Formerly AP4601A
Vol 4 Pt 6

AP 105D-1307-5F

Issued July 1974

Hunter

BAY SERVICING SCHEDULE

POWERED FLYING CONTROL JACK PART NO. AH 30227 (FAIREY HYDRAULICS)

BY COMMAND OF THE DEFENCE COUNCIL

Michael Cary

(Ministry of Defence)

FOR USE IN THE
ROYAL AIR FORCE

AMENDMENT RECORD CERTIFICATE

1. This certificate is for Ministry of Defence (Air) ALs only.
2. Amendments are to be inserted in numerical sequence except where Non-Availability slips for particular A.L.s are issued.

A.L. No	A.L. MONTH AND YEAR OF ISSUE	AMENDMENT INCORPORATED SIGNATURE	DATE OF INCORPORATION
1	Dec 1983	W.J. Aldridge	16 Feb 1984
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POWERED FLYING CONTROL JACK SUPPLEMENTARY SERVICING

ITEM No	ITEM	OPERATION

REF NO.	EQUIPMENT AND TOOLS	QTY
	Kits Tool Airframe Fitter to Scale A2 AP830 Vol 3 Pt A	
27KF/683	Tool, Seal Manipulating Pt No. FHQ 100	1
27KF/697	Block, Connecting Pt No. FHQ 102	1
27KF/688	Tool, Manipulating Pt No. FHQ 164	1
27KF/1	Spanner, Hook Pt No. FHQ 759	1
27KF/2748	Spanner, Extension End Pt No. FHQ 760	1
27KF/2747	Jig, Setting Pt No. FHQ 761	1
27KF/6	Blocks, Vice Pt No. FHQ 762	1
27KF/107	Mandrel, Seal Expansion Pt No. FHQ 794	1

SPARES

Refer to AP4515P Vol 3 Pt 1 Sect 2 Chap 1

	MATERIALS	NATO CODE NO.	
30A/3055	Locking Wire 22 SWG		As required
34B/2241973	Grease, XG-287	G-354	" "
30B/1214	Tinmans Solder, Grade C		" "
33C/525	Soldering Flux		" "
33H/2202110	Compound, Pigmented Varnish Jointing	S-726	" "

SERVICING NOTES

1. AP105D-0001-5F is to be complied with throughout the work detailed in this schedule.

2. Clean all components, except pre-packed bearings, in oil, OM-15.

3. All components, except bearings, are to be immersed in oil, OM-15 immediately before assembling.

P.T.O.

ITEM No	ITEM	OPERATION
1.	Preparation	
1.1	Servicing Notes.	Read.
2.	Dismantling	
2.1	Jack body.	(i) Remove polythene bag containing connecting pieces. (ii) Support in vice using vice blocks.
2.2	By-pass valve blanking plugs.	Remove.
2.3	By-pass valve attachment banjo bolts.	(i) Remove. (ii) Discard bonded seals.
2.4	By-pass valve.	Remove.
2.5	By-pass valve banjo bolt.	(i) Remove. (ii) Remove union. (iii) Discard bonded seals.
▶ 2.6	By-pass valve.	
	(a) Piston.) (b) Spring.)	Remove.
	(c) Piston seal.) (d) Special washer.)	Remove and discard. ◀
2.7	Identification plate and dowel.	Remove.
2.8	Locking collar.	Slacken, using hook spanner.
2.9	Extension end.	Remove, using peg spanner. Note: Extension end bearing is not to be disturbed unless defective.
2.10	Extension end.	
	(a) Locking washer.	Remove and discard.
	(b) Locking collar.) (c) Ferrules.)	Remove.
	(d) Seals and inserts.	Remove and discard.
2.11	Jack body.	Remove ram.
2.12	Jack ram piston seals.	Remove and discard.

