

**MINI PACK  
AEC-E001**

**AMERICAN AERONAUTICAL CORP.**

**JT9D-7J  
ESN:685969**



**[www.american-aeronautical.com](http://www.american-aeronautical.com)**

**AEC-E001**

**AMERICAN AERONAUTICAL CORP.**

**JT9D-7J**

**ESN: 685969**

**CONTENTS**

- **FAA Form 8130-3**
- **FAA Form 337 (2)**
- **Test Cell report**
- **Shop Visit report**
- **KM-214E Precision Tool list**
- **KM-230 Engine Preliminary Inspection**
- **KM-231 Borescope Report (Pre test)**
- **KM-231 Borescope Report (Post test)**
- **KM-232 LLP Status Report**
- **KM-233 Work Order Control Log**
- **KM-234 Module S/N List**
- **KM-236 AD Status Report**
- **KM-237 Service Bulletin Record**
- **KM-241 Transfer Report**
- **KM-96A Scrap Parts Log**
- **Kalitta Maintenance Workscope**
- **FORM KM-34 Repair Order**
- **FORM KM-34A RO Control Log**
- **Kalitta Maintenance Task Cards**
- **KM-A441 Thrust Reverser**
- **JT9-M900 HPT Module**
- **FORM KM-7 (non-routine work cards)**
- **Misc 8130-3's**

INITIAL MAINTENANCE  
FAA REPAIR STATION #K00718X  
3063 Skyway St., Oscoda, MI 48750  
PARTIAL REPAIR TAG

CUSTOMER NAME	Aero Excel Corp	
QUANTITY	MFR. PART NUMBER	SERIAL NUMBER
1	JT9D-7J	685969
DESCRIPTION	Power Plant	
WORK ORDER NO.	ITEM NO.	DATE
AEC-5101		11/29/13
AUTHORIZED SIGNATURE	CERT. NUMBER	
QC62	3065785	

NOTE: Subject to the information on the reverse side.

FORM KM24B

NOTICE

The work requested by the customer and described in the Repair or Overhaul Report for the Customer's Order Number referenced was performed and inspected in accordance with current regulations of the Federal Aviation Administration. The part or assembly identified is approved for all characteristics generated by this work for return to service. Pertinent details are on file at this facility under the Work Order Number shown on the reverse side.

This tag is being used in lieu of an Airworthiness Release because the part or assembly:

Received a limited work scope and requires additional repair or overhaul work and testing to establish airworthiness.

Requires installation in next higher assembly and final test to determine airworthiness.

Requires final test to determine airworthiness.



US Department  
of Transportation  
Federal Aviation  
Administration

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

Form Approved  
OMB No. 2120-0020  
2/28/2011

Electronic Tracking Number

For FAA Use Only

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

1. Aircraft	Nationality and Registration Mark	Serial No.
	Make	Model <span style="margin-left: 100px;">Series</span>
2. Owner	Name (As shown on registration certificate)	Address (As shown on registration certificate)
		Address _____
		City _____ State _____
		Zip _____ Country _____

3. For FAA Use Only

4. Type		5. Unit Identification			
Repair	Alteration	Unit	Make	Model	Serial No.
<input type="checkbox"/>	<input type="checkbox"/>	AIRFRAME	_____	(As described in Item 1 above)	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	POWERPLANT	Pratt & Whitney	JT9D-7J	685969
<input type="checkbox"/>	<input type="checkbox"/>	PROPELLER			
<input type="checkbox"/>	<input type="checkbox"/>	APPLIANCE	Type		
			Manufacturer		

6. Conformity Statement

A. Agency's Name and Address		B. Kind of Agency	
Name <u>KALITTA MAINTENANCE</u>		U. S. Certificated Mechanic <input type="checkbox"/> Manufacturer <input type="checkbox"/>	
Address <u>5063 SKYWAY DR. HGR. 7</u>		Foreign Certificated Mechanic <input type="checkbox"/> C. Certificate No.	
City <u>OSCODA</u> State <u>MI</u>		<input checked="" type="checkbox"/> Certificated Repair Station	
Zip <u>48750</u> Country <u>USA</u>		<input type="checkbox"/> Certificated Maintenance Organization	
		<u>KOOR718X</u>	

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

Extended range fuel per 14 CFR Part 43 App. B <input type="checkbox"/>	Signature/Date of Authorized Individual <u>David W Heisner II, Lead Mechanic</u> <i>David W. Heisner II</i> 12/07/2013
--	---

7. Approval for Return to Service

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

BY	FAA Ft. Standards Inspector	Manufacturer	Maintenance Organization	Persons Approved by Canadian Department of Transport
	FAA Designee <input checked="" type="checkbox"/>	Repair Station	Inspection Authorization	Other (Specify)
Certificate or Designation No. <u>KOOR718X</u>		Signature/Date of Authorized Individual <u>Christopher E. Miller, Inspector</u> <i>Christopher E. Miller</i> 12/07/2013		

**NOTICE**

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

**8. Description of Work Accomplished**

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

UNITED STATES

12/07/2013

Nationality and Registration Mark

Date

JT9D-7J ESN 685969  
TSN: 77,647  
CSN: 19,684

CUSTOMER: Aero Excel Components, Inc.

REASON FOR REMOVAL: Performance Test-12/Turbine Damage

Disassembled as necessary, inspected, repaired & reassembled as required for return to service IAW P&W JT9D EM P/N 770408 Rev.127 dated 08/2011. Performed 91+ days engine preservation IAW JT9D EM section 72-00-00. Performed test #'s 1,3,6,8,9, 11 & 12. Ref. forms KM-232 for LLP changes, KM-234 for Module changes, KM-236 for AD's C/W and KM-237 for S/B's accomplished. Reference WO AEC-E001-1 for outgoing accessory list.

Removed HPT MOD S/N C85948  
Removed LPT MOD S/N D62981

Installed HPT MOD S/N C85710  
Installed LPT MOD S/N D0607A

Removed HPT T-1 Disk S/N J41043  
Removed HPT T-2 Disk S/N S67730  
Removed HPT T-1 A/S S/N EV8020  
Removed HPT T-1 A/S Inner S/N SZ2616  
Removed HPT T-2 A/S S/N A332AA0085  
Removed LPT T-3 Disk S/N R28649  
Removed LPT T-4 Disk S/N H00925  
Removed LPT T-5 Disk S/N A415AA0028  
Removed LPT T-6 Disk S/N T00015  
Removed LPT T-6 A/S S/N A436AA0025

Installed HPT T-1 Disk S/N S17359  
Installed HPT T-2 Disk S/N AKLBDU7092  
Installed HPT T-1 O/R/A/S S/N S52340  
Installed HPT T-1 I/R/A/S S/N MM4039  
Installed HPT T-2 A/S S/N VC7458  
Installed LPT T-3 Disk S/N S17218  
Installed LPT T-4 Disk S/N P06686  
Installed LPT T-5 Disk S/N M90671  
Installed LPT T-6 Disk S/N K29653  
Installed LPT T-6 A/S S/N A436AA0509

**FORMS USED:**

- KM-34 Repair Order(S)
- KM-34A RO Control Log
- KM-214E Precision Tool list
- KM-230 Power Plant Preliminary Inspection
- KM-231 Gas Path Borescope Reports (2) (video pre & post test)
- KM-232 LLP List
- KM-233 Work Order Control Log
- KM-234 Module S/N List
- KM-236 AD List
- KM-237 SB List
- KM-241 Engine Transfer report
- KM-96A Scrap Log

DETAILS OF ALL WORK PERFORMED ARE ON FILE AT KALITTA MAINTENANCE UNDER WO# AEC-E001

\*\*\*\*\*  
\*\*\*\*\*END\*\*\*\*\*

Additional Sheets Are Attached

<p>1. Approving National Aviation Authority / Country: <b>UNITED STATES</b></p>		<p>2. <b>AUTHORIZED RELEASE CERTIFICATE</b> FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG</p>		<p>3. Form Tracking Number: <b>JT9-E2744</b></p>	
<p>4. Organization Name and Address: Kalitta Maintenance FAA Certificated Repair Station #KO0R718X 5063 Skyway Dr. Hangar 7 Oscoda, MI 48750</p>		<p>5. Work Order/Contract/Invoice Number: <b>AEC-E001</b></p>			
6. Item:	7. Description:	8. Part Number:	9. Eligibility:*	10. Quantity:	11. Serial/Batch Number:
1	Powerplant	JT9D-7J	N/A	1	685969
<p>12. Status/Work: <b>Repaired</b></p>					
<p>13. Remarks: Disassembled as necessary, inspected, repaired &amp; reassembled IAW P&amp;W EM P/N 770408 Rev. 127 dated 08/15/2011. Performed test #'s 1, 3, 6, 8, 9, 11 &amp; 12. Performed 91+ days engine preservation IAW JT9D EM section 72-00-00 storage. Reference KM-236 for AD's complied with, KM-234 for Module S/N's installed, KM-232 for LLP changes and KM-237 for S/B compliance. Details of work performed are on file at Kalitta Maintenance under WO# AEC-E001. Reference WO AEC-E001-1 for outgoing accessory list.</p>					
<p>TT: 77,647 TC: 19,684</p>					
<p>19. <input checked="" type="checkbox"/> 14 CFR 43.9 Return to Service <input 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.</p>					
<p>20. Authorized Signature: <i>Christopher E. Miller</i></p>		<p>21. Approval/Certificate Number: <b>KO0R718X</b></p>			
<p>22. Name (Typed or Printed): Christopher E. Miller</p>		<p>23. Date (m/d/y): <b>12/07/2013</b></p>			
<p><b>User/Installer Responsibilities</b></p>					
<p>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 part/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.</p>					



## **ENGINE CENTER**

### **SHOP VISIT REPORT**

**AERO EXCEL COMPONENTS, INC.**  
FOR JT9D ENGINE MODEL: JT9D-7J  
**ENGINE SERIAL NUMBER: 685969**  
WORK ORDER: AEC-E001

**REASON OF SHOP VISIT:**  
**TEST 12- PERFORMANCE TEST**  
**DAMAGED LPT AND HPT MODULES**

**REPORT DATE**  
December 05, 2013



**SHOP VISIT REPORT**

<b>Customer:</b>	Aero Excel Comp.	<b>Date:</b>	Dec 05, 2013	<b>Engine Type:</b>	JT9D-7J
<b>Subject:</b>	ENGINE			<b>Work Order:</b>	AEC-E001
<b>Serial Number:</b>	685969	<b>Total Time:</b>	77,647	<b>TSI:</b>	0
		<b>Total Cycles:</b>	19,684	<b>CSI:</b>	0

**Reason:** Test 12 – Performance Test, Damaged LPT and HPT Modules

**Highlights:**

Engine was inducted in the shop last 24 September 2013 for Test 12 – Performance Test under Engine Workscope AEC-E001.

During Engine Test Cell Initial Start Up, flame and sparks were emitting from the exhaust of the engine. The engine was shut down as precautionary measure.

Borescope Inspection found, LPT and HPT Modules with out of limits damage.

Engine Workscope AEC-E001 Rev 01 was issued to remove and replace the LPT and HPT Modules.

After Replacement of LPT and HPT Modules, Fuel Manifold found incorrectly installed from prior shop visit. The discrepancy was corrected by replacing affected manifolds and subsequent engine run was successful.

During Post Maintenance Test Cell Run, engine experienced High Vibration. It was corrected by replacement of 4 ea Fan Blades, Trim Balance of C-1 Hub and re-balance of LPC Modules.

**Summary:**

Engine was rebuilt using original parts from the engine except the following (LPT Module, HPT Module, Fan Case, Exhaust Plug, Precooler, EVC, Rear Compressor Stator Vane Actuator, N1 Tach Transmitter, Thermocouple, EGT Harness and Press Regulator Valve Assy) which were supplied by Kalitta Maintenance.

The engine passed test last December 02, 2013 with a Hot Day EGT Margin of 7.3 °C.

Please refer to the engine's mini-pack and shop visit records.

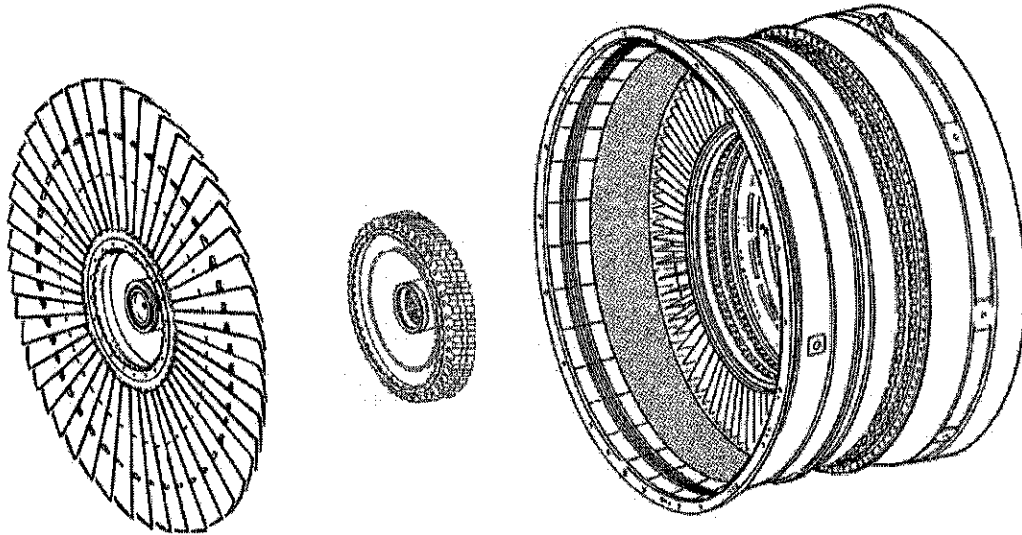
Prepared by: Fernando R. Pacia / 12-05-13





SHOP VISIT REPORT

<b>Customer:</b>	Aero Excel Comp. Inc.	<b>Engine Type:</b>	JT9D-7J
<b>Subject:</b>	ENGINE	<b>ESN:</b>	685969
<b>Module :</b>	Fan Module	<b>Mod SN:</b>	G74706
		<b>TSN:</b>	70,131
		<b>CSN:</b>	11,297



**Highlights:**

The Fan Module was visually inspected and found the Fan Case Wear Holes out of limit.

Fan Case S/N E01261 was removed and replaced with Kalitta Maintenance supplied Fan Case S/N BZ4376.

During Post Maintenance Test Cell Run, engine experienced High Vibration. It was corrected by replacement of 4 ea Fan Blades, Trim Balance of C-1 Hub and re-balance of LPC Modules.



**SHOP VISIT REPORT**

**Customer:** Aero Excel Comp. Inc.

**Subject:** ENGINE

**Module :** LPC Module

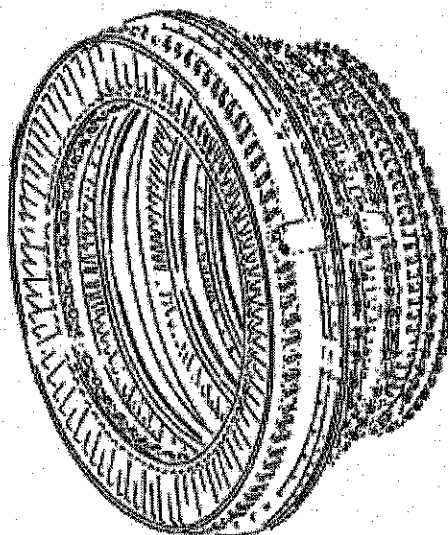
**ESN:** 685969

**Mod SN:** A62609

**Engine Type:** JT9D-7J

**TSN:** 82,653

**CSN:** 18,768



**Highlights:**

The LPC Module visually inspected and found satisfactory.

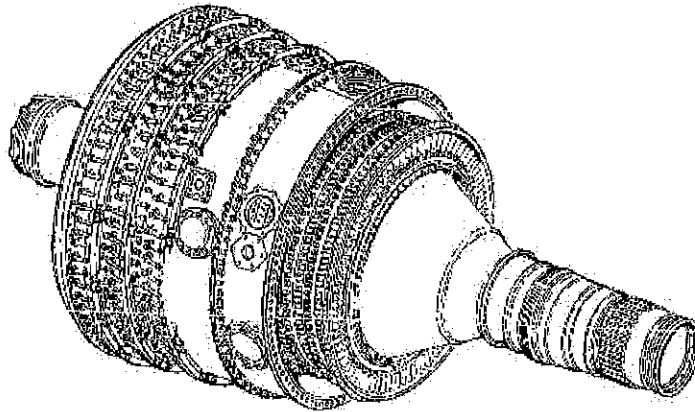


**SHOP VISIT REPORT**

**Customer:** Aero Excel Comp. Inc.  
**Subject:** ENGINE  
**Module :** HPC Module

**ESN:** 685969  
**Mod SN:** B0186A

**Engine Type:** JT9D-7J  
**TSN:** 71,768  
**CSN:** 16,833



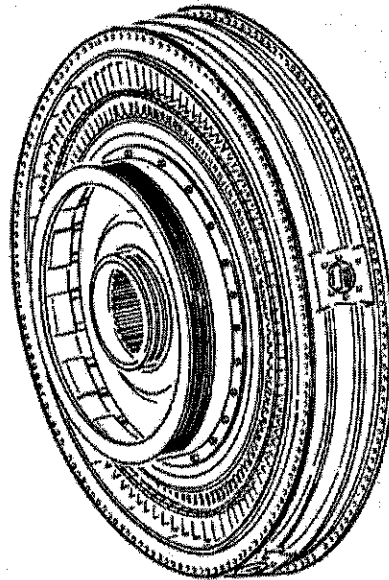
**Highlights:**

The HPC Module visually inspected exposed areas and found satisfactory.



SHOP VISIT REPORT

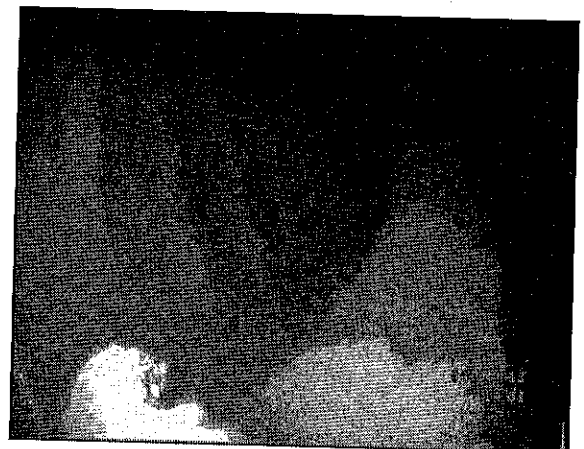
<b>Customer:</b>	Aero Excel Comp. Inc.	<b>Engine Type:</b>	JT9D-7J
<b>Subject:</b>	ENGINE	<b>ESN:</b>	685969
<b>Module :</b>	HPT Module	<b>Mod / EMU SN:</b>	C85710
		<b>TSN:</b>	52,919.9
		<b>CSN:</b>	14,742



**Highlights:**

Borescope Inspection found several T-2 Vanes with damage (missing material) at approx. 6 o'clock position, out of limit, and all T-2 Blades exhibit signs of L/E FOD damage, out of limits.

HPT Module S/N C85948 was removed and replaced with Kalitta Maintenance supplied HPT Module S/N C85710, TSN/CSN: 52,919.9/14,742.



