

# Del-ML (EU) 1321/2014

Presentation seminarium för CAO (MG, MF) NLO, AUB och fristående tekniker som i huvudsak arbetar med små luftfartyg

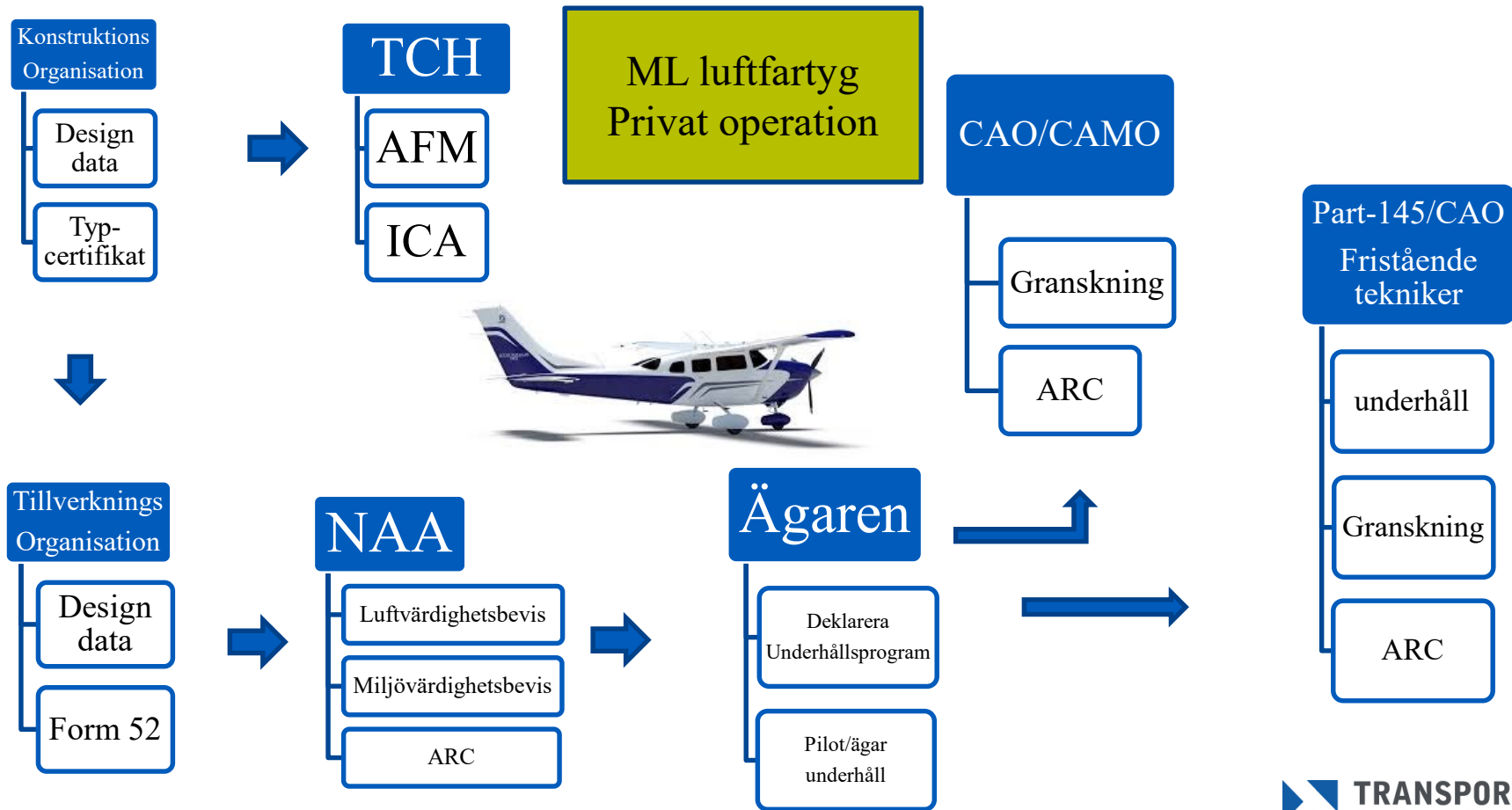
2021-10-20 Presentatör Ola Asp

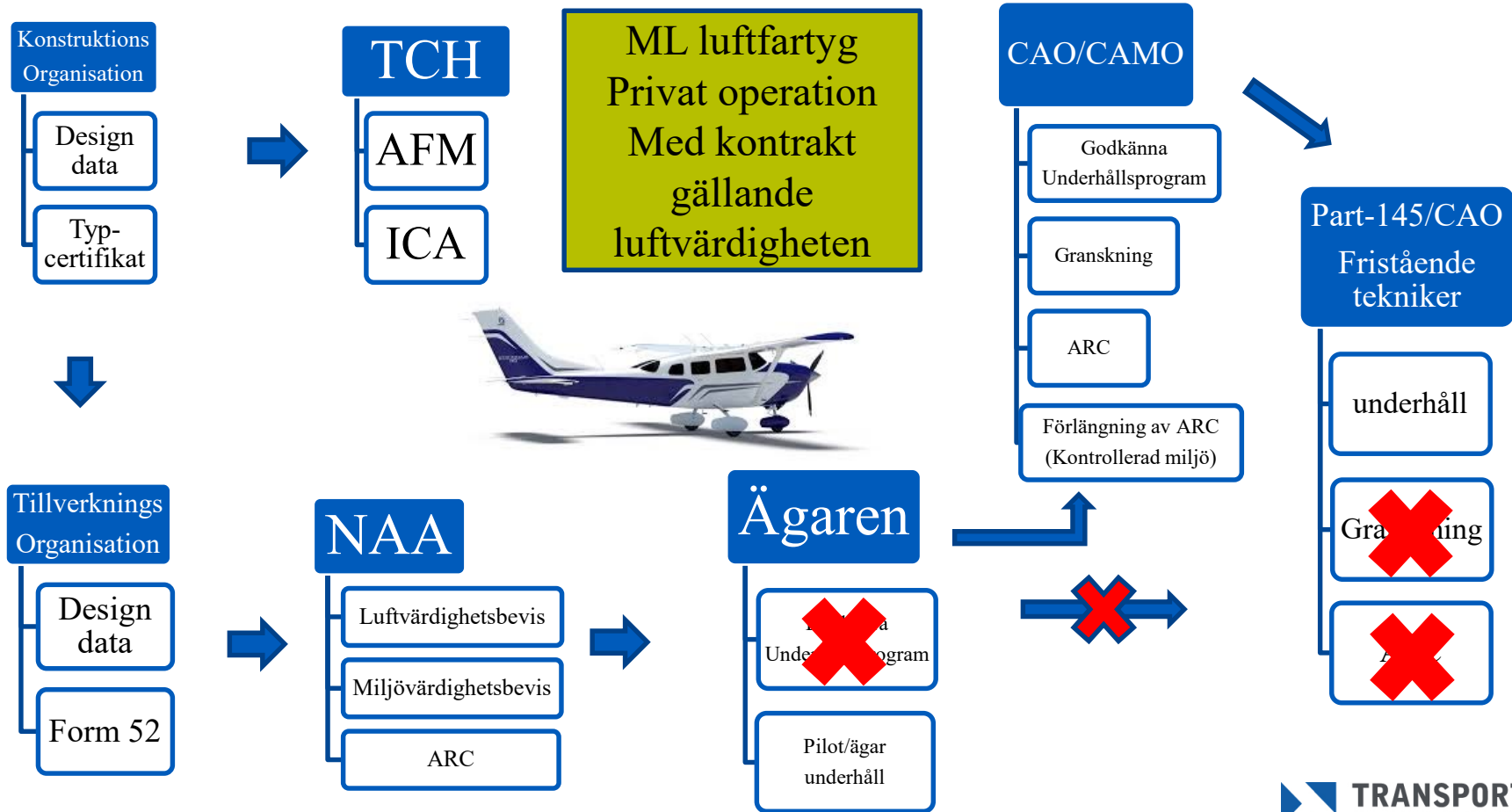
Processkoordinator Del-M, Del-ML, Del-CAMO och NLO

