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INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

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OVERVIEW

- **THE REASONS BEHIND
ICA POLICY**
- **FSAW 98-03**
- **HBAW 98-18**
- **CHECKLIST REVIEW**

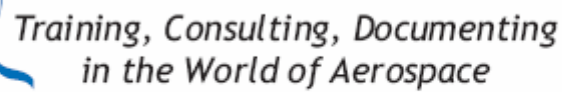
INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

GOAL:

- **CONVINCE MECHANICS THAT ICA ARE FOR THEIR BENEFIT, AND WILL SOLVE MORE PROBLEMS THEN THEY CREATE.**

QUESTION:

- **WHAT ARE:
INSTRUCTIONS FOR
CONTINUED
AIRWORTHINESS
(ICA)?**



ANSWER:

PROCEDURES FOR MAINTENANCE, INSPECTIONS, ALLOWABLE WEAR, TOLERANCES, TROUBLE SHOOTING, REPAIRS, ETC., ESSENTIAL TO THE CONTINUED AIRWORTHINESS OF THE AIRCRAFT.

- ARE FOUND IN:
- 21.50 23.1529
- 25.1529 27.1529
- 29.1529 31.82
- 33.4 35.4
- APPENDIX G OF PART 23
- APPENDIX H OF PART 25

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ARE ALSO FOUND IN THE FAR:

- **43.13(a) PERFORMANCE RULES**
- **43.15 ADDITIONAL
PERFORMANCE RULES**
- **43.16 A/W LIMITATIONS**
- **91.403(c) GENERAL**

Question?

- **After 40 plus years of field
approvals without ICA where did
the need for ICA start?**



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ANSWER:

- **FAA STARTED THINKING ABOUT “ICA” DURING THE RULE MAKING PROCESS FOR THE NEW PART 135, SINGLE ENGINE, IFR, PASSENGER CARRYING RULE (REF: 135.421(d))**

PART 135 SEIFR RULE REQUIRES:

- **ALTERNATIVE SOURCE OF ELECTRICAL POWER**
- **STAND-BY VACUUM SYSTEM**
SO
- **MANY OF THESE ALTERATIONS WOULD BE PERFORMED UNDER A FIELD APPROVAL.**



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PART 135 RULEMAKING FOUND:

- AT THAT TIME NO POLICY OR REQUIREMENTS FOR ICA EXISTED FOR FIELD APPROVED MAJOR ALTERATIONS REQUIRED BY FAR 135.421 (d) ADDITIONAL MAINTENANCE REQUIREMENTS.

PART 135 RULEMAKING FOUND:

- SO WE HAD TO DEVELOP ICA POLICY FOR FIELD APPROVALS OR THE FAA GENERAL COUNCIL WOULD CANCEL FIELD APPROVALS FOR MAJOR ALTERATIONS.

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OTHER PROBLEMS:

- **WITHOUT “ICA” THE MECHANIC WHO HAS TO MAINTAIN THE MAJOR ALTERATION (CHANGE TO THE TYPE DESIGN) WITH NO MAINTENANCE INSTRUCTIONS IS FORCED TO STRETCH THE TRUTH IN THE LOG BOOK ENTRY.**

LIKE WHAT?

- **YOU INSTALLED TUNDRA TIRES ON A PA-18-150 UNDER A FIELD APPROVAL 7 YEARS AGO BUT THEY ARE NOW WORN OUT. WHAT DO YOU DO?**

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LIKE WHAT?

- **YOU SIGN OFF AN ANNUAL/100 HOUR INSPECTION ON AN PIPER 28-235 WITH 4 MAJOR ALTERATIONS UNDER A FIELD APPROVALS USING THE MFG. INSPECTION PROGRAM.**
- **ARE YOU LEGAL?**

THE SOLUTION



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SOLUTION:

- **SINCE THE RULES WERE ALREADY IN PLACE REQUIRING “ICA” WE DEVELOPED NEW POLICY.**
- **FSAW 98-03 FLIGHT STANDARDS BULLETIN (AIRWORTHINESS) CHANGED THE FAA INSPECTOR’S POLICY ON FIELD APPROVALS TO REQUIRE “ICA.”(dated: 1-30-98)**

HBAW 98-03 REQUIRES:

- **“ICA” FOR FIELD APPROVED MAJOR ALTERATIONS ONLY.**
- **“ICA” MUST BE ATTACHED TO THE FORM 337.**
- **“ICA” BECOMES PART OF THE AIRCRAFT’S INSPECTION PROGRAM.**
- **LOG BOOK ENTRY FOR THE MAJOR ALTERATION MENTIONS “ICA.”**



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ICA FACTS:

- **“ICA” ARE FOR FIELD APPROVED MAJOR ALTERATIONS ONLY**
- **“ICA IS CONSIDERED “ACCEPTABLE” DATA ONLY JUST LIKE ANY OTHER MAINTENANCE MANUAL.**
- **“ICA” ARE ATTACHED TO FORM 337 TO ENSURE THE “ICA” ARE NOT LOST OR MISPLACED.**
- **MECHANICS CAN DEVELOP AN ICA AND HAVE THE FAA “ACCEPT” THEM.**

