Year = 2007
Model = F-150
Engine = 4.6L
VIN =
IDS Version = Not Available

Fuel Pump Driver Module

WARNING:

Crown Victoria Police Interceptor vehicles equipped with fire suppression system, refer to Secti 03 for Important Safety Warnings. Failure to follow these instructions may result in personal inju

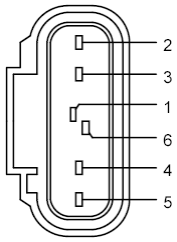
This pinpoint test is intended to diagnose the following:

- fuel pump driver module (FPDM) (9D370) and (9D372)
- FPDM power supply relay
- inertia fuel shutoff (IFS) switch (9341)
- harness

circuits: B+ , GND , FPC , FPM , FPM2 , FP PWR , FP2PWR , FP RTN, FP2RTN , VPWR Fuel, VPWF 2, and PWRGND

- powertrain control module (PCM) (12A650)

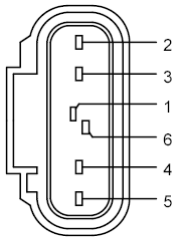
Fuel Pump Driver Module (FPDM) Connector



Harness Side

Circuit	Pin
VPWR Fuel	5
FPM (Fuel Pump Monitor)	1
FPC (Fuel Pump Command)	6
FPPWR (Fuel Pump Power)	4
FPRTN (Fuel Pump Return)	2
PWRGND (Power Ground)	3

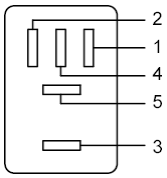
Fuel Pump Driver Module 2 (FPDM2) Connector

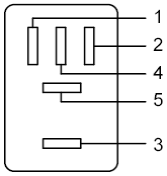


Harness Side

Circuit	Pin
VPWR Fuel 2	5
FPM2 (Fuel Pump Monitor 2 - Rear\Secondary Pump)	1
FPC (Fuel Pump Command)	6
FP2PWR (Fuel Pump 2 Power)	4
FP2RTN (Fuel Pump 2 Return)	2
PWRGND (Power Ground)	3

integral to the PDJB.



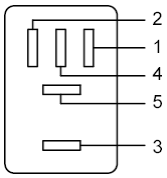


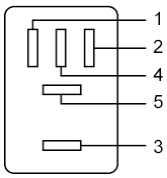
Harness Side

Component side

Circuit	Pin
B+ (Battery Positive Voltage)	3
VPWR (Vehicle Power)	1
GND (Ground)	2
VPWR Fuel	5

Fuel Pump Driver Module 2 Power (FPDM2 PWR) Re Connector - Refer to the Wiring Diagrams Manual fo schematic and connector information.



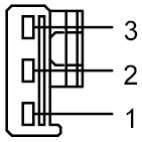


Harness Side

Component side

Circuit	Pin
B+ (Battery Positive Voltage)	3
VPWR (Vehicle Power)	1
GND (Ground)	2
VPWR Fuel 2	5

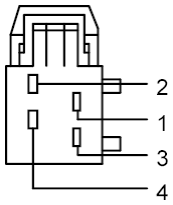
Inertia Fuel Shutoff (IFS) Switch Connector



Harness Side

Circuit	Pin
VPWR Fuel - A	2
VPWR Fuel - B	1

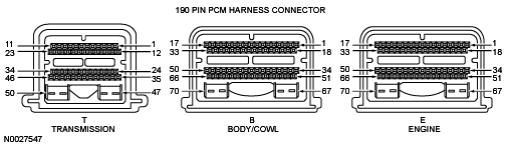
Power Distribution Junction Box (PDJB) Connector
This applies to applications with an FPDM PWR rela
integral to the PDJB.



Harness Side

Circuit	Pin
VPWR Fuel	3

Powertrain Control Module (PCM) Connector -
For PCM connector views or reference values, refer
Section 6.



