

WASHER NOZZLE SUB-ASSY

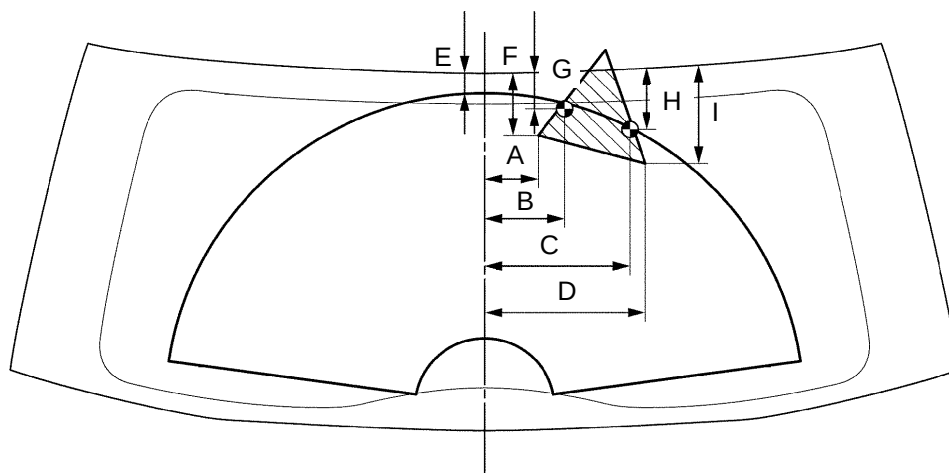
660CH-01

ADJUSTMENT

1. REMOVE WASHER NOZZLE SUB-ASSY

- (a) With the engine running, check that the point where the washer fluid hits the rear window is within the range indicated by the hatched line.

Rear:



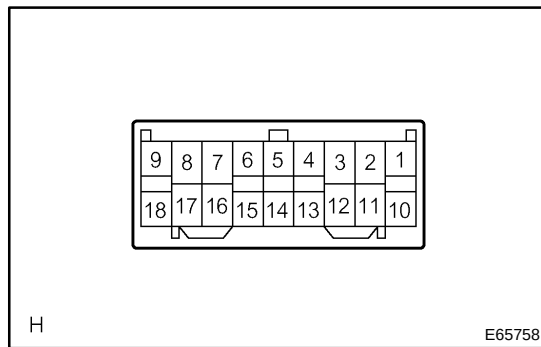
A: 86 mm (3.39 in.)
 B: 126 mm (4.97 in.)
 C: 230 mm (9.07 in.)
 D: 254 mm (9.99 in.)
 E: 31 mm (1.21 in.)

F: 99 mm (3.91 in.)
 G: 57 mm (2.22 in.)
 H: 93 mm (3.67 in.)
 I: 149 mm (5.87 in.)

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I35786

INSPECTION



1. WINDSHIELD WIPER SWITCH ASSY

(a) Continuity Check

- (1) Check the continuity between each of the terminals of the connector.

Standard:

Front Wiper Switch

Switch position	Tester connection	Specified condition
MIST	7 (+1) - 17 (+B)	Continuity
OFF	7 (+1) - 16 (+S), 7 (+1) - 17 (+B)	No continuity
INT	7 (+1) - 16 (+S)	Continuity
LO	7 (+1) - 17 (+B)	Continuity
HI	8 (+2) - 17 (+B)	Continuity

Front Washer Switch

Switch position	Tester connection	Specified condition
OFF	2 (EW) - 11 (WF)	No continuity
ON	2 (EW) - 11 (WF)	Continuity

Rear Wiper Switch

Switch position	Tester connection	Specified condition
OFF	2 (EW) - 13 (C1R), 2 (EW) - 10 (+1R)	No continuity
INT	2 (EW) - 13 (C1R)	Continuity
ON	2 (EW) - 10 (+1R)	Continuity

