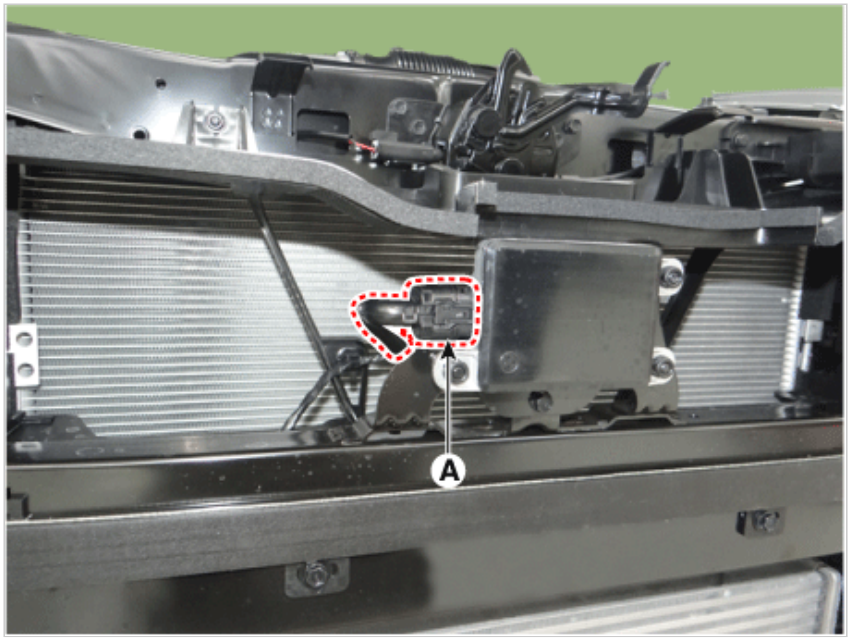
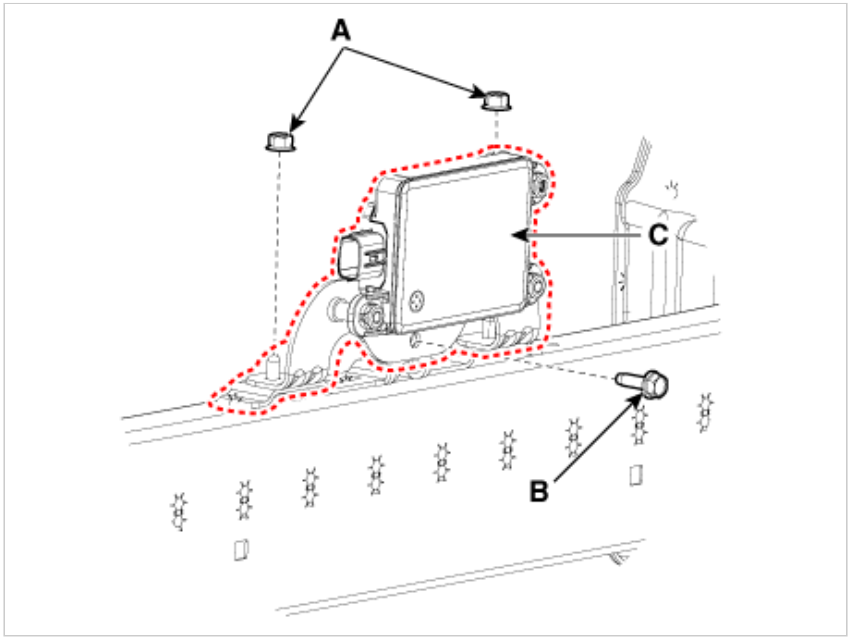
Removal

1. Turn ignition switch OFF and disconnect the negative (-) battery cable.
2. Remover the front bumbper assembly.
   (Refer to Body - "Front bumper assembly")
3. Disconnect the SCC ECU & radar connector (A).