Harness Side

Circuit	Pin
FPM (Fuel Pump Monitor)	B30
FPC (Fuel Pump Command)	B62

KB1 : CHECK FOR DIAGNOSTIC TROUBLE CODES (DTCS)

- **Are DTCs P1233, P1234, P1235, P1236, P1237, P1238, or P1641 present?**

Yes	No
For DTC P1233, Go to KB2. For DTC P1234, Go to KB39. For DTCs P1235 or P1641, Go to KB20. For DTC P1236, Go to KB51. For DTC P1237, Go to KB27. For DTC P1238, Go to KB57.	For all others, GO to Section 4, Diagnostic Trouble C (DTC) Charts and Descriptions.

KB2 : DTC P1233: IS DTC P1233 PRESENT IN THE KOEO SELF-TEST?

NOTE: The Mustang 5.4L is equipped with 2 FPDM s. The DTC P1233 applies to the FPDM mounted on the drive
the luggage compartment

- Carry out the KOEO self-test.
- **Is DTC P1233 present?**

Yes	No
Go to KB3.	The PCM is now receiving a signal from the FPDM possible cause of DTC P1233 is that the IFS switc tripped, then reset. For a no start (engine cranks), DISREGARD the DT this time. RETURN to Section 3 Symptom Charts ar continue as directed. After repairing the no start, to diagnose the intermittent causes of P1233, Go to KB19. For all others, Go to KB19.

KB3 : DOES THE ENGINE START?

NOTE: The Mustang 5.4L starts with 1 FPDM disabled

- **Does the engine start?**

Yes	No
to check the FPM circuit, Go to KB15.	VERIFY the IFS switch is set (button pressed). If Go to KB4.

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

(+) FPDM Connector, Harness Side	(-) FPDM Connector, Harness Side
VPWR Fuel - Pin 5	PWRGND - Pin 3

- **Is the voltage greater than 10 V?**

Yes	No
Go to KB15.	Go to KB5.

KB5 : CHECK THE VOLTAGE TO THE FPDM

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

(+) FPDM Connector, Harness Side	(-)
VPWR Fuel - Pin 5	Ground

- **Is the voltage greater than 10 V?**

Yes	No
REPAIR the open circuit.The FPDM ground circuit is open. CLEAR the DTCs. REPEAT the self-test.	Go to KB11. There is no voltage to the FPDM.

KB6 : CHECK THE B+ VOLTAGE TO THE FPDM POWER SUPPLY RELAY

- Ignition OFF.
- FPDM PWR Relay connector disconnected.
- Measure the voltage between:

(+) FPDM PWR Relay Connector, Harness Side	(-)
B+ - Pin 3	Ground

- **Is the voltage greater than 10 V?**

Yes	No
Go to KB7.	A B+ circuit concern is present. CHECK the conditio related fuse/fuse links. If OK, REPAIR the open circ the fuse/fuse link is damaged, CHECK the circuit for to ground before installing a new fuse/fuse link. CLEAR the DTCs. REPEAT the self-test.

- Measure the voltage between:

(+) FPDM PWR Relay Connector, Harness Side	(-)
VPWR - Pin 1	Ground

- **Is the voltage greater than 10 V?**

Yes	No
Go to KB8.	REPAIR the open circuit. CLEAR the DTCs. REPEAT the self-test.

KB8 : CHECK FOR GROUND TO THE FPDM POWER SUPPLY RELAY

- Measure the resistance between:

(+) FPDM PWR Relay Connector, Harness Side	(-)
GND - Pin 2	Ground

- **Is the resistance less than 5 Ohm?**

Yes	No
Go to KB9.	REPAIR the open circuit. CLEAR the DTCs. REPEAT the self-test.

KB9 : CHECK THE VPWR FUEL CIRCUIT FOR AN OPEN CIRCUIT IN THE HARNESS

- Measure the resistance between:

(+) FPDM Connector, Harness Side	(-) FPDM PWR Relay Connector, Harness Side
VPWR Fuel - Pin 5	VPWR Fuel - Pin 5

- **Is the resistance less than 5 Ohm?**

Yes	No
INSTALL a new FPDM relay. CLEAR the DTCs. REPEAT the self-test.	Go to KB10.

