

INVITATION TO BID

Tender Ref: GMCM/ENGG/PW127/REPAIR/03/2025

1. Pakistan International Airline (PIA) invites quotations through EPADS and sealed bids from renowned (Eligibility as per Bidding Documents) Vendors on "Single Stage Two Envelope Basis"

for

"Repair / Overhaul of PW127 Engine S/N: ED-0006 & ED-0315"

2. Bidding documents containing detail terms and conditions, etc. are available electronically and can be downloaded from

3. PIACL Website <https://www.piac.com.pk/corporate/business-with-pia/tenders>

4. PPRA Website <https://www.ppra.org.pk/active-tenders>

5. EPADS-PPRA website <https://eprocure.gov.pk> through Supplier Login

6. Bids MUST BE submitted electronically through EPADS.

7. The bids must be prepared in accordance with the instruction in the bidding documents and must submitted by **14-05-2025** before 10:30 AM. Bids will be opened on the same day at 11:00 AM.

8. Hard Copies of bids along with Original Bid Security instrument (for local bidders) MAY BE submitted to the undersigned before above given deadline (in addition to EPADS).

Pakistan International Airlines

GM Contract Management Division

1st Floor, Supply Chain Management Department
Building, [PIACL], Head Office Karachi Airport-75200
Pakistan

Tel: +92-21-99044216 / 5277

E-mail. gm.cm@piac.aero / contract.tech@piac.aero

Website: <http://web.piac.com.pk/>

IMPORTANT NOTES

Bidding documents, containing detailed terms and conditions, etc. are available and can be downloaded from PIA Website <https://www.piac.com.pk/corporate/sales-procurement/tender> as well as from E-PADS PPRA web site www.eprocure.gov.pk free of cost. Bidders need to get registered at E-web portal of E-PADS PPRA (**Federal PPRA**) to access the tender document and other relevant information including electronic bid submission. In case of any help regarding EPADS online submission, Following emails auditcell.scm@piac.aero and contract.tech@piac.aero may be contacted.

Bids should be submitted electronically ONLY through EPADS PPRA web portal. Manual submission of bid, without EPADS electronic bid is NOT acceptable. For registration and training on EPADS or in case of any technical difficulty in using EPADS, prospective bidder/s may contact Mr. Rizwan Mehmood, Director MIS Room No.109, 1st Floor, FBC Building Sector G-5/2, Islamabad or Helpline Contact No. 051-111-137-237.

The bids prepared in accordance with the instructions in the bidding documents must be submitted through EPADS web portal by closing time & date mentioned in the tender document. Bids will be opened on the same day at 11:00 AM through EPADS.

All interested bidders must register themselves at EPADS by using link: <https://eprocure.gov.pk/#/supplier/registration>

Original Bid Security and Tender Fee instrument MUST BE attached with the Technical Proposal and the reference / PayOrder copy must be submitted through EPADS online submission as well, before Tender Closing Date & Time (For Local Bidders only).

Note for International Bidders

International Suppliers/Vendors/Bidders are requested to register on EPADS if for assistance to get registered contact PIA Focal EPADS Mr. Wali Sohaib Najeeb email auditcell.scm@piac.aero and contract.tech@piac.aero.

In the event that Foreign bidders are unable to register on an EPAD, manual bids (subject to company management approval) may be submitted; but, in compliance with PPRA instructions, all bidders, whether local and foreign, must subsequently register on EPADS.

Tender for
Repair / Overhaul of PW127 Engine
S/N: ED-0006 & ED-0315

Section A- Instructions to Bidders

1. Scope of Tender:

Pakistan International Airlines Corporation Limited (PIACL) invites “sealed proposals” from interested parties for the “Repair & Overhaul of PW127 Engines installed on PIACL ATR Fleet”.

The services must include following,

- Complete Overhaul of PW127 Engine with up to date MOD status. (i.e. incorporation of all applicable ADs, Mandatory / Recommended SB's)
- Availability of Loaner engine to support operation of Aircraft

2. Mandatory Requirements:

S/N	PRE-QUALIFICATION	YES / NO
1.	Must have in house PWC Approved PW127 Engine repair/ Overhaul facility.	
2.	PIA requires EASA form-1/ FAA form 8130/TCA form 24-0078 with Repaired / overhauled engine.	
3.	The Service Provider must facilitate visit of PCAA/PIA personnel	
4.	No PMA Parts Allowed	
5.	No DER Repairs Allowed	
6.	Proposal must be non-exclusive	

Note: Offer **MUST** contain the above table duly filled to consider the proposal.

Section B – Evaluation of Proposals

Proposals **must** contain the criteria table with offer mentioned against each field.

1. Technical Evaluation Criteria:

Following Criteria will be used for Evaluation:

S/N	Criteria	Unit	Weightage	Fill here
1.	Experience of PW127 Engine Overhaul in Last 3 Years (Max marks for 30 or above engines overhauled in last 03 years)	Number	15	
2.	OEM facility or OEM Designated Overhaul Facility(DOF) for PW127 Engines	YES / NO	05	
3.	Turnaround time in days.	Days	10	
4.	Warranty (Time on Wing) specified in terms of flight Hours.	FH	10	
5.	Performance Guarantee in terms of EGT Margin (Minimum 50 degree EGTM)	Number	05	
6.	Loaner Engine offer in case of extension of offered TAT with discounted Daily Rental	AGREE / NOT AGREE	10	
7.	In case of engine failure within warranty period, FOC loaner, repair and transportation both ways provided by the Service Provider	AGREE / NOT AGREE	10	
8.	Loaner Engine support assurance for unplanned/unforeseen engine replacement	AGREE / NOT AGREE	05	
9.	Support for PIA technical team facility visit for table inspection	AGREE / NOT AGREE	03	
10.	Availability of exchange module option	AGREE / NOT AGREE	02	
11.	On-site Repair by On-wing Support Team for Quick Turn	AGREE / NOT AGREE	05	
	TOTAL		80	

Marks will be calculated as per following formula:

Obtained Marks (A) = (Best Offer / Service Provider's offer) x weightage

2. Financial Evaluation Criteria

Following Criteria will be used for Financial Evaluation:

S/N	Criteria	Units	Weightage
1.	NTE Repair Quote on the basis of attached work scope including routine labor, repair cost, harsh environment package (if applicable), Testing, preservation and packaging.	USD	40
2.	Not to Exceed (NTE) Cost in case of BER	USD	20
3.	Labor rate	USD	05
4.	Engine Testing Charges inclusive Fuel & Oil	USD	02
5.	Discount on supply of new parts	%CLP	05
6.	Cost for supply of used parts (Maximum % CLP)	%CLP	07
7.	Cost of Exchange Parts	%CLP	02
	Handling Fee		
8.	New parts (LLP)	%CLP	03
9.	New parts (Non-LLP)	%CLP	02
10.	Used Part (LLP)	% Of Repair Cost	02
11.	Used Parts (Non-LLP)	% Invoice	02
12.	Handling Charges on Sub-Contracted work	% Invoice	02
13.	Handling Charges on customer Furnished Equipment /Parts	% CLP	01
	Capping on Handling Charges		
14.	New parts (LLP)	USD	02
15.	New parts (Non-LLP)	USD	02
16.	Used Part (LLP)	USD	02
17.	Used Parts (Non-LLP)	USD	02
18.	Handling Charges on Sub-Contracted work	USD	02
19.	Handling Charges on customer Furnished Equipment /Parts	USD	02

20.	Handling Charges on Sub-Contracted work	USD	02
	Payment Terms		
21.	Initial Invoice at the time of induction	% of NTE cost	05
22.	Progressive invoice during repair	% of NTE cost	05
23.	Final Invoice on redelivery of engine	% of NTE Cost	05
24.	Over & above invoice after redelivery of engine	Yes/No	05
25.	Sharing of Transport charges to and from KHI station	% Invoice	18
26.	Penalty per day in case of extended TAT	USD	05
	TOTAL		140

NOTE: Above quote will be valid for six months.

All financial offers must be in USD.

