

RESTRICTED

AL No 423
(SSR 2100 - Intro)

AP 4781A, Vol 2
Leaflet No Q⁸

Gnat T Mk 1 Aircraft - Radio - To make provision for and introduce
SSR 2100 - Part 'A' - Pre Mod No Gnat/303
Part 'B' - Post Mod No Gnat/303

(Mod No Gnat/679)

(Class C/3 CWP)

(AB/A/23295.-6 .1 .71)

1. INTRODUCTION

Following upon an Air Staff requirement, an identification system SSR 2100 (Secondary Surveillance Radar) is introduced into the Gnat aircraft by this modification.

(1) This modification does not supersede, partially supersede or satisfy the work called for by any other Modification, Command Modification, SRIM or Special Instruction (Technical).

(2) This modification is to be embodied in Gnat T185D aircraft Serial Nos XM 705 to XM 709 (excluding XM 707) and XM 697.

2. EMBODIMENT

This modification is to be embodied as directed by Command Headquarters.

Note: Embodiment is recommended by Contractor's Working Party.

3. APPROXIMATE TIME REQUIRED FOR EMBODIMENT

The work will take approximately 385 man hours, plus normal test time. (20 to strip; 330 to embody; 25 to re-assemble; 10 to test plus normal test time).

4. DRAWINGS REQUIRED

The following drawings are required and will be supplied by the Contractor for CWP use:

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<u>Drawing No</u>	<u>Title</u>
1810/1A & UN(EXT Mod 679)	Mod to GA of Front Fuselage
1810/9A & UN(EXT Mod 679)	Mod to Front Fuse Keel Structure Assy
1810/11 & 12A & UN(EXT Mod 679)	Mod to Assy of Fw'd Cockpit
Sht 1	Side Structure
1810/11 & 12A & UN	Mod to Assy of Fw'd Cockpit
(EXT Mod 679) Sht 2	Side Structure
1810/933A & UN/2(EXT Mod 679)	Mod to Side Member Assy (Pilots Floor Stbd)
1810/5155A & UN(EXT Mod 679)	Mod to Equipment Floor (FR 4-5A)
1810/5225A & UN(EXT Mod 679)	Mod to Btm Frame 6 Assy
1810/5799A & UN(EXT Mod 679)	Mod to Frame 7 (Side Portion Stbd)
1810/7019A	Mtg for SSR Aerial (Top) in Nose Hatch
1810/7021A	Mtg for SSR Aerial (Bottom) in Nose Hatch
1810/7065	Assy of Mountings for Aerial Switch Panel
1847/685 (EXT Mod 679)	Mod to Control Rod Assy
1857/63A & UN - Sht 2 *	GA of LP Cock Teleflex Control
1857/63A & UN(EXT Mod 679)	Mod to GA of LP Cock Teleflex Control
1871/537A & UN(EXT Mod 679)	Mod to GA of Oxygen System
1875/807A & UN - Sht 1 *	GA of Cabin Pressure Control Equipment
1875/807A & UN(EXT Mod 679)	Mod to GA of Cabin Pressure Control Equipment
1875/813A (EXT Mod 679)	Mod to Anti-"G" & Screen De-Frost Pipe Installation
1875/1227A & UN(EXT Mod 679)	Mod to Anti-"G" & Screen De-Frost Pipe in Cabin
1880/503A & UN(EXT Mod 679)	Mod to Pitot & Static Piping System (Cockpit Details)
1881/1033A & UN(EXT Mod 679)	Mod to GA of Equipment in Nose Hatch
1881/1323A & UN(EXT Mod 679)	Mod to TB 'AJ' & Earth Terminal 4 Mounting Assy (TB 'CJ' added)
1881/1403A/1 (EXT Mod 679)	Mod to Assy Dimmer Box Wired-Front
1881/1453A & UN(EXT Mod 679)	Mod to Assy of Cockpit Lights Front Stbd
1881/1751A & UN/4(EXT Mod 679)	Mod to Main Cable Assy No 1
1881/1755A/9(EXT Mod 679)	Mod to Main Cable Assy No 3
1881/1863A & UN(EXT Mod 679)	Mod to Electrical Instlln in Cockpits, Stbd Side
1881/1955 (EXT Mod 679)	Mod to Wiring Diagram Cockpit Lights (Front)
1881/1769A/1(EXT Mod 679)	Mod to Cable Assy No 10
(Sht 1)	Cockpit Lighting

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<u>Drawing No</u>	<u>Title</u>
1881/2099A (EXT Mod 679)	Mod to Assy of Dimmer Lid Equipment
1882/215A (EXT Mod 679)	Mod to Wiring Diagram Inst Landing System
1882/257A & UN(EXT Mod 679)	Mod to Instlln of Radio Equipment in Nose
1882/409A (EXT Mod 679)	Mod to Wiring Diagram Inst Landing System
1882/511	GA of SSR 2100 Installation (Retrospective Action)
1882/533	Wiring Diagram SSR 2100
1882/537	Assy of SSR Aerial (Upper)
1882/539	Assy of SSR Aerial (Lower)
1882/547	Instlln of SSR 2100 in Port Rear Cockpit
1883/195A & UN/1(EXT Mod 679)	Mod to Mounting Bracket Assy
1883/393A & UN/2 (EXT Mod 679)	Mod to Assy of Hydraulic & LP Cock Levers
1883/439A & UN(EXT Mod 679)	Mod to Instlln of Stbd Consoles Etc
(Sht 1)	
1883/439A & UN(EXT Mod 679)	Mod to Instlln of Stbd Consoles Etc
(Sht 2)	
1883/441A & UN(EXT Mod 679)	Mod to Framework Assy (Stbd Console - Front)
1883/453A & UN/1(EXT Mod 679)	Mod to Bearer
1883/707A (EXT Mod 679)	Mod to Horizontal Panel Assy
1883/709 (EXT Mod 679)	Mod to Horizontal Panel
1883/711 (EXT Mod 679)	Mod to Label
1883/715 (EXT Mod 679)	Mod to Packings
1882/517	UHF Aerial Connector

* Reference Drawings.

