MANUAL TRANSMISSION AND DIFFERENTIAL (DIAGNOSTICS)

1. Basic Diagnostic Procedure

A: PROCEDURE

	Step	Check	Yes	No
1	**CHECK PRE-INSPECTION.** 1) Ask the customer when and how trouble occurred using the check list for interview. <Ref. to 6MT(diag)-4, Check List for Interview.> 2) Before performing diagnosis, inspect the unit which might influence the driver's control center differential. <Ref. to 6MT(diag)-5, INSPECTION, General Description.>	Is unit that might influence the driver's control center differential problem normal?	Go to step **2.**	Repair the faulty unit.
2	**CALLING UP THE DTC.** Check the DTC. <Ref. to 6MT(diag)-20, WITH SUBARU SELECT MONITOR, OPERATION, Read Diagnostic Trouble Code (DTC).> NOTE: • For DTC, refer to "List of Diagnostic Trouble Code (DTC)". <Ref. to 6MT(diag)-25, List of Diagnostic Trouble Code (DTC).> • If the communication function of the Subaru Select Monitor cannot be executed normally, check the communication circuit.	Is the DTC called up?	Go to step **3.** NOTE: Record all DTC.	Go to step **4.**
3	**PERFORM THE DIAGNOSIS.** 1) Inspect and repair the all DTC using "Diagnostic Procedure with Diagnostic Trouble Code (DTC)". <Ref. to 6MT(diag)-27, Diagnostic Procedure with Diagnostic Trouble Code (DTC).> NOTE: For DTC, refer to "List of Diagnostic Trouble Code (DTC)". <Ref. to 6MT(diag)-25, List of Diagnostic Trouble Code (DTC).> 2) Start the engine. 3) Read the DTC using Subaru Select Monitor. <Ref. to 6MT(diag)-20, WITH SUBARU SELECT MONITOR.>	Is the DTC displayed?	Record all DTC, and inspect using "Diagnostic Procedure with Diagnostic Trouble Code (DTC)" <Ref. to 6MT(diag)-27, Diagnostic Procedure with Diagnostic Trouble Code (DTC).> Repeat "PERFORM THE DIAGNOSIS" until normal code called up.	Go to step **4.**
4	**READ THE DTC WITH COMBINATION METER.** Check DTC with combination meter. <Ref. to 6MT(diag)-20, READ DIAGNOSTIC TROUBLE CODE (DTC) WITH DIAGNOSTIC INDICATOR LIGHT..> NOTE: For details concerning DTCs refer to the "List of Diagnostic Trouble Code (DTC)". <Ref. to 6MT(diag)-25, List of Diagnostic Trouble Code (DTC).>	Is the DTC called up?	Go to step **5.** NOTE: Record all DTC.	Inspect using "Can not calling up DTC". NOTE: After the inspection, read the DTC again.

	Step	Check	Yes	No
5	**PERFORM THE DIAGNOSIS.** 1) Inspect and repair the all DTC using "Diagnostic Procedure with Diagnostic Trouble Code (DTC)". <Ref. to 6MT(diag)-27, Diagnostic Procedure with Diagnostic Trouble Code (DTC).> NOTE: For DTC, refer to "List of Diagnostic Trouble Code (DTC)". <Ref. to 6MT(diag)-25, List of Diagnostic Trouble Code (DTC).> 2) Perform the inspection mode. <Ref. to 6MT(diag)-22, Inspection Mode.>	Is the DTC displayed?	Record all DTC, and inspect using "Diagnostic Procedure with Diagnostic Trouble Code (DTC)" <Ref. to 6MT(diag)-27, Diagnostic Procedure with Diagnostic Trouble Code (DTC).> Repeat "PERFORM THE DIAGNOSIS" until normal code called up.	Inspect using "General Diagnostic Table".

2. Check List for Interview

A: CHECK

Check the following items when problem has occurred.

NOTE:
Use copies of this page for interviewing customers.

Customer's name			
Date of purchase			
Date of repair			
Trans. model	TRANSMISSION	VIN	
Odometer reading	km or miles		
Frequency	❑ Continuous ❑ Intermittent (times a day)		
Weather	❑ Fine ❑ Cloudy ❑ Rainy ❑ Snowy ❑ Various/Others ( )		
Place	❑ High ❑ Suburbs ❑ Inner city ❑ Uphill ❑ Rough road ❑ Others ( )		
Outdoor temperature	❑ Hot ❑ Warm ❑ Cool ❑ Cold		
Vehicle speed	km/h (MPH)		
Driver's control center differential indicator light	❑ Flashing	❑ Except flashing	
Driving condition	❑ Not affected ❑ While decelerating	❑ At starting ❑ While accelerating	❑ While turning (❑ RH / ❑ LH) ❑ While cruising
Symptoms	❑ No change to AUTO or MANUAL		
	❑ No change of front and rear torque distribution		
	❑ No change to differential free		
	❑ No change to differential lock		
	❑ Tight cornering condition is occurred in AUTO or MANUAL mode with differential free		
	❑ Noise or vibration		
	❑ Others ( )		

3. General Description

A: CAUTION

Supplemental restraint system airbag wiring harness is routed near the driver's control center differential control module.

CAUTION:

• All airbag system wiring harness and connectors are colored yellow. Do not use the electrical test equipment on these circuits.

• Be careful not to damage the airbag system wiring harness when performing diagnostics and servicing the driver's control center differential control module.

• When measuring the voltage or resistance of each control unit or each sensor, use a tapered pin with diameter of less than 0.64 mm (0.025 in) in order to avoid poor contact. Do not insert the pin with diameter of more than 0.65 mm (0.026 in).

B: INSPECTION

1. POWER SUPPLY

1) Measure battery voltage and specific gravity of electrolyte.

Standard of voltage: More than 12 V

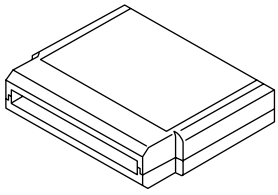
Standard of gravity: More than 1.260

2) Check the condition of fuse.

3) Check the condition of harness and harness connector.

C: PREPARATION TOOL

1. SPECIAL TOOL

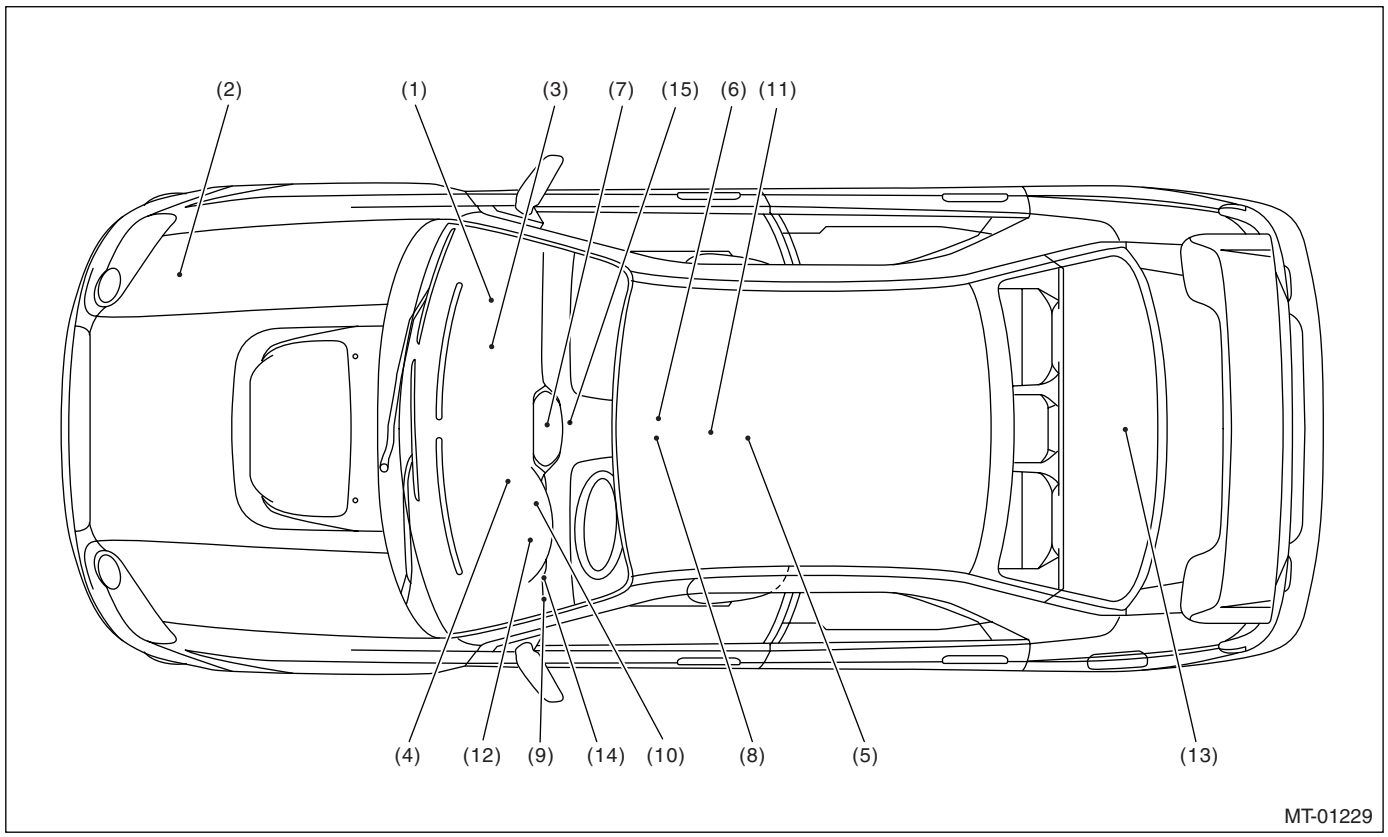
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST24082AA260	24082AA260	CARTRIDGE	Troubleshooting for electrical system.
 ST22771AA010	22771AA010	SUBARU SELECT MONITOR KIT	Troubleshooting for electrical system.

2. GENERAL TOOL

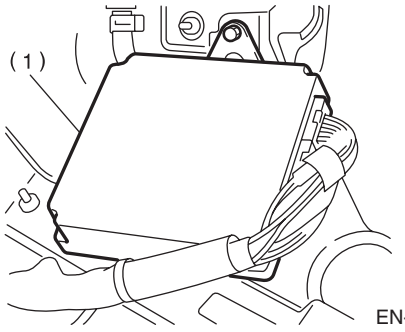
TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance, voltage and ampere.
Oscilloscope	Used for measuring sensor.

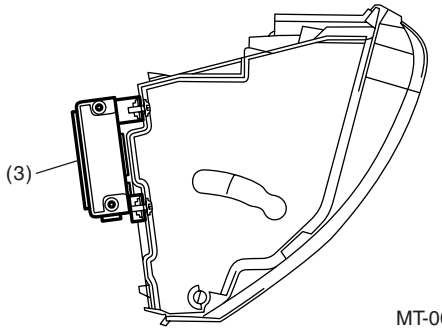
4. Electrical Component Location

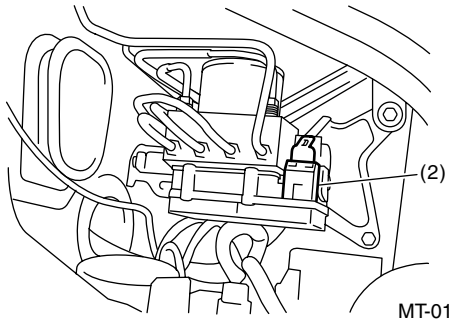
A: LOCATION



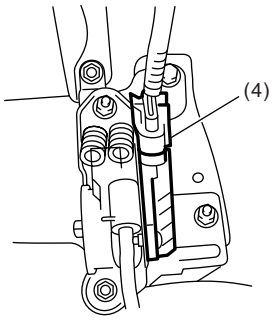
(1) Engine control module (ECM)
(2) ABS control module & hydraulic control unit (ABSCM&H/U)
(3) Driver's control center differential control module
(4) Accelerator position sensor
(5) Yaw rate & lateral G sensor
(6) Center differential control dial
(7) Center differential
(8) Manual mode switch
(9) Driver's control center differential relay
(10) Driver's control center differential indicator light (driver's control center differential diagnostic indicator light)
(11) Parking brake switch
(12) Brake light switch
(13) Rear differential oil temperature switch
(14) Data link connector
(15) Neutral position switch



