

## Model

GE 90 Inlet Cowl

## Serial

001114

## Part number

314W1400-9

## Condition

REPAIRED

## TSR 0 CSR 0

TSN 35,213 CSN 4,415

## Trace to

Etihad (Last operator)

## Tag by

SOCIETE AIR FRANCE

## Tag date

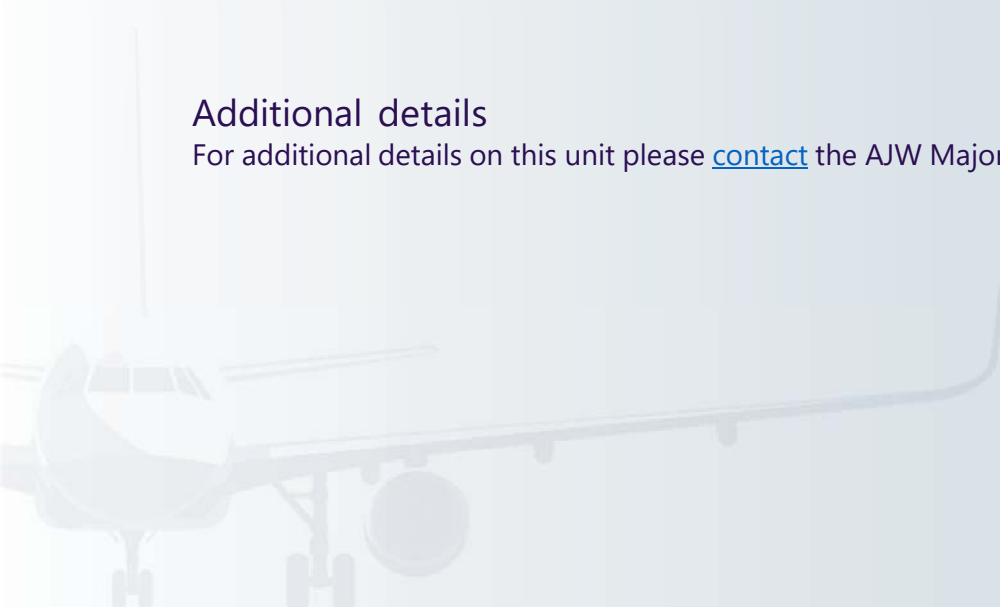
21 JUN 2019

## Location

EUROPE

## Additional details

For additional details on this unit please [contact](#) the AJW Major Assets Team.




**MINI PACK**

**AJW**



**AIRWORTHY  
CERTIFICATE/FORM**



1. Approving Competent Authority/Country DIRECTION GÉNÉRALE DE L'AVIATION CIVILE / FRANCE	2. <b>AUTHORISED RELEASE CERTIFICATE</b> <i>Certificat d'Autorisation de Mise en Service</i> <b>EASA FORM 1 – Formulaire 1 de l'EASA</b>	3. Form Tracking Number <i>Numéro de traçage du formulaire</i>  *8463500*
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4. Organisation Name and Address <i>Nom et adresse de l'organisme</i>	<b>AIRFRANCE</b> SOCIÉTÉ AIR FRANCE 45 rue de Paris 95747 ROISSY CDG Cedex FRANCE	5. Work Order/Contract/Invoice <i>Bon de Commande/Contrat/Facture</i> T32203
--	--	--

6. Item	7. Description	8. Part No / Numéro de la pièce	9. Qty. / Qté	10. Serial No. / Numéro série	11. Status / Work État / Travaux
1	INLET COWL ASSEMBLY (GE90-115B)	314W1400-9	1	001114	REPAIRED


12. Remarks  
*Observations* BOEING CHM 71-11-23 REV22 JUL15  
 WORK PERFORMED FOLLOWING AJW RO: NUMBER T32203 DATED 14FEB2019 AND WORKSCOPE NUMBER AJL-07032019 REV00 DATED 13MAR2019.  
 SEE CSDR NUMBER 77/54/CO1361 REV01 CAT.A DATED 19JUN2019.

A--C--C--U--M--U--L--A--T--E--D--  
 SINCE HOURS CYCLES DAY CA  
 NEW 035213 4415  
 CHAUL  
 REPAIR

For work details, see Work Shop Report with same number as mentioned in block 3.  
 The work identified in Block 11 and described herein has been accomplished in accordance with 14 CFR part 43 and in respect to that work, the items are approved for return to service under certificate no. CNFY912C.

13a. Certifies that the items identified above were manufactured in conformity to: <i>Certifie que les éléments identifiés ci-dessus ont été fabriqués conformément:</i> <input type="checkbox"/> approved design data and are in condition for safe operation <i>aux données de définition approuvées et sont en état de fonctionner en toute sécurité</i> <input type="checkbox"/> non-approved design data specified in block 12 <i>aux données de définition non approuvées indiquées en case 12.</i>	14a. <input checked="" type="checkbox"/> Part-145.A.50 Release to Service <i>Partie 145.A.50 Remise en service</i> <input type="checkbox"/> Other regulation specified in block 12 <i>Autre réglementation visée à la case 12</i> Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, was accomplished in accordance with Part-145 and in respect to that work the items are considered ready for release to service. <i>Certifie que, sauf dispositions contraires mentionnées dans la case 12, les travaux indiqués dans la case 11 et décrits dans la case 12, ont été accomplis conformément à la Partie 145 et, compte tenu de ces travaux, les éléments sont considérés comme prêts à être remis en service.</i>
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TCCA CERTIFICATE N°897-20

13b. Authorized Signature <i>Signature autorisée</i>	13c. Approval / Authorisation Number <i>Numéro de l'agrément / autorisation</i>	14b. Authorized Signature <i>Signature autorisée</i> 	14c. Certificate / Approval Ref. No. <i>N° de Certificat / d'agrément</i> FR.145.0010
13d. Name / Nom	13e. Date (dd mmm yyyy) / (jj mmm aaaa)	14d. Name / Nom JOMAT	14e. Date (dd mmm yyyy) / (jj mmm aaaa) 21 JUN 2019

**USER / INSTALLER RESPONSIBILITIES / RESPONSABILITÉS DE L'UTILISATEUR / INSTALLATEUR**  
 This certificate does not automatically constitute authority to install the item(s).  
 Ce certificat ne vaut pas automatiquement autorisation d'installer le ou les éléments.  
 Where the user/installer performs work in accordance with regulations of an airworthiness authority different than the airworthiness authority specified in block 1, it is essential that the user/installer ensures that his/her airworthiness authority accepts items from the airworthiness authority specified in block 1.  
 Lorsque l'utilisateur/installateur effectue des travaux conformément à la réglementation d'une autorité responsable de la navigabilité, autre que l'autorité responsable de la navigabilité indiquée dans la case 1, il est essentiel que l'utilisateur/installateur s'assure que l'autorité responsable de la navigabilité dont il relève accepte les éléments approuvés par l'autorité responsable de la navigabilité inscrite à la case 1.  
 Statements in blocks 13a and 14a do not constitute installation certification. In all cases aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.  
 Les mentions figurant dans les cases 13a et 14a ne constituent pas une certification d'installation. Dans tous les cas, le dossier d'entretien de l'aéronef doit contenir une certification d'installation délivrée conformément aux réglementations nationales par l'utilisateur/installateur avant que l'aéronef puisse décoller.



**SHOP VISIT  
REPORT**



**WORK SHOP REPORT**

No: B463500

Customer...: AJ WALTER AVIATION LTD  
Work Order.: T32203

Dossier.....: 1904918  
Requisition No.: 00620637

Designation : INLET COWL ASSEMBLY (GE90-115B)  
Part Number...: 314W1400-9  
Serial Number.: 001114

TSN.: UNKNOWN  
CSN.: UNKNOWN

Removal from A/C.: A6-LRC  
Aircraft Model...: UNKNOWN

Pos.: UNKNOWN

Time...: UNKNOWN  
Cycles.: UNKNOWN

Removal Date.....: 14FEB19

Location.: CDG

Removal Type.....: UNSCHEDULED  
Removal Reason...: TEST AND REPAIR

Condition as received.....: .

Work requested.....: REPAIR

Warranty requested.:

Warranty Accepted.:

Shop Finding.....: REPAIR REQUIRED FOLLOWING AJW RO: NUMBER T32203 DATED .  
14FEB2019.

Confirmation of Removal.: FAILURE FOUND - REMOVAL REASON CONFIRMED

Repair Text.....: WORK PERFORMED FOLLOWING AJW RO: NUMBER T32203 DATED 14FEB20  
SEE CSDR NUMBER 77/54/C01361 REV01 CAT.A DATED 19JUN2019.

Documentation Reference.: BOEING

CMM 71-11-23 REV22 JUL15

Modif/Remarks.....: WORK PERFORMED FOLLOWING AJW RO: NUMBER T32203 DATED  
14FEB2019 AND WORKSCOPE NUMBER AJI-07032019 REV00 DATED 13MAR2019.  
SEE CSDR NUMBER 77/54/C01361 REV01 CAT.A DATED 19JUN2019.

New Part Number...:

New Serial Number.:

Parts replaced : SEE PART LIST

Issue Date.....: 21JUN19

Name :

JOMAT

Repair Shop

Revision date.: 21JUN19

Signed :



CDG HE02

**WORK SHOP REPORT**

No: B463500

-- Parts replaced --

Part Number / Alt	Description	QTY	UI
BACB30VF08K3	BOLT	50	EA
NAS1200M5-7P	RIVET	100	GM

Issue Date....: 21JUN19

Revision date.: 21JUN19

Repair Shop

CDG HE02

Page 2/2



**NON- INCIDENT  
STATEMENT**



Date: 16 January, 2019  
To: Altavair

## Non Incident / Non Accident Statement - Airframe

### Aircraft

Registration	MSN	Type	TSN	CSN
A6-LRC	36302	B777-200LR	44123:53	4796

To whom it may concern:

During operation by Etihad Airways from 06-February-2014 until 16-January-2019 of the above Aircraft, we hereby confirm that the Aircraft:

- ▶ Has not been involved in any accident or serious incident as defined in Chapter 1 of ICAO Annex 13
- ▶ Has not been obtained from nor operated by any government or military source.
- ▶ Has not been subjected to severe stress or heat outside of normal operation and maintenance.
- ▶ Have not been submerged in salt water or otherwise exposed to corrosive agents outside of normal operation and maintenance.

Approved by:  
Najeeb Hassan Ansari  
B777 Fleet Management Manager  
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Prepared by:  
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Technical Records Officer  
+971 2 511 5324  
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**MINI PACK**

**AJW**



**TRACE**



Air Salvage International, ID: 18-074-12

Part No: 314W1400-9

Desc: R/H INLET COWL

Serial No: 001114

Qty: 1

Notes: 100-0961, 100-0963, 100-1086

As removed from B777 MSN 36302

Registration A6-LRC On 30/01/2019 12:36:33



**ETIHAD AIRWAYS**  
**FLEET ENGINEERING**  
**OCCM TIME STATUS**



Unit TSN:	44123:53	Unit Name:	A6-LRC
Unit CSN:	4796	Item:	B777-200LR
Unit DSN:	4231	Serial:	36302
Unit MSN:	36302	Status AS AT:	14-Jan-19

ATA	Item Desc	Item Number	Serial Number	Position	Installed Date	Installed Aircraft TSN	Installed Aircraft CSN	COMP TSN	COMP CSN
57-43	SLAT NO 1 LE	114W5110-5	000631	SLAT NO 1 LE_1	24-Jul-07	0	0	44123	4796
57-43	SLAT NO 4 LE	114W4140-107	000721	SLAT NO 4 LE_4	9-Jun-11	15531	1539	40945	4660
57-63	AY, COVE LIP DOOR INSTL WING	113W6100-17	WB143	FLAPERON ASSY_LH	24-Jul-07	0	0	44123	4796
57-63	AY, COVE LIP DOOR INSTL WING	113W6100-18	WB143	FLAPERON ASSY_RH	24-Jul-07	0	0	44123	4796
57-63	AILERON ASSEMBLY	113W7003-109	WD669	AILERON_LH	24-Jul-07	0	0	44123	4796
57-63	AILERON ASSEMBLY	113W7003-110	WD669	AILERON_RH	24-Jul-07	0	0	44123	4796
71-00	ACTUATOR	TY1898-51	02652	PDOS ACTUATOR_RH2	24-Jul-07	0	0	44123	4796
71-00	ACTUATOR ASSY T R PDOS	TY1904-50	6463	ACTUATOR ASSY-T/R PDOS_LF1	24-Jul-07	0	0	44123	4796
71-00	ACTUATOR ASSY T R PDOS	TY1904-50	6506	ACTUATOR ASSY-T/R PDOS_RF2	24-Jul-07	0	0	44123	4796
71-00	ACTUATOR ASSY T R PDOS	TY1904-50	6509	ACTUATOR ASSY-T/R PDOS_RF1	24-Jul-07	0	0	44123	4796
71-00	ACTUATOR ASSY T R PDOS	TY1904-50	6528	ACTUATOR ASSY-T/R PDOS_RA2	24-Jul-07	0	0	44123	4796
71-00	ACTUATOR ASSY T R PDOS	TY1904-50	6530	ACTUATOR ASSY-T/R PDOS_LF2	24-Jul-07	0	0	44123	4796
71-00	ACTUATOR ASSY T R PDOS	TY1904-50	6533	ACTUATOR ASSY-T/R PDOS_LA2	24-Jul-07	0	0	44123	4796
71-00	ACTUATOR ASSY T R PDOS	TY1904-50	6566	ACTUATOR ASSY-T/R PDOS_LA1	24-Jul-07	0	0	44123	4796
71-00	ACTUATOR ASSY T R PDOS	TY1904-50	6568	ACTUATOR ASSY-T/R PDOS_RA1	24-Jul-07	0	0	44123	4796
71-00	COWL INLET	314W1400-9	001114	COWL INLET_RH	10-Oct-18	44117	4793	35213	4415
71-00	COWL INLET	314W1400-9	000865	COWL INLET_LH	10-Oct-18	44117	4793	36514	4043
71-00	ACTUATOR	TY1898-51	02585	PDOS ACTUATOR_RH1	3-Oct-13	24246	2890	45121	4827
71-00	PDOS ACTUATOR	TY1898-60	04122	PDOS ACTUATOR_LH1	5-Apr-17	39797	4420	4325	376
71-00	PDOS ACTUATOR	TY1898-60	05429	PDOS ACTUATOR_LH2	5-Apr-17	39797	4420	4325	376
73-00	UNIT ASSY ENG DATA	816420-3	2007027084	UNIT ASSY ENG DATA_RH	24-Jul-07	0	0	44123	4796
73-00	UNIT ASSY ENG DATA	816420-3	2007030458	UNIT ASSY ENG DATA_LH	24-Jul-07	0	0	44123	4796
76-00	SERVO	304RAA1	1456	SERVO MOTOR_LH	24-Jul-07	0	0	44123	4796
76-00	SERVO	304RAA1	1476	SERVO MOTOR_RH	24-Jul-07	0	0	44123	4796
77-00	AIRBORNE VIBRATION MONITR	8KE143GAD1	3715H	AIRBORNE VIBRATION MONITR_LH	24-Jul-07	0	0	44123	4796
77-00	AIRBORNE VIBRATION MONITR	8KE143GAD1	3839H	AIRBORNE VIBRATION MONITR_RH	24-Jul-07	0	0	44123	4796

*Handwritten signature/initials*



TARMAC ARAGON  
 CTRA A-1612 DE ALBARRACIN KM6  
 44396 Teruel - Spain  
 VAT # ES B-44241933

Print date 12/11/2018 10:39  
 SCAN REF: 59154\_531\_1

# WORK ORDER

ROUTINE

page 1 of 3

Order Ref.: WO- 59154

Title RECORD INLET COWL DETAILS ON AND OFF

Y/Ref

Date 12/11/2018 10:38:28

ATA 7100 POWER PLANT



WO-59154

AIRCRAFT	COMPONENT
Reg. A6-LRC Type B777-237LR GE90-110B MSN 36302	

Mandatory (Y/N) Y ETOPS (Y/N) N  
 WP-531

MNT.PROG:

Prepared by Hector GARCIA  
 eSigned

Received by

LIMIT FH  
 FC  
 Date

**NEXT DUE MANAGED BY THE OPERATOR**

DEFECT / REQUESTED WORK	TASK PERFORMED
-------------------------	----------------

After engine replacement, record PN & SN on and PN & SN off of inlet cowls.

INLET COWL OFF:

Pos #1. PN: 314W1400-9

SN: 684

Pos #2. PN: 314W1400-9

SN: 524

INLET COWL ON:

Pos #1. PN: 314W1400-9

SN: 865

Pos #2. PN: 314W1400-9

SN: 1114



NOTE: ENGINE #1 ESN 906282 INSTALLED ON 2 OCT 18  
 ENGINE #2 ESN 906428 INSTALLED ON 27 SEP 18

note: see next page if there is not enough room here

Engineer ID	hh:mm	Engineer ID	hh:mm	Deferred	DEF	NON ROUTINE	NRC	Complied With	C/W
#1		#5			<input type="checkbox"/>		<input type="checkbox"/>	(NRC possible)	<input type="checkbox"/>
#2		#6		Ref:		Ref:			
#3		#7		Calibrated Tools	P/N - DESC	S/N	VALID UNTIL		
#4		#8			P/N - DESC	S/N	VALID UNTIL		

COMPONENT REMOVED DESC .....  
 P/N ..... S/N ..... POS ....

COMPONENT INSTALLED DESC .....  
 P/N ..... S/N ..... POS ....

RELEASE REF .....

DUPLICATE	NOT REQUIRED	AUTH No	DATE	TRIG	SIGN/STAMP
We certify that a duplicate safety inspection has been carried out and the identified control system of the aircraft / component functions correctly, and in respect of the maintenance performed, the control system is assembled and locked correctly.					

CERTIFICATION	reserved for administration
TRIG <i>CUT</i>	
DATE & HOUR <i>21 NOV 18</i>	
PART-145 App No <i>WUE 1451203</i>	
PLACE <i>TEY</i>	
SIGN/STAMP <i>[Signature]</i>	



Reference: **WO- 59154**

Title **RECORD INLET COWL DETAILS ON AND OFF**

Date **12/11/2018 10:38:28**

ATA **7100 POWER PLANT**

page 2 of 3

COMPLAINT / REQUESTED WORK (FULL TEXT)	COMPLETED TASK & RESULTS DATE / ID / SIGN
<p>After engine replacement, record PN &amp; SN on and PN &amp; SN off of inlet cowls.</p> <ul style="list-style-type: none"><li>•</li></ul>	



TARMAC ARAGON  
CTRA A-1512 DE ALBARRACIN KM6  
44396 Teruel - Spain  
VAT # ES B-44241933

Print date 12/11/2018 10:39

# WORK ORDER

ROUTINE

page 3 of 3

Order Ref.: WO- 59154

Title RECORD INLET COWL DETAILS ON AND OFF

## COMPONENT REMOVAL

P/N	NIL	DESCRIPTION
SERIAL		REASON
POS		

## COMPONENT INSTALLATION

P/N	NIL	DESCRIPTION
SERIAL		CERTIFICATE
POS		



## MATERIAL ISSUED

QUANTITY	P/N	DESCRIPTION	FIN	IPC
----------	-----	-------------	-----	-----



## CARRY FORWARD SHEET (ENGINE/APU REMOVAL)

Engine/APU Part No. <b>GE90-110B1603</b>	TSN/CSN <b>39360 / 5414</b>	Visit/Workorder No. <b>1700983</b>
Engine/APU Serial No. <b>906376</b>	Date of Removal <b>12 SEP 2018</b>	ATL/DDLT-Defect Reference <b>—</b>
Engine Position <b># 2</b>	Aircraft Registration <b>A6-LRC</b>	Station <b>TERUEL</b>

TASK / DEFECTS / REPAIR / OBSERVATIONS		ACTION TAKEN	
<b>ITEM</b>	ENGINE ESN 906376 REMOVED WITH INLET COWL INCLUDED, AS ONE ASSEMBLY	ENGINE ESN 906428 INSTALLED WITH THIS INLET COWL ATTACHED, AS ONE ASSEMBLY	NAME / STAFF NO. <b>C. THOMPSON</b>
<b>NAME / STAFF NO.</b>			DATE <b>21 Nov 18</b>
<b>APP. NO. / STAMP</b>	SEE INLET P/N/SN BELOW	SEE INLET P/N/SN BELOW	APP. NO. / STAMP 
	P/N: <b>314W1400-9</b>	P/N: <b>314W1400-9</b>	SIGN 
	S/N: <b>000524</b>	S/N: <b>001114</b>	
<b>ITEM</b>			NAME / STAFF NO.
<b>NAME / STAFF NO.</b>			DATE
<b>APP. NO. / STAMP</b>			APP. NO. / STAMP
	P/N:	P/N:	SIGN
	S/N:	S/N:	
<b>ITEM</b>			NAME / STAFF NO.
<b>NAME / STAFF NO.</b>			DATE
<b>APP. NO. / STAMP</b>			APP. NO. / STAMP
	P/N:	P/N:	SIGN
	S/N:	S/N:	
<b>ITEM</b>			NAME / STAFF NO.
<b>NAME / STAFF NO.</b>			DATE
<b>APP. NO. / STAMP</b>			APP. NO. / STAMP
	P/N:	P/N:	SIGN
	S/N:	S/N:	

RECORD TOTAL NUMBER OF SHEET RAISED: NUMBER \_\_\_\_\_ OF \_\_\_\_\_

Note: Provide additional sheet as necessary.

Circle if continue: YES NO

## Aircraft Readiness Log

Pgm Id/Model #  
777 /FFX

Line Number: 939  
Airplane Identification  
W0939/WF131/W7776

Page 189  
Customer  
ETIHAD AIRWAYS

Zone MPD	Part Number Part Description Vendor Name	Used On/Alt Authority Cage Code/SRC/ATA/LL/PV/AD	Qty	Serial Number	Miscellaneous Location X-Station/Y-BL/Z-Wtr
ZA2004 414	314W1086-8 FAN COWL RIGHT HAND BOEING CO THE	314W1086/ 81205/SFE/71/ / /	1	001028	
ZB2002 423	314W1086-9 FAN COWL LEFT HAND BOEING CO THE	314W1086/ 81205/SFE/71/ / /	1	001027	
ZA1019 412	314W1400-9 INLET ASSY BOEING CO THE	314W1400/ 81205/SFE/71/ / /	1	001114	
ZB1019 422	314W1400-9 INLET ASSY BOEING CO THE	314W1400/ 81205/SFE/71/ / /	1	001115	
ZA2006 415	315W1298-23 FAN DUCT COWL BOEING CO THE	315W1298/ 81205/SFE/71/ / /	1	001068	
ZA2011 416	315W1298-24 FAN DUCT COWL BOEING CO THE	315W1298/ 81205/SFE/71/ / /	1	001044	
ZB2006 425	315W1298-25 FAN DUCT COWL BOEING CO THE	315W1298/ 81205/SFE/71/ / /	1	001035	
ZB2011 426	315W1298-26 FAN DUCT COWL BOEING CO THE	315W1298/ 81205/SFE/71/ / /	1	001045	




**MINI PACK**

**AJW**



**R9D5-F G**



		AIRCRAFT STRUCTURE REPAIR SUMMARY					DATE:	6-Jan-19		
Aircraft Type:		B777-200LR		Aircraft Registration:		A6 - LRC		Aircraft MSN:	36302	
S. No.	SDRR No.	Description	Repair Status	Classification	Repair Date	References	NRC / WO Ref. No.:	Inspection	T-Defect / R-MR / Work Order	
15	B7-54-LRC-0015	ITEM DELETED. REMOVED FROM AIRCRAFT.								
16	B7-53-LRC-0016	DENT WITH SCRATCH ON RH AFT BELLY FAIRING PANEL 198UR OUTER SKIN, 2.25" FROM AFT EDGE OF PANEL. DIMENSION 1.75" X 0.5".	PERMANENT	MINOR	20-Feb-15	SRM 53-00-70-1A-0, ALLOWABLE DAMAGE GENERAL Para.2.A (b)	053	NO		
17	B777-36302-55-0017	Minor Dent on Left Horizontal Stabilizer Leading Edge Mid-Section at STA 330.0 and 10.0" FWD of Leading Edge Lower Aft Edge. Dimensions: Depth Y=0.028mm, Length L=1.30", Width W=0.875", W/Y=31.25	PERMANENT	MINOR	21-Oct-15	SRM 55-10-01-1A-3 FIG 103, DETAIL D	3004	NO		
18	B777-36302-54-0018	ITEM DELETED. REMOVED FROM AIRCRAFT.								
19	B777-36302-53-0019	Scratch mark AFT of AFT cargo door Fuselage Skin STA 1748 - STA 1769, STR 37R-38R. Dimensions: L = 1.75", W = 1.0" material lost 0.001", original thickness = 0.250".	PERMANENT	MINOR	23-Dec-15	SRM 53-00-01-1A-1 FG 103, DETAIL D	032	NO		
20	B777-36302-57-0020	RH I/B Trailing edge flap PN 113W2700-14, SN 000658 found with damage on upper surface with Disbond size 13" x 13".	PERMANENT	MINOR	23-Dec-15	SRM 57-53-01, Repair 3, SRM 51-70-05	028	NO		
21	B777-36302-53-0021	RH BELLY FAIRING PANEL 198WR FOUND WITH DISBOND DAMAGE SIZE 3.5" X 2.25" APPROXIMATELY 7" INCHES FROM FORWARD EDGE OF THE PANEL.	PERMANENT	MINOR	16-Aug-16	SRM 53-00-70-2R, TABLE 201, SRM 51-70-04-2R3	031	NO		
22	B777-36302-54-0022 Rev00	ITEM DELETED. REMOVED FROM AIRCRAFT.								
23	B777-36302-53-0023 Rev00	Scratch Mark Aft of L2 pax door cutout, LH Fuselage Skin between STA 788.5 - STA 804 and STR 22L-23L. Reworked area L=2", W=0.5" Loss of material = 0.011".	PERMANENT CAT A	MINOR	2-Aug-17	SRM 53-00-01-1A-1 Table A Rev 74 dtd May 15/17	ATL 11402115 Visit # 1329655	NO		
24	B777-36302-53-0024 Rev00	AFT cargo door cut-out upper aft conner with gouge between STGR 28R and 29R. Damage blended out with dimensions: L=3", W= 1", Original Skin Thickness = 0.248", Remaining Skin Thickness = 0.241"	PERMANENT CAT A	MINOR	4-Apr-17	SRM 53-00-01-1A-1 Table A Rev 73 dtd Jan 15/17	NRC 036 Visit # 1369918	NO		
25	B7-540000-8865	RH ENGINE INLET COWL PN 314W1400-9, SN 001114 LIP SKIN FOUND WITH DENT AT 1.0 O' CLOCK POSITION. DIMENSIONS: A = 1.5", Y = 0.035". A/Y = 42.	PERMANENT CAT A	MINOR	21-Sep-11	SRM 54-13-01-1A-1, Figure 103, Detail E	Visit # 199938, Index # 38 Defect # A-1516503	NO		
26	Inlet Cowl-314W14009-001114-01 Rev.01	RH ENGINE INLET COWL PN 314W1400-9, SN 001114 LIP SKIN FOUND WITH DENT AT 5.0 - 6.0 O' CLOCK POSITION. DIMENSIONS: L = 2.25", W = 1.0", Depth = 0.040".	PERMANENT CAT A	MINOR	15-Mar-18	SRM 54-13-01-1A-1, Figure 103, Detail E	Visit # 1591645 EWI EY_B777-54-0274_EWI	NO		

## AIRCRAFT STRUCTURE REPAIR SUMMARY

DATE: **6-Jan-19**

Aircraft Type:		B777-200LR		Aircraft Registration:		A6 - LRC		Aircraft MSN:		36302	
S. No.	SDRR No.	Description	Repair Status	Classification	Repair Date	References	NRC / WO Ref. No.:	Inspection	T-Defect / R-MR / Work Order		
27	<b>B7-LRE-0009</b>	<p>INLET COWL PN 314W1400-9, SN 001114 FOUND WITH EXTENSIVE DAMAGE ON UPPER OUTER BAREL UPPER SURFACE DUE TO SLING FAILURE WHILE FITTMENT ON AIRPLANE MSN 34599. DUE TO EXTENSIVE DAMAGE OUTER BAREL REPLACED.</p> <p>LIP SKIN ALSO FOUND WITH MULTIPLE BLENDOUTS AT APPROXIMATELY 10 - 11 O'CLOCK POSITION - QTY 7 - DAMAGE "A1-A7" AND BETWEEN 12 AND 1 O'CLOCK POSITION - QTY 1. BLENDOUT DETAILS ARE AS FOLLOWS:</p> <p style="text-align: right;">Damage "A1" Size(mm): 34 x 14, material loss = 0.002"      Damage "A2" Size(mm): 36 x 19, material loss = 0.002"</p> <p style="text-align: right;">Damage "A3" Size(mm): 32 x 10, material loss = 0.001"      Damage "A4" Size(mm): 14 x 9, material loss = 0.001"</p> <p style="text-align: right;">Damage "A5" Size(mm): 13 x 10, material loss = 0.001"      Damage "A6" Size(mm): 11 x 10, material loss = 0.001"</p> <p style="text-align: right;">Damage "A7" Size(mm): 17 x 9, material loss = 0.001"</p> <p style="text-align: right;">Damage at 12 - 1 o'clock Size(mm): 28 x 9, material loss = 0.001"</p>	PERMANENT CAT A	MINOR	5-Apr-16	AMM 71-11-01 SRM 54-13-01-1A-1, Figure 103, Table A, Detail A	Visit # 882560, Shop Visit# 791349, RFC R001 NRC # 001 AUH11344469 AUH10209546	NO			
28	<b>B777-36304-54-0015</b>	RH ENGINE INLET COWL PN 314W1400-9, SN 001114 LIP SKIN FOUND WITH SURFACE CORROSION IN THE AREA FROM 10 O'CLOCK - 2 O'CLOCK. SURFACE CORROSION BLENDED WITH REWORK SIZE 14.6" X 11", ORIGINAL LIP SKIN THICKNESS =0.077", REMAINING THICKNESS = 0.074".	PERMANENT CAT A	MINOR	10-Apr-16	SRM 54-13-01-1A-1, Figure 103, Detail A	Visit # 1077799, NRC # 4022 AUH14771999	NO			
29	B777-36303-54-0006	LH ENGINE INLET COWL (P/N: 314W1400-9, S/N: 000865) LIP SKIN AT 12 O' CLOCK POSITION FOUND WITH DENT. DENT SIZE: L = 2.0", W = 1.5", DEPTH = 0.039".	PERMANENT CAT A	MINOR	1-Dec-15	SRM 54-13-01-1A-1, Figure 103, TABLE "A" Detail "E"	Visit # 1059475, NRC # 043 AUH13809387	NO			
30	B777-36303-54-0010	LH ENGINE INLET COWL (P/N: 314W1400-9, S/N: 000865) LIP SKIN AT 10 O' CLOCK POSITION FOUND WITH SCRATCH MARK. SCRATCH BLENDED WITH SIZE: L = 5.125", W = 0.250", MATERIAL LOSS = 0.001".	PERMANENT CAT A	MINOR	14-Mar-16	SRM 54-13-01-1A-1, Figure 103, TABLE "A" Detail "A"	Visit # 1058236, NRC # 4023 AUH14570865	NO			

*A.B.*

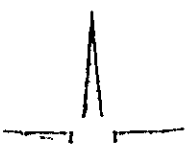
**MINI PACK**

**AJW**



**B7-540000-6865**



**Structural Damage Repair Report**

  
 ADAT/TS/8394 Issue 04 (March 2011)  
 AIRCRAFT TECHNOLOGIES

MSN: 34599	Date: 16 May 2013	Index No: 38
Aircraft Type: B777-300ER	SDRR.No: B7-540000-6865	
Aircraft Reg'n: A6-ETC	Structural Classification: PRIMARY	
Aircraft TSN : 27780	Aircraft CSN : 5269	Visit: 199938 WO: N/A
<b>Damaged Component(s)</b>		
Description:	#1 ENGINE INLET COWL LIP SKIN AT 1 O' CLOCK POSITION - DENT	
Part Number:	314W1400-9	Serial No : 1114
Damage Caused by:	F.O.D	
SRM / CMM Ref:	B777-300 SRM 54-13-01-1A-1	
<b>Location of damage</b>		
Body Station/ Frame:	STGR/BL/WL:	RIBS:
Position:	At 1 O' Clock Position	Side: LHS
<b>Defect Description (Type of damage, Dimension)</b>		
WITH REFERENCE TO THE DDL A-1516503, DURING TRANSIT A DENT REPORTED ON # 1 ENGINE INLET COWL LIP SKIN AT 1 O' CLOCK POSITION. DENT EVALUATION CARRIED OUT AND FOUND WITHIN ALLWOABLE DAMAGE LIMITS IAW SRM 54-13-01-1A-1 FIGURE 101 & FIGURE 103, DETAIL 'E'.		
Dimension: A = 1.50", Y = 0.035", A/Y = 42		
Method of inspection :	H.F.E.C + VISUAL	
Repair exists in near vicinity:	YES	Distance between repairs:
*Sketch/ Drawing No. :	N/A	
<b>Action / Rectification</b>		
Permanent :	DENT FOUND WITHIN ALLWOABLE DAMAGE LIMITS IAW SRM 54-13-01-1A-1 FIGURE 101 & FIGURE 103 and DETAIL 'E'. DENT LEFT AS IS PERMANENT AND NO ADDITIONAL INSPECTION REQUIRED.  Date : 21 Sep 2011	
Repair Approved by:	B777 SRM 54-13-01-1A-1, Allowable Damage 1, FIG 101 & 103, DETAIL 'E'	
(ADAT Repair Scheme, DDO, SRM, SB, other) -Specify SRM/CMM Rev. & Date)		
Repair is: PERMANENT	Repair Installation Date : 21 Sep 2011	
Inspection Threshold:	NO ADDITIONAL REQUIREMENTS.	
Applicable Reference(s):	B777 SRM 54-13-01-1A-1, Allowable Damage 1, FIG 101 & 103, DETAIL 'E' DDL A-1516503	
Prepared by: NARAYANAN KUTTY	Staff No. : 14364	
Signature : ELECTRONICALLY GENERATED DOCUMENT NO SIGNATURE REQUIRED	Date : 16 May 2013	

\* Where Applicable.



# Structural Damage Repair Report

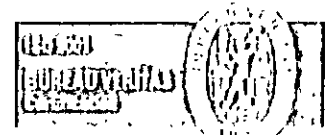


MSN: 34599	Date: 16 May 2013	Index No: 38
Aircraft Type: B777-300ER	SDRR No: B7-540000-6865	
Aircraft Reg'n: A6-ETC	Structural Classification: PRIMARY	
Aircraft TSN : 27780   Aircraft CSN : 5269	Visit: 199938	WO: N/A

**ACTION / RECTIFICATION :**

DENT FOUND WITHIN ALLOWABLE DAMAGE LIMITS IAW SRM 54-13-01-1A-1 FIGURE 101 & FIGURE 103 and DETAIL 'E'.

DENT LEFT AS IS PERMANENT AND NO ADDITIONAL INSPECTION IS REQUIRED.



Deferred Defect History Report


Defect Description:								
Date/Time Raised	Defect	Aircraft Regn.	Defect Type /Defect #	Status	ATA	Organization / Dept	Raised By Name/Staff #	NR #
21-09-2011 11:58:17	#1 ENG HAS A DENT ON INLET COWL LP AT 1 O CLOCK POSN	A6-ETC	A-1516503	Closed	54-12	AUH / ETIHAD ABU DHABI LINE	Ey Auh Engineer / EY-00000	1330710
Deferral History:								
Date & Time	Deferral Details				Organization / Dept	Deferred By Name/Staff #	AUTH#	
Operations:								
Ops Steps	WO Number/Steps	Operation Description		Action taken	Staff	Date & Time		
Final Action:								
Date	Final Action				Organization / Dept	Closed by Name / Staff #	AUTH#	
21-09-2011 11:58	DENT FOUND WITHIN LIMITS IAW SRM 54-13-01-1A-1 FIG 101 AND FIG 103 DETAIL AND A = 1.5" , Y = 0.035" A/Y = 42 DENT AND BUCKLE CHART UPDATED				AUH/ETIHAD ABU DHABI LINE	Mian Altaf Hussain / EY-20142	B139	
Material Requirements:								
Part Number	Description				Req. Qty.	Qty. Available	U.O.M	
Resource Requirements:								

VISIT # 199938

Part No: 314W 1400-9  
S.No: 1114

SDR # BT-540000-6865

33



***Inlet Cowl-314W14009-  
001114-01 Rev01***





## Structural Damage/Repair - Record

**Part I. Aircraft/Component Damage Details (to be filled out by A&C/STR Heavy/Light/Line Maintenance Organization)**

Aircraft Type/MSN/Reg.: <b>B777-200 A6-LRE</b>	SDRR No.: <b>INLET COWL-314W14009-001114-01</b> <small>(EY Fleet Mgt. Control No.)</small>	Rev. No.: <b>01</b>
Aircraft / Component CSN: <b>4303 FC</b>	Aircraft / Component TSN: <b>39762:22 FH</b>	
Affected Part: <b>LH COWL INLET</b>	PN: <b>314W1400-9</b>	SN: <b>001114</b>
Visit No./Type: <b>1591645</b>	NRC/ATL No: <b>CARD SEQ 7</b>	ATA: <b>54</b>

**Description of Defect:** *(Report any previous repair in the area)*

- Indicate **Damage Type** (crack, dent, scratch, delam / disbond, corroded etc...)
- Indicate **Damage Dimension** (Length, Width, Max Depth, Area, Diameter, Original Thickness, Max Material Loss)
- Indicate **Damage Location/Orientation** [exact position of damage with distances to nearest Frame/Station, Stringer or adjacent landmark: edge of part, ribs, stiffeners latches/hinges, panels, radial (o'clock or degree) position, orientation (view looking fwd/aft)]

**INLET COWL Pd 314W1400-9, Sn 001114 LIP SKIN - EXISTING DENT DAMAGE REASSESSMENT. DENT LOCATION BETWEEN 5 O'CLOCK AND 6 O'CLOCK.**

**Inspection Reference: Was damage found during SB/EO/AMP/MPD?**

No, Audit/Incident/Finding by Chance/Others:

Yes, SB/EO/EWI No.: **EY-B777-54-0274-EWI** MPD/AMP/Task No.: **AUH 19767941 (W.O)**

**Cause of Damage:**

- Environment  
  Lavatory/Galley Spill  
  Chemical Spill  
  Internal Leakage  
  Wet Insulation Blanket  
  Temporary Repair Replacement  
 Bird Strike  
  Accidental Damage  
  Blocked Drain  
  Lightning Strike  
  Unknown  
  Others (pls. specify)

**Part II. Damage Assessment (to be filled out by A&C or STR Heavy/Light/Line Maintenance Organization)**

Damage within Allowable/Repairable Limits?  Yes    No, Contact Engg, Technical Request No.:    No, Replaced

**Repair Approved by SRM/GMM/AMM:**

*(Specify Chapter Page Block, Para, Figure, Diagram, Sheet and Rev No.)*

**SRM: 54-13-01-1A-1 FIG 103**  
**DETAIL "E"**

SRI/IIR/SSI (if any):

Repair Approved by: **RDAS, FAA, RDR, Part21 DOA**

**Repair Classification:**

MINOR    MAJOR

**Description of Repair:**

**DENT WITH DIMENSIONS: L = 2.25" , W = 1.0" AND DEPTH = 0.040"**  
**NO DIMENSIONS PROPAGATION. NO REPEAT INSPECTION IS REQUIRED AS PER SRM 54-13-01-1A-1 FIG 103 DETAIL "E".**  
**NO REPEAT INSPECTION REQUIRED AS PER ABOVE SRM.**

Monitoring Defect No.:

Weight Change:

Yes,                      (kg, weight change);                      (kg-m (in), moment change)    No (less than 0.5 kg)

**Instruction for Continued Airworthiness:**

Ins Threshold:

Ins Interval:

Ins Method:


**Repair Life Limitation:**

**Repair Category:**

- A Permanent  
 B Permanent with inspection  
 C Temporary

**Corrosion Level:**

- 1    2    3    N/A  
 Widespread  
 Local

NAME/STAFF ID:	APPROVAL/STAMP NO.:	MAINTENANCE ORGANIZATION:	DATE:
<b>HAMID 20036</b>		<b>EY LINE MAINT</b>	<b>15 MAR 2018</b>

Click to Print

Print Form

Email this form to EY Fleet Management Team, click the applicable button below:

<a href="mailto:A320FleetMgt@etihad.ae">A320FleetMgt@etihad.ae</a>	<a href="mailto:A380FleetMgt@etihad.ae">A380FleetMgt@etihad.ae</a>	<a href="mailto:B787FleetMgt@etihad.ae">B787FleetMgt@etihad.ae</a>
<a href="mailto:A330A340FleetMgt@etihad.ae">A330A340FleetMgt@etihad.ae</a>	<a href="mailto:B777FleetMgt@etihad.ae">B777FleetMgt@etihad.ae</a>	

## Structural Damage/Repair - Record

**Aircraft Type/MSN/Reg.:** B777-300ER/36304/A6-LRE

**SDRR No.:** INLET COWL-314W14009-001114-01  
(EY Fleet Mgt. Control No.)

**Rev. No.:** 01

**Part III. Evaluation and Review (to be filled-out by EY Fleet Management Engineering)**

### Damage/Repair Figure

- Attach extracted reference manual figures, sketch and/or general and detail view photos.

