

## 9. CAN Communication Circuit Check

### A: PROCEDURE

#### 1. BUS "A" (MAIN-CAN)

NOTE:

- When measuring the resistance of CAN communication circuit, measure it in sleep status.

To enter sleep status

- With ignition switch OFF and key or switch operation stopped, keep the doors, trunk, and rear gate all closed for one minute or more.
- On models with keyless access function, keep the access key 2 m or more away from the vehicle.
- When the bus line is measured, combined resistance of the end resistance (120  $\Omega$ ) in ECM and the end resistance (120  $\Omega$ ) in VDC CM can be measured. The combined resistance is supposed to be approximately 56 — 64  $\Omega$  with the stabilizing circuit included. If the measured resistance value becomes 55  $\Omega$  or less, main wiring harness or related lines may be shorted. Or, the combined resistance may have changed because of a resistance other than the end resistance created on the circuit. If the measured value is 65  $\Omega$  or more, there may be a malfunction such as open circuit in one of the end resistances, or in the stabilizing circuit, or in the main wiring harness.

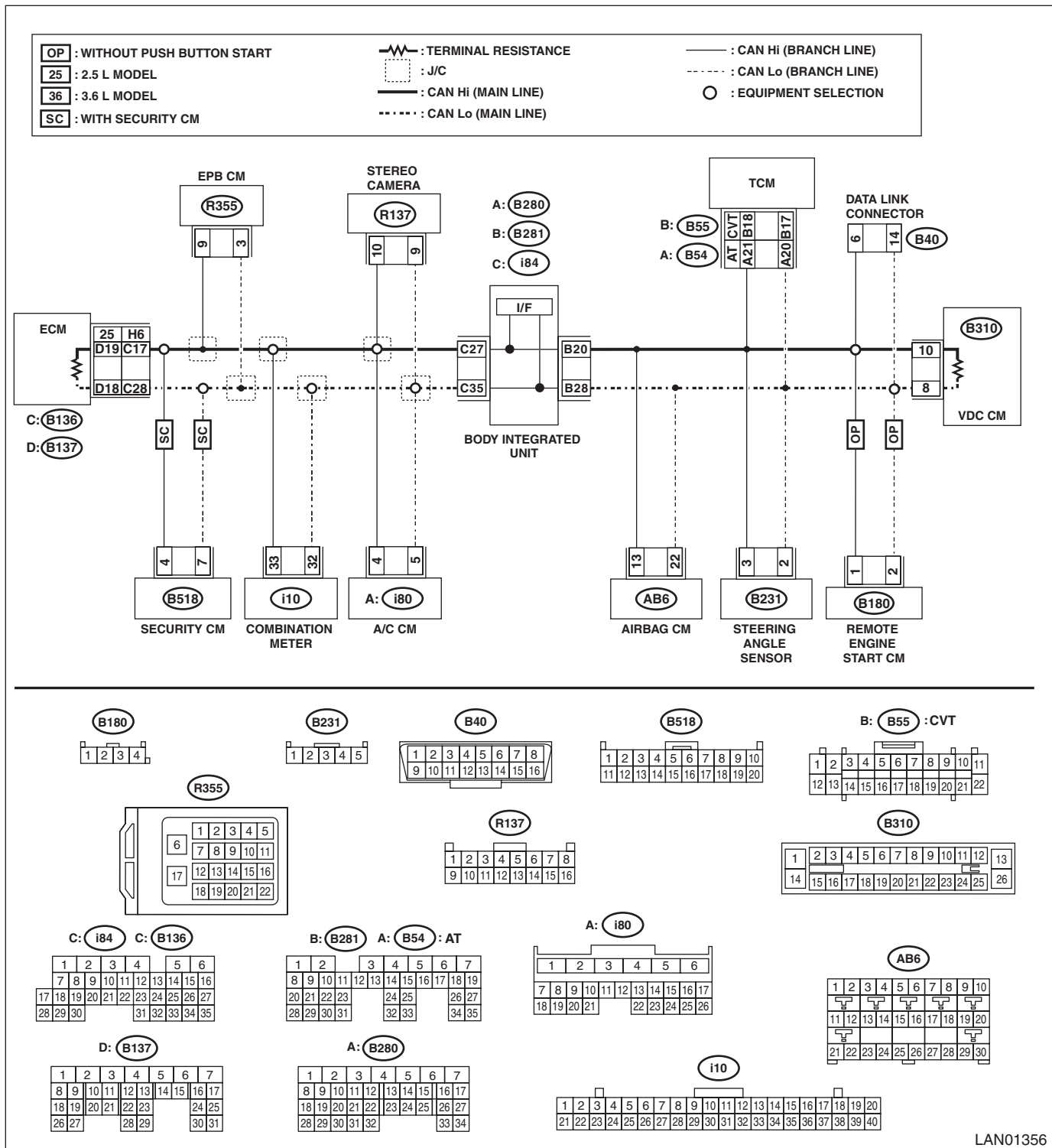
Also, even when the resistance value falls within approx. 56 — 64  $\Omega$ , related lines may be open if an error of communication for initializing or a CAN system U-code has occurred. (The resistance won't be between approx. 56 — 64  $\Omega$  if the main wiring harness is open.)

# CAN Communication Circuit Check

LAN SYSTEM (DIAGNOSTICS)

## WIRING DIAGRAM:

CAN communication system <Ref. to WI-83, WIRING DIAGRAM, CAN Communication System.>



LAN01356

# CAN Communication Circuit Check

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
<p><b>1</b>      <b>CHECK FROM DATA LINK CONNECTOR.</b> Using the tester, measure the resistance between terminals. <b>Connector &amp; terminal</b> <b>(B40) No. 6 — Chassis ground:</b> <b>(B40) No. 14 — Chassis ground:</b></p>	Is the resistance 10 Ω or less?	Check for ground short. <Ref. to LAN(diag)-18, GROUND SHORT INSPECTION (BUS "A" (MAIN-CAN)), INSPECTION, CAN Communication Circuit Check.>	Go to step 2.
<p><b>2</b>      <b>CHECK FROM DATA LINK CONNECTOR.</b> 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. <b>Connector &amp; terminal</b> <b>(B40) No. 6 — Chassis ground:</b> <b>(B40) No. 14 — Chassis ground:</b></p>	Is the voltage 5 V or less?	Go to step 3.	Check for battery short. <Ref. to LAN(diag)-20, BATTERY SHORT INSPECTION (BUS "A" (MAIN-CAN)), INSPECTION, CAN Communication Circuit Check.>
<p><b>3</b>      <b>CHECK FROM DATA LINK CONNECTOR.</b> 1) Turn the ignition switch to OFF. 2) Using the tester, measure the resistance between terminals. <b>Connector &amp; terminal</b> <b>(B40) No. 6 — No. 14:</b></p>	Is the resistance 55 Ω or less?	Perform the inspection for the resistance of 55 Ω or less. <Ref. to LAN(diag)-24, 55 Ω OR LESS, INSPECTION, CAN Communication Circuit Check.>	Go to step 4.
<p><b>4</b>      <b>CHECK FROM DATA LINK CONNECTOR.</b> Using the tester, measure the resistance between terminals. <b>Connector &amp; terminal</b> <b>(B40) No. 6 — No. 14:</b></p>	Is the resistance 65 Ω or more?	Perform the inspection for the resistance of 65 Ω or more. <Ref. to LAN(diag)-27, 65 Ω OR MORE, INSPECTION, CAN Communication Circuit Check.>	If the display of CAN system U-code disappears from the current malfunction, the CAN network is currently normal. If the U-code has detected as current malfunction, related lines may be open. Perform the inspection for the related line corresponding to the detected DTC. <Ref. to LAN(diag)-16, LIST, CAN Communication Circuit Check.>

# CAN Communication Circuit Check

LAN SYSTEM (DIAGNOSTICS)

## 2. BUS "B" (SMART SYSTEM CAN)

NOTE:

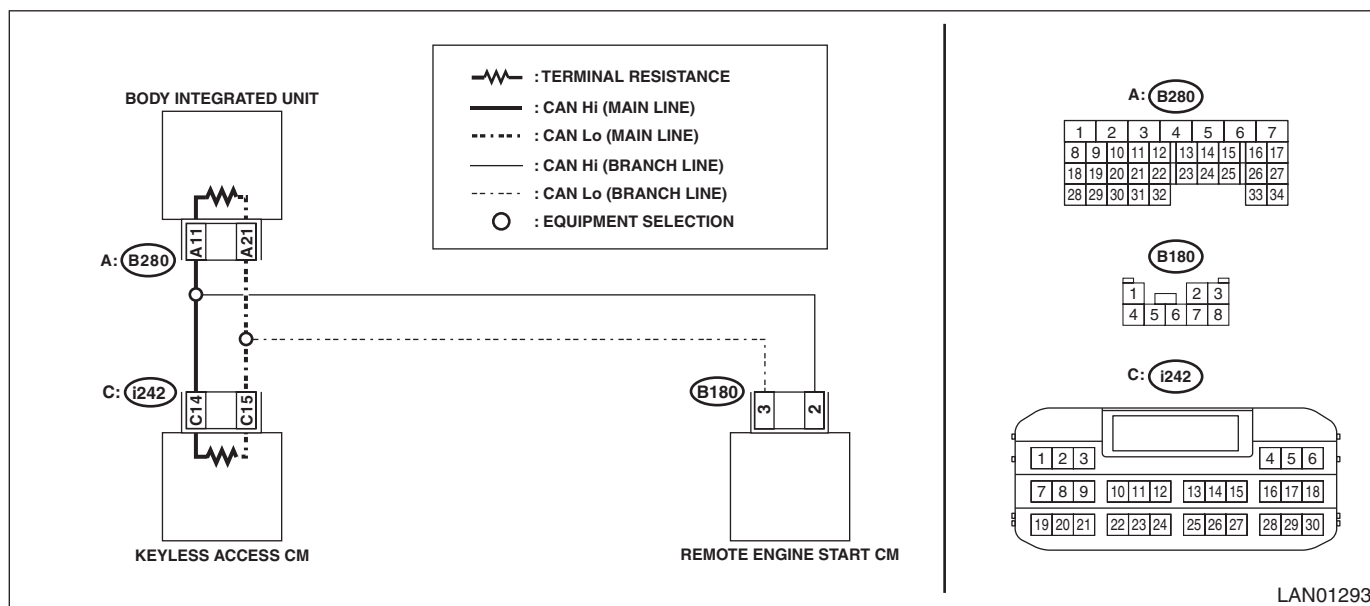
- When measuring the resistance of CAN communication circuit, measure it in sleep status.

To enter sleep status

- With ignition switch OFF and key or switch operation stopped, keep the doors, trunk, and rear gate all closed for one minute or more.
- On models with keyless access function, keep the access key 2 m or more away from the vehicle.
- When the bus line is measured, combined resistance of the end resistance (120 Ω) in body integrated unit and the end resistance (120 Ω) in keyless access CM can be measured. The combined resistance is supposed to be approximately 57 — 63 Ω. If the measured resistance value becomes 56 Ω or less, main wiring harness or related lines may be shorted. Or, the combined resistance may have changed because of a resistance other than the end resistance created on the circuit. If the measured value is 64 Ω or more, there may be a malfunction such as open circuit in one of the end resistances or in the main wiring harness. Also, even when the resistance value falls within approx. 57 — 63 Ω, related lines may be open if an error of communication for initializing or a CAN system U-code has occurred. (The resistance won't be between approx. 57 — 63 Ω if the main wiring harness is open.)

### WIRING DIAGRAM:

CAN communication system <Ref. to WI-83, WIRING DIAGRAM, CAN Communication System.>



LAN01293

Step	Check	Yes	No
<b>1</b> <b>CHECK FROM BODY INTEGRATED UNIT CONNECTOR.</b> 1) Disconnect the body integrated unit connector. 2) Using the tester, measure the resistance between terminals. <b>Connector &amp; terminal</b> <b>(B280) No. 11 — Chassis ground:</b> <b>(B280) No. 21 — Chassis ground:</b>	Is the resistance 10 Ω or less?	Check for ground short. <Ref. to LAN(diag)-47, GROUND SHORT INSPECTION (BUS "B" (SMART SYSTEM CAN)), INSPECTION, CAN Communication Circuit Check.>	Go to step 2.

# CAN Communication Circuit Check

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
<p><b>2</b></p> <p><b>CHECK FROM BODY INTEGRATED UNIT CONNECTOR.</b></p> <p>1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals.</p> <p><b>Connector &amp; terminal</b> <b>(B280) No. 11 — Chassis ground:</b> <b>(B280) No. 21 — Chassis ground:</b></p>	<p>Is the voltage 5 V or less?</p>	<p>Go to step 3.</p>	<p>Check for battery short. &lt;Ref. to LAN(diag)-48, BATTERY SHORT INSPECTION (BUS "B" (SMART SYSTEM CAN)), INSPECTION, CAN Communication Circuit Check.&gt;</p>
<p><b>3</b></p> <p><b>CHECK FROM BODY INTEGRATED UNIT CONNECTOR.</b></p> <p>1) Turn the ignition switch to OFF. 2) Using the tester, measure the resistance between terminals.</p> <p><b>Connector &amp; terminal</b> <b>(B280) No. 11 — No. 21:</b></p>	<p>Is the resistance 56 Ω or less?</p>	<p>Perform the inspection for the resistance of 56 Ω or less. &lt;Ref. to LAN(diag)-51, 56 Ω OR LESS, INSPECTION, CAN Communication Circuit Check.&gt;</p>	<p>Go to step 4.</p>
<p><b>4</b></p> <p><b>CHECK FROM BODY INTEGRATED UNIT CONNECTOR.</b></p> <p>Using the tester, measure the resistance between terminals.</p> <p><b>Connector &amp; terminal</b> <b>(B280) No. 11 — No. 21:</b></p>	<p>Is the resistance 64 Ω or more?</p>	<p>Perform the inspection for the resistance of 64 Ω or more. &lt;Ref. to LAN(diag)-52, 64 Ω OR MORE, INSPECTION, CAN Communication Circuit Check.&gt;</p>	<p>If the display of CAN system U-code disappears from the current malfunction, the CAN network is currently normal. If the U-code has detected as current malfunction, related lines may be open. Perform the inspection for the related line corresponding to the detected DTC. &lt;Ref. to LAN(diag)-16, LIST, CAN Communication Circuit Check.&gt;</p>

# CAN Communication Circuit Check

## LAN SYSTEM (DIAGNOSTICS)

### B: LIST

- Bus "A" (MAIN-CAN)

Resistance value between CAN Hi and Lo	Contents of inspection	Remarks
Ground short inspection	<Ref. to LAN(diag)-18, GROUND SHORT INSPECTION (BUS "A" (MAIN-CAN)), INSPECTION, CAN Communication Circuit Check.>	Shorted to ground in the communication circuit or control module.
Battery short inspection	<Ref. to LAN(diag)-20, BATTERY SHORT INSPECTION (BUS "A" (MAIN-CAN)), INSPECTION, CAN Communication Circuit Check.>	Shorted to battery power supply in the communication circuit or control module.
56 — 64 $\Omega$	<Ref. to LAN(diag)-22, 56 — 64 $\Omega$ , INSPECTION, CAN Communication Circuit Check.>	Combined resistance of end resistance does not have malfunction; short to ground or +B short of the CAN communication circuit is possible, however.
55 $\Omega$ or less	<Ref. to LAN(diag)-24, 55 $\Omega$ OR LESS, INSPECTION, CAN Communication Circuit Check.>	Resistance is lower than combined resistance of end resistance. Short to CAN Hi and CAN Lo on the CAN communication circuit is possible.
65 $\Omega$ or more	<Ref. to LAN(diag)-27, 65 $\Omega$ OR MORE, INSPECTION, CAN Communication Circuit Check.>	Resistance is higher than combined resistance of end resistance. Open circuit of CAN communication circuit is possible.
Related lines 56 — 64 $\Omega$ (TCM)	<Ref. to LAN(diag)-29, RELATED LINES 56 — 64 $\Omega$ (TCM), INSPECTION, CAN Communication Circuit Check.>	No TCM data is received. Perform inspection when faulty is detected.
Related lines 56 — 64 $\Omega$ (steering angle sensor)	<Ref. to LAN(diag)-31, RELATED LINES 56 — 64 $\Omega$ (STEERING ANGLE SENSOR), INSPECTION, CAN Communication Circuit Check.>	Perform inspection, when communication failure of steering angle sensor is detected.
Related lines 56 — 64 $\Omega$ (A/C CM)	<Ref. to LAN(diag)-33, RELATED LINES 56 — 64 $\Omega$ (A/C CM), INSPECTION, CAN Communication Circuit Check.>	No A/C data is received. Perform inspection when faulty is detected.
Related lines 56 — 64 $\Omega$ (electronic parking CM)	<Ref. to LAN(diag)-35, RELATED LINES 56 — 64 $\Omega$ (ELECTRONIC PARKING CM), INSPECTION, CAN Communication Circuit Check.>	No EPB data is received. Perform inspection when faulty is detected.
Related line 56 — 64 $\Omega$ (stereo camera)	<Ref. to LAN(diag)-41, RELATED LINE 56 — 64 $\Omega$ (STEREO CAMERA), INSPECTION, CAN Communication Circuit Check.>	No ACC data is received. Perform inspection when faulty is detected.
Related lines 56 — 64 $\Omega$ (combination meter)	<Ref. to LAN(diag)-37, RELATED LINES 56 — 64 $\Omega$ (COMBINATION METER), INSPECTION, CAN Communication Circuit Check.>	No meter data is received. Perform inspection when faulty is detected.
Related lines 56 — 64 $\Omega$ (security CM)	<Ref. to LAN(diag)-39, RELATED LINES 56 — 64 $\Omega$ (SECURITY CM), INSPECTION, CAN Communication Circuit Check.>	No security CM data is received. Perform inspection when faulty is detected.
Related lines 56 — 64 $\Omega$ (airbags)	<Ref. to LAN(diag)-43, RELATED LINES 56 — 64 $\Omega$ (AIRBAGS), INSPECTION, CAN Communication Circuit Check.>	Perform inspection, when communication failure of airbag system is detected.
Related lines 56 — 64 $\Omega$ (remote engine start)	<Ref. to LAN(diag)-45, RELATED LINES 56 — 64 $\Omega$ (REMOTE ENGINE START), INSPECTION, CAN Communication Circuit Check.>	No other data is received. Perform inspection when faulty is not detected.