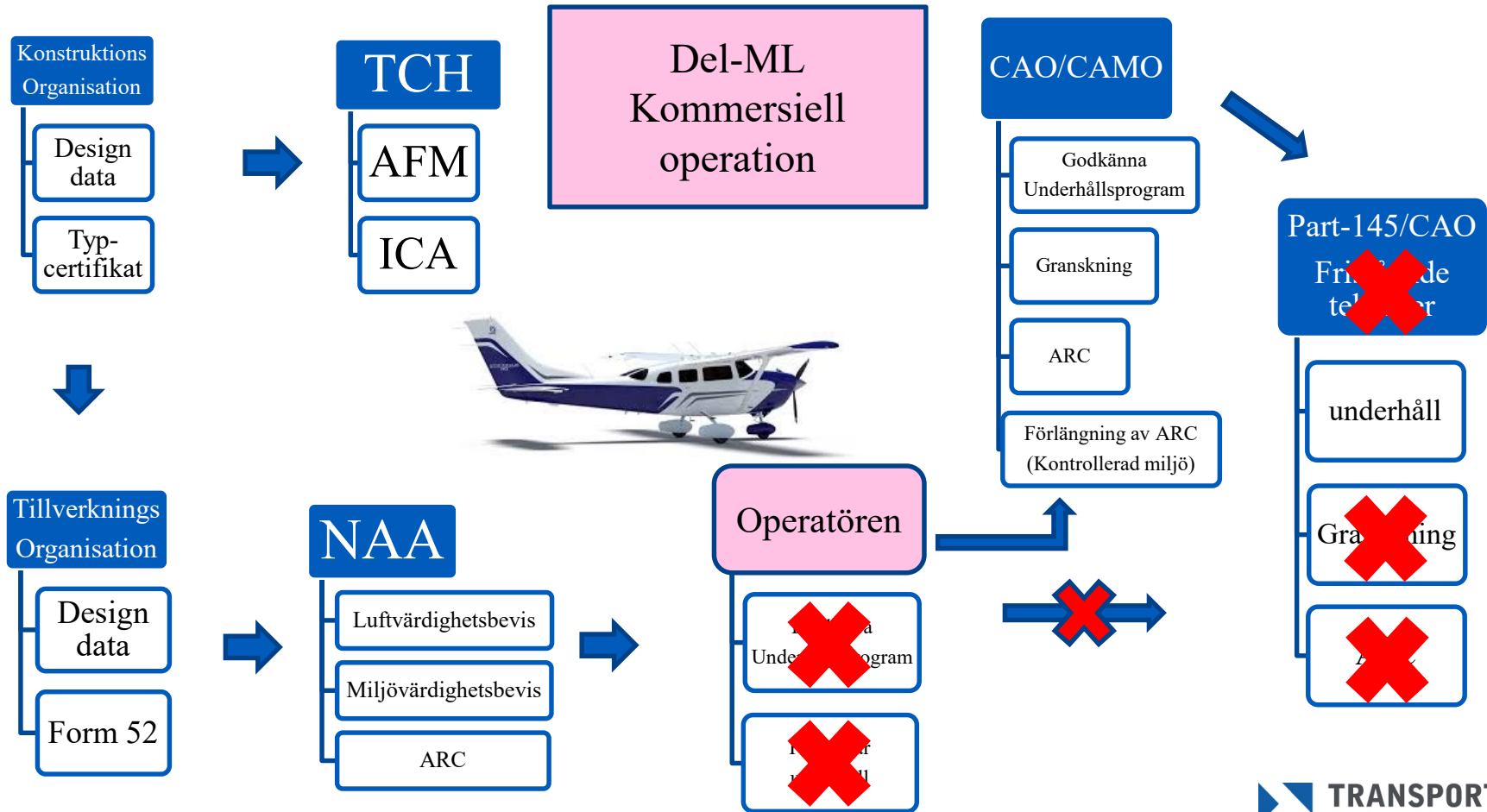
# Del-ML

- Luftvärdighetsstandard för luftfartyg
- Flygplan < 2730kg MTOM
