

Time Between Overhaul (TBO) Card



Williams International

THIS LOG MUST REMAIN WITH THE ENGINE LOGBOOK IN WHICH THE COMPONENT IS INSTALLED
REFER TO CHAPTER 5 OF THE APPROPRIATE MAINTENANCE MANUAL FOR OVERHAUL TIMES

P/N: 119149 S/N: CL8APU0965
FUEL DELIVER UNIT (FJ44-3 W/SHIELD)

REMOVED	INSTALLED	ENGINE SERIAL NUMBER	DATE	Time Since Overhaul			PART HOURS	COMMENTS: Note when part is overhauled, zero out part hours
				ENGINE HOURS AT INSTALL	ENGINE HOURS AT REMOVAL	PART HOURS THIS INSTALL		
☐	☒	141632	3-25-15	1985.40	NA		2032.8	<i>[Signature]</i> W15R33SJ
☐	☐			NA				
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REPAIR STATION RECORD

Master Work Order: 33680Engine P/N: 67000-200Page: 1 of 1Engine S/N: 141632Activity: C3: Check 3Statement of Work Performed

In addition to the manual instructions, maintenance was performed in accordance with the following service bulletins, letters, and AD's (as applicable):

SERVICE BULLETIN / SERVICE LETTER ACTIVITY

<u>WO</u>	<u>Document #</u>
34775	FJ44-72-080: Engine - 2nd Reduction Bevel Gear B
34457	FJ44-72-097: Engine - Split Inner Ring Ball Bear
34772	FJ44-72-107: Engine - 2nd Reduction Pinion Beari
34458	FJ44-72-108: Engine - Accessory Drive Shaft - Re
34461	FJ44-72-110: Engine - Dampener Bracket Assembly
34465	FJ44-72-124: Engine - HP Turbine Blades - Replac
34603	FJ44-73-044: Engine Fuel and Control - Fuel Deli
34466	FJ44-77-013: Engine Indicating - FADEC Engine Ha
34447	SL44-72-306: LP-Rear Brg Seal Retain-Replace
34453	SL44-72-318: Engine - 1st LP Turbine Nozzle - Re
34448	SL44-72-327: Engine - Identification Plate - Ins
34451	SL44-72-382: Engine - Bleed Valve Shaft - Replac
34454	SL44-72-429: Engine - 1st Reduction Bevel Gear B

FAA Repairman:

(Certificate No. WI5R335J)

FJ44-3A TURBOFAN ENGINE
ACCEPTANCE TEST PERFORMANCE SUMMARY
IN ACCORDANCE WITH DOCUMENT 73332 Rev. C
WILLIAMS INTERNATIONAL CO., L.L.C.

Eng P/N: 67000-200	Eng S/N: 141632	Eng Bld: rev 2	Test Date: 03/24/2015
ATRC Ver: CP362.01	Date: 1/2/13	Thrust Tare: N/A	Test Cell: B08
CFG Ver: CP354.00.B08.00	Date: 12/17/2009	Pc1: 1.9960	Oil Type: Mobil Jet II
Acq Ver: CP318.01	Date: 05/08/2009	Pc2: 2.0450	Exh Noz: TL-99958 s/n 004
Inlet: TL-99953	Inlet Cd: 0.987	Inlet Dia: 20.644	SPLHV: 18400
Fuel Type: Tank 8 JET A	Spec Grav: 0.8145	Temp Slope: 0.00040000	LHV: 18505
Dir: FJ44-3A CP354/150324233835			

N1 TRIM

N1 Trim Increments (-10 rpm/incr.) 6 incr.
N1 Trim Speed (SLS, 79F Dry Day, Uninst) 17734 rpm

ITT TRIM

ITT Trim Increments (2.5 Deg. R/incr.) 0 incr.
Trimmed ITT 1960 Deg. R

PERFORMANCE AT N1 TRIM SPEED (Referred to Sea Level Static, 79F Dry Day, Uninstalled)

Parameter	Actual	Allowable	Deviation
Referred FN	2867 lbf	2866 (min) 2907 (max)	0
Referred ITT	1960 R	1970 (max)	0
Referred N2	40679 rpm	N/A	N/A

PERFORMANCE AT RATED THRUST (Referred to Sea Level Static, 79F Dry Day, Uninstalled)

Parameter	Actual	Allowable	Deviation
Referred SFC	0.504 lbm/hr/lbf	0.510 (max)	0.000

