Component Procedures: Distance Sensor

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Component Procedures: Distance Sensor

Parts and Labor (itype_189)

Parts

Qualifier	Part #	Name	Price	Note
Sonar System	99110F2100	Sonar Sensor	1642.29	

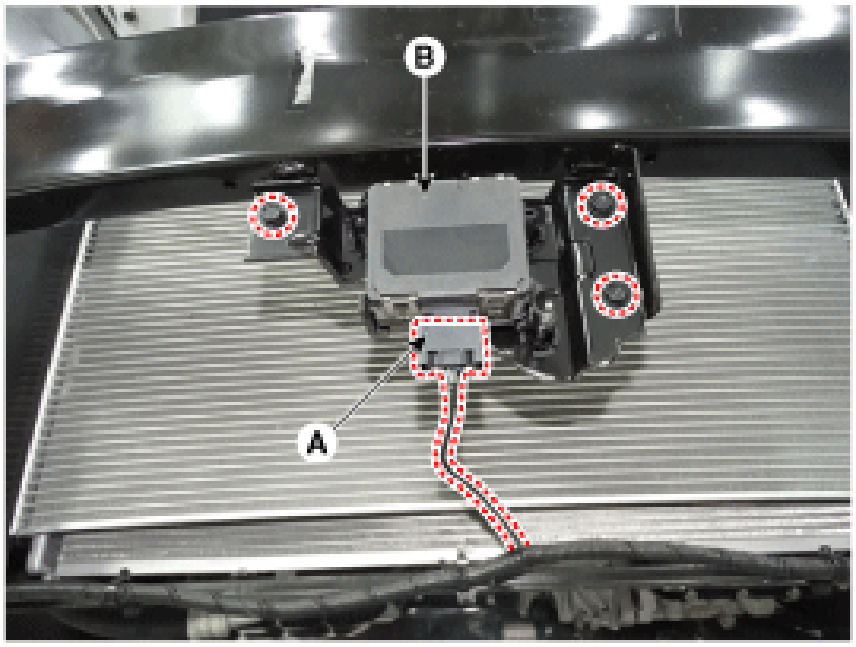
Labor

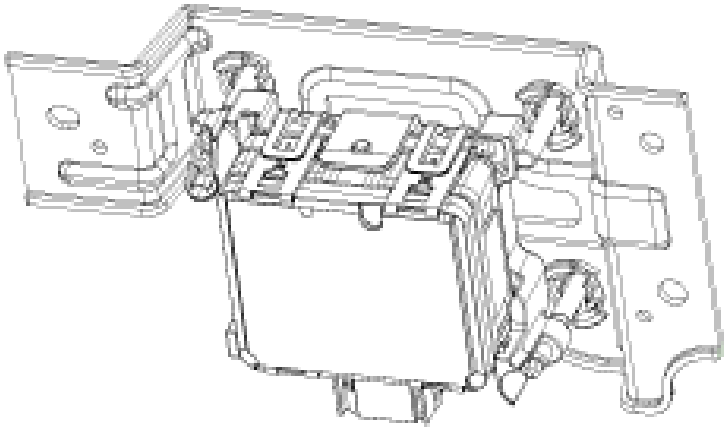
Operation	Qualifier Path	Skill	Std Hrs	Wty Hrs
Remove & Replace	Cruise Control > Sensor, R&R > Adaptive Cruis?	B	1.7	0.0
Calibrate	Cruise Control > Sensor, Calibrate	B	1.5	0.0

Smart Cruise Control Unit - Repair Procedures (Article 44076)

- Removal

- Remove the bumper. (Refer to Body - "Front Bumper")
- Disconnect the smart cruise control unit connector (A).
- Remove the smart cruise control unit assembly (B) from vehicle after loosening mounting bolts.





- Installation

- Install in the reverse order of removal. The vertical installation angle of the unit must be within 2° ± 0.4°. (not 0 degree) ■ Before installing the bumper onto the vehicle, measure the vertical angle of the unit with a protractor as shown.

