

SECTION **WW**  
WIPER, WASHER & HORN

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# PRECAUTIONS

## PRECAUTIONS

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### Precautions for Supplemental Restraint System (SRS) “AIR BAG” and “SEAT BELT PRE-TENSIONER”

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The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system may include seat belt switch inputs and dual stage front air bag modules. If equipped with dual stage front air bag modules, the SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the SRS and SB section of this Service Manual.

The vehicle may be equipped with a passenger air bag deactivation switch. Because no rear seat exists where a rear-facing child restraint can be placed, the switch is designed to turn off the passenger air bag so that a rear-facing child restraint can be used in the front passenger seat. The switch is located in the center of the instrument panel, near the ashtray. When the switch is turned to the ON position, the passenger air bag is enabled and could inflate for certain types of collision. When the switch is turned to the OFF position, the passenger air bag is disabled and will not inflate. A passenger air bag OFF indicator on the instrument panel lights up when the passenger air bag is switched OFF. The driver air bag always remains enabled and is not affected by the passenger air bag deactivation switch.

#### **WARNING:**

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SRS section.**
- **Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.**
- **The vehicle may be equipped with a passenger air bag deactivation switch which can be operated by the customer. When the passenger air bag is switched OFF, the passenger air bag is disabled and will not inflate. When the passenger air bag is switched ON, the passenger air bag is enabled and could inflate for certain types of collision. After SRS maintenance or repair, make sure the passenger air bag deactivation switch is in the same position (ON or OFF) as when the vehicle arrived for service.**

### Wiring Diagrams and Trouble Diagnosis

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When you read wiring diagrams, refer to the following:

- [GI-13, "How to Read Wiring Diagrams"](#)
- [PG-9, "POWER SUPPLY ROUTING"](#)

When you perform trouble diagnosis, refer to the following:

- [GI-9, "HOW TO FOLLOW TEST GROUPS IN TROUBLE DIAGNOSES"](#)
- [GI-25, "How to Perform Efficient Diagnosis for an Electrical Incident"](#)

Check for any Service bulletins before servicing the vehicle.

# FRONT WIPER AND WASHER

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## FRONT WIPER AND WASHER

### System Description

#### WIPER OPERATION

##### Models Without Intermittent Wipers

The front wiper switch is controlled by a lever built into the combination switch. There are two front wiper switch positions:

- LO speed
- HI speed

With the ignition switch in the ON or START position, power is supplied

- through 20A fuse [No. 6, located in the fuse block (J/B)]
- to front wiper motor terminal B.

##### Low and High Speed Wiper Operation

Ground is supplied to front wiper switch terminal 17 through body grounds E12 and E54.

With the front wiper switch in the LO position, ground is supplied

- to front wiper motor terminal L
- through front wiper switch terminal 14.

With power and ground supplied, the front wiper motor operates at low speed.

With the front wiper switch in the HI position, ground is supplied

- to front wiper motor terminal H
- through front wiper switch terminal 16.

With power and ground supplied, the front wiper motor operates at high speed.

##### Auto Stop Operation

When the front wiper switch is turned OFF, the front wiper motor will continue to operate at low speed until wiper blades reach windshield base.

When wiper blades are not located at base of windshield with front wiper switch OFF, ground is supplied

- to front wiper motor terminal L
- through front wiper switch terminal 14
- through front wiper switch terminal 13
- through front wiper motor terminal P
- through front wiper motor terminal E
- through body grounds E12 and E54.

##### Models With Intermittent Wipers

The front wiper switch is controlled by a lever built into the combination switch.

There are three front wiper switch positions:

- LO speed
- HI speed
- INT (Intermittent).

With the ignition switch in the ON or START position, power is supplied

- through 20A fuse [No. 6, located in the fuse block (J/B)]
- to front wiper motor terminal B and
- to front wiper switch terminal 19.

##### Low and High Speed Wiper Operation

Ground is supplied to front wiper switch terminal 17 through body grounds E12 and E54

With the front wiper switch in the LO position, ground is supplied

- to front wiper motor terminal L
- through front wiper switch terminal 14.

With power and ground supplied, the front wiper motor operates at low speed.

With the front wiper switch in the HI position, ground is supplied

- to front wiper motor terminal H
- through front wiper switch terminal 16.

With power and ground supplied, the front wiper motor operates at high speed.

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# FRONT WIPER AND WASHER

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## Auto Stop Operation

When the front wiper switch is turned OFF, the front wiper motor will continue to operate at low speed until wiper blades reach windshield base.

When wiper blades are not located at base of windshield with front wiper switch OFF, ground is supplied

- through wiper motor terminal L
- through wiper switch terminal 14
- through front wiper switch terminal 13
- through front wiper motor terminal P
- through front wiper motor terminal E
- through body grounds E12 and E54.

When wiper blades reach base of windshield, front wiper motor terminals B and P are connected instead of terminals P and E.

Battery power is then supplied

- through front wiper motor terminal P
- to front wiper switch terminal 13.

With battery voltage supplied to front wiper switch terminal 13, the front wiper switch will stop the front wiper motor with the blades at the PARK position.

## Intermittent Operation

The wiper blades perform a single wiping operation, followed by a delay interval which is adjustable from approximately 3 to 13 seconds, after which the cycle repeats. This feature is controlled by the front wiper switch.

When the front wiper switch is placed in the INT position, ground is supplied intermittently

- to front wiper motor terminal L
- through front wiper switch terminal 14
- through front wiper switch terminal 17
- through body grounds E12 and E54.

The delay interval time is controlled by the front wiper switch.

The front wiper motor operates at low speed at the desired delay interval.

## WASHER OPERATION

With the ignition switch in the ON or START position, power is supplied

- through 20A fuse [No. 6, located in the fuse block (J/B)]
- to front washer motor terminal +.

When the lever is pulled to the WASH position, ground is supplied

- to front washer motor terminal –
- from front wiper switch terminal 18
- through front wiper switch terminal 17
- through body grounds E12 and E54.

With power and ground supplied, the front washer motor operates.

