Numéro - *Number*

PM - 0140

Marque - *Make*

PRATT & WHITNEY

Type

PT6A - 64

Construit par : **PRATT & WHITNEY**
Maker

le : **01/2003**
the

Documents présentés :
Records submitted

AUTHORIZED RELEASE CERTIFICATE – FINAL ACCEPTANCE TEST RECORD SB REC. OF ENGINE AD, S/N COMPONENTS LIST enclosed in engine log book pocket.

Rappel des heures de fonctionnement
Record or running time

Depuis fabrication : **0 h**
Since manufacture

Depuis révision : **S - R**
Since Overhaul

Livret établi à : **TARBES**
Log Book established at (Place and Date)

le : 07/04/2003
the

SOCATA
DIRECTION QUALITE
QUALITY DIRECTOR

Signature et cachet
Stamp and Signature

EADS SOCATA
DIRECTION QUALITÉ

[redacted]

[redacted]

AGREMENT PRODUCTION JAR 21 N° F.G.027. - *MANUFACTURING AGREEMENT JAR 21 N° F.G.027.*

**********MUNCIE AVIATION CO.CRS#[redacted]**********

	Date	A/C Hobbs	A/C TT	Eng. TT	Cycles
N700AQ	7/6/2015	2734.6	2734.6	2734.6	2958

C/W Annual/B+ Inspection C/W ref TBM Service manual chapter 5-20-03
Performed compressor wash and T-wheel rinse per Chapter 71-00-00 of P&W MM
Performed Insitu Fuel Nozzle Cleaning IAW Chapter 71-00-00 of P&W MM
Installed New Heat Exchanger cooling duct seal P/N T700A2150080100

I certify that this **Engine** has been inspected in accordance with a **B+** Inspection and was determined to be in airworthy condition.
Make **P&W** Ser.No **PCE-PM0140**
Model **PT6A-64** Reg.Mark **N700AQ**
The aircraft/component identified above was repaired and inspected in accordance with current Regulations of Federal Aviation Agency,approved for return to service
Pertinent details of the repair are on file at the Agency
Work Order No. **S001323** Date **7/6/2015**
Signed [redacted] Inspector for
MUNCIE AVIATION CO. CRS#[redacted]
MUNCIE, IN 47308 765-289-7141

**********MUNCIE AVIATION CO.CRS#[redacted]**********

	Date	A/C Hobbs	A/C TT	Eng. TT	Cycles
N700AQ	8/1/2016	2966	2966	2966	3188

C/W Annual/A+ Inspection C/W ref TBM Service manual chapter 5-20-02
Performed compressor wash and T-wheel rinse per Chapter 71-00-00 of P&W MM
C/W 400 Hr Fuel nozzles by removing and sending to Dallas Airmotive for testing see signoff for details reinstalled using new "O"rings and gaskets,torqued and saftied
Borescoped Hot section with nozzles removed no issues noted
C/W SB70-211 Mechanical pump outlet union Installed using new "O"ring
C/W SB70-213 Engine Drainage system per instructions
C/W 600 Hr StandBy gen. brushes replaced with P/N ALE1013AS
C/W 600 Hr Starter generator brushes determined to be at 1/2 life,C/W 600 Hr chip detector
Found one compressor blade slight damage blended IAW MM Ch 72-30-05
Compressor inlet treated and corrosion preventitive applied

C/W P&W SB14474 R1 oil discoloration Cat. 4
C/W P&W SB14001 R19 oil transition to Aeroshell 560

I certify that this **Engine** has been inspected in accordance with a **A+** Inspection and was determined to be in airworthy condition.
Make **P&W** Ser.No **PCE-PM0140**
Model **PT6A-64** Reg.Mark **N700AQ**
The aircraft/component identified above was repaired and inspected in accordance with current Regulations of Federal Aviation Agency,approved for return to service
Pertinent details of the repair are on file at the Agency
Work Order No. **S001896** Date **8/1/2016**
Signed [redacted] Inspector for
MUNCIE AVIATION CO. CRS#[redacted]
MUNCIE, IN 47308 765-289-7141

