

VEHICLE GENERAL


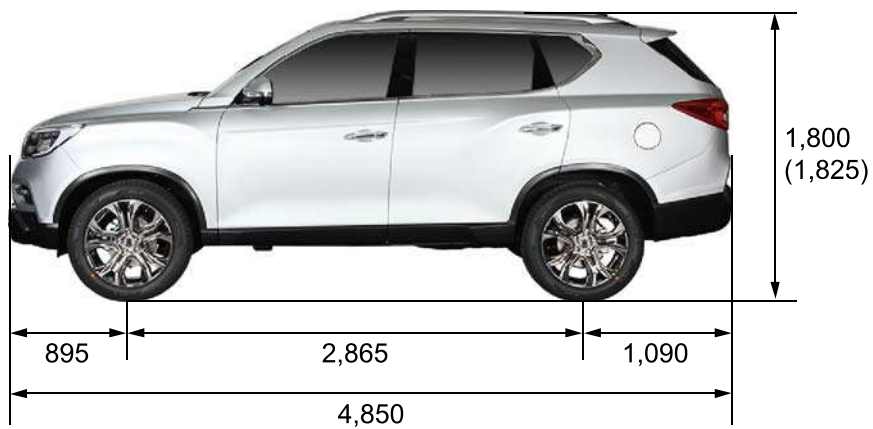


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VEHICLE GENERAL

1. SPECIFICATIONS AND IDENTIFICATION

1) Exterior Dimensions

Unit: mm

Top view	
	
Side view	
	
Front view	Rear view
	

Modification basis	
Application basis	
Affected VIN	

1) Cleanness

(1) Cleanness of DI engine fuel system

► Cleanness of DI engine fuel system and service procedures

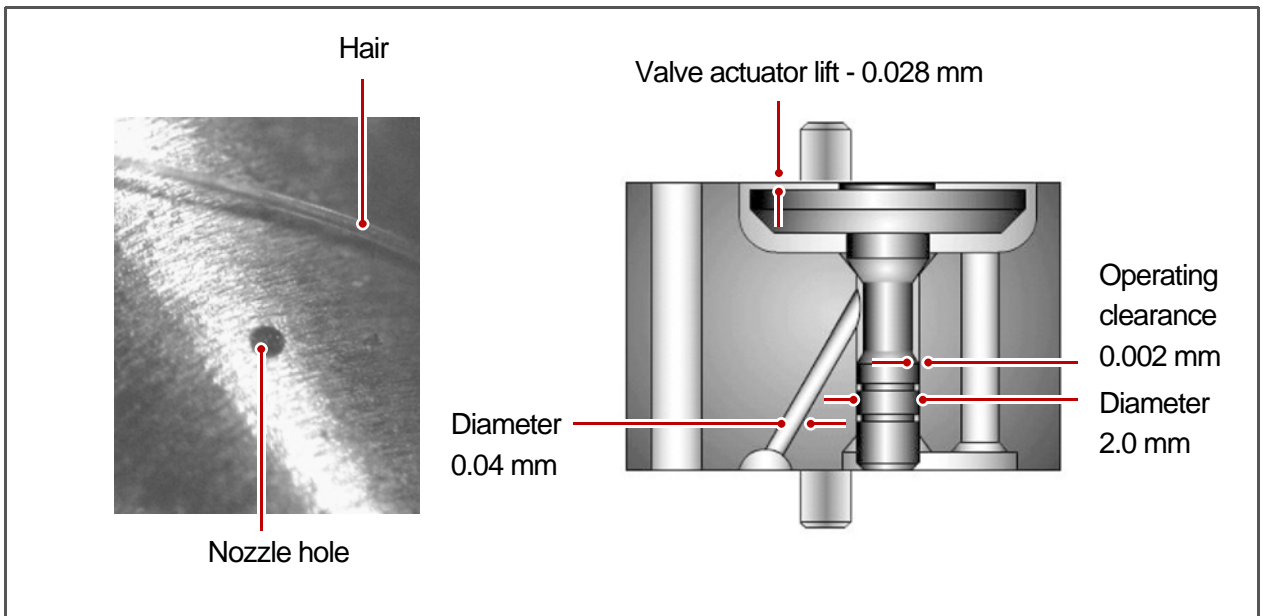
The fuel system for DI engine consists of transfer (low pressure) line and high pressure line. Its highest pressure reaches over 2,000bar.

Some components in injector and HP pump are machined at the micrometer 100 μm of preciseness.

The pressure regulation and injector operation are done by electric source from engine ECU. Accordingly, if the internal valve is stuck due to foreign materials, injector remains open.

Even in this case, the HP pump still operates to supply high pressurized fuel. This increases the pressure to combustion chamber (over 250 bar) and may cause fatal damage to engine.

You can compare the thickness of injector nozzle hole and hair as shown in below figure (left side). The below figure shows the clearance between internal operating elements.

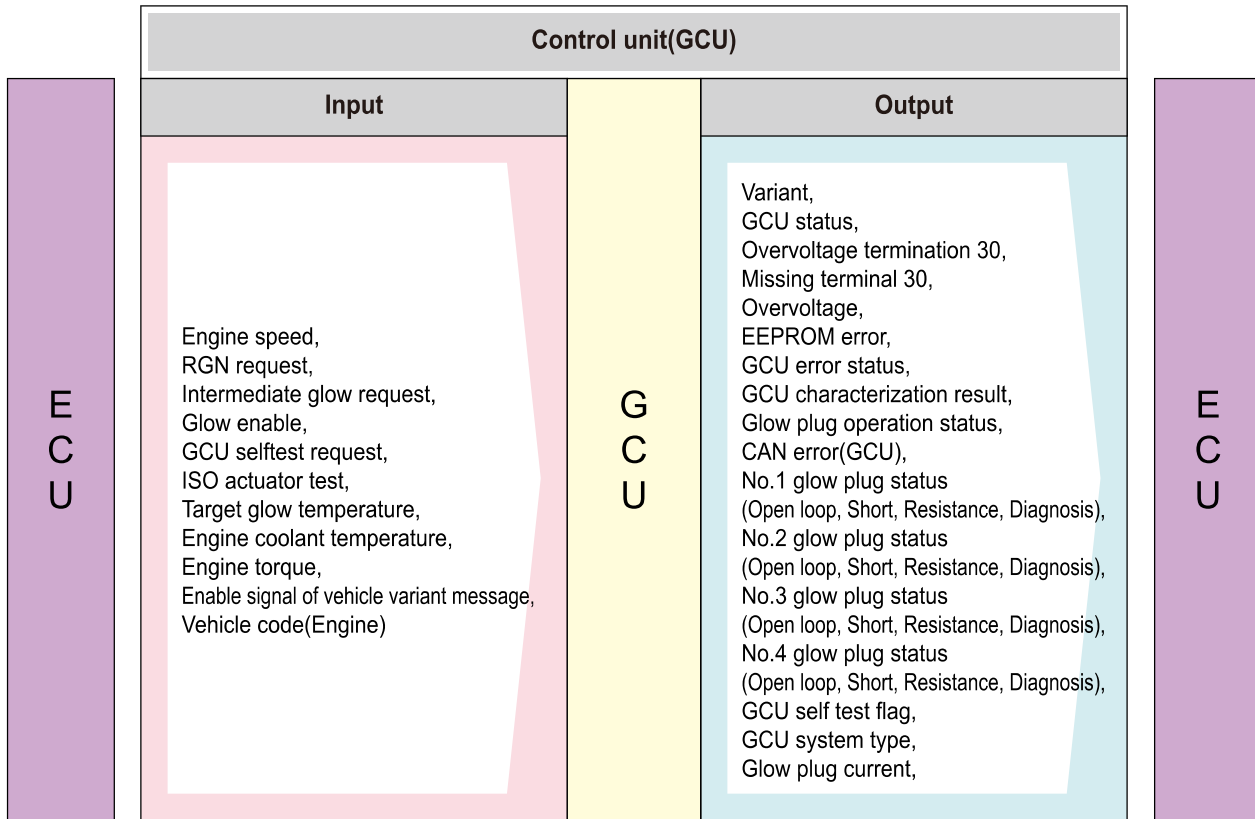


The core elements of fuel system has very high preciseness that is easily affected by dust or very small foreign material. Therefore, make sure to keep the preliminary works and job procedures in next pages. If not, lots of system problems and claims may arise.

