

Genuine Accessories



Vehicle Model **Sonata**

Model Year 2018-
 Part No. C2F57 AC200
 Language English
 Rev. Date 5/31/2017

Accessory: **Remote Engine Start - Key Start**

Difficulty: (B)

Note: Difficulty stated above reflects the minimum level of expertise required to install the accessory:
 (A) Customer
 (B) Dealer Technician
 (C) Master Technician or Specialist

Application Notes

**Vehicle must be equipped with mechanical key start.
 Ensure vehicle does NOT have SMART KEY (PUSH BUTTON IGNITION SYSTEM).**

Vehicle should be equipped with automatic transmission, power door locks, and power windows. If these features are not equipped on the vehicle, do not proceed with install.

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 personal protective equipment (PPEs) that may be required for a step. Examples of safety equipment icons noted below:	
	Denotes cautions to be taken to avoid physical injury or electronic component damage		Denotes specific tools that are necessary to complete a step		
	Denotes cautions to be taken to avoid vehicle and component damage	N O T E	Denotes important information to be reviewed during the step		

Basic Required Tools

Ratchet	8 mm Socket	10 mm Socket	12 mm Socket	Extension	Torque wrench	#2 Phillips Screwdriver
					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.	
Wire Cutters	Trim Removal Tool	Clean Cloth	50/50 Isopropyl Alcohol (70%) and Water Mix	Clip Removal Tool		

Technical Support



Authorized dealers use: (1) 855-225-7344
 Hours: M-F - 9am-5pm Pacific Standard Time

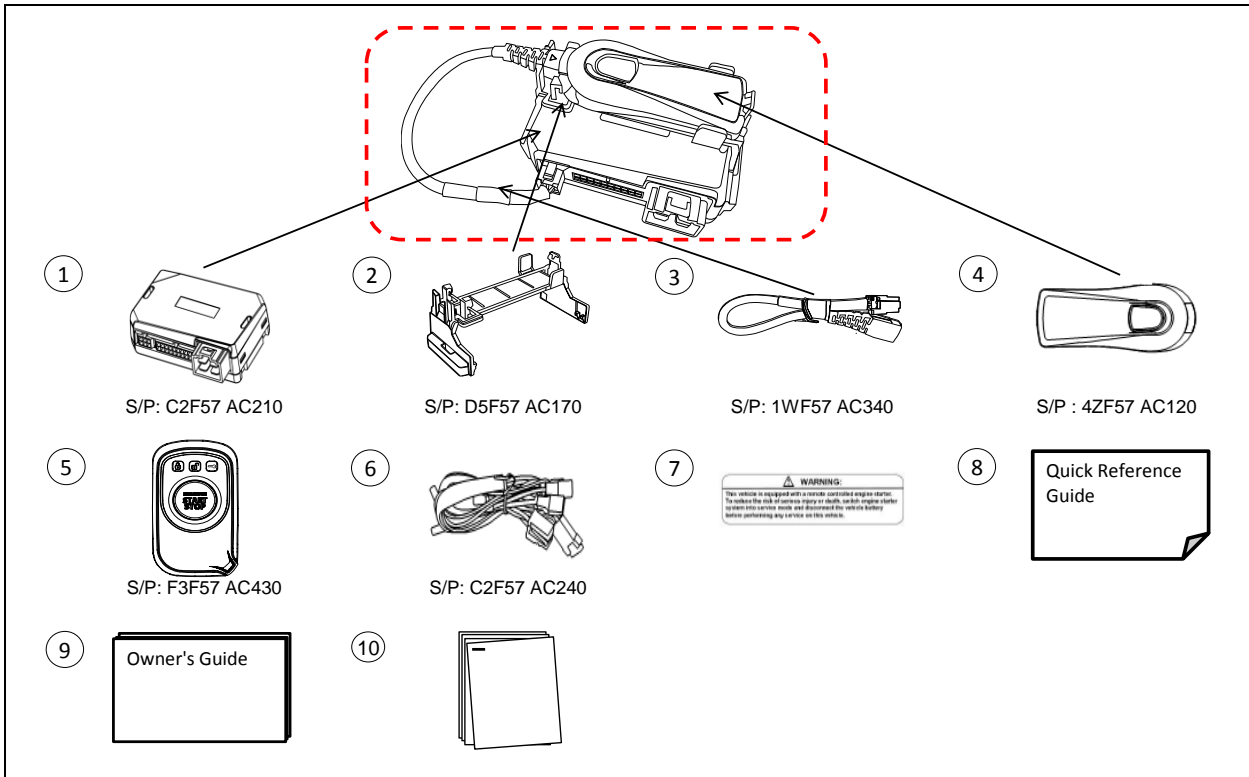
Part Weight (Gross)	
1.16	lbs
0.53	kg

Notes to the installer:

- 1 Read the entire Installation Instructions prior to beginning the installation of the part.
- 2 Make sure the vehicle is completely clean and dry in the area(s) the part is to be installed.
- 3 Ensure the vehicle is properly protected in the area(s) that the accessory is to be installed.
- 4 NEVER place tools on painted surfaces, seating surfaces, dash pad, console or floor carpet/mats.
- 5 Always wear appropriate personal protective equipment, including gloves, safety glasses, etc., when required.
- 6 Record radio presets prior to disconnecting battery power, if needed.
- 7 Ensure the transportation fuse is set to "ON" before starting the install.
- 8 Roll down the driver's window and adjust the power seats (if applicable) prior to disconnecting battery power, if needed.
- 9 **To prevent stress on the remote start wire harness, ensure the tilt steering column is fully extended before installing the kit.**
- 10 Vehicle should be at room temperature.
- 11 **The order of the disassembly and reassembly steps have been optimized for maximum efficiency and the correct installation of the Remote Engine Start kit. Disassemble vehicle components (including harness connectors) and install the kit components according to each step, as indicated. Avoid disassembling or reassembling any components in advance to prevent unnecessary labor time and/or installation errors.**

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Kit Overview



No.	Qty	Description	No.	Qty	Description
1	1	Control Module	6	1	Harness
2	1	Antenna Bracket	7	1	Warning Label
3	1	Antenna Harness	8	1	Quick Reference Guide
4	1	Antenna	9	1	Owner's Guide
5	2	1 Way Transmitter Fob	10	1	Installation Guide

Hardware Kit Contents

A	
13	Wire Tie*

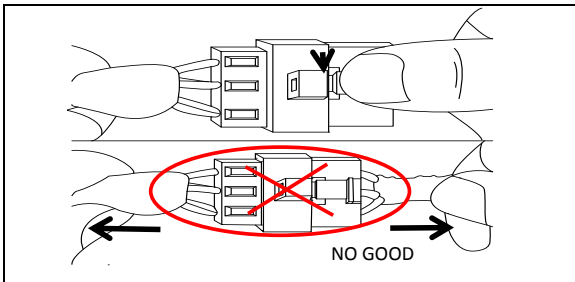
* Indicates extra components intentionally included in kit as spares.
Follow instructions for proper placement of each component.

