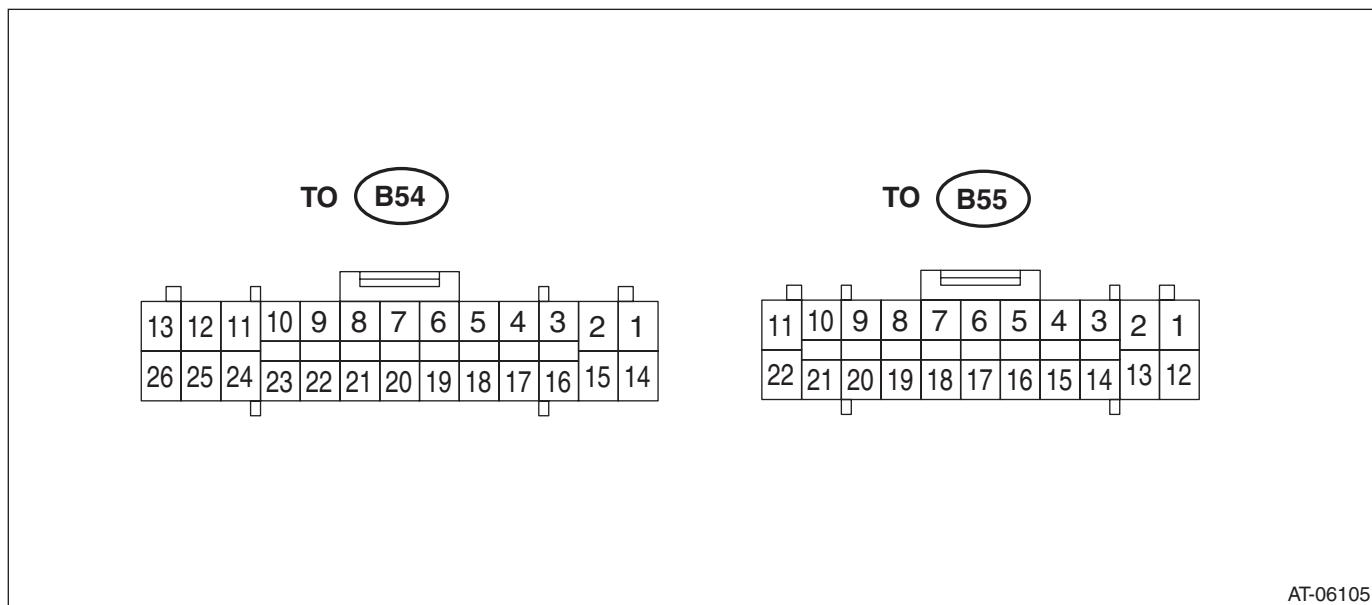


Transmission Control Module (TCM) I/O Signal

CONTINUOUSLY VARIABLE TRANSMISSION (DIAGNOSTICS)

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

A: ELECTRICAL SPECIFICATION



AT-06105

NOTE:

Measure after warming up.

- Non-turbo model

Item	Connector No.	Terminal No.	Measuring condition	Measurement value	Resistance between terminal and chassis ground	Remarks
Backup power supply	B55	1	—	10 — 13 V	—	
Ignition power supply	B55	21	—	10 — 13 V	—	
Main power supply	B55	11	—	10 — 13 V	—	
Main power supply	B55	2	—	10 — 13 V	—	
Main power supply	B55	22	—	10 — 13 V	—	
Manual mode switch	B55	4	Manual mode switch ON	Less than 1 V	—	
			Manual mode switch OFF	8 V or more	—	
Manual mode UP switch	B55	5	Manual mode UP switch ON	Less than 1 V	—	
			Manual mode UP switch OFF	8 V or more	—	
Manual mode DOWN switch	B55	16	Manual mode DOWN switch ON	Less than 1 V	—	
			Manual mode DOWN switch OFF	8 V or more	—	
Stop light switch	B55	13	Stop light switch ON	8 V or more	—	
			Stop light switch OFF	Less than 1 V	—	
P range switch	B54	5	P range	Less than 1 V	—	
			Except for P range	8 V or more	—	
R range switch	B54	18	R range	Less than 1 V	—	
			Except for R range	8 V or more	—	
N range switch	B54	9	N range	Less than 1 V	—	
			Except for N range	8 V or more	—	

