

GROUP Body Electrical	NUMBER 20-BE-006H-1
DATE September, 2020	MODEL(S) Elantra (ADa) Santa Fe (TMa)

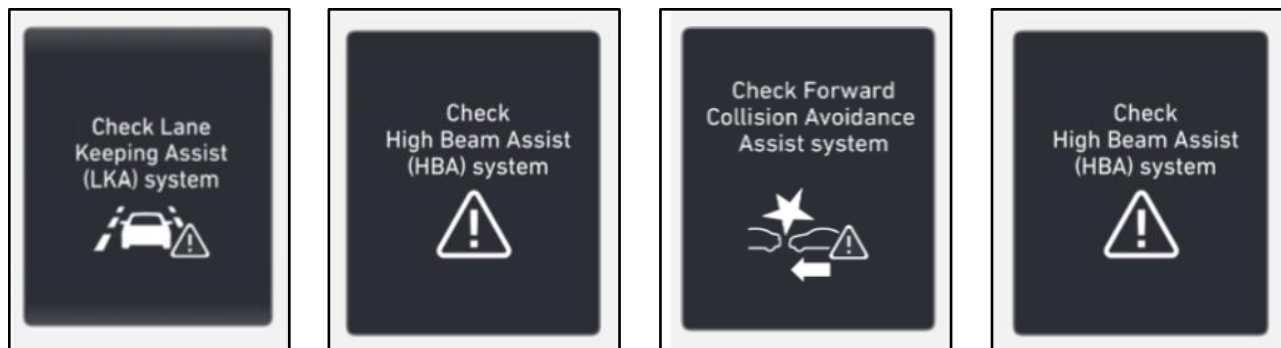
SUBJECT: FRONT VIEW CAMERA REPLACEMENT

This TSB supersedes TSB# 20-BE-006H to expand the affected vehicles date range.

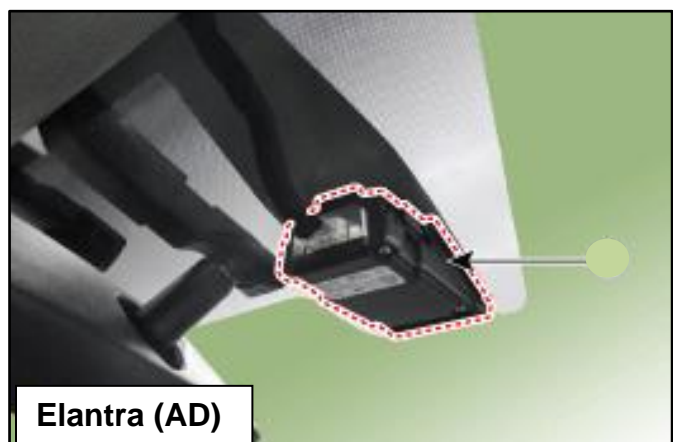
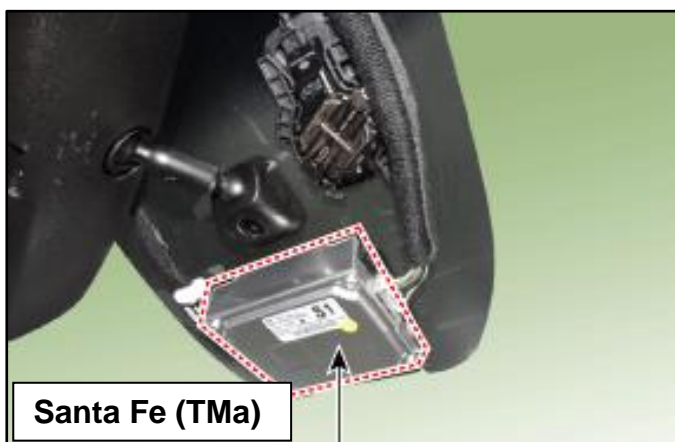
Description: Certain 2019-2020MY Santa Fe and 2018-2020MY Elantra equipped with the front multi-function camera may exhibit one or more of the following warnings on the instrument cluster; Lane Keep Assist System (LKAS), Front Collision Avoidance Assist (FCA), High Beam Assist (HBA), Smart Cruise Control (SCC), and Autonomous Emergency Braking (AEB). This bulletin describes the procedure to replace the front camera/ multi-function camera.

NOTE: When the Warning Indicator Message turns ON, the diagnostic code C1604 (ECU Hardware Error) or C1606 (CAN Time out - BCM & ADM or ECU Software – Error) will be triggered.

EXAMPLE OF POSSIBLE WARNING MESSAGES



FRONT CAMERA




Applicable Vehicles: Certain 2018-2020 MY Elantra (ADa) produced from 8/31/18 - 9/15/20 and 2019-2020 MY Santa Fe (TMa) produced from 5/23/18 - 9/14/20 equipped with the front view camera.