GROUND IDLE THRUST (Referred to Sea Level Static, 79F Dry Day, Uninstalled)

Parameter	Actual	Max Allowable	Deviation
Referred FN	143 lbf	164 (max)	0
Referred N2	22827 rpm	N/A	N/A

ACCELERATION TIME (Flight Idle to 95% Rated Thrust)

Parameter	Actual	Max Allowable	Deviation
Time (Corr. to STD)	4.3 seconds	5.1	0.0
TT2	30.2 F	N/A	N/A
PT2	14.294 PSIA	N/A	N/A

MECHANICAL SYSTEMS PERFORMANCE (Steady-State)

Parameter	Actual	Allowable	Deviation
Max Main Oil Temp	137.5 F	275.0	0.0
Min Main Oil Press	49.9 psig	35.0	0.0
Max Main Oil Press	82.2 psig	90.0	0.0

Parameter	Actual	Allowable	Deviation
Oil Consumption	<u>0.003</u> gal/hr	0.023 (max)	<u>0.000</u>
Engine Dry Weight	<u> </u> lb	518.5 (max)	<u> </u>

Total Engine Run Time

1985.40

Total Engine Cycles

2055.0

**ENGINE NOT WEIGHED
THIS SHIPMENT**

Engineering

Usher Taha

Date:

3/26/15

FJ44-3A TURBOFAN ENGINE
ACCEPTANCE TEST PERFORMANCE SUMMARY
IN ACCORDANCE WITH DOCUMENT 73332 Rev. C
WILLIAMS INTERNATIONAL CO., L.L.C.

Eng P/N: 67000-200	Eng S/N: 141632	Eng Bld: rev 2	Test Date: 03/24/2015
ATRC Ver: CP362.01	Date: 1/2/13	Thrust Tare: N/A	Test Cell: B08
CFG Ver: CP354.00.B08.00	Date: 12/17/2009	Pc1: 1.9960	Oil Type: Mobil Jet II
Acq Ver: CP318.01	Date: 05/08/2009	Pc2: 2.0450	Exh Noz: TL-99958 s/n 004
Inlet: TL-99953	Inlet Cd: 0.987	Inlet Dia: 20.644	SPLHV: 18400
Fuel Type: Tank 8 JET A	Spec Grav: 0.8145	Temp Slope: 0.00040000	LHV: 18505
Dir: FJ44-3A CP354/150324233835			

Data Points

PARAMETER	DATA					
	2	3	4	5	6	7
Data Point Number	2	3	4	5	6	7
Percent N1TO	25.95	82.22	88.50	93.49	97.64	100.19
Power Lever Angle	17.55	37.36	40.77	44.36	47.69	65.93
Referred N1 Speed	4667	14793	15924	16825	17573	18034
Referred N2 Speed	22827	37816	38926	39740	40499	41007
Referred Thrust	142.7	1764.3	2139.4	2469.5	2792.4	3009.4
Referred Fuel Flow	138.2	873.0	1060.1	1231.8	1404.0	1528.1
Referred SFC	0.968	0.495	0.496	0.499	0.503	0.508
Referred ITT (R)	1193	1710	1805	1879	1944	1988
Referred Airflow	16.0	59.7	65.5	70.1	74.1	76.6
Overall Press Ratio	2.50	12.86	15.09	17.03	18.93	20.16
Reynolds Number Index	1.01379	1.02446	1.02774	1.02864	1.02929	1.02972
Specific Humidity	0.00280	0.00284	0.00285	0.00285	0.00286	0.00287
Theta Referred to 79 F	0.92687	0.91808	0.91542	0.91447	0.91385	0.91329
Delta	0.96700	0.96570	0.96531	0.96492	0.96471	0.96438
Net Thrust (lbf)	138.0	1703.8	2065.2	2382.9	2693.9	2902.3
Average Fuel Flow (lb/hr)	127.3	798.2	967.2	1122.8	1278.9	1390.9
Air Flow (lbm/sec)	16.0	60.1	66.0	70.6	74.7	77.2
CDP (psia)	35.5	182.5	214.1	241.5	268.3	285.8
N1 Speed (rpm)	4497	14187	15249	16104	16814	17250
N2 Speed (rpm)	22005	36286	37299	38060	38773	39249
Inlet Temperature (F)	39.6	34.9	33.4	32.9	32.6	32.3
Fuel Temperature (F)	42.6	34.2	35.3	34.8	35.1	35.4
Dewpoint (F)	23.9	24.3	24.3	24.4	24.4	24.4
Average ITT (F)	655	1124	1208	1274	1333	1373
Inlet Delta Press. (psia)	0.069	1.039	1.275	1.485	1.690	1.825
Cell Pressure (psia)	14.211	14.192	14.186	14.180	14.177	14.173
Oil Temperature (F)	98.1	129.0	135.5	136.5	136.9	137.5
Oil Pressure (psig)	49.9	76.9	77.9	79.6	80.9	82.2
Oil Tank Pressure (psig)	8.0	16.0	17.8	19.4	20.9	21.9
Date	03/25/15	03/25/15	03/25/15	03/25/15	03/25/15	03/25/15
Time	05:28:11	05:32:35	05:36:09	05:39:38	05:43:01	05:46:44