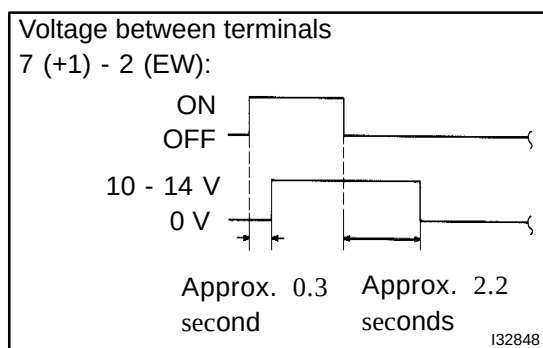
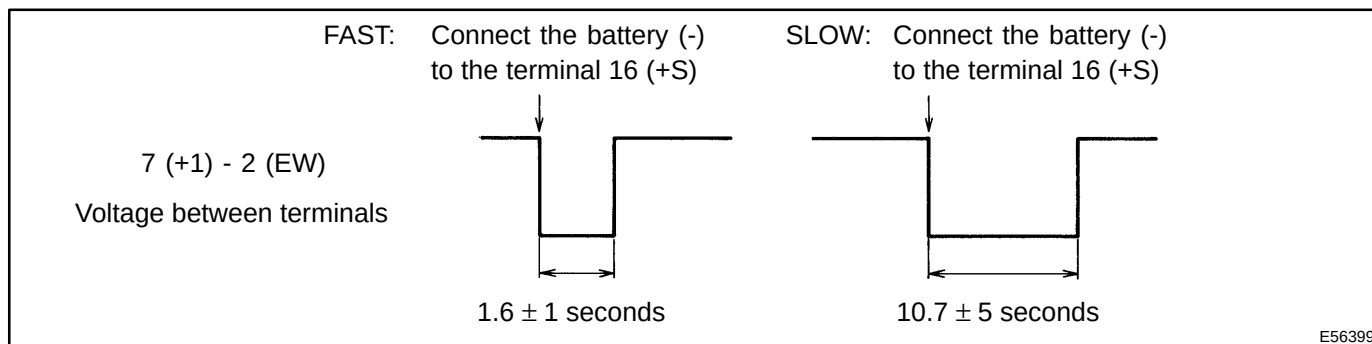
Rear Washer Switch

Switch position	Tester connection	Specified condition
OFF	2 (EW) - 12 (WR)	No continuity
ON (Rear wiper switch OFF side)	2 (EW) - 12 (WR)	Continuity
ON (Rear wiper switch ON side)	2 (EW) - 12 (WR), 2 (EW) - 10 (+1R)	Continuity

(b) Intermittent Operation Check

- (1) Connect the voltmeter (+) terminal to the terminal 7 (+1) of the connector, the voltmeter (-) terminal to the terminal 2 (EW) of the connector.
- (2) Connect the battery (+) to the terminal 7 (+B) of the connector, the battery (-) to the terminal 2 (EW) and the terminal 6 (+S) of the connector.
- (3) Turn the wiper switch into the INT position.
- (4) Connect the battery (+) to the terminal 16 (+S) of the connector for 5 seconds.

- (5) Connect the battery (-) to the terminal 16 (+S) of the connector. Operate the intermittent wiper relay and check voltage between the terminal 7 (+1) and the terminal 2 (EW).



(c) Operation Check (Front Wiper)

- (1) Turn the wiper switch into the OFF position.
- (2) Connect the battery (+) to the terminal 17 (+B) of the connector, the battery (-) to the terminal 16 (+S) and 2 (EW) of the connector.
- (3) Connect the voltmeter (+) terminal to the terminal 7 (+1) of the connector, the voltmeter (-) terminal to the terminal 2 (EW) of the connector. Turn the washer switch ON and OFF and check voltage between the terminal 7 (+1) and the terminal 2 (EW).

2. WINDSHIELD WIPER MOTOR ASSY

(a) LO Operation Check

- (1) Connect the battery (+) to the terminal 1 (+1) of the connector, the battery (-) to the terminal 5 (E) of the connector, and check that the motor operates at low speed (LO).

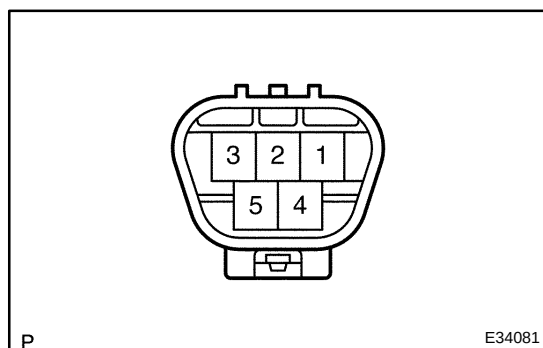
(b) HI Operation Check

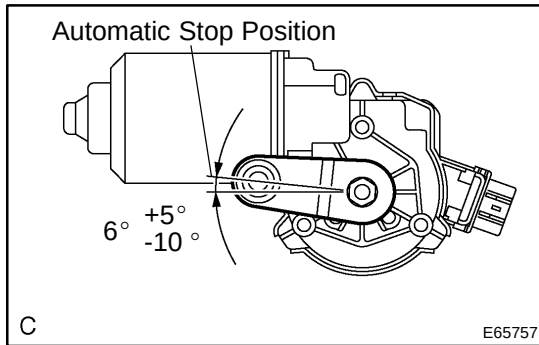
- (1) Connect the battery (+) to the terminal 4 (+2) of the connector, the battery (-) to the terminal 5 (E) of the connector, and check that the motor operates at high speed (HI).