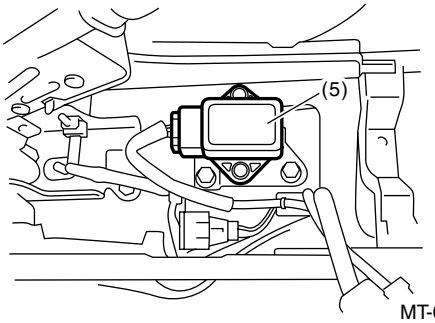




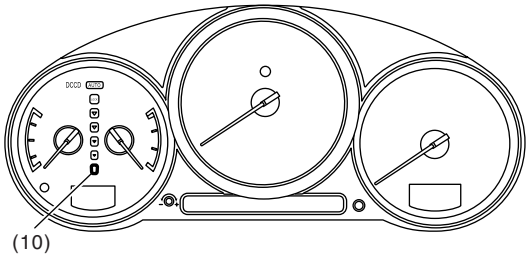
MT-01230



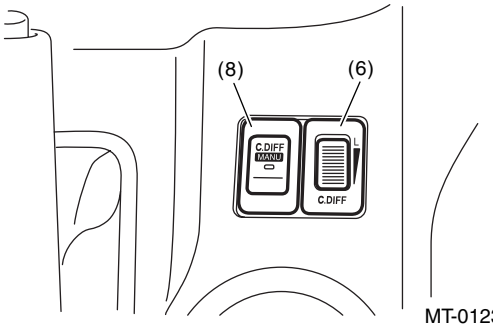
MT-00958



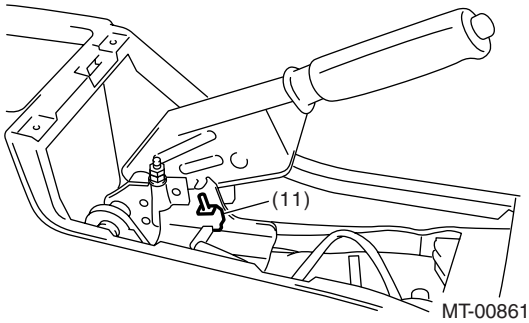
MT-01231



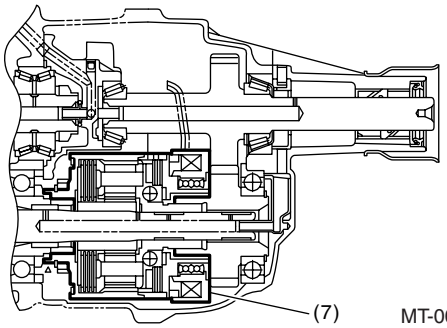
MT-00860



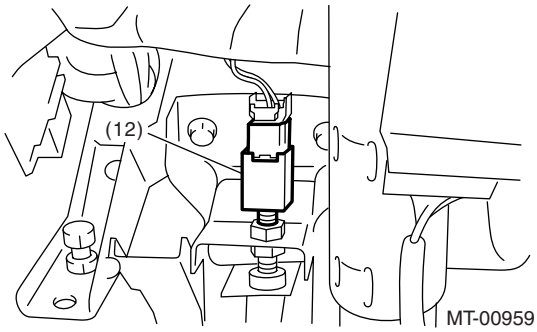
MT-01232



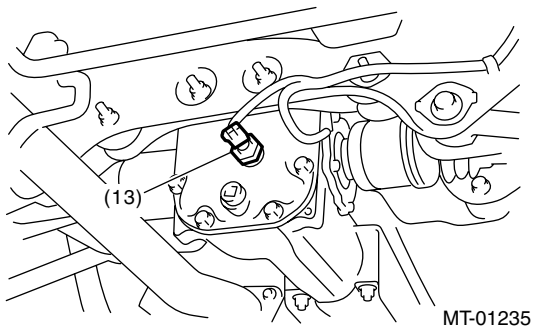
MT-00861

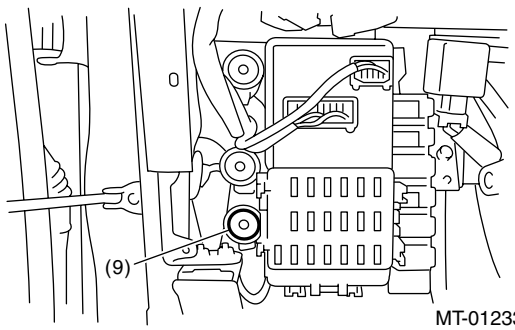


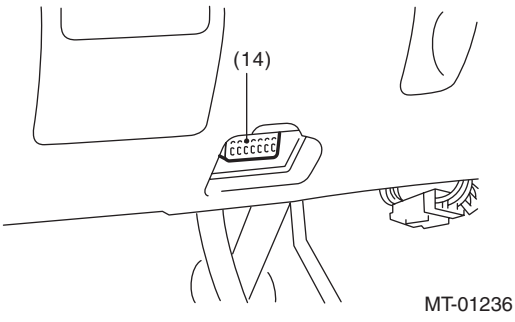
MT-00857

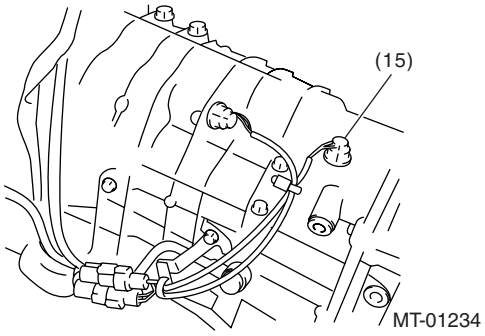


MT-00959


(13)
MT-01235

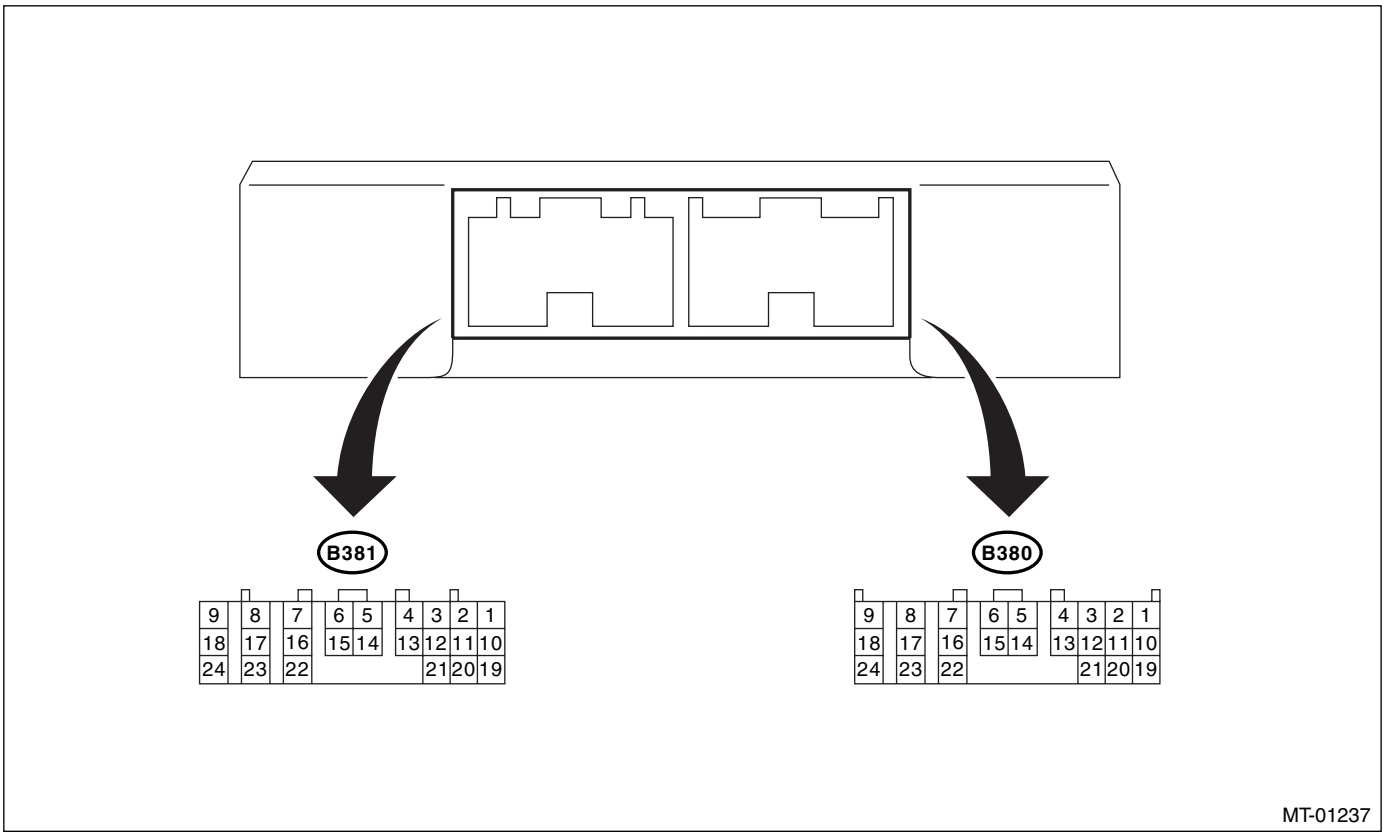

(9)
MT-01233


(14)
MT-01236


(15)
MT-01234

5. Driver's Control Center Differential Control Module I/O Signal

A: ELECTRICAL SPECIFICATION



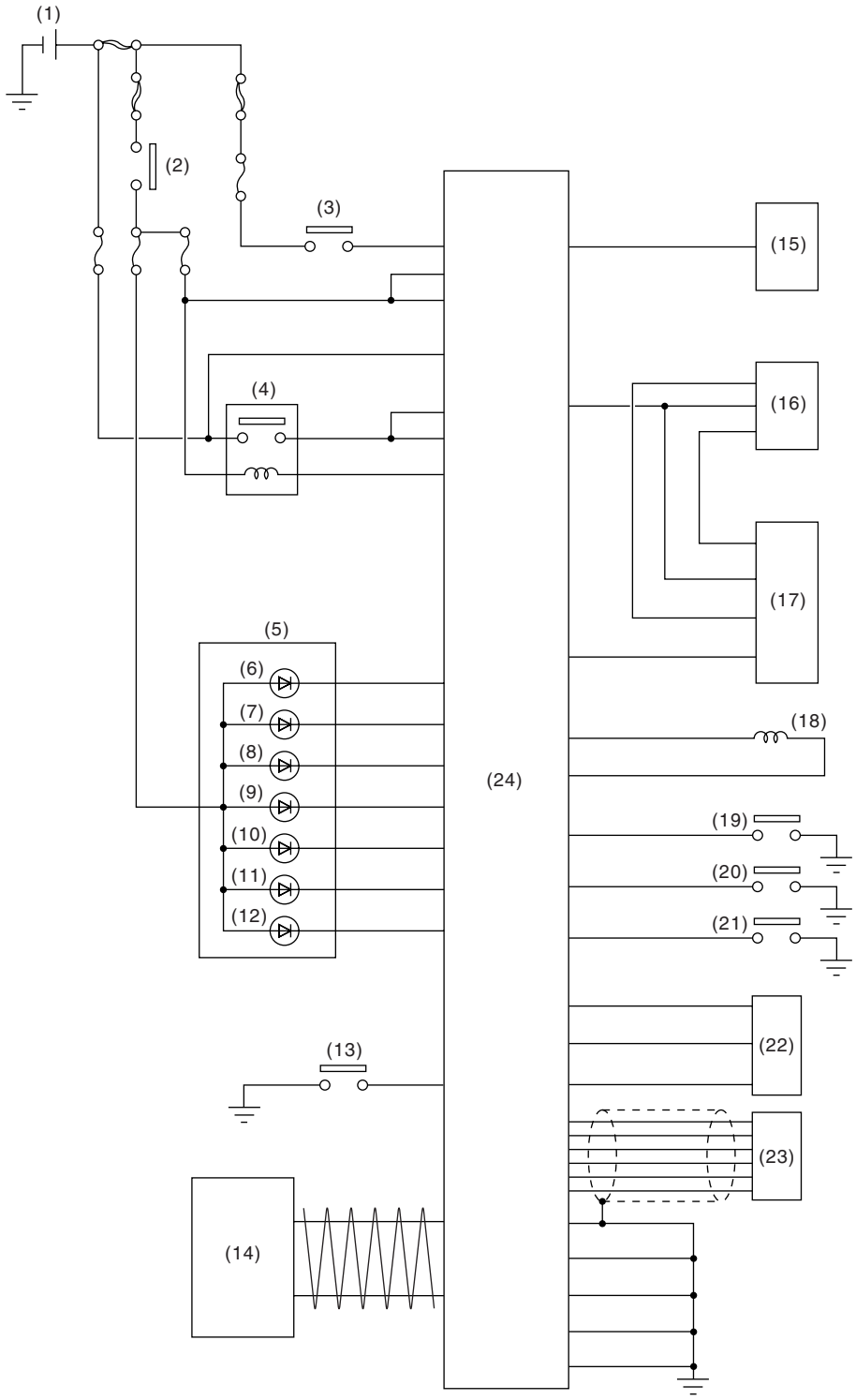
Check with ignition switch ON.					
Content	Connector No.	Terminal No.	Measuring conditions	Voltage (V)	To body resistance (ohm)
Back-up power supply	B381	17	Ignition switch ON or OFF	10 — 13	—
Ignition power supply	B381	5	Ignition switch ON (engine OFF)	10 — 13	—
	B381	6			—
Driver's control center differential power supply	B381	7			—
	B381	8			—
Driver's control relay	B381	10	Ignition switch ON	Less than 1	—
Accelerator position sensor	B380	2	Accelerator pedal is released.	0.3 — 1.8	—
			Accelerator pedal is fully depressed.	2.8 — 4.7	
Center differential control dial power supply	B380	23	Ignition switch ON	Approx. 5	—
Center differential control dial ground line	B381	14	Ignition switch ON	0	—
Center differential control dial input signal	B380	3	When differential is locked	Approx. 5	—
			When differential is free	Less than 0.5	

Driver's Control Center Differential Control Module I/O Signal

Check with ignition switch ON.					
Content	Connector No.	Terminal No.	Measuring conditions	Voltage (V)	To body resistance (ohm)
Driver's control center differential output	B381	9	When differential is locked (When driver's control center differential indicator light is in differential lock)	6.0 — 7.0	1.0 — 2.0 (between connector terminals)
			When differential is free (When parking brake is applied)	Less than 0.5	
Driver's control center differential ground line	B381	24	When differential is free	Less than 0.5	
Parking brake switch	B380	5	When parking brake is applied	Less than 0.4	—
			When parking brake is released	More than 8	
Driver's control center differential indicator light (Lock ratio 0%)	B381	4	When illuminates	Less than 1	—
			When turned off	More than 8	
Driver's control center differential indicator light (Lock ratio 15%)	B381	3	When illuminates	Less than 1	—
			When turned off	More than 8	
Driver's control center differential indicator light (Lock ratio 35%)	B381	2	When illuminates	Less than 1	—
			When turned off	More than 8	
Driver's control center differential indicator light (Lock ratio 65%)	B381	1	When illuminates	Less than 1	—
			When turned off	More than 8	
Driver's control center differential indicator light (Lock ratio 85%)	B381	13	When illuminates	Less than 1	—
			When turned off	More than 8	
Driver's control center differential indicator light (Lock ratio 100%)	B381	12	When illuminates	Less than 1	—
			When turned off	More than 8	
AUTO indicator light	B381	11	When illuminates	Less than 1	—
			When turned off	More than 8	
Stop light switch	B380	4	Brake pedal depressed.	More than 8	—
			Brake pedal released.	Less than 1	
Rear differential oil temperature switch	B380	14	Rear differential oil temperature switch OFF	More than 8	—
			Rear differential oil temperature switch ON	Less than 0.4	
Manual mode switch	B380	13	Switch is released	More than 4.3	—
			Switch is depressed	Less than 0.1	
Data link signal (Subaru Select Monitor)	B380	9	—	—	—
					—
Driver's control center differential control module ground line	B381	16	—	0	—
	B381	22			—
	B381	23			—
	B380	20			—
	B381	15			—

Check with ignition switch ON.						
Content		Connector No.	Terminal No.	Measuring conditions	Voltage (V)	To body resistance (ohm)
Yaw rate & lateral G sensor	Input (lateral G sensor)	B380	1	Ignition switch ON (When vehicle on the level)	2.35 — 2.65 When vehicle on the level	—
	Battery voltage	B380	22	Ignition switch ON	more than 8	—
	Input (Yaw rate sensor)	B380	10	Ignition switch ON (engine OFF, when stopped, ABS is in normal condition)	Waveform <Ref. to 6MT(diag)-13, WAVEFORM, MEASUREMENT, Driver's Control Center Differential Control Module I/O Signal.>	—
	Standard (Yaw rate sensor)	B380	19	Ignition switch ON	2.1 — 2.9	—
	Test	B380	21	Ignition switch ON (engine OFF, when stopped, ABS is in normal condition)	Waveform <Ref. to 6MT(diag)-13, WAVEFORM, MEASUREMENT, Driver's Control Center Differential Control Module I/O Signal.>	—
	Ground	B380	10	—	—	—
CAN communication signal		B380	18	Ignition switch ON	Pulse signal	—
		B380	24			—
Neutral position switch		B380	15	Neutral	less than 0.1	—
				Except neutral	more than 8	—
Engine speed signal		B380	6	Ignition switch ON (engine OFF)	less than 1	
				Ignition switch ON (engine ON)	Less than 1 ←→ More than 8	

B: WIRING DIAGRAM

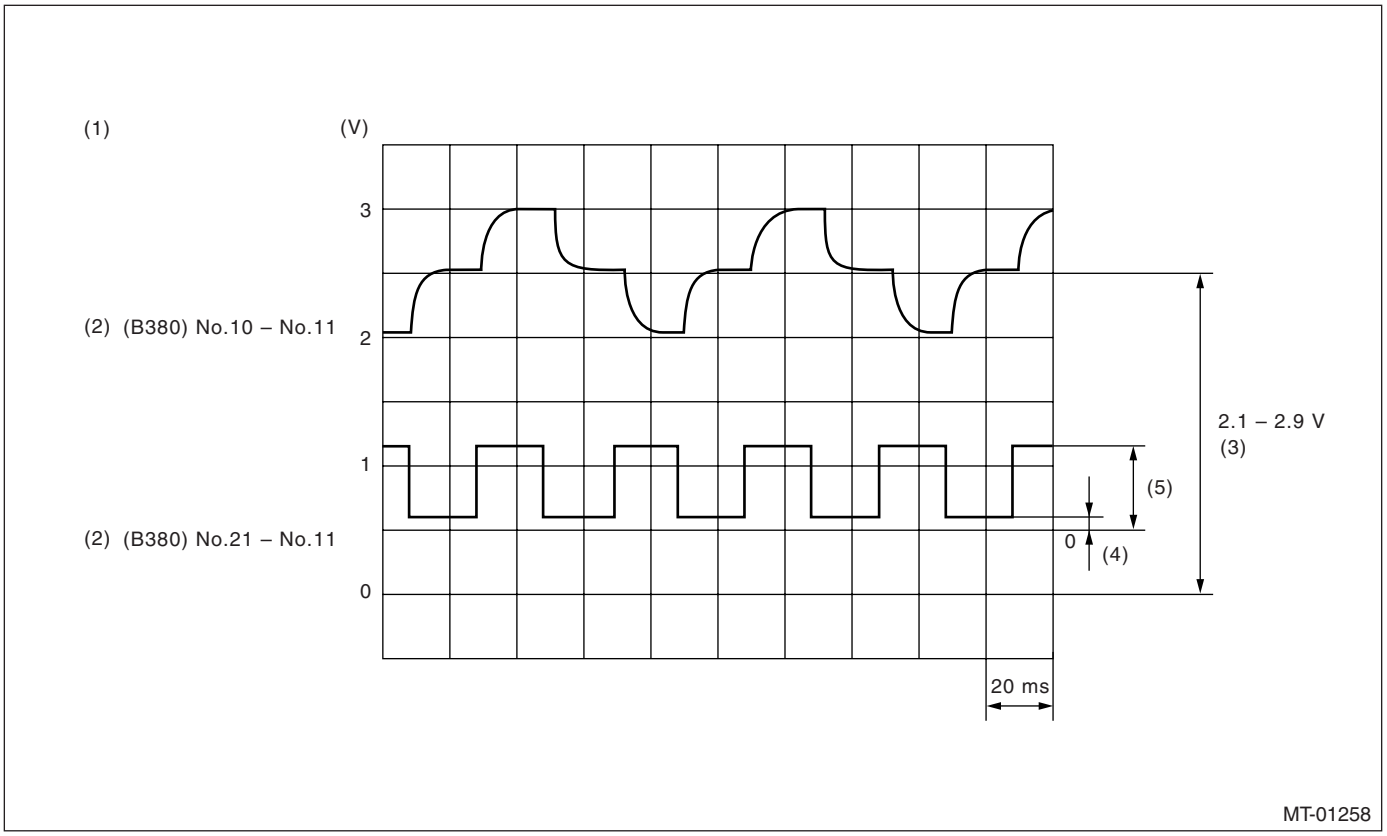


(1) Battery
(2) Ignition relay
(3) Stop light switch
(4) Driver's control center differential relay
(5) Combination meter
(6) Driver's control center differential indicator light (Lock ratio 0%)
(7) Driver's control center differential indicator light (Lock ratio 15%)
(8) Driver's control center differential indicator light (Lock ratio 35%)
(9) Driver's control center differential indicator light (Lock ratio 65%)
(10) Driver's control center differential indicator light (Lock ratio 85%)
(11) Driver's control center differential indicator light (Lock ratio 100%)
(12) AUTO indicator light
(13) Neutral position switch
(14) ABS control module & hydraulic control unit (ABSCM&H/U)
(15) Data link connector
(16) Accelerator position sensor
(17) Engine control module (ECM)
(18) Driver's control center differential
(19) Parking brake switch
(20) Manual mode switch
(21) Rear differential oil temperature switch
(22) Center differential control dial
(23) Yaw rate & lateral G sensor
(24) Driver's control center differential control module

C: MEASUREMENT

Measure input and output signal voltage.

1. WAVEFORM



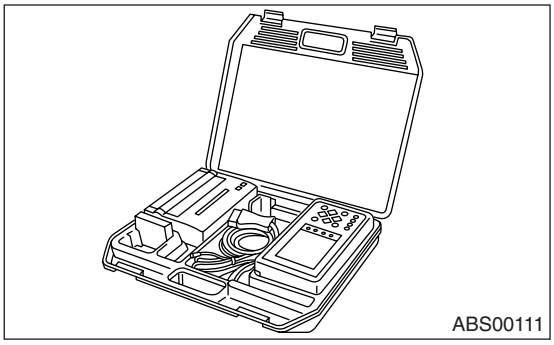
(1) Yaw rate sensor
(2) Terminal No.
(3) Vehicle is at a standstill. (engine OFF, ABS is in normal condition)
(4) Less than 1 V
(5) Approx. 6 V

6. Subaru Select Monitor

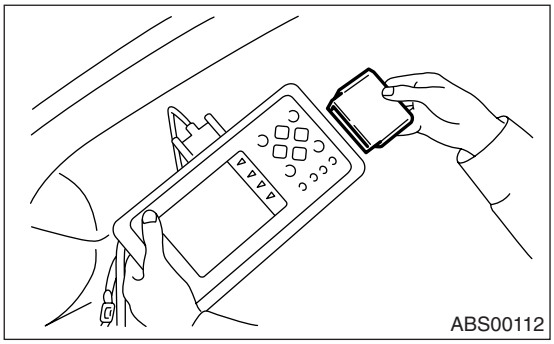
A: OPERATION

1. READ DIAGNOSTIC TROUBLE CODE (DTC)

1) Prepare the Subaru Select Monitor kit. <Ref. to 6MT(diag)-5, SPECIAL TOOL, PREPARATION TOOL, General Description.>

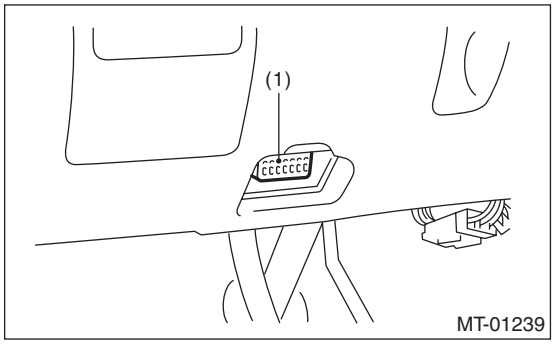


2) Connect the diagnosis cable to Subaru Select Monitor.
3) Insert the cartridge to Subaru Select Monitor. <Ref. to 6MT(diag)-5, SPECIAL TOOL, PREPARATION TOOL, General Description.>



4) Connect the Subaru Select Monitor to data link connector.

(1) Data link connector is located in the lower portion of the instrument panel (on the driver's side).

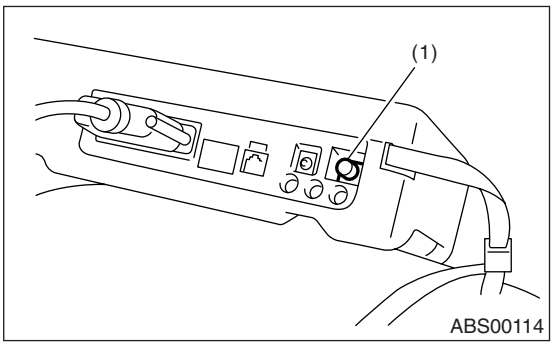


(1) Data link connector

(2) Connect the diagnosis cable to data link connector.

CAUTION:
Do not connect the scan tools except for Subaru Select Monitor or general scan tool.

5) Turn the ignition switch to ON (engine OFF) and turn the Subaru Select Monitor switch to ON.



(1) Power switch

6) On the «Main Menu» display screen, select the {Each System Check} and press the [YES] key.
7) On the «System Selection Menu» display screen, select the {Transmission} and press the [YES] key.
8) Press the [YES] key after the {Center Differential Control} is displayed.
9) On the «Transmission Diagnosis» display screen, select the {DTC Display} and press the [YES] key.

NOTE:
• For details concerning operation procedure, refer to the "SUBARU SELECT MONITOR OPERATION MANUAL".
• For details concerning DTCs, refer to the "List of Diagnostic Trouble Code (DTC)". <Ref. to 6MT(diag)-25, List of Diagnostic Trouble Code (DTC).>

10) If transmission and Subaru Select Monitor cannot communicate, check the communication circuit. <Ref. to 6MT(diag)-17, COMMUNICATION FOR INITIALIZING IMPOSSIBLE, INSPECTION, Subaru Select Monitor.>
11) On the «Check DTC» display screen, select the {Latest Code} or {Memory Code} and press the [Yes] key.

Display	Contents to be monitored
Latest	Indicate the latest DTC on the Subaru Select Monitor display.
Memory Code	Indicate the latest DTC in previous trouble on the Subaru Select Monitor display.

2. READ CURRENT DATA

1) On the «Main Menu» display screen, select the {Each System Check} and press the [YES] key.
2) On the «System Selection Menu» display screen, select the {Transmission} and press the [YES] key.
3) Press the [YES] key after the {Center Differential Control} is displayed.
4) On the «Transmission Diagnosis» screen, select the {Current Data Display/Save}, and then press the [YES] key.
5) On the «Data Display Menu» screen, select the data display style and press the [YES] key.
6) Using a scroll key, move the display screen up or down until necessary data is shown.

- A list of the support data is shown in the following table.

Display	Contents to be monitored	Unit of measure
Lateral G Sensor	Lateral G sensor voltage is displayed.	V
Center Differential Switch Voltage	Center differential switch voltage is displayed.	V
Center Differential Actual Current	Actual current of center differential is displayed.	A
Center Differential Set Current	Set current of center differential is displayed.	A
FR Wheel Speed	Wheel speed detected by front ABS wheel speed sensor RH is displayed.	km/h or MPH
FL Wheel Speed	Wheel speed detected by front ABS wheel speed sensor LH is displayed.	km/h or MPH
RR Wheel Speed	Wheel speed detected by rear ABS wheel speed sensor RH is displayed.	km/h or MPH
RL Wheel Speed	Wheel speed detected by rear ABS wheel speed sensor LH is displayed.	km/h or MPH
Sub-Accelerator Sensor	Accelerator pedal position sensor voltage is displayed.	V
Yaw rate sensor voltage	Voltage detected by yaw rate sensor is displayed.	V
Yaw rate & G sensor ref. V	Reference voltage of yaw rate & lateral G sensor is displayed.	V
Engine Speed	Current engine speed is displayed.	rpm
ABS Signal	ON/OFF of ABS signal is displayed.	ON or OFF
Stop Light SW	ON/OFF of stop light switch is displayed.	ON or OFF
Rear differential Oil Temperature SW	ON/OFF of rear differential oil temperature switch is displayed.	ON or OFF
Module Identification Signal	ON/OFF of module identification signal is displayed.	ON or OFF
Center Differential Light 1	ON/OFF of center differential light 1 is displayed.	ON or OFF
Center Differential Light 2	ON/OFF of center differential light 2 is displayed.	ON or OFF
Center Differential Light 3	ON/OFF of center differential light 3 is displayed.	ON or OFF
Center Differential Light 4	ON/OFF of center differential light 4 is displayed.	ON or OFF
Center Differential Light 5	ON/OFF of center differential light 5 is displayed.	ON or OFF
Center Differential Light 6	ON/OFF of center differential light 6 is displayed.	ON or OFF
Parking SW	ON/OFF of parking switch is displayed.	ON or OFF
Center Differential Relay	ON/OFF of center differential relay is displayed.	ON or OFF
AUTO/MANUAL Mode Change SW	ON/OFF of AUTO/MANUAL mode change switch is displayed.	ON or OFF
AUTO Mode Light	ON/OFF of AUTO mode light is displayed.	ON or OFF
Neutral Switch	Neutral switch condition (neutral/except neutral) is displayed.	ON or OFF

NOTE:
For details concerning operation procedure, refer to the “SUBARU SELECT MONITOR OPERATION MANUAL”.

3. CLEAR MEMORY MODE

1) On the «Main Menu» display screen, select the {2. Each System Check} and press the [YES] key.
2) On the «System Selection Menu» display screen, select the {Transmission} and press the [YES] key.
3) Press the [YES] key after the {Center Differential Control} is displayed.
4) On the «Transmission Diagnosis» display screen, select the {Clear Memory} and press the [YES] key.

Display	Contents to be monitored
Is a memory clearance performed?	Function of clearing DTC.

5) When “Done” and “Turn ignition switch OFF” are shown on the display screen, turn the Subaru Select Monitor and ignition switch to OFF.

NOTE:
For details concerning operation procedure, refer to the “SUBARU SELECT MONITOR OPERATION MANUAL”.

