Formerly AP4601A
Vol 4 Pt 6

AP 105D-1305-5F
Issued July 1974

HUNTER

BAY SERVICING SCHEDULE

POWERED FLYING CONTROL JACK
PART NO. AH 25999
(FAIREY HYDRAULICS)

BY COMMAND OF THE DEFENCE COUNCIL

Michael Carr

(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		M. Waddington	28-2-84
2			
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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		
1A/4225	Balance, Spring 0-30 lb.		1
4G/5902	Test Rig, Powered Flying Controls Mk2		1
27KF/106	Mandrel, Seal Expansion Pt No. FH0793		1
27KF/683	Tool, Seal Manipulating Pt No.FHQ100		1
27KF/688	Tool, Manipulating Pt No.FHQ164		1
27KF/697	Block, Connecting Pt No.FHQ102		1
26BU/116	Spanner, Hook Pt No.FHQ110/4		1
27KF/700	Spanner, Peg Pt No.FHQ158		1
27KF/699	Jig, Setting Pt No.FHQ160		1
27KF/698	Clamps, Vice Pt No.FHQ161		1
	SPARES		
	Refer to AP4515P Vol 3 Pt 1 Sec 2 Chap 1		
	MATERIALS	NATO CODE NO.	
30A/3055	Wire Locking Nickel Chrome 22SWG		As required
34B/2241973	Grease, XG-287	G-354	" "
30B/1214	Solder, Tinmans, Grade C		" "
33C/525	Flux, Solder		" "
33H/2202110	Compound, Pigmented Varnish, Jointing	S-726	" "

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POWERED FLYING CONTROL JACK

ITEM No	ITEM	OPERATION
1.	Preparation	
1.1	Servicing Notes.	Read.
2.	Dismantling	
2.1	By-pass valve attachment bolts.	Remove.
2.2	By-pass valve.	
2.3	By-pass valve.	
	(a) Spring.	Remove.
	(b) Piston.	
	(c) Piston seal.	Remove and discard.
2.4	Special washer.	Remove and discard from jack counterbore.
2.5	Special seal.	
2.6	Jack body.	Support in vice using vice blocks.
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.	Remove.
	(c) Ferrules.	
	(d) Seals and inserts.	Remove and discard.
2.11	Jack body.	Remove ram.
2.12	Jack ram piston seals and inserts.	Remove and discard.
2.13	Platform protection cover.	Remove.
2.14	Protection plugs.	

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Continued overleaf

ITEM No	ITEM	OPERATION
2.15	Jack body.	Remove from vice and vice blocks.
2.16	Duct blanking plug.	(i) Remove. (ii) Discard bonded seal.
2.17	Jack body seals and inserts.	Remove and discard.
3.	Examination	
3.1	Extension end and bearing.	(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.	(i) Clean.
3.9	By-pass valve spring.	(ii) Examine.
3.10	By-pass valve attachment bolts.	
3.11	Duct blanking plug.	
3.12	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 FHB157) or fabric faces (Pre Mod FHB157) are towards atmosphere. (Fig 1 refers).
4.4	Extension end seals.	(ii) Expand into grooves using mandrel.
4.5	Jack ram.	Fit.
4.6	Extension end. (a) Locking collar. (b) Locking washer. (c) External seal.	Fit.

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ITEM No	ITEM	OPERATION
4.	Assembling (Contd)	
4.7	Extension end.	(i) Fit. (ii) Ensure locating dowel holes coincide.
4.8	Locking collar.	Tighten.
4.9	Duct blanking plug.	(i) Fit new bonded seals. (ii) Fit.
4.10	Jack body.	Remove from vice and vice blocks.
4.11 4.12	Special seal.) Special washer.)	Fit to jack counterbore.
4.13	By-pass valve piston seal.	Fit.
4.14	Reseating washer.	Fit. (AP105D-1305-1).
4.15	By-pass valve. (a) Piston.) (b) Spring.)	Fit.
4.16	Reseating washer.	Remove.
4.17	By-pass valve.	Refit.
4.18	Connecting pieces seals.	Fit.
4.19	Connecting pieces.	Refit.
NB	During Item 5 reference identification.	is to be made to Fig 3 for connexion
5.	Testing	
5.1	Connecting block Pt No.FHQ102.	Fit to jack platform.
5.2	Connexion E.	Connect to hydraulic test rig supply line.
5.3	Connexions A and D.	Fit blanks.
5.4	Connexions B and C.	Connect to hydraulic test rig in order to achieve alternate pressure and return selection.
5.5	Connexion E.	Apply pressure of between 2880 and 3120 lbf/in2.

