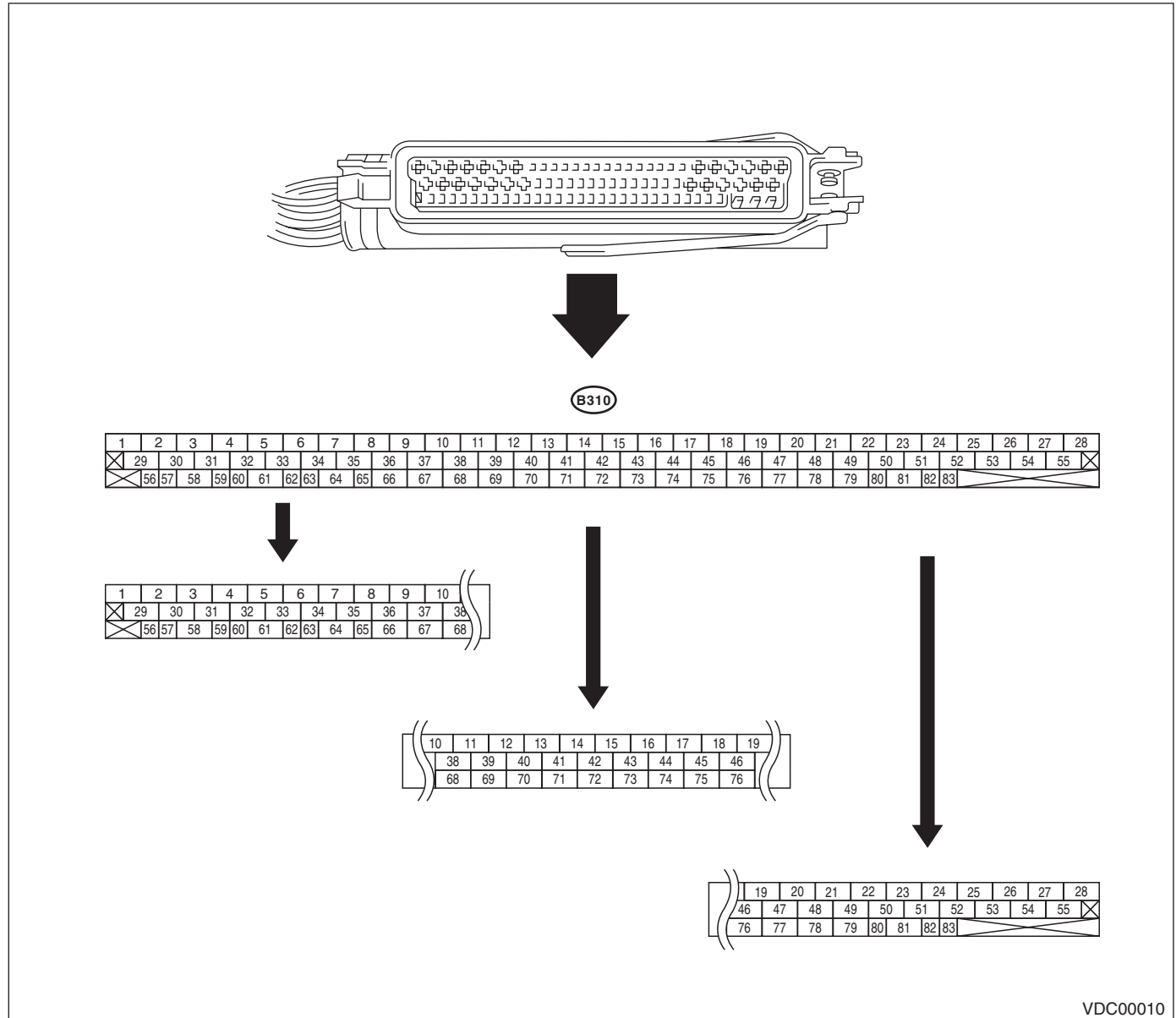


Control Module I/O Signal

VEHICLE DYNAMICS CONTROL (VDC) (DIAGNOSTICS)

5. Control Module I/O Signal

A: ELECTRICAL SPECIFICATION



VDC00010

NOTE:

- Terminal numbers in the VDCCM connector are as shown in the figure.
- When the connector is removed from VDCCM, the connector switch closes the circuit between terminals No. 53 and 54. Then, ABS warning light and brake warning light (EBD warning light) illuminates.

