

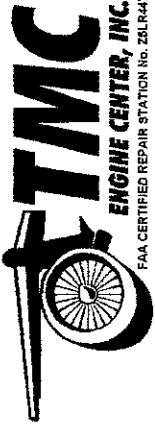
1. Approving National Aviation Authority/Country: FAA/United States

2. **AUTHORIZED RELEASE CERTIFICATE**  
 FAA Form 8130-3 AIRWORTHINESS APPROVAL TAG

3. Form Tracking Number: 050806054

4. Organization Name and Address: TMC ENGINE CENTER, INC.  
 7905 NW 77th AVE  
 MEDLEY, FL 33166  
 FAA REPAIR STATION  
 No. Z5LR447Y


5. Work Order/Contract/Invoice Number: 06054



6. Item:	7. Description:	8. Part Number:	9. Eligibility:	10. Quantity:	11. Serial/Batch Number:	12. Status/Work
1.	JT8D Turbofan Engine	JT8D-15	B-727 or B-737 or DC-9	1 each	P696589B	Repaired

13. Remarks: The subject engine was removed from service to comply with ASB 6431 R1, to replace the LPC and HPC modules, and to perform a hot section inspection. A Hot Section Inspection and a continue time repair shop visit was accomplished. The low pressure turbine was disassembled, repaired, and balanced. The T2 and T3 disk were overhauled. 40 each T4 blades and 25 each T3 blades were replaced with overhauled units. The T4 disk is from ESN 700002-15. 27 each T2 vanes were replaced with overhauled units. The LPT was assembled and balanced. The high pressure turbine was repaired. The T1 disk was overhauled inspected. The T1 blades are CFM and were CTVI by Jet Engine Technologies. The #5 carbon seal assembly was flow checked. The T1 was assembled and balanced. The high compressor parts were overhauled by Jet Thrust, Inc. The C7 through C12 disks were Ni-Cad plated per ASB 6431 R1. A new thick web C9 disk was installed. The other HPC disks came from ESN 656052-15. The C7 through C12 blades were overhauled and are all Cat A/OPT. The HPC stators were overhauled. The C8 and C9 stators were overhauled by TMC. The high compressor was assembled and balanced by TMC. The Combustion Chambers (9 each Cat 2A) and Combustion Chamber Rear Support Assy were overhauled. The T1 NGVs were replaced with overhauled units. The 8th and 13th stage bleed valves were overhauled. The T1 OAS was replaced with a new unit. 9 each fuel nozzles were overhauled. The low compressor is from ESN 700002-15. The C1 fan was temporarily removed to blend a nick on a C2 blade. The LPC otherwise was CTVI. All removed mainline bearings were inspected. The following Airworthiness Directives were complied with: 86-09-02 R2, 03-12-07, 05-25-05 (C13 T1, T2, and T3 disks only), and 06-17-07 R1. The engine was disassembled to the extent necessary to accomplish the repair, cleaned, inspected, repaired as required by the Customer and Workscope, assembled, tested, and accepted I/A/W the Pratt & Whitney JT8D Engine Manual PN 481672, R165, dated 4/15/08. Engine TSN: 68347.8, Engine CSN: 39672, TSHSI: 00:00, CSHSI: 0, TSR: 00:00, CSR: 0. Ref. Forms: FAA Form 337, TMC-ENG-10-1 for JT8D Life Limited Parts Status, and TMC-ENG-07 for JT8D Airworthiness Directive Compliance Status. The engine is configured for Stage III installation. **TIMES AND CYCLES ON ALL DISKS ARE AS RECEIVED FROM THE CUSTOMER AND FULL TRACE HAS NOT BEEN VERIFIED BY THIS REPAIR STATION.**


19.  14 CFR 43.9 Return to Service.  Other regulation specified in Block 13.

