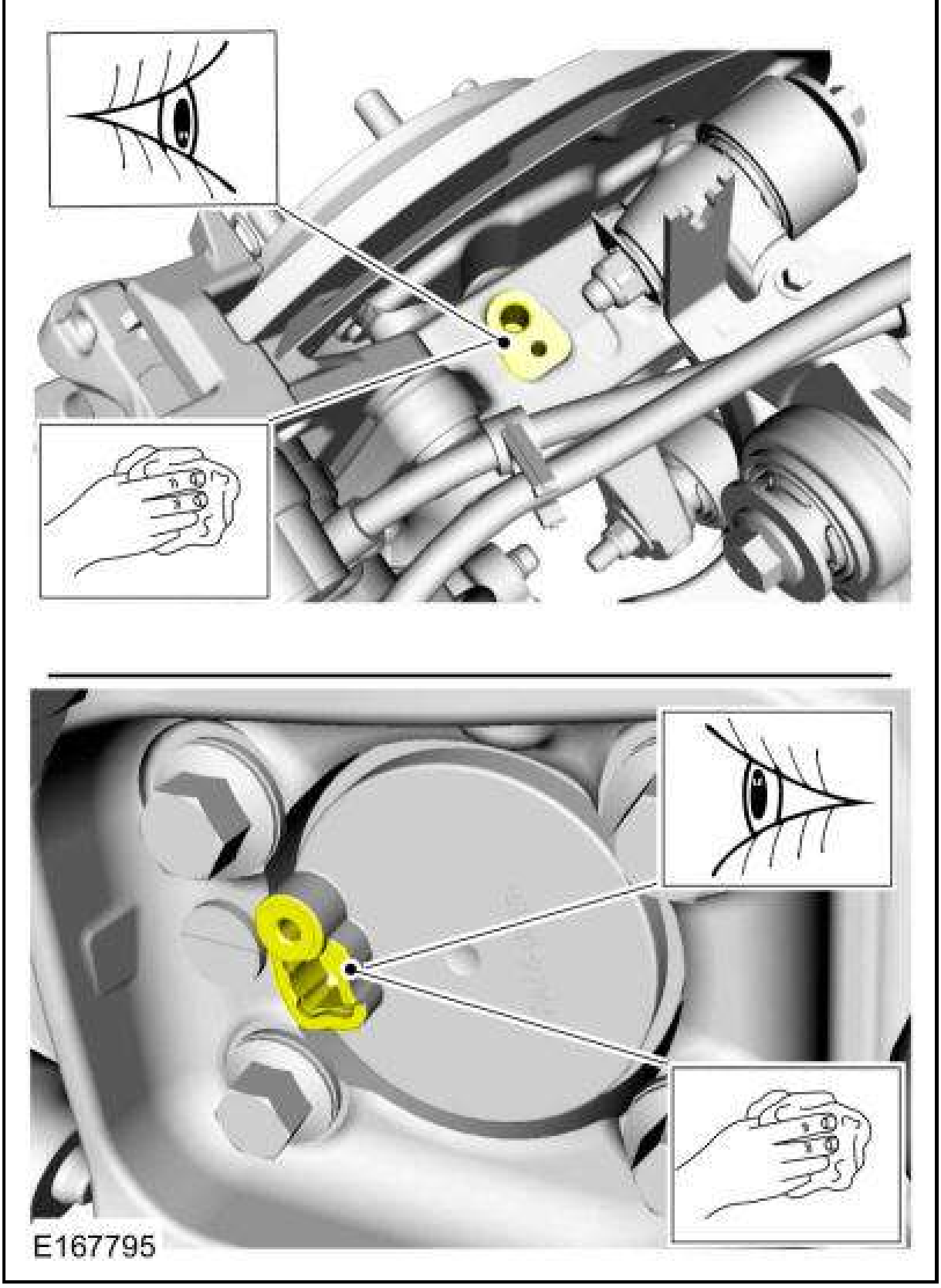
Yes	No
Go to AA5.	Go to AA4.

AA4: DIAGNOSE THE NETWORK CONCERN

DTC	Description	Action
B137F:17	Steering Wheel Left Switch Pack: Circuit Voltage Above Threshold	For non-adaptive cruise control, **GO to Pinpoint Test B** For adaptive cruise control, **GO to Pinpoint Test D**
B137F-2A	Steering Wheel Left Switch Pack: Signal Stuck In Range	For non-adaptive cruise control, **GO to Pinpoint Test B** For adaptive cruise control, **GO to Pinpoint Test D**
B137F-4A	Steering Wheel Left Switch Pack: Incorrect Component Installed	For non-adaptive cruise control, **GO to Pinpoint Test B** For adaptive cruise control, **GO to Pinpoint Test D**
All other Diagnostic Trouble Codes (DTCs)	-	REFER to: **Power Steering** .

DTC Chart: Cruise Control Module (CCM) (Adaptive Cruise Control)

DTC	Description	Action
B142E:78	Forward Looking Sensor Horizontal Alignment: Alignment or Adjustment Incorrect	**GO to Pinpoint Test H**
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**.
B1433:54	Forward Looking Sensor Alignment: Missing Calibration	**GO to Pinpoint Test H**
C0072:00	Brake Temperature Too High: No Sub Type Information	This DTC sets when the CCM receives a brake over temperature message from the brake system. This condition disables the adaptive cruise control, and displays ADAPTIVE CRUISE NOT AVAILABLE message in the IPC. ALLOW the brake system to cool for 30 minutes. CLEAR the Diagnostic Trouble Codes (DTCs) and REPEAT the self-test.
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** .
C1132:4B	Head Up Display: Over Temperature	REFER to: **Collision Warning and Collision Avoidance System** .
C1A67:96	Forward Looking Sensor: Component Internal Failure	**GO to Pinpoint Test I**
C1A67:97	Forward Looking Sensor: Component or System Operation Obstructed or Blocked	**GO to Pinpoint Test J**
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	A HS-CAN2 fault was present as a point in time. The fault is not currently present since the module is communicating with the diagnostic scan tool. CLEAR the DTC. REPEAT the network test with the diagnostic scan tool. VERIFY the integrity of the connectors and wiring. Refer to **Module Communications Network** for schematic and connector information.
U0100:00	Lost Communication With ECM/PCM "A": No Sub Type Information	**GO to Pinpoint Test K**
U0103:00	Lost Communication With Gear Shift Control Module A: No Sub Type Information	**GO to Pinpoint Test L**



2. **NOTE:** **Use the white stripe on rear wheel speed sensor harness for orientation purposes, making sure the harness is not twisted during installation. Make sure the clips and plastic ties on the EPB wiring harness are correctly aligned with the tape on the wheel speed sensor harness.**

To install, reverse the removal procedure.