HPT 2<sup>nd</sup> Stage Vane Missing Material and HPT 2<sup>nd</sup> Stage Blade L/E Damage



SHOP VISIT REPORT

**Customer:** Aero Excel Comp. Inc.

**Subject:** ENGINE

**Module :** LPT Module

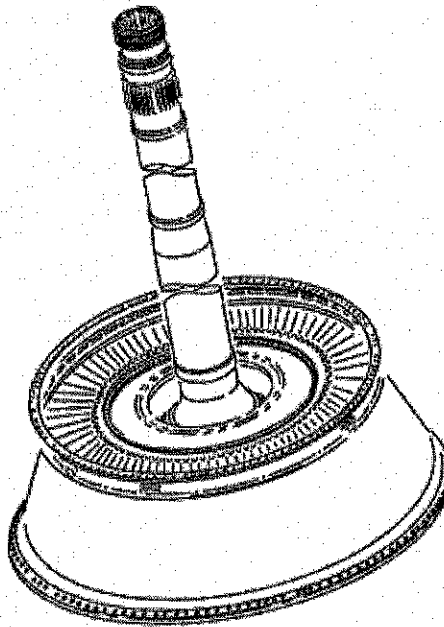
**ESN:** 685969

**Mod SN:** D0607A

**Engine Type:** JT9D-7J

**TSN:** 22,847.2

**CSN:** 5,318



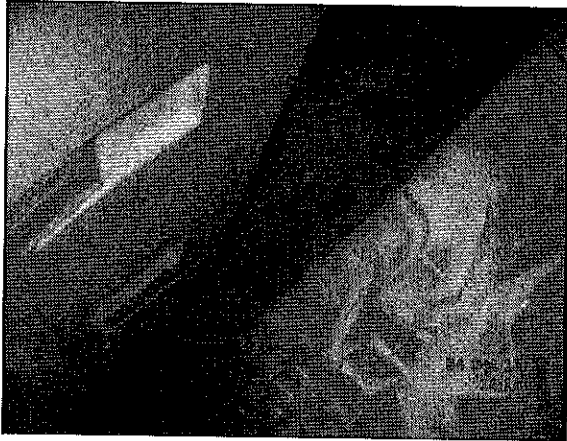
**Highlights:**

Boreoscope Inspection found several T-3 vanes with damage (missing material) at approx. 6 o'clock position, out of limits and T-3 Blades exhibits signs of L/E FOD damage, out of limits.

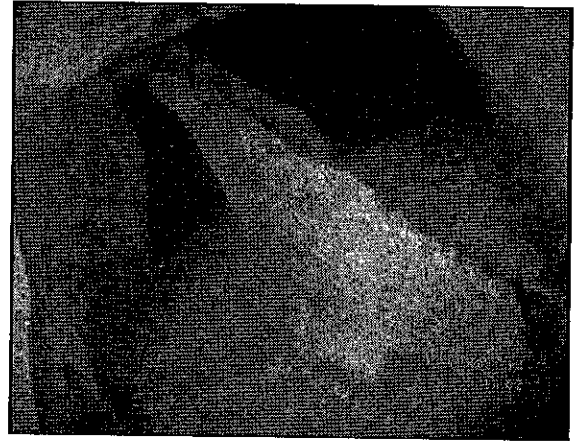
LPT Module S/N D62981 was removed and replaced with Kalitta Maintenance supplied LPT Module S/N D0607A, TSN/CSN: 22,847.2/5,318.



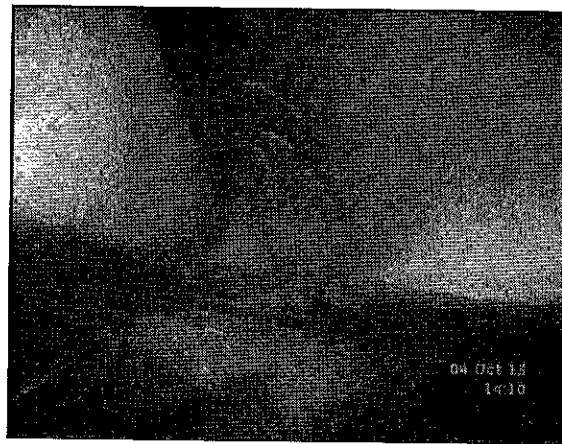
SHOP VISIT REPORT



LPT Vane Damage



PT 3<sup>rd</sup> Stage Vane Missing Material



LPT 3<sup>rd</sup> Stage Blade Damage

**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #K00R718X

KALITTA MAINTENANCE AD COMPLIANCE RECORD										FORM KM-236			
Customer: AERO EXCEL COMPONENTS			Work Order AEC-E001			Engine Model: JT9D-7J							
ESN: 685969		Total Time: 77,647		Total Cycles: 19,684		Date: 12/06/2013							
T: Terminated		SS: Superseded		N/A: Not Applicable		CW: Complied With		PCW: Previously Complied With		R: Repetitive		Open: Not Accessed This Visit	
AD No.	Description	Part No.	Serial No.	Status	Method of Compliance	Taskcard / KM-7	Re-Inspect TET/TEC						
2007-05-17	T-1 DISK	840801	S17359	C/W	NDT SPOP 84	8130 TN # KM-7 #35							
2007-05-17	T-2 HUB	706942	AKLBDU7092	C/W	NDT SPOP 84	8130 TN # KM-7 #35							
2009-04-18	2ND STAGE HPT VANE LEAN BACK			C/W	BOROSCOPE	8130 TN # KM-7 #35	1,000 CYCLES						
94-15-16	EVC	747955-8	81767	C/W	SB 75-40	8130 TN # 2013341							

**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #K00R718X

KALITTA MAINTENANCE SERVICE BULLETIN COMPLIANCE RECORD				FORM KM-237	
Customer: AERO EXCEL	Work Order No.: AEC-E001	Article S/N: 685969			
Article Total Time: 77,647	Total Cycles: 19,684				
Service Bulletin No.	Revision No.	Revision Date	Description	Component	S/B Added or Removed
6074	1	12/04/1998	Engine case fan, assembly Incorporation of First Stage Fan Duct Segments with Depth holes	FAN CASE FRONT ASSY	Added
A6488	1	04/18/2008	Boroscope Inspection for 2nd Stage HPT Vane Lean Back	2nd Stage HPT Vane Lean Back	Added

Completed By: Christopher E. Miller 2305 Date: 12/06/2013 Page 1 of 1



**KALITTA MAINTENANCE**  
 CERTIFICATED REPAIR STATION #K00R718X

<b>CUSTOMER MODULE SERIAL NUMBER LIST</b>						<b>FORM KM-234</b>	
Customer: AEC, Inc.		ESN: 685969		Eng Model: JT9D-7J		WO: AEC-E001	
Removal Date: UNK		TSN: 77,647		CSN: 19,684			
<b>Incoming Status</b>				<b>Outgoing Status</b>			
Description	S/N	TSN	CSN	Description	S/N	TSN	CSN
FAN MODULE	G74706	70,131	11,297	FAN MODULE	G74706	70,131	11,297
LPC MODULE	A62609	82,653	18,768	LPC MODULE	A62609	82,653	18,768
HPC MODULE	B0186A	71,768	16,833	HPC MODULE	B0186A	71,768	16,833
HPT MODULE	C85948	73,229	14,267	HPT MODULE	C85710	52,919.9	14,742
LPT MODULE	D62981	64,643	14,372	LPT MODULE	D0607A	22,847.2	5,318
Remarks:							
Name: Christopher E. Miller 2305							Date: 12/05/2013

**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #K00R718X

**KALITTA MAINTENANCE CUSTOMER LIFE LIMITED PARTS SHEET** **FORM KM-232**

Customer AEC, Inc. Time Since Repair 0 Date 12/06/2013

Engine S/N 685969 Cycles Since Repair 0 Total Engine Time 77,647

Engine Model JT9D-7J Service Order # AEC-E001 Total Engine Cycles 19,684

ITEM	PART #	SERIAL #	HOURS			CYCLES		
			LIMIT	TSN	REMAIN	LIMIT	CSN	REMAIN
Fan Hub	778631	G74706		70,131		15,000	11,297	3,703
C01.5 Disk	NOT	USED		THIS		CONFIG	UR	ATION
C02 Disk	706422	H47113		57,105		15,000	9,742	5,258
C03 Disk	645833	A113AA0018		20,383		15,000	4,344	10,656
C04 Disk	669624	ABDUJAL2513		12,203		15,000	2,870	12,130
C05 Disk	669605	8A2261		52,220		15,000	10,557	4,443
C06 Disk	671906	1Y9444		60,104		15,000	12,784	2,216
C07 Disk	718207	G50837		57,695		15,000	11,342	3,658
C08 Disk	794908	8Z3827		61,624		15,000	12,395	2,605
C09 Disk	794909	5B3995		51,372		15,000	10,196	4,804
C10 Disk	704210	5Y1022		8,892		15,000	1,742	13,258
C11 Disk	670911	6Z8544		59,303		15,000	12,182	2,818
C12 Disk	675512	3Y7075		62,702		15,000	12,692	2,308

Prepared by: Peggy Jones 3074  
Inspected by: Christopher E. Miller 2305

\* THESE ITEMS CHANGED AT THIS SHOP VISIT  
\*\* THIS PAGE MAY BE COPIED TO ENGINE MODEL

**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #K00R718X

**KALITTA MAINTENANCE CUSTOMER LIFE LIMITED PARTS SHEET** FORM KM-232

Customer AEC, Inc. Time Since Repair 0 Date 12/06/2013  
 Engine S/N 685969 Cycles Since Repair 0 Total Engine Time 77,647  
 Engine Model JT9D-7J Service Order # AEC-E001 Total Engine Cycles 19,684

ITEM	PART #	SERIAL #	HOURS			CYCLES		
			LIMIT	TSN	REMAIN	LIMIT	CSN	REMAIN
C13 Disk	675513	4Y7243		27,282		15,000	6,456	8,544
C14 Disk	789614	4Z5455		56,607		15,000	11,308	3,692
C15 Disk	788815	S26905		20,172		15,000	3,952	11,048
* T1 Disk	840801	S17359		22,878.3		15,000	4,959	10,041
*T2 Disk	706942	AKLBDU7092	30,000	17,993.7	12,006.3	15,000	6,407	8,593
*T1 O/R/A/S	735907	S52340		17,726.0		20,000	4,242	15,758
*T1 I/R/A/S	769290	MM4039		46,575.2		15,000	9,959	5,041
*T2 Airseal	798917	VC7458		34,513.4		15,000	12,628	2,372
*T3 Disk	792003	S17218		20,300.2		15,000	4,606	10,394
*T4 Disk	758104	P06686		30,873.2		15,000	7,623	7,377
*T5 Disk	769925	M90671		34,075.4		15,000	7,396	7,604
*T6 Disk	714906	K29653		51,451.2		15,000	9,517	5,483
*T6 Airseal	811260	A436AA0509		22,911.5		15,000	5,089	9,911

Prepared by: Peggy Jones 3074  
 Inspected by: Christopher E. Miller 2305  
 \* THESE ITEMS CHANGED AT THIS SHOP VISIT  
 \*\* THIS PAGE MAY BE COPIED TO ENGINE MODEL



**Life Limited Parts Time/Cycle Record  
PRATT & WHITNEY JT9D SERIES**

ENGINE MODEL: JT9D-7J ENGINE SERIAL NUMBER 685969 WORK ORDER NUMBER: S10248 CUSTOMER: AERO EXCEL COMPONENTS, INC. WORK PERFORMED: REPLACED HPCR, HPTR, LPTR, COMBUSTOR & NOZZLE GUIDE VANES					SINCE NEW:		TOTAL TIME TOTAL CYCS		
							77,647	19,684	
					SINCE LAST SHOP VISIT:		0	0	
					SINCE LAST H/S/I:		UNK	UNK	
					SINCE LAST E/H/M:		UNK	UNK	
EIN	NOMENCLATURE	PART NO.	SERIAL NO.	TIME LIMIT	CYCLE LIMIT	TOTAL TIME	TOTAL CYCLES	TIME REMAINING	CYCLES REMAINING
	Fan Rotor Module	778631	G74706			70,131	11,297		
0002	C-1 Hub/ Fan	778631	G74706	N/A	15,000	70,131	11,297	N/A	3,703
	LPC Module	UNK	A62609			82,653	18,768		
0029	C-2 Disk	706422	H47113	N/A	15,000	57,105	9,742	N/A	5,258
0030	C-3 Disk	645833	A113AA0018	N/A	15,000	20,383	4,344	N/A	10,656
0031	C-4 Disk	669624	ABDUAL2513	N/A	15,000	12,203	2,870	N/A	12,130
	HPC Module	UNK	B0186A			71,768	16,833		
0165	C-5 Disk	669605	8A2261	N/A	15,000	52,220	10,557	N/A	4,443
0166	C-6 Disk	671906	1Y9444	N/A	15,000	60,104	12,784	N/A	2,216
0164	C-7 Disk	718207	G50837	N/A	15,000	57,695	11,342	N/A	3,658
0167	C-8 Disk	794908	8Z3827	N/A	15,000	61,624	12,395	N/A	2,605
0168	C-9 Disk	794909	5B3995	N/A	15,000	51,372	10,196	N/A	4,804
0169	C-10 Disk	704210	5Y1022	N/A	15,000	8,892	1,742	N/A	13,258
0170	C-11 Disk	670911	6Z8544	N/A	15,000	59,303	12,182	N/A	2,818
0171	C-12 Disk	675512	3Y7075	N/A	15,000	62,702	12,692	N/A	2,308
0172	C-13 Disk	675513	4Y7243	N/A	15,000	27,282	6,456	N/A	8,544
0173	C-14 Disk	789614	4Z5455	N/A	15,000	56,607	11,308	N/A	3,692
0174	C-15 Disk	788815	S26905	N/A	15,000	20,172	3,952	N/A	11,048
	HPT Module	UNK	C85948			73,229	14,267		
0352	T-1 Disk	842501	J41043	N/A	15,000	UNK	10,134	N/A	4,866
0353	T-2 Disk	706942	S67730	30,000	15,000	21,905	5,049	8,095	9,951
0362	T-1 Airseal	735907	EV8202	N/A	20,000	18,490	3,803	N/A	16,197
0364	T-1 Airseal Inner	769290	SZ2616	N/A	15,000	24,178	4,177	N/A	10,823
0363	T-2 Airseal	798917	A332AA0085	N/A	15,000	19,893	4,627	N/A	10,373
	LPT Module	UNK	D62981			64,643	14,372		
0401	T-3 Disk	792003	R28649	N/A	15,000	25,640	5,685	N/A	9,315
0402	T-4 Disk	758104	H00925	N/A	15,000	53,792	11,833	N/A	3,167
0403	T-5 Disk	769925	A415AA0028	N/A	15,000	19,893	4,627	N/A	10,373
0404	T-6 Disk	762206	T00015	N/A	15,000	19,893	4,627	N/A	10,373
0427	T-6 Airseal	774838	A436AA0025	N/A	15,000	19,893	4,627	N/A	10,373

The above data was obtained from engine records supplied by the previous owners, repair agencies and operators of the engine.

APPROVED BY:

DATE: 12/13/2012

**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #K00R718X

**CUSTOMER ENGINE WORKSCOPE**

**CUSTOMER:** AERO EXCEL COMPONENTS, INC.

DATE	ENG MODEL	ENG S/N	TOTAL ENG TIME	TOTAL ENG CYCLES	TIME SINCE SHOP VISIT	CYCLES SINCE SHOP VISIT
09-24-13	JT9D-7J	685969	77,647	19,684	0	0

A/C	POSN	WO #	REMVD DATE	INPUT DATE	WORKSCOPE DATE	REV
UNK	UNK	AEC-E001	UNK	09-24-13	09-24-13	00

Reason for Revision:

Reason for Removal:  Scheduled  Unscheduled  Convenience  Turbine Exhaust Case  
TEST 12 - PERFORMANCE TEST

Type of Release Required:  FAA 145  EASA 145  Dual  Other

**GENERAL INSTRUCTIONS**

Engine Minimum Build: \_\_\_\_\_ Hours \_\_\_\_\_ Cycles

Special Instructions:

1. Accomplish Test 12- Performance Test IAW Pratt & Whitney JT9D-7J Engine Manual, latest revision.
2. Return the engine to a serviceable unit.

Introduction Instructions:

1. Accomplish the Powerplant Preliminary Inspection latest revision IAW RSM Form KM-230.
2. Separate the Scrap Parts for customer's disposition.

Borescope Instructions:

Accomplish Pre Test Cell and Post Test Full Video Borescope Inspection.

Accessory Instructions:

None

**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #KÖ0R718X

**CUSTOMER ENGINE WORKSCOPE**

CUSTOMER: AERO EXCEL COMPONENTS, INC.

WO #: AEC-E001 ESN: 685969 MODEL: JT9D-7J DATE: 09-24-13

**FAN CASES GROUP**

Perform the Following:  Light Maintenance  Heavy Maintenance  
 Performance Restoration  Other

Work Instructions:

General Visual Inspection.

Special Instructions:

None

ADs Requiring Action:

None at this time.

SBs Requiring Action:

None

**LOW PRESSURE COMPRESSOR MODULE**

Perform the Following:  Light Maintenance  Heavy Maintenance  
 Performance Restoration  Other

Work Instructions:

None

Special Instructions:

None

ADs Requiring Action:

None at this time.

SBs Requiring Action:

None

**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #K00R718X  
**CUSTOMER ENGINE WORKSCOPE**

CUSTOMER: AERO EXCEL COMPONENTS, INC.

WO #: AEC-E001 ESN: 685969 MODEL: JT9D-7J DATE: 09-24-13

---

**INTERMEDIATE CASE GROUP**

---

Perform the Following:  Light Maintenance  Heavy Maintenance  
 Performance Restoration  Other

Work Instructions:

None

Special Instructions:

None

ADs Requiring Action:

None at this time

SBs Requiring Action:

None

---

**TURBINE COUPLING GROUP**

---

Perform the Following:  Light Maintenance  Heavy Maintenance  
 Performance Restoration  Other

Work Instructions:

None

Special Instructions:

None

ADs Requiring Action:

None at this time.

SBs Requiring Action:

None

**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #K00R718X

**CUSTOMER ENGINE WORKSCOPE**

CUSTOMER: AERO EXCEL COMPONENTS, INC.

WO #: AEC-E001 ESN: 685969 MODEL: JT9D-7J DATE: 09-24-13

---

**HIGH PRESSURE COMPRESSOR MODULE**

---

Perform the Following:  Light Maintenance  Heavy Maintenance  
 Performance Restoration  Other

Work Instructions:

None

Special Instructions:

None

ADs Requiring Action:

None at this time.

SBs Requiring Action:

None

---

**DIFFUSER CASE GROUP**

---

Perform the Following:  Light Maintenance  Heavy Maintenance  
 Performance Restoration  Other

Work Instructions:

None

Special Instructions:

None

ADs Requiring Action:

None at this time.

SBs Requiring Action:

None



**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #K00R718X

**CUSTOMER ENGINE WORKSCOPE**

**CUSTOMER:** AERO EXCEL COMPONENTS, INC.

**WO #:** AEC-E001      **ESN:** 685969      **MODEL:** JT9D-7J      **DATE:** 09-24-13

---

**HIGH PRESSURE TURBINE MODULE**

---

**Perform the Following:**     **Light Maintenance**     **Heavy Maintenance**  
    **Performance Restoration**     **Other**

**Work Instructions:**

None

---

**Special Instructions:**

None

---

**ADs Requiring Action:**

None at this time.

---

**SBs Requiring Action:**

None

---

**LOW PRESSURE TURBINE MODULE**

---

**Perform the Following:**     **Light Maintenance**     **Heavy Maintenance**  
    **Performance Restoration**     **Other**

**Work Instructions:**

None

---

**Special Instructions:**

None

---

**ADs Requiring Action:**

None at this time.

---

**SBs Requiring Action:**

None

**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #KÖ0R718X

**CUSTOMER ENGINE WORKSCOPE**

CUSTOMER: AERO EXCEL COMPONENTS, INC.

WO #: AEC-E001 ESN: 685969 MODEL: JT9D-7J DATE: 09-24-13

**TURBINE EXHAUST CASE GROUP**

Perform the Following:  Light Maintenance  Heavy Maintenance  
 Performance Restoration  Other

Work Instructions:

None

Special Instructions:

None

ADs Requiring Action:

None at this time.

SBs Requiring Action:

None

**MAIN GEARBOX MODULE**

Perform the Following:  Light Maintenance  Heavy Maintenance  
 Performance Restoration  Other

Work Instructions:

None

Special Instructions:

None

ADs Requiring Action:

None at this time.

SBs Requiring Action:

None

**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #KÖ0R718X  
**CUSTOMER ENGINE WORKSCOPE**

CUSTOMER: AERO EXCEL COMPONENTS, INC.