20. Authorized Signature:   
 Gregory L. Polaski

21. Approval/Certificate No.: Z5LR447Y

22. Name (typed or printed): Gregory L. Polaski

23. Date (m/d/y): 14 May 2008

20. Authorized Signature:   
 Gregory L. Polaski

21. Approval/Certificate No.: Z5LR447Y

22. Name (typed or printed): Gregory L. Polaski

23. Date (m/d/y): 14 May 2008

User/Installer Responsibilities

It is important to understand that the existence of this document alone does not automatically constitute authority to install the part/component/assembly.

Where the user/installer performs work in accordance with the national regulations of an airworthiness authority different than the airworthiness authority of the country specified in Block 1, it is essential that the user/installer ensures that his/her airworthiness authority accepts parts/components/assemblies from the airworthiness authority of the country specified in Block 1.

Statements in Blocks 14 and 19 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.



**MAJOR REPAIR AND ALTERATION  
(Airframe, Powerplant, Propeller, or Appliance)**

Form Approved  
OMB No. 2120-0020  
11/30/2007

Electronic Tracking Number

**For FAA Use Only**

**INSTRUCTIONS:** Print or type all entries. See Title 14 CFR §43.9 Part 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for Instructions and disposition of this form. This report is required by law (49 U.S.C. §44701). Failure to report can result in civil penalty for each such violation. (49 U.S.C. §46301(a))

1. Aircraft	Nationality and Registration Mark	Serial No.	
	Make	Model	Series
2. Owner	Name (As shown on registration certificate)	Address (As shown on registration certificate)	
		Address	City _____ State _____ Zip _____ Country _____

**3. For FAA Use Only**

4. Type		5. Unit Identification			
Repair	Alteration	Unit	Make	Model	Serial No.
<input type="checkbox"/>	<input type="checkbox"/>	AIRFRAME	_____	(As described in Item 1 above)	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	POWERPLANT	<b>Pratt &amp; Whitney</b>	<b>JT8D-15</b>	<b>P696589B</b>
<input type="checkbox"/>	<input type="checkbox"/>	PROPELLER			
<input type="checkbox"/>	<input type="checkbox"/>	APPLIANCE	Type		
			Manufacturer		

**6. Conformity Statement**

A. Agency's Name and Address		B. Kind of Agency		C. Certificate No.
Name <b>TMC Engine Center, Inc.</b>		<input type="checkbox"/> U.S. Certificated Mechanic	Manufacturer	
Address <b>7905 NW 77<sup>th</sup> Avenue</b>		<input type="checkbox"/> Foreign Certificated Mechanic	C. Certificate No.	
City <b>Medley</b> State <b>Florida</b>		<input checked="" type="checkbox"/> Certified Repair Station	<b>Z5LR447Y</b>	
Zip <b>33166</b> Country <b>USA</b>		<input type="checkbox"/> Certificated Maintenance Organization		

D. I certify that the repair and/or alteration made to the unit(s) identified in item (5) above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Extended range fuel Per 14 CFR Part 43 App. B <input type="checkbox"/>	Signature/Date of Authorized Individual <b>Gregory L. Polaski / Chief Inspector</b>  5/14/08
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**7. Approval for Return to Service**

Pursuant to the authority given persons specified below, the unit identified in item 5 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is  Approved  Rejected

BY	FAA Fit. Standards Inspector	Manufacturer	Maintenance Organization	Persons Approved by Canadian Department of Transport
	FAA Designee <input checked="" type="checkbox"/>	Repair Station	Inspection Authorization	Other (Specify)

Certificate or Designation No. <b>Z5LR447Y</b>	Signature/Date of Authorized Individual <b>Gregory L. Polaski / Chief Inspector</b>  5/14/08
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**NOTICE**

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft records. An alteration must be Compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

**8. Description of Work Accomplished**

(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

[Empty box for Nationality and Registration Mark]

[Empty box for Date]

Nationality and Registration Mark

Date

Work Order: **06054** , Model: **JT8D-15**  
Engine Serial Number: **P696589B**  
Engine Total Time: **68347.8**; Engine Total Cycles: **39672**

The subject engine was removed from service to comply with ASB 6431, replace the LPC module with one from ESN 700002-15, replace the HPC module with one from ESN 656052-15, and to perform a hot section inspection.

