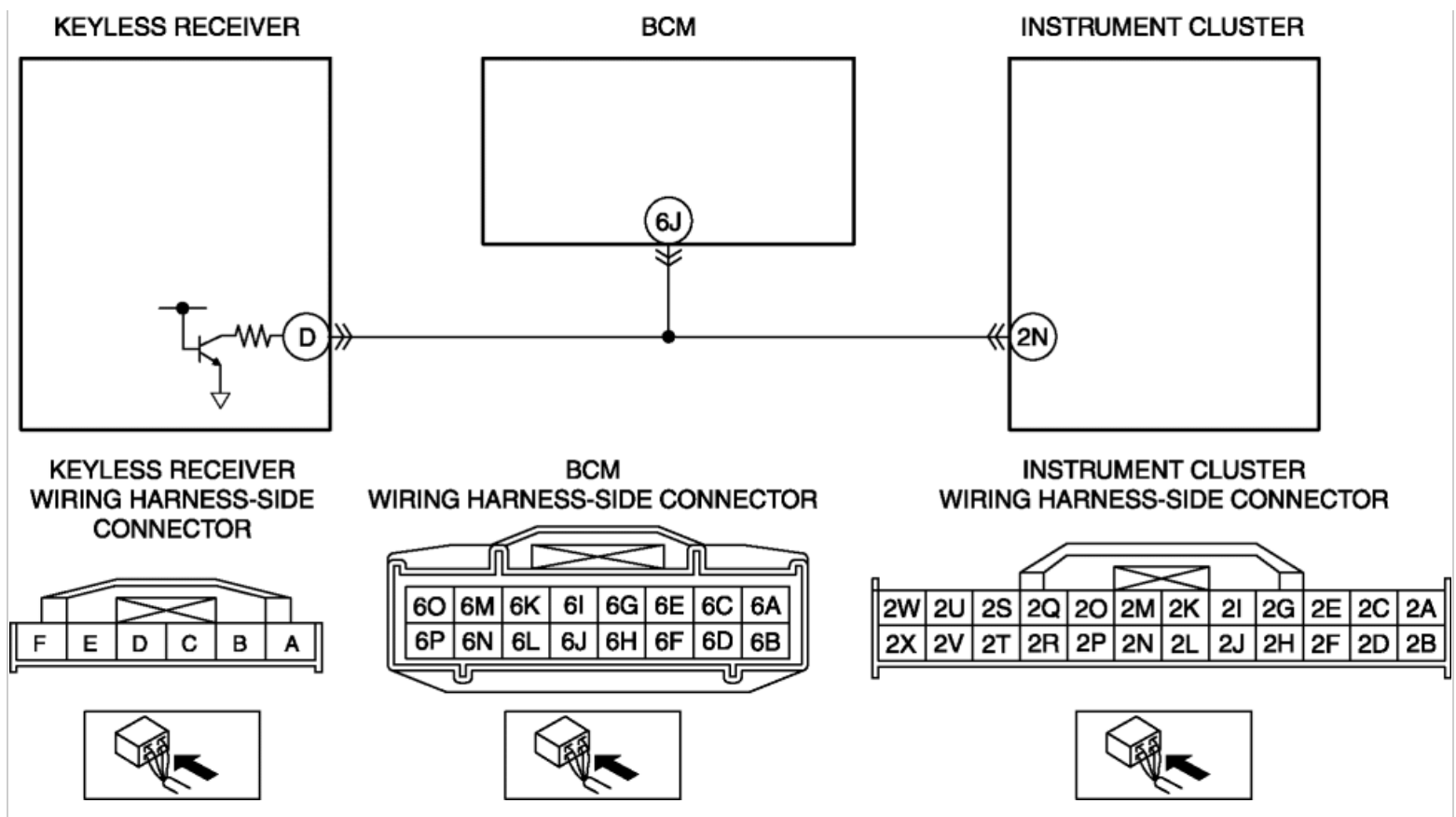


2012 - Mazda6 - Suspension

DTC U0127:00

Without Advanced Keyless Entry And Push Button Start System

DESCRIPTION	• Communication failure between instrument cluster and keyless receiver
DETECTION CONDITION	• The instrument cluster cannot receive the signal from the keyless receiver.
POSSIBLE CAUSE	• Connector or terminal malfunction (keyless receiver, BCM and/or instrument cluster) • Keyless receiver malfunction • Short to ground in wiring harness between keyless receiver terminal D and BCM terminal 6J • Short to ground in wiring harness between keyless receiver terminal D and instrument cluster terminal 2N • Short to power supply in wiring harness between keyless receiver terminal D and BCM terminal 6J • Short to power supply in wiring harness between keyless receiver terminal D and instrument cluster terminal 2N • Open circuit in wiring harness between keyless receiver terminal D and BCM terminal 6J • Open circuit in wiring harness between keyless receiver terminal D and instrument cluster terminal 2N • BCM malfunction • Instrument cluster malfunction