Hardware Total
13

Radio Presets - record customer preset frequencies if disconnecting battery power

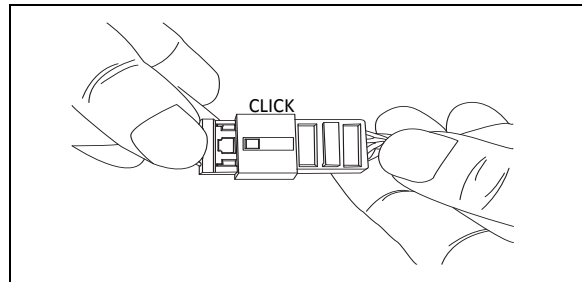
FM1 _____ FM2 _____ FM3 _____ FM4 _____ FM5 _____
 FM6 _____ FM7 _____ FM8 _____ FM9 _____ FM10 _____
 AM1 _____ AM2 _____ AM3 _____ AM4 _____ AM5 _____
 SAT1 _____ SAT2 _____ SAT3 _____ SAT4 _____ SAT5 _____

Special Instructions



Disconnecting Connectors

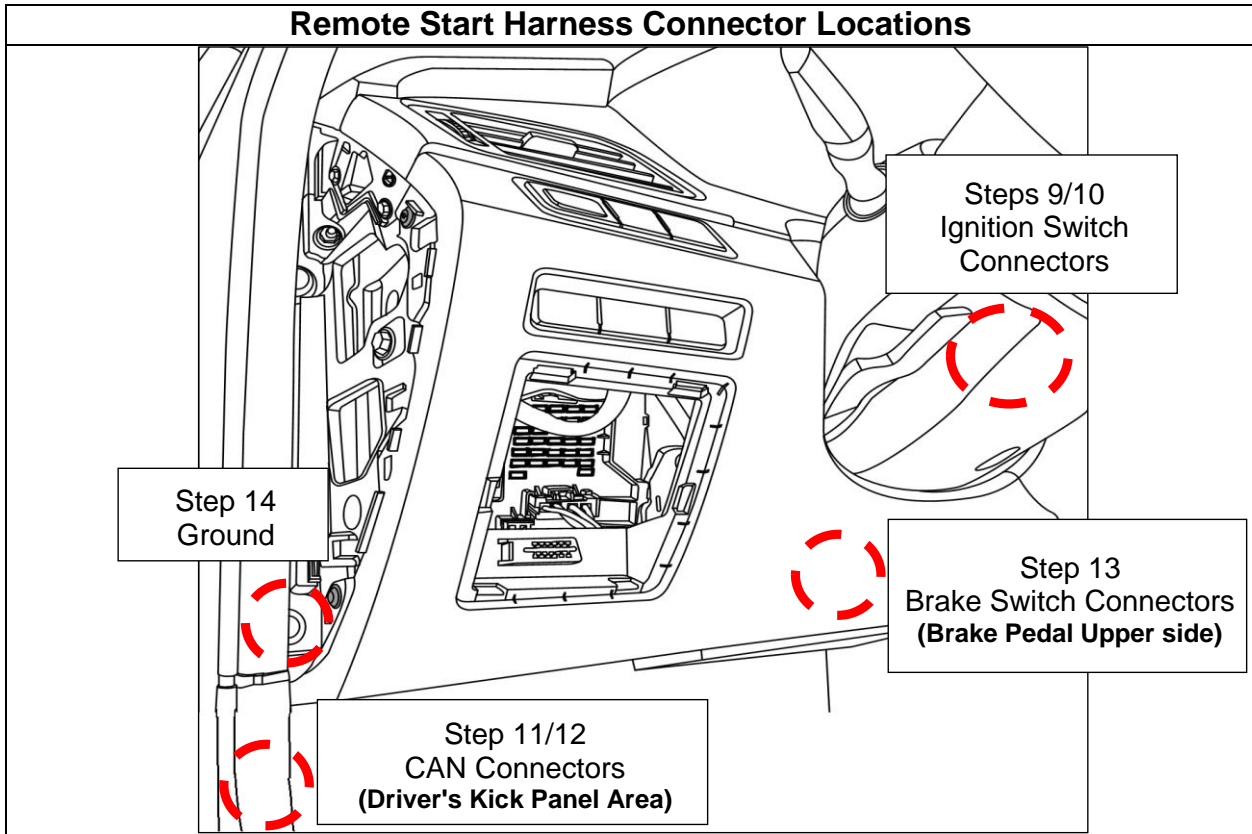
When disconnecting connectors, grasp the connectors, not the wire.




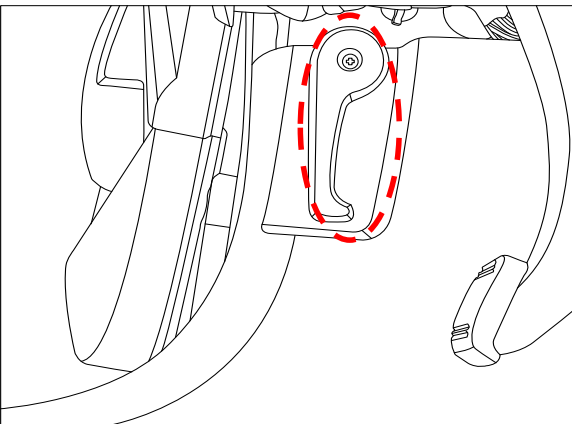
Locking Connectors

When locking connectors, listen for a click indicating they are securely locked.