- The **Fan Inlet Case** was removed to facilitate other maintenance and was visually inspected for continue time use and pressure checked. The inlet case and low compressor are CFM from ESN 700002-15.
- The **Low Compressor Section** was not disassembled. The C1, C2 fans and the C6 blades were visually inspected insitu. The C1 fan was temporarily removed to blend a nick on a C2 fan blade. The C1 fan blades leading edges were blended. The rest of the low compressor was visually inspected for continue time use. It is from ESN 700002-15.
- The **Intermediate Case** was not removed from the low compressor and was visually inspected insitu. It is from ESN 700002-15. 3 each 8<sup>th</sup> stage bleed valves were removed and overhauled.
- The **High Compressor Section** was disassembled and overhauled by Jet Thrust Inc. A new Ni-Cad plated thick web C9 disk was installed. The C7, C8, C10, C11, C12, and C13 disks were overhauled by Jet Thrust, Inc. and came from ESN 656052-15. All were Ni-Cad plated per ASB 6431, AD 03-12-07. AD 05-25-05 was complied with to the C13 disk. All HPC blades were overhauled and are all Cat A or OPT blades. All HPC stators were overhauled. The C8 and C9 stators were overhauled by TMC. The C8 disk and 8-9 spacer were inspected/overhauled per ASB 6468, AD 06-17-07 R1. The HPC rear hub was overhauled. The HPC was assembled and balanced.
- The **Diffuser Section** was removed from the high compressor and was continue time visually inspected as an assembly. It was pressure checked. 9 each fuel nozzles were overhauled. 1 each 13<sup>th</sup> stage bleed valve was overhauled.
- The **Combustion / Nozzle Section** was disassembled and a hot section inspection was accomplished. The combustion chambers were overhauled to Cat 2A per ASB 5639 R10 and AD 86-09-02 R2. The nozzle case was disassembled and the T1 vanes replaced with overhauled units. The Combustion Chamber Rear Support was overhauled. The T1 outer air seal was replaced with a new unit.
- The **High Pressure Turbine** was removed and disassembled. The T1 disk was overhauled and AD 05-25-05 was complied with. The T1 blades were visually and NDT inspected by Jet Engine Technologies. The No. 5 carbon seal assembly was removed from the HPT shaft and flow tested. It is post ASB 6196. The HPT was assembled and balanced.
- The **Low Pressure Turbine** was disassembled and repaired. The T2 and T3 disks were overhauled and AD 05-25-05 was complied with. 40 each T4 blades were replaced with overhauled units, however the T4 disk was not fully de-bladed. The T4 disk is installed from ESN 700002-15. The T2 blades were visually and NDT inspected. 25 each T3 blades were replaced with overhauled units and the rest were visually/NDT inspected and shotpeened. 27 each T2 vanes were replaced with overhauled units, the rest were continue time visually inspected and NDT inspected. The T4 hub was overhauled. The LPT tierods were overhauled. The LPT was assembled and balanced.
- The **Exhaust Case** was not disassembled and was continue time visually inspected. A run-out check of the #6 housing was good. The EGT thermocouple probes were replaced with overhauled units and the EGT harness was bench checked.
- All **Main Line Bearings** that were removed were inspected (# 1, 4, 4 ½, 5, and 6).
- The **Engine Gearbox** was continue time visually inspected insitu.
- All pertinent **Airworthiness Directives** were reviewed and found to be current with the exception of the following which were accomplished this shop visit (see next page).

