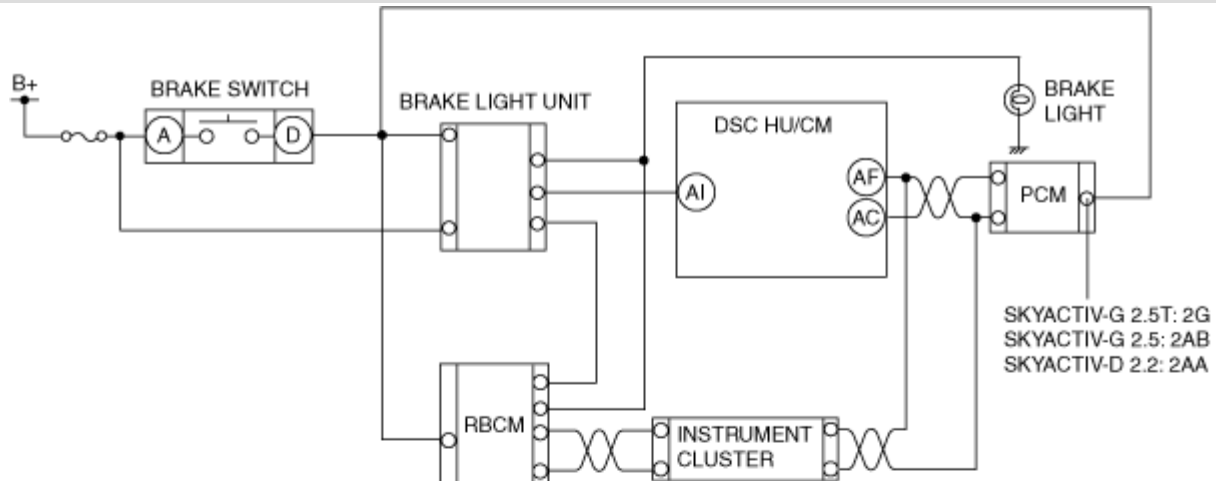


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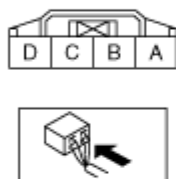
FactoryManuals.net is a great resource for anyone who wants to save money on repairs by doing their own work. The manuals provide detailed instructions and diagrams that make it easy to understand how to fix a vehicle.

2012 MAZDA 3 / Axela Sedan OEM Service and Repair Workshop Manual

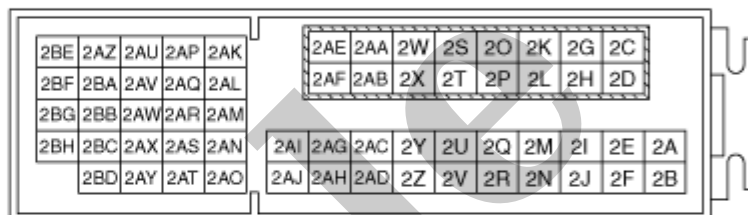
[Go to manual page](#)



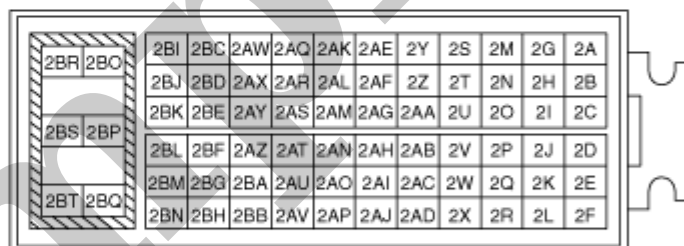
BRAKE SWITCH WIRING
HARNESS-SIDE CONNECTOR



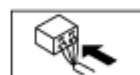
PCM
WIRING HARNESS-SIDE CONNECTOR



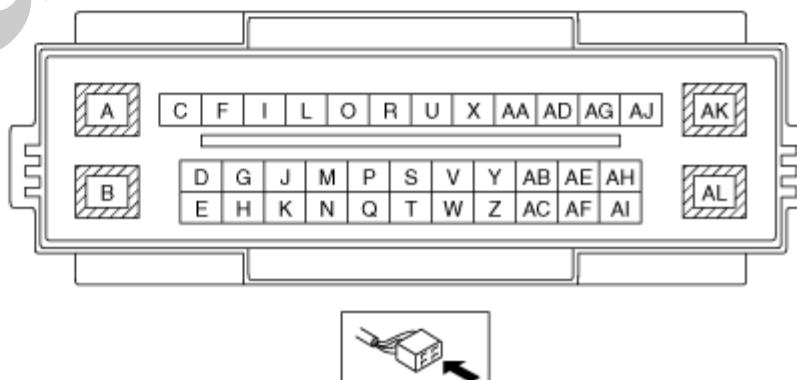
(SKYACTIV-G 2.5T/SKYACTIV-D 2.2)



