A: DTC C0021 FRONT ABS WHEEL SPEED SENSOR RH POWER SUPPLY MALFUNCTION

NOTE:

For the diagnostic procedure, refer to DTC C0027 "REAR ABS WHEEL SPEED SENSOR LH POWER SUP-PLY MALFUNCTION". <Ref. to VDC(diag)-43, DTC C0027 REAR ABS WHEEL SPEED SENSOR LH POW-ER SUPPLY MALFUNCTION, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

B: DTC C0023 FRONT ABS WHEEL SPEED SENSOR LH POWER SUPPLY MALFUNCTION

NOTE:

For the diagnostic procedure, refer to DTC C0027 "REAR ABS WHEEL SPEED SENSOR LH POWER SUP-PLY MALFUNCTION". <Ref. to VDC(diag)-43, DTC C0027 REAR ABS WHEEL SPEED SENSOR LH POW-ER SUPPLY MALFUNCTION, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

C: DTC C0025 REAR ABS WHEEL SPEED SENSOR RH POWER SUPPLY MAL-FUNCTION

NOTE:

For the diagnostic procedure, refer to DTC C0027 "REAR ABS WHEEL SPEED SENSOR LH POWER SUP-PLY MALFUNCTION". <Ref. to VDC(diag)-43, DTC C0027 REAR ABS WHEEL SPEED SENSOR LH POW-ER SUPPLY MALFUNCTION, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

D: DTC C0027 REAR ABS WHEEL SPEED SENSOR LH POWER SUPPLY MAL-FUNCTION

DTC DETECTING CONDITION: Defective ABS wheel speed sensor

TROUBLE SYMPTOM:

- ABS does not operate.
- VDC does not operate.



VEHICLE DYNAMICS CONTROL (VDC) (DIAGNOSTICS)

	Step	Check	Yes	No
1	CHECK POOR CONTACT IN CONNECTOR. Check if there is poor contact in VDCCM&H/U power supply circuit.	Is there poor contact?	Repair the con- nector.	Go to step 2.
2	CHECK THE VDCCM&H/U POWER SUPPLY CIRCUIT. 1) Turn the ignition switch to OFF. 2) Disconnect the VDCCM&H/U connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between VDCCM&H/ U connector terminals. Terminals (B310) No. 14 (+) — (B310) No. 6 (-):	Is the voltage 10 — 15 V?	Go to step 3 .	Check the genera- tor, battery and VDCCM&H/U power supply cir- cuit.
3	 CHECK THE VDCCM&H/U. 1) Connect all the connectors. 2) Erase the memory. 3) Perform the Inspection Mode. 4) Read the DTC. 	Is the same DTC displayed?	Replace the VDCCM&H/U.	Go to step 4.
4	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag- nosis according to DTC.	It results from a temporary noise interference.

E: DTC C0021 OPEN/HIGH INPUT OF FRONT ABS WHEEL SPEED SENSOR RH

NOTE:

For the diagnostic procedure, refer to DTC C0027 "OPEN/HIGH INPUT OF REAR ABS WHEEL SPEED SENSOR LH". <Ref. to VDC(diag)-45, DTC C0027 OPEN/HIGH INPUT OF REAR ABS WHEEL SPEED SENSOR LH, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

F: DTC C0023 OPEN/HIGH INPUT OF FRONT ABS WHEEL SPEED SENSOR LH

NOTE:

For the diagnostic procedure, refer to DTC C0027 "OPEN/HIGH INPUT OF REAR ABS WHEEL SPEED SENSOR LH". <Ref. to VDC(diag)-45, DTC C0027 OPEN/HIGH INPUT OF REAR ABS WHEEL SPEED SENSOR LH, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

G: DTC C0025 OPEN/HIGH INPUT OF REAR ABS WHEEL SPEED SENSOR RH

NOTE:

For the diagnostic procedure, refer to DTC C0027 "OPEN/HIGH INPUT OF REAR ABS WHEEL SPEED SENSOR LH". <Ref. to VDC(diag)-45, DTC C0027 OPEN/HIGH INPUT OF REAR ABS WHEEL SPEED SENSOR LH, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

H: DTC C0027 OPEN/HIGH INPUT OF REAR ABS WHEEL SPEED SENSOR LH DTC DETECTING CONDITION:

- Defective ABS wheel speed sensor (broken wire, input voltage too high)
- Defective harness connector

TROUBLE SYMPTOM:

- ABS does not operate.
- VDC does not operate.



Step	Check	Yes	No
1 CHECK POOR CONTACT IN CONNECTOR.	Is there poor contact?	Repair the con-	Go to step 2.
Check if there is poor contact between		nector.	
VDCCM&H/U and ABS wheel speed sensor.			
2 CHECK HARNESS CONNECTOR BETWEEN	Is the resistance less than 0.5	Go to step 3.	Repair the har-
VDCCM&H/U AND ABS WHEEL SPEED	Ω?		ness connector
SENSOR.			between
1) Disconnect the connector (B310) from the			VDCCM&H/U and
VDCCM&H/U.			ABS wheel speed
2) Disconnect the connector from ABS wheel			sensor.
speed sensor.			
3) Measure the resistance between			
VDCCM&H/U connector and ABS wheel			
speed sensor connector.			
Connector & terminal			
DTC C0021			
(B310) No. 22 — (B6) No. 1:			
(B310) No. 21 — (B6) No. 2:			
DTC C0023			
(B310) No. 41 — (B15) No. 1:			
(B310) No. 25 — (B15) No. 2:			
DTC C0025			
(B310) No. 23 — (R72) No. 1:			
(B310) No. 38 — (R72) No. 2:			
DTC C0027			
(B310) No. 24 — (R73) No. 1:			
(B310) No. 40 — (R73) No. 2:			
3 CHECK GROUND SHORT OF HARNESS.	Is the resistance more than 1	Go to step 4.	Repair the har-
Measure the resistance between VDCCM&H/U	ΜΩ?		ness connector
connector and chassis ground.			between
Connector & terminal			VDCCM&H/U and
DTC C0021			ABS wheel speed
(B310) No. 21 — Chassis ground:			sensor.
DTC C0023			
(B310) No. 25 — Chassis ground:			
DTC C0025			
(B310) No. 38 — Chassis ground:			
(P210) No. 40 Chapping grounds			
(B310) No. 40 — Chassis ground:	1_{0} the veltere 5_{0} $10 \sqrt{2}$	Cata atan C	
	Is the voltage 5 — 16 V?	Go to step b .	Go to step 5 .
1) Connect the VDCCM8.H/II connector			
2) Turn the ignition switch to ON			
3) Measure the voltage between ABS wheel			
speed sensor connector and chassis ground			
Connector & terminal			
DTC C0021			
(B6) No. 1 (+) — Chassis around (-):			
DTC C0023			
(B15) No. 1 (+) — Chassis around (-):			
DTC C0025			
(R72) No. 1 (+) — Chassis around (–):			
DTC C0027			
(R73) No. 1 (+) — Chassis ground (–):			

VEHICLE DYNAMICS CONTROL (VDC) (DIAGNOSTICS)

	Step	Check	Yes	No
5	 CHECK THE VDCCM&H/U POWER SUPPLY CIRCUIT. 1) Turn the ignition switch to OFF. 2) Disconnect the VDCCM&H/U connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between VDCCM&H/ U connector terminals. Connector & terminal (B310) No. 14 (+) — (B310) No. 6 (-): 	Is the voltage 10 — 15 V?	Go to step 7.	Check the genera- tor, battery and VDCCM&H/U power supply cir- cuit.
6	 CHECK ABS WHEEL SPEED SENSOR SIG- NAL. 1) Install the ABS wheel speed sensor. 2) Prepare an oscilloscope. 3) Check the ABS wheel speed sensor. <ref. to ABS-15, ABS WHEEL SPEED SENSOR, INSPECTION, Rear ABS Wheel Speed Sen- sor.></ref. 	Is the pattern the same wave- form as shown in the figure?	Go to step 7.	Replace the ABS wheel speed sen- sor.
7	 CHECK THE VDCCM&H/U. 1) Connect all the connectors. 2) Erase the memory. 3) Perform the Inspection Mode. <ref. inspection="" mode.="" procedure,="" to="" vdc(diag)-25,=""></ref.> 4) Read the DTC. 	Is the same DTC displayed?	Replace the VDCCM&H/U. <ref. to="" vdc-7,<br="">VDC Control Mod- ule and Hydraulic Control Unit (VDCCM&H/U).></ref.>	Go to step 8.
8	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag- nosis according to DTC.	It results from a temporary noise interference.

I: DTC C0022 FRONT ABS WHEEL SPEED SENSOR RH SIGNAL MALFUNC-TION

NOTE:

For the diagnostic procedure, refer to DTC C0028 "REAR ABS WHEEL SPEED SENSOR LH SIGNAL MAL-FUNCTION". <Ref. to VDC(diag)-48, DTC C0028 REAR ABS WHEEL SPEED SENSOR LH SIGNAL MAL-FUNCTION, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

J: DTC C0024 FRONT ABS WHEEL SPEED SENSOR LH SIGNAL MALFUNC-TION

NOTE:

For the diagnostic procedure, refer to DTC C0028 "REAR ABS WHEEL SPEED SENSOR LH SIGNAL MAL-FUNCTION". <Ref. to VDC(diag)-48, DTC C0028 REAR ABS WHEEL SPEED SENSOR LH SIGNAL MAL-FUNCTION, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

K: DTC C0026 REAR ABS WHEEL SPEED SENSOR RH SIGNAL MALFUNC-TION

NOTE:

For the diagnostic procedure, refer to DTC C0028 "REAR ABS WHEEL SPEED SENSOR LH SIGNAL MAL-FUNCTION". <Ref. to VDC(diag)-48, DTC C0028 REAR ABS WHEEL SPEED SENSOR LH SIGNAL MAL-FUNCTION, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

L: DTC C0028 REAR ABS WHEEL SPEED SENSOR LH SIGNAL MALFUNC-TION

DTC DETECTING CONDITION:

- Defective ABS wheel speed sensor signal (noise, irregular signal, etc.)
- Defective harness connector

TROUBLE SYMPTOM:

- ABS does not operate.
- VDC does not operate.



	Step	Check	Yes	No
1	CHECK OUTPUT OF ABS WHEEL SPEED	Does the speed indicated on	Go to step 2.	Go to step 7.
	SENSOR USING SUBARU SELECT MONI-	the display change in response		
	TOR.	to the speedometer reading		
	1) Select {Current Data Display & Save} in Subaru Select Menitor	during acceleration/decelera-		
	2) Read the ABS wheel speed sensor output	in the straight-ahead position?		
	corresponding to the faulty wheel in Subaru			
	Select Monitor data display mode.			
2	CHECK POOR CONTACT IN CONNECTOR.	Is there poor contact in con-	Repair the con-	Go to step 3.
	Turn the ignition switch to OFF.	nectors between VDCCM&H/U	nector.	
2		and ABS wheel speed sensor?	Co to otop 4	Install the radio
3	Make sure the radio wave devices and electric.	electric components installed	Go to step 4.	wave devices and
	components are installed correctly.	correctly?		electric compo-
		-		nents properly.
4	CHECK CAUSE OF SIGNAL NOISE.	Are noise sources installed?	Install the noise	Go to step 5.
	Check if the noise sources (such as an		sources apart from	
			sensor namess.	
5	CHECK THE VDCCM&H/U.	Is the same DTC displaved?	Replace the	Go to step 6 .
	1) Connect all the connectors.		VDCCM&H/U.	•
	2) Erase the memory.		<ref. td="" to="" vdc-7,<=""><td></td></ref.>	
	3) Perform the Inspection Mode. <ref. td="" to<=""><td></td><td>VDC Control Mod-</td><td></td></ref.>		VDC Control Mod-	
	VDC(diag)-25, PROCEDURE, inspection		Control Unit	
	4) Read the DTC.		(VDCCM&H/U).>	
6	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag-	It results from a
			nosis according to	temporary noise
			DTC.	interference.
7		Is the ABS wheel speed sen-	Go to step 8.	Lighten the ABS
	SFEED SENSON.	$7.5 \text{ N} \cdot \text{m} (0.76 \text{ kgf-m}, 5.5 \text{ ft-lb})?$		sor installation
		(e. eg, e.e,		bolts.
8	CHECK ABS WHEEL SPEED SENSOR SIG-	Does the oscilloscope indicate	Go to step 10.	Go to step 9.
	NAL.	the waveform pattern like		
	 Install the ABS wheel speed sensor. Prepare an oscilloscope 	tire is slowly turned? Does the		
	 Check the ABS wheel speed sensor. < Ref. 	oscilloscope indication repeat		
	to ABS-14, ABS WHEEL SPEED SENSOR,	the waveform pattern like		
	INSPECTION, Front ABS Wheel Speed Sen-	shown in the figure when the		
	sor.>	tire is slowly turned in equal		
٩	CHECK ABS WHEEL SPEED SENSOR OR	Are there foreign matter	Bemove dirt thor-	Go to step 10
5	MAGNETIC ENCODER.	breakage or damage at the tip	oughly. Also	
		of ABS wheel speed sensor or	replace the ABS	
		magnetic encoder?	wheel speed sen-	
			sor or magnetic	
			with hub unit bear-	
			ing if it is broken or	
			damaged.	
10	CHECK CAUSE OF SIGNAL NOISE.	Are the radio wave devices and	Go to step 11.	Install the radio
	Make sure the radio wave devices and electric	electric components installed		wave devices and
	components are installed correctly.	correctly?		electric compo-
11	CHECK CAUSE OF SIGNAL NOISE.	Is the noise sources installed?	Go to step 12.	Install the noise
	Check if the noise sources (such as an			sources apart from
	antenna) are installed near the sensor har-			sensor harness.
	ness.			

	Step	Check	Yes	No
12 CHI 1) (2) (3) (VDC Moc 4) (ECK THE VDCCM&H/U. Connect all the connectors. Erase the memory. Perform the Inspection Mode. <ref. to<br="">C(diag)-25, PROCEDURE, Inspection de.> Read the DTC.</ref.>	Is the same DTC displayed?	Replace the VDCCM&H/U. <ref. to="" vdc-7,<br="">VDC Control Mod- ule and Hydraulic Control Unit (VDCCM&H/U).></ref.>	Go to step 13.
13 CHI	ECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag- nosis according to DTC.	It results from a temporary noise interference. NOTE: Though the ABS warning light re- mains on at this time, it is normal. Drive the vehicle at more than 12 km/h (7 MPH) in order to turn ABS warning light off. Be sure to drive the vehicle and check the warning light goes off.