**Damage within Allowable Limits?**

- Yes, Ref. No.:  
SRM 54-13-01-1A-1 Fig 103  
Detail E
- No

**Repair within SRM /AMM/CMM?**

- Yes, Manual Ref No.:
- No, OEM Ref. No.:

**Corrosion Level:**

- 1    2    3    N/A
- Widespread    Local

**Structure Classification:**

- PRIMARY    SECONDARY

**Instruction for Continued Airworthiness:**

Ins Threshold: NA  
Ins Interval: NA  
Ins Method: NA

**Repair Life Limitation:** NA

**Repair Classification:**



- MINOR
- MAJOR

**Repair Category:**

- A Permanent
- B Permanent with inspection
- C Temporary

**Remarks:**

- Performed dent re-assessment as per EY\_B777-54-0274\_EWI repair instructions & ref. SRM 54-13-01-1A-1 Fig 103 Detail E, found no damage propagation or dimension changed
- Carried out evaluation of re-assessment and found within Allowable Damage Limits with no repeat inspection requirements as per SRM 54-13-01-1A-1 Fig. 103 sheet 7 Detail E Rev 76 dtd 15 Jan/ 2018
- This SDRR INLET COWL-314W14009-001114-01 Rev01 supersedes SDRR Rev00
- T-6726368 now closed



REVIEWED BY / STAFF ID:	SIGNATURE:	DATE:	VERIFIED BY / STAFF ID:	SIGNATURE:	DATE:
Emmanuel Sta Teresa/ 10482		Mar 21, 2018	Anton Dukov		Mar 21, 2018

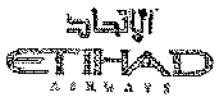



**Part IV. Additional / Definitive Action (to be filled-out by EY Fleet Management Engineering)**

**Permanent Action / Repair Replacement:**

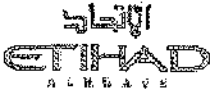





- Performed permanent repair Cat A as per SRM 54-13-01-1A-1 Fig 103 Detail E

**Definitive Approval Ref. No.:**





REVIEWED BY / STAFF ID:	SIGNATURE:	DATE:	VERIFIED BY / STAFF ID:	SIGNATURE:	DATE:
Emmanuel Sta Teresa/ 10482		Jan 31, 2018	Anton Dukov		Feb 4, 2018

		<b>JOB CARD</b>					REV NO.	1/07-MAR-18		
		<b>EY_B777-54-0274_EWI</b>					CARD SEQ:	7		
		<b>WORK PACK REFERENCE</b>					PAGE	1/4		
		160					VISIT NO.	<b>1591645</b>		
Abu Dhabi International Airport PO Box 35566 New Airport Road Abu Dhabi United Arab Emirates		A/C TYPE	B777-200LR	REGN.	A6-LRE	MSN	36304	CHARGEABLE NON-CHARGEABLE	<input checked="" type="checkbox"/>	
		WORK ORDER	 *AUH19767941*					<b>AF</b>		
		LOCATION / DEPT.	AUH EY Line Drop/ETIHAD ABU DHABI LINE							
CUSTOMER CODE	EY	TITLE	Inlet Cowl PN 314W1400-9, SN 001114 Lip Skin - Existing Dent Damage Reassessment				PROGRAM TYPE	EWI		
MAN HOURS	1.00	INTERVAL				TASK				
MEN	2	FH	FC	DY		ATA	54			
ELAPSED TIME						ZONE	400			
ZONE DESC:		Power Plants, Nacelle and Pylons								
<b>ENSURE THAT ALL SETUP PROCEDURE AND SAFETY PRECAUTIONS IDENTIFIED WITHIN THE APPLICABLE TASKS ARE FOLLOWED</b>										
STEP	TASK DESCRIPTION / REQUIREMENT	CERTIFICATION								
		MECH Sign/Emp.No Date	INSP Sign/Stamp Date							
10	PART NO. : 314W1400-9 SERIAL NO : 001114 POSITION : COWL INLET_LH  Perform reassessment of dent damage on Inlet Cowl Lip Skin between 5 o'clock and 6 o'clock location IAW SRM 54-13-01-1A-1. Note: The damage was initially reported with dimensions L=2.25", W=1.0" and Depth=0.040" which should categorize it as permanent with no further inspection, (ref. SDRR "Inlet Cowl-314W1400-9-001114-01). However 24 months repeat		 15 MAR 2018							
<b>TICK AS APPLICABLE</b> Certifies that the work specified, except as otherwise specified, was carried out in accordance with CAR 145 / EASA Part 145* and in respect to that work, the aircraft / aircraft component is considered ready for release to service. (*Delete not applicable)										
<input checked="" type="checkbox"/> UAE.145.0002 <input type="checkbox"/> EASA.145.0442 <input type="checkbox"/> UAE.145.0010 (OLD:GCAA-EM/G/487) <input type="checkbox"/> OTHER										
INDEPENDENT INSPECTION REQUIRED					YES	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/>		
<b>NOTE: INDEPENDENT INSPECTIONS MUST BE RECORDED AND CERTIFIED IN AN APPROVED MANNER.</b>										

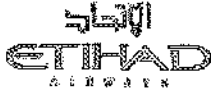

NRC's Raised	NRC NO(S):	Add. Work Sheets raised:	AWS NO(s)	CARD CLEAR
		YES <input type="checkbox"/>		
YES <input type="checkbox"/>				
NO <input checked="" type="checkbox"/>				

	<b>JOB CARD</b>						REV NO.	1/07-MAR-18	
	<b>EY_B777-54-0274_EWI</b>						CARD SEQ:	7	
	<b>WORK PACK REFERENCE</b>						PAGE	2/4	
	160						VISIT NO.	<b>1591645</b>	
Abu Dhabi International Airport PO Box 35566 New Airport Road Abu Dhabi United Arab Emirates	A/C TYPE	B777-200LR	REGN.	A6-LRE	MSN	36304	CHARGEABLE	<input checked="" type="checkbox"/>	
	WORK ORDER	 *AUH19767941*					<b>AF</b>		
	LOCATION / DEPT.	AUH EY Line Drop/ETIHAD ABU DHABI LINE							
STEP	TASK DESCRIPTION / REQUIREMENT	CERTIFICATION							
		MECH Sign/Emp.No Date	INSP Sign/Stamp Date						
20	inspection was applied to subject damage and the purpose of this EWI is to confirm if the repeat inspection is required or not.   Fill SDRR QA871 form and send it to B777FLETMGT@etihad.ae. Make sure exact damage dimensions: Length, Width and Depth are reported and conclusion of repeat inspection requirement or damage acceptable as permanent with no further inspection required.								
98	 Ensure the work area is clear of all tools, equipment and any other externeous parts and material.		 15 MAR 2018						
99	 ****FOR INFORAMTION ONLY, NO SIGN OFF REQUIRED*** PLEASE FEEDBACK ANY ISSUE OR SUGGESTION FOR								
<b>TICK AS APPLICABLE</b> <input checked="" type="checkbox"/> UAE.145.0002 <input type="checkbox"/> EASA.145.0442 <input type="checkbox"/> UAE.145.0010 (OLD:GCAA-EM/G/487) <input type="checkbox"/> OTHER		Certifies that the work specified, except as otherwise specified, was carried out in accordance with CAR 145 / EASA Part 145 and in respect to that work, the aircraft / aircraft component is considered ready for release to service. (*Delete not applicable)							
INDEPENDENT INSPECTION REQUIRED		YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>						
<b>NOTE: INDEPENDENT INSPECTIONS MUST BE RECORDED AND CERTIFIED IN AN APPROVED MANNER.</b>									

<b>NRC's Raised</b> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NRC NO(S):	Add. Work Sheets raised:	AWS NO(s)	CARD CLEAR
		YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		

	<b>JOB CARD</b>						REV NO.	1/07-MAR-18
	<b>EY_B777-54-0274_EWI</b>						CARD SEQ:	7
	<b>WORK PACK REFERENCE</b>						PAGE	3/4
	160						VISIT NO.	<b>1591645</b>
Abu Dhabi International Airport PO Box 35566 New Airport Road Abu Dhabi United Arab Emirates	A/C TYPE	B777-200LR	REGN.	A6-LRE	MSN	36304	CHARGEABLE	<input checked="" type="checkbox"/>
	WORK ORDER	 *AUH19767941*					<b>AF</b>	
	LOCATION / DEPT.	AUH EY Line Drop/ETIHAD ABU DHABI LINE						
<b>STEP</b>	<b>TASK DESCRIPTION / REQUIREMENT</b>						<b>CERTIFICATION</b>	
							<b>MECH Sign/Emp.No Date</b>	<b>INSP Sign/Stamp Date</b>
100	IMPROVEMENT WITH REGARDS TO THE CONTENT OF THIS EO/EWI TO B777FleetMGT@etihad.ae"    Return the aircraft to a serviceable condition.						  15 MAR 2018	
<b>TICK AS APPLICABLE</b>								
<input checked="" type="checkbox"/> UAE.145.0002		Certifies that the work specified, except as otherwise specified, was carried out in accordance with CAR 145 / <del>EASA Part 145</del> * and in respect to that work, the aircraft / aircraft component is considered ready for release to service. (*Delete not applicable)						
<input type="checkbox"/> EASA.145.0442								
<input type="checkbox"/> UAE.145.0010 (OLD:GCAA-EM/G/487)								
<input type="checkbox"/> OTHER								
INDEPENDENT INSPECTION REQUIRED YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>								
NOTE: INDEPENDENT INSPECTIONS MUST BE RECORDED AND CERTIFIED IN AN APPROVED MANNER.								
<b>REFERENCES</b>								
No Reference Defined								
<b>APPLICABLE ZONES</b>								
410								
<b>ASSOCIATED DOCUMENTS / RELATED CARDS</b>								
No associated documents/related cards defined								
<b>ACCESS PANEL REQUIREMENTS</b>								
No Access Panel assigned to this task								
<b>MATERIAL REQUIREMENTS</b>								
<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>QTY REQD</b>	<b>AS REQD</b>	<b>BATCH NUMBER</b>				
No materials assigned to this task								
(Empty rows for material requirements)								

<b>NRC's Raised</b>	NRC NO(S):	Add. Work Sheets raised:	AWS NO(s)	CARD CLEAR
YES <input type="checkbox"/>		YES <input type="checkbox"/>		
NO <input checked="" type="checkbox"/>		NO <input checked="" type="checkbox"/>		

	<b>JOB CARD</b>						REV NO.	1/07-MAR-18	
	<b>EY_B777-54-0274_EWI</b>						CARD SEQ:	7	
	<b>WORK PACK REFERENCE</b>						PAGE	4/4	
	-160						VISIT NO.	<b>1591645</b>	
Abu Dhabi International Airport PO Box 36566 New Airport Road Abu Dhabi United Arab Emirates	A/C TYPE	B777-200LR	REGN.	A6-LRE	MSN	36304	CHARGEABLE	<input checked="" type="checkbox"/>	
	WORK ORDER	 *AUH19767941*					<b>AF</b>		
	LOCATION / DEPT.	AUH EY Line Drop/ETIHAD ABU DHABI LINE							

**MATERIAL REQUIREMENTS**

PART NUMBER	DESCRIPTION	QTY REQD	AS REQD	BATCH NUMBER

**TOOLING REQUIREMENTS**

PART NUMBER	DESCRIPTION	QTY REQUIRED
No tools assigned to this task		

**ACTUAL PRODUCTION MAN-HOURS RECORDING**

Skill	ACT Person	ACT Mhrs (Hrs:Min)

NRC's Raised YES <input type="checkbox"/> NO <input type="checkbox"/>	NRC NO(S):	Add. Work Sheets raised: YES <input type="checkbox"/> NO <input type="checkbox"/>	AWS NO(s)	CARD CLEAR

## 1. **Applicability**

- A. This subject gives the allowable damage limits for the Inlet Cowl Skin for the GE90-100 Series Engine shown in Figure 101/ALLOWABLE DAMAGE 1.

### **Figure 101. Allowable Damage - Inlet Cowl Skin - GE90-100 Series Engine**

Sheet 1

## 2. **General**

- A. Do an inspection of the damaged area to find the dimension of the damage. Boeing recommends that you use an instrumented Non-Destructive Inspection (NDI) procedure. Refer to NDT Part 1, 51-01-00 for instruction on how to select an inspection procedure.

**NOTE: Other inspection methods that have been examined and found satisfactory by the operator can be used.**

- B. Refer to Figure 102/ALLOWABLE DAMAGE 1 for the definitions of the face-sheets of a honeycomb panel, and size definitions of the damage.
- C. After the damage to the aluminum parts is removed:
- (1) Apply a chemical conversion coating to the reworked areas. Refer to 51-20-01, GENERAL.
- D. For damages to the composite panels (Acoustic panel and Outer panel), remove the moisture from the damaged area. Use a heat source with a maximum of 125°F (52°C) to remove the moisture from the honeycomb cells. Refer to 51-70-04, REPAIR GENERAL for damage removal and moisture removal procedures.
- E. Seal all permitted damage areas of the composite panels with one of the methods that follow. Refer to Figure 103/ALLOWABLE DAMAGE 1 Table B or Table C for the inspection and sealing requirements:
- (1) Temporary Seal:
    - (a) Seal the damage with aluminum foil tape (speed tape) 3M-Y436 or the equivalent.
    - (b) Keep a record of the location and do the inspection as necessary. Replace the aluminum foil tape if you find deterioration.
    - (c) Repair or seal permanently as given in Figure 103/ALLOWABLE DAMAGE 1 Table B or Table C .
  - (2) Permanent Seal:
    - (a) BMS 8-207 epoxy resin as given in 51-70-08, REPAIR 1.
    - (b) BMS 5-92, Type I or Type III adhesive. Cure the BMS 5-92, Type I or Type III adhesive at 75°F (24°C) for 24 hours.
- F. For the damaged areas of the Acoustic panel and Outer panel where a permanent seal was applied do one of the following steps:
- (1) Apply one layer of BMS 10-79, Type III primer on the outer face (tool-side face-sheet) of the outer panel. Refer to SOPM 20-44-04.
  - (2) Apply one layer of BMS 10-103, Type I primer on the inner faces (bag-side face-sheet) of the outer panel. Refer to SOPM 20-44-04.
  - (3) Apply two layers of BMS 10-103, Type III primer on the inner face (bag-side face-sheet) of the acoustic panel. Refer to SOPM 20-44-04.
  - (4) Apply one layer of aluminized epoxy primer BAC 5755 Type 10 on the perforated face sheet (tool-side face-sheet) of the acoustic panel.
- G. Apply a finish to the reworked areas as given in AMM PAGEBLOCK 51-21-10/701.

### **Figure 102. Allowable Damage Definitions**

Sheet 1

## 3. **References**

<b>Reference</b>	<b>Title</b>
51-10-01, GENERAL	Aerodynamic Smoothness Requirements
51-10-02, GENERAL	Inspection and Removal of Damage
51-20-01, GENERAL	Protective Treatment - Metal Structure
51-30-03, GENERAL	Sources For Non-Metallic Repair Materials
51-30-05, GENERAL	Equipment and Tools For Repairs
51-70-04, REPAIR GENERAL	Repair Procedures for Wet Layup Materials
51-70-08, REPAIR 1	Resin Sweep-Fair Procedures
AMM 51-21-10 P/B 701	DECORATIVE EXTERIOR PAINT SYSTEM - CLEANING/PAINTING
AMM 71-11-01	INLET COWL
AMM 71-11-01 P/B 201	INLET COWL - MAINTENANCE PRACTICES
BAC 5755	Application of Interior Decorative Finishes
NDT Part 1, 51-01-00	Orientation and Preparation for NDT Tests
SOPM 20-41-01	Decoding Table For Boeing Finish Codes
SOPM 20-44-04	Application of Urethane Compatible Primer

**4. Allowable Damage Limits**

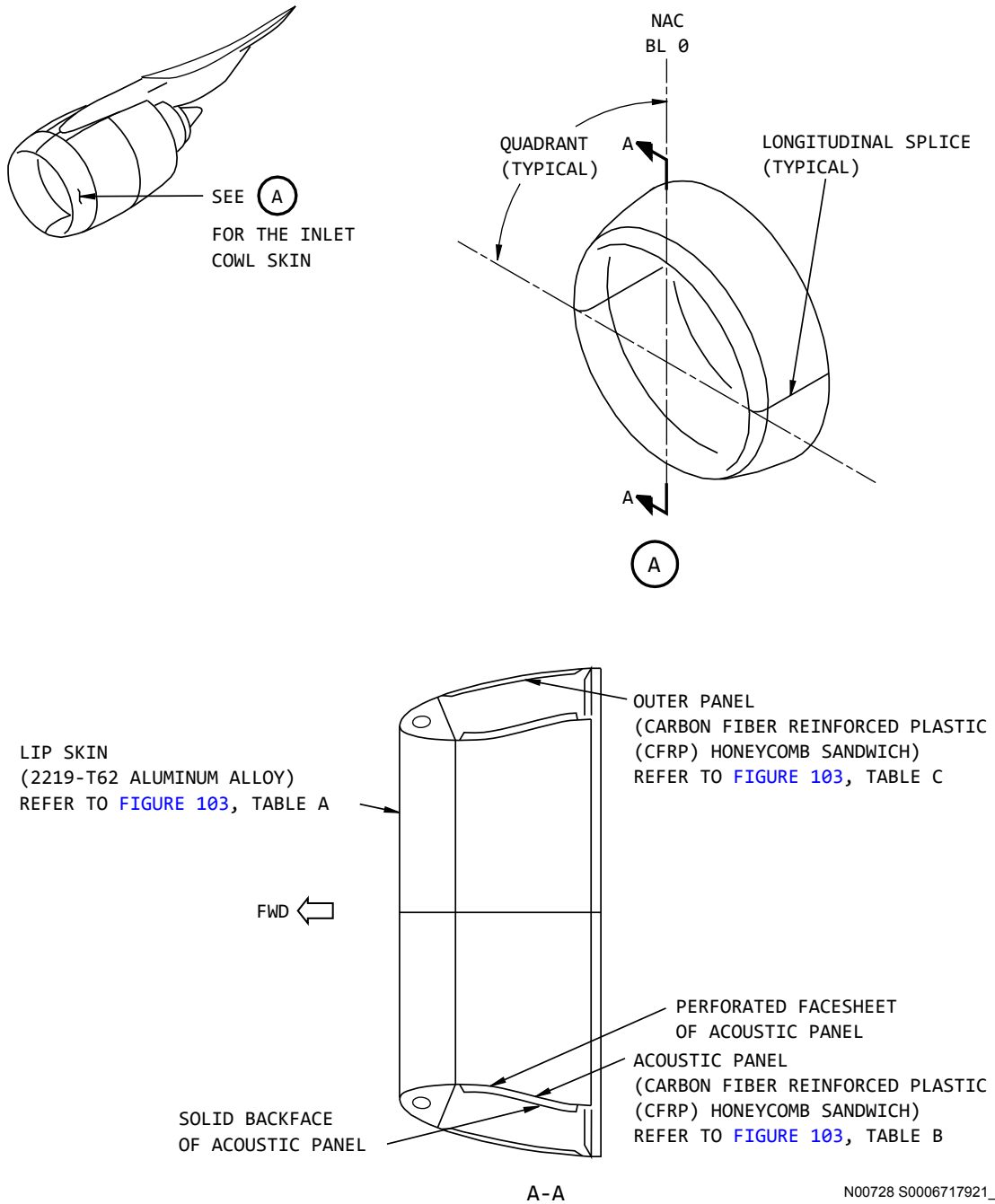
A. Refer to Figure 103/ALLOWABLE DAMAGE 1 for the allowable damage limits of the Inlet Cowl Skin.

**Figure 103. Allowable Damage Limits**

- Sheet 1
- Sheet 2
- Sheet 3
- Sheet 4
- Sheet 5
- Sheet 6
- Sheet 7
- Sheet 8
- Sheet 9
- Sheet 10
- Sheet 11



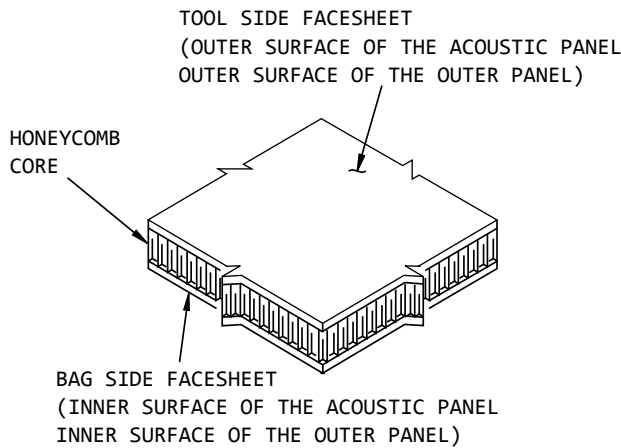
Fig Issue Date: 15 Sep 2005



N00728 S0006717921\_V1

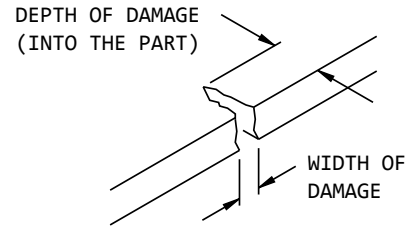
Figure 101. Allowable Damage - Inlet Cowl Skin - GE90-100 Series Engine

Fig Issue Date: 15 Sep 2005



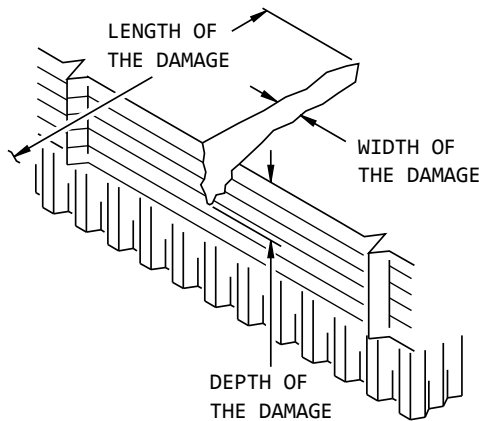
DEFINITIONS OF THE FACESHEETS

(A)



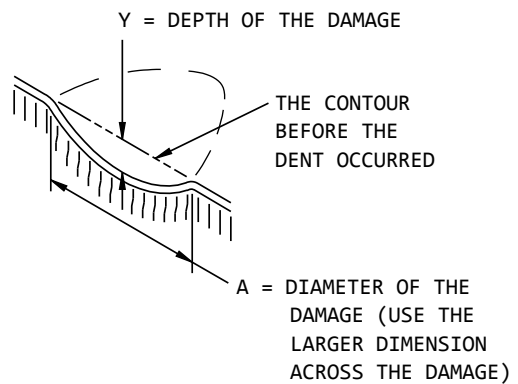
SIZE DEFINITIONS FOR EDGE DAMAGE

(B)



SIZE DEFINITIONS FOR NICK, GOUGE, OR SCRATCH DAMAGE

(C)



SIZE DEFINITIONS FOR DENT DAMAGE

(D)

N00729 S0006717922\_V1

Figure 102. Allowable Damage Definitions

Fig Issue Date: 15 Sep 2016

ALLOWABLE DAMAGE LIMITS - INLET COWL LIP SKIN				
DESCRIPTION	NICKS, GOUGES AND SCRATCHES	DENTS	CRACKS	HOLES AND PUNCTURES
LEADING EDGE SKIN (ALUMINUM)	SEE DETAILS A, B, C, AND D 	SEE DETAIL E - DAMAGE MINIMUM SPACING 15.0 INCH 	- FOR CRACKS AT THE EDGE SEE DETAILS B, C, AND D - FOR SURFACE CRACKS SEE HOLES AND PUNCTURES 	- MAXIMUM 0.25 INCH (6.35 mm) DIAMETER - DAMAGE MINIMUM SPACING 4D FROM AN ADJACENT HOLE, FASTENER OR OTHER DAMAGE - 1.5D FROM THE EDGE OF THE PART 

TABLE A

ALLOWABLE DAMAGE LIMITS - INLET COWL ACOUSTIC PANEL			
TYPE OF DAMAGE	DAMAGE TO THE CARBON FIBER PLY	LIMIT DESCRIPTION	MAXIMUM DAMAGE LIMITS LENGTH: INCHES (mm) AREA: SQUARE INCHES (SQUARE cm)
NICKS, GOUGES AND SCRATCHES	NO	ANY DIMENSION	NONE
	YES 	- LENGTH - WIDTH - DEPTH IN PLYS - DAMAGE MINIMUM SPACING	20.0 (508) 0.25 (6) 1 PLY (MAXIMUM) SEE <a href="#">FIGURE 103</a> , DETAIL I
DENTS 	NO	- DIAMETER, DEPTH - DAMAGE MINIMUM SPACING OR - DIAMETER, DEPTH - DAMAGE MINIMUM SPACING	2.0 (51), 0.050 (1.3) SEE <a href="#">FIGURE 103</a> , DETAIL I  10.0 (254), 0.0050 (0.13) SEE <a href="#">FIGURE 103</a> , DETAIL I
	YES	ANY DIMENSION	SEE LIMITS FOR HOLES AND PUNCTURES
HOLES AND PUNCTURES 	YES	- DIAMETER  - DEPTH - DAMAGE MINIMUM SPACING	1.0 (25) 3.0 (76) 4.0 (102)  ONE FACESHEET AND THE CORE. SEE <a href="#">FIGURE 103</a> , DETAIL I

TABLE B

N01118 S0006717923\_V4

Figure 103. Allowable Damage Limits : Sheet 1

Fig Issue Date: 15 Sep 2005

ALLOWABLE DAMAGE LIMITS - INLET COWL ACOUSTIC PANEL				
TYPE OF DAMAGE	DAMAGE TO THE CARBON FIBER PLY	LIMIT DESCRIPTION		MAXIMUM DAMAGE LIMITS LENGTH: INCHES (mm) AREA: SQUARE INCHES (SQUARE cm)
DELAMINATION  	NO	PERFORATED FACESHEET	- DIAMETER - DEPTH - DAMAGE MINIMUM SPACING - TOTAL AREA OF ALL DELAMINATION	SEE DETAIL H 5.0 (127) ONE FACESHEET AND THE CORE SEE FIGURE 103, DETAIL I 50.0 (323)
		SOLID FACESHEET	- DIAMETER - DEPTH - DAMAGE MINIMUM SPACING - TOTAL AREA OF ALL DELAMINATION	SEE DETAIL H 5.0 (127) ONE FACESHEET AND THE CORE SEE FIGURE 103, DETAIL I 50.0 (323)
	YES	SEE LIMITS FOR HOLES AND PUNCTURES		
EDGE DAMAGE	YES 	- WIDTH - DEPTH - DAMAGE MINIMUM SPACING	0.25 (6) 0.10 (2.5) 1.0 (25)	
EDGE EROSION	YES 	- ANY DIMENSION	SEE DETAIL F AND G	

TABLE B (CONTINUED)

Figure 103. Allowable Damage Limits : Sheet 2

Fig Issue Date: 15 Jan 2006

ALLOWABLE DAMAGE LIMITS - INLET COWL OUTER PANEL			
TYPE OF DAMAGE	DAMAGE TO THE CARBON FIBER PLY	LIMIT DESCRIPTION	MAXIMUM DAMAGE LIMITS LENGTH: INCHES (mm) AREA: SQUARE INCHES (SQUARE cm)
NICKS, GOUGES AND SCRATCHES	NO	ANY DIMENSION	NONE
	YES 8	- LENGTH - WIDTH - DEPTH IN PLYS -DAMAGE MINIMUM SPACING	20 (508) 0.25 (6) 1 PLY (MAXIMUM) SEE FIGURE 103, DETAIL I
DENTS 4	NO	- DIAMETER - DEPTH - DAMAGE MINIMUM SPACING	2.0 (51) 0.050 (1.3) SEE FIGURE 103, DETAIL I
	YES	ANY DIMENSION	SEE LIMITS FOR HOLES AND PUNCTURES
HOLES AND PUNCTURES 13	YES	- DIAMETER	1.0 (25.4) 9 3.0 (76.2) 10 4.0 (101.6) 11
		- DEPTH - DAMAGE MINIMUM SPACING	ONE FACESHEET AND THE CORE SEE FIGURE 103, DETAIL I
DELAMINATION 6 12	NO	- DIAMETER	SEE DETAIL H 4.0 (101.6) 9 6.0 (152.4) 10 8.0 (203.2) 11
		- DEPTH IN PLYS - DAMAGE MINIMUM SPACING	ONE FACESHEET AND THE CORE SEE FIGURE 103, DETAIL I
EDGE DAMAGE	YES 5	- WIDTH - DEPTH - DAMAGE MINIMUM SPACING	0.25 (6) 0.10 (2.5) 1.0 (25)
		EDGE EROSION	SEE DETAIL F AND G

TABLE C

N00967 S0006717925\_V2

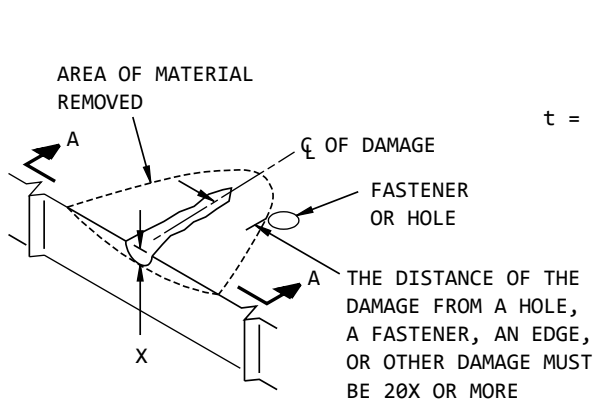
Figure 103. Allowable Damage Limits : Sheet 3

NOTES

- 1 DAMAGE OF UP TO 5% OF THE THICKNESS IS PERMITTED IN THE AREA OF THE SPLICE FASTENERS.
- 2 A MAXIMUM OF TWO DENTS ARE PERMITTED IN ONE QUADRANT. REFER TO FIGURE 101 AND FIGURE 103, DETAIL E. THE EDGE OF THE DENTS MUST BE A MINIMUM 0.50 (13 mm) FROM ANY FASTENER (COUNTERSINK EDGE).
- 3 INSTALL A NAS 1398D BLIND MONEL RIVET WITH BMS 5-63 SEALANT.
- 4 DENTS GENERALLY RESULT IN FIBER DAMAGE OR DELAMINATION. THE LIMITS FOR DENTS CAN BE APPLICABLE IF NO FIBER DAMAGE OR DELAMINATION EXISTS. IF THERE IS FIBER DAMAGE OR DELAMINATION REFER TO THE APPLICABLE DAMAGE DATA IN TABLE B OR TABLE C.
- 5 DO A PERMANENT SEAL OF THE DAMAGE AS GIVEN IN THE PARAGRAPH GENERAL.
- 6 DELAMINATION IS NOT PERMITTED IN THE CRITICAL AREA SHOWN IN FIGURE 103 DETAIL H.
- 7 DO AN INSPECTION OF THE DELAMINATION EVERY 400 FLIGHT CYCLES. REPAIR THE DAMAGE BEFORE OR AT 4,000 FLIGHT CYCLES.
- 8 DO A TEMPORARY OR PERMANENT SEAL OF THE DAMAGE. FOR THE TEMPORARY SEAL, DO AN INSPECTION EVERY 400 FLIGHT CYCLES AND DO A PERMANENT SEAL AT OR BEFORE 4,000 FLIGHT CYCLES.
- 9 DO A TEMPORARY SEAL OF THE DAMAGE. DO AN INSPECTION EVERY 400 FLIGHT HOURS. REPAIR THE DAMAGE BEFORE OR AT 4,000 FLIGHT HOURS.
- 10 DO A TEMPORARY SEAL OF THE DAMAGE. REPAIR THE DAMAGE AT OR BEFORE 400 FLIGHT HOURS.
- 11 DO A TEMPORARY SEAL OF THE DAMAGE. REPAIR THE DAMAGE AT OR BEFORE 25 FLIGHT HOURS.
- 12 FOR EDGE DELAMINATION REFER TO EDGE DAMAGE.
- 13 HOLES AND PUNCTURES MUST BE CLEANED UP TO CIRCULAR HOLES BEFORE APPLICATION OF TEMPORARY OR PERMANENT SEAL. MAKE THE ESTIMATE OF THE HOLE SIZE AFTER YOU CLEAN UP THE DAMAGE.

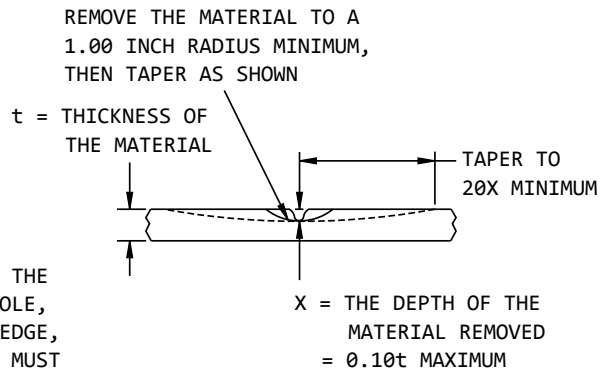
Figure 103. Allowable Damage Limits : Sheet 4

Fig Issue Date: 15 Sep 2005



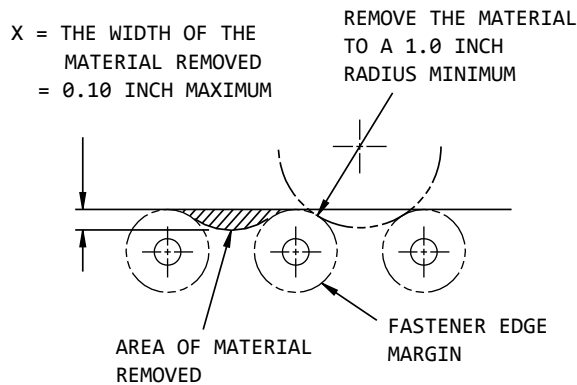
REMOVAL OF DAMAGED MATERIAL ON A SURFACE

(A)



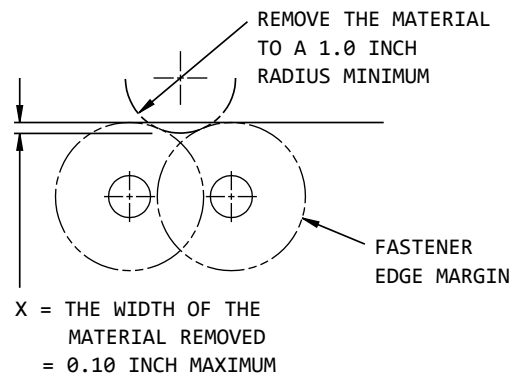
**NOTE:** CLEANUP TO  $0.50t$  MAXIMUM OF THE SKIN THICKNESS IS PERMITTED FOR 25 FLIGHT HOURS, THEN YOU MUST REPAIR THE DAMAGE.

A-A



REMOVAL OF DAMAGED MATERIAL AT EDGES WHERE THE FASTENER EDGE MARGINS DO NOT HAVE AN OVERLAP

(B)



REMOVAL OF DAMAGED MATERIAL AT EDGES WHERE THE FASTENER EDGE MARGINS HAVE AN OVERLAP

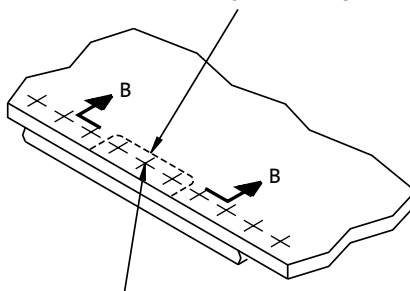
(C)

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Figure 103. Allowable Damage Limits : Sheet 5

Fig Issue Date: 15 Sep 2005

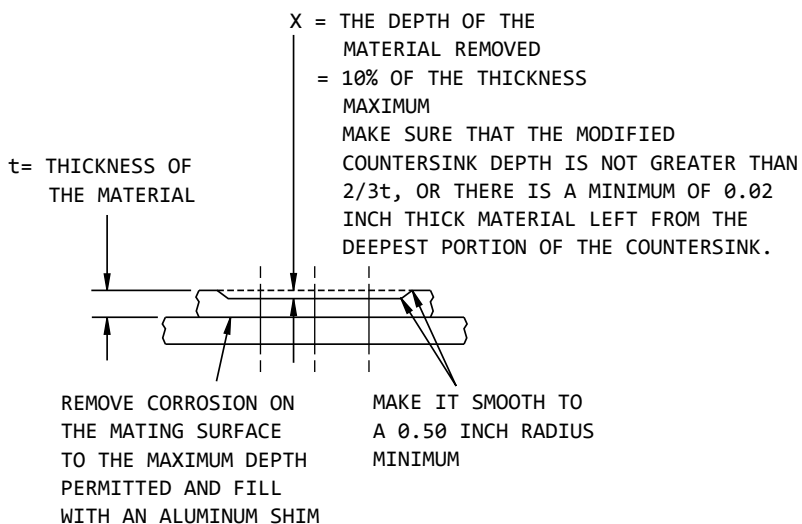
THE REMOVAL OF MATERIAL AROUND THREE  
FASTENERS IN A GROUP OF TEN IS  
PERMITTED TO A MAXIMUM DEPTH OF X



REMOVE THE FASTENERS BEFORE THE  
DAMAGE IS REMOVED. INSTALL THE  
FASTENERS AFTER THE REWORK IS  
COMPLETED

REMOVAL OF CORROSION DAMAGE  
AROUND THE FASTENERS

(D)

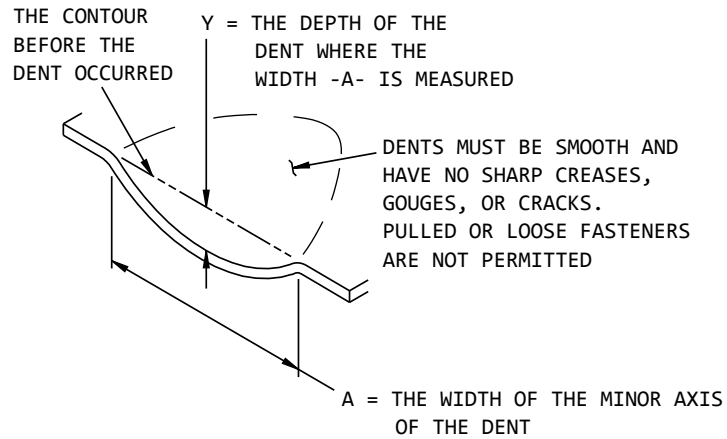


B-B

N01131 S0006717928\_V1

Figure 103. Allowable Damage Limits : Sheet 6





IT IS NOT NECESSARY TO REPAIR THE DENT IF:

- DENTS ARE SMOOTH AND HAVE NO GOUGES, CRACKS, OR SHARP CREASES
- $A/Y$  IS MORE THAN 8 AT ALL LOCATIONS ALONG THE DENT
- $Y$  IS 0.125 INCH (3.2 mm) OR LESS
- THE MAJOR AXIS OF THE DENT IS 4.00 INCHES (102 mm) OR LESS

OR,

IT IS NOT NECESSARY TO REPAIR THE DENT IF:

- DENTS ARE SMOOTH AND HAVE NO GOUGES, CRACKS, OR SHARP CREASES
- $Y$  IS 0.125 INCH (3.2 mm) OR LESS
- THE MAJOR AXIS OF THE DENT IS 4.00 INCHES (102 mm) OR LESS
- AND THE DENT IS INSPECTED EVERY 24 CALENDAR MONTHS OF OPERATION AND THERE ARE NO CRACKS.