(c) Automatic Stop Operation Check

- (1) Connect the battery (+) to the terminal 1 (+1) of the connector, the battery (-) to the terminal 5 (E) of the connector. With the motor being rotated at low speed (LO), disconnect terminal 1 (+1) to stop the wiper motor operation at any position except the automatic stop position.
- (2) Using SST, connect the terminal 1 (+1) and 3 (S), and the battery (+) to the terminal 2 (B) to restart the motor operation at low speed (LO).

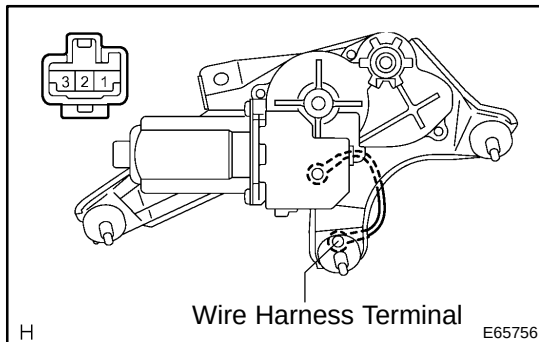
SST 09843-18040





(3) Check the automatic stop position.

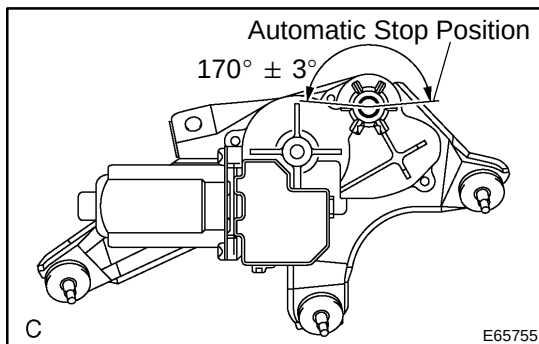
Standard: See the illustration.



3. REAR WIPER MOTOR AND BRACKET ASSY

(a) Operation check

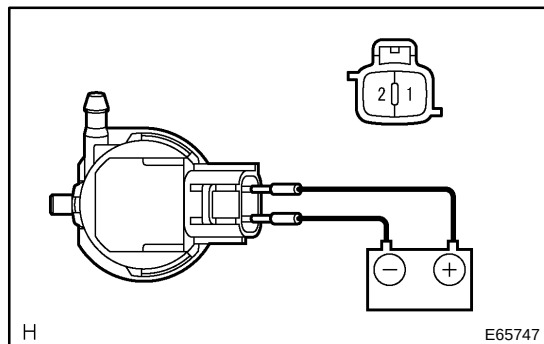
- (1) Connect the battery (+) to the terminal 1 (+B) of the connector, the battery (-) to the terminal 3 (LS) of the connector and wire harness terminal of the rear wiper motor and bracket assy, then check that the rear wiper motor and bracket operate.



(b) Automatic Stop Position Operation Check

- (1) Connect the battery (+) to the terminal 1 (+B) of the connector, the battery (-) to the terminal 3 (LS) of the connector and wire harness terminal of the rear wiper motor and bracket assy. With the motor being rotated disconnect the terminal 3 (LS) from the battery (-), then check that the wiper motor stops automatically to the automatic stop position.

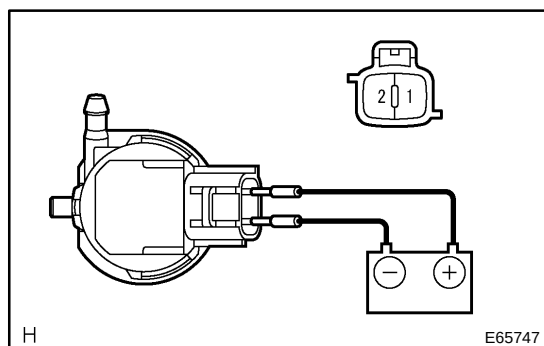
ON-VEHICLE INSPECTION



1. INSPECT WINDSHIELD WASHER MOTOR ASSY

(a) Operation Check

- (1) Pour the water into the washer jar with the windshield washer motor and pump assy installed to the washer jar assy.
- (2) Connect the battery (+) to the terminal 1 of the windshield washer motor and pump assy, the battery (-) to the terminal 2 of the windshield washer motor and pump assy. Check that the water comes out from the washer jar.



2. INSPECT REAR WASHER MOTOR ASSY

(a) Operation Check

- (1) Pour the water into the washer jar with the rear washer motor assy installed to the washer jar assy.
- (2) Connect the battery (+) to the terminal 1 of the rear washer motor assy, the battery (-) to the terminal 2 of the rear washer motor assy. Check that the water comes out from the washer jar.

WIPER AND WASHER SYSTEM

6605A-10

PRECAUTION

1. PRECAUTION OF WASHER NOZZLE ADJUSTMENT

- (a) Do not clean or adjust the washer nozzle with a safety pin, etc. because;
 - (1) the washer nozzle tip is made of resin and could be damaged.
 - (2) adjustment is not necessary because the washer nozzle is a spray type.
- (b) In case the washer nozzle is clogged with wax etc., remove it and clean the nozzle hole with a soft resin brush, etc.

