

### WIPER AND WASHER SYSTEMS

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WIPER AND WASHER SYSTEMS

#### 1. Front Wiper and Washer

#### A: GENERAL

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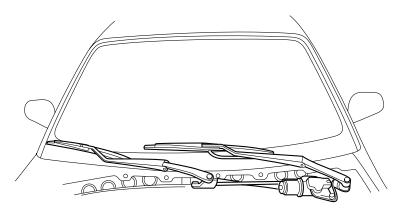
#### 1. FRONT WIPER

1) The front wiper is of a tandem type featuring wide wiping area. The blade is installed to the arm by means of U-hook joint to improve serviceability.

2) The front wiper operates in the HI and LOW speed modes and the INTERMITTENT mode. The operation modes can be selected by turning the wiper switch incorporated in the combination switch.

3) In the INTERMITTENT mode, the intermittent unit installed behind the combination switch controls the front wiper operation interval.

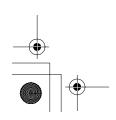
4) The front wiper system uses a modular construction in which the wiper motor forms an integral part of the linkage. The motor is installed on the body through rubber mounting.



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5) The size of the motor is minimized by changing the stator shape, coil windings and the magnet.

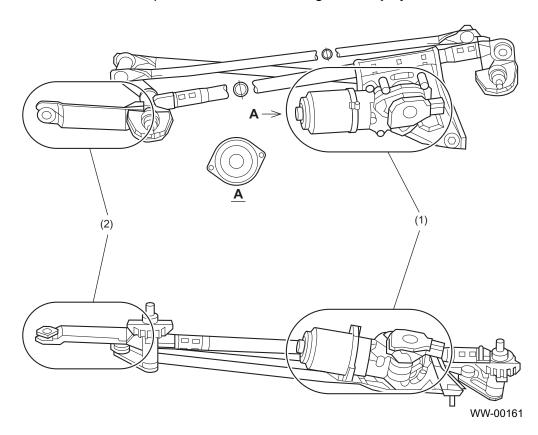


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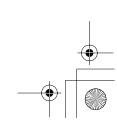
FRONT WIPER AND WASHER WIPER AND WASHER SYSTEMS

6) The mounting bracket is modified. In case of a personal accident, the bracket area breaks when hit by a person to absorb the impact and lessen the degree of injury.



(1) Motor

(2) Bracket



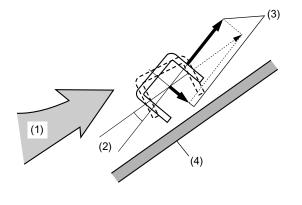
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7) The driver's side wiper arm is angled to disperse the force applied to the wiper arm by the air flow. A part of the dispersed force acts to press the wiper blade against the windshield helping to prevent the wiper blade being lifted up.

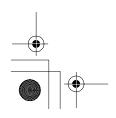


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(3) Dispersed force

(4) Windshield

(1) Air flow(2) Angle of twist







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## FRONT WIPER AND WASHER

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#### 2. FRONT WASHER SYSTEM

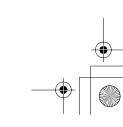
1) The washer system consists of a washer tank, a motor and pump unit, and a pair of nozzles.

2) The washer tank is installed at the front of the strut mount on the left side of the engine compartment.

- 3) The washer motor and pump unit is installed at the bottom of the washer tank.
- 4) The washer nozzles are installed on the hood. Each nozzle has two spray holes.
- 5) Each washer nozzle is provided with a check valve which is located just below it.

#### 3. SPECIFICATIONS

| Washer tank | Capacity                                 |               |           | 4.0 l (4.2 US qt, 3.5 Imp qt)            |
|-------------|--|---------------|-----------|--|
| Wiper motor | Rated voltage                            |               |           | 12 V                                     |
|             | No-load current                          |               |           | 4 A or less                              |
|             | Speed<br>[2.0 N· m (20 kg-cm, 17 in-lb)] |               | HIGH      | 66±6 rpm                                 |
|             |  |               | LOW       | 43±5 rpm                                 |
|             | Locked rotor character-<br>istics        | HIGH          | Torque    | 29.4 N· m (300 kg-cm, 2.2 ft-lb) or more |
|             |  |               | Current   | 36.0 A or less                           |
|             |  | LOW           | Torque    | 34.3 N ⋅ m (350 kg-cm, 2.5 ft-lb)        |
|             |  |               | Current   | 31.5 A or less                           |
| Wiper blade | Length                                   | Driver's side |           | 550 mm (21.65 in)                        |
|             | Passe                                    |               | er's side | 425 mm (19.69 in)                        |



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REAR WIPER AND WASHER

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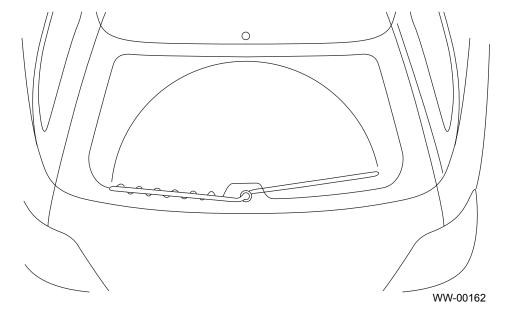
#### 2. Rear Wiper and Washer

#### A: GENERAL

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#### 1. REAR WIPER

- 1) The rear wiper operates intermittently at a 10-second interval.
- 2) The rear wiper operates over a 168-degree angle.



#### 2. REAR WASHER SYSTEM

- 1) The same washer tank is shared by the front and rear washer systems.
- 2) The washer motor and pump unit is installed at the bottom of the washer tank, adjacent to the front washer's unit.

3) The washer nozzle is installed on the upper portion of rear gate panel. The nozzle has two spray holes.

4) The washer nozzle is provided with a check valve which is located just below it.

#### 3. SPECIFICATIONS

| Wiper motor | Rated voltage                             | 12 V              |  |
|-------------|---|-------------------|--|
|             | No-load current                           | 2 A or less       |  |
|             | Speed [at 0.5 N ⋅ m (5 kg-cm, 4.3 in-lb)] | 25 rpm or more    |  |
|             | Locked rotor current                      | 13 A or less      |  |
| Wiper blade | Length                                    | 375 mm (14.76 in) |  |

