

## Ageing Aircraft Info Session for Operators & CAMOs, Q&A.

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Q1. Will there be any additional national authority oversight over operators handling of fatigue critical and structural programs in the future?

Answer:

The extent of additional oversight activity would depend on the status of those programmes within the operators fleet. If already well established one would envisage little additional activity. If there are several aircraft requiring surveys for repairs to fatigue critical structure additional oversight may be implemented.

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Q2. How does the CAMO establish the need to request the/need of a DTI?

Answer:

If a major change is considered to potentially affect either Fatigue Critical Baseline Structure (FCBS) based on the TCH list of FCBS or is a change considered to affect FCBS provided in a list by the STCH and there is no DT data currently available from the DAH then the CAMO should contact the DAH for confirmation as to whether a new DTE and DTI are required. The TCH REG will provide guidance for the assessment of repairs. A CAMO may also choose to use the guidance of AMC 20-20A to make their own assessment prior to receiving DAH data.

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Q3: Does FCMS include repaired structure?

Answer:

No, there is no list required of repaired structure although FCMS may be or have been repaired and require a DTI. We expect the Design Approval Holder to evaluate published repairs that they have designed for FCMS. The FCMS is a description of any additional structure which a modification implements that its fatigue critical which is already described in the FCBS.

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Q4: 26.370(a)(ii) "Introduce a plan in the AMP": what is the definition of "AMP" - is it the Maintenance Programme for the operator's fleet (as approved by NAA) or can it mean control of individual inspections against individual a/c via the aircraft defect log?

Answer:

AMP is Aircraft Maintenance Programme as required by point M.A.302 of Part-M, which must demonstrate compliance with the ICA issued by design approval holders and with the applicable provisions of Part-26.

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Q5: There are many structural repairs manual (SRM) repairs to fatigue critical structure (FCS) however the SRM does not define the classification of the repair per 21A91/21.435. How does an operator know the repair classification if it has not been specified per SRM?

Answer:

If the reinforcing repair and associated ICA is implemented in accordance with the SRM approved data at the time of the repair the CAMO should check whether that data is still valid according to the latest SRM and TCH REGs and if it is not clear as to what action to take then the CAMO should contact the TCH to establish whether new or revised DTI are required. All reinforcing repairs to FCS performed in accordance with the SRM should be reviewed for completeness and applicability of DTI as necessary in accordance with the TCH REGs, SRM or other applicable data.

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Q6: 26.370(a) (ii): where an operator's fleet consists of a/c certificated after 2009 and therefore has no REG - there will be no "REG" survey compliance threshold for repairs. When does one therefore plan to review the DTI?

Answer:

The TCH repairs and associated DTI for new aircraft types first certificated after 11 Jan 2008 may be assumed to be compliant with the applicable damage tolerant certification basis and therefore Part-26. A records review should normally be sufficient on such a new aircraft to identify if there are third party reinforcing repairs to FCS and establish if those repairs have been approved appropriately and provided with DTI where necessary. Ultimately, for such aircraft, and notwithstanding Part-26, the need to ensure compliance with the applicable certification basis is a primary consideration and it is therefore recommended that the records review should be conducted and any missing DTI incorporated in the AMP as soon as possible. The allowances for evaluating repairs to older aircraft provided by the guidance of AMC 20-20A for development of the TCH REGs are not envisaged to be necessary or utilized for these newer aircraft.

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Q7a: For the REG (Repair Evaluation Guidelines) / Repair Survey I conclude that:

TCH must submit the REGs to EASA for approval before 26 February 2023 per par 26.309(b) and after approval make the REGs available.

Answer: Yes that is correct.

Q7b: Operators must incorporate a plan to address repairs affecting FCS in the AMP before 26 February 2024 per par 26.370(b)(ii).

Yes, that is correct. The plan should include a repair survey that must be accomplished before reaching DSG (based on REG) or within 7 years after EASA approval of REG (26 February 2030), whichever occurs later.

Can you confirm?

Answer:

Yes, the operator must incorporate a plan in the AMP (or reference to a plan) that provides means to obtain DTI for repairs. This will include schedules for repair surveys unless a records review is considered and agreed to be sufficient.

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Q8: Will rework repairs (blend out, trim-outs, etc.) be on a list of repairs that require DTE?

Answer:

All repairs should be DT from now on, e.g. in the SRM, all the inspection data will be fully DT compliant. However, you won't be expected to evaluate existing blend outs, trim-outs, etc.. The plan for addressing the existing repairs only needs to address what we call reinforcing repairs, where a strap or reinforcing doubler or similar part is added. From now on you will always get DT data from the DAHs that is DT compliant.

