



HYUNDAI Genuine Accessories

Vehicle Model	Santa Fe & Santa Fe Sport	Accessory	Windshield Washer Heater
Model Year	2013~	Difficulty	B
Part No.	2WF58-AQ100		

- Accessory Installation

Note: Difficulty stated above reflects the minimum level of expertise required to install the accessory.

(A) Customer (B) Dealer Technician (C) Master Technician

Instructional Symbols / Definitions

	Denotes warnings that may lead to serious physical injury or vehicle damage.		Denotes quality processes to be checked prior to moving to the next step.	Denotes safety equipment required to be used such as a mask, safety glasses, gloves, and hearing protection.	
	Denotes cautions to be taken to avoid physical injury or electronic component damage.		Denotes specific tools that are necessary to complete the step.		
	Denotes cautions to be taken to avoid vehicle and component damage.		Denotes instructional steps necessary to complete the process.		

Basic Required Hand Tools

10mm Wrench	10mm T-Type Nut Driver	Side Cutters	Torque Wrench
Tape Measure	Ratchet	10mm Socket	12mm Socket
Swivel	Extension	Panel Removal Tool	

FMVSS 110 Compliance Information

Part Number:
2WF58-AQ100
2.2 lbs
1.0 kg
(Gross Weight)

All dealers must determine if the weight they have added in the form of all options or accessories, when added to the weight of all Port/Dealer Installed options or accessories, exceeds the lesser of 1.5% of GVWR or 100 lbs. If the additional weight does exceed the lesser of the indicated thresholds, a "Load Carrying Capacity Reduced" label must be installed. A black, fine-point, indelible marker must be used to write by hand onto the label, the reduced carrying capacity in kilograms or pounds, which is the total weight of all added options and accessories.
Load Label Part Number: NP070 - 09003



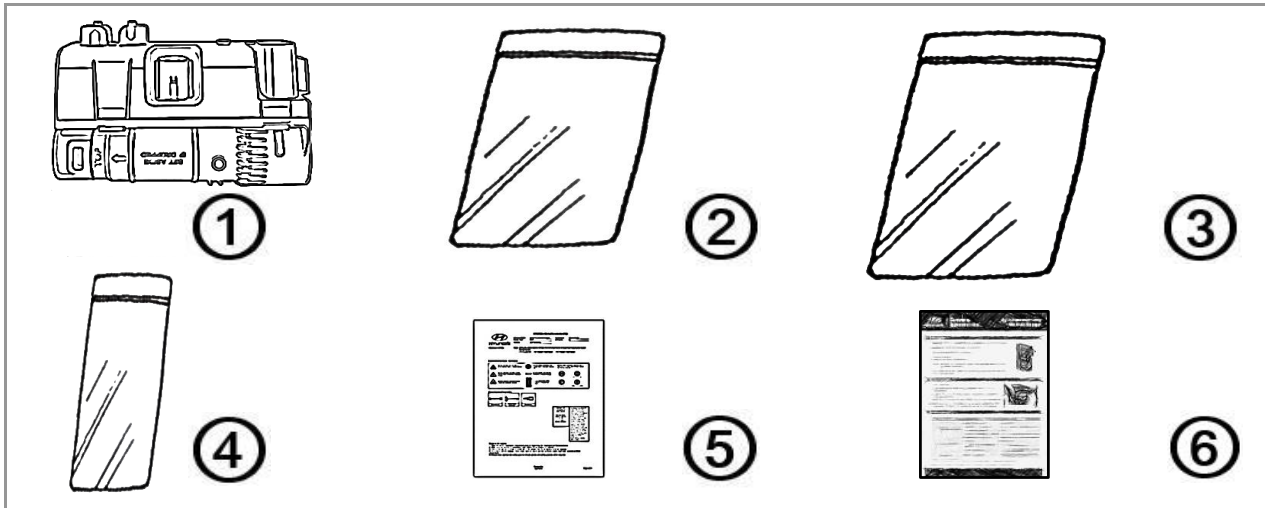
Caution: If the Washer Heater unit has been dropped, the unit may have sustained enough damage to cause the unit to fail and possibly cause damage to other vehicle components.

Notes to the Installer:

- 1) Read the entire installation instructions prior to beginning the installation of this accessory.
- 2) Make sure the vehicle is completely clean before the accessory is installed.
- 3) Ensure the vehicle is properly protected in the area(s) that the accessory is to be installed.
- 4) To prevent vehicle damage, never place tools on top of painted surfaces, seats, dash pad, console or floor carpet/mats.
- 5) Always wear appropriate safety gear to include gloves and safety glasses when required.