Marks will be calculated as per following formula:

Formula for all Dollar Value Points is **Obtained Marks = (Highest Offer / Bid Offer) x Weightage**

For remaining points **Obtained Marks = (Best Offer / Bidder's Offer) x weightage**

Total Marks Obtained = (40% x Marks obtained in Technical Evaluation) + (60% x Marks obtained in Technical Evaluation)

ED-0315 PW127 ENGINE**LLP/INCOMING INSPECTION/BSI REPORT/CRUISE TREND DATA**

PAKISTAN INTERNATIONAL AIRLINES
 POWERPLANT OVERHAUL DIVISION(TSE)
 PWC127M
LLP STATUS

REGISTRATION :	AP-BHP#2			LAST LLP INSTALLATION DATA	As On	
Engine S/N:	ED315					
			DATE:	27-Dec-2018	18-Feb-2020	
			TSN:	12858.4	13668	
			CSN:	12367	13099	
			TSR:	0	809.6	
			CSR:	0	732	
			TSI:	0	809.6	
			CSI:	0	732	
Nomenclature	PART NO	SERIAL NO	Life Limit (cyc)	CSN	CSN	REMAINING FOR RMVL
Impeller LP	3072764-01	EAAE000N260	15000	0	732	14268
impeller HP	3072766-01	A004AHPF	15000	0	732	14268
Cover HP turb Front	3039640	A004BKMR	15000	0	732	14268
Disk turbine HP	3041511	A00488DE	15000	0	732	14268
Cover HP turb rear	3039639	A00BKL2	15000	0	732	14268
Seal Air Interstage	3039172-02	MDA18004657	13638	0	732	12904.36364
Disk turbine LP	3039412	A004BRN4	15000	0	732	14268
Disk power turbine 1st stg	3038513	A004BFYW	30000	0	732	29268
Disk power turbine 2nd stg	3033914	A002RW2A	30000	12367	13099	16901
HPT Blades (Hours)	3115601-01	Various	5000	0	809.6	4190.4
PT1 Blades(Hrs)	3123943-01	Various	25000	0	809.6	24190.4

TSO

DCE/TSE/PPOH/PW127-S1A

(S1A)

**PIA ENGINE OVERHAUL SHOP (TSE)
INCOMING INSPECTIONSHEET
PW127E/M**

Revised.

Work Sheet No:	DCE/TSE/PPOH/PW127-S1A	W/O No:	PIA-E18-R
Maintenance Data Ref.	WSPG MANUAL # 3040879 and MAINTENANCE MANUAL	S/N:	ED0315
Procedure for:	INCOMING INSPECTION	Ex- Aircraft:	AP-BHP #2
Reason of Removal:	All Prop Blades Broken	Station:	GIL
Date of Removal:	20-09-2019	Issue Date:	

C General Inspection

#	Check for	Findings/Suggestions	Technician	Engr/Insp Sign/Date
1.	Tag	Attached.	<i>Ahmar</i>	<i>Y/M</i> Q3-40 02269
2.	Preservation status	Fuel-Oil system preserved.	<i>Ahmar</i>	Q3-40 02269
3.	Transportation damage	NIL	<i>Ahmar</i>	<i>Y/M</i> Q3-40 02269
4.	Proper installation on stand / trolley	Sat.	<i>Ahmar</i>	Q3-40 02269
5.	Inlet / exhaust obstruction	NIL	<i>Ahmar</i>	<i>Y/M</i> Q3-40 02269
6.	Free rotation	All three rotors free rotates. No abnormal sound	<i>Ahmar</i>	<i>Y/M</i> Q3-40 02269
7.	Component security	Sat.	<i>Ahmar</i>	Q3-40 02269
8.	Component Serial Number verification & recording	Noted.	<i>Ahmar</i>	Q3-40 02269
9.	Shortages	Noted.	<i>Ahmar</i>	<i>Y/M</i> Q3-40 02269
10.	Any other finding if any	Brush Block Corbmdamaged.	<i>Ahmar</i>	<i>Y/M</i> Q3-40 02269

Engine Specific Inspection

A	PRELIMINARY EVALUATIONS			
1.	ECTM trends	Attached.	<i>Ahmar</i>	<i>Y/M</i> Q3-40 02269
2.	Evaluation of LCF life limited parts installed on the engine.	List attached.	<i>Ahmar</i>	Q3-40 02269
3.	Evaluation of component or accessory soft time per MM 05-20-00.	Sat.	<i>Ahmar</i>	Q3-40 02269

Rev. No:	Rev. Date:	Prepared by:	Checked by:
24	7 th Dec, 2022	Serzeb Kamran	Ahmar Abbas
73.0	05 Feb, 2024		

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DCE/TSE/PPOH/PW127-S1A

(S1A)

**PIA ENGINEOVERHAUL SHOP(TSE)
INCOMING INSPECTIONSHEET
PW127E/M**

Revised.

Work Sheet No:	DCE/TSE/PPOH/PW127-S1A	W/O No:	PIA-E18-R
Maintenance Data Ref.	WSPG MANUAL # 3040879 and MAINTENANCE MANUAL	S/N:	ED0315
Procedure for:	INCOMING INSPECTION	Ex- Aircraft:	AP-BHP #2
Reason of Removal:	All Prop Blades Broken	Station:	GIL
Date of Removal:	20-09-2019	Issue Date:	

C General Inspection

#	Check for	Findings/Suggestions	Technician	Engr/Insp Sign/Date
1.	Tag	Attached.	<i>Ahmar</i>	<i>Y/M</i> 27/1/24 Q3-40 02269
2.	Preservation status	Fuel-Oil System Preserved.	<i>Ahmar</i>	<i>Y/M</i> 27/1/24 Q3-40 02269
3.	Transportation damage	NIL	<i>Ahmar</i>	<i>Y/M</i> 27/1/24 Q3-40 02269
4.	Proper installation on stand / trolley	Sat.	<i>Ahmar</i>	<i>Y/M</i> 27/1/24 Q3-40 02269
5.	Inlet / exhaust obstruction	NIL	<i>Ahmar</i>	<i>Y/M</i> 27/1/24 Q3-40 02269
6.	Free rotation	All Three rotors Free Rotates. No abnormal Sound	<i>Ahmar</i>	<i>Y/M</i> 27/1/24 Q3-40 02269
7.	Component security	Sat.	<i>Ahmar</i>	<i>Y/M</i> 27/1/24 Q3-40 02269
8.	Component Serial Number verification & recording	Noted.	<i>Ahmar</i>	<i>Y/M</i> 27/1/24 Q3-40 02269
9.	Shortages	Noted.	<i>Ahmar</i>	<i>Y/M</i> 27/1/24 Q3-40 02269
10.	Any other finding if any	Brush Block Corbim damaged.	<i>Ahmar</i>	<i>Y/M</i> 27/1/24 Q3-40 02269

Engine Specific Inspection

A	PRELIMINARY EVALUATIONS			
1.	ECTM trends	Attached.	<i>Ahmar</i>	<i>Y/M</i> 27/1/24 Q3-40 02269
2.	Evaluation of LCF life limited parts installed on the engine.	List attached.	<i>Ahmar</i>	<i>Y/M</i> 27/1/24 Q3-40 02269
3.	Evaluation of component or accessory soft time per MM 05-20-00.	Sat.	<i>Ahmar</i>	<i>Y/M</i> 27/1/24 Q3-40 02269

Rev. No:	Rev. Date:	Prepared by:	Checked by:
24	7 th Dec, 2022	Serzeb Kamran	Ahmar Abbas
73.0	05 Feb, 2024		

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TSE/PPOH/PW127-S1A

(S1A)

**PIA ENGINE OVERHAUL SHOP (TSE)
INCOMING INSPECTIONSHEET
PW127E/M**

Revised.

