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| **Guide kompetenskrav för ledningspersonal “MM/SM/CMM”** |

*Transportstyrelsen fråntar sig ansvar för att samtliga regler är omhändertagna och att texten helt överensstämmer med gällande regler.*

Uppdaterad enligt:

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Initial | Amd 1 | Amd 2 | Amd 3 | Amd 4 | Amd 5 | Amd 6 | Amd 7 | Amd 8 | Amd 9 |
| 1321/2014 | 2015/1008 | 2015/1536 | 2018/1142 | 2019/1383 | 2019/1384 | 2020/270 | 2020/1159 | 2021/700 | 2021/1963 |
| - | - | - | - | Y | NA | NA | NA | NA | NA |

|  |  |  |  |
| --- | --- | --- | --- |
| 10 | 11 | 12 | 13 |
| 2022/410 | 2022/1360 | 2023/203 | 2023/989 |
| Y | NA | Y | NA |

AMC/GM, **Part-145** Uppdaterad enligt:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Issue 2 | Amd 1 | Amd 2 | Amd 3 | Amd 4 | Amd 5 | Amd 6 |
| 2015/029/R | 2016/011/R | 2019/009/R | 2020/002/R | 2021/009/R | 2022/011/R | 2023/010/R |
| - | - | - | - | NA | Y | NA |

Guide “MM/SM/CMM” är en guide som en underhållssorganisation kan använda för vägledning av kompetenskrav på ledningspersonal.

* **Kraven ska sedan anpassas till organisations verksamhet och krav i MOE.**
* **Dokumentation som styrker (hur man kom fram till (145.A.30(e)) ska finnas och sparas enligt 145.A.55.**

Kontroll av att gällande **regelkrav** är beaktade, utförd för:

MM *- Namn:*

SM *- Namn:*

CMM *- Namn:*

Kompetensbedömning utförd av:

Datum:

Kommentar:

AM’s godkännande av kompetensbedömningen:

**GM1 to Annex II (Part-145) Definitions**

**Competency** is a combination of individual skills, practical and theoretical knowledge, attitudes, training, and experience.

