VDC

## **ABS SEQUENCE CONTROL**

# 4. ABS Sequence Control

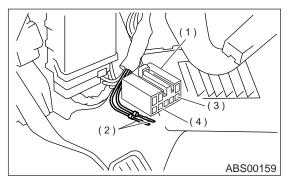
## A: OPERATION

1) Under the ABS sequence control, after the hydraulic unit solenoid valve is driven, the operation of the hydraulic unit can be checked by means of the brake tester or pressure gauge.

2) ABS sequence control can be started by diagnosis connector or select monitor.

#### 1. ABS SEQUENCE CONTROL WITH DIAG-NOSIS CONNECTOR

1) Connect diagnosis terminals to terminals No. 5 and No. 8 of the diagnosis connector beside driver's seat heater unit.



- (1) Diagnosis connector
- (2) Diagnosis terminal
- (3) 8 terminal
- (4) 5 terminal

2) Set the speed of all wheels at 2.75 km/h (2 MPH) or less.

3) Turn ignition switch OFF.

4) Within 0.5 seconds after the ABS and VDC warning light goes out, depress the brake pedal and hold it immediately after ignition switch is turned to ON.

#### CAUTION:

#### Do not depress the clutch pedal.

NOTE:

• When the ignition switch is set to on, the brake pedal must not be depressed.

Engine must not operate.

5) After completion of ABS sequence control, turn ignition switch OFF.

### 2. ABS SEQUENCE CONTROL WITH SE-LECT MONITOR

NOTE:

• In the event of any trouble, the sequence control may not be operative. In such a case, activate the sequence control, referring to "ABS SEQUENCE CONTROL WITH DIAGNOSIS CONNECTOR".

<Ref. to VDC-16, ABS SEQUENCE CONTROL WITH DIAGNOSIS CONNECTOR, OPERATION, ABS Sequence Control.>

• When the diagnosis terminal is connected to the diagnosis connector, the sequence control will not operate.

 Connect select monitor to data link connector beside driver's seat instrument panel lower cover.
Turn ignition switch ON.

3) Turn select monitor switch ON.

4) Put select monitor to "BRAKE CONTROL" mode.

5) When "Function check sequence" is selected, `ABS sequence control' will start.

6) The message `Press Brake Pedal Firmly' is displayed as follows:

(1) When using the brake tester, depress brake pedal with braking force of 981 N (100 kgf, 221 lb).

(2) When using the pressure gauge, depress brake pedal so as to make the pressure gauge indicate 3,432 kPa (35 kg/cm<sup>2</sup>, 498 psi).

#### CAUTION:

#### Do not depress the clutch pedal.

7) When the message "Press YES" is displayed, press «YES» key.

8) Operation points will be displayed on select monitor.

Vehicle-id: SIE-id::A:Operation **VDC-16** 

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## 3. CONDITIONS FOR ABS SEQUENCE CONTROL

		2.75 km/h (2 MPH) or less		
	Speed of all wheels	10 km/h (6 MPH) or less		
Operational guide line of sequence control	Terminal No. 5 and No. 8	LOW		
	Ignition key switch	OFF 1.5s ON 1.5s 1.4s 1.0s 1.4s	0.6s	
		Point A		
	ABS warning light	OFF LIGHT		
	ABS warning light	Within 0.5s		
	VDC warning light	OFF LIGHT		
	VDC. OFF indicator light	OFF		
	VDC operation indicator light			
	Pressure sensor signal	OFF ON		
	AET	LOW HIGH		
	AEB	LOW HIGH		
	AEC	LOW HIGH		
	EAM	OFF ON		
		OFF ON		
	Valve relay	OFF		
	Secondary cut valve	OFF		
	Primary cut valve	OFF		
Operational pattern of	Secondary suction valve	OFF 0.4s 1s		
sequence	Primary suction valve	OFF ON		
Control Operational pressure of sequence control	FL outlet valve			
	FL inlet valve	OFF ON		
	FR outlet valve	OFF ON		
	FR inlet valve	OFF ON		
	RR outlet valve	OFF ON		
	RR inlet valve	OFF ON		
	RL outlet valve	OFF ON		
	RL inlet valve	OFF		
	Pump motor	OFF ON		
	Pressure of master cylinder			
	Pressure of FL wheel cylinder			
	Pressure of FR wheel cylinder			
	Pressure of RR wheel cylinder			
	Pressure of RL wheel cylinder			
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## NOTE:

• When select monitor is used, control operation starts at point A. The patterns from IGN key ON to the point A show that operation is started by diagnosis connector.

HIGH means high voltage.LOW means low voltage.

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,	SIE-id::A:Operation





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## ABS SEQUENCE CONTROL

## **B: SPECIFICATION**

## 1. CONDITIONS FOR COMPLETION OF ABS SEQUENCE CONTROL

When the following conditions develop, the ABS sequence control stops and ABS operation is returned to the normal control mode.

1) When the speed of at least one wheel reaches 10 km/h (6 MPH).

2) When terminal No. 5 or No. 8 are separated from diagnosis terminals. (When select monitor is not used.)

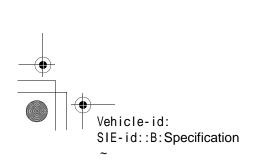
3) When the brake pedal is released during sequence control and the braking lamp switch is set to off.

4) When brake pedal is depressed after ignition key is turned to ON, and before ABS warning light goes out. (When select monitor is not used.)

5) When brake pedal is not depressed after ignition key is turned to ON, and within 0.5 seconds after ABS warning light goes out. (When select monitor is not used.)

6) After completion of the sequence control.

7) When malfunction is detected. (When select monitor is used.)



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