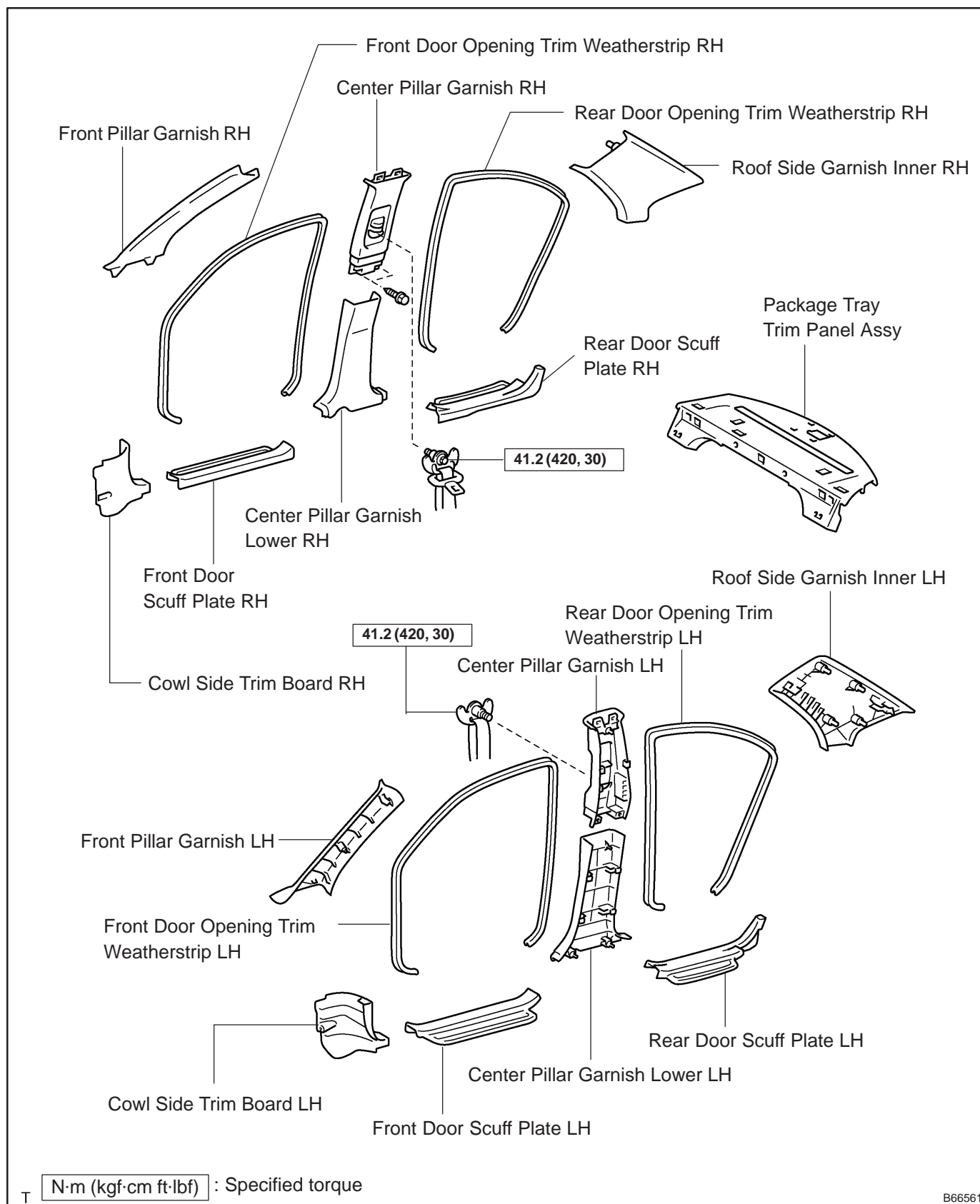


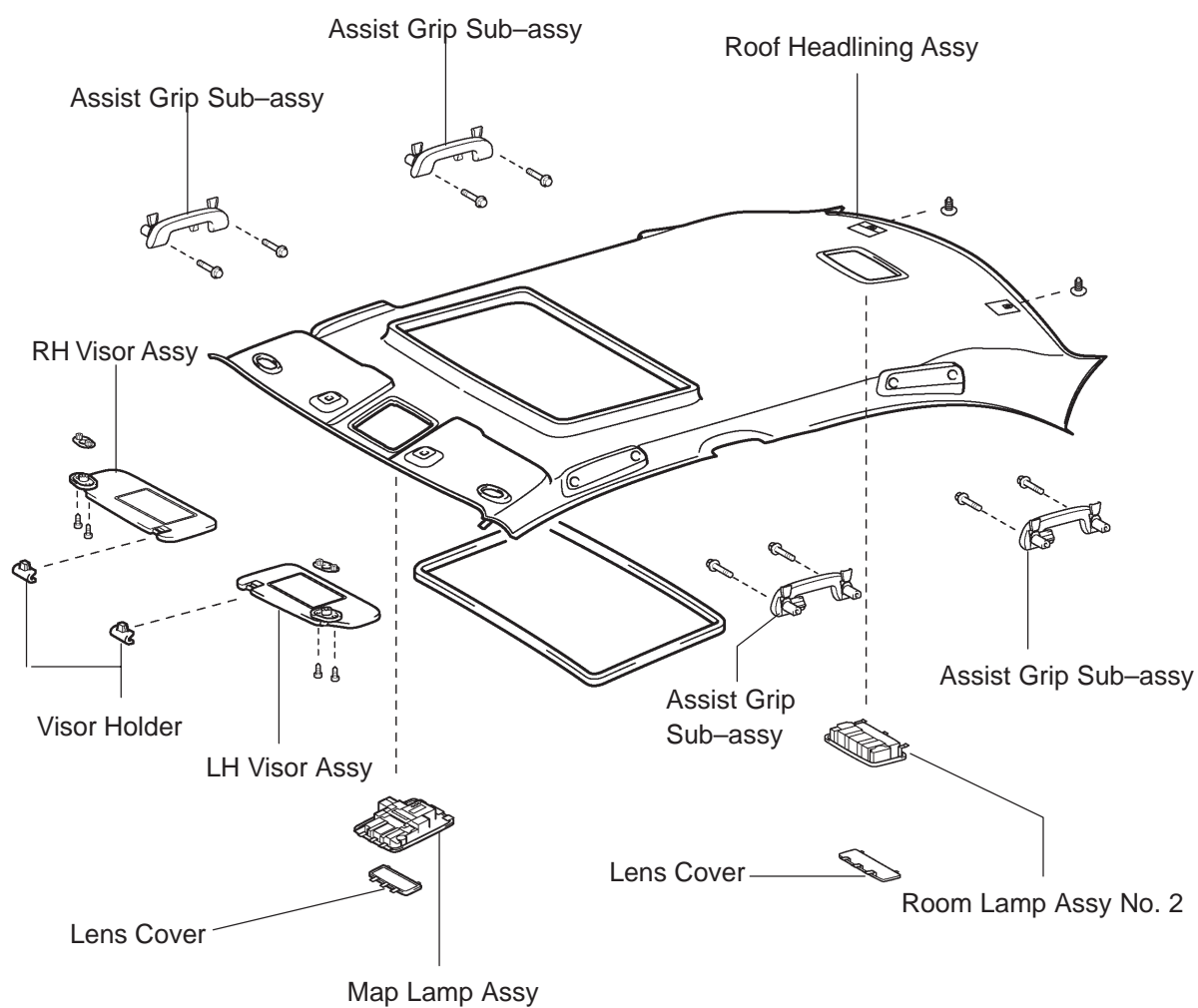
