

Section

M

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Hunter P.R. Mk.11 Aircraft Fuselage, Photographic reconnaissance Facility Introduced.

(Mod. No. Hunter/1205)

(Class S.O.O. to 4 Aircraft)

(AB/A/18631 - 2.2. 67)

1. INTRODUCTION

This modification introduces photographic reconnaissance facility into the front fuselage and when embodied together with Mods. 587 and 1112 into a post R.P. G.A. Mk. 11 aircraft, constitutes a full conversion to the Hunter P.R. Mk. 11. (This modification standard is defined under Mod. 1179).

(1) This modification does not supersede, partially supersede or satisfy the work called for by any Modification, Naval Service Modification, S.T.I. or S.I.

2. EMBODIMENT

Sets of this modification are to be demanded in accordance with the A.S.E. (Air Stores Establishment) and embodied to meet the operational requirements of the aircraft.

3. APPROXIMATE TIME REQUIRED FOR EMBODIMENT

The work will take approximately 330 man-hours. (25 to strip: 250 to embody: 30 to reassemble: 25 to test).

4. DRAWINGS REQUIRED

The following drawings are required and are to be demanded for Naval Stores from the Director General, Aircraft, Admiralty, London, S.W.1.

<u>Drawing No.</u>	<u>Title</u>
E.260768	Assy. of Camera Installation
E.262062	G.A. of Camera Heating
D.231470	Assy. of Camera Mountings
D.234131	G.A. of Camera Heating
D.259648	Assy. of Cameras
D.264081	Mod. to Frame 3
C.261789	Assy. of Ballast and Mountings
C.262092	G.A. of I.F.F. Mk. 10 Installation
B.261066	Mod. to Supply Panel
B.262378	Mod. to Hydraulic Installation in Front Fuselage
B.262499	Modified Lighting Screen (Stb'd).
B.264175	Frame 4
B.264176	Frame 6
A.233149	Mod. to Frame 5
A.234249	Mod. to Nose Wheel Door Landing
A.262562	Mod. to Nose Wheel Door
A.262568	Altns. to Cabin Pressg. and Air Cond.

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5. PARTS AND SPECIAL TOOLS REQUIRED

(1) Parts and/or Materials

(a) The undermentioned items comprise a Set of Parts.
 Demands for Sets of Parts are to be forwarded to the
 Ministry of Defence (N), London, S.W.6.

Ref. No.	Part No.	Nomenclature	Qty.
	E.259647	Nose Piece	1
	D.231470/A	Sub Assy. camera mountings	1
	D.260444	Assy. camera J.B.	1
	C.187921/194	Pipe	1
	C.187921/195	Pipe	1
	C.187921/204	Pipe	1
	C.187921/260	Pipe	1
	C.260400	Camera Control Box	1
	C.260532	Mtg. bracket for Control Box	1
	C.260784	Cable assy. FR.5	1
	C.261065/1	Wiring diagram Supply panel	1
	B.211878	Attachment plate	1
	B.216495	Hose assy.	2
	OR		
	ACM.17024	Hose assy. (Dunlop)	2
	B.230598	Metallic hose assy.	1
	B.231578	Ram air pipe	1
	B.232997	Cone	1
	B.233539/1	Pipe	1
	B.233539/4	Pipe	1
	B.235589	Wedge plate assy.	2
	B.252129/3	Pipe	1
	B.260783	Cable assy. Fr. 3	1
	B.260785	Cable assy. Fr. 7	1
	B.260786	Cable assy. Fr. 8	1
	B.260787	Cable assy. Fr. 9	1
	B.261567/1	Pipe	1
	B.261567/2	Pipe	1
	B.261567/3	Pipe	1
	B.261756	Reinforcing plate	1
	B.262181	Ballast (Port)	1
	B.262488	Ballast (Stb'd)	1
	A.186450	Clamp Fitting	1
	A.231383	Mtg. bracket for control switch	1
	A.231402	Label	1
	A.232045	Blanking plate	1
	A.234247	Landing	1
	A.235802	Bracket	1
	A.252130	Pipe assembly	1
	A.261571	Attachment bracket	1
	A.261835	Ballast	3
	A.261852	Knurled nut	2
	A.262347	Support bracket	1
	A.264178	Addition to cable form (Supply Panel)	1
	F.174142	Tab washer	1
	F.192798	Sealing, ring	1
	F.231628	Felt ring	1
	F.232058	Label	1
	F.233387	Pipe clamp	2

