

JAR 145			ECAR 145		
Paragraph	Section 1	Section 2	Implementing rule	Means of compliance Certification Specifications Guidance material	Remarks
145.30 (a)	<p>Personnel requirements</p> <p>A senior person or group of persons acceptable to the JAA full member Authority, whose responsibilities include ensuring that the JAR-145 approved maintenance organisation is in compliance with JAR-145 requirements, must be nominated. Such person(s) must ultimately be directly responsible to the accountable manager who must be acceptable to the JAA full member Authority.</p>	<p>AMC 145.30(a)</p> <p>1 The person or persons nominated should represent the maintenance management structure of the organisation and be responsible for all functions specified in JAR-145. It therefore follows that, dependent upon the size of the JAR-145 organisation, the JAR-145 functions may be subdivided under individual managers (and in fact may be further subdivided) or combined in any number of ways.</p> <p>2 In essence however the JAR-145 organisation should have, dependent upon the extent of approval, a base maintenance manager, a line maintenance manager, a workshop manager and a quality manager, all of whom should report to the accountable manager except in small JAR-145 organisation where any one manager may also be the accountable manager, and subject to JAA full member Authority acceptance, he may also be the line maintenance manager or the workshop manager. Procedures should make clear who deputises for any particular manager in the case of lengthy absence of said manager(s). The length of absence to justify deputising is the period beyond which the organisation cannot function properly due to such absence.</p> <p>3 The accountable manager is responsible for ensuring that all necessary resources are available to accomplish maintenance in accordance with JAR 145.65[(b)] to support the organisation's JAR-145 approval.</p> <p>4 The base maintenance manager is responsible for ensuring that all maintenance required to be carried out in the hangar, plus any defect rectification carried out during</p>	<p>Personnel requirements</p> <p>A senior person or group of persons acceptable to the <u>Member State</u>, whose responsibilities include ensuring that the <u>ECAR-145</u> approved maintenance organisation is in compliance with <u>ECAR-145</u> requirements, must be nominated. Such person(s) must ultimately be directly responsible to the accountable manager who must be acceptable to the <u>Member State</u> Authority.</p> <p><u>1 The person or persons nominated must represent the maintenance management structure of the organisation and be responsible for all functions specified in ECAR-145</u></p> <p><u>2 Procedures must make clear who deputises for any particular manager in the case of lengthy absence of said manager(s).</u></p> <p><u>3 The accountable manager is responsible for ensuring that all necessary resources are available to accomplish maintenance in accordance with ECAR-145.65[(b)] to support the organisation's ECAR-145 approval.</u></p> <p><u>4 With the exception of the accountable manager, the managers must be identified and their credentials submitted for acceptance to the Member State. To be accepted, the accountable manager must demonstrate a basic understanding of ECAR-145 and the responsibilities associated with being accountable manager.</u></p> <p>5 To be accepted, [all other] such managers <u>must</u> have relevant knowledge and satisfactory experience related to aircraft/aircraft component maintenance.</p>	<p>AMC 145.30(a)</p> <p>1 It therefore follows that, dependent upon the size of the <u>ECAR-145</u> organisation, the <u>ECAR-145</u> functions may be subdivided under individual managers (and in fact may be further subdivided) or combined in any number of ways.</p> <p>2 In essence however the <u>ECAR-145</u> organisation should have, dependent upon the extent of approval, a base maintenance manager, a line maintenance manager, a workshop manager and a quality manager, all of whom should report to the accountable manager except in small <u>ECAR-145</u> organisation where any one manager may also be the accountable manager, and subject to JAA full member Authority acceptance, he may also be the line maintenance manager or the workshop manager. 3 resulting from the quality compliance monitoring of <u>ECAR-145.65[(c)]</u>.</p> <p>5 The line maintenance manager is responsible for ensuring that all maintenance required to be carried out on the line including line defect rectification is carried out to the standards specified in <u>ECAR-145.65[(b)]</u> and also responsible for any corrective action resulting from the quality compliance monitoring of <u>ECAR-145.65[(c)]</u>.</p> <p>6 The workshop manager is responsible for ensuring that all work on aircraft components is carried out to the standards specified in <u>ECAR-145.65[(b)]</u> and also responsible for any corrective action resulting from the quality compliance monitoring of <u>ECAR-145.65[(c)]</u>.</p> <p>7 The quality manager's responsibility is specified in <u>ECAR-145.30(b)</u>.</p>	<p>Guidance</p> <p>Moved to rule, otherwise there is no mention of any particular management structure.</p> <p>Moved to rule Form 4 for acceptance of personnel must be in the approval specifications.</p>

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		<p>base maintenance, is carried out to the design and quality standards specified in JAR 145.65[(b)]. The base maintenance manager is also responsible for any corrective action resulting from the quality compliance monitoring of JAR 145.65[(c)].</p> <p>5 The line maintenance manager is responsible for ensuring that all maintenance required to be carried out on the line including line defect rectification is carried out to the standards specified in JAR 145.65[(b)] and also responsible for any corrective action resulting from the quality compliance monitoring of JAR 145.65[(c)].</p> <p>6 The workshop manager is responsible for ensuring that all work on aircraft components is carried out to the standards specified in JAR 145.65[(b)] and also responsible for any corrective action resulting from the quality compliance monitoring of JAR 145.65[(c)].</p> <p>7 The quality manager's responsibility is specified in JAR 145.30(b).</p> <p>8 Notwithstanding the example sub-paragraphs 2 - 7 titles, the organisation may adopt any title for the foregoing managerial positions but should identify to the JAA full member Authority the titles and persons chosen to carry out these functions.</p> <p>9 Where a JAR - 145 organisation chooses to appoint managers for all or any combination of the identified JAR - 145 functions because of the size of the undertaking, it is necessary that these managers report ultimately through either the base maintenance manager or line maintenance manager or workshop manager or quality manager, as appropriate, to the accountable</p>		<p>8 Notwithstanding the example sub-paragraphs 2 - 7 titles, the organisation may adopt any title for the foregoing managerial positions but should identify to the JAA full member Authority the titles and persons chosen to carry out these functions.</p> <p>9 Where a ECAR-145 organisation chooses to appoint managers for all or any combination of the identified ECAR-145 functions because of the size of the undertaking, it is necessary that these managers report ultimately through either the base maintenance manager or workshop manager or quality manager, as appropriate, to the accountable manager.</p> <p>10 NOTE: Certifying staff may report to any of the managers specified depending upon which type of control the ECAR-145 approved maintenance organisation uses (for example = licensed engineers/independent inspection/dual function supervisors etc.) so long as the quality compliance monitoring staff specified in ECAR-145.65 [(c)(1)] remain independent of all.</p>	<p>Deleted: JAR</p> <p>Guidance</p>

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		<p>manager. 10 The JAA full member Authority therefore requires the managers specified above to be identified and their credentials submitted on JAA Form Four to the JAA full member Authority. [To be accepted, the accountable manager should demonstrate a basic understanding of JAR-145 and the responsibilities associated with being accountable manager.] To be accepted, [all other] such managers should have relevant knowledge and satisfactory experience related to aircraft/aircraft component maintenance as appropriate in accordance with the relevant national regulations of the JAA full member Authority granting the JAR-145.</p> <p>NOTE: Certifying staff may report to any of the managers specified depending upon which type of control the JAR -145 approved maintenance organisation uses (for example – licensed engineers/independent inspection/dual function supervisors etc.) so long as the quality compliance monitoring staff specified in JAR 145.65 [(c)(1)] remain independent of all. Appendix 4 gives some organisation examples. [Ch. 2, 10.7.98; Amdt. 3, 01.04.01]</p>			Moved to the rule
30(b)	The accountable manager must nominate a sub-paragraph (a) senior person, with responsibility for monitoring the JAR 145.65(b) quality system including the associated feedback system. Such senior person must have right of direct access to the accountable manager to ensure that the accountable manager is kept properly informed on quality and compliance matters.]	AMC 145.30(b) Monitoring the quality system includes requesting remedial action as necessary by the AMC 145.30(a) accountable manager, base maintenance manager, line maintenance manager, and workshop manager as appropriate.] [Amdt. 3, 01.04.01]	The accountable manager must nominate a sub-paragraph (a) senior person, with responsibility for monitoring the ECAR 145.65(b) quality system including the associated feedback system. Such senior person must have right of direct access to the accountable manager to ensure that the accountable manager is kept properly informed on quality and compliance matters]	Monitoring the quality system includes requesting remedial action as necessary by the AMC 145.30(a) accountable manager, base maintenance manager, line maintenance manager, and workshop manager as appropriate.]	

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30(c)	The JAR-145 approved maintenance organisation must [have a maintenance man-hour plan showing that the organisation has] sufficient [staff] to plan, perform, supervise, inspect [and quality monitor the organisation] in accordance with the approval. [In addition the organisation must have a procedure to reassess work intended to be carried out when actual staff availability is less than the planned staffing level for any particular work shift or period].	<p>AMC 145.30(c) [1] Have sufficient staff means that the JAR-145 approved maintenance organisation employs or contracts such staff of which at least half the staff that perform maintenance in each workshop, hanger or flight line should be employed to ensure organisational stability. Contract staff, being part time or full time should be made aware that when working for the JAR-145 approved maintenance organisation they are subjected to compliance with the organisation's procedures specified in the maintenance organisation exposition relevant to their duties. For the purpose of this sub-paragraph, employed means the person is directly employed as an individual by the JAR-145 approved maintenance whereas contracted means the person is employed by another organisation and contracted by that organisation to the JAR-145 approved maintenance organisation.</p> <p>2 The maintenance man-hour plan should take into account any maintenance carried out on aircraft / aircraft components from outside the JAA full member State.</p> <p>3 The maintenance man-hour plan should relate to the anticipated maintenance work load except that when the JAR-145 approved maintenance organisation cannot predict such workload, due to the short term nature of its contracts, when such plan should be based upon the minimum maintenance workload needed for commercial viability. Maintenance work load includes all necessary work such as, but not limited to, planning, maintenance record checks, production of worksheets/cards in paper or electronic form, accomplishment of maintenance, inspection and the</p>	[c] The ECAR-145 approved maintenance organisation must [have a maintenance man-hour plan showing that the organisation has] sufficient [staff] to plan, perform, supervise, inspect [and quality monitor the organisation] in accordance with the approval. [In addition the organisation must have a procedure to reassess work intended to be carried out when actual staff availability is less than the planned staffing level for any particular work shift or period].	<p>AMC 145.30(c) [1] Have sufficient staff means that the ECAR-145 approved maintenance organisation employs or contracts such staff of which at least half the staff that perform maintenance in each workshop, hanger or flight line should be employed to ensure organisational stability. Contract staff, being part time or full time should be made aware that when working for the ECAR-145 approved maintenance organisation they are subjected to compliance with the organisation's procedures specified in the maintenance organisation exposition relevant to their duties. For the purpose of this sub-paragraph, employed means the person is directly employed as an individual by the ECAR-145 approved maintenance whereas contracted means the person is employed by another organisation and contracted by that organisation to the ECAR-145 approved maintenance organisation.</p> <p>2 The maintenance man-hour plan should take into account any maintenance carried out on aircraft / aircraft components from outside the member State.</p> <p>3 The maintenance man-hour plan should relate to the anticipated maintenance work load except that when the ECAR-145 approved maintenance organisation cannot predict such workload, due to the short term nature of its contracts, when such plan should be based upon the minimum maintenance workload needed for commercial viability. Maintenance work load includes all necessary work such as, but not limited to, planning, maintenance record checks, production of worksheets/cards in paper or electronic form, accomplishment of maintenance, inspection and the completion of maintenance records.</p>	

