



Rolls-Royce

Rolls-Royce Corporation Model 250

250-C40B

CAE-867168

Engine log

Model	M250-C40B	Part #	23063378	Serial #	CAE-844168
Owner	McTurbine	TSN/CSN	1890.6/3121		
	Compressor	Part #	23065593	Serial #	CAC-45031
		TSN	1890.6	CSN	3121
		TSO	New	CSO	New
	Impeller	Part#	23065591	Serial #	JY102044
		TSN/CSN	1890.6/3121	TR/CR	5609.4/11879
	Gearbox	Part #	23063380	Serial #	CAG-44168
		TSN	1890.6	TSO	New
				TR	On Condition
	Turbine	Part #	23063354	Serial #	CAT-44756
		TSN	1890.6		1516.5/2509
		TSO	258.5	TR to OH	1491.5
	#1 Wheel	Part #	M250-10227	Serial #	X594662
		TSN/CSN	258.5/491	TR/CR	1516.5/2509
	#2 Wheel	Part #	23032280	Serial #	X610587
		TSN/CSN	258.5/491	TR/CR	1516.5/2509
	#3 Wheel	Part #	6898663	Serial #	HX93607
		TSN/CSN	1890.6/3121	TR/CR	1659.4/2879
	#4 Wheel	Part #	23066744	Serial #	HX76792
		TSN/CSN	1890.6/3121	TR/CR	1659.4/2879
	HMU	Part #	23078035	Serial #	JGALM0338
		TSN/O	1890.6	TR	609.4
	PMA	Part #	23064128	Serial #	A000-198
		TSN/O	On Condition	TR	On Condition
	CEFA	Part #	23066681	Serial #	0704-26
		TSN/O	On Condition	TR	On Condition
	Bleed Valve	Part #	23073353	Serial #	FF-36840
		TSN/O	1186.2	TR	313.8
	Fuel Nozzle	Part #	M250-10604	Serial #	INR03689
		TSN/O	49.4	TR	1950.6

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

2.

AUTHORIZED RELEASE CERTIFICATE

FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG

3. Form Tracking Number:
170328

4. Organization Name and Address:

Keystone Turbine Services, 885 Fox Chase, Suite 111, Coatesville, PA 19320 - Certificate No. 8MHR895B

5. Work Order/Contract/Invoice Number:
011374

6. Item:

7. Description:

1 Engine

8. Part Number:

23063378

9. Quantity:

1

10. Serial Number:

CAE-844168

11. Status/Work:

Tested

12. Remarks:

Functionally tested the engine IAW the Rolls-Royce C40B O&MM Manual Ed 1 Rev 18.

TSN: 1890.6

CSN: 3121

13a. Certifies the items identified above were manufactured in conformity to:

- Approved design data and are in a condition for safe operation.
- Non-approved design data specified in Block 12.

14a. 14 CFR 43.9 Return to Service Other regulation 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 Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service.

13b. Authorized Signature:

13c. Approval/Authorization No.:

14b. Authorized Signature:

14c. Approval/Certificate No.:

13d. Name (Typed or Printed):

13e. Date (dd/mm/yy):

14d. Name (Typed or Printed):

14e. Date (dd/mm/yy):

Keith Evans Jr

20/MAR/2017

8MHR895B

User/Installer Responsibilities

It is important to understand that the existence of this document alone does not automatically constitute authority to install the aircraft engine/propeller/article.

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 aircraft engine(s)/propeller(s)/article(s) from the airworthiness authority of the country 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.

AUTHORIZED RELEASE CERTIFICATE

FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG

3. Form Tracking Number: **Mtr Grp: SE1631301**

5. Work Order, Contract, or Invoice Number: **WO: EN107520**

6. Item	7. Description	8. Part Number	9. Eligibility*	10. Quantity	11. Serial/Batch Number	12. Status/Work
1	ENGINE	23063392	N/A	ONE	CAE-844168	REPAIRED
1	COMPRESSOR	23065593	N/A	ONE	CAC-45031	REPAIRED
1	GEARBOX	23063380	N/A	ONE	CAG-44168	INSPECTED
1	TURBINE	23063354	N/A	ONE	CAT-44756	OVERHAULED

13. Remarks: Repaired I.A.W. C40 Overhaul Manual, CSP22001, 2nd Ed., 12th Rev. dated 9/15/2011, & Tested I.A.W. C40 Ops & Maint. Manual, CSP21000, 1st Ed., 13th Rev. dated 12/15/2011.

Engine: TSN: 1632.1 TSO: NEW T/R: N/A C/R: N/A Replaced with Serviceable: None. Replaced with Service Bulletins/Modifications: CEB's A72-5031 R6, A72-5045 R1, 72-5058 R1, 73-5022, 73-5036, CSL A5010 R6, CSL 5094 R7, CSL 5131 R1. Previously Complied with Service Bulletins/Modifications: CEB's A72-5028 R2, 73-5020 R1, 73-5024. Gearbox: TSN: 1632.1 TSO: NEW T/R: N/A C/R: N/A Replaced with Serviceable: None. Replaced with Service Bulletins/Modifications: None. Previously Complied with Service Bulletins/Modifications: None. Performed a 1750 Hour Inspection & Tested with Engine CAE-844168. Compressor: TSN: 1632.1 TSO: NEW T/R: 1750 C/R: 12370 CSN: 2630 CSO: N/A Replaced with New: Spur Adapter Gearshaft, 2 1/2 Bearing Inner Race. Replaced with Serviceable: None. Complied with Service Bulletins/Modifications: CEB's 72-5038 R1, CSL A5010 R6, CSL 5069, CSL 5094 R7, 3500 Hr. Inspection. Previously Complied with Service Bulletins/Modifications: CEB's 72-5008 R2, 72-5021 R1, A72-5028 R2. Turbine: TSN: 1632.1 TSO: 0.0 T/R: 1750 C/R: 3000 CSN: 2630 CSO: 0 Replaced with New: Turbine Spline Adapter, G/P Turbine Aft Lab Seal, 1st Stage Wheel, 2nd Stage Wheel, P/T Outer Shaft, Turbine Shaft-to-Pinion Gear Coupling, Turbine-to-Compressor Coupling. Replaced with Serviceable: Tiebolt, 1st Stage Nozzle Shield, 1st Stage Turbine Nozzle, 2nd Stage Turbine Nozzle, P/T Support Assembly. Complied with Service Bulletins/Modifications: CEB's 72-5016 R1, A72-5031 R6, 72-5045 R1, A72-5044 R2, CSL 5107, CSL 5080 R1, CSL 5094 R7. Previously Complied with Service Bulletins/Modifications: CEB's A72-5043 R3.

4. Organization Name and Address: **ROLLS-ROYCE ENGINE SERVICES - OAKLAND INC.**
7200 Earhart Road
Oakland, California 94621 (VZ3R937L)

2. Approving National Aviation Authority/Country: **FAA/United States**

14. Certifies the items identified above were manufactured in conformity to:
 Approved design data and are in a condition for safe operation
 Non-approved design data specified in Block 13

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

15. Authorized Signature: _____
 20. Authorized Signature: *L. Gill*
 21. Approval/Certificate Number: **VZ3R937L**

16. Approval/Authorization No.: _____
 18. Date (m/d/y): _____
 22. Name (Typed or Printed): **L. Gill**
 23. Date (m/d/y): **May/17/2012**
 250 Production

Completion Date: May 17, 2012

Ship Short CIT Probe.

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 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.



Rolls-Royce Engine Services
 Gardena, California

FAA Repair Station #: VZ3R937L
 Test Program Tool #: 3.0.133
 Test Database Tool #: 1.0

Engine Model: A250-C40B
 Engine S/N: CAE-844168
 Customer: REP AIR AVIATION
 Work Order: EN107520A
 Mon Grp #1: SE1631301

Run #: 1

Test Cell: TC3
 Operator: Dave Moody
 Observer: Tim Gorse

Compressor	S/N	W/O	MNG # (hrs)
Turbine	CAC-46031	CT104959	SE1631301
Gearbox	CAG-44168	TT108292	SE1631301
	0 JGALM0338	EN107520	SE1631301
		JCSAME0393	JGALPC352

Date: 5/17/12
 Oil: Mobil Jet 254
 Fuel: Jet-A-50
 HPT Areas: 4.58,5.81,6.92,9.0 LPT Areas: 16.10,16.23,44,22,35

Test Inspection

PREDICTED DATA OPERATION AND MAINTENANCE MANUAL SPEC

Spec MG1 (F)	1263	1203	
Pred Shaft PWR @ Spec MG1 (hp)	739	552	
Spec Shaft PWR (hp)	715	552	460
Percent Delta From Spec PWR	3.3%	1.8%	0.0%
Predicted SFC (lbm/hp-hr)	0.574	0.591	0.605
Spec SFC (lbm/hp-hr)	0.584	0.594	0.638
Percent Delta From Spec SFC	-1.7%	-0.5%	-0.8%
Predicted Wf @ Spec MG1 (lbm/hr)	422	368	335

TMOP Callibration	78.1	(psi(g))	715.00	(hp)
TMOP PTS SPEC	78.6	(psi(g))	1.8	((psi(g))

POLYNOMIAL CURVE FIT

	INTERCEPT	1ST COEFF	2ND COEFF
HP-MGT	-6.046E+02	7.281E-01	1.938E-04
FUEL-MGT	-4.588E+01	9.427E-02	1.846E-04
FUEL-HP	1.076E+02	3.739E-01	6.920E-05
TMOP-HP	1.897E+00	1.066E-01	-
M1-HP	3.841E+04	2.473E+01	-9.805E-03

POINTS USED IN DETERMINING CURVE FIT DATA

Date	Time	Corrected MG1/TOT	Corrected SHP	Corrected Fuel Flow
17-May-12	08:16:00	1004.63	322.63	235.27
17-May-12	08:22:19	1075.96	400.28	268.75
17-May-12	08:28:33	1144.42	466.10	305.48
17-May-12	08:34:12	1205.86	555.20	336.00
17-May-12	08:41:27	1285.92	648.10	379.63
17-May-12	08:47:19	1346.37	727.40	415.92

1. Approving Civil Aviation Authority/Country: FAA/United States		2. <h1 style="text-align: center;">AUTHORIZED RELEASE CERTIFICATE</h1> <p style="text-align: center;">FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG</p>		3. Form Tracking Number: 170328	
4. Organization Name and Address: Keystone Turbine Services, 885 Fox Chase, Suite 111, Coatesville, PA 19320 - Certificate No. 8MHR895B		5. Work Order/Contract/Invoice Number: 011374		11. Status/Work: Tested	
6. Item: 1	7. Description: Engine	8. Part Number: 23063378	9. Quantity: 1	10. Serial Number: CAE-844168	
12. Remarks: Functionally tested the engine JAW the Rolls-Royce C40B O&MM Manual Ed 1 Rev 18. TSN: 1890.6 CSN: 3121					
13a. Certifies the items identified above were manufactured in conformity to: <input type="checkbox"/> Approved design data and are in a condition for safe operation. <input type="checkbox"/> Non-approved design data specified in Block 12.			14a. <input checked="" type="checkbox"/> 14 CFR 43.9 Return to Service <input type="checkbox"/> Other regulation 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 Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service.		
13b. Authorized Signature:		13c. Approval/Authorization No.:		14c. Approval/Certificate No.: 8MHR895B	
13d. Name (Typed or Printed):		13e. Date (dd/mm/yyy):		14d. Name (Typed or Printed): Keith Evans Jr	
User/Installer Responsibilities					
It is important to understand that the existence of this document alone does not automatically constitute authority to install the aircraft engine/propeller/article. 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 aircraft engine(s)/propeller(s)/article(s) from the airworthiness authority of the country 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.					



ROLLS-ROYCE MODEL 250 TEST CERTIFICATE

S/N OF UNIT TESTED: CAE844168

MODEL: C40B

WORK ORDER NO: 11374

DATE TESTED: 3/13/2017

SPECIFICATIONS AND PREDICTED DATA

	TAKEOFF	MAX CONT		
SPEC MGT (F)	1356	1263		
SPEC OUTPUT SHAFT POWER (hp)	715	613		
SPEC SFC (lbm/hp-hr)	.574	.591		
PRED SHAFT PWR AT SPEC MGT (hp)	738	621		
PRED SFC (lb/hp-hr)	.578	.599		
PERCENT DELTA FROM SPEC PWR (%)	3.2%	1.3%		
PERCENT DELTA FROM SPEC SFC (%)	-0.7%	-1.4%		
TORQUE METER OIL PRESSURE CALIBRATION	78.90	(psi(g))		715 (hp)
TORQUE METER OIL PRESSURE PTS SPEC	78.60	(psi(g))	+/-	1.81 (psig)

Passed per Table 2 power

TESTED BY: Tan Renko DATE: 3/17/17

Keystone Turbine Services
C.R.S. 8MHR895B



KEYSTONE TURBINE SERVICES
CRS 8MHR895B
ENGINE/COMPONENT MAINTENANCE REPORT

Customer McTurbine W.O Number 011374
Manufacturer Rolls-Royce Unit Engine Model 250-C40B S/N CAE-844168
Total Time (TT) 1890.6 Time Since Overhaul (TSO) TSN
Total Cycles (TC) 3121 Cycles Since Overhaul (CSO) CSN
Date Received 3/8/17 Date Completed 3/20/17

WORKSCOPE:

Functionally Test Engine

WORK PERFORMED:

Functionally tested. All work was performed in accordance with the following FAA approved data: Rolls-Royce's Commercial Engine Bulletins, and applicable Operation and Maintenance and Overhaul Manuals.

The article identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details of the repair are on file at this repair station under the work order referenced above.

Signature of Authorized Representative:

Date: 3/20/17



Rolls-Royce

Rolls-Royce Corporation
P.O. Box 420
Indianapolis, Indiana
46206-0420 USA

Dear Customer:

Congratulations on your purchase of a new turbine-powered aircraft. Since you are now the owner of a Rolls-Royce Corporation Model 250 gas turbine engine, we would like to take this opportunity to acquaint you with the services available for support of your engine.

We have established a worldwide network of Authorized Maintenance Centers (AMC's) to provide local access to technical assistance, technical representatives, training, service and maintenance information, engine inspection, repair, overhaul and warranty. Additionally, AMC's offer engine and module exchange and rental programs. These independent companies are established businesses recognized for their expertise in the gas turbine industry.

Provided with this letter is a copy of the latest *Rolls-Royce Corporation Model 250 Worldwide Authorized Maintenance Center Directory*. This directory describes Rolls-Royce Corporation customer support responsibilities, AMC's capabilities and lists their locations, telephone and fax numbers.

Please note that the first card (GT-11157-1) in the Engine Log Book details the procedure to receive the Operation and Maintenance Manual, Illustrated Parts Catalog, and complete sets of Commercial Engine Bulletins, and Commercial Service Letters, all of which are furnished free of charge to new owners of Rolls-Royce Corporation engines. Additionally, when this card is received at our office, you will automatically be registered to receive all future Commercial Engine Bulletin and Commercial Service Letter revisions applicable to your engine model free of charge. *Note: Revision service for the IPC and OMM is included for the first year; thereafter you must purchase manual revision service through Aviall, the single source Rolls-Royce Corporation Model 250 Parts Distributor, as described on this card.*

We would also like to remind you of the importance of providing proper maintenance for your new gas turbine engine. The Model 250 Operation and Maintenance Manuals that are provided should be utilized and its instructions followed explicitly. Special attention should be directed to the warnings and cautions summarized in the front section of your Operation and Maintenance Manual to assure safe and reliable operation. The operation of your gas turbine engine depends on proper operation and maintenance.

Thank you and again, congratulations.

Rolls-Royce Corporation
Model 250 Customer Support



Rolls-Royce

Certificate of Conformance

Rolls-Royce Corporation certifies that the Model 250 series engine shipped herewith was manufactured in accordance with all applicable specifications, drawings and procedures. This certificate shall be of no force or effect upon expiration of the warranty provision applicable to the purchase order.

Engine Serial No. CAE-844168

Purchase Order No. 875418

Daniel Vogel

Quality Assurance Department

FEBRUARY 5, 2001

Date



Rolls-Royce

Delivery Notification

There are pink cards ("Transfer of Ownership Card" GT-11157) included in this section which notify Rolls-Royce Corporation when a new owner accepts delivery of a used aircraft and a white card ("New Owner Registration" GT-11157-1) that notifies Rolls-Royce Corporation when an owner accepts delivery of a new aircraft. These cards are postage paid guaranteed (if mailed in the United States), pre-addressed, and only require completing and forwarding to Rolls-Royce Corporation as addressed. By sending in one of these completed cards, you will allow Rolls-Royce Corporation's support organization to serve you better. When the new owner card is received, Rolls-Royce Corporation will notify all Rolls-Royce Corporation Model 250 Authorized Maintenance Centers (AMC) in your geographical area who are capable of providing all operation, maintenance, and service for your Model 250 engine. Your participation will be greatly appreciated and will help us ensure you the best service possible.

GT-11156 (6/00)



Rolls-Royce Model 250-C40/C47 Series New Original Equipment Engine Warranty and Disclaimer Summary

Rolls-Royce warrants that Rolls-Royce through an authorized Rolls-Royce facility will repair or replace (at Rolls-Royce option) any Model 250-C40/C47 series new engine or new engine part sold by Rolls-Royce to an aircraft manufacturer for installation in a new aircraft which is returned to an authorized Rolls-Royce facility with transportation charges prepaid to and from an authorized Rolls-Royce facility and which has failed or malfunctioned, or at time of delivery, is deficient in material or workmanship or not in conformity with the applicable model specification effective at time of delivery to the aircraft manufacturer, subject, however to each of the following limitations and exclusions:

1. The period of this warranty for each model is limited as follows:
 - A. For new engines installed in new aircraft sold by the aircraft manufacturer as new (except for normal aircraft acceptance testing), twenty-four (24) months after date of delivery from the aircraft manufacturer or one thousand (1000) hours of operation or cycle limitation as defined in the appropriate Operations and Maintenance Manual, whichever period expires first.
2. Optional equipment not manufactured by Rolls-Royce and not a part of the basic engine assembly such as Engine Air Particle Separator and Auto Reignition Controls are excluded from this warranty. The only warranty applicable to these type components are those offered by the manufacturer of the component.
3. A notice in writing of a warranty claim must be given to Rolls-Royce or an authorized Rolls-Royce facility not later than 30 days after the claimed failure, malfunction or non-conformity is discovered and the new engine or new engine part must be returned to Rolls-Royce or an authorized Rolls-Royce facility not later than 90 days after such notification is made.
4. This warranty shall not apply to failures, malfunctions, or non-conformities of engine or engine parts attributable in whole or in part to the failure to preserve, install, operate, maintain, repair, replace or alter the same in accordance with applicable recommendations by Rolls-Royce or attributable in whole or in part to misuse, corrosion, erosion, neglect, or accident including foreign object damage whether in operation, in transit, or in storage; the replacement of maintenance items made in connection with normal maintenance, labor for removal and reinstallation of failed or malfunctioning of an engine is attributable in whole or in part to such part(s), this warranty is voided unless the Optional New Surplus Rolls-Royce Military Part Warranty has been purchased from Rolls-Royce.
5. The installation of a new surplus Rolls-Royce military part resold by the United States Government to the general public which meets all Federal Aviation Administration requirements will not void this warranty. However, if a failure or malfunction of an engine is attributable in whole or in part to such part(s), this warranty is voided unless the Optional New Surplus Rolls-Royce Military Part Warranty has been purchased from Rolls-Royce.
- 6.1 (PURCHASER) ACCEPTS AND AGREES THAT THE WARRANTIES GRANTED TO THE (PURCHASER) UNDER CLAUSE 5 OF THE PURCHASE CONTRACT AND, SO FAR AS THEY RELATE TO THE SUPPLIES AND EQUIPMENT, THE PRODUCT ASSURANCE GUARANTEES GRANTED TO THE (PURCHASER) UNDER CLAUSE 4 HEREOF ARE EXCLUSIVE AND ARE EXPRESSLY IN LIEU OF AND THE (PURCHASER) HEREBY WAIVES, RELEASES AND DISCLAIMS (I) ALL OTHER CONDITIONS AND WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OF FITNESS, AND ANY IMPLIED WARRANTY ARISING FROM COURSE OF PERFORMANCE, COURSE OF DEALING OR USAGE OF TRADE, (II) ALL OTHER OBLIGATIONS AND LIABILITIES WHATSOEVER OF ROLLS-ROYCE WHETHER IN CONTRACT, WARRANTY OR TORT (INCLUDING WITHOUT LIMITATION, NEGLIGENCE, ACTIVE, PASSIVE OR IMPUTED LIABILITY OR STRICT LIABILITY) OR BY STATUTE OR OTHERWISE FOR ANY NON-CONFORMANCE, DEFECT, DEFICIENCY, FAILURE, MALFUNCTIONING, OR FAILURE TO FUNCTION OF ANY ITEM OF THE SUPPLIES OR OF THE EQUIPMENT REFERRED TO IN CLAUSE 5.2 OF THE PURCHASE CONTRACT, (III) STRICT LIABILITY OR PRODUCT LIABILITY, AND (IV) ALL DIRECT, INDIRECT, SPECIAL, CONSEQUENTIAL AND INCIDENTAL DAMAGES OF ANY NATURE WHATSOEVER, AND THE (PURCHASER) AGREES THAT ROLLS-ROYCE SHALL NOT BE LIABLE TO THE (PURCHASER) UPON ANY CLAIM THEREFOR OR UPON ANY CLAIM HOWSOEVER ARISING OUT OF THE MANUFACTURE OR SUPPLY OR INSPECTION BY ROLLS-ROYCE OR ANY OF ITS AFFILIATES OF ANY ITEM OF THE SUPPLIES OR OF THE EQUIPMENT REFERRED TO IN CLAUSE 5.2 OF THE PURCHASE CONTRACT WHETHER IN CONTRACT, WARRANTY OR TORT (INCLUDING WITHOUT LIMITATION, NEGLIGENCE, ACTIVE, PASSIVE OR IMPUTED LIABILITY OR STRICT LIABILITY) OR BY STATUTE OR OTHERWISE, EXCEPT AS EXPRESSLY PROVIDED IN THE WARRANTIES, AND THE (PURCHASER) ASSUMES ALL RISK AND LIABILITY WHATSOEVER NOT EXPRESSLY ASSUMED BY ROLLS-ROYCE IN THE WARRANTIES.

- 6.2 ROLLS-ROYCE AND THE (PURCHASER) AGREE THAT THIS CLAUSE 6 HAS BEEN THE SUBJECT OF DISCUSSION AND NEGOTIATION, IS FULLY UNDERSTOOD BY THE PARTIES AND THE PRICE OF THE SUPPLIES AND OTHER MUTUAL AGREEMENTS OF THE PARTIES SET FORTH IN THE PURCHASE CONTRACT AND THIS CONTRACT ARE ARRIVED AT HAVING DUE REGARD TO:
 - 6.2.1 THE EXPRESS WARRANTIES OF ROLLS-ROYCE AND THE (PURCHASER'S) RIGHTS THEREUNDER; AND
 - 6.2.2 THE EXCLUSIONS, WAIVERS AND LIMITATION SET FORTH IN CLAUSE 6.1 ABOVE.
 - 6.3 IN THE CASE OF ANY CONFLICT BETWEEN THIS CLAUSE 6 AND CLAUSE 5 OF THE PURCHASE CONTRACT, THE PROVISIONS OF THIS CLAUSE 6 SHALL PREVAIL.
7. The obligations of Rolls-Royce under this warranty are limited to repair or replacement (at Rolls-Royce option) of engines or engine parts as provided herein and do not include any remedy or liability for incidental or consequential damages of any kind, whether for damage or other property, for costs or expenses of operation of engines, for commercial losses or lost profits due to loss of use or grounding of engines or aircraft or otherwise.

In no event, whether as a result of breach of contract or warranty, alleged negligence or otherwise, shall Rolls-Royce be liable for special or consequential damages including, but not limited to, loss of profits or revenue, loss of use of the engine or engine parts or other equipment, cost of capital, cost of substitute equipment, facilities or services, downtime costs, or claims of customers of buyer(s) for such damages.