M: DTC C0029 ABS WHEEL SPEED SENSOR SIGNAL MALFUNCTION IN ONE OF FOUR WHEELS

DTC DETECTING CONDITION:

- Defective ABS wheel speed sensor signal (noise, irregular signal, etc.)
- Defective magnetic encoder
- When a wheel is turned freely for a long time

TROUBLE SYMPTOM:

- ABS does not operate.
- VDC does not operate.
- EBD may not operate.

NOTE:

Brake warning light comes on as well as ABS warning light when EBD does not operate.



Step Check Yes No 1 WHETHER A WHEEL TURNED FREELY OR NOT. Check if the wheels have been turned freely for more than one minute, such as when the vehi- cle is jacked-up, under full-lock cornering or when the wheels are not in contact with road surface. Did the wheels turn freely? VDC is normal. Erase the memory. NOTE: This diagnostic trouble code may sometimes occur if the wheels turn freely for a long time, for example when the vehicle is towed or jacked- up, or when steer- ing wheels contin- uously turned all the way. Replace the tire. 2 CHECK TIRE SPECIFICATIONS. Turn the ignition switch to OFF. Are the tire specifications cor- for the way. Replace the tire. Replace the tire. 3 CHECK WEAR OF TIRE. Is the tire oressure correct? Go to step 3. Replace the tire. 5 CHECK INSTALLATION PRESSURE. Is the tire pressure correct? Go to step 6. Tighten the 4BS wheel speed sen- sor installation bolts tightened or installation bolts tightened or installation bolts tightened so installation bolts. Go to step 6. Tighten the 4BS wheel speed sen- sor installation bolts. 6 CHECK ABS WHEEL SPEED SENSOR SIG. (For tour wheels) Go to step 7. Go to step 7. 6 CHECK ABS WHEEL SPEED SENSOR OR NAL. 1) Install the ABS wheel speed sensor. 2) Prepare an oscilloscope. 3) Check the ABS wheel speed sensor. 5) or or magnetic encocder as a unit with hourit bear- sor. 3) Check the ABS wheel spee		•	a : i		
1 WHETHER A WHEEL TURNED FREELY OR NOT. Check if the wheels have been turned freely for more than one minute, such as when the vehi- cle is jacked-up, under full-lock cornering or when the wheels are not in contact with road surface. Did the wheels turn freely for a long time, for example when the vehicle is towed or jacked- up, or when steer- ing wheels contin- uously turned all the way. CHECK TIRE SPECIFICATIONS. Turn the ignition switch to OFF. Are the tire specifications cor- rect? Go to step 3. Replace the tire. 2 CHECK TIRE SPECIFICATIONS. Turn the ignition switch to OFF. Is the tire worn excessively? Replace the tire. Go to step 4. 4 CHECK WEAR OF TIRE. Is the tire worn excessively? Replace the tire. or installation bolts tightened sor installation bolts tightened sor installation bolts tightened sor installation bolts tightened sor installation bolts. Go to step 6. Go to step 7. 6 CHECK ABS WHEEL SPEED SENSOR IG NAL. Does the oscilloscope indicate the waveform pattern like shown in the figure when the tire is slowly turned? Does the tind is broken or damanged. Remove dirt		Step	Check	Yes	No
NOT. Check if the wheels have been turned freely for more than one minute, such as when the vehicale is jacked-up, under full-lock cornering or when the wheels are not in contact with road surface. NOTE: This diagnostic trouble code may sometimes occur if the wheels turn freely for a long time, for example when the vehicle is towed or jacked-up, or when steering wheel is continuously turned all the way. 2 CHECK TIRE SPECIFICATIONS. Are the tire specifications correct? Go to step 3. Replace the tire. 3 CHECK WEAR OF TIRE. Is the tire over excessively? Replace the tire. Go to step 4. 4 CHECK INSTALLATION OF ABS WHEEL Is the tire over excessively? Replace the tire. Go to step 6. Tighten the ABS wheel speed sensor. 5 CHECK ABS WHEEL SPEED SENSOR SIGNAL. Is the source on contaction obst tighten the figure when the tire is slowly turned of paguation bots tightened sensor. Go to step 8. Go to step 7. 6 CHECK ABS WHEEL SPEED SENSOR SIGNAL. In shall the ABS wheel speed sensor. Go to step 8. Go to step 7. 7 CHECK ABS WHEEL SPEED SENSOR OR Are there foreign matter, breakage or damage at the tire or organetic encoder? Benove dirt thoroson or damaged. Go to step 8. Go to step 8. Go to step 8. 7 CHECK ABS WHEEL SPEED SENSOR OR MAGNETIC ENCODER. Is the same DTC displayed? Beno	1	WHETHER A WHEEL TURNED FREELY OR	Did the wheels turn freely?	VDC is normal.	Go to step 2.
Check if the wheels have been turned freely for more than one minute, such as when the vehicle is jacked-up, under full-lock cornering or when the wheels are not in contact with road surface. NOTE: This diagnostic trouble code may sometimes occur if the wheels turn freely for a long time, for example when the vehicle is towed or jacked- up, or when steer- ing wheel is contin- uously turned all the way. 2 CHECK TIRE SPECIFICATIONS. Turn the ignition switch to OFF. Are the tire specifications cor- rect? Go to step 3. Replace the tire. 3 CHECK WEAR OF TIRE. Is the tire worn excessively? Replace the tire. Go to step 4. 4 CHECK WEAR OF TIRE. Is the tire pressure correct? Go to step 5. Adjust the tire pressure. 5 CHECK NEAR OF TIRE. Is the tire pressure correct? Go to step 6. Tighten the ABS wheel speed sen- sor installation bolts tightened 7.5 Nm (0.78 kgf-m, 5.5 ft-b)? Tighten the ABS wheel speed sensor. Tighten the ABS wheel speed sensor. 1) Install the ABS wheel speed sensor. Does the oscilloscope indicator to ABS vHEEL SPEED SENSOR RIC- NAL. Does the oscilloscope indicator the waveform pattern like shown in the figure when the tire is slowly turned in equal speed for more one rotation? Go to step 8. Go to step 8. 7 CHECK ABS WHEEL SPEED SENSOR OR MAGNETIC ENCODER. Are the foreign matter, breakage or damage at the tip of ABS wheel speed sensor or magnetic encoder? Remove dirt thor- or		NOT.		Erase the memory.	
more than one minute, such as when the vehicle is jacked-up, or when the wheels are not in contact with road surface. This diagnostic trouble code may sometimes occur if the wheels turn freely for a long time, for example when the vehicle is towed or jacked- up, or when steer- ing wheel is contin- uously turned all the way. 2 CHECK TIRE SPECIFICATIONS. Turn the ignition switch to OFF. Turn the ignition switch to OFF. Are the tire specifications cor- rect? Go to step 3. Replace the tire. 3 CHECK WEAR OF TIRE. Is the tire worn excessively? Replace the tire. Go to step 4. 4 CHECK WEAR OF TIRE. Is the tire pressure correct? Go to step 5. Adjust the tire pressure. 5 CHECK INSTALLATION OF ABS WHEEL SPEED SENSOR. Are the ABS wheel speed sen- sor installation bolts tightened 7.5 N.M. (O.76 kg/m, 5.5 th.l)? (For four wheels) Go to step 6. Tighten the ABS wheel speed sen- sor. 6 CHECK ABS WHEEL SPEED SENSOR SIC NAL. Dres the oscilloscope indication pattern like shown in the figure when the tire is slowly turned 7 boes the oscilloscope indication repeat to ABS-14, ABS WHEEL SPEED SENSOR or MAGNETIC ENCODER. Are there foreign matter, breakage or damage at the tip of ABS wheel speed sensor reglace the ABS wheel speed sen- sor or magnetic encoder? Go to step 8. 7 CHECK THE VDCCMAH/U. 1) Connect all the connectors. Is the same DTC displayed? Replace the ABS wheel speed sen- sor or magnetic encoder as a unit with thub unit bear- ing if it is b		Check if the wheels have been turned freely for		NOTE:	
cle is jacked-up, under full-lock cornering or when the wheels are not in contact with road surface. trouble code may sometimes occur if the wheels turn freely for a long time, for example when the vehicle is lowed or jacked- up, or when steer- ing wheel is contin- uously turned all the way. 2 CHECK TIRE SPECIFICATIONS. Turn the ignition switch to OFF. Are the tire specifications cor- rect? Go to step 3. 3 CHECK WEAR OF TIRE. Is the tire worn excessively? Replace the tire. 4 CHECK INE INFLATION PRESSURE. Is the tire pressure correct? Go to step 4. 5 CHECK INSTALLATION OF ABS WHEEL SPEED SENSOR. Are the ABS wheel speed sen- sor installation bolts tightened 7.5 N.m (0.76 kgf-m, 5.5 ft-b)? (For four wheels) Go to step 6. Tighten the ABS wheel speed sen- sor installation bolts. 6 CHECK ABS WHEEL SPEED SENSOR NIC NAL. Does the coscilloscope indicate the waveform pattern like shown in the figure when the tire is slowly turned? Does the oughly.Also replace the ABS wheel speed sensor. Go to step 8. Go to step 8. 7 CHECK ABS WHEEL SPEED SENSOR OR MAGNETIC ENCODER. Are there foreign matter, breakage or damage at the tip or ABS wheel speed sensor or magnetic encoder? Remove dirt thor- or magnetic encoder as a unit with hub unit bear- ing if it is broken or damaged. Go to step 9. 8 CHECK THE VDCCM&H/U. 1) Connect all the connectors. Is the same DTC displayed? Replace the VDCCM&H/U. VDCCM&H/U		more than one minute, such as when the vehi-		This diagnostic	
when the wheels are not in contact with road surface. sometimes occur if the wheels turn freely for a long time, for example when the vehicle is towed or jacked- up, or when steer- ing wheel is contin- uously turned all the way. 2 CHECK TIRE SPECIFICATIONS. Turn the ignition switch to OFF. Turn the ignition switch to OFF. Are the tire specifications cor- rect? Go to step 3. Replace the tire. 3 CHECK WEAR OF TIRE. Is the tire worn excessively? Replace the tire. Go to step 4. 4 CHECK WISALLATION OF ABS WHEEL SPEED SENSOR. Is the tire pressure correct? Go to step 5. Adjust the tire pressure. 5 CHECK INSTALLATION OF ABS WHEEL SPEED SENSOR. Are the ABS wheel speed sen- sor installation boits tightened 7.5 N M (0.76 kg/m, 5.5 thel)? Go to step 6. Tighten the ABS wheel speed sen- sor. 6 CHECK KABS WHEEL SPEED SENSOR SIC NAL. Does the oscilloscope indicate the waveform pattern like shown in the figure when the tire is slowly turned 7 Dees the solloscope indication repeat the waveform pattern like shown in the figure when the tire is slowly turned in equal speed for more one rolation? Go to step 8. 7 CHECK ABS WHEEL SPEED SENSOR OR MAGNETIC ENCODER. Are there foreign matter, breakage or damage at the tip of ABS wheel speed sen- sor or magnetic encoder? Remove dirt thor- or magnetic encoder? Go to step 9. 8 CHECK THE VDCCM&H/U. 1) Connact all the connectors. Is the same DTC		cle is jacked-up, under full-lock cornering or		trouble code may	
surface. the wheels turn freely for a long time, for example when the vehicle is towed or jacked-up, or when steering wheel is continuously turned all the way. 2 CHECK TIRE SPECIFICATIONS. Turn the ignition switch to OFF. 3 CHECK WEAR OF TIRE. 4 CHECK TIRE INFLATION PRESSURE. 5 CHECK NISTALLATION OF ABS WHEEL SPEED SENSOR. 6 CHECK ABS WHEEL SPEED SENSOR SIG. NAL. 1) Install the ABS wheel speed sensor. 2) Prepare an oscilloscope. 3 CHECK ABS WHEEL SPEED SENSOR SIG. NAS-14, ABS WHEEL SPEED SENSOR. 6 CHECK ABS WHEEL SPEED SENSOR SIG. NAS-14, ABS Wheel speed sensor. 2) Prepare an oscilloscope. 3 CHECK ABS WHEEL SPEED SENSOR SIG. NAS-14, ABS Wheel speed sensor. 2) Prepare an oscilloscope. 3 CHECK ABS WHEEL SPEED SENSOR SIG. NAS-14, ABS Wheel speed sensor. 2) Prepare an oscilloscope. 3 CHECK ABS WHEEL SPEED SENSOR SIG. NAS-14, ABS Wheel Speed Sensor. 2) Prepare an oscilloscope. 3 CHECK ABS WHEEL SPEED SENSOR OR MAGENTION. Front ABS Wheel Speed Sensor. 2) Prepare an oscilloscope. 3 CHECK ABS WHEEL SPEED SENSOR OR MAGNETIC ENCODER. 6 CHECK ABS WHEEL SPEED SENSOR OR MAGNETIC ENCODER. 7 CHECK ABS WHEEL SPEED SENSOR OR MAGNETIC ENCODER. 8 CHECK THE VDCCM&H/U. 1) 1) Conneet all the connectors. <th></th> <th>when the wheels are not in contact with road</th> <th></th> <th>sometimes occur if</th> <th></th>		when the wheels are not in contact with road		sometimes occur if	
2 CHECK TIRE SPECIFICATIONS. Turn the ignition switch to OFF. Are the tire specifications correct? Go to step 3. Replace the tire. 3 CHECK TIRE NOF TIRE. Is the tire worn excessively? Replace the tire. Go to step 3. 4 CHECK TIRE INFLATION OF ABS WHEEL SPEED SENSOR. Is the tire pressure correct? Go to step 5. Adjust the tire pressure. 5 CHECK NSTALLATION OF ABS WHEEL SPEED SENSOR. Is the tire pressure correct? Go to step 6. Tighten the ABS wheel speed sen- sor installation bots tightened 7.5 N m (0.76 kgf-m, 5.5 ft-lb)? Tighten the ABS wheel speed sen- sor installation bots tightened 7.5 N m (0.76 kgf-m, 5.5 ft-lb)? Go to step 8. Go to step 7. 6 CHECK ABS WHEEL SPEED SENSOR SIG- NAL. Does the oscilloscope indicate the waveform pattern like shown in the figure when the tire is slowly turned? Does the oscilloscope indication repeat the waveform pattern like shown in the figure when the tire is slowly turned? Go to step 8. Go to step 8. 7 CHECK ABS WHEEL SPEED SENSOR OFR MAGNETIC ENCODER. Are there foreign matter, breakage or damage at the tip of ABS wheel speed sensor or magnetic encoder? Remove dirt thor- with hub unit bear- ing if it is broken or damaged. Go to step 9. 8 CHECK THE VDCCM&H/U. 1) Connect all the connectors. Is the same DTC displayed? Replace the VDCCM&H/U. 20 Go to step 9.		surface.		the wheels turn	
2 CHECK TIRE SPECIFICATIONS. Turn the ignition switch to OFF. Are the tire specifications correct? Go to step 3. Replace the tire. 3 CHECK TIRE SPECIFICATION S. Turn the ignition switch to OFF. Are the tire specifications correct? Go to step 3. Replace the tire. 4 CHECK TIRE INFLATION PRESSURE. Is the tire pressure correct? Go to step 5. Adjust the tire pressure. 5 CHECK INSTALLATION OF ABS WHEEL SPEED SENSOR. Are the ABS wheel speed sen- sor installation bolts tightened 7.5 Nm (0.76 kgl-m, 5.5 ft-lb)? Go to step 6. Tighten the ABS wheel speed sen- sor installation bolts tightened 7.5 Nm (0.76 kgl-m, 5.5 ft-lb)? Go to step 8. Go to step 7. 6 CHECK ABS WHEEL SPEED SENSOR SIG- NAL. Does the oscilloscope indicate the waveform pattern like shown in the figure when the tire is slowly turned? Does the oscilloscope indication repeat the saveform pattern like shown in the figure when the tire is slowly turned? Does the oscilloscope indication repeat the waveform pattern like shown in the figure when the tire is slowly turned in equal speed for more one rotation? Remove dirt thor- or magnetic encoder? Go to step 8. 7 CHECK THE VDCCM&H/U. 1) Connect all the connectors. Is the same DTC displayed? Remove dirt thor- or magnetic encoder as a unit with hub unit bear- ing if it is broken or damaged. Go to step 9. 8 CHECK THE VDCCM&H/U. 1) Connect all the connectors. Is the same DTC di				freely for a long	
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6 CHECK ABS WHEEL SPEED SENSOR SIG- NAL. Does the oscilloscope indicate the waveform pattern like shown in the figure when the tire is slowly turned? Does the oscilloscope indication repeat to ABS-14, ABS WHEEL SPEED SENSOR, INSPECTION, Front ABS Wheel Speed Sen- sor.> Go to step 8. Go to step 7. 7 CHECK ABS WHEEL SPEED SENSOR OR MAGNETIC ENCODER. Are there foreign matter, of ABS wheel speed sensor or magnetic encoder? Remove dirt thor- oughly. Also replace the ABS wheel speed sen- sor or magnetic encoder as a unit with hub unit bear- ing if it is broken or damaged. Go to step 8.			7.5 N·m (0.76 kgf-m, 5.5 ft-lb)?		sor installation
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		1) Connect all the connectors.		VDCCM&H/U.	
2) Erase the memory.		2) Erase the memory.		<ref. th="" to="" vdc-7,<=""><th></th></ref.>	
3) Perform the Inspection Mode. <ref. control="" mod-<="" th="" to="" vdc=""><th></th><th>3) Perform the Inspection Mode. <ref. th="" to<=""><th></th><th>VDC Control Mod-</th><th></th></ref.></th></ref.>		3) Perform the Inspection Mode. <ref. th="" to<=""><th></th><th>VDC Control Mod-</th><th></th></ref.>		VDC Control Mod-	
VDC(diag)-25, PROCEDURE, Inspection		VDC(diag)-25, PROCEDURE, Inspection		ule and Hydraulic	
Mode.> Control Unit		Mode.>		Control Unit	
4) Read the DTC. (VDCCM&H/U).>		4) Read the DTC.		(VDCCM&H/U).>	

