

## 15. Diagnostic Procedure without Diagnostic Trouble Code (DTC)

### A: CHECK SPORT SHIFT SWITCH

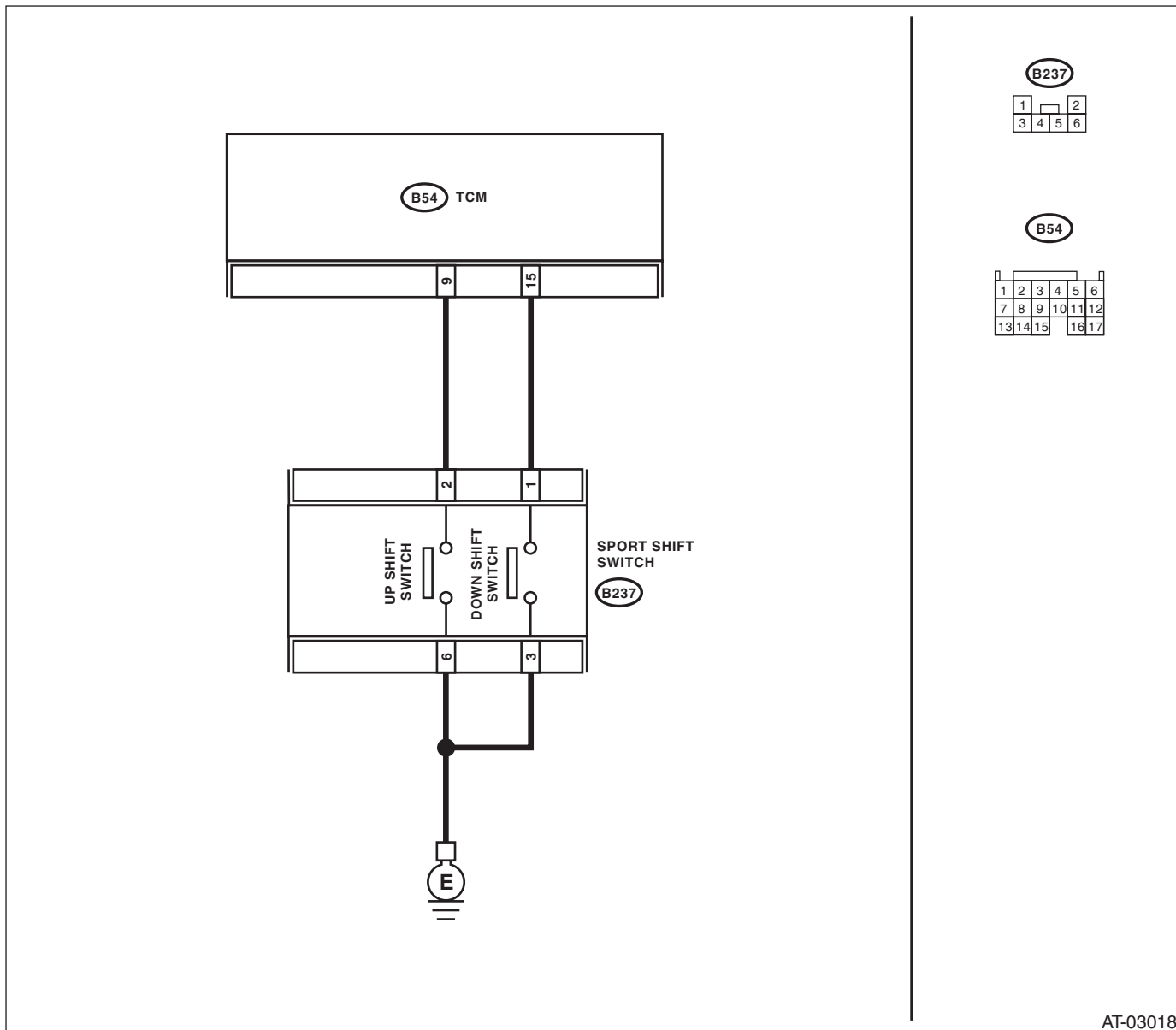
**DIAGNOSIS:**

SPORT shift switch input signal circuit is open or shorted.

**TROUBLE SYMPTOM:**

Does not shift gears in SPORT shift mode.

