



**PREVOST**

ENREGISTRÉ - REGISTERED  
**ISO 9001 & ISO 14001**

**MAINTENANCE Mi11-06D  
 INFORMATION**



<b>DATE :</b>	<b>FEBRUARY 2011</b>	<b>SECTION :</b>	<b>23 - Accessories</b>
<b>SUBJECT :</b>	<b>PREVOST AWARE ADAPTIVE CRUISE BRAKING (ACB) • FLR10 RADAR SENSOR ALIGNMENT</b>		

<b>REVISION :</b>		<b>THIS REVISION SUPERSEDES PREVIOUS VERSION.</b>
<b>D</b>	NEW KIT #7770169 FOR US SERVICE CENTERS	
<b>C</b>	ADDITION OF END OF VALIDITY IN APPLICATION BOX	

**APPLICATION**

<b>Model</b>	<b>VIN</b>	
All	Equipped with PrevoSt AWARE Adaptive Cruise Braking system Up to H3 Series: 2PCH33494 <u>EC712659</u> incl. X3 Series: 2PCG33494 <u>EC735693</u> incl.	

**DESCRIPTION**

PrevoSt AWARE Adaptive Cruise Braking (ACB) is an optional cruise control that adds an additional mode of operation to conventional speed controls, familiar to most drivers of passenger cars. This mode is called distance control. Distance control adjusts the speed of the vehicle to maintain a constant following interval (distance) to the vehicle ahead. Using a radar sensor mounted to the front bumper, the ACB system measures the distance between the coach and the forward vehicle.

If the radar sensor becomes misaligned (or any other system problem is detected) a pop-up message will show on the DID to notify the driver that service is needed.

If a radar fault condition appears, one of the following pop-up messages will show in the DID.

ACB RADAR MISALIGNMENT  
 ACB RADAR FAULT

ACB RADAR DATA LINK FAILURE  
 ACB RADAR BLOCKED

The first step to go through when a customer complains about false alarms or bad system performance is to check the radar sensor alignment.

<b>NOTE</b>
<i>The maximum radar range is approximately 500 feet (150 meters). Rain, snow, fog, ice and other severe weather conditions may affect the performance of the ACB system and shorten radar range. Should the radar sensor be blocked with ice, snow or other foreign matter, the pop-up message ACB RADAR BLOCKED will show on the DID.</i>

The ACB radar sensor is pre-aligned at the factory and no adjustment should be needed. It will not function properly if misaligned after a collision. Information may appear on the DID to let you know if the sensor is misaligned. Realigning the radar sensor requires a qualified technician, the radar sensor alignment tool and the present procedure.