WO #: AEC-E001 ESN: 685969 MODEL: JT9D-7J DATE: 09-24-13

**ANGLE GEARBOX MODULE**

Perform the Following:  Light Maintenance  Heavy Maintenance  
 Performance Restoration  Other

Work Instructions:

None

Special Instructions:

None

ADs Requiring Action:

None at this time.

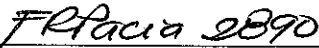
SBs Requiring Action:

None

**SIGNATURES**



Director of Powerplants



Powerplant Engineer



Inspection Manager/Supervisor

Customer Representative

**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #K00R718X

**CUSTOMER ENGINE WORKSCOPE**

**CUSTOMER:** AERO EXCEL COMPONENTS, INC.

**WO #:** AEC-E001    **ESN:** 685969    **MODEL:** JT9D-7J    **DATE:** 09-24-13

**ANGLE GEARBOX MODULE**

**Perform the Following:**     Light Maintenance     Heavy Maintenance  
    Performance Restoration     Other

**Work Instructions:**

None

**Special Instructions:**

None

**ADs Requiring Action:**

None at this time.

**SBs Requiring Action:**

None

**SIGNATURES**



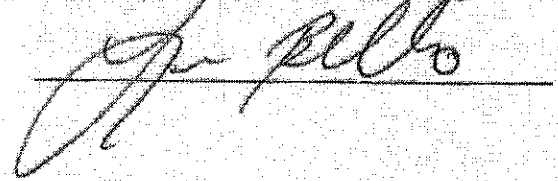
Director of Powerplants



Powerplant Engineer



Inspection Manager/Supervisor



Customer Representative

**KALITTA**  
MAINTENANCE

REPAIR STATION  
MANUAL  
CERTIFICATED REPAIR STATION  
#K00R718X

APPENDIX I  
PAGE: 5  
DATE: 05-30-07  
REV: 13

**WORK AUTHORIZATION**

FORM #KM-2

Customer AERO EXCEL COMPONENTS, INC Work Order No. AEC-E001

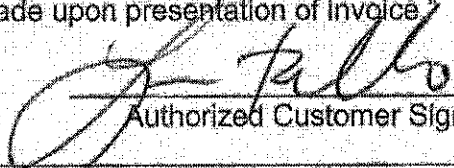
MFG \_\_\_\_\_ Model JT9D-7J S/N 685969

Registration No. \_\_\_\_\_ Nationality USA

Brief Job Description: Perform Test 12 - Performance test in accordance with P&W JT9D-7J Engine Manual, latest revision.

**CUSTOMER WORK AUTHORIZATION**

"I hereby authorize the above work to be performed and agree that payment for such work be made upon presentation of invoice."

  
Authorized Customer Signature

9/24/2013  
Date

**CUSTOMER AIRCRAFT ACCEPTANCE**

"I acknowledge that the work described above was accomplished as identified above and hereby accept the aircraft and the work accomplished."

  
Authorized Signature

9/24/2013  
Date

**MAINTENANCE RELEASE STATEMENT**

The aircraft, engine, and/or component identified above was repaired and inspected in accordance with current Federal Aviation Regulations and was found airworthy for return to service. Pertinent details of the repair are on file under the above named job number at this agency.

\_\_\_\_\_  
Authorized Company Signature

\_\_\_\_\_  
Date

**KALITTA MAINTENANCE  
OSCODA, MICHIGAN  
FAA REPAIR STATION #K00R718X**

**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #KÖ0R718X

**CUSTOMER ENGINE WORKSCOPE**

CUSTOMER: AERO EXCEL COMPONENTS, INC.

DATE	ENG MODEL	ENG S/N	TOTAL ENG TIME	TOTAL ENG CYCLES	TIME SINCE SHOP VISIT	CYCLES SINCE SHOP VISIT
10-10-13	JT9D-7J	685969	77,647	19,684	0	0

A/C	POSN	WO #	REMVD DATE	INPUT DATE	WORKSCOPE DATE	REV
UNK	UNK	AEC-E001	UNK	09-24-13	10-10-13	01

**Reason for**

**Revision:**

To change the whole workscope due to the new findings, damaged LPT and HPT Modules.

**Reason for**

**Removal:**

DAMAGED LPT AND HPT MODULES

Scheduled  Unscheduled  Convenience  Turbine Exhaust Case

**Type of Release**

**Required:**

FAA 145  EASA 145  Dual  Other

**GENERAL INSTRUCTIONS**

**Engine Minimum Build:**

Hours

Cycles

**Special Instructions:**

1. Disassemble the engine to gain access LPT and HPT Modules.
2. Remove and replace damaged LPT and HPT Modules.
3. Inspect and repair the engine as necessary IAW Pratt & Whitney JT9D-7J Engine Manual latest revision.
3. All repair must have the Customer's written approval prior to proceeding with such repairs.
5. Reassemble the engine to a serviceable unit

**Introduction Instructions:**

1. Accomplish the Powerplant Preliminary Inspection latest revision IAW RSM Form KM-230.
2. Separate the Scrap Parts for customer's disposition.

**Borescope Instructions:**

Accomplish Pre Test Cell and Post Test Full Video Borescope Inspection.

**Accessory Instructions:**

None

**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #K00R718X

**CUSTOMER ENGINE WORKSCOPE**

CUSTOMER: AERO EXCEL COMPONENTS, INC.

WO #: AEC-E001 ESN: 685969 MODEL: JT9D-7J DATE: 10-10-13

**FAN CASES GROUP**

Perform the Following:  Light Maintenance  Heavy Maintenance  
 Performance Restoration  Other

Work Instructions:

General Visual Inspection.

Special Instructions:

None

ADs Requiring Action:

None at this time.

SBs Requiring Action:

None

**LOW PRESSURE COMPRESSOR MODULE**

Perform the Following:  Light Maintenance  Heavy Maintenance  
 Performance Restoration  Other

Work Instructions:

None

Special Instructions:

None

ADs Requiring Action:

None at this time.

SBs Requiring Action:

None

**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #K00R718X

**CUSTOMER ENGINE WORKSCOPE**

CUSTOMER: AERO EXCEL COMPONENTS, INC.

WO #: AEC-E001 ESN: 685969 MODEL: JT9D-7J DATE: 10-10-13

**INTERMEDIATE CASE GROUP**

Perform the Following:  Light Maintenance  Heavy Maintenance  
 Performance Restoration  Other

Work Instructions:

None

Special Instructions:

None

ADs Requiring Action:

None at this time

SBs Requiring Action:

None

**TURBINE COUPLING GROUP**

Perform the Following:  Light Maintenance  Heavy Maintenance  
 Performance Restoration  Other

Work Instructions:

None

Special Instructions:

None

ADs Requiring Action:

None at this time.

SBs Requiring Action:

None



**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #KÖ0R718X

**CUSTOMER ENGINE WORKSCOPE**

CUSTOMER: AERO EXCEL COMPONENTS, INC.

WO #: AEC-E001 ESN: 685969 MODEL: JT9D-7J DATE: 10-10-13

**HIGH PRESSURE COMPRESSOR MODULE**

Perform the Following:  Light Maintenance  Heavy Maintenance  
 Performance Restoration  Other

Work Instructions:

None

Special Instructions:

None

ADs Requiring Action:

None at this time.

SBs Requiring Action:

None

**DIFFUSER CASE GROUP**

Perform the Following:  Light Maintenance  Heavy Maintenance  
 Performance Restoration  Other

Work Instructions:

None

Special Instructions:

None

ADs Requiring Action:

None at this time.

SBs Requiring Action:

None

**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #K00R718X

**CUSTOMER ENGINE WORKSCOPE**

CUSTOMER: AERO EXCEL COMPONENTS, INC.

WO #: AEC-E001 ESN: 685969 MODEL: JT9D-7J DATE: 10-10-13

**HIGH PRESSURE TURBINE MODULE**

Perform the Following:  Light Maintenance  Heavy Maintenance  
 Performance Restoration  Other

Work Instructions:

Remove and replace HPT Module.

Special Instructions:

None

ADs Requiring Action:

None at this time.

SBs Requiring Action:

None

**LOW PRESSURE TURBINE MODULE**

Perform the Following:  Light Maintenance  Heavy Maintenance  
 Performance Restoration  Other

Work Instructions:

Remove and replace LPT Module.

Special Instructions:

None

ADs Requiring Action:

None at this time.

SBs Requiring Action:

None

**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #KÖ0R718X

**CUSTOMER ENGINE WORKSCOPE**

CUSTOMER: AERO EXCEL COMPONENTS, INC.

WO #: AEC-E001 ESN: 685969 MODEL: JT9D-7J DATE: 10-10-13

**TURBINE EXHAUST CASE GROUP**

Perform the Following:  Light Maintenance  Heavy Maintenance  
 Performance Restoration  Other

Work Instructions:

General Visual Inspection.

Special Instructions:

None

ADs Requiring Action:

None at this time.

SBs Requiring Action:

None

**MAIN GEARBOX MODULE**

Perform the Following:  Light Maintenance  Heavy Maintenance  
 Performance Restoration  Other

Work Instructions:

None

Special Instructions:

None

ADs Requiring Action:

None at this time.

SBs Requiring Action:

None

**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #K00R718X

**CUSTOMER ENGINE WORKSCOPE**

CUSTOMER: AERO EXCEL COMPONENTS, INC.

WO #: AEC-E001 ESN: 685969 MODEL: JT9D-7J DATE: 10-10-13

**ANGLE GEARBOX MODULE**

Perform the Following:  Light Maintenance  Heavy Maintenance  
 Performance Restoration  Other

Work Instructions:

None

Special Instructions:

None

ADs Requiring Action:

None at this time.

SBs Requiring Action:

None

**SIGNATURES**

B. Z. 1287

Director of Powerplants

FR Pacia 2090

Powerplant Engineer

A. Ocker 2306

Inspection Manager/Supervisor

[Signature]

Customer Representative

Page 7 of 7

**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #K00R718X

**CUSTOMER ENGINE WORKSCOPE**

CUSTOMER: AERO EXCEL COMPONENTS, INC.

WO #: AEC-E001 ESN: 685969 MODEL: JT9D-7J DATE: 10-10-13

**ANGLE GEARBOX MODULE**

Perform the Following:  Light Maintenance  Heavy Maintenance  
 Performance Restoration  Other

Work Instructions:

None

Special Instructions:

None

ADs Requiring Action:

None at this time.

SBs Requiring Action:

None

**SIGNATURES**

B. J. 1267

Director of Powerplants

FR Pacia 2890

Powerplant Engineer

A. Decker 2306

Inspection Manager/Supervisor

Customer Representative

**KALITTA**  
MAINTENANCE

REPAIR STATION  
MANUAL  
CERTIFICATED REPAIR STATION  
#K00R718X

APPENDIX I  
PAGE: 5  
DATE: 05-30-07  
REV: 13

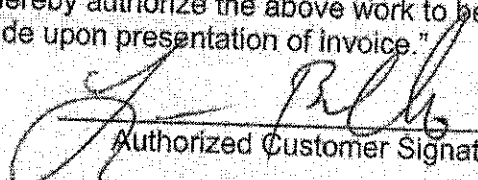
**WORK AUTHORIZATION**

FORM #KM-2

Customer AERO EXCEL COMPONENTS, INC Work Order No. AEC-E001  
MFG \_\_\_\_\_ Model JT9D-7J S/N 685969  
Registration No. \_\_\_\_\_ Nationality USA  
Brief Job Description: Disassemble the engine to gain access LPT and HPT  
Modules. Remove and replace damaged LPT and HPT Modules.

**CUSTOMER WORK AUTHORIZATION**

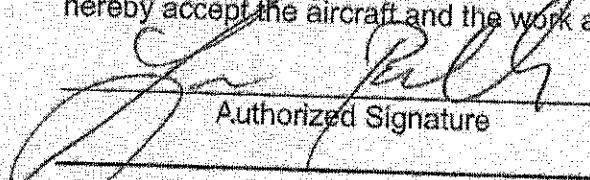
"I hereby authorize the above work to be performed and agree that payment for such work be made upon presentation of invoice."

  
Authorized Customer Signature

6/26/2013  
Date

**CUSTOMER AIRCRAFT ACCEPTANCE**

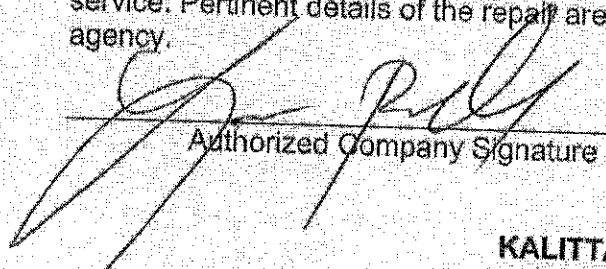
"I acknowledge that the work described above was accomplished as identified above and hereby accept the aircraft and the work accomplished."

  
Authorized Signature

6/26/2013  
Date

**MAINTENANCE RELEASE STATEMENT**

The aircraft, engine, and/or component identified above was repaired and inspected in accordance with current Federal Aviation Regulations and was found airworthy for return to service. Pertinent details of the repair are on file under the above named job number at this agency.

  
Authorized Company Signature

6/26/2013  
Date

**KALITTA MAINTENANCE**  
OSCODA, MICHIGAN  
FAA REPAIR STATION #K00R718X

**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #K00R718X

ENGINE TRANSFER REPORT FORM KM-241

Customer Aero Excel Components WO # AEC-E001  
 Engine Serial No. 685969  
 Engine Model P&W JT9D-7J  
 Aircraft Model \_\_\_\_\_

ACC / QEC Items Missing at Release	
Starter	
Start Valve	
Generator	
#10 Cascade Vane P/N 65B97513-7	

**Reason for Removal:**  
 Engine initially inducted into shop to accomplish Test 12

**Shop Visit Summary / Workscope of Modules:**  
 Removed and replaced LPT and HPT Modules. Balanced LPC Module. Accomplished all required testing for work accomplished.

**Maintenance Status:**

	Y	N	Date
Engine Cell Tested	✓		12/3/2013
Oil System Preserved	✓		12/6/2013
Fuel System Preserved	✓		12/6/2013
Oil System Drained		✓	

**On-Wing Maintenance Actions Required:**

	Y	N
Part Power Run		✓
MPA Run	✓	
Seal Run In		✓
Water/Detergent Wash		✓
Vibration Survey		✓

**Carried Forward Actions Required / Defects / Other Remarks**

- Forward Lower Mount not installed due to Excessive Wear at Cone bolt to universal block. Item returned to customer as is.
- Aft Mount Barrel Nuts not installed. Customer will install at time of Engine installation.
- Gearbox breather Duct Missing Cowling mating plate.
- Preserved Engine for 91+ Days IAW JT9D EM P/N 770408 Revision 127 Dated AUG 15/2011 Section 72-00-00 STORAGE.

QC22

*[Signature]*

Inspector / Signature \_\_\_\_\_ Date 12-7-2013 FAA 8130-3 Tracking # AEC-E001

APPENDIX I

**REPAIR STATION  
MANUAL  
CERTIFICATED REPAIR STATION  
#KO0R718X**

**KALITTA  
MAINTENANCE**

PAGE: 28  
DATE: 06-15-12  
REV: 30

WO ID AEC-E001  
Line No. 1



Customer Name: 15718 AERO EXCEL COMPONENTS INC

FORM KM-34

Aircraft/Articles	STA	DATE	Aircraft/Articles Serial No.	KM-34 No.
JT9-E	KOSC-JT9	09/23/2013	JT9-E	JT9-E2744

ITEM: TEST 12 ESN 685969 Test 12  
1/1 Line No. 1 JT9D-7J

1. Accomplish Engine Performance Test No. 12 in accordance with Pratt & Whitney JT9D Engine Manual 71-00-00.

Parts Required:	Written By: Name & Employee No. (Type or Print)
	Fernando Pacia 2890

Remarks:

ACTION TAKEN:

Accomplished engine performance test No. 12 I.A.W. P&W  
JT9D E.M. 71-00-00. Ref. W.O# AEC-E001 for work performed  
and original signatures.

Check Box if KM-44 is attached <input type="checkbox"/>	Mechanic & Employee No.	Date	Inspector & Employee No.	Date
Initial & employee No. _____	<i>Sal T...</i> 2809	12/6/13	<i>M. Garcia</i> 1727	12/6/13
Open: (if required)			Mech. / #	Insp. / #
Close: (if required)			Mech. / #	Insp. / #

Part No. Removed	Serial No. Removed	Part No. Installed	Serial No. Installed	List parts on back side of needed



APPENDIX I

**REPAIR STATION  
MANUAL  
CERTIFICATED REPAIR STATION  
#KO0R718X**

**KALITTA  
MAINTENANCE**

PAGE: 28  
DATE: 06-15-12  
REV: 30

WO ID AEC-E001  
Line No. 2



Customer Name: 15718 AERO EXCEL COMPONENTS INC

FORM KM-34

Aircraft/Articles	STA	DATE	Aircraft/Articles Serial No.	KM-34 No.
JT9-E	KOSC-JT9	09/24/2013	JT9-E	JT9-E2745

ITEM: BORESCOPE INSPECTION ESN 685969 Full Video Borescope  
1/1 Line No. 2 JT9D-7J (PRE TEST CELL RUN)  
1. Accomplish Full Video Borescope Inspection.

Parts Required:	Written By: Name & Employee No. (Type or Print)
	Fernando Pacia 2890

Remarks:

ACTION TAKEN:

Full Video Borescope, pretest cell run, accomplished IACW B747  
Amm 72-00-00 Insp. No significant findings, ref. attach report.

Check Box if KM-44 is attached <input type="checkbox"/>	Mechanic & Employee No.	Date	Inspector & Employee No.	Date
Initial & employee No. _____	<i>FB</i> 2000	10/13	<i>J. Pacia</i> 2000	10/13
Open: (if required)			Mech. / #	Insp. / #
Close: (if required)			Mech. / #	Insp. / #

Part No. Removed	Serial No. Removed	Part No. Installed	Serial No. Installed	List parts on back side of needed

APPENDIX I

**REPAIR STATION  
MANUAL  
CERTIFICATED REPAIR STATION  
#KO0R718X**

**KALITTA  
MAINTENANCE**

PAGE: 28  
DATE: 06-15-12  
REV: 30

WO ID AEC-E001  
Line No. 3



Customer Name: 15718 AERO EXCEL COMPONENTS INC FORM KM-34

Aircraft/Articles	STA	DATE	Aircraft/Articles Serial No.	KM-34 No.
JT9-E	KOSC-JT9	09/24/2013	JT9-E	JT9-E2746

**ITEM: BORESCOPE INSPECTION** ESN 685969 Full Video Borescope  
1/1 Line No. 3 JT9D-7J (POST TEST CELL RUN)  
1. Accomplish Full Video Borescope Inspection.

Parts Required:	Written By: Name & Employee No. (Type or Print)
	Fernando Pacia 2890

Remarks:

**ACTION TAKEN:**  
*Accomplished full video borescope inspection on JT9D-7J ESN 685969,  
Post test cell run; IAW P/W JT9D EM (p/n 770408) 72-00-00, Check-03 (Borescope).  
No significant findings. (Ref. attached borescope report dated 12-5-13).*

Check Box if KM-44 is attached <input type="checkbox"/>	Mechanic & Employee No.	Date	Inspector & Employee No.	Date
	N/A QC46	12-5-13	QC46	12-5-13

Open: (if required)	Mech. / #	Insp. / #
Close: (if required)	Mech. / #	Insp. / #

Part No. Removed	Serial No. Removed	Part No. Installed	Serial No. Installed	List parts on back side of needed

APPENDIX I

REPAIR STATION  
MANUAL  
CERTIFICATED REPAIR STATION  
#KO0R718X

KALITTA  
MAINTENANCE

PAGE: 28  
DATE: 06-15-12  
REV: 30

WO ID AEC-E001  
Line No. 4



Customer Name: 15718 AERO EXCEL COMPONENTS INC

FORM KM-34

Aircraft/Articles	STA	DATE	Aircraft/Articles Serial No.	KM-34 No.
JT9-E	KOSC-JT9	10/10/2013	JT9-E	JT9-E2749

ITEM: JT9D-7  
1/1 Line No. 4  
ESN 685969 LPT Removal  
JT9D-7J

- Disassemble the engine to access LPT Module. Remove and replace LPT Module. Inspect and repair as necessary. Reassemble the engine to a serviceable unit.