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Q9: How rigidly will the implementation time scale limits be enforced? Looking at the numerous delays for mandating for ADS-B?

Answer:

We don't envisage any problems for operators in meeting these timescales due to the wide availability of data. CS-26 outlines the activities that should be accomplished to meet the time scales. As long as it's in the operator plan to obtain any missing DT data it is then under operator responsibility to ensure compliance with that plan. As for any other related process, the competent authority will be responsible for oversight.

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Q10: A general question: this regulation is the result of a series of evolutions in the search for sources of structural risk. Assuming the process is not finished, what are the potential additional sources of damage? Is there already a particular sensitivity domain of the structures or materials on which to work?

Answer:

EASA is always evaluating areas of risk in all domains of safety. For identified areas of risk the Agency concentrates its efforts on producing a best intervention strategy, within which we don't always have to go to regulations to mitigate risk. In this case we have finished many years of activity regarding ageing metallic structures with a regulation that ensures a level playing field across specific categories of large aeroplane, but there are other means to mitigate risk, such as safety promotion, which is part of the work that we do daily at the Agency. Furthermore, the recently published amendments to Part 21 that ensure the validity of the continuing structural integrity programme throughout the life of the aeroplane

will help mitigate other structural risks in the future. New risks are identified and mitigated by involvement with new technologies such as additive manufacturing and monitoring of safety data such as occurrence reports for emerging trends. Please go to our website for more information, in particular our European Plan for Aviation Safety 2021/2025 to learn more about the Agency's strategy.

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Q11: Are temporary repairs with ICAs to be implemented in the AMP by the operator?

Answer:

This question is outside the scope of the session as it is not restricted to compliance with Part-26. However, Point M.A.302 (d) of Part M states that the AMP shall demonstrate compliance with instructions for continuing airworthiness issued by the holders of the type certificate, restricted type certificate, supplemental type certificate, major repair design approval, ETSO authorisation or any other relevant approval issued under Annex I (Part-21) to Regulation (EU) No 748/2012. Normally, temporary repairs come with a limitation on the life of the repair, which is typically quite short relative to the revision schedule of the AMP. In such cases the processes used by the CAMO for temporary repairs may allow the repair ICA to be controlled by means other than incorporation in the AMP. Note that according to GM 21.A.435(a) - Classification of repairs -, not all temporary repairs need be classified as major, but this does not take away from the need to address approved ICA for that repair. The information provided in response to this question does not supersede any other applicable requirements or any applicable competent authority approved processes for implementation of repair ICA.

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Q12: Could you please clarify the need of ageing training for operators, mentioned in AMC4 CAMO.A.305(g): "the need for particular training... AMC20-20 'Continuing Structural Integrity Programme? Would it be a mandatory training followed by recurrent trainings?

Answer:

The possible need for training would depend on the age of the fleet and the experience of CAMO staff with implementation of TCH structural maintenance programmes and structural repairs and changes, so the statement in AMC4 CAMO.A.305(g) is principally something for the Operator and CAMO to be aware of than for the Agency to prescribe a level of training. The guidance material in AMC 20-20A explains the concepts behind the Part-26 rule and supports the means of compliance in CS-26, so CAMO staff may need to be familiarized with that guidance. In turn the regulatory material will be supported by a considerable amount of fleet specific data and information provided by the TCH, which is very straight forward to implement. If you have a relatively new fleet with clear records, there won't be much work to do at all.

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Q13: Outside the Operators requirement to evaluate existing repairs via the TCH's REG is it correct to say that the Operator/CAMO can only implement the remaining Part 26 requirements in their AMP if they have be completed by the TCH first?

Answer:

In general, that is the best approach. The data for incorporation in the AMP should consist of (or in the case of the CPCP, take into account) existing and new TCH data that has been used by the TCH (or STCH) to comply with the Part-26 requirements applicable to TCHs. It is recommended that before updating their AMP operators wait until they get confirmation from the TCH about what data is applicable for the purpose of supporting compliance with operator requirements. While much of the TCH data already exists and is even approved by EASA, in some cases, existing TCH data (including REGs) developed for compliance with US regulations may need to be revised before being approved by EASA so that their applicability and suitability for use by EU operators is clear to the operator and competent authorities.

