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**1998 FORD Probe OEM Service and Repair** Workshop Manual

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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 AM : P0C67**

## 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) D	Description	Fault Trigger Condition
SOBDMC (secondary on-	Generator Position Sensor	This DTC (diagnostic trouble code) sets
board diagnostic control	Circuit 'A' High: No Sub Type	when a short to power is detected in the
module C) P0C67:00 Ir	Information	generator resolver circuit.

#### **Possible Sources**

- Wiring, terminals or connectors
- Front module (electric motor)
- Inverter System Controller (ISC) calibration

## AM1 CHECK THE INVERTER SYSTEM CONTROLLER (ISC) CALIBRATION LEVEL

## NOTE

Wiring overlays or repinning of circuits are NOT appropriate for DTC P0C67 due to risk of hardware damage.

• Verify the Inverter System Controller (ISC) is at the latest calibration level.

Is the Inverter System Controller (ISC) at the latest calibration level?

## AM4 CHECK THE GS3 CIRCUIT FOR A SHORT TO VOLTAGE

- Disconnect Inverter System Controller (ISC) C1458A .
- Disconnect Transmission Sensor Speed Resolver C1280 .
- Ignition ON.
- Measure and record:

Positive Lead	Measurement / Action	Negative Lead	
C1458A-B3	v	Ground	

#### Is any voltage present?

Voc	REPLACE the harness.
162	CLEAR the diagnostic trouble codes (DTCs) and REPEAT the self-test.

No GO to AM5

## AM5 CHECK FOR CORRECT INVERTER SYSTEM CONTROLLER (ISC) OPERATION

- Disconnect and inspect all Inverter System Controller (ISC) 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 Inverter System Controller (ISC) connectors. Make sure they seat and latch correctly.
- Connect Transmission Sensor Speed Resolver C1280 .
- Ignition ON.
- Operate the system and determine if the concern is still present.

#### Is the concern still present?

• Us Are an	ing a diagnostic scan tool, run the Inverter System Controller (ISC) self-test. y Inverter System Controller (ISC) diagnostic trouble codes (DTCs) other th	an P0C6A present?
Yes	DIAGNOSE all other Inverter System Controller (ISC) diagnostic trouble codes DTC (diagnostic trouble code) chart in this section.	; (DTCs), REFER to the
Νο	GO to AN2	
AN2 CH	IECK THE INVERTER SYSTEM CONTROLLER (ISC) CALIBRATION LEVEL	
• Ve Is the l	rify the Inverter System Controller (ISC) is at the latest calibration level. nverter System Controller (ISC) at the latest calibration level?	
Yes	GO to AN3	
No	UPDATE the Inverter System Controller (ISC) to the latest calibration level.	
<ul> <li>Igr</li> <li>Us</li> <li>Was D1</li> </ul>	nition ON. ing a diagnostic scan tool, run the Inverter System Controller (ISC) self-test. <b>'C (diagnostic trouble code) P0C6A read from the Inverter System Control</b>	ler (ISC)?
Yes	GO to AN4	
Νο	The system is operating correctly at this time. The DTC (diagnostic trouble co set due to high network traffic or an intermittent fault condition.	de) may have been
AN4 VI	SUAL INSPECTION OF THE LOW VOLTAGE SYSTEM	
• lgr	nition OFF.	

• De-energize the high voltage system.

# **Possible Sources**

- Wiring, terminals or connectors
- Front module (electric motor)
- Inverter System Controller (ISC) calibration

AO1 CHECK THE INVERTER SYSTEM CONTROLLER (ISC) CALIBRATION LEVEL			
<b>NOTE</b> Wiring damag	g overlays or repinning of circuits are NOT appropriate for DTC P0C5F due to risk of hardware ge.		
• Vei Is the li	rify the Inverter System Controller (ISC) is at the latest calibration level. nverter System Controller (ISC) at the latest calibration level?		
Yes	GO to AO2		
Νο	UPDATE the Inverter System Controller (ISC) to the latest calibration level.		
AO2 CH	ECK FOR DTC (DIAGNOSTIC TROUBLE CODE) P0C5F		
• lgr • Us (D1 <b>Was DT</b>	nition ON. ing a diagnostic scan tool, retrieve all Inverter System Controller (ISC) diagnostic trouble codes FCs). <b>C (diagnostic trouble code) P0C5F read from the Inverter System Controller (ISC)?</b>		
Yes	GO to AO3		
No	<b>No</b> 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.		
AO3 VIS	SUAL INSPECTION OF THE LOW VOLTAGE SYSTEM		
• Igr	iition OFF.		

• De-energize the high voltage system.

	Positive Lead	Measurement / Action	Negative Lead	
	C1458A-B2	Ω	C1280-5	
ls th	e resistance le	ss than 5 ohms?		
Yes	GO to AO6	5		
Νο	REPLACE th CLEAR the	ne harness. diagnostic trouble codes	s (DTCs) and REPE	AT the self-test.
AO6 •	<b>CHECK FOR CO</b> Disconnect and Repair:	RRECT INVERTER SYSTE	<b>M CONTROLLER</b> em Controller (ISC	(ISC) OPERATION
	corrosion (	(install new connector or	terminals – clear	module pins)
	<ul> <li>damaged or bent pins – install new terminals/pins</li> </ul>			
• • • Is th	• pushed-ou Reconnect the I Connect Transn Ignition ON. Operate the sys e concern still	at pins – install new pins a inverter System Controlle nission Sensor Speed Res stem and determine if the <b>present?</b>	as necessary er (ISC) connector solver C1280 . e concern is still p	s. Make sure they seat and latch correctly. present.
Yes	CHECK OAS TSB (Techn FSA (Field S FOLLOW th Pinpoint Te	SIS (Online Automotive Se ical Service Bulletin) , GSI Service Action) . If a servic ne service article instructi est V(In step V3 continue	ervice Informatio B (General Service ce article exists fo ons. If no service through to step V	n System) for any applicable service articles e Bulletin), SSM (special service message) of r this concern, DISCONTINUE this test and articles address this concern, GO to 4 regardless of DTC presence.)

