VARIABLE MOTOR CIRCUIT

CIRCUIT DESCRIPTION

The passenger side J/B ECU receives signals from the wiper switch, the rain sensor and others to operate the variable motor.

When the wiper switch is in the INT or LO position, or the washer is operated in the washer–linked operation, passenger side J/B ECU controls the variable motor to stop it at the raise–up position.

However, when the vehicle speed is 170 km/h (106 mile/h) or more, it stops not at the raise–up position but at the minimum angle position.

If the variable motor is stopped at the raise–up position, passenger side J/B ECU controls the variable motor considering the vehicle speed as 170 km/h (106 mile/h) or more unless the vehicle speed becomes less than 150 km/h (93 mile/h).

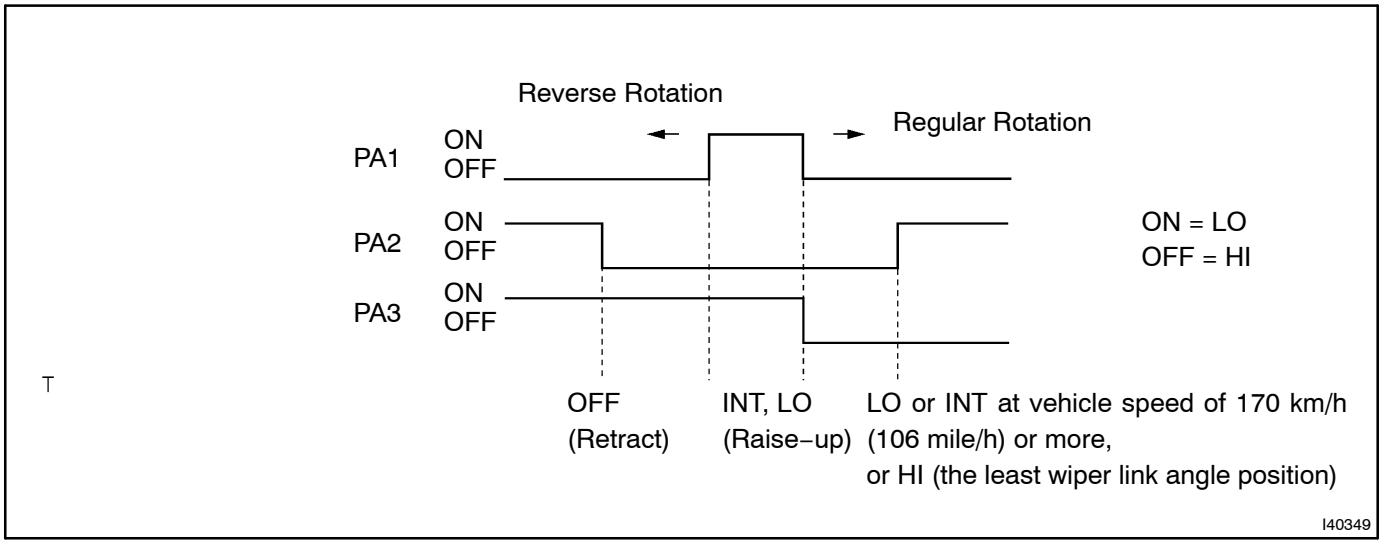
If the wiper switch is in the HI position, passenger side J/B ECU controls the variable motor to stop it at the minimum angle position.