Control Module I/O Signal

VEHICLE DYNAMICS CONTROL (VDC) (DIAGNOSTICS)

Content		Terminal No. (+) — (–)	Input/Output signal
			Measured value and measuring conditions
Ignition switch		28 — 1	10 — 15 V when the ignition switch is ON.
ABS wheel speed sensor (Wheel speed sensor)	Front wheel LH	19 — 21	0.12 — 1 V (at 20 Hz)
	Front wheel RH	13 — 14	
	Rear wheel LH	15 — 16	
	Rear wheel RH	17 — 18	
Yaw rate & lateral G sensor	Output (Lateral G sensor)	11 — 64	2.2 — 2.8 V when the vehicle is on level surface
	Power supply	50 — 64	10 — 15 V when the ignition switch is ON.
	Output (Yaw rate sensor)	65 — 64	Waveform <Ref. to VDC(diag)-14, WAVEFORM, MEASUREMENT, Control Module I/O Signal.>
	Reference (Yaw rate sensor)	66 — 64	2.1 — 2.9 V
	Test	67 — 64	1 V — 5 cycles for a 40 ms pulse signal. <Ref. to VDC(diag)-14, WAVEFORM, MEASUREMENT, Control Module I/O Signal.>
	Ground	64	—
CAN communication line (+)		83 — 1	2.5 — 1.5 V pulse signal <Ref. to VDC(diag)-14, WAVEFORM, MEASUREMENT, Control Module I/O Signal.>
CAN communication line (–)		81 — 1	3.5 — 2.5 V pulse signal <Ref. to VDC(diag)-14, WAVEFORM, MEASUREMENT, Control Module I/O Signal.>
Relay box	Valve relay power supply	27 — 1	10 — 15 V when the ignition switch is ON.
	Valve relay drive	48 — 1	Less than 15 V when the ignition switch is ON.
	Motor relay drive	22 — 1	1.5 V or less (ABS/TCS/VDC Operation): 10 V or more (ABS/TCS/VDC not operated)
	Motor monitor	9 — 1	1.5 V or less (ABS/TCS/VDC Operation): 10 V or more (ABS/TCS/VDC not operated)
VDCH/U	Front inlet (hold) solenoid valve LH	24 — 1	When the valve turns OFF, 10 — 15 V. When the valve turns ON, less than 1.5 V.
	Front inlet (hold) solenoid valve RH	3 — 1	
	Rear inlet (hold) solenoid valve LH	31 — 1	
	Rear inlet (hold) solenoid valve RH	23 — 1	
	Front outlet (decompression) solenoid valve LH	26 — 1	
	Front outlet (decompression) solenoid valve RH	29 — 1	
	Rear outlet (decompression) solenoid valve LH	4 — 1	
	Rear outlet (decompression) solenoid valve RH	25 — 1	
	Primary cut solenoid valve	34 — 1	
	Secondary cut solenoid valve	35 — 1	
	Primary suction solenoid valve	32 — 1	
	Secondary suction solenoid valve	30 — 1	
Pressure sensor	Power supply	77 — 75	4.75 — 5.25 V when the ignition switch is ON.
	Primary output	76 — 75	0.48 — 0.72 V (when the brake pedal is released)
	Ground	75	—
	Secondary output	44 — 75	0.48 — 0.72 V (when the brake pedal is released)
VDC indicator light		72 — 1	After turning the ignition switch to ON, less than 1.5 V during 1.5 seconds and 10 — 15 V after 1.5 seconds passed.
VDC warning light/VDC OFF indicator light		61 — 1	After turning the ignition switch to ON, less than 1.5 V during 1.5 seconds and 10 — 15 V after 1.5 seconds passed.
ABS warning light		53 — 1	After turning the ignition switch to ON, less than 1.5 V during 2.6 seconds and 10 — 15 V after 1.5 seconds passed.
Subaru Select Monitor		38 — 1	0 — 12 V pulse signal (in communication)