**Radar sensor alignment tool:**

**Canada #685349.**

**USA kit #7770169.**

**Each Service Center is equipped with one unit.**

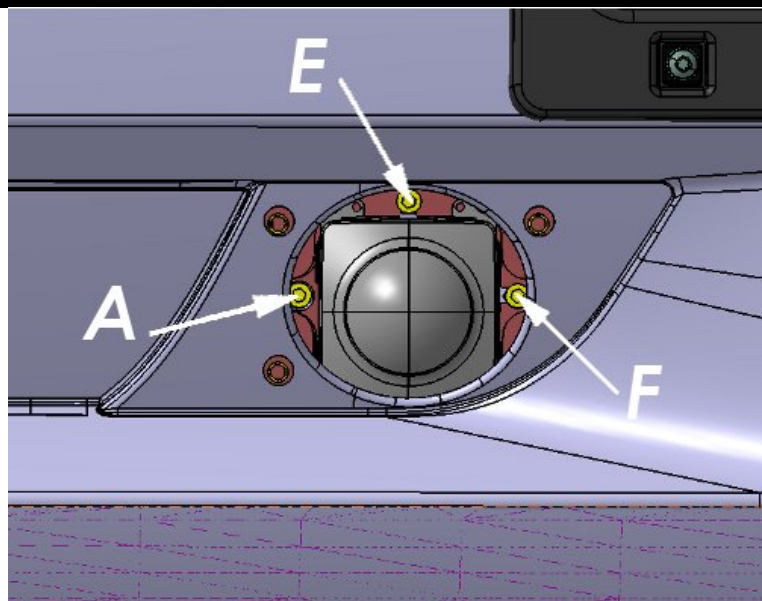
**PROCEDURE**

**⚠ DANGER**

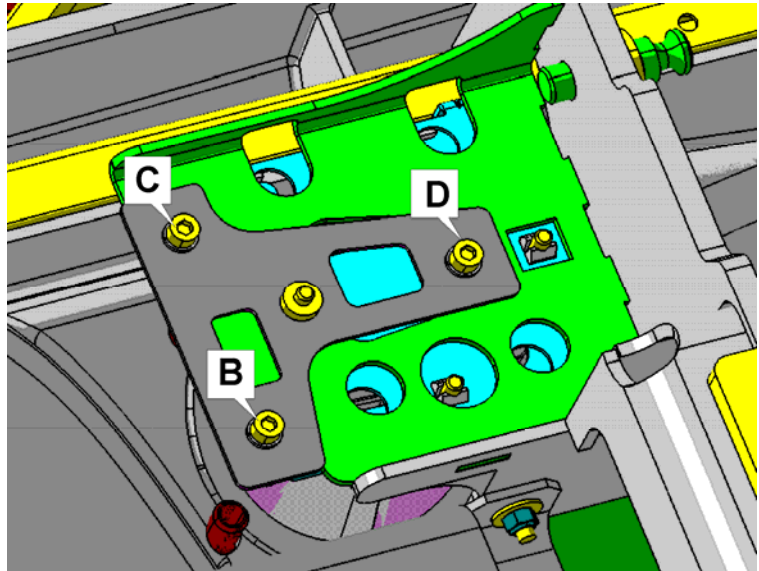
Park vehicle safely, apply parking brake, stop engine and set battery master switch(es) to the OFF position prior to working on the vehicle.

**Part 1 RADAR CENTERING**

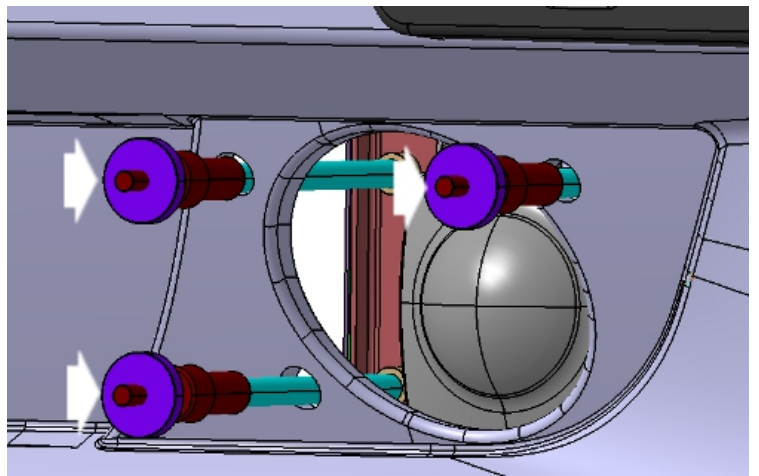
1. Adjust the radar sensor position in reference to the bumper opening to respect the required radar conical beam clearance.
2. Loosen screw **A**.
3. Open the reclining bumper.



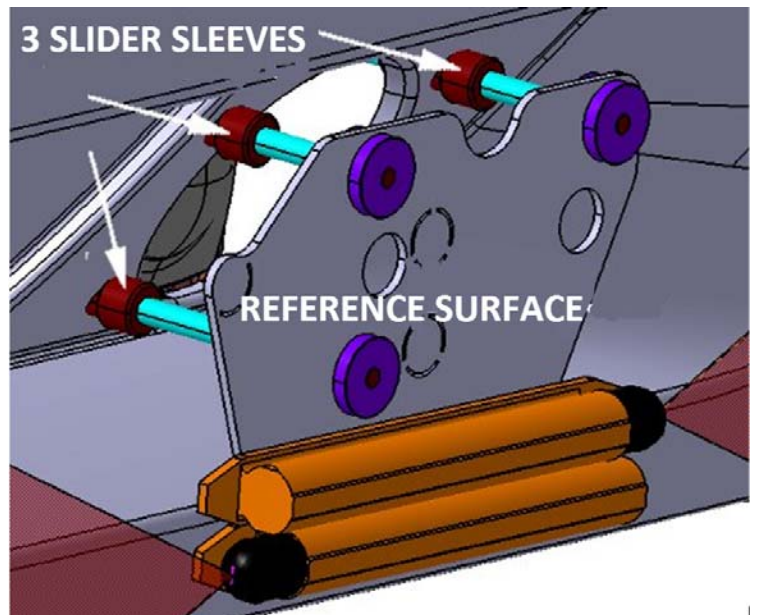
- Loosen screw **B**, **C** and **D**. The radar can be moved at this time.
- Close reclining bumper.