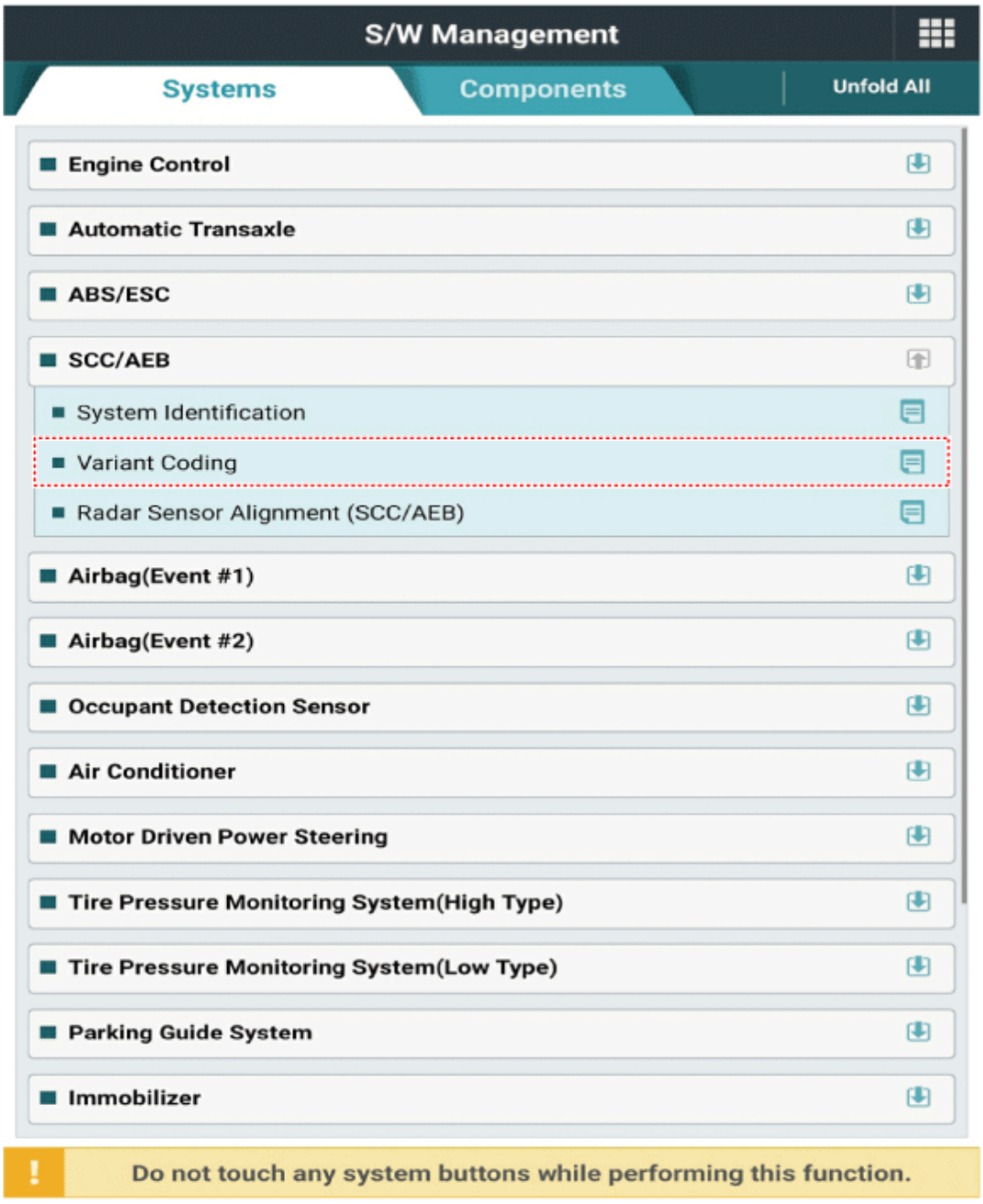
4. Loosen the SCC ECU & radar nuts (A) and bolt (B) and then remove the SCC ECU & radar (C).

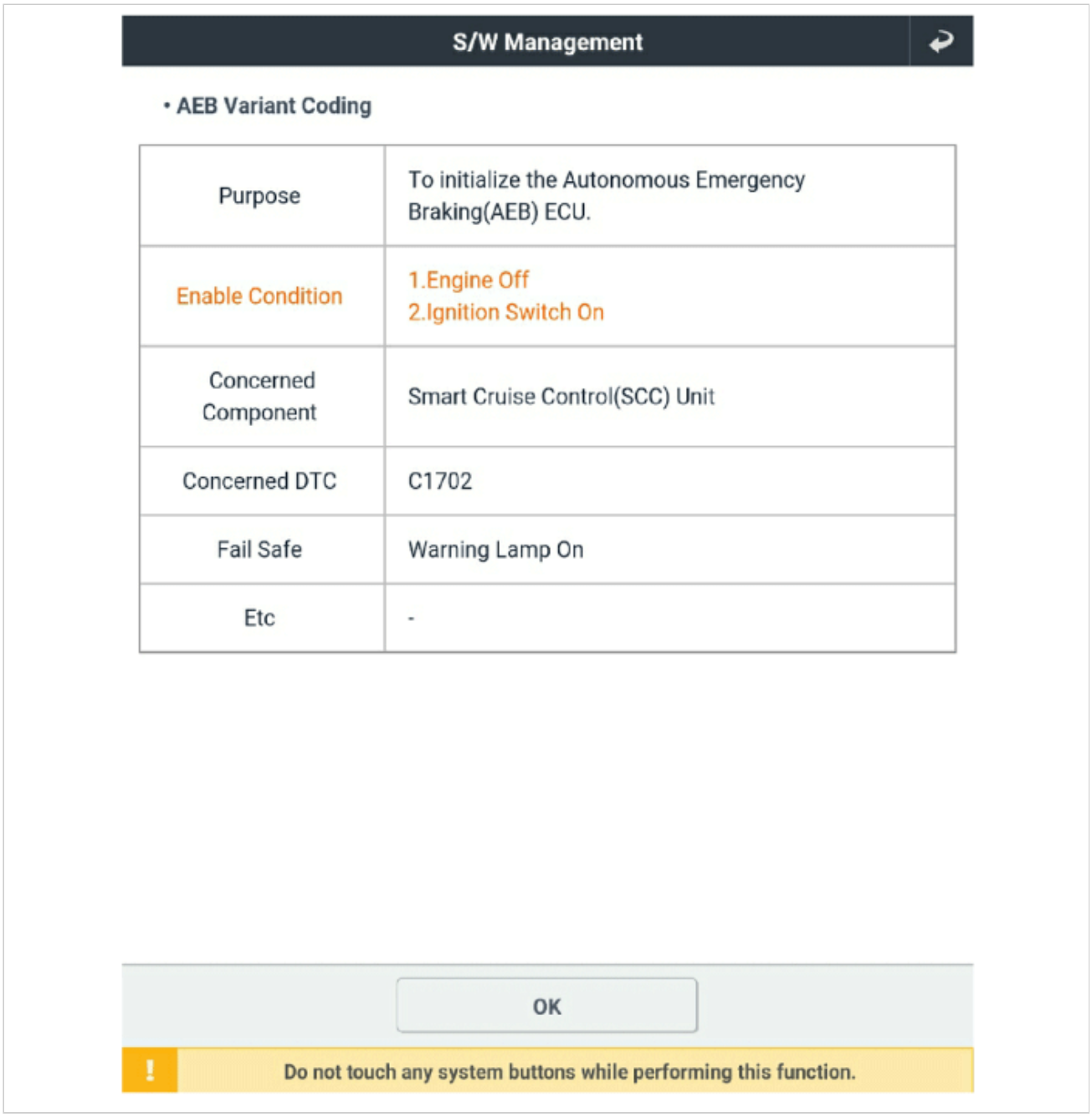
Tightening torque:
(A,B) : 9.8 - 11.8 N·m (1.0 - 1.2 kgf·m, 7.2 - 8.7 lb·ft)