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<u>Ref. No.</u>	<u>Part No.</u>	<u>Nomenclature</u>	<u>Qty.</u>
	F.233743	Cleat	1
	F.233845	Locating plate	4
	F.233866	Fairlead	1
	F.261040	Mounting bracket	1
	F.261755	Blanking plate	1
	F.261788	Adaptor plate	1
	F.262174	Special bolt	4
	F.262175	Special bolt	4
	F.262349	Special clip	1
	F.262402	Bracket for fire warning switch	1
	F.262422	Sealing washer	2
	F.262423	Sealing washer	2
	F.264177	Fairlead	1
	STD.840/20	Clip	2
	STD.840/23	Clip	2
	STD.840/25	Clip	2
	STD.841/32	Clip	1
	STD.841/48	Clip	1
	STD.851/55	Clip	1
	STD.1509/23/060	Distance tube	1
	STD.1547/20/16	Packing washer	1
	STD.1547/24/10	Packing washer	2
	STD.1547/28/10	Packing washer	5
	STD.1590/C	Radiusused packing	2
	STD.1606/44/A6	Screw	2
	STD.1606/44/C16	Screw	3
	STD.1606/45/B16	Screw	1
	STD.1682/8	Clip	2
	STD.1682/10	Clip	6
	STD.1687/2	Saddle	2
	STD.1744/8	Sleeve	1
	STD.1744/10	Sleeve	3
	STD.2046/19/22	Clip	1
	STD.2046/29/22	Clip	1
	STD.2046/30/22	Clip	1
	STD.2046/48/20	Clip	1
	STD.2046/55/20	Clip	2
	A.25.1/2.B	Bolt	1
	A.25.4.B	Bolt	4
	A.25.1/2.C	Bolt	7
	A.25.1.C	Bolt	27
	A.25.2.C.	Bolt	37
	A.25.3.C.	Bolt	13
	A.25.5.C.	Bolt	29
	A.25.7.C	Bolt	1
	A.25.10.C	Bolt	4
	A.25.26.E	Bolt	8
	A.25.32.E	Bolt	4
	A.31.B.12	Screw	7
	A.32.C.20	Screw	12
	A.33.B.16	Screw	2
	A.45.B.14	Screw	4
	A.27.C.P.	Nut	61
	AS.156/404	Rivet	34
	AS.156/405	Rivet	13
	AS.156/406	Rivet	12
	AS.156/407	Rivet	5

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<u>Ref. No.</u>	<u>Part No.</u>	<u>Nomenclature</u>	<u>Qty.</u>
	AS.156/506	Rivet	28
	AS.156/507	Rivet	56
	AS.156/508	Rivet	13
	AS.156/606	Rivet	4
	AS.156/607	Rivet	3
	AS.156/608	Rivet	2
	AS.161/507	Rivet	15
	AS.164/304	Rivet	12
	AS.164/306	Rivet	4
	AS.164/309	Rivet	4
	AS.164/403	Rivet	3
	AS.164/404	Rivet	9
	AS.164/405	Rivet	8
	AS.164/406	Rivet	8
	AS.1242.3.C	Bolt	6
	AS.1242.2.E	Bolt	12
	AS.1246.3.C	Bolt	1
	AS.1248.3.C	Bolt	3
	AS.3360/B/6/B	Earthing Connector	5
	AS.3360/B/6/C	Earthing Connector	2
	AS.5401	Sealing ring	2
	AS.5419/3	Clip	3
	AS.5419/6	Clip	2
	AGS.605 Mk.1	Clip, type 'J'	1
	AGS.1104/A	Cone adaptor	1
	AGS.1109/G	Reducing union	2
	AGS.1142/J	Adaptor nipple	2
	AGS.1170/A	Nipple	2
	AGS.1186/A	Bonding seal	1
	AGS.1533/F	Bonding strip	2
	AGS.2001.B.1	Nut	6
	AGS.2001.B.4	Nut	5
	AGS.2001.C.1	Nut	22
	AGS.2002.B.1	Nut	8
	AGS.2002.C.1	Nut	24
	AGS.2002.E.1	Nut	12
	AGS.2002.G.1	Nut	8
	AGS.2008.C.1	Nut	11
	AGS.2049/320	Rivet, Pop	2
	SP.15.B	Washer	19
	SP.15.C	Washer	75
	SP.16.C	Washer	35
	SP.13.E	Washer	12
	SP.13.G	Washer	8
	SP.23.C	Washer	4
	AWE.110/6	Hot air control valve (AWE Ltd.)	1
	AWE.111/12	Bimetal control valve (AWE Ltd.)	1
	ACO.9023	Adaptor (Dunlop)	2
	C.4205.1.E	Pipe clamp Mk. 3 (King)	2
14A/5887		Intervalometer Type 95	1
5F/2281		Strapping (Hellerman)	6 ft.
5F/2282		Stud (Hellerman)	60
10H/20414	CZ.61889/3	Bulkhead Socket/Plug	1
10H/20415	CZ.61889	Bulkhead Socket/Plug	1
	No.6	Chekaleke Plug	9
	No. 10	Chekaleke Plug	1
		P.V.C. Tube $\frac{1}{2}$ ins. i/dia.	6 ins.
		Specn. E & I 659	
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(b) Service Supply items

<u>Ref. No.</u>	<u>Part No.</u>	<u>Nomenclature</u>	<u>Qty.</u>
5CY/2564		Circuit breaker - 45 amp.	1
5CY/4520		Cover	1
14A/4990		4 ins. Lens unit for F.95 Mk. IV camera	1
14A/5886		F. 95 camera Mk.IV with 4 ins.lens	2
14A/5900		F. 95 camera Mk.IV with 12 ins. lens	1

(c) The undermentioned items are also required and, if not available, are to be demanded on the appropriate R. N. Store Depot.

<u>Ref. No.</u>	<u>Part No.</u>	<u>Nomenclature</u>	<u>Qty.</u>
33A/9428870		Varnish, Shellac, Specn. BSX/18	As req'd.
33C/1532	E.C.802	Sealant, Specn. DTD.900/4451	As req'd.
33C/1533	E.C.750	Sealant, Specn. DTD.900/4451 Cord Specn. F.35	As req'd.
		Balloon cord, 4 oz.	As req'd.
		Stainless steel locking	As req'd.
		Wire, Specn. DTD.189 or DTD.161	As req'd.
		Paint - Signal red 537	As req'd.
		D.E.F.1050 or 1052A, Colour code	
		BS.381 C1948	
		Paint - Eau-de -Nil	As req'd.
		D.E.F.1052	

(2) SPECIAL TOOLS AND/OR TEST EQUIPMENT

No special tools or test equipment are required for the embodiment of this modification.

