

Collar Screw Inspection and Replacement Procedure

Equipment Needed:

Elevated Winch or Rigid Pipe (4-5 feet)
4mm Allen Wrench
Torque Wrench
Loctite 638 Retaining Compound (Green)
7649 Primer (Optional)

CAUTION: Obey all Safety Rules while performing the following procedure. Failure to do so may result in injury.

Step One - Expose the collars: Using an overhead winch, secure the straps to the payload mounting bracket and slowly raise the payload until the collars are visible.

Alternate Method: If there is no winch available, the easiest method to expose the collars is to raise the tower approximately 5 feet and insert a piece of rigid pipe between the roof bracket which supports the tower (roof side) and the payload mounting bracket (see photo). Once the pipe is in place, slowly release air pressure from the mast until the payload is supported by the pipe and all of the collars are exposed from the protective cover. DO NOT STAND DIRECTLY UNDER THE PAYLOAD AT ANY TIME DURING THIS PROCESS.

Step Two - Visually inspect all collars: Making sure all collars are visible, check each for missing screws or those that may be visibly loose or bent. Please note: Different tower models may have a different number of collars. If you have any questions about the number of collars your tower has, contact Tempest Fireco Towers or your vehicle manufacturer for additional information. Record all missing screws by indicating the quantity and number of the collar (collars are numbered from largest to smallest).





Roof of Vehicle



Collar Arrangement





Step Three - Quick test for Loose Screws: Using a 4 mm Allen Wrench held between the fingertips, apply light to moderate pressure to each of the screws to determine whether it is loose or not. Generally speaking, when using this amount of pressure you shouldn't be able to turn the screw if it the securing glue is still intact. Please note, however, too much pressure on the Allen Wrench will break the securing-glue bond. Once the screw is turned in either direction, they should be removed and replaced. Refer to Step Four for information on replacing screw(s).

IMPORTANT! Only remove one screw at a time. Never remove all collar screws at the same time as this could cause issues when reinstalling the new screws.

Step Four - Reinstalling Missing or Loose Screws: Any missing screws or those determined to be loose during Step Three should be replaced using factory supplied screws only. Spray the 7649 Primer into the empty screw location and apply Green Locktite 638 generously to the threads of the new screw. Install the screw into the collar. Using a torque wrench, tighten to 3.6 newton-meters (31.86 inch-pounds). Use extreme caution, overtightening the collar screws can result in damage to the threads.

Step Five – Extend the Tower: Once all screws have been replaced, raise the tower for approximately three to four hours to allow sufficient time for the glue to cure.



Test with Allen Wrench



Tighten to 31.86 inch pounds using Torque Wrench