Parts  
Required:

Written By: Name & Employee No.  
(Type or Print)

Fernando Pacia 2890

Remarks:

ACTION TAKEN:

Disassembled engine to access LPT module. Removed and replaced LPT Module I.A.W P&W E-M 72-00-00. Ref. W.O # AECE001 Task card # RI 7252-A11. For work performed and original signatures.

Check Box if KM-44 is attached

Initial & employee No.

Mechanic & Employee No.

Date

Inspector & Employee No.

Date

*Fal Pach* 2809

12/6/13

*M. Suarez* 1927

12/6/13

Open: (if required)

Mech. / #

Insp. / #

Close: (if required)

Mech. / #

Insp. / #

Part No. Removed	Serial No. Removed	Part No. Installed	Serial No. Installed	List parts on back side of needed
LPT Module	D62981	LPT Module	D0607A	

APPENDIX I

**REPAIR STATION  
MANUAL  
CERTIFICATED REPAIR STATION  
#KO0R718X**

**KALITTA  
MAINTENANCE**

PAGE: 28  
DATE: 06-15-12  
REV: 30

WO ID AEC-E001  
Line No. 5



Customer Name: 15718 AERO EXCEL COMPONENTS INC

FORM KM-34

Aircraft/Articles	STA	DATE	Aircraft/Articles Serial No.	KM-34 No.
JT9-E	KOSC-JT9	10/10/2013	JT9-E	JT9-E2750

ITEM: JT9D-7 ESN 685969 HPT Removal  
1/1 Line No. 5 JT9D-7J

1. Disassemble the engine to gain access HPT Module. Remove and replace HPT Module. Inspect and repair as necessary. Reassemble the engine to a serviceable unit.

Parts Required:	Written By: Name & Employee No. (Type or Print) Fernando Pacia 2890
-----------------	---

Remarks:

**ACTION TAKEN:**  
  
Disassembled engine to access HPT Module. Removed and replaced HPT Module T.A.W. P&W EM 72-00-00. Ref. WO# AEC-E001 Task card RI 7251-A1J for work performed and original signatures.

Check Box if KM-44 is attached <input type="checkbox"/>	Mechanic & Employee No.	Date	Inspector & Employee No.	Date
Initial & employee No. _____	<i>fel [signature] 2809</i>	12/6/13	<i>[signature] 1727</i>	12/6/13
Open: (if required)	Mech. / #	Insp. / #		
Close: (if required)	Mech. / #	Insp. / #		

Part No. Removed	Serial No. Removed	Part No. Installed	Serial No. Installed	List parts on back side of needed
HPT Module	C85948	HPT Module	C85710	

APPENDIX I  
PAGE: 30  
DATE: 06-15-12  
REV: 30

REPAIR STATION  
MANUAL  
CERTIFICATED REPAIR STATION  
#KO0R718X

KALITTA  
MAINTENANCE

Repair Station Work Order Control Log

FORM KM-34A

WORK ORDER ID # AEC-E001

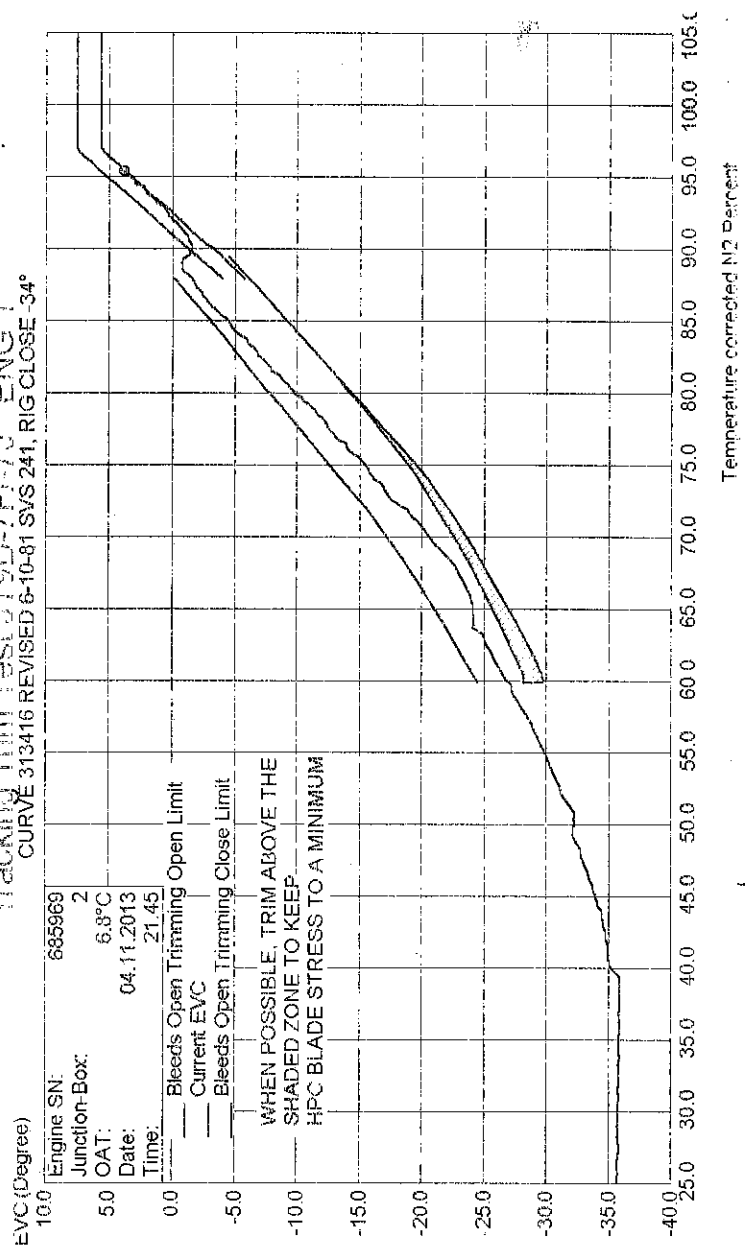
(IF APPLICABLE)

SHOP OR AIRCRAFT JT9-E

TYPE OF INSP AEC-E001

KM-34 No.	DESCRIPTION	COMPLETED		DATE
		MECH	INSP	
JT9-E2744	TEST 12::19071 ESN 685969 Test 12 JT9D-7J	<i>J. T. [Signature]</i> 2809	QC56	12/6/13
JT9-E2745	BORESCOPE INSPECTIO ESN 685969 Full Video Borescope JT9D-7J (PRE TEST CELL RUN)	N/A QC86	QC86	10/2/13
JT9-E2746	BORESCOPE INSPECTIO ESN 685969 Full Video Borescope JT9D-7J (POST TEST CELL RUN)	N/A QC46	QC46	12-5-13
JT9-E2749	JT9D-7::14159 ESN 685969 LPT Removal JT9D-7J	<i>J. T. [Signature]</i> 2809	QC56	12/16/13
JT9-E2750	JT9D-7::13628 ESN 685969 HPT Removal JT9D-7J	<i>J. T. [Signature]</i> 2809	QC56	12/16/13

Tracking Trim Test JT9D-7J-7J ENG 1  
CURVE 313416 REVISED 6-10-81 SVS 241, RIG CLOSE -34°



*Handwritten:* 7/1/13  
SRL 11-4-13

**QC60**

*Handwritten:* 11-4-13

RMS

**KALITTA AIR**

FILENAME: 685969  
Oil Type: 2380  
Eng P/N: JT9D-7J  
Test Type: 12  
Work #: AEC-E001

Engine Model: JT9D-7J  
Number of Starts: 4  
Fuel Type: Jet A  
Eng S/N: 685969

Test Run Date: November 21, 2013  
Engine Run Time: 45:04.4  
Fuel Consumed(LBS): 23445

WFM at Lightoff: 290.3  
Max WFM at Start: 1782.4

Operator During Test Run:  
Jason Merillat, Goddard, Jason, Todd

Oil Consumption: .1 PT/HR

POWER SETTING:	STARTUP	GROUND IDLE	FLIGHT IDLE	1.3	1.34	1.4	TO
DATE:	12/1/2013	12/2/2013	12/2/2013	12/2/2013	12/2/2013	12/2/2013	12/2/2013
TIME:	11:15:02 AM	11:37:03 AM	11:36:44 AM	11:57:40 AM	12:03:44 PM	12:09:51 PM	12:15:58 PM
N1PRCNT	%RPM	28.1	28.6	37.2	80.8	83.5	87.1
N1	RPM	824	1029	1339	2909	3005	3136
N1c	RPM	1038	1058	1377	2990	3089	3223
N1PRCNTc	%RPM	28.8	29.4	38.3	83.1	85.8	89.5
N2PRCNT	%RPM	62.7	63.4	71.2	89.0	90.3	91.8
N2	RPM	4560	4949	5556	6947	7049	7162
N2c	RPM	5022	5090	5714	7141	7246	7361
N2PRCNTc	%RPM	64.3	65.2	73.2	91.5	92.8	94.3
WFM	LBS	1782	2195	2634	11835	13012	14711
WFMc	LBS	1871	2313	2786	12534	13787	15584
FN	FTLB	1237	4541	5443	31568	34409	38279
FNc	FTLB	1471	4952	5966	34846	38013	42342
EPR		1.014	1.021	1.036	1.300	1.340	1.401
PT7/PT2		1.014	1.021	1.036	1.300	1.340	1.401
CDX		0.000	0.000	0.000	0.000	0.000	0.000
BARO	PSIA	14.40	14.34	14.34	14.34	14.34	14.34
PT0	PSIA	14.39	14.34	14.33	14.30	14.29	14.28
CELL_DP_0	"H2O	0.26	0.19	0.29	1.27	1.35	1.49
PS2	"H2O	0.33	0.31	0.28	-0.01	-0.07	-0.01
PT2	PSIA	14.39	14.34	14.34	14.30	14.30	14.30
PT3C	PSIG	0.87	1.31	2.36	14.47	15.61	17.20
PS4	PSIG	30.77	35.96	56.93	218.02	234.65	256.58
PS51	PSIG	21.17	25.09	40.69	165.85	179.14	196.39
PT7	PSIA	14.60	14.63	14.86	18.59	19.17	20.03
PT9	PSIA	14.38	14.33	14.32	14.24	14.25	14.24
CELL_DP_9	"H2O	0.49	0.50	0.62	2.28	2.53	2.68
POIL	PSIG	33.87	43.64	44.06	49.41	49.60	49.89
BPRESS	INHG	1.75	2.03	3.51	8.75	9.09	9.56
PFUEL	PSIG	43.66	43.45	42.76	36.37	35.29	33.99
PSTAR	PSIG	32.31	25.10	26.47	65.27	68.30	73.61
T0	°C	1.0	-0.1	-0.1	0.3	0.2	0.4
T2	°C	0.2	-0.9	-0.9	-0.6	-0.7	-0.5
EGT	°C	361.9	371.0	411.9	706.5	737.5	775.9
EGTc	°C	392.8	404.6	447.7	756.8	789.5	829.4
TT7_EGT_AVG	°C	361.9	371.0	411.9	706.5	737.5	775.9
TFUEL	°C	1.7	-0.5	-0.4	-0.2	-0.2	-0.1
TOIL	°C	28.0	73.4	70.8	49.0	49.0	49.0
SCAV_OIL_TEMP	°C	40.1	86.8	85.6	84.6	86.5	88.5
TSTAR	°C	47.1	9.7	10.0	11.8	12.6	14.3
TCOWL_F	°C	8.7	3.6	3.8	6.0	7.6	9.8
TCOWL_R	°C	15.5	12.6	12.5	25.3	29.7	35.7
TCR		0.212	0.216	0.228	0.224	0.223	0.221
LPCRMX		1.625	1.627	1.653	2.088	2.154	2.255
LCPR		1.060	1.091	1.164	2.010	2.091	2.203
LPCRMIN		1.545	1.547	1.573	2.008	2.074	2.175

*MX42 12-2-13*

*QC60 12-2-13*

**KALITTA AIR**

JT9D

HPCRMX		6.996	7.003	7.082	8.399	8.601	8.907	9.502	
HCPR		2.959	3.214	4.270	8.093	8.325	8.601	8.978	
HPCRMIN		6.696	6.703	6.782	8.099	8.301	8.607	9.202	
FUEL SG		0.82	0.82	0.82	0.82	0.82	0.82	0.82	
STARTUP TIME	SEC	63.0	368.8	368.8	368.8	368.8	368.8	368.8	
LIGHTOFF TIME	SEC	34.2	336.8	336.8	336.8	336.8	336.8	336.8	
ACCEL TIME	SEC	4.9	4.9	4.9	4.9	4.9	4.9	4.9	

MX42 12-2-13

QC60 12-2-13

Eng S/N: 685969  
 Test Type: 12  
 Work #: AEC-E001



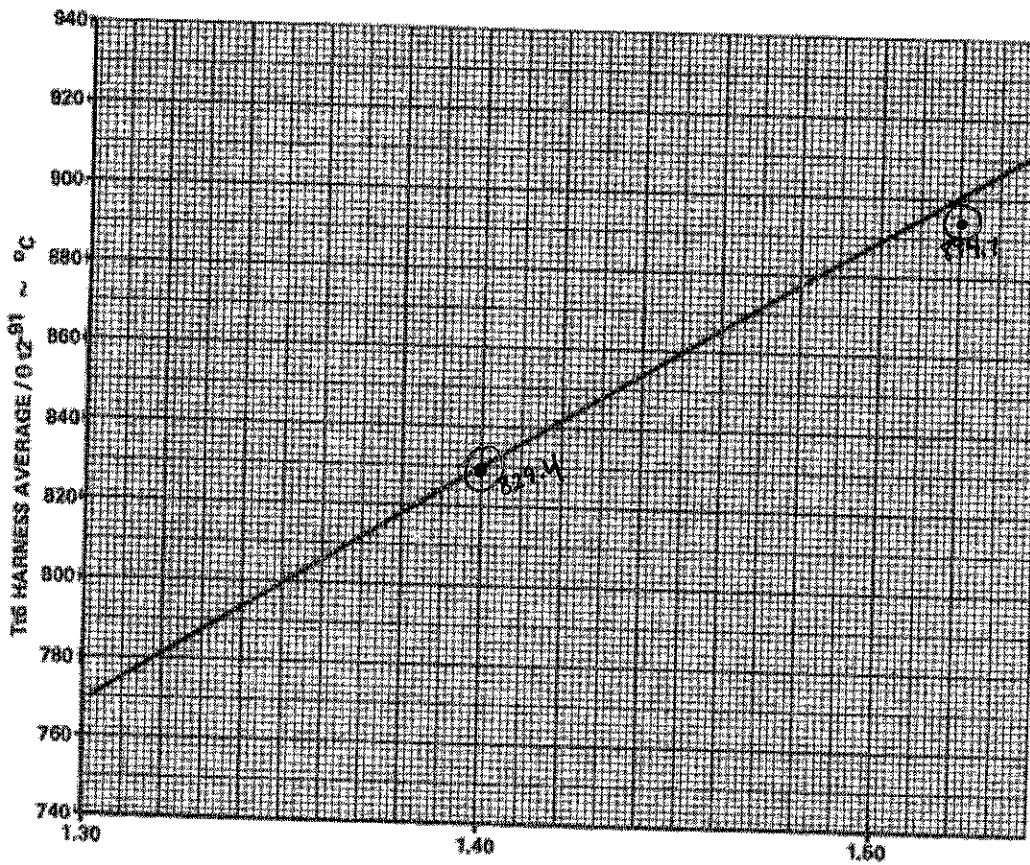
685969-7J  
12-2-13 MX42

Pratt & Whitney  
JT9D ENGINE MANUAL (PN 770408)

ENGINE GENERAL - TESTING-12  
(PERFORMANCE TEST - TEST NO. 12)

12-2-13 QC60

CORRECTED Tt6 LIMIT CURVE



PT7/PT2 (FOR ENGINES NOT INCORPORATING CDX)  
EPR (FOR ENGINES INCORPORATING CDX)

CPE CN 2651  
JOG 6-29-85

L-89256

EGT (Tt6) Acceptance Limit Curve  
Figure 1308 (Sheet 2)

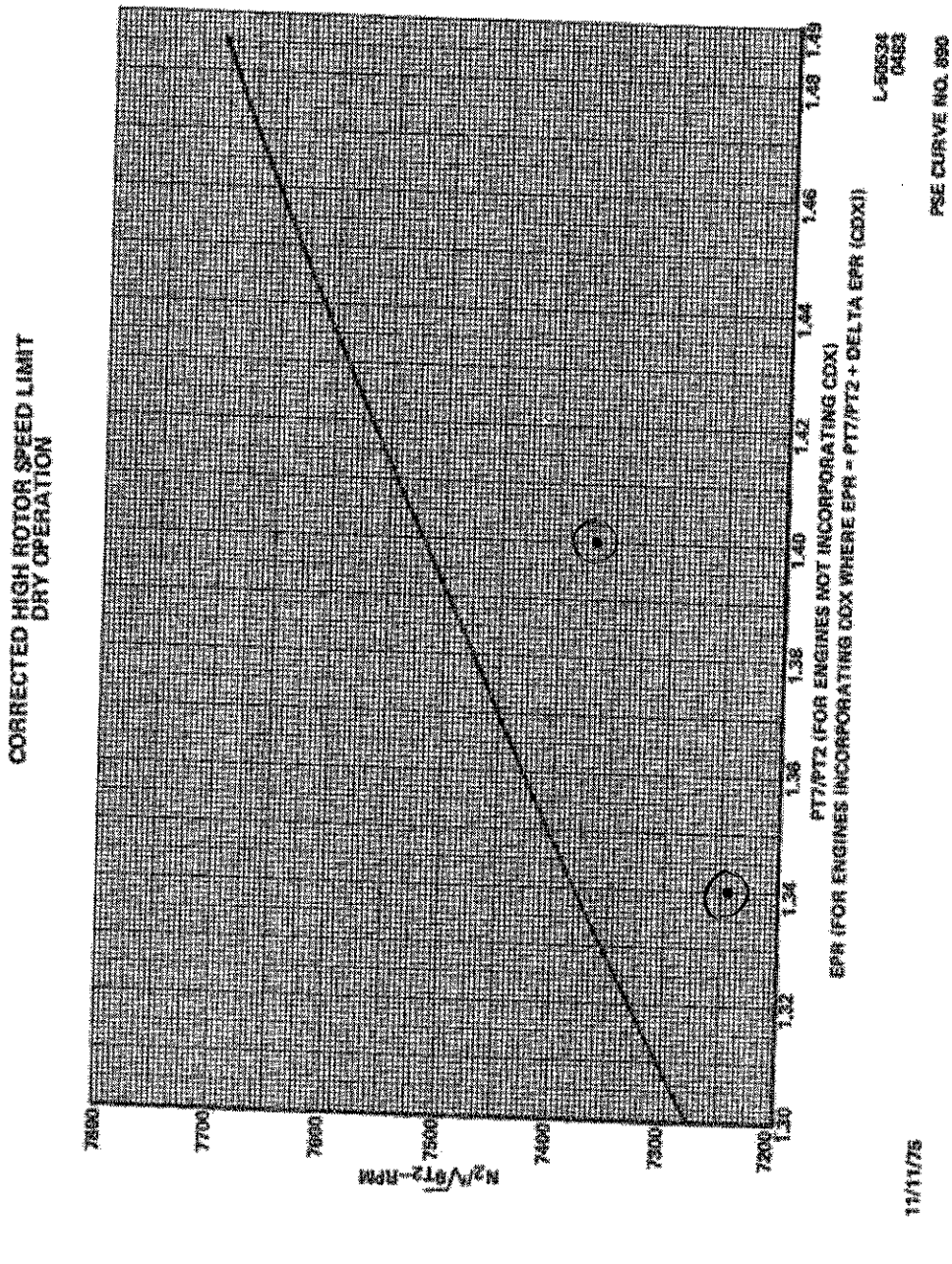
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TESTING-12  
Page 1337/1338  
MAR 1/93  
027

EFFECTIVITY -7J

Not subject to the EAR per 15 C.F.R. Chapter 1, Part 734.3(b)(3).

