



National Aviation Company of India Limited

**ANNEXURE "I" – DETAILS OF AIR INDIA'S A310-300 FREIGHTER AIRCRAFT
VT-EQS**

1.	No. of aircraft	1
2.	Registration No.	VT-EQS
3.	Manufacturer's Serial No.	538
4.	Operating Weights & Fuel Capacity	
	Max. Taxi weight (t)	153.9
	Max. Take Off weight (t)	153.0
	Max. Landing weight (t)	123.0
	Max. Zero Fuel weight (t)	113.0
	Operating Empty weight (t)	76.5
	Fuel Capacity (USG)	16,140
5.	Powerplant	
	Engine Type	CF6-80C2A2
	Thrust (S.L.S.) (lb)	53,500
6.	Cargo Capacity	
	Main Deck	Can Accommodate :
		12[88"x125"] ULDs in single row or
		11[96"x125"] ULDs in single row or
		5 [125"x96"] ULDs in single row or
		14[125"x88"] ULDs in side by side row or
		12[125"x96"] ULDs in side by side row and
		4[88"x125"] ULDs in single row configuration
	Fwd Hold	3 Pallets
	Aft Hold	7LD3
	Spec. Bulk Volume (cft)	303
7.	No. of Galleys (Dry)	1
8.	No. of Courier Seats	3
9.	No. of Toilets	1
10.	Noise Compliance	Stage 3



National Aviation Company of India Limited

A310-300 FREIGHTER AIRCRAFT SPECIFIC DATA

Registration No.	VT-EQS
Year of Manufacture	Aug'90
Manufacturer's Sl.No.	538
As of 1st September, 2009	
Hours since new	52956
Cycles since new	20493
Next 'C' check due on ('C' check interval 18 months)	August 2010
As of 1st September, 2009	
Engine #1	695-318
Hours since new	40108
Cycles since new	14037
Cycles to next shop visit	1017
Engine #2	690-143
Hours since new	46756
Cycles since new	15469
Cycles to next shop visit	1985

The above indicated engines will be installed at the time of delivery. Kindly note that, during inspection of the aircraft the engines may be different.



National Aviation Company of India Limited

A310-300 FREIGHTER AIRCRAFT – MAINTENANCE SCHEDULE

Airframe :

'A' check interval	500 hours
'2A'	1000 hours
'3A'*	1500 hours OR 220 days**
'C'	18 months
5Y	5 years
10Y	10 years

* Flight Release check.

** Whichever is earlier

Engines : ON CONDITION

Landing Gear : Overhaul Intervals

NLG : 12,000 cycles OR 9 years

MLG : 16,000 cycles OR 8 years

Landing Gear due for Overhaul (DD/MM/YR)

	VT-EQS
NLG	21.08.2010
MLG LH	31.07.2014
MLG RH	31.07.2014



Aviation Company of India Limited

AVIONICS FOR VT-EQS

Equipment	Manufacturers	Model	Qty.
VHF NAV	Collins	VHF 700	Dual
ADF	Collins	ADF 700	Dual
ILS	Collins	ILS 700	Dual
Weather Radar	Collins	WRT-701x	Dual
Transponder Mode 'S'	Honeywell	TRA-67A	Dual
HF	Collins	HFS700	Dual
PA Amplifier	Collins	PAU-700	
TCAS System	Honeywell	TPA-81A	
CVR	Honeywell	SSCVR	
IRS	Litton	461800-0300-2201	Triple
FMC	Smiths	745SUE4B4	Dual
ADC	Honeywell	4045053903	Dual
Selcal	Team	SC2253A	
FCC	SFENA	13470ADM	Dual
DFAU	Teledyne	2227000-10/A	
EGPWC	Honeywell	965-0976-003-206-20C	
DME	Collins	DME-700	Dual

N A C I L



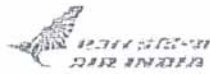
National Aviation Company of India Limited

A310-300F POWERED WITH GE CF6-80C2A2 ENGINES

MAJOR JOBS CARRIED OUT ON VT-EQS

The VT-EQS aircraft was converted to freighter at EADS EFW facility in Dresden. The freighter conversion is covered by a STC – Supplemental Type Certificate (FAR 25.85) and is approved by EASA and Indian regulatory agency – DGCA.