SUBJECT:**FRONT VIEW CAMERA REPLACEMENT****Parts Information:**

Model	PART NAME	PART NUMBER	QTY
Elantra (ADa)	UNIT ASSY-FR VIEW CAMERA	99211-F2000	1
Santa Fe (TMa)	UNIT ASSY-FR VIEW CAMERA	99211-S2000	1

Special Service Tools:

SPECIAL SERVICE TOOL	PART NUMBER	DESCRIPTION	PHOTO
Calibration Target	09964-C1100	The calibration target provides front camera alignment verification. Additional calibration target tool can be order through Bosch at (866) 539-4248.	

Warranty Information:

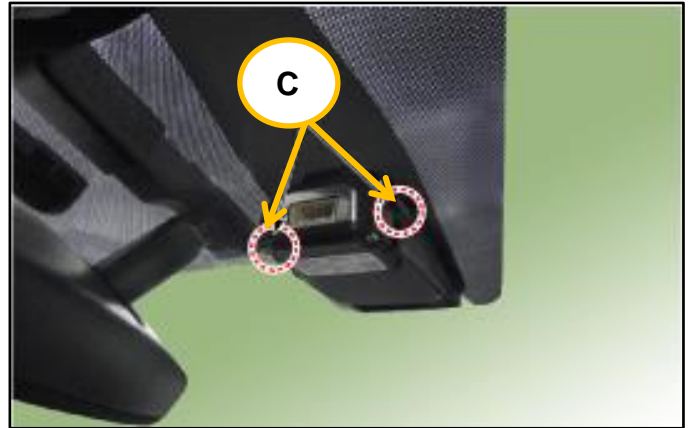
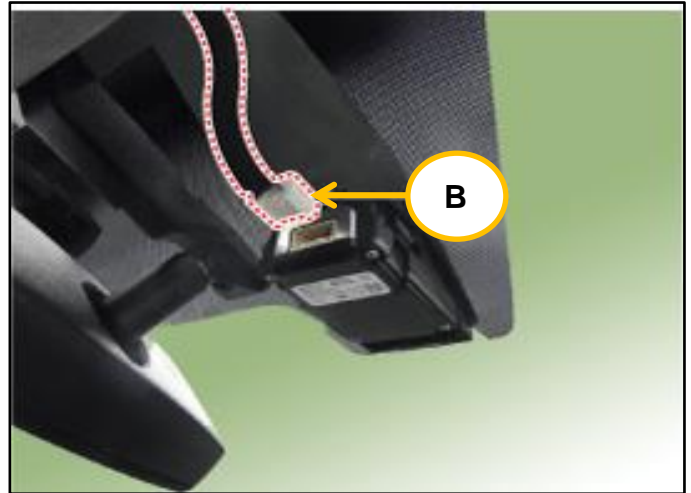
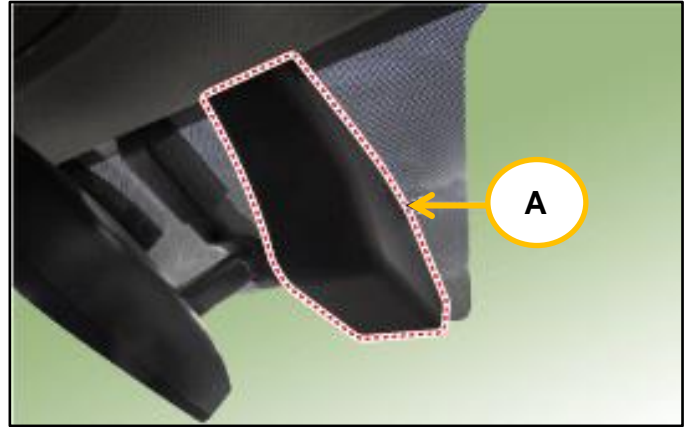
MODEL	OP CODE	OPERATION	OP TIME	CAUSAL PART	NATURE CODE	CAUSE CODE
Elantra (ADa)	00DA06R2	Camera Replacement + Recalibration	0.4 M/H	99211-F2000	I3N	ZZ1
Santa Fe (TMa)	00DA06R1	Camera Replacement + Recalibration	0.5 M/H	99211-S2000	I3N	ZZ1

NOTE 1: Submit Claim on Campaign Claim Entry Screen.

NOTE 2: If a part is found in need of replacement while performing the repair for this TSB, and the affected part is still under warranty, submit a separate claim using the same Repair Order. If the affected part is out of warranty, submit a prior approval request for goodwill consideration prior to performing the work.

