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2016 MAZDA 3 / Axela Sedan OEM Service and Repair Workshop Manual

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Step	Inspection		Action
3	VERIFY THAT REPAIRS HAVE BEEN COMPLETED • Clear the DTC for the instrument cluster using the M-MDS. (See CLEARING DTC [INSTRUMENT CLUSTER].) • Switch the ignition ON (engine off or on) and wait for 20 s or more. • Retrieve the instrument cluster DTCs using the M-MDS. (See DTC INSPECTION [INSTRUMENT CLUSTER].) • Is the same DTC displayed?	Yes	Replace the instrument cluster, then go to the next step. (See INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)
		No	Go to the next step.
4	VERIFY IF OTHER DTCs DISPLAYED • Are any other DTCs displayed?	Yes	Repair or replace the malfunctioning part according to the applicable DTC troubleshooting. (See DTC TABLE [INSTRUMENT CLUSTER].)
		No	DTC troubleshooting completed.

Step	Inspection		Action
6	VERIFY THAT REPAIRS HAVE BEEN COMPLETED • Always reconnect all disconnected connectors. • Connect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.) • Clear the DTC for the instrument cluster using the M-MDS. (See CLEARING DTC [INSTRUMENT CLUSTER].) • Switch the ignition ON (engine off or on) and wait for 5 s or more. • Retrieve the instrument cluster DTCs using the M-MDS. (See DTC INSPECTION [INSTRUMENT CLUSTER].) • Is the same DTC displayed?	Yes	Repeat the inspection from Step 1. • If the malfunction recurs, replace the instrument cluster. (See INSTRUMENT CLUSTER REMOVAL/INSTALLATION.) Go to the next step.
		No	Go to the next step.
7	VERIFY IF OTHER DTCs DISPLAYED • Are any other DTCs displayed?	Yes	Repair or replace the malfunctioning part according to the applicable DTC troubleshooting. (See DTC TABLE [INSTRUMENT CLUSTER].)
		No	DTC troubleshooting completed.

Description	• U0001:88 — Module communication error (HS-CAN) • U0010:88 — Module communication error (MS-CAN) • U0100:00 — Communication error with PCM • U0101:00 — Communication error with TCM • U0104:00 — Communication error with radar unit • U0114:00 — Communication error with AWD control module • U0121:00 — Communication error with DSC HU/CM • U0128:00 — Communication error with electric parking brake control module • U0131:00 — Communication error with electric power steering (EPS) control module • U0140:00 — Communication error with front body control module (FBCM) • U0142:00 — Communication error with rear body control module (RBCM) • U0151:00 — Communication error with SAS control module • U0156:00 — Communication error with connectivity master unit (CMU) • U0158:00 — Communication error with active driving display • U0159:00 — Communication error with parking assist unit • U0182:00 — Communication error with auto leveling control module or adaptive front lighting system (AFS) control module • U0214:00 — Communication error with start stop unit • U0232:00 — Communication error with blind spot monitoring (BSM) control module (LH) • U0235:00 — Communication error with forward sensing camera (FSC) • U023A:00 — Communication error with forward sensing camera (FSC)

Possible cause	• Malfunction in CAN bus communication line • Malfunction in CAN line between PCM and instrument cluster • Malfunction in CAN line between TCM and instrument cluster • Malfunction in CAN line between radar unit and instrument cluster • Malfunction in CAN line between AWD control module and instrument cluster • Malfunction in CAN line between DSC HU/CM and instrument cluster • Malfunction in CAN line between electric parking brake control module and instrument cluster • Malfunction in CAN line between electric power steering (EPS) control module and instrument cluster • Malfunction in CAN line between front body control module (FBCM) and instrument cluster • Malfunction in CAN line between rear body control module (RBCM) and instrument cluster • Malfunction in CAN line between SAS control module and instrument cluster • Malfunction in CAN line between connectivity master unit (CMU) and instrument cluster • Malfunction in CAN line between active driving display and instrument cluster • Malfunction in CAN line between parking assist unit and instrument cluster • Malfunction in CAN line between auto leveling control module or adaptive front lighting system (AFS) control module and instrument cluster • Malfunction in CAN line between start stop unit and instrument cluster • Malfunction in CAN line between blind spot monitoring (BSM) control module (LH) and instrument cluster • Malfunction in CAN line between forward sensing camera (FSC) and instrument cluster
System wiring diagram	Not applicable

Diagnostic Procedure

• Perform the malfunction diagnosis according to the troubleshooting procedure for the multiplex communication system. (See CONTROLLER AREA NETWORK (CAN) MALFUNCTION DIAGNOSIS FLOW [TYPE-A (SKYACTIV-G 2.5)].) (See CONTROLLER AREA NETWORK (CAN) MALFUNCTION DIAGNOSIS FLOW [TYPE-A (SKYACTIV-G 2.5T, SKYACTIV-D 2.2)].) (See CONTROLLER AREA NETWORK (CAN) MALFUNCTION DIAGNOSIS FLOW [TYPE-B].)

DTC INSPECTION [INSTRUMENT CLUSTER]

SM2898885

id0902e896030

CMDTC Self Test

1.Connect the M-MDS to the DLC-2.

2.After the vehicle is identified, select the following items from the initialization screen of the M-MDS.