HYUNDAI Genuine Accessories

Kit Overview

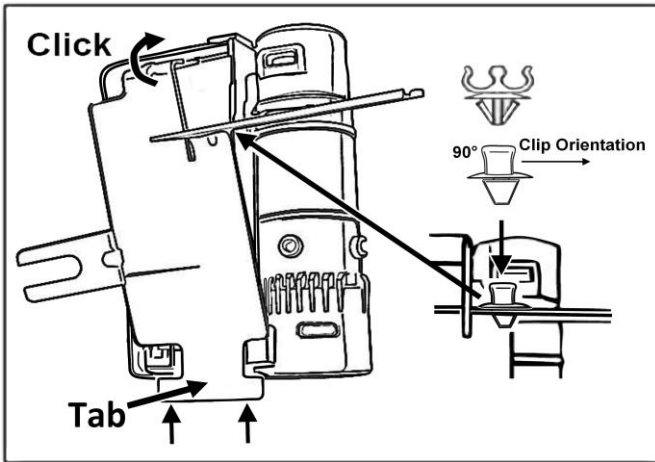


No.	Qty.	Description
1	1	Washer Heater
2	1	Bracket Bag
3	1	Power Cable & Hose Bag
4	1	Hardware Bag
5	1	Installation Instructions
6	1	Quick Reference

Hardware Overview

A  1 BRACKET	F  1 BOLT
B  1 POWER CABLE	G  1 WIRE TIE
C  2 HOSE (3.3", 85mm & 10.4", 265mm)	H  3 CLAMP TIE
D  1 HOSE CLAMP	
E  1 HOSE CONNECTOR	

Hardware Total
11

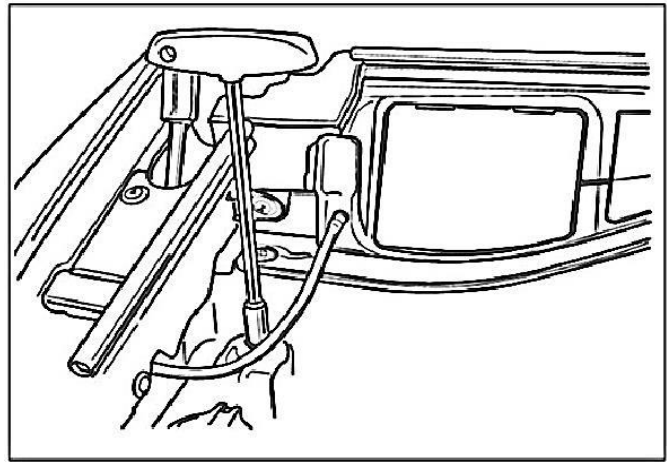


1

- NOTE**
1. Disconnect and isolate vehicle's negative battery cable.
 2. Insert the bottom tab of the bracket into the bottom of the Washer Heater as shown.
 3. Press the top of the Washer Heater into the bracket until an audible click is heard.
 4. Orient and install the provided clip into the bracket as shown.



WARNING! Shock Hazard. Do not touch vehicle's negative battery terminal to vehicle's positive battery terminal. Serious injury and damage to the vehicle may occur.



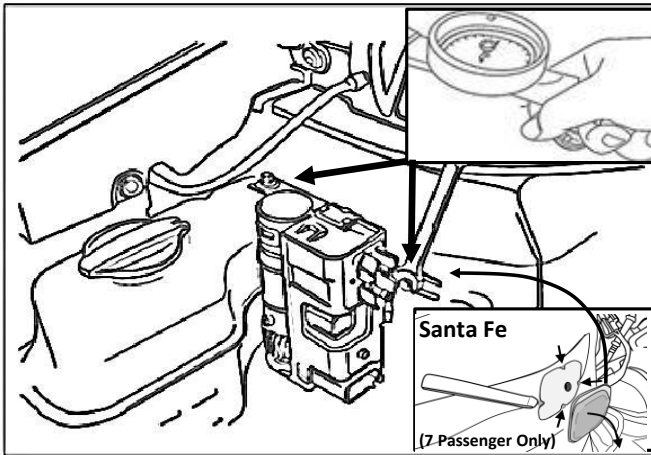
10mm T-Type Nut Driver

2

- NOTE**
1. Open the hood.
 2. On the passenger side of the vehicle, loosen (do not remove) the top mounting bolt of the coolant reservoir just enough to slide the Washer Heater bracket into place.



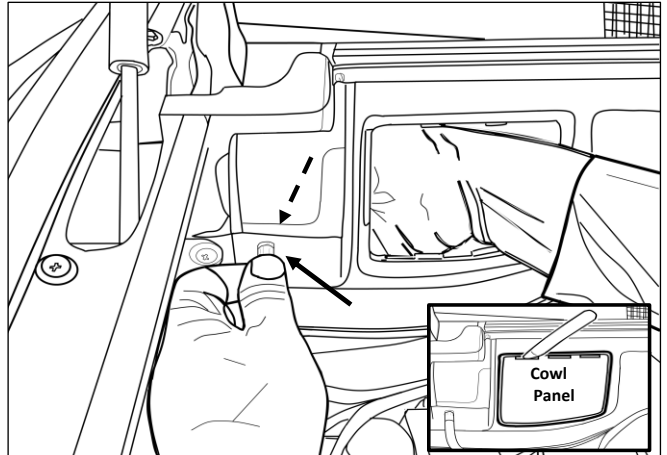
Caution! Be careful not to injure your hands when installing the bracket.