Transmission Control Module (TCM) I/O Signal

CONTINUOUSLY VARIABLE TRANSMISSION (DIAGNOSTICS)

Item	Connector No.	Terminal No.	Measuring condition	Measurement value	Resistance between terminal and chassis ground	Remarks
D range switch	B54	22	D range	Less than 1 V	—	
			Except for D range	8 V or more	—	
ATF temperature sensor	B54	3	ATF temperature at 20°C (68°F)	Approx. 2.5 V	Approx. 2.5 kΩ	
			ATF temperature at 80°C (176°F)	Approx. 0.7 V	Approx. 330 Ω	
ATF temperature sensor GND	B54	16	Always	Approx. 0 V	—	
Secondary pressure sensor power supply output	B54	2	Ignition switch ON	5 V	—	
Secondary pressure sensor	B54	17	Ignition switch ON, engine OFF	Approx. 0.5 V (0 MPa)	—	Value increases with increase of engine load. (0.5 — 4.5 V)
			Ignition switch ON, engine ON	Approx. 1.0 V (1.0 MPa)	—	
Secondary pressure sensor GND	B54	15	Always	Approx. 0 V	—	
Primary speed sensor	B54	6	While driving	0 or 5 V	—	Refer to the waveform (sensor)
Secondary speed sensor	B54	7	While driving	0 or 5 V	—	Refer to the waveform (sensor)
Turbine speed sensor	B54	20	Engine ON, "P" or "N" range	0 or 5 V	—	Refer to the waveform (sensor)
Self shut output	B55	20	For three seconds after ignition switch ON and OFF	Less than 1 V	—	
			Ignition switch OFF	8 V or more	—	
F&R solenoid	B54	11	Engine ON	Refer to the waveform (solenoid (1))	Approx. 4 — 6 Ω	Resistance value at 20°C (68°F). Value is higher as the temperature increase.
Secondary solenoid	B54	12	Engine ON	Refer to the waveform (solenoid (2))	Approx. 5 — 7 Ω	Resistance value at 20°C (68°F). Value is higher as the temperature increase.
Primary UP solenoid	B54	24	Engine ON, while UP shifting	Refer to the waveform (solenoid (3))	Approx. 10 — 13.5 Ω	Resistance value at 20°C (68°F). Value is higher as the temperature increase.

Transmission Control Module (TCM) I/O Signal

CONTINUOUSLY VARIABLE TRANSMISSION (DIAGNOSTICS)

Item	Connector No.	Terminal No.	Measuring condition	Measurement value	Resistance between terminal and chassis ground	Remarks
Primary DOWN solenoid	B54	25	Engine ON, while DOWN shifting	Refer to the waveform (solenoid (4))	Approx. 10 — 13.5 Ω	Resistance value at 20°C (68°F). Value is higher as the temperature increase.
Lock-up duty solenoid	B54	26	Lock-up ON	Refer to the waveform (solenoid (5))	Approx. 10 — 13.5 Ω	Resistance value at 20°C (68°F). Value is higher as the temperature increase.
AWD solenoid	B54	13	Engine ON, "P" or "N" range	Refer to the waveform (solenoid (6))	Approx. 2 — 4.5 Ω	Resistance value at 20°C (68°F). Value is higher as the temperature increase.
			Engine ON, "D" range, brake ON	Refer to the waveform (solenoid (7))		
CAN communication line (+)	B55	18	—	—	—	
CAN communication line (-)	B55	17	—	—	—	
GND	B54	1	Always	Approx. 0 V	—	
GND	B54	14	Always	Approx. 0 V	—	

Transmission Control Module (TCM) I/O Signal

CONTINUOUSLY VARIABLE TRANSMISSION (DIAGNOSTICS)