The New AVEX, Inc. C.R.S. [redacted]

205 Durley Avenue, Suite A, Camarillo, CA 93010 (805) 389-1188 FAX (805) 389-3323

ENGINE Pratt & Whitney PT6A-64 **S/N PCE-PM-0140** **N700AQ**

Work Order: 13132 **TTSN:** 3095.9 **Date:** 4/25/2017

Tach: **Hobbs:** 298.9 **TCSN:** 3275 **TSO:** **CSO:**

1. Complied with a "C" inspection plus annual I.A.W. Daher MM Chapter 05-20-04, 05-20-05 and Pratt and Whitney PT6A-66D MM. All AD's checked through revision 2017-06; see AD compliance record provided with the airframe logbook. Daher checklist meets requirements of 14 CFR 91.409 and 14 CFR 43 Appendix D.
2. Performed pre-maintenance borescope of engine first stage compressor blades I.A.W. Pratt and Whitney PT6A-64 MM Chapter 72. Blades need blended this visit.
3. Complied with Pratt and Whitney SB 14507R1 by the inspection of the interconnect rod for safety cable possible ferrule interference with the FCU lever or cam lever I.A.W. Pratt and Whitney SB 14507R1. No discrepancies noted.
4. Complied with Pratt and Whitney SB 14509R3 by the removal and replacement of the propeller over speed governor mounting washers with new I.A.W. Pratt and Whitney SB 14509R3.
5. Complied with the 1000 hour replacement of the P-3 filter with new I.A.W. Pratt and Whitney PT6A-64 MM Chapter 72. Leak checks good.
6. Complied with inspection of the fuel outlet filter for foreign matter or distortion I.A.W. Pratt and Whitney MM Chapter 73. No defects noted.
7. Complied with Pratt and Whitney letter of deviation DAA2017-332-PT6A-64-PM0140 case # PWC-79371-D7K3 for the following one ITT exceedance of 896° C for 25 seconds dated May 2016; by performing a complete borescope of engine and performing engine performance checks I.A.W. Pratt and Whitney PT6A-64 MM Chapters 71 and 72 and Pratt and Whitney letter of deviation DAA2017-332-PT6A-64-PM0140. No defects noted at this time. Engine in this condition continues to comply with the certification basis and is a fit condition for continued operation I.A.W. Pratt and Whitney letter of deviation DAA2017-332-PT6A-64-PM0140.
8. Blended first stage compressor I.A,.W. Daher MM Chapter 72.
9. Primed and painted engine inlet I.A.W. Pratt and Whitney PT6A-64 MM Chapter 72.
10. Removed and replaced engine oil filter with new I.A.W. Pratt and Whitney PT6A-64 MM Chapter 74.

The New AVEX, Inc. C.R.S. [redacted]
205 Durley Avenue, Suite A, Camarillo, CA 93010 (805) 389-1188 FAX (805) 389-3323

ENGINE Pratt & Whitney PT6A-64 S/N PCE-PM-0140 N700AQ
Work Order: 13132 TTSN: 3095.9 Date: 4/25/2017
Tach: Hobbs: 298.9 TCSN: 3275 TSO: CSO:

Leak checks good.

11. Performed full borescope of aircraft engine I.A.W. Pratt and Whitney PT6A-64 MM Chapter 72. Engine appears normal for time in service.
12. Borescoped through the exhaust duct drain I.A.W. Pratt and Whitney PT6A-64 MM Chapter 72 and found some minor spots of coked oil around the drain area and the drains are free at this time.
13. Oil sample sent to Jet Care for analysis I.A.W. Pratt and Whitney PT6A-64 MM 79.
14. Borescoped the engine first stage compressor blades post maintenance I.A.W. Pratt and Whitney PT6A-64 MM Chapter 72. No changes noted between pre and post maintenance inspections.

This aircraft, airframe, aircraft engine, propeller or appliance was repaired/inspected in accordance with the current Federal Aviation Regulations and has been found to be in an airworthy condition for scope of work performed. Pertinent details of the repair/inspection are on file at this Repair Station under Work Order No. 13132.