Rolls-Royce Model 250-C40/C47 Series New Spare Engine and New Spare Part Warranty and Disclaimer



WARRANTY

Rolls-Royce warrants that Rolls-Royce through an authorized Rolls-Royce facility will repair or replace (at Rolls-Royce option) any Model 250-C40/C47 series new engine or new engine part sold by an authorized Rolls-Royce facility for installation in a certified aircraft which is returned to an authorized Rolls-Royce facility with transportation charges prepaid to and from an authorized Rolls-Royce facility and which has failed or malfunctioned, or at time of delivery, is deficient in material or workmanship or not in conformity with the applicable model specification effective at time of delivery to an authorized Rolls-Royce facility, subject, however to each of the following limitations and exclusions:

1. The period of this warranty for each model is limited as follows:
 - A. New spare engines and new spare engine parts which have been preserved in accordance with published Rolls-Royce procedures twenty-four (24) months from date of installation or one thousand (1000) hours of operation or cycle limitation as defined in the appropriate Operations and Maintenance Manual, whichever period expires first, if installed within three (3) months after date of shipment from an authorized Rolls-Royce facility. Installations occurring after more than three (3) months from date of shipment from an authorized Rolls-Royce facility will be twenty-seven (27) months from date of shipment or one thousand (1000) hours of operation or cycle limitation as defined in the appropriate Operations and Maintenance Manual, whichever period expires first.
2. Optional equipment not manufactured by Rolls-Royce and not a part of the basic engine assembly such as Engine Air Particle Separator and Auto Recognition Controls are excluded from this warranty. The only warranty applicable to these type components are those offered by the manufacturer of the component.
3. A notice in writing of a warranty claim must be given to Rolls-Royce or an authorized Rolls-Royce facility not later than 30 days after the claimed failure, malfunction or non-conformity is discovered and the new engine or new engine part must be returned to an authorized Rolls-Royce facility not later than 90 days after such notification is made.
4. This warranty shall not apply to failures, malfunctions, or non-conformities of engine or engine parts attributable in whole or in part to the failure to preserve, install, operate, maintain, repair, replace or after the same in accordance with applicable recommendations by Rolls-Royce or attributable in whole or in part to misuse, corrosion, erosion, neglect, or accident including foreign object damage whether in operation, in transit, or in storage; the replacement of maintenance items made in connection with normal maintenance, labor for removal and reinstallation of failed or malfunctioning engine or engine parts; any such engine or engine part which has been repaired by other than an authorized Rolls-Royce facility so as in any way to adversely affect the engine or part performance or reliability.
5. The installation of a new surplus Rolls-Royce military part resold by the United States Government to the general public which meets all Federal Aviation Administration requirements will not void this warranty. However, if a failure or malfunction of an engine is attributable in whole or in part to such part(s), this warranty is voided unless the Optional New Surplus Rolls-Royce Military Part Warranty has been purchased from Rolls-Royce.
- 6.1 (PURCHASER) ACCEPTS AND AGREES THAT THE WARRANTIES GRANTED TO THE (PURCHASER) UNDER CLAUSE 5 OF THE PURCHASE CONTRACT AND, SO FAR AS THEY RELATE TO THE SUPPLIES AND EQUIPMENT, THE PRODUCT ASSURANCE GUARANTEES GRANTED TO THE (PURCHASER) UNDER CLAUSE 4 HEREOF ARE EXCLUSIVE AND ARE EXPRESSLY IN LIEU OF AND THE (PURCHASER) HEREBY WAIVES, RELEASES AND DISCLAIMS (I) ALL OTHER CONDITIONS AND WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR OF FITNESS, AND ANY IMPLIED WARRANTY ARISING FROM COURSE OF PERFORMANCE, COURSE OF DEALING OR USAGE OF TRADE, (II) ALL OTHER OBLIGATIONS AND LIABILITIES WHATSOEVER OF ROLLS-ROYCE WHETHER IN CONTRACT, WARRANTY OR TORT (INCLUDING WITHOUT LIMITATION, NEGLIGENCE, ACTIVE, PASSIVE OR IMPUTED LIABILITY OR STRICT LIABILITY) OR BY STATUTE OR OTHERWISE FOR ANY NON-COMFORMANCE, DEFECT, DEFICIENCY, FAILURE, MALFUNCTIONING, OR FAILURE TO FUNCTION OF ANY ITEM OF THE SUPPLIES OR OF THE EQUIPMENT REFERRED TO IN CLAUSE 5.2 OF THE PURCHASE CONTRACT, (III) STRICT LIABILITY OR PRODUCT LIABILITY, AND (IV) ALL DIRECT, INDIRECT, SPECIAL, CONSEQUENTIAL AND INCIDENTAL DAMAGES OF ANY NATURE WHATSOEVER, AND THE (PURCHASER) AGREES THAT ROLLS-ROYCE SHALL NOT BE LIABLE TO THE (PURCHASER) UPON ANY CLAIM THEREFOR OR UPON ANY CLAIM HOWSOEVER ARISING OUT OF THE MANUFACTURE OR SUPPLY OR INSPECTION BY ROLLS-ROYCE OR ANY OF ITS AFFILIATES OF ANY ITEM OF THE SUPPLIES OR OF THE EQUIPMENT REFERRED TO IN CLAUSE 5.2 OF THE PURCHASE CONTRACT WHETHER IN CONTRACT, WARRANTY OR TORT (INCLUDING WITHOUT LIMITATION, NEGLIGENCE, ACTIVE, PASSIVE OR IMPUTED LIABILITY OR STRICT LIABILITY) OR BY STATUTE OR OTHERWISE, EXCEPT AS EXPRESSLY PROVIDED IN THE WARRANTIES, AND THE (PURCHASER) ASSUMES ALL RISK AND LIABILITY WHATSOEVER EXPRESSLY ASSUMED BY ROLLS-ROYCE IN THE WARRANTIES.
- 6.2 ROLLS-ROYCE AND THE (PURCHASER) AGREE THAT THIS CLAUSE 6 HAS BEEN THE SUBJECT OF DISCUSSION AND NEGOTIATION, IS FULLY UNDERSTOOD BY THE PARTIES, AND THE PRICE OF THE SUPPLIES AND OTHER MUTUAL AGREEMENTS OF THE PARTIES SET FORTH IN THE PURCHASE CONTRACT AND THIS CONTRACT ARE ARRIVED AT HAVING DUE REGARD TO:
 - 6.2.1 THE EXPRESS WARRANTIES OF ROLLS-ROYCE AND THE (PURCHASER'S) RIGHTS THEREUNDER; AND
 - 6.2.2 THE EXCLUSIONS, WAIVERS AND LIMITATION SET FORTH IN CLAUSE 6.1 ABOVE.
- 6.3 IN THE CASE OF ANY CONFLICT BETWEEN THIS CLAUSE 6 AND CLAUSE 5 OF THE PURCHASE CONTRACT, THE PROVISIONS OF THIS CLAUSE 6 SHALL PREVAIL.
7. The obligations of Rolls-Royce under this warranty are limited to repair or replacement (at Rolls-Royce option) of engines or engine parts as provided herein and do not include any remedy or liability for incidental or consequential damages of any kind, whether for damage to airframe or other property, for costs or expenses of operation of engines, for commercial losses or lost profits due to loss of use or grounding of engines or aircraft or otherwise.

In no event, whether as a result of breach of contract or warranty, alleged negligence or otherwise, shall Rolls-Royce be liable for special or consequential damages including, but not limited to, loss of profits or revenue, loss of use of the engine or engine parts or other equipment, cost of capital, cost of substitute equipment, facilities or services, downtime costs, or claims of customers of buyer(s)) for such damages.

TRANSFER OF OWNERSHIP CARD

WHEN ENGINE OR AIRCRAFT OWNERSHIP HAS CHANGED (NOT FOR DELIVERY TO NEW, ORIGINAL OWNER) PLEASE COMPLETE THIS CARD AND RETURN TO ROLLS-ROYCE CORPORATION AS ADDRESSED

New Owner Name, Address, Phone & Fax:

Aircraft Make & Model:

Engine Model	Serial Number
1)	1)
2)	2)
Engine TT and/or TSO:	
1)	2)

GT-11157 (6/00)

TRANSFER OF OWNERSHIP CARD

WHEN ENGINE OR AIRCRAFT OWNERSHIP HAS CHANGED (NOT FOR DELIVERY TO NEW, ORIGINAL OWNER) PLEASE COMPLETE THIS CARD AND RETURN TO ROLLS-ROYCE CORPORATION AS ADDRESSED

New Owner Name, Address, Phone & Fax:

Aircraft Make & Model:

Engine Model	Serial Number
1)	1)
2)	2)
Engine TT and/or TSO:	
1)	2)

GT-11157 (6/00)



Rolls-Royce



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL
FIRST CLASS PERMIT NO. 404 INDIANAPOLIS, IN

POSTAGE WILL BE PAID BY ADDRESSEE

Rolls-Royce Corporation
Program Manager, Speed Code P36
Model 250 Engines
P.O. Box 420
Indianapolis, IN 46206-0420



Rolls-Royce



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Program Manager, Speed Code P36
Model 250 Engines
P.O. Box 420
Indianapolis, IN 46206-0420





Rolls-Royce

INSTRUCTIONS

1. The pages in this engine log book are color coded as follows:

- White - Engine Assembly
- Blue - Compressor Assembly
- Canary - Gearbox Assembly
- Cherry - Turbine Assembly
- Green - Propeller Reduction Gearbox Assembly (Turboprop Engines Only)
- Beige - Engine Accessories
- Orange - Individual TBO Extension Records (Supplied by Distributor when Applicable)

2. Keep the pages that have entries upon them in the front of the book in the order mentioned above. Keep the spare blank pages in the back of the book behind the engine test log envelope.
3. As new pages are added, number them in numerical order.
4. There is no Part V for the Gearbox Assembly.

IMPORTANT

5. All records must stay with a given assembly as follows:
 - a. When an engine assembly is transferred to any activity for overhaul, repair, warranty claim, etc, the entire log book must accompany the engine assembly.
 - b. When a compressor assembly, gearbox assembly, or turbine assembly is transferred to another activity for overhaul, repair, warranty claim, etc, all pages for that assembly that have entries upon them must be removed from the log book and accompany that assembly to its destination.
 - c. The replacement assembly received will be accompanied by its own log book data. (A complete log book will accompany each engine assembly; appropriate log book pages will accompany each replacement compressor, gearbox, or turbine assembly shipped from Rolls-Royce Corporation.)
 - d. The applicable TBO extension page (orange) must always accompany the unit being returned for overhaul at the end of its extension period.
6. Make all log book entries promptly.
7. Additional log book pages can be ordered from your authorized Rolls-Royce Corporation distributor.

F-9825 (6/00)

ROLLS-ROYCE CORPORATION MODEL 250 SERVICE PROTECTION PLAN



Rolls-Royce

OVERVIEW

SPP

Optional to the standard Rolls-Royce Corporation engine warranty is our Service Protection Plan (SPP). The purpose of the SPP is to: (1) provide you with a fixed engine cost over extended periods of time; (2) allow for a more accurate cost prediction; and (3) avoid unplanned costs associated with unscheduled maintenance events. As such, SPP provides the following basic coverage by Rolls-Royce Corporation:

- Line maintenance replacement parts (e.g., igniters, fuel nozzles, etc.).
- Scheduled and unscheduled maintenance, including shop labor, parts and consumables.
- Life-limited parts.
- Incorporation of alert service bulletins as soon as possible and recommended bulletins at time of next repair; includes labor, parts and consumables.
- Loaner engines available (at plan rate).
- Availability of unit exchange line replaceable units.
- Continuous spare parts replenishment.

Typically, these services would be provided through the Rolls-Royce Corporation Authorized Maintenance Center (AMC).

Your responsibilities include:

- Line maintenance/inspection labor.
- Removal and installation labor, for scheduled and unscheduled removals.
- Support equipment and tools as specified in Rolls-Royce Corporation technical manuals.
- Submittal of plan reports.

GT-11182-1(F) (6/00)

**Rolls-Royce Corporation
Model 250 Service Protection Plan (cont'd)**



Rolls-Royce

SPP

For the following coverage, you pay a monthly fee based on the hours flown in a given month multiplied by a specific dollar rate per engine flight hour.

<u>Support Elements</u>	<u>Rolls-Royce Corporation</u>	<u>Operator</u>
Spare Engine(s)	X	—
Spare Parts	X	—
Support Equipment & Tools	—	X
Maintenance Training (Tuition)	X	—
Technical Publications	X	—
<u>Line Maintenance And Inspections</u>		
Labor	—	X
Part Replenishment Including Consumable Parts	X	—
Shipment Cost of Engine Units	X	—
<u>Repair, HSL, and OH at AMC</u>		
Labor	X	—
Parts Replenishment - Including Consumable Parts	X	—
Life Limited Parts Replenishment	X	—
Parts Repair & Modification	X	—
Shipment Cost of Engine Units	X	—
<u>Recommended CEB's</u>		
Parts - Including Consumable Parts	X	—
Labor	X	—

PUBLICATIONS AND REVISIONS



Rolls-Royce

- CSL Is a Commercial Service Letter. Contains information to supplement the O & M Manual. (MOST CSL'S ARE FAA APPROVED).
- CEB Is a Commercial Engine Bulletin. Contains information to inspect or modify engine hardware in conjunction with O & M Manual. (CEB'S ARE FAA APPROVED).
- O & M MANUAL Is the Operation and Maintenance Manual. Per FAR 43-13, each person performing maintenance shall use method, techniques, and practices prescribed in the current manufacturer's maintenance manual. (THE O & M MANUAL IS FAA APPROVED).
- IPC Is the Illustrated Parts Catalog. (IPC IS BASED ON FAA APPROVED DATA).
- To Operate as well as maintain your engine properly and safely, you must refer to all of the above publications.
- IT IS THE OWNER'S/OPERATOR'S RESPONSIBILITY TO CONTACT ROLLS-ROYCE CORPORATION TO INITIATE AND MAINTAIN DISTRIBUTION OF THESE PUBLICATIONS AND THEIR REVISIONS.

THEY ARE NOT DISTRIBUTED AUTOMATICALLY!



Place
Stamp
Here

Aviall, Inc.
Attn: Technical Publications
2055 Diplomat Dr.
Dallas, TX 75234 USA

Service Record Engine Assembly



Part I
Page No.

Engine Serial Number CAE- 844168

Engine Model 250- C40B

Date	Installed				Removed			
	A/C/S/N	Engine Time		Date	Engine Time		Reason	
		Reg. #	Since OH		Since OH	Total		
02-23-2001	49076 N430NM	NEW	0.0					
8-18-2015	49076 FA10 3071	NEW	1632.1	16-09-2014	TSN	1841.2	Repair	
			CSN: 3031 1841.2	19-April-2016	TSN	CSN: 3021 1890.6	Repair	
			SD: 3121 1890.6					

F-2782AT (5/99)

**AD Note Compliance
and
CEB Modification Record
Engine Assembly**



Part III
Page No.

Engine Serial Number CAE-844168 Engine Model 250-C40B

AD #	Applicable CEB #	Date		Method of Compliance	One Time	Recurring	Next Comp. Date		Signature and Certificate Number
		Hours @ Comp.					Next Comp. @ Hrs		
None Applicable	See enclosed list	02-05-01 0.0		Incorporated at Manufacturer	X		N/A		Rolls-Royce
	A72-5027	05-30-2001 5.9		Inspection of self sealing magnetic chip detectors.		X	55.9		<i>John J. Scher</i> BHTC 40 APRR 1-86
	CEB 73-5023	2/2/04 848.0		HMU-replace N/A by P/N	X		N/A		YKER025K
	CEB 73-5025	2/2/04 848.0		HMU-replace	X				YKER025K
	CEB 73-5027	2/2/04 848.0		New ECU	X				YKER025K
	CEB A-73-5021	3/3/04 848.0		DIR BY INSTRUCTION OF P.A. SIGNAL		X			CAU-AIR QCOR576Y
	A-73-5027	02-15-07 1153.8		N/A BY P/N OF NOZZLE INSTALLED			N/A		QCOR576Y
	A-72-5062	02-15-07 1153.8		N/A BY SN			N/A		QCOR576Y
	CEB A72-5031 R6	5/17/12 1632.1		REPLACE 1ST STAGE NOZZLE SHIELD			N/A		CAU-AIR QCOR576Y <i>John J. Scher</i> VZ3R937L

GT-2786DT (5/00)

AD Note Compliance and CEB Modification Record Engine Assembly



Rolls-Royce

Part III
Page No.

Engine Serial Number CAE- 844168

Engine Model 250- C40B

AD #	Applicable CEB #	Date		Method of Compliance	One Time	Recurring	Next Comp. Date		Signature and Certificate Number
		Hours @ Comp.	@ Comp.				Next Comp. @ Hrs	Hrs	
	CEB A72-5045 R1	5/17/12		NEW 2ND STG SPLINED ADAPTER & LOCK NUT					<i>[Signature]</i> VZ3R937L
		1632.1							
	CEB 72-5058 R1	5/17/12		REPLACE #2 BEARING					<i>[Signature]</i> VZ3R937L
		1632.1							
	CEB 73-5022	5/17/12		RELEASE OF FLARED FUEL LINE SEALS					<i>[Signature]</i> VZ3R937L
		1632.1							
	CEB 73-5036 R2	5/17/12		HMU-ONE TIME TORQUE OF METERING HEAD BOLT					<i>[Signature]</i> VZ3R937L
		1632.1							
	CSL A5010 R6	5/17/12		INSPECT COMP. ROTOR & SPLINED ADAPTER					<i>[Signature]</i> VZ3R937L
		1632.1							
	CSL 5094 R7	5/17/12		USE OF UNAPPROVED PARTS ENGINE					<i>[Signature]</i> VZ3R937L
		1632.1							
	CSL 5131 R1	5/17/12		NON-INTRUSIVE GEAR INSPECTION					<i>[Signature]</i> VZ3R937L
		1632.1							
	PCW'S- CEB'S A72-5028 R2, CEB-72-5046	5/17/12		73-5020 R1, 73-5024.					<i>[Signature]</i> VZ3R937L
		1632.1							
		June 25, 2015		Gear box Assy CAG-44168					<i>[Signature]</i> PCW'S-CEB'S
		1841.2		Replacement of Breather Gauge Seal	X				

GT-2786DT (5/99)

Ad Note Compliance and Ceb Modification Record Engine Assembly



Part III
Page No. C408

Engine Serial Number CAE 841168 Engine Model 250- C408

AD #	Applicable CEB #	Date		Method of Compliance	Recurring	Next Comp. Date		Signature and Certificate Number
		Hours @ Comp.				Next Comp. @ Hrs		
	CEB-72-5647	12 Sept 2016		Release of New centrifugal Breather (Gearsurfer with May/2014 coating)			27/A	Jane Koye M111125628
		1990.6			X		27/A	

GT-2786D (12/98)



Ad Note Compliance and Ceb Modification Record Engine Assembly

Part III
Page No. _____

Engine Serial Number CAE- Engine Model 250-

AD #	Applicable CEB #	Date Hours @ Comp.	Method of Compliance	Recurring		Signature and Certificate Number
				One Time	Next Comp. Date Next Comp. @ Hrs	

GT-2786D (12/98)

Inspection - Maintenance - Overhaul Record Engine Assembly



Rolls-Royce

Part IV
Page No. /

Engine Serial Number CAE- 844168

Engine Model 250- C40B

Date	Engine Time		Remarks	Signature and Certificate No.	Organization
	Since OH	Total			
02-05-01	New	0.0	Fuel system preserved with MIL-0-6081 oil.	<i>F. Brubaker</i>	Rolls-Royce
02-23-2001	NEW	0.0	FUEL SYSTEM DEPRESERVED		BHTC CO APPR 1-E
01-6-2001	TT	25.4	Installed Studin Company Fuel	<i>Walter D. Gault</i>	Edwards
	Cycles	47	Flow Transducer Part # SFS7834		FKFR930D
			and Studin Installation Report No. 4014-2.		
			Ref: w/o C05222A11		
12-19-01	TT	102.6	Drained & reconditioned oil with Rayco 510	<i>CLARK</i>	Edwards
	Cycles	153	Replaced CEFF oil filter. PIN 23000097.		FKFR930D
			Ref: w/o C013155FA		
2-8-02	TSN	127.1	Performed 150 Hour inspection per	<i>TKR</i>	Edwards
	Cycles	169	Rolls-Royce C40B Maintenance Manual.		FKFR930D
			Drained & new service oil with		
			Rayco 510. Washed compressor.		

Continued on back of page

GT-2784AT(5/00)

Inspection - Maintenance - Overhaul Record Engine Assembly



Part IV
Page No. 2

Engine Serial Number CAE- 844168

Engine Model 250- C40B

Date	Engine Time		Remarks	Signature and Certificate No.	Organization
	Since OH	Total			
<u>2-8-02</u> <i>entry continued</i>	<u>TSN</u>	<u>127.1</u>	<u>Oil filter checked 175cc. Power</u>	<i>[Signature]</i>	<u>Edwards</u>
	<u>Cycles</u>	<u>169</u>	<u>check performed 110, Ref: us0 001471EA</u>		<u>FKFR9300</u>



12 MAY, 2002
Aircraft BELL 430 S/N 49076 Acft TT 284.9 hrs. TQ events: 474
Eng. S/N CAE844161 w/372 cycles & CAE844168 w/437 cycles.
Performed 300 hrs. inspection schedule on engines. Inspected, cleaned & reinstalled oil filter, installed new C.E.F.A. Oil filter element, drained oil and reserviced with 560 Royco. Leak & operational checks satisfactory. Engine returned back to service all maintenance work done I.A.W. Roll & Royce manuals and FAA directives. Pertinent details on this maint. work on file at this station under W.O.# 060302-4AG.
FAA Repair Station E0FR278Y

[Signature]
Gilberto Rodriguez A&P 683578734

Inspection - Maintenance - Overhaul Record Engine Assembly



Part IV
Page No. 3

Engine Serial Number CAE- Engine Model 250-

Date	Engine Time		Remarks	Signature and Certificate No.	Organization
	Since OH	Total			

ECOLIFT
Corporation

17 Oct. 2002
 Aircraft BELL 430 S/N49076 Acft TT 429.5 hrs. IQ events: 903
 Eng. S/N CAE844168 w/519 cycles.
 Performed 150 hrs. inspection schedule on engines. Inspected, cleaned & reinstalled oil filter. Leak & operational checks satisfactory. Engine returned back to service all maintenance work done I.A.W. Roll & Royce manuals and FAA directives. Pertinent details on this maint. work on file at this station under W.O.# 2K1014-4AG.
 FAA Repair Station EOPR278Y

Gilberto Rodriguez
 Gilberto Rodriguez A&P 583578734

GT-2784A (12/98)

Date: March 12, 2003
CAV-AIR w/o # H4369
Bell 430 Reg: N304AG S/N: 49076
Acft total time: 575.0 hours Torque event: 1359 Landings: 1259
#2 Engine: CAE-844168 Engine total time: 575.0 Engine cycles: 698

Engi

Performed a 150 / 300 hour engine inspection on # 2 engine CAE-844168 per Allison 250-C40B inspection guide chapter 72-00-00 table 603 & 604.

Performed a 600 hour / 6 month servicing of engine per BHT-430-MM-2 servicing chart figure 12-1. Changed engine oil & serviced with Royco 560 oil, installed a new CEFA oil filter p/n: 23066697 on engine.

Checked for new AD's thru Bi-weekly 2003-2 (no new AD's were found).

Installed a repaired HMU p/n: 23075496 s/n: JGALM0338 with a total time of 992.7 hours on #2 engine s/n: CAE-844168. Repair of this HMU was done by Goodrich Pump & Engine Control Systems Inc. under work order # 93630. Bleed fuel system and parked piston of HMU.

NOTE: re-compliance of CEB A-73-5021 is due on this HMU s/n: JGALM0338 at engine total time of 860 S
Performed power assurance check on engine, # 2 eng is a + 3

Installed a new spark igniter lead assembly p/n: 23060816 s/n: JH-0201710 on # 2 eng.

Small amount of FOD was found on # 2 engine s/n: CAE-844168 compressor impeller leading edge. Repaired (dressed out) effected areas of compressor's impeller leading edges I/A/W Allison 250-C40B service manual chapter 72-30-00 pages 221, 223 and figure 209.

I certify that this Engine has been inspected in accordance with a 150/300 hr inspection and was determined to be in Airworthy condition. Date 3-12-03 W.O. # H4369 A/O Hrs 575.0
CAV-AIR INC. Fort Lauderdale Executive Airport, Fla. FAA Repair Station QCOR536Y

Authorized Signature

Richard Droll

ENGINE LOG

10 A/S

MODEL NO.

RETIREMENT TIME

SERIAL NO.

OVERHAUL INTERVAL

DATE	TIME IN AIR		INSPECTION & MAINTENANCE REMARKS	SIGNATURE AND LICENSE NUMBER
	HRS	MIN		
			<p style="text-align: center;">ECOLIFT Corporation</p> <p>07/31/03 Bell 430 Reg # N304AG S/N:49076 TTime:697.0 hrs TQ 1802 Eng. S/N: CAE844168 Total Cyc:873</p> <p>I Certify the Maintenance work performed on this aircraft has been I.A.W. manufacturers Maint. Manuals. Performed 150hrs Insp. Inspected Cleaned & re-installed int. oil filter . Installed new CEFA oil filter change oil re-serviced w. Royco 560 oil. Leak and operational checks satisfactory</p> <p>All Maint: work done I.A.W. current FAA regulations and applicable standards of airworthiness. Acft. was found to be in an airworthy condition for return to service. Pertinent details on file at Ecolift Corp. FAA repair station # ECR-8278Y under WO# 2K1042-4AG</p> <p><i>Gilberto Rodriguez</i> Gilberto Rodriguez A&P 583578734</p>	
TOTAL FORWARD				
TOTAL TO DATE				

S-432 (FORM 1582D)
(8/13/90)



KEYSTONE HELICOPTER SERVICES
1420 PHOENIXVILLE PIKE • WEST CHESTER, PA 19380

INSPECTION -- MAINTENANCE OVERHAUL RECORD ENGINE ASSEMBLY

Part IV
Page No. 7

Engine Serial Number CAE844168 Engine Model 250-C40B

ALBE 681-3

Date	Engine Time		Remarks	Signature	Organization
	Since OH	Total			
2/2/04	TSN	848.0	Inspected and repaired due to low power. Performed 150/300 hour inspections. Tested per the manufacturer's specification		
	CSN	1087			
<p>The powerplant or component identified herein was repaired and inspected in accordance with current Federal Aviation Regulations, and was found airworthy for return to service. Pertinent details of the repairs are on file at this agency under: KEystone ENGINE SERVICES CRS #YKER025K 110 STEWART HUSTON DR. COATESVILLE, PA 19320 A Division of Keystone Helicopter Corp.</p>					
<p>W.O. No. <u>A04150</u> Date <u>2/2/04</u> for _____</p>					
<p>Signed <u>Timothy A. Holt</u></p>					
<p><i>(The remainder of the table is crossed out with a large diagonal line.)</i></p>					



KEYSTONE HELICOPTER SERVICES
1420 PHOENIXVILLE PIKE • WEST CHESTER, PA 19380

INSPECTION — MAINTENANCE OVERHAUL RECORD ENGINE ASSEMBLY

Date: March 3, 2004
CAV-AIR w/o #H4685
Bell 430 Reg: N304AG S/N: 49076
ACTT: 848.0 TQ events: 2217 Landings: 1814
#2 eng: CAE-844168 Eng TTSN: 848.0 Cycles: 1087

Date

Organization

Reinstalled engine in Bell 430, s/n 49076 following repairs. Repairs and 150/300hr inspection of engine was performed by Keystone Engine Services under work order # A04150.
Performed 600hr/6 month servicing of engine LA W BHT-430-MM-2 servicing chart fig. 12-1.
Performed CEB A-73-5021 (P.L.A inspection only).
Installed modified ECU p/n: 23075229, s/n: JG9AME0383, TTSN: 1192.0. ECU modification performed by Goodrich Pump and Engine Control Systems Inc. under work order # 104752-R209403.
Installed repaired HMU p/n: 23078035, s/n: JGALM0338, TTSN 1267.7. HMU repaired by Goodrich Pump and Control Systems Inc. under work order # 107816-R211063.
Replaced combustion case drain valve p/n: 6854255 with new.
Performed power assurance check, the engine is a +7 using the IIDS system.
AD's checked thru Bi-week 2004-05, no new ad's found.
Test run and leak checked, no discrepancies found.
All work performed IAW Rolls-Royce and Bell maintenance publications.

certify that this ENGINE has been inspected in accordance with AA-ANNUAL inspection and was determined to be in Airworthy condition. Date 3/3/04 W/O # 11268 A/O Hrs 2420
CAV-AIR INC. Fort Lauderdale Executive Airport, Fla. FAA Repair Station QC08536Y

Authorized Signature: [Signature]



KEYSTONE HELICOPTER SERVICES

INSPECTION — MAINTENANCE OVERHAUL RECORD

Engi
ALBE 6

DATE: March 18, 2005

BELL 430

REG: N305AG

CAV-AIR W/O #H5099

S/N: 49076

AIRCRAFT TOTAL TIME: 942.8 TORQUE EVENTS: 2849

LANDINGS: 2043

Di

#2 ENGINE: CAE-844168

ENGINE TOTAL TIME: 942.8

ENGINE CYCLES: 1280

Performed a 150 hour engine inspection on #2 engine s/n CAE-844168 per Rolls Royce 250-C40B operation and maintenance manual, table 603 guide.

Performed a 600 hour/6 month servicing (oil change) of engine per BHT-430-MM-2 servicing chart, figure 12-1. Serviced with Royco 560 oil.

Installed a new CEFA oil filter p/n: 23066697.

Performed a power assurance check on engine (#2 engine is a +1).

Performed CEB-A-73-5029 Rev 1 (new fuel nozzle) on #2 engine s/n CAE-844168. Removed fuel nozzle p/n 6899001 s/n 1XR05429 with a total time of 942.8 hours. Installed overhauled fuel nozzle p/n 23077067 s/n 1VR05720 with a total time of UNK hours. Overhaul of nozzle was done by Rolls Royce Engine Service under work order # EA-121780.

