

GBSC Towrope Systems

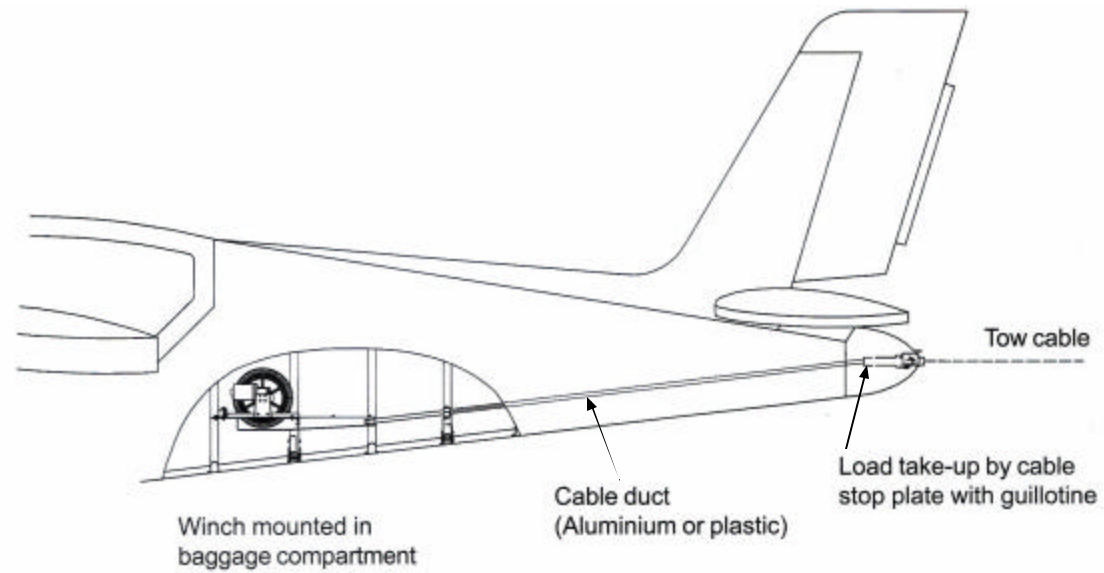
Topics

- Changes for 2011
- Tost Retractor System (Pawnee)
- Tost Weak Link Assembly
- Rope Weak Links & Adapters
- Rope Inspection

Changes for 2011

- Due to several rope break events, Pawnees will now use Tost OEM rope
- ¼" synthetic (2700 lb breaking strength)
- Previous rope was ¼" hollow core Dacron (2000 lb breaking strength)
- Dacron was subject to fraying at knot
- Reel capacity limits Tost length to 190 ft

