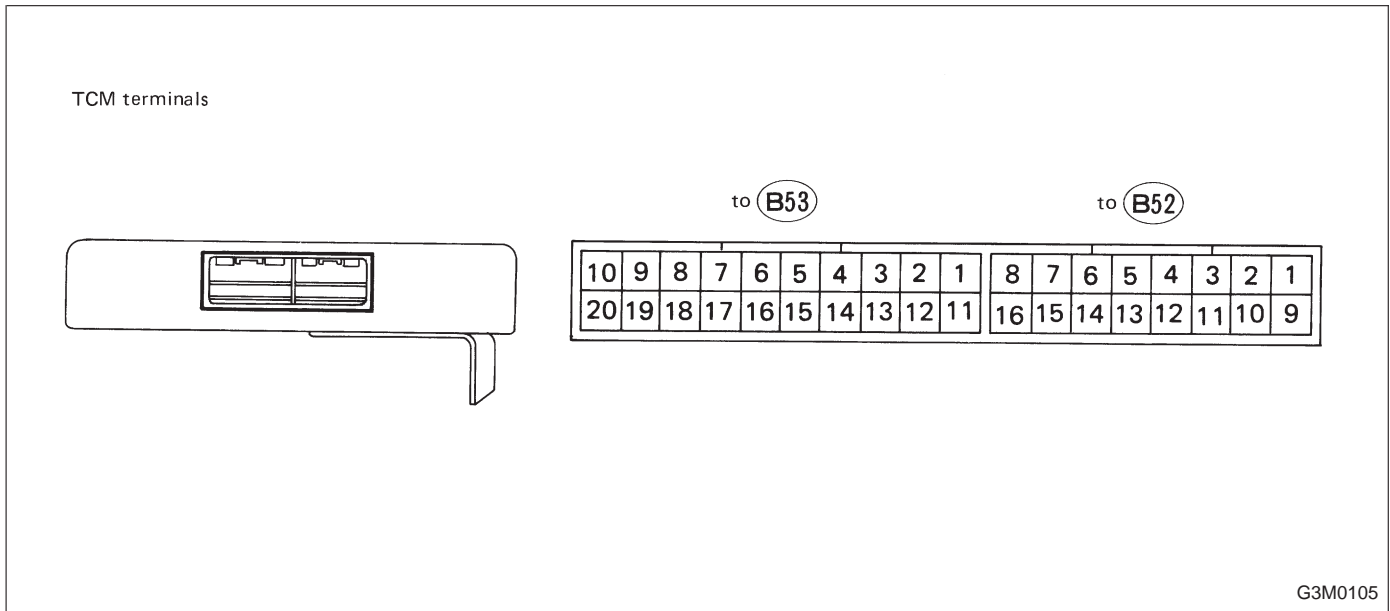


4. Transmission Control Module (TCM) I/O Signal



G3M0105

Check with ignition switch ON.

| Content | | Connector No. | Terminal No. | Measuring conditions | Voltage (V) |
|-----------------------|--------------------------|---------------|------------------------------------------|-------------------------------------------------|----------------|
| Battery supply | | B52 | 1 | Ignition switch OFF | 11 — 13 |
| Ignition power supply | | B52 B52 | 15 16 | Ignition switch ON (with engine OFF) | 11 — 13 |
| Inhibitor switch | "P" and "N" range switch | B53 | 12 | Select lever in "P" or "N" range | Less than 1 |
| | | | | Select lever in any other than "P" or "N" range | More than 8 |
| | "R" range switch | B52 | 3 | Select lever in "R" range | Less than 1 |
| | | | | Select lever in any other than "R" range | More than 9.5 |
| | "D" range switch | B53 | 11 | Select lever in "D" range | Less than 1 |
| | | | | Select lever in any other than "D" range | More than 9.5 |
| | "3" range switch | B53 | 3 | Select lever in "3" range | Less than 1 |
| | | | | Select lever in any other than "3" range | More than 9.5 |
| "2" range switch | B53 | 10 | Select lever in "2" range | Less than 1 | |
| | | | Select lever in any other than "2" range | More than 9.5 | |
| "1" range switch | B53 | 9 | Select lever in "1" range | Less than 1 | |
| | | | Select lever in any other than "1" range | More than 9.5 | |
| Diagnosis switch | | B53 | 13 | Diagnosis connector connected | Less than 1 |
| | | | | Diagnosis connector disconnected | More than 6 |
| Brake switch | | B53 | 8 | Brake pedal depressed | More than 10.5 |
| | | | | Brake pedal released | Less than 1 |
| ABS signal | | B53 | 7 | ABS switch ON | Less than 1 |
| | | | | ABS switch OFF | More than 6.5 |
| AT diagnostic signal | | B53 | 18 | Ignition switch ON (with engine OFF) | Less than 1 |
| | | | | Ignition switch ON (with engine ON) | More than 10 |

