1. Approving Competent Authority/Country	2.	3. Form Tracking Number.
CAA/UNITED KINGDOM	**AUTHORISED RELEASE CERTIFICATE** **CAA FORM 1**	38753

4. Organisation Name and Address.	5. Work Order/Contract/Invoice
Summit Aviation Engine Overhaul Ltd. Merlin Way Manston Kent CT12 5FE Tel: 01843 822444	**Work Order No:** W2522 **Customer Order No:** 027/SAC/01/20

6. Item	7. Description	8. Part No.	9. Qty.	10. Serial No.	11. Status/Work
1	ENGINE	JT8D-17A	1	709273	REPAIRED

12. Remarks

LPC, HPC, HPT & LPT modules stripped, inspected & repaired. Hot section inspection carried out.
C3, 4, 5, 6, 7, T2, 3 & 4 Disks replaced this shop visit. Engine reassembled and tested satisfactorily.
AD's & SB's incorporated this visit: 86-09-02 R2 (A5639 R10), 2003-12-07 (A6431 R1), 2011-03-01 (T1, T3 & T4 only), SB 6101 R1 & A6475 R1
Slave Igniter Box used for Test cell run. All parts covered by the AMM have not been tested for serviceability
Post Test Borescope performed. Engine inhibited 90+ days.

T.T.S.N 32620.37 T.C.S.N 21294

Work carried out in accordance with Pratt & Whitney Engine Manual P/N 481672, Revision 180 dated Oct 15, 2020
Details of work carried out held on file at Summit Aviation Engine Overhaul Ltd under Reference in Block 5

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. UKGY695Y

13a. Certifies that the items identified above were manufactured in conformity to:	14a. [X] Part-145.A.50 Release to Service [X] Other regulation specified in Block 12
[ ] approved design data and are in a condition for safe operation. [ ] non-approved design data specified in block 12	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

13b. Authorised Signature:	13c. Approval/Authorisation No.	14b. Authorised Signature	14c. Certificate/Approval Ref No.
			UK.145.00576
13d. Name	**13e. Date (dd mmm yyyy)**	**14d. Name**	**14e. Date (dd mmm yyyy)**
		JAMIE DAY	11 Jan 2022

USER/INSTALLER RESPONSIBILITIES

This certificate does not automatically constitute authority to install the item(s).

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.

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

Maintenance Release
JT8D -1 / -17AR

Summit Aviation Engine Overhaul Ltd
Merlin Way
Manston, Kent CT12 5FE
Tel: 01843 822444
Email: qc@summit-aviation.co.uk

Engine Model No:	JT8D-17A	Engine Serial No:	709273
Work Order No:	W2522	Manufacturer:	Pratt & Whitney

Time Since New:	32620.37	Cycles Since New:	21294
Time Since LSV:	0	Cycles Since LSV:	0
Test Cell Run Time:	3 Hrs 49 mins	Customer:	SAC

Description of Work Accomplished:

- **Module 21/23: Front Accessory and Inlet Group**
- Disassembled, inspected, repaired & re-assembled
- #1 Bearing replaced with inspected Bearing

- **Module 33: Fan Rotor and Low Pressure Compressor Group**
- Disassembled, inspected, repaired & re-assembled
- X12 Rear Comp Tie Rod Nuts replaced with new
- C3, C4, C5 & C6 disks replaced with inspected Disks
- LPC Blades repaired/replaced
- Fan Discharge Rear Comp Outer Duct replaced with inspected Duct

- **Module 34: Intermediate Case Group**
- Disassembled, inspected, repaired & re-assembled
- Gearbox Drive Bevel Gear Shaft replaced with inspected Shaft
- Lower Shaft Bearing replaced with inspected Bearing
- Upper Shaft Bearing replaced with inspected Bearing

- **Module 36: High Pressure Compressor Group**
- Disassembled, inspected, repaired & re-assembled
- C10-11 Spacer replaced with inspected Spacer
- C11-12 Spacer replaced with inspected Spacer
- All HPC blades replaced with overhaul
- C7 Disk replaced with overhauled
- C8, C9, C10, C11 & C12 Disks overhauled
- C8 Stator replaced with inspected Stator
- C9 Stator replaced with inspected Stator

- **Module 37/38: Diffuser Group**
- Disassembled, inspected, repaired & re-assembled
- #4 Bearing Seal Seat replaced with repaired Seat (Post A6475)
- #4 Bearing replaced with inspected Bearing
- # 4 & 5 scavenge Pump Drive Gear replaced with inspected Gear
- X9 Fuel Nozzles bench checked/repaired

- **Module 41: Combustion and No. 5 Bearing Section**
- Disassembled, inspected, repaired & re-assembled
- X9 Combustion Chambers overhauled
- X2 Combustion Chambers Pins replaced with inspected pins

- **Module 51: Turbine Nozzle Group**
- Disassembled, inspected, repaired & re-assembled
- X46 1st Stage NGV's replaced with x5 overhauled & X41 inspected
- T-Duct replaced with overhauled

- **Module 52: Rear Compressor Drive Turbine Group**
- Disassembled, inspected, repaired & re-assembled
- X24 T1 Blades replaced with repaired Blades

- **Module 53: Front Compressor Drive Turbine Group**
- Disassembled, inspected, repaired & re-assembled
- T2 Disk & Blades replaced with repaired Assy
- T3 & T4 Disk replaced with inspected Disks
- X27 T3 Blades replaced with overhauled
- X16 T4 Blades replaced with overhauled
- 2nd Stage Inner Air Seal replaced with inspected
- 3rd Stage Inner Air Seal replaced with inspected
- 4th Stage Inner Air Seal replaced with inspected
- 2nd Stage NGV Shroud replaced with inspected Shroud
- 3rd Stage NGV Shroud replaced with inspected Shroud
- 4th Stage NGV Shroud replaced with inspected Shroud
- T3 OAS replaced with overhauled
- X31 2nd Stage NGV's replaced with inspected Vanes
- X26 3rd Stage NGV's replaced with inspected Vanes
- X23 4th Stage NGV's replaced with inspected Vanes & x2 overhauled

- **Module 54: Turbine Exhaust Case Section Group**
- Build Group Level Inspection performed
- Exhaust Case Assy replaced with inspected Assy
- #6 Bearing replaced with inspected Bearing

- **Module 61: Main accessory Gearbox Group**
- New CSD Seal installed
- New Oil Filter installed

- **Module 71: Fan Discharge Section**
- Disassembled, inspected, repaired and re-assembled

- QEC
- Fuel pump Filter replaced with new
- FCU replaced with repaired
- X1 Fuel De-ice Valve replaced with inspected/Tested Valve

Engine re-assembled and successfully tested in accordance with
72-00-00 Testing 07, Test No.3, Acceptance and Performance
High power surge margin check carried out satisfactorily
Engine preservation 90+ Days, Post Test Borescope performed

Work carried out IAW Pratt & Whitney Engine Manual PN 481672 Rev 180

A Copy of this entry is held in our records under ref: W2522

Certifies that the work specified except as otherwise specified was carried out in accordance with Part 145 and in respect to that work the aircraft/aircraft component is considered ready for release to service.

Signature: _____ Authority: _____ Date: 11.1.2022

MAINTENANCE RELEASE

Engine Model No:	JT8D-17A	Engine Serial No:	709273
Work Order No:	W2522	Manufacturer:	Pratt & Whitney

Airworthiness Directives, Modifications, Engineering Orders Embodied:

a) Airworthiness Directives Previously Incorporated: -

86-02-52 91-24-14 2003-05-07 2006-17-07

b) Airworthiness Directives Incorporated this visit: -

86-06-02 R2 (A5639 R10) 2003-12-07 (A6431 R1) 2011-03-01 (T1, T3 & T4 only)

Service Bulletins & Service Instructions Incorporated:

a) PWA Service Bulletins Previously Incorporated: -

N/K

b) PWA Service Bulletins Incorporated this visit: -

A5369 R10 SB 6101 R1 A6431 R1 A6475 R1

Certifies that the work specified except as otherwise specified was carried out in accordance with Part 145 and in respect to that work the aircraft/aircraft component is considered ready for release to service.

Signature: _____ Authority: _____ Date: 11.1.2022

MAINTENANCE RELEASE

Engine Model No:	JT8D-17A	Engine Serial No:	709273
Work Order No:	W2522	Manufacturer:	Pratt & Whitney

Remarks:

1. HPC Integral type inner air seal spacers installed. Yes ☑ No. ☐.

2. Combustion Chambers overhauled @ 32620 TTSN & 21294 TCSN.

   Inspection Intervals ref AD 86-09-02 6500 hours / 5000 cycles

3. 7th Thru. 12th stage HPC disks inspection and Ni-Cad plating carried out I.A.W. ASB 6431 R1 (AD 2003-12-07).

Disk	P/No.	S/No.	NI - CAD	PWA 110-21	YRSNRC	Next due before
C 7	5006007-022	BENCAP0718	X		11.01.2022	11.01.2030
C 8	792038-002	BENCAK4796	X		11.01.2022	11.01.2030
C 9	822109	BENCAX2014	X		11.01.2022	11.01.2030
C10	772510-001	BENCAL8162	X		11.01.2022	11.01.2030
C11	815611-002	BENCAR8743	X		11.01.2022	11.01.2030
C12	815612-002	BENCAR7107	X		11.01.2022	11.01.2030

Certifies that the work specified except as otherwise specified was carried out in accordance with Part 145 and in respect to that work the aircraft/aircraft component is considered ready for release to service.

