

Component Procedures: Wiper Motor

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Component Procedures: Wiper Motor

Parts and Labor (itype_189)

Parts

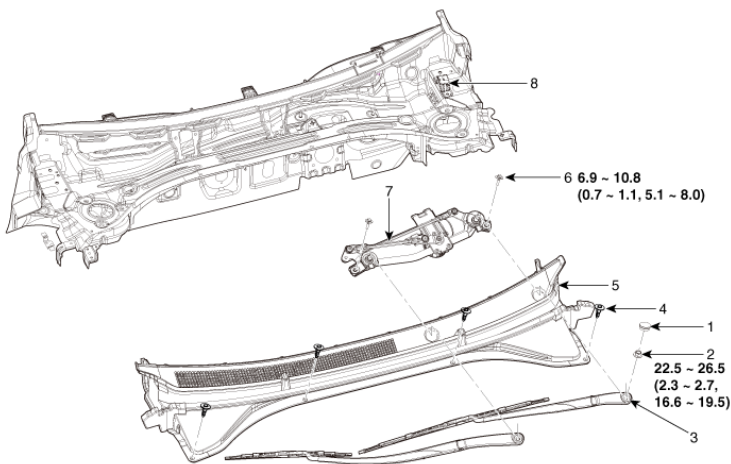
Qualifier	Part #	Name	Price	Note
Wipers	98110F2000	Wiper Motor	301.90	

Labor

Operation	Qualifier Path	Skill	Std Hrs	Wty Hrs
Remove & Replace	Wipers > Wiper Motor, R&R	B	0.4	0.0

Front Wiper Motor - Components and Components Location (Article 44624)

- Component Location

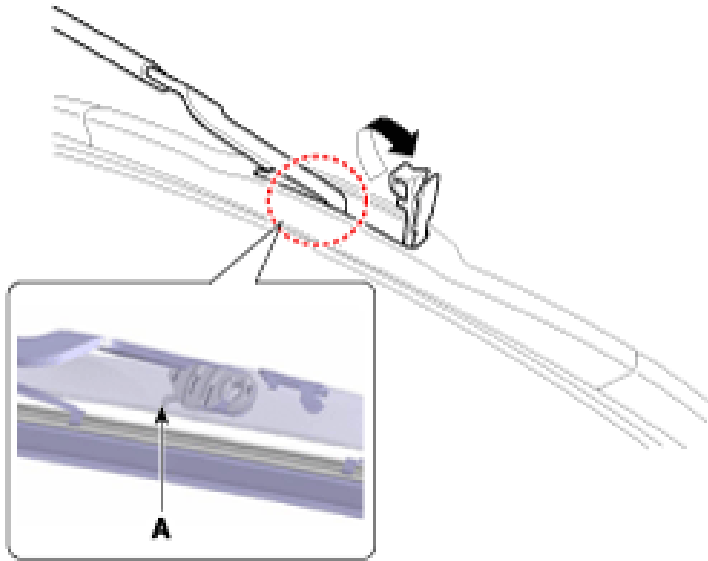


Tightening torque : N.m(kgf.m, lb-ft)