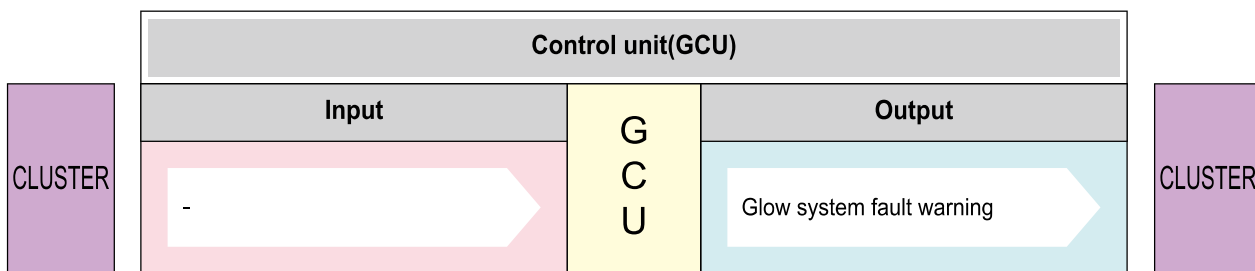
Modification basis	
Application basis	
Affected VIN	

3. CAN INPUT/OUTPUT ELEMENTS

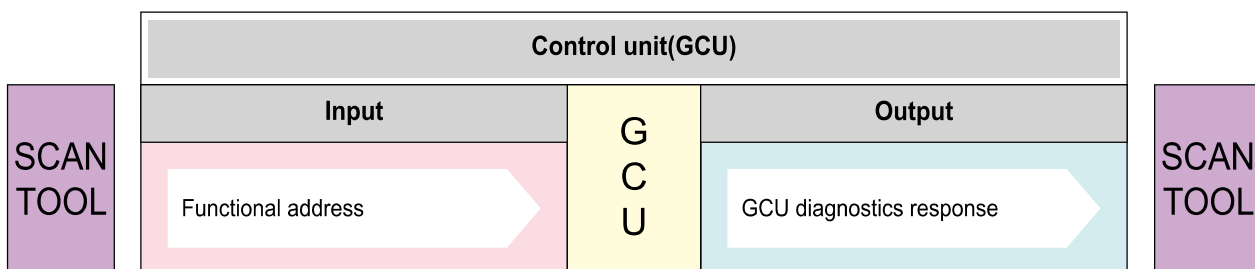
► ECU



► CLUSTER

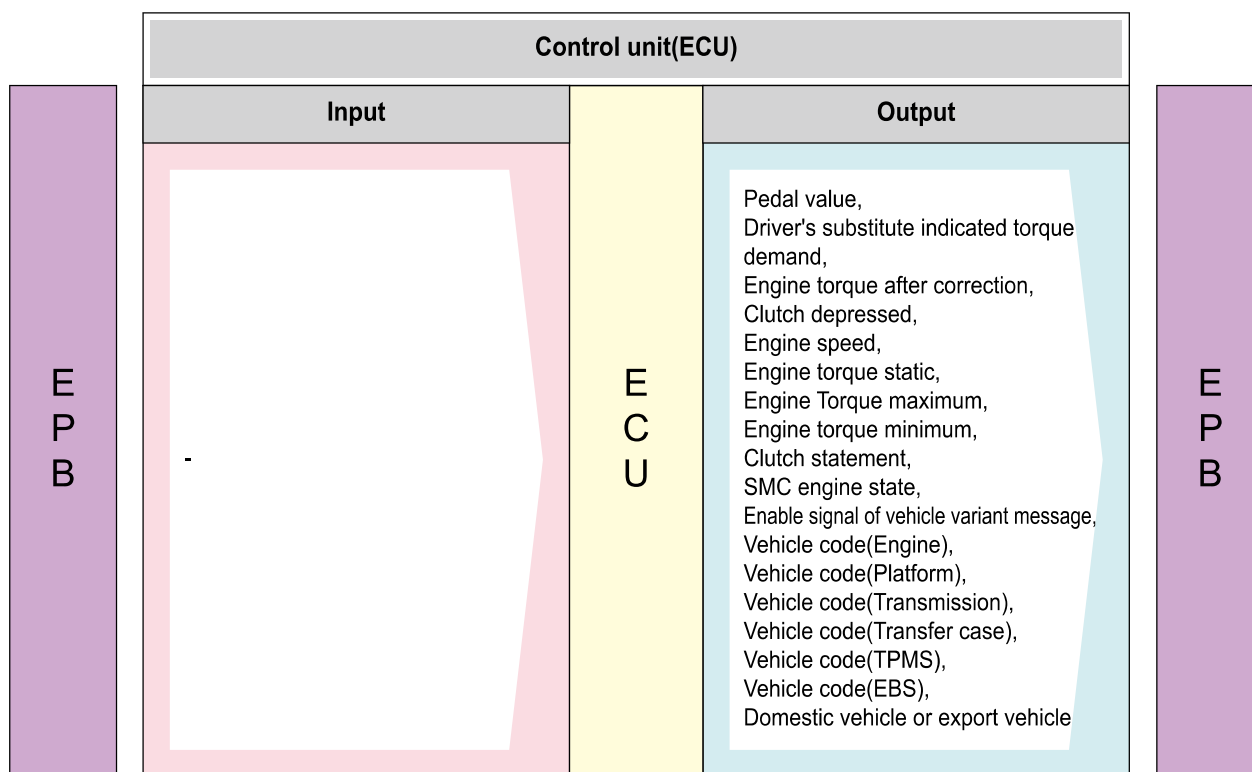


► SCAN TOOL

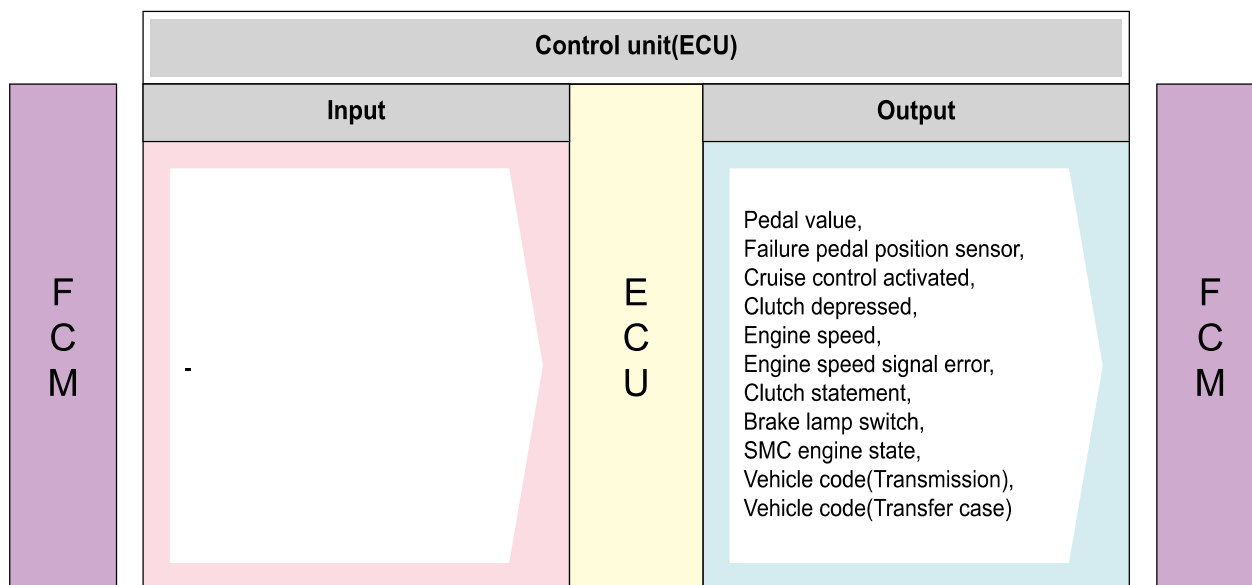


Modification basis	
Application basis	
Affected VIN	

► EPB



► FCM

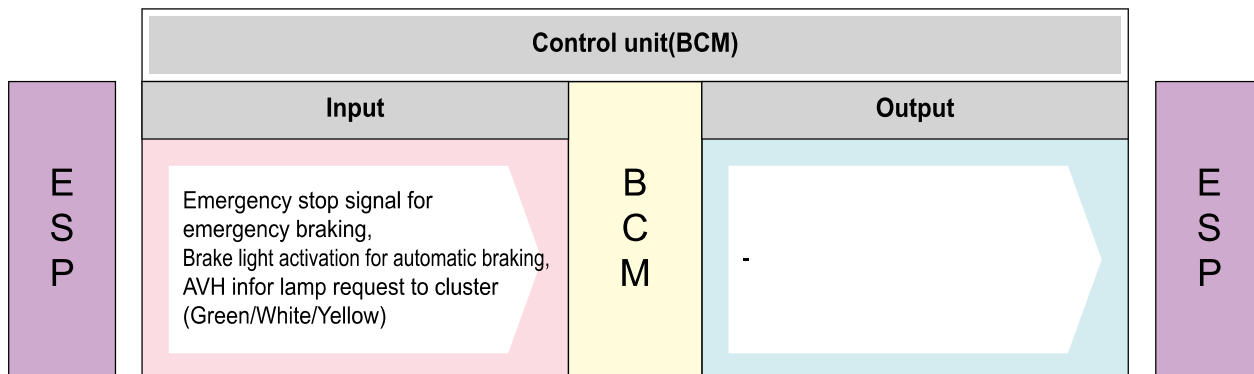


- ENGINE GENERAL
- ENGINE ASSEMBLY
- FUEL SYSTEM
- INTAKE SYSTEM
- EXHAUST SYSTEM
- TURBOCHARGER
- LUBRICATION
- COOLING SYSTEM
- CHARGE SYSTEM
- PRE-HEATING
- STARTING
- CRUISE CONTROL
- E-GR SYSTEM
- LNT & DPF
- ENGINE CONTROL

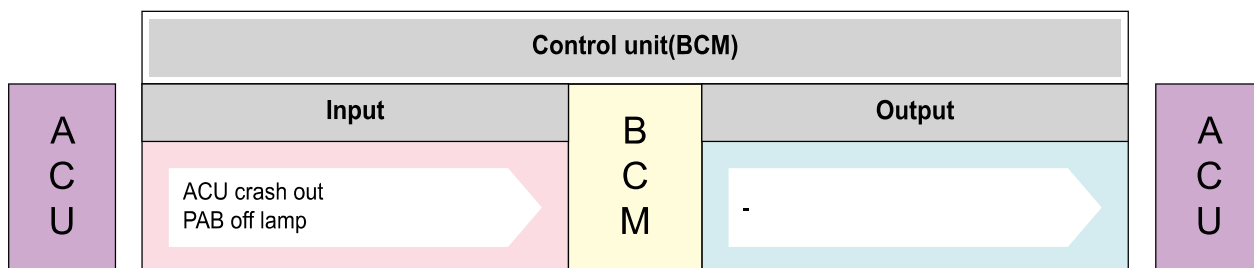
Modification basis	
Application basis	
Affected VIN	