**WIRING DIAGRAM:**



AT-03018

# DIAGNOSTIC PROCEDURE WITHOUT DIAGNOSTIC TROUBLE CODE (DTC)

## AUTOMATIC TRANSMISSION (DIAGNOSTICS)

Step	Check	Yes	No
<b>1</b> <b>CHECK SPORT SHIFT SWITCH.</b> 1) Connect the Subaru Select Monitor to vehicle and turn the ignition switch ON and Subaru Select Monitor ON. 2) Subaru Select Monitor is set with LED display screen. 3) Move the select lever to sport shift mode. 4) Move and hold the select lever to up side.	Does the up switch LED of Subaru Select Monitor light up?	Go to step 2.	Go to step 3.
<b>2</b> <b>CHECK SPORT SHIFT SWITCH.</b> Move and hold the select lever to down side.	Does the down switch LED of Subaru Select Monitor light up?	Go to "Inspection of SPORT shift indicator" procedures. <Ref. to 4AT(D)-120, CHECK SPORT SHIFT INDICATOR, Diagnostic Procedure without Diagnostic Trouble Code (DTC).>	Go to step 12.
<b>3</b> <b>CHECK SPORT SHIFT SWITCH GROUND LINE.</b> 1) Turn the ignition switch to OFF. 2) Disconnect the connector from SPORT shift switch. 3) Measure the resistance of harness between SPORT shift switch connector and chassis ground. <b>Connector &amp; terminal</b> <b>(B237) No. 6 — Chassis ground:</b>	Is the resistance less than 1 $\Omega$ ?	Go to step 4.	Repair the open circuit in harness between SPORT shift switch and chassis ground.
<b>4</b> <b>CHECK SPORT SHIFT SWITCH.</b> Measure the resistance between SPORT shift switch terminals. <b>Connector &amp; terminal</b> <b>(B237) No. 6 — No. 2:</b>	Is the resistance more than 1 $M\Omega$ ?	Go to step 5.	Replace the guide plate assembly.
<b>5</b> <b>CHECK SPORT SHIFT SWITCH.</b> 1) Move the select lever to SPORT shift mode. 2) Measure the resistance between SPORT shift switch terminals. <b>Connector &amp; terminal</b> <b>(B237) No. 6 — No. 2:</b>	Is the resistance less than 1 $\Omega$ ?	Go to step 6.	Replace the guide plate assembly.
<b>6</b> <b>CHECK HARNESS CONNECTOR BETWEEN TCM AND SPORT SHIFT SWITCH.</b> 1) Disconnect the connector from TCM. 2) Measure the resistance of harness between TCM connector and SPORT shift switch connector. <b>Connector &amp; terminal</b> <b>(B237) No. 2 — (B54) No. 9:</b>	Is the resistance less than 1 $\Omega$ ?	Go to step 7.	Repair the open circuit in harness between SPORT shift switch connector and TCM connector and poor contact in coupling connector.
<b>7</b> <b>CHECK HARNESS CONNECTOR BETWEEN TCM AND SPORT SHIFT SWITCH.</b> 1) Disconnect the connector from steering roll connector. 2) Measure the resistance of harness between SPORT shift switch connector and chassis ground. <b>Connector &amp; terminal</b> <b>(B237) No. 2 — Chassis ground:</b>	Is the resistance more than 1 $M\Omega$ ?	Go to step 8.	Repair the short circuit in harness between SPORT shift switch connector and TCM connector.

