



Service Bulletin SB.JS-004

22 June 2011

TITLE

Replacement of Main Pin Lock System

APPLICABILITY

At the time of release, this service bulletin applies to the following aircraft:

MODEL	SERIAL NUMBERS
JS1A	002,005, 009
JS1B	004, 006

REASON

The plastic clips of the main pin lock system harden, become brittle and/or crack due to age, indirect exposure and fatigue.

DESCRIPTION

The plastic pin has been replaced by a metal spring-pin locking mechanism.

COMPLIANCE

MANDATORY INSPECTION: Inspect the condition of the plastic clip. When it is cracked or broken, or otherwise unable to secure the main pin, implement the retrofit as described in this service bulletin.

INSTRUCTIONS

The wing main pins are secured to the fuselage by two locks, each through which a locking pin is inserted. The system used from SN 1A-002 to SN 1A-009 and the system employed since SN010 are shown side-by-side in Figure 1 below. The system used since SN010, employs main pin (part nr. 1A-2.09.10) version 3.5, while the system addressed by this service bulletin applies to main pins prior to and including version 3.4.

Since SN010, all aircraft leaving the factory utilise a metal main pin locking mechanism using a sprung pin. This system is referenced by its part number 1A-1.06.50. The main pin has been revised accordingly. Version 3.5 of the main pin differs from prior versions (up to version 3.4) by an extension of its handle. No modifications are required to the wings or to the structure of the fuselage.

The locks installed on the fuselage can be accessed after removal of the seatback. The metal locks are mounted on a glass plate, which is bonded to the skin of the fuselage using epoxy resin with cotton flocks filler.



Figure 1: (left) Plastic clip and main pin v3.4; (right) Main pin v3.5 and lock system 1A-1.06.50

The preferred method of removing the locks is by carefully chipping away the bonding material (cotton flocks mix) using a chisel, and then grinding the surface in preparation for the new locks. The locks can also be removed by just cutting the plastic clip, then grinding the glass plate and bond flush with the fuselage using an epoxy resin with cotton flocks filler. Be careful of excessive force or excessive heat from the grinder, as this may cause damage to the skin surface.

Mount the wings to the fuselage and ensure that the main pins are pushed in completely.

Apply sufficient bonding material to the base of the lock. Position the lock onto the skin with the locking pin through the hole in the main pin handle. Position the lock square with the main pin handle. The body of the lock must be 1mm to 2mm away from the main pin handle.

Remove excess bonding material around the base. Allow the mixed bonding material to keep locks in position while curing.

MATERIAL

- 2 main pin lock systems. See Drawing D1A-1.06.50 attached herewith;
- 2 new main pins. See Drawing D1A-2.09.10;
- Wood chisel;

Document name:

Main Pin Lock Upgrade

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SB.JS-004

Rev:

02

Document issue date:

22 June 2011

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Approval number: Design: D667, Manufacturing: M667, Maintenance: AMO1179

- Mallet;
- Hot air gun (optional);
- Angle grinder with metal cutting/grinding blade;
- Glass paper;
- Epoxy resin and cotton flocks;

MASS AND BALANCE

Version 3.5 of the main pin weighs negligibly more than earlier versions up to version 3.4, although the lock assembly 1A-1.06.50 is slightly heavier than the plastic component it replaces. The modification occurs around the wing main spar, and is therefore close to the centre of mass. The resulting difference in aircraft behaviour is negligible.

MANUALS

Page 4-5 of the JS1 Flight Manual need to be replaced. See page attached.

Page 12-1 of the JS1 Maintenance Manual needs to be replaced. See page attached.

NOTES

None

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