



AP 105D-1303-6

JACK

FAIREY HYDRAULICS LTD.

PART No. AH33523

**REPAIR AND RECONDITIONING INSTRUCTIONS
FITS, CLEARANCES AND REPAIR TOLERANCES**

BY COMMAND OF THE DEFENCE COUNCIL

Frank Cooper

Ministry of Defence

Sponsored for use in the

ROYAL AIR FORCE by D Air Eng (RAF)

Prepared by Fairey Hydraulics Limited, Heston, Middlesex

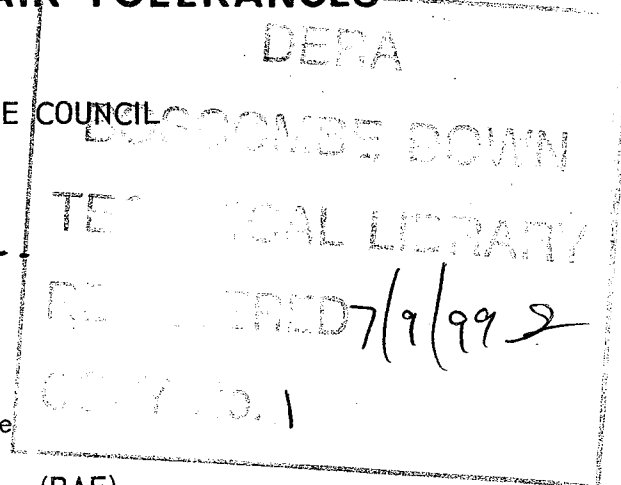
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AP 100B-01, Order 0504 (RAF)

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Note ... Standard repairs (FHSR's) authorized by the key diagram are given in A.P.105D-0002-1.

WARNING: THE FINITE LIFE OF THESE JACKS IS 2000 FLYING HOURS AS DEFINED BY THE LIFE OF THE JACK BODY PART No. AH 33203

FHR 451 - Refacing of by-pass valve piston conical surface

1. The valve piston conical surface may be refaced to a finish of 32 micro-inches, or better. Concentricity to diameter X (Fig. 1) must be maintained at 0.001 in. (0.002 in. total D.I. reading) and after refacing dimension Y must not be less than 0.865 in. On assembly lightly seat the piston in the jack body by the method detailed in A.P.105D-1303-1. Where the clearance between the housing and the jack body (Fig. 1) is below the minimum requirement, repair scheme FHR 1076 (para. 2) must be incorporated.

FHR 1076 - Re-seating of by-pass valve

2. When the assembly clearance between housing and jack body, with re-seating washer FHQ 2284 in position and the housing securing bolts screwed down finger tight only, is below the minimum requirement (A.P.105D-1303-1), this scheme allows a lower tolerance as indicated (Fig. 1). A further special washer, FHSO 101, which is 0.050-0.055 in thick, is introduced and may be used, if necessary, to meet testing requirements. (See A.P.105D-1303-1 - By-pass valve alternative washers and springs).

