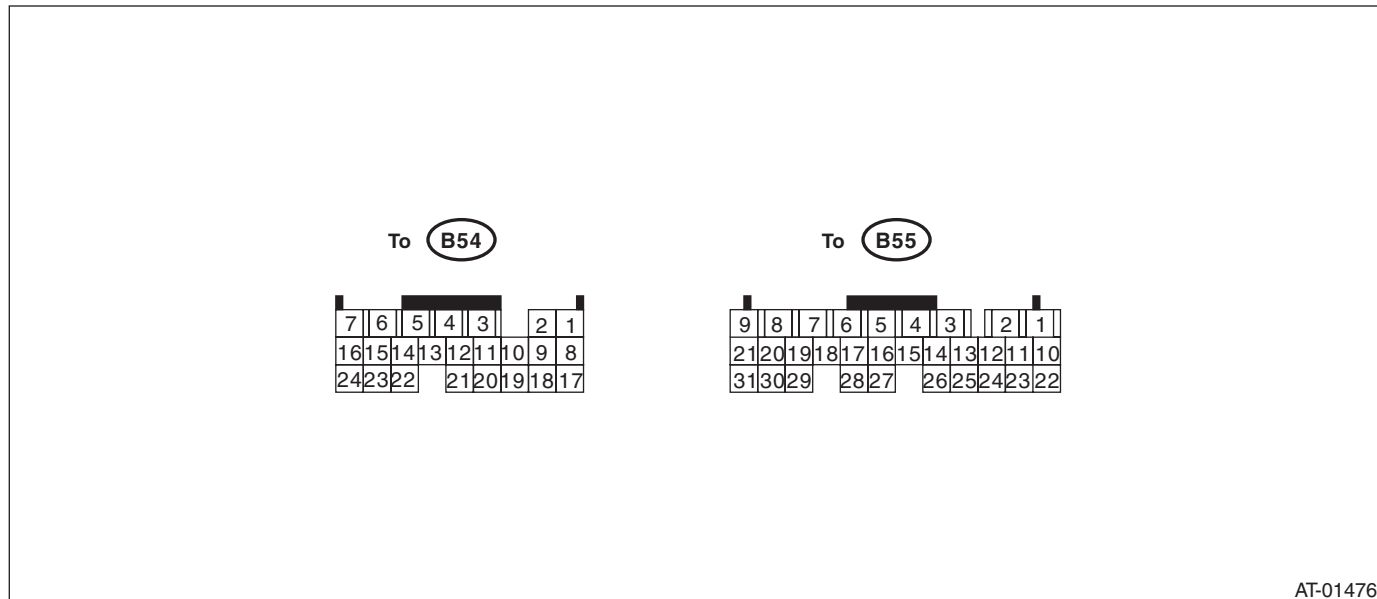


# Transmission Control Module (TCM) I/O Signal

AUTOMATIC TRANSMISSION (DIAGNOSTICS)

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

### A: ELECTRICAL SPECIFICATION



AT-01476

Check with ignition switch ON.						
Contents	Measured terminal (Connector & Terminal No.)		Measuring condition	Voltage (V)	Resistance (Ω)	
	Positive terminal	Ground terminal				
Backup power supply	(B55) No.27	Chassis ground	—	10 — 13	—	
	(B55) No.28	Chassis ground				
	(B55) No.29	Chassis ground				
ACC power supply	(B55) No.16	Chassis ground	Ignition switch ACC	10 — 13	—	
Ignition power supply	(B55) No.21	Chassis ground	Ignition switch ON	10 — 13	—	
	(B55) No.31	Chassis ground				
Inhibitor switch	“P” range switch	(B54) No.5	Chassis ground	Select lever “P” range	Less than 1	—
				Select lever except “P” range	8 or more	—
	“N” range switch	(B54) No.22	Chassis ground	Select lever “N” range	Less than 1	—
				Select lever except “N” range	8 or more	—
	“R” range switch	(B54) No.14	Chassis ground	Select lever “R” range	Less than 1	—
				Select lever except “R” range	8 or more	—
“D” range switch	(B54) No.4	Chassis ground	Select lever “D” range	Less than 1	—	
			Select lever except “D” range	8 or more	—	
Accelerator pedal position sensor	(B54) No.19	Chassis ground	Throttle fully closed.	0.2 or more	—	
			Throttle fully open.	4.6 or less		
Accelerator pedal position sensor power supply	(B54) No.10	Chassis ground	Ignition switch ON	Approx. 4.6 — 5.4	—	