Signature: _____ Authority: _____ Date: 11.1.2022

Log Book Entry
JT8D – 1 to -17AR
Engines

Summit Aviation Engine Overhaul Ltd
Merlin Way
Manston, Kent CT12 5FE
Tel: 01843 822444
Email: qc@summit-aviation.co.uk

Engine S/No: 709273	*Engine Type:* JT8D-17A	*Insp. Ref & W/O No:* W2522
Total Hours: 32620.37	*Total Cycles:* 21294	*Customer:* SAC

The Following Work Was Carried Out:-

- Module 21/23: Front Accessory and Inlet Group
- Disassembled, inspected, repaired & re-assembled
- #1 Bearing replaced with inspected Bearing

- Module 33: Fan Rotor and Low Pressure Compressor Group
- Disassembled, inspected, repaired & re-assembled
- X12 Rear Comp Tie Rod Nuts replaced with new
- C3, C4, C5 & C6 disks replaced with inspected Disks
- LPC Blades repaired/replaced
- Fan Discharge Rear Comp Outer Duct replaced with inspected Duct

- Module 34: Intermediate Case Group
- Disassembled, inspected, repaired & re-assembled
- Gearbox Drive Bevel Gear Shaft replaced with inspected Shaft
- Lower Shaft Bearing replaced with inspected Bearing
- Upper Shaft Bearing replaced with inspected Bearing

- Module 36: High Pressure Compressor Group
- Disassembled, inspected, repaired & re-assembled
- C10-11 Spacer replaced with inspected Spacer
- C11-12 Spacer replaced with inspected Spacer
- All HPC blades replaced with overhaul
- C7 Disk replaced with overhauled
- C8, C9, C10, C11 & C12 Disks overhauled
- C8 Stator replaced with inspected Stator
- C9 Stator replaced with inspected Stator

- Module 37/38: Diffuser Group
- Disassembled, inspected, repaired & re-assembled
- #4 Bearing Seal Seat replaced with repaired Seat (Post A6475)
- #4 Bearing replaced with inspected Bearing
- # 4 & 5 scavenge Pump Drive Gear replaced with inspected Gear
- X9 Fuel Nozzles bench checked/repaired

Log Book Entry
JT8D – 1 to -17AR
Engines

Summit Aviation Engine Overhaul Ltd
Merlin Way
Manston, Kent CT12 5FE
Tel: 01843 822444
Email: qc@summit-aviation.co.uk

- **Module 41: Combustion and No. 5 Bearing Section**
- Disassembled, inspected, repaired & re-assembled
- X9 Combustion Chambers overhauled
- X2 Combustion Chambers Pins replaced with inspected pins

- **Module 51: Turbine Nozzle Group**
- Disassembled, inspected, repaired & re-assembled
- X46 1st Stage NGV's replaced with x5 overhauled & X41 inspected
- T-Duct replaced with overhauled

- **Module 52: Rear Compressor Drive Turbine Group**
- Disassembled, inspected, repaired & re-assembled
- X24 T1 Blades replaced with repaired Blades

- **Module 53: Front Compressor Drive Turbine Group**
- Disassembled, inspected, repaired & re-assembled
- T2 Disk & Blades replaced with repaired Assy
- T3 & T4 Disk replaced with inspected Disks
- X27 T3 Blades replaced with overhauled
- X16 T4 Blades replaced with overhauled
- 2nd Stage Inner Air Seal replaced with inspected
- 3rd Stage Inner Air Seal replaced with inspected
- 4th Stage Inner Air Seal replaced with inspected
- 2nd Stage NGV Shroud replaced with inspected Shroud
- 3rd Stage NGV Shroud replaced with inspected Shroud
- 4th Stage NGV Shroud replaced with inspected Shroud
- T3 OAS replaced with overhauled
- X31 2nd Stage NGV's replaced with inspected Vanes
- X26 3rd Stage NGV's replaced with inspected Vanes
- X23 4th Stage NGV's replaced with inspected Vanes & x2 overhauled

- **Module 54: Turbine Exhaust Case Section Group**
- Build Group Level Inspection performed
- Exhaust Case Assy replaced with inspected Assy
- #6 Bearing replaced with inspected Bearing

- **Module 61: Main accessory Gearbox Group**
- New CSD Seal installed
- New Oil Filter installed

Log Book Entry
JT8D – 1 to -17AR
Engines

Summit Aviation Engine Overhaul Ltd
Merlin Way
Manston, Kent CT12 5FE
Tel: 01843 822444
Email: qc@summit-aviation.co.uk

- Module 71: Fan Discharge Section
- Disassembled, inspected, repaired and re-assembled

- QEC
- Fuel pump Filter replaced with new
- FCU replaced with repaired
- X1 Fuel De-ice Valve replaced with inspected/Tested Valve

- Airworthiness Directives complied with:-

86-09-02 R2 (A5639 R10) 2003-12-07 (A6431 R1) 2011-03-01 (T1, T3 & T4 only)

SB 6101 R1 A6475 R1

Engine re-assembled and successfully tested in accordance with
72-00-00 Testing 07, Test No.3, Acceptance and Performance.
High power surge margin check carried out satisfactorily

Engine preservation 90+ Days, Post Test Borescope performed

Work carried out IAW Pratt & Whitney Engine Manual PN 481672 Rev 180

A Copy of this entry is held in our records under ref: W2522

Certifies that the work specified except as otherwise specified was carried out in accordance with Part 145 and in respect to that work the aircraft/aircraft component is considered ready for release to service.

Signed: _____ Insp. Stamp: SUMMIT AVIATION 6 Date: 11.1.2022

Name: JAMIE DAY Position: Chief Engineer

Service Bulletin's Incorporation Log JT8D (STD) Engines

Summit Aviation Engine Overhaul Ltd
Merlin Way,
Manston, Kent CT12 5FE
Tel: 01843 822444
Email: qc@summit-aviation.co.uk

WORK ORDER NO:	W2522	CUSTOMER:	SAC		
ENGINE TYPE:	JT8D-17A	T.T.S.N:	32620.37	DATE:	11.01.2022
ENGINE S/No:	709273	T.C.S.N:	21294	PAGE No:	1 of 1

SB No:	Description	Rev. #	Status	Sign
A5639	Overhauled Combustion Chambers installed (AD 86-09-02 R2)	10	CW	
A6101	# 4 & 5 Bearing area oil fire preventive management - Temperature indicators installed this visit	1	CW	
A6431	HPC Disk overhauled/Ni-cad coated (AD 2003-17-07)	1	CW	
A6475	Modify #4 bearing baffle	1	CW	

Compliance Codes:

CW = Complied with this shop visit. PCW = Previously complied with. N/A = Not applicable. OP = Open
N/D = Not disassembled this shop visit. TBA = To be accomplished

Summit Aviation Engine Overhaul Ltd
Merlin Way
Manston
Kent CT12 5FE
Tel: 01843 822444

Email: qc@summit-aviation.co.uk

ENGINE LIFE LIMITED PARTS STATUS PWA. JT8D (STD) SERIES

Engine S/No:	709273		Total Hrs:	32,620.37			Aircraft	727
Engine Type:	JT8D-17A		Total Cycs:	21,294			Date compiled:	11.01.2022

			Total Since New		Limitations		Availability	
Component	**Part No**	**Serial No**	**Hours**	**Cycles**	**Hours**	**Cycles**	**Hours**	**Cycles**
Fan Rotor								
C1 Disk	848001	BBDUAS8556	17373.00	10,742	N/A	20,000	N/A	9,258
C2 Disk	790832	BBDUAT9164	18397.00	13,736	30,000	20,000	11603.00	6,264
LP Compressor								
C3 Disk	745703	4A0062	12263.00	7,485	30,000	20,000	17737.00	12,515
C4 Disk	799504	L89537	6144.00	4,647	30,000	20,000	23856.00	15,353
C5 Disk	745705	4A2729	12263.00	7,485	30,000	20,000	17737.00	12,515
C6 Disk	745706	2A5448	12263.00	7,485	30,000	20,000	17737.00	12,515
HP Compressor								
C7 Disk	5006007-022	BENCAP0718	13837.00	8,324	30,000	20,000	16163.00	11,676
C8 Disk	792038-002	BENCAK4796	22964.00	12,600	30,000	20,000	7036.00	7,400
C9 Disk	822109	BENCAX2014	7971.00	5,721	30,000	20,000	22029.00	14,279
C10 Disk	772510-001	BENCAL8162	10007.00	9,122	30,000	20,000	19993.00	10,878
C11 Disk	815611-002	BENCAR8743	16260.00	10,395	30,000	20,000	13740.00	9,605
C12 Disk	815612-002	BENCAR7107	16260.00	10,395	30,000	20,000	13740.00	9,605
C13 Disk	5003613-01	BBDUAM1372	19225.00	15,670	30,000	20,000	10775.00	4,330
HP Turbine								
T1 Disk	832201	R54099	2312.00	17,090	30,000	20,000	27688.00	2,910
HP Shaft	698604-114	3A5766	N/A	N/A	N/A	N/A	N/A	N/A
LP Turbine								
T2 Disk	5004022-01	BLDLC31064	9615.30	5,331	30,000	20,000	20384.70	14,669
T3 Disk	5003103-01	BLDLBN5944	16332.71	10,623	30,000	20,000	13667.29	9,377
T4 Disk	5003104-01	BLDLBN6314	9537.90	5,410	30,000	20,000	20462.10	14,590
LP Shaft	5003540-022	L46941	N/A	N/A	N/A	N/A	N/A	N/A
Hr Limiter	C8	Due in:	7,036		Cyc Limiter	T1	Due in:	2,910

Remarks:
compiled from supplied data
C3, 4, 5, 6, 7, T2, 3 & 4 replaced this shop visit

Signed:	
Name:	J Day
Title:	Chief Engineer
Date:	11.01.2022

Engine records held at:	by customer	Approval No's: UK.145.00576 & UKGY695Y

Summit Aviation Engine Overhaul Ltd
Merlin Way
Manston, Kent CT12 5FE
Tel: 01843 822444
Email: qc@summit-aviation.co.uk