PROBLEM SYMPTOMS TABLE

1. FRONT WIPER AND WASHER SYSTEM

Symptom	Suspect Area	See page
Front wipers do not operate.	1. IG1 relay 2. WIP fuse 3. Windshield wiper switch assy 4. Windshield wiper motor assy 5. Wire harness or connector	- - 66-5 66-5 -
Front wipers do not operate in LO or HI.	1. Windshield wiper switch assy 2. Windshield wiper motor assy 3. Wire harness or connector	66-5 66-5 -
Front wipers do not operate in INT.	1. Windshield wiper switch assy 2. Windshield wiper motor assy 3. Wire harness or connector	66-5 66-5 -
Front washer motor does not operate.	1. IG1 relay 2. WSH fuse 3. Windshield wiper switch assy 4. Front washer motor 5. Wire harness or connector	- - 66-5 66-4 -
Front wipers do not operate when front washer switch is in the ON position.	1. Windshield wiper switch assy 2. Windshield wiper motor assy 3. Wire harness or connector	66-5 66-5 -
Front washer fluid is not injected.	1. Washer hose and nozzle	-
• When the wiper switch is OFF, the wiper blade does not retract or the retract position is wrong. • The wiper blade is in contact with the body.	1. Windshield wiper motor assy (Wiper arm and blade set position) 2. Windshield wiper motor assy (Automatic stop position)	66-8 66-5

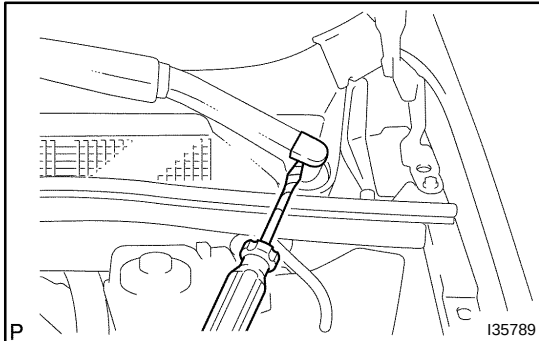
2. REAR WIPER AND WASHER SYSTEM

Symptom	Suspect Area	See page
Rear wiper does not operate.	1. IG1 relay 2. RR WIP fuse 3. Windshield wiper switch assy 4. Rear wiper motor and bracket assy 5. Wire harness or connector	- - 66-5 66-5 -
Rear wiper does not operate in ON or INT.	1. Windshield wiper switch assy 2. Rear wiper motor and bracket assy 3. Wire harness or connector	66-5 66-5 -
Rear washer motor does not operate.	1. IG1 relay 2. WSH fuse 3. Windshield wiper switch assy 4. Rear washer motor 5. Wire harness or connector	- - 66-5 66-4 -
Rear wiper does not operate when rear washer switch is in the ON position (Rear wiper switch is ON side).	1. Windshield wiper switch assy 2. Rear wiper motor and bracket assy 3. Wire harness or connector	66-5 66-5 -
Rear washer fluid is not injected.	1. Washer hose and nozzle	-
• When the wiper switch is OFF, the wiper blade does not retract or the retract position is wrong. • The wiper blade is in contact with the body.	1. Rear wiper motor and bracket assy (Rear wiper blade set position). 2. Rear wiper motor and bracket (Automatic stop position).	66-11 66-5

3. WASHER FLUID LEVEL WARNING SYSTEM

Symptom	Suspect Area	See page
Washer level warning light comes on (Washer fluid level is normal).	1. Level warning switch assy 2. Combination meter assy 3. Wire harness or connector	- 71-1 -
Washer level warning light does not come on (Empty the washer fluid in washer tank assy).	1. Level warning switch assy 2. Combination meter assy 3. Wire harness or connector	- 71-1 -

WINDSHIELD WIPER MOTOR ASSY REPLACEMENT



1. REMOVE FRONT WIPER ARM HEAD CAP

- (a) Using a small screwdriver, remove the 2 front wiper arm covers.

HINT:

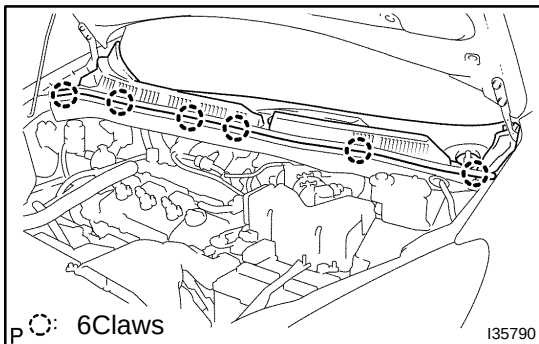
Tape up the screwdriver tip before use.