VEHICLE DYNAMICS CONTROL (VDC) (DIAGNOSTICS)

	Step	Check	Yes	No
9	Step CHECK OTHER DTC DETECTION.	Check Is any other DTC displayed?	Yes Perform the diag- nosis according to DTC.	No It results from a temporary noise interference. NOTE: Though the ABS warning light re- mains on at this time, it is normal. Drive the vehicle at more than 12 km/h (7 MPH) in order to turn ABS warning light off. Be sure to drive the vehicle and check the
				warning light goes off.

N: DTC C0031 FRONT INLET SOLENOID VALVE RH MALFUNCTION IN VDC-CM&H/U

NOTE:

For the diagnostic procedure, refer to DTC C0064 "PRIMARY SUCTION VALVE MALFUNCTION IN VDC-CM&H/U". <Ref. to VDC(diag)-55, DTC C0064 PRIMARY SUCTION VALVE MALFUNCTION IN VDC-CM&H/U, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

O: DTC C0032 FRONT OUTLET SOLENOID VALVE RH MALFUNCTION IN VDC-CM&H/U

NOTE:

For the diagnostic procedure, refer to DTC C0064 "PRIMARY SUCTION VALVE MALFUNCTION IN VDC-CM&H/U". <Ref. to VDC(diag)-55, DTC C0064 PRIMARY SUCTION VALVE MALFUNCTION IN VDC-CM&H/U, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

P: DTC C0033 FRONT INLET SOLENOID VALVE LH MALFUNCTION IN VDC-CM&H/U

NOTE:

For the diagnostic procedure, refer to DTC C0064 "PRIMARY SUCTION VALVE MALFUNCTION IN VDC-CM&H/U". <Ref. to VDC(diag)-55, DTC C0064 PRIMARY SUCTION VALVE MALFUNCTION IN VDC-CM&H/U, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

Q: DTC C0034 FRONT OUTLET SOLENOID VALVE LH MALFUNCTION IN VDC-CM&H/U

NOTE:

For the diagnostic procedure, refer to DTC C0064 "PRIMARY SUCTION VALVE MALFUNCTION IN VDC-CM&H/U". <Ref. to VDC(diag)-55, DTC C0064 PRIMARY SUCTION VALVE MALFUNCTION IN VDC-CM&H/U, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

R: DTC C0035 REAR INLET SOLENOID VALVE RH MALFUNCTION IN VDC-CM&H/U

NOTE:

For the diagnostic procedure, refer to DTC C0064 "PRIMARY SUCTION VALVE MALFUNCTION IN VDC-CM&H/U". <Ref. to VDC(diag)-55, DTC C0064 PRIMARY SUCTION VALVE MALFUNCTION IN VDC-CM&H/U, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

VDC(diag)-53

S: DTC C0036 REAR OUTLET SOLENOID VALVE RH MALFUNCTION IN VDC-CM&H/U

NOTE:

For the diagnostic procedure, refer to DTC C0064 "PRIMARY SUCTION VALVE MALFUNCTION IN VDC-CM&H/U". <Ref. to VDC(diag)-55, DTC C0064 PRIMARY SUCTION VALVE MALFUNCTION IN VDC-CM&H/U, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

T: DTC C0037 REAR INLET SOLENOID VALVE LH MALFUNCTION IN VDC-CM&H/U

NOTE:

For the diagnostic procedure, refer to DTC C0064 "PRIMARY SUCTION VALVE MALFUNCTION IN VDC-CM&H/U". <Ref. to VDC(diag)-55, DTC C0064 PRIMARY SUCTION VALVE MALFUNCTION IN VDC-CM&H/U, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

U: DTC C0038 REAR OUTLET SOLENOID VALVE LH MALFUNCTION IN VDC-CM&H/U

NOTE:

For the diagnostic procedure, refer to DTC C0064 "PRIMARY SUCTION VALVE MALFUNCTION IN VDC-CM&H/U". <Ref. to VDC(diag)-55, DTC C0064 PRIMARY SUCTION VALVE MALFUNCTION IN VDC-CM&H/U, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

V: DTC C0061 SECONDARY CUT VALVE MALFUNCTION IN VDCCM&H/U

NOTE:

For the diagnostic procedure, refer to DTC C0064 "PRIMARY SUCTION VALVE MALFUNCTION IN VDC-CM&H/U". <Ref. to VDC(diag)-55, DTC C0064 PRIMARY SUCTION VALVE MALFUNCTION IN VDC-CM&H/U, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

W: DTC C0062 PRIMARY CUT VALVE MALFUNCTION IN VDCCM&H/U

NOTE:

For the diagnostic procedure, refer to DTC C0064 "PRIMARY SUCTION VALVE MALFUNCTION IN VDC-CM&H/U". <Ref. to VDC(diag)-55, DTC C0064 PRIMARY SUCTION VALVE MALFUNCTION IN VDC-CM&H/U, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

X: DTC C0063 SECONDARY SUCTION VALVE MALFUNCTION IN VDCCM&H/U

NOTE:

For the diagnostic procedure, refer to DTC C0064 "PRIMARY SUCTION VALVE MALFUNCTION IN VDC-CM&H/U". <Ref. to VDC(diag)-55, DTC C0064 PRIMARY SUCTION VALVE MALFUNCTION IN VDC-CM&H/U, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

Y: DTC C0064 PRIMARY SUCTION VALVE MALFUNCTION IN VDCCM&H/U DTC DETECTING CONDITION:

- Defective harness connector
- Defective VDCH/U solenoid valve

TROUBLE SYMPTOM:

- ABS does not operate.
- EBD does not operate.
- VDC does not operate.



	Step	Check	Yes	No
1	 CHECK THE VDCCM&H/U INPUT VOLTAGE. 1) Turn the ignition switch to OFF. 2) Disconnect the connector from the VDCCM&H/U. 3) Run the engine at idle. 4) Measure the voltage between VDCCM&H/U connector and chassis ground. Connector & terminal (B310) No. 14 (+) — Chassis ground (-): 	Is the voltage 10 — 15 V?	Go to step 2.	Repair the power supply circuit.
2	 CHECK THE VDCCM&H/U GROUND CIR- CUIT. 1) Turn the ignition switch to OFF. 2) Measure the resistance between VDCCM&H/U connector and chassis ground. <i>Connector & terminal</i> (B310) No. 6 — Chassis ground: 	Is the resistance less than 0.5 Ω ?	Go to step 3 .	Repair the VDCCM&H/U ground harness.
3	CHECK POOR CONTACT OF CONNEC- TORS.	Is there poor contact in con- nector between generator, bat- tery and VDCCM&H/U?	Repair the con- nector.	Go to step 4 .
4	 CHECK THE VDCCM&H/U. 1) Connect all the connectors. 2) Erase the memory. 3) Perform the Inspection Mode. 4) Read the DTC. 	Is the same DTC displayed?	Replace the VDCCM&H/U. <ref. to="" vdc-7,<br="">VDC Control Mod- ule and Hydraulic Control Unit (VDCCM&H/U).></ref.>	Go to step 5 .
5	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag- nosis according to DTC.	Temporary poor contact occurs.

Z: DTC C0041 VDC CONTROL MODULE MALFUNCTION

DTC DETECTING CONDITION: Defective VDCCM&H/U

- TROUBLE SYMPTOM:
- ABS does not operate.
- EBD does not operate.VDC does not operate.
- VDC does not operat



	Step	Check	Yes	No
1	 CHECK THE VDCCM&H/U GROUND CIR- CUIT. 1) Turn the ignition switch to OFF. 2) Disconnect the connector from the VDCCM&H/U. 3) Measure the resistance between VDCCM&H/U and chassis ground. Connector & terminal (B310) No. 6 — Chassis ground: 	Is the resistance less than 0.5 Ω ?	Go to step 2.	Repair the VDCCM&H/U ground harness.
2	CHECK POOR CONTACT OF CONNEC- TORS.	Is there poor contact of the connector between the bat- tery, ignition switch and VDCCM&H/U?	Repair the con- nector.	Go to step 3 .
3	CHECK CAUSE OF SIGNAL NOISE.	Is the car telephone or the radio properly installed?	Go to step 4.	Install the car phone or radio properly.
4	CHECK CAUSE OF SIGNAL NOISE.	Is there a noise source (such as an antenna) installed near the sensor harness?	Install the noise sources apart from the sensor har- ness.	Go to step 5 .
5	 CHECK THE VDCCM&H/U. 1) Connect all the connectors. 2) Erase the memory. 3) Perform the Inspection Mode. 4) Read the DTC. 	Is the same DTC displayed?	Replace the VDCCM&H/U. <ref. to="" vdc-7,<br="">VDC Control Mod- ule and Hydraulic Control Unit (VDCCM&H/U).></ref.>	Go to step 6 .
6	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag- nosis according to DTC. <ref. to<br="">VDC(diag)-36, List of Diagnostic Trou- ble Code (DTC).></ref.>	Temporary poor contact occurs.

AA:DTC C0042 POWER VOLTAGE MALFUNCTION

DTC DETECTING CONDITION:

CHECK THE VDCCM&H/U power supply voltage.

TROUBLE SYMPTOM:

- ABS does not operate.
- EBD may not operate.
- VDC does not operate.

NOTE:

Warning lights go off if voltage returns. **WIRING DIAGRAM:**



VEHICLE DYNAMICS CONTROL (VDC) (DIAGNOSTICS)

	Step	Check	Yes	No
1	 CHECK GENERATOR. 1) Start the engine. 2) Run the engine at idle after warming up. 3) Measure the voltage between generator terminal B and chassis ground. Terminals Generator B terminal (+) — Chassis ground (-): 	Is the voltage 10 — 15 V?	Go to step 2.	Repair the genera- tor. <ref. to<br="">SC(H4SO)-21, Generator.></ref.>
2	CHECK BATTERY TERMINAL. Turn the ignition switch to OFF.	Are the positive and negative battery terminals clamped tightly?	Go to step 3.	Tighten the termi- nal.
3	 CHECK THE VDCCM&H/U INPUT VOLTAGE. 1) Disconnect the connector from the VDCCM&H/U. 2) Run the engine at idle. 3) Operate the devices such as headlights, air conditioner, defogger, etc. which produce much electrical loading. 4) Measure the voltage between VDCCM&H/U connector and chassis ground. Connector & terminal (B310) No. 14 (+) — Chassis ground (-): 	Is the voltage 10 — 15 V?	Go to step 4.	Repair the power supply circuit.
4	 CHECK THE VDCCM&H/U GROUND CIR- CUIT. 1) Turn the ignition switch to OFF. 2) Measure the resistance between VDCCM&H/U connector and chassis ground. Connector & terminal (B310) No. 6 — Chassis ground: 	Is the resistance less than 0.5 Ω ?	Go to step 5 .	Repair the VDCCM&H/U ground harness.
5	CHECK POOR CONTACT OF CONNEC- TORS.	Is there poor contact in con- nector between generator, bat- tery and VDCCM&H/U?	Repair the con- nector.	Go to step 6 .
6	 CHECK THE VDCCM&H/U. 1) Connect all the connectors. 2) Erase the memory. 3) Perform the Inspection Mode. 4) Read the DTC. 	Is the same DTC displayed?	Replace the VDCCM&H/U. <ref. to="" vdc-7,<br="">VDC Control Mod- ule and Hydraulic Control Unit (VDCCM&H/U).></ref.>	Go to step 7.
7	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag- nosis according to DTC. <ref. to<br="">VDC(diag)-36, List of Diagnostic Trou- ble Code (DTC).></ref.>	Temporary poor contact occurs.