I certify that this Engine has been inspected in accordance with a 150 Hour inspection and was determined to be in Airworthy condition. Date 3/18/05 W/O # 5099 A/O Hrs 942.8
CAV-AIR INC. Fort Lauderdale Executive Airport, Fla. FAA Repair Station QCOR536Y

Authorized Signature



KEYSTONE HELICOPTER SERVICES
1420 PHOENIXVILLE PIKE • WEST CHESTER, PA 19380

INSPECTION — MAINTENANCE OVERHAUL RECORD ENGINE ASSEMBLY

Part IV
Page No. / 0

Engine Time

Make:	Rolls-Royce	Reg. No:	N304AG
Model:	250-C40B	Date:	Mar. 24, 2006
#2 Eng S/N:	CAE-844168	W/O No:	H5438
Hours:	1041.9	Cycles:	1487
LOG BOOK ENTRY			
Page 1 of 1			

Description of Work Accomplished

Performed a 150 / 300 hour / Annual Engine inspection on #2 engine s/n: CAE-844168 per Rolls-Royce 250-C40B operation and maintenance manual table 603 and 604 guides.
 Performed a 600 hour / 6 month servicing of engine with Royco 560 oil.
 Performed a power assurance check on #2 engine s/n: CAE-844168 is a +2 using IIDS.
 Performed a engine compressor wash.
 Installed a new fuel flow transmitter p/n: 66052GAS s/n: 3208 on #2 engine s/n: CAE844168.

Approval for Return to Service
 The article(s) identified above was repaired, and inspected in accordance with current FAA regulations and is approved for return to service.
 Pertinent details of the repair are on file at this agency under this work order.

Car-Air Authorized Signature:

Rennett E. Howell

FAA Certified Repair Station QCOR336Y

2011 S. Perimeter Road, Suite L, Ft. Lauderdale, FL 33309 Phone 954 491 5071 Fax 954 771 4682

INSPECTION — MAINTENANCE OVERHAUL RECORD ENGINE ASSEMBLY

KEYSTONE HELICOPTER SERVICES
1420 PHOENIXVILLE PIKE • WEST CHESTER, PA 19380



Engine Serial Number _____ Engine Model _____

ALBE 681-3

Date	Engine Time		Remarks	Signature	Organization
	Since OH	Total			
Make: Bell			 LOG BOOK ENTRY	Reg. No: N304AG	
Model: 430				Date: Mar. 19, 2007	
#2 Eng S/N: CAE-944168	Hours: 1133.8	Cycles: 1670	Page 1 of 1		

Description of Work Accomplished

- > Performed 150 Hour Inspection in accordance with Rolls Royce Allison 250-C40B Maintenance Manual Section 72-00-00 Table 603
- > Performed 300 Hour Inspection in accordance with Rolls Royce Allison 250-C40B Maintenance Manual Section 72-00-00 Table 604

Approval for Return to Service
I certify that this aircraft has been inspected in accordance with an engine inspection and is determined to be in airworthy condition.
Pertinent details of the repair are on file at this agency under this work order.


CAW-Air Authorized Signature:



KEYSTONE HELICOPTER SERVICES
1420 PHOENIXVILLE PIKE • WEST CHESTER, PA 19380

INSPECTION -- MAINTENANCE OVERHAUL RECORD ENGINE ASSEMBLY

Part IV
Page No. 12

Date	Engine Time		Remarks	Signature	Organization
	Since OH	Total			
Make:	Bell			Reg. No:	NS04AG
Model:	430			Date:	Mar. 13, 2007
#2 Eng S/N:	CAE-844188	Hours: 1133.8	Cycles: 1670	W/O No:	H8601


Page 1 of 1

Description of Work Accomplished

- Performed Engine historical records research. Checked for FAA Airworthiness Directives through FAA Bi-Weekly 2007- 05
- Performed 600 Hour / 6 Month Servicing in accordance with Rolls Royce Allison 250-C40B Maintenance Manual Section 72-00-00 Table 604 and Section 72-00-00 Para 8.d. Engine serviced with oil Royco 560. CEFA filter replaced with item p/n: 23086697
- Complied with AD 2006-20-07 (Addis and Additional Life Limit for Third and Fourth Stags Turbine Wheels) in accordance with AD Instructions
- Complied with CEB A-72-5048 Rev 2 (Engine, Turbine Assembly -- New Threshold Event Recording and New Steady State Operation Avoidance Range Limit) in accordance with CEB Instructions
- Replaced igniter with item p/n: CH34187AJOB in accordance with Rolls Royce Allison 250-C40B Operation and Maintenance Manual Section 74-20-01. Functional test performed satisfactorily
- Replaced vent tube seal p/n: 6898354 in accordance with Rolls Royce Allison 250-C40B Operation and Maintenance Manual Chapter 72

Approval for Return to Service

The article(s) identified above was repaired and inspected in accordance with current FAA regulations and is approved for return to service. Pertinent details of the repair are on file at this agency under this work order.

Key-Air Authorized Signature: 


Engine Assembly

Part IV

Page No. 13

Engine Model 250-C40B

Engine Serial Number CAE- 844168

D:	DATE:	4/15/2008	R/H ENG. MODEL: ALLISON 250-C40B	ization
	AC REG#	N304AG	ENG. S/N: CAE-844168	
	HOBBS:	N/A	C/W 150 hr inspection in accordance with Rolls Royce 250-C40 MM inspection	
	ACTT:	1265.6hrs	checklist C/W AD's search thru bi-weekly 2008-08.	
	ENGT:	1265.6hrs	I certify that this engine has been inspected in accordance with 150hrs	
	TSHS:	NEW	inspection and was found to be in an airworthy condition.	
				
			Elias Dakak	
			A&P3135771A	

Engine Serial Number CAE- 844168

Date	Engine Time		Remarks	Signature & Certificate Number	Organization
	Since O/H	Total			
6/29/08	Rolls-Royce 250-C40B N304AG	Eng. #2 Pos. BHT 430 S/N 49076	S/N CAE-844168 ENG. TTSN 1282.3 Hobbs: 1282.3 A/C TTSN: 1282.1 ENG. CSN: 1283		
<p>Complied with 150 HR. / 300 HR. (ANNUAL) Engine Inspection in accordance with Rolls-Royce 250-C40B-MM. Drained engine oil and replenished with 6 quarts of Royco 560 in accordance with RR 250-C40B Maintenance Manual. Replaced engine Oil Filter Assembly, and installed NEW Oil Filter. Replaced engine Fuel Filter Assembly and installed NEW Fuel Filter. Replaced Combustion Drain Valve with NEW P/N 6834255.</p> <p>All AD's reviewed through Bi-Weekly 2098-13.</p> <p>I CERTIFY THIS ENGINE WAS INSPECTED AND/OR REPAIRED IN ACCORDANCE WITH TURBOMECA ARRISUS 2F MAINTENANCE MANUALS AND CURRENT FEDERAL AVIATION REGULATIONS, AND HAS BEEN DETERMINED TO BE IN AN AIRWORTHY CONDITION. THIS AIRCRAFT IS APPROVED FOR RETURNED TO SERVICE FOR THE WORK PERFORMED. PERTINENT DETAILS OF THIS INSPECTION AND MAINTENANCE ARE ON FILE AT THIS STATION UNDER WORK ORDER NUMBER 080209, 080210, 080211.</p>					
			<p>Authorized Signature: <i>[Signature]</i> Date: 6/29/08</p> <p>ROTORTECH SERVICES, Inc., 3800 Southern Blvd, Ste. 510, West Palm Beach, Fla. FAA CRS O38R249Y</p>		
<p>ENTRY VOID - SEE CORRECTED ENTRY ON NEXT PAGE</p>					

Inspection - Maintenance - Overhaul Record Engine Assembly



Part IV
Page No.

Engine Serial Number CAE-844168 Engine Model 250-C40B

Date	Engine Time		Remarks	Signature and Certificate No.	Organization
	Since OH	Total			
6/29/08			<p>Rolls-Royce 250-C40B Eng. #2 Pos. S/N CAE-844168 ENG. TTSN 1282.3 ENG. CSN: 1283 N304AG BHT 430 S/N 49076 Hobbs: 1282.3 A/C TTSN: 1282.1</p> <p>Complied with 150 HR. / 300 HR. (ANNUAL) Engine Inspection in accordance with Rolls-Royce 250-C40B MM. Drained engine oil and replenished with 6 quarts of Royco 560 in accordance with RR 250-C40B Maintenance Manual. Replaced engine Oil Filter Assembly, and installed NEW Oil Filter. Replaced engine Fuel Filter Assembly and installed NEW Fuel Filter. Replaced Combustion Drain Valve with NEW P/N 6854255.</p> <p>All AD's reviewed through Bi-Weekly 2008-13. I CERTIFY THIS ENGINE WAS INSPECTED AND/OR REPAIRED IN ACCORDANCE WITH ROLLS ROYCE 250-C40B MAINTENANCE MANUALS AND CURRENT FEDERAL AVIATION REGULATIONS, AND HAS BEEN DETERMINED TO BE IN AN AIRWORTHY CONDITION. THIS AIRCRAFT IS APPROVED FOR RETURNED TO SERVICE FOR THE WORK PERFORMED. PERTINENT DETAILS OF THIS INSPECTION AND MAINTENANCE ARE ON FILE AT THIS STATION UNDER WORK ORDER NUMBER <u>080246, 080247, 080248.</u></p>		

Authorized Signature  Date: 6/29/08
 ROTORTECH SERVICES, Inc., 3800 Southern Blvd, Ste. 510, West Palm Beach, Fla. FAA CRS O38R249Y



LOG BOOK ENTRY

Date: 04 February 2009
Engine Model: Rolls-Royce

Aircraft S/N: 49076
Engine No. 2 S/N: CAE-844168

Airframe Hours: 1321.4
Engine No. 2 Hours: 1321.4

RIN Count: 3650
Engine No. 2 Cycles: 2064

I certify this aircraft engine, S/N CAE-844168, as installed in aircraft Bell Helicopter Model 430, S/N 49076 Registration No. N504AG, the following was complied with, in accordance with the current Manufacturer's Maintenance Manuals or as otherwise indicated:

- Complied with **PREFLIGHT INSPECTION** in accordance with Rolls-Royce 250-C408 Operation and Maintenance Manual Chapter 72 Table 601.
- Complied with **POST FLIGHT INSPECTION** in accordance with Rolls-Royce 250-C408 Operation and Maintenance Manual Chapter 72 Table 602.
- Complied with **150 HOUR INSPECTION** in accordance with Rolls-Royce 250-C408 Operation and Maintenance Manual Chapter 72 Table 603.
- Complied with **300 HOUR INSPECTION** in accordance with Rolls-Royce 250-C408 Operation and Maintenance Manual Chapter 72 Table 604.
- Complied with Rolls-Royce Alert Commercial Engine Bulletin CEB-A-73-5033 Revision 1 dated 01 July 2005 titled **Engine, Fuel and Control - Hydromechanical Unit (HMU) Procedures for Checking P1 Nozzle Screen for Contamination**. The currently installed HMU's are as follows: Engine No. 2 - P/N 23078035 S/N J6ALM0338.

All applicable airworthiness directives for this rotorcraft have been complied with through F.A.A. Bi-Weekly Issue **Small Aircraft, Effective 2/09-03 February 2009** (Small Aircraft, Kitecraft, Gliders, Balloons, and Airships).

The aircraft airframe, engine and appliances identified above were repaired and inspected in accordance with the current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details are on file at Texas Aviation Services Repair Station RY1R466K, under work order / job log # 13281 for S/N-49076.

Signed:

Wayne G. Powell, Texas Aviation Services, Inc.

• 3901 North Main Street, Hangar 2S • Fort Worth, TX 76106 •
• (817) 625-0192 • FAX (817) 605-0195 •
FAA Repair Station RY1R466K

4/9/2010 HI883 Bell430 S/N 49076 ACFT:1422.3
Engine # 2 S/N CAE-844168 TTSN 1422.3 Engine Cycles 2225

Performed 150HR/300 HR inspection per Rolls Royce inspection Guide Table 603 Chapter 72.

- 1-Removed engine scavenge sump for inspection and reinstalled with new crush washer p/n 6784419-8.
 - 2-Removed upper T-Fitting for inspection of screen/jet nozzle and reinstalled with new crush washer p/n 6784419-8
 - 3- Removed # 1 reducer,oil check valves and inspected ,performed chip detector functional check OK.
 - 4-Replaced oil with 6 Qts. of Aeroshell 560. Checked engine oil levels.
 - 5- Performed engine compressor wash using soap solution and fresh water rinse.
 - 6- Performed Ground Run and Leak Checks. No discrepancies noted.
 - 7- Replaced Engine Igniter p/n 6899084 with new Igniter p/n 6899084. All work performed by RR 250-C40B MM.
 - 8- Replaced Oil filter with new CEFA Oil Filters p/n 23056451. Work performed using RR 250-C40 MM.
 - 9-Installed new safety wire and torque hardware on Exciter box.
- Ground run and Leak check . No Defects Noted.

I certify that the above described work/repairs/inspections (150HR/300HR) were performed in accordance with the manufacturers maintenance manual recommendations and current FAA standards and was determined to be in airworthy condition and is approved for Return to Service. All additional pertinent details of work performed during this inspection are on file under work order No.(6): 100639,100640.

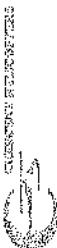
Authorized signature  , Dated 4/9/2010

Rotortech Services Inc. 4095 Southern Blvd., West Palm Beach, Fla. 33406
Certified Repair Station No. O38R249Y.

Inspection - Maintenance - Overhaul Record

FAA

Rolls-Royce



Make: Rolls-Royce
 Model: 250-C40B
 Serial No.: CAE844168
 Engine TT: 1557.0

Reg. No.: HI 883
 Date: 08/11/2011
 W/O No.: 2158
 Page: 1 of 1

Engine log book # 2

Cycle 2464 HOBBS: 0.0

Engine Serial

Date	Description of Work Accomplished	Organization
	1. Complied with 150/ 300 hrs inspection in accordance with Rolls-Royce 250-C40B operation and maintenance manual chapter 72 table 603/604	
	2. Complied with 300hrs / 6 months oil engine servicing in accordance Rolls-Royce manual chapter 72-60-00 para. 8. D.	
	3. Installed new lube filter P/N 2306697 in accordance with Rolls-Royce manual chapter 72-60-00 para. 1. E.	
	4. Installed new fuel filter P/N 23056451 in accordance with Rolls-Royce manual chapter 73-10-00 para. 2.B	
	5. Installed new flares gasket tubes P/N AS3075-08 in accordance with Rolls-Royce manual chapter	
	6. Complied with AD' research.	
	7. Complied with CEB research.	
	8. Complied with CEB-A-72-5031 engine- turbine inspection of 1 st stage nozzle shield dome in accordance with CEB instruction. No damage found, Next Due at engine total cycles 3464.	
	9. Complied with CEB-A-73-5021 inspection of main drive shaft for backlash (HMU) in accordance with CEB' instruction. Next due at engine total Time 1857.0.	
	10. Complied with turbine oil flow (130cc) in accordance with Rolls-Royce manual chapter 72-50-00 para. 5. E.	
	11. Complied with compressor wash in accordance with Rolls-Royce manual chapter 72-30-00 para 4.B.	
	12. Complied with engine operational check and leak check.	
	<p>The article(s) identified above was repaired and inspected in accordance with current FAA regulations and is approved for return to service. Pertinent details of the repair are on file at this agency under this work order.</p> <p>Approved Signature: <i>MARCO J. BRAVO</i></p> <p>FAA Certified Repair Station 88V/R026R 1620 SW 75th Avenue, Pembroke Pines, FL 33023 Phone 954.987.1900</p>	

GT-2784A (12/98)

Inspection - Maintenance - Overhaul Record Engine Assembly



Part IV
Page No.

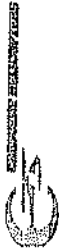
Engine Serial Number CAE- 844168 Engine Model 250- C40B

Date	Engine Time		Remarks	Signature and Certificate No.	Organization
	Since OH	Total			
MAY 20, 12	0	1,632.1	Removed due to HGO	17983543	RR
5/17/12	NEW	1632.1	REPAIRED & PERFORMED A 1750 HR. INSPECTION I.A.W. MANUFACTURER'S SPECIFICATIONS & TESTED I.A.W. OPS & MAINT. MANUAL TABLE 2. DETAILS FILED UNDER MGN: SE1631301.	ROLLS ROYCE ENGINE SERVICES-OAKLAND, CA 94621 7200 EARHART ROAD OAKLAND, CA 94621 REP STA NO VZ3R937	

GT-2784A (12/98)

Inspection - Maintenance - Overhaul Record

Rolls-Royce



Make: Rolls-Royce
Model: 250-C40B
Serial No.: CAE844168
Engine TT: 1675.5 **Cycle:** 2715 **HOBBS:** 0.0
Reg. No.: HI 883
Date: Jan-21-2013
W/O No.: 2185
Page: 1 of 1

Engine Serial

Date

anization

- Description of Work Accomplished**
1. Completed with 1500 300 hrs inspection in accordance with Rolls-Royce 250-C40B operation and maintenance manual chapter 72 table 603/604
 2. Complied with 300hrs / 6 months oil engine servicing in accordance with Rolls-Royce manual chapter 72-00-00 para. 8. D.
 3. Installed new tube filter P/N 2305697 in accordance with Rolls-Royce manual chapter 72-60-00 para. 1. E.
 4. Installed new fuel filter P/N 23056451 in accordance with Rolls-Royce manual chapter 73-10-00 para. 2.B
 5. Installed new filter gasket tubes P/N AS3075-08 in accordance with Rolls-Royce manual chapter
 6. Complied with AD' research.
 7. Complied with CEB research.
 8. Complied with turbine oil flow (130cc) in accordance with Rolls-Royce manual chapter 72-50-00 para. 5. E.
 9. Complied with compressor wash in accordance with Rolls-Royce manual chapter 72-30-00 para 4.B.
 10. Replaced CEFA tube filter P/N 7593331-101 installed new in accordance with Roll Royce 25-C40B MM.
 11. Complied with engine operational check and leak check.

The article(s) identified above was repaired and inspected in accordance with current FAA regulations and is approved for return to service. Pertinent details of the repair are on file at this agency under this work order.

Authorized Signature:

MAURO T. BIAVO

Approved for Return to Service

FAA Certified Repair Station SVR0228N
 1620 SW 15th Avenue, Pahrump Pines, FL 33802 Phone 954 987 1500

Inspection - Maintenance - Overhaul Record Engine Assembly



Eng. Make:	Rolls Royce	Act Reg. No:	H1883
Eng. Model:	250-C40B	Act S/N:	49076
W/O No:	C07509FL	Date:	October 10 th , 2014
Eng S/N:	CAE-844168	Hours:	1841.2
		Cycles:	3031
		Page:	1 OF 2

Eng

LOG BOOK ENTRY ENGINE

nization

Description of Work Accomplished

Bulletins / Directives

- Performed historical records research. Checked for FAA AD compliance through FAA AD Bi-Weekly Issue 2014-20. Complied with FAA AD2013-20-03 Effective December 5, 2013 (Third stage turbine vibration), BHT ASB430-05-34 Dated June 10, 2005 (New transient limit and power turbine rpm (np) steady state operation avoidance, Introduction of), and Rolls Royce 250-C40 Series CEB A-72-5048 Revision 2 Dated June 27, 2006 (Engine, turbine assembly - New threshold event recording and new steady-state operation avoidance range limit) in accordance with AD, ASB, and CEB Instructions.
- Complied with BHT ASB430-13-50 Dated August 7, 2013 (Engine, assembly - Inspection of mag plugs to detect metal generation from the No. 2 bearing) and Rolls Royce 250-C40B CEB-72-5062 Revision 1 Dated June 10, 2013 (Engine, assembly - Inspection of mag plugs to detect metal generation from the No. 2 bearing) in accordance with ASB and CEB Instructions. Not applicable due to serial number of components installed.

Inspections

- Performed 150 hour inspection in accordance with Rolls Royce 250-C40B Operation and Maintenance Manual Section 72-00-00 Table 606
- Performed 300 hour / 12 month inspection in accordance with Rolls Royce 250-C40B Operation and Maintenance Manual Section 72-00-00 Table 606

Servicing / Lubrication

- Performed 600 hour / 12 months servicing requirements in accordance with Rolls Royce 250-C40B Operation and Maintenance Manual Section 72-00-00 Para 8.D, Engine - Servicing on Engine oil and filter system. Serviced engine oil system with oil; Royco 560.
- Replaced CEFA oil filter with new item p/n; 23066697.
- Performed compressor wash and rinse in accordance with Rolls Royce 250-C40B Operation and Maintenance Manual Section 72-30-00 Para 4.

Continued on Next Page;

GT-2784AT (1/05)

Inspection - Maintenance - Overhaul Record Engine Assembly



Eng. Make:	Rolls Royce	Acft Reg. No:	H1883
Eng. Model:	250-C40B	Acft S/N:	49076
W/O No:	C07509FL	Date:	October 10 th , 2014
Eng S/N:	CAE-844168	Page:	2 OF 2
Hours:	1841.2	Cycles:	3031



LOG BOOK ENTRY ENGINE

Da ation

Maintenance

- Replaced No. 1 bearing pressure reducer assembly with new item p/n; 23068215 in accordance with Rolls Royce 250-C40B Operation and Maintenance Manual Chapter 72
- Replaced power turbine pressure nozzle with new item p/n; 23001832 in accordance with Rolls Royce 250-C40B Operation and Maintenance Manual Chapter 72.
- Replaced fuel nozzle p/n; 1VR05720 with overhauled item p/n; 23077067 s/n; 1NR03689 in accordance with Rolls Royce 250-C40B Operation and Maintenance Manual Chapter 73. Performed shimming procedure for fuel nozzle installation.
- Noted 1 3/4 inch chip on upper chip detector housing self closing valve preventing valve from closing. Removed chip and investigated as far as practical without disassembly of gearbox. No further damage to components noted. Performed penalty engine operational check for 30 minutes. No chip detection indications noted. Removed and inspected chip detector and housing. No further damage noted. Installed chip detector and housing. Work performed in accordance with Rolls Royce 250-C40B Operation and Maintenance Manual. Operational Check / Ground Run / Flight Test
- Performed leak checks as applicable to disturbed components satisfactorily
- Performed operational checks as applicable to disturbed components satisfactorily

Approval for Return to Service

The article(s) identified above was inspected and repaired in accordance with current FAA regulations, and with respect to that work, is approved for return to service. Pertinent details of the repair are on file at this agency under this work order.

[Signature]

ERS Authorized Signature:

2011 J. Pastiner Road, Suite G, Ft. Lauderdale, FL 33309
 FAA Certificate Repair Station 1E9R560Y
 Phone 954 491 4371 Fax 954 771 4692

GT-2784AT (1/05)

Inspection - Maintenance - Overhaul Record Engine Assembly



Eng. Make:	Rolls Royce	Actl Reg. No:	H1833
Eng. Model:	250-C40B	Actl S/N:	49075
W/O No:	C0R022FL	Date:	October 10 th , 2014
Eng S/N:	CAE-844168	Hours:	1841.2
		Cycles:	3031
		Page:	1 OF

ization

Description of Work Accomplished

Maintenance
Investigated discrepancy of engine power assurance check failure after multiple attempts. Verified engine accessory systems operate correctly. Determined discrepancy to be internal to engine. Removed engine for further evaluation / repair as necessary. Work performed in accordance with Rolls Royce 250-C40B Operation and Maintenance Manual and BHT-430-MM.

Approval for Return to Service

Perinent details of the removal are on file at this agency under this work order.

ERS Authorized Signature:

3313 Performance Road, Suite 1, Ft. Lauderdale, FL 33309 Phone 954 491 1711 FAX 954 771 4652
FAA Certified Repair Station 1E9R960Y

20 Jun 2015	1841.2	REPAIRED TURBINE FOR LOW POWER IAW CSP22001 OVERHAUL MANUAL 2 ND ED. 15 TH REV. PERTINENT DETAILS ON FILE AT THIS REPAIR STATION UNDER WO# 12796CE2.	Lawson McWright	McTurbin Inc.
25-Jun-2015	1841.2 TSN: 3031 CSN	REPAIRED TURBINE CAT-44756, COMPRESSOR CAC-45031, GEARBOX CAG-44168 AND TESTED IAW CSP22001 OVERHAUL MANUAL 2ND ED. 15TH REV. PERTINENT DETAILS ON FILE AT THIS REPAIR STATION UNDER WO# 12796CE2.	Lawson McWright	McTurbin Inc.

GT-2784AT (1/05)

Part IV
Page No. 250- C40B
Engine Model 250- C40B

Engine Serial Number CAE- 844168

Date	Engine Time		Remarks	Signature and Certificate No.	Organization
	Since OH	Total			
8-18-2005	NEW	0.00	Fuel system preserved with MIL-0-6087 oil.		Rolls-Royce
	T6N	1841.2	INSTALLED ENGINE ON #2 (R/H) SIDE IJ1A163 ROLLS ROYCE OPERATION AND MAINTENANCE MANUAL AND RHT-430-MM	<i>Mark E. Owen</i> APP 3167510	
8-18-2005	T6N	1841.2	INSTALLED ECO PINA3075A39 (30005800N3075A39)		
			SIN (DEFAMED 38) ON #2 (R/H) SIDE ALL WORK PERFORMED IJ1A163 ROLLS ROYCE OPERATION MANUAL RHT-430-MM	<i>Mark E. Owen</i> APP 3167510	

GT-2784AT (1/05)

19 AUG 2015
ACFT TT: 1881-1
ENG TT: 1841-6
ENG CYC: 3032

ENG #2 S/N: CAE844168

NO CHIP LIGHT ILLUMINATED DURING FLIGHT OPERATION

ABP316954
NunTR

09 AUG 2015
CFT TT: 1881-1
NG TT: 1841-6
NG CYC: 3032

REMOVED JEA CHIP DETECTORS CLEANED AND REINSTALLED. DRAIN
ALL OIL FROM ENGINE. PERFORMED ENGINE FLUSH OF OIL AND
RESERVICED TO FULL WITH ROTCO 560. REMOVED AND CLEANED ENG
OIL FILTER. REINSTALLED ENGINE OIL FILTER. REMOVED AND REPLACED
ENGINE CEFA FILTER WITH NEW FILTER PIN: 1763516. PERFORMED
5 MIN GROUND RUN, NO CHIP LIGHT AT THIS TIME. ALL WORK
PERFORMED I/A/W ROLLS ROYCE J50-CHOB OPERATION AND MAINTENANCE
MANUAL AND BHT-430-MM. _____

NunTR
ABP316954
09AUG15

1. Approving National Aviation Authority/Country: FAA/UNITED STATES

2. Form Tracking Number: 13053CE2-W

AUTHORIZED RELEASE CERTIFICATE

FAA FORM 8130-3, AIRWORTHINESS APPROVAL TAG

4. Organization Name and Address:
 McCurbine Inc. FAA CRS # MCWR362K
 401 Junior Beck Drive
 Corpus Christi, Texas 78405 USA

5. Work Order/Contract/Invoice Number: 13053CE2-W

6. Item:	7. Description	8. Part Number:	9. Quantity	10. Serial Number:	11. Status/Work
1	ENGINE	23063378	1 EACH	CAE-844168	REPAIRED

12. Remarks

REPAIRED GEARBOX CAG-44168, TURBINE CAT-44756, AND COMPRESSOR CAC-45031 IN ACCORDANCE WITH CSP22001 OVERHAUL MANUAL 2ND EDITION 16TH REVISION DATED SEPTEMBER 15, 2015

TSN: 1890.6 CSN: 3121

13a. The items identified above were manufactured in conformity to the applicable regulations and are in a condition for safe operation.