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		<p>completion of maintenance records.</p> <p>4 In the case of aircraft base maintenance, the maintenance man-hour plan should relate to the AMC 145.25(a) aircraft hangar visit plan.</p> <p>5 In the case of aircraft component maintenance, the maintenance man-hour plan should relate to the AMC 145.25(a) aircraft component planned maintenance.</p> <p>6 The quality monitoring compliance function man-hours should be sufficient to meet the requirement of JAR 145.65(c) which means taking into account relevant AMC 145.65(c) sub-paragraphs. Where quality monitoring staff perform other functions, the time allocated to such functions needs to be taken into account in determining quality monitoring staff numbers.</p> <p>7 The maintenance man-hour plan should be reviewed at least every 3 months and updated when necessary.</p> <p>8 Significant deviation from the maintenance man-hour plan should be reported through the departmental manager to the quality manager and the accountable manager for review. Significant deviation means more than a 25% shortfall in available man-hours during a calendar month for any one of the functions specified in JAR 145.30(c).</p> <p>9 The referenced maintenance man-hour plan and any associated procedure should be specified in the Maintenance Organisation Exposition and for information can be found listed in the Appendix 2 example exposition as item 2.22.] [Amdt. 3, 01.04.01]</p>		<p>4 In the case of aircraft base maintenance, the maintenance man-hour plan should relate to the AMC 145.25(a) aircraft hangar visit plan.</p> <p>5 In the case of aircraft component maintenance, the maintenance man-hour plan should relate to the AMC 145.25(a) aircraft component planned maintenance.</p> <p>6 The quality monitoring compliance function man-hours should be sufficient to meet the requirement of ECAR- 145.65(c) which means taking into account relevant AMC 145.65(c) sub-paragraphs. Where quality monitoring staff perform other functions, the time allocated to such functions needs to be taken into account in determining quality monitoring staff numbers.</p> <p>7 The maintenance man-hour plan should be reviewed at least every 3 months and updated when necessary.</p> <p>8 Significant deviation from the maintenance man-hour plan should be reported through the departmental manager to the quality manager and the accountable manager for review. Significant deviation means more than a 25% shortfall in available man-hours during a calendar month for any one of the functions specified in ECAR-145.30(c).</p> <p>9 The referenced maintenance man-hour plan and any associated procedure should be specified in the Maintenance Organisation Exposition.</p>	
30(d)	The competence of personnel involved in maintenance [and/or quality audits]	AMC 145.30(d) 1 The referenced	The competence of personnel involved in maintenance [and/or quality audits] must	AMC 145.30(d) 1 2	

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	<p>must be established [and controlled] in accordance with a procedure and to a standard acceptable to the JAA full member Authority.</p>	<p>procedure requires amongst others that planners, mechanics, specialised services staff, supervisors and certifying staff are assessed for competence by 'on the job' evaluation and/or by examination relevant to their particular job role within the organisation before unsupervised work is permitted.</p> <p>2 To assist in the assessment of competence, job descriptions are recommended for each job role in the organisation. Basically, the assessment should establish that -</p> <p>a Planners are able to interpret maintenance requirements into maintenance tasks, and have an appreciation that they have no authority to deviate from the [maintenance] data.</p> <p>b Mechanics are able to carry out maintenance tasks to any standard specified in the [maintenance] data and will notify supervisors of mistakes requiring rectification to re-establish required maintenance standards.</p> <p>c Specialised services staff are able to carry out specialised maintenance tasks to the standard specified in the maintenance [data] and will both inform and await instructions from their supervisor in any case where it is not possible to complete the specialised maintenance in accordance with the [maintenance] data.</p> <p>d Supervisors are able to ensure that all required maintenance tasks are carried out and where not [completed] or where it is evident that a particular maintenance task cannot be carried out to the [maintenance] data, then such problems will be reported to [the JAR-145.30(b) person for appropriate action. In addition, for those supervisors who</p>	<p>be established [and controlled] in accordance with a procedure and to a standard acceptable to the <u>Member State</u>. <u>The referenced procedure requires amongst others that planners, mechanics, specialised services staff, supervisors and certifying staff are assessed for competence by examination relevant to their particular job role within the organisation before unsupervised work is permitted.</u></p>	<p>a Planners are able to interpret maintenance requirements into maintenance tasks, and have an appreciation that they have no authority to deviate from the [maintenance] data.</p> <p>b. Mechanics are able to carry out maintenance tasks to any standard specified in the [maintenance] data and will notify supervisors of mistakes requiring rectification to re-establish required maintenance standards.</p> <p>c. Specialised services staff are able to carry out specialised maintenance tasks to the standard specified in the maintenance [data] and will both inform and await instructions from their supervisor in any case where it is not possible to complete the specialised maintenance in accordance with the [maintenance] data.</p> <p>d. Supervisors are able to ensure that all required maintenance tasks are carried out and where not [completed] or where it is evident that a particular maintenance task cannot be carried out to the [maintenance] data, then such problems will be reported to [the <u>ECAR</u>-145.30(b) person for appropriate action. In addition, for those supervisors who also carry out maintenance tasks, that they understand such tasks should not be undertaken when incompatible with their management responsibilities.]</p> <p>e. Certifying staff are able to determine when the aircraft or aircraft component is ready to release to service and when it should not be released to service.</p> <p>3. Particularly, in the case of planners, specialised services staff, supervisors and certifying staff, a knowledge of organisation procedures relevant to their particular role in the organisation is important.</p> <p>4. Quality audit staff</p>	<p><u>Note: The terminology for "examination" must be clarified.</u></p>

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		<p>also carry out maintenance tasks, that they understand such tasks should not be undertaken when incompatible with their management responsibilities.] e Certifying staff are able to determine when the aircraft or aircraft component is ready to release to service and when it should not be released to service. 3. Particularly, in the case of planners, specialised services staff, supervisors and certifying staff, a knowledge of organisation procedures relevant to their particular role in the organisation is important. [4. Quality audit staff are able to monitor compliance with JAR-145 identifying non compliance in an effective and timely manner in order that the JAR -145 approved maintenance organisation may remain in compliance JAR -145.] [Ch. 2, 10.7.98; Amdt. 3, 01.04.01]</p>		<p>are able to monitor compliance with ECAR-145 identifying non compliance in an effective and timely manner in order that the ECAR-145 approved maintenance organisation may remain in compliance ECAR-145.]</p>	
30(e)	<p>Personnel who carry out and/or control a continued airworthiness non-destructive test of aircraft structures and/or aircraft components must be appropriately qualified for the particular non-destructive test in accordance with the JAA agreed issue of European standard EN 4179, except that the JAA full member Authority may accept an equivalent standard in the case of any JAR -145 approved / accepted maintenance organisation located outside the JAA full member States. Personnel who carry out any other specialised task must be appropriately qualified in accordance with any existing national standard recognised by the JAA full member Authority as an appropriate standard.] [(1) Notwithstanding sub-paragraph (e), personnel qualified prior to 31 December 2003</p>	<p>AMC 145.30(e) 1 Continued airworthiness non-destructive testing means such testing specified by the type certificate holder /aircraft or engine or propeller manufacturer in JAR 145.45 maintenance data for in service aircraft/aircraft components for the purpose of determining the continued fitness of the product to operate safely. 2 Appropriately qualified means to Level 1, 2 or 3 as defined by the JAA agreed issue of EN 4179 dependant upon the non-destructive testing function to be carried out. The current JAA agreed issue of EN 4179 is prEN 4179 Edition P4 dated March 2000. 3 Notwithstanding the fact that Level 3 personnel</p>	<p>Personnel who carry out and/or control a continued airworthiness non-destructive test of aircraft structures and/or aircraft components must be appropriately qualified for the particular non-destructive test in accordance with <u>the applicable Agency non-destructive test specification.</u> , except that the <u>Agency</u> may accept an equivalent standard in the case of any <u>ECAR-145</u> approved maintenance organisation located outside the <u>EU</u>. Personnel who carry out any other specialised task must be appropriately qualified in accordance with any existing national standard recognised by the <u>Agency</u> as an appropriate standard.] [1) Notwithstanding sub-paragraph (e), personnel qualified prior to <u>the date of applicability of ECAR 145</u> in accordance with any national standard recognised by the <u>Member State</u> may continue to carry</p>	<p>AMC 145.30(e) 1 Continued airworthiness non-destructive testing means such testing specified by the type certificate holder /aircraft or engine or propeller manufacturer in <u>ECAR-145.45</u> maintenance data for in service aircraft/aircraft components for the purpose of determining the continued fitness of the product to operate safely. 2 Appropriately qualified means to Level 1, 2 or 3 as defined by the <u>current</u> issue of EN 4179 dependant upon the non-destructive testing function to be carried out. 3 Notwithstanding the fact that Level 3 personnel may be qualified via EN 4179 to establish and authorise methods, techniques, etc., <u>this</u> does not</p>	<p><u>Note: Agency NDT Specification has to be defined.</u></p>

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	<p>in accordance with any national standard recognised by the JAA full member Authority may continue to carry out and/or control such non-destructive test after 31 December 2003. Any such personnel who intend to carry out and/or control a non-destructive test for which they were not qualified prior to 31 December 2003 must qualify for such non-destructive test in accordance with the JAA agreed issue of European standard EN 4179.]</p> <p>[(2) Notwithstanding subparagraph (e), those personnel specified in subparagraph (f)(1) and (f)(2), qualified in JAR-66 sub-category B1 may carry out and/or control colour contrast dye penetrant tests.]</p>	<p>may be qualified via EN 4179 to establish and authorise methods, techniques, etc., does not permit such personnel to deviate from methods and techniques published by the type certificate holder/manufacturer in the form of continued airworthiness data, such as in non-destructive test manuals or service bulletins, unless the manual or service bulletin expressly permits such deviation.</p> <p>4 Notwithstanding the general references in EN 4179 to a National aerospace NDT Board, all examinations should be conducted by personnel or organisations under the general control of such a Board. In the absence of a National aerospace NDT Board, the JAA full member Authority will make arrangements with another JAA full member Authority to use the NDT Board of that State.</p> <p>5 Particular non-destructive test means any one or more of the following; Dye penetrant, magnetic particle, eddy current, ultrasonic and radiographic methods including X ray and gamma ray.</p> <p>6 In addition it should be noted that new methods are and will be developed, such as, but not limited to thermography and shearography, which are not specifically addressed by EN 4179. Until such time as an agreed standard is established such methods should be carried out in accordance with the particular equipment manufacturers recommendations including any training and examination process to ensure competence of the personnel with the process.</p> <p>7 Any JAR-145 approved maintenance organisation that carries out continued airworthiness non-destructive testing should establish</p>	<p>out and/or control such non-destructive test. Any such personnel who intend to carry out and/or control a non-destructive test for which they were not qualified prior to <u>the date of applicability of ECAR 145</u> must qualify for such non-destructive test in accordance with <u>the applicable Agency non-destructive test specification.</u>]</p> <p>3 Notwithstanding subparagraph (e), those personnel specified in subparagraph (f)(1) and (f)(2), qualified in <u>ECAR-66</u> sub-category B1 may carry out and/or control colour contrast dye penetrant tests.]</p>	<p>permit such personnel to deviate from methods and techniques published by the type certificate holder/manufacturer in the form of continued airworthiness data, such as in non-destructive test manuals or service bulletins, unless the manual or service bulletin expressly permits such deviation.</p> <p>4 Notwithstanding the general references in EN 4179 to a National aerospace NDT Board, all examinations should be conducted by personnel or organisations under the general control of such a Board. In the absence of a National aerospace NDT Board, the Member State will make arrangements with another <u>Member State</u> to use the NDT Board of that State.</p> <p>5 Particular non-destructive test means any one or more of the following; Dye penetrant, magnetic particle, eddy current, ultrasonic and radiographic methods including X ray and gamma ray.</p> <p>6 In addition it should be noted that new methods are and will be developed, such as, but not limited to thermography and shearography, which are not specifically addressed by EN 4179. Until such time as an agreed standard is established such methods should be carried out in accordance with the particular equipment manufacturers recommendations including any training and examination process to ensure competence of the personnel with the process.</p> <p>Any <u>ECAR-145</u> approved maintenance organisation that carries out continued airworthiness non-destructive testing should establish non-destructive testing specialist qualification procedures acceptable to the JAA full member Authority.</p> <p>8 Boroscopy and</p>	