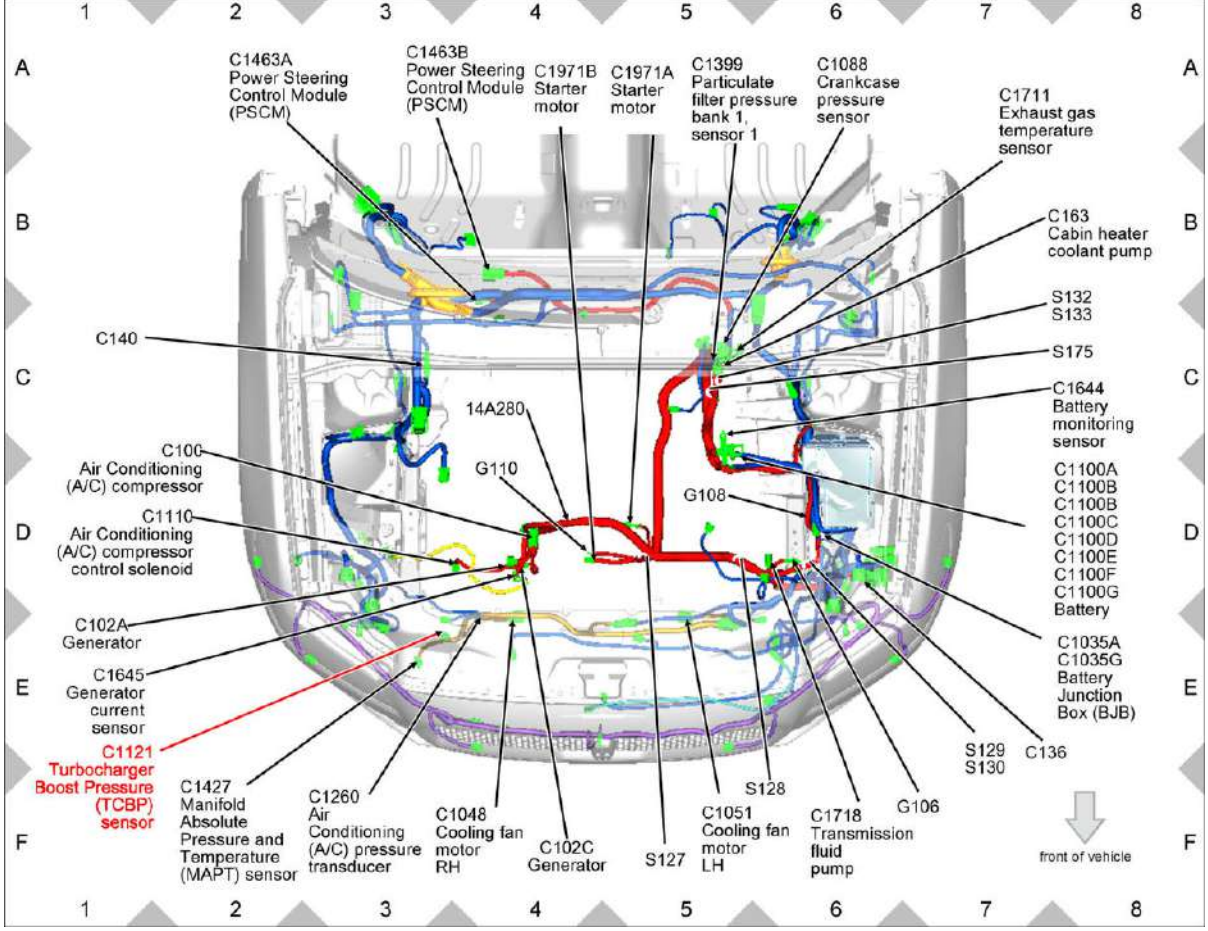


Fig. 666: Turbocharger Boost Pressure (TCBP) sensor (2.0L) Components Location
Courtesy of FORD MOTOR COMPANY

TURBOCHARGER BOOST PRESSURE (TCBP) SENSOR (2.7L)

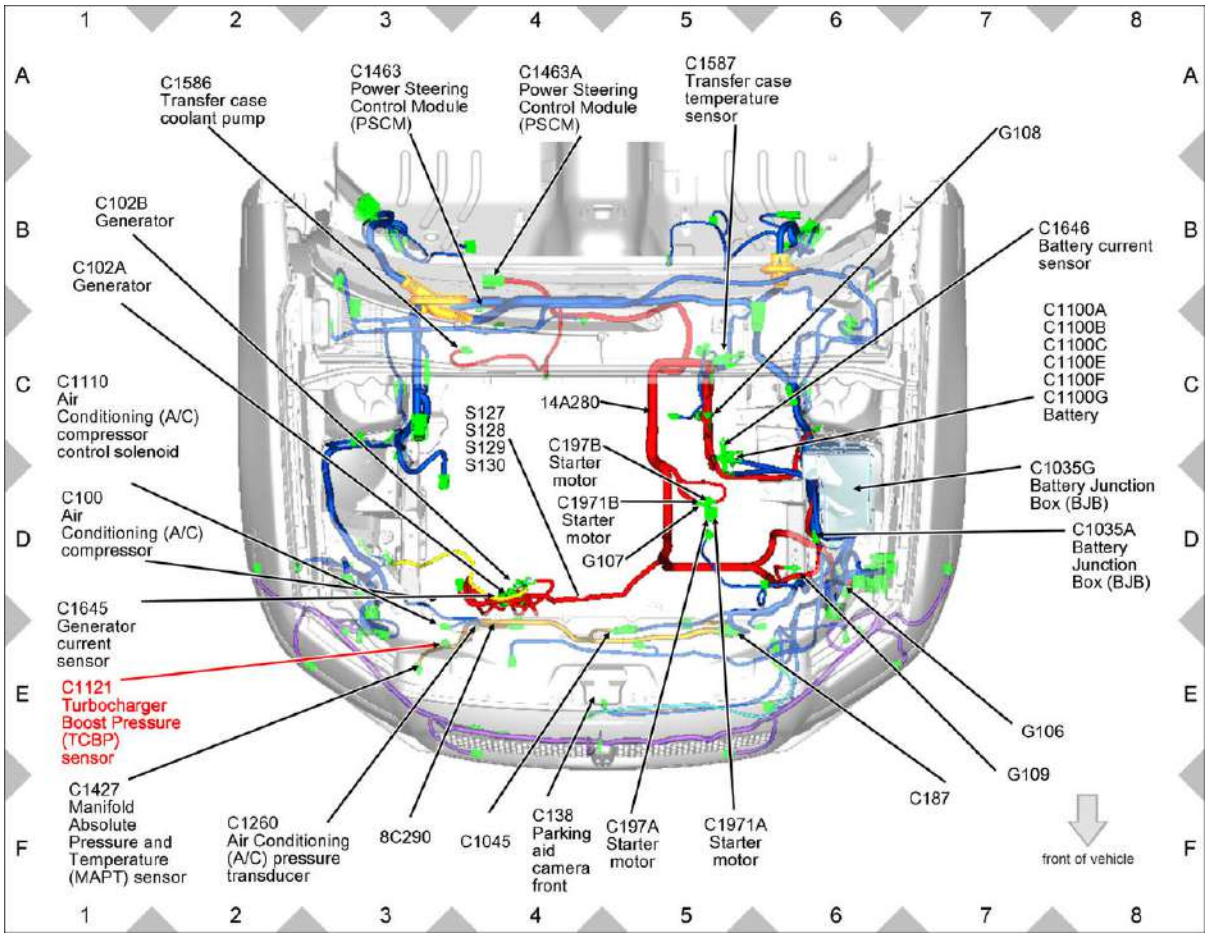


Fig. 667: Turbocharger Boost Pressure (TCBP) sensor (2.7L) Components Location
Courtesy of FORD MOTOR COMPANY