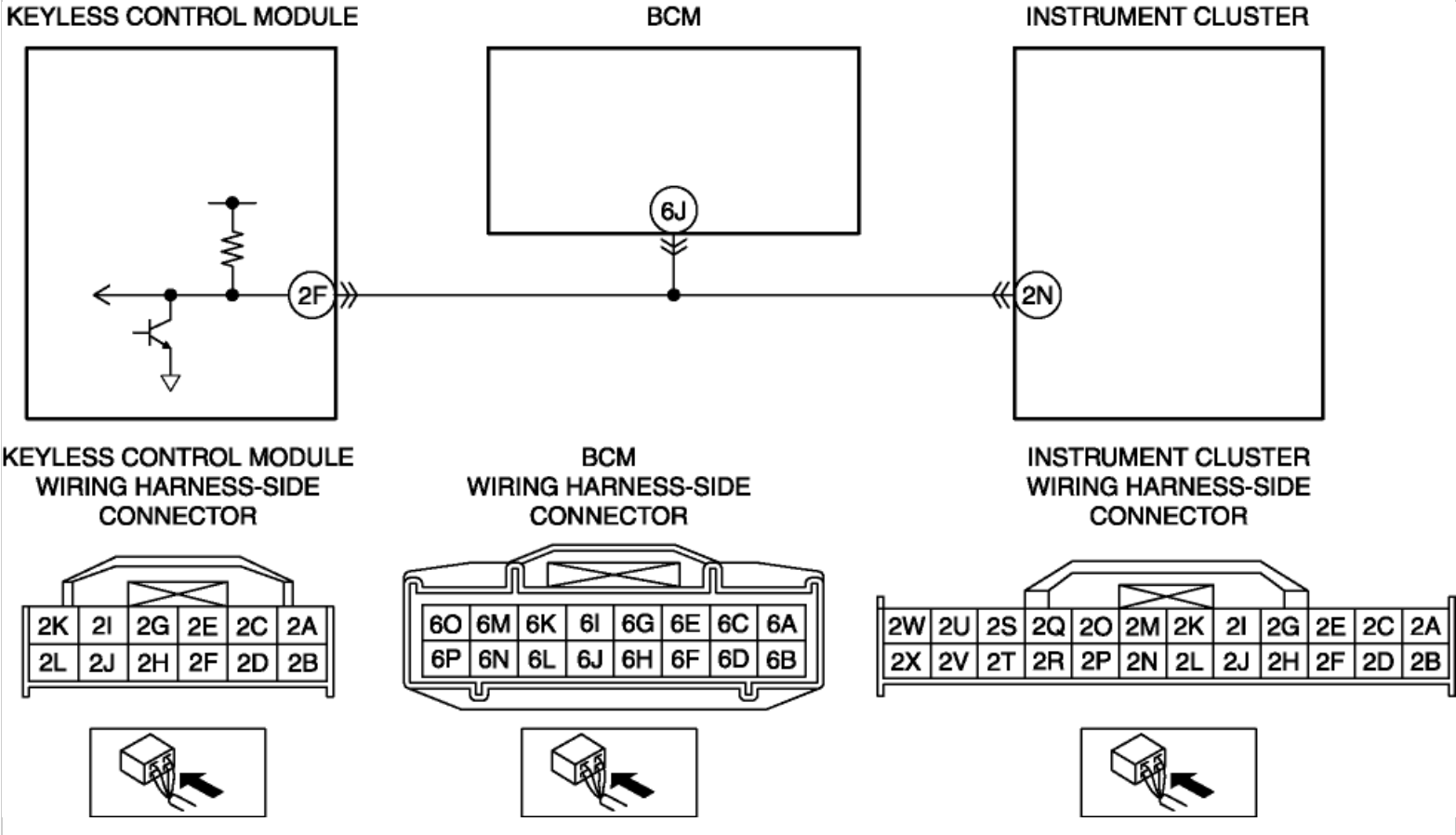
Diagnostic procedure

STEP	INSPECTION	ACTION
1	INSPECT KEYLESS RECEIVER CONNECTOR CONDITION - Switch the ignition to off. - Disconnect the negative battery cable. - Disconnect the keyless receiver connector. - Inspect the connector and terminals (corrosion, damage, pin disconnection). - Is there any malfunction?	Yes Repair or replace the connector or terminals, then go to Step 9. No Go to the next step.
2	INSPECT BCM CONNECTOR CONDITION - Disconnect the BCM connector. - Inspect the connector and terminals (corrosion, damage, pin disconnection). - Is there any malfunction?	Yes Repair or replace the connector or terminals, then go to Step 9. No Go to the next step.
3	INSPECT INSTRUMENT CLUSTER CONNECTOR CONDITION - Disconnect the instrument cluster connector. - Inspect the connector and terminals (corrosion, damage, pin disconnection). - Is there any malfunction?	Yes Repair or replace the connector or terminals, then go to Step 9. No Go to the next step.
4	INSPECT KEYLESS RECEIVER Inspect the keyless receiver. (See KEYLESS RECEIVER INSPECTION [KEYLESS ENTRY SYSTEM] .)	Yes Replace the keyless receiver, then go to Step 9. (See KEYLESS RECEIVER REMOVAL/ INSTALLATION.) No Go to the next step.

	• Is there any malfunction?		
5	INSPECT WHEEL UNIT SIGNAL FOR SHORT TO GROUND • Inspect for continuity between keyless receiver terminal D (wiring harness-side) and body ground. • Is there continuity?	Yes Repair or replace the wiring harness for a possible short to ground, then go to Step 9.	
		No Go to the next step.	
6	INSPECT WHEEL UNIT SIGNAL FOR SHORT TO POWER SUPPLY • Reconnect the negative battery cable. • Switch the ignition to ON. • Measure the voltage between keyless receiver terminal D (wiring harness-side) and body ground. • Is there any voltage?	Yes Repair or replace the wiring harness for a possible short to power supply, then go to Step 9.	