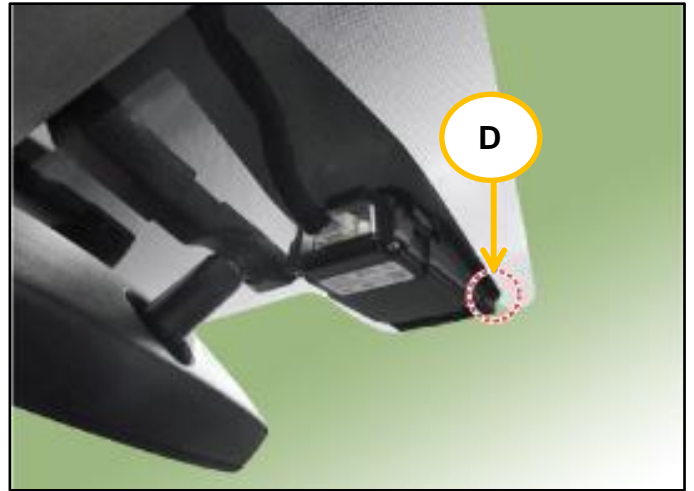
Service Procedure:**A. Elantra (ADa) Front Camera Disconnection**

1. Remove the front view camera unit cover (A).
2. Disconnect the front view camera unit connector (B).
3. Disengage the mounting bracket, and remove the front view camera unit (C).



B. Elantra (ADa) Front Camera Installation

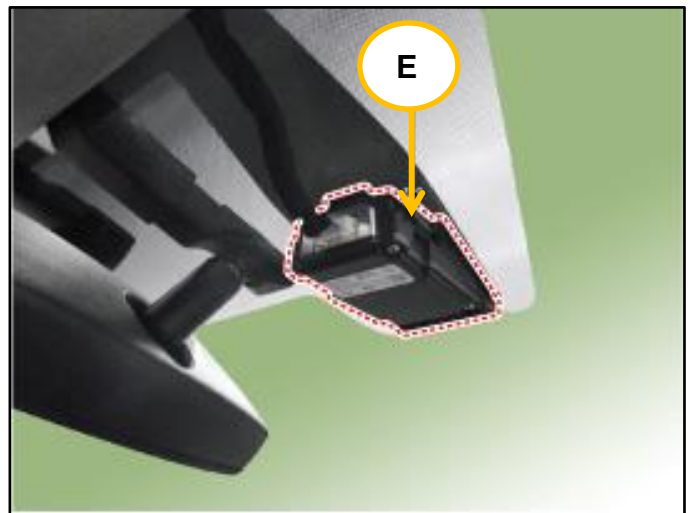
1. Align the front view camera with the mounting bracket using the forward edge point (D). Re-engage the mounting bracket.



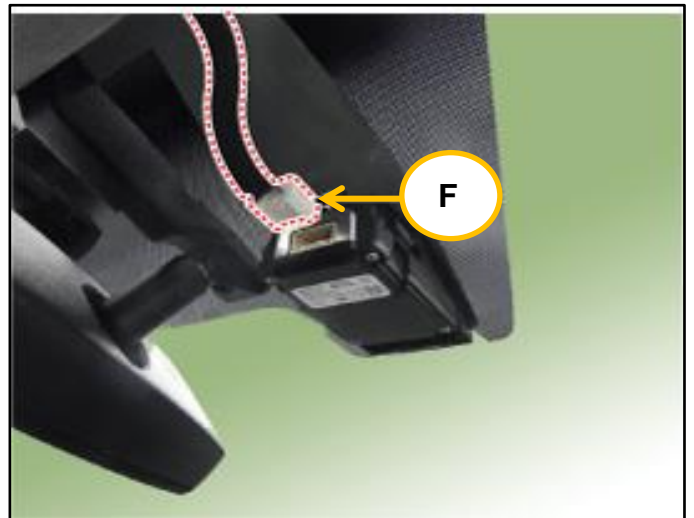
2. Engage the snaps and pivot the camera upwards to lock the camera in place (E).

NOTICE

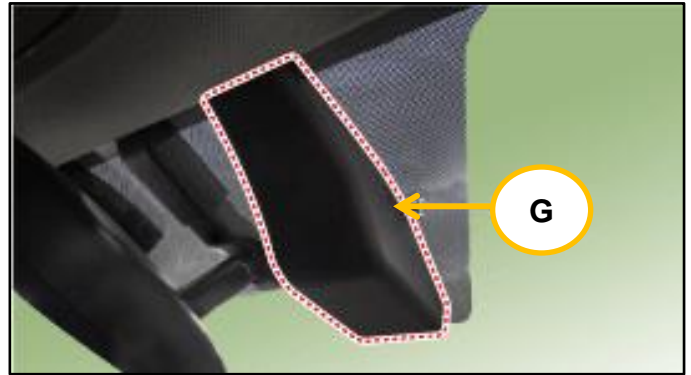
A 'clicking' sound will signal that the camera is fully seated.



