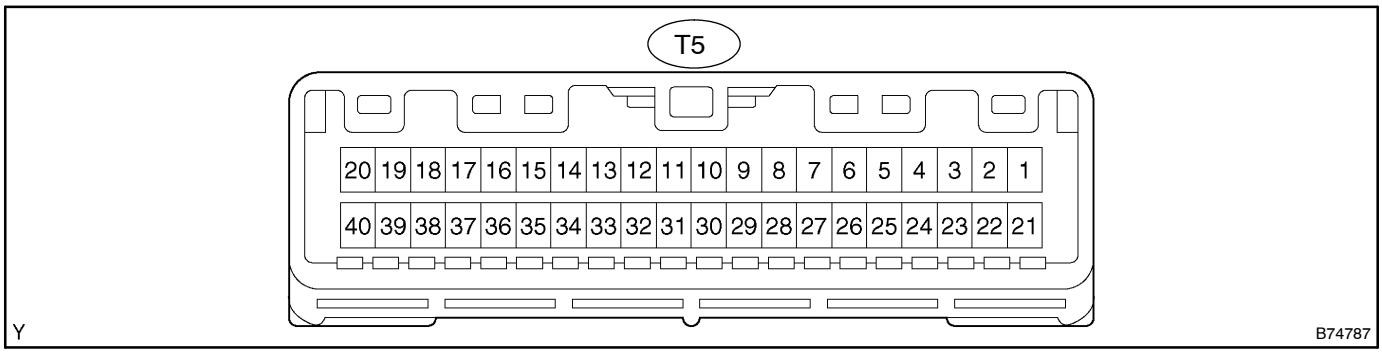
05HY8–01

TERMINALS OF ECU

1. CHECK THEFT DETERRENT ECU



(a) Disconnect the T5 ECU connector.
(b) Measure the resistance and voltage of each terminal of the wire harness side connector.
Standard:

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
GND (T5–20) – Body ground	W–B – Body ground	Ground	Constant	Below 1 Ω
+B1 (T5–1) – Body ground	V–Y – Body ground	+B power supply	Constant	10 to 14 V
+B2 (T5–21) – Body ground	G–W – Body ground	+B power supply	Constant	10 to 14 V
IG (T5–24) – Body ground	R–L – Body ground	Ignition power supply	Ignition switch OFF → ON	0 V → 10 to 14 V
CNSL (T5–10) – Body ground	P–B – Body ground	Smart key system cancel switch	Cancel switch OFF → ON	10 kΩ or higher → Below 1 Ω

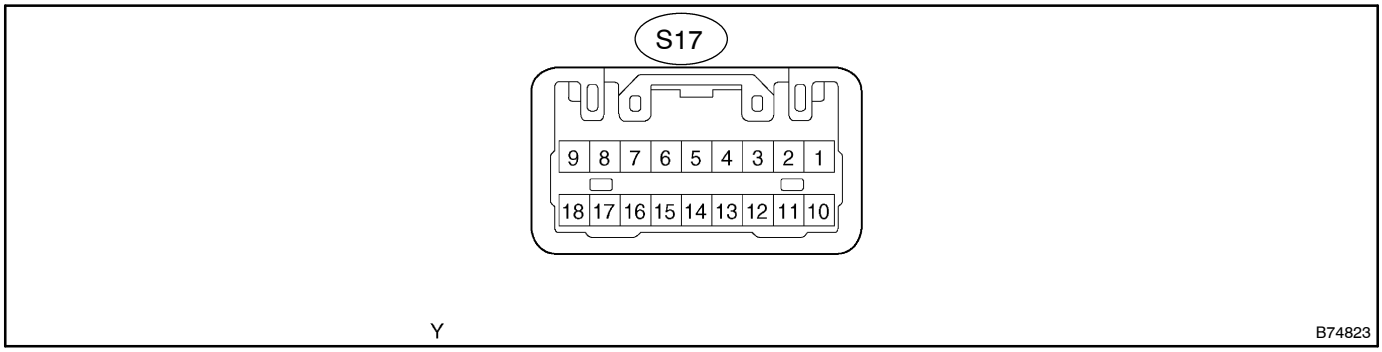
If the result is not as specified, there may be a malfunction on the wire harness side.
(c) Reconnect the T5 ECU connector.
(d) Measure the voltage and frequency of each terminal of the connector.
Standard:

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
IND2 (T5–2) – Body ground	V–R*1 – Body ground R*2 – Body ground	Smart indicator	Smart indicator illuminates (When ignition switch is turned from OFF to ON and vehicle interior check passes, it illuminates. When ignition switch is OFF and any door is unlocked, it flashes continuously.)	3 to 6 V
RCO (T5–15) – Body ground	B–Y*1 – Body ground BR–W*2 – Body ground	Power source	Ignition switch OFF, no key inserted, all doors closed and transmitter switch OFF → ON	0V to 6 V → 6 V
RDA1 (T5–29) – Body ground	Y*1 – Body ground BR*2 – Body ground	Door control receiver input signal	No key in ignition key cylinder, all doors closed and transmitter switch OFF → ON	Below 1 V → 12 V
RSS1 (T5–30) – Body ground	G–Body ground	Door control receiver output signal	Ignition switch OFF, no key inserted, all doors closed and transmitter switch OFF → ON	0 V to 6 V → Below 1 V
RCO2 (T5–34) – Body ground	B–Y*1 – Body ground B–O*2 – Body ground	Power source	Luggage door closed and ignition switch OFF → ON	0 V → 6 V

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
RDA2 (T5–32) – Body ground	Y–G – Body ground	Door control receiver input signal	No key in ignition key cylinder, all doors closed and transmitter switch OFF → ON	Below 1 V → 12 V
RSS2 (T5–12) – Body ground	R–G – Body ground	Door control receiver output signal	Luggage door closed, smart key within trunk detection area and ignition switch OFF → ON	0 V to 6 V → Below 1 V
CLG1 (T5–16) – Body ground	G–W*1 – Body ground L–R*2 – Body ground	Driver door oscillator sensor signal	With smart key in door oscillator's detection area, lock switch OFF → ON	0 Hz → Above 0 Hz
CLG2 (T5–17) – Body ground	L–B – Body ground	passenger door oscillator sensor signal	With smart key in door oscillator's detection area, lock switch OFF → ON	0 Hz → Above 0 Hz
CLG3 (T5–36) – Body ground	B*1–Body ground L–W*2 – Body ground	Rear door LH oscillator sensor signal	With smart key in door oscillator's detection area, lock switch OFF → ON	0 Hz → Above 0 Hz
CLG4 (T5–37) – Body ground	V*1–Body ground B*2–Body ground	Rear door LH oscillator sensor signal	With smart key in door oscillator's detection area, lock switch OFF → ON	0 Hz → Above 0 Hz
CLG5 (T5–18) – Body ground	B–W – Body ground	Room oscillator front sensor signal	30 seconds elapses after driver door open → closed; or closed → open and ignition switch PUSH OFF/ PUSH ON;	0 Hz → Above 0 Hz
CLG6 (T5–19) – Body ground	LG–B – Body ground	Luggage oscillator outer sensor signal	30 seconds elapses after driver door open → closed; or closed → open and ignition switch PUSH OFF/ PUSH ON;	0 Hz → Above 0 Hz
CLG7 (T5–38) – Body ground	R–B – Body ground	Room oscillator rear sensor signal	30 seconds elapses after driver door open → closed; or closed → open and ignition switch PUSH OFF/ PUSH ON;	0 Hz → Above 0 Hz
CLG8 (T5–39) – Body ground	L–Y*1 – Body ground LG*2 – Body ground	Luggage oscillator inner sensor signal	With luggage door closed and smart key in trunk oscillator's detection area, ignition switch PUSH OFF → ON	0 Hz → Above 0 Hz

HINT:
*1: LHD
*2: RHD
If the result is not as specified, the theft deterrent ECU may have a malfunction.

2. CHECK STEERING LOCK ECU



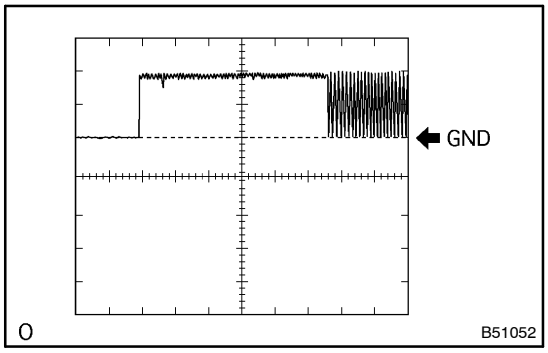
(a) Disconnect the S17 ECU connector.
(b) Measure the resistance and voltage of each terminal of the wire harness side connector.
Standard:

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
GND (S17–9) – Body ground	W–B – Body ground	Ground	Constant	Below 1 Ω
CPUB (S17–1) – Body ground	V–Y – Body ground	+B power supply	Constant	10 to 14 V
+B (S17–10) – Body ground	R–L*1 – Body ground B–L*2 – Body ground	+B power supply	Constant	10 to 14 V
IG2 (S17–2) – Body ground	B–Body ground	Ignition power supply	Ignition switch PUSH OFF → Ignition ON	0 V → 10 to 14 V
PUSH (S17–11) – Body ground	P–B – Body ground	Push switch input signal	Ignition switch PUSH OFF → Ignition ON	10 kΩ or higher → Below 1 Ω
KSW (S17–12) – Body ground	LG–B – Body ground	Key unlock warning switch input signal	Ignition switch PUSH OFF → Ignition ON	10 kΩ or higher → Below 1 Ω

HINT:
*1: LHD
*2: RHD
If the result is not as specified, there may be a malfunction on the wire harness side.
(c) Reconnect the S17 ECU connector.
(d) Check the resistance and voltage of each terminal of the connector.
Standard:

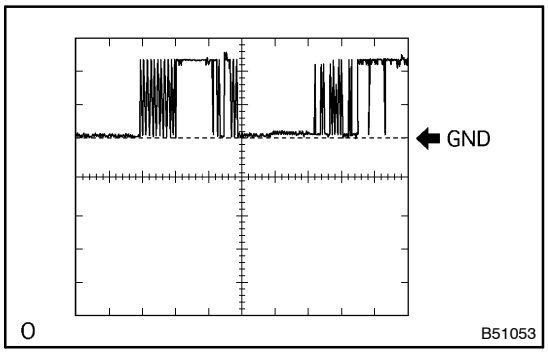
Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
PUSH (S17–11) – GND (S17–9)	P–B – W–B	Push switch input signal	Igniton switch PUSH OFF → Ignition ON	0 V → 10 to 14 V
KSW (S17–12) – GND (S17–9)	LG–B – W–B	Key unlock warning switch input signal	Igniton switch PUSH OFF → Ignition ON	0 V → 10 to 14 V
VC5 (S17–7) – GND (S17–9)	R – W–B	Power source	Key inserted → Ignition ON	0 V → 5 V
TXCT (S17–16) – GND (S17–9)	Y–B – W–B	Key code output signal	Key inserted → Ignition ON	Pulse generation (see waveform 1)
CODE (S17–17) – GND (S17–9)	O – W–B	Demodulated signal or key code data	Key inserted → Ignition ON	Pulse generation (see waveform 2)
RXCK (S17–8) – GND (S17–9)	L*1 – W–B L–W*2 – W–B	transponder key amplifier communication signal	Key inserted → Ignition ON	Pulse generation (see waveform 3)
EFIO (S17–13) – GND (S17–9)	B–Y*1 – W–B GR*2–G	ECM output signal	Ignition switch PUSH OFF → Ignition ON	Pulse generation (see waveform 4)
EFII (S17–4) – GND (S17–9)	GR–R – W–B	ECM output signal	Ignition switch PUSH OFF → Ignition ON	Pulse generation (see waveform 5)

HINT:
*1: LHD
*2: RHD
If the result is not as specified, the steering lock ECU may have a malfunction.



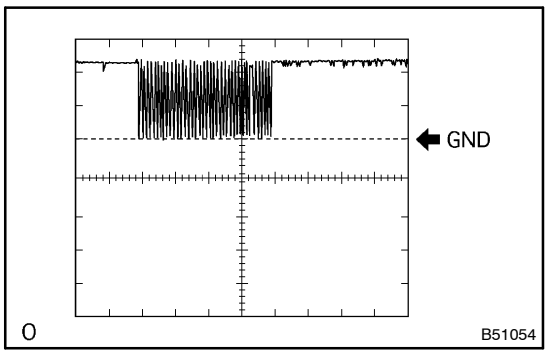
(1) Inspect using an oscilloscope.
Waveform 1 (Reference)

Terminal	TXCT – GND
Tool Setting	2 V/DIV 10 ms/DIV
Condition	Key inserted → Ignition switch ON