Remote Start Harness Connector Locations




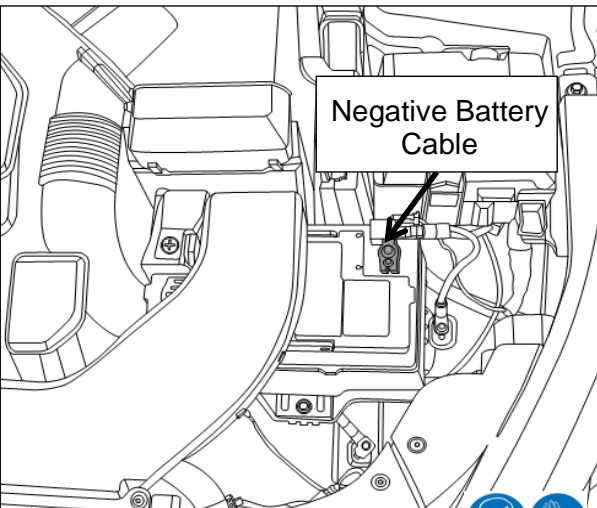
1 



NOTE

1. Open the Driver's Door Window.
2. Move the Driver's Seat to the rearmost position.
3. Record all pre-set radio stations (if applicable).
4. Pull the Hood Lever to open the Hood.

2  Ratchet and 10mm Socket




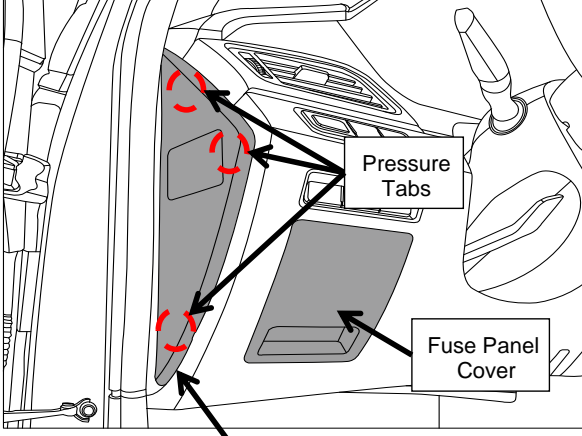

NOTE


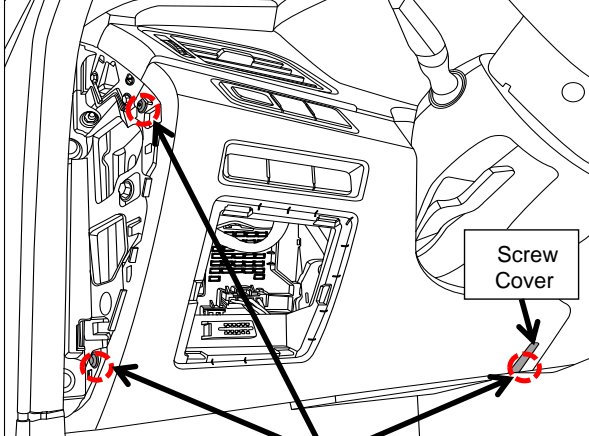

1. Remove the vehicle's Negative Battery Cover and store in a safe place.
2. Disconnect and isolate the vehicle's Negative Battery Cable.


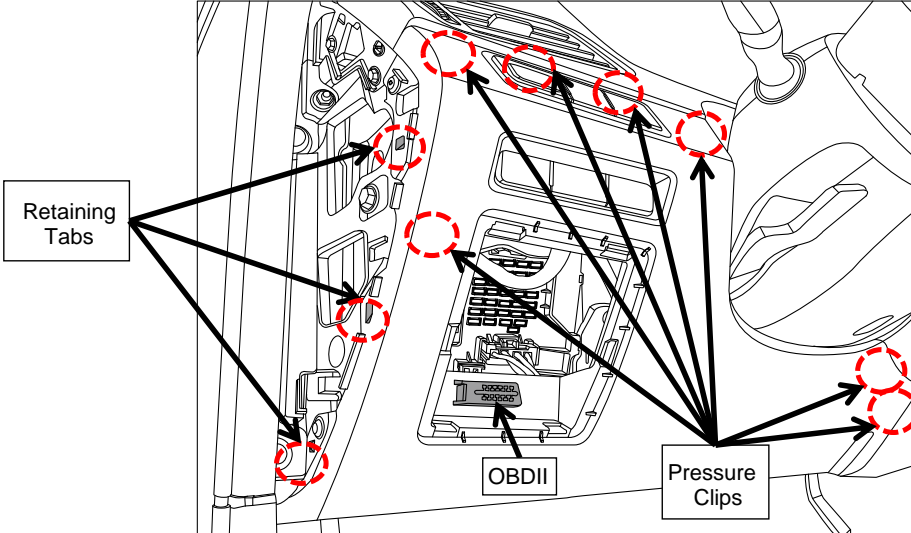

Note: Negative Battery Cover omitted for clarity.

WARNING! Shock Hazard. Do not touch vehicle's negative battery terminal to vehicle's positive battery terminal. Serious physical injury or electronic component damage may occur.

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3		Trim Removal Tool
		
N O T E	<ol style="list-style-type: none"> 1. Remove the fuse panel cover. 2. Gently pull the weather strip back from the dash area. 3. Using a trim removal tool, remove the driver's side dash end cap panel by prying outward to disengage the four (4) Pressure Tabs. 4. Store the removed parts in a safe location for reinstallation. 	
	Caution: Do not damage the Dash Panel, Fuse Panel Cover or Dash End Cap.	

4		#2 Phillips Screwdriver and Trim Removal Tool
		
N O T E	<ol style="list-style-type: none"> 1. Using a Phillips Screwdriver, remove the two (2) phillips screws from the side of the lower dash panel as shown. 2. Using a Trim Removal Tool, release the screw cover from the top of the lower dash panel. 3. Using a Phillips Screwdriver, remove the one (1) phillips screw from the bottom of lower dash panel as shown. 4. Store the removed screws in a safe location for reinstallation. 	
	Caution: Do not damage the Lower Dash Panel.	

5		Trim Removal Tool
		
N O T E	<ol style="list-style-type: none"> 1. Using a trim removal tool, carefully pry outward to release the three (3) retaining tabs on the side and seven (7) pressure clips. 2. Remove the OBDII connector from the panel. 3. Disconnect any Electrical Connectors from the Lower Dash Panel. 4. Store the removed part in a safe location for reinstallation. 	
	Caution! Do not damage the Lower Dash Panel, OBDII Connector or Electrical Connectors.	