NOTE: As of date, all the applicable FAA Airworthiness Directives which are due have been complied.



AIR INDIA
ENGINE OVERHAUL, OAP, MUMBAI

LIFE LIMITED PARTS LIST FOR THE ENGINE										
GE-CF6-80C2 A2 ENGINE										
ENGINE S/No:	695318	Release Date	05.10.07							
ENG TSN	40108		ENG CSN		14037					
BOOSTER S/No.		21X90282	TSN	45895	CSN	15619				
			TSO	10475	CSO	3681				
								LIFE BALANCE		REMARKS
S/No.	DESCRIPTION	PART No.	SERIAL No.	U. HRD.	U. CYB	TSN	CSN	HOURS	CYCLEB	
1	Stg.1 Fan disk	1700M78F08	SNG05926		20000	39058	13885		6114	
2	Stg.2 -5 spool	1856M71F01	VL0L04940		20000	45895	15619		4381	
3	Fan forward Shaft	1277M75G07	GWNY4650		20000	40108	14037		5963	
4	Fan Mid shaft	1862M41F01	MFOAT644		20000	39426	14879		5121	
CORE S/No.		31X90283	TSN	41847	CSN	11970				
			TSO	10475	CSO	3681				
S/No.	DESCRIPTION	P/No.	Sr.No.	U. HRD.	U. CYB	TSN	CSN	HOURS	CYCLEB	REMARKS
1	Stg.1 Disk	9380M26F02	SNG04147		14480	43283	13463		1017	
2	Stg.2 Disk	9380M27F03	RRG00745		20000	41847	11970		8030	
3	Spool 3-9 Stage	1856M15G02	VL0L3318		20000	14410	4753		15247	
4	Stg.10 Disk	9380M29F03	RRAD0194		20000	41847	11970		8030	
5	Spool 11-14 Stage	9380M30G09	MPOS3011		16600	40100	13545		3055	
6										
7										
8	Ret. CDP Seal	1855M60F02	ELDAG341		20000	47476	16335		3665	
9										
HPT S/No.		53X90142	TSN	40785	CSN	13763				
			TSO	1618	CSO	468				
S/No.	DESCRIPTION	P/No.	Sr.No.	U. HRD.	U. CYB	TSN	CSN	HOURS	CYCLEB	REMARKS
1	Stg.1 Disk	2047M32G04	MPOAE343		15000	41326	13051		1949	
2	Impeller spacer	1539M12F01	GFF59E91		15000	16656	6453		8547	
3	Stg.2 Disk	9362M43F02	MUNDD948		15000	39221	3199		11701	
4	Vane Ring Diffuser	9290M28F15	BTABS184		15000	31876	11844		3156	
LPT S/No.		57X95317	TSN	41349	CSN	15046				
			TSO	11332	CSO	3979				
S/No.	DESCRIPTION	P/No.	Sr.No.	U. HRD.	U. CYB	TSN	CSN	HOURS	CYCLEB	REMARKS
1	Stg.1 Disk	9373M51F03	MPOQ4318		20000	47228	18519		1481	
2	Stg.2 Disk	9373M52F04	MPOS5951		20000	45247	17363		2637	
3	Stg.3 Disk	9373M53F05	FLA2M158		20000	41349	15046		4954	
4	Stg.4 Disk	9373M54F04	FLA3M172		20000	41349	15046		4954	
5	Stg.5 Disk	9373M55F04	FLA4M171		20000	41349	15046		4954	
6	LPT Shaft	9382M59F06	GWNY3501		20000	41349	15046		4954	
Air Mount Links										
1	LH Link	1846M23G01	EGTB6353		50000	16859	6251		43748	
2	RH Link	9348M84G03	WIN349AD		80000	19117	7114		72816	
Prepared By: Shanthi M.K. Dy.Chief Engineer										