Torque wrench, 10mm Socket, Extension, Panel Removal Tool and 10mm Wrench

3

- NOTE**
1. For installation on Santa Fe 7-passenger vehicles, first remove the D-shaped section of insulation (see inset) to expose the threaded mounting location. Insert panel removal tool and carefully pry around perforated line to separate the section from the rest of the insulator.
 2. Install and tighten one (1) provided bolt through the Washer Heater bracket and vehicle as shown. Torque: 10Nm (1.0 kgf, 89 lbs-in.)
 3. Tighten the top bolt securing the Washer Heater bracket to the coolant reservoir as shown. Torque: 10Nm (1.0 kgf, 89 lbs-in.)



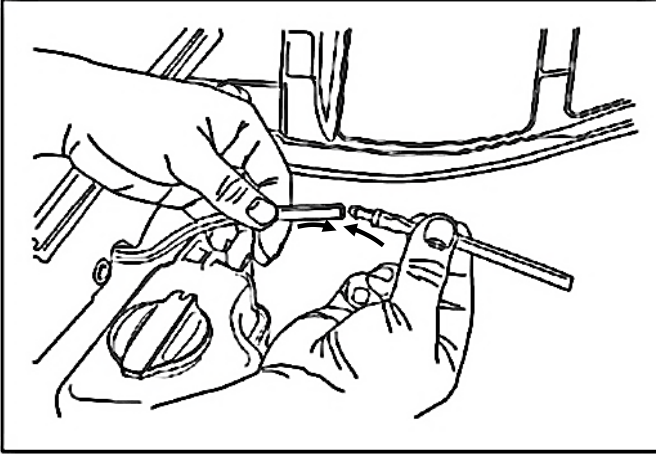
Panel Removal Tool

4

- NOTE**
1. On the passenger side of the engine compartment, locate the washer hose on the cowl as shown.
 2. Remove the cowl panel (Inset) with a panel removal tool to gain access to the backside of the cowl hose connector.
 3. With your right hand hold the cowl hose connector from the inside of the cowl and with your other hand carefully disconnect the engine room side washer hose.



Ensure cowl connector is not damaged during this operation.



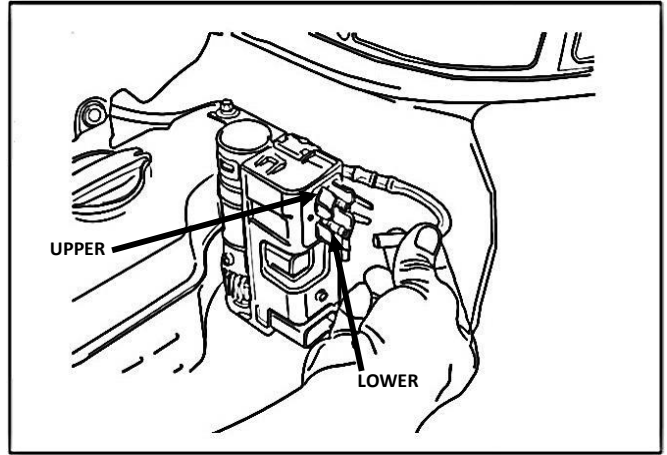
5

NOTE

1. Connect the 3.3" (shorter) kit hose with hose connector to the washer hose removed in step 4.



Ensure the hose fully seats onto the kit hose connector.



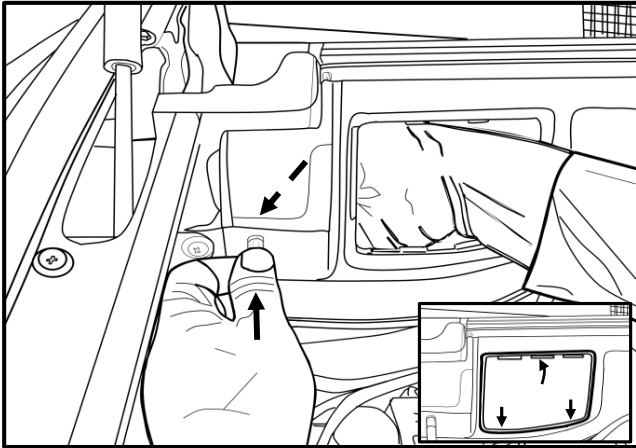
6

NOTE

1. Connect the open end of the 3.3" (shorter) hose extension to the lower hose connector of the Washer Heater as shown.



Ensure the hose fully seats onto the lower connector of the Washer Heater.



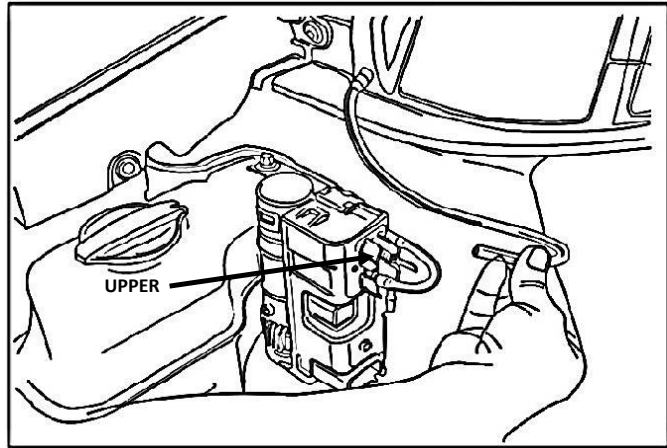
7

NOTE

1. With your right hand hold the cowl hose connector from the inside of the cowl and with your other hand carefully insert the 10.4" (longer) hose onto the engine room side washer hose fitting.
2. Confirm that the two ends of the hose are firmly inserted onto the hose fitting.
3. Starting at the base, install the cowl panel back into its original position.