FPDM PWR Relay Connector, Harness Side	IFS Switch Connector, Harness Side
VPWR Fuel - Pin 5	VPWR Fuel - A - Pin 2

- **Is the resistance less than 5 Ohm?**

Yes	No
INSTALL a new IFS switch. REFER to the Workshop Manual Section 310-01, Fuel Tank and Lines. VERIFY the IFS switch is set (button pressed). CLEAR the DTCs. REPEAT the self-test.	REPAIR the open circuit. CLEAR the DTCs. REPEAT the self-test.

KB11 : CHECK THE FUEL PUMP FUSE

NOTE: These steps are for applications with a FPDM PWR relay integral to the PDJB.

- Ignition OFF.
- Check the FPDM power supply relay fuse. Refer to the Wiring Diagrams Manual for schematic and connector information.
- **Is the fuse OK?**

Yes	No
Go to KB12.	INSTALL a new fuse. CHECK the associated circu short to ground before installing the fuse. CLEAR the DTCs. REPEAT the self-test.

KB12 : CHECK FOR VOLTAGE TO THE IFS SWITCH

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

(+) IFS Switch Connector, Harness Side	(-)
VPWR Fuel - A - Pin 2	Ground

- **Is the voltage greater than 10 V?**

Yes	No
Go to KB14.	Go to KB13.

- **Is the resistance less than 5 Ohm?**

Yes	No
CHECK the fuel pump fuse. REPAIR as necessary. If OK, INSTALL a new FP RLY / PDJB. CLEAR the DTCs. REPEAT the self-test.	REPAIR the open circuit. CLEAR the DTCs. REPEAT the self-test.

KB14 : CHECK THE IFS FOR AN OPEN

- Ignition OFF.
- Measure the resistance between:

(+) IFS Switch Connector, Component Side	(-) IFS Switch Connector, Component Side
VPWR Fuel - A - Pin 2	VPWR Fuel - B - Pin 1

- **Is the resistance less than 5 Ohm?**

Yes	No
REPAIR the open circuit.The VPWR fuel circuit is open. CLEAR the DTCs. REPEAT the self-test.	INSTALL a new IFS switch. REFER to the Workshop Manual Section 310-01, Fu and Lines. CLEAR the DTCs. REPEAT the self-test.

KB15 : CHECK THE FPM CIRCUIT FOR AN OPEN CIRCUIT IN THE HARNESS

- FPDM connector disconnected.
- PCM connector disconnected.
- Measure the resistance between:

(+) FPDM Connector, Harness Side	(-) PCM Connector, Harness Side
FPM - Pin 1	FPM - Pin B30

- **Is the resistance less than 5 Ohm?**

Yes	No
Go to KB16.	REPAIR the open circuit. CLEAR the DTCs. REPEAT the self-test.

Yes	No
Go to KB17.	REPAIR the short circuit. CLEAR the DTCs. REPEAT the self-test.

KB17 : CHECK THE FPM CIRCUIT FOR A SHORT TO GROUND IN THE HARNESS

- Ignition OFF.
- Measure the resistance between:

(+) FPDM Connector, Harness Side	(-)
FPM - Pin 1	Ground

- **Is the resistance greater than 10 kOhm?**

Yes	No
Go to KB18.	REPAIR the short circuit. CLEAR the DTCs. REPEAT the self-test.

KB18 : CHECK FOR FPM OUTPUT FROM THE FPDM

NOTE: It is OK for the voltage to cycle below this range and then return within range.

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

(+) PCM Connector, Harness Side	(-)
FPM - Pin B30	Ground

- **Is the voltage between 0.02 V - 1 V?**

Yes	No
Go to KB65.	INSTALL a new FPDM. REFER to the Workshop Manual Section 303-04, Fu Charging and Controls. CLEAR the DTCs. REPEAT the self-test.

—Shake, wiggle, and bend the FPM circuit between the FPDM and the PCM
—Shake, wiggle, and bend the B+ and ground circuits to the FPDM power supply relay
—Lightly tap on the IFS switch to simulate road shock
—Lightly tap on the FPDM to simulate road shock
—Lightly tap on the FPDM power supply relay to simulate road shock

- **Is a concern present?**

Yes	No
ISOLATE the concern and REPAIR as necessary. CLEAR the DTCs. REPEAT the self-test.	Unable to duplicate or identify the concern at this GO to Pinpoint Test Z.

