

# SERVICE BULLETIN

## StingSport Nose Strut Inspection

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ISSUED BY:

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DATE OF NOTICE: July 7, 2006  
EFFECTIVE DATE: Immediately  
TIME OF COMPLIANCE: Before next flight

LIMITATIONS: None  
AFFECTED AIRCRAFT: TL-Ultralight StingSport  
AFFECTED SERIAL NUMBERS: All serial numbers  
NOTICE ID: TL070706  
THIS NOTICE SUPERCEDES: NA  
PAGES: This is page 1 of 3 pages.

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REFERENCES:

Illustrated Parts Catalog for the TL 2000 StingSport

DISCUSSION:

**Reason for Issuance:** Field reports of one aircraft with cracks in the insert portion of the nose gear strut as it enters the lower housing sleeve, which consists of the nose leg fork.

**Background:** In the interest of safety, TL Ultralight is issuing this bulletin requiring inspection of all nose gear assemblies prior to the next flight and subsequent periodic inspections as part of all pre-flight inspections. This inspection can be accomplished without removal of any parts. At the next annual condition or 100 hour inspection a more detailed examination will be required.

Damage to the nose gear in any aircraft can occur from hard landings, nose wheel landings, high speed touchdowns, (or high speed takeoff with late rotation) resulting in 'wheelbarrow' loads on the nose gear assembly. During such operations more than the entire gross weight of the aircraft can be concentrated on the nose gear assembly. In addition these loads, as in any nose wheel aircraft, are not axial, generally causing the nose steering assembly to bow forward or aft. A single occurrence is cause for an

inspection but such severe loading can easily exceed the limits of the steering assembly and are cumulative in their effects.

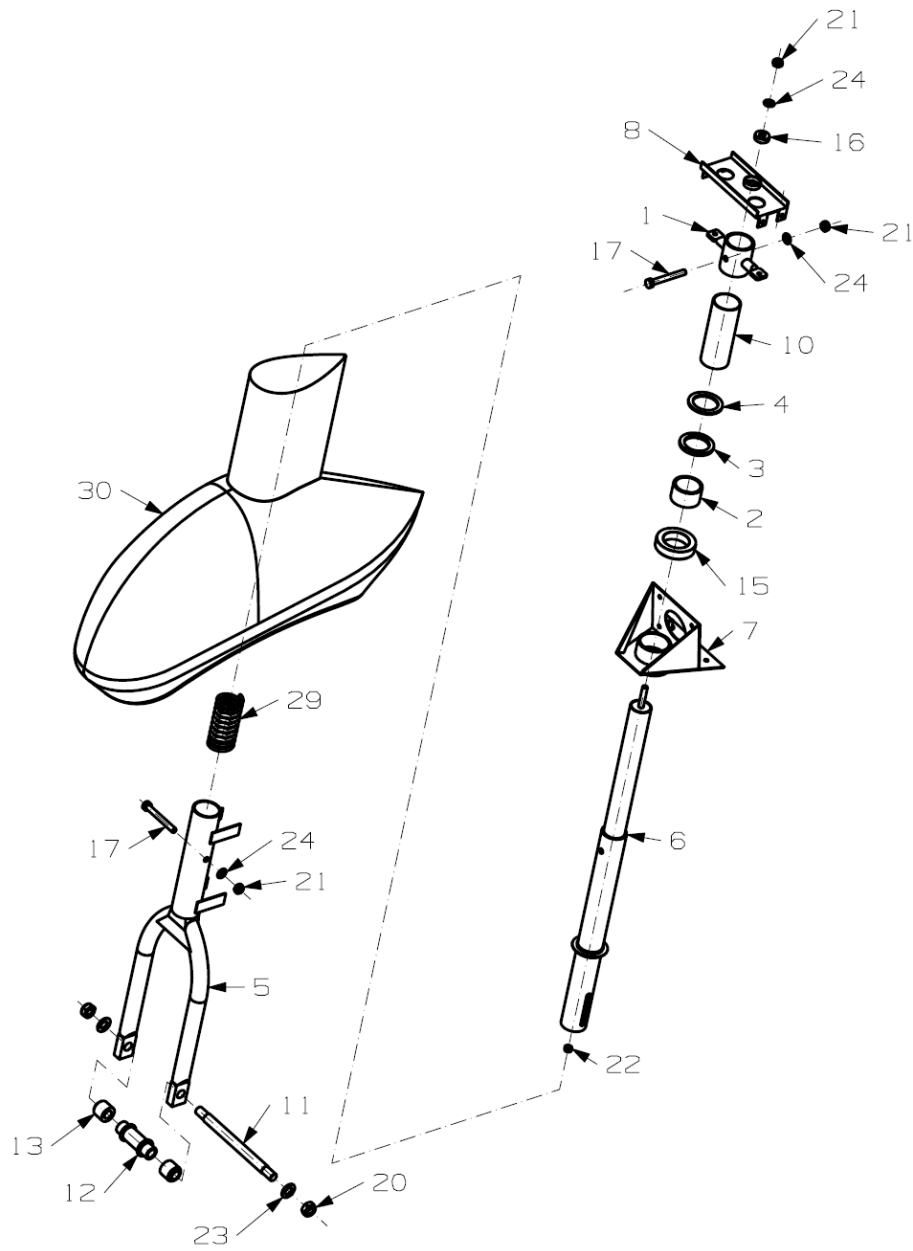
Because of the broad range of use or abuse to which the fleet is subjected, it is impossible to make the gear system foolproof. It is also difficult to categorize or establish a precise cause and effect relationship to number of hours flown versus confirmation of hard landings or nose impacts from pilots post flight briefings.

Therefore, ensure preflight inspection of the nose gear system, correct tire pressure, adequate wheel fairing to tire clearance, correct axle nut torque and exercise proper pilot takeoff, approach and landing techniques via continued proficiency training to prevent problems with the nose gear system.

#### CORRECTIVE ACTION:

##### **Inspection:**

1. From a distance, head-on or to the side, the nose gear should appear to be in plane with the aircraft centerline and the upper strut tube should align with the centerline of the lower nose wheel fork.
2. There should be heavy grease lubricant exposed at the top of the nose wheel fork, which may hinder proper inspection. Remove and replace this lubricant after the inspection.
3. Inspect the top edge of the nose wheel fork (Item 5 below) as it exits the top of the nose wheel fairing (Item 30 below). This steel tube should have vertical straight edges and should be round and concentric. If there are signs of metal stress, 'belled-out' edges or an elliptical shape at the top of this tube then the nose gear will require disassembly for further safety inspection.
4. Inspect the lower exposed portion of the nose gear upper strut tube (Item 6 below). This tube should be straight and its centerline axis aligned with the centerline axis of the lower nose wheel fork into which it is inserted. The slotted area at the bottom of the strut is the movement slot for the exposed bolt located in the nose wheel fairing. There should not be any cracks radiating from the bolt travel slot or radius marks from impact by the outer tube of the nose wheel fork.
5. While inspecting the nose gear assembly, have an assistant push down on the aft fuselage to raise the nose gear off the paving. Observe the operation of the gear spring shock damper (Item 29 below) to confirm a smooth compression and interrelated movement of the upper strut into the lower fork when the load is replaced on the nose gear system after the pressure on the aft fuselage is released. Do not drop or bounce the nose gear by a sudden release of the aft fuselage.
6. During landing operations do not allow the nose gear to impact the surface after landing. Use the aerodynamic force of the elevator to place it on the runway before loss of elevator authority.



End of Service Bulletin