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		<p>non-destructive testing specialist qualification procedures acceptable to the JAA full member Authority.</p> <p>8 Boroscoping and other techniques such as delamination coin tapping are non-destructive inspections rather than non-destructive testing. Notwithstanding such differentiation, the JAR-145 approved maintenance organisation should establish a procedure acceptable to the JAA full member Authority to ensure that personnel who carry out and interpret such inspections are properly trained and assessed for their competence with the process. Non-destructive inspections, not being considered as non-destructive testing by JAR -145 are not listed in Appendix 1 under class rating D1.</p> <p>9 The referenced standards, methods, training and procedures should be specified in the Maintenance Organisation Exposition and for information can be found listed in the Appendix 2 example exposition as item 3.11.] [Amdt. 3, 01.04.01]</p>		<p>other techniques such as delamination coin tapping are non-destructive inspections rather than non-destructive testing. Notwithstanding such differentiation, the ECAR-145 approved maintenance organisation should establish a procedure acceptable to the Member State to ensure that personnel who carry out and interpret such inspections are properly trained and assessed for their competence with the process. Non-destructive inspections, not being considered as non-destructive testing by ECAR-145 are not listed in Appendix 1 under class rating D1.</p> <p>9 The referenced standards, methods, training and procedures should be specified in the Maintenance Organisation Exposition.</p>	
30(f)(1)	<p>Any JAR -145 approved maintenance organisation maintaining aircraft with a maximum take-off mass of 5 700 kg and above, except where stated otherwise in sub-paragraph [(i)] must have];</p> <p>In the case of aircraft line maintenance, appropriate aircraft type rated certifying staff qualified in accordance with JAR-145.35 plus JAR-66 sub-category B1 and B2. In addition such JAR-145 approved maintenance organisation may also use appropriate task trained certifying staff qualified in accordance with JAR-145.35 plus</p>	<p>AMC 145.30(f)(1)</p> <p>1 Certifying staff qualified in accordance with JAR -66 category B1 and/or B2 includes those personnel holding protected rights under JAR-66.1 (d).</p> <p>2 For the purposes of category A minor scheduled line maintenance means any minor scheduled inspection/check up to and including a weekly check specified in the operators approved aircraft maintenance programme. For aircraft maintenance programmes that do not specify a weekly check, the JAA full member Authority will determine the most significant check that is</p>	<p>Any ECAR-145 approved maintenance organisation maintaining aircraft with a maximum take-off mass of 5700 kg and above, except where stated otherwise in sub-paragraph [(i)] must have];</p> <p>[(1) In the case of aircraft line maintenance, appropriate aircraft type rated certifying staff qualified in accordance with ECAR-145.35 plus ECAR-66 sub-category B1 and B2. In addition such ECAR-145 approved maintenance organisation may also use appropriate task trained certifying staff qualified in accordance with ECAR-145.35 plus ECAR-66 category A to carry out minor scheduled line maintenance and simple defect</p>	<p>AMC 145.30(f)(1)</p> <p>2 For the purposes of category A minor scheduled line maintenance means any minor scheduled inspection/check up to and including a weekly check specified in the operators approved aircraft maintenance programme. For aircraft maintenance programmes that do not specify a weekly check, the Member State will determine the most significant check that is considered equivalent to a weekly check.</p> <p>3 Typical tasks permitted after appropriate task training to be carried out by the category A for the purpose of the</p>	<p><u>Note: Protected rights should be dealt with in general not with specific references to B1, B2 etc. NB Cat C is not dealt with in the same manner as B1 and B2 currently.</u></p>

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	JAR-66 category A to carry out minor scheduled line maintenance and simple defect rectification. The availability of such category A certifying staff does not replace the need for JAR-66 sub-category B1 and B2 certifying staff to support the category A certifying staff except that such JAR-66 sub-category B1 and B2 staff need not always be present at the line station during minor scheduled line maintenance or simple defect rectification.]	considered equivalent to a weekly check. 3 Typical tasks permitted after appropriate task training to be carried out by the category A for the purpose of the category A issuing a JAR-145.50 aircraft certificate of release to service as part of minor scheduled line maintenance or simple defect rectification are contained in the following list. a Replacement of wheel assemblies. b Replacement of wheel brake units. c Replacement of emergency equipment . d Replacement of ovens, boilers and beverage makers. e Replacement of internal and external lights, filaments and flash tubes. f Replacement of windscreen wiper blades. g Replacement of passenger and cabin crew seats, seat belts and harnesses. h Closing of cowlings and refitment of quick access inspection panels. i Replacement of toilet system components but excluding gate valves. j Simple repairs and replacement of internal compartment doors and placards but excluding doors forming part of a pressure structure. k Simple repairs and replacement of overhead storage compartment doors and cabin furnishing items. l Replacement of static wicks. m Replacement of aircraft main and APU aircraft batteries. n Replacement of inflight entertainment system components but excluding public	rectification. The availability of such category A certifying staff does not replace the need for ECAR-66 sub-category B1 and B2 certifying staff to support the category A certifying staff except that such ECAR-66 sub-category B1 and B2 staff need not always be present at the line station during minor scheduled line maintenance or simple defect rectification.] <u>Certifying staff qualified in accordance with EC-66 category A, B1 and/or B2 includes those personnel holding protected rights under EC-66.1 (d).</u>	category A issuing a <u>ECAR-145.50</u> aircraft certificate of release to service as part of minor scheduled line maintenance or simple defect rectification are contained in the following list. a Replacement of wheel assemblies. b Replacement of wheel brake units. c Replacement of emergency equipment . d Replacement of ovens, boilers and beverage makers. e Replacement of internal and external lights, filaments and flash tubes. f Replacement of windscreen wiper blades. g Replacement of passenger and cabin crew seats, seat belts and harnesses. h Closing of cowlings and refitment of quick access inspection panels. i Replacement of toilet system components but excluding gate valves. j Simple repairs and replacement of internal compartment doors and placards but excluding doors forming part of a pressure structure. k Simple repairs and replacement of overhead storage compartment doors and cabin furnishing items. l Replacement of static wicks. m Replacement of aircraft main and APU aircraft batteries. n Replacement of inflight entertainment system components but excluding public address. o Routine lubrication and replenishment of all system fluids and gases. p The de-activation only of sub-systems and aircraft components as permitted by the	

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JAR 145			ECAR 145		
Paragraph	Section 1	Section 2	Implementing rule	Means of compliance Certification Specifications Guidance material	Remarks
		<p>address.</p> <p>o Routine lubrication and replenishment of all system fluids and gases.</p> <p>p The de-activation only of sub-systems and aircraft components as permitted by the operator's minimum equipment list where such de-activation is agreed by the JAA full member Authority as a simple task.</p> <p>q Replacement of any other aircraft component as agreed by the JAA full member Authority in conjunction with the JAA Maintenance Division for a particular aircraft type only where it is agreed that the task is simple.</p> <p>NOTE: This list will be periodically updated in the light of ongoing experience and technological changes.]</p> <p>[Amdt. 3, 01.04.01]</p>		<p>operator's minimum equipment list where such de-activation is agreed by the JAA full member Authority as a simple task.</p> <p>q Replacement of any other aircraft component as agreed by the <u>Member State</u> in conjunction with the <u>Agency</u> Maintenance Division for a particular aircraft type only where it is agreed that the task is simple.</p> <p>NOTE: This list will be periodically updated in the light of ongoing experience and technological changes.]</p>	
30(f)(2)	<p>[(2) In the case of aircraft base maintenance, appropriate aircraft type rated certifying staff qualified in accordance with JAR-145.35 plus JAR-66 category C. In addition such JAR-145 approved maintenance organisation must have appropriate aircraft type rated staff qualified in accordance with JAR-145.35 (b) and (e) plus JAR-66 sub-category B1 and B2 to support the category C certifying staff. The JAR-145 approved maintenance organisation must maintain a register of any such JAR-66 sub-category B1 and B2 qualified support staff.]</p>	<p>AMC 145.30(f)(2)</p> <p>1 JAR-145.30</p> <p>[(f)](2) requires in the case of aircraft base maintenance, category C certifying staff supported by category B1 and B2 qualified staff. Support means that the category B1 qualified staff must be satisfied that all mechanical tasks / inspections have been carried out to the required standard and the category B2 qualified staff must be satisfied that all avionic tasks / inspections have been carried out to the required standard before the category C certifying staff issues the certificate of release to service. The primary role of the category C certifying staff is to ensure that all work required to be carried out during the particular base maintenance check has been called up and accomplished. The secondary but equally important role of the category C certifying staff is to assess the impact of any work not carried out with a view to</p>	<p>[(2) In the case of aircraft base maintenance, appropriate aircraft type rated certifying staff qualified in accordance with ECAR-145.35 plus ECAR-66 category C. In addition such ECAR-145 approved maintenance organisation must have appropriate aircraft type rated staff qualified in accordance with ECAR-145.35 (b) and (e) plus ECAR-66 sub-category B1 and B2 to support the category C certifying staff.</p> <p><u>Support means that the category B1 qualified staff must be satisfied that all mechanical tasks / inspections have been carried out to the required standard and the category B2 qualified staff must be satisfied that all avionic tasks / inspections have been carried out to the required standard before the category C certifying staff issues the certificate of release to service.</u></p> <p><u>The category C certifying staff must ensure that all work required to be carried out during the particular base maintenance check has been called up and accomplished.</u></p> <p><u>The category C certifying staff must also assess the impact of any work not carried</u></p>	<p>AMC 145.30(f)(2)</p> <p>1 ECAR-145.30</p> <p>[(f)](2) requires in the case of aircraft base maintenance, category C certifying staff supported by category B1 and B2 qualified staff. .</p> <p>2</p>	

