A.P.4326, Vol. 6, Part

CHAPTER 6

ENGINE NACELLE

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Fig.

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(4)	Refit	the	COW	ing	support	noop

(5) Mark on the wing skin at the inboard and outboard engine ribs a reference line parallel with, and one inch from, the edge of the wing skin.

(6) Remove the turbo starter exhaust connections from the new cowling.

(7) Offer up the cowling to the engine and centralize it about the engine compressor casing, and ensure that the centre of the top attachment hole in the support hoop coincides with the centre of the corresponding 1/8 in. dia. pilot hole in the rear of the cowling. Check that the turbo starter exhaust connection

Introduction

1. A method of pictorial indexing is employed in this chapter to locate and categorize damage and to illustrate repair schemes by step-to-step progression from the main component key diagram, through detailed structural illustrations and negligible damage charts, to repair schemes designed for particular structural items. Figure 1 - Keydiagram, illustrates the cowling assembly and gives the figure numbers of the individual cowling structure illustrations. The structure illustrations simplify the identification of structural items and, in the key, give details of these items together with negligible damage definitions and repair figure numbers.

...

Front cowling and service panel

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structure

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Fitting a new front cowling

2. When fitting a new engine air intake front cowling a new service panel must also be fitted.

Front cowling

Fig.

1

2

3

5

...

. . .

(1) Remove the engine service panel, front, and upper rear cowling as detailed in A.P.4326, Vol.1, Sect.4, Chap.1.

(2) Remove and retain any items from the unserviceable cowling which are required for refitment to the new cowling.

(3) Remove the cowling support hoop and the flame-proof bulkhead panels above the engine.

Key diagram

edge

will align with the turbo starter exhaust pipe.

(8) Using a cramp on the highest point of the rear support hoop and on the rear frame of the cowling, draw it down into position.

(9) Mark off the cut line on the cowling port and starboard edges by marking back 1 in. from the reference line.

(10) Remove the cowling and trim it to the cut line. Offer up the cowling to seat on the wing leading edge attachment angle, press it back on to the engine and clamp it to the support hoop.

(11) Open up the 1/8 in. dia. pilot hole at the centre of the cowling rear edge to $\frac{1}{4}$ in. dia. and fit a $\frac{1}{4}$ in. dia. service bolt.

(12) Using clamps, progressively pull the cowling down on to the support hoop. If fouling at the trimmed edge occurs, remove the cowling and trim as necessary, and continue this method until the cowling is correctly seated.

(13) Ensure that the forward pilot hole in each cowling attachment flange coincides with the relevant attachment hole in the leading edge of the wing and open up both of them to a ¼ in. dia. Slacken the service bolt securing the cowling to the support hoop and fit two bolts in the enlarged holes.

(14) Slacken off the bolts at the cowling support hoop and tighten the bolts at the cowling attachment flanges. This will seat the cowling at the wing leading edge attachment points.

(15) Retighten the clamps at the cowling rear support hoop to reseat the cowling on the hoop. Open up the alternate pilot holes in the cowling at the support hoop to $\frac{1}{4}$ in. dia. and fit $\frac{1}{4}$ in. dia. service bolts.

(16) Remove the clamps and drill the remaining holes in the rear of the cowling to 9.80 mm. Countersink these holes and fit the cowling securing bolts. Remove the ¼ in. dia. service bolts, enlarge the holes to 0.3860 in. dia., countersink them and fit the remainder of the securing bolts at the support hoop position.

(17) Without the use of clamps proceed as in paragraphs (15) and (16) for the attachment holes in the front cowling wing contour attachment flange.

(18) Offer up the upper rear cowling and from it mark a cut line on the rear of the front cowling.

(19) Remove the front and upper rear cowlings and trim the rear of the front cowling to the cut line.

(20) Refit the flame-proof bulkhead panels, the front cowling, the upper rear cowling, and the turbo starter exhaust connection. Check that there is an even gap of 0.030 in. at the front cowling edges.

Note...

It is permissible to use Langite packing, to a maximum thickness of 0.200 in., beneath the tubular section rubber seal to effect good contact between the engine cowling nose ring seal and the engine compressor casing metal seal.

Service panel

(21) Fit the bottom rear cowling and mark off a reference line 1 in. from the skin edge around the service panel aperture.

(22) Offer up the service panel so that

the toggle fasteners hold the panel firmly in position without distortion.

(23) Note the best position of the panel to suit the general contour and mark a cut line 1 in. from the reference line. Remove the service panel and trim to the cut line.

(24) Refit the service panel and adjust the toggle fastener rods to ensure a good fit.

(25) Check that there is an even gap of 0.030 in. maximum and ensure that all toggle rods snap back firmly.

Cracked jet pipe cone

3. Cracking of the front inner cone of the jet pipe cowling (fig.5, item 5) may occur quite early in the life of the aircraft. This failure has no adverse effect, either structurally, or on performance. The cracks are to be repaired by stainless steel welding. Dents are to be left.

Fitting a new lower rear engine cowling 4.

(1) Remove the cowling (A.P.4326, Vol.1, Sect.4, Chap.1).

(2) Transfer from the unserviceable cowling any items which are required for the new one.

(3) Mark on the engine nacelle skins around the cowling aperture a reference line parallel with, and one inch from, the edge of each skin.

(4) Offer up the cowling and centralize it in relation to the engine nacelle general contour and cowling aperture. Ensure that the centre attachment pilot hole on the cowling rear edge coincides with the centre attachment hole in the engine nacelle cowling attachment hoop. Fasten the toggle fasteners to hold the cowling firmly in position without distortion.

(5) Clamp the cowling in close contact with the engine nacelle cowling attachment hoop.

(6) Mark a cut line on the cowling skin edges one inch from the reference line previously marked.

(7) Remove the cowling and trim its edges to the cut line. Re-offer up the cowling and reclamp it to the engine nacelle cowling attachment hoop.

(8) With a No.11 drill (4.850 mm) enlarge the 1/8 in.dia. pilot hole at the centre of the cowling rear edge to 4.850 mm dia. and fit **a** 2 B.A. service bolt. (9) Progressively pull the cowling into close contact with the attachment hoop by means of the clamp.

Note...

- 1. If the trimmed edges foul, remove the cowling and trim it as necessary. Repeat this procedure until the cowling is correctly seated.
- 2. Ensure that the inboard end of intermediate frame 3A of the cowling has a clearance of 0.100 in. between itself and the forward pivot lug on the main undercarriage pivot bracket.

(10) Fasten the DZUS fasteners, and adjust the cowling toggle fastener rods to ensure a good fit.

(11) Drill alternate 4.850 mm dia. (Drill No.11) pilot holes in the cowling at the engine nacelle attachment hoop and fit 2 B.A. service bolts.

(12) Remove the clamps and complete the drilling of the holes 4.850 mm dia. (Drill No.11). Countersink all holes to suit the cowling securing bolt heads. Fit 2 B.A. cowling securing bolts at these positions.

(13) Remove the service bolts from the rear cowling hoop position and countersink the holes to suit the cowling securing bolt heads. Fit 2 B.A. cowling securing bolts.

Front cowling, loose rivets

5. Renewal of loose rivets in the air intake front spinning, or in any area of the engine air intake where there is a possibility of rivet shanks or swarf. being ingested by the engine, must not be attempted.



