



MANDATORY PERMIT DIRECTIVE

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

MPD: 2004-004 YAKOVLEV / AEROSTAR SA / INTREPRINDEREA DE AV BACAU / STROJIRNY PRVNI PETILESKY / LET NARODNI PODNIK KUNOVICE / SUKHOI / NANCHANG AIRCRAFT

Subject: Pneumatic system reservoirs.

Applicability: Strojirny Prvni Petilesky / Let Narodni Podnik Kunovice Yak C.11 aeroplanes.
Strojirny Prvni Petilesky Yak C.18A aeroplanes.
Yakovlev Yak 50 aeroplanes.
Yakovlev / Aerostar SA / Intreprinderea De Av Bacau Yak 52 aeroplanes.
Yakovlev Yak 55 and Yak 55M aeroplanes.
Sukhoi SU-26M, SU-26M2 and SU-26MX aeroplanes.
Nanchang Aircraft NAMC CJ-6A aeroplanes.

Reason: A serious ground incident occurred to a Yak 50 where the pneumatic system reservoir, while at normal working pressure, explosively ruptured causing serious damage, jamming the throttle in the open position and tipping the aeroplane onto its nose.

Findings reported by the Air Accident Investigation Branch indicate that the reservoir failure was caused by internal corrosion, which had weakened the wall, particularly in the lower area where water had accumulated.

There is a potential for a number of aeroplanes types, which have similar pneumatic system reservoirs, to have hidden defects, which could develop into potentially catastrophic failures.

Compliance: Not later than 5 flying hours or one month from the effective date of this MPD, whichever is the sooner, carry out a maintenance schedule amendment as detailed overleaf.

Not later than 20 flying hours or three months from the effective date of this MPD, whichever is the sooner, carry out the initial inspection as detailed overleaf.

continued overleaf

Action:**Maintenance schedule amendment**

Carry out a review of the Approved Maintenance Schedule (AMS), (AMS prescribed in the Airworthiness Approval Note (AAN)) for the particular aeroplane. Ensure the schedule contains the following tasks to protect against and detect corrosion of the pneumatic system reservoir:

After every flight – Open the water trap.

After 50 flying hours or annually (whichever is the sooner) – Remove the reservoir from the aeroplane and drain the water.

Annually - Carry out internal inspection of the pneumatic system reservoir, as per Initial Inspection detailed below.

Five yearly or at the interval recommended by the aeroplane manufacturer - Carry out hydrostatic test of the pneumatic system reservoir, as per Initial Inspection detailed below.

Carry out a review of the aeroplane maintenance records to identify when the pneumatic system reservoir was last inspected internally and hydrostatic tested.

Initial Inspection

If the reservoir has been subject to a detailed internal inspection with acceptable results within the last 12 months and a satisfactory hydrostatic test within the last five years, or in accordance with the manufacturers recommended period, this can be accepted as meeting the requirement for the initial inspection and test.

Remove the reservoir from the aeroplane and carry out a detailed visual inspection of the internal surfaces of the reservoir using a borescope or similar device. Light surface corrosion is acceptable, all other corrosion, typically heavy, pitting, exfoliation or any sign of distress; require the bottle to be rejected.

Carry out a hydrostatic test on the reservoir in accordance with the manufacturer's maintenance instructions or in accordance with industry best practice (typically 1.5 times working pressure) for the testing of pressure vessels used in pneumatic systems. Bottles that fail to hold the pressure or show any signs of distortion are required to be rejected.

Record compliance with this MPD in the aircraft log book.

In order that the situation regarding reservoirs with corrosion can be monitored, the CAA requests any reservoirs that are rejected are made the subject of a Mandatory Occurrence Report (MOR). CAP 382 - The Mandatory Occurrence Reporting Scheme refers.

The CAA is not aware of any corrosion-inhibiting compound that the aeroplane manufacturer has recommended for use in the pneumatic reservoir or system. Operators are reminded that should they choose to use proprietary corrosion inhibiting compounds, it is their responsibility to ascertain, and technically justify, the fitness for purpose of the compound they use. CAP 562 - Civil Aircraft Airworthiness Information and Procedures, Leaflet 11-22 Appendix 51-3 also refers.

This MPD becomes effective on 4 February 2004.

DISTRIBUTION – MPD2004-004

All Owners/Operators

Organisations with Approval E4/M5 (Ex-military aircraft)

Mr P Kelleher, Head of Design and Production Standards Division - 3W

Deputy Chief Surveyor - 1W

Mr H Elder, Maintenance Requirements and Policy Section – 1W

Mr N Davis, Aircraft Certification Section - 2E

Safety Investigation and Data Department - 2W

Deputy Head of General Aviation Department - 1W

Head of Systems Department - 2E

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All 9 UK Regional Offices

Richard Goode Aerobatics

Yak UK Ltd