FJ44-3A TURBOFAN ENGINE
ACCEPTANCE TEST PERFORMANCE SUMMARY
IN ACCORDANCE WITH DOCUMENT 73332 Rev. C
WILLIAMS INTERNATIONAL CO., L.L.C.

Eng P/N: 67000-200	Eng S/N: 141632	Eng Bld: rev 2	Test Date: 03/24/2015
ATRC Ver: CP362.01	Date: 1/2/13	Thrust Tare: N/A	Test Cell: B08
CFG Ver: CP354.00.B08.00	Date: 12/17/2009	Pc1: 1.9960	Oil Type: Mobil Jet II
Acq Ver: CP318.01	Date: 05/08/2009	Pc2: 2.0450	Exh Noz: TL-99958 s/n 004
Inlet: TL-99953	Inlet Cd: 0.987	Inlet Dia: 20.644	SPLHV: 18400
Fuel Type: Tank 8 JET A	Spec Grav: 0.8145	Temp Slope: 0.00040000	LHV: 18505
Dir: FJ44-3A CP354/150324233835			

VIBRATION SURVEY (PEAK LEVELS)

Parameter	Actual	Max Allowable	Deviation
Max 1E HP rad vib	0.48 ips @ 38.960 krpm	1.10	0.00
Max 1E LP rad vib	0.23 ips @ 6.031 krpm	0.25	0.00

Engineering *Carla Tindley* Date: *3/26/15*

FJ44-3A ENGINE SERIAL NUMBER RECORD

P/N:	67000-200	S/N:	141632	C/L:	E
Q/M	P/N	C/L	DESCRIPTION	S/N	
010	77500	E	FJ44-3 BASE ENGINE	300762	
020	111867	NC	FADEC	CL8APW1271	
SERIALIZED COMPONENTS OF FJ44-3 BASE ENGINE					
010	72036	D	FAN ROTOR, 16 BLADE, SWEPTBACK	AU21950	
020	69026	E	ROTOR, ASSY IP COMPRESSOR BALANCE	HW29491	
030	45785	F	NUT RETAINER, AXIAL COMPRESSOR	JDM00841	
040	111423	A	SHAFT ASSY, LP COMPLETE	RX07TK0257	
050	110979	NC	CASE & INSERT ASSY	FRM2349	
055	70563	D	VANE ASSY FAN STATOR	AU20785	
060	68067	NC	VANE, STATOR, IP COMPRESSOR STAGE 3	AU20731	
065	66948	A	VANE ASSY, IP COMPRESSOR STAGE 1&2	AU20733	
080	57657	A	#1 CARBON SEAL	TX29W52	
085	78639	B	#1 CARBON SEAL RUNNER	TX76W49	
090	67305	B	HOUSING, BEARING #1 MACH/ASSY	AU21180	
100	56172	D	#1 BALL BEARING, SPLIT INNER RING	MW2305	
110	78301	B	#4 BEARING, ROLLER OUTER RACE	JT78762	
111	78301	B	#1.5 BEARING, ROLLER OUTER RACE	JT78773	
115	50817	C	NOZZLE ASSY, FUEL	BCC1AUR0985	
120	66912	F	HSG ASSY, INTERSTAGE	AU23655	
130	54879	E	COVER, OIL TANK	WL21523	
140	50349	C	1ST RED. BEVEL GEAR	BG4492	
150	76166	NC	SHAFT, ACCESSORY DRIVE	GG649	
160	78302	B	BRG, ROLLER - 1ST RDCN BVL GEAR	JT79438	
170	78321	A	BRG, BALL - 1ST RDCN BVL GEAR	JT78522	
180	55663	J	SUPPORT, BRG, 1ST RDCN BVL GEAR	AU21172	
190	56278	B	1ST RED. PINION GEAR	BG2477	
200	64711	C	SHAFT, HIGH PRESSURE	RX07RT1835	