# CAN Communication Circuit Check

LAN SYSTEM (DIAGNOSTICS)

- Bus “B” (smart system CAN)

Resistance value between CAN Hi and Lo	Contents of inspection	Remarks
Ground short inspection	<Ref. to LAN(diag)-47, GROUND SHORT INSPECTION (BUS “B” (SMART SYSTEM CAN)), INSPECTION, CAN Communication Circuit Check.>	Shorted to ground in the communication circuit or control module.
Battery short inspection	<Ref. to LAN(diag)-48, BATTERY SHORT INSPECTION (BUS “B” (SMART SYSTEM CAN)), INSPECTION, CAN Communication Circuit Check.>	Shorted to battery power supply in the communication circuit or control module.
57 — 63 Ω	<Ref. to LAN(diag)-49, 57 — 63 Ω, INSPECTION, CAN Communication Circuit Check.>	Combined resistance of end resistance does not have malfunction; short to ground or +B short of the CAN communication circuit is possible, however.
56 Ω or less	<Ref. to LAN(diag)-51, 56 Ω OR LESS, INSPECTION, CAN Communication Circuit Check.>	Resistance is lower than combined resistance of end resistance. Short to CAN Hi and CAN Lo on the CAN communication circuit is possible.
64 Ω or more	<Ref. to LAN(diag)-52, 64 Ω OR MORE, INSPECTION, CAN Communication Circuit Check.>	Resistance is higher than combined resistance of end resistance. Open circuit of CAN communication circuit is possible.
Related lines 57 — 63 Ω (remote engine start)	<Ref. to LAN(diag)-53, RELATED LINES 57 — 63 Ω (REMOTE ENGINE START), INSPECTION, CAN Communication Circuit Check.>	No other data is received. Perform inspection when faulty is not detected.

# CAN Communication Circuit Check

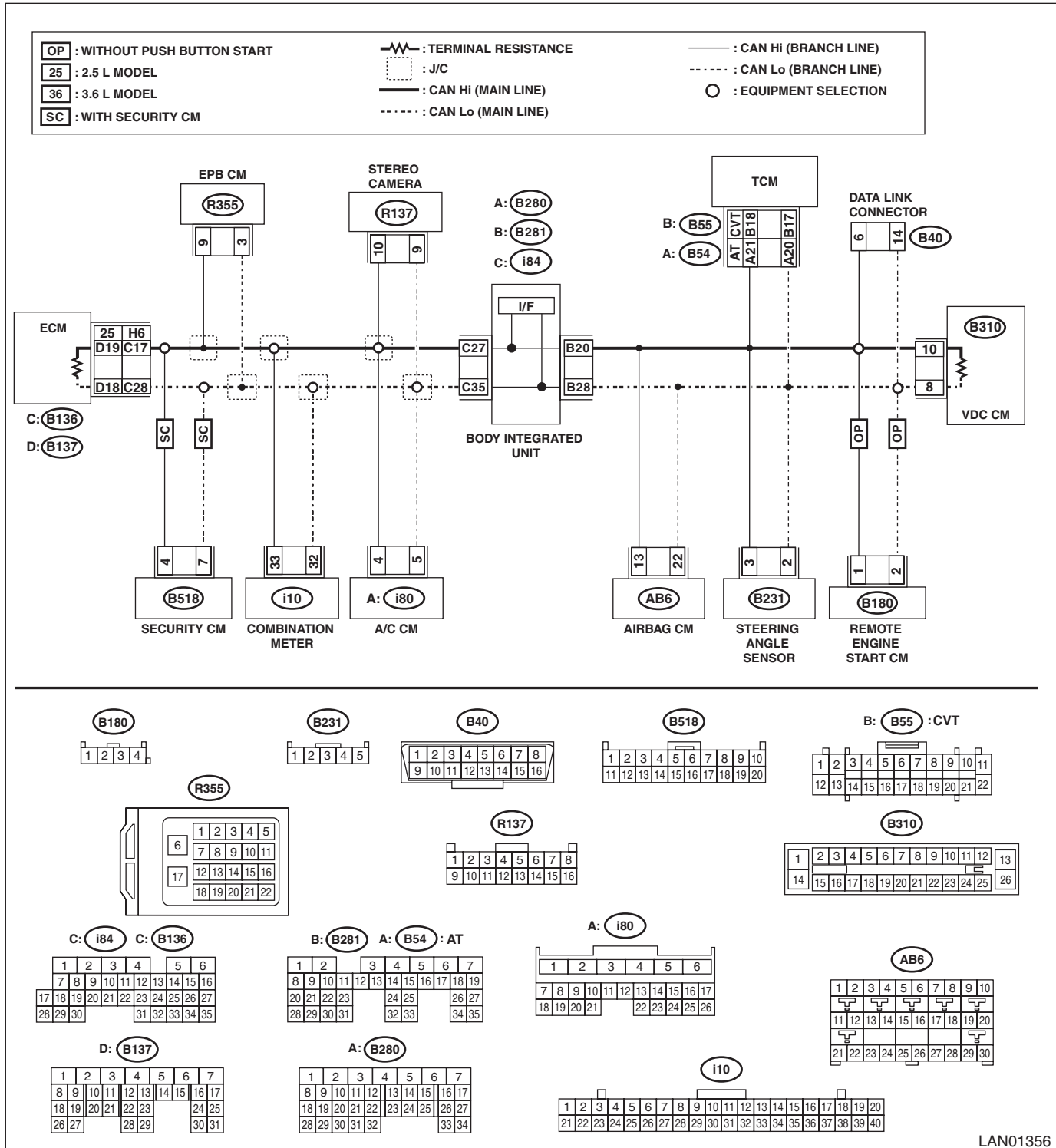
LAN SYSTEM (DIAGNOSTICS)

## C: INSPECTION

### 1. GROUND SHORT INSPECTION (BUS "A" (MAIN-CAN))

#### WIRING DIAGRAM:

CAN communication system <Ref. to WI-83, WIRING DIAGRAM, CAN Communication System.>



LAN01356

#### NOTE:

Main wiring harness or related lines may be shorted to ground, or shorted to ground in one of the control modules.



# CAN Communication Circuit Check

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
<p><b>1</b>     <b>CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.</b> Using the tester, measure the resistance between terminals. <b>Connector &amp; terminal</b> <b>(B40) No. 6 — Chassis ground:</b> <b>(B40) No. 14 — Chassis ground:</b></p>	Is the resistance 10 Ω or less?	Go to step 2.	Currently, it is normal.
<p><b>2</b>     <b>CHECK CONTROL MODULE.</b> With the tester connected, disconnect control module. NOTE: Disconnect the body integrated unit at the end. <b>Connector &amp; terminal</b> <b>(B40) No. 6 — Chassis ground:</b> <b>(B40) No. 14 — Chassis ground:</b></p>	Did the resistance change to 10 Ω or more?	Replace the control module whose resistance has changed. When the value changed at disconnecting the body integrated unit, Go to step 3.	Repair or replace the short circuit of the main wiring harness and related lines between body integrated unit and VDC CM.
<p><b>3</b>     <b>CHECK BETWEEN MAIN WIRING HARNESSSES.</b> Using the tester, measure the resistance between terminals. <b>Connector &amp; terminal</b> <b>(i84) No. 27 — Chassis ground:</b> <b>(i84) No. 35 — Chassis ground:</b></p>	Is the resistance 10 Ω or less?	Repair or replace the short circuit of the main wiring harness and related lines between body integrated unit and ECM.	Replace the body integrated unit. <Ref. to SL-80, REMOVAL, Body Integrated Unit.>

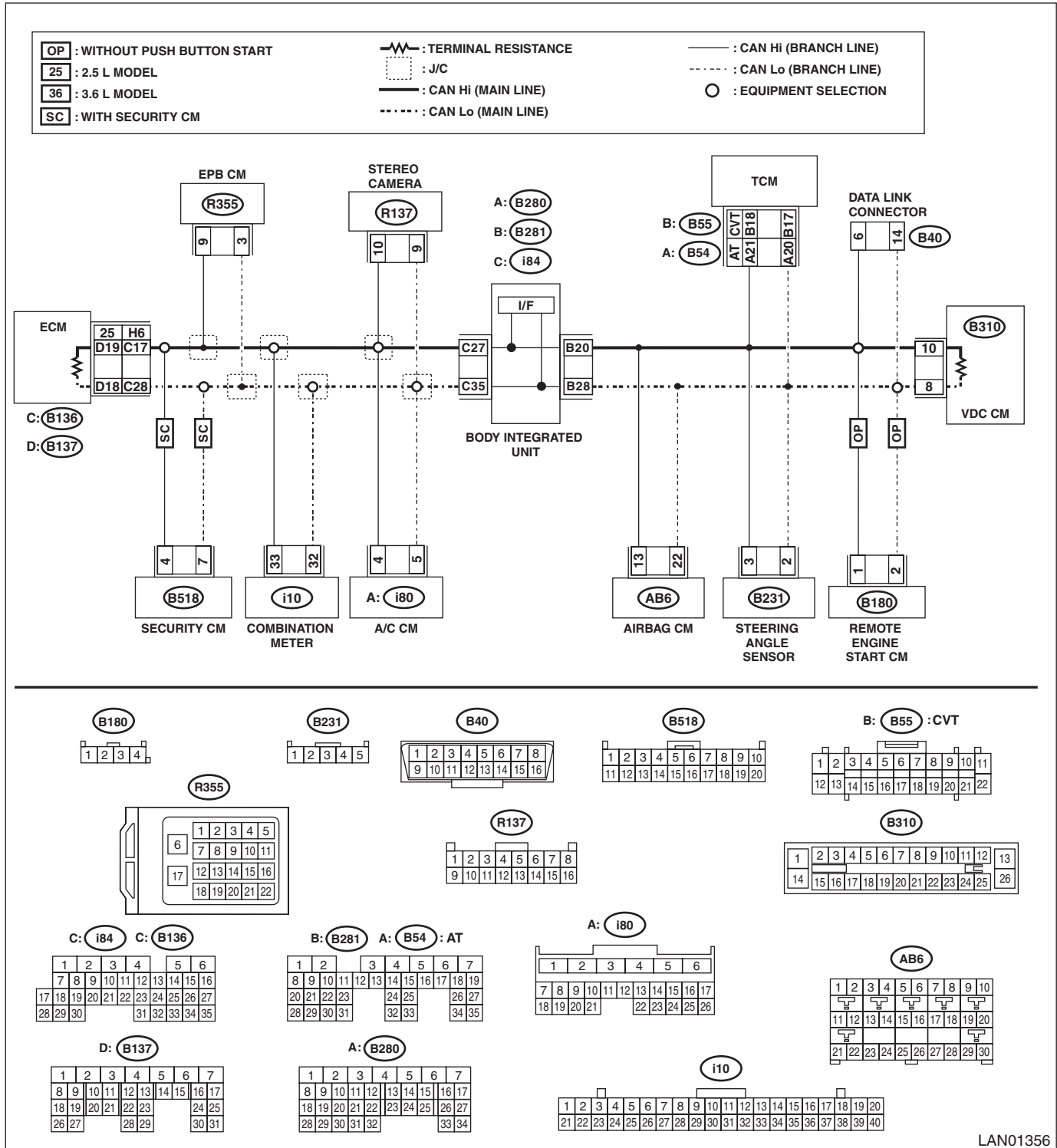
# CAN Communication Circuit Check

LAN SYSTEM (DIAGNOSTICS)

## 2. BATTERY SHORT INSPECTION (BUS "A" (MAIN-CAN))

### WIRING DIAGRAM:

CAN communication system <Ref. to WI-83, WIRING DIAGRAM, CAN Communication System.>



### NOTE:

Main wiring harness or related lines may be shorted to battery circuit, or shorted to battery circuit in one of the control modules.

# CAN Communication Circuit Check

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
<p><b>1</b>     <b>CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.</b>            1) Turn the ignition switch to ON.            2) Using the tester, measure the voltage between terminals.  <b>Connector &amp; terminal</b>  <b>(B40) No. 6 (+) — Chassis ground (-):</b>  <b>(B40) No. 14 (+) — Chassis ground (-):</b></p>	Is the voltage 5 V or less?	Currently returned to normal.	Go to step 2.
<p><b>2</b>     <b>CHECK CONTROL MODULE.</b>            With the tester connected, disconnect control module.            NOTE:            Disconnect the body integrated unit at the end.  <b>Connector &amp; terminal</b>  <b>(B40) No. 6 (+) — Chassis ground (-):</b>  <b>(B40) No. 14 (+) — Chassis ground (-):</b></p>	Did the voltage change to 5 V or less?	Replace the control module whose voltage has changed. When the value changed at disconnecting the body integrated unit, Go to step 3.	Repair or replace the short circuit of the main wiring harness and related lines between body integrated unit and VDC CM.
<p><b>3</b>     <b>CHECK BETWEEN MAIN WIRING HARNESSSES.</b>            Using the tester, measure the voltage between terminals.  <b>Connector &amp; terminal</b>  <b>(i84) No. 27 (+) — Chassis ground (-):</b>  <b>(i84) No. 35 (+) — Chassis ground (-):</b></p>	Is the voltage 1 V or less?	Replace the body integrated unit. <Ref. to SL-80, REMOVAL, Body Integrated Unit.>	Repair or replace the short circuit of the main wiring harness and related lines between body integrated unit and ECM.