# SLIDING ROOF COMPONENTS

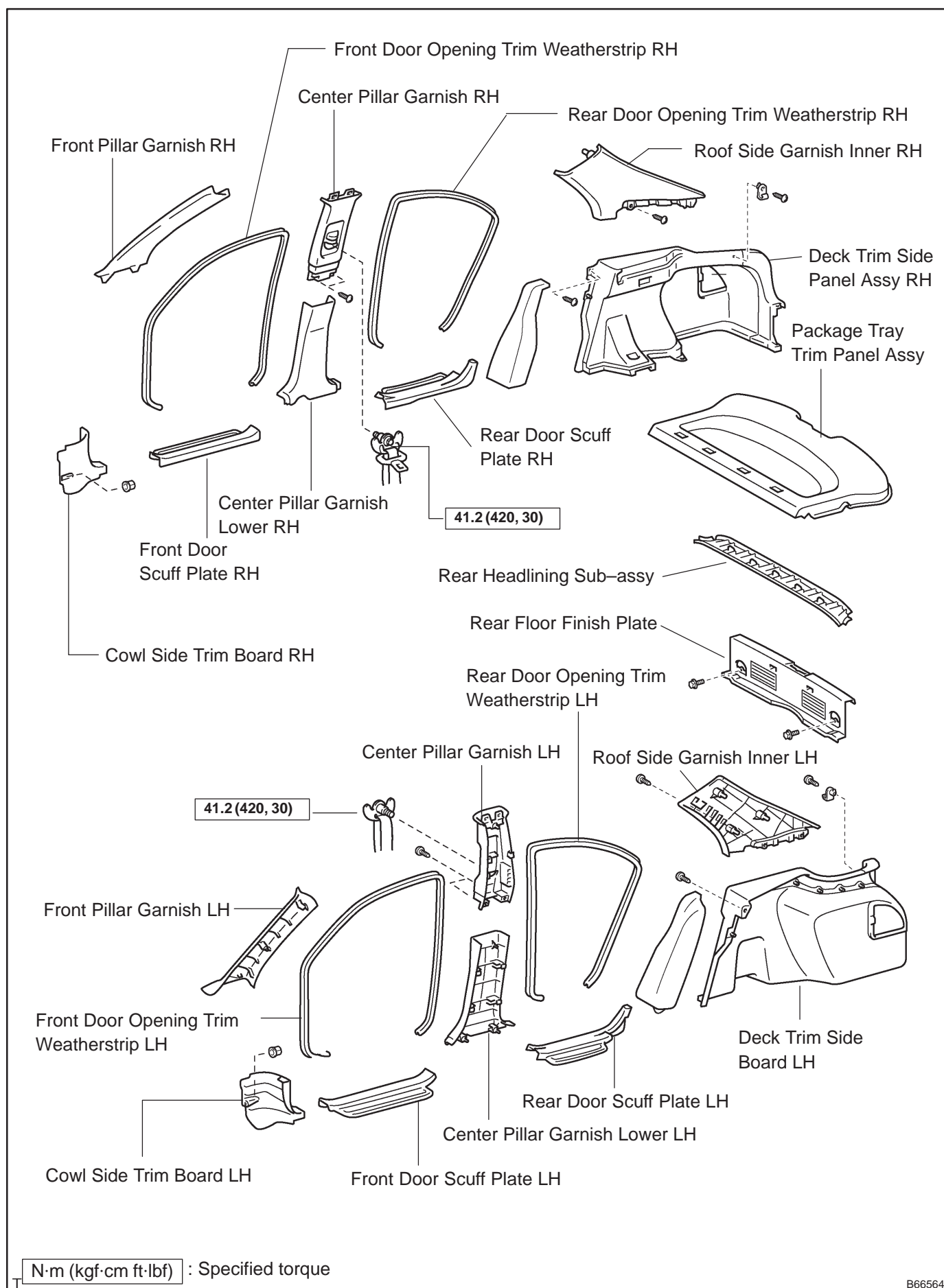