- Helikopter < 1200kg MTOM / max 4 ombord
- Andra ELA2 luftfartyg

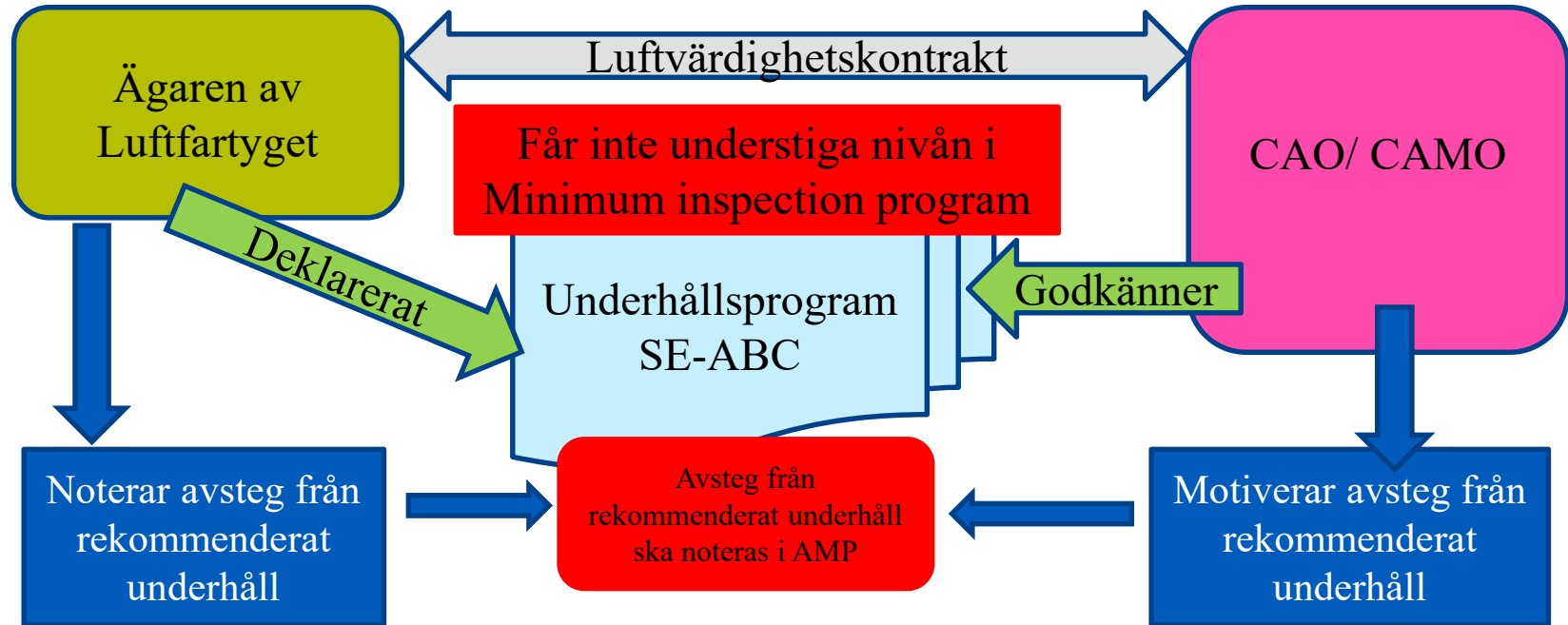
Som inte ingår i ett AOC med operativ licens