Fig.1 Key diagram





Fig. 2. Front cowling and service panel structure

						'	Negligib	le damage				
	Mater	rial		·	D	ents	See	tchee	H	oles		
Item	Spec.	\$.W.G.	Part No.	Description	Max, depth	Min. dia.	Depth	Spacing	Max. dia.	Pitch ratio	ch io Repairable damage	Repair fig. No.
FRONT	COWLING											
1	DTD213	18	F A1 50 843	Airintaka	Eas day	alla of an	-listhin and				(To be added later)	1.00
21		(20	E A1.50 1565	Frame 1	0.05	1.00	a ons	1.00	damage	refer to fig.	. 5	/
3		22	E.A1.50.1231	Intermediate frame 1A	0.05	1.00	0.005	1.00	0.00	45.4		•
4		22	F A1 50 1233	Intermediate frame 1B	0.05	1.00	0.005	1.00	0.20	15:1		8
5		14	E.A1 50.257 (port)	Intermediate frame TD	0.03	1.00	0.003	1.00	0.20	15:1		8
			E A1 50 258 (starb.)									
÷		()	(F.F. 1 147)	Support boon frame 2	0.05	1.50	0.010	2.00	0 125	22.4		
6		14	F A1 50 1273	Capping strip	0.05	1.50	0.010	3.00	0 125	32:1		10
7		22	E A1 50 259 (port)	Capping scrip	0.03	1.30	0.010	3.00	0.172	32:1		10
			E A1 50 260 (starb)	Intermediate frame 74	0.05	1.00	0.005	1.00	0 00	45.4		0
8	DTD 610	1 22	F A1 50 261 (port)	intermediate mane 27	0 05	1 00	0.000	1.00	0.70	12:1		8
~ >	10.1.0.010	3	E A1 50 262 (starb.)	Intermediate frame 2B	0.05	1 00	0.005	1.00	0.70	15.1		0
9		116	E A1 50 263 (port)	intermediate in ante 20	0 03	1 00	0 005	1.00	0.10	15:1		0
		1.0	E A1 50 264 (starb.)									
			(F F I 264)	Alt seating stiffener	0.04	1.00	0 010	1 00	0.135	24.4		9
10		22	F A1 50 1265 (port)	Alt seating schener	0.04	1.00	0 010		0.123	27.1		,
			F A1 50 1267 (starb.)	Butt atran	0.05	1.00	0.005	1.00				17
11		18	F A1 50 1243 (port)	butt strap	0 03	1.00	0.003	1 00				14
			F A1 50 1245 (starb)	Chappel-section stiffener	0.05	1.00	0.010	1 00	0 175	22.4		17
12		20	F A1 50 1249	Stringer	0.05	0.75	0.005	1 00	0.125	14 1		12
13		22	F A1 50 889	Diaphraem	0.04	0.75	0.005	1 00	0 125	20.1		13
					0.01	0 / 0	0 005	1 00	0 10	20.1		
SERVICE	PANEL											
1)		(16	E.A1.50.1571 (port)									
			E.A1.50.1573 (starb.)	Front seating stiffener	0.05	1 00	0 010	1.00	0.125	24:1		
2		18	E.A1.50.293 (port)			1.000	10 C.4.C.4	0.000-000	10100			
			E.A1.50.294 (starb.)									
			(E.E.J.150)	Frame 2A	0 10	1 00	0.010	1.00	0.20	15:1		
3	D.T.D.610	1 22	E.A1.50.1019 (port)									
1		5	E.A1.50.417 (starb.)									
		1	(E.E.J.150)	Frame 2B	0-10	1 00	0 005	1.00	0.20	15:1		
4		18	E.A1.50,297 (port)									
			E.A1.50.298 (starb.)									
		1	(E.E.J.233)	Frame 2C	0.10	1.00	0.010	1.00	0.20	15:1		
5)		20	E.A1.50.1157 (port)	Second and the second second		10000000	St. 200	2007-222	00000000	0.00		
-			E.A1.50.1158 (starb.)	Stringer	0-10	1.00	0.010	1.00	0.125	16.1		

KEY TO FIG. 2 (FRONT COWLING AND SERVICE PANEL STRUCTURE)

Note .- All dimensions are in inches.



							Negligib	le damage				
	Mate	rial			D	ents	Ser	tchas	н	oles		
			-		Max.	Min.	Scra	tches	Max.	Pitch		
tem	Spec.	S.W.G.	Part No.	Description	depth dia.	dia.	Depth	Spacing	dia.	ratio	Repairable damage	Repair fig. No.
1)			(E.A1.20.10319	Frame 1	0.04	1.00	0.005	1.00	0.20	20.1	(To be added here)	
2			E.A1.20.10321	Frame 2	0.05	0.75	0.010	1.00	0.20	15:1	(To be added later)	16
3 }	D.T.D.610	20	E.A1.20.10323	Frame 3	0.02	0.75	0.010	1.00	0-20	15:1		16
31		18	E A1 20 10337	Frame 4 segment	0.05	0.75	0.010	1.00	0.20	15:1		1/51
6	DTD 171	24	E A1 20 8261	Cone	Eas day	1.00	0.005	1.00	0.125	32:1		
7	D.T.D.610	22	E.A1.20.10349	Colle	FOT Get	ans or neg	singiole and	repairable	damage i	eter to fig.	5	
			(E.E.J.142)	Stringer	0.10	1.00	0.010	1.00	0.125	16.1		
8	D.T.D.213	20	E.A1.20.10335	Side panel	For det	ails of nes	ligible and	renairable	damage :	eler to fir	5	
9	D.T.D.124	22	E.A1.20.1193	Reinforcing cowl	0.03	0.75	0.005	2.00	annage I		-	

Note.-All dimensions are in inches.

Fig 3. Jet pipe cowling structure

UPPER REAR COWLING



Fig. 4 Upper and lower rear cowling structure

								Negligib	le damage				
2	Mater	ial				D	ents	- See		H	oles	a sea a sea a	
ltem	Spec.	S.W.G.	Part No.	Description		Max. depth	Min. dia.	Depth	Spacing	Max. dia.	Pitch ratio	Repairable damage	Repair fig. No.
UPPER	REAR COWLI	NG											
1]		(16	E.A1.50.1293									····	
2		22	(E.E.J.268) F A1 50 785 (port)	Front seating stiffener		0.04	1-00	0.010	1.00	0.125	32:1	(To be added later)	
3		22	E.A1.50.786 (starb.) E.A1.50.755 (port) E.A1.50.755 (port)	Frame 1		0.10	1.00	0.010	1.00	0.20	15:1		15
4		16	(E.E.J.71) E.A1.50.205 (port)	Frame 1A		0-10	1.00	0.005	1.00	0-125	16:1		14
5 }	D.T.D.610	22	(E.E.J.70) E.A1.50.211	Frame 2		0.10	1.00	0.010	1.00	0.20	15:1	· · · · ·	
6		16	(E.E.J.71) E A1 50 203	Frame 2A		0.10	1.00	0.005	1.00	Q-125	16:1		14
7		122	(E.E.J.70)	Frame 3		0-10	1.00	0.010	1.00	0.20	15:1		15
		122	(E.E.J.71)	Frame 3A		0-10	1.00	0.005	1.00	0.125	16.1		14
в		16		Frame 4	÷.	0.10	1.00	0.010	1.00	0.20	15.4		14
9		16	E.A1.50.769 (port) E.A1.50.770 (starb.)	Rear seating stiffener		0.04	1.00	0.010	1.00	0.125	32:1		15
,		["	(E.E.J.71)	Stringer		0.10	1.00	0 005	1.00	0.125	16:1		14
1)	C REAR COWL	ING	E A 1 50 037										
2		22	(E.E.J.72) E.A1.50.787 (port)	Front seating stiffener		0.04	1 00	0 010	1 00	0-125	24:1		
3		22	E.A1.50.788 (starb.) E.A1.50.763 (port) E.A1.50.764 (starb.)	Frame 1		0 10	1.00	0.005	1.00	0.20	15:1		15
4		16	(E.E.J.71) E.A1.50.231 (port)	Frame 1A		0 · 10	1 00	0.005	1.00	0·125	16:1		14
5		22	(E.E.J.70) E.A1.50.237 (port)	Frame 2		0-10	1.00	0 010	1.00	0 · 20	15:1		15
ſ	D.1.D.610	1	E.A1.50.238 (starb.) (E.E.J.71)	Frame 2A		0.10	1.00	0.005	1.00	0.125	16.1		
6		16	E.A1.50.229 (port) E.A1.50.230 (starb.)							0 115	10.1		
7		16	E.A1.50.235 (port) E.A1.50.236 (starb.)	Frame 3		0.10	1.00	0.010	1.00	0-20	15:1		15
8		22	(E.E.J.237) E.A1.50.1647 (port) E.A1.50.1648 (ctock)	Frame 3A		0.05	1.00	0.005	1.00	0·125	24:1		
9)		22	(E.E.J.73) E.A1.50.793 (port)	Rear seating stiffener		0.05	1.00	0.005	1.00	0.125	24:1		
		l	E.A1.50.794 (starb.) (E.E.J.71)	Stringer	÷.	0.10	1.00	0.005	1.00	0-125	16:1		14

KEY TO FIG. 4 (UPPER AND LOWER REAR COWLING STRUCTURE)

Note .- All dimensions are in inches.