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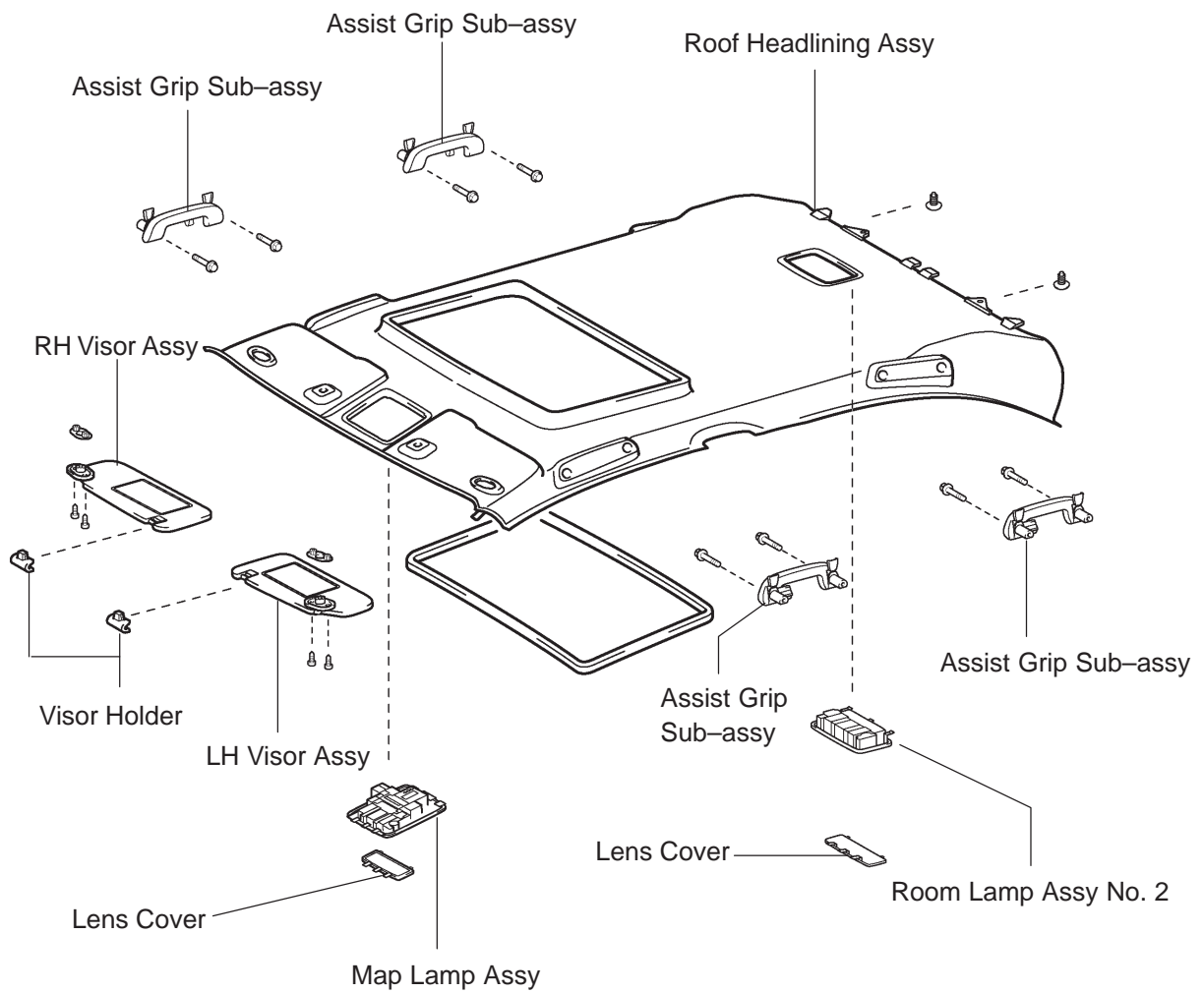
## Sedan Models