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Continued overleaf

ITEM No	ITEM	OPERATION
2.13	Platform protection cover.	Remove.
2.14	Protection plugs.	
2.15	Jack body.	Remove from vice and vice blocks.
3.	Examination	
NB	Extension end bearing is prepacked, do not contaminate with oil while cleaning extension end.	
3.1	Extension end.	(i) Clean. (Servicing Note 2 refers). (ii) Examine.
3.2	Locking collar.	
3.3	Ferrules.	
3.4	Jack ram.	
3.5	Jack body.	
3.6	Connecting pieces.	
3.7	By-pass valve housing.	
3.8	By-pass valve piston.	
3.9	By-pass valve spring.	
3.10	By-pass valve attachment banjo bolts.	
3.11	By-pass valve blanking plugs.	(i) Clean. (ii) Examine.
3.12	By-pass valve banjo bolt.	
3.13	By-pass valve banjo union.	
3.14	Re-seating washer.	
3.15	Identification plate and dowel.	
4.	Assembling	
4.1	Jack body.	Support in vice using vice blocks.
4.2	Jack ram piston. (a) Backing seals. (b) Sealing rings.	Fit to piston head. (Fig 1 and 2 refers).
4.3	Jack body seals and inserts.	(i) Fit. Note: Ensure white inserts (Post Mod 156) or fabric faces (Pre Mod 156) are towards atmosphere (Fig 1 refers).
4.4	Extension end seals and inserts.	(ii) Expand into grooves using mandrel.
4.5	Jack ram.	Fit to jack body.

ITEM No	ITEM	OPERATION
4.	Assembling (Contd)	
4.6	Extension end. (a) Locking collar.) (b) Locking washer.)	Fit.
	(c) External seal.)	
4.7	Extension end.	(i) Fit. (ii) Ensure locating dowel holes coincide.
4.8	Locking collar.	Tighten.
4.9	By-pass valve. (a) Special washer.) (b) Piston seal.)	Fit.
4.10	Reseating washer.	Fit. (AP105D-1307-1).
4.11	By-pass valve. (a) Spring.) (b) Piston.)	Fit.
4.12	Reseating washer.	Remove.
4.13	By-pass valve. (a) Banjo union.) (b) Bonded seals.) (8 off).) (c) Banjo bolt.) (d) Attachment banjo) bolts.) (e) Blanking plugs.)	Fit.
4.14	By-pass valve.	Refit.
4.15	Connecting pieces seals.	Fit.
4.16	Connecting pieces.	Refit.
5.	During this Item reference is to be made to Fig.3 for connexion identification. Testing	
5.1	Connecting block Pt No.FHQ 102.	Fit to jack platform.
5.2	Connexion E.	Connect to hydraulic test rig supply.
5.3	Connexions A and D.	Fit blanks.
5.4	Connexions B and C.	Connect to hydraulic test rig in order to achieve pressure and return selection.
5.5	Jack.	Bleed until all air is expelled.
5.6	Connexions B, C and E.	Release pressure.

Continued overleaf

ITEM No	ITEM	OPERATION
5.7	Connexion C.	(i) Disconnect from test rig supply. (ii) Connect to test rig return.
5.8	Connexions B and E.	(i) Apply pressure of between 3850 and 4150 lbf/in2. (ii) Maintain for 3 minutes. (iii) Ensure no external leakage.
5.9	Connexion B.	(i) Reduce pressure to between 1 and 10 lbf/in2. (ii) Maintain for 3 minutes. (iii) Ensure no external leakage.
5.10	Connexions B and E.	Release pressure.
5.11	Connexion B.	(i) Disconnect from test rig supply. (ii) Connect to test rig return.
5.12	Connexion C.	(i) Disconnect from test rig return. (ii) Connect to test rig supply.
5.13	Connexions C and E.	(i) Apply pressure of between 3850 and 4150 lbf/in2. (ii) Maintain for 3 minutes. (iii) Ensure no external leakage.
5.14	Connexion C.	(i) Reduce pressure to between 1 and 10 lbf/in2. (ii) Maintain for 3 minutes. (iii) Ensure no external leakage.
5.15	Connexions E and C.	Release pressure.
5.16	Connexion B.	(i) Disconnect from test rig return. (ii) Connect to test rig supply.
5.17	Connexion C.	Disconnect from test rig.
5.18	Connexions B and E.	(i) Apply pressure of between 2880 and 3120 lbf/in2. (ii) Maintain pressure for 4 minutes.
5.19 N.C.	Connexion C.	During fourth minute measure seepage. This is not to exceed 65 Cm3.
5.20	Connexions B and E.	Release pressure.
5.21	Connexion B.	Disconnect from test rig.
5.22	Connexion C.	Connect to test rig supply.
5.23	Connexions E and C.	(i) Apply pressure of between 2880 and 3120 lbf/in2. (ii) Maintain for 4 minutes.