- Turbo model

Item	Connector No.	Terminal No.	Measuring condition	Measurement value	Resistance between terminal and chassis ground	Remarks
Backup power supply	B55	1	—	10 — 13 V	—	
Ignition power supply	B55	21	—	10 — 13 V	—	
Main power supply	B55	11	—	10 — 13 V	—	
Main power supply	B55	2	—	10 — 13 V	—	
Main power supply	B55	22	—	10 — 13 V	—	
Manual mode switch	B55	4	Manual mode switch ON	Less than 1 V	—	
			Manual mode switch OFF	8 V or more	—	
Manual mode UP switch	B55	5	Manual mode UP switch ON	Less than 1 V	—	
			Manual mode UP switch OFF	8 V or more	—	
Manual mode DOWN switch	B55	16	Manual mode DOWN switch ON	Less than 1 V	—	
			Manual mode DOWN switch OFF	8 V or more	—	
Stop light switch	B55	13	Stop light switch ON	8 V or more	—	
			Stop light switch OFF	Less than 1 V	—	
P range switch	B54	5	P range	Less than 1 V	—	
			Except for P range	8 V or more	—	
R range switch	B54	18	R range	Less than 1 V	—	
			Except for R range	8 V or more	—	
N range switch	B54	9	N range	Less than 1 V	—	
			Except for N range	8 V or more	—	
D range switch	B54	22	D range	Less than 1 V	—	
			Except for D range	8 V or more	—	
ATF temperature sensor	B54	3	ATF temperature at 20°C (68°F)	Approx. 2.6 V	Approx. 2.6 kΩ	
			ATF temperature at 80°C (176°F)	Approx. 0.7 V	Approx. 370 Ω	
ATF temperature sensor GND	B54	16	Always	Approx. 0 V	—	
Secondary pressure sensor power supply output	B54	2	Ignition switch ON	5 V	—	
Secondary pressure sensor	B54	17	Ignition switch ON, engine OFF	Approx. 0.5 V (0 MPa)	—	Value increases with increase of engine load. (0.5 — 4.5 V)
			Ignition switch ON, engine ON	Approx. 1.0 V (1.0 MPa)	—	
Secondary pressure sensor GND	B54	15	Always	Approx. 0 V	—	
Primary speed sensor	B54	6	While driving	0 or 5 V	—	Refer to the waveform (sensor)
Secondary speed sensor	B54	7	While driving	0 or 5 V	—	Refer to the waveform (sensor)

Transmission Control Module (TCM) I/O Signal

CONTINUOUSLY VARIABLE TRANSMISSION (DIAGNOSTICS)

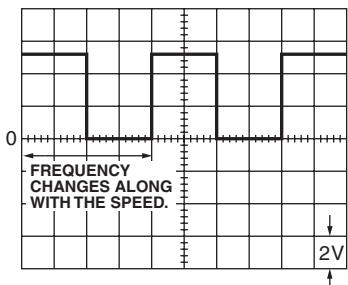
Item	Connector No.	Terminal No.	Measuring condition	Measurement value	Resistance between terminal and chassis ground	Remarks
Front wheel speed sensor	B54	20	While driving	0 or 5 V	—	Refer to the waveform (sensor)
Self shut output	B55	20	For three seconds after ignition switch ON and OFF	Less than 1 V	—	
			Ignition switch OFF	8 V or more		
F&R solenoid	B54	11	Engine ON	Refer to the waveform (solenoid (1))	Approx. 4 — 6 Ω	Resistance value at 20°C (68°F). Value is higher as the temperature increase.
Secondary solenoid	B54	12	Engine ON	Refer to the waveform (solenoid (2))	Approx. 5 — 7 Ω	Resistance value at 20°C (68°F). Value is higher as the temperature increase.
Primary UP solenoid	B54	24	Engine ON, while UP shifting	Refer to the waveform (solenoid (3))	Approx. 10 — 13.5 Ω	Resistance value at 20°C (68°F). Value is higher as the temperature increase.
Primary DOWN solenoid	B54	25	Engine ON, while DOWN shifting	Refer to the waveform (solenoid (4))	Approx. 10 — 13.5 Ω	Resistance value at 20°C (68°F). Value is higher as the temperature increase.
Lock-up duty solenoid	B54	26	Lock-up ON	Refer to the waveform (solenoid (5))	Approx. 10 — 13.5 Ω	Resistance value at 20°C (68°F). Value is higher as the temperature increase.
AWD solenoid	B54	13	Engine ON, "P" or "N" range	Refer to the waveform (solenoid (6))	Approx. 2 — 4.5 Ω	Resistance value at 20°C (68°F). Value is higher as the temperature increase.
			Engine ON, "D" range, brake ON	Refer to the waveform (solenoid (7))		
Lock-up ON/OFF solenoid	B54	23	Lock-up OFF	Less than 1 V	Approx. 13 — 18.5 Ω	Resistance value at 20°C (68°F). Value is higher as the temperature increase.
			With lock-up ON and R range	Battery voltage or higher		
CAN communication line (+)	B55	18	—	—	—	
CAN communication line (-)	B55	17	—	—	—	
GND	B54	1	Always	Approx. 0 V	—	
GND	B54	14	Always	Approx. 0 V	—	