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6	Trim Removal Tool
N O T E	<ol style="list-style-type: none"> 1. Carefully pull the weatherstrip away from the side of the Driver's Kick Panel and Front Door Step Sill area. 2. Using a Trim Removal Tool, remove the Driver's Side Front Door Step Sill Trim Panel by inserting the trim removal tool under the trim panel and prying upward to release the three (3) Clips and two (2) Hooks. 3. Store the removed part in a safe location for reinstallation.
<div style="display: flex; align-items: center;"> <p style="margin: 0;">Caution: Do not damage the Driver's Kick Panel or Driver's Door Threshold Panel.</p> </div>	

7	Trim Removal Tool, 8mm Socket, and Clip Removal Tool
N O T E	<ol style="list-style-type: none"> 1. Using an 8 mm Socket, remove the Hood Latch Release Lever by compressing the center post tabs while simultaneously prying the lever away from the Kick Panel using a Trim Removal Tool. 2. Using a Clip Removal Tool, remove the one (1) Plastic Push Clip. 3. Pull the Kick Panel rearwards to release the metal clip and remove panel. 4. Store the removed parts in a safe location for reinstallation.
<div style="display: flex; align-items: center;"> <p style="margin: 0;">Caution: Do not damage the Driver's Kick Panel.</p> </div>	


8	#2 Phillips Screwdriver and Trim Removal Tool
N O T E	<ol style="list-style-type: none"> 1. Release the Upper Steering Column Shroud 2. Remove the three (3) Phillips Screws securing the Lower Steering Column Shroud as shown. <ul style="list-style-type: none"> - Rotate the Steering Wheel as needed to access the two (2) Upper Screws. 3. Release the Tilt Adjust Lever on the Steering Wheel Column. 4. Carefully remove the Lower Steering Column Shroud to access the 6-Pin Ignition Switch Connector. 5. Adjust the Tilt Steering Wheel to the fully extended position and lock into place. 6. Store the removed parts in a safe location for reinstallation.
<div style="display: flex; align-items: center;"> <p style="margin: 0;">**NOTE : To access screws, insert key and turn to the ACC position, in order to prevent steering wheel from locking.</p> </div> <p style="margin: 0;">Caution: Do not damage the Steering Column Shroud, Steering Wheel Trim or Steering Column when removing upper two (2) screws.</p>	

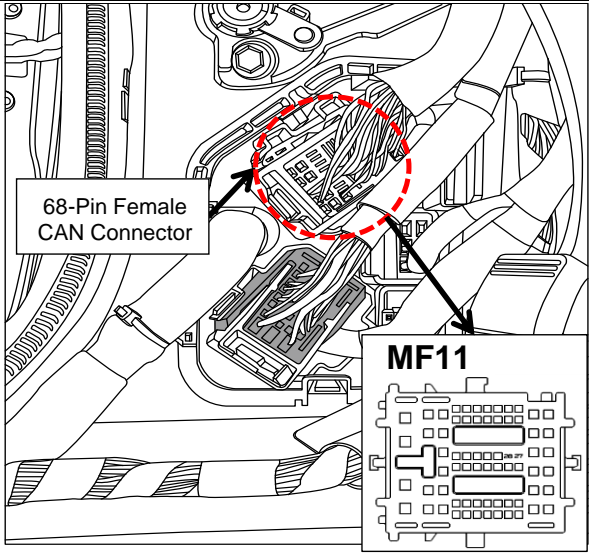
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9		<div style="position: absolute; top: 150px; left: 650px; border: 1px solid black; padding: 2px;"> Factory 6-Pin Female Ignition Switch Connector </div> <div style="position: absolute; top: 270px; left: 790px;"> M39 <table border="1" style="border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">3</td> <td style="width: 20px;">2</td> <td style="width: 20px;">1</td> </tr> <tr> <td style="width: 20px;">6</td> <td style="width: 20px;">5</td> <td style="width: 20px;">4</td> </tr> </table> </div>	3	2	1	6	5	4
3	2	1						
6	5	4						
N O T E	1. Unplug the Factory 6-Pin Female Connector from the Ignition Switch.							
	Caution: Do not damage the Steering Column Wiring, Steering Wheel or Steering Column.							

10	Wire Cutters	<div style="position: absolute; top: 490px; left: 790px; border: 1px solid black; padding: 2px;">Wire Tie</div> <div style="position: absolute; top: 535px; left: 765px; border: 1px solid black; padding: 2px;">Factory 6-Pin Female Ignition Switch Connector</div> <div style="position: absolute; top: 605px; left: 345px; border: 1px solid black; padding: 2px;">GND & CAN Harness Routing</div> <div style="position: absolute; top: 605px; left: 775px; border: 1px solid black; padding: 2px;">Remote Start Harness</div> <div style="position: absolute; top: 690px; left: 540px; border: 1px solid black; padding: 2px;">Remote Start Harness Routing Up And Over To Brake Switch</div>
N O T E	<ol style="list-style-type: none"> 1. Plug the Factory 6-Pin Female Connector into the Remote Start 6-Pin Male Connector. 2. Plug the Remote Start Harness 6-Pin Female Connector into the Ignition Switch connector. 3. Adjust the Remote Start Ignition Harness and Factory Ignition Harness as needed to make sure there are no rub or pinch areas or contact points with steering column components and the tilt mechanism / springs. 4. Make sure the steering column is fully extended / tilted up and locked in place before installing the wire tie. 5. Make sure the Remote Start Harness is routed as shown. 6. Using one (1) Wire Tie, secure the Remote Start Harness to the Factory Harness as shown. 7. Trim excess Wire Tie material. <p>NOTE: The Remote Start Harness routing position from the Ignition Switch over to the ground location, as shown above, is for clarity only. Follow the next steps for the actual sequence of installation.</p>	
	Caution: Do not damage the Steering Column Wiring, Steering Wheel or Steering Column.	

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11  Wire Cutters




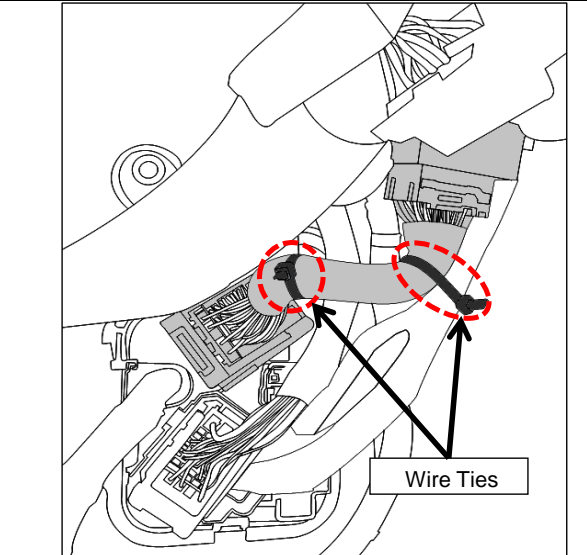
68-Pin Female CAN Connector

MF11

NOTE

1. Locate the four (4) connectors on the driver's kick panel area as shown above.
2. Identify and disconnect the UPPER factory 68-pin Female CAN Connector and then plug into the corresponding Remote Start Harness connectors.