Airworthiness Directives Status
P&W JT8D (STD) Engines

Engine Type:	JT8D – 17A	T.T.S.N:	32620.37	T.T.S.L.S.V:	0	Work Order No:	W2522
Engine S/No:	709273	T.C.S.N:	21294	T.C.S.L.S.V:	0	Date compiled:	11.01.2022

Model Effectivity	AD No.	Related SB's	Description	Status	Last Complied	Next Due	Remarks
ALL	70-02-02 R1		6TH STAGE COMPRESSOR DISC REPLACEMENT PARTICULAR SERIAL NO'S	N/A	N/A	N/A	N/A to P/N 745706 S/N 2A5448
ALL	70-11-03	SB 2460 R4	6TH STAGE COMPRESSOR DISC REPLACEMENT (P/NO. 586906)	N/A	N/A	N/A	N/A to P/N 745706 S/N 2A5448
ALL	70-25-08	SB 2817 R1	7TH STAGE COMPRESSOR DISC REPLACEMENT (P/NO. 500507)	N/A	N/A	N/A	N/A to P/N 5006007-022 S/N BENCAP0718 installed
ALL	70-26-05		1ST STAGE COMPRESSOR ROTOR BLADES INSP. FOR TOOL MARKS P/N 616601B AND PREVIOUS	N/A	N/A	N/A	N/A by P/N 805431 installed IAW supplied data
-1, -1A, -7,-7A	71-07-01	ASB 2944 R13	FRONT COMPRESSOR FRONT HUB NDT/SHOTPEEN (P/N 504101 AND 515201)	N/A	N/A	N/A	N/A by model
-1, -1A, -7,-7A, -9 & -11	71-25-07	SB 3536 R2	FUEL NOZZLE SUPPORT ALTERATION (P/NO'S. 480735, 493332, 501725 & 523476	N/A	N/A	N/A	N/A by model
-1, -1A, -7, -7A	75-01-01 R1	SB 2452 R13 ASB 4357 R3 SB 4193 R7	LOW TURBINE SHAFT SPLINES FAILURE. REMOVAL / INSPECT. NO.2 COMPRESSOR HUB SPLINE INSPECT	N/A	N/A	N/A	N/A by model

Airworthiness Directives Status
P&W JT8D (STD) Engines

Engine S/No. 709723

Model Effectivity	AD No.	Related SB's	Description	Status	Last Complied	Next Due	Remarks
ALL	75-05-06 R2	ASB 4389 R11	FUEL MANIFOLD LEAKAGE (BUILD STANDARD) TORQUE / INSPECT. (P/N 629141, 629148, 629154, 699155, 735780 AND 735781)	N/A	N/A	N/A	N/A by P/N 762622, 762623, 762624 762625 installed IAW supplied data
-9, -11, -15, -17	76-12-06	ASB 4577 R2 SB 4555 R4	2ND STAGE FAN BLADE PIN INSPECT (P/N 520456)	N/A	N/A	N/A	N/A by model
-1 TO -7B	76-20-02	SB 2406 R9	2ND STAGE FAN BLADE STRAP INSPECT (BLADE P/N 433802)	N/A	N/A	N/A	N/A by model
-1 TO -11	76-24-01 R1		REMOVE FROM SERVICE 8TH STAGE COMPRESSOR DISC (P/No. 496908)	N/A	N/A	N/A	N/A by model
-1 TO -7B	77-03-06	ASB 4661 R2	1ST STAGE COMPRESSOR HUB RETIREMENT (P/N 504101)	N/A	N/A	N/A	N/A by model
-9& -9A	77-07-11		TO PRECLUDE INTERFERENCE BETWEEN THE FOURTH STAGE TURBINE ROTOR AND STATOR	N/A	N/A	N/A	N/A by model
-1,-1A,-1B, -7, -7A, -7B, -9, -9A, -11, -15 & -17	77-16-12	ASB 4639 R2	TO PRECLUDE POSSIBLE LOW TURBINE SHAFT FAILURE, RESULTING FROM FAILURE OF THE 4 1/2 BEARING	N/A	N/A	N/A	N/A by P/N 751166 & S/N 512A installed IAW supplied data
-9 A TO -17AR	78-17-02-R3	ASB 4841 R6	C1HUB BLADE SLOT INSPECTION FOR CRACKS (P/NO's 594301, 640601, 743301, 749801, 750101 AND 791801)	N/A	N/A	N/A	N/A by P/N 848001 S/N BBDUAS8556 installed IAW supplied data
-1 TO -9A	78-23-12	SB 4592 R3	3RD STAGE TURBINE BLADE RIVETS FAILURE - REPLACE BY P/N 759351 OR 618749	N/A	N/A	N/A	N/A by model

Airworthiness Directives Status
P&W JT8D (STD) Engines

Engine S/No. 709723

Model Effectivity	AD No.	Related SB's	Description	Status	Last Complied	Next Due	Remarks
-1,-1A,-1B, -7, -7A, -7B, -9, -9A, -11, -15, -17&17R	80-15-51	ASB 5154 R3	INSPECTION OF REAR COMPRESSOR FRONT HUB (P/N 690908, 701308, 717608, 717708 AND 738308)	N/A	N/A	N/A	N/A by P/N 792038-002 S/N BENCAK4796 installed IAW supplied data
-15-17&-17R	85-19-51 R1	SB 5510 R5 ASB 5541 R3	REPAIRED 2ND STAGE TURBINE DISK INSPECTION.	N/A	N/A	N/A	N/A by model
ALL	86-02-52 R1	ASB 5639 R10	INSPECTION OFCOMBUSTION CHAMBERS REPAIRED BY AEROTHRUST,	PCW	30.06.06	N/A	PCW IAW supplied data
ALL	86-08-04-R1	ASB 5649 R3	INSPECTION / REPLACEMENT OF HPC SPACERS	N/A	N/A	N/A	N/A by spacers installed IAW supplied data
ALL	86-09-02 R2	ASB 5639 R10	COMBUSTION CHAMBERS INSPECTION	CW	32620 TT 21294 TC	See remarks	O/H combustion chambers installed Re-inspect interval 6500hours/5000 cycles
-1,-1A,-1B, -7, -7A, -7B, -9, -9A, -11, -15 & -17	87-14-01 R1	ASB 5729 R2	2ND FAN BLADE. ULTRASONIC AND F.P.I. INSPECTION (P/N 433802, 645902, 678102, 695932, 746402 AND 759902)	N/A	N/A	N/A	SUPERSEDED BY AD 2009-24-01
-7, -7A, -7B	89-24-02		2NDSTAGE FAN DISK FRACTURE. INSPECT FOR PRESENCE AND PROTRUSION OF A SPACER.	N/A	N/A	N/A	N/A by model
- 9 TO – 17AR	89-25-11	ASB 5841	REPLACE 1ST STAGE FAN BLADES RETAINING PLATES P/No. 520451, 616645, 639616, 760297, 793935 & 802710.	N/A	N/A	N/A	N/A by P/N 808145 installed IAW supplied data
ALL	91-24-14		INSPECT / REPLACE UNAPPROVED 4 1/2 SEAL SPACERS.	PCW	N/K	N/A	PCW IAW supplied data

Airworthiness Directives Status
P&W JT8D (STD) Engines

Engine S/No. 709723

Model Effectivity	AD No.	Related SB's	Description	Status	Last Complied	Next Due	Remarks
-15A, -17A, -17AR	94-20-09	SB 5913 R8	INSPECT LPT BLADES STAGES 3 AND 4.	N/A	N/A	N/A	N/A Turbine containment ring PCW IAW SB 6110 part A & B IAW supplied data
-15A, -17A, -17AR	94-20-09	ASB 6110 R1 (PART A)	INSTALLATION OF IMPROVED INNER FRONT FAN EXHAUST DUCT AND ASSOCIATED HARDWARE.	N/A	N/A	N/A	N/A Turbine containment ring PCW IAW SB 6110 part A & B IAW supplied data
-15A, -17A, -17AR	94-20-09	ASB 6110 R1 (PART B)	INSTALLATION OF IMPROVED 3RD STAGE TURBINE INNER AIR SEAL.	N/A	N/A	N/A	N/A Turbine containment ring PCW IAW SB 6110 part A & B IAW supplied data
-15A, -17A, -17AR	94-20-09	ASB 6131 R3	INSTALLATIONS OF IMPROVED No. 6 BEARING SCAVENGE PUMP BRACKET BUSHING.	N/A	N/A	N/A	N/A Turbine containment ring PCW IAW SB 6110 part A & B IAW supplied data
-15A, -17A, -17AR	94-20-09	SB 5748 R5	REWORK 3RD AND 4TH STAGE TURBINE VANES AND VANES CLUSTER ASSEMBLY.	N/A	N/A	N/A	N/A Turbine containment ring PCW IAW SB 6110 part A & B IAW supplied data
ALL	94-25-07	ASB 5842 R4 SUPERSEDED BY ASB 6230	ULTRASONIC INSPECTION OF CCOC FOR CRACKS IN REAR FLANGE WELD JOINT (P/N 796761 OR 806675)	N/A	N/A	N/A	N/A to P/N 806748 installed IAW supplied data
ALL	95-02-16	ASB 6153 R2 ASB 6169 R6 ASB 6170 R2	INIT / REPETITIVE INSP. OF #7 F/N REPLACEMENT WITH WELDED F/N & STEEL "B" NUTS ON LINES, LOW EMISSIONS F/N ONLY. SUPERSEDES AD 94-14-16	N/A	N/A	N/A	N/A to P/N 809886 installed IAW supplied data
-9 TO -17 AR	95-10-10	ASB 6104 R3	TO PREVENT FRACTURE, INSPECT C1 FAN HUB (CERTAIN P/No's & S/No's)	N/A	N/A	N/A	N/A to S/N BBDUAS85 installed IAW supplied data

