

# Your Ultimate Source for OEM Repair Manuals

FactoryManuals.net is a great resource for anyone who wants to save money on repairs by doing their own work. The manuals provide detailed instructions and diagrams that make it easy to understand how to fix a vehicle.

## 1991 FORD Scorpio Sedan OEM Service and Repair Workshop Manual

[Go to manual page](#)

|   |          |   |  |
|---|----------|---|--|
| SOBDMC (secondary on-board diagnostic control module C) | C1013:00 | Brake System Pressure: No Sub Type Information                                | <a href="#">GO to Pinpoint Test BS</a> |
| SOBDMC (secondary on-board diagnostic control module C) | C101F:00 | Generic Valve Failure: No Sub Type Information                                | <a href="#">GO to Pinpoint Test BS</a> |
| SOBDMC (secondary on-board diagnostic control module C) | C113A:62 | Wakeup Control: Signal Compare Failure  | <a href="#">GO to Pinpoint Test A</a>  |
| SOBDMC (secondary on-board diagnostic control module C) | P0560:00 | System Voltage: No Sub Type Information                                       | <a href="#">GO to Pinpoint Test BV</a> |
| SOBDMC (secondary on-board diagnostic control module C) | P0562:00 | System Voltage Low: No Sub Type Information                                   | <a href="#">GO to Pinpoint Test BV</a> |
| SOBDMC (secondary on-board diagnostic control module C) | P0563:00 | System Voltage High: No Sub Type Information                                  | <a href="#">GO to Pinpoint Test C</a>  |
| SOBDMC (secondary on-board diagnostic control module C) | P0600:49 | Serial Communication Link: Internal Electronic Failure                        | <a href="#">GO to Pinpoint Test D</a>  |
| SOBDMC (secondary on-board diagnostic control module C) | P0600:88 | Serial Communication Link: Bus Off  | <a href="#">GO to Pinpoint Test D</a>  |
| SOBDMC (secondary on-board diagnostic control module C) | P0607:00 | Control Module Performance: No Sub Type Information                           | <a href="#">GO to Pinpoint Test E</a>  |
| SOBDMC (secondary on-board diagnostic control module C) | P060A:44 | Internal Control Module Monitoring Processor Performance: Data Memory Failure | <a href="#">GO to Pinpoint Test F</a>  |

|   |          |  |  |
|---|----------|--|--|
| SOBDMC (secondary on-board diagnostic control module C) | P0613:86 | TCM Processor: Signal Invalid  | <a href="#">GO to Pinpoint Test J</a>  |
| SOBDMC (secondary on-board diagnostic control module C) | P061A:92 | Internal Control Module Torque Performance: Performance or Incorrect Operation                   | <a href="#">GO to Pinpoint Test BW</a> |
| SOBDMC (secondary on-board diagnostic control module C) | P061A:93 | Internal Control Module Torque Performance: No Operation   | <a href="#">GO to Pinpoint Test BW</a> |
| SOBDMC (secondary on-board diagnostic control module C) | P0634:00 | Control Module Internal Temperature "A" Too High: No Sub Type Information                        | <a href="#">GO to Pinpoint Test K</a>  |
| SOBDMC (secondary on-board diagnostic control module C) | P064F:00 | Unauthorized Software/Calibration Detected: No Sub Type Information                              | <a href="#">GO to Pinpoint Test L</a>  |
| SOBDMC (secondary on-board diagnostic control module C) | P06A6:00 | Sensor Reference Voltage "A" Circuit Range/Performance: No Sub Type Information                  | <a href="#">GO to Pinpoint Test B</a>  |
| SOBDMC (secondary on-board diagnostic control module C) | P06A7:00 | Sensor Reference Voltage "B" Circuit Range/Performance: No Sub Type Information                  | <a href="#">GO to Pinpoint Test B</a>  |
| SOBDMC (secondary on-board diagnostic control module C) | P06A9:00 | Sensor Reference Voltage "D" Circuit Range/Performance: No Sub Type Information                  | <a href="#">GO to Pinpoint Test M</a>  |
| SOBDMC (secondary on-board diagnostic control module C) | P06B1:00 | Sensor Power Supply "A" Circuit Low: No Sub Type Information                                     | <a href="#">GO to Pinpoint Test B</a>  |
| SOBDMC (secondary on-board diagnostic control module C) | P06B8:00 | Internal Control Module Non-Volatile Random Access Memory (NVRAM) Error: No Sub Type Information | <a href="#">GO to Pinpoint Test N</a>  |