Work Sheet No:	DCE/TSE/PPOH/PW127-S1A	W/O No:	PIA-E18-R
Maintenance Data Ref.	WSPG MANUAL # 3040879 and MAINTENANCE MANUAL	S/N:	ED0315
Procedure for:	INCOMING INSPECTION	Ex- Aircraft:	AP-BHP #2
Reason of Removal:	All Prop Blades Broken due contact with soft ground	Station:	GIL
Date of Removal:	20-09-2019	Issue Date:	27-02-25

b)	Remove and visual inspect the P2.5/P3 Air Switching Valve for general condition.	Sat.	M. Zai	Y/M 27/12/25	Q3-40 02269
c)	Perform spring compression check w.r.t. OHM.	N/R	M. Zai	Y/M 27/12/25	Q3-40 02269
9.	<p>Borescope Inspection: Engine Maintenance Manual 72-00. For any repair requiring access through the hot section</p> <p>Borescope Inspection: Engine Maintenance Manual 72-03. To complement instruction for HSI.</p>				
a)	L.P impeller	Slight Tip sub Observed.	Suit	27/12/25	Q3-40 02269
b)	H.P impeller	Satisfactory	Suit	27/12/25	Q3-40 02269
c)	Combustion chamber	Coaching eroded/missing material and axial cracks. Related TBE missing.	Suit	27/12/25	Q3-40 02269
d)	H.P vanes	cat-A deformation on O3 thru as hairline cracks on T/E.	Suit	27/12/25	Q3-40 02269
e)	H.P.T Blades & shrouds	Blades sat. light lip sub observed.	Suit	27/12/25	Q3-40 02269
f)	L.P vanes	Sat.	Suit	27/12/25	Q3-40 02269
g)	L.P.T Blades & shrouds	Nothing to report.	Suit	27/12/25	Q3-40 02269
h)	1 st stage power turbines	Sat.	Suit	27/12/25	Q3-40 02269
i)	2 nd stage power turbines	Sat.	Suit	27/12/25	Q3-40 02269
j)	#6/7 Bearing vent tube	Nothing to report	Suit	27/12/25	Q3-40 02269
k)	RGB first & second stage gears	Sat.	Suit	27/12/25	Q3-40 02269

Rev. No:	Rev. Date:	Prepared by:	Checked by:
24	7 th Dec, 2022	Serzeb Kamran	Ahmar Abbas
75.1	10 Feb, 2025		

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POWERPLANT OVERHAUL DIVISION
PIA ENGINEERING & MAINTENANCE
BSI REPORT OF ENGINE SN: ED0315 (AP-BHP #2)
CONFIGURATION/DATA

ENG MODEL NO	PW127M (BS1237)	A/C ID MSN	ATR42-500 AP-BHP 665
ENG PART NO	3073453	ENG POSITION	R/H
ENG SERIAL NO RGB SERIAL NO	PCE-ED0315 RGM-ED0315	INSPECTION DATE	Jun 2020, Feb 2025
ENG & RGB TTSN/TCSN TSO/CSO	13669H/13099C 810H/732C	TIME TO HSI	4190H
REMOVAL DATE STN REASON	20 Sep, 2019 / GILGIT AIRCRAFT RUNWAY OVERSHOOT DUE LATE TOUCHDOWN, RH MLG COLLAPSED IN SOFT GROUND RESULTING PROP BLADES BROKEN DUE CONTACT WITH SOFT GROUND	EVENT DATE STATION	20 Jul, 2019 Gilgit Airport (GIL/OPTG), Northern Pakistan
INSPECTOR NAME / AUTH	YASIR BASHIR / Q3-40:2269	ENGINE STATUS	UNSERVICEABLE

REASON OF BSI:

Post Removal - Detail BSI as per Shop Incoming Inspection

INSPECTION/SIGNIFICANT FINDINGS

SN	TASK	FINDINGS	REMARKS
1	LP Impeller & Shroud	Light tip rub observed.	Serviceable
2	HP Impeller & Shroud	Nothing to report.	Serviceable
3	Combustion Chamber & Small Exit Duct	Cooling ring eroded/missing material and axial cracks with isolated TBC missing. Small exit duct satisfactory.	Serviceable condition
4	HP Vanes	Cat-A deterioration observed on 03 Vanes as acceptable hairline cracks on the airfoil trailing edge	Serviceable
5	HPT Blade & Shrouds	Blades are satisfactory. Slight tip rub observed.	Serviceable
6	LPT, LP Vane Ring & Shrouds	Nothing to report.	Serviceable
7	PT Stg 1 & 2 Blades	Satisfactory.	Serviceable
8	Inter Compressor Case Cavity	Nothing to report	Serviceable
9	RGB Stage 1 & 2 Gears	Nothing to report.	Serviceable
10	6/7 Bearing Vent Tube	Nothing to Report	Serviceable
11	AGB Gears	Normal wear pattern observed	Serviceable

CONCLUSION: Detail BSI of RGB, cold & hot section carried out as per Engine Maintenance Manual (3037332) Rev 75.1 Dated 10 Feb, 2025 Chap 72-00-00 ENGINE-INSPECTION/CHECK-1 & 2 found gas path hardware & gears condition acceptable per MM in-service inspection criteria.

However, engine ED0315 experienced unusual operating/stress conditions, exceeding operating limitations as Prop blades broken due contact with soft ground, therefore said engine unschedule removed from service per MM Chap 05-50-00-UNSCHEDULED MAINTENANCE INSPECTIONS, Para 5,K (PROPELLER SUDDEN STOPAGE) for necessary inspection/repair in accordance with Overhaul Manual instructions (Light Overhaul Section).