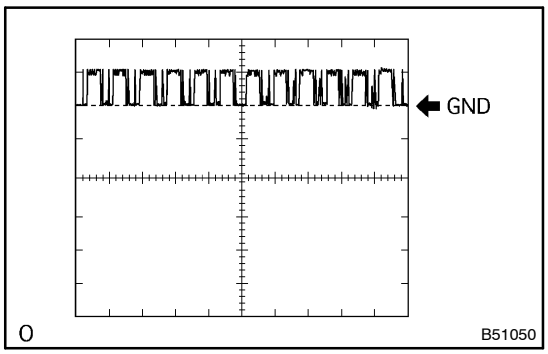
(2) Inspect using an oscilloscope.
Waveform 2 (Reference)

Terminal	CODE – GND
Tool Setting	5 V/DIV 10 ms/DIV
Condition	Key inserted → Ignition switch ON



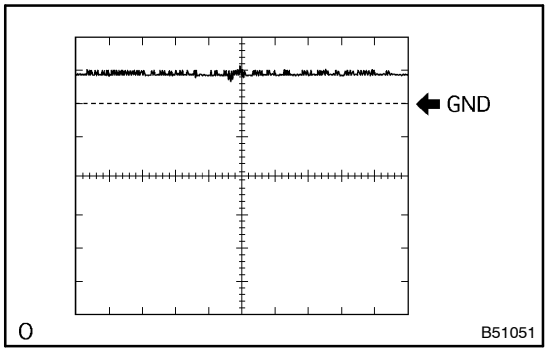
(3) Inspect using an oscilloscope.
Waveform 3 (Reference)

Terminal	RXCK – GND
Tool Setting	5 V/DIV 10 ms/DIV
Condition	Key inserted → Ignition switch ON



(4) Inspect using an oscilloscope.
Waveform 4 (Reference)

Terminal	EFIO – GND
Tool Setting	5 V/DIV 5 ms/DIV
Condition	Key inserted → Ignition switch ON

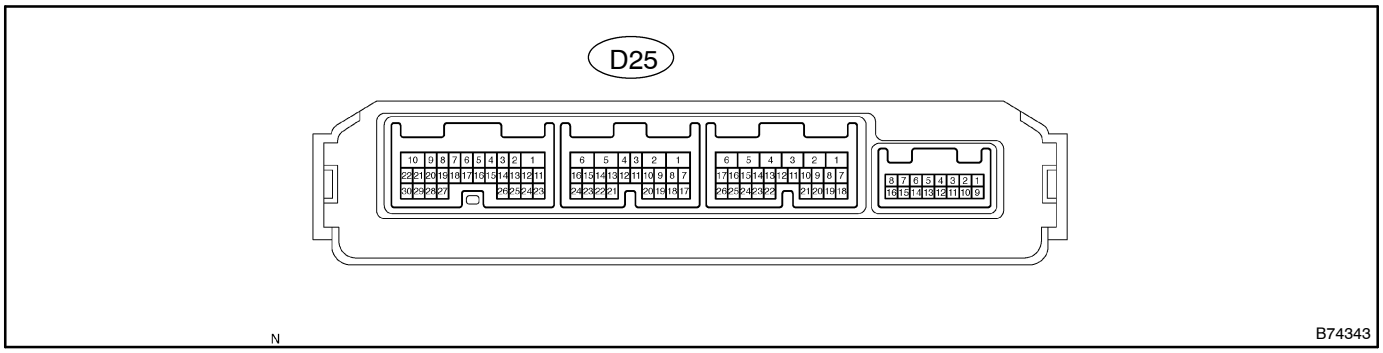


(5) Inspect using an oscilloscope.

Waveform 5 (Reference)

Terminal	EFII – GND
Tool Setting	5 V/DIV 5 ms/DIV
Condition	Key inserted → Ignition switch ON

3. CHECK DRIVER DOOR ECU



(a) Disconect the D25 ECU connector.

(b) Measure the resistance and voltage of each terminal of the wire harness side connector.