FJ44-3A ENGINE SERIAL NUMBER RECORD

P/N: 67000-200		S/N: 141632		C/L: E
OM	P/N	C/L	DESCRIPTION	S/N
210	78640	B	#2 CARBON SEAL FACE RUNNER	TX87W51
220	55684	A	#2 BEARING HOUSING	JDM00627
230	55666	A	#2 BEARING	MW3462
240	68937	NC	#2 CARBON SEAL	TX14Y49
250	66055	D	ROTOR, HP COMPRESSOR	HW29951
260	69885	A	COVER ASSY, HP COMPRESSOR	AU21130
270	69147	NC	FUEL MANIFOLD & SEAL ASSY	AU21371
280	55608	F	SEAL & FUEL SLINGER ASSY	AU21297
281	57882	B	BALANCE PISTON	MX20021
290	75327	B	DIFFUSER CASE ASSY	AU21001
310	75406	NC	NOZZLE & PRI. PLATE ASSY, HP TURB.	AU20949
320	73458	F	ROTOR ASSY, HP TURBINE	HW29532
321	67093	F	DISK, HP TURBINE	HW29532
368	59853	A	#3 BRG, ROLLER (HP SHAFT)	FT5335
380	54963	A	#3 CARBON SEAL HOUSING	ADM001238
390	64771	A	#3 CARBON SEAL	TX62W52
395	45075	C	#4 CARBON SEAL, FWD	TX74W24
396	45075	C	#4 CARBON SEAL, AFT	TX74W86
400	72165	C	NOZZLE, 1ST LP TURBINE	AU21139
410	72038	H	BALANCE ASSY, LP TURBINE ROTOR	AU21020
411	72037	D	DISK, 1ST LP ROTOR	HW29317
551	66993	F	DISK, 2ND LP ROTOR	HW29601
554	48639	D	#4 BEARING - INNER RACE	FT4206
560	73610	D	HSG ASSY NOZZLE, 2ND LP TURBINE	AU21104
570	78823	B	GEARBOX ASSY, ACCESS DRIVE	MX20001
610	68032	F	IGNITOR	CK0801281
611	68032	F	IGNITOR	CK0801295

FJ44-3A ENGINE SERIAL NUMBER RECORD

P/N: 67000-200		S/N: 141632	C/L: E	
OM	P/N	C/L	DESCRIPTION	S/N
620	73489	NC	EXCITER, IGNITION	BL17668
621	73489	NC	EXCITER, IGNITION	BL17709
640	77697	NC	FUEL DELIVERY UNIT	CL8ATW0179
650	57847	C	INDICATOR, FUEL FILTER, ELECT.	GE3822
660	110590	A	PUMP ASSY, LUBE & SCAV	MX20304
670	110718	A	COOLER, LUBE OIL	PP0254
680	62141	NC	ITT PROBE ASSY #1	YYF020563
681	62141	NC	ITT PROBE ASSY #2	YYF020564
682	62141	NC	ITT PROBE ASSY #3	YYF020565
710	62141	NC	ITT PROBE ASSY #4	YYF020566
711	62141	NC	ITT PROBE ASSY #5	YYF020567
712	62141	NC	ITT PROBE ASSY #6	YYF020568
722	75378	B	ITT FLIGHT HARNESS	YYF001430
730	79646	NC	SENSOR, TT2/PT2	GST4170
740	57355	C	SENSOR, SPEED, N1 DUAL MAGN	MD0118796
750	54831	G	SENSOR, SPEED, N2 DUAL MAGN	MD0119200
760	110753	NC	ITT / N1 TRIM BOX	SPA1300



2. Service Bulletins Basic To Model/Serial No.

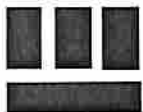
1.AD'S

2.SERVICE BULLETIN'S

No airworthiness directives or service bulletin's applicable as of	10/24/2008
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AD/SB

6115APR92



WILLIAMS INTERNATIONAL

2280 W. MAPLE RD., P.O. BOX 200, WALLED LAKE, MI 48390-200 USA

CERTIFICATION OF CONFORMANCE

Williams International (WI) certifies that the engine identified below by part number, model number and serial number has successfully completed acceptance testing in accordance with ATP 73332. W.I. Also certifies that this engine conforms to the FAA type certificate and type certificate data sheet, with exceptions noted below and is in a condition for safe operation in accordance with the published operational limits.