6. MODIFICATION OF SPARES

The following list shows the spares affected by this modification and the parts required to modify them:-

<u>Ref. No.</u>	<u>Part No.</u>	<u>Nomenclature</u>	<u>Qty.</u>
26FX/5896	E.204493	<u>Light screen (Stb'd)</u>	

Parts required:-

None

26FX/8506	E.221074	<u>Nose wheel door (Front)</u>
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Parts required:-

AS 164/403	Rivet	3
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26FX/20369	E.258847	<u>Tacan access panel</u>
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Parts required:-

B.261567/2	Pipe	1
A.261571	Attachment bracket	1
F.262422	Sealing Washer	2
F.262423	Sealing Washer	2
STD.2046/55/20	Clip	1
A.25.1.C	Bolt	1
A.32.C.20	Screw	8
A.G.S.2001.C.1	Nut	8
A.G.S.2008.C.1	Nut	1
A.G.S.2049/320	Rivet, Pop	2
SP.15.C	Washer	8
A.C.O.9203	Adaptor (Dunlop)	2

26FX/20340	B.256021	<u>Angle</u>
26FX/20341	B.256022	<u>Angle</u>

Parts required:-

None.

Spares will be modified by

7. CHANGE OF REFERENCE, PART AND ASSEMBLY NUMBERS

The embodiment of this modification changes Reference, Part and Assembly Numbers as follows:-

Ref. No.	Old		Ref. No.	New	
	Part/Assy.	Nomenclature		Part/Assy.	No.
26FX/5896	E.204493	Light screen (Stbd)	26FX/	B.262499	
26FX/8506	E.221074	Nose Wheel door (Front)	26FX/	A.262562	
26FX/20369	E.258847	Tacan access panel	26FX/	E.264181	
26FX/20340	B.256021	Mounting beam	26FX/	B.264179	
26FX/20341	B.256022	Mounting beam	26FX/	B.264180	

8. SEQUENCE OF OPERATIONS

The following is the sequence of operations:-

NOTE: Before any electrical circuit is disturbed or disconnected, all power supplies in, to or from the aircraft are to be disconnected. Power supplies are to be reconnected only when the person responsible for embodying the modification is satisfied that all action has been taken to make the aircraft safe for reconnection.

- (1) Render the aircraft electrically safe. (A.P.4347S, V Sect. 5, Chap. 1 refers).
- (2) Dissipate the air pressure in the hydraulic system by carefully removing the hydraulic reservoir cap. Dissipate the hydraulic pressure by operating one of the services.
- (3) Remove the nose piece, Part No. E.177079, which becomes redundant (A.P.4347S, Vol. 1, Sect. 3, Chap. 1 refers).

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(4) Remove redundant ballast and mountings from front face of frame 3.

(5) Disconnect and remove the redundant G.45 B camera, Ref. No. 14A/1380, together with adaptor, Type 32, Ref. No. 14A/1423, flange front, Ref. No. 14A/1420, end protective cover, R.f.No. 14A/2852 and mounting, Type 27, Ref. No. 14A/1042.

(6) Remove the ballast mounted between frames 3 and 6 together with beams, Part Nos. B.256021 and B.256022 (Fixings also to be retained).

(7) Remove the ram air pipe from between frames 3 and 6, Part No. B.186838 (Fixings to be retained).

(8) Remove the radio bay access doors.

(9) Remove the TACAN access door (A.P.4347S, Vol.1, Sect.3, Chap. 1 refers).

(10) Remove access door between frames 11 and 12.

(11) Remove access panels port and starboard to engine bleed valves.

(12) Remove the starboard light screen, Part No. E.204493 (Fixings also to be retained).

(13) Remove the arch panel (stbd) (Firewarning), situated in the cabin, as shown on Drawing No. E.260768.

(14) Remove the fire warning test button and cabin lights from the starboard windscreens platform.

(15) From front face of frame 3, remove spigots, Part No. F.213351 (2 off). Remove clamps, Part No. F.191915 (2 off) and fit adaptor plate, Part No. F.261788. Remove channels, Part No. A.218538 (Port) and A.218539 (Stbd) together with angles, Part No. F.218906, F.218907, F.218908 and F.218909. Fill redundant holes as shown on Drawing No. D.264081. Remove reinforcing plates, Part No. F.174478 (2 off), and fill 4 redundant holes as shown. Remove the hood control switch, Part No. F.190440. At aft face of frame, remove angles, Part No. F.218944, bracket, Part No. A.218945, filling redundant holes as shown. At saddle, starboard side, remove lower rivet, C'sk. and fit new rivet as shown at drg. ref. E.11. Remove label, Part No. A.184397, and hood control switch stiffnuts, Part No. A.G.S.2008.C.1 (2 off), and fill remaining upper stiffnut with bolt as shown on Drawing No. D.264081.

(16) At aft face of frame 3 locate label, Part No. F.232058. Drill frame from label and rivet up. Locating from label and bend line, drill 1 hole $\frac{3}{4}$ ins. dia. std.