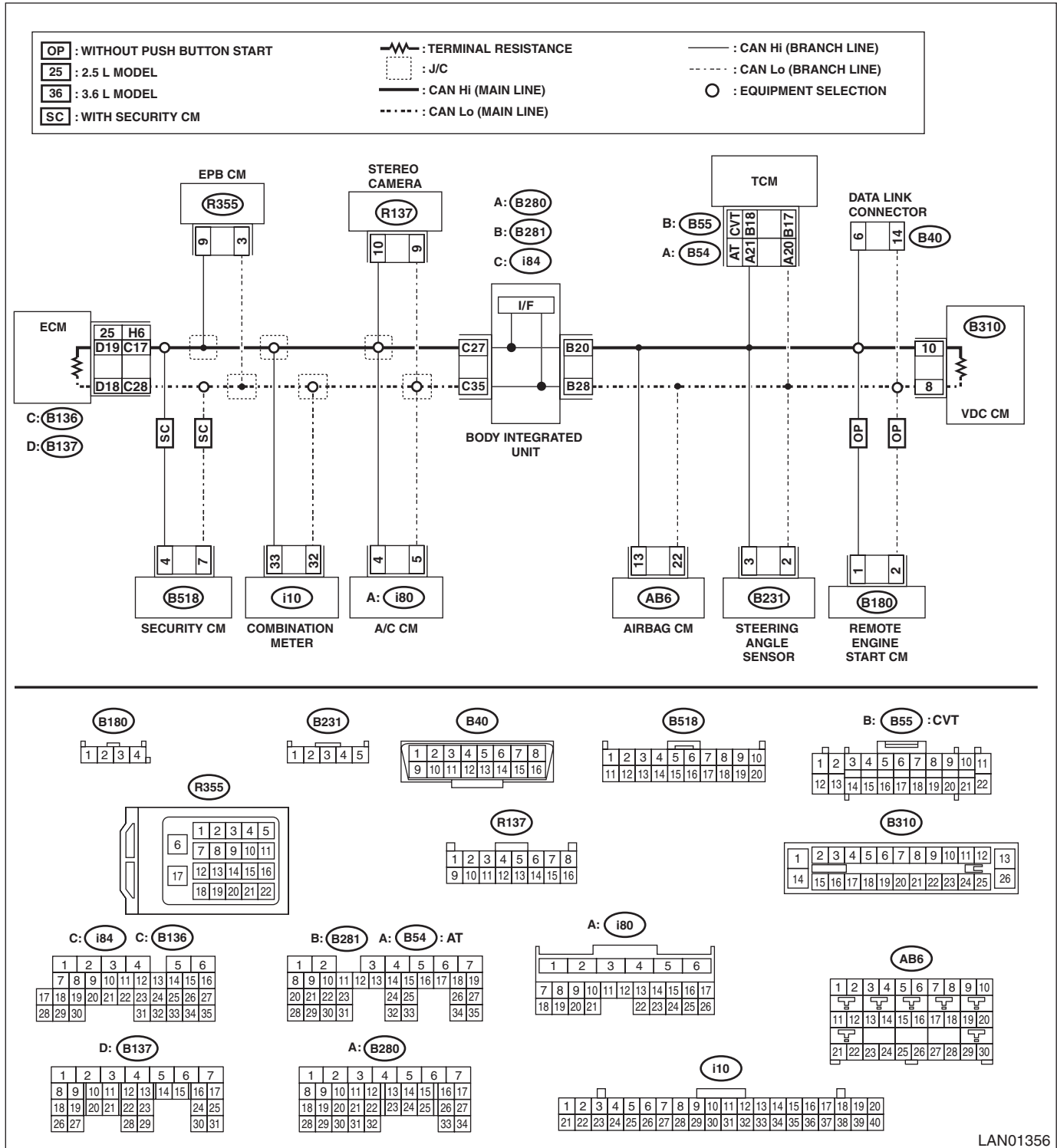
# CAN Communication Circuit Check

LAN SYSTEM (DIAGNOSTICS)

## 3. 56 — 64 Ω

### WIRING DIAGRAM:

CAN communication system <Ref. to WI-83, WIRING DIAGRAM, CAN Communication System.>



### NOTE:

When the measured resistance value is 56 — 64 Ω, main wiring harness or related lines may be shorted to ground, or shorted to power supply line, or related line may be open.

# CAN Communication Circuit Check

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
<p><b>1 CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.</b> Using the tester, measure the resistance between terminals. <b>Connector &amp; terminal</b> <b>(B40) No. 6 — Chassis ground:</b> <b>(B40) No. 14 — Chassis ground:</b></p>	Is the resistance 10 Ω or less?	Go to step 2.	Go to step 4.
<p><b>2 CHECK CONTROL MODULE.</b> With the tester connected, disconnect control module. NOTE: Disconnect the body integrated unit at the end. <b>Connector &amp; terminal</b> <b>(B40) No. 6 — Chassis ground:</b> <b>(B40) No. 14 — Chassis ground:</b></p>	Did the resistance change to 10 Ω or more?	Replace the control module whose resistance has changed. When the value changed at disconnecting the body integrated unit, Go to step 3.	Repair or replace the short circuit of the main wiring harness and related lines between body integrated unit and VDC CM.
<p><b>3 CHECK MAIN WIRING HARNESS AND RELATED LINES.</b> Using the tester, measure the resistance between terminals. <b>Connector &amp; terminal</b> <b>(i84) No. 27 — Chassis ground:</b> <b>(i84) No. 35 — Chassis ground:</b></p>	Is the resistance 10 Ω or less?	Repair or replace the short circuit of the main wiring harness and related lines between body integrated unit and ECM.	Replace the body integrated unit. <Ref. to SL-80, REMOVAL, Body Integrated Unit.>
<p><b>4 CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.</b> 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. <b>Connector &amp; terminal</b> <b>(B40) No. 6 (+) — Chassis ground (-):</b> <b>(B40) No. 14 (+) — Chassis ground (-):</b></p>	Is the voltage 5 V or less?	CAN communication circuit is normal.	Go to step 5.
<p><b>5 CHECK CONTROL MODULE.</b> With the tester connected, disconnect control module. (Disconnect the body integrated unit at the end.) <b>Connector &amp; terminal</b> <b>(B40) No. 6 (+) — Chassis ground (-):</b> <b>(B40) No. 14 (+) — Chassis ground (-):</b></p>	Did the voltage change to 5 V or less?	Replace the control module whose voltage has changed. When the voltage changed at disconnecting the body integrated unit, Go to step 6.	Repair or replace the short circuit of the main wiring harness and related lines between body integrated unit and VDC CM.
<p><b>6 CHECK HARNESS.</b> Using a tester, measure the voltage between terminals and chassis ground. <b>Connector &amp; terminal</b> <b>(i84) No. 27 (+) — Chassis ground (-):</b> <b>(i84) No. 35 (+) — Chassis ground (-):</b></p>	Is the voltage 5 V or less?	Replace the body integrated unit. <Ref. to SL-80, REMOVAL, Body Integrated Unit.>	Repair or replace the short circuit of the main wiring harness and related lines between body integrated unit and ECM.

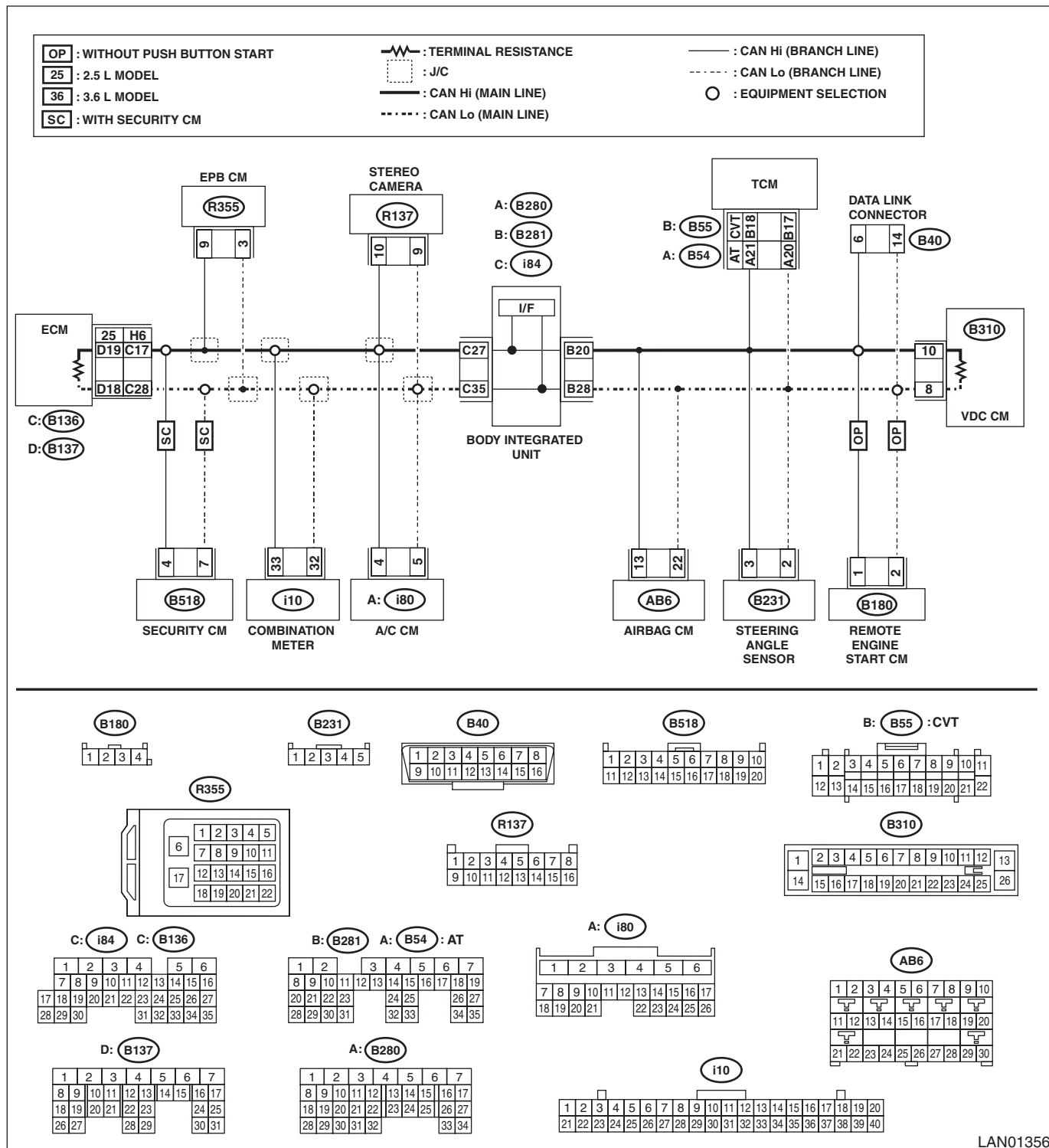
# CAN Communication Circuit Check

LAN SYSTEM (DIAGNOSTICS)

## 4. 55 Ω OR LESS

### WIRING DIAGRAM:

CAN communication system <Ref. to WI-83, WIRING DIAGRAM, CAN Communication System.>



### NOTE:

When the bus line is measured, combined resistance of end resistance (120 Ω) in ECM and end resistance (120 Ω) in VDC CM can be measured. The combined resistance is approximately 56 — 64 Ω. When the measured resistance value is 55 Ω or less, main wiring harness or related lines may be shorted, or combined resistance may have changed because resistance other than end resistance is created on the circuit.

# CAN Communication Circuit Check

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
<b>1 CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.</b> Using the tester, measure the resistance between terminals. <i>Connector &amp; terminal</i> <i>(B40) No. 6 — No. 14:</i>	Is the resistance 10 $\Omega$ or less?	Go to step 2.	Go to step 4.
<b>2 CHECK MAIN WIRING HARNESS AND RELATED LINES.</b> With a tester connected, disconnect control module connectors in order. NOTE: Disconnect the body integrated unit at the end. <i>Connector &amp; terminal</i> <i>(B40) No. 6 — No. 14:</i>	Is there any control module whose condition has changed from short state?	Replace the control module whose resistance has changed. When the value changed at disconnecting the body integrated unit, Go to step 3.	Repair or replace the short circuit of the main wiring harness and related lines between body integrated unit and VDC CM.
<b>3 CHECK BETWEEN MAIN WIRING HARNESSES.</b> Using the tester, measure the resistance between terminals. <i>Connector &amp; terminal</i> <i>(i84) No. 27 — No. 35:</i>	Is the resistance 10 $\Omega$ or less?	Repair or replace the short circuit of the main wiring harness and related lines between body integrated unit and ECM.	Replace the body integrated unit. <Ref. to SL-80, REMOVAL, Body Integrated Unit.>
<b>4 CHECK CONTROL MODULE.</b> 1) Disconnect ECM and VDC CM connectors. 2) Using a tester, measure the resistance between control module terminals. <i>Connector &amp; terminal</i> <i>(B137) No. 19 — No. 18 (2.5 L model):</i> <i>(B136) No. 17 — No. 28 (3.6 L model):</i> <i>(B310) No. 8 — No. 10:</i>	Is the resistance 115 — 135 $\Omega$ ?	Go to step 5.	Replace the control module whose end resistance value is out of the specified range.
<b>5 CHECK CONTROL MODULE.</b> 1) Disconnect the connector of body integrated unit. 2) Using a tester, measure the resistance between control module terminals. <i>Connector &amp; terminal</i> <i>(i84) No. 27 — (B281) No. 28:</i> <i>(i84) No. 35 — (B281) No. 20:</i>	Is the resistance 2,850 — 3,150 $\Omega$ ?	Go to step 6.	Replace the body integrated unit. <Ref. to SL-80, REMOVAL, Body Integrated Unit.>
<b>6 CHECK CONTROL MODULE.</b> Using a tester, measure the resistance between control module terminals. <i>Connector &amp; terminal</i> <i>(i84) No. 35 — (B281) No. 28:</i> <i>(i84) No. 27 — (B281) No. 20:</i>	Is the resistance less than 1 $\Omega$ ?	Go to step 7.	Replace the body integrated unit. <Ref. to SL-80, REMOVAL, Body Integrated Unit.>
<b>7 CHECK CONTROL MODULE.</b> 1) Disconnect the connector of combination meter. 2) Using the tester, measure the resistance between terminals. <i>Connector &amp; terminal</i> <i>(i10) No. 33 — No. 32:</i>	Is the resistance 2,850 — 3,150 $\Omega$ ?	Go to step 8.	Replace the combination meter.
<b>8 CHECK CONTROL MODULE.</b> 1) Disconnect the security CM connector. 2) Using a tester, measure the resistance between control module terminals. <i>Connector &amp; terminal</i> <i>(B40) No. 6 — No. 14:</i>	Is the resistance 1,425 — 1,575 $\Omega$ ?	Go to step 9.	Replace the security CM.

## CAN Communication Circuit Check

### LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
<b>9</b> <b>CHECK HARNESS.</b> Using the tester, measure the resistance between terminals. <i><b>Connector &amp; terminal</b></i> <i><b>(B281) No. 28 — No. 20:</b></i>	Is the resistance 1 MΩ or more?	Go to step 11.	Go to step 10.
<b>10</b> <b>CHECK HARNESS.</b> With a tester connected, disconnect control modules in order. NOTE: Disconnect the body integrated unit at the end. <i><b>Connector &amp; terminal</b></i> <i><b>(B281) No. 28 — No. 20:</b></i>	Are there any control modules whose resistance changed to 1 MΩ or more?	Replace the control module that has changed.	Repair or replace the harness due to resistance component.
<b>11</b> <b>CHECK CONTROL MODULE.</b> With a tester connected, disconnect control modules in order. NOTE: Disconnect the body integrated unit at the end. <i><b>Connector &amp; terminal</b></i> <i><b>(i84) No. 27 — No. 35:</b></i>	Are there any control modules whose resistance changed to 1 MΩ or more?	Replace the control module that has changed.	Repair or replace the harness due to resistance component.