AB:DTC C0042 ABS WHEEL SPEED SENSOR POWER MALFUNCTION

NOTE:

For the diagnostic procedure, refer to DTC C0042 "POWER VOLTAGE MALFUNCTION". <Ref. to VDC(diag)-59, DTC C0042 POWER VOLTAGE MALFUNCTION, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

AC:DTC C0044 AT COMMUNICATION

DTC DETECTING CONDITION: No CAN signal from TCM.

TROUBLE SYMPTOM:

- ABS does not operate.
- VDC does not operate.

	Step	Check	Yes	No
1	CHECK LAN SYSTEM. Perform the diagnosis for LAN system. <ref. to<br="">LAN(diag)-25, OPERATION, Read Diagnostic Trouble Code (DTC).></ref.>	Is there any fault in LAN sys- tem?	Perform the diag- nosis according to DTC for LAN sys- tem.	Go to step 2 .
2	CHECK POOR CONTACT IN CONNECTORS.	Is there poor contact in TCM connector?	Repair the con- nector.	Go to step 3.
3	CHECK TCM.	Is the TCM normal?	Go to step 4.	Replace the TCM. <ref. 4at-62,<br="" to="">Transmission Con- trol Module (TCM).> <ref. to<br="">5AT-56, Transmis- sion Control Mod- ule (TCM).></ref.></ref.>
4	 CHECK THE VDCCM&H/U. 1) Connect all the connectors. 2) Erase the memory. 3) Perform the Inspection Mode. 4) Read the DTC. 	Is the same DTC displayed?	Replace the VDCCM&H/U.	Go to step 5.
5	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag- nosis according to DTC.	It results from a temporary noise interference.

AD:DTC C0045 DIFFERENT VDC CONTROL MODULE SPECIFICATION DTC DETECTING CONDITION:

Different control module specification

TROUBLE SYMPTOM:

- ABS does not operate.
- VDC does not operate.

Step	Check	Yes	No
1 CHECK VDCCM&H/U SPECIFICATION. Check the identification mark of the VDCCM&H/U. Identification mark of VDCCM&H/U Wagon model OUTBACK 3.0 R: G5 Sedan model OUTBACK 3.0 R: GB	Is the identification mark of VDCCM&H/U the same as vehicle specification?	Go to step 2 .	Replace the VDCCM&H/U. <ref. to="" vdc-7,<br="">VDC Control Mod- ule and Hydraulic Control Unit (VDCCM&H/U).></ref.>
2 CHECK TCM SPECIFICATION. Check the TCM specification.	Is the specification of TCM same as vehicle specification?	Go to step 3.	Replace the TCM. <ref. 4at-62,<br="" to="">Transmission Con- trol Module (TCM).> <ref. to<br="">5AT-56, Transmis- sion Control Mod- ule (TCM).></ref.></ref.>
 3 CHECK AT SYSTEM. 1) Start the engine. 2) Check the DTC in AT system. 	Is DTC of AT system dis- played?	Repair the AT sys- tem.	Go to step 4 .
4 CHECK ECM SPECIFICATION. Check the ECM specification.	Is the specification of ECM same as vehicle specification?	Go to step 5 .	Replace the ECM. <ref. to<br="">FU(H4SO)-36, Engine Control Module (ECM).> <ref. to<br="">FU(H4DOTC)-38, Engine Control Module (ECM).> <ref. to<br="">FU(H6DO)-33, Engine Control Module (ECM).></ref.></ref.></ref.>
 5 CHECK THE VDCCM&H/U. 1) Connect all the connectors. 2) Erase the memory. 3) Perform the Inspection Mode. 4) Read the DTC. 	Is the same DTC displayed?	Replace the VDCCM&H/U.	Go to step 6 .
6 CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag- nosis according to DTC.	It results from a temporary noise interference.

AE:DTC C0045 AT CONTROL MODULE MALFUNCTION

DTC DETECTING CONDITION:

Defective TCM

TROUBLE SYMPTOM:

- ABS does not operate.
- VDC does not operate.

	Step	Check	Yes	No
1	CHECK AT SYSTEM.	Is DTC of AT system dis-	Repair the AT sys-	Go to step 2.
	 Start the engine. Check the DTC in AT system. 	played?	tem.	
2	 CHECK THE VDCCM&H/U. Connect all the connectors. Erase the memory. Perform the Inspection Mode. Read the DTC. 	Is the same DTC displayed?	Replace the VDCCM&H/U.	Go to step 3 .
3	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag- nosis according to DTC.	It results from a temporary noise interference.

AF:DTC C0047 IMPROPER CAN COMMUNICATION

DTC DETECTING CONDITION:

CAN communication line circuit is open or shorted.

TROUBLE SYMPTOM:

- ABS does not operate.
- VDC does not operate.



	Step	Check	Yes	No
1	CHECK LAN SYSTEM. Perform the diagnosis for LAN system. <ref. to<br="">LAN(diag)-25, OPERATION, Read Diagnostic Trouble Code (DTC).></ref.>	Is there any fault in LAN sys- tem?	Perform the diag- nosis according to DTC for LAN sys- tem.	Go to step 2.
2	CHECK POOR CONTACT IN CONNECTORS.	Is there poor contact in VDCCM&H/U connector?	Repair the con- nector.	Go to step 3.
3	 CHECK THE VDCCM&H/U. 1) Connect all the connectors. 2) Erase the memory. 3) Perform the Inspection Mode. 4) Read the DTC. 	Is the same DTC displayed?	Replace the VDCCM&H/U. <ref. to="" vdc-7,<br="">VDC Control Mod- ule and Hydraulic Control Unit (VDCCM&H/U).></ref.>	Temporary poor contact occurs.

AG:DTC C0051 VALVE RELAY OFF MALFUNCTION

DTC DETECTING CONDITION:

Defective valve relay

TROUBLE SYMPTOM:

- ABS does not operate.
- EBD does not operate.
- VDC does not operate.



	Step	Check	Yes	No
1	 CHECK THE VDCCM&H/U INPUT VOLTAGE. 1) Turn the ignition switch to OFF. 2) Disconnect the connector from the VDCCM&H/U. 3) Run the engine at idle. 4) Measure the voltage between VDCCM&H/U connector and chassis ground. Connector & terminal (B310) No. 5 (+) — Chassis ground (-): 	Is the voltage 10 — 15 V?	Go to step 2.	Repair the har- ness connector between battery and VDCCM&H/U.
2	 CHECK THE VDCCM&H/U GROUND CIR- CUIT. 1) Turn the ignition switch to OFF. 2) Measure the resistance between VDCCM&H/U connector and chassis ground. Connector & terminal (B310) No. 6 — Chassis ground: 	Is the resistance less than 0.5 Ω ?	Go to step 3.	Repair the VDCCM&H/U ground harness.
3	CHECK POOR CONTACT IN CONNECTORS.	Is there poor contact in con- nector between generator, bat- tery and VDCCM&H/U?	Repair the con- nector.	Go to step 4 .
4	 CHECK THE VDCCM&H/U. 1) Connect all the connectors. 2) Erase the memory. 3) Perform the Inspection Mode. 4) Read the DTC. 	Is the same DTC displayed?	Replace the VDCCM&H/U. <ref. to="" vdc-7,<br="">VDC Control Mod- ule and Hydraulic Control Unit (VDCCM&H/U).></ref.>	Go to step 5.
5	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag- nosis according to DTC.	Temporary poor contact occurs.

AH:DTC C0051 VALVE RELAY MALFUNCTION

DTC DETECTING CONDITION:

Defective valve relay

- TROUBLE SYMPTOM:
- ABS does not operate.
- EBD does not operate.
- VDC does not operate.



Step		Check	Yes	No
 CHECK THE VDCCMa 1) Turn the ignition sw 2) Disconnect the conv VDCCM&H/U. 3) Run the engine at i 4) Measure the voltage U connector and chass Connector & termina (B310) No. 14 (+) - (B310) No. 5 (+) - 	&H/U INPUT VOLTAGE. witch to OFF. unector from the dle. le between VDCCM&H/ sis ground. al - Chassis ground (-): Chassis ground (-):	Is the voltage 10 — 15 V?	Go to step 2.	Repair the power supply circuit.
2 CHECK THE VDCCMa Calculate the voltage of step 1. A: (B310) No. 14 (+) – B: (B310) No. 5 (+) –	&H/U INPUT VOLTAGE. difference measured in - Chassis ground (–): Chassis ground (–):	Is the voltage difference between A and B more than 2 V?	Repair the power supply circuit.	Go to step 3 .
 CHECK THE VDCCM. CUIT. 1) Turn the ignition sw 2) Measure the resista VDCCM&H/U connect Connector & termin (B310) No. 6 - Ch 	&H/U GROUND CIR- vitch to OFF. ance between or and chassis ground. aal bassis ground:	Is the resistance less than 0.5 Ω ?	Go to step 4.	Repair the VDCCM&H/U ground harness.
4 CHECK THE VDCCM Measure the resistance connector terminals. <i>Connector & termin</i> (B310) No. 5 — (B	&H/U VALVE RELAY. e between VDCCM&H/U al 310) No. 6:	Is the resistance more than 1 $M\Omega$?	Go to step 5.	Replace the VDCCM&H/U.
5 CHECK POOR CONT.	ACT IN CONNECTORS.	Is there poor contact in con- nector between generator, bat tery and VDCCM&H/U?	Repair the con- - nector.	Go to step 6 .
 6 CHECK THE VDCCM. 1) Connect all the cor 2) Erase the memory. 3) Perform the Inspec 4) Read the DTC. 	&H/U. inectors. tion Mode.	Is the same DTC displayed?	Replace the VDCCM&H/U. <ref. to="" vdc-7,<br="">VDC Control Mod- ule and Hydraulic Control Unit (VDCCM&H/U).></ref.>	Go to step 7.
7 CHECK OTHER DTC	DETECTION.	Is any other DTC displayed?	Perform the diag- nosis according to DTC.	Temporary poor contact occurs.

AI: DTC C0051 VALVE RELAY TEST MALFUNCTION

DTC DETECTING CONDITION:

Defective valve relay

- TROUBLE SYMPTOM:
- ABS does not operate.
- EBD does not operate.
- VDC does not operate.



	Step	Check	Yes	No
1	 CHECK THE VDCCM&H/U INPUT VOLTAGE. 1) Turn the ignition switch to OFF. 2) Disconnect the connector from the VDCCM&H/U. 3) Run the engine at idle. 4) Measure the voltage between VDCCM&H/U connector and chassis ground. Connector & terminal (B310) No. 5 (+) — Chassis ground (-): 	Is the voltage 10 — 15 V?	Go to step 2.	Repair the VDCCM&H/U power circuit.
2	 CHECK THE VDCCM&H/U GROUND CIR- CUIT. 1) Turn the ignition switch to OFF. 2) Measure the resistance between VDCCM&H/U connector and chassis ground. Connector & terminal (B310) No. 6 — Chassis ground: 	Is the resistance less than 0.5 Ω ?	Go to step 3.	Repair the VDCCM&H/U ground circuit.
3	CHECK THE VDCCM&H/U VALVE RELAY. Measure the resistance between VDCCM&H/U connector terminals. Connector & terminal (B310) No. 5 — (B310) No. 6:	Is the resistance more than 1 $M\Omega$?	Go to step 4.	Replace the VDCCM&H/U.
4	CHECK POOR CONTACT IN CONNECTORS.	Is there poor contact in con- nector between generator, bat- tery and VDCCM&H/U?	Repair the con- nector.	Go to step 5 .
5	 CHECK THE VDCCM&H/U. Connect all the connectors. Erase the memory. Perform the Inspection Mode. Read the DTC. 	Is the same DTC displayed?	Replace the VDCCM&H/U. <ref. to="" vdc-7,<br="">VDC Control Mod- ule and Hydraulic Control Unit (VDCCM&H/U).></ref.>	Go to step 6 .
6	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag- nosis according to DTC.	Temporary poor contact occurs.

AJ:DTC C0051 VALVE RELAY ON MALFUNCTION

DTC DETECTING CONDITION:

Defective valve relay

- TROUBLE SYMPTOM:
- ABS does not operate.
- VDC does not operate.
- EBD may not operate.



	Step	Check	Yes	No
1	 CHECK THE VDCCM&H/U VALVE RELAY. 1) Disconnect the connector from the VDCCM&H/U. 2) Measure the resistance between VDCCM&H/U connector terminals. Terminals No. 5 — No. 6: 	Is the resistance more than 1 $M\Omega$?	Go to step 2.	Replace the VDCCM&H/U. <ref. to="" vdc-7,<br="">VDC Control Mod- ule and Hydraulic Control Unit (VDCCM&H/U).></ref.>
2	CHECK POOR CONTACT IN CONNECTORS.	Is there poor contact in con- nector between generator, bat- tery and VDCCM&H/U?	Repair the con- nector.	Go to step 3.
3	 CHECK THE VDCCM&H/U. Connect all the connectors. Erase the memory. Perform the Inspection Mode. Read the DTC. 	Is the same DTC displayed?	Replace the VDCCM&H/U. <ref. to="" vdc-7,<br="">VDC Control Mod- ule and Hydraulic Control Unit (VDCCM&H/U).></ref.>	Go to step 4 .
4	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag- nosis according to DTC. <ref. to<br="">VDC(diag)-36, List of Diagnostic Trou- ble Code (DTC).></ref.>	Temporary poor contact occurs.