3. Connect the front view camera unit connector (F).

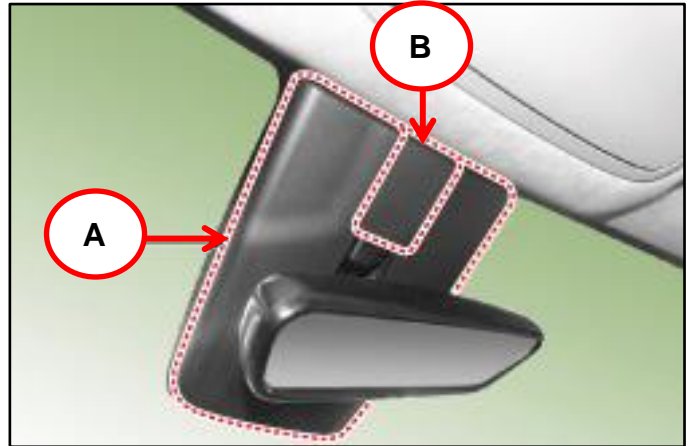


4. Attach the front view camera unit cover (G).

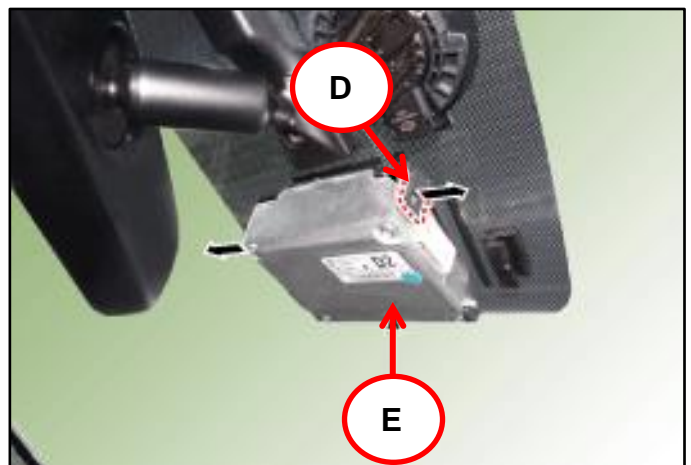
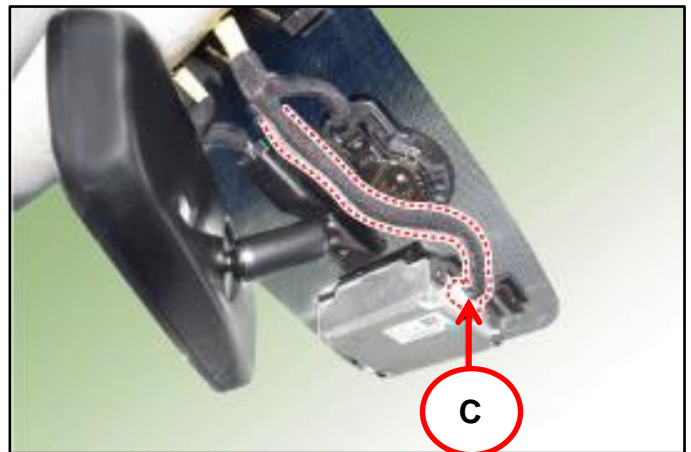


C. Santa Fe (TMa) Front Camera Disconnection

1. Remove the mirror wiring cover (A) and rain sensor cover (B) .
2. Disconnect the front view camera connector (C).

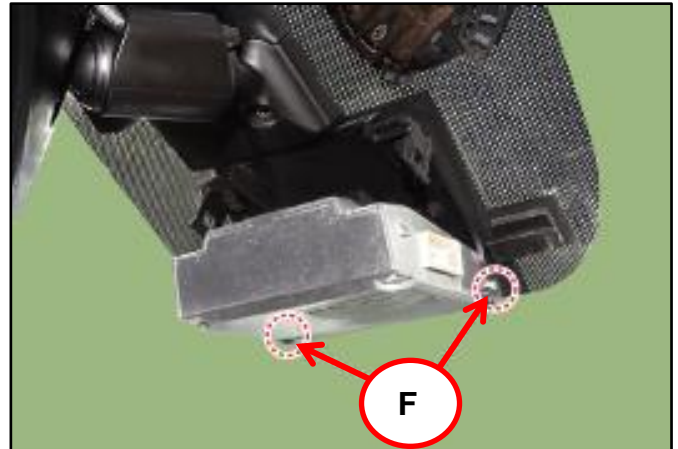


3. Separate the fixed points of the coupler (D) and remove the front view camera (E).



D. Santa Fe (TMa) Front Camera Installation

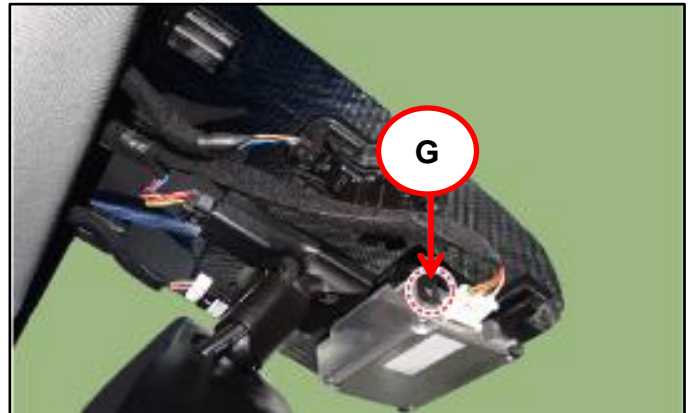
1. Align the front view camera to the reference points (F).