						1	legligible	damage				
	Marar	ial.			Scratches			Dents				
Item Spec.	Spec.	S.W.G.	Part No.	Description	Depth	Min. spacing	Max. depth	Max. width	Min. width	Min. spacing	Repairable damage	Repair fig. No.
12)	D.T.D.213	18	€.A1.50.843 (E.A1.50.1261 (port)	Air-intake skin	0·005	3	0.05	4	1.00	6W	Holes. Oil canning effect.	7
3	D.T.D.610	22	E.A1.50.1262 (starb) E.A1.50.425 (port) E.A1.50.426 (starb.)	Front cowling upper panel Upper rear cowling panel	0.003	2	0.03	4	0.50	4₩	Panting and damage in excess of negligible.	6
1)	(D.T.D.171)	24	E.A1.20.10329	Rear inner cone	1 0 000	2	0.005		0.50			
3	DTD 571	29	E.A1 20 8261C	Front inner cone	1 0 002	1	0.012	3	0.20	1 11		
6	D.T.D.610	22	E.A1.20.10331	Jet-cipe cowhar lower panel	0 003	2	0 03	4	0.50	4W		
7 8]	D.T.D.213	20	E.A1.20.10335 (E.A1.50.427 (port)	Side panel	0 004	Ĵ	0 04	4	0.70	6W		4 6
9}	D.T.D 610	22	E.A1.50.128 (starb.) E.A1.50.1163 (port)	Lower rear cowling panel	0.003	2	0.03	4	0.50	41		6 🕨
10			E.A1.50.1263 (port)	Front conding cover strai								

Notes which nensions given for negligible damage are in inches. W, in min. specing column= the least dimension of the damage,

Fig. 5. Engine cowling skinning



A.P.4326, Vol. 6, Part 1, Chap. 6 (AL.27) 1 BUTT-STRAP, 18 S.W.G., D.T.D.610 4 OFF 2 INSERTION PATCH, 22 S.W.G., D.T.D.610 1 OFF 3 RIVETS, A52230/403 AS REQUIRED 4 RIVETS, A52230/303 AS REQUIRED





Fig. 8. Insertion repair to intermediate frames IA, IB, 2A and 2B-front cowling



Fig. 10. Insertion repair to ring capping strip-front cowling

CUT-LINE ----

-

SECTION INSERTION LENGTH



Fig. 11. Insertion repair to support hoop, frame 2, lower half



Fig. 12. Insertion repair to skin joint butt-strap and channel-section stringer-front cowling









THIS REPAIR IS NOT APPLICABLE TO FRAME 2, UPPER COWLING

This leaf issued with A.L. No. 9 , Dec. 1952

A.P.4326, Vol. 6, Part 1, Chap. 6

	, ALL DIM	ENSIONS ARE IN INCHES	I REF
	300.30		3 DC 4 PA
		- 	S RIV 6 RIV
*		3	- PICK UP
			ITE PL TC
			SEC SEC OF
2 STRINGER		1 0.500	
	CUT LINE SECTION INSERTION LENGTH Eig 16 Incertion rel	section A-A	oine cowline

I REPAIR ANGLE, 20 S.W.G., D.T.D.610	2 OFF
2 BUTT STRAP, 18 S.W.G., D.T.D.610	2 OFF
3 DOUBLING PLATE, 22 S.W.G., D.T.D.610	2 OFF
4 PACKING PIECE, 20 S.W.G., D.T.D.610	2 OFF
5 RIVETS, AS2230/404	32 OFF
6 RIVETS, AS2227/404	32 OFF

EXISTING RIVET HOLES

EM 3 TO BE COPIED FROM THE REDUNDANT DOUBLING ATE BUT WITH 0.50 FLANGE AS SHOWN, AND CURVED D SUIT FRAME

CTION REPLACEMENT TO BE MADE FROM APPROPRIATE CTION, CUT TO LENGTH AND MADE ON EITHER SIDE SECTION CUT-LINE

to. Insertion repair to trames 1, 2 and 3-jet pipe cowling FIg.

APPENDIX I

ENGINE NACELLE - AVON Mk. 109

Appendix I

ENGINE NACELLE - Avon Mk.109

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Introduction

1. This appendix illustrates the engine nacelle of aircraft fitted with Avon Mk.109 engines in the same manner as the main chapter illustrates the nacelles of aircraft fitted with Avon Mk.1 engines. Information which is common to both types of nacelle, being already given in the main chapter, is not repeated here.

2. The figure numbers of all illustrations and repair schemes in this appendix range from 601 upwards to distinguish them from similar illustrations and repair schemes peculiar to other types of nacelle.

Fitting a new air intake assembly to an engine front cowling assembly

3. When necessary a new air intake assembly Part No.EA3.00.957 (port) or EA3.00.963 (starboard) may be fitted to an engine front cowling assembly, Part No.EA6.50.493 (port) or EA6.50.495 (starboard) by the following procedure:-

(1) Place the engine front cowling nose downwards on a flat surface.

(2) Working within the engine front cowling measure the distance between the forward face of Frame 2 and the aft face of Frame 1 taking the measurements from points mid-way between stringers at eight positions. To ensure accurate

RESTRICTED

repeat measurements, mark the positions on Frame 2 from which the measurements have been made. Record the measurements for subsequent comparison.

Note...

Ensure that the measurements are made parallel to the longitudinal axis of the engine front cowling.

(3) Carefully drill out the rivets securing the air intake attachment cleats to the sides of each stringer.

(4) Carefully drill out the rivets securing the engine front cowling skin to the skin attachment flange of Frame 1 of the air intake.

(5) Place the engine front cowling assembly on a suitable horizontal stand to facilitate subsequent operations.

(6) Remove the unserviceable air intake assembly, Part No.EA1.50.557 (port) or EA1.50.861 (starboard).

(7) Obtain a new spare air intake Part No.EA3.00.957 (port) Ref.26FZ/38671 or Part No.EA3.00.963 (starboard) Ref. 26FZ/38672. Clean and degrease.

Note...

The new spare air intake is supplied undrilled in the attachment areas. A trim allowance of 0.100 in. is provided on the abutting edge of the air intake outer skin edge. The cleat-tostringer attachment lugs are pilot drilled.

(8) Temporarily fit the new air intake and push fully home onto the engine front cowling.

(9) Repeat the procedure of operation (2) and obtain a second set of measurements.

(10) Assess the amount to be trimmed from the air intake edges by comparison of the measurements obtained at operations (2) and (9).

Note...

1. Allowance must be made for the provision of a 0.030 in. max. gap at

the joint line between the air intake outer skin and the front engine cowling.

2. Any uneveness of the measurements obtained may indicate that the air intake has not been pushed fully home.

(11) Remove the air intake and trim as necessary until the measurements recorded at operation (2) are obtained.

(12) Refit the air intake and push fully home. Check that a gap exists at the joint line between the air intake outer skin and the front engine cowling outer skin. The gap must not exceed 0.030 in. max.



Fig. 601. Key diagram

F.S./2

RESTRICTED

A.P.101B-0400-6, Part 1, Chap.6, App.1 A.L.116, Oct.74

(13) Drill the lug of each attachmentto-stringer cleat with two 0.125 in. dia. holes to mate with the existing holes in the stringer.

(14) Drill the air intake Frame 1 skin attachment flange with 0.125 in. dia. holes to mate with the holes in the engine front cowling skin.

(15) Remove the air intake assembly and remove all swarf and burrs. Very care-

fully examine the air intake assembly for any residual debris.

(16) Treat all dressed edges with selfetch primer.

(17) Apply Celloseel QH to the engaging surfaces of the air intake and the engine front cowling. Finally fit the air intake and push fully home.

(18) Secure the engine air intake with rivets, Part No.AGS.2051/429 at the cleat-to-stringer positions and rivets

Part No.AS.2230/404 at the Frame 1 flange to engine front cowling skin positions.

Note...

Distorted rivet holes may be enlarged to 5/32 in. dia. and the appropriate oversize rivet fitted.

(19) After completion of the work alter the existing Part No. on the engine air intake to read EA1.50.557 (port) or EA1.50.861 (starboard).