3. P-CAN INPUTS AND OUTPUTS

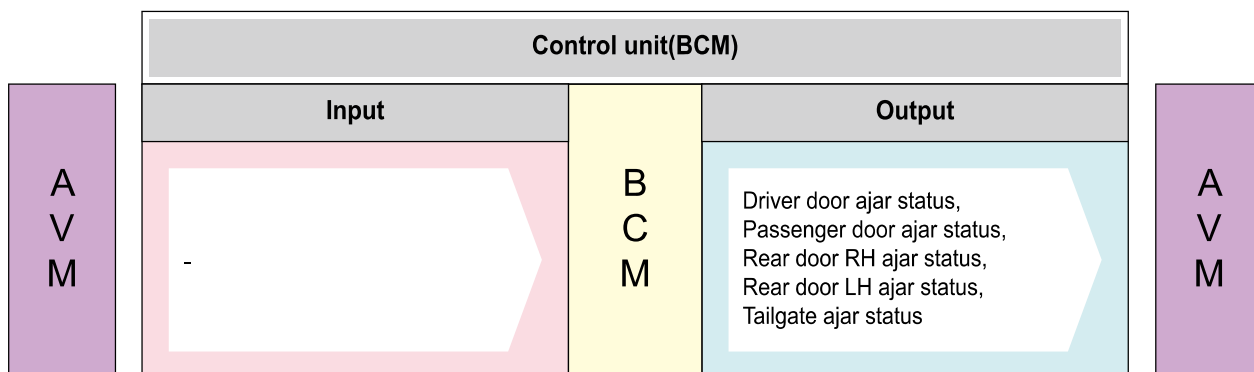
► ESP



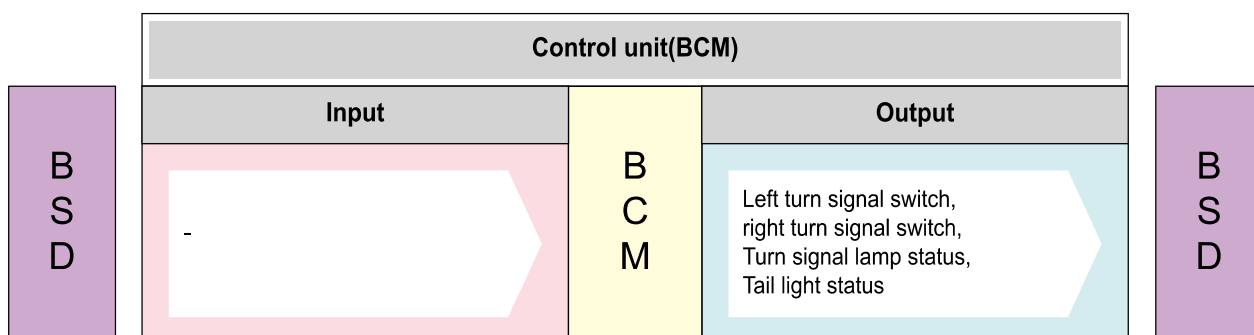
► ACU



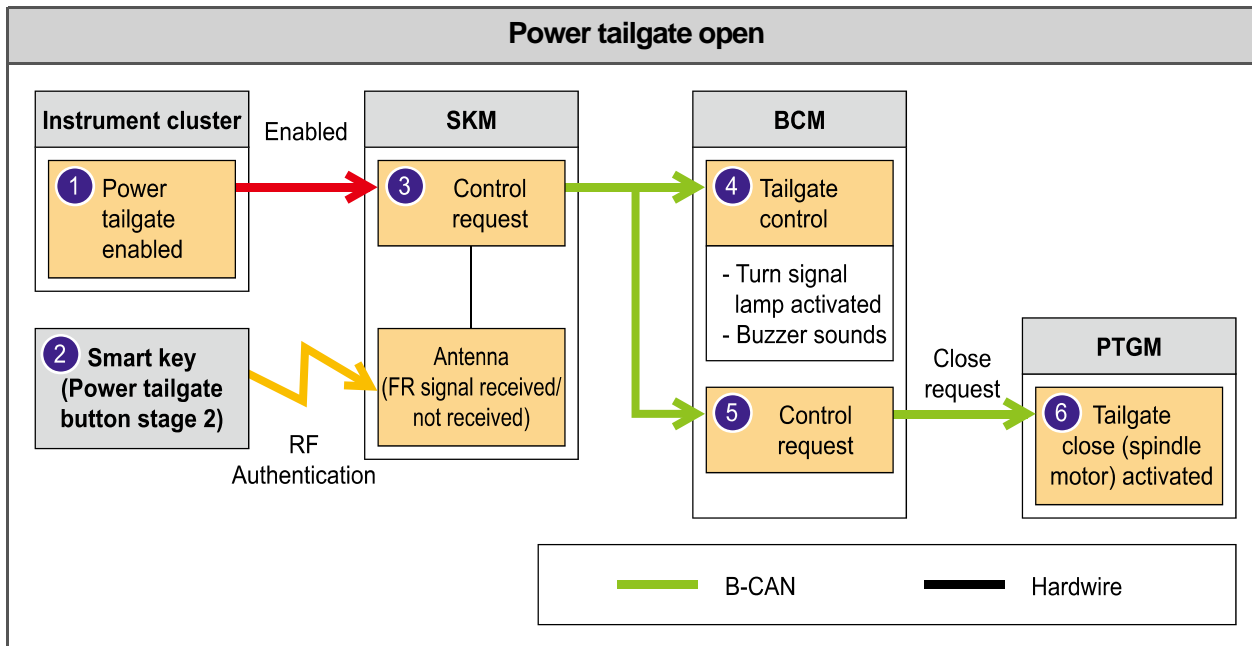
► AVM



► BSD



Modification basis	
Application basis	
Affected VIN	



1. The power tailgate is enabled.
2. The tailgate activation signal is sent when the tailgate button on the smart key is pressed for 1.5 sec. or longer (step 2).
3. The SKM receives the tailgate activation signal and sends the tailgate control request signal to the BCM.
4. The BCM activates the tailgate close control.
5. The BCM sends the tailgate close control request signal to the PTGM.
6. The PTGM closes the power tailgate.



NOTE

The power tailgate stops functioning when the tailgate button is pressed briefly during operation.

Modification basis	
Application basis	
Affected VIN	

2. CAUTIONS

CAUTION

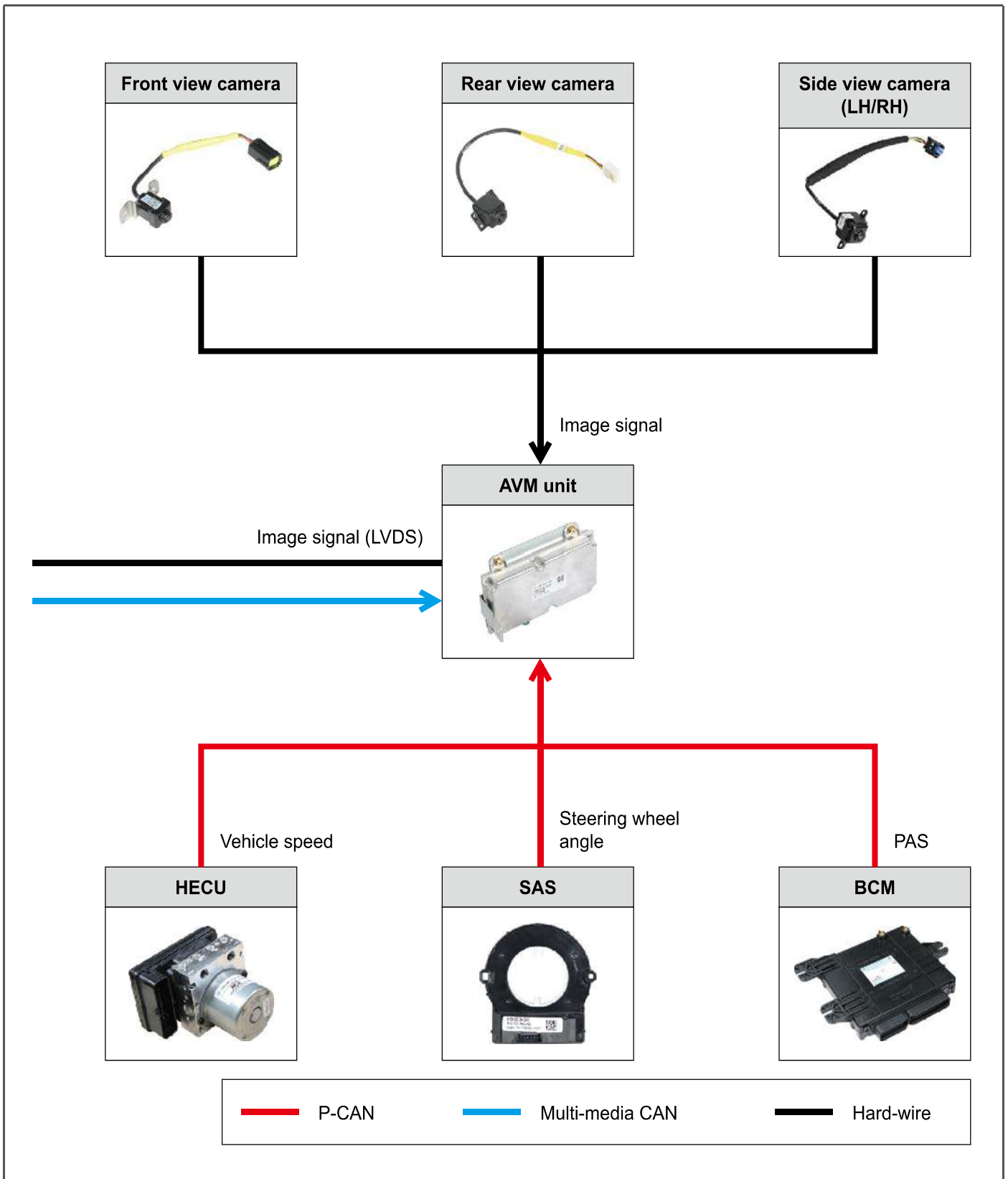
- During winter time, check if wiper blades are frozen to the windshield.
- Wiper operation with the blades frozen can damage the wiper blade and motor.
- The wiper operation on the dry windshield can scratch the glass and wear the blade prematurely.
Do not operate the wiper when the windshield is dry.
- When it does not rain, turn the wiper switch into the "OFF" position.
- Turn the wiper switch to the "OFF" position before any car wash to avoid unwanted operation of the wipers.
- Check if the rain sensor is in position securely when removing, fitting and checking it.
- Be sure to use the wiper blade with specified size.
- Be careful so a misdetection does not occur due to the sticker and foreign materials in the rain sensor sensing part at the windshield glass.

