



LEONARD Vertical Radar Alignment Check User Guide

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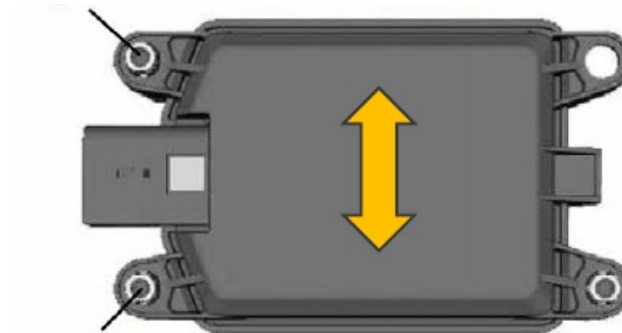
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LEONARD

LEONARD Vertical Radar Alignment Check

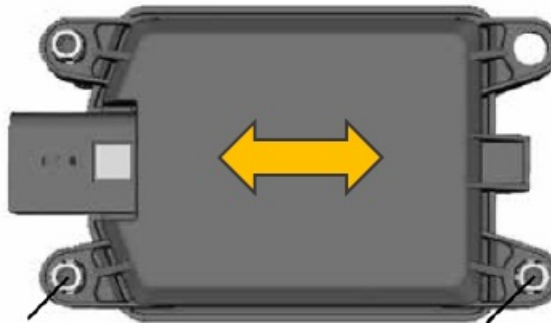
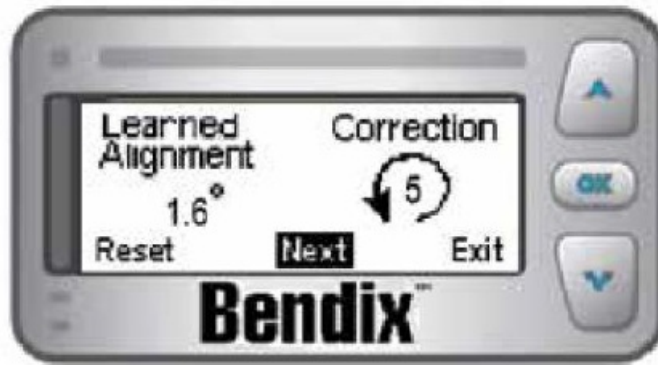


Vertical Radar Alignment Check



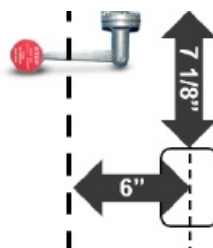
1. Park the bus on a level surface. Air suspension must be charged as it would be during normal operation.
2. Place the digital inclinometer on a horizontal section of the frame rail. Zero out the inclinometer.
3. Place the calibrated inclinometer against the front surface of the radar unit so that it is in the same orientation as it was on the frame rail.
4. Verify that it displays 0° ($\pm 1.5^{\circ}$)
5. If no adjustment is necessary, proceed to next page.
6. If adjustment is necessary, use a Torx T-20 Screwdriver, rotate the top left adjustment screw on the forward-facing radar unit until the inclinometer display reads 0° ($\pm 1.5^{\circ}$)
7. Re-cycle the ignition key
8. If necessary, clear the DTC using Bendix ACom.
9. Proceed to next page

Lateral Radar Alignment Check



1. Select "OK" on the DIU.
2. Using the arrows to the right of the screen, scroll to the menu screen "Radar" then, "Alignment Check" and press "OK"
3. Doing so will display a Learned Alignment indicator. It is important to note that the system learns its true alignment over the course of many hours of driving – this does not necessarily mean that something went wrong with the system.
4. If no correction is required (displays 0), proceed to next page
5. In this case, the display shows that a counterclockwise correction is required –indicated by the number 5 in the circular arrow. Note that this correction may be in either direction and any number – not necessarily 5
6. Using a Torx T-20 Screwdriver, rotate the bottom right adjustment screw on the forward-facing radar unit (5) five full turns, counterclockwise.
7. Upon completion, select "Reset" and then "Exit" on the DIU.
8. Re-cycle the ignition key.
9. If necessary, clear the DTC using Bendix ACom.

Camera Mounting



- Measure from bottom of rubber windshield seal
- Top of camera bracket is 7 1/8" down from the bottom edge of the rubber windshield seal
- Measure 6" over from center line of windshield

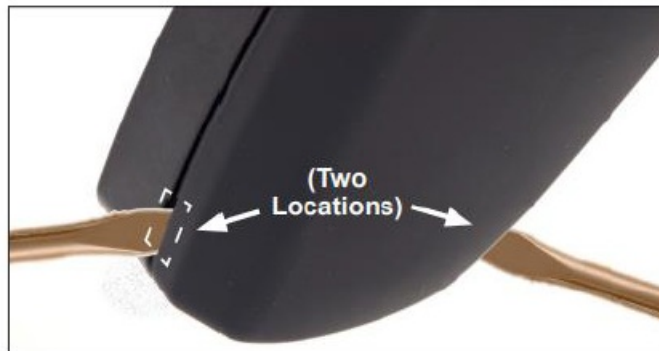
- Center of camera bracket should be 6" over from windshield center
- Place a level on bracket tabs prior to installing camera to be sure it is level

Camera Mounting

CAMERA REMOVAL

CAUTION

Do not use a twisting action when releasing the tabs. Insert the screwdrivers and pry by moving the handles towards each other a small amount. Never twist the screwdrivers as the tabs may break! Replace the bracket if the tab is broken.