(17) At stbd. side of frame 3, cut 1 hole $1\frac{1}{2}$ ins. dia. std. and 1 hole 1.07 ins. dia. Drill 4 holes Morse No. 10, as shown on Drawing No. D.264081.

(18) At base of frame stbd. side, drill 1 hole $\frac{3}{4}$ ins. dia. std. and 2 holes Morse No. 10, as shown on Drawing No. D.264081.

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(19) At base of frame, on centre line, open up existing hole to 2 ins. dia. std. Remove the four starboard and three port lowermost inboard fixings for frame stiffeners and open holes to Morse No. 21. Locate blanking plate, Part No. A.232045, drill frame fromplate and fit as shown on Drawing No.D.264081.

(20) From hood control switch, Part No.F.190440 removed at sub-para.(15), remove switch, ref. no. 5C/4224 (complete with transfers). Mounting bracket, Part No.A.183030 and label, Part No. A.184397 become redundant. Fit switch ref. no. 5C/4224 and label, Part No.A.231402 to mounting bracket, Part No. A.231383, using existing screws and locking with varnish, specn. BSX/18. Locate assembly and drill frame 4 holes Morse No. 10 to match. Fit stiffnuts to aft face of frame, drilling frame to suit. Fit switch assembly as shown on Drawing No.D.264081.

(21) At 1 $\frac{3}{4}$ ins. flanged hole in top port side of frame, locate blanking plate, Part No.F.261755 drill frame 2 holes Morse No.10 from blanking plate and fit as shown on Drawing No.D.264081.

(22) Remove locating plates, Part No.F.174475 (4 off) from front face of frame and fit locating plates, Part No.F.233845 (4 off), as shown in 'Detail A' of Drawing No.D.264081.

(23) From rear face of frame 3, starboard top, temporarily remove the nose wheel undercarriage jack and lash clear to surrounding structure.

(24) Carefully remove rivets and temporarily remove stiffeners Part Nos. A.209618, D.174468/10, D.174468/12, bracket Part No. A.190488 and bracket Part No. B.208998. Remove existing fixings from vertical stiffeners in way of new reinforcing plate, Part No. B.261756 together with tee pieces, Part No. A.178983 (Port), A.178984 (Stbd.) and packing, Part No.F.183761 (2 off). (Items to be retained for re-fitment).

(25) Locate reinforcing plate, Part No.B.261756 by tooling hole and profile. Drill frame 21 holes Morse No.21, 9 holes Morse No. 30 and 10 holes Morse No. 10 from plate. Open up existing holes in frame as indicated and drill reinforcing plate from frame to match as shown on Drawing No.D.264081.

(26) Open holes in packings, Part No.F.183761 (2 off) to Morse No. 10 to match frame and reinforcing plate, Part No. B.261756.

(27) Fit reinforcing plate, Part No.B.261756 together with stiffeners, Part Nos. A.209618, D.174468/10, D.174468/12, brackets, Part Nos. A.190488 and B.208998, tee pieces, Part Nos. A.178983 and A.178984 (removed at sub-para.(24) and packings, Part No.F.183761 modified at sub-para. (26). Replace the nose wheel undercarriage jack using existing packing washers as shown on Drawing No.D.264061.

(28) Locate mounting bracket, Part No.F.261040, drill frame and reinforcing plate to match and fit to rear face of frame as shown on Drawing No. D.264061.

(29) Fit chekaleke plug No. 6 to tooling holes about diaphragm (9 off) and chekaleke plug No. 10 (1 off) at lowermost tooling hole, as shown on Drawing No. D.264081.

NOTE: Nuts to be locked by burring and bolt heads to face forward where possible.

(30) Re-part number frame as D.264061.

(31) At top of frame 4, locate and drill flange for anchor nuts, Part No. A.G.S. 2008.C.1 (2 off). Fit anchor nuts. From starboard anchor nut locate and drill flange 1 hole Morse No. 25. On port side of frame locate and drill 4 holes Morse No. 30 to match saddle, Part No. STD.1687/2. Fit saddles as shown on Drawing No. B.264175, Re-part number frame as B.264175.

(32) At top of frame 5, locate and drill flange for anchor nuts, Part No. A.G.S.2008.C.1 (2 off). Fit anchor nuts as shown on Drawing No.A.233149. Re-part number frame as A.233149.

(33) At bottom of frame 6, starboard side, remove reinforcing angle, Part No.F.210012 complete with profile washer, Part No. F.207383 and serrated plate, Part No.F.207735, if fitted. Mark off and cut out diaphragm. At 2 1/16 ins. dia. hole situated on the starboard side above new cut-out, locate and drill holes in diaphragm for anchor nuts. Fit anchor nuts, Part No. A.G.S.2008.C.1 (2 off) on aft face, as shown on Drawing No. B.264176.

(34) On starboard side of frame 6, locate and cut 2 holes 1.442/1.447 ins. dia. and drill 4 holes 1/8 ins. dia. std. c'sk. on aft face as shown on Drawing No. B.264176. Re-part number frame as B.264176.

(35) Modify front nose wheel door at forward end as shown on Drawing No.A.262562. Re-part no. door as A.262562.

(36) At forward end of nose wheel bay, mark off and cut back landing, and remove existing rivets. Fit new landing, Part No. A.234247 as shown on Drawing No.A.234249.