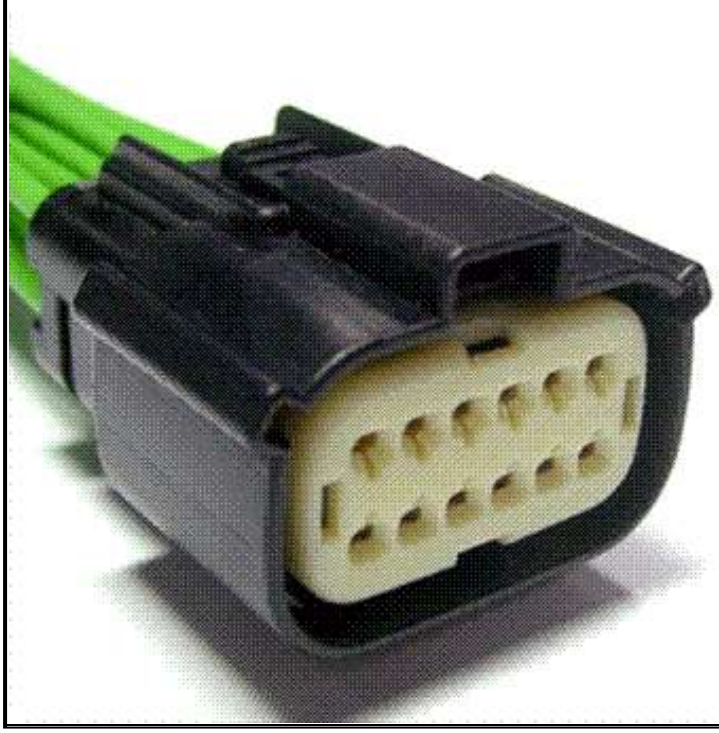
TURBOCHARGER BOOST PRESSURE (TCBP) SENSOR (3.0L)

9	*	*	Not Used
10	VET78 (WH-VT)	20	ACTUATOR - GEAR SHIFT # PWM OUT 3 (PWM3)
11	*	*	Not Used
12	SBB87 (WH-RD)	18	FUSE - 87 OR CIRCUIT BREAKER

Available Pigtail Kits

Pigtail Kit Part Number

WPT-1125



Service Part Number:

AU2Z-14S411-AMA

Gauge:

16

Pin material:

Silver

Cavities:

12

Vehicle Uses

Connector - Inline

Mirror - Sideview

CONNECTOR END VIEW C1694 - MANIFOLD ABSOLUTE PRESSURE AND TEMPERATURE (MAPT) SENSOR

Connector: C1694

Description

MANIFOLD ABSOLUTE PRESSURE AND TEMPERATURE (MAPT) SENSOR

Color

Harness

12C508

Base Part #

part# N/A

Service Pigtail

Not Available

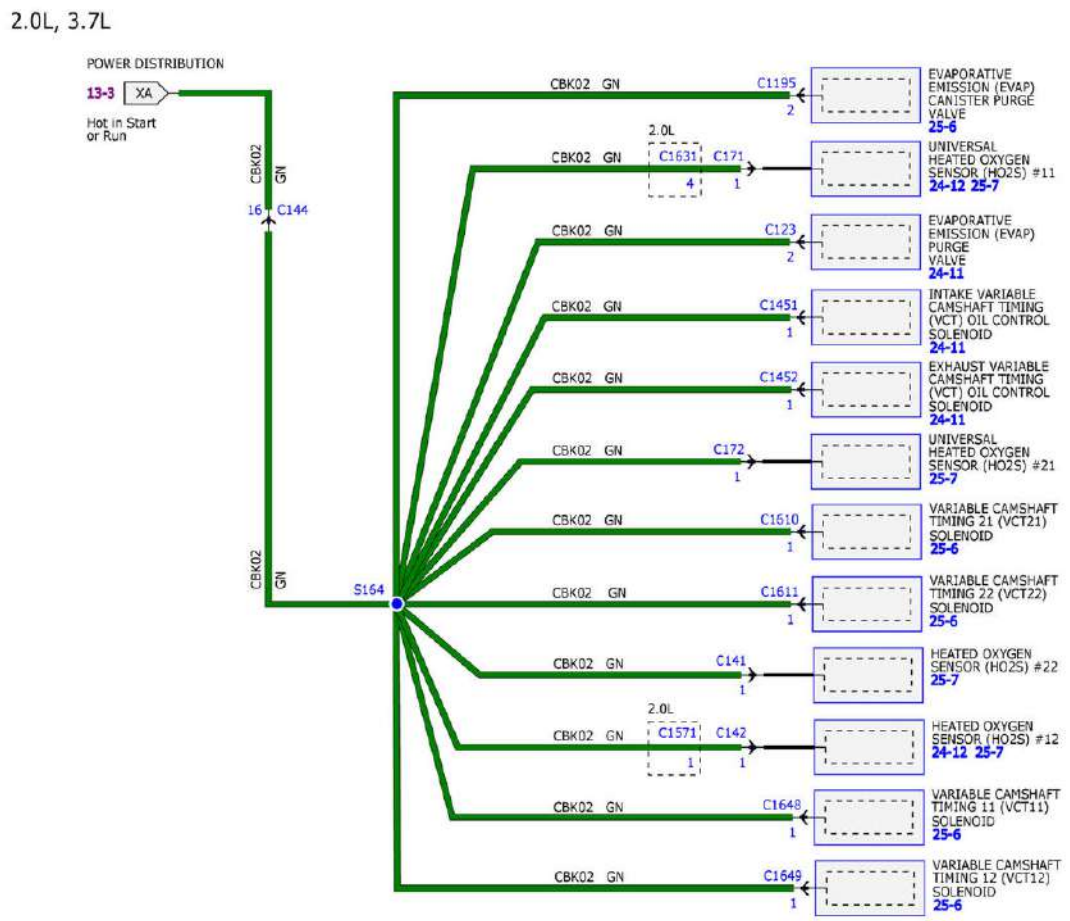


Fig. 280: Power Distribution/BCM Wiring Diagram (24 Of 56)
Courtesy of FORD MOTOR COMPANY

