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SERVICE INFORMATION LETTER

SERVICE INFORMATION LETTER NO. 0152
Revision 1

DATE: March 28, 2025

1. SUBJECT: Idler Pulley Alignment and Snubber Roller Adjustment

2. MODELS: F-28A, 280, F-28C, F-28C-2, F-28C-2R, and 280C

3. EFFECTIVITY: All Serial Numbers

4. BACKGROUND:

This Service Information Letter (SIL) was initially published when Enstrom had received a report from an operator of a broken pylon. The failure occurred in the area adjacent to the mounting bracket for the belt tension assembly bracket (Refer to Figure 1). As previously reported in the initial SIL issue, a review of Enstrom's records indicated that other than the reported failure there had been three failures in this area in the ten years prior to 2001. No related failures have been reported since that time. Enstrom believes the failures are not a chronic problem and were probably a result of either a rough belt or improperly adjusted belt tension and idler pulley adjustment.

This SIL provides a recommended one time inspection of the pylon adjacent to the belt tensioning assembly mounting bracket and an inspection check list for the belt tension assembly area for use during the 50 hour periodic inspection. This SIL also provides maintenance procedures for adjusting the belt tension assembly, "snubber roller", and idler pulley.

Revision 1 adds the snubber roller adjustment procedure, updates the 50 hour checklist (Table 1), adds clarifying text and pictorials, and removes F-28F, 280F, and 280FX from the model list and maintenance procedures. (Applicable content is incorporated in the Enstrom F-28F/280F Series Maintenance Manual).

5. COMPLIANCE:

A. Unless complied with at the time the SIL was originally issued, Enstrom recommends visually inspecting the pylon area adjacent to the belt tensioning assembly mounting bracket for cracks and other damage within the next 10 flight hours (refer to Figure 1). If no damage is found, return the aircraft to service. If damage is found, repair in accordance with AC 43.13-1B or contact Enstrom Customer Service for specific repair instructions.

B. Inspect the belt tensioning assembly in accordance with the inspection checklist found in Table 1 during the 50 hour periodic inspections.

C. If the belt tensioning assembly requires adjustment as a result of the inspections in paragraphs 5, A or 5, B, refer to paragraph 5.1 for the maintenance procedures for adjusting the belt tensioning assembly.

5.1 MAINTENANCE PROCEDURES:

A. Rig/Adjust the clutch control for the belt tension assembly. Refer to Service Information Letter 0080, latest revision, for maintenance procedures.

B. Adjust the belt "snubber" roller using the following procedure.

1. With the belt tension clutch engaged, adjust the belt "snubber" roller so that it is parallel to the belt surface and has 0.25-0.38 in/6.4-9.7 mm clearance between the belt surface and the roller.

2. While checking/adjusting the track of the idler pulley, observe the belt "snubber" roller. While running the engine at 2900 RPM, there should be approximately 0.125 in/3.2 mm clearance between the belt surface and the roller. Adjust the roller as required to obtain the 0.125 in/3.2 mm clearance.

WARNING: SHUT DOWN THE ENGINE BEFORE MAKING ANY ADJUSTMENTS TO THE BELT ROLLER.

a. If roller adjustment is required, disengage clutch, and shut off the engine.

b. Engage clutch and adjust the belt "snubber" roller so that it is parallel to the belt surface and has 0.25-0.38 inch/6.4-9.5 mm clearance between the belt surface and the roller.

c. After final adjustment of the idler pulley track, loosen the aft nut on the "snubber" roller and allow the roller to self-align on the idler straps. Torque the aft nut to 95-110 in-lb/10.8-12.5 Nm.

d. Disengage clutch.

WARNING: EXTREME CAUTION SHOULD BE USED WHEN BELT TENSION MECHANISM IS IN ENGAGED POSITION. PERSONAL INJURY COULD OCCUR.

e. Start engine, engage rotor system, and verify that the belt "snubber" roller clearance (0.38 inch/9.5 mm) is correct.