Continued overleaf

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

ITEM No	ITEM	OPERATION
5.	Testing (Contd)	
5.22	Connexion B.	Disconnect from test rig.
5.23	Connexion C.	Connect to test rig supply.
5.24	Connexions E and C.	(i) Apply pressure of between 2880 and 3120 lbf/in2. (ii) Maintain pressure for 4 minutes.
5.25	Connexion B.	During fourth minute measure seepage. This is not to exceed 65 cm 3.
5.26	Connexions E and C.	Release pressure.
5.27	Connexions B and C.	Connect to test rig in order to achieve alternate pressure and return selection.
5.28	Connexion E.	Apply pressure of between 2880 and 3120 lbf/in2.
5.29	Connexions B and C.	(i) Apply pressure alternately to stroke jack ram. (ii) Check measurement is between 2.600 and 2.636 in.
5.30	Connexions B C and E.	Release pressure.
5.31	Connexions B and C.	Connect to test rig return.
5.32	Connexion E.	Disconnect.
5.33	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 27 lbf.
6.	By-pass Valve Test	
6.1	Connexions B and C.	Disconnect from test rig return.

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ITEM No	ITEM	OPERATION
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.
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 pipes.	(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	Duct blanking plug.	Lock with wire.
7.9	By-pass valve attachment bolts.	Lock together with wire.
7.10	Ferrules.	(i) Lightly coat mating surfaces with yellow chromate. (ii) Fit to extension end.

ITEM No	ITEM	OPERATION
7.	Completion (Contd)	
7.11	Jack ram.	Lightly coat exposed portion with grease, XG-287.
7.12	Identification plate and dowel.	(i) Lightly coat undersurface with yellow chromate. (ii) Fit to jack body. (iii) Secure as appropriate.
7.13	Servicing forms.	Sign.