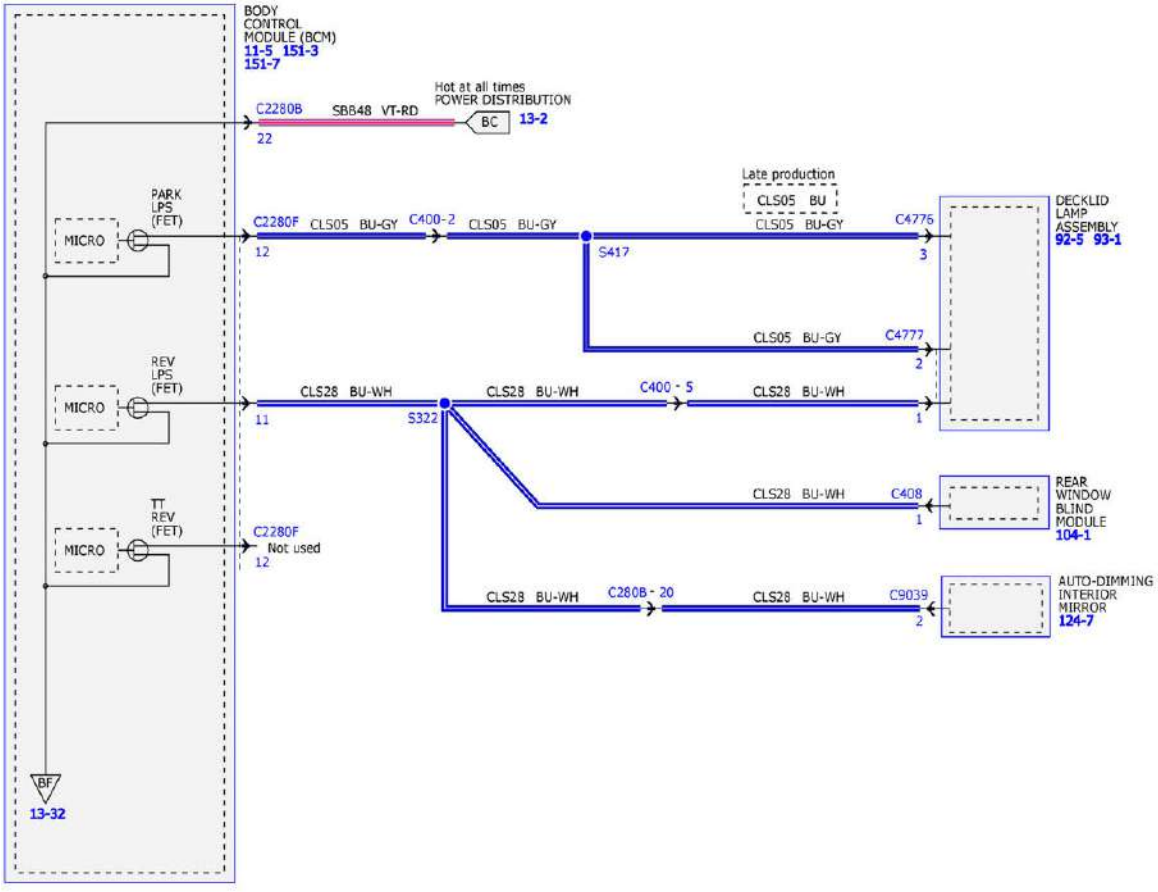
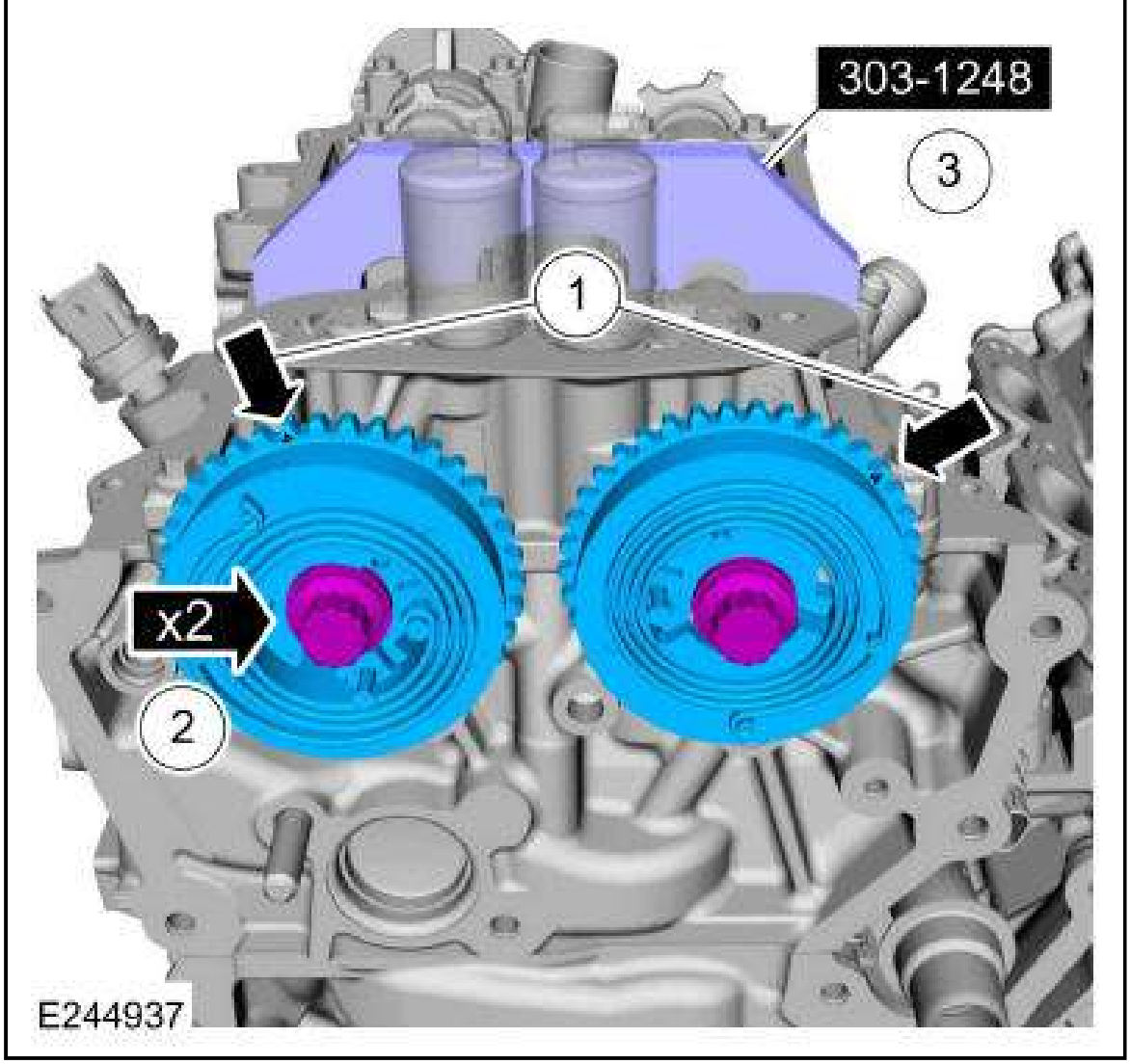


Fig. 281: Power Distribution/BCM Wiring Diagram (25 Of 56)
Courtesy of FORD MOTOR COMPANY