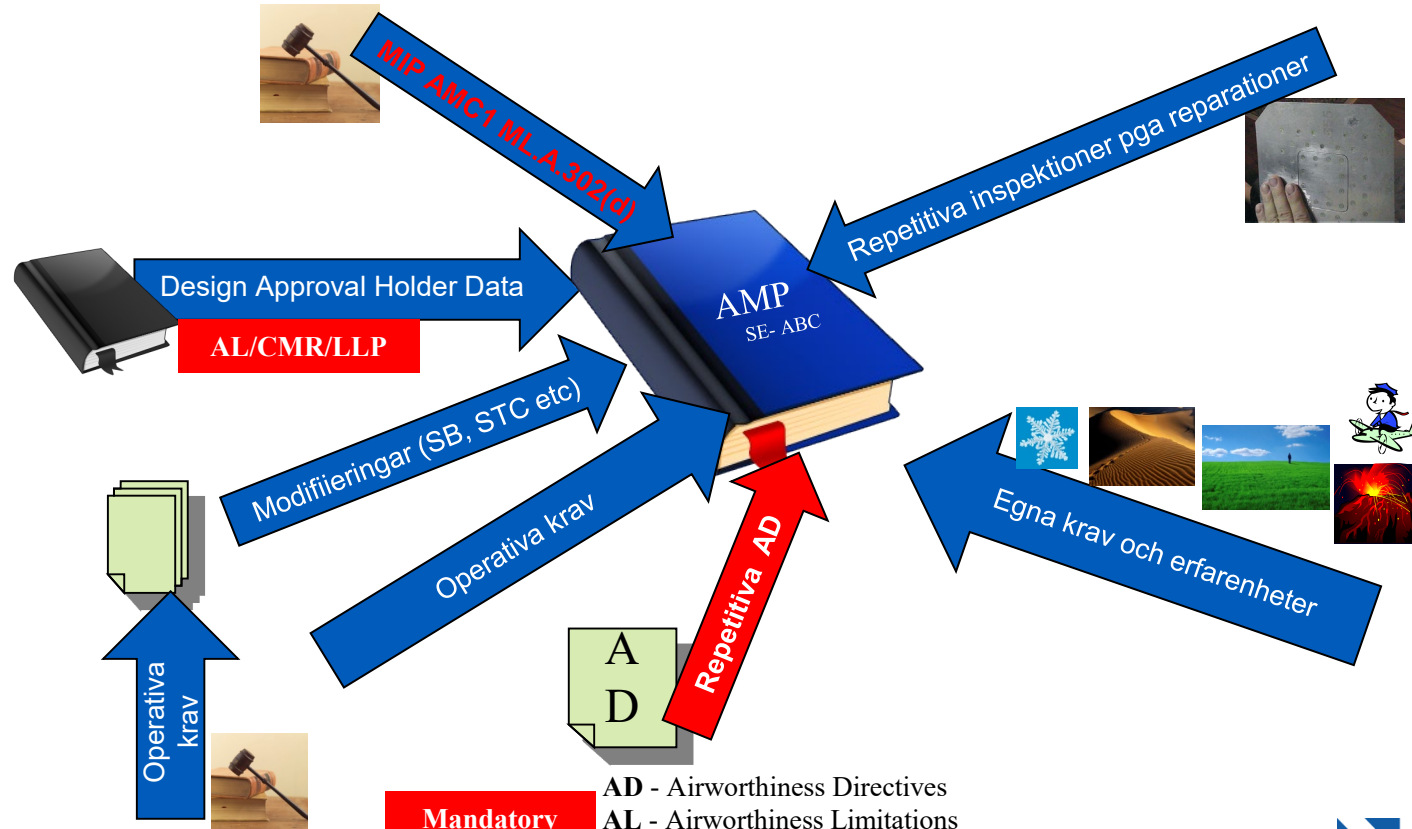




# Underhållsprogram (AMP)



# Data att beakta vid framtagande av ett underhållsprogram



**Mandatory**

- AD - Airworthiness Directives
- AL - Airworthiness Limitations
- CMR - Certification Maintenance Requirement
- LLP- Life Limited Parts

