



Foreign Part-145 approvals - Aircraft maintenance

UG.CAO.00134-004

	Name	Validation	Date
Prepared by:	Marc GRAGNOLI	Validated	12/07/2018
Verified by:	Karl SPECHT	Validated	13/07/2018
Reviewed by:	Dominique PERRON	Validated	13/07/2018
Approved by:	Thaddee Sulocki	Validated	13/07/2018





DOCUMENT CONTROL SHEET

Reference documents

a) Contextual documents

Applicable requirements are listed in the form "FO.CAO.00136-XXX - Foreign Part-145 approvals – Documentation Index".

b) Internal documents

Applicable document are listed in the form "FO.CAO.00136-XXX - Foreign Part-145 approvals – Documentation Index".

Log of issues

Issue	Issue date	Change description
001	13/11/2013	First issue. This document is aimed to provide the applicant with guidance material supporting the application/approval, and as such has been reviewed by Regulations Continuing Airworthiness Section (F.S.1.2).
002	01/09/2014	Update of Quality documents to implement the new corporate image of the Agency and the changes to the organization structure.
003	22/10/2015	Endorsement of comments received from stakeholders.
004	13/07/2018	Main changes introduced: <ul style="list-style-type: none">• Change of title to extend applicability of the User Guide to all aircraft line and base maintenance• Revised guidance for works outside the approved locations following comments from stakeholders• Acceptable CRS following line maintenance• Principles of aircraft CRS and sign-off• CRS related to basic regulation• Minimum line maintenance location set-up





Foreign Part-145 approvals Aircraft maintenance	Doc # Approval Date	UG.CAO.00134-004 13/07/2018
--	------------------------	--------------------------------

0. Introduction



**0.1 Table of contents.**

0.	Introduction.....	3
0.1	Table of contents.....	4
0.2	Definitions and abbreviations.....	6
0.3	Scope and applicability	7
0.4	Purpose	7
0.5	Entry into force	7
0.6	Associated instructions.....	7
0.7	Communication	7
1.	Privileges and limitations of line maintenance	8
1.1.	Definition of aircraft line maintenance scope of work.....	9
1.2.	Organisation responsibilities.....	9
1.3.	When to assess the maintenance activity.....	9
1.4.	Assessment of the intended scope of work (initial/change of approval).....	10
1.5.	Example of maintenance activity considered to be base maintenance.....	12
1.6.	Assessment of maintenance task by an already approved maintenance organisation	12
2.	Maintenance away from the approved location(s).....	13
2.1.	Definition and applicability.....	14
2.2.	Maintenance away from the approved location under approved privileges as per 145.A.75(c).....	14
2.2.1	Possible Scenarios.....	15
2.2.2	Condition to be specified in the exposition.....	16
2.2.2.1	Occasional aircraft line maintenance (Scenario 1)	17
2.2.2.2	Maintenance outside the approved locations other than “occasional line maintenance” (Scenario 2, 3 and 4)	18
2.3.	Direct approval of other maintenance outside the approved locations	19
3	Line station without a permanent cat. B2 staff.....	20
4	Policy on certificates of Release to Service for aircraft maintenance and associated responsibilities of maintenance organisation and CAMOs	22
4.1	Continuing airworthiness responsibilities, including maintenance	23
4.2	Certification of maintenance.....	24
4.3	How many CRS can or should be issued.....	24
4.4	What does it mean that “there are no non-compliances which are known to endanger flight safety”	25
4.5	What does it mean “appropriately authorised certifying staff”	25
4.6	What does it mean “when it has been verified that all maintenance ordered has been properly carried out” ..	25
4.7	In the case of base maintenance, what are the functions and responsibilities of “support staff”	26
4.8	What is the function of personnel authorised to “sign-off”	26
5	Acceptable CRS following line maintenance	27
5.1	Definitions	28
5.2	Work Order issued by the customer operator	28
5.3	Possible CRS system for Line Maintenance.....	28
5.4	Multiple release approach	28
5.5	Single release approach	29
5.5.1	Single release approach when only “B1” and “B2” c/s are available (no any “B1+B2”)	29
5.6	Special cases.....	30
6	Line or Base maintenance release of aircraft not covered by the Basic Regulation	31
6.1	Scope and Applicability.....	32
6.2	Practice 1	32





Foreign Part-145 approvals	Doc #	UG.CAO.00134-004
Aircraft maintenance	Approval Date	13/07/2018

6.3 Practice 2	32
6.4 Practice 3	32
6.5 Practices for aircraft certificate of release to service	34
7 Minimum line maintenance location setup	36
7.1 Scope and applicability	37
7.2 Check list for minimum line maintenance location setup	38



**0.2 Definitions and abbreviations.****Abbreviations**

AMC	ACCEPTABLE MEANS OF COMPLIANCE
AMO	APPROVED MAINTENANCE ORGANISATION
AMTO	APPROVED MAINTENANCE TRAINING ORGANISATION
AOG	AIRCRAFT ON GROUND
BIPM	INTERNATIONAL BUREAU OF WEIGHTS AND MEASUREMENTS
CAO	CONTINUING AIRWORTHINESS ORGANISATION
CAP	CORRECTIVE ACTION PLAN
CIPM	INTERNATIONAL COMMITTEE ON WEIGHTS AND MEASUREMENTS
C/S	CERTIFYING STAFF
CC/S	COMPONENT CERTIFYING STAFF
EASA	EUROPEAN AVIATION SAFETY AGENCY
EU	EUROPEAN UNION
GM	GUIDANCE MATERIAL
ILAC	INTERNATIONAL LABORATORY ACCREDITATION COOPERATION
IOSRS	INTERNAL OCCURENCE REPORTING SYSTEM
MOA	MAINTENANCE ORGANISATION APPROVAL
MOAP	MAINTENANCE ORGANISATION APPROVAL PROCEDURES
MOC	MAINTENANCE OVERSIGHT COORDINATOR
MOE	MAINTENANCE ORGANISATION EXPOSITION
MOR	MANDATORY OCCURRENCE REPORTING
MRA	MUTUAL RECOGNITION ARRANGEMENT
NAA	NATIONAL AVIATION AUTHORITY
NRAB	NATIONAL RECOGNISED ACCREDITATION BODY
OEM	ORIGINAL EQUIPMENT MANUFACTURER
PPB	PRINCIPAL PLACE OF BUSINESS
QE	QUALIFIED ENTITY
RAB	REGIONAL ACCREDITATION BODY
S/S	SUPPORT STAFF
STCH	SUPPLEMENTAL TYPE CERTIFICATE HOLDER
TCH	TYPE CERTIFICATE HOLDER
WH	WORKING HOURS
WHOC	WORKING HOURS EASA OVERSIGHT COORDINATOR





Foreign Part-145 approvals Aircraft maintenance	Doc #	UG.CAO.00134-004
	Approval Date	13/07/2018

0.3 Scope and applicability

EASA is the Competent Authority for maintenance organisations having their principal place of business located outside the EU, as established by EASA Part 145.1 “General” and is therefore responsible for the final approval of these maintenance organisations and for establishing procedures detailing how EASA Part-145 applications and approvals are managed.

This user Guide is applicable to EASA Part-145 applicant and EASA Part-145 AMOs’ (hereafter referred as maintenance organisations) having their principal place of business located outside the EU Member States and which are not certified under the provisions of a bilateral agreement signed with the EU.

The provisions of this user guide are complementary to the requirements of Part-145 regulation “as amended” and does not supersede or replace the associated regulatory requirements.

0.4 Purpose

This user guide is designed to be used by maintenance organisations and the assigned inspector when implementing and checking:

- the privileges and limitations associated to a scope of approval for line maintenance ;
- the complexity and level of aircraft maintenance that can be performed under its line maintenance scope of approval;
- maintenance away from the approved location(s) as per 145.A.75.(c);
- availability of the B2 certifying staff.

0.5 Entry into force

This User Guide comes into force 90 days after publication on the EASA website. Within this time frame the maintenance organisation shall assess the impact of this User Guide in the organisation’s procedures and when relevant propose a revision of the affected procedures to the assigned inspector.