4. Install the RH timing chain. Refer to: **Timing Chain**.

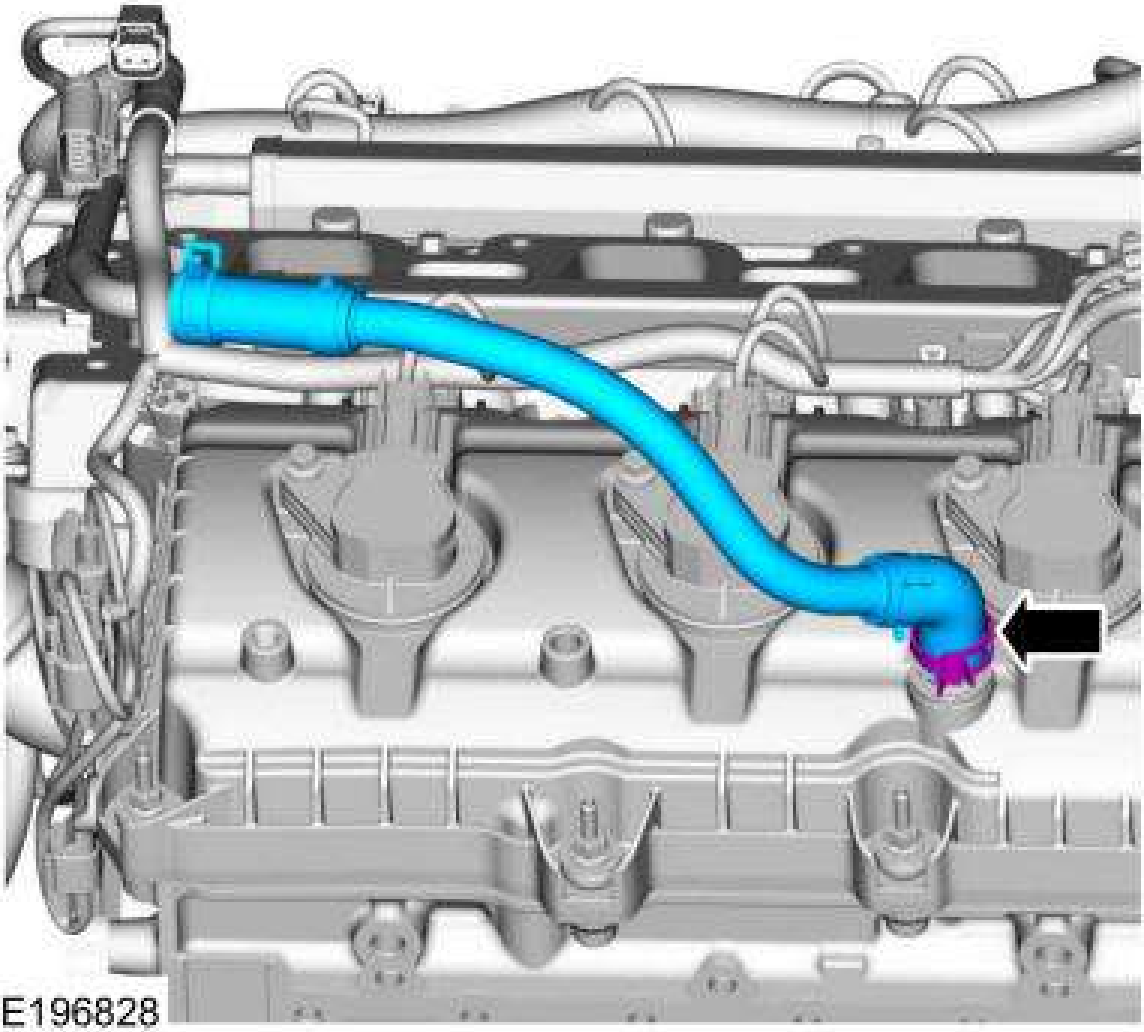
REMOVAL

ENGINE

For information on Ford Color Coded Illustrations refer to **OEM COLOR CODING** .

Special Tool(s) / General Equipment

	**303-1246 Engine Spreader Bar, TKIT-2006UF-FLM, TKIT-2006UF-ROW**
 E188625	303-1634 Lift Eyes (2), TKIT-2014D-ROW3, TKIT-2014D-FL_ROW
 307-346	307-346 (T97T-7902-A) Retainer, Torque Converter, TKIT-1998-LM (NavigatoR), TKIT-1997-F/FLM/LT



27.

- Disconnect the RH CMP and KS sensor electrical connectors.
- Disconnect the wire harness retainer.

Item	Description
1	FPDM (fuel pump driver module) **Comments:** The FPDM (fuel pump driver module) is located in front of the left rear wheel well and above the air deflector.

FUEL CHARGING AND CONTROLS - SYSTEM OPERATION AND COMPONENT DESCRIPTION

System Operation

For System Operation, Refer to **ENGINE CONTROLS - DESCRIPTION & OPERATION (EXCEPT DIESEL & HYBRID)** .

Component Description

For Component Description, **ENGINE CONTROLS - DESCRIPTION & OPERATION (EXCEPT DIESEL & HYBRID)** .

DIAGNOSIS AND TESTING

FUEL CHARGING AND CONTROLS

Diagnostics in this article assume a certain skill level and knowledge of Ford-specific diagnostic practices. For information about these, REFER to: **Diagnostic Methods** .

For a PCM DTC, REFER to: **Electronic Engine Controls - 2.7L EcoBoost** .

For driveability symptoms without a DTC, Refer to **ENGINE CONTROLS - SYMPTOM CHARTS (EXCEPT DIESEL & HYBRID)** .

REMOVAL AND INSTALLATION

FUEL INJECTORS

For information on Ford Color Coded Illustrations refer to **OEM COLOR CODING** .

Removal And Installation

1. The fuel injectors are serviced with the fuel rail. Refer to: **Fuel Rail**.

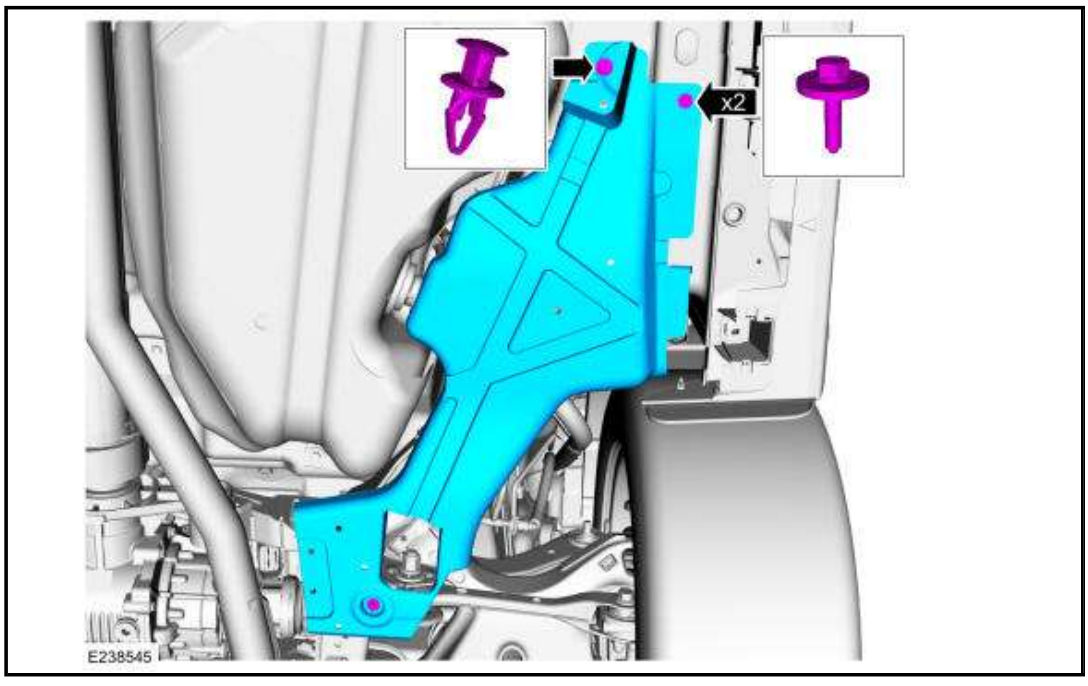
FUEL PUMP DRIVER MODULE (FPDM)

For information on Ford Color Coded Illustrations refer to **OEM COLOR CODING** .

Removal

NOTE: **The FPDM (fuel pump driver module) is located in front of the left rear wheel well and above the air deflector.**

1. With the vehicle in NEUTRAL, position it on a hoist. Refer to: **Jacking and Lifting - Overview** .
2. Remove the right rear air deflector retainers, remove the pushpin and then remove the right rear air deflector.