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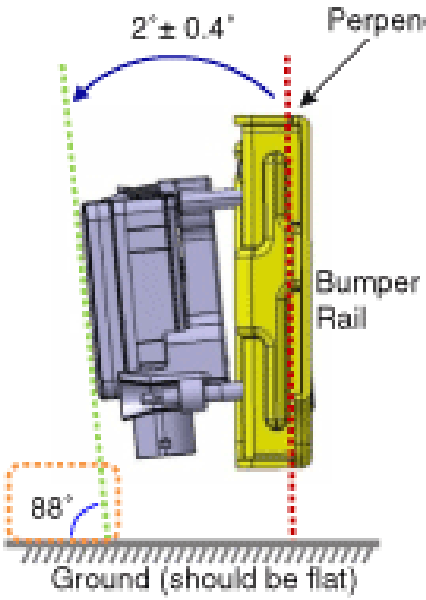
NOTICE

- The vertical installation angle of the unit must be within 2° ± 0.4°. (not 0 degree) ■ Before installing the bumper onto the vehicle, measure the vertical angle of the unit with a protractor as shown.



- Align the smart cruise control sensor. (Refer to Engine Electrical System - "Smart Cruise Control(SCC) Alignment")
- Install the bumper cover. (Refer to Body - "Front Bumper Cover")

- Smart Cruise Control (SCC) Sensor Alignment

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- Check the pollution condition of sensor cover

Smart Cruise Control (SCC) Radar Alignment

- Stop the vehicle horizontally at a flat place. Adjustment may not be accurate if the installation surface height and angle of the vehicle and reflector are different. Perform in an area with minimum clearance of 8m front, 4m sides, and 1.2m above the vehicle. Remove heavy objects from inside of the vehicle (seating area and trunk). Ensure that all tires are filled with spec air pressure. Remove objects (metal plates, resins, etc.) that may cause electric signal interference from the area where sensor alignment is performed. Be sure that the vehicle is not moved and free from vibration when performing sensor alignment (getting in/out or opening/closing doors). Check that radiator grill and sensor cover is not dirty. Check that the wheel alignment is normal. Do not turn OFF the power when performing sensor alignment. Power supplied to the radar sensor must be between 9V-16V. Temperature in the area where sensor alignment is performed must be between -30-60°C.

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- Adjustment may not be accurate if the installation surface height and angle of the vehicle and reflector are different.
- Perform in an area with minimum clearance of 8m front, 4m sides, and 1.2m above the vehicle.
- Remove heavy objects from inside of the vehicle (seating area and trunk).
- Ensure that all tires are filled with spec air pressure.
- Remove objects (metal plates, resins, etc.) that may cause electric signal interference from the area where sensor alignment is performed.
- Be sure that the vehicle is not moved and free from vibration when performing sensor alignment (getting in/out or opening/closing doors).
- Check that radiator grill and sensor cover is not dirty.
- Check that the wheel alignment is normal.