*ED Decision 2022/011/R*

| **Grundläggande krav “MM/SM/CMM”** | **OK + bilaga**  **(N/A)** |
| --- | --- |
| AMC1 145.A.30(cc) Personnel requirements  *ED Decision 2022/011/R*  **KNOWLEDGE, BACKGROUND AND EXPERIENCE OF NOMINATED PERSON(S)**  The person or persons to be nominated in accordance with points (b), (c) and (ca) of point 145.A.30 should have: |  |
| AMC1 145.A.30(cc)**-(a)**  **practical experience and expertise** in the application of  aviation safety standards and  safe operating practices; | **MM/SM/CMM** |
| ***TS tillägg:***  *Lämplig inställning till säkerhet och efterlevnad av rutiner.   (Attityd – Se definition ”Competency”)* |  |
| AMC1 145.A.30(cc)**-(b)** **knowledge** of:  (1) human factors principles\*;  (2) **EU management system requirements** and their application  (**including** safety management systems and  compliance monitoring); | **MM/SM/CMM** |
| ***TS tillägg:***  *\* HF kan t.ex. erhållas med* ***Initial safety training*** *enligt AMC4 145.A.30(e)* |  |
| AMC1 145.A.30(cc)**-(c)**  5 years of relevant work experience, of which at least 2 years should be from the aeronautical industry in an appropriate position; | **MM/SM/CMM** |
| ***TS tillägg:***   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | Vad, var (arbetsgivare)? | När? År, mån  Hur lång tid? | Motivering  (Relevant) | | Minst  2 år | Ska vara **relevant erfarenhet** från:   * + *Luftfartygs-, komponentunderhåll\**  (145 (MF, CAO-U, 66) *och/eller*   + *Arbetsuppgifter avseende fortsatt luftvärdighet*  (CAMO, MG, CAO-L) *och/eller*   + *Övervakning* av sådana uppgifter (auditör, CMM, QM)   **och** varit i en **relevant position** inför **rollen** som MM, SM, CMM.  *\*Obligatoriskt erfarenhet för MM för att erhållit tillräckliga kunskaper för rollen.*  *(Ska vara ifrån civil flygindustri)* |  |  |  | |  | **och** |  |  |  | | Resterande år | Ska vara **relevant erfarenhet** **inför rollen** som MM, SM, CMM.  *(Kan vara utanför civil flygindustri)* |  |  |  | | **Summa minst 5 år:** | | |  |  | |  |
| AMC1 145.A.30(cc)**-(d)** ***(Alternativ 1):***  a relevant engineering *or* technical degree, **or**  *(‘Relevant engineering or technical degree’ means a degree from aeronautical, mechanical, electrical, electronic, avionics or other studies that are relevant to the maintenance and/or continuing airworthiness of aircraft/aircraft components.)*  an aircraft technician **or**  maintenance engineer qualification **with additional education** that is acceptable to the competent authority. | **MM/SM/CMM** |
| AMC1 145.A.30(cc)**-(d)** ***(Alternativ 2):***  The provision set out in the first paragraph of point (d) may be replaced by **2 years** of experience **in addition** to those already recommended by paragraph (c) above.  These **2 years** should cover an appropriate combination of experience in tasks/activities related to  maintenance **and/or**  continuing airworthiness management **and/or**  the surveillance of such tasks. | **MM/SM/CMM** |
| ***TS tillägg:***  ***Appropriate*** *combination of experience in tasks/activities related to:*   |  |  |  |  | | --- | --- | --- | --- | | Vad?  (arbetsuppgift)  **Aircraft maintenance** | Var?  Arbetsgivare | När? | Hur lång tid? | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | | Aircraft maintenance |  | Summa: |  | | Vad?  (arbetsuppgift)  **Continuing airworthiness management** | Var?  Arbetsgivare | När? | Hur lång tid? | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | | Continuing airworthiness management |  | Summa: |  | | Vad?  (arbetsuppgift)  **Surveillance of such tasks**   * **aircraft maintenance and/or** * **continuing airworthiness management** | Var?  Arbetsgivare | När? | Hur lång tid? | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | | Surveillance of such tasks |  | Summa: |  | | **Summa:** | | |  | |  |
| AMC1 145.A.30(cc)**-(d)** ***(Alternativ 3):***  For the person to be nominated in accordance with point (c) or (ca) of point 145.A.30, **in the case** where the organisation holds one or more additional organisation certificates within the scope of Regulation (EU) 2018/1139 **and**  **that person has already an equivalent position** (i.e. compliance monitoring manager, safety manager) under the additional certificate(s) held, **the provisions set out in the first two paragraphs of point (d) may be replaced by the completion of**  a **specific training programme** acceptable to the competent authority to gain an adequate   * + **understanding of maintenance standards**   *and*   * + **continuing airworthiness concepts and principles**; | **SM/CMM** |
| ***TS tillägg:***  *Se:*   * *Guide för utveckling av ett specifikt träningsprogram för SM/CMM (Del-CAMO & Del-145)* |  |
| AMC1 145.A.30(cc)**-(e)**  **thorough knowledge** of the organisation's MOE **and**  safety policy; | **MM/SM/CMM** |
| AMC1 145.A.30(cc)**-(f)** **knowledge of a relevant sample of the type(s) of aircraft *or* components** gained through a formalised training course. These courses could be provided by  a Part-147 organisation,  by the manufacturer,  by the Part-145 organisation **or**  by any other organisation accepted by the competent authority.  Aircraft/engine type training courses should be at least at a level **equivalent to the Part-66 Appendix III Level 1** General Familiarisation.  ‘**Relevant sample**’ means that these courses should cover typical aircraft or components that are within the scope of work of the organisation. | **MM/SM/CMM** |
| ***TS tillägg:***  Formalised training course documented. |  |
| For all balloons and any other aircraft of 2 730 kg MTOM or less, the **formalised training courses** may be replaced by  a demonstration of the required knowledge by providing documented evidence, **or**  by an assessment acceptable to the competent authority.  This assessment should be recorded; | **MM/SM/CMM** |
| ***TS tillägg:***  ***A-rating***  *MM/SM/CMM ska ha utbildning på relevanta typer av luftfartyg som motsvarar de luftfartyg som finns i tillståndets scope, har tillståndet gruppbehörighet ska utbildning finnas på minst ett luftfartyg i varje grupp. Med relevant typ menas också att struktur (duk, trä, metall), avionik (digital, analog), motor (bensin, diesel, el) ska tas med.*  ***B – och C-rating***  *MM/SM/CMM ska ha utbildning på relevanta komponenter som motsvarar de komponenter som finns i tillståndets scope.*  ***D-rating***  *MM/SM/CMM ska ha utbildning på relevanta NDT-metoder som finns i tillståndets scope.* | **MM/SM/CMM** |
| AMC1 145.A.30(cc)**-(h)**  **knowledge** of maintenance methods; | **MM/SM/CMM** |
| ***TS tillägg:***   * *Se AMC5 145.A.30(e)* | *(Se sid 7)* |
| AMC1 145.A.30(cc)**-(h)**  **knowledge** of the applicable regulations; | **MM/SM/CMM** |
| ***TS tillägg:***  *T.ex:*  *Del-145*  EN 4179 *(om man berörs)*  *Del-M*  *Del-ML (om man berörs)*  *Del-IS.I.OR (om man berörs) Gäller från 2026-02-22*  *Del-CAMO (om man berörs)*  *Del-21*  *Del-21L (om man berörs)*  *TSFS (LFS)*  ”Händelserapporteringsförordning” (*376/2014)*  *”Förteckningsförordningen” (2015/1018)*  *BASA inkl TIP/MAG (för respektive land/avtal) (om man berörs)*  *EU-USA*  *EU-Canada*  *EU-Brazil*  *EU-Japan*  *EU-China*  *EU-UK* |  |
| AMC1 145.A.30(cc)**-(i)**  adequate language and communication skills. | **MM/SM/CMM** |

