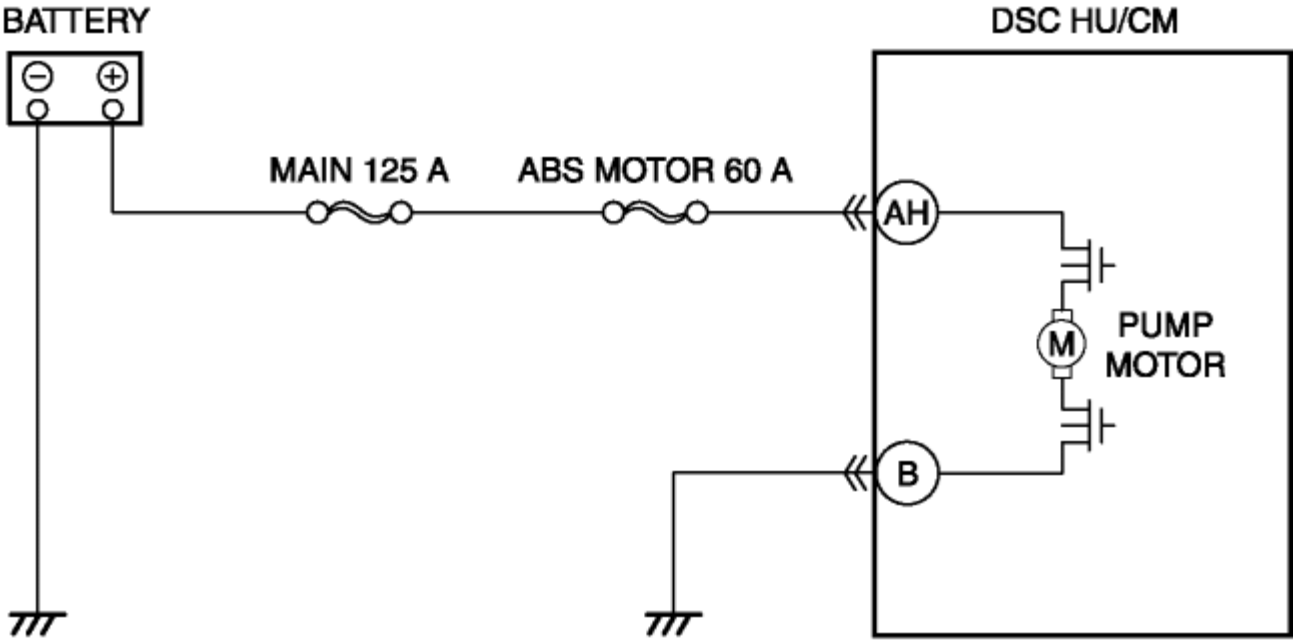
2012 - Mazda6 - Brakes

DTC C0020:01/ C0020:11/ C0020:13/ C0020:16/ C0020:1C/ C0020:71 [DYNAMIC STABILITY CONTROL (DSC)]

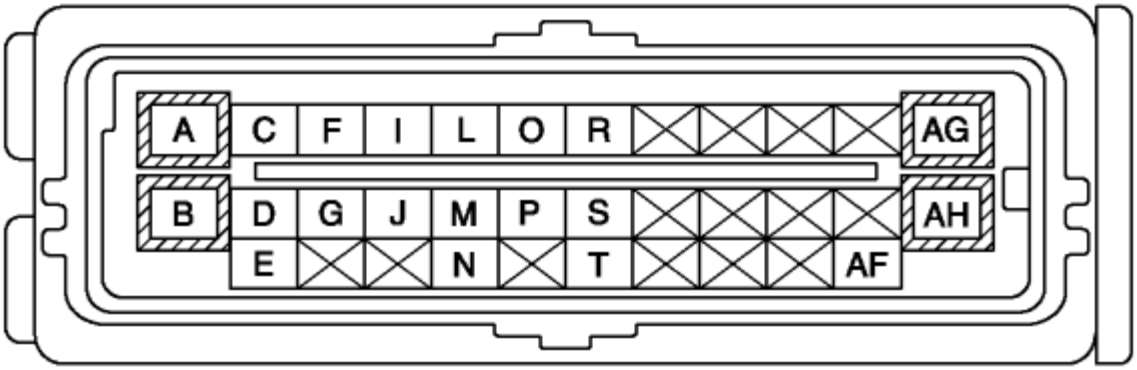
C0020:01 **C0020:11** **C0020:13** **C0020:16** **C0020:1C** **C0020:71**	Pump motor, motor relay
DETECTION CONDITION	**C0020:01** • Open circuit in motor relay monitor circuit is detected for **2 s**, while the relay is off. **C0020:11** • Motor relay monitor ON is detected for **4 s**, while the relay is off. **C0020:13** • Motor relay monitor off is detected for **0.12 s**, while the relay is ON and motor fail-safe relay is off. • Motor relay monitor off is detected for **0.12 s**, while the relay monitor is ON. **C0020:16** • The voltage less than motor relay monitor off is detected for **4 s**, while the relay is ON and motor fail-safe relay is off. **C0020:1C** • Motor relay monitor off is detected for **0.12 s**, while the relay is ON. **C0020:71** • Motor relay monitor voltage of **2 V or less** is detected for a continuous **24 ms** from when it has become **4.7 V or less** after the motor check is initially

