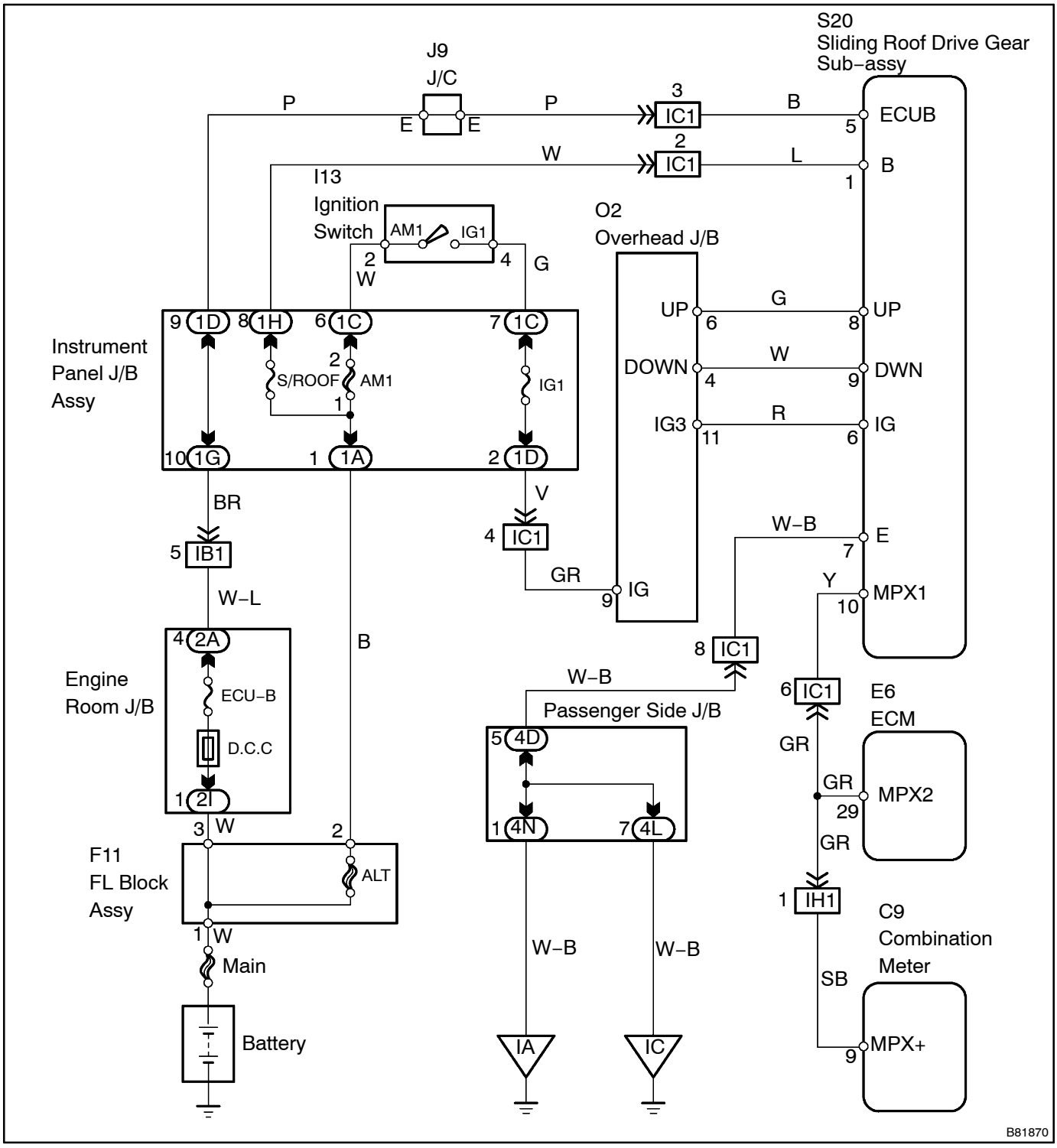
SLIDING ROOF DOES NOT MOVE BY SWITCH

CIRCUIT DESCRIPTION

The sliding roof drive gear sub–assy (sliding roof ECU) monitors a sliding roof motor switch signal, and the motor built in the sliding roof drive gear sub–assy is driven.