The entry into force date of this User Guide does not supersede the need to comply with any other entry into force date(s) established by applicable regulations.

0.6 Associated instructions

EASA has developed associated instructions (user guides, Forms, templates and work instructions), that detail specific matters, which have to be considered as an integral part of this procedure.

A complete listing of these documents, together with their applicability to the maintenance organisation or NAA / QE / EASA, is addressed in the current revision of the “Foreign Part-145 approvals – documentation Index”, FO.CAO.00136-XXX (XXX identifies the revision number). Documents which are applicable to both NAA/QE/EASA and maintenance organisation are made available on the [EASA Web Site \(http://easa.europa.eu, Foreign Part-145 Approvals page\)](http://easa.europa.eu).

Each time a cross reference is provided to another document or another chapter / paragraph of the same document, this reference is identified with **grey text**.

0.7 Communication

All documents and correspondences between the maintenance organisation, the overseeing authority and EASA shall be in the English language unless otherwise agreed by EASA.





Foreign Part-145 approvals Aircraft maintenance	Doc #	UG.CAO.00134-004
	Approval Date	13/07/2018

1. Privileges and limitations of line maintenance





Foreign Part-145 approvals Aircraft maintenance	Doc # Approval Date	UG.CAO.00134-004 13/07/2018
--	------------------------	--------------------------------

1.1. Definition of aircraft line maintenance scope of work.

The definition of aircraft line maintenance is provided in AMC 145.A.10, together with a list of activities which “may” be considered as line maintenance.

The word “may” is used because it is not possible to establish a provision giving a strict border line between line and base maintenance, having general applicability to all cases. [For this reason, the organisation shall establish in the MOE 1.9 chapter, a clear definition of the line maintenance capability, as applicable to the particular organisation, taking into account the guidance provided in the following paragraph 1.4 of this User Guide.](#)

1.2. Organisation responsibilities.

Based on the above the maintenance organisation shall ensure prior to any intended maintenance event¹ that the activity can be carried out under its line maintenance scope of approval (refers to AMC 145.A.10) and does not fall under chapter 1.5 “Example of maintenance activity considered to be base maintenance” of this user guide.

This assessment may not need to take place each time, but be based on already established MOE procedures (e.g. the fact that a daily check is a line maintenance task is obvious and does not need to be assessed each time).

Even if this assessment confirms that the activity is line maintenance, the maintenance organisation shall also verify if this activity requires other means than the ones already in use at a Line station (e.g.: use of a hangar, platforms, stands, etc.).

The following chapters provide a guidance on when and how to assess the maintenance activity.

1.3. When to assess the maintenance activity.

The maintenance organisation’s assessment to decide if any maintenance event falls within the definition of line or base maintenance, may be needed in two different moments/situations:

- for an initial/change of approval, when evaluating the scope of work the maintenance organisation is applying for;
- for an already approved maintenance organisation, when evaluating if a maintenance requested by the customer (e.g.: a new SB requested by the customer, a defect rectification, a work package requested by the customer, etc.) falls within the approved line maintenance scope of work.

¹ Maintenance event is intended to be the condition/period when an aircraft is under the responsibility of a maintenance organisation for the purpose of undergoing one or a series of maintenance tasks which is/are identified in a “clear work order” formally issued by the Customer/Operator.





Foreign Part-145 approvals Aircraft maintenance	Doc # Approval Date	UG.CAO.00134-004 13/07/2018
--	------------------------	--------------------------------

1.4. Assessment of the intended scope of work (initial/change of approval)

It is the responsibility of the maintenance organisation to demonstrate to the competent authority that the intended scope of work may be carried out in a line maintenance environment, under its line maintenance scope of approval².

Line Maintenance should be understood as any maintenance that is carried out before flight to ensure that the aircraft is fit for the intended flight, and to be limited as follows:

- A. Maintenance tasks falling in chapter 1.5 “Example of maintenance activity considered to be base maintenance” are not permitted; Such limitation shall be assessed, as applicable, to any of the following points;
- B. Trouble shooting and/or Defect Rectification **not requiring special ground support usually relevant to base maintenance** (e.g.: special equipment, structured production planning, complex and lengthy maintenance);
- C. Component replacement including:
 - scheduled component replacements included in the scheduled maintenance activity identified in the MOE 1.9 (as part of the minor scheduled line maintenance or scheduled checks identified below);
 - unscheduled component replacement in relation to a defect rectification (e.g. AOG, MEL closure, etc.)
- D. Minor repairs and modifications which do not require extensive disassembly and can be accomplished by simple means;
- E. Minor scheduled line maintenance (are those scheduled tasks not exceeding the weekly check as specified in the aircraft maintenance programme);
- F. Scheduled checks, are those scheduled tasks which exceed the weekly check (or equivalent as determined by the competent authority). **Each operator is customizing the aircraft maintenance programme and grouping its maintenance intervals as necessary.** The maintenance organisation should review the intended maintenance from the customer operator and identify in the TCH data (e.g. MPD) the maintenance level which allows to carry out that intended maintenance. The outcome of this exercise is to identify the intended limitation of the line maintenance scope of approval, in terms of scheduled maintenance checks³. In particular, the following is expected:
 1. Depending on the manufacturer policy for scheduled maintenance requirement development a clear limitation to the maintenance scope of work may be normally expressed in one of the following ways:
 - “up to and excluding X check” (e.g. X= 2A, 3A, etc.) for a MPD, where maintenance check packages and letter checks are used;

² Similar considerations may apply for a base maintenance scope of approval

³ An organisation approved with such limitation, may however be faced by stand-alone request to perform a particular task, the interval of which does not fall in the typical interval framework (typically referred as “out of phase” task) and exceeds this limitation. For example an organisation is approved with limitation for 3000FH on a certain aircraft type, and the customer is requesting a single “out of phase task” having 3500 FH interval, which is exceeding the maintenance level check identified in the scope of approval. This task may be carried out provided it complies with the decision making process. This means that the task is verified to be within the capability of the organisation in terms of maintenance data, tools, materials, personnel competence, etc. and their level of complexity remains within the limit of line maintenance (in case the activity is done under a line maintenance scope of approval).





Foreign Part-145 approvals Aircraft maintenance	Doc # Approval Date	UG.CAO.00134-004 13/07/2018
--	------------------------	--------------------------------

- “up to and excluding “X FH /Y FC / Z calendar time” for a MPD, where task intervals are given in the appropriate usage parameters (e.g. flight hours, flight cycles, calendar time, APU hours) for example up to and excluding 3000FH, 750 FC, 12 months);
2. the identified limit, to be indicated in the MOE 1.9, shall be such that all the related routine/scheduled tasks are excluding any of the tasks listed in Chapter 1.5 “Example of maintenance activity considered to be base maintenance”;
 3. a “decision making process” needs to be established in the MOE (normally chapter 2.28 production planning procedure) in order to assess:
 - the need to access the hangar (even if the activity is permitted under a line maintenance scope of approval), considering in particular the type of aircraft, the maintenance event type/complexity, the environmental and weather conditions;
 - any work order / work package received from the customer operator to ensure it may be fully performed under a line maintenance scope of approval, taking into account additional works to the original work package that may be added, leading out to the line maintenance scope of work, such as:
 - addition of previously deferred maintenance tasks;
 - defects raising from the routine tasks (these defects are not known in advance, however, the related risk in terms of number and level of defects needs to be taken into account and estimated in advance);

Example of “decision making process”

A 2A maintenance check on a B737 classic aircraft type is normally considered “line maintenance” when the routine tasks are assessed as per the manufacturer MPD/ operator AMP. Therefore a maintenance organisation may be approved to perform this check under a line maintenance scope of work. However, a work order to perform the “2A check”, where the customer operator would request the performance of works in addition to the “2A” routine tasks, such as the addition of ADs, SBs, deferred tasks, will need to be carefully assessed by the maintenance organisation with the use of the “decision making process”.

