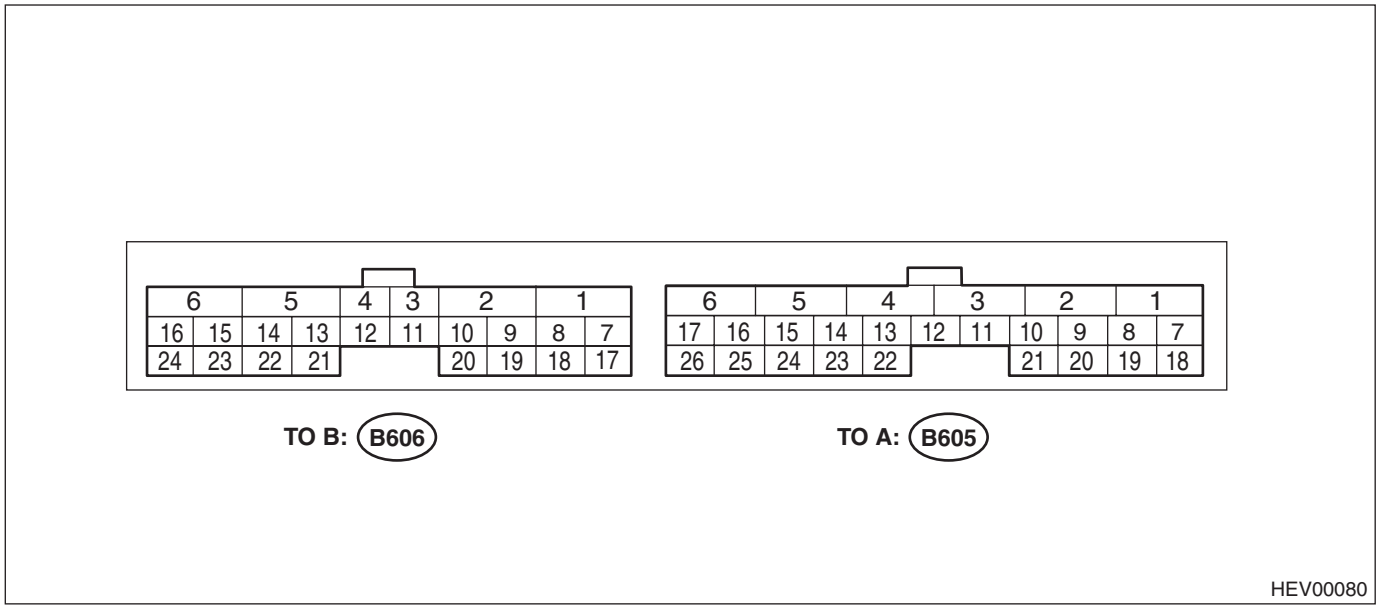
5. Control Module I/O Signal

A: ELECTRICAL SPECIFICATION

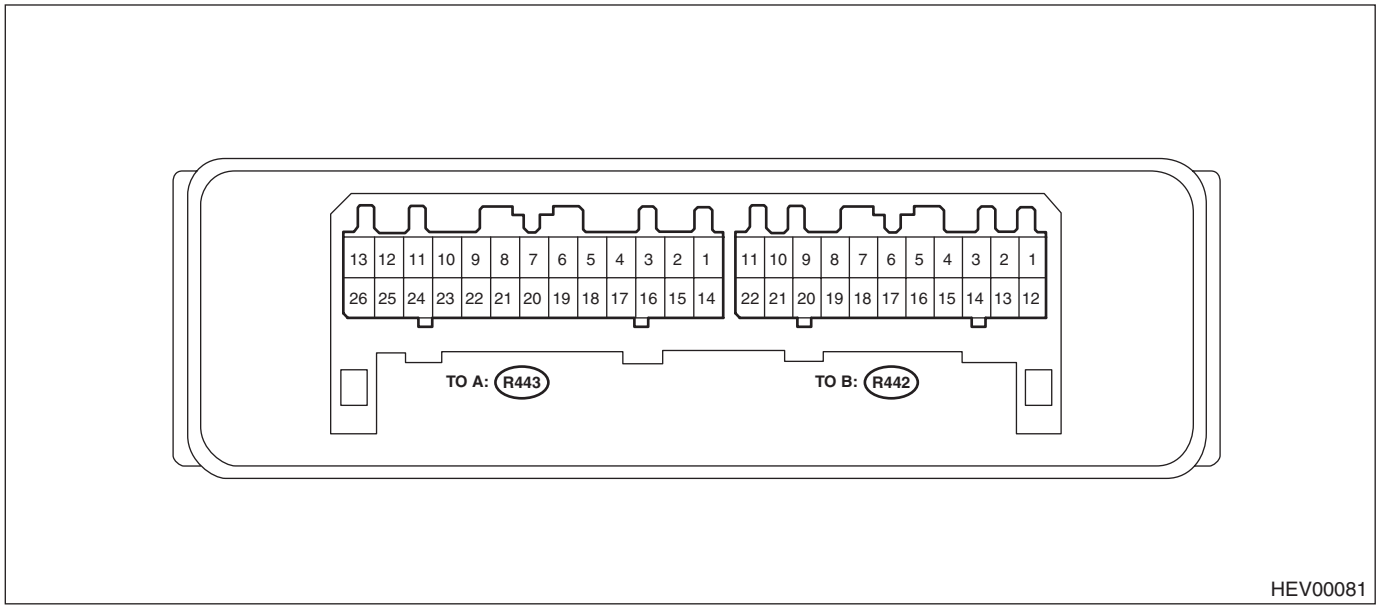
1. HYBRID POWERTRAIN CONTROL MODULE (HPCM)