5. PARTS AND SPECIAL TOOLS REQUIRED

(1) Parts and/or Materials

(a) The modification kit which consists of the following items will be assembled by the Contractor for use by the Contractor's Working Party.

(i) Items supplied by the Contractor:

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<u>Ref No</u>	<u>Part No</u>	<u>Nomenclature</u>	<u>Qty</u>	<u>Class of Equipment</u>
<u>PARTS 'A' & 'B'</u>				
26DN/-	1810/5155B	Packing plate	1)	C
26DN/-	1810/7019B	Reinforcing	1)	
26DN/-	1810/7019C	Mounting block	2)	
26DN/-	1810/7021B	Reinforcing	1)	
26DN/-	1810/7021C	Angle	1)	
26DN/-	1810/7025	Bearer (Fwd)	1)	
26DN/-	1810/7027B	Bearer (Aft)	1)	
26DN/-	1810/7029	Angle	1)	
26DN/-	1810/7031A	Bracket Assy	1)	
26DN/-	1810/7033A	Cleat	1)	
26DN/-	1810/7035A/UN	Mounting bracket	1)	
26DN/-	1810/7041UN	Mounting bracket	1)	
26DN/-	1810/7043A	Mounting bracket	1)	
26DN/-	1810/7049	Angle	1)	
26DN/1497304	1810/7057	Guard	1)	
26DN/-	1810/7059A	Bracket-Aerial switch	1)	
26DN/1497308	1810/7061A	Angle	1)	
26DN/1497307	1810/7063A	Angle	1)	
26DN/1719	1847/217	Fork end	1)	
26DN/-	1857/1757A	LP Fuel cock lever	1)	
		assy		
26DN/1497309	1871/625	Pipe	1)	
26DN/1497310	1871/627	Pipe	1)	
26DN/1497315	1875/1031A	Pipe Assy	1)	
26DN/1497311	1875/1035A	Pipe	1)	
26DN/1497312	1875/1037A	Pipe	1)	
26DN/1497313	1875/1039A	Pipe	1)	
26DN/1497314	1875/1437	Clamp block	4)	
26DN/1497316	1880/750	Pipe	1)	
26DN/1497317	1880/752	Pipe	1)	
26DN/1497318	1880/754	Pipe	1)	
26DN/1497319	1880/756	Pipe	1)	
26DN/1497320	1880/1739	Clamp block	2)	
26DN/1497321	1880/1741	Clamp block	2)	
26DN/-	1881/1033B	Packing plate	1)	
26DN/-	1881/1769BEKT679	Cable assy	1)	
26DN/-	1881/2199	Met Cal label **	1)	
26DN/-	1882/507	Aerial switch panel	1)	
10HB/17217	1882/519	Cable assy No 85	1	-
10HB/17219	1882/523	Cable assy No 87	1	-
10HB/17220	1882/525A	Cable assy No 88	1	-
10HB/17221	1882/527A	Cable assy No 89	1	-
10HB/17222	1882/531/A	Cable assy No 84(ILS)	1(including plate D.24498-37)	
26DN/-	1882/541	Cable assy No 90(ILS)	1)	
26DN/-	1883/1305A	Panel	1)	
26DN/-	1883/1307	Patch panel	1)	
26DN/-	1883/1313A	Bracket	1)	
26DN/-	1883/1315	Label	1)	

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<u>Ref No</u>	<u>Part No</u>	<u>Nomenclature</u>	<u>Qty</u>	<u>Class of Equipment</u>
26DN/-	1883/1319	Label	1	C
26DN/-	1883/1321A	Mounting bracket	1	C
26DN/-	1883/1327A	Stop bracket	1	C
26DN/-	1883/1329	Panel	1	C
26DN/-	1883/1331	Panel	1	C
26DN/-	1883/1339A	Support bracket	1	C
26DN/-	1883/1341UN	Mounting plate - Aerial switch No 1	1	C
26DN/-	1883/1343A	Tray assy	1	C
26DN/-	1883/1351A	Bracket	1	C
26DN/-	1883/1361	Fwd support bracket	1	C
26DN/-	1883/1365A	Channel	2	C
26DN/-	1883/1367	Top vertical fairing	1	C
26DN/-	1883/1371	Label	1	C
26DN/-	1883/1373A/UN	Attachment lug	1	C
26DN/-	STD.850/31	Clip	1	C
26FX/20207	STD.915/U/20	Washer	1	C
26DN/-	FDS37 Sht 39	Dymomite Label '28'	1	C
26DN/-	FDS37 Sht 39	Dymomite Label 'AV'	1	C
26DN/-	FDS37 Sht 39	Dymomite Label 'CB'	1	C
26DN/-	FDS37 Sht 39	Dymomite Label 'CJ'	1	C
26DN/-	FDS.16	Cleat	2	C
28S/1012450	A32.B.10	Screw	2	C
28S/9992522	A32.B.16	Screw	2	C
28DU/9480166	A102.1/2.B	Bolt	2	C
28DU/9419560	A.102.1.B	Bolt	4	C
28DU/9419565	A.102.1.D	Bolt	25	C
28DU/9480233	A.116.1/2.D	Bolt	2	C
28S/9435590	A.204.A.12	Screw	5	C
28S/9435594	A.204.B.12	Screw	2	C
28S/1220232	A.217.B.28	Screw	3	C
26DN/8110	AD.42.R	Imex Rivet	1	C
26DN/8111	AD.44.R	Imex Rivet	6	C
26DN/8114	AD.56.R	Imex Rivet	16	C
26DN/8116	AD.68.R	Imex Rivet	2	C
28F/1046309	AGS.838/3	Elbow union body	1	C
NIV	AGS.838/4	Union nut	2	C
NIV	AGS.838/8	Union bush	2	C
28F/9439897	AGS.1142/E	Nipple	1	C
28F/9708189	AGS.1170/A	Nipple	1	C
28M/10308	AGS.2002.A.4	Nut	5	C
28M/1086618	AGS.2002.B.1	Nut	4	C
28M/9435067	AGS.2008.C.1	Nut	1	C
28M/9144673	AGS.2019.C.1	Nut	1	C
28W/1206041	AGS.2035.B	Washer	4	C
28W/1200328	AGS.2037.B	Shakeproof washer	4	C
28Q/2005131	AGS.2045/613	Rivet (Chobert)	4	C
28Q/14814	AGS.2047/613	Pin (Chobert)	4	C