IF THE DENT DOES NOT AGREE WITH THE ABOVE CONDITIONS, THE DENT IS PERMITTED FOR 25 FLIGHT HOURS IF:

- THE DENT HAS A CREASE LESS THAN 3.00 INCHES (76 mm) LONG
- $Y$  IS LESS THAN 0.25 INCH (6.4 mm)
- THE LENGTH AND WIDTH OF THE DENT IS LESS THAN 7.00 INCHES (178 mm)
- THERE ARE NO MORE THAN TWO DENTS FOR EACH UPPER QUADRANT
- THERE ARE NO MORE THAN TWO DENTS TOTAL FOR BOTH LOWER QUADRANTS TOGETHER.

DENT THAT IS PERMITTED ON THE INLET COWL LIP SKIN

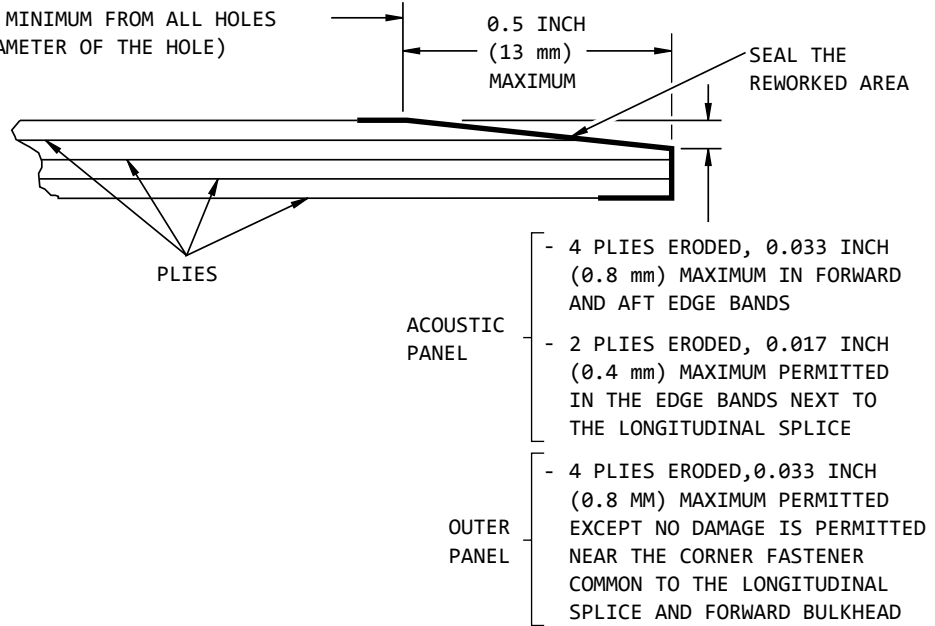
E

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Figure 103. Allowable Damage Limits : Sheet 7

Fig Issue Date: 15 Sep 2005

THE EDGE OF THE MATERIAL REMOVED  
 MUST BE 2XD MINIMUM FROM ALL HOLES  
 (D = THE DIAMETER OF THE HOLE)



DAMAGE REMOVAL AND SEAL INSTRUCTIONS:

1. CLEAN THE DAMAGED AREA AS GIVEN IN [SRM 51-10-02](#).
2. MAKE A CHAMFER ON THE EDGE, UP TO THE MAXIMUM DIMENSIONS SHOWN, TO REMOVE THE DAMAGED MATERIAL.
  - A. DO NOT MAKE A CHAMFER THAT GOES THROUGH THE EDGE OF A COUNTERSINK AT A FASTENER LOCATION.
  - B. REMOVE ALL BURRS TO MAKE THE CONTOUR SMOOTH.
  - C. SEAL THE REWORKED AREA

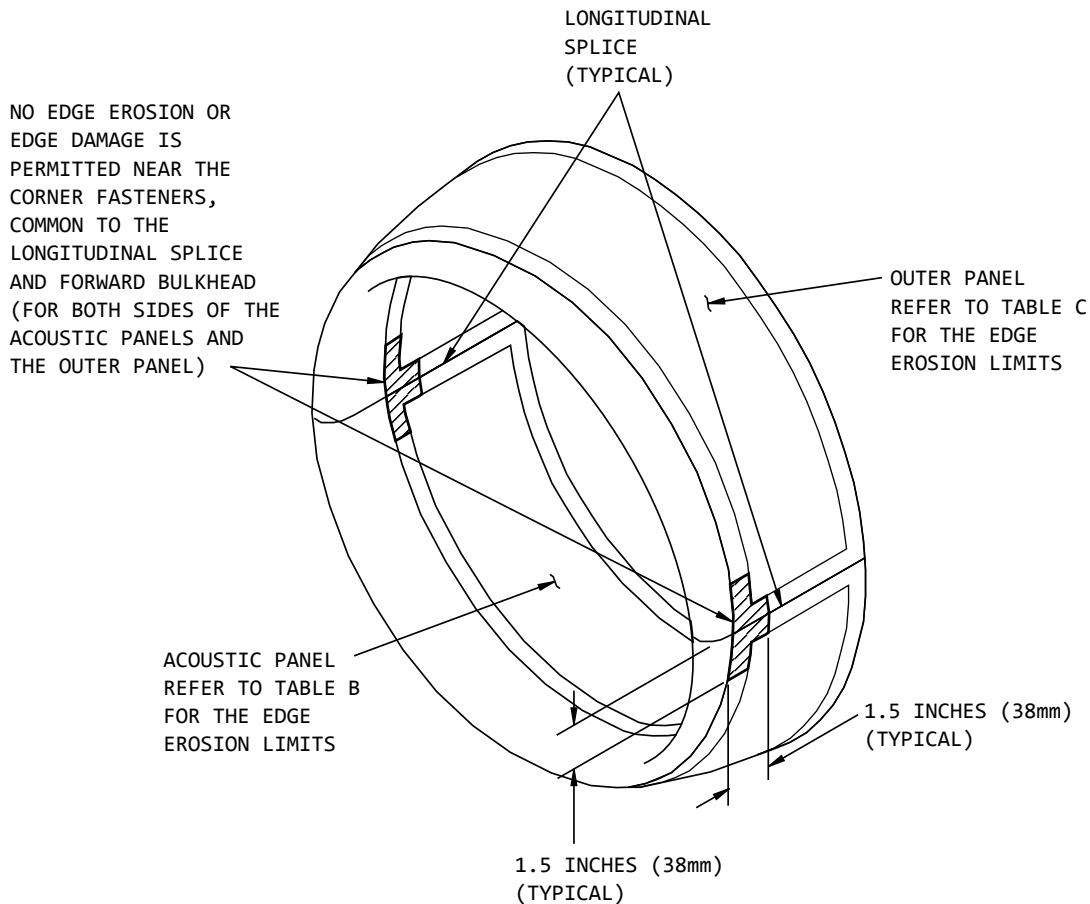
REMOVAL OF EDGE EROSION DAMAGE

(F)

N01136 S0006717930\_V1

Figure 103. Allowable Damage Limits : Sheet 8

Fig Issue Date: 15 Sep 2005



 EDGE EROSION OR EDGE DAMAGE IS NOT PERMITTED IN THIS AREA.

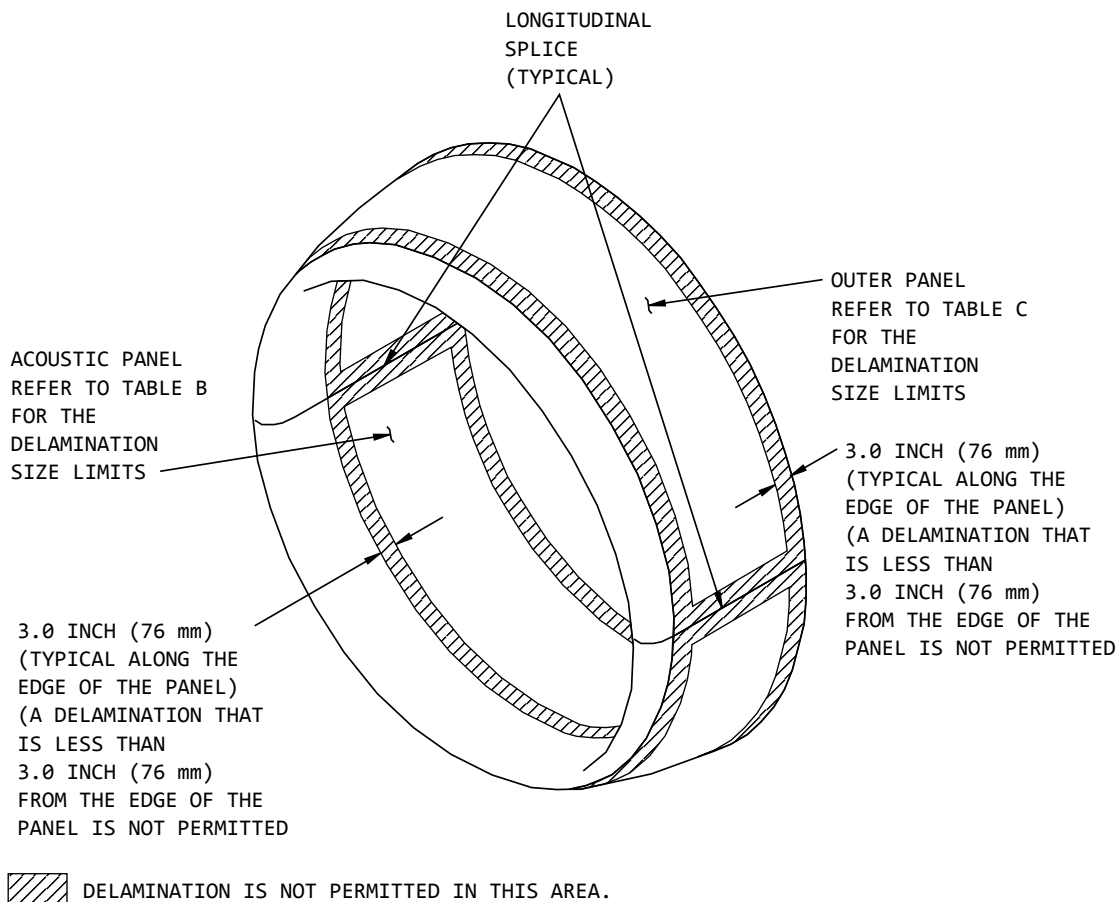
EDGE EROSION DAMAGE PERMITTED  
ON THE OUTER PANEL AND ACOUSTIC PANEL

G

W52138 S0006717931\_V1

Figure 103. Allowable Damage Limits : Sheet 9

Fig Issue Date: 15 Sep 2005



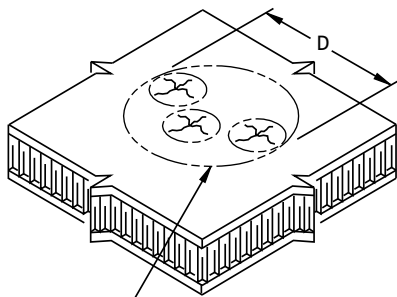
DELAMINATION DAMAGE PERMITTED  
ON THE OUTER PANEL AND ACOUSTIC PANEL

(H)

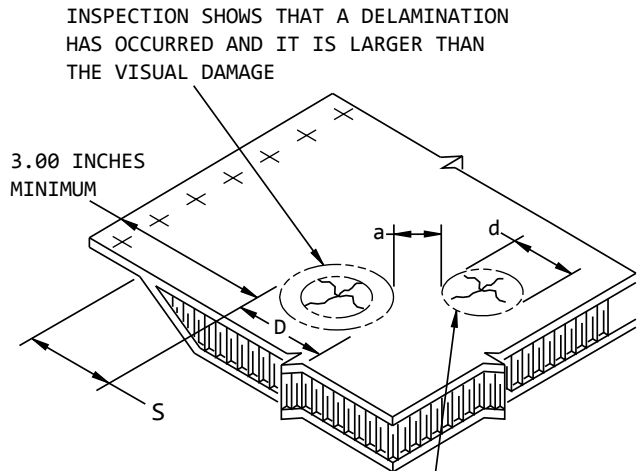
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Figure 103. Allowable Damage Limits : Sheet 10

Fig Issue Date: 15 Sep 2005



SMALL DAMAGE AREAS THAT ARE CLOSELY SPACED MAY BE GROUPED TOGETHER AND CONSIDERED AS ONE DAMAGE AREA



INSPECTION SHOWS THAT THERE IS ONLY VISUAL DAMAGE

**NOTE:**

- A DAMAGED AREA CAN INCLUDE ANY OF THE TYPES OF DAMAGE WHICH FOLLOW:
  - A DENT
  - A DELAMINATION
  - A PUNCTURE
  - A NICK, GOUGE OR SCRATCH WITH FIBER DAMAGE
- TO FIND DELAMINATION YOU CAN USE NONDESTRUCTIVE INSPECTION PROCEDURES (REFER TO NDT PART 1, 51-01-01).
- THE DIAMETER OF A DAMAGE AREA IS EITHER THE DIAMETER OF THE VISUAL DAMAGE OR THE DIAMETER OF THE DELAMINATION. USE THE DIAMETER OF THE LARGER DAMAGE.
- -D- IS THE LARGER DIAMETER OF ANY TWO ADJACENT DAMAGE AREAS.
- -d- IS THE SMALLER DIAMETER OF ANY TWO ADJACENT DAMAGE AREAS.
- -a- IS THE DISTANCE BETWEEN ANY TWO ADJACENT DAMAGE AREAS.
- THE MINIMUM -a- THAT IS PERMITTED IS THE LARGER OF 0.75D OR 3d.
- -S- IS THE DISTANCE FROM THE EDGE OF THE DAMAGE TO THE EDGE OF THE HONEYCOMB.
  - FOR THE INLET COWL OUTER PANEL -S- MUST BE 2.00 INCHES OR 1XD WHICHEVER IS LARGER.
  - FOR THE INLET COWL ACOUSTIC PANEL S MUST BE 3.5XD INCHES.

DAMAGE SIZE AND SPACING DATA FOR COMPOSITE PANELS



W76239 S0006717933\_V1

Figure 103. Allowable Damage Limits : Sheet 11

**MINI PACK**

**AJW**



**B7-LRE-0009**



**Structural Damage Repair Report**

MSN: 36304	Date: 25 Jan 2015	Index No: 09
Aircraft Type: B777-200LR	SDRR No: B7-54-LRE-0009	
Aircraft Reg'n: A6-LRE	Structural Classification: PRIMARY	
Aircraft TSN : 25371	Aircraft CSN : 3001	Visit: 882560 WO: AUH11344469

<b>Damaged Component(s)</b>		
Description:	INLET COWL UPPER OUTER BARREL DAMAGED DUE TO DUE TO SLING BREAK	
Part Number:	314W1400-9	Serial No : 001114
Damage Caused by:	ACCIDENTAL	
SRM / CMM Ref:	B777-300 SRM 54-13-01 Rev.49, 15 May 2014	
<b>Location of damage</b>		
Body Station/ Frame:	STGR/BLWL:	RIBS:
Position:		Side:
<b>Defect Description (Type of damage, Dimension)</b>		
<p>ON 26 Aug 2014 SUBJECT INLET COWL (P/N: 314W1400-9, S/N: 001114) WHILE FITMENT ON AIRCRAFT B777-300ER, Regn: A6-ETC MSN: 34599, WAS DAMAGED ON THE UPPER OUTER BARREL UPPER SURFACE DUE TO SLING FAILURE. MINOR SCRATCH DAMAGES WERE ALSO FOUND ON THE LIP SKIN AT TWO LOCATIONS (A &amp; B) BETWEEN 10 &amp; 11 O' CLOCK POSITION (Qty: 07) AND BETWEEN 12 &amp; 1 O' CLOCK POSITION (Qty: 01). REFER TO ATTACHED SKETCH FOR DETAILS.</p> <p>DUE TO THE EXTENSIVE DAMAGE ON THE UPPER OUTER BARREL PANEL, IT IS TO BE REPLACED. THERE ARE TWO EXISTING MINOR DENT DAMAGES ON THE INLET COWL LIP SKIN AT 1 O' CLOCK AND AT 5 O' CLOCK POSITIONS WHICH ARE REPORTED IN SDRR # B7-540000-6866 &amp; SDRR # B7-540000-6865 RESPECTIVELY. MINOR SCRATCH MARKS ON THE LIPSKIN BETWEEN 10 &amp; 11 O' CLOCK POSITION AND BETWEEN 12 &amp; 1 O' CLOCK POSITION WERE REMOVED I.A.W. B777-300 SRM 51-10-02-0G-0, Para.5.A. HFEC INSPECTION AS PER NTM 51-06-00 CONFIRMED NIL CRACKS. ULTRASONIC THICKNESS TEST WA PERFORMED AS PER NTM 51-00-10 PT 4 TO DETERMINE LOSS OF MATERIAL (0.002" &amp; 0.001").</p> <p>Dimension: Refer to the sketch for details.</p>		
Method of inspection :	TAP TEST + HFEC + U.T.THICKNESS + DVI	
Repair exists in near vicinity:	NO	Distance between repairs: N/A
*Sketch/ Drawing No. :		
<b>Action / Rectification</b>		
Permanent :	<p>(1) UPPER OUTER BARREL WAS REPLACED WITH SERVICEABLE PANEL (from Ex Inlet Cowl S/N: 001431) IN ACCORDANCE WITH B777 AMM 71-11-01 PB 201.</p> <p>(2) MINOR SCRATCH REWORKS ON THE LIPSKIN BETWEEN 10 &amp; 11 O' CLOCK POSITION AND BETWEEN 12 &amp; 1 O' CLOCK POSITION WERE FOUND TO BE WITHIN ALLOWABLE DAMAGE LIMITS I.A.W. B777-300 SRM 54-13-01-1A-1 TABLE 'A', FIG 103, DETAIL 'A'. SURFACE PROTECTION CARRIED OUT AS PER B777-300 SRM 51-20-01.</p> <p>Date : 25 Jan 2015</p>	
Repair Approved by:	B777-300 SRM 54-13-01-1A-1 TABLE 'A', FIG 103, DETAIL 'A'	
(ADAT Repair Scheme, DDO, SRM, SB, other)	B777 AMM 71-11-01 PB 201	
-Specify SRM/CMM Rev. & Date)		
Repair is: PERMANENT	Repair Installation Date : 02 Sep 2014	
Inspection Threshold:	NO SUPPLEMENTAL INSPECTION REQUIRED.	
Applicable Reference(s):	SHOP WORK PACK NRC 001	
Prepared by: NARAYANAN KUTTY		Staff No. : 14364
Signature : ELECTRONICALLY GENERATED DOCUMENT NO SIGNATURE REQUIRED		Date : 25 Jan 2015

\* Where Applicable.

# Structural Damage Repair Report

MSN: 36304	Date: 25 Jan 2015	Index No: 09
Aircraft Type: B777-200LR	SDRR No: B7-54-LRE-0009	
Aircraft Reg'n: A6-LRE	Structural Classification: PRIMARY	
Aircraft TSN : 25371   Aircraft CSN : 3001	Visit: 882560	WO: AUH11344469

**ACTION / RECTIFICATION :**

(1) UPPER OUTER BARREL WAS REPLACED WITH SERVICEABLE PANEL (from Ex Inlet Cowl S/N: 001431) IN ACCORDANCE WITH B777 AMM 71-11-01 PB 201.

(2) MINOR SCRATCH REWORKS ON THE LIPSKIN BETWEEN 10 & 11 O' CLOCK POSITION AND BETWEEN 12 & 1 O' CLOCK POSITION WERE FOUND TO BE WITHIN ALLOWABLE DAMAGE LIMITS I.A.W. B777-300 SRM 54-13-01-1A-1 TABLE 'A', FIG 103, DETAIL 'A'.

SURFACE PROTECTION CARRIED OUT AS PER B777-300 SRM 51-20-01.

NOTE: SUBJECT INLET COWL (P/N: 314W1400-9, S/N: 001114) IS PRESENTLY FITTED ON A6-LRE, B777-200LR, MSN: 36304.

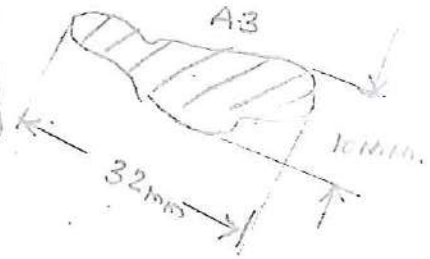
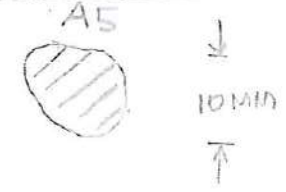
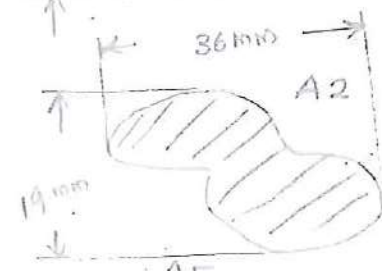
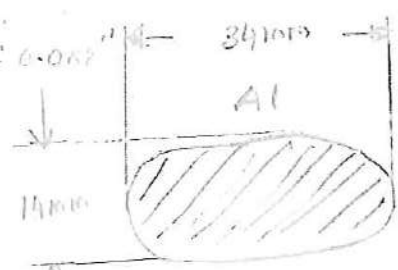
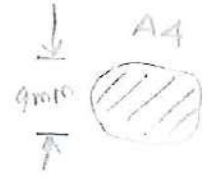


(A)

ORIGINAL THICKNESS: 0.062"

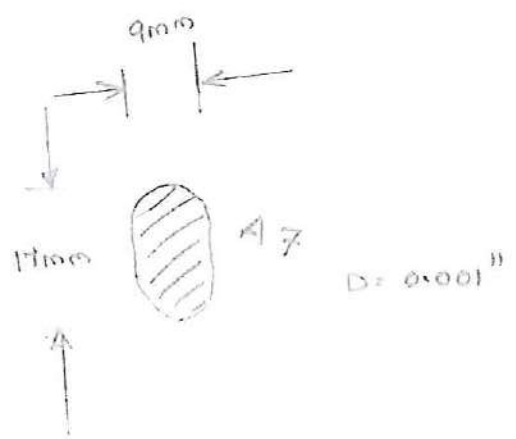
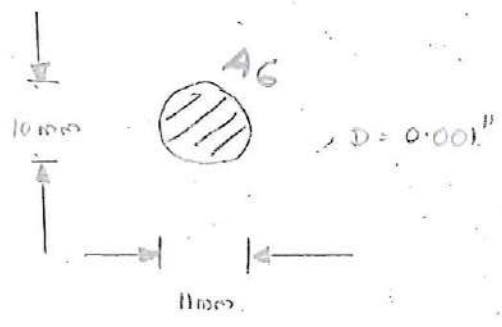
10 10 11  
0' CLOCK POSITION N

	L	W	D
A1	34	14	0.003"
A2	36	19	0.002"
A3	32	10	0.001"
A4	14	9	0.001"
A5	13	10	0.001"
A6	11	10	0.001"
A7	17	9	0.001"



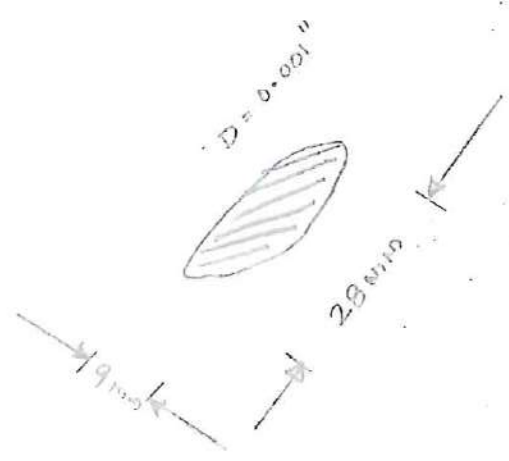
ADAT 6224

ADAT 6224  $M \cdot \sqrt{7}$



12 TO 10' (101)  
POSITION

L      W      D  
E. 28MM x 9MM.      0.001"



ORIGINAL THICK: 0.077"  
REMAINING THICK: 0.076"

ADAT  
6224  $\gamma/\sqrt{}$

ORIGINAL COPY

Work Order *AUI11344469*	<b>NON ROUTINE WORK CARD</b>					CARD NO.	001
						PAGE	1 OF 3
ETIHAD A6-LRE	A/C REG	A/C TYPE	VISIT NO.	ZONE	TRADE	ATA	DATE RAISED
	A6-LRE	B777-200LR	882560	VARIOUS	AF		24-JAN-15
GENERATED BY		EST. MH	CHARGEABLE	CUSTOMER AUTH. (IF REQD.)		RAISED BY EMP. NO.	
CARD / DEFECT NO:		NR Number	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>				
M7139612		7139612					

DEFECT/ DESCRIPTION OF NON-ROUTINE WORK

PLEASE REPLACE THE BOEING LOAN UNIT PN:314W1400-28 SN:001558 INLET COWL WITH ETIHAD STOCK

*FOR ETIHAD AIRCRAFT ONLY	ETOPS / Critical Task <input type="checkbox"/>	SFAR88 / CDCCL / EWIS Task <input type="checkbox"/>	RII / INDEPENDENT INSPECTION REQUIRED? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
*DATA ENTRY REQ YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	*DATA ENTRY ACTIONED BY EMP. NO. 34268	*DEFERAL CODE	*DEFERAL NO
MCC CONTROL NO (if applicable)			

ITEM NO	ACTION TO BE TAKEN	ACTION TAKEN	MECH SIGN EMP. NO. DATE	ENGR STAMP SIGN DATE
10	PLEASE REPLACE AND RETURN TO STORES WITH LOAN/POOL TAG, SERVICEABLE TAG	N <sup>o</sup> 21 ENG. INLET COWL REPLACED AW AMM 71-11-01 PB 401 REV 73 JAN 15		25 JAN 15 ETIHAD B479
20	APPLY T12 SENSOR SEALANT	20 STOP 20 N/A. REF. Amm. 73-21-06-400-801-H01 REV 73 JAN 15	28052 25 JAN 15	25 JAN 15 ETIHAD B381
30	REINSTALL PANEL T12 PROBE	30 T12 SENSOR ACCESS PANEL NORMALISED.	28052 25 JAN 15	25 JAN 15 ETIHAD B381
40	TORQUE INLET COWL BOLTS AW AMM 71-11-01 BP 401 REV 73 JAN 15.	40. TORQUE INLET COWL BOLTS AW AMM 71-11-01/401 REV #. 73 5/1/15	28052 25 JAN 15	25 JAN 15 ETIHAD B479


CARD CLEAR  TICK AS APPROPRIATE









UAE.145.0002  EASA.145.0442  UAE.145.0010 (OLD:GCAA-EM/G487)  OTHER

Certifies that the work specified, except as otherwise specified, was carried out in accordance with CAR 145 / EASA Part 145 and in respect to that work, the aircraft / aircraft component is considered ready for release to service. (\*Delete not applicable)

COMPONENT CHANGE DETAILS					
POSN	P/N OFF	S/N OFF	P/N ON	S/N ON	Batch No/GRN
10	<del>314W1400-28</del> 314W1400-28	001558	<del>314W1400-9</del> 314W1400-9	001114	AUI-S-1502372

Continuation NR Page Attached Yes  No  Tick box if additional parts used sheets attached

Work Order	AUH 11344469	<b>NON ROUTINE WORK CARD</b> <b>Continuation Sheet</b>		CARD NO.:	001
				PAGE:	2 OF 3
		A/C REG.:	VISIT NO.:	RAISED BY EMP. NO.:	
A-6-LRE			82560		

ITEM NO	ACTION TO BE TAKEN	ACTION TAKEN	MECH SIGN. EMP. NO./ DATE	ENGR STAMP SIGN/DATE
50	RECONNECT ENG A-ICE PNEUMATIC DUCT	ENG ANTI-ICE DUCT RECONNECTED IAW AMM		 25 JAN 2015 
60	RECONNECT T12 ELECTR. CONNECTORS (2) AND PDSF ELECTR. CONNECTOR (1)	(60) T12 SENSOR CONNECTORS NORMALISED. AMM: 73-21-06-400-801-H01.	29052 25 JAN 15	 25 JAN 15 
70	APPLY YELLOW DOT AT DENT B3235 LOC ON INLET COWL UP SKIN. (DENT HAS BEEN ENTERED AT DAMAGE CHART ITEM 55. ALSO IF IS WRITTEN AT INLET COWL CERTIFICATE AS ACCEPTABLE AS PER SRM 53-12-01)	70. YELLOW DOT APPLIED IAW AMM, 56-24-11/701 REV 73 05 JAN 15.		 25 JAN 2015 
80	T12 SENSOR TRANSFER FROM INLET COWL S/N 01558 TO NEW COWL S/N 01114.	(80) T12 SENSOR INSTALLED PER AMM: 73-21-06-400-801-H01 REV. 73 05 JAN 15.	29052 25 JAN 15	 25 JAN 15 

CARD CLEAR

TICK AS APPROPRIATE

UAE.145.0002  
 EASA 145.0442  
 OTHERS \_\_\_\_\_


Certifies that the work specified, except as otherwise specified, was carried out in accordance with CAR 145 / EASA Part 145 and in respect to that work, the aircraft / aircraft component is considered ready for release to service. (\*Delete not applicable)





COMPONENT CHANGE DETAILS

POSN	P/N OFF	S/N OFF	P/N ON	S/N ON	Batch No./GRN/Label
#01			154DN9	EGNL 7671	EX: S/N: 001558

continuation NR Page attached Yes  No  Tick box if additional parts used sheets attached

Work Order	A0171134469	<b>NON ROUTINE WORK CARD Continuation Sheet</b>	CARD NO.:	001
			PAGE:	3 OF 3

	A/C REG.:	VISIT NO.:	RAISED BY EMP. NO.:
	AG-LRE	882560	

ITEM NO	ACTION TO BE TAKEN	ACTION TAKEN	MECH SIGN	ENGR STAMP
			EMP. NO./ DATE	SIGN/DATE
90.	CARRY OUT DUPLICATES INSP. OF ENG#1 INTAKE COOL INSTALLATION.	90. CARRIED OUT DUPLICATE INSPECTION OF ENG#1 INTAKE COOL INSTALLATION. JAO AMM 71-11-01/401 REV 43 05/JAN/15. NANO DATE TIME 1 <sup>ST</sup> NASIZ 25 JAN 2015 07:30G		
		2 <sup>ND</sup> TAMIED 25 JAN 2015 07:30G	 	 25JAN15 AUTH/STAN. 

**CARD CLEAR** TICK AS APPROPRIATE

UAE.145.0002  UAE.145.0002 Certifies that the work specified, except as otherwise specified, was carried out in accordance with CAR 145 / EASA-Part-145\* and in respect to that work, the aircraft / aircraft component is considered ready for release to service. (\*Delete not applicable)  
 EASA 145.0442  
 OTHERS \_\_\_\_\_

COMPONENT CHANGE DETAILS					
POSN	P/N OFF	S/N OFF	P/N ON	S/N ON	Batch No./GRN/Label

continuation NR Page attached Yes  No  Tick box if additional parts used sheets attached



4

TECHNICAL RECORDS DATA - WORK REQUIRED


TSN/CS/NSN	TBO/CBO	TSO/CSO/DSO	TSR/CSR/DSR
AC HRS AT REMOVAL	CYCLES AT REMOVAL	ATA NUMBER	ZONE

FAULT CODE

1. AS IS TEST & REPORT	5. CLEAN/REPAIR/RECTIFY (OC)
2. STRIP & REPORT SAMPLE	6. OVERHAUL
3. REWORK	7. WARRANTY CLAIM
4. MODIFY	

MOD/WORK READ.

Ref SDR # B7-54000-68663 68675  
 Dent within seam limits @ 12 o'clock  
 5 o'clock

SIGNATURE  DATE 05 JAN 2015

TRAXX CODE REPAIR ORDER NO. DATE

5

ABU DHABI TECHNOLOGIES

Certificate of Release to Service

EASA-145-0073  
 UAE-145-0010 UAE 145.00



\*  Certified that the work specified except as otherwise specified was carried out in accordance with ~~PART 145\*~~ CAR-145\* and in respect to that work the aircraft/aircraft component is considered ready for release to service.

\*  USA FAA ref. CFRS GUX2107F-VISIT no.:  
 The appliance identified hereon was repaired and inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service.

\* DELETE AS APPROPRIATE

SIGNATURE/DATE  
 05 JAN 2015

STAMP  


B7 SA-LRE-0009

Oracle Complex MRO

Home WO Overview Data Entry Prod Reports SCM Reports Other Pr

Arch Issues | View Material Transactions | Issue to Work order | Return to HOLD Sub Inventory | Mark for Return | Order Enquiry | Iter  
 Logged In As UKUTTY

Oracle Complex Maintenance Repair & Overhaul : Component Removal and History Details

Component Details

Item Number **314W1400-9** Description **COWL INLET** Installed Unit **A6-LRE**  
 Serial Number **001114** Item Type **ROTABLE TRACKED**

Removal/ Install Repair History

Component Removal, Installation & Repair History

Unit	Name	Position	Installation			Removal			Repair Details								
			Location	Date	Staff No	Location	Date	Staff No	Rem Type	Rem Reason	Location	Date	Staff No	Visit	OSP Order Number	MOD Stamp	Items NFF C'smd
A6- DDA	COWL INLET_LH		AUH-AFS	22- Feb- 2012		AUH-ELM	25- Aug- 2012	EY- 28010	Scheduled	Robbery							
A6- ETC	COWL INLET_LH		AUH-AFS	23- Feb- 2012		AUH-ELM	26- Aug- 2013	EY- 27977	Unscheduled	Robbery							
A6- ETC	COWL INLET_LH		AUH-AFS	23- Feb- 2012		AUH-ELM	26- Aug- 2014	EY- 27977	Unscheduled	Damaged	AUH- STRCMP	02- Sep- 2014	13776	<a href="#">791349</a>			
A6- DDC	ZA1019_INLET ASSY_LH		AUH- ELINE	02- Sep- 2014	EY- 27969	AUH-ELM	31- Dec- 2014	EY- 27964	Unscheduled	Damaged	AUH- STRCMP	05- Jan- 2015	12343	<a href="#">872324</a>			
A6- LRE	COWL INLET_LH		AUH-ELM	25- Jan- 2015	EY- 28009												

ck

View Material Transactions | Issue to Work order | Return to HOLD Sub Inventory | Mark for Return | Order Enquiry | Item Search | Component History | Search Item (form) | Move Order - Create | Move Order - Transact | PRN Enquiry | Material General Txn | View Material Issue | Home | WO Overview | Data Entry | Prod Reports Re



 <b>P.O. BOX 46450 ABU DHABI, U.A.E.</b>	<h1 style="margin:0;">WORKSHOP CONTROL SHEET</h1>	VISIT No: 791349 INSTANCE No: 1807013 CUSTOMER: ETIHAD AIRWAYS(EY) CUSTOMER RO: LCI677_Annex 3C_Airframe REQ'D REL AUTHORITY: GCAA
--	---	--

UNIT DESCRIPTION: COWL INLET	Manual Ref.: B777 NTM 51-05-01 Rev: 60 Date: 10-APR-14	ATA: 54
------------------------------	---	---------

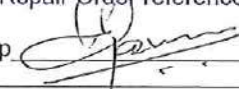
Manufacturer Part No.: 314W1400-9	Serial No: 001114	Qty: 1	A/C Reg A6-ETC	Visit Dept AUH-STRCMP
-----------------------------------	-------------------	--------	----------------	-----------------------

Life Details (as received)	TSN CSN DSN	TSO CSO DSO	TSR CSR DSR
Hours	15890.73	15890.73	15890.73
Cycles	2561	2561	2561
Days	NA	NA	NA

Reason for Removal: DAMAGE ON UPPER SURFACE DUE TO SLING BROKE. REFER W/O# AUH10164728, VISIT# 755836. B777-300ER/ A6-ETC.	Customer Requirements:
---	------------------------

CARD NUMBER NTM51-05-01_INSP_314W14XXX      REV 1	WORK REQUIREMENT (S) REPAIR MODIFICATION: (Embody the following AD/SB/EO) NA
--	---

The foregoing work requirement is based on information supplied by the customer and I.A.W. Customer Repair Order referenced above.

Sign/Stamp  / <sup>ADAT</sup> 8520 Production Planning      Date: 31-Aug-2014


**FINAL RELEASE CERTIFICATION (WORKSHOP)**

Part Number: 314W1400-9	Serial Number: 001114
-------------------------	-----------------------

The work recorded above has been carried out in accordance with the requirements of the customer and relevant technical manuals and in respect to that work the item is considered ready for release / return to service under (\* Tick as appropriate):

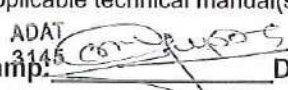
UAE.145.0010   
  EASA   
  FAA   
  DGSAS OMAN   
  MILITARY   
  MAA   
  OTHERS \_\_\_\_\_  
EASA. 145/0073    CFRS GUX2107F    AWR/238/ADAT 042-087    MAA/AAMC /2012/02

Certified in accordance with Technical Procedures Manual 4-41

Signature:       Auth. Stamp: <sup>ADAT</sup> 8520      Date: 02 SEP 14










Name: VIVEK JOYH PICARDO  
(Block Letters)

I hereby certify that work-pack content is IAW the requirement of the applicable technical manual(s), and any additional Planning, & Engineering requirements (where applicable).



Released by Name: MANOJ      Signature & Stamp:       Date: 18 Sep 2014

Workpackage received for archives/Technical Records.