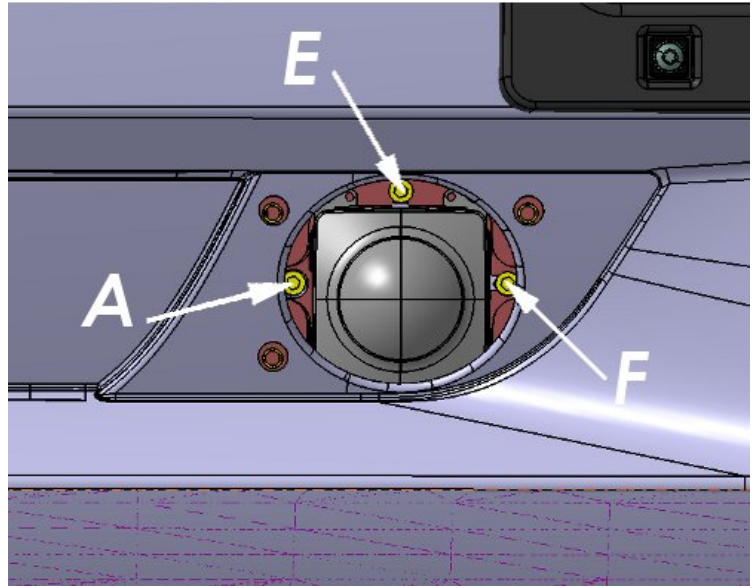
- Screw the 3 extensions included with the alignment tool firmly onto the radar sensor base plate as shown on figure at right.



- Fix the alignment tool reference surface to the 3 extensions.
- Move the slider sleeves into the 1/2" diameter bumper skin holes to position the radar sensor assembly.