## Models With Intermittent Wipers

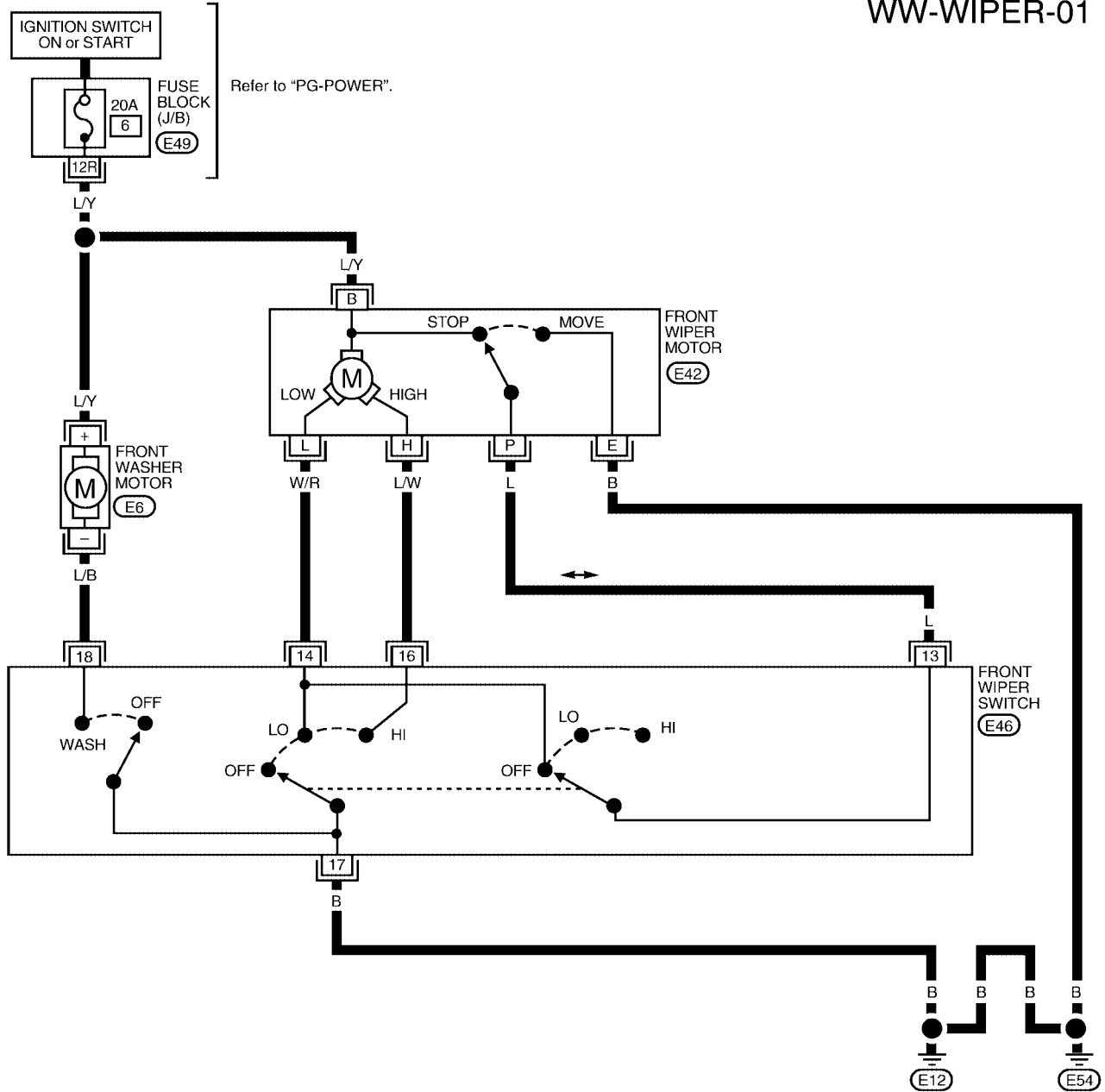
When the lever is pulled to the WASH position for one second or more, the wiper motor operates at low speed for approximately 3 seconds to clean windshield. This feature is controlled by the wiper switch in the same manner as the intermittent operation.