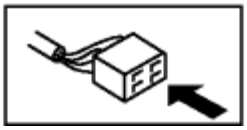
	operated.

POSSIBLE CAUSE	• Fuse malfunction
	  ▪ MAIN 125 A fuse
	  ▪ ABS MOTOR 60 A fuse
	• Pump motor operation malfunction
	• Connector or terminal malfunction
	• Open circuit in wiring harness between DSC HU/CM terminal B and body ground
	• Short to ground in wiring harness between battery positive terminal and DSC HU/CM terminal AH
	• Open circuit in wiring harness between battery positive terminal and DSC HU/CM terminal AH
	• DSC HU/CM malfunction
	  ▪ Motor relay malfunction



DSC HU/CM WIRING HARNESS-SIDE CONNECTOR





Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT FUSE** • Switch the ignition to off. • Disconnect the negative battery cable. • Remove the following fuses: ▪ MAIN 125 A fuse ▪ ABS MOTOR 60 A fuse • Inspect the fuses.	Yes	Replace the malfunctioning fuse, then go to Step 6.
		No	Install the fuses, then go to the next step.

	• Is there any malfunction?		
2	**VERIFY PUMP MOTOR OPERATION** • Reconnect the negative battery cable. • Switch the ignition to ON (engine off). • Access the active command mode for the pump motor using the M-MDS. (See **ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)]**.) • Does the pump motor operate?	Yes	Go to the next step.
		No	Replace the DSC HU/CM, then go to Step 6. (See **DSC HU/CM REMOVAL/INSTALLATION**.)
3	**INSPECT DSC HU/CM CONNECTOR CONDITION** • Switch the ignition to off. • Disconnect the negative battery cable. • Disconnect the DSC HU/CM 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 6.
		No	Go to the next step.
4	**INSPECT ABS PUMP MOTOR GROUND CIRCUIT FOR OPEN CIRCUIT** • Inspect for continuity between DSC HU/CM terminal B (wiring harness-side) and body ground. • 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 6.
5	**INSPECT ABS PUMP MOTOR POWER SUPPLY CIRCUIT FOR SHORT TO GROUND OR OPEN CIRCUIT** • Reconnect the negative battery cable. • Switch the ignition to ON. • Measure the voltage between DSC HU/CM terminal AH (wiring harness-side) and body ground. • Is the voltage **B+** ?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible short to ground or open circuit, then go to the next step.

6	**VERIFY DTC TROUBLESHOOTING COMPLETED** • Make sure to reconnect the disconnected connectors. • Reconnect the negative battery cable. • Clear the DTC from the DSC HU/CM memory using the M-MDS. (See **ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)]**.) • Drive the vehicle at speed of **6 km/h {4 mph} or more**. • Gradually slow down and stop the vehicle. • Perform the DSC DTC inspection. (See **ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)]**.) • Is the same DTC 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**.)
		No	Go to the next step.
7	**VERIFY AFTER REPAIR PROCEDURE** • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See **ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)]**.)
		No	DTC troubleshooting completed.

< Previous Next >

Back to Top

© 2011 Mazda North American Operations, U.S.A.