(+) FC3 Relay Connector, Harness Side	(-)
VPWR	Ground
B+	Ground

- For Escape/Kuga 2.0L, Focus 2.3L, and MKC with 5 fan relays,
- FC3 Relay connector disconnected.
- FC5 Relay connector disconnected.
- Measure the voltage between:

(+) FC3 Relay Connector, Harness Side	(-)
VPWR	Ground

- Measure the voltage between:

(+) FC5 Relay Connector, Harness Side	(-)
VPWR	Ground
B+	Ground

- For all others,
- FC2 Relay connector disconnected.
- Measure the voltage between:

(+) FC2 Relay Connector, Harness Side	(-)
VPWR	Ground

- Measure the voltage between:

(+) FC3 Relay Connector, Harness Side	(-)
VPWR	Ground
B+	Ground

Are the voltages greater than 10.5 V?

Yes	No
GO to KF9.	REPAIR the open circuit. Clear the PCM DTCs. REPEAT the self-test.

KF9 CHECK FC2 AND FC3 RELAYS

- Carry out the Relay Component Test. Refer to appropriate Wiring Diagrams, Component Testing article.

Is a concern present?

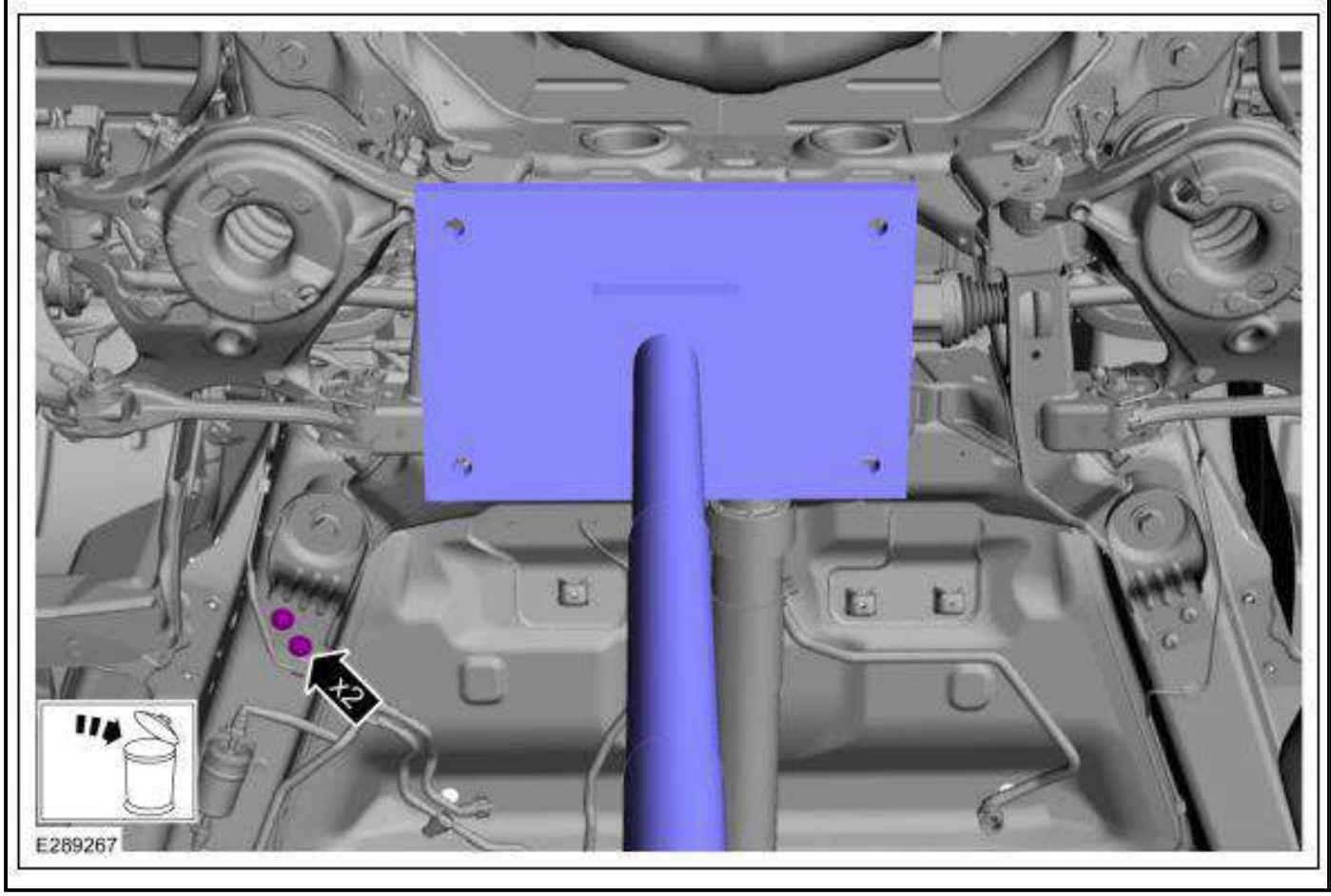
Yes	No
INSTALL a new relay in question. Clear the PCM DTCs. REPEAT the self-test.	For symptoms without DTCs, GO to KF18. For all others, GO to KF10.

KF10 CHECK THE HFC CIRCUIT FOR AN OPEN

- Ignition OFF.
- PCM connector disconnected.
- For Fiesta 1.0L,
- Measure the resistance between:

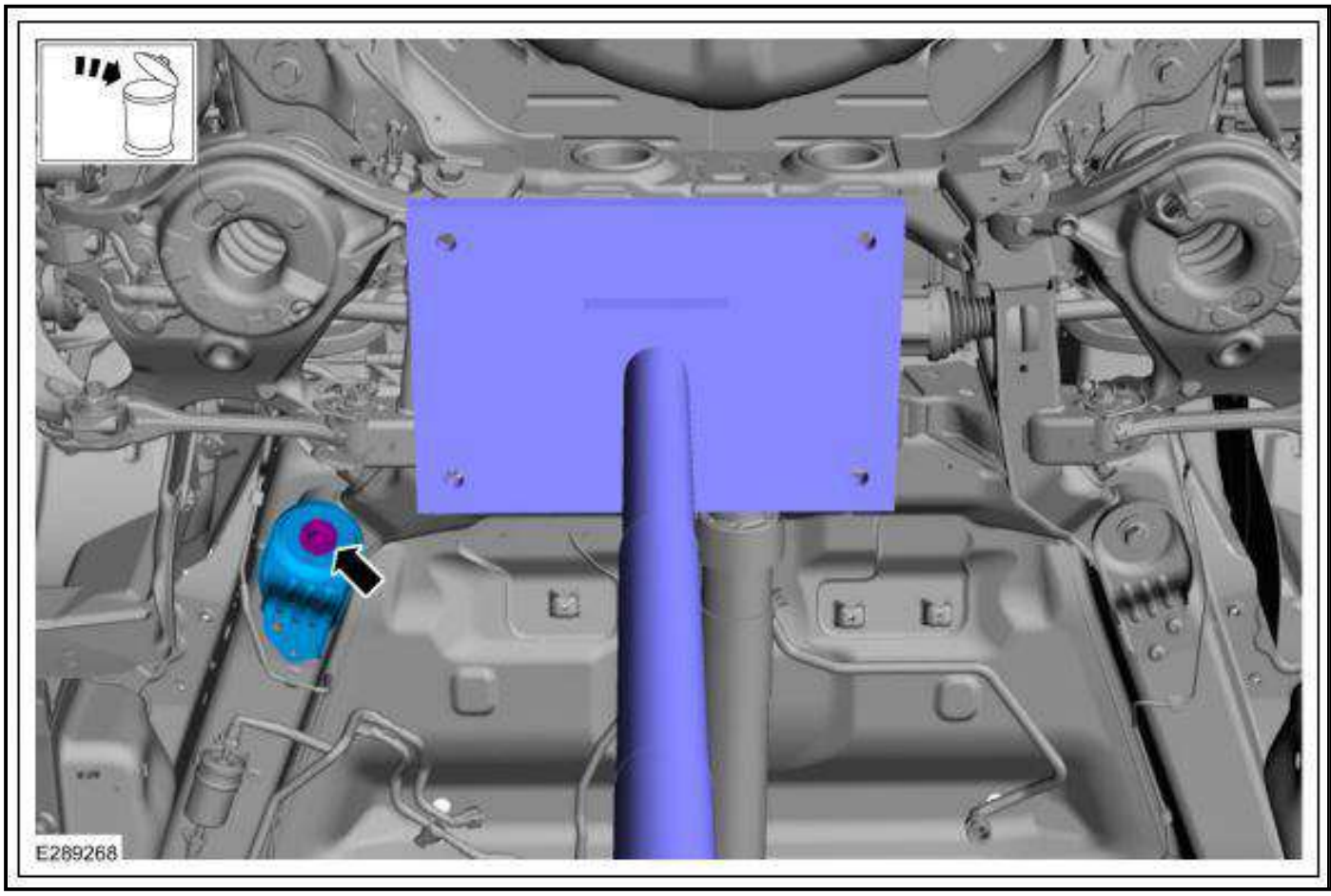
(+) FC3 Relay Connector, Harness Side	(-) PCM Connector, Harness Side
HFC	HFC