[redacted] 4/25/17
Date

(LBID:13067)

For: FAA Approved Repair Station # [redacted]

Pratt & Whitney Canada Corp.
1000 Marie-Victorin
Longueuil, Quebec, Canada J4G 1A1
(450) 647-9411

Pratt & Whitney Canada
A United Technologies Company

DAA2017-332-PT6A-64-PM0140
CRM Case # PWC-79371-D7K3

April 25, 2017

Muncie Aviation Company
5201 North Walnut Street
Muncie, Indiana
USA, 47303

Attention: Mr. Don Burris, Service Manager (Email [redacted])

Subject: Deviation Letter, PT6A-64, S/N PCE-PM0140 (TTSN: 3095.9 hrs). ITT Exceedance

Dear Mr. Burris,

Pratt & Whitney Canada Corp. (P&WC) understands that the subject engine experienced an ITT exceedance of 896°C peak for 25 sec in flight, as recorded by the Shadin monitoring unit. P&WC further understands that this exceedance occurred in May of 2016, with an engine total time of 2935.3hrs. At the time the exceedance was believed to have been 20 seconds in duration, however, due to the Shadin operating parameters, there is an addition 5 second period that must be added, for a total of 25 seconds. This exceedance falls into Area B of the Temperature Limits Chart (Fig. 501, Engine Maintenance Manual P/N: 3038321 Chapter 71-00-00).

An engineering assessment of the information provided finds that the engine, in this regard, continues to comply with the certification basis, and is in a fit condition for continued operation subject to the successful accomplishment of a complete borescope inspection and an engine performance check. Findings should be reported to P&WC CFirst.

This event and the maintenance actions should be documented in the engine log book with a copy of this letter.

Should there be any queries on this matter, please do not hesitate to contact the undersigned.

Best regards,

PRATT & WHITNEY CANADA Corp.

[redacted]

Paul Tsachiridis
Technical Specialist
PT6A Customer Engineering
Customer Services
Tel: [redacted]
E-mail: [redacted]

[redacted]

Gerry Whitty
Deputy Chief Engineer
Customer Service
[redacted]

CC: CFirst, Warranty, Cops Trac

This Deviation Letter constitutes Transport Canada approved data. P&WC acknowledges the final authority of the local regulatory agency in the application of this data. Applicable engine Airworthiness Limitations and Airworthiness Directives shall take precedence.

The New AVEX, Inc. C.R.S. [redacted]

205 Durley Avenue, Suite A, Camarillo, CA 93010 (805) 389-1188 FAX (805) 389-3323

ENGINE Pratt & Whitney PT6A-64 **S/N** PCE-PM-0140 **N700AQ**

Work Order: 13132 **TTSN:** 3095.9 **Date:** 5/26/2017

Tach: **Hobbs:** 298.9 **TCSN:** 3275 **TSO:** **CSO:**

1. Borescoped the engine first stage compressor blades post maintenance I.A.W. Pratt and Whitney PT6A-64 MM Chapter 72. No changes noted between pre and post maintenance inspections.

This aircraft, airframe, aircraft engine, propeller or appliance was repaired/inspected in accordance with the current Federal Aviation Regulations and has been found to be in an airworthy condition for scope of work performed. Pertinent details of the repair/inspection are on file at this Repair Station under Work Order No. 13132.

[redacted] 5/26/17

Date

(LBID:13158)

For: FAA Approved Repair Station # [redacted]

DAHER

FAA CRS # [redacted] / EASA [redacted]

SOCATA North America, Inc.
601 NE 10th Street
Pompano Beach, FL 33060

Date : 01/03/2018 | Serial Number : 252 | Registration : N700AQ | Aircraft type : TBM 700

Meter Time: 408.7 Hobbs | Time Since New : 3205.7 | Cycle Since New : 3282 | Work Order : 6255

- Model PT6A-64, s/n PM0140 Eng. TT. 3205.7 Eng. TC 3282.
- Completed compressor turbine desalination wash IAW Pratt & Whitney maintenance manual chapter 71-00-00 part A & C. Performed ground run for operational test of engine, no defects noted. Gained access to first stage compressor by removing access panels. Complied with FOD visual inspection of first stage compressor blades. No defects noted at this time. Work done IAW P&WC maintenance manual chapter 72-30-05. Removal and installation of access panels done IAW Socata maintenance manual chapter 71-60-02.