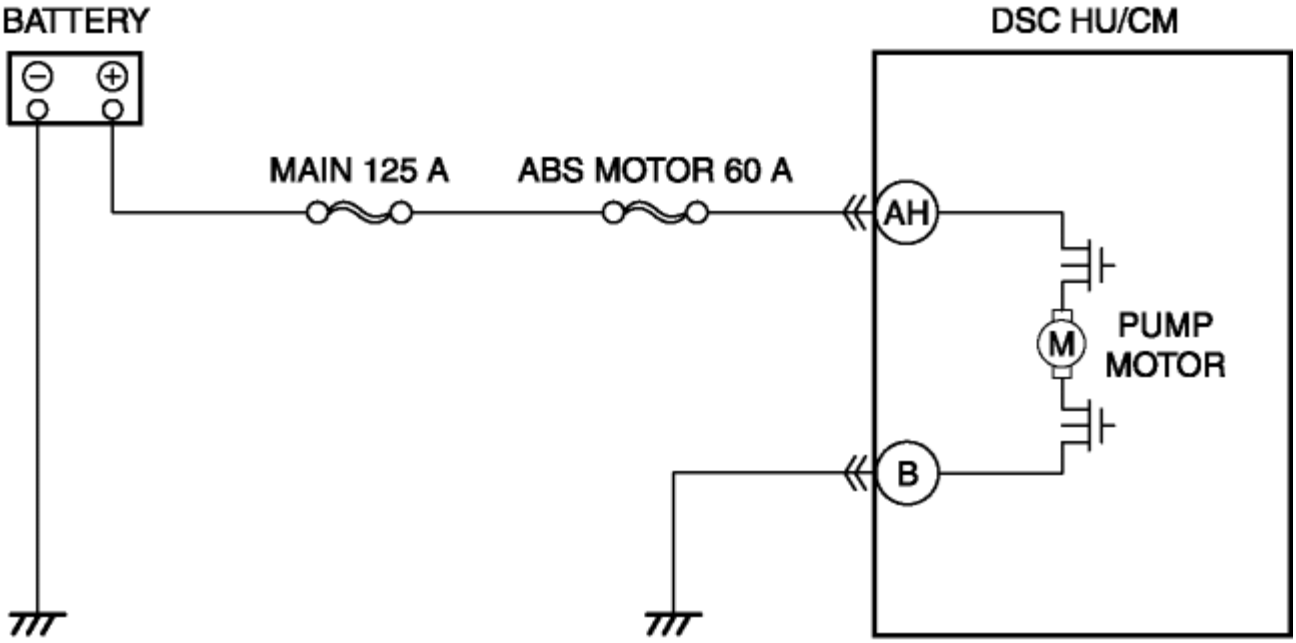
2012 - Mazda6 - Brakes

DTC C0020:01/ C0020:11/ C0020:13/ C0020:16/ C0020:1C/ C0020:71 [DYNAMIC STABILITY CONTROL (DSC)]

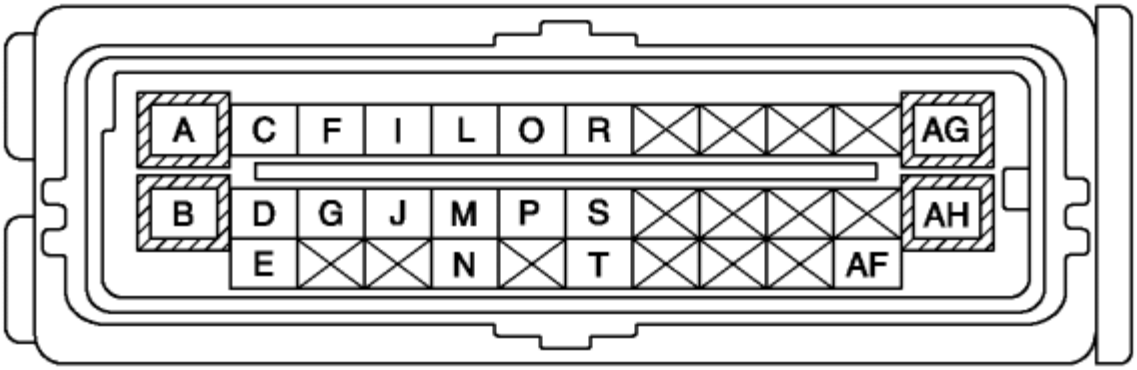
C0020:01 **C0020:11** **C0020:13** **C0020:16** **C0020:1C** **C0020:71**	Pump motor, motor relay
DETECTION CONDITION	**C0020:01** • Open circuit in motor relay monitor circuit is detected for **2 s**, while the relay is off. **C0020:11** • Motor relay monitor ON is detected for **4 s**, while the relay is off. **C0020:13** • Motor relay monitor off is detected for **0.12 s**, while the relay is ON and motor fail-safe relay is off. • Motor relay monitor off is detected for **0.12 s**, while the relay monitor is ON. **C0020:16** • The voltage less than motor relay monitor off is detected for **4 s**, while the relay is ON and motor fail-safe relay is off. **C0020:1C** • Motor relay monitor off is detected for **0.12 s**, while the relay is ON. **C0020:71** • Motor relay monitor voltage of **2 V or less** is detected for a continuous **24 ms** from when it has become **4.7 V or less** after the motor check is initially

