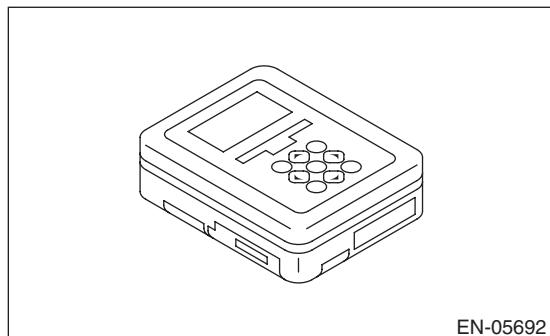


### 7. Subaru Select Monitor

#### A: OPERATION

##### 1. READ DIAGNOSTIC TROUBLE CODE (DTC)

1) Prepare the Subaru Select Monitor kit. <Ref. to VDC(diag)-7, SPECIAL TOOL, PREPARATION TOOL, General Description.>

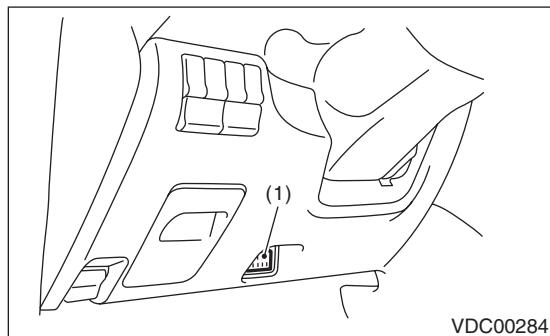


2) Prepare PC with Subaru Select Monitor installed.  
3) Connect the SDI (Subaru Diagnostic Interface) to the PC USB port (exclusively for Subaru Selector Monitor) using a USB cable.

##### NOTE:

Port exclusively for Subaru Select Monitor refers to the USB port used when installing Subaru Select Monitor.

4) Connect the diagnosis cable to the SDI.  
5) Connect the SDI to the data link connector located in the lower portion of the instrument panel (on the driver's side).



##### CAUTION:

**Do not connect scan tools other than the Subaru Select Monitor.**

6) Start the PC.  
7) Turn the ignition switch to ON (engine OFF) and run the "PC application for Subaru Select Monitor".  
8) On the «Main Menu» display screen, select {Each System Check}.

9) On the «System Selection Menu» display screen, select {Brake Control}.

10) Click the [OK] button after the {VDC} is displayed.

11) On the «Brake Control Diagnosis» screen, select {DTC Display}.

12) Record the DTC and data.

##### NOTE:

- For detailed operation procedure, refer to the "help on PC application for Subaru Select Monitor".

- For details concerning DTCs, refer to "List of Diagnostic Trouble Code (DTC)". <Ref. to VDC(diag)-26, List of Diagnostic Trouble Code (DTC).>

- Up to 3 DTCs are displayed in the order of detection.

- If a particular DTC is not stored in memory properly at the occurrence of problem (due to a drop in VDCCM&H/U power supply etc.), the DTC suffixed with a question mark "?" is displayed on Subaru Select Monitor display screen. This shows it may be an unreliable reading.

13) If VDC and Subaru Select Monitor cannot communicate, check the communication circuit. <Ref. to VDC(diag)-32, COMMUNICATION FOR INITIALIZING IS IMPOSSIBLE (SUBARU SELECT MONITOR COMMUNICATION MALFUNCTION), Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

Display	Contents to be monitored
Current	The current DTC is displayed on Subaru Select Monitor display screen.
Old	The latest DTC in previous troubles is displayed on Subaru Select Monitor display screen.
Second previous	The second latest DTC in previous troubles is displayed on Subaru Select Monitor display screen.
Third previous	The third latest DTC in previous problems is displayed on Subaru Select Monitor display screen.

# Subaru Select Monitor

## VEHICLE DYNAMICS CONTROL (VDC) (DIAGNOSTICS)

### 2. READ CURRENT DATA

- 1) On the «Main Menu» display screen, select {Each System Check}.
- 2) On the «System Selection Menu» display screen, select {Brake Control}.
- 3) Click the [OK] button after the {VDC} is displayed.
- 4) On the «Brake Control Diagnosis» display screen, select {Current Data Display/Save}.
- 5) On the «Data Display Menu» screen, select {Data Display}.
- 6) Using the scroll key, scroll the display screen up or down until the desired data is shown on the screen.

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

Display	Contents to be monitored	Unit of measure
FR Wheel Speed	Wheel speed detected by front ABS wheel speed sensor RH is displayed.	km/h
FL Wheel Speed	Wheel speed detected by front ABS wheel speed sensor LH is displayed.	km/h
RR Wheel Speed	Wheel speed detected by rear ABS wheel speed sensor RH is displayed.	km/h
RL Wheel Speed	Wheel speed detected by rear ABS wheel speed sensor LH is displayed.	km/h
Steering Angle Sensor	Steering wheel angle detected by steering angle sensor is displayed.	deg
Yaw Rate Sensor	Vehicle angular speed detected by yaw rate sensor is displayed.	deg (deg/s)
Pressure Sensor (P)	Brake fluid pressure detected by the primary pressure sensor is displayed.	bar
Pressure Sensor (S)	Brake fluid pressure detected by the secondary pressure sensor is displayed.	bar
Lateral G Sensor	Vehicle lateral direction acceleration detected by lateral G sensor is displayed.	m/s (m/s <sup>2</sup> )
IG Power Supply Voltage	Voltage supplied to the VDCCM is displayed.	V
Valve Relay Signal	The valve relay operating condition is displayed.	ON or OFF
Motor Relay Signal	The motor relay operating condition is displayed.	ON or OFF
Motor Relay Monitor	The motor relay operating condition is displayed.	ON or OFF
VDC Operation Light	VDC operation condition is displayed.	ON or OFF
VDC Warning Light	ON/OFF condition of the VDC warning light/VDC OFF indicator light is displayed. (ON is displayed when there is a VDC failure.)	ON or OFF
ABS Warning Light	ON/OFF condition of the ABS warning light is displayed.	ON or OFF
VDC OFF Light	ON/OFF condition of the VDC warning light/VDC OFF indicator light is displayed. (ON/OFF is displayed by operating the VDC OFF switch and EAM signal.)	ON or OFF
EBD Warning Light	ON/OFF condition of the EBD warning light is displayed.	ON or OFF
EAM Signal	Engine control command signal is displayed.	1 or 0
PATA Signal	ON/OFF condition of the VDC OFF switch is displayed.	ON or OFF
Gear Position	Gear position is displayed by number. 0: N or P, 1:1st, 2:2nd, 3:3rd, 4:4th, 7:R	—
Engine Speed	Engine speed is displayed.	rpm
PW Signal	Acceleration opening is displayed.	%
Car Line	Vehicle type is displayed by number. Normally “1”	—