2. REMOVE FR WIPER ARM RH

- (a) Operate the wiper, and stop the windshield wiper motor assy to the automatic stop position.
(b) Remove the nut and the FR wiper arm RH.

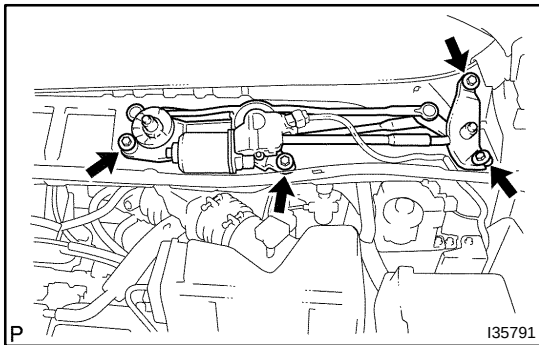
3. REMOVE FR WIPER ARM LH

- (a) Remove the nut and the FR wiper arm LH.



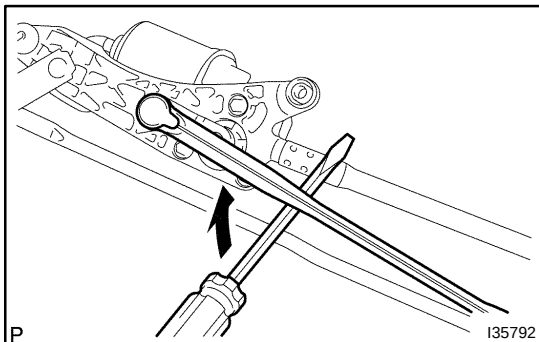
4. REMOVE COWL TOP VENTILATOR LOUVER SUB-ASSY

- (a) Remove the 6 claws and the cowl top ventilator louver sub-assy .



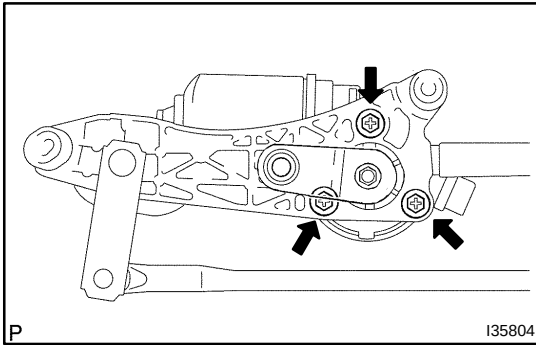
5. REMOVE WINDSHIELD WIPER MOTOR & LINK ASSY

- (a) Disconnect the connector.
(b) Remove the 4 bolts and wiper motor & link assy.



6. REMOVE WINDSHIELD WIPER MOTOR ASSY

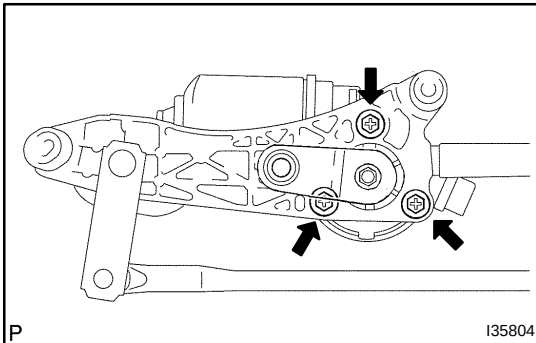
- (a) Using a screwdriver, disengage the meshing of rod at the crank arm pivot of the windshield wiper motor assy.



- (b) Remove the 3 bolts and windshield wiper motor assy from the windshield wiper link assy.

HINT:

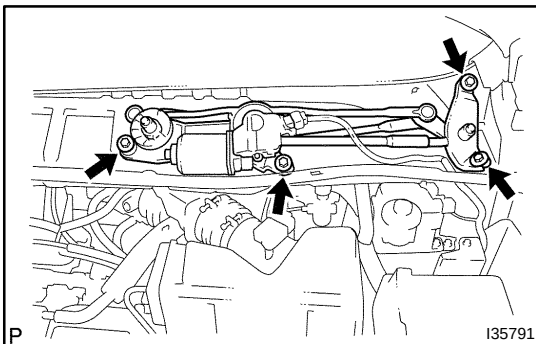
Turning the crank arm by hand prior to the operation will be able to remove the wiper motor easier.



7. INSTALL WINDSHIELD WIPER MOTOR ASSY

- (a) Apply MP grease to the crank arm pivot of the windshield wiper motor assy.
- (b) Install the windshield wiper motor assy with the 3 bolts to the windshield wiper link assy.

