

<b>MAINTENANCE &amp; ENGINEERING</b>  <b>FORMS</b>	<b>ENGINE BSI CONDITION REPORT</b>  WORK ORDER. 17989 <b>A/C REG: 5H-PAG.</b> <b>ESN: PCE 120599.</b>
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# 1. GENERAL DATA

Date: 25/5/2017. Customer: \_\_\_\_\_

Station: DAR-ES-SALAAM

Aircraft Registration: \_\_\_\_\_

Aircraft MSN: 384

Engine Model: PW 121

Engine S/N: \*\*\*\*\*

Engine Position: LH

Engine TSN 31866:29

Engine CSN 32569

Engine TSO 1507:58

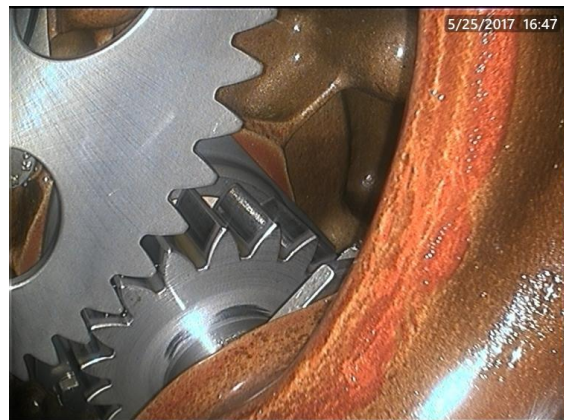
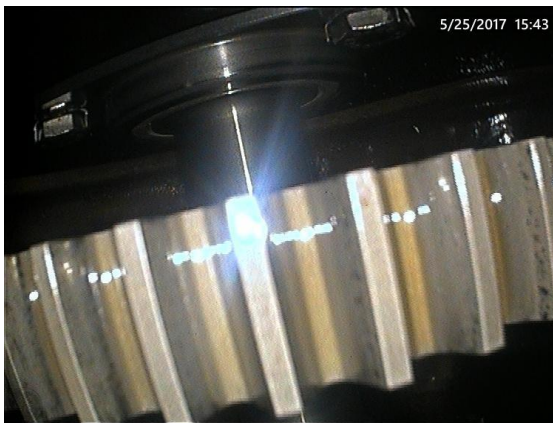
Engine CSO 1355

# 2. ENGINE BORESCOPE INSPECTION FINDINGS

A borescope inspection was performed to evaluate engine component condition in the following areas: RGB & TURBOMACHINERY (L.P. impeller, C.C. liner. H.P Vane assembly, H.P Blades, Shroud segments & SED duct). This borescope performed in accordance with Pratt and Whitney Canada Maintenance Manual

P/N 3034642 Rev 58.3. Dated APRIL 2017

## 2.1 RGB S/N



**GEARS CONDITION;** Good condition as per the pictures, could not check pinion gears because is full of preservation oil.

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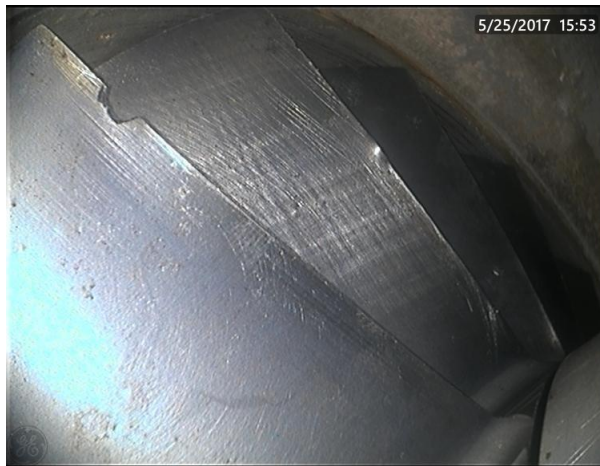
**RGB; 121337:** TSN 22267;38  
CSN; 22074

TSO; 1507;58  
CSO; 1355

**1.1 TURBOMACHINERY**

**1.1.1 L.P. Impeller Inspection:**

Access through the engine intake was used to inspect the L.P. compressor. The L.P compressor was found. With minor dents/nicks with strong dirty deposit observed.