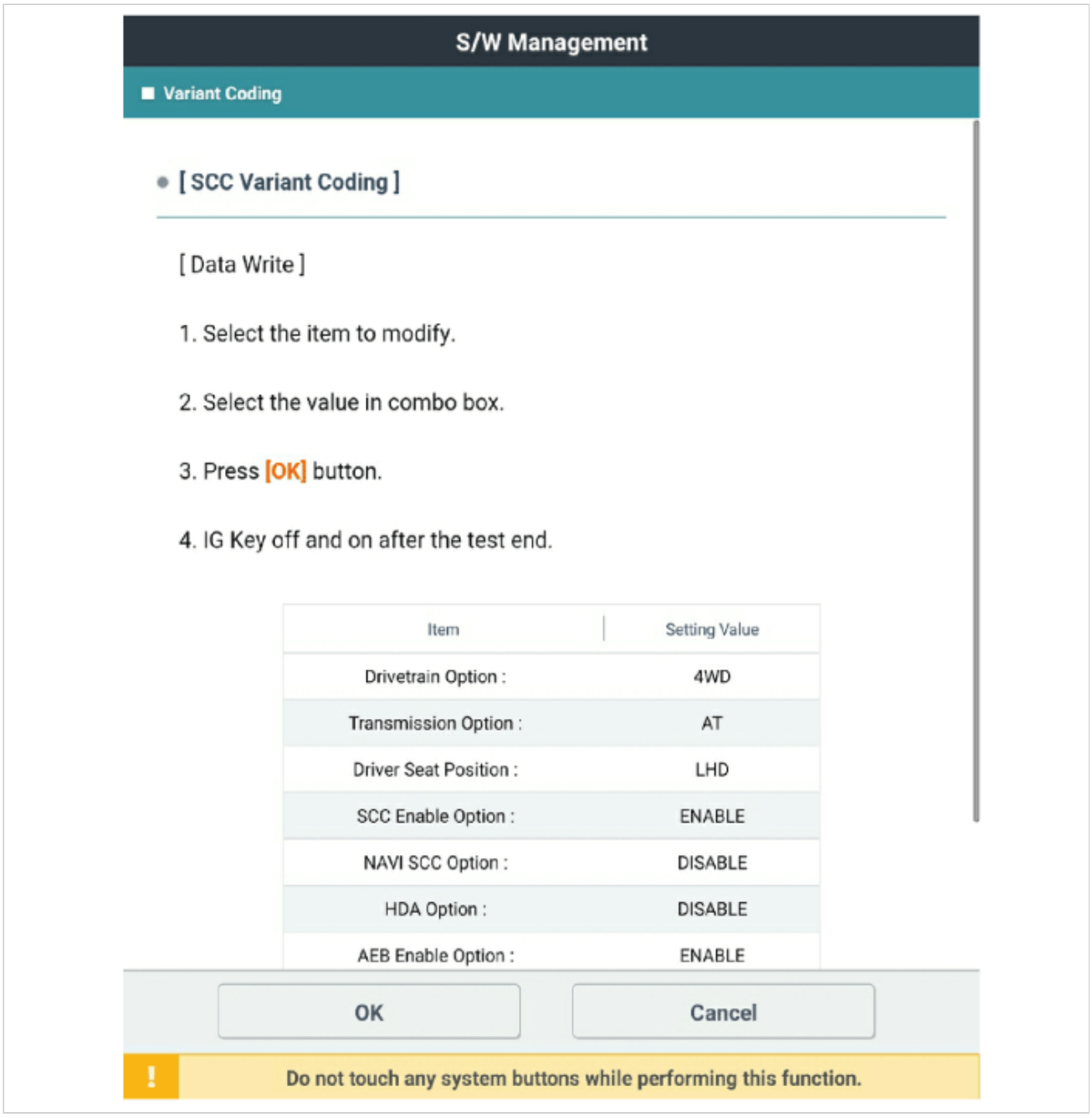


Installation

1. Install in the reverse order of removal.
2. Perform SCC variant coding.


S/W Management
Systems
Components
Unfold All
Engine Control
Automatic Transaxle
ABS/ESC
SCC/AEB
System Identification
Variant Coding
Radar Sensor Alignment (SCC/AEB)
Airbag(Event #1)
Airbag(Event #2)
Occupant Detection Sensor
Air Conditioner
Motor Driven Power Steering
Tire Pressure Monitoring System(High Type)
Tire Pressure Monitoring System(Low Type)
Parking Guide System
Immobilizer
Do not touch any system buttons while performing this function.


