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1979 FORD Pinto OEM Service and Repair Workshop Manual

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- Disconnect Inverter System Controller (ISC) C1458A .
- Ignition ON.
- Measure and record:

Positive Lead	Measurement / Action	Negative Lead
C1458A-M1	V	Ground

Is the voltage greater than 10.5 volts?

Yes	GO to BO6

No	REPAIR the circuit.

BO6 CHECK THE INVERTER SYSTEM CONTROLLER (ISC) VPWR CIRCUITS FOR VOLTAGE

- Ignition OFF.
- Connect a 5A fused jumper between:

Positive Lead	Measurement / Action	Negative Lead
C1458A-K3		Ground

- Ignition ON.
- Measure and record:

Positive Lead	Measurement / Action	Negative Lead
C1458A-L2	V	Ground

The Inverter System Controller (ISC) is referred to as the SOBDMC (Secondary On-Board Diagnostic Control Module C) in the scan tool.

Normal Operation and Fault Conditions

REFER to: Electric Powertrain Control - Component Location(303-14F Electric Powertrain Control - 3.5L V6 PowerBoost (CN), Description and Operation).

DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
SOBDMC (secondary on-board diagnostic control module C) U2100:00	Initial Configuration Not Complete: No Sub Type Information	This DTC (diagnostic trouble code) sets when the transmission identification (TRID) data is missing from the SOBDMC (secondary on-board diagnostic control module C) .

Possible Sources

- Inverter System Controller (ISC) configuration

BP1 CARRY OUT THE TRANSMISSION STRATEGY DOWNLOAD

- Ignition ON.
- Using a diagnostic scan tool, carry out the Transmission Strategy Download.
  REFER to: Transmission Strategy Download(307-01B Automatic Transmission - 10-Speed Automatic Transmission – 10R80 MHT, General Procedures).
- Using a diagnostic scan tool, clear the Inverter System Controller (ISC) diagnostic trouble codes (DTCs).
- Ignition OFF.
- Wait 60 seconds.
- Ignition ON.
- Using a diagnostic scan tool, carry out the Inverter System Controller (ISC) self-test.

Is DTC (diagnostic trouble code) U2100 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, It is necessary to seek additional help. REFER to the Service Repair And Technical Assistance Process. A vehicle data recorder (VDR) or similar recorder may also be useful.

C1458A-J1	Ω	Ground

Is the resistance greater than 10K ohms?

Yes	REFER to: Powertrain Control Module (PCM) Input and Output Controls(303-14E Electronic Engine Controls - 3.5L V6 PowerBoost (CN), Diagnosis and Testing). Pinpoint Test Z.

No	GO to BQ2

BQ2 CHECK THE WAKE-UP SIGNAL CIRCUIT FOR A SHORT TO GROUND WITH THE BECM (BATTERY ENERGY CONTROL MODULE) DISCONNECTED

- Disconnect Inline connector to BECM (battery energy control module) C4238 .
- Measure and record:

Positive Lead	Measurement / Action	Negative Lead
C1458A-J1	Ω	Ground

Is the resistance greater than 10K ohms?

Yes	GO to BQ3

No	GO to BQ4

BQ3 CHECK FOR CORRECT BECM (BATTERY ENERGY CONTROL MODULE) OPERATION

- Disconnect and inspect all BECM (battery energy control module) connectors.
- Repair:
  - corrosion (install new connector or terminals – clean module pins)

No	GO to BQ6

BQ5 CHECK FOR CORRECT DCDC (DIRECT CURRENT/DIRECT CURRENT CONVERTER CONTROL MODULE) OPERATION

- Disconnect and inspect all DCDC (direct current/direct current converter 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 DCDC (direct current/direct current converter 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 DCDC (direct current/direct current converter control module) . REFER to: Direct Current/Alternating Current (DC/AC) Inverter - Electric, Vehicles With: Pickup Bed Power Outlet (414-05 Voltage Converter/Inverter, 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.

BQ6 CHECK THE WAKE-UP SIGNAL CIRCUIT FOR A SHORT TO GROUND WITH THE PCM (POWERTRAIN CONTROL MODULE) DISCONNECTED

- Disconnect PCM (powertrain control module) C175B .
- Measure and record:

Positive Lead	Measurement / Action	Negative Lead

PINPOINT TEST BR : U351B

NOTE

The Inverter System Controller (ISC) is referred to as the SOBDMC (Secondary On-Board Diagnostic Control Module C) in the scan tool.

Normal Operation and Fault Conditions

REFER to: Electric Powertrain Control - Component Location(303-14F Electric Powertrain Control - 3.5L V6 PowerBoost (CN), Description and Operation).

DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
SOBDMC (secondary on-board diagnostic control module C) U351B:00	High Voltage System Interlock Circuit 'D' Low: No Sub Type Information	This DTC (diagnostic trouble code) sets when difference is detected between the battery and the electric AC module.

Possible Sources

- Wiring, terminals or connectors
- ACCM (air conditioning control module)

BR1 REVIEW AND RECORD THE INTERLOCK DIAGNOSTIC TROUBLE CODES (DTCS)

- Ignition ON.
- Using a diagnostic scan tool, carry out a continuous memory diagnostic trouble codes (CMDTCs) self-test.
- Using a diagnostic scan tool, clear all continuous memory diagnostic trouble codes (CMDTCs).
- Using a diagnostic scan tool, run the BECM (battery energy control module) and the Inverter System Controller (ISC) self-test.

Is DTC (diagnostic trouble code) U351B present?

Yes	GO to BR2

No	The system is operating correctly at this time. The DTC (diagnostic trouble code) may have been set due to high network traffic or an intermittent fault condition.

- Ignition OFF.
- Connect ACCM (air conditioning control module) C1803B .
- CONNECT the service disconnect plug.
  REFER to: High Voltage System De-energizing - Full Hybrid Electric Vehicle (FHEV)(414-03A High Voltage Battery, Mounting and Cables, General Procedures).
- 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 ACCM (air conditioning control module) and Electric Compressor Assembly. REFER to: Heating, Ventilation and Air Conditioning (HVAC) Control Module (412-00 Climate Control System - General Information, 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 BS : ABS (ANTI-LOCK BRAKE SYSTEM) MODULE CONCERNS

NOTE

The Inverter System Controller (ISC) is referred to as the SOBDMC (Secondary On-Board Diagnostic Control Module C) in the scan tool.

Normal Operation and Fault Conditions

When specific diagnostic trouble codes (DTCs) are set by the ABS (anti-lock brake system) module, corresponding diagnostic trouble codes (DTCs) are also set in the SOBDMC (secondary on-board diagnostic control module C) . These diagnostic trouble codes (DTCs) do not indicate a concern with the SOBDMC (secondary on-board diagnostic control module C) . To clear the SOBDMC (secondary on-board diagnostic control module C) diagnostic trouble codes (DTCs) in question, diagnose the corresponding ABS (anti-lock brake system) module concern.

REFER to: Electric Powertrain Control - Component Location(303-14F Electric Powertrain Control - 3.5L V6 PowerBoost (CN), Description and Operation).

DTC Fault Trigger Conditions

SOBDMC (secondary on-board diagnostic control module C) C056A:00	Brake Booster Pressure Sensor Power Supply Circuit: No Sub Type Information	An ABS (anti-lock brake system) concern has been identified by the ABS (anti-lock brake system) module. To clear this SOBDMC (secondary on-board diagnostic control module C) DTC (diagnostic trouble code) , diagnose the corresponding ABS (anti-lock brake system) module concern.
SOBDMC (secondary on-board diagnostic control module C) C056B:00	Brake Pressure Sensor 'A' Intermittent/Erratic: No Sub Type Information	An ABS (anti-lock brake system) concern has been identified by the ABS (anti-lock brake system) module. To clear this SOBDMC (secondary on-board diagnostic control module C) DTC (diagnostic trouble code) , diagnose the corresponding ABS (anti-lock brake system) module concern.
SOBDMC (secondary on-board diagnostic control module C) C0594:00	Brake Booster Motor 'A' Performance: No Sub Type Information	An ABS (anti-lock brake system) concern has been identified by the ABS (anti-lock brake system) module. To clear this SOBDMC (secondary on-board diagnostic control module C) DTC (diagnostic trouble code) , diagnose the corresponding ABS (anti-lock brake system) module concern.
SOBDMC (secondary on-board diagnostic control module C) C0596:00	Brake Booster Motor 'A' Current Sensor Circuit Range/Performance: No Sub Type Information	An ABS (anti-lock brake system) concern has been identified by the ABS (anti-lock brake system) module. To clear this SOBDMC (secondary on-board diagnostic control module C) DTC (diagnostic trouble code) , diagnose the corresponding ABS (anti-lock brake system) module concern.
SOBDMC (secondary on-board diagnostic control module C) C1013:00	Brake System Pressure: No Sub Type Information	An ABS (anti-lock brake system) concern has been identified by the ABS (anti-lock brake system) module. To clear this SOBDMC (secondary on-board diagnostic control module C) DTC (diagnostic trouble code) , diagnose the corresponding ABS (anti-lock brake system) module concern.
SOBDMC (secondary on-board diagnostic control module C) C101F:00	Generic Valve Failure: No Sub Type Information	An ABS (anti-lock brake system) concern has been identified by the ABS (anti-lock brake system) module. To clear this SOBDMC (secondary on-board diagnostic control module C) DTC (diagnostic