## Examples of alternative maintenance actions: *GM1ML.A.302(c)(3)*

ICA task	AMP proposed alternative	MIP task	Alternative acceptable Yes/No
Inspection XX 6 months interval	Inspection XX 12 months interval	Inspection XX 12 months interval	Yes
Inspection XX 12 months interval	Inspection XX 24 months interval	Inspection XX 12 months interval	No
Inspection XX 24 months interval	Inspection XX 36 months interval	Inspection XX 12 months interval	No (24 months to be kept)
Functional test system XX	Operational test system XX (same interval) or general visual inspection system XX (same interval)	Functional test system XX (same interval)	No
Operational test system XX	Functional test system XX (same interval)	Operational test system XX (same interval)	Yes



## Riskbaserat förhållningssätt till variationer på underhållsuppgifter i AMP *AMC1 ML.A.302(c)*

When evaluating an alternative to a maintenance task issued or recommended by the DAH, such as the extension of TBO intervals, or when considering not to include a maintenance task issued or recommended by the DAH, a risk-based approach should be taken, considering aspects such as the operation of aircraft, type of aircraft, hours and years in service, maintenance of the aircraft, compensating measures, redundancy of components, etc.

	Examples
<b>OPS approval</b>	HIGHER RISK: commercial operation, commercial flight training MEDIUM RISK: flight training by an association, non-commercial specialised operations (SPO) LOWER RISK: private
<b>Flight rules</b>	HIGHER RISK: instrument flight rules (IFR) MEDIUM RISK: visual flight rules (VFR) at night LOWER RISK: VFR by day
<b>Aircraft weight</b>	HIGHER RISK: Other than ELA1 MEDIUM RISK: ELA1 aircraft other than light sport aeroplanes (LSA), very light aircraft (VLA), sailplanes and powered sailplanes LOWER RISK: LSA, VLA, sailplanes and powered sailplanes
<b>Who manages the airworthiness of the aircraft?</b>	HIGHER RISK: owner LOWER RISK: CAMO/CAO
<b>Who maintains the aircraft?</b>	HIGHER RISK: pilot-owner MEDIUM RISK: independent certifying staff LOWER RISK: maintenance organisation
<b>Time in service (flight hours, years)</b>	HIGHER RISK: very high number of hours or years MEDIUM RISK: medium number of hours or years LOWER RISK: low number of hours or years

	Examples
<b>Aircraft utilisation</b>	HIGHER RISK: less than 50 h per year MEDIUM RISK: around 200 h per year LOWER RISK: more than 400 h per year
<b>ACAM findings</b>	HIGHER RISK: numerous findings in ACAM or ramp inspections MEDIUM RISK: few findings in ACAM inspections LOWER RISK: rare findings in ACAM inspections
<b>System redundancy (for components such as engine/propeller)</b>	HIGHER RISK: single-engined aircraft LOWER RISK: multi-engined aircraft
<b>Supplementary maintenance measures</b>	HIGHER RISK: no supplementary measures LOWER RISK: supplementary measures (such as oil analysis, engine data monitoring, boroscope inspections, corrosion inspections, etc.)
<b>Risk factor of the component failure</b>	HIGHER RISK: engine failure on a helicopter MEDIUM RISK: engine failure on an aeroplane LOWER RISK: sailplane, or powered sailplane

## MANDATORY CONTINUING AIRWORTHINESS INFORMATION OTHER THAN ADS

The intent is that the **AMP** (whether based on **MIP** or not) includes all mandatory scheduled maintenance requirements identified during the initial airworthiness activity, by the **TC holder**, **STC holder** and, if applicable, engine **TC holder**.