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JAR 145			ECAR 145		
Paragraph	Section 1	Section 2	Implementing rule	Means of compliance Certification Specifications Guidance material	Remarks
		<p>either requiring its accomplishment or agreeing with the operator to defer such work to another specified check or time limit.</p> <p>2 Qualified category B1 and B2 means, except where stated otherwise in subparagraph 3, holding an appropriately type rated JAR -66 aircraft maintenance licence in either category B1, category B2 or both category B1 and B2. Such personnel should, as required by JAR-145.30 [(f)(2) be in compliance with JAR-145.35 (b) and (e). These personnel need not be certifying staff but the JAR-145 approved maintenance organisation may use appropriately qualified certifying staff to satisfy the requirement.</p> <p>3 For those JAR -145 approved maintenance organisations that prior to JAR -66 worked in accordance with National requirements not containing licensing requirements, the organisation should identify in conjunction with the JAA full member Authority those staff considered to have equivalent qualifications to either JAR -66 category B1 or B2. Such staff will be considered as supporting the JAR-66 category C certifying staff and may qualify for the limited JAR-66 aircraft maintenance licence.</p> <p>4 Certifying staff qualified in accordance with JAR -66 category C includes those personnel holding protected rights under JAR -66.1 (d). [Amdt. 3, 01.04.01]</p>	<p><u>out with a view to either requiring its accomplishment or agreeing with the operator to defer such work to another specified check or time limit. Qualified category B 1 and B2 means, except where stated otherwise in subparagraph 3, holding an appropriately type rated ECAR -66 aircraft maintenance licence in either category B1, category B2 or both category B1 and B2. Such personnel should, as required by ECAR-145.30 [(f)(2) be in compliance with ECAR-145.35 (b) and (e). These personnel need not be certifying staff but the ECAR-145 approved maintenance organisation may use appropriately qualified certifying staff to satisfy the requirement.</u></p> <p><u>3 For those EC AR -145 approved maintenance organisations that prior to ECAR -66 worked in accordance with National requirements not containing licensing requirements, the organisation must identify in conjunction with the Member State those staff considered to have equivalent qualifications to either ECAR -66 category B1 or B2. Such staff will be considered as supporting the ECAR -66 category C certifying staff and may qualify for the limited ECAR-66 aircraft maintenance licence.</u></p> <p><u>4.The EC AR-145 approved maintenance organisation must maintain a register of any such EC AR-66 sub-category B1 and B2 qualified support staff.]</u></p> <p><u>5.Certifying staff qualified in accordance with ECAR-66 category C includes those personnel holding protected rights under ECAR-66.1 (d).]</u></p>		

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JAR 145			ECAR 145		
Paragraph	Section 1	Section 2	Implementing rule	Means of compliance Certification Specifications Guidance material	Remarks
30(g)	Reserved for certifying staff of aircraft under 5 700 kg maximum take-off mass. Until such time as JAR -66 specifies a requirement for certifying staff of aircraft under 5 700 kg maximum take-off mass, continued compliance is required with the current national aviation regulations of the JAA full member Authority that granted or proposes to grant JAR -145 approval.]		Reserved for certifying staff of aircraft under 5700 kg maximum take-off mass. Until such time as <u>ECAR-66</u> specifies a requirement for certifying staff of aircraft under 5700 kg maximum take-off mass, continued compliance is required with the current national aviation regulations of the <u>Member State</u> that granted or proposes to grant <u>ECAR -145 approval.</u>]		
30(h)	Reserved for certifying staff of aircraft components. Until such time as JAR -66 specifies a requirement for certifying staff of aircraft components, continued compliance is required with the current national aviation regulations of the JAA full member Authority that granted or proposes to grant JAR -145 approval.]		Reserved for certifying staff of aircraft components. Until such time as <u>ECAR-66</u> specifies a requirement for certifying staff of aircraft components, continued compliance is required with the current national aviation regulations of the <u>Member State</u> that granted or proposes to grant <u>ECAR -145 approval.</u>]		
30(I)	Notwithstanding sub-paragraph [(f)] the JAR-145 approved maintenance organisation may in the following circumstances use certifying staff qualified as specified in this sub-paragraph subject to compliance with the conditions stated for each circumstance:] [(1) For a non-JAA State or non-JAA full member State based JAR-145 maintenance organisation approved by a JAA full member Authority, the organisation may use certifying staff qualified in accordance with the national aviation regulations of the State in which the organisation is based subject to the JAA full member Authority in conjunction with the JAA Maintenance Division being satisfied that such regulations result in a standard of qualification comparable with JAR-66. Published JAA additional conditions, where specified, will need to be satisfied to ensure equivalence.] [(2) Reserved for non-JAA State based JAR-145 maintenance organisation accepted by the JAA full member Authorities in accordance with JAR -145.10(c).] [(3) For limited line maintenance carried out by another organisation under the quality		Notwithstanding sub-paragraph [(f)] the <u>ECAR-145</u> approved maintenance organisation may in the following circumstances use certifying staff qualified as specified in this sub-paragraph subject to compliance with the conditions stated for each circumstance:] [(1) For a <u>an ECAR-145 approved</u> maintenance organisation <u>located outside the territory of the Member States</u> , the organisation may use certifying staff qualified in accordance with the national aviation regulations of the <u>third country</u> in which the organisation is based subject to the <u>Agency</u> being satisfied that such regulations result in a standard of qualification comparable with <u>ECAR-66</u> . Published <u>Agency</u> additional conditions, where specified <u>in the Approval Specifications</u> , will need to be satisfied to ensure equivalence.] [(3) For limited line maintenance carried out by another organisation under the quality system of a <u>an</u> approved <u>ECAR-145</u> maintenance organisation at <u>third country</u> location the organisation may use certifying staff qualified in accordance with the national aviation regulations of the <u>third country</u> , subject to the <u>Agency</u> being satisfied that such regulations result in a		

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JAR 145			ECAR 145		
Paragraph	Section 1	Section 2	Implementing rule	Means of compliance Certification Specifications Guidance material	Remarks
	system of a JAA full member Authority approved JAR-145 maintenance organisation at a non-JAA State or non-JAA full member State location the organisation may use certifying staff qualified in accordance with the national aviation regulations of the State of the location, subject to the JAA full member Authority in conjunction with the JAA Maintenance Division being satisfied that such regulations result in a standard of qualification comparable with JAR-66. Published JAA additional conditions, where specified, will need to be satisfied to ensure equivalence.]		standard of qualification comparable with ECAR-66 . Published Agency additional conditions, where specified <u>in the Approval Specification</u> , will need to be satisfied to ensure equivalence.]		

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Paragraph	Section 1	Section 2	Implementing rule	Means of compliance Certification Specifications Guidance material	Remarks
	<p>[(4) For a repetitive pre-flight airworthiness directive which specifically states that the flight crew may carry out such airworthiness directive, the JAR-145 approved maintenance organisation may issue a limited JAR-145 certification authorisation to the aircraft commander and/or the flight engineer subject to being satisfied that sufficient practical training has been carried out to ensure that such aircraft commander or flight engineer can accomplish the airworthiness directive to the required standard.]</p> <p>[(5) For the unforeseen case of an aircraft grounded at a location not having an appropriately approved or accepted JAR-145 maintenance organisation, the JAR-145 approved or accepted maintenance organisation contracted to provide maintenance support may issue a one-off JAR-145 certification authorisation to a person with not less than 5 years maintenance experience and holding a valid ICAO aircraft maintenance licence rated for the aircraft type requiring certification subject to the JAR-145 maintenance organisation obtaining and holding on file evidence of the experience and the licence. All such cases must be reported to the JAA full member Authority within 7 days of the issuance of such certification authorisation. The JAA full member Authority will require any such maintenance that could affect flight safety to be rechecked by the contracted JAR-145 approved or accepted maintenance organisation.</p> <p>For the purposes of this subparagraph unforeseen means that the aircraft grounding could not reasonable have been predicted by the operator because the defect was unexpected due to being part of a hitherto reliable system.]</p> <p>[Ch. 2, 10.7.98; Amdt. 3, 01.04.01]</p>		<p>[(4) For a repetitive pre-flight airworthiness directive which specifically states that the flight crew may carry out such airworthiness directive, the ECAR-145 approved maintenance organisation may issue a limited ECAR-145 certification authorisation to the aircraft commander and/or the flight engineer subject to being satisfied that sufficient practical training has been carried out to ensure that such aircraft commander or flight engineer can accomplish the airworthiness directive to the required standard.]</p> <p>[(5) For the unforeseen case of an aircraft grounded at a location not having an appropriately approved ECAR-145 maintenance organisation, the ECAR-145 approved maintenance organisation contracted to provide maintenance support may issue a one-off ECAR-145 certification authorisation to a person with not less than 5 years maintenance experience and holding a valid ICAO aircraft maintenance licence rated for the aircraft type requiring certification subject to the ECAR-145 maintenance organisation obtaining and holding on file evidence of the experience and the licence. All such cases must be reported to the Member State within 7 days of the issuance of such certification authorisation. The Member State will require any such maintenance that could affect flight safety to be rechecked by the contracted ECAR-145 approved maintenance organisation.</p> <p>For the purposes of this subparagraph unforeseen means that the aircraft grounding could not reasonable have been predicted by the operator because the defect was unexpected due to being part of a hitherto reliable system.]</p>		<p>Deleted: JAR</p> <p>Deleted: JAR</p> <p>Deleted: JAR</p> <p>Deleted: or accepted</p> <p>Deleted: JAR</p> <p>Deleted: JAR</p> <p>Deleted: or accepted</p> <p>Deleted: JAR</p> <p>Deleted: JAR</p> <p>Deleted: JAA full member Authority</p> <p>Deleted: JAA full member Authority</p> <p>Deleted: JAR</p> <p>Deleted: or accepted</p> <p>Deleted: [Ch. 2, 10.7.98; Amdt. 3, 01.04.01]</p>