WIRING DIAGRAM



1	READ VALUE OF HAND–HELD TESTER (SLIDING ROOF OPEN AND CLOSE SWITCH)

(a) Use the DATA LIST to check if the open switch and close switch are functioning properly.
Sliding roof ECU:

Item	Measurement Item/ Display (Range)	Normal Condition	Diagnostic Note
OPEN SW	Sliding roof open switch signal /ON or OFF	OK: Sliding roof open switch is pressed OFF: Sliding roof open switch is not pressed	–
CLOSE SW	Sliding roof close switch signal /ON or OFF	OK: Sliding roof close switch is pressed OFF: Sliding roof close switch is not pressed	–

OK: When the switch is operating, the tester should display as shown in the chart below.

Switch Item (tester Display)	No pressing	Pressing
OPEN SW	OFF	ON
CLOSE SW	OFF	ON
UP SW	OFF	ON
DOWN SW	OFF	ON

NG → **Go to step 4**

OK

2	PERFORM ACTIVE TEST BY HAND–HELD TESTER

(a) Select the ACTIVE TEST, use the hand–held tester to generate a control command, and then check that the sliding roof open and close switches activate.
Sliding roof ECU:

Item	Test Details	Diagnostic Note
SLIDE ROOF	Operate sliding roof CLOSE/ UP Operate sliding roof OPEN/ DOWN	–

OK:
When CLOSE/UP is selected on the tester, the sliding roof should close.
When OPEN/DOWN is selected on the tester, the sliding roof should open.

NG → **Go to step 8**

OK

3 READ VALUE OF HAND–HELD TESTER (SLIDING ROOF MOTOR HALL IC)

(a) Use the DATA LIST to check if the hall IC are functioning properly.
Sliding roof ECU:

Item	Switch Condition	Standard Value	Diagnostic Note
HALL IC1 PULSE	Sliding roof motor Hall IC1 pulse signal/ LO or HI	HI: Hall IC1 outputs pulse LO: Hall IC1 does not output pulse	–
HALL IC1 STATUS	Sliding roof motor status signal (HALL IC1)/ NORMAL or LOCK	NORMAL: Sliding roof motor is operating normally LOCK: Sliding roof motor is locked	–
HALL IC2 PULSE	Sliding roof motor Hall IC2 pulse signal/ LO or HI	HI: Hall IC2 outputs pulse LO: Hall IC2 does not output pulse	–
HALL IC2 STATUS	Sliding roof motor status signal (HALL IC2)/ NORMAL or LOCK	NORMAL: Sliding roof motor is operating normally LOCK: Sliding roof motor is locked	–

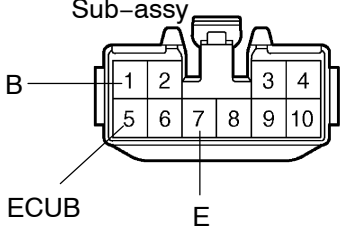
OK: When sliding roof motor is operating, the tester should display as shown in the chart above.

NG → **Go to step 4**

OK

REPLACE SLIDING ROOF DRIVE GEAR SUB–ASSY

4 CHECK WIRE HARNESS (SLIDING ROOF DRIVE GEAR SUB–ASSY – BATTERY AND BODY GROUND)



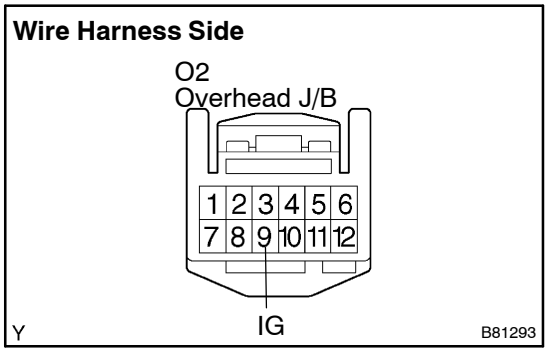
(a) Disconnect the S20 drive gear connector.
(b) Measure the voltage and resistance of the wire harness side connector.
Standard:

Tester Connection	Specified Condition
S20–7 (E) – Body ground	Below 1 Ω
S20–1 (B) – S20–7 (E)	10 to 14 V
S20–5 (ECUB) – S20–7 (E)	10 to 14 V

NG → **REPAIR OR REPLACE HARNESS AND CONNECTOR**

OK

5 CHECK WIRE HARNESS (OVERHEAD J/B – BATTERY)



(a) Disconnect the O2 overhead J/B connector.
(b) Measure the voltage of the wire harness side connector.