AK:DTC C0052 MOTOR/MOTOR RELAY MALFUNCTION

DTC DETECTING CONDITION:

- Defective motor and motor relay
- Defective harness connector

TROUBLE SYMPTOM:

- ABS does not operate.
- VDC does not operate.
- EBD may not operate.



Step		Check	Yes	No
I CHECK THE VDCCM&I 1) Turn the ignition swite 2) Disconnect the connect the	H/U INPUT VOLTAGE. ch to OFF. ector from the ch to ON. between VDCCM&H/ s ground.	Is the voltage 10 — 15 V?	Go to step 2.	Repair the VDCCM&H/U power supply cir- cuit.
Connector & terminal (B310) No. 9 (+) — C (B310) No. 14 (+) —	l Chassis ground (–): Chassis ground (–):			
2 CHECK INSTALLATION GROUND.	N OF MOTOR	Is the motor ground terminal installation bolt tightened 33 N·m (3.3 kgf-m, 24.3 ft-lb)?	Go to step 3.	lighten the motor ground terminal installation bolt.
 CHECK THE VDCCM&I CUIT. 1) Turn the ignition swite 2) Measure the resistan VDCCM&H/U connector Connector & terminate (B310) No. 6 — Chase (B310) No. 10 — Chase 	H/U GROUND CIR- ch to OFF. c and chassis ground. <i>I</i> ssis ground: assis ground:	Is the resistance less than 0.5 Ω ?	Go to step 4.	Repair the VDCCM&H/U ground harness.
4 CHECK VDCCM&H/U M Measure the resistance b connector terminals. <i>Terminals</i> No. 9 — No. 10:	IOTOR RELAY. between VDCCM&H/U	Is the resistance more than 1 MΩ?	Go to step 5.	Replace the VDCCM&H/U.
5 CHECK POOR CONTAC Turn the ignition switch t	CT IN CONNECTORS.	Is there poor contact in con- nector between generator, bat- tery and VDCCM&H/U?	Repair the con- nector.	Go to step 6 .
 6 CHECK THE VDCCM&I 1) Connect all the conne	H/U. ectors. on Mode.	Is the same DTC displayed?	Replace the VDCCM&H/U. <ref. to="" vdc-7,<br="">VDC Control Mod- ule and Hydraulic Control Unit (VDCCM&H/U).></ref.>	Go to step 7.
7 CHECK OTHER DTC D	ETECTION.	Is any other DTC displayed?	Perform the diag- nosis according to DTC. <ref. to<br="">VDC(diag)-36, List of Diagnostic Trou- ble Code (DTC).></ref.>	Temporary poor contact occurs. NOTE: Though the ABS warning light re- mains on at this time, it is normal. Drive the vehicle at more than 12 km/h (7 MPH) in order to turn ABS warning light off. Be sure to drive the vehicle and check the warning light goes off.

AL:DTC C0052 MOTOR/MOTOR RELAY OFF MALFUNCTION

- **DTC DETECTING CONDITION:**
- Defective motor relay
- Defective harness connector

TROUBLE SYMPTOM:

- ABS does not operate.
- VDC does not operate.
- EBD may not operate.

NOTE:

For the diagnostic procedure, refer to DTC C0052 "MOTOR/MOTOR RELAY MALFUNCTION". <Ref. to VDC(diag)-74, DTC C0052 MOTOR/MOTOR RELAY MALFUNCTION, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

AM:DTC C0052 MOTOR/MOTOR RELAY ON MALFUNCTION

- DTC DETECTING CONDITION:
- Defective motor relay
- Defective harness connector

TROUBLE SYMPTOM:

- ABS does not operate.
- VDC does not operate.
- EBD may not operate.


VEHICLE DYNAMICS CONTROL (VDC) (DIAGNOSTICS)

	Step	Check	Yes	No
1	 CHECK VDCCM&H/U MOTOR RELAY. 1) Disconnect the connector from the VDCCM&H/U. 2) Measure the resistance between VDCCM&H/U connector terminals. <i>Terminals</i> <i>No. 9 — No. 10:</i> 	Is the resistance more than 1 MΩ?	Go to step 2.	Replace the VDCCM&H/U. <ref. to="" vdc-7,<br="">VDC Control Mod- ule and Hydraulic Control Unit (VDCCM&H/U).></ref.>
2	 CHECK THE VDCCM&H/U. 1) Connect all the connectors. 2) Erase the memory. 3) Perform the Inspection Mode. 4) Read the DTC. 	Is the same DTC displayed?	Replace the VDCCM&H/U. <ref. to="" vdc-7,<br="">VDC Control Mod- ule and Hydraulic Control Unit (VDCCM&H/U).></ref.>	Go to step 3 .
3	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag- nosis according to DTC. <ref. to<br="">VDC(diag)-36, List of Diagnostic Trou- ble Code (DTC).></ref.>	Temporary poor contact occurs. NOTE: Though the ABS warning light re- mains on at this time, it is normal. Drive the vehicle at more than 12 km/h (7 MPH) in order to turn ABS warning light off. Be sure to drive the vehicle and check the warning light goes off.

AN:DTC C0052 MOTOR DTC DETECTING CONDITION:

- Defective motor
- Defective motor relay
- Defective harness connector

TROUBLE SYMPTOM:

- ABS does not operate.
- VDC does not operate.
- EBD may not operate.

NOTE:

For the diagnostic procedure, refer to DTC C0052 "MOTOR/MOTOR RELAY MALFUNCTION". <Ref. to VDC(diag)-74, DTC C0052 MOTOR/MOTOR RELAY MALFUNCTION, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

AO:DTC C0054 BLS OPEN CIRCUIT

DTC DETECTING CONDITION:

Defective stop light switch

TROUBLE SYMPTOM:

• ABS does not operate.

• VDC does not operate.



	Step	Check	Yes	No
1	 CHECK OUTPUT OF STOP LIGHT SWITCH WITH SUBARU SELECT MONITOR. 1) Select {Current Data Display & Save} in Subaru Select Monitor. 2) Release the brake pedal. 3) Read the stop light switch output in Subaru Select Monitor. 	Is OFF displayed on the dis- play screen?	Go to step 2.	Go to step 3.
2	 CHECK OUTPUT OF STOP LIGHT SWITCH WITH SUBARU SELECT MONITOR. 1) Depress the brake pedal. 2) Read the stop light switch output in Subaru Select Monitor. 	Is ON displayed on the display screen?	Go to step 5 .	Go to step 3 .
3	CHECK IF STOP LIGHTS COME ON. Depress the brake pedal.	Does the stop light illuminate?	Go to step 4.	Repair the stop light circuit.
4	 CHECK OPEN CIRCUIT OF HARNESS. 1) Turn the ignition switch to OFF. 2) Disconnect the connector from the VDCCM&H/U. 3) Depress the brake pedal. 4) Measure the voltage between VDCCM&H/U connector and chassis ground. Connector & terminal (B310) No. 37 (+) — Chassis ground (-): 	Is the voltage 10 — 15 V?	Go to step 5.	Repair the har- ness between stop light switch and VDCCM&H/U con- nector.
5	CHECK POOR CONTACT IN CONNECTORS.	Is there poor contact in con- nector between stop light switch and VDCCM&H/U?	Go to step 6 .	Repair the con- nector.
6	 CHECK THE VDCCM&H/U. 1) Connect all the connectors. 2) Erase the memory. 3) Perform the Inspection Mode. 4) Read the DTC. 	Is the same DTC displayed?	Replace the VDCCM&H/U. <ref. to="" vdc-7,<br="">VDC Control Mod- ule and Hydraulic Control Unit (VDCCM&H/U).></ref.>	Go to step 7.
7	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag- nosis according to DTC.	Temporary poor contact occurs.

AP:DTC C0054 BLS ON MALFUNCTION

DTC DETECTING CONDITION:

Defective stop light switch

TROUBLE SYMPTOM:

ABS does not operate.

• VDC does not operate.



VEHICLE DYNAMICS CONTROL (VDC) (DIAGNOSTICS)

	Step	Check	Yes	No
1	 CHECK STOP LIGHT SWITCH. 1) Turn the ignition switch to OFF. 2) Disconnect the stop light switch connector. 3) Measure the resistance of stop light switch terminals. 	Is the resistance more than 1 $M\Omega$ when switch is OFF (when pedal is not depressed)?	Go to step 2 .	Replace the stop light switch.
2	INTERVIEWING CUSTOMERS. Make sure that the operation was performed in which accelerator pedal and brake pedal were depressed simultaneously (with depressing brake pedal with left foot).	Were the acceleration pedal and brake pedal depressed simultaneously?	System is normal. (DTC may be recorded while brake is applied during driving.))	Go to step 3.
3	 CHECK THE VDCCM&H/U. Connect all the connectors. Erase the memory. Perform the Inspection Mode. Read the DTC. 	Is the same DTC displayed?	Replace the VDCCM&H/U. <ref. to="" vdc-7,<br="">VDC Control Mod- ule and Hydraulic Control Unit (VDCCM&H/U).></ref.>	Go to step 4 .
4	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag- nosis according to DTC. <ref. to<br="">VDC(diag)-36, List of Diagnostic Trou- ble Code (DTC).></ref.>	Temporary poor contact occurs.

AQ:DTC C0057 ECM COMMUNICATION

DTC DETECTING CONDITION:

No CAN signal from ECM.

TROUBLE SYMPTOM:

• ABS does not operate.

• VDC does not operate.

	Step	Check	Yes	No
1	CHECK LAN SYSTEM.	Is there any fault in LAN sys-	Perform the diag-	Go to step 2.
	Perform the diagnosis for LAN system. < Ref. to	tem?	nosis according to	
	LAN(diag)-25, OPERATION, Read Diagnostic		DTC for LAN sys-	
	Trouble Code (DTC).>		tem.	
2	CHECK POOR CONTACT IN CONNECTORS.	Is there poor contact in ECM	Repair the con-	Go to step 3.
		connector?	nector.	
3	CHECK ECM.	Is ECM normal?	Go to step 4.	Replace the ECM.
4	CHECK THE VDCCM&H/U.	Is the same DTC displayed?	Replace the	Go to step 5.
	 Connect all the connectors. 		VDCCM&H/U.	
	Erase the memory.		<ref. th="" to="" vdc-7,<=""><th></th></ref.>	
	Perform the Inspection Mode.		VDC Control Mod-	
	4) Read the DTC.		ule and Hydraulic	
			Control Unit	
			(VDCCM&H/U).>	
5	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag-	It results from a
			nosis according to	temporary noise
			DTC.	interference.

VEHICLE DYNAMICS CONTROL (VDC) (DIAGNOSTICS)

AR:DTC C0071 EXCESSIVE STEERING ANGLE SENSOR OUTPUT OFFSET DTC DETECTING CONDITION:

Defective steering angle sensor **TROUBLE SYMPTOM:** VDC does not operate.



	Step	Check	Yes	No
1	 CHECK STEERING WHEEL. 1) Drive the vehicle on a flat road. 2) Park the vehicle straight. 3) Check the steering wheel for deviation from center. 	Is the deviation from the center of steering wheel less than 5°?	Go to step 2 .	Perform the cen- tering adjustment of steering wheel.
2	 CHECK THE VDCCM&H/U. 1) Turn the ignition switch to OFF. 2) Connect all the connectors. 3) Erase the memory. 4) Perform the Inspection Mode. 5) Read the DTC. 	Is the same DTC displayed?	Replace the VDCCM&H/U. <ref. to="" vdc-7,<br="">VDC Control Mod- ule and Hydraulic Control Unit (VDCCM&H/U).></ref.>	Go to step 3 .
3	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag- nosis according to DTC. <ref. to<br="">VDC(diag)-36, List of Diagnostic Trou- ble Code (DTC).></ref.>	Temporary poor contact occurs.

AS:DTC C0071 EXCESSIVE VARIATION AMOUNT OF STEERING ANGLE SEN-SOR OUTPUT

DTC DETECTING CONDITION: Defective steering angle sensor TROUBLE SYMPTOM: VDC does not operate. WIRING DIAGRAM:



	Step	Check	Yes	No
1	 CHECK THE VDCCM&H/U. 1) Turn the ignition switch to OFF. 2) Connect all the connectors. 3) Erase the memory. 4) Perform the Inspection Mode. 5) Read the DTC. 	Is the same DTC displayed?	Replace the VDCCM&H/U. <ref. to="" vdc-7,<br="">VDC Control Mod- ule and Hydraulic Control Unit (VDCCM&H/U).></ref.>	Go to step 2.
2	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag- nosis according to DTC. <ref. to<br="">VDC(diag)-36, List of Diagnostic Trou- ble Code (DTC).></ref.>	Temporary poor contact occurs.

VEHICLE DYNAMICS CONTROL (VDC) (DIAGNOSTICS)

AT:DTC C0071 STEERING ANGLE SENSOR OUTPUT

DTC DETECTING CONDITION: Defective steering angle sensor TROUBLE SYMPTOM: VDC does not operate.



	Step	Check	Yes	No
1	 CHECK STEERING WHEEL. 1) Drive the vehicle on a flat road. 2) Park the vehicle straight. 3) Check the steering wheel for deviation from center. 	Is the deviation from the center of steering wheel less than 5°?	Go to step 2.	Perform the cen- tering adjustment of steering wheel.
2	CHECK DRIVING PLACE. Check if the vehicle ran the road with banks or sandy surface (which does not mean a dirt road).	Did the vehicle run the road with banks or sandy surface (which does not mean a dirt road)?	VDCCM&H/U may record DTC when the vehicle ran the road with banks or sandy surface (which does not mean a dirt road).	Go to step 3.
3	 CHECK OUTPUT OF STEERING ANGLE SENSOR WITH SUBARU SELECT MONI- TOR. 1) Select {Current Data Display & Save} in Subaru Select Monitor. 2) Read the steering angle sensor output dis- played on display. 	Does the steering angle sensor output value on the display vary in accordance with steer- ing operation when turning the steering wheel to the right or left?	Go to step 4.	Replace the steer- ing angle sensor.
4	 CHECK THE VDCCM&H/U. 1) Turn the ignition switch to OFF. 2) Connect all the connectors. 3) Erase the memory. 4) Perform the Inspection Mode. 5) Read the DTC. 	Is the same DTC displayed?	Replace the VDCCM&H/U. <ref. to="" vdc-7,<br="">VDC Control Mod- ule and Hydraulic Control Unit (VDCCM&H/U).></ref.>	Go to step 5 .
5	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag- nosis according to DTC.	Temporary poor contact occurs.