Continued

ITEM No	ITEM	OPERATION
5.	Testing (Contd)	
5.24 2 DRIP	Connexion B.	During fourth minute measure seepage. This is not to exceed 65 Cm3.
5.25	Connexions E and C.	Release pressure.
5.26	Connexions B and C.	Connect to hydraulic test rig in order to achieve pressure and return selection.
5.27	Connexion E.	Apply pressure of between 2880 and 3120 lbf/in2.
5.28	Connexions B and C.	(i) Apply pressure alternately to stroke jack ram. (ii) Check measurement is between 2.790 and 2.858 in.
5.29	Connexions B, C and E.	Release pressure.
5.30	Connexions B and C.	Connect to test rig return.
5.31	Connexion E.	Disconnect.
5.32	Jack ram.	(i) Stroke manually to between 20 and 25 times. (ii) Measure resistance in both directions using spring balance. Resistance is not to exceed 29 lbf.
6.	By-pass Valve Test	
6.1	Connexions B and C.	Disconnect from test rig return.
6.2	Connexions E and B.	(i) Connect to common test rig supply. (ii) Gradually apply pressure until flow starts at connexion C. (iii) Note pressure at which flow falls to normal seepage rate. This pressure is not to exceed 500 lbf/in2. (iv) Increase pressure to between 2880 and 3120 lbf/in2 then gradually decrease and note pressure at which flow recommences at connexion C. This pressure is not to be less than 200 lbf/in2. (v) Release pressure.
6.3	Connexion B.	Disconnect.

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ITEM No	ITEM	OPERATION
6.4	Connexion C.	Connect to common pressure supply with connexion E.
6.5	Jack.	Repeat Sub-item 6.2, Operations (ii) to (v) inclusive, but observing flow from connexion B.
6.6	Connexions E and C.	Disconnect.
7.	Completion	
7.1	Jack.	Ensure fully retracted.
7.2	By-pass valve protection plug.	(i) Fit seal. (ii) Fit.
7.3	Connecting block.	Remove from jack platform.
7.4	Connecting pieces.	(i) Remove. (ii) Place in polythene bag and attach to jack body.
7.5 7.6	Protection plugs. Platform protection cover.	Fit to jack platform.
7.7	Locking washer.	Lock by peening into collar and jack body.
7.8 7.9	By-pass valve attachment banjo bolts. By-pass valve blanking plugs.	Lock together with wire.
7.10	Jack ram.	Lightly coat exposed portion with grease, XG-287.
7.11	Identification plate and dowel.	(i) Lightly coat undersurface with yellow chromate. (ii) Fit to jack body. (iii) Secure by soldering retaining strip.
7.12	Servicing forms.	Sign.