685969-7J  
12-2-13 MX42  
12-2-13 QC60

Pratt & Whitney  
JT9D ENGINE MANUAL (PN 770408)  
ENGINE GENERAL - TESTING-12  
(PERFORMANCE TEST - TEST NO. 12)



Corrected High Rotor Speed Limit  
(N2) (Dry Operation)  
Figure 1307

EFFECTIVITY -7F -7J

#72-00-00  
TESTING-12  
Page 1333/1334  
MAR 1/93  
027

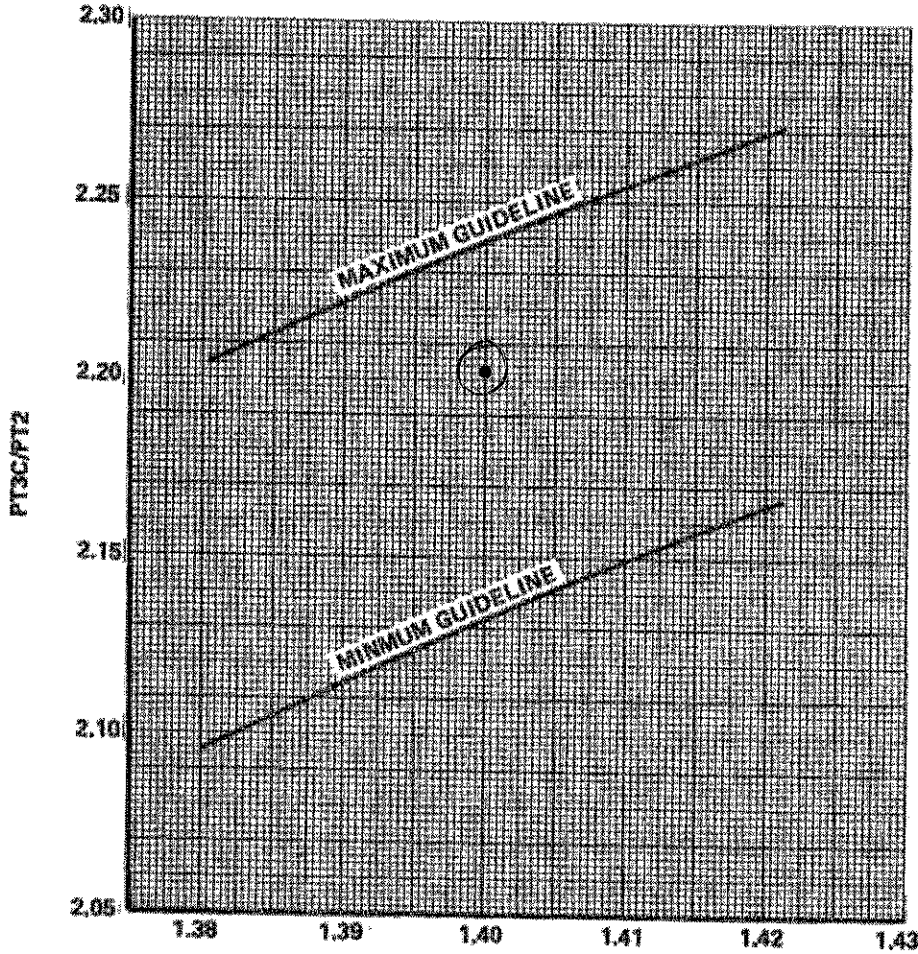
Not subject to the EAR per 15 C.F.R. Chapter 1, Part 734.3(b) (3).

685969-7J  
12-2-13 MX42

12-2-13 QC60

Pratt & Whitney  
JT9D ENGINE MANUAL (PN 770408)

ENGINE GENERAL - TESTING-12  
(PERFORMANCE TEST - TEST NO. 12)



CN772  
9-18-74

PT7/PT2

L-50543  
1284

NOTE: Engine may exceed guidelines after verification that instrumentation errors, calculation errors or pressure leaks do not exist.

Front Compressor Pressure Ratio  
Guide Line Curve (Dry Operation)  
Figure 1305

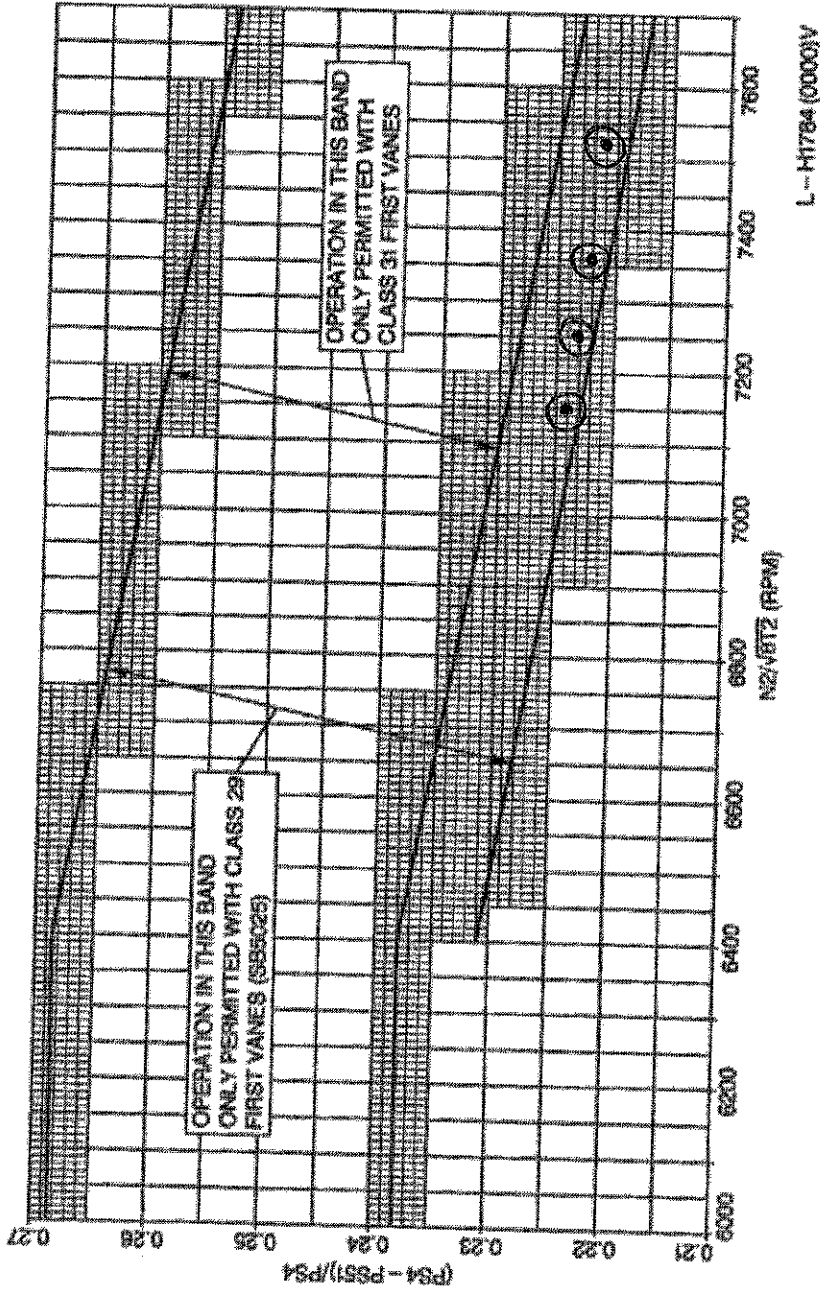
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TESTING-12  
Page 1329/1330  
FEB 15/03  
027

EFFECTIVITY -7F -7J

Pratt & Whitney  
JT9D ENGINE MANUAL (PN 770408)

ENGINE GENERAL - TESTING-12  
(PERFORMANCE TEST - TEST NO. 12)

C85969-7J  
12-2-13 50X42  
12-2-13 QC60



Turbine Cooling Air Check Curve  
For Engines Incorporating  
HPT Second Blade PN 805402  
(SB 5942) Or PN 808602 (SB 6042)  
Figure 1303 (Sheet 4)

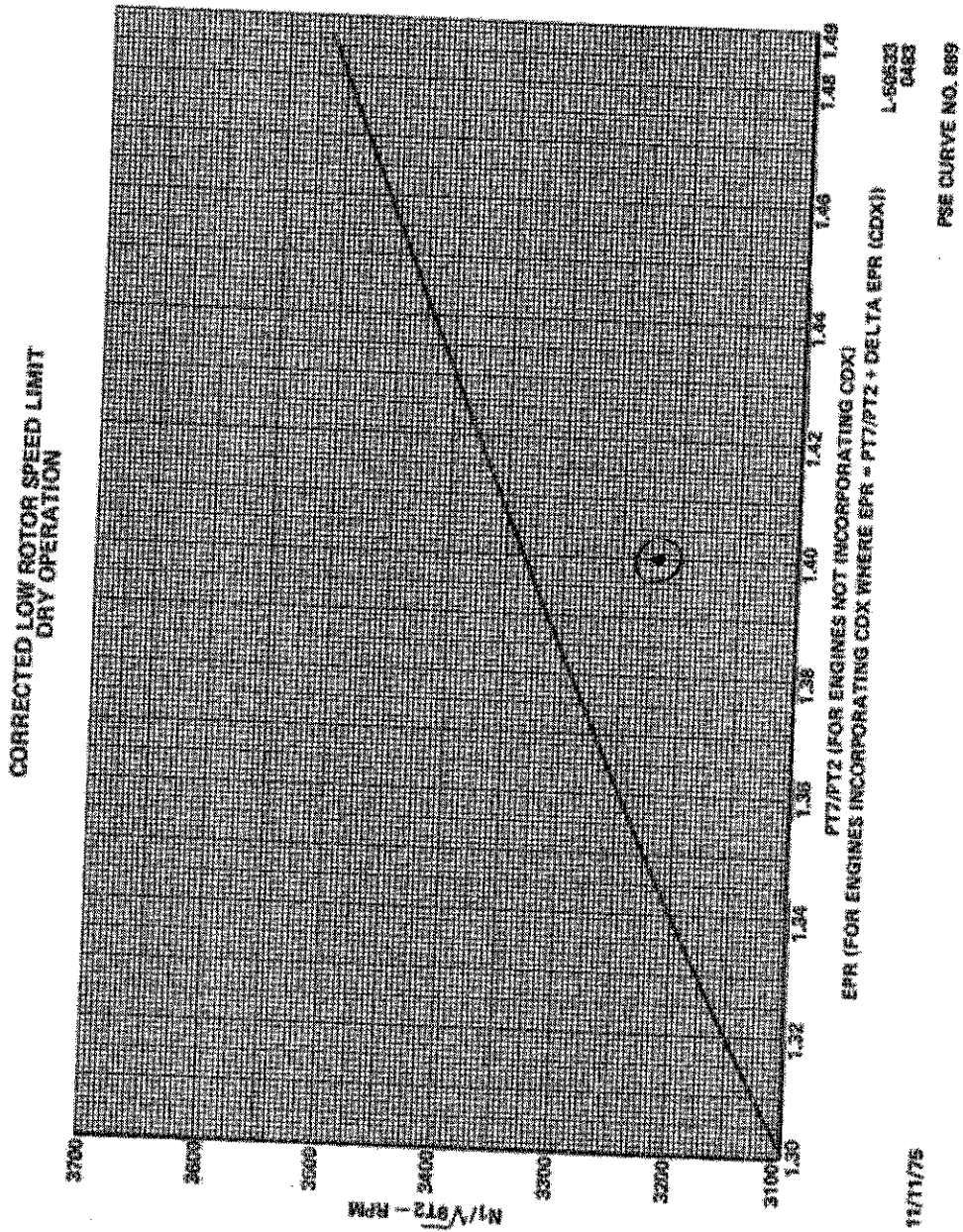
EFFECTIVITY -7J

#72-00-00  
TESTING-12  
Page 1325/1326  
MAR 1/93  
027

685969-7J  
12-2-13 MX42  
12-2-13 QC60

Pratt & Whitney  
JT9D ENGINE MANUAL (PN 770408)

ENGINE GENERAL - TESTING-12  
(PERFORMANCE TEST - TEST NO. 12)



Corrected Low Rotor Speed Limit  
(N1) (Dry Operation)  
Figure 1306

#72-00-00  
TESTING-12  
Page 1331/1332  
MAR 1/93  
027

EFFECTIVITY -7F -7J

Not subject to the EAR per 15 C.F.R. Chapter 1, Part 734.3(b)(3).

# U FLANGE

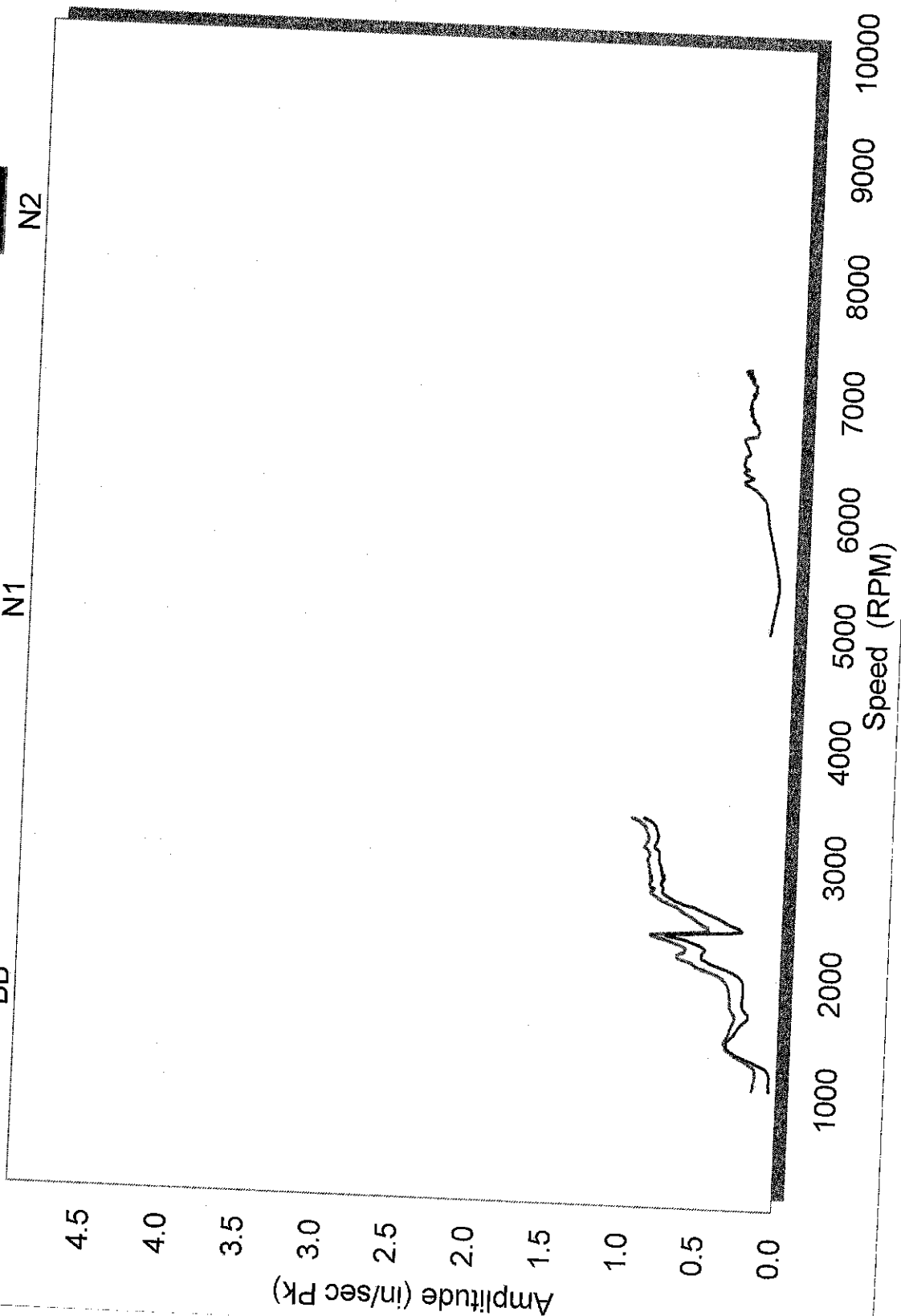


Data Peaks

BB	3356	1.00
N1	3356	0.93
N2	7233	0.37

MX42 12-2-13

QC60 12-2-13



# K FLANGE

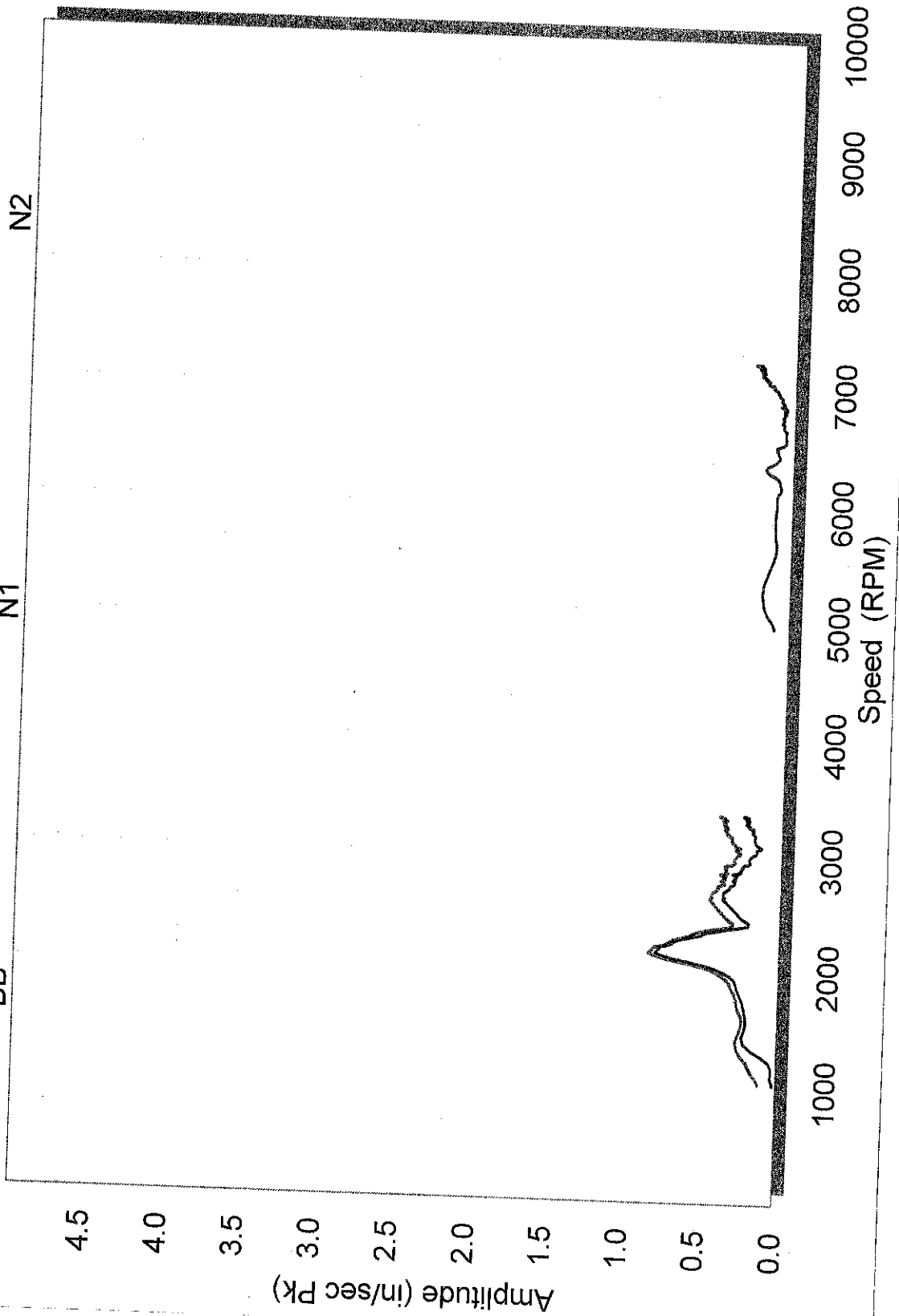


Data Peaks

Peak Label	Frequency (Hz)	Amplitude (in/sec Pk)
BB	2166	0.85
N1	2166	0.80
N2	7238	0.26