Terminal No. (terminal symbol)	Item	Measuring condition	Measurement value	Note
(B605) No. 1	Linear solenoid output	—	Cannot be measured	—
(B605) No. 2	Main power supply 1	Always	11 — 15 V	—
(B605) No. 3	Main power supply 2	Always	11 — 15 V	—
(B605) No. 4	LIN communication	—	Cannot be measured	LIN communication line
(B605) No. 5	GND1	Always	0 V	—
(B605) No. 6	GND2	Always	0 V	—
(B605) No. 7	(Not used)	—	—	—
(B605) No. 8	(Not used)	—	—	—
(B605) No. 9	(Not used)	—	—	—
(B605) No. 10	HEV CAN H	—	Cannot be measured	CAN communication line
(B605) No. 11	HEV CAN L	—	Cannot be measured	CAN communication line
(B605) No. 12	MAIN CAN H	—	Cannot be measured	CAN communication line
(B605) No. 13	MAIN CAN L	—	Cannot be measured	CAN communication line
(B605) No. 14	PU CAN H	—	Cannot be measured	CAN communication line
(B605) No. 15	PU CAN L	—	Cannot be measured	CAN communication line
(B605) No. 16	(Not used)	—	—	—
(B605) No. 17	(Not used)	—	—	—
(B605) No. 18	Oil pressure SW input	Engine running	11 — 15 V	—
		When ignition switch is ON	0 V	—
(B605) No. 19	(Not used)	—	—	—
(B605) No. 20	(Not used)	—	—	—
(B605) No. 21	IG SW input	Ignition switch ON	11 — 15 V	—
(B605) No. 22	Starter drive request signal	Model without push button start at cranking	8 — 14 V	—
		Model with push button start at cranking	Waveform	—
(B605) No. 23	P range SW input	P range	Less than 1 V	—
		Except for P range	8 V or more	—

Terminal No. (terminal symbol)	Item	Measuring condition	Measurement value	Note
(B605) No. 24	R range SW input	R range	Less than 1 V	—
		Except for R range	8 V or more	—
(B605) No. 25	N range SW input	N range	Less than 1 V	—
		Except for N range	8 V or more	—
(B605) No. 26	D range SW input	D range	Less than 1 V	—
		Except for D range	8 V or more	—
(B606) No. 1	GND1 for sensors	Always	0 V	—
(B606) No. 2	GND2 for sensors	Always	0 V	—
(B606) No. 3	Brake booster pressure sensor input 1	Always	0.5 — 4.5 V	—
(B606) No. 4	Brake booster pressure sensor input 2	Always	0.5 — 4.5 V	—
(B606) No. 5	(Not used)	—	—	—
(B606) No. 6	(Not used)	—	—	
(B606) No. 7	Sensor power supply output 1	When ignition switch is ON	4.5 V or more	—
(B606) No. 8	(Not used)	—	—	—
(B606) No. 9	Sensor power supply output 3	When ignition switch is ON	4.5 V or more	—
(B606) No. 10	(Not used)	—	—	—
(B606) No. 11	Brake stroke sensor input 1	When brake pedal is depressed	Approx. 1 V or more	—
		When brake is not depressed	Approx. 1 V	—
(B606) No. 12	(Not used)	—	—	—
(B606) No. 13	(Not used)	—	—	—
(B606) No. 14	ISG CRK output	When ignition switch is ON	Less than 1 V	—
(B606) No. 15	ISG INH output	When ignition switch is ON	Less than 2 V	—
(B606) No. 16	Brake vacuum pump relay output	When brake vacuum pump operates	9 V or more	—
		When brake vacuum pump not activated	0 V	—
(B606) No. 17	Sensor power supply output 2	When ignition switch is ON	4.5 V or more	—
(B606) No. 18	Battery voltage 2 monitor input	Always	11 — 15 V	—
(B606) No. 19	Vacuum pump relay monitor input	When brake vacuum pump operates	9 V or more	—
		When brake vacuum pump not activated	0 V	—
(B606) No. 20	Brake stroke sensor input 2	When brake pedal is depressed	Approx. 4 V or less	—
		When brake is not depressed	Approx. 4 V	—
(B606) No. 21	(Not used)	—	—	—
(B606) No. 22	Battery relay CLOSE output	—	—	—
(B606) No. 23	Battery relay OPEN output	—	—	—
(B606) No. 24	GND3 for sensors	Always	0 V	—