KEY TO FIG.602 (FRONT COWLING AND SERVICE PANEL STRUCTURE)

					Negligible Damage						
					De n	ts	Ser	atches	Hol	es	
	Mater	ial			Max.	Min.			Max.	Pitch	
Item	Spec.	S.W.G.	Part No.	Description	Depth	dia.	Depth	Spacing	dia.	ratio	
FRONT C	OWLING										
1	L.59	18	EA6.50.559	Assembly, spinning outer	0.05	0.75	0.005	1.00	0.125	16:1	
2	L.59	20	EA6.50.561	Assembly, spinning inner	0.04	0.75	0.005	3.00	-	-	
3	L.72	20	EA6.50.783	Skin, top	0.04	0.75	0.004	2.00	-	-	
4	L.72	16	EA6.50.959	Plate, reinforcing	0.04	1.00	0.010	1.00	0.125	24:1	
5	L.73	12	EA6.50.801	Plate, capping	0.05	2.00	0.010	3.00	0.125	32:1	
6	L.72	16	EA6.50.969	Plate doubling, external	0.04	1.00	0.010	1.00	0.125	24:1	
7	L.72	20	EA6.50.719	Plate, doubling	0.04	1.00	0.005	2.00	0.125	32:1	
8	L.72	18	EA6.50.707	Frame, No.1A	0.05	1.00	0.005	1.00	0.200	20:1	
9	L.59	18	EA6.50.897	Throat, duct	0.05	0.75	0.005	1.00	—	-	
10	L.72	12	EA6.50.645	Frame No.2	0.05	1.00	0.005	1.00	0.200	20:1	
11	L.72	20	EA6.50.727	Stringer No.8, rear	0.05	0.75	0.005	1.00	0.125	16:1	
12	L.59	18	EA6.50.897	Body, duct	0.05	0.75	0.005	1.00	-	-	
13	L.72	20	EA6.50.743	Frame No. 2A	0.05	0.75	0.005	1.00	-		
14	L.72	16	EA6.50.723	Plate, doubling	0.04	1.00	0.010	1.00	0.125	20:1	
15	L.72	16	EA6.50.807	Stiffener, at frame 8	0.10	1.00	0.010	1.00	0.125	24:1	
16	L. 73	18	EA6.50.735	Door, access	0.05	0.75	0.010	1.50	0.125	4:1	
17	L.72	20	EA6.50.747	Piece, end	0.02	0.50	0.020	0.50	0.125	-	
18	L. 72	16	EA6.50.134	Stiffener, edge	0.05	1.00	0.010	1.00	0'.100	24:1	
19	L 72	16	EA6.50.623	Stringer, No.2 forward	0.15	0.75	0.010	1.00	0.125	10:1	
20	L.72	20	EA6.50.795	Buttstrap	0.10	1.00	0.010	1.50	0.25	10:1	
21	L 72	20	EA6.50.799	Plate, doubling	0.02	1.00	0.010	1.00	0.20	4:1	
21	L 72	20	EA6.50.785	Skin, bottom	0.04	0.70	0.005	2.00		-	
23	L.72	20	EA6.50.523	Land, exhaust	0.020	0.50	0.010	1.00	-	-	
SERVICE	PANEL										
1	1 50	1.0	FAG 50 59	Member frame 2A	0.10	1.00	0.005	1.00	0.157	20:3	
1	L.72	10	EAG 50.00	Aft stiffener frame 2A	0.10	1.00	0.005	1.00	0.157	25:	
2	L.72	20	EAG. 50. 55	Stiffener forward	0.10	1.00	0,005	1.00	0.157	25:	
3	L.72	20	EA0. 30. 71	Stiffener oft	0.10	1.00	0,005	1.00	0.157	20:	
4	L.72	18	EAC. 50. 59	Stringer	0.05	0.75	0.005	1.00	0.125	16:	
5	L.72	20	EA0. 50. 03	Ventilation duct	0.04	0.75	0.004	3.00		-	
6	D.T.D.213	20	EA0. 50.283		0.01	-	-	-	120		
7	L.59	16	EA9.50.39A	Dase place	0.00						

Note...

All dimensions are in inches. Skin dents must not exceed 4 inches in dia. and must be separated by not less than 5 times the least dimension of damage.

.



1



FIG. 603. UPPER AND LOWER REAR COWLING STUCTURE

							Negligi	ble Damage		
	Mate	erial			Dent	s	Scra	tches	Но1	es
ltem	spec.	S.W.G.	Part No.	Description	Max. Depth	Min. Dia.	Depth	Spacing	Max. Dia.	Pitch Ratio
UPPER	REAR COWLI	NG		· · · ·						
1	L.72	22	E.A6.50.475 (port) E.A6.50.476 (starb.) (FEJ.70)	Frame 1	0, 10	1.0	0.010	1.0	0 200	
2	L.72	22	E.A6.50.473 (port) E.A6.50.474 (starb.)				0.010	1.0	0.200	15.1
3	L. 72	22	(EEJ.71) E.A6.50.471 (port)	Frame 1A	0.10	1.0	0.005	1.0	0.125	16:1
			E.A6.50.472 (starb.)	cowl skin	0.03	0.5	0.003	2.0	-	-
4	L.59	-	E. B6. 50. 95	Spar cooling intake assembly	-	-	-	-	-	-
LOWER	REAR COWLI	IG								
1	L.59	20	E.B6.50.55 (port) E.B6.50.56 (starb.)	Pipe	0,04	0.7	0.005	1.5		
2	L.72	20	E.B6.50.33 (port)				0.005	1.5		
3	L.72	20	E.B6.50.34 (starb.) E.B6.50.35 (port)	rop plate	0.05	1.0	0.005	2.0	-	-
4	L. 72	22	E.B6.50.36 (starb.) E.A6.50.491 (port) E.A6.50.492 (starb.)	End plate	0.05	1.0	0.005	2.0		-
			(EEJ. 191)	stringer	0.10	1.0	.0.005	1.0	0.200	15:1
5	L.72	22	E. A6. 50. 485 (port)	cowl skip	0.02	0.5	0.000			
6	L.72	22	E. A6.50.489 (port) E. A6.50.490 (starb.)		0.03	0.5	0.003	2.0	-	-
7	L.72	22	(EEJ.71) E.A6.50.487 (port) E.A6.50.488 (starb.)	Intermediate frame 1A	0.10	1.0	0.005	1.0	0.125	16:1
			(EEJ.70)	Frame 1	0.10	1.0	0.005	1.0	0.200	15:1

KEY TO FIG. 603 (UPPER AND LOWER REAR COWLING STRUCTURE)

Note: - All dimensions are in inches. Skin dents must not exceed 4 inches in dia. and must be separated by not less than 5 times the least dimension of damage.



APPENDIX 2

ENGINE NACELLE - AVON MK. 206

Appendix 2 ENGINE NACELLE - AVON MK.206

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Introduction

1. A method of pictorial indexing is employed in this chapter to simplify the identification of structural items, and in the key, give details of these items together with negligible damage definitions, repair figure numbers and repair recommendations.

2. The figure numbers of all illustrations and repair schemes in this appendix range from 901 upwards to distinguish them from similar illustrations and repair schemes peculiar to other nacelles on other makes of aircraft. The negligible damage key to each of the figures 902 to 905 inclusive contains a column headed 'Repair Fig.No.' The figure numbers quoted are those from the basic chapter which caters for repair to Avon Mk.1 Engine Nacelle. The information is applicable in principal to the Avon Mk.206 Engine Nacelle and is given as a broad guide line. If any doubt exists as to the applicability of an Avon Mk.1 Engine Nacelle repair to an Avon Mk.206 Engine Nacelle reference must be made to the Contractor.

Deletion of air intake securing cleats from frame 1 of the engine cowl (fig.906)

3. Whenever an engine cowl assembly air intake assembly is replaced, the cleats securing frame 1 to the stringers at the positions indicated in the illustration must be removed by carefully drilling out the securing rivets and filling the redundant rivet holes with

RESTRICTED

Tucker 'Imex' rivets Part No.AD42 (2 off) and AD54 (53 off).

Note...

The removal of cleats from the air intake assembly prior to fitting must be carried out with the greatest care to avoid debris entering the space between the inner and outer spinnings of the assembly.

Fitting a new air intake assembly to an engine front cowl assembly

4. A new air intake assembly, Part No. EB8.50.467/8, must be fitted to an engine front cowl assembly by the following procedure:-

(1) Place the engine front cowl assembly nose downwards on a flat surface.

(2) Working within the front cowl assembly, measure the distance between the aft face of frame 1 and the forward face of frame 1A at eight positions midway between stringers and record the measurements.

Note...

The positions from which the measurements are made on frame 1A must be marked to ensure that measurements in a subsequent operation are accurately repeated.

(3) Drill out all the rivets securing frame 1 attachment cleats to the front cowl stringers.

(4) Very carefully drill out therivets securing frame 1 skin flange to the front cowl skin and stringers.

(5) Place the engine front cowl assembly in a horizontal position on a stand, to facilitate access for subsequent operations.