This type of maintenance check may easily fall within the examples given in the following chapter 1.5 “Example of maintenance activity considered to be base maintenance” having the result to be considered as base maintenance and being outside the maintenance organisation scope of work.

In such a case, the outcome of the “decision making process”, may be for example:

- the impossibility to accept such work order from the customer operator, being outside the scope of work of the maintenance organisation, or;
- to agree with the customer operator a revised work order, to remove the works which have been identified as base maintenance tasks (e.g. removal of a SB which was requiring extensive disassembly and modification of flight controls, etc.).





Foreign Part-145 approvals Aircraft maintenance	Doc # Approval Date	UG.CAO.00134-004 13/07/2018
--	------------------------	--------------------------------

1.5. Example of maintenance activity considered to be base maintenance.

When any of the following task is required to be carried out (regardless if contained in a scheduled maintenance check or arising from a defect rectification/AOG situation), a base maintenance scope of approval is needed:

- High number of different type of tasks to be carried out, even if taken singularly those tasks may still fall under the definition of line maintenance (e.g. a combination of routine task cards, non-routine task cards issued following defects discovered during the check, out of phase tasks, deferred items from previous maintenance, minor repairs, minor modifications, component replacement, etc.). Such case is clearly requiring a base maintenance production planning support and/or base maintenance release to service process (category C C/S supported by B1/B2 support staff) in order to ensure that all the maintenance ordered has been carried out before issuing the CRS;
- Maintenance tasks or replacement of any major component, either scheduled or unscheduled, where the related maintenance procedures clearly address the need of an hangar environment requiring special ground support equipment and/or structured production planning and/or complex and lengthy maintenance, such as for example a full landing gear replacement , simultaneous replacement of two engines, etc.;
- Any scheduled maintenance task (e.g. routine task from the MP) which requires extensive disassembly of the aircraft and/or extensive in depth inspection;
- Major repairs and/or major modifications;
- Trouble shooting and/or Defect Rectification requiring special ground support usually relevant to base maintenance (e.g.: special equipment, structured production planning, complex and lengthy maintenance).
- A scheduled maintenance event, which in the planning phase has been already identified as significant in terms of duration and/or man-hours (e.g. an A/C down time above 72 hours or four shifts whichever is less).
- A work package requiring a complex team composition in terms of high Number & Categories (avionic, structure, cabin, NDT qualification and skills, etc.) of staff involved per shift.
- The management of the event by B1 and B2 support staff and the release by a C certifying staff.

Note: The maintenance organisation remains responsible to ensure that even if each individual work order is falling under the line maintenance activity, a maintenance event which is cumulating several of these work orders remains within the line maintenance scope of activity.

1.6. Assessment of maintenance task by an already approved maintenance organisation

For an approved maintenance organisation, it remains its responsibility to assess if any maintenance requested by the customer falls within the approved line maintenance scope of work. This assessment is expected to be performed based on the “decision making process” described in the chapter 1.4 “Assessment of the intended scope of work (initial/change of approval)”, paragraph F.3.





Foreign Part-145 approvals Aircraft maintenance	Doc # Approval Date	UG.CAO.00134-004 13/07/2018
--	------------------------	--------------------------------

2. Maintenance away from the approved location(s)





Foreign Part-145 approvals Aircraft maintenance	Doc # Approval Date	UG.CAO.00134-004 13/07/2018
--	------------------------	--------------------------------

2.1. Definition and applicability

145. A.75 (c) allows **privileges for the** maintenance organisation to “maintain any aircraft or any component for which it is approved at any location subject to the need for such maintenance arising either from the **unserviceability of the aircraft** or from the necessity of supporting **occasional line maintenance**, subject to the conditions specified in the exposition”.

In addition, the Appendix IV to Part-M (Class and Rating system), provides some additional flexibility to the case of the B, C and D1 rated organizations (e.g. B/C rated organisation being allowed to carry out maintenance on installed engine/component during base or line maintenance).

The privilege to perform maintenance in a non-approved location, means that the organisation is issuing a CRS outside the approved locations as per 145.A.50 (aircraft/engine/component/NDT certificate of release to service as applicable depending from the class rating hold by the organisation).

In case of any aircraft line or base maintenance activity within the EU territories, aircraft certifying staff shall be qualified to Part-66.

Activity outside the approved locations can be carried in two cases as described in the following paragraphs 2.2 “Maintenance away from the approved location under approved privileges as per 145.A.75(c)” and 2.3 “Direct approval of other maintenance outside the approved” of this User Guide.

2.2. Maintenance away from the approved location under approved privileges as per 145.A.75(c)

The procedure(s) related to granting this privileges are approved by the competent authority based upon the ability of the Quality System to deal adequately with the EASA Part-145 requirements. Normally this ability cannot be demonstrated at the time of the initial approval, therefore this procedure cannot be included in the MOE nor approved by the competent before the first 2 year surveillance cycle has been completed. Exceptions can be granted on a case by case basis for AMOs, who have a justified need to work outside the approved locations immediately after initial approval.

Where the organisation intends to propose an MOE procedure deviating from any applicable condition specified in this user guide for the case of “maintenance away from the approved location under approved privileges as per 145.A.75(c)”, the EASA MOC has to be involved by the assigned inspector for a case by case assessment before approving the procedure. In such case the request originated by the organisation, needs to identify clearly which condition of this user guide is not met, which is the justification for asking a deviation, how the proposed procedure ensures an equivalent level of safety and compliance with applicable implementing regulations.

As a matter of principle, whenever this privilege is used, the AMO shall evaluate the risk associated to the task to be performed and shall implement mitigating measures.

It must be noted that the fact that an organisation has been granted these privileges should not be understood as if any maintenance task could be performed at any location, or that such locations become “approved locations”.





Foreign Part-145 approvals Aircraft maintenance	Doc # Approval Date	UG.CAO.00134-004 13/07/2018
--	------------------------	--------------------------------

2.2.1 Possible Scenarios

The following scenarios may be considered under approved privileges, meaning that the related maintenance activity outside the approved locations can be carried out based on a control procedure in the MOE:

Scenario 1 - Occasional aircraft line maintenance: applies only to the Ax rated AMO for the need of supporting an A/C operation in a non-approved location for line maintenance (e.g. one-time flight, short term or seasonal contract, flight schedule change, etc.). The use of this privilege is specifically limited to those cases where the maintenance organisation has a maintenance contract with the EU customer operator requesting such maintenance outside the approved location and subject to an MOE control procedure which meets the minimum requirements specified in [par. 2.2.2.1 of this User Guide](#).

Scenario 2 – A rated AMOs to support an unserviceable aircraft due to an unscheduled event (AOG): applies to the need of aircraft maintenance in the case of an unscheduled/unexpected event, such as an AOG requiring defect rectification, subject to an MOE control procedure which meets the minimum requirements specified in [par. 2.2.2.2 of this User Guide](#) and further subject to the following limitations specific to the A rated AMO:

- The privilege is limited to maintenance organisations having received a work order or having a maintenance contract with the EU customer/operator (A/C covered by the basic Regulation) requesting such maintenance outside the approved location;
- In the case of Aircraft Base Maintenance activity, prior notification has to be sent to the allocated inspector before starting the activity, to allow evaluation of the risk associated to the activity and possibly consider an on-site audit after receiving the notification.

Scenario 3 – B/C rated AMO to support “on-wing” maintenance: applies only to activities carried out “on-wing” following a maintenance work order received from the customer/operator (either scheduled or unscheduled maintenance), subject to an MOE control procedure which meets the minimum requirements specified in [par. 2.2.2.2 of this User Guide](#) and further subject to the following limitations specific the B/C rated AMO:

- the activity is performed “on-wing” without removal of the component. Nevertheless, the Bx/Cx AMO may temporarily⁴ remove a component for maintenance, in order to improve access to that component, except when such removal generates the need for additional maintenance;
- The MOE (of the Bx/Cx AMO):
 - includes procedures for the necessary coordination between the Bx, Cx, as applicable, and the Ax rated maintenance organisation responsible for issuing the aircraft CRS;
 - clearly indicates that the organisation is allowed to perform maintenance, as applicable, on an installed component/engine/APU (“on-wing”), including any associated condition;
 - specifies under which condition such organisation may be allowed to use aircraft maintenance data⁵;
- where the maintenance task to be performed is only included in the engine/component maintenance data (e.g. it is only in the ESM or CMM) confirmation from the TCH is needed that the task can be carried out outside the workshop environment;

⁴ “temporarily” implies that the component removed is re-fitted on the same a/c during the same maintenance event before final aircraft CRS.