Visually confirm both hose ends are fully inserted to prevent leakage prior to reinstalling the cowl panel.



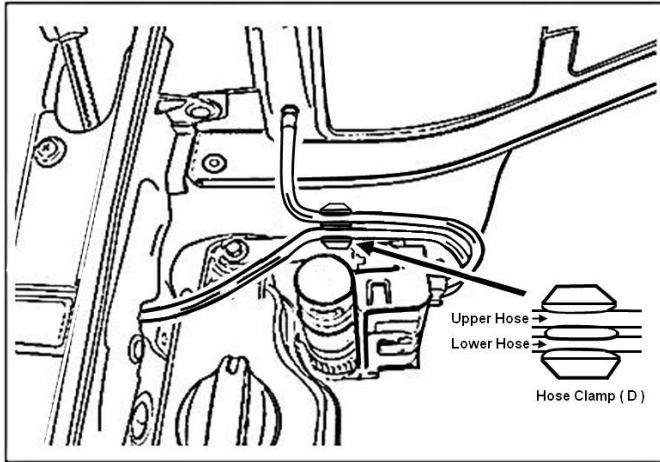
8

NOTE

1. Connect the remaining end of the 10.4" (longer) hose to the upper hose connector of the Washer Heater.



Ensure the hose fully seats onto the upper connector of the Washer Heater.



Tape Measure

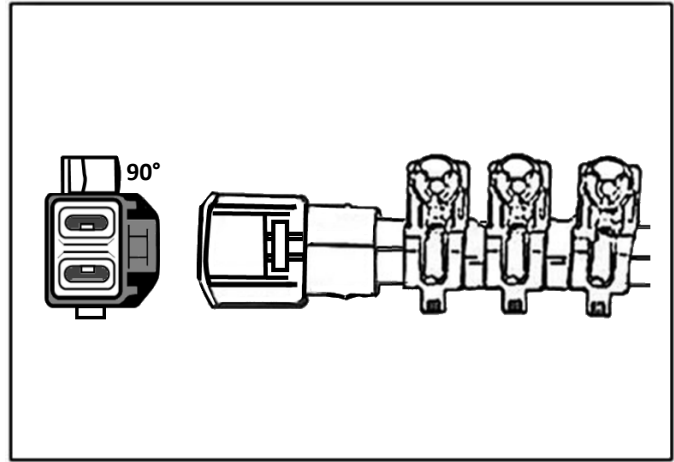
9

NOTE

1. Route the lower hose to the clamp and install the hose onto the front clamp location, leaving about 6" (150mm) of hose length from the clamp to the hose connector on the Washer Heater.
2. Route the upper hose to the clamp and install the hose onto the rear clamp location, leaving about 6" (150mm) of hose length from the clamp to the hose connector on the Washer Heater.



Ensure the hose is not pinched at any point after completing this step

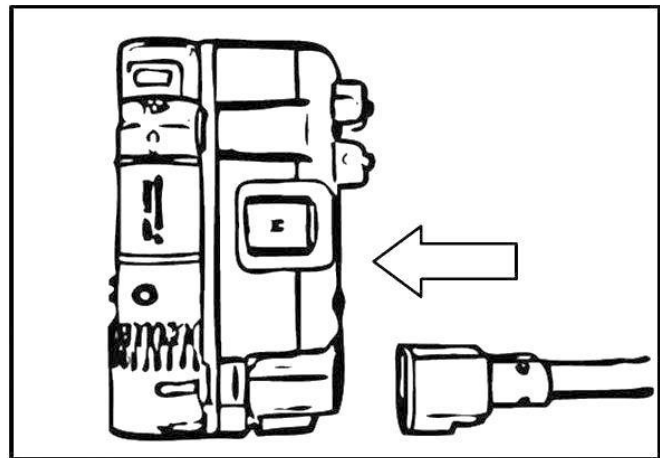


Wrench

10

NOTE

1. Loosely install three (3) clamp ties onto the connector end of the power harness. Make sure to orient the clamp ties as shown.
2. Do not tighten the clamp ties.



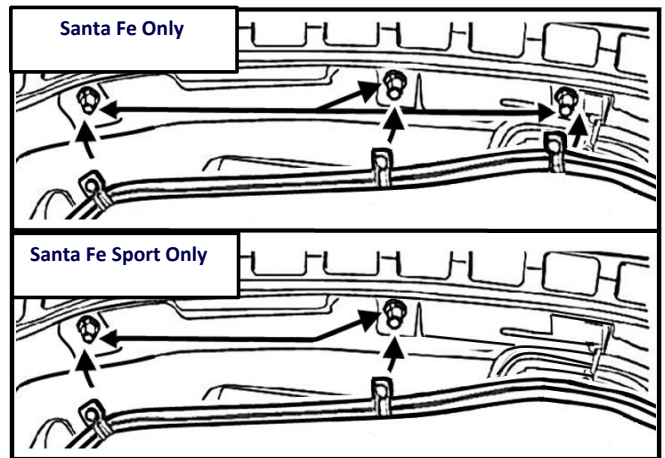
Wrench

11

NOTE

1. Connect the power cable to Washer Heater as shown. Make sure you hear an audible click indicating the connector is properly locked into position.