KB20 : DTC P1235: IS DTC P1235 PRESENT IN THE KOEO SELF-TEST?

NOTE: The Mustang 5.4L is equipped with 2 FPDM s. The DTC P1235 applies to the FPDM mounted on the drive the luggage compartment

NOTE: For ETC applications, check if ETC DTC P2105 is present. An ETC system concern could cause P1235, should be diagnosed first.

- Carry out the KOEO self-test.
- **Is DTC P1235 present?**

Yes	No
Go to KB21.	Go to KB26.

KB21 : CHECK THE FPC CIRCUIT FOR AN OPEN IN THE HARNESS

- FPDM connector disconnected.
- PCM connector disconnected.
- Measure the resistance between:

(+) PCM Connector, Harness Side	(-) FPDM Connector, Harness Side
FPC - Pin B62	FPC - Pin 6

- **Is the resistance less than 5 Ohm?**

Yes	No
Go to KB22.	REPAIR the open circuit. CLEAR the DTCs. REPEAT the self-test.

- **Is the voltage less than 1 V?**

Yes	No
Go to KB23.	REPAIR the short circuit. CLEAR the DTCs. REPEAT the self-test.

KB23 : CHECK THE FPC CIRCUIT FOR A SHORT TO GROUND

- Ignition OFF.
- Measure the resistance between:

(+) FPDM Connector, Harness Side	(-)
FPC - Pin 6	Ground

- **Is the resistance greater than 10 kOhm?**

Yes	No
Go to KB25.	REPAIR the short circuit. CLEAR the DTCs. REPEAT the self-test.

KB24 : CHECK THE FPC CIRCUIT IN THE FPDM

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

(+) PCM Connector, Harness Side	(-)
FPC - Pin B62	Ground

- **Is the voltage between 4.5 V - 5.5 V?**

Yes	No
Go to KB65.	INSTALL a new FPDM. REFER to the Workshop Manual Section 303-04 Charging and Controls. CLEAR the DTCs. REPEAT the self-test.

- **Is the voltage greater than 10 V?**

Yes	No
Go to KB65.	INSTALL a new FPDM. REFER to the Workshop Manual Section 303-04 Charging and Controls. CLEAR the DTCs. REPEAT the self-test.

KB26 : CHECK THE FPC CIRCUIT FOR AN INTERMITTENT OPEN OR SHORTS

NOTE: With no concern present, the FPDM sends a 50% duty cycle (all OK) to the PCM on the FPM circuit. Depe
on the scan tool type, the FPM PID may display 50%, or a random value that is fluctuating between 85% and 115

- Ignition ON, engine OFF.
- Access the PCM and monitor the FPM (PER) PID.
- Observe the FPM PID for an indication of a concern while carrying out the following:
  —Shake, wiggle, and bend the FPC circuit between FPDM and the PCM
  —Lightly tap on the FPDM to simulate road shock
- **Is a concern present?**

Yes	No
ISOLATE the concern and REPAIR as necessary. CLEAR the DTCs. REPEAT the self-test.	Unable to duplicate or identify the concern at this GO to Pinpoint Test Z.

KB27 : DTC P1237: IS DTC P1237 PRESENT IN THE KOEO SELF-TEST?

NOTE: The Mustang 5.4L is equipped with 2 FPDM s. The DTC P1237 applies to the FPDM mounted on the drive
the luggage compartment

- Carry out the KOEO self-test.
- **Is DTC P1237 present?**

Yes	No
Go to KB28.	DTC P1237 is possibly intermittent, Go to KB34.

KB28 : DOES THE ENGINE START?

NOTE: The Mustang 5.4L starts with 1 FPDM disabled

- FPDM2 connector disconnected.
- **Does the engine start?**

Yes	No
Go to KB37.	Go to KB29.

- Measure the resistance between:

(+) FPDM Connector, Harness Side	(-) FPDM Connector, Harness Side
FPPWR - Pin 4	FPRTN - Pin 2

- **Is the resistance less than 10 Ohm?**

Yes	No
Go to KB30.	ISOLATE the concern, Go to KB33.