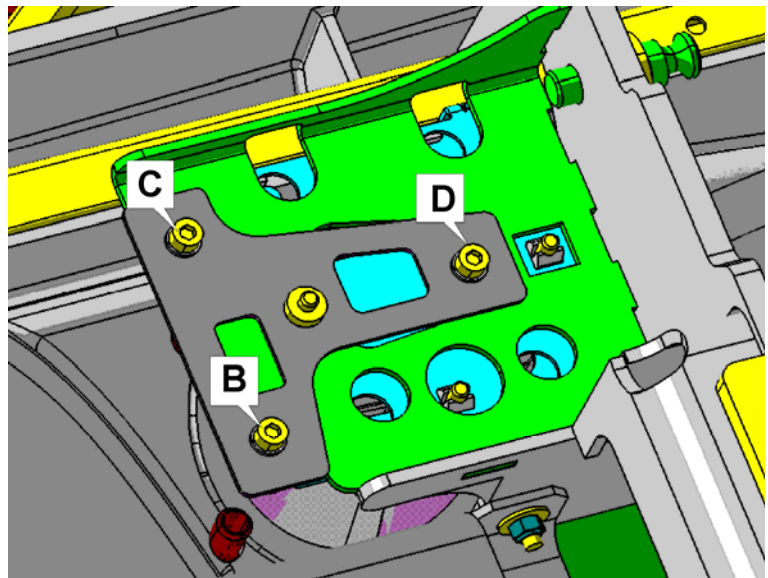


9. Tighten screw **A**.

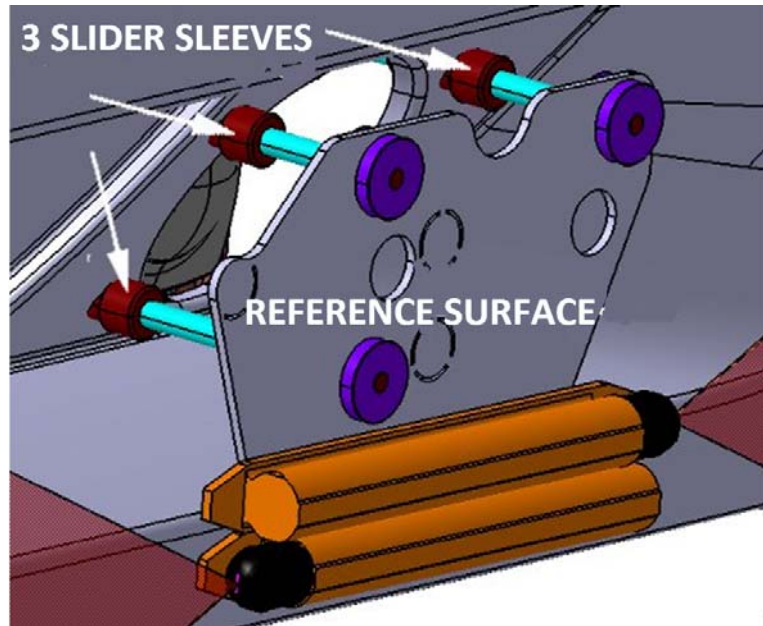


10. Lower reclining bumper and tighten screw **B**, **C** and **D**.

11. Close reclining bumper.



12. Slide the 3 slider sleeves out of the bumper skin holes.



## Part 2 TILT ADJUSTMENT (VERTICAL)

13. Press the digital angle gauge ON/OFF button.

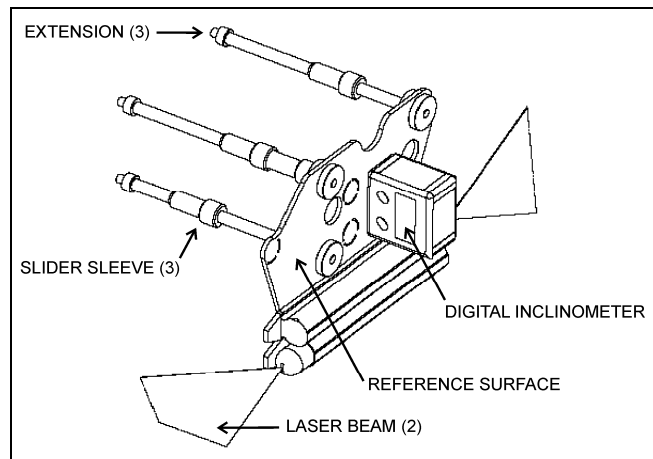


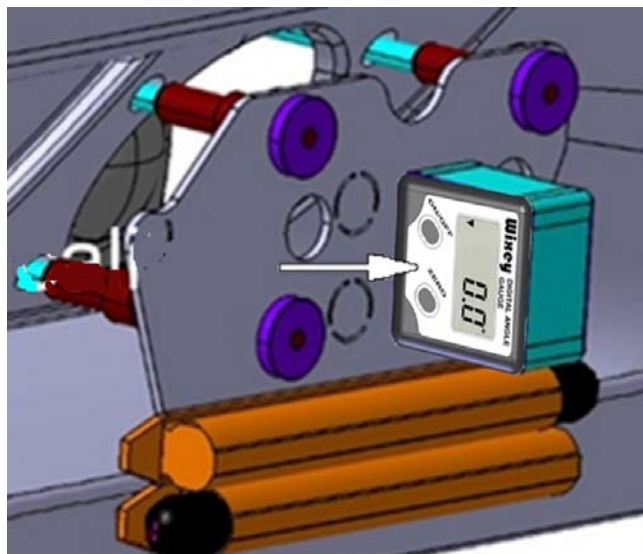
14. Set the digital angle gauge flat on a vertical chassis member. Check for proper verticality of the vertical member using a bubble level.