12  Wire Cutters

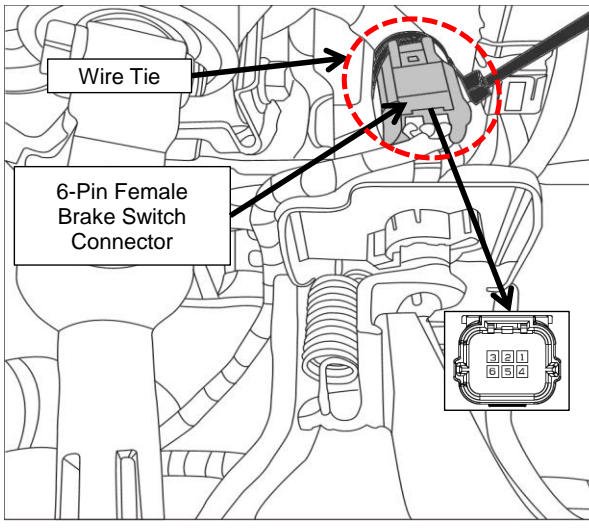


Wire Ties

NOTE

1. Using two (2) Wire Ties secure the 68-Pin CAN Wire Harness to Vehicle Harness, as shown.
2. Trim excess Wire Tie material.

13  Wire Cutters




Wire Tie

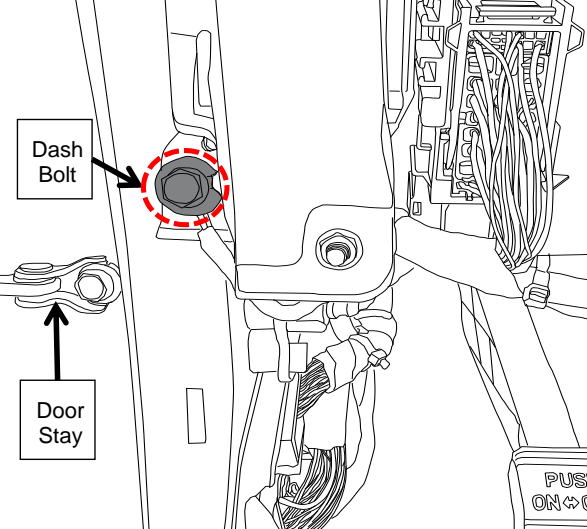
6-Pin Female Brake Switch Connector

NOTE

1. Route the 6-Pin Brake Switch Connectors and T-Harness over the knee air bag and up to the Brake Switch.
2. Locate the Factory Female 6-Pin Connector, located on the Brake Switch as shown above.
3. Disconnect the Factory Female 6-Pin Connector from the Brake Switch and plug it into the corresponding Remote Start T-Harness Connector.
4. Plug the corresponding 6-Pin Remote Start Harness Connector into the Brake Switch. **Ensure both connectors are fully locked together.**
5. Using a Wire Tie, secure the 6-Pin Brake Switch Connector to the Remote Start Harness and to the Factory Brake Switch Harness.
6. Trim excess Wire Tie material.

CAUTION! Route Brake Switch wire harness under steering column. Make sure there is adequate clearance between wire harness and steering components.

14  Ratchet, Torque Wrench, Extension, and 12 mm Socket



Dash Bolt

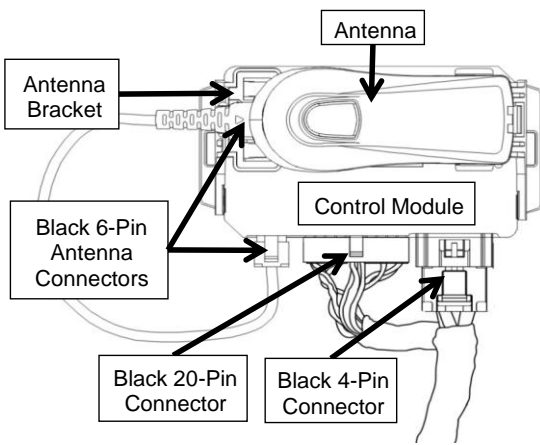
Door Stay

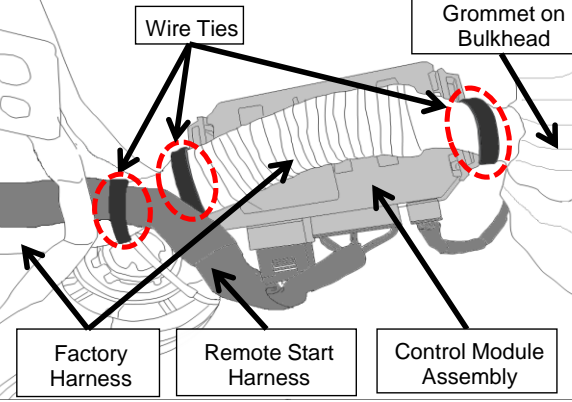
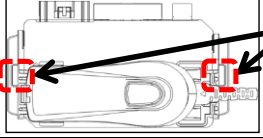
NOTE

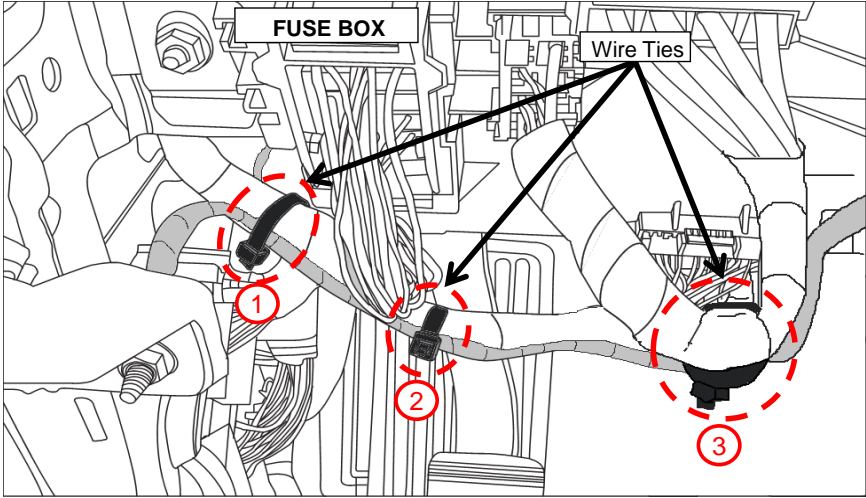
1. Remove the lower 12 mm Dash Bolt located just above the Door Stay.
2. Route the Ground Wire, across the Fuse Box then up and over to the 12 mm Dash Bolt hole, as shown above.
3. Insert the 12 mm Dash Bolt into the Ground Wire Ring Terminal, then reinstall.
4. Torque the 12 mm Dash Bolt to: 16.7 ~ 21.6 N.m (1.7 ~ 2.2 kgf.m, 12.3 ~ 15.9 lb-ft).