(37) At forward face of frame 3 fit sub-assy. of camera mountings, Part No. D.231470/A as shown in Section 'A A' of Drawing No. D.231470.

(38) From between the hydraulic restrictor situated at the top of frame 4 and pipe Part No.C.187921/33, remove pipe, Part No.C.187921/34. From between pipe Part No.C.187921/28 at nose wheel jack and pipe, Part No.C.187921/26 at sequence valve, remove pipe, Part No.C.187921/27.

NOTE: A suitable receptacle should be provided to trap resultant loss of hydraulic fluid.

(39) Fit pipes, Part No.C.187921/195 and C.187921/260 between pipe Part No. C.187921/28 and Pipe Part No.C.187921/26. Fit pipes, Part No.C.187921/204 and C.187921/194 between restrictor and pipe Part No.C.187921/33. Clamp up using existing clamps and additional clip, Part No.AS.5419-3, as shown on Drawing No.B.262378.

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NOTE: All pipe connections to be wire locked with Stainless steel locking wire, Specn. D.T.D.189 or D.T.D.161.

(40) Disconnect the I.F.F. Mk. 10 upper aerial cable from the aerial switch unit on the aft face of frame 16. Withdraw the aerial cable through the duct between frames 11 and 6 and release from the aft face of frame 4. Drill the upper blast tube landing as shown, re-run the aerial clipping into position using clips, Part No. AS.5419/6 (2 off), and strapping into position down the front face of frame 6 as shown on Drawing No.C.262092.

(41) Re-connect the aerial to the aerial switch unit at frame 16.

(42) At frame 5, starboard side, locate bracket, Part No. A.235802 and drill flange 3 holes Morse No. 10 to match. Fit bracket as shown in detail 'M' of drawing No. D.234131.

(43) Fit pipe Part No. B.233539/4 through duct vacated by I.F.F. aerial. Fit fairleads, Part Nos. F.233866 and F.264177 together with earthing connector, Part No. AS.3360, B.6B as shown at detail 'A' and position 'T' and at detail 'J', using cleat, Part No. F.233743, of Drawing No.D.234131.

(44) Fit pipe, Part No. A.252130, clipping to bracket Part No. A.235802, fitted at sub-para (42), using clip, Part No.A.G.S.605 Mk. 1 as shown at detail 'M' of Drawing No.D.234131.

(45) At frame 3, fit cone, Part No.B.232997 as shown on Drawing No.D.234131.

(46) Fit pipe, Part No.B.252129/3 to cone, as shown at detail 'G', and hot air control valve, AWE Ltd., Part No.AWE 110-6, attaching pipes, Part Nos. B.252129/3 and A.252130, with sealing ring, Part No. AS.5401 and King pipe clamp Mk. 3 Part No. C.4205-1-E, as shown on Drawing No.D.234131.

(47) Bond control valve as shown in detail 'L'. Fit cone adaptor, Part No. A.G.S.1104/A and bonded seal, Part No. A.G.S.1186/A, to control valve as shown on Drawing No.D.234131.

(48) Fit pipe, Part No.B.233539/1 to frame 3, clipping at frame with clip, Part No. AS.5419/3. Drill flange of frame 4 1 hole Morse No. 10 and clip pipe with clip, Part No. AS.5419/3. Connect up to hot air control valve as shown on Drawing No. D.234131.

(49) At frame 3 secure pipe Part No.B.233539/1, with pipe clamp Part No. F.233387 (2 off), as shown in 'View on arrow C' of Drawing No. D.234131.

(50) On forward face of frame 6 fit bulkhead socket/plugs ref. nos. 10H/20414 and 10H/20415. Identify socket ref. no. 10H/20415 with signal red paint 537, DEF.1050 or 1052A colour code BS.381C, 1948, as shewn in detail 'A' of Drawing No.E.260768.

(51) Fit camera junction box Part No.D.260444 between frames 4 and 5, run cable assy. FR.6, (part of junction box), ends 6B and 6C to bulkhead plug/sockets on Frame 6 strapping to existing I.F.F. loom, as shown on Drawing No.E.260768.

(52) Run cable assy. Fr. 4, (Part of junction box), down the starboard side of frame 4 clipping into position as shown in detail 'C' of Drawing No.E.260768.

(53) Run cable assy. Fr. 2, (Part of junction box), down the port side of frame 4 clipping and strapping as shown in detail 'C' of Drawing No.E.260768. Run across to aft face of frame 3 and connect end 'C' to existing F.150 cable assy. clipping with clip Part No.STD.2046/19/22 as shown on Drawing No.E.260768.

(54) Fit Fr. 9 cable assy. Part No.B.260787 to camera junction box, run down starboard side of frame 6 and connecting earth lead as shown in detail 'A' of Drawing No.E.260768. Pass through duct carrying camera heating pipe to aft face of frame 16 as shown on Drawing No.E.260768.

(55) Fit ram air pipe, Part No.B.231578 between frames 3 and 6 using felt ring, Part No.F.231628, with existing clips and fixings, as shown on Drawing No.A.262568.

(56) Modify ballast mounting beams, Part Nos. B.256021 (Port) and B.256022 (Stbd) removed at sub-para. (6). Refit, using existing ballast and additional ballast, Part Nos.B.262181 (Port), B.262488 (Stbd) and A.261835 (3 off) at aft end of beams, with existing fixings where indicated and special bolts, Part Nos. F.262174 and F.262175 (4 off each), as shown on Drawing No.C.261789. Re-part number beams as B.264179 and B.264180.