Part Number: 67000-200 Serial Number: 141632

Item Description: Turbo-Fan Engine

Model number: FJ44-3A

FAA Type Cert No: E3GL

Exceptions: NONE

Authorized Signature

Date:

10-24-08

Time Between Overhaul (TBO) Card

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P/N: 110590 S/N: MX20304
PUMP ASSY, LUBE AND SCAVENGE

REMOVED	INSTALLED	ENGINE SERIAL NUMBER	DATE	Time Since Overhaul				COMMENTS: Note when part is overhauled, zero out part hours
				ENGINE HOURS AT INSTALL	ENGINE HOURS AT REMOVAL	PART HOURS THIS INSTALL	PART HOURS	
☐	☒	141632	10-24-08	0		NA	0	
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Component Life Limited Card



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P/N: 66055

S/N: HW29951

ROTOR,HP COMPRESSOR

REMOVED	INSTALLED	ENGINE SERIAL NUMBER	DATE	HOURS				CYCLES				AUTHORIZED SIGNATURE AND NUMBER
				ENGINE HOURS AT INSTALL	ENGINE HOURS AT REMOVAL	PART HOURS THIS INSTALL	PART HOURS AT REMOVAL	ENGINE CYCLES AT INSTALL	ENGINE CYCLES AT REMOVAL	PART CYCLES THIS INSTALL	PART CYCLES AT REMOVAL	
	☒	141632	10-24-08	<i>[Signature]</i>		NA		<i>[Signature]</i>		NA		
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P/N: 72037 S/N: HW29317

DISK,LP TURB ROTOR,STG 1

REMOVED	INSTALLED	ENGINE SERIAL NUMBER	DATE	HOURS				CYCLES				AUTHORIZED SIGNATURE AND NUMBER
				ENGINE HOURS AT INSTALL	ENGINE HOURS AT REMOVAL	PART HOURS THIS INSTALL	PART HOURS AT REMOVAL	ENGINE CYCLES AT INSTALL	ENGINE CYCLES AT REMOVAL	PART CYCLES THIS INSTALL	PART HOURS AT REMOVAL	
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P/N: 72036 S/N: AU21950
ROTOR,FAN,16 BLADE,SWEPT BACK

REMOVED	INSTALLED	ENGINE SERIAL NUMBER	DATE	HOURS				CYCLES				AUTHORIZED SIGNATURE AND NUMBER
				ENGINE HOURS AT INSTALL	ENGINE HOURS AT REMOVAL	PART HOURS THIS INSTALL	PART HOURS AT REMOVAL	ENGINE CYCLES AT INSTALL	ENGINE CYCLES AT REMOVAL	PART CYCLES THIS INSTALL	PART CYCLES AT REMOVAL	
	☒	141632	10-24-08	<u>6</u>		NA		<u>0</u>		NA		
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P/N: 69026

S/N: HW29491

ROTOR ASSY,IP CPRSR BALANCE

REMOVED	INSTALLED	ENGINE SERIAL NUMBER	DATE	HOURS				CYCLES				AUTHORIZED SIGNATURE AND NUMBER
				ENGINE HOURS AT INSTALL	ENGINE HOURS AT REMOVAL	PART HOURS THIS INSTALL	PART HOURS AT REMOVAL	ENGINE CYCLES AT INSTALL	ENGINE CYCLES AT REMOVAL	PART CYCLES THIS INSTALL	PART CYCLES AT REMOVAL	
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P/N: 66993

S/N: HW29061

DISC, ROTOR, 2ND LPT

REMOVED	INSTALLED	ENGINE SERIAL NUMBER	DATE	HOURS				CYCLES				AUTHORIZED SIGNATURE AND NUMBER	
				ENGINE HOURS AT INSTALL	ENGINE HOURS AT REMOVAL	PART HOURS THIS INSTALL	PART HOURS AT REMOVAL	ENGINE CYCLES AT INSTALL	ENGINE CYCLES AT REMOVAL	PART CYCLES THIS INSTALL	PART HOURS AT REMOVAL		
	☒	141632	10-24-08	☒		NA		☒		NA			
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FJ44-3A TURBOFAN ENGINE
ACCEPTANCE TEST PERFORMANCE SUMMARY
IN ACCORDANCE WITH DOCUMENT 73332 Rev B
WILLIAMS INTERNATIONAL CO., L.L.C.

