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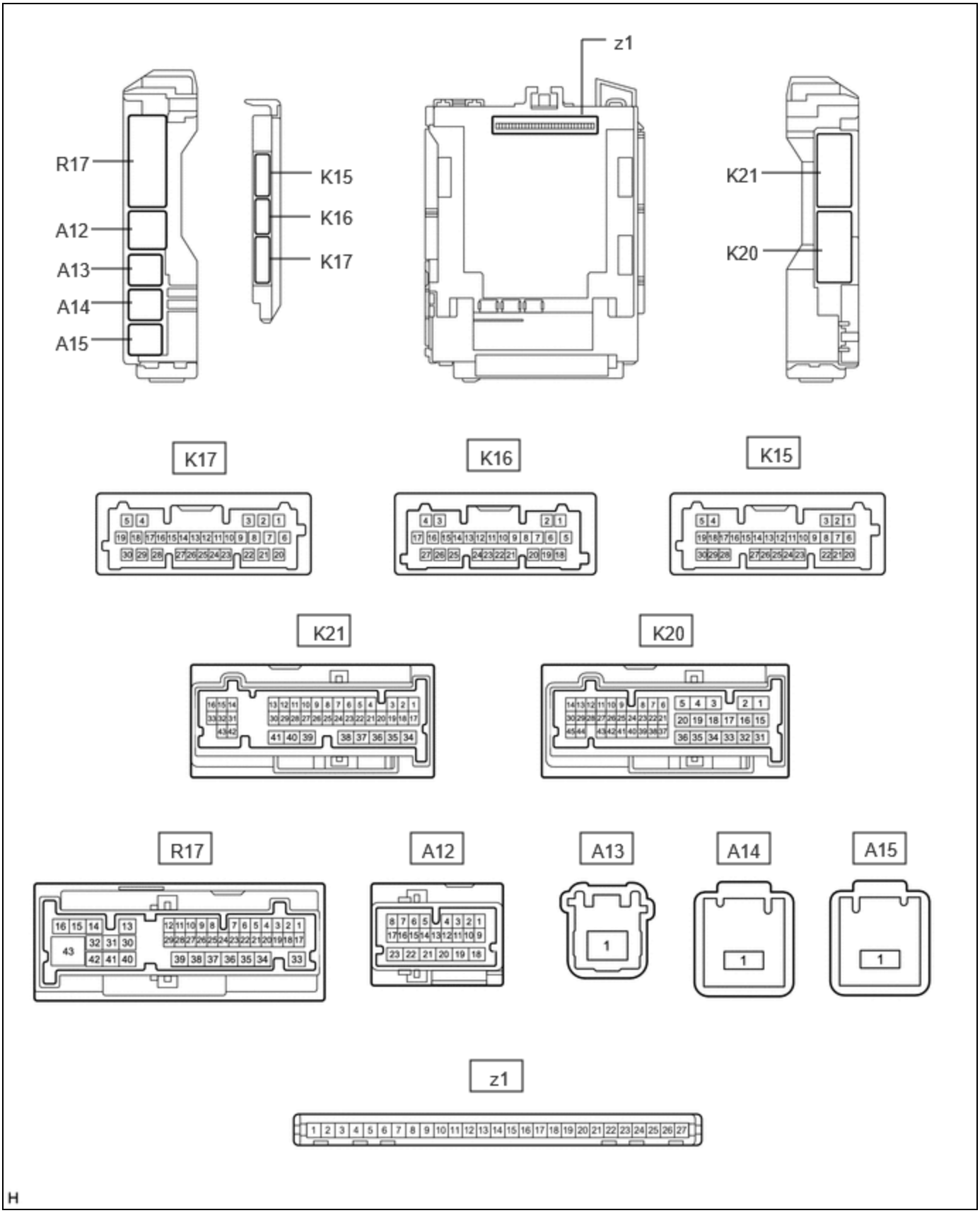
Model Year Start: 2023	**Model:** Prius Prime	**Prod Date Range:** [12/2022 -]
Title: DOOR LOCK: POWER DOOR LOCK CONTROL SYSTEM: TERMINALS OF ECU; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

TERMINALS OF ECU

CHECK POWER DISTRIBUTION BOX ASSEMBLY AND MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)



(a) Remove the main body ECU (multiplex network body ECU) from the power distribution box assembly.

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(b) Reconnect the power distribution box assembly connectors.