13b. Approved design data and are in a condition for safe operation.

13c. Non-approved design data as specified in Block 12.

13d. Authorized Signature: *Larry Reyes*

13e. Approval Authority/Signature: *Larry Reyes*

13f. Date (dd/mm/yyyy):

13g. Name (Typed or Printed): LARRY REYES

13h. Approval/Certificate No.: MCWR362K

14a. 14 CFR 43.9 Return to Service Other regulation specified in Block 12

14b. Certifies that unless otherwise specified in Block 12, the work identified in Block 11 and described in Block 12 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service.

14c. Date (dd/mm/yyyy): 12 SEP 2016

14d. Authorized Signature: *Larry Reyes*

14e. Name (Typed or Printed): LARRY REYES

14f. Approval/Certificate No.: MCWR362K

14g. Date (dd/mm/yyyy): 12 SEP 2016

User/Installer Responsibilities

It is important to understand that the existence of this document alone does not automatically constitute authority to install the aircraft engine/propeller/article.

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 aircraft engine(s)/propeller(s)/article(s) from the airworthiness authority of the country specified in Block 1.

Statements in Block 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.

3. Form Tracking Number:
PTNRR - 25573

AUTHORIZED RELEASE CERTIFICATE

FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG

1. Approving Civil Aviation Authority Country:
FAA/UNITED STATES

4. Organization Name and Address:
Premier Turbines
3551 Doniphan Drive
Neosho, MO 64850



5. Work Order/Contract/ Invoice Number:
RPR43892

Certificate No.: YD03530K

6. Item:	7. Description:	8. Part Number:	9. Quantity:	10. Serial Number:	11. Status/Work:
1	ENGINE ASSEMBLY	23063378	1	CAE-844168	TESTED

12. Remarks
TESTED ENGINE ASSEMBLY ONLY WITH REFERENCE TO CSP21000 OMM Edition: 1 Revision: 17 Dated: December 15, 2015 (including up to TR EIR17-72-1 dated July 15, 2016).

Details are on file at this Repair Station under sales order referenced in block 5.
TSN: 1890.6 TSO: NEW CSN: 3121 CSO: NA

13a. Certifies the items identified above were manufactured in conformity to: <input checked="" type="checkbox"/> Approved design data and are in a condition for safe operation. <input type="checkbox"/> Non-approved design data specified in Block 12.	14a. <input checked="" type="checkbox"/> 14 CFR 43.9 Return to Service Certifies that unless otherwise specified in Block 12, the work identified in Block 11 and described in Block 12 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service.
13b. Authorized Signature: 	14b. Authorized Signature: 
13c. Approval/Authorization No.:	14c. Approval/Certificate Number: YD03530K
13d. Name (typed or printed):	14d. Date (dd/mm/yyyy): 07/Sep/2016

User/Installer Responsibilities

It is important to understand that the existence of this document alone does not automatically constitute authority to install the aircraft engine/propeller/article. Where the user/installer works 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 aircraft engine(s)/propeller(s)/article(s) from the airworthiness authority of the country specified in Block 1.

Statements in blocks 13a and 14a do not constitute installation certification. In all cases, the aircraft maintenance record must contain an installation certification issued in accordance with the national regulation by the user/installer before the aircraft may be flown.

1. Approving National Aviation Authority/Country: FAA/UNITED STATES

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

3. Form Tracking Number: 14021CE2-W

4. Organization Name and Address:
McTurbine Inc. FAA CRS # MCWR362K
401 Junior Beck Drive
Corpus Christi, Texas 78405 USA

5. Work Order/Contract/Invoice Number: 14021CE2-W

6. Item:	7. Description	8. Part Number:	9. Quantity	10. Serial Number:	11. Status/Work
1	ENGINE	23063378	1 EACH	CAE-844168	REPAIRED

12. Remarks

REPAIRED GEARBOX CAG-44168 IN ACCORDANCE WITH CSP21000 OPERATION AND MAINTENANCE MANUAL 1ST EDITION 18TH REVISION DATED DECEMBER 15, 2016 AND CSP22001 OVERHAUL MANUAL 2ND EDITION 17TH REVISION DATED SEPTEMBER 15, 2016. REQUIRES POWER ASSURANCE CHECK.

TSN: 1890.6 CSN: 3121

13a. Certificate the items identified above were examined in conformity with the applicable design data and are in a condition for safe operation.

13b. Approved Signature: *Larry Reyes*

13c. Date (dd/mm/yyyy):

13d. Authorized Signature: *Larry Reyes*

13e. Date (dd/mm/yyyy):

13f. Approval/Certificate No.: MCWR362K

13g. Date (dd/mm/yyyy): 02 MAR 2017

14a. 14 CFR 43.9 Return to Service Other regulation specified in Block 12

14b. Certifies that unless otherwise specified in Block 12, the work identified in Block 11 and described in Block 12 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service.

14c. User/Installer Responsibilities

It is important to understand that the existence of this document alone does not automatically constitute authority to install the aircraft engine/propeller/article.

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 aircraft engine(s)/propeller(s)/article(s) from the airworthiness authority of the country specified in Block 1.

Statements in Block 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.

FAA FORM 8130-3 (02-14)

MC-22 R21

NSN: 6052-00-012-9005

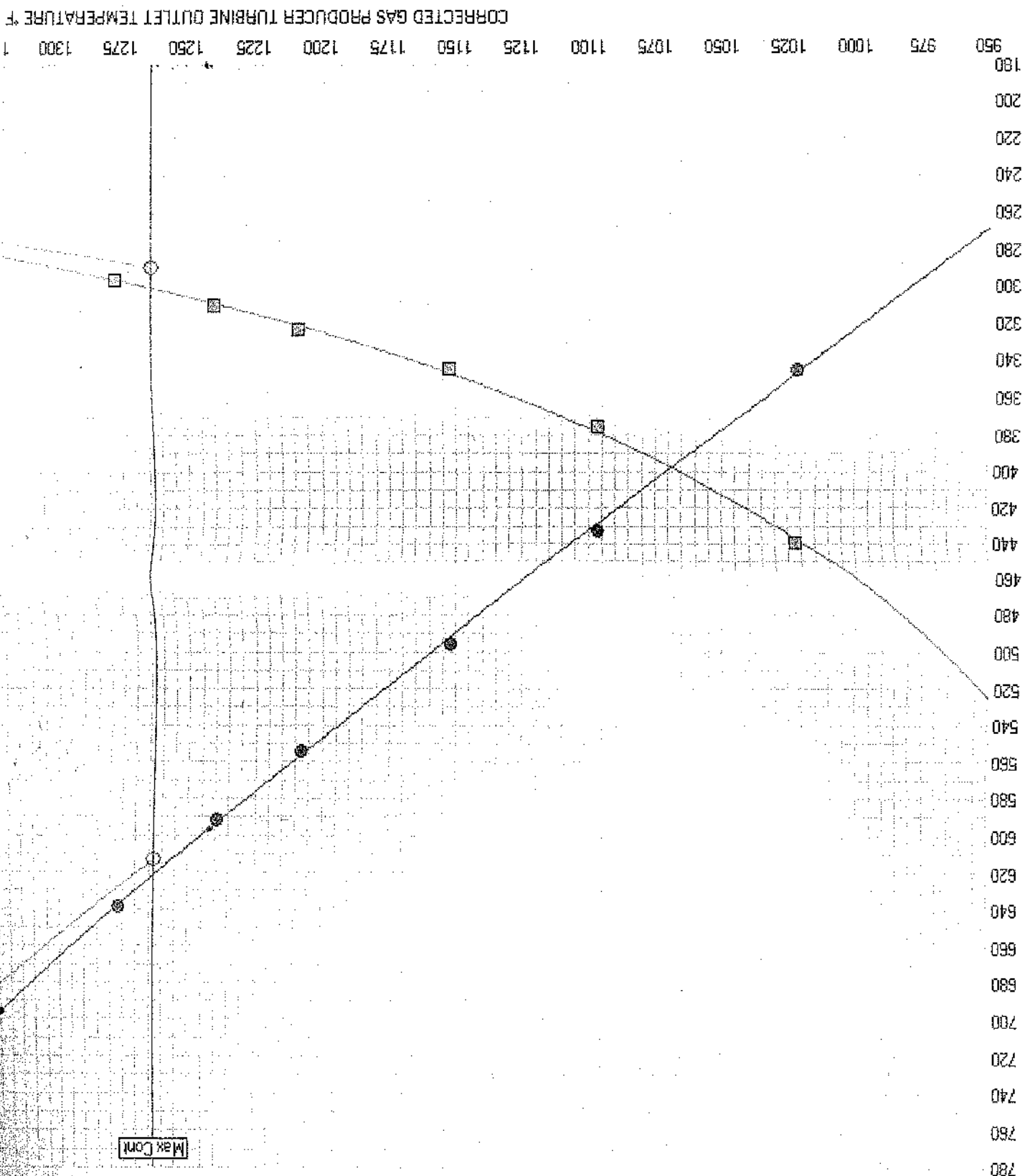
9/7/2016 1:47:23 PM		9/7/2016 1:52:37 PM		9/7/2016 1:57:44 PM		2:02:49 PM		2:07:55 PM		2:13:04 PM		2:18:11 PM		2:23:33 PM		2:30:07 PM	
Insum 1st Power Point 2nd Power Point 3rd Power Point 4th Power Point 5th Power Point 6th Power Point 7th Power Point 8th Power Point End Oil Consun Ground Idle Be																	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
46941	48466	48466	48466	48466	48466	48466	48466	48466	48466	48466	48466	48466	48466	48466	48466	48466	48466
92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0
45621	47103	48153	49123	49649	50222	50919	50922	50922	50922	51208	51208	51208	51208	51208	51208	51208	51208
100.0	100.0	100.0	100.1	100.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
183.8	229.1	252.0	292.6	311.9	326.8	336.8	344.8	354.8	364.8	374.8	384.8	394.8	404.8	414.8	424.8	434.8	444.8
188.7	233.8	256.1	296.4	315.8	340.8	348.8	358.8	368.8	378.8	388.8	398.8	408.8	418.8	428.8	438.8	448.8	458.8
9614	9614	9625	9625	9621	9619	9618	9618	9618	9618	9618	9618	9618	9618	9618	9618	9618	9618
335.7	418.7	479.2	525.5	570.2	615.8	654.8	684.8	714.8	744.8	774.8	804.8	834.8	864.8	894.8	924.8	954.8	984.8
38.2	47.2	53.6	59.6	63.4	68.4	72.8	77.8	82.8	87.8	92.8	97.8	102.8	107.8	112.8	117.8	122.8	127.8
344.7	432.1	495.3	553.9	609.9	667.8	724.8	782.8	840.8	898.8	956.8	1014.8	1072.8	1130.8	1188.8	1246.8	1304.8	1362.8
98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0
240.6	279.7	307.0	333.7	359.6	385.4	411.1	436.8	462.6	488.4	514.1	539.8	565.6	591.4	617.1	642.9	668.7	694.5
246.8	286.2	315.4	342.7	369.4	396.1	422.8	449.5	476.2	502.9	529.6	556.3	583.0	609.7	636.4	663.1	689.8	716.5
0.7160	0.6624	0.6367	0.6187	0.6082	0.5988	0.5898	0.5812	0.5728	0.5644	0.5561	0.5478	0.5395	0.5312	0.5229	0.5146	0.5063	0.4980
12.4	12.4	12.6	12.6	12.4	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
-3.41	-3.42	-3.41	-3.41	-3.41	-3.41	-3.41	-3.41	-3.41	-3.41	-3.41	-3.41	-3.41	-3.41	-3.41	-3.41	-3.41	-3.41
28.51	28.49	28.48	28.47	28.47	28.47	28.47	28.47	28.47	28.47	28.47	28.47	28.47	28.47	28.47	28.47	28.47	28.47
28.58	28.56	28.55	28.55	28.55	28.55	28.55	28.55	28.55	28.55	28.55	28.55	28.55	28.55	28.55	28.55	28.55	28.55
28.51	28.50	28.50	28.50	28.50	28.50	28.50	28.50	28.50	28.50	28.50	28.50	28.50	28.50	28.50	28.50	28.50	28.50
98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6	98.6
88.3	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4
88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7
91.4	91.4	91.1	91.2	91.6	91.8	91.8	91.8	91.8	91.8	91.8	91.8	91.8	91.8	91.8	91.8	91.8	91.8
89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5
565.0	565.0	565.0	565.0	565.0	565.0	565.0	565.0	565.0	565.0	565.0	565.0	565.0	565.0	565.0	565.0	565.0	565.0
157.2	174.5	188.1	198.3	202.8	210.5	215.0	219.5	224.0	228.5	233.0	237.5	242.0	246.5	251.0	255.5	260.0	264.5
159.0	177.2	191.1	198.3	202.8	210.5	215.0	219.5	224.0	228.5	233.0	237.5	242.0	246.5	251.0	255.5	260.0	264.5
153.1	153.1	153.1	153.1	153.1	153.1	153.1	153.1	153.1	153.1	153.1	153.1	153.1	153.1	153.1	153.1	153.1	153.1
256	266	266	266	266	266	266	266	266	266	266	266	266	266	266	266	266	266
197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197
0.90	0.79	-0.80	-2.50	-3.70	-4.10	-4.10	-4.10	-4.10	-4.10	-4.10	-4.10	-4.10	-4.10	-4.10	-4.10	-4.10	-4.10
1.10	1.10	1.10	1.10	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
-5	-21	12	-21	12	-21	-35	-35	-35	-35	-35	-35	-35	-35	-35	-35	-35	-35
0.35	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
0.54	0.54	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
114.6	114.6	116.2	120.4	119.5	119.5	119.5	119.5	119.5	119.5	119.5	119.5	119.5	119.5	119.5	119.5	119.5	119.5
4.2	4.2	4.8	5.1	5.5	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
5.03	4.97	5.29	5.49	5.65	5.77	5.89	5.98	6.06	6.14	6.22	6.30	6.38	6.46	6.54	6.62	6.70	6.78

Halls-Royce 250 Performance Graph

Acceptance Signature _____
 Rejection Signature _____

Max Cont

○ Min Allowable SHP
 ○ Max Allowable SFC



CORRECTED SHAFT HORSE POWER

CORRECTED GAS PRODUCER TURBINE INLET TEMPERATURE °F

ont DEI and TO

Engine Model:
250-C40B

Serial Number:
CAE844168

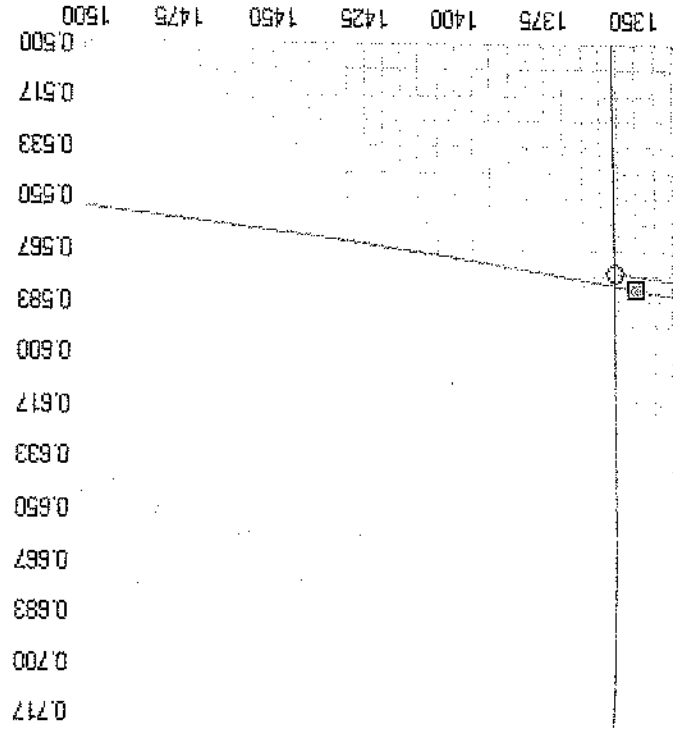
Work Order:
RPR43892

Run Number:
1

Customer:
MCTURBINE

Entry Date:
9/7/2016

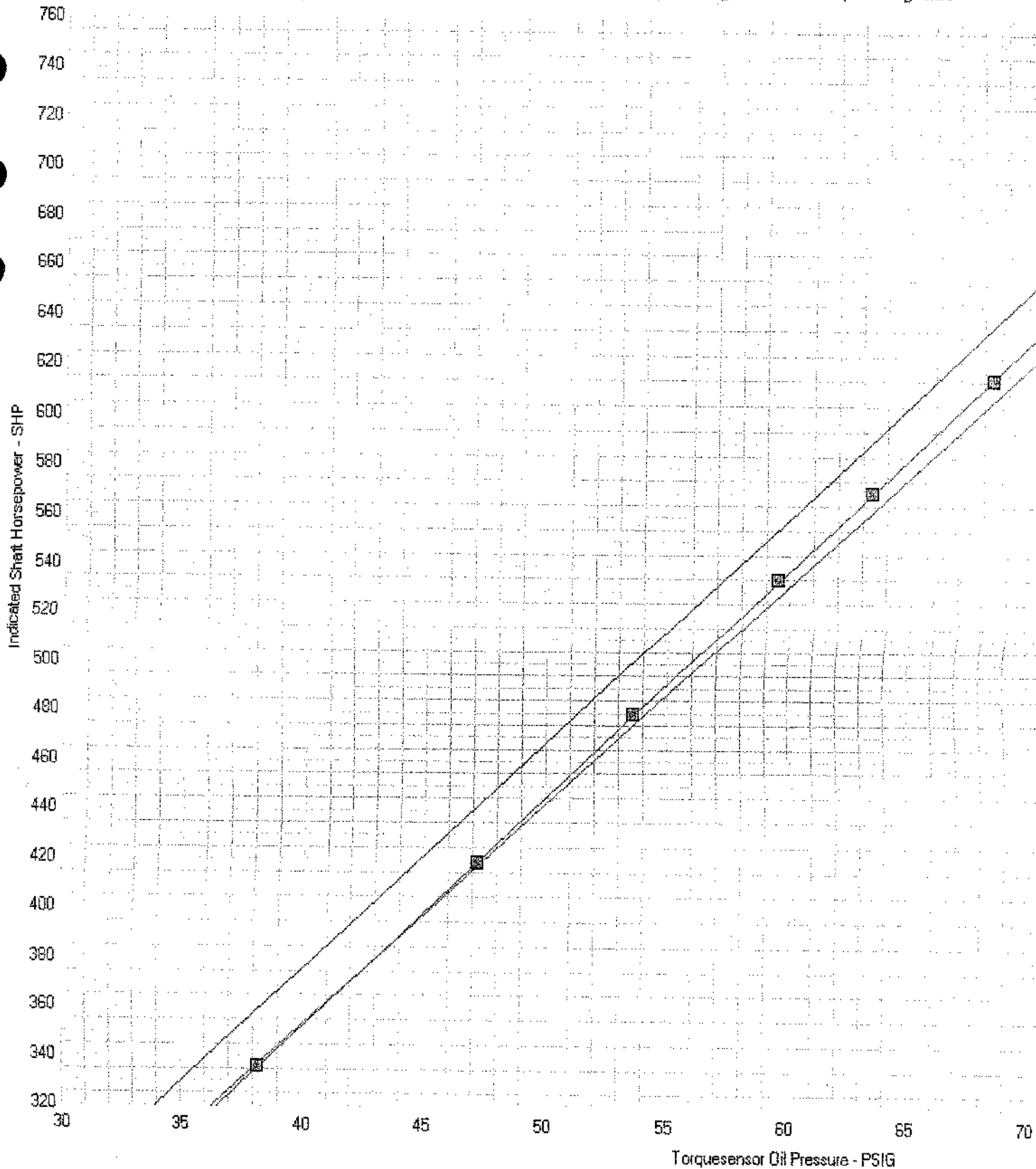
SPECIFIC FUEL CONSUMPTION



Rolls-Royce 250 Torquemeter Graph

Acceptance Signature

Rejection Signature



Engine Model:
250-C40B

Serial Number:
4E844168

Work Order:
11PR43892

Run Number:
1

Customer:
MCTURBINE

Entry Date:
5/7/2016

=====
=====

75

80

85

90

**Inspection - Maintenance-Overhaul Record
Engine Assembly**

Part IV
Part No.
Engine Model 250-

Engine Serial Number CAE- 844168

Date	Engine Time		Remarks	Signature and Certificate No.	Organization
	Since OH	Total			
12 Sep 2016	New	1890.6	REPAIRED GEARBOX CAG-44168, TURBINE CAT-44756, AND COMPRESSOR CAC-45031 IAW CSP22001 OVERHAUL MANUAL 2 ND ED. 16 TH REV. AND TESTED CSP21000 OPERATION AND MAINTENANCE MANUAL 1 ST ED. 17 TH REV. PERTINENT DETAILS ON FILE AT THIS REPAIR STATION UNDER WO# 13053CE2-W	<i>Joe Ryan</i>	Rolls-Royce
2 March 2017		CSP:3121 1890.6 CSP: 2121	REPAIRED GEARBOX CAG-44168 IAW CSP21000 OPERATION AND MAINTENANCE MANUAL 1 ST ED. 18 TH REV AND CSP22001 OVERHAUL MANUAL 2 ND ED. 17 TH REV. PERTINENT DETAILS ON FILE AT THIS REPAIR STATION UNDER WO# 14021CE2-W.	<i>Joe Ryan</i> <i>McWor 3121</i>	McWor Inc.

TSN 1890.6
CSN 3121

3/20/17

Functionally tested the engine IAW the Rolls-Royce C40B O&MM Manual Ed 1 Rev 18.



The powerplant and/or component identified herein was tested in accordance with current Federal Aviation Regulations, and was found airworthy for return to service. Pertinent details of the repairs are on file at this agency under:

W.O. No: 011374

Date: 3/20/17

Signed: *[Signature]*

For: CRS # 8MHR895B

Keystone Turbine Services, LLC
885 Fox Chase, Ste 111
Coatesville, PA 19320

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GT-2784AT (1/05)

POWER ASSURANCE CHECK

ENGINE 2

TORQUE: 74

PRESSURE ALTITUDE: 204

OAT (DEGREES C): 29

ACTUAL MGT: 719

CALC MGT: 715 BASIC

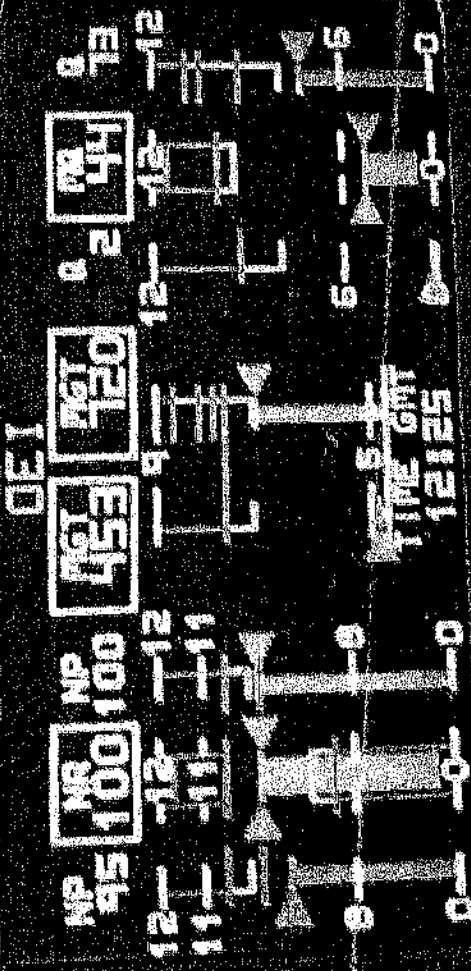
CALC MGT: 721 PART SEP

CALC MGT: 718 SNOW

CALC MGT: 724 PART SEP + SNOW

ACTUAL MGT SHOULD BE 5 CALC MGT
RTN MENU P/A

ENG OIL FUEL AUX FUEL XMSN OIL
123PSI 128 260LBS 220 0LBS 64PSI



REC'D/AMP VOL

SPARE

1-00M 2-00M TEL PA

3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

1-11M 2-11M 3-11M 4-11M 5-11M 6-11M 7-11M 8-11M 9-11M 10-11M 11-11M 12-11M 13-11M 14-11M 15-11M 16-11M 17-11M 18-11M 19-11M 20-11M

SEL SWP E

1-11M 2-11M 3-11M 4-11M 5-11M 6-11M 7-11M 8-11M 9-11M 10-11M 11-11M 12-11M 13-11M 14-11M 15-11M 16-11M 17-11M 18-11M 19-11M 20-11M

AVOID STEADY STATE OPERATION BETWEEN 91° & 91° (N)

AUDIO MUTE N
LDG GEAR UP

1-11M 2-11M 3-11M 4-11M 5-11M 6-11M 7-11M 8-11M 9-11M 10-11M 11-11M 12-11M 13-11M 14-11M 15-11M 16-11M 17-11M 18-11M 19-11M 20-11M

ENGINE LOG

K.O. #: 1P8ELL-032017

Date: 24-MAY-2017
Page: 1 of 1

RETIREMENT TIME
OVERHAUL INTERVAL

ENGINE LOGBOOK MAINTENANCE ENTRY

FAA Form 3360-101-0101
Revision 1/2005
Maintenance Record



Registration No.: FARD2071
Aircraft Model: BELL 430
Altitude Serial No.: 48976

Engine Model: 250 C2005
Engine Serial No.: GAE 444158
Engine Position: #2

Airframe Total Time: 2002.5
Engine Total Time: 1860.6
Engine Total Cycles: 3123

Accomplished the Following Scheduled Inspections and Maintenance:

FAA Form	Interval	Inspection
ENG-151046	150 Hr 12 Mo.	150 HOUR/12 MONTHS INSPECTION: Engine Scheduled Inspection
ENG-310636	300 Hr 12 Mo.	300 HOUR/12 MONTHS INSPECTION: Engine Scheduled Inspection

I certify that a Manufacturer's recommended Engine Inspections have been performed on this aircraft in accordance with regulations and was determined to be in airworthy condition.