C. Check/Adjust the idler pulley track using the following procedure (refer to Figure 2).

1. Remove the upper cowling if not already accomplished.

2. Decrease the torque on the bolt and nuts at Points 1 through 3. The bolts and nuts at points 2 and 3 should be snug enough that they require force to turn but not be "loose." Point 1 must loose enough to allow the idler stabilizer strut to slide as the idler support shaft is turned.

3. Rotate the idler support shaft using a wrench so that Point 3 is at the highest position. Then rotate the shaft approximately 75° towards the right side of the aircraft (clockwise looking forward).

WARNING: USE CAUTION WHEN ADJUSTING THE IDLER PULLEY TRACK WITH THE ENGINE RUNNING AND THE BELT DRIVE SYSTEM ENGAGED.

4. Start engine and slowly engage rotor system while observing idler pulley track on belt. During engagement, use a 7/8" wrench to rotate the idler shaft as necessary to keep the belt aligned.

5. When clutch is fully engaged at idle, use 7/8" wrench and turn idler support shaft until the belt is centered on the pulley and between the actuator arm assemblies.

6. When the pulley is centered, tighten the bolt at the pylon strap (point 1).

8. Holding the idler support shaft with the wrench, tighten the forward idler shaft nut (point 2) to 600-780 in-lb/68.2-88.6 Nm and then tighten the aft nut (point 3) to 290-410 in-lb/33.0-46.6 Nm.

9. Increase the engine speed to 2000 RPM and check the idler pulley track. Adjust the track as required.

10. If the track is good at 2000 RPM, gradually increase the engine speed to 2900 RPM while observing the track. Adjust the track as required.

12. After engine shutdown:

    a. Inspect the assembly for security.

    b. Torque bolt at the pylon strap (point 1) (50-70 in-lb/5.7-8.0 Nm).

13. Reinstall cowling.

5.2 PARTS:

Refer to the F-28/280 Series Illustrated Parts Catalog, latest revision.

6. ESTIMATED MAN HOURS:

1 Man-Hour for belt tension assembly inspection/adjustment and for idler pulley alignment.

7. WARRANTY:

Per Enstrom warranty policy.

8. WEIGHT CHANGE: N/A

9. LOG BOOK ENTRY:

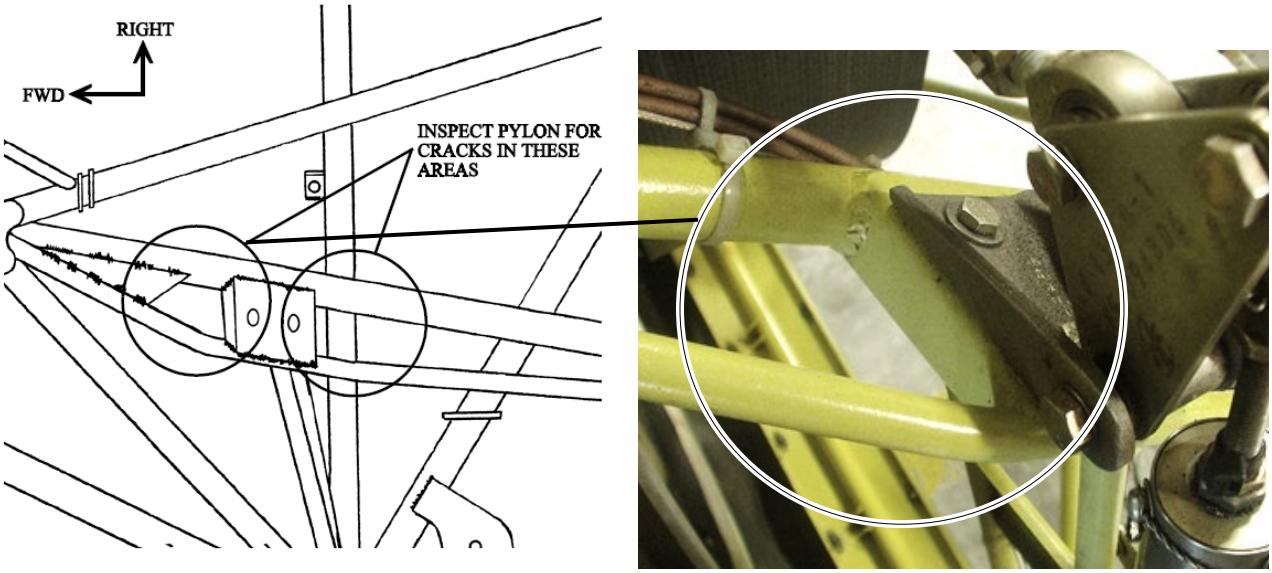
As required for maintenance entries.