- Do not turn OFF the power when performing sensor alignment.
- Power supplied to the radar sensor must be between 9V-16V.
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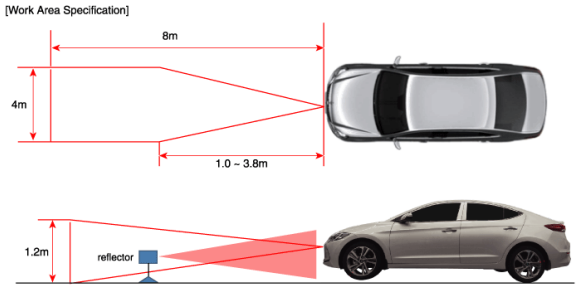
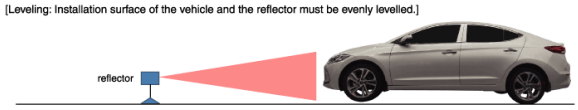
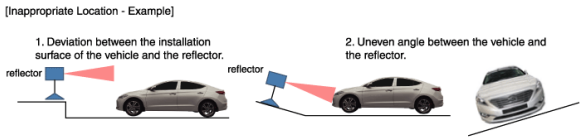
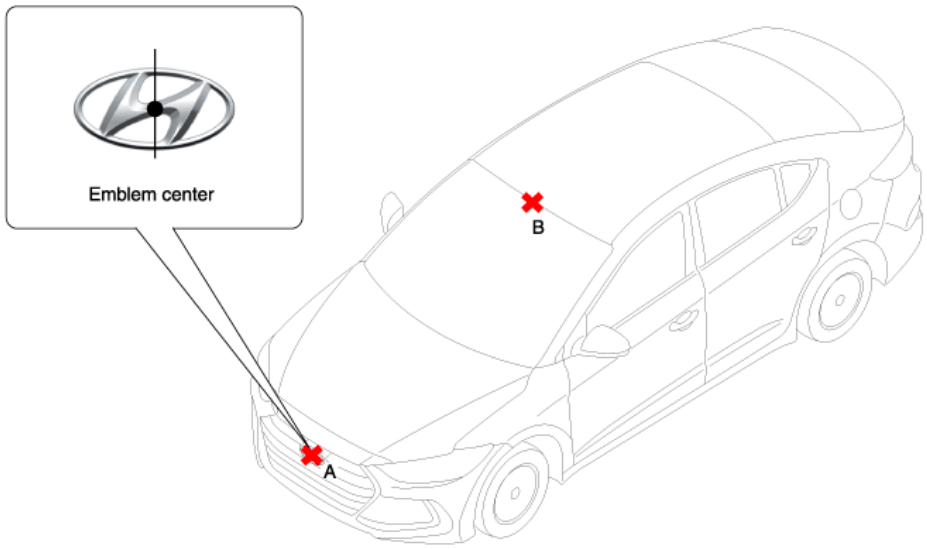




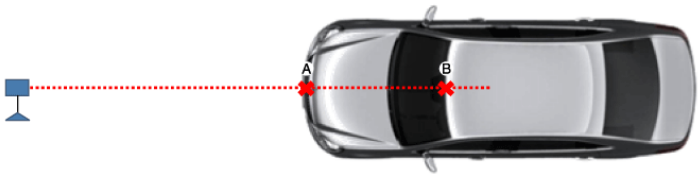


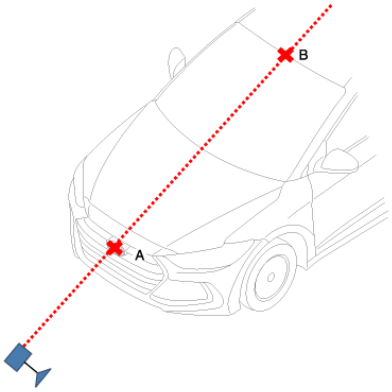
- Mark the center point of emblem (A) and the center point on top of wind glass (B).



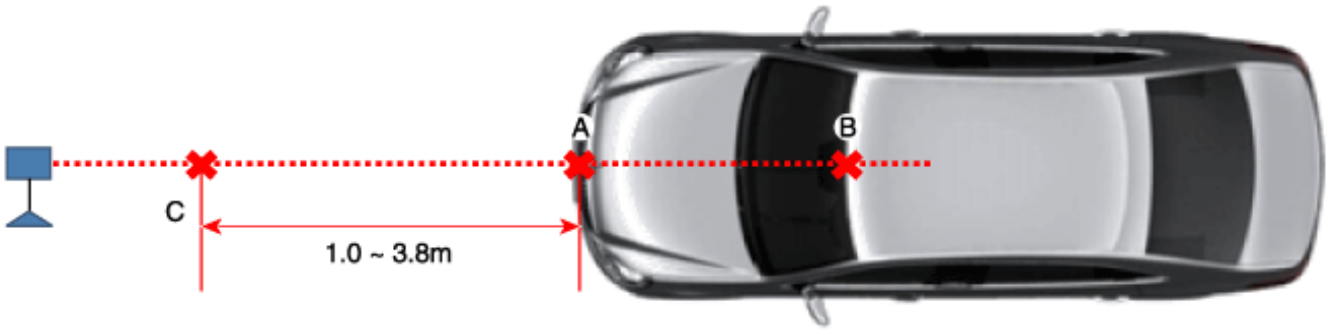
- Connect the SCC Calibration Laser (SST No. : 09964-C1200) to the Tri-Pod (SST No. : 09964-C1300).