		No Go to the next step.	
7	INSPECT WHEEL UNIT SIGNAL FOR OPEN CIRCUIT • Switch the ignition to off. • Disconnect the negative battery cable. • Inspect for continuity between following terminals. ▪ Keyless receiver terminal D (wiring harness-side) and BCM terminal 6J (wiring harness-side) ▪ Keyless receiver terminal D (wiring harness-side) and instrument cluster terminal 2N (wiring harness-side) • Is there continuity?	Yes Go to the next step.	
		No Repair or replace the wiring harness for a possible open circuit, then go to Step 9.	
8	PERFORM BCM DTC INSPECTION • Reconnect the disconnected connectors. • Reconnect the negative battery cable. • Perform the BCM DTC inspection using the M-MDS. (See DTC INSPECTION [BCM].) • Are any DTCs present?	Yes Go to the applicable DTC inspection. (See DTC TABLE [BCM] .)	
		No Go to the next step.	
9	VERIFY TROUBLESHOOTING COMPLETED • Make sure to reconnect the disconnected connectors. • Reconnect the negative battery cable. • Clear the DTC from the memory using the M-MDS. (See TIRE PRESSURE MONITORING SYSTEM (TPMS) ON-BOARD DIAGNOSIS.) • Switch the ignition to ON and wait for more than 30 s. • Perform the TPMS DTC inspection using the M-MDS. (See TIRE PRESSURE MONITORING SYSTEM (TPMS) ON-BOARD DIAGNOSIS.) • Is the same DTC present?	Yes Repeat the inspection from Step 1. If the malfunction recurs, replace and configure the instrument cluster, then go to the next step. (See INSTRUMENT CLUSTER REMOVAL/ INSTALLATION .) (See INSTRUMENT CLUSTER CONFIGURATION .)	
		No Go to the next step.	
10	VERIFY AFTER REPAIR PROCEDURE • Drive the vehicle at speed of more than 25 km/ h { 15.5 mph} for more than 10 min. • Are any DTCs present?	Yes Go to the applicable DTC inspection. (See TIRE PRESSURE MONITORING SYSTEM (TPMS) ON-BOARD DIAGNOSIS .)	
		No DTC troubleshooting completed.	