When cleaning the windshield over the sensor with damp clothes, the wiper may operate suddenly. It could cause serious injury. Make sure to place the wiper switch to the OFF position and ignition switch OFF when not in use.

► Irregular operation (abrupt operation)

- Check if the sensor is not displaced.
- Check if the rain sensor cover is securely installed.
- Check if the customer is familiar with how to control the wiper sensitivity.
That is, check if the user has set the wiper sensitivity to the 5th level (FAST).
- Check the wiper blades for wear.
- If the wiper blade cannot wipe the glass uniformly and cleanly, the irregular operations could be occurred. Therefore, the wiper blade should be replaced with a new one.

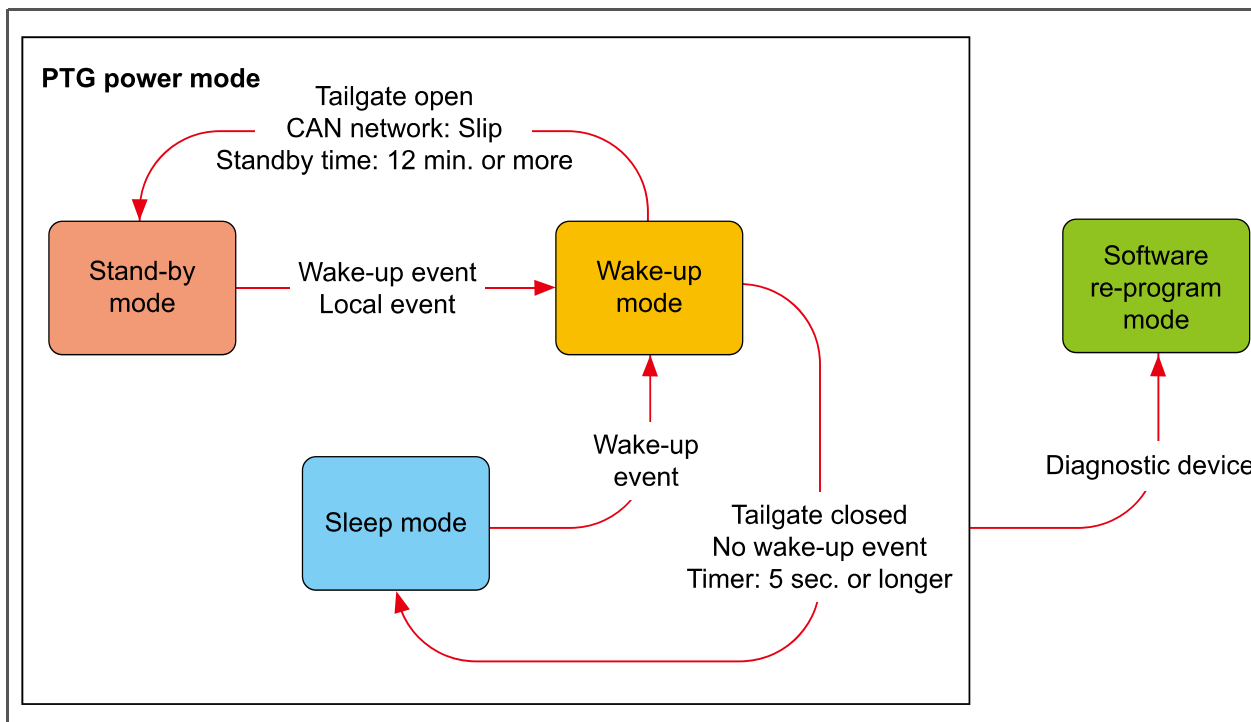
Modification basis	
Application basis	
Affected VIN	



- FUSE AND
- BCM
- SKM
- FCM
- INSTRUMENT
- SWITCH
- EXTERIOR LAMP
- INTERIOR LAMP
- WIPER AND
- SMART AUDIO
- AVM**
- AC INVERTE
- DDM/PD M
- DSM
- PTG
- BSD

Modification basis	
Application basis	
Affected VIN	

4. PTG SYSTEM POWER MODE



1) Operating Process

(1) Wake-up mode

- The wake-up mode is a typical state where input/output, power operating control, and all input checks are normal.
- The system wakes up by triggering wake-up event by CAN message or PTG switch operation in sleep mode.
- The PTG system is always in wake up mode as long as the system is active.