S/W Management
• AEB Variant Coding
Purpose
To initialize the Autonomous Emergency Braking(AEB) ECU.
Enable Condition
1.Engine Off
2.Ignition Switch On
Concerned Component
Smart Cruise Control(SCC) Unit
Concerned DTC
C1702
Fail Safe
Warning Lamp On
Etc
-
OK
Do not touch any system buttons while performing this function.



3. Perform the smart cuise control system (Stop & Go) unit radar alignment.
(Refer to Engine Electrical System - "Smart cruise control (Stop & Go) unit-radar")

Smart Cruise Control (SCC) Radar Sensor Alignment

Smart Cruise Control (SCC) unit detects a forward vehicle and then recognizes the distance to the forward vehicle and the relative speed using the built-in radar sensor. In order for the radar sensor to operate correctly, it must be properly aligned parallel to the driving direction of the vehicle. So, the radar sensor alignment procedure must be carried out after the sensor is reinstalled or replaced with new one. If not performing the sensor alignment in the conditions mentioned above, the smart cruise control system may not operate correctly.

Information

The SCC radar sensor alignment is required when:

- The SCC unit is reinstalled or replaced with a new one.
- The radar sensor or the surrounding parts are impacted by a collision.
- The sensor does not recognize a forward vehicle.
- The Steering Angle Sensor (SAS) is replaced or adjusted.

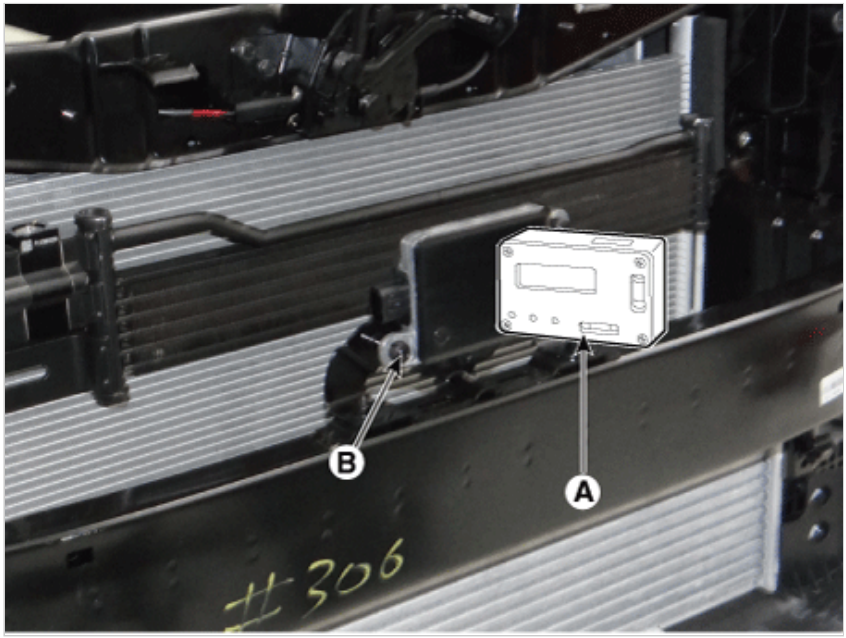
NOTICE

Preparation before the SCC radar sensor alignment:

- Put the vehicle on the level ground.
- Take out heavy luggage from the vehicles' seats or trunk.
- Set all tires according to the specified pressure.
- Check wheel alignment.
- Check that the front surface of the SCC unit is clean.

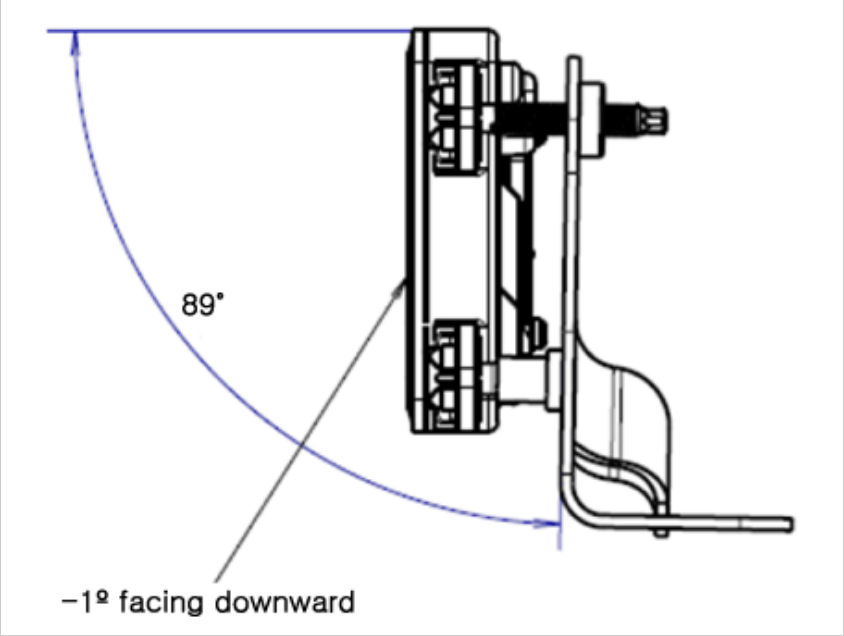
Radar sensor should be aligned in both vertical and lateral direction. Vertical alignment can performed by using the SST (0K964-3T000) and lateral alignment can be performed automatically by driving on a road.