(6) Remove the unserviceable air intake assembly, Part No.EB8.50.155, from the engine front cowl assembly, Part No. EB8.50.5/7.

Note...

The frame 1-to-stringer attachment cleats remain attached to the air intake assembly as they are not required for re-assembly.

(7) Clean the new air intake assembly Part No.EB8, 50.467/8.

Note...

The air intake assembly is supplied as a spare Ref.No.26FZ/13708, with a 0.100 in. trim allowance, undrilled in attachment areas, and with the frame 1-to-stringer attachment cleats riveted in position.

(8) Before fitting the new air intake assembly carefully drill out the rivets securing the frame 1-to-stringer attachment cleats. Remove and discard the attachment cleats.

(9) Remove any swarf or debris from the air intake assembly.

(10) Fill the redundant cleat attachment rivet holes using Imex 'pop' rivets: -

Two 1/8 in. dia. AD42 at stringer H cleat position and 5/32 in. dia. AD54 at all other stringer positions.

(11) Temporarily fit the air intake assembly to the engine front cowl assembly and push fully home.

(12) Repeat operation (2) compare the measurements now obtained with the first measurements obtained at operation (2) and from this comparison assess the amount to be trimmed from the new air intake assembly and mark the cut-line.

Note...

Any uneven measurements may indicate that the air intake has not been pushed fully home on one side or the other.

(13) Remove the engine air intake assembly and trim as necessary, repeating the trial fitting and trimming until the dimensions obtained in operation (2) are achieved.

(14) With the air intake assembly in the correct position drill the new frame 1 flange to mate with the existing rivet holes in the engine front cowl.

Note...

The standard rivet is 1/8 in., but if the original hole sizes in a few places have elongated it is permissible to fit 5/32 in. oversize rivets.

(15) Remove the engine air intake assembly and remove all swarf and burrs.

(16) Treat all dressed edges with selfetch primer.

(17) Apply Celloseel QH to the flange edge of frame 1 and finally assemble the air intake assembly to the engine front cowl, pushing well home until the securing rivet holes are aligned.

(18) Secure the engine air intake assembly to the engine front cowl assembly using rivets A.S. 2230/405 or 404 as necessary.

CAUTION

If an engine front cowl assembly is to be immediately fitted on to the aircraft from which it was removed ensure that the flexible tubular seal on frame 1 makes full contact with the metal seal surface on the engine compression casing, Chap.6, para.2, subpara. (20) Note, refers.

Note...

The air intake assembly, Part No. EB8.50.467/8, must be renumbered as EB8.50.155, after completion of fitting to the engine front cowl assembly.

A.P.101B-0400-6, Part I, Chap.6, App.2 A.L.111, Dec.73



FIG.901 KEY DIAGRAM



FIG . 902 ENGINE COWLING SKINNING

RESTRICTED

KEY TO FIG.902 (ENGINE COWLING SKINNING)

						N	egligibl	e damage				
			Mater	ial	De	nts	Ser	atches	Ho	les		
Item	Description	Part No.	Spec.	S.₩.G.	Max. Depth	Min. Dia.	Depth	Spacing	Max. Dia.	Pitch Ratio	Repairable Damage	Repair Fig.No.
1	Spinning outer, air intake	EB8.50.179	L.59	18	0.05	1.00	0.005	3,00		-	Dents, cracks and holes in excess of negligible	Chapter 6, 7
2	Skin, upper, front cowl	EB8,50,1113	L.72	20	0.04	0.75	0.004	2.00		-]		
3	Skin, upper, rear cowl	EB8.50.1617	L.72	20	0.05	0.80	0.006	2.00				
4	Skin, top	EB8.50.1407	L.72	22	0.03	0.50	0.003	2.00	-	-		
5	Skin, wing stub	EB8.50.1243D	D.T.D.171	24	0.02	0.60	0.002	2.00	-	-	Holes, dents and	
6	Skin, outer cone	EB8,50,1243A	D.T.D.171	24	0.05	0.70	0.004	2.00			_cracks lose rivets	- Chapter 6, 0
7	Skin, bottom	EB8,50,1409	L.72	22	0.03	0.50	0.003	2.00		-	skin painting	
8	Skin, lower, rear cowl	EB8,50,1201	L.72	20	0.05	0.80	0.006	2.00	-	-		
9	Skin, service panel	EB8,50,953	L.72	20	0.05	0.80	0.006	2.00	14			
10	Skin, lower, front cowl	EB8.50.1115	L.72	20	0.05	0.80	0.006	2.00				

Note...

All dimensions are in inches



FIG. 903. FRONT COWLING AND SERVICE-PANEL STRUCTURE

KEY TO FIG.903 (FRONT COWLING AND SERVICE - PANEL STRUCTURE)

							Neglig	ible Dama	ge			
			Mater	i a l	Der	its	Ser	at.ches	Ho	les		
Item	Description	Part No.	Spec.	S.W.G.	Max. Depth	Min. Dia.	Depth	Spacing	Max. Dia.	Pitch Ratio	Repairable Damage	Repair Fig.No.
1	Stringer R	EB8.50.887	E.E.J.336	18	0.06	0.75	0.006	0.125	0.130	15:1	Dents, holes and cracks in excess	Chapter 6, 19 use E.E.J.336
2	Land door access	EB8,50.1521	L.72	18	0.02	0.80	-	-	0.100	20:1	of negligible	18 s.w.g.
3	Stringer, A and B	EB8.50.829	E.E.J.336	18	0.06	0.75	0.006	0.125	0.130	15:1	Refer to item 1	Refer to item 1
4	Skin inboard edge	EB8.50.301	L.72	20	0.04	0.75	0.005	2.00	2	-	Dents, holes and cracks in excess of negligible	Chapter 6, 6
5	Member edge, inboard	EB8.50.253	E.E.J.297	16	0.05	1.00	0.010	1.00	0.125	24:1	Refer to item 1	Chapter 6, 9 use EEJ297, 16 s.w.g.
6	Stringer C	EB8,50,831	E.E.J.336	18	0.06	0.75	0.006	0.125	0.130	15:1	Refer to item 1	Refer to item 1
7	Stringer, F and K	EB8.50.907	E.E.J.336	18	0.06	0.75	0.006	0,125			Refer to item 1	Refer to item 1
8	Stringer, D	EB8.50.895	E.E.J.336	18	0.06	0.75	0.006	0.125	0.130	15:1	Refer to item 1	Refer to item 1
9	Skin upper, front cowl	EB8.50.1113	L.72	20	0.04	0.75	0.005	2.00	-	_	Refer to item 4	Refer to item 4
10	Seating, panel	EB8.50.1119	L.72	18	0,02	1.00	0.003	0.150	0.125	30:1	Dents, holes and cracks in excess of negligible	
11	Stringer, E and L	EB8.50.899	E.E.J.336	18	0.06	0.75	0.006	0,125	0.130	15:1	Refer to item 1	Refer to item 1
12	Frame 1A	EB8.50.217	L.72	16	0.10	1.00	0.010	1.00	0.020	16:l	Dents, holes and cracks in excess of negligible	
13	Stringer, R frame 2 to 1B	EB8.50.903	E.E.J.336	18	0.06	0.75	0.006	0.125	0,130	15:1	Refer to item 1	Refer to item 1
14	Doubling, forward channel	EB8,50,787	L.73	14	0.030	1,00	0,008	1.00	-	-	Dents in excess	
15	Doubling, aft channel	EB8.50.797	1.73	14	0.030	1.00	0.008	1.00	-		of negligible	
16	Doubler outer frame 2	EB8.50.803	L.73	14	0.030	1.00	0,008	1.00	-	-	and tears	Renewal
17	Doubler, flanged, inboard	EB8.50.811	L.73	16	0.005	1.00	0.005	3.00	0,125	15:1	_	recommended
18	Stringer, stub C	EB8.50.977	L.72	18	0.06	0.75	0.006	1.125	0.130	15:1	Refer to item 1	Refer to item 1

continued...