#### NOTE:

For details concerning the operation procedure, refer to the «help on PC application for Subaru Select Monitor».

### 3. CLEAR MEMORY MODE

- 1) On the «Main Menu» display screen, select {Each System Check}.
- 2) On the «System Selection Menu» display screen, select {Brake Control}.
- 3) Click the [OK] button after the {VDC} is displayed.
- 4) On the «Brake Control Diagnosis» display screen, select {Clear Memory}.
- 5) When the “Clear Memory?” is shown on the screen, click the [YES] button.
- 6) When “Done” and “Turn ignition switch to OFF” are shown on the display screen, turn the ignition switch to OFF.

#### NOTE:

For details concerning the operation procedure, refer to the “help on PC application for Subaru Select Monitor”.

# Subaru Select Monitor

## VEHICLE DYNAMICS CONTROL (VDC) (DIAGNOSTICS)

### 4. FUNCTION CHECK

Display	Contents of display	Index No.
ABS check mode	Operate the valve and pump motor by turns to perform the ABS sequence control.	<Ref. to ABS-11, ABS Sequence Control.>
VDC check mode	Operate the valve and pump motor by turns to perform the VDC sequence control.	<Ref. to VDC-19, VDC Sequence Control.>
Steering angle sensor neutral & lateral G sensor 0 pt mode	Set the steering angle sensor neutral position and the lateral G sensor "0" points.	<Ref. to VDC-25, Steering Angle Sensor.>

# Subaru Select Monitor

## VEHICLE DYNAMICS CONTROL (VDC) (DIAGNOSTICS)

### 5. FREEZE FRAME DATA

#### NOTE:

- Data stored at the time of failure occurred is shown on display.
- Each time a failure occurs, the latest information is stored in the freeze frame data in memory.
- 1 freeze frame data is stored.
- If a freeze frame data is not properly stored in memory (due to a drop in VDCCM power supply, etc.), a DTC suffixed with a question mark "?" appears on the Subaru Select Monitor display. This shows it may be an unreliable reading.

#### FREEZE FRAME DATA LIST

Display	Contents to be monitored
FR Wheel Speed	Wheel speed detected by the front ABS wheel speed sensor RH is displayed in km/h.
FL Wheel Speed	Wheel speed detected by the front ABS wheel speed sensor LH is displayed in km/h.
RR Wheel Speed	Wheel speed detected by the rear ABS wheel speed sensor RH is displayed in km/h.
RL Wheel Speed	Wheel speed detected by the rear ABS wheel speed sensor LH is displayed in km/h.
Steering Angle Sensor	Steering wheel angle detected by steering angle sensor is displayed.
Yaw Rate Sensor	Vehicle angular speed detected by the yaw rate sensor is converted and displayed in volts.
Lateral G Sensor	Vehicle lateral direction acceleration detected by lateral G sensor is converted and displayed in volts.
Primary Pressure Sensor	Brake fluid pressure detected by the primary pressure sensor is converted and displayed in volts.
Secondary Pressure Sensor	Brake fluid pressure detected by the secondary pressure sensor is converted and displayed in volts.
Vehicle Speed	The vehicle speed is displayed.
Required Torque	Engine torque required by the driver is displayed.
Current Torque	Current engine torque is displayed.
Target Torque	The target torque is displayed.
Acceleration Opening Angle	Acceleration opening is displayed.
Engine Speed	Engine speed is displayed.
Gear Position	Gear position is displayed.
IG Power Supply Voltage	Voltage supplied to VDC control module is displayed.
ABS Warning Light	ON/OFF condition of the ABS warning light is displayed.
EBD Warning Light	ON/OFF condition of the EBD warning light is displayed.
VDC Warning Light	ON/OFF condition of the VDC warning light/VDC OFF indicator light is displayed. (ON is displayed when there is a VDC failure.)
VDC OFF Light	ON/OFF condition of the VDC warning light/VDC OFF indicator light is displayed. (ON/OFF is displayed by operating the VDC OFF switch and EAM signal.)
VDC Operation Light	ON/OFF condition of VDC indicator light is displayed.
Valve Relay Signal	The valve relay operating condition is displayed.
Motor Relay Driving Vibration	The motor relay operating condition is displayed.
Motor Relay Monitor	The motor relay operating condition is displayed.
Decreasing Required Torque	Engine torque decrease request is displayed.
EAM Signal	Engine control command signal is displayed.
VDC O Control Flag	VDC operation condition (over-steering) is displayed.
VDC U Control Flag	VDC operation condition (under-steering) is displayed.
ABS Control Flag	ABS operating condition is displayed.
VDC OK B Signal	VDC sensor normal flag