Airworthiness Directives Status
P&W JT8D (STD) Engines

Engine S/No. 709723

Model Effectivity	AD No.	Related SB's	Description	Status	Last Complied	Next Due	Remarks
ALL	95-16-07	ASB 4723 R12	C9, C10, C11, C12 DISCS NDT (SUPERSEDES AD 81-08-02)	N/A	N/A	N/A	N/A by P/N's installed IAW supplied data
ALL	95-26-03	ASB 6226	HPC DISC VISUAL INSPECTION FOR CORROSION (FOR CERTAIN ENGINES PRODUCED AT THY SHOP) (SUPERSEDES AD T95-15-51)	N/A	N/A	N/A	N/A by ESN IAW supplied data
ALL	96-23-14	ASB 6202 R1 ASB 6228 R1	INSPECTION OF CCOC	N/A	N/A	N/A	N/A by P/N 806748 installed IAW supplied data
-1, -1A, -1B, 7, -7A, -7B, -9, -9A, -11, -15, -17&-17R	97-19-12	ASB 6274 R2	INSPECTION OF 4TH STAGE LPT HUBS FOR CRACKS	N/A	N/A	N/A	N/A by model
1, -1A, -1B, 7, -7A, -7B, -9, -9A, -11, -15, -17&-17R	97-19-14	SB 5913 R8 ASB 6110 R1 SB 6131 R3 ASB 6274 R2	IMPROVED CONTAINMENT HARDWARE & 6BRG, BRKT. BUSH'G. SUPERSEDES AD 94-20-08	N/A	N/A	N/A	N/A by model
ALL	98-04-39	ASB 6202 R1	CCOC BORESCOPE INSPECTION	N/A	N/A	N/A	N/A by P/N 806748 installed IAW supplied data
ALL	98-12-07	ASB 6038 R5	INSPECTION AND RECOATING OF HPC DISC'S STAGES 7 THRU TO 12. (SUPERCEDES AD 94-20-01).	N/A	N/A	N/A	SUPERSEDED BY 2003-12-07
ALL	98-21-24		COMPRESSOR DISK CRACKING - FROM ARC BURNS IN THE TIE RODS - HOLES INSPECTION	N/A	N/A	N/A	N/A by P/N or S/N's installed IAW supplied data

Airworthiness Directives Status
P&W JT8D (STD) Engines

Engine S/No. 709723

Model Effectivity	AD No.	Related SB's	Description	Status	Last Complied	Next Due	Remarks
ALL	99-01-08		TO PREVENT THE FAILURE OF HPC DISK DUE TO CADMIUM EMBRITTLEMENT	N/A	N/A	N/A	N/A by P/N's installed IAW supplied data
-1 TO 15A	2000-22-06	ASB 6381 R1	FUEL PUMP CONTROL SHAFT OVERHAUL	N/A	N/A	N/A	N/A by model
-9 TO -17AR	2001-15-18	ASB 6336 R1	REMOVE FROM SERVICE C2 DISCS (P/No's 745902, 790832 and 807502) IDENTIFIED BY S/No'S IN ASB 6336	N/A	N/A	N/A	N/A by S/N BBDUAT9164 installed IAW supplied data
-1 TO -17AR	2002-17-02		ENHANCED INSPECTION OF SELECTED CRITICAL LIFE LIMITED PARTS.	N/A	N/A	N/A	SUPERSEDED BY AD 2005-25-05
- 1 TO -17AR	2003-05-07	SB 5409 R2, SB 5716 R2 SB 5734 & SB 6429 R1	TO PREVENT 1ST AND 2ND STAGE FAN SEPERATION FROM THE LOW-PRESSURE COMPRESSOR.	PCW	N/K	N/A	PCW IAW supplied data
ALL	2003-12-07	ASB 6431 R1	INSPECTION AND RECOATING OF HPC DISC'S STAGES 7 THRU TO 12. (SUPERCEDES AD 98-12-07).	CW	32620 TT 21294 TC 11.01.2022	11.01.2030	CW this shop visit. C7-C12 Overhauled. Re-inspect 3 YRSNRC not to exceed 8 YRSNRC
ALL	2005-17-16	ASB 6442	TO PREVENT FAILURE OF CRITICAL LIFE -LIMITED ROTATING PARTS WHICH HAVE BEEN RETURNED TO SERVICE WITH CRACKS, CORROSION, AND PITTING OR DIMENSIONS OUTSIDE MANUAL LIMITS.	N/A	N/A	N/A	N/A by S/N's installed IAW supplied data

Airworthiness Directives Status
P&W JT8D (STD) Engines

Engine S/No. 709723

Model Effectivity	AD No.	Related SB's	Description	Status	Last Complied	Next Due	Remarks
ALL	2005-25-05		TO PREVENT FAILURE OF CRITICAL LIFE -LIMITED ROTATING PARTS.	N/A	N/A	N/A	Superseded by AD 2011-03-01
ALL	2006-17-07 R1	A6468 A6430 R2	INSPECTION FOR FRETTING AND FLUORESCENT MAGNETIC PARTICLE INSPECTION (FMPI) FOR CRACKING IN THE AREA OF THE TIE ROD HOLES ON THE HPC FRONT HUBS	PCW	30307 TT 19565 TC	N/A	PCW IAW supplied data
-7, -7A, -7B, -9, -9A, -11, -15, -17	2009-24-01		2ND STAGE FAN BLADE NDT INSPECTION (SUPERSEDES AD 87-14-01 R1)	N/A	N/A	N/A	N/A by model
9, -9A, -11, -15, -17 & 17R	2010-21-17		TO PREVENT HIGH CYCLE FATIGUE CRACKING AT THE BLADE ROOT, OVERHAUL C1 BLADE	N/A	N/A	N/A	N/A by model
ALL	2011-03-01		TO PREVENT FAILURE OF CRITICAL LIFE -LIMITED ROTATING PARTS	CW	32620 TT 21294 TC	Piece part exposure	T1, T3 & T4 CW this shop visit All applicable disks due at next piece part exposure
-1, -1B, -7, -7B, -9, -9A, -11, -15, -17 & -17R	2004-0008 R1	ASB 6274 R2	TO PREVENT FAILURE 4th STAGE TURBINE DISKS	N/A	N/A	N/A	N/A by P/N 5003104-01 S/N K9319 installed

Airworthiness Directives Status
P&W JT8D (STD) Engines

Engine S/No. 709723

The following airworthiness directives, applicable requirements, procedures, operational directives or information issued by the authority responsible for the oversight of the engine and the instructions for continued airworthiness issued by the type certificate holder have been complied with.	Sign
DRC CAA checked – None found	

Compliance Codes CW: Complied With PCW: Previously Complied With N/A: Not Applicable TBA: To Be Accomplished OP: Open

Comments:

Compiled from supplied data

Authorised Signature: _____ Stamp: SUMMIT AVIATION 6 INCS. Date: 11.1.2022

SUMMIT AVIATION ENGINE OVERHAUL LIMITED
ENGINE TEST CELL RUN REPORT

Report No:	Work Order No:	Date:	Customer:
055/21	W2522	15/12/21	Serve Air Cargo
Engine Type:	Engine Serial No:	Engine TT:	Engine TC:
JT8D-17A	709273	32620	21294

Engine Test Information at T.O. Power (Corrected)

Fn: (lbs)	EPR:	N1 RPM:	N2 RPM:	EGT:	TSFC:
16066.86	2.15	8080.74	11516.73	574.6 °C	0.55
Ovr Inlet Vib: (mils pk-pk)	Ovr Rear Vib: (mils pk-pk)	Oil Press: (psi)	Breather: (Hg)	Oil Cons: (USG/HR)	EGT Margin
1.98	1.88	47.83	2.92	0.14	24.4 °C

Engine Was Tested With:

F.C.U. S/N:	Fuel Pump S/N:	PRBC S/N:
57381	7315	6155798

Post Run Checks:

1. Fuel Filter Check
2. Gearbox Mag Plug Check
3. Engine Preserveation
4. Test Run Information

Time Run:	229 Mins
Fuel Used:	4075 ltrs

Other Documents Attached:

EGT Spread Check	✓
Bleed Valve Settings	✓
Turbine Cooling Air Check Curve	✓
EPR vs Thrust Chart	✓
Trimmer Settings	✓
Vibration Chart	✓

Operation Discrepancies/Shop Findings:

Report No. 055/21	Summit Aviation Engine Overhaul Ltd Engine Test Report	Date. 15/12/21

Engine Type JT8D-17A Serial No. 709273

T_{t7} Spread check

T_{t7} average @ T/O N/R

Highest Probe,No.	N/R	N/R	Lowest Probe,No.	N/R	N/R
Highest probe-lowest	N/R	Limit 127°C			
Highest probe - avg	N/R	Limit 61°C			

Bleed Valve settings

Baro. 1034 mbar / 30.53 "Hg

8th & 13th St.