Signature: *[Signature]*
CSC, Inc., Center for Aircraft
Log # 1725324-70A

CONDITION & MAINTENANCE REMARKS

SIGNATURE AND LICENSE NUMBER

TOTAL FORWARD

TOTAL TO DATE

S-432 (FORM 1582D)
(8/13/90)



Assembly Record
Engine Assembly

Part V
Page No. _____
C40B

Engine Serial Number CAE-844168

Engine Model 250-

Nomenclature	Part Number	Serial Number	Installed		Removed		Reason
			Date	TT TSO	Date	TT TSO	
Gearbox	23063380	CAG-44168	02-05-01	0.0 New	1/30/2015	1841.2 TSN	Repair
Compressor	23065593	CAC-45031	"	0.0 New	5/17/12	1632.1 NEW	REPAIR
Turbine	23063354	CAT-44756	"	0.0 New	5/17/12	1632.1 NEW	OVHLL
COMPRESSOR	23065593	CAC-45031	5/17/12	1632.1 NEW	1/30/2015	1841.2 TSN	Repair
TURBINE	23063354	CAT-44756	5/17/12	1632.1 0.0	160012014	1841.2 209.1	Repair
Turbine	23063354	CAT-44756	25 Jun 2015 26 Jun 2016	1841.2 209.1	31 May 2016	1890.6 258.5	Repair
Compressor	23065593	CAC-45031	25 Jun 2015 27 Jun 2015	1841.2 TSN	31 May 2016	1890.6 TSN	Repair
Gear box	23063380	CAG-44168	25 Jun 2015	1841.2 TSN	31 May 2016	1890.6 TSN	Repair
Turbine	23063354	CAT-44756	12 Sept 2016	1890.6 258.5	14 Feb 2017	1890.6 258.5	Convenience
Compressor	23065593	CAC-45031	12 Sept 2016	1890.6 TSN	14 Feb 2017	1890.6 TSN	Convenience

F-2785AT (5/99)

ASSEMBLY RECORD
Engine Assembly



Rolls-Royce

Part V

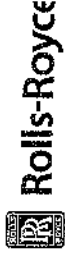
Page No.

Engine Serial Number CAE- 844168

Engine Model 250- C40B

Nomenclature	Part Number	Serial Number	Installed		Removed		Reason
			Date	TT TSO	Date	TT TSO	
Gear box	23063380	CAG-44168	12 Sept 2016	1890.6 TSN	14 Feb 2017	1890.6 TSN	Repair
Turbine	25063354	CAT-44754	2 Mar 2017	1890.6 250.5			
Compressor	25065593	CAC-45031	2 Mar 2017	1890.6 TSN			
Gear box	23063380	CAG-44168	2 Mar 2017	1890.6 TSN			

Assembly Record Engine Accessories



Part VI
Page No.

Engine Serial Number CAE- 844168

Engine Model 250- C40B

Nomenclature	Part Number	Serial Number	Installed		Removed		Reason
			Date	TT TSO	Date	TT TSO	
FADEC ASSY HYDROMECHANICAL UNIT	23070257	JG9AME0389	02-05-01	0.0 NEW	120-04	848.0 TSN	CEB 73- 5027 raining + faults
FUEL NOZZLE	23072732	JGAMT0579	"	0.0 NEW	3/12/03	575.0	ENGINE MON'T START
BLEED VALVE	6899001	INS04016	"	0.0 NEW	04-26-2001	0.0 NEW	HGA 101
FUEL NOZZLE	23005366	FF59433	"	0.0 NEW	01-23-03	556.1 new	CEB-973 5029 R
C.I.T. PROBE	6899001	1XR05429	04-26-2001	0.0 NEW	03-15-05	642.11.942.8	
Bleed valve	23056915	NR 01264	02-22-2001	0.0 NEW			
Bleed valve	23005366	FF59402	01-23-03	481.8 N/A	08/04/03	704.4 227.6	1 Probe 5 faults
HMU	23073353	FF3684-0	08/04/03	150.0:0.0 ENG TT 704.4			
FUEL NOZZLE	23075496	JGALM0338	3/12/03	HMU TT 792.7 Eng TT 575.0	1-20-04	848.0 TSN	faults found
GT-2785C (12/98)	23077067	1VR05720	03-15-05	150.0:0.0 ENG TT 942.8	4/06/12	1632.1 689.3	REPAIR

Engine Serial Number CAE- 844168 Engine Model 250-C40B

Nomenclature	Part Number	Serial Number	Installed		Removed		Reason
			Date	TT TSO	Date	TT TSO	
ECU	23075229	JG9AME0383	2/2/04	848.0 TSN			
HMU	23072726	JGAMT0554	2/2/04	848.0 TSN	2/25/04	848.0 TSN	Removed NOT USED
HMU	23078035	J6ALM0338	2/25/04	1632.1 TSN	4/06/12	1632.1 NEW	REPAIR
FUEL NOZZLE	23077067	1VR05720	5/17/12	1632.1 TSN	4/06/12	1632.1 NEW	REPAIR
H.M.U.	23078035	JGALM0338	5/17/12	1632.1 NEW			
Fuel Nozzle	23075229	J69AME0383	4/20/14	1890.1 TSN	31 May 2016	1890.1 TSN	Removed Compliance
Fuel Nozzle	M250-10604	1NR03689	12 Sep 2016	1890.1 TSN	19-4-16	1890.1 TSN	REMOVED

Compressor Assembly

Compressor Serial Number CAC- 45031 Engine Model 250- C40B

Aircraft S/N	Engine S/N	Installed		Removed		Reason
		Date	TT TSO	Date	TT TSO	
44076	CAF-844168	02-05-01	0.0 New	4/06/12	1632.1 NEW	REPAIR
	CAF-844168	5/17/12	1632.1 NEW	30 Jan 2005	1841.2	Repair
	CAF-844168	25/Jan/2005	1841.2 TSN	31 May 2014	TSN 1890.6	Repair
	CAF-844168	17 Sept 2016	1890.6 TSN	14 Feb 2017	1890.6 TSN	CONVENIENCE
	CAF-844168	2 Mar 2017	1890.6 TSN			

F-2782BT (5/99)

AD Note Compliance and CEB Modification Record Compressor Assembly



Part III
Page No. _____

Compressor Serial Number CAC-45031 Engine Model 250-C40B

AD #	Applicable CEB #	Date		Method of Compliance	Recurring		Signature and Certificate Number
		Hours @ Comp.	Next Comp. Date		One Time	Next Comp. @ Hrs	
None Applicable	See enclosed list	02-05-01		Incorporated at manufacturer	X		Rolls-Royce
		0.0					
		2-8-03		N/A to PN 23073863			Edwards
		137.1		S-roll installed	<input checked="" type="checkbox"/>		FKF4930A
		2/2/04		Spline adapter-repl			
	CEB A72-5039	848.0		N/A by S/N			
	CEB 72-5058 R1	5/17/12		REPLACE #2 BEARING	<input checked="" type="checkbox"/>		T. H. H. KER025K
	CSL A5010 R6	1632.1					VZ3R937L
		5/17/12		INSPECT COMP. ROTOR & SPLINED ADAPTER			
	CSL 5069	1632.1		RELEASE OF NEW #1 BEARING HOUSING		@3382.1	VZ3R937L
		5/17/12					
	CSL5094 R7	1632.1		USE OF UNAPPROVED PARTS ENGINE			
	3500 HR. INSPECTION	5/17/12		F.P.I. IMPELLER ON COND. INSPECTION			
	PCW'S- CEB'S	1632.1					
		72-5008 R2,		2-5021 R1, A72-5028 R2.			

GI-2786ET (5/00)



AD Note Compliance
and
CEB Modification Record
Compressor Assembly

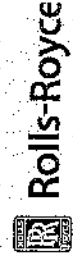
Part III
Page No. _____

Compressor Serial Number CAC- 45031 Engine Model 250- C40B

AD #	Applicable CEB #	Date Hours @ Comp.	Method of Compliance	Recurring		Signature and Certificate Number
				One Time	Next Comp. Date Next Comp. @ Hrs	

GT-2786ET (5/99)

Inspection - Maintenance - Overhaul Record Compressor Assembly



Part IV
Page No. _____

Compressor Serial Number CAC- 45031 Engine Model 250- C40B

Date	Compressor Time		Remarks	Signature and Certificate No.	Organization
	Since OH	Total			
2/2/04	TSN	848.0	Inspected and repaired due to low power. Performed inspections. Tested per the manufacturer's specifications. The powerplant or component identified herein was repaired and inspected in accordance with current Federal Aviation Regulations, and was found airworthy for return to service. Pertinent details of the repairs are on file at this agency under: KEYSTONE ENGINE SERVICES CHS # YKER025K 110 STEWART HUSTON DR. COATESVILLE, PA 19320 A Division of Keystone Helicopter Corp.	Performed	150/300 hour
Cycles:	CSN	1087			
<p>W.O. No. <u>A04150</u> Date <u>2/2/04</u> for _____</p> <p>Signed <u>Timothy A. [Signature]</u></p>					
5/17/12	NEW	1632.1	REPAIRED & PERFORMED A 1750 HR. INSPECTION I.A.W. MANUFACTURER'S SPECIFICATIONS & TESTED I.A.W. OPS & MAINT. MANUAL TABLE 2. DETAILS FILED UNDER MGN: SE1631301.	ROLLS ROYCE ENGINE SERVICES-OAKLAND, INC 7200 EARHART ROAD OAKLAND, CA 94621 REF STA NO VZ3R937L	

F-2784C (12/98)

Compressor Assembly

Part IV
Page No. 2

Compressor Serial Number CAC- 45031

Engine Model 250- C40B

Date	Compressor Time		Remarks	Signature and Certificate No.	Organization
	Since OH	Total			
25-Jun-2015	TSN CSN	1841.2 CSN: 3031	REPAIRED COMPRESSOR FOR LOW POWER IAW CSP22001 OVERHAUL MANUAL 2ND ED. 15TH REV. PERTINENT DETAILS ON FILE AT THIS REPAIR STATION UNDER WO# 12796CE2.	<i>Das Reg</i> MENE 302K	McFarlane McFarlane
12 Sept 2016	TSN CSN	1890.6 91: 3121	REPAIRED AND REINSTALLED ON CAE-844168 IAW CSP22001 OVERHAUL MANUAL 2ND ED. 16TH REV. PERTINENT DETAILS ON FILE AT THIS REPAIR STATION UNDER WO# 13053CE2-W.	<i>Das Reg</i> MENE R 302K	McFarlane McFarlane



**ASSEMBLY RECORD
COMPRESSOR ASSEMBLY**

Part V
Page No.

Engine Model 250- G40B

Compressor Serial Number CAC- 45031

Nomenclature	Part Number Serial Number	INSTALLED				REMOVED			
		Date	Compressor		Date	Compressor		Component	
			CYCLES	TT		CYCLES	TT		
IMPELLER	23065591 JY102044	02-05-01	0.0	TT	4/06/12	1632.1	TT	CYCLES	TT
IMPELLER	23065591 JY102044	5/17/12	1632.1	TT		1632.1			
SPUR ADAPTER GEARSHAFT	M250-10022 YJ26783	5/17/12	1632.1	NEW	31 May 2014	1890.6			258.5
SPLINE ADAPTER	23051117-1 70595	5/17/12	2630	N/A		3121			491
Spur Adapter Gearshaft	M250-10022 YJ 37674	12 Sept 2014	1890.6	UNK					
			2630	N/A					
			3121	0.0					
				0					

GT-2785B (10/98)

Cycle Record Compressor Assembly

Part VI
Page No.

Compressor Serial Number CAC- 45031

Engine Model 250- C40B

Aircraft S/N	Engine S/N	Installed				Removed			
		Date	Compressor TT	Cycle Count Current Cycles Cycle Limit	Engine Cycles at Installation	Date	Compressor TT	Cycle Count Current Cycles Cycle Limit	Engine Cycles at Removal
CAE-844168	CAE-844168	02-05-01	0.0	0		1/Jan/02	1841.2	3031	3031
		25 June 31 Jan 2015	1841.2	3031	3031	31 Mar 2016	1890.6	3121	3121
CAE-844168	CAE-844168	12 Sept 2016	1890.6	3121	3121				

T-9387T (5/99)

Compressor Assembly

Part VI
Page No.

Compressor Serial Number CAC-45031

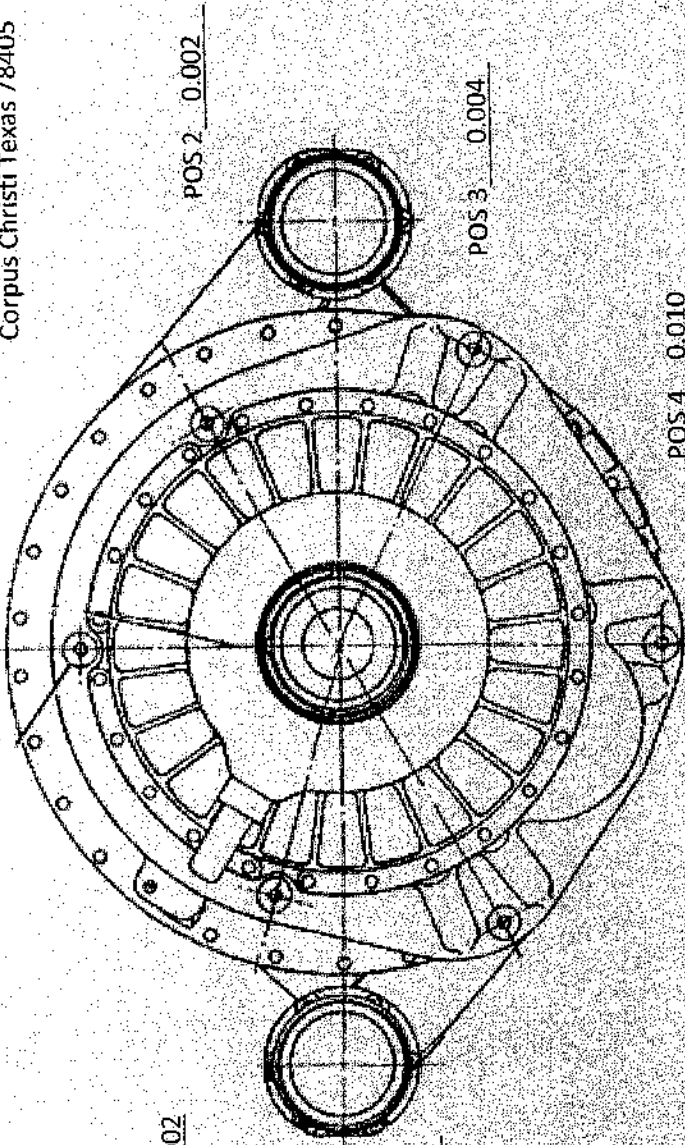
Engine Model 250-C40B

Aircraft S/N	Engine S/N	Installed					Removed							
		Date	Compressor TT	Cycle Count Current Cycles Cycle Limit	Engine Cycles at Installation	Date	Compressor TT	Cycle Count Current Cycles Cycle Limit	Engine Cycles at Removal					

COMPRESSOR SHIM REQUIREMENTS

McTurbine Inc.
401 Junior Beck Drive
Corpus Christi Texas 78405

POS 1 0.000



POS 6 0.002

POS 5 0.000

POS 4 0.010

POS 3 0.004

POS 2 0.002

DATE 02 MAR 2017

COMPRESSOR S/N: CAC-45031

Work Order # 14021CE2-W

Signature

Dave Royer

COMPRESSOR SHIM REQUIREMENTS

McTurbine Inc.
401 Junior Beck Drive
Corpus Christi Texas 78405

POS 1 0.000

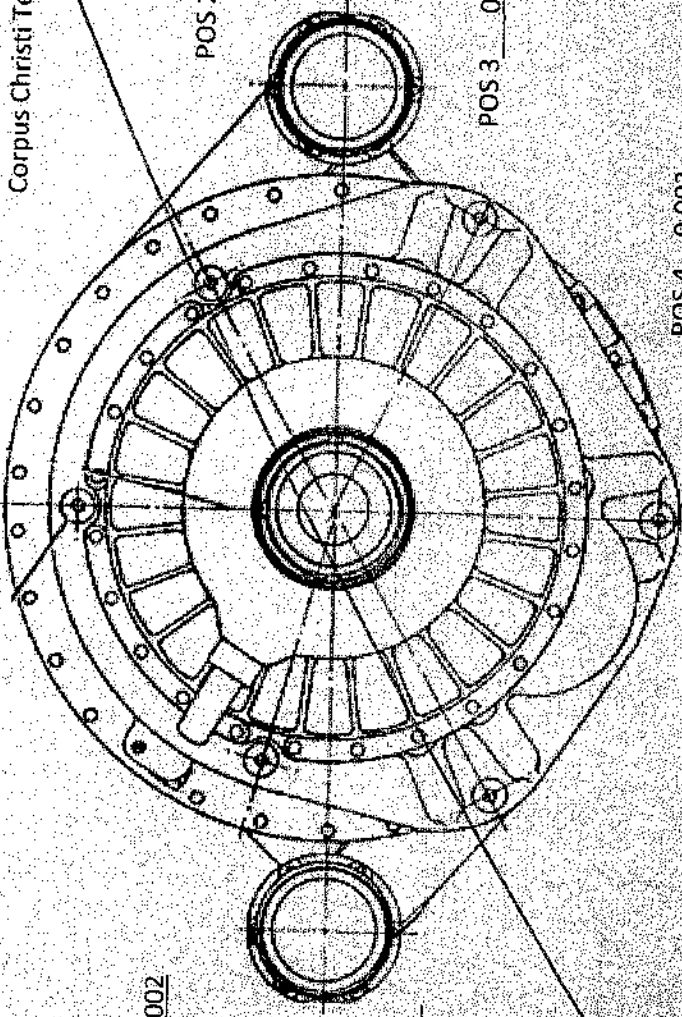
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POS 2 0.002

POS 5 0.002

POS 3 0.002

POS 4 0.002



COMPRESSOR S/N: CAC-45031

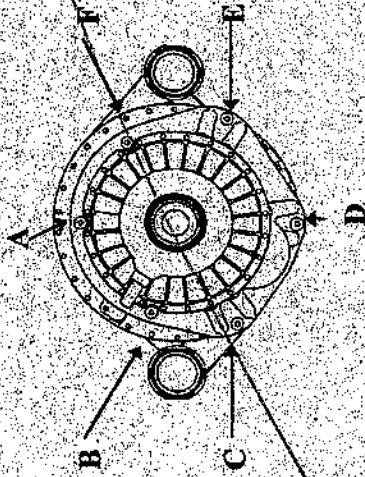
DATE 31 MAR 2015

Work Order # 12796CE2

Signature

[Handwritten Signature]

250 SERIES III and IV
COMPRESSOR SHIM RECORD



SHIM POSITION	TOTAL SHIM THICKNESS
A	.006
B	.008
C	.000
D	.016
E	.014
F	.010

DATE	5.07.2012
WORK ORDER	CJ104959
MGN	SH1631E01
COMPRESSOR S/N	CAC430E1



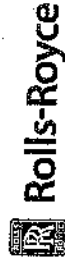
Gearbox Assembly

Part 1
Page No.

Gearbox Serial Number CAG-44168

Engine Model 250-C40B

Aircraft S/N Engine S/N	Installed		Removed		Reason
	Date	TT TSO	Date	TT TSO	
49076 CAE-844168	02-05-01	0.0 New	Jan 30, 2015	1891.2 TSN	Repair
CAE-844168	25 Sep 2015	1891.7 TSN	31 May 2016	1890.6 TSN	Repair
CAE-844168	12 Sep 2016	1890.6 TSN	14 Feb 2017	1890.6 TSN	Repair
CAE 844168	2 Mar 2017	1890.6 TSN			



Part II
Page No. _____

Engine Model 250- C40B

Gearbox Serial Number

CAG- 44168

Transferred/shipped			Received			
Date	From	To	Gearbox Time		Date	Organization
			Total	Since O/H		
02-05-01	Rolls-Royce	BELL	0.0	New	FEB. 2001	BHTC

F-2782 CF (5/00)

AD Note Compliance
and
CEB Modification Record
Gearbox Assembly

Gearbox Serial Number CAG- 44168 Engine Model 250- C40B

AD #	Applicable CEB #	Date		Method of Compliance	One Time	Recurring	Next Comp. Date		Signature and Certificate Number
		Hours @ Comp.	Next Comp. @ Hrs						
None applicable	See enclosed list	02-05-01	0.0	Incorporated at manufacturer	X		N/A	N/A	Rolls-Royce
	CAG-72-5044	June 25, 2015	1841.2	Replacement of Breather Gasket	X		N/A	N/A	Law Royce MCWR 3626
	CAG-72-5047	12 Sep 2016	1899.6	Release of new centrifugal Breather gearhead of Multipurpose Coasting	X		N/A	N/A	Law Royce MCWR 3626

GT-2787T (5/00)

AD Note Compliance
 and
CEB Modification Record
Gearbox Assembly

 Part III
 Page No. _____

 Gearbox Serial Number CAG- 44168

 Engine Model 250- C40B

AD #	Applicable CEB #	Hours @ Comp.	Method of Compliance	Recurring		Signature and Certificate Number
				One Time	Next Comp. Date Next Comp. @ Hrs	

Inspection - Maintenance - Overhaul Record Gearbox Assembly



Part IV
Page No.

Gearbox Serial Number CAG-44168

Engine Model 250- C40B

Date	Gearbox Time		Remarks	Signature and Certificate No.	Organization
	Since OH	Total			
5/17/12	NEW	1632.1	PERFORMED A 1750 HOUR INSPECTION I.A.W. MANUFACTURER'S SPECIFICATIONS & TESTED I.A.W. OPS & MAINT. MANUAL TABLE 2. DETAILS FILED UNDER MGN: SE1631301.	<i>[Signature]</i>	
25-Jun-2015	TSN CSN	1841.2 CSN: 3031	REPAIRED GEARBOX FOR LOW POWER IAW CSP22001 OVERHAUL MANUAL 2ND ED. 15TH REV. PERTINENT DETAILS ON FILE AT THIS REPAIR STATION UNDER WO# 12796CE2.	<i>[Signature]</i> MCCOY 3121K	Rolls-Royce McGraw-Hill
12 Sept 2016	TSN CSN	1890.6 CSN: 3171	REPAIRED, COMPLIED WITH NONINTRUSIVE INSPECTION, AND REINSTALLED ON CAE-844168 IAW CSP22001 OVERHAUL MANUAL 2 ND ED. 16 TH REV. PERTINENT DETAILS ON FILE AT THIS REPAIR STATION UNDER WO# 13053CE2-W.	<i>[Signature]</i> MCCOY 3121K	Rolls-Royce McGraw-Hill

F-2784B (12/98)

Gearbox Serial Number CAG- 44168

Engine Model 250- C40B

Date	Gearbox Time		Remarks	Signature and Certificate No.	Organization
	Since OH	Total			
21 May 2017	TSM	1890.6	REPAIRED AND REINSTALLED ON CAE-844168 1AW CSP21000 OPERATION AND MAINTENANCE MANUAL 1 ST ED. 18 TH REV AND CSP22001 OVERHAUL MANUAL 2 ND ED. 17 TH REV. PERTINENT DETAILS ON FILE AT THIS REPAIR STATION UNDER WO# 14021CE2-W.	<i>[Signature]</i> MORSE 302K	<i>[Signature]</i> MORSE

Turbine Assembly

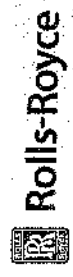
Part I
Page No.
250- C40B

Turbine Serial Number CAT- 44756 Engine Model 250- C40B

Aircraft S/N	Engine S/N	Installed		Removed		Reason
		Date	TT TSO	Date	TT TSO	
	49076					
	CAT-844168	02-05-01	0.0 New	4/06/12	1632.1 NEW	OVERHAUL
	CAT-844168	5/17/12	1632.1 0.0			
	CAT-844168	25 June 2015	1841.2 209.1	16 Oct 2014	1841.2 209.1	Repair low power
	CAT-844168	12 Sept 2014	1890.6 258.5	31 May 2016	1890.6 258.5	Repair
	CAT-844168	2 Mar 2017	1890.6 258.5	14 Feb 2017	1890.6 258.5	Convenience

GT-2782DI (4/99)

Transfer Record



Turbine Serial Number CAT- 44756 Engine Model 250- C40B Part II Page No. _____

Date	TRANSFERRED/SHIPPED		RECEIVED			
	From	To	Turbine Time			
			Total	Since O/H		
02-05-01	Rolls-Royce	BELL	0.0	New	FEB. 2001	BHTC

AD Note Compliance and CEB Modification Record Turbine Assembly



Part III
Page No. _____

Turbine Serial Number CAT- 44756 Engine Model 250- C40B

AD #	Applicable CEB #	Date		Method of Compliance	One Time	Recurring	Next Comp. Date Next Comp. @ Hrs	Signature and Certificate Number
		Hours @ Comp.	02-05-01					
None applicable	See enclosed list	0.0	0.0	Incorporated at manufacturer	X		N/A	Rolls-Royce
	CEBA 72-5031	2/2/04 848.0	848.0	Insp #1 nozzle shield	X		N/A	T. Hawk YKER025K
	CEBA 72-5043	2/2/04 848.0	848.0	#4 wheel-inspect	X			T. Hawk YKER025K
2006-20-07	0-72-50482	02-19-07 185.8		chk in 1 and 15000005		X	Remove At 6 6550	CASAR
	CEBA 72-5031	7/17/11 1357		new mw CEB inst	X	X	AT 3064 cycles	CC000361 Crescent Helicopt P. J. Davis
	CEB 72-5016 R1	5/17/12 1632.1		REPLACE G/P TURBINE SUPPORT				VZ3R937L
	CEB A72-5031 R6	5/17/12 1632.1		REPLACE 1ST STAGE NOZZLE SHIELD				VZ3R937L
	CEB 72-5045 R1	5/17/12 1632.1		NEW 2ND STG SPLINED ADAPTER & LOCK NUT				VZ3R937L
	CEB A72-5044 R2	5/17/12 1632.1		INSPECT 3RD STAGE TURBINE WHEEL				VZ3R937L

GT-2788AT (5/00)

AD Note Compliance and CEB Modification Record Turbine Assembly

Part III Page No.

Turbine Serial Number CAT- 44756 Engine Model 250- C40B

AD #	Applicable CEB #	Date		Method of Compliance	Recurring	One Time	Next Comp. Date		Signature and Certificate Number
		Hours @ Comp.					Next Comp. @ Hrs		
	CSL 5107	5/17/12		P/T ROTOR CLAMPING					<i>[Signature]</i> VZ3R937L
	CSL 5080 R1	1632.1		MANUFACTURING TOOL MARKS ON TUBE ASSY.					<i>[Signature]</i> VZ3R937L
	CSL 5094 R7	5/17/12		USE OF UNAPPROVED PARTS ENGINE					<i>[Signature]</i> VZ3R937L
	PCW'S- CEB'S A72-5043 R3.	1632.1							<i>[Signature]</i> VZ3R937L
	667a7e	28 Jan 2015		No Bearing Retaining Ribs		X		N/A	<i>[Signature]</i> MORSEBIL
	66b-a-72-5043R2	12 Sept 2016		Inspection of 3rd Stage Wheel - Requires Identification				N/A	<i>[Signature]</i> MORSEBIL
		1890.6						N/A	

Inspection - Maintenance - Overhaul Record TURBINE ASSEMBLY

Rolls-Royce



Part IV
Page No.