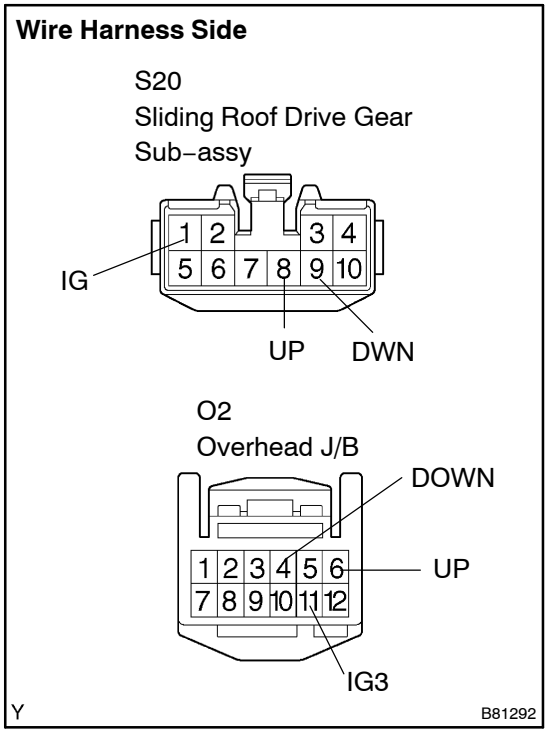
Standard:

Tester Connection	Condition	Specified Condition
O2–9 (IG) – Body ground	Ignition switch position OFF → ON	0V → 10 to 14 V

NG → **REPAIR OR REPLACE HARNESS AND CONNECTOR**

OK

6 CHECK WIRE HARNESS (SLIDING ROOF DRIVE GEAR SUB–ASSY – OVERHEAD J/B)



(a) Disconnect the O2 overhead J/B connector.
(b) Measure the resistance of the wire harness side connectors.

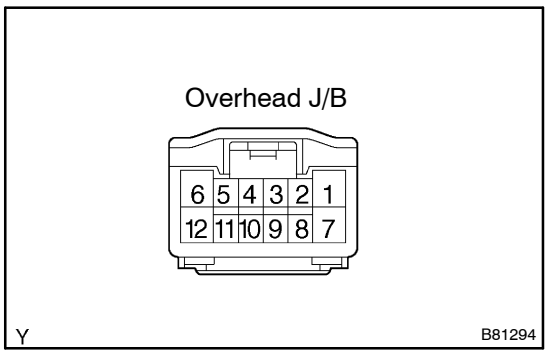
Standard:

Tester Condition	Specified Condition
S20–8 (UP) – O2–6 (UP)	Below 1 Ω
S20–9 (DWN) – O2–4 (DOWN)	Below 1 Ω
S20–6 (IG) – O2–11 (IG3)	Below 1 Ω

NG → **REPAIR OR REPLACE HARNESS AND CONNECTOR**

OK

7 INSPECT OVERHEAD J/B (SLIDE ROOF MOTOR SWITCH)



(a) Disconnect the O2 J/B connector.
(b) Measure the resistance of the J/B.
Standard:

Terminal No.	Switch Condition	Specified Condition
1 – 8	Slide open	Below 1 Ω
1 – 9	Tilt up	Below 1 Ω

NG → **REPLACE OVERHEAD J/B**

OK

REPLACE SLIDING ROOF DRIVE GEAR SUB–ASSY

8 CHECK MOVEMENT OF SLIDING ROOF

(a) Remove the sliding roof drive gear, then check that the sliding roof can be moved by hand.
OK: The sliding roof moves smoothly.

NG → **REPAIR OR REPLACE SLIDING ROOF**

OK

REPLACE SLIDING ROOF DRIVE GEAR SUB–ASSY