PROBLEM:

- **INITIALLY BOTH THE FAA INSPECTORS AND INDUSTRY DID NOT LIKE THE NEW POLICY.**



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SOLUTION:

- **SINCE THE MAJOR PROBLEM WAS IN THE DEVELOPMENT OF “ICA” A CHECK LIST WAS THE SOLUTION.**
- **FLIGHT STANDARDS HANDBOOK BULLETIN FOR AIRWORTHINESS (HBAW) 98-18 INCLUDED A CHECK LIST FOR “ICA.”(dated 10-07-98)**

SOLUTION:

- **CHECKLIST IS NOW IN FAA ORDER 8300.10 VOL. 2 CHAPTER 1, AND** 
- **AC 43.210**



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8300.10 ASI Handbook

- STANDARDIZED THE FIELD APPROVAL PROCESS FOR “ICA”
- SUPPORTS FSAW 98-03
- FORMALIZES FAA POLICY DOES A FEW OTHER “NEAT” THINGS.



LIKE WHAT?



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NEAT THINGS:

- **THE CHECKLIST MEETS THE REGULATIONS.**
- **THE CHECKLIST HAS 16 ITEMS BUT FOR MOST ALTERATIONS YOU WILL ONLY FILL OUT BETWEEN 5 TO 8 CHECKLIST ITEMS.**
- **ICA CAN REFERENCE MFG'S INSTRUCTIONS.**

NEAT THINGS:

- **RECORD KEEPING INFORMATION.**
- **INSTRUCTIONS ON REPLACEMENT OF PARTS.**
- **INSTRUCTIONS ON HOW TO REVISE THE "ICA."**



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“ICA” CHECK LIST REVIEW



“ICA” CHECKLIST:

- THE CHECK LIST MUST ADDRESS THE FIRST 16 ITEMS.
- “ICA” MUST BE MENTIONED ON BLOCK 8 OF THE FORM 337 AND ATTACHED TO THE 337.
- IF A CHECKLIST ITEM DOES NOT APPLY, WRITE “N/A” AFTER THE ITEM.

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Let's install something!

- **How about installing a set cable cutters on a Bell 206 helicopter.**
- **No problem getting the Data field approved.**

ITEM #1: INTRODUCTION

- **BRIEF DESCRIPTION OF THE COMPONENT BEING ALTERED.**
- **PURPOSE OF THE ALTERATION.**
- **DISTRIBUTION OF THE "ICA" IF APPLICABLE.**
- **UNITS OF MEASUREMENTS.**
- **LIST OF PARTS.**



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ITEM #2: DESCRIPTION

- **DESCRIPTION OF THE MAJOR ALTERATION, ITS FUNCTIONS AND INTERFACE WITH OTHER SYSTEMS IF ANY.**

ITEM #3: CONTROL

- **DESCRIBE HOW THE NEW COMPONENT IS CONTROLLED, OR OPERATED.**



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ITEM #4: SERVICE INFORMATION

- **LIST TYPES OF FLUIDS USED, SERVICING POINTS, AND LOCATION OF ACCESS PANELS AS APPROPRIATE.**

ITEM #5: MAINTENANCE INSTRUCTIONS

- **LIST RECOMMENDED INSPECTION/MAINTENANCE PERIODS.**
- **REFER TO MFG.... INSTRUCTIONS.**
- **SPECIAL NOTES OR CAUTIONS**
- **FUNCTIONAL CHECKS ETC..**



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ITEM #6: TROUBLESHOOTING

- **INFORMATION DESCRIBING PROBABLE MALFUNCTIONS, HOW TO RECOGNIZE THOSE PROBLEMS AND HOW TO FIX THEM.**

ITEM #7: REMOVAL AND REPLACEMENT INFORMATION

- **THIS SECTION DESCRIBE THE ORDER AND METHOD OF REMOVAL AND REPLACEMENT OF PRODUCTS AND PARTS.**
- **MAY REFERENCE MFG..... PROCEDURES FOR TESTS, ALIGNMENT, CALIBRATE, ETC..**

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ITEM #8: DIAGRAMS

- **SHOW WHERE ACCESS PLATES ARE LOCATED, INCLUDING INSTRUCTIONS ON HOW TO GAIN ACCESS TO THE COMPONENT(S)**

ITEM # 9: SPECIAL INSPECTIONS

- **LIST ANY SPECIAL INSPECTIONS SUCH AS X-RAY, ULTRASONIC TESTING, EDDY CURRENT, MAGNETIC PARTICLE OR ANY OTHER SPECIAL INSPECTION REQUIREMENTS.**

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ITEM #10: SPECIAL PROTECTIVE TREATMENTS

- LIST SPECIAL COATINGS, PAINT, LUBRICANTS, OR CORROSION PROOFING THE ALTERATION OR SURROUNDING STRUCTURE MAY REQUIRE.

ITEM #11: DATA

- RELATIVE TO FASTENERS, SUCH AS TYPE OF FASTENERS, TORQUE REQUIREMENTS, SPECIAL INSTALLATION REQUIREMENTS IF ANY.