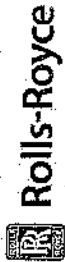
Turbine Serial Number CAT- 44756

Engine Model 250- C40B

Date	Turbine Time		Remarks	Signature and Certificate No.	Organization
	Since OH	Total			
2/2/04	TSN	848.0	Updated and performed 150/300 hour inspections. Tested per the manufacturer's specifications.		
Cycles:	CSN	1087			
<p>The powerplant or component identified herein was repaired and inspected in accordance with current Federal Aviation Regulations, and was found airworthy for return to service. Pertinent details of the repairs are on file at this agency under: KEYSTONE ENGINE SERVICES CRS # YKER025K 110 STEWART HUSTON DR. COATESVILLE, PA 19320 A Division of Keystone Helicopter Corp.</p> <p>W.O. No. A04150 Date 2/2/04 for</p> <p>Signed <i>Timothy L. [Signature]</i></p>					
5/17/12	0.0	1632.1	OVERHAULED I.A.W. MANUFACTURER'S SPECIFICATIONS & TESTED I.A.W. OPS & MAINT. MANUAL TABLE 2.	ROLLS ROYCE ENGINE SERVICES OAKLAND, IN C	
	CSO: 0	CSN: 2630	DETAILS FILED UNDER MGN: SE1631301.	7200 EARHART ROAD OAKLAND, CA 94621 REP STA NO VZ3R937L	
				<i>[Signature]</i>	
			TIEBOLT S/N: DJ57646		
			FREE LENGTH: 7.371		

F-2784D (8/99)

Inspection - Maintenance - Overhaul Record Turbine Assembly



Rolls-Royce

Part IV
Page No. _____

Turbine Serial Number CAT- 44756

Engine Model 250- C40B

Date	Turbine Time		Remarks	Signature and Certificate No.	Organization
	Since OH	Total			
25-Jun-2015	TSN CSN	1841.2 CSN: 3031	REPAIRED TURBINE FOR LOW POWER, REPLACED TIE BOLT P/N: 23008030 S/N: NC87846 FREE LENGTH 7.372 IAW CSP22001 OVERHAUL MANUAL 2ND ED. 15TH REV. PERTINENT DETAILS ON FILE AT THIS REPAIR STATION UNDER WO# 12796CE2.	<i>Ray Hagan</i> <i>MCURBARK</i>	<i>McTurbin</i> <i>Inc</i>
12 Sep 2016	258.5 CSO: 491	1890.6 CSO: 3121	REPAIRED AND REINSTALLED ON CAE-844168 IAW CSP22001 OVERHAUL MANUAL 2 ND ED. 16 TH REV. PERTINENT DETAILS ON FILE AT THIS REPAIR STATION UNDER WO# 13053CE2-W	<i>For Ray</i> <i>MCURBARK</i>	<i>McTurbin</i> <i>Inc</i>

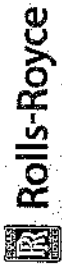
<p>1. Approving National Aviation Authority/Country: FAA/UNITED STATES</p>		<p>2. AUTHORIZED RELEASE CERTIFICATE FAA FORM 8130-3, AIRWORTHINESS APPROVAL TAG</p>		<p>3. Form Tracking Number: 12796CE2-A</p>	
<p>4. Organization Name and Address: McTurbine Inc. FAA CRS # MCWR362K 401 Juniper Beck Drive Corpus Christi, Texas 78405 USA</p>		<p>5. Work Order/Contract/Invoice Number: 12796CE2</p>			
6. Item:	7. Description	8. Part Number:	9. Quantity	10. Serial Number:	11. Status/Work
1	ENGINE	23063378	1 EACH	CAE-844168	REPAIR
<p>12. Remarks</p> <p>REPAIRED TURBINE CAT-44756, COMPRESSOR CAC-45031, GEARBOX CAG-41168 FOR LOW POWER AND TESTED IN ACCORDANCE WITH CSP22001 OVERHAUL MANUAL 2ND EDITION, 15TH REVISION, DATED SEPTEMBER 15, 2014.</p> <p>TSN: 1841.2 CSN: 3031</p>					
<p>13a. <input checked="" type="checkbox"/> 14 CFR 43.9 Return to Service <input type="checkbox"/> Other regulation specified in Block 12</p> <p>Certifies that unless otherwise specified in Block 12, the work identified in Block 11 and described in Block 12 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service.</p>					
<p>13b. Authorized Signature <i>Larry Reyes</i></p>		<p>13c. Approval/Authorization No. MCWR362K</p>		<p>14c. Approval/Certificate No.: MCWR362K</p>	
<p>13d. Name (Typed or Printed): LARRY REYES</p>		<p>13e. Date (dd/mm/yyyy):</p>		<p>14e. Date (dd/mm/yyyy): 25 JUN 2015</p>	
<p>User/Installer Responsibilities</p> <p>It is important to understand that the existence of this document alone does not automatically constitute authority to install the aircraft engine/propeller/article.</p> <p>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 aircraft engine(s)/propeller(s)/article(s) from the airworthiness authority of the country specified in Block 1.</p> <p>Statements in Block 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.</p>					

Turbine Serial Number CAT- 44756

Engine Model 250- C40B

Nomenclature	Part Number Serial Number	Installed				Removed					
		Date	Turbine		Component		Date	Turbine		Component	
			Cycles	TT	Cycles	TT		Cycles	TT	Cycles	TT
1st STG. WHL	23053299 X147091	02-05-01	0.0	0.0	0.0	0.0	4/06/12	1632.1 2630	1632.1 2630	TT Cycles	TT Cycles
2nd STG. WHL	23032280 HX131823	"	0.0	0.0	0.0	0.0	4/06/12	1632.1 2630	1632.1 2630	TT Cycles	TT Cycles
3rd STG. WHL	6898663 HX93607	"	0.0	0.0	0.0	0.0	4/06/12	1632.1 2630	1632.1 2630	TT Cycles	TT Cycles
4th STG. WHL	23066744 HX76792	"	0.0	0.0	0.0	0.0	4/06/12	1632.1 2630	1632.1 2630	TT Cycles	TT Cycles
1ST STG WHEEL	M250-10227 X594662	5/17/12	1632.1 2630	NEW 0.0							
2ND STG WHEEL	23032280 X610567	5/17/12	1632.1 2630	NEW 0.0							
3RD STG WHEEL	6898663 HX93607	5/17/12	1632.1 2630	1632.1 2630	1632.1 2630	31 May 2016	1890.6 3121	1890.6 3121	1890.6 3121	TT Cycles	TT Cycles
4TH STG WHEEL	23066744 HX76792	5/17/12	1632.1 2630	1632.1 2630	1632.1 2630	16 Oct 2014	1841.2 3031	1841.2 3031	1841.2 3031	TT Cycles	TT Cycles
TIEBOLT	23008030 DJ57646	5/17/12	1632.1 2630	UNK N/A							
1ST STG NOZZLE SHIELD	23073566 26382	5/17/12	1632.1 2630	UNK N/A							

27850J (5/99)



Cycle Record
Turbine Assembly

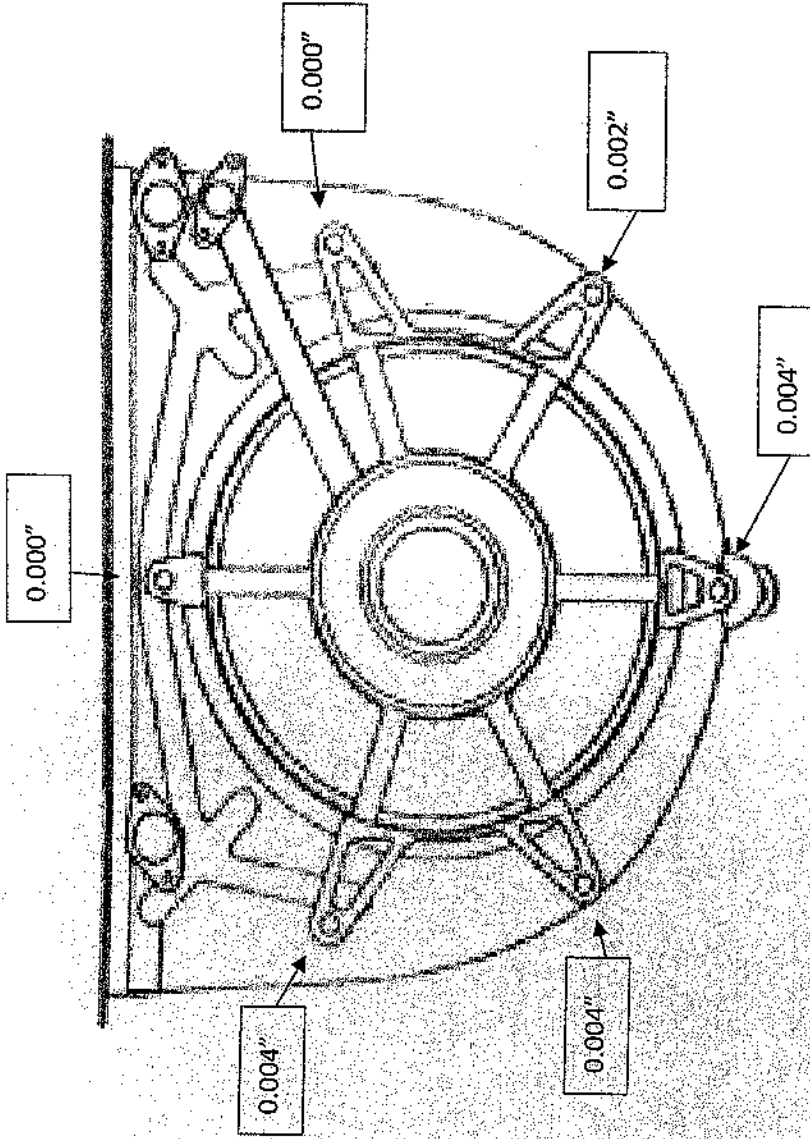
Part VI
Page No.

Turbine Serial Number CAT- 44756

Engine Model 250-C40B

		Installed					Removed				
Aircraft S/N	Engine S/N	Date	Turbine TT	Cycle Count Current Cycles	Engine Cycles at Installation	Date	Turbine TT	Cycle Count Current Cycles	Engine Cycles at Removal		
				Cycle Limit				Cycle Limit			
CAE-844168		02-05-01	0.0			16 Oct 2014	1841.2	3031	3031		
CAE-844168		20 Jan 2015	1841.2	3031	3031	31 May 2016	1890.6	3121	3121		
CAE-844168		12 Sept 2016	1890.6	3121	3121						

VICTOR TURBINE INC.
401 Junior Beck Drive
Corpus Christi Texas 78405

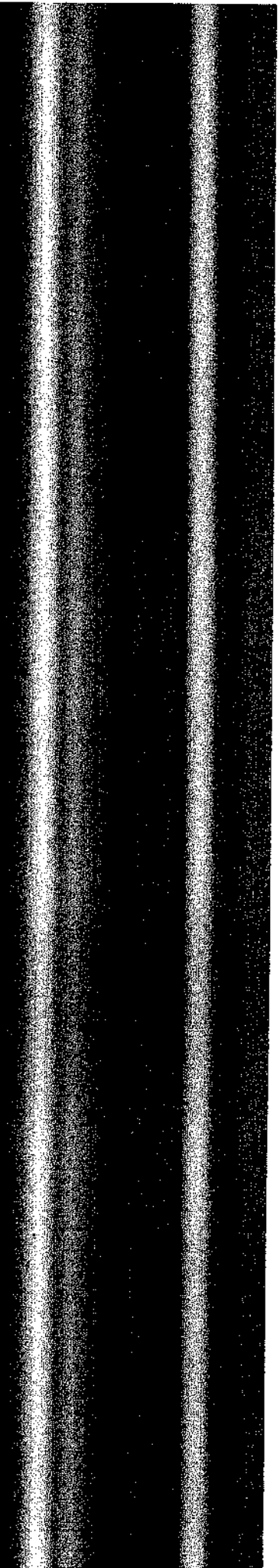


TURBINE S/N: CAT-44756

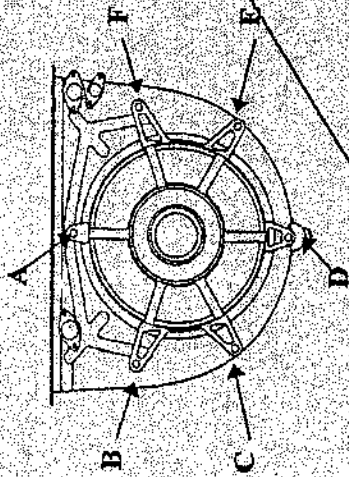
DATE 20 JAN 2015

Work Order # 12796CE2

Signature



250 SERIES III and IV
TURBINE SHIM RECORD



SHIM POSITION	TOTAL SHIM THICKNESS
A	.002
B	.000
C	.000
D	.000
E	.002
F	.002

DATE	5/17/2012
WORK ORDER	111106292
MGN	SE1691301
TURBINE	CAT-44756



Rolls-Royce

LIFE LIMITED PART LOG CARD

LIFE LIMITED PART NAME		3RD STAGE WHEEL	PART NUMBER		SERIAL NUMBER		Comments	Signature And Certificate #
Date Installed	Date Removed	Engine and Module S/N	Engine Model	Hours	Cycles	Overspeed Events * (as app)		
5/17/12		CAT-44756	C40	1632.1	2630		VZ3R937L	

*For PT Wheel Overspeed Cycles, record event date and event maximum % on the Comments Line.

*This card should accompany the part when removed from engine or module.

GT-12017(4-05)



Rolls-Royce

LIFE LIMITED PART LOG CARD

This card is to accompany every life limited part of the engine for proper tracking of component life.

The card is to be completely filled out with all necessary information as follows:

- ▶ Page Number - (if more than one card is needed for the component all pages should be retained for history purposes)
- ▶ Life Limited Part Name
- ▶ Part Number - (if part number is changed at some point during the life of the component a new card should be started and the old card retained for history purposes)
- ▶ Serial Number
- ▶ Date Installed
- ▶ Date Removed
- ▶ Engine and Module Serial Number
- ▶ Engine Model
- ▶ Hours - (to correspond with the date installed or removed, depending on entry being recorded)
- ▶ Cycles - (to correspond with the date installed or removed, depending on entry being recorded)
- ▶ Overspeed Events (as app) -- (this column is only to be filled out for Power Turbine Wheels that are required to be tracked by events exceeding specified Event Thresholds)
- ▶ Comments -- (any important information regarding the history of the component, i.e. reason for removal, inspection, CEB compliance, repair, scrap date, etc.)
- ▶ Signature and Certificate #



Rolls-Royce

LIFE LIMITED PART LOG CARD

LIFE LIMITED PART NAME		4TH STAGE WHEEL	PART NUMBER		23066744	SERIAL NUMBER		HX76792	
Date Installed	Date Removed	Engine and Module S/N	Engine Model	Hours	Cycles	Overspeed Events * (as app)	Comments	Signature And Certificate #	
5/17/12		CAT-44756	C40	1632.1	2630			VZ3R937L	

*For PT Wheel Overspeed Cycles, record event date and event maximum % on the Comments Line.
 *This card should accompany the part when removed from engine or module.
 GT-12017(4-05)



Rolls-Royce

LIFE LIMITED PART LOG CARD

This card is to accompany every life limited part of the engine for proper tracking of component life.

The card is to be completely filled out with all necessary information as follows:

- ▶ Page Number - (if more than one card is needed for the component all pages should be retained for history purposes)
- ▶ Life Limited Part Name
- ▶ Part Number - (if part number is changed at some point during the life of the component a new card should be started and the old card retained for history purposes)
- ▶ Serial Number
- ▶ Date Installed
- ▶ Date Removed
- ▶ Engine and Module Serial Number
- ▶ Engine Model
- ▶ Hours - (to correspond with the date installed or removed, depending on entry being recorded)
- ▶ Cycles - (to correspond with the date installed or removed, depending on entry being recorded)
- ▶ Overspeed Events (as app) - (this column is only to be filled out for Power Turbine Wheels that are required to be tracked by events exceeding specified Event Thresholds)
- ▶ Comments - (any important information regarding the history of the component, i.e. reason for removal, inspection, CEB compliance, repair, scrap date, etc.)
- ▶ Signature and Certificate #

Service Accessory Record



Nomenclature HYDROMECHANICAL UNIT

Part I
Page No.

Component Serial Number JGALLM0538

Engine Model 250-C40

Date	Installed				Removed				
	Engine S/N	A/C/S/N	Reg. No.	Accessory Time		Date	Accessory Time		Reason
				Since OH	Total		Since OH	Total	
5/17/12	CAE-844168			New	0.0				
				NEW	2051.8				

GT-11778T (F) 5/00

Inspection - Maintenance - Overhaul - Transfer AD/CEB compliance record accessory



Rolls-Royce

Part II
Page No.

Nomenclature HYDROMECHANICAL UNIT

Component Serial Number JGALM0338

Engine Model 250- C40

Note 1: Record AD & CEB compliance and transfer information in "Remarks" section.
Note 2: This card must accompany accessory at removal.

Date	P/N	Accessory Time		Remarks	Signature and Certificate No.
		Since OH	Total		
04/23/12	23078035	New-	0-0-	Shipped from Rolls-Royce to: INSPECTED PER MANUFACTURER'S SPECIFICATIONS. DETAILS FILED UNDER MGN: SEI631301 W/O: EA142422 COMPLIED WITH: CEB-73-5036 R. 2 (SB 73-31) R. 1	Rolls Royce
				ROLLS ROYCE ENGINE SERVICES-OAKLAND, INC 7200 EARHART ROAD OAKLAND, CA 94621 REP. STA. NO. VZ3R937L	
					<i>[Signature]</i> 092

GT-11778T (B) 5/00

Service Accessory Record



Rolls-Royce

Part I
Page No.

Nomenclature HYDROMECHANICAL UNIT

Engine Model 250-C40

Component Serial Number JGALM0338

Installed				Removed					
Date	Engine S/N	A/C S/N		Accessory Time		Date	Accessory Time		Reason
		Reg. No.		Since OH	Total		Since OH	Total	
				--New	--00--				
NOV 24 11	CAB 844168	49076	H1883	NEW	1591.2				

GT-1178T (P) 5/00

MGN # 3615425

	DATE	MACH.	INSP.
	21 Nov 2011	1689	092



AD/CEB compliance record accessory

Part II
Page No.

Engine Model 250- C40

Nomenclature HYDROMECHANICAL UNIT

Component Serial Number JGALM0338

Note 1: Record AD & CEB compliance and transfer information in "Remarks" section.
 Note 2: This card must accompany accessory at removal.

Date	P/N	Accessory Time		Remarks	Signature and Certificate No.
		Since OH	Total		
11/21/11	23078035	-New	-0.0-	Shipped from Rolls-Royce to:	Rolls Royce
		NEW	1591.2	REPAIRED AND TESTED PER MANUFACTURERS SPECIFICATIONS. DETAILS FILED UNDER MGN: SFI549501	ROLLS ROYCE ENGINE SERVICES, OAKLAND, INCL. 7200 EARHART ROAD OAKLAND, CA 94621 REP STATION #23R927L
				W/O: EA141841	
				COMPLIED WITH: CEB-73-5036 R. 2 (SB 73-31) R. 1	<i>[Signature]</i> 092

PRESERVATION TAG
TYPE OF PRESERVATION

LONG TERM PRESERVED
WITH MIL-O-8084
GRADE 1010 MAY
REPRESERVE DATE 2013

ROLLS-ROYCE ENGINE SERVICES - OAKLAND INC.
7200 Earhart Road
Oakland, CA 94621-4504
FAA Repair Station # VZ3R937L

COMPONENT CONDITION REPORT

ROLLS-ROYCE ENGINE SERVICES - OAKLAND INC.

FAA REPAIR STATION VZ3R937L



CUSTOMER: REP AIR AVIATION

WORK ORDER NUMBER: EA141841

MONITOR GROUP: SF1549501

PART DESCRIPTION: EMC-35 HYDROMECHANICAL UNIT

PART NUMBER: 23078035(113200-03C10)

SERIAL NUMBER: JGALM0338

REASON FOR REMOVAL: HIGH MGT

If the reason for removal was failure, list only parts, which caused the failure and define condition of the failed parts; excessive wear, broken, frozen, grounded, burnt, etc.

METERING VALVE POTENTIOMETER WORN

BRIEF DESCRIPTION OF WORK ACCOMPLISHED: REPAIRED AND TESTED PER MANUFACTURER'S SPECIFICATIONS

CMM CSP24009 1ST EDITION, 7TH REVISION DATED 15 JUN, 2004

MAJOR PARTS USED: 1EA METERING VALVE POTENTIOMETER, 1EA ELECTRICAL CONNECTOR, 1EA P1 YOKE PIN AND ASSOCIATED 100% ITEMS (PACKINGS, CAPS ETC.)

COMMENTS: WORN M/V POTENTIOMETER CAUSED FLOW SHIFTS WHICH CAUSED THE HIGH MGT READINGS. THE MAIN ELECTRICAL CONNECTOR WAS REPLACED DUE TO CORROSION. UNIT TESTS GOOD AFTER REPAIR PROCESS. CEB 73-5036 R2 (SB 73-31 R1) COMPLIED WITH THIS VISIT.

MECHANIC: W. WOOD 1689

INSPECTOR:



11-22-11

DATE: 21 NOVEMBER, 2011

Monitor Group: SF1549501

Work Order: EA141841

Date: 21 NOV, 2011

UNCONTROLLED WHEN PRINTED
Copies of this document are valid only for performance of work on W/O EA141841 effective as of 11/21/2011

Approving National Aviation Authority/Country

2.

AUTHORIZED RELEASE CERTIFICATE

FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG

3. Form Tracking Number:

FAA/United States

4. Organization Name and Address:
 ROLL-S-ROYCE ENGINE SERVICES - OAKLAND INC.
 7200 Earhart Road
 Oakland, California 94621 4504 (VZ3R937L)

SF1549501

5. Work Order, Contract, or Invoice Number:
 EA141841

6. Item	7. Description	8. Part Number	9. Eligibility*	10. Quantity	11. Serial/Batch Number	12. Status/Work
1	EMC-35 HYDROMECHANICAL UNIT	23078035 (113200-03C10)	N/A	1 EA	JGALM0338	REPAIRED

13. Remarks: The above unit was repaired and tested in accordance with the manufacturer's specifications. C.M.M. CSP24009, 1st Edition, 7th Revision, Dated 15 June, 2004. Records of work performed are on file at this repair station under Monitor Group Number: SF1549501.

Bulletins complied with: CEBB 73-5036 R2 (SB 73-31 R1).

TSO: NEW TTT: 1591.2

This assembly embodies Fuel Pump P/N: 113415-03C3 S/N: JGALP0352

Completion date: 21 November, 2011

14. Certifies the items (item(s) above) were manufactured in conformity to:

Approved design data and are in a condition for safe operation.

Non-approved design data specified in Block 13.

15. Authorized Signature: _____

16. Approval/Authorization No. _____

17. Name (Typed or Printed): _____

18. Date (m/d/y): _____

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

20. Authorized Signature: *Spiff JF*

21. Approval/Certificate Number: VZ3R937L

22. Name (Typed or Printed): *Epifanio Fragoso*

23. Date (m/d/y): *Nov/22/2011*

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, authority across part/component/assembly 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.

* Authority must cross check eligibility with applicable technical data.



SERVICE RECORD ACCESSORY

GT-2786AT (F)

NOMENCLATURE

HYDROMECHANICAL UNIT

Part I
Page No. _____

Component Serial Number

JGALM0338

Engine Model 250-C40B

INSTALLED				REMOVED				
Date	Engine S/N	A/C S/N Reg. #	Accy. Time		Date	Accy. Time		Reason
			Since OH	Total		Since OH	Total	
5-30-97	CAE-844074	49034	NEW	0.0	9-15-97	NEW	6.2	Vendor Recall
3-12-98	CAE-844090	49043	NEW	0.0	6-30-98	NEW	0.0	Upgrade
05-28-99	CAE-844119	49056	NEW	0.0	8-23-01	978.3	978.3	MAINT
06-13-02	CAE-844106	49050 N1993PA	NEW	992.7	6-22-02	992.7	992.7	LEAKING FLUID
3/12/03	CAE-844168	49076 N304AG	new	992.7	1-21-04	TSN	1265.7	FAULTS FOUND
2/25/04	844168	49076 N304AG	NEW	1265.7				
NOV. 07/11		49076 N304AG	new	1	NOV. 07, 11	TSN	1591.2	High mot



GT-2786T

AD NOTE COMPLIANCE AND CEB MODIFICATION RECORD ACCESSORY

Part III Page No. _____

NOMENCLATURE _____ HYDROMECHANICAL UNIT

Component Serial Number JGALM0338 Engine Model 250-C40B

AD #	Applicable CEB #	Date		Method of Compliance	Recurring	Next Comp. Date	Signature and Certificate Number
		Hours @ Comp.	Next Comp. Hrs				
				SEE ENCLOSED LIST			
	A-73-6021 PMI (10005)	8/11/99	6.2	CECO S/B 73-8 73-9	X		SF32839 J. J. J. J. J.
	73-5021	9782		CECO S/B 73-13	✓		
	73-5023 PMI (10011)	11-29-11		CECO S/B 73-14	✓		
	73-5025 PMI (10013)			CECO S/B 73-16	✓		SF32839 McL...
	73-5027			GPEC S/B 73-13	✓		
	73-5028/PMI (10020)	11/20/10		GPEC S/B 73-20	✓		Dr. Jeffrey GHE
	73-5024	2-18-04		GPEC S/B 73-13	✓	TSN 1567.7	SF32839
	73-5030 PMI (10024)	TSN 1567.7		SP LINE CHECKED IN U/I	✓		X...
				GPEC S/B 73-25	✓		



INSPECTION - MAINTENANCE - OVERHAUL RECORD
ACCESSORY

GT-2786B

HYDROMECHANICAL UNIT

Part IV
Page No. 1

NOMENCLATURE

Component Serial Number JGALM0338

Engine Model 250- C40B

477

Date	Acqy. Time		Remarks	Signature and Certificate No.	Organization
	Since OH	Total			
10/1/97	new	6.2	Installed stick shifter Per CECO w/o 116777P Ran final test	SF32839C A. Kuznetsov CECO	CECO
8/11/98	NEW	6.2	Updated to 113200-0204	SF32839C A. Kuznetsov CECO	CECO
11-29-01	New	978.3	REF. S.B. 73-8, 73-9 Repaired/updated to 113200-0305 (4507976) TAN CMM 73-26-00 d. 10/21/01 E. 1166 73-13-14 REPAIRED/UPDATED TO 113200-0507 C230753496 TAN CMM 73-20-00 DTD 21147 4-56 73-13, 73-30 CECO	SF32839C S. A. M. Knight CECO	CECO
11/20/02	NEW	992.7		SF32839C A. Kuznetsov CECO	CECO
8-18-04	New	1265.7	Repaired/updated to PIN 113200-0510 (4507976) TAN CMM 73-30-00 10/13/03 + 5/6/07 73-13 (CEB 73-5051 J. A. M. Knight CECO 73-26-00 (M.P. 2000) OK WAL 10/13/03	A. Kuznetsov CECO	GPECs
				SF32839C S. A. M. Knight CECO	GPECs

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

2. Form Tracking Number: **2-19-2004-02JHOH**

AUTHORIZED RELEASE CERTIFICATE

FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG

4. Organization Name and Address: **Goodrich Pump & Engine Control Systems, Inc.
CHARTER OAK BOULEVARD
WEST HARTFORD, CT 06133-0651**

Repair Station Number: **SF3R839L**

6. Item	7. Description	8. Part Number	9. Eligibility*	10. Quantity	11. Serial/Batch Number	12. Status/Work
1.	EMC-35A HMU	113200-03C10 23078035	N/A	1	JGALM0338	REPAIRED

13. Remarks

1. Status/Work Description: Repaired Time to Continue TSN 1267.7 Hours

2. Component Maintenance Manual: 73-20-00

3. Service Bulletin(s): 73-13, 73-25 Temp. Rev. N/A

4. Comments: CEB,S 73-5021 (SPLINE CHECK ONLY) 73-6030/PMI 10024

14. Certifies that the work specified in block 12/13 was carried out in accordance with JAR 145 and in respect to that work the aircraft component is considered ready for release to service under JAA Acceptance Certificate Number: JAA.4312


15. Authorized Signature: _____

16. FAA Authorization No.: _____

17. Name (Typed or Printed): _____

18. Date (m/d/yy): _____

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

20. Authorized Signature: 

21. Approval/Certificate No.: **SF3R839L**

22. Name (Typed or Printed): **James Harrington**

23. Date (m/d/yy): **2/19/2004**

24. Certifies that unless otherwise specified in block 13, the work identified in Block 12 and described in Block 13 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service.

