

Systems, APU & Power Plant Introduction

AMP Reference: IAL/330/T Revision 00 Initial

1.0 General Introduction

This section provides the scheduled maintenance tasks and frequencies for all Systems, Power Plant and Auxiliary Power Unit.

Shop maintenance tasks (off-aircraft) may not be included.

With respect to the evaluation procedures and the resulting tasks the following is noted:

1. Operational checks were not considered as forming part of Normal Operating Crew Duties when determining the evident or hidden aspects of functional failures (ref. Policy and Procedures and book (PPH) para 4.4.4.1). As a result, some tasks given in this section may be considered as flight crew tasks in accordance with Note 5.
2. deleted in Revision 26
3. Cat II/Cat III landing capabilities, Reduced Vertical Separation Minima (RVSM) capabilities and Extended Twin Engine Operations (ETOPS) are inherent functions of the basic design standard of the aircraft. Scheduled tasks necessary for these operations have been considered in the development of this section. Operators should comply with National Requirements as applicable.
4. Lubrication requirements specified in this MPD do not represent the total lubrication provisions for the aeroplane. Accordingly, operators should refer to the manufacturer's appropriate maintenance publications for additional lubrication information.
5. During the review of an aircraft system for the purpose of modifying or verifying the maintenance requirements, the reviewer must be aware that those functions associated with the ignition prevention features of all systems are identified and analysed in MSI 28-18-00 Ignition Prevention. Any review of an existing MPD task must therefore consider that it may be necessary to review MPD 281800 in addition to the specific system MSI identified.
6. Operators should take the opportunity of APU/Power Plant removal and disassembly to perform "off wing" inspections and parts/assemblies' restoration as per engine shop manuals. No scheduled basis for these tasks is defined in this MPD.
7. No threshold or opportunity inspection requirements are given for APU/Power Plant. Manufacturer may recommend such inspections in the event that late development or early in-service experience would indicate the desirability to examine specific components of individual engines or APU. If this is necessary, then direct negotiations between applicable operators and the APU/engine manufacturer will be arranged. Results of these inspections are to be made available by the manufacturer to other customer airlines as well as the Regulatory Authorities.
8. Limitations of life limited parts of the APU are controlled and published in GTCP 331-350 (c) Engine Component Maintenance Manual.
9. APU task intervals quoted in terms of APU HRS may be converted to another usage parameter in accordance with an appropriate conversion factor based on an operator's specific APU utilization.

10. No recommendation is made for scheduled fuel analysis. Operators who suspect the quality of their fuel supplies or who operate in an environment known to promote microbiological growth are recommended to introduce fuel sampling and consider the use of additives to minimize the potential for such growth.

11. As noted in MRBR Section B, General Rule 6, limitations of life limited parts are controlled by the manufacturers and published in the following documents:

– Airbus A330 Airworthiness Limitation Section – Part 1, 4 and 5

– RR Trent 700 Time Limits Manual, T-Trent-1RR

12. Unless reviewed by Airbus throughout the MSG3 process, maintenance task recommendations included in Engine Manufacturer documentations such as CESM (GE), MAN (PW), MPG (PW) and EMP (RR) are not systematically included in the MPD.

13. Tasks approved from Fuel Tank Safety (FTS) Requirements using the criteria established in Special Federal Aviation Regulation (SFAR 88) / EASA policy statement on the process for developing instructions for maintenance and inspection of fuel tank system ignition source prevention; are identified with (SFAR 88) in parenthesis following the task description in the MPD. This policy has been applied to Systems & Power Plant tasks listed under ATA 281800 in Section 2.

Operators requesting revisions to the baseline FTS requirements may revise these tasks and intervals through their normal operator approval process.

14. Electrical Wiring Interconnection System (EWIS) tasks derived from the Enhanced Zonal Analysis Procedure (EZAP) in ATA 20 of Section Systems, Power Plants and Auxiliary Power Unit and standard zonal tasks with EWIS content are identified by (EWIS) in parenthesis following the task description in the MPD.