Note: Refer to step 10 for ground wire routing position under the Fuse Box.


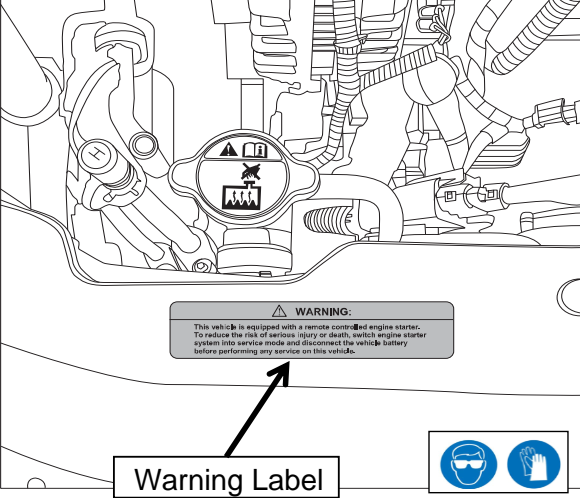

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15	🔑	
 <p>Antenna Bracket</p> <p>Antenna</p> <p>Control Module</p> <p>Black 6-Pin Antenna Connectors</p> <p>Black 20-Pin Connector</p> <p>Black 4-Pin Connector</p>		
NOTE	<ol style="list-style-type: none"> 1. Connect the 20-Pin Connector (black) to the Control Module. 2. Connect the 4-Pin Connector (black) to the Control Module. 3. Verify the following: <ul style="list-style-type: none"> - Control Module is attached to Antenna Bracket. - Both black 6-Pin connectors are attached to Antenna and Control Module. 	
⚠️	<p>Ensure that each Connector is fully seated in the Control Module and in the Antenna.</p>	


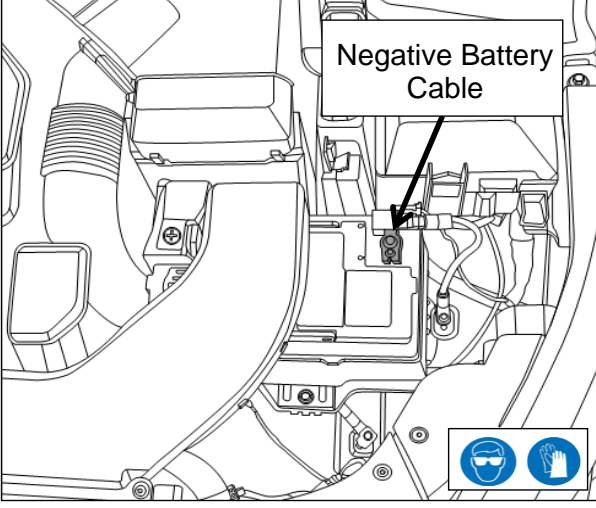

16	🔑	Wire Cutters
 <p>Wire Ties</p> <p>Grommet on Bulkhead</p> <p>Factory Harness</p> <p>Remote Start Harness</p> <p>Control Module Assembly</p>		
 <p>Wire Tie Mounting Holes</p> <p>Feed wire tie through each hole on Control Module and tie to vehicle harness.</p>		
NOTE	<ol style="list-style-type: none"> 1. Position the Control Module Assembly (Control Module + Antenna + Antenna Harness + Antenna Bracket) close to the Grommet on Bulkhead, as shown. 2. Using two (2) Wire Ties, secure the Control Module Assembly to left side of the Factory Harness as shown. 3. Using one (1) Wire Tie, secure the Remote Start Harness to Factory Harness as shown. 4. Trim excess Wire Tie material. 	
⚠️	<p>Ensure the Control Module Assembly is fully located on the left of Factory Harness.</p> <p>Ensure the Control Module Assembly does not interfere with the Steering Column Shaft.</p>	


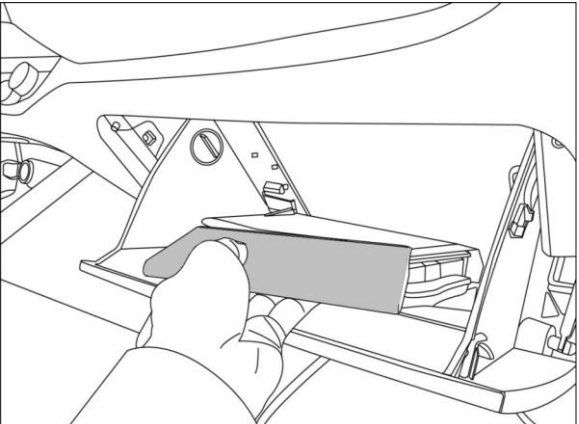
17	🔑	Wire Cutters
 <p>FUSE BOX</p> <p>Wire Ties</p> <p>1</p> <p>2</p> <p>3</p>		
NOTE	<ol style="list-style-type: none"> 1. Using three (3) Wire Ties, secure the Remote Start Ground and CAN Wires at locations #1 & #2. Secure the Ground, CAN, and Remote Start Ignition Harness at location #3, to the factory wiring. 2. Trim excess Wire Tie material. 	


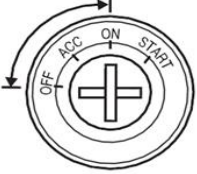



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18		Clean Cloth and 50/50 Mix of Isopropyl Alcohol (70%) and Water
		
N O T E	<ol style="list-style-type: none"> 1. Clean the left top surface of the Radiator Cover. - Ensure the surface is completely dry. 2. Remove the Adhesive Liner from the Warning Label, then secure the label to the Radiator Cover as shown. 	
	<p>Ensure the surface is completely dry before installing the Warning Label. Ensure the label is aligned straight with the edge of the Radiator Cover and without air bubbles under the label.</p>	

20		
<p>GO TO → Function Check</p>		
N O T E	<ol style="list-style-type: none"> 1. Perform the Function Check at the end of the instructions. 	





