25. 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 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 part/components/assembly from the Airworthiness Authority of the country specified in block 1.

26. Statements in block 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.

User/Installer Responsibilities

R/M-2/18/04

Written By Urban, Dick

Date: February 18, 2004

List Service Bulletins Incorporated: 73-13 73-25

The electrical connector was checked for damage or corrosion and damaged wires or crimps. No damage or corrosion was found. The metering valve potentiometer was replaced as a precaution. The unit was updated tested, endurance tested, final tested and preserved for shipment.

Action Taken:

Inspection Overhaul Repair Modify Test Only

Unit Disposition:

The unit was tested in the as received condition and the customer complaint was not confirmed

Comments / Observations:

By: Visual Inspection Test Disassembly

Customer Complaint Confirmed: Yes No N/A

Description:

Unrelated Damage: Yes No N/A

Investigation Results:

STEPPER MOTOR FAULTS

Customer's Reason for Removal:

Customer:	Rolls-Royce	Model:	EMC-35A
End User:	Keystone Helicopter	Serial Number	JGALM0338
Purchase Order:	R211063	Removal Date:	
Hours:		Sales Order:	65192
TSN:	1267.7	Work Order:	107816
TSO:		Part List In:	113200-03C7
TSR:		Parts List Out:	113200-03C10

Pump & Engine Control Systems
Goodrich Corporation
Charter Oak Boulevard
Box 350651
West Hartford, CT 06133-0651



M11863

INVESTIGATION REPORT NUMBER:

INPUT CONF: 113200-03C7

OUTPUT CONF: 113200-03C10

SERIAL NO. JGALM0338

DATE REC. 01/23/04

S/O NO. 00065192

W/O NO. 107816

73-20-00 dated 10/15/03

PARENT WO: 00107816

INCORP SERV BUL. 73-13, 73-25

73-13, 73-25

O/H IAW CHANDLER EVANS MANUAL

CEBS 73-5021 (SPLINE CHECK ONLY), 73-5030/PMI 10024

Op Seq# for Bar Code 10.00

DATE	INSP	OPER	REFERENCE	DESCRIPTION OF WORK PERFORMED
01/10/04	9224	31.00		ADVISE ENGRG OF RESULTS
01/10/04	9224	110.00		REPAIR AS REQUIRED
01/10/04	9224	120.00		REPAIR ITEMS FROM AS-RECD INSP
01/10/04	9224	130.00		INSPECT PARTS PRIOR TO ASSY
01/10/04	9224	140.00		SB 73-25 DUAL PLA POT
01/10/04	9224	150.00		UPDATE NAMEPLATE(S), AS REQ'D
01/10/04	9224	160.00		REASSEMBLE PUMP A/R
01/10/04	9224	170.00		BREAK-IN PUMP - IF REQ'D
01/10/04	9224	180.00		PUMP ACCEPTANCE TEST - IF REQ'D
01/10/04	9224	190.00		RE-ASSEMBLE HMU COMPLETE
01/10/04	9224	200.00		HYPOT
01/10/04	9224	210.00		PRESET
01/10/04	9224	220.00		TEST
01/10/04	9224	230.00		ENDURANCE SCREEN
01/10/04	9224	240.00		FINAL TEST W/ FALLOUT CHK

108
 1-29-04
 Mandy Anderson

INPUT CONF: 113200-03G7 OUTPUT CONF: 113200-03C10 SERIAL NO. JGALM0338
 S/O NO. 00065192 W/O NO. 107816 DATE REC. 01/23/04
 O/H IAW CHANDLER EVANS MANUAL 73-20-00 dated 10/15/03 PARENT W/O: 00107816
 INCORP SERV BUL. 73-13, 73-25

CEBs 73-5021 (SPLINE CHECK ONLY), 73-5030/PMI 10024 Op Seq# for Bar Code 10.00

DATE	TECH	INSP	OPER NO.	REFERENCE DOCUMENT	DESCRIPTION OF WORK PERFORMED
2/16/04	2/16/04		250.00		LOCKWIRE, VAC CHK, OIL FLUSH
FEB 17 2004			260.00		HYPOT, TEST INSPECTION
			270.00		MOC SIGNOFF
			300.00		FINAL INSPECT
			800.00		REPAIR AS REQUIRED

END OF REPORT FOR W/O#: 107816



TRANSFER RECORD ACCESSORY

P/N 23073353

Nomenclature BLEED VALVE Serial Number FE36840 Model RR250

TRANSFERRED / SHIPPED				RECEIVED		
Date	From	To	Total Time		Date	Organization
			TSN	TSO		

DIP / RE 200-010 R3

AD NOTE AND CEB COMPLIANCE MODIFICATION RECORD ACCESSORY

P/N 23073353

Nomenclature BLEED VALVE Serial Number FF36840 Model RR250

Compliance Date	Bulletin or Directive No.	Title	Signature	Organization
JUNE 11, 2003	CEB-75-3024	IMPROVED DURABILITY	<i>Ruben Wright</i>	DALLAS AIRMOTIVE, INC. VRPR4CL

**AD NOTE AND CEB COMPLIANCE
MODIFICATION RECORD
ACCESSORY**

P/N 23073353

Nomenclature BLEED VALVE Serial Number FF36840 Model RR250

Compliance Date	Bulletin or Directive No.	Title	Signature	Organization

INSPECTION-MAINTENANCE
OVERHAUL RECORD
ACCESSORY

P/N 23073353

Nomenclature BLEED VALVE Serial Number FF36840 Model RR250

Date	TSN	TSO	Remarks	Signature	Organization
JUNE 11, 2003	UNKNOWN	00.0	OVERHAULED, TESTED AND PRESERVED 1/A/W ROLLS ROYCE MANUAL 14W3 2ND EDITION 8TH REVISION SECTION 75-10-02. DETAILS ON FILE UNDER DALLAS AIRMOTIVE, INC. WORK ORDER: C55903	<i>Robert Wright</i>	DALLAS AIRMOTIVE, INC. YRRR49TL

DTP/RE: 200-014 R2

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

2

AUTHORIZED RELEASE CERTIFICATE

FAA FORM 8130-3, AIRWORTHINESS APPROVAL TAG

3. Form Tracking Number:
C55903

4. Organization Name and Address
Dallas Armotive
6114 Forest Park Road
Dallas, TX 75235-6498

Certificate Number: YRRR491L

5. Work Order/Contract/Invoice Number:
C55903

6. Item:	7. Description:	8. Part Number:	9. Eligibility:	10. Quantity:	11. Serial/ Batch Number:	12. Status/Work:
1	BLEED VALVE	23073833	N/A	1	FF36340	OVERHAULED

13. Remarks: TT UNK TSO: ZERO CSN: UNK CSO: ZERO
O/H IAW POLLS ROYCE OHM 14W3 2nd EDITION REVISION 8 SECTION 75-10-02
C/W CEB-75-3024

Details on file at this Repair Station under work order/s referenced in block 3 & 5 Inspector: WYLLIE BEDINGFIELD Date: 06/11/03
 Certifies that the work specified in Block 12/13 was carried out in accordance with JAR 145 and with respect to that work the aircraft component is considered ready for release to service under JAA Acceptance Certificate Number: JAA 4368

14. Certifies the items identified above were manufactured in conformity to:
 Approved design data and are in a condition for safe operation
 Non-approved design data specified in Block 13

15. Authorized Signature:	16. Approval/Authorization No.:	19. <input checked="" type="checkbox"/> 14 CFR 43.9 Return to Service <input checked="" type="checkbox"/> Other regulation specified in Block 13 Certifies that unless otherwise specified in Block 13, the work identified in Block 12 and described in Block 13 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service	20. Authorized Signature:	21. Approval/Certificate No.:
17. Name (Typed or Printed):	18. Date (m/d/y):	22. Name (Typed or Printed):	23. Date (m/d/y):	

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.

Dakota Air Parts

Advanced Aerospace & Defense Logistics Support

International Inc.

Acknowledgement

SO #: S119716

Date Printed: 3/6/2018

Time: 12:50:27 PM

of Items: 1

Page: 3

Prepared By: Jonathan Kohl

To:

L.J. WALCH CO., INC.
6600 PRESTON AVENUE
LIVERMORE, CA 94550
United States of America
ATTN: LINDA WINANTAN

Ship To:

L.J. WALCH CO., INC.
6600 PRESTON AVENUE
LIVERMORE, CA 94550
UNITED STATES OF AMERICA

Date Open: 3/6/2018

Ship Via:

Customer PO#: 12485

Customer #: LJWC1

Ship Via Acc:

FAX: 19252941780

Buyer:

Item	Part Number/Description	Delivery	To Ship	BackOrd	CD		Unit Price	Total Amt
------	-------------------------	----------	---------	---------	----	--	------------	-----------

INSPECTION / RETURNS / CANCELED PURCHASE ORDERS

All items are subject to your inspection and acceptance. Customer will notify Dakota Air Parts Int'l. Inc. within two (2) business days of receipt of material if any material is rejected. All rejected items must be returned in their original condition with all trace paperwork and original packaging to Dakota Air Parts Int'l. Inc. within ten (10) days of receipt, and must include an RMA number issued by Dakota Air Parts Int'l. Inc.. Returned material may be subject to a 20% restocking fee. Items installed or altered in any way will not be authorized for return. Customer is responsible for freight both ways if returned. Any items canceled that require work fees (overhaul, inspection, repair) or orders that have been denied export will be subject to a 20% restocking fee and actual work fees if work has been started by the repair facility. Dakota Air Parts is not responsible for any delay caused by the OEM, Outside Vendors, Repair Facilities or Force Majeure. All past due accounts will be charged a finance charge of 0.015 which is an annual percentage rate of 0.18 with a minimum charge of \$2.00.

INSURANCE CLAUSE & LIABILITY WAIVER

It is the standard practice of Dakota Air Parts that all shipments be shipped on the customers account and insured. All items shipped C.O.D. and/or any other shipping method, that must be prepaid, will be insured and billed to the customer.

Waiver of Liability

The item(s) ordered under the above Sales Order may be shipped without insurance if the Customer expressly requests this in writing. Upon such a request, the Customer assumes liability for this shipment and guarantees payment of said shipment regardless of outcome. It is understood that the customer warrants payment in full of the invoice amount. The Customer agrees to assume any and all liability and risks which may arise from the non-insured shipment. Further, the Customer agrees on behalf of itself and its successors and assigns to indemnify, hold harmless and release Dakota Air Parts International, Inc., its directors, officers, employees and agents, from any responsibility or liability for any and all damage or loss that may result from the non-insured shipment.

By signature of a duly authorized representative of the Customer, the Customer acknowledges that it fully understands this Waiver of Liability and agrees to its terms.

--	--	--	--	--	--	--	--	--

PLEASE ACKNOWLEDGE RECEIPT		SubTotal:	200.00
Authorized Signature:		Misc Charge:	0.00
Jonathan Kohl	EMAIL: sales1@asimro.com	Freight:	0.00
Dakota Air Parts	PHONE: 602-842-3609	Total:	200.00
Jonathan Kohl			

Part I
Page No.

Nomenclature BLEED VALVE

Component serial number FF59402

Engine Model 250- C40B

Installed				Removed			
Date	Engine S/N	A/C S/N		Date	Accessory time		Reason
		Reg. No.	Since OH		Since OH	Total	
10-30-00	CAE-844161	49076	New	8/4/03	222.6	704.4	Removed

GT-11778T (F) 5/00

Inspection - Maintenance - Overhaul - Transfer
 AD/CEB compliance record accessory



Nomenclature BLEED VALVE

Part II
 Page No.

Component serial number FF59402

Engine Model 250- C40B

Note 1: Record AD & CEB compliance and transfer information in "Remarks" section.
 Note 2: This card must accompany accessory at removal.

Date	P/N	Accessory time		Remarks	Signature and certificate no.
		Since OH	Total		
10-30-00	23005366	New	0.0	Shipped from Rolls-Royce to: BEI	Rolls-Royce

GT-11778T (B) 5/00

Service accessory record

01



Rolls-Royce

Part I
Page No.

Nomenclature BLEED VALVE

Component serial number FF59433

Engine Model 250-C40B

Installed				Removed					
Date	Engine S/N	A/C S/N	Reg. No.	Accessory time		Date	Accessory time		Reason
				Since OH	Total		Since OH	Total	
02-05-01	CAE-844168		49076	New	0.0	1-23-03	NEW	556.1	REMOVED

GT-11778T (F) 5/00

Inspection - Maintenance - Overhaul - Transfer
 AD/CEB compliance record accessory



Part II
 Page No.

Nomenclature BLEED VALVE

Engine Model 250- C40B

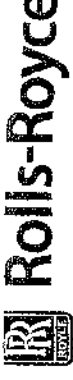
Component serial number TF59433

Note 1: Record AD & CEB compliance and transfer information in "Remarks" section.
 Note 2: This card must accompany accessory at removal.

Date	P/N	Accessory time		Remarks	Signature and certificate no.
		Since OH	Total		
02-05-01	23005366	New	0.0	Shipped from Rolls-Royce to: BEL	Rolls-Royce

GT-11778T (B) 5/00

Service Accessory Record



Nomenclature FUEL NOZZLE Part I
 Component serial number 1NR03687A Page No. 1
 Engine Model 250-C47

Installed				Removed				
Date	Engine S/N	A/C S/N Reg. #	Accy. Time		Date	Accy. Time		Reason
			Since OH	Total		Since OH	Total	
5 AUG. 08	CAE.847451		0.0	1409.3	7-25-2016	1849.9	3849.2	Overhaul
22. April. 14	CAE.844166	45-0676	0.0	3898.6	31 May 2016	49.4	3898.6	CEB Compliance
12 SEP 2016	CAE.844168		49.4	3898.6				

GT-11778(F) 5/00

AD/CEB Compliance Record Accessory



Nomenclature FUEL NOZZLE Part II Page No. 1

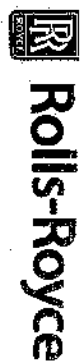
Component serial number 1NR03689 Engine Model 250-C47

Note 1: Record AD & CEB compliance and transfer information in "Remarks" section.
 Note 2: This card must accompany accessory at removal.

Date	P/N	Accy. Time		Remarks	Signature and Certificate No.
		Since OH	Total		
JUN 13 2008	23077067	0.0	1944.3	The product has been overhauled and tested in accordance with Rolls-Royce Overhaul Manual CSP 22001 Edition 2 Revision 8 Dated 13/SEP/07. The product is approved for return to service. All pertinent details of the work are on file at this organization under W/O: LW698475	 SAL AMO #22-58
SEP 21 2013	23077067	0.0	DNK	OVERHAULD TAW 14W3 SECOND EXHAUST REVISION 9 DATED 9/13/13. IN COMPLIANCE WITH CEB-A-73-0041 KITR964K	 BL Rida
Sept 2014	MPSD-10604	49.4	3898.6	Completed W/ CEB-73-5036 R 2 Full Work Spec the 100% Air Strud replacement. Each part Details as file at this Repair Station under W/O 15053022-10	 Jay Boyer MILWAUKEE

GT-11778 (B) 5/00

Service Accessory Record



Nomenclature FADEC ASSY.

Part I
Page No. _____

Component serial number JG9AME0383

Allison Engine Model 250-C408

Installed				Removed				Reason
Date	Engine S/N	A/C S/N Reg. No.	Accy. Time Since OH	Accy. Time Total	Date	Accy. Time Since OH	Accy. Time Total	
8-20-99	CAE-844129	49060 HB-7CH	New	0.0	6 March 01	New	242.09	P1 DFLT indication 11/8/01 SP7
26/6/01	CAE-844058	49028 E1-WAV	@926:30	242.09	24/AUG/02	R/A	526.5	PLANE FCT AN ENGINE MAT EXCEEDS LIMITS
2-2-04	CAE-844168		TSN	1192.0	10/JAN/03	New	1192.0	Unable to clear restriction ENGINE MAT EXCEEDS LIMITS

GT 11778T (10/98)

Inspection - Maintenance - Overhaul - Transfer - AD/CEB Compliance Record Accessory



Rolls-Royce

FADEC ASSY.

Part II
Page No. _____

Nomenclature _____
Component serial number JG9AME0383

Rolls-Royce Allison Engine Model 250 - C40B

Note 1: Record AD & CEB compliance and transfer information in "Remarks" section.
Note 2: This card must accompany accessory at removal.

Date	P/N	Accy. Time		Remarks	Signature and Certificate No.
		Since OH	Total		
8-20-99	23070257	New	0.0	Shipped from Rolls-Royce Allison to: BELL	Rolls-Royce Allison
8 Nov 2001	23070257	New	242.09	Shipped from BELL to Rolls-Royce Allison for maintenance to Chandler . UNIT REPAIRED FOR GOVERNOR MANUFACTURING MANUFACTURE 73-25-02 DATED 2/1/97	ROBERT BARRON ENGINEER
11/16/03	23070257	New	242.09		
2/25/03	23070257	New	1192.0	Tested per CMM 73-25-02	SE328396
12/16/03	23070257	New	1192.0	Updated per SR 73-15	SE328396

AUTHORIZED RELEASE CERTIFICATE

FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG

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

3. Form Tracking Number:
 N/A
 E5796

4. Organization Name and Address:
 Goodrich Pump & Engine Control Systems, Inc.
 CHARTER OAK BOULEVARD
 WEST HARTFORD, CT 06133-0651

Repair Station Number SF3R839L

5. Work Order/Contract/Invoice Number: 104752
 R209403

6. Item	7. Description	8. Part Number	9. Eligibility*	10. Quantity	11. Serial/Barc Number	12. Status/Work
1.	EMC-35A ECU	114200-4A2-4303 23075229	N/A 250-C40B	1	JG9AME0383	MODIFIED

13. Remarks

- Status/Work Description: Modified Time to Continue TSN 1192.0 HOURS
- Component Maintenance Manual: 73-25-02 Rev. - dated 2/1/97
- Service Bulletin(s): SB 73-15 Temp. Rev.
- Comments: Unit updated to 114200-4A2-4303

Certifies that the work specified in block 12/13 was carried out in accordance with JAR 145 and in respect to that work the aircraft component is considered ready for release to service under JAA Acceptance Certificate Number: JAA4312

14. Certifies the items identified above were manufactured in conformity to:

- Approved design data and are in a condition for safe operation.
- Non-approved design data specified in Block 13.

19. 4 CFR 43.9 Return to Service Other regulation specified in Block 19
 Certifies that unless otherwise specified in block 13, the work identified in Block 12 and described in Block 13 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service.

15. Authorized Signature:	16. FAA Authorization No.:	20. Authorized Signature	21. Approval/Certificate No:
17. Name (Typed or Printed)	18. Date (m/d/y):	22. Name (Typed or Printed)	23. Date (m/d/y):
		Robert Martin	SF3R839L 12/18/2003

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 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 part/components/assembly from the Airworthiness Authority of the country specified in block 1.

Statements in block 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.

GOODRICH

Pump & Engine Control Systems
Goodrich Corporation
Charter Oak Boulevard
Box 330651
West Hartford, CT 06133 0651

INVESTIGATION REPORT NUMBER

E5796

Customer:	Rolls-Royce	Model:	EMC-35A
End User:	Keystone helicopter	Serial Number	JG9AME0383
Purchase Order:	4303 UPGRADE POOL	Removal Date:	
Hours:		Sales Order:	61486
TSN:	1192.0	Work Order:	104752
TSO:		Part List In:	114200-2A2-4207
TSR:		Parts List Out:	114200-4A2-4303
Cycles:			
CSN:			
CSO:			
CSR:			

Customer's Reason for Removal:

IGNIFLT (IGNITION I FAULT)
SALES ORDER SUPPLEMENT RECEIVED TO UPGRADE ECU TO 4303 CONFIGURATION.

Investigation Results:

Unrelated Damage: Yes No N/A

Description:

The ECU exterior "As Received" was heavily contaminated with with glue (used to paste the ECU tag) and with oily/greasy substance which gave the ECU a yellowish appearance and was difficult to clean up.

Customer Complaint Confirmed: Yes No N/A

By: Visual Inspection Test Disassembly

Comments Observations:

ECU passed "As Received" functional testing with no faults.
Several engine startup simulation were made while monitoring the igniter and starter signals. no defects were found.
ECU tested O.K. The ECU was further subjected to thermal and vibration testing, which it passed successfully.
The Fault observed is likely due to igniter fault detection design issue which this ECU may be providing a greater contribution to. Update ECU to 4303 configuration improves igniter fault detection.

Unit Disposition:

Overhaul Repair Modify Test Only

Action Taken:

ECU upgraded to 114200-4A2-4303 configuration.
ECU has been tested and PASSED the Functional Acceptance Test

List Service Bulletins Incorporated: N/A

Written By *Eidanaf, Al*

Date: August 19, 2003

GOODRICH
 Pump & Engine Control Systems
 Goodrich Corporation
 Charter Oak Boulevard
 Box 330651
 West Hartford, CT 06133 0651

Support Engineering/Quality Engineering
EMC-35A RTV Incoming Test Instruction List

Rev. A 02-06-03

Customer:	Rolls-Royce	Serial Number	JG9AME0383
Model:	EMC-35A	Part List In:	114200-2A2-4207
Sales Order:	61486	Parts List Out:	114200-2A2-4207
Work Order:	98544	Assembly Name	ECU
Purchase Order	R209403		
Debit Number			

Customer's Reason for Removal:

IgniFit (ignition I fault)

R470 Status

Date
Comp.

Date	Op. #	Oprtr. #	Description of Work
4-23-03	100	5587	As Received Inspection
4/23/03	105	11549	Clean ECU As Required Per TPS 122
APR 23 2003	110	11581	Maintenance Terminal Download as per TPS 125.
APR 23 2003	115	11581	Perform INCOMING ATP with Pressure Testing Recorded on PT1540. Test Software; BELL 04, Load Switch Pos. 1 mA.
APR 23 2003	120	11581	Test R470 and Bond Test Record on PT1540
4/23/03	200	11715	Engineering Fault Isolation, As Req'd.

RTV Notes

Written By **AL ELDANAF**

Date Initiated April 4, 2003

GOODRICH

Goodrich Corporation
Charter Oak Boulevard
Box 330651
West Hartford, CT 06133 0651

**Support Engineering/Quality Engineering
EMC-35A RTV "Prepare To Ship" Inst. List**

Rev. A 02-06-03

Customer:	Rolls-Royce	Serial Number	JG9AME0383
Model:	EMC-35A	Part List In:	114200-2A2-4207
Sales Order:	61486	Parts List Out:	114200-2A2-4207
Work Order:	98544	Assembly Name	ECU
Purchase Order	R209403		
Debit Number			

Customer's Reason for Removal:

IgniFit (ignition I fault)

Date	Op. #	Oprtr. #	Description of Work	N/C DATE
8-18-03	300	11551	FINAL ATP, TPS 186	
8-18-03	305	N/A	PEDAL POT TEST (for 6002, 7102, & 8000 ECUs ONLY)	
8-19-03	310	11552	P1 TEST	RECORD ON PT1540
8-19-03	315	11552	BOND TEST	RECORD ON PT1540
8-19-03	320	11552	PERFORM R470 TEST	
8-19-03	325	11552	FINAL SOFTWARE / ONLINE LOADER	
8-19-03	330	11552	INSPECTION	
8-19-03	335	11552	LOAD CONSTANTS / EE ERASE AND VERIFY	<i>Stephen Martin</i>
8-19-03	340	11552	MARK AND INSTALL NAMEPLATE IF REQ'D.	
8-19-03	345	11552	LOCKWIRE, P1 CAP, VIBRATION ISOLATORS	
8-19-03	350	11715	Generate Engineering Strip Report	
8-19-03	355	11715	Advise program administrator of ECU disposition & repairs (if any)	
8/23/03	360		INSPECTION By FAA Repairman Certificate Holder	
	365		Final Inspection	11-18-03

Written By AL ELDANAF

Date Initiated April 4, 2003



Pump & Engine Control Systems
 Goodrich Corporation
 Charter Oak Boulevard
 Box 330651
 West Hartford, CT 06133 0651

Support Engineering/Quality Engineering
 EMC-35A SB 73-15, 4303 ECU Conversion Inst. Lis

Rev. C 02-06-03

Customer:	Rolls-Royce	Serial Number	JG9AME0383
Model:	EMC-35A	Part List In:	114200-2A2-4207
Sales Order:	61486	Parts List Out:	114200-4A2-4303
Work Order:	104752	Assembly Name	ECU
Purchase Order:	4303 UPGRADE POOL		
Debit Number			

Customer's Reason for Removal:

IgniFit (ignition I fault)
 Sales order supplement received to upgrade ECU to 4303 configuration.

