

## **Key Replacement Procedure**

## **Equipment Needed:**

Elevated Winch or Rigid Pipe (4-5 feet) Screwdriver (flat head) Replacement Key Fine Sandpaper (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 – Identify the broken key and visually inspect all collars for signs of damage or other issues: If collars or screws are damaged, contact factory for additional information.

**Step Three – Replace the damaged key:** Remove the key retaining screw and remove the broken key. Sometimes you will need to use a pick of some kind to remove broken pieces. Once removed, line up the keyway in the section with the key slot and insert the new key with the hole facing out. Please note that sometimes the key will need to be sanded slightly to ensure the section slides properly.



Roof of Vehicle



Collar Arrangement





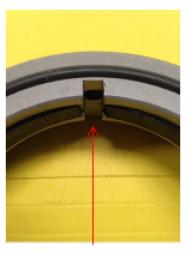




Step Three – Replace the damaged key (continued): Please note - Sometimes when the tower rotates it also causes the internal guide band to rotate as well, thus blocking the key slot (see photo). If the key will not fit into the collar slot, verify that the band has not rotated. If so, rotate the section slightly until the band opening is visible and, using a small pick to hold the band in position, rotate the tower section to its proper alignment.

Step Four – Reinstalling key retaining screw: When reinstalling the key retaining screw make sure the screw goes in easily to ensure the collar threads do not get damaged. Tighten the screw until the key is snug and then back it off approximately 1/4 of a turn. The purpose of the screw is to prevent the key from sliding and falling out, not to secure the key. Tightening the key retaining screw too tight will prevent the tower section from extending and retracting properly and could lead to damage. DO NOT use any other material for a key other than factory approved components.

**Step Five – Extend the Tower:** Once the key has been replaced, raise the tower section manually to verify proper movement. Once verified, raise the tower completely using an approved air source to ensure proper operation.



Internal Guide Band and key slot alignment