1. Park the vehicle on a level ground.
2. Remove the front bumper assembly.
   (Refer to Body - "Front Bumper Assembly")
3. Check the vertical alignment of the radar sensor using the digital level/tilt meter (A).
   If the vertical alignment is out of the the tolerance, turn the adjustment screw (B) until the alignment is within the tolerance.
   Tolerance: ±1.5º or less



NOTICE

The vertical mounted degree should be -1º downward.

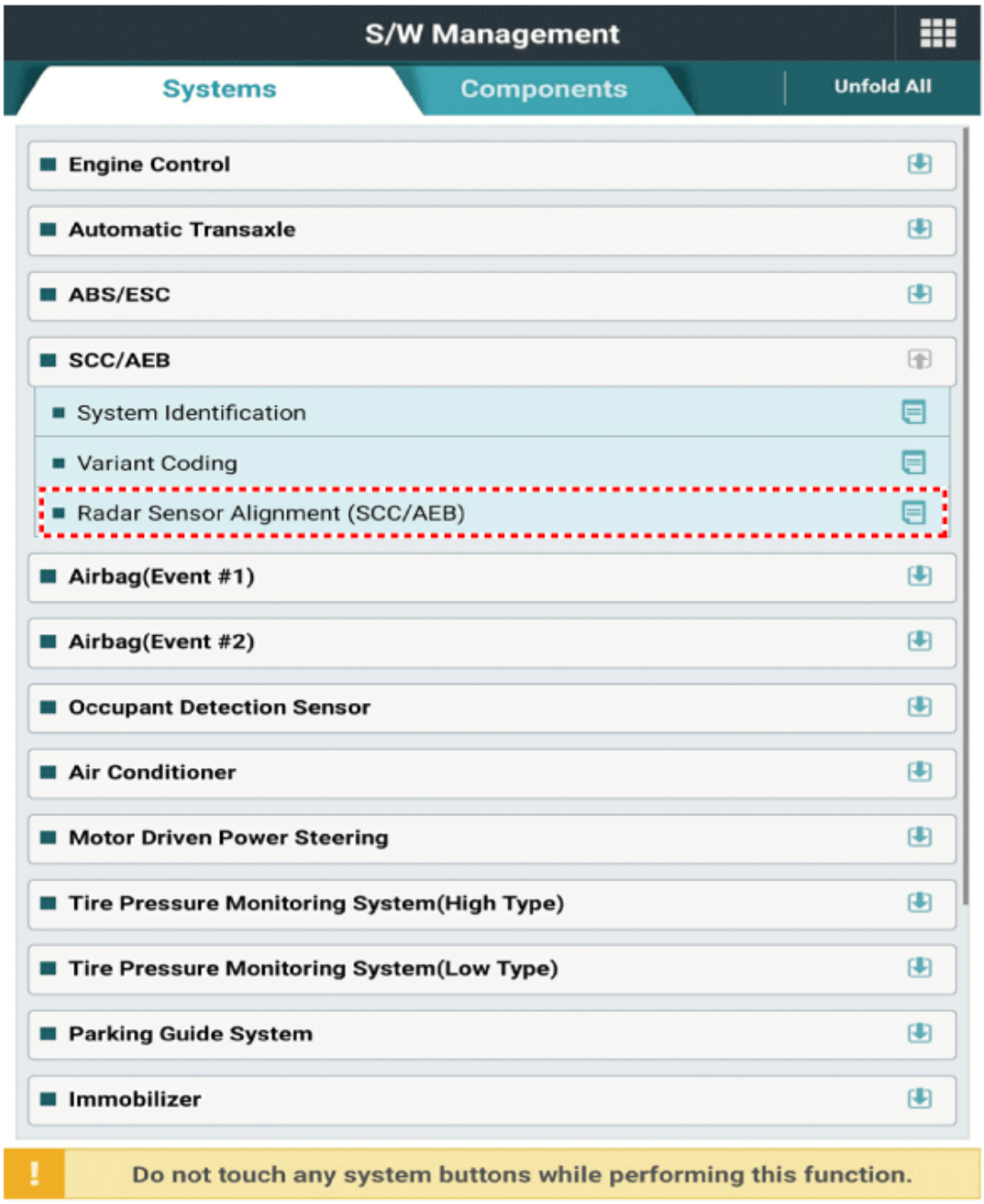


4. Install the front bumper.
   (Refer to Body - "Front Bumper Assembly")

5. To perform the lateral alignment, connect the KDS with the engine started and select the “SCC Alignment”.

Information

Be sure to erase DTC before performing the lateral alignment.