R470 Status

	Date Comp.
--	------------

Date	Op. #	Oprtr. #	Description of Work	N/C Date
	100	↑	As Received Inspect, Tamper proof Seal: OK / Damaged / NA	
	105	↑	Clean and Prep ECU per TPS122	
	110	↑	Maintenance Terminal Download As Per TPS 125	
	115	↑	If req'd., Test PMA per TPS 79; if PASS, NA OP 220 TPS 82	
	200	↓	Disassemble ECU For Board Reworks. Record Board S/Ns In ECU Log.	
12/2/03	205	11549	Convert CPU; TPS 180, if req'd. replace U3 w/ 112862-3 Part Mark CPU Brd. "11599Assy114334-3" - <i>Taucau</i>	
12/5/03	210	11549	Convert IF; TPS 185, if req'd. TPS 461 Ops 840 to 830 Part Mark IF Brd. "11599AssyR2-114335-4" - <i>Taucau</i>	
12/16/03	215	11715	Pwr Brd. 5V Supply Calibration, R428 SOT per PSM 1779.	
12/16/03	216	11549	Install RNC55 H1101ES @ R428 (113660-10)	
	217		Convert PWR; if req'd. replace U411 w/ 113911-1	
	218	N/A	PWR Brd. PMA Rework per TPS 82 if req'd. Part Mark PWR Brd. "11599Assy114337-1" - <i>Taucau</i>	
12/16/03	220	12715	Pwr Brd. Verify 5V: Min: 5.05V Actual: <u>5.13V</u> Max: 5.15V	
EC 18 2003	225	100	Inspect All Reworks Performed	
	230	N/A	Conformal Coat Brds. per TPS 93 Ops. 800-810, 825	
12/10/03	235	N/A	Conformal Coat EMI Cable per TPS 90	

Written By AL ELDANAF

Date Initiated



Coltec Industries

Chandler Evans Control Systems Division
Charter Oak Boulevard
West Hartford, Conn. 06101

Investigation Report # E5796

Support Engineering/Quality Engineer

EMC-35A SB 73-15, 4303 ECU Conversion In

Page 2

Rev. C 02-06-

REFERENCE THE EMC-35A ECU ASSEMBLY PROCESS SHEETS FOR THE FOLLOWING OPERATIONS
Actual operation numbers may differ from process sheets

Date	Op. #	Oprtr. #	Description of Work	N/C Date
12-16-03	240	10440	Computer Board & Edge Card Assembly	
12-16-03	245	10440	Preliminary ATP <i>Bell 12, 10mA</i>	
12-16-03	250	10440	Bake ECU for 15 Minutes at 50 deg. C	
12-16-03	255	10440	Torque of Hold Down Screws	
12-16-03	260	10440	Secure Housing Hardware	
12-16-03	265	10440	Inspection	
12-16-03	270	10440	Install temporary Cover Assy-Torque External Hardware & J1, J2	
12-16-03	275	N/A	If Req'd. 72 Hr. ECU Burn In per TPS 81	
12-16-03	280	10440	Vibration Testing (5 Min. Only)	
12-16-03	285	10440	Remove Temporary Cover and Bake ECU for 45 Minutes at 105 deg. C	
12-16-03	290	10440	Install Final (113877-2) Cover	
12-16-03	292	10440	Leak Test as per OEM Process.	
DEC 17 2003	294	11581	Test 13 (Q), Temperature Cycling (3 cycles only)	
DEC 17 2003	300	11581	Final ATP	
DEC 17 2003	305	11581	P1 Test, TPS 186	- RECORD ON PT1540 -
DEC 17 2003	310	11581	Bond & R470 Test	- RECORD ON PT1540 -
DEC 17 2003	315	11581	Final Software/On Line Loader	
12-17-03	320	100	The next Operation requires a CECO Inspector to Witness .	
DEC 17 2003	325	11581	Load Constants , EE Erase, and Verify	
DEC 17 2003	330	11581	Mark and Install nameplate	
DEC 17 2003	335	11581	Lockwire, P1CAP, Vibration Isolators	
12/17/03	340	11715	Generate Engineering Strip report	
12/17/03	345	11715	Advise program administrator of ECU disposition & repairs (if any)	
12/18/03	350		Inspection By FAA Repairman Certificate Holder	
DEC 19 2003	355		Final Inspection	

Written By AL ELDANAF

Date Initiated

1. UNITED STATES

FAA FORM 130-3
AIRWORTHINESS APPROVAL TAG

U.S. Department of Transportation
Federal Aviation Administration

3. System Tracking Ref. No.
80210170

4. Organization
Rolls-Royce Corporation
2001 South Tibbs Avenue
Indianapolis, Indiana 46241

Page: 1 of 1
5. Work Order, Contract, or Invoice No:

x4946-5006869-bell

6. Item	7. Description	8. Part Number	9. Eligibility*	10. Quantity	11. Serial/ Batch Number	12. Status/Work
000010	INJECTOR ASSY, FUEL	6899001	TO BE VERIFIED BY INSTALLER	3PC	1XR05429 1XR05436 1XR05437	NEW

13. Remarks
 EXPORT ITEM(S) AIRWORTHINESS APPROVAL-PART(S). THIS FORM IS NOT AN EXPORT APPROVAL.
 Company Sold To / Country
 BELL HELICOPTER TEXTRON
 12,800 RUE DE L'AVENIR
 MIRABEL QC J7J 1R4
 CANADA

Limited life parts must be accompanied by maintenance history including total time/total cycles/time since new.

14. New Newly Overhauled
 Certifies that the new or newly overhauled part(s) identified except as otherwise specified in block 13 was (were) manufactured in accordance with FAA approved design data and airworthiness.

19. Return to Service in Accordance with FAR 43.9
 Certifies that the work specified in block 13 (or attached) above was carried out in accordance with FAA airworthiness regulations and in respect to the work performed the part(s) is (are) approved for return to service.

NOTE: In case of parts to be exported, the special requirements of the importing country have been met.

15. Signature *[Signature]* 16. FAA Authorization No: ODAF-501101-CE
 20. Authorized Signature: _____ 21. Certificate Number: _____

17. Name (Typed or Printed) LEWIS L. LENTZ 18. Date: 10/24/2000
 22. Name (Typed or Printed): _____ 23. Date: _____

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 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.
 Statement in block 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.

FAA Form 130-3 (11-93)
 The FAA Form 8130-3 and JAA Form One are equivalent. Other countries such as Canada also have equivalent acceptable documents.
 *Optional. Installer must cross check eligibility with applicable technical data.

Facsimile



Rolls-Royce

To Jim Taylor
Company Bell Helicopter
Fax number 514-437-4985
Date 02/07/2001
Pages 2 (including cover page)

From Patti Birdwell
Location Assembly & Test
Speed code R38
Direct dial 317-230-5422
Direct fax 317-230-6196

Please pair up the attached CEB page in the logbook with engine S/N CAE-844168, which was shipping from Rolls-Royce on Tuesday, February 6, 2001. The serial number on the page included in the engine logbook is incorrect.

I apologize for any inconvenience this causes. If you have any questions, please contact me at the above telephone number.

Thank you!

Patti Birdwell
Administrative Asst. to
Russ Vogel, Director
Production Assembly & Test

Am u Page

AN ORIGINAL IS BEING MAILED

Jim [signature] FEB 15/2001

Rolls-Royce Corporation P.O. Box 420 Indianapolis, Indiana 46206-0420 USA

B Compliance

Engine Series: Model 250- C40B

Module:	CEB Number	Title	Date	Incorporated	Published?
HMU		Module Serial Number: JGAMT0579			
	73-5004	Engine, Fuel & Control, HMU Fireshield, Add Spacer Washers		Incorporated	Not Published
	73-5013	Engine, Fuel & Control, Hydromechanical Unit Assembly - Incorporation of a Screened Standpipe	11/26/97	Incorporated	Published
	73-5025	Engine, Fuel & Control, Release of New HMU		Incorporated	Not Published

The intent of the above Commercial Engine Bulletins have been incorporated.

This is the original configuration of Engine Serial No.844168 as of 02/05/2001 shipped from Allison Engine Company.

<i>Module:</i>	<i>CEB Number</i>	<i>Title</i>	<i>Date</i>	<i>Incorporated</i>	<i>Published?</i>
Engine		Module Serial Number: CAE-844168			
	72-5002	Engine Assembly, Self-Sealing, Quick Disconnect, Fuzz Burning Chip Detector, Add	7 /30/97	Incorporated	Published
	72-5018	Engine, Replace #3 & 4 Roller Bearing		Incorporated	Not Published
	73-5001	Engine, Electrical System, Install New Clamping	10/31/96	Incorporated	Published
	73-5002	Engine, Fuel and Control, HMU to CEFA Tube Assembly, Replace	1 /31/97	Incorporated	Published
	73-5003	Engine, Fuel, Lube and Air System, Combined Engine Filter Assembly, Rework to Incorporate Dummy RTD		Incorporated	Not Published
	73-5005	Engine, Fuel & Control, Replacement of Oil Scavenge Hose to Provide More Clearance for Chip Detector	10/15/97	Incorporated	Published
	73-5010	Engine, Fuel & Control, Rework of CEFA to provide Clearance for Self-Sealing Chip Detector	7 /30/97	Incorporated	Published
	73-5019	Engine, Fuel & Control, Release of New CEFA with increased Bypass Valve, increased Thermal Lockout Temperature, and New Filter Element	5 /7 /99	Incorporated	Published
	73-5020	Engine, Fuel & Control - CEFA - Replace Active RTD with Dummy RTD	6 /22/99	Incorporated	Published
	74-5001	Engine, Ignition System, Relocation of Ignition Lead		Incorporated	Not Published

The intent of the above Commercial Engine Bulletins have been incorporated.

This is the original configuration of Engine Serial No.844168 as of 02/05/2001 shipped from Allison Engine Company.

CEB Compliance

Engine Series: Model 250- C40B

CEB Number	Title	Date	Incorporated	Published?
<i>Module:</i> Turbine	<i>Module Serial Number:</i> CAT-44756			
72-5001	Engine, Turbine, Release of #5 Labyrinth Seal Air Tube Slip Joint - Modification	10/31/96	Incorporated	Published
72-5011	Engine, Turbine Assembly, Reidentification of Fourth Stage Turbine Wheel	12/15/97	Incorporated	Published
72-5013	Engine, Turbine Assembly, Horizontal Fireshield - Replace	4 /30/98	Incorporated	Published
72-5019	Engine, Turbine Assembly, Recoating of Inner and Outer PT Shafts		Incorporated	Not Published
72-5020	Engine, Turbine Assembly, Modification of Horizontal Fireshield for Commonality		Incorporated	Not Published
72-5025	Engine, Turbine Assembly, Release of New Rear Engine Mount		Incorporated	Not Published

The intent of the above Commercial Engine Bulletins have been incorporated.

This is the original configuration of Engine Serial No 8AA168 as of 02/05/2001 shipped from Allison Engine Company.

CEB Compliance

Engine Series: Model 250- C40B

<i>Module:</i>	<i>CEB Number</i>	<i>Title</i>	<i>Module Serial Number:</i>	<i>Date</i>	<i>Incorporated</i>	<i>Published?</i>
Bleed Valve			FF59433			
	Bleed Valve	None Applicable			Incorporated	Not Published

The intent of the above Commercial Engine Bulletins have been incorporated.

EB Compliance

Engine Series: Model 250- C40B

	<i>CEB Number</i>	<i>Title</i>	<i>Date</i>	<i>Incorporated</i>	<i>Published?</i>
<i>Module:</i>	ECU	<i>Module Serial Number:</i>	JG9AME0389		
	73-5016	Engine, Fuel & Control, Incorporation of the Conformal Coated Flex (C40 only)		Incorporated	Not Published

The intent of the above Commercial Engine Bulletins have been incorporated.

This is the original configuration of Engine Serial No.844168 as of 02/05/2001 shipped from Allison Engine Company.

CEB Compliance

Engine Series: Model 250- C40B

	<i>CEB Number</i>	<i>Title</i>	<i>Date</i>	<i>Incorporated</i>	<i>Published?</i>
<i>Module:</i>	Fuel Nozzle	<i>Module Serial Number:</i>	1NS04016		
	Fuel Nozzle	None Applicable		Incorporated	Not Published

The intent of the above Commercial Engine Bulletins have been incorporated.

This is the original configuration of Engine Serial No.844168 as of 02/05/2001 shipped from Allison Engine Company.

CEB Compliance

Engine Series: Model 250- C40B

	<i>CEB Number</i>	<i>Title</i>	<i>Date</i>	<i>Incorporated</i>	<i>Published?</i>
<i>Module:</i>	Gearbox	<i>Module Serial Number:</i> CAG-44168			
	72-5010	Engine, Gearbox Assembly, Pinion Gear Roller Bearings, Replace		Incorporated	Not Published
	72-5010	Engine, Gearbox Assembly, Pinion Gear Roller Bearings, Replace		Incorporated	Not Published
	72-5017	Engine, Gearbox Assembly, Release of New Spare Pad Cover to Prevent Oil Leakage	2 /16/99	Incorporated	Published
	72-5024	Engine, Gearbox Assembly, Release of New Torquemeter Damper Ring		Incorporated	Not Published

The intent of the above Commercial Engine Bulletins have been incorporated.

This is the original configuration of Engine Serial No.844168 as of 02/05/2001 shipped from Allison Engine Company.

CEB Compliance

Engine Series: Model 250- C40B

	CEB Number	Title	Date	Incorporated	Published?
Module:	Compressor	Module Serial Number:	CAC-45031		
	72-5003	Engine, Compressor, Scroll Assembly, Replacement	7 /30/97	Incorporated	Published
	72-5006	Engine, Compressor Assembly, Release of New Number One Bearing Housing to Reduce One Hertz Whine	12/21/98	Incorporated	Published
	72-5008	Engine, Compressor - Compressor Rear Support - New Stationary Seal Coating	2 /27/98	Incorporated	Published
	72-5012	Engine, Compressor Assembly, Removal of Compressor Vent Gaskets	2 /15/98	Incorporated	Published
	72-5021	Engine, Compressor Assembly, Release of New Number One Bearing Assembly	12/14/98	Incorporated	Published

J1 1288

Rev. 12-31-97

PACKING ROOM CHECK SHEET

GEARBOX

250-C40B, C47B, C47M

GEAR BOX S/N CAG-441168

250-C40B P/N 23063380

~~250-C47B P/N 23063380~~

Date 2-5-01

Contract or P/O

Date Shipped

Destination

S.O.

Shipped with: Engine S/N

CAE-844168

TSLO NEW

TT NEW

PART NAME	PART NO.	S/N

NEW (✓)

OVERHAUL ()

REPAIR ()

MODIFICATION ()

Inspector

MEDRAGE SCALF

Certified Inspector

Wood/JV/1288

11-1384
REV. 3-01-00

PACKING ROOM CHECK SHEET

ENGINE UNIT

250-C40B/C47B/C47M

ENGINE S/N CAT. 844168

250-C40B P/N 23063378

Date 2-5-01

Contract or P/O

TSLO NEW TT NEW

Date Shipped

Destination

Shipped with: C/B S/N CAG-44168 Comp. S/N CAC-45031

S.O.

Turb. S/N CAT-44756

Part Name	Part No.	S/N	Part Name	Part No.	S/N
FADEC CONTROL	23070257		FUEL NOZZLE	6899001	INS04016
ASSY (BCU)	23071644		FUEL NOZZLE	6899001	INS04016
PERMANENT MAGNET	23064128		BLEBD VALVE	23005366	FF59433
ALTERNATOR (PMA)	23064129		BLEBD VALVE	23005366	FF59433
HYDROMECHANICAL UNIT (HMU)	23072732		NI PICKUP	23054163	ENB182
COMBINED ENGINE FILTER ASSY (CFPA)	23066682		N2 PICKUP	23054164	ENB182
ELECTRICAL HARNESS	23064230 23065805		ANT-ICE VALVE	6899080	AE18006
CIT PROBE	23056915		N2 O/S VALVE ASSY	23007827	6215
CECO FUEL PUMP	113415-0344		T/M TRANSDUCER	23070297	6382-9-529

NEW (✓) OVERHAUL () REPAIR () MODIFICATION () CORRELATION ()

Certified Inspector

Inspector Assembly & Test/11287.doc

Inspector

NEW (y) GEORGE STALF

Certified Inspector

MODIFICATION ()

REPAIR ()

OVERHAUL ()

PART NAME	PART NO.	S/N
Spur Adapter Gearshaft	23072374 23073520	C6 128242
Impeller Assembly	23065591	5Y 102044
Compressor Rotor	23065592	32115

Shipped with: Engine S/N CAE 844168 TSLO NEW

IT NEW

S.O.

Destination

Date Shipped

Contract or P/O

Date 2-5-01

PACKING ROOM CHECK SHEET

COMPRESSOR

250-C40B, C47B, C47M

250-C40B P/N 23065593

COMPRESSOR S/N CACHSC31

DATE SHIPPED 2-5-01
 SHIPPED WITH: ENGINE CASE 844168

DESTINATION
 CONTACT OR P/N
 TSIO
 TT
 S.O.
 TURBINE S/N CMT-44756
 250-C40B P/N 23061354
 TURBINE UNIT
 250-C40B, C47B, C47M
 PACKING ROOM CHECK SHEET

PART NAME	PART NO.	S/N	PART NAME	PART NO.	S/N
GAS TURBINE ROTOR ASSY.	23064610	33958	POWER TURBINE ROTOR ASSY.	23064627	47049
1ST STAGE WHEEL	23053299	X147091	3RD STAGE WHEEL	6898663	HX93607
2ND STAGE WHEEL	23032280	HX131823	4TH STAGE WHEEL	23066744	HX76792

NEW () OVERHAUL () REPAIR () MODIFICATION ()
 Inspector GEORGE SCOTT
 Certified Inspector

Rolls-Royce

ENGINE TEST LOG 250 SERIES

TEST No. _____

ENGINE S/N 874168
 TYPE TEST Sch. B
 DATE 2-03-01
 STAND H/L
 P.T.S. No. 897
 OIL TYPE: 23699

TYPE FUEL J-H
 LHV : : :
 SP. GR. : : :

TO : : :
 CC : : :
 IDLE : : :

CUSTOMER MON. N1 N2 : : :
 COL. N1 N2 : : :

REMARKS: : : :
 : : :
 : : :

81.5 81.3 81.0 93 81.3 81.3 81.3 94 91.3 81.5

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COMP SEAL VENT ORIF DASH NO. 3
 hp=
 T/M CAL
 ECU S/N
 CIT (T1) S/N
 No. STARTS 2
 LOG SHT 1
 RUN COMP.
 RUN INCOMP. 2
 OPER. M. F. 100%
 OPER. 100%
 DATE OF ACCEPT 2.05
 DATE OF ACCEPT

TD ENGINE TEST LOG

UNITS	1	2	3	4	5	6	7	8	9	10	11	12
DATA REQUIRED												
TIME MIL CLOCK	04:50	05:40	06:30	07:20	08:10	09:00	09:50	10:40	11:30	12:20		
POWER SETTING	SRT	SRT	SRT	SRT	SRT	SRT	SRT	SRT	SRT	SRT	SRT	SRT
GAS PRODUCER SPEED (N1)	3200	3100	3000	2900	2800	2700	2600	2500	2400	2300	2200	2100
DYNE SPEED	3200	3100	3000	2900	2800	2700	2600	2500	2400	2300	2200	2100
DYN. FORCEMETER	8	11	10	10	10	10	10	10	10	10	10	10
DYN. FORCEMETER	41000	41000	41000	41000	41000	41000	41000	41000	41000	41000	41000	41000
ENGINE TORQUEMETER	2.7	2.5	2.5	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
CORR. SHAFT HORSEPOWER	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
FUEL INLET PRESSURE	110	100	100	100	100	100	100	100	100	100	100	100
OBSERVED FUEL FLOW	110	100	100	100	100	100	100	100	100	100	100	100
FUEL INLET TEMP.	110	100	100	100	100	100	100	100	100	100	100	100
CORR. FUEL FLOW	110	100	100	100	100	100	100	100	100	100	100	100
ANTI-ICE LINE TEMPERATURE	46	46	46	46	46	46	46	46	46	46	46	46
AVG. COMP. INLET PRESSURE	38	38	38	38	38	38	38	38	38	38	38	38
AVG. COMP. INLET TEMP.	38	38	38	38	38	38	38	38	38	38	38	38
TEST CELL REF. TEMP.	38	38	38	38	38	38	38	38	38	38	38	38
VENTURI Δ P	38	38	38	38	38	38	38	38	38	38	38	38
VENTURI ATM. PRESS.	38	38	38	38	38	38	38	38	38	38	38	38
VENTURI REF. TEMP.	38	38	38	38	38	38	38	38	38	38	38	38
PLENUM Δ P	38	38	38	38	38	38	38	38	38	38	38	38
COMP. DISCHARGE TEMP.	38	38	38	38	38	38	38	38	38	38	38	38
COMP. DISCHARGE PRESSURE	38	38	38	38	38	38	38	38	38	38	38	38
GEARBOX CASE PRESSURE	38	38	38	38	38	38	38	38	38	38	38	38
COMP. SEAL VENT PRESSURE	38	38	38	38	38	38	38	38	38	38	38	38
IND. MGT	38	38	38	38	38	38	38	38	38	38	38	38
CORR. MGT	38	38	38	38	38	38	38	38	38	38	38	38
MAIN OIL PRESSURE	38	38	38	38	38	38	38	38	38	38	38	38
SCAVENGE OIL PRESSURE	38	38	38	38	38	38	38	38	38	38	38	38
OIL INLET PRESSURE	38	38	38	38	38	38	38	38	38	38	38	38
SCAVENGE OIL TEMPERATURE	38	38	38	38	38	38	38	38	38	38	38	38
OIL INLET TEMPERATURE	38	38	38	38	38	38	38	38	38	38	38	38
OIL FLOW TIME (S/B)	38	38	38	38	38	38	38	38	38	38	38	38
OIL FLOW	38	38	38	38	38	38	38	38	38	38	38	38
DYNE VIBRATION	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
GEARBOX VIBRATION	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
TURBINE VIBRATION	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
COMPRESSOR VIBRATION	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
START ACCEL & DECEL TIME	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
START NUMBER	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
DOWN	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
OIL CONSUMPTION	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
FUEL DRAINAGE	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7

Rolls-Royce Allison
 P.O. Box 420
 Indianapolis, Indiana
 46206-0420 USA

Rolls-Royce Allison
P.O. Box 420
Indianapolis, Indiana
46206-0420 USA

0935
29.53
19

TIME																												
TRUE BAR.																												
OUTSIDE TEMP.																												
RELATIVE HUMIDITY																												
GENERAL	DATA REQUIRED											UNITS	1	2	3	4	5	6	7	8	9	10	11	12				
	TIME MIL. CLOCK												hh:mm	10:08	10:18	10:32	10:50	10:58	11:05	11:12	11:19	11:26	11:33		11:40			
POWER SETTING													54/22			900	960	1030	1090	1150	1210	1270			612			
GAS PRODUCER SPEED (N1)												rpm	3212	L	W	4872	5147	5346	5539	5731	5923	6115			6309			
DYNE SPEED												rpm	7392	0	A	9598	9589	9604	9590	9603	9591	9590			9605			
Nz overspeed vol. 12																												
HORSEPOWER	DYN. FORCEMETER												ft/lb	9			189	189	236	290	316	358	399			11		
	DYN. FORCEMETER												hp		0	0												
	ENGINE TORQUEMETER												psig	2.7	F	F	33.0	35.0	48.0	57.0	63.7	72.0	80.0			2.5		
	CORR. SHAFT HORSEPOWER												hp		L	L		396.5	416.2	547.5	615.3	693.7	771.9					
FUEL	FUEL INLET PRESSURE												psig		S	180°												
	OBSERVED FUEL FLOW												lb/hr	109	A		11	10.5	9	8	7	6	5			17		
	FUEL INLET TEMP.												°F				412	233	269	302	329	363	398			105		
	CORR. FUEL FLOW												lb/hr		N		34	33	33	33	33	33	32			33		
COMPRESSOR	ANTI-ICE LINE TEMPERATURE												°F	40000														
	AVG. COMP. INLET PRESSURE												in HgA	60000			44	45	46	50	52	52	53			41		
	EXH. STATIC PRESSURE												in HgA	40000			28.33	29.31	29.28	29.27	29.26	29.25	29.25	29.25			29.29	
	AVG. COMP. INLET TEMP.												°F	36			29.44	29.48	29.47	29.47	29.48	29.48	29.48	29.48			29.33	
	TEST CELL REF. TEMP.												°F				37	37	37	38	39	39	39			39		
	VENTURI Δ P												psid				34	34	34	35	36	36	37			35		
	VENTURI ATM. PRESS.												psia															
	PLENUM Δ P												in H2O															
	COMP. DISCHARGE TEMP.												°F				466	485	515	547	568	590	612			854		
	COMP. DISCHARGE PRESSURE												in HgA	82			182	196	213	230	242	257	271			81		
GEARBOX CASE PRESSURE												in H2O	17			0	0	0	0	0	0	0			11			
COMP. SEAL VENT PRESSURE												in Hg	2.1			5.4	6.2	7.1	8.0	8.7	9.2	9.7			.9			
TURB.	IND. MGT												°F	1087			913	960	1030	1103	1150	1217	1286			743		
	CORR. MGT												°F	747				1032	1095	1169	1215	1293	1356					
OIL	MAIN OIL PRESSURE												psig	124			122	123	125	126	126	126	126			110		
	SCAVENGE OIL PRESSURE												psig				24	24	25	25	26	27	27			18		
	OIL INLET PRESSURE												psig				.7	.7	.7	.7	.7	.7	.7			.6		
	SCAVENGE OIL TEMPERATURE												°F				230	233	236	239	241	244	251			200		
	OIL INLET TEMPERATURE												°F	88			188	189	189	186	185	186	185			183		
	OIL FLOW TIME (5 lb)												min															
OIL FLOW												lb/min																
VIBRA.	DYNE VIBRATION												in/sec	.09			.16	.17	.19	.22	.22	.25	.24			.20		
	GEARBOX VIBRATION												in/sec	.05			.21	.20	.20	.21	.19	.19	.19			.06		
	TURBINE VIBRATION												in/sec	.08			.08	.09	.08	.09	.10	.12	.10			.05		
	COMPRESSOR VIBRATION												in/sec	.08			.18	.17	.17	.16	.16	.19	.20			.09		
START ACCEL & DECEL TIME												min	481															
START NUMBER													3															
DOWN																												1146
OIL CONSUMPTION													FUEL DRAINAGE															
OIL AT:	TOTAL	TIME	ELAPSED	TOTAL OIL	COMB. CHAM							cc/min	FUEL PUMP DRAIN															
START	29.9	10:08	TIME	CONS lb/hr	EXH. COL. DRAIN							cc/min	BURNER DRAIN VALVE															
FINISH	29.9	1142	MS		FIRE SHIELD DRAIN							cc/min	TOTAL FUEL GAL.															

Rolls-Royce

ENGINE TEST LOG
250 SERIES

TEST No. 30147

ENGINE S/N 844168	MODEL 640B
TYPE TEST Sch. B	DATE 02-03-01
LOG SHEET No. 2	STAND 146
P.T.S. No. 897	OIL TYPE: 23699
TYPE FUEL J-1	
LHV 18525.4	SP. GR. .8063

14	15	16	17	18	19	20	21	22	23	24	25
:	:	:	:	:	:	:	:	:	:	:	:

CUSTOMER MON. N1 N2

	COL.	N1	N2
IDLE			
CC			
TO			

REMARKS:

MAG. PLUG

	COL.	LOC.	COND.	ACTION
1				
2				
3				
4				

SEA LEVEL - STATIC (UNITY RAM) PERFORMANCE

CORR hp	SFC: MAX/CORR	WFC: MAX/CORR	CORR hp	SFC: MAX/CORR	WFC: MAX/CORR
368	.691	.676			
460	.638	.625			
552	.605	.582			
SETTING	M/C				
TOT #	1242				
hp	644.0				
MIN. ALLOW	413				
% VAR.	5.05				
SFC	.573				
MAX. ALLOW	.571				
% VAR.	-3.03				

ECU S/N	CIT (T1) S/N	LOG SHT 2	RUN COMP. <input checked="" type="checkbox"/>	RUN INCOMP.
T/M CAL 715 hp=	78.6 psig	No. STARTS 3	ROUTED TO STORAGE	
COMP SEAL VENT ORIF DASH No. -3		TOTAL TIME 3:43	OPER. M. L. L.	
		DATE OF ACCEPT 02-03-01	OPER.	