Standard:

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
GND (D25–1) – Body ground	W–B – Body ground	Ground	Constant	Below 1 Ω
CPUB (D25–4) Body ground	V–Y – Body ground	+B power supply	Constant	10 to 14 V
BDR (D25–6) – Body ground	R – Body ground	+B power supply	Constant	10 to 14 V
SIG (D25–5) – Body ground	R–L – Body ground	Ignition power supply	Ignition switch ON	10 to 14 V
TRG+ (D25–14) – TRG – (D25–13)	GR – P	Trigger switch signal	Trigger switch not pushed → Pushed	10 kΩ or higher → Below 1 Ω

If the result is not as specified, there may be a malfunction on the wire harness side.

(c) Reconnect the D25 ECU connector.

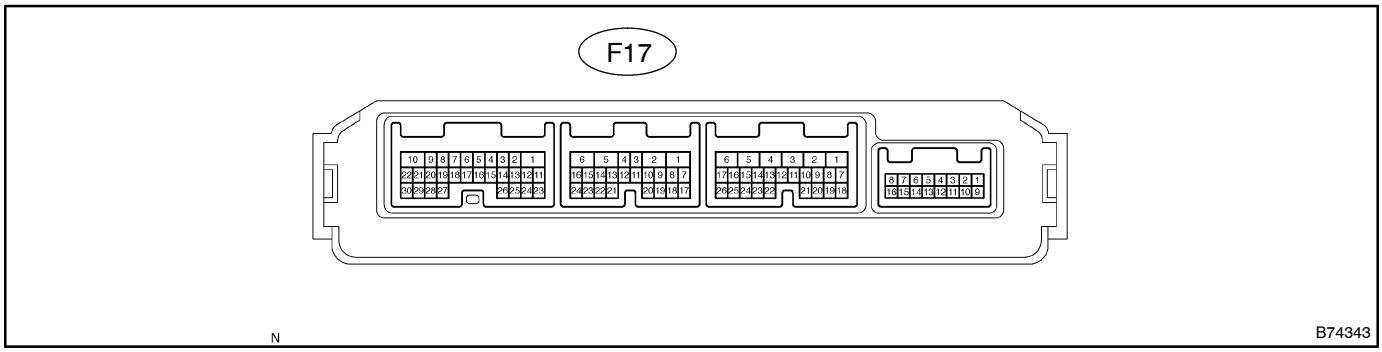
(d) Measure the resistance and voltage of each terminal of the connector.

Standard:

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
OSCB (D25–11) – OSCE (D25–22)	R – G–Y	+B power supply	Constant	10 to 14 V
SEL (D25–21) OSCE (D25–22)	W – G–Y	Sensor detection signal	Smart key at least 3 m away from door → Close to door	10 to 14 V → 0 V
CLGI (D25–10) – GND (D25–1)	L–G – W–B	Signal output to oscillator	Smart key at least 3 m away from door → Close to door	Above 0 Hz → 0 Hz
SENS (D25–9) – GND (D25–1)	G–W – W–B	Lock switch detection signal	Outside door handle touched → Not touched	10 to 14 V → 0 V
CLGO (D25–12) – GND – (D25–1)	L–R – W–B	Sensor detection signal	All doors locked and ignition switch OFF → ON	Above 0 Hz → 0 Hz

If the result is not as specified, the driver door ECU may have a malfunction.

4. CHECK PASSENGER DOOR ECU



(a) Disconnect the F17 ECU connector.

(b) Measure the resistance and voltage of each terminal of the wire harness side connector.

Standard:

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
GND (F17–1) – Body ground	W–B – Body ground	Ground	Constant	Below 1 Ω
CPUB (F17–4) Body ground	V–Y – Body ground	+B power supply	Constant	10 to 14 V
BDR (F17–6) – Body ground	R – Body ground	+B power supply	Constant	10 to 14 V
SIG (F17–5) – Body ground	R–L – Body ground	Ignition power supply	Ignition switch ON	10 to 14 V
TRG+ (F17–14) – TRG (F17–13)	GR – P	Trigger switch signal	Trigger switch not pushed → Pushed	10 kΩ or higher → Below 1 Ω

If the result is not as specified, there may be a malfunction on the wire harness side.

(c) Reconnct the F17 ECU connector.