Photos 1 - L.P. impeller condition. good with 3blades with L.E nicks/dents, which requires blending



**Photo 1.1 HP impeller Condition is in Good condition**

**1.1.2 Hot Section:**

Access through the Igniter plug port was used to inspect the H.P. turbine blades, shroud segments, H.P triple vanes, and small exit duct and CC liners.

The H.P turbine blades were found in good condition with L.E top coating material loss.

Shroud segments found in good condition with signs of blade tip rub.

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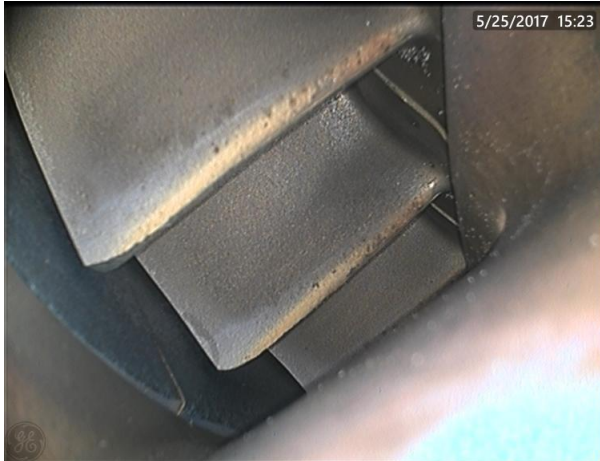
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H.P triple vanes found in moderately good condition with missing material or hole on the L.E

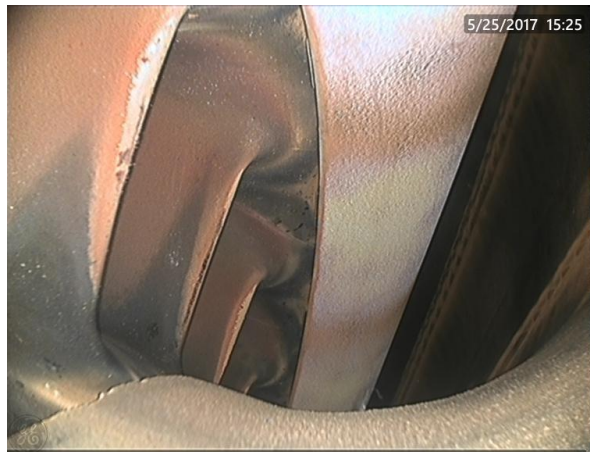
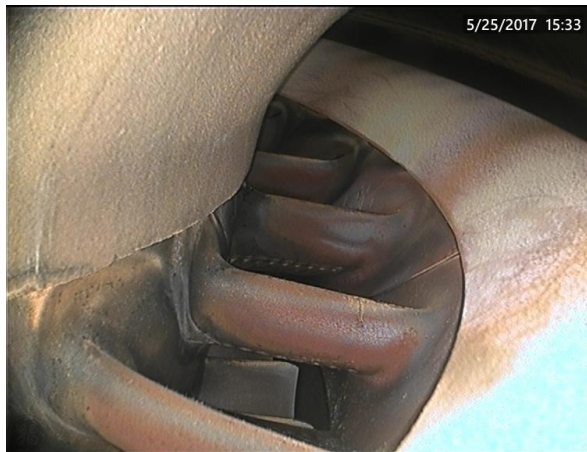
Small exit duct found in good condition with light burning

Combustion liner found in good condition

Fuel nozzles inspected and found in good condition with light carbon deposit



Photos 2 - H.P. turbine blade and shroud segment condition. Good with L.E blade top coating loss, with signs of blade tip rub.