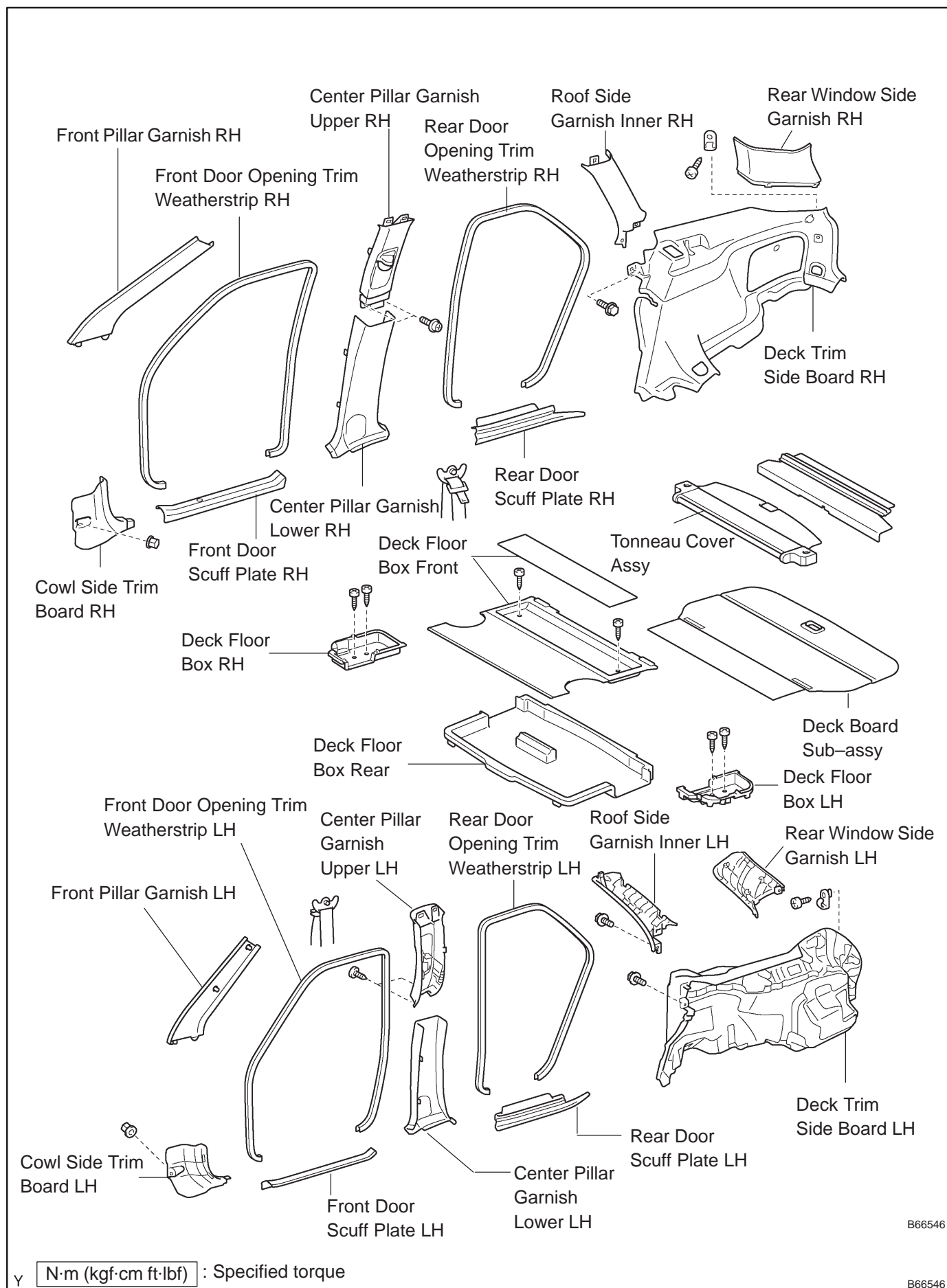




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## Liftback Models