Transmission Control Module (TCM) I/O Signal

CONTINUOUSLY VARIABLE TRANSMISSION (DIAGNOSTICS)

B: WAVEFORM

1. SENSOR

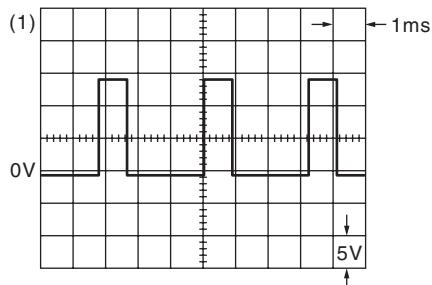


AT-04690

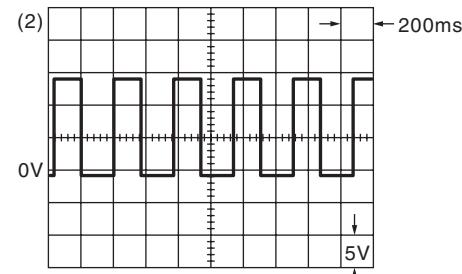
SUBARU.

2. SOLENOID

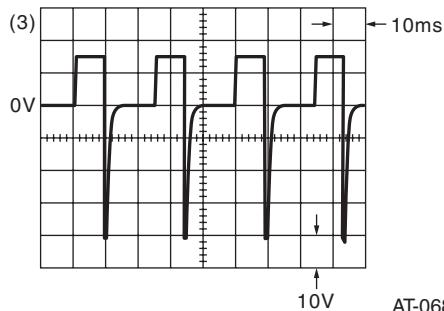
- Non-turbo model



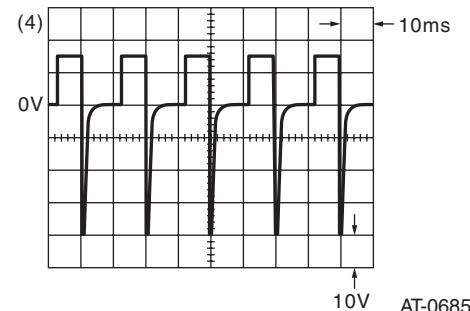
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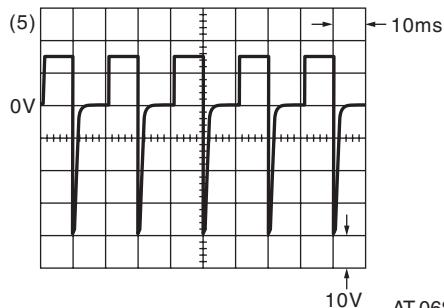
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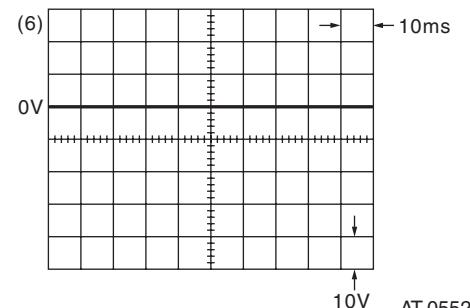
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AT-06850



