

Flap Hinge Fairing Installation and Maintenance Manual	Issue Date: 10-15-88
STC No. SA1194GL	Rev. C
Manual No. 28HF-M	Rev Date: 2-12-11

PIPER PA-28 FLAP HINGE FAIRING INSTALLATION AND MAINTENANCE MANUAL

Aircraft Eligibility: Piper PA-28-140, PA-28-150, PA-28-160, PA-28-180, PA-28-235, PA-28R-180, PA-28R-200, PA-28-151, PA-28-161, PA-28-181, PA-28-201T, PA-28-236, PA-28R-201, PA-28R-201T, PA-28RT-201, PA-28RT-201T.

Knots 2U, Ltd.
709 Airport Road
Burlington, WI 53105
www.knots2u.com

Flap Hinge Fairing Installation and Maintenance Manual	Issue Date: 10-15-88
STC No. SA1194GL	Rev. C
Manual No. 28HF-M	Rev Date: 2-12-11

Table of Contents

Section	Title	Page
	Cover Page	1
	Revision Control	2
	Table of Contents	3
	Introduction	4
1.0	Left Side Fairing Installation	4
2.0	Locating Mounting Holes for Outboard Fairing	4
3.0	Installing Rivnuts	4
4.0	Trimming Flap Gap Seals	4
5.0	Final Installation	5
6.0	Right Side Installation	5
7.0	Removal of Flap Hinge Fairings	5
8.0	Paperwork	5
9.0	Parts List	5
	Detail #1	6
	Detail #2	7
10.0	Maintenance / Instructions for Continued Airworthiness	8
	Supplemental Type Certificate	

Flap Hinge Fairing Installation and Maintenance Manual	Issue Date: 10-15-88
STC No. SA1194GL	Rev. C
Manual No. 28HF-M	Rev Date: 2-12-11

Introduction

This manual describes the installation of fairings which cover the aircraft's flap hinges. The fairings attach with rivnuts and screws so they may be easily removed for inspections or pre-flights if required.

Section 1.0

Left Side Fairing Installation

If aircraft is equipped with flap gap seals, refer to section 1.4 and detail 2 for instructions. If flap gap seals are to be installed, completing the flap hinge fairing installation first will achieve some time Savings.

Lower flaps, referring to Detail #1, place one P/N IFHF, Inboard flap hinge fairing on inboard flap hinge by spreading the leading edge and sliding over the support. (Please note P/N IFHF is slightly wider than the outboard fairings P/N FHF). Position the fairing on flap surface parallel to stiffener ridges with the curve of the fairing conforming to the curve in the flap. Check clearance between the fairing and the bolt. Drill a hole, no larger than necessary, in the side of the fairing per detail #1. The bolt may also be replaced with a shorter bolt as long as one full thread protrudes from the nut. Make the hole large enough so that the nut can be inspected during pre-flight.

Check the leading edge slot for Clearance from the hinge while running the flaps through full travel. File to attain proper clearance. After confirming proper clearance and fit, hold fairing firmly in place and drill three #40 pilot holes (.098") through part and into flap. If a hole falls on an existing rivet it may be moved to avoid the rivet while observing all edge distances. Cleco fairing in place.

Follow the same procedure for the center flap hinge fairing P/N FHF.

Section 2.0

Locating Mounting Holes for Outboard Fairing

Repeat the above fitting procedures for the outboard flap hinge fairing P/N FHF. On many aircraft the flange on the outboard fairing may overlap the edge of the flap and must be trimmed. In these cases re-locate the outboard mounting holes per Detail #1. Cleco fairing in place.

Section 3.0

Installing Rivnuts

Remove clecos and fairings. Enlarge mounting holes in flap to a #15 hole size and install P/N A6K-120 rivnuts in holes. Enlarge the holes in the flap hinge fairings P/N FHF and IFHF to a #27 hole size. Apply Piper window seal P/N 189-715 to bottom of flange On fairings per Detail #1.