Eng P/N: 67000-200
Prog Ver: CP275.02
Acq Ver: CP169.03
ATP Ver: CP333.00
ATP Doc: 77438 Rev NC
Fuel Type: JETA

Eng S/N: 141632
Date: 09/16/05
Date: 06/15/00
Date: 11/10/05
Inlet Sn: 1 3603
LHV: 18588

Eng Bld: 1
Thrust Tare: 5.0
Pc1: 2.0010
Pc2: 2.0230
Inlet Cd: 0.933
Spec Grav: 0.7983

Test Date: 10/23/08
Test Cell: O5
Oil Type: MOBIL JET2
Exh Noz: TL99958
Inlet Dia: 20.64
Temp Slope: 0.00040800
Dir: 0810230500

N1 TRIM

Trim Increments (-10 rpm/incr.) 5 incr.
N1 Trim Speed (SLS, 79F Dry Day, Uninst) 17744 rpm

PERFORMANCE @ N1 TRIM SPEED (Referred to Sea Level Static, 79F Dry Day, Uninstalled)

Parameter	Actual	Allowable	Deviation
Referred FN	2866 lbf	2866 (min)	0
		2907 (max)	0
Referred ITT	1919 R	1970 (max)	0
Referred N2	40416 rpm	N/A	N/A

PERFORMANCE @ 2820 lbf RATED THRUST (Referred to Sea Level Static, 79F Dry Day, Uninstalled)

Parameter	Actual	Allowable	Deviation
Referred SFC	0.497 lbm/hr/lbf	0.510 (max)	0.000

GROUND IDLE THRUST (Referred to Sea Level Static, 79F Dry Day, Uninstalled)

Parameter	Actual	Max Allowable	Deviation
Referred FN	141 lbf	166	0
Referred N2	22888 rpm	N/A	N/A

ACCELERATION TIME (F1 to 95% Rated Thrust)

Parameter	Actual	Max Allowable	Deviation
Time (Corr. to STD)	4.7 seconds	5.6	0.0
TT2	36.9 F	N/A	N/A
PT2	12.687 psia	N/A	N/A

MECHANICAL SYSTEMS PERFORMANCE (Steady-State)

Parameter	Actual	Allowable	Deviation
Max Main Oil Temp	158.5 F	275.0	0.0
Min Main Oil Press	41.5 psig	35.0	0.0
Max Main Oil Press	80.8 psig	90.0	0.0

Parameter	Actual	Allowable	Deviation
Oil Consumption	0.005 gal/hr	0.023 (max)	0.0
Engine Dry Weight	515.0 lb	518.5 (max)	0.0

Total Engine Run Time

2:41

Total Engine Cycles

21.5

Engineering

[Signature]

ME
8613

Date:

10/23/08

FJ44-3A TURBOFAN ENGINE
ACCEPTANCE TEST PERFORMANCE SUMMARY
IN ACCORDANCE WITH DOCUMENT 73332 Rev B
WILLIAMS INTERNATIONAL CO.

Eng P/N: 67000-200	Eng S/N: 141632	Eng Bld: 1	Test Date: 10/23/08
Prog Ver: CP275.02	Date: 09/16/05	Thrust Tare: 5.0	Test Cell: 05
Acq Ver: CP169.03	Date: 06/15/00	Pc1: 2.0010	Oil Type: MOBIL JET2
ATP Ver: CP333.00	Date: 11/10/05	Pc2: 2.0230	Exh Noz: TL99958
ATP Doc: 77438 Rev NC	Inlet Sn: I 3603	Inlet Cd: 0.933	Inlet Dia: 20.64
Fuel Type: JETA	LHV: 18588	Spec Grav: 0.7983	Temp Slope: 0.00040800