Visually confirm the connector is fully seated into the Washer Heater before proceeding to the next step.



Wrench

12

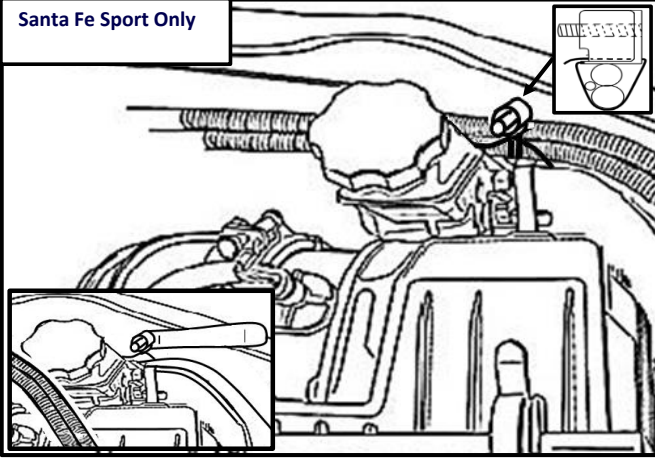
NOTE

1. Using your fingers, unscrew and remove the three (3) plastic retainers from the bulkhead cowl as shown.
2. Discard the retainers.
- Route the power harness across the bulkhead cowl and attach the three (3) clamp ties over the studs as shown. Make sure the power harness is not twisted.
2. Tighten the clamp ties and cut the remaining parts of clamp ties.



Confirm which vehicle you are installing onto based on the illustration shown.

Santa Fe Sport Only



Side Cutters, Panel Removal Tool

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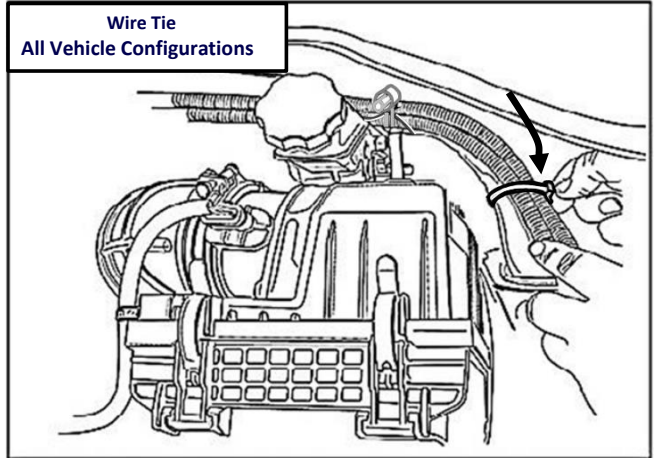
NOTE

1. Carefully cut off the clamp tie securing the brake fluid reservoir harness.
2. Dislodge the clamp tie from the bulkhead cowl and discard.
3. Using the provided clamp tie wrap the kit harness and the brake fluid reservoir harness as shown in the upper right illustration.
4. Install the Clamp tie into the original position as shown.
5. Carefully trim the excess lead of the clamp tie.



This is for Santa Fe Sport installation application only. Do not perform this on the Santa Fe (7 Passenger) configuration vehicle.

**Wire Tie
All Vehicle Configurations**



Side Cutters

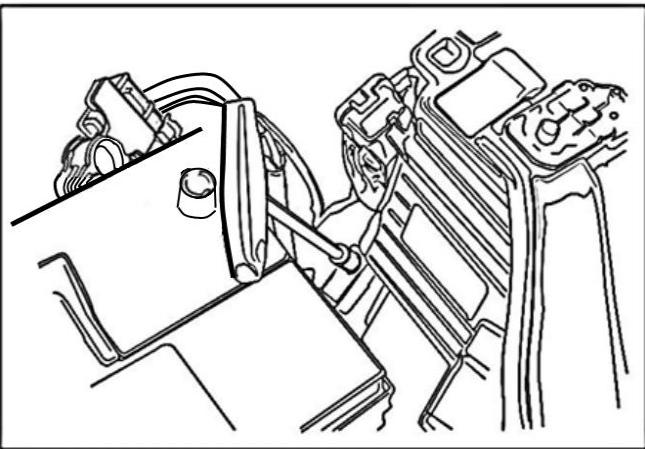
14

NOTE

1. Route the power harness across the cowl and route it behind the master cylinder as shown. Make sure the power harness is not twisted.
2. Using one (1) wire tie, secure the washer heater harness to the vehicle harness as shown.
3. Use the side cutters to trim the excess wire tie.



Ensure wire tie is cut flush to prevent potential injury from any sharp plastic edge.



