

Transmission Control Module (TCM) I/O Signal

CONTINUOUSLY VARIABLE TRANSMISSION (DIAGNOSTICS)

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

A: ELECTRICAL SPECIFICATION

TO **B54**

| | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 |

TO **B55**

| | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|
| 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 |

AT-05105

NOTE:

Measure after warming up.

| Item | Connector No. | Terminal No. | Measuring condition | Measured 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 | Paddle shift UP switch ON | Less than 1 V | — | |
| | | | Paddle shift UP switch OFF | 8 V or more | — | |
| Manual mode DOWN switch | B55 | 16 | Paddle shift DOWN switch ON | Less than 1 V | — | |
| | | | Paddle shift 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 | — | |

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| Item | Connector No. | Terminal No. | Measuring condition | Measured value | Resistance between terminal and chassis ground | Remarks |
|---|---------------|--------------|---|--------------------------------------|--|---|
| 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) |
| 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 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. |

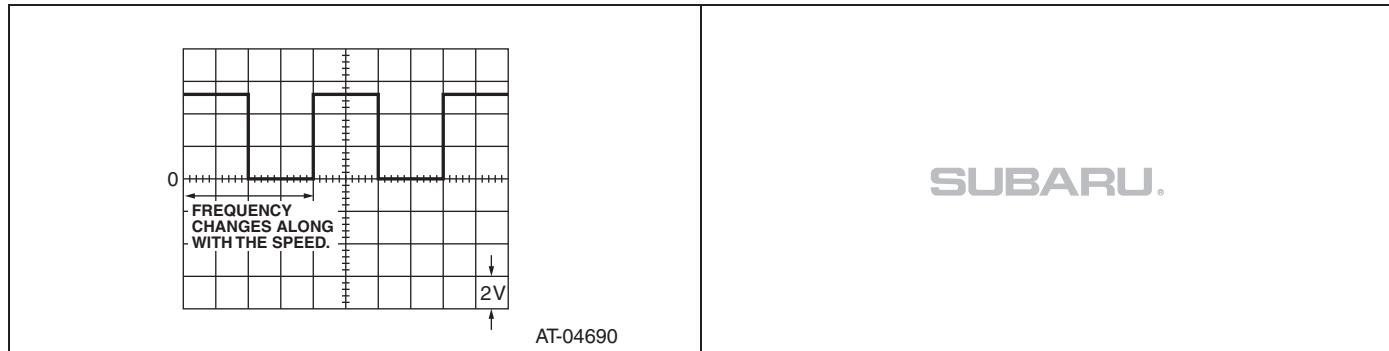
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| Item | Connector No. | Terminal No. | Measuring condition | Measured value | Resistance between terminal and chassis ground | Remarks |
|--|---------------|--------------|--------------------------------|--------------------------------------|--|---|
| 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. |
| | | | Lock-up ON | 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 | — | — |
| Data link signal (Subaru Select Monitor) | B55 | 19 | Ignition switch ON | 8 V or more | — | — |
| | | | Ignition switch OFF | Less than 1 V | | |

B: WAVEFORM

1. SENSOR



SUBARU.

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CONTINUOUSLY VARIABLE TRANSMISSION (DIAGNOSTICS)

2. SOLENOID