Name: \_\_\_\_\_      Signature: \_\_\_\_\_      Date: \_\_\_\_\_












		<h1 style="text-align: center;">SHOP ROUTINE CARD</h1>		PAGE	1/2
				MR Rev/Date:	1/ 31-AUG-14
CARD (MR) NO:		NTM51-05-01_INSP_314WI4XXX		VISIT NO.	791349
Work Order:		 *AUH10208842*		S&C	
Description:		COWL INLET			
Part No:		314W1400-9		Parent Dept/Shop	AUH-STRCMP
Serial No:		001114		Visit Start Date:	31-AUG-14
Quantity:		1	MOD Status:		
Manufacturer:		BOEING COMMERCIAL AIRPLANES		Planned Finish Date:	01-SEP-14
Cust Code: EY	Cust Name: ETIHAD AIRWAYS(EY)	Work Type:			
REF: B777 NTM 51-05-01	REV: 60	DATE: 10-APR-14			
ENSURE THAT ALL PROCEDURES AND SAFETY PRECAUTIONS IDENTIFIED WITHIN THE APPLICABLE TASKS ARE FOLLOWED					
CERTIFY THAT THE ABOVE REF DOC REV NO IS THE SAME AS PER CURRENT EDOC REV.:- REV NO: <u>60</u> STAMP: <u>ADAT 3146</u> CD SERVER					
OP	DEPT	TASK DESCRIPTION / REQUIREMENT	CERTIFICATION		
			MECH Sign/Emp.No Date	INSP Sign/Stamp Date	
10	AUH-STRCMP	PRE-INSPECTION ===== This work sheet is applicable to the following P/N:314W1400-9. Ref.Doc: B777 NTM 51-05-01. IDENTIFY AND RECORD: ----- MFG. P/N: <u>314W1400-9</u> SERIAL.NO: <u>001114</u> Heed all warnings cautions and notes specified in the NTM.	 01SEP14 13776	 01SEP14 ADAT 3146	
20	AUH-STRCMP	Perform general visual inspection of the unit for general condition, and any obvious damage. Record all the defect/findings that will be found during inspection and action taken against any found defect on inspection report sheet form ADAT/QA/101R.	 01SEP14 13776	 01SEP14 ADAT 3146	
30	AUH-STRCMP	Perform NDT inspection Tap test on the outer barrel of the Inlet Cowl per B777 NTM 51-05-01.Record the size and position of the findings on the inspection report sheet form ADAT/QA/101R. Note: All recorded damage area must be assessed for acceptance or repair action, iaw SRM requirements.	 01SEP14 13776	 01SEP14 ADAT 3146	
40	AUH-STRCMP	Perform NDT inspection HFEC on the Lip skin per B777 NTM 51-06-00. Record the size and position of the findings on the inspection report sheet from ADAT/QA/101R. Note: All recorded damage area must be assessed for acceptance or repair action, iaw SRM requirements.	 01SEP14 13776	 01SEP14 ADAT 3146	
CERTIFIED IN ACCORDANCE WITH TPM "4-41"					

ORIGINAL COPY

CARD NUMBER	MR Rev/Date.	 *AUH10208842*	PAGE	2/2	
NTM51-05-01_INSP_3 14WI4XXX	1/31-AUG-14		VISIT NO	<b>791349</b>	
Signature		Auth. Stamp	ADAT 3146	Date	01SEP14

Repair Cards	NRC No.	Description	Add Worksheet Raised.	Description
	1) AH10209546	P001	1)	
YES ✓	2) AH1020530	P002	2)	
NO	3)		3)	


ORIGINAL COPY

		<h1 style="text-align: center;">SHOP ROUTINE CARD</h1>		PAGE	1/2	
				MR Rev/Date:	1/ 02-SEP-14	
CARD (MR) NO:		SRM54-13-01_REP_314WXXXX		VISIT NO.	<b>791349</b>	
Work Order:		 *AUH10221865*		S&C		
PO BOX NO. 45555 - ABU DHABI - UAE APPROVED BY / REF# UAE 145.0010. DGSA S OMAN AWR/238/ADAT-042/D EASA 145.0073. FAA USA GUX2107F. AND OTHER (SPECIFY)	Description:		COWL INLET		Parent Dept/Shop	AUH-STRCMP
	Part No:		314W1400-9			
	Serial No:		001114		Visit Start Date:	31-AUG-14
	Quantity:		1	MOD Status:		
	Manufacturer:		BOEING COMMERCIAL AIRPLANES			
Cust Code:	Cust Name: ETIHAD AIRWAYS(EY)	Work Type: REPAIR		Planned Finish Date:	09-SEP-14	
REF: B777 SRM 54-13-01		REV: 49	DATE: 15-MAY-14			
ENSURE THAT ALL PROCEDURES AND SAFETY PRECAUTIONS IDENTIFIED WITHIN THE APPLICABLE TASKS ARE FOLLOWED CERTIFY THAT THE ABOVE REF DOC REV NO IS THE SAME AS PER CURRENT EDOC REV.:- REV NO: <u>49</u> STAMP: <u>ADAT 3146</u> BOEING TOOL BOX						
OP	DEPT	TASK DESCRIPTION / REQUIREMENT	CERTIFICATION			
			MECH Sign/Emp.No Date	INSP Sign/Stamp Date		
10	AUH-STRCMP	REPAIR ===== THIS WORK SHEET IS APPLICABLE TO THE FOLLOWING P/N: 314W1400-9  IDENTIFY & RECORD: ----- MFG. P/N: <u>314W14009</u>  SERIAL NO: <u>001114</u>  HEED ALL WARNINGS, CAUTIONS AND NOTES SPECIFIED IN THE SRM.	 13776 02 SEP 14	 02 SEP 14  ADAT 3146		
20	AUH-STRCMP	NOTE: ===== RECORD ALL THE DEFECTS/FINDINGS THAT WILL BE FOUND DURING MAINTENANCE AND ACTION TAKEN AGAINST ANY FOUND DEFECT ON INSPECTION REPORT SHEET FORM ADAT/QA/101R.	 13776 02 SEP 14	 02 SEP 14 ADAT 3146		
30	AUH-STRCMP	OUTER BARREL REPLACED. REFER INSPECTION REPORT  0219114 ADAT 3146 REPAIR THE DAMAGE AREA OF THE OUTER BARREL PER B777 SRM 54-13-01-2R-2 REPAIR 2.3146	ADAT 3146  N/A	N/A  ADAT 3146		
40	AUH-STRCMP	APPLY THE FINISH TO THE REPAIR PER B777 SRM 51-70-05 PARA 4.0 GENERAL.	ADAT 3146  N/A	N/A  ADAT 3146		
50	AUH-STRCMP	FINALLY INSPECT, IDENTIFY AND CERTIFY THE COWL INLET SERVICEABLE.	 ADAT 3146 13776 02 SEP 14	 13776 02 SEP 14 ADAT 3146		
60	AUH-STRCMP	PROTECT THE COWL INLET AND ROUTE TO STORE.	 13776 ADAT 3146 02 SEP 14	 13776 02 SEP 14 ADAT 3146		

ORIGINAL COPY

CARD NUMBER	MR Rev/Date.	 *AUH10221865*	PAGE	2/2
SRM54-13-01_REP_31 4WXXXXX	1/ 02-SEP-14		VISIT NO	<b>791349</b>

CERTIFIED IN ACCORDANCE WITH TPM "4-41"

Signature		Auth. Stamp	ADAT 5568	Date	02 SEP 2014
-----------	---	-------------	--------------	------	-------------

Repair Cards	NRC No.	Description	Add Worksheet Raised.	Description
	1) AUH 1020 5546	E001	1)	
YES ✓	2) AUH 1020 530	E002	2)	
NO	3)		3)	

QUALITY ASSURANCE DEPARTMENT > ADAT/QA/101R Issue 14 (Nov 2010)  
**Inspection Report**



Part No. : 314W1400-9	Serial No. : 001114	Description : COWL INLET		
Visit No. : <del>202004</del> ADAT 3146 791349	Shop No. : 202004	Customer : ETIMAD	Date : 01 SEP 14	No. of Sheets : ... Of 9

NO.	DEFECT	ACTION TAKEN	Mech. Sign Staff No Date	Auth. Stamp Sign Date
1	INLET COWL DAMAGED ON UPPER SURFACE DUE TO BROKEN SLING. CARRY OUT NDI TAP TEST IAW B777 NIM 51-05-01	NDI CARRIED OUT ON OUTER SKIN OF UPPER BARREL. FOUND DISBOND AREA MARKED. REFER AMH 10210530 OPERATION 10 (R002)	13776 ADAT 3146 01 SEP 14	ADAT 3146 DATE 01 SEP 14
2	INLET COWL LIP SKIN FOUND WITH MINOR SCRATCHES. CARRY OUT HFEC ON LIP SKIN IAW B777 NIM 51-06-00	MINOR SCRATCHES BLENDED OUT IAW B777 SEM 51-10-02-04-0 PHRA SA REV 49 DTD 15 MAY 14. REFER AMH 10209546 OPERATION 10 (R001).	13776 ADAT 3146 01 SEP 14	ADAT 3146 DATE 01 SEP 14
3	CARRY OUT FINAL ASSESSMENT ON REWORKED AREA IAW SEM 54-13-01-1A-1 ON 2 LOCATIONS LOCATION 'A' - 10-11 O'CLOCK LOCATION 'B' - 12-1 O'CLOCK	ASSESSMENT CARRIED OUT ON REWORKED AREA OF LIP SKIN ON 2 LOCATIONS (A & B). FOUND WITHIN ALLOWABLE LIMITS IAW B777 SEM 54-13-01-1A-1	13776 ADAT 3146 01 SEP 14	ADAT 3146 DATE 01 SEP 14
		TABLE A FIG 106 DETAIL A REV 49 DTD 15 MAY 2014 REFER AMH 10209546 OPERATION 30 (R001) & ATTACHED FIGURES FOR LOCATION A & B	13776 ADAT 3146 01 SEP 14	ADAT 3146 DATE 01 SEP 14

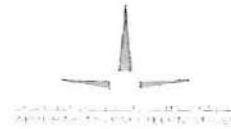
\*GCAA UAE  \*EASA  \*FAA-USA  \*DGSAS-OMAN  (\* Tick as applicable)

Further Sheets Raised : Y/N

CERTIFIED I.A.W. TPM 4-41



QUALITY ASSURANCE DEPARTMENT > ADAT/QA/101R Issue 14 (Nov 2010)  
**Inspection Report**



Part No. : 314W1400-9	Serial No. : 001114	Description : COWL INLET		
Visit No. : 791349	Shop No.: 202004	Customer : ETHAD	Date : 01SEP14	No. of Sheets : ...2... Of ...3

NO.	DEFECT	ACTION TAKEN	Mech.Sign Staff No Date	Auth.Stamp Sign Date
4 RAISED BY ADAT 3148	CARRY OUT DEFECT RECORDING + EVALUATION I.MW SRM 54-13-01	MULTIPLE DAMAGES FOUND ON OUTER BARREL. ALL DAMAGES COMBINED TO CARRY OUT REPAIR + DAMAGE CONFINED TO 4 LOCATIONS (A, B, C, D)	13776 01SEP14	ADAT 3148 DATE 01SEP14
4 RAISED BY ADAT 3148	(CONTD)	DAMAGE A CONFINED REPAIR AREA 10" X 5". DAMAGE FOUND 12" FROM LEADING EDGE + 48" FROM RN SIDE (ALF).	13776 01SEP14	ADAT 3148 DATE 01SEP14
4 RAISED BY ADAT 3148	(CONTD)	DAMAGE B COMBINED AREA 6" X 3". DAMAGE FOUND 3" FROM TIL PROBE ACCESS PANEL + 15" FROM TRAILING EDGE	13776 01SEP14	ADAT 3148 DATE 01SEP14
4 RAISED BY ADAT 3148	(CONTD)	DAMAGE C COMBINED AREA 18" X 6.5". DAMAGE FOUND 6.5" FROM LEADING EDGE + 9.8" FROM LH SIDE OF PANEL (ALF)	13776 01SEP14	ADAT 3148 DATE 01SEP14
4 RAISED BY ADAT 3148	(CONTD)	DAMAGE D COMBINED AREA 18" X 6". DAMAGE FOUND 10" FROM LEADING EDGE + 46" FROM LH SIDE OF PANEL (ALF). REFER ATTACHED PICTURES	13776 01SEP14	ADAT 3148 DATE 01SEP14

\*GCAA UAE  \*EASA  \*FAA-USA  \*DGSAS-OMAN  (\* Tick as applicable)

Further Sheets Raised : Y/N

CERTIFIED I.A.W. TPM 4-41



QUALITY ASSURANCE DEPARTMENT > ADAT/QA/101R Issue 14 (Nov 2010)

Inspection Report



Part No. : 314w1400-9	Serial No. : 00114	Description : COWL INLET		
Visit No. : 791349	Shop No. : 202004	Customer : ETHAD	Date : 02 SEP 14	No. of Sheets : 3... Of 3

NO.	DEFECT	ACTION TAKEN	Mech. Sign Staff No Date	Auth. Stamp Sign Date
5	CARRY OUT REPAIR TO UPPER COWL BARREL I.AW SLM 54-13-01-2R2	OUTER BARREL UPPER PANEL REPLACED WITH SERVICEABLE PANEL P/N 81205314W1421-6 FROM INLET COWL S/N 001431 VISIT # 792250 - REFER AMH10210530 (R002)	13776 02 SEP 14	ADAT 3148 DATE 02 SEP 14
RAISED BY		OPERATION 20 & 30 - COPY OF SERVICEABLE LABEL ATTACHED. REMOVAL/INSTALLATION I.AW AMM 71-11-01/201 REV 71 PTD 05 MAY 2014	13776 02 SEP 14	ADAT 3148 DATE 02 SEP 14
ADAT 3148				
6	T12 SENSOR LOBBED TO SERVICE M-LRE - I.AW AMM 73-21-06	INLET TEMPERATURE SENSOR (T12) INSTALLED TO HOLE COWL (S/N 00114) I.AW AMM 73-21-06-000-801-1101 REFER VISIT 792230 AMH10219903 & ATTACHED	13776 02 SEP 14	ADAT 3148 DATE 02 SEP 14
RAISED BY		CARRY FORWARD SHEET & SERVICEABLE LABEL COPY	13776	ADAT 3148 DATE 02 SEP 14
ADAT 3148				
RAISED BY				
				DATE 02 SEP 14
				DATE



\*GCAA UAE  \*EASA  \*FAA-USA  \*DGSAS-OMAN  (\* Tick as applicable)

Further Sheets Raised : Y / N

CERTIFIED I.A.W. TPM 4-41





<p>1. General Civil Aviation Authority United Arab Emirates</p>	<p><b>AUTHORISED RELEASE CERTIFICATE</b> <b>AW FORM 1</b></p>		<p>3. Form Tracking Number <b>100386649</b></p>		
<p>4. Organisation Name and Address</p> <div style="text-align: center;">  <p>شركة أبوظبي للطائرات ABU DHABI AIRCRAFT TECHNOLOGIES</p> </div> <p><b>ABU DHABI AIRCRAFT TECHNOLOGIES (ADAT)</b> P.O BOX: 46450, ABU DHABI UNITED ARAB EMIRATES</p>		<p>5. Work Order/Contract/Invoice Visit No: <b>791349</b> Customer RO: <b>LCI 677</b></p>			
<p>6. Item <b>1</b></p>	<p>7. Description <b>COWL INLET</b></p>	<p>8. Part Number <b>314W1400-9</b></p>	<p>9. Qty. <b>1</b></p>	<p>10. Serial Number <b>001114</b></p>	<p>11. Status/ Work <b>Repaired</b></p>
<p>12. Remarks</p> <p>MINOR SCRATCHES ON LIP SKIN BLENDED OUT AND FOUND WITHIN ALLOWABLE LIMITS I.A.W B777 SRM 54-13-01-1A-1 TABLE A FIG: 103 DETAIL A,REV 49 DATED 15 MAY 2014</p> <p>UPPER OUTER BARREL REPLACED WITH SERVICEABLE PANEL P/N 81205 314W1421-6 (EX INLET COWL SN: 001431) AND INSTALLED I.A.W B777 AMM 71-11-01 PB 201 REV 71 DATED 05 MAY 2014</p> <p>TSN:15890.73 ,CSN:2561 ,DSN:1179,TSO:15890.73 ,CSO:2561 ,DSO:1179 ,TSR:15890.73 ,CSR:2561 ,DSR:1179</p> <p>Customer: ETIHAD AIRWAYS(EY)</p>					
<p>13a. Certifies that the items identified above were manufactured in conformity to:</p> <p><input type="checkbox"/> Approved design data and are in condition for safe operation.</p> <p><input type="checkbox"/> Non-approved design data specified in block 12</p>					
<p>13b. Authorised Signature</p>		<p>13c. Approval/ Authorisation Number</p>		<p>14a. <input checked="" type="checkbox"/> CAR - 145.50 Release to Service <input type="checkbox"/> Other regulation, specified in block 12</p> <p>Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, was accomplished in accordance with CAR 145 and in respect to that work the items are considered ready for release to service.</p>	
<p>13d. Name</p>		<p>13e. Date (dd/mm/yyyy)</p>		<p>14b. Authorised Signature </p> <p>14c. Certificate/ Approval Ref. Number <b>UAE.145.0010</b></p>	
<p>14d. Name Vivek John Picardo</p>		<p>14e. Date (dd/mm/yyyy) ADAT 3-1-14</p>		<p>14e. Date (dd/mm/yyyy) <b>02-Sep-2014</b></p>	
<p><b>USER/INSTALLER RESPONSIBILITIES</b></p>					
<p>This certificate does not automatically constitute authority to install the item(s).</p> <p>Where the user/installer performs work in accordance with regulations of an airworthiness authority different than the airworthiness authority specified in block 1, it is essential that the user/installer ensures his/her airworthiness authority accepts items from the airworthiness authority specified in block 1.</p> <p>Statements in blocks 13a and 14a do not constitute installation certification. In all cases aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.</p> <p>AW Form 1 Issue: 2(July 2011)</p> <p>ADAT/QAA/404E Issue 01 (Apr. 2014) - Electronic Version</p>					

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- Details
- Visit Tasks
- Maintenance Requirements
- Cost Details
- Visit Stages

*W/P#145*

Update Visit

Cancel Revert Validate Go Apply

\* Indicates required field

Visit Number	791349	+ Visit Name	LCI 677
Visit Type	COMP. REPAIR	Item	
Unit		Serial Number	
Organization	CIVIL-ABU DHABI	Department	ADAT STRUCTURE & C
Sub Inventory		Physical Locator	
Priority		Visit Status	Planning
Service Request		Service Category	
Project Template	ADAT Commercial Temp	Simulation Plan	Primary Plan
Start Date	31-AUG-2014	Hour	13
		Minutes	01
Planned End Date		Hour	00
		Minutes	00
End Date		Due By Date	
Description	DAMAGE ON UPPER SURFACE DUE TO SLING BROKE. REFER W/O# AUH10164728, VISIT# 755836. B777-300ER/ A6-ETC.		

Cancel Revert Validate Go Apply

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- [Transactions](#)
- [Service Requests](#)
- [Repair Orders](#)
- [History](#)
- [Operating Units](#)
- [Configuration](#)

Item Instance Details

Item Instance: **1807013**  
 Item: **314W1400-9**  
 Item Description: **COWL INLET**

General Attributes

Organization Name	CIVIL-ABU DHABI	Instance Name	
Last Version Label	AS_CREATED	Version Label Date	29-JUN-2011 12:05
Revision		New Version Label	
System	<a href="#">Go</a>	External Reference	
Item Instance Type		Accounting Classification	Customer Product
Serial Number	001114	Operational Status	Not Used
Status	CREATED <a href="#">Go</a>	Lot Number	00111400000000000000
Quantity	1	Condition	Unserviceable
Start Date	12-JUN-2011	UOM	Each
Shipped On Date		Start Time	0:00
End Date	<a href="#">Go</a>	Shipped On Time	
Return By Date	<a href="#">Go</a>	End Time	
Actual Return Date	<a href="#">Go</a>	Return By Time	
		Actual Return Time	

\* Indicates required field.  
 Error Message: HZ1100  
 Note: This new instance cannot be updated.

[Create Item Instance](#)

Creation Completed

Owner

Party Type Party  
 Party Name: ETIHAD AIRWAYS(EY) Party Number: 26550  
 Account Number: 400 Account Name: ETIHAD AIRWAYS

Current Location

\* Type Inventory  
 Organization Name: CIVIL-ABU DHABI Sub-Inventory Name: AUHCCOMPSP  
 Locator: C.00.X.00.AUHCCOMPSP....

Installed At

\* Installed Date [Go](#) Installed Time

Field Format is HH:MM:SS

Change installed date does not change contract date.

Type Party Site [Go](#)

Party Name: ETIHAD AIRWAYS([Go](#)) Party Number: 26550 ([Go](#))  
 Line 1: NEW AIRPORT RO. ([Go](#)) Site Number: 11070 ([Go](#))  
 Address: NEW AIRPORT ROAD, POST BOX 35566  
 Abu Dhabi, AE

Order

Sales Order Number Sales Order Date  
 Sales Order Line  
 Purchase Order Number Agreement Name [Go](#)

Item Flags

- BOM Enabled
- IS Trackable  Inventory Trackable
- Sellable  Shippable

Item Views

- Merchant  Customer

Descriptive Flexfields

Leased From

Context Value: **Tool Calibration Details** [Go](#)  
 Select Context Value and click [Go](#) to view relevant flags.

Serial Comments

Serial Status: Unserviceable

Source Location: RPC

Last Service

Next Service

Work Order Status

Alert Receivers

TEAR-OFF LABEL

*Handwritten:* 755826  
7714

000508

*Handwritten:* POSSIBLE INSURANCE CLAIM  
Please provide ML Details/amount

**WARRANTY**  
31 AUG 2014  
 YES  NO

*Handwritten:* Costs no amount done.

ADAT/QA/508 ISSUE 11 TOP COPY & HARD PACK - COMPONENT / WHITE COPY - WORK PACK / BLUE COPY - STORES

UNSERVICEABLE PART REMOVAL DETAILS

ADAT NO.		TYPE OF REMOVAL	<input checked="" type="checkbox"/> S : SCHEDULED
CFF P/N	314401400-9		<input type="checkbox"/> U : UNSCHEDULED
OFF P/N		ACCIDENT/INCIDENT/SAFETY	REPORT <input type="checkbox"/> TICK - IF REQD
OVERFLOW		DEFECT NOTED DURING:	<input checked="" type="checkbox"/> INSPECTION
KEYWORD	835		<input type="checkbox"/> IN FLIGHT
DESC			<input type="checkbox"/> RUN-UP
S/N			<input type="checkbox"/> OTHER
POS		REMOVED FROM	<input type="checkbox"/> DD
ATL I/O		AC REG. NO.	<input type="checkbox"/> MM
NR NO.		REMOVED ON DATE	<input type="checkbox"/> YY
REMOVED AT STN			
REASON FOR REMOVAL			




DESPATCH TO \*REPAIRWORKSHOP  
M/O # 37020218 SIGNATURE


APPROVED STAMP OR LICENCE NO.  
**APPROVED STAMP**  
6479








*Handwritten:* Received on 31/Aug/2014 with M/O # (Physically to unit record on 28/Aug 2014)

PART NUMBER	QTY REQ'D	Min. Order Qty	LEAD TIME	REMARKS
BMS8-139CL1STY120	3 YD	-	STOCK	PO: 1000292867
BMS8-297TY4CL2-3K70	10 YD	-	STOCK	PO: 1000292871 AWB : 607 57803900
BMS5-90T2C250-350-10	4 SH	4 SHEET	STOCK	Vendor offered PN: BMS5-90T3C250-350-10, Pls advise if acceptable
BMS5-154TY2CL1GR5-YD	5 YD	5 YD	STOCK	Vendor offered PN: BMS5-154TY2CL2GR5, Pls advise if acceptable
BMS8-124T5CL6G3.0X1"	10 SF	1 SHEET	No Stock	L/T 2weeks
BMS8-154CL1TY3GA	5 YD	-	No Stock	No Qoute so far, Pls advise Alternate
SYNCORE 9872.1-K30	2 YD	5 ROLLS	No stock	(100FOOT ROLL), 17-18 Weeks L/T ( \$ 3,230.88 PRICE PER 100 FOOT ROLL)




B777 → A6-ETC - #1 ENGINE NOSE COWL

		REPAIR / FABRICATION CARD				CARD NO.		
		REPAIR	<input checked="" type="checkbox"/>	FABRICATION	<input type="checkbox"/>	R001		
		WORK ORDER #		 *AUH10209546*		Page 1 of __		
CUSTOMER	A/C REGN	A/C TYPE / ENG. / COMPONENT P/N.	DEPARTMENT	ATA	VISIT NO.			
EY	AB-ETC	314W1400-9	AUH-STRCMP	54-00	791349			
ORIGINATING W/O NO.		ORIGINATING TASK CARD NO.		RAISED BY	DATE RAISED			
AUH10208842		NTM51-05-01_INSP_314WI4XXX		12343	01-SEP-2014			
DESCRIPTION OF ITEM :COWL-INLET								
MFG P/N .		SERIAL NO.	QTY	* FABRICATED P/N				
314W1400-9		001114	1					
DESCRIPTION OF DEFECT AND RECTIFICATION / REPAIR / FABRICATION ACTION					REQUIRED :			
REQUIRED :					DATE			
CARRY-OUT INSPECTION AND EVALUATION ON LIP SKIN MINOR SCRATCHES AREA IAW B777 SRM:54-13-01-1A-1 REV:49 DATED:15/MAY/2014.					ASAP			
RAISED BY (SIGN / STAMP): 					TIME			
DOC REFERENCES. B777 SRM: 54-13-01					EXT. NO. 7091/7428			
ISSUE/REV.			DATED					
- 49 -			15 May 2014					
ALL WORK TO BE ACCOMPLISHED IAW MANUFACTURER'S APPROVED MANUAL OR APPROVED DATA								
NOTE    " * " TO BE FILLED IN CASE OF FABRICATION ONLY.								
PARENT SHOP: ADAT STRUCTURE & COMPOSITE								
SEQ.	ITEM	MFG P/N OF MATERIAL USED	DESCRIPTION	QTY	BATCH NO. / LOT NO.	MECH.	CERT CLNCE	
1	Material	ALODINE 1001	CHEM. COATING .	01.0Z	AUH 00 35474568		ADAT 3180 2/09/14	
2	Fab.	* Fabricated _____ IAW approved drawing see overleaf for detailed work accomplished						
3	P/N Ident	Identify and Record _____ MFG P/No. _____ FAB P/NO. _____ Drawing number of fabricated Part _____						
4	Insp.	* Carry out final inspection for conformity as per approved drawing						
FINAL RELEASE CERTIFICATION								
NOTE		<input type="checkbox"/> Tick as appropriate		Certified IAW Technical Procedure Manual 4-41				
<input checked="" type="checkbox"/>	EASA. 145.0073			<input type="checkbox"/>	OTHERS (SPECIFY)			
<input checked="" type="checkbox"/>	UAE.145.0010			<input type="checkbox"/>	USA FAA Ref. CFRS GUX2107/F			
<input type="checkbox"/>	OMAN DGSAS Ref. AWR/238/ADAT-042/87			<input type="checkbox"/>	MAA/AAMC/2012/02			
Certified the work specified except as other wise specified was carried out IAW Part 145				*USA FAA Ref CFRS GUX 2107/F The appliance identified hereon was repaired and inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details of the repair are on file at this repair station under Visit Number _____				
CAR-145* and in respect to that work the aircraft / aircraft component is considered ready for release to service.								



SIGN <u></u>	AUTH. STAMP <u>ADAT 314G</u>
NAME <u>VIVERE PICARDO</u> (BLOCK CAPITALS)	DATE <u>02 SEP 14</u>



		REPAIR / FABRICATION CARD				CARD NO.
		REPAIR	<input checked="" type="checkbox"/>	FABRICATION	<input type="checkbox"/>	R001
		WORK ORDER #			Page 2 of __	
		*AUH10209546*				
CUSTOMER	A/C REGN	A/C TYPE / ENG. / COMPONENT P/N.	DEPARTMENT	ATA	VISIT NO.	
EY		314W1400-9	AUH-STRCMP	54-00	791349	
ACTION TO BE TAKEN					CERTIFICATION	
OPERATION SEQ.	ACTION TO BE TAKEN		ACTION TAKEN		MECH SIGN EMP # DATE	INSP SIGN STAMP DATE
10	REMOVE THE MINOR SCRATCHES ON LH INLET		REMOVED THE MINOR SCRATCHES ON LH INLET		 12346 01/SEP/14.	 ADAT 3129 01/SEP/14.
	COWL LIP SKIN IAW B777		COWL LIP SKIN IAW B777			
	SRM:51-10-02-0G-0 PARA-5A		SRM:51-10-02-0G-0 PARA-5A			
	REV:49 DATED:15 MAY 2014.		REV:49 DATED:15 MAY 2014.			
	ADAT 3129 					
20	CARRY-OUT HFEC INSPECTION ON MINOR SCRATCHES		CARRIED-OUT HFEC INSPECTION ON MINOR SCRATCHES REMOVED AREA		P229 1V0V ADAT 6224 01/09/2014  ADAT 6224 01/09/2014	ADAT 6224 01/09/2014
	REMOVED AREA IAW		IAW NTM:51-06-00, NIL CRACK			
	NTM:51-06-00		CARRIED OUT UT THICKNESS CHECK AS PER NIM 51-00-10, PLY FOUND ORIGINAL 0.082" & REMAINING 0.080" AT LOCATION 'A', FOUND ORIGINAL 0.077" & REM 0.076" AT LOCATION 'B'			
	RAISED BY					
	ADAT 3129 					
	OPERATION SEQ.		CARRY-OUT FINAL ASSESSMENT ON REWORKED AREA ON LIP SKIN			
	ASSESSMENT ON REWORKED		LOCATION 'A', AND LOCATION 'B' WITH IN ALLOWABLE LIMIT IAW			
	AREA IAW B777		B777.SRM:54-13-01-1A-1			
	SRM:54-13-01-1A-1 TABLE-A		TABLE-A FIG:103 DETAIL: A			
	FIG:103 DETAIL:A AND E		REV:49 DATED:15 MAY 2014.			
	ADAT 3129 					

		<b>REPAIR / FABRICATION CARD</b>			CARD NO.
		REPAIR <input checked="" type="checkbox"/>	FABRICATION <input type="checkbox"/>		R001
		WORK ORDER #	 *AUH10209546*		Page 3 of __
CUSTOMER	A/C REGN	A/C TYPE / ENG. / COMPONENT P/N.	DEPARTMENT	ATA	VISIT NO.
EY		314W1400-9	AUH-STRCMP	54-00	791349

ACTION TO BE TAKEN				CERTIFICATION		
OPERATION SEQ.	ACTION TO BE TAKEN	ACTION TAKEN	MECH SIGN EMP # DATE	INSP SIGN STAMP DATE		
40	CARRY-OUT PROTECTIVE	CARRIED-OUT PROTECTIVE	 12046 01/09/14	 ADAT 3123 01/09/14		
	TREATMENT REWORKED LIP	TREATMENT REWORKED LIP				
	SKIN AREA IAW B777	SKIN AREA IAW B777				
	SRM:51-20-01 REV:49	SRM:51-20-01 REV:49				
	DATED:15 MAY 2014.	DATED:15 MAY 2014.				
	RAISED BY ADAT 3123 					
	OPERATION DEPT.					
	RAISED BY					
	OPERATION DEPT.					
	RAISED BY					
	OPERATION DEPT.					
	RAISED BY					



<b>REPAIR / FABRICATION CARD</b>					CARD NO.		
<input checked="" type="checkbox"/> REPAIR		<input type="checkbox"/> FABRICATION			R002		
WORK ORDER #		 *AUH10210530*			Page 1 of __		
CUSTOMER EY	A/C REGN A6-ETC	A/C TYPE / ENG. / COMPONENT P/N. 314W1400-9	DEPARTMENT AUH-STRCMP	ATA 54-00	VISIT NO. 791349		
ORIGINATING W/O NO. AUH10208842		ORIGINATING TASK CARD NO. NTM51-05-01_INSP_314WI4XXX		RAISED BY 13776	DATE RAISED 01-SEP-2014		
DESCRIPTION OF ITEM :COWL INLET							
MFG P/N . 314W1400-9		SERIAL NO. 001114		QTY 1	* FABRICATED P/N N/A		
DESCRIPTION OF DEFECT AND RECTIFICATION / REPAIR / FABRICATION ACTION REQUIRED :					REQUIRED :		
INLET COWL DAMAGED ON UPPER SURFACE DUE TO BROKEN SLING - REFER W/O AUH10164728, VISIT # 755836  RAISED BY (SIGN / STAMP):  ADAT 3146					DATE 01 SEP 14		
					TIME 19:00		
					EXT. NO. 7096		
DOC REFERENCES. NTM 51-05-01				ISSUE/REV. 60	DATED 10 APR 14		
ALL WORK TO BE ACCOMPLISHED IAW MANUFACTURER'S APPROVED MANUAL OR APPROVED DATA							
NOTE " " TO BE FILLED IN CASE OF FABRICATION ONLY.							
PARENT SHOP: ADAT STRUCTURE & COMPOSITE							
SEQ.	ITEM	MFG P/N OF MATERIAL USED	DESCRIPTION	QTY	BATCH NO. / LOT NO.	MECH.	CERT CLNCE
1	Material		ADAT 3146		N/A		
2	Fab.	* Fabricated IAW approved drawing see overleaf for detailed work accomplished					
3	P/N Ident	Identify and Record MFG P/No. _____ FAB P/NO. _____ Drawing number of fabricated Part _____					
4	Insp.	* Carry out final inspection for conformity as per approved drawing					
<b>FINAL RELEASE CERTIFICATION</b>							
NOTE		<input type="checkbox"/> Tick as appropriate		Certified IAW Technical Procedure Manual 4-41			
<input checked="" type="checkbox"/>	EASA. 145.0073	<input type="checkbox"/>	OTHERS (SPECIFY)	*USA FAA Ref CFRS GUX 2107/F The appliance identified hereon was repaired and inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details of the repair are on file at this repair station under Visit Number _____			
<input checked="" type="checkbox"/>	UAE. 145.0010	<input type="checkbox"/>	USA FAA Ref. CFRS GUX2107/F				
<input checked="" type="checkbox"/>	OMAN DGSAS Ref. AWR/238/ADAT-042/87	<input type="checkbox"/>	MAA/AAMC/2012/02				
Certified the work specified except as other wise specified was carried out iaw Part 445 CAR-145* and in respect to that work the aircraft / aircraft component is considered ready for release to service.							

SIGN 	AUTH. STAMP 
NAME <u>VIVICK PICARDO</u> (BLOCK CAPITALS)	DATE <u>02 SEP 14</u>

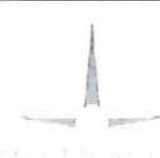
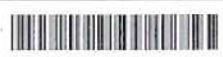
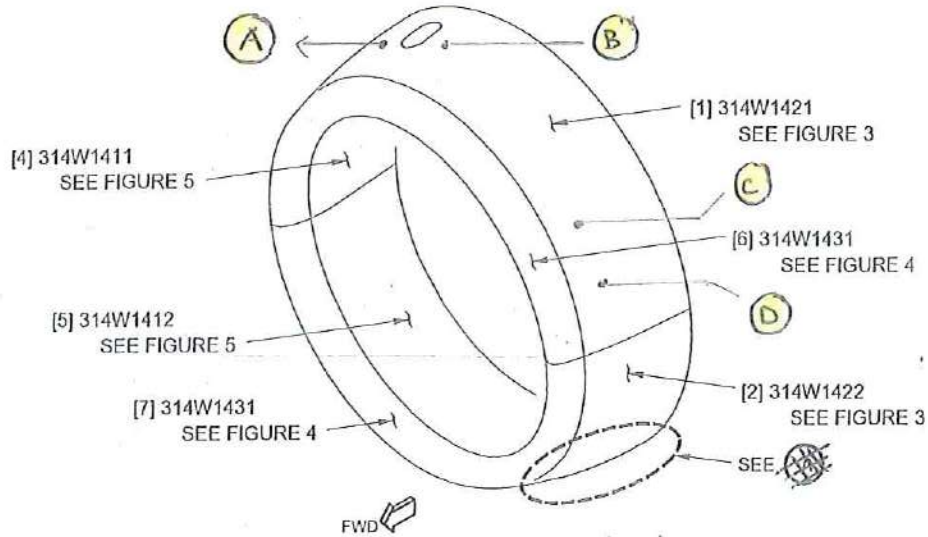
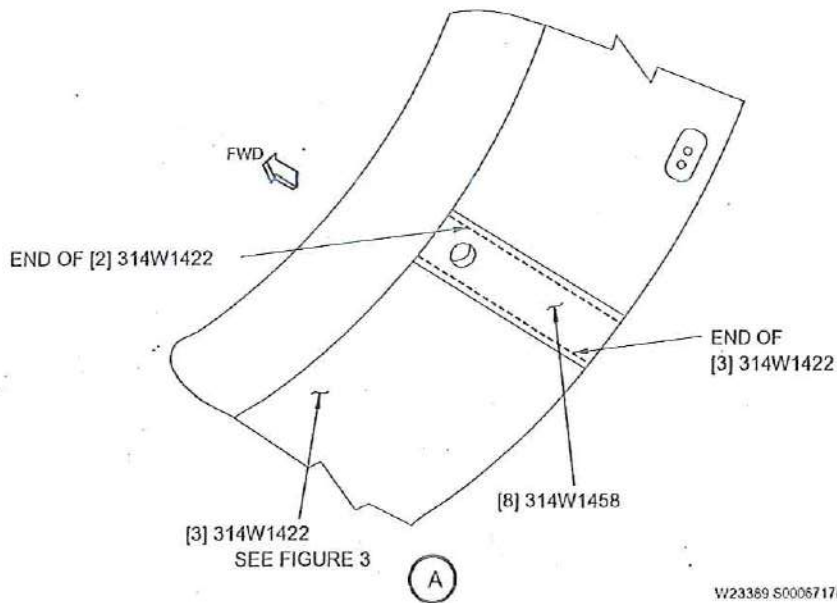
		REPAIR / FABRICATION CARD				CARD NO.
		REPAIR	<input checked="" type="checkbox"/>	FABRICATION	<input type="checkbox"/>	R002
		WORK ORDER #			Page 2 of __	
		*AUH10210530*				
CUSTOMER	A/C REGN	A/C TYPE / ENG. / COMPONENT P/N.	DEPARTMENT	ATA	VISIT NO.	
EY		314W1400-9	AUH-STRCMP	54-00	791349	
ACTION TO BE TAKEN					CERTIFICATION	
OPERATION SEQ.	ACTION TO BE TAKEN		ACTION TAKEN		MECH SIGN EMP # DATE	INSP SIGN STAMP DATE
10	CARRY OUT NDI (TAP TEST) ON THE OUTER BARREL I.A.W B777 NTM 51-05-01		CARRIED OUT TAP TEST AS PER NTH 51-05-01 PEI FOUND NO BOND. AREA MARKED		ADAT 6224	ADAT 6224 M.F. 01SEP2014
	AUH-AFS					
	RAISED BY ADAT 3148					
20	CARRY OUT REMOVAL OF UPPER OUTER BARREL PANEL I.A.W		UPPER OUTER BARREL PANEL REMOVED I.A.W AMM 71-11-01/201		ADAT 3148 01-08-14	ADAT 3148 01SEP14
	AMM-PTS					
	RAISED BY 20 ADAT 3148		P/N 81205314W1421-6			
30	CARRY OUT INSTALLATION OF SERVICEABLE PANEL		INSTALLATION OF SERVI- CABLE PANEL		ADAT 2189 02/09/14	ADAT 2189 02SEP14
	AMM-PTS					
	RAISED BY ADAT 3148		OUT I.A.W AMM 71-11-01 PB 201			
	OPERATION DEPT.					
	RAISED BY					

Fig. Issue Date: 15 May 2014



NOTE: REFER TO TABLE 2 FOR THE LIST OF MATERIALS.



