SC-20-90-04.01

Type: Service Communication
Year: 2020
System: 90- Electrical
Sequence: 04

RADAR Calibration

Applicability: MY20 Revero GT and GTS
Market Region: All

Revision 1: Update for vertical location of Radar mirror
PURPOSE: Supplement to the Karma Sync Procedure for Radar Module Calibration

Using C161197900500 Radar alignment tool, follow the prompts in Karma Sync and use this as a supplement to the work shop manual or any instructions provided with the tool.

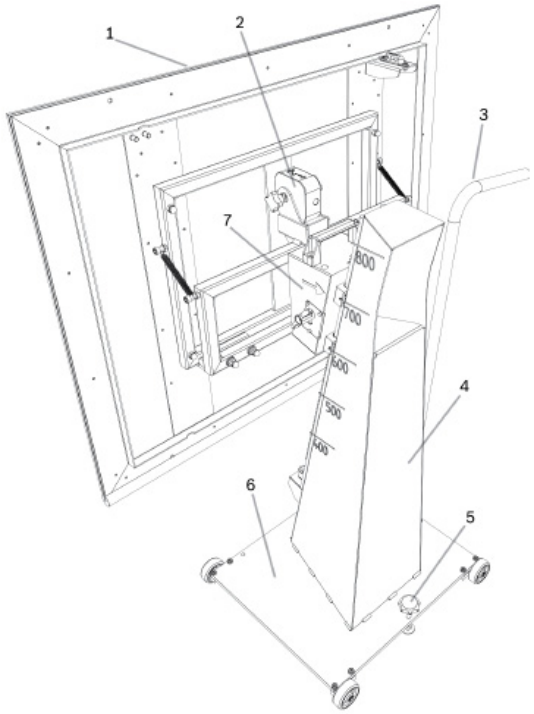


Fig. 1: RSCD 2100

1. *Mirror unit (ICC sensor target plate)*
2. *Mirror mount with tilting unit*
3. *Handle*
4. *Post with height scale*
5. *Positioning foot*
6. *Base plate with wheel modules*
7. *Base slide gauge with vertical release*



Fig. 2: "Standard" laser alignment unit

1 Laser mount
2 Laser module with on/off switch

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Remove the rubber shroud from the radar module (fig.1a and 1b) by pulling it off to prepare for alignment. (Install is the reverse, slide in the top portion to the clip and then the lower)