KB30 : CHECK THE FPRTN CIRCUIT FOR A SHORT TO POWER IN THE HARNESS

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

(+) FPDM Connector, Harness Side	(-)
FPRTN - Pin 2	Ground

- **Is the voltage less than 1 V?**

Yes	No
Go to KB31.	REPAIR the short circuit. CLEAR the DTCs. REPEAT the self-test.

KB31 : CHECK THE FPPWR CIRCUIT FOR A SHORT TO GROUND IN THE HARNESS

- FP connector disconnected.
- Measure the resistance between:

(+) FPDM Connector, Harness Side	(-)
FPPWR - Pin 4	Ground

- **Is the resistance greater than 10 kOhm?**

Yes	No
Go to KB32.	REPAIR the short circuit. CLEAR the DTCs. REPEAT the self-test.

- Command outputs ON
- Measure the voltage between:

(+) FP Connector, Harness Side	(-) FP Connector, Harness Side
FPPWR	FPRTN

- **Is the voltage greater than 10 V?**

Yes	No
INSTALL a new FP. REFER to the Workshop Manual Section 310-01, Fuel Tank and Lines. CLEAR the DTCs. REPEAT the self-test.	VERIFY the vehicle battery was at a proper charge the test. VERIFY the pump ON command did not time out be voltage check was made. REPEAT as necessary. INSTALL a new FPDM. REFER to the Workshop M Section 303-04, Fuel Charging and Controls CLEAR the DTCs. REPEAT the self-test.

KB33 : ISOLATE THE OPEN CIRCUIT

- FP connector disconnected.
- Measure the resistance between:

(+) FP Connector, Harness Side	(-) FPDM Connector, Harness Side
FPPWR	FPPWR - Pin 4
FPRTN	FPRTN - Pin 2

- Measure the resistance between:

(+) FP Connector, Component Side	(-) FP Connector, Component Side
FPPWR	FPRTN

- **Are the resistances less than 10 Ohm?**

Yes	No
Unable to duplicate or identify the concern at this time. GO to Pinpoint Test Z.	REPAIR the open circuit.If the open is internal to the INSTALL a new FP. REFER to the Workshop Manu Section 310-01, Fuel Tank and Lines. CLEAR the DTCs. REPEAT the self-test.

KB35 : CHECK THE FPPWR AND FPRTN CIRCUIT FOR AN INTERMITTENT OPEN OR SHORTS

NOTE: With no concern present, the FPDM sends a 50% duty cycle (all OK) to the PCM on the FPM circuit. Depe on the scan tool type, the FPM PID may display 50%, or a random value that is fluctuating between 85% and 115

- Ignition ON, engine OFF.
- Access the PCM and monitor the FPM (PER) PID.
- Observe the FPM PID for an indication of a concern while carrying out the following:
  —Shake, wiggle, and bend the FPPWR and FPRTN circuits between the FPDM and the FP
  —Lightly tap on the FP and FPDM to simulate road shock
- **Is a concern present?**

Yes	No
ISOLATE the concern and REPAIR as necessary. CLEAR the DTCs. REPEAT the self-test.	Go to KB36.

KB36 : CHECK THE FPPWR CIRCUIT FOR A SHORT TO GROUND IN THE HARNESS

NOTE: The lamp turns on when a concern is present.

- Ignition OFF.
- FPDM connector disconnected.
- Connect a non-powered test lamp between:

Point A FPDM Connector, Harness Side	Point B FPDM Connector, Harness Side
FPPWR - Pin 4	VPWR Fuel - Pin 5

- Ignition ON, engine OFF.
- Observe the test lamp for an indication of a concern. Shake, wiggle, and bend the FPPWR circuit between the FPDM and the FP.
- **Is a concern present?**

Yes	No
ISOLATE the concern and REPAIR as necessary. CLEAR the DTCs. REPEAT the self-test.	Unable to duplicate or identify the concern at this GO to Pinpoint Test Z.

	CLEAR the DTCs. REPEAT the self-test.