Yes	O to AP2	
No	PDATE the Inverter System Controller (ISC) to the latest calibration level.	
AP2 CH	( FOR DTC (DIAGNOSTIC TROUBLE CODE) P0C61	
• lgr • Us (D <sup>-1</sup> <b>Was DT</b>	n ON. a diagnostic scan tool, retrieve all Inverter System Controller (ISC) diagnostic trouble codes <b>liagnostic trouble code) P0C61 read from the Inverter System Controller (ISC)?</b>	
Yes	O to AP3	
Νο	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.	
AP3 VIS	n OFF.	
<ul> <li>De</li> <li>RE</li> <li>Ba</li> <li>Re</li> <li>Vis</li> <li>Ma</li> </ul>	ergize the high voltage system. to: High Voltage System De-energizing - Full Hybrid Electric Vehicle (FHEV)(414-03A High Voltag y, Mounting and Cables, General Procedures). /e the high voltage traction battery service disconnect plug. y inspect all the low voltage cables. sure all the low voltage connectors are correctly and securely connected.	
• Exa	ne all the low voltage cables and connectors for damaged, burned or overheated insulation and or broken connections.	
ls a cor	n 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, GO to Pinpoint Test V(In step V3 continue through to step V4 regardless of DTC presence.)
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 AQ : P0C62**

# 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-	Drive Motor 'B' Position Sensor	This DTC (diagnostic trouble code) sets
board diagnostic control	Circuit 'B' High: No Sub Type	when a short to power is detected in the
module C) P0C62:00	Information	generator resolver circuit.

## **Possible Sources**

- Wiring, terminals or connectors
- Front module (electric motor)
- Inverter System Controller (ISC) calibration

## AQ1 CHECK THE INVERTER SYSTEM CONTROLLER (ISC) CALIBRATION LEVEL

ls a c	ls a concern present?				
Yes	REPAIR as r CLEAR the	REPAIR as necessary. CLEAR the diagnostic trouble codes (DTCs) and REPEAT the self-test.			
No	GO to AQ4	Į.			
AQ4	CHECK THE GS2	2 CIRCUIT FOR A SHORT	TO VOLTAGE		
• • •	Disconnect Inve Disconnect Trar Ignition ON. Measure and re	erter System Controller (l nsmission Sensor Speed l ecord:	SC) C1458A . Resolver C1280 .		
	Positive Lead	Measurement / Action	Negative Lead		
	C1458A-A2	Ÿ	Ground		
ls an	y voltage prese	ent?			
Yes       REPLACE the harness. CLEAR the diagnostic trouble codes (DTCs) and REPEAT the self-test.         No       GO to AQ5					
AQ5 CHECK FOR CORRECT INVERTER SYSTEM CONTROLLER (ISC) OPERATION					
•	Disconnect and Repair:	inspect all Inverter Syste	em Controller (ISC) (	connectors.	
	<ul> <li>corrosion (install new connector or terminals – clean module pins)</li> </ul>				
	<ul> <li>damaged or bent pins – install new terminals/pins</li> </ul>				

- pushed-out pins install new pins as necessary
- Reconnect the Inverter System Controller (ISC) connectors. Make sure they seat and latch correctly.

## AR1 CHECK THE INVERTER SYSTEM CONTROLLER (ISC) CALIBRATION LEVEL

# NOTE

Wiring overlays or repinning of circuits are NOT appropriate for DTC P0C6B due to risk of hardware damage.

• Verify the Inverter System Controller (ISC) is at the latest calibration level.

Is the Inverter System Controller (ISC) at the latest calibration level?

Yes	GO to AR2		
No	UPDATE the Inverter S	ystem Controller (ISC) to the latest	calibration level.

## AR2 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) P0C6B

- Ignition ON.
- Using a diagnostic scan tool, retrieve all Inverter System Controller (ISC) diagnostic trouble codes (DTCs).

## Was DTC (diagnostic trouble code) P0C6B read from the Inverter System Controller (ISC)?

Yes	GO to AR3	
Νο	The system set due to h	is operating correctly at this time. The DTC (diagnostic trouble code) may have been igh network traffic or an intermittent fault condition.

## AR3 VISUAL INSPECTION OF THE LOW VOLTAGE SYSTEM

- Ignition OFF.
- De-energize the high voltage system.
   REFER to: High Voltage System De-energizing Full Hybrid Electric Vehicle (FHEV)(414-03A High Voltage Battery, Mounting and Cables, General Procedures).
- Remove the high voltage traction battery service disconnect plug.
- Visually inspect all the low voltage cables.
- Make sure all the low voltage connectors are correctly and securely connected.