2. Apply force to lock the camera in place (G).

NOTICE

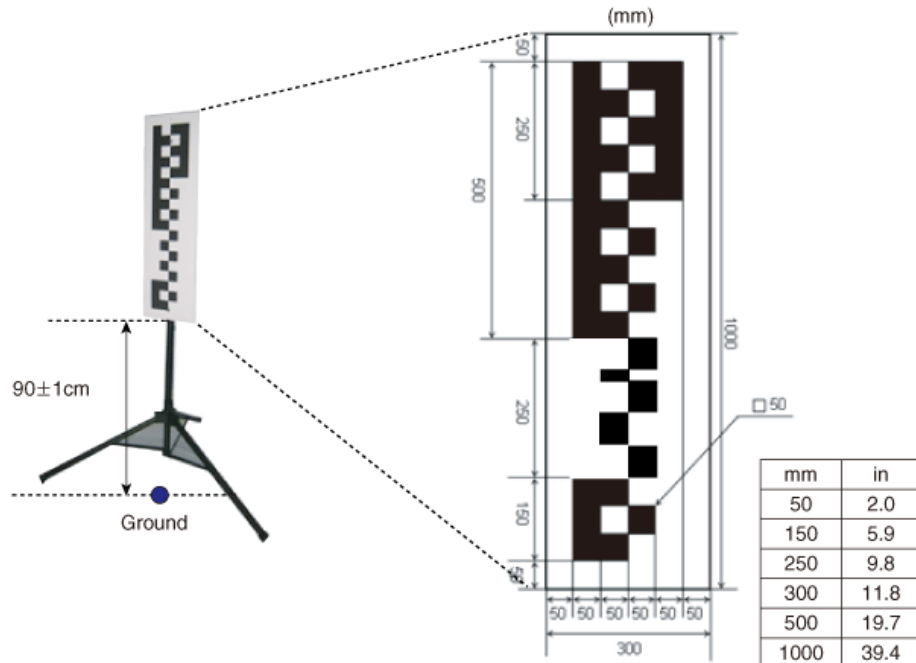
A 'clicking' sound will signal that the camera is fully seated.



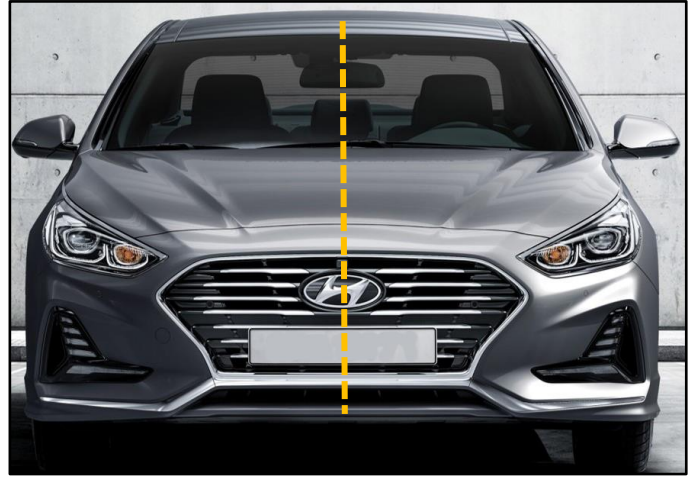
3. Reassemble all parts in reverse order of removal.

E. Service Point Target Auto Calibration

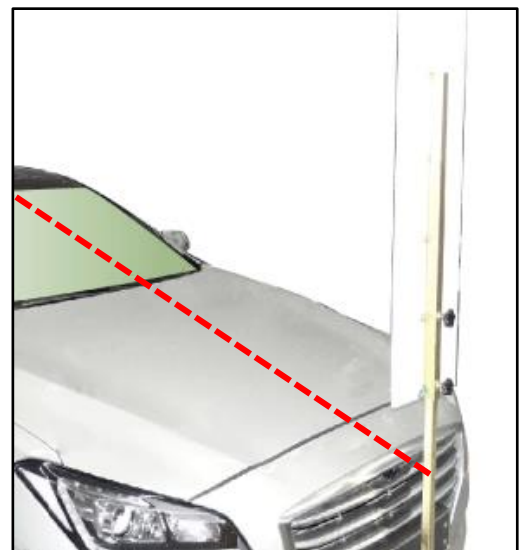
1. Install the calibration target as displayed in the reference picture.