The aircraft Airframe, Engine, Propeller, Appliance Identified Above Was Repaired And Inspected In Accordance With Current Regulation Of Federal Aviation Administration And Is Approved For Return To Service For the Work Performed. Permanent Records Of The Repair Are on File At This Repair Station Under W.O. # 6255, Date : 01/03/2018 Signature: [redacted] Dino Fantinato

CRS # [redacted] EASA. [redacted]

DAHER

FAA CRS #[redacted] / EASA.[redacted]

SOCATA North America, Inc.
601 NE 10th Street
Pompano Beach, FL 33060

Date : 04/11/2018

Serial Number : 252

Registration : N700AQ

Aircraft type : TBM 700

Meter Time: 3258.7 Hobbs

Time Since New : 3258.7

Cycle Since New : 3328

Work Order : 6326

- Eng. PT6A-64 S/N. PM-0140 TSN. 3258.7 CSN. 3328.
- Performed a Standard Program - A+/Annual inspection IAW TBM Maintenance manual chapters 05-20-02/05-20-05. 14 CFR 91.409(a)(1) and Part 43 Appendix D.
- Performed preliminary F.O.D. borescope inspection of engine first stage compressor blades, no defect noted.
- Performed engine minor inspection IAW P&WC maintenance manual chapter 72-00-00 Par. 8 Table 601, no defect noted.
- Performed ultrasonic cleaning P3 filter. Cleaned/Inspected P3 filter drain valve housing assy and filter bowl. Re-installed with new O-rings.
- Cleaned, inspected and re-installed oil filter with new O-rings.
- Inspected AGB scavenge pump inlet screen IAW P&WC Maintenance manual chapter 72-60-00, Par. 6-D, no foreign material found.
- Performed bridge check and continuity of chip detector, no defect noted.
- C/W 600 hrs. Cleaned, inspected and re-installed fuel pump inlet screen with new O-rings.
- C/W 600 hrs. Replaced fuel pump outlet filter with new P/N 3059779-01 and O-rings kit P/N 3033356.
- C/W P&WC SIL PT6A-213 Inspected compressor inlet case , no corrosion found. Applied approved corrosion inhibitor compound "Corrosion X" on inlet case area as required IAW P&WC EMM Section 72-00-00 as specified in P&WC Service Information Letter No. PT6A-213.
- Performed compressor, turbine desalination wash IAW Pratt & Whitney maintenance manual chapter 71-00-00.
- Replaced both igniters with new P/N CH34055.
- Performed engine run to determine satisfactory performance IAW the manufacturer's recommendations and leak checked, found satisfactory and no leak noted.

The aircraft ~~Airframe~~, Engine, ~~Propeller~~, Appliance Identified Above Was Repaired And Inspected In Accordance With Current Regulation Of Federal Aviation Administration And In Accordance With EASA 145.A.50 And Is Approved For Return To Service For the Work Performed. Permanent Records Of The Repair Are on File At This Repair Station Under W.O. # 6326, Signature [redacted] Kam Phongsavath, Date : 04/11/2018
CRS #[redacted] / EASA. [redacted]

I certify that this Engine has been inspected/repaired in accordance with "A +" inspection per Socata MM & Far 43 and IAW EASA-145 and determine to be in Airworthy condition. Pertinent details on file under W.O # 6326 and copy given to customer.
Aircraft T.T : 3258.7 Engine T.T : 3258.7 Prop T.T : 3258.7
Signature : [redacted] Kam Phongsavath
Date : 04/11/2018 CRS # [redacted] / EASA [redacted]