Section 4.0

Trimming Flap Gap Seals

If the aircraft is equipped with flap gap seals they must be trimmed to clear the leading edge of the flap hinge fairing. Use Detail #2 as a guide when trimming flap gap seals. Observe proper radius and de-burr seal. Check fit while running the flaps through their full travel, observe any binding or excessive chaffing with the gap seal and correct the condition.

Flap Hinge Fairing Installation and Maintenance Manual	Issue Date: 10-15-88
STC No. SA1194GL	Rev. C
Manual No. 28HF-M	Rev Date: 2-12-11

Section 5.0

Final Installation

Secure fairings to the flap using P/N AN526C-632-R8 screws. If desired a small amount of RTV may be placed around the edge of the fairings at this time.

Section 6.0

Right Side Installation

Repeat sections 1 thru 5 on right flap.

Section 7.0

Removal of Flap Hinge Fairings

If it is necessary to remove the flap hinge fairings simply remove the screws holding the fairing in place.

Section 8.0

Paperwork

Perform paperwork (FAA Form 337 and Log Book entry). Place a copy of the Flap Hinge Fairing Installation and Maintenance Manual and Supplemental Type Certificate with the aircraft records.

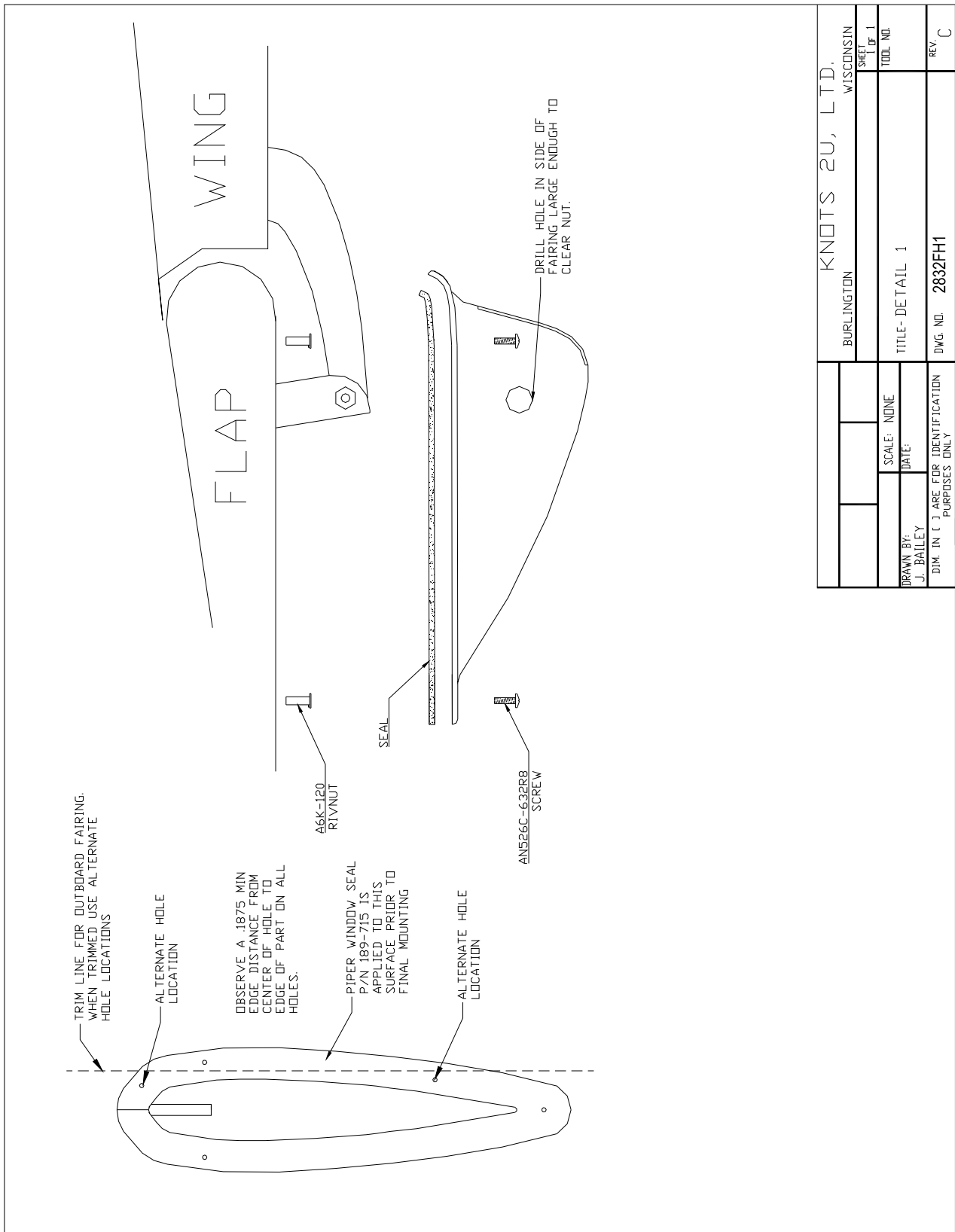
Component Weights: 6 Fairings and Hardware 1.2 pounds
 Arm 133 Inches
 Confirm for specific model