10mm T-Type Nut Driver

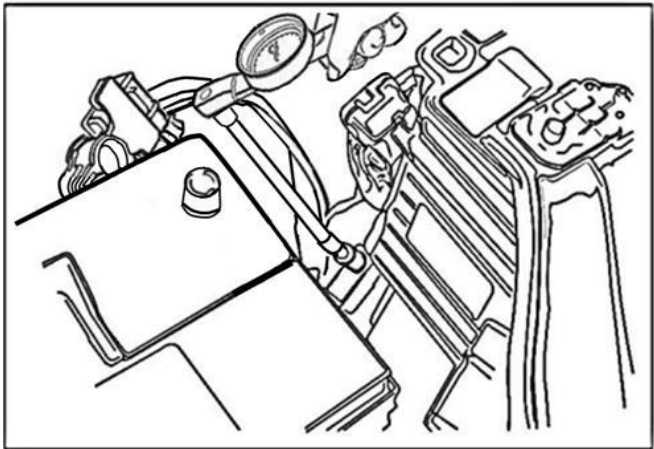
15

NOTE

1. Remove and retain the ground bolt for reinstallation in step 16 from the vehicle body panel as shown.



Ensure the surface is clean of debris and materials.



Torque Wrench, Extension, Swivel, and 10mm Socket

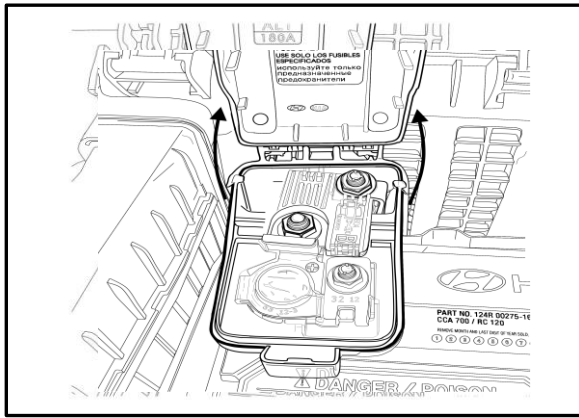
16

NOTE

1. Install the ground bolt removed in step 15, through the black harness ground eyelet and into the vehicle body as shown.
2. Securely tighten the ground bolt. Torque: 10Nm (1.0 kgf, 89 lbs-in.)



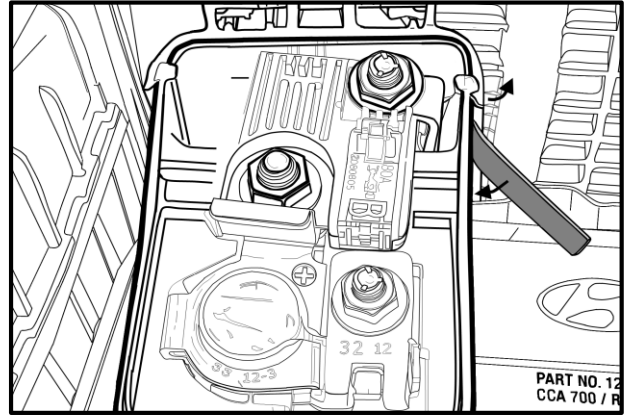
Ensure the ground eyelet is flush to the vehicle panel and does not move after being torqued.



17

1. Open the positive battery terminal cover.

NOTE



Panel Removal Tool

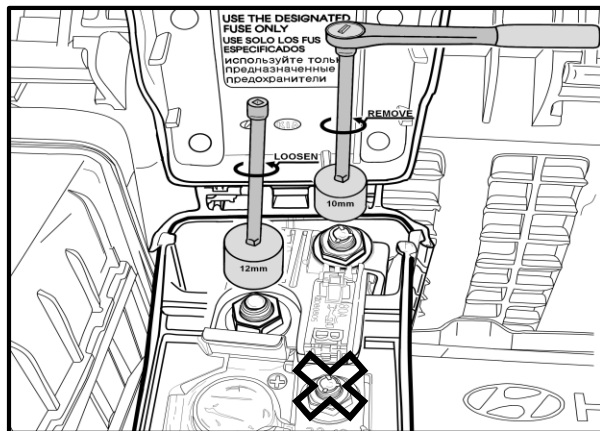
18

1. Insert the panel removal tool in between the case halves as shown and gently separate.

NOTE



Do not damage the case when separating the two halves.



Ratchet, Extension, 10mm and 12mm Socket

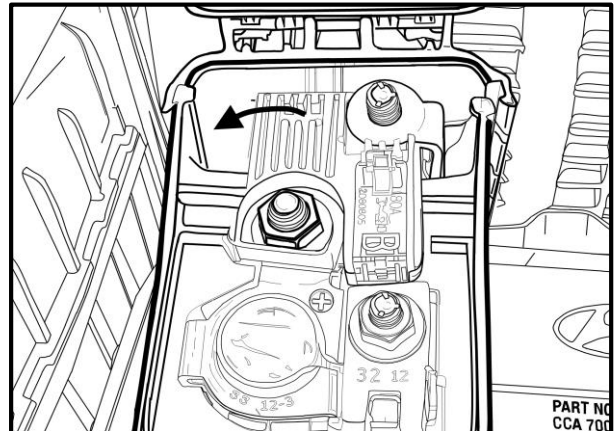
19

1. Using a ratchet, extension, and 10mm socket remove the fastener as shown and set aside for reinstallation in step 23.
2. With a 12mm socket loosen **but do not remove** the fastener as shown. This will be re-torqued in step 24.