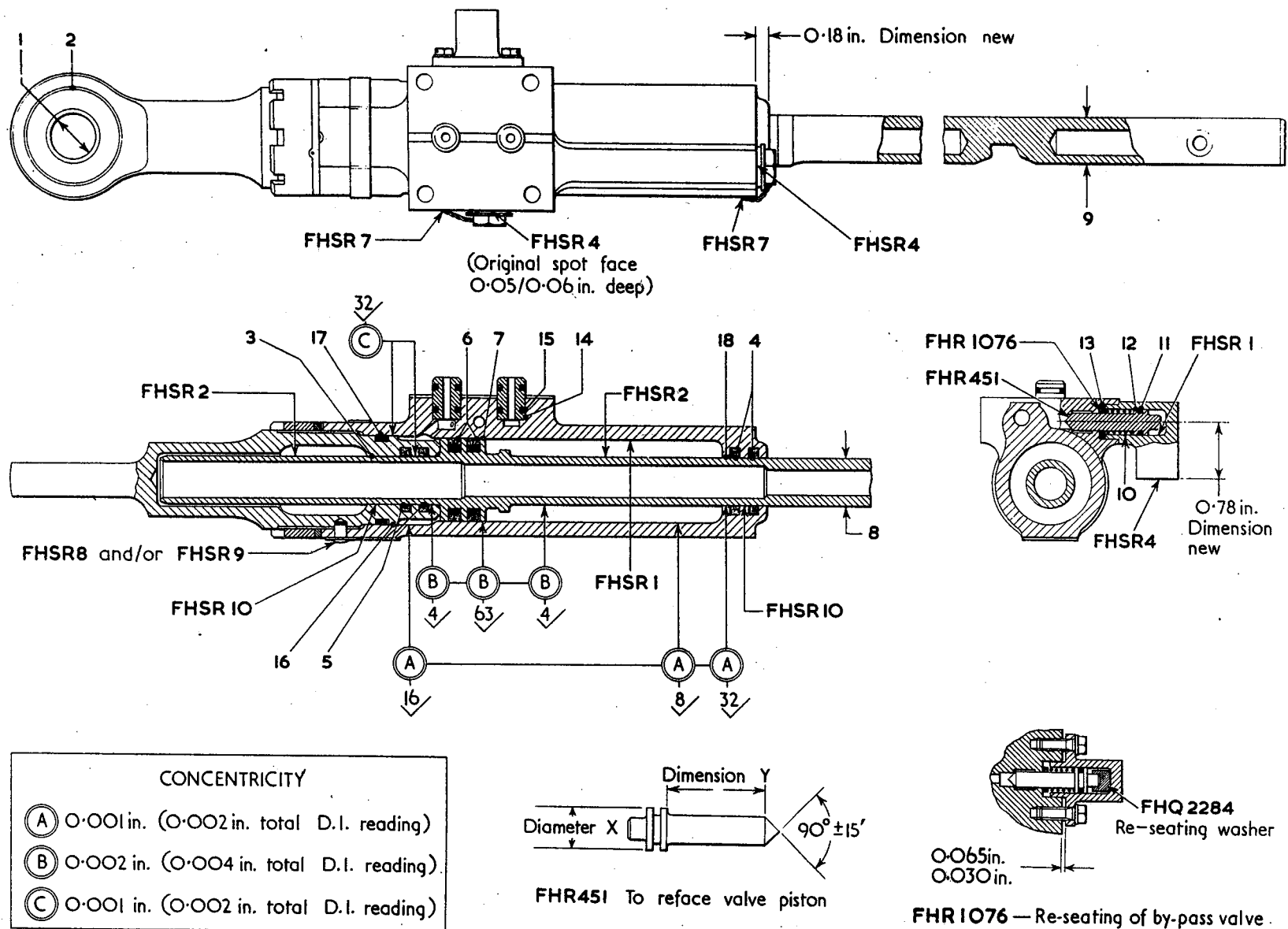


Fig. 1. Key diagram

◀ (Position identification date ted) ▶

SCHEDULE 1

FITS, CLEARANCES AND REPAIR TOLERANCES

Ref. No. on Key diagram (1)	Parts and Description (2)			Dimension New (3)	Permissible Worn Dimension		Clearance New (6)	Permissible Worn Clearance (7)	Remarks (8)
					Inter- changeable Assembly (4)	Selective Assembly (5)			
1	BEARING		i/d	0.6252 0.6247	0.6255	—	—	—	
2	BEARING IN EXTENSION END	Extension end	i/d	1.3752 1.3742	1.3752	1.3756	0.0009 -0.0005	0.0009	
		Bearing	o/d	1.3747 1.3743	1.3743	1.3733			
3	PISTON RAM IN EXTENSION END	Extension end	i/d	0.6882 0.6870	0.6895	0.6910	0.0032 0.0010	0.0050	
		Piston	o/d	0.6860 0.6850	0.6845	0.6820			
4	PISTON RAM IN SEALS			Fit new seals to assembly instructions (A.P. 105D-1303-1)					
5	PISTON RAM IN SEALS			Fit new seals to assembly instructions (A.P. 105D-1303-1)					
6	PISTON SEALS IN JACK BODY	Body	i/d	1.1885 1.1870	1.1895	1.1915	-0.0046 -0.0199	-0.0046	
		Seals (fitted)	o/d	1.2069 1.1931	—	—			
7	PISTON HEAD IN JACK BODY	Body	i/d	1.1885 1.1870	1.1895	1.1915	0.0135 0.0100	0.0145	
		Head	o/d	1.1770 1.1750	1.1750	1.1725			

A.P. 105D-1303-6

SCHEDULE 1 (continued)

FITS, CLEARANCES AND REPAIR TOLERANCES

Ref. No. on Key diagram	Parts and Description			Dimension New	Permissible Worn Dimension		Clearance New	Permissible Worn Clearance	Remarks
					Inter- changeable Assembly	Selective Assembly			
(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)
8	PISTON RAM	Nitrided portion o/d		0.6860 0.6850	0.6845	—	—	—	
9	PISTON RAM	Dimension across flat		0.6400 0.6380	0.6360	—	—	—	
10	SPRING Part No. DH 23207				Effort when compressed to 0.45 in. to be 10 ±1 lb.				