- For Escape/Kuga 2.0L with 5 fan relays,



3. Remove and discard the rear subframe forward bolt. Remove the rear subframe bracket. Install the General Equipment: Transmission Jack.

   Torque: 129 lb.ft (175 Nm)



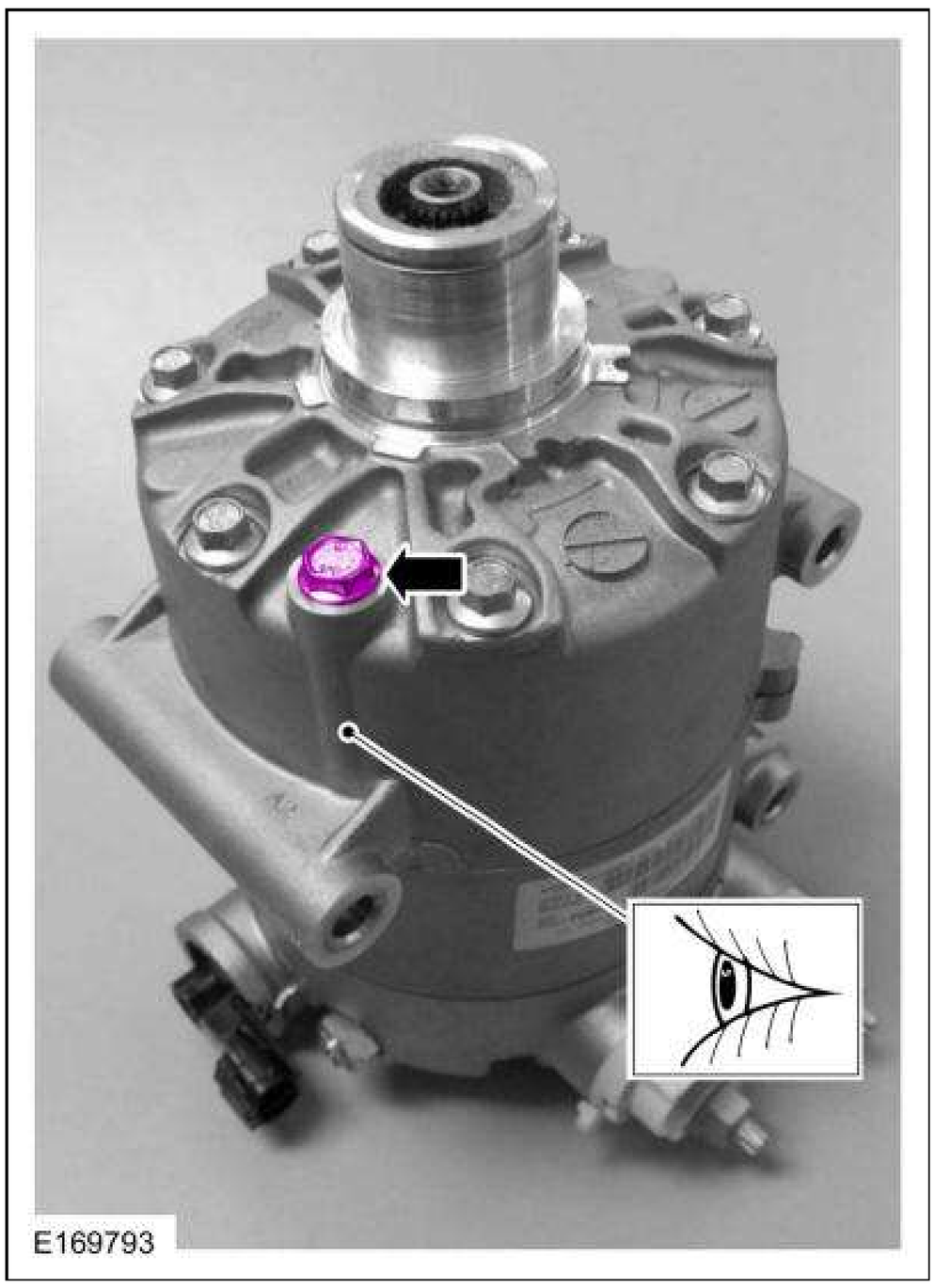
4. Remove and discard the rear subframe rearward bolt and lower the subframe on the drivers side only. Install the General Equipment: Transmission Jack.

   Torque: 129 lb.ft (175 Nm)

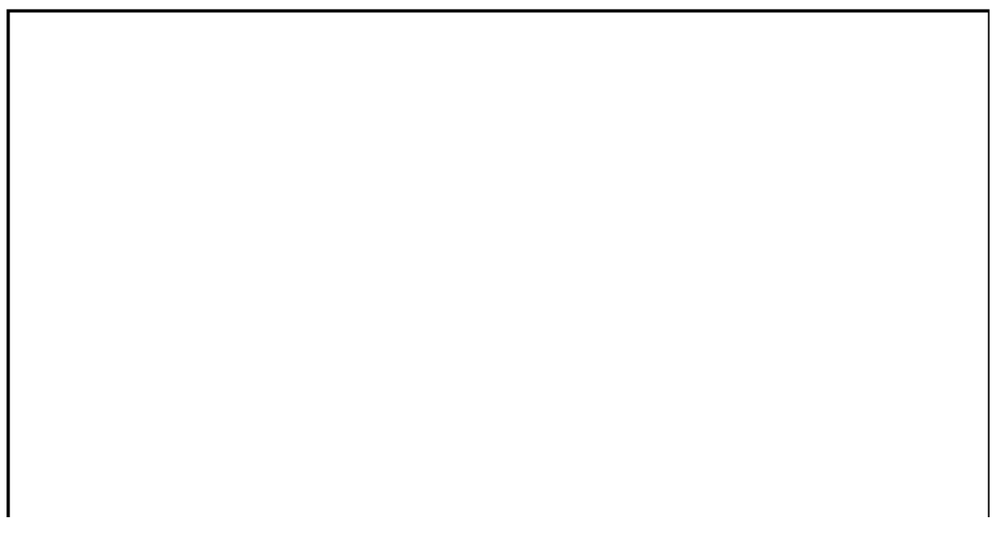
12. Install the suction and discharge port seal cap on the new A/C compressor.