⁵ EMM/CMM tasks are more detailed and with higher restrictions than any equivalent/similar AMM task supposed to be performed only during aircraft operations. Therefore, in the cases where the B/C rated AMO is intending to use the AMM instead of the relevant EMM/CMM data, the AMO shall liaise with the customer to have a clear indication in the work Order to use the AMM. Such decision cannot be of the B/C rated AMO which shall respectively use EMM/CMM data unless otherwise specified in the work order.





Foreign Part-145 approvals Aircraft maintenance	Doc # Approval Date	UG.CAO.00134-004 13/07/2018
--	------------------------	--------------------------------

- In case of scheduled maintenance, the repetitive use of the privilege at the same location or for the same customer at different locations is not permitted;
- With regards to Cx rating, this privilege is intended for those components which are not readily transportable (e.g. thrust reverser, radome, LDG strut, etc.);

Scenario 4 – NDT activities under D1 rating: applies only to the D1 rated AMO. This class rating is only necessary for an AMO that carries out NDT as a particular task for another organisation and by definition this activity may need to be carried out at the customer's facility where the particular aircraft, engine or component is located, subject to an MOE control procedure which meets the minimum requirements specified in [par. 2.2.2.2 of this User Guide](#) and further subject to the following limitations specific of the D1 rated AMO:

- The MOE includes procedures for the necessary coordination between the D1 rated AMO and, as applicable, the Ax, Bx, Cx rated maintenance organisation responsible for issuing the final CRS of the aircraft, engine, component on which the NDT activity is carried out;
- EASA is not intending to issue Part-145 approval to D1 organizations only performing activities outside the approved locations without a permanent facility at the approved address where all applicable Part-145 organizations requirements are met, with particular reference to having facilities, personnel, maintenance data, tools and equipment to perform the intended/approved scope of work.

The following table summarises the acceptable cases of working outside the approved locations under an indirect approval privilege:

Indirect approval	Ax		Bx	Cx	D1	MOE control procedure
	Line	Base				
Scenario 1- Occasional aircraft line maintenance	X					Par. 2.2.2.1
Scenario 2- A rated AMO to support of an unserviceable aircraft due to an unscheduled event (AOG)	X	X				Par. 2.2.2.2
Scenario 3- B/C rated AMO to support "on-wing" maintenance			X	X		Par. 2.2.2.2
Scenario 4- NDT activities under D1 rating					X	Par. 2.2.2.2

2.2.2 Condition to be specified in the exposition.

When the maintenance organisation wishes to use the privileges described in the [previous paragraph](#), the [MOE 1.9](#) (scope of work) shall make reference to the fact that the maintenance organisation may perform works away from the approved locations, subject to the condition specified in MOE 2.24 (specific maintenance procedure). [The MOE 2.24 procedures shall be developed based on the following paragraphs as applicable to the intended scenario and are](#) intended to specify:

- which maintenance tasks are going to be performed under such privilege;
- how the maintenance organisation is going to ensure that the EASA Part-145 requirements are met in each case (in particular with regards to adequate facilities, sufficient staff, appropriate certifying staff, availability of tooling and equipment, availability of current maintenance data, adequate planning, release to service procedures, etc.);
- how the maintenance organisation's quality system is going to monitor compliance with the above requirements.





2.2.2.1 Occasional aircraft line maintenance (Scenario 1)

The procedure, shall be based on the following criteria:

- a) Scope of work shall be limited to:
 - aircraft type listed in the MOE 1.9 scope of work and;
 - routine tasks up to and including weekly check (or MOE 1.9 maintenance level whichever is less);
 - trouble shooting and defect rectification
 - any other specific limitation relevant to the organisation class rating, as indicated in par. 2.2.1 of this user guide under scenario 1.
- b) A process shall be in place, under the responsibility of the Quality Manager, to show:
 - how the maintenance Manager ensures that the necessary facilities, certifying staff, tools, equipment, material, maintenance data will be made available as necessary and how the maintenance records will be managed;

- The involvement of the Quality system and its approval for the occasional line maintenance, based on the following criteria:

Use of the non-approved location (consecutive calendar days)	Approval
equal or less than 10	Issued by the Quality manager based either on an on-site audit or a desktop review.
between 10 and 40	Issued by the Quality manager based on an on-site audit.
Note: When the duration expected for the maintenance is more than 40 days, the approval of a new line station shall be requested to EASA , to be listed in the MOE 5.3 (list of line maintenance locations as per 145.A.75 (d)).	

- that, when the privilege is used for more than 10 days (second case in the table above), the assigned inspector is notified of such approval within 7 days from the date of the beginning of the operation. In addition, that a list of all the CRS issued under this procedure shall be made available to EASA upon request;
- c) The notification shall be formalized using a Form, to be enclosed in the MOE Part 5, including the following minimum information:
 - Customer (s) operator requesting the maintenance activity;
 - Aircraft type(s);
 - Scope of the requested maintenance activity;
 - Location;
 - Number and category of certifying staff assigned to support this activity;
 - Quality Manager signature.
 - d) In case of scheduled maintenance, the repetitive use of the privilege at the same location or for the same customer at different locations is not permitted.





Foreign Part-145 approvals Aircraft maintenance	Doc #	UG.CAO.00134-004
	Approval Date	13/07/2018

2.2.2.2 Maintenance outside the approved locations other than “occasional line maintenance” (Scenario 2, 3 and 4)

The procedure, shall be based on the following criteria:

- a) The Scope of work shall be limited to:
 - aircraft type or components or engines or NDT methods and associated maintenance level as listed in the MOE 1.9 scope of work and;
 - any other specific limitation relevant to the organisation class rating, as indicated in par. 2.2.1 of this user guide under scenario 2, 3 and 4, as applicable.
- b) A process shall be in place, under the responsibility of the Quality Manager, including:
 - how the Maintenance Manager ensures that the necessary facilities, certifying staff, tools, equipment, material, maintenance data will be made available as necessary and how the maintenance records will be managed;
 - the involvement of the Quality System and its approval for any work away from the approved location, based on a desktop review;
 - availability of a list of all the CRS issued under this procedure to be made available to EASA upon request; In the case scenario 2 is used to perform aircraft base maintenance activities a prior notification shall be sent to the allocated inspector before starting the activity (as a reference, the minimum information listed in paragraph 2.2.2.1 point (c) of this user guide are expected with the notification)





Foreign Part-145 approvals Aircraft maintenance	Doc #	UG.CAO.00134-004
	Approval Date	13/07/2018

2.3. Direct approval of other maintenance outside the approved locations

EASA may consider additional scenarios for maintenance outside the approved locations in cases not already covered by the previous [paragraph 2.2](#), to be approved on a case by case basis, therefore subject to a direct approval.

Prerequisite for considering any additional scenario is a demonstration of need (e.g. warranty claims, support of an EU operator, etc.), where the related assessment by EASA will depend on a risk based approach and confidence building with the maintenance organisation.