Control Module I/O Signal

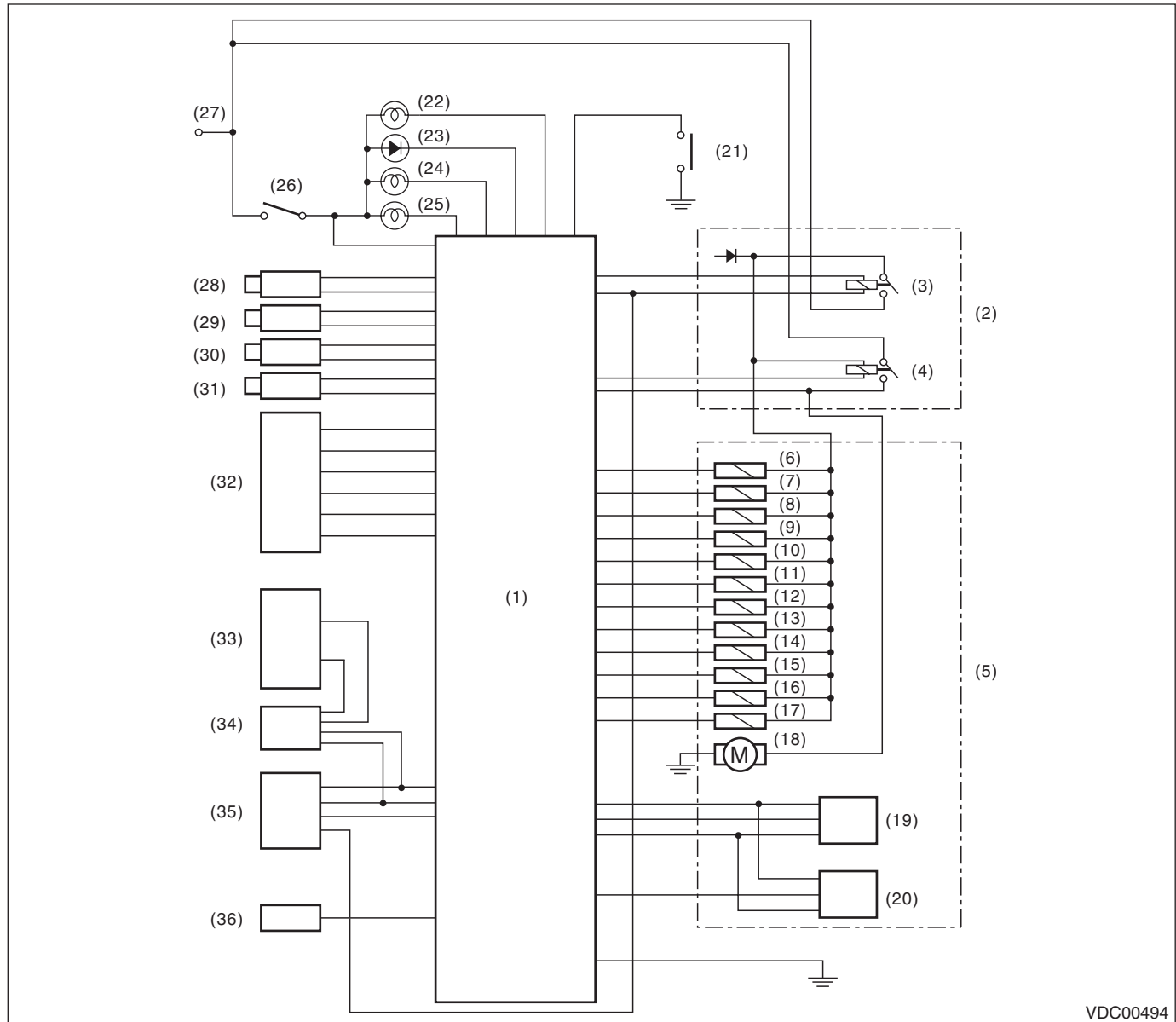
VEHICLE DYNAMICS CONTROL (VDC) (DIAGNOSTICS)

Content	Terminal No. (+) — (-)	Input/Output signal
		Measured value and measuring conditions
VDC OFF switch	40 — 1	10 — 15 V when the ignition switch is ON. 0 V (While pressing the switch)
Ground	1	—
Ground	55	—
Brake warning light (EBD warning light)	54 — 1	After turning the ignition switch to ON, less than 3.6 V during 1.5 seconds and 10 — 15 V after 1.5 seconds passed.