LP Compressor



HP Compressor



Combustion Chamber & Small Exit Duct



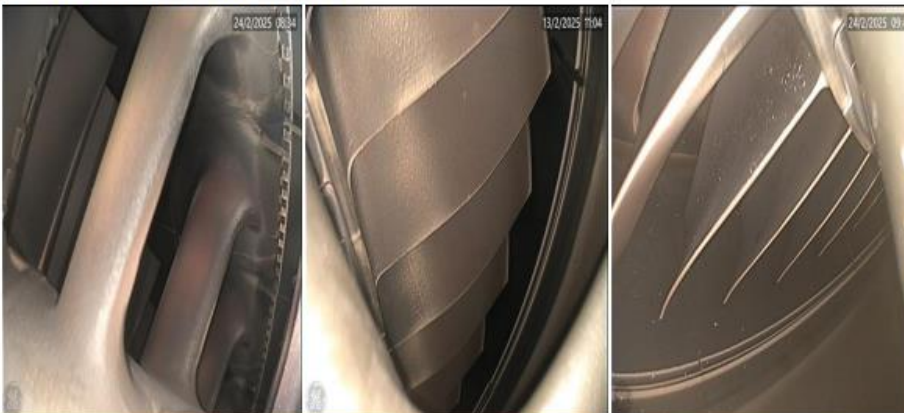
HP Vanes



HP Turbine & Shrouds



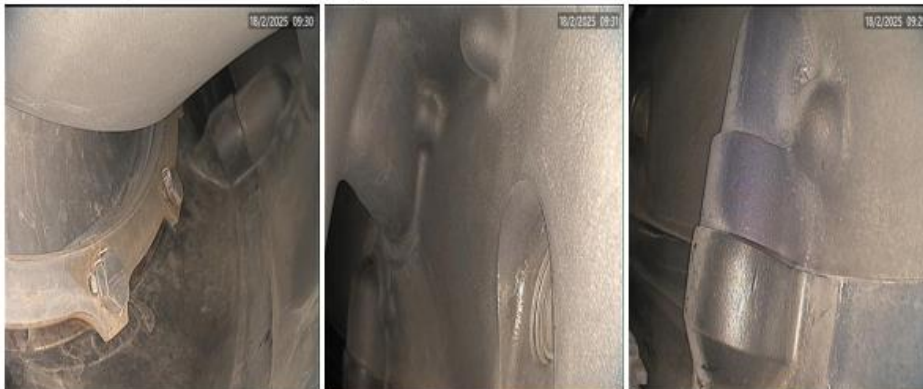
LP Stator, Turbine & Shrouds



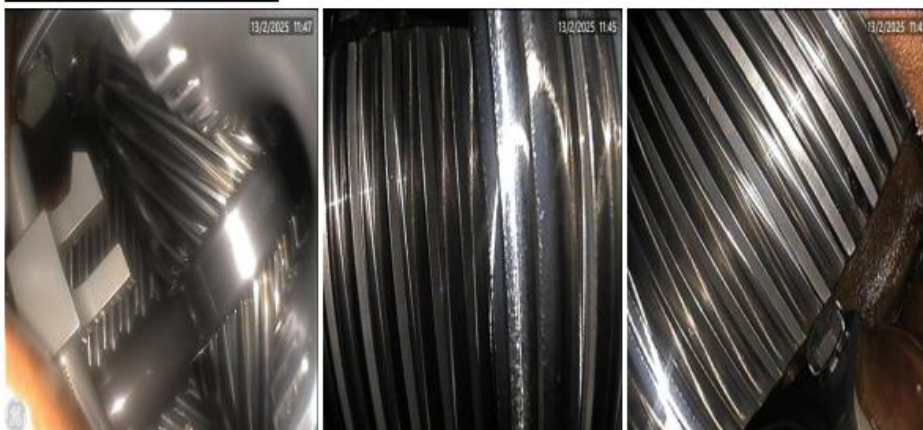
PT Stg 1 & 2 Blade



Inter Compressor Case Cavity



RGB Stage 1 & 2 Gears



6/7 Bearing Vent Tube

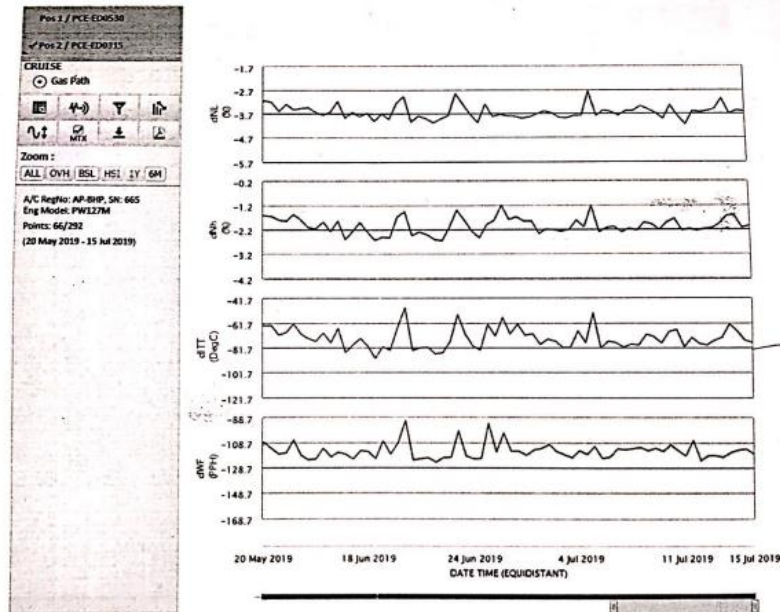


AGB Gears





Cruise Trend Plot For AP-BHP



Generated On: 04-Nov-2019 06:10:35 (UTC)

CAMP Systems (tm) 2013-19

This report is for information purposes only. CAMP makes no representations or warranties with respect to the information contained herein. It is the sole responsibility of the operator and aircraft to determine the airworthiness of an engine and dispatchability of an aircraft, in each case in accordance with the requirements of the manufacturer and regulatory authorities.

ED-0006 PW127 ENGINE**LLP/INCOMING INSPECTION/BSI REPORT/CRUISE TREND DATA**

PAKISTAN INTERNATIONAL AIRLINES
 POWERPLANT OVERHAUL DIVISION(TSE)
 PW127E
 LLP STATUS

REGISTRATION :	AP-BHH#2				LAST LLP INSTALLATION DATA	AS OF DATE
Engine S/N:	ED0006					
			DATE:		19-Dec-21	14-Nov-23
			TSN:		13949	16784
			CSN:		13453	15857
			TSR:		0	2835
			CSR:		0	2404
			TSI:		0	2835
			CSI:		0	2404

Nomenclature	PART NO	SERIAL NO	Life Limit (cyc)	Limit	CSN	CSN	REMAINING FOR REMOVAL
Impeller LP	3072764-01	EAAF000D759	15000	15000	0	2404	12596
impeller HP	3072766-01	A00503PF	15000	15000	0	2404	12596
Cover HP turb Front	3039640	A00519DF	15000	15000	0	2404	12596
Disk turbine HP	3041511	A00515C9	15000	15000	0	2404	12596
Cover HP turb rear	3039639	A00519DY	15000	15000	0	2404	12596
Seal Air Interstage	3039172-02	MDA20014215	13636	15000	0	2404	11232
Disk turbine LP	3039412	A004XFR7	15000	15000	0	2404	12596
Disk power turbine 1st stg	3038513	A0050DD4	30000	30000	0	2404	27596
Disk power turbine 2nd stg	3033914	A001X9X3	30000	30000	18139	20543	9457
HPT Blades (hrs)	3115601-01	Various	5000		0	2835	2165
PT1 Blades (hrs)	3123943-01	Various	25000		0	2835	22165

Note: ED0006 removed unschedule due to FOD of LP Impeller at ISB on 14/11/23

DCE/TSE/PPOH/PW127-S1A

(S1A)

**PIA ENGINEOVERHAUL SHOP(TSE)
INCOMING INSPECTIONSHEET
PW127E/M**

Work Sheet No:	DCE/TSE/PPOH/PW127-S1A	W/O No:	PIA-E17-R
Maintenance Data Ref.	WSPG MANUAL # 3040879 and MAINTENANCE MANUAL	S/N:	ED 0006
Procedure for:	INCOMING INSPECTION	Ex- Aircraft:	AP-BHH #2
Reason of Removal:	FOD Impeller damaged	Station:	KHI
Date of Removal:	14-11-2023	Issue Date:	22-12-2023

General Inspection

#	Check for	Findings/Suggestions	Technician	Engr/Insp Sign/Date
1.	Tag	Attached.	M. Zubin P-67552	yiv 30/12/23
2.	Preservation status	Preserved.	M. Zubin	yiv
3.	Transportation damage	NIL	M. Zubin	yiv 30/12/23
4.	Proper installation on stand / trolley	Sat.	M. Zubin	yiv 30/12/23
5.	Inlet / exhaust obstruction	NIL	M. Zubin	yiv
6.	Free rotation	Sat.	M. Zubin 67552	yiv 30/12/23
7.	Component security	Sat.	M. Zubin	yiv 30/12/23
8.	Component Serial Number verification & recording	Recorded.	M. Zubin	yiv 30/12/23
9.	Shortages	Noted.	M. Zubin	yiv
10.	Any other finding if any	LRU/Components Found Missing, AC & DC Gas, EEC, AFU, Brush Block Feath Pump, Prop Brk, FFTXM Exciter Boxes, Mounts-AFT PND, TOP, Air bleed System, HBV, PYM HMU, F Pump, Fuel Heater, Oil & Fuel Temp sensors, O/S Governor, Pump, LD PSLO. oil Press TXM.	M. Zubin	yiv 30/12/23

Engine Specific Inspection

A	PRELIMINARY EVALUATIONS			
1.	ECTM trends	Attached	M. Zubin	yiv 30/12/23
2.	Evaluation of LCF life limited parts installed on the engine.	Attached.	M. Zubin	yiv 30/12/23
3.	Evaluation of component or accessory soft time per MM 05-20-00.	TBD	M. Zubin 67552	yiv 30/12/23

Rev. No:	Rev. Date:	Prepared by:	Checked by:
24	7 th Dec, 2022	Serzeb Kamran	Ahmar Abbas
72.0	20 Nov, 2023		

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TSE/PPOH/PW127-S1A

(S1A)

PIA ENGINE OVERHAUL SHOP (TSE)
INCOMING INSPECTIONS SHEET
PW127E/M

Work Sheet No:	DCE/TSE/PPOH/PW127-S1A	W/O No:	PIA-E17-R
Maintenance Data Ref.	WSPG MANUAL # 3040879 and MAINTENANCE MANUAL	S/N:	ED 0006
Procedure for:	INCOMING INSPECTION	Ex- Aircraft:	AP-BHH #2
Reason of Removal:	FOD Impeller damaged	Station:	KHI
Date of Removal:	14-11-2023	Issue Date:	22-12-2023