- Airworthiness limitations or Airworthiness limitation items (ALI)
- Certification maintenance requirements (CMR)
- Safe life items or safe life limits or safe life limitations
- Life-limited parts (LLP)
- Time limits
- Retirements life
- Mandatory Inspections or Mandatory Airworthiness Inspections
- Fuel airworthiness limitations or Fuel tank safety limitations

**The intervals of the mandatory continuing airworthiness information cannot be extended by a CAMO/CAO. The escalation of such tasks is to be approved by the Agency.**

## Årlig granskning av underhållsprogrammet *AMC1 ML.A.302(c)(9)*

(a) During the annual review of the maintenance programme, as required by point ML.A.302(c)(9), the following should be taken into consideration:

- (1) the results of the maintenance performed during that year, which may reveal that the current maintenance programme is not adequate;
- (2) the results of the AR performed on the aircraft, which may reveal that the current maintenance programme is not adequate;
- (3) revisions introduced on the documents affecting the programme basis, such as the ML.A.302(d) MIP or the DAH's data;
- (4) changes in the aircraft configuration, and type and specificity of operation;
- (5) changes in the list of pilot-owners; and
- (6) applicable mandatory requirements for compliance with Part 21, such as airworthiness directives (ADs), airworthiness limitations, certification maintenance requirements and specific maintenance requirements contained in the type certificate data sheet (TCDS).

## Årlig granskning av underhållsprogrammet *AMC1 ML.A.302(c)(9)*

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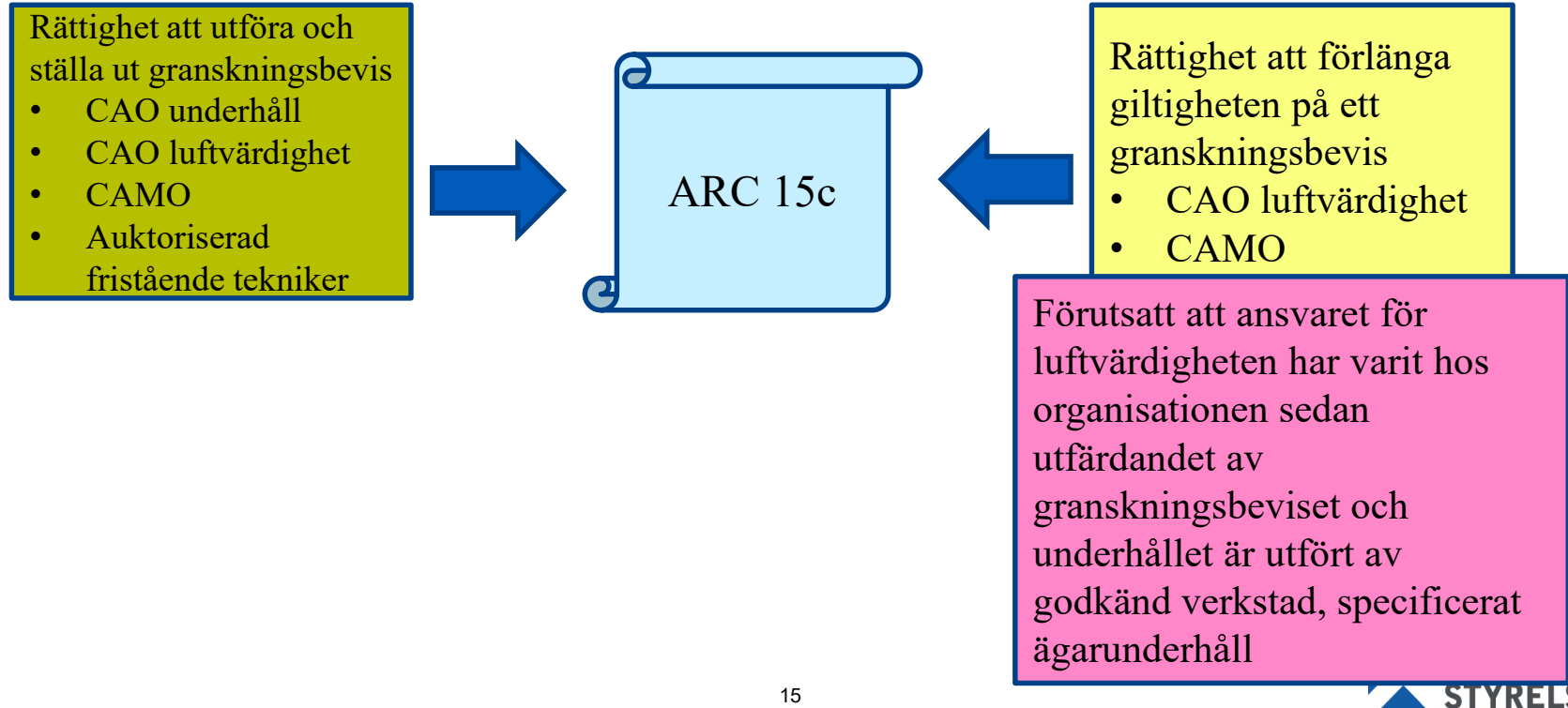
(b) When reviewing the effectiveness of the AMP, the AR staff (or the CAMO/CAO staff if the review of the AMP is not performed in conjunction with an AR) may need to review the maintenance carried out during the last 12 months, including unscheduled maintenance. To this end, he or she should receive the records of all the maintenance performed during that year from the owner/CAMO/CAO.