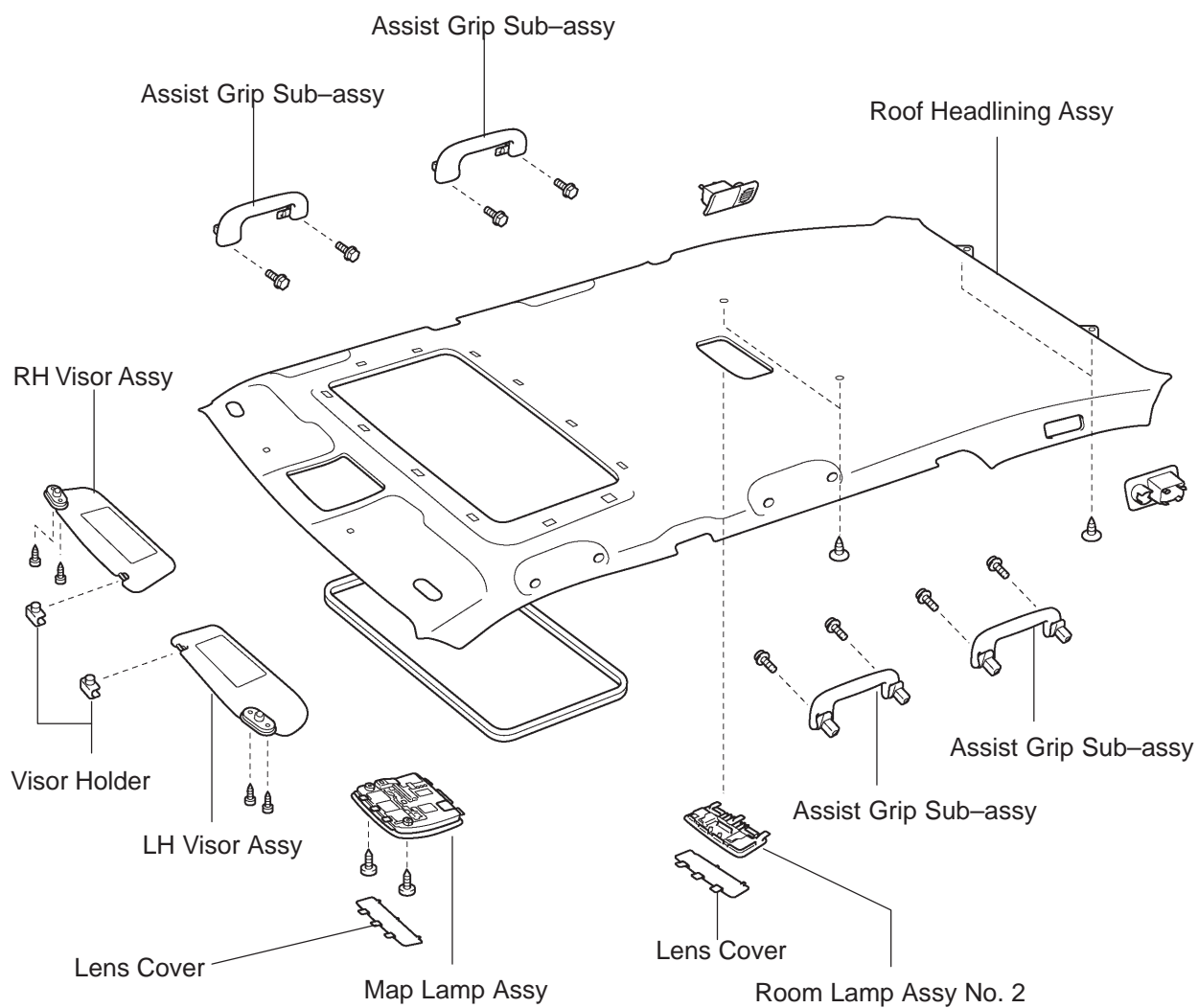




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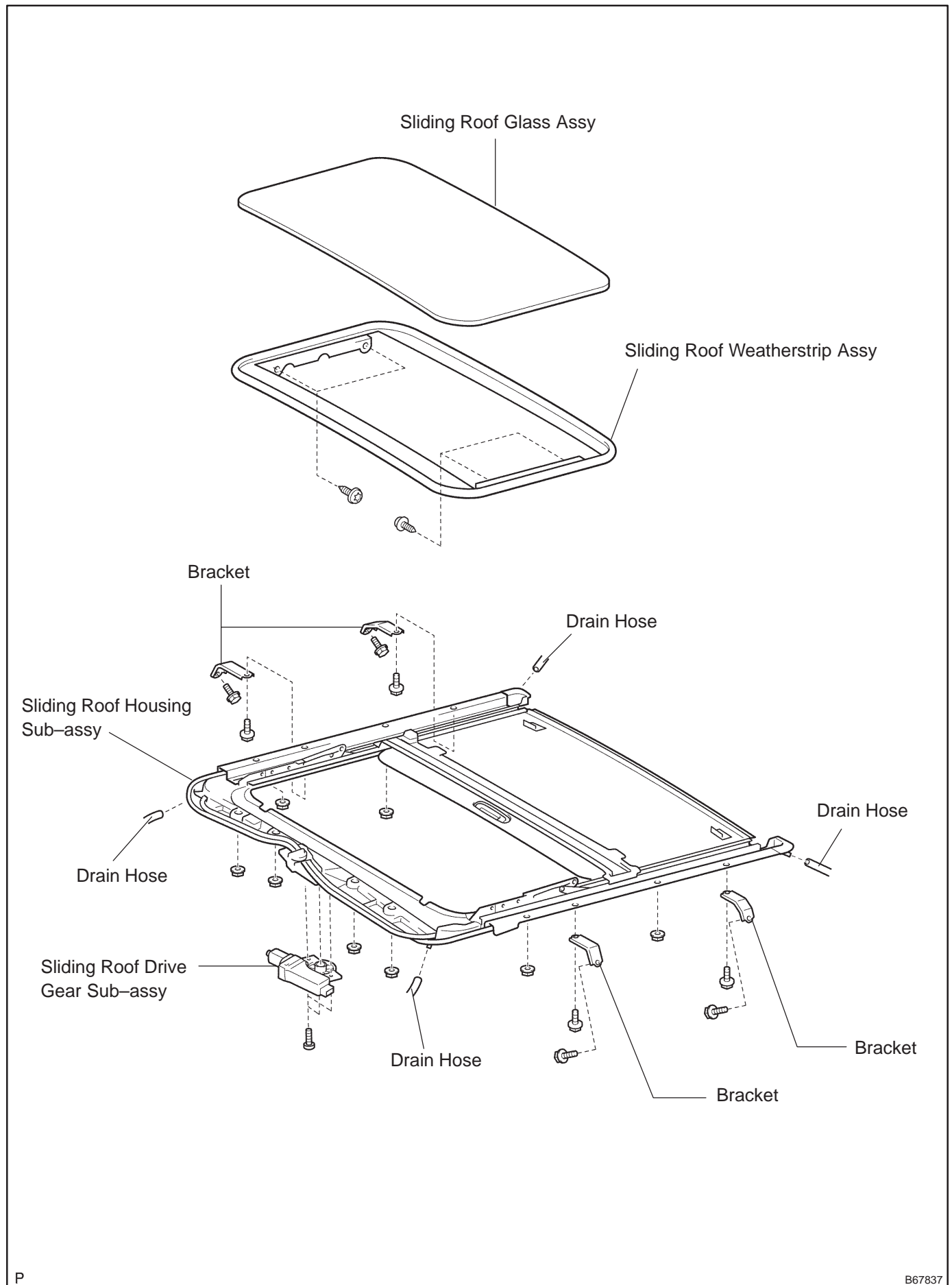
## Wagon Models