19		Ratchet, 10 mm Socket, Extension, and Torque Wrench
		
N O T E	<ol style="list-style-type: none"> 1. Reconnect the Negative Battery Cable. Torque to 4.0-6.0 N-m (0.4-0.6 kgf-m, 34.8-51.6 lb-in). 2. Reconnect the vehicle's Negative Battery Cover. 3. Make sure the Transportation Fuse is in the "ON" position. 4. Replace the weather strip at dash area to allow Driver's Door to close properly. 5. Close the Hood, Tailgate and all Doors. 6. Test the LOCK / UNLOCK function using Factory Key Fob. 	
	<p>NOTE: If vehicle is not responding, carefully re-check all wiring connections. If the vehicle is still not responding, follow the Troubleshooting at the end of the instructions.</p>	

21		#2 Phillips Screwdriver, Ratchet, 10 mm Socket, Extension, and Torque Wrench
		
N O T E	<ol style="list-style-type: none"> 1. Reinstall all removed parts in reverse order of disassembly. 2. Place the Quick Reference Guide and the Owner's Guide into the Glove Box. 3. Attach the Remote Start Fobs to each of the Factory Key Fob Rings. 4. Confirm Trunk Lid opens by pressing the trunk release button on the dash panel and then close trunk. 	

A	
<p align="center">Remote Start Transmitter Fob Pairing Procedure (Not needed for new installations. Only pair if a fob is replaced.)</p> <p align="center">Remote Start Fob</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div data-bbox="215 352 427 552"> <p>Key 5X</p>  </div> <div data-bbox="451 457 532 499" style="font-size: 2em;">➔</div> <div data-bbox="557 384 695 573">  </div> </div>	
N O T E	<ol style="list-style-type: none"> 1) Open driver's door. 2) Insert the Key into the ignition. Turn the key from OFF to ON position five (5) times within 5 seconds 3) After step 2 within 5 seconds. Press  button on the 1st Remote Start Fob one time. 4) After registering the 1st Remote Start Fob, within another 5 seconds, Press  button on the 2nd Remote Start Fob one time. 5) Verify that both Fobs are functioning correctly by performing lock/unlock function.
<p>Note: The remote start key Fobs come paired to the system from the factory, and should not require re-pairing.</p> <p>Note: The remote engine start system can recognize up to three (3) remotes Fobs; the kit includes two (2) remote Fobs.</p> <p>If a new Fob, or additional Fob is needed later, the Fob pairing process should be done with the original Fob or oldest available Fob.</p>	








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Function Check

Items To Be Checked	
	1. Press  button one time. (All doors, hood & trunk are closed).
	1. Press  button 2 times. 2. Press  button 2 more times.
	1. Press  button one time. 2. Within 3 seconds, press and hold  button for 2 seconds.
	While the vehicle is running via remote start, 1. Press  button two (2) times. 2. Press  button two (2) additional times.
	While the vehicle is running via remote start, 1. Press  button one (1) time.
	While the vehicle is running via remote start, 1. Press brake pedal.
	While the vehicle is running via remote start, 1. Press and hold  button for two (2) seconds.
	While the vehicle is running via remote start, 1. Open the hood.
	While the vehicle is running via remote start, 1. Open any door.
	While the vehicle is running via remote start, 1. After all doors are unlocked via the remote start fob, open the trunk by pressing the trunk release button within the Hyundai logo on the trunk lid.
	

Items to be Checked	
	Transmitter Fob LOCK icon will flash, vehicle signal lights will flash, and all doors will LOCK.
	Transmitter Fob UNLOCK icon will flash, vehicle signal lights will flash, and Driver's door will UNLOCK. Transmitter Fob UNLOCK icon will flash, vehicle signal lights will flash, and all doors will UNLOCK.
	Transmitter Fob LOCK icon will flash, vehicle signal lights will flash, and all doors will LOCK. Transmitter Fob KEY icon will flash, the engine will crank and start, the vehicle signal lights will flash.
	Transmitter Fob UNLOCK icon flash, vehicle signal light flashes twice and Driver's door will UNLOCK. Transmitter Fob UNLOCK icon flash, vehicle signal light flashes twice and All doors will UNLOCK.
	Transmitter Fob LOCK icon will flash, vehicle signal lights will flash, and all doors will LOCK.
	The engine will shut down immediately.
	Transmitter Fob KEY icon will flash, and the engine will stop.
	The engine will stop.
	The engine will stop after approximately thirty (30) seconds.
	The engine will stop after approximately fifty (50) seconds.
	Confirm the brake lights are operating.

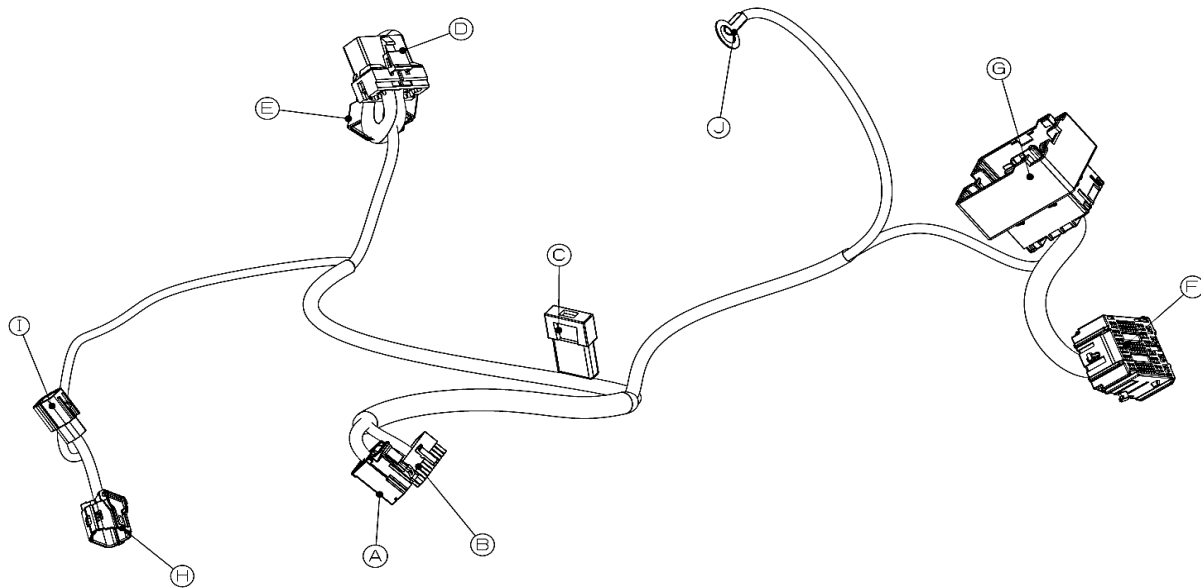
Troubleshooting

Issue / Concern	
	The vehicle does not LOCK by using the Remote Start Key Fob.
	The vehicle LOCKS, UNLOCKS, but does not START (no cranking sound).
	The vehicle LOCKS, UNLOCKS, but does not START and there is CRANKING sound from the engine.
	The remote does NOT LOCK / UNLOCK and does not START the vehicle. The Remote LED lights flash when buttons are pressed.
	The LED icon lights on the Transmitter Fob does not light up.
	The Engine turns off when entering the vehicle, while running under Remote Start mode.
	Engine does not turn off immediately when the brake pedal is pressed after starting engine with remote.