Torque: 7.5 N·m (76 kgf·cm, 66 in·lbf)



8. INSTALL WINDSHIELD WIPER MOTOR & LINK ASSY

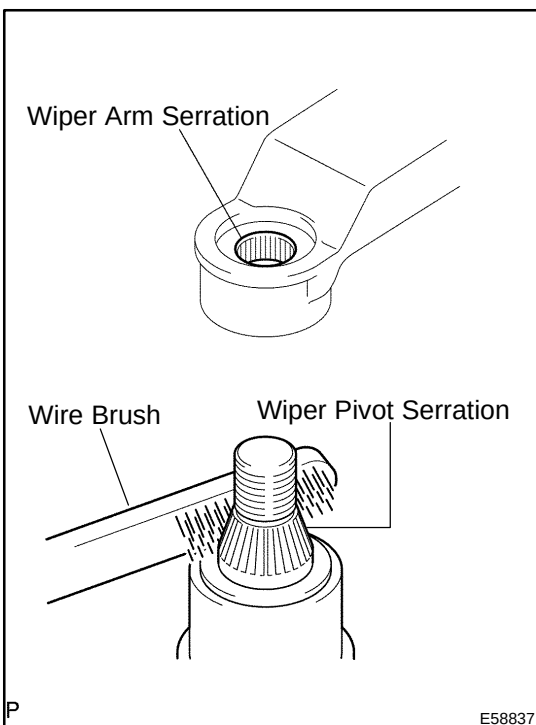
- (a) Install the wiper motor & link assy with the 4 bolts.

Torque: 5.5 N·m (56 kgf·cm, 49 in·lbf)

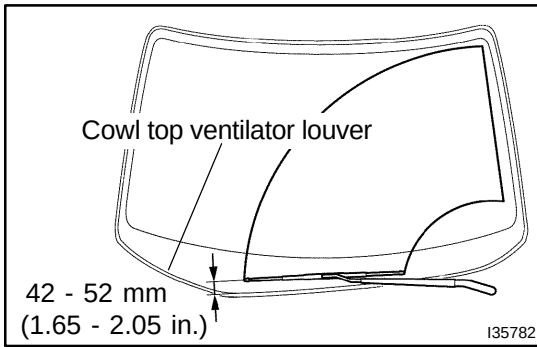
- (b) Connect the connector.

9. INSTALL FR WIPER ARM LH

- (a) Operate the wiper, and stop the windshield wiper motor assy to the automatic stop position.



- (b) Scrape off the serration part of the wiper arm with a round file or equivalent.
- (c) Clean the wiper pivot serration with a wire brush.



- (d) Install the front wiper arm LH with the nut to the position shown in the illustration.

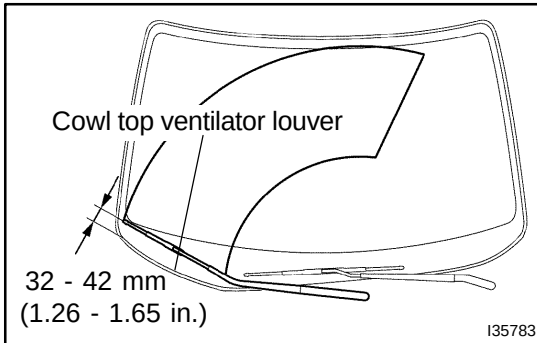
Torque: 20 N·m (204 kgf·cm, 14.8 ft·lbf)

HINT:

Hold down the arm hinge by hand to fasten the nut.

10. INSTALL FR WIPER ARM RH

- (a) Scrape off the serration part of the wiper arm with a round file or equivalent.
- (b) Clean the wiper pivot serration with a wire brush.



- (c) Install the front wiper arm RH with the nut to the position shown in the illustration.

Torque: 20 N·m (205 kgf·cm, 15 ft·lbf)

HINT:

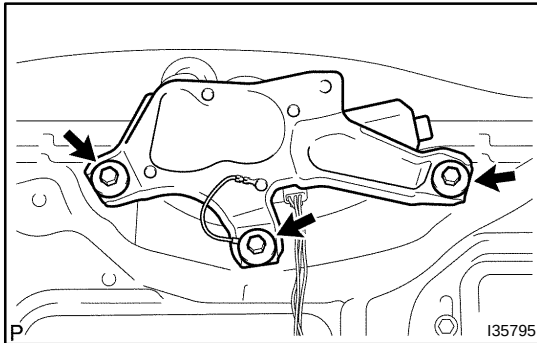
Hold down the arm hinge by hand to fasten the nut.

- (d) Operate the wiper while running the water or the washer fluid over the window, and check the wiping condition and that the front wiper does not hit against the vehicle body.