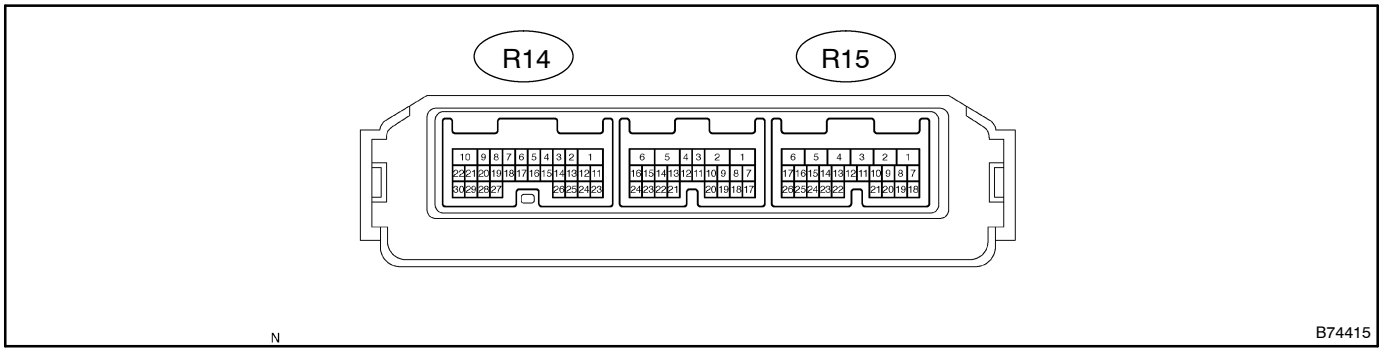
(d) Measure the resistance and voltage of each terminal of the connector.

Standard:

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
OSCB (F17–11) – OSCE (D25–22)	R – G–Y	+B power supply	Constant	10 to 14 V
SEL (F17–21) OSCE (D25–22)	W – G–Y	Sensor detection signal	Smart key at least 3 m away from door → Close to door	10 to 14 V → 0 V
CLGI (F17–10) – GND (D25–1)	L–B – W–B	Signal output to oscillator	Smart key at least 3 m away from door → Close to door	Above 0 Hz → 0 Hz
SENS (F17–9) – GND (D25–1)	G–W – W–B	Lock switch detection signal	Outside door handle touched → Not touched	10 to 14 V → 0 V
CLGO (F17–12) – GND (D25–1)	L–B – W–B	Sensor detection signal	All doors locked and ignition switch OFF → ON	Above 0 Hz → 0 Hz

If the result is not as specified, the passenger door ECU may have a malfunction.

5. CHECK REAR DOOR LH ECU



(a) Disconect the R14 and R15 ECU connectors.
(b) Measure the resistance and voltage of each terminal of the wire harness side connectors.
Standard:

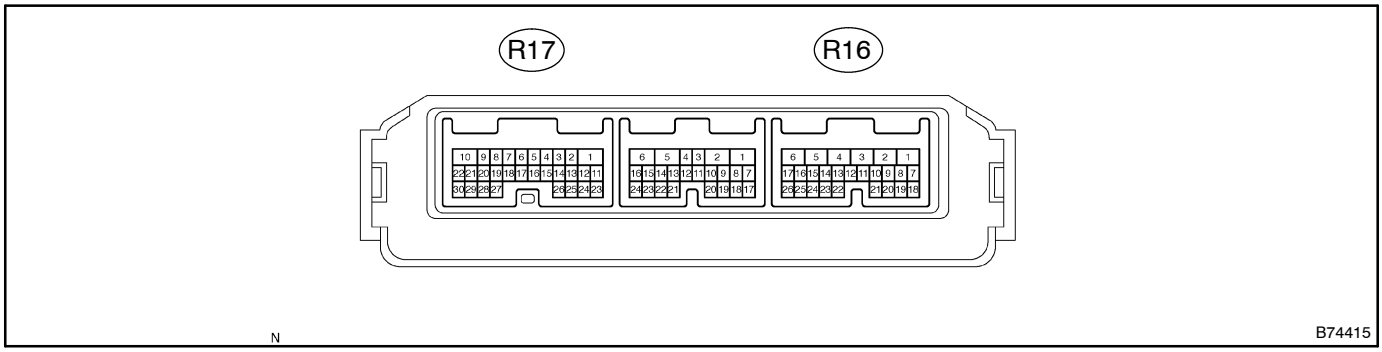
Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
GND (R15–6) – Body ground	W–B – Body ground	Ground	Constant	Below 1 Ω
CPUB (R15–1) Body ground	V–Y – Body ground	+B power supply	Constant	10 to 14 V
BDR (R15–2) – Body ground	R–B – Body ground	+B power supply	Constant	10 to 14 V
SIG (R15–26) – Body ground	R–L – Body ground	Ignition power supply	Ignition switch ON	10 to 14 V
TRG+ (R14–2) – TRG (R14–28)	GR–L – P	Trigger switch signal	Trigger switch not pushed → Pushed	10 kΩ or higher → Below 1 ΩR14