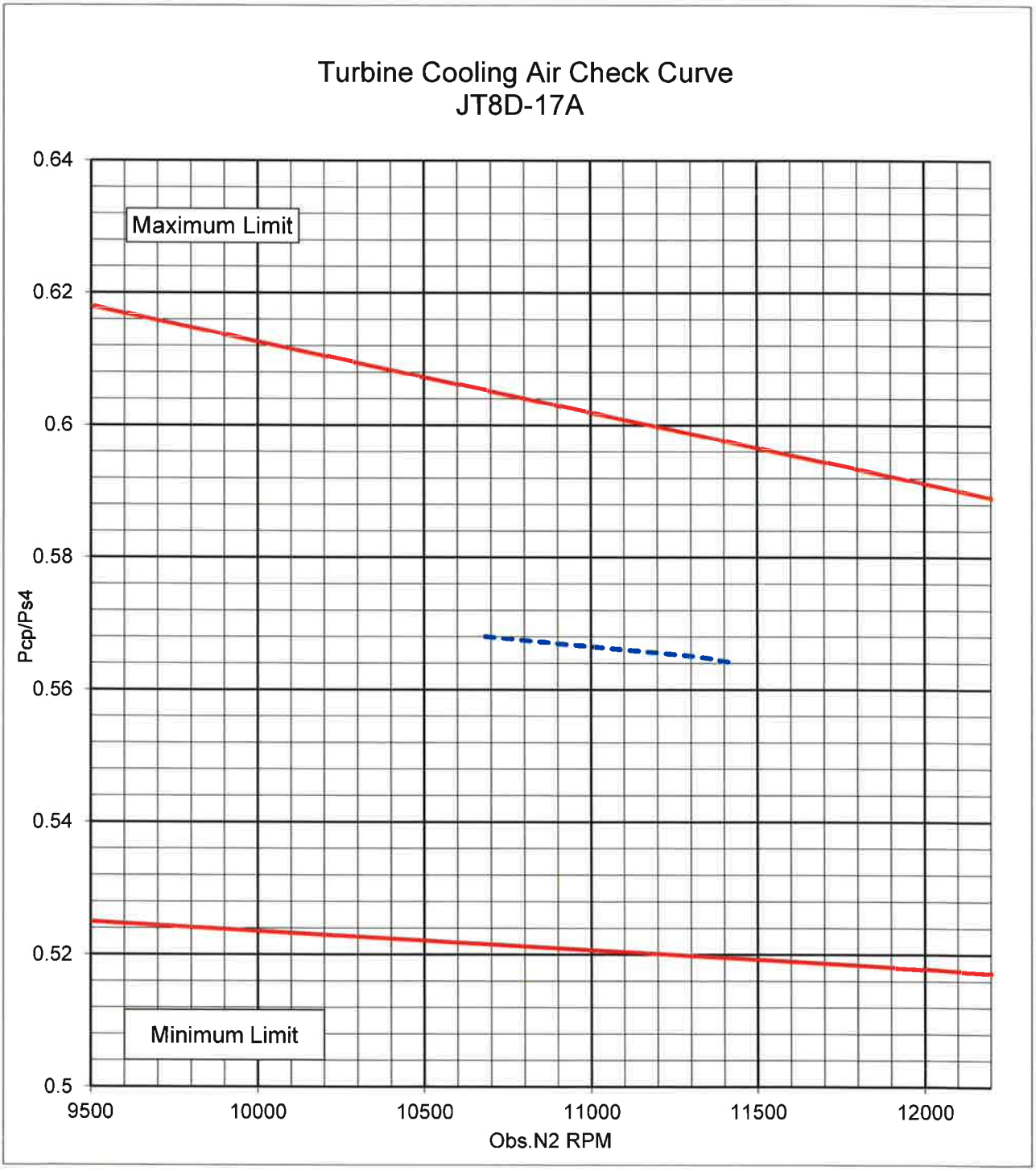
Close at	8715	RPM N_2	9.78222	°C T_{t1}
	6.12	Psi P_{S3}	42.99	"Hg abs.P_{S3}
	-0.96	"H_2O P_{T2}	30.46	"Hg abs.P_{T2}
Open at	8200	RPM N_2	9.78	°C T_{t2}
	4.60	Psi P_{S3}	39.90	"Hg abs.P_{S3}
	-0.70	"H_2O P_{T2}	30.48	"Hg abs.P_{T2}

Oil Pressure (psig)	Idle	46.8 psi		Takeoff	47.8 psi
Data Plate (1.65 EPR)	10773	RPM	87.98%	N_2	
Trimmer Settings	Idle N_2	10679	EPR Part Power		1.822
Oil consumption 0.14	Usg/Hr				
Fuel heater temp.rise 42°C in	10				
Left Anti-ice valve operation	OK		Right Anti-ice valve operation		OK

EGT at Start	421 °C	
Acceleration time	5.27	
Limit for T_{t1}°C	7.54	
Margin (seconds)	2.27	Pass

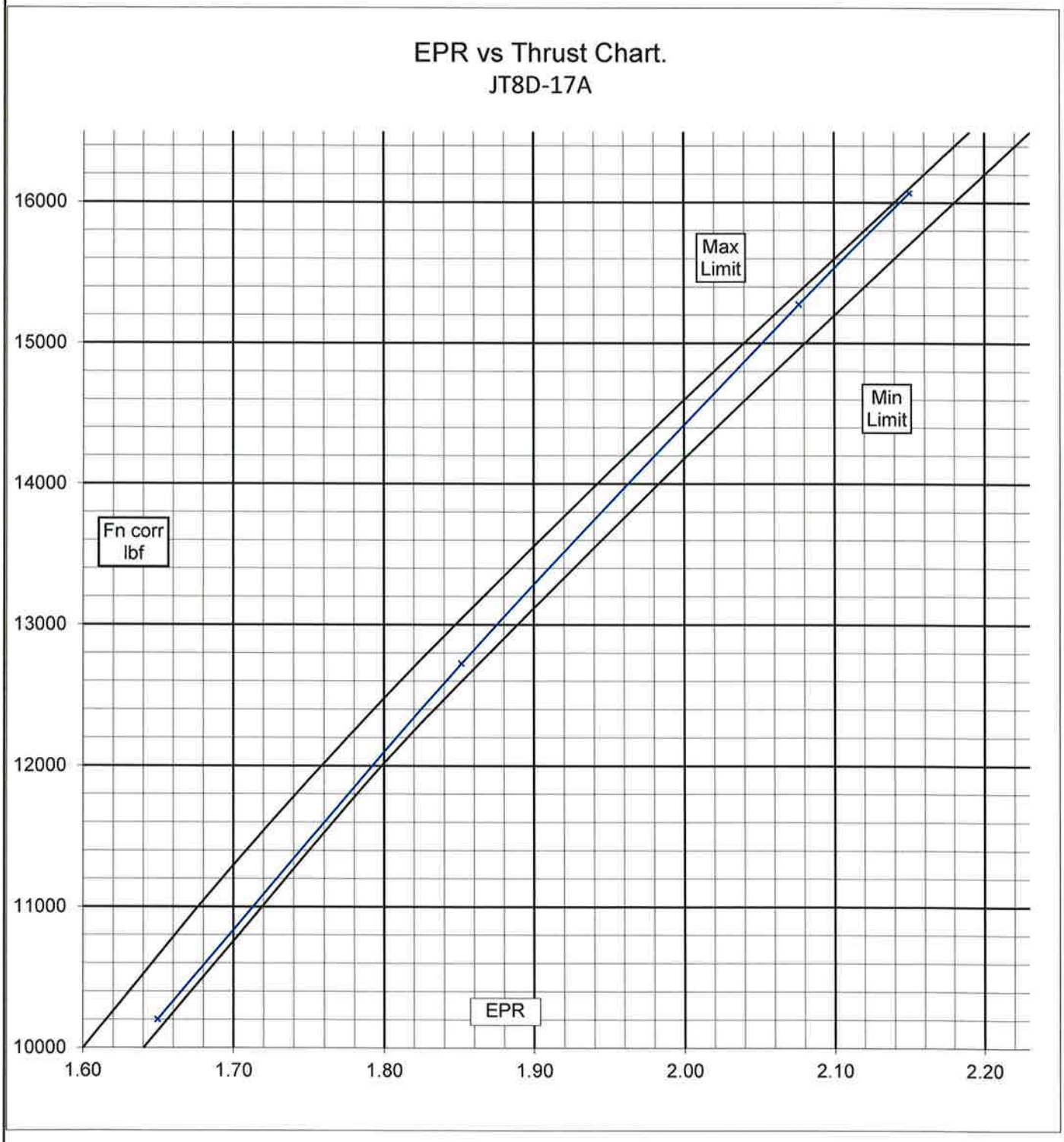
Report No. 055/21	Summit Aviation Engine Overhaul Ltd. Engine Test Report	Date 15/12/21

Engine Type JT8D-17A Serial No. 709273



Report No. 055/21	Summit Aviation Engine Overhaul Ltd. Engine Test Report	Date 15/12/21

Engine Type JT8D-17A Serial No. 709273



========== Vibration Spectrum Job ==========
========== W2522 ==========

Customer: W2522
Started: 16/12/2021 11:36 Job Status: Complete
Last Updated: 16/12/2021 11:39
A/C Reg: NA A/C Total TM: 0.0
Eng S/N: 709273 TSO: 0.0
Eng Type: JT8D-17A TSN: 32620.0
Eng Pos: 1
Prop S/N: NA TSO: 0.0
Prop Type: NA TSN: 0.0

---------- Analyzer Information ----------

ACES 4041 Viper II Analyzer Serial No: 4041T1607-002
App Version: 2020.0505.14 Cal Date: 26 Aug 2021
Owner: CFS AeroProducts Ltd.AERO ENGINES IRELAND
Addr:
United Kingdom

Phone:
E-Mail:

---------- Policies ----------

Deny:
Allow: Copy, Delete, ICF Update, Modify
License Option: None

---------- Properties ----------

Setup Name: JT8D-17A MAX SCAN Version: 0.0.0.0

Resolution: 400
Average Type: Exp Blocks in Average: 4
Min Freq: 1300.00 Max Freq: 8800.00
Frequency Units: RPM RPM/Line: 22.00
Record Time Trace: No

Channel A (FAN): 797V-GJTC
(106.140 mVolts/IPS, Normal Polarity, IEP, Single-Ended)
Full-Scale Range: 5.00 mils Pk-Pk
Channel B (TURB): 793V-GJTC
(96.200 mVolts/IPS, Normal Polarity, Differential)
Full-Scale Range: 5.00 mils Pk-Pk

