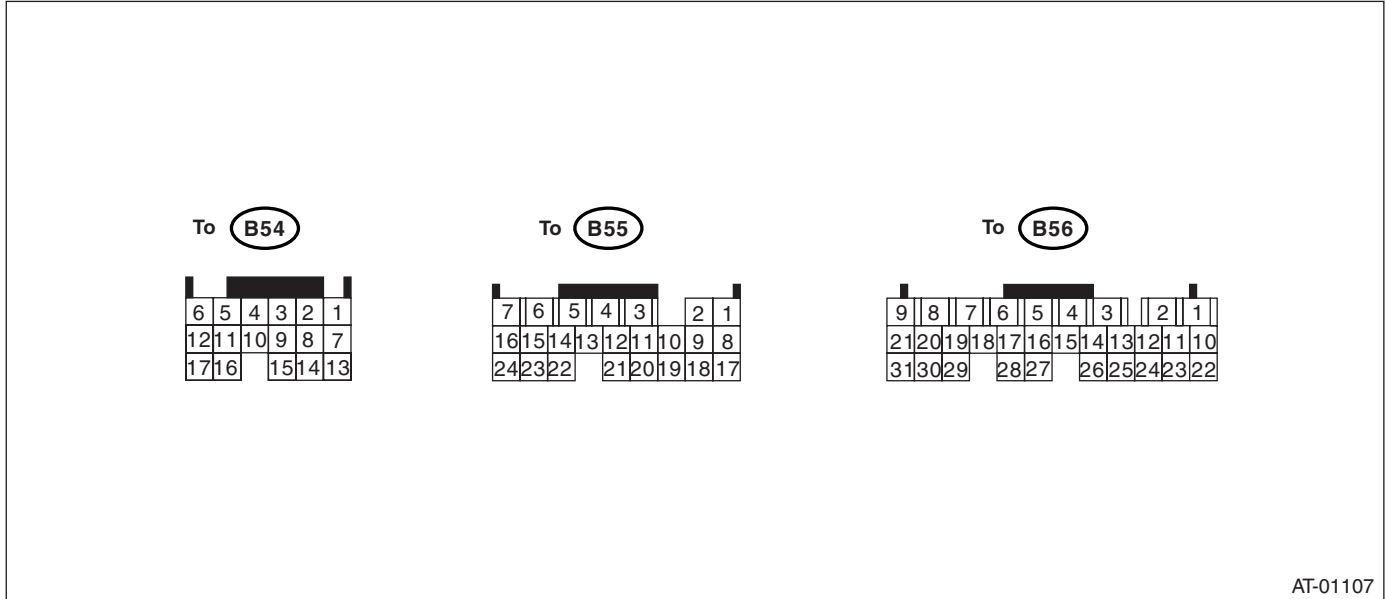


TRANSMISSION CONTROL MODULE (TCM) I/O SIGNAL

AUTOMATIC TRANSMISSION (DIAGNOSTICS)

5. Transmission Control Module (TCM) I/O Signal

A: ELECTRICAL SPECIFICATION



AT-01107

Check with ignition switch ON.						
Content		Connector No.	Terminal No.	Measuring conditions	Voltage (V)	Resistance to body (Ω)
Back-up power supply		B56	27	Ignition switch OFF	10 — 13	—
			28			
			29			
ACC power supply		B56	16	Ignition switch ACC	10 — 13	—
Ignition power supply		B56	21	Ignition switch ON (with engine OFF)	10 — 13	—
		B56	31			
Inhibitor switch	"P" range switch	B55	5	Select lever in "P" range	Less than 1	—
				Select lever in any other than "P" range (except "N" range)	More than 8	
	"N" range switch	B55	22	Select lever in "N" range	Less than 1	—
				Select lever in any other than "N" range	More than 8	
	"R" range switch	B55	14	Select lever in "R" range	Less than 1	—
				Select lever in any other than "R" range	More than 8	
	"D" range switch	B55	4	Select lever in "D" range	Less than 1	—
				Select lever in any other than "D" range	More than 8	
	"3" range switch	B54	16	Select lever in "3" range	Less than 1	—
				Select lever in any other than "3" range	More than 8	
	"2" range switch	B54	4	Select lever in "2" range	Less than 1	—
				Select lever in any other than "2" range	More than 8	
	"1" range switch	B54	10	Select lever in "1" range	Less than 1	—
				Select lever in any other than "1" range	More than 8	
Brake switch		B55	20	Brake pedal depressed.	More than 10.5	—
				Brake pedal released.	Less than 1	