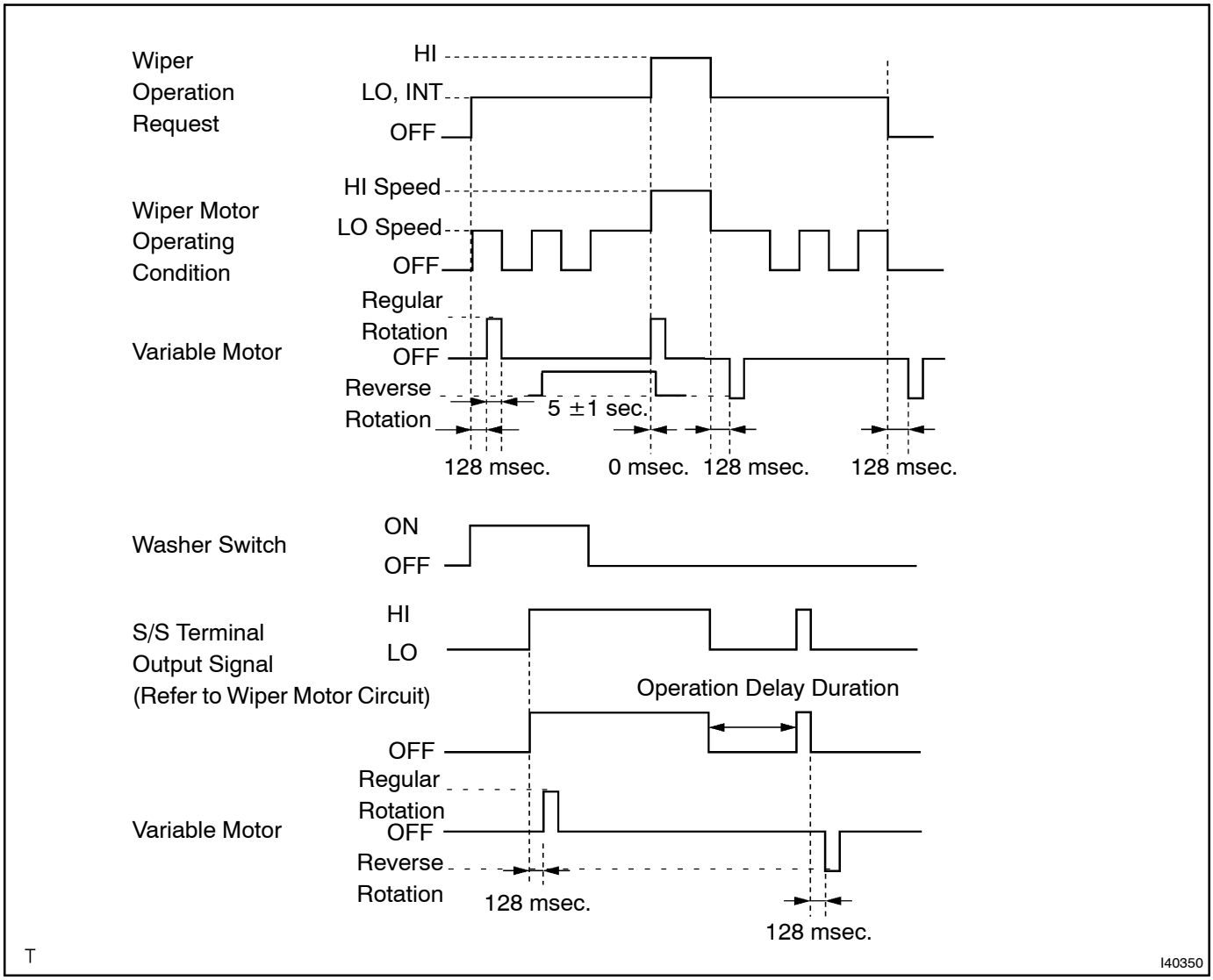
If the wiper motor stop command is received, the variable motor is moved to the retract position.

PA1, PA2 and PA3 terminals are position detection sensors of the variable motor.