See Figure 13. If a camera needs to be removed, locate the two locations at the lower corners where the camera and bracket meet.

1. Insert two medium-sized flat-blade screwdrivers into the slots, fully seating them.
2. Then gently prying by moving the screwdriver handles away from the windshield a small amount- push against the retaining clips to release the camera.

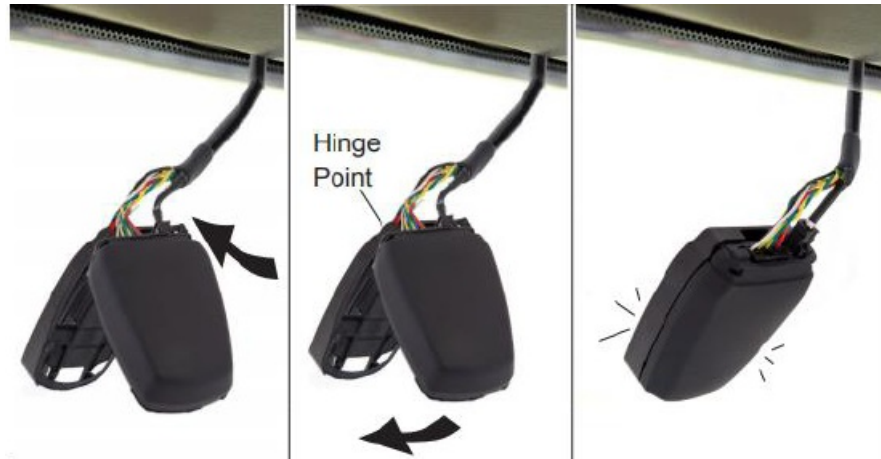
BRACKET REMOVAL

The camera must be removed prior to this procedure. The preferred method for removing a bracket ideally requires two technicians. Using a heat-gun, one of the technicians gradually applies heat to the outside of the windshield at the location of the adhesive, while the other gently applies a prying force to the bracket while being careful not to damage the windshield. As soon as the ideal temperature is reached, the bracket will release. Allow the windshield to completely cool down before cleaning the glass and installing a replacement bracket. When replacing brackets, use only replacements with the same part number or a direct superceding replacement number supplied by Bendix or the OEM. If you have questions, Contact the Bendix Tech Team at 1-800-AIR-BRAKE (1-800-247-2725), option 2. NOTE: Some OEMs may offer the windshield with the bracket pre-installed. Contact the dealer for more information.

WARNING

Whenever re-installing or replacing a camera-for example, after a windshield is replaced-the recommended position for the vehicle must be used. Failure to install the camera in the correct position can result in system Diagnostic Trouble Codes being set, and system performance degradation. The ambient temperature must be in the range of 50-100° F. protective film from the tape covering the adhesive on the windshield and, using a small "torpedo level to be sure that camera will be installed with a lint-free cloth and a 50-50 isopropyl alcohol solution. Make certain that there is minimum of 62 lb. (28.1 kg.) pressure in place for ten (10) minutes. Remove the tape or a non-permanent marker to indicate where the bracket and windshield are joined. Wait at least twenty minutes before installing the completely dry bracket. Remove the camera, at which point a 50% bond strength is created.

1. Engage the top of the camera into the bracket



2. Rotate the camera into the bracket
3. Listen for the click as the bracket engages the camera

IMPORTANT:

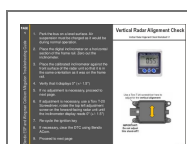
Double-check that the camera is fully engaged into the bracket.



Verify that the channel between them has the same gap all the way around, and pull gently on the camera to check that the tabs at the top and bottom are engaged and that there is no play. To install the camera into the bracket, See Figure 12.

1. Engage the top of the camera into the bracket. There are two channels in the camera that need to line up with the bracket housing, so check to be sure that both sides engage into the bracket.
2. While maintaining the engagement at the top of the camera, rotate the rest of the camera body about that hinge point, towards the bracket.
3. When the camera and bracket meet, there are retaining clips built into the bracket that will snap into place, holding the camera in position.
4. Double-check that the camera is fully engaged into the bracket by verifying that the channel between them has the same gap all the way around. Pull gently on the camera to check that the tabs at the top and bottom are engaged and that there is no play. See Figure 12.
5. Remove any tape, or temporary marks made, during the installation.

Documents / Resources



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