	SPRING Part No. DH 32197				Effort when compressed to 0.45 in. to be 13.5 ±1 lb.				
11	BY-PASS PISTON SEAL IN HOUSING	Housing	i/d	0.3755 0.3745	0.3760	0.3775	-0.0043 -0.0137	-0.0043	
		Seal (fitted)	o/d	0.3882 0.3798	—	—			
12	BY-PASS PISTON HEAD IN HOUSING	Housing	i/d	0.3755 0.3745	0.3760	0.3775	0.0035 0.0015	0.0045	
		Piston	o/d	0.3730 0.3720	0.3715	0.3700			
13	SEAL BETWEEN BODY AND HOUSING	Assembled groove width		0.0560 0.0470	Housing and body when assembled to be within dimension new limits		-0.0110 -0.0260	-0.0110	
		Seal width		0.0730 0.0670	—	—			
14	CONNECTING PIECE IN BODY	Body	i/d	0.3755 0.3745	0.3765	0.3780	0.0035 0.0015	0.0050	
		Connecting piece	o/d	0.3730 0.3720	0.3715	0.3695			

SCHEDULE 1 (continued)

FITS, CLEARANCES AND REPAIR TOLERANCES

Ref. No. on Key diagram	Parts and Description			Dimension New	Permissible Worn Dimension		Clearance New	Permissible Worn Clearance	Remarks
					Inter- changeable Assembly	Selective Assembly			
(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)
15	CONNECTING PIECE SEALS IN BODY	Body	i/d	0.3755	0.3765	0.3780	-0.0083 -0.0177	-0.0083	
				0.3745					
		Seals (fitted)	o/d	0.3922					
				0.3838					
16	EXTENSION END IN BODY	Body	i/d	1.2510	1.2520	1.2540	0.0030 0.0005	0.0050	
				1.2495					
		Extension end	o/d	1.2490					
				1.2480					
17	EXTENSION END SEAL IN BODY	Body	i/d	1.2510	1.2520	1.2540	-0.0068 -0.0167	-0.0068	
				1.2495					
		Seal (fitted)	o/d	1.2662					
				1.2578					
18	PISTON RAM IN JACK BODY	Body	i/d	0.6882	0.6895	0.6910	0.0032 0.0010	0.0050	
				0.6870					
		Piston	o/d	0.6860					
		(chromium portion)		0.6850					

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