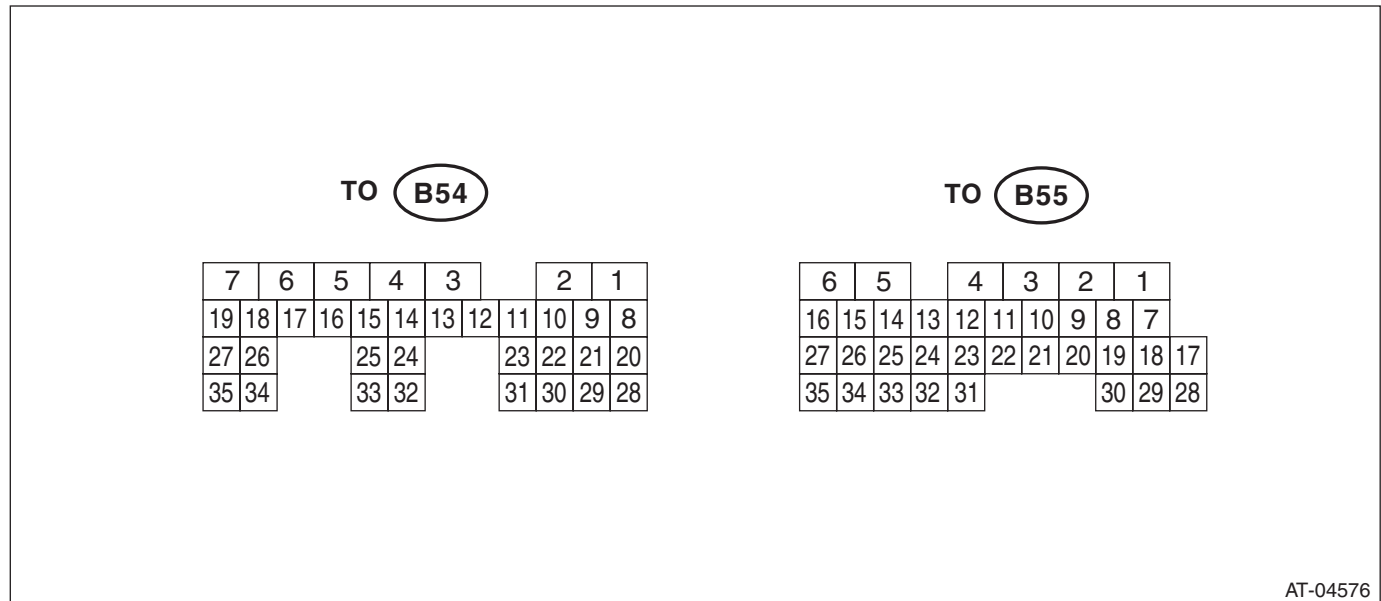


Transmission Control Module (TCM) I/O Signal

AUTOMATIC TRANSMISSION (DIAGNOSTICS)

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

A: ELECTRICAL SPECIFICATION



Check with ignition switch ON.						
Item		Measured terminal (Connector & Terminal No.)		Measuring condition	Voltage (V)	Resistance (Ω)
		Positive terminal	Ground terminal			
Backup power supply		(B54) No. 27	Chassis ground	—	10 — 13	—
		(B54) No. 26	Chassis ground			
		(B54) No. 25	Chassis ground			
Ignition power supply		(B54) No. 1	Chassis ground	Ignition Switch ON	10 — 13	—
		(B54) No. 2	Chassis ground			
Inhibitor switch	“P” range switch	(B55) No. 14	Chassis ground	Select lever “P” range	Less than 1	—
				Select lever Except “P” range	8 or more	—
	“N” range switch	(B55) No. 11	Chassis ground	Select lever “N” range	Less than 1	—
				Select lever Except “N” range	8 or more	—
	“R” range switch	(B55) No. 13	Chassis ground	Select lever “R” range	Less than 1	—
				Select lever Except “R” range	8 or more	—
	“D” range switch	(B55) No. 10	Chassis ground	Select lever “D” range	Less than 1	—
				Select lever Except “D” range	8 or more	—

Transmission Control Module (TCM) I/O Signal

AUTOMATIC TRANSMISSION (DIAGNOSTICS)

