Chapter 1

DUNLOP PNEUMATIC BRAKE UNITS

1. This chapter contains information to guide personnel in the repair of certain pneumatic brakes that have been rendered unserviceable through wear or damage.

2. Each brake repair is given the code letters "RP" followed by the repair number. The repairable brakes are tabulated in the List of Pneumatic Brake Units and Relevant Repair Schemes and the "RP" and the relevant Volume 1 appendix numbers are given in the adjoining columns. Details of special tools and repair parts which are fundamentally similar are given in Tables that follow the List of Pneumatic Brake Units and Relevant Repair Schemes.

3. The repairs may involve the bushing of worn or damaged backplate holes.

4. It should be noted that where no tolerances are given for certain dimensions shown on the repair drawings, the following limits will apply; $\pm$ 0·005 in. for dimensions shown in decimal figures, $\pm$ 0·015 in. for dimensions shown in fractional figures.

LIST OF PNEUMATIC BRAKE UNITS AND RELEVANT REPAIR SCHEMES

Wheel Part No.	Issue No.	Vol. 1 Ref. Sect. 1 Chap. 1 Appendix	Repair Scheme RP No.	Wheel Part No.	Issue No.	Vol. 1 Ref. Sect. 1 Chap. 1 Appendix	Repair Scheme RP No.
AH.8219		1		AHO.5446		20	
AH.8377		2		AH.8050		21	
AH.8392		3		AH.8983		22	
AH.8209		4	64	AH.8902		23	
AH.8439		5	158	AH.8910		24	
AH.8407		6		AH.9027		25	
AH.8311		7		AHO.5785		26	
AH.8269		8		AH.9419		27	
AH.8138		9		AH.9074		28	
AH.8749		10		AH.8998		29	
AH.8726		11		AH.9353		30	
AH.8065		12		AH.9380		31	
AH.8129		13		AH.9506		32	
AHO.5480		14		AH.9771		33	64
AH.10227		15		AH.9140		34	
AH.10271		16		AH.8132/20		35	
AH.10160		17		AH.50155		36	
AH.8057		18		AH.50329		37	
AHO.1827		19		AH.50178		38	
				AH.50196		39	158

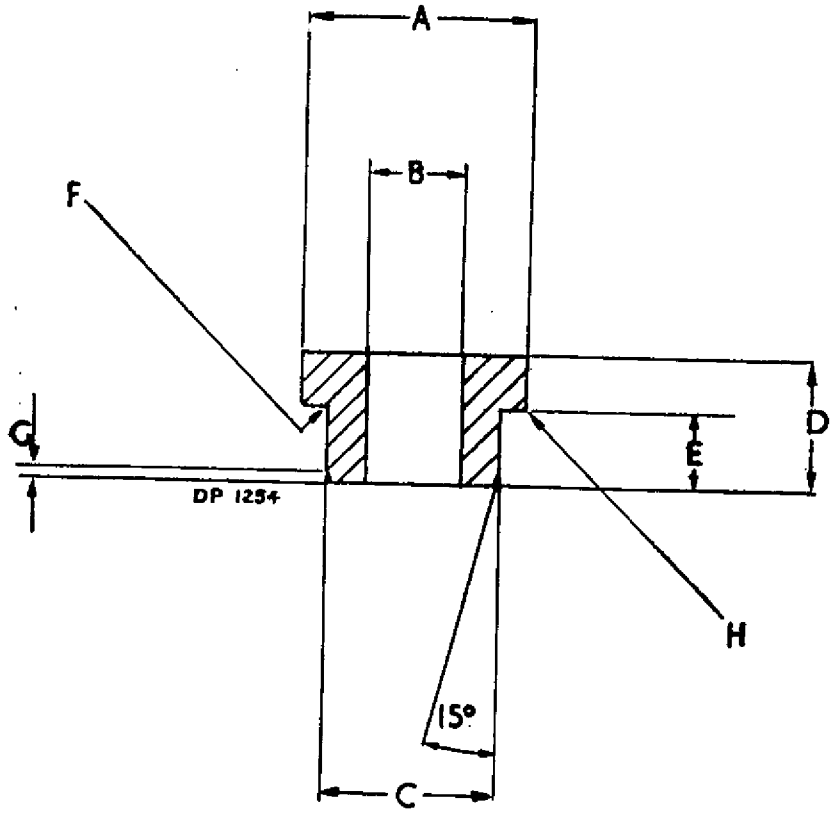
Note . . .