| **Ytterligare krav** | **OK + bilaga**  **(N/A)** |
| --- | --- |
| AMC1 145.A.30(c);(ca) Personnel requirements  *ED Decision 2022/011/R*  SAFETY MANAGEMENT AND **COMPLIANCE MONITORING FUNCTION** |  |
| **(b) Compliance monitoring function**  **(2) The compliance monitoring manager should:**  (i) not be one of the persons referred to in point 145.A.30(b);  (ii) be able to demonstrate relevant  knowledge,  background and  appropriate experience related to the activities of the organisation,  including knowledge and  experience in compliance monitoring; | **CMM** |
| **145.A.30(e)**  *Regulation (EU) 2021/1963*  The organisation shall **establish and control the competency of the personnel involved** in any  maintenance, airworthiness reviews, safety management and compliance monitoring in  accordance with a procedure and to a standard agreed with the competent authority. In  addition to the necessary expertise related to the job function, the competency of the personnel  must include an understanding of the application of **safety management principles**, **including**  **human factors and human performance** issues, which is **appropriate to their function and**  **responsibilities in the organisation**. |  |
| AMC4 145.A.30(e) Personnel requirements  *ED Decision 2022/011/R*  **SAFETY TRAINING (INCLUDING HUMAN FACTORS)** |  |
| (b) **Initial safety training** should cover all the topics of the training syllabus specified in GM1 145.A.30(e) either as a  dedicated course **or**  else integrated within other training.  The syllabus may be adjusted to reflect the particular nature of the organisation. The syllabus may also be adjusted to suit the particular nature of work for each function within the organisation.  For example:   * small organisations not working in shifts may cover in less depth subjects related to teamwork and communication; * planners may cover in more depth the scheduling and planning objectives of the syllabus, and in less depth the objective of developing skills for shift working.   All personnel identified in accordance with point (a) of this AMC, including personnel being recruited from any other organisation should receive initial safety training **compliant with the organisation’s training standards** prior to commencing the actual job function, unless their competency assessment justifies that there is no need for such training. New, directly employed personnel working under direct supervision may receive training within 6 months after joining the maintenance organisation. | **MM/SM/CMM** |
| ***TS tillägg:***  Vid nytt tillstånd ska utbildningen vara genomförd vid tillträde.  Vid befintligt tillstånd ska utbildningen vara genomförd inom 6 månader. |  |

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| **Ytterligare krav** | **OK + bilaga**  **(N/A)** |
| **AMC5 145.A.30(e) Personnel requirements**  *ED Decision 2022/011/R*  **OTHER TRAININGS** |  |
| (a) The organisation should **assess the need** for particular trainings, for example with regard to the  ‘Electrical Wiring Interconnection System’ (EWIS) or  ‘Critical Design Configuration Control Limitations’ (CDCCL). | **MM/SM/CMM** |
| (b) Guidance on EWIS training programme for maintenance organisation personnel is provided in AMC 20-22. | - |
| (c) Guidance on fuel tank safety training is provided in ‘Appendix IV to AMC5 145.A.30(e) and AMC2 145.B.200(a)(3)’. | - |
| ***TS tillägg:***  *MSG 3 (om man berörs)*  *ETOPS (om man berörs)*  *NDT-metoder (om man berörs)* | **MM/SM/CMM** |

|  |  |
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| **Ytterligare krav** | **OK + bilaga**  **(N/A)** |
| GM4 145.A.30(e) Personnel requirements  *ED Decision 2022/011/R*  **COMPETENCY OF THE SAFETY MANAGER** |  |
| The competency of a safety manager should include, but not be limited to, the following:  (a) knowledge of ICAO standards and European requirements on safety management;  (b) an understanding of management systems, including compliance monitoring systems;  (c) an understanding of risk management;  (d) an understanding of safety investigation techniques and root cause methodologies;  (e) an understanding of human factors;  (f) understanding and promotion of a positive safety culture;  (g) operational experience related to the activities of the organisation;  (h) safety management experience;  (i) interpersonal and leadership skills, and the ability to influence staff;  (j) oral and written communications skills;  (k) data management, analytical and problem-solving skills. | **SM** |