KEY TO FIG.903

3 (FRONT COWLING AND SERVICE - PANEL STRUCTURE) - (continued)

					Ν	legligi	ble Dam	age				
			Materia	1	Den	its	Scr	atches	Но	les		
Item	Description	Part No.	Spec.	S.W.G.	Max. Depth	Min. Dia.	Depth	Spacing	Max. Dia.	Pitch Ratio	Repairable Damage	Repair Fig.No.
19	Duct assembly	EB8.50.1569	D.T.D.171	22	0.06	0.80	0.006	1.00	-	-	Dents, holes and cracks in excess of negligible	Renewal recommended
20	Doubler inner, frame 2	EB8.50.821	D.T.D.124	18	0.05	1.00	0.005	0.150	0.30	20:1		
21	Doubler, inner	EB8,50,823	L.73	14	0.03	1.00	0.008	1,125	-	-	200 - A	Refer to items
22	Doubler outer, frame 2	EB8.50.801	D.T.D.124	18	0.05	1.00	0.005	0,150	0.30	20:1	Refer to items 14	-14 to 17,
23	Doubler, top	EB8.50.805	L.73	16	0.005	1.00	0.005	3.00	0.125	15:1	to it, inclusive	inclusive
24	Frame 1B	EB8.50.219	L.72	16	0.10	1.00	0.010	1.00	0.20	15:1	Refer to item 12	
2.5	Stringer 5 and T	EB8.50.833	E.E.J.336	16	0.07	0.70	0.007	1.00	0.125	20:1	Refer to item l	Refer to item 1
26	Stringer V	EB8.50.891	E.E.J.336	16	0.07	0.70	0.007	1.00	0.125	20:1	Refer to item 1	Refer to item 1
27	Plate, doubling	EB8.50.1323	L.72	16	0.050	1.00	0.006	3.00	0.125	20:1	Dents, holes and cracks in excess of negligible	Renewal recommended
28	Plate, slide	EB8.50.1327	L.72	16	-	-	0.006	2.00	-	-	-	Renewal recommended
29	Plate, shim 0.24 thick	EB8,50,1329	-	-	-	-	-	-	-	-	-	1000
3.0	Stringer X	EB8.50.893	E.E.J.336	16	0.07	0.70	0.007	1,00	0.125	20:1	Refer to item 1	Refer to item 1
31	Stringer Y and Z	EB8.50.909	E.E.J.336	16	0.07	0.70	0.007	1.00	0.125	20:1	Refer to item l	Refer to item 1
32	Cleat (typical)	EB8.50.981	D.T.D.683 o E.E.D.X.25	г	-	-	-	-	-	-	Cracks dents and holes	Renew
33	Doubler, outboard	EB8.50.809	L.73	16	0.05	1.00	0.005	3.00	0.125	15:1	Refer to item 14	Refer to item 14
34	Skin, outboard edge	EB8.50.303	L.72	20	0.040	0.75	0.004	2.00	-	-	Refer to item 4	Refer to item 4
35	Member, edge, outboard	EB8,50,819	E.E.J.297	16	0.05	1.00	0.010	1.00	0.125	24:1	Refer to item 5	Refer to item 5
36	Strap reinforcing, frame 2	EB8.50.825	L.73	20	0.05	1,00	0.010	1.50	0.125	32:1	Dents, holes and cracks in excess	Chapter 1, 9

of negligible

continued...

KEY TO FIG.903 (FRONT COWLING AND SERVICE - PANEL STRUCTURE) - (continued)

						- P	legligi	ble Damag	e			
			Mater	ial	De	nts -	Scr	atches	Ho	les		
ltem	Description	Part No.	Spec.	S.W.G.	Max. Depth	Min. Dia.	Depth	Spacing	Max. Dia.	Pitch Ratio	Repairable Damage	Repair Fig.No.
37	Doubler, internal	EB8.50.245	L.73	14	0.030	1.00	0.008	1.00	-	-	Refer to item 14	Refer to item 14
38	Stringer H	EB8.50.911	E.E.J.337	16	0.07	0.70	0.007	1.00	0.125	20:1	Refer to item 1	Refer to item 1
39	Web inboard, frame 2 forward	EB8.50.785	L.73	14	0.040	1.00	0.010	2.00	0.125	32:1	Cracks, dents	Use the
40	Web, inboard aft	EB8.50.791	L.73	14	0.040	1.00	0,010	2.00	0.125	32:1	and holes in	principle of repair shown in
41	Web, outboard forward	EB8.50.781	L.73	14	0.040	1.00	0.010	2.00	0.125	32:1	excess of negligible	Chapter 2, 88,
42	Web, outboard aft	EB8.50.783	L.73	14	0.040	1.00	0.010	2.00	0.125	32:1		s.w.g.14
43	Jointing channel forward	EB8.50.797	L.73	14	0.040	1.125	0.010	1.50	-	-7	Cracks, dents and	1
4.4	Jointing channel frame 2	EB8.50.799	L.73	14	0.040	1.125	0.010	1.50	-	_]	holes in excess of negligible	
45	Member, edge, outboard	EB8.50.431	L.72	16	0.05	1.00	0.010	1.00	0.125	24:1	Refer to item 5	
46	Member, edge, inboard	EB8.50.433	L.72	16	0.05	1.00	0.010	1.00	0,125	24:1	Refer to item 5	
47	Stiffener, edge scaling	EB8.50.4061	L.72	16	0.05	1.00	0.007	2.00	0.15	40:1		
48	Frame 2C	EB8,50,1069	L.72	22	0.10	1.00	0.010		0.20	15:1		
49	Plate, reinforcing	EB8.50.947	L.73	18	0,020	0.50	0.020	1.00			3	
50	Plate, doubling	EB8.50.485	L.72	20	0.04	0.75	0.01	1.00	0,125	10:1		
51	Skin	EB8.50.353	L.72	20	0.04	0.75	0.004	2.00	-	-	Dents, holes and cracks in excess	Refer to item 4
52	Strap, skin edge, outboard	EB8.50.427	L.72	16	0.05	1.00	0.007	2.00	-	-	of negligible	
53	Strap, skin edge, inboard	EB8,50,429	L.72	16	0.05	1.00	0,007	2.00	-	-	Dents, cracks and holes in excess of negligible	Renewal recommende d
54	Frame 2B, intermediate, outboard	EB8.50.1065	L.72	16	0,10	1.00	0.010	1.00	0.20	20:1		
55	Plate doubling	EB8.50,487	172	18	0.05	1.00	0.005	1.50	0.30	20:1	Denus, holes and cracks in excess of negligible	Renewal recommended

continued ...

KEY TO FIG, 903

(FRONT COWLING AND SERVICE - PANEL STRUCTURE) - (continued)

							Neglig	ible Dama	ge			
			Mater	i a l	Der	ıts	Scr	atches	Ho	les		
lten	Description	Part No.	Spec.	S.₩.G.	Max. Depth	Min. Dia.	Depth	Spacing	Max. Dia.	Pitch Ratio	Repairable Damage	Repair Fig.No.
5.6	Baffle	EB8.50.133	L.72	20	0.40	0.75	0.004	2.00	-	-		
57	Stiffener, end	EB8.50.447	L.72	16	0.05	1,00	0.007	2.00	0,15	40:1	Dents, holes and cracks in excess	Renewal
5.8	Frame 2A	EB8.50.1063	L.72	22	0.10	0.00	0.010		0.20	15:1	of negligible	recommended
59	Stiffener, edge sealing	EB8.50.1071	L.72	16	0.05	1,00	0,007	2,00	0.15	40:1	Dents, holes and cracks in excess	Chapter n, 9
60	Frame 2B, intermediate, inboard	EB8.50.1067	L.72	22	0.10	1.00	0.010		0.20	15:1	of negligible	
61	Plate, doubling, air intake	EB8.50.345	L.72	18	0.05	1.00	0.005	1.50	0.30	20:1	Refer to item 55	Refer to item 55
6.2	Stringer G and J	EB8.50.896	E.E.J.336	18	0.006	0.75	0.006	1.125	1,130	15:1	Refer to item 1	Refer to item 1
63	Skin, lower, front cowl	EB8.50.1115	L.72	20	0.004	0.75	0.004	2.00	-	-	Refer to item 4	Refer to ite: 1
64	Stringer, M	EB8.50.897	E.E.J.336	18	0.006	0.75	0.006	1.125	1.130	15:1	Refer to item 1	Refer to item 1
65	Plate reinforcing, starboard	EB8.50.967	L.72	16	0.050	1.00	0.006	2,00	0.350	25:1	Dents, holes and cracks in excess	Renewal
6.6	Plate, sealing	EB8.50.319	L.72	20	0.04	0.75	0.004	2,00	-	-	of negligible	recommended
67	Stringer, M	EB8.50.898	E.E.J.336	16	0.07	0.70	0.007	1.00	0.125	20:1	Refer to item 1	Refer to item 1
6.8	Stringer	EB8.50.900	E.E.J.336	18	0.06	0.75	0.006	0.125	0.130	15:1	Refer to item 1	Refer to item 1
69	Stringer, 0	EB8.50.985	E.E.J.336	18	0.06	0.75	0.006	0.125	0.130	15:1	Refer to item 1	Refer to item 1
70	Ring, seal retaining	EB8.50.191	L.,72	20	0.07	1,00	0.007	0.130	-	-	Dents, cracks and holes in excess of negligible	Renewal recommended