Result	
	Check the vehicle status 1. Engine is OFF. 2. Accessory function is OFF. 3. All doors are closed. 4. Hood and Tailgate are closed.
	Ensure the Valet Mode is OFF. (Refer to Owner's Guide for details.) Ensure that the buttons are properly activated. Buttons may not recognize a command if the LED icon light is still flashing. The installation might be faulty. Call Technical Support on Page 1.
	Check that the vehicle battery is not dead. The installation might be faulty. Call Technical Support on Page 1.
	The Transmitter Fob is not paired to the Control Module. Follow the Remote Start Fob Pairing Procedure in the Installation Instructions.
	The Transmitter Fob batteries are dead. Refer to the Owner's Manual for instructions to change the batteries.
	Vehicle will shut off automatically after thirty (30) seconds, if key is not in IGN ON position, as noted in the Owner's Manual in the "Driving Off" section. Verify the key is in the ignition ON position within 30 seconds after opening the doors. Verify the brake pedal is pressed after the key is in ignition ON position.
	Verify Driving OFF Mode after remote starting. Engine does not turn off after Driving Off Mode even when the brake pedal is pressed. Verify the brake connector is correctly installed. (refer to Step 13).

Genuine Accessories

Wiring Diagram



Ⓐ FEMALE 4P Module CONNECTOR

		MAKER	KET	신규	C/D
		HOUSING	M6610047-5		●
		TERMINAL	ST730288-3 ST730588-3		●
NO	CIRCUIT NAME	CIRCUIT DESCRIPTION	SPEC	RMK	
1	IGN-1	IG2 Output	AVS 3.0	W	
2	IGN-2	START Output	AVSS 0.85	Y	
3	IGN-3	IG1 Output	AVS 3.0	G	
4	IGN-4	(+12V) BATT	AVS 3.0	R	

Ⓒ FEMALE 6P Ignition CONNECTOR

		MAKER	KUM	신규	C/D
		HOUSING	PH772-06025		●
		TERMINAL	MT025-23230 MT025-23330		●
NO	CIRCUIT NAME	CIRCUIT DESCRIPTION	SPEC	RMK	
2	IGN-2	IG2 Output	AVS 3.0	W	
3	IGN-3	START Output	AVS 2.0	Y	
4	IGN-4	IG1 Output	AVS 3.0	G	
5	IGN-5	(+12V) BATT	AVS 3.0	R	

Ⓓ MALE 6P CAN CONNECTOR

		MAKER	KET	신규	C/D
		HOUSING	M6645775		●
		TERMINAL	ST741345-3 ST741332-3 ST741333-3 ST741286-3		●
NO	CIRCUIT NAME	CIRCUIT DESCRIPTION	SPEC	RMK	
27	CAN-27	B CAN-H	AVSS 0.3	BR	
28	CAN-28	B CAN-L	AVSS 0.3	W	

Ⓑ FEMALE 20PIN Input/Output CONNECTOR

		MAKER	MOLEX	신규	C/D
		HOUSING	43025-2000(B)		●
		TERMINAL	43030-0001		●
NO	CIRCUIT NAME	CIRCUIT DESCRIPTION	SPEC	RMK	
1	(-)GND	GND	AVSS 0.5	B	
2	(-)GND	GND	AVSS 0.5	B	
9	(+)PICH3	Footbrake Input	AVSS 0.3	W/B	
19	CAN-HIGH	B CAN-H	AVSS 0.3	BR	
20	CAN-LOW	B CAN-L	AVSS 0.3	W	

Ⓔ MALE 6P Ignition CONNECTOR

		MAKER	KUM	신규	C/D
		HOUSING	PH772-06025		●
		TERMINAL	MT021-23230 MT021-23330		●
NO	CIRCUIT NAME	CIRCUIT DESCRIPTION	SPEC	RMK	
2	IGN-2	IG2 Output	AVS 3.0	W	
3	IGN-3	START Output	AVS 2.0	Y	
4	IGN-4	IG1 Output	AVS 3.0	G	
5	IGN-5	(+12V) BATT	AVS 3.0	R	

Ⓕ FEMALE 6P Footbrake CONNECTOR

		MAKER	KUM	신규	C/D
		HOUSING	HP285-06021		●
		TERMINAL	TP105-00100		●
NO	CIRCUIT NAME	CIRCUIT DESCRIPTION	SPEC	RMK	
5	FBRK-5	FOOTBRAKE Input	AVSS 0.3	W/B	

Ⓖ MALE 6P Footbrake CONNECTOR

		MAKER	KUM	신규	C/D
		HOUSING	HP281-06020		●
		TERMINAL	TP101-00100		●
NO	CIRCUIT NAME	CIRCUIT DESCRIPTION	SPEC	RMK	
5	FBRK-5	FOOTBRAKE Input	AVSS 0.3	W/B	

Ⓒ 2P FUSE (30A)

NO	CIRCUIT NAME	CIRCUIT DESCRIPTION	SPEC	RMK
1	30F-1	To Main	AVS 3.0	R
2	30F-2	To Vencie	AVS 3.0	R

Ⓖ FEMALE 6P CAN CONNECTOR

		MAKER	KET	신규	C/D
		HOUSING	M655730		●
		TERMINAL	ST731375-3 ST731395-3 ST731396-3 ST731260-3		●
NO	CIRCUIT NAME	CIRCUIT DESCRIPTION	SPEC	RMK	
27	CAN-27	B CAN-H	AVSS 0.3	BR	
28	CAN-28	B CAN-L	AVSS 0.3	W	

Ⓙ Ground Terminal

		MAKER	KET
		Part No.	ST710286-3
NO	CIRCUIT NAME	CIRCUIT DESCRIPTION	SPEC
1	GND	Ground	AVSS 0.3