VEHICLE DYNAMICS CONTROL (VDC) (DIAGNOSTICS)

AU:DTC C0071 STEERING ANGLE SENSOR COMMUNICATION

DTC DETECTING CONDITION:

Signal does not come from steering angle sensor.

TROUBLE SYMPTOM:

VDC does not operate.

WIRING DIAGRAM:



Step	Check	Yes	No
 CHECK POWER SUPPLY FOR STEERING ANGLE SENSOR. 1) Turn the ignition switch to OFF. 2) Disconnect the connector from steering angle sensor. 3) Turn the ignition switch to ON. 4) Measure the voltage between the steering angle sensor and chassis ground. Connector & terminal 	Is the voltage 10 — 15 V?	Go to step 4.	Go to step 2.

VDC(diag)-89

	Step	Check	Yes	No
2	CHECK OUTPUT VOLTAGE OF VDCCM&H/ U. Measure the voltage between VDCCM&H/U and chassis ground. Connector & terminal (B310) No. 30 (+) — Chassis ground (-);	Is the voltage 10 — 15 V?	Repair the har- ness between the steering angle sensor and VDCCM&H/U.	Go to step 3.
3	CHECK POOR CONTACT IN CONNECTORS.	Is there poor contact in con-	Correct or replace	Go to step 9.
4	CHECK GROUND CIRCUIT OF STEERING ANGLE SENSOR. Measure the resistance between steering angle sensor and chassis ground. Connector & terminal (B231) No. 3 — Chassis ground:	Is the resistance less than 0.5 Ω ?	Go to step 5.	Repair ground cir- cuit in the steering angle sensor.
5	 CHECK STEERING ANGLE SENSOR HARNESS. 1) Disconnect the connector from the VDCCM&H/U. 2) Measure the resistance between VDCCM&H/U and steering angel sensor. Connector & terminal (B231) No. 1 (B310) No. 29: (B231) No. 2 (B310) No. 13: 	Is the resistance less than 0.5 Ω?	Go to step 6.	Repair the har- ness between the steering angle sensor and VDCCM&H/U.
6	CHECK GROUND SHORT CIRCUIT OF STEERING ANGLE SENSOR HARNESS. Measure the resistance between steering angle sensor and chassis ground. Connector & terminal (B231) No. 1 — Chassis ground: (B231) No. 2 — Chassis ground:	Is the resistance more than 1 $M\Omega$?	Go to step 7.	Repair the har- ness between the steering angle sensor and VDCCM&H/U.
7	 CHECK STEERING ANGLE SENSOR. 1) Turn the ignition switch to OFF. 2) Connect all the connectors. 3) Erase the memory. 4) Perform the Inspection Mode. 5) Read the DTC. 	Is the same DTC displayed?	Go to step 8.	Go to step 10.
8	 CHECK THE VDCCM&H/U. 1) Turn the ignition switch to OFF. 2) Replace the steering angle sensor. 3) Erase the memory. 4) Perform the Inspection Mode. 5) Read the DTC. 	Is the same DTC displayed?	Replace the VDCCM&H/U. <ref. to="" vdc-7,<br="">VDC Control Mod- ule and Hydraulic Control Unit (VDCCM&H/U).></ref.>	Go to step 11.
9	 CHECK STEERING ANGLE SENSOR. 1) Turn the ignition switch to OFF. 2) Connect all the connectors. 3) Erase the memory. 4) Perform the Inspection Mode. 5) Read the DTC. 	Is the same DTC displayed?	Replace the VDCCM&H/U. <ref. to="" vdc-7,<br="">VDC Control Mod- ule and Hydraulic Control Unit (VDCCM&H/U).></ref.>	Go to step 10 .
10	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag- nosis according to DTC.	Temporary poor contact occurs.
11	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag- nosis according to DTC.	Original steering angle sensor mal- function

AV:DTC C0071 STEERING ANGLE SENSOR POWER SUPPLY MALFUNCTION DTC DETECTING CONDITION:

Defective steering angle sensor **TROUBLE SYMPTOM:**

- ABS does not operate.
- VDC does not operate.

NOTE:

- Warning light does not illuminate though problem is detected.
- The ABS and VDC operate normally if voltage returns.



	Cton	Chaolí	Vaa	Ne
-			res	
1 I		Is the voltage 10 – 15 V?	Go to step 4.	Go to step 2.
	ANGLE SENSOR.			
	 Turn the ignition switch to OFF. Discompare the compositor from standing 			
	2) Disconnect the connector from steering			
	angle sensor.			
	 a) Turn the ignition switch to ON. b) Macoura the velterie between the steering. 			
	4) Measure the voltage between the steering			
	(P221) No. $4(x)$ Chaosis ground ()			
	(B231) No. 4 (+) — Chassis ground (-):	1_{0} the velterie 10 1_{0} 1_{0}	Densisthe her	Cata stan 0
2		is the voltage 10 – 15 v?	Repair the nar-	Go to step 3.
	U. Massure the voltage between VDCCM8H/H		ness between the	
			steering angle	
	(R210) No. 20 (1) Chassis ground ():			
2	(BST0) No. S0 (+) — Chassis ground (-).	le there near contact in con	Correct or replace	Co to stan 7
3	CHECK FOOR CONTACT IN CONNECTORS.	ns there poor contact in con-	the connector	
4				Densir areund sin
4		is the resistance less than 0.5	Go to step 5 .	Repair ground cir-
	ANGLE SENSOR.	\$27		cuit in the steering
	angle sonsor and chassis ground			angle sensor.
	Connector & terminal			
	(B231) No. 3 — Chassis around:			
5	CHECK STEERING ANGLE SENSOR	Is the same DTC displayed?	Go to step 6	Go to stop 8
J	1) Turn the ignition switch to OFF	is the same Dic displayed!		
	2) Connect all the connectors			
	3) Frase the memory			
	4) Perform the Inspection Mode			
	5) Read the DTC.			
6	CHECK THE VDCCM&H/U	Is the same DTC displayed?	Replace the	Go to step 9
Ŭ	1) Turn the ignition switch to OFF		VDCCM&H/U	
	2) Beplace the steering angle sensor		<bef td="" to="" vdc-7<=""><td></td></bef>	
	3) Erase the memory.		VDC Control Mod-	
	4) Perform the Inspection Mode.		ule and Hvdraulic	
	5) Read the DTC.		Control Unit	
	,		(VDCCM&H/U).>	
7	CHECK STEERING ANGLE SENSOR.	Is the same DTC displayed?	Replace the	Go to step 8.
	1) Turn the ignition switch to OFF.		VDCCM&H/U.	
	2) Connect all the connectors.		<ref. td="" to="" vdc-7,<=""><td></td></ref.>	
	3) Erase the memory.		VDC Control Mod-	
	4) Perform the Inspection Mode.		ule and Hydraulic	
	5) Read the DTC.		Control Unit	
	,		(VDCCM&H/U).>	
8	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag-	Temporary poor
			nosis according to	contact occurs.
			DTC.	
9	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag-	Original steering
			nosis according to	angle sensor mal-
			DTC.	function
B				

AW:DTC C0072 YAW RATE SENSOR OUTPUT

DTC DETECTING CONDITION: Defective yaw rate sensor TROUBLE SYMPTOM: VDC does not operate. WIRING DIAGRAM:



	Step	Check	Yes	No
1	CHECK DRIVING PLACE.	Did the vehicle run the road	VDCCM&H/U may	Go to step 2.
	Check if the vehicle ran the road with banks or	with banks or sandy surface	record DTC when	•
	sandy surface (which does not mean a dirt	(which does not mean a dirt	the vehicle ran the	
	road).	road)?	road with banks or	
			sandy surface	
			(which does not	
			mean a dirt road).	
2	CHECK YAW RATE & LATERAL G SENSOR	Is the yaw rate & lateral G sen-	Go to step 3.	Tighten the yaw
	INSTALLATION.	sor installation bolt tightened to		rate & lateral G
		$7.5 \text{ N} \cdot \text{m} (0.76 \text{ kgf-m}, 5.5 \text{ ft-lb})?$		sensor installation
				bolt.
3	CHECK OUTPUT OF YAW RATE & LATER-	Is the reading indicated on	Go to step 4.	Replace the yaw
		monitor display –4 – 4 deg/s?		rate & lateral G
	1) Drive the vehicle on a flat road			Sensor.
	2) Park the vehicle straight			
	3) Select {Current Data Display & Save} in			
	Subaru Select Monitor.			
	4) Read the vaw rate output displayed on dis-			
	play.			
4	CHECK OUTPUT OF STEERING ANGLE	Is the reading indicated on	Go to step 5.	Perform the cen-
	SENSOR WITH SUBARU SELECT MONI-	monitor display –5 — 5°?		tering adjustment
	TOR.			of steering wheel.
	 Drive the vehicle on a flat road. 			
	Park the vehicle straight.			
	Select {Current Data Display & Save} in			
	Subaru Select Monitor.			
	4) Read the steering angle sensor output dis-			
_	played on display.			<u> </u>
5	CHECK YAW RATE & LATERAL G SENSOR.	Is the same DIC displayed?	Go to step 6.	Go to step 7.
	 Iurn the ignition switch to OFF. Connect all the connectors 			
	2) Connect all the connectors.			
	4) Perform the Inspection Mode			
	5) Bead the DTC			
6		Is the same DTC displayed?	Benlace the	Go to sten 8
ľ	1) Turn the ignition switch to OFF.		VDCCM&H/U.	
	2) Replace the vaw rate & lateral G sensor.		<ref. th="" to="" vdc-7.<=""><th></th></ref.>	
	3) Erase the memory.		VDC Control Mod-	
	4) Perform the Inspection Mode.		ule and Hydraulic	
	5) Read the DTC.		Control Unit	
			(VDCCM&H/U).>	
7	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag-	Temporary poor
			nosis according to	contact occurs.
			DTC.	
8	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag-	Malfunction is
			nosis according to	found in original
			DTC.	yaw rate & lateral
				G sensor.

AX:DTC C0072 YAW RATE SENSOR POWER/OUTPUT

DTC DETECTING CONDITION: Defective yaw rate sensor TROUBLE SYMPTOM: VDC does not operate. WIRING DIAGRAM:



Step	Check	Yes	No
 CHECK YAW RATE & LATERAL G SENSOR POWER SUPPLY. 1) Turn the ignition switch to OFF. 2) Disconnect the connector from yaw rate & lateral G sensor. 3) Turn the ignition switch to ON. 4) Measure the voltage between yaw rate & lateral G sensor and chassis ground. Connector & terminal 	Is the voltage 10 — 15 V?	Go to step 4.	Go to step 2.
(B230) No. 3 (+) — Chassis ground (–):			

VDC(diag)-95

	Step	Check	Yes	No
2	CHECK OUTPUT VOLTAGE OF VDCCM&H/	Is the voltage 10 — 15 V?	Repair the har-	Go to step 3.
	U.		ness between yaw	
	Measure the voltage between VDCCM&H/U		rate & lateral G	
	and chassis ground.		sensor and	
	Connector & terminal		VDCCM& H/U.	
	(B310) No. 30 (+) — Chassis ground (–):			
3	CHECK POOR CONTACT OF CONNECTOR.	Is there poor contact in con-	Correct or replace	Go to step 10 .
-		nector?	the connector.	
4	CHECK YAW RATE & LATERAL G SENSOR	Is the resistance less than 0.5	Go to step 7.	Go to step 5.
	GROUND CIRCUIT.	Ω?		
	Neasure the resistance between the yaw rate			
	(B230) No. 6 - Chassis ground:			
5		le the registered loss than 0.5	Popair the bar	Go to stop 6
5			nepali lite fiai-	
	Measure the resistance between VDCCM&H/U	52:	rate & lateral G	
	and chassis ground		sensor and	
	Connector & terminal		VDCCM& H/U	
	(B310) No. 16 — Chassis ground:			
6	CHECK POOR CONTACT IN CONNECTORS.	Is there poor contact in con-	Correct or replace	Go to step 10.
		nector?	the connector.	•
7	CHECK YAW RATE & LATERAL G SENSOR	Is the resistance less than 0.5	Go to step 8.	Repair the har-
	HARNESS.	Ω?		ness between yaw
	 Disconnect the connector from the 			rate & lateral G
	VDCCM&H/U.			sensor and
	2) Measure the resistance between VDCCM&			VDCCM& H/U.
	H/U and yaw rate & lateral G sensor.			
	Connector & terminal			
•	(B310) NO. 28 — (B230) NO. 4:		O a ta atau 0	Danain tha han
8	CHECK GROUND SHORT OF HARNESS.	Is the resistance more than 1	Go to step 9.	Repair the har-
	connector and chassis ground	1712.2.5		rate & lateral G
	Connector & terminal			sensor and
	(B310) No. 28 — Chassis ground:			VDCCM& H/U.
9	CHECK YAW RATE & LATERAL G SENSOR.	Is the oscilloscope pattern the	Go to step 10.	Replace the vaw
•	1) Connect all the connectors.	same waveform as shown in		rate & lateral G
	 Turn the ignition switch to ON. 	the figure?		sensor.
	3) Check the signal pattern of oscilloscope			
	between VDCCM&H/U connector terminals.			
	<ref. mea-<="" th="" to="" vdc(diag)-16,="" waveform,=""><th></th><th></th><th></th></ref.>			
	SUREMENT, Control Module I/O Signal.>			
	Connector & terminal			
	(B310) No. 2 — No. 16:			
	(B310) No. 28 — No. 16:			-
10	CHECK YAW RATE & LATERAL G SENSOR.	Is the same DIC displayed?	Heplace the	Go to step 11.
	1) Turn the ignition switch to OFF.			
	 connect all the connectors. a) Frase the memory 		VDC Control Mod	
	 A) Perform the Inspection Mode 		ule and Hydraulic	
	5) Read the DTC		Control Unit	
			(VDCCM&H/U).>	
11	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag-	Temporarv poor
		,	nosis according to	contact occurs.
			DTC.	
L		1	1	1