|   |          |   |  |
|---|----------|---|--|
| SOBDMC (secondary on-board diagnostic control module C) | P0A3A:00 | Generator Temperature Sensor Circuit Intermittent: No Sub Type Information      | <a href="#">GO to Pinpoint Test T</a>  |
| SOBDMC (secondary on-board diagnostic control module C) | P0A3C:94 | Drive Motor "A" Inverter Over Temperature: Unexpected Operation                 | <a href="#">GO to Pinpoint Test U</a>  |
| SOBDMC (secondary on-board diagnostic control module C) | P0A47:00 | Drive Motor "B" Position Sensor Circuit Low: No Sub Type Information            | <a href="#">GO to Pinpoint Test V</a>  |
| SOBDMC (secondary on-board diagnostic control module C) | P0A4C:00 | Generator Position Sensor Circuit Range/Performance: No Sub Type Information    | <a href="#">GO to Pinpoint Test W</a>  |
| SOBDMC (secondary on-board diagnostic control module C) | P0A4D:00 | Generator Position Sensor Circuit Low: No Sub Type Information                  | <a href="#">GO to Pinpoint Test X</a>  |
| SOBDMC (secondary on-board diagnostic control module C) | P0A50:92 | Generator Position Sensor Circuit Overspeed: Performance Or Incorrect Operation | <a href="#">GO to Pinpoint Test Y</a>  |
| SOBDMC (secondary on-board diagnostic control module C) | P0A6F:00 | Generator Phase U Current: No Sub Type Information                              | <a href="#">GO to Pinpoint Test Z</a>  |
| SOBDMC (secondary on-board diagnostic control module C) | P0A71:00 | Generator Phase U Current High: No Sub Type Information                         | <a href="#">GO to Pinpoint Test AA</a> |
| SOBDMC (secondary on-board diagnostic control module C) | P0A72:00 | Generator Phase V Current: No Sub Type Information                              | <a href="#">GO to Pinpoint Test Z</a>  |
| SOBDMC (secondary on-board diagnostic control module C) | P0A74:00 | Generator Phase V Current High: No Sub Type Information                         | <a href="#">GO to Pinpoint Test AA</a> |

|   |          |  |  |
|---|----------|--|--|
| SOBDMC (secondary on-board diagnostic control module C) | P0C5A:00 | Drive Motor "B" Position Sensor Circuit "A": No Sub Type Information             | <a href="#">GO to Pinpoint Test AI</a> |
| SOBDMC (secondary on-board diagnostic control module C) | P0C5C:00 | Drive Motor "B" Position Sensor Circuit "A" Low: No Sub Type Information         | <a href="#">GO to Pinpoint Test AJ</a> |
| SOBDMC (secondary on-board diagnostic control module C) | P0C5D:00 | Drive Motor "B" Position Sensor Circuit "A" High: No Sub Type Information        | <a href="#">GO to Pinpoint Test AK</a> |
| SOBDMC (secondary on-board diagnostic control module C) | P0C5F:00 | Drive Motor "B" Position Sensor Circuit "B": No Sub Type Information             | <a href="#">GO to Pinpoint Test AO</a> |
| SOBDMC (secondary on-board diagnostic control module C) | P0C61:00 | Drive Motor "B" Position Sensor Circuit "B" Low: No Sub Type Information         | <a href="#">GO to Pinpoint Test AP</a> |
| SOBDMC (secondary on-board diagnostic control module C) | P0C62:00 | Drive Motor "B" Position Sensor Circuit "B" High: No Sub Type Information        | <a href="#">GO to Pinpoint Test AQ</a> |
| SOBDMC (secondary on-board diagnostic control module C) | P0C64:00 | Generator Position Sensor Circuit A: No Sub Type Information                     | <a href="#">GO to Pinpoint Test V</a>  |
| SOBDMC (secondary on-board diagnostic control module C) | P0C65:00 | Generator Position Sensor Circuit "A" Range/Performance: No Sub Type Information | <a href="#">GO to Pinpoint Test AH</a> |
| SOBDMC (secondary on-board diagnostic control module C) | P0C66:00 | Generator Position Sensor Circuit "A" Low: No Sub Type Information               | <a href="#">GO to Pinpoint Test AL</a> |
| SOBDMC (secondary on-board diagnostic control module C) | P0C67:00 | Generator Position Sensor Circuit "A" High: No Sub Type Information              | <a href="#">GO to Pinpoint Test AM</a> |

