

# APU Life Limited Parts

**AMP Reference:** IAL/777/T Revision 00 Initial

## Life limited Parts / Safe Life Items

This section of the Maintenance Programme consists of 'Life-Limited Parts' (LLP) or 'Safe Life Items' SLI and the 'Time Controlled Components'.

As per (Regulation (EU) No 1321/2014), M.A 305, term 'life-limited part' embraces any component/part for which the maintenance schedule of the aircraft maintenance programme requires the permanent removal from service when, or before, the specified mandatory life limitation in accordance with Commission Regulation (EU) No 748/2012 if any of the applicable parameters is reached.

## Auxiliary Power Unit

APU Limitations of life-limited parts are controlled by the engine manufacturers and are published in the APU GTCP331-500 Component Maintenance Manual, ATA NO. 49-26-57, revised 3 Aug 2021, Revision Number 25

## Conditions for Interpretation

Cycle Definition.

One cycle equals a start or attempted start reaching at least 95 percent (RPM) engine speed and subsequent shutdown.

Recording Cycles.

(1) Accurate engine records, log books and LLP cards should be used for tracking cycles on Life-Limited Parts.

(2) Some Life-Limited Parts may have operating cycles marked on the part using the format below. This procedure is no longer recommended.

Example:

A part that has been through repair twice since new, once at 800 cycles and once again at an additional 1,700 cycles will be marked "X.8.17." The total accumulated cycles are 2,500. At the next repair after 1,500 additional cycles of service, the part will be identified with another 15, for a complete cycles code marking of "X.8.17.15."

(3) To prevent confusion with proper cycle tracking on parts, cycles marked on a part should either match the actual accumulated cycles documented in the engine records (LLP Card) or be obscured using the process shown in Step (3)(a).

(a) Obscure the area using Electrochemical Etch per AS478, Type 7A1 or SPM 20-00-02/70-00-01. A complete masking of the area or the use of standard type (i.e., XXXXX) is recommended.

## Life Limited Parts and limits

Nomenclature, Part No.	Reference Assy. Part No.	Life Limit <sup>^</sup> , Cycles	Check Interval	Remarks
Load Compressor Impeller				
3822468-3	N/A	27,000	None	
3822612-1	N/A	27,000	None	
First Stage Engine Compressor Impeller				
3822340-2	3822483-1	27,000	None	
3822611-1	N/A	27,000	None	
Second Stage Compressor Impeller				
3822341-4	N/A	27,000	None	

Part No.	Part No.	Life Limit <sup>^</sup> , Cycles	Check Interval	Remarks
3822341-5	N/A	27,000	None	
First Stage Turbine				
3842152-1	3842151-2 3842151-3	27,000	None	
Second Stage Turbine				
3842156-1	3842155-3 3842155-4	27,000	None	
Third Stage Turbine				
N/A*	3842160-5	27,000	None	
N/A*	3842160-6	27,000	None	

\* Blades are not removable, so the life limit applies to the Wheel Assembly part number.

<sup>^</sup> Life Limit (Cycles) are not to be exceeded, and are not related to check intervals or inspection criteria.