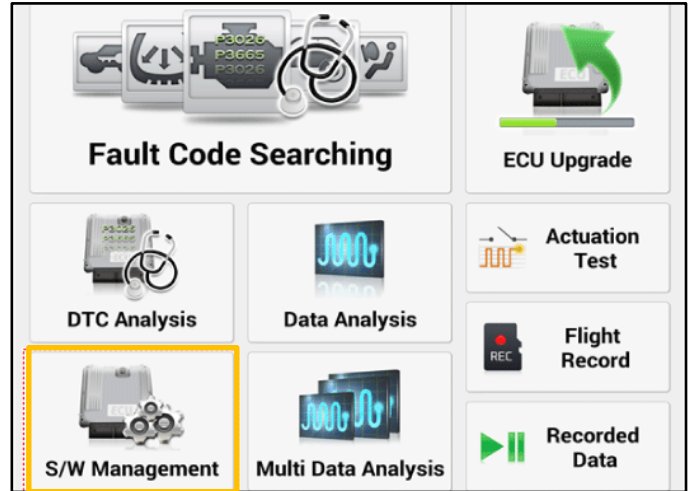
- 2. Use the Hyundai emblem to determine the vehicle centerline.



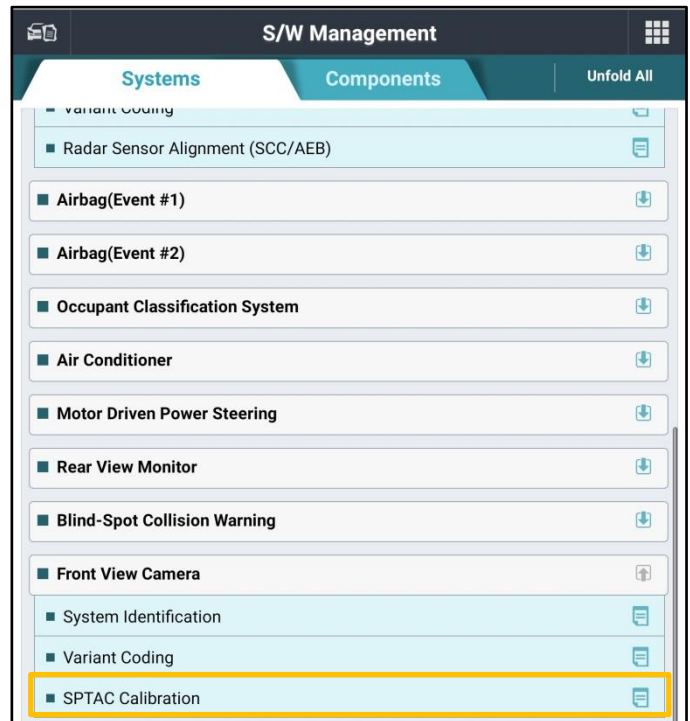
- 3. Place the calibration target in front of the vehicle centerline.



- 4. Access the Hyundai GDS-M.
Select **S/W Management**.

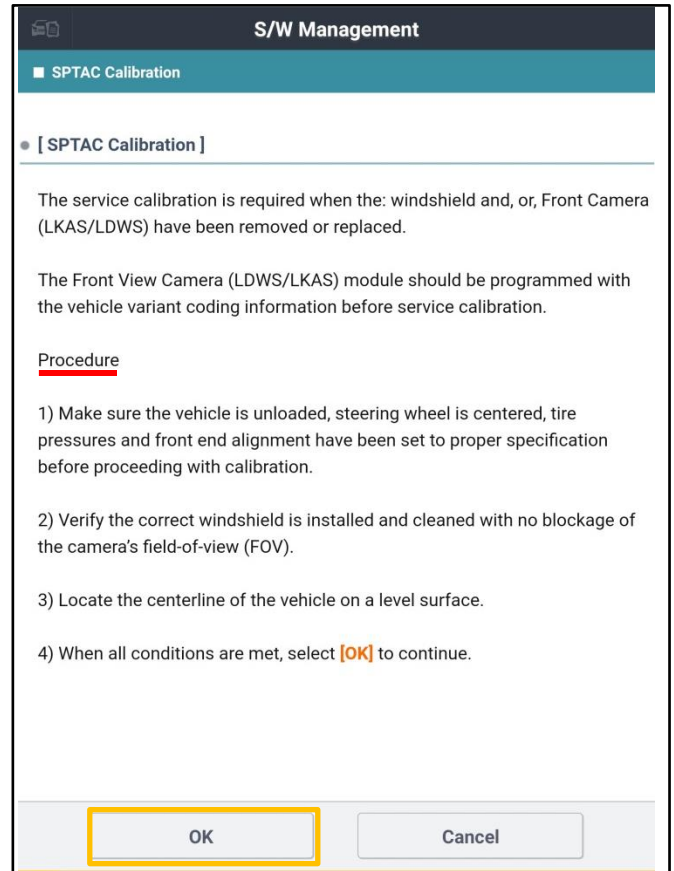


- 5. Select **Front View Camera**
Select **STPAC Calibration**.