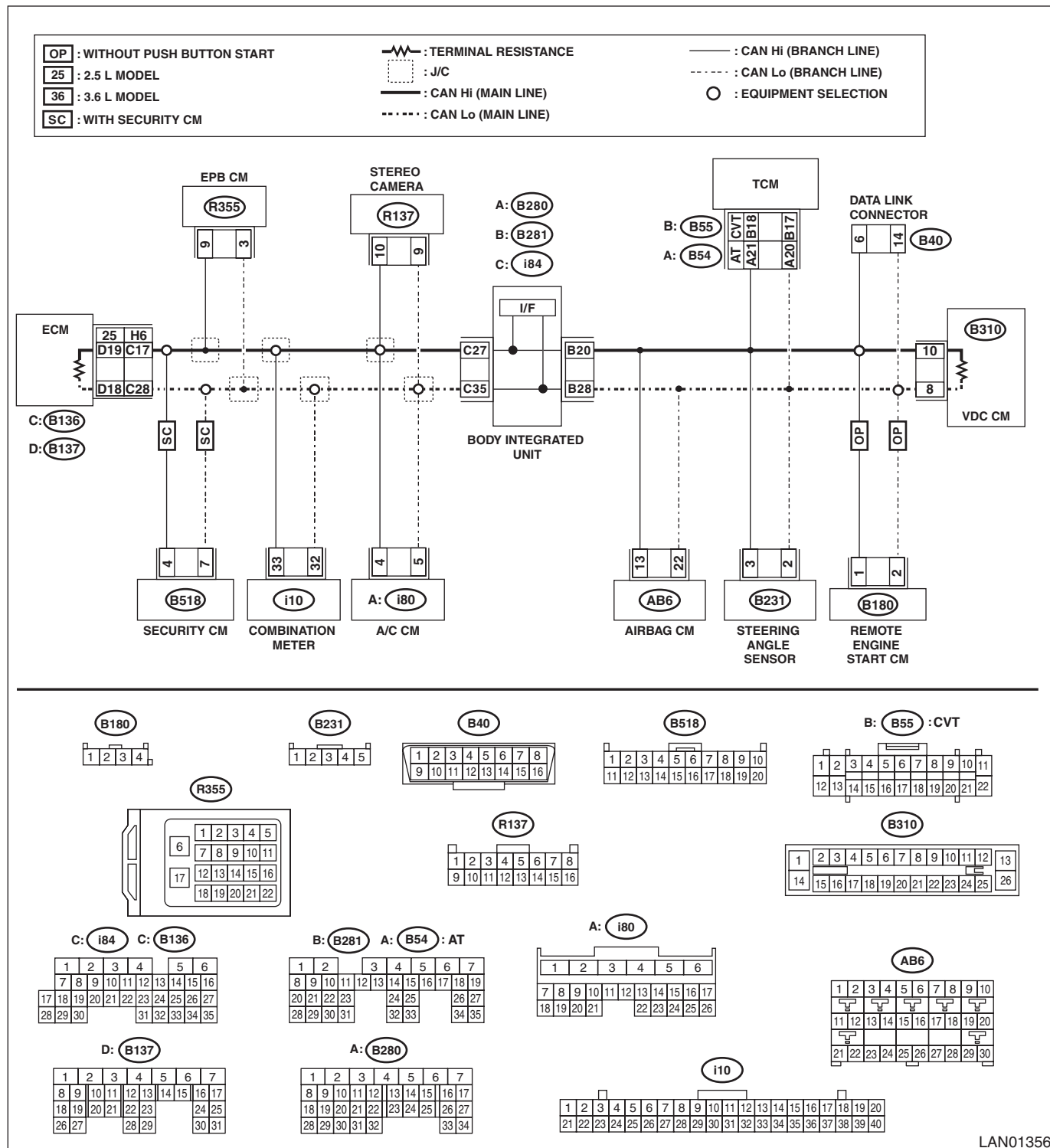


# CAN Communication Circuit Check

## 5. 65 Ω OR MORE

### WIRING DIAGRAM:

CAN communication system <Ref. to WI-83, WIRING DIAGRAM, CAN Communication System.>



### NOTE:

When CAN communication circuit is measured, combined resistance of end resistance (120 Ω) in ECM and end resistance (120 Ω) in VDC CM can be measured. The combined resistance is approximately 56 — 64 Ω. When the measured resistance value is 65 Ω or more, either of end resistance or main wiring harness may have malfunction such as open circuit.

# CAN Communication Circuit Check

## LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
<b>1 CHECK CONTROL MODULE.</b> 1) Disconnect ECM and VDC CM connectors. 2) Using a tester, measure the resistance between control module terminals. <i><b>Connector &amp; terminal</b></i> <i><b>(B137) No. 18 — No. 19 (2.5 L model):</b></i> <i><b>(B136) No. 17 — No. 28 (3.6 L model):</b></i> <i><b>(B310) No. 8 — No. 10:</b></i>	Is the resistance 115 — 135 Ω?	Go to step 2.	Replace the control module whose value is out of the specification.
<b>2 CHECK CONTROL MODULE.</b> 1) Disconnect the connector of body control module. 2) Using a tester, measure the resistance between control module terminals. <i><b>Connector &amp; terminal</b></i> <i><b>(B281) No. 28 — (i84) No. 27:</b></i> <i><b>(B281) No. 20 — (i84) No. 35:</b></i>	Is the resistance 2,850 — 3,150 Ω?	Go to step 3.	Replace the body integrated unit. <Ref. to SL-80, REMOVAL, Body Integrated Unit.>
<b>3 CHECK CONTROL MODULE.</b> Using the tester, measure the resistance between terminals. <i><b>Connector &amp; terminal</b></i> <i><b>(B281) No. 28 — (i84) No. 35:</b></i> <i><b>(B281) No. 20 — (i84) No. 27:</b></i>	Is the resistance less than 1 Ω?	Go to step 4.	Replace the body integrated unit. <Ref. to SL-80, REMOVAL, Body Integrated Unit.>
<b>4 CHECK CONTROL MODULE.</b> 1) Disconnect the connector of combination meter. 2) Using the tester, measure the resistance between terminals. <i><b>Connector &amp; terminal</b></i> <i><b>(i10) No. 33 — No. 32:</b></i>	Is the resistance 2,850 — 3,150 Ω?	Go to step 5.	Replace the combination meter.
<b>5 CHECK CONTROL MODULE.</b> 1) Disconnect the security CM connector. 2) Using a tester, measure the resistance between control module terminals. <i><b>Connector &amp; terminal</b></i> <i><b>(B40) No. 6 — No. 14:</b></i>	Is the resistance 1,425 — 1,575 Ω?	Go to step 6.	Replace the security CM.
<b>6 CHECK HARNESS.</b> Using a tester, check continuity between terminals. <i><b>Connector &amp; terminal</b></i> <i><b>(B40) No. 6 — (B310) No. 10:</b></i> <i><b>(B40) No. 14 — (B310) No. 8:</b></i> <i><b>(B40) No. 6 — (i281) No. 20:</b></i> <i><b>(B40) No. 14 — (i281) No. 28:</b></i>	Is there continuity?	Go to step 7.	Repair or replace the open circuit of harness.
<b>7 CHECK HARNESS.</b> 1) Disconnect the ECM connector. 2) Using a tester, check continuity between terminals. <i><b>Connector &amp; terminal</b></i> <i><b>2.5 L model</b></i> <i><b>(B40) No. 6 — (B137) No. 19:</b></i> <i><b>(B40) No. 14 — (B137) No. 18:</b></i> <i><b>3.6 L model</b></i> <i><b>(B40) No. 6 — (B136) No. 17:</b></i> <i><b>(B40) No. 14 — (B136) No. 28:</b></i>	Is there continuity?	It is possible that temporary poor communication occurs.	Repair or replace the open circuit of harness.

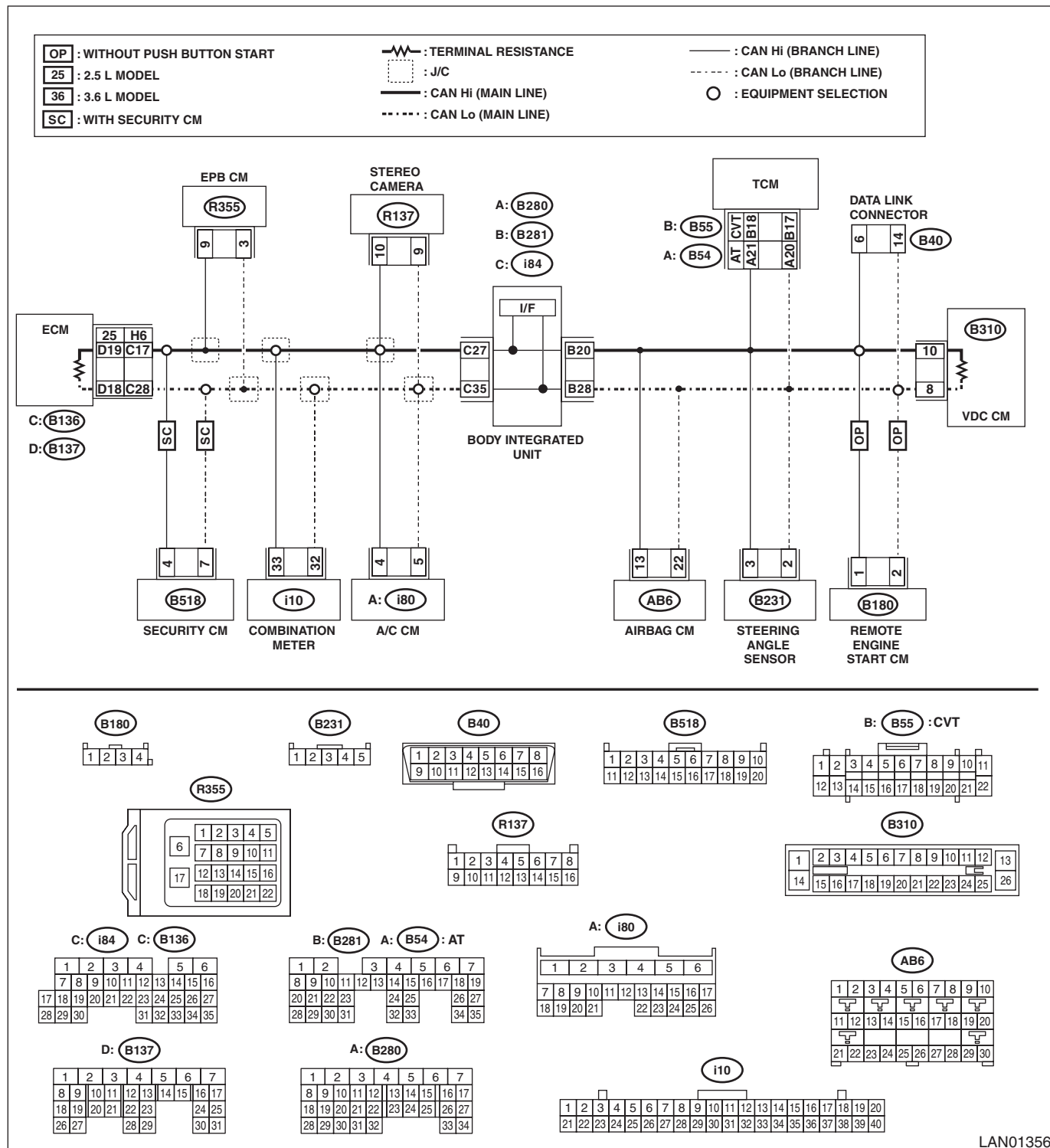
# CAN Communication Circuit Check

LAN SYSTEM (DIAGNOSTICS)

## 6. RELATED LINES 56 — 64 Ω (TCM)

### WIRING DIAGRAM:

CAN communication system <Ref. to WI-83, WIRING DIAGRAM, CAN Communication System.>



### NOTE:

Perform inspection when no data is received, or faulty is detected. This is different from power supply shorted or ground shorted.

# CAN Communication Circuit Check

## LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
<b>1</b> <b>CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.</b> 1) Disconnect the TCM connector. 2) Using the tester, measure the resistance between terminals. <b>Connector &amp; terminal</b> <b>CVT model</b> <b>(B55) No. 17 — No. 18:</b> <b>5AT model</b> <b>(B54) No. 20 — No. 21:</b>	Is the resistance 400 $\Omega$ or more?	Related lines between TCM and main wiring harness is open, or main wiring harness is open at two places or more.	Go to step 2.
<b>2</b> <b>CHECK RELATED LINES.</b> Using the tester, measure the resistance between terminals. <b>Connector &amp; terminal</b> <b>CVT model</b> <b>(B55) No. 17 — (B40) No. 14:</b> <b>(B55) No. 18 — (B40) No. 6:</b> <b>5AT model</b> <b>(B54) No. 20 — (B40) No. 14:</b> <b>(B54) No. 21 — (B40) No. 6:</b>	Is the resistance 10 $\Omega$ or more?	Repair or replace the open circuit portion of TCM related lines.	Check DTC of TCM. <Ref. to CVT(diag)-17, OPERATION, Read Diagnostic Trouble Code (DTC).> <Ref. to 5AT(diag)-20, OPERATION, Read Diagnostic Trouble Code (DTC).>

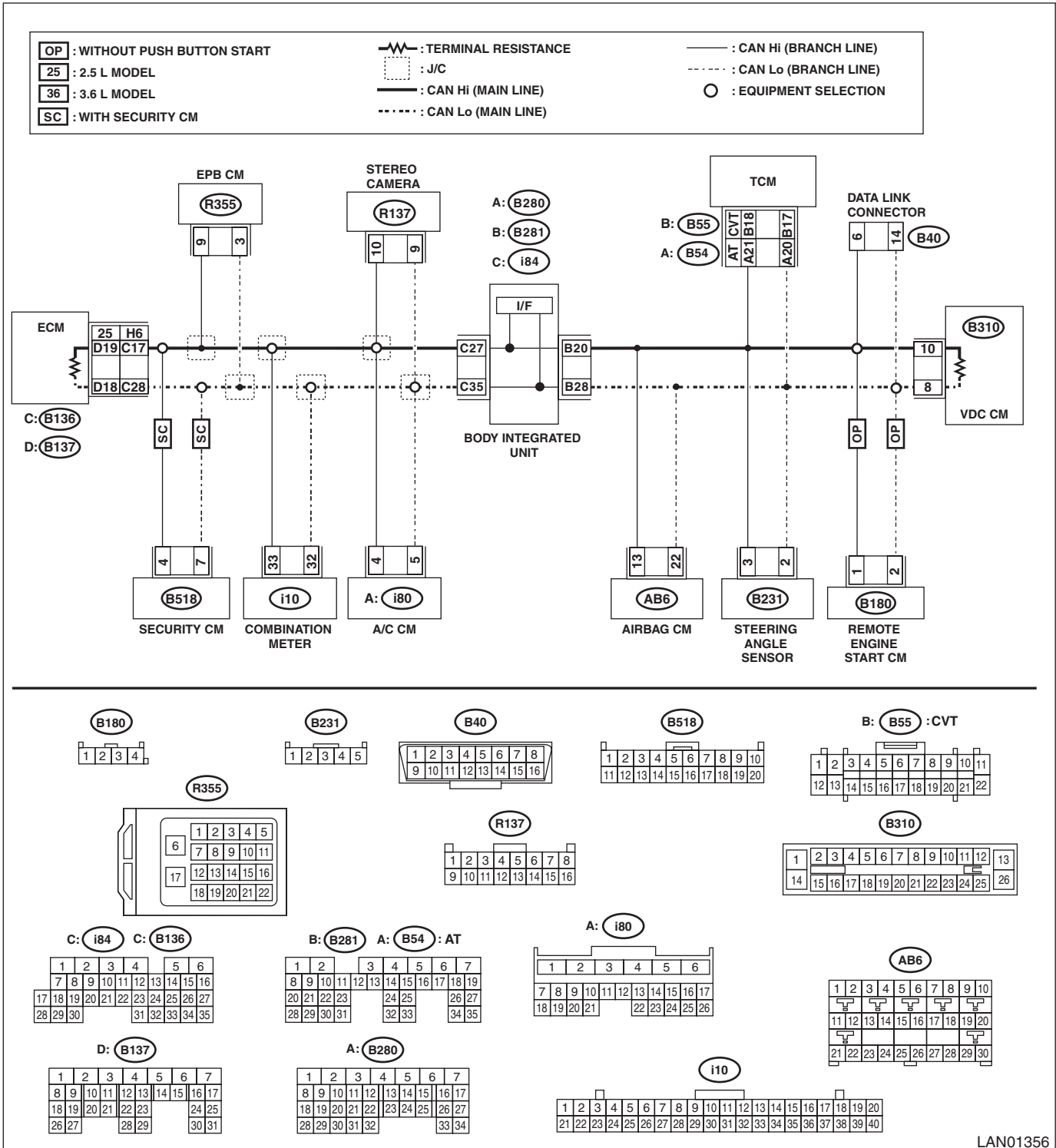
# CAN Communication Circuit Check

LAN SYSTEM (DIAGNOSTICS)

## 7. RELATED LINES 56 — 64 Ω (STEERING ANGLE SENSOR)

### WIRING DIAGRAM:

CAN communication system <Ref. to WI-83, WIRING DIAGRAM, CAN Communication System.>



# CAN Communication Circuit Check

## LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
<b>1</b> <b>CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.</b> 1) Disconnect the steering angle sensor connector. 2) Using the tester, measure the resistance between terminals. <b>Connector &amp; terminal</b> <b>(B231) No. 2 — No. 3:</b>	Is the resistance 400 $\Omega$ or more?	Related lines between steering angle sensor and main wiring harness is open, or main wiring harness is open at two places or more.	Go to step 2.
<b>2</b> <b>CHECK RELATED LINES.</b> Using the tester, measure the resistance between terminals. <b>Connector &amp; terminal</b> <b>(B231) No. 2 — (B40) No. 14:</b> <b>(B231) No. 3 — (B40) No. 6:</b>	Is the resistance 10 $\Omega$ or more?	Repair or replace the open circuit portion of steering angle sensor related lines.	Check DTC of VDC CM. <Ref. to VDC(diag)-23, OPERATION, Read Diagnostic Trouble Code (DTC).>

