

RUDDER GAP SEALS

APPLICABLE MODELS

PIPER PA-24, PA-24-250, PA-24-260

ISSUE DATE 03/24/82

KNOTS 2U, LTD.

*709 AIRPORT ROAD
BURLINGTON, WI 53105
262 763-5100*

REV #	DATE	EFFECT
A	07/04/99	Changed hardware, general cleanup. Removed PA-24-400.

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RIGHT SIDE INSTALLATION

SECTION 1.0 LOCATING AND DRILLING FOR P/N RRS-24

With top of P/N TEMPLATE-24 at top of vertical fin align TEMPLATE in its proper position. TEMPLATE should be located so it will provide ½" edge distance between center of holes and trailing edge of vertical fin. TEMPLATE should also be centered to leave an equal spacing at the top and bottom. With TEMPLATE in its proper position, mark and drill all holes in vertical fin to a #40 hole size. Confirm proper locations using P/N RRS-24 and enlarge holes to a #18 hole size.

SECTION 1.1 ATTACHING P/N RRS-24

De-burr holes and clean shavings from aircraft. Holes should be corrosion proofed with Alodine or equivalent. Place retainer P/N RET-24 inside vertical fin so holes line up with holes drilled in vertical fin, hold temporarily in place. Place rudder seal P/N RRS-24 on outside of vertical fin with holes matching those drilled. Using (19) AN526C632R8, secure rudder seal in place.

SECTION 1.2 CONFIRMING PROPER MOVEMENT OF RUDDER

With seal P/N RRS-24 installed move rudder through its full movement and check for binding on any rivet heads. If binding occurs seal may be "joggled slightly" with a needle nose pliers to prevent binding.

LEFT SIDE INSTALLATION

SECTION 2.0 LOCATING AND DRILLING FOR LEFT SIDE RUDDER SEALS

With top of P/N TEMPLATE-24 at top of vertical fin align TEMPLATE in its proper position. TEMPLATE should be located so it will provide ½" edge distance between center of holes and trailing edge of vertical fin. TEMPLATE should also be centered to leave an equal spacing at the top and bottom. With TEMPLATE in its proper position, mark and drill all holes in vertical fin to a #40 hole size. Confirm proper locations using P/N's LRB-24, LRH-24, LRC-24, LRT-24 and enlarge holes to a #18 hole size.

SECTION 2.1 ATTACHING LEFT SIDE RUDDER SEALS

De-burr holes and clean shavings from aircraft. Holes should be corrosion proofed with Alodine or equivalent. Place retainer P/N RET-24 inside vertical fin so holes line up with holes drilled in vertical fin, hold temporarily in place. Place rudder seals P/N LRB-24, LRH-24, LRC-24, & LRT-24 on outside of vertical fin with holes matching those drilled. Using (19) AN526C632R8, secure rudder seal in place.

SECTION 2.2 CONFIRMING PROPER MOVEMENT OF RUDDER

With left side seals installed move rudder through its full movement and check for binding on any rivet heads. If binding occurs seal may be "joggled slightly" with a needle nose pliers to prevent binding.

PAPERWORK AND PARTS LIST

SECTION 3.0

PAPERWORK

Perform paperwork (337 and logbook entry). Place Supplemental Type Certificate and KNOTS 2U, LTD. Maintenance Manual with log books.

Rudder Seals and Hardware: .9 lbs.