(c) Measure the resistance and voltage according to the value(s) in the table below.

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
z1-13 (GND1) - Body ground	Ground	Always	Below 1 Ω
z1-14 (GND2) - Body ground	Ground	Always	Below 1 Ω
z1-26 (BECU) - Body ground	Auxiliary battery power supply	Ignition switch off	11 to 14 V
z1-27 (IGR) - Body ground	Ignition power supply (IG signal)	Ignition switch off	Below 1 V
		Ignition switch ON	11 to 14 V

(d) Install the main body ECU (multiplex network body ECU) to power distribution box assembly.

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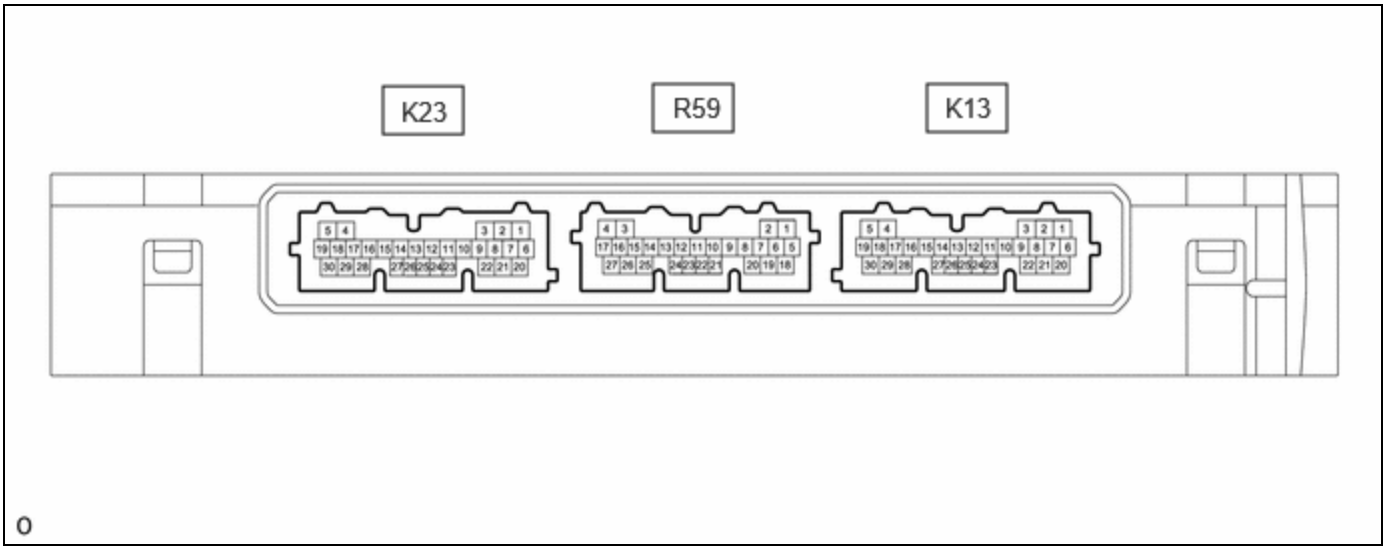
(e) Measure the voltage and check for pulses according to the value(s) in the table below.

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
R17-3 (FLCY) - Body ground	Front door courtesy light switch assembly (LH) input	Front door LH open → closed	Below 1 V → 11 to 14 V or pulse output (maximum 14 V)*3
R17-5 (FRCY) - Body ground	Front door courtesy light switch assembly (RH) input	Front door RH open → closed	Below 1 V → 11 to 14 V or pulse output (maximum 14 V)*3
R17-28 (LCTY) - Body ground	Rear door courtesy light switch assembly (LH) input	Rear door LH open → closed	Below 1 V → 11 to 14 V or pulse output (maximum 14 V)*3
R17-1 (RCTY) - Body ground	Rear door courtesy light switch assembly (RH) input	Rear door RH open → closed	Below 1 V → 11 to 14 V or pulse output (maximum 14 V)*3
R17-2 (BCTY) - Body ground	Back door courtesy light switch input	Back door open → closed	Below 1 V → 11 to 14 V or pulse output (maximum 14 V)*3
K17-9 (LSFL) - Body ground	Front door LH unlock detection switch input	Front door LH unlocked → locked	Below 1 V → 11 to 14 V or pulse output (maximum 14 V)*3
K17-3 (LSFR) - Body ground	Front door RH unlock detection switch input	Front door RH unlocked → locked	Below 1 V → 11 to 14 V or pulse output (maximum 14 V)*3
K17-10 (LSWL) - Body ground	Rear door LH unlock detection switch input	Rear door LH unlocked → locked	Below 1 V → 11 to 14 V or pulse output (maximum 14 V)*3
K16-23 (LSWR) - Body ground	Rear door RH unlock detection switch input	Rear door RH unlocked → locked	Below 1 V → 11 to 14 V or pulse output (maximum 14 V)*3
R17-36 (ACT-) - Body ground	Door lock motor unlock drive output	Door control switch or driver door key cylinder off → on (unlock)	Below 1 V → 11 to 14 V → Below 1 V
R17-37 (ACT-) - Body ground	Door lock motor unlock drive output	Door control switch or driver door key cylinder off → on	Below 1 V → 11 to 14 V → Below 1 V

