

RANS

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Airworthiness Directive: 130

Date: October 6, 2003

Subject: S-6 Coyote II – Improved Tail Spring Mount & Steer Horns

Compliance: Discretion of Aircraft Owner

Models Effected: S-6ES & S-6S Conventional Gear (Taildragger)
 (Assembled or under construction)

Pricing: Contact RANS Parts Department

A few S-6 Coyote II's have experienced Tailwheel Spring failure. The failures have occurred where the aft mounting bolt hole is located. Assemblies affected may be identified by 2 mounting bolts (fwd & aft) attaching the Tail Spring to the Tail Spring Mount Plate.

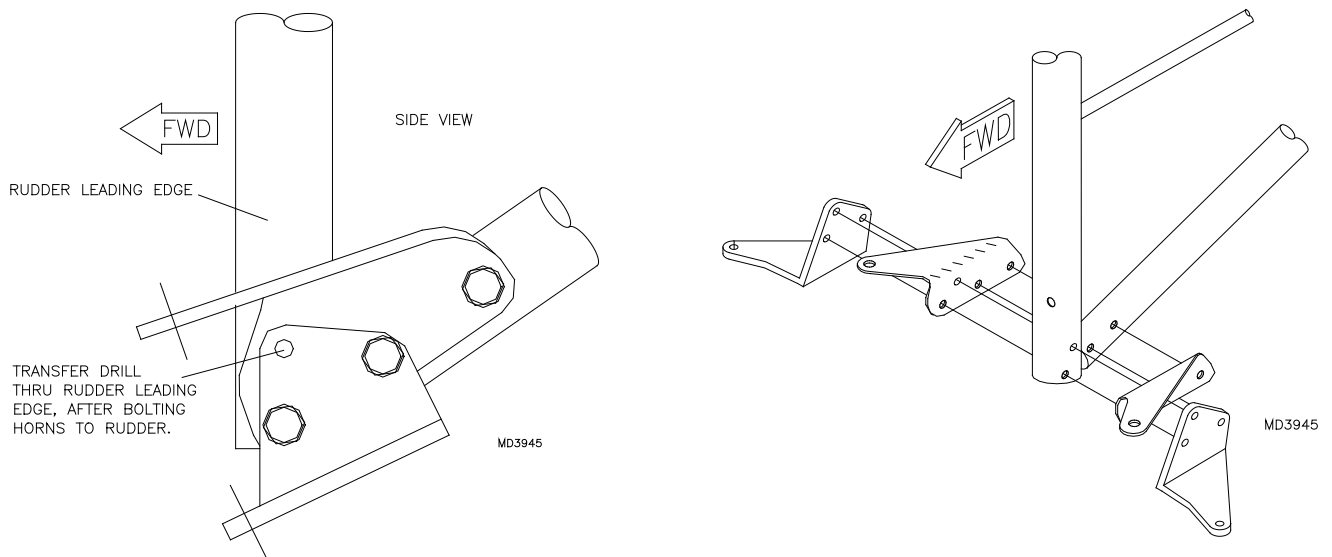
The Improved Tailwheel Spring Mount eliminates this weaker point by cradling the tail wheel spring on either side at the aft with only a single forward mounting bolt. Tail Spring Mount

Improved Tailwheel Steer Horns are also available. The Improved Steer Horns are required when installing the Improved Tail Spring Mount

Installation Instructions: Refer to included pages for parts and assembly.