Section 9.0

Parts List

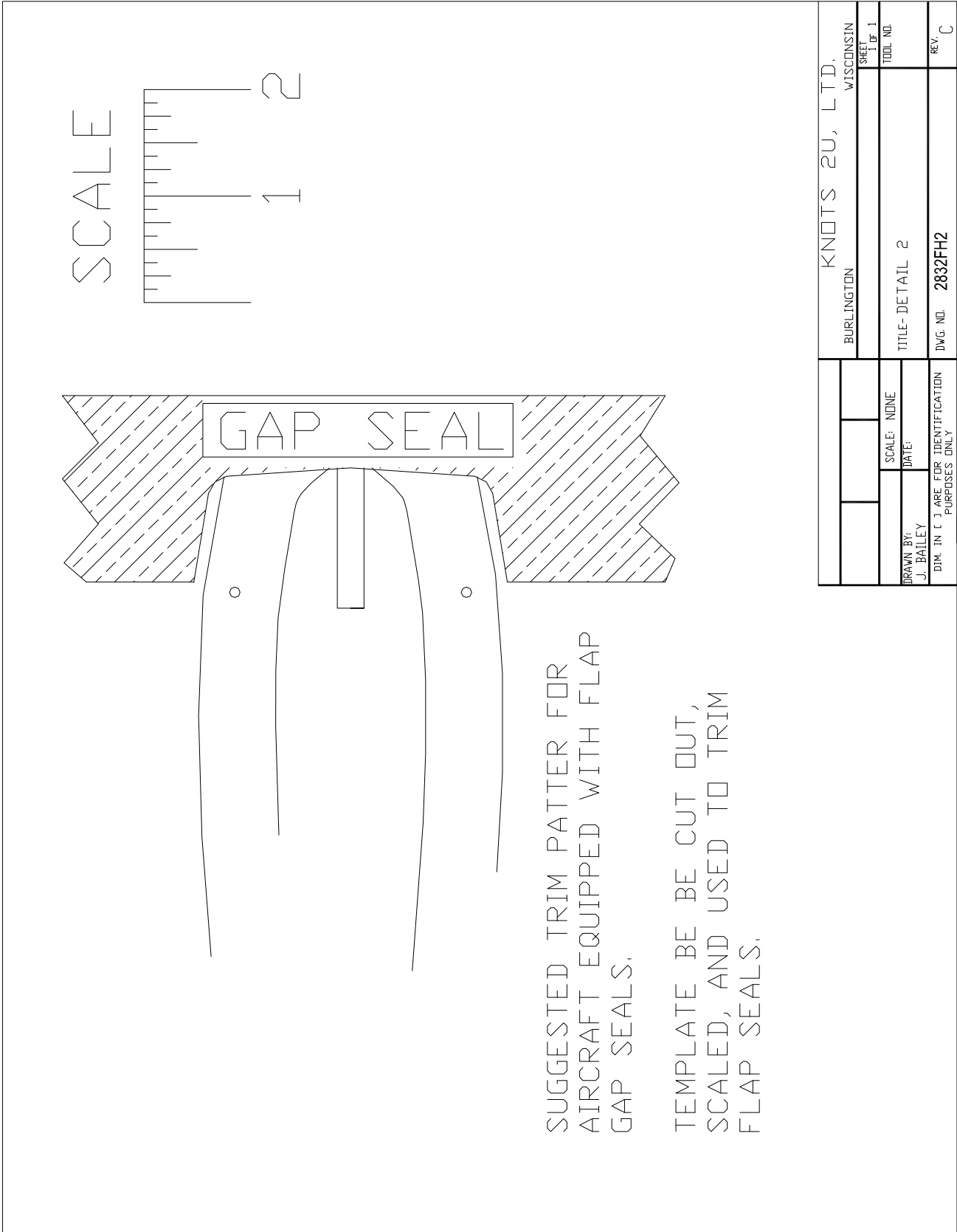
Part #	No. Req'd	Description
FHF	4	Flap Hinge Fairing
IFHF	2	Inboard Flap Hinge Fairing
A6K-120	20	Rivnut
AN526C-632-R8	20	Screw
189-715	12'	Piper Window Seal