4. FREEZE FRAME DATA

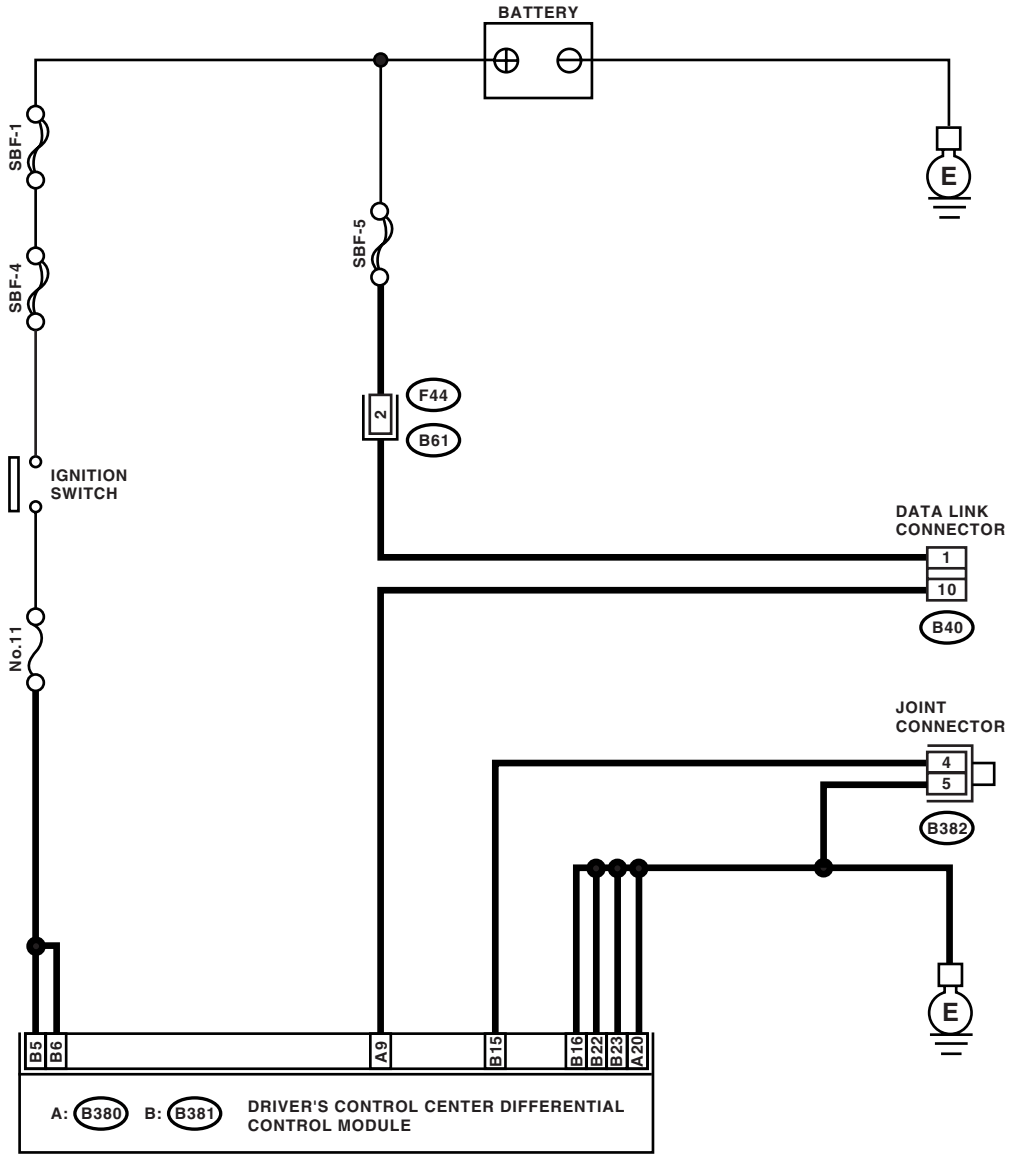
NOTE:
• Data stored at the time of trouble occurrence is shown on display.
• Each time trouble occurs, the latest information is stored in the freeze frame data in memory.
• Freeze frame data will be memorized up to seven.

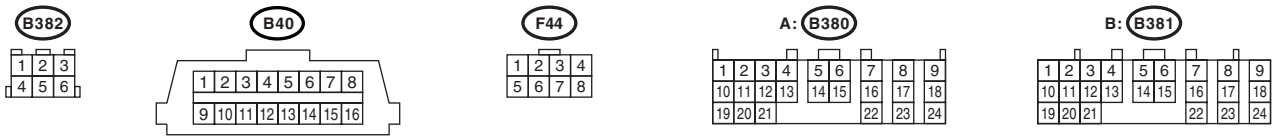
DTC	Content	Contents be monitored
P1720	DCCD CAN system circuit	CAN communication circuit condition is displayed.
P1721	DCCD engine rpm signal system	Engine speed signal circuit condition is displayed.
P1759	Lateral G sensor	Lateral G sensor circuit condition is displayed.
P1764	Yaw rate sensor system circuit	Yaw rate sensor circuit condition is displayed.
P1765	Yaw rate side G sensor reference system circuit	Yaw rate reference circuit condition is displayed.
P1875	Center differential	Center differential circuit condition is displayed.
P2125	Accelerator pedal position sensor	Accelerator pedal position sensor circuit condition is displayed.

B: INSPECTION

1. COMMUNICATION FOR INITIALIZING IMPOSSIBLE

DETECTING CONDITION:
Faulty harness connector.
TROUBLE SYMPTOM:
Communication is impossible between driver's control center differential control module and Subaru Select Monitor.
WIRING DIAGRAM:





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	Step	Check	Yes	No
1	**CHECK IGNITION SWITCH.**	Does the ignition switch turn to ON?	Go to step **2.**	Turn the ignition switch to ON, and select transmission mode using Subaru Select Monitor.
2	**CHECK BATTERY.** 1) Turn the ignition switch to OFF. 2) Measure the battery voltage.	Is the voltage more than 10 V?	Go to step **3.**	Charge or replace the battery.
3	**CHECK BATTERY TERMINAL.**	Is there poor contact at battery terminal?	Repair or tighten the battery terminal.	Go to step **4.**
4	**CHECK INSTALLATION OF DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE CONNECTOR.** Turn the ignition switch to OFF.	Is the driver's control center differential control module connector inserted into driver's control center differential control module until it is locked by clamps?	Go to step **5.**	Insert driver's control center differential control module connector into driver's control center differential control module.
5	**CHECK SUBARU SELECT MONITOR COMMUNICATION.** 1) Turn the ignition switch to ON. 2) Using Subaru Select Monitor, check whether communication to other system can be executed normally.	Is the system name displayed on Subaru Select Monitor?	Go to step **9.**	Go to step **6.**
6	**CHECK SUBARU SELECT MONITOR COMMUNICATION.** 1) Turn the ignition switch to OFF. 2) Disconnect the driver's control center differential control module connector. 3) Turn the ignition switch to ON. 4) Check whether communication to other systems can be executed normally.	Is the system name displayed on Subaru Select Monitor?	Replace driver's control center differential control module. <Ref. to 6MT(diag)-6, LOCATION, Electrical Component Location.>	Go to step **7.**
7	**CHECK HARNESS CONNECTOR BETWEEN EACH CONTROL MODULE AND DATA LINK CONNECTOR.** 1) Turn the ignition switch to OFF. 2) Disconnect driver's control center differential control module connector, ECM connector and ABSCM connector. 3) Measure the resistance between data link connector and chassis ground. ***Connector & terminal*** ***(B40) No. 10 — Chassis ground:***	Is the resistance more than 1 MΩ?	Go to step **8.**	Repair harness and connector between each control module and data link connector.
8	**CHECK OUTPUT SIGNAL FOR DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE.** 1) Turn the ignition switch to ON. 2) Measure the voltage between data link connector and chassis ground. ***Connector & terminal*** ***(B40) No. 5 (+) — Chassis ground (−):***	Is the voltage less than 1 V?	Go to step **9.**	Repair harness and connector between each control module and data link connector.

	Step	Check	Yes	No
9	**CHECK HARNESS CONNECTOR BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND DATA LINK CONNECTOR.** 1) Turn the ignition switch OFF. 2) Disconnect the driver's control center differential control module connector. 3) Measure the resistance between driver's control center differential control module connector and data link connector. ***Connector & terminal*** ***(B380) No. 9 — (B40) No. 10:***	Is the resistance less than 1 Ω?	Go to step **10.**	Repair harness and connector between driver's control center differential control module and data link connector.
10	**CHECK POWER SUPPLY CIRCUIT.** 1) Turn the ignition switch to ON. (engine OFF) 2) Measure the ignition power supply voltage between driver's control center differential control module connector and chassis ground. ***Connector & terminal*** ***(B381) No. 15 (+) — Chassis ground (−):*** ***(B381) No. 16 (+) — Chassis ground (−):***	Is the voltage more than 10 V?	Go to step **11.**	Repair open circuit in harness between driver's control center differential control module and battery.
11	**CHECK HARNESS CONNECTOR BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND CHASSIS GROUND.** 1) Turn the ignition switch to OFF. 2) Measure the resistance of harness between driver's control center differential control module and chassis ground. ***Connector & terminal*** ***(B380) No. 20 — Chassis ground:*** ***(B381) No. 15 — Chassis ground:*** ***(B381) No. 21 — Chassis ground:*** ***(B381) No. 22 — Chassis ground:*** ***(B381) No. 23 — Chassis ground:***	Is the resistance less than 1 Ω?	Go to step **12.**	Repair open circuit in harness between driver's control center differential control module and inhibitor side connector, and poor contact in coupling connector.
12	**CHECK POOR CONTACT IN CONNECTOR.**	Is there poor contact in control module power supply, ground circuit and data link connector?	Repair the connector.	Replace the driver's control center differential control module only. <Ref. to 6MT(diag)-6, LOCATION, Electrical Component Location.>

7. Read Diagnostic Trouble Code (DTC)

A: OPERATION

1. READ DIAGNOSTIC TROUBLE CODE (DTC) WITH DIAGNOSTIC INDICATOR LIGHT.

NOTE:
Perform the following step 4) to 8) within 30 sec.

1) Securely apply the parking brake.
2) Set the center differential control dial to differential free.
3) Start the engine.
4) Set the center differential control dial to differential lock.
5) Release the parking brake.
6) Set the center differential control dial to differential free.
7) Securely apply the parking brake.
8) Repeat the step 4) to 7) for twice.

NOTE:
Repeat the step from the beginning when diagnostic indicator light does not blink.

9) Execute inspection mode. <Ref. to 6MT(diag)-22, Inspection Mode.>

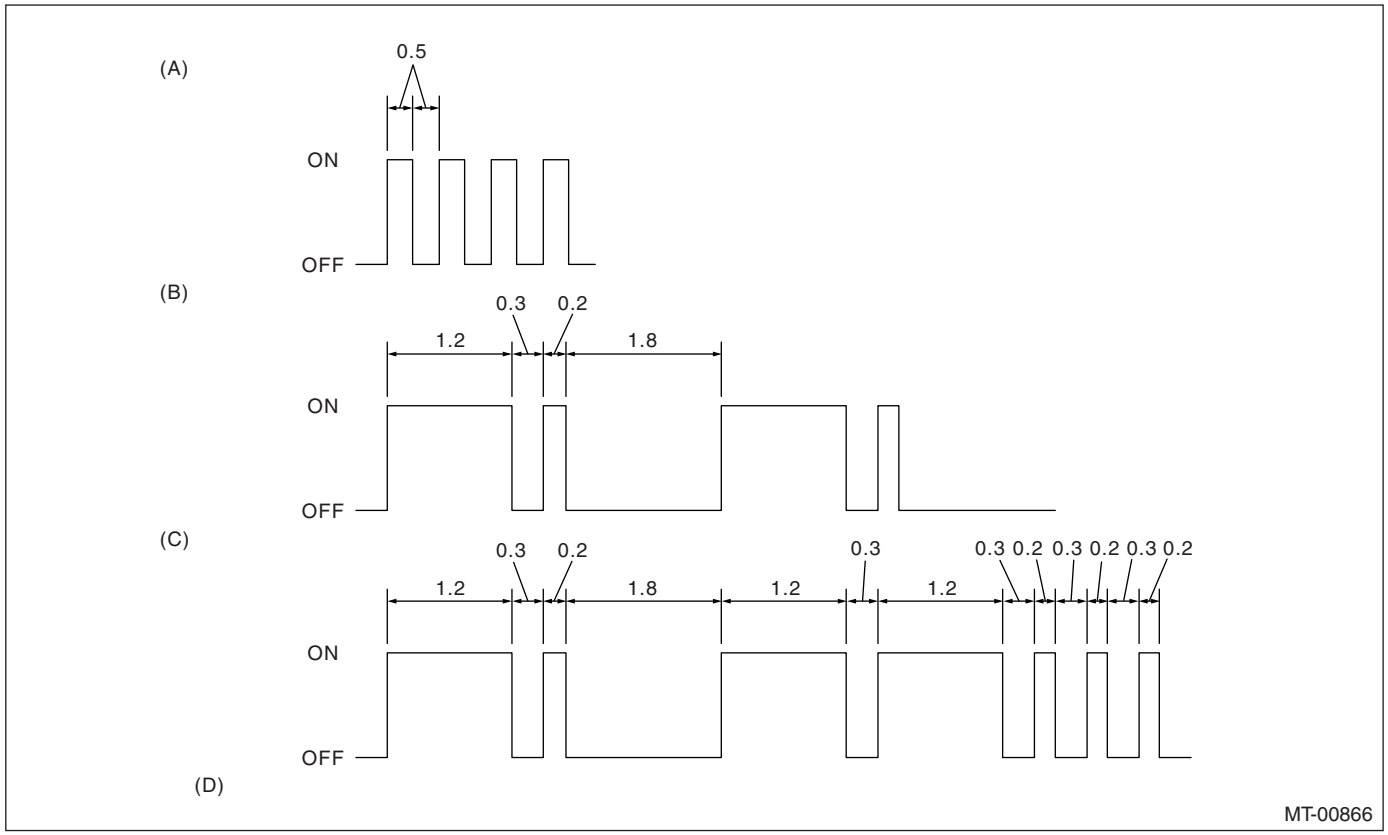
NOTE:
Refer to “HOW TO READ DIAGNOSTIC TROUBLE CODE (DTC)” for reading DTC. <Ref. to 6MT(diag)-21, HOW TO READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Read Diagnostic Trouble Code (DTC).>

2. WITH SUBARU SELECT MONITOR

Detail procedure for reading DTC, refer to “SUBARU SELECT MONITOR”. <Ref. to 6MT(diag)-14, Subaru Select Monitor.>

3. HOW TO READ DIAGNOSTIC TROUBLE CODE (DTC)

DTC for faulty part is indicated by blinking of driver's control center differential indicator. Long blink (1.2 sec.) means ten's place, short blink (0.2 sec.) means one's place.



(A) Normal code
(B) DTC 11
(C) DTC 11 and 23
(D) Unit: Seconds

NOTE:
- The codes which are memorized in control module, and the codes which are appeared to inform the trouble to driver in normal driving condition; are only "21", "22", "23", "25", "26", "27" and "28".
- For details of DTC, refer to "List of Diagnostic Trouble Code (DTC)". <Ref. to 6MT(diag)-25, List of Diagnostic Trouble Code (DTC).>

8. Inspection Mode

A: PROCEDURE

WARNING:
Observe the road traffic law.

1) Call up the Self-diagnosis diagnostic trouble code (DTC). <Ref. to 6MT(diag)-20, READ DIAGNOSTIC TROUBLE CODE (DTC) WITH DIAGNOSTIC INDICATOR LIGHT., OPERATION, Read Diagnostic Trouble Code (DTC).>
2) A brake pedal is stepped on and a brake pedal is returned.
3) Operate the Manual mode switch once or more, and then set to Manual mode.
4) Turn the center differential control dial to differential lock and differential free for once, and turn it to differential lock, and then wait three seconds.
5) With the vehicle parked, shift the gear position to 1st then neutral.

9. Clear Memory Mode

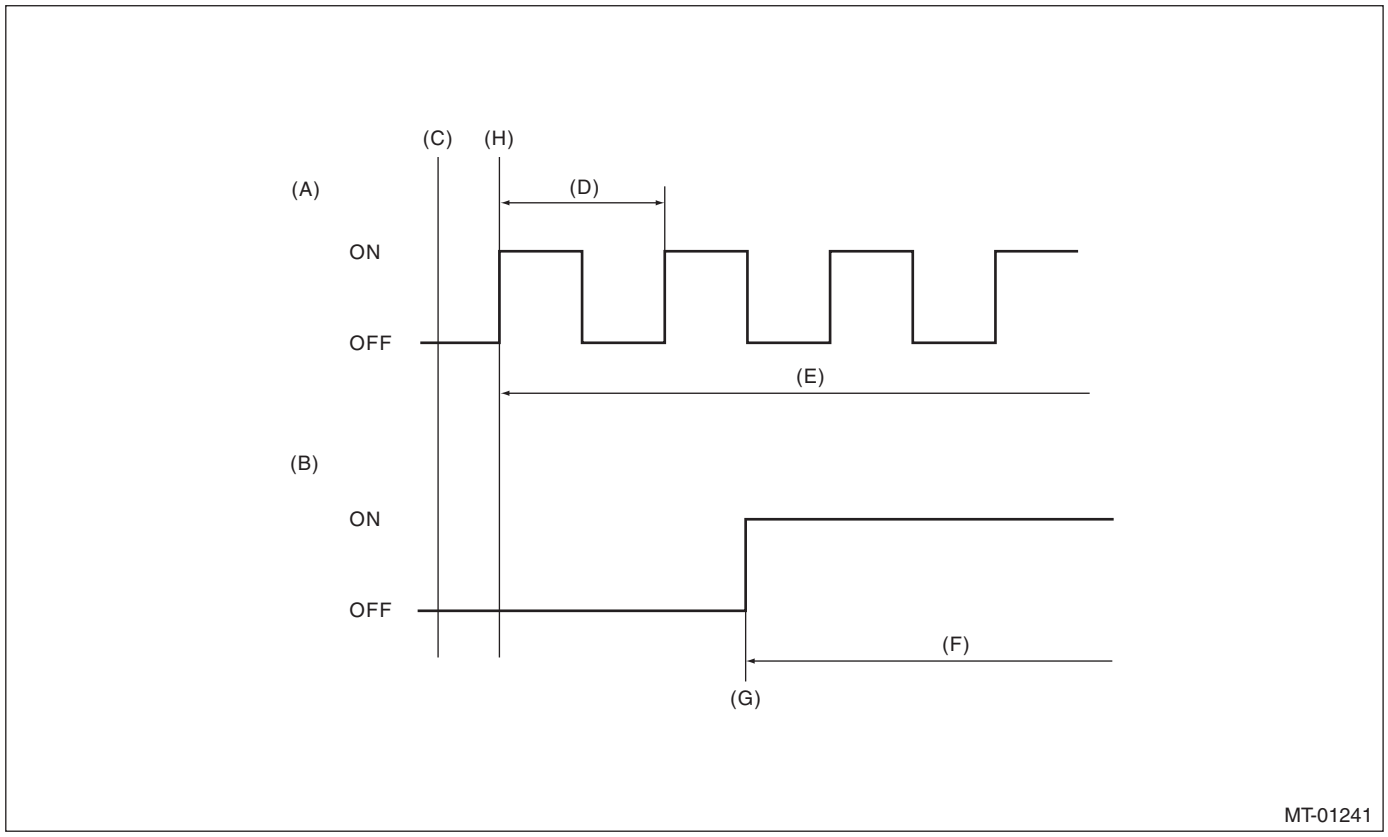
A: OPERATION

Detail procedure for clearing DTCs, refer to “SUBARU SELECT MONITOR”. <Ref. to 6MT(diag)-14, Subaru Select Monitor.>

10.Driver's Control Center Differential Indicator Light Display

A: INSPECTION

When the malfunction occurs on part or unit, the control module performs self diagnosis and driver's control center differential indicator light (at the bottom differential free light) keep blinking until detect the malfunction and the ignition switch is turned to OFF. Faulty part or unit can be identified by calling up DTC.
Indicator display is as shown in the figure.



(A) Faulty
(B) Normal
(C) Ignition switch ON
(D) 1 sec.
(E) Blink
(F) Driver's control center differential indicator light illuminates
(G) Set manual mode dial to differential free position
(H) Malfunction is detected

11.List of Diagnostic Trouble Code (DTC)

A: LIST

1. SUBARU SELECT MONITOR DISPLAY

DTC	Connect	Content of diagnosis	Index
P1720	DCCD CAN system circuit	CAN communication circuit is open or shorted.	<Ref. to 6MT(diag)-32, DTC P1720 DCCD CAN SYSTEM CIRCUIT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
P1721	DCCD engine rpm signal system circuit	Engine speed signal circuit is open or shorted.	<Ref. to 6MT(diag)-34, DTC P1721 DCCD ENGINE RPM SIGNAL SYSTEM CIRCUIT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
P1759	Lateral Acceleration Sensor Circuit	Lateral G sensor circuit is open or shorted.	<Ref. to 6MT(diag)-37, DTC P1759 LATERAL ACCELERATION SENSOR CIRCUIT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
P1764	Yaw rate sensor system circuit	Yaw rate sensor circuit is open or shorted.	<Ref. to 6MT(diag)-40, DTC P1764 YAW RATE SENSOR SYSTEM CIRCUIT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
P1765	Yaw rate side G sensor reference system circuit	Yaw rate reference circuit is open or shorted.	<Ref. to 6MT(diag)-43, DTC P1765 YAW RATE SIDE G SENSOR REFERENCE SYSTEM CIRCUIT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
P1875	Circuit of Center Diff.	Driver's control center differential circuit is open or shorted.	<Ref. to 6MT(diag)-46, DTC P1875 CIRCUIT OF CENTER DIFF., Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
P2125	Accelerator Position Sensor E	Accelerator pedal position circuit is open or shorted.	<Ref. to 6MT(diag)-52, DTC 2125 ACCELERATOR POSITION SENSOR E, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

2. COMBINATION METER INDICATOR LIGHT

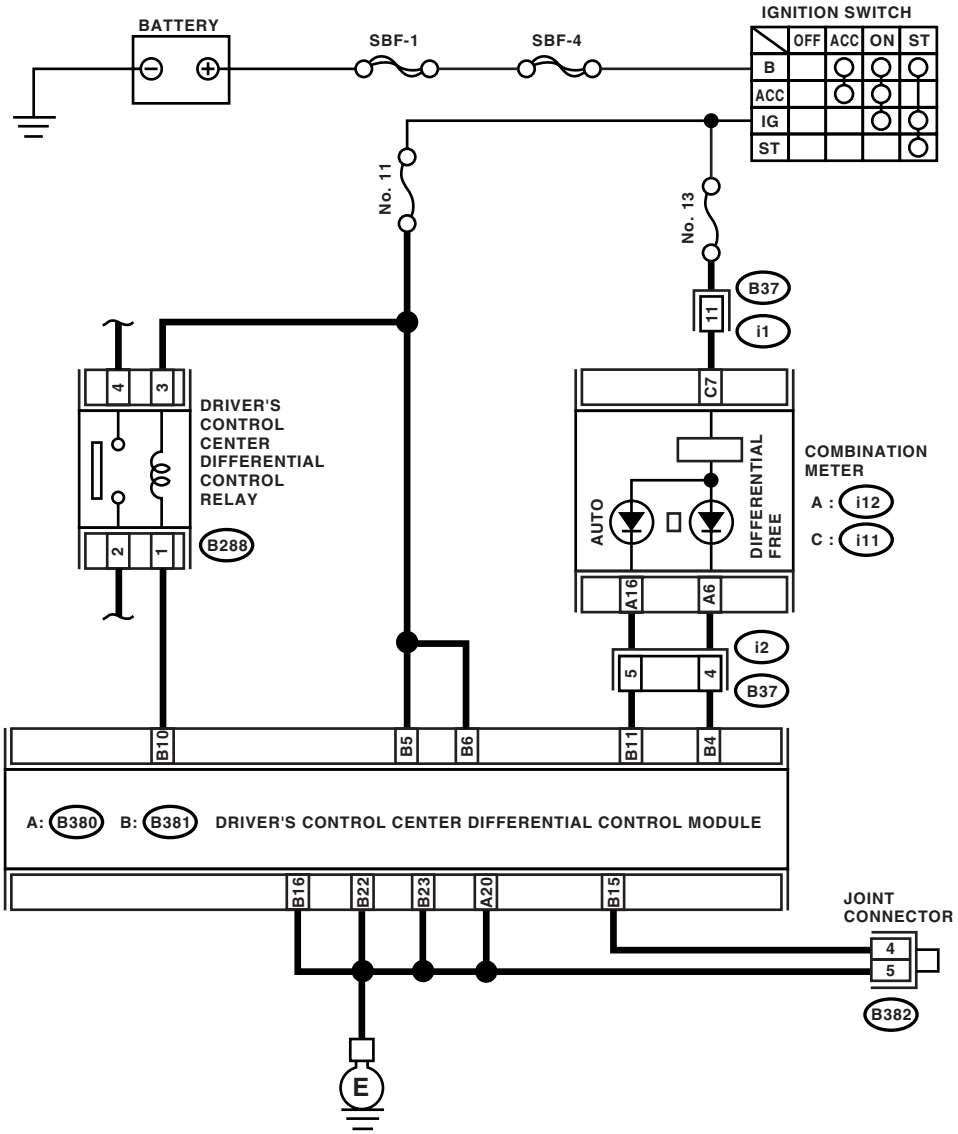
DTC	Connect	Content of diagnosis	Index
21	Accelerator Position Sensor E	Accelerator pedal position circuit is open or shorted.	<Ref. to 6MT(diag)-52, DTC 2125 ACCELERATOR POSITION SENSOR E, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
22	Lateral Acceleration Sensor Circuit	Lateral G sensor circuit is open or shorted.	<Ref. to 6MT(diag)-37, DTC P1759 LATERAL ACCELERATION SENSOR CIRCUIT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
23	Circuit of Center Diff.	Driver's control center differential circuit is open or shorted.	<Ref. to 6MT(diag)-46, DTC P1875 CIRCUIT OF CENTER DIFF., Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
24	Center differential control dial	Center differential control dial circuit is open or shorted.	<Ref. to 6MT(diag)-55, DTC 24 CHECK CENTER DIFFERENTIAL CONTROL DIAL., Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
25	DCCD CAN system circuit	CAN communication circuit is open or shorted.	<Ref. to 6MT(diag)-32, DTC P1720 DCCD CAN SYSTEM CIRCUIT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
26	DCCD engine rpm signal system	Engine speed signal circuit is open or shorted.	<Ref. to 6MT(diag)-34, DTC P1721 DCCD ENGINE RPM SIGNAL SYSTEM CIRCUIT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