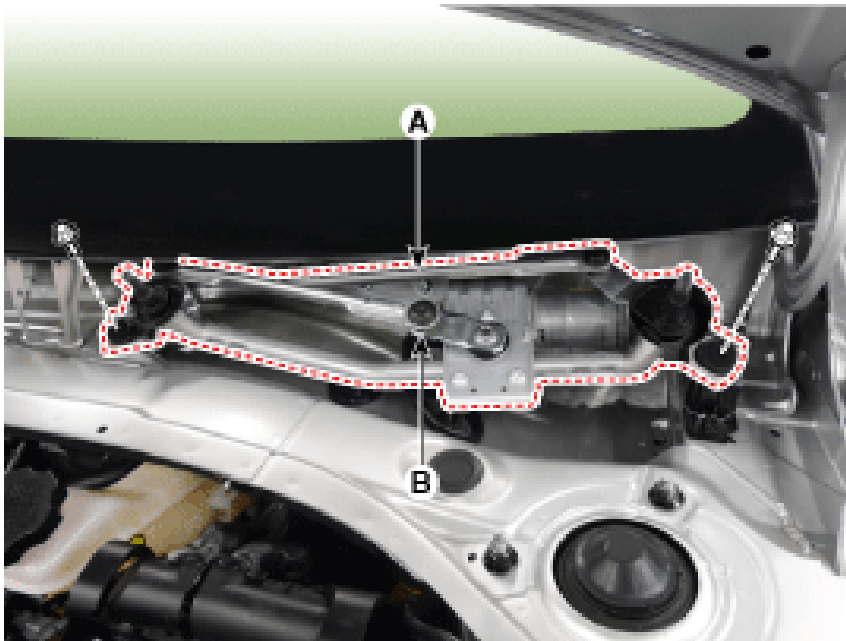
1. Cap 2. Nut 3. Wiper arm & blade 4. Rivet 5. Cowl top cover 6. Bolt 7. Wiper motor & linkage assembly 8. Wiper motor connector

Front Wiper Motor - Repair Procedures (Article 44625)

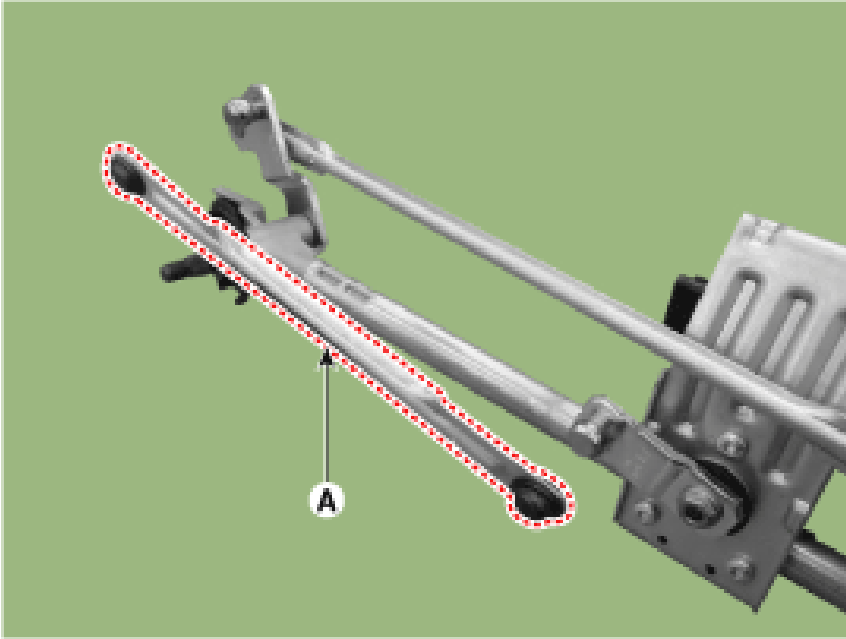
- Removal
- Disconnect the negative (-) battery terminal.
- If necessary, release the wiper blade fixing clip by pulling up and remove the wiper blade from the inside radius of wiper arm .



- Remove the cowl top cover. (Refer to Body - "Cowl Top Cover")
- Disconnect the windshield deicer connector (B) after loosening the wiper motor assembly mounting bolts (A).



- Hold the wiper motor crank arm and remove the upper linkage (A).



- Hold the wiper motor crank arm and remove the upper linkage (A). Before removing the wiper motor and linkage assembly, make sure that the linkage is stopped at auto stop position. To install the wiper motor crank arm exactly, check that the linkage is aligned with the crank arm in straight line and the angle of each linkages. Be careful not to bend the linkage.