If the result is not as specified, there may be a malfunction on the wire harness side.
(c) Reconnect the R14 and R15 ECU connectors.
(d) Measure the resistance and voltage of each terminal of the connectors.
Standard:

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
OSCB (R14–13) – OSCE (R14–27)	R – G–Y	+B power supply	Constant	10 to 14 V
SEL (R14–1) OSCE (R14–27)	W – G–Y	Sensor detection signal	Smart key at least 3m away from door → Close to door	10 to 14 V → 0 V
CLGI (R15–22) – GND (R15–6)	B – W–B	Signal output to oscillator	Smart key at least 3m away from door → Close to door	Above 0 Hz → 0 Hz
SENS (R14–3) – GND (R15–6)	G–W – W–B	Lock switch detection signal	Outside door handle touched → Not touched	10 to 14 V → 0 V
CLGO (R14–23) – GND (R15–6)	L–R – W–B	Sensor detection signal	All doors locked and ignition switch OFF → ON	Above 0 Hz → 0 Hz

If the result is not as specified, the rear door LH ECU may have a malfunction.

6. CHECK REAR DOOR RH ECU



(a) Disconnect the R16 and R17 ECU connectors.
(b) Measure the resistance and voltage of each terminal of the wire harness side connectors.
Standard:

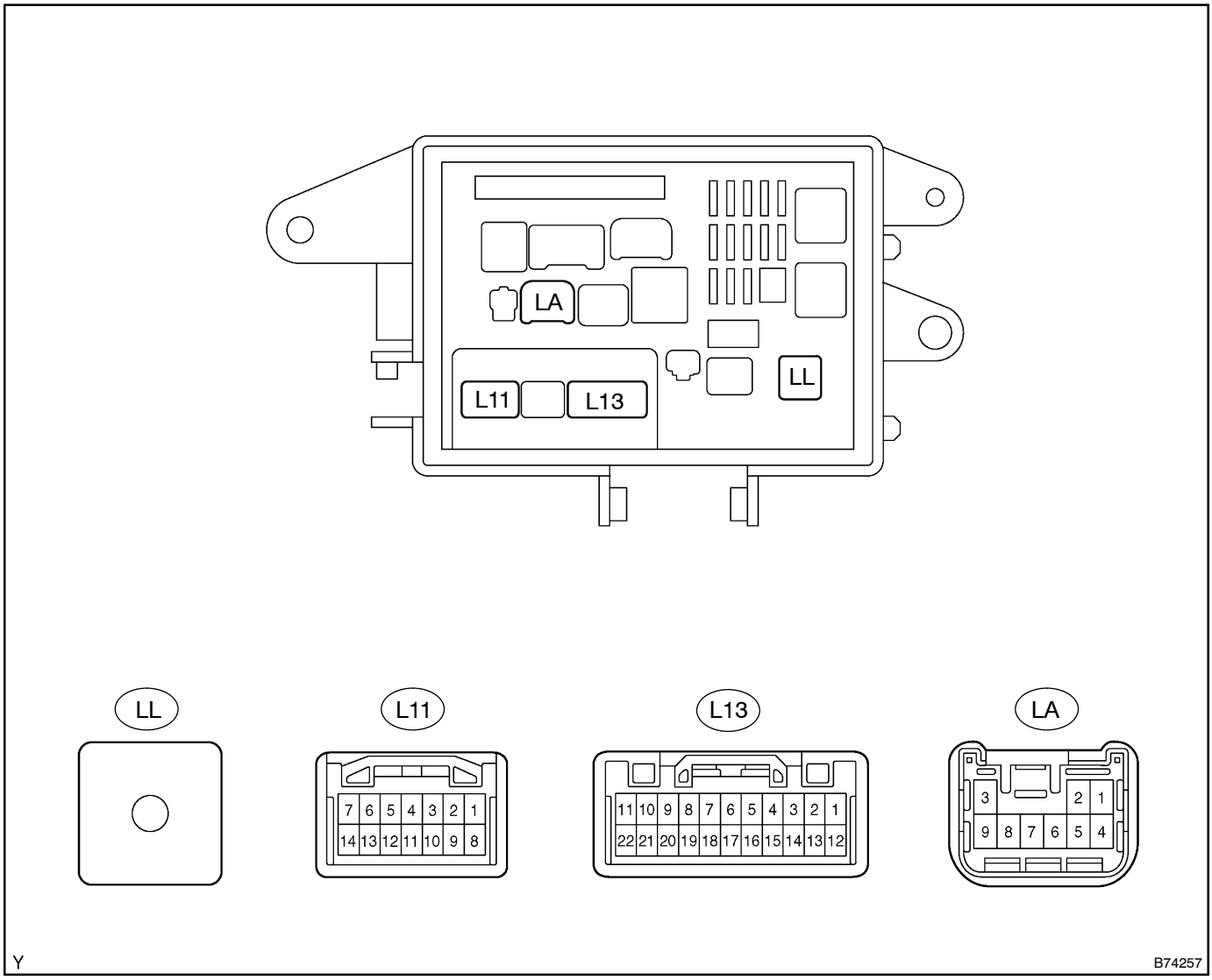
Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
GND (R16–6) – Body ground	W–B – Body ground	Ground	Constant	Below 1 Ω
CPUB (R16–1) Body ground	V–Y – Body ground	+B power supply	Constant	10 to 14 V
BDR (R16–2) – Body ground	R–W – Body ground	+B power supply	Constant	10 to 14 V
SIG (R16–26) – Body ground	R–L – Body ground	Ignition power supply	Ignition switch ON	10 to 14 V
TRG+ (R17–2) – TRG (R17–28)	GR – L–P	Trigger switch signal	Trigger switch not pushed → Pushed	10 kΩ or higher → Below 1 Ω