(1)Select “Self Test”.

(2)Select “All CMDTCs”.

3.Verify the DTC according to the directions on the screen.

• If any DTCs are displayed, perform troubleshooting according to the corresponding DTC inspection after recording the snapshot data. (See DTC TABLE [INSTRUMENT CLUSTER].)

4.After completion of repairs, clear all DTCs stored in the instrument cluster. (See CLEARING DTC [INSTRUMENT CLUSTER].)

ODDTC Self Test

1.Connect the M-MDS to the DLC-2.

2.After the vehicle is identified, select the following items from the initialization screen of the M-MDS.

(1)Select “Self Test”.

(2)Select “Modules”.

(3)Select “IC”.

3.Verify the DTC according to the directions on the screen.

• If any DTCs are displayed, perform troubleshooting according to the corresponding DTC inspection after recording the snapshot data. (See DTC TABLE [INSTRUMENT CLUSTER].)

4.After completion of repairs, clear all DTCs stored in the instrument cluster. (See CLEARING DTC [INSTRUMENT CLUSTER].)

Snapshot Data

CLEARING DTC [INSTRUMENT CLUSTER]

SM2898886

id0902e896040

CMDTC Memory Clearing Procedure

1.Connect the M-MDS to the DLC-2.

2.After the vehicle is identified, select the following items from the initialization screen of the M-MDS.

(1)Select “Self Test”.

(2)Select “All CMDTCs”.

3.Verify the DTC according to the directions on the screen.

4.Press the clear button on the DTC screen to clear the DTC.

5.Switch the ignition off.

6.Switch the ignition ON (engine off or on) and wait for 5 s or more.

7.Perform DTC inspection. (See DTC INSPECTION [INSTRUMENT CLUSTER].)

8.Verify that no DTCs are displayed.

ODDTC Memory Clearing Procedure

1.Connect the M-MDS to the DLC-2.

2.After the vehicle is identified, select the following items from the initialization screen of the M-MDS.

(1)Select “Self Test”.

(2)Select “Modules”.

(3)Select “IC”.

3.Verify the DTC according to the directions on the screen.

DTC No.	Warning/indicator light	Description	Fail-safe function	Drive cycle	Self test type*1	Memory function	Page
U0001:88	–	Module communication error (HS-CAN)	–	–	C, D	×	(See DTC U0001:88/U0010:88/U0100:00/U0101:00/U0104:00/U0114:00/U0121:00/U0128:00/U0131:00/U0140:00/U0142:00/U0151:00/U0156:00/U0158:00/U0159:00/U0182:00/U0214:00/U0232:00/U0235:00/U023A:00 [INSTRUMENT CLUSTER].)
U0010:88	–	Module communication error (MS-CAN)	–	–	C, D	×	
U0100:00	Illuminated/Flash	Communication error with PCM	–	–	C, D	×	
U0101:00	–	Communication error with TCM	–	–	C, D	×	
U0104:00 *2	Illuminated/Flash	Communication error with radar unit	–	–	C, D	×	
U0114:00 *3	–	Communication error with AWD control module	–	–	C, D	×	
U0121:00	Illuminated/Flash	Communication error with DSC HU/CM	–	–	C, D	×	
U0128:00	Illuminated/Flash	Communication error with electric parking brake control module	–	–	C, D	×	
U0131:00	Illuminated/Flash	Communication error with electric power steering (EPS) control module	–	–	C, D	×	
U0140:00	Illuminated/Flash	Communication error with front body control module (FBCM)	–	–	C, D	×	
U0142:00	–	Communication error with rear body control module (RBCM)	–	–	C, D	×	
U0151:00	Illuminated/Flash	Communication error with SAS control module	–	–	C, D	×	
U0156:00	Illuminated/Flash	Communication error with connectivity master unit (CMU)	–	–	C, D	×	
U0158:00 *4	–	Communication error with active driving display	–	–	C, D	×	
U0159:00 *9	Illuminated/Flash	Communication error with parking assist unit	–	–	C, D	×	
U0182:00 *5	Illuminated/Flash	Communication error with auto leveling control module or adaptive front lighting system (AFS) control module	–	–	C, D	×	

PID/DATA MONITOR INSPECTION [INSTRUMENT CLUSTER]

SM2898888

id0902e896060

1.Connect the M-MDS to the DLC-2.

2.After the vehicle is identified, select the following items from the initialization screen of the M-MDS.

(1)Select "DataLogger".

(2)Select "Modules".

(3)Select "IC".

3.Select the applicable PID from the PID table.

4.Verify the PID data according to the directions on the screen.

Note

• The PID data screen function is used for monitoring the calculated value of input/output signals in the module. Therefore, if the monitored value of the output parts is not within the specification, it is necessary to inspect the monitored value of input parts corresponding to the applicable output part control. In addition, because the system does not display an output part malfunction as an abnormality in the monitored value, it is necessary to inspect the output parts individually.
• When detecting DTCs, PIDs related to a malfunctioning system may not display even if the module is normal. Therefore, if a PID is not displayed, it is necessary to verify the DTC, perform malfunction diagnosis of the DTC that was detected, and do repairs.

*5:With lane departure warning system (LDWS)

*6:With tire pressure monitoring system (TPMS)

*7:With adaptive front lighting system (AFS)