REAR WIPER MOTOR AND BRACKET ASSY REPLACEMENT

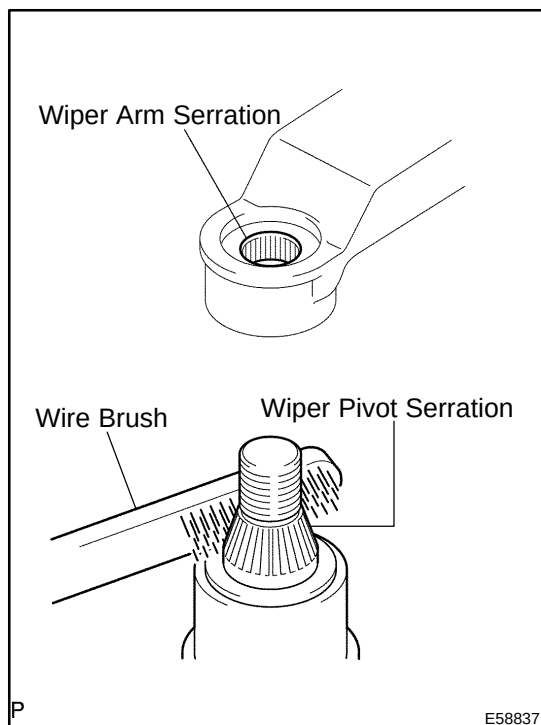
660CD-01

1. **REMOVE REAR WIPER ARM**
 - (a) Remove the rear wiper arm head cap from the rear wiper arm.
 - (b) Remove the nut and the rear wiper arm.
2. **REMOVE BACK DOOR GARNISH CENTER (See page 76-19)**
3. **REMOVE BACK DOOR SIDE GARNISH LH (See page 76-19)**
4. **REMOVE POWER BACK DOOR ROD (W/ POWER BACK DOOR) (See page 76-19)**
5. **REMOVE BACK DOOR SIDE GARNISH RH (See page 76-19)**
6. **REMOVE BACK DOOR PULL STRAP (See page 76-19)**
7. **REMOVE BACK DOOR TRIM BOARD ASSY (See page 76-19)**

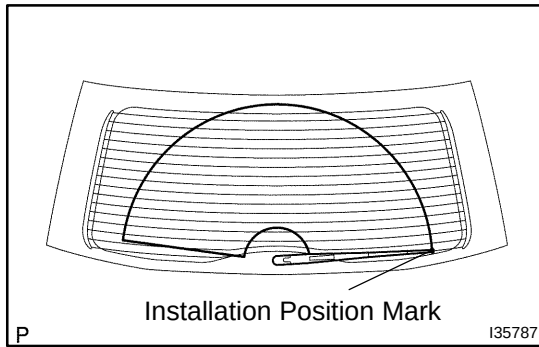


8. **REMOVE REAR WIPER MOTOR AND BRACKET ASSY**
 - (a) Remove the 3 bolts.
 - (b) Disconnect the connector, and remove the rear wiper motor assy.

9. **INSTALL REAR WIPER MOTOR AND BRACKET ASSY**
 - (a) Install the rear wiper motor assy with the 3 bolts.
Torque: 5.5 N·m (56 kgf·cm, 49 in·lbf)
 - (b) Connect the connector.



10. **INSTALL REAR WIPER ARM**
 - (a) Scrape off the serration part of the wiper arm with a round file or equivalent.
 - (b) Clean the rear wiper pivot serration with a brush.



- (c) Stop the rear wiper motor assy to the automatic stop position. Install the rear wiper arm to the position as shown in the illustration.

Torque: 5.5 N·m (56 kgf·cm, 49 in·lbf)

- (d) Install the rear wiper arm head cap.

WIPER RUBBER LH

REPLACEMENT

660CE-01

1. REMOVE FR WIPER BLADE LH

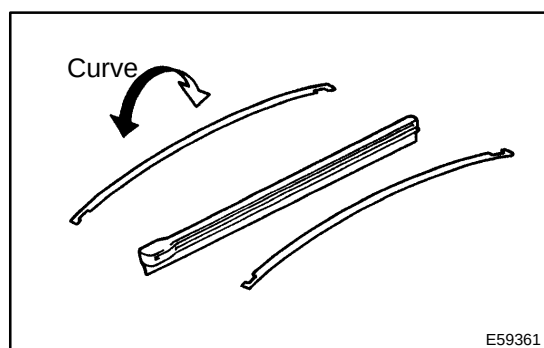
- (a) Remove the front wiper blade LH from the front wiper arm LH.

NOTICE:

Do not fold down the front wiper arm with the front wiper blade being removed from it.

2. REMOVE WIPER RUBBER LH

- (a) Remove the front wiper rubber LH from the front wiper blade.
 (b) Remove the 2 wiper rubber backing plates from the wiper rubber LH.

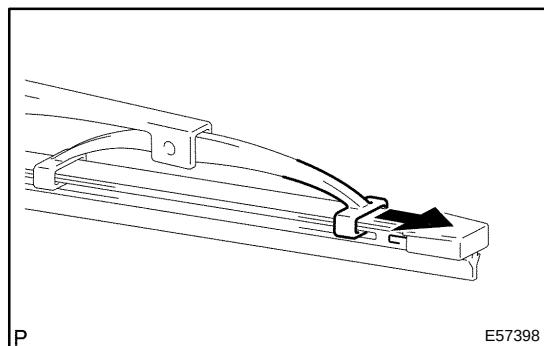


3. INSTALL WIPER RUBBER LH

- (a) Install the 2 wiper rubber backing plates to the wiper rubber LH.