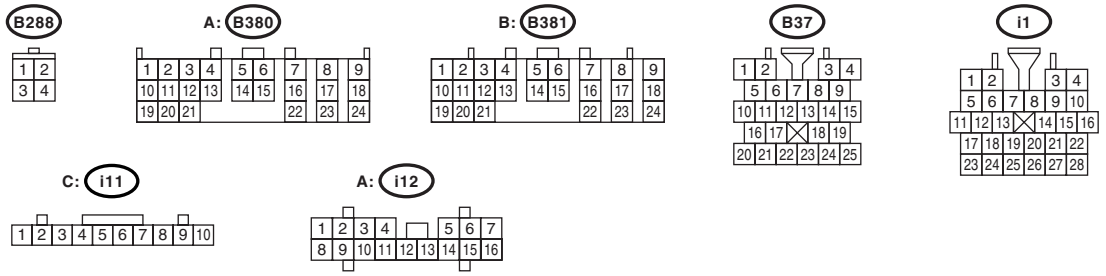
DTC	Connect	Content of diagnosis	Index
27	Yaw rate side G sensor reference system circuit	Yaw rate reference circuit is open or shorted.	<Ref. to 6MT(diag)-43, DTC P1765 YAW RATE SIDE G SENSOR REFERENCE SYSTEM CIRCUIT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
28	Yaw rate sensor system circuit	Yaw rate sensor circuit is open or shorted.	<Ref. to 6MT(diag)-43, DTC P1765 YAW RATE SIDE G SENSOR REFERENCE SYSTEM CIRCUIT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
31	Manual mode switch	Manual mode switch circuit is open or shorted.	<Ref. to 6MT(diag)-57, DTC 31 MANUAL MODE SWITCH, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
32	Parking brake switch	Parking brake switch circuit is open or shorted.	<Ref. to 6MT(diag)-61, DTC 32 CHECK PARKING BRAKE SWITCH, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
33	Stop light switch	Brake switch circuit is open or shorted.	<Ref. to 6MT(diag)-63, DTC 33 STOP LIGHT SWITCH, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
37	Neutral position switch	Neutral position switch circuit is open or shorted.	<Ref. to 6MT(diag)-65, DTC 37 NEUTRAL POSITION SWITCH, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

12.Diagnostic Procedure with Diagnostic Trouble Code (DTC)

A: DTC CANNOT BE CALLED UP

WIRING DIAGRAM:





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	Step	Check	Yes	No
1	**CHECK THE AUTO INDICATOR LIGHT.** Turn the ignition switch to ON.	Does the AUTO indicator light illuminate?	Go to step **5.**	Go to step **2.**
2	**CHECK THE GROUND CIRCUIT OF DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE.** 1) Turn the ignition switch to OFF. 2) Disconnect the connector of driver's control center differential control module. 3) Measure the resistance between driver's control center differential control module harness connector and chassis ground. ***Connector & terminal*** ***(B380) No. 20 — Chassis ground:*** ***(B381) No. 15 — Chassis ground:*** ***(B381) No. 16 — Chassis ground:*** ***(B381) No. 22 — Chassis ground:*** ***(B381) No. 23 — Chassis ground:***	Is the resistance less than 1 Ω?	Go to step **3.**	Repair the open circuit of driver's control center differential control module ground circuit.
3	**CHECK FUSE (No. 11).** Remove the fuse (No. 11).	Is the fuse (No. 11) is blown out?	Replace fuse (No.11). If the replaced fuse (No.11) is blown out easily, repair short circuit in harness between fuse (No.11) and driver's control center differential control module.	Go to step **4.**
4	**CHECK IGNITION POWER SUPPLY CIRCUIT OF DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE.** 1) Turn the ignition switch to ON. (engine OFF) 2) Measure the voltage between driver's control center differential control module and chassis ground. ***Connector & terminal*** ***(B381) No. 5 (+) — Chassis ground (−):*** ***(B381) No. 6 (+) — Chassis ground (−):***	Is the voltage more than 10 V?	Go to step **5.**	Repair the open circuit in harness between fuse (No. 11) and driver's control center differential control module, or fuse (No. 11) and battery.
5	**CHECK MANUAL MODE SWITCH.** 1) Turn the ignition switch to OFF. 2) Connect all connectors. 3) Turn the ignition switch to ON. 4) Push the manual mode switch to enter the manual mode.	Is the manual mode obtained?	Go to step **6.**	Repair the switch. <Ref. to 6MT(diag)-57, DTC 31 MANUAL MODE SWITCH, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
6	**CHECK DRIVER'S CONTROL CENTER DIFFERENTIAL INDICATOR LIGHT.** Operate the center differential control dial.	Does the center differential indicator light illuminate according to center differential control dial?	Go to step **8.**	Go to step **7.**
7	**CHECK THE CENTER DIFFERENTIAL CONTROL DIAL** <Ref. to 6MT(diag)-55, DTC 24 CHECK CENTER DIFFERENTIAL CONTROL DIAL., Diagnostic Procedure with Diagnostic Trouble Code (DTC).>	Is the center differential control dial circuit normal?	Go to step **8.**	Repair it.

	Step	Check	Yes	No
8	**CHECK THE PARKING BRAKE SWITCH** <Ref. to 6MT(diag)-61, DTC 32 CHECK PARKING BRAKE SWITCH, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>	Is the parking brake switch circuit normal?	Go to step **9.**	Repair it.
9	**READ THE DTC.** Read the DTC. <Ref. to 6MT(diag)-20, OPERATION, Read Diagnostic Trouble Code (DTC).>	Is the DTC called up?	Go back to the Basic Diagnostic Procedure. <Ref. to 6MT(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>	Go to step **10.**
10	**CHECK THE DRIVER'S CONTROL CENTER DIFFERENTIAL INDICATOR LIGHT.** 1) Turn the ignition switch to OFF. 2) Disconnect harness connector from combination meter. 3) Turn the ignition switch to ON. (engine OFF) 4) Short between the combination meter harness connector and chassis ground. ***Connector & terminal*** ***(i12) No. 6 — Chassis ground:***	Does the lowest light of driver's control center differential indicator illuminate?	Go to step **11.**	Check the combination meter.
11	**CHECK THE HARNESS BETWEEN COMBINATION METER AND DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE.** 1) Turn the ignition switch to OFF. 2) Disconnect the harness connector from driver's control center differential control module. 3) Measure the resistance of harness between combination meter harness connector and driver's control center differential control module harness connector. ***Connector & terminal*** ***(i12) No. 6 — (B381) No. 4:***	Is the resistance less than 1 Ω?	Go to step **12.**	Repair the open circuit and connector of harness between combination meter harness connector and driver's control center differential control module harness connector.
12	**CHECK THE HARNESS BETWEEN COMBINATION METER AND DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE.** Measure the resistance of harness between driver's control center differential control module harness connector and chassis ground. ***Connector & terminal*** ***(B381) No. 4 — Chassis ground:***	Is the resistance more than 1 MΩ?	Go to step **13.**	Repair the short of harness between combination meter harness connector and driver's control center differential control module harness connector.
13	**CHECK THE POOR CONTACT IN HARNESS CONNECTOR**	Is there any poor contact in harness connectors of each circuit?	Repair the poor contact.	Replace the driver's control center differential control module.

B: CHECK REAR DIFFERENTIAL OIL TEMPERATURE SWITCH

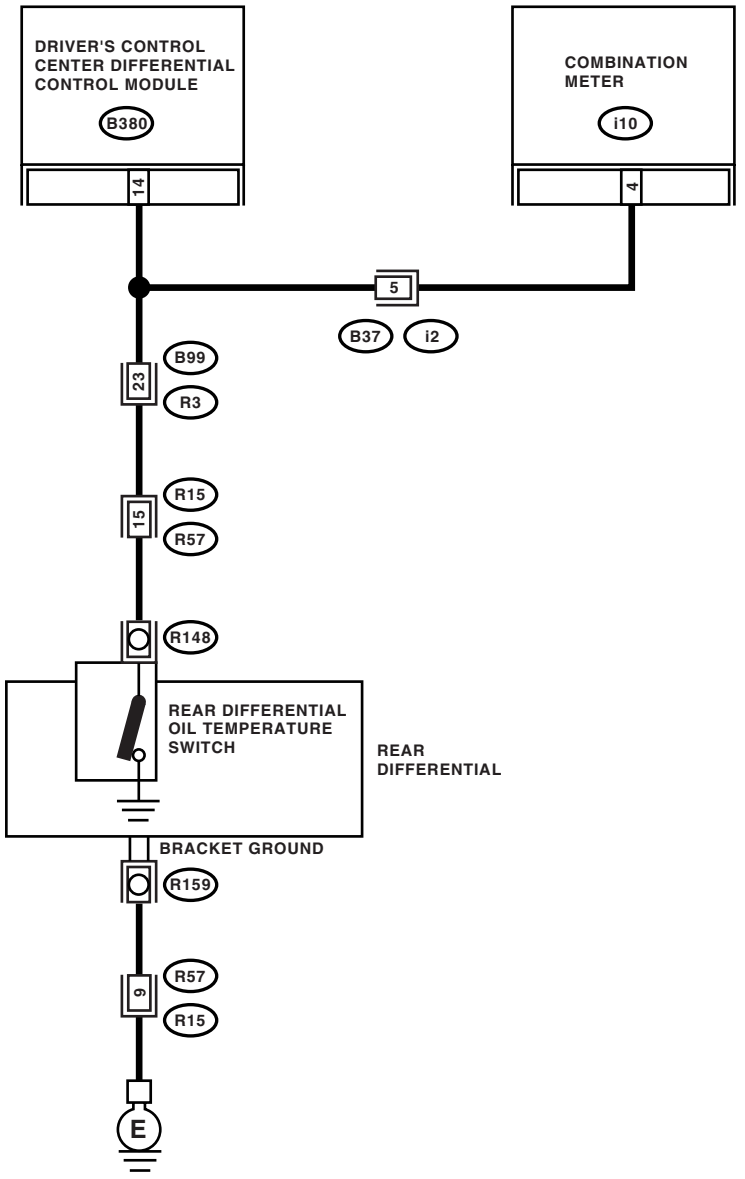
DIAGNOSIS:

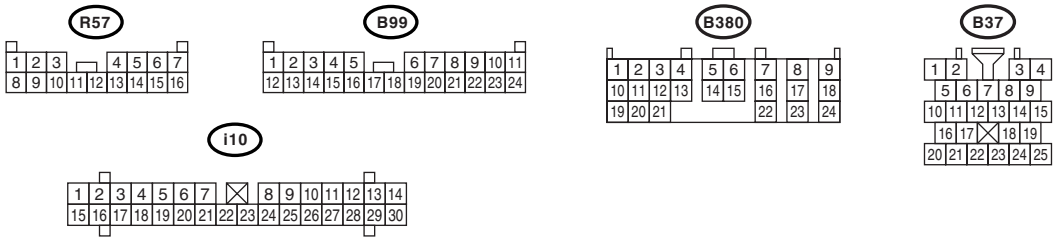
Input signal circuit of rear differential oil temperature switch is open or shorted.

TROUBLE SYMPTOM:

- Center differential stays free.
- Handling tends to oversteer.
- Rear differential oil temperature switch warning light illuminates.

WIRING DIAGRAM:





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	Step	Check	Yes	No
1	**CHECK REAR DIFFERENTIAL OIL TEMPERATURE SWITCH WARNING LIGHT CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the connector of driver's control center differential control module harness connector. 3) Turn the ignition switch to ON. (engine OFF) 4) Measure the voltage of rear differential oil temperature switch. ***Connector & terminal*** ***(B380) No. 14 (+) — Chassis ground (–):***	Is the voltage less than 0.4 V?	Go to step **7.**	Go to step **2.**
2	**CHECK THE HARNESS BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND COMBINATION METER.** 1) Turn the ignition switch to OFF. 2) Disconnect the harness connector from the combination meter. 3) Disconnect the connector from the rear differential oil temperature switch. 4) Measure the resistance between combination meter and driver's control center differential control module harness connector. ***Connector & terminal*** ***(B380) No. 14 — (i10) No. 4:***	Is the resistance less than 1 Ω?	Go to step **3.**	Repair the open circuit between driver's control center differential control module and combination meter.
3	**CHECK THE HARNESS BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND REAR DIFFERENTIAL OIL TEMPERATURE SWITCH.** Measure the resistance between driver's control center differential control module harness connector and rear differential oil temperature switch harness connector. ***Connector & terminal*** ***(B380) No. 14 — (R148) No. 1:***	Is the resistance less than 1 Ω?	Go to step **4.**	Repair the open circuit between driver's control center differential control module and rear differential oil temperature switch.
4	**CHECK REAR DIFFERENTIAL OIL TEMPERATURE SWITCH GROUND CIRCUIT.** 1) Disconnect the harness connector from bracket ground of rear differential. 2) Measure the resistance between the rear differential oil temperature switch ground harness connector and chassis ground. ***Connector & terminals*** ***(R159) No. 1 — Chassis ground:***	Is the resistance more than 1 MΩ?	Repair the open circuit of rear differential oil temperature switch ground circuit and poor contact of harness connector.	Go to step **5.**
5	**CHECK REAR DIFFERENTIAL OIL TEMPERATURE SWITCH.** Measure the resistance between rear differential oil temperature switch terminal and rear differential oil temperature switch body. ***Terminals*** ***(R148) No. 1 — Rear differential oil temperature switch body:***	Is the resistance less than 1 Ω?	Go to step **6.**	Replace the rear differential oil temperature switch.
6	**CHECK REAR DIFFERENTIAL OIL TEMPERATURE SWITCH WARNING LIGHT.** 1) Turn the ignition switch to ON. 2) Short between the combination meter harness connector and chassis ground. ***Terminals*** ***(R148) No. 4 (+) — Chassis ground (–):***	Does the rear differential oil temperature switch warning light turn OFF?	Go to step **7.**	Replace the combination meter.

Step		Check	Yes	No
7	CHECK POOR CONTACT.	Is there any poor contact in the circuit of rear differential oil temperature switch?	Repair the poor contact.	Replace the driver's control center differential control module.

C: DTC P1720 DCCD CAN SYSTEM CIRCUIT

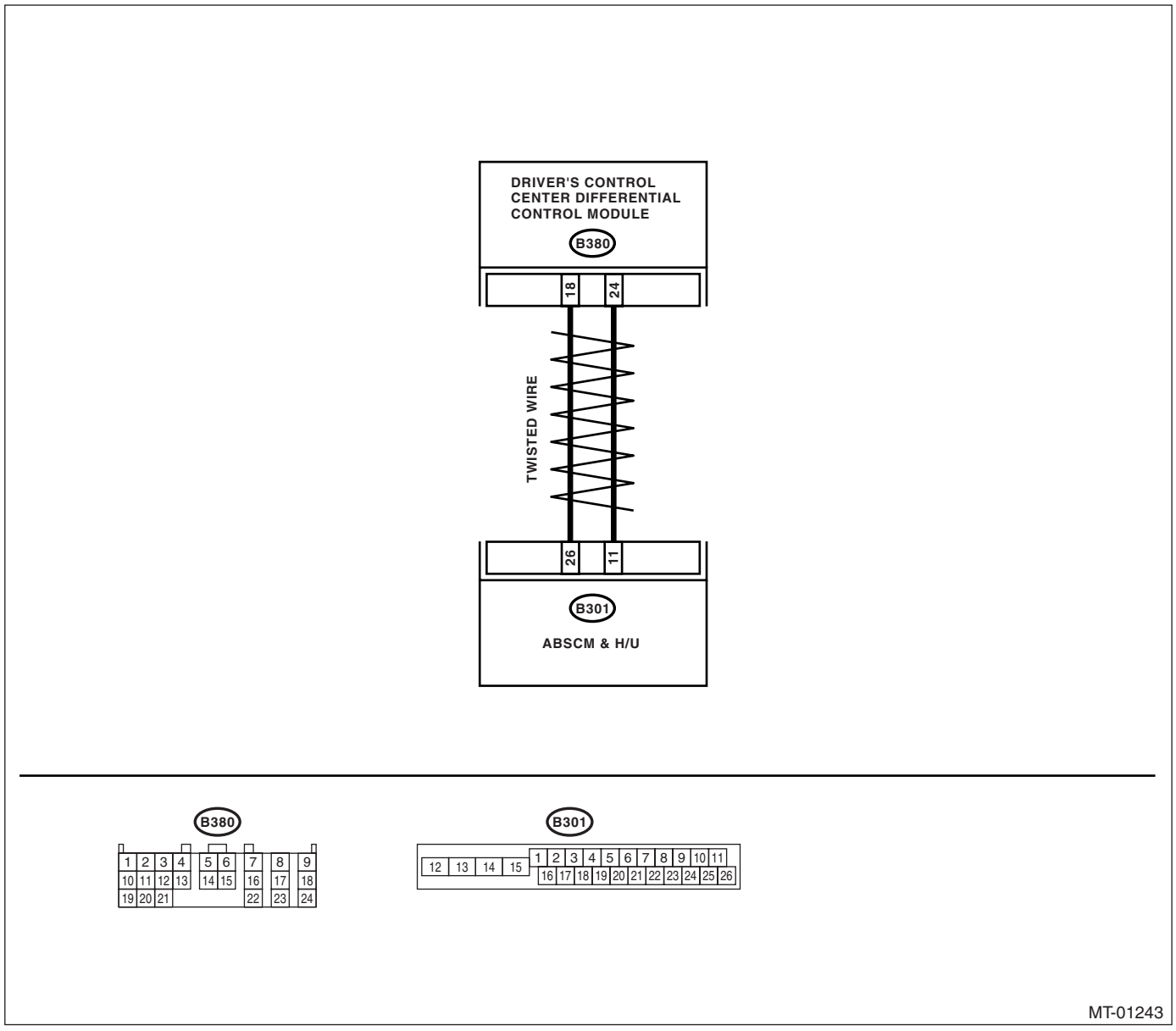
DIAGNOSIS:

Open or short circuit in CAN communication circuit

TROUBLE SYMPTOM:

- Tight corner braking phenomenon is occurred.
- ABS does not operate.
- ABS warning light illuminates.

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK HARNESS CONNECTOR BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND ABSCM.** 1) Turn the ignition switch to OFF. 2) Disconnect the connectors from driver's control center differential control module and ABSCM&H/U. 3) Measure the resistance of harness connector between driver's control center differential control module and ABSCM&H/U. ***Connector & terminal*** ***(B380) No. 18 — (B301) No. 26:*** ***(B380) No. 24 — (B301) No. 11:***	Is the resistance less than 1 Ω?	Go to step **2.**	Repair the open circuit in harness between driver's control center differential control module and ABSCM&H/U.
2	**CHECK HARNESS CONNECTOR BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND ABSCM.** Measure the resistance between driver's control center differential control module and chassis ground. ***Connector & terminal*** ***(B380) No. 18 — Chassis ground:*** ***(B380) No. 24 — Chassis ground:***	Is the resistance more than 1 MΩ?	Go to step **3.**	Repair the short circuit in harness between driver's control center differential control module and ABSCM&H/U.
3	**CHECK HARNESS CONNECTOR BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND ABSCM.** 1) Turn the ignition switch to ON. 2) Measure the voltage between driver's control center differential control module connector and chassis ground. ***Connector & terminal*** ***(B380) No. 18 (+) — Chassis ground (−):*** ***(B380) No. 24 (+) — Chassis ground (−):***	Is the voltage less than 1 V?	Go to step **4.**	Repair the short circuit in harness between driver's control center differential control module and ABSCM&H/U.
4	**CHECK POOR CONTACT.**	Is there poor contact in CAN communication circuit?	Repair the poor contact.	Go to step **5.**
5	**CHECK ABSCM.** 1) Turn the ignition switch to OFF. 2) Connect all the connectors. 3) Clear DTCs. 4) Check DTC of ABSCM.	Is the DTC of CAN communication circuit displayed on ABSCM?	Replace the driver's control center differential control module. <Ref. to 6MT-125, Driver's Control Center Differential Control Module.>	Check ABSCM.