10. REPETITIVE INSPECTIONS:

Use the information in Table 1 to supplement the inspection checklists found in the applicable maintenance manual for each model aircraft during 50 hour periodic inspections.

Table 1. Periodic Inspection Criteria

Nature of Inspection			Frequency
1.	Inspect belt tension assembly for:		
	a.	Proper extension of piston with clutch engaged (measurement: 1.63 - 1.75 in./41.1 - 44.5 mm).	50 Hours
	b.	Worn or loose nylon bushings in side plate slots.	50 Hours
	c.	Wear notches in the side plate slots.	50 Hours
	d.	Microswitch for proper operation at over-center position.	50 Hours
	e.	Bushing in bellcrank at pylon for looseness.	50 Hours
	f.	Security of clutch engagement cable.	50 Hours
	g.	Security of all attaching hardware.	50 Hours
	h.	Cracks in the adjacent pylon structure.	50 Hours
	i.	Clutch capsule adapter and bushing for wear. Replace Bushing (P/N 07DU08) as required.	50 Hours
2.	Inspect idler pulley assembly for:		
	a.	Looseness in idler yoke shaft rod end bearing.	50 Hours
	b.	Cracks in idler yoke end. (See also SDB 0109 and SDB 0118.)	50 Hours
	c.	Cracks and security of idler support bracket.	50 Hours
	d.	Evidence of idler pulley out of track.	50 Hours
	e.	Worn or loose idler yoke support bushings.	50 Hours
	f.	Proper clearance of belt “snubber” roller (clutch engaged).	50 Hours
	g.	Security of all hardware.	50 Hours



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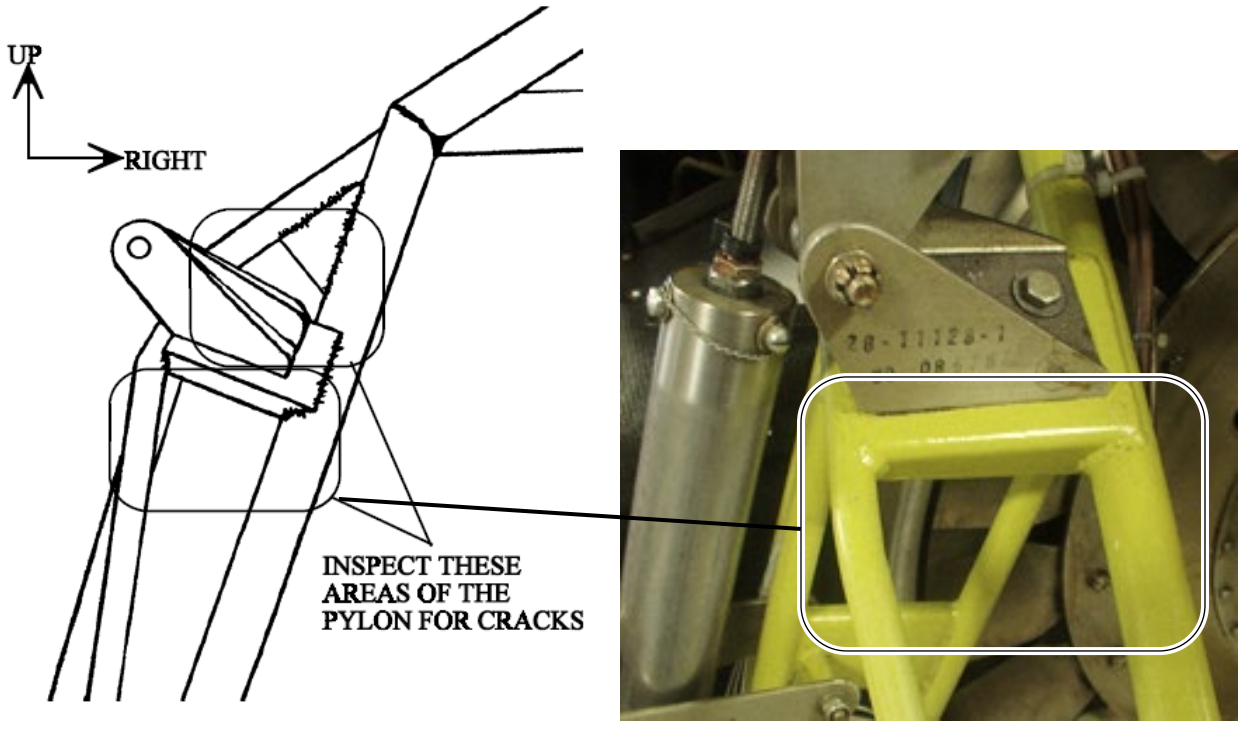