| Content | Connector No. | Terminal No. | Measuring conditions | Voltage (V) | Resistance to body (ohms) |
|-----------------------------------------------|---------------|--------------|---------------------------------------------------------------------------------------------|---------------------------|---------------------------|
| Throttle position sensor | B53 | 20 | Throttle fully closed. | 0.3 — 0.7 | — |
| | | | Throttle fully open. | 3.9 — 4.3 | |
| Throttle position sensor power supply voltage | B53 | 1 | Ignition switch ON (with engine OFF) | 4.8 — 5.7 | — |
| ATF temperature sensor | B53 | 19 | ATF temperature 20°C (68°F) | 2.9 — 4.0 | 2.1 k — 2.9 k |
| | | | ATF temperature 80°C (176°F) | 1.0 — 1.4 | 275 — 375 |
| Vehicle speed sensor 1 | B53 | 15 | Vehicle stopped. | 0 | 450 — 650 |
| | | | Vehicle speed at least 20 km/h (12 MPH) | More than 1 (AC range) | |
| Vehicle speed sensor 2 | B52 | 5 | When vehicle is slowly moved at least 2 meters (7ft). | Less than 1 ↔ More than 4 | — |
| Engine speed signal | B52 | 4 | Ignition switch ON (with engine OFF) | More than 10.5 | — |
| | | | Ignition switch ON (with engine ON) | 8 — 11 | |
| Cruise set signal | B53 | 6 | When cruise control is set (SET lamp ON). | Less than 1 | — |
| | | | When cruise control is not set (SET lamp OFF). | 6 — 10 | |
| Shift solenoid 1 | B52 | 10 | Select lever in 1st or 4th gear | More than 10 | 20 — 30 |
| | | | Select lever in 2nd or 3rd gear | Less than 1 | |
| Shift solenoid 2 | B52 | 9 | Select lever in 1st or 2nd gear | More than 10 | 20 — 30 |
| | | | Select lever in 3rd or 4th gear | Less than 1 | |
| Shift solenoid 3 | B52 | 8 | Select lever in "N" range (with throttle fully closed.) | Less than 1 | 20 — 30 |
| | | | Select lever in "D" range (with throttle fully closed.) | More than 10 | |
| Duty solenoid A | B52 | 11 | Throttle fully closed (with engine OFF) after warm-up. | 1.5 — 4.0 | 2.0 — 4.5 |
| | | | Throttle fully open (with engine OFF) after warm-up. | Less than 1 | |
| Dropping resistor | B52 | 12 | Throttle fully closed (with engine OFF) after warm-up. | 5 — 14 | 12 — 18 |
| | | | Throttle fully open (with engine OFF) after warm-up. | Less than 0.5 | |
| Duty solenoid B | B52 | 7 | When lock up occurs. | More than 8.5 | 10 — 17 |
| | | | When lock up is released. | Less than 0.5 | |
| Duty solenoid C | B52 | 6 | Fuse on FWD switch | More than 8.5 | 10 — 17 |
| | | | Fuse removed from FWD switch. (with throttle fully open and with select lever in 1st gear.) | Less than 0.5 | |
| Sensor ground line 1 | B53 | 16 | — | 0 | Less than 1 |
| Sensor ground line 2 | B53 | 4 | — | 0 | Less than 1 |
| System ground line | B52 | 14 | — | 0 | Less than 1 |
| Power system ground line | B52 | 13 | — | 0 | Less than 1 |
| FWD switch | B52 | 2 | Fuse removed. | More than 10 | |
| | | | Fuse installed. | Less than 1 | |