W23369 S0006717699\_V1

Figure 2. Inlet Cowl Skin Identification - GE90-100 Series Engine - Sheet 1

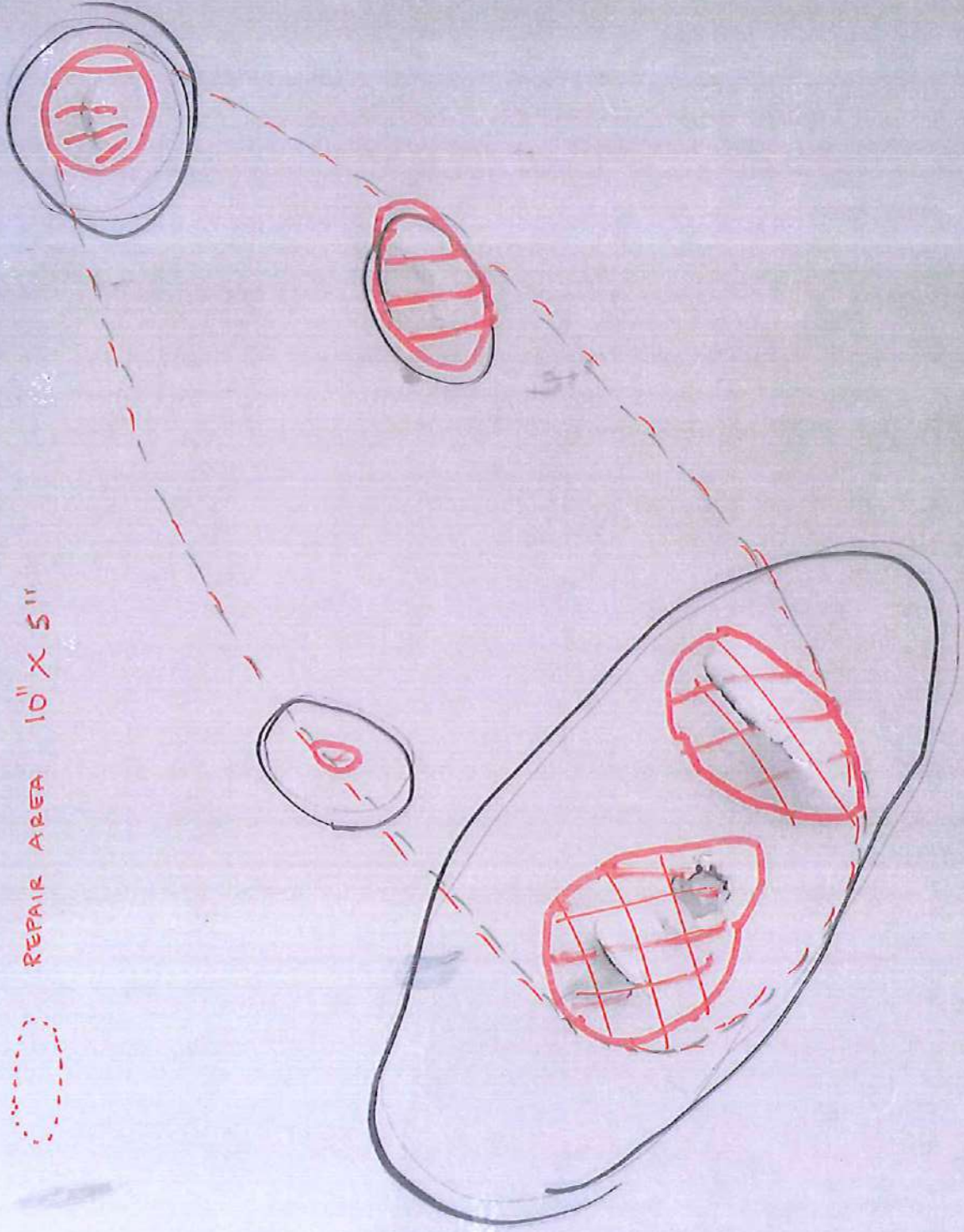
VISIT # 791349

WPH # 145

A

DISBONDED AREA

REPAIR AREA 10" X 5"



VISIT # 791349

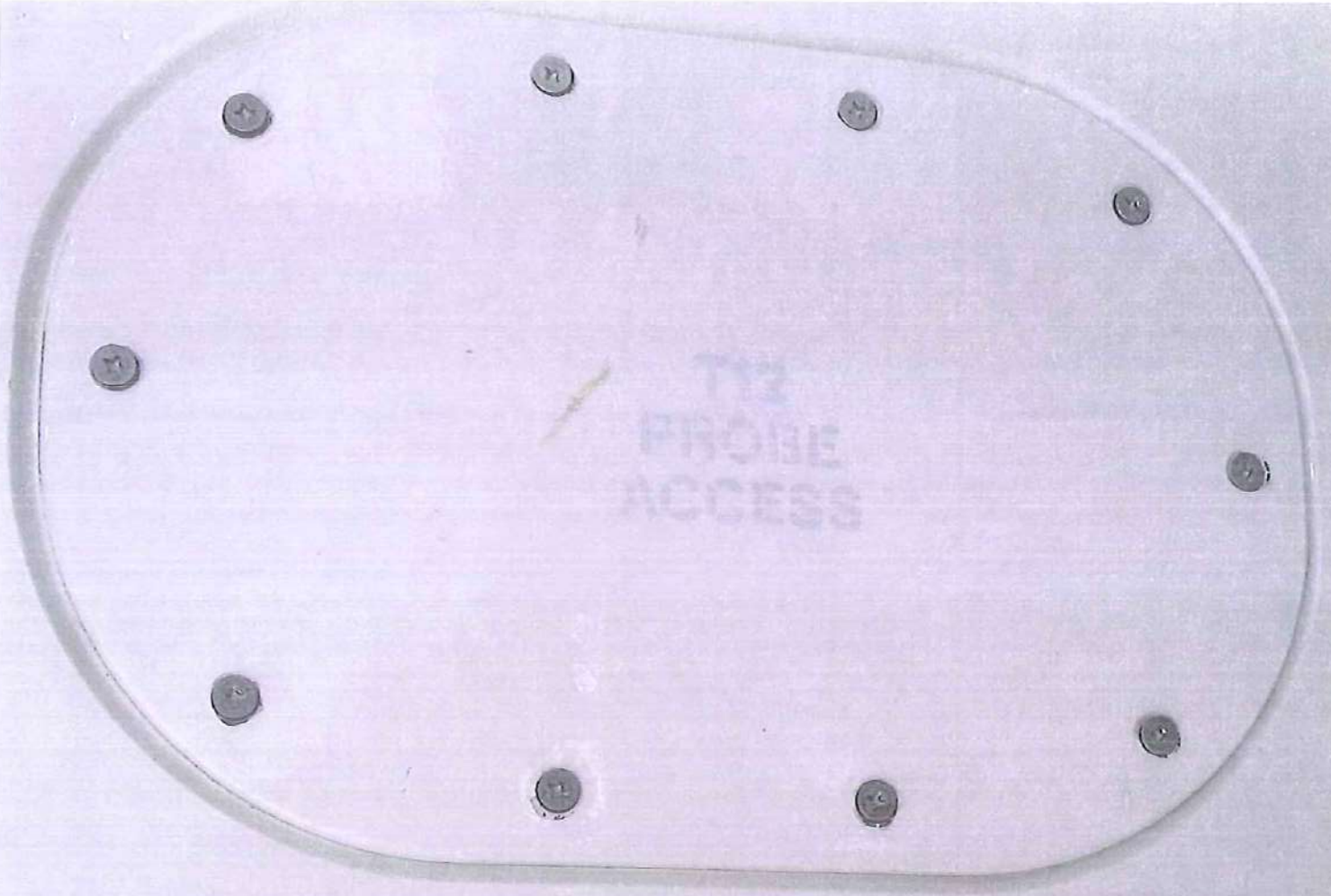
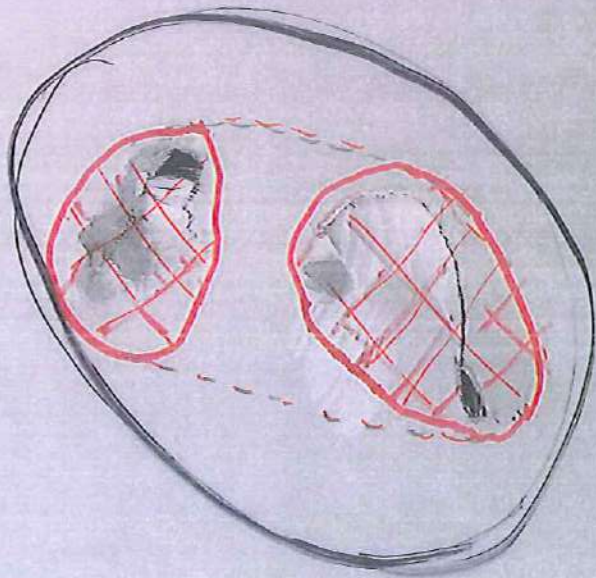
(B)



DISBONDED AREA



REPAIR AREA 6" X 3"

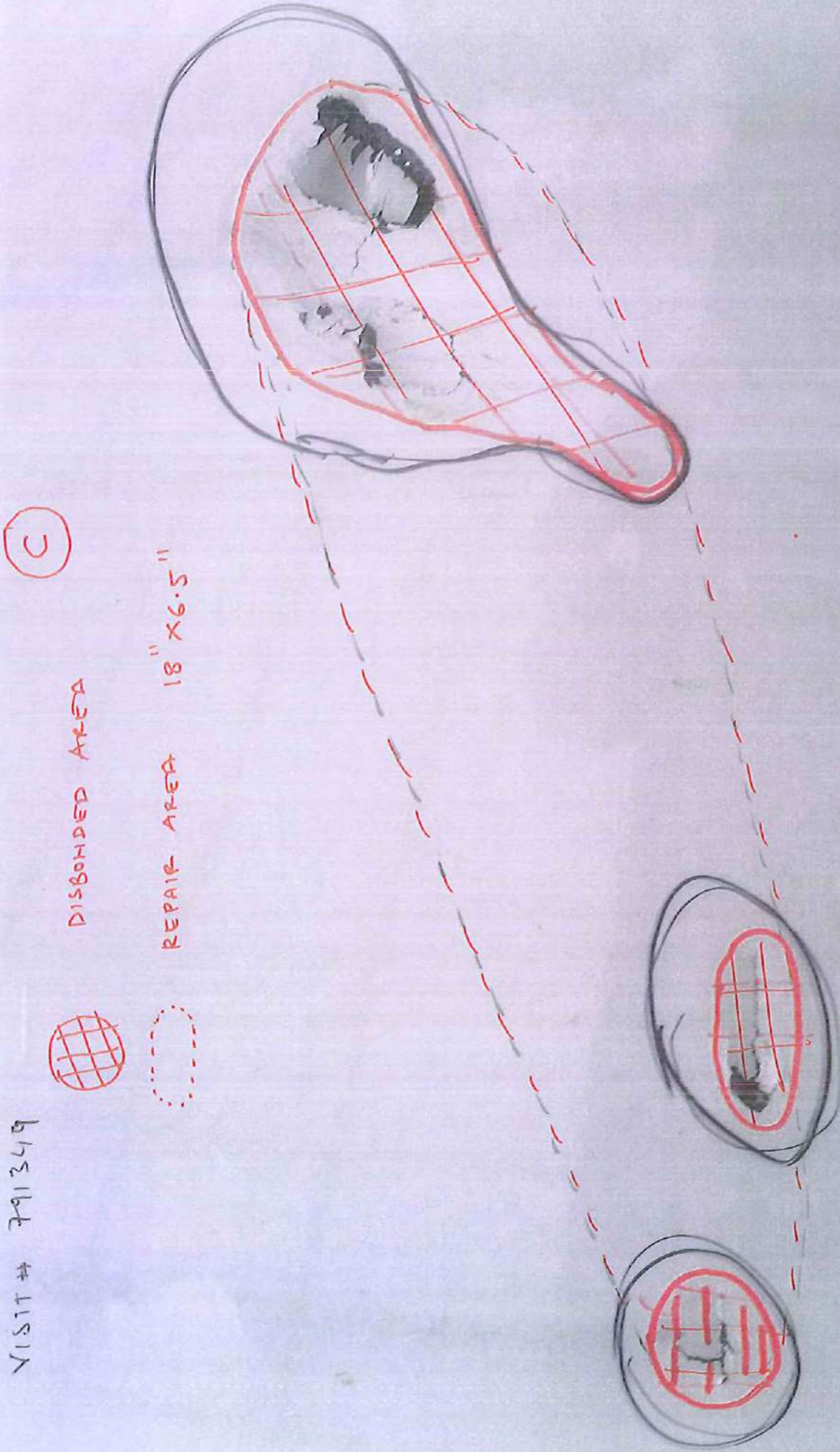
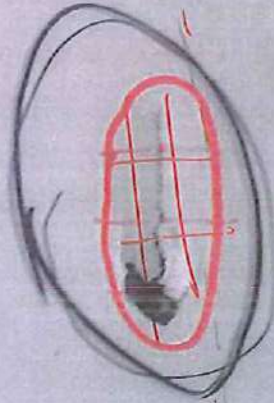
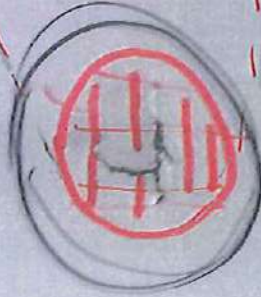
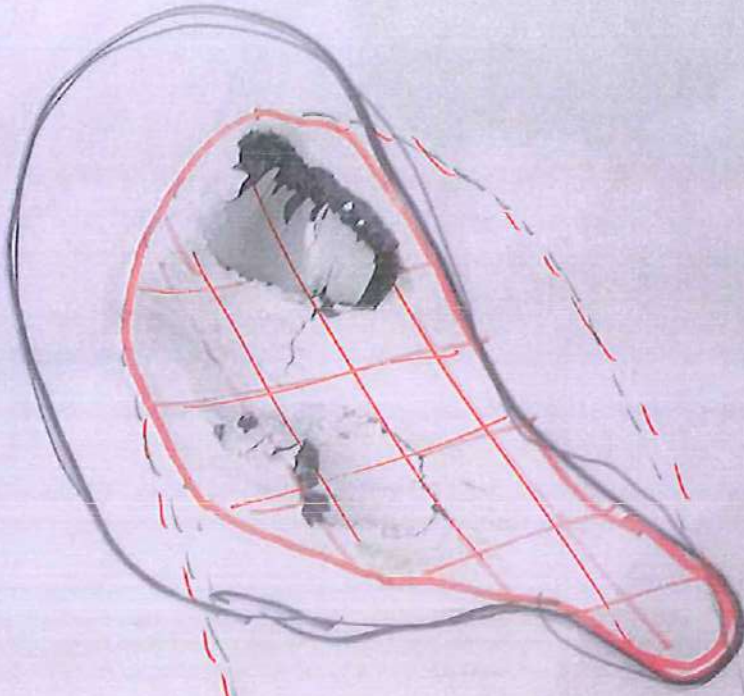


VISIT # 791349

(C)

DISBONDED AREA

REPAIR AREA 18" X 6.5"

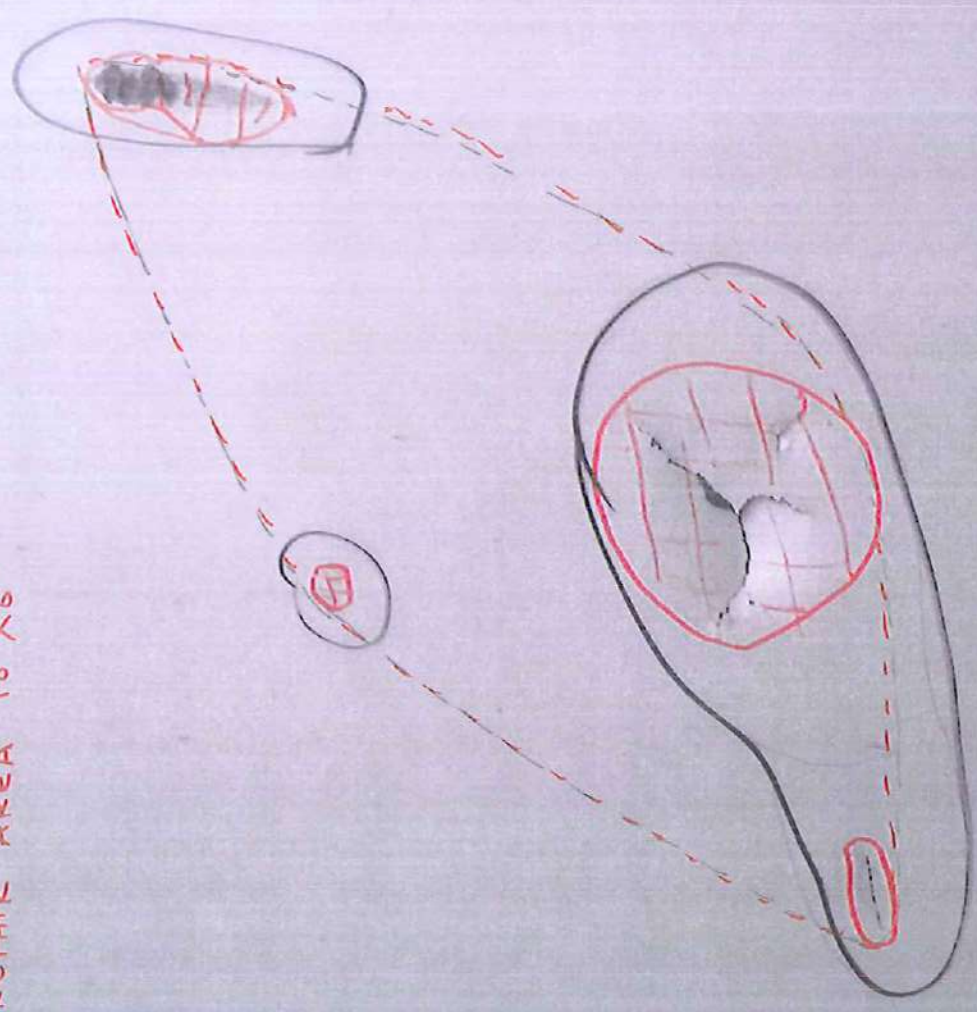


VISIT # 791349

(D)

DISBORDER AREA

REPAIR AREA 18" X 6"



### 1. Applicability

- A. Repair 2 is applicable to the Inlet Cowl Outer Barrel panel for the GE90-100 Series engine shown Figure 201/REPAIR 2.

#### Figure 201. Inlet Cowl Outer Barrel Panel Location - GE90-100 Series Engine

Sheet 1

### 2. General

- A. Get access to the damaged area. Remove the inlet cowl outer barrel panel if necessary. Refer to AMM PAGEBLOCK 71-11-01/401.  
B. Do an inspection of the damaged area to find the dimension of the damage. Boeing recommends that you use an instrumented Non-Destructive Inspection (NDI) procedure. Refer to NDT Part 1, 51-01-00 for instructions on how to select an inspection procedure.

**NOTE:** Other inspection methods that have been examined and found satisfactory by the operator can be used.

- C. Refer to Figure 202/REPAIR 2 for the definitions of the facesheets of a honeycomb panel.  
D. For repair of the expanded aluminum foil mesh (BMS 8-336), refer to 51-70-14, REPAIR 4.  
E. Make sure the aerodynamic smoothness is satisfactory or there will be a decrease in the economic performance of the airplane. Refer to 51-10-01, GENERAL.

#### Figure 202. Definitions of the Facesheets

Sheet 1

### 3. References

Reference	Title
51-10-01, GENERAL	Aerodynamic Smoothness Requirements
51-70-04, REPAIR GENERAL	Repair Procedures for Wet Layup Materials
51-70-05, REPAIR GENERAL	Repair Procedures for Preimpregnated Materials
51-70-14, REPAIR 4	Procedures for Repairs with Expanded Aluminum Foil Mesh (BMS 8-336)
AMM 51-21-10 P/B 701	DECORATIVE EXTERIOR PAINT SYSTEM - CLEANING/PAINTING
AMM 71-11-01 P/B 401	INLET COWL - REMOVAL/INSTALLATION
NDT Part 1, 51-01-00	Orientation and Preparation for NDT Tests
SOPM 20-44-04	Application of Urethane Compatible Primer

### 4. Repair Instructions

- A. Refer to Table 201/REPAIR 2 for the repair data that is applicable to damage of the Inlet Cowl Outer Barrel panels.  
B. For a repair made with wet lay-up materials and cured at 200°F (93°C), refer to 51-70-04, REPAIR GENERAL.

**NOTE:** The composite repair limits referred to in Table 201/REPAIR 2 of this repair require two structural plies on top of the one-for-one damaged ply replacement. Refer to Figure 201/REPAIR 2 for the ply orientation.

- C. For a repair made with preimpregnated materials and cured at 350°F (177°C), refer to 51-70-05, REPAIR GENERAL.  
D. Apply one layer of BMS 10-79, Type III primer on the outer face (tool side facesheet) of the outer barrel panel. Apply one layer of BMS 10-103 Type I primer on the inner face (bag side facesheet) of the outer barrel panel. Refer to SOPM 20-44-04.  
E. Apply a finish to the reworked area as given in AMM PAGEBLOCK 51-21-10/701.

#### Table 201.



EFFECTIVITY: ALL

REPAIR DATA FOR THE INLET COWL OUTER BARREL SKIN - GE90-100 SERIES ENGINE		
TYPE OF REPAIR	PERMANENT REPAIR	
REPAIR CURE TEMPERATURE	WET LAYUP 200°F (93°C) CURE	PREIMPREGNATED LAYUP 350°F (177C) CURE
REPAIR SIZE AND LIMITS FOR SOLID LAMINATE AREA	Repair of solid laminate edgebands is not permitted	There are no size limits on the repair
REPAIR SIZE AND LIMITS FOR HONEYCOMB AREA	<p>14.5 inches (368 mm) in diameter (D) maximum, and not more than 33 percent of the smallest dimension of the honeycomb panel at the damage location.</p> <p>Total repaired area for each panel not more than 3.0 square feet (2787 square cm).</p> <p>The repair is limited to one facesheet and honeycomb core.</p> <p>Use one repair ply for each damaged ply of the panel plus two more structural plies; One ply at 0 degrees and one ply at +/- 45 degrees. Refer to Figure 201 for the ply direction.</p> <p>The repair must be a minimum of 6 inches (152 mm), edge to edge, away from another repair or damage location.</p> <p>The repair must be a minimum of 2.0 inches (51 mm) or one diameter (D), that which is larger, away from the edge of the honeycomb.</p> <p>For repairs to the inner skin the overlap for each ply is 1.00 inch (25.4 mm). For repairs to the outer skin the overlap for each ply is 0.50 inch (13 mm).</p>	There are no size limits on the repair
REPAIR INSTRUCTIONS	Refer to 51-70-04, REPAIR GENERAL	Refer to 51-70-05, REPAIR GENERAL

Fig. Issue Date: 15 May 2014

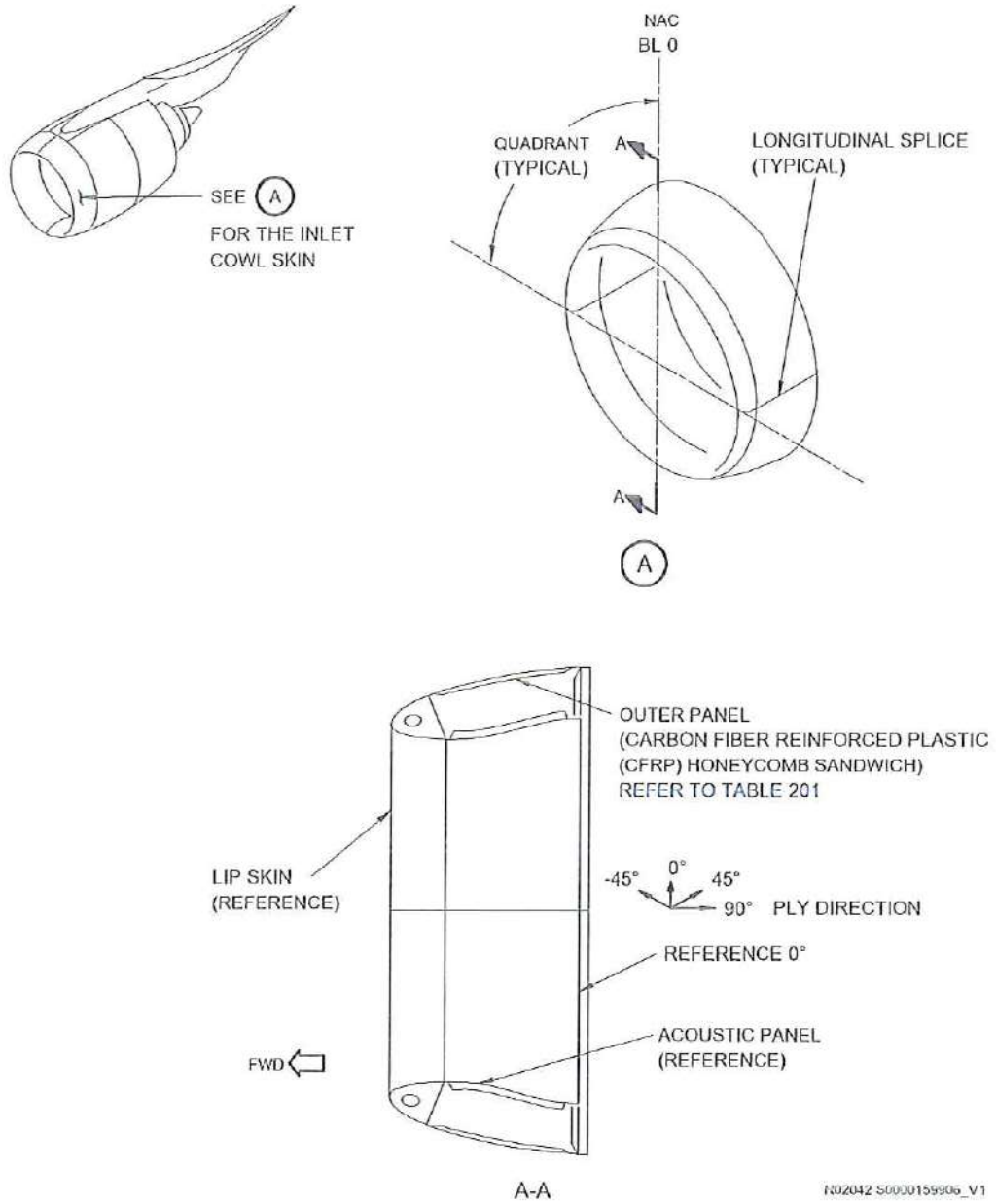


Figure 201. Inlet Cowl Outer Barrel Panel Location - GE90-100 Series Engine - Sheet 1

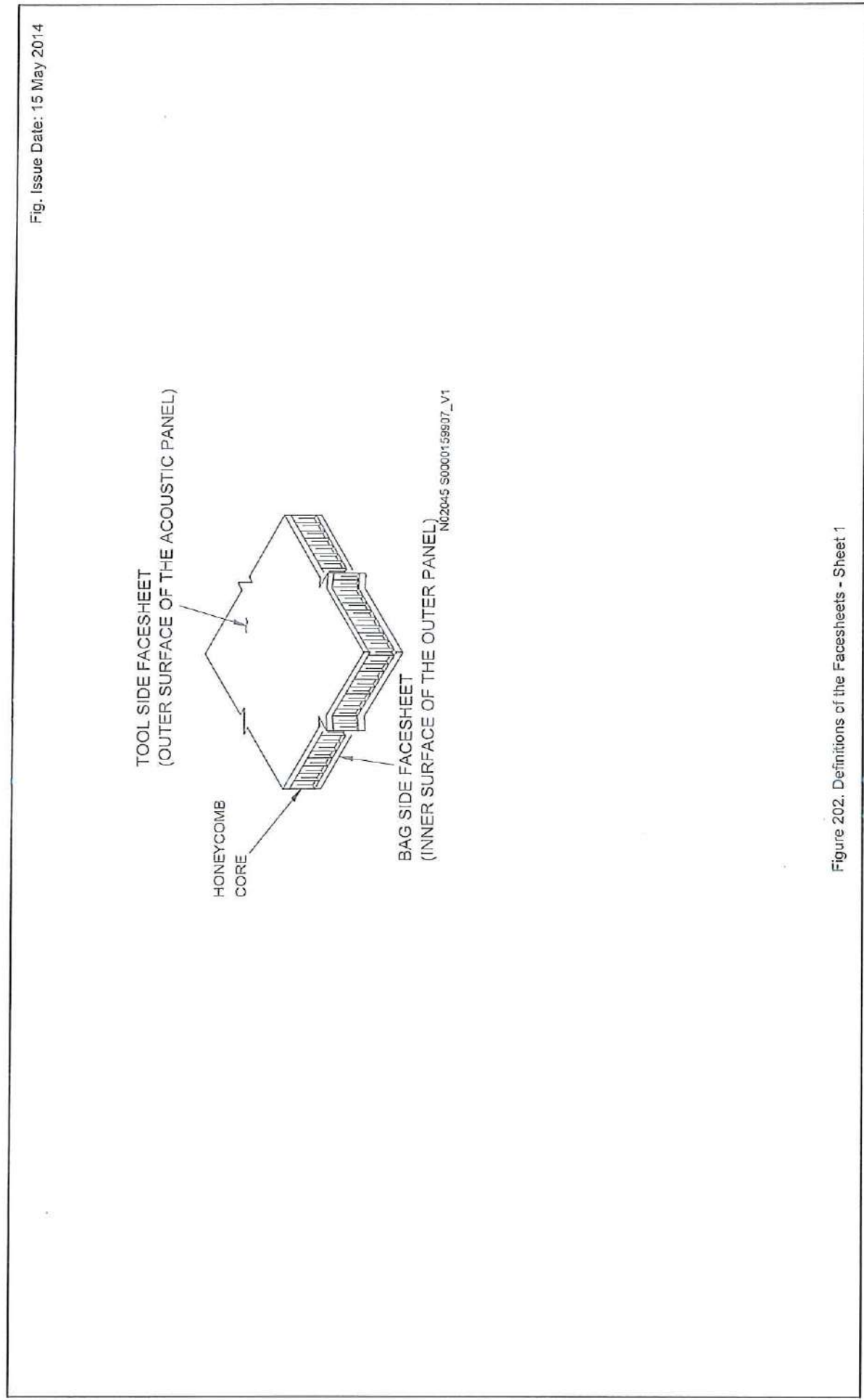


Fig. Issue Date: 15 May 2014

Figure 202. Definitions of the Facesheets - Sheet 1

URGENT

TECHNICAL SERVICES > ADAT/TS/8024A ISSUE 21 (JUNE 2014)

# Engineering Enquiry / Request

(Refer to ADAT/TS/8024A/Instructions in eDOC for filling instructions)



CODE : 57	<input checked="" type="checkbox"/> Aircraft	<input type="checkbox"/> Engine	<input type="checkbox"/> Component
ATA No. : 72	Release Authority : <input type="checkbox"/> EASA <input type="checkbox"/> FAA <input checked="" type="checkbox"/> GCAA:		
Manual Seq No. : 19416H	<input type="checkbox"/> Other (Specify): _____		
cMRO Seq. No. : 6669634	Act/Eng/Comp Input Date & Time:		
Page 01 : of	Act/Eng/Comp Departure Date & Time :		

### PART (A) : INITIAL ENQUIRY / REQUEST (To be filled-out by Base/Line Station/Engine Services/Component Services)

SUBJECT: INLET COWL P/N INTERCHANGEABILITY						Visit No	792250
CUSTOMER	ACFT TYPE	ENGINE TYPE	REG / MSN / SN	FH / TSN	FC / CSN	WO No	MIL10212194
ETIHAD	B777F	GE90	AG-DDC	5857:12	1057	NRC No	001
Part / Component / Assy Name	PART NO		Serial No	Component FC/CSN	Component FH/TSN		
INLET COWL	314W1400-24		001431	N/A	N/A		
Next Higher Assy Description/Part No	N/A		Cost of Affected Item	(USD / or State)			
References (SRM/IPC/AMM/CMM/OHM/OTHER)	N/A		Aircraft/Engine/Component Location				
Urgency: <input type="checkbox"/> AOG <input checked="" type="checkbox"/> WORK STOPPAGE <input type="checkbox"/> 'A' Check <input type="checkbox"/> 'C' Check <input type="checkbox"/> Pre-Input <input checked="" type="checkbox"/> Casualty Input <input type="checkbox"/> Normal							

### DETAILS OF ENQUIRY / REQUEST:

AG-DDC EXPERIENCED BIRD STRIKE RESULTING WITH DAMAGE AT ENG # 1 INLET COWL LIP SKIN.  
 REFER DDO M54-5237 EY, ISSUED TO CARRY OUT FERRY FLIGHT UP TO BASE.

INLET COWL P/N : 314W1400-24, S/N: 001431 DUE MIL SPARE REQUESTING TO ALLOW US TO INSTALL SERVICEABLE INLET COWL P/N; 314W1400-9, S/N: 00114 EX AG-ETC.

Raised by:  Name/Stamp/Title	Reviewed by:  Name/Stamp/Title	02, SEP, 14 at : 1420H Date Time
Department: AFS	Contact Name:	Tel/Ext:

0518866012



# Engineering Enquiry / Request

(Refer to ADAT/TS/8024A/Instructions in eDOC for filling instructions)



Code: <u>B7</u>	cMRO Seq No: <u>6669634</u>	Page No: <u>2 of 2</u>
ATA No: <u>54</u>	Manual Seq No: <u>19416H</u>	Customer: <u>ETIHAD AIRWAYS</u>
Acf/Eng/Component & Reg/SN: <u>A6-DDC, MSN 39691</u>		

PART (B) Technical Services FINAL Response	GROUP: <input checked="" type="checkbox"/> ST <input type="checkbox"/> IN <input type="checkbox"/> AV <input type="checkbox"/> SY <input type="checkbox"/> PP <input type="checkbox"/> PS
(Sheet of ) This EER is CLOSED: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Received: Date: <u>02Sep 2014</u> Time: <u>14:30</u>	Replied: Date: <u>02 Sep 2014</u> Time: <u>15:30</u>

REFERENCES:  
Boeing message # GMO-ETI-14-0152-08B

ACTION: NOTE: This EER response is for one time use only.

In reply to Part A of this EER.  
Installation of Inlet Cowl P/N 314W1400-9 in place of 314W1400-24 found structurally and functionally acceptable and approved under RDR GMO-ETI-14-0152-08B valid for 90 Days from time of part installation provided following is met:

1. Install Inlet Cowl P/N 214W1400-9 in place of P/N 214W1400-24 IAW AMM 71-11-01/401.
2. Raise DDL with following requirements:
  - a) Perform General Visual Inspection on the inlet cowl IAW AMP task EY\_B777F\_71-836-01-01 for signs of cracking. Pay particular attention to the base of the bathhub fittings on the inlet attached ring while performing this inspection. The cracks usually originate from a base of a bathhub fitting.  
**Threshold for inspection: 3000 FH from previous inspection**  
**Repeat Interval: 3000 FH**
  - b) Replace Inlet Cowl P/N 314W1400-9 with a serviceable unit P/N: 314W1400-24 within 90 calendar Days following initial installation of 314W1400-9 on the aircraft.
3. DDO M54-5238EY is covering this installation

<b>R A I S E</b>	<input checked="" type="checkbox"/> Defect Deferred List (DDL)/Base Deferred Defects (BDD)/Aircraft Technical Log (ATL) Entry * (* STRIKE thru which is not applicable)
	Limitations/Threshold/ Interval /Inspection method : Validity <u>90 Days</u> . Repeat Inspection IAW AMP task EY_B777F_71-836-01-01
	<input type="checkbox"/> Structural Damage/Repair Recording (SDR) ***
	<input type="checkbox"/> Reflect on the D & B and (External Damage Record Sheet (EDRS) ***
	<input type="checkbox"/> Primary Structure (Must fill Discrepant Structure Report (DSR) Form ADAT/TS/8625) ***
	<input type="checkbox"/> If Corrosion, complete Corrosion Prevention and Control Program (CPCP) Form ADAT/TS/8628) ***
Corrosion Level: <input type="checkbox"/> 1 <input type="checkbox"/> 2 Note: For 3 <sup>rd</sup> Party Customer, If corrosion is Level 2, customer is responsible to upgrade its maintenance program to Level 1. Reflect this note when recording the performed repair.	
*** For 3 <sup>rd</sup> Party Customer, the recording is the responsibility of the Customer unless contracted. This recording requirement(s) must be reflected by ADAT when closing the performed repair / card. If contracted, it is recorded on the customer equivalent documentation.	

THE TECHNICAL CONTENT OF THIS DOCUMENT IS APPROVED PER (\* STRIKE thru which is not applicable)

<input type="checkbox"/> EASA Part 145 A.45 ( )	<input type="checkbox"/> FAA AR / FAA DER *	<input type="checkbox"/> EASA RDAS / RAS *	<input type="checkbox"/> TA	<input type="checkbox"/> NAA
<input type="checkbox"/> GCAA CAR 145 .45 ( )	<input checked="" type="checkbox"/> RDR	<input type="checkbox"/> DOA Part/CAR 21.J	<input type="checkbox"/> TV	<input type="checkbox"/> OTHER

Organization Name/Name: BOEING Authorization No.: N/A Doc Ref: message #GMO-ETI-14-0152-08B

ADAT Document Raised  RS / RB \*  DDO  EO  EWI  Drawing(s)  Tech Pubs Amndmt  Others (Specify)  
(If applicable): DOCUMENT No: M54-5238EY

Customer approval for deferred inspection or deferred permanent repair is required  Yes  No  N/A

Customer Name / Signature: N/R Date: \_\_\_\_\_

Engineering M/Hrs : 10.0 Hrs

Eng'g Drafting M/Hrs : \_\_\_\_\_ Hrs Customer Approval: \_\_\_\_\_

Related PO Raised Ref / Cost : \_\_\_\_\_ (as per contract) Signature (over printed name)

Initiated by: <u>Anton Dukov</u> Name/Title _____ Signature _____	Approved by: <u>Raid Bulka</u> Name/Title <u>APC</u> Signature _____
---	--

IMPORTANT: 1. ANY DEVIATION OUTSIDE THE SCOPE OF APPROVALS HELD BY ADAT MUST BE APPROVED BY THE APPLICABLE AIRWORTHINESS AUTHORITY, OR ITS DELEGATED APPROVAL HOLDER, VIA ADAT SMQA, BEFORE RELEASE TO SERVICE.  
2. COPY OF RELEVANT APPROVAL DOCUMENT SHALL BE ATTACHED TO THIS EER (eg: RDAS, FAA FORM, ADAT DDO, etc.)