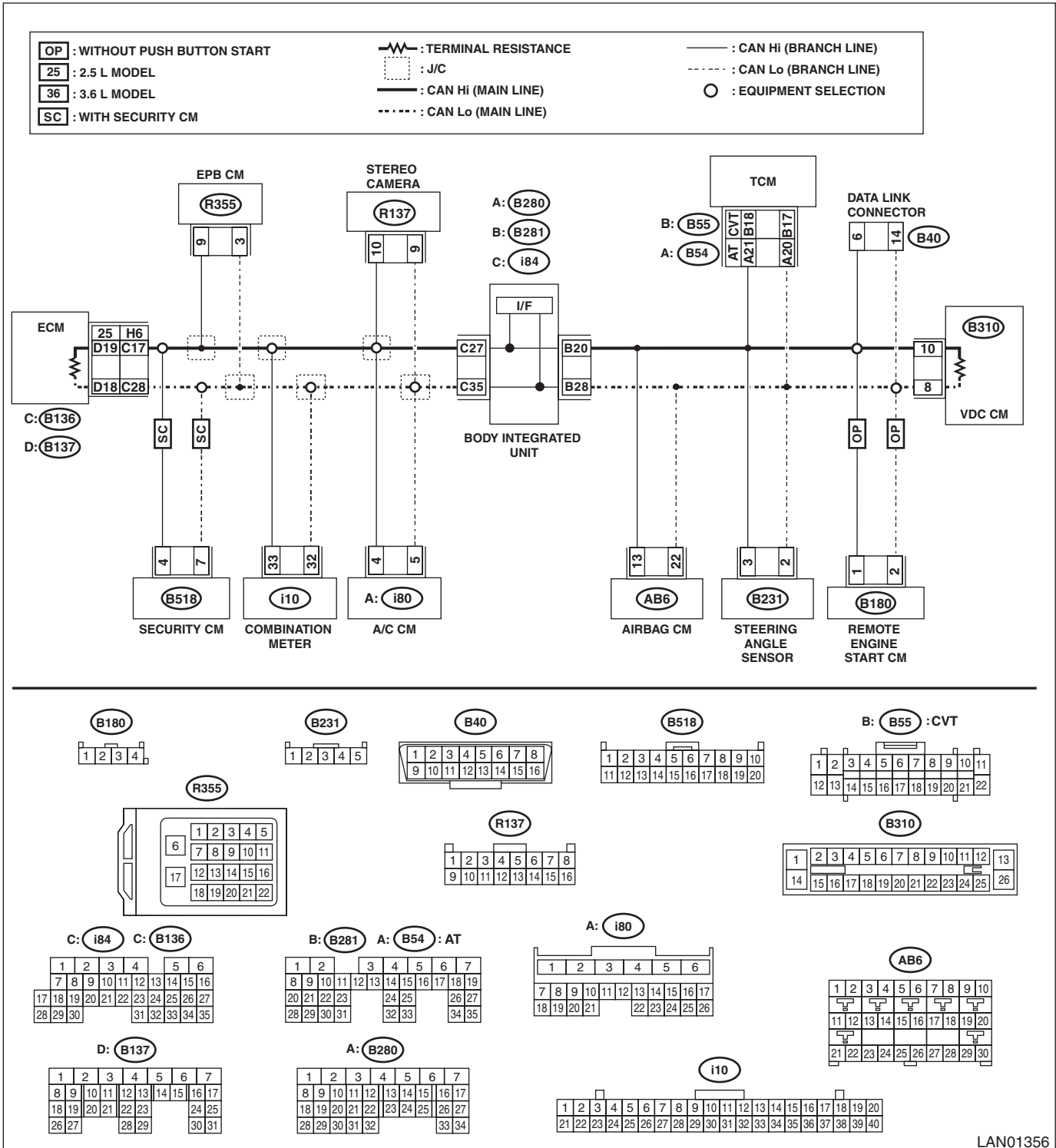
# CAN Communication Circuit Check

LAN SYSTEM (DIAGNOSTICS)

## 8. RELATED LINES 56 — 64 Ω (A/C CM)

### WIRING DIAGRAM:

CAN communication system <Ref. to WI-83, WIRING DIAGRAM, CAN Communication System.>



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# CAN Communication Circuit Check

## LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
<b>1</b> <b>CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.</b> 1) Disconnect the A/C CM connector. 2) Using the tester, measure the resistance between terminals. <b>Connector &amp; terminal</b> <b>(i80) No. 4 — No. 5:</b>	Is the resistance 400 $\Omega$ or more?	Related lines between A/C CM and main wiring harness is open, or main wiring harness is open at two places or more.	Go to step 2.
<b>2</b> <b>CHECK RELATED LINES.</b> Using the tester, measure the resistance between terminals. <b>Connector &amp; terminal</b> <b>(i80) No. 4 — (B40) No. 6:</b> <b>(i80) No. 5 — (B40) No. 14:</b>	Is the resistance 10 $\Omega$ or more?	Repair or replace the open circuit of A/C CM related lines.	Check DTC of A/C CM. <Ref. to AC(diag)-46, OPERATION, Read Diagnostic Trouble Code (DTC).>



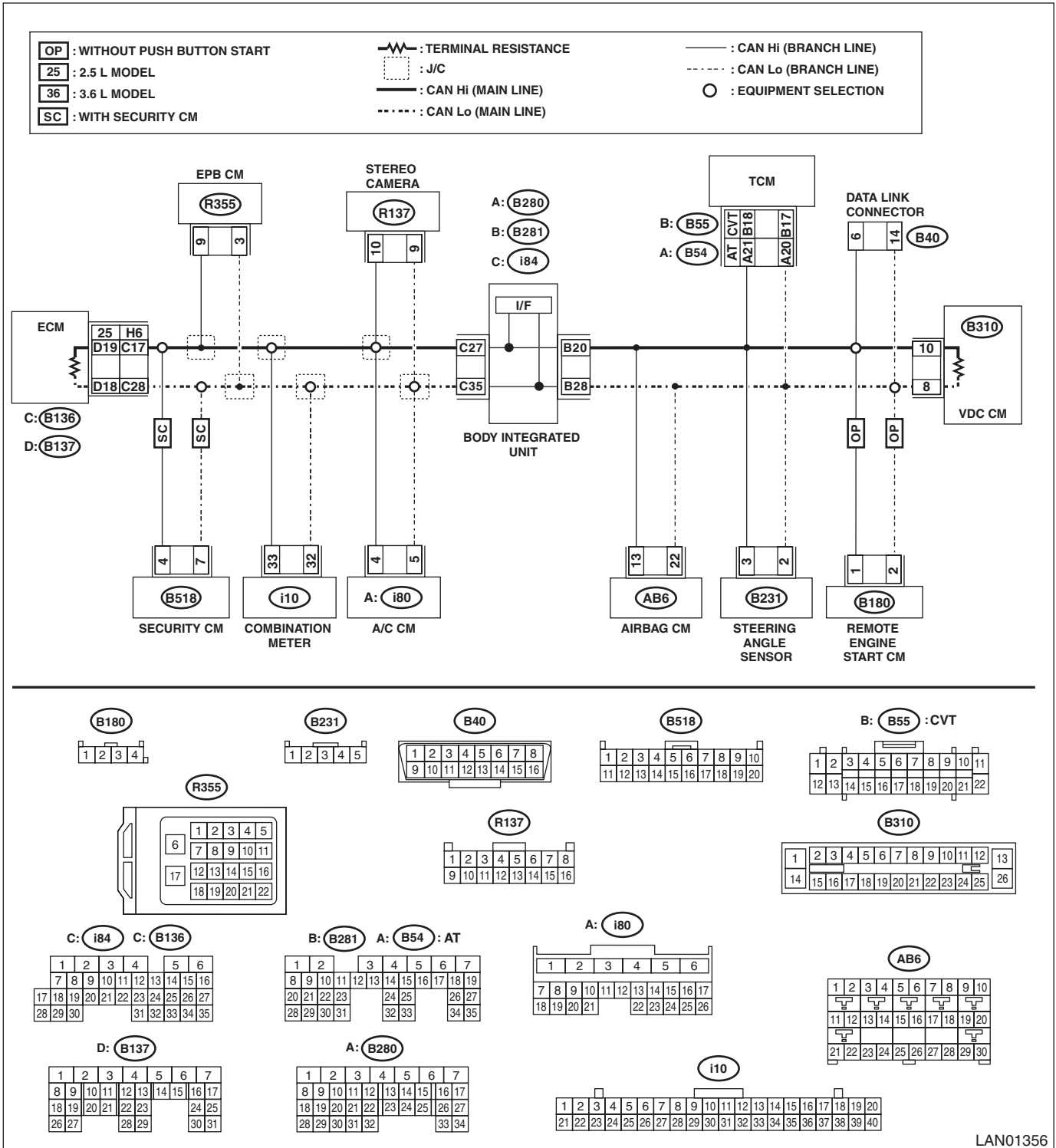
# CAN Communication Circuit Check

LAN SYSTEM (DIAGNOSTICS)

## 9. RELATED LINES 56 — 64 Ω (ELECTRONIC PARKING CM)

### WIRING DIAGRAM:

CAN communication system <Ref. to WI-83, WIRING DIAGRAM, CAN Communication System.>



# CAN Communication Circuit Check

## LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
<b>1</b> <b>CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.</b> 1) Disconnect the electronic parking CM connector. 2) Using the tester, measure the resistance between terminals. <b>Connector &amp; terminal</b> <b>(R355) No. 3 — No. 9:</b>	Is the resistance 400 $\Omega$ or more?	Related lines between electronic parking CM and main wiring harness is open, or main wiring harness is open at two places or more.	Go to step 2.
<b>2</b> <b>CHECK RELATED LINES.</b> Using the tester, measure the resistance between terminals. <b>Connector &amp; terminal</b> <b>(R355) No. 9 — (B40) No. 6:</b> <b>(R355) No. 3 — (B40) No. 14:</b>	Is the resistance 10 $\Omega$ or more?	Repair or replace the open circuit portion of electronic parking CM related lines.	Check DTC of electronic parking CM. <Ref. to PB(diag)-21, OPERATION, Read Diagnostic Trouble Code (DTC).>

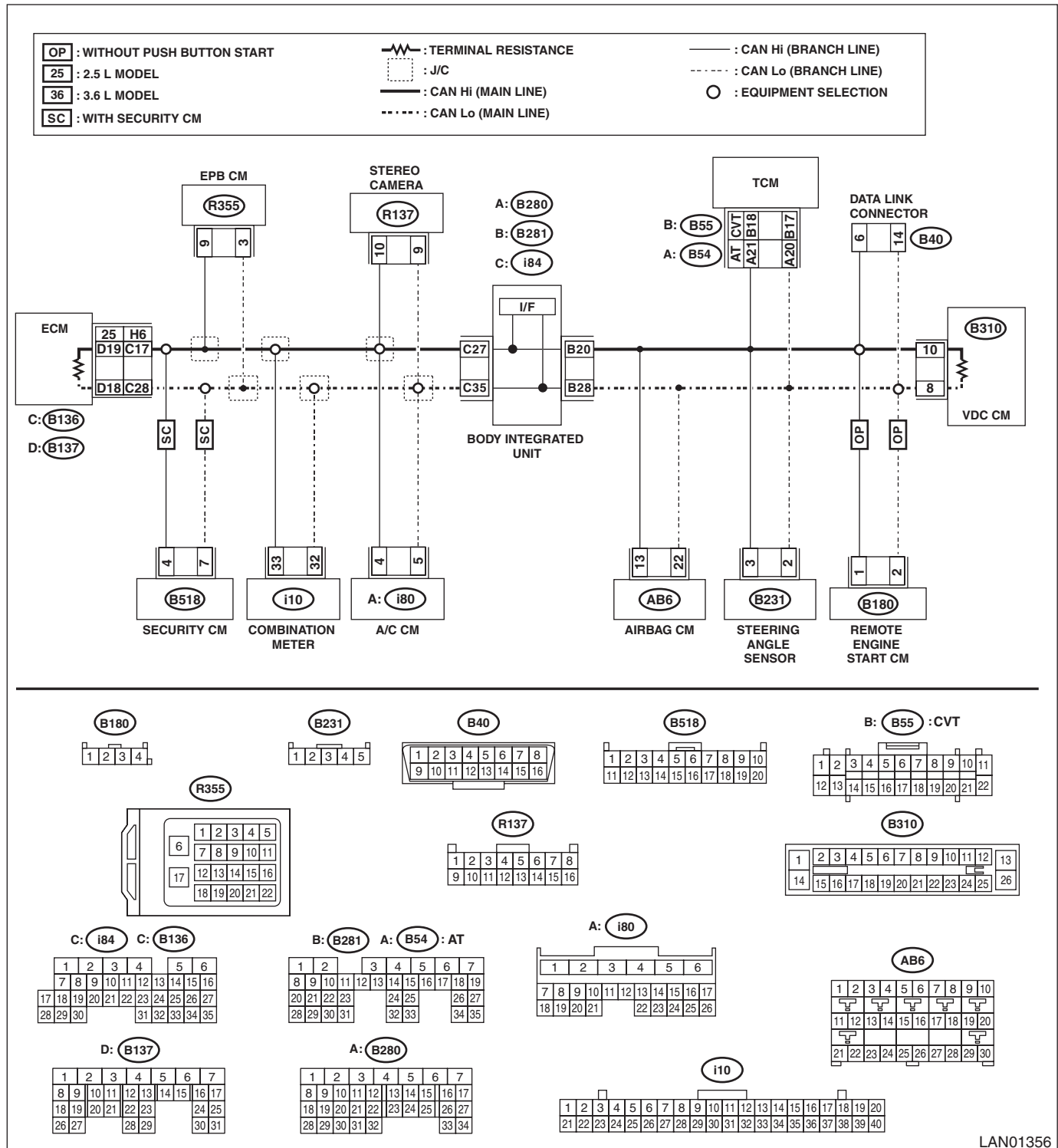
# CAN Communication Circuit Check

LAN SYSTEM (DIAGNOSTICS)

## 10. RELATED LINES 56 — 64 Ω (COMBINATION METER)

### WIRING DIAGRAM:

CAN communication system <Ref. to WI-83, WIRING DIAGRAM, CAN Communication System.>



# CAN Communication Circuit Check

## LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
<b>1</b> <b>CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.</b> 1) Disconnect the combination meter connector. 2) Using the tester, measure the resistance between terminals. <b>Connector &amp; terminal</b> <b>(i10) No. 32 — No. 33:</b>	Is the resistance 400 $\Omega$ or more?	Related lines between combination meter and main wiring harness is open, or main wiring harness is open at two places or more.	Go to step 2.
<b>2</b> <b>CHECK RELATED LINES.</b> Using the tester, measure the resistance between terminals. <b>Connector &amp; terminal</b> <b>(i10) No. 32 — (B40) No. 14:</b> <b>(i10) No. 33 — (B40) No. 6:</b>	Is the resistance 10 $\Omega$ or more?	Repair or replace the open circuit portion of combination meter related lines.	Check DTC of combination meter.