**Övrig information – Regelverkets beskrivning/krav på respektive roll**

| **MM** |
| --- |
| **145.A.30 Personnel requirements**  *Regulation (EU) 2021/1963* |
| (b) The accountable manager shall nominate a person or group of persons representing the management structure for the maintenance functions and with the **responsibility to ensure that the organisation works in accordance with the MOE and approved procedures**. It shall be made clear in the procedures who deputises for a particular person in the case of lengthy absence of that person. |
| **AMC1 145.A.30(b) Personnel requirements**  *ED Decision 2022/011/R* |
| **MANAGEMENT STRUCTURE FOR MAINTENANCE**  The person or group of persons nominated under point 145.A.30(b), with the responsibility to ensure that the organisation works in accordance with the MOE and approved procedures (i.e. responsibility for ensuring compliance) should represent the management structure of the organisation and be **responsible for the daily operation of the organisation, in respect of all maintenance-related functions.**   * *Se pkt 1-8 för ytterliggare specificering* |
| **GM1 145.A.30(b) Personnel requirements**  *ED Decision 2022/011/R* |
| **RESPONSIBILITY FOR ENSURING COMPLIANCE**  The person(s) nominated in accordance with 145.A.30(b) are responsible, in the day-to-day maintenance activities, **for ensuring that the organisation personnel work in accordance with the applicable procedures and regulatory requirements.**  These nominated persons should demonstrate a complete understanding of the applicable regulatory requirements, and ensure that the organisation’s processes and standards accurately reflect these requirements. It is their role to ensure that compliance is proactively managed, and that early warning signs of non-compliance are documented and acted upon. |

Personen har kunskap och förståelse om regelverkets krav för rollen.

| **SM** |
| --- |
| **145.A.30 Personnel requirements**  *Regulation (EU) 2021/1963* |
| (ca) The accountable manager shall nominate a person or group of persons with the **responsibility to manage the development, administration and maintenance of effective safety management processes** as part of the management system. |
| **AMC1 145.A.30(c);(ca) Personnel requirements**  *ED Decision 2022/011/R* |
| **SAFETY MANAGEMENT** AND COMPLIANCE MONITORING FUNCTION  **(a) Safety management**  If more than one person is designated for the development, administration and maintenance of effective safety management processes, the accountable manager should identify the person who acts as the unique focal point, i.e. the ‘safety manager’. **The functions of the safety manager should be to:**  (i) facilitate hazard identification, risk assessment and management;  (ii) monitor the implementation of actions taken to mitigate risks, as listed in the safety action plan, unless action follow-up is addressed by the compliance monitoring function;  (iii) provide periodic reports on safety performance to the safety review board (the functions of the safety review board are those defined in AMC1 145.A.200(a)(1));  (iv) ensure the maintenance of safety management documentation;  (v) ensure that there is safety training available, and that it meets acceptable standards;  (vi) provide advice on safety matters; and  (vii) ensure the initiation and follow-up of internal occurrence investigations. |

Personen har kunskap och förståelse om regelverkets krav för rollen.

| **CMM** |
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| **145.A.30 Personnel requirements**  *Regulation (EU) 2021/1963* |
| (c) The accountable manager shall nominate a person or group of persons with the **responsibility to manage the compliance monitoring function** as part of the management system. |
| **AMC1 145.A.30(c);(ca) Personnel requirements**  *ED Decision 2022/011/R* |
| SAFETY MANAGEMENT AND **COMPLIANCE MONITORING FUNCTION**  **(b) Compliance monitoring function**  If more than one person is designated for the compliance monitoring function, the accountable manager should identify the person who acts as the unique focal point, i.e. the ‘compliance monitoring manager’.  **(1) The role of the compliance monitoring manager should be to ensure that:**  (i) the activities of the organisation are monitored for compliance with the applicable requirements and any additional requirements as established by the organisation, and that these activities are carried out properly under the supervision of the nominated persons referred to in points (b), (c) and (ca) of point 145.A.30;  (ii) any maintenance contracted to another maintenance organisation is monitored for compliance with the contract or work order;  (iii) an audit plan is properly implemented, maintained, and continually reviewed and improved; and  (iv) corrections and corrective actions are requested as necessary. |

Personen har kunskap och förståelse om regelverkets krav för rollen.