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<u>Ref No</u>	<u>Part No</u>	<u>Nomenclature</u>	<u>Qty</u>	<u>Class of Equipment</u>
28Q/9417245	AGS.2051/419BS	Pop rivet (Break stem)	4	C
26DN/-	1883/1337B	Lower fairing plate	1	C
28Q/9417266	AGS.2050/419BS	Pop rivet (Break stem)	2	C
28Q/19107	SP78/604	Rivet	3	C
28Q/1987602	AS.160/203	Rivet	4	C
28Q/6968	AS.160/303	Rivet	4	C
28Q/9513235	AS.164/303	Rivet	1	C
28Q/9702754	AS.164/304	Rivet	2	C
28Q/9676	AS.164/403	Rivet	1	C
28Q/7655	AS.164/404	Rivet	40	C
28Q/9564474	AS.164/405	Rivet	33	C
28Q/9040	AS.164/507	Rivet	24	C
28D/1007979	AS.1246.1.B	Bolt	6	C
28Q/9703793	SP80/303	Rivet	1	C
28Q/9463604	SP80/304	Rivet	1	C
28Q/1028817	SP80/404	Rivet	37	C
28Q/9147920	SP80/405	Rivet	6	C
28Q/9141062	SP80/406	Rivet	3	C
28Q/19346	SP80/505	Rivet	1	C
28Q/9137404	AS.2229/304	Rivet	6	C
28Q/9129592	AS.2230/404	Rivet	12	C
28E/1006932	AS.2294/1	Spring clip	1	C
28E/9998659	AS.2295/2	Spring clip	1	C
26DN/-	AS.2811/5/350	Distance tube	1	C
28S/1214120	AS.2993/5C	Screw	2	C
28S/1214121	AS.2993/6C	Screw	2	C
28F/18958	AS.6712	Elbow union body	1	C
28F/18839	AS.6713	Union nut	2	C
28F/18840	AS.6714	Union bush	2	C
28M/1951792	AS.8600A	Nut	5	C
28M/1275903	AS.8600B	Nut	2	C
28M/1275904	AS.8600D	Nut	28	C
28F/9710567	SP90/C4	Split pin	1	C
28W/9419401	SP10B	Washer	4	C
28W/9419465	SP13B	Washer	6	C
28W/9995407	SP25A	Washer	5	C
28P/1012570	SP29.G.6	Taper pin	2	C
28W/17541	SP124.A	Washer	5	C
28W/9471274	SP124.B	Washer	10	C
28W/9457834	SP124.D	Washer	26	C
5X/10457	42586/3	Taper pin receptacle	2	-
5X/-	60199	Type AMP.37		
5X/1143471		Connector Unit	1	-
		Electro-Methods (D2/PS/Y)		
5CZ/6399	WB.1110/24	Spacer	5	-
5CZ/1035035	WB.1110/25	Spacer	5	-
5CZ/6424	WB.1114/28	Pillar	4	-
5X/1007061	AMP.320 559	I/L Connector	4	-
32B/1260	BAS23-2/J26/2	'Bestobel' bedding tape	1 ft	

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<u>Ref No</u>	<u>Part No</u>	<u>Nomenclature</u>	<u>Qty</u>	<u>Class of Equipment</u>
26DN/8335	DAS.393/16/1.5	Dunlop Hose	1	-
10W/-	RWV.3.J	Resistor 120 ohm	1	-
		2 1/2 w (Painton)		
5E/4182		Uninyvin cable 22	20 ft	-
32C/-		PVC Tube 6m/m	34 ins	-
		I/dia x .05m/m		
		thick		
32B/-		Lasso No 92 Yellow	2 ft	-
		PVC x 1 in. wide		
		(self adhesive)		
5E/9100180		Equipment wire -	12 ft	-
		White		
5CZ/4337545		Cover	1	-
5CZ/4337546		Cover	1	-
5CZ/6583		Link	1	-
5CZ/6642 or		Terminal block	1	-
5CZ/7379				
5CZ/4329149 or		Terminal block	1	-
5CZ/7381				