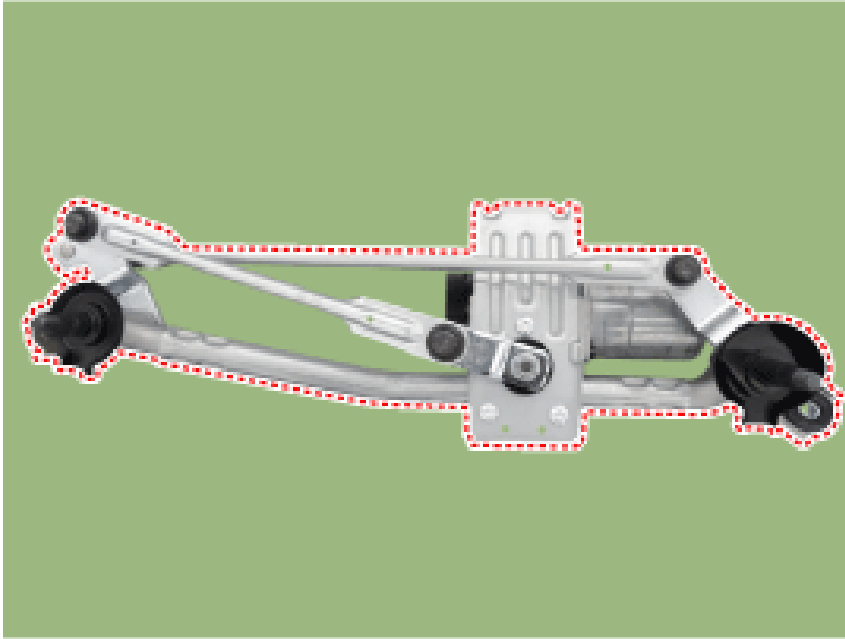
Before removing the wiper motor and linkage assembly, make sure that the linkage is stopped at auto stop position. To install the wiper motor crank arm exactly, check that the linkage is aligned with the crank arm in straight line and the angle of each linkages. Be careful not to bend the linkage.



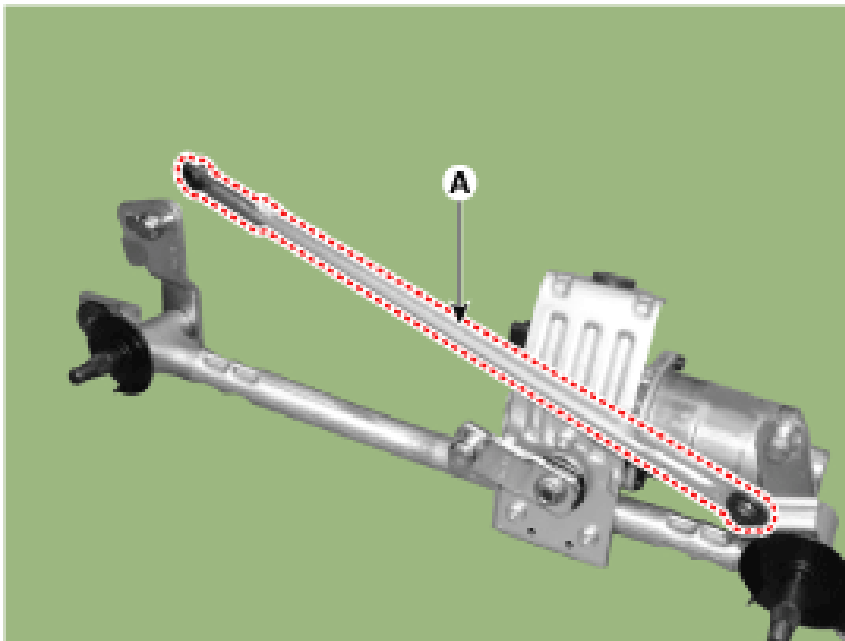
- Before removing the wiper motor and linkage assembly, make sure that the linkage is stopped at auto stop position.