If the result is not as specified, there may be a malfunction on the wire harness side.
(c) Reconnect the R16 and R17 ECU connectors.
(d) Measure the resistance and voltage of each terminal of the connectors.
Standard:

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
OSCB (R17–13) – OSCE (R17–27)	R – G–Y	• +B power supply • Ground	Constant	10 to 14 V
SEL (R17–1) – OSCE (R17–27)	W – G–Y	Sensor detection signal	Smart key at least 3m away from door → Close to door	10 to 14 V → 0 V
CLGI (R16–22) – GND (R16–6)	L–W – W–B	Signal output to oscillator	Smart key at least 3m away from door → Close to door	Above 0 Hz → 0 Hz
SENS (R17–3) – GND (R16–6)	G–W – W–B	Lock switch detection signal	Outside door handle touched → Not touched	10 to 14 V → 0 V
CLGO (R17–23) – GND (R16–6)	L–R – W–B	Sensor detection signal	All doors locked and ignition switch OFF → ON	Above 0 Hz → 0 Hz

If the result is not as specified, the rear door RH ECU may have a malfunction.

7. CHECK LUGGAGE ROOM J/B ECU



(a) Disconnect the LA, LL, L11 and L13 ECU connectors.

(b) Measure the resistance and voltage of each terminal of the wire harness side connectors.

Standard:

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
HIC (LL–1) Body ground	B–W – Body ground	+B	Constant	10 to 14 V
P GND (LA–5) – Body ground	W–B – Body ground	Ground	Constant	Below 1 Ω
SG (L14–5) Body ground	W–B – Body ground	Ground	Constant	Below 1 Ω
LCH (L11–1) – Body ground	V – Body ground	+B power supply	Constant	10 to 14 V
LCTY (L11–4) – Body ground	G – Body ground	Ignition power supply	Ignition switch ON	10 to 14 V
BDCY (L13–2) – Body ground	L*1 – Body ground GR*2 – Body ground	Trigger switch signal	Trigger switch not pushed → Pushed	10 kΩ or higher → Below 1 Ω
LPSW (L11–2) Body ground	BR*1 – Body ground R*2 – Body ground	Luggage compartment door push switch input	Luggage compartment door push switch OFF → ON	10 kΩ or higher → Below 1 Ω

HINT:
*1: LHD
*2: RHD
If the result is not as specified, there may be a malfunction on the wire harness side.

Standard:

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
LCM + (L11–8) – LCM – (L11–1)	V – L	Luggage door closer motor output	Constant	Below 1 Ω

If the result is not as specified, the luggage room J/B ECU may have a malfunction.