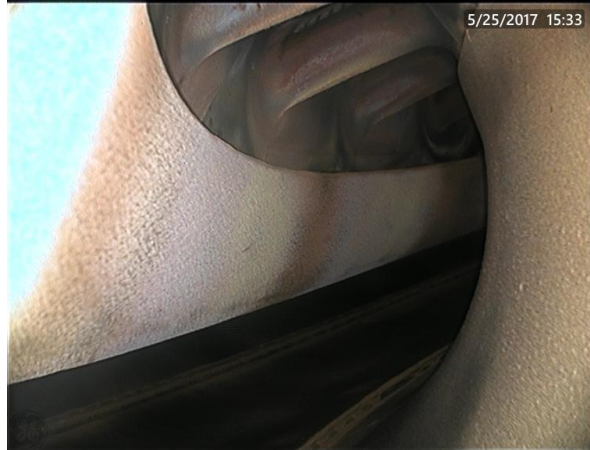


Photos 3 - H.P. triple vane L.E. condition good with normal level of wear

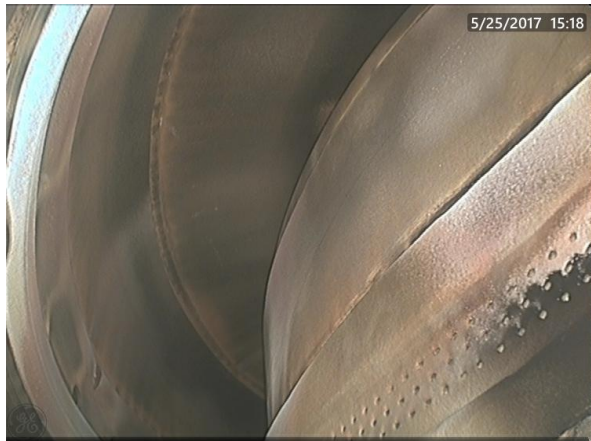
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Photos 4 - H.P. triple vane trailing edge condition is good with light cracks as observed



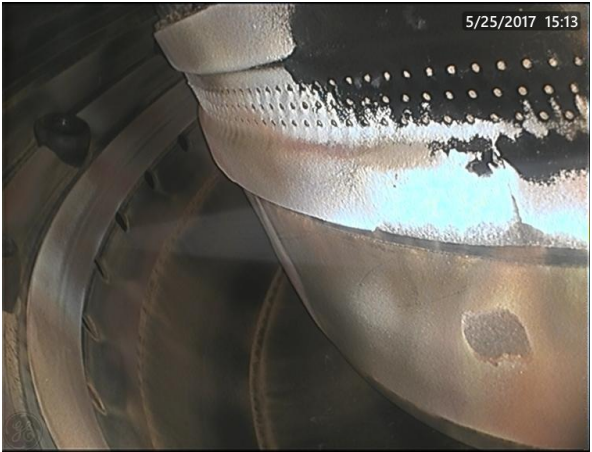
Photos 5 - S.E.D. (Small Exit Duct) condition good with light erosion and burning observed



Photos 6 - C.C. liner condition is good with light erosion

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Photos 7 - C.C. liner condition good with some areas with material loss .



Photos 8 - Fuel nozzle condition good with some giving black carbon in the combustion inner liners.

Borescope summary:

**ENGINE S/N: PCE 120599**

Part Description	Findings
LP Impeller	Good condition with nicks/dents which requires blending.
CC Outer Liner	Good

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CC Inner Liner	Good condition with carbon deposit plus top coating material loss.
HPT Vanes Assy and Small Exit Duct	Good with light erosion
HPT Turbine Blades and Shrouds	L.E light top coating Material loss

The overall condition of the viewed components is considered good with normal level of wear. LP Impeller observed to have nicks/dents which requires blending.

It is recommended to perform more regular compressor recovery washes to help remove the dirt build up observed inside the compressor sections.

Note: Extended use of high engine power settings is also known to cause accelerated hot section wear on engine CC liner and H.P. vane assemblies. Where possible, reduced power settings will contribute to increased hot section component durability and lower operating costs.

*Note:*

*Due to the nature of borescope inspections and the limited access to internal components, the findings in this report are limited to the viewed areas only. This report does not constitute Certificate of release.*

All pertinent information held on file at \*\*\*\*. Services PLC Maintenance and Engineering under Work Order no:

The data relevant to the accumulated service life of engine have been updated on date

Technician	Engineer
Name: Leopold SILAYO	Name:
Date:25/05/2017	Date:
Signature:	Signature and Stamp