With Advanced Keyless Entry And Push Button Start System

DESCRIPTION	Communication failure between instrument cluster and keyless control module
DETECTION CONDITION	The instrument cluster cannot receive the signal from the keyless control module.
POSSIBLE CAUSE	- Connector or terminal malfunction (keyless receiver, BCM and/or instrument cluster) - Short to ground in wiring harness between keyless control module terminal 2F and BCM terminal 6J - Short to ground in wiring harness between keyless control module terminal 2F and instrument cluster terminal 2N - Short to power supply in wiring harness between keyless control module terminal 2F and BCM terminal 6J - Short to power supply in wiring harness between keyless control module terminal 2F and instrument cluster terminal 2N - Open circuit in wiring harness between keyless control module terminal 2F and BCM terminal 6J - Open circuit in wiring harness between keyless control module terminal 2F and instrument cluster terminal 2N - Keyless control module malfunction - BCM malfunction - Instrument cluster malfunction



Diagnostic procedure

STEP	INSPECTION	ACTION
------	------------	--------

1	INSPECT KEYLESS CONTROL MODULE CONNECTOR CONDITION - Switch the ignition to off. - Disconnect the negative battery cable. - Disconnect the keyless control module connector. - Inspect the connector and terminals (corrosion, damage, pin disconnection). - Is there any malfunction?	Yes	Repair or replace the connector or terminals, then go to Step 9.
		No	Go to the next step.
2	INSPECT BCM CONNECTOR CONDITION - Disconnect the BCM connector. - Inspect the connector and terminals (corrosion, damage, pin disconnection). - Is there any malfunction?	Yes	Repair or replace the connector or terminals, then go to Step 9.
		No	Go to the next step.
3	INSPECT INSTRUMENT CLUSTER CONNECTOR CONDITION - Disconnect the instrument cluster connector. - Inspect the connector and terminals (corrosion, damage, pin disconnection). - Is there any malfunction?	Yes	Repair or replace the connector or terminals, then go to Step 9.
		No	Go to the next step.
4	INSPECT WHEEL UNIT SIGNAL FOR SHORT TO GROUND - Inspect for continuity between keyless control module terminal 2F (wiring harness-side) and body ground. - Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to ground, then go to Step 9.
		No	Go to the next step.
5	INSPECT WHEEL UNIT SIGNAL FOR SHORT TO POWER SUPPLY - Reconnect the negative battery cable. - Switch the ignition to ON. - Measure the voltage between keyless control module terminal 2F (wiring harness-side) and body ground. - Is there any voltage?	Yes	Repair or replace the wiring harness for a possible short to power supply, then go to Step 9.
		No	Go to the next step.
6	INSPECT WHEEL UNIT SIGNAL FOR OPEN CIRCUIT - Switch the ignition to off. - Disconnect the negative battery cable. - Inspect for continuity between following terminals. - Keyless control module terminal 2F (wiring harness-side) and BCM terminal 6J (wiring harness-side) - Keyless control module terminal 2F (wiring harness-side) and instrument cluster terminal 2N (wiring harness-side) - Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 9.
7	PERFORM ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM DTC INSPECTION - Perform the advanced keyless entry and push button start system DTC inspection using the M-MDS. (See DTC INSPECTION [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM].) - Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM] .)
		No	Go to the next step.

