

# Service Bulletin SB.JS-013

31 May 2012

TITLE

Extension of Airbrake Blade 3

### APPLICABILITY

MODEL	SERIAL NUMBERS
JS1A	001 - 003, 005, 009
JS1B	004, 006 - 008, 010 - 037

### REASON

On the deployment of the airbrakes in flight, the edge of the airbrake blade 3 may cross the edge of the airbrake cap recess. This may result in the airbrake from retracting fully.

#### DESCRIPTION

The bottom edge of the airbrake blade 3 must remain below the upper edge of the airbrake box; however, compound manufacturing variation may result in the bottom edge of airbrake blade 3 being able to move over the edge of the airbrake cap recess if the aerodynamic forces are sufficiently high. This may cause the blade to jam, preventing the airbrake from retracting fully.

The bottom edge of airbrake blade 3 has been extended downwards, preventing the airbrake blade from being able to slip onto the airbrake cap recess, even in the case of manufacturing variations.

### COMPLIANCE

MANDATORY.

Part 1 of this Service Bulletin must be accomplished before the next flight.

If the minimum distance, as specified in Part 1 is not met, Part 2 and Part 3 are applicable.

Part 2 is an interim solution until Part 3 is completed, and should be accomplished before the next flight. JS should be notified to supply parts required for Part 3. Until Part 3 is accomplished, deployment of airbrakes should commence below 250km/h (135 kts).

Part 3 should be accomplished before 50 hours of flight or 30 days, whichever comes first.

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## **INSTRUCTIONS**

### Part 1: Measuring of airbrake cap recess

With the aircraft de-rigged, extend the airbrakes fully against the mechanical stop (inside the airbrake box).



Figure 1: Measuring of airbrake cap recess

The measurement should be taken, in the middle of the airbrake, from the surface of the airbrake cap recess to the top edge of airbrake blade 3, as illustrated in Figure 1a&b. If this measurement is more than 53mm, Part 2 of this Service Bulletin is applicable.

### Part 2: Interim solution

With the aircraft de-rigged, extend the airbrakes fully against the mechanical stop (inside the airbrake box).

Apply three or four, 50mm width Mylar strips onto airbrake blade 3. Start at the middle of the blade and continue to the tip side, adding the rest, at various lengths, as illustrated in Figure 2a. Each strip should extend roughly 3mm below the edge of the blade, as illustrated in Figure 2b.



Figure 2: Interim solution, Mylar attached to airbrake blade 3.

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### Part 3: Replace airbrake blade 3

- 1. Remove airbrake blade 3 by releasing the locknuts from the peened M6H12/37 bolts and removing these bolts. Take note where each brass spacer, as illustrated in Figure 2a, is installed as they have to be reinstalled in the same position.
- 2. Install the new airbrake blade using the supplied M6H12/37 bolts and the original brass spacers.



Figure 3: Brass spacer & bolt tightening

- 3. Lock the bolts in Figure 2b, while allowing sufficient free movement of the blade.
- 4. Use the supplied flat M6 self-locking nuts to lock the bolts to the airbrake lifters as illustrated in Figure 3.



Figure 4: Bolt peening

- 5. Trim the ends of the bolts if they protrude by more than 1½ threads.
- 6. Test operation.
- 7. Protect the surface of the wing skin. Peen the end of the bolt with a centre punch and a hammer, with the bolt pressing against a 5kg counterweight at the back, as illustrated in Figure 4.

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Figure 5: Peening with counter mass.

- 8. Test operation and ensure there is no interference between any blades and bolts.
- 9. Dispose of removed blades.

#### MATERIAL

JS needs to be advised to supply parts in the case that Part 2 is applicable:

- 4x M6 Flat self-locking nuts
- 4x M6H12/37
- 2x 1A-2.06.31 airbrake blade 3 (D1A-2.06.31 v4.0)

#### MASS AND BALANCE

Not affected

#### MANUALS

No effects on flight and maintenance manuals.

#### NOTES

This Service Bulletin must be accomplished by an approved AMO.

The accomplishment of this Service Bulletin must be entered in the aircraft airframe logbook and flight folio.

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