(SKYACTIV-G 2.5)



DSC HU/CM WIRING HARNESS-SIDE CONNECTOR

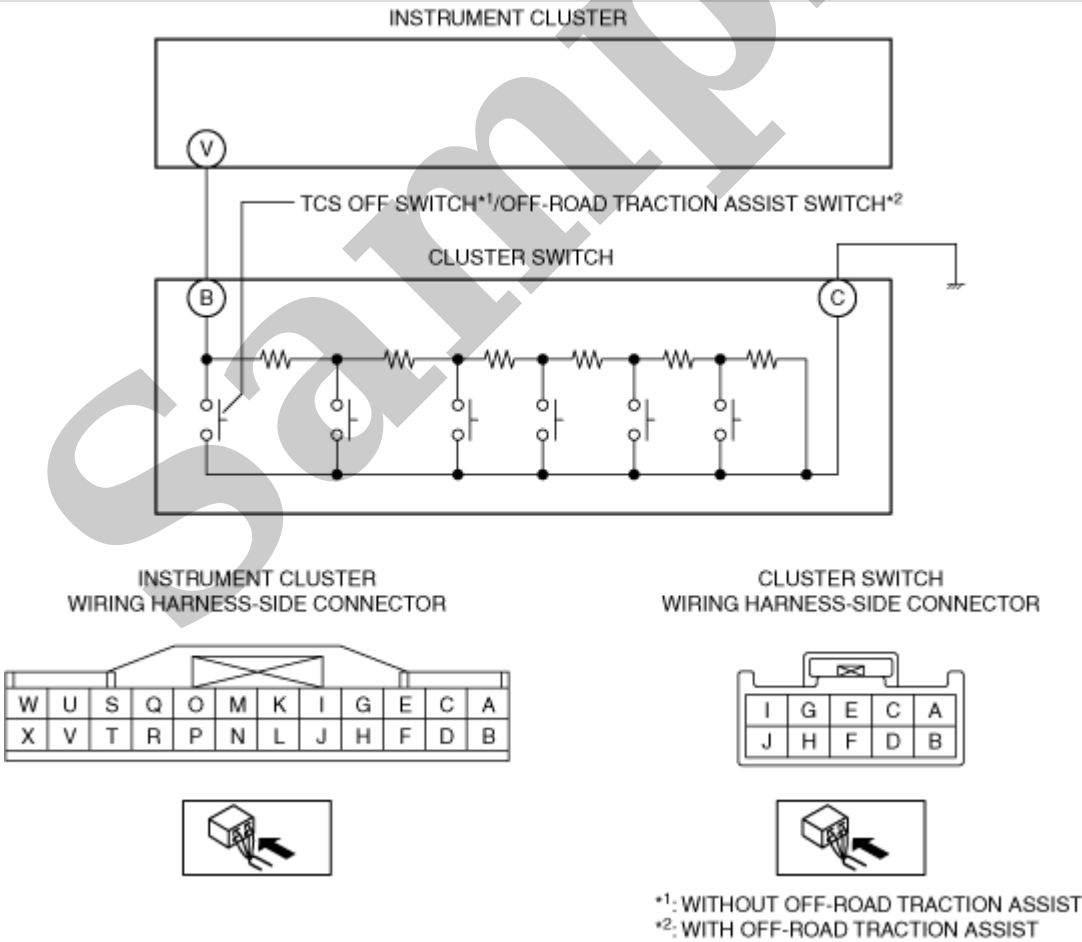


DTC C0089:64 [DSC HU/CM]

SM2898127

id04026290650

DTC	C0089:64	Without Off-Road Traction Assist <ul style="list-style-type: none">• TCS OFF switch With Off-Road Traction Assist <ul style="list-style-type: none">• Off-Road Traction Assist switch
DETECTION CONDITION	• Continuous ON signal from the TCS OFF switch (Without Off-road traction assist) / Off-Road Traction Assist switch (With Off-road traction assist) for 10 s or more is detected.	
FAIL-SAFE FUNCTION	Refer to “DTC Table” and “Fail-safe Function Malfunction Contents”. (See DTC TABLE [DSC HU/CM] .)	
POSSIBLE CAUSE	<ul style="list-style-type: none">• The driver pressed and held the TCS OFF switch (Without Off-road traction assist) / Off-Road Traction Assist switch (With Off-road traction assist) for 10 s or more.• Short to ground in the wiring harness between the instrument cluster terminal V and cluster switch terminal B• Open circuit in wiring harness between cluster switch terminal C and body ground• Cluster switch malfunction<ul style="list-style-type: none">— TCS OFF switch malfunction (Without Off-road Traction Assist)— Off-road Traction Assist switch malfunction (With Off-road Traction Assist)• Poor connection at connectors (female terminal)	



Diagnostic procedure

Diagnostic procedure

Step	Inspection	Results	Action
1	INSPECT FUSE CONDITION • Is the fuse (ABS/DSC M 50A) normal?	Yes	Go to the next step.
		No	Replace the fuse, then go to Step 6.
2	VERIFY PUMP MOTOR OPERATION • Switch the ignition to off. • Connect the M-MDS to the DLC-2. • Switch the ignition ON (engine off). • Access PMP_MT_SP active command modes using the M-MDS. (See SIMULATION INSPECTION [DSC HU/CM].) • Does the pump motor operate?	Yes	Go to Step 6.
		No	Go to the next step.
3	INSPECT MOTOR RELAY POWER SUPPLY FOR OPEN CIRCUIT • Switch the ignition to off. • Disconnect the DSC HU/CM connector. • Inspect for continuity between DSC HU/CM terminal B (vehicle harness-side) and the positive battery terminal. • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness, then go to Step 6.
4	INSPECT MOTOR RELAY POWER SUPPLY FOR SHORT CIRCUIT • Inspect for continuity between DSC HU/CM terminal B (vehicle harness-side) and body ground. • Is there continuity?	Yes	Repair or replace the wiring harness, then go to Step 6.
		No	Go to the next step.
5	INSPECT PUMP MOTOR GROUND FOR OPEN CIRCUIT • Inspect for continuity between DSC HU/CM terminal AL (vehicle harness-side) and body ground. • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness, then go to the next step.
6	VERIFY THAT THE SAME DTC IS NOT PRESENT • Reconnect all disconnected connectors. • Using the M-MDS, clear the DTC from the DSC HU/CM. (See CLEARING DTC [DSC HU/CM].) • Start the engine and drive the vehicle at 10 km/h {6.2 mph} or more. • Using the M-MDS, perform the DSC HU/CM DTC inspection. (See DTC INSPECTION [DSC HU/CM].) • Are the same DTCs present?	Yes	Repeat the inspection from Step 1. If the malfunction recurs, 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.
7	VERIFY THAT NO OTHER DTCs ARE PRESENT • Are any other DTCs output?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [DSC HU/CM].)
		No	DTC troubleshooting completed.