CS1 (N1): Pulse S 100% RPM = 8594 RPM = * 60.000

Condition 1: MAX VIB

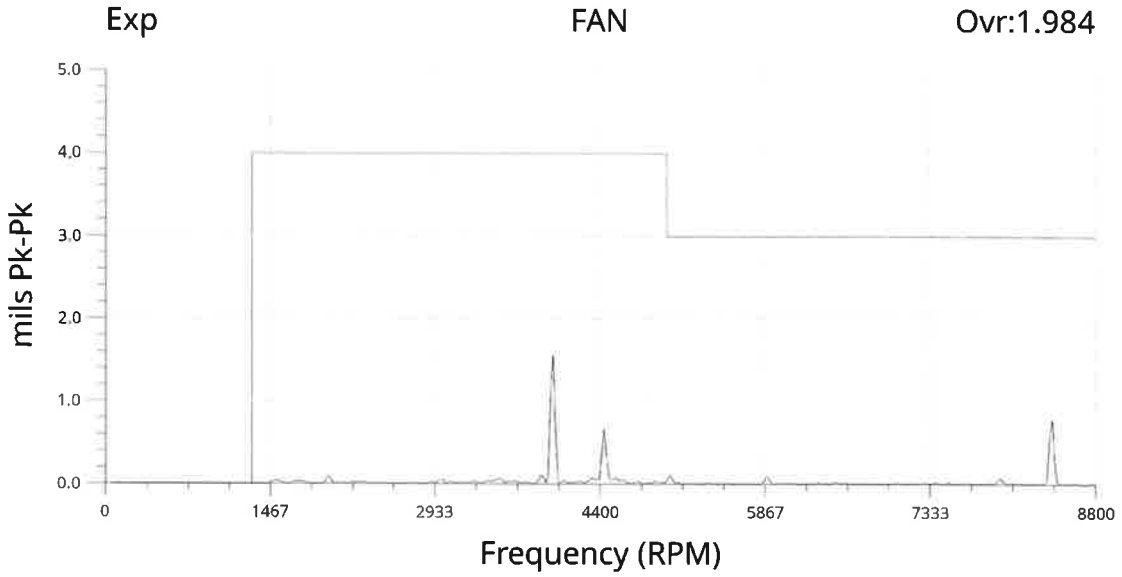
Spectrum Limits:

F-low	F-high	Unit	Limit
1300.00	5000.00	xRPM	4.00
5000.00	8800.00	xRPM	3.00
1300.00	4000.00	xRPM	3.00
4000.00	5000.00	xRPM	4.00
5000.00	8800.00	xRPM	3.00
0.00	4200.00	xRPM	4.00
4200.00	5600.00	xRPM	6.00
5600.00	10000.00	xRPM	4.00

Customer: W2522
Started: 16/12/2021 11:36
Last Updated: 16/12/2021 11:39
A/C Reg: NA
Condition: MAX VIB
Speeds: N1=3975.80

Job Status: Complete

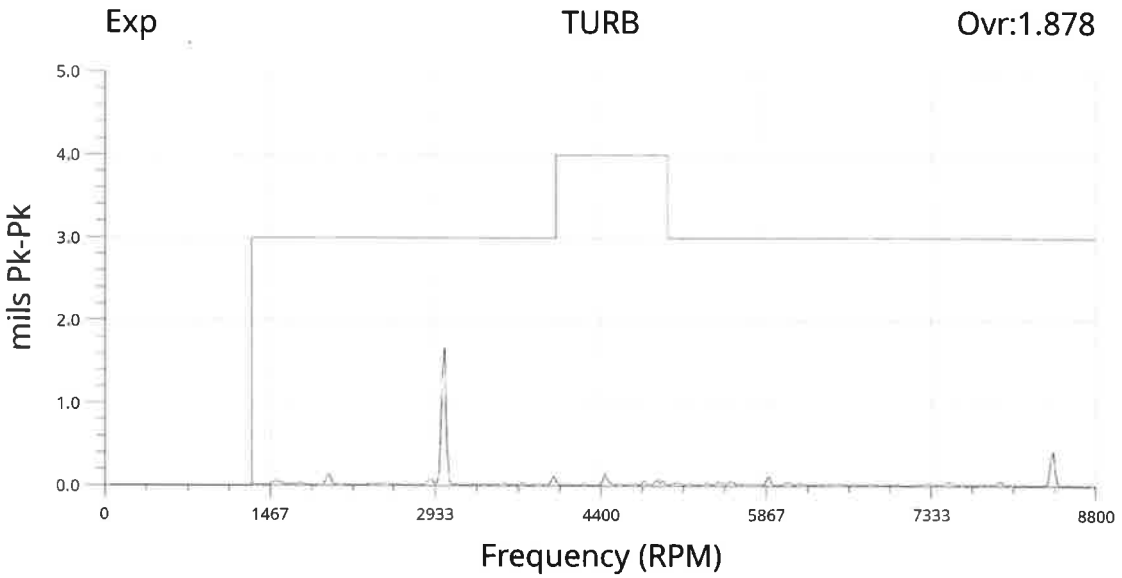
A/C Total TM: 0.0
Engine: 709273



Customer: W2522
Started: 16/12/2021 11:36
Last Updated: 16/12/2021 11:39
A/C Reg: NA
Condition: MAX VIB
Speeds: N1=3975.80

Job Status: Complete

A/C Total TM: 0.0
Engine: 709273



JT8D-STD Series Performance Calculation

Report. No.	055/21						
Date	15/12/21	Time	10:59:59	Engine S/N	709273	Type	JT8D- 17A
Test Point No.	13	Condition	Takeoff				
Barometer	1034 mb	30.533 "Hg		T_{t1}	9.78 °C	49.6 °F	
Cell Depression	-0.71 "H2O						
True Barometer	30.58 "Hg	15.02 psia		LP Fuel Pressure psig	-89.66		
Fuel s.g	0.802	Sample Temp.	10.0 °C	Fuel Temp. at meter	12.7 °C		
Corrected Fuel s.g.	0.800						
Temperature correction factor Θ	0.9819	Pressure correction factor δ_{T2}		1.0154		Test Cell correction factor	1.040009
Kc correction factor	0.9885	Kh correction factor		1.000		Thrust Corr. To ISA	15448.77
RPM correction factor $\sqrt{\Theta_{T2}}$	0.9909	Fuel flow correction factor KcKh δ_{T2}		1.0038			

Observed Parameters		Limit (Observed)		Corrected Parameters			
N_1 RPM	8007.2	8460	93.20%	N_1 RPM	8080.7		
N_2 RPM	11411.9	11800	93.20%	N_2 RPM	11516.7		
EGT °C	559.3	599		EGT °C	574.6	Margin	24.4 °C
Thrust Lbf	15687.5			Thrust Lbf	16066.9		
Fuel flow GPH	1116.0			Fuel flow lb/hr	8896.0		
P_{T2} "H_20	-2.75	14.923 psia	30.382 "Hg	P_{T7}/P_{T2}	2.150		
P_{S3} psig	38.45			TSFC	0.554		
P_{CP} psig	119.03			P_{CP}/P_{S4}	0.564		
P_{S4} psig	222.58			P_{S3}/P_{T2}	3.583		
P_{T7} "Hg	34.74	65.32 "Hg ABS		P_{S4}/P_{S3}	4.444		
Actual Breather"Hg	2.92	1.43 psi					
Oil Press.psig	49.26	Oil Temp	126.3 °C	Oil Press psig	47.8		
				P_{S4}/P_{T2}	15.92		
				P_{S4}/P_{T7}	7.41		
				P_{S4}/δ_{T2}	233.98 psia		
				P_{S3}/δ_{T2}	37.86 psig		77.20 "Hg

JT8D-STD Series Performance Calculation

Date	15/12/21	Time	11:03:45		Engine S/N	709273	Type	JT8D-17A
Test Point No.	19	Condition	Perf.Point 2					
Barometer	1034 mb	30.533 "Hg		T_{t1}	9.79 °C	49.6 °F		
Cell Depression	-0.67 "H2O							
True Barometer	30.58 "Hg	15.02 psia		LP Fuel Pressure psig		-89.66		
Fuel s.g	0.802	Sample Temp.	10.0 °C	Fuel Temp. at meter		15.4 °C		
Corrected Fuel s.g.	0.798							
Temperature correction factor Θ	0.9819	Pressure correction factor δ_{T2}		1.0154		Test Cell correction factor		1.040009
Kc correction factor	0.9885	Kh correction factor		1.000		Thrust Corr. To ISA		14689.27
RPM correction factor $\sqrt{\Theta_{T2}}$	0.9909	Fuel flow correction factor KcKh δ_{T2}		1.0037				

Observed Parameters

N_1 RPM	7821.9	91.04%	
N_2 RPM	11310.5	92.37%	
EGT °C	545.1		
Thrust Lbf	14915.0		
Fuel flow GPH	1078.7		
P_{T2} "H_20	-2.75	14.921 psia	30.380 "Hg
P_{S3} psig	36.03		
P_{CP} psig	112.84		
P_{S4} psig	211.26		
P_{T7} "Hg	32.50	63.08 "Hg ABS	
Actual Breather"Hg	2.70		
Oil Press.psig	48.70	Oil Temp.	135.2 °C

Corrected Parameters

N_1 RPM	7893.6	91.88%	
N_2 RPM	11414.2	93.21%	
EGT °C	560.2		
Thrust Lbf	15277.0		
Fuel flow lb/hr	8579.1		
P_{T7}/P_{T2}	2.077		
TSFC	0.562		
P_{CP}/P_{S4}	0.565		
P_{S3}/P_{T2}	3.422		
P_{S4}/P_{S3}	4.432		
Oil Press psig	47.4		
P_{S4}/P_{T2}	15.16		
P_{S4}/P_{T7}	7.30		
P_{S4}/δ_{T2}	222.85	psia	
P_{S3}/δ_{T2}	35.49	psig	72.36 "Hg

