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## 2011 MAZDA MX-5 / Miata OEM Service and Repair Workshop Manual

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# DTC U3001:04 [ELECTRIC PARKING BRAKE CONTROL MODULE]

SM2898090

id04023425580

| Description | Electric parking brake control module internal malfunction |
|---|---|
| Detection condition | • Malfunction in the electric parking brake control module is detected. |
| Fail-safe | Not applicable |
| Possible cause | • Electric parking brake control module malfunction |
| System wiring diagram | Not applicable |

## Diagnostic Procedure

| Step | Inspection | Results | Action |
|---|---|---|---|
| 1 | VERIFY IF THE ELECTRIC PARKING BRAKE WARNING LIGHT IS TURNED ON<br>• Verify if the electric parking brake warning light is turned on.<br>• Is the electric parking brake warning light turned on? | Yes | Go to the next step. |
| | | No | Replace the electric parking brake control module, then go to the next step.<br>(See ELECTRIC PARKING BRAKE CONTROL MODULE REMOVAL/INSTALLATION.) |
| 2 | VERIFY IF MALFUNCTIONING LOCATION IS ELECTRIC PARKING BRAKE CONTROL MODULE DEPENDING ON REPEATABILITY<br>• Clear the DTC for the electric parking brake control module using the M-MDS. (See CLEARING DTC [ELECTRIC PARKING BRAKE CONTROL MODULE].)<br>• Perform the following procedure 3 times or more.<br>— Pull up the electric parking brake switch to operate the electric parking brake.<br>— Press down the electric parking brake switch to release the electric parking brake.<br>• Retrieve the electric parking brake control module DTCs using the M-MDS. (See DTC INSPECTION [ELECTRIC PARKING BRAKE CONTROL MODULE].)<br>• Is the same DTC displayed? | Yes | Replace the electric parking brake control module, then go to the next step.<br>(See ELECTRIC PARKING BRAKE CONTROL MODULE REMOVAL/INSTALLATION.) |
| | | No | Go to the next step. |
| 3 | VERIFY IF OTHER DTCs DISPLAYED<br>• Are any other DTCs displayed? | Yes | Repair or replace the malfunctioning part according to the applicable DTC troubleshooting.<br>(See DTC TABLE [ELECTRIC PARKING BRAKE CONTROL MODULE].) |
| | | No | DTC troubleshooting completed. |

| Step | Inspection | Results | Action |
|---|---|---|---|
| 5 | **VERIFY ELECTRIC PARKING BRAKE CONTROL MODULE POWER SUPPLY VOLTAGE**<br>• Always reconnect all disconnected connectors.<br>• Connect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.)<br>• Measure the voltage at the following terminals (wiring harness-side):<br>— Electric parking brake control module terminal 1C<br>— Electric parking brake control module terminal 1H<br>• Is the voltage B+? | Yes | Go to the next step. |

# DTC U3003:17 [ELECTRIC PARKING BRAKE CONTROL MODULE]

SM2898092

id04023425600

| | |
|---|---|
| **Description** | **Electric parking brake control module high power supply voltage input** |
| Detection condition | • Power supply voltage of 16 V or more is detected in the power supply circuit of the electric parking brake control module. |
| Fail-safe | Not applicable |
| Possible cause | • DTCs are stored in the PCM.<br>• Battery malfunction<br>• Generator malfunction<br>• Electric parking brake control module malfunction |
| System wiring diagram | Not applicable |

## Diagnostic Procedure

| Step | Inspection | Results | Action |
|---|---|---|---|
| 1 | **VERIFY PCM DTCs**<br>• Retrieve the PCM DTCs using the M-MDS. (See ON-BOARD DIAGNOSTIC TEST [PCM (SKYACTIV-G 2.5 (WITHOUT CYLINDER DEACTIVATION))].) (See ON-BOARD DIAGNOSTIC TEST [PCM (SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION))].) (See ON-BOARD DIAGNOSTIC TEST [PCM (SKYACTIV-D 2.2)].) (See ON-BOARD DIAGNOSTIC TEST [PCM (SKYACTIV-G 2.5T)].)<br>• Are any DTCs displayed? | Yes | Repair or replace the malfunctioning part according to the applicable DTC troubleshooting.<br>(See DTC TABLE [PCM (SKYACTIV-G 2.5 (WITHOUT CYLINDER DEACTIVATION))].)<br>(See DTC TABLE [PCM (SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION))].)<br>(See DTC TABLE [PCM (SKYACTIV-D 2.2)].)<br>(See DTC TABLE [PCM (SKYACTIV-G 2.5T)].) |
| | | No | Go to the next step. |
| 2 | **INSPECT BATTERY**<br>• Inspect the battery. (See BATTERY INSPECTION.)<br>• Is the battery normal? | Yes | Go to the next step. |
| | | No | Replace the battery, then go to Step 4.<br>(See BATTERY REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITHOUT CYLINDER DEACTIVATION)].)<br>(See BATTERY REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)].)<br>(See BATTERY REMOVAL/INSTALLATION [SKYACTIV-D 2.2].)<br>(See BATTERY REMOVAL/INSTALLATION [SKYACTIV-G 2.5T].) |