15. Press the ZERO button to set the gauge to 0.0°. LCD display will show 0.0°.

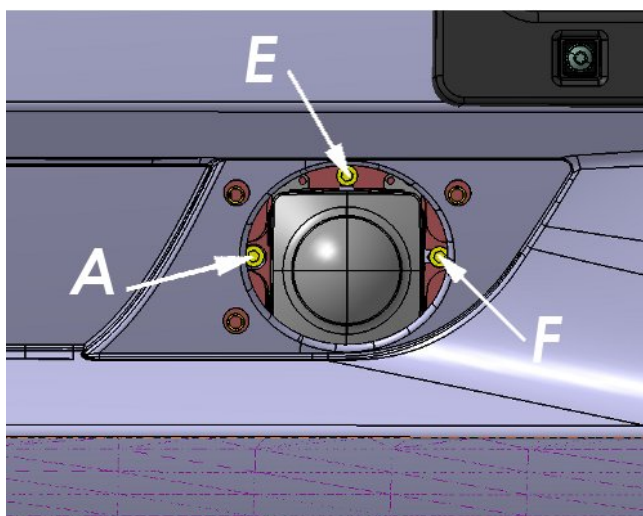


16. Place the digital angle gauge on the alignment tool reference surface as shown on figure 3.



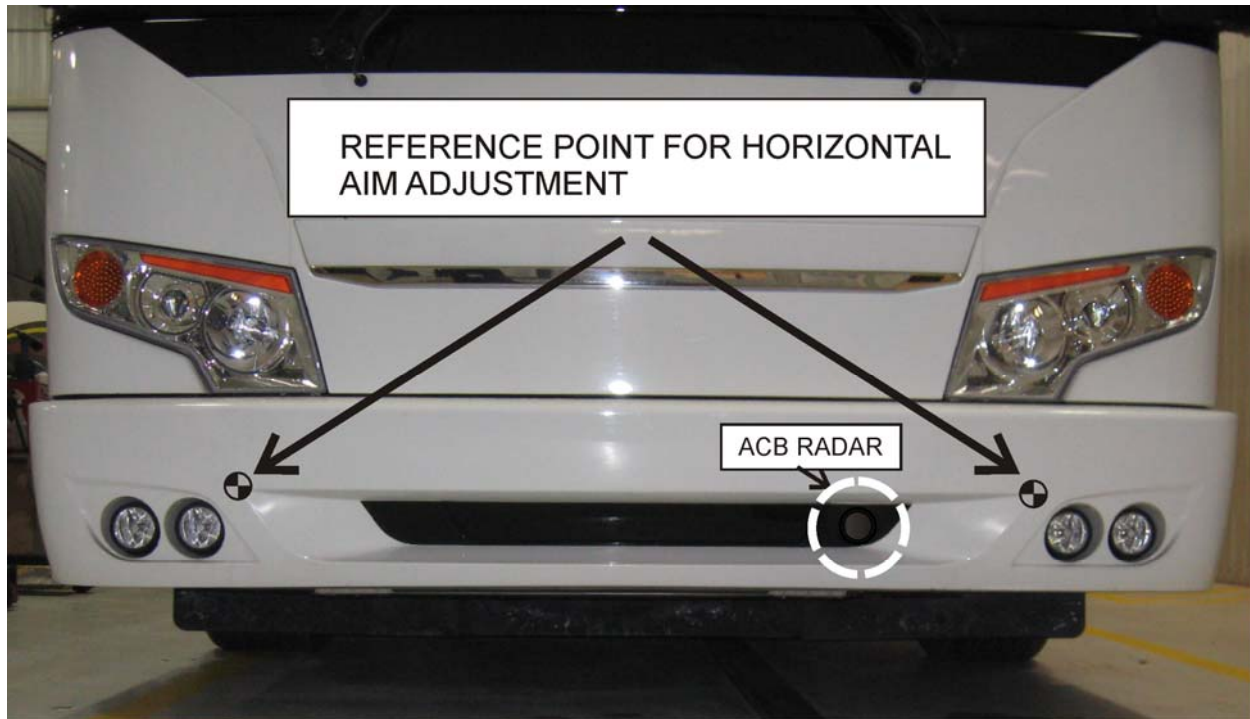


17. Screw **E** serves as tilt (vertical plane) adjustment. Turn screw **E** clockwise or counterclockwise depending on direction needed until digital angle gauge reads 0.0°.
18. If it's not possible to obtain 0.0° reading, assure that the 3 extensions are not leaning against the bumper skin at the 3 holes.
19. If the extensions are leaning against the bumper skin, repeat steps 1 thru 17.