B SPECIMEN MINIMUM WORKSCOPE FOR REPAIR ENGINES			
1. Visual inspects engine external condition for			
a) Corrosion	N/L	M. Zehi 67552	Ym 31/1/24
b) Protective coating	Sat.	M. Zehi	Ym 31/1/24
c) Obvious damage.	L Impeller FOD damage obsvd.	M. Zehi	Ym 31/1/24
d) Wire harness (check for chafing through external shielding braid)	Found SAT.	M. Zehi	Ym 31/1/24 Q3-40 2421
e) AGB oil pump bevel drive gear.	Normal wear pattern obsvd.	M. Zehi	Ym 31/1/24
f) FCOC for crack on mounting feet	Sat	M. Zehi	Ym 31/1/24
g) RGB mounting pad for crack indication	Sat.	M. Zehi	Ym 31/1/24 Q3-40 2421
2. Inspect and remove			
a) Chip detector (Chip spectrographic analysis if required)	Nothing to report.	M. Zehi 67552	Ym 31/1/24
b) Oil filters patch check	Sat.	M. Zehi	Ym 31/1/24
3. Clean Gas Generator drain valve(s).	Cleaned.	M. Zehi	Ym 31/1/24
4. No. 5 bearing vent tubes routed to the engine exhaust, de-coke inside of tube. (Post SB 21053)	N/R.	—	Ym 31/1/24
5. ICC drain line, clean inside of tube. (SB 21136)	Cleaned.	M. Zehi	Ym 31/1/24 Q3-40 2421
6. Replacement of either the #29 Bearing and the Angle Gear Drive with new component. (As per SIL PW100-104 recommendation, replace both as set)	N/R.	—	Ym 31/1/24 Q3-40 2421
7. Inspect ICC cavity for oil accumulation. (Ref. MM 72-00-00, engine inspection/check)	Nothing to report	M. Zehi	Ym 31/1/24
8. Accessories			
a) T6/ITT system Check. (As applicable Maintenance Manual)	Checked and Found Sat. (16-E/20)	M. Zehi 67552	Ym 31/1/24

Rev. No:	Rev. Date:	Prepared by:	Checked by:
24	7 th Dec, 2022	Serzeb Kamran	Ahmar Abbas
72.0	20 Nov, 2023		

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TSE/PPOH/PW127-S1A

(S1A)

PIA ENGINEOVERHAUL SHOP(TSE)
INCOMING INSPECTIONSHEET
PW127E/M

Work Sheet No:	DCE/TSE/PPOH/PW127-S1A	W/O No:	PIA-E17-R
Maintenance Data Ref.	WSPG MANUAL # 3040879 and MAINTENANCE MANUAL	S/N:	ED 0006
Procedure for:	INCOMING INSPECTION	Ex- Aircraft:	AP-BHH #2
Reason of Removal:	FOD Impeller damaged	Station:	KHI
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b)	Remove and visual inspect the P2.5/P3 Air Switching Valve for general condition.	Sat.	Sunil P.6763 12/24 yin 01/24
c)	Perform spring compression check w.r.t. OHM.	NIR.	— yin 01/24
9.	Borescope Inspection: Engine Maintenance Manual 72-00. For any repair requiring access through the hot section Borescope Inspection: Engine Maintenance Manual 72-03. To complement instruction for HSI.		
a)	L.P impeller	Deep multiple Nicks/Missing material (Moss bite) observed on all LP Vanes L/E due hard material ingestion/FOD damage. Dimm. recorded.	Sunil P.6763 12/24 yin 01/24
b)	H.P impeller	Downstream damage observed as several nicks/dents on Impeller Fuel & Splitter Vanes Dimm. recorded.	Sunil yin 01/24
c)	Combustion chamber	Normal deterioration seen as axial cracks on cooling ring and isolated TBC missing.	Sunil yin 02/24
d)	H.P vanes	Cat-A deterioration observed on 07 Vanes T/E.	Sunil P.6763 yin 02/24