(2) Sleep mode

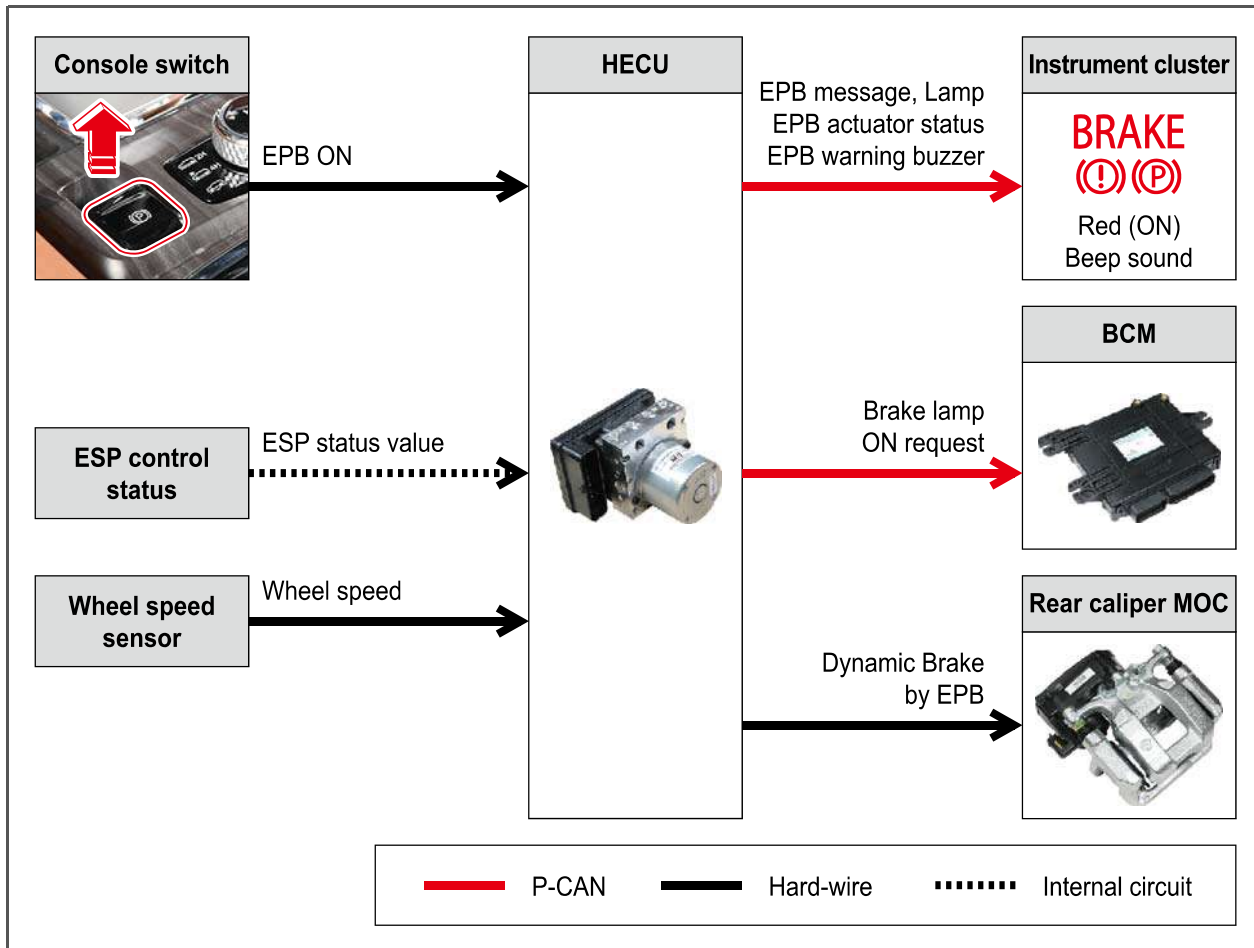
- The sleep mode is a ready state of PTG system, which means low power mode (1 mA or less).
- All inputs and outputs monitoring is inactive.
- The system enters sleep mode 5 sec. after the tailgate is closed properly and no network activation is detected.

Modification basis	
Application basis	
Affected VIN	

► **Dynamic brake by EPB**

This mode can be used when the ESP system or brake system is faulty. Pulling the EPB switch decelerates the vehicle.

- Operating conditions: Vehicle speed of 5 Km or higher, faulty ESP system or brake system
- Operation description: The EPB function decelerates the vehicle while the EPB switch is pulled (0.5 g).



Modification basis	
Application basis	
Affected VIN	

AIR CONDITIONING SYSTEM

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GENERAL INFORMATION

1. SPECIFICATIONS

Component	Item		Specifications
Heater core	Size		166 (W) × 203 (H) × 29 (D)
	Capacity		8,426 (9,800 W)
Evaporator	Size		257.8 (W) × 199 (H) × 48 (D)
	Capacity		4,730 (5,500 W)
Blower motor	Input power		308 W (Max. at 12 V)
	Fan speed		2,800 rpm
PTC	Input power		1 kW
Heater and A/C control assembly	Rated voltage		DC 13.5 V
	Operating voltage		DC 9 to 16 V
	Operating temperature		-30 to +80 °C
	Max. current consumption		2.5 A
	Dark current		1.1 mA
	Button switch		Push-return type
	Fan speed switch	DATC	Dial type (unlimited rotation)
		MTC	Dial type(180°)
Temperature switch	MTC	Dial type(220°)	

- DATC : Dual Automatic Temperature Control
- MTC : Manual Temperature Control

Modification basis	
Application basis	
Affected VIN	

AIR CONDITIONING SYSTEM
 AIR BAG SYSTEM
 SEAT/SEAT BELT
 SUNROOF
 BODY INTERIOR
 BODY EXTERIOR
 BODY DIMENSIONS
 FRAME & BODY

2. CAUTIONS

CAUTION

- You can operate the power seat with the ignition switch OFF. However, frequent operation of the seat switch with the engine stopped can result in battery becoming discharged.
- Operating more than one seat adjustment switch at the same time can cause damage to the seat motor. Therefore, operate the seat switch only one at a time.
- Do not use organic solvents such as benzene, thinner, alcohol or gasoline to prevent the seat cover from being damaged while cleaning.
- Do not operate the seat position adjustment switch forcefully when the seat does not move or it contacts an object.
- If the power seat is not operated, check and correct the problem before driving off.