MX42 12-2-13

QC60 12-2-13

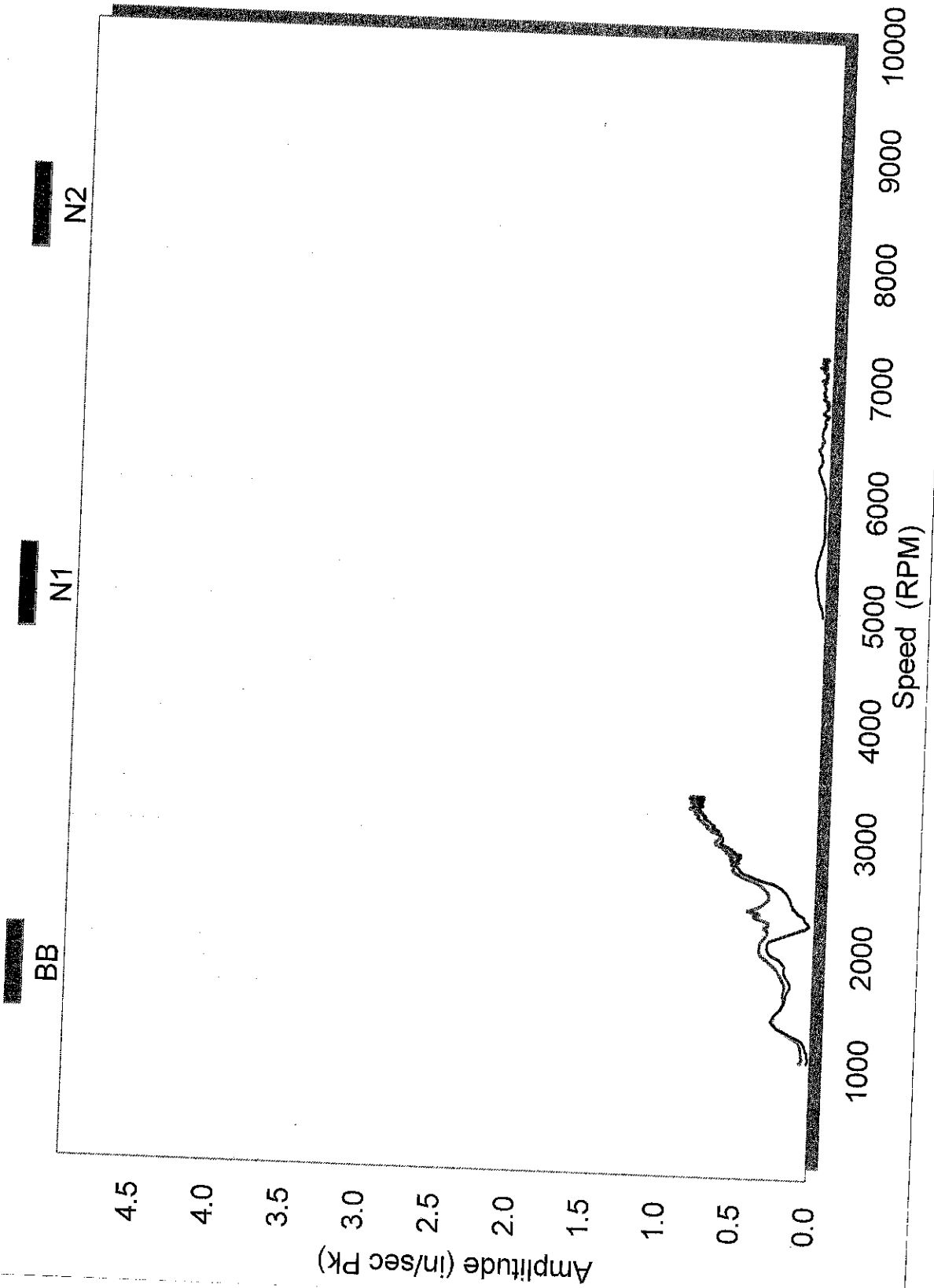


# P FLANGE

Data Peaks		
BB	3341	0.86
N1	3352	0.81
N2	7162	0.08

MAX42 12-2-13

QC60 12-2-13



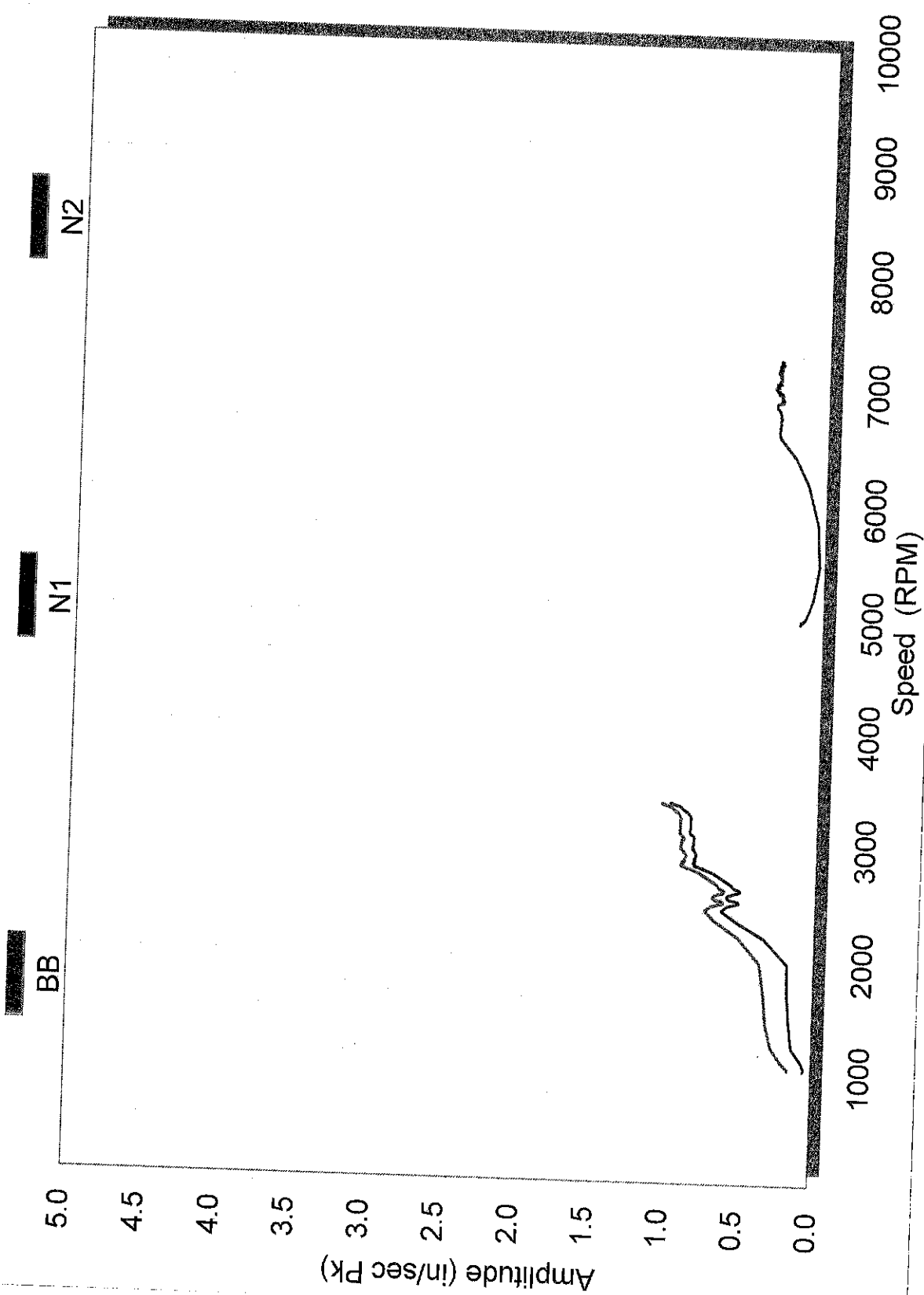


# U FLANGE

Data Peaks			
BB	3370	1.05	
N1	3370	0.99	
N2	7025	0.36	

*MX42 12-2-13*

QC60 12-2-13

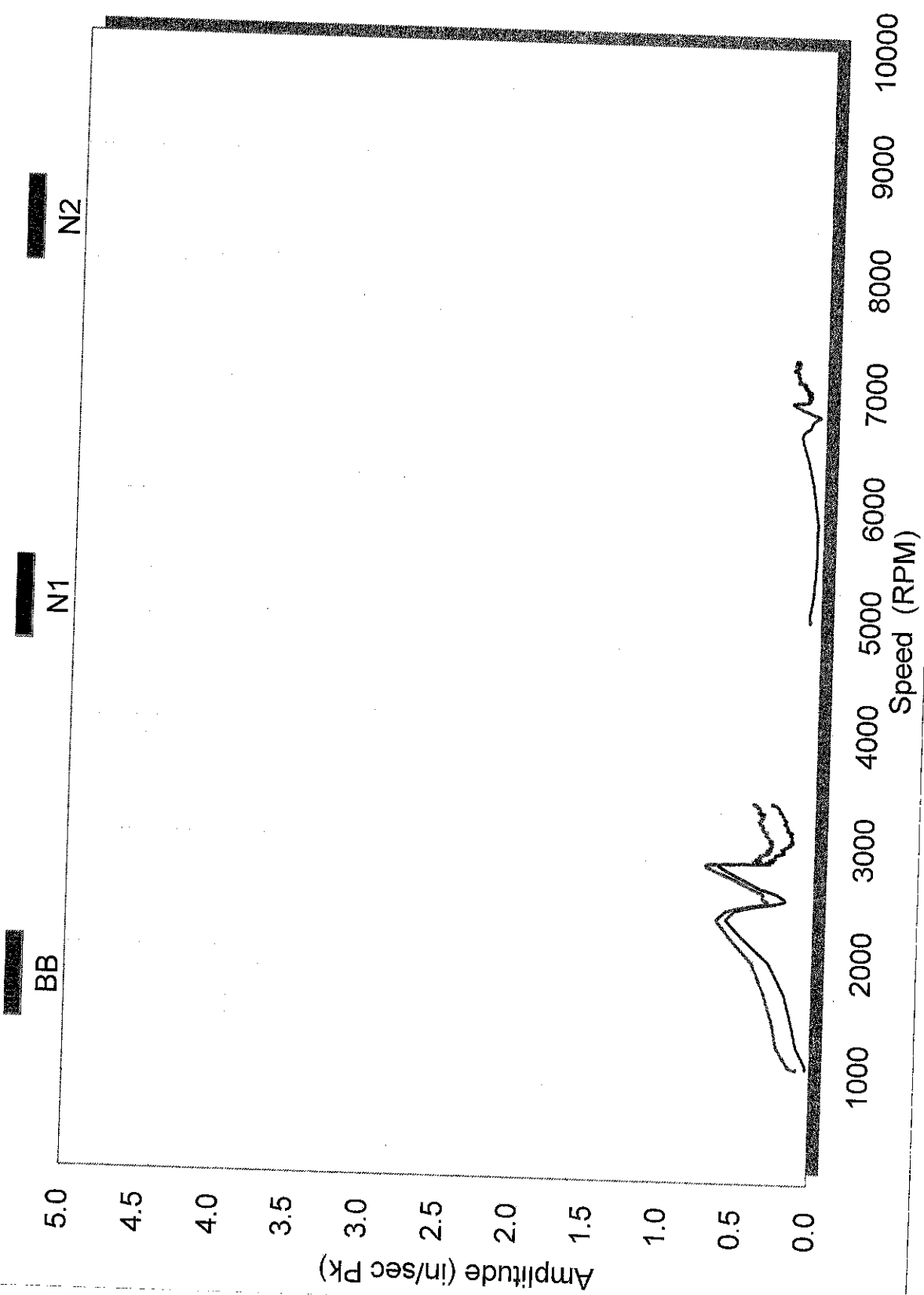


# K FLANGE

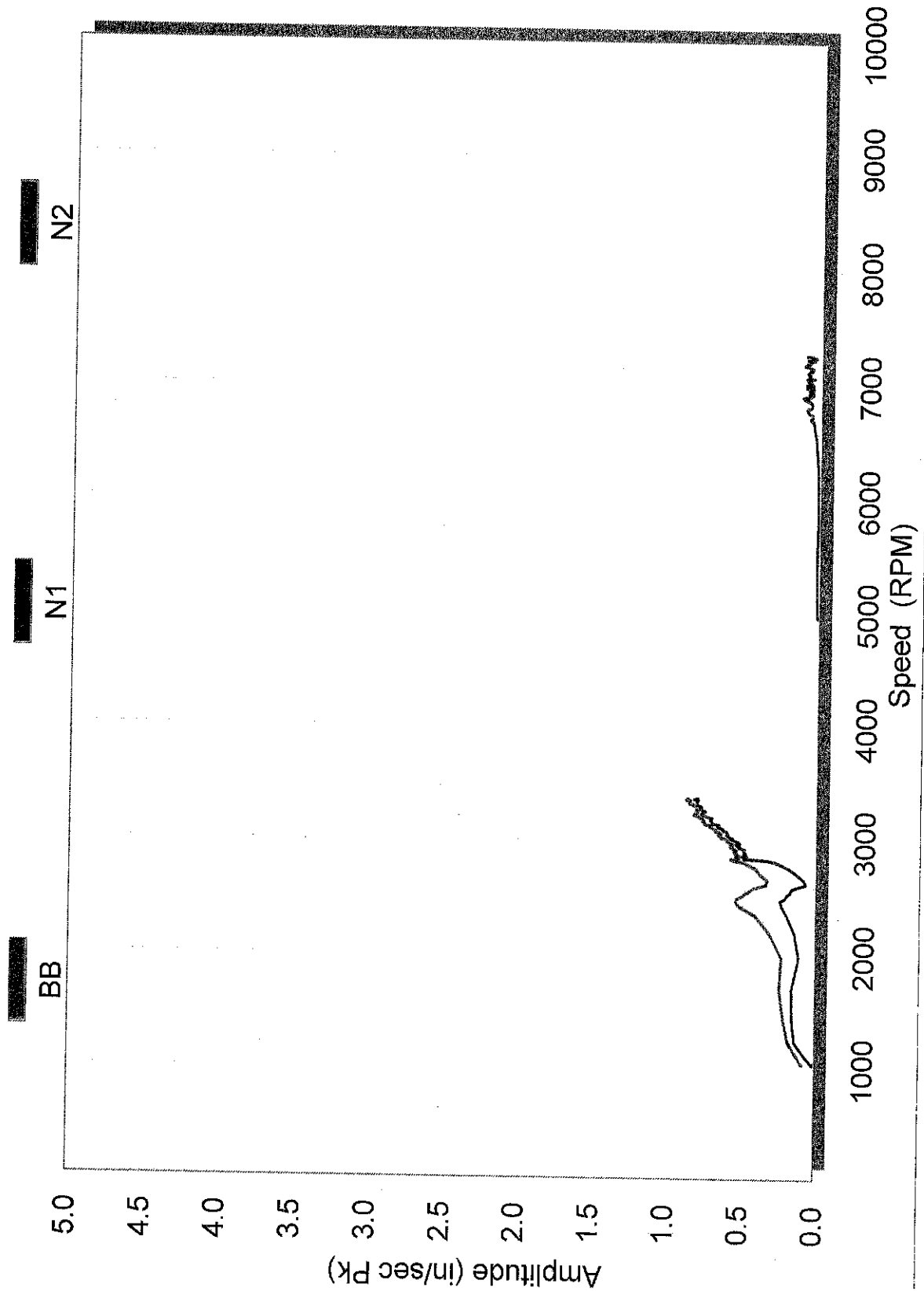
Data Peaks			
BB	2825	0.73	
N1	2825	0.64	
N2	6891	0.23	

MAX42 12-2-13

QC60 12-2-13



# P FLANGE



Data Peaks

Peak Label	Frequency (Hz)	Amplitude (in/sec PK)
BB	3363	0.88
N1	3363	0.82
N2	6900	0.12

*MX42 12-2-13*

QC60 12-2-13

**KALITTA MAINTENANCE  
REPAIR STATION MANUAL**

S/N: 685969

W/O NO: AEC-E001

EFF: JT9D-ALL

Appendix II - Section A  
JT9D TASK CARDS  
POST MAINTENANCE INSPECTION  
CHECKLIST

TASK: PM7200-ALL

REV: 2

DATE: 06-15-12

*** CUSTOMER: <u>AERO EXCEL</u> *** (3)					
ITEM	TASK	DATE	MECH	LEAD	INSP
1.	Check QEC components. Generate shortage list or non-routines for missing items.	11-29-13	K. Henry 8602	MX27	XXXX
2.	Ensure that all electrical connectors are properly tightened and safetied.	11-29-13 P. 134	K. Henry 8602	MX27	XXXX
3.	Torque check all pneumatic duct vee band clamps.	11-29-13	K. Henry 8602	MX27	XXXX
4.	Check the following items for proper servicing: Engine oil tank. CSD/IDG. Starter. NOTE: Service as placarded for oil specification.	11-29-13	K. Henry 8602	MX27	XXXX
5.	Verify that all items requiring locking devices are properly safetied per PWA Standard Practices Manual requirements.	11-29-13	K. Henry 8602	MX27	XXXX
6.	Perform GVI of entire completed engine for obvious defects in workmanship or any other unsatisfactory condition resulting from the shop visit.	11-29-13	XXXX	MX27	QC62
7.	Review paperwork package. Verify that all items are properly signed off. Turn in engine shop visit package to Inspection for final review.	11-29-13	XXXX	MX27	XXXX
8.	Review package. Transfer open items to a Test Run Form KM-34. Retain a copy of the issued KM-34 and items in engine shop.	11/29/13	XXXX	XXXX	QC62
9.	Issue test run requirements and partial repair tag. Release engine for test.	11/29/13	XXXX	XXXX	QC62

**KALITTA MAINTENANCE  
REPAIR STATION MANUAL**

S/N: 685969  
W/O NO: AEC-E001  
EFF: JT9D-ALL

Appendix II – Section A  
JT9D TASK CARDS  
POST TEST CELL CHECKLIST

TASK: PT7200-ALL  
REV: 3  
DATE: 12-15-12

*** CUSTOMER: <u>Aero Excel Comp.</u> ***					
ITEM	TASK	DATE	MECH	LEAD	INSP
1.	Accomplish the test runs and complete the run-up sheet.	12/6/13	<i>[Signature]</i> 2809	WPNAL 1733	XXXX
2.	Accomplish a full video borescope.	12-5-13	XXXX	XXXX	QC46
3.	Install all borescope plugs removed for item 2.	<del>12-4-13</del> 12-5-13	<i>[Signature]</i> 6900	<i>[Signature]</i> 2809	XXXX
4.	Visually check engine for evidence of fluid leaks. Pull main engine oil screen and gearbox magnetic chip detector. Check condition.	12-4-13	<i>[Signature]</i> 6900	<i>[Signature]</i> 2809	XXXX
5.	Install serviceable main oil screen & gearbox chip detector. Use new "O" rings.	12-4-13	<i>[Signature]</i> 6900	<i>[Signature]</i> 2809	XXXX
6.	Remove components installed for test cell run. {test bed engine mounts, etc.}	12/3/13	<i>[Signature]</i> 2809	XXXX	XXXX
7.	Check QEC components. Generate shortage list or non-routines for missing or removed items.	12/4/13	MX28	<i>[Signature]</i> 2809	XXXX
8.	Check the following items for proper servicing: Engine oil tank. CSD/IDG. Starter. <i>Not Installed</i> NOTE: Service as placarded for oil specification.	12/5/13	<i>[Signature]</i> 2809	XXXX	XXXX
9.	Install serviceable forward lower engine mount assembly, complete with safety bolt/hardware and cone bolt nut & <del>washer</del> washer. <i>N/A Mount will be installed by customer</i>	12-6-13	<i>[Signature]</i> 2809	WPNAL 1733	XXXX
10.	Verify that all engine pneumatic duct clamps have safety wire installed. Install safety wire if missing.	12-5-13	<i>[Signature]</i> 5839	<i>[Signature]</i> 2809	XXXX
11.	Perform GVI of entire completed engine for obvious defects in workmanship or any other unsatisfactory condition resulting from the engine shop visit &/or test run.	12-5-13	XXXX	<i>[Signature]</i> 2809	QC46
12.	Verify the three way manual valve position lever is in the flight mode and safetied.	12-5-13	XXXX	XXXX	QC46
13.	Review paperwork package. Verify that all items are properly signed off. Turn in engine test run package to Inspection for final review.	12-6-13	XXXX	WPNAL 1733	QC86
14.	Review package and issue a maintenance release document. Release engine to service.	12-7-13	XXXX	XXXX	QC69