KB38 : CHECK THE FPRTN CIRCUIT FOR A SHORT TO GROUND IN THE HARNESS

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

(+) FPDM Connector, Harness Side	(-) FPDM Connector, Harness Side
VPWR Fuel - Pin 5	FPRTN - Pin 2

- **Is the voltage less than 1 V?**

Yes	No
INSTALL a new FPDM. REFER to the Workshop Manual Section 303-04, Fuel Charging and Controls. CLEAR the DTCs. REPEAT the self-test.	REPAIR the short circuit. CLEAR the DTCs. REPEAT the self-test.

KB39 : DTC P1234: IS DTC P1234 PRESENT IN THE KOEO SELF-TEST?

NOTE: The Mustang 5.4L is equipped with 2 FPDM s. The DTC P1234 applies to the FPDM2 mounted on the pas side of the luggage compartment

- Carry out the KOEO self-test.
- **Is DTC P1234 present?**

Yes	No
Go to KB40.	The PCM is now receiving a signal from FPDM2. possible cause of DTC P1234 is that the IFS switc tripped, then reset. Go to KB50.

KB41 : CHECK THE POWER TO FPDM2

- Measure the voltage between:

(+) FPDM2 Connector, Harness Side	(-)
VPWR Fuel 2 - Pin 5	Ground

- **Is the voltage greater than 10 V?**

Yes	No
REPAIR the open circuit.The FPDM2 ground circuit is open. CLEAR the DTCs. REPEAT the self-test.	There is no voltage to the FPDM2. Go to KB42.

KB42 : CHECK THE B+ VOLTAGE TO THE FPDM2 POWER SUPPLY RELAY

- Ignition OFF.
- FPDM2 PWR Relay connector disconnected.
- Measure the voltage between:

(+) FPDM2 PWR Relay Connector, Harness Side	(-)
B+ - Pin 3	Ground

- **Is the voltage greater than 10 V?**

Yes	No
Go to KB43.	A B+ circuit concern is present. CHECK the conditio related fuse/fuse links. If OK, REPAIR the open circ the fuse/fuse link is damaged, CHECK the circuit for to ground before installing a new fuse/fuse link. CLEAR the DTCs. REPEAT the self-test.

KB43 : CHECK THE VPWR VOLTAGE TO THE FPDM2 POWER SUPPLY RELAY

- Measure the voltage between:

(+) FPDM2 PWR Relay Connector, Harness Side	(-)
VPWR - Pin 1	Ground

- **Is the voltage greater than 10 V?**

Yes	No
Go to KB44.	REPAIR the open circuit. CLEAR the DTCs. REPEAT the self-test.

- Measure the resistance between:

(+) FPDM2 PWR Relay Connector, Harness Side	(-)
GND - Pin 2	Ground

- **Is the resistance less than 5 Ohm?**

Yes	No
Go to KB45.	REPAIR the open circuit. CLEAR the DTCs. REPEAT the self-test.

KB45 : CHECK THE VPWR FUEL 2 CIRCUIT FOR AN OPEN CIRCUIT IN THE HARNESS

- Measure the resistance between:

(+) FPDM2 Connector, Harness Side	(-) FPDM2 PWR Relay Connector, Harness Side
VPWR Fuel 2 - Pin 5	VPWR Fuel 2 - Pin 5

- **Is the resistance less than 5 Ohm?**

Yes	No
INSTALL a new FPDM2 PWR relay. CLEAR the DTCs. REPEAT the self-test.	Go to KB50.

KB46 : CHECK THE FPM2 CIRCUIT FOR AN OPEN CIRCUIT IN THE HARNESS

- Ignition OFF.
- FPDM2 connector disconnected.
- PCM connector disconnected.
- Measure the resistance between:

(+) FPDM2 Connector, Harness Side	(-) PCM Connector, Harness Side
FPM2 - Pin 1	FPM2

- **Is the resistance less than 5 Ohm?**

Yes	No
Go to KB47.	REPAIR the open circuit. CLEAR the DTCs. REPEAT the self-test.

- **Is the voltage less than 1 V?**

Yes	No
Go to KB48.	REPAIR the short circuit. CLEAR the DTCs. REPEAT the self-test.

