

## Technical Note TN.JS-026

11 March 2015

### TITLE

Installation/replacement of JS1 flaperon driver plates.

### DESCRIPTION

This Technical Note describes the process of replacing damaged flaperon driver plates or the installation of optional flaperon driver plates between Flap 1 and Flap 2.

### APPLICABILITY

JS1-A, JS1-B, JS1-C

### INSTRUCTIONS

The following steps are required to replace flaperon driver plates:

- Removing of the damaged plate(s)
- fitment of replacement driver plate
- bonding of replacement driver plate
- testing of replacement driver plate

### REMOVING

1. Cut broken flaperon driver plate flush.
2. Grind slot open on broken side, 1.5mm thick x 16mm deep. This can be done by:
  - Drilling 1.5mm adjacent holes.
  - Using a small file to remove the excess material and filing the slot square, as illustrated in

Figure 1:

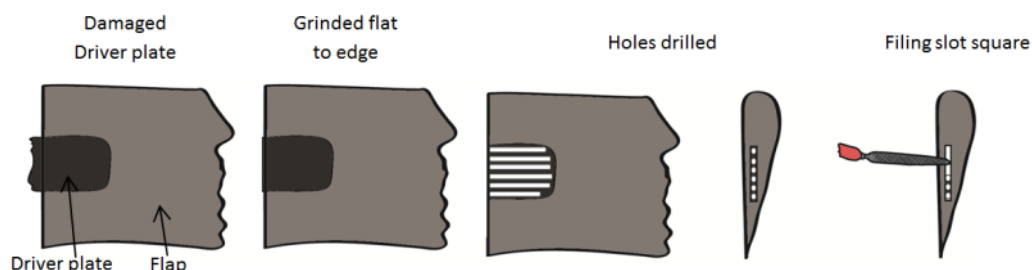
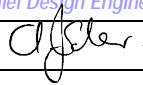
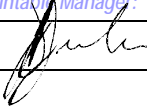


Figure 1: Removal of damaged flaperon driver plate

Driver plates are bonded to flaperons to Flap 1, Flap 3 (root side) and Flap 4.

### NOTE:

On the JS1-A and JS1-B types the Flap 2 driver plates were bonded to the tip side. It is recommended to bond the driver plate to the inboard side of Flap 3, with the slot in Flap 2,

Document name: Installation/replacement of JS1 flaperon driver plates	Document number: TN.JS-026	Rev: 1	Document issue date: 11 March 2015	Authorized signatures		Page 1 of 4
				Chief Design Engineer:	Accounting Manager:	
						

consisted with the design of the JS1-C model. This will result in less risk of the driver plate being damage during transport.

**CAUTION:** Ensure the slots are opened parallel to the flaperon surfaces according to Figure 2. Deviation from the drawing below may cause damage to the rovings, resulting in loss of structural integrity.

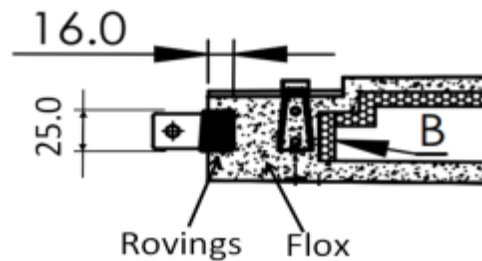


Figure 2: Flaperon structure

## FITTING

- Ensure the slot is clean and excess material is removed.
- Drill a hole with a diameter of 0.8mm or less in the centre of the driver plate. A needle or thin wire is inserted into the hole (as illustrated in Figure 3) to assist with the horizontal alignment. (The wire will be removed after bonding.)

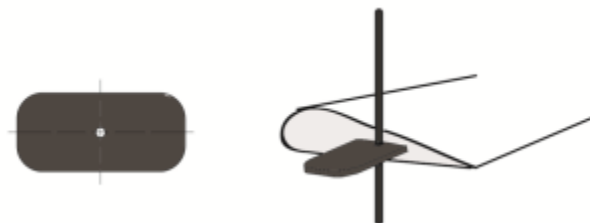
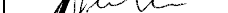


Figure 3: Wire in Driver plate for alignment

- Insert the tip of the driver plate into the slot of Flap 3 with the alignment wire touching the edge of the flaperon. This ensures the driver plate is positioned with the kink centred between the flaperons. Test the position of the driver plate by raising the flaps to full flaperon deflection

## BONDING

- Mask the edges of the flaperons to ensure that bonding material does not contaminate the finished surface.
- Lightly sand and degrease the bonding side of the driver plates

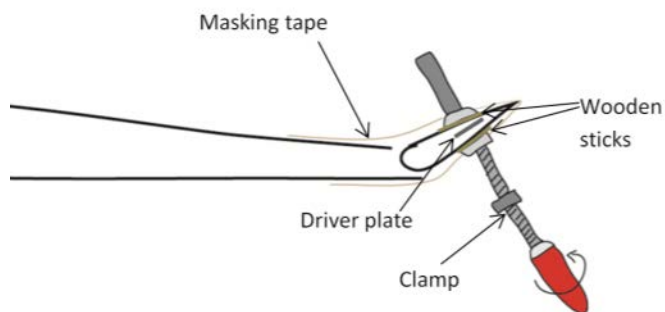
Document name: Installation/replacement of JS1 flaperon driver plates	Document number: TN.JS-026	Rev: 1	Document issue date: 11 March 2015	Authorized signatures		Page 2 of 4
				Chief Design Engineer: 	Accountable Manager: 	

8. Prepare the bonding resin mixture.
9. Apply the mixture to the bonding side only and insert into the slot with the alignment wire inserted in the guiding hole.
10. Insert the flaperon driver plate into slot of the adjacent flaperon.
11. Remove excess bonding material ensuring no bonding material remains between the two flaperons.
12. Set up the flaperon during curing as follows:

FLAP 1 and 2	FLAