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2012 FORD Focus Wagon OEM Service and Repair Workshop Manual

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- Using a diagnostic scan tool, perform the PACM (pedestrian alert control module) module self-test.
- **NOTE**

  DTC (diagnostic trouble code) B1A01:01 can also be present when carrying out this step and should be disregarded at this time.

  Check for recorded Diagnostic Trouble Codes (DTCs) from the PACM (pedestrian alert control module) module self-test.

Is DTC (diagnostic trouble code) B1A01:13 recorded?

Yes	INSTALL a new sounder. REFER to: Pedestrian Alert System Speaker (413-22 Pedestrian Alert System, Removal and Installation). In this section.

No	GO to C3

C3 CHECK THE SOUNDER SIGNAL AND RETURN CIRCUIT FOR A SHORT TOGETHER

- Ignition OFF.
- Disconnect PACM (pedestrian alert control module) C2828 .
- Measure:

Lead 1	Measurement / Action	Lead 2
C2828-9	Ω	C2828-8

Is the resistance greater than 10,000 ohms?

Yes	GO to C6

No	REPAIR the circuits.

C6 CHECK FOR CORRECT PACM (PEDESTRIAN ALERT CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect the PACM (pedestrian alert control module) and connector.
- 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 PACM (pedestrian alert control module) connector. Make sure it seats and latches correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS (Online Automotive Service Information System) for any applicable service articles: TSB (Technical Service Bulletin) , GSB (General Service Bulletin) , SSM (special service message) or FSA (Field Service Action) . If a service article exists for this concern, DISCONTINUE this test and FOLLOW the service article instructions. If no service articles address this concern, INSTALL a new PACM (pedestrian alert control module) . REFER to: Pedestrian Alert Control Module (PACM) (413-22 Pedestrian Alert System, Removal and Installation).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

PINPOINT TEST D : B1A01:12, B1A01:13

Refer to Wiring Diagrams Cell 66for schematic and connector information.
Normal Operation and Fault Conditions The PACM (pedestrian alert control module) controls the front sounder output on hardwired circuitry and sets Diagnostic Trouble Codes (DTCs) when a circuit or sounder fault is detected. **DTC Fault Trigger Conditions**

DTC (diagnostic trouble code)	Description	Fault Trigger Condition

Lead 1	Measurement / Action	Lead 2
C2828-9	V	Ground

Is any voltage present?

Yes	GO to D3

No	GO to D7

D3 CHECK FOR A SHORT TO VOLTAGE WITH THE SOUNDER DISCONNECTED

- Ignition OFF.
- Disconnect Sounder C1945 (DTC (diagnostic trouble code) B1A01:12).
- Measure:

Lead 1	Measurement / Action	Lead 2
C2828-9	V	Ground

- Ignition ON.

Is any voltage present?

Yes	REPAIR the signal circuit.

No	REPAIR the return circuit.

D4 CHECK THE SOUNDER FOR AN OPEN

- Ignition OFF.
- Disconnect Sounder C1945 (DTC (diagnostic trouble code) B1A01:13).
- Connect a fused jumper wire:

Yes	GO to D6

No	REPAIR the circuit in question.

D6 CHECK THE SOUNDER RETURN CIRCUIT FOR AN OPEN

- Measure:

Lead 1	Measurement / Action	Lead 2
C2828-8	Ω	C1945-2

Is the resistance less than 3 ohms?

Yes	GO to D7

No	REPAIR the circuit in question.

D7 CHECK FOR CORRECT PACM (PEDESTRIAN ALERT CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect the PACM (pedestrian alert control module) and connector.
- 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 PACM (pedestrian alert control module) connector. Make sure it seats and latches correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS (Online Automotive Service Information System) for any applicable service articles: TSB (Technical Service Bulletin) , GSB (General Service Bulletin) , SSM (special service message) or

- Repeat the PACM (pedestrian alert control module) self-test.

Are any non-network Diagnostic Trouble Codes (DTCs) present?

Yes	DIAGNOSE all non-network Diagnostic Trouble Codes (DTCs). REFER to DTC (diagnostic trouble code) Chart: PACM (pedestrian alert control module) Module in this section.

No	GO to E2

E2 PERFORM THE PCM (POWERTRAIN CONTROL MODULE) KOEO (KEY ON, ENGINE OFF) SELF-TEST

- Using a diagnostic scan tool, perform the PCM (powertrain control module) KOEO (key on, engine off) self-test.

Are any non-network Diagnostic Trouble Codes (DTCs) present?

Yes	DIAGNOSE all non-network Diagnostic Trouble Codes (DTCs). REFER to the Master DTC (diagnostic trouble code) Chart.

No	GO to E3

E3 RECHECK THE PACM (PEDESTRIAN ALERT CONTROL MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

No	The system is operating correctly at this time. The concern may have been due to incorrect parts replacement procedures or incorrect module configuration.

E5 CHECK FOR CORRECT PCM (POWERTRAIN CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect the PCM (powertrain control module) .
- 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 PCM (powertrain control module) 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 (Online Automotive Service Information System) for any applicable service articles: TSB (Technical Service Bulletin) , GSB (General Service Bulletin) , SSM (special service message) or FSA (Field Service Action) . If a service article exists for this concern, DISCONTINUE this test and FOLLOW the service article instructions. If no service articles address this concern,  Guided Routine available in the on-line Workshop Manual.

No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

PINPOINT TEST F : U0140:00

Normal Operation and Fault Conditions

The PACM (pedestrian alert control module) communicates with the BCM (body control module) over the HS-CAN1 (high-speed controller area network 1) .

DTC Fault Trigger Conditions

F3 PERFORM THE PACM (PEDESTRIAN ALERT CONTROL MODULE) SELF-TEST

- Using a diagnostic scan tool, perform the PACM (pedestrian alert control module) self-test.

Are any non-network Diagnostic Trouble Codes (DTCs) present?

Yes	REFER to DTC (diagnostic trouble code) Chart: PACM (pedestrian alert control module) in this section.
No	GO to F4

F4 PERFORM THE BCM (BODY CONTROL MODULE) SELF-TEST

- Using a diagnostic scan tool, perform the BCM (body control module) self-test.

Are any non-network Diagnostic Trouble Codes (DTCs) present?

Yes	REFER to the Master DTC (diagnostic trouble code) Chart.
No	GO to F5

F5 RECHECK THE PACM (PEDESTRIAN ALERT CONTROL MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

No	The system is operating correctly at this time. The concern may have been due to incorrect parts replacement procedures or incorrect module configuration.

F7 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect the BCM (body control module) 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 (body control module) 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 (Online Automotive Service Information System) for any applicable service articles: TSB (Technical Service Bulletin) , GSB (General Service Bulletin) , SSM (special service message) or FSA (Field Service Action) . If a service article exists for this concern, DISCONTINUE this test and FOLLOW the service article instructions. If no service articles address this concern, INSTALL a new BCM (body control module) . REFER to: Body Control Module (BCM) (419-10 Multifunction Electronic Modules, Removal and Installation).

No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

PINPOINT TEST G : U0422:00

Normal Operation and Fault Conditions

The PACM (pedestrian alert control module) receives ignition state data from the BCM (body control module) over the HS-CAN1 (high-speed controller area network 1) .

DTC Fault Trigger Conditions

DTC (diagnostic	Description	Fault Trigger Condition

Possible Sources

- PACM (pedestrian alert control module) programming concern

H1 RETEST THE PACM (PEDESTRIAN ALERT CONTROL MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

- Ignition ON.
- Perform the PACM (pedestrian alert control module) self-test.

Is DTC (diagnostic trouble code) U202B:61 present?

Yes	INSTALL a new PACM (pedestrian alert control module) . REFER to: Pedestrian Alert Control Module (PACM) (413-22 Pedestrian Alert System, Removal and Installation).

No	The PACM (pedestrian alert control module) is functioning correctly. This DTC (diagnostic trouble code) only sets when development software is in use in the PACM (pedestrian alert control module) .

PINPOINT TEST I : U202B:62

Normal Operation and Fault Conditions

The PACM (pedestrian alert control module) sets Diagnostic Trouble Codes when the PACM (pedestrian alert control module) is programmed with development software.

DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
PACM (pedestrian alert control module) U202B:62	In-Use Application Signing Key: Signal Compare Failure	This DTC (diagnostic trouble code) sets in the PACM (pedestrian alert control module) when development software is programmed into a production module.

Possible Sources

- PACM (pedestrian alert control module) programming concern

I1 CHECK FOR RECENT SERVICE HISTORY

- Ignition ON.