|   |          |   |  |
|---|----------|---|--|
| SOBDMC (secondary on-board diagnostic control module C) | P1A0E:61 | Hybrid Powertrain Control Module - Motor Disabled: Signal Calculation Failure   | <a href="#">GO to Pinpoint Test I</a>  |
| SOBDMC (secondary on-board diagnostic control module C) | P1A0E:62 | Hybrid Powertrain Control Module - Motor Disabled: Signal Compare Failure       | <a href="#">GO to Pinpoint Test AV</a> |
| SOBDMC (secondary on-board diagnostic control module C) | P1A0E:64 | Hybrid Powertrain Control Module - Motor Disabled: Signal Plausibility Failure  | <a href="#">GO to Pinpoint Test AV</a> |
| SOBDMC (secondary on-board diagnostic control module C) | P1A0E:96 | Hybrid Powertrain Control Module - Motor Disabled: Component Internal Failure   | <a href="#">GO to Pinpoint Test AV</a> |
| SOBDMC (secondary on-board diagnostic control module C) | P1A40:00 | ABS Control Module Configuration Not Complete: No Sub Type Information          | <a href="#">GO to Pinpoint Test BS</a> |
| SOBDMC (secondary on-board diagnostic control module C) | P1A41:00 | ABS Control Module Programming Error: No Sub Type Information                   | <a href="#">GO to Pinpoint Test BS</a> |
| SOBDMC (secondary on-board diagnostic control module C) | P2531:00 | Ignition Switch Run Position Circuit Low: No Sub Type Information               | <a href="#">GO to Pinpoint Test BT</a> |
| SOBDMC (secondary on-board diagnostic control module C) | P2533:1F | Ignition Switch On/Start Position Circuit: Circuit Intermittent                 | <a href="#">GO to Pinpoint Test BT</a> |
| SOBDMC (secondary on-board diagnostic control module C) | P2533:62 | Ignition Switch On/Start Position Circuit: Signal Compare Failure               | <a href="#">GO to Pinpoint Test BA</a> |
| SOBDMC (secondary on-board diagnostic control module C) | P2C94:00 | Hybrid/EV Battery Contactor Control Supply Circuit Low: No Sub Type Information | <a href="#">GO to Pinpoint Test BU</a> |

|   |          |  |  |
|---|----------|--|--|
| SOBDMC (secondary on-board diagnostic control module C) | U0140:00 | Lost Communication With Body Control Module: No Sub Type Information                           | <a href="#">GO to Pinpoint Test BF</a> |
| SOBDMC (secondary on-board diagnostic control module C) | U0140:87 | Lost Communication With Body Control Module: Missing Message                                   | <a href="#">GO to Pinpoint Test BS</a> |
| SOBDMC (secondary on-board diagnostic control module C) | U0143:00 | Lost Communication With Body Control Module "C": No Sub Type Information                       | <a href="#">GO to Pinpoint Test BG</a> |
| SOBDMC (secondary on-board diagnostic control module C) | U0151:00 | Lost Communication With Restraints Control Module: No Sub Type Information                     | <a href="#">GO to Pinpoint Test BH</a> |
| SOBDMC (secondary on-board diagnostic control module C) | U0151:87 | Lost Communication With Restraints Control Module: Missing Message                             | <a href="#">GO to Pinpoint Test BS</a> |
| SOBDMC (secondary on-board diagnostic control module C) | U0155:00 | Lost Communication With Instrument Panel Cluster (IPC) Control Module: No Sub Type Information | <a href="#">GO to Pinpoint Test BI</a> |
| SOBDMC (secondary on-board diagnostic control module C) | U0164:00 | Lost Communication With HVAC Control Module: No Sub Type Information                           | <a href="#">GO to Pinpoint Test BJ</a> |
| SOBDMC (secondary on-board diagnostic control module C) | U016A:00 | Lost Communication With Global Positioning System Module: No Sub Type Information              | <a href="#">GO to Pinpoint Test BY</a> |
| SOBDMC (secondary on-board diagnostic control module C) | U0198:00 | Lost Communication With Telematic Control Module: No Sub Type Information                      | <a href="#">GO to Pinpoint Test BZ</a> |
| SOBDMC (secondary on-board diagnostic control module C) | U019B:00 | Lost Communication With Battery Charger Control Module "A": No Sub Type Information            | <a href="#">GO to Pinpoint Test CA</a> |