# DIAGNOSTIC PROCEDURE WITHOUT DIAGNOSTIC TROUBLE CODE (DTC)

## AUTOMATIC TRANSMISSION (DIAGNOSTICS)

Step	Check	Yes	No
<b>8 CHECK INPUT SIGNAL FOR TCM.</b> 1) Connect all connectors. 2) Turn the ignition switch to ON. (Engine is stopped.) 3) Measure the signal voltage for TCM. <b>Connector &amp; terminal</b> <b>(B54) No. 9 (+) — Chassis ground (-):</b>	Is the voltage more than 9 V?	Go to step 9.	Replace the TCM. <Ref. to 4AT-77, Transmission Control Module (TCM).>
<b>9 CHECK INPUT SIGNAL FOR TCM.</b> 1) Move select lever to shift up side. 2) Measure the signal voltage for TCM. <b>Connector &amp; terminal</b> <b>(B54) No. 9 (+) — Chassis ground (-):</b>	Is the voltage less than 1 V?	Go to step 10.	Replace the TCM. <Ref. to 4AT-77, Transmission Control Module (TCM).>
<b>10 CHECK SPORT SHIFT SWITCH GROUND LINE.</b> 1) Turn the ignition switch to OFF. 2) Disconnect the connector from SPORT shift switch. 3) Measure the resistance of harness between SPORT shift switch connector and chassis ground. <b>Connector &amp; terminal</b> <b>(B237) No. 3 — Chassis ground:</b>	Is the resistance less than 1 $\Omega$ ?	Go to step 11.	Repair the open circuit in harness between SPORT shift switch and chassis ground.
<b>11 CHECK SPORT SHIFT SWITCH.</b> Measure the resistance between SPORT shift switch terminals. <b>Connector &amp; terminal</b> <b>(B237) No. 3 — No. 1:</b>	Is the resistance more than 1 M $\Omega$ ?	Go to step 12.	Replace the guide plate assembly.
<b>12 CHECK SPORT SHIFT SWITCH.</b> 1) Move the select lever to SPORT shift mode. 2) Measure the resistance between SPORT shift switch terminals. <b>Connector &amp; terminal</b> <b>(B237) No. 3 — No. 1:</b>	Is the resistance less than 1 $\Omega$ ?	Go to step 13.	Replace the guide plate assembly.
<b>13 CHECK HARNESS CONNECTOR BETWEEN TCM AND SPORT SHIFT SWITCH.</b> 1) Disconnect the connector from TCM. 2) Measure the resistance of harness between TCM connector and SPORT shift switch connector. <b>Connector &amp; terminal</b> <b>(B237) No. 1 — (B54) No. 15:</b>	Is the resistance less than 1 $\Omega$ ?	Go to step 14.	Repair the open circuit in harness between SPORT shift switch connector and TCM connector and poor contact in coupling connector.
<b>14 CHECK HARNESS CONNECTOR BETWEEN TCM AND SPORT SHIFT SWITCH.</b> 1) Disconnect the steering roll connector. 2) Measure the resistance of harness between SPORT shift switch connector and chassis ground. <b>Connector &amp; terminal</b> <b>(B237) No. 1 — Chassis ground:</b>	Is the resistance more than 1 M $\Omega$ ?	Go to step 15.	Repair the short circuit in harness between SPORT shift switch connector and TCM connector.
<b>15 CHECK INPUT SIGNAL FOR TCM.</b> 1) Connect all connectors. 2) Turn the ignition switch to ON. (Engine is stopped.) 3) Measure the signal voltage for TCM. <b>Connector &amp; terminal</b> <b>(B54) No. 15 (+) — Chassis ground (-):</b>	Is the voltage more than 9 V?	Go to step 16.	Replace the TCM. <Ref. to 4AT-77, Transmission Control Module (TCM).>

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## AUTOMATIC TRANSMISSION (DIAGNOSTICS)

Step	Check	Yes	No
<b>16</b> <b>CHECK INPUT SIGNAL FOR TCM.</b> 1) Move the select lever to shift down side. 2) Measure the signal voltage for TCM. <b>Connector &amp; terminal</b> <b>(B54) No. 15 (+) — Chassis ground (-):</b>	Is the voltage less than 1 V?	Go to step 17.	Replace the TCM. <Ref. to 4AT-77, Transmission Control Module (TCM).>
<b>17</b> <b>CHECK POOR CONTACT.</b>	Is there poor contact in SPORT shift switch circuit?	Repair the poor contact.	Intermittent poor contact in SPORT shift switch circuit connector or har- ness