**MINI PACK**

**AJW**

**B777-36304-54-0015**



## Structural Damage/Repair - Record

**Part I: Aircraft/Component Damage Details (to be filled out by A&C/STR Heavy/Light/Line Maintenance Organization)**

Aircraft Type/MSN/Reg.: B777-200LR/36304/A6-LRE	SDRR No: (EY Fleet Mgt. Control No.) <b>B777-36304-54-0015</b>	
Aircraft / Component CSN : 3657	Aircraft / Component TSN : 32267:58	
Affected Part: <b>LHENGINE INLET COWL LIP SKIN</b>	PN: <b>341W1400-9</b>	SN: <b>001114</b>
Visit No./Type: 1077799 / C3+17A+CABIN RECONFIG	NRC/ATL Ref. No: <b>4022</b>	ATA: <b>54-00</b>

Description of Defect: (incl. damage type, affected sub part and general location) **SURFACE CORROSION FOUND ON THE EXTERNAL SURFACE OF LEFT INLET COWL UPPER LIP ASSY HALF**

Damage Dimension: mm (in)  
 Length, L: **14.6"** Width, W: **11"** Depth, D: \_\_\_\_\_ Diameter, Ø: \_\_\_\_\_ Area, A: \_\_\_\_\_  
 Original Thickness, t: **0.077"** Max. Material Loss: **0.003"**

Damage Location  
 Frame, FR: from \_\_\_\_\_ to \_\_\_\_\_ Stringer, STGR: from \_\_\_\_\_ to \_\_\_\_\_ (LH/RH) Rib: from \_\_\_\_\_ to \_\_\_\_\_  
 Body Buttock Line, BL: from \_\_\_\_\_ to \_\_\_\_\_ Water Line, WL: from \_\_\_\_\_ to \_\_\_\_\_  
 Orientation (view looking fwd / aft): **FWD** Radial (degrees or clock) position: **10°CLOCK - 2°CLOCK**  
 Report any previous repair in the area: \_\_\_\_\_

Inspection Reference: Was damage found during SB/ALI/MRB/MPD?  No  Yes

SB/EO No.: \_\_\_\_\_  
 MRB/MPD/AMS/ALI/Task No.: **EY-B777-71-836-01-01**

**Cause of Damage:**

- Environment  
  Lavatory/Galley Spill  
  Chemical Spill  
  Internal Leakage  
  Wet Insulation Blanket  
  Temporary Repair Replacement  
 Bird Strike  
  Accidental Damage  
  Blocked Drain  
  Lightning Strike  
 Unknown  
 Others (pls. specify)

**Part II: Damage Assessment (to be filled out by A&C or STR Heavy/Light/Line Maintenance Organization)**

Damage within Allowable Limits  Yes  No, Contact Engg, Technical Request No. **TR 21371H**  No, Replaced

Repair Approved by **SRM/CMM/AMM**: \_\_\_\_\_ Repair Approved by: RDAS, FAA, RDR, Part21 DOA

(Specify Chapter Page Block, Para, Figure, Diagram, Sheet and Rev No.)  
**54-13-01-1A-1 ALLOWABLE DAMAGE 1**  
 SRI/IIR/SSI (if any): **PARAGRAPH 4.A. FIGURE 103 SHEET 5 DETAIL A REV. 70 JAN 15 2016**

Repair Classification  
 Minor  Major

Description of Repair: **SURFACE CORROSION REMOVED IAW SRM 51-10-02-06-0 HFEC INSPECTION PER NTM 51-00-01 PT6 NIL FINDINGS. REPROTECTED REMOVED AREA IAW SRM 20-43-03. REMOVED WITHIN LIMIT IAW SRM 54-13-01-1A-1 ALLOWABLE DAMAGE 1 PARAGRAPH 4.A. FIGURE 103 SHEET 5 DETAIL A.**

Monitoring Defect No. (if any): \_\_\_\_\_ Weight Change:  
 Yes, (kg, weight change); \_\_\_\_\_ (kg-m (in), moment change)  No (less than 0.5 kg)

Repair Life Limitation Ins Threshold: _____ Ins Interval: _____ Ins Method: _____ Repair Replacement: _____	Repair Category <input checked="" type="checkbox"/> A Permanent <input type="checkbox"/> B Permanent with inspection <input type="checkbox"/> C Temporary	Corrosion Level <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> N/A <input type="checkbox"/> Widespread <input checked="" type="checkbox"/> Local
---	--	---

NAME/STAFF ID	APPROVAL/STAMP NO.	MAINTENANCE ORGANIZATION	DATE
<b>CYRUS 11219</b>	<b>EYEng 2449</b>	<b>EY ENGINEERING</b>	<b>APRIL 10 2016</b>

Click to Print

Print Form

Email this form to EY Fleet Management Team, click the applicable button below:

A320 Fleet Mgt.

A380 Fleet Mgt.

B787 Fleet Mgt.

A330/A340 Fleet Mgt.

B777 Fleet Mgt.

**Part III. Evaluation and Review (to be filled-out by EY Fleet Management Engineering)**

**Damage/Repair Figure**

- Attach extracted reference manual figures, sketch and/or general and detail view photos.
- Indicate the exact position of damage with distances to nearest frame, stringer or adjacent landmark such as edge of part, ribs, stiffeners latches/hinges, doublers, access panels.

*Insert Image Here*

**Damage Repair within Allowable Limits?**

- Yes  
 No

Ref. No.: SRM 54-13-01-1A-1, FIG 103

**Repair within SRM /AMM/CMM?**

- Yes, Manual Ref No.:  
 No, OEM Ref. No.:

- Minor Repair       Major Repair

**Structure Classification**

- Primary  
 Secondary

**Repair Life Limitation**

Ins Threshold:  
 Ins Interval:  
 Ins Method:  
 Repair Replacement:

**Repair Category**

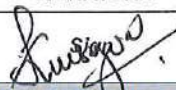

- A Permanent  
 B Permanent with inspection  
 C Temporary

**Corrosion Level**

- 1     2     3     N/A  
 Widespread  
 Local

**Remarks:**

The surface corrosion reworked areas on LH Engine Inlet cowl lipskin approximately between 2 & 10 O' clock position are within the Allowable Damage Limits in accordance with B777-200 SRM 54-13-01-1A-1 Figure 103, Detail A.  
 The corrosion are structurally acceptable and left as is permanent category A with no additional requirements.

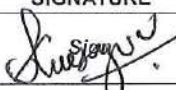

REVIEWED BY/STAFF ID:	SIGNATURE	DATE	VERIFIED BY/STAFF ID:	SIGNATURE	DATE
Narayanan Kutty		21 Apr 16	Anton Dukov		21 Apr 16

**Part IV. Additional / Definitive Action (to be filled-out by EY Fleet Management Engineering)**

**Permanent Action / Repair Replacement:**

These blend outs are structurally acceptable and left as is permanent category A with no additional requirements.

Definitive OEM Approval Ref. No.: N/A

REVIEWED BY/STAFF ID:	SIGNATURE	DATE	VERIFIED BY/STAFF ID:	SIGNATURE	DATE
Narayanan Kutty		21 Apr 16	Anton Dukov		21 Apr 16





# Non Routine Work Card

Work Order No. (1)		CARD No. (2)	4022
*AUH14771999*			

A/C Reg (3)	A/C Type (4)	VISIT No. (5)	Zone (6)	Trade (7)	ATA (8)	Date Raised (9)	Raised By (10)
A8-LRE	B777-200LR	1077798	400	STR	54-12	04-APR-2016	13163
Job Card No. (11)	NRC No. (12)		EST. MH (13)	Chargeable (14)		Customer Auth (15)	
EY_B777_71-836-01-01	8621002		40	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>			


### Defect Description

(16) SURFACE CORROSION FOUND ON THE EXTERNAL SURFACE OF LEFT INLET COWL UPPER LIP ASSY HALF.

(17) Independent Inspection/RII Requirement Yes  No

\* Data Entry Required for Etihad Aircrafts only

Data Entry Done by (18)	Deferral Code (19)	Deferral No (20)	MCC Control No (21)
AG 10044			

SEQ (22)	Action To Be Taken (23)	Action Taken (24)	MECH Sign EMP. Date (25)	INSP. Sign Stamp Date (26)
10				
	RAISE TR FOR CORROSION REPAIR PROCEDURE	TR 21371H RAISED FOR CORROSION REPAIR PROCEDURE	EYEng 2449	EYEng 2449 04 APRIL 2016
20	CARRY OUT REMOVAL OF CORROSION IAW SRM 51-10-02-06-0 REV. TO JAN. 15 2016	(20) SURFACE CORROSION REMOVED ON LIP SKIN IAW SRM 51-10-02-06-0 REV. TO JAN 15, 2016		EYEng 2609 8/4/16
30	CARRY OUT HFEC INSP. IAW NIM 51-00-01 PT. 6	CARRIED OUT HFEC AS PER NIM 51-00-01, P+6 (REV 64, 10AUG 2015) FOUND NIL CRACK / CORROSION	EYEng 6224	EYEng 6224 08 APR 2016

### Certification

I hereby certify that the maintenance was accomplished in accordance with CAR 145/Part 145/FAR 145 and MOE 2.16/RSQM 7.2 requirements.

UAE.145.0010     
  EASA 145.0073     
  FAA 2GUY107C     
  Others ..... (27)

Name: Zekher     
 Sign: *Zekher*     
 Stamp: EYEng 2613     
 Date: 10/4/16 (28)

### Rotable Component Change Details

Position (29)	P/N OFF (30)	S/N OFF (31)	P/N ON (32)	S/N ON (33)

(34) Continuation NR Page Attached Yes       (35) Additional parts used sheets attached

Card Cleared (36)	Date (37)

**Non Routine Work Card**
  
**(Continuation sheet)**

Visit No.	A/C Reg.	Work Order No	NRC No.	Date Raised	Raised by
(6) 1077999	(3) A6-LRE	(11) AWH14771999	(12) 4022	(9) 04 APRIL 2016	(10) 13163

SEQ	Action to be Taken	Action Taken	MECH Sign EMP. Date	INSP. Sign Stamp Date
22)	(23)	(24)	(25)	(26)
40	CARRY OUT MEASUREMENT OF MATERIAL THICKNESS IAW NDT PART 4 51-00-10. REV. NO. 64 AUG 10 2015	Comparison of UT Thermo logs. NOT PART 4 51-00-10 Revoked AUG 10 2015 IAW FORM. maximum max temp loss 0.1 0.003" → ORG 0.077" IAW 0.077"	del 11/29/10	EYEng 6207 del 10 APR 2016
50	CARRY OUT EVALUATION IAW SRM 54-13-01-1A-1 ALLOWABLE DAMAGE 1 PARAGRAPH 4.A. FIGURE 103 SHEET 5 DETAIL A. REV. 70 JAN 15 2016	EVALUATION CARRIED OUT; ORIGINAL LIP SKIN THICKNESS = 0.077". REMAINING THICKNESS = 0.074" DEPTH OF MATERIAL REMOVED = 0.003". THE REWORKED IS WITHIN ALLOWABLE DAMAGE IAW SRM 54-13-01-1A-1 ALLOWABLE DAMAGE 1 PARAGRAPH 4.A. FIGURE 103 SHEET 5 DETAIL A. AREA OF REWORKED = 14.6 X 11" BETWEEN 10 O'CLOCK AND 2 O'CLOCK	EYEng 2449	EYEng 2449 10 APR 2016

**Certification**

I hereby certify that the maintenance was accomplished in accordance with CAR 145/Part 145/FAR 145 and MOE 2.16/RSQM 7.2 requirements.

UAE.145.0010     
  EASA.145.0073     
  FAA GUX2107F     
  Others..... (27)

Name: *Zelalun*     
 Sign: *[Signature]*     
 Stamp: EYEng 2513     
 Date: 10 APR 2016 (28)

**Rotable Component Change Details**

Position	P/N OFF	S/N OFF	P/N ON	S/N ON
(29)	(30)	(31)	(32)	(33)

(34) Continuation NR Page Attached      
 (35) Additional parts used sheets attached

## Non Routine Work Card (Continuation sheet)

Visit No.	A/C Reg	Work Order No	NRC No.	Date Raised	Raised by	
(6) 1077799	(3) AG-LRE	A3414771999	(12) 4022	(9) 04 APRIL 2016	(10) 13163	
SEQ	Action to be Taken		Action Taken		MECH Sign EMP. Date	INSP. Sign Stamp Date
(22) (23)			(24)		(25) EYEng 2449	(26) EYEng 2449 10 APRIL 2016
50			VIEW LOOKING FORWARD. REV. 70 JAN. 15 2016			
60	APPLY ALODINE 1200 PER SOPM 20-43-03		APPLIED ALODINE 1200 ON REWORKED AREA 1AW SOPM 20-43-03 REV. 17 JULY 01 2015		EYEng 2449	EYEng 2449 10 APRIL 2016

### Certification

I hereby certify that the maintenance was accomplished in accordance with CAR 145/Part 145/FAR 145 and MOE 2.16/RSQM 7.2 requirements.

UAE.145.0010     
  EASA.145.0073     
  FAA GUX2107F     
  Others..... (27)

Name: *Zelalem*     
 Sign: *Zme*     
 Stamp: EYEng 2613     
 Date: 10/12/16 (28)

### Rotable Component Change Details

Position	P/N OFF	S/N OFF	P/N ON	S/N ON
(29)	(30)	(31)	(32)	(33)

(34) Continuation NR Page Attached     
  (35) Additional parts used sheets attached

# MATERIAL USAGE REPORT

Report Date: 12-APR-2016 06:45

Page 1 of 1

VISIT NO.: 1077799    A/C REGISTRATION: A6-LRE    CUSTOMER: ETIHAD AIRWAYS(EY)

SRN	MFR PN ITEM	DESCRIPTION	ISSUED QTY	*RETURNED QTY	UOM	LOT NO.	SERIAL NO.	REMARKS
<b>WORKORDER: AUH14771999</b>								
1	ALOCROM1200AB 20KGKIT	COATING, CHEMICAL, 20 KG KIT	1	0	KT	AUH0035796194		

This certifies that the above material has been Ordered against the stated work order and consumed/installed on the mentioned aircraft in accordance with the applicable TPM procedure.



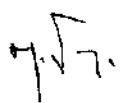
ENGINEER SIGNATURE

EYEng  
2449

ENGINEER STAMP NO

**\* IMPORTANT NOTE:** Please indicate quantity of unused 'S' spares being returned to store and "Marked for return" in the column above.

## Tool Measurement Recording


(1) Visit No.	1077799	(2) Task Card No	NRC 4022
(3) A/C Type	B777-200LR	(4) A/C Reg.	A6-LRE
(5) Tool Description	EDDY CURRENT		
(6) Tool PN	M2N3L	(7) Tool S/N	S25964
(8) Task Description	TO DETECT CRACK / CORROSION.		
(9) Record Measurement			
UNIT OF MEASUREMENT : KHZ			
(10) Certified By Name: VENKAT	Signature: 	Stamp: EYEng 6224	Date: 08 APR 2016

As per TPM 2-26 and TPM 2-17 Para 37 the Form should be used whenever the task card has no appropriate stages/steps to record the tool measurements.

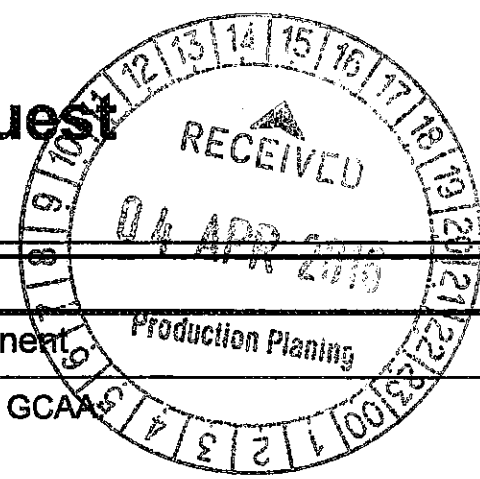
## Tool Measurement Recording

(1) Visit No	1077799	(2) Task Card No	1077799
(3) A/C Type	B777-300ER	(4) A/C Reg	A6-LRE
(5) Tool Description	TC410 Tension machine		
(6) Tool P/N	826172	(7) Tool S/N	826172
(8) Task Description	Tension Machine		
(9) Record Measurement			

Measure in Tension

(10) Certified By	Signature: 	Stamp: EYEng 6207	Date: 10 Apr 2016
-------------------	--	----------------------	-------------------

As per TPM 2-26 and TPM 2-17 Para 37 the Form should be used whenever the task card has no appropriate stages/steps to record the tool measurements.



(Refer to EYEng/TS/8024A/Instructions in eDOC for filling instructions)

CODE : B7	<input checked="" type="checkbox"/> Aircraft	<input type="checkbox"/> Engine	<input type="checkbox"/> Component
ATA No : 54	Release Authority : <input type="checkbox"/> EASA <input type="checkbox"/> FAA <input checked="" type="checkbox"/> GCAA		
Manual Seq No : 21371H	<input type="checkbox"/> Other (Specify): _____		
CMRO Seq No : 8621808	Aircraft / Engine / Comp Input Date & Time: 29-MAR-2016		
Page : 1 of 2	Aircraft / Engine / Comp Departure Date & Time : 21-APR-2016		

**PART (A) : INITIAL TECHNICAL REQUEST** (To be filled-out by Base/Light/Line Station/Component Services)

SUBJECT: SURFACE CORROSION ON EXT UPPER HALF OF LH INLET COWL LIP SKIN						Visit No	1077799
CUSTOMER	ACFT TYPE	ENGINE TYPE	REG / MSN / SN	FH / TSN	FC / CSN	WO No	14771999
ETIHAD AIRWAYS	B777-200LR	GE90-110	A6-LRE/ 36304	32267:58	3657	NRC No	4022
Part / Component / Assy Name		Part No	Serial No	Component FC/CSN	Component FH/TSN		
INLET COWL		341W1400-9	001114	3487	24336		
Next Higher Assy Description / Part No			N/A	Cost of Affected Item	(USD / or State)		
References (SRM/IPC/AMM/CMM/OHM/OTHER)			SRM 54-13-01-1A-1	Aircraft/Engine/Component Location	HANGAR 6B		
Urgency: <input type="checkbox"/> AOG <input type="checkbox"/> WORK STOPPAGE <input type="checkbox"/> 'A' Check <input checked="" type="checkbox"/> 'C' Check <input type="checkbox"/> Pre-Input <input type="checkbox"/> Casualty Input <input type="checkbox"/> Normal							

**DETAILS OF TECHNICAL REQUEST:**

REFER NRC-4022

WIDE SPREAD SURFACE CORROSION /PITTING FOUND ON THE EXTERNAL UPPER HALF OF INLET COWL LIP SKIN. IN B777-200 SRM 54-13-01-1A-1, ALLOWABLE DAMAGE 1 FIG 103, SHEET 1 TABLE A IS NOT GIVING ANY SPECIFIC ALLOWABLE LIMIT FOR CORROSION. PLEASE PROVIDE AN APPLICABLE CORROSION REMOVAL AND REPAIR PROCEDURE OR ADVISE FURTHER COURSE OF ACTION.

NOTE: PLEASE VISIT COMPONENT LOCATION FOR MORE DETAILS



Raised by: RR KURUP /EEAE Name / Stamp / Title	EYEng 2497  Signature	Reviewed by: CYRUS /AE 2449 Name / Stamp / Title	04 / 04 / 16 at 15:00 Date Time
Department: AFS (STRUCTURES)		Contact Name:	Tel/Ext: 8309

(Refer to EYEng/TS/8024A/Instructions in eDOC for filling instructions)

Code: <b>B7</b>	cMRO Seq No: <b>8621808</b>	Page No: <b>02</b> of <b>02</b>
ATA No: <b>54</b>	Manual Seq No: <b>21371H</b>	Customer: <b>ETIHAD AIRWAYS</b>
Aircraft / Engine / Component & Registration / SN: <b>B777-200LR / A6-LRE / 36304</b>		

<b>PART (B)</b> (Sheet 1 of 1)	<b>Design, Engineering and Innovation FINAL Response</b>	Group: <input checked="" type="checkbox"/> ST <input type="checkbox"/> IN <input type="checkbox"/> AV <input type="checkbox"/> SY <input type="checkbox"/> PP
This TR is CLOSED: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

Received: Date: <b>04.03.2016</b> Time: <b>15:30</b>	Replied: Date: <b>06.03.2016</b> Time: <b>10:15</b>
--	---

**REFERENCES:**  
 /A/ BOEING MSG # GMO-ETI-16-0034-04B /B/ B777-200LR SRM 54-13-01-1A-1

**ACTION:** **NOTE: This TR response is for one time use only.**

**In response to Part A of this TR ,kindly find below engineering reply:**

Engineering has reviewed the reported damage in Part A and provides the following response:

- Remove the damage per 777-200 SRM 51-10-02. Maintain a surface finish of 125 micro inches Ra or smoother.
- Accomplish an HFEC surface inspection per 777 NDT Manual Part 6, 51-00-01 or Fluorescent Penetrant Inspection per SOPM 20-20-02 Type-1, Method-C, Level-3 or higher on the reworked areas to ensure all damage has been removed and there are no cracks.
- The allowable damage limits for the inlet cowl lip skin provided in 777-200 SRM 54-13-01 Allowable Damage 1 references apply. See Figure 103, Details A, B, C, and D.
- Provided the allowable damage limits in 777-200 SRM 54-13-01 Allowable Damage 1 references are not exceeded, apply Alodine 1200 per SOPM 20-43-03 to the blended areas.

<b>R A I S E</b>	For ETIHAD AIRWAYS aircraft –	<input type="checkbox"/> T-Defect (Non-Routine (NR) [Legacy fleet] / Work Order (WO) [New fleet])
		<input type="checkbox"/> Maintenance Requirement (MR) [Legacy fleet] / Adhoc Job Instruction Card (Adhoc JIC) [New fleet]
		<input type="checkbox"/> Defect Deferred List (DDL) / Aircraft Technical Log (ATL) Entry
	For 3 <sup>rd</sup> Party Customer –	<input type="checkbox"/> Base Deferred Defects (BDD) / Aircraft Technical Log (ATL) Entry ***
	<b>Limitations/Threshold/ Interval /Inspection method :</b>	
	<input type="checkbox"/> Structural Damage/Repair Record (SDRR) (Form QA871 is for Etihad only) ***	<input type="checkbox"/> Cabin Deferred Defects (CDD)
<input type="checkbox"/> Reflect on the D & B and (External Damage Record Sheet (EDRS) ***	<input type="checkbox"/> Reflect on the Fan Damage Chart (FDC)	
<input type="checkbox"/> For 3 <sup>rd</sup> Party Customer only – If Corrosion, Level: <input type="checkbox"/> 1 <input type="checkbox"/> 2 . Complete customer CPCP form (if contracted) *** Note: If corrosion is Level 2, customer is responsible to upgrade its maintenance program to Level 1. Reflect this note in repair records.		
*** For 3 <sup>rd</sup> Party Customer, the recording is the responsibility of the Customer unless contracted. This recording requirement(s) must be reflected by EYEng when closing the performed repair / card. If contracted, it is recorded on the customer equivalent documentation.		

**THE TECHNICAL CONTENT OF THIS DOCUMENT IS APPROVED PER** (\* STRIKE thru which is not applicable)

<input type="checkbox"/> EASA Part 145.A.45 ( )	<input type="checkbox"/> FAA AR / FAA DER *	<input type="checkbox"/> EASA RDAS / RAS *	<input type="checkbox"/> TA	<input type="checkbox"/> NAA
<input checked="" type="checkbox"/> GCAA CAR 145.45 ( b )	<input type="checkbox"/> RDR	<input type="checkbox"/> DOA Part/CAR 21.J	<input type="checkbox"/> TV	<input type="checkbox"/> OTHER

Organization Name/Name: **N/A** Authorization No.: **N/A** Doc Ref: **N/A**



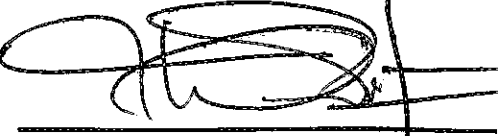
EYEng Document Raised  RS / RB \*  DDO  EO  EI  Drawing(s)  Tech Pubs Amndmt  Others (Specify)

(if applicable): DOCUMENT No: **N/A**

Customer approval for deferred inspection or deferred permanent repair is required  Yes  No  N/A

Customer Name / Signature: **N/A** Date: \_\_\_\_\_

Engineering M/Hrs : <b>4</b>	Chargeable to: <input type="checkbox"/> AFS/CS <input checked="" type="checkbox"/> Customer	Related PO Raised Ref / Cost: <b>N/A</b> (as per contract)	Chargeable to: <input type="checkbox"/> AFS/CS <input type="checkbox"/> Customer
Eng. Drafting M/Hrs : <b>0</b>			

Initiated by: <b>Ehab B. Al-Zoubi</b> Design Engineer Name/Title	 Signature	Approved by:  Name/Title	 Signature
---	--	---	--

**IMPORTANT:** 1. ANY DEVIATION OUTSIDE THE SCOPE OF APPROVALS HELD BY EYEng MUST BE APPROVED BY THE APPLICABLE AIRWORTHINESS AUTHORITY, OR IT'S DELEGATED APPROVAL HOLDER, VIA EYEng SMQA, BEFORE RELEASE TO SERVICE.  
 2. COPY OF RELEVANT APPROVAL DOCUMENT SHALL BE ATTACHED TO THIS TR (example: RDAS, FAA FORM, EYEng DDO, etc.)



Fig. Issue Date: 15 Jan 2016

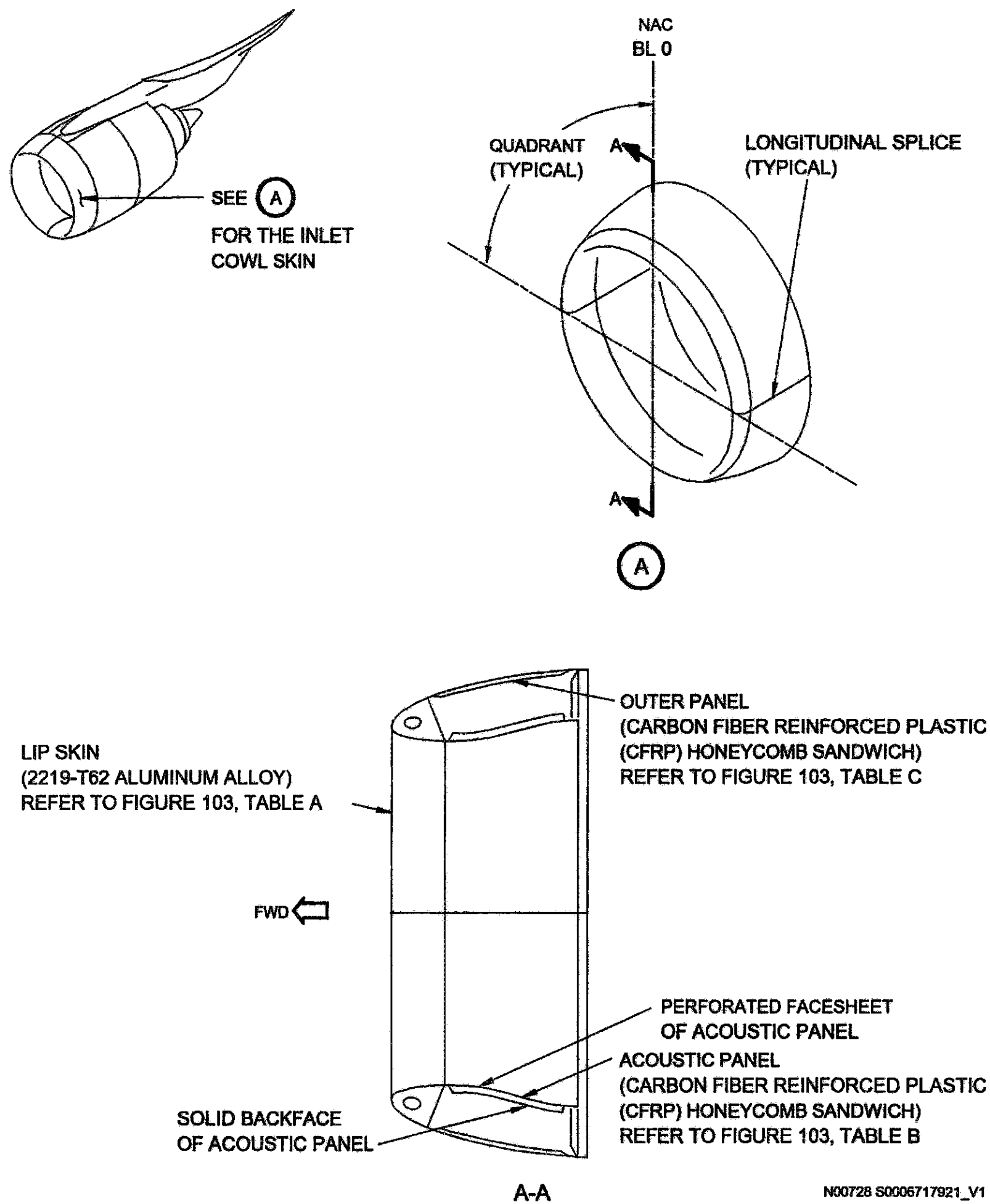


Figure 101. Allowable Damage - Inlet Cowl Skin - GE90-100 Series Engine - Sheet 1

Fig. Issue Date: 15 Jan 2016

ALLOWABLE DAMAGE LIMITS - INLET COWL LIP SKIN				
DESCRIPTION	NICKS, GOUGES AND SCRATCHES	DENTS	CRACKS	HOLES AND PUNCTURES
LEADING EDGE SKIN (ALUMINUM)	SEE DETAILS A, B, C, AND D 1	SEE DETAIL E - DAMAGE MINIMUM SPACING 15.0 INCH 2	- FOR CRACKS AT THE EDGE SEE DETAILS B, C, AND D - FOR SURFACE CRACKS SEE HOLES AND PUNCTURES 1	- MAXIMUM 0.25 INCH (6.35 mm) DIAMETER - DAMAGE MINIMUM SPACING 4D FROM AN ADJACENT HOLE, FASTENER OR OTHER DAMAGE - 1.5D FROM THE EDGE OF THE PART 3

TABLE A

ALLOWABLE DAMAGE LIMITS - INLET COWL ACOUSTIC PANEL			
TYPE OF DAMAGE	DAMAGE TO THE CARBON FIBER PLY	LIMIT DESCRIPTION	MAXIMUM DAMAGE LIMITS LENGTH: INCHES (mm) AREA: SQUARE INCHES (SQUARE cm)
NICKS, GOUGES AND SCRATCHES	NO	ANY DIMENSION	NONE
	YES 5	- LENGTH - WIDTH - DEPTH IN PLYS - DAMAGE MINIMUM SPACING	20.0 (508) 0.25 (6) 1 PLY (MAXIMUM) SEE FIGURE 103, DETAIL I
DENTS 4	NO	- DIAMETER - DEPTH - DAMAGE MINIMUM SPACING	2.0 (51) 0.050 (1.3) SEE FIGURE 103, DETAIL I
	YES	ANY DIMENSION	SEE LIMITS FOR HOLES AND PUNCTURES
HOLES AND PUNCTURES 13	YES	- DIAMETER - DEPTH - DAMAGE MINIMUM SPACING	1.0 (25) 9 3.0 (76) 10 4.0 (102) 11 ONE FACESHEET AND THE CORE. SEE FIGURE 103, DETAIL I

TABLE B

Figure 103. Allowable Damage Limits - Sheet 1

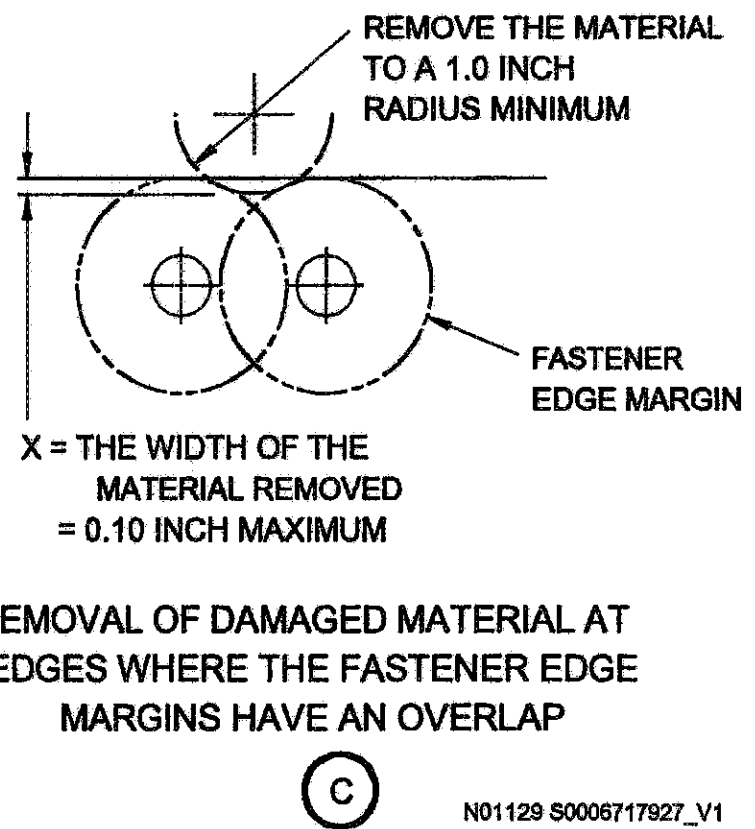
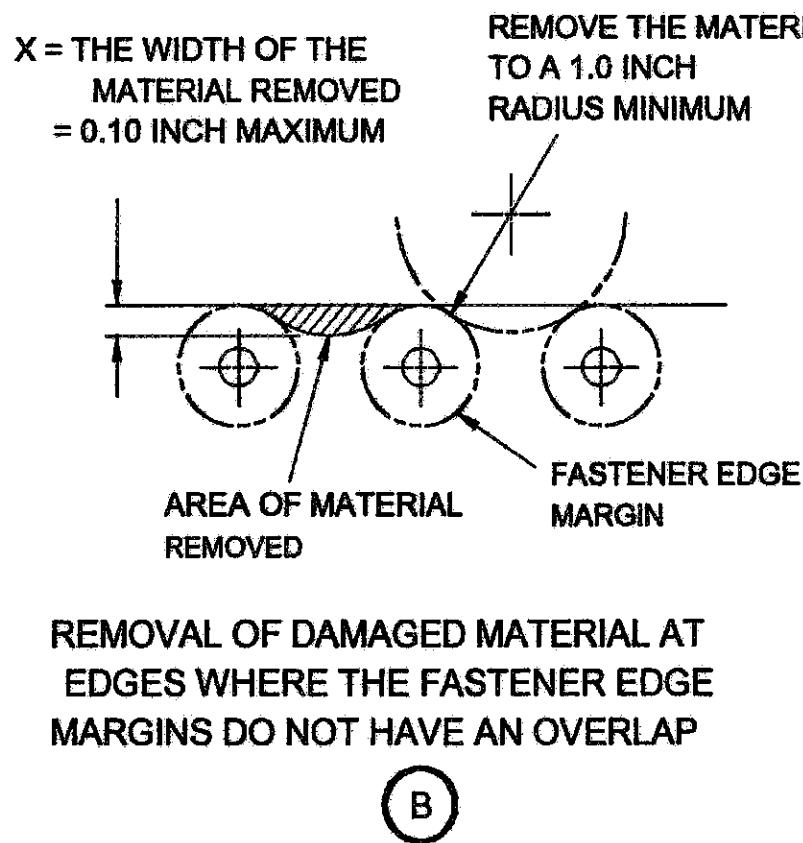
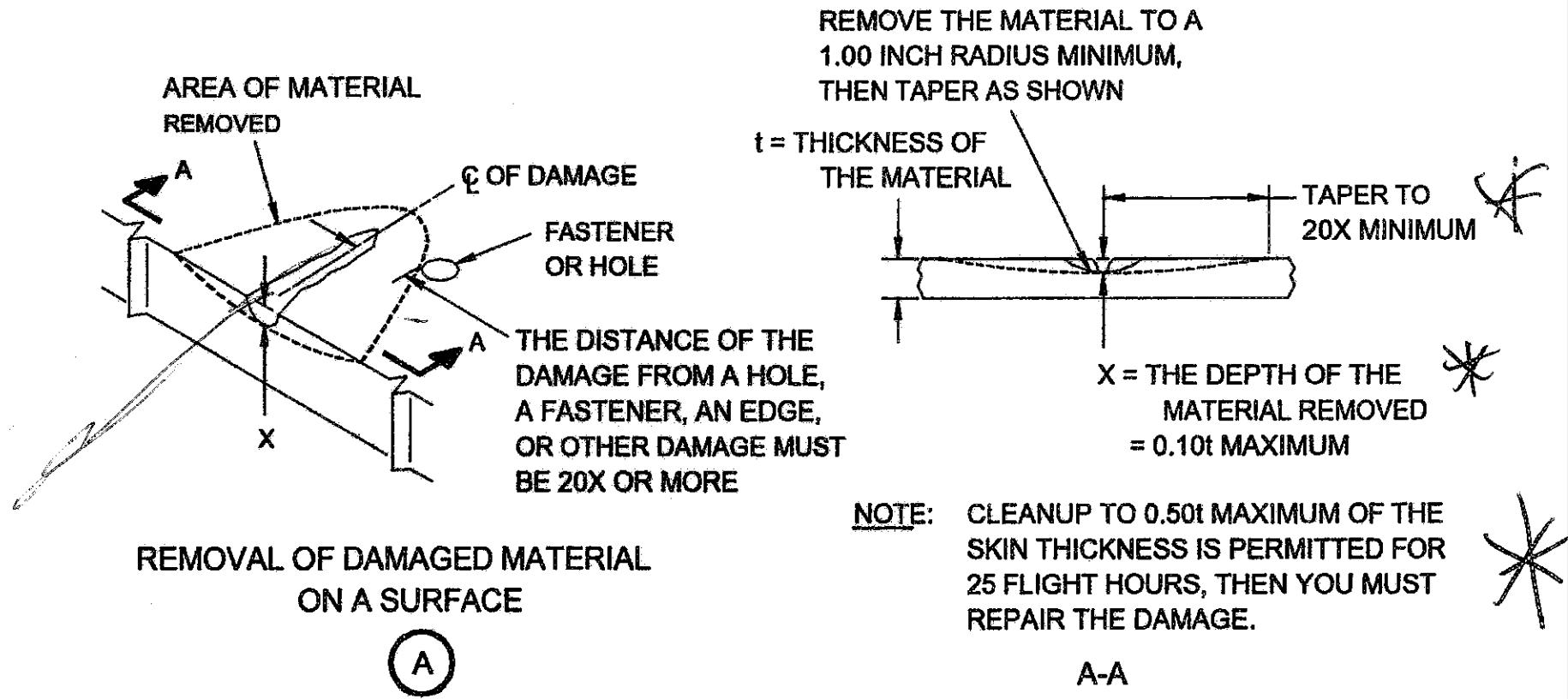
Fig. Issue Date: 15 Jan 2016

#### NOTES

- 1 DAMAGE OF UP TO 5% OF THE THICKNESS IS PERMITTED IN THE AREA OF THE SPLICE FASTENERS.
- 2 A MAXIMUM OF TWO DENTS ARE PERMITTED IN ONE QUADRANT. REFER TO FIGURE 101 AND FIGURE 103, DETAIL E. THE EDGE OF THE DENTS MUST BE A MINIMUM 0.50 (13 mm) FROM ANY FASTENER (COUNTERSINK EDGE).
- 3 INSTALL A NAS 1398D BLIND MONEL RIVET WITH BMS 5-63 SEALANT.
- 4 DENTS GENERALLY RESULT IN FIBER DAMAGE OR DELAMINATION. THE LIMITS FOR DENTS CAN BE APPLICABLE IF NO FIBER DAMAGE OR DELAMINATION EXISTS. IF THERE IS FIBER DAMAGE OR DELAMINATION REFER TO THE APPLICABLE DAMAGE DATA IN TABLE B OR TABLE C.
- 5 DO A PERMANENT SEAL OF THE DAMAGE AS GIVEN IN THE PARAGRAPH GENERAL.
- 6 DELAMINATION IS NOT PERMITTED IN THE CRITICAL AREA SHOWN IN FIGURE 103 DETAIL H.
- 7 DO AN INSPECTION OF THE DELAMINATION EVERY 400 FLIGHT CYCLES. REPAIR THE DAMAGE BEFORE OR AT 4,000 FLIGHT CYCLES.
- 8 DO A TEMPORARY OR PERMANENT SEAL OF THE DAMAGE. FOR THE TEMPORARY SEAL, DO AN INSPECTION EVERY 400 FLIGHT CYCLES AND DO A PERMANENT SEAL AT OR BEFORE 4,000 FLIGHT CYCLES.
- 9 DO A TEMPORARY SEAL OF THE DAMAGE. DO AN INSPECTION EVERY 400 FLIGHT HOURS. REPAIR THE DAMAGE BEFORE OR AT 4,000 FLIGHT HOURS.
- 10 DO A TEMPORARY SEAL OF THE DAMAGE. REPAIR THE DAMAGE AT OR BEFORE 400 FLIGHT HOURS.
- 11 DO A TEMPORARY SEAL OF THE DAMAGE. REPAIR THE DAMAGE AT OR BEFORE 25 FLIGHT HOURS.
- 12 FOR EDGE DELAMINATION REFER TO EDGE DAMAGE.
- 13 HOLES AND PUNCTURES MUST BE CLEANED UP TO CIRCULAR HOLES BEFORE APPLICATION OF TEMPORARY OR PERMANENT SEAL. MAKE THE ESTIMATE OF THE HOLE SIZE AFTER YOU CLEAN UP THE DAMAGE.