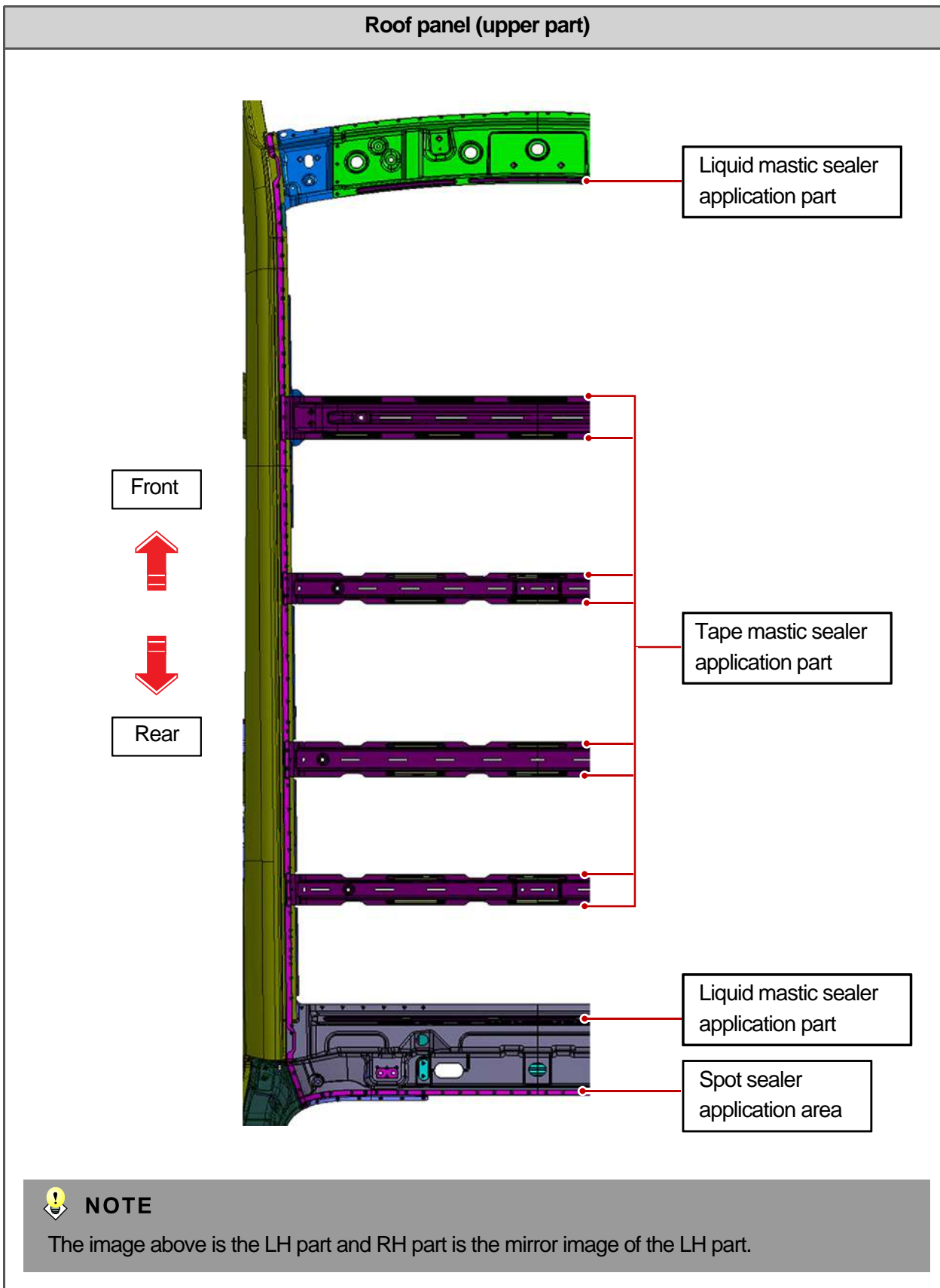
3. WARNINGS

WARNING

- Adjust the driver seat before driving.
- Make sure that the seat is firmly secured after adjusting.
- Never drive the vehicle with the head restraint removed or lowered excessively. Otherwise, your neck, spine or other parts of the body can be severely injured in the event of an accident.
- If the seatback is reclined too much, the risk of sliding under the lap belt and being injured is increased.
- Do not put any object that could damage the seat on the seat.
- The front and rear seats are equipped with the seat heater system. Using the seat heater system excessively may cause minor burns. The following occupants should exercise special care when using it.
 - * Infants, children, old or handicapped persons
 - * Persons with sensitive skin
 - * Exhausted persons
 - * Persons who is drunk or took medicine which causes drowsiness such as sleeping pills, cold tablets, etc.
- Do not place anything on the seat that insulates against the heat, such as a blanket or cushion.
- Make sure that the head restraints are in place and secured properly. Never drive the vehicle with the head restraint removed.
- To minimize the injuries in a collision or an abrupt stop, make sure the seatback is in the upright position before driving. If the seatback is reclined too much, the occupant could slide under the seat belt in a collision or an abrupt stop and cannot be protected properly by the air bag system.