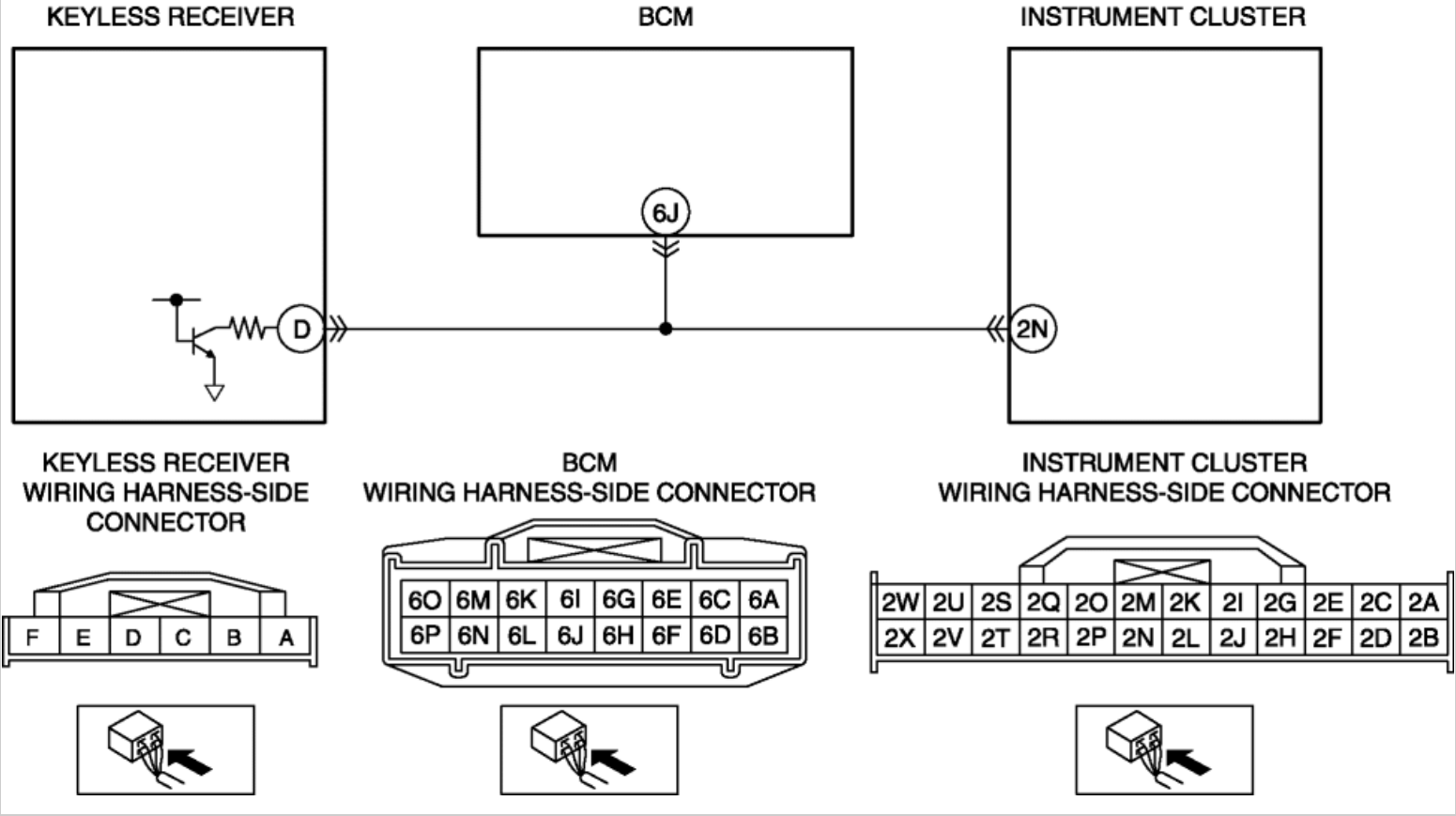
8	PERFORM BCM DTC INSPECTION • Reconnect the disconnected connectors. • Reconnect the negative battery cable. • Perform the BCM DTC inspection using the M-MDS. (See DTC INSPECTION [BCM].) • Are any DTCs present?	YesGo to the applicable DTC inspection. (See DTC TABLE [BCM].) NoGo to the next step.
9	VERIFY TROUBLESHOOTING COMPLETED • Make sure to reconnect the disconnected connectors. • Reconnect the negative battery cable. • Clear the DTC from the memory using the M-MDS. (See TIRE PRESSURE MONITORING SYSTEM (TPMS) ON-BOARD DIAGNOSIS.) • Switch the ignition to ON and wait for more than 30 s. • Perform the TPMS DTC inspection using the M-MDS. (See TIRE PRESSURE MONITORING SYSTEM (TPMS) ON-BOARD DIAGNOSIS.) • Is the same DTC present?	YesRepeat the inspection from Step 1. If the malfunction recurs, replace and configure the instrument cluster, then go to the next step. (See INSTRUMENT CLUSTER REMOVAL/ INSTALLATION.) (See INSTRUMENT CLUSTER CONFIGURATION.) NoGo to the next step.
10	VERIFY AFTER REPAIR PROCEDURE • Drive the vehicle at speed of more than 25 km/ h { 15.5 mph} for more than 10 min. • Are any DTCs present?	YesGo to the applicable DTC inspection. (See TIRE PRESSURE MONITORING SYSTEM (TPMS) ON-BOARD DIAGNOSIS.) NoDTC troubleshooting completed.