**KALITTA**  
MAINTENANCE

REPAIR STATION  
MANUAL  
CERTIFICATED REPAIR STATION  
#K00R718X

APPENDIX II  
PAGE: 13  
DATE: 06-15-13  
REV: 33

**POWERPLANT PRELIMINARY INSPECTION FORM KM-230**

ESN: <u>685969</u>		W.O. #: <u>AEC-E001</u>	
ITEM	TASK DESCRIPTION	DATE	INSP
	<p><b>NOTES:</b> Accomplish Preliminary Inspection as required by §145.211 (c) (ii). Generate non-routine items for all discrepancies noted.</p> <p>This is a general visual inspection looking for obvious defects, irregularities, and other evidence of an unserviceable condition. No open up or component removal is required for this inspection.</p>		
1.	<p>RECORD DATE &amp; TIME ENGINE INDUCTED INTO SHOP</p> <p>DATE: <u>9-25-13</u> TIME: <u>0700</u></p>	<u>9/25/13</u>	<b>QC46</b>
2.	<p>Preliminary Inspection waived by Customer (military engines only). N/A this step if not applicable.</p>	<u>9/25/13</u>	<b>N/A</b> <b>QC86</b>
3.	<p>Take pictures / video of engine at time of receipt into Engine Center.</p>	<u>9/25/13</u>	<b>QC86</b>
4.	<p>Check fan blades (C-1), including midspan shrouds, for wear, nicks, arc burns, &amp; looseness. Check fan case for obvious defects. Check nose dome for condition/security. Inspect fan reverser system.</p>	<u>9/25/13</u>	<b>QC46</b>
5.	<p>Perform general visual inspection of engine exterior, QEC &amp; components for any obvious defects and irregularities, including evidence of fluid leaks, cracked pneumatic/bleed ducts, burnt wiring, cracked case, etc.</p>	<u>9/25/13</u>	<b>QC46</b>
6.	<p>Visually inspect engine turbine exhaust case, exhaust sleeve/tail cone, &amp; thrust reverser (if applicable).</p>	<u>9/25/13</u>	<b>QC46</b>
7.	<p>List non-routines generated from inspection items 1-5 above.</p> <p><u>Km-7 # 18 thru 67,</u></p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Use back side for additional space if needed. <input type="checkbox"/></p> <p>Generate a Form KM-34 for <u>Hidden Damage Inspection</u> <input type="checkbox"/></p> <p>No non-routines generated from this inspection <input type="checkbox"/></p>	<u>9/25/13</u>	<b>QC46</b>

FORM KM-230

APPENDIX I  
PAGE: 52  
DATE: 09-15-11  
REV: 28

REPAIR STATION  
MANUAL  
CERTIFICATED REPAIR STATION  
#K00R718X

**KALITTA**  
MAINTENANCE

Scrap Parts Log Form KM-96A

SCRAP PARTS LOG			Form KM-96A	
Customer / Work Order: <u>AERO EXCEL COMP. / AEC-E001</u>				
Part Name	P/N / S/N	A/C Registration Number or Article S/N	Authorized By	Date Part Mutilated/Returned
Instr. for Propulsion Pch.	65B90259-127	AEC-E001 / ESN: 685969	<i>[Signature]</i>	12-6-13
A&B Link Bracket	599782 / NSM	AEC-E001 / ESN: 685969	<i>[Signature]</i>	12-6-13
		<b>- END QC69</b>		

PROJECT MANAGER or DESIGNEE: QC22 DATE: 12-6-13

APPENDIX I

PAGE: 102  
DATE: 03-15-13  
REV: 32

REPAIR STATION  
MANUAL  
CERTIFICATED REPAIR STATION  
#K00R718X

**KALITTA  
MAINTENANCE**

**Precision Tool Record Form KM-214E**

Work Order No.: AEL-E001/685969  
Km-7 #198  
Start Date: 11/2/13

Customer Name: AERO EXCEL COMPONENTS INC

Tool Name	Serial No. / ID No.	Mechanic Signature & Employee No.	Inspector Signature or Stamp	Calibration Due Date
<u>ABLE SCALE</u>	<u>1169</u>	<u>MX49</u>	<u>QC52</u>	<u>5/6/14</u>
		<u>END QC69</u>		

Reviewed by: [Signature] 1108  
Inspector signature & employee no.

Completion Date: 11-2-13

***If no precision tools used during maintenance visit check box  & sign:***

**NOTE:** This form is used by the Kalitta Maintenance Engine / APU shop only. Form completion is self-explanatory.



APPENDIX I  
PAGE: 102  
DATE: 03-15-13  
REV: 32

REPAIR STATION  
MANUAL  
CERTIFICATED REPAIR STATION  
#K00R718X

**KALITTA**  
MAINTENANCE

Precision Tool Record Form KM-214E

Work Order No.: AEC-5001

Customer Name: AERO EXCEL COMP.

Start Date: 9-27-13

Tool Name	Serial No. / ID No.	Mechanic Signature & Employee No.	Inspector Signature or Stamp	Calibration Due Date
TORQUE WRENCH	0608796217	K. Henry 5839	QC56	12-7-2013
Torque Wrench	0606711945	Joseph 5726	QC56	7-24-2014
Torque Wrench	0106716017	S. Smith 6875	QC86	6-6-2014
Torque Wrench	DFD32500	S. Smith 6875	QC72	5-7-2014
Depth Gage	126351	K. Henry 8602	QC86	9-11-200 <sup>4/12/12</sup> 9-11-2014
Torque Wrench	1209004011	K. Henry 8602	QC72	8-30-2014
TORQUE WRENCH	07027659	R. Noda 8649	QC72	10-03-2014
Torque wrench	0311603864	Atull 3324	QC93	08-29-2014
TORQUE WRENCH	1109002037	K. Henry 5839	QC56	1-17-2014
Torque Wrench	6900 D	Joseph: 6900	QC28	9-4-2014
Torque Wrench	0666 D	Joseph: 6900	QC56	3-26-2014
		END QC69		

Reviewed by: A. De 2306  
Inspector signature & employee no.

Completion Date: 12-7-13

If no precision tools used during maintenance visit check box  & sign:

Inspector & employee no.

NOTE: This form is used by the Kalitta Maintenance Engine / APU shop only. Form completion is self-explanatory.

**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #K00R718X

**CUSTOMER ENGINE WORK ORDER CONTROL LOG**

FORM KM-233

CUSTOMER: AERO EXCEL COMPONENTS, INC

WO #: AEC-E001 ESN: 685969 MODEL: JT9D-7J DATE: 09-24-13

ITEM	TASK	DATE	ISSUE	DATE	LEAD	DATE	INSP
1	ENGINE WORKSCOPE	09-24-13	FRPACIA 2890	09-24-13	MX17	12-02-13	H. Perry 8640
2	PRECISION TOOL RECORD FORM KM-214E	09-24-13	FRPACIA 2890	09-24-13	MX17	12-7-13	QC69
3	SCRAP PARTS LOG FORM KM-96A	09-24-13	FRPACIA 2890	09-24-13	MX17	12-02-13	H. Perry 8640
4	GAS PATH BORESCOPE REPORT (PRE TEST CELL) FORM KM-231	09-24-13	FRPACIA 2890	09-24-13	MX17	10-24-13	T. Shaffer 3309
5	FORM KM-230 POWERPLANT PRELIMINARY INSPECTION	09-24-13	FRPACIA 2890	09-24-13	MX17	10-8-13	T. Shaffer 3309
6	GAS PATH BORESCOPE REPORT (POST TEST CELL) FORM KM-231	09-24-13	FRPACIA 2890	09-24-13	MX17	12-2-13	B. Jones 3074
7	Front Fan Case Removal / Installation #RI 7231-A133	09-30-13	MX17	9-30-13	MX17	10-3-13	B. Jones 3074
8	Fan Hub Removal / Installation RI 7231-A13	09-30-13	MX17	09-30-13	MX17	10-3-13	B. Jones 3074
9	HPT Module Removal / Install RI 7251-A13 #1	10/11/13	MX17	10/11/13	MX17	10-17-13	T. Shaffer 3309
10	LPT module Removal / Install	10/10/13	MX17	10/10/13	MX17	10-23-13	M. Dean 1567
11	EXH MOD REMOVE/INSTALL RI 7253-A/J	10/11/13	MX27	10/11/13	MX27	10-23-13	M. Dean 1567
12	Post Mx Checklist PM 7200-ALL	10/11/13	MX27	10/11/13	MX27	10-25-13	M. Dean 1567
13	Exhaust Module Removal/ Installation RI 7253 A/J (#2)	11-5-13	MX35	11-5-13	MX35	11-11-13	M. Dean 1567

**KALITTA**  
MAINTENANCE

REPAIR STATION  
MANUAL  
CERTIFICATED REPAIR STATION  
#K00R718X

APPENDIX II  
PAGE: 25  
DATE: 12-15-12  
REV: 31

CUSTOMER ENGINE WORK ORDER CONTROL LOG

FORM KM-233

CUSTOMER: AERO EXCEL Components, INC.

WO #: AEC-E001 ESN: 685969 MODEL: JT9D-7J DATE: 11-5-13

ITEM	TASK	DATE	ISSUE	DATE	LEAD	DATE	INSP
14	Low pressure Turbine Module - Remove and install RI7252-A1J (#2)	11-5-13	MX35	11-5-13	MX35	11-11-13	Milan 1567
15	Post Maintenance Inspection Checklist PM7200-A11 (#2)	11-5-13	MX35	11-5-13	MX35	11-25-13	Milan 1567
16	JT9D-INST #3	11-15-13	M. C. 6887	11-15-13	MX27	12-4-13	Bjorne 3074
17	JT9D-REM #3	11-16-13	QC72	11-16-13	MX27	12-4-13	Bjorne 3074
18	JT9D-INST #4	11-21-13	Milan 1567	11-21-13	MX39	11-23-13	QC69
19	JT9D-REM #4	11-21-13	Milan 1567	11-21-13	MX39	11-30-13	QC69
20	Low Pressure Turbine Module Removal and Install RI7252-A1J (#3)	11/25/13	J. J. 2809	11/25/13	J. J. 2809	12-02-13	H. Perry
21	Exhaust Module Removal and Installation RI7253 A1J (#3)	11/25/13	J. J. 2809	11/25/13	J. J. 2809	12-02-13	H. Perry 8640
22	Fan Hub Removal/Installation RI7231-A1J (#2)	11/26/13	MX17	11/26/13	MX17	12-02-13	H. Perry 8640
23	Low Pressure Comp. Removal/Installation RI7252-A1J (#1)	11/26/13	MX17	11/26/13	MX17	12-02-13	H. Perry 8640
24	Post maintenance checklist PM 7200-A11 (#3)	11-29-13	MX27	11-29-13	MX27	12-02-13	H. Perry 8640
25	Post test call checklist PT7200-A11 (#1)	12/4/13	J. J. 2809	12/4/13	J. J. 2809	12-06-13	QC69
26	JT9D-INST	10-2-13	Bjorne 3074	10-2-13	MX35	12-6-13	Bjorne 3074

**KALITTA**  
MAINTENANCE

REPAIR STATION  
MANUAL  
CERTIFICATED REPAIR STATION  
#K00R718X

APPENDIX II  
PAGE: 33  
DATE: 12-15-13  
REV: 34

CUSTOMER ENGINE WORK ORDER CONTROL LOG

FORM KM-233

CUSTOMER: AERO EXCEL COMPONENTS INC

WO#: AEC-500/ ESN: 685969 MODEL: JT9D-7J DATE: 12-6-13

ITEM	TASK	DATE	ISSUE	DATE	LEAD	DATE	INSP
27	JT9D-REM	10-5-13	<i>B Jones</i> 3074	10-5-13	MX35	12-6-13	<i>B Jones</i> 3074
28	JT9D-INST #2	10-25-13	<i>B Jones</i> 3074	10-25-13	MX35	12-6-13	<i>B Jones</i> 3074
29	JT9D-REM #2	11-5-13	<i>B Jones</i> 3074	11-5-13	MX35	12-6-13	<i>B Jones</i> 3074
<del>30</del>	<del>JT9D-INST #3</del>	<del>11-16-13</del>	<del><i>B Jones</i> 3074</del>	<del>11-16-13</del>	<del>MX35</del>	<del>12-6-13</del>	<del><i>B Jones</i> 3074</del>
<del>31</del>	<del>JT9D-REM #3</del>	<del>11-18-13</del>	<del><i>B Jones</i> 3074</del>	<del>11-18-13</del>	<del>MX35</del>	<del>12-6-13</del>	<del><i>B Jones</i> 3074</del>
30	JT9D-INST #5	11-30-13	<i>J. F. [Signature]</i> 2809	11-30-13	<i>J. F. [Signature]</i> 2809	12-6-13	<i>M. Dean</i> 1507
31	JT9D-REM #5	12-2-13	<i>J. F. [Signature]</i> 2809	12-2-13	<i>J. F. [Signature]</i> 2809	12-6-13	<i>M. Dean</i> 1507
32	PRECISION TOOL RECORD FORM KM-214E	11/2/13	<i>J. [Signature]</i> 1392	11/2/13	MX24	12/6/13	<i>J. [Signature]</i> 1392

# KALITTA MAINTENANCE

CERTIFICATED REPAIR STATION #K00R718X

FORM KM-231

## GAS PATH BORESCOPE REPORT

KM-34 No.: AEC-E001 ENGINE MAKE: P&W MODEL: JT9D-7J

CUSTOMER: Aero Excel Comp. ESN: 685969

STAGE	DAMAGE	EROSION	AIRFOIL	REMARKS	INSP/DATE
LPC 1 <sup>ST</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>	C-1 Fan - 15 blades with minor nicks on LE	<b>QC46</b> 9-26-13
LPC 1.5 STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input type="checkbox"/>		<b>QC46</b> 9-26-13
LPC 2 <sup>ND</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		<b>QC46</b> 9-26-13
LPC 3 <sup>RD</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		<b>QC46</b> 9-26-13

NOTE: USE BORESCOPE CRITERIA APPROPRIATE TO THE CUSTOMER'S PROGRAM

**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #K00R718X

FORM KM-231

**GAS PATH BORESCOPE REPORT**

KM-34 No.: AEC-E001 ENGINE MAKE: P&W MODEL: JT9D-7J

CUSTOMER: Aero Excel Comp. ESN: 685969

STAGE	DAMAGE	EROSION	AIRFOIL	REMARKS	INSP/DATE
LPC 4 <sup>TH</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		QC46 9-26-13
LPC 5 <sup>TH</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input type="checkbox"/>		QC46 9-26-13
LPC 6 <sup>TH</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input type="checkbox"/>		QC46 9-26-13

NOTE: USE BORESCOPE CRITERIA APPROPRIATE TO THE CUSTOMER'S PROGRAM

**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #K00R718X

FORM KM-231

**GAS PATH BORESCOPE REPORT**

KM-34 No.: AEC-E001 ENGINE MAKE: P&W MODEL: JT9D-7J

CUSTOMER: Aero Excel Comp. ESN: 685969

STAGE	DAMAGE	EROSION	AIRFOIL	REMARKS	INSP/DATE
HPC 1 <sup>ST</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input type="checkbox"/>		QC46 9-26-13
HPC 2 <sup>ND</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input type="checkbox"/>		QC46 9-26-13
HPC 3 <sup>RD</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input type="checkbox"/>		QC46 9-26-13
HPC 4 <sup>TH</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input type="checkbox"/>		QC46 9-26-13

NOTE: USE BORESCOPE CRITERIA APPROPRIATE TO THE CUSTOMER'S PROGRAM

# KALITTA MAINTENANCE

CERTIFICATED REPAIR STATION #K00R718X

## GAS PATH BORESCOPE REPORT

FORM KM-231

KM-34 No.: AEC-E001

ENGINE MAKE: P&W

MODEL: JT9D-7J

CUSTOMER: Aero Excel Comp.

ESN: 685969

STAGE	DAMAGE	EROSION	AIRFOIL	REMARKS	INSP/DATE
HPC 5 <sup>th</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		<b>QC46</b> 9-26-13
HPC 6 <sup>th</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		<b>QC46</b> 9-26-13
HPC 7 <sup>th</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		<b>QC46</b> 9-26-13
HPC 8 <sup>th</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		<b>QC46</b> 9-26-13

**NOTE: USE BORESCOPE CRITERIA APPROPRIATE TO THE CUSTOMER'S PROGRAM**



**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #K00R718X

**GAS PATH BORESCOPE REPORT**

FORM KM-231

KM-34 No.: AEC-E001 ENGINE MAKE: P&W MODEL: JT9D-7J

CUSTOMER: Aero Excel Comp. ESN: 685969

STAGE	DAMAGE	EROSION	AIRFOIL	REMARKS	INSP/DATE
HPC 9 <sup>th</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		QC46 9-26-13
HPC 10 <sup>th</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		QC46 9-26-13
HPC 11 <sup>th</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		QC46 9-26-13
HPC 12 <sup>th</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		QC46 9-26-13

**NOTE: USE BORESCOPE CRITERIA APPROPRIATE TO THE CUSTOMER'S PROGRAM**

# KALITTA MAINTENANCE

CERTIFICATED REPAIR STATION #K00R718X

## GAS PATH BORESCOPE REPORT

FORM KM-231

KM-34 No.: AEC-E001

ENGINE MAKE: P&W

MODEL: JT9D-7J

CUSTOMER: Aero Excel Comp.

ESN: 685969

STAGE	DAMAGE	EROSION	AIRFOIL	REMARKS	INSP/DATE
HPC 13 <sup>th</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		<b>QC22</b> 9-26-13
HPC 14 <sup>th</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>	A few blades with very minor L/E nicks. All within limits IAW EM 72-00-00 Check-03	<b>QC22</b> 9-26-13
HPC 15 <sup>th</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>	A few blades with very minor L/E nicks. All within limits IAW EM 72-00-00 Check-03	<b>QC22</b> 9-26-13

**NOTE:** USE BORESCOPE CRITERIA APPROPRIATE TO THE CUSTOMER'S PROGRAM

Page 6 of 8

**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #K00R718X

**GAS PATH BORESCOPE REPORT**

FORM KM-231

KM-34 No.: AEC-E001 ENGINE MAKE: P&W MODEL: JT9D-7J

CUSTOMER: Aero Excel Comp.