PART 'A' Peculiar Parts

26DN/-	1810/7055A	Plate	1	C
26DN/-	1883/1303A	Top panel	1	C
26DN/-	1883/1309A	Bearer	1	C
26DN/-	1883/1311A	Bearer	1	C
26DN/-	1883/1337B	Lower vertical fairing	1	C
28D/1007971	A.25.1.B	Bolt	1	C
28D/1010658	A.25.1.B	Bolt	2	C
28D/1011006	A.25.5.B	Bolt	2	C
28D/1011011	A.25.8.B	Bolt	3	C
28D/9436920	A.25.1.C	Bolt	4	C
28D/9133012	A.25.3.C	Bolt	2	C
28D/1212405	A.25.36.C	Bolt	1	C
28S/9992522	A.32.B.16	Screw	1	C
28M/1086618	AGS.2002.B.1	Nut	6	C
28M/9434251	AGS.2008.B.1	Nut	3	C
28M/-	AGS.2013.B.1	Nut	3	C
28M/13774	AGS.2019.B.1	Nut	1	C
28M/9433473	AGS.2002.C.1	Nut	3	C
28M/9144673	AGS.2019.C.1	Nut	1	C
28D/1007973	AS.1242.2.B	Bolt	1	C
28D/9128739	AS.1248.1/2.B	Bolt	2	C
28D/1218385	AS.1248.2.B	Bolt	2	C
28D/1218386	AS.1248.3.B	Bolt	1	C
28D/1007981	AS.1248.1/2.C	Bolt	3	C
28D/1007982	AS.1248.1.C	Bolt	2	C
28D/1013284	AS.1248.2.C	Bolt	2	C
28Q/9135416	AS.2230.303	Rivet	6	C
28W/9419474	SP.15B	Washer	11	C
28W/9419475	SP.15.C	Washer	5	C

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<u>Ref No</u>	<u>Part No</u>	<u>Nomenclature</u>	<u>Qty</u>	<u>Class of Equipment</u>
<u>PART 'B' Peculiar Parts</u>				
26DN/-	1810/7055A/UN	Plate	1	C
26DN/1497326	1883/1303A/UN	Top panel	1	C
26DN/-	1883/1309A/UN	Bearer	1	C
26DN/-	1883/1311A/UN	Bearer	1	C
28DU/9480166	A.102.1/2.B	Bolt	3	C
28DU/9419560	A.102.1.B	Bolt	2	C
28DU/9419562	A.102.4.B	Bolt	2	C
28DU/9419563	A.102.8.B	Bolt	3	C
28DU/9419966	A.102.1/2.D	Bolt	5	C
28DU/9419566	A.102.3.D	Bolt	2	C
28DU/9484481	A.102.36.D	Bolt	1	C
28DU/9419535	A.113.1/2.B	Bolt	5	C
28DU/9419536	A.113.1.B	Bolt	2	C
28DU/9419598	A.113.3.B	Bolt	1	C
28DU/9480222	A.113.1/2.D	Bolt	7	C
28M/9140963	A.148.B.77	Nut	3	C
28S/9998419	A.204.B.20	Screw	1	C
28S/1201335	A.205.B.16	Screw	1	C
28M/1275903	AS.8600.B	Nut	8	C
28M/1275904	AS.8600.D	Nut	3	C
28M/1275898	AS.8603.B	Nut	1	C
28M/19368	AS.8606.D	Nut	1	C
28Q/1012151	AS.2230.203	Rivet	6	C
28W/9471274	SP.124.B	Washer	11	C
28W/9457834	SP.124.D	Washer	6	C

(ii) Embodiment Loan Items

PARTS 'A' & 'B'

<u>Ref No</u>	<u>Part No</u>	<u>Nomenclature</u>	<u>Qty</u>	<u>Class of Equipment</u>
10AE/1071521		Aerial Switch Unit	1	A
5CW/1047694		Switch	2	-
10B/20275		Aerial Type 100B	2	A
10D/2232734		Transponder SSR.2100	1	A
10L/2232735		Control Unit	1	A
		SSR.2101		
5CW/4222		Guard Locking Switch	1	-

(b) The following materials are to be provided under Unit arrangements:

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<u>Ref No</u>	<u>Part No</u>	<u>Nomenclature</u>	<u>Qty</u>	<u>Class of Equipment</u>
30A/9437135		22G Stainless Steel locking wire Specn DTD.189A	As reqd	C
33B/1076		Paint - Bright blue Specn DTD.827	As reqd	C
32A/9539173		Thread, Fibre glass .037 ins dia (Tygadur)	As reqd	C
33E/9450627		Sealing compound Bostik 1752	As reqd	C
33E/246 to DTD900/4690		Sealing compound Boscoprene 2115	As reqd	C
33E/2202125	DTD900/4058	Bostik 1790	As reqd	C
34E/9100513		Grease XG.275 Specn DTD.825A	As reqd	C

(2) Special Tools and/or Test Equipment

The following special tools are required:

<u>Ref No</u>	<u>Part No</u>	<u>Nomenclature</u>	<u>Qty</u>	<u>Class of Equipment</u>
26DN/-	MKT.679/1	Trim template	1	C
26DN/-	MKT.679/2	Trim template	1	C

Note: One set has been provisioned for use by Contractor's Working Party.