The following are examples (list not exhaustive) of additional scenarios subject to direct approval:

- one time or temporary need of Ax AMO to perform scheduled aircraft base maintenance;
- temporary need of a Bx/Cx AMO to perform several scheduled “on-wing” activities on different aircraft (e.g. implementation of modification campaign following SBs, ADs);
- need of a Bx/Cx AMO to perform maintenance outside the approved locations at another Bx/Cx workshop (workshop “off-wing” maintenance);

Any such case can be evaluated by EASA subject to a concession request as per MOE 3.10 procedure, specifying as a minimum:

- a) The proposed scenario (including location(s)) and demonstration of need;
- b) Statement from the Quality system that the conditions in which the intended maintenance will be carried out have been verified to be in compliance with applicable Part-145 requirements. Prior agreement with the assigned inspector is necessary to decide if this statement shall be based on desktop or on-site audit by the Quality System, which will depend on the confidence building with the organization’s quality system and the risk associated with the maintenance task;
- c) Confirmation that any maintenance according to the proposed scenario, will be only started after approval by EASA;

The assigned inspector shall review the application and evaluate, depending on the confidence with the organization’s quality system, if the recommendation for approval is to be finalized with a desktop or on-site audit by the assigned inspector. The EASA MOC has to be consulted for a final decision on this matter.

The recommendation to EASA shall include an EASA Form 6 and associated Technical Visa recommendation for approval of the concession. The approval is finalized by EASA with the issuance of the concession approval letter and without change of the EASA Form 3 certificate.

In the case of scheduled aircraft base maintenance, the authority oversight plan shall include a sampling of the documentation associated to the activity performed outside the approved location (e.g. review of maintenance records), and when practicable shall also include an on-site audit during the on-going maintenance.





Foreign Part-145 approvals Aircraft maintenance	Doc #	UG.CAO.00134-004
	Approval Date	13/07/2018

3 Line station without a permanent cat. B2 staff





Foreign Part-145 approvals Aircraft maintenance	Doc #	UG.CAO.00134-004
	Approval Date	13/07/2018

Part 145.A.30 (g) requires that any maintenance organisation maintaining aircraft, have, in the case of aircraft line maintenance, appropriate aircraft rated certifying staff qualified as category B1, B2, B3 as appropriate....”.

As a consequence, maintenance organisations shall demonstrate that appropriate aircraft rated **B1 and B2** certifying staff are available in the maintenance organisation, for each aircraft type intended to be included in the approved scope of work.

However, when the maintenance organisation is operating various line stations, it is not necessary that B2 C/S is permanently available at each line station, provided that in the line station (s) where the B2 C/S is not available one of the following condition may be met:

Option a) The line maintenance contract(s) in place (e.g. IATA SGHA-standard ground handling agreement), clearly specify that the contract(s) is/are limited to defect rectification not requiring B2 privileges to allow the aircraft release to service.

In this case the maintenance organisation does not need to provide any evidence that B2 certifying staff is permanently available at the line station for such a contract.

Option b) The line maintenance contract(s) in place do(es) not have limitations.

In this case, the situation needs to be evaluated depending on the volume of work performed at the line station (e.g. number and type of contracts in place, flight schedules, on-call maintenance, etc.), taking into account the probability of having a defect which can be only solved exercising the privileges of cat. B2 certifying staff. As a general criteria, it may be considered acceptable not to have a cat. B2 certifying staff permanently on site provided that he can be made available in case of need within a reasonable timeframe to support the operation (maximum travel time 2 hours)

Such B2 certifying staff can be either one of the maintenance organisation’s B2 certifying staff or a contracted “on call” B2 certifying staff from another maintenance organisation. This B2 certifying staff could be sufficient to support more than one line station within the limits of AMC 145.A.30 (d) 1.

In this case, since the B2 certifying staff is going to sign on behalf of the contracting maintenance organisation, he/she must be appropriately trained, assessed and authorized (issued a certifying staff authorization). This is not necessary if the defect is rectified and released by the contracted maintenance organisation under their own privileges.

In the case the maintenance organisation is operating line station(s) where B2 certifying staff is not permanently available, the MOE chapter L2.3 “line maintenance control of defects and repetitive defects” shall include a procedure on how to deal with defects requiring B2 certifying staff (refer to “Foreign Part 145 –aircraft line maintenance”, UG.CAO.00134-XXX).





Foreign Part-145 approvals Aircraft maintenance	Doc #	UG.CAO.00134-004
	Approval Date	13/07/2018

4 Policy on certificates of Release to Service for aircraft maintenance and associated responsibilities of maintenance organisation and CAMOs





Foreign Part-145 approvals Aircraft maintenance	Doc #	UG.CAO.00134-004
	Approval Date	13/07/2018

Reference: EASA policy on certificates of Release to Service for aircraft maintenance and associated responsibilities of maintenance organisations and CAMOs (ref. EASA policy letter dated 17 December 2015).

The following guidance is specifically addressing the maintenance of complex motor-powered aircraft involved in commercial air transport.

4.1 Continuing airworthiness responsibilities, including maintenance

The continuing airworthiness responsibilities are described in detail in Part-M regulation. Different provisions are in place depending on the aircraft category and type of operations. However, all these provisions have two aspects in common:

- the owner/operator (or contracted CAMO, if existing) is responsible for all activities aimed to determine the airworthiness status of the aircraft and to appropriately plan and coordinate maintenance, and;
- the contracted maintenance organisation or, when permitted by the rule, the independent certifying staff, are responsible for adequately performing and certifying the maintenance ordered by the owner/operator/CAMO.

In the particular case of aircraft involved in Commercial Air Transport, the operator is responsible for the continuing airworthiness of the aircraft it operates and shall be approved as a CAMO.

These responsibilities include, among other aspects, ensuring that all maintenance requirements (Airworthiness Directives, maintenance programme requirements, defect rectification, etc.) are complied with and released by approved Part-145 maintenance organisations.

This means that the operator (CAMO) is responsible for planning and ordering all required maintenance and for verifying that all the ordered maintenance has been released to service by the approved Part-145 organisation.

However, the operator is not responsible for the actual performance of maintenance, which is the responsibility of the Part-145 organisation issuing the CRS (Certificate of Release to Service).

Important aspects to be considered are the following:

- The operator (CAMO) cannot issue Certificates of Release to Service (CRS) following maintenance. The CRS has to be issued always by certifying staff of the Part-145 organisation;
- When maintenance is performed and released by the Part-145 organisation, the operator must have procedures to verify that all the maintenance ordered to that organisation has been released to service by the approved Part-145 organisation. However, in order to perform this verification the operator (CAMO) is not required to use certifying staff;
- Since the CRS only certifies that the maintenance ordered by the operator (CAMO) has been performed and released in accordance with Part-145, it does not guarantee that all the continuing airworthiness requirements are met (there may be some missing maintenance that has not been ordered by the operator). This is the responsibility of the operator (CAMO);
- Consequently, the operator (CAMO) must have procedures to ensure that a flight does not take place unless all the continuing airworthiness requirements are met. This could be met, for example, by a procedure where the operator (CAMO) receives a communication from the maintenance organisation and the operator (CAMO) notifies to the commander that there is no other maintenance due. However, other procedures are possible, for example, delegating to the Part-145 the notification to the commander;
- The CRS issued by the Part-145 organisation has to go always on board the aircraft as part of the Technical Log System, together with all the information related to rectification of defects, deferral of maintenance actions, etc. This information has to be always available to the commander, who is the ultimate responsible for accepting the aircraft before a flight takes place;
- The Technical Log System must also contain a maintenance statement issued by the operator (CAMO) providing the status of which scheduled and out of phase maintenance is next due. However, this maintenance statement does not need to be on board if the operator (CAMO) has alternate procedures acceptable for the competent authority in order to control the next maintenance due;





Foreign Part-145 approvals Aircraft maintenance	Doc #	UG.CAO.00134-004
	Approval Date	13/07/2018

- This maintenance statement, if placed on board the aircraft, does not supersede the obligation to have the Part-145 CRS on board and available to the commander.

4.2 Certification of maintenance

“A certificate of release to service shall be issued by appropriately authorised certifying staff on behalf of the organisation when it has been verified that all maintenance ordered has been properly carried out by the organisation in accordance with the procedures specified in point 145.A.70, taking into account the availability and use of the maintenance data specified in point 145.A.45 and that there are no non-compliances which are known to endanger flight safety”

In addition:

“A certificate of release to service shall be issued before flight at the completion of any maintenance”

The wording of the requirements above is further clarified in the following paragraphs.