(57) Modify the starboard light screen removed in sub-para.(12) as shown on Drawing No.B.262499. Re-part number modified screen as B.262499.

(58) Re-fit the modified starboard light screen using existing fixings, as shown on Drawing No.E.260768.

(59) Locate control box mounting bracket, Part No.C.260532 at starboard windscreen by means of windscreen platform fixings. Mark off 1 hole Morse No.25 at forward end from existing hole in the standby compass mounting and c'sk. at 90°. Remove the control box mounting bracket.

(60) To the camera control box mounting bracket, Part No. C.260532, fit bracket for fire warning switch, Part No.F.262402. From the arch panel, Part No.A.190430, removed in sub-para. (13), strip the switch, Ref. 5CW/6311 inclusive of window, Ref. No. 5C/4528 and filament, Ref. No. 5L/X951272, and mount into the new bracket, Part No.F.262402. Lock screws with shellac, Specn. BSX/18, Ref. No. 33A/9428870. Fit the completed assy. of camera control mounting bracket and fire warning switch to the starboard windscreen platform as shown on Drawing No. E.260768.

(61) Fit the camera control box, Part No.C.260400 to the mounting bracket as shown on Drawing No.E.260768.

(62) Refit the fire warning test button and cabin lights removed in sub-para. (14), strapping cables into position as shown on Drawing No.E.260768.

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(63) Connect cable assemblies FR.7, Part No.B.260785 and FR.8, Part No.B.260786 to camera control box, run and strap into position and connect to bulkhead socket/plugs at aft face of frame 6 as shown on Drawing No.E.260768.

(64) In the radio bay at circuit breakers situated below the supply panel, modify the top mounting angle and re-part number as A.261067. Fit 45 amp. circuit breaker, Ref.No.5CY/2564 and cover, Ref. No. 5CY/4520. Open the generator control panel and fit addition to cable form (Supply Panel), Part No.A.264178. Remove existing wiring diagram and fit new wiring diagram, Part No. C.261065/1, as shown on Drawing No.B.261066.

(65) Connect FR.9 cable assy. Part No.B.260787, fitted at sub-para. (54), to new circuit breaker as shown on Drawing No. B.261066.

(66) At aft face of frame 11 starboard side at entrance to duct fit pipe, Part No. B.261567/1 to pipe, Part No.B.233539/4 fitted at sub-para. (43). Clip together and bond as shown in detail 'D' of Drawing No.E.262062.

(67) Fit flex hose assembly, Part No.B.216495 or Dunlop Part No. ACM.17024 to pipe, Part No.B.261567/1, using reducing union, Part No.A.G.S.1109-G and adaptor nipple, Part No. A.G.S.1142J, as shown on Drawing No.E.262062.

(68) At accumulator support tube forward of frame 19 remove clip securing the port sediment drain. Locate and fit support bracket, Part No.A.262347 together with special clip, Part No. F.262349, re-securing the port sediment drain by the lower bolt, using existing clip, as shown at detail 'F' of Drawing No. E.262062.

(69) Fit pipe, Part No.B.261567/3, joining up to existing gun heating pipe at frame 19. Clip at support bracket, Part No. A.262347, fitted at sub-para. (68) with clip, Part No.STD.2046/55/20, bond and earth joint as shown at details 'F' and 'D' respectively, of Drawing No.E.262062.

(70) To pipe, Part No.B.261567/3, fit flexible hose assy. Part No.B.216495 or Dunlop Part No.ACM.17024, clip into position with clip, Part No.STD.2046/48/20 as shown in plan view of Drawing No.E.262062.

(71) At top centre of fuselage adjacent to frame 34, remove blanking cap, Part No.F.239636, from outlet on engine casing. Fit flexible hose assembly, Part No.B.230598 between engine casing and existing gun heating pipe, Part No.B.192093/8, together with clamp fitting, Part No.A.186450 and sealing ring, Part No.F.192798 as shown on Drawing No.E.262062.

NOTE: It may be found that two men working from each side of the fuselage are required to carry out this operation.

(72) On former 'A' of the Tacan access door removed at sub-para. (9), locate attachment bracket, Part No.A.261571. Drill former 2 holes Morse No. 10 to match bracket. Fit bracket together with sealing washers, Part Nos. F.262422 and F.262423 and adaptor Dunlop Part No.ACO.9023 (1 off each). Seal in accordance with Std.2000 as shown at detail 'B' of Drawing No.E.262062.

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(73) At rear cover at existing 1.0 ins. dia. hole, remove blanking plate, Part No.C.247299/4. Open 3 Morse 30 holes to Morse No. 10 and fit adaptor, Dunlop Part No.ACO.9023 together with sealing washers, Part Nos.F.262422 and F.262423. Seal in accordance with STD.2000 as shown in detail 'C' of Drawing No. E.262062.

(74) At stiffener, locate tooling hole, drill for and fit anchor nut, Part No.A.G.S.2008.C.1 as shown in detail 'E' of Drawing No. E.262062.

(75) Fit pipe, Part No.B.261567/2 across access door clipping to stiffener using clip, Part No. STD.2046/55/20 as shown on Drawing No. E.262062.

(76) Re-part number the Tacan access door as E.264181.