# DIAGNOSTIC PROCEDURE WITHOUT DIAGNOSTIC TROUBLE CODE (DTC)

## AUTOMATIC TRANSMISSION (DIAGNOSTICS)

### B: CHECK SPORT SHIFT INDICATOR

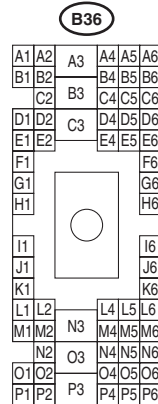
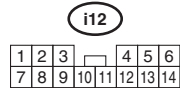
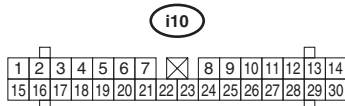
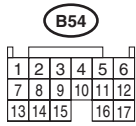
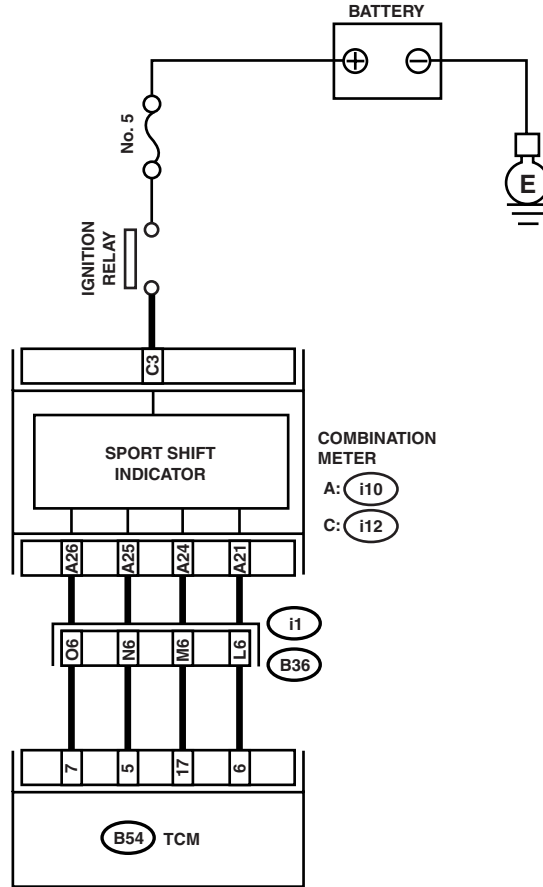
#### DIAGNOSIS:

The SPORT shift indicator output signal circuit is open or shorted.

#### TROUBLE SYMPTOM:

- SPORT shift indicator does not illuminate or remains illuminated.
- SPORT shift indicator display does not change.

#### WIRING DIAGRAM:



AT-01612

# DIAGNOSTIC PROCEDURE WITHOUT DIAGNOSTIC TROUBLE CODE (DTC)

## AUTOMATIC TRANSMISSION (DIAGNOSTICS)

Step	Check	Yes	No	
1	<b>CHECK SPORT SHIFT INDICATOR.</b>	Does SPORT shift indicator operate normally when driving in SPORT shift mode?	Go to "CHECK BUZZER". <Ref. to 4AT(D)-122, CHECK BUZZER, Diagnostic Procedure without Diagnostic Trouble Code (DTC).>	Go to step 2.
2	<b>CHECK COMBINATION METER.</b>	Do meters and indicators other than SPORT shift indicator operate normally?	Go to step 3.	Check the combination meter.
3	<b>CHECK HARNESS CONNECTOR BETWEEN TCM AND COMBINATION METER.</b> 1) Turn the ignition switch to OFF. 2) Disconnect the connector from TCM and combination meter. 3) Measure the resistance of harness between TCM and combination meter. <b>Connector &amp; terminal</b> <b>(B54) No. 6 — (i10) No. 21:</b> <b>(B54) No. 17 — (i10) No. 24:</b> <b>(B54) No. 5 — (i10) No. 25:</b> <b>(B54) No. 7 — (i10) No. 26:</b>	Is the resistance less than 1 $\Omega$ ?	Go to step 4.	Repair the open circuit in harness between TCM and combination meter connector and poor contact in coupling connector.
4	<b>CHECK HARNESS CONNECTOR BETWEEN TCM AND COMBINATION METER.</b> Measure the resistance between TCM and chassis ground. <b>Connector &amp; terminal</b> <b>(B54) No. 6 — Chassis ground:</b> <b>(B54) No. 17 — Chassis ground:</b> <b>(B54) No. 5 — Chassis ground:</b> <b>(B54) No. 7 — Chassis ground:</b>	Is the resistance more than 1 $M\Omega$ ?	Go to step 5.	Repair the short circuit in harness between TCM and combination meter connector.
5	<b>CHECK OUTPUT SIGNAL EMITTED FROM TCM.</b> 1) Connect the connector to TCM and combination meter. 2) Turn the ignition switch to ON. (Engine is stopped.) 3) Measure the voltage between TCM and chassis ground. <b>Connector &amp; terminal</b> <b>(B54) No. 6 (+) — Chassis ground (-):</b> <b>(B54) No. 17 (+) — Chassis ground (-):</b> <b>(B54) No. 7 (+) — Chassis ground (-):</b> <b>(B54) No. 5 (+) — Chassis ground (-):</b>	Is the voltage more than 4 V?	Go to step 6.	Replace the combination meter.
6	<b>CHECK POOR CONTACT.</b>	Is there poor contact in SPORT shift indicator circuit?	Repair the poor contact.	Replace the TCM.

