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POLICE
aviation
services

Service Bulletin SB52

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Subject. Inspection of EPMS machined parts for corrosion.

Classification

MANDATORY

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Date 9 September 2008

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SUBJECT: PAS designed and built External Payload Mounting System (EPMS) beams.

APPLICABILITY: All MD900/902 aircraft equipped with EPMS.
This SB supersedes PAS SB 33.

INTRODUCTION: It has been reported that on some early-build EPMS installations some of the machined components (those attaching the main EPMS beam to the skid structure, front and rear) have suffered from exfoliation corrosion and, in one case, structural failure.
This SB calls for a recurring close visual inspection of the effected and other machined parts.

COMPLIANCE: Within 25 flying hours of receipt of this SB and ANNUALLY thereafter.

MANPOWER: Approximately two man-hours.

PROVISIONING: Hand tools.
Cleaning materials (soap and water) scrubbing brush and/or Scotchbright.
Abrasive: fine or extra-fine grit abrasive paper.
Degreasing agent.
Paint: aviation grade epoxy primer and aviation grade epoxy paint (black).
Bright torch or lamp.
Light wax-type anti-corrosion fluid such as LPS-3.

WEIGHT AND BALANCE: None.

ACCOMPLISHMENT INSTRUCTIONS:

With soap and water, thoroughly clean and dry:

- all of the machined parts that attach the main EPMS beam to the skid cross-tube structure at both front and rear cross-tubes. *[Note: it will be necessary to partially dismantle these attachments in order to fully inspect them. However, it is not necessary to dismantle the clamps around the skid cross-tubes themselves unless corrosion is suspected in this area].*
- all machined parts attaching payloads to the main EPMS beam.

(Avoid using chlorinated solvents as they can leave a chloride residue which can promote corrosion).

With the aid of a bright torch or lamp visually inspect all of the machined parts for corrosion or cracking. Pay particular attention to lugs and flanges. Any bubbles or discontinuities in the paint should be probed with a scribe or similar tool. Serious corrosion can be concealed under paint that initially appears to be only slightly damaged.

If corrosion is found, it must be assessed as to whether it is slight or serious. To do this remove the corrosion using fine or extra fine grit abrasive paper ensuring that damage is blended out to a minimum slope of 10:1.

Slight corrosion is defined as any number of areas of corrosion which leave a depression on the surface of the bracket AFTER removal and blending no greater than 10mm in diameter and 0.25mm (0.010") in depth.

Serious corrosion is defined as any area of corrosion greater than that defined as slight.

If the corrosion is **Serious**, the effected part(s) must be **replaced or the EPMS removed before further flight**.

If the corrosion is **Slight**, the affected part(s) must be replaced or repaired as follows **before further flight**.

- Thoroughly clean, rinse and dry the part(s) as described above.
- Thoroughly degrease and prime the blended areas using aviation grade epoxy primer.
- Finish paint the blended areas using an aviation grade epoxy paint, colour black.

Re-assemble onto the aircraft and apply a light wax-type anti-corrosion coating, such as LPS-3, to all machined parts on the EPMS.

Report all instances of corrosion found to the PAS Design Office.

Amend the aircraft's maintenance schedule to include the above procedure on the **annual inspection**.

Amend the aircraft records to record the accomplishment of PAS SB 52.