4.3 How many CRS can or should be issued

Part-145 requires a CRS to be issued before flight at the completion of “any maintenance”.

The words “any maintenance” can be interpreted in different ways, such as:

- “any maintenance task”;
- “any combination of maintenance tasks”;
- “any maintenance event”.

As a result of this, the regulation allows different systems of release to service, such as (refer to [chapter 5 of this user guide for further details](#)):

- Several certificates of release to service are issued, each one of them covering a single maintenance task
- Several certificates of release to service are issued, each one of them covering a certain group of tasks.
- A single certificate of release to service is issued covering all the maintenance included in a maintenance event.

Regardless of which release system is used, the release to service procedure implemented by the maintenance organisation should be adequate to the type of organisation, complexity, scope of work, etc., and has to ensure compliance with release to service requirements. This means, among other aspects, that:

- A CRS must identify clearly the work performed and, if applicable, any incomplete work and the corresponding limitations;
- A CRS can only be issued by certifying staff holding certification privileges for all the maintenance tasks covered by the release statement;
- In the case of base maintenance the CRS must be issued by category C certifying staff;
- The release to service procedures must ensure that all the maintenance actions have been properly coordinated, and the release to service is issued within a reasonable timeframe after the actual performance of the tasks;

In addition, it is important to stress that a release to service, whether it is single or multiple, does not necessarily mean that the aircraft is airworthy and ready for flight. A release to service is just a release after the performance of maintenance and its issuance is the responsibility of the maintenance organisation. However, the responsibility for defining the airworthiness status of the aircraft is the responsibility of the CAMO/operator.





Foreign Part-145 approvals Aircraft maintenance	Doc #	UG.CAO.00134-004
	Approval Date	13/07/2018

4.4 What does it mean that “there are no non-compliances which are known to endanger flight safety”

The intent of this requirement is to cover those cases where the maintenance organisation, during the performance of the maintenance ordered by the operator, discovers a non-compliance which endangers flight safety. However, it is not the intent to require the maintenance organisation to find or become responsible for hidden non-compliances which are not expected to be discovered during the ordered maintenance.

Certain questions have been raised as to whether this includes also those situations where, after performing the maintenance ordered by the operator, the aircraft is left in a non-airworthy configuration. This could be the case, for example, where the maintenance organisation removes an engine for preservation (without installing a new one), or where the organisation performs an NDT inspection and finds a crack outside limits. This has raised questions as to whether in these cases a CRS can be issued for the maintenance performed.

All the cases mentioned above (including those of non-compliances affecting flight safety discovered during maintenance), can be properly addressed by using the provisions contained in 145.A.50(c) and (e). Based on those provisions, it is possible to release the maintenance performed, as long as the incomplete maintenance is properly identified and communicated to the operator and possibly to the competent authority if a disagreement with the operator exists (refer to the [MOE User Guide UG.CAO.0024 chapter 2.16 for further guidance](#)).

4.5 What does it mean “appropriately authorised certifying staff”

This means that in order to issue a CRS the certifying staff have to be formally authorised by the maintenance organisation to do so.

The word “appropriately” means that the person can only be authorised when the organisation has verified compliance with all the applicable qualification requirements, only for the scope of work applicable to that qualification.

This means that, for example, in the case of a line maintenance event which includes a daily check + some single running tasks + requested defect rectification entered in the Technical Log by the crew, if such event includes tasks within the scope of B1 and B2 privileges (mechanical tasks and avionic tasks), then a single release to service can only be issued if the person issuing it holds both the B1 and B2 licences. It is not possible for a B1 certifying staff (or for a B2 certifying staff) to issue a single release to service covering the full maintenance event. The other option is to have a B1 certifying staff issuing a release to service for the mechanical tasks and a B2 certifying staff issuing a release to service for the avionics tasks, which would become a multiple release system (refer to [chapter 5 of this user guide for further guidance](#)).

4.6 What does it mean “when it has been verified that all maintenance ordered has been properly carried out”

This doesn't necessarily mean that certifying staff have to perform or supervise the whole process of every task, but the necessity of assessing the complexity of each task, making sure that they have been assigned to personnel authorised to sign-off to the corresponding level, coordinating the different tasks, supporting that personnel in case of any mistakes or unexpected difficulties and verifying that the job has been completed and signed-off properly.

As a consequence, this is not just an administrative task which can be performed from a remote location or without having been involved at all. Certifying staff have the last call on the amount of involvement they would like to perform in order to be satisfied that the maintenance can be properly released. This level of involvement cannot be predefined or limited by the organisation's procedures.





Foreign Part-145 approvals Aircraft maintenance	Doc #	UG.CAO.00134-004
	Approval Date	13/07/2018

4.7 In the case of base maintenance, what are the functions and responsibilities of “support staff”

The qualification criteria for B1/B2 certifying staff and support staff are identical as both:

- must have a Part-66 licence with the corresponding type ratings (or be qualified according to Appendix IV to Part-145 when applicable);
- must have the same recent experience and continuation training;
- must have training in human factors and company procedures; and
- are subject to the same competence assessment;

The only difference is that in the base maintenance environment there is an additional function, the category C certifying staff. However, this function is more administrative due to the more complex environment.

Regarding the level of involvement of the support staff, Part-145 states that “B1 and B2 support staff shall ensure that all relevant tasks or inspections have been carried out to the required standard before the category C certifying staff issues the certificate of release to service”.

This requirement is of a similar nature to the one contained in 145.A.50(a), where certifying staff are required to ensure that “it has been verified that all maintenance ordered has been properly carried out”. As a consequence, the level of involvement expected from the support staff follows the same principles as indicated above for certifying staff.

4.8 What is the function of personnel authorised to “sign-off”

Part-145 requires that, in order to prevent omissions, every task or group of tasks should be signed-off by formally authorised personnel after its completion. It also states that a “sign-off” is different from a “release to service”.

Furthermore, work by “unauthorised personnel” (temporary staff, trainee..) should be checked by “authorised personnel” before they sign-off. “They” means “authorised personnel” (formally authorised to sign-off).

This concept of personnel authorised to sign-off is in line with the provisions related to the assessment of mechanics contained in Part-145. This assessment should guarantee that “mechanics shall be able to carry out tasks to any standard specified in the maintenance data, and will notify supervisors of mistakes requiring rectification to re-establish required maintenance standards”.

Nevertheless, holding a “sign off” authorisation doesn’t mean that the authorised person can sign-off all tasks. It means that he/she can sign-off tasks up to the authorised level, depending on the training and experience held, and in accordance with a procedure described in the MOE. Furthermore, even if this person is qualified and able to carry out the task to the required standard, this does not mean that certifying staff and support staff are not needed. The presence of certifying staff and support staff is an additional safety barrier and has the function of coordinating the different tasks, supporting those mechanics in case of any mistakes or unexpected difficulties and verifying that the job has been completed and signed-off properly.





Foreign Part-145 approvals Aircraft maintenance	Doc #	UG.CAO.00134-004
	Approval Date	13/07/2018

5 Acceptable CRS following line maintenance





5.1 Definitions

Refer to the previous chapter 4 of this user guide for further guidance on the definition and meaning of aircraft certificate of release to service

5.2 Work Order issued by the customer operator

Line Maintenance work order may vary significantly depending from customer operator, ATL system in use, etc., and could be:

- A sequence of different work orders, each one covering a single maintenance task, or;
- A sequence of crew entries in the Aircraft Log book, which can also be considered as a series of work orders, or;
- A single work order which is including a certain group of maintenance tasks, or;
- A combination of the above.

5.3 Possible CRS system for Line Maintenance

A CRS can only be issued by certifying staff holding certification privileges for all the maintenance tasks covered by the release statement.

The possible CRS scenarios described in the following paragraphs can be envisaged, which all comply with Part-145 regulation.

5.4 Multiple release approach

This situation applies when a maintenance event is composed by various work orders⁷ and each work order is issued and individual CRS, resulting in multiple releases associated to the particular maintenance event.