Tost Retractor System



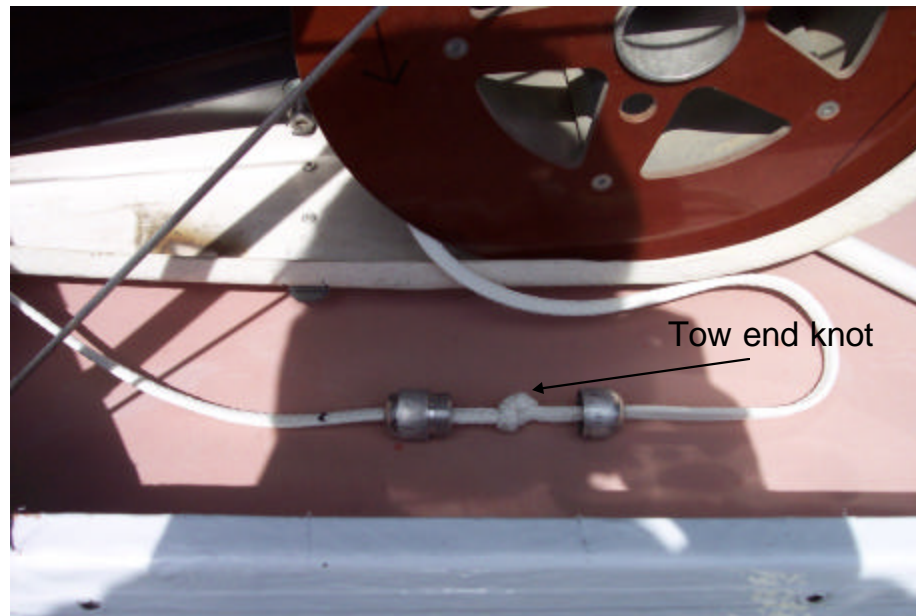
Tost Takeup Reel



Tost Retractor System

- Rope and 2 knots carry glider load
 - Tail stop plate – Tow end
 - Weak link assy – Glider end
- Take up reel carries no load
- Guillotine mechanism at tail
- Towrope
 - Tost OEM ¼” solid core with overhand knots
 - 1215 lb effective strength (includes knots)

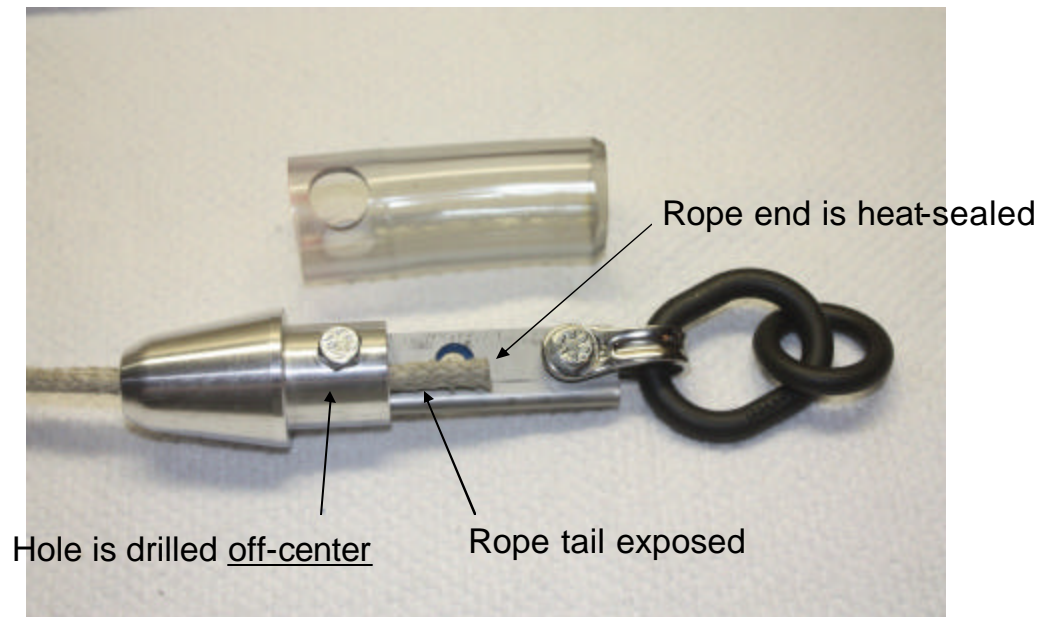
Tost Retractable System



Weak Link Assy



Weak Link Assy



Weak Link Assy

- Tail of knot exposed – confirms knot intact
- Cut end is heat sealed – prevents unraveling
- Inspect knot prior to day's operations
- Blue weak link -- 1368 lb
- “Weak Link” toolbox has necessary tools and directions
- Spare Assy stored in toolbox

Tost Rope: Overhand knot



Rope Weak Links / Adapters

- Yellow weak link
 - 1/4" 3-strand polypropylene
 - 1130 lb breaking strength
 - Used with 1-26
- White adapter (not a weak link)
 - 3/8" 3-strand nylon
 - 3240 lbs breaking strength
 - Used with 1-34 and 2-33

Yellow Towrope

- 5/16" hollow-braid polypropylene
- 1500 lbs breaking strength
- Used with Birddog
- Used with Pawnee (winter ops)

Towrope Inspection

- Inspect full length prior to flight ops
- No inline knots
- For polypropylene ropes and weak links, no more than 20% broken fibers in any local area.
- Put questionable rope in “Old Rope” bin in green shed for recycling