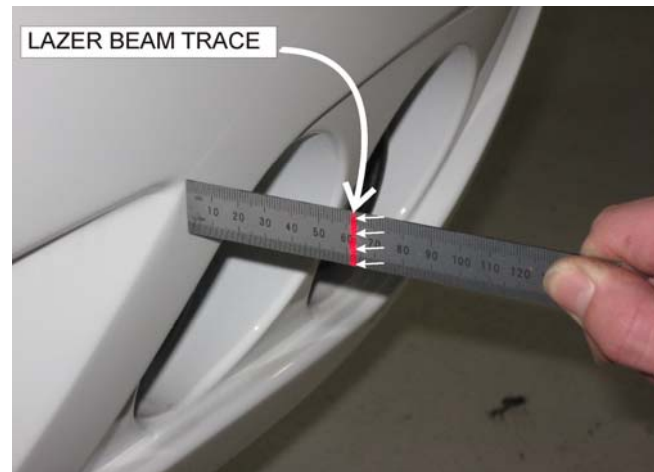


### Part 3 HORIZONTAL AIM ADJUSTMENT

20. Define two symmetrically located reference points on the bumper. Later in this procedure, the distance between the bumper surface at these reference points and the laser beam will be measured and then adjusted to be equal on both sides.



21. Turn on each laser and select the flat beam type
22. Using a measuring tape, measure distance between the bumper at the reference point and the laser beam. This measure must be equal on both sides.
23. Screw **F** serves as horizontal aim adjustment. Turn screw **F** clockwise or counterclockwise depending on direction needed in order to have the same measurement on both sides.



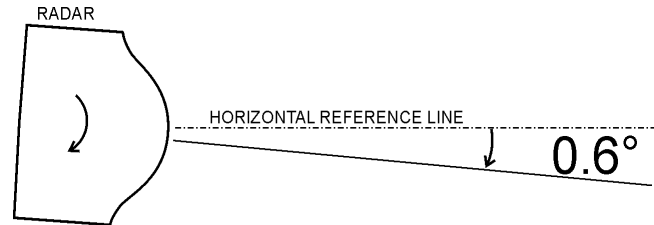
24. If it's not possible to obtain the same measurement both sides, assure that the 3 extensions are not leaning against the bumper skin at the 3 holes.

**If the extensions are leaning against the bumper skin, repeat steps 1 thru 20.**



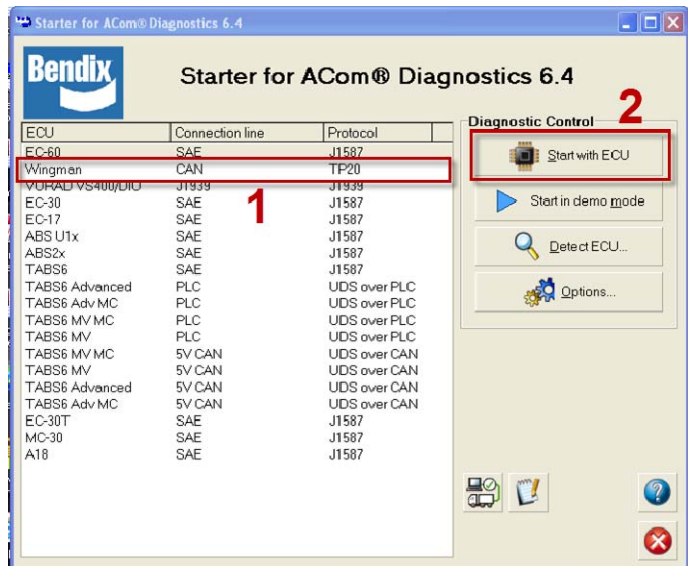
## Part 4 FINAL ADJUSTMENT

25. Once the radar sensor tilt and horizontal aim adjustment is complete, use the digital angle gauge to adjust a tilt of  $0.6^\circ$  downwards using screw E.