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
		(unlock)	
R17-40 (ACT+) - Body ground	Door lock motor lock drive output	Door control switch or driver door key cylinder off → on (lock)	Below 1 V → 11 to 14 V → Below 1 V
R17-41 (ACT+) - Body ground	Door lock motor lock drive output	Door control switch or driver door key cylinder off → on (lock)	Below 1 V → 11 to 14 V → Below 1 V
K15-18 (BSR1) - Body ground	Rear door outside handle assembly RH (rear door open switch) input	Rear door outside handle assembly RH (rear door open switch) off → on	Below 1 V → 11 to 14 V → Below 1 V
K16-4 (BSR2) - Body ground	Door lock release motor assembly RH output	Rear door outside handle assembly RH (rear door open switch) off → on	Below 1 V → 11 to 14 V → Below 1 V
K15-12 (BSL1) - Body ground	Rear door outside handle assembly LH (rear door open switch) input	Rear door outside handle assembly LH (rear door open switch) off → on	Below 1 V → 11 to 14 V → Below 1 V
K16-3 (BSL2) - Body ground	Door lock release motor assembly LH output	Rear door outside handle assembly LH (rear door open switch) off → on	Below 1 V → 11 to 14 V → Below 1 V
K20-20 (ACTD) - Body ground	Door lock motor unlock drive output	Door control switch or driver door key cylinder off → on (unlock)	Below 1 V → 11 to 14 V → Below 1 V
R17-42 (TR+) - Body ground*1	Back doorlock motor unlock drive output	Back door closed → open	Below 1 V → 11 to 14 V → Below 1 V
K17-4 (UL3) - Body ground	Driver door key-linked unlock input	Driver door key cylinder in neutral position → on (unlock)	Pulse generation → Below 1 V
K17-28 (L2) - Body ground	Driver door key-linked lock input	Driver door key cylinder in neutral position → on (lock)	Pulse generation → Below 1 V
K16-6 (L1) - Body ground*2	Door control switch assembly input	Door control switch assembly off → on (lock)	Pulse generation → Below 1 V
K16-7 (UL1) - Body ground*2	Door control switch assembly input	Door control switch assembly off → on (unlock)	Pulse generation → Below 1 V
K21-43 (GSW) - Body ground	Airbag ECU signal (collision detection signal)	Ignition switch ON with airbag ECU assembly connector disconnected	4.3 to 5.5 V

*1: w/o Power Back Door System
*2: w/ Door Control Switch
*3: Differs depending on the vehicle model

CHECK CERTIFICATION ECU (SMART KEY ECU ASSEMBLY)



(a) Disconnect the K13 certification ECU (smart key ECU assembly) connector.

(b) Measure the voltage and resistance according to the value(s) in the table below.

HINT:

Measure the values on the wire harness side with the connector disconnected.

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
K13-6 (+B) - Body ground	Auxiliary battery power supply	Ignition switch off	11 to 14 V
K13-29 (E) - Body ground	Ground	Always	Below 1 Ω

(c) Reconnect the K13 certification ECU (smart key ECU assembly) connector.

(d) Measure the voltage and check for pulses according to the value(s) in the table below.

TERMINAL NO. (SYMBOL)	TERMINAL DESCRIPTION	CONDITION	SPECIFIED CONDITION
R59-16 (TSW5) - K13-29 (E)	Back door opener switch input	Back door opener switch (open switch) off → on	Pulse generation → Below 1 V