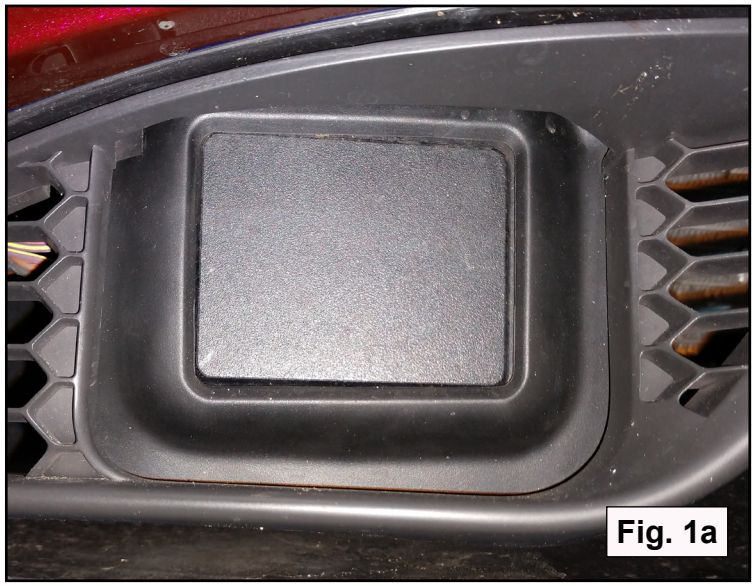


Fig. 1a



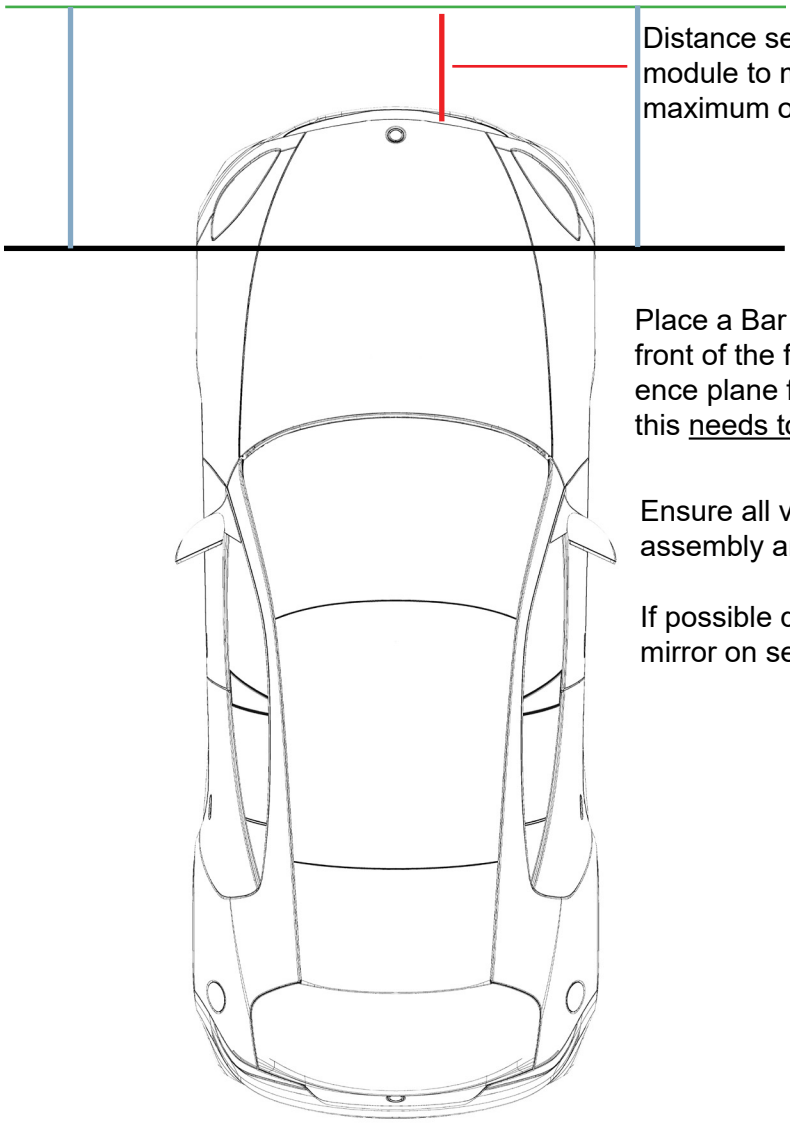
Fig. 1b

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Radar Alignment set up: Set up the mirror parallel to the drive wheel, in front of the center line of the radar module. This is an essential and important first step!



Distance set: 1.2m from radar module to mirror surface maximum of 1.8m

Place a Bar (conduit or straight tube) in front of the front wheels to make a reference plane for the front mirror this needs to be parallel to the rear axle!

Ensure all vehicle tires and entire mirror assembly are on a single flat area.

If possible do not place rear wheels and mirror on separate floor sections.

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Camera Alignment Procedure:

1. Start with the mirror in position 2 (“0 degrees”) is perpendicular to the ground. Once mirror is aligned correctly to the radar module. Check the bubble level (Fig. 2a) and set this level by turning the base knobs turning in the clockwise or anti-clockwise direction as needed.
The rear most knob is forward tilt. (Fig.2b)