(77) Re-fit the modified Tacan access door, Part No.E.264181 (A.P.4347S, Vol. 1 Sect. 3, Chap. 1 refers).

(78) Couple up the flexible pipe assemblies at forward face of frame 12 and aft face of frame 16 as shown on Drawing No.E.262062.

NOTE: All pipe couplings and threaded connections to be locked with stainless steel locking wire Specn. D.T.D.189 or D.T.D.161.

(79) Fit bi-metal control unit, AWE. Ltd., Part No. AWE 111/12 to camera mounting structure on forward face of frame 3. Connect up pipe, Part No.B.233539/1 fitted at sub. para. (48) to bi-metal control unit as shown at detail 'B' of Drawing No.D.234131.

Test for pressure and temperature control in accordance with instructions on Drawing No.E.262062 (Para. 9 refers).

(80) At frame 3, forward face, fit FR.3 cable assy., Part No. B.260783 and FR.5 cable assy., Part No.C.260784, Clip into position as shown in detail 'B' and side view of Drawing No.E.260768.

(81) To the 4 ins. lens cameras (2 off), Ref. No. 14A/5886 fit wedge plate assy., Part No.B.235589, locking as shown at detail 'A' of Drawing No.D.259648.

(82) Fit cameras to camera structure and lock into position with locking device on structure, as shown at 'View on Frame 3' of Drawing No.D.259648.

(83) Fit intervalometer, type 95, Ref. No.14A/5887 as shown on Drawing No. D.259648.

(84) Connect up cables to intervalometer and port and starboard cameras as shown in diagram on Drawing No.E.260768.

(85) To 12 ins. lens camera, Ref. No. 14A/5900, fit attachment plate, Part No.B.211878, locking as shown on Drawing No.D.259648.

(86) Fit to nose assembly, Part No.E.259647 in vertical or horizontal position. Wire lock knurled nuts, Part No.A.261852 together and with balloon cord to locking lug as shown on Drawing No. D.259648.

RESTRICTED

(87) Connect up camera and eyelid actuator mechanism to FR.1 cable assy. (Part of nose assembly) as shown on Drawing No.E.260768.

NOTE: When camera is used facing forward, the 4 ins. lens unit Ref. No. 14A/4990, may be employed. If camera is fitted in vertical position, 12 ins. lens only must be used.

(88) Offer up the nose assembly, Part No.E.259647, to the front fuselage and connect FR.1 cable assy. to FR.2 cable assy. at the bottom of frame 3 as shown in the diagram on Drawing No.E.260768.

(89) Finally attach the nose piece to the fuselage.

(90) Replace the port and starboard panels to engine bleed valves.

(91) Replace the access door between frames 11 and 12.

(92) Replace the radio bay access door.

(93) Bleed the nose wheel bay door hydraulic circuit.

(94) Top up the hydraulic reservoir (A.P.4347S, Vol. 1, Sect. 2, Chap. 2 refers).

(95) Reinstate the electrical supply (A.P.4347S, Vol. 1, Sect. 5, Chap. 1 refers).

(96) Record the embodiment of this modification on the front fuselage modification plate.

9. SPECIAL TESTS AFTER EMBODIMENT

When this modification has been embodied and inspected the following special tests are to be carried out:-

Test the camera heating circuit for pressure and temperature (Drawing No. E.262062 refers). Test the cabin pressurisation in accordance with A.P.4347S, Vol. 1, Sect. 3, Chap. 8. Test the camera electrical circuitry in accordance with A.P.1335C, Vol. 1.

10. RECORDING ACTION

When this modification has been embodied and inspected in accordance with current authorised procedure, the relevant entries are to be made in the appropriate aircraft records.

11. DISPOSAL OF REDUNDANT PARTS

(1) The undermentioned parts rendered redundant by the embodiment of this modification are to be returned to R.N. Store Depot.

<u>Ref. No.</u>	<u>Part No.</u>	<u>Nomenclature</u>	<u>Qty.</u>
26FX/23	E.177079	Nose Piece	1

RESTRICTED

(NOTE:- This item is a spare on the Hunter G.A. Mk. 11 aircraft).

(2) The undermentioned parts rendered redundant by this modification are to be disposed of locally as scrap.

Ref. No.	Part No.	Nomenclature	Qty.
	14A/1042	Mounting Type 27	1
	14A/1380	G.45B Camera	1
	14A/1420	Flange, front	1
	14A/1423	Adaptor, Type 32	1
	14A/2852	End protective cover	1
	C.247299/4	Blanking plate	1
	C.251940	Mounting beam	1
	C.251941	Mounting beam	1
	B.181896	Cross member	1
	B.183311	Camera gun mtg. channel	1
	B.186838	Ram air pipe	1
	B.187921/27	Pipe	1
	B.187921/34	Pipe	1
	B.200943	Cross member	1
	B.200944	Cross member	1
	B.213059	Bracket	1
	B.245776	Ballast	7
	B.245777	Side plate	2
	B.246300	Tie	2
	B.246595	Angle	2
	B.254626	Strap plate	2
	A.181898	Channel	1
	A.181899	Channel	1
	A.183030	Mounting bracket	1
	A.184397	Label	1
	A.212873	Bracing strut	2
	A.213102	Strut	1
	A.218538	Channel	1
	A.218539	Channel	1
	A.218945	Bracket	1
	A.221873	Bracing Strut	2
	A.254627	Channel	1
	F.174475	Locating plate	4
	F.174478	Reinforcing plate	2
	F.181900	Angle	2
	F.181902	Shim	2
	F.183512	Packing	1
	F.183513	Packing	1
	F.189298	Label	1
	F.191915	Clamp	2
	F.200945	Angle	1
	F.200946	Angle	1
	F.200947	Angle	1
	F.200948	Angle	1
	F.207383	Profile Washer	1) If
	F.207735	Serrated plate	1) fitted
	F.210012	Reinforcing angle	1)
	F.213351	Spigot	2
	F.218906	Angle	1
	F.218907	Angle	1
	F.218908	Angle	1
	F.218909	Angle	1
	F.218944	Angle	2