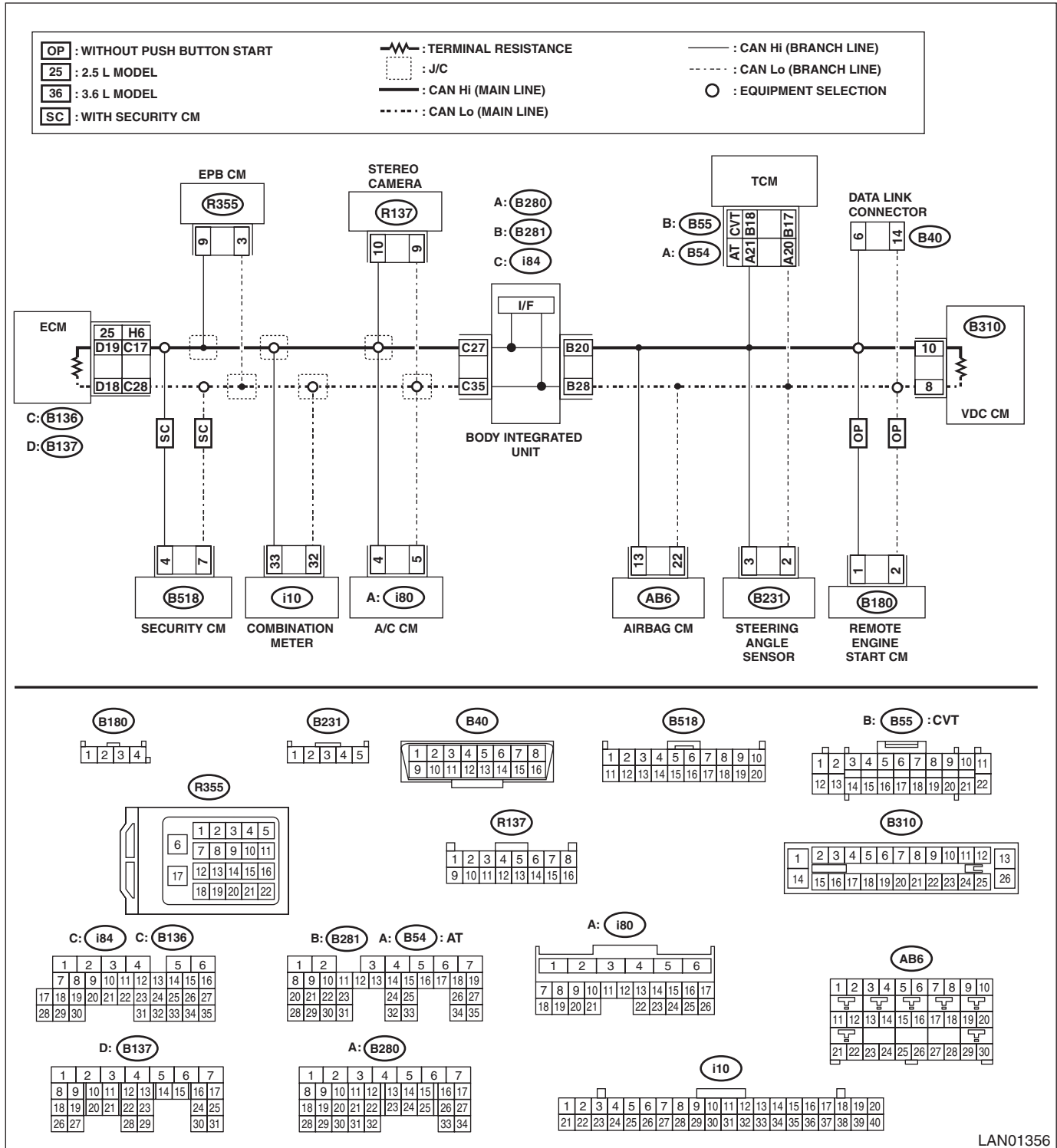
# CAN Communication Circuit Check

LAN SYSTEM (DIAGNOSTICS)

## 11. RELATED LINES 56 — 64 Ω (SECURITY CM)

### WIRING DIAGRAM:

CAN communication system <Ref. to WI-83, WIRING DIAGRAM, CAN Communication System.>



LAN01356

# CAN Communication Circuit Check

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
<b>1</b> <b>CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.</b> 1) Disconnect the security CM connector. 2) Using the tester, measure the resistance between terminals. <i><b>Connector &amp; terminal</b></i> <i><b>(B518) No. 7 — No. 4:</b></i>	Is the resistance 400 $\Omega$ or more?	Related lines between security CM and main wiring harness is open, or main wiring harness is open at two places or more.	Go to step 2.
<b>2</b> <b>CHECK RELATED LINES.</b> Using the tester, measure the resistance between terminals. <i><b>Connector &amp; terminal</b></i> <i><b>(B518) No. 4 — (B40) No. 6:</b></i> <i><b>(B518) No. 7 — (B40) No. 14:</b></i>	Is the resistance 10 $\Omega$ or more?	Repair or replace the open circuit portion of security CM related lines.	Check DTC of immobilizer system. <Ref. to IM(diag)-9, OPERATION, Read Diagnostic Trouble Code (DTC).>

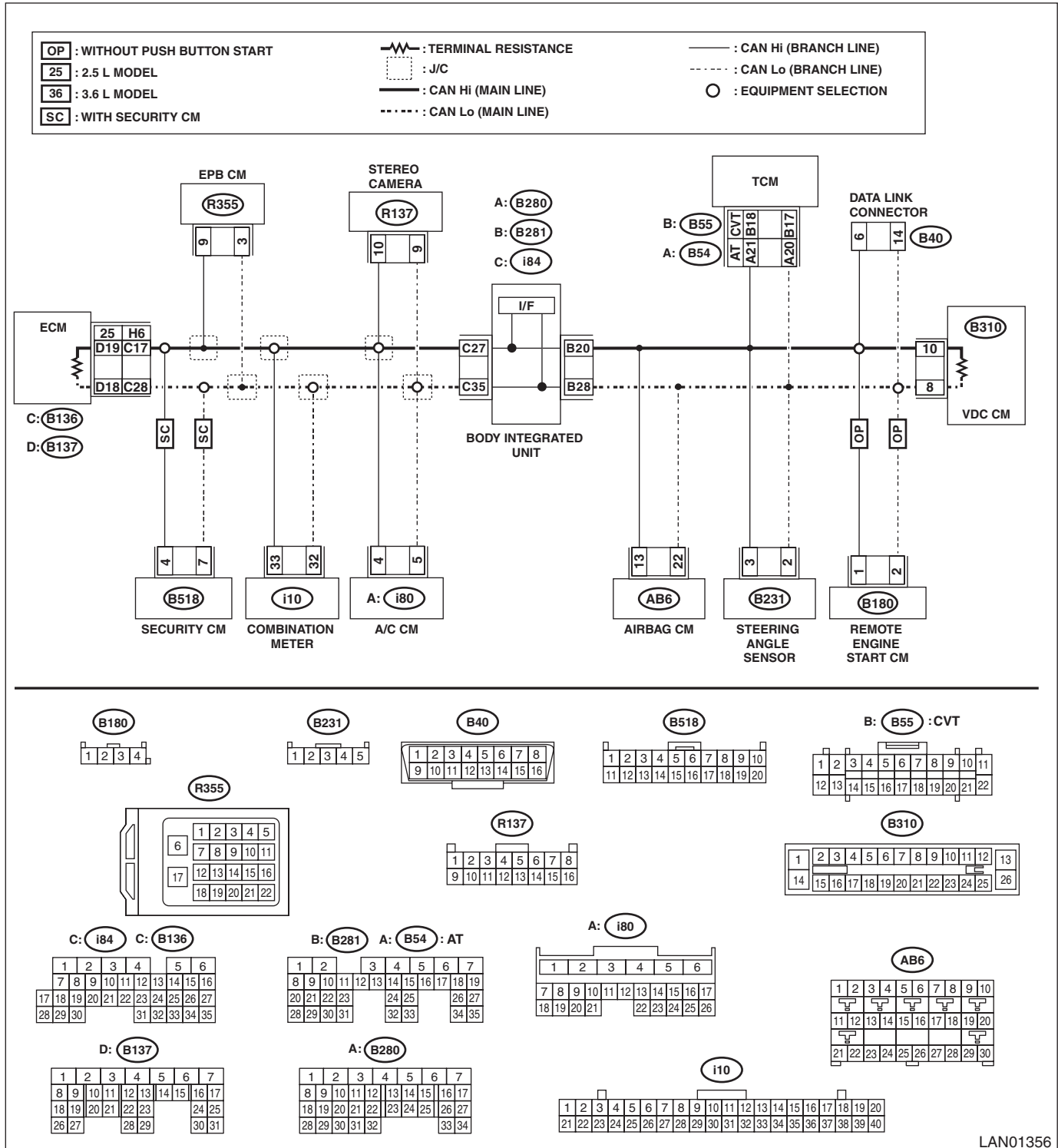
# CAN Communication Circuit Check

LAN SYSTEM (DIAGNOSTICS)

## 12.RELATED LINE 56 — 64 Ω (STEREO CAMERA)

### WIRING DIAGRAM:

CAN communication system <Ref. to WI-83, WIRING DIAGRAM, CAN Communication System.>



# CAN Communication Circuit Check

## LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
<b>1</b> <b>CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.</b> 1) Disconnect the stereo camera CM connector. 2) Using the tester, measure the resistance between terminals. <b>Connector &amp; terminal</b> <b>(R137) No. 10 — No. 9:</b>	Is the resistance 400 $\Omega$ or more?	Related lines between stereo camera CM and main wiring harness is open, or main wiring harness is open at two places or more.	Go to step 2.
<b>2</b> <b>CHECK RELATED LINES.</b> Using the tester, measure the resistance between terminals. <b>Connector &amp; terminal</b> <b>(R137) No. 9 — (B40) No. 14:</b> <b>(R137) No. 10 — (B40) No. 6:</b>	Is the resistance 10 $\Omega$ or more?	Repair or replace the open circuit portion of stereo camera CM related lines.	Check DTC of stereo camera. <Ref. to ES(diag)-40, OPERATION, Read Diagnostic Trouble Code (DTC).>



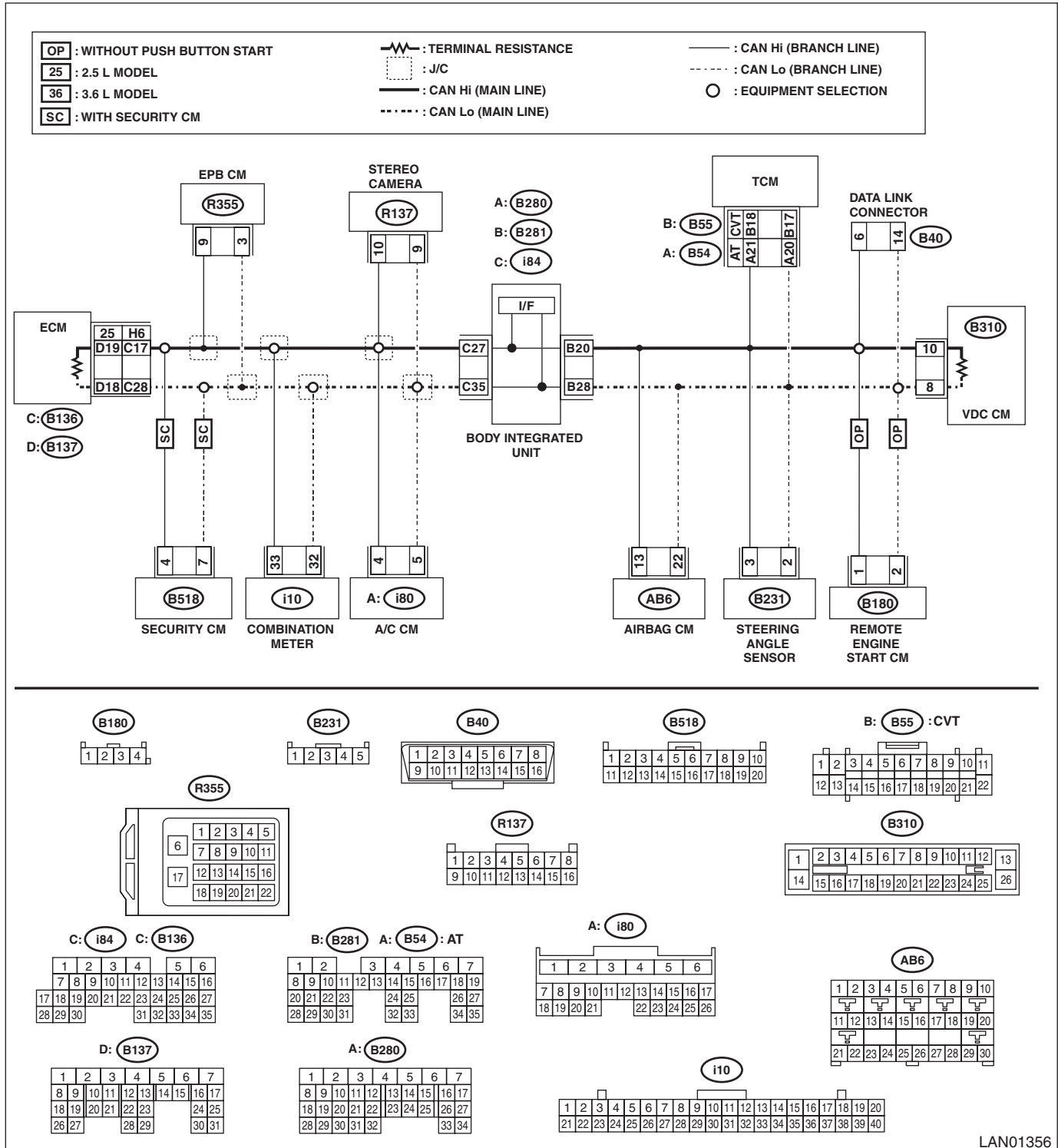
# CAN Communication Circuit Check

LAN SYSTEM (DIAGNOSTICS)

## 13. RELATED LINES 56 — 64 Ω (AIRBAGS)

### WIRING DIAGRAM:

CAN communication system <Ref. to WI-83, WIRING DIAGRAM, CAN Communication System.>



# CAN Communication Circuit Check

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
<b>1</b> <b>CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.</b> 1) Disconnect the A/B CM connector. 2) Using the tester, measure the resistance between terminals. <i><b>Connector &amp; terminal</b></i> <i><b>(AB6) No. 13 — No. 22:</b></i>	Is the resistance 400 $\Omega$ or more?	Related lines between A/B CM and main wiring harness is open, or main wiring harness is open at two places or more.	Go to step 2.
<b>2</b> <b>CHECK RELATED LINES.</b> Using the tester, measure the resistance between terminals. <i><b>Connector &amp; terminal</b></i> <i><b>(AB6) No. 13 — (B40) No. 6:</b></i> <i><b>(AB6) No. 22 — (B40) No. 14:</b></i>	Is the resistance 10 $\Omega$ or more?	Repair or replace the open circuit of A/B CM related lines.	Check DTC of A/B CM.

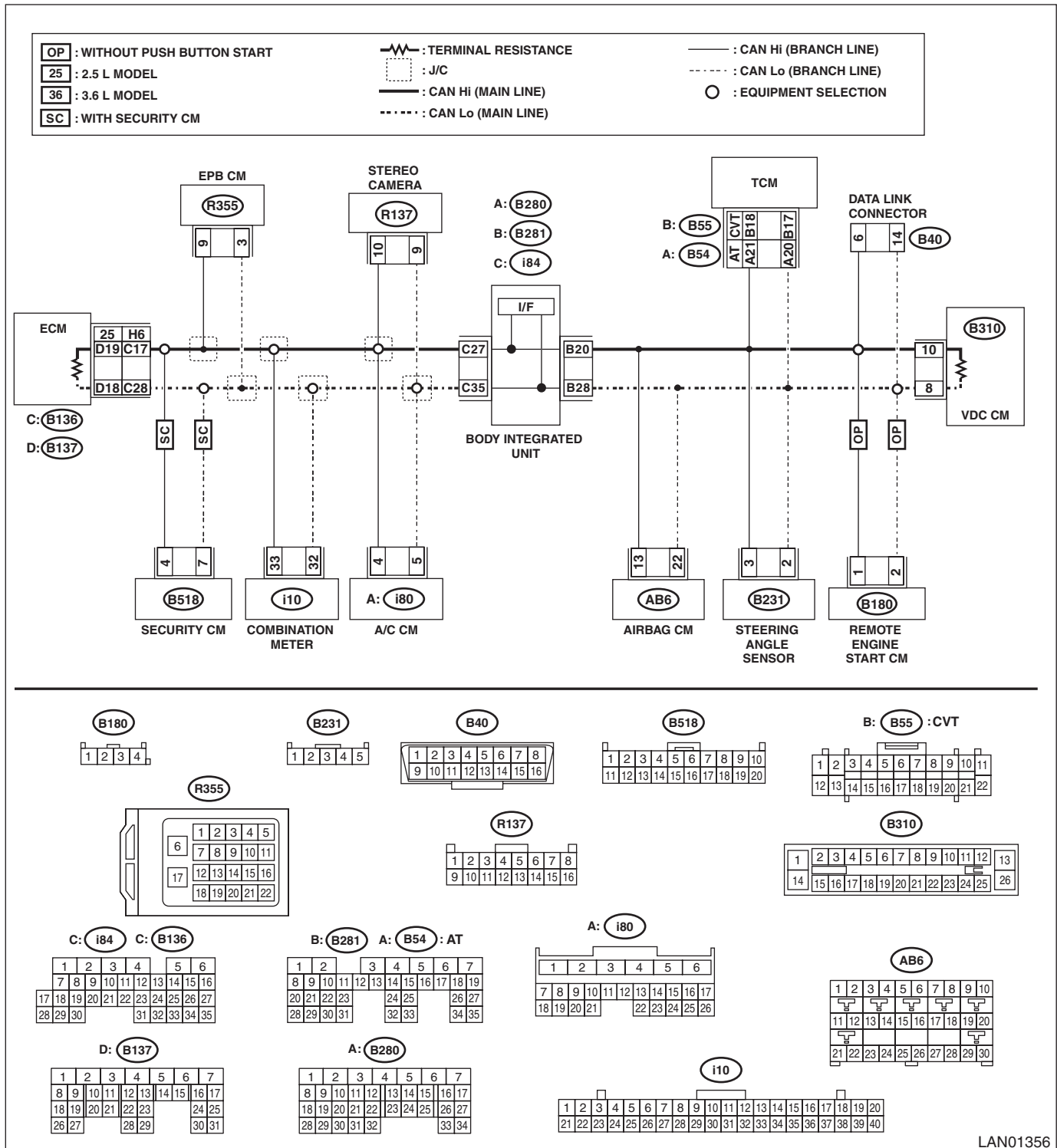
# CAN Communication Circuit Check

LAN SYSTEM (DIAGNOSTICS)