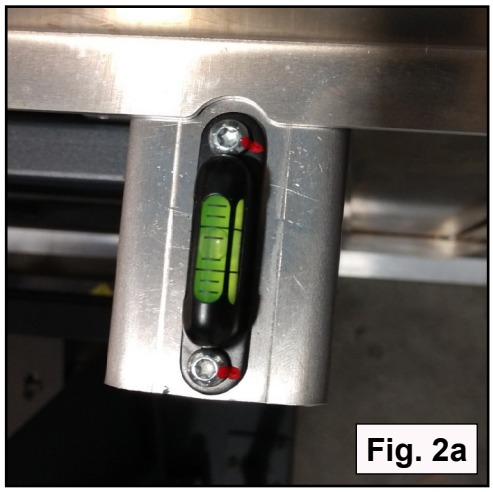


Fig. 2a

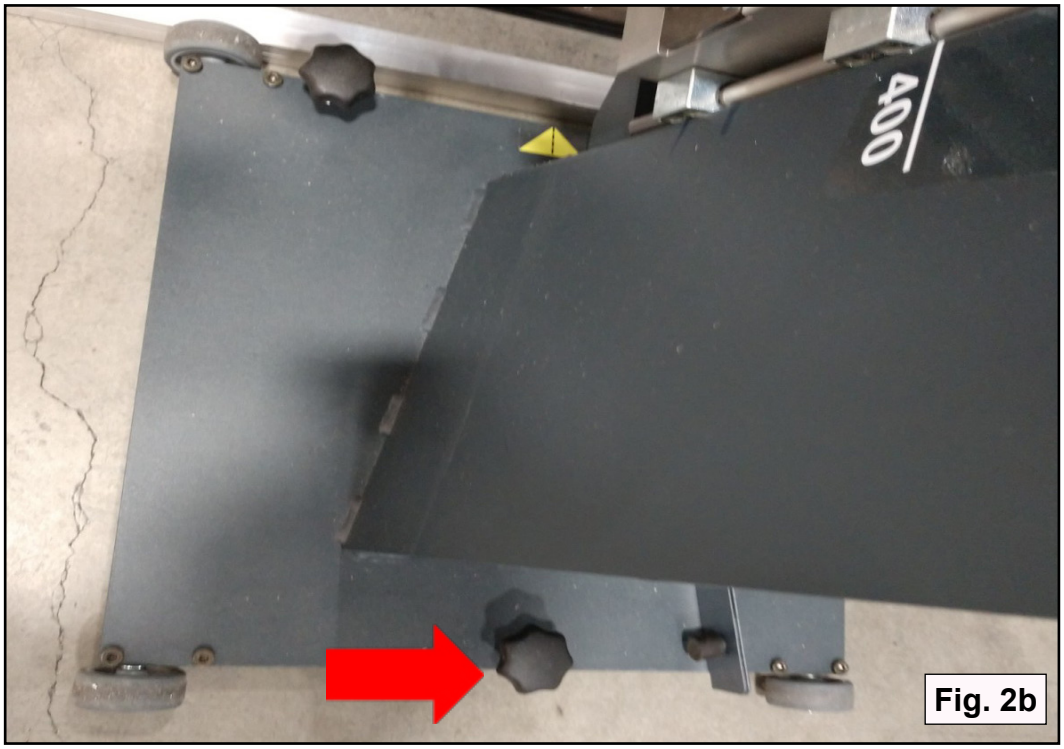


Fig. 2b

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NOTE: Vertical alignment of mirror, should have be centered on the Radar module. That is the center of mirror must point to center of the radar sensor. This is also found in the RCD 2100 manual which should be supplied with the tool.
For the Karma Revero GT and GTS, and the GS-6 vehicles
note the position in Fig.2b, the bottom bracket is located 260 mm from the base of the unit, and the top bracket lower edge is at the 400 mark (360 mm from unit base.)



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Follow the prompts in Karma Sync Service Procedures selection. Position 1 on the Alignment Mirror is shown below, position the mirror as requested. When making changes to the angle of mirror make sure it is moved gently forward enough to rotate the block. Place in position 1 at two (2°) degrees,(fig. 3), follow the prompt to position 2 at zero (0°) degrees (fig. 4) and continue as directed to position 3 at two (2°) degrees back (fig.5) as shown.
You will be instructed to move to the next position in order for the calibration to begin.

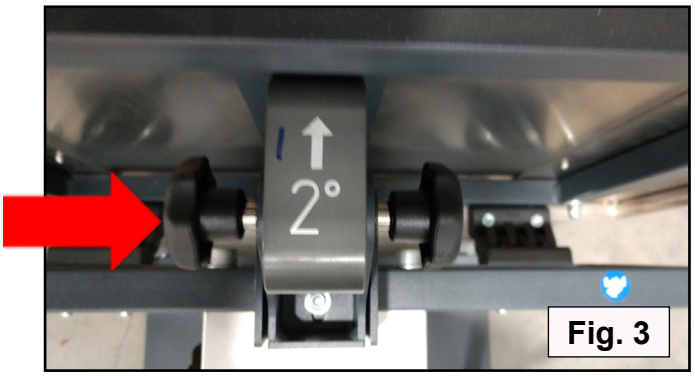


Fig. 3

NOTE: When pressing the Karma Sync action, insure there are no vibrations around the setup this may adversely influence the calibration. (People walking by can cause enough vibration!)

