Departure Recommendation 00556415 Revision 0.0

Basic

Submitting Site	
Work Order Number	
Purchase Order Number	
Date opened	25-Aug-2017

Received from

End User / Operator	THAI AVIATION SERVICES LTD
Aircraft Tail Number	920279
Engine Serial Number	947906
ETSN	290
ECSN	187

Engine Type Certificate Holder Recommendation

Approved by

Craig Ackerman 25-Aug-2017

Approved by

Jeffrey Simpson 25-Aug-2017

Engine Manual

Engine Model	CT7-8
Manual Reference	AMM
Manual Revision	Rev 15
Pageblock Type	Servicing
Pageblock/Repair Number	N/A
Pageblock Configuration	
Pageblock Effectivity	
ATA Number	72-00-00
ATA Task/Subtask	72-00-00-620-001

Part Information

Part Name	Engine Assy
Part Number	3066T90G02
Prefix/suffix/repair code	N/A
Part Quantity	001
Part Serial Number	947906
Life Limited Part	No
Part Time Since New	290
Part Cycles Since New	187

Engine Regulatory Review

This departure condition was evaluated to 14 CFR 1.1 and GE procedures and determined to be Minor

Manual Requirement

CT7-8 Maintenance Manual, GEK 105159,Rev. 15, Dated 10/31/2014, Section 72-00-00, Engine Servicing 001A, TASK 72-00-00-620-001, Preservation for engine to be inactive for 14-45 day requires the following:

(1) Inspect the engine for removed or disconnected parts. Be sure that all discrepancies are entered in the engine records.
(2) Be sure that the engine, accessories, and inlet area are clean and free from corrosion and foreign material.
(3) Clean the engine. Refer to TASK 72-00-00-100-005.
(4) Install the protective covers on the engine inlet and exhaust. If the covers are not available, seal the openings with barrier material or equivalent, and secure the wrap with adhesive tape PPP-T-60 C10-103 .
(5) Cover the other engine openings, blower exhaust, fuel pump inlet, and customer bleeds.

(6) Record the date and extent of the engine preservation in the engine records.
B. Maintenance During 14 to 45 Day Storage.
(1) No engine run required.

Current Condition

ESN 947906 was removed without proper preservation for 45-180 day storage IAW MM GEK 105159 (fuel system not preserved). The engine was stored in an engine can and in a temperature controlled room for a period of 220 days. Request permission to extend the 14-45 day preservation to 220 days.

Recommendation

Recommend return to operation with the following maintenance and servicing to be performed prior to return to revenue service.
1. Remove the radial driveshaft per TASK 72-60-00-020-001, Paragraph 3.A
2. Drain engine oil (TASK 72-00-00-610-005) and refill with new engine oil (72-00-00-610-005).
3. Replace the oil filter element (01-225, 79-00-00) and the engine oil filter bowl (01-230, 79-00-00), Refer to TASK 79-00-00-100-004.
4. Replace the fuel filter per TASK 72-00-00-610-007 including the idle speed leakage check.
5. Perform a ground or in flight power assurance check per TASK 72-00-00-760-004, IC 72-00-00-1300-004, Paragraph 3.D or 3.E.
6. Operate the engine for a minimum of 30 minutes with the engine in fly (steps 6 and 7 may be accomplished together).
7. Inspect the electrical chip detector Refer to TASK 72-00-00-610-004.
8. Perform an idle speed leakage check per TASK 72-00-00-760-004, IC 72-00-00-1300-004, Paragraph 3.C

Substantiation

This disposition maintains the component serviceability with regards to type design requirements. No airworthiness directives are impacted by this recommendation. It is supported by the following engineering rational: Field Experience, Inspection and Test.

This requested 220 day extension to the CT7-8A engine 14 -45 day preservation upper limit within PSE's field experience, similar to approved extensions, for the CT7 family of engines. The recommendation is consistent with departure records approved for various extensions above the 14-45 preservation procedure.

GE CT7 Product Support Engineering (PSE) had approved a Departure Record (DR) for an engine which was not properly preserved or properly stored for 320 days over the manual requirement. The engine followed similar recommendation procedures defined above and was successfully returned to service and continue to operate with no oil or fuel related issues. The engine has accrued a minimum of 372 engine flight hours in operation, after incorporating the recommended procedure to return the engine to service, with no abnormalities reported.

In addition, Fourty-three (43) prior eDRs were accepted for CT7 engines not properly preserved. These DRs accepted extensions, above the 45 day upper limit from the minimum of a 7 day extension to the maximum of a 160 day extension with no fuel preservation. In addition, three DRr accepted extensions with engines stored indoors, in a temperature controlled environment out on engine stands for 365 days. These engines were returned to service with no abnormalities reported.

The proposed deviation to the storage requirements of the CT7-8A engine preservation is within PSE's field experience for engines stored inside. Requiring the recommended procedures, prior to returning ESN 947906 to service, will identify any potential issues that will negatively impact engine performance.