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ITEM #12: SPECIAL TOOLS

- **SPECIAL TOOLS USED TO MAINTAIN THE ALTERATION SUCH AS A NUCLEAR POWERED TORQUE WRENCH OR A WIND DRIVEN SAFETY WIRE TWISTER.**

ITEM #13: COMMUTER AIRCRAFT REQUIREMENTS

- **ELECTRICAL LOADS.**
- **METHODS OF BALANCING FLIGHT CONTROLS.**
- **IDENTIFICATION OF PRIMARY AND SECONDARY STRUCTURE AFFECTED.**
- **SPECIAL REPAIRS METHODS.**



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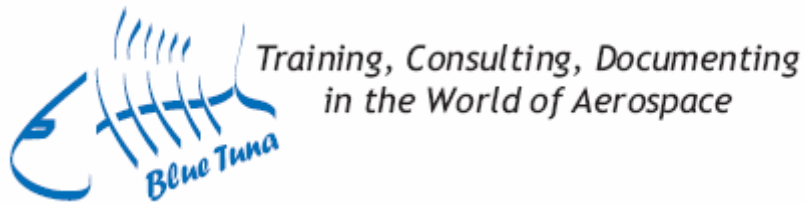
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ITEM #14: RECOMMENDED OVERHAUL PERIODS

- **REQUIRED IF THE OVERHAUL PERIOD IS LISTED BY THE COMPONENT OR EQUIPMENT MFG..**

ITEM #15: AIRWORTHINESS LIMITATION SECTION

- **INCLUDES ANY “APPROVED” AIRWORTHINESS LIMITATIONS SUCH AS ONE WOULD FIND IN AN STC THAT IS BEING INCORPORATED WITH OTHER WORK APPROVED UNDER A FAA FIELD APPROVAL.**



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ITEM #16: REVISION

- **INCLUDES INFORMATION ON HOW TO REVISE THE ICA. FOR EXAMPLE SEND A LETTER AND A COPY OF THE REVISED FORM 337 TO THE FSDO REQUESTING A REVISION.**
- **FAA INSPECTOR "ACCEPTS" THE CHANGE BY SIGNING BLOCK 3 OF THE FORM 337.**

RECORDKEEPING



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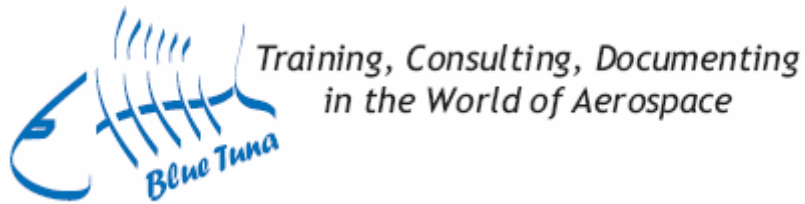
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RECORDKEEPING

- **PART 91 OPERATIONS REQUIRE A LOG BOOK ENTRY (SECTION 43.9)**
- **ENTRY RECORDS THE MAJOR ALTERATION AND IDENTIFIES THE ORIGINAL ICA LOCATION (FAA FORM 337 DATED 3/15/04)**
- **STATEMENT THAT “ICA” IS PART OF THE INSPECTION PROGRAM**

RECORDKEEPING

- **AIR CARRIER IS RESPONSIBLE FOR CHANGING HIS MAINTENANCE PROGRAM. (REVISION SENT TO THE PMI)**
- **PART 135 OPERATORS WITH AAIP MUST SUBMIT A CHANGE IN ACCORDANCE WITH SECTION 135.419(b)**



INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

RECORDKEEPING

- **PART 135, 9 OR LESS USING ANNUAL, 100 HOUR INSPECTION PROGRAMS MUST:**
- **MAKE A LOG BOOK ENTRY**
- **STATEMENT THAT ICA IS NOW PART OF THE INSPECTION PROGRAM**
- **IDENTIFY WHERE THE "ICA" ARE LOCATED. (FORM 337, DATED 3/15/04)**

SUMMARY



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SUMMARY:

- “ICA” IS FOR MAJOR ALTERATIONS PERFORMED UNDER A FIELD APPROVAL ONLY.
- “ICA” IS “ACCEPTABLE DATA.”
- “ICA” IS ATTACHED TO THE FORM 337 SO IT IS WILL PART OF A REQUIRED RECORD UNDER 91.417.

SUMMARY:

- “ICA” POLICY PRESERVES THE FIELD APPROVAL PROCESS FOR MAJOR ALTERATIONS BY MEETING THE SAME REQUIREMENTS FOR STC UNDER SECTION 21.50.



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SUMMARY:

- OF THE 16 ITEMS MOST OF THE TIME A MAXIMUM OF 8 WILL BE FILLED OUT COMPLETELY.
- “ICA” CAN REFER TO THE MFG. INSTRUCTIONS.
- REPLACEMENT PARTS CAN BE IDENTIFIED.
- “ICA” CAN BE REVISED AND SO CAN OLDER FIELD APPROVALS.