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Y

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## REPLACEMENT

1. **REMOVE ROOF HEADLINING ASSY** (See pages 76-36, 76-45 and 76-54)
2. **REMOVE SLIDING ROOF GLASS SUB-ASSY**
  - (a) Using a torx driver, remove the 4 screws and glass.
3. **REMOVE SLIDING ROOF HOUSING SUB-ASSY**
  - (a) Remove the 8 bolts and 4 brackets.
  - (b) Remove the 8 nuts and roof housing.
4. **REMOVE SLIDING ROOF DRIVE GEAR SUB-ASSY**
  - (a) Remove the 3 bolts and drive gear.
5. **INSTALL SLIDING ROOF DRIVE GEAR SUB-ASSY**
  - (a) Install the drive gear with the 3 bolts.
6. **INSTALL SLIDING ROOF HOUSING SUB-ASSY**
  - (a) Install the roof housing with the 8 nuts.
  - (b) Install the 4 brackets with the 8 bolts.
7. **ADJUST SLIDING ROOF GLASS SUB-ASSY**
  - (a) Check for a difference in levels between the sliding roof (weatherstrip) and roof panel.  
**Dimension (Front end and rear end):  $0 \pm 1.5 \text{ mm}$  ( $0 \pm 0.059 \text{ in.}$ )**  
**Dimension (Corner of rear side):  $0 \pm 2.0 \text{ mm}$  ( $0 \pm 0.079 \text{ in.}$ )**
  - (b) Check for a difference in levels between the sliding roof (glass) and roof panel front end and rear end.  
**Dimension (Front end and rear end):  $6.0 \text{ mm}$  ( $0.236 \text{ in.}$ )**
  - (c) Adjust the roof panel.
    - (1) Loosen the adjusting screw to adjust the sliding roof panel position, and tighten the screw in the position where the sliding roof panel is fixed.  
**Torque:  $4.0 \text{ N}\cdot\text{m}$  ( $40 \text{ kgf}\cdot\text{cm}$ ,  $35 \text{ in.}\cdot\text{lbf}$ )**
  - (d) Inspect for leaks.
    - (1) Adjusting the sliding roof, check that there are no water leaks.
8. **INSTALL SLIDING ROOF GLASS SUB-ASSY**
  - (a) Install the glass with the 4 screws.
9. **CHECK FOR WATER LEAKS**
10. **RESET SLIDING ROOF POSITION** (See page 74-7)
11. **INSTALL ROOF HEADLINING ASSY** (See pages 76-36, 76-45 and 76-54)



# SLIDING ROOF SYSTEM LOCATION

7408S-01

Roof Console Box

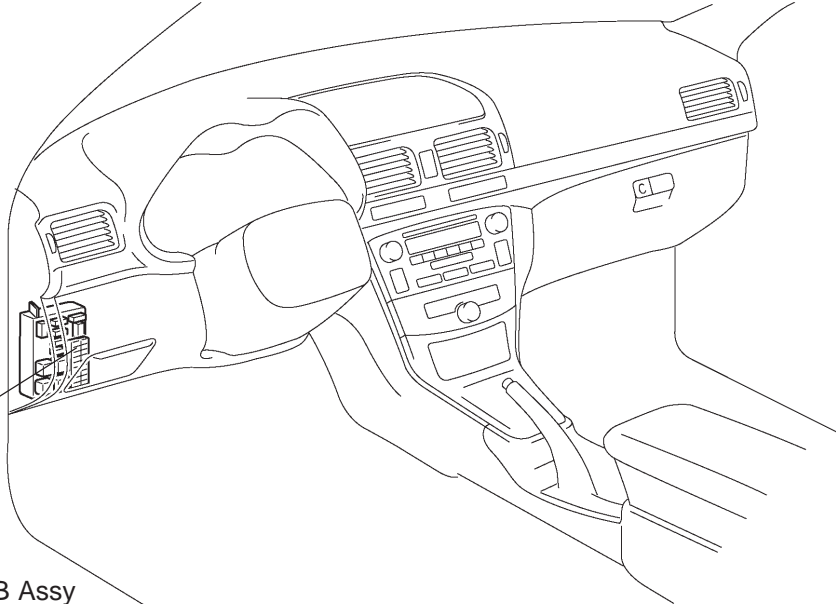
● Sliding Roof Motor Switch Assy

Combination Meter Assy

Sliding Roof Drive  
Gear Sub-assy

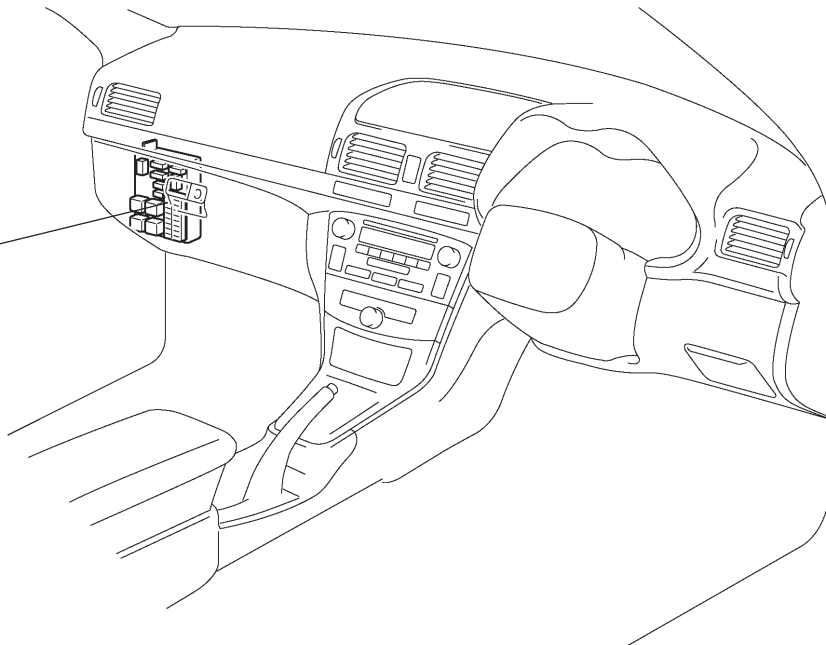
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**LHD Models**