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<b>Check with ignition switch ON.</b>					
Contents	Measured terminal (Connector & Terminal No.)		Measuring condition	Voltage (V)	Resistance (Ω)
	Positive terminal	Ground terminal			
ATF temperature sensor	(B54) No.21	(B54) No.9	ATF temperature 20°C (68°F)	3.5 — 4.3	2.5k — 7.0 k
			ATF temperature 80°C (176°F)	1.0 — 2.2	300 — 800
ATF temperature sensor ground	(B54) No.9	Chassis ground	—	0	Less than 1 (When inserting connector) (When discon- necting connec- tor)
Rear vehicle speed sensor	(B54) No.24	(B54) No.23	20 km/h (12 MPH) Vehicle speed at least	More than 2 (AC range)	—
Rear vehicle speed sensor ground	(B54) No.23	Chassis ground	—	0	Less than 1 (When inserting connector) (When discon- necting connec- tor)
Front vehicle speed sensor	(B54) No.6	(B54) No.15			450 — 650
Front vehicle speed sensor ground	(B54) No.15	Chassis ground	—	—	—
Torque converter turbine speed sensor	(B54) No.7	(B54) No.16	Engine idling after warm-up (“D” range)	0	450 — 650
			Engine idling after warm-up (“N” range)	More than 1 (AC range)	
Torque converter turbine speed sensor ground	(B54) No.16	Chassis ground	—	—	—
Engine speed signal	(B54) No.13	Chassis ground	Ignition switch ON (engine OFF)	Less than 1	—
			Ignition switch ON (with engine ON)	More than 5 (AC range)	—
Line pressure linear solenoid	(B55) No.20	(B55) No.19	Ignition switch ON (with engine OFF) Throttle fully closed in “R” range after warm-up.	3.7 — 7.7	4.0 — 6.0
			Ignition switch ON (with engine OFF) Throttle fully closed in “R” range after warm-up.	1.1 — 5.1	
Line pressure linear solenoid ground	(B55) No.19	Chassis ground	—	Less than 1	Less than 1
Lock-up duty solenoid	(B55) No.5	Chassis ground	When lock up occurs.	10.5 or more	2.0 — 4.5
			When lock up is released.	Less than 1	

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Check with ignition switch ON.					
Contents	Measured terminal (Connector & Terminal No.)		Measuring condition	Voltage (V)	Resistance ( $\Omega$ )
	Positive terminal	Ground terminal			
Transfer duty solenoid	(B55) No.4	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	
2-4 brake duty solenoid	(B55) No.6	Chassis ground	“P” or “N” range	5.0 or more	2.0 — 4.5
			2nd or 4th gear	Less than 1	
High clutch duty solenoid	(B55) No.8	Chassis ground	3rd or 4th gear	Less than 1	2.0 — 4.5
			“P” or “N” range	5.0 or more	
Low clutch duty solenoid	(B55) No.9	Chassis ground	1st or 2nd gear	Less than 1	2.0 — 4.5
			“P” or “N” range	5.0 or more	
Low & reverse duty solenoid	(B55) No.7	Chassis ground	Except “1” range	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	
Range lock signal	(B55) No.18	Chassis ground	Vehicle speed in “D” range 0 km/h (0 MPH)	10.5 or more	7 — 18
			Vehicle speed in “D” range 20 km/h (12 MPH)	Less than 1	
Data link signal (Subaru Select Monitor)	(B55) No.12	Chassis ground	—	—	—
CAN communication signal (+)	(B55) No.12	Chassis ground	Ignition switch ON	Pulse signal	—
CAN communication signal (-)	(B54) No.12	Chassis ground	Ignition switch ON	Pulse signal	—
FWD switch	(B55) No.17	Chassis ground	Fuse removed	10.5 or more	—
			Fuse installed	1 or less	—
System ground circuit	(B54) No.8	Chassis ground	—	0	Less than 1
	(B54) No.17	Chassis ground	—	0	Less than 1
	(B55) No.2	Chassis ground	—	0	Less than 1
	(B55) No.3	Chassis ground	—	0	Less than 1