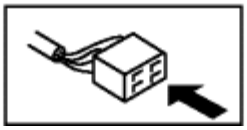
	operated.

POSSIBLE CAUSE	• Fuse malfunction
	  ▪ MAIN 125 A fuse
	  ▪ ABS MOTOR 60 A fuse
	• Pump motor operation malfunction
	• Connector or terminal malfunction
	• Open circuit in wiring harness between DSC HU/CM terminal B and body ground
	• Short to ground in wiring harness between battery positive terminal and DSC HU/CM terminal AH
	• Open circuit in wiring harness between battery positive terminal and DSC HU/CM terminal AH
	• DSC HU/CM malfunction
	  ▪ Motor relay malfunction



DSC HU/CM WIRING HARNESS-SIDE CONNECTOR





Diagnostic procedure

STEP	INSPECTION		ACTION
1	**INSPECT FUSE** • Switch the ignition to off. • Disconnect the negative battery cable. • Remove the following fuses: ▪ MAIN 125 A fuse ▪ ABS MOTOR 60 A fuse • Inspect the fuses.	Yes	Replace the malfunctioning fuse, then go to Step 6.
		No	Install the fuses, then go to the next step.

	• Is there any malfunction?		
2	**VERIFY PUMP MOTOR OPERATION** • Reconnect the negative battery cable. • Switch the ignition to ON (engine off). • Access the active command mode for the pump motor using the M-MDS. (See **ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)]**.) • Does the pump motor operate?	Yes	Go to the next step.
		No	Replace the DSC HU/CM, then go to Step 6. (See **DSC HU/CM REMOVAL/INSTALLATION**.)
3	**INSPECT DSC HU/CM CONNECTOR CONDITION** • Switch the ignition to off. • Disconnect the negative battery cable. • Disconnect the DSC HU/CM 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 6.
		No	Go to the next step.
4	**INSPECT ABS PUMP MOTOR GROUND CIRCUIT FOR OPEN CIRCUIT** • Inspect for continuity between DSC HU/CM terminal B (wiring harness-side) and body ground. • 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 6.
5	**INSPECT ABS PUMP MOTOR POWER SUPPLY CIRCUIT FOR SHORT TO GROUND OR OPEN CIRCUIT** • Reconnect the negative battery cable. • Switch the ignition to ON. • Measure the voltage between DSC HU/CM terminal AH (wiring harness-side) and body ground. • Is the voltage **B+** ?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible short to ground or open circuit, then go to the next step.

6	**VERIFY DTC TROUBLESHOOTING COMPLETED** • Make sure to reconnect the disconnected connectors. • Reconnect the negative battery cable. • Clear the DTC from the DSC HU/CM memory using the M-MDS. (See **ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)]**.) • Drive the vehicle at speed of **6 km/h {4 mph} or more**. • Gradually slow down and stop the vehicle. • Perform the DSC DTC inspection. (See **ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)]**.) • Is the same DTC 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**.)
		No	Go to the next step.
7	**VERIFY AFTER REPAIR PROCEDURE** • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See **ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)]**.)
		No	DTC troubleshooting completed.

< Previous Next >

Back to Top

© 2011 Mazda North American Operations, U.S.A.