Figure 103. Allowable Damage Limits - Sheet 4

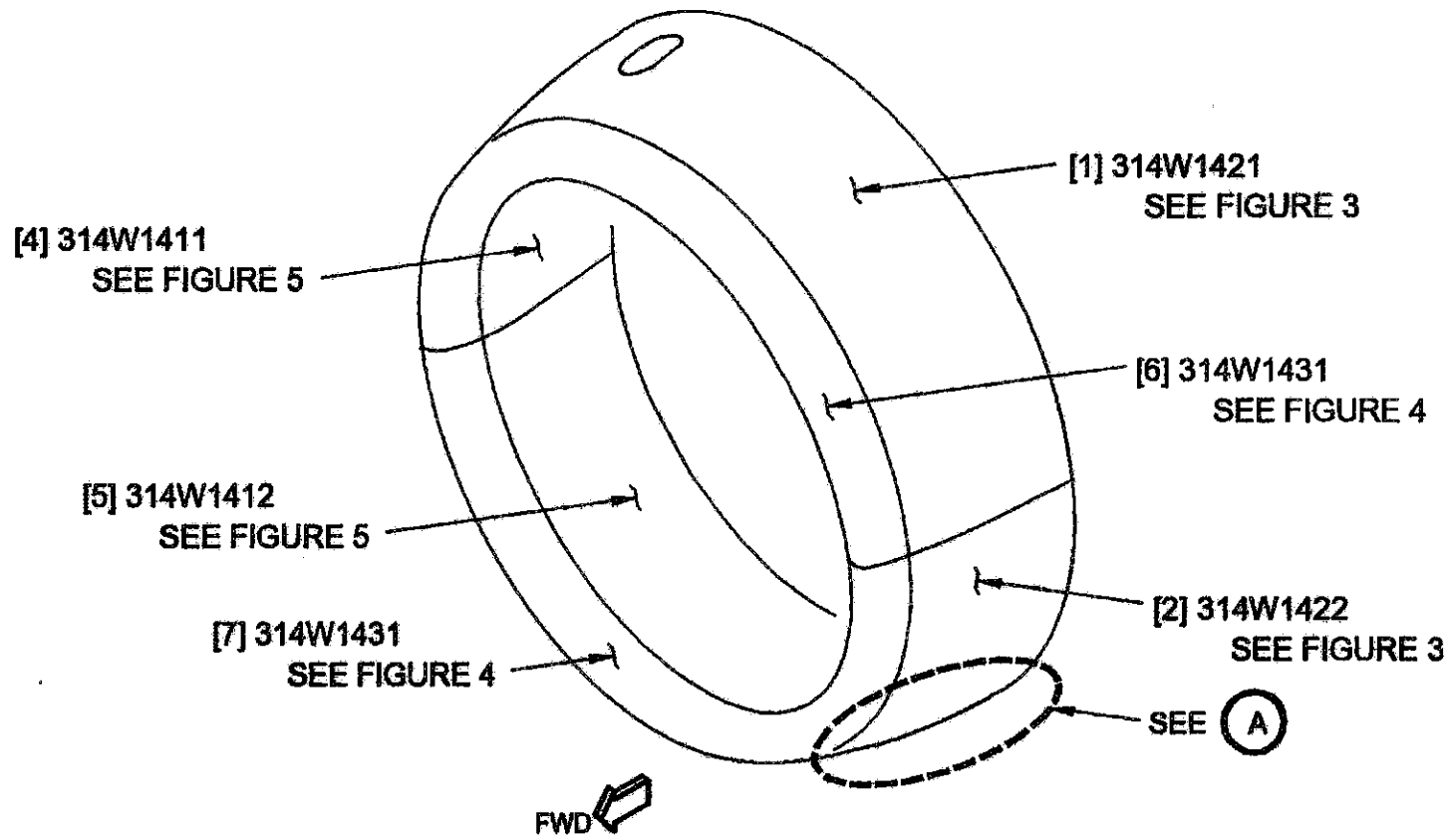
Fig. Issue Date: 15 Jan 2016



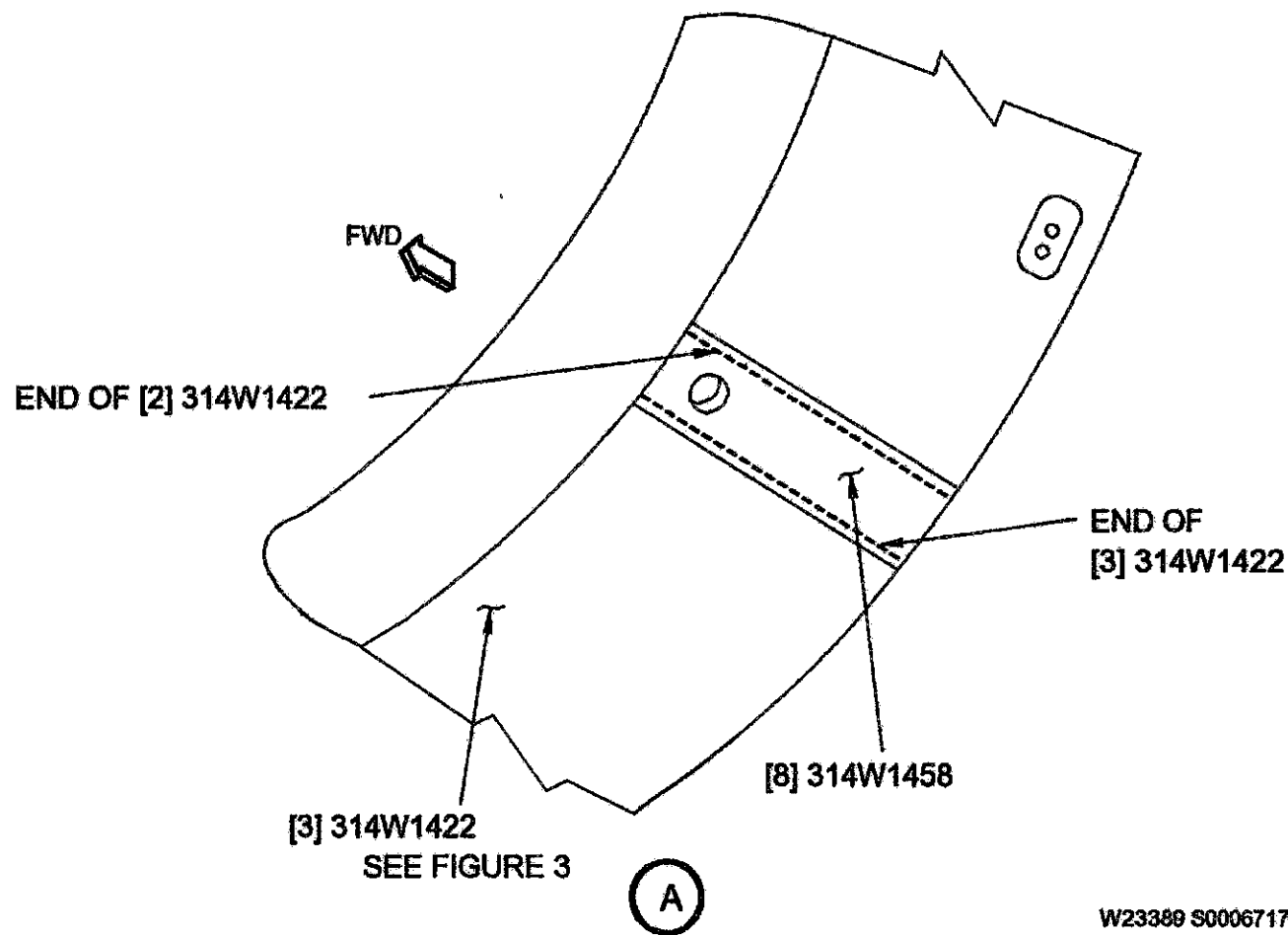
N01129 S0006717927\_V1

Figure 103. Allowable Damage Limits - Sheet 5

Fig. Issue Date: 15 Jan 2016



**NOTE:** REFER TO TABLE 2 FOR THE LIST OF MATERIALS.

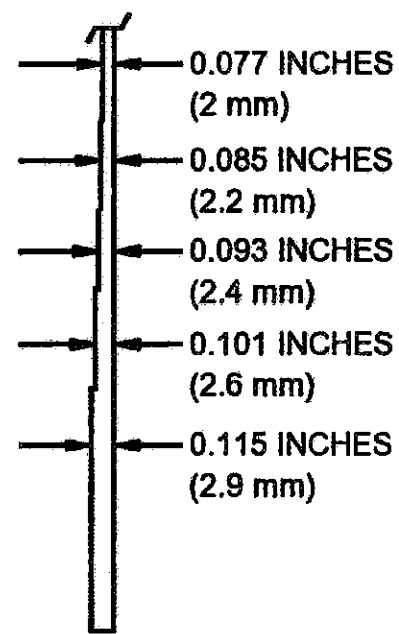
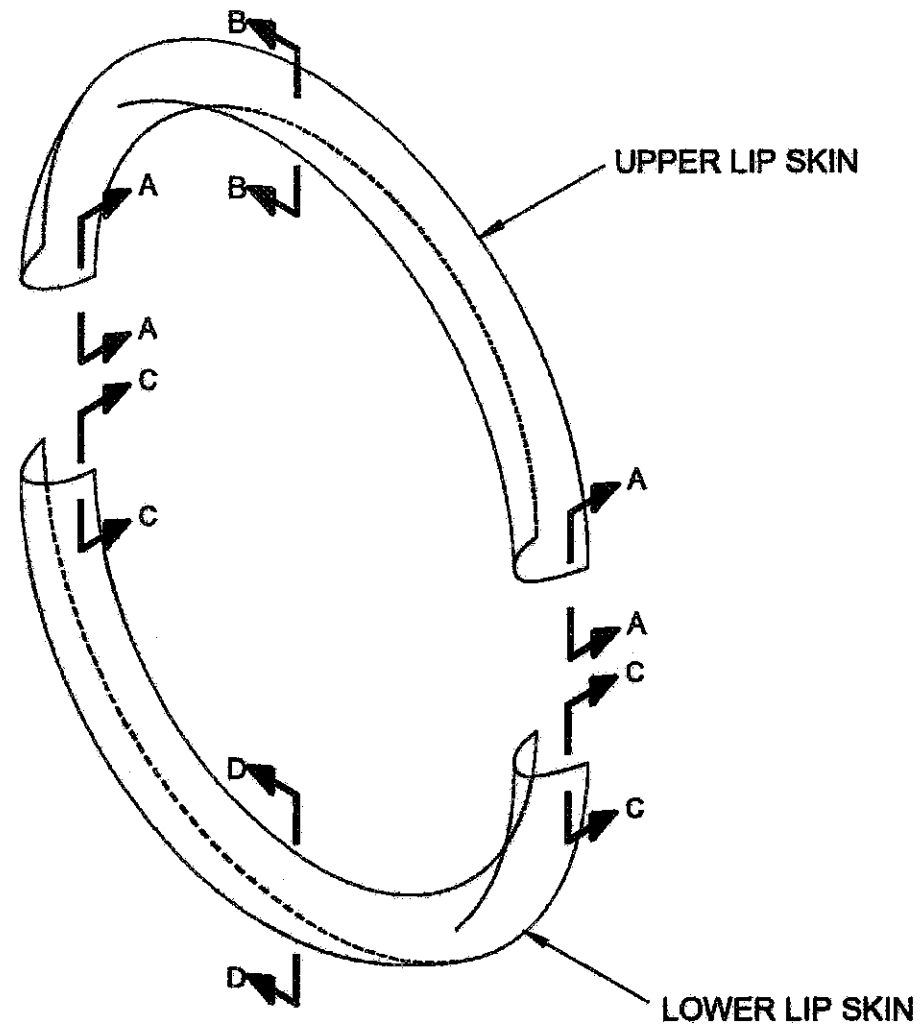


W23389 S0006717699\_V1

Figure 2. Inlet Cowl Skin Identification - GE90-100 Series Engine - Sheet 1

EFFECTIVITY: ALL

Fig. Issue Date: 15 Jan 2016



A-A  
(C-C IS OPPOSITE)

W30562 S0006717911\_V1

Figure 4. Inlet Cowl Lip Skin - Chem-milled Areas - Sheet 1

Fig. Issue Date: 15 Jan 2016

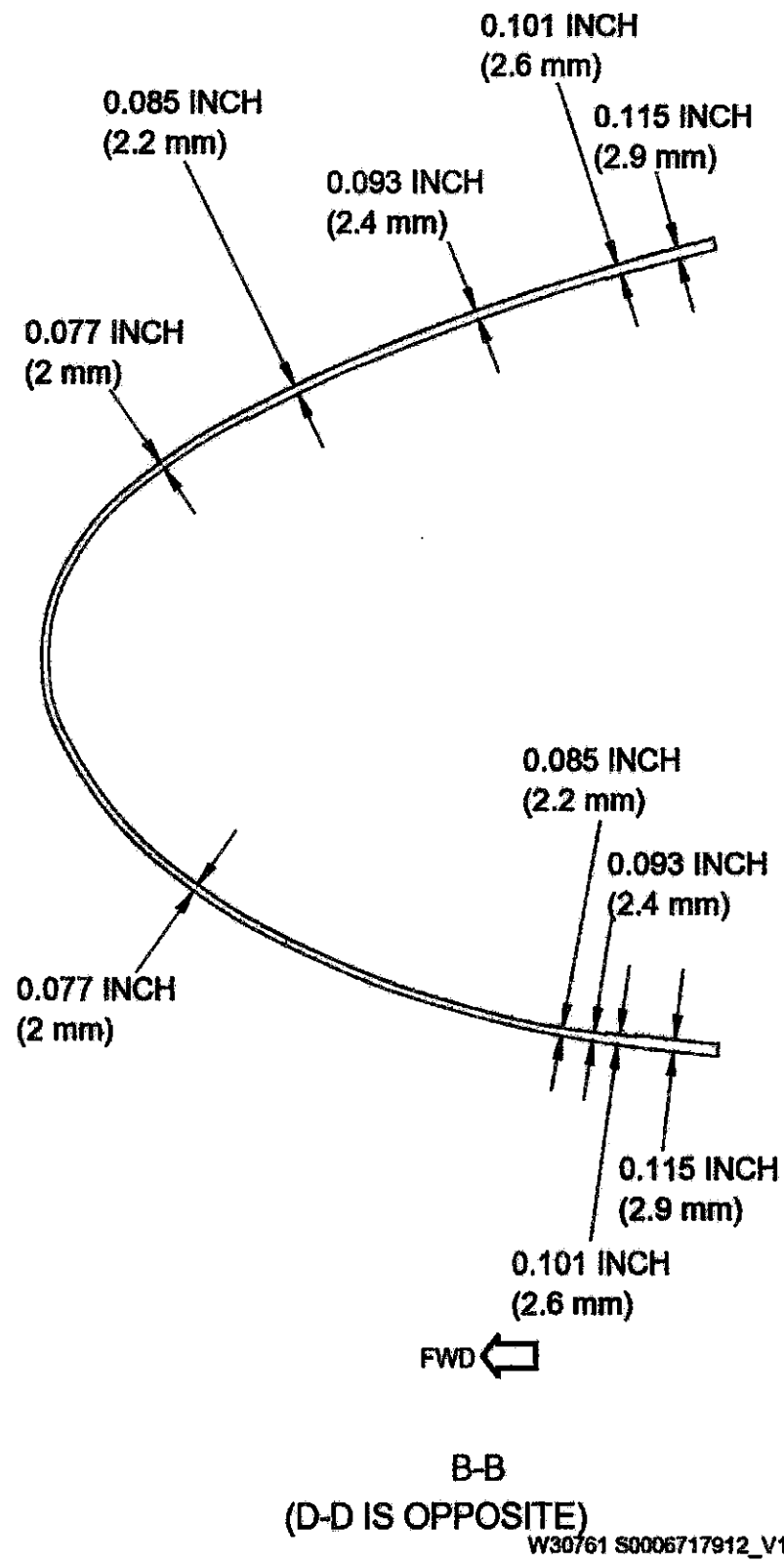


Figure 4. Inlet Cowl Lip Skin - Chem-milled Areas - Sheet 2

**TR 21371H - A6-LRE - LH ENG - INLET COWL LIP SKIN - CORROSION**

donotreply@boeing.com

**Sent:** Tuesday, April 05, 2016 11:59 AM  
**Cc:** Maintenance Control EYE Duty Engineer; ENG-STR-INT; B777 FLEET MGT  
**Attachments:** DAMAGE DETAILS.pdf (1 MB)

FROM: Ehab B Al Zuibi, ealzubi@etihad.ae  
 05-Apr-2016 11:59:34 (GMT+04:00) Abu Dhabi, Muscat / 05-Apr-2016 07:59:34 (GMT)

[MESSAGE NUMBER:GMO-ETI-16-0034-01C]

Your message has been received. If a response has been requested, it will be provided on or before 05-Apr-2016 19:59:59 (GMT)

This message is sent to the following:  
 Duty Engineer Group, Etihad Airways  
 Structures Interiors Group, ADAT  
 777 Fleet Management, Etihad Airways

SERVICE REQUEST ID: 3-3502286422  
 PRIORITY: AOG  
 ACCOUNT: ADAT (GMO)  
 SR DUE DATE: 05-Apr-2016 19:59:59 (GMT)  
 FIELD BASE: BFAUH-Abu Dhabi-United Arab Emirates  
 PRODUCT TYPE: Airplane  
 PRODUCT LINE: 777  
 PRODUCT: 777-200  
 ATA: 5410-00

INQUIRY TYPE: Component Repair                      FAA Form 8100-9 Requested No      Repair  
 Design Record Requested No

PART NUMBER:341W1400-9                      PART SERIAL NUMBER:001114

## AIRPLANE(S):

Registry Number	Variable Number	Serial Number	Hours/Cycles
A6-LRE	WD015	36304	32,267/3,657

SUBJECT: TR 21371H - A6-LRE - LH ENG - INLET COWL LIP SKIN - CORROSION

## REFERENCES:

## Message Text:

Description

Dear Boeing Team,

During the current maintenance visit; surface/pitting corrosion was found on LH ENG Inlet Cowl Lip Skin Upper Half, the corrosion is extending all over the lip segment, refer to the attached file for more details.

After reviewing the related SRM reference 54-13-01-1A-1; we couldn't find any limitation/repair for the corrosion finding.

EYE is intending to remove the corrosion using the sanding method, followed by dye penetrant inspection.

## Desired Action

Therefore; kindly advise the limitation/reference for corrosion finding at the



lip skin as well as your acceptance to proceed with the corrosion removal.

Purchase Order Number (if required)

=====

Best Regards,

Ehab B, Al-Zoubi  
Design Engineer - Structures  
Design, Engineering and Innovation

Etihad Airways Engineering  
Next to Abu Dhabi International Airport  
P.O. Box: 46450, Abu Dhabi, United Arab Emirates

Tel: + 971 2 575 7555  
Dir: + 971 2 505 8426  
Mobile: +971 505665192  
24/7 Duty Engineer: +971 50 612 8511

etihad.com  
The National Airline of the United Arab Emirates

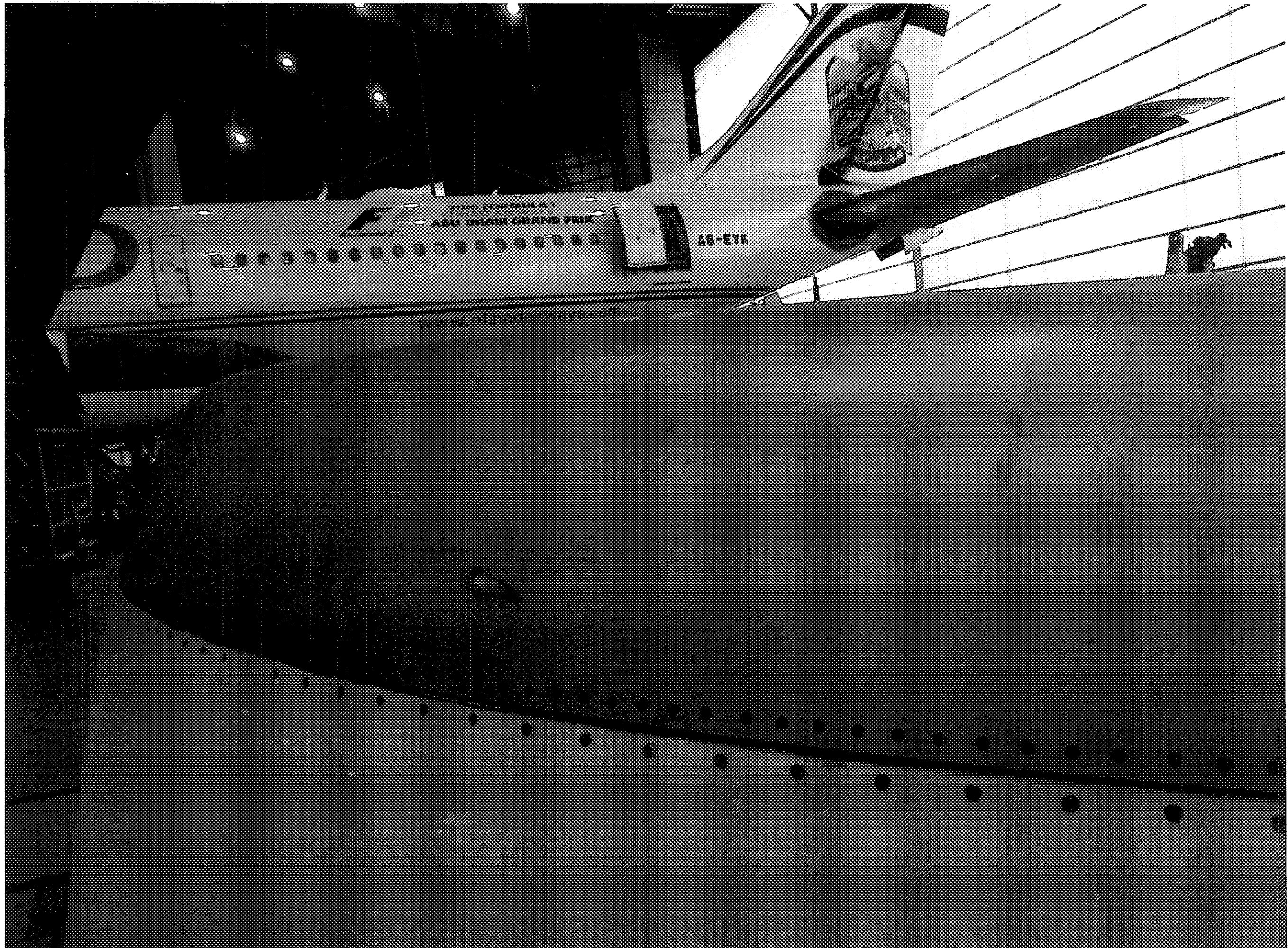
-----  
Towards zero emissions, every little helps! Think before you print this email.  
-----

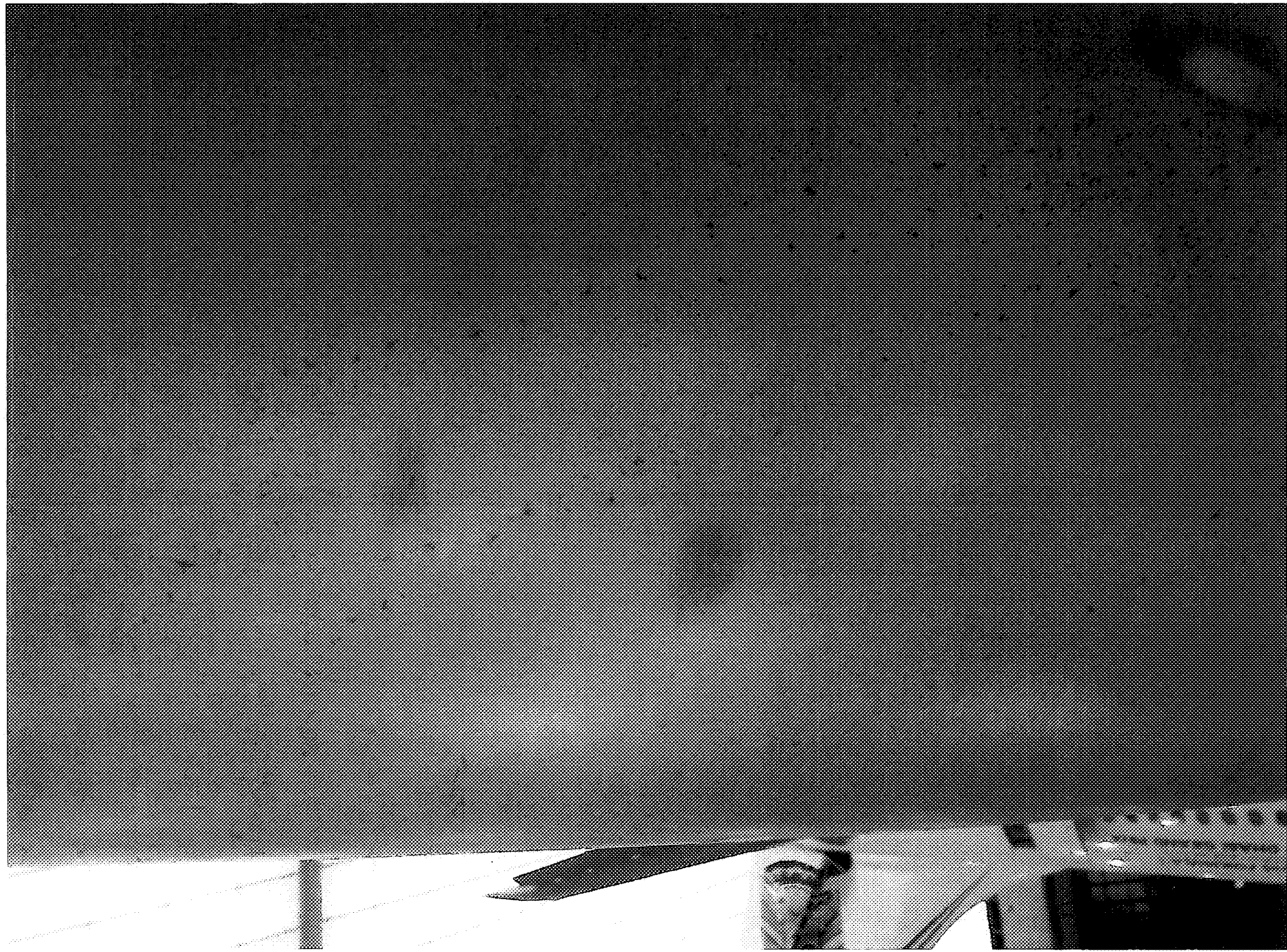
Additional phone contact(s) for AOG submission:  
<Not Entered>

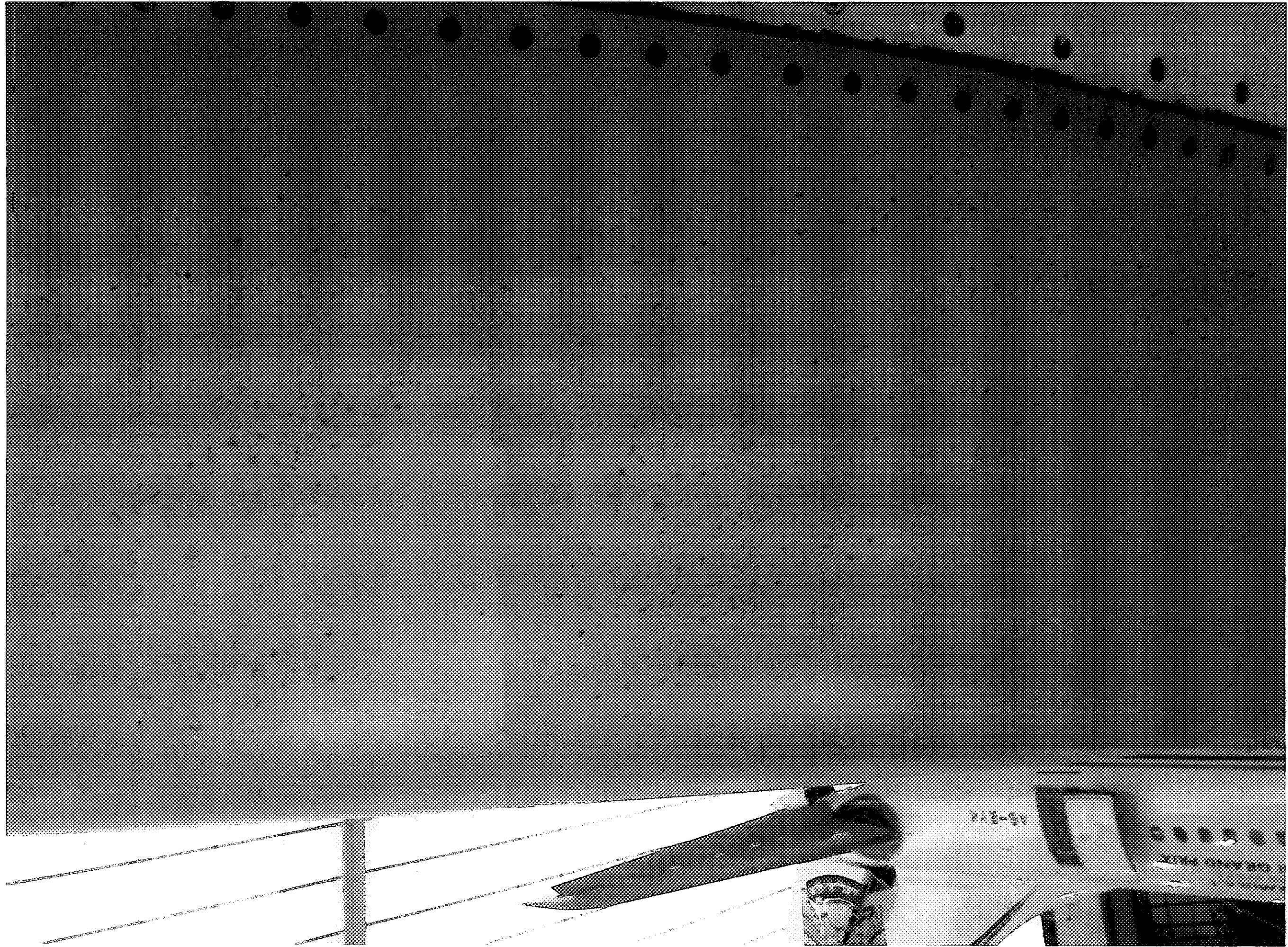
If attachments are referred to, and not present, please contact your local Boeing Field Service Representative. If your local Field Service Representative is unavailable, you may contact the appropriate Airline Support Manager or call the BCA Operations Center at (206) 544-7500.

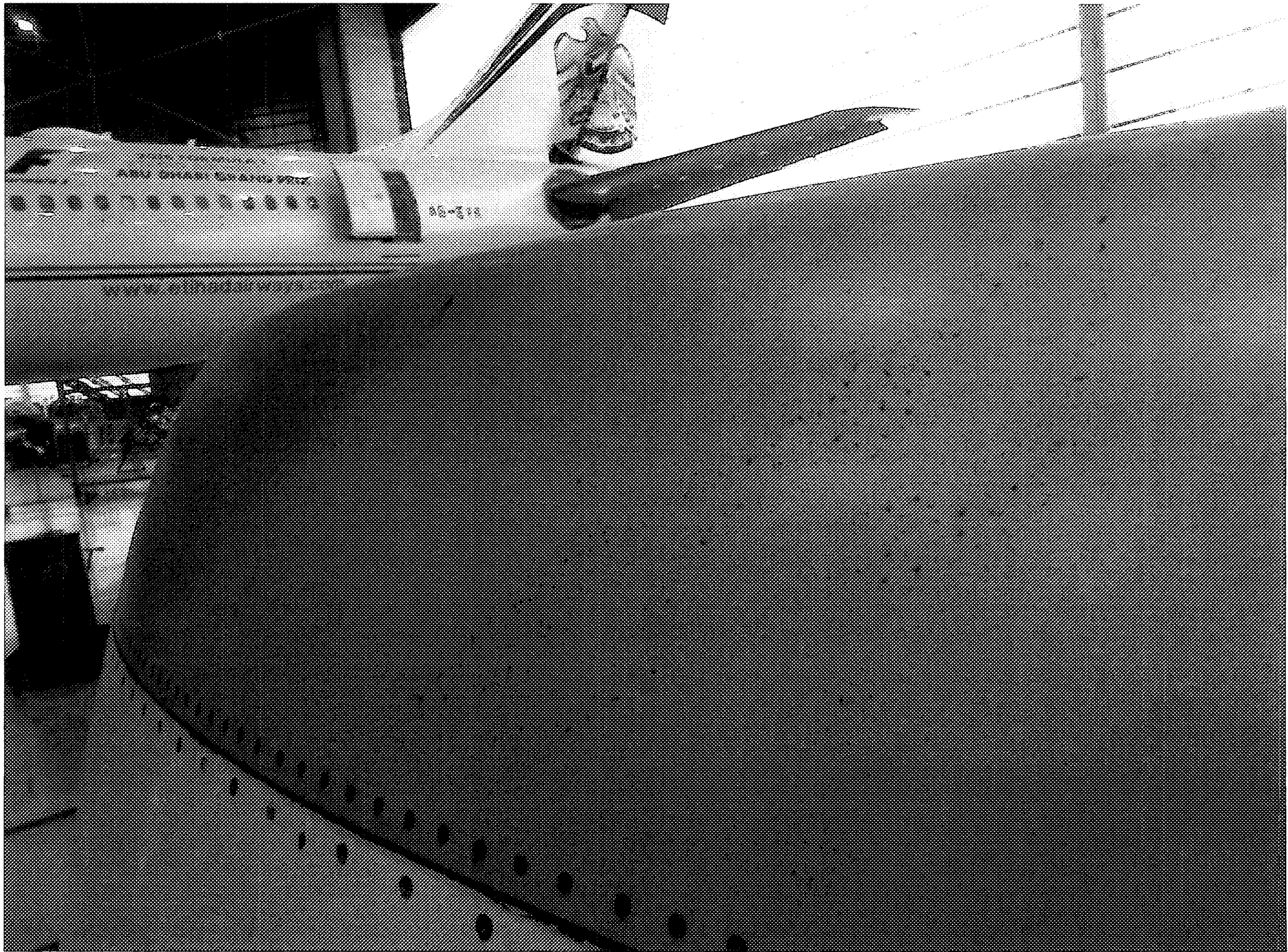
BOEING PROPRIETARY

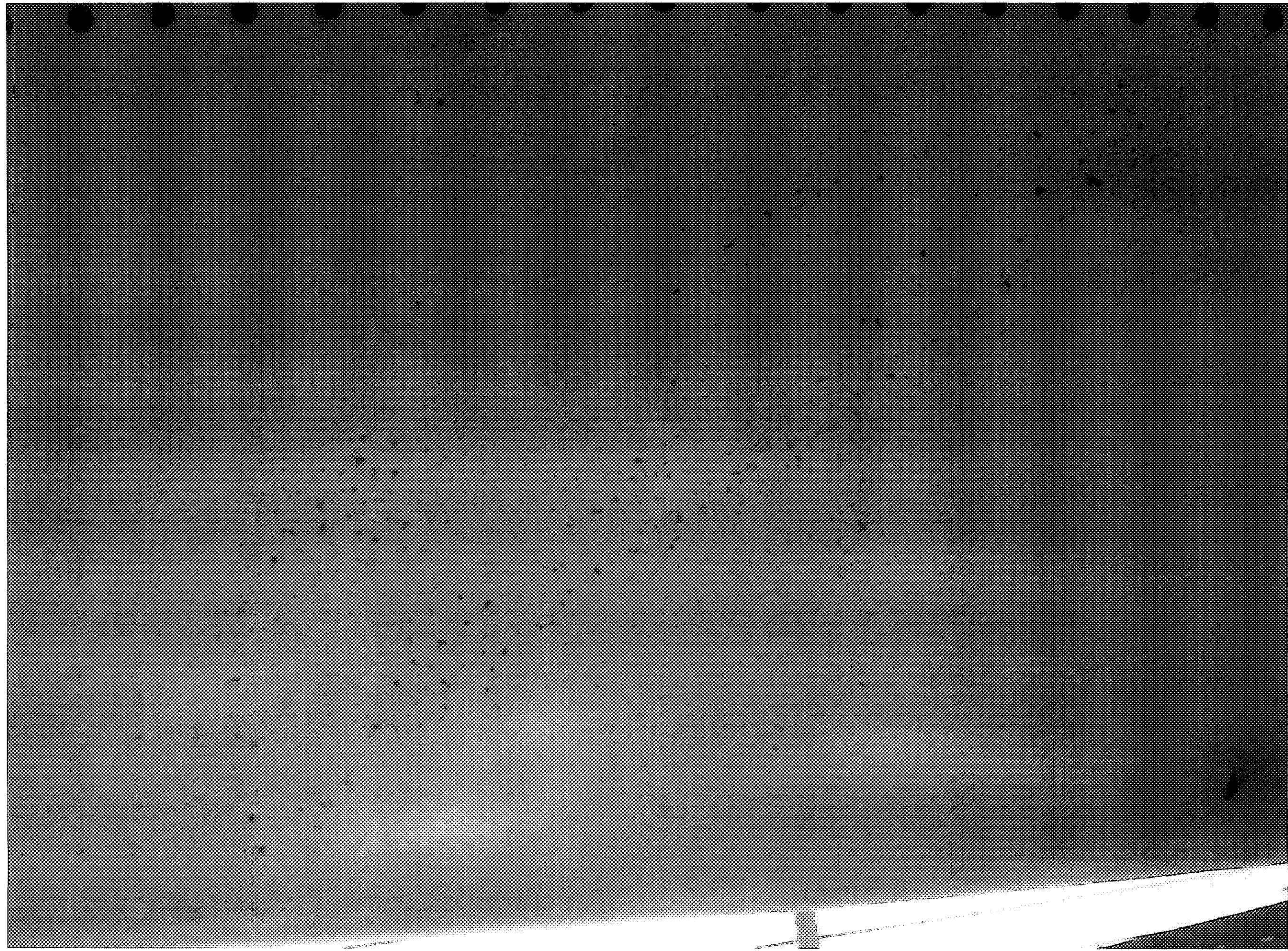
This message and any attachments to it contain or may contain Boeing proprietary material which is protected by law and/or per the terms of existing agreements with Boeing. Proprietary material may be used by the recipient only as permitted under the terms of any such prior agreement with Boeing. This message is intended only for the named recipients. If you are not an intended recipient, you are hereby notified that any further review, copying, use or dissemination of this message is strictly prohibited. If you have received this message in error, delete it from your computer and/or other storage medium and notify the sender immediately./



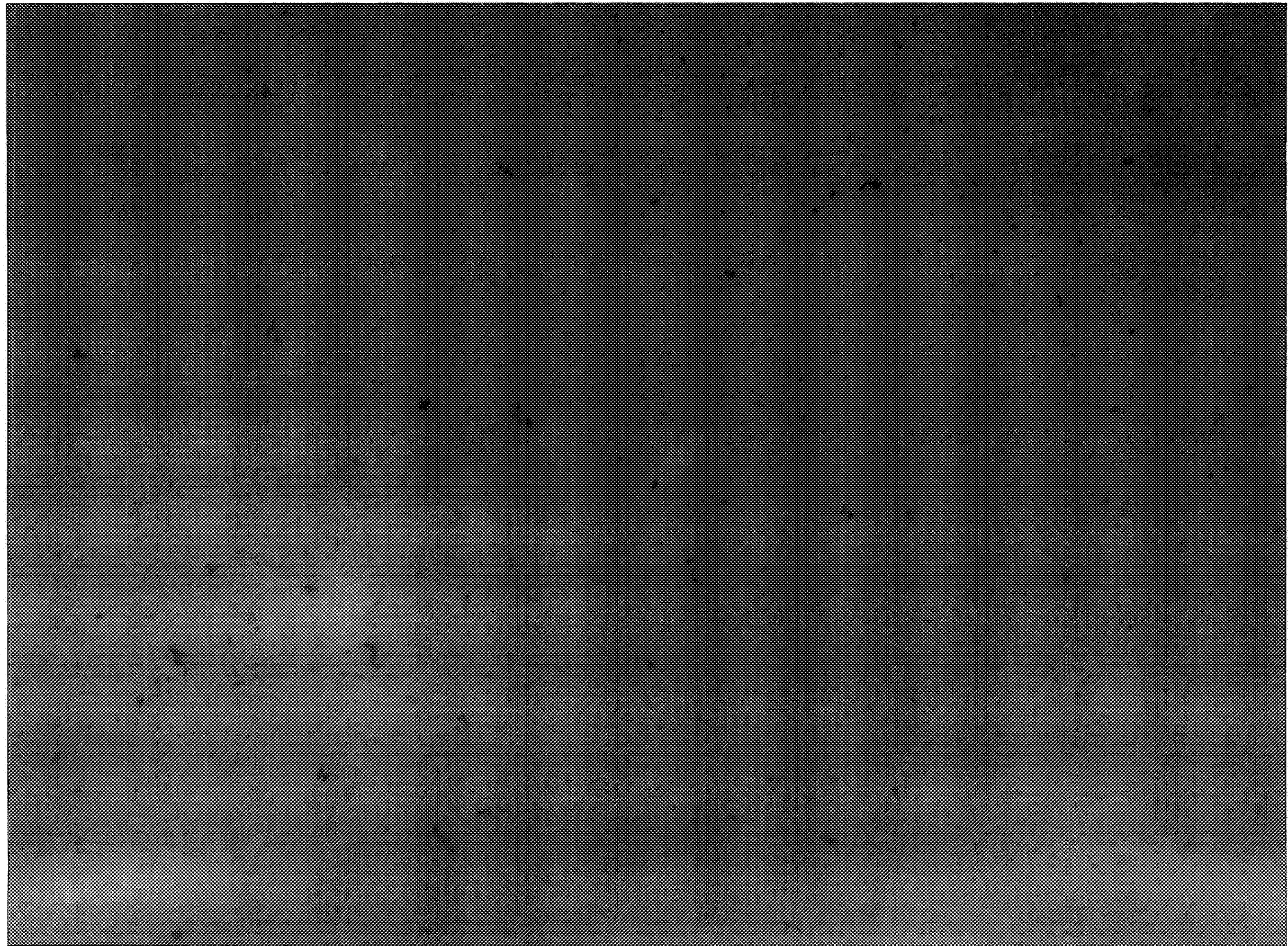














**TR 21371H - A6-LRE - LH ENG - INLET COWL LIP SKIN - CORROSION**

Boeing Customer Support [csd.boecom@boeing.com]

Sent: Tuesday, April 05, 2016 6:55 PM

FROM: THE BOEING COMPANY

TO: ADAT (GMO)

[MESSAGE NUMBER:GMO-ETI-16-0034-02B] Customer Input Required

MESSAGE DATE: 05 Apr 2016 0755 US PACIFIC TIME / 05 Apr 2016 1455 GMT

The following message is distributed to the following people at ADAT:  
Ehab B Al Zuibi, Structures Interiors Group

The following message is distributed to the following people at Etihad Airways:  
777 Fleet Management, Duty Engineer Group  
Service Request ID: 3-3502286422

Message Due Date: 06-Apr-2016 23:59 US PACIFIC TIME

Field Service Base: BFAU

Service Category: Airplane Model: 777 Series/Product: 777-200  
ATA: 5410-00

SUBJECT: TR 21371H - A6-LRE - LH ENG - INLET COWL LIP SKIN - CORROSION

AIRPLANE (VARIABLE/SERIAL): WD015/36304 REGISTRY: A6-LRE Flight Hours: 32267  
Flight Cycles: 3657

INQUIRY TYPE: Component Repair FAA Form 8100-9 Requested: No Repair  
Design Record Requested: No

Part Number: 341W1400-9 Part Serial Number: 001114  
P/N CAGE Code:

REFERENCES:  
/A/ GMO-ETI-16-0034-01C

DESCRIPTION:

Description

Dear Boeing Team,

During the current maintenance visit; surface/pitting corrosion was found on LH ENG Inlet Cowl Lip Skin Upper Half, the corrosion is extending all over the lip segment, refer to the attached file for more details.