Details of tools and repair parts which are fundamentally similar are given in Tables following this list.

TABLE I

Details of bushes for brake unit backplates (dimensions in inches)

Part No.	Material Spec.	A (dia.)	B (dia.)	C (dia.)	D	E	F (rad.)	G (chamfer)	H (chamfer)
RP64/3	S.80	$\frac{0{\cdot}555}{0{\cdot}550}$	$\frac{1}{4}$ in. drill	$\frac{0{\cdot}4395}{0{\cdot}4390}$	$\frac{0{\cdot}280}{0{\cdot}275}$	$\frac{0{\cdot}165}{0{\cdot}160}$	0·005 (max.)	$\frac{0{\cdot}020}{0{\cdot}015}$ × 15 deg.	$\frac{0{\cdot}015}{0{\cdot}010}$ × 45 deg.



RP 64

REPAIR TO BOLT HOLES IN BRAKE UNIT BACKPLATE

Equipment required

Press: Hydraulic or mechanical

Press tools: Supporting base plate, Part No. AM.20346
Pressing in tool, Part No. AO.101210

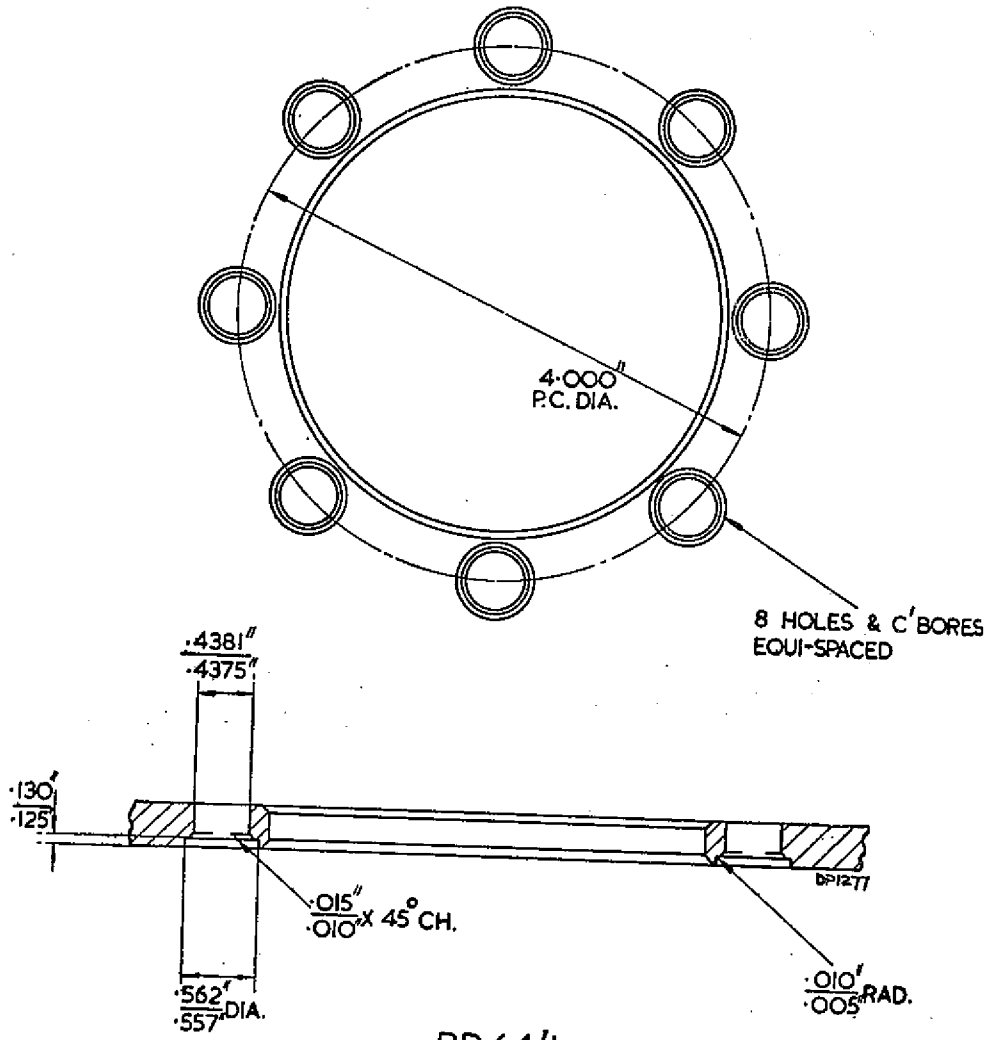
Special jig: Drill jig (with two loose plugs). Part No. A.8843