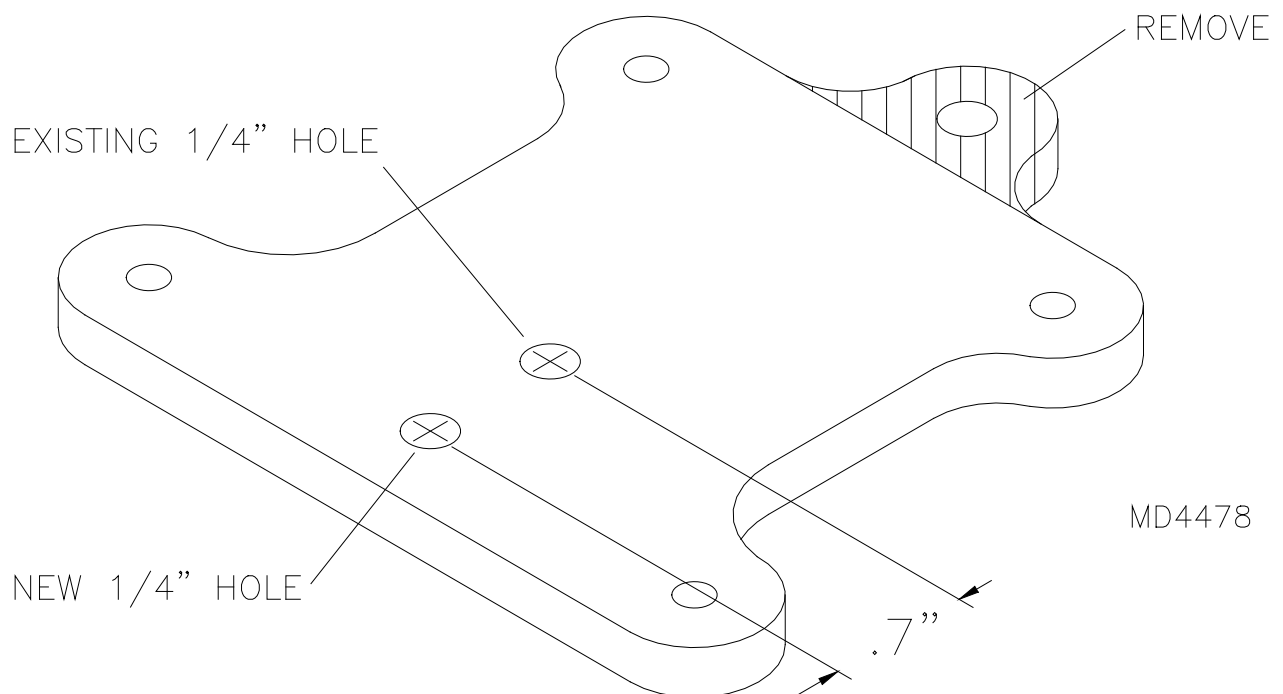
1. **REMOVE TAIL SPRING:** Raise aircraft tail and place on a sturdy sawhorse or equivalent. Disconnect Steer Springs. Unbolt Tail Spring Mount Plate and Tail Spring Assembly from fuselage.
2. **INSTALL STEERHORNS:** Remove Steer Fork and Steer Horn Bushing from Rudder (if so equipped). Unbolt Rudder horns and install Tailwheel Steerhorns. See **FIGURE 130-2**. Bolt Hummertangs to Steer Horns. Attach Steer Springs to Hummertangs. Attach Chains to Steer Springs.

FIGURE 130-2



3. **MODIFY TAIL SPRING MOUNT PLATE:** Remove Mount Plate from Tail Spring. Modify Tail Spring Mount Plate per **FIGURE 130-3**. A new Tail Spring Mount Plate (KPTG0032) may also be purchased from RANS Parts Department.

FIGURE 130-3



4. **RE-INSTALL TAIL SPRING: NOTE:** *On aircraft with Bottom Gussets(1999 or newer), temporarily bolt the modified Mount Plate on tailcone, transfer drill 1/4" through new hole, remove Mount Plate and final drill the Bottom Gusset only to 9/16". Bolt Tail Spring to Mount Plate using only the new hole. Be sure to include the 3/4" spacer if required (all S-6ES and pre-1999 S-6S). Bolt the Mount Plate Assembly to the tailcone. File or sand the Tailwheel Bushings to fit tight against the Tailwheel Spring. The Tail Cable Attach Hummertangs must also be tight. **CAUTION:** Do **NOT** remove too much material. The Tailspring must be tight between the Bushings. Bolt the Tail Spring Assembly to the tailcone. Cut off chain links as needed. When properly set the Steer Springs should be approximately 1/2 compressed.*

Parts required:

All S-6ES

pre-1999 S-6S "SUPER SIX" (straight top Tailcone Longerons):

<u>#</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>	<u>QTY</u>
1	1/4" Bolt	AN4-31A	2
2	Bushing – Tailwheel	KPTG0031	2
3	Mount Strap – Tailwheel	KPTG0030	1
4	3/4" Spacer Block	KPTG0034	1
5	1/4" Bolt	AN4-16A	1
6	1/4" Thin Washer	AN960-416L	1
7	1/4" Tensile Nut	AN365-428A	1

Aircraft with Steer Forks will also require the following:

8	Tailwheel Steerhorn	KPRD0048 L/R	1L/1R
9	3/16" Bolt	AN3-20A	3
10	3/16" Thick Washer	AN960-10	2
11	3/16" Shear Nut	AN364-1032A	1
12	Hummertang	T12-HT6	2
13	3/16" Bolt	AN3-5A	2
14	3/16" Thin Washer	AN960-10L	4
15	Steer Chain	TW-C	2

Post 1999 S-6S "SUPER SIX" (curved top Tailcone Longerons):

#	DESCRIPTION	PART NUMBER	QTY
1	1/4" Bolt	AN4-23A	2
2	Bushing – Tailwheel	KPTG0035	2
3	Mount Strap – Tailwheel	KPTG0030	1
4	NOT REQUIRED	-----	0
5	1/4" Bolt	AN4-10A	1
6	1/4" Thin Washer	AN960-416L	1
7	1/4" Tensile Nut	AN365-428A	1

Aircraft with Steer Forks will also require the following:

8	Tailwheel Steerhorn	KPRD0048 L/R	1L/1R
9	3/16" Bolt	AN3-23A	3
10	3/16" Thick Washer	AN960-10	2
11	3/16" Shear Nut	AN364-1032A	1
12	Hummertang	T12-HT6	2
13	3/16" Bolt	AN3-5A	2
14	3/16" Thin Washer	AN960-10L	4
15	Steer Chain	TW-C	2

Thank you for your attention to this matter. Hopefully we have not inconvenienced you to any great degree.

Fly safe.