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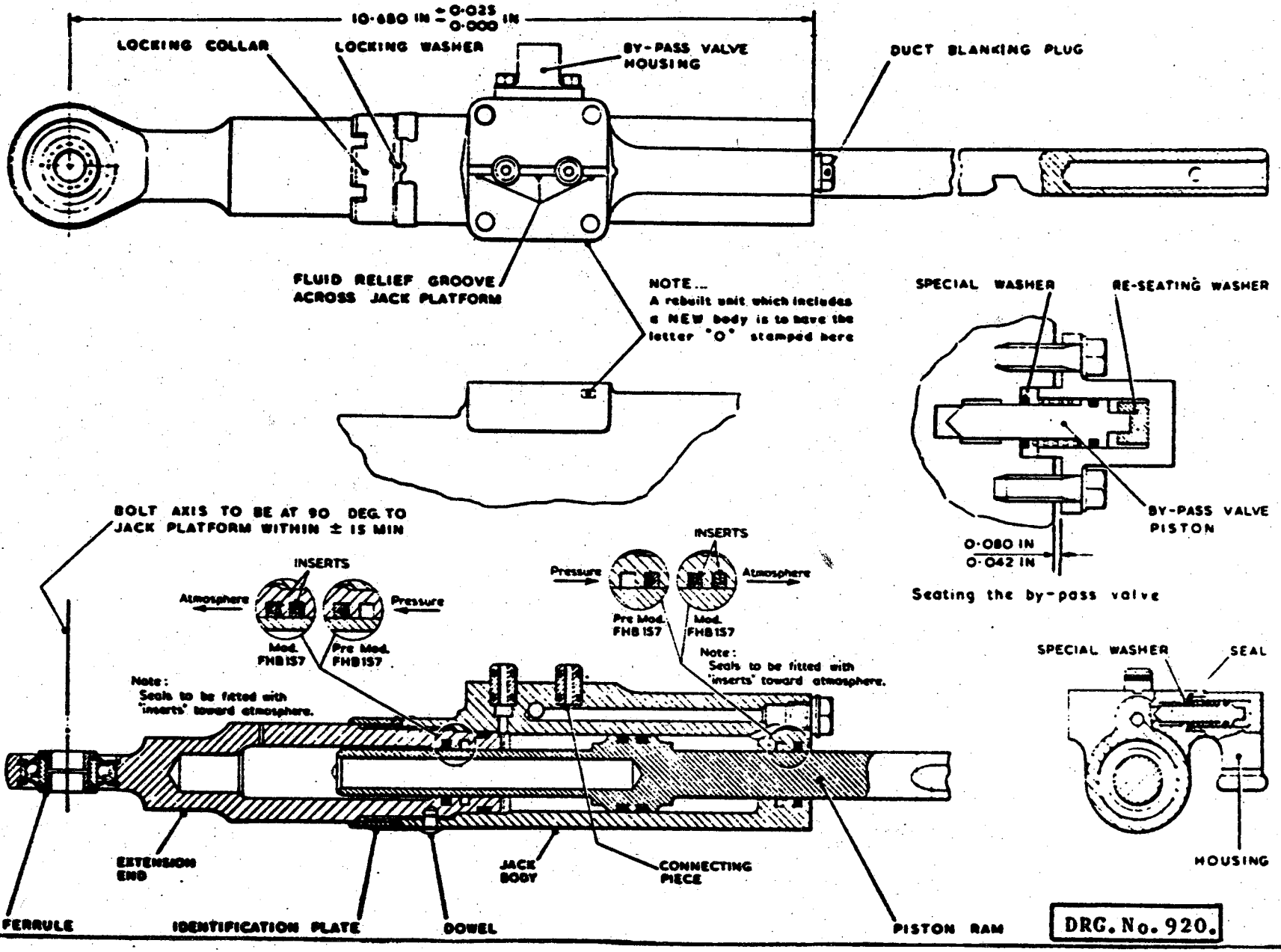
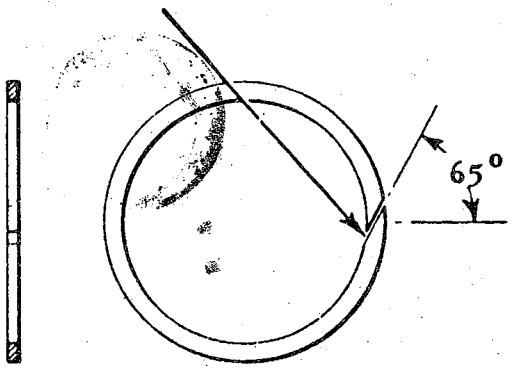


FIG 1

Continued

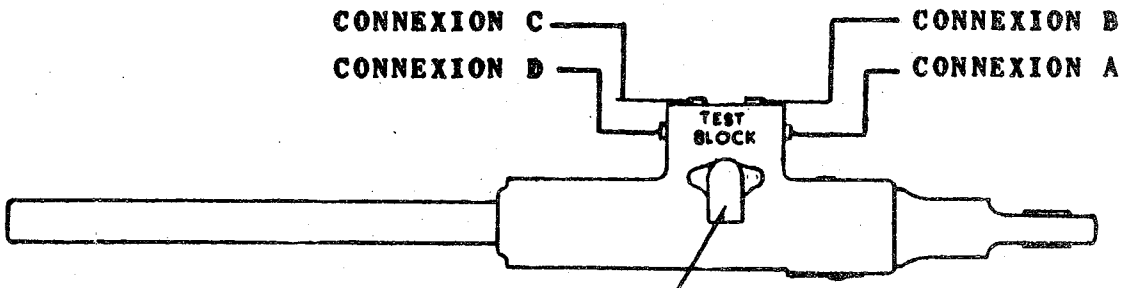
SLIT WITH RAZOR-EDGED BLADE IMMEDIATELY
PRIOR TO ASSEMBLY INTO COMPONENT



PISTON HEAD
SEALING RING

DRG. No. 450.

FIG 2



DRG. No. 451.

TEST CONNEXIONS

FIG 3