- To install the wiper motor crank arm exactly, check that the linkage is aligned with the crank arm in straight line and the angle of each linkages.

- Be careful not to bend the linkage.

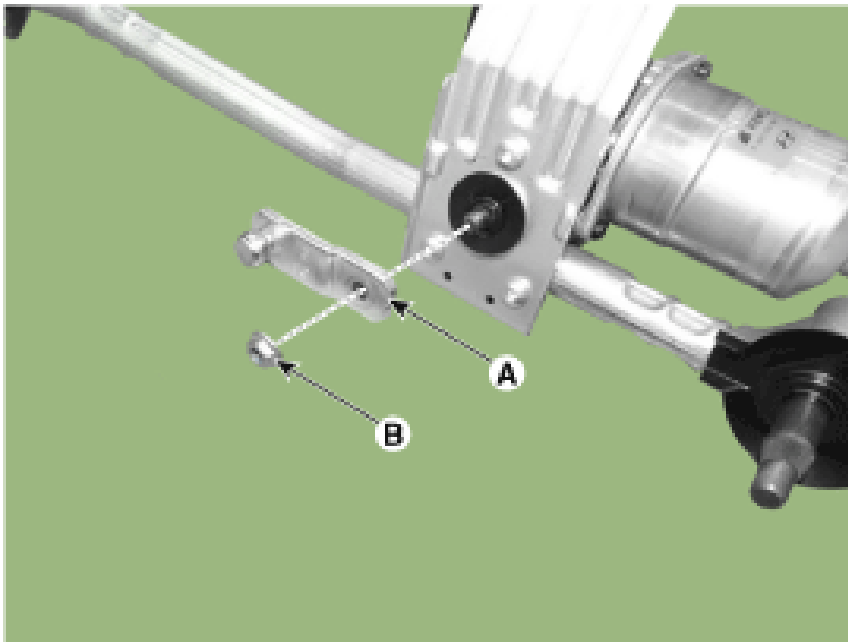


- Remove the lower linkage (A) from the wiper motor crank arm. To install the wiper motor crank arm exactly, check that the linkage is aligned with the crank arm in straight line and the angle of each linkages. Be careful not to bend the linkage.

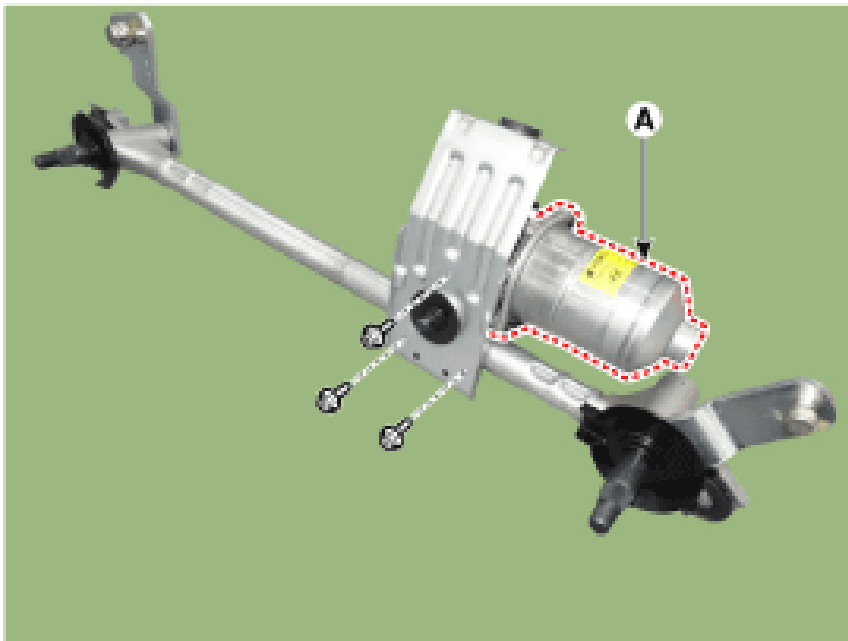


To install the wiper motor crank arm exactly, check that the linkage is aligned with the crank arm in straight line and the angle of each linkages. Be careful not to bend the linkage.

