Precision Aviation Inc.

Level 2 Troubleshooting:

Calibration and Installation Procedure:

1. **Power On Equipment:**
   Turn on all relevant equipment in the cockpit before starting the calibration process.
2. **Ensure No Nearby Metal Structures:**
   Ensure that there are no metal structures or objects near the compass, as they may interfere with the calibration.
3. **Consider Runway Effects:**
   Runways with heavy re-bar reinforcement and nearby metal buildings can cause magnetic interference. If you suspect this to be an issue, it is recommended to perform the calibration in flight.
4. **Address EMI/RF Interference in Non-OEM Environments:**
   When working in a non-OEM cabin environment or with aftermarket components, there may be multiple sources of electromagnetic interference (EMI) or radio frequency (RF) interference. It's advisable to conduct an EMI/RF evaluation if this is a concern.
5. **Select Mounting Location:**
   Identify a stable mounting point on the glareshield or windscreen. Ensure that there is no significant change in the compass direction when moving it toward the mounting location. This will help maintain accurate readings during calibration.
6. **Shielding for EMI/RF Interference:**
   If EMI or RF interference is detected, magnetic shielding and balancing balls are available as solutions to mitigate the issue.
7. **Use of Correct Mounting Hardware:**
   To avoid calibration issues, always use the mounting hardware provided with the instrument. The supplied brackets and hardware are made from non-magnetic brass or aluminum, and the calibration key is also non-magnetic. Using alternative hardware may lead to incorrect calibration.
8. **Avoid Over-rotating Compensator Screws:**
   Do not rotate the North-South (N-S) or East-West (E-W) compensator screws past 180 degrees, as this can misalign the components and prevent successful calibration.
9. **Re-zero the Compass Before Calibration:**
   Before beginning the calibration process, re-zero the compass. Refer to the position marks on the bottom of the compass (as shown in the image) to ensure proper alignment.

See picture below:

Align the Compensator Dots:

Image 1: Align the front red dots on the North-South (N-S) and East-West (E-W) of the compensators. This step is essential for proper calibration of the compass.

Turn the Compass to the Bottom and Check the Gears:

Image 2: Turn the compass to the bottom. Ensure that the red dots are visible on both the N-S and E-W gears.

- If one of the red dots is not visible, turn the screw 180 degrees on the front of the compass and check the bottom again to ensure the red dots align properly.