Control Module I/O Signal

VEHICLE DYNAMICS CONTROL (VDC) (DIAGNOSTICS)

B: WIRING DIAGRAM



VDC00494

- | | | |
|---|--|--|
| (1) VDC control module (VDCCM) | (15) Primary cut solenoid valve | (26) Ignition relay |
| (2) Relay box | (16) Secondary suction solenoid valve | (27) Battery |
| (3) Valve relay | (17) Secondary cut solenoid valve | (28) Front ABS wheel speed sensor LH |
| (4) Motor relay | (18) Motor | (29) Front ABS wheel speed sensor RH |
| (5) VDC hydraulic control unit (VDCH/U) | (19) Primary pressure sensor | (30) Rear ABS wheel speed sensor LH |
| (6) Front hold valve LH | (20) Secondary pressure sensor | (31) Rear ABS wheel speed sensor RH |
| (7) Front decompression valve LH | (21) VDC OFF switch | (32) Yaw rate & lateral G sensor |
| (8) Front hold valve RH | (22) ABS warning light | (33) Engine control module (ECM) |
| (9) Front decompression valve RH | (23) VDC warning light/VDC OFF indicator light | (34) Transmission control module (TCM) |
| (10) Rear hold valve LH | (24) VDC indicator light | (35) Steering angle sensor |
| (11) Rear decompression valve LH | (25) Brake warning light (EBD warning light) | (36) Data link connector |
| (12) Rear hold valve RH | | |
| (13) Rear decompression valve RH | | |
| (14) Primary suction solenoid valve | | |

Control Module I/O Signal

VEHICLE DYNAMICS CONTROL (VDC) (DIAGNOSTICS)