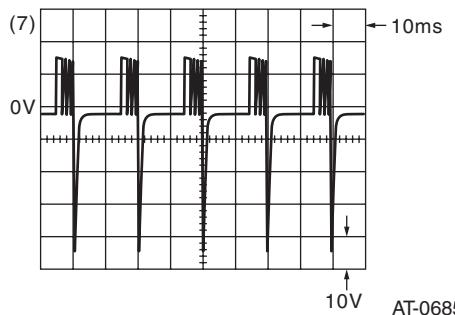
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AT-05527

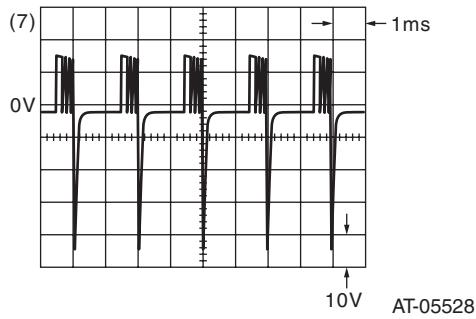
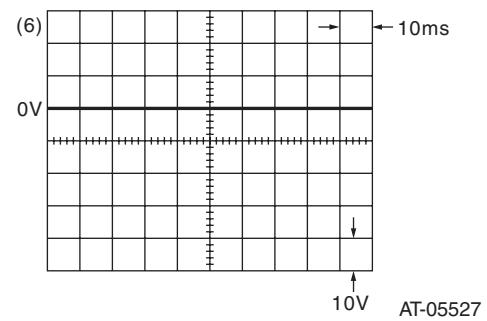
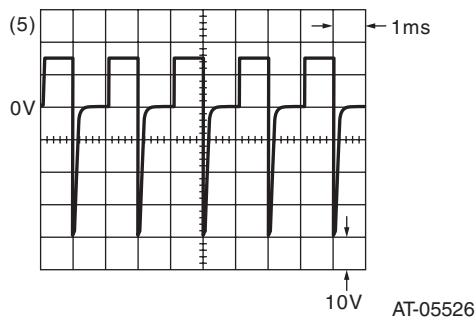
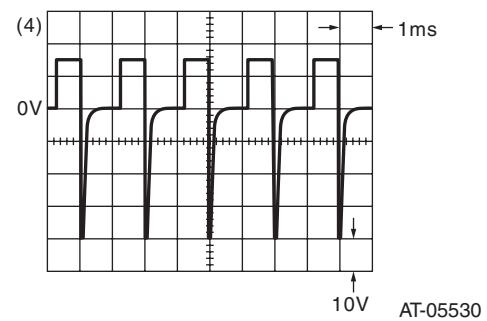
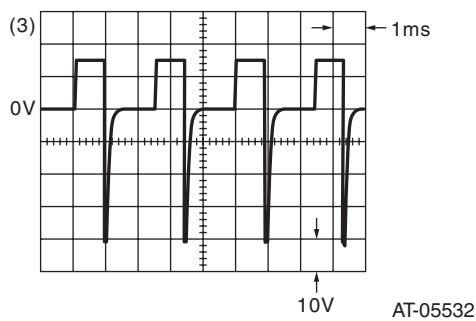
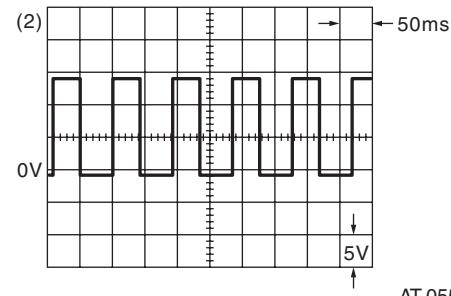
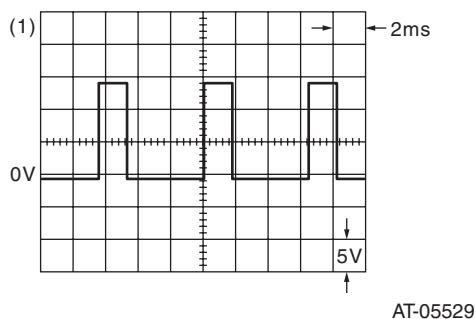
Transmission Control Module (TCM) I/O Signal

CONTINUOUSLY VARIABLE TRANSMISSION (DIAGNOSTICS)



SUBARU.

- Turbo model



SUBARU.