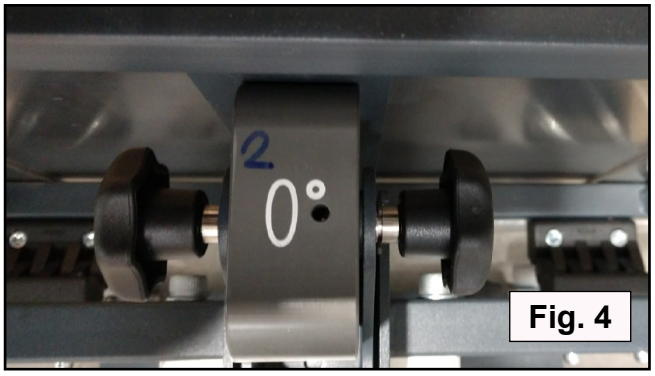


Fig. 4

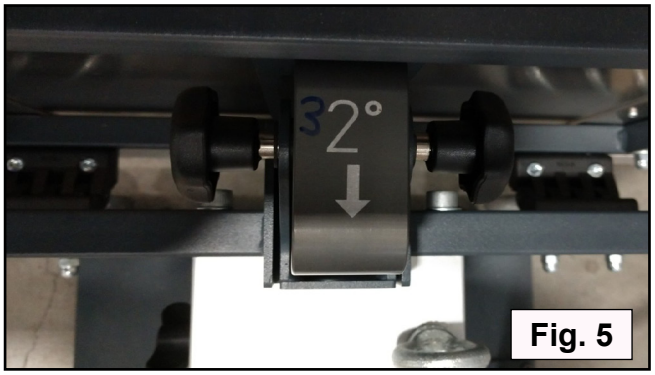


Fig. 5

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Karma Sync will instruct you which adjust should be made. (fig.6a) use the scroll bar to see the instructed adjustment - this will be different on every calibration and vehicle(fig 6b).
The (as facing) the left lower adjustment screw will manage vertical alignment, the right side upper adjustment screw handles horizontal alignment. You may be required to adjust one or both or neither.