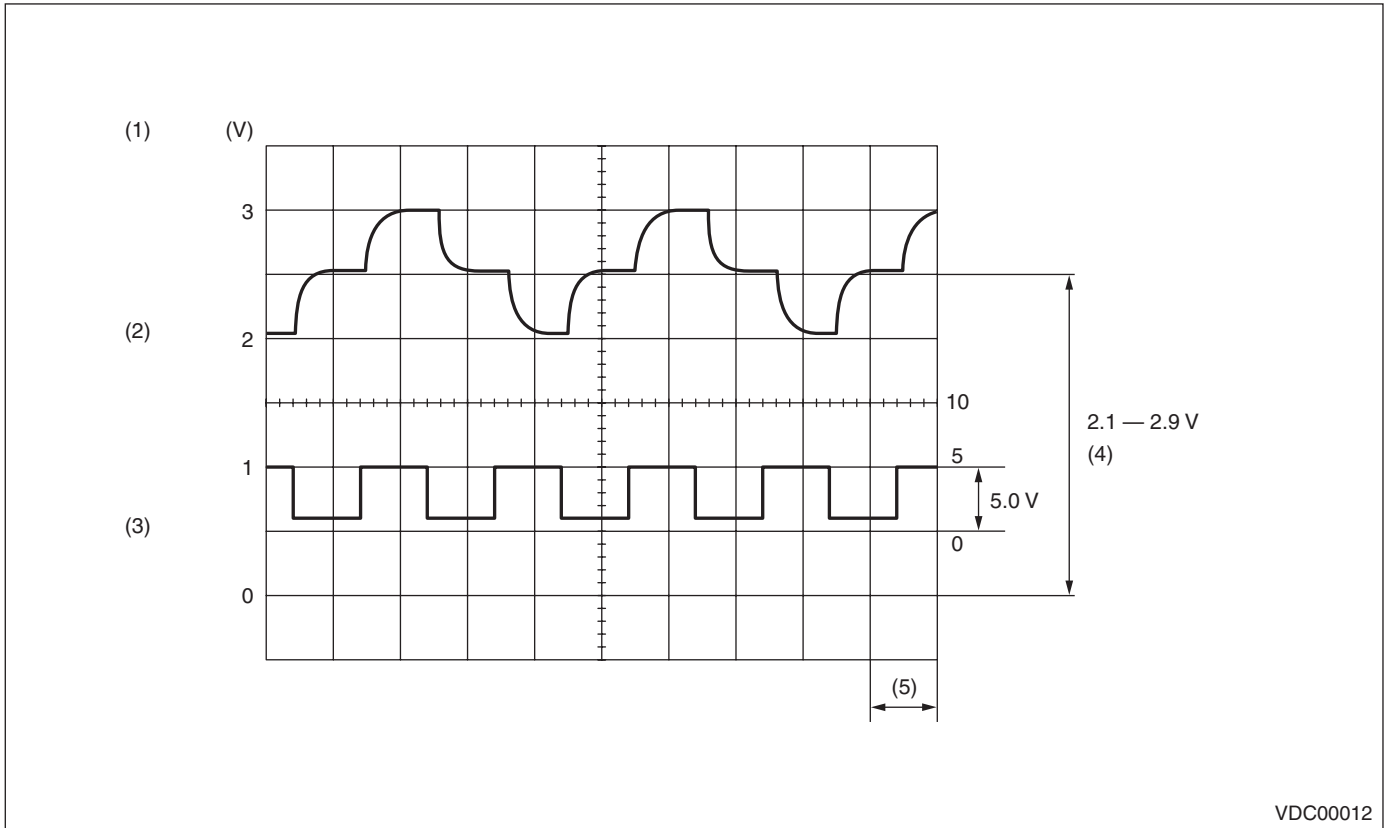
C: MEASUREMENT

Measure the input and output signal voltages.

NOTE:

Measure while the VDCCM connector cover is removed. <Ref. to VDC(diag)-16, VDCCM Connector Cover.>

1. WAVEFORM



(1) Yaw rate sensor

(2) Terminals No. 65 — 64

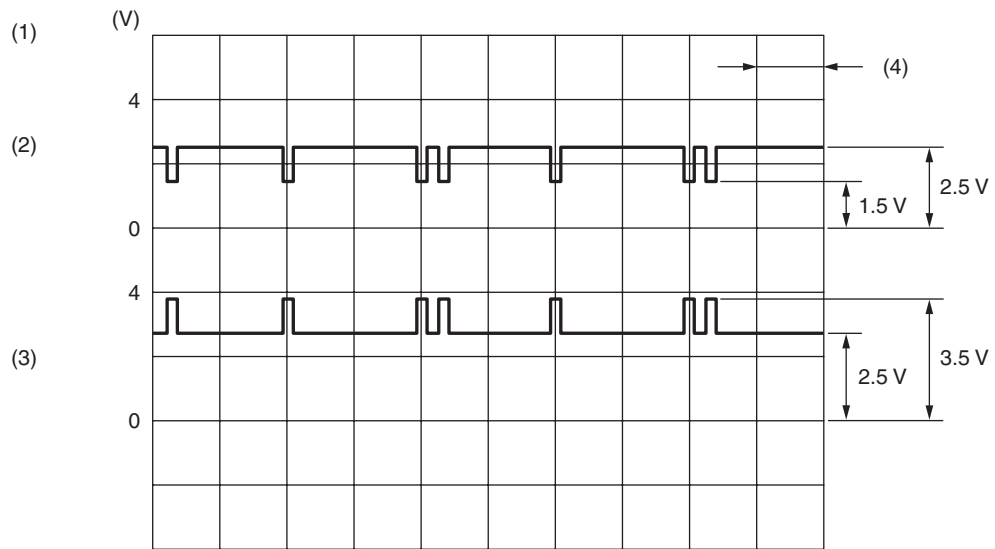
(3) Terminals No. 67 — 64

(4) Vehicle is at a standstill.

(5) 20 ms

Control Module I/O Signal

VEHICLE DYNAMICS CONTROL (VDC) (DIAGNOSTICS)



VDC00013

(1) CAN communication line

(3) Terminals No. 81 — 1

(4) 5 ms

(2) Terminals No. 83 — 1