# FRONT WIPER AND WASHER

## Wiring Diagram — WIPER — MODELS WITHOUT INTERMITTENT WIPERS

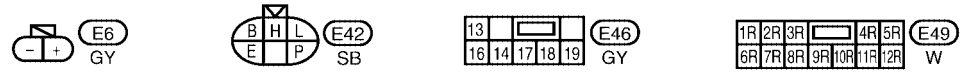
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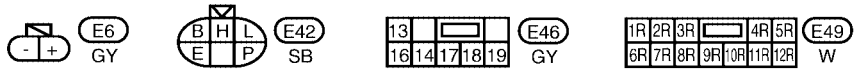
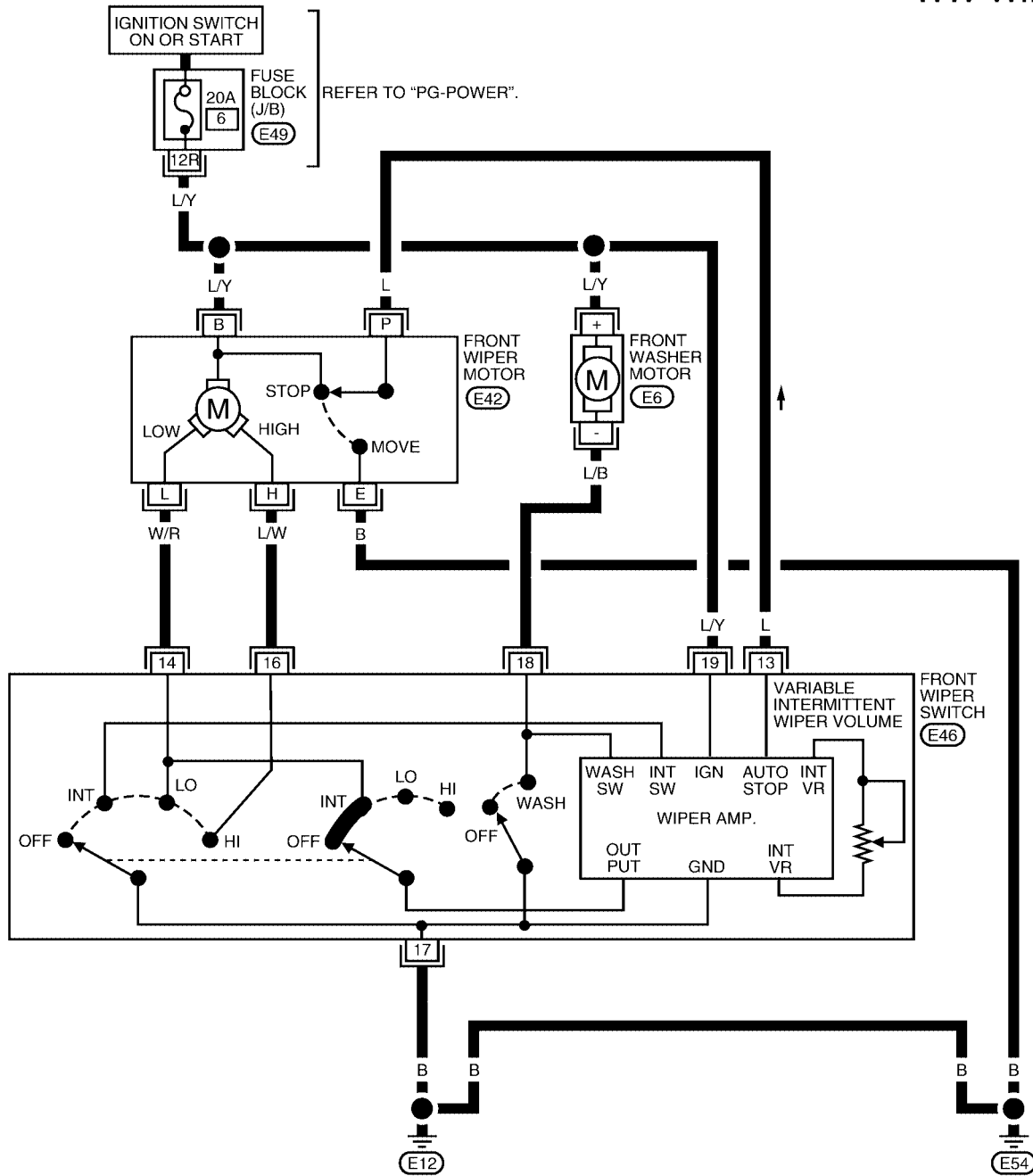


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# FRONT WIPER AND WASHER

## MODELS WITH INTERMITTENT WIPERS

WW-WIPER-02



# FRONT WIPER AND WASHER

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## Removal and Installation

### WIPER ARMS

1. Prior to wiper arm installation, turn on wiper switch to operate wiper motor and then turn it "OFF" (Auto Stop).
2. Lift the blade up and then set it down onto glass surface to set the blade center to clearance "L1" & "L2" immediately before tightening nut.
3. Eject washer fluid. Turn on wiper switch to operate wiper motor and then turn it "OFF".
4. Ensure that wiper blades stop within clearance "L1" & "L2".