JAR 145			ECAR 145		
Paragraph	Section 1	Section 2	Implementing rule	Means of compliance Certification Specifications Guidance material	Remarks
145.35 (a)	[Certifying staff] In addition to the appropriate JAR-145.30 [(f)] to [(i)] sub-paragraph(s), the JAR-145 approved maintenance organisation must ensure that certifying staff have an adequate understanding of the relevant aircraft and/or aircraft component(s) to be maintained together with the associated organisation procedures before the issue or re-issue of the JAR-145 certification authorisation. Relevant aircraft and/or aircraft component(s) means those aircraft and/or aircraft component(s) specified in the particular JAR-145 certification authorisation.]	AMC 145.35(a) [Adequate understanding of the relevant aircraft and/or aircraft component(s) to be maintained together with the associated organisation procedures means that the person has received training and passed an examination or has relevant maintenance experience and passed an examination on the product type and associated organisation procedures such that the person understands how the product functions, what are the more common defects with associated consequences. Note that JAR-66 mandates product type training and examination for aircraft of 5700kg and above. Such training meets the intent of this AMC for such aircraft. Alternatively such training and examination may be reduced or eliminated when AMC 145.35(e) sub-paragraph 3 is taken into account.] [Amdt. 3, 01.04.01]	[Certifying staff] In addition to the appropriate ECAR-145.30 [(f)] to [(i)] sub-paragraph(s), the ECAR-145 approved maintenance organisation must ensure that certifying staff have an adequate understanding of the relevant aircraft and/or aircraft component(s) to be maintained together with the associated organisation procedures before the issue or re-issue of the ECAR-145 certification authorisation. Relevant aircraft and/or aircraft component(s) means those aircraft and/or aircraft component(s) specified in the particular ECAR-145 certification authorisation.] <u>Adequate understanding of the relevant aircraft and/or aircraft component(s) to be maintained together with the associated organisation procedures means that the person has received training and passed an examination or has relevant maintenance experience and passed an examination on the product type and associated organisation procedures such that the person understands how the product functions and what are the more common defects with associated consequences..</u>	AMC 145.35(a) ECAR-66 mandates product type training and examination for aircraft of 5700kg and above. Such training meets the intent of the rule for such aircraft. Alternatively such training and examination may be reduced or eliminated when AMC 145.35(e) sub-paragraph 3 is taken into account.	
35(b)	The JAR-145 approved maintenance organisation must ensure that all aircraft release certifying staff are involved in at least 6 months of actual aircraft maintenance experience in any 2 year period. For the purpose of this sub-paragraph involved in actual aircraft maintenance means the person has worked in an aircraft maintenance environment and has either exercised the privileges of the JAR-145 certification authorisation and/or has actually carried out maintenance on at least some of the aircraft type systems specified in the particular JAR-145 certification authorisation.]		The ECAR-145 approved maintenance organisation must ensure that all aircraft release certifying staff are involved in at least 6 months of actual aircraft maintenance experience in any 2 year period. For the purpose of this sub-paragraph involved in actual aircraft maintenance means the person has worked in an aircraft maintenance environment and has either exercised the privileges of the ECAR-145 certification authorisation and/or has actually carried out maintenance on at least some of the aircraft type systems specified in the particular ECAR-145 certification authorisation.]		
35(c)	The JAR-145 approved maintenance	AMC 145.35(c)	The ECAR-145 approved maintenance	145.35(c)	

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JAR 145			ECAR 145		
Paragraph	Section 1	Section 2	Implementing rule	Means of compliance Certification Specifications Guidance material	Remarks
	<p>organisation must ensure that all certifying staff receive sufficient continuation training in each 2 year period to ensure that such certifying staff have up to date knowledge of relevant technology, organisation procedures and human factor issues.]</p>	<p>1] Continuation training is a [two way] process to ensure that certifying staff remain current in terms of procedures, human factors and technical knowledge and that the JAR-145 approved maintenance organisation receives feedback on the adequacy of its procedures [and maintenance instructions. Due to the interactive nature of this training, consideration should be given to the possibility that such training has the involvement of the quality department to ensure that feedback is actioned. Alternatively, there should be a procedure to ensure that feedback is formally passed from the training department to the quality department to initiate action.]</p> <p>[2] Continuation training should cover changes in relevant requirements such as JAR-145, changes in organisation procedures and the modification standard of the products being maintained plus human factor issues [identified from any internal or external analysis of incidents.] It should also address instances where staff failed to follow procedures and the reasons why particular procedures are not always followed. In many cases the continuation training will reinforce the need to follow procedures [and ensure that incomplete or incorrect procedures are identified to the company in order that they can be corrected. This does not preclude the possible need to carry out a quality audit of such procedures.]</p> <p>[3] Continuation training should be of sufficient duration in each 2 year period to [meet the intent of JAR -145.35(c)] and may be split into a number of separate elements. [JAR-145.35(c) relates such training to keeping certifying staff updated in terms of</p>	<p>organisation must ensure that all certifying staff receive sufficient continuation training in each 2 year period to ensure that such certifying staff have up to date knowledge of relevant technology, organisation procedures and human factor issues.]</p> <p><u>Continuation training must cover changes in relevant requirements such as ECAR-145, changes in organisation procedures and the modification standard of the products being maintained plus human factor issues [identified from any internal or external analysis of incidents.] It must also address instances where staff failed to follow procedures and the reasons why .</u></p> <p><u>The content of continuation training must be related to relevant quality audit findings and must be reviewed at least once in every 24 month period.</u></p>	<p>1] Continuation training is a [two way] process to ensure that certifying staff remain current in terms of procedures, human factors and technical knowledge and that the ECAR-145 approved maintenance organisation receives feedback on the adequacy of its procedures [and maintenance instructions. Due to the interactive nature of this training, consideration should be given to the possibility that such training has the involvement of the quality department to ensure that feedback is actioned. Alternatively, there should be a procedure to ensure that feedback is formally passed from the training department to the quality department to initiate action.]</p> <p>[2] . In many cases the continuation training will reinforce the need to follow procedures [and ensure that incomplete or incorrect procedures are identified to the company in order that they can be corrected. This does not preclude the possible need to carry out a quality audit of such procedures.]</p> <p>[3] Continuation training should be of sufficient duration in each 2 year period to [meet the intent of ECAR-145.35(c)] and may be split into a number of separate elements. ECAR-145.35(c) relates such training to keeping certifying staff updated in terms of relevant technology, procedures and human factors issues which means it is one part of ensuring quality. Therefore sufficient duration should be related to relevant quality audit findings and other internal / external sources of information available to the organisation on human errors in maintenance. This means that in the case of a ECAR-145 approved maintenance organisation that maintains aircraft with few relevant</p>	<p>Moved to rule</p>

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JAR 145			ECAR 145		
Paragraph	Section 1	Section 2	Implementing rule	Means of compliance Certification Specifications Guidance material	Remarks
		<p>relevant technology, procedures and human factors issues which means it is one part of ensuring quality. Therefore sufficient duration should be related to relevant quality audit findings and other internal / external sources of information available to the organisation on human errors in maintenance. This means that in the case of a JAR-145 approved maintenance organisation that maintains aircraft with few relevant quality audit findings, continuation training could be limited to days rather than weeks, whereas a similar organisation with a number of relevant quality audit findings, such training may take several weeks. For a JAR-145 approved maintenance organisation that maintains aircraft components, the duration of continuation training would follow the same philosophy but should be scaled down to reflect the more limited nature of the activity. For example certifying staff who release hydraulic pumps may only require a few hours of continuation training whereas those who release turbine engine may only require a few days of such training. The content of continuation training should be related to relevant quality audit findings and it is recommended that such training is reviewed at least once in every 24 month period.]</p> <p>[4] The method of training is intended to be a flexible process and could, for example, include [a JAR-147 continuation training course,] aeronautical college courses, internal short duration courses, seminars, etc. The elements, general content and length of such training should be specified in the JAR-145 maintenance organisation exposition [unless such training is undertaken under a JAR-147</p>		<p>quality audit findings, continuation training could be limited to days rather than weeks, whereas a similar organisation with a number of relevant quality audit findings, such training may take several weeks. For a ECAR-145 approved maintenance organisation that maintains aircraft components, the duration of continuation training would follow the same philosophy but should be scaled down to reflect the more limited nature of the activity. For example certifying staff who release hydraulic pumps may only require a few hours of continuation training whereas those who release turbine engine may only require a few days of such training.]</p> <p>[4] The method of training is intended to be a flexible process and could, for example, include [a ECAR-147 continuation training course,] aeronautical college courses, internal short duration courses, seminars, etc. The elements, general content and length of such training should be specified in the ECAR-145 maintenance organisation exposition [unless such training is undertaken by an ECAR-147 approved organisation.</p>	

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JAR 145			ECAR 145		
Paragraph	Section 1	Section 2	Implementing rule	Means of compliance Certification Specifications Guidance material	Remarks
		<p>spectrum of intended duties and this should not be done. When the person has been recruited from another JAR-145 approved maintenance organisation and was a certifying person in that organisation then it is reasonable to accept a written confirmation from the person responsible for running the quality system about the person.</p> <p>3 Qualification assessment means collecting copies of all documents that attest to qualification, such as the licence and/or any authorisation held. This should be followed by a confirmation check with the organisation(s) that issued such document(s) and finally a comparison check for differences between the product type ratings on the qualification documents and the relevant product types maintained by the JAR-145 approved maintenance organisation. This latter point may reveal a need for product type differences training.</p> <p>4 The referenced procedure should be specified in the Maintenance Organisation Exposition as part of item 3.4 in Appendix 2 to this Section.] [Amdt. 3, 01.04.01]</p>		<p>spectrum of intended duties and this should not be done. When the person has been recruited from another ECAR-145 approved maintenance organisation and was a certifying person in that organisation then it is reasonable to accept a written confirmation from the person responsible for running the quality system about the person.</p> <p>3 Qualification assessment means collecting copies of all documents that attest to qualification, such as the licence and/or any authorisation held. This should be followed by a confirmation check with the organisation(s) that issued such document(s) and finally a comparison check for differences between the product type ratings on the qualification documents and the relevant product types maintained by the ECAR-145 approved maintenance organisation. This latter point may reveal a need for product type differences training.</p> <p>4</p>	<p>Guidance</p> <p>Moved to rule</p>

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JAR 145			ECAR 145		
Paragraph	Section 1	Section 2	Implementing rule	Means of compliance Certification Specifications Guidance material	Remarks
35(f)	The JAR-145 approved maintenance organisation must issue a JAR-145 certification authorisation that clearly specifies the scope and limits of such authorisation to those staff that it nominates as certifying staff on behalf of the organisation when satisfied that such staff are in compliance with sub-paragraphs (a), (c) and (e) plus (b) as applicable. Continued validity of the JAR-145 certification authorisation is dependent upon continued compliance with sub-paragraphs (a) and (c) plus (b) as applicable.]	AMC 145.35(f) [The JAR-145 certification] authorisation [] should be in a style that makes its scope clear to certifying staff and any authorised person that may require to examine the [authorisation]. Where codes are used to define scope, [a code translation] should be readily available. Authorised persons [] include [any] JAA full member Authority [surveyor and any member of a JAA Maintenance Standardisation Team.] [Amdt. 3, 01.04.01]	The JAR -145 approved maintenance organisation must issue a JAR -145 certification authorisation that clearly specifies the scope and limits of such authorisation to those staff that it nominates as certifying staff on behalf of the organisation when satisfied that such staff are in compliance with sub-paragraphs (a), (c) and (e) plus (b) as applicable. Continued validity of the JAR -145 certification authorisation is dependent upon continued compliance with sub-paragraphs (a) and (c) plus (b) as applicable.] <u>[The ECAR-145 certification] authorisation [] must be in a style that makes its scope clear to certifying staff and any authorised person that may require to examine the [authorisation]. Where codes are used to define scope, [a code translation] must be readily available. Authorised persons [] include [any] Member State [surveyor and any member of an Agency Maintenance Standardisation Team.]</u>	AMC 145.35(f)	Moved to rule
35(g)	The manager or person responsible for the quality system must also remain responsible on behalf of JAR-145 approved maintenance organisation for issuing JAR-145 certification authorisations to certifying staff. Such manager or person may nominate other persons to actually issue the JAR-145 certification authorisations in accordance with a procedure acceptable to the JAA full member Authority.]		The manager or person responsible for the quality system must also remain responsible on behalf of JAR -145 approved maintenance organisation for issuing JAR -145 certification authorisations to certifying staff. Such manager or person may nominate other persons to actually issue the JAR -145 certification authorisations in accordance with a procedure acceptable to the Member State .		
35(h)	The JAR-145 approved maintenance organisation must maintain a record of all certifying staff which must include details of [any JAR-66 aircraft maintenance licence held, all training completed and] the scope of their JAR-145 certification authorisation.[The record must include those with limited or one-off JAR-145 certification authorisations.]	AMC 145.35(h) 1 The following minimum information should be kept on record in respect of each certifying person: a Name b Date of Birth c Basic Training d Type Training e Continuation Training	The JAR -145 approved maintenance organisation must maintain a record of all certifying staff which must include details of [any JAR -66 aircraft maintenance licence held, all training completed and] the scope of their JAR -145 certification authorisation.[The record must include those with limited or one-off JAR -145 certification authorisations.] <u>The following minimum information must be kept on record in respect of</u>	AMC 145.35(h) 1 2 The record may be kept in any format but should be controlled by the organisation's quality department. This does not mean that the quality department should run the record system. 3 Persons authorised to access the system should be	