- Remove the crank arm (A) after loosening a nut (B).



- Remove the wiper motor (A) after loosening the bolts.



- Installation

- Install the wiper motor.

- Install the crank arm. Tightening torque : 14.7 - 19.6 Nm (1.5 - 2.0 kgf.m, 10.8 - 14.5 lbf.ft) To install the wiper motor crank arm, make sure that the linkage is aligned with the crank arm in straight line and set the angle of each linkages exactly.

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- Install the lower and upper linkage to the wiper motor crank arm.

- Install the wiper motor and linkage assembly and then connect the wiper motor connector . Tightening torque : 7.0 - 11.0 Nm (0.7 - 1.1 kgf.m, 5.0 - 7.9 lbf.ft)

- Install the cowl top cover.

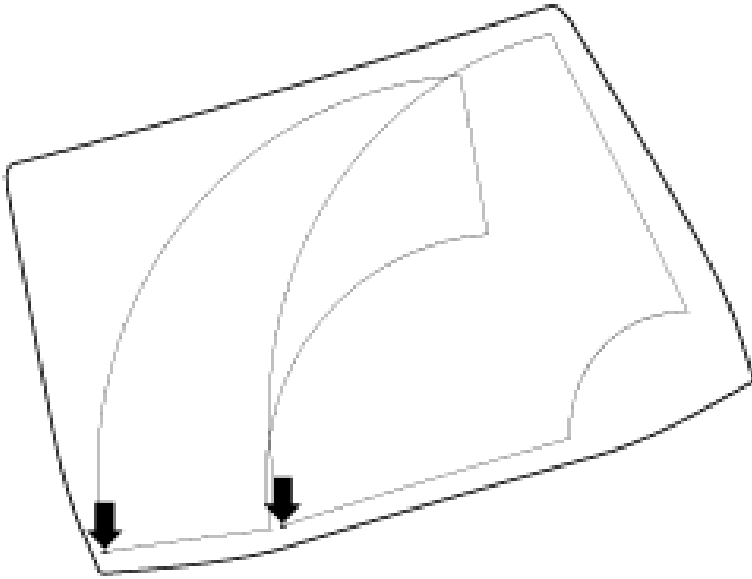
- Install the windshield wiper arm and blade. Tightening torque : 23.0 - 27.0 Nm (2.3 - 2.7 kgf.m, 16.6 - 19.5 lbf.ft) The windshield wiper motor must be cycled to make sure that it is in the park position. If necessary, adjust the wiper arm and blade.

The windshield wiper motor must be cycled to make sure that it is in the park position. If necessary, adjust

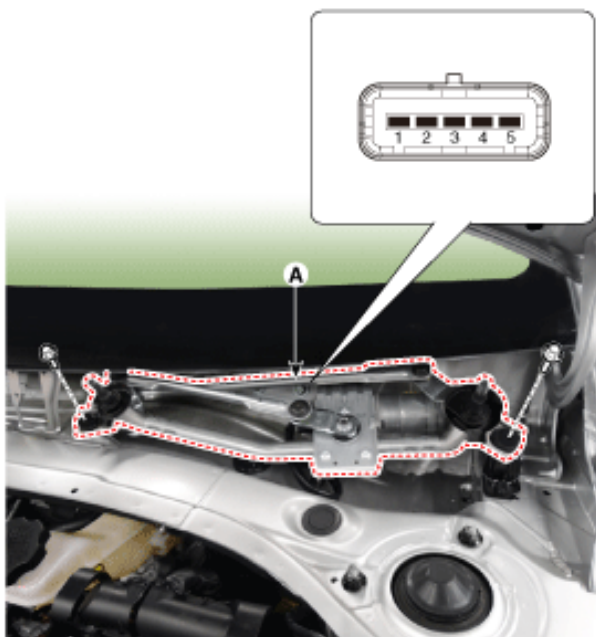
the wiper arm and blade.