AIR INDIA
ENGINE OVERHAUL, OAP, MUMBAI

ENGINE INSTALLATION / REMOVAL DETAILS

CUSTOMER		AI	ENGINE MODEL		GE CF6-80C2 A2	
Engine Sr. No.	695318		TSN/CSN	40108	14037	
A/C Location;	EQS-1		TSO/CSO			
Date:	1-Sep-09		TSV/CSV	1618	468	
			W/O NO.			
T/O EGT MARGIN			MCT MRGN		OIL PR.	

Reason For Removal:

MODULE STATUS

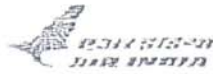
Description	Serial No.	TSN	CSN	TSO	CSO	REMARKS
Booster	21X90282	45895	15619	10475	3681	
Core	31X90283	41847	11970	10475	3681	
Combustor	ASD80632	-	-	3495	916	
HPT stg 1 nozz assy	51X90333	40368	14461	11455	2871	
HPT	53X90142	40785	13763	1618	468	
LPT	57X95317	41349	15046	11332	3979	
A.G.B	CDP5C034	-	-	12530	4152	
T.G.B	EPEO1897	-	-	16812	5389	
I.G.B.	FIABL059	-	-	1618	468	
Mid shaft	MPOAT644	39426	14879	10475	3681	
Fwd. shaft	GWNY4650	40108	14037	10475	3681	

Module Minimum Life balance

Module	Cycles	Life limiting part
Booster	4381	Stg.2 -4 spool
Core	1017	Stg.1 Disk
HPT	1949	Stg.1 Disk
LPT	1481	Fwd.Shaft
Mid shaft	5121	Mid shaft
Fwd. shaft	5963	Fwd. shaft
MINIMUM	1017	Stg.1 Disk