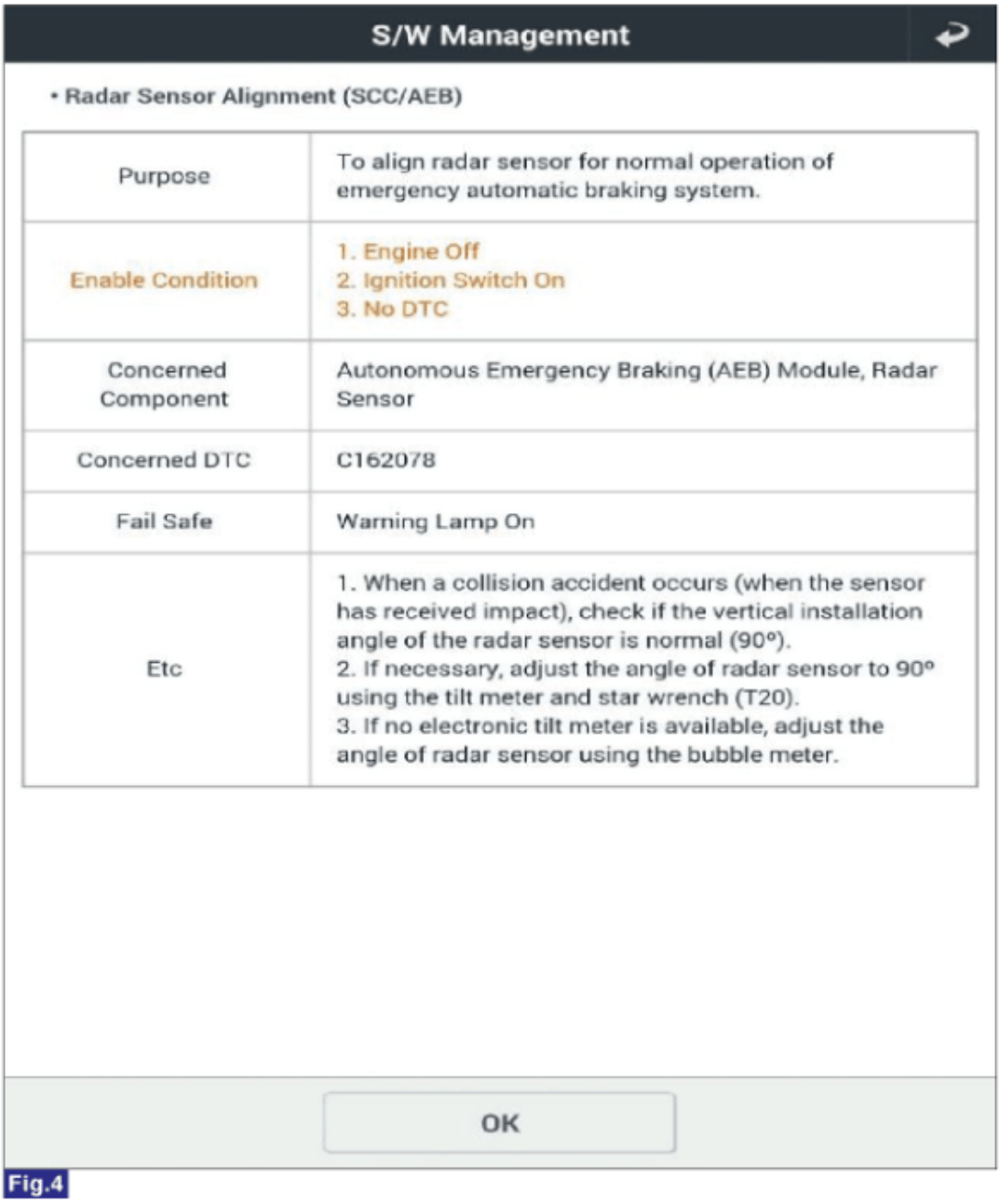


Fig.4

6. Select “Driving Mode” to start sensor alignment.