KB48 : CHECK THE FPM2 CIRCUIT FOR A SHORT TO GROUND IN THE HARNESS

- Ignition OFF.
- Measure the resistance between:

(+) FPDM2 Connector, Harness Side	(-)
FPM2 - Pin 1	Ground

- **Is the resistance greater than 10 kOhm?**

Yes	No
Go to KB49.	REPAIR the short circuit. CLEAR the DTCs. REPEAT the self-test.

KB49 : CHECK FOR FPM2 OUTPUT FROM THE FPDM2

NOTE: It is OK for the voltage to cycle below this range and then return within range.

- FPDM2 connector connected.
- Ignition ON, engine OFF.
- Measure the voltage between:

(+) PCM Connector, Harness Side	(-)
FPM2	Ground

- **Is the voltage between 0.02 V - 1 V?**

Yes	No
Go to KB65.	INSTALL a new FPDM2. REFER to the Workshop Manual Section 303-04 Charging and Controls. CLEAR the DTCs. REPEAT the self-test.

—Shake, wiggle, and bend the VPWR fuel 2 circuit to the FPDM2
—Shake, wiggle, and bend the FPM2 circuit between the FPDM2 and the PCM
—Shake, wiggle, and bend the B+ and ground circuits to the FPDM2 power supply relay
—Lightly tap on the IFS switch to simulate road shock
—Lightly tap on the FPDM2 to simulate road shock
—Lightly tap on the FPDM2 power supply relay to simulate road shock

- **Is a concern present?**

Yes	No
ISOLATE the concern and REPAIR as necessary. CLEAR the DTCs. REPEAT the self-test.	Unable to duplicate or identify the concern at this GO to Pinpoint Test Z.

KB51 : DTC P1236: IS DTC P1236 PRESENT IN THE KOEO SELF-TEST?

- The Mustang 5.4L is equipped with 2 FPDM s. The DTC P1236 applies to the FPDM2 mounted on the passeng of the luggage compartment
- Carry out the KOEO self-test.
- **Is DTC P1236 present?**

Yes	No
Go to KB52.	Go to KB56.

KB52 : CHECK THE FPC CIRCUIT FOR AN OPEN IN THE HARNESS

- Ignition OFF.
- FPDM2 connector disconnected.
- PCM connector disconnected.
- Measure the resistance between:

(+) PCM Connector, Harness Side	(-) FPDM2 Connector, Harness Side
FPC - Pin B62	FPC - Pin 6

- **Is the resistance less than 5 Ohm?**

Yes	No
Go to KB53.	REPAIR the open circuit. CLEAR the DTCs. REPEAT the self-test.

- **Is the voltage less than 1 V?**

Yes	No
Go to KB54.	REPAIR the short circuit. CLEAR the DTCs. REPEAT the self-test.

KB54 : CHECK THE FPC CIRCUIT FOR A SHORT TO GROUND

- Ignition OFF.
- Measure the resistance between:

(+) FPDM2 Connector, Harness Side	(-)
FPC - Pin 6	Ground

- **Is the resistance greater than 10 kOhm?**

Yes	No
Go to KB55.	REPAIR the short circuit. CLEAR the DTCs. REPEAT the self-test.

KB55 : CHECK THE FPC CIRCUIT IN THE FPDM2

- FPDM2 connector connected.
- Ignition ON, engine OFF.
- Measure the voltage between:

(+) PCM Connector, Harness Side	(-)
FPC - Pin B62	Ground

- **Is the voltage greater than 10 V?**

Yes	No
Go to KB65.	INSTALL a new FPDM2. REFER to the Workshop Manual Section 303-04 Charging and Controls. CLEAR the DTCs. REPEAT the self-test.

Yes	No
ISOLATE the concern and REPAIR as necessary. CLEAR the DTCs. REPEAT the self-test.	Unable to duplicate or identify the concern at this GO to Pinpoint Test Z.

KB57 : DTC P1238: IS DTC P1238 PRESENT IN THE KOEO SELF-TEST?