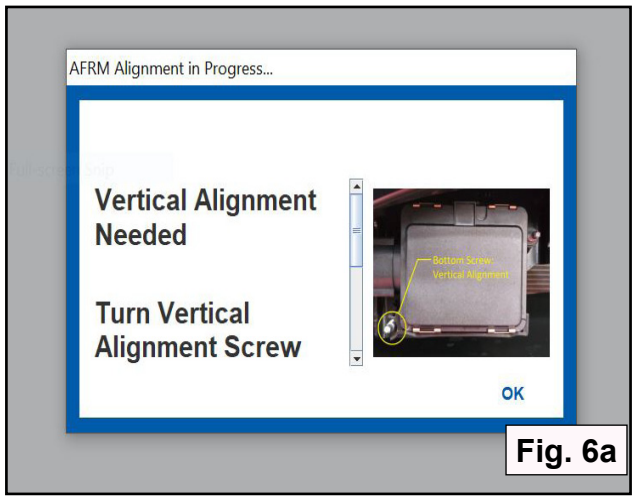


Fig. 6a

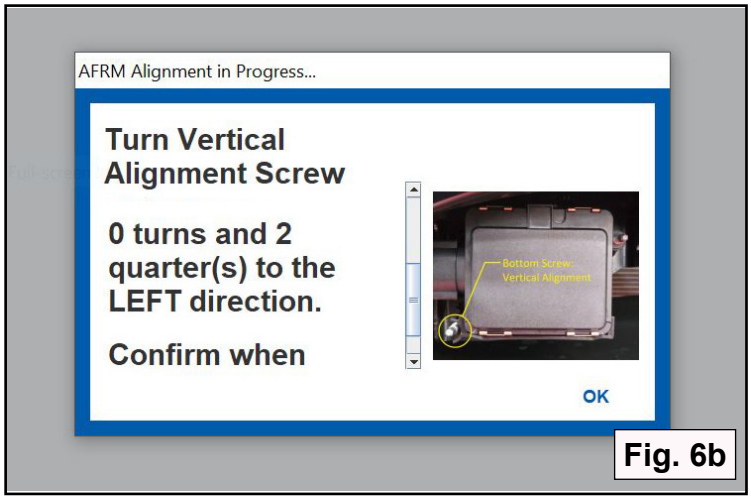
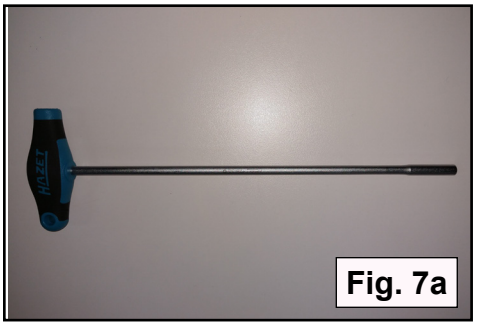
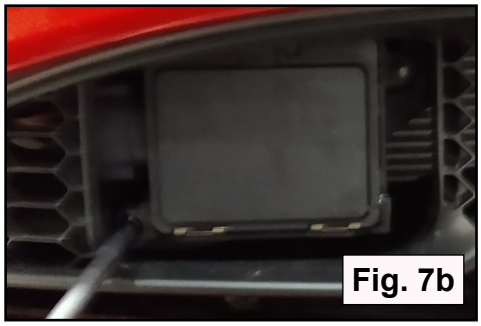
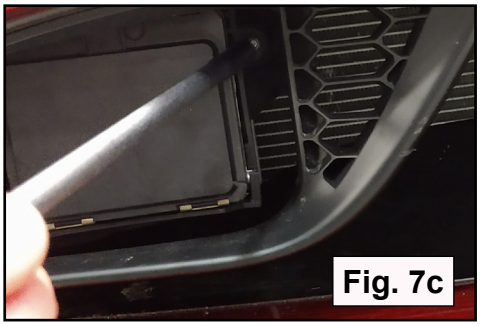


Fig. 6b


Fig. 7a


Fig. 7b


Fig. 7c

Radar module socket this example is a Hazet 428-3.5 hex socket (fig. 7a) and the vertical adjustment screw (fig.7b and the horizontal adjustment (fig. 7c.)
The Hex socket tool can be sourced locally, it is not supplied by Karma Automotive.

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Karma Sync will inform you when each direction is correctly performed, a prompt will appear. (fig.8) When all steps are completed as directed the procedure will be done (fig. 9). Replace the radar shroud and test drive.