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>	<u>Class of Equipment</u>
26DN/2866	1847/685A	Control rod assy		

Parts required:

26DN/1719	1847/217	Fork end	1	C
28P/1012570	SP.29-G.6	3/32" dia taper pin	2	C
26DN/9173	1883/195A/1	Mounting brkt assy		

Parts required:

26DN/-	1883/1313A	Angle	1	C
28Q/1028817	SP80/404	Rivet	2	C
28Q/9137404	AS.2229/304	Rivet	2	C
28M/9144673	AGS.2019C.1	Anchor nut 2B.A	1	C
28Q/6968	AS.160.303	Rivet	4	C
28Q/7655	AS.164.404	Rivet	2	C

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<u>Ref No</u>	<u>Part No</u>	<u>Nomenclature</u>	<u>Qty</u>	<u>Class of Equipment</u>
26DN/7752	1883/195A/ UN/1	Mounting brkt assy		

Parts required:

26DN/-	1883/1313A	Angle	1	C
28Q/1028817	SP80/404	Rivet	2	C
28Q/9137404	AS.2229/304	Rivet	2	C
28M/19368	AS.8606.D	Anchor nut 10-32 UNF	1	C
28Q/6968	AS.160.303	Rivet	4	C
28Q/7655	AS.164.404	Rivet	2	C

26DN/1443599	1881/1403A/1	Lid Assy, wired dimmer box		
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Parts required:

5X/-	60199	Connector unit Electro-methods (D2/PS/Y)	1	-
5E/9100180		Equipment wire, white	As reqd	C
10W/-	RWV3J	Resistor, 120 ohms 2 $\frac{1}{2}$ w (Painton)	1	-
5X/10457	42586/3	Taper pin receptacle Type AMP.37	2	-
33H/243		Epoxy resin	As reqd	

26DN/3682	1848/217A	Pulley guard assy		
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Parts required:

NIL

26DN/4616	1883/711	Label		
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Parts required:

NIL

26DN/7062	1883/707B	Panel		
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Parts required:

26DN/-	1883/1319	Label	1	C
26DN/-	1883/715/1	Fwd packing	1	C
26DN/-	1883/715/2	Aft packing	1	C
26DN/-	1883/1315	Label	1	C
26DN/-	1883/1307	Patch panel	1	C
28Q/9513235	AS.164.303	Rivet	1	C
28Q/9702754	AS.164.304	Rivet	2	C

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<u>Ref No</u>	<u>Part No</u>	<u>Nomenclature</u>	<u>Qty</u>	<u>Class of Equipment</u>
26DN/198	1810/4005A/2	Nose hatch assy		
<u>Parts required:</u>				
26DN/1497308	1810/7061A	Angle	1	C
26DN/1497307	1810/7063A	Angle	1	C
28E/1006932	AS.2294/1	Spring clip	1	C
28E/9998659	AS.2295/2	Spring clip	1	C
28Q/9703793	SP80/303	Rivet	1	C
28Q/9463604	SP80/304	Rivet	1	C
28Q/9147920	SP80/405	Rivet	4	C
28Q/9417245	AGS.2051-419BS	Rivet	2	C

26DN/199 1810/4005A/ UN/2 Nose hatch assy

<u>Parts required:</u>				
26DN/1497308	1810/7061A	Angle	1	C
26DN/1497307	1810/7063A	Angle	1	C
28E/1006932	AS.2294/1	Spring clip	1	C
28E/9998659	AS.2295/2	Spring clip	1	C
28Q/9703793	SP80/303	Rivet	1	C
28Q/9463604	SP80/304	Rivet	1	C
28Q/9147920	SP80/405	Rivet	4	C
28Q/9417245	AGS.2051-419BS	Rivet	2	C

For other spares rendered redundant by this modification see Para 11.

7. CHANGE OF REFERENCE, PART AND ASSEMBLY NUMBERS

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

<u>Ref No</u>	<u>Old Part/Assy No</u>	<u>Nomenclature</u>	<u>Ref No</u>	<u>New Part/Assy No</u>
26DN/-	1883/453A/1	Bearer	26DN/-	1883/453A/2
26DN/-	1883/453A/UN/1	Bearer	26DN/-	1883/453A/UN/2
26DN/-	1847/689	Tube	26DN/-	1847/689/1
26DN/2866	1847/685A	Control rod assy	26DN/1497329	1847/685A/1
26DN/9173	1883/195A/1	Mounting bracket assy	26DN/1497327	1883/195A/2

RESTRICTED

<u>Ref No</u>	<u>Old</u> <u>Part/Assy</u> <u>No</u>	<u>Nomenclature</u>	<u>Ref No</u>	<u>New</u> <u>Part/Assy</u> <u>No</u>
26DN/7752	1883/195A/UN/1	Mounting bracket assy	26DN/1497328	1883/195A/UN/2
26DN/-	(1883/393A/2	Assy of	26DN/-	(1883/393A/3
26DN/-	(1883/393A/UN/2	hydraulic & LP cock levers	26DN/-	(1883/393A/UN/3
26DN/1443599	1881/1403A/1	Lid assy wired dimmer box	26DN/1497322	1881/1403A/2
26DN/-	1881/1755A/9	Main cable assy No 3	26DN/-	1881/1755A/10
26DN/-	1881/1751A/4	Cable assy No 1	26DN/-	1881/1751A/5
26DN/-	1881/1751A/UN/4	Cable assy No 1	26DN/-	1881/1751A/UN/5
26DN/-	1881/1769A/1	Cable assy No 10	26DN/-	1881/1769A/2
26DN/-	1883/343A/2	Detachable structure	26DN/-	1883/343A/3
26DN/-	1883/343A/UN/2	Detachable structure	26DN/-	1883/343A/UN/3
26DN/3682	1848/217A	Pulley guard assy	26DN/1497331	1848/347A
26DN/-	1883/715	Packing	26DN/-	(1883/715/1 (Fwd packing (1883/715/2 (Aft packing
26DN/4616	1883/711	Label	26DN/-	1883/711/1
26DN/-	1883/707A	Panel assy	26DN/-	1883/707A/1
26DN/7062	1883/707B	Panel assy (spares)	26DN/1497330	1883/707B/1
26DN/198	1810/4005A/2	Nose hatch assy	26DN/1497305	1810/4005A/3
26DN/199	1810/4005A/UN/2	Nose hatch assy	26DN/1497306	1810/4005A/UN/3
26DN/-	1810/933A/2	}Side member assy	(26DN/-	1810/933A/3
26DN/-	1810/933A/UN/2	(Pilot's floor stbd)	(26DN/-	1810/933A/UN/3
26DN/-	1883/441A/1	}Framework assy	(26DN/-	1883/441A/2
26DN/-	1883/441A/UN/1	(Stbd console front)	(26DN/-	1883/441A/UN/2

RESTRICTED

8. 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.