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Deleted: [The EC-145 certification] authorisation [] should be in a style that makes its scope clear to certifying staff and any authorised person that may require to examine the [authorisation]. Where codes are used to define scope, [a code translation] should be readily available. Authorised persons [] include [any] JAA full member Authority [surveyor and any member of a JAA Maintenance Standardisation Team.] ¶
[Amdt. 3, 01.04.01]¶

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JAR 145			ECAR 145		
Paragraph	Section 1	Section 2	Implementing rule	Means of compliance Certification Specifications Guidance material	Remarks
		<p>f. Experience</p> <p>g. Qualifications relevant to the approval</p> <p>h. Scope of the authorisation</p> <p>i. Date of first issue of the authorisation</p> <p>j. If appropriate - expiry date of the authorisation</p> <p>k. Identification Number of the authorisation</p> <p>2 The record may be kept in any format but should be controlled by the organisation's quality department. This does not mean that the quality department should run the record system.</p> <p>3 Persons authorised to access the system should be maintained at a minimum to ensure that records cannot be altered in an unauthorised manner or that such confidential records become accessible to unauthorised persons.</p> <p>4 The certifying person should be given reasonable access on request to his/her own records.</p> <p>5 The JAA full member Authority is an authorised person when investigating the records system for initial and continued approval or when the JAA full member Authority has cause to doubt the competence of a particular certifying person.</p> <p>6 The organisation should keep the record for at least two years after the certifying person has ceased employment with the organisation or withdrawal of the authorisation, whichever is the sooner. In addition, the certifying</p>	<p><u>each certifying person:</u></p> <p><u>a. Name</u></p> <p><u>b. Date of Birth</u></p> <p><u>c. Basic Training</u></p> <p><u>d. Type Training</u></p> <p><u>e. Continuation Training</u></p> <p><u>f. Experience</u></p> <p><u>g. Qualifications relevant to the approval</u></p> <p><u>h. Scope of the authorisation</u></p> <p><u>i. Date of first issue of the authorisation</u></p> <p><u>j. If appropriate - expiry date of the authorisation</u></p> <p><u>k. Identification Number of the authorisation</u></p> <p><u>The organisation must keep the record for at least two years after the certifying person has ceased employment with the organisation or withdrawal of the authorisation, whichever is the sooner. In addition, the certifying staff must be furnished on request with a copy of their record on leaving the organisation.</u></p> <p><u>The certifying person must be given access on request to his/her own records.</u></p>	<p>maintained at a minimum to ensure that records cannot be altered in an unauthorised manner or that such confidential records become accessible to unauthorised persons.</p> <p>5 The <u>Member State</u> is an authorised person when investigating the records system for initial and continued approval or when the <u>Member State</u> has cause to doubt the competence of a particular certifying person.</p> <p>6</p>	<p>Moved to rule</p> <p>Guidance</p>

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JAR 145			ECAR 145		
Paragraph	Section 1	Section 2	Implementing rule	Means of compliance Certification Specifications Guidance material	Remarks
		staff should be furnished on request with a copy of their record on leaving the organisation. [Amdt. 3, 01.04.01]			
35(i)	Certifying staff must be provided with [a copy of their JAR-145 certification authorisation. The copy may be in either a documented or electronic format.]		Certifying staff must be provided with [a copy of their ECAR-145 certification authorisation. The copy may be in either a documented or electronic format.]		Moved to rule
35(j)	Certifying staff must be able to produce their JAR-145 certification authorisation to any authorised person within a reasonable time. [Amdt. 3, 01.04.01]	AMC 145.35(j) Certifying staff are not required to carry their [JAR-145 certification] authorisation []. [A reasonable time in which to show such certification authorisation is within 24 hours.] Authorised persons [means any official or business person or organisation with a valid reason for seeing the JAR-145 certification Authorisation. Valid reasons include the need to check such authorisation for validity, scope and authenticity.]	Certifying staff must be able to produce their ECAR-145 certification authorisation to any authorised person within <u>24 hours</u> . ▼	AMC 145.35(j) Certifying staff are not required to carry their ECAR-145 certification] authorisation <u>at all times</u> []. ▼ Authorised person, [means any official or business person or organisation with a valid reason for seeing the ECAR-145 certification Authorisation. Valid reasons include the need to check such authorisation for validity, scope and authenticity.]	Moved to the rule
145.40 (a)	Equipment, tools and material The JAR-145 approved maintenance organisation must have the necessary equipment, tools and material to perform the approved scope of work.	AMC 145.40(a) 1 Once the applicant for JAR-145 approval has determined the intended scope of approval for consideration by the JAA full member Authority, it will be necessary to show that all tools and equipment as specified in the approved data can be made available when needed. All such tools and equipment that require to be controlled in terms of servicing	Equipment, tools and material The ECAR-145 approved maintenance organisation must have the necessary equipment, tools and material <u>available</u> to perform the approved scope of work. <u>Where the manufacturer specifies a particular tool or equipment, then that tool or equipment must be used, unless otherwise agreed by the Member State in a particular case via a procedure specified in the maintenance organisation exposition to use alternative tooling/equipment.</u>	AMC 145.40 1 Once the applicant for ECAR-145 approval has determined the intended scope of approval for consideration by the Member State, it will be necessary to show that all tools and equipment as specified in the approved data can be made available when needed. All such tools and equipment that require to be controlled in terms of servicing	

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JAR 145			ECAR 145		
Paragraph	Section 1	Section 2	Implementing rule	Means of compliance Certification Specifications Guidance material	Remarks
		<p>or calibration by virtue of being necessary to measure specified dimensions and torque figures etc, should be clearly identified and listed in a control register including any personal tools and equipment that the organisation agrees can be used. Where the manufacturer specifies a particular tool or equipment, then that tool or equipment should be used, unless otherwise agreed by the JAA full member Authority in a particular case via a procedure specified in the maintenance organisation exposition to use alternative tooling/equipment.</p> <p>2 The availability of equipment and tools means permanent availability except in the case of any tool or equipment that is so rarely needed that its permanent availability is not necessary.</p> <p>3 A JAR-145 organisation approved for base maintenance should have sufficient aircraft access equipment and inspection platforms/docking such that the aircraft may be properly inspected.</p> <p>4 The necessary material to perform the scope of work means readily available raw material and aircraft components in accordance with the manufacturer's recommendation unless the organisation has an established spares provisioning procedure. [Ch. 2, 10.7.98]</p>	<p><u>The availability of equipment and tools means permanent availability except in the case of any tool or equipment that is so rarely needed that its permanent availability is not necessary but only then if agreed by the Member State</u></p> <p><u>3 An ECAR-145 organisation approved for base maintenance must have sufficient aircraft access equipment and inspection platforms/docking such that the aircraft may be properly inspected.</u></p> <p><u>The necessary material to perform the scope of work means readily available raw material and aircraft components in accordance with an established spares provisioning procedure.</u></p>	<p>or calibration by virtue of being necessary to measure specified dimensions and torque figures etc, should be clearly identified and listed in a control register including any personal tools and equipment that the organisation agrees can be used.</p>	<p>Deleted: JAR</p> <p>Deleted: 2</p> <p>Deleted: . Where the manufacturer specifies a particular tool or equipment, then that tool or equipment should be used, unless otherwise agreed by the Member State in a particular case via a procedure specified in the maintenance organisation exposition to use alternative tooling/equipment</p> <p>Deleted: 2 The availability of equipment and tools means permanent availability except in the case of any tool or equipment that is so rarely needed that its permanent availability is not necessary.¶ 3 A EC-145 organisation approved for base maintenance should have sufficient aircraft access equipment and inspection platforms/docking such that the aircraft may be properly inspected.</p> <p>Deleted: 4</p> <p>Deleted: The necessary material to perform the scope of work means readily available raw material and aircraft components in accordance with the manufacturer's recommendation unless the organisation has an established spares provisioning procedure.¶ [Ch. 2, 10.7.98]</p> <p>Deleted: the manufacturers recommendation unless the organisation has</p> <p>Moved to rule</p> <p>Moved to the rule.</p>

JAR 145			ECAR 145		
Paragraph	Section 1	Section 2	Implementing rule	Means of compliance Certification Specifications Guidance material	Remarks
40(b)	Where necessary, tools, equipment and particularly test equipment must be controlled and calibrated to standards acceptable to the JAA full member Authority at a frequency to ensure serviceability and accuracy. Records of such calibrations and the standard used must be kept by the JAR-145 approved maintenance organisation.	<p>AMC 145.40(b)</p> <p>1 The control of these tools and equipment requires that the organisation has a procedure to inspect/service and, where appropriate, calibrate such items on a regular basis and indicate to users that the item is within any inspection or service or calibration time-limit. A clear system of labelling all tooling, equipment and test equipment is therefore necessary giving information on when the next inspection or service or calibration is due and if the item is unserviceable for any other reason where it may not be obvious. A register should be maintained for all precision tooling and equipment together with a record of calibrations and standards used.</p> <p>2 Inspection, service or calibration on a regular basis should be in accordance with the equipment manufacturers' instructions except where the JAR -145 organisation can show by results that a different time period is appropriate in a particular case. [Ch. 2, 10.7.98]</p>	<p>Where necessary, tools, equipment and particularly test equipment must be controlled and calibrated to standards acceptable to the <u>Member State</u> at a frequency to ensure serviceability and accuracy. Records of such calibrations and the standard used must be kept by the JAR-145 approved maintenance organisation.</p> <p><u>The control of these tools and equipment requires that the organisation has a procedure to inspect/service and, where appropriate, calibrate such items on a regular basis and indicate to users that the item is within any inspection or service or calibration time-limit. The system of labelling all tooling, equipment and test equipment must give information on when the next inspection or service or calibration is due and if the item is unserviceable for any other reason where it may not be obvious. A register must be maintained for all precision tooling and equipment together with a record of calibrations and standards used.</u></p> <p><u>2 Inspection, service or calibration on a regular basis must be in accordance with the equipment manufacturers' instructions except where the ECAR-145 organisation can show by results that a different time period is appropriate in a particular case.</u></p>	<p>AMC 145.40(b)</p> <p>1</p>	<p>Deleted: JAR</p> <p>Moved to the rule</p>