NOTE: The Mustang 5.4L is equipped with 2 FPDM s. The DTC P1238 applies to the FPDM2 mounted on the pas side of the luggage compartment

- Carry out the KOEO self-test.
- **Is DTC P1238 present?**

Yes	No
Go to KB58.	CHECK for an intermittent concern, Go to KB64.

KB58 : CHECK THE FP2PWR , FP2RTN AND INTERNAL FUEL PUMP CIRCUIT RESISTANCE

- Ignition OFF.
- FPDM2 connector disconnected.
- Measure the resistance between:

(+) FPDM2 Connector, Harness Side	(-) FPDM2 Connector, Harness Side
FP2PWR - Pin 4	FP2RTN - Pin 2

- **Is the resistance less than 10 Ohm?**

Yes	No
Go to KB59.	ISOLATE the concern, Go to KB63.

KB60 : CHECK THE FP2PWR AND FP2RTN CIRCUIT(S) FOR A SHORT TO GROUND IN THE HARNESS

- Ignition OFF.
- Measure the resistance between:

(+) FPDM2 Connector, Harness Side	(-)
FP2PWR - Pin 4	Ground
FP2RTN - Pin 2	Ground

- **Are the resistances greater than 10 kOhm?**

Yes	No
Go to KB61.	REPAIR the short circuit. CLEAR the DTCs. REPEAT the self-test.

KB61 : CHECK FOR A SHORT BETWEEN THE FP2PWR AND FP2RTN CIRCUITS

- Measure the resistance between:

(+) FPDM2 Connector, Harness Side	(-) FPDM2 Connector, Harness Side
FP2PWR - Pin 4	FP2RTN - Pin 2

- **Is the resistance greater than 10 kOhm?**

Yes	No
Go to KB62.	REPAIR the short circuit. CLEAR the DTCs. REPEAT the self-test.

and Lines. CLEAR the DTCs. REPEAT the self-test.	voltage check was made. REPEAT as necessary. INSTALL a new FPDM2. REFER to the Workshop Section 303-04, Fuel Charging and Controls CLEAR the DTCs. REPEAT the self-test.

KB63 : ISOLATE THE OPEN CIRCUIT

- FP connector disconnected. Refer to the Wiring Diagrams Manual for schematic and connector information.
- Measure the resistance between:

(+) FP Connector, Harness Side	(-) FPDM2 Connector, Harness Side
FP2PWR	FP2PWR - Pin 4
FP2RTN	FP2RTN - Pin 2

- Measure the resistance between:

(+) FP Connector, Component Side	(-) FP Connector, Component Side
FP2PWR	FP2RTN

- **Are the resistances less than 10 Ohm?**

Yes	No
Unable to duplicate or identify the concern at this time. GO to Pinpoint Test Z.	REPAIR the open circuit.If the open is internal to the INSTALL a new FP. REFER to the Workshop Manu Section 310-01, Fuel Tank and Lines. CLEAR the DTCs. REPEAT the self-test.

KB64 : CHECK THE FP2PWR AND FP2RTN CIRCUIT FOR AN INTERMITTENT OPEN OR SHORTS

NOTE: With no concern present, the FPDM2 sends a 50% duty cycle (all OK) to the PCM on the FPM2 circuit. De
on the scan tool type, the FPM2 PID may display 50%, or a random value that is fluctuating between 85% and 11

- Ignition ON, engine OFF.
- Access the PCM and monitor the FPM2 (PER) PID.
- Observe the FPM2 PID for an indication of a concern while carrying out the following:
  —Shake, wiggle, and bend the FP2PWR and FP2RTN circuits between the FPDM2 and the FP
  —Lightly tap on the FP and FPDM2 to simulate road shock
- **Is a concern present?**

Yes	No
ISOLATE the concern and REPAIR as necessary. CLEAR the DTCs. REPEAT the self-test.	GO to Pinpoint Test Z.

- Carry out the PCM self-test and verify the concern is still present.
- **Is the concern still present?**

Yes	No
INSTALL a new PCM. REFER to Section 2, Flash Electrically Erasable Programmable Read Only Memory (EEPROM).	The system is operating correctly at this time. The c may have been caused by a loose or corroded conn