e)	H.P.T Blades & shrouds	Stage-1 Corrosion observed on all Blades Area-A. HPT Tip-Shroud rub obsvd.	Sunil yin 02/24
f)	L.P vanes	Marks of metal impact obsvd.	Sunil yin 01/24
g)	L.P.T Blades & shrouds	Dent seen on 01 Blade tip. LPT Tip-Shroud rub obsvd.	Sunil yin 02/24
h)	1 st stage power turbines	Sat.	Sunil yin 02/24
i)	2 nd stage power turbines	Sat.	Sunil yin 02/24
j)	#6/7 Bearing vent tube	Thin layer of soot obsvd.	Sunil yin 02/24
k)	RGB first & second stage gears	Sat.	Sunil P.6763 yin 01/24

Rev. No:	Rev. Date:	Prepared by:	Checked by:
24	7 th Dec, 2022	Serzeb Kamran	Ahmar Abbas
72.0	20 Nov, 2023		

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**POWERPLANT OVERHAUL DIVISION
 PIA ENGINEERING & MAINTENANCE**
BSI REPORT OF ENGINE SN: ED0006 (AP-BHH #2)
CONFIGURATION/DATA

ENG MODEL NO	PW127M	A/C REG & MSN	ATR42-500 AP-BHH / 645
ENG PART NO	3073453	ENG POSITION	R/H
ENG SERIAL NO	ED0006	INSPECTION DATE	Dec 2023
ENG TTSN/TCSN - TSO/CSO	16784H/15857C - 2835H/2404C	TIME TO HSI	2165H
DATE/REASON/STN OF REMOVAL	22.11.2023/FOD DAMAGE/ISB	EVENT DATE/STN	13.11.2023/ISB
INSPECTOR NAME / AUTH	YASIR BASHIR / Q3-40:2269	ENGINE STATUS	UNSERVICEABLE

REASON OF BSI:	Post Removal - Detail BSI as per Shop Incoming Inspection
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INSPECTION/SIGNIFICANT FINDINGS

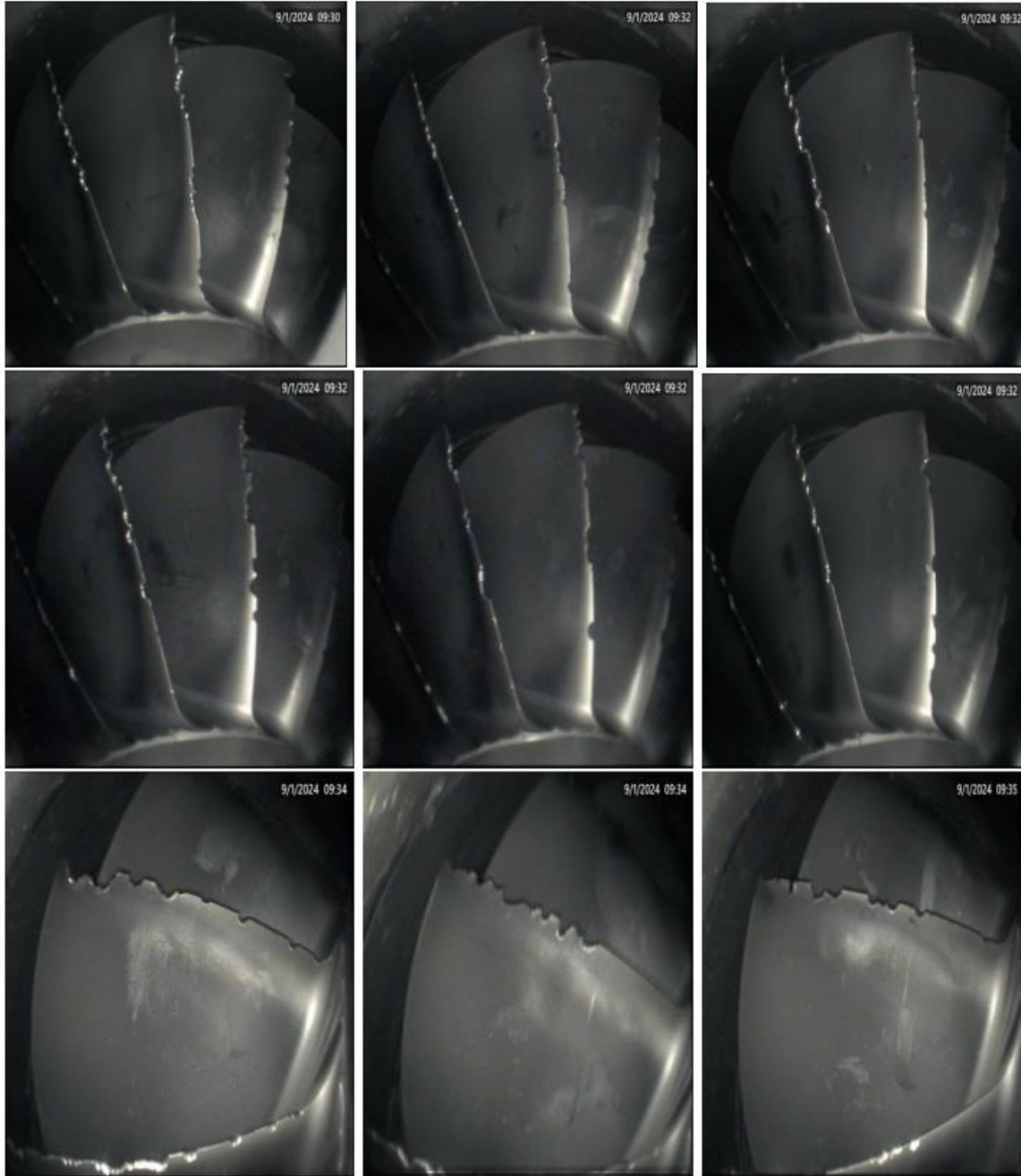
SN	TASK	FINDINGS	REMARKS
1	Intake & LP Impeller	Impact marks observed on Inlet case gas path area. Deep multiple nicks with missing material observed on all Vanes leading edge Area Cb, Ca & Cc. Dim 0.335" X 0.200" noted.	Unserviceable
2	HP Impeller & Shroud	Several dents and Nicks observed on full & splitter Vane leading edge area C & Cc. Dim 0.058" in size recorded. Impact marks with & deep scratches seen on impeller/Shroud.	Conditionally acceptable in Cat-2 limits for in-service engine. However, may be scrapped at piece part level table inspection.
3	Combustion Chamber & Small Exit Duct	Axial Cracks on cooling ring and isolated TBC missing. Coating loss observed on small exit duct.	Serviceable
4	HP Vanes	Cat-A deterioration observed on 07 Vanes. Erosion/Oxidation observed on outer support ring.	Serviceable
5	HPT Blade & Shrouds	Stage -1 Corrosion observed on all HPT Blades area A. Heavy tip-shroud rub observed.	Conditionally acceptable for in-service engine. However, parts may be scrapped at piece part level table inspection.
6	LPT, LP Vane Ring & Shrouds	Marks of metal impact observed. Dent seen on 01 Blade trailing edge. Severe Blade tip-shroud rub observed	Conditionally acceptable for further service. However, parts may be scrapped at piece part level table inspection.
7	PT Stg 1 & 2 Blades	Satisfactory.	Serviceable
8	Inter Compressor Case Cavity	Oil wetness observed.	Conditionally acceptable for In-service engine.
9	RGB Stage 1 & 2 Gears	Nothing to report.	Serviceable
10	6/7 Bearing Vent Tube	Thin layer of soot observed.	Serviceable
11	AGB Gears	Normal wear pattern observed.	Serviceable