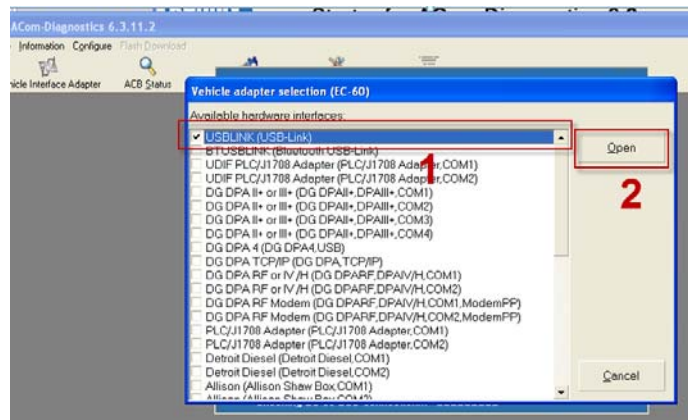


## Part 5 RESETTING MISALIGNMENT VALUE USING BENDIX ACom

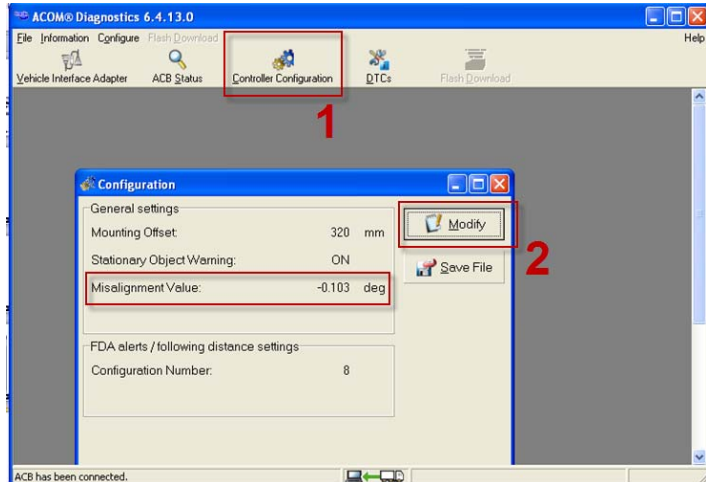
26. On Google, search for « bendix acom diagnostics software ».
27. Download the latest version of *Bendix ACom Diagnostics*® software on your laptop.
28. Launch *Bendix ACom Diagnostics*®.
29. Select *Wingman CAN TP20* and then click on *Start with ECU*.



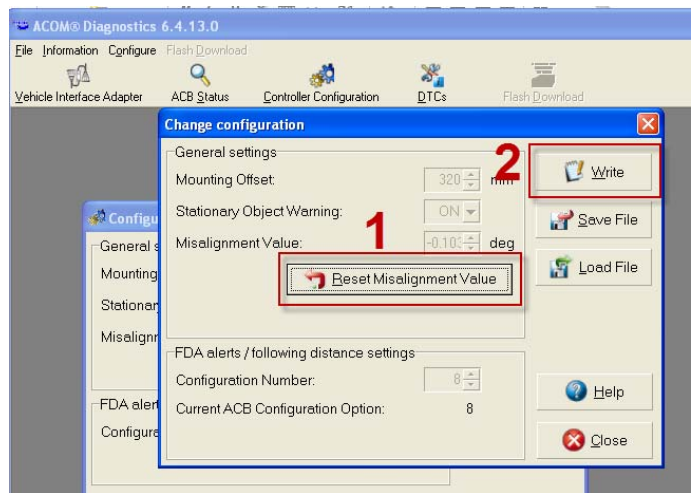
30. Select your type of connection (USB-Link) and then click on *Open*.



- To reset the Misalignment Value, select *Controller Configuration* and then click on *Modify*.



- Click on *Reset Misalignment Value* and then click on *Write*.



## Part 6 ROAD TEST

- Perform a 30 minutes road test to evaluate the ACB behavior.

## Part 7 CHECKING MISALIGNMENT VALUE USING BENDIX ACom

- After the road test, use *Bendix ACom Diagnostics®* software to check the Misalignment Value (refer to Part 5 for the procedure).
- If the absolute value of the misalignment (numerical value without regard to sign + or -) is greater than 0.7deg, it is necessary to perform the complete alignment of the radar once again, starting from Part 1 up to Part 7.