After reviewing the related SRM reference 54-13-01-1A-1; we couldn't find any limitation/repair for the corrosion finding.

EYE is intending to remove the corrosion using the sanding method, followed by dye penetrant inspection.

Desired Action

Therefore; kindly advise the limitation/reference for corrosion finding at the lip skin as well as your acceptance to proceed with the corrosion removal.

Purchase Order Number (if required)

Best Regards,

Ehab B, Al-Zoubi  
Design Engineer - Structures  
Design, Engineering and Innovation

Etihad Airways Engineering  
Next to Abu Dhabi International Airport  
P.O. Box: 46450, Abu Dhabi, United Arab Emirates

Tel: + 971 2 575 7555  
Dir: + 971 2 505 8426  
Mobile: +971 505665192  
24/7 Duty Engineer: +971 50 612 8511

etihad.com  
The National Airline of the United Arab Emirates

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Towards zero emissions, every little helps! Think before you print this email.  
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Additional phone contact(s) for AOG submission:  
<Not Entered>

RESPONSE AND/OR REQUIRED ACTION :

ACTION REQUESTED:

Boeing is unable to evaluate your request. Please provide the average depth of the reported surface pitting on the lipskin.

If attachments are referred to, and are not present, please access them by logging into MyBoeingFleet Service Requests application or contact your Boeing Field Service Representative.

<https://myboeingfleet.boeing.com/servicerequests/index.html?entityId=3-1LX4QPL&entityType=CommunicationMessage>

Suppliers, please access attachments by logging into Boeing Partner Network Supplier Service Requests application.

Ronald Hikida, Sr. Liaison Engineer  
Propulsion - 777 Nacelle  
Andre Moore, Manager  
Propulsion Service Engineering  
Boeing Commercial Airplanes

**TR 21371H - A6-LRE - LH ENG - INLET COWL LIP SKIN - CORROSION**

Boeing Customer Support [csd.boecom@boeing.com]

Sent: Tuesday, April 05, 2016 7:14 PM

FROM: THE BOEING COMPANY  
TO: ADAT (GMO)  
[MESSAGE NUMBER:GMO-ETI-16-0034-03B] Customer Input Required  
MESSAGE DATE: 05 Apr 2016 0814 US PACIFIC TIME / 05 Apr 2016 1514 GMT

The following message is distributed to the following people at ADAT:  
Ehab B Al Zuibi, Structures Interiors Group

The following message is distributed to the following people at Etihad Airways:  
777 Fleet Management, Duty Engineer Group  
Service Request ID: 3-3502286422

Message Due Date: No Action Required

Field Service Base: BFSAUH

Service Category: Airplane Model: 777 Series/Product: 777-200  
ATA: 5410-00

SUBJECT: TR 21371H - A6-LRE - LH ENG - INLET COWL LIP SKIN - CORROSION

AIRPLANE (VARIABLE/SERIAL): WD015/36304 REGISTRY: A6-LRE Flight Hours: 32267  
Flight Cycles: 3657

INQUIRY TYPE: Component Repair FAA Form 8100-9 Requested: No Repair  
Design Record Requested: No

Part Number: 341W1400-9 Part Serial Number: 001114  
P/N CAGE Code:

REFERENCES:  
/A/ GMO-ETI-16-0034-02B  
/B/ GMO-ETI-16-0034-01C

DESCRIPTION:

Description

Dear Boeing Team,

During the current maintenance visit; surface/pitting corrosion was found on LH ENG Inlet Cowl Lip Skin Upper Half, the corrosion is extending all over the lip segment, refer to the attached file for more details.

After reviewing the related SRM reference 54-13-01-1A-1; we couldn't find any limitation/repair for the corrosion finding.

EYE is intending to remove the corrosion using the sanding method, followed by dye penetrant inspection.

Desired Action

Therefore; kindly advise the limitation/reference for corrosion finding at the lip skin as well as your acceptance to proceed with the corrosion removal.

Purchase Order Number (if required)

Best Regards,

Ehab B, Al-Zoubi  
Design Engineer - Structures  
Design, Engineering and Innovation

Etihad Airways Engineering  
Next to Abu Dhabi International Airport  
P.O. Box: 46450, Abu Dhabi, United Arab Emirates

Tel: + 971 2 575 7555  
Dir: + 971 2 505 8426  
Mobile: +971 505665192  
24/7 Duty Engineer: +971 50 612 8511

etihad.com  
The National Airline of the United Arab Emirates

-----  
Towards zero emissions, every little helps! Think before you print this email.  
-----

Additional phone contact(s) for AOG submission:  
<Not Entered>

RESPONSE AND/OR REQUIRED ACTION :

RESPONSE:

Boeing is unable to evaluate your request. Please provide the average depth of the reported surface pitting on the lipskin.

REQUIRED ACTION:

Please disregard our previous request for depth of teh surface pitting, we believe we can provide a response with the information provided.

If attachments are referred to, and are not present, please access them by logging into MyBoeingFleet Service Requests application or contact your Boeing Field Service Representative.

<https://myboeingfleet.boeing.com/servicerequests/index.html?entityId=3-1LXOIZN&entityType=CommunicationMessage>

Suppliers, please access attachments by logging into Boeing Partner Network Supplier Service Requests application.

Ronald Hikida, Sr. Liaison Engineer  
Propulsion - 777 Nacelle  
Andre Moore, Manager  
Propulsion Service Engineering  
Boeing Commercial Airplanes

**TR 21371H - A6-LRE - LH ENG - INLET COWL LIP SKIN - CORROSION**

Boeing Customer Support [csd.boecom@boeing.com]

Sent: Tuesday, April 05, 2016 7:47 PM

FROM: THE BOEING COMPANY

TO: ADAT (GMO)

[MESSAGE NUMBER:GMO-ETI-16-0034-04B] Boeing Response

MESSAGE DATE: 05 Apr 2016 0847 US PACIFIC TIME / 05 Apr 2016 1547 GMT

The following message is distributed to the following people at ADAT:  
Ehab B Al Zuibi, Structures Interiors Group

The following message is distributed to the following people at Etihad Airways:  
777 Fleet Management, Duty Engineer Group  
Service Request ID: 3-3502286422

Field Service Base: BFSAUH

Service Category: Airplane Model: 777 Series/Product: 777-  
200 ATA: 5410-00

SUBJECT: TR 21371H - A6-LRE - LH ENG - INLET COWL LIP SKIN - CORROSION

AIRPLANE (VARIABLE/SERIAL): WD015/36304 REGISTRY: A6-LRE Flight Hours:  
32267 Flight Cycles: 3657

INQUIRY TYPE: Component Repair FAA Form 8100-9 Requested: No Repair  
Design Record Requested: No

Part Number: 341W1400-9 Part Serial Number: 001114  
P/N CAGE Code:

## REFERENCES:

/A/ GMO-ETI-16-0034-01C

## DESCRIPTION:

During the current maintenance visit; surface/pitting corrosion was found on LH ENG Inlet Cowl Lip Skin Upper Half, the corrosion is extending all over the lip segment, refer to the attached file for more details.

After reviewing the related SRM reference 54-13-01-1A-1; we couldn't find any limitation/repair for the corrosion finding.

ETI is intending to remove the corrosion using the sanding method, followed by dye penetrant inspection.

## RESPONSE:

Boeing has reviewed the Ref /A/ message and provides the following response:

1. Remove the damage per the Ref /B/ SRM. Maintain a surface finish of 125 microinches Ra or smoother.
2. Accomplish an HFEC surface inspection per 777 NDT Manual Part 6, 51-00-01 or Fluorescent Penetrant Inspection per SOPM 20-20-02 Type-1, Method-C, Level-3 or higher on the reworked areas to ensure all damage has been removed and there are no cracks.
3. The allowable damage limits for the inlet cowl lip skin provided in Ref /C/ apply. See Figure 103, Details A, B, C, and D.
4. Provided the allowable damage limits in Ref /C/ are not exceeded, apply

Alodine 1200 per SOPM 20-43-03 to the blended areas.

If attachments are referred to, and are not present, please access them by logging into MyBoeingFleet Service Requests application or contact your Boeing Field Service Representative.

<https://myboeingfleet.boeing.com/servicerequests/index.html?entityId=3-1LXOJ3A&entityType=CommunicationMessage>

Suppliers, please access attachments by logging into Boeing Partner Network Supplier Service Requests application.

Ronald Hikida, Sr. Liaison Engineer  
Propulsion - 777 Nacelle  
Andre Moore, Manager  
Propulsion Service Engineering  
Boeing Commercial Airplanes

**TR 21371H - A6-LRE - LH ENG - INLET COWL LIP SKIN - CORROSION**

donotreply@boeing.com

Sent: Tuesday, April 05, 2016 9:43 PM

Cc: Ehab Alzu'bi; Maintenance Control EYE Duty Engineer; ENG-STR-INT; B777 FLEET MGT

FROM: Godege D Sampath, gsampath@adat.ae  
 05-Apr-2016 18:43:59 (GMT) Greenwich Mean Time : Dublin, Edinburgh, Lisbon,  
 London / 05-Apr-2016 17:43:59 (GMT)

[MESSAGE NUMBER:GMO-ETI-16-0034-05C]

This message has been sent to you by The Boeing Company on behalf of  
 Godege D Sampath. It is for informational purposes only.

Please do not reply to this mail. Questions regarding the content of this message  
 may be  
 directed to Godege D Sampath at the address above.

A response by 05-Apr-2016 14:00:00 (US Pacific Time) / 05-Apr-2016 22:00:00 (GMT)  
 has been requested from The Boeing Company.

This message is sent to the following:

Ehab B Al Zuibi, ADAT  
 Duty Engineer Group, Etihad Airways  
 Structures Interiors Group, ADAT  
 777 Fleet Management, Etihad Airways

SERVICE REQUEST ID: 3-3502286422  
 PRIORITY: AOG  
 ACCOUNT: ADAT (GMO)  
 FIELD BASE: BFSAUH-Abu Dhabi-United Arab Emirates  
 PRODUCT TYPE: Airplane  
 PRODUCT LINE: 777  
 PRODUCT: 777-200  
 ATA: 5410-00

INQUIRY TYPE: Component Repair                      FAA Form 8100-9 Requested No      Repair  
 Design Record Requested No

PART NUMBER:341W1400-9                      PART SERIAL NUMBER:001114

## AIRPLANE(S):

Registry Number	Variable Number	Serial Number	Hours/Cycles
A6-LRE	WD015	36304	32,267/3,657

SUBJECT:                      TR 21371H - A6-LRE - LH ENG - INLET COWL LIP SKIN - CORROSION

## Message Text:

Dear Boeing Team,

Thanks for your response with regards to MESSAGE NUMBER:GMO-ETI-16-0034-04B.

However, the quoted references are not attached.

Please provide us with Ref /B/ & /C/ mentioned in the message.

Thanks & Best Regards,

Sam Abeyawardena  
 Duty Engineer [Airworthiness]  
 Design, Engineering & Innovation

Etihad Airways Engineering  
 Adjacent to Abu Dhabi International Airport,

P.O. Box: 46450, Abu Dhabi, United Arab Emirates  
Tel: +971 2 575 7555  
Dir: +971 2 511 1254  
Mob: +971(0) 506 128 511  
Email: GABEYAWARDENA@etihad.ae  
Email: dutyengineer@etihad.ae

etihad.com  
The National Airline of the United Arab Emirates

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Towards zero emissions, every little bit helps! Think before you print this email.  
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If attachments are referred to, and not present, please contact your local Boeing Field Service Representative. If your local Field Service Representative is unavailable, you may contact the appropriate Airline Support Manager or call the BCA Operations Center at (206) 544-7500.

BOEING PROPRIETARY

This message and any attachments to it contain or may contain Boeing proprietary material which is protected by law and/or per the terms of existing agreements with Boeing. Proprietary material may be used by the recipient only as permitted under the terms of any such prior agreement with Boeing. This message is intended only for the named recipients. If you are not an intended recipient, you are hereby notified that any further review, copying, use or dissemination of this message is strictly prohibited. If you have received this message in error, delete it from your computer and/or other storage medium and notify the sender immediately./



**TR 21371H - A6-LRE - LH ENG - INLET COWL LIP SKIN - CORROSION**

Boeing Customer Support [csd.boecom@boeing.com]

Sent: Tuesday, April 05, 2016 10:12 PM

FROM: THE BOEING COMPANY

TO: ADAT (GMO)

[MESSAGE NUMBER:GMO-ETI-16-0034-06B] Boeing Response

MESSAGE DATE: 05 Apr 2016 1111 US PACIFIC TIME / 05 Apr 2016 1811 GMT

The following message is distributed to the following people at ADAT:  
Godege D Sampath, Structures Interiors Group, Ehab B Al Zuibi

The following message is distributed to the following people at Etihad Airways:  
777 Fleet Management, Duty Engineer Group  
Service Request ID: 3-3502286422

Field Service Base: BFSAUH

Service Category: Airplane Model: 777 Series/Product: 777-200  
ATA: 5410-00

SUBJECT: TR 21371H - A6-LRE - LH ENG - INLET COWL LIP SKIN - CORROSION

AIRPLANE (VARIABLE/SERIAL): WD015/36304 REGISTRY: A6-LRE Flight Hours: 32267  
Flight Cycles: 3657

INQUIRY TYPE: Component Repair FAA Form 8100-9 Requested: No Repair  
Design Record Requested: No

Part Number: 341W1400-9 Part Serial Number: 001114  
P/N CAGE Code:

REFERENCES:

/A/ GMO-ETI-16-0034-05C

DESCRIPTION:

Thanks for your response with regards to MESSAGE NUMBER:GMO-ETI-16-0034-04B.  
However, the quoted references are not attached.  
Please provide us with Ref /B/ & /C/ mentioned in the message.

RESPONSE:

Boeing apologizes for the oversight. These are the applicable Ref /B/ 777-200 SRM 51-10-02 and Ref /C/ 777-200 SRM 54-13-01 Allowable Damage 1 references.

If attachments are referred to, and are not present, please access them by logging into MyBoeingFleet Service Requests application or contact your Boeing Field Service Representative.

<https://myboeingfleet.boeing.com/servicerequests/index.html?entityId=3-1LXV99T&entityType=CommunicationMessage>

Suppliers, please access attachments by logging into Boeing Partner Network Supplier Service Requests application.

Ronald Hikida, Sr. Liaison Engineer  
Propulsion - 777 Nacelle

Andre Moore, Manager  
Propulsion Service Engineering  
Boeing Commercial Airplanes



**COMMERCIAL  
TRACE**



**BILL OF SALE**

KNOW ALL PERSONS BY THESE PRESENTS;

THAT THE BOEING COMPANY (SELLER), a Delaware corporation whose address is Box 3707, Seattle, Washington, is the owner of the full legal and beneficial title to that certain BOEING MODEL 777-237LR AIRCRAFT (generic airframe model 777-200) manufactured by THE BOEING COMPANY bearing REGISTRATION IDENTIFICATION VT-ALC and MANUFACTURER'S SERIAL NUMBER 36302, together with the two (2) GE90-110B1 series engines (generic engine model GE90-110B1) installed thereon, manufactured by General Electric, bearing MANUFACTURER'S SERIAL NUMBERS 906302 and 906303, respectively, together with all appliances, parts, instruments, appurtenances, accessories, furnishings, or other equipment or property installed on or attached to said aircraft and engines, other than equipment furnished by AIR INDIA LIMITED (BFE).

THAT for and in consideration of the sum of \$1.00 and other valuable consideration SELLER does this 27 day of JULY, 2007, grant, convey, transfer, bargain and sell, deliver and set over, at Everett, Washington, pursuant and subject to the terms and conditions of Purchase Agreement No. 2997 dated December 30, 2005, all of SELLER'S right, title and interest in and to the above described aircraft, engines, appliances, parts, instruments, appurtenances, accessories, furnishings and/or other equipment or property (other than BFE) unto AIR INDIA LIMITED (BUYER), and unto its successors and assigns forever.

THAT SELLER hereby warrants to BUYER, its successors and assigns, that there is hereby conveyed to BUYER on the date hereof, good title to the aforesaid aircraft, engines, appliances, parts, instruments, appurtenances, accessories, furnishings and/or other equipment or property (other than BFE), free and clear of all liens, encumbrances and rights of others, and that it will warrant and defend such title forever against all claims and demands whatsoever.

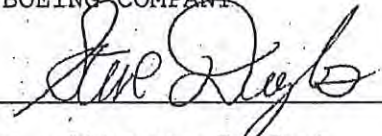
THIS Bill of Sale is delivered by SELLER to BUYER in Everett, Washington, and governed by the law of the State of Washington.

IN WITNESS WHEREOF, SELLER has caused this instrument to be executed by its duly authorized Attorney-In-Fact this 27 day of JULY, 2007.

THE BOEING COMPANY

By

Title

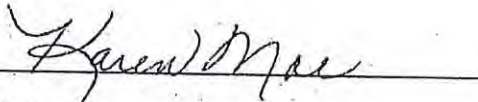
  
Attorney-In-Fact

ACKNOWLEDGMENT

STATE OF WASHINGTON )  
  ) ss.  
COUNTY OF KING      )

On this 27 day of JULY, 2007, S. M. Douglas, known to me, the undersigned (a Notary Public in and for the State of Washington, duly commissioned and sworn), to be the duly authorized Attorney-In-Fact of THE BOEING COMPANY, the corporation that executed the foregoing instrument, to me acknowledged the said instrument to be the free and voluntary act and deed of said corporation for the uses and purposes therein mentioned, and on oath stated that he is authorized to execute the said instrument on behalf of said corporation by authority of their Boards of Directors.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal.



KAREN MOE  
Notary Public in and for the State  
of Washington, residing at Kirkland,  
County of King.  
Commission expiration date: 08/14/10.



**BILL OF SALE**

Know all men by these presents that National Aviation Company of India Limited (the "Seller"), having an office at Old Airport, Santacruz (E), Mumbai 400 029, India, is the owner of the title to the following airframe (the "Airframe"), the engines as specified (the "Engines"), and all appliances, components, parts, instruments, appurtenances, accessories, furnishings, modules and other equipment of any nature incorporated therein, installed thereon or attached thereto on the date hereof and all records, documents and technical manuals related thereto (the "Parts").

**MANUFACTURER OF AIRFRAME:**

**MANUFACTURER OF ENGINES:**

THE BOEING COMPANY

GENERAL ELECTRIC COMPANY

MODEL: 777-200LR

MODEL: GE-90-110B1

MANUFACTURER'S SERIAL

MANUFACTURER'S SERIAL

NO: 36302

NOs: 906302 and 906303

REGISTRATION MARK: VT-ALC

The Airframe, Engines and Parts are hereafter together referred to as the "Equipment".

That for and in consideration of the sum of \$1.00 and other good and valuable consideration, receipt of which is hereby acknowledged, the Seller does this 6<sup>th</sup> day of November 2007 hereby grant, bargain, sell, convey, transfer, set over and deliver all of its rights, title and interest to and in the Equipment to the following entity and to its successors and permitted assigns for its and their use forever:

Golden State Aircraft LLC (the "Buyer")

Rodney Square North

1100 North Market Street

Wilmington, Delaware

19890-0001

The Seller hereby warrants to the Buyer, its successors and permitted assigns that it has on the date hereof good and lawful right to sell, deliver and transfer title to the Equipment to the Buyer and that there is hereby conveyed to the Buyer on the date hereof good, legal and valid

title to the Equipment, free and clear of all claims, charges, Liens (other than Permitted Liens) and rights of others and that the Seller will warrant and defend such title forever against all claims and demands whatsoever.

This Bill of Sale is executed and delivered by Seller to Buyer pursuant to the Sale Agreement dated even date herewith between Seller and Buyer (the "Sale Agreement").

Terms used herein bear the same respective meanings as are ascribed thereto (whether directly or by incorporation therein) in the Sale Agreement.

This Bill of Sale shall in all respects be governed by, and construed in accordance with, the internal laws of the State of New York, United States of America without reference to principles of conflicts of law other than Section 5-1401 and Section 5-1402 of the New York General Obligations Law.

**IN WITNESS WHEREOF**, the undersigned have caused this instrument to be executed by their duly authorised representatives this 06<sup>th</sup> day of November 2007 at 3:30 PM <sup>EST</sup> (New York time), at which time the Airframe and the Engine bearing MSN 906302 was located at John F. Kennedy Airport, New York, New York and the Engine bearing MSN 906303 was located in international airspace.

Accepted:

*fm*

**GOLDEN STATE AIRCRAFT LLC**

by Golden State Statutory Trust, its Manager

by Wilmington Trust Company, not in its individual capacity, but solely as trustee

Name:

J. Christopher Murphy

Title:

Financial Services Officer



*H. J. Mehtaji*

**NATIONAL AVIATION COMPANY OF INDIA LIMITED**

Name: H. J. MEHTAJI

Title: Regional Finance & Accounts Manager - USA & CANADA

AIRCRAFT BILL OF SALE

Date: 5 February 2014

KNOW ALL MEN BY THESE PRESENTS:

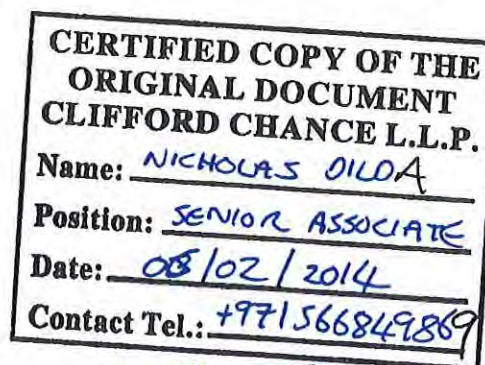
THAT GOLDEN STATE AIRCRAFT LLC, a company incorporated and existing under the laws of Delaware (hereinafter referred to as the "Owner") is the legal owner of (a) that one (1) Boeing 777-200LR aircraft bearing manufacturer's serial number 36302 (the "Aircraft"), (b) all appliances, components, parts, instruments, accessories, furnishings, modules, navigational and communications equipment and other equipment and property of whatever nature (other than complete Engines, as hereinafter defined) incorporated in, installed on or attached to the Aircraft on the date hereof (collectively, the "Parts"), (c) two (2) General Electric GE90-110B1L1 engines bearing manufacturer's serial numbers 906275 and 906376 and any and all Parts incorporated in, installed on or attached to such engines on the date hereof (the "Engines") and (d) all logbooks, Aircraft records, books, handbooks, drawings, manuals, flight records, historical, operational and maintenance data for the Aircraft and any other document owned by the Seller in connection with the Aircraft (the "Aircraft Documentation").

THAT for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Owner does hereby grant, convey, transfer, bargain and sell, deliver and set over in favour of Etihad Airways P.J.S.C. all of the Owner's right, title and interest in and to the Aircraft, the Engines, the Aircraft Documentation and the Parts and each of its successors and assigns forever.

THAT this Bill of Sale is delivered pursuant to the Sale and Purchase Agreement dated 5 December 2013 between Air India Limited and Etihad Airways P.J.S.C. and capitalized terms used herein and not otherwise expressly defined shall have the meanings given such terms (or assigned to them by reference) therein.

THAT the Aircraft, Engines, the Aircraft Documentation and Parts are sold in an "as-is, where-is" condition and without recourse or warranty being given by the Seller (and any and all implied warranties or terms are hereby expressly excluded).

THAT this Bill of Sale shall be governed by and construed in accordance with the laws of England and is executed as a deed and delivered by a duly authorised representative of the Owner on this 5<sup>th</sup> day of February, 2014, at Abu Dhabi, United Arab Emirates, at which time the Aircraft is located at Abu Dhabi, United Arab Emirates.



**Executed as a deed by**

**GOLDEN STATE AIRCRAFT LLC**

by Golden State Statutory Trust, as Manager  
by Wilmington Trust Company, not in its individual capacity  
but solely as Trustee

Signed by )  
a duly authorised )  
representative for and )  
on behalf of )  
Golden State Aircraft LLC )



**Steve Barone**  
Assistant Vice President

By its countersignature below, Air India Limited hereby grants, conveys, transfers, bargains and sells, delivers and sets over in favour of Etihad Airways P.J.S.C. all of Air India's right, title and interest in and to the Aircraft, the Engines, the Aircraft Documentation and the Parts and each of its successors and assigns forever and warrants to the Buyer, and its successors and assigns and hereby warrants to the Buyer, and its successors and assigns, that there is hereby conveyed to the Buyer with full title guarantee good and marketable title to the Aircraft, the Engines, the Aircraft Documentation and the Parts and all of the Seller's and all of Air India's right, title and interest in and to the Aircraft, the Engines, the Aircraft Documentation and the Parts free and clear of all Security Interests.

**Executed as a deed by**

**AIR INDIA LIMITED**

Signed by )  
a duly authorised )  
representative for and )  
on behalf of )  
Air India Limited )

**Executed** as a deed by

**GOLDEN STATE AIRCRAFT LLC**

by Golden State Statutory Trust, as Manager  
by Wilmington Trust Company, not in its individual capacity  
but solely as Trustee

Signed by )  
a duly authorised )  
representative for and )  
on behalf of )  
Golden State Aircraft LLC )

By its countersignature below, Air India Limited hereby grants, conveys, transfers, bargains and sells, delivers and sets over in favour of Etihad Airways P.J.S.C. all of Air India's right, title and interest in and to the Aircraft, the Engines, the Aircraft Documentation and the Parts and each of its successors and assigns forever and warrants to the Buyer, and its successors and assigns and hereby warrants to the Buyer, and its successors and assigns, that there is hereby conveyed to the Buyer with full title guarantee good and marketable title to the Aircraft, the Engines, the Aircraft Documentation and the Parts and all of the Seller's and all of Air India's right, title and interest in and to the Aircraft, the Engines, the Aircraft Documentation and the Parts free and clear of all Security Interests.

**Executed** as a deed by

**AIR INDIA LIMITED**

Signed by )  
a duly authorised )  
representative for and )  
on behalf of )  
Air India Limited )



**Harjeet Sawhney**  
Manager - Air India  
Abu Dhabi & Al Ain

**BILL OF SALE**

By this Bill of Sale, **ETIHAD AIRWAYS P.J.S.C.**, (the Seller) for good and valuable consideration (the receipt of which is hereby acknowledged) confirms that pursuant to an aircraft sale and purchase agreement dated 23 September 2014 (the **Aircraft Sale and Purchase Agreement**) made between the Seller and **UNION 23 LEASING LIMITED** (the Buyer), the Seller did sell, grant, transfer and deliver to the Buyer at Abu Dhabi on 23 September 2014 at 07:05 a.m./p.m. (Abu Dhabi time) all its right, title and interest in and to:

1. one Boeing 777-200LR aircraft bearing manufacturer's serial number 36302;
1. one GE90-115B engine and one GE90-110B engine bearing manufacturer's serial numbers 906275 and 906376;
2. all Parts; and
3. the Manuals and Technical Records,

(hereinafter referred to as the **Aircraft**),

and hereby conveys, transfers, sells and delivers with full title guarantee to the Buyer such title to the Aircraft and all its right, title and interest in and to the Aircraft free and clear of any Security Interests, other than Permitted Security Interests and the Seller hereby agrees to warrant and defend such title forever against all claims and demands whatsoever.

In this Bill of Sale, words and expressions defined in the Aircraft Sale and Purchase Agreement (whether defined therein or incorporated by reference) will bear the same respective meanings unless otherwise defined herein.

This Bill of Sale is governed and construed in accordance with English law.

**IN WITNESS** whereof, the Seller has caused this Bill of Sale to be duly executed and delivered as a deed this 23 day of September 2014.

**SIGNED, SEALED and DELIVERED**

as a deed by

*JAMES RIGNEY*

as lawful attorney for and in the name of

**ETIHAD AIRWAYS P.J.S.C.**

in the presence of:

Witness' signature: *Ajay*

Witness' name: **AJAY RAMAKRISHNAN**

Witness' Address:

*ETIHAD AIRWAYS P.J.S.C.,  
ABU DHABI*

)  
)  
)  
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**BILL OF SALE**

By this Bill of Sale, **UNION 23 LEASING LIMITED** (the **Seller**) hereby confirms that the Seller grants, transfers and delivers to **ETIHAD AIRWAYS P.J.S.C.** (the **Buyer**) at Abu Dhabi on 1 October 2018 at 4:13 a.m./p.m. (Abu Dhabi time) all its right, title and interest in and to:

1. one Boeing 777-200LR aircraft bearing manufacturer's serial number 36302;
2. one GE90 115B engine and one GE90 110B engine bearing manufacturer's serial numbers 906275 and 906376;
3. all Parts; and
4. the Manuals and Technical Records,

(hereinafter referred to as the **Aircraft**), as originally granted, transferred and delivered to the Seller pursuant to an aircraft sale and purchase agreement dated 23 September 2014 (the **Aircraft Sale and Purchase Agreement**),

and hereby conveys, transfers, sells and delivers with full title guarantee to the Buyer such title to the Aircraft and all its right, title and interest in and to the Aircraft free and clear of all liens, claims, charges encumbrances and rights of others and the Seller hereby agrees to warrant and defend such title forever against all claims and demands whatsoever.

In this Bill of Sale, words and expressions defined in the Aircraft Sale and Purchase Agreement (whether defined therein or incorporated by reference) will bear the same respective meanings unless otherwise defined herein.

This Bill of Sale is governed and construed in accordance with English law.

**IN WITNESS** whereof, the Seller has caused this Bill of Sale to be duly executed and delivered as a deed this 1st day of October 2018

**SIGNED, SEALED and DELIVERED**

as a deed by

as authorised signatory for and in the name of

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John Curran  
Director

**UNION 23 LEASING LIMITED**

in the presence of:

Witness' signature:

Witness' name:

Witness' Address:

**Michael Byrne**  
**Unit C1407**  
**Level 14, Burj Daman**  
**DIFC**  
**PO Box 506734, Dubai**  
**United Arab Emirates**

## Bill of Sale – MSN 36302 Airframe

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Etihad Airways PJSC ("**Seller**"), owner of the full legal and beneficial title to the aircraft airframe, equipment and documents described below (hereinafter referred to as the "**Airframe**"):

- 1 one (1) Boeing 777-200LR airframe bearing manufacturer's serial number 36302;
- 2 all equipment, accessories and parts belonging to, installed in or appurtenant to such aircraft airframe; and
- 3 the Aircraft Documents (as defined below),

does hereby sell, grant, transfer and deliver all its right, title and interest in and to the Airframe to SFTS EY-777 Airframes, LP ("**Purchaser**"), with full title guarantee to have and to hold the Airframe forever. Seller hereby warrants to Purchaser, and its successors and assigns, that it is the legal and beneficial owner of the Airframe, that there is hereby conveyed to Purchaser full legal and beneficial good and marketable title to the Airframe free and clear of any Security Interests (as defined below), and that it will forever defend such title against any and all such non-permitted claims and demands whatsoever.

The terms "Aircraft Documents" and "Security Interests" shall have the following meanings in this Bill of Sale as such terms relate to the Airframe:

**Aircraft Documents** means all records, logs, manuals, technical data, tags and other documents in respect of the specification, maintenance, modification and repair of the Airframe whether printed on paper or stored on any disk or electronic medium, and in the case of the latter includes any software not generally available to Purchaser and necessary to store and retrieve such data; and

**Security Interest** means any mortgage, charge (whether fixed or floating), pledge, lien, hypothecation, assignment, trust arrangement, or security interest of any kind or other agreement or arrangement having the effect of conferring security (including title transfer and/or retention arrangements having a similar effect).

This Bill of Sale is governed by, and shall be construed in accordance with, the laws of England.

**IN WITNESS WHEREOF**, Seller has caused this Bill of Sale to be duly executed as a deed and delivered this 16 day of January 2019, while the Airframe was located at Kemble, UK, at 10:06 AM local time.

EXECUTED as a DEED and DELIVERED )

for and on behalf of )

Ethihad Airways PJSC )

by )

ANDREW FISHER )

being persons who, in accordance )  
with the laws of its jurisdiction of )  
incorporation, are duly authorized )  
to execute this deed on its behalf )



in the presence of -

Witness Signature:

Witness Name: OLIVER WHITE

Witness Occupation: HEAD FLEET PROJECTS

Witness Address: ETIHAD AIRWAYS, NEW AIRPORT RD.

Foreign Seller KHALIFA CITY, ABU DHABI, UAE.



## Bill of Sale

By this Bill of Sale, SFTS EY-777 Airframes, LP (the "Seller") does hereby sell, grant and transfer to A J Walter Aviation Limited (the "Buyer") free and clear of any and all Security created by the Seller, in accordance with the terms of an Airframe Sale Agreement dated 7 September 2018 (the "Sale Agreement") and made between the Seller and the Buyer, all its rights, title and interest in and to:

1. one (1) Boeing 777-200LR airframe with manufacturer's serial number 36302;
2. all equipment, accessories and Parts belonging to, installed in or appurtenant to such airframe to the extent title thereto is vested in the Seller on the Delivery Date; and
3. the Technical Records,

(the "Airframe") whilst the Airframe is located at Kemble, United Kingdom at 2.07 pm (local time)

The Airframe is sold "as is where is" to the Buyer for good and valuable consideration, receipt of which is hereby acknowledged by the Seller.

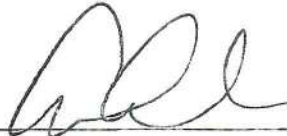
The Seller hereby warrants to the Buyer, its successors and assigns that the Seller has conveyed to the Buyer, subject to and in accordance with the provisions of the Sale Agreement, good marketable title to the Airframe free and clear of all Security and the Seller agrees with the Buyer and its successors and assigns that the Seller will warrant and defend such title forever against all claims and demands whatsoever.

Capitalised terms used but not defined herein shall have the meanings given to them in the Sale Agreement.

This Bill of Sale and any non-contractual obligations arising out of or in connection with it are governed by English law.

Dated the 16<sup>th</sup> day of January 2019

IN WITNESS WHEREOF SFTS EY-777 Airframes, LP by its duly authorised representative, executed this Bill of Sale.

  
\_\_\_\_\_  
**Timothy D. A. O'Hara**  
**Vice President**

For and on behalf of

**SFTS EY-777 Airframes, LP**  
**(by Shooting for the Stars VII, LLC, its general partner)**