# DIAGNOSTIC PROCEDURE WITHOUT DIAGNOSTIC TROUBLE CODE (DTC)

## AUTOMATIC TRANSMISSION (DIAGNOSTICS)

### C: CHECK BUZZER

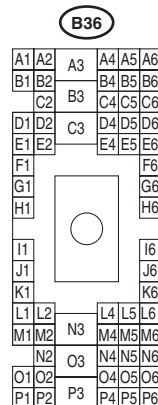
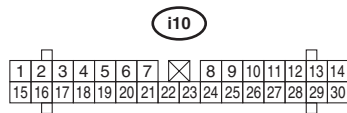
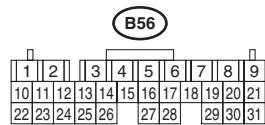
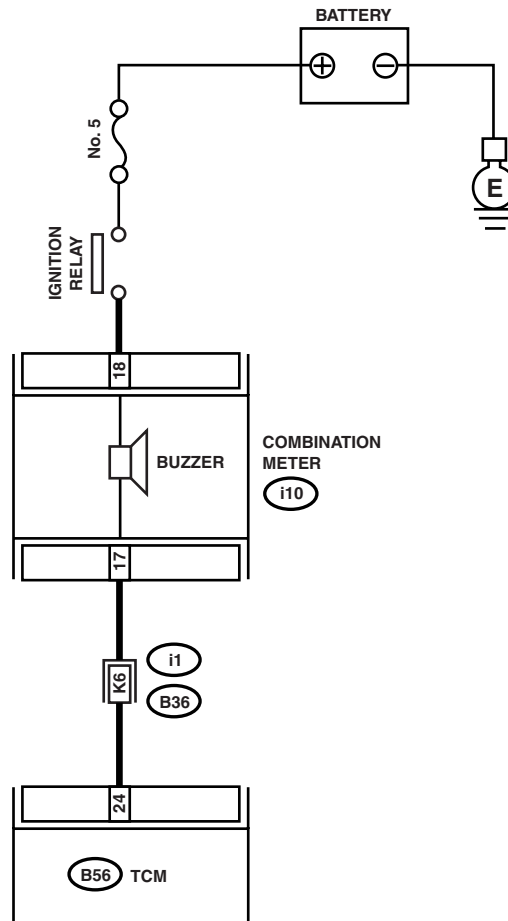
#### DIAGNOSIS:

Buzzer output signal circuit is open or shorted.

#### TROUBLE SYMPTOM:

Buzzer remains sounded.

#### WIRING DIAGRAM:



AT-01613

# DIAGNOSTIC PROCEDURE WITHOUT DIAGNOSTIC TROUBLE CODE (DTC)

AUTOMATIC TRANSMISSION (DIAGNOSTICS)

Step	Check	Yes	No
<b>1</b> <b>CHECK HARNESS BETWEEN TCM AND COMBINATION METER.</b> 1) Turn ignition switch to OFF. 2) Disconnect connector from combination meter and TCM. 3) Measure the resistance between TCM connector and chassis ground. <b>Connector &amp; terminal</b> <b>(B56) No. 24 — (i10) No. 17:</b>	Is the resistance less than 1 $\Omega$ ?	Go to step 2.	Repair the open or short circuit between TCM and combination meter.
<b>2</b> <b>CHECK HARNESS BETWEEN TCM AND COMBINATION METER.</b> 1) Turn ignition switch to OFF. 2) Disconnect connector from combination meter and TCM. 3) Measure the resistance between TCM connector and chassis ground. <b>Connector &amp; terminal</b> <b>(B56) No. 24 — Chassis ground:</b>	Is the resistance more than 1 $M\Omega$ ?	Go to step 3.	Repair the short circuit in harness between TCM and combination meter connector.
<b>3</b> <b>CHECK COMBINATION METER.</b> 1) Connect connector to combination meter. 2) Turn ignition switch to ON. (Engine is stopped.)	Does buzzer sound?	Replace the combination meter.	Go to step 4.
<b>4</b> <b>CHECK POOR CONTACT.</b>	Is there poor contact in buzzer circuit?	Repair the poor contact.	Replace the TCM.