Modification basis	
Application basis	
Affected VIN	

3) Roof Panel



AIR
CONDITIO

AIR BAG
SYSTEM

SEAT/SEA
T BELT

SUNROO
F

BODY
INTERIOR

BODY
EXTERIO

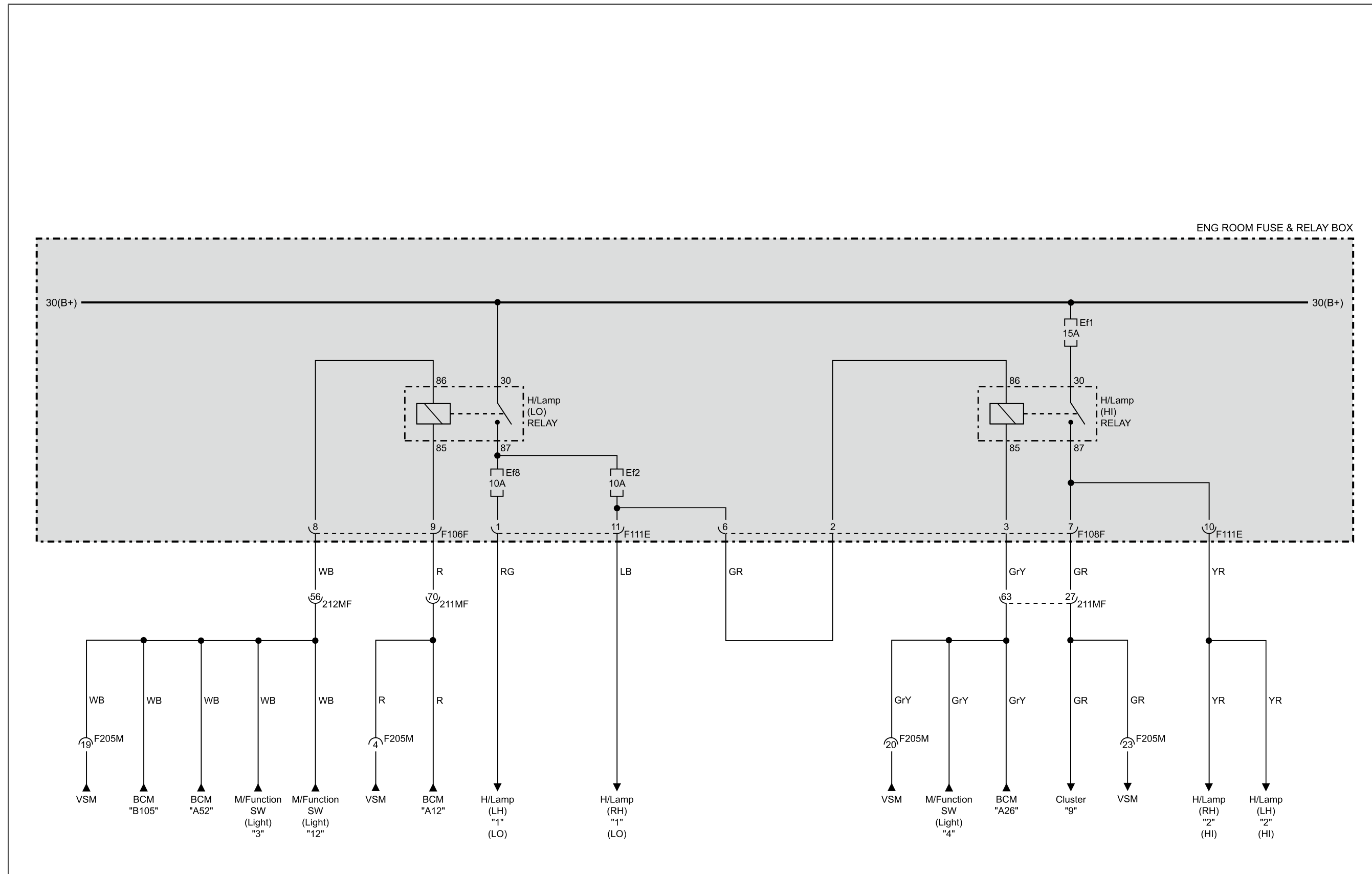
BODY
DIMENSI

FRAME &
BODY

Modification basis	
Application basis	
Affected VIN	

► Ef1, Ef2, Ef8, H/LAMP(HI/LO) RELAY

FUSE / RELAY
GROUND



Modification basis	
Application basis	
Affected VIN	

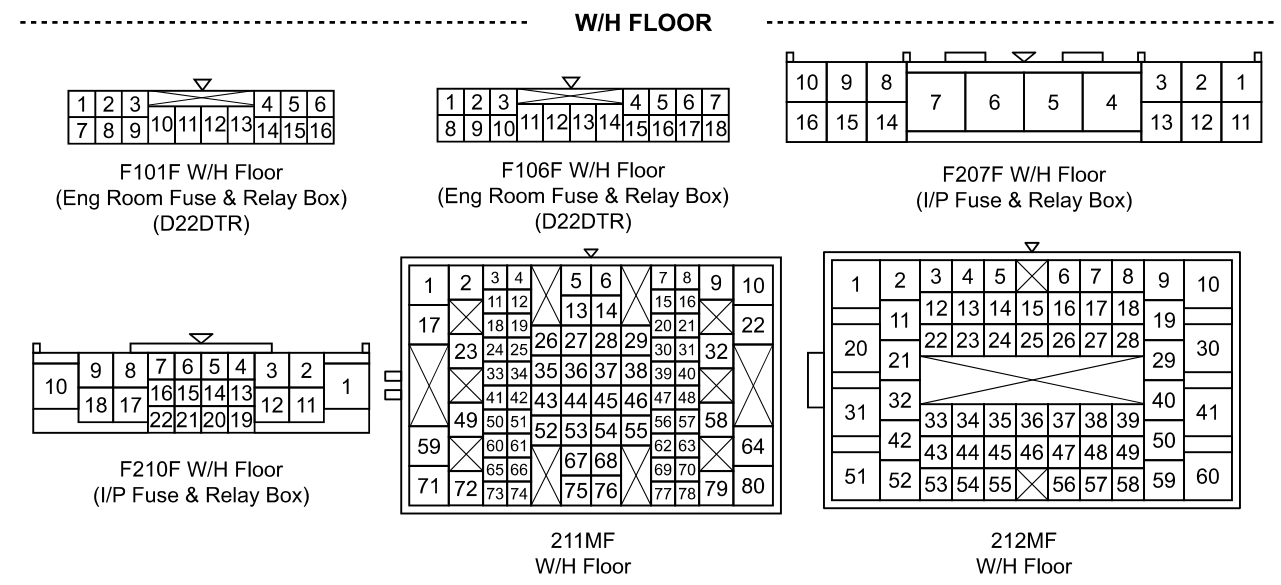
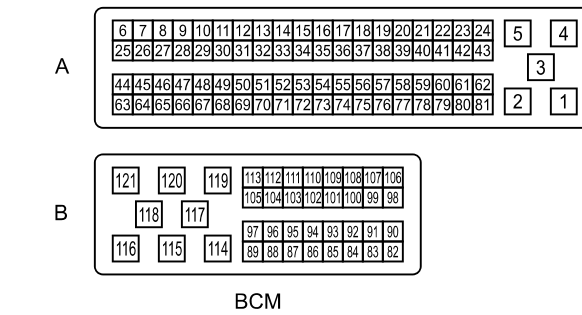
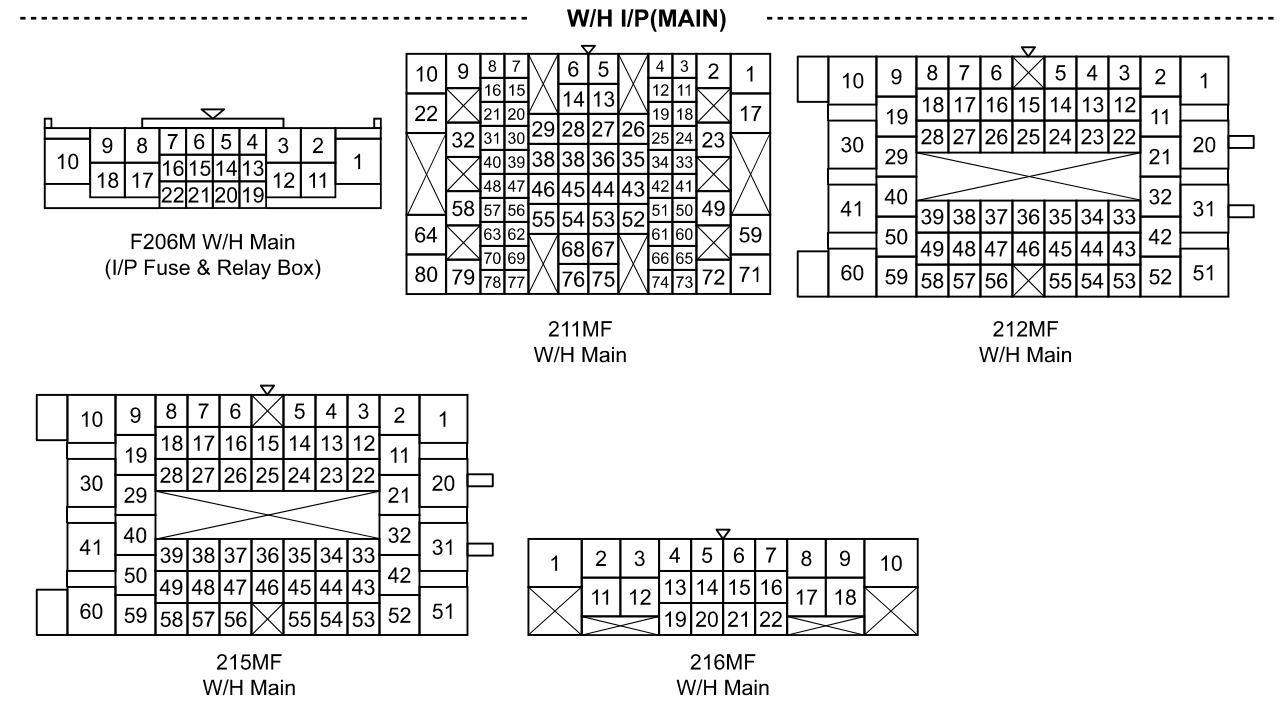
1) CONNECTOR

Connector	Pin	Color	Connecting Wiring Harness	Connector Position	Remark
F101F	16	White	W/H Floor - Eng Room Fuse & Relay Box	Eng Room Fuse & Relay Box	D22DTR
F106F	18	Gray	W/H Floor - Eng Room Fuse & Relay Box	Eng Room Fuse & Relay Box	D22DTR
F206M	22	White	W/H Main - I/P Fuse & Relay Box	I/P Fuse & Relay Box	
F207F	16	White	W/H Floor - I/P Fuse & Relay Box	I/P Fuse & Relay Box	
F210F	22	White	W/H Floor - I/P Fuse & Relay Box	I/P Fuse & Relay Box	