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Check with ignition switch ON.					
Content	Connector No.	Terminal No.	Measuring conditions	Voltage (V)	Resistance to body (Ω)
Throttle position sensor	B55	19	Throttle fully closed.	More than 0.2	—
			Throttle fully open.	Less than 4.6	
Throttle position sensor power supply	B55	10	Ignition switch ON (with engine OFF)	Approx. 5	—
ATF temperature sensor	B55	21	ATF temperature 20°C (68°F)	3.5 — 4.3	2.3 k — 5.3 k
			ATF temperature 80°C (176°F)	1.0 — 2.2	300 — 800
Rear vehicle speed sensor	B55	24	Vehicle speed at least 20 km/h (12 MPH)	More than 2 (AC range)	—
Front vehicle speed sensor	B55	6	Vehicle stopped.	0	450 — 750
			Vehicle speed at least 20 km/h (12 MPH)	More than 1 (AC range)	
Torque converter turbine speed sensor	B55	7	Engine idling after warm-up. ("D" range)	0	450 — 750
			Engine idling after warm-up. ("N" range)	More than 1 (AC range)	
Vehicle speed output signal	B56	1	Vehicle speed at least 10 km/h (6 MPH)	Less than 1 ← → More than 4	—
Engine speed signal	B55	13	Ignition switch ON (with engine OFF)	Less than 1	—
			Ignition switch ON (with engine ON)	More than 5 (AC range)	
Line pressure linear solenoid	B56	20	Ignition switch ON (with engine OFF) Throttle fully closed after warm-up. ("R" range)	3.9 — 7.7	4.0 — 8.0
			Ignition switch ON (with engine OFF) Throttle fully open after warm-up. ("R" range)	1.1 — 4.6	
Lock-up duty solenoid	B56	5	When lock up occurs.	More than 10.5	2.0 — 4.5
			When lock up is released.	Less than 1	
Transfer duty solenoid	B56	4	"P" or "N" range	Less than 1	2.0 — 4.5
			Throttle fully open and with select lever in 1st gear.	More than 10.5	
2-4 brake duty solenoid	B56	6	"P" or "N" range	More than 10.5	2.0 — 4.5
			2nd or 4th gear	Less than 1	
High clutch duty solenoid	B56	8	3rd or 4th gear	Less than 1	2.0 — 4.5
			"P" or "N" range	More than 10.5	
Low clutch duty solenoid	B56	9	1st or 2nd gear	Less than 1	2.0 — 4.5
			"P" or "N" range	More than 10.5	
Low & reverse duty solenoid	B56	7	"P" or "N" range	More than 10.5	2.0 — 4.5
			"1" range	More than 5	
AT OIL TEMP warning light	B56	13	Light ON	Less than 1	—
			Light OFF	More than 9	
ABS signal	B54	12	ABS switch ON	Less than 1	—
			ABS switch OFF	6.5 — 15	
Front vehicle speed sensor ground	B55	15	—	0	Less than 1
Rear vehicle speed sensor ground	B55	23	—	0	Less than 1

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Check with ignition switch ON.					
Content	Connector No.	Terminal No.	Measuring conditions	Voltage (V)	Resistance to body (Ω)
Torque converter turbine speed sensor ground	B55	16	—	0	Less than 1
System ground line	B55	17	—	0	Less than 1
	B56	2			
	B56	3			
	B55	8			
Sensor ground line	B55	9	—	0	Less than 1
Range lock signal	B56	18	"D" range 0 km/h (0 mile)	More than 10.5	20 — 40
			"D" range 20 km/h (12 mile/h)	Less than 1	
Data link signal (Subaru Select Monitor)	B56	12	—	—	—
SPORT shift mode switch	B54	3	SPORT shift mode switch ON	Less than 1	—
			SPORT shift mode switch OFF	More than 8	
Shift up switch	B54	9	Shift up switch ON	Less than 1	—
			Shift up switch OFF	More than 8	
Shift down switch	B54	15	Shift down switch ON	Less than 1	—
			Shift down switch OFF	More than 8	
Buzzer	B56	24	ON	Less than 1	—
			OFF	More than 8	
SPORT shift indicator 4	B54	7	SPORT shift mode OFF	More than 4	—
			Shift down indicator ON	Less than 1	
SPORT shift indicator 3	B54	5	SPORT shift mode OFF	More than 4	—
			SPORT shift mode with 4th gear	Less than 1	
SPORT shift indicator 2	B54	17	SPORT shift mode OFF	More than 4	—
			SPORT shift mode with 2nd and 3rd gear	Less than 1	
SPORT shift indicator 1	B54	6	SPORT shift mode OFF	More than 4	—
			SPORT shift mode with 1st and 3rd gear	Less than 1	
CAN communication signal +	B55	3	Ignition switch ON	Pulse signal	—
CAN communication signal –	B55	12	Ignition switch ON	Pulse signal	