ENGINE LIMITER

3-9 SPOOL INSP	N/A
HPC STG 2 DISK	1017
1st LIMITER	1017



AIR INDIA
ENGINE OVERHAUL, OAP, MUMBAI

LIFE LIMITED PARTS LIST FOR THE ENGINE										
GE-CF6-80C2 A2 ENGINE										
ENGINE S/No:		690143	Release Date		19.09.08					
ENG TSN		46756	ENG CSN		15469					
BOOSTER S/No.		21X90283	TSN		43962	CSN		12109		
			TSO		2353	CSO		664		
S/No.	DESCRIPTION	PART No.	SERIAL No.	U.HRS.	U.CYS	TSN	CSN	LIFE BALANCE		REMARKS
								HOURS	CYCLES	
1	Stg.1 Fan disk	1703M91F08	MFOBG956		20000	48887	15171		4829	
2	Stg.2-5 spool	1856M71F01	VOLO5588		20000	43962	12109		7891	
3	Fan forward Shaft	1277M75G07	GWNY0802		20000	45258	15866		4134	
4	Fan Mid shaft	1862M48F01	MFOAA166		20000	45866	14448		5552	
CORE S/No.		31X95102	TSN		46633	CSN		17653		
			TSO		7805	CSO		2592		
S/No.	DESCRIPTION	P/No.	Sr.No.	U.HRS.	U.CYS	TSN	CSN	LIFE BALANCE		REMARKS
								HOURS	CYCLES	
1	Stg.1 Disk	1644M21F04	DC338767		20000	7805	2592		17408	
2	Stg.3 Disk	9380M127F03	SNGO4171		20000	44471	15568		4432	
3	Spool 3-9 Stage	1856M15G02	VOLD1000		20000	7805	2592		17408	
4	Stg.10 Disk	9380M29F03	SNGO6992		20000	34574	13254		6746	
5	Spool 11-14 Stage	1531M11G01	MFOAH889		20000	45604	14830		5170	
6	-	-	-		-	-	-		-	
7	-	-	-		-	-	-		-	
8	Rot. CDP Seal	1855M60F02	ELOAA352		20000	43049	15564		4436	
9	-	-	-		-	-	-		-	
HPT SR.No		53X90333	TSN		42926	CSN		15444		
			TSO		2353	CSO		664		
S/No.	DESCRIPTION	P/No.	Sr.No.	U.HRS.	U.CYS	TSN	CSN	LIFE BALANCE		REMARKS
								HOURS	CYCLES	
1	Stg.1 Disk	1531M84G12	GWNB4676		15000	12301	2632		12368	
2	Impeller spacer	1539M12F02	GFFR8F5A		15000	23342	8669		6331	
3	Stg.2 Disk	9362M43F02	BTAC2795		15000	51668	13015		1985	
4	Vane Ring Diffuser	9290M28F15	BTAB5459		15000	26174	12613		2387	
LPT S/No.		57X90140	TSN		43080	CSN		15688		
			TSO		16265	CSO		5396		
S/No.	DESCRIPTION	P/No.	Sr.No.	U.HRS.	U.CYS	TSN	CSN	LIFE BALANCE		REMARKS
								HOURS	CYCLES	
1	Stg.1 Disk	9373M51F03	FIA1F518		20000	39437	13859		6341	
2	Stg.2 Disk	9373M52F04	MPOS5950		20000	43080	15688		4312	
3	Stg.3 Disk	9373M53F05	SNE90027		20000	43080	15688		4312	
4	Stg.4 Disk	9373M54F04	MPOT1119		20000	43080	15688		4312	
5	Stg.5 Disk	9373M55F04	MPOS5980		20000	43080	15688		4312	
6	LPT Shaft	9382M59F05	GWNC5980		20000	43080	15688		4312	
AR Mount Links										
1	LH Link	1846M23G01	EGTB6341		80000	19177	6855		43145	
2	RH Link	9348M84G03	WIN4559Y		80000	24636	9094		70906	
Prepared By: Shanthy M.K. Dy.Chief Engineer										



AIR INDIA

ENGINE OVERHAUL, OAP, MUMBAI

ENGINE INSTALLATION / REMOVAL DETAILS

CUSTOMER		AI	ENGINE MODEL		GE CF6-80C2 A2	
Engine Sr. No.	690143		TSN/CSN	46756	15469	
A/C Location;	EQS -2		TSO/CSO	15232	4905	
Date:	1-Sep-09		TSV/CSV	2353	664	
			W/O NO.			
T/O EGT MARGIN		MCT MRGN			OIL FR.	

Reason For Removal:

MODULE STATUS						
Description	Serial No.	TSN	CSN	TSO	CSO	REMARKS
Booster	21X90283	43962	12109	2353	664	
Core	31X95102	46633	17653	7805	2592	
Combustor	ASD80636	-	-	2353	664	
HPT stg 1 nozz assy	51X90276	43903	15018	2353	664	
HPT	53X90333	42926	15444	2353	664	
LPT	57X90140	43080	15688	16265	5396	
A.G.B	FIAOS279			2353	664	
T.G.B	EPEO1797			15232	4905	
I.G.B.	EPE20864			2353	664	
Mid shaft	MPOAA166	45866	14448			
Fwd. shaft	GWNY0802	45258	15866	2353	664	
LH LINK	EGTB6341	19177	6855	2353	664	
RH LINK	WIN4559Y	24636	9094	2353	664	

Module Minimum Life balance		
Module	Cycles	Life limiting part
Booster	4829	Stg.1 Fan disk
Core	4432	Stg.2 Disk
HPT	1985	Stg.2 Disk
LPT	4312	Stg.4 Disk
Mid shaft	5552	Mid shaft
Fwd. shaft	4134	Fwd. shaft
MINIMUM	1985	Stg.2 Disk