Instrument Panel J/B Assy

- GAUGE1 Fuse
- S/ROOF Fuse
- IG1 Relay
- Integration Relay

**RHD Models**

Instrument Panel J/B Assy

- GAUGE1 Fuse
- S/ROOF Fuse
- IG1 Relay
- Integration Relay

## ON-VEHICLE INSPECTION

### 1. CHECK WINDOW LOCK SWITCH

- (a) Check that operation of the power windows excluding the driver side and the sliding roof are disabled when the window lock switch of the power window master switch is pressed.
- (b) Check that the power windows and the sliding roof can be operated when the window lock switch is pressed again.

### 2. CHECK AUTO SLIDE-OPEN/CLOSE FUNCTION

- (a) Check that the sliding roof switch can operate the sliding roof as follows when the tilt-UP/ DOWN function is not being used:

**Standard:**

Condition	Switch Condition	Switch Operation	Roof Glass
• Ignition switch ON • Window lock switch OFF	SLIDE OPEN	Pressed for more than 0.3 sec.	Fully open
	TILT UP		Fully closed

**HINT:**

The sliding roof stops partway when the sliding roof switch is pushed on either side during AUTO operation.

### 3. CHECK AUTO TILT UP/DOWN FUNCTION

- (a) Check that the sliding roof switch can operate the sliding roof as follows when the slide-OPEN/CLOSE function is not being used:

**Standard:**

Condition	Switch Condition	Switch Operation	Roof Glass
• Ignition switch ON • Window lock switch OFF	TILT UP	Pressed for more than 0.3 sec.	Fully tilted up
	SLIDE OPEN		Fully closed

**HINT:**

The sliding roof stops partway when the sliding roof switch is pushed on either side during AUTO operation.

### 4. CHECK SLIDING ROOF OPERATION FUNCTION AFTER IGNITION IS TURNED OFF

- (a) When both of the following conditions are fulfilled, check that the power windows and the sliding roof can be operated even after the ignition switch is turned OFF:
  - Within 43 seconds after the ignition switch is turned OFF
  - When the driver side door is closed

### 5. CHECK JAM PROTECTION FUNCTION

**HINT:**

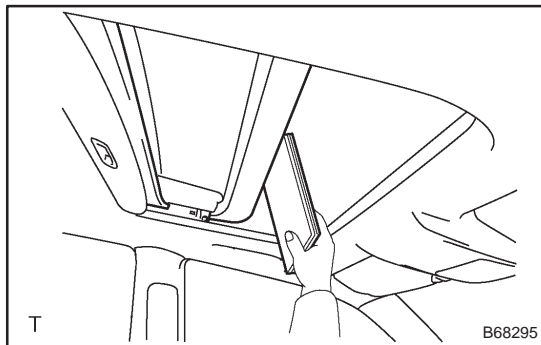
The jam protection function prevents any part of your body from getting caught by accident between the vehicle body and the roof glass during sliding roof operation.

**Operative condition:**

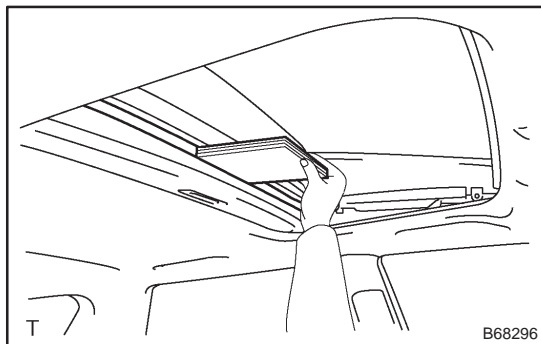
- AUTO CLOSE
- AUTO CLOSE during sliding roof operation after the ignition switch is turned OFF
- AUTO TILT-DOWN
- AUTO TILT-DOWN during sliding roof operation after the ignition switch is turned OFF

**CAUTION:**

- **Do not check this function using a part of your body such as your hand. Also, pay thorough attention that nothing gets caught by accident during this process.**
- **If this function is checked by inserting a thin object (less than 5 mm (0.20 in.)) between the roof glass and vehicle body, it may not operate.**



- (a) When the slide-OPEN/CLOSE function is operating:  
Check that the sliding roof opens approximately 200 mm (7.87 in.) right when something gets caught between the vehicle body and the roof glass during sliding roof operation.



- (b) When the tilt-UP/DOWN function is operating:  
Check that the sliding roof fully tilts up when something gets caught between the vehicle body and the roof glass during sliding roof operation.