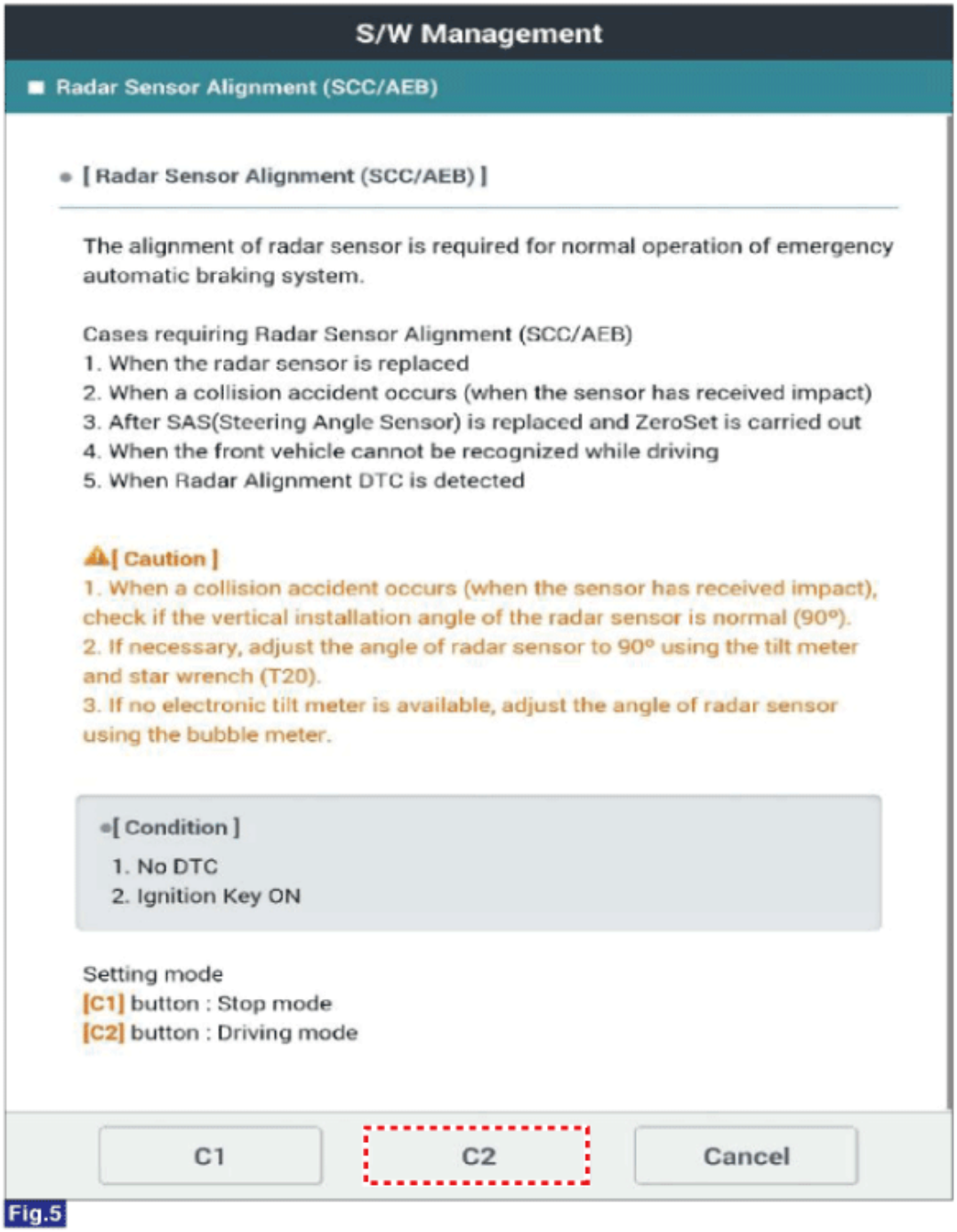
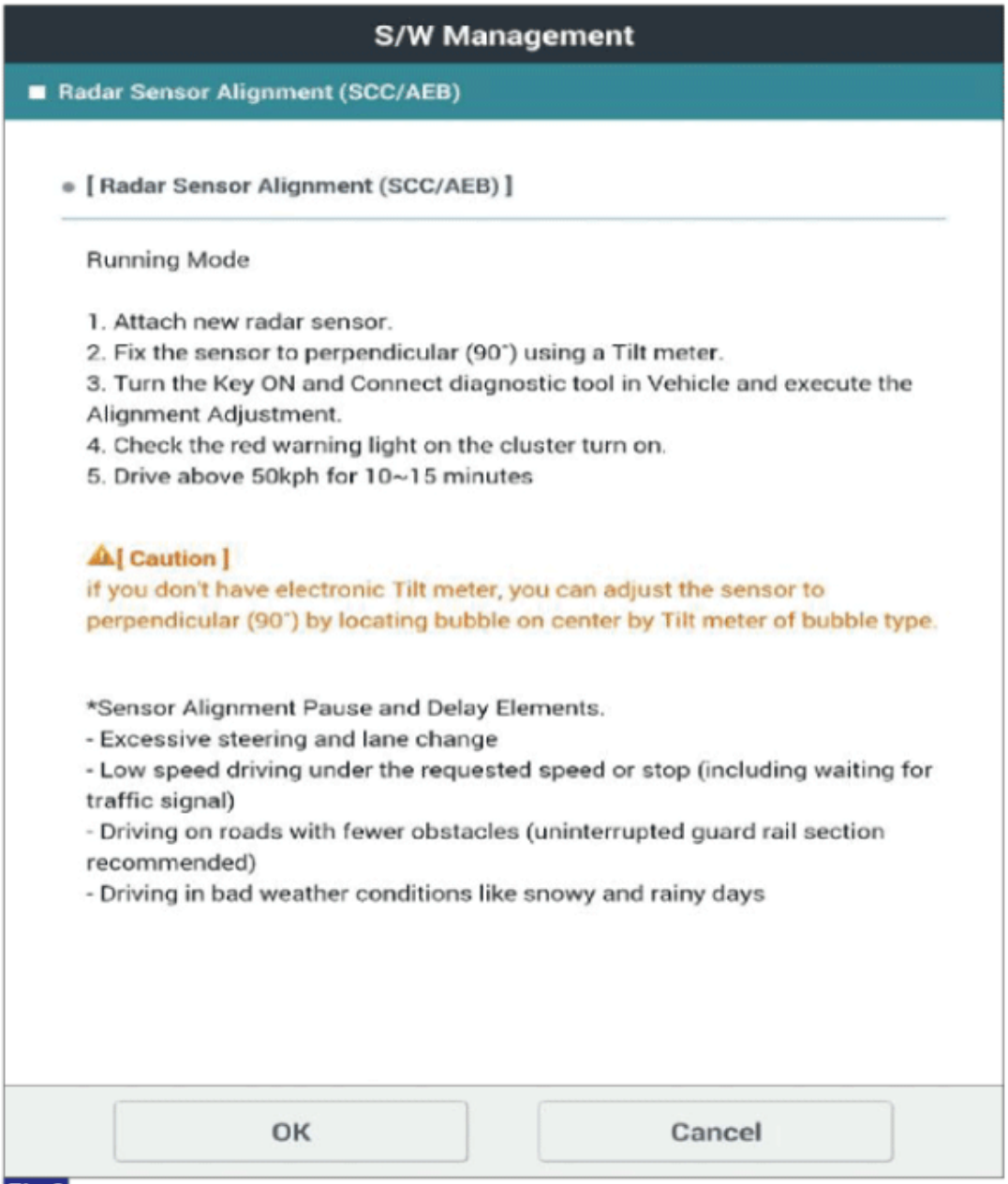