AY:DTC C0072 YAW RATE SENSOR REFERENCE

DTC DETECTING CONDITION: Defective yaw rate sensor TROUBLE SYMPTOM: VDC does not operate. WIRING DIAGRAM:

(B310) VDCCM & H/U 16 <u>3</u> 28 <u>2</u> <u>1</u> 30 B312 B347 -0 2 4 5 7 3 (B230) YAW RATE & LATERAL G SENSOR B312 (B230) (B310) 1 2 3 4 5 6 7 8 9 12 10 123 11 12 13 14 15 16 17 18 19 20 21 22 23 24 4 5 6 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 VDC00411

Yes No Step Check CHECK POWER SUPPLY FOR YAW RATE & Is the voltage 10 - 15 V? Go to step 3. Go to step 2. 1 LATERAL G SENSOR. 1) Turn the ignition switch to OFF. 2) Disconnect the connector from yaw rate & lateral G sensor. 3) Turn the ignition switch to ON. 4) Measure the voltage between yaw rate & lateral G sensor and chassis ground. **Connector & terminal** (B230) No. 3 (+) — Chassis ground (-):

VDC(diag)-97

Step	Check	Yes	No
2 CHECK OUTPUT VOLTAGE OF VDCCM&H/ U. Macoure the veltage between VDCCM&H/L	Is the voltage 10 — 15 V?	Repair the har- ness between yaw	Go to step 5.
and chassis ground. Connector & terminal		sensor and VDCCM& H/U.	
(B310) No. 30 (+) — Chassis ground (–):			
3 CHECK YAW RATE & LATERAL G SENSOR GROUND CIRCUIT. Measure the resistance between the yaw rate & lateral G sensor and chassis ground. Connector & terminal (B230) No. 6 — Chassis ground:	Is the resistance less than 0.5 Ω?	Go to step 6 .	Go to step 4 .
4 CHECK THE VDCCM&H/U GROUND CIR-	Is the resistance less than 0.5	Repair the har-	Go to step 5.
CUIT. Measure the resistance between VDCCM&H/U and chassis ground. Connector & terminal (B310) No. 16 — Chassis ground:	Ω?	ness between yaw rate & lateral G sensor and VDCCM& H/U.	
5 CHECK POOR CONTACT IN CONNECTORS.	Is there poor contact in con- nector?	Correct or replace the connector.	Go to step 9.
 6 CHECK HARNESS OF YAW RATE & LATER- AL G SENSOR. 1) Turn the ignition switch to OFF. 2) Disconnect the connector from the VDCCM&H/U. 3) Measure the resistance between VDCCM& H/U and yaw rate & lateral G sensor. Connector & terminal (B310) No. 1 — (B230) No. 1: 	Is the resistance less than 0.5 Ω ?	Go to step 7.	Repair the har- ness between yaw rate & lateral G sensor and VDCCM& H/U.
7 CHECK GROUND SHORT CIRCUIT OF HAR- NESS. Measure the resistance between VDCCM&H/U and chassis ground. Connector & terminal (B310) No. 1 — Chassis ground:	Is the resistance more than 1 $M\Omega$?	Go to step 8.	Repair the har- ness between yaw rate & lateral G sensor and VDCCM& H/U.
 8 CHECK YAW RATE & LATERAL G SENSOR. 1) Turn the ignition switch to OFF. 2) Install the yaw rate & lateral G sensor to the body. 3) Connect all the connectors. 4) Turn the ignition switch to ON. 5) Measure the voltage between VDCCM&H/U connector terminals. Connector & terminal	Is the voltage 2.1 — 2.9 V?	Go to step 9 .	Replace the yaw rate & lateral G sensor. <ref. to<br="">VDC-14, Yaw Rate and Lateral G Sen- sor.></ref.>
 9 CHECK THE VDCCM&H/U. 1) Turn the ignition switch to OFF. 2) Connect all the connectors. 3) Erase the memory. 4) Perform the Inspection Mode. 5) Read the DTC. 	Is the same DTC displayed?	Replace the VDCCM&H/U. <ref. to="" vdc-7,<br="">VDC Control Mod- ule and Hydraulic Control Unit (VDCCM&H/U).></ref.>	Go to step 10 .
10 CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag- nosis according to DTC.	Temporary poor contact occurs.

AZ:DTC C0072 EXCESSIVE VARIATION AMOUNT OF YAW RATE SENSOR OUTPUT DTC DETECTING CONDITION:

Dife Defective yaw rate sensor TROUBLE SYMPTOM: VDC does not operate. WIRING DIAGRAM:



	Step	Check	Yes	No
1	CHECK DRIVING PLACE.	Did the vehicle run the road	VDCCM&H/U may	Go to step 2.
	Check if the vehicle ran the road with banks or	with banks or sandy surface	record DTC when	
	sandy surface (which does not mean a dirt	(which does not mean a dirt	the vehicle ran the	
	road).	road)?	road with banks or	
			sandy surface	
			(which does not	
			mean a dirt road).	

VDC(diag)-99

	Step	Check	Yes	No
2	CHECK YAW RATE & LATERAL G SENSOR INSTALLATION.	Is the yaw rate & lateral G sen- sor installation bolt tightened to 7.5 N⋅m (0.76 kgf-m, 5.5 ft-lb)?	Go to step 3.	Tighten the yaw rate & lateral G sensor installation bolt.
3	 CHECK YAW RATE & LATERAL G SENSOR POWER SUPPLY. 1) Turn the ignition switch to OFF. 2) Disconnect the connector from yaw rate & lateral G sensor. 3) Turn the ignition switch to ON. 4) Measure the voltage between yaw rate & lateral G sensor and chassis ground. Connector & terminal (B230) No. 3 (+) — Chassis ground (-): 	Is the voltage 10 — 15 V?	Go to step 5 .	Go to step 4 .
4	CHECK OUTPUT VOLTAGE OF VDCCM&H/ U. Measure the voltage between VDCCM&H/U and chassis ground. <i>Connector & terminal</i> (B310) No. 30 (+) — Chassis ground (-):	Is the voltage 10 — 15 V?	Repair the har- ness between yaw rate & lateral G sensor and VDCCM& H/U.	Go to step 7.
5	CHECK YAW RATE & LATERAL G SENSOR GROUND CIRCUIT. Measure the resistance between the yaw rate & lateral G sensor and chassis ground. Connector & terminal (B230) No. 6 — Chassis ground:	Is the resistance less than 0.5 Ω ?	Go to step 8 .	Go to step 6 .
6	CHECK THE VDCCM&H/U GROUND CIR- CUIT. Measure the resistance between VDCCM&H/U and chassis ground. Connector & terminal (B310) No. 16 — Chassis ground:	Is the resistance less than 0.5 Ω ?	Repair the har- ness between yaw rate & lateral G sensor and VDCCM& H/U.	Go to step 7.
7	CHECK POOR CONTACT IN CONNECTORS.	Is there poor contact in con- nector?	Correct or replace the connector.	Go to step 14.
8	 CHECK HARNESS OF YAW RATE & LATER- AL G SENSOR. 1) Disconnect the connector from the VDCCM&H/U. 2) Measure the resistance between VDCCM& H/U and yaw rate & lateral G sensor. Connector & terminal (B310) No. 1 — (B230) No. 1: (B310) No. 2 — (B230) No. 2: (B310) No. 28 — (B230) No. 4: 	Is the resistance less than 0.5 Ω?	Go to step 9.	Repair the har- ness between yaw rate & lateral G sensor and VDCCM& H/U.
9	CHECK GROUND SHORT CIRCUIT OF HAR- NESS. Measure the resistance between VDCCM&H/U connector and chassis ground. <i>Connector & terminal</i> (B310) No. 1 — Chassis ground: (B310) No. 2 — Chassis ground: (B310) No. 28 — Chassis ground:	Is the resistance more than 1 $M\Omega$?	Go to step 10 .	Repair the har- ness between yaw rate & lateral G sensor and VDCCM& H/U.
10	 CHECK YAW RATE & LATERAL G SENSOR. 1) Turn the ignition switch to OFF. 2) Connect all the connectors. 3) Turn the ignition switch to ON. 4) Measure the voltage between VDCCM&H/ U connector terminals. Connector & terminal (B310) No. 1 (+) — (B310) No. 16 (-): 	Is the voltage 2.1 — 2.9 V?	Go to step 11.	Replace the yaw rate & lateral G sensor.

VEHICLE DYNAMICS CONTROL (VDC) (DIAGNOSTICS)

	Step	Check	Yes	No
11	 CHECK YAW RATE & LATERAL G SENSOR. 1) Turn the ignition switch to ON. 2) Check the signal pattern of oscilloscope between VDCCM&H/U connector terminals. <ref. control="" i="" mea-surement,="" module="" o="" signal.="" to="" vdc(diag)-16,="" waveform,=""></ref.> Connector & terminal (B310) No. 2 — No. 16: (B310) No. 28 — No. 16: 	Is the oscilloscope pattern the same waveform as shown in the figure?	Go to step 12.	Replace the yaw rate & lateral G sensor.
12	 CHECK YAW RATE & LATERAL G SENSOR. 1) Turn the ignition switch to OFF. 2) Connect all the connectors. 3) Erase the memory. 4) Perform the Inspection Mode. 5) Read the DTC. 	Is the same DTC displayed?	Go to step 13.	Go to step 15.
13	 CHECK THE VDCCM&H/U. 1) Turn the ignition switch to OFF. 2) Replace the yaw rate & lateral G sensor. 3) Erase the memory. 4) Perform the Inspection Mode. 5) Read the DTC. 	Is the same DTC displayed?	Replace the VDCCM&H/U. <ref. to="" vdc-7,<br="">VDC Control Mod- ule and Hydraulic Control Unit (VDCCM&H/U).></ref.>	Go to step 16 .
14	 CHECK YAW RATE & LATERAL G SENSOR. 1) Turn the ignition switch to OFF. 2) Connect all the connectors. 3) Erase the memory. 4) Perform the Inspection Mode. 5) Read the DTC. 	Is the same DTC displayed?	Replace the VDCCM&H/U. <ref. to="" vdc-7,<br="">VDC Control Mod- ule and Hydraulic Control Unit (VDCCM&H/U).></ref.>	Go to step 15 .
15	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag- nosis according to DTC.	Temporary poor contact occurs.
16	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag- nosis according to DTC.	Malfunction is found in original yaw rate & lateral G sensor.

BA:DTC C0073 EXCESSIVE AMOUNT OF LATERAL G SENSOR OUTPUT OFF-SET

NOTE:

Refer to DTC C0073 for diagnostic procedure. <Ref. to VDC(diag)-102, DTC C0073 EXCESSIVE LATERAL G SENSOR OUTPUT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

BB:DTC C0073 LATERAL G SENSOR OUTPUT

NOTE:

Refer to DTC C0073 for diagnostic procedure. <Ref. to VDC(diag)-102, DTC C0073 EXCESSIVE LATERAL G SENSOR OUTPUT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

BC:DTC C0073 EXCESSIVE VARIATION AMOUNT OF LATERAL G SENSOR OUTPUT

NOTE:

Refer to DTC C0073 for diagnostic procedure. <Ref. to VDC(diag)-102, DTC C0073 EXCESSIVE LATERAL G SENSOR OUTPUT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

BD:DTC C0073 EXCESSIVE LATERAL G SENSOR OUTPUT

DTC DETECTING CONDITION: Lateral G sensor malfunction TROUBLE SYMPTOM: VDC does not operate.



	Step	Check	Yes	No
1	CHECK YAW RATE & LATERAL G SENSOR INSTALLATION.	Is the yaw rate & lateral G sen- sor installation bolt tightened to 7.5 N⋅m (0.76 kgf-m, 5.5 ft-lb)?	Go to step 2.	Tighten the yaw rate & lateral G sensor installation bolt.
2	 CHECK LATERAL G SENSOR OUTPUT. 1) Park the vehicle on a level surface. 2) Select {Current Data Display & Save} in Subaru Select Monitor. 3) Read the lateral G sensor output displayed on screen. 	Is the indicated reading on the monitor display –1.5 — 1.5 m/ s ² ?	Go to step 3.	Replace the yaw rate & lateral G sensor.
3	 CHECK LATERAL G SENSOR OUTPUT. 1) Turn the ignition switch to OFF. 2) Remove the yaw rate & lateral G sensor from vehicle. 3) Turn the ignition switch to ON, and select {Current Data Display & Save} in Subaru Select Monitor. 4) Read the lateral G sensor output displayed on screen. 	When the yaw rate & lateral G sensor is inclined 90° to the right, is the indicated value 6.8 — 12.8 m/s ² ?	Go to step 4.	Replace the yaw rate & lateral G sensor.
4	CHECK LATERAL G SENSOR. Read the lateral G sensor output displayed on screen.	When the yaw rate & lateral G sensor is inclined 90° to the left, is the indicated value -6.8 12.8 m/s^2 ?	Go to step 5.	Replace the yaw rate & lateral G sensor.
5	CHECK POOR CONTACT IN CONNECTORS. Turn the ignition switch to OFF.	Is there poor contact in con- nector between VDCCM& H/U and yaw rate & lateral G sen- sor?	Repair the con- nector.	Go to step 6 .
6	 CHECK THE VDCCM&H/U. 1) Connect all the connectors. 2) Erase the memory. 3) Perform the Inspection Mode. 4) Read the DTC. 	Is the same DTC displayed?	Replace the VDCCM&H/U. <ref. to="" vdc-7,<br="">VDC Control Mod- ule and Hydraulic Control Unit (VDCCM&H/U).></ref.>	Go to step 7.
7	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag- nosis according to DTC.	Temporary poor contact occurs.

BE:DTC C0073 LATERAL G SENSOR POWER/OUTPUT

DTC DETECTING CONDITION: Lateral G sensor malfunction DTC DETECTING CONDITION:

VDC does not operate.