Check with ignition switch ON.					
Item	Measured terminal (Connector & Terminal No.)		Measuring condition	Voltage (V)	Resistance (Ω)
	Positive terminal	Ground terminal			
ATF temperature sensor	(B55) No. 23	(B55) No. 12	ATF temperature 20°C (68°F)	3.5 — 4.3	2.5 k — 7.0 k
			ATF temperature 80°C (176°F)	1.0 — 2.2	300 — 800
ATF temperature sensor ground	(B55) No. 12	Chassis ground	—	0	Less than 1 (When inserting connector) ∞ (When disconnecting connector)
Rear vehicle speed sensor	(B55) No. 26	(B55) No. 15	20 km/h (12 MPH) Vehicle speed at least	2 or more (AC range)	—
Rear vehicle speed sensor ground	(B55) No. 15	Chassis ground	—	0	Less than 1 (When inserting connector) ∞ (When disconnecting connector)
Front vehicle speed sensor	(B55) No. 27	(B55) No. 16	—	—	450 — 650
Front vehicle speed sensor ground	(B55) No. 16	Chassis ground	—	—	—
Torque converter turbine speed sensor	(B55) No. 1	(B55) No. 2	Engine idling after warm up ("D" range)	0	450 — 650
			Engine idling after warm up ("N" range)	1 or more (AC range)	
Torque converter turbine speed sensor ground	(B55) No. 2	Chassis ground	—	—	—
Line pressure linear solenoid	(B55) No. 4	(B55) No. 3	Ignition switch ON, throttle fully closed in R range after warm up.	3.7 — 7.7	4.0 — 6.0
			Ignition switch ON, throttle fully open in R range after warm up.	1.1 — 5.1	
Line pressure linear solenoid ground	(B55) No. 3	Chassis ground	—	Less than 1	Less than 1
Lock-up duty solenoid	(B55) No. 6	Chassis ground	When lock up occurs.	10.5 or more	2.0 — 4.5
			When lock up is released.	Less than 1	
Transfer duty solenoid	(B55) No. 5	Chassis ground	With fuse installed to FWD switch	Less than 1	2.0 — 4.5
			With fuse removed from FWD switch (1st gear)	2.0 — 3.0	

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AUTOMATIC TRANSMISSION (DIAGNOSTICS)

Check with ignition switch ON.					
Item	Measured terminal (Connector & Terminal No.)		Measuring condition	Voltage (V)	Resistance (Ω)
	Positive terminal	Ground terminal			
2-4 brake duty solenoid	(B54) No. 4	Chassis ground	"P" or "N" range 2nd or 4th gear	5.0 or more Less than 1	2.0 — 4.5
High clutch duty solenoid	(B54) No. 6	Chassis ground	3rd or 4th gear "P" or "N" range	Less than 1 5.0 or more	2.0 — 4.5
Low clutch duty solenoid	(B54) No. 7	Chassis ground	1st or 2nd gear "P" or "N" range	Less than 1 5.0 or more	2.0 — 4.5
Low & reverse duty solenoid	(B54) No. 5	Chassis ground	Driving at 1st gear on manual mode (15 km/h (9.3 MPH) or more)	5.0 or more	2.0 — 4.5
			Driving at 1st gear on manual mode (15 km/h (9.3 MPH) or more)	2.5 — 5.0	
Data link signal (Subaru Select Monitor)	(B54) No. 8	Chassis ground	—	—	—
CAN communication signal (+)	(B55) No. 18	Chassis ground	Ignition switch ON	Pulse signal	—
CAN communication signal (—)	(B55) No. 17	Chassis ground	Ignition switch ON	Pulse signal	—
FWD switch	(B54) No. 10	Chassis ground	Fuse removed	10.5 or more	—
			Fuse installed	1 or less	—
Power GND2	(B54) No. 20	Chassis ground	—	0	Less than 1
Power GND1	(B54) No. 21	Chassis ground	—	0	Less than 1
Control GND2	(B54) No. 22	Chassis ground	—	0	Less than 1
Control GND1	(B54) No. 23	Chassis ground	—	0	Less than 1
SPORT shift switch	(B54) No. 17	Chassis ground	Ignition switch ON SPORT shift mode switch is ON	Less than 1	—
			Ignition switch ON SPORT switch shift mode switch is OFF	8 or more	—
SPORT shift UP switch	(B54) No. 19	Chassis ground	Ignition switch ON SPORT shift up switch is ON	Less than 1	—
			Ignition switch ON SPORT switch shift mode switch is OFF	8 or more	—

Transmission Control Module (TCM) I/O Signal

AUTOMATIC TRANSMISSION (DIAGNOSTICS)

Check with ignition switch ON.					
Item	Measured terminal (Connector & Terminal No.)		Measuring condition	Voltage (V)	Resistance (Ω)
	Positive terminal	Ground terminal			
SPORT shift DOWN switch	(B54) No. 18	Chassis ground	Ignition switch ON SPORT shift down switch is ON	Less than 1	—
			Ignition switch ON SPORT switch shift mode switch is OFF	8 or more	—