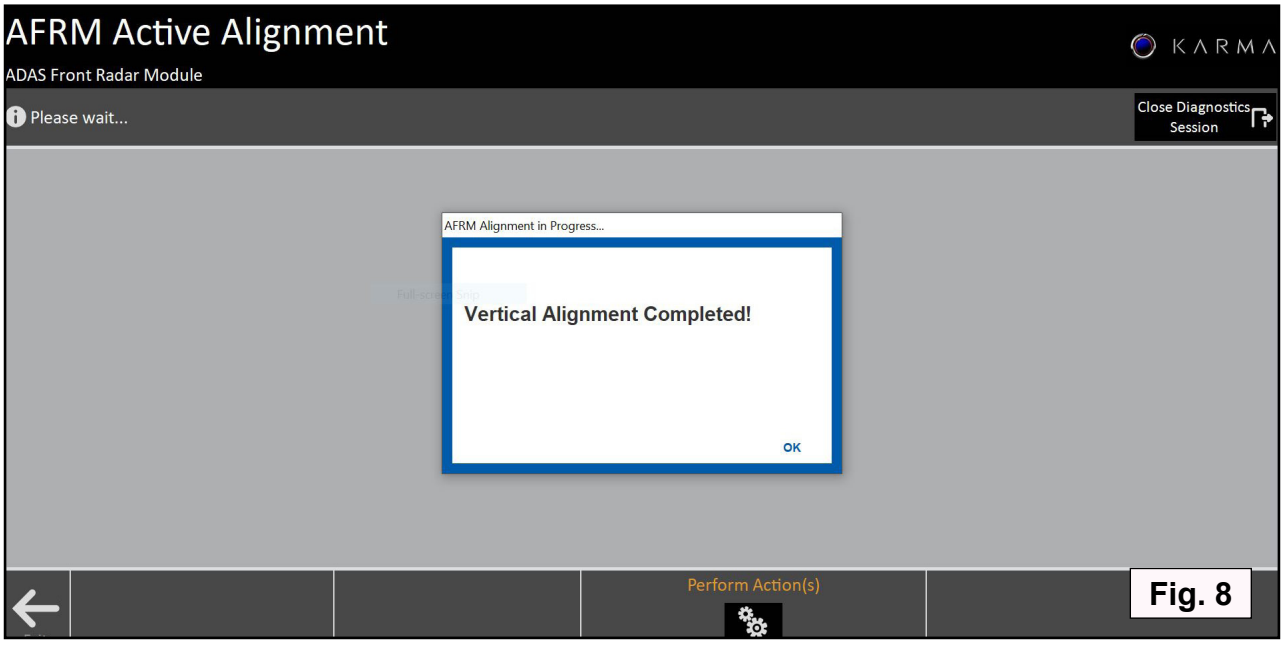


Fig. 8

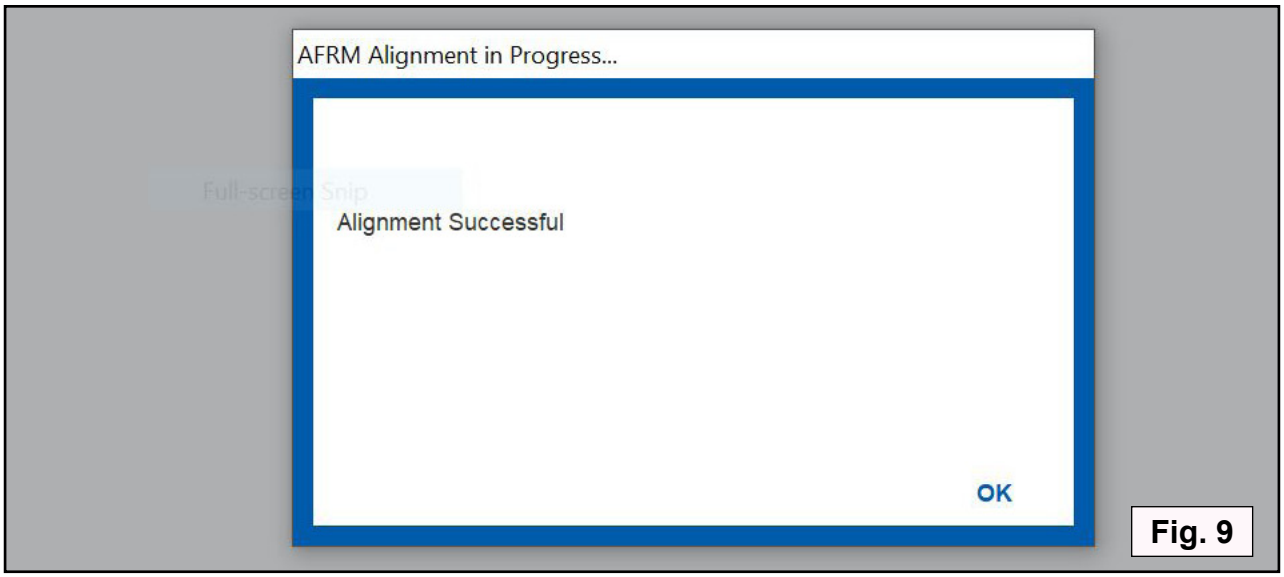


Fig. 9

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KARMA

SC-20-90-04.01

Type: Service Communication
Year: 2020
System: 90- Electrical
Sequence: 04

RADAR Calibration

Applicability: MY20 Revero GT and GTS
Market Region: All

PARTS REQUIRED:

PART NUMBER	DESCRIPTION	QTY
	N/A	

SHOP SUPPLIES:

DESCRIPTION
N/A

SPECIAL TOOLS and PARTS:

PART NUMBER	DESCRIPTION	QTY
C161197900500	Radar alignment tool	1

LABOR CODES:

CODE	TIME	DEFECT CODE
90-25-16-07	0.5	90-25-16-13

SUBLET:

CODE	DESCRIPTION	AMOUNT
N/A		

CAUSAL PART:

PART NUMBER	DESCRIPTION
C131197003100	AFRM

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