NOTE



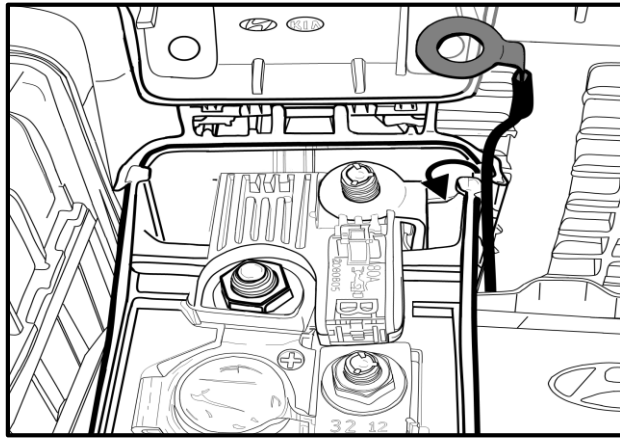
NOTE: Do not loosen the battery post fastener shown with the 'X' over it. This is to remain torqued.



20

1. Using only your hand, pivot the upper section as shown towards the left side of the case.
2. Movement will typically not exceed 1/4 inch.

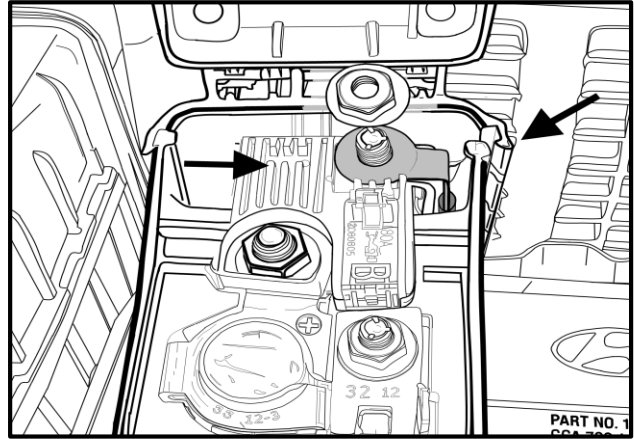
NOTE



21

1. Route kit harness in through the opening of the case halves as shown.

NOTE



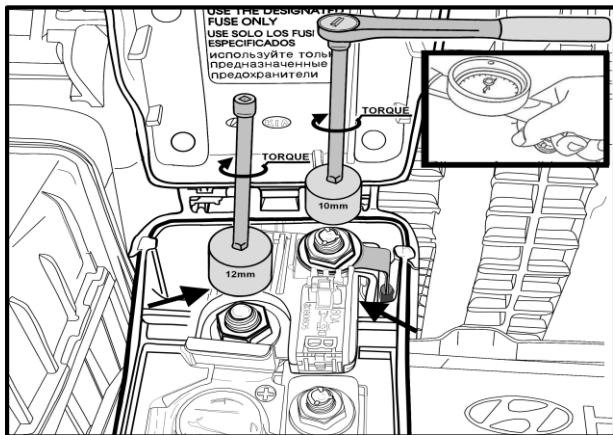
22

1. Align kit harness over the battery terminal stud and lower as shown.
2. Hand tighten the previously removed fastener onto the stud.
3. Ensure the kit harness +B eyelet is oriented correctly as shown.
4. Close the case halves into their original position.
5. Orient the fusible link accordingly.

NOTE



Do not crush kit wire between fusible link and case.



Torque wrench, extension, 10mm, 12mm

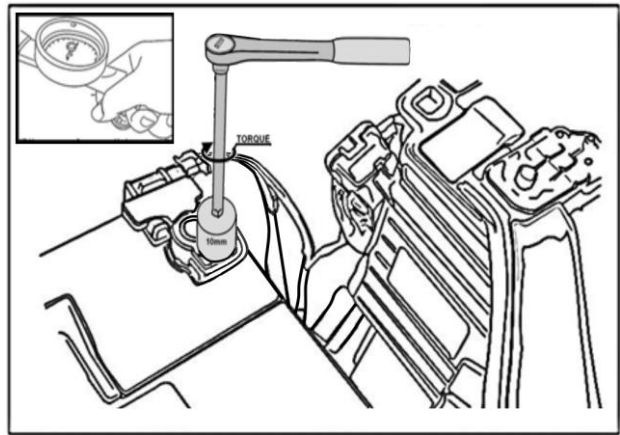
23

1. With your free hand secure the fusible link so it does not move during the torque process at the two arrow positions.
2. Install the 12mm socket on the torque wrench and apply 19Nm (1.9 kgf, 168 lbs-in.).
3. Install the 10mm socket on the torque wrench and apply 11Nm (1.1 kgf, 97 lbs-in.).
4. Close lid.

NOTE



Damage to the fusible link will result if 10mm and 12mm fasteners are over torqued.