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F.220373	Plug end	2
F.220951	Arch panel (Stb'd)	1
F.233867	Fairlead	1
F.239636	Blanking cap	1
	Wiring diagram	1
	Supply panel	

12. EFFECT ON WEIGHT AND MOMENT

This modification causes a change in the Basic Weight of plus 3.0 lb. with a change in the moment of plus 1938 lb. in. about the C.G. datum.

13. EFFECT ON AIRCRAFT OR EQUIPMENT OPERATION AND HANDLING

The operation and handling of the aircraft is affected in that it is adapted to fulfil the photo-reconnaissance role.

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753/89992/250/2.67/S(P&D)L.

A.L. No.33
(Hoist for lifting tacan)

A.P.101B-1311-2
Leaflet No. M.2

Hunter G.A. Mk.11 Aircraft. Miscellaneous: to make provision for use of Lifting Hoist B.252863 for Lifting Tacan A.C. Supplies Panel

(Mod. No. Hunter/GE.1181)

(Class S.O.O.)

(AB/A/17403. - 10.2.67.)

1. INTRODUCTION

This modification introduces a lifting hoist for lifting and lowering the A.C. Supply panel into and from the aircraft.

Note:- It should be noted that while this modification uses an assembly consisting of a mounting bracket and a hoisting gearbox (C.226234) and a hoist brace (B.223910), the gearbox and brace are already available in Service ex gun or ammunition pack hoisting equipment for Hunter T. Mk.8.

(1) This modification does not cancel supersede or render unnecessary any work called for by approved Modifications, Naval Service Modifications, S.T.I.s., or S.I.s.

2. EMBODIMENT

Sets of this modification are to be demanded in accordance with the A.S.E. (Air Stores Establishment) and embodied to meet the operational requirements of the aircraft.

3. DRAWINGS REQUIRED

(1) The following drawings are required and are to be demanded from the Director General, Aircraft, Admiralty, London, S.W.1.

<i>Drawing No.</i>	<i>Title</i>
B.252863	Assy. of Lifting Hoist

4. PARTS AND SPECIAL TOOLS REQUIRED

(1) Parts and/or Materials

(a) The undermentioned items are required, and, if not available are to be demanded on the appropriate R.N. Store Depot:-

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>
26FX/20336	B.252862	Mounting bracket	1
28D/9436920	A.25.1.C	Bolt	3
28D/12513	A.25.2.C	Bolt	3
28W/9416643	SP.47.C	Spring Washer	6

(b) Service Supply items:-

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>
26FX/-	C.226234	Gear Box	1

Note:- To be obtained from Assy. of armament hoist, 26FX/95683, Part No. B.224119.

R E S T R I C T E D

(2) Special Tools and/or Test Equipment

No special tools or test equipment are required for the embodiment of this modification.

5. MODIFICATION OF SPARES

No spares are affected by this modification.

6. CHANGE OF REFERENCE, PART AND ASSEMBLY NUMBERS

There are no changes of Reference, Part or Assembly Numbers as a result of this modification.

7. SEQUENCE OF OPERATIONS

The following is the sequence of operations:-

Note:- Before any electrical circuit is disturbed or disconnected, all electrical power supplies in, to or from the aircraft are to be disconnected. Power supplies are to be reconnected only when the person responsible for embodying or inspecting the modification is satisfied that all action has been taken to make the aircraft safe for reconnection.

Where nuclear safety may be affected, the prescribed routing of electric cables must be strictly followed.

(1) Obtain gear box, Part No. C. 226234 from gun/ammunition box hoist, Part No. B. 224119, Ref. No. 26FX/95683.

(2) Fit gear box to mounting bracket, Part No. B. 252862 using bolts, Part No. A. 25.1.C. (3 off) and bolts, Part No. A. 25.2.C (3 off) together with spring washers, Part No. SP.47.C (6 off) as shown in Drawing No. B. 252863.

The hoist is now ready for attachment to aircraft and for use in conjunction with brace, Part No. B. 223910, Ref. No. 26FX/95677. For method of use see appropriate section of A.P.4347L, Vol. 1.

8. SPECIAL TESTS AFTER EMBODIMENT

No special test are required after the embodiment of this modification.

9. RECORDING ACTION

When this modification has been embodied and inspected in accordance with current authorised procedure, the relevant entries are to be made in the appropriate aircraft records.

10. DISPOSAL OF REDUNDANT PARTS

No parts are rendered redundant by the embodiment of this modification.

11. EFFECT ON WEIGHT AND MOMENT

Not applicable.

12. EFFECT ON AIRCRAFT OR EQUIPMENT OPERATION AND HANDLING

This modification has the following effect on operation and handling.

Servicing eased.

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