NOTICE

- The windshield wiper motor must be cycled to make sure that it is in the park position. If necessary, adjust the wiper arm and blade.
- Install the wiper arm and blade to the specified position. A : Auto stop position (Blade)



- Inspection
- Remove the connector (A) from the wiper motor.

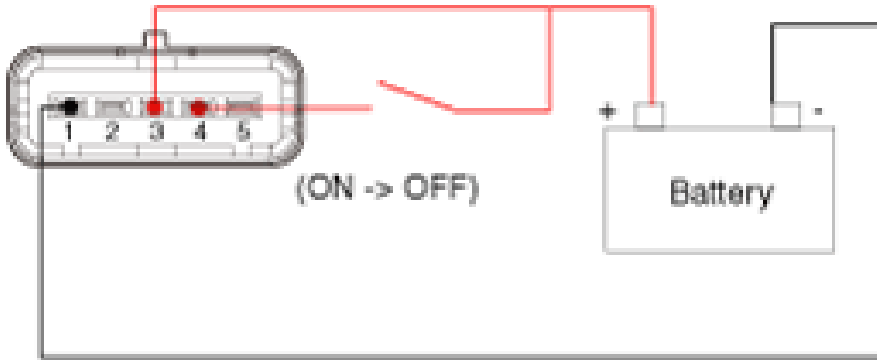


- Attach the positive (+) lead from the battery to terminal 3 and the negative (-) lead to terminal 5. No Description 1 Ground 2 Parking 3 IGN 2 4 Low Speed 5 High Speed

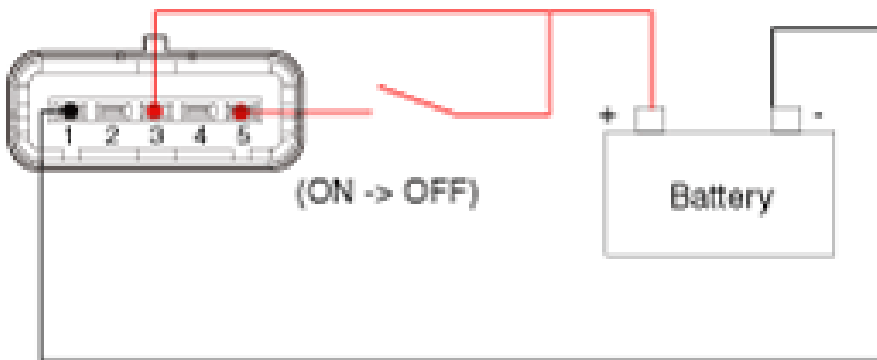
No Description

- 1 Ground
- 2 Parking
- 3 IGN 2
- 4 Low Speed
- 5 High Speed

[LOW]



[HIGH]



- Inspection (with GDS)
- The wiring harness system on the body can check the failed parts more rapidly with tester for the vehicle (GDS). The tester (GDS) provides the following information. Self examination : Checking the failure code (DTC) and display Sensor data : Checking the system input/output data state Forced driving : Checking the system operation condition Additional function : Other controlling such as he system option and zero point adjustment
- Self examination : Checking the failure code (DTC) and display
- Sensor data : Checking the system input/output data state
- Forced driving : Checking the system operation condition
- Additional function : Other controlling such as he system option and zero point adjustment
- Select the 'Car model' and the system to be checked in order to check the vehicle with the tester.
- Select the module to be checked after selecting BCM. Select "BCM" and "Instrument Panel Module (IPM)" to check the Instrument Panel Module (IPM).