JT8D-STD Series Performance Calculation

Date	15/12/21	Time	11:07:54		Engine S/N	709273	Type	JT8D-17A	
Test Point No.	25	Condition	Perf.Point 3						
Barometer	1034 mb	30.533 "Hg		T_{t1}	9.90 °C	49.8 °F			
Cell Depression	-0.59 "H2O								
True Barometer	30.58 "Hg	15.02 psia		LP Fuel Pressure psig		-89.66			
Fuel s.g	0.802	Sample Temp.	10.0 °C	Fuel Temp. at meter		15.3 °C			
Corrected Fuel s.g.	0.798								
Temperature correction factor Θ	0.9823	Pressure correction factor δ_{T2}			1.0159		Test Cell correction factor		1.040009
Kc correction factor	0.9888	Kh correction factor			1.000		Thrust Corr. To ISA		12234.91
RPM correction factor $\sqrt{\Theta_{T2}}$	0.9911	Fuel flow correction factor KcKh δ_{T2}			1.0045				

Observed Parameters				Corrected Parameters			
N_1 RPM	7371.4	85.80%		N_1 RPM	7437.5		
N_2 RPM	11001.9	89.85%		N_2 RPM	11100.6		
EGT °C	509.6			EGT °C	523.7		
Thrust Lbf	12429.9			Thrust Lbf	12724.4		
Fuel flow GPH	885.9			Fuel flow lb/hr	7040.2		
P_{T2} "H_20	-2.44	14.930 psia	30.397 "Hg	P_{T7}/P_{T2}	1.852		
P_{S3} psig	29.94			TSFC	0.553		
P_{CP} psig	95.44			P_{CP}/P_{S4}	0.566		
P_{S4} psig	179.97			P_{S3}/P_{T2}	3.012		
P_{T7} "Hg	25.70	56.28 "Hg ABS		P_{S4}/P_{S3}	4.337		
Actual Breather"Hg	2.47						
Oil Press.psig	48.32	Oil Temp.	130.1 °C	Oil Press psig	47.1		
				P_{S4}/P_{T2}	13.06		
				P_{S4}/P_{T7}	7.05		
				P_{S4}/δ_{T2}	191.93	psia	
				P_{S3}/δ_{T2}	29.47	psig	60.10 "Hg

JT8D-STD Series Performance Calculation

Date	15/12/21	Time	11:11:00		Engine S/N	709273	Type	JT8D-17A	
Test Point No.	31	Condition	Perf.Point 4						
Barometer	1034 mb	30.533 "Hg		T_{t1}	9.98 °C	50.0 °F			
Cell Depression	-0.50 "H2O								
True Barometer	30.57 "Hg	15.01 psia		LP Fuel Pressure psig		-89.66			
Fuel s.g	0.802	Sample Temp.	10.0 °C	Fuel Temp. at meter		15.2 °C			
Corrected Fuel s.g.	0.798								
Temperature correction factor Θ	0.9826	Pressure correction factor δ_{T2}		1.0163			Test Cell correction factor	1.040009	
Kc correction factor	0.9890	Kh correction factor		1.000			Thrust Corr. To ISA	9809.194	
RPM correction factor $\sqrt{\Theta_{T2}}$	0.9912	Fuel flow correction factor KcKh δ_{T2}		1.0051					

Observed Parameters				Corrected Parameters			
N_1 RPM	6942.0	80.80%		N_1 RPM	7003.3		
N_2 RPM	10679.0	87.21%		N_2 RPM	10773.3		
EGT °C	470.2			EGT °C	483.4		
Thrust Lbf	9969.4			Thrust Lbf	10201.7		
Fuel flow GPH	714.3			Fuel flow lb/hr	5673.7		
P_{T2} "H_20	-2.18	14.936 psia	30.409 "Hg	P_{T7}/P_{T2}	1.650		
P_{S3} psig	24.63			TSFC	0.556		
P_{CP} psig	79.64			P_{CP}/P_{S4}	0.568		
P_{S4} psig	151.60			P_{S3}/P_{T2}	2.655		
P_{T7} "Hg	19.59	50.16 "Hg ABS		P_{S4}/P_{S3}	4.202		
Actual Breather"Hg	2.19						
Oil Press.psig	47.92	Oil Temp	124.3 °C	Oil Press psig	46.8		
				P_{S4}/P_{T2}	11.16		
				P_{S4}/P_{T7}	6.76		
				P_{S4}/δ_{T2}	163.94	psia	
				P_{S3}/δ_{T2}	24.24	psig	49.42 "Hg

JT8D-STD Series Performance Calculation

Date	15/12/21	Time	10:44:14		Engine S/N	709273	Type	JT8D-17A	
Test Point No.	7	Condition	Part Power						
Barometer	1034 mb	30.533 "Hg		T_{t1}	9.99 °C	50.0 °F		USE COLD STOP	
Cell Depression	-0.57 "H2O								
True Barometer	30.57 "Hg	15.02 psia		LP Fuel Pressure psig		48.60			
Fuel s.g	0.802	Sample Temp.	10.0 °C	Fuel Temp. at meter		13.1 °C			
Corrected Fuel s.g.	0.800								
Temperature correction factor Θ	0.9826	Pressure correction factor δ_{T2}		1.0162			Test Cell correction factor	1.040009	
Kc correction factor	0.9890	Kh correction factor		1.000			Thrust Corr. To ISA	11897.04	
RPM correction factor $\sqrt{\Theta_{T2}}$	0.9913	Fuel flow correction factor KcKh δ_{T2}		1.0050					

Observed Parameters				Corrected Parameters			
N_1 RPM	7314.6	85.14%		N_1 RPM	7379.1		
N_2 RPM	10950.3	89.43%		N_2 RPM	11046.9		
EGT °C	476.9			EGT °C	490.2		
Thrust Lbf	12089.5			Thrust Lbf	12373.0		
Fuel flow GPH	861.7			Fuel flow lb/hr	6858.2		
P_{T2} "H_20	-2.32	14.933 psia	30.404 "Hg	P_{T7}/P_{T2}	1.822		
P_{S3} psig	29.23			TSFC	0.554		
P_{CP} psig	92.95			P_{CP}/P_{S4}	0.567		
P_{S4} psig	175.53			P_{S3}/P_{T2}	2.963		
P_{T7} "Hg	24.81	55.38 "Hg ABS		P_{S4}/P_{S3}	4.307		
Actual Breather"Hg	2.35						
Oil Press.psig	48.60	Oil Temp	117.9 °C	Oil Press psig	47.4		
T_{t7} No.1	469.7			P_{S4}/P_{T2}	12.76		
T_{t7} No.2	505.5			P_{S4}/P_{T7}	7.00		
T_{t7} No.3	438.9			P_{S4}/δ_{T2}	187.51	psia	
T_{t7} No.4	444.8			P_{S3}/δ_{T2}	28.76	psig	58.65 "Hg
T_{t7} No.5	465.5						
T_{t7} No.6	473.2			T_{t7} average°C	476.9		
T_{t7} No.7	477.9			T_{t7} spread°C	100.6		
T_{t7} No.8	539.5			T_{t7} max-average	62.6		

JT8D-STD Series Performance Calculation

Date	15/12/21	Time	11:11:00		Engine S/N	709273	Type	JT8D-17A
Test Point No.	31	Condition	Data Plate					
Barometer	1034 mb	30.533 "Hg		T_{t1}	9.98 °C	50.0 °F		
Cell Depression	-0.50 "H2O							
True Barometer	30.57 "Hg	15.01 psia		LP Fuel Pressure psig		-89.66		
Fuel s.g	0.802	Sample Temp.	10.0 °C	Fuel Temp. at meter		15.2 °C		
Corrected Fuel s.g.	0.798							
Temperature correction factor Θ	0.9826	Pressure correction factor δ_{T2}			1.0163	Test Cell correction factor		1.040
Kc correction factor	0.9890	Kh correction factor			1.000	Thrust Corr. To ISA		9809.194
RPM correction factor $\sqrt{\Theta_{T2}}$	0.9912	Fuel flow correction factor KcKh δ_{T2}			1.0051			

Observed Parameters

N_1 RPM	6942.0	80.80%	
N_2 RPM	10679.0	87.21%	
EGT °C	470.2		
Thrust Lbf	9969.4		
Fuel flow GPH	714.3		
P_{T2} "H_20	-2.18	14.936 psia	30.409 "Hg
P_{S3} psig	24.63		
P_{CP} psig	79.64		
P_{S4} psig	151.60		
P_{T7} "Hg	19.59	50.16 "Hg ABS	
Actual Breather"Hg	2.19		
Oil Press.psig	47.92	Oil Temp	124.3 °C

Corrected Parameters

N_1 RPM	7003.3	81.52%	
N_2 RPM	10773.3	87.98%	
EGT °C	483.4		
Thrust Lbf	10201.7		
Fuel flow lb/hr	5673.7		
P_{T7}/P_{T2}	1.650		
TSFC	0.556		
P_{CP}/P_{S4}	0.568		
P_{S3}/P_{T2}	2.655		
P_{S4}/P_{S3}	4.202		
Oil Press psig	46.8		
P_{S4}/P_{T2}	11.16		
P_{S4}/P_{T7}	6.76		
P_{S4}/δ_{T2}	163.94 psia		
P_{S3}/δ_{T2}	24.24 psig		49.42 "Hg

Vibration Spectrum Job W2522

Customer: W2522
Started: 16/12/2021 11:36 Job Status: Complete
Last Updated: 16/12/2021 11:39
A/C Reg: NA A/C Total TM: 0.0
Eng S/N: 709273 TSO: 0.0
Eng Type: JT8D-17A TSN: 32620.0
Eng Pos: 1
Prop S/N: NA TSO: 0.0
Prop Type: NA TSN: 0.0

Analyzer Information

ACES 4041 Viper II Analyzer Serial No: 4041T1607-002
App Version: 2020.0505.14 Cal Date: 26 Aug 2021
Owner: CFS AeroProducts Ltd.AERO ENGINES IRELAND
Addr:
United Kingdom