| Step | Inspection | Results | Action |
|---|---|---|---|
| 1 | VERIFY PCM DTCs<br>• Retrieve the PCM DTCs using the M-MDS. (See ON-BOARD DIAGNOSTIC TEST [PCM (SKYACTIV-G 2.5 (WITHOUT CYLINDER DEACTIVATION))].) (See ON-BOARD DIAGNOSTIC TEST [PCM (SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION))].) (See ON-BOARD DIAGNOSTIC TEST [PCM (SKYACTIV-D 2.2)].) (See ON-BOARD DIAGNOSTIC TEST [PCM (SKYACTIV-G 2.5T)].)<br>• Are any DTCs displayed? | Yes | Repair or replace the malfunctioning part according to the applicable DTC troubleshooting.<br>(See DTC TABLE [PCM (SKYACTIV-G 2.5 (WITHOUT CYLINDER DEACTIVATION))].)<br>(See DTC TABLE [PCM (SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION))].)<br>(See DTC TABLE [PCM (SKYACTIV-D 2.2)].)<br>(See DTC TABLE [PCM (SKYACTIV-G 2.5T)].) |
| | | No | Go to the next step. |
| 2 | INSPECT BATTERY<br>• Inspect the battery. (See BATTERY INSPECTION.)<br>• Is the battery normal? | Yes | Go to the next step. |
| | | No | Recharge or replace the battery, then go to Step 6.<br>(See BATTERY RECHARGING.)<br>(See BATTERY REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITHOUT CYLINDER DEACTIVATION)].)<br>(See BATTERY REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)].)<br>(See BATTERY REMOVAL/INSTALLATION [SKYACTIV-D 2.2].)<br>(See BATTERY REMOVAL/INSTALLATION [SKYACTIV-G 2.5T].) |
| 3 | INSPECT GENERATOR<br>• Inspect the generator. (See GENERATOR INSPECTION [SKYACTIV-G 2.5 (WITHOUT CYLINDER DEACTIVATION)].) (See GENERATOR INSPECTION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)].) (See GENERATOR INSPECTION [SKYACTIV-D 2.2].) (See GENERATOR INSPECTION [SKYACTIV-G 2.5T].)<br>• Is the generator normal? | Yes | Go to the next step. |
| | | No | Replace the generator, then go to Step 6.<br>(See GENERATOR REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITHOUT CYLINDER DEACTIVATION)].)<br>(See GENERATOR REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)].)<br>(See GENERATOR REMOVAL/INSTALLATION [SKYACTIV-D 2.2].)<br>(See GENERATOR REMOVAL/INSTALLATION [SKYACTIV-G 2.5T].) |
| 4 | INSPECT ELECTRIC PARKING BRAKE CONTROL MODULE CONNECTOR CONDITION<br>• Switch the ignition off.<br>• Disconnect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.)<br>• Disconnect the electric parking brake switch connector.<br>• Inspect the connector engagement and connection condition and inspect the terminals for damage, deformation, corrosion, or disconnection.<br>• Is the connector normal? | Yes | Go to the next step. |
| | | No | Repair or replace the connector, then go to Step 6. |

| Step | Inspection | Results | Action |
|---|---|---|---|
| | | | • Repair or replace the malfunctioning part.<br>**If there is no common connector:**<br>• Repair or replace the wiring harness which has an open circuit.<br>Go to the next step. |
| 6 | **VERIFY THAT REPAIRS HAVE BEEN COMPLETED**<br>• Always reconnect all disconnected connectors.<br>• Connect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.)<br>• Clear the DTC for the electric parking brake control module using the M-MDS. (See CLEARING DTC [ELECTRIC PARKING BRAKE CONTROL MODULE].)<br>• Perform the following procedure 3 times or more.<br>— Pull up the electric parking brake switch to operate the electric parking brake.<br>— Press down the electric parking brake switch to release the electric parking brake.<br>• Retrieve the electric parking brake control module DTCs using the M-MDS. (See DTC INSPECTION [ELECTRIC PARKING BRAKE CONTROL MODULE].)<br>• Is the same DTC displayed? | Yes | Repeat the inspection from Step 1.<br>• If the malfunction recurs, replace the electric parking brake control module. (See ELECTRIC PARKING BRAKE CONTROL MODULE REMOVAL/INSTALLATION.)<br>Go to the next step. |
| | | No | Go to the next step. |
| 7 | **VERIFY IF OTHER DTCs DISPLAYED**<br>• Are any other DTCs displayed? | Yes | Repair or replace the malfunctioning part according to the applicable DTC troubleshooting.<br>(See DTC TABLE [ELECTRIC PARKING BRAKE CONTROL MODULE].) |
| | | No | DTC troubleshooting completed. |

| Step | Inspection | Results | Action |
|---|---|---|---|
| 5 | **VERIFY ELECTRIC PARKING BRAKE CONTROL MODULE POWER SUPPLY VOLTAGE**<br>• Always reconnect all disconnected connectors.<br>• Connect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.)<br>• Measure the voltage at the electric parking brake control module terminal 1C (wiring harness-side).<br>• Is the voltage B+? | Yes | Go to the next step. |