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- Select "BCM" and "Instrument Panel Module (IPM)" to check the Instrument Panel Module (IPM).
 - Select the "Input/Output monitoring" menu to search the current state of the input/output data. The input/output data for the sensors corresponding to the "Instrument Panel Module (IPM)" can be checked.

The screenshot shows a software window titled "Current Data" with a search bar and several control buttons: "Selective Display", "Full List", "Graph", "Items List", "Reset Min.Max", "Record", "Stop", "Grouping", and "VSS". Below the controls is a table with three columns: "Sensor Name", "Value", and "Unit".

Sensor Name	Value	Unit
<input type="checkbox"/> Arm/Disarm Buzzer Setting	ON	-
<input type="checkbox"/> Head Lamp Escort	ON	-
<input type="checkbox"/> Auto Door Lock State	15km/h	-
<input type="checkbox"/> Auto Door Unlock Status	Shift-lever	-
<input type="checkbox"/> 2-Turn Unlock	OFF	-
<input type="checkbox"/> RK Trunk Button Function Lock	OFF	-
<input type="checkbox"/> SMK Welcome Option	ON	-
<input type="checkbox"/> Battery Voltage Monitoring Input	11.4	V
<input type="checkbox"/> Auto Light Sensor (Option)	0.4	V
<input type="checkbox"/> Light Switch Voltage(Voltage Divided)	5.0	V
<input type="checkbox"/> Head Lamp High Switch Voltage(Voltage Divided)	5.0	V
<input type="checkbox"/> Fog Lamp Switch Voltage(Voltage Divided)	5.0	V
<input type="checkbox"/> Front Wiper Switch Voltage(Voltage Divided)	5.0	V
<input type="checkbox"/> Wiper INT Volume Voltage(Voltage Divided)	3.6	V
<input type="checkbox"/> ACC	ON	-
<input type="checkbox"/> IGN1	ON	-
<input type="checkbox"/> IGN2	ON	-
<input type="checkbox"/> Defogger / Deicer Switch	OFF	-
<input type="checkbox"/> Washer Switch	OFF	-
<input type="checkbox"/> INT Switch	OFF	-
<input type="checkbox"/> Mist Switch	OFF	-
<input type="checkbox"/> Wiper Stop Position Switch	ON	-
<input type="checkbox"/> Wiper Low Relay	OFF	-

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Sensor Name	Value	Unit
<input type="checkbox"/> Wiper Low Relay	OFF	-
<input type="checkbox"/> Wiper High Relay	OFF	-
<input type="checkbox"/> Room Lamp Output	OFF	-
<input type="checkbox"/> Tail Lamp Switch	OFF	-
<input type="checkbox"/> Auto Light Switch (Option)	OFF	-
<input type="checkbox"/> Head Lamp Switch	OFF	-
<input type="checkbox"/> Head Lamp High Switch	OFF	-
<input type="checkbox"/> Front Fog Switch (Option)	OFF	-
<input type="checkbox"/> Tail AV	ON	-
<input type="checkbox"/> Puddle Lamp Output	OFF	-
<input type="checkbox"/> Key Inter Lock Switch(Manual Key Type)	ON	-
<input type="checkbox"/> ATM solenoid Output	OFF	-
<input type="checkbox"/> Safety Power Window Enable	ON	-
<input type="checkbox"/> Assist Seat Belt Indicator (Option)	OFF	-
<input type="checkbox"/> Crash Input Signal	OFF	-
<input type="checkbox"/> Rain Sensor Option Line	NON RAIN	-
<input type="checkbox"/> PAS Option Line	OFF	-
<input type="checkbox"/> Brake Switch	OFF	-
<input type="checkbox"/> Sunroof Open	OFF	-
<input type="checkbox"/> Head Lamp Passing Switch	OFF	-
<input type="checkbox"/> Wiper Low Switch	OFF	-
<input type="checkbox"/> Wiper High Switch	OFF	-
<input type="checkbox"/> Front Wiper Backup Switch	OFF	-