In this case, an appropriately authorized B1 or B2 certifying staff, as applicable, shall sign the CRS of the related task.

EXAMPLE:

• Maintenance event 1

Work Order 1	Weekly check	CRS 1 issued by B1 c/s
Work Order 2	LH engine IDG replacement	CRS 2 issued by B1 c/s
Work Order 3	Trouble shooting autopilot 1	CRS 3 issued by B2 c/s
Work Order 4	ATL item 1- Hard landing	CRS 4 issued by B1 c/s

Note: 4 different CRS issued in this maintenance event

Or

• Maintenance event 2

Work Order 1	Weekly check	CRS 1 issued by B1 c/s
	LH engine IDG replacement	
	ATL item 1- Hard landing	
Work Order 2	Trouble shooting autopilot 1	CRS 2 issued by B2 c/s

Note: 2 different CRS issued in this maintenance event

Note: any of the CRS above may also be issued by a c/s holding a combined "B1+B2" c/s authorization

⁷ each work order may contain a single task or a group of tasks





5.5 Single release approach

This situation applies when a single certificate of release to service is issued covering all the maintenance ordered in a maintenance event. In this case, if the maintenance event is including both mechanical and avionic tasks, the only person who can issue the single CRS is someone holding a “B1+B2” c/s authorisation.

EXAMPLE:

- Maintenance event 1**

Work Order 1	Weekly check	One single CRS issued by a B1+B2 c/s
	LH engine IDG replacement	
	Trouble shooting autopilot 1	
	ATL item 1 - Hard landing	

Note: 1 single CRS issued in this maintenance event

Or

- Maintenance event 2**

Work Order 1	Perform A check tasks in the tally sheet containing mechanical and avionic tasks	One single CRS issued by a B1+B2 c/s
--------------	--	--------------------------------------

Note: 1 single CRS issued in this maintenance event

5.5.1 Single release approach when only “B1” and “B2” c/s are available (no any “B1+B2”)

This situation typically applies to line maintenance environment, when a single maintenance event including mechanical and avionic tasks is order to the maintenance organisation and only stand alone “B1” and “B2” c/s is available. In such case, an acceptable CRS shall be such that:

- B1 certifying staff is issuing a CRS for the mechanical tasks, and;
- B2 certifying staff is issuing a CRS for the avionic tasks;

This result can be obtained, for example issuing a line maintenance release to service certificate, which is including both the B1 CRS and the B2 CRS.

EXAMPLE:

- Maintenance event 1**

Work Order 1	Weekly check	One CRS issued by B1 c/s for mechanical tasks and One CRS issued by B2 c/s for avionic tasks
	LH engine IDG replacement	
	Trouble shooting autopilot 1	
	ATL item 1 - Hard landing	

Or

- Maintenance event 2**

Work Order 1	Perform A check tasks in the tally sheet containing mechanical and avionic tasks	One CRS issued by B1 c/s for mechanical tasks and One CRS issued by B2 c/s for avionic tasks
--------------	--	---

After the CRS above have been issued, the recording of the maintenance event in the logbook can be done by any B1 or B2 c/s.





Foreign Part-145 approvals Aircraft maintenance	Doc #	UG.CAO.00134-004
	Approval Date	13/07/2018

5.6 *Special cases*

For certifying staff qualified according to national licensing systems as per the Appendix IV to Part-145, further limitations may apply, where the national licensing system does not include full release to service privileges.

EXAMPLE

This applies for example when the national licensing regulation does not allow the B2 category certifying staff (or equivalent) licence holders to issue a CRS. In such cases, the CRS by B2 c/s staff shall be replaced by a “sign-off” by staff holding a B2 sign-off authorisation and the final aircraft CRS will be issued by a B1 c/s according to the privileges granted by the national licensing system.





Foreign Part-145 approvals Aircraft maintenance	Doc #	UG.CAO.00134-004
	Approval Date	13/07/2018

6 Line or Base maintenance release of aircraft not covered by the Basic Regulation





Foreign Part-145 approvals Aircraft maintenance	Doc # Approval Date	UG.CAO.00134-004 13/07/2018
--	------------------------	--------------------------------

6.1 Scope and Applicability

This guidance applies to those aircraft which are excluded from complying with the airworthiness requirements contained in the EASA Basic Regulation and its Implementing Rules for airworthiness as amended.

The purpose of this guidance is to explain to all Foreign EASA Part-145 organisations holding an "A" rating (A1, A2, A3 or A4) and to the assigned inspectors overseeing these approvals on behalf of EASA the following:

- the appropriate use of the EASA Part-145 maintenance release;
- the appropriate identification in the EASA MOE of the scope of the EASA Part-145 maintenance release;
- the various maintenance release practices identified during EASA surveillance audits;
- the EASA position in relation to each of those practices and in which cases findings would be raised.

The various maintenance release practices are summarised in the following paragraphs. In addition, Annex 1 of this User Guide is summarising the various practices together with examples of possible wording of the maintenance release.

6.2 Practice 1

When an approved EASA Part 145 organisation issues a release according to EASA Part 145.A.50 using their EASA Part-145 approval number, such a release is issued outside the privileges granted by the EASA Part 145 approval. Therefore, the EASA inspector shall raise a finding against EASA Part 145.A.50 requirements.

6.3 Practice 2

When an approved EASA Part-145 organisation issues a release under the aviation regulation (aviation code) of the State of Registry (SoR) and is using its SoR dedicated maintenance approval number, EASA does not have objections about this practice regardless of whether the aviation code of the SoR is also called "Part-145" ("**practice 2a**" of the attached Annex) or not ("**practice 2b**" of the attached Annex). The reason is that there is no possible confusion since the organisation is signing with the SoR dedicated maintenance approval number and this release falls completely under the SoR responsibility.

6.4 Practice 3

When an approved EASA Part 145 organisation issues a release under the aviation regulation (aviation code) of the State of Registry (SoR) and there is no dedicated maintenance approval number granted by the SoR (the organisation still refers to the EASA approval number), two different cases have been identified:

1. The aviation code of the SoR is also called "Part-145" ("**practice 3a**" of the attached Annex).

EASA does not have objections about this practice as long as:

- i. the release statement clearly identifies that this is a release under the aviation law of the SoR **and**
- ii. the organisation provides evidence that the SoR aviation laws allow this practice and the use of the EASA approval number.

This release falls completely under the SoR responsibility.

However, if those two conditions are not met, and the release statement is identical to the EASA Part-145 one, the EASA inspector shall raise a finding against EASA Part 145.A.50 requirements. The reason is that a confusion exists of whether this is an EASA release or not, taking into account that the organisation is also referring to the EASA approval number.

Note, 'In the case of line maintenance, the associated CRS is typically recorded by the maintenance staff in the AIC technical logbook, which is designed by the operator. In this case, if the operator has pre-printed a release statement which is





Foreign Part-145 approvals Aircraft maintenance	Doc #	UG.CAO.00134-004
	Approval Date	13/07/2018

identical to the EASA Part-145 release, it is acceptable that this statement is crossed out and replaced by an statement which clearly identifies that it is a release under the aviation law of the SoR. The release may still refer to the EASA approval number.

2. The aviation code of the SoR is not called "Part-145" ("practice 3b" of the attached Annex).

EASA does not have objections about this practice as long as the organisation provides evidence that the SoR laws allow this practice and the use of the EASA approval number.
This release falls completely under the SoR responsibility.