Flap Hinge Fairing Installation and Maintenance Manual	Issue Date: 10-15-88
STC No. SA1194GL	Rev. C
Manual No. 28HF-M	Rev Date: 2-12-11



KNOTS 2U, LTD.		WISCONSIN	
BURLINGTON		SHEET OF 1	
SCALE: NONE		TITLE: DETAIL 1	
DRAWN BY: J. BAILEY		TOOL NO.:	
DATE:		REV. C	
DIM. IN U J ARE FOR IDENTIFICATION PURPOSES ONLY		DWG. NO. 2832FH1	

Flap Hinge Fairing Installation and Maintenance Manual	Issue Date: 10-15-88
STC No. SA1194GL	Rev. C
Manual No. 28HF-M	Rev Date: 2-12-11



SUGGESTED TRIM PATTERN FOR AIRCRAFT EQUIPPED WITH FLAP GAP SEALS.
 TEMPLATE BE BE CUT OUT, SCALED, AND USED TO TRIM FLAP SEALS.

BURLINGTON WISCONSIN		KNOTS 2U, LTD.	
SHEET 1 OF 1		TOOL NO.	
DRAWN BY: J. BAILEY		TITLE-DETAIL 2	
SCALE: NONE		DWG. NO. 2832FH2	
DATE:		REV. C	
DIM. IN [] ARE FOR IDENTIFICATION PURPOSES ONLY			

Flap Hinge Fairing Installation and Maintenance Manual	Issue Date: 10-15-88
STC No. SA1194GL	Rev. C
Manual No. 28HF-M	Rev Date: 2-12-11

Section 10.0

Maintenance / Instructions for Continued Airworthiness

The Airworthiness Limitations section is FAA approved and specifies maintenance required under Secs. 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.

For the current copy of this manual please contact Knots 2U, Ltd. at 262 763-5100 or via email at technical@knots2u.com.

Part A

Inspection

1. There are no special tools required to maintain the flap hinge fairings. Any tools required are basic hand tools.
2. Inspection at pre-flight to check attachment of flap hinge fairings to aircraft. Check for binding through full flap travel and cracks or defects in the flap hinge fairing. If a possible problem exists the fairings can be removed and inspected further.
3. Remove flap hinge fairings during 100 hour inspections and annuals to inspect fairings and flap attachment.

Part B

Maintenance

Keep slot of hinge fairing clear of obstructions. If the aircraft is painted and paint stripper is used, confirm paint stripper is not used on flap hinge fairings. Fairings should be removed during the stripping process.

Part C

Cracking or Defects

1. If any cracks are found in a flap hinge fairing, stop drill the crack.
2. If any crack exceeds ½” in length, or if a crack runs from an attachment hole to the outer edge of the flange the fairing must be replaced.