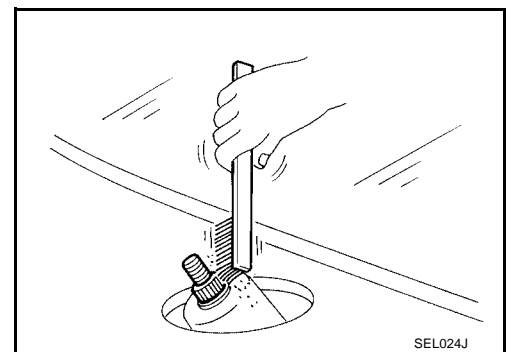
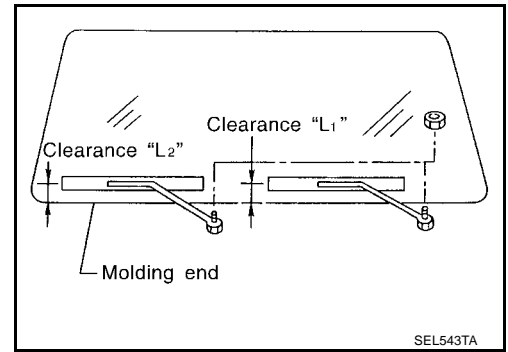
**Clearance "L1" : 25 mm (0.98 in)**

**Clearance "L2" : 25 mm (0.98 in)**

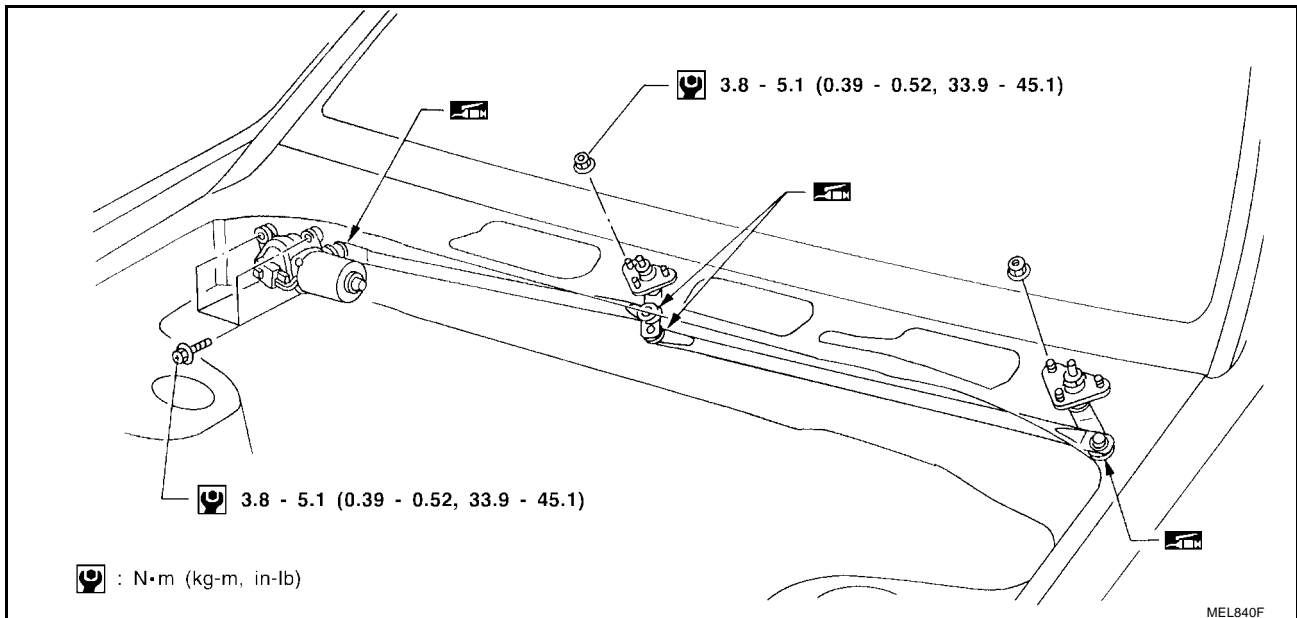
- Tighten wiper arm nuts to specified torque.

**Front wiper : 13 - 18 N·m (1.3 - 1.8 kg·m, 9 - 13 ft·lb)**

- Before reinstalling wiper arm, clean the pivot area as illustrated. This will reduce possibility of wiper arm looseness.