Torque Wrench, Extension, 10mm Socket

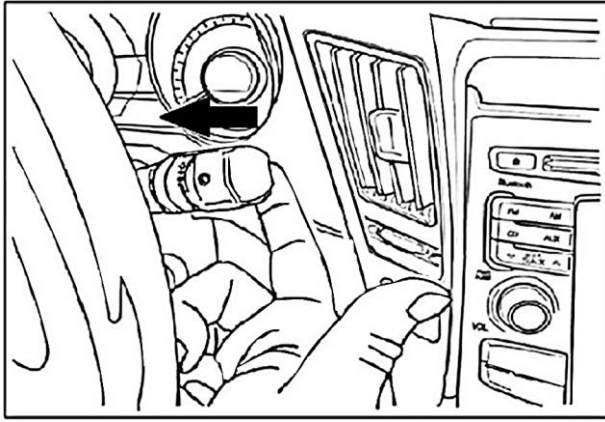
24

1. Properly seat the negative battery cable onto the post and orient as shown.
2. While securing with your free hand, torque the negative lead fastener to 5Nm (.5 kgf, 44 lbs-in.).

NOTE



Ensure that negative battery cable is properly torqued.



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NOTE

1. Ensure that the windshield washer fluid reservoir has an adequate amount of windshield washer fluid for testing purposes.
2. Start engine and wait for 30 seconds.
3. Operate the windshield washer lever and check that heated washer fluid is spraying.






WARNING! Contact with the hot fluid could cause a burn or serious injury.








HYUNDAI Genuine Accessories
Function Check

Items To Be Checked		Results Of The Check
	When operating washer lever, is washer fluid sprayed?	Washer fluid is sprayed from washer nozzles.
	After starting engine and waiting for 30 seconds, is heated washer fluid sprayed when operating washer lever?	Heated washer fluid is sprayed from washer nozzles.

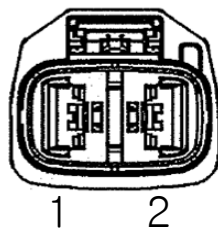
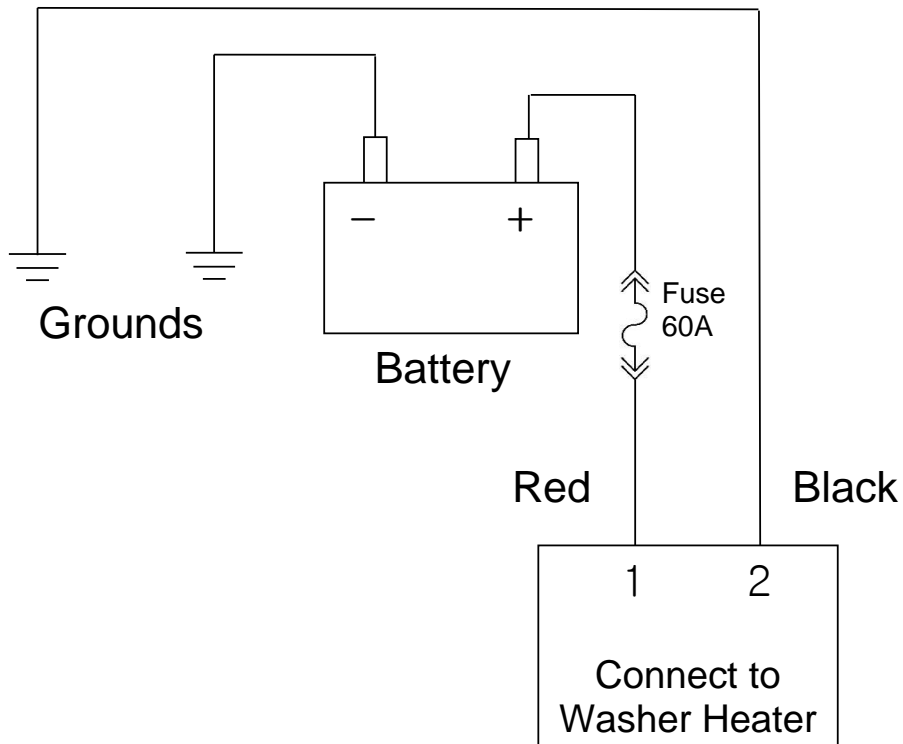
HYUNDAI Genuine Accessories Troubleshooting

Issue / Concern	Item To Be Checked
 <p>Washer fluid is not spraying or pressure is insufficient.</p>	<p>Hose connection is loose or hose is crimped by other components. Make sure wire tie is not too tight. Make sure the nozzle is not clogged. Make sure windshield washer fluid reservoir is full.</p>
 <p>Washer fluid is not hot.</p>	<p>Power Cable connection. Corrosion at positive or negative connections. Blown fuse.</p>
 <p>Abnormal noise.</p>	<p>Check that the unit is properly installed as per the instructions and verify that all included hardware was installed.</p>

HYUNDAI Genuine Accessories Visual Check

Items To Be Checked		Results Of The Check
	After installation, no interference with other components of vehicle.	No interference.
	No sharp objects near washer hose.	Nothing sharp near the hoses.
	Hose connector is fully inserted to washer hose.	Fully inserted.
	Washer hose is fully inserted onto washer heater.	Fully inserted.
	Power harness connector is fully inserted and locked into washer heater.	Fully inserted and locked.
	Power harness is securely fastened by cable tie and clamp ties.	Securely fastened.
	Power harness eyelets are securely tightened to battery and vehicle ground.	Securely fastened.

HYUNDAI Genuine Accessories Electrical Schematic



= Connector