6. Verify the steps listed in the **Procedure** section have been performed.

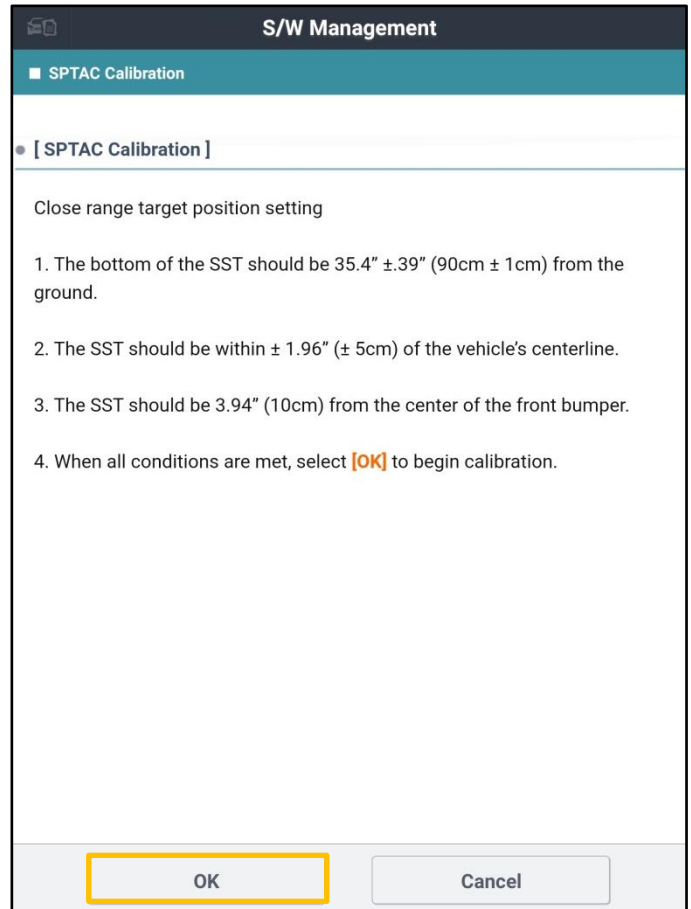
Select **OK**.

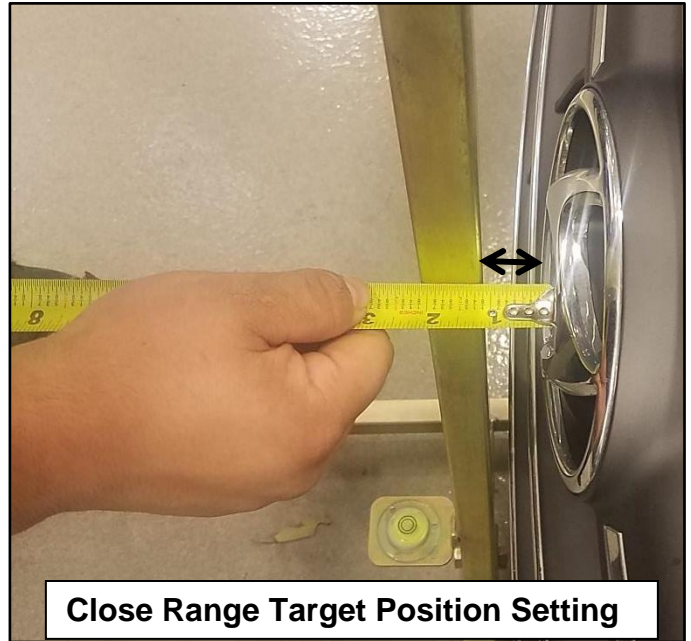


7. **Close Range Target Position Setting**

Use a tape measure to align the calibration target with the vehicle. The target must be aligned to the GDS-M specifications.

Select **OK** when complete.

