



SERVICE INFORMATION

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CORRECT INSTALLATION OF A LIQUID COOLING SYSTEM ON A ROTAX ENGINE (4 KUL 95, ISSUED OCT.1995)

(A) INTRODUCTION

THIS INFORMATION IS INTENDED TO ASSIST THE AIRCRAFT DESIGNER, MANUFACTURER AND BUILDER TO ACHIEVE CORRECT OPERATING CONDITIONS AND ASSEMBLY FOR THE ENGINE AND CONSEQUENTLY OPTIMUM PERFORMANCE AND RELIABILITY.

(B) TECHNICAL DATA AND GENERAL INFORMATION

IN ADDITION TO THIS SERVICE INFORMATION PLEASE REFER TO:

- ALL OTHER SERVICE INFORMATION AND TECHNICAL BULLETINS REGARDING YOUR ENGINE
- OPERATORS MANUAL
- ENGINE DATA SHEET
- POWER, TORQUE AND FUEL CONSUMPTION CURVES
- SPARE PARTS LIST
- ENGINE INSTALLATION CHECK LIST

SUBJECT:

INADEQUATE COOLING SYSTEMS AND POOR FITTING CONNECTIONS DUE TO:

- 1) USE OF NON STANDARD OR NON ROTAX COOLING SYSTEMS.
- 2) INADEQUATE TORQUING OF HOSE FITTINGS AND CONNECTIONS
- 3) USE OF INCORRECTLY DESIGNED HOSES AND FITTINGS WHICH DO NOT OFFER A ADEQUATE LEVEL OF ATTACHMENT AND PERFORMANCE

NOTE

GENERAL HOUSEHOLD PLUMBING FITTINGS ARE NOT CONSIDERED ACCEPTABLE FOR USE IN AN AIRCRAFT!

REASON:

CURRENTLY IN THE FIELD THERE IS A VARIETY OF NON ROTAX COOLING SYSTEM DESIGNS BEING OFFERED TO THE END USER, OR SELF DESIGNED SYSTEMS BUILT FROM VARIOUS PARTS AND PIECES NEVER INTENDED TO BE USED FOR SUCH PURPOSES (IE; GENERAL HOUSEHOLD PLUMBING HARDWARE).

EXPERIENCE HAS SHOWN THAT OFTEN THESE SYSTEMS CAN LEAD TO OPERATIONAL TROUBLES AND OR RUNNING FAILURES DUE TO THEIR LACK OF DESIGN AND ENGINEERING TO A SAFE AND ADEQUATE STANDARD.

SOME OF THE MORE OBVIOUS PROBLEMS WHICH HAVE BECOME APPARENT ARE AS FOLLOWS:

- 1) INPROPER FITTING OF JOINTS, HOSE CONNECTIONS AND FASTENERS TO A ADEQUATE LEVEL OF SECURITY WHICH WOULD PREVENT HOSES FROM BLOWING OFF AND CRITICAL COMPONENTS FROM DISLODGING OR COMING LOOSE.
- 2) INADEQUATE FLOW RATES WHICH ARE TOO RESTRICTIVE TO THE REQUIREMENTS OF THE ENGINE AS WELL AS INPROPER PRESSURE CAPS.
- 3) RADIATOR CORE SIZES WHICH ARE NOT CORRECT TO THE REQUIREMENTS OF THE ENGINE.

COMPLIANCE:

ALL ROTAX ENGINES WHICH REQUIRE LIQUID AND OR OIL COOLING SYSTEMS FOR CORRECT OPERATION AND FUNCTION.

REMEDY:

- 1) VERIFY THAT YOUR COOLING SYSTEM(OIL AND OR WATER) MEETS COMPLIANCE WITH THE ROTAX REQUIREMENTS AS LISTED IN YOUR OPERATORS MANUAL, INSTALLATION GUIDE, AND ANY SERVICE AND TECHNICAL BULLETINS PUBLISHED REGARDING THE SAME.(COPIES OF SUCH CAN BE OBTAINED FROM ANY ROTAX SERVICE CENTRE OR REPAIR STATION)
- 2) CHECK THAT ALL FITTINGS HOSES AND CONNECTIONS OFFER A SAFE LEVEL OF SECURITY, AND THAT THEY MEET THE REQUIRED LEVEL OF PERFORMANCE FOR YOUR ENGINE.
- 3) ASSURE THAT CORRECT OPERATING TEMPERATURES AND PRESSURES ARE BEING MAINTAINED BY THE COOLING SYSTEM.

****NOTE****

****THE LIQUID COOLING REQUIREMENT OF A ROTAX ENGINE CALLS FOR PRESSURIZATION OF THE SYSTEM, THEREFORE CORRECTLY FASHIONED HOSE CONNECTORS WITH BARBS FOR SECURING THE HOSE ATTACH POINTS, PROPERLY TORQUED AND SAFETY WIRED CLAMPS, AS WELL AS PROPERLY MATCHED PRESSURE CAPS ARE ESSENTIAL!****

ACCOMPLISHMENT:

THE NECESSARY MEASURES TO BE TAKEN AND CONFIRMED BY THE AIRCRAFT BUILDER/OPERATOR MANUFACTURE.

SUMMARY:

THIS IS A SERVICE TIP, NO WARRANTY APPLIES!



DANGER!

FAILURE TO COMPLY WITH THIS RECOMMENDATION COULD RESULT IN ENGINE DAMAGE AND PERSONAL INJURY!