Selenious acid solution: 2 oz. selenious acid crystals dissolved in 1 pint of water

New part: Bush, Part No. RP64/3 (eight required)

WARNING

Selenious acid crystals or solution must not be allowed to come into contact with the skin.



RP 64/1

Fig. 1 Machining of backplate holes (1)

Introduction

1. Due to wear, the eight holes in the backplate may become so elongated that the brake unit becomes unserviceable. When this happens, the bolt holes are to be enlarged and bushes are to be fitted to restore the holes to their original dimensions. The maximum elongation permitted before repair is 0·030 in. on the original dia. of $\frac{0{\cdot}317}{0{\cdot}132}$ in.

Method of repair

2. (1) Dismantle and degrease the backplate.

(2) Remove the paint as detailed in Vol. 1, Sect. 1, Chap. 1.

(3) Locate the drill jig in the 3·250/3·255 in. dia. bore, and with a loose plug in one of the holes on the 4·0 in. pitch centre dia., drill and ream one of the other holes on the 4·0 in. p.c.d. to the dimension shown in RP64/1 (*fig.* 1).

(4) Locate the freshly-reamed hole with the other loose plug. Drill and ream the remaining seven holes. Counterbore, chamfer, and radius the eight holes as shown in RP64/1 (*fig.* 1). Check against drawing dimensions.

(5) Clean the repaired surfaces of the holes and repair the chromate film (*A.P. 2656A, Vol. 1, Sect. 5, Chap. 2*).

(6) Apply a thin coating of pigmented varnish jointing compound (*Stores Ref. 33C/1264*) to the mating surfaces of the bushes RP64/3.

(7) Locate the backplate in the supporting base plate and then press the bushes into position.

(8) Locate the drill jig in the 3·250/3·255 in. bore, and with the loose plug in one of the bushes on the 4·0 in. pitch centre dia., drill and ream one of the other bushes as shown in RP64/2.

(9) Locate the freshly-reamed bush with the other loose plug. Drill and ream the seven remaining holes. Countersink the eight holes as shown in RP64/2 (*fig.* 2). Check against drawing dimensions.

(10) Remove the swarf from the bushes and apply a thin coating of pigmented varnish jointing compound (*Stores Ref. 33C/1264*) to the interior surface of each bush.

Inspection

3. The repair must be to the satisfaction of the supervising inspector A.I.D., C.I.O./N.A.I. or C.I.O./A.I.S.

Painting

4. Repaint the backplate as described in Vol. 1, Sect. 1, Chap. 1.

Identification

5. After satisfactory completion of the repair, use $\frac{1}{8}$ in. metal stamps to mark "RP64" immediately below the assembly Issue No. on the brake unit. After marking the brake unit, paint the indentations with selenious acid solution.