Foreign Part-145 approvals
Aircraft maintenance

Doc # UG.CAO.00134-004
Approval Date 13/07/2018

6.5 Practices for aircraft certificate of release to service

A/C registration	Release Statement used	Approval reference used	EASA position	Conclusion
A/C covered by the Basic Regulation (BR)	EASA release statement: <i>"Certifies that the work specified, except as otherwise specified, was carried out in accordance with Part-145 and in respect to that work the aircraft is considered ready for release to service"</i>	EASA.145.XXXX	This is the release expected for aircraft covered by Basic Regulation.	Compulsory
Practice 1 A/C not covered by the BR	EASA release statement: <i>"Certifies that the work specified, except as otherwise specified, was carried out in accordance with Part-145 and in respect to that work the aircraft is considered ready for release to service"</i>	EASA.145.XXXX	This release is issued outside the privileges granted by the EASA Part-145 approval. (The assigned inspector shall raise a finding against EASA Part 145.A.50 requirements)	The organisation has used EASA procedures on aircraft not covered by the Basic Regulation (and not allowed by the MOE)
Practice 2a A/C not covered by the BR	The SoR release statement refers to the aviation code of the SoR, which is <u>also</u> called "Part-145" Example: <i>"Certifies that the work specified, except as otherwise specified, was carried out in accordance with Part-145 under the national aviation law of the SoR (name) and in respect to that work the aircraft is considered ready for release to service"</i>	SoR Number	No objections from EASA	The CRS falls under the SoR responsibility
Practice 2b A/C not covered by the BR	The SoR release statement refers to the aviation code of the SoR, which is <u>not</u> called "Part-145" Example: <i>"Certifies that the work specified, except as otherwise specified, was carried out in accordance with (Aviation Code of the SoR) and in respect to that work the aircraft is considered ready for release to service"</i>	SoR Number	No objections from EASA	The CRS falls under the SoR responsibility





Foreign Part-145 approvals
Aircraft maintenance

Doc # UG.CAO.00134-004
Approval Date 13/07/2018

A/C registration	Release Statement used	Approval reference used	EASA position	Conclusion
Practice 3a A/C not covered by the BR	<p>The SoR release statement refers to the aviation code of the SoR, which is <u>also</u> called "Part-145"</p> <p>Example:</p> <p><i>"Certifies that the work specified, except as otherwise specified, was carried out in accordance with Part-145 under the national aviation law of the SoR (name) and in recognition of the organisation's EASA Part-145 approval, and in respect to that work the aircraft is considered ready for release to service"</i></p> <p><i>Signed: EASA.145.XXXX</i></p>	EASA.145.XXXX	<p>No Objection from EASA as long as the release statement clearly identifies that this is a release under the aviation law of the SoR and as long as the AMO provides evidence that the SoR laws allow this practice and the use of the EASA approval number</p> <p>(if those conditions are not met findings shall be raised)</p>	The CRS falls under the SoR responsibility
Practice 3b A/C not covered by the BR	<p>The SoR release statement refers to the aviation code of the SoR, which is <u>not</u> called "Part-145"</p> <p>Example:</p> <p><i>"Certifies that the work specified, except as otherwise specified, was carried out in accordance with (Aviation Code of the SoR) and in recognition of the organisation's EASA Part-145 approval, and in respect to that work the aircraft is considered ready for release to service"</i></p> <p><i>Signed: EASA.145.XXXX</i></p>	EASA.145.XXXX	<p>No Objection from EASA as long as the AMO provides evidence that the SoR laws allow this practice and the use of the EASA approval number</p> <p>(if those conditions are not met findings shall be raised)</p>	The CRS falls under the SoR responsibility





Foreign Part-145 approvals Aircraft maintenance	Doc #	UG.CAO.00134-004
	Approval Date	13/07/2018

7 Minimum line maintenance location setup





Foreign Part-145 approvals Aircraft maintenance	Doc #	UG.CAO.00134-004
	Approval Date	13/07/2018

7.1 Scope and applicability

Experience shows that maintenance organisations often underestimate the need to have a minimum setup in terms of facilities, tools and equipment when opening a line maintenance location.

A checklist is made available in the following paragraph on the facilities, tools, and equipment materials to be typically available at a line maintenance Location.

This document is to be considered as high level guidance to be adapted to the size and complexity of the particular line maintenance location. It has to be noted that:

- compliance of the check list does not necessarily mean that the line maintenance location complies with Part-145 facility, tools and equipment requirements;
- absence of one or more item does not necessarily mean non-compliance to Part-145, if it can be demonstrated that the particular item(s) are not necessary depending from the type of aircraft and contracts in place and/or the same result can be obtained by different means. For example, infrequently used equipment (e.g. elevator access platforms where no any routine elevator inspection is necessary at the line maintenance location) do not need to be permanently available, however means shall be in place to obtain them when needed;
- other Part-145 requirements apply (e.g. maintenance data, personnel, certifying staff) which are not included in this document.





Foreign Part-145 approvals Aircraft maintenance	Doc # Approval Date	UG.CAO.00134-004 13/07/2018
--	------------------------	--------------------------------

7.2 Check list for minimum line maintenance location setup

A. Facilities

1. CS / Maintenance Staff Offices Availability:

- Enough Space (Study Instructions/Filling Records)
- PC Terminals and Printers
- Staff Means of Transportation to Apron

2. Line Station Communications Means:

- Station E-mail Available
- Scanner/Fax
- Fixed Phone
- Certifying Staff Mobile Phones or Radios
- A/C Contact Radio Frequency
- Customers MCC/Main Base Contacts Available
- Customers Flight Schedule System Information Available

3. Storage facilities

- Storage area for materials and components with racks to hold and segregate serviceable/unserviceable components
- Tool crib area

4. Access to the Hangar in case of need: Local Provider Contract / Agreement

B. General Items to be always available (not aircraft specific)

- Tire Pressure Manometer
- High Pressure Nitrogen Bottles + Pressure Reducer
- Mean of transport for Wheels & Brakes
- Interphone Headset + Extension Cord
- General (Personal) Tool Box
- Portable Lights for External Inspection
- Digital Tester (Fluke)
- Grease Gun
- Fuel Drainage Tool + Disposal Tank
- Antistatic ESD Wristband
- High Speed Tape
- Circuit Breaker Collars
- Sealants/Fillers for Temporary Repairs
- Lock wire (Various Dimensions)
- Platforms, Stairs, Ladders for Fuselage/Wings/Tail. A Cherry Picker Car with extendable Platform is recommended to facilitate the most frequent activities (e.g. for engine oil refill)





Foreign Part-145 approvals Aircraft maintenance	Doc # Approval Date	UG.CAO.00134-004 13/07/2018
--	------------------------	--------------------------------

C. Aircraft Specific Items to be typically available for a/c type in the scope of work

Some of the tools/equipment indicated below are typically provided by the customer operator. However, when an EASA Part-145 approval is requested in the absence of a customer operator, the maintenance organisation remains responsible to comply with the requirement to have available the necessary tools and equipment to perform the approved scope of work. An approval cannot be granted based on intentions to acquire tools and equipment only at the time a contract will be in place.

- Tire Inflation Adaptor (Specific A/C tyre)
- Torque Wrench/Adaptor Sets (Wheels Replacement)
- Nose/Main Landing Gear Axle Jack to Lift A/C (Wheels Replacement)
- Engine/IDG Oil Servicing Pump or Cart
- Hydraulic Oil Servicing Pump (If not by design installed on board)
- Shock Absorber Servicing Adapter (Air / Oil)
- Thrust Reverser Deactivation Pin/Device (If not Operator provided or Installed On-board or On-board as Fly-Kit)
- Starter Valve Manual Operation Tool (If not Operator provided or Installed On-board or On-board as Fly-Kit)
- Pitot / Static / TAT / AOA Covers (If not Operator provided or On-board as Fly-Kit)
- Landing Gear Lockpins (If not Operator provided or On-board)
- Steering Deactivation By-pass Pin (If not Operator provided)

D. Aircraft Specific items to be typically available after a contract with a customer operator is signed

Need of availability for the parts listed below at the maintenance organisation depends from the type of activities included in the contract with the customer operator together with its requirements for the parts to be available at each line maintenance location where aircraft are operated, in order to reduce possible AOG effects. Some of the items listed may be provided by the customer operator

- Wheels
- Brakes
- Engine / IDG Oil
- Hydraulic Oil
- Engine Oil/Fuel Filter Kit
- Oxygen Cylinders (Crew / Portable)
- Lamps Kit (External / Internal)
- (Eventually) NO-GO Components
- Sealants/Fillers for Temporary Repairs