ENGINE LOG BOOK ENTRY

Date:	*06/12/2018*	**Registration:**	*N700AQ*	**Aircraft S/N:**	*252*
MODEL	*TMB700-C2*	**Engine**	*PT6A-64*	**Serial Number**	PCE-PM0140
ACTT:	*3285.7*	**Engine TT:**	*3286.1*	**ETC:3363**	**Ldgs: 3347**

THE FOLLOWING MAINTENANCE WAS PERFORMED:

1. Performed a visual inspection thru the exhaust of the second stage PT disk for a previous ITT exceedance recorded on the ETM Shadin, (start up level 1), ITT 833C for 12 seconds Ng 47.8 , Np 733 rpm, Fuel flow 24.9 GPH dated June 10-2018, found no defects at this time as per Pratt & Whitney MM chapter 72. Second Stage P.T blades shows signs of normal wear and use.

This aircraft was repaired/inspected in accordance with current manufacturer regulations and was found airworthy for return to service for work the performed.

Signe[redacted] A&P[redacted]

Jorge A Soto Vargas

Borescope Inspection Report

SOUTHEAST TURBINES
2600 NW 55th Court, Suite 240
Fort Lauderdale, Florida 33309
Tel: 954-491-8119
Fax: 954-491-8117
FAA CERTIFIED REPAIR STATION [redacted]

Date:	Engine Position:
07/16/2018	Single

Customer:	Work Order Number:	Aircraft Registration:	Hobbs:
Daher Aircraft, Inc.	TS7247	N700AQ	3297.5

Engine Model:	Engine Serial Number:	TSN:	TSO:	CSN:	CSO:
PT6A-64	PCE-PM0140	3297.5	N/A	3356	N/A

Summary:

Compressor Section:

The engine compressor section was inspected for general condition using a digital borescope inserted through the inlet screen on the right side of the engine. The 1st stage compressor shroud was found to have light surface corrosion. The 1st stage compressor blades were inspected; the blades showed signs of a blend repair on the leading edges of multiple blades. The 1st stage stator vanes appeared to be dirty and showed minor to moderate amounts of corrosion on the leading edges. Overall the compressor section looked to be in typical condition for time in service and operating conditions.

Hot Section:

Performed a borescope inspection on the hot section for general condition through the approximate 9 O'clock fuel nozzle port. The I.E. Duct was inspected and found to be in good condition with good coating colorization. The C.T. guide vane was found to have an area with coating bubbled up but is free from cracks at this time. The C.T. blades showed to be in good condition, light 1st stage sulphidation looks to be present on the faces of the blades. A few of the C.T. blades showed to have minor bubbling coating on the faces of the blades due to imperfections. These imperfections have been deemed acceptable per Pratt and Whitney. No C.T. blade tip rubs were noted on during inspection. The combustion liner was inspected, the cooling ring was found to have a few cracks. Moderate amounts of carbon build up were shown throughout the combustion liner. The P.T. Blades were found to be in good condition, there were no signs of erosion or corrosion observed at this time. The exhaust case was visually inspected externally and no discrepancies were found at this inspection. Overall the hot section appeared to be in relatively normal condition for engine model and operating environment.

Recommendations:

- Frequent Compressor and C.T. wheel water washes is recommended to reduce sulphidation deposits on the blades.
- Follow instructions in the Pratt & Whitney PT6A-64 Maintenance Manual, Section 72-00-00, "Corrosion Inhibition Procedure" to reduce the formation of surface corrosion.

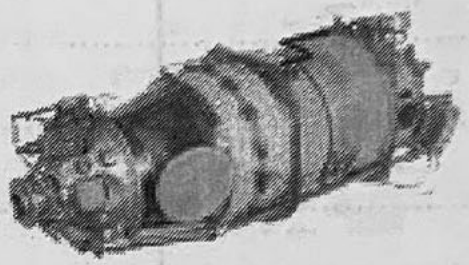
Conditions noted above reflect the general condition of the engine at this time without penetrating or disassembling the engine.
A Borescope inspection is a limited inspection.

Work Performed By:	Signature:	Date:
Trevor Osuna	Trevor Osuna	07/16/2018

SOUTHEAST TURBINES, CORP.