					3		Negligi	ble Damage				
			Mate	rial	Den	ts	Scr	atches	- Ho	les		
Item	Description	Part No.	Spec.	S.W.G.	Max. Depth	Min. Dia.	Depth	Spacing	Max. Dia.	Pitch Ratio	Repairable Damage	Repair Fig.No.
71	Diaphragm (typical)	EB8.50.189	L.72	18	0.05	1.00	0.005	2.00		-	Dents and cracks in excess of negligible	Renewal recommended
72	Spinning, outer	EB8.50.179	L.59	18	0.05	1.00	0.005	3.00	-	-]	Dents, holes and	
73	Spinning, inner	EB8.50.177	L.59	20	0.05	1.00	0.005	3.00	-	-]	cracks in excess	- Chapter 6, 7
74	Frame, nose	EB8.50.167	L.72	20	0.05	1.00	0.005	3.00	-	-	Dents, holes and cracks in excess of negligible	
75	Spinning, channel air duct	EB8.50.163	L.59	20	0.04	1.00	0.004	3.00	-	-	Cracks and holes in excess of negligible	Renewal recommended
76	Spinning, frame 1	EB8.50.159	L.72	18	0.05	1.00	0.005	3.00		-	Cracks, holes and dents in excess of negligible	Chapter 6, 7
77	Assembly, frame 1	EB8.50.157	L.72	20	0.05	1,00	0.005	1.00	-	-	Cracks, holes and dents	

KEY TO FIG.903 (FRONT COWLING AND SERVICE - PANEL STRUCTURE) - (continued)

Note...

All dimensions are in inches



FIG. 904. UPPER AND LOWER REAR COWLING STRUCTURE

KEY TO FIG.904 (UPPER AND LOWER REAR COWLING STRUCTURE)

							Negligi	ble Damag	e			
			Mater	ial	Der	nts	Scr	atches	Ho	les		
Item	Description	Part No.	Spec.	S.W.G.	Max. Depth	Min. Dia.	Depth	Spacing	Max. Dia.	Pitch Ratio	Repairable Damage	Repair Fig.No.
1	Stiffener, edge, forward	EB8.50.1019	E.E.J.353	16	0.04	1.00	0.010	1.00	0.125	32:1	Dents, holes and -cracks in excess	newal
2	Stiffener, edge, outboard port	EB8.50.41	E.E.J.297	16	0.04	1.00	0.010	1.00	0.125	32:1	of negligible \int^{re}	commended
3	Stringer, 1 to 2	EB8.50.63	E.E.J.71	22	0.10	1.00	0.005	1.00	0.125	16:1	Dents, holes and Ch cracks	apter 6, 14
4	Frame 1A	EB8.50.1043	L.72	16	0.10	1.00	0.010	1.00	0.20	15:1	Dents, holes and Re	newa]
5	Frame 1, port	EB8.50.1045	L.72	16	0.10	1.00	0.010	1.00	0.20	15:1	cracks in excess re of negligible Ch us	commended apter 6, 15, e E.E.J.70
6	Stringer, stub	EB8.50.69	E.E.J.71	22	0.10	1.00	0.005	1.00	0.125	16:1	Refer to item 3 Re	fer to item 3
7	Sealing, frame	EB8.50.1033	D.T.D.171	22	0.10	0.75	0,005	1.00	0.125	15:1	Dents, holes cracks in excess	
										_	of negligible	
8	Stringer	EB8.50.1206	L.72	22	0.10	1.00	0,005	1,00	0,125	16:1]	
9	Stringer	EB8.50.135	E.E.J.71	22	0.10	1.00	0,005	1.00	0.125	16:1	"Refer to item 3"Re	fer to item 3
10	Frame 2, port	EB8.50.1073	L.72	16	0.10	1.00	0.010	1.00	0,20	15:1	Refer to item 5 Re	fer to item 5
11	Stringer, 2 to 3	EB8.50.65	E.E.J.71	22	0.10	1.00	0.005	1.00	0,125	16:1	Refer to item 3 Re	fer to item 3
12	Frame 2A, port	EB8,50,1049	L,72	16	0.10	1.00	0.010	. 1.00	0.20	15:1	Dents, holes and Ch -cracks in excess-us	apter 6, 15, e E.E.J.71
13	Frame 3A, port	EB8.50.1081	172	16	0.10	1.00	0.010	1.00	0.20	15:1	of negligible	
14	Frame 4, port	EB8.50.1815	L,72	16	0,10	1.00	0.010	1.00	0.20	15:1	Dents, holes and cracks in excess B of negligible P	enewal ecommended
15	Stringer 3 to 4	EB8.50.68	L.72	22	0.10	1.00	0.005	1.00	0,125	16:1	Dents, holes and cracks in excess Re	fer to item 3
16	Stringer, 3 to 4	EB8.50.67	L.72	22	0.10	1.00	0.005	1.00	0.125	16:1	of negligible	

continued ...

KEY TO FIG. 904 (UPPER AND LOWER REAR COWLING STRUCTURE) - (continued)

	nander state Malanter – Elsen aller aller at der Malanderse aller at der Malanderse ander 19			-			Neglig	ible Dama	ige			
			Mater	i a l	Den	its	Scr	atches	Ho	les		
Item	Description	Part No.	Spec.	S.W.G.	Max. Depth	Min. Dia.	Depth	Spacing	Max. Dia.	Pitch Ratio	Repairable Damage	Repair Fig.No.
17	Stiffener, rear seating	EB8.50.78	L.72	16	0.05	1.00	0.005	1.00	0.125	24:1	Dents, holes and cracks in excess	Renewal
18	Stiffener, rear scating	EB8.50.77	L.72	16	0.05	1.00	0.005	1.00	0.125	24:1	of negligible	recommended
19	Frame 3	EB8.50.1081	L.72	16	0.10	1.00	0.010	1.00	0.20	15:1	Refer to item 12	Refer to item 12
20	Stringer 2 to 3	EB8.50.66	E.E.J.71	22	0.10	1.00	0.005	1.00	0.125	16;l	Refer to item 3	Refer to item β
21	Strap, skin edge inboard	EB8.50.39	L.72	22	0.03	0.50	0.003	2.00	0.125	15;1		
22	Stringer	EB8.50.1273	E.E.J.71	22	0.10	1.00	0.005	1.00	0.125	16:1	Refer to item 3	Refer to item 3.
23	Stiffener, edge, inboard	EB8.50.43	E.E.J.297	16	0.04	1,00	0.010	1.00	0.125	32:1		
24	Frame 1A	EB8, 50, 1038	L.72	22	0.10	1.00	0.010	1.00	0.20	15:1	Dents, holes and cracks in excess of negligible	Renewal recommended
2.5	Stringer	EB8.50.1205	L.72	20	0.05	0.75	0.005	1.00	0.125	16:1		
26	Skin, port cowl	EB8.50.1617	1.,72	22	0.03	0.50	0.003	2.00		-	Dents, holes and cracks in excess of negligible	Chapter 6, 6
27	Frame, sealing	EB8.50.1035	E.E.J.71	22	0.10	1.00	0.005	1.00	0.125	16:1	Refer to item 3	Refer to item 3
28	Stringer, stub	EB8.50.70	E.E.J.71	22	0.10	1.00	0.005	1.00	0.125	16:1	Refer to item 3	Refer to item 3
29	Stringer, 1 to 2	EB8.50.64	E.E.J.71	22	0.10	1.00	0.005	1.00	0.125	16:1	Refer to item 3	Refer to item 3
30	Frame 1	EB8.50.1047	L.72	22	0.10	1.00	0.010	1.00	0.20	15:1	Refer to item 5	Refer to item 5
31	Stiffener, edge, inboard	EB8,50.551	E.E.J.297	22	0.05	1.00	0.005	1.00	0.125	24:1		
32	Frame, toggle No.2	EB8.50.559	L.72	16	0.10	1.00	0.005	1.00	0.125	16:1	Refer to item 5	Refer to item 5
33	Skin, cowl	EB8.50,1201	L.72	22	0.03	0.50	0.003	2.00	-	-	Refer to item 26	Refer to item 26
34	Frame 2	EB8.50.1075	L.72	16	0.10	1.00	0.005	1.00	0.125	16:1	Refer to item 5	Refer to item 5
35	Strap, skin edge	EB8.50.547	L.72	22	0.03	0.50	0.003	2.00	0.125	15:1		
36	Frame 2A, intermediate	EB8.50.1051	L.72	22	0.10	1.00	0.010	1.00	0.20	15:1	Refer to item 12	Befer to item 12
37	Stringer, 2 to 3	EB8.50.66	E.E.J.71	22	0.10	1.00	0.005	1.00	1.125	16:I	Refer to item 3	Refer to item 3
38	Plate, reinforcing	EB8.50.947	L.73	18	~	10	0.006	а. С	-1	2	Dents, cracks and holes in excess of negligible	Renewal recommended

continued...