## 14. RELATED LINES 56 — 64 Ω (REMOTE ENGINE START)

### WIRING DIAGRAM:

CAN communication system <Ref. to WI-83, WIRING DIAGRAM, CAN Communication System.>



LAN01356

# CAN Communication Circuit Check

## LAN SYSTEM (DIAGNOSTICS)

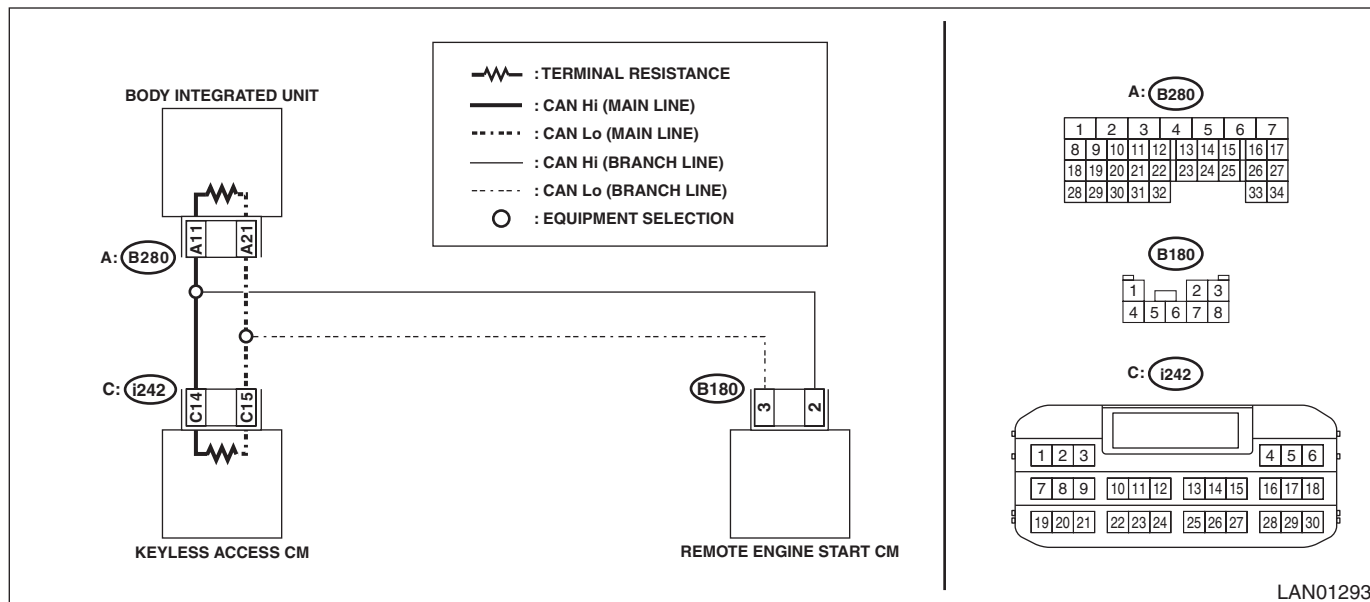
Step	Check	Yes	No
<b>1</b> <b>CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.</b> 1) Disconnect the remote engine start CM connector. 2) Using the tester, measure the resistance between terminals. <b>Connector &amp; terminal</b> <b>(B180) No. 1 — No. 2:</b>	Is the resistance 400 $\Omega$ or more?	Related lines between remote engine start CM and main wiring harness is open, or main wiring harness is open at two places or more.	Go to step 2.
<b>2</b> <b>CHECK RELATED LINES.</b> Using the tester, measure the resistance between terminals. <b>Connector &amp; terminal</b> <b>(B40) No. 6 — (B180) No. 1:</b> <b>(B40) No. 14 — (B180) No. 2:</b>	Is the resistance 10 $\Omega$ or more?	Repair or replace the open circuit portion of remote engine start CM related lines.	Check that the remote engine start function operates normally.

# CAN Communication Circuit Check

## 15. GROUND SHORT INSPECTION (BUS "B" (SMART SYSTEM CAN))

### WIRING DIAGRAM:

CAN communication system <Ref. to WI-83, WIRING DIAGRAM, CAN Communication System.>



LAN01293

### NOTE:

Main wiring harness or related lines may be shorted to ground, or shorted to ground in one of the control modules.

Step	Check	Yes	No
<b>1</b> <b>CHECK BETWEEN MAIN WIRING HARNESSSES.</b> Using the tester, measure the resistance between terminals. <i>Connector &amp; terminal</i> <i>(B280) No. 11 — Chassis ground:</i> <i>(B280) No. 21 — Chassis ground:</i>	Is the resistance 10 Ω or less?	Go to step 2.	Currently, it is normal.
<b>2</b> <b>CHECK CONTROL MODULE.</b> With the tester connected, disconnect control module. <i>Connector &amp; terminal</i> <i>(B280) No. 11 — Chassis ground:</i> <i>(B280) No. 21 — Chassis ground:</i>	Did the resistance change to 10 Ω or more?	Replace the control module whose resistance has changed.	Repair or replace the short circuit of the main wiring harness and related lines between body integrated unit and keyless access CM.

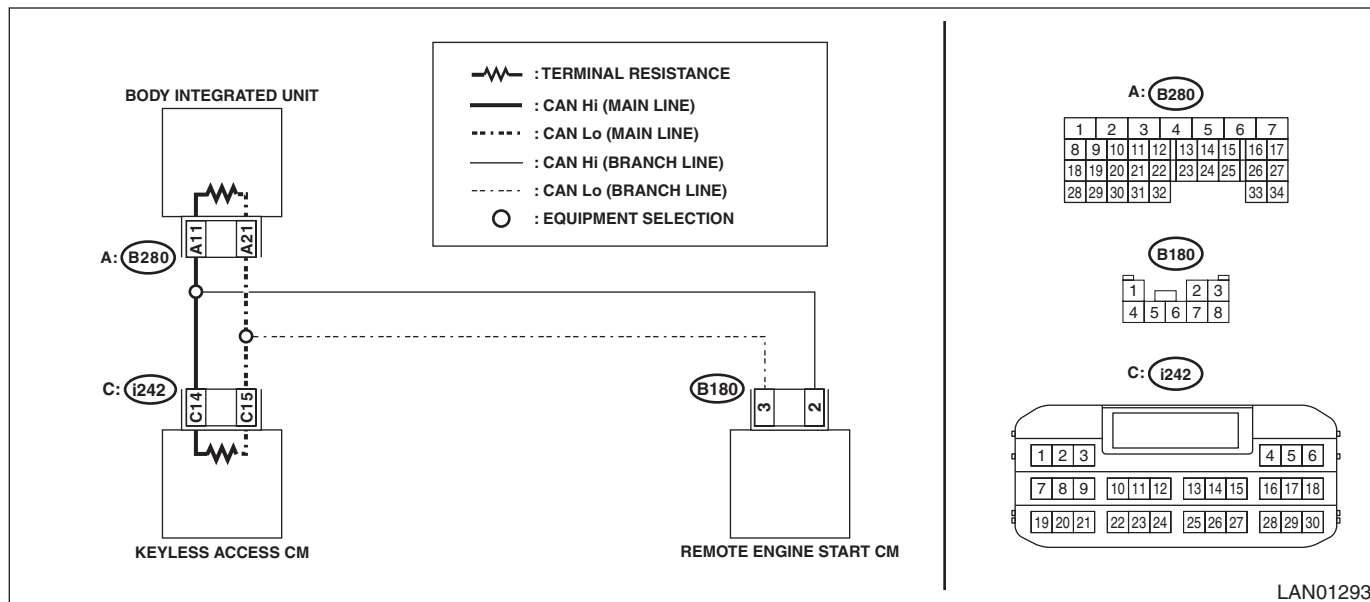
# CAN Communication Circuit Check

LAN SYSTEM (DIAGNOSTICS)

## 16. BATTERY SHORT INSPECTION (BUS "B" (SMART SYSTEM CAN))

### WIRING DIAGRAM:

CAN communication system <Ref. to WI-83, WIRING DIAGRAM, CAN Communication System.>



LAN01293

### NOTE:

Main wiring harness or related lines may be shorted to battery circuit, or shorted to battery circuit in one of the control modules.

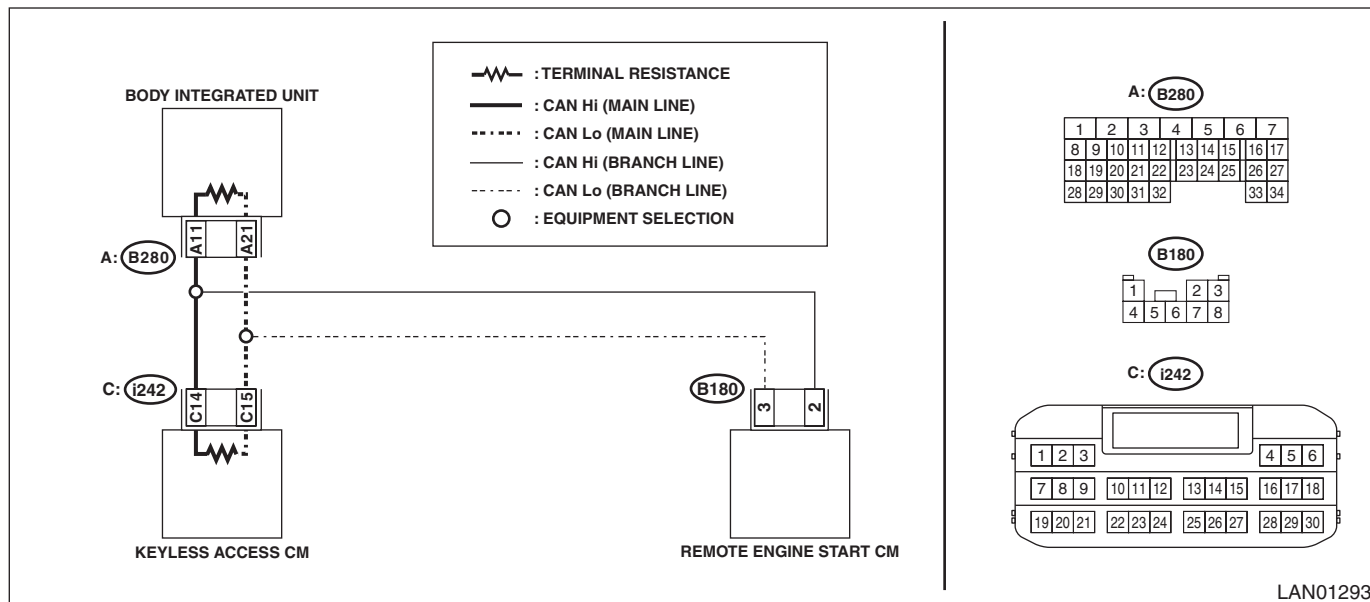
Step	Check	Yes	No
<b>1 CHECK BETWEEN MAIN WIRING HARNESSSES.</b> 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. <b>Connector &amp; terminal</b> (B280) No. 11 (+) — Chassis ground (-): (B280) No. 21 (+) — Chassis ground (-):	Is the voltage 5 V or less?	Currently returned to normal.	Go to step 2.
<b>2 CHECK CONTROL MODULE.</b> With the tester connected, disconnect control module. <b>Connector &amp; terminal</b> (B280) No. 11 (+) — Chassis ground (-): (B280) No. 21 (+) — Chassis ground (-):	Did the voltage change to 5 V or less?	Replace the control module whose voltage has changed.	Repair or replace the short circuit of the main wiring harness and related lines between body integrated unit and keyless access CM.

# CAN Communication Circuit Check

## 17.57 — 63 Ω

### WIRING DIAGRAM:

CAN communication system <Ref. to WI-83, WIRING DIAGRAM, CAN Communication System.>



LAN01293

### NOTE:

When the measured resistance value is 57 — 63 Ω, main wiring harness or related lines may be shorted to ground, or shorted to power supply line, or related line may be open.

Step	Check	Yes	No	
1	<p><b>CHECK BETWEEN MAIN WIRING HARNESSSES.</b> Using the tester, measure the resistance between terminals. <b>Connector &amp; terminal</b> <b>(B280) No. 11 — Chassis ground:</b> <b>(B280) No. 21 — Chassis ground:</b></p>	Is the resistance 10 Ω or less?	Go to step 2.	Go to step 3.
2	<p><b>CHECK CONTROL MODULE.</b> With the tester connected, disconnect control module. NOTE: Disconnect the body integrated unit at the end. <b>Connector &amp; terminal</b> <b>(B280) No. 11 — Chassis ground:</b> <b>(B280) No. 21 — Chassis ground:</b></p>	Did the resistance change to 10 Ω or more?	Replace the control module whose resistance has changed.	Repair or replace the short circuit of the main wiring harness and related lines between body integrated unit and keyless access CM.
3	<p><b>CHECK BETWEEN MAIN WIRING HARNESSSES.</b> 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. <b>Connector &amp; terminal</b> <b>(B280) No. 11 (+) — Chassis ground (-):</b> <b>(B280) No. 21 (+) — Chassis ground (-):</b></p>	Is the voltage 5 V or less?	CAN communication circuit is normal.	Go to step 4.

# CAN Communication Circuit Check

## LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
<b>4</b> <b>CHECK CONTROL MODULE.</b> With the tester connected, disconnect control module. (Disconnect the body integrated unit at the end.) <b>Connector &amp; terminal</b> <b>(B280) No. 11 (+) — Chassis ground (-):</b> <b>(B280) No. 21 (+) — Chassis ground (-):</b>	Did the voltage change to 5 V or less?	Replace the control module whose voltage has changed.	Repair or replace the short circuit of the main wiring harness and related lines between body integrated unit and keyless access CM.

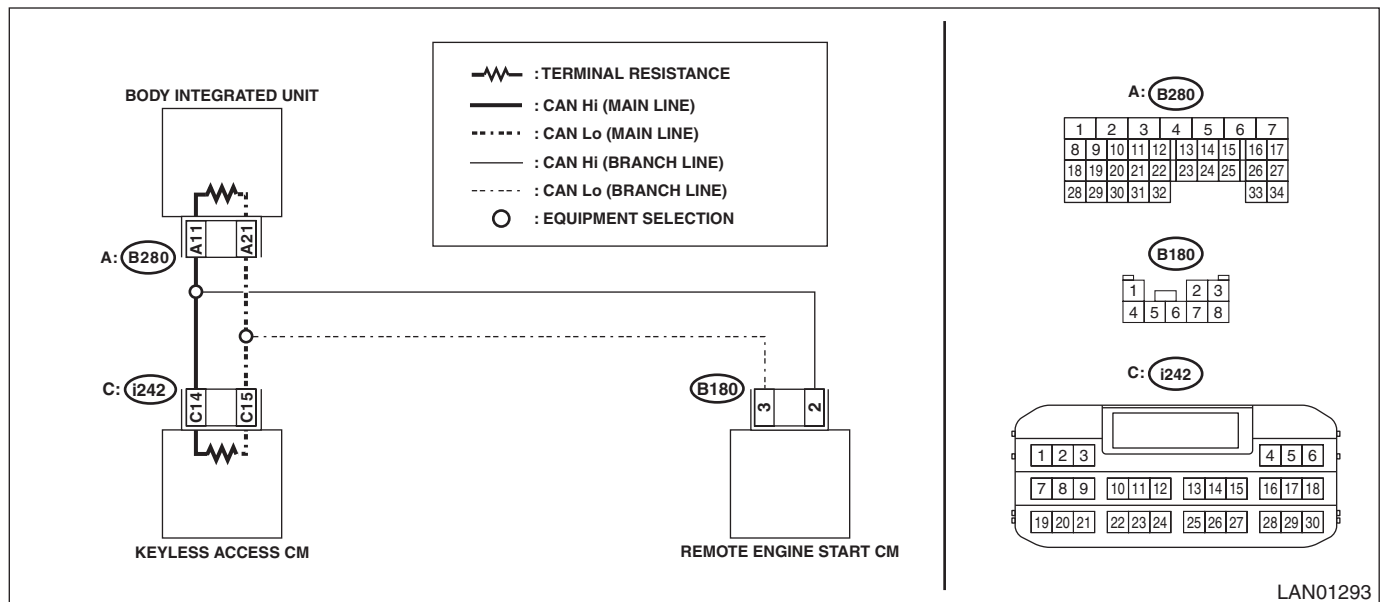


# CAN Communication Circuit Check

## 18.56 Ω OR LESS

### WIRING DIAGRAM:

CAN communication system <Ref. to WI-83, WIRING DIAGRAM, CAN Communication System.>



LAN01293

### NOTE:

When the bus line is measured, combined resistance of end resistance (120 Ω) in body integrated unit and end resistance (120 Ω) in keyless access CM can be measured. The combined resistance is approximately 57 — 63 Ω. When the measured resistance value is 56 Ω or less, main wiring harness or related lines may be shorted, or combined resistance may have changed because resistance other than end resistance is created on the circuit.