NOTICE:

Be careful about the right side and the wrong side of the backing plates.

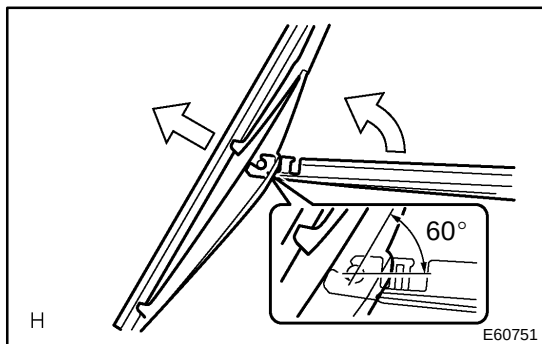


- (b) Install the wiper rubber LH so that the head part (Larger side) of the wiper rubber faces the arm axle side.

NOTICE:

Push the front wiper blade into the grooves of the wiper rubber to engage them completely.

REAR WIPER RUBBER REPLACEMENT



1. REMOVE REAR WIPER BLADE ASSY

- (a) Remove the rear wiper arm head cap from the rear wiper arm.
- (b) Raise the rear wiper blade to the position as shown in the illustration where the meshing of the claw is disengaged with the click sound.

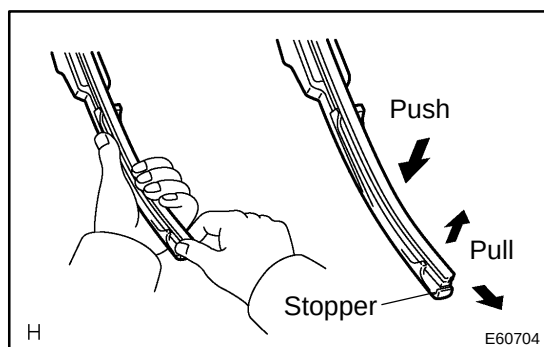
NOTICE:

Be careful not to break the claw.

- (c) Pull the rear wiper blade straight from the wiper arm toward the left side of the vehicle.

NOTICE:

Do not fold the rear wiper arm with the rear wiper blade being removed from it.



2. REMOVE REAR WIPER RUBBER

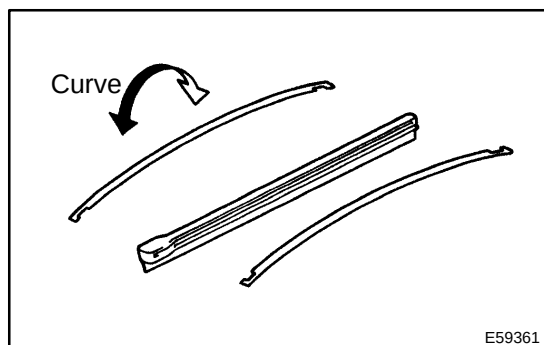
- (a) Pull the end of the rubber protruded from the blade stopper as shown in the illustration.

NOTICE:

Do not pull out the wiper rubber forcibly. Otherwise, the backing plates are deformed or blade claw is damaged.

HINT:

Pushing the position close to the middle of the blade raises the rubber, making easier to pull the rubber out.



3. INSTALL REAR WIPER RUBBER

- (a) Install the 2 wiper rubber backing plates to the rear wiper rubber.

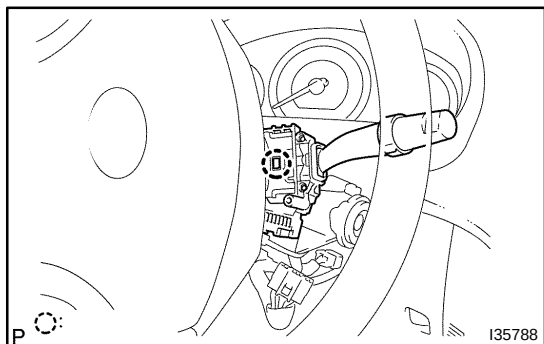
NOTICE:

Be sure to install the wiper rubber backing plates in the right direction.

WINDSHIELD WIPER SWITCH ASSY REPLACEMENT

660CG-02

1. REMOVE STEERING COLUMN COVER (See page 50-8)



2. REMOVE WINDSHIELD WIPER SWITCH ASSY

- (a) Disconnect the connector.
- (b) Using a screwdriver, disengage the claw and pull out the windshield wiper switch Assy.

NOTICE:

The claw will be broken if pressed hard.

HINT:

Tape up the screwdriver tip before use.