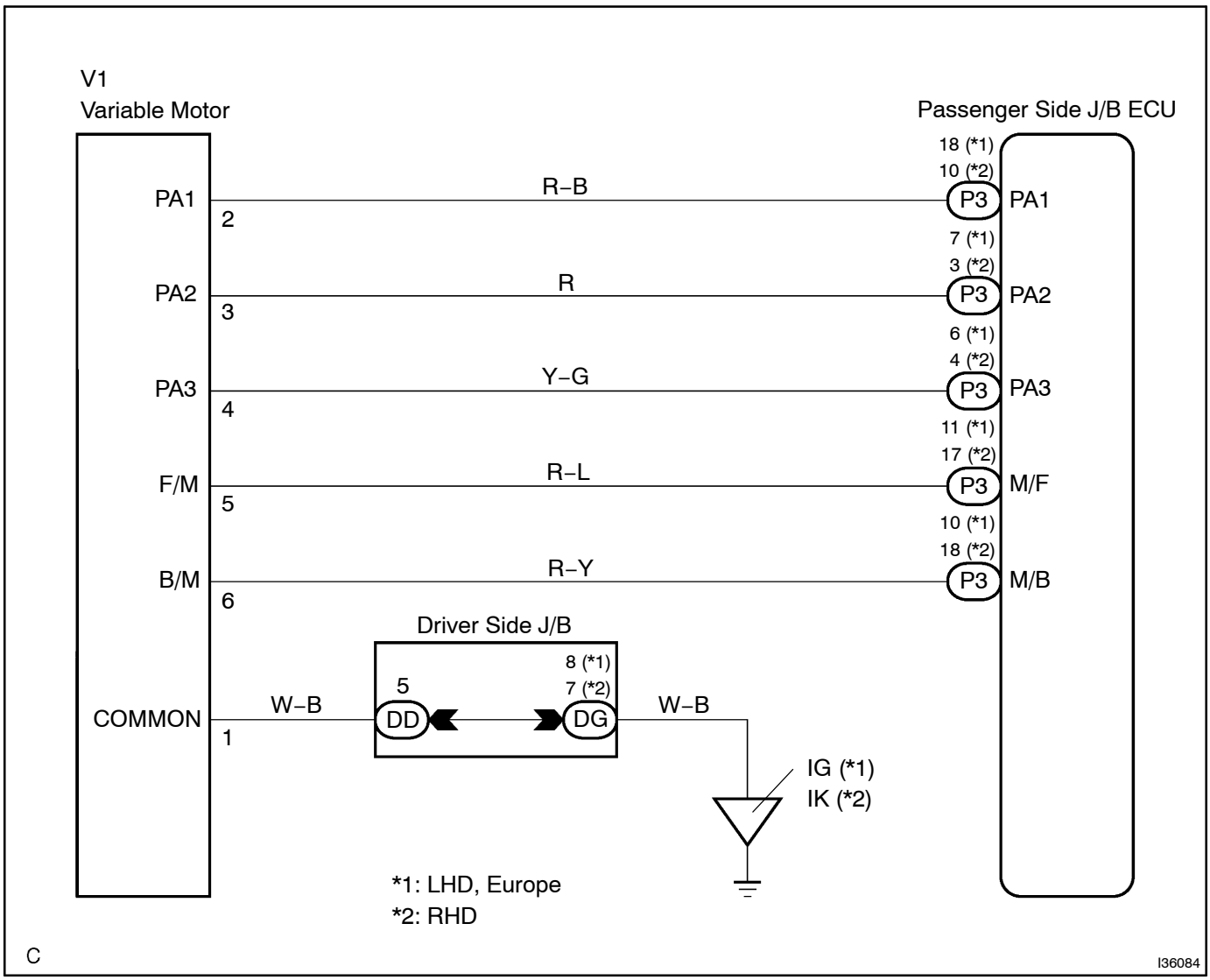
Relationships between the variable motor position and the position detection sensors.