Phone:
E-Mail:

Policies

Deny:
Allow: Copy, Delete, ICF Update, Modify
License Option: None

Properties

Setup Name: JT8D-17A MAX SCAN Version: 0.0.0.0

Resolution: 400
Average Type: Exp Blocks in Average: 4
Min Freq: 1300.00 Max Freq: 8800.00
Frequency Units: RPM RPM/Line: 22.00
Record Time Trace: No

Channel A (FAN): 797V-GJTC
(106.140 mVolts/IPS, Normal Polarity, IEP, Single-Ended)
Full-Scale Range: 5.00 mils Pk-Pk
Channel B (TURB): 793V-GJTC
(96.200 mVolts/IPS, Normal Polarity, Differential)
Full-Scale Range: 5.00 mils Pk-Pk

CS1 (N1): Pulse S 100% RPM = 8594 RPM = * 60.000

Condition 1: MAX VIB

Spectrum Limits:

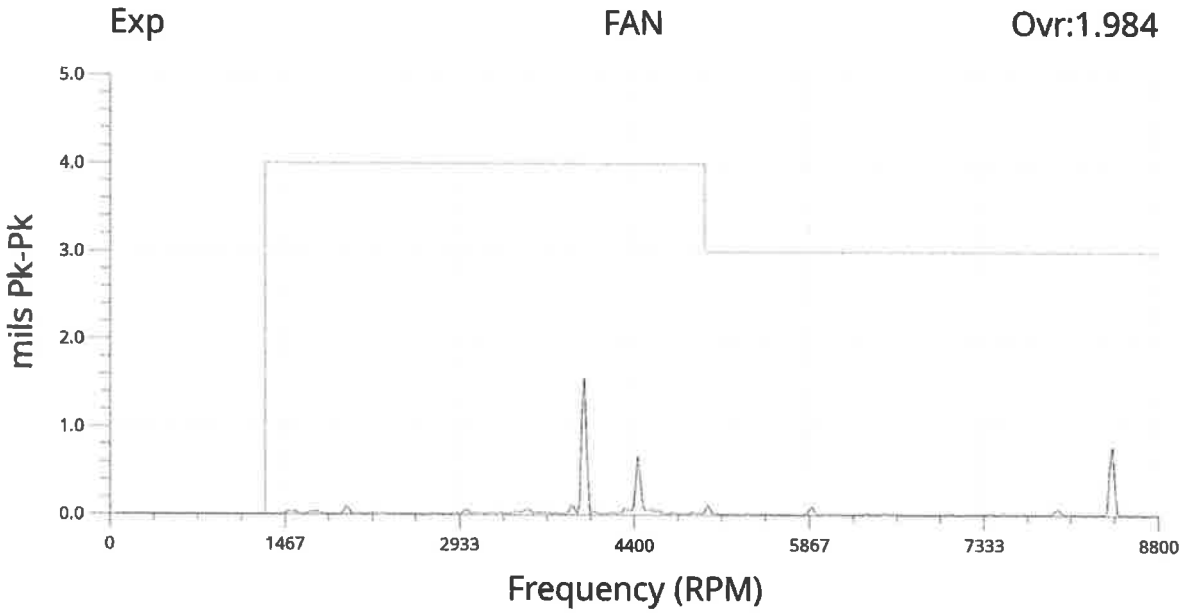
F-low	F-high	Unit	Limit
1300.00	5000.00	xRPM	4.00
5000.00	8800.00	xRPM	3.00
1300.00	4000.00	xRPM	3.00
4000.00	5000.00	xRPM	4.00
5000.00	8800.00	xRPM	3.00
0.00	4200.00	xRPM	4.00
4200.00	5600.00	xRPM	6.00
5600.00	10000.00	xRPM	4.00

Condition 1 (MAX VIB): 475 Total Samples

Customer: W2522
Started: 16/12/2021 11:36
Last Updated: 16/12/2021 11:39
A/C Reg: NA
Condition: MAX VIB
Speeds: N1=3975.80

Job Status: Complete

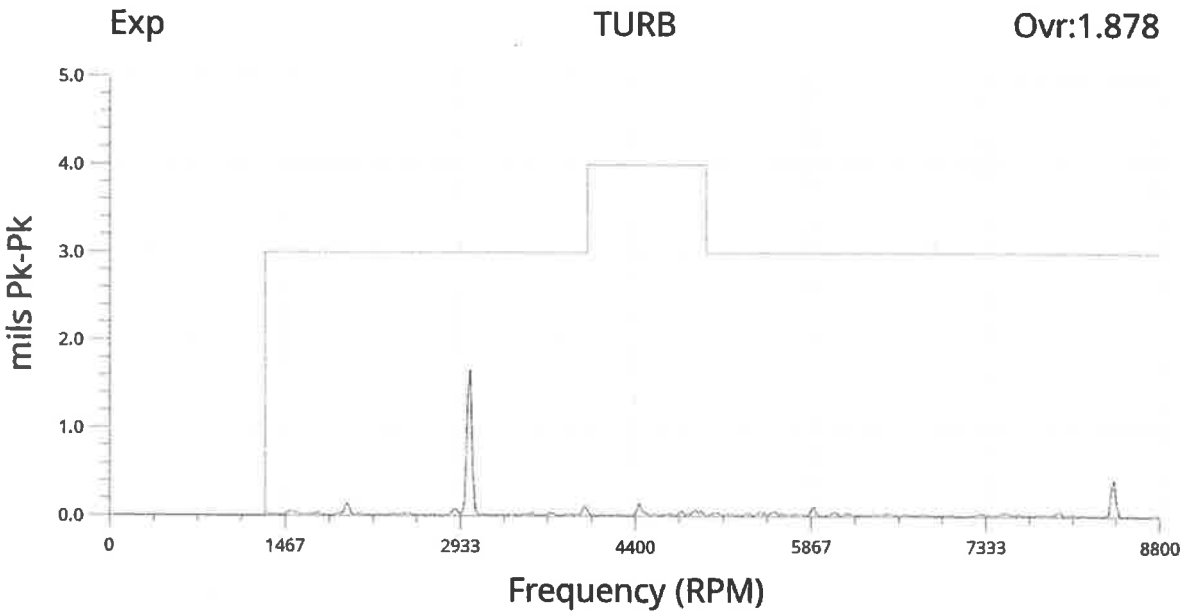
A/C Total TM: 0.0
Engine: 709273



Customer: W2522
Started: 16/12/2021 11:36
Last Updated: 16/12/2021 11:39
A/C Reg: NA
Condition: MAX VIB
Speeds: N1=3975.80

Job Status: Complete

A/C Total TM: 0.0
Engine: 709273



Approval No. EASAUK.145 00576
FAA UKGY695Y

Borescope Inspection Report
JT8D-STD Series Engines

Merlin Way
Manston, Kent CT12 5FE
Tel: 01843 822444
Email: qc@summit-aviation.co.uk

Engine S/No	709273	T.T.S.N	32620.~~00~~ 37	T.C.S.N	21294	W/O No	W2522
Engine Type	JT8D-17A	T.S.L.S.V	0	C.S.L.S.V	0	Date	21/12/2021
Customer	Serve Air						

Step	Task	Insp.
	FAN SECTION AND LOW PRESSURE COMPRESSOR	
1	FAN CASE ASSEMBLY AND INLET GUIDE VANES NO Defects	INSP 22 SUMMIT AVIATION
2	C1 FAN ASSEMBLY (27 BLADES) NO Defects	INSP 22 SUMMIT AVIATION
3	1ST STAGE STATOR NO Defects	INSP 22 SUMMIT AVIATION
4	C2 BLADES (40 BLADES) NO Defects	INSP 22 SUMMIT AVIATION
	6TH STAGE BLADES (62 BLADES) NO Defects	INSP 22 SUMMIT AVIATION

Step	Task	Insp.
	HIGH PRESSURE COMPRESSOR	
1	7TH STAGE BLADES (60 BLADES) LEADING EDGE	
	NO Defects	INSP 22 SUMMIT AVIATION
	7TH STAGE BLADES (60 BLADES) LEADING & TRAILING EDGE (IF SB 6038 IS INCORPORATED)	
	NO Defects	INSP 22 SUMMIT AVIATION
2	8TH STAGE BLADES (58 BLADES) LEADING & TRAILING EDGE (IF SB 6038 IS INCORPORATED)	
	leading edge only - NO Defects	INSP 22 SUMMIT AVIATION
3	9TH STAGE BLADES (60 BLADES) LEADING & TRAILING EDGE (IF SB 6038 IS INCORPORATED)	
	N/A - Pre SB6038	INSP 22 SUMMIT AVIATION
	10TH STAGE BLADES (64 BLADES) LEADING EDGE (IF SB 6038 IS INCORPORATED)	
	N/A - Pre SB6038	INSP 22 SUMMIT AVIATION
	13TH STAGE BLADES (74 BLADES)	
	NO Defects	INSP 22 SUMMIT AVIATION

Step	Task	Insp.
	COMBUSTION SECTION	
1	COMBUSTION CHAMBERS (THRU #4 & #7 CHAMBERS) NO Defects	
2	FUEL NOZZLES (THRU #4 & #7 CHAMBERS) NO Defects	
3	1ST STAGE NGV (THRU #4 & #7 CHAMBERS) NO Defects	

Step	Task	Insp.
	HIGH PRESSURE TURBINE	
1	1ST STAGE TURBINE BLADES NO Defects	

Step	Task	Insp.
	LOW PRESSURE TURBINE	
1	4TH STAGE TURBINE VANES (77 VANES)	
	NO Defects	INSP 22 SUMMIT AVIATION
2	4TH STAGE TURBINE BLADES (74 BLADES)	
	NO Defects	INSP 22 SUMMIT AVIATION

	Insp.
ADDITIONAL REMARKS	
None	INSP 22 SUMMIT AVIATION