	Sten	Check	Ves	No
1		Is the indicated reading on the	Go to step 2	Go to step 3
1	1) Park the vehicle on a level surface.	monitor display $-1.5 - 1.5 \text{ m/}$		
	2) Select {Current Data Display & Save} in	c ² ?		
	Subaru Select Monitor.	3 :		
	3) Read the lateral G sensor output displayed			
	on screen.			
2	CHECK POOR CONTACT IN CONNECTORS.	Is there poor contact in con-	Repair the con-	Go to step 10.
	Turn the ignition switch to OFF.	nector between VDCCM& H/U	nector.	
		and yaw rate & lateral G sen-		
-		sor?		
3	CHECK YAW RATE & LATERAL G SENSOR	Is the voltage 10 — 15 V?	Go to step b .	Go to step 4.
	1) Turn the ignition switch to OFF			
	2) Disconnect the connector from vaw rate &			
	lateral G sensor.			
	3) Turn the ignition switch to ON.			
	4) Measure the voltage between yaw rate &			
	lateral G sensor and chassis ground.			
	Connector & terminal			
	(B230) No. 3 (+) — Chassis ground (–):			
4	CHECK OUTPUT VOLTAGE OF VDCCM&H/	Is the voltage 10 — 15 V?	Repair the har-	Go to step 5.
	U.		ness between yaw	
	and chassis ground		rate & lateral G	
	Connector & terminal			
	(B310) No. 30 (+) — Chassis ground (–):		V DOOMA TI/O.	
5	CHECK POOR CONTACT OF CONNECTOR.	Is there poor contact in con-	Correct or replace	Go to step 10.
		nector?	the connector.	
6	CHECK OPEN CIRCUIT IN LATERAL G SEN-	Is the resistance less than 0.5	Go to step 7.	Repair the har-
	SOR OUTPUT HARNESS.	Ω?		ness connector
	1) Disconnect the connector from yaw rate &			between yaw rate
	lateral G sensor.			& lateral G sensor
				and VDCCIVI&H/U.
	3) Measure the resistance between VDCCM&			
	H/U and vaw rate & lateral G sensor.			
	Connector & terminal			
	(B310) No. 3 — (B230) No. 5:			
7	CHECK GROUND SHORT CIRCUIT FOR	Is the resistance more than 1	Go to step 8.	Repair the har-
	YAW RATE & LATERAL G SENSOR HAR-	ΜΩ?		ness connector
	NESS.			between yaw rate
	Measure the resistance between VDCCM&H/U			& lateral G sensor
	connector and chassis ground.			and VDCCM&H/U.
	(B210) No. 2 Chassis ground:			
8	CHECK LATEBAL & SENSOR	ls the voltage 2 35 - 2 65 V	Go to step 9	Benlace the vaw
Ŭ	1) Turn the ignition switch to OFF	when vaw rate & lateral G sen-		rate & lateral G
	2) Remove the vaw rate & lateral G sensor	sor is on a level?		sensor.
	from vehicle.			
	3) Connect the connector to the yaw rate &			
	lateral G sensor.			
	Connect the VDCCM&H/U connector.			
	5) Turn the ignition switch to ON.			
	6) Measure the voltage between yaw rate &			
	lateral G sensor connector terminals.			
	$(R220) N_0 = 5 (1) - (R220) N_0 = 6 (1)$			
	(DZ3U) NU. 3 (+) — (DZ3U) NO. 6 (-):			

	Step	Check	Yes	No
9	CHECK POOR CONTACT IN CONNECTORS.	Is there poor contact in con- nector between VDCCM& H/U and yaw rate & lateral G sen- sor?	Repair the con- nector.	Go to step 10 .
10	 CHECK THE VDCCM&H/U. 1) Connect all the connectors. 2) Erase the memory. 3) Perform the Inspection Mode. 4) Read the DTC. 	Is the same DTC displayed?	Replace the VDCCM&H/U. <ref. to="" vdc-7,<br="">VDC Control Mod- ule and Hydraulic Control Unit (VDCCM&H/U).></ref.>	Go to step 11.
11	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag- nosis according to DTC.	Temporary poor contact occurs.

BF:DTC C0074 PRESSURE SENSOR TEST MALFUNCTION

DTC DETECTING CONDITION:

Defective pressure sensor

TROUBLE SYMPTOM:

ABS does not operate.

• VDC does not operate.



	Step	Check	Yes	No
1	CHECK PRESSURE SENSOR POWER SUP-	Is the voltage 4.75 — 5.25 V?	Go to step 4.	Go to step 2.
	PLY.			
	 Turn the ignition switch to OFF. 			
	Disconnect the connector from the pres-			
	sure sensor.			
	3) Turn the ignition switch to ON.			
	4) Measure the voltage between pressure			
	Connector & terminal			
	(B348) No. 1 (+) — Chassis around (–):			
2	CHECK OUTPUT VOLTAGE OF VDCCM&H/	Is the voltage 4.75 — 5.25 V?	Repair the har-	Go to step 3.
	U.		ness between the	
	Measure the voltage between VDCCM&H/U		pressure sensor	
	and chassis ground.		and VDCCM&H/U.	
	Connector & terminal			
	(B310) No. 27 (+) — Chassis ground (–):		-	-
3	CHECK POOR CONTACT OF CONNECTOR.	Is there poor contact in con-	Correct or replace	Go to step 9 .
		nector?	the connector.	O a ta atau F
4		Is the resistance less than 0.5	Go to step 7.	Go to step 5.
	Measure the resistance between pressure	52:		
	sensor and chassis ground.			
	Connector & terminal			
	(B348) No. 3 — Chassis ground:			
5	CHECK THE VDCCM&H/U GROUND CIR-	Is the resistance less than 0.5	Repair the har-	Go to step 6.
	CUIT.	Ω?	ness between the	
	Measure the resistance between VDCCM&H/U		pressure sensor	
	and chassis ground.		and VDCCM&H/U.	
	Connector & terminal (P210) No. 12 Chapping ground:			
6	CHECK POOR CONTACT OF CONNECTOR	Is there poor contact in con-	Correct or replace	Go to step 9
Ŭ		nector?	the connector.	
7	CHECK PRESSURE SENSOR HARNESS.	Is the resistance less than 0.5	Go to step 8.	Repair the har-
	 Turn the ignition switch to OFF. 	Ω?		ness between the
	2) Disconnect the connector from the			pressure sensor
	VDCCM&H/U.			and VDCCM&H/U.
	3) Measure the resistance between			
	Connector & terminal			
	(B310) No. 11 — (B348) No. 2:			
8	CHECK GROUND SHORT OF HARNESS.	Is the resistance more than 1	Go to step 9.	Repair the har-
	Measure the resistance between VDCCM&H/U	ΜΩ?		ness between the
	connector and chassis ground.			pressure sensor
	Connector & terminal			and VDCCM&H/U.
_	(B310) No. 11 — Chassis ground:			-
9	CHECK THE VDCCM&H/U.	Is DTC displayed?	Replace the	Go to step 10 .
	1) Connect all the connectors.		VDCCM&H/U.	
	 2) ErdSe the memory. 3) Perform the Inspection Mode 		VDC Control Mod	
	4) Read the DTC		ule and Hydraulic	
	, noud no b to.		Control Unit	
			(VDCCM&H/U).>	
10	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag-	Temporary poor
			nosis according to	contact occurs.
			DTC.	

BG:DTC C0074 EXCESSIVE PRESSURE SENSOR OUTPUT OFFSET

DTC DETECTING CONDITION:

Defective pressure sensor

TROUBLE SYMPTOM:

• ABS does not operate.

• VDC does not operate.



VEHICLE DYNAMICS CONTROL (VDC) (DIAGNOSTICS)

	Step	Check	Yes	No
1	CHECK STOP LIGHT SWITCH CIRCUIT. Check stop light switch open circuit.	Is the stop light switch circuit OK?	Go to step 2.	Repair the stop light switch circuit.
2	 CHECK THE VDCCM&H/U. 1) Connect all the connectors. 2) Erase the memory. 3) Perform the Inspection Mode. 4) Read the DTC. 	Is the same DTC displayed?	Replace the VDCCM&H/U. <ref. to="" vdc-7,<br="">VDC Control Mod- ule and Hydraulic Control Unit (VDCCM&H/U).></ref.>	Go to step 3 .
3	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag- nosis according to DTC. <ref. to<br="">VDC(diag)-36, List of Diagnostic Trou- ble Code (DTC).></ref.>	Temporary poor contact occurs.

BH:DTC C0074 PRESSURE SENSOR POWER/OUTPUT

DTC DETECTING CONDITION:

Defective pressure sensor

TROUBLE SYMPTOM:

- ABS does not operate.
- VDC does not operate.

NOTE:

For the diagnostic procedure, refer to DTC C0074 "PRESSURE SENSOR TEST MALFUNCTION". <Ref. to VDC(diag)-107, DTC C0074 PRESSURE SENSOR TEST MALFUNCTION, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

BI: DTC C0074 PRESSURE SENSOR OUTPUT

DTC DETECTING CONDITION:

Defective pressure sensor

TROUBLE SYMPTOM:

• ABS does not operate.

• VDC does not operate.



	Sten	Check	Ves	No
4		Le the step light quitab airquit	Co to otop 2	If there is malfune
1	Check STOP LIGHT SWITCH CIRCUIT.		Go to step Z.	tion in the sten
	Check stop light switch open circuit.	UK?		tion in the stop
				light switch circuit,
				DIC may be
				recorded in the
•			O a ta ata a E	memory.
2	CHECK PRESSURE SENSOR POWER SUP-	Is the voltage 4.75 — 5.25 V?	Go to step 5 .	Go to step 3.
	PLY.			
	 Ium the ignition switch to OFF. Disconnect the connector from the processing of the processing			
	2) Disconnect the connector from the pres-			
	Sure sensor.			
	 A) Measure the veltage between pressure 			
	4) Measure life voltage between pressure			
	(B249) No. 1 (1) Chassis around ():			
2		le the voltage 4 75 E 25 V2	Donair tha har	Co to stop 4
3		Is the voltage 4.75 — 5.25 V !	nepali lite fiai-	G0 10 Step 4.
	0. Maasura tha valtaga batwaan VDCCM8 H/U			
	and chassis ground		and VDCCM&H/II	
	Connector & terminal			
	$(B310)$ No $27(\pm)$ — Chassis around (-):			
4		Is there poor contact in con-	Correct or replace	Go to step 10
4	CHECK FOOR CONTACT OF CONNECTOR.	nector?	the connector	
5		ls the resistance less than 0.5	Go to stop 8	Go to stop 6
5		Ω^2		Go io siep o .
	Measure the resistance between pressure	22:		
	sensor and chassis around			
	Connector & terminal			
	(B348) No. 3 — Chassis ground:			
6	CHECK THE VDCCM&H/U GROUND CIR-	Is the resistance less than 0.5	Repair the har-	Go to step 7.
ľ.	CUIT.	Ω ?	ness between the	
	Measure the resistance between VDCCM&H/U		pressure sensor	
	and chassis ground.		and VDCCM&H/U.	
	Connector & terminal			
	(B310) No. 12 — Chassis ground:			
7	CHECK POOR CONTACT OF CONNECTOR.	Is there poor contact in con-	Correct or replace	Go to step 10.
		nector?	the connector.	
8	CHECK PRESSURE SENSOR HARNESS.	Is the resistance less than 0.5	Go to step 9.	Repair the har-
	 Turn the ignition switch to OFF. 	Ω?		ness between the
	2) Disconnect the connector from the			pressure sensor
	VDCCM&H/U.			and VDCCM&H/U.
	Measure the resistance between			
	VDCCM&H/U and pressure sensor.			
	Connector & terminal			
	(B310) No. 11 — (B348) No. 2:			
9	CHECK GROUND SHORT OF HARNESS.	Is the resistance more than 1	Go to step 10.	Repair the har-
	Measure the resistance between VDCCM&H/U	ΜΩ?		ness between the
	connector and chassis ground.			pressure sensor
	Connector & terminal			and VDCCM&H/U.
	(B310) No. 11 — Chassis ground:			
10	CHECK THE VDCCM&H/U.	Is DTC displayed?	Replace the	Go to step 11.
	 Connect all the connectors. 		VDCCM&H/U.	
	2) Erase the memory.		<ref. td="" to="" vdc-7,<=""><td></td></ref.>	
	3) Perform the Inspection Mode.		VDC Control Mod-	
	4) Read the DTC.		ule and Hydraulic	
			Control Unit	
L			(VDCCM&H/U).>	
11	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag-	Temporary poor
			nosis according to	contact occurs.
1			DIC.	

BJ:DTC C0074 PRESSURE SENSOR POWER MALFUNCTION

DTC DETECTING CONDITION:

Defective pressure sensor

TROUBLE SYMPTOM:

• ABS does not operate.

• VDC does not operate.


Diagnostic Procedure with Diagnostic Trouble Code (DTC)

VEHICLE DYNAMICS CONTROL (VDC) (DIAGNOSTICS)

	Step	Check	Yes	No
1	CHECK POOR CONTACT IN CONNECTORS. Check if there is poor contact in VDCCM&H/U power supply circuit.	Is there poor contact?	Repair the con- nector.	Go to step 2 .
2	 CHECK THE VDCCM&H/U POWER SUPPLY CIRCUIT. 1) Turn the ignition switch to OFF. 2) Disconnect the VDCCM&H/U connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between VDCCM&H/U connector terminals. Connector terminal. (B310) No. 14 (+) — (B310) No. 6 (-): 	Is the voltage 10 — 15 V?	Go to step 3.	Check the power supply circuit in VDCCM&H/U.
3	 CHECK THE VDCCM&H/U. 1) Connect all the connectors. 2) Erase the memory. 3) Perform the Inspection Mode. 4) Read the DTC. 	Is the same DTC displayed?	Replace the VDCCM&H/U. <ref. to="" vdc-7,<br="">VDC Control Mod- ule and Hydraulic Control Unit (VDCCM&H/U).></ref.>	Go to step 4.
4	CHECK OTHER DTC DETECTION.	Is any other DTC displayed?	Perform the diag- nosis according to DTC.	It results from a temporary noise interference.

BK:DTC C0081 SYSTEM MALFUNCTION

DTC DETECTING CONDITION:

VDC long time sequential control

TROUBLE SYMPTOM:

• ABS does not operate.

• VDC does not operate.

	Step	Check	Yes	No
1	CHECK POOR CONTACT IN CONNECTOR.	Is there poor contact in the VDCCM& H/U and yaw rate & lateral G sensor connector?	Repair the con- nector.	Go to step 2 .
2	 CHECK THE VDCCM&H/U. 1) Replace the yaw rate & lateral G sensor. 2) Connect all the connectors. 3) Erase the memory. 4) Perform the Inspection Mode. 5) Read the DTC. 	Is the same DTC displayed?	Replace the VDCCM&H/U.	Malfunction is found in original yaw rate & lateral G sensor.