~~(c) reviews introduced in the documents concerning the programme tasks, such as the MIP (a) or~~  
MIP or the DAH's data;

(4) changes in the aircraft configuration, and type and specificity of operation;

**(c) When reviewing the results of the maintenance performed during that year and the results of the AR, attention should be paid as to whether the defects found could have been prevented by introducing in the maintenance programme certain DAH's recommendations, which were initially disregarded by the owner, CAMO or CAO.**

# Luftvärdighetsgranskning



# Fristående luftvärdighetsgranskare

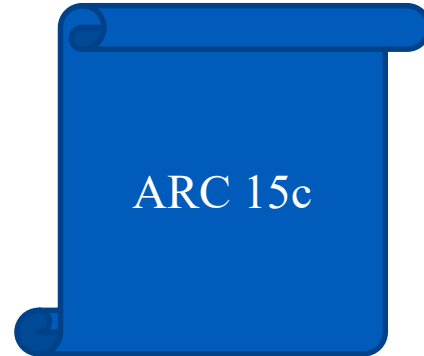
Auktorisering av fristående luftvärdighetsgranskare av luftfartyg som uppfyller kraven i Del-ML

2021-10-20 Presentatör Ola Asp,  
processkoordinator Del-M, Del-ML, Del-  
CAMO och NLO



## Villkor för utförande och utfärdande av granskningsbevis 15c för fristående luftvärdighetsgranskare

- Granskning ska genomföras i samband med 100 timmars/ årlig tillsyn
- Granskning varje år



## Villkor för auktorisering av fristående luftvärdighetsgranskare

- Ansökan till behörig myndighet
- Gällande Del-66 certifikat på typen
- Uppfyller 6/24 månaders regeln (*Del-66.A.20(b)*)
- Auktorisering genom granskning under supervision av behörig myndighet
  - Supervision innebär att kunna visa och beskriva fysisk inspektion och dokumentgranskning samt förevisa en rutinbeskrivning och hur dokumentation för granskningen skapas och sparas
- Auktorisering gäller 5 år under förutsättning att minst en granskning utförs årligen
- Förnyelse kan göras efter 5 år genom ny validering och supervision av behörig myndighet

**Slut**