211MF	80	White	W/H Main - W/H Floor	Inside of Driver Cowl Side	
212MF	60	Black	W/H Main - W/H Floor	Inside of Driver Cowl Side	
215MF	60	Black	W/H Main - W/H Floor	Inside of PASS Cowl Side	
216MF	22	White	W/H Main - W/H Floor	Inside of PASS Cowl Side	
351FD	50	White	W/H Floor - W/H Driver DR	Inside the Driver Cowl Side PNL	
353DD	30	White	W/H Driver DR - W/H Driver DR EXTN	Inside the Driver Cowl Side PNL	
361FD	50	White	W/H Floor - W/H PASS DR	Inside the PASS Cowl Side PNL	
371FD	29	White	W/H Floor - W/H RR LH DR	Under the LH B-Pillar	
381FD	29	White	W/H Floor - W/H RR RH DR	Under the RH B-Pillar	

2) GROUND

Ground	Connecting Wiring Harness	Connector Position	Remark
G303F	W/H Floor	Under the Driver Seat	
G307F	W/H Floor	Inside of LH C-Pillar Lower Cover	
G315F	W/H Floor	Under the PASS Seat	

3) CONNECTOR IDENTIFICATION SYMBOL & PIN NUMBER POSITION



Modification basis	
Application basis	
Affected VIN	