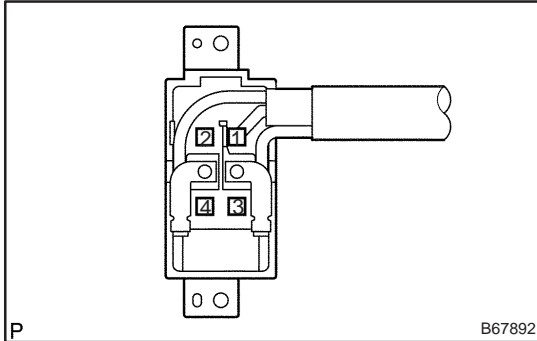
## 6. CHECK FAIL-SAFE FUNCTION

- (a) If the sliding roof does not close because the jam protection function operates improperly, press the sliding roof switch on the TILT UP side and until the sliding roof fully closes. Then you can close the sliding roof using manual operation.

## PROBLEM SYMPTOMS TABLE

Symptom	Suspected Area	See Page
AUTO function does not operate	1. Sliding roof motor assy	<a href="#">74-3</a>
Sliding roof system does not operate	1. S/ROOF fuse	—
	2. GAUGE1 fuse	—
	3. IG1 relay	—
	4. Integration relay	—
	5. Sliding roof housing assy	<a href="#">74-15</a>
	6. Sliding roof motor switch assy	<a href="#">74-6</a>
	7. Sliding roof motor assy	<a href="#">74-3</a>
	8. Wire harness	<a href="#">74-3</a>
Sliding roof system stops operation halfway	1. Sliding roof motor assy	<a href="#">74-3</a>
	2. Wire harness	<a href="#">74-3</a>
	3. Sliding roof housing assy	<a href="#">74-15</a>

## INSPECTION

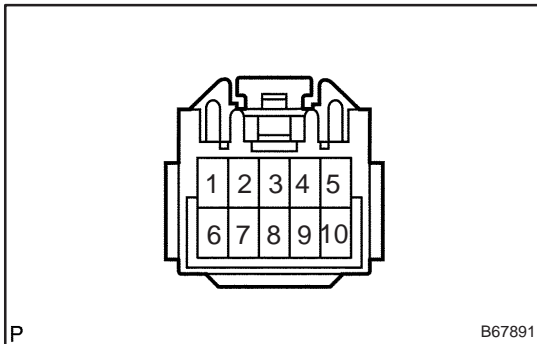


1. **INSPECT SLIDING ROOF MOTOR SWITCH ASSY**
  - (a) Remove the sliding roof motor switch  
(See pages 76-36, 76-45 and 76-54).
  - (b) Check the resistance between the terminals when operating the switch.

**Standard:**

Terminals No.	Switch Operation	Specified Condition
1 – 2	TILT UP is pressed	Below 1 $\Omega$
2 – 3	SLIDE OPEN is pressed	Below 1 $\Omega$
1, 3 – 2	OFF	10 k $\Omega$ or higher

If the result is not as specified, replace the switch assy.

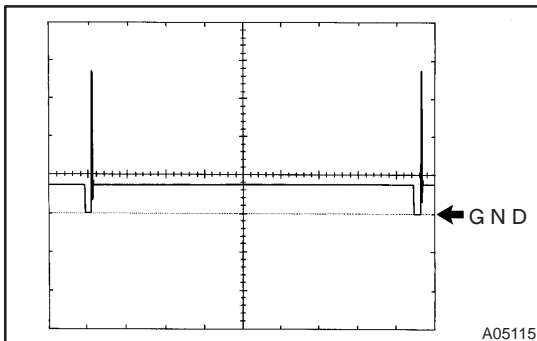


2. **INSPECT SLIDING ROOF MOTOR ASSY**

- (a) Disconnect the sliding roof motor connector  
(See pages 76-36, 76-45 and 76-54).
- (b) Check the resistance and voltage between the terminals of the wire harness side connector.

**Standard:**

Terminals No.	Condition	Specified Condition
5 $\leftrightarrow$ Body ground	Constant	Below 1 $\Omega$
3 – 5	Ignition switch ON	10 to 14 V
10 – 5	Constant	10 to 14 V
6 – 5	TILT UP is pressed	Below 1 $\Omega$
1 – 5	SLIDE OPEN is pressed	Below 1 $\Omega$
8 – 5	Ignition switch OFF $\rightarrow$ ON, Engine idle speed	Pulse generation *



Reference (\*): Using an oscilloscope

Item	Contents
Tool Setting	10 V/DIV., 20 ms/DV.
Vehicle Condition	Engine idle speed

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

## RESET

### 1. RESET SLIDING ROOF MOTOR

- (a) If the AUTO operation function does not operate, reset the sliding roof motor as follows:
- (1) Press the sliding roof switch on the TILT UP side and hold it until the sliding roof motor stops. Then release the switch and leave it untouched for 10 seconds or more.
  - (2) Press the sliding roof switch on the TILT UP side again for 10 seconds or more and hold it until the sliding roof glass stops at the fully open and up position.
  - (3) Release the switch, press it again within 5 seconds and hold it until a series of movements indicated below have been completed:  
Fully closing → Fully opening → Fully closing

#### HINT:

When the battery terminal is disconnected or after the jam protection function has operated, the sliding roof motor ECU may not detect the position of the roof glass. If the AUTO operation function is still disabled even after the sliding roof motor is reset, the Hall IC (built in the sliding roof motor) for detecting the roof glass position may be malfunctioning.