VIBRATION SURVEY (PEAK LEVELS) FROM VIB TEST DIRECTORY: 0810230814_FJ44-3A_vib

PARAMETER	ACTUAL		MAX ALLOWABLE	DEVIATION
Max 1E HP rad vib	0.26 IPS	37161 RPM	1.10	0.00
Max 1E LP rad vib	0.19 IPS	16428 RPM	0.25	0.00
Max ½ELP INTERSTAGE** (10200 - 13200 N1 RPM)	0.04 IPS	11786 RPM	0.13	0.00
Max ¾ELP REAR MOUNT** (10200 - 13200 N1 RPM)	0.04 IPS	12038 RPM	0.18	0.00
Max 1ELP START VIB** (1500 - 2700 N1 RPM)	0.04 IPS	1305 RPM	0.20	0.00

** (REF ED W-8576)

ENGINEERING




Date 10/23/08

FJ44-3A TURBOFAN ENGINE
ACCEPTANCE TEST PERFORMANCE SUMMARY
IN ACCORDANCE WITH DOCUMENT 73332 Rev B
WILLIAMS INTERNATIONAL CO., L.L.C.

Eng P/N: 67000-200
Prog Ver: CP275.02
Acq Ver: CP169.03
ATP Ver: CP333.00
ATP Doc: 77438 Rev NC
Fuel Type: JETA

Eng S/N: 141632
Date: 09/16/05
Date: 06/15/00
Date: 11/10/05
Inlet Sn: I 3603
LHV: 18588

Eng Bld: 1
Thrust Tare: 5.0
Pc1: 2.0010
Pc2: 2.0230
Inlet Cd: 0.933
Spec Grav: 0.7983

Test Date: 10/23/08
Test Cell: O5
Oil Type: MOBIL JET2
Exh Noz: TL99958
Inlet Dia: 20.64
Temp Slope: 0.00040800
Dir: 0810230500

PARAMETER

DATA

DATA POINT NUMBER	4	5	6	7	8	9
PERCENT N1TO	25.16	82.09	88.26	93.49	97.52	99.98
POWER LEVER ANGLE	16.38	35.87	39.11	45.60	47.89	69.29
REFERRED N1 SPEED	4689	15305	16471	17459	18212	18676
REFERRED N2 SPEED	22888	38096	39175	40112	40912	41402
REFERRED Fuel Flow	131.96	941.98	1149.57	1360.15	1557.65	1684.24
REFERRED THRUST	141	1931	2343	2745	3102	3321
REFERRED ITT (R)	1221	1727	1815	1892	1961	2005
REFERRED AIRFLOW	0.6	62.7	68.4	74.1	78.3	80.9
REFERRED SFC	0.938	0.488	0.491	0.495	0.502	0.507
N1 SPEED	4506	14702	15807	16745	17466	17906
N2 SPEED	21999	36599	37597	38476	39240	39698
AVERAGE ITT (F)	678	1149	1227	1297	1361	1401
AIRFLOW	0.5	56.3	61.4	66.5	70.3	72.7
NET THRUST	121	1666	2021	2368	2675	2863
FUELFLOW	107.97	769.70	938.02	1109.01	1269.76	1372.30
CDP (PSIA)	30.4	167.8	197.1	226.3	252.5	268.8
OVERALL PRESS RATIO	2.40	13.24	15.55	17.86	19.92	21.21
INLET TEMP. (F)	37.2	36.8	35.7	35.2	35.1	34.8
DEWPOINT (F)	22.8	23.0	23.1	23.1	23.1	23.1
FUEL TEMP. (F)	49.6	46.3	47.5	48.9	49.6	50.4
CELL PRESSURE	12.687	12.677	12.676	12.675	12.674	12.672
INLET PRESSURE	12.687	11.507	11.252	10.957	10.706	10.533
SPECIFIC HUMIDITY	0.00299	0.00301	0.00303	0.00303	0.00303	0.00303
REYNOLDS NO. INDEX	0.91050	0.91080	0.91315	0.91433	0.91442	0.91502
DELTA	0.86331	0.86261	0.86254	0.86248	0.86238	0.86229
THETA79	0.92247	0.92161	0.91964	0.91863	0.91847	0.91791
OIL TEMPERATURE	158.5	138.1	139.0	137.5	136.7	136.2
OIL PRESSURE	41.5	76.5	78.3	79.6	80.7	80.8
OIL TANK PRES (PSIG)	8.0	15.2	16.9	18.5	19.9	20.8
DATE	10/23/08	10/23/08	10/23/08	10/23/08	10/23/08	10/23/08
TIME	07:47:02	07:52:03	07:57:01	08:02:01	08:07:02	08:12:02