### WIPER MOTOR AND LINKAGE



### Removal

1. Remove wiper arms. Refer to [WW-7, "WIPER ARMS"](#).
2. Remove cowl top grilles. Refer to [EI-30, "Removal and Installation"](#).
3. Remove wiper motor linkage cover and disconnect linkage.

#### **CAUTION:**

**Be careful not to break ball joint rubber boot.**

4. Disconnect wiper motor harness connector.
5. Remove 4 bolts that secure wiper motor.

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# FRONT WIPER AND WASHER

6. Detach wiper motor from wiper linkage at ball joint.
7. Remove nuts from wiper pivots and remove wiper linkage.

## Installation

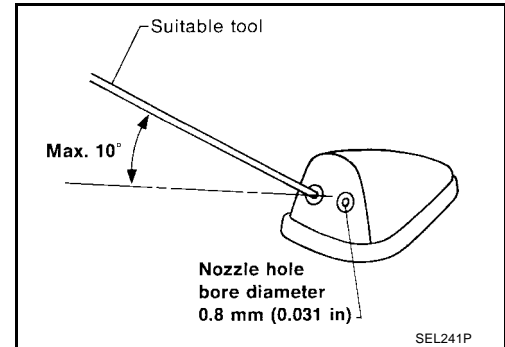
- Grease ball joint portion before installation.
1. Installation is the reverse order of removal.

## Washer Nozzle Adjustment

- Adjust washer nozzle with suitable tool as shown.

**Adjustable range** :  $\pm 10^\circ$

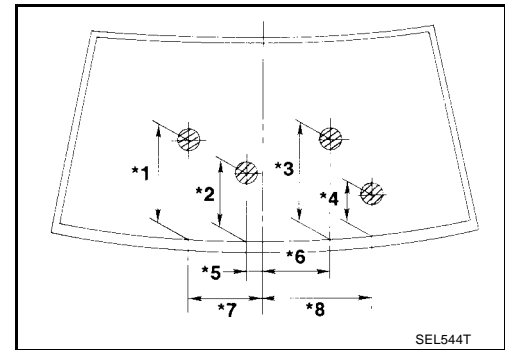
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Unit: mm (in)

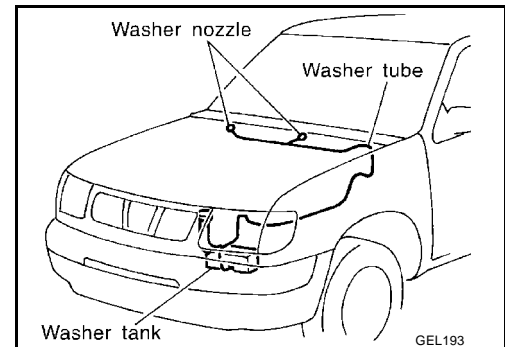
*1	390 (15.35)	*5	145 (5.71)
*2	160 (6.30)	*6	143 (5.63)
*3	379 (14.92)	*7	225 (8.86)
*4	140 (5.51)	*8	535 (21.06)

\*: The diameters of these circles are less than 80 mm (3.15 in).