- Match the vertical line of laser to (A) and (B) using the SCC calibration laser pointer.



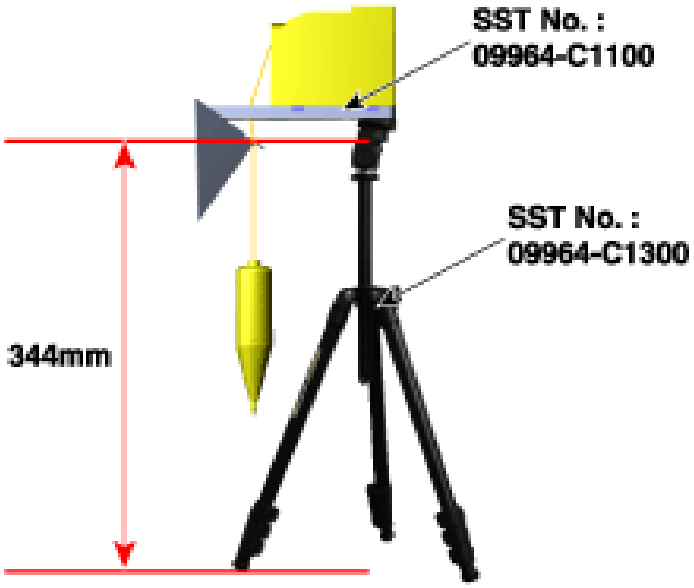


- Mark (C) located in 1.0-3.8m from (A) in front of the vehicle.



- Disconnect the SCC Calibration Laser (SST No. : 09964-C1200) from the Tri-Pod (SST No. : 09964-C1300).

- Align the vertical weight of the with the point (C).
- Connect the reflector (SST No. : 09964-C1100) to the tripod (SST No. : 09964-C1300) and set the reflector center height to 344mm.



- Set the reflector horizontal using the leveler which is built in the tripod (SST No. : 09964-C1300). Balance the level so that the bubble in the level is set between the spec lines.