CONCLUSION: Detail BSI of RGB, cold & hot section gas path hardware carried out as per Engine Maintenance Manual (3037332) Rev 73 Dated 05.02.2024, Chap 72-00-00 ENGINE-INSPECTION/CHECK-1 & 2 found LP Impeller severe damaged (Mouse bite) due FOD/hard material ingestion suspected threaded object causing downstream damages beyond EMM acceptable limits. Therefore, ESN: ED0006 has been removed from service for necessary repair.

Intake

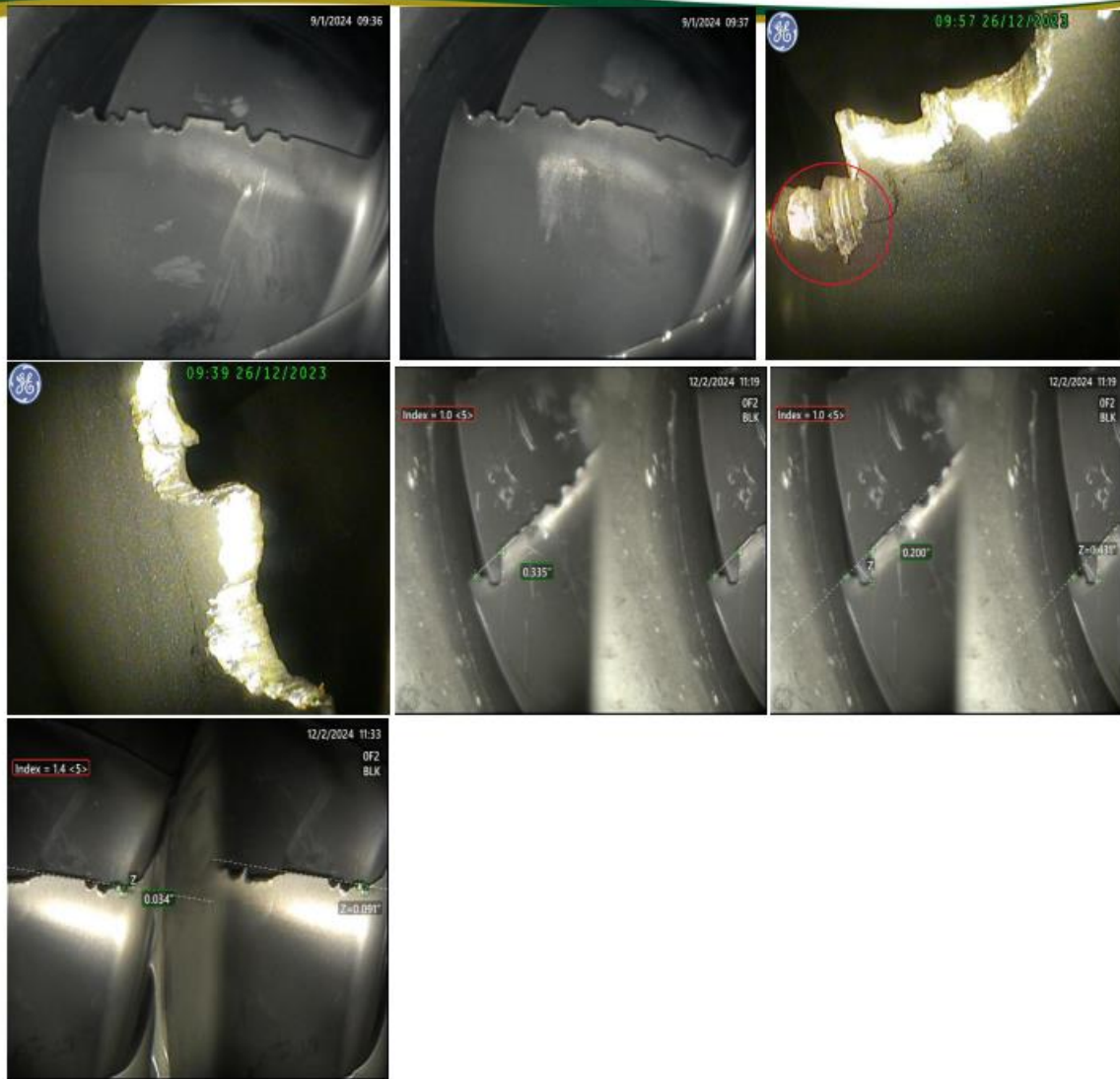


LP Compressor

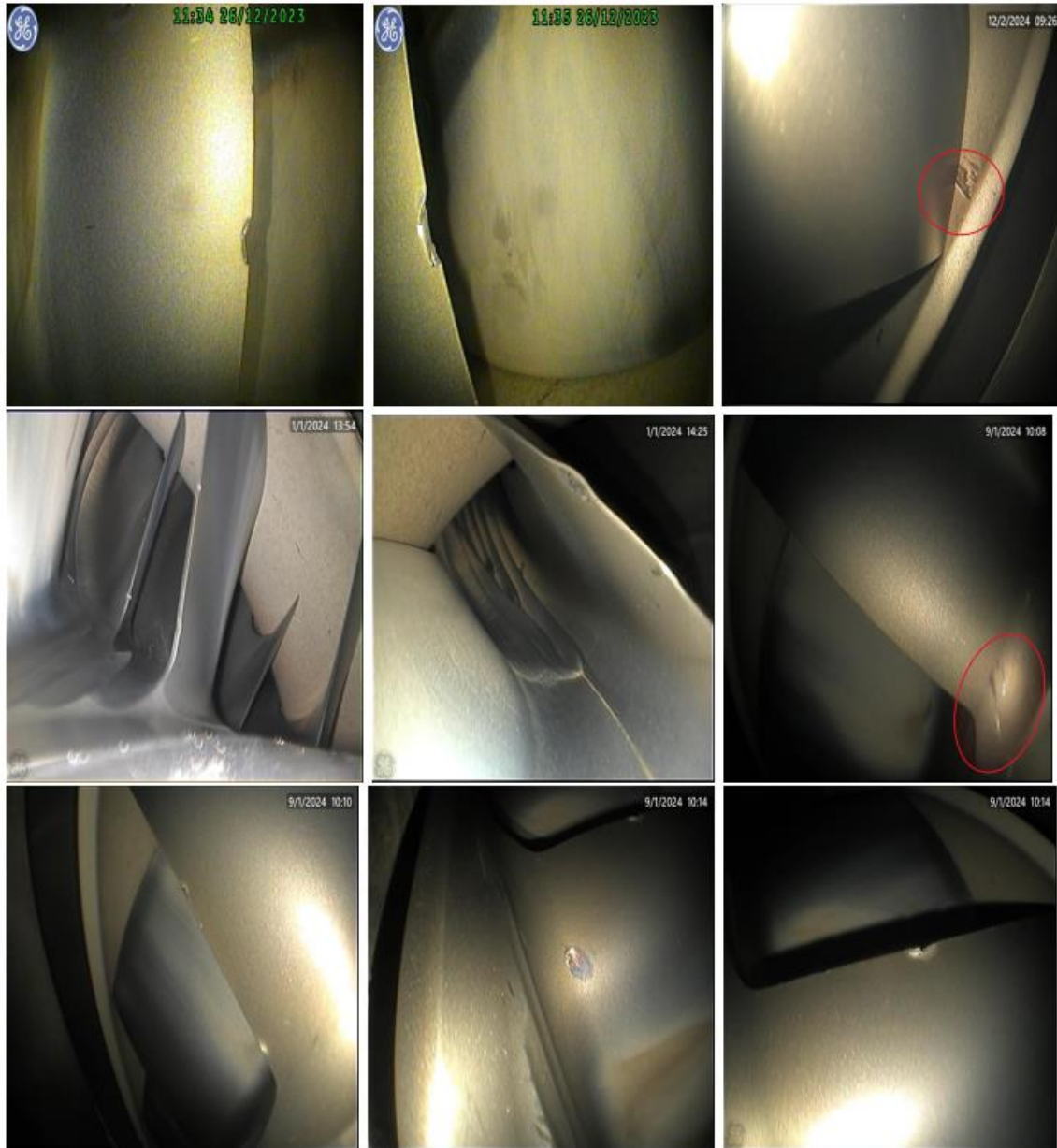




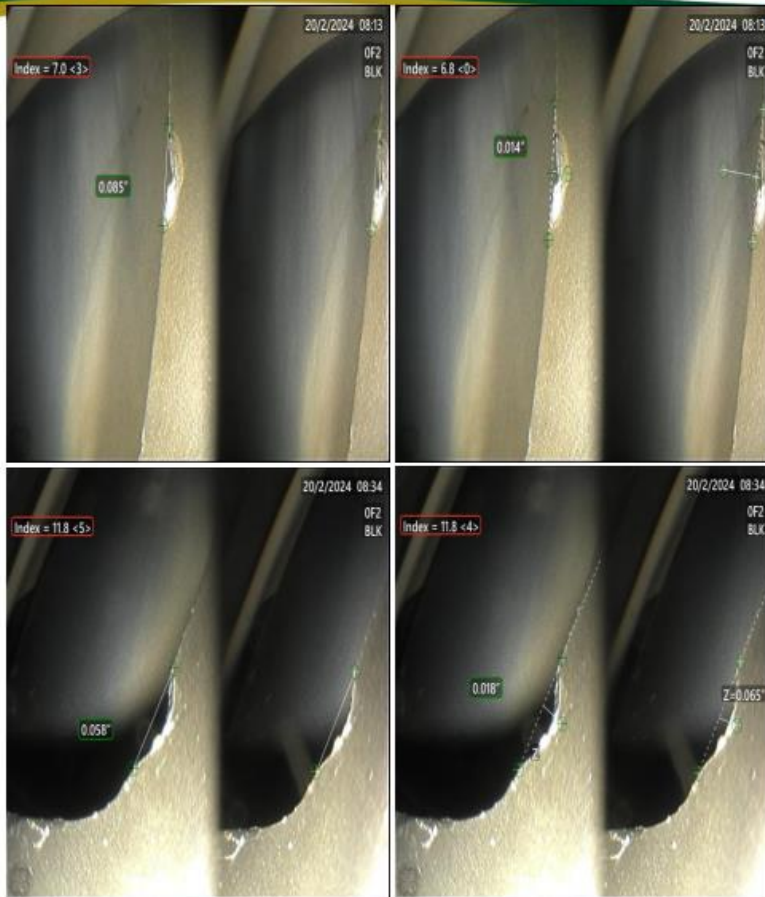
**POWERPLANT OVERHAUL DIVISION
PIA ENGINEERING & MAINTENANCE**