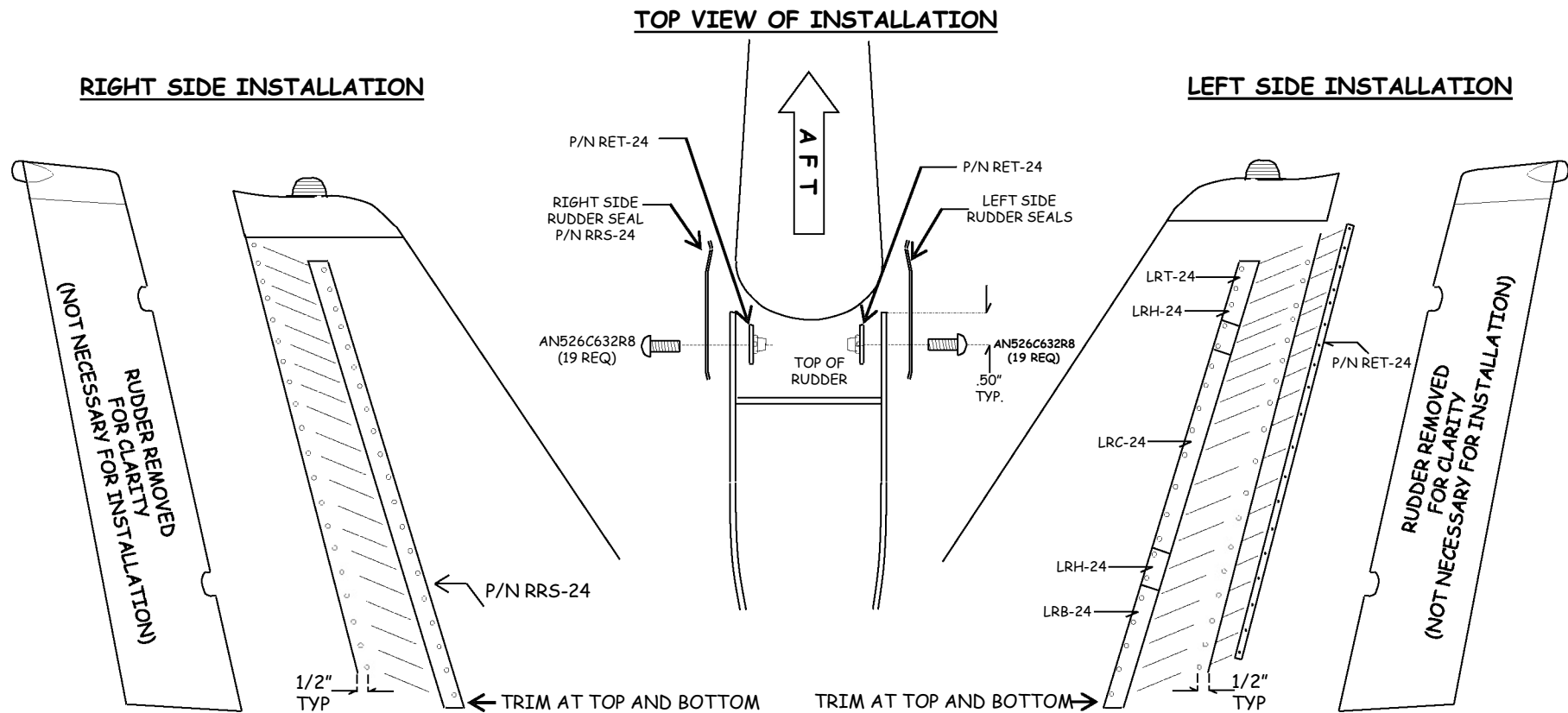
Arm: Per appropriate Piper Service Manual

SECTION 4.0

PARTS LIST

PART #	QTY	DESCRIPTION
RRS-24	1	RIGHT RUDDER SEAL
RET-24	2	RETAINER
TEMPLATE-24	1	DRILLING TEMPLATE
LRB-24	1	LEFT RUDDER BOTTOM
LRH-24	2	LEFT RUDDER HINGE
LRC-24	1	LEFT RUDDER CENTER
LRT-24	1	LEFT RUDDER TOP
AN526C632R8	38	#632 X 1/2 S/S ROUNDHEAD MACHINE SCREW

PA-24, PA-24-250, PA-24-260 RUDDER SEAL INSTALLATION



REV.	DATE	EFFECT

KNOTS 2U, LTD.

703 AIRPORT ROAD, BURLINGTON, WI 53105

DRAWING # **C-RS**

PIPER PA-24, PA-24-250, PA-24-260

07/04/99

NOT TO SCALE

DRAWN BY: JMB

SECTION 6.0 MAINTENANCE MANUAL**KNOTS 2U, LTD.****PIPER PA-24, PA-24-250, PA-24-260.****RUDDER GAP SEALS****PART A. INSPECTION**

1. Daily inspection at preflight to ensure there is no binding of controls, bent gap seals, abrading of rivets, control surfaces, or broken parts.
2. When aircraft has been stored outside during snow or freezing conditions, a careful inspection should be made of the areas behind and under the seals for ice accumulations. If ice is found that cannot be removed by careful brushing, the aircraft should be de-iced.
3. At 100 hour inspections it is suggested to check for abrading of rivets, control surfaces, and seals. Chafe tape should be inspected for peeling or excessive wear. Check all hardware and attachment of all seals.

PART B. MAINTENANCE

1. There are no special tools required to maintain the seals. Any tools needed are basic hand tools.
2. Maintenance of the Gap Seals is to keep the seal surface clean of oil and dirt, and the edge of the seal touching the control surface smoothly. If the Gap Seal appears to be abrading the control surface, 3M 5490 Teflon Tape or equivalent may be applied to the Gap Seal to act as a wear surface. The tape should be applied before further flight to prevent control wear.
3. If upon installation, or through wear, there is a warp in the seal or it lies unevenly, you may drill a #40 hole and cut the seal in a direction 90 degrees from the trailing edge. Drill the hole in the center of the warp, 1/2 inch from the trailing edge of the surface the seal is attached to. The cut in the seal should be trimmed to give a slot 1/16th" wide, with parallel edges. The slots should be no closer than 6 inches from each other or the end of the seal.
4. When aircraft is painted, care should be taken to prevent paint, paint remover, or solvents from contacting the Chafe Strip. If Chafe Strip is damaged, refer to PART B Paragraph 2 of this manual for replacement specifications.

PART C. CRACKING, DEFECTS, LOOSE RIVETS

1. If cracks are found in a Gap Seal, stop-drill the crack. If there are more than 3 cracks in a Gap Seal, the seal must be replaced.
2. If the Chafe Strip peels, 3M 5490 Teflon Tape, or equivalent, may be applied
3. If there are excessive bends or kinks in the seal, and the airflow over the control surface is disturbed, the seal must be replaced.