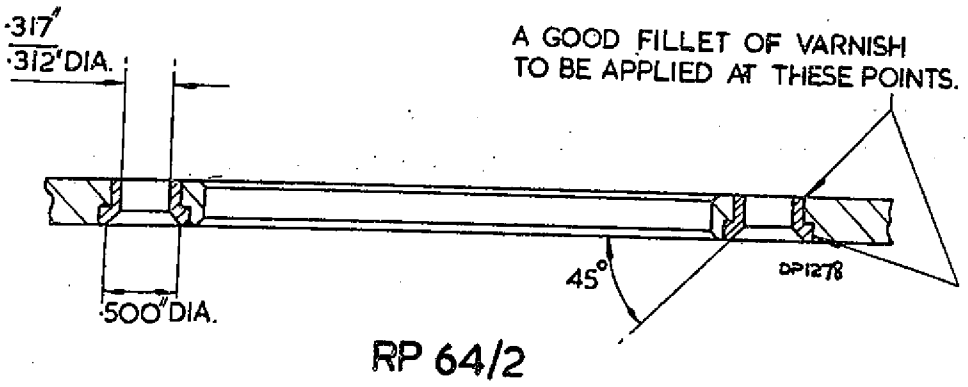


Fig. 2. Machining of backplate holes (2)

P25592 577438/7792 3/56 1750 C & P Gp. 1

RP. 158

REPAIR AND WEAR ALLOWANCE FOR BACKPLATE SLOTS (INFLATED BAG-TYPE BRAKE UNITS)

(This R.P. supersedes that issued with A.L.52)

Introduction

1. The brake units covered by this scheme are referred to in Table 1.

Slot wear

2. The maximum permissible brake shoe lug slot wear **X** in. in the backplate is given in Table 1. The original dimension of the slot is **Y** in. (*fig.* 1), thus permitting a maximum worn dimension of **Z** in. It is essential that wear at one end of the slot is not permitted to exceed **X** in. When wear has occurred at one end only, up to this maximum, the brake backplate must therefore be restricted to fitment to the aircraft in such a manner that wear will take place at the other end only. Normally, when checking wear, the original slot can plainly be seen as a step in the worn slot, and wear should be checked from this point.

Cracks

3. Cracks from the inner corners of the slots must not exceed $\frac{3}{16}$ in. in length, where they do so the back plate is unserviceable. Cracks up to $\frac{3}{16}$ in. may be stopped by drilling a hole through the backplate at the extremity of the crack (*fig.* 1).

Identification

4. After satisfactory completion of the repair, "RP.158" is to be stamped immediately below the Assembly Issue No. on the brake unit with $\frac{1}{16}$ in. metal stamps. Paint the indentations with selenious acid solution.

Requirement

5. Selenious acid solution:—

2 oz. selenious acid crystals dissolved in one pint of water.

TABLE 1

Brake shoe lug slot wear in backplate

Brake Part No.	Backplate Part No.	Max. permissible wear each end of slot X in.	Dimension new of slot Y in.	Max. worn dimension of slot Z in.
A.H.8439	AH.7329	0·10	1·140	1·340
AH.9771	AH.40140	0·10	1·390	1·590
AH.50196	AH.7329	0·10	1·140	1·340

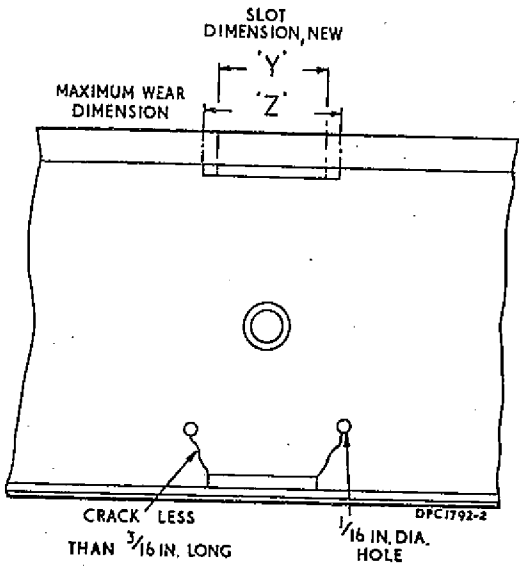


Fig. 1. Repair dimensions

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