2012 - Mazda6 - Suspension

DTC U0127:00

Without Advanced Keyless Entry And Push Button Start System

DESCRIPTION	• Communication failure between instrument cluster and keyless receiver
DETECTION CONDITION	• The instrument cluster cannot receive the signal from the keyless receiver.
POSSIBLE CAUSE	• Connector or terminal malfunction (keyless receiver, BCM and/or instrument cluster) • Keyless receiver malfunction • Short to ground in wiring harness between keyless receiver terminal D and BCM terminal 6J • Short to ground in wiring harness between keyless receiver terminal D and instrument cluster terminal 2N • Short to power supply in wiring harness between keyless receiver terminal D and BCM terminal 6J • Short to power supply in wiring harness between keyless receiver terminal D and instrument cluster terminal 2N • Open circuit in wiring harness between keyless receiver terminal D and BCM terminal 6J • Open circuit in wiring harness between keyless receiver terminal D and instrument cluster terminal 2N • BCM malfunction • Instrument cluster malfunction



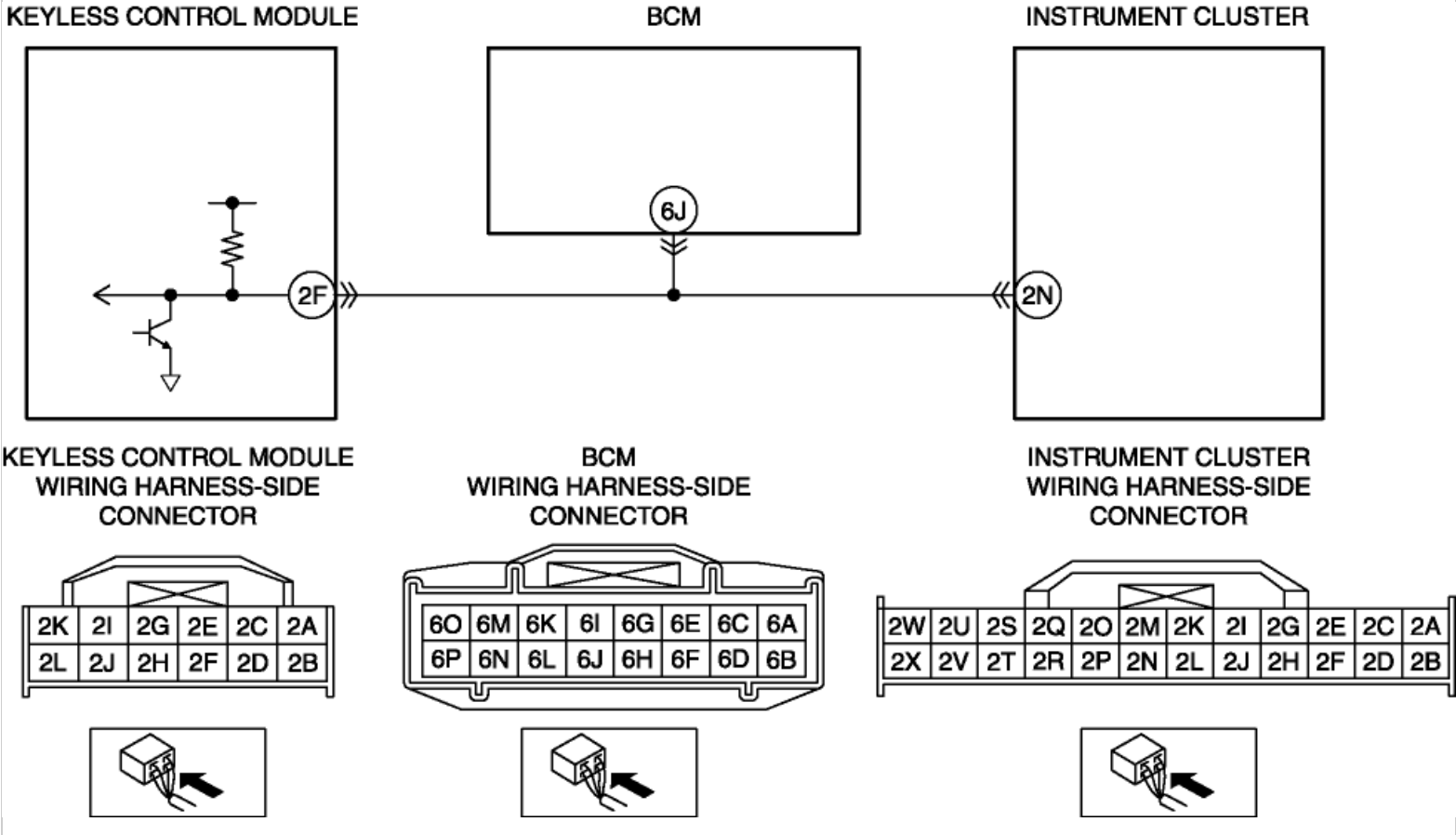
Diagnostic procedure

STEP	INSPECTION	ACTION
1	INSPECT KEYLESS RECEIVER CONNECTOR CONDITION - Switch the ignition to off. - Disconnect the negative battery cable. - Disconnect the keyless receiver connector. - Inspect the connector and terminals (corrosion, damage, pin disconnection). - Is there any malfunction?	Yes Repair or replace the connector or terminals, then go to Step 9.
		No Go to the next step.
2	INSPECT BCM CONNECTOR CONDITION - Disconnect the BCM connector. - Inspect the connector and terminals (corrosion, damage, pin disconnection). - Is there any malfunction?	Yes Repair or replace the connector or terminals, then go to Step 9.
		No Go to the next step.
3	INSPECT INSTRUMENT CLUSTER CONNECTOR CONDITION - Disconnect the instrument cluster connector. - Inspect the connector and terminals (corrosion, damage, pin disconnection). - Is there any malfunction?	Yes Repair or replace the connector or terminals, then go to Step 9.
		No Go to the next step.
4	INSPECT KEYLESS RECEIVER Inspect the keyless receiver. (See KEYLESS RECEIVER INSPECTION [KEYLESS ENTRY SYSTEM] .)	Yes Replace the keyless receiver, then go to Step 9.
		(See KEYLESS RECEIVER REMOVAL/INSTALLATION.) No Go to the next step.

	Is there any malfunction?		