ESN: 685969

STAGE	DAMAGE	EROSION	AIRFOIL	REMARKS	INSP/DATE
HOT SECTION COMBUSTION CHMBR(S) INNER/OUTER LINERS FUEL NOZZLES CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input checked="" type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		<b>QC46</b> 9-26-13
HOT SECTION T1 NOZZLE GUIDE VANES CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input checked="" type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		<b>QC46</b> 9-26-13
HOT SECTION T1 BLADES CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		<b>QC46</b> 9-26-13
HOT SECTION T2 GUIDE VANES CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>	Limited View	<b>QC46</b> 9-26-13

**NOTE: USE BORESCOPE CRITERIA APPROPRIATE TO THE CUSTOMER'S PROGRAM**

**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #K00R718X

**GAS PATH BORESCOPE REPORT** FORM KM-231

KM-34 No.: AEC-E001 ENGINE MAKE: P&W MODEL: JT9D-7J

CUSTOMER: Aero Excel Comp. ESN: 685969

STAGE	DAMAGE	EROSION	AIRFOIL	REMARKS	INSP/DATE
HOT SECTION T2 BLADES CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		<b>QC46</b> 9-26-13
HOT SECTION LPT BLADES CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		<b>QC46</b> 9-26-13
HOT SECTION LPT VANES CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>	Limited View	<b>QC46</b> 9-26-13

Page 8 of 8

**NOTE:** USE BORESCOPE CRITERIA APPROPRIATE TO THE CUSTOMER'S PROGRAM  
SUMMARY OF SIGNIFICANT FINDINGS: **No significant findings.**

FINAL REVIEW: *[Signature]* **QC46** DATE: 9-26-13

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**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #K00R718X

FORM KM-231

**GAS PATH BORESCOPE REPORT**

KM-34 No.: AEC-E001 ENGINE MAKE: Pratt & Whitney MODEL: JT9D-7J

CUSTOMER: Aero Excel Comp. ESN: 685969

STAGE	DAMAGE	EROSION	AIRFOIL	REMARKS	INSP/DATE
LPC 1 <sup>ST</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>	C-1 Fan Blades with minor L/E nicks	10-4-13 <b>QC86</b>
LPC 1.5 STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input type="checkbox"/>		10-4-13 <b>QC86</b>
LPC 2 <sup>ND</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		10-4-13 <b>QC86</b>
LPC 3 <sup>RD</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		10-4-13 <b>QC86</b>

**NOTE:** USE BORESCOPE CRITERIA APPROPRIATE TO THE CUSTOMER'S PROGRAM

**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #K00R718X

FORM KM-231

**GAS PATH BORESCOPE REPORT**

KM-34 No.: AEC-6001 ENGINE MAKE: Pratt & Whitney MODEL: JT9D-7J

CUSTOMER: Aero Excel Comp. ESN: 685969

STAGE	DAMAGE	EROSION	AIRFOIL	REMARKS	INSP/DATE
LPC 4 <sup>TH</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		10-4-13  QC86
LPC 5 <sup>TH</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input type="checkbox"/>		10-4-13  QC86
LPC 6 <sup>TH</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input type="checkbox"/>		10-4-13  QC86

NOTE: USE BORESCOPE CRITERIA APPROPRIATE TO THE CUSTOMER'S PROGRAM

**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #K00R718X

FORM KM-231

**GAS PATH BORESCOPE REPORT**

KM-34 No.: AEC-5001 ENGINE MAKE: Pratt & Whitney MODEL: JT9D-7J

CUSTOMER: Aero Excel Comp. ESN: 685969

STAGE	DAMAGE	EROSION	AIRFOIL	REMARKS	INSP/DATE
HPC 1 <sup>ST</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input type="checkbox"/>		10-4-13 QC86
HPC 2 <sup>ND</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input type="checkbox"/>		10-4-13 QC86
HPC 3 <sup>RD</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input type="checkbox"/>		10-4-13 QC86
HPC 4 <sup>TH</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input type="checkbox"/>		10-4-13 QC86

NOTE: USE BORESCOPE CRITERIA APPROPRIATE TO THE CUSTOMER'S PROGRAM



**KALITTA MAINTENANCE**

CERTIFICATED REPAIR STATION #K00R718X

**GAS PATH BORESCOPE REPORT**

FORM KM-231

KM-34 No.: AEC-500

ENGINE MAKE: Pratt & Whitney MODEL: JT9D-7J

CUSTOMER: Aero Excel Comp.

ESN: 685969

STAGE	DAMAGE	EROSION	AIRFOIL	REMARKS	INSP/DATE
HPC 5 <sup>th</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		10-4-13 QC86
HPC 6 <sup>th</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		10-4-13 QC86
HPC 7 <sup>th</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		10-4-13 QC86
HPC 8 <sup>th</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		10-4-13 QC86

NOTE: USE BORESCOPE CRITERIA APPROPRIATE TO THE CUSTOMER'S PROGRAM

**KALITTA MAINTENANCE**

CERTIFICATED REPAIR STATION #K00R718X

**GAS PATH BORESCOPE REPORT**

FORM KM-231

KM-34 No.: AFC-5001

ENGINE MAKE: Pratt & Whitney MODEL: JT9D-7J

CUSTOMER: Aero Excel Comp.

ESN: 685969

STAGE	DAMAGE	EROSION	AIRFOIL	REMARKS	INSP/DATE
HPC 9 <sup>th</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		10-4-13 QC86
HPC 10 <sup>th</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		10-4-13 QC86
HPC 11 <sup>th</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		10-4-13 QC86
HPC 12 <sup>th</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		10-4-13 QC86

**NOTE: USE BORESCOPE CRITERIA APPROPRIATE TO THE CUSTOMER'S PROGRAM**

**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #K00R718X

KM-34 No.: AEC-E001 **FORM KM-231**  
**GAS PATH BORESCOPE REPORT**  
 ENGINE MAKE: Pratt & Whitney MODEL: JT9D-7J

CUSTOMER: Aero Excel Comp. ESN: 685969

STAGE	DAMAGE	EROSION	AIRFOIL	REMARKS	INSP/DATE
HPC 13 <sup>th</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		10-4-13 QC86
HPC 14 <sup>th</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>	A few blades with very minor L/E nicks with in limits EM 72-00-00 Check 03	10-4-13 QC86
HPC 15 <sup>th</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>	A few blades with very minor L/E nicks with in limits EM 72-00-00 Check 03	10-4-13 QC86

**NOTE:** USE BORESCOPE CRITERIA APPROPRIATE TO THE CUSTOMER'S PROGRAM

**KALITTA MAINTENANCE**

CERTIFICATED REPAIR STATION #K00R718X

**GAS PATH BORESCOPE REPORT**

FORM KM-231

KM-34 No.: AEC-5001

ENGINE MAKE: Pratt & Whitney MODEL: JT9D-7J

CUSTOMER: Aero Excel Comp.

ESN: 685969

STAGE	DAMAGE	EROSION	AIRFOIL	REMARKS	INSP/DATE
HOT SECTION COMBUSTION CHMBR(S) INNER/OUTER LINERS FUEL NOZZLES CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input checked="" type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input checked="" type="checkbox"/>		10-4-13 QC86
HOT SECTION T1 NOZZLE GUIDE VANES CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input checked="" type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input checked="" type="checkbox"/>		10-4-13 QC86
HOT SECTION T1 BLADES CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input checked="" type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input checked="" type="checkbox"/>		10-4-13 QC86
HOT SECTION T2 GUIDE VANES CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input checked="" type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input checked="" type="checkbox"/>	Several T-2 vanes damaged at approx. 6 o'clock position, missing material. Out of limits.	10-4-13 QC86

NOTE: USE BORESCOPE CRITERIA APPROPRIATE TO THE CUSTOMER'S PROGRAM

**KALITTA MAINTENANCE**

CERTIFICATED REPAIR STATION #K00R718X

**GAS PATH BORESCOPE REPORT**

FORM KM-231

KM-34 No.: AEC-001

ENGINE MAKE: Pratt & Whitney MODEL: JT9D-7J

CUSTOMER: Aero Excel Comp. ESN: 685969

STAGE	DAMAGE	EROSION	AIRFOIL	REMARKS	INSP/DATE
HOT SECTION T2 BLADES CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input checked="" type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input checked="" type="checkbox"/>	All blades exhibit signs of L/E FOD damage, out of limits.	10-4-13 <b>QC86</b>
HOT SECTION LPT BLADES CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input checked="" type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input checked="" type="checkbox"/>	All blades exhibit signs of L/E FOD dam	10-4-13 <b>QC86</b>
HOT SECTION LPT VANES CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input checked="" type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input checked="" type="checkbox"/>	Several T-3 vanes damaged at approx. 6 o'clock position, missing material. Out of limits.	10-4-13 <b>QC86</b>

NOTE: USE BORESCOPE CRITERIA APPROPRIATE TO THE CUSTOMER'S PROGRAM Page 8 of 8

SUMMARY OF SIGNIFICANT FINDINGS: HPT 2nd stage vanes, HPT 2nd Stage blades, LPT 3rd Stage Vanes and LPT 3rd Stage Blades

all have damage as noted above that are out of limits.

FINAL REVIEW: *[Signature]* DATE: 10/4/13

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**KALITTA MAINTENANCE**  
CERTIFICATED REPAIR STATION #K00R718X

FORM KM-231

**GAS PATH BORESCOPE REPORT**

KM-34 No.: AEC-E001 ENGINE MAKE: Pratt & Whitney MODEL: JT9D-7J

CUSTOMER: Aero Excel Comp. ESN: 685969

STAGE	DAMAGE	EROSION	AIRFOIL	REMARKS	INSP/DATE
LPC 1 <sup>ST</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		QC46 12-5-13
LPC 1.5 STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input type="checkbox"/>		QC46 12-5-13
LPC 2 <sup>ND</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		QC46 12-5-13
LPC 3 <sup>RD</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>	A few minor nicks in LE of blades. All damage is within continued time limits, IAW PW JT9D-7J EM 72-00-00, Check -03.	QC46 12-5-13

**NOTE:** USE BORESCOPE CRITERIA APPROPRIATE TO THE CUSTOMER'S PROGRAM

# KALITTA MAINTENANCE

CERTIFICATED REPAIR STATION #K00R718X

## GAS PATH BORESCOPE REPORT

FORM KM-231

KM-34 No.: AEC-E001 ENGINE MAKE: Pratt & Whitney MODEL: JT9D-7J

CUSTOMER: Aero Excel Comp. ESN: 685969

STAGE	DAMAGE	EROSION	AIRFOIL	REMARKS	INSP/DATE
LPC 4 <sup>TH</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		<b>QC46</b> 12-5-13
LPC 5 <sup>TH</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input type="checkbox"/>		<b>QC46</b> 12-5-13
LPC 6 <sup>TH</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input type="checkbox"/>		<b>QC46</b> 12-5-13

NOTE: USE BORESCOPE CRITERIA APPROPRIATE TO THE CUSTOMER'S PROGRAM



**KALITTA MAINTENANCE**  
 CERTIFICATED REPAIR STATION #K00R718X

FORM KM-231

**GAS PATH BORESCOPE REPORT**

KM-34 No.: AEC-E001 ENGINE MAKE: Pratt & Whitney MODEL: JT9D-7J

CUSTOMER: Aero Excel Comp. ESN: 685969

STAGE	DAMAGE	EROSION	AIRFOIL	REMARKS	INSP/DATE
HPC 1 <sup>ST</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input type="checkbox"/>		<b>QC46</b> 12-5-13
HPC 2 <sup>ND</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input type="checkbox"/>		<b>QC46</b> 12-5-13
HPC 3 <sup>RD</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input type="checkbox"/>		<b>QC46</b> 12-5-13
HPC 4 <sup>TH</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input type="checkbox"/>		<b>QC46</b> 12-5-13

**NOTE:** USE BORESCOPE CRITERIA APPROPRIATE TO THE CUSTOMER'S PROGRAM

# KALITTA MAINTENANCE

CERTIFICATED REPAIR STATION #K00R718X

## GAS PATH BORESCOPE REPORT

FORM KM-231

KM-34 No.: AEC-E001 ENGINE MAKE: Pratt & Whitney MODEL: JT9D-7J

CUSTOMER: Aero Excel Comp. ESN: 685969

STAGE	DAMAGE	EROSION	AIRFOIL	REMARKS	INSP/DATE
<b>HPC 5<sup>th</sup> STAGE</b> CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		<b>QC46</b> <i>12-5-13</i>
<b>HPC 6<sup>th</sup> STAGE</b> CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		<b>QC46</b> <i>12-5-13</i>
<b>HPC 7<sup>th</sup> STAGE</b> CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		<b>QC46</b> <i>12-5-13</i>
<b>HPC 8<sup>th</sup> STAGE</b> CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		<b>QC46</b> <i>12-5-13</i>

**NOTE:** USE BORESCOPE CRITERIA APPROPRIATE TO THE CUSTOMER'S PROGRAM

# KALITTA MAINTENANCE

CERTIFICATED REPAIR STATION #K00R718X

## GAS PATH BORESCOPE REPORT

FORM KM-231

KM-34 No.: AEC-E001 ENGINE MAKE: Pratt & Whitney MODEL: JT9D-7J

CUSTOMER: Aero Excel Comp. ESN: 685969

STAGE	DAMAGE	EROSION	AIRFOIL	REMARKS	INSP/DATE
HPC 9 <sup>th</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		<b>QC46</b> <i>12-5-13</i>
HPC 10 <sup>th</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>	A few minor nicks in LE & TE of blades. All damage is within continued time limits, IAW PW JT9D-7J EM 72-00-00, Check -03.	<b>QC46</b> <i>12-5-13</i>
HPC 11 <sup>th</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		<b>QC46</b> <i>12-5-13</i>
HPC 12 <sup>th</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		<b>QC46</b> <i>12-5-13</i>

**NOTE:** USE BORESCOPE CRITERIA APPROPRIATE TO THE CUSTOMER'S PROGRAM

# KALITTA MAINTENANCE

CERTIFICATED REPAIR STATION #K00R718X

## GAS PATH BORESCOPE REPORT

FORM KM-231

KM-34 No.: AEC-E001

ENGINE MAKE: Pratt & Whitney      MODEL: JT9D-7J

CUSTOMER: Aero Excel Comp.

ESN: 685969

STAGE	DAMAGE	EROSION	AIRFOIL	REMARKS	INSP/DATE
HPC 13 <sup>th</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>	A few blades with minor dents in concave side and TE. All damage is within continued time limits, IAW PW JT9D-7J EM 72-00-00, Check -03.	<b>QC46</b>  12-5-13
HPC 14 <sup>th</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>	A few blades with very minor LE nicks. All damage is within continued time limits, IAW PW JT9D-7J EM 72-00-00, Check -03.	<b>QC46</b>  12-5-13
HPC 15 <sup>th</sup> STAGE CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>	A few blades with very minor LE nicks. All damage is within continued time limits, IAW PW JT9D-7J EM 72-00-00, Check -03.	<b>QC46</b>  12-5-13

**NOTE: USE BORESCOPE CRITERIA APPROPRIATE TO THE CUSTOMER'S PROGRAM**

Page 6 of 8

**KALITTA MAINTENANCE**  
 CERTIFICATED REPAIR STATION #K00R718X

**GAS PATH BORESCOPE REPORT**

FORM KM-231

KM-34 No.: AEC-E001

ENGINE MAKE: Pratt & Whitney MODEL: JT9D-7J

CUSTOMER: Aero Excel Comp.

ESN: 685969

STAGE	DAMAGE	EROSION	AIRFOIL	REMARKS	INSP/DATE
HOT SECTION COMBUSTION CHMBR(S) INNER/OUTER LINERS FUEL NOZZLES CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input checked="" type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input checked="" type="checkbox"/>		QC46 12-5-13
HOT SECTION T1 NOZZLE GUIDE VANES CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input checked="" type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input type="checkbox"/> DIRTY <input checked="" type="checkbox"/>		QC46 12-5-13
HOT SECTION T1 BLADES CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>	Some blade tip area coating loss.	QC46 12-5-13
HOT SECTION T2 GUIDE VANES CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>	Limited View.	QC46 12-5-13

**NOTE:** USE BORESCOPE CRITERIA APPROPRIATE TO THE CUSTOMER'S PROGRAM

# KALITTA MAINTENANCE

CERTIFICATED REPAIR STATION #K00R718X

## GAS PATH BORESCOPE REPORT

FORM KM-231

KM-34 No.: AEC-E001 ENGINE MAKE: Pratt & Whitney MODEL: JT9D-7J

CUSTOMER: Aero Excel Comp. ESN: 685969

STAGE	DAMAGE	EROSION	AIRFOIL	REMARKS	INSP/DATE
HOT SECTION T2 BLADES CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		<b>QC46</b>  <i>12-5-13</i>
HOT SECTION LPT BLADES CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>		<b>QC46</b>  <i>12-5-13</i>
HOT SECTION LPT VANES CHECK BLOCK IF N/A TO ENGINE MODEL <input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY <input type="checkbox"/>	CLEAN <input checked="" type="checkbox"/> DIRTY <input type="checkbox"/>	<b>Limited View</b>	<b>QC46</b>  <i>12-5-13</i>

NOTE: USE BORESCOPE CRITERIA APPROPRIATE TO THE CUSTOMER'S PROGRAM Page 8 of 8

SUMMARY OF SIGNIFICANT FINDINGS: **No significant findings. Borescope performed in accordance with P&W JT9D Engine Manual (p/n 770408), 72-00-00, Check-03 (Borescope).**

FINAL REVIEW: QC46 *Robert* 2013 DATE: Dec 05 2013

**AEC-E001-1**  
**Aero Excel Components, Inc.**  
**JT9D-7J**  
**ESN: 685969**

QEC INSTALLED ON ESN JT9D-7J ESN 685969

	P/N	S/N
HYDRAULIC PUMP	350880-7	MX-525893
FUEL PUMP	705501-40	00626
FUEL CONTROL	759000-2	76266
STATOR VANE ACTUATOR	719999-3	6033570
CSD	729490	3219
EVBC	747955-8	75131
N-1 TACH	742437-2	BL2105
PDU	126236-4-2	P-1559
T/R SHUT OFF VALVE	1572T100-19	1144
REGULATOR VALVE	898108-1	P-560
PRECOOLER	189680-2	99-1521
HIGH STAGE BLEED VALVE	737109-7	DD24537
3.0 ACTUATOR	UNREADABLE	
FUEL FLOW TRANSMITTER	60B00046-22	2099A
MAIN GEAR BOX MODULE	MGBMOD7J	F62655
ANGLE GEARBOX MODULE	788876	RV8252
LOWER AFT MOUNT	65B90555-5	UNK
L/H TANGE LINK	65B90361-12	UNK
R/H TANGE LINK	65B90361-12	UNK

WP 01ed 1733 12-6-2013

A. Deel 2306 QC22 12-6-2013



APPENDIX I

**REPAIR STATION  
MANUAL  
CERTIFICATED REPAIR STATION  
#KO0R718X**

**KALITTA  
MAINTENANCE**

PAGE: 28  
DATE: 06-15-12  
REV: 30

WO ID AEC-E001-01  
Line No. 1



**Customer Name:** 15718 AERO EXCEL COMPONENTS INC **FORM KM-34**

Aircraft/Articles	STA	DATE	Aircraft/Articles Serial No.	KM-34 No.
JT9-E	KOSC-JT9	12/04/2013	JT9-E	JT9-E2833

**ITEM:** JT9D-7 **ESN 685969 QEC Inventory**  
**1 / 1 Line No. 1** **JT9D-7J**  
 1 . Prepare an inventory for the Engine QEC.

<b>Parts Required:</b>	<b>Written By: Name &amp; Employee No.</b> ( Type or Print )
	Fernando Pacia <span style="float: right;">2890</span>

**Remarks:**

**ACTION TAKEN:**

*Prepared an inventory for Engine QEC see attached inventory sheet.*

Check Box if KM-44 is attached <input type="checkbox"/>	<b>Mechanic &amp; Employee No.</b>	<b>Date</b>	<b>Inspector &amp; Employee No.</b>	<b>Date</b>
Initial & employee No. _____	<i>W. Pond 1733</i>	<i>12-6-13</i>	<i>A. Decker 2306</i>	<i>12-6-13</i>

<b>Open:</b> (if required)	Mech. / #	Insp. / #
<b>Close:</b> (if required)	Mech. / #	Insp. / #

Part No. Removed	Serial No. Removed	Part No. Installed	Serial No. Installed	List parts on back side of needed

APPENDIX I  
 PAGE: 30  
 DATE: 06-15-12  
 REV: 30

**REPAIR STATION  
 MANUAL  
 CERTIFICATED REPAIR STATION  
 #KO0R718X**

**KALITTA  
 MAINTENANCE**

**Repair Station Work Order Control Log**

FORM KM-34A

WORK ORDER ID # AEC-E001-01  
 (IF APPLICABLE)

SHOP OR AIRCRAFT JT9-E

TYPE OF INSP AEC-E001-01

KM-34 No.	DESCRIPTION	COMPLETED		DATE
		MECH	INSP	
JT9-E2833	JT9D-7::20684 ESN 685969 QEC Inventory JT9D-7J	WPonef 1733	QC22	12-6-12