## Washer Tube Layout

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# CIGARETTE LIGHTER

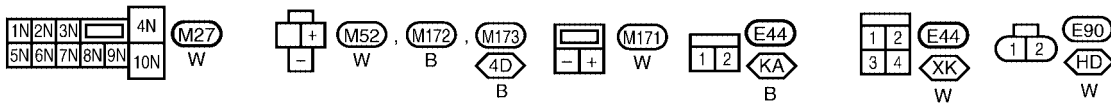
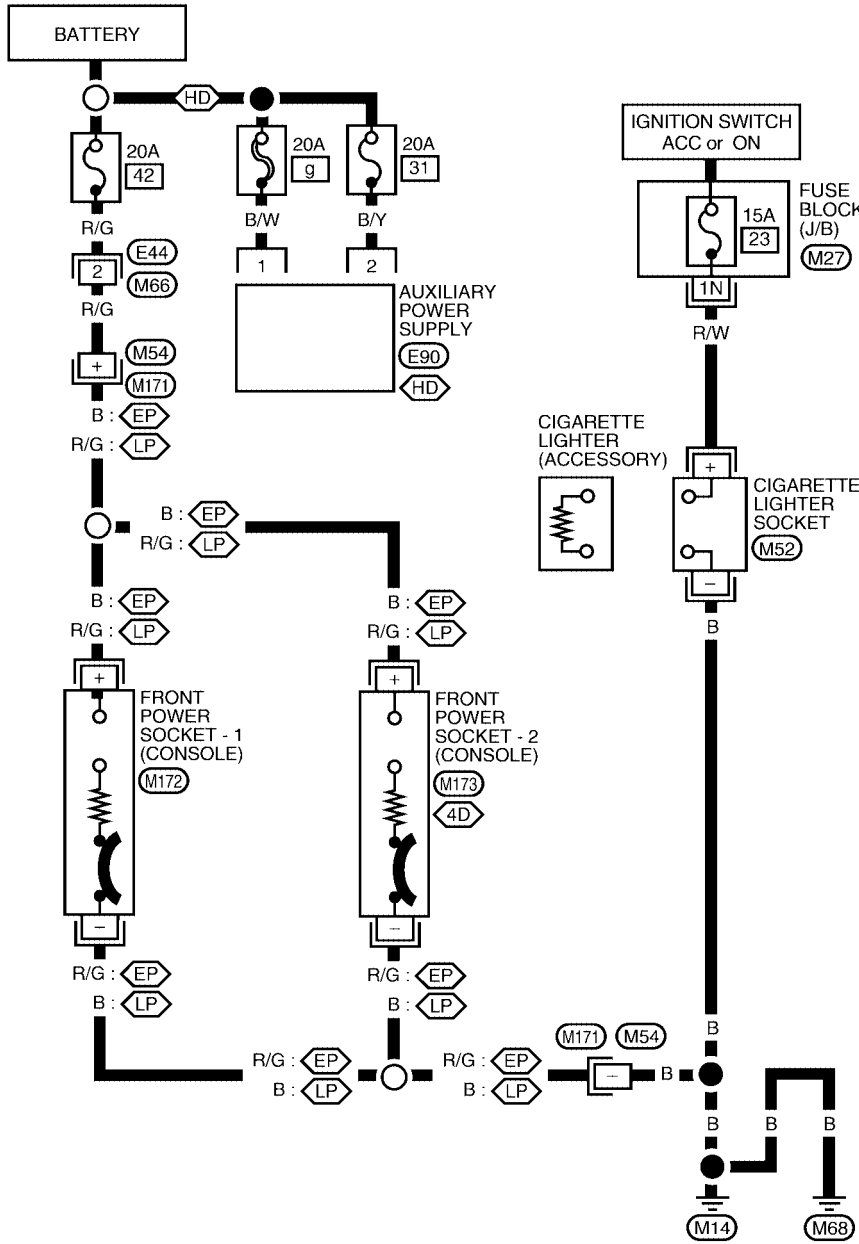
## CIGARETTE LIGHTER Wiring Diagram — CIGAR —

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### WW-CIGAR-01

- ⬡KA : With KA24DE
  - ⬡XK : Except KA24DE
  - ⬡4D : 4 door models
  - ⬡HD : With heavy duty electrical system
  - ⬡EP : Early production
  - ⬡LP : Late production
- Refer to "PG-POWER".