|   |          |   |  |
|---|----------|---|--|
| SOBDMC (secondary on-board diagnostic control module C) | U069E:87 | Lost Communication With Coolant Heater "A": Missing Message   | <a href="#">GO to Pinpoint Test CD</a> |
| SOBDMC (secondary on-board diagnostic control module C) | U1011:86 | Invalid Internal Control Module Monitoring Data Received from ECM/PCM: Signal Invalid                                     | <a href="#">GO to Pinpoint Test BN</a> |
| SOBDMC (secondary on-board diagnostic control module C) | U1012:86 | Invalid Internal Control Module Monitoring Data Received from Anti-Lock Brake System (ABS) Control Module: Signal Invalid | <a href="#">GO to Pinpoint Test BO</a> |
| SOBDMC (secondary on-board diagnostic control module C) | U1027:00 | ABS Control Module Lost Communication With ECM/PCM "A": No Sub Type Information   | <a href="#">GO to Pinpoint Test BS</a> |
| SOBDMC (secondary on-board diagnostic control module C) | U1028:00 | ABS Control Module Received Invalid Data from ECM/PCM "A": No Sub Type Information  | <a href="#">GO to Pinpoint Test BS</a> |
| SOBDMC (secondary on-board diagnostic control module C) | U2100:00 | Initial Configuration Not Complete: No Sub Type Information   | <a href="#">GO to Pinpoint Test BP</a> |
| SOBDMC (secondary on-board diagnostic control module C) | U301B:00 | Control Module Wake-up Circuit "A" Low: No Sub Type Information   | <a href="#">GO to Pinpoint Test BQ</a> |
| SOBDMC (secondary on-board diagnostic control module C) | U351B:00 | High Voltage System Interlock Circuit "D" Low: No Sub Type Information  | <a href="#">GO to Pinpoint Test BR</a> |

## Pinpoint Tests

### PINPOINT TEST A : C113A

#### NOTE

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



REFER to: [Body Control Module \(BCM\)](#)  
(419-10 Multifunction Electronic Modules, Removal and Installation).

## A2 CHECK THE BCM (BODY CONTROL MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

### NOTE

After a BCM self-test, DTC C113A:62 will set in the Inverter System Controller (ISC).

### NOTE

DTC C113A-11 which sets in the BCM is different from DTC C113A-62 which sets in the Inverter System Controller (ISC).

- Ignition ON.
- Using a diagnostic scan tool, clear all diagnostic trouble codes (DTCs) from all modules.
- Using a diagnostic scan tool, carry out the BCM (body control module) self-test.

**Was DTC (diagnostic trouble code) C113A:11 set in the BCM (body control module) ?**

|            |                          |
|------------|--------------------------|
| <b>Yes</b> | GO to <a href="#">A3</a> |
|------------|--------------------------|

|           |   |
|-----------|---|
| <b>No</b> | The As-Built data was successfully programmed during PMI (programmable module installation) . |
|-----------|---|

## A3 CHECK THE PCM (POWERTRAIN CONTROL MODULE) FOR A SHORT TO GROUND

- Ignition OFF.
- Disconnect PCM (powertrain control module) C175B .
- Ignition ON.
- Using a diagnostic scan tool, clear the BCM (body control module) diagnostic trouble codes (DTCs).
- Wait 10 seconds.
- Using a diagnostic scan tool, carry out the BCM (body control module) self-test.

**Was DTC (diagnostic trouble code) C113A:11 set in the BCM (body control module) ?**

|            |                          |
|------------|--------------------------|
| <b>Yes</b> | GO to <a href="#">A4</a> |
|------------|--------------------------|



**Are the resistances greater than 10,000 ohms?**

|            |                          |
|------------|--------------------------|
| <b>Yes</b> | GO to <a href="#">A6</a> |
|------------|--------------------------|

|           |                     |
|-----------|---------------------|
| <b>No</b> | REPAIR the circuit. |
|-----------|---------------------|

#### **A6 CHECK THE WAKE-UP SIGNAL CIRCUITS FOR A SHORT TO VOLTAGE**

- Ignition ON.
- Measure:

| Positive Lead | Measurement / Action  | Negative Lead |
|---------------|---|---------------|
| C175B-73      |    | Ground        |
| C1458A-K1     |  | Ground        |

**Is any voltage present?**

|            |                          |
|------------|--------------------------|
| <b>Yes</b> | GO to <a href="#">A7</a> |
|------------|--------------------------|

|           |                     |
|-----------|---------------------|
| <b>No</b> | REPAIR the circuit. |
|-----------|---------------------|

#### **A7 CHECK THE WAKE-UP SIGNAL CIRCUITS FOR AN OPEN**

- Ignition OFF.
- Measure:

| Positive Lead | Measurement / Action | Negative Lead |
|---------------|----------------------|---------------|
|---------------|----------------------|---------------|