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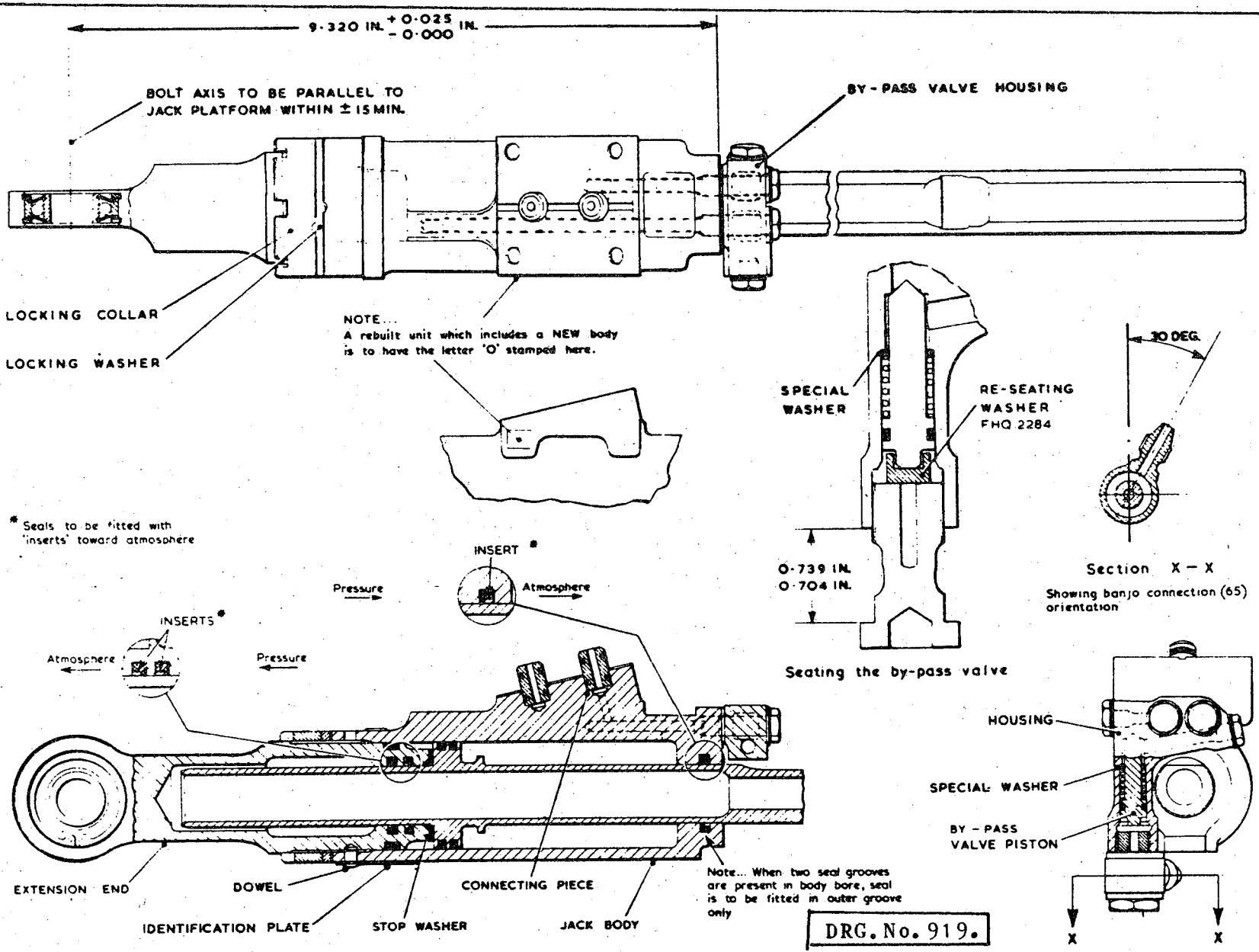

DRG. No. 919.

FIG 1

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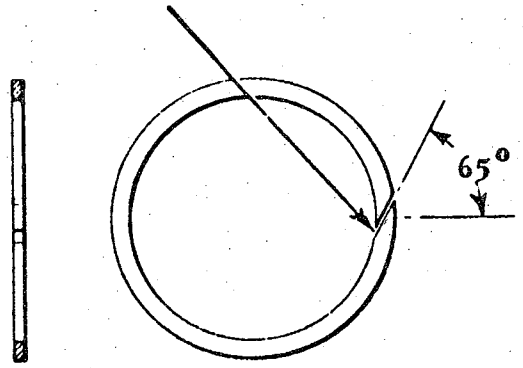
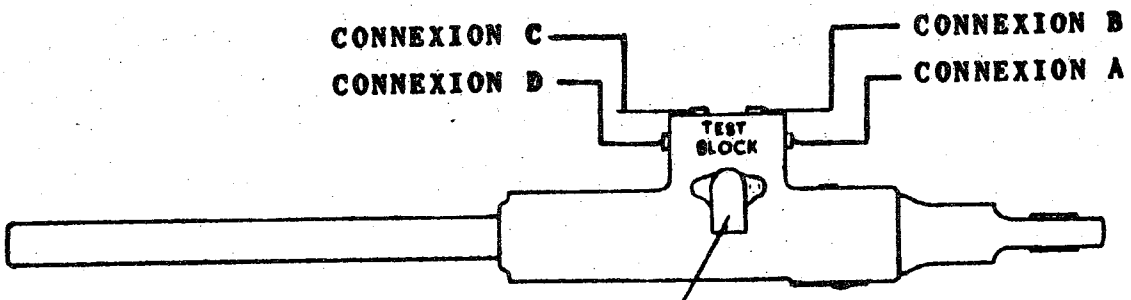
SLIT WITH RAZOR-EDGED BLADE IMMEDIATELY
PRIOR TO ASSEMBLY INTO COMPONENT



PISTON HEAD
SEALING RING

DRG. No. 450.

FIG 2



DRG. No. 451.

FIG 3