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- 2 Inspection, service or calibration on a regular basis should be in accordance with the equipment manufacturers' instructions except where the EC-145 organisation can show by results that a different time period is appropriate in a particular case.¶ [Ch. 2, 10.7.98]
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JAR 145			ECAR 145		
Paragraph	Section 1	Section 2	Implementing rule	Means of compliance Certification Specifications Guidance material	Remarks
145.45 (a)	[Maintenance] data The JAR-145 approved maintenance organisation must hold and use applicable current [maintenance] data in the performance of maintenance including modifications and repairs. Applicable means relevant to any aircraft, aircraft component or process specified in the JAR-145 approved maintenance organisation's approval class rating schedule and any associated capability list.		[Maintenance] data The JAR -145 approved maintenance organisation must hold and use applicable current [maintenance] data in the performance of maintenance including modifications and repairs. Applicable means relevant to any aircraft, aircraft component or process specified in the JAR -145 approved maintenance organisation's approval class rating schedule and any associated capability list. <u>Except that in the case of operator or customer provided [maintenance] data it is not necessary to hold such provided data when the work order is completed other than the need to comply with ECAR-145.55(c).</u>		
45(b)	For the purposes of JAR-145 applicable [maintenance] data is; (1) Any applicable requirement, procedure, airworthiness directive, operational directive or information issued by the JAA or JAA full member Authority. (2) Any applicable airworthiness directive issued by a non-JAA Authority or non-JAA full member Authority where said Authority is the original type certificate Authority. (3) Any applicable data, such as but not limited to, maintenance and repair manuals, issued by an organisation under the approval of the JAA full member Authority including type certificate and supplementary type certificate holders and any other organisation approved to publish such data by the said Authority. (4) Unless specified otherwise by the JAA full member Authority, any applicable data, such as but not limited to, maintenance and repair manuals, issued by an organisation under the approval or authority of a non JAA Authority or non-JAA full member Authority where said Authority is the original type certificate Authority. (5) Any applicable standard, such as but not limited to, maintenance	AMC 145.45(b) 1 Except as specified in sub-paragraph 5, each JAR-145 approved maintenance organisation should hold and use the following minimum [maintenance] data relevant to the organisation's approval class rating. All maintenance related JARs and associated AMCs and IEMs, all JAA maintenance related temporary guidance leaflets, the JAA publication entitled 'JAR-145 Listed Organisations', all applicable national maintenance requirements and notices which have not been superseded by a JAA requirement, procedure or directive and all applicable national airworthiness directives plus any non-national airworthiness directive supplied by a contracted non-national operator or customer. 2 In addition to sub-paragraph 1, a JAR-145 approved maintenance organisation with an approval class rating in category A - Aircraft, should hold and use the following [maintenance] data where published. The appropriate sections of the operator's aircraft maintenance programme, aircraft maintenance manual, repair	For the purposes of ECAR-145 applicable [maintenance] data is; (1) Any applicable requirement, procedure, airworthiness directive, operational directive <u>specifications or</u> information issued by the <u>Agency or the Member State</u> . (2) Any applicable airworthiness directive issued by a <u>third country</u> Authority where said Authority is the original type certificate Authority. (3) Any applicable data, such as but not limited to, maintenance and repair manuals, issued by an organisation under the approval of the <u>Agency</u> including type certificate and supplementary type certificate holders and any other organisation approved to publish such data by the <u>Agency</u> . (4) Unless specified otherwise by the <u>Agency</u> , any applicable data, such as but not limited to, maintenance and repair manuals, issued by an organisation under the approval or authority of a <u>third country Authority</u> where said Authority is the original type certificate Authority. (5) Any applicable standard, such as but not limited to, maintenance standard practises issued by any Authority, institute or organisation and recognised by the <u>Agency</u> as a good standard for maintenance. (6) Any applicable data issued in accordance with sub-paragraph (c).	AMC 145.45(b) 1 Except as specified in sub-paragraph 5, each ECAR-145 approved maintenance organisation should hold and use the following minimum [maintenance] data relevant to the organisation's approval class rating. All maintenance related <u>Implementing Rules</u> and associated AMCs, <u>Approval specifications</u> and <u>Guidance Material</u> , all <u>Agency</u> maintenance related temporary guidance leaflets, the <u>Agency</u> publication entitled 'JAR-145 Listed Organisations', all applicable national maintenance requirements and notices which have not been superseded by an <u>Agency</u> requirement, procedure or directive and all applicable national airworthiness directives plus any non-national airworthiness directive supplied by a contracted non-national operator or customer. 2 In addition to sub-paragraph 1, a JAR-145 approved maintenance organisation with an approval class rating in category A - Aircraft, should hold and use the following [maintenance] data where published. The appropriate sections of the operator's aircraft maintenance programme, aircraft	<u>Note: The division of responsibilities in the transition plan has to be established ie Agency/Member State responsibility.</u>

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JAR 145			ECAR 145		
Paragraph	Section 1	Section 2	Implementing rule	Means of compliance Certification Specifications Guidance material	Remarks
	<p>standard practises issued by any Authority, institute or organisation and recognised by the JAA full member Authority as a good standard for maintenance.</p> <p>(6) Any applicable data issued in accordance with sub-paragraph (c).</p>	<p>manual, supplementary structural inspection document, corrosion control document, service bulletins, service letters, service instructions, modification leaflets, NDI manual, parts catalogue, type certificate data sheet and any other specific document issued by the type certificate or supplementary type certificate holder as [maintenance] data, except that in the case of operator or customer provided [maintenance] data it is not necessary to hold such provided data when the work order is completed other than the need to comply with JAR 145.55(c).</p> <p>3 In addition to sub-paragraph 1, a JAR-145 approved maintenance organisation with an approval class rating in category B - Engines/APUs, should hold and use the following [maintenance] data where published. The appropriate sections of the engine/APU maintenance and repair manual, service bulletins, service letters, modification leaflets, NDI manual, parts catalogue, type certificate data sheet and any other specific document issued by the type certificate holder as [maintenance] data, except that in the case of operator or customer provided [maintenance] data it is not necessary to hold such provided data when the work order is completed other than the need to comply with JAR 145.55(c).</p> <p>4 In addition to sub-paragraph 1, a JAR-145 approved maintenance organisation with an approval class rating in category C - Components other than complete engines/APUs, should hold and use the following [maintenance] data where published. The appropriate sections of the vendor maintenance and repair manual, service bulletins and service letters plus any document issued by the</p>		<p>maintenance manual, repair manual, supplementary structural inspection document, corrosion control document, service bulletins, service letters, service instructions, modification leaflets, NDI manual, parts catalogue, type certificate data sheet and any other specific document issued by the type certificate or supplementary type certificate holder as [maintenance] data, except that in the case of operator or customer provided [maintenance] data it is not necessary to hold such provided data when the work order is completed other than the need to comply with ECAR -145.55(c).</p> <p>3 In addition to sub-paragraph 1, a ECAR-145 approved maintenance organisation with an approval class rating in category B - Engines/APUs, should hold and use the following [maintenance] data where published. The appropriate sections of the engine/APU maintenance and repair manual, service bulletins, service letters, modification leaflets, NDI manual, parts catalogue, type certificate data sheet and any other specific document issued by the type certificate holder as [maintenance] data, except that in the case of operator or customer provided [maintenance] data it is not necessary to hold such provided data when the work order is completed other than the need to comply with ECAR -145.55(c).</p> <p>4 In addition to sub-paragraph 1, a ECAR-145 approved maintenance organisation with an approval class rating in category C - Components other than complete engines/APUs, should hold and use the following [maintenance] data where published. The appropriate sections of the vendor maintenance and repair manual, service bulletins and service letters plus any document issued by the type</p>	<p>Moved to the rule</p>

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JAR 145			ECAR 145		
Paragraph	Section 1	Section 2	Implementing rule	Means of compliance Certification Specifications Guidance material	Remarks
		<p>type certificate holder as [maintenance] data on whose product the component may be fitted when applicable, except that in the case of operator or customer provided [maintenance] data it is not necessary to hold such provided data when the work order is completed other than the need to comply with JAR 145.55(c).</p> <p>5 Appropriate sections of the sub-paragraphs 2 to 4 additional [maintenance] data means in relation to the maintenance work scope at each particular maintenance facility. In other words for example, a base maintenance facility should have almost complete set(s) of the [maintenance] data whereas a line maintenance facility may need only the maintenance manual and the parts catalogue.</p> <p>6 A JAR-145 approved maintenance organisation only approved in class rating category D - Specialised services, should hold and use the following [maintenance] data where published in respect of the particular specialised service(s) specified in the approval schedule. JAR-145 plus associated AMC's and IEMs and the specialised service(s) process specification, except that in the case of operator or customer provided [maintenance] data it is not necessary to hold such provided data when the work order is completed other than the need to comply with JAR 145.55(c). [Ch. 2, 10.7.98; Amdt. 3, 01.04.01]</p>		<p>certificate holder as [maintenance] data on whose product the component may be fitted when applicable, except that in the case of operator or customer provided [maintenance] data it is not necessary to hold such provided data when the work order is completed other than the need to comply with ECAR-145.55(c).</p> <p>5 Appropriate sections of the sub-paragraphs 2 to 4 additional [maintenance] data means in relation to the maintenance work scope at each particular maintenance facility. In other words for example, a base maintenance facility should have almost complete set(s) of the [maintenance] data whereas a line maintenance facility may need only the maintenance manual and the parts catalogue.</p> <p>6 A ECAR-145 approved maintenance organisation only approved in class rating category D - Specialised services, should hold and use the following [maintenance] data where published in respect of the particular specialised service(s) specified in the approval schedule. ECAR-145 plus associated AMC's, <u>Approval Specifications</u> and <u>Guidance Material</u>, and the specialised service(s) process specification. <u>Transferred into the rule.</u></p> <p>[Ch. 2, 10.7.98; Amdt. 3, 01.04.01]</p>	
45(c)	The JAR-145 approved maintenance organisation may only modify maintenance instructions in accordance with a procedure specified in the maintenance organisation's exposition where it can be shown that such modified maintenance instruction	AMC 145.45(c) The referenced procedure should address the need for a practical demonstration by the mechanic to the quality personnel of the proposed modified maintenance	The ECAR -145 approved maintenance organisation may only modify maintenance instructions in accordance with a procedure specified in the maintenance organisation's exposition where it can be shown that such modified maintenance instruction results in	AMC 145.45(c) The referenced procedure should address the need for a practical demonstration by the mechanic to the quality personnel of the proposed modified maintenance	