5	INSPECT WHEEL UNIT SIGNAL FOR SHORT TO GROUND - Inspect for continuity between keyless receiver terminal D (wiring harness-side) and body ground. - Is there continuity?	Yes Repair or replace the wiring harness for a possible short to ground, then go to Step 9.	
		No Go to the next step.	
6	INSPECT WHEEL UNIT SIGNAL FOR SHORT TO POWER SUPPLY - Reconnect the negative battery cable. - Switch the ignition to ON. - Measure the voltage between keyless receiver terminal D (wiring harness-side) and body ground. - Is there any voltage?	Yes Repair or replace the wiring harness for a possible short to power supply, then go to Step 9.	
		No Go to the next step.	
7	INSPECT WHEEL UNIT SIGNAL FOR OPEN CIRCUIT - Switch the ignition to off. - Disconnect the negative battery cable. - Inspect for continuity between following terminals. - Keyless receiver terminal D (wiring harness-side) and BCM terminal 6J (wiring harness-side) - Keyless receiver terminal D (wiring harness-side) and instrument cluster terminal 2N (wiring harness-side) - Is there continuity?	Yes Go to the next step.	
		No Repair or replace the wiring harness for a possible open circuit, then go to Step 9.	
8	PERFORM BCM DTC INSPECTION - Reconnect the disconnected connectors. - Reconnect the negative battery cable. - Perform the BCM DTC inspection using the M-MDS. (See DTC INSPECTION [BCM].) - Are any DTCs present?	Yes Go to the applicable DTC inspection. (See DTC TABLE [BCM] .)	
		No Go to the next step.	
9	VERIFY TROUBLESHOOTING COMPLETED - Make sure to reconnect the disconnected connectors. - Reconnect the negative battery cable. - Clear the DTC from the memory using the M-MDS. (See TIRE PRESSURE MONITORING SYSTEM (TPMS) ON-BOARD DIAGNOSIS.) - Switch the ignition to ON and wait for more than 30 s. - Perform the TPMS DTC inspection using the M-MDS. (See TIRE PRESSURE MONITORING SYSTEM (TPMS) ON-BOARD DIAGNOSIS.) - Is the same DTC present?	Yes Repeat the inspection from Step 1. If the malfunction recurs, replace and configure the instrument cluster, then go to the next step. (See INSTRUMENT CLUSTER REMOVAL/ INSTALLATION .) (See INSTRUMENT CLUSTER CONFIGURATION .)	
		No Go to the next step.	
10	VERIFY AFTER REPAIR PROCEDURE - Drive the vehicle at speed of more than 25 km/ h { 15.5 mph} for more than 10 min. - Are any DTCs present?	Yes Go to the applicable DTC inspection. (See TIRE PRESSURE MONITORING SYSTEM (TPMS) ON-BOARD DIAGNOSIS .)	
		No DTC troubleshooting completed.	