Type 2

13. Remove the A/C clutch and A/C clutch field coil from the old A/C compressor. Refer to **Air Conditioning (A/C) Clutch and Air Conditioning (A/C) Clutch Field Coil**.
14. Remove the oil drain bolt from the old A/C compressor.



15. Press the suction damper to allow proper ventilation while draining the oil from the old A/C compressor.

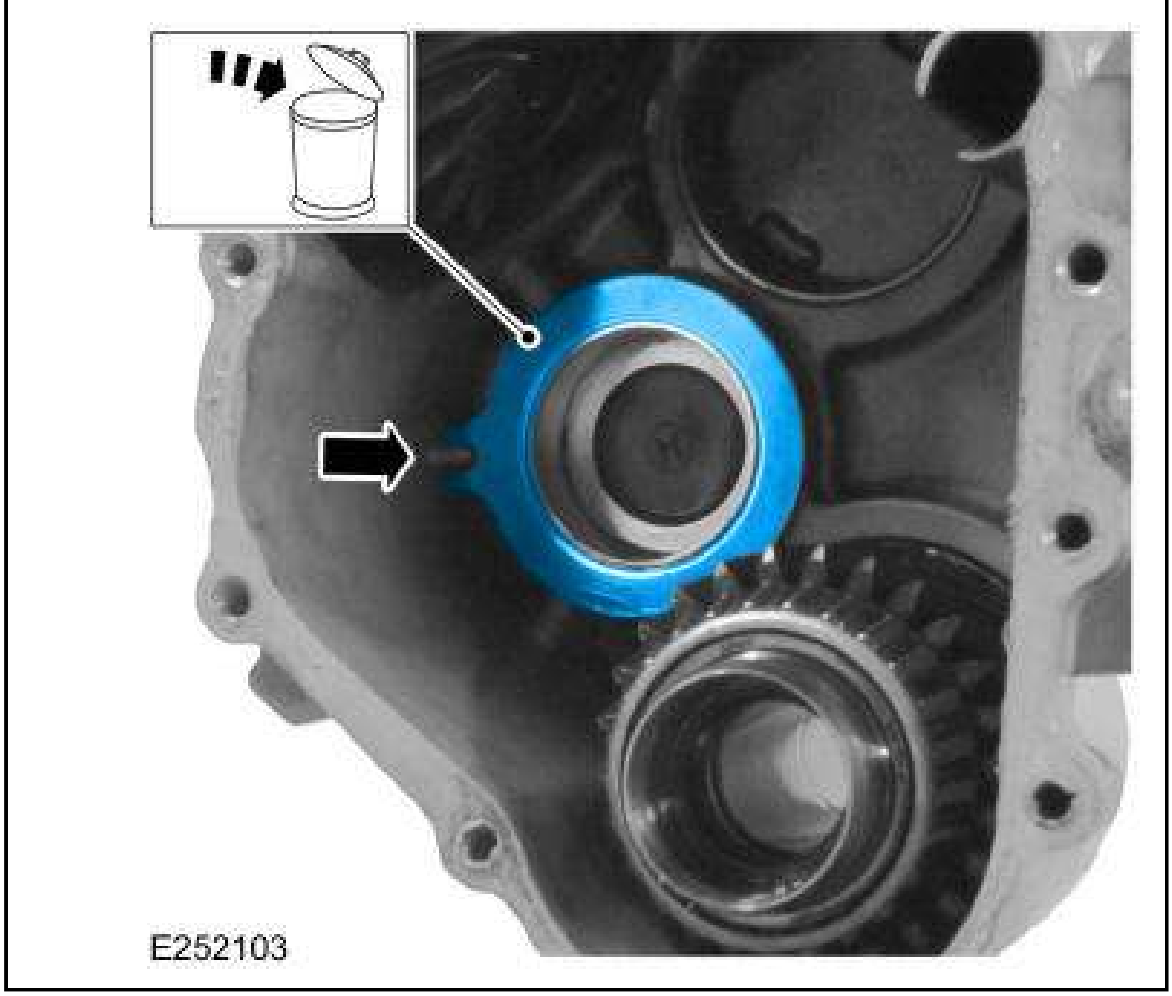


Symptom	Possible Sources	Action
TCC APPLY hydraulic circuit blocked or leaking		DISASSEMBLE and INSPECT the transmission, main control passages for debris/blockage. REFER to: **Main Control Valve Body**. CLEAN as necessary. REFER to: **Transmission Description - System Operation and Component Description**.
TCC friction material worn or damaged		INSTALL a new torque converter. REFER to: **Transmission - 2.7L EcoBoost (238kW/324PS)**. REFER to: **Transmission - 3.0L EcoBoost**. REFER to: **Transmission - 3.7L Duratec (227kW/301PS)**.
TCC always applied/stalls vehicle	TCC solenoid mechanically stuck ON	INSTALL a new solenoid body. REFER to: **Solenoid Body**.
TCC regulator apply valve stuck ON		DISASSEMBLE, CLEAN and INSPECT the TCC regulator apply valve. If bore or valve is damaged, INSTALL a new main control. REFER to: **Main Control Valve Body**.
TCC control valve stuck ON		DISASSEMBLE and INSPECT the TCC control valve for debris/ blockage. CLEAN as necessary. REFER to: **Main Control Valve Body**.
TCC RELEASE hydraulic circuit blocked or leaking		DISASSEMBLE and INSPECT the transmission, main control passages for debris/blockage. REFER to: **Main Control Valve Body**. CLEAN as necessary. REFER to: **Transmission Description - System Operation and Component Description**.
TCC welded or damaged		INSTALL a new torque converter. REFER to: **Transmission - 2.7L EcoBoost (238kW/324PS)**. REFER to: **Transmission - 3.0L EcoBoost**. REFER to: **Transmission - 3.7L Duratec (227kW/301PS)**.
TCC cycles, shudders or chatters	Incorrect Transmission Strategy programmed into the PCM	PERFORM transmission strategy download. REFER to: **Transmission Strategy Download**.
TCC solenoid filter or seal damaged		INSTALL a new solenoid body or filter. REFER to: **Solenoid Body**.
TCC solenoid mechanically sticking		INSTALL a new solenoid body. REFER to: **Solenoid Body**.
TCC regulator apply valve, springs, clips loose, stuck, binding, missing, misassembled		DISASSEMBLE, CLEAN and INSPECT the TCC regulator apply valve. If bore or valve is damaged, INSTALL a new main control. REFER to: **Main Control Valve Body**.
TCC control valve, springs, clips loose, stuck, binding, missing, misassembled		DISASSEMBLE and INSPECT the main control for debris/blockage. CLEAN as necessary. REFER to: **Main Control Valve Body**.
TCC RELEASE/TCC APPLY hydraulic circuit blocked or leaking		DISASSEMBLE and INSPECT the transmission, main control for debris/blockage. REFER to: **Main Control Valve Body**. CLEAN as necessary. REFER to: **Transmission Description - System Operation and Component Description**.

GENERAL PROCEDURES

ADAPTIVE LEARNING DRIVE CYCLE

For information on Ford Color Coded Illustrations refer to **OEM COLOR CODING** .



30. Remove the input gear assembly.