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JAR 145			ECAR 145		
Paragraph	Section 1	Section 2	Implementing rule	Means of compliance Certification Specifications Guidance material	Remarks
	results in equivalent or improved maintenance standards and subject to the type certificate holder being informed. Maintenance instructions for the purpose of this sub-paragraph means an instruction on how to carry out the particular maintenance task. The JAR-145 approved maintenance organisation may not carry out the engineering design of repairs and modifications under this sub-paragraph (c).	instruction. The quality personnel should approve (or not approve) the modified maintenance instruction and ensure that the type certificate or supplementary type certificate holder is informed of the modified maintenance instruction. The procedure should include a paper/ electronic traceability of the complete process from start to finish and ensure that the relevant maintenance instruction clearly identifies the modification. Modified maintenance instructions should only be used in the following circumstances; a Where the type certificate / supplementary type certificate holders original intent can be carried out in a more practical or more efficient manner. b Where the type certificate / supplementary type certificate holders original intent cannot be achieved by following the maintenance instructions. For example, where a component cannot be replaced following the original maintenance instructions. c For the use of alternative tools / equipment. [Ch. 2, 10.7.98]	equivalent or improved maintenance standards and subject to the type certificate holder being informed. Maintenance instructions for the purpose of this sub-paragraph means an instruction on how to carry out the particular maintenance task. The ECAR -145 approved maintenance organisation may not carry out the engineering design of repairs and modifications under this sub-paragraph (c).	instruction. The quality personnel should approve (or not approve) the modified maintenance instruction and ensure that the type certificate or supplementary type certificate holder is informed of the modified maintenance instruction. The procedure should include a paper/electronic traceability of the complete process from start to finish and ensure that the relevant maintenance instruction clearly identifies the modification. Modified maintenance instructions should only be used in the following circumstances; a Where the type certificate / supplementary type certificate holders original intent can be carried out in a more practical or more efficient manner. b Where the type certificate / supplementary type certificate holders original intent cannot be achieved by following the maintenance instructions. For example, where a component cannot be replaced following the original maintenance instructions. c For the use of alternative tools / equipment.	
45(d)	A JAR-145 approved maintenance organisation must be appropriately approved as required by JAR-21 Subpart M to classify repairs as minor or major and to approve minor repair design data. Such approval is not required for a JAR-145 approved maintenance organisation that only carries out repairs in accordance with the approved type certificate holders	AMC 145.45(d) 1 A JAR-145 approved maintenance organisation also approved in accordance with JAR - 21 Subpart JA is required by JAR - 145.45 (d) to establish a repair classification procedure. To satisfy the requirement, the organisation	To classify repairs as minor or major and to approve minor repair design data an ECAR -145 approved maintenance organisation must be appropriately approved as required by JAR-21 Subpart M. Such approval is not required for a ECAR -145 approved maintenance organisation that only carries out repairs in accordance with the approved type certificate holders published repair data or	AMC 145.45(d) 1 A ECAR -145 approved maintenance organisation also approved in accordance with JAR- 21 Subpart JA is required by ECAR -145.45 (d) to establish a repair classification procedure. To satisfy the requirement, the	Reworded for clarity

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JAR 145			ECAR 145		
Paragraph	Section 1	Section 2	Implementing rule	Means of compliance Certification Specifications Guidance material	Remarks
	published repair data or any other JAA full member Authority approved repair data. Whether approved or not in accordance with this sub-paragraph the JAR-145 approved maintenance organisation must establish a procedure to ensure that appropriate action is taken in the case of damage assessment and the need to use only approved repair data.]	<p>should describe how repairs will be classified in accordance with JAR-21 Subpart M, how a new repair design will be approved and how the organisation will ensure that only approved repair data is used in the implementation of a repair. The procedure should also include appropriate elements from sub-paragraph 2.</p> <p>2 A JAR-145 approved maintenance organisation not approved in accordance with JAR - 21 Subpart JA is required by JAR - 145.45 (d) to establish a procedure to process minor or major repairs. To satisfy the requirement, the organisation should describe the actions to be taken when the need for damage assessment and / or repair action arises. At minimum, the procedure should address the need to assess damage against published approved repair data and the action to be taken if damage is beyond the limits or outside the scope of such data. This could involve any one or more of the following options; Repair by replacement of damaged parts, requesting technical support from the type certificate holder or from an organisation approved in accordance with JAR-21 Subpart JA and finally JAA full member approval of the particular repair data.]</p> <p>[3 The reference in sub-paragraph 2 to published approved repair data means the data specified in JAR 145.45(b).</p> <p>4 For the purpose of JAR</p>	any other <u>Member State</u> approved repair data. Whether approved or not in accordance with this sub-paragraph the <u>ECAR-145</u> approved maintenance organisation must establish a procedure to ensure that appropriate action is taken in the case of damage assessment and the need to use only approved repair data.] <u>The referenced procedure must be specified in the maintenance organisation exposition .</u>	<p>organisation should describe how repairs will be classified in accordance with JAR-21 Subpart M, how a new repair design will be approved and how the organisation will ensure that only approved repair data is used in the implementation of a repair. The procedure should also include appropriate elements from sub-paragraph 2.</p> <p>2 A <u>ECAR-145</u> approved maintenance organisation not approved in accordance with JAR - 21 Subpart JA is required by <u>ECAR-145.45</u> (d) to establish a procedure to process minor or major repairs. To satisfy the requirement, the organisation should describe the actions to be taken when the need for damage assessment and / or repair action arises. At minimum, the procedure should address the need to assess damage against published approved repair data and the action to be taken if damage is beyond the limits or outside the scope of such data. This could involve any one or more of the following options; Repair by replacement of damaged parts, requesting technical support from the type certificate holder or from an organisation approved in accordance with JAR-21 Subpart JA and finally JAA full member approval of the particular repair data.]</p> <p>[3 The reference in sub-paragraph 2 to published approved repair data means the data specified in <u>ECAR-145.45(b)</u>.</p>	

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JAR 145			ECAR 145		
Paragraph	Section 1	Section 2	Implementing rule	Means of compliance Certification Specifications Guidance material	Remarks
		145.45(d) reference to minor or major repair relates only to design criteria and not to maintenance criteria.] [Amdt. 3, 01.04.01]		4 For the purpose of ECAR -145.45(d) reference to minor or major repair relates only to design criteria and not to maintenance criteria.]	
45(e)	Except where stated otherwise in sub-paragraph (e)(1), the JAR-145 approved maintenance organisation must provide a common workcard or worksheet system for use throughout relevant parts of the organisation and must either transcribe accurately the maintenance data contained in sub-paragraphs (b), (c) and (d) onto such workcards or worksheets or make precise reference to the particular maintenance task(s) contained in such maintenance data. Workcards and worksheets may be computer generated and held on an electronic data base subject to both adequate safeguards against unauthorised alteration and a back-up electronic data base which is updated within 24 hours of any entry made to the main electronic data base. (1) Where the JAR-145 approved maintenance organisation provides a maintenance service to an aircraft operator who require their workcard or worksheet system to be used then such workcard or worksheet system may be used. In this case the JAR-145 approved maintenance organisation must establish a procedure to ensure correct completion of the aircraft operators workcards or worksheets.]	AMC 145.45(e) 1 Relevant parts of the organisation means with regard to aircraft base maintenance, aircraft line maintenance, engine workshops, mechanical workshops and avionic workshops. Therefore, for example engine workshops should have a common system throughout such engine workshops that may be different to that in aircraft base maintenance. 2 Complex maintenance tasks should be transcribed onto the workcards or worksheets and sub-divided into clear stages to ensure a record of the accomplishment of the maintenance task. Of particular importance is the need to differentiate and specify, when relevant, disassembly, accomplishment of task, reassembly and testing. In the case of a lengthy maintenance task involving a succession of personnel to complete such task, it may be necessary to use supplementary workcards or worksheets to indicate what was actually accomplished by each individual person.] [Amdt. 3, 01.04.01]	Except where stated otherwise in sub-paragraph (e)(1), the ECAR -145 approved maintenance organisation must provide a common workcard or worksheet system for use throughout relevant parts of the organisation and must either transcribe accurately the maintenance data contained in sub-paragraphs (b), (c) and (d) onto such workcards or worksheets or make precise reference to the particular maintenance task(s) contained in such maintenance data. Workcards and worksheets may be computer generated and held on an electronic data base subject to both adequate safeguards against unauthorised alteration and a back-up electronic data base which is updated within 24 hours of any entry made to the main electronic data base. (1) Where the ECAR -145 approved maintenance organisation provides a maintenance service to an aircraft operator who require their workcard or worksheet system to be used then such workcard or worksheet system may be used. In this case the ECAR -145 approved maintenance organisation must establish a procedure to ensure correct completion of the aircraft operators workcards or worksheets.] <u>2 Complex maintenance tasks should be transcribed onto the workcards or worksheets and sub-divided into clear stages to ensure a record of the accomplishment of the maintenance task</u>	AMC 145.45(e) 1 Relevant parts of the organisation means with regard to aircraft base maintenance, aircraft line maintenance, engine workshops, mechanical workshops and avionic workshops. Therefore, for example engine workshops should have a common system throughout such engine workshops that may be different to that in aircraft base maintenance. <u>The workcards should differentiate and specify, when relevant, disassembly, accomplishment of task, reassembly and testing. In the case of a lengthy maintenance task involving a succession of personnel to complete such task, it may be necessary to use supplementary workcards or worksheets to indicate what was actually accomplished by each individual person.]</u>	Transferred to rule
45(f)	The JAR-145 approved maintenance organisation must ensure that all applicable [maintenance] data is readily available for use when required by maintenance personnel.	(see next box in this column)	The ECAR -145 approved maintenance organisation must ensure that all applicable [maintenance] data is readily available for use when required by maintenance personnel.		

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JAR 145			ECAR 145		
Paragraph	Section 1	Section 2	Implementing rule	Means of compliance Certification Specifications Guidance material	Remarks
45(g)	The JAR-145 approved maintenance organisation must ensure that [maintenance] data controlled by the organisation is kept up to date. In the case of operator / customer controlled and provided [maintenance] data, the JAR-145 approved maintenance organisation must show that either it has written confirmation from the operator / customer that all such [maintenance] data is up to date or it has work orders specifying the amendment status of the [maintenance] data to be used or it can show that it is on the operator / customer [maintenance] data amendment list. [Amdt. 3, 01.04.01]	AMC 145.45 (f)&(g) 1 To keep data up to date a procedure should be set up to monitor the amendment status of all data and maintain a check that all amendments are being received by being a subscriber to any document amendment scheme. 2 Data being made available to personnel maintaining aircraft means that the data should be available in close proximity to the aircraft being maintained, for supervisors, mechanics and certifying staff to study. 3 Where computer systems are used, the number of computer terminals should be sufficient in relation to the size of the work programme to enable easy access, unless the computer system can produce paper copies. Where microfilm or microfiche readers/printers are used, a similar requirement is applicable. [Ch. 2, 10.7.98; Amdt. 3, 01.04.01]	The ECAR -145 approved maintenance organisation must <u>establish a procedure to</u> ensure that [maintenance] data controlled by the organisation is kept up to date. In the case of operator / customer controlled and provided [maintenance] data, the ECAR -145 approved maintenance organisation must show that either it has written confirmation from the operator / customer that all such [maintenance] data is up to date or it has work orders specifying the amendment status of the [maintenance] data to be used or it can show that it is on the operator / customer [maintenance] data amendment list. <u>The referenced procedure must be specified in the maintenance organisation exposition.</u>	AMC 145.45 (f)&(g) 1 To keep data up to date a procedure should be set up to monitor the amendment status of all data and maintain a check that all amendments are being received by being a subscriber to any document amendment scheme. 2 Data being made available to personnel maintaining aircraft means that the data should be available in close proximity to the aircraft being maintained, for supervisors, mechanics and certifying staff to study. 3 Where computer systems are used, the number of computer terminals should be sufficient in relation to the size of the work programme to enable easy access, unless the computer system can produce paper copies. Where microfilm or microfiche readers/printers are used, a similar requirement is applicable.	

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