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Q14: if the Cert Basis for an applicable aircraft type is after JAR 25 Change 7 or FAR 25 Amendment 45 - does that mean if a (reinforcing) repair has been carried out in accordance with the TCH SRM or other TCH approved data that the repair will be in compliance with the discussed DTE/DTI requirements?

Answer:

Not necessarily. The DTE and DTI will only be compliant with Part-26 if the approved TCH data was fully in compliance with the certification basis at the time that the repair was implemented. It is known that this was not always the case for early damage tolerant types and in several cases of compliance with the US CFR14 Part 26.43 for repairs, TCHs updated some of the approved data, meaning that existing ICA may have been superseded. You should get confirmation in the repair evaluation guidelines as to some of the details of the SRM and other repair data status. If it's not clear, then it is recommended to contact the TCH, they are being encouraged to communicate with operators.

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Q15: Does it mean, if we did install in the past a large antenna on top of the fuselage with an STC issued by a Part 21 approved design organization, that the STC holder has to review the ICA and address the new regulation?

Answer:

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Q16: What is the EASA position, does the operator have to show the repair inspection intervals in the customized AMP on task basis, or is it OK to attach a list of all the class II repairs in the AMP?

Answer:

This is outside the scope of this session as it applies to control of repair ICA in general and not specifically Part-26. AMC M.A.302 expects repetitive inspection tasks to be incorporated in the AMP.

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Q17: Could you please specify, whether there is a need for additional AMP amendments for the CAMOs, managing such A/C types, where TC / STC holders already provide the necessary data (SSID) with the required inspections FH/FC/Calendar schedule?

Answer:

AMP amendment will not be needed where the TCH (SSID or ALS) already complies with point 26.302. Operators should wait for confirmation from the TCH. There will be maximum use of data by TCHs and EASA that is already available.

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Q18: If A Structural Program and CPCP in particular, is implemented in the AMP, using the (S)TCH data and there is a complete status of all performed repairs (outside the SRM limit) with the Airworthiness Data provided, what else should be taken into the consideration?

Answer:

If all repairs (including SRM repairs, which may not be the case – see the earlier questions) and changes are already proven by applicable processes to have compliant DTI the only other point need to demonstrate compliance is to incorporate an LOV into the AMP.

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Q19: Any GM for CAMOs on how to be sure, which type of ALI, provided by the (S)TCH for the MOD/REP shall be applied for reassessment?

Answer:

If in doubt, the operator should contact the (S)TCH. They first have to demonstrate compliance to the (S)TCH requirements of Part-26 and should make that information available to operators.

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Q20: AMC20-20A changes (albeit slightly) the definition of corrosion levels to be monitored via CPCP. What is the EASA position on past corrosion findings which have already been classified as per previous definitions?

Answer:

If you are working to a CPCP in the approved AMP, which is based on that of an AD or an MRBR the existing classifications of that programme apply and new findings can continue to be classified in that way. If the TCH changes the baseline programme to provide new corrosion level definitions the CAMO should adopt those definitions for future corrosion findings.

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Q21: the training is now listed in one paragraph with EWIS and CDCCL, nevertheless there is currently no Part 147 Training organisation that offers training, does EASA expect for trainings to become available any time soon?

Answer:

The tasks involved with compliance with point 26.370 are within the normal CAMO scope, however a familiarization with AMC 20-20A may be needed. See Q12 for more details.

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Q22: Is it our correct interpretation of 26.370 g(5) that a physical survey for repairs for aircraft certified as per CS 25.571 (Damage Tolerance) is not a must as long as repair records for the aircraft are considered complete by the CAMO and the requirements per TC REG are complied with for any known repair?

Answer:

Yes, that is correct, it's not a must as long as repair records are considered complete by the CAMO. It is recommended in some cases, particularly for older aircraft, because the records are not always as good as expected. Confidence in records will increase with the newer aircraft in general terms, with less repairs and with adherence to the stronger evolving requirements for records and data management.

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Q23: When we talk about aging aircraft, are we talking in relation to the actual age by Date of Manufacture or also related to flight hours and cycles

Answer:

In the context of ageing aircraft structures we are addressing phenomena that require consideration of both age (in calendar time) and operational usage (in flight hours and cycles)..

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Q24: Will there be new repair certification approvals to the repair organizations to effectively carry out such repairs assessments and issuance of continuing airworthiness?

Answer:

No, we are talking about the need for approved design data for major reinforcing repairs, so it will be covered by existing approvals that TCHs and other Design Organisations have under Part 21 or, by direct approval by EASA. The CAMO is responsible for obtaining the DT data for existing repairs if it is not made available by the DAH.