D: DTC P1721 DCCD ENGINE RPM SIGNAL SYSTEM CIRCUIT

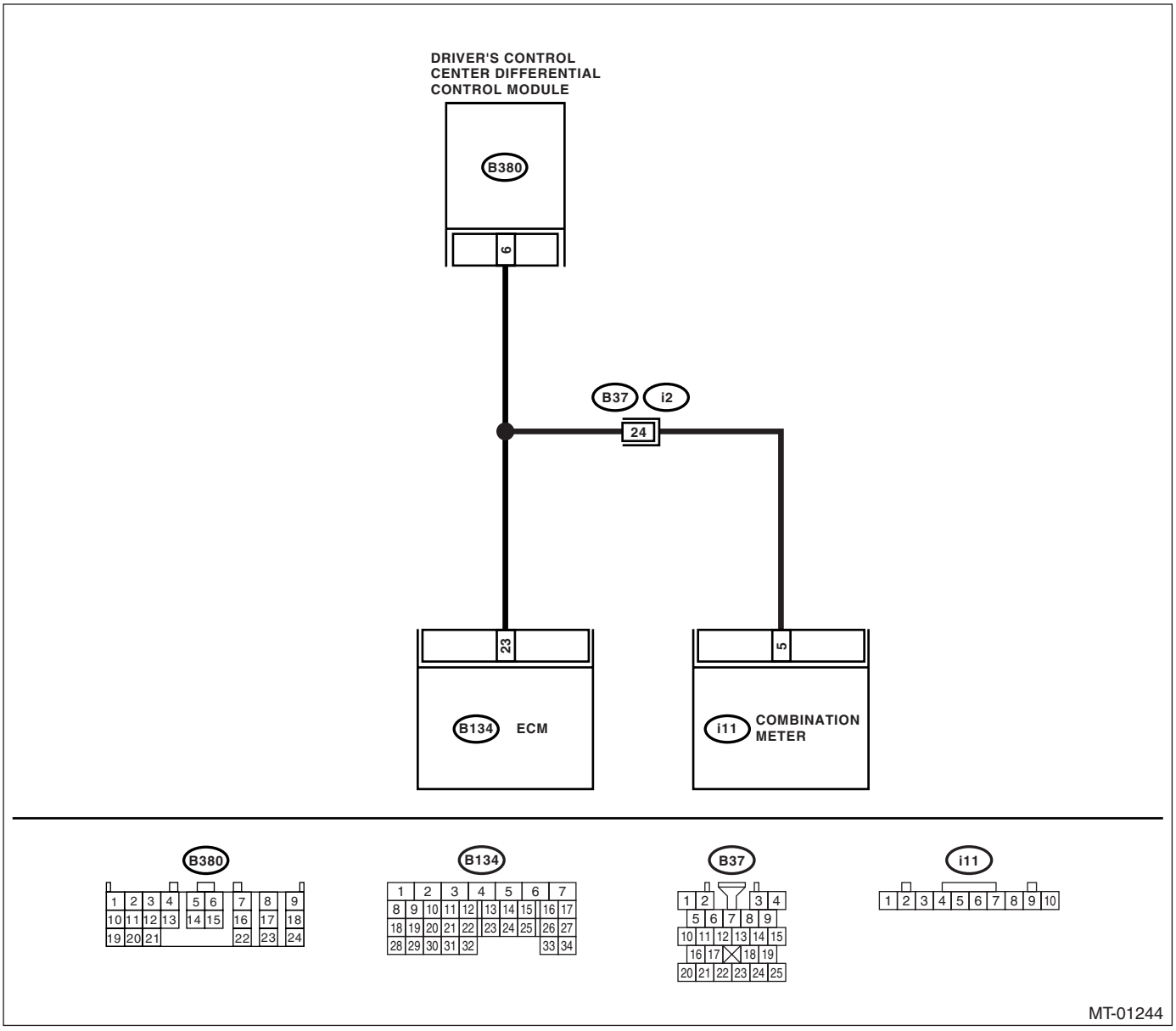
DIAGNOSIS:

DCCD Open or short in engine speed output signal circuit

TROUBLE SYMPTOM:

The dendency of oversteer occurred when high speed cornering.

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK HARNESS CONNECTOR BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND ECM.** 1) Turn the ignition switch to OFF. 2) Disconnect the connectors from driver's control center differential control module, Combination Meter and ECM. 3) Measure the resistance of harness connector between driver's control center differential control module and ECM. ***Connector & terminal*** ***(B380) No. 6 — (B134) No. 23:***	Is the resistance less than 1 Ω?	Go to step **2.**	Repair the open circuit in harness between driver's control center differential control module and ECM.
2	**CHECK HARNESS CONNECTOR BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND ECM.** Measure the resistance between driver's control center differential control module and chassis ground. ***Connector & terminal*** ***(B380) No. 6 — Chassis ground:***	Is the resistance more than 1 MΩ?	Go to step **3.**	Repair the short circuit in harness between driver's control center differential control module and ECM.
3	**CHECK HARNESS CONNECTOR BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND ECM.** 1) Turn the ignition switch to ON. 2) Measure the resistance between driver's control center differential control module and chassis ground. ***Connector & terminal*** ***(B380) No. 6 (+) — Chassis ground (−):***	Is the voltage less than 1 V?	Go to step **4.**	Repair the short circuit in harness between driver's control center differential control module and ECM.
4	**CHECK INPUT SIGNAL FOR DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE.** 1) Turn the ignition switch to OFF. 2) Connect all connectors. 3) Start the engine and let it idle.	Does the tachometer in the combination meter operate?	Go to step **5.**	Check ECM.
5	**CHECK INPUT SIGNAL FOR DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE.** 1) Turn the ignition switch to OFF. 2) Connect the Subaru Select Monitor to data link connector. 3) Start the engine and Subaru Select Monitor switch to ON. 4) Idle the engine. 5) Read the data of engine speed using Subaru Select Monitor.	Is the revolution value about the same as tachometer reading shown in the combination meter?	Go to step **7.**	Go to step **6.**
6	**CHECK POOR CONTACT.**	Is there poor contact in engine speed signal circuit?	Repair the poor contact.	Go to step **7.**

	Step	Check	Yes	No
7	**CHECK DTC.** Perform the inspection mode and read DTC.	Is the DTC 26 displayed?	Replace the driver's control center differential control module. <Ref. to 6MT-125, Driver's Control Center Differential Control Module.>	Even if the center differential indicator light (differential free position) blinks, the circuit is in normal condition. Temporary poor contact occurs. Repair the harness or connector between driver's control center differential control module and ECM.

E: DTC P1759 LATERAL ACCELERATION SENSOR CIRCUIT

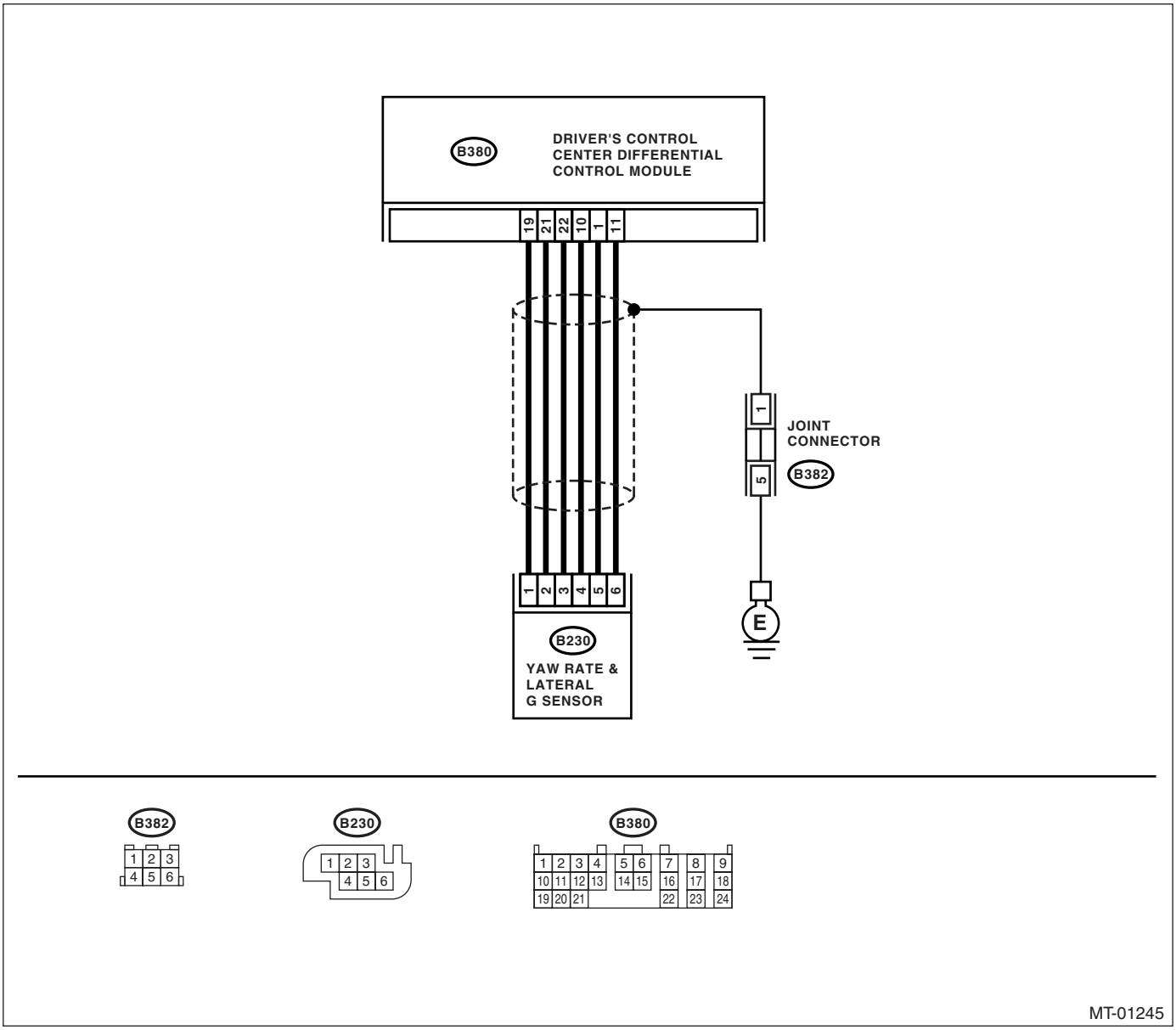
DIAGNOSIS:

Open or short in lateral G sensor circuit

TROUBLE SYMPTOM:

The dendency of understeer occurred when high speed cornering.

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK YAW RATE & LATERAL G SENSOR VOLTAGE.** 1) Turn the ignition switch to OFF. 2) Disconnect the connectors from yaw rate & lateral G sensor. 3) Turn the ignition switch to ON. (engine OFF) 4) Measure the voltage between yaw rate & lateral G sensor harness connector and Chassis ground (–). ***Connector & terminal*** ***(B230) No. 3 (+) — Chassis ground (–):***	Is the voltage more than 8 V?	Go to step **4.**	Go to step **2.**
2	**CHECK OUTPUT SIGNAL OF DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE.** Measure the voltage between driver's control center differential control module and chassis ground. ***Connector & terminal*** ***(B380) No. 22 (+) — Chassis ground (–):***	Is the voltage more than 8 V?	Repair the open circuit in harness between driver's control center differential control module and yaw rate & lateral G sensor.	Go to step **3.**
3	**CHECK BATTERY.**	Is the voltage more than 10 V?	Go to step **10.**	Charge or replace the battery.
4	**CHECK YAW RATE & LATERAL G SENSOR GROUND CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the connectors from driver's control center differential control module. 3) Measure the resistance between driver's control center differential control module and yaw rate & lateral G sensor. ***Connector & terminal*** ***(B380) No. 10 — (B230) No. 4:***	Is the resistance less than 1 Ω?	Go to step **5.**	Repair the open circuit in harness between driver's control center differential control module and yaw rate & lateral G sensor.
5	**CHECK YAW RATE & LATERAL G SENSOR GROUND CIRCUIT.** Measure the resistance between driver's control center differential control module connector and Chassis ground (–). ***Connector & terminal*** ***(B380) No. 10 — Chassis ground:***	Is the resistance more than 1 MΩ?	Go to step **6.**	Repair the short circuit in harness between driver's control center differential control module and yaw rate & lateral G sensor.
6	**CHECK HARNESS CONNECTOR BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND YAW RATE & LATERAL G SENSOR.** Measure the resistance between driver's control center differential control module and yaw rate & lateral G sensor. ***Connector & terminal*** ***(B380) No. 1 — (B230) No. 5:***	Is the resistance less than 1 Ω?	Go to step **7.**	Repair the open circuit in harness between driver's control center differential control module and yaw rate & lateral G sensor.
7	**CHECK HARNESS CONNECTOR BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND YAW RATE & LATERAL G SENSOR.** Measure the resistance between driver's control center differential control module harness connector and Chassis ground (–). ***Connector & terminal*** ***(B380) No. 1 — Chassis ground:***	Is the resistance more than 1 MΩ?	Go to step **8.**	Repair the short circuit in harness between driver's control center differential control module and yaw rate & lateral G sensor.

	Step	Check	Yes	No
8	**CHECK LATERAL G SENSOR.** 1) Turn the ignition switch to OFF. 2) Connect all the connectors. 3) Connect the Subaru Select Monitor to data link connector. 4) Turn the ignition switch to ON, and Subaru Select Monitor switch to ON. 5) Read the data of “Lateral G sensor signal” using Subaru Select Monitor. <Ref. to 6MT(diag)-15, READ CURRENT DATA, OPERATION, Subaru Select Monitor.>	Is the data 2.35 — 2.65 V?	Go to step **11.**	Go to step **9.**
9	**CHECK LATERAL G SENSOR.** Measure the voltage yaw rate & lateral G sensor connector. ***Connector & terminal*** ***(B230) No. 5 (+) — (B230) No. 6 (–):***	Is the voltage 2.35 — 2.65 V?	Go to step **10.**	Replace the yaw rate & lateral G sensor.
10	**CHECK POOR CONTACT.**	Is there poor contact in lateral G sensor circuit?	Repair the poor contact.	Go to step **11.**
11	**CHECK DTC.** 1) Perform the “clear memory”. <Ref. to 6MT(diag)-23, Clear Memory Mode.> 2) Start the engine. 3) Read the DTC using Subaru Select Monitor. <Ref. to 6MT(diag)-20, Read Diagnostic Trouble Code (DTC).>	Is the DTC P1759 displayed?	Replace the driver’s control center differential control module.	Go to step **12.**
12	**CHECK FOR OTHER DTC ON DISPLAY.**	Is there any DTC other than P1759 displayed?	Perform the diagnosis according to DTC.	Lateral G sensor circuit is in normal condition. Temporary poor contact occurs. Repair the harness or connector between driver’s control center differential control module and yaw rate & lateral G sensor.

F: DTC P1764 YAW RATE SENSOR SYSTEM CIRCUIT

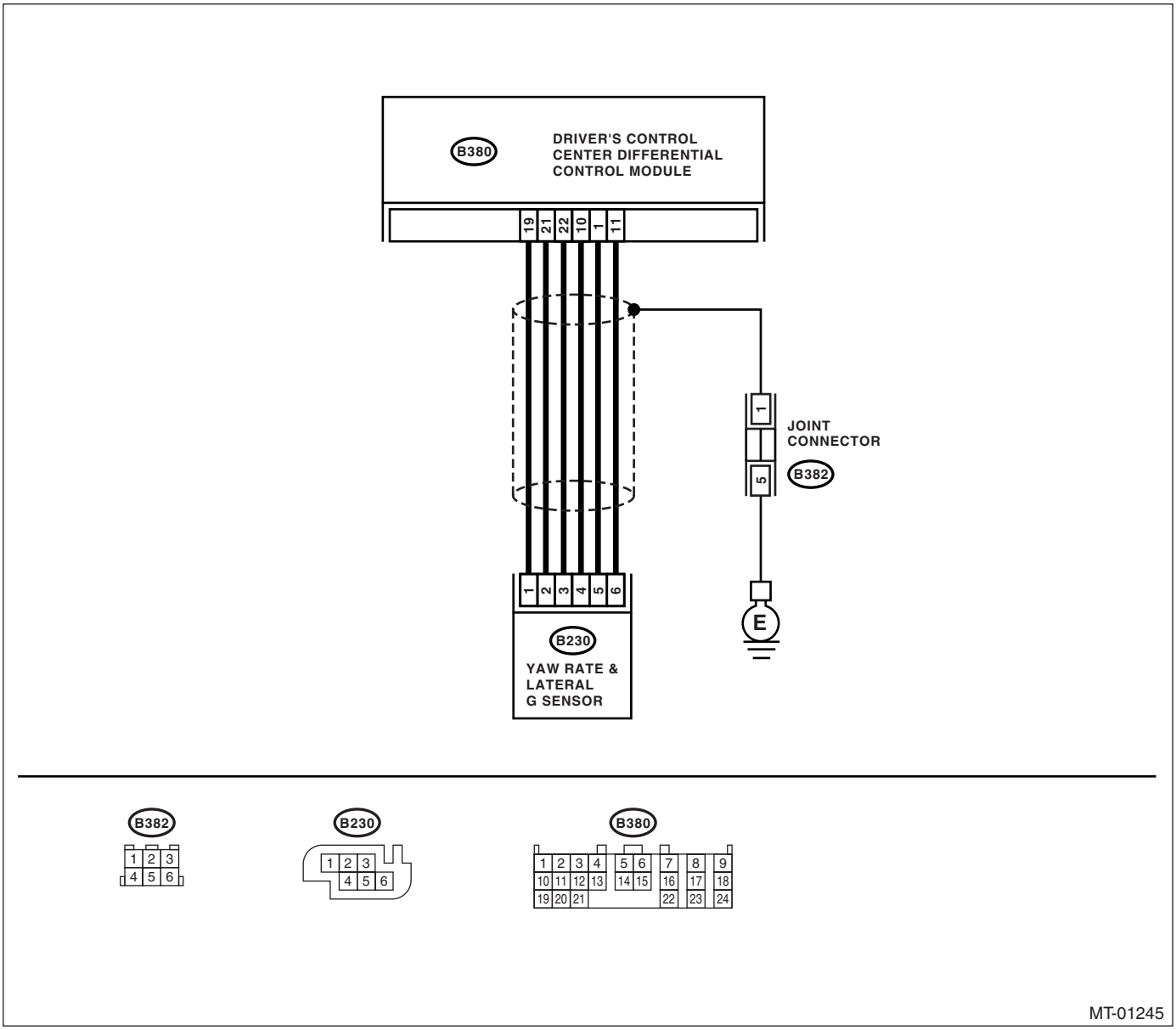
DIAGNOSIS:

Open or short in yaw rate sensor circuit

TROUBLE SYMPTOM:

The dendency of understeer occurred when high speed cornering.

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK YAW RATE & LATERAL G SENSOR POWER SUPPLY.** 1) Turn the ignition switch to OFF. 2) Disconnect the connectors from yaw rate & lateral G sensor. 3) Turn the ignition switch to ON. (engine OFF) 4) Measure the voltage between yaw rate & lateral G sensor and chassis ground. ***Connector & terminal*** ***(B230) No. 3 (+) — Chassis ground (–):***	Is the voltage more than 8 V?	Go to step **4.**	Go to step **2.**
2	**CHECK DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE POWER SUPPLY OUTPUT.** Measure the resistance between driver's control center differential control module and chassis ground. ***Connector & terminal*** ***(B380) No. 22 (+) — Chassis ground (–):***	Is the voltage more than 8 V?	Repair the open circuit in harness between driver's control center differential control module and yaw rate & lateral G sensor.	Go to step **3.**
3	**CHECK BATTERY.**	Is the voltage more than 10 V?	Go to step **11.**	Charge or replace the battery.
4	**CHECK YAW RATE & LATERAL G SENSOR GROUND CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the connectors from driver's control center differential control module. 3) Measure the resistance between driver's control center differential control module and yaw rate & lateral G sensor. ***Connector & terminal*** ***(B380) No. 11 — (B230) No. 6:***	Is the resistance less than 1 Ω?	Go to step **5.**	Repair the open circuit in harness between driver's control center differential control module and yaw rate & lateral G sensor.
5	**CHECK YAW RATE & LATERAL G SENSOR GROUND CIRCUIT.** Measure the resistance between driver's control center differential control module and chassis ground. ***Connector & terminal*** ***(B380) No. 11 — Chassis ground:***	Is the resistance more than 1 MΩ?	Go to step **6.**	Repair the short circuit in harness between driver's control center differential control module and yaw rate & lateral G sensor.
6	**CHECK DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND YAW RATE & LATERAL G SENSOR GROUND CIRCUIT.** Measure the resistance between driver's control center differential control module and yaw rate & lateral G sensor. ***Connector & terminal*** ***(B380) No. 10 — (B230) No. 4:***	Is the resistance less than 1 Ω?	Go to step **7.**	Repair the open circuit in harness between driver's control center differential control module and yaw rate & lateral G sensor.
7	**CHECK DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND YAW RATE & LATERAL G SENSOR GROUND CIRCUIT.** Measure the resistance between driver's control center differential control module and chassis ground. ***Connector & terminal*** ***(B380) No. 10 — Chassis ground:***	Is the resistance more than 1 MΩ?	Go to step **8.**	Repair the short circuit in harness between driver's control center differential control module and yaw rate & lateral G sensor.

	Step	Check	Yes	No
8	**CHECK INPUT SIGNAL FOR DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE.** 1) Connect all the connectors. 2) Connect the Subaru Select Monitor to vehicle. 3) Turn the ignition switch to ON. 4) Subaru Select Monitor switch to ON. 5) Read the data of "Yaw rate sensor signal" using Subaru Select Monitor. <Ref. to 6MT(diag)-14, OPERATION, Subaru Select Monitor.>	Is the voltage of 2.0 V ←→2.5 V ←→ 3.0 V displayed?	Go to step **12.**	Go to step **9.**
9	**CHECK OUTPUT SIGNAL OF YAW RATE & LATERAL G SENSOR.** 1) Turn the ignition switch to OFF. 2) Check the oscilloscope signal pattern between driver's control center differential control module connector terminals. ***Connector & terminal*** ***Positive test lead: (B380) No. 10*** ***Ground harness: (B380) No. 20*** 3) Turn the ignition switch to ON.	Is the oscilloscope pattern the same waveform as shown in the figure? <Ref. to 6MT(diag)-13, WAVEFORM, MEASUREMENT, Driver's Control Center Differential Control Module I/O Signal.>	Go to step **10.**	Replace the yaw rate & lateral G sensor.
10	**CHECK OUTPUT SIGNAL OF DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE.** 1) Turn the ignition switch to OFF. 2) Check the oscilloscope signal pattern between driver's control center differential control module connector terminals. ***Connector & terminal*** ***Positive lead: (B380) No. 19*** ***Ground harness: (B380) No. 20*** 3) Turn the ignition switch to ON.	Is the oscilloscope pattern the same waveform as shown in the figure? <Ref. to 6MT(diag)-13, WAVEFORM, MEASUREMENT, Driver's Control Center Differential Control Module I/O Signal.>	Go to step **11.**	Replace the driver's control center differential control module.
11	**CHECK POOR CONTACT.**	Is there poor contact in yaw rate sensor circuit?	Repair the poor contact.	Go to step **12.**
12	**CHECK DTC.** 1) Perform the "clear memory". <Ref. to 6MT(diag)-23, Clear Memory Mode.> 2) Start the engine. 3) Read the DTC using Subaru Select Monitor. <Ref. to 6MT(diag)-20, Read Diagnostic Trouble Code (DTC).>	Is the DTC P1764 displayed?	Replace the driver's control center differential control module.	Go to step **13.**
13	**DETECTING CHECK FOR OTHER DTC.**	Is there any DTC other than P1764 displayed?	Perform the diagnosis according to DTC.	Yaw rate sensor circuit is in normal condition. Temporary poor contact occurs. Repair the harness or connector between driver's control center differential control module and yaw rate & lateral G sensor.