FAA CERTIFIED REPAIR STATION [redacted]

2600 N.W. 55th Court, Suite 240
Ft. Lauderdale, FL 33309
Tel: 954-491-8119
Fax: 954-491-8117



Engine Model: PT6A-64 **S/N:** PCE-PM0140 **Registration**: N700AQ
TSN: 3,297.5 **CSN:** 3,356 **HOBBS:** 3,297.5

Performed minor blend-repair on 1ea 1st stage compressor blade. Other Blend repairs were noted. All work was performed in accordance with manufacturer's specifications: Pratt & Whitney PT6A-64 Maintenance Manual, P/N 3038321, Revision #46 dated April 9, 2018.

The aircraft engine and components identified above were inspected in accordance with current regulations of the Federal Aviation Administration and are approved for return to service. Pertinent details of the above work are on file under work order #TS7247.

Date: July 16, 2018

Signed: [redacted] 7-16-18

Jason M. Messina for Repair Station # [redacted]

DAHER

FAA CRS # [redacted] / EASA. [redacted]

SOCATA North America, Inc.
601 NE 10th Street
Pompano Beach, FL 33060

Date : 07/18/2018	Serial Number : 252	Registration : N700AQ	Aircraft type : TBM 700
Meter Time: 500.5 Hobbs	Time Since New : 3297.5	Cycle Since New : 3356	Work Order : 6409

- Eng. PT6A-64 S/N. PM-0140 TSN. 3297.5 SHSI. 931.7 CSN. 3356.
- Performed preliminary F.O.D. borescope inspection of engine first stage compressor blades, found a minor dent on 1 blade. Blend-repair was performed by SouthEast Turbines, Corp. See their logbook entry W.O. TS7247, dated July 16, 2018.
- Removed and re-installed inertial separator, plenum panels and air inlet screen to facilitate the engine survey inspection. Engine survey inspection was accomplished by SouthEast Turbines, Corp. See attached their inspection report W.O. TS7247, dated July 16, 2018.
- C/W P&WC SIL PT6A-213 Inspected engine compressor inlet case for corrosion, no defect noted at this inspection. Applied an approved corrosion inhibitor compound "Corrosion X" on inlet case area as required IAW P&WC EMM Section 72-00-00 as specified in P&WC Service Information Letter No. PT6A-213.

The aircraft ~~Airframe~~, Engine, ~~Propeller~~, Appliance Identified Above Was Repaired And Inspected In Accordance With Current Regulation Of Federal Aviation Administration And In Accordance With EASA 145.A.50 And Is Approved For Return To Service For the Work Performed. Permanent Records Of The Repair Are on File At This Repair Station Under W.O. # 6409, Signature: [redacted] Kam Phongsavath, Date : 07/18/2018
CRS # [redacted] / EASA. [redacted]

BMG Jet Center

06/01/2019

952 S. Kirby Road Bloomington, IN 47403 Ph: 812-825-7979

REGISTRATION: **N700AQ**

ENGINE MAKE: **Pratt & Whitney** MODEL: **PT6A-64** S/N: **PCE-PM-0140**

AFTT: **3512.3** ETT: 3512.3 HOBBS: **715.3** LANDING CYCLES: **3587**

Perform Engine Minor Inspection IAW PW MM
Performed Borescope Evaluation of 1st stage compressor, CT Disk, CT Stater, Shroud Segments, Large Exit Duct, Combustion Liner, & Power Section Turbine Blades from Exhaust
Remove, Clean & Inspect P3 Filter & Reinstall
Remove, Clean & Inspect Oil filter & Reinstall
Perform Spark Ignitor Inspection
Inspect Ignitors
Inspect Engine Control Linkage
Inspect Scavenge Pump Inlet Screen
Inspect Carbon Beta Block

For all complete list of SC Inspections completed this date see Attached Status Sheet Dated 6/1/19.

I certify that this Engine has been inspected IAW FAR 43 Appendix "D" Annual / 100 HR Inspection and was determined to be in airworthy condition and returned for service.

Bob Burke [redacted] AP[redacted] IA