Fig.5

7. Drive the vehicle and check that the yellow warning light on the cluster is turned ON and then OFF.


S/W Management
Radar Sensor Alignment (SCC/AEB)
[Radar Sensor Alignment (SCC/AEB)]
Running Mode
1. Attach new radar sensor.
2. Fix the sensor to perpendicular (90˚) using a Tilt meter.
3. Turn the Key ON and Connect diagnostic tool in Vehicle and execute the Alignment Adjustment.
4. Check the red warning light on the cluster turn on.
5. Drive above 50kph for 10~15 minutes
[Caution]
if you don't have electronic Tilt meter, you can adjust the sensor to perpendicular (90˚) by locating bubble on center by Tilt meter of bubble type.
*Sensor Alignment Pause and Delay Elements.
- Excessive steering and lane change
- Low speed driving under the requested speed or stop (including waiting for traffic signal)
- Driving on roads with fewer obstacles (uninterrupted guard rail section recommended)
- Driving in bad weather conditions like snowy and rainy days
OK
Cancel
Fig.6

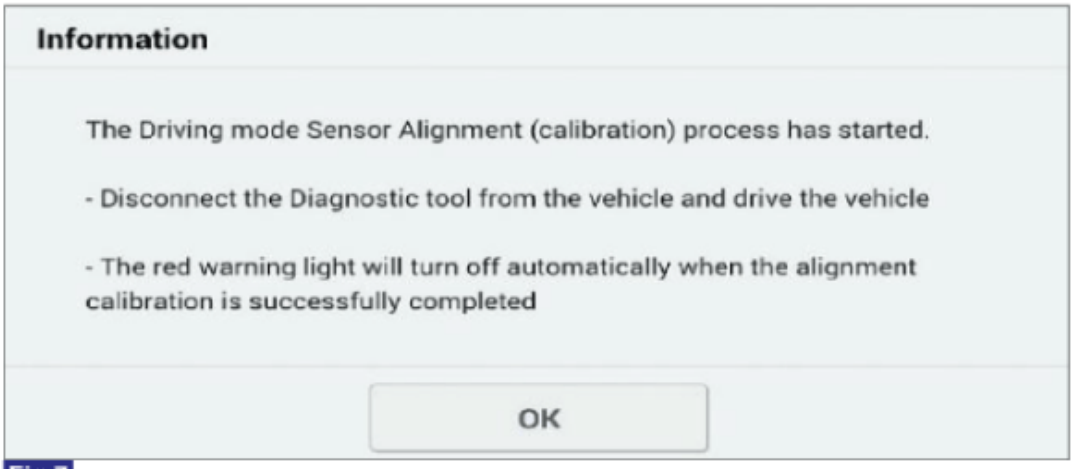


Fig.7

NOTICE

The lateral alignment takes about 5 to 15 minutes generally but it can be shorten or extended depending on the road condition or driving condition.

- Road or driving conditions for shortening the alignment :
  - Driving at more than 65 km/h (40.4 mph)
  - Driving on a road without curve and slope
  - Driving on a thick and wide paved road
  - Driving on a road where there are repetitive and fixed targets (metal materials such as street lights or guard rails)
  - Driving on a dry road without rain or snow
- Road or driving conditions that can interrupt the alignment process
  - Driving a road with the sharp curve where the radius is within 100m (328.0ft)
  - Driving at a lower speed than suggested above or during a stop due to a red light
  - Driving in a tunnel or under an overpass
  - Turning the steering wheel excessively to the left or right or changing the lane suddenly

⚠ CAUTION

Be sure to follow the below safety guidelines while driving the vehicle for the lateral alignment :

- Observe a regulation speed
- Do not drive too fast for shortening the sensor alignment. Drive safely considering the road condition and traffic situation.
- Do not stare the KDS screen or operate the KDS while driving. Only while stopping, the KDS should be operated.

NOTICE

If the lateral alignment is not completed successfully, check the alignment using the KDS. If the value is out of ±3º, check that the back beam or bracket where the SCC unit is mounted are in a good condition and then if there is no problems, replace the SCC unit with new one. After replacing the SCC unit, repeat the alignment procedure described above.