Variable motor position	PA1	PA2	PA3
Retract position	OFF	ON	ON
In operation	OFF	OFF	ON
Raise up position	ON	OFF	ON
In operation	OFF	OFF	OFF
The minimum angle position	OFF	ON	OFF




Wiper Operation Request
HI
LO, INT
OFF
Wiper Motor Operating Condition
HI Speed
LO Speed
OFF
Variable Motor
Regular Rotation
OFF
Reverse Rotation
5 ±1 sec.
128 msec.
0 msec.
128 msec.
128 msec.
Washer Switch
ON
OFF
S/S Terminal Output Signal (Refer to Wiper Motor Circuit)
HI
LO
Operation Delay Duration
OFF
Variable Motor
Regular Rotation
OFF
Reverse Rotation
128 msec.
128 msec.
T
I40350

WIRING DIAGRAM



INSPECTION PROCEDURE

1	PERFORM ACTIVE TEST ON INTELLIGENT TESTER II

(a) Connect the intelligent tester II to the DLC3.
(b) Turn the ignition switch to the ON position and turn the intelligent tester II main switch on.
(c) Select the item below in the ACTIVE TEST and then check that the variable motor operates.

BODY NO.3 (PASSENGER SIDE JUNCTION BLOCK ECU):

Item	Test Details	Diagnostic Note
Wiper Angle Control	Wiper angle control ON/OFF	Europe

OK: Variable motor operates.

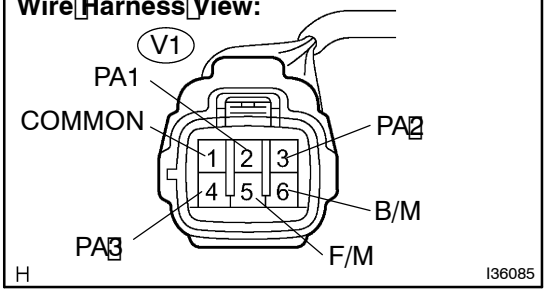
NG → **Go to step 2**

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE (SEE PAGE 05–1582)

2	INSPECT WINDSHIELD WIPER LINK ASSY(VARIABLE MOTOR)

Variable Motor Connector Wire Harness View:



(a) Disconnect the variable motor connector.
(b) Measure the voltage according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified condition
V1–2 – V1–1	Ignition switch ON	10 to 14 V
V1–3 – V1–1	Ignition switch ON	10 to 14 V
V1–4 – V1–1	Ignition switch ON	10 to 14 V
V1–5 – V1–1	When wiper switch in HI and ignition switch ON	10 to 14 V
V1–6 – V1–1	When wiper switch in OFF and ignition switch ON	10 to 14 V

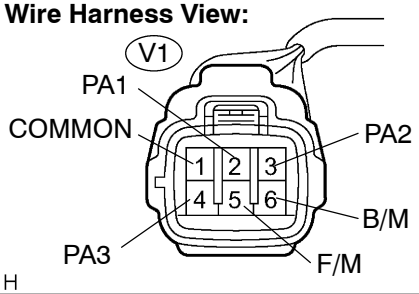
NG → **Go to step 3**

OK

REPLACE WINDSHIELD WIPER LINK ASSY

3	CHECK HARNESS AND CONNECTOR(VARIABLE MOTOR – PASSENGER SIDE JUNCTION BLOCK)

Variable Motor Connector
Wire Harness View:



(a) Disconnect the P3 connector from the passenger side junction block.

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

Standard:

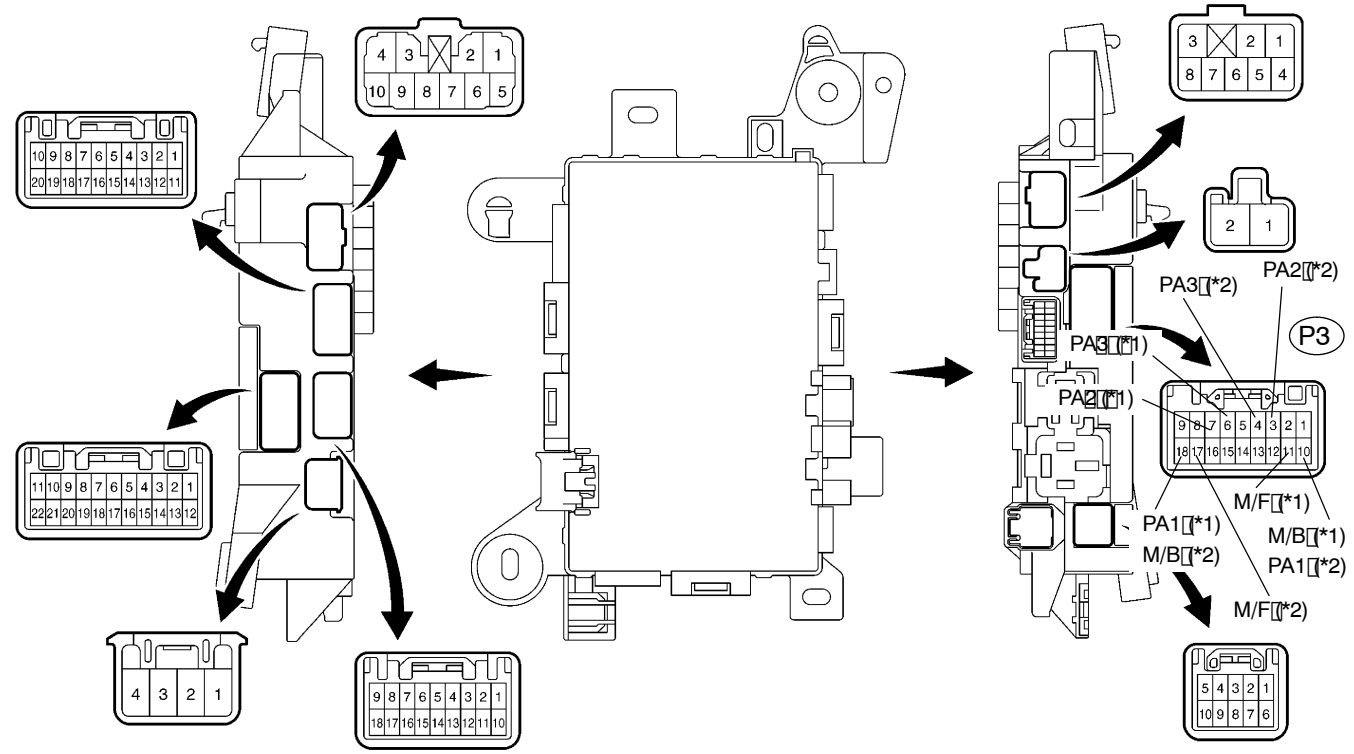
LHD:

Tester connection	Condition	Specified condition
P3–6 – V1–4	Always	Below 1 Ω
P3–7 – V1–3	Always	Below 1 Ω
P3–10 – V1–6	Always	Below 1 Ω
P3–11 – V1–5	Always	Below 1 Ω
P3–18 – V1–2	Always	Below 1 Ω
V1–1 – Body ground	Always	Below 1 Ω
V1–2 – Body ground	Always	10 kΩ or higher
V1–3 – Body ground	Always	10 kΩ or higher
V1–4 – Body ground	Always	10 kΩ or higher
V1–5 – Body ground	Always	10 kΩ or higher
V1–6 – Body ground	Always	10 kΩ or higher

RHD:

Tester connection	Condition	Specified condition
P3–3 – V1–3	Always	Below 1 Ω
P3–4 – V1–4	Always	Below 1 Ω
P3–10 – V1–2	Always	Below 1 Ω
P3–17 – V1–5	Always	Below 1 Ω
P3–18 – V1–6	Always	Below 1 Ω
V1–1 – Body ground	Always	Below 1 Ω
V1–2 – Body ground	Always	10 kΩ or higher
V1–3 – Body ground	Always	10 kΩ or higher
V1–4 – Body ground	Always	10 kΩ or higher
V1–5 – Body ground	Always	10 kΩ or higher
V1–6 – Body ground	Always	10 kΩ or higher

Passenger Side Junction Block
Connector Front View:



*1: LHD
*2: RHD

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HINT:
This illustration is for RHD model. The RHD and LHD models are symmetrical.

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE (SEE PAGE 05–1582)