### **Wills Wing Technical Bulletin**

**T2 Hang Loop and Spreader Bar Replacement** 

#### **Applies To**

All Models T2

### Introduction

There have been two types of hang loop spreader bar configurations used on the T2, and three different configurations of the hang loop – spreader bar and support pillar combination. When ordering a replacement hang loop or a replacement spreader bar, you must specify the glider serial number and the hang loop type and spreader bar type, and take note of the proper installation procedures, as detailed below.

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The first 50 or so T2's – those assembled through mid-July of 2005 – were made with the original T2 type hang loop and hang loop spreader bar and the non-swiveling support pillar, as shown below, left. T2's assembled between mid July 2005 and mid May 2006 were upgraded to the current type support pillar, which provides for the spreader bar to be rotated 90 degrees during glider breakdown, and reduces interference with and wear on the spars when the glider is folded up. This configuration is shown below on the right. The spreader bar and hang loop for both these configurations are the same – the spreader bar incorporates removable end caps which secure the hang loop to the spreader bar, and which are held on by self-locking Allen screws.

# After mid May 2006, T2's were made with the same, 2<sup>nd</sup> configuration support pillar, but with a new, one piece spreader bar with integral end caps, and a new type of hang loop which fits tightly over the integral end caps and is then secured with plastic zip ties that pass through small webbing loops (picture on the following page shows the older T2 type spreader bar and hang loop on the left and the most recent, one piece spreader bar – hang loop assembly on the right).

While both T2 type spreader bars are compatible with either support pillar, each requires the specific compatible hang loop designed for that spreader bar.





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### Procedures - Inspection, Replacement, Adjustment

On the original T2 type spreader bar, with the removable end caps, it is important not to over tighten the securing Allen screws, as they can be broken during installation or removal if over tightened. These screws are manufactured with a small patch of locking material to insure that they will not back out after installation, so if you have removed them to replace the hang loop, you should use a small amount of non-permanent Loc-Tite when you re-install them.

As shown in the second photo on the first page, the back up portion of the original T2 type hang loop is secured to the glider by larks heading the loop around the keel, underneath the sweep wire and VG ropes. On the most recent T2 type hang loop the back up portion is secured around the keel, and over the top of the sweep wire and VG ropes with a quick link. After installation, the quick like should be finger tightened, and then tightened not more than one quarter additional turn with a wrench. (The purpose of routing the backup loop over the top of the sweep wire and VG ropes is that this will provide an additional means of connection between the pilot and glider in the event of a failure in flight of the keel tube.)

There is no requirement to upgrade from an older configuration to one of the newer configurations. There are some possible reasons to upgrade:

- 1) The swiveling type of support pillar allows the spreader bar to be rotated more effectively out of the way of the spars during breakdown, and may thus reduce wear on or damage to the spars during transport.
- 2) The one piece spreader bar avoids the possibility of a screw breaking off during installation of a new hang loop.
- 3) The most recent hang loop design, on which the back up is installed over the top of the sweep wire and VG ropes, may provide a more secure attachment of the pilot to the glider in the event of an in-flight failure of the keel.