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# HORN

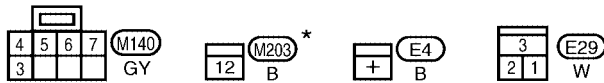
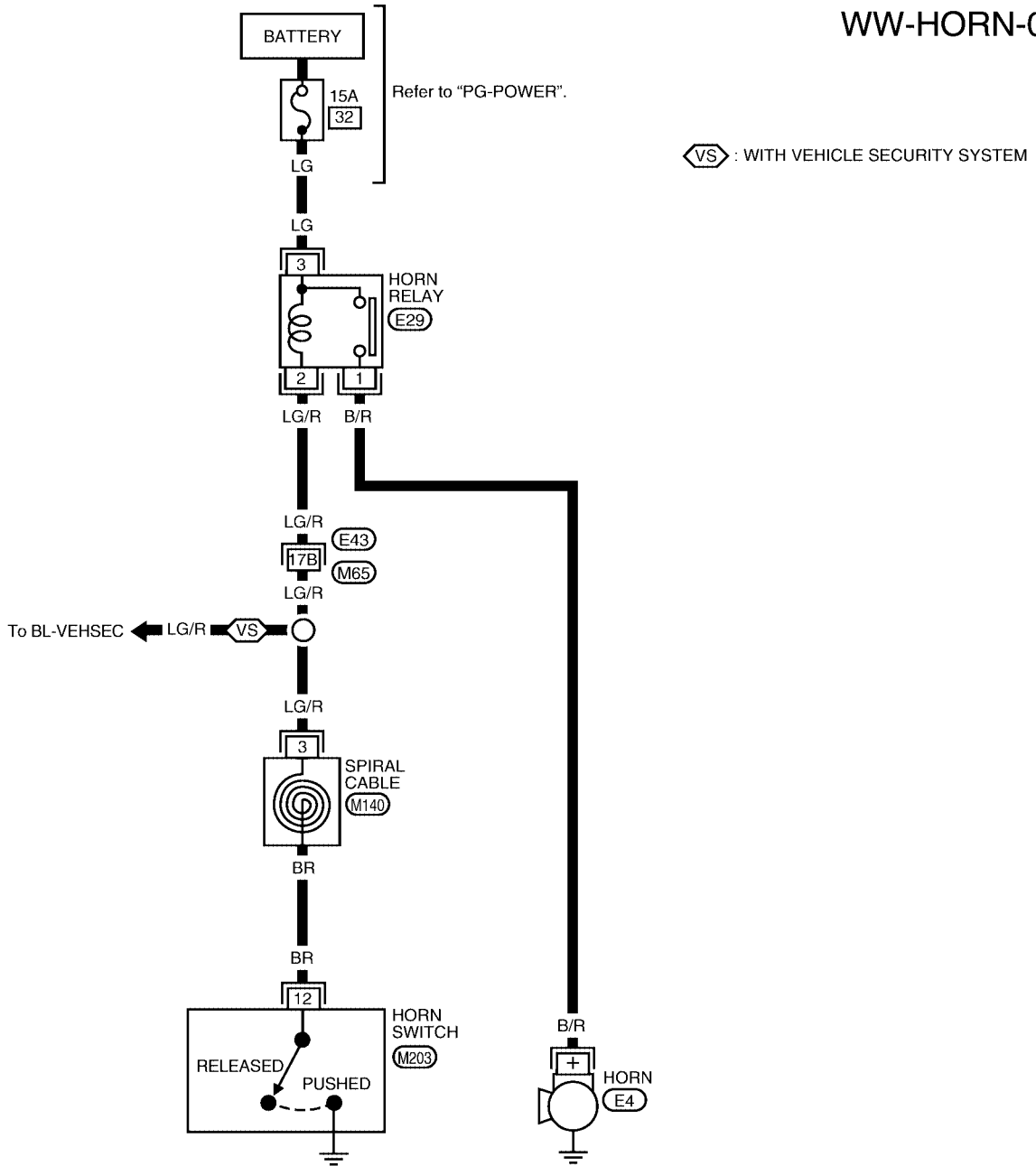
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## HORN

### Wiring Diagram — HORN —

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## WW-HORN-01



Refer to the following.  
 E43 - SUPER MULTIPLE JUNCTION (SMJ)

\* : This connector is not shown in "HARNESS LAYOUT" of PG section.

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