G: DTC P1765 YAW RATE SIDE G SENSOR REFERENCE SYSTEM CIRCUIT

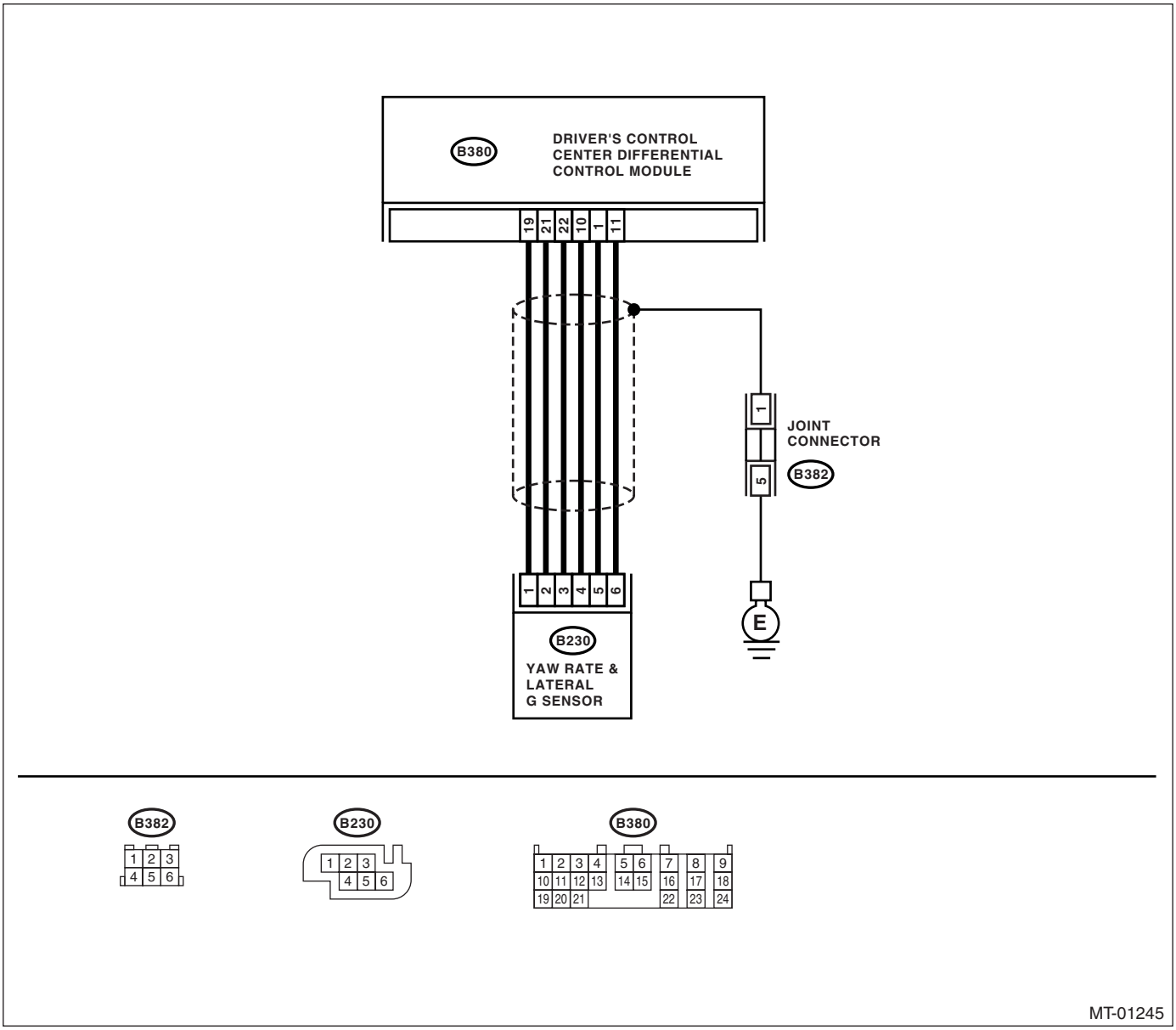
DIAGNOSIS:

Open or short in yaw rate & lateral G sensor reference circuit

TROUBLE SYMPTOM:

The dendency of understeer occurred when high speed cornering.

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK YAW RATE & LATERAL G SENSOR VOLTAGE.** 1) Turn the ignition switch to OFF. 2) Disconnect the connectors from yaw rate & lateral G sensor. 3) Turn the ignition switch to ON. (engine OFF) 4) Measure the voltage between yaw rate & lateral G sensor harness connector and chassis ground (–). ***Connector & terminal*** ***(B230) No. 3 (+) — Chassis ground (–):***	Is the voltage more than 8 V?	Go to step **4.**	Go to step **2.**
2	**CHECK DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE VOLTAGE.** Measure the voltage between driver's control center differential control module harness connector and chassis ground (–). ***Connector & terminal*** ***(B380) No. 22 (+) — Chassis ground (–):***	Is the voltage more than 8 V?	Repair the open circuit in harness between driver's control center differential control module and yaw rate & lateral G sensor.	Go to step **3.**
3	**CHECK BATTERY.**	Is the voltage more than 10 V?	Go to step **10.**	Charge or replace the battery.
4	**CHECK YAW RATE & LATERAL G SENSOR GROUND CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the connectors from driver's control center differential control module. 3) Measure the resistance between driver's control center differential control module harness connector and yaw rate & lateral G sensor. ***Connector & terminal*** ***(B380) No. 11 — (B230) No. 6:***	Is the resistance less than 1 Ω?	Go to step **5.**	Repair the open circuit in harness between driver's control center differential control module and yaw rate & lateral G sensor.
5	**CHECK YAW RATE & LATERAL G SENSOR GROUND CIRCUIT.** Measure the resistance between driver's control center differential control module harness connector and Chassis ground (–). ***Connector & terminal*** ***(B380) No. 11 — Chassis ground:***	Is the resistance more than 1 MΩ?	Go to step **6.**	Repair the short circuit in harness between driver's control center differential control module and yaw rate & lateral G sensor.
6	**CHECK HARNESS CONNECTOR BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND YAW RATE & LATERAL G SENSOR.** Measure the resistance between driver's control center differential control module harness connector and yaw rate & lateral G sensor. ***Connector & terminal*** ***(B380) No. 19 — (B230) No. 1:***	Is the resistance less than 1 Ω?	Go to step **7.**	Repair the open circuit in harness between driver's control center differential control module and yaw rate & lateral G sensor.
7	**CHECK HARNESS CONNECTOR BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND YAW RATE & LATERAL G SENSOR.** Measure the resistance between driver's control center differential control module harness connector and Chassis ground (–). ***Connector & terminal*** ***(B380) No. 19 — Chassis ground:***	Is the resistance more than 1 MΩ?	Go to step **8.**	Repair the short circuit in harness between driver's control center differential control module and yaw rate & lateral G sensor.

	Step	Check	Yes	No
8	**CHECK LATERAL G SENSOR.** 1) Turn the ignition switch to OFF. 2) Connect all the connectors. 3) Connect the Subaru Select Monitor to data link connector. 4) Turn the ignition switch to ON, and Subaru Select Monitor switch to ON. Read the data of “Yaw rate & lateral G sensor” using Subaru Select Monitor. <Ref. to 6MT(diag)-15, READ CURRENT DATA, OPERATION, Subaru Select Monitor.>	Is the data 2.1 — 2.9?	Go to step **11.**	Go to step **9.**
9	**CHECK YAW RATE & LATERAL G SENSOR.** Measure the driver’s control center differential control module harness connector voltage. ***Connector & terminal*** ***(B380) No. 19 (+) — No. 20 (–):***	Is the voltage 2.1 — 2.9 V?	Go to step **10.**	Replace the yaw rate & lateral G sensor.
10	**CHECK POOR CONTACT.**	Is there poor contact in yaw rate & lateral G sensor reference circuit?	Repair the poor contact.	Go to step **11.**
11	**CHECK DTC.** 1) Perform the “clear memory”. <Ref. to 6MT(diag)-23, Clear Memory Mode.> 2) Start the engine. 3) Read the DTC. <Ref. to 6MT(diag)-20, Read Diagnostic Trouble Code (DTC).>	Is the DTC P1765 displayed?	Replace the driver’s control center differential control module.	Go to step **12.**
12	**DETECTING CHECK FOR OTHER DTC.**	Is there any DTC other than P1765 displayed?	Perform the diagnosis according to DTC.	Lateral G sensor circuit is in normal condition. Temporary poor contact occurs. Repair the harness or connector between driver’s control center differential control module and yaw rate & lateral G sensor.

H: DTC P1875 CIRCUIT OF CENTER DIFF.

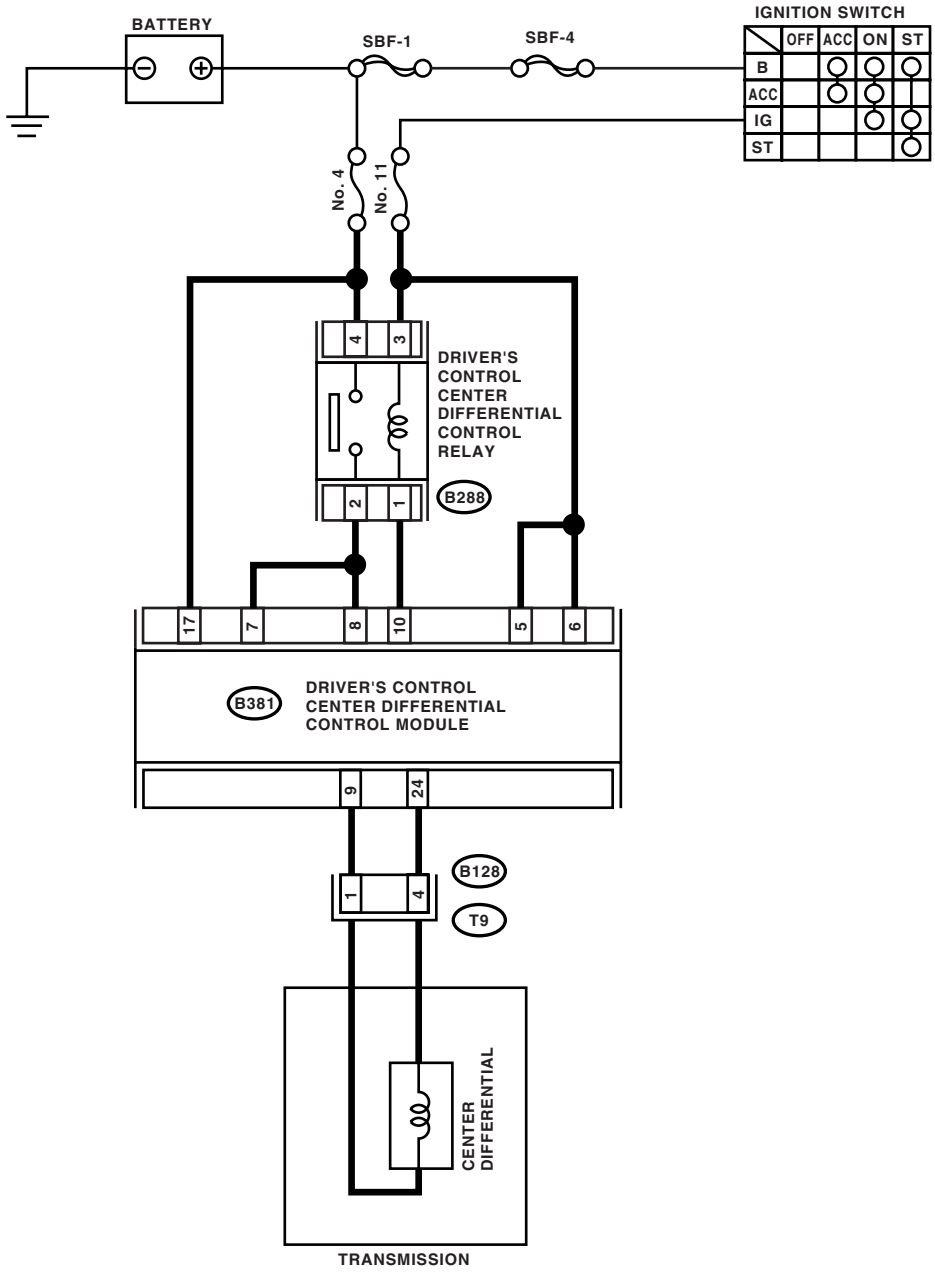
DIAGNOSIS:

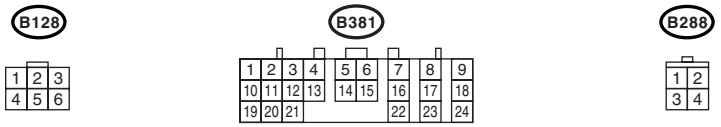
Output signal circuit of center differential is open or shorted.

TROUBLE SYMPTOM:

- Center differential does not operate.
- Lock ratio of center differential does not variation, or malfunction occurs.
- Tight corner braking condition occurs.
- Handling tends to oversteer.
- The dendency of understeer occurred when high speed cornering.

WIRING DIAGRAM:





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	Step	Check	Yes	No
1	**CHECK THE HARNESS BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND TRANSMISSION HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the harness connector of driver's control center differential control module. 3) Disconnect the transmission harness connector and bulk harness connector. 4) Measure the resistance of harness between driver's control center differential control module harness connector and transmission harness connector. ***Connector & terminal*** ***(B381) No. 9 — (B128) No. 1:*** ***(B381) No. 24 — (B128) No. 4:***	Is the resistance less than 1 Ω?	Go to step **2.**	Repair the open circuit of bulk harness between driver's control center differential control module and transmission harness.
2	**CHECK THE HARNESS BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND TRANSMISSION HARNESS.** Measure the resistance between driver's control center differential control module harness connector and chassis ground. ***Connector & terminal*** ***(B381) No. 9 — Chassis ground:*** ***(B381) No. 24 — Chassis ground:***	Is the resistance more than 1 MΩ?	Go to step **3.**	Repair the short circuit of bulk harness between driver's control center differential control module and transmission harness.
3	**CHECK THE CENTER DIFFERENTIAL.** Measure the resistance between transmission harness connector terminals. ***Connector & terminals*** ***(T9) No. 1 — No. 4:***	Is the resistance 1.0 — 2.0 Ω?	Go to step **4.**	Replace the center differential.
4	**CHECK THE OUTPUT SIGNAL OF DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE.** 1) Connect all the harness connectors. 2) Turn the ignition switch to ON. (engine OFF) 3) Release the parking brake. 4) Set the driver's control center differential to manual mode by pressing manual mode switch. 5) Set the center differential control dial to differential lock. 6) Measure the voltage between driver's control center differential control module and harness connector. ***Connector & terminal*** ***(B381) No. 9 (+) — (B381) No. 24 (–):***	Is the voltage 6.0 — 7.0 V?	Go to step **5.**	Go to step **6.**

	Step	Check	Yes	No
5	**CHECK THE OUTPUT SIGNAL OF DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE.** 1) Turn the center differential control dial from differential lock to differential free position. 2) Measure the voltage between driver's control center differential control module and harness connector. ***Connector & terminal*** ***(B381) No. 9 (+) — (B381) No. 24 (–):***	Does the voltage change smoothly?	Circuit is already returned to normal condition this time though the indicator blink illuminates. A temporary poor connector or harness may be the case. Repair the poor contact in connector or harness of driver's control center differential control module and transmission harness. Check the poor contact in power supply circuit, too.	Go to step **6.**
6	**CHECK FUSE (No. 4).** Remove the fuse (No. 4).	Is the fuse (No. 4) is blown out?	Replace fuse (No.4). If the replaced fuse (No.4) is blown out easily, repair short circuit in harness between fuse (No.4) and driver's control center differential control module.	Go to step **7.**
7	**CHECK POWER SUPPLY CIRCUIT OF DRIVER'S CONTROL CENTER DIFFERENTIAL RELAY.** 1) Fuse installation. 2) Disconnect the harness connector of driver's control center differential relay. 3) Measure the voltage between driver's control center differential relay harness connector and chassis ground. ***Connector & terminal*** ***(B288) No. 4 (+) — Chassis ground (–):***	Is the voltage more than 10 V?	Go to step **8.**	Repair the open or short circuit between fuse (No. 4) and driver's control center differential relay, battery.
8	**CHECK IGNITION POWER SUPPLY CIRCUIT OF DRIVER'S CONTROL CENTER DIFFERENTIAL RELAY.** Measure the voltage between driver's control center differential relay and chassis ground. ***Connector & terminal*** ***(B288) No. 3 (+) — Chassis ground (–):***	Is the voltage more than 10 V?	Go to step **9.**	Repair the open circuit between fuse (No. 11) and driver's control center differential control module.

	Step	Check	Yes	No
9	**CHECK HARNESS BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND DRIVER'S CONTROL RELAY.** 1) Turn the ignition switch to OFF. 2) Disconnect the driver's control center differential control unit connector. 3) Measure the resistance of harness between driver's control center differential control module harness connector and driver's control relay harness connector. ***Connector & terminal*** ***(B381) No. 18 — (B288) No. 2:*** ***(B381) No. 19 — (B288) No. 2:*** ***(B381) No. 21 — (B288) No. 1:***	Is the resistance less than 1 Ω?	Go to step **10.**	Repair the open circuit between driver's control center differential control module harness connector and driver's control relay harness connector.
10	**CHECK HARNESS BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND DRIVER'S CONTROL RELAY.** Measure the resistance of harness between driver's control center differential control module harness connector and chassis ground. ***Connector & terminal*** ***(B381) No. 7 — Chassis ground:*** ***(B381) No. 8 — Chassis ground:*** ***(B381) No. 10 — Chassis ground:***	Is the resistance more than 1 MΩ?	Go to step **11.**	Repair the short circuit between driver's control center differential control module harness connector and driver's control relay, battery harness connector.
11	**CHECK DRIVER'S CONTROL RELAY.** Measure the resistance between driver's control relay terminals. ***Terminals*** ***(B288) No. 4 — No. 2:***	Is the resistance more than 1 MΩ?	Go to step **12.**	Replace the driver's control relay.
12	**CHECK DRIVER'S CONTROL RELAY.** Connect the terminal No. 3 to battery positive side, and terminal No.1 to battery negative side, and then measure the resistance between driver's control relay terminals. ***Terminals*** ***(B288) No. 4 — No. 2:***	Is the resistance less than 1 Ω?	Go to step **13.**	Replace the driver's control relay.
13	**CHECK IGNITION POWER SUPPLY CIRCUIT FOR DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL UNIT.** 1) Connect all the connectors. 2) Turn the ignition switch to ON. 3) Measure the voltage between driver's control center differential control unit and chassis ground. ***Connector & terminal*** ***(B381) No. 10 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **14.**	Go to step **16.**
14	**CHECK IGNITION POWER SUPPLY CIRCUIT FOR DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL UNIT.** Measure the voltage between driver's control center differential control unit and chassis ground. ***Connector & terminal*** ***(B381) No. 7 (+) — Chassis ground (–):*** ***(B381) No. 8 (+) — Chassis ground (–):***	Is the voltage more than 8 V?	Go to step **15.**	Go to step **16.**

	Step	Check	Yes	No
15	**CHECK CENTER DIFFERENTIAL.** 1) Turn the ignition switch to OFF. 2) Connect the Subaru Select Monitor to the data link connector. 3) Turn the ignition switch and Subaru Select Monitor switch to ON. 4) Set the driver's control center differential to manual mode by pressing manual mode switch. 5) Release the parking brake. 6) Set the center differential control dial to lock position. 7) Read the data of "center differential indicator current" and "center differential actual current" using Subaru Select Monitor.	Are both of the "center differential indicator current" and "center differential actual current" approx. 4.3 — 4.5A?	Go to step **16.**	Go to step **17.**
16	**CHECK CENTER DIFFERENTIAL.** 1) Operate the center differential control dial so that the "2A" is displayed for "center differential indicator current" on the Subaru Select Monitor. 2) Read the data of "center differential actual current" using Subaru Select Monitor.	Is the "center differential actual current" almost same as "center differential indicator current"?	The center differential circuit is in normal condition. A temporary poor contact of connector or harness may be the cause. Repair harness or connector in driver's control center differential circuit.	Go to step **17.**
17	**CHECK POOR CONTACT IN HARNESS CONNECTOR.**	Is there poor contact in harness connector?	Repair the poor contact.	Go to step **18.**
18	**CHECK DTC.** 1) Erase the memory. <Ref. to 6MT(diag)-20, Read Diagnostic Trouble Code (DTC).> 2) Read the DTC using Subaru Select Monitor. <Ref. to 6MT(diag)-20, Read Diagnostic Trouble Code (DTC).>	Is P1875 displayed?	Replace the driver's control center differential control unit.	Go to step **19.**
19	**CHECK OTHER DTC DETECTION.**	Is any DTC except P1875 displayed?	Diagnose according to DTC.	The center differential circuit is in normal condition. A temporary poor contact of connector or harness may be the cause. Repair harness or connector in driver's control center differential circuit.