Snapshot data item	Unit	Data contents	Data read/use method	Corresponding data monitor items
IG-ON_TIMER	hh:mm:ss* ¹	<p>Elapsed time since ignition was switched ON</p> <p>Note</p> <ul style="list-style-type: none"> • The instrument cluster records the elapsed time since the ignition was switched ON. 	<ul style="list-style-type: none"> • The DSC HU/CM constantly receives the elapsed time since the ignition was switched ON sent via CAN signal from the instrument cluster. • If a DTC is detected, the DSC HU/CM records the elapsed time since the ignition was switched ON when the DTC was detected, and it is displayed in the M-MDS. 	–
LAT_ACCL_R	G	Lateral acceleration (Raw Value)	–	LAT_ACCL_R
LON_ACCL_R	G	Longitudinal acceleration (Raw Value)	–	LON_ACCL_R
PMP_MT	Off/On	Pump motor	–	–
PWR_MODE_KEY	Key Out/ Key Recently Out/ Key Approved(Position 0)/ Post Accessory (Position 0)/ Accessory (Position 1)/ Post Ignition (Position 1)/ Ignition On (Position 2)/ Running (Position 2)/ Running - Starting In Progress (Position 2)/ Crank (Position 3)	<ul style="list-style-type: none"> • Key Out: Ignition switched off • Key Recently Out (Position 0): Elapsed time within 3 s since ignition was switched to off • Accessory (Position 1): Ignition is switched to ACC • Post Ignition (Position 2): Elapsed time within 3 s since ignition was switched ON • Ignition On (Position 2): Ignition switched ON (engine off) • Running (Position 2): Ignition switched ON (engine on) • Running - Starting: Cranking condition 	<ul style="list-style-type: none"> • The DSC HU/CM constantly receives the ignition switch status sent via CAN signal from the instrument cluster. • If a DTC is detected, the DSC HU/CM records the ignition switch status when the DTC was detected, and it is displayed in the M-MDS. 	–
RPM_STATUS	Engine Stop/ Under 1500rpm/ Over 1500rpm/ FAIL	Engine RPM status	<ul style="list-style-type: none"> • The DSC HU/CM constantly receives the ignition switch status sent via CAN signal from the instrument cluster. • If a DTC is detected, the DSC HU/CM records the ignition switch status when the DTC was detected, and it is displayed in the M-MDS. 	TACHOMTR* ²
SHIFT_STATUS	P/N D/ R/ FAIL	Shift position status	<ul style="list-style-type: none"> • The DSC HU/CM constantly receives the selector lever position sent via CAN signal from the instrument cluster. • If a DTC is detected, the DSC HU/CM records the selector lever position when the DTC was detected, and it is displayed in the M-MDS. 	–
STR_ANG_C	°	Steering wheel angle (Calculated Value)	–	STR_ANG_C
TCS	Inactive/ Active	Traction control system	–	–
TOTAL_DIST	km, ft, mi	Accumulated total traveled distance from completion of vehicle until DSC HU/CM detects DTC (Odometer value in instrument cluster)	<p>The distance traveled when the DSC HU/CM detected a DTC can be calculated by performing the following procedure.</p> <ol style="list-style-type: none"> 1. Verify the odometer value in the instrument cluster. 2. Verify the snap shot data item TOTAL_DIST. 3. Subtract 2 from 1. 	–

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) and wait for 5 s or more.

7.Perform DTC inspection. (See **DTC INSPECTION [DSC HU/CM]**.)

8.Verify that no DTCs are displayed.

Sample

DTC No.	ABS warning light	Brake system warning light (when parking brake is released)	TCS/DSC indicator light	TCS OFF indicator light*11	OFF-road Traction Assist indicator light*12	Malfunction location	Fail-safe	Drive cycle
C0031:29	Illuminated	— *4	Illuminated	—	—	LF ABS wheel-speed sensor/ABS sensor rotor	×	—
C0031:2F								
C0031:64								
C0033:07	Illuminated	— *4	Illuminated	—	—	RF ABS sensor rotor	×	—
C0034:07	Illuminated	— *4	Illuminated	—	—	RF ABS wheel-speed sensor/ABS sensor rotor	×	—
C0034:11	Illuminated	— *4	Illuminated	—	—	RF ABS wheel-speed sensor	×	—
C0034:15								

DTC No.	ABS warning light	Brake system warning light (when parking brake is released)	TCS/DSC indicator light	TCS OFF indicator light*11	OFF-road Traction Assist indicator light*12	Malfunction location	Fail-safe	Drive cycle
C003A:29	Illuminated	— *4	Illuminated	—	—	RR ABS wheel-speed sensor/ABS sensor rotor	×	—
C003A:2F								
C003A:64								
C0040:64	—	—	Illuminated	—	—	Brake switch	×	—
C0044:28	—	—	Illuminated	—	—	Brake fluid pressure sensor	×	—
C0044:47								
C0044:49								
C0044:51								
C0044:54	Illuminated							
C0044:64	—							
C0044:8F	—							
C0051:62	—	—	Illuminated	—	—	Steering angle sensor	×	—
C0051:64								
C0051:67								
C0051:85								
C0061:28	—	—	Illuminated	—	—	SAS control module system	×	—
C0061:54	Illuminated	—	Illuminated	—	—	DSC HU/CM system (unperformed initialization procedure)	×	—

