APS3200 APU WORKSCOPE DOCUMENT

APU S/N:	**2118**	**DATE REMOVED:**	**05 December 2019**
T.T.S.N.	**23769 Hrs**	**T.C.S.N**	**23751 Cycles**
T.S.L.S.V. (Repaired)	**7356 Hrs**	**C.S.L.S.V. (Repaired)**	**8345 Cycles**
T.S.O.	**N/A Hrs**	**C.S.O.**	**N/A Cycles**
EX A/C REG:	**ZS-SFH**	**DATE INSTALLED**	**3**
Part no.	**4500001B**	**Model**	**APS3200**

ACRONYMS:

T.T.S.N. - Total Time Since New
T.S.L.S.V. - Total Time Since Last Shop visit
T.S.O. - Time Since Overhaul

T.C.S.N. - Total Cycles Since New
C.S.L.S.V. - Total Cycles Since Last Shop visit
C.S.O. - Cycles Since Overhaul

APU REMOVAL REASON/FINDINGS:	**Scheduled Change APU Soft Life 7500 Hours**

1.1 HISTORY:

a. Last Shop Visit:

Date: No previous Shop Visit History
Reason: Soft Life Timex
Overhaul status: N/A..
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b. Maintenance Reports/in-service history:

1.2 S.A.A. TECHNICAL INDUCTION INSPECTION PROCEDURE:

a. Perform induction inspection of the engine as follows: (Record all discrepancies/findings).

- Inspect the engine for damage, and missing parts etc.
- Inspect the air intake and exhaust areas for any discrepancies.
- Inspect the bleed air duct for evidence of oil coating/deposits.
- Inspect the engine for evidence of external fluid leakage.
- Inspect the engine (including Oil Cooler core and Cooling Fan exit) for evidence of oil leakage.
- Inspect the oil filters and magnetic chip detector for metal or any other contamination. (Record all findings).
- Inspect the delta P indicators to determine whether any has extended (popped).
- Inspect the unit for obvious signs of vibration. (broken brackets, lines, etc.)
- Inspect the electrical harness for condition, chafing, support, and connector security.
- Ensure the rotating group turns freely by hand with no rub/abnormal noise.
- Record all LRU part and serial numbers for verification/correction of MEMIS data base.
- Carry out borescope inspection (look for signs of oil wetting on power section assembly).

1.3 RECORD OF SAAT INDUCTION INSPECTION FINDINGS/ANOMALIES:

- Generator not fitted
- No metal on Chip Detector

- the rotating group turns freely by hand
- Borescope revealed normal wear patterns

2.1 WORKSCOPE IF UNIT IS TO BE REPAIRED BY 3rd Party: √

The following work to be accomplished by SAAT prior to engine shipment;

- Perform induction inspection of the engine and record all findings.
- Install unit in an approved shipping container

2.2 WORKSCOPE/DEPTH OF REPAIR LEVEL:- √

- Provide a receiving inspection and inventory (completeness) report to SAAT
- All bearings for detailed inspection, and replacement of all carbon seals.
- Gearbox Assembly – disassemble completely for refurbishment. Visually inspect all removed parts, in case of abnormalities refer to the engine manual for criteria/instructions.
- Load Compressor Assembly. – disassemble completely for refurbishment. Visually inspect all removed parts, in case of abnormalities refer to the engine manual for criteria/instructions, replace front bearing and carbon seal due to time accumulated.
- Power Section – disassemble completely for refurbishment. Visually inspect all removed parts, in case of abnormalities refer to the engine manual for criteria/instructions, bearings to be scrapped due to time accumulated.
- Overhaul fuel nozzles and manifolds.
- Performance test per engine manual.
- Preserve the unit per EM instructions.