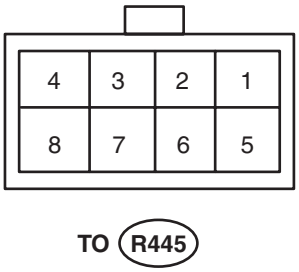
2. DRIVE MOTOR CONTROL MODULE (DMCM)



Terminal No. (terminal symbol)	Item	Measuring condition	Measurement value	Note
(R443) No. 1	(Not used)	—	—	—
(R443) No. 2	HEVCAN H	—	Cannot be measured	CAN communication line
(R443) No. 3	CT W	When ignition switch is ON	2.45 — 2.55 V	—
(R443) No. 4	(Not used)	—	—	—
(R443) No. 5	CT V	When ignition switch is ON	2.45 — 2.55 V	—
(R443) No. 6	SVCC2	When ignition switch is ON	4.9 — 5.1 V	—
(R443) No. 7	CT U	When ignition switch is ON	2.45 — 2.55 V	—
(R443) No. 8	SVCC1	When ignition switch is ON	4.9 — 5.1 V	—
(R443) No. 9	(Not used)	—	—	—
(R443) No. 10	IG	When ignition switch is ON	11 — 15 V	—
(R443) No. 11	SS RY	When ignition switch is ON	0 V	—
(R443) No. 12	GND1	Always	0 V	—
(R443) No. 13	IG SS1	When ignition switch is ON	11 — 15 V	—
(R443) No. 14	(Not used)	—	—	—
(R443) No. 15	HEVCAN L	—	Cannot be measured	CAN communication line
(R443) No. 16	(Not used)	—	—	—
(R443) No. 17	SGND2	When ignition switch is ON	0 V	—
(R443) No. 18	SGND1	When ignition switch is ON	0 V	—
(R443) No. 19	SCIMOCO	—	Cannot be measured	SCI communication line
(R443) No. 20	SCICOMO	—	Cannot be measured	SCI communication line
(R443) No. 21	FANPIN	When ignition switch is ON	11 — 15 V	—
(R443) No. 22	FANPOUT	When ignition switch is ON	11 — 15 V	—
(R443) No. 23	(Not used)	—	—	—
(R443) No. 24	IPUPWR RY	When ignition switch is ON	0 V	—
(R443) No. 25	GND2	Always	0 V	—
(R443) No. 26	IG SS2	When ignition switch is ON	11 — 15 V	—
(R442) No. 1	UN	—	Cannot be measured	—
(R442) No. 2	UP	—	Cannot be measured	—
(R442) No. 3	TMP B	When ignition switch is ON	0.23 V — 4.6 V	—
(R442) No. 4	TMP A	When ignition switch is ON	0.23 V — 4.6 V	—

Terminal No. (terminal symbol)	Item	Measuring condition	Measurement value	Note
(R442) No. 5	AGND1	Always	0 V	—
(R442) No. 6	R1	—	Cannot be measured	—
(R442) No. 7	S4	—	Cannot be measured	—
(R442) No. 8	S3	—	Cannot be measured	—
(R442) No. 9	S2	—	Cannot be measured	—
(R442) No. 10	S1	—	Cannot be measured	—
(R442) No. 11	(Not used)	—	—	—
(R442) No. 12	WN	—	Cannot be measured	—
(R442) No. 13	WP	—	Cannot be measured	—
(R442) No. 14	VN	—	Cannot be measured	—
(R442) No. 15	VP	—	Cannot be measured	—
(R442) No. 16	(Not used)	—	—	—
(R442) No. 17	R2	—	Cannot be measured	—
(R442) No. 18	(Not used)	—	—	—
(R442) No. 19	(Not used)	—	—	—
(R442) No. 20	(Not used)	—	—	—
(R442) No. 21	(Not used)	—	—	—
(R442) No. 22	SCIIPU	—	Cannot be measured	SCI communication line

3. HIGH VOLTAGE BATTERY



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Terminal No. (terminal symbol)	Item	Measuring condition	Measurement value	Note
(R445) No. 1	Main power supply 1	Always	11 — 15 V	—
(R445) No. 2	HEVCAN H	—	Cannot be measured	CAN communication line
(R445) No. 3	HEVCAN L	—	Cannot be measured	CAN communication line
(R445) No. 4	GND	Always	0 V	—
(R445) No. 5	Main power supply 2	Always	11 — 15 V	—
(R445) No. 6	IG power supply	When ignition switch is ON	11 — 15 V	—
(R445) No. 7	(Not used)	—	—	—
(R445) No. 8	GND	Always	0 V	—