Additional Sheets are Attached

86-09-02 R2 (Amdt. 39-9385. Combustion Chambers inspection/repair/identification per Table 1, ASB 5639 R10. PN 780853 7 each and PN 780854 2 each Overhauled Cat 2A cans installed this shop visit. If ECM is used, re-inspect on or before 8500 hours/6000 cycles. If ECM is not used, re-inspect on or before 6500 hours/5000 cycles. See form TMC-41-13 for combustion chamber part/serial numbers)

AD 03-12-07 (Amdt. 39-13192. Ni-Cad plated C7, C8, C10, C11, and C12 disks per ASB 6431 R1. Disk overhaul accomplished by Jet Thrust, Inc. The C9 disk is new with Ni-Cad. Re- Inspect on or before 10/16/15. See form TMC-36-00 for plating/coating status)

AD 05-25-05 (Amdt. 39-14398. Inspected the C13, T1, T2, and T3 disks per the required inspections in the JT8D Engine Manual. The C1, C2, and T4 disks were not fully de-bladed this shop visit. Re-inspect the C1, C2, C13, T1, T2, T3, and T4 disks at next de-blading after 100 CIS SLI)

AD 06-17-07 R1 (Amdt. 39-14791. C7 and C8 disks were Ni-Cad plated this shop visit per ASB 6431 R1 and the 8-9 spacer PN 821917 SN CZ4808 is plated with Ni-Cad per ASB 6468. Inspection -04 and FMPI was complied with to all HPC disks during overhaul by Jet Thrust, Inc. Re-inspect when ASB 6431 is due or remove C8 disk from service when disk time/cycles expire, whichever occurs first)

NOTE: Disk times/cycles are as supplied by the Customer and full trace has not been verified by this repair station.

NOTE: The engine is configured for Stage III installation.

The subject engine was disassembled to the extent necessary to accomplish the repair, cleaned, inspected, repaired as required by the Customer and the Workscope, re-assembled, tested and found airworthy in accordance with the Pratt & Whitney JT8D Engine Manual, P/N 481672, Rev. #165 dated 4/15/08. Pertinent details of the above are on file at this Repair Station under W. O. No. 06054.

END

**Paperwork Reduction Act Statement:** The reason for collecting this information is to track major maintenance performed on aircraft. The collected information is used as part of the aircraft's historical file. The public reporting burden for this collection of information is estimated to average 30 minutes per response. Responses are mandated by 14 CFR Part 43. Collected information becomes part of the public record and no confidentiality is required. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control number associated with this collection is 2120-0020. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW Washington, DC 20591, Attn: Information Collection Clearance Officer, AIO-20.



TMC Engine Center, Inc.  
 FAA CRS Z5LR447Y  
 7905 NW 77th Avenue  
 Medley, Florida 33166