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- Remove the vertical weight. Visually check that the reflecting side of the reflector is levelled with the front of the vehicle.
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- Check again the radar sensor and the surface of front bumper for the following items with the eyes. Make sure that there is no debris, or reflecting object on the surface of the radar. Make sure that there is no debris, or reflecting object on the radiator grill.
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- Connect the GDS to the DLC of the vehicle and start sensor alignment. If the engine is running, the vibration may cause inaccurate sensor alignment, so perform sensor alignment in IG ON mode.
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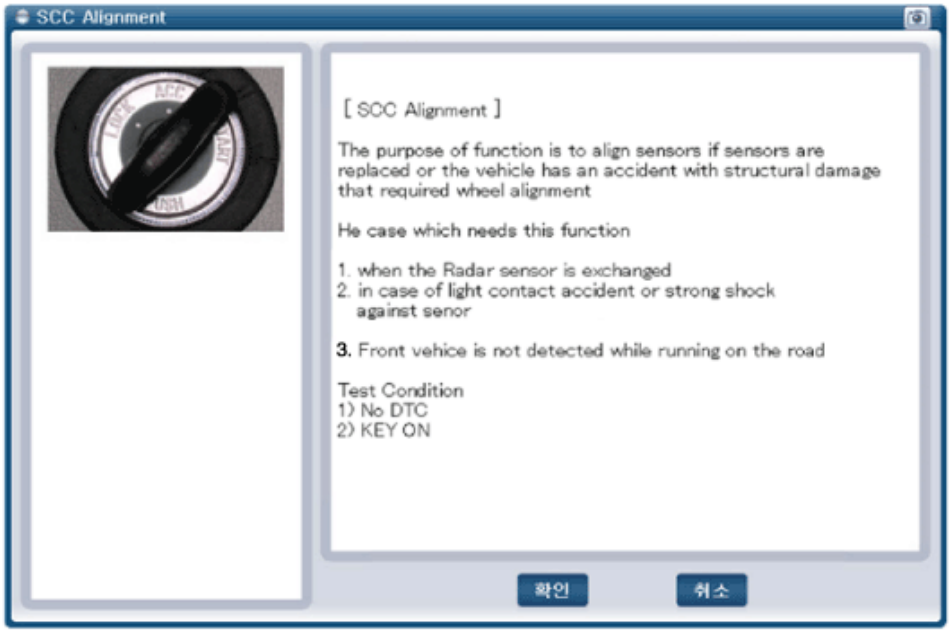
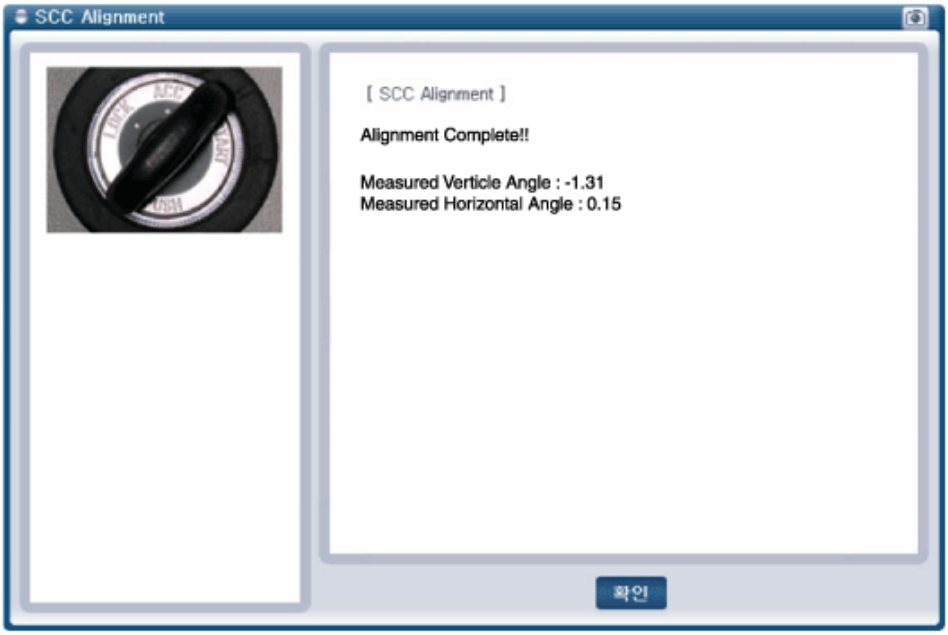
- After correctly selecting the vehicle model, select "SCC Alignment" from the auxiliary functions in GDS Menu.



- Perform sensor alignment by following the directions shown in the GDS monitor.



- In case of sensor alignment failure, check the alignment conditions. Turn the ignition key OFF, then reperform the sensor alignment procedure.
- Inspection
- Check the bumper appearance and accidents. (Visual appearance of the vehicle, Maintenance and bumper replacement history) ☞ If the vehicle has been crashed, SCC mounting part is highly likely to be twisted.
- Check whether the radar sensor cover of the bumper is dirty. ☞ If the cover is dirty, SCC is highly likely to be released by the foreign substance during operation.
- After engine starting, check SCC warning massage in the cluster and DTC code. (Refer to DTC guide)