With Advanced Keyless Entry And Push Button Start System

DESCRIPTION	• Communication failure between instrument cluster and keyless control module
DETECTION CONDITION	• The instrument cluster cannot receive the signal from the keyless control module.
POSSIBLE CAUSE	• Connector or terminal malfunction (keyless receiver, BCM and/or instrument cluster) • Short to ground in wiring harness between keyless control module terminal 2F and BCM terminal 6J • Short to ground in wiring harness between keyless control module terminal 2F and instrument cluster terminal 2N • Short to power supply in wiring harness between keyless control module terminal 2F and BCM terminal 6J • Short to power supply in wiring harness between keyless control module terminal 2F and instrument cluster terminal 2N • Open circuit in wiring harness between keyless control module terminal 2F and BCM terminal 6J • Open circuit in wiring harness between keyless control module terminal 2F and instrument cluster terminal 2N • Keyless control module malfunction • BCM malfunction • Instrument cluster malfunction



Diagnostic procedure

STEP	INSPECTION	ACTION
------	------------	--------

1	INSPECT KEYLESS CONTROL MODULE CONNECTOR CONDITION - Switch the ignition to off. - Disconnect the negative battery cable. - Disconnect the keyless control module connector. - Inspect the connector and terminals (corrosion, damage, pin disconnection). - Is there any malfunction?	Yes	Repair or replace the connector or terminals, then go to Step 9.
		No	Go to the next step.
2	INSPECT BCM CONNECTOR CONDITION - Disconnect the BCM connector. - Inspect the connector and terminals (corrosion, damage, pin disconnection). - Is there any malfunction?	Yes	Repair or replace the connector or terminals, then go to Step 9.
		No	Go to the next step.
3	INSPECT INSTRUMENT CLUSTER CONNECTOR CONDITION - Disconnect the instrument cluster connector. - Inspect the connector and terminals (corrosion, damage, pin disconnection). - Is there any malfunction?	Yes	Repair or replace the connector or terminals, then go to Step 9.
		No	Go to the next step.
4	INSPECT WHEEL UNIT SIGNAL FOR SHORT TO GROUND - Inspect for continuity between keyless control module terminal 2F (wiring harness-side) and body ground. - Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to ground, then go to Step 9.
		No	Go to the next step.
5	INSPECT WHEEL UNIT SIGNAL FOR SHORT TO POWER SUPPLY - Reconnect the negative battery cable. - Switch the ignition to ON. - Measure the voltage between keyless control module terminal 2F (wiring harness-side) and body ground. - Is there any voltage?	Yes	Repair or replace the wiring harness for a possible short to power supply, then go to Step 9.
		No	Go to the next step.
6	INSPECT WHEEL UNIT SIGNAL FOR OPEN CIRCUIT - Switch the ignition to off. - Disconnect the negative battery cable. - Inspect for continuity between following terminals. - Keyless control module terminal 2F (wiring harness-side) and BCM terminal 6J (wiring harness-side) - Keyless control module terminal 2F (wiring harness-side) and instrument cluster terminal 2N (wiring harness-side) - Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 9.
7	PERFORM ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM DTC INSPECTION - Perform the advanced keyless entry and push button start system DTC inspection using the M-MDS. (See DTC INSPECTION [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM].) - Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM] .)
		No	Go to the next step.

8	PERFORM BCM DTC INSPECTION • Reconnect the disconnected connectors. • Reconnect the negative battery cable. • Perform the BCM DTC inspection using the M-MDS. (See DTC INSPECTION [BCM].) • Are any DTCs present?	YesGo to the applicable DTC inspection. (See DTC TABLE [BCM].) NoGo to the next step.
9	VERIFY TROUBLESHOOTING COMPLETED • Make sure to reconnect the disconnected connectors. • Reconnect the negative battery cable. • Clear the DTC from the memory using the M-MDS. (See TIRE PRESSURE MONITORING SYSTEM (TPMS) ON-BOARD DIAGNOSIS.) • Switch the ignition to ON and wait for more than 30 s. • Perform the TPMS DTC inspection using the M-MDS. (See TIRE PRESSURE MONITORING SYSTEM (TPMS) ON-BOARD DIAGNOSIS.) • Is the same DTC present?	YesRepeat the inspection from Step 1. If the malfunction recurs, replace and configure the instrument cluster, then go to the next step. (See INSTRUMENT CLUSTER REMOVAL/ INSTALLATION.) (See INSTRUMENT CLUSTER CONFIGURATION.) NoGo to the next step.
10	VERIFY AFTER REPAIR PROCEDURE • Drive the vehicle at speed of more than 25 km/ h { 15.5 mph} for more than 10 min. • Are any DTCs present?	YesGo to the applicable DTC inspection. (See TIRE PRESSURE MONITORING SYSTEM (TPMS) ON-BOARD DIAGNOSIS.) NoDTC troubleshooting completed.