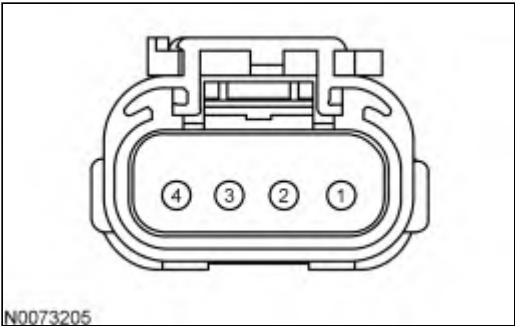


TA: Clutch Pedal Position (CPP) Switch

This pinpoint test is intended to diagnose the following:

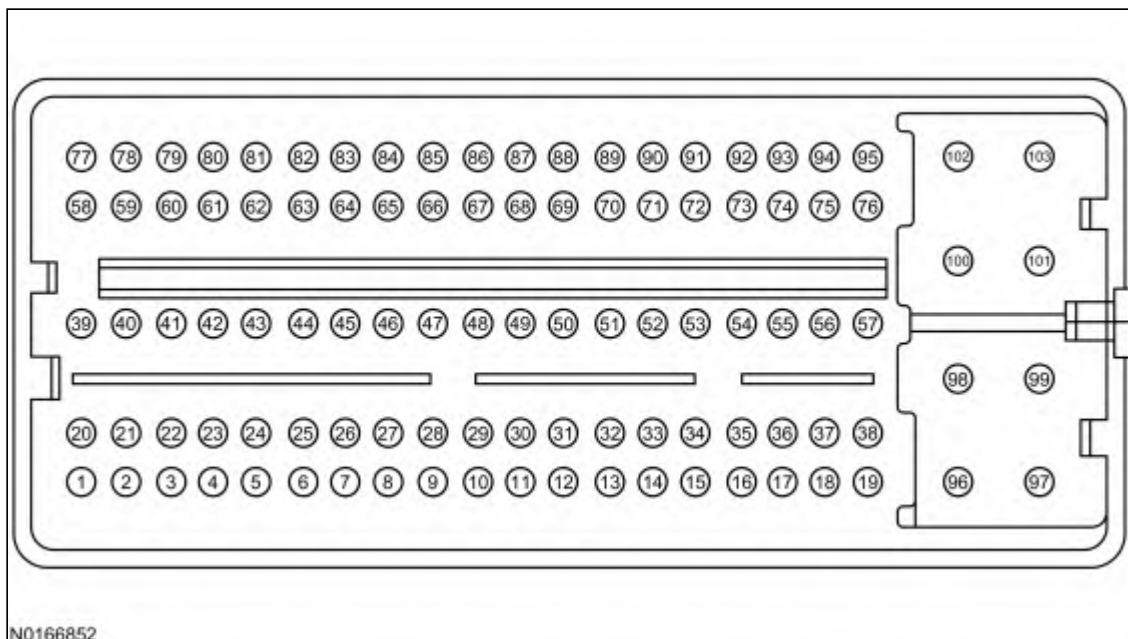
- CPP sensor
- harness circuits: CPP, CPP1, CPP2, CPP-BT, GND, SIGRTN, and VREF
- PCM (12A650)

Clutch Pedal Position (CPP) Sensor Connector



Pin	Circuit
1	CPP2 (Clutch Pedal Position 2)
3	CPP1 (Clutch Pedal Position 1)
4	SIGRTN (Signal Return)
2	VREF (Reference Voltage)

Powertrain Control Module-B (PCM-B) Connector



Pin	Circuit
9	CPP2 (Clutch Pedal Position 2)
10	CPP1 (Clutch Pedal Position 1)

TA1 CHECK FOR DIAGNOSTIC TROUBLE CODES (DTCs)

Note: Diagnose DTCs P0830, P0833 and P170A before entering this pinpoint test. Refer to the Workshop Manual Section 303-14, Electronic Engine Controls, to continue diagnosis.

Note: Diagnose and repair all circuit DTCs before diagnosing range and performance DTCs.

Are DTCs P08A8, P08A9, P08AA, P08B5, P08B6, P08B7, or P08B9 present?

Yes	For DTC P08B9, GO to TA2 . For all others, GO to TA3 .
No	GO to TA3 .

TA2 CHECK THE CPP PID CORRELATION

⚠ WARNING: Block all wheels, set the parking brake and firmly apply the service brake to reduce the risk of vehicle movement during this procedure. Failure to follow these instructions may result in serious personal injury.

Note: All PIDs may not be available on all vehicles.

- Ignition ON, engine OFF.
- Access the PCM and monitor the CPP_BOT (MODE), CPP_STATUS (MODE) and CPP_TOP (MODE) PIDs.
- Access the PCM and monitor the CPP_PERCENT (PER) PID.
- Apply and release the clutch pedal.

Do all the PID values change when the clutch pedal is applied and released?

Yes	The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector.
No	GO to TA3 .

TA3 CHECK THE VREF VOLTAGE TO THE CPP SENSOR

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

(+) CPP Sensor Connector, Harness Side	(-) CPP Sensor Connector, Harness Side
VREF - Pin 2	SIGRTN - Pin 4

Is the voltage between 4.5 - 5.5 V?

Yes	GO to TA4 .
No	GO to Pinpoint Test B .

TA4 CHECK THE CPP CIRCUIT FOR AN OPEN

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

(+) CPP Sensor Connector, Harness Side	(-) PCM-B Connector, Harness Side
CPP1 - Pin 3	CPP1 - Pin 10
CPP2 - Pin 1	CPP2 - Pin 9

Are the resistances less than 5 ohms?

Yes	GO to TA5 .
No	REPAIR the open circuit. Clear the PCM DTCs. REPEAT the self-test.

TA5 CHECK THE CPP CIRCUIT FOR A SHORT TO GROUND

- Measure the resistance between:

(+) CPP Sensor Connector, Harness Side	(-)
CPP1 - Pin 3	Ground
CPP2 - Pin 1	Ground

Are the resistances greater than 10K ohms?

Yes	GO to TA6 .
No	REPAIR the short circuit. Clear the PCM DTCs. REPEAT the self-test.

TA6 CHECK THE CPP SENSOR CIRCUITS FOR A SHORT

- Measure the resistance between:

(+) CPP Sensor Connector, Harness Side	(-) CPP Sensor Connector, Harness Side
CPP1 - Pin 3	VREF - Pin 2
CPP1 - Pin 3	SIGRTN - Pin 4
CPP2 - Pin 1	VREF - Pin 2
CPP2 - Pin 1	SIGRTN - Pin 4

Are the resistances greater than 10K ohms?

Yes	GO to TA7 .
No	REPAIR the short circuit. Clear the PCM DTCs. REPEAT the self-test.

TA7 CHECK THE CPP CIRCUIT FOR A SHORT TO VOLTAGE

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

(+) CPP Sensor Connector, Harness Side	(-)
CPP1 - Pin 3	Ground
CPP2 - Pin 1	Ground

Is any voltage present?

Yes	REPAIR the short circuit. Clear the PCM DTCs. REPEAT the self-test.
No	INSTALL a new CPP sensor. Clear the PCM DTCs. REPEAT the self-test.

TA8 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 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) ,
No	The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector.

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