The work will be carried out by Contractor's Working Party.

9. SPECIAL TESTS AFTER EMBODIMENT

(1) When this modification has been embodied and inspected the following special tests are to be carried out.

(a) Purge the oxygen system and carry out flow and leak tests in accordance with AP 101B-1801-1A, Sect 3, Chap 10.

(b) Carry out cabin pressure tests in accordance with AP 101B-1801-1A, Sect 3, Chap 8.

(c) Test the Pitot-static system in accordance with AP 1275T Vol 1, Sect 3.

(d) Check the UHF radio in accordance with AP 101B-1801-1B, Sect 8, Chap 2, Paras 36, 37 and 40.

(e) Check the hydraulic on/off valve (Sec AP 101B-1801-1A, Sect 3, Chap 6, Para 11 and Fig 17).

(f) Check out the SSR 2100 system as follows:

(Note: These instructions are not yet available in a Ministry Publication).

1.1. GENERAL

The equipment should be inspected and Bench Tested before installation in an Aircraft.

1.2. VISUAL INSPECTION

(a) Check electrical connectors to ensure correct mating.

(b) Check each Unit to ensure that it is securely attached to the Mounting Tray.

(c) Check that cabling is properly mounted and clamped firmly to prevent damage from vibration.

(d) Check primary power source connections to ensure no short circuit exists.

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2. ELECTRICAL TESTS

2.1. TEST EQUIPMENT REQUIRED

- (a) IFF/SSR Ramp Test Set CRM.544. Cossor.
- (b) In line Power Meter BIRD. 4311. with 1000J. element and Type 'N' connectors, or similar.

2.2. TEST PROCEDURE

- 2.2.1. Ensure power, is available on the Aircraft also depress the required circuit breakers to supply power to the Transponder.
- 2.2.2. Select function switch on Control Unit SSR.2101. to 'S/B' and allow approx 60 seconds warm up time.
- 2.2.3. Select function switch to MODE 'A'
- 2.2.4. Press 'TEST' switch and note that GREEN test indicator is lit, and remains alight for 10 to 15 seconds.
- 2.2.5. Select function switch to Mode 'B'
- 2.2.6. Press 'TEST' switch and note that GREEN test indicator is lit, and remains alight for 10 to 15 seconds.
- 2.2.7. Select function switch to ST/BY.
- 2.2.8. Remove the Aerial Feed Connection to the front of the SSR.2100 Transponder.
- 2.2.9. Locate test set CRM.544 near to the Transponder, connect RF Lead (25 ft) together with 56dB attenuator (or 39dB plus 17dB in Series) between RF Output on test set and Aerial Feeder connection on the SSR.2100 Transponder.
- 2.2.10. Connect Power Supply to CRM.544 Test Set (28v or 115v) and select Power Switch to 'ON' (note power indicator lamp is lit).
- 2.2.11. Select 'Function' Switch on Test Set to 'Self Test' note that the meter reads in GREEN region of upper scale.

NOTE: METER SHOULD READ IN GREEN REGION (LOWER SCALE) TO DENOTE "ACCEPT" AND RED REGION TO DENOTE "NO REPLIES" EXCEPT FOR REPLY RATE AND SELF TEST MEASUREMENTS.

RESTRICTED

<u>Test No</u>	<u>On Control Unit</u> <u>Select:</u>	<u>On Test Set CRM.544</u> <u>Select:</u>	<u>Test Set</u> <u>Indicator</u> <u>Should read:</u>
1	Mode A Code 0000	Function switch to reply Mode SW to A Code to 0000	GREEN
2	Mode A Code 0000	Mode SW to A Code 0000 Function SW to freq. and Power	GREEN
3	Mode A Code 0000	Function SW to reply Mode A Code 0000	GREEN
4	Mode A Code 1000	Mode A Code 1000	GREEN
5	" " " 2000	" " " 2000	GREEN
6	" " " 3000	" " " 3000	GREEN
7	" " " 4000	" " " 4000	GREEN
8	" " " 5000	" " " 5000	GREEN
9	" " " 6000	" " " 6000	GREEN
10	" " " 7000	" " " 7000	GREEN
11	" " " 0100	" " " 0100	GREEN
12	" " " 0200	" " " 0200	GREEN
13	" " " 0300	" " " 0300	GREEN
14	" " " 0400	" " " 0400	GREEN
15	" " " 0500	" " " 0500	GREEN
16	" " " 0600	" " " 0600	GREEN
17	" " " 0700	" " " 0700	GREEN
18	" " " 0010	" " " 0010	GREEN
19	" " " 0020	" " " 0020	GREEN
20	" " " 0030	" " " 0030	GREEN
21	" " " 0040	" " " 0040	GREEN
22	" " " 0050	" " " 0050	GREEN
23	" " " 0060	" " " 0060	GREEN
24	" " " 0070	" " " 0070	GREEN
25	" " " 0001	" " " 0001	GREEN
26	" " " 0002	" " " 0002	GREEN
27	" " " 0003	" " " 0003	GREEN
28	" " " 0004	" " " 0004	GREEN
29	" " " 0005	" " " 0005	GREEN
30	" " " 0006	" " " 0006	GREEN
31	" " " 0007	" " " 0007	GREEN
32	" " " 7777	" " " 7777	GREEN

