

EASA Part 145 Production Planning Audit - EASA.145.A.47	
Name of Auditee	
Date of Audit	
Name of Auditor	
Audit Standard EASA Part 145 IR, AMC & GM	
<i>Additional Guidance is shown in Bold Italics – Basic Questions include Management & Oversight –Ownership of Procedures - Competence & Training “as required” Completeness, Compliance & Validity of Procedures. In all cases identify the reference of MOE and Associated Procedure</i>	
Audit Criteria	Compliant Y or N – Provide MOE /Associated Procedure Reference for Compliance or detail Corrective Action Request & Reference
145.A.47 Production planning <i>Regulation (EU) No 1321/2014</i> (a) The organisation shall have a system appropriate to the amount and complexity of work to plan the availability of all necessary personnel, tools, equipment, material, maintenance data and facilities in order to ensure the safe completion of the maintenance work. (b) The planning of maintenance tasks, and the organising of shifts, shall take into account human performance limitations. (c) When it is required to hand over the continuation or completion of maintenance tasks for reasons of a shift or personnel changeover, relevant information shall be adequately communicated between outgoing and incoming personnel.	
AMC 145.A.47(a) Production planning <i>ED Decision 2016/011/R</i> 1. Depending on the amount and complexity of work generally performed by the maintenance organisation, the planning system may range from a very simple procedure to a complex organisational set-up including a dedicated planning function in support of the production function.	

<p>2. For the purpose of Part-145, the production planning function includes two complementary elements:</p> <ul style="list-style-type: none"> — scheduling the maintenance work ahead, to ensure that it will not adversely interfere with other work as regards the availability of all necessary personnel, tools, equipment, material, maintenance data and facilities. — during maintenance work, organising maintenance teams and shifts and provide all necessary support to ensure the completion of maintenance without undue time pressure. <p>3. When establishing the production planning procedure, consideration should be given to the following:</p> <ul style="list-style-type: none"> — logistics, — inventory control, — square meters of accommodation, — man-hours estimation, — man-hours availability, — preparation of work, — hangar availability, — environmental conditions (access, lighting standards and cleanliness), — co-ordination with internal and external suppliers, etc. — scheduling critical maintenance tasks during periods when staff are likely to be most alert. 	
<p>AMC1 145.A47(b) Production planning ED Decision 2022/011/R</p> <p>CONSIDERATION OF FATIGUE IN THE PLANNING OF MAINTENANCE</p>	

(a) The way and the extent to which the organisation should consider the threat of fatigue in the planning of tasks and organising of shifts will vary from one organisation to another and from one maintenance event to another, depending on what maintenance is to be carried out, how, where, when and by whom.

(b) Fatigue is one example of human factors issues which should be taken into account by the management system, particularly for the planning activity. In this respect, where the organisation activity is prone to fatigue issues, the organisation should:

(1) ensure that the safety policy required by point 145.A.200(a) gives due consideration to the aspects of fatigue;

(2) ensure that the internal safety reporting scheme required by point 145.A.202 enables the collection of fatigue issues;

(3) ensure that the threat of fatigue is adequately taken into account by the management system key processes (e.g. assessment, management, monitoring);

(4) provide safety promotion material and adapt safety training accordingly.

(c) The organising of shifts should consider good practices in the maintenance domain and applicable rules. The resulting shift schedule should be shared with the maintenance staff sufficiently in advance so they can plan adequate rest. The established shift durations should not be exceeded merely for management convenience even when staff is willing to work extended hours.

(d) The organisation should have a procedure (including mitigations) to address cases where the working hours are to be significantly increased, or when the shift pattern is to be significantly modified, such as for urgent operational reasons. In cases not covered by that procedure, the organisation should perform a specific risk assessment and define additional mitigation actions, as applicable. Basic mitigations may include:

(1) additional supervision and independent inspection;

(2) limitation of maintenance tasks to non-critical tasks;

(3) use of additional rest breaks.

<p>GM1 145.A47(b) Production planning</p> <p>ED Decision 2022/011/R</p> <p>CONSIDERATION OF FATIGUE IN THE PLANNING OF MAINTENANCE</p> <p>(a) Fatigue may be induced by:</p> <ul style="list-style-type: none"> (i) the environment and conditions (e.g. noise, humidity, temperature, closed section, working overhead) in which the work is carried out; (ii) excessive hours of duty and shift working, particularly with multiple shift periods or patterns, additional overtime or night work; (iii) travel to the maintenance location (e.g. jetlag, duration) Fatigue is one of the factors that may contribute towards maintenance errors when it is not properly considered as part of planning activities. <p>(b) Taking into account the threat of fatigue in the planning of maintenance tasks and organising of shifts refers to setting up the maintenance and the shifts in a way that enables the maintenance staff to remain sufficiently free from fatigue so they can perform the planned maintenance safely, including:</p> <ul style="list-style-type: none"> – providing rest periods of sufficient time to overcome the effects of the previous shift and to be rested by the start of the following shift; – avoiding shift patterns that cause a serious disruption of an established sleep/work pattern, such as alternating day/night duties; – planning recurrent extended rest periods and notifying staff sufficiently in advance.. 	
<p>AMC 145.A47(c) Production planning</p> <p>ED Decision 2015/029/R</p> <p>The primary objective of the changeover / handover information is to ensure effective communication at the point of handing over the continuation or completion of maintenance actions. Effective task and shift handover depends on three basic elements:</p> <ul style="list-style-type: none"> – The outgoing person's ability to understand and communicate the important elements of the job or task being passed over to the incoming person. – The incoming person's ability to understand and assimilate the information being provided 	

<p>by the outgoing person.</p> <p>– A formalised process for exchanging information between outgoing and incoming persons and a planned shift overlap and a place for such exchanges to take place.</p>	
<p>GM1 145.A.47(d) Production planning</p> <p>ED Decision 2022/011/R</p> <p>‘External working teams’ refers to an organisation that does not belong to the Part-145 organisation in whose facility the maintenance is being carrying out, and which is, for example (this list is not exhaustive): – contracted by the Part-145 maintenance organisation; or – subcontracted by the Part-145 maintenance organisation; or – contracted by the person or organisation responsible for the aircraft continuing airworthiness.</p> <p>The objective of point 145.A.47(d) is to manage the risk involved in the actual execution of maintenance by the various organisations at the same location.</p> <p>Example: The need for one organisation to be informed that they should not put the aircraft in a certain configuration (regarding, for instance, electrical power) if this is could contribute to an error in the maintenance performed by another organisation.</p> <p>Note: Refer to GM2 145.A.205 for the difference between contracting and subcontracting maintenance activities.</p>	
<p>All Audit Findings have been transferred to corrective action requests</p>	
<p>Signature</p>	<p>Name</p>
<p>Audit Closed QM Signature</p> <p>Date</p>	