# DTC U300A:62 [ELECTRIC PARKING BRAKE CONTROL MODULE]

SM2898095

id04023425650

| Description | Ignition switch status mismatch |
|---|---|
| Detection condition | • Electric parking brake control module detects the following mismatches.<br>— Condition of IG1 power supply supplied to instrument cluster<br>— Condition of IG1 power supply supplied to electric parking brake control module |
| Fail-safe | Not applicable |
| Possible cause | • DTCs are stored in the instrument cluster.<br>— Instrument cluster power supply circuit malfunction<br>— Instrument cluster malfunction<br>• Electric parking brake control module connector or terminal malfunction<br>• Electric parking brake control module power supply circuit (IG1) malfunction<br>— Short to ground in wiring harness between IG1 relay terminal C and electric parking brake control module terminal 1AB<br>— C/U IG1 15 A fuse malfunction<br>— Open circuit in wiring harness between IG1 relay terminal C and electric parking brake control module terminal 1AB<br>• Electric parking brake control module malfunction |

| Step | Inspection | Results | Action |
|---|---|---|---|
| 4 | VERIFY THAT REPAIRS HAVE BEEN COMPLETED<br>• Always reconnect all disconnected connectors.<br>• Connect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.)<br>• Clear the DTC for the electric parking brake control module using the M-MDS. (See CLEARING DTC [ELECTRIC PARKING BRAKE CONTROL MODULE].)<br>• Perform the following procedure 3 times or more.<br>— Pull up the electric parking brake switch to operate the electric parking brake.<br>— Press down the electric parking brake switch to release the electric parking brake.<br>• Retrieve the electric parking brake control module DTCs using the M-MDS. (See DTC INSPECTION [ELECTRIC PARKING BRAKE CONTROL MODULE].)<br>• Is the same DTC displayed? | Yes | Repeat the inspection from Step 1.<br>• If the malfunction recurs, replace the electric parking brake control module. (See ELECTRIC PARKING BRAKE CONTROL MODULE REMOVAL/INSTALLATION.)<br>Go to the next step. |
| | | No | Go to the next step. |
| 5 | VERIFY IF OTHER DTCs DISPLAYED<br>• Are any other DTCs displayed? | Yes | Repair or replace the malfunctioning part according to the applicable DTC troubleshooting. (See DTC TABLE [ELECTRIC PARKING BRAKE CONTROL MODULE].) |
| | | No | DTC troubleshooting completed. |

# DTC C1020:68 [ELECTRIC PARKING BRAKE CONTROL MODULE]

SM2898097

id04023425670

| Description | Error signal received from DSC HU/CM |
|---|---|
| Detection condition | • Electric parking brake control module receives the error signals from the DSC HU/CM after 5 s or more since ignition was switched ON (engine on). |
| Fail-safe | Not applicable |
| Possible cause | • DTCs are stored in the DSC HU/CM.<br>• DSC HU/CM malfunction |
| System wiring diagram | Not applicable |

## Diagnostic Procedure

| Step | Inspection | Results | Action |
|---|---|---|---|
| 1 | VERIFY DSC HU/CM DTCs<br>• Retrieve the DSC HU/CM DTCs using the M-MDS. (See DTC INSPECTION [DSC HU/CM].)<br>• Are any DTCs displayed? | Yes | Repair or replace the malfunctioning part according to the applicable DTC troubleshooting. (See DTC TABLE [DSC HU/CM].) |
| | | No | Go to the next step. |
| 2 | VERIFY THAT REPAIRS HAVE BEEN COMPLETED<br>• Clear the DTC for the electric parking brake control module using the M-MDS. (See CLEARING DTC [ELECTRIC PARKING BRAKE CONTROL MODULE].)<br>• Perform the following procedure 3 times or more.<br>— Pull up the electric parking brake switch to operate the electric parking brake.<br>— Press down the electric parking brake switch to release the electric parking brake.<br>• Retrieve the electric parking brake control module DTCs using the M-MDS. (See DTC INSPECTION [ELECTRIC PARKING BRAKE CONTROL MODULE].)<br>• Is the same DTC displayed? | Yes | Replace the DSC HU/CM, then go to the next step. (See DSC HU/CM REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITHOUT CYLINDER DEACTIVATION)].) (See DSC HU/CM REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)].) (See DSC HU/CM REMOVAL/INSTALLATION [SKYACTIV-D 2.2].) (See DSC HU/CM REMOVAL/INSTALLATION [SKYACTIV-G 2.5T].) |
| | | No | Go to the next step. |
| 3 | VERIFY IF OTHER DTCs DISPLAYED<br>• Are any other DTCs displayed? | Yes | Repair or replace the malfunctioning part according to the applicable DTC troubleshooting. (See DTC TABLE [ELECTRIC PARKING BRAKE CONTROL MODULE].) |
| | | No | DTC troubleshooting completed. |