RESTRICTED

<u>Test No</u>	<u>On Control Unit</u> <u>Select:</u>	<u>On Test Set CRM.544</u> <u>Select:</u>	<u>Test Set</u> <u>Indicator</u> <u>Should read:</u>
33	Mode A Code 7777	Function SW to No reply Mode A Code 7777	RED
34	Mode A Code 7777	Function SW to reply rate Mode A Code 7777	40% Deflection (Approx)
35	Mode A Code 7777	Function SW to Freq/ Power Mode A Code 7777	GREEN
36	Mode B Code 0000	Mode SW to 'B' Code 0000 Function SW to reply	GREEN
37	Mode B Code 1000	Mode B Code 1000	GREEN
38	" " " 2000	" " " 2000	GREEN
39	" " " 3000	" " " 3000	GREEN
40	" " " 4000	" " " 4000	GREEN
41	" " " 5000	" " " 5000	GREEN
42	" " " 6000	" " " 6000	GREEN
43	" " " 7000	" " " 7000	GREEN
44	" " " 0100	" " " 0100	GREEN
45	" " " 0200	" " " 0200	GREEN
46	" " " 0300	" " " 0300	GREEN
47	" " " 0400	" " " 0400	GREEN
48	" " " 0500	" " " 0500	GREEN
49	" " " 0600	" " " 0600	GREEN
50	" " " 0700	" " " 0700	GREEN
51	" " " 0010	" " " 0010	GREEN
52	" " " 0020	" " " 0020	GREEN
53	" " " 0030	" " " 0030	GREEN
54	" " " 0040	" " " 0040	GREEN
55	" " " 0050	" " " 0050	GREEN
56	" " " 0060	" " " 0060	GREEN
57	" " " 0070	" " " 0070	GREEN
58	" " " 0001	" " " 0001	GREEN
59	" " " 0002	" " " 0002	GREEN
60	" " " 0003	" " " 0003	GREEN
61	" " " 0004	" " " 0004	GREEN
62	" " " 0005	" " " 0005	GREEN
63	" " " 0006	" " " 0006	GREEN

RESTRICTED

<u>Test No</u>	<u>On Control Unit</u> <u>Select:</u>	<u>On Test Set CRM 544</u> <u>Select:</u>	<u>Test Set</u> <u>Indicator</u> <u>should read:</u>
64	Mode B Code 0007	Mode B Code 0007	GREEN
65	Mode B Code 7777	Mode B Code 7777	GREEN
66	Mode B Code 7777	Mode B Code 7777 Function SW to Freq/Power	GREEN
67	Mode C A/R Switch to ON	Mode C Code 0000 Function SW to reply	GREEN
67A	Press and release I/P switch	Function switch to "Ident"	GREEN for approx 20 secs
67B	Function switch to "B"	Mode switch to Mode "B"	RED
68	Select ST/BY	Remove attenuators and R/F Head from Aerial connector on front of Transponder and stow in Lid of CRM 544. Reposition the CRM 544 Approx 30 ft from the Upper Aerial and direct Test Set Aerial toward Aircraft Aerial.	
69	Reconnect Aerial Feeder to front of Transponder. Select Mode A Code 0000	Select Mod A Code 0000 Function Switch to 'Reply' Aerial test switch to 'Upper'.	GREEN
70	Select ST/BY Remove Aerial Feeder from connector at front Transponder.	Insert Wattmeter between Transponder Aerial connector and Aerial Feeder Set Wattmeter to read "FORWARD POWER".	
71	Select Mode A Code 7777	Set CRM 544 to Mode A Code 7777 Function SW to reply.	GREEN

Note: Wattmeter reading

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<u>Test No</u>	<u>On Control Unit</u> <u>Select:</u>	<u>On Test Set CRM 544</u> <u>Select:</u>	<u>Test Set</u> <u>Indicator</u> <u>should read:</u>
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72	Select ST/BY	Set Wattmeter to read reflected power.	
----	--------------	--	--

73	Mode A Code 7777	CRM 544 as test 71	GREEN
----	------------------	--------------------	-------

Note: Reflected Power reading.

Calculate VSWR =

$$1 + \sqrt{\frac{\text{Reflected Power}}{\text{Forward Power}}}$$

$$1 - \sqrt{\frac{\text{Reflected Power}}{\text{Forward Power}}}$$

Or calculate from VSWR Nomograph
VSWR must not exceed 1.5:1

74	Select ST/BY	Remove wattmeter and re-connect Aerial Feeder to Transponder. Move CRM 544 to Approx 30 ft. of Lower Aerial. Select Lower Aerial on Aerial Test Switch.	
----	--------------	---	--

75	Mode A Code 7777	Mode A Code 7777 Function SW to reply	GREEN
----	------------------	--	-------

76	Select ST/BY	Insert wattmeter between transponder Aerial connector and Aerial Feeder. Set Wattmeter to read "FORWARD POWER".	
----	--------------	---	--

77	Mode A Code 7777	Mode A Code 7777 Function SW to reply	GREEN
----	------------------	--	-------

Note: Wattmeter reading

RESTRICTED

<u>Test No</u>	<u>On Control Unit</u> <u>Select:</u>	<u>On Test Set CRM 544</u> <u>Select:</u>	<u>Test Set</u> <u>Indicator</u> <u>should read:</u>
----------------	--	--	--

78	Select ST/BY	Set Wattmeter to "Reflected Power"	
----	--------------	---------------------------------------	--

79	Mode A Code 7777	As test 77.	GREEN
----	---------------------	-------------	-------

Note: Reflected Power
reading.