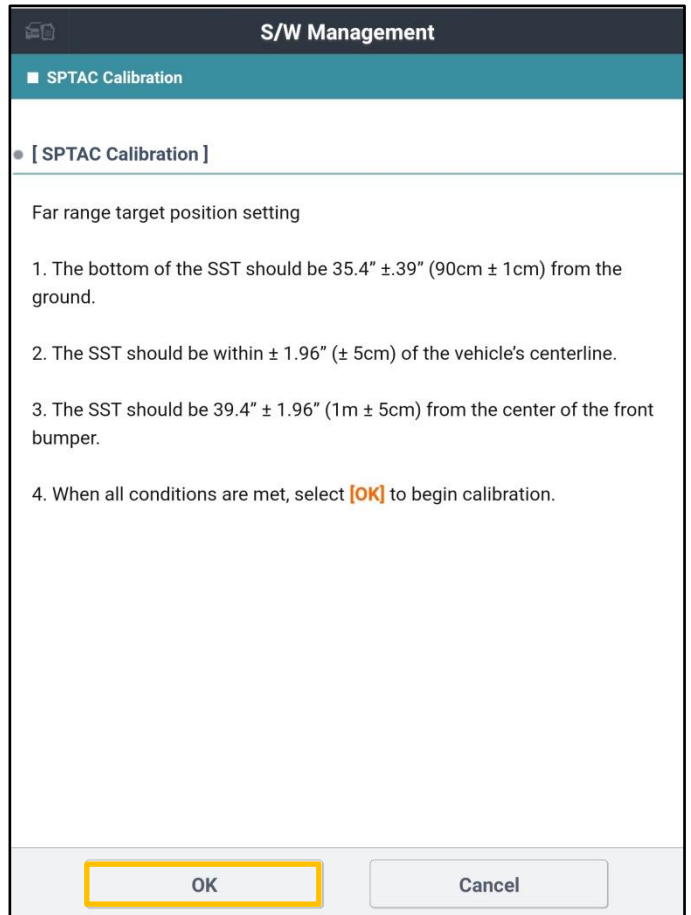


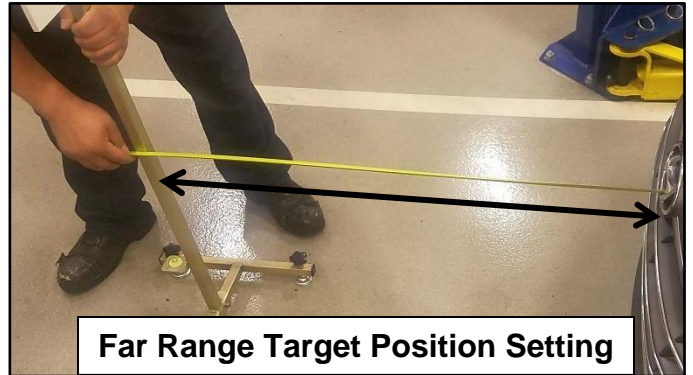


8. **Far Range Target Positioning Setting**

Use a tape measure to align the calibration target with the vehicle. The target must be aligned to the GDS-M specifications.

Select **OK** when complete.

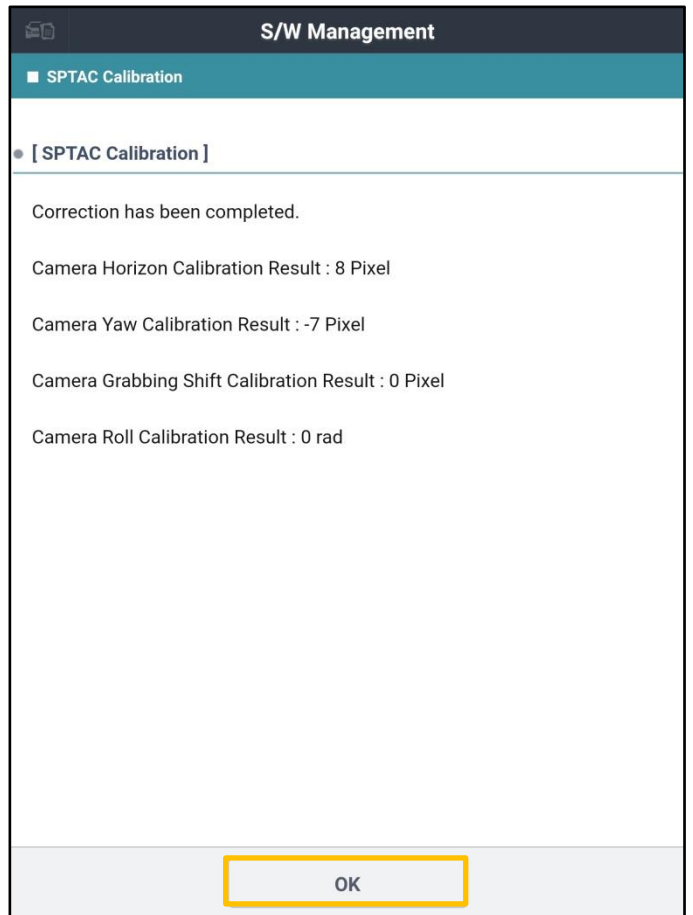




9. If the calibration was performed correctly, a confirmation screen will appear.

Select **OK**.

If the calibration was not performed correctly, perform the procedure again until the target position is aligned properly.



10. Please verify that LKAS, FCA, HBA, SCC, AEB warnings and function conditions do not exist on the instrument cluster.
11. The service procedure is now complete.