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KEY TO FIG.904 (UPPER AND LOWER REAR COWLING STRUCTURE) - (continued)

							Negligi	ble Damag	е			
			Mater	ial	Den	ts	Ser	atches	Ho	les		
Item	Description	Part No.	Spec.	S.W.G.	Max. Depth	Min. Dia.	Depth	Spacing	Max. Dia.	Pitch Ratio	Repairable Damage	Repair Fig.No.
39	Frame 3A, intermediate	EB8.50.1083	L.72	22	0.10	1.00	0.010	1.00	0.20	15:1	Dents, holes and cracks in excess of negligible	-
40	Stiffener, outboard	EB8,50.579	L.72	16	0.04	1.00	0.010	1.00	0.125	32:1		
41	Stiffener, rear inboard	EB8.50.581	L.72	16	0.04	1.00	0.010	1.00	0.125	32:1		
42	Door, cowl	EB8.50.1263	L.72	20	0.05	0.80	0.006	2.00	-	-		
43	Plate, reinforcing	EB8.50.149	L.73	10	-	=	0.006	-	-			Renewal Recommended
4.4	Stiffener, edge, rear	EB8.50,1313	E.E.J.353	16	0.04	1.00	0.010	1.00	0.125	30:1		
4.5	Stringer, 3A, rear	EB8.50.576	E.E.J.71	22	0.10	1.00	0.005	1.00	0.125		Refer to item 3	Refer to item 3
46	Stringer, 3A, rear	EB8.50.575	E.E.J.71	22	0.10	1.00	0,005	1.00	0.125		Refer to item 3	Refer to item 3
47	Doubler	EB8,50,1511	L.72	22	0.025	1.00	0.003	2.00	-			
48	Bracket .	EB8.50.1517	S.514	20	-	-	0.005	-	-			
49	Stringer, 3 to 3A	EB8.50.574	E.E.J.71	22	0.10	1.00	0.005	1.00	0.125		Refer to item 3	Refer to item 3
50	Stringer, 3 to 3A	EB8.50.573	E.E.J.71	22	0.10	1.00	0.005	1.00	0.125		Refer to item 3	Refer to item 3
51	Strap, skin edge outboard	EB8.50.545	L.72	22	0.03	0.50	0.003	2.00	0.125	15:1		
52	Stringer, 2 to 3	EB8.50.65	E.E.J.71	22	0.10	1,00	0.005	1.00	0.125		Refer to item 3	Refer to item 3
53	Diaphragm	EB8.50.189	L.72	18	0.05	1.00	0.005	2.00	-	-		
54	Stringer, 1 to 22	EB8.50.63	E.E.J.71	22	0.10	1.00	0.005	1.00	0,125	16:1	Refer to item 3	Refer to item 3
55	Frame 1A, intermediate	EB8.50.1037	L.72	16	0.10	1.00	0.005	1.00	0.125	16:1	Dents, holes and cracks in excess of negligible	Renewal recommended
56	Piece, sealing	EB8.50.631	L.1	3	-		-		-	-		
57	Piece, sealing	EB8.50.125	164	4		_	_	12	-	-		
58	Stiffener edge, outboard	EB8.50.549	E.E.J.297	16	0.04	1.00	0.010	1.00	0.125	32:1		
59	Stringer, stub	EB8.50.69	E.E.J.71	22	0.10	1.00	0.005	1.00	0.125	16:1	Refer to item 3	Refer to item 3
60	Plate, doubling	EB8.50.131	L.72	18	-		0.006		-	(inc.		
61	Stiffener, edge forward	EB8.50.1023	E.E.J.353	16	0.04	1.00	0.010	1.00	0.125	30:1		

Note...

All dimensions are in inches



FIG. 905. JET PIPE COWLING STRUCTURE

KEY TO FIG.905 (JET PIPE COWLING STRUCTURE)

						1	Vegligi	ble Damag	ge			
			Materi	ial	Den	ts -	Scr	atches	Hol	les		
Item	Description	Part No.	Spec.	S.W.G.	Max. Depth	Min. Dia.	Depth	Spacing	Max. Dia.	Pitch Ratio	Repairable Damage	Repair Fig.No.
1	Frame 2	EB8.50.1340	E.E.J.373	18	0.05	0.75	0.010	1.00	0,20	15:1		Chapter 6, 16
2	Cleat	EB8,50,1355	L.72	18	-	-	0.015	-	-	-	Renewal recommended	
3	Stringer, rear, lower	EB8.50.686	E.E.J.373	18	0.10	1.00	0.010	1.00	0.125	16:1	-	Renewal
4	Stringer, rear, upper	EB8,50,1253	E.E.J.373	18	0.10	1.00	0.010	1.00	0.125	16:1	- None	recommended
5	Riblet	EB8.50.1244E	D.T.D.171	24	0.025	0.50	0.005	1.00		-]		1
6	Cone, inner, forward	EB8.50.1243B	D.T.D.171	24	0.05	0.70	0.005	1.00	-	-		
7	Cone, outer	EB8.50.1243A	D.T.D.171	24	0.05	0.70	0.005	1.00	-	<u></u>	- Non e	Renewa) recommended
8	Stringer, rear, upper	EB8.50.1252	E.E.J.373	18	0.10	1.00	0.010	1.00	0.125	16:1		Teconinended
g	Skin, wing stub	EB8.50.1244D	D.T.D.171	24	0.04	0.75	0.006	1.00	0.25	10:1		
10	Buttstrap, port	EB8.50.675	L.72	18	0.03	1.00	0.010	3,00	4	-	None	Renewal recommended
11	Piece end	EB8.50.1243F	D.T.D.171	24	0.05	0.70	0.005	1.00	-	-	None	Befer to items 5 to 9 inclusive
12	Stringer, rear, lower	EB8.50.687	E.E.J.373	18	0.10	1.00	0.010	1.00	0.125	16:1	Refer to item	Befer to item 3
13	Rihlet	EB8.50.671	L.72	20	0.03	0.75	0.006	1.00	-	•	None	Renewal recommended
14	Stringer rear lower	EB8,50,685	E.E.J.373	1.8	0.10	1.00	0.010	1.00	0.125	16:l	Refer to item :	3 Befer to item 3
15	Stringer rear lower	EB8.50.683	E.E.J.373	18	0.10	1.00	0.010	1.00	0.125	16:1	Refer to item :	3 Befer to item 3
15	Frame A	EB8.50.13443	L.72	18	0.05	1.00	0.005	1.00	1.125	32:1		Chapter 6, 16
17	Panel wing, outboard port	EB8.50.669	L.59	20	0,04	0,75	0.005	3.00	-		Dents, holes an cracks in exce	nd Repair by Argon ssarc welding is
18	Panel wing, outboard, stbd.	EB8.50.670	L. 59	20	0.04	0.75	0.005	3.00	-	-	of negligible	permissible
19	Plate, gusset	EB8.50.715	1.,72	18	-	1	0.006	1.00			Renewal recommended	-
20	Frame 1	EB8.50.1337	L.72	18	0.04	1.00	0.005	1.00	0.20	20:1		Chapter 6, 16
21	Stringer, forward	EB8.50.677	E.E.J.373	18	0.10	1.00	0.010	1.00	0.125	16:1	Refer to item 3	3 Refer to item 3

Note...

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All dimensions are in inches



FIG. 906 DELETION OF AIR INTAKE SECURING CLEATS FROM FRAME 1 OF THE ENGINE COWL

RESTRICTED

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