3.1 LRU Requirement: (Based on M.P.G. and component Time-Since-Last shop visit status). √

Component Description	Time Since Overhaul	Minimum work to be done.
Bleed Control Valve 4100837G	17656	Disassemble, Inspect and Recertify per latest CMM
Cooling Fan 4101109H	14669	Disassemble, Inspect and Recertify per latest CMM
Fuel Control Unit 45000039F	18210	Disassemble, Inspect and Recertify per latest CMM
Fuel Flow Divider 4501259A	13367	Disassemble, Inspect and Recertify per latest CMM
Actuator IGV 4504086	17656	Disassemble, Inspect and Recertify per latest CMM
Oil cooler assy. 4951652	26221	Clean and repair as required
Electrical harness	Unknown	Check and test as per CMM
Ignition Exciter	Unknown	Visual inspection, and operational test on APU
Speed sensor #1	Unknown	Visual inspection, and operational test on APU
Speed sensor #2	Unknown	Visual inspection, and operational test on APU
Compressor discharge sensor	Unknown	Visual inspection, and operational test on APU
Intake press. /temp sensor	Unknown	Visual inspection, and operational test on APU
L.O.P. switch	Unknown	Visual inspection, and operational test on APU
B.C.V. actuator assy.	Unknown	Visual inspection, and operational test on APU
Fuel solenoid(De-oil) valve	Unknown	Visual inspection, and operational test on APU
Oil level sensor	Unknown	Visual inspection, and operational test on APU
Starter	Unknown	Brush check and repair if necessary
Delta Pressure switch	Unknown	Check and test as per EM

3.2. Modifications: √

- All other modifications are to be done, with S.A.A.T. pre-approval.

3.3 Special Notes: √

a. The current modification status of the APU /LRU must be retained.
b. Any deviation(s) from the Manufacturer CMM requires SAAT pre-approval, and must be recorded in the engine's Release Documentation.
c. Advise SAAT prior to replacing/exchanging any LRU Components on this engine.
d. Notify SAAT of any further recommendations pertaining to additional work to be performed.
e. EASA release certificate is required.
f. Supply a complete SB /AD listing after refurbishment.
g. Provide a record for LRU part/serial numbers installed upon return.
h. Type 2 (BP2197) oil will be SAAT's elected oil for use in service.

3.4 General: √

a. **Engine In-Process (investigation) requirements:**
- Provide a receiving inspection and inventory (completeness) report to SAAT
- Provide results of the in-bound test to SAAT (if performed)
- Provide a failure investigation report, and proposed work input to SAAT

3.5 WORKSCOPE/LEVEL OF WORK REQUIRED BY SAAT

Compliance with para.1.3, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, and 3.7.

3.6 SAAT Workscope Committee Members

THIS DOCUMENT REFLECTS THE DECISION OF THE SAAT WORKSCOPE COMMITTEE FOR THIS UNIT.

Designation	Name	Date
I.SINCLAIR	JEOS COORD	2023/11/29
M. BIBBEY	P&W/ IAE	2023/11/29
M. ARENDS	SMS	2023/11/29
J.WASSIN	MCC/ POWER PLANTS	2023/11/29
P.J MARX	MCC/ POWER PLANT	2023/11/29
J.M CABELEIRA	JEOS	2023/11/29
G. ROSS	SAA	2023/11/29
P.G NGWENYA	MCC	2023/11/29
M.N MASOGA	ENGINEERING	2023/11/29

Workscope Approval

Chairman : M.R. Makgakga **Signature: ……Date: 29 April 2024**

Manager : Don Reddy **Signature:……..Date: 29 April 2024**

NOTE: All Reports to be supplied to SAA. Technical, mailto; MaynardBibbey@flysaa.com ; IainSinclair@flysaa.com,

3.7 Final release-for-service inspection at SAAT (Post-repair). √

- Verification of workscope compliance.
- Verification of completeness and serviceability of the engine.
- Update of the Memis A-class/LRU structure.
- Update Memis modification management program as-required.
- Ensure unit is fitted with a BP2197 oil brand decal on the oil tank.
- Ensure unit is fitted with a BP2197 oil brand decal on the oil tank.