I: DTC 2125 ACCELERATOR POSITION SENSOR E

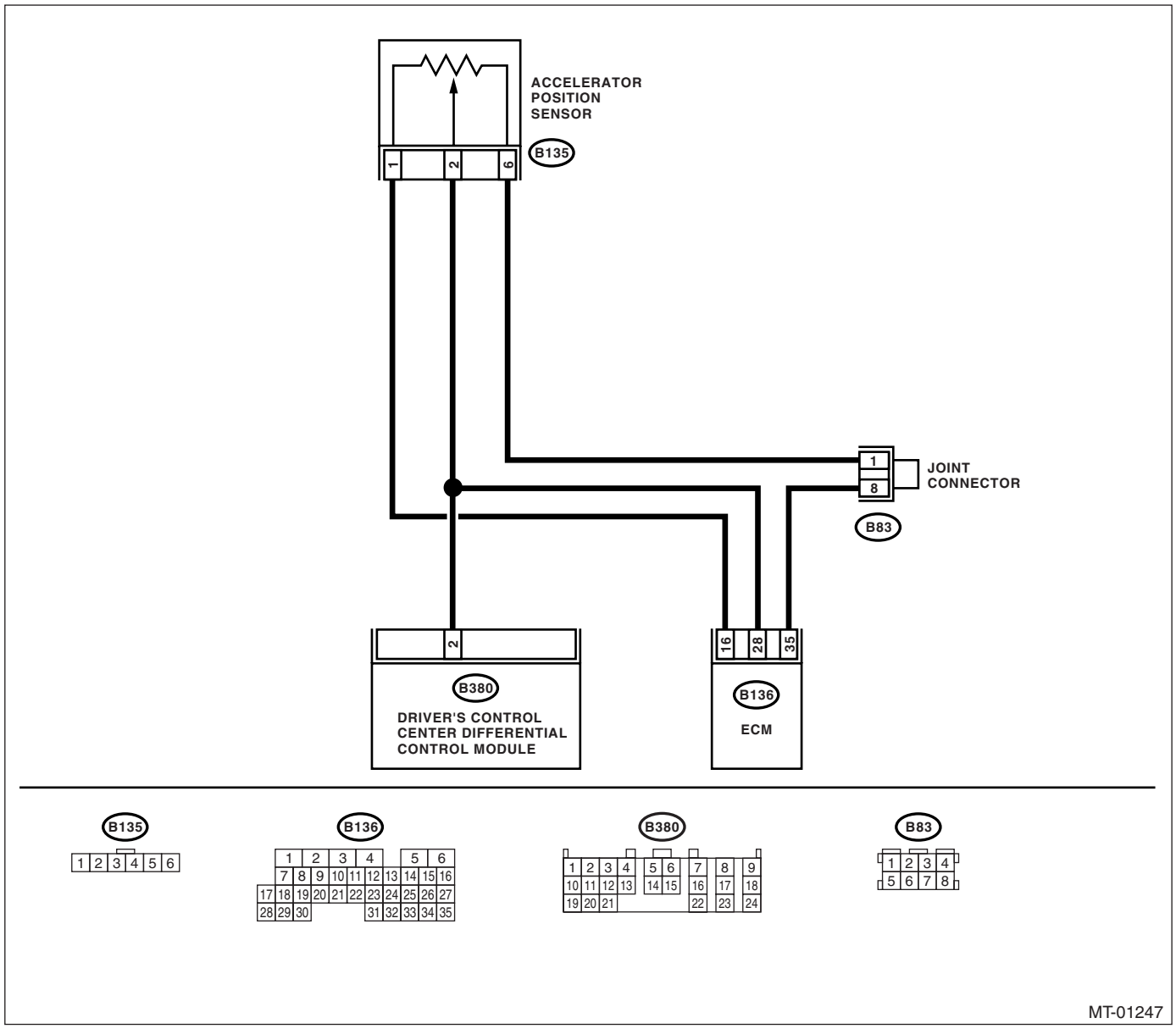
DIAGNOSIS:

The accelerator position sensor input signal circuit is open or shorted.

TROUBLE SYMPTOM:

- Tight corner braking condition occurs.
- Handling tends to oversteer.

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK DTC.**	Is the DTC displayed on engine self diagnosis test mode?	Check with referring to DTC section of engine. <Ref. to EN(H4DOTC)(diag)-73, LIST, List of Diagnostic Trouble Code (DTC).>	Go to step **2.**
2	**CHECK THE HARNESS BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND ACCELERATOR POSITION SENSOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the harness connector of driver's control center differential control module, ECM and accelerator position sensor. 3) Measure the resistance of harness between driver's control center differential control module harness connector and accelerator position sensor. ***Connector & terminal*** ***(B380) No. 2 — (B135) No. 2:***	Is the resistance less than 1 Ω?	Go to step **3.**	Repair the open circuit of harness between driver's control center differential control module and accelerator position sensor.
3	**CHECK THE HARNESS BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND ECM.** Measure the resistance of harness between driver's control center differential control module harness connector and ECM harness connector. ***Connector & terminal*** ***(B380) No. 2 — (B136) No. 28:***	Is the resistance less than 1 Ω?	Go to step **4.**	Repair the open circuit of harness between driver's control center differential control module and ECM.
4	**CHECK THE HARNESS BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND ACCELERATOR POSITION SENSOR.** Measure the resistance of harness between driver's control center differential control module harness connector and chassis ground. ***Connector & terminal*** ***(B380) No. 2 — Chassis ground:***	Is the resistance more than 1 MΩ?	Go to step **5.**	Repair the short circuit of harness between driver's control center differential control module and accelerator position sensor and ECM.
5	**CHECK INPUT SIGNAL OF DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE.** 1) Connect all connectors. 2) Connect the Subaru Select Monitor to data link connector. 3) Turn the ignition switch to ON (engine OFF), and Subaru Select Monitor switch to ON. 4) Read the data of sub accelerator sensor signal using Subaru Select Monitor. Check the measured value is within specification without depressing the accelerator pedal.	Is the voltage 0.3 — 1.8 V?	Go to step **6.**	Go to step **7.**

	Step	Check	Yes	No
6	**CHECK INPUT SIGNAL OF DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE.** 1) Fully depress the accelerator pedal. 2) Read the data of sub accelerator sensor signal using Subaru Select Monitor. Check the measured value is within specification the accelerator pedal depressed.	Is the data 2.8 — 4.7 V?	Go to step **10.**	Go to step **7.**
7	**CHECK ACCELERATOR PEDAL POSITION SENSOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the connector of accelerator pedal position sensor. 3) Measure the resistance of accelerator pedal position sensor. ***Terminal*** ***No. 1 — No. 6:***	Is the resistance 0.75 k — 3.15 kΩ?	Go to step **8.**	Replace the accelerator pedal position sensor.
8	**CHECK ACCELERATOR PEDAL POSITION SENSOR.** Measure the resistance of accelerator pedal position sensor. ***Terminal*** ***No. 2 — No. 6:***	Is the resistance 0.15 k — 0.63 kΩ?	Go to step **9.**	Replace the accelerator pedal position sensor.
9	**CHECK THE POOR CONTACT.**	Is there any poor contact in accelerator position sensor circuit?	Repair the poor contact.	Go to step **10.**
10	**CHECK DTC.** 1) Perform the "clear memory". <Ref. to 6MT(diag)-23, Clear Memory Mode.> 2) Read the DTC using Subaru Select Monitor. <Ref. to 6MT(diag)-20, Read Diagnostic Trouble Code (DTC).>	Is the DTC P2125 displayed?	Replace the driver's control center differential control module.	Go to step **11.**
11	**DETECTING CHECK FOR OTHER DTC**	Is there any DTC other than P2125 displayed?	Perform the diagnosis according to DTC.	Accelerator position sensor circuit is in normal condition. Temporary poor contact occurs. Repair the harness or connector between driver's control center differential control module, accelerator pedal position sensor and ECM.

J: DTC 24 CHECK CENTER DIFFERENTIAL CONTROL DIAL.

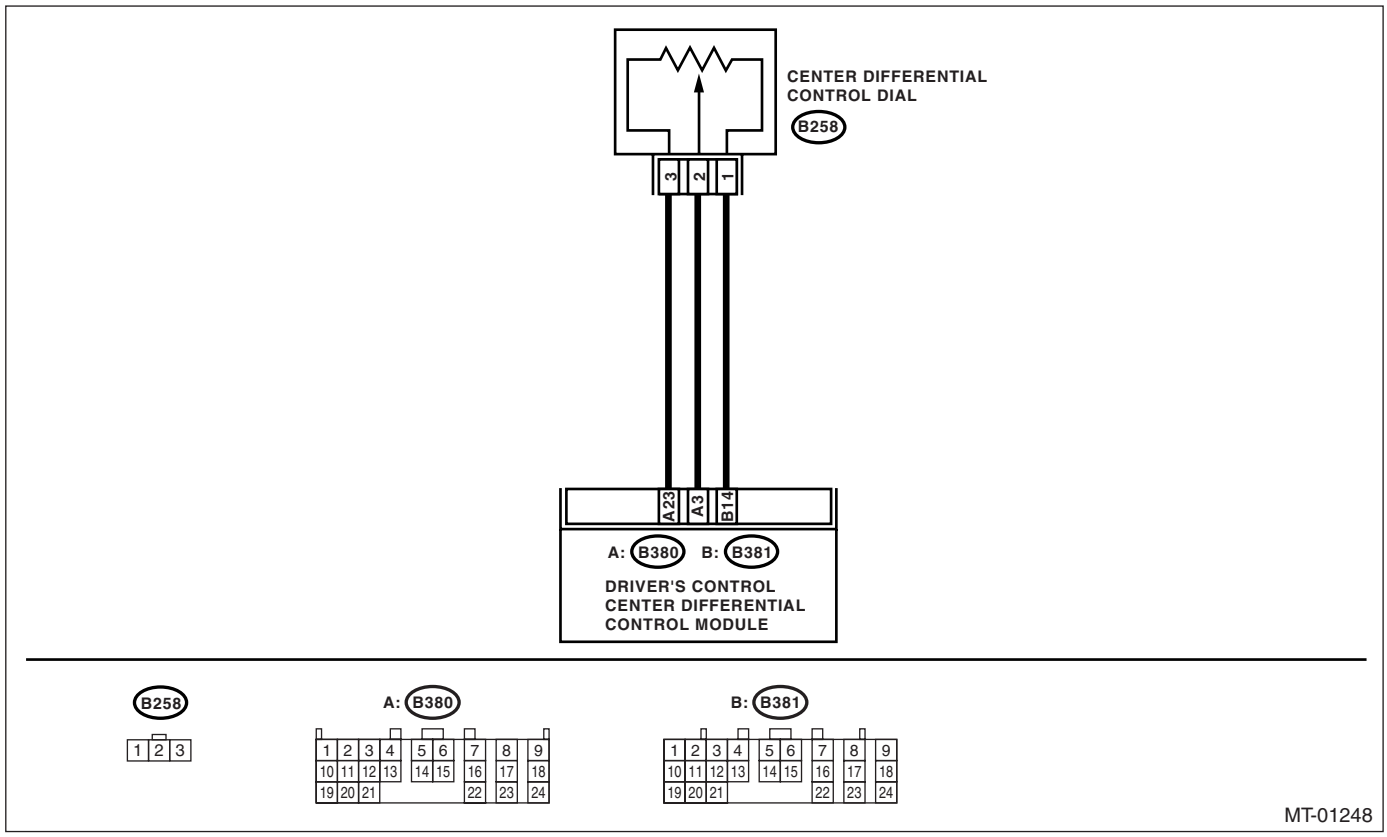
DIAGNOSIS:

Input signal circuit of center differential control dial is open or shorted.

TROUBLE SYMPTOM:

- Indicator light does not operate though setting the center differential control dial.
- Torque characteristics do not change.

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK THE HARNESS BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND CENTER DIFFERENTIAL CONTROL DIAL.** 1) Turn the ignition switch to OFF. 2) Disconnect the connector of driver's control center differential control module and center differential control dial. 3) Measure the resistance of harness between driver's control center differential control module and center differential control dial harness connector. ***Connector & terminal*** ***(B380) No. 3 — (B258) No. 2:*** ***(B380) No. 23 — (B258) No. 3:*** ***(B381) No. 14 — (B258) No. 1:***	Is the resistance less than 1 Ω?	Go to step **2.**	Repair the open circuit between driver's control center differential control module and center differential control dial.

	Step	Check	Yes	No
2	**CHECK THE HARNESS BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND CENTER DIFFERENTIAL CONTROL DIAL.** Measure the resistance between driver's control center differential control module harness connector and chassis ground. ***Connector & terminal*** ***(B380) No. 3 — Chassis ground:*** ***(B380) No. 23 — Chassis ground:*** ***(B381) No. 14 — Chassis ground:***	Is the resistance more than 1 MΩ?	Go to step **3.**	Repair the short circuit between driver's control center differential control module and center differential control dial.
3	**CHECK THE CENTER DIFFERENTIAL CONTROL DIAL.** 1) Remove the center differential control dial. 2) Measure the resistance between center differential control dial connectors. ***Terminals*** ***(B258) No. 1 — No. 3:***	Is the resistance 7.5 — 12.5 kΩ?	Go to step **4.**	Replace the driver's control dial.
4	**CHECK THE CENTER DIFFERENTIAL CONTROL DIAL.** Measure the resistance between center differential control dial connectors. ***Terminals*** ***(B258) No. 1 — No. 2:***	Dose the resistance change smoothly when setting the dial from differential lock to differential free?	Go to step **5.**	Replace the center differential control dial.
5	**CHECK THE OUTPUT POWER SUPPLY OF DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE.** 1) Connect all the harness connectors. 2) Turn the ignition switch to ON. (engine OFF) 3) Measure the voltage driver's control center differential control module harness connector. ***Connector & terminal*** ***(B380) No. 23 — (B381) No. 14***	Is the voltage approx. 5 V?	Go to step **6.**	Replace the driver's control center differential control module.
6	**CHECK POOR CONTACT.**	Is there poor contact in center differential control dial circuit?	Repair the poor contact.	Center differential control dial circuit is in normal condition. Temporary poor contact occurs. Repair the harness or connector between driver's control center differential control module and driver's control center differential.

K: DTC 31 MANUAL MODE SWITCH

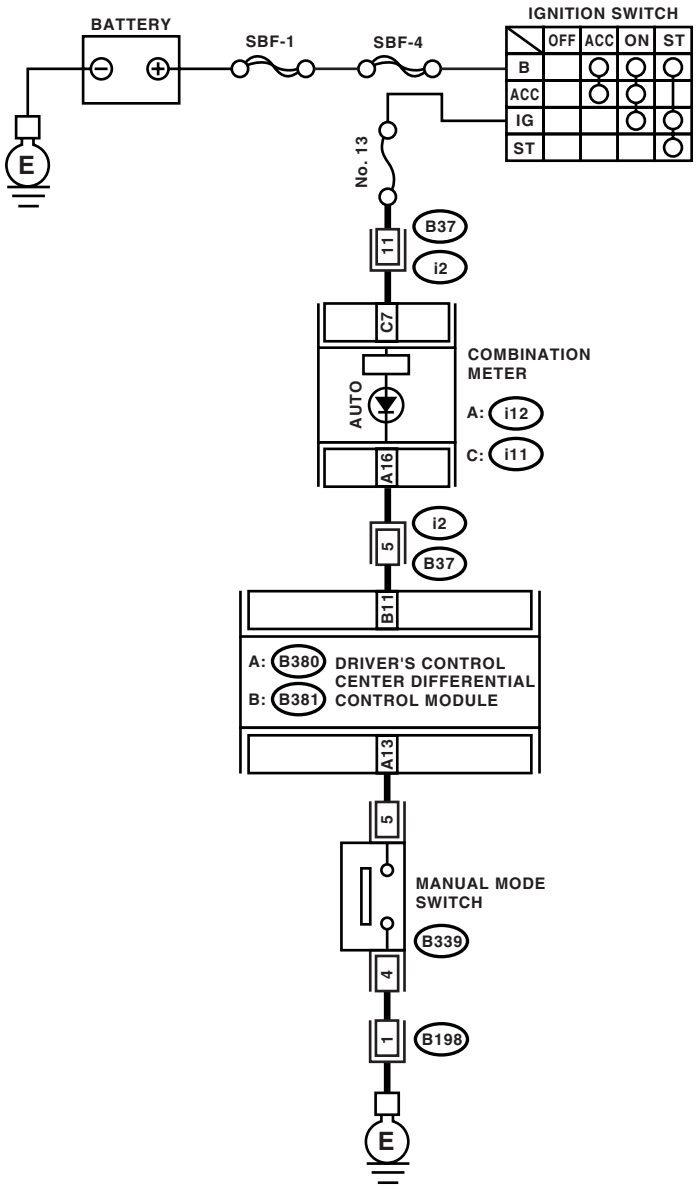
DIAGNOSIS:

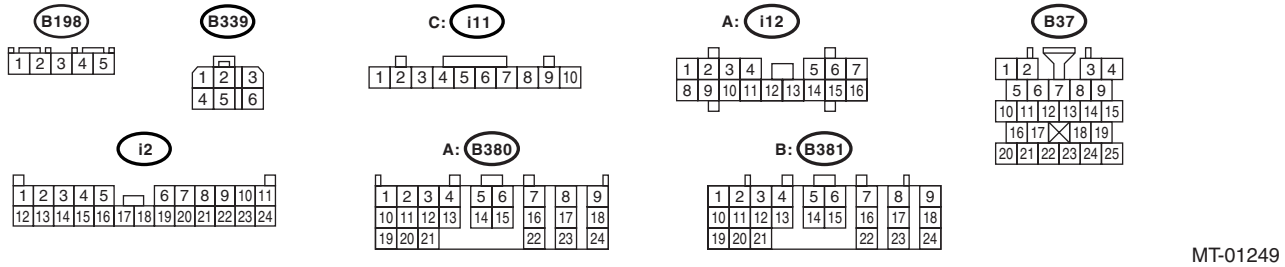
Input signal circuit of manual mode switch circuit is open or shorted.

TROUBLE SYMPTOM:

- Driver's control center differential can not be manual mode. Or can not be auto mode.
- AUTO indicator does not illuminate, or does not go off.

WIRING DIAGRAM:





MT-01249

	Step	Check	Yes	No
1	**CHECK OPERATION OF MANUAL MODE SWITCH.** Set the manual mode switch to auto mode.	Does the AUTO indicator light in combination meter illuminate?	Go to step **8.**	Go to step **2.**
2	**CHECK AUTO INDICATOR LIGHT.** 1) Turn the ignition switch to OFF. 2) Disconnect the harness connector of driver's control center differential control module. 3) Turn the ignition switch to ON. (engine OFF) 4) Short between the driver's control center differential control module and chassis ground. ***Connector & terminal*** ***(B381) No. 11 — Chassis ground:***	Does the AUTO indicator light in combination meter illuminate?	Replace the driver's control center differential control module.	Go to step **3.**
3	**CHECK POWER SUPPLY OF COMBINATION METER.** 1) Turn the ignition switch to OFF. 2) Disconnect the harness connector of combination meter. 3) Turn the ignition switch to ON. (engine OFF) 4) Measure the voltage between combination meter harness connector and chassis ground. ***Connector & terminal*** ***(i11) No. 7 (+) — Chassis ground (−):***	Is the voltage more than 10 V?	Go to step **4.**	Check and repair the open and short of harness between battery and combination meter, and poor contact of harness connector.
4	**CHECK THE HARNESS BETWEEN COMBINATION METER AND DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE.** 1) Turn the ignition switch to OFF. 2) Disconnect the harness connector of combination meter. 3) Measure the resistance between combination meter harness connector and driver's control center differential control module harness connector. ***Connector & terminal*** ***(i12) No. 16 — (B381) No. 11:***	Is the resistance less than 1 Ω?	Go to step **5.**	Repair the open circuit of harness between combination meter harness connector and driver's control center differential control module harness connector, and poor contact of harness connector.
5	**CHECK THE HARNESS BETWEEN COMBINATION METER AND DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE.** Measure the resistance between driver's control center differential control module harness connector and chassis ground. ***Connector & terminal*** ***(B381) No. 11 — Chassis ground:***	Is the resistance more than 1 MΩ?	Go to step **6.**	Repair the short circuit of harness between combination meter harness connector and driver's control center differential control module harness connector.
6	**CHECK HARNESS CONNECTOR POOR CONTACT.**	Is there any poor contact in the circuit between combination meter and driver's control module?	Repair the poor contact.	Go to step **7.**
7	**CHECK AUTO INDICATOR LIGHT.** 1) Connect the harness connector of combination meter. 2) Short between the driver's control center differential control module harness connector and chassis ground. ***Connector & terminal*** ***(B381) No. 11 — Chassis ground:***	Does the AUTO indicator light light up?	Replace the driver's control center differential control module.	Replace the combination meter.

	Step	Check	Yes	No
8	**CHECK GROUND CIRCUIT OF MANUAL MODE SWITCH.** 1) Turn the ignition switch to OFF. 2) Disconnect the manual mode switch connector. 3) Measure the resistance between manual mode switch harness connector and chassis ground. ***Connector & terminal*** ***(B339) No. 4 — Chassis ground:***	Is the resistance more than 1 MΩ?	Repair the open circuit of harness between manual mode switch harness connector and chassis ground.	Go to step **9.**
9	**CHECK THE HARNESS BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND MANUAL MODE SWITCH.** 1) Disconnect the driver's control center differential control module harness connector. 2) Measure the resistance of harness between driver's control center differential control module and manual mode switch. ***Connector & terminal*** ***(B380) No. 13 — (B339) No. 5:***	Is the resistance less than 1 Ω?	Go to step **10.**	Repair the open circuit of harness between driver's control center differential control module and manual mode switch.
10	**CHECK THE HARNESS BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND MANUAL MODE SWITCH.** Measure the resistance of harness between driver's control center differential control module and chassis ground. ***Connector & terminal*** ***(B380) No. 13 — Chassis ground:***	Is the resistance more than 1 MΩ?	Go to step **11.**	Repair the short circuit of harness between driver's control center differential control module and manual mode switch.
11	**CHECK THE MANUAL MODE SWITCH.** 1) Remove the manual mode switch. 2) Measure the resistance of between manual mode switch connectors. ***Terminals*** ***(B339) No. 4 — No. 5:***	Is the resistance more than 1 MΩ?	Go to step **12.**	Replace the manual mode switch.
12	**CHECK THE MANUAL MODE SWITCH.** 1) Keep depressing the manual mode switch. 2) Measure the resistance of between manual mode switch connectors. ***Terminals*** ***(B339) No. 4 — No. 5:***	Is the resistance less than 1 Ω?	Go to step **13.**	Replace the manual mode switch.
13	**CHECK THE INPUT SIGNAL OF DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE.** 1) Install the manual mode switch. 2) Connect the harness connector of driver's control center differential control module. 3) Connect the Subaru Select Monitor to data link connector. 4) Turn the ignition switch to ON. (engine OFF) 5) Subaru Select Monitor switch to ON. 6) Read the data of AUTO/MANUAL mode switch signal using Subaru Select Monitor.	Is the data OFF?	Go to step **14.**	Replace the driver's control center differential control module.