Step	Check	Yes	No	
1	<p><b>CHECK BETWEEN MAIN WIRING HARNESSSES.</b> Using the tester, measure the resistance between terminals. <b>Connector &amp; terminal</b> <b>(B280) No. 11 — No. 21:</b></p>	Is the resistance 10 Ω or less?	Go to step 2.	Go to step 3.
2	<p><b>CHECK MAIN WIRING HARNESS AND RELATED LINES.</b> With a tester connected, disconnect control module connectors in order. <b>Connector &amp; terminal</b> <b>(B280) No. 11 — No. 21:</b></p>	Is there any control module whose condition has changed from short state?	Replace the control module whose resistance has changed.	Repair or replace the short circuit of the main wiring harness and related lines between body integrated unit and keyless access CM.
3	<p><b>CHECK CONTROL MODULE.</b> 1) Disconnect the connectors of the body integrated unit and the keyless access CM. 2) Using a tester, measure the resistance between control module terminals. <b>Connector &amp; terminal</b> <b>(B280) No. 11 — No. 21:</b> <b>(i242) No. 15 — No. 14:</b></p>	Is the resistance 115 — 135 Ω?	Go to step 4.	Replace the control module whose end resistance value is out of the specified range.
4	<p><b>CHECK HARNESS.</b> With a tester connected, disconnect control modules in order. <b>Connector &amp; terminal</b> <b>(B281) No. 11 — No. 21:</b></p>	Are there any control modules whose resistance changed to 1 MΩ or more?	Replace the control module that has changed.	Repair or replace the harness due to resistance component.

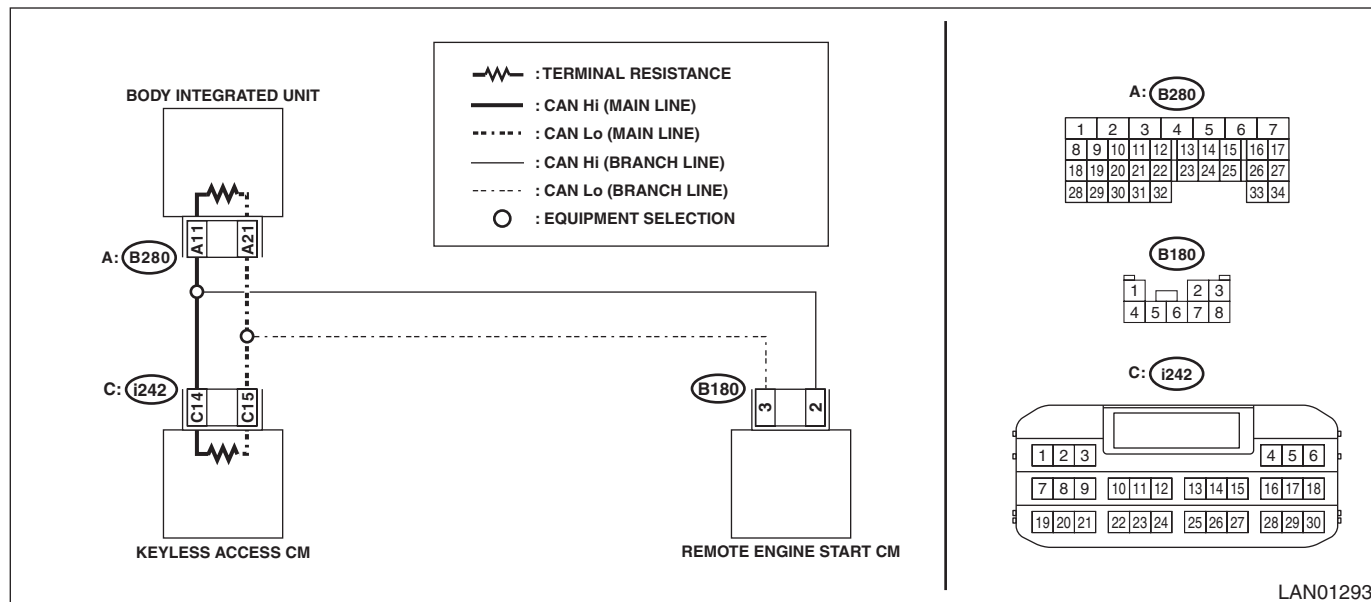
# CAN Communication Circuit Check

LAN SYSTEM (DIAGNOSTICS)

## 19.64 Ω OR MORE

### WIRING DIAGRAM:

CAN communication system <Ref. to WI-83, WIRING DIAGRAM, CAN Communication System.>



### NOTE:

When the CAN communication circuit is measured, combined resistance of end resistance (120 Ω) in body integrated unit and end resistance (120 Ω) in keyless access CM can be measured. The combined resistance is approximately 57 — 63 Ω. When the measured resistance value is 64 Ω or more, either of end resistance or main wiring harness may have malfunction such as open circuit.

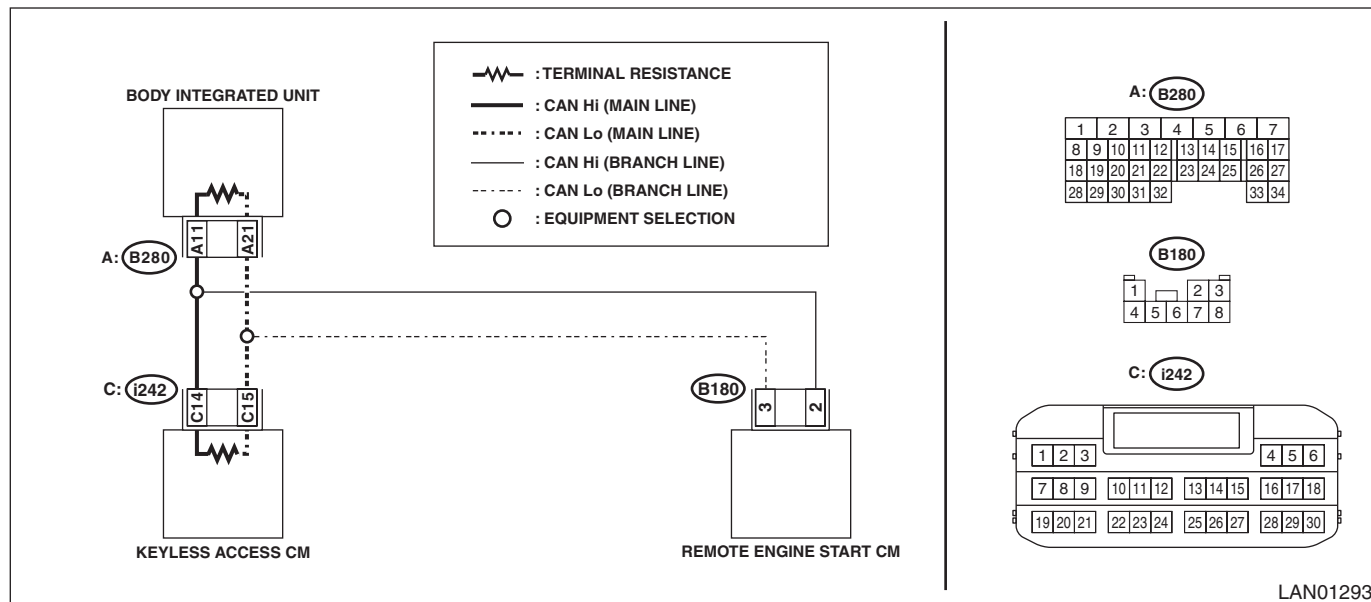
Step	Check	Yes	No
<b>1 CHECK CONTROL MODULE.</b> 1) Disconnect the connectors of the body integrated unit and the keyless access CM. 2) Using a tester, measure the resistance between control module terminals. <b>Connector &amp; terminal</b> <b>(B280) No. 11 — No. 21:</b> <b>(i242) No. 15 — No. 14:</b>	Is the resistance 115 — 135 Ω or more?	Go to step 2.	Replace the control module whose value is out of the specification.
<b>2 CHECK HARNESS.</b> Using a tester, check continuity between terminals. <b>Connector &amp; terminal</b> <b>(B280) No. 11 — (i242) No. 14:</b> <b>(B280) No. 21 — (i242) No. 15:</b>	Is there continuity?	It is possible that temporary poor communication occurs.	Repair or replace the open circuit of harness.

# CAN Communication Circuit Check

## 20.RELATED LINES 57 — 63 Ω (REMOTE ENGINE START)

### WIRING DIAGRAM:

CAN communication system <Ref. to WI-83, WIRING DIAGRAM, CAN Communication System.>



LAN01293

Step	Check	Yes	No
<b>1</b> <b>CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.</b> 1) Disconnect the remote engine start CM connector. 2) Using the tester, measure the resistance between terminals. <i>Connector &amp; terminal</i> <i>(B180) No. 2 — No. 3:</i>	Is the resistance 400 Ω or more?	Related lines between remote engine start CM and main wiring harness is open, or main wiring harness is open at two places or more.	Go to step 2.
<b>2</b> <b>CHECK RELATED LINES.</b> Using the tester, measure the resistance between terminals. <i>Connector &amp; terminal</i> <i>(B280) No. 11 — (B180) No. 2:</i> <i>(B280) No. 21 — (B180) No. 3:</i>	Is the resistance 10 Ω or more?	Repair or replace the open circuit portion of remote engine start CM related lines.	Check that the remote engine start function operates normally.

## List of Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

### 10. List of Diagnostic Trouble Code (DTC)

#### A: LIST

DTC	Item	Content of diagnosis	Note
None	Communication for Initializing Impossible	Subaru Select Monitor communication is open or shorted.	<Ref. to LAN(diag)-70, COMMUNICATION FOR INITIALIZING IMPOSSIBLE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U1201	CAN-HS Counter Abnormal	High speed CAN communication error	<Ref. to LAN(diag)-72, DTC U1201 CAN-HS COUNTER ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U1202	CAN-HS Bus Off	Communication of some module is shut down.	<Ref. to LAN(diag)-73, DTC U1202 CAN-HS BUS OFF, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U1211	CAN-HS ECM Data Abnormal	Error data is received from ECM.	<Ref. to LAN(diag)-74, DTC U1211 CAN-HS ECM DATA ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U1212	CAN-HS TCM Data Abnormal	Error data is received from TCM.	<Ref. to LAN(diag)-75, DTC U1212 CAN-HS TCM DATA ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U1213	CAN-HS VDC Data Abnormal	Error data is received from VDC module.	<Ref. to LAN(diag)-76, DTC U1213 CAN-HS VDC DATA ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U121A	CAN-HS Meter Unit Data Abnormal	Error data is received from meter.	<Ref. to LAN(diag)-78, DTC U121A CAN-HS METER UNIT DATA ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U121B	CAN-HS A/C Data Abnormal	Error data is received from A/C module.	<Ref. to LAN(diag)-79, DTC U121B CAN-HS A/C DATA ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U121C	CAN-HS SCU Data Abnormal	Error data is received from SCU.	<Ref. to LAN(diag)-80, DTC U121C CAN-HS SCU DATA ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U1219	CAN-HS EPB Data Abnormal	Error data is received from EPB module.	<Ref. to LAN(diag)-77, DTC U1219 CAN-HS EPB DATA ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U1221	CAN-HS ECM No-Receive Data	Data does not arrive from ECM.	<Ref. to LAN(diag)-81, DTC U1221 CAN-HS ECM NO-RECEIVE DATA, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U1222	CAN-HS TCM No-Receive Data	Data does not arrive from TCM.	<Ref. to LAN(diag)-81, DTC U1222 CAN-HS TCM NO-RECEIVE DATA, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U1223	CAN-HS VDC No-Receive Data	Data does not arrive from VDC module.	<Ref. to LAN(diag)-82, DTC U1223 CAN-HS VDC NO-RECEIVE DATA, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U122A	CAN-HS Meter No-Receive Data	Data does not arrive from meter.	<Ref. to LAN(diag)-83, DTC U122A CAN-HS METER NO-RECEIVE DATA, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U122B	CAN-HS A/C No-Receive Data	Data does not arrive from A/C CM.	<Ref. to LAN(diag)-83, DTC U122B CAN-HS A/C NO-RECEIVE DATA, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U122C	CAN-HS SCU No-Receive Data	Data does not arrive from SCU.	<Ref. to LAN(diag)-84, DTC U122C CAN-HS SCU NO-RECEIVE DATA, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U1229	CAN-HS EPB No-Receive Data	Data does not arrive from EPB module.	<Ref. to LAN(diag)-82, DTC U1229 CAN-HS EPB NO-RECEIVE DATA, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

# List of Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

DTC	Item	Content of diagnosis	Note
U1301	CAN-LS Counter Abnormal (LS or KAC)	Communication is unstable because of KAC CAN communication error.	<Ref. to LAN(diag)-99, DTC U1301 CAN-LS COUNTER ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U1302	CAN-LS Bus Off (LS or KAC)	Integrated unit communication is shut down because of KAC CAN communication error.	<Ref. to LAN(diag)-100, DTC U1302 CAN-LS BUS OFF, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U1328	Smart System CAN (KAC) Data No-Receive	Data does not arrive from keyless access CM.	<Ref. to LAN(diag)-101, DTC U1328 SMART SYSTEM CAN (KAC) DATA NO-RECEIVE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U1601	LIN Communication (Seat Memory) Failure	Communication error with seat memory module occurred.	<Ref. to LAN(diag)-102, DTC U1601 LIN COMMUNICATION (SEAT MEMORY) FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0073	Control Module Communication Bus "A" Off	Communication of some module is shut down.	<Ref. to LAN(diag)-84, DTC U0073 CONTROL MODULE COMMUNICATION BUS "A" OFF, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0401	Invalid Data Received From ECM/PCM "A"	Error data is received from ECM.	<Ref. to LAN(diag)-85, DTC U0401 INVALID DATA RECEIVED FROM ECM/PCM "A", Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0402	Invalid Data Received From TCM	Error data is received from TCM.	<Ref. to LAN(diag)-86, DTC U0402 INVALID DATA RECEIVED FROM TCM, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0416	Invalid Data Received From Vehicle Dynamics Control Module	Error data is received from VDC module.	<Ref. to LAN(diag)-87, DTC U0416 INVALID DATA RECEIVED FROM VEHICLE DYNAMICS CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0422	Invalid Data Received From Body Control Module	Error data is received from body integrated unit.	<Ref. to LAN(diag)-89, DTC U0422 INVALID DATA RECEIVED FROM BODY CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0423	Invalid Data Received From Instrument Panel Cluster Control Module	Error data is received from meter.	<Ref. to LAN(diag)-90, DTC U0423 INVALID DATA RECEIVED FROM INSTRUMENT PANEL CLUSTER CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U1433	Invalid Data Received From EyeSight	Error data is received from stereo camera.	<Ref. to LAN(diag)-91, DTC U1433 INVALID DATA RECEIVED FROM EyeSight, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0417	Invalid Data Received From Park Brake Control Module	Error data is received from electric parking CM.	<Ref. to LAN(diag)-88, DTC U0417 INVALID DATA RECEIVED FROM PARK BRAKE CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0100	Lost Communication With ECM/PCM "A"	Data does not arrive from ECM.	<Ref. to LAN(diag)-92, DTC U0100 LOST COMMUNICATION WITH ECM/PCM "A", Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0101	Lost Communication With TCM	Data does not arrive from TCM.	<Ref. to LAN(diag)-93, DTC U0101 LOST COMMUNICATION WITH TCM, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0122	Lost Communication With Vehicle Dynamics Control Module	Data does not arrive from VDC module.	<Ref. to LAN(diag)-94, DTC U0122 LOST COMMUNICATION WITH VEHICLE DYNAMICS CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0140	Lost Communication With Body Control Module	Data does not arrive from body integrated unit.	<Ref. to LAN(diag)-96, DTC U0140 LOST COMMUNICATION WITH BODY CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>