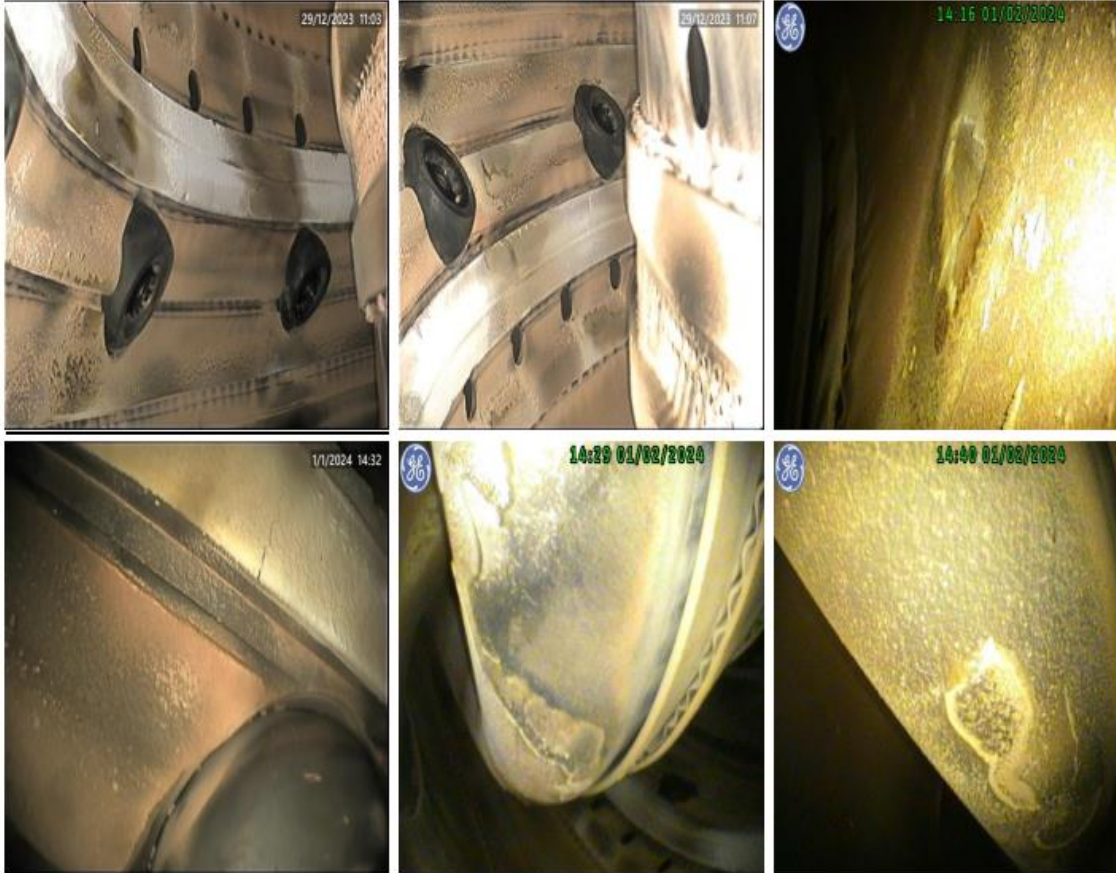
HP Compressor







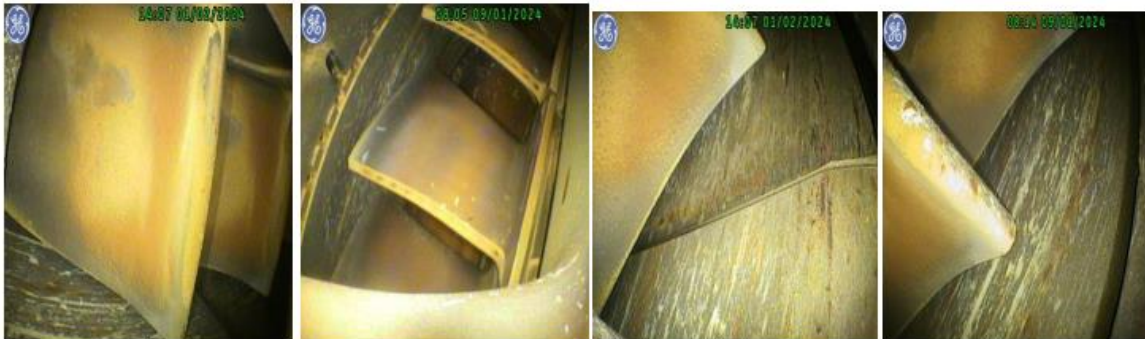
Combustion Chamber & Small Exit Duct



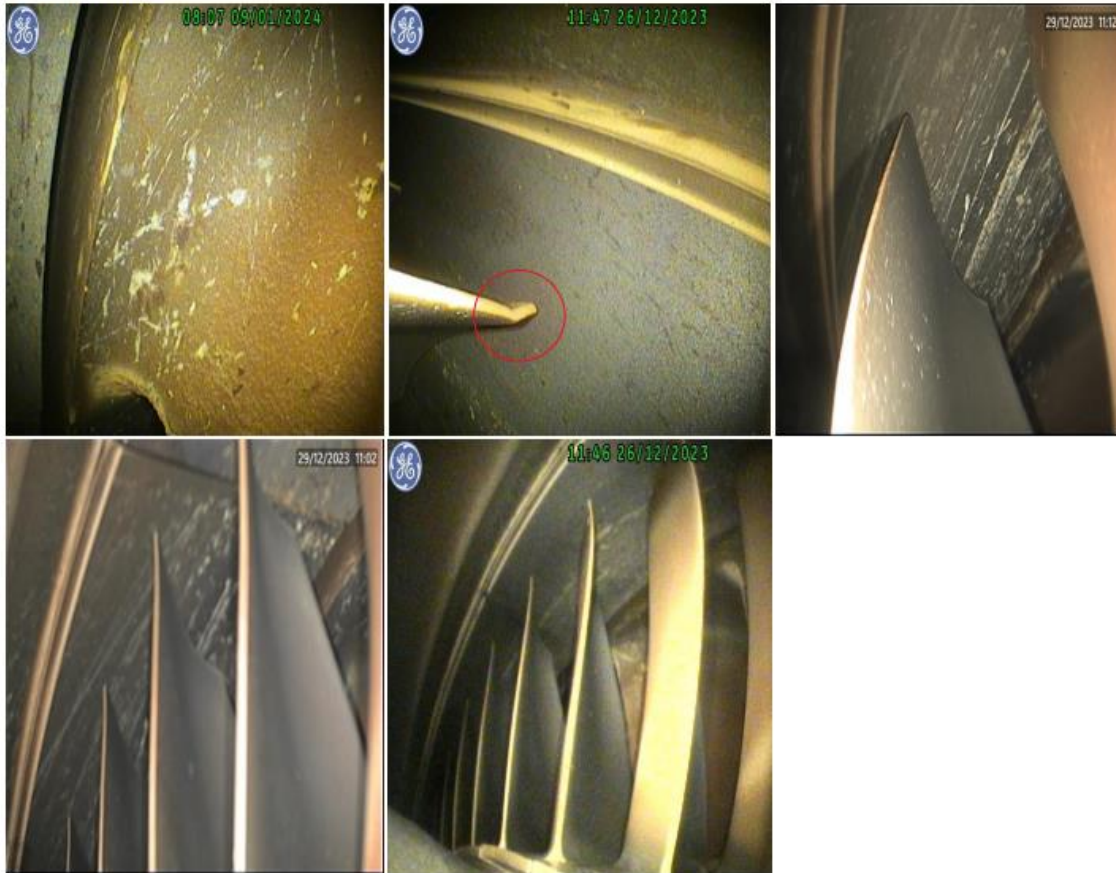
HP Vanes



HP Turbine



LP Turbine



PT Stg 1 & 2 Blade



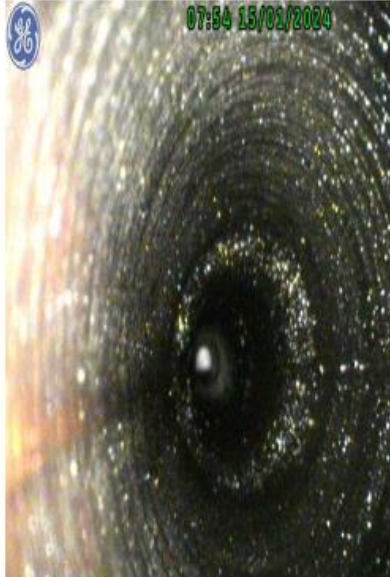
Inter Compressor Case Cavity



RGB Stage 1 & 2 Gears



6/7 Bearing Vent Tube

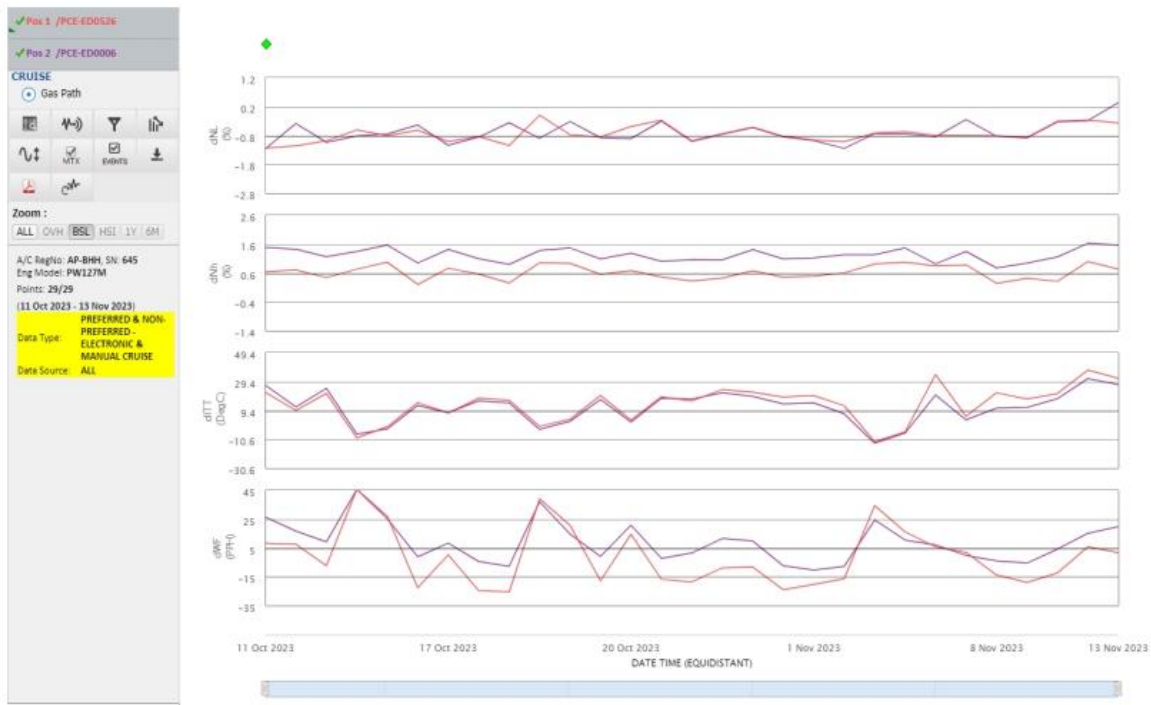


AGB Gears





Cruise Trend Plot For AP-BHH



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