For Operators under U.S. FAA Jurisdiction only: Operators requesting revisions to the baseline EWIS task or description must submit their request through the cognizant Flight Standards District Office, who may add comments and then forward it to the manager of the appropriate FAA Aircraft Certification Office, or office of the Transport Airplane Directorate, having cognizance over the type certificate for the affected airplane for concurrence prior to approval. Task intervals may be revised through normal operator approval process. Tasks indicated with “(EWIS)” after the task description must not be deleted from the operator's maintenance program.

Tasks indicated with “(EWIS)” after the task description must not be deleted from the maintenance program.

15. Tasks arising from the Enhanced Zonal Analysis Procedure (EZAP), (comprised of GVI tasks not fully covered by Zonal tasks and DI/RS tasks) are included within ATA chapter 20 of the System and Powerplant section of the MRBR and have no Failure Effect Category (FEC) quoted. The tasks are identified with “(EWIS)” following the task description (see “Electrical Wiring Interconnection System (EWIS)” for further details). These tasks remain under the responsibility of the Zonal Maintenance Working Group.

NOTE (i): The term “EWIS” in the task description of ATA 20 tasks includes all electrical wiring and interconnection systems installations (e.g., cables, conduits, clamps, etc...).

NOTE (ii): ATA 20 tasks must not be deleted from the operator's maintenance program NOTE (iii): For advice on cleaning contaminated wiring, refer to the Airbus Electrical Standard Practices Manual (ESPM) chapter 20-55-20 "CLEANING OF WIRES (Airbus)".

ETOPS capability is included in the A330 certification basis. As a result, the ETOPS particularities have been considered in the development of the System MSG3 analyses. The basis for ETOPS consideration in the A330 MRB Report development process is the ETOPS Significant System List.

This provides the list of systems, functions and corresponding rationales established during ETOPS Certification activities. A system is qualified as "ETOPS significant" when it has a "unique" influence for ETOPS, in the sense that it specifically participates to the ETOPS basic tenet: "Preclude and protect the diversion". An ETOPS significant system is either a system having a functional failure that may contribute to a decision to divert or a system which has increased importance to ensure a safe flight and landing following a diversion longer than 60 minutes. Systems that are necessary for the safe conclusion of all diversions are not considered as ETOPS significant.

Those tasks that result from the functional failure analysis of an ETOPS significant system are highlighted in this MPD with the words "ETOPS Relevant Task" in the Maintenance Task descriptions and are applicable to all type of operations (ETOPS Flights and Non-ETOPS Flights).

Operators should also refer to the A330 ETOPS CMP Document (Configuration, Maintenance, Procedure and Dispatch standards for Extended Diversion Time Operations) for additional ETOPS Requirements.

NOTE 1 to 9 and 11 to 28:

The content of these MRBR Section C Notes is given as full text in the corresponding MPD task.

NOTE 10: Operationally check the slide/raft in accordance with the following schedule:

Door/Exit (RH Or LH Side)	Quantity (Per Operator Fleet)	Check Interval
FWD Passenger/Crew Door	1	36 MTHS
MID Passenger/Crew Door	1	36 MTHS
AFT Passenger/Crew Door	1	36 MTHS
Emergency Exit	1	36 MTHS

Checks may be performed on either side and do not all have to be performed on the same aircraft. As an ongoing continuous maintenance program, the operator should continue the operational check sequence until this schedule has been revised by the MRB.

Inadvertent deployments may not be used to satisfy the above requirements.

A330 / A340 fleets can be combined for common doors.

For A330-200F applicable for FWD Passenger/Crew Door only.

NOTE 29: Interval to be managed at component level.

Tasks identified with Note 29 in the MRBR are to be managed at component level. In these cases, the interval is to be counted from the manufacturing date of the component or from date of previous task accomplishment on the component. Where an expiry date is applied by the vendor, the operator may seek agreement from local NAA to change the expiry date to reflect the task

interval and thus avoid giving the impression that the component has been left in service beyond the approved period.

The requirement to manage intervals at component level does not necessarily lead to serialization of these components. Other means such as electronic tagging or bar coding may be used as an alternative.