	Step	Check	Yes	No
14	**CHECK THE INPUT SIGNAL OF DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE.** 1) Keep depressing the manual mode switch. 2) Read the data of AUTO/MANUAL mode switch signal using Subaru Select Monitor.	Is the data ON?	Go to step **15.**	Replace the driver's control center differential control module.
15	**CHECK POOR CONTACT IN HARNESS CONNECTOR.**	Is there any poor contact in manual mode switch circuit?	Repair the poor contact.	Go to step **16.**
16	**CHECK DTC.** Read the DTC from combination meter. <Ref. to 6MT(diag)-20, Read Diagnostic Trouble Code (DTC).>	Is the DTC 31 displayed?	Replace the driver's control center differential control module.	Go to step **17.**
17	**DETECTING CHECK FOR OTHER DTC.**	Is there any DTC other than 31 displayed?	Perform the diagnosis according to DTC.	Center differential control dial circuit is in normal condition. Temporary poor contact occurs. Repair the harness or connector between driver's control center differential control module, manual mode switch and chassis ground.

L: DTC 32 CHECK PARKING BRAKE SWITCH

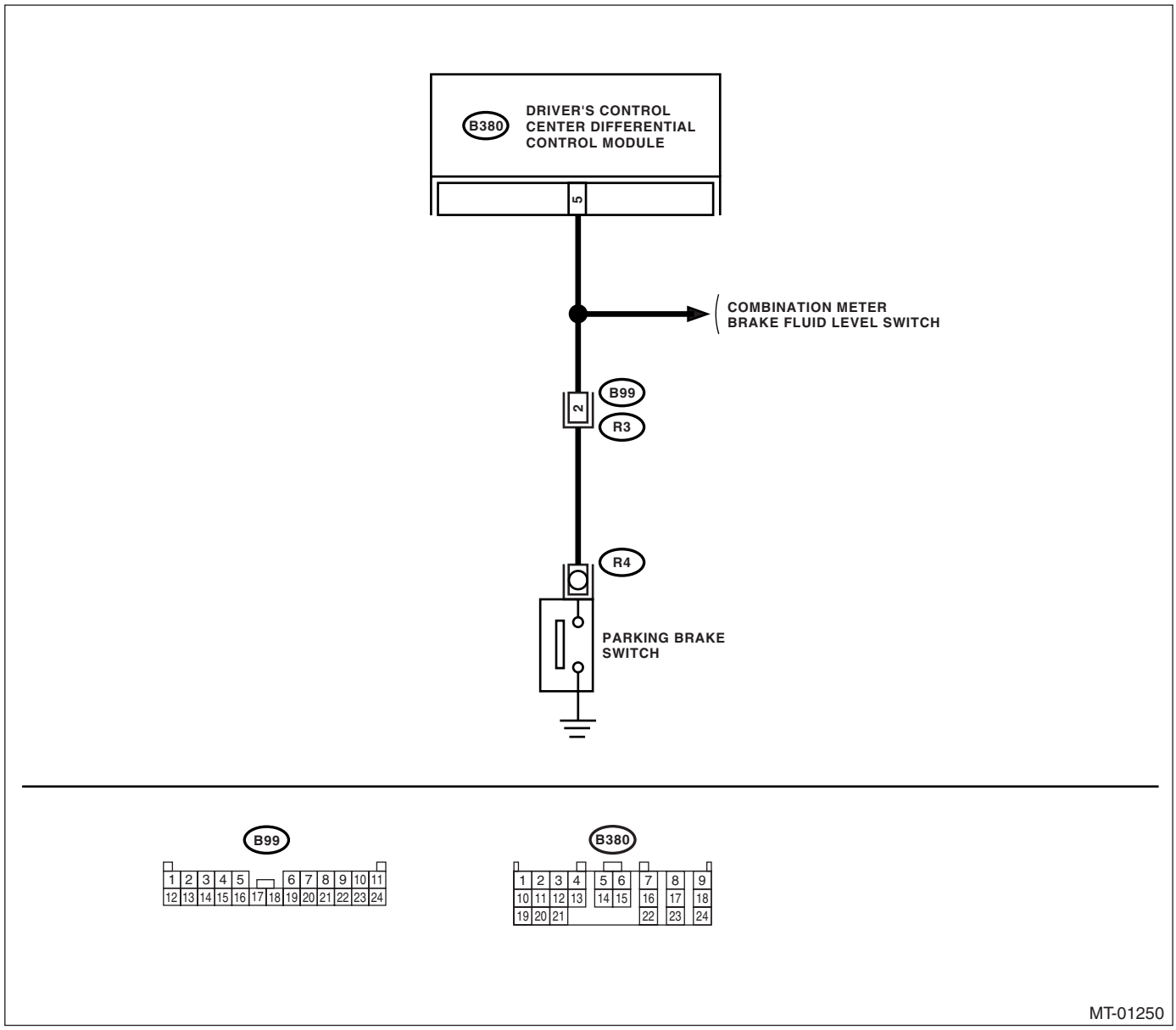
DIAGNOSIS:

Input signal circuit of parking brake switch is open or shorted.

TROUBLE SYMPTOM:

- Differential does not tend to be free though apply the parking brake.
- Differential stays free by releasing the parking brake.

WIRING DIAGRAM:

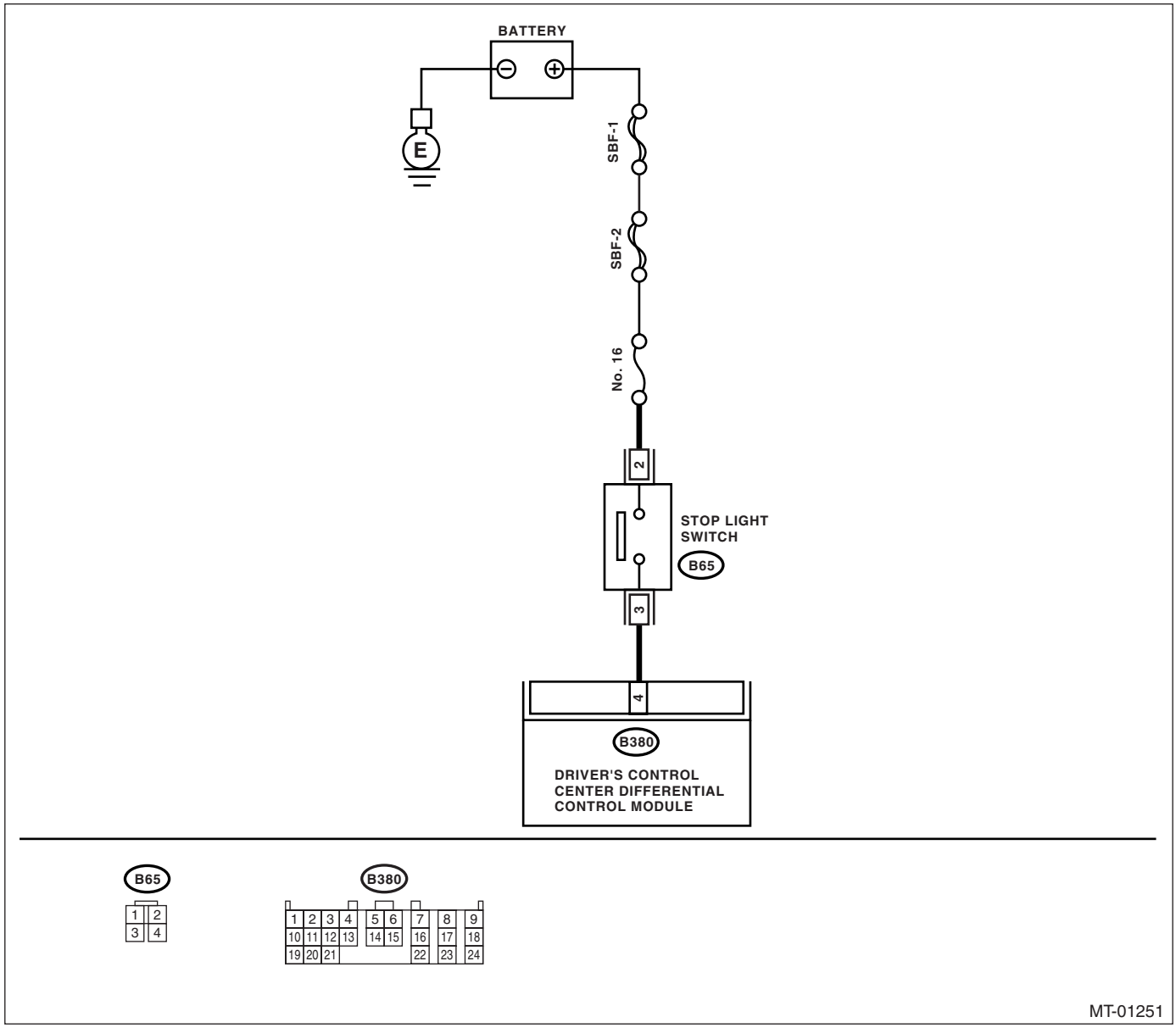


Step		Check	Yes	No
1	**CHECK THE PARKING BRAKE SWITCH CIRCUIT.** 1) Turn the ignition switch to ON. 2) Start the engine. 3) Apply the parking brake.	Does the parking brake warning light illuminate?	Go to step **2.**	Check the parking pilot & brake fluid warning light circuit.
2	**CHECK THE PARKING BRAKE SWITCH CIRCUIT.** Release the parking brake.	Does the parking brake warning light turn OFF?	Go to step **3.**	Check the brake fluid level, parking pilot & brake fluid level warning light circuit.

	Step	Check	Yes	No
3	**CHECK THE HARNESS BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND PARKING BRAKE SWITCH.** 1) Turn the ignition switch to OFF. 2) Disconnect the harness connector of driver's control center differential control module, combination meter and parking brake switch. 3) Measure the resistance of harness between driver's control center differential control module and parking brake switch. ***Connector & terminal*** ***(B380) No. 5 — (R4) No. 1:***	Is the resistance less than 1 Ω?	Go to step **4.**	Repair the open circuit of harness and poor contact of connector.
4	**CHECK THE HARNESS BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND PARKING BRAKE SWITCH.** Measure the resistance between driver's control center differential control module harness connector and chassis ground. ***Connector & terminal*** ***(B380) No. 5 — Chassis ground:***	Is the resistance more than 1 MΩ?	Go to step **5.**	Repair the short circuit of harness.
5	**CHECK THE INPUT SIGNAL OF DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE.** 1) Connect all the harness connectors. 2) Connect the Subaru Select Monitor to data link connector. 3) Turn the ignition switch to ON, and Subaru Select Monitor switch to ON. 4) Release the parking brake. 5) Read the data of parking switch signal using subaru Select Monitor.	Is the data OFF?	Go to step **6.**	Replace the driver's control center differential control module.
6	**CHECK THE INPUT SIGNAL OF DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE.** 1) Apply the parking brake. 2) Read the data of parking switch signal using subaru Select Monitor.	Is the data ON?	Go to step **7.**	Replace the driver's control center differential control module.
7	**CHECK POOR CONTACT IN HARNESS CONNECTOR.**	Is there any poor contact in harness connector of parking brake circuit?	Repair the poor contact of harness connector.	Center differential control dial circuit is in normal condition. Temporary poor contact occurs. Repair the harness or connector between driver's control center differential control module and neutral switch.

M: DTC 33 STOP LIGHT SWITCH

DIAGNOSIS:
Open or short circuit in stop light switch circuit
TROUBLE SYMPTOM:
Wheels are locked while the ABS operates.
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK DTC.**	Is the stop light switch related DTC displayed during ABS self-diagnosis test mode?	Check according to ABS DTC.	Go to step **2.**

	Step	Check	Yes	No
2	**CHECK DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE.** 1) Turn the ignition switch to OFF. 2) Connect the Subaru Select Monitor to data link connector. 3) Turn the ignition switch to ON, and Subaru Select Monitor switch to ON. 4) Read the data of "Stop Light Switch" using Subaru Select Monitor.	Is the "OFF" displayed?	Go to step **3.**	Replace the driver's control center differential control module.
3	**CHECK DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE.** 1) Drepress the brake pedal and hold it. 2) Read the data of "Stop Light Switch" using Subaru Select Monitor.	Is the "ON" displayed?	Go to step **6.**	Go to step **4.**
4	**CHECK INPUT SIGNAL FOR DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE.** 1) Turn the ignition switch to OFF. 2) Disconnect the harness connector of driver's control center differential control module. 3) Drepress the brake pedal and hold it. 4) Measure the voltage between driver's control center differential control module and chassis ground. ***Connector & terminal*** ***(B380) No. 4 (+) — Chassis ground (−):***	Is the voltage more than 8 V?	Go to step **5.**	Repair the open circuit in harness between driver's control center differential control module and stop light switch.
5	**CHECK POOR CONTACT.**	Is there poor contact in stop light switch circuit?	Repair the poor contact in harness connector.	Replace the driver's control center differential control module.
6	**CHECK DTC.** Read the DTC from combination meter. <Ref. to 6MT(diag)-20, Read Diagnostic Trouble Code (DTC).>	Is the DTC 33 displayed?	Replace the driver's control center differential control module.	Go to step **7.**
7	**CHECK FOR OTHER DTC ON DISPLAY.**	Is there any DTC other than 33 displayed?	Perform the diagnosis according to DTC.	Stop light switch circuit is in normal condition. Temporary poor contact occurs. Repair the harness or connector between driver's control center differential control module and stop light switch.

N: DTC 37 NEUTRAL POSITION SWITCH

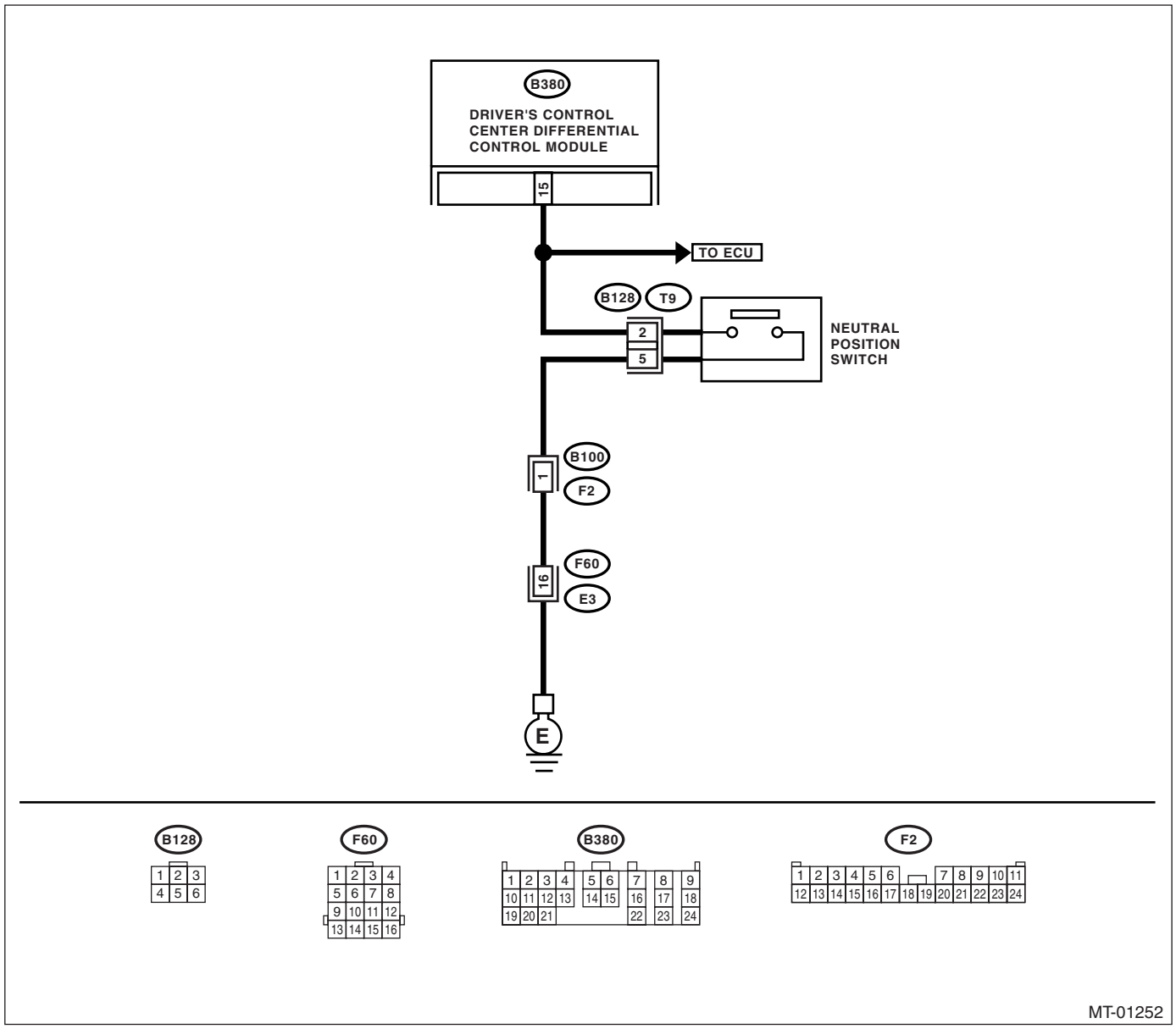
DIAGNOSIS:

Open or short in neutral position switch circuit

TROUBLE SYMPTOM:

- Handling tende to oversteer.
- The dendency of understeer occurred when high speed cornering.

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK HARNESS BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND NEUTRAL POSITION SWITCH.** 1) Turn the ignition switch to OFF. 2) Disconnect the connectors from driver's control center differential control module, ECM and in neutral position switch. 3) Measure the resistance between driver's control center differential control module and neutral position switch. ***Connector & terminal*** ***(B380) No. 15 — (B128) No. 2:***	Is the resistance less than 1 Ω?	Go to step **2.**	Repair the open circuit in harness between neutral position switch connector and Engine ground (–).
2	**CHECK HARNESS BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND NEUTRAL POSITION SWITCH.** Measure the resistance between driver's control center differential control module connector and Chassis ground (–). ***Connector & terminal*** ***(B380) No. 15 — Chassis ground:***	Is the resistance more than 1 MΩ?	Go to step **3.**	Repair the short circuit in harness between neutral position switch and driver's control center differential control unit.
3	**CHECK HARNESS BETWEEN DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE AND ENGINE GROUND.** Measure the resistance between neutral position switch connector and Engine ground (–). ***Connector & terminal*** ***(B128) No. 5 — Engine ground:***	Is the resistance less than 1 Ω?	Go to step **4.**	Repair the open circuit in harness between neutral position switch connector and Engine ground (–).
4	**CHECK NEUTRAL POSITION SWITCH.** 1) Move the shift lever to "N". 2) Measure the resistance between transmission harness connector terminals. ***Connector & terminal*** ***(T9) No. 2 — No. 5:***	Is the resistance less than 1 Ω?	Go to step **5.**	Replace the neutral position switch.
5	**CHECK NEUTRAL POSITION SWITCH.** 1) Move the shift lever to other than "N". 2) Measure the resistance between transmission harness connector terminals. ***Connector & terminal*** ***(T9) No. 2 — No. 5:***	Is the resistance more than 1 MΩ?	Go to step **6.**	Replace the neutral position switch.
6	**CHECK INPUT SIGNAL FOR DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE.** 1) Connect all the connectors. 2) Turn the ignition switch to ON. 3) Subaru Select Monitor switch to ON. 4) Move the shift lever to "N". 5) Read the data of "Neutral switch" using Subaru Select Monitor.	Is the "ON" displayed?	Go to step **7.**	Go to step **8.**

	Step	Check	Yes	No
7	**CHECK INPUT SIGNAL FOR DRIVER'S CONTROL CENTER DIFFERENTIAL CONTROL MODULE.** 1) Move the shift lever to other than "N". 2) Read the data of "Neutral switch" using Subaru Select Monitor.	Is the "OFF" displayed?	Neutral switch circuit is in normal condition. Temporary poor contact occurs. Repair the harness or connector between driver's control center differential control module, neutral switch and ECM.	Go to step **8.**
8	**CHECK POOR CONTACT.**	Is there any poor contact in neutral position switch circuit?	Repair the poor contact.	Go to step **9.**
9	**CHECK DTC.** Read the DTC from combination meter. <Ref. to 6MT(diag)-20, Read Diagnostic Trouble Code (DTC).>	Is DTC 33 displayed?	Replace the driver's control center differential control unit.	Go to step **10.**
10	**CHECK OTHER DTC DETECTION.**	Is any DTC except DTC 33 displayed?	Diagnose according to DTC.	The neutral position switch circuit is in normal condition. A temporary poor contact of connector or harness may be the cause. Repair harness or connector in neutral position switch circuit.

13.General Diagnostic Table

A: INSPECTION

Symptom	Abnormal units/parts
Tight cornering condition	• ABSCM&H/U • ABS wheel speed sensor • Accelerator position sensor • ECM • Center differential • Center differential control dial • Manual mode switch • Tire/Wheel • Driver's control center differential control module
Tendency to oversteer	• Accelerator position sensor • ECM • Center differential control dial • Manual mode switch • Tire/Wheel • Driver's control center differential control module • Center differential • Driver's control center differential relay • Rear differential oil temperature switch • Neutral position switch
Tendency to understeer at high speed cornering	• Yaw rate & lateral G sensor • Center differential • ECM • Engine speed signal • Neutral position switch
No change in the center differential torque character	• Center differential control dial • Driver's control center differential relay • Center differential • Driver's control center differential control module
Driver's control center differential indicator does not operate	• Combination meter • Driver's control center differential control module
Driver's control center differential indicator does not operate though setting the center differential control dial	• Center differential control dial • Combination meter • Driver's control center differential control module
No change to AUTO or MANUAL	• Manual mode switch • Combination meter • Driver's control center differential control module
AUTO indicator light does not illuminate	• Manual mode switch • Combination meter • Driver's control center differential control module
Differential does not become free, or stays free	• Parking brake switch • Center differential • Manual mode switch • Center differential control dial • Rear differential • Tire/Wheel • Driver's control center differential relay • Rear differential oil temperature switch • Driver's control center differential control module
ABS does not operation	• ABSCM&H/U • CAN communication signal • Stop light switch • Driver's control center differential control module

Symptom	Abnormal units/parts
Differential does not become lock, or stays lock	• ABSCM&H/U • ABS wheel speed sensor • Accelerator position sensor • ECM • Center differential • Center differential control dial • Manual mode switch • Tire/Wheel • Driver's control center differential control module • Driver's control center differential relay