DTC No.	ABS warning light	Brake system warning light (when parking brake is released)	TCS/DSC indicator light	TCS OFF indicator light*11	OFF-road Traction Assist indicator light*12	Malfunction location	Fail-safe	Drive cycle
U0417:00	—	—	—	—	—	Signal error from electric parking brake control module	×	—
U0420:00	—	—	Illuminated	—	—	Abnormal message from EPS control module	×	—
U0423:00	—	—	—	—	—	Abnormal message from instrument cluster	×	—
U0443:00								
U0452:86	Illuminated	—	Illuminated	—	—	Abnormal message from SAS control module	×	—
U053B:00	—	—	—	—	—	Abnormal message from forward sensing camera (FSC)	×	—
U2007:46	—	—	Illuminated	—	—	DSC HU/CM (internal malfunction)	×	—
U2007:62	Illuminated	Illuminated	Illuminated	—	—	DSC HU/CM (internal malfunction)	×	—
U2101:00	Illuminated	—	Illuminated	—	—	Configuration data not recorded	×	—
U2300:52								
U2300:54								
U2300:55								
U2300:56								
U2300:64								
U3000:49	Illuminated	Illuminated *5	Illuminated	—	—	DSC HU/CM (internal malfunction)	×	—
U3003:08	—	—	—	—	—	Power supply system	—	—
U3003:16	Illuminated	— *8	Illuminated				×	
U3003:17		Illuminated *9*10						
		Illuminated						

*1: Vehicles with smart city brake support (SCBS)

DTC No.	Fail-safe function						
	Control status						
	ABS control	EBD control	TCS Control		DSC Control	Brake assist control	Vehicle roll prevention function
			Brake control	Engine control			
C0051:85	Control enabled	Control enabled	Control disabled		Control disabled	Control enabled	Control disabled
C0061:28	Control enabled	Control enabled	Control disabled		Control disabled	Control enabled	Control disabled
C0061:54	Control enabled	Control enabled	Control disabled		Control disabled	Control enabled	Control disabled
C0061:64	Control enabled	Control enabled	Control disabled		Control disabled	Control enabled	Control disabled
C0062:28	Control disabled	Control enabled	Control disabled *4		Control disabled *4	Control disabled *4	Control disabled *4
C0062:54	Control enabled *4	Control enabled	Control disabled *4		Control disabled *4	Control disabled *4	Control disabled *4
C0062:64	Control disabled	Control enabled	Control disabled *4		Control disabled *4	Control disabled *4	Control disabled *4
C0062:76	Control disabled	Control enabled	Control disabled *4		Control disabled *4	Control disabled *4	Control disabled *4
C0063:28	Control enabled	Control enabled	Control disabled		Control disabled	Control enabled	Control disabled
C0063:54	Control enabled	Control enabled	Control disabled		Control disabled	Control enabled	Control disabled
C0063:64	Control enabled	Control enabled	Control disabled		Control disabled	Control enabled	Control disabled
C006B:00	Control enabled	Control enabled	Control disabled		Control disabled	Control enabled	Control disabled
C0072:68	Control enabled	Control enabled	Control disabled	Control enabled	Control enabled	Control enabled	Control enabled
C0089:64	Control enabled						
C1139:64	Control enabled	Control enabled	Control enabled		Control enabled	Control enabled	Control enabled
C1A08:1C	Control enabled	Control enabled	Control disabled		Control disabled	Control disabled	Control disabled
P0942:46	Control enabled	Control enabled	Control disabled		Control disabled	Control disabled	Control disabled
P0942:49	Control disabled	Control disabled	Control disabled		Control disabled	Control disabled	Control disabled
U0001:88	Control disabled	Control enabled	Control disabled		Control disabled	Control disabled	Control disabled
U0100:00	Control disabled	Control enabled	Control disabled *4		Control disabled *4	Control disabled *4	Control disabled *4
U0101:00	Control enabled	Control enabled	Control disabled		Control disabled	Control enabled	Control disabled
U0104:00 *2	Control enabled	Control enabled	Control enabled		Control enabled	Control enabled	Control enabled
U0114:00 *5	Control enabled	Control enabled	Control enabled		Control enabled	Control enabled	Control enabled
U0128:00	Control enabled	Control enabled	Control enabled		Control enabled	Control enabled	Control enabled