Calculate VSWR as in
Test 73

80	Select ST/BY	Remove wattmeter and re- connect Aerial Feeder.	
----	--------------	--	--

81	Mode 3 Code 7777	Select Aerial Test Switch to "FLIGHT" Mode 3 Code 7777 Function Switch to reply	GREEN
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"REPEAT TESTS Nos 1 to 81 using aircraft standby battery".

(a) Place Top Hat Screw of test kit, Aerial, Type 6996 (10S/17254) over upper aerial. Remove fuse 94 (500 m/a) on aerial relay in nose bay and check that system, on failure, is switched to upper aerial.

(b) Positive checks on individual aerials should be carried out by disconnecting aerials during transmission.

(c) Checks on existing aircraft radio systems during the operation of the SSR equipment to prove there is no mutual interference, should be carried out.

(2) As the embodiment of this modification involves disturbances of:-

(a) The aircraft assisted escape systems, checks of the system are to be made in accordance with AP 3158, Vol 2, Leaflet B39 Para 2 (c) and (d).

(b) The Hydraulic and LP cock control system, an independent check of the control system is to be made in accordance with AP 3158, Vol 2, Leaflet No B28.

(c) The Pitot/Static system, an independent sense and leak check is to be made in accordance with AP 3158, Vol 2, Leaflet No B42.

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10. RECORDING ACTION

Record embodiment of modification on Aircraft Form 700.

Note: An entry is also to be recorded in History and/or Component Bay Servicing Record Sheet in accordance with AP 3158, Vol 2, Leaflets C2 and C4.

11. REDUNDANT PARTS

The undermentioned parts rendered redundant by the embodiment of this modification are to be disposed of as scrap in accordance with AP 830, Vol 1 (5th Edition) Leaflet A19/1.

<u>Ref No</u>	<u>Part No</u>	<u>Nomenclature</u>	<u>Qty</u>	<u>Class of Equipment</u>
5CW/6430		Switch	1	
or				
5CW/7541				
26DN/-	1810/2015	Angle	1	C
26DN/-	1810/3125	Cleat	2	C
26DN/-	1810/3693	Bearer (Fwd)	1	C
26DN/-	1810/3695	Bearer (Aft)	1	C
26DN/-	1810/3895	Cleat	1	C
26DN/-	1810/4009A	Assy of bracket	1	C
26DN/-	1810/4009A/UN	Assy of bracket	1	C
26DN/-	1810/4355A	Cleat	1	C
26DN/-	1810/4355A/UN	Cleat	1	C
26DN/-	1810/4361A	Bracket assy	1	C
26DN/-	1810/4361A/UN	Bracket assy	1	C
26DN/-	1810/5503	Angle	1	C
26DN/-	1810/6369A	Cleat	1	C
26DN/-	1810/6369A/UN	Cleat	1	C
26DN/-	1810/6483	Angle	1	C
26DN/-	1810/6485	Angle	1	C
26DN/-	1810/6489	Angle	1	C
26DN/-	1810/6605	Clip Mounting	1	C
26DN/9053	1810/6919	Micro switch	1	C
		mounting plate		
26DN/8221	1857/1713A	LP Fuel cock	1	B
		lever assy		
26DN/4364	1871/581	Pipe	1	C
26DN/4365	1871/583	Pipe	1	C
26DN/4672	1875/971A	Pipe	1	C
-	1875/985A	Pipe	1	C
26DN/7457	1875/989A	Pipe	1	C
26DN/8334	1875/995A	Pipe	1	C
26DN/6655	1875/1203	Special pipe clip	1	C
-	1880/827	Pipe	1	C
-	1880/829	Pipe	1	C
26DN/7857	1881/2383A/UN	Guard	1	C
26DN/8336	1881/2385	Guard	1	C
-	1883/53	Cleat	1	C
26DN/9032	1883/445A/1	Top panel assy	1	C
26DN/8169	1883/445A/UN/1	Top panel assy	1	C

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<u>Ref No</u>	<u>Part No</u>	<u>Nomenclature</u>	<u>Qty</u>	<u>Class of Equipment</u>
26DN/9176	1883/447A/2	Top panel assy	1	B
26DN/8224	1883/447A/2/UN	Top panel assy	1	B
26DN/-	1883/455A	Bearer	1	C
26DN/-	1883/455A/UN	Bearer	1	C
26DN/-	1883/457A	Bearer	1	C
26DN/-	1883/457A/UN	Bearer	1	C
26DN/4617	1883/713	Label	1	C
26DN/-	1883/771A	Stiffener	1	C
26DN/-	1883/771A/UN	Stiffener	1	C
26DN/8137	1883/1063A	Lower vertical fairing	1	B
26DN/8138	1883/1063A/UN	Lower vertical fairing	1	B

12. EFFECT ON WEIGHT AND MOMENT CHANGE

This modification causes a change in Basic Weight of plus 18.50 lb. with a change in moment of plus 1660 lb. in. about the CG datum.

13. EFFECT ON AIRCRAFT OR EQUIPMENT OPERATION AND HANDLING

See Pilot's Notes.

14. EFFECT ON SERVICING AND ON GROUND SUPPORT EQUIPMENT

(a) Servicing is increased by the installation of the SSR system with its appropriate switches, transponder and additional wiring.

(b) Flight simulators will be similarly affected.

(c) Ground support equipment is not affected.

(d) Reference is to be made to para 9 (1) (f) of this leaflet for instructions on checking and testing the SSR 2100 system, until the appropriate Publication is printed.

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