(Viewed from Back)

Figure 1. Belt Tension Assembly Pylon Mount Inspection Areas

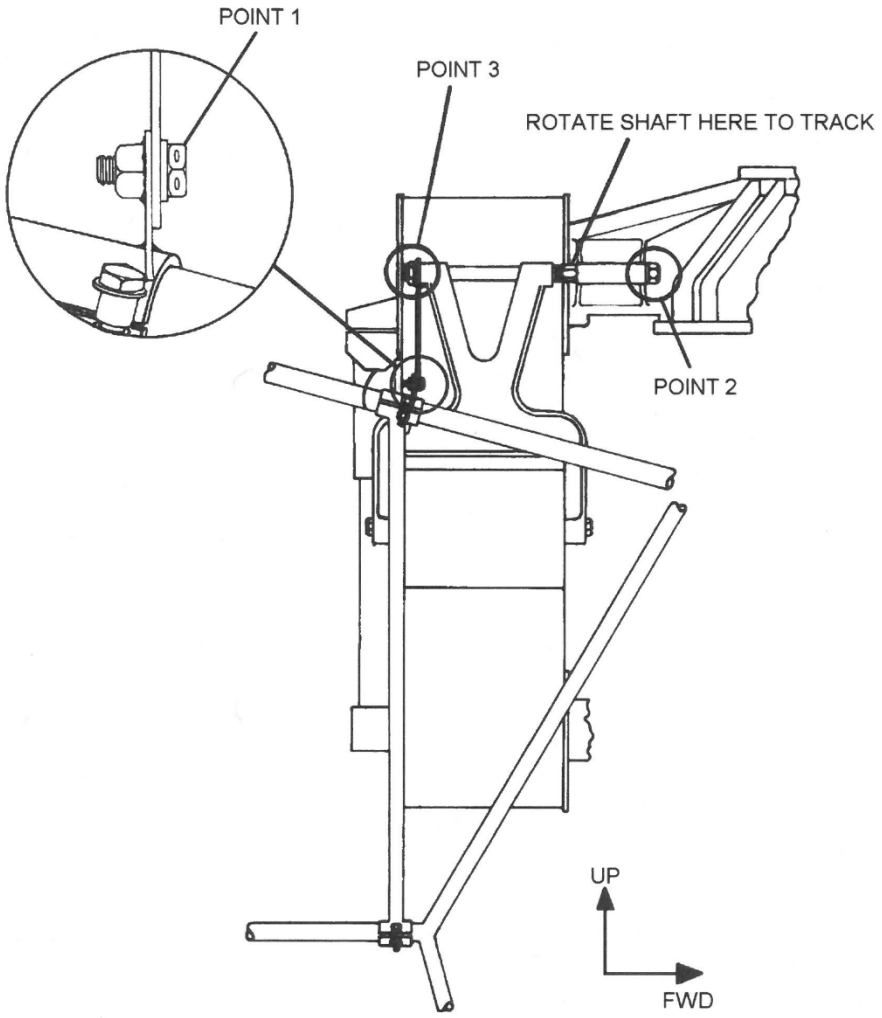

Figure 2. Idler Pulley Tracking (Viewed from Right)