**JT8D LIFE LIMITED PARTS STATUS**

ENGINE MODEL: JT8D-16  
 ENGINE TOTAL TIME: 68347.8

ENGINE SERIAL NUMBER: 686589  
 ENGINE TOTAL CYCLES: 39672

CUSTOMER: Air Lease International, Inc.  
 WORK ORDER: 06054

As Received from Customer												As Installed during this Shop Visit											
DISC STAGE	PART NUMBER	SERIAL NUMBER	HOUR LIMIT	CYCLE LIMIT	HOURS USED	CYCLES USED	HOURS REMAIN	CYCLES REMAIN	DISC STAGE	PART NUMBER	SERIAL NUMBER	HOUR LIMIT	CYCLE LIMIT	HOURS USED	CYCLES USED	HOURS REMAIN	CYCLES REMAIN	REMOVED FROM ESN/WO					
C-1	848101	BBDUAX2918	N/A	20000	UNK	6018	N/A	13982	C-1	848101	BBDUAR3327	N/A	20000	8884.8	5371	N/A	14629	ESN 700002-15 CFM					
C-2	790832	BBDUAM9373	30000	20000	15115	9647	14885	10353	C-2	790832	BBDUAM9370	30000	20000	11345.8	7393	18654.2	12617	ESN 700002-15 CFM					
C-3	798773	S34162	30000	20000	29988	18230	2	1770	C-3	798773	BBDUAU0886	30000	20000	8170.8	4967	21829.2	15033	ESN 700002-15 CFM					
C-4	798604	R24552	30000	20000	29988	18230	2	1770	C-4	798604	BBDUAX2817	30000	20000	8170.8	4967	21829.2	15033	ESN 700002-15 CFM					
C-5	745705	S12028	30000	20000	29988	18230	2	1770	C-5	745705	BBDUAX2422	30000	20000	8170.8	4967	21829.2	15033	ESN 700002-15 CFM					
C-6	745706	S34407	30000	20000	29988	18230	2	1770	C-6	745706	BBDUAW8987	30000	20000	8170.8	4967	21829.2	15033	ESN 700002-15 CFM					
C-7	815607	BENCAS6155	30000	20000	4815	3385	25185	16635	C-7	815607-001	BENCAP1849	30000	20000	7380.6	4667	22619.4	15333	ESN 686052-15 CFM					
C-8	797208	BENCAH3953	30000	20000	22719	14010	7281	5990	C-8	787208-001	BENCAP0461	30000	20000	7380.6	4667	22619.4	15333	ESN 686052-15 CFM					
C-9	701609	NENCAH1973	30000	20000	15115	9647	14885	10353	C-9	822109	BENCAX5425	30000	20000	0	0	30000	20000	NEW					
C-10	772510	BENCAM1630	30000	20000	15115	9647	14885	10353	C-10	815610-002	BENCAP6148	30000	20000	7380.6	4667	22619.4	15333	ESN 686052-15 CFM					
C-11	772511	BENCAL7334	30000	20000	15115	9947	14885	13053	C-11	772511-001	BENCAN7915	30000	20000	7380.6	4667	22619.4	15333	ESN 686052-15 CFM					
C-12	798512	BENCAM1438	30000	20000	15115	9947	14885	13053	C-12	815612-002	BENCAP3376	30000	20000	7380.6	4667	22619.4	15333	ESN 686052-15 CFM					
C-13	5003813-01	BBDUAO4598	30000	20000	4815	3385	25185	16635	C-13	5003813-01	BBDUAU4979	30000	20000	7380.6	4667	22619.4	15333	ESN 686052-15 CFM					
T-1	5004301-01	BKLB881750	30000	20000	15115	9647	14885	10353	T-1	5004301-01	BKLB881750	30000	20000	15115	9647	14885	10353	ESN 686588-15 WO 05857					
T-2	803122	BLDLB30713	30000	20000	11887	7738	18113	12262	T-2	803122	BLDLB30713	30000	20000	11887	7738	18113	12262	ESN 686588-15 WO 05975					
T-3	795603	BLDLB75481	30000	20000	11887	7738	18113	12262	T-3	795603	BLDLB75461	30000	20000	11887	7738	18113	12262	ESN 686588-15 WO 05976					
T-4	769104	S13320	30000	20000	31095	18999	-1095	1001	T-4	769104	BLDLC1584	30000	20000	8170.8	4967	21829.2	15033	ESN 700002-15 CFM					
HPT shaft	UNK	UNK	N/A	N/A	UNK	UNK	UNK	UNK	HPT shaft	698604	6A7350	N/A	N/A	UNK	UNK	UNK	UNK	ESN 676234-17 WO 05049					
LPT shaft	UNK	UNK	N/A	N/A	UNK	UNK	UNK	UNK	LPT shaft	748824	G32125	N/A	N/A	UNK	UNK	UNK	UNK	CFM WO 05984					

Information for all disks not replaced supplied by customer. Documentation and/or trace for disks replaced is on file at TMC Engine Center, Inc. under the referenced Work Order Number.  
 Remarks: Times and Cycles on all installed disks are as supplied by the Customer and full trace has not been verified by this Repair Station. The engine is configured for Stage III installation.

5/14/2008  
 ENGINEERING DATE