control module C) C0048:00		diagnostic control module C) DTC (diagnostic trouble code) , diagnose the corresponding ABS (anti-lock brake system) module concern.
SOBDMC (secondary on-board diagnostic control module C) C0049:00	Brake Fluid Level: No Sub Type Information	An ABS (anti-lock brake system) concern has been identified by the ABS (anti-lock brake system) module. To clear this SOBDMC (secondary on-board diagnostic control module C) DTC (diagnostic trouble code) , diagnose the corresponding ABS (anti-lock brake system) module concern.
SOBDMC (secondary on-board diagnostic control module C) C0051:00	Steering Wheel Position Sensor: No Sub Type Information	An ABS (anti-lock brake system) concern has been identified by the ABS (anti-lock brake system) module. To clear this SOBDMC (secondary on-board diagnostic control module C) DTC (diagnostic trouble code) , diagnose the corresponding ABS (anti-lock brake system) module concern.
SOBDMC (secondary on-board diagnostic control module C) C004B:00	Brake Fluid Level Sensor/Switch 'A' Circuit/Open: No Sub Type Information	An ABS (anti-lock brake system) concern has been identified by the ABS (anti-lock brake system) module. To clear this SOBDMC (secondary on-board diagnostic control module C) DTC (diagnostic trouble code) , diagnose the corresponding ABS (anti-lock brake system) module concern.
SOBDMC (secondary on-board diagnostic control module C) C004C:00	Brake Booster Motor 'A' Position Sensor Exceeded Learning Limit: No Sub Type Information	An ABS (anti-lock brake system) concern has been identified by the ABS (anti-lock brake system) module. To clear this SOBDMC (secondary on-board diagnostic control module C) DTC (diagnostic trouble code) , diagnose the corresponding ABS (anti-lock brake system) module concern.
SOBDMC (secondary on-board diagnostic control module C) C004D:00	Brake System Pressure Slow Response: No Sub Type Information	An ABS (anti-lock brake system) concern has been identified by the ABS (anti-lock brake system) module. To clear this SOBDMC (secondary on-board diagnostic control module C) DTC (diagnostic trouble code) , diagnose the corresponding ABS (anti-lock brake system) module concern.
SOBDMC (secondary on-	Brake System Pressure Control Valve Actuator Stuck: No Sub	An ABS (anti-lock brake system) concern has been identified by the ABS (anti-lock brake system)

SOBDMC (secondary on-board diagnostic control module C) C006C:00	Stability System: No Sub Type Information	An ABS (anti-lock brake system) concern has been identified by the ABS (anti-lock brake system) module. To clear this SOBDMC (secondary on-board diagnostic control module C) DTC (diagnostic trouble code) , diagnose the corresponding ABS (anti-lock brake system) module concern.
SOBDMC (secondary on-board diagnostic control module C) C0072:00	Brake Temperature Too High: No Sub Type Information	An ABS (anti-lock brake system) concern has been identified by the ABS (anti-lock brake system) module. To clear this SOBDMC (secondary on-board diagnostic control module C) DTC (diagnostic trouble code) , diagnose the corresponding ABS (anti-lock brake system) module concern.
SOBDMC (secondary on-board diagnostic control module C) C0500:00	Left Front Wheel Speed Sensor 'A' Circuit/Open: No Sub Type Information	An ABS (anti-lock brake system) concern has been identified by the ABS (anti-lock brake system) module. To clear this SOBDMC (secondary on-board diagnostic control module C) DTC (diagnostic trouble code) , diagnose the corresponding ABS (anti-lock brake system) module concern.
SOBDMC (secondary on-board diagnostic control module C) C0501:00	Left Front Wheel Speed Sensor 'A' Range/Performance: No Sub Type Information	An ABS (anti-lock brake system) concern has been identified by the ABS (anti-lock brake system) module. To clear this SOBDMC (secondary on-board diagnostic control module C) DTC (diagnostic trouble code) , diagnose the corresponding ABS (anti-lock brake system) module concern.
SOBDMC (secondary on-board diagnostic control module C) C0504:00	Left Front Wheel Speed Sensor 'A' Intermittent/Erratic: No Sub Type Information	An ABS (anti-lock brake system) concern has been identified by the ABS (anti-lock brake system) module. To clear this SOBDMC (secondary on-board diagnostic control module C) DTC (diagnostic trouble code) , diagnose the corresponding ABS (anti-lock brake system) module concern.
SOBDMC (secondary on-board diagnostic control module C) C0506:00	Right Front Wheel Speed Sensor 'A' Circuit/Open: No Sub Type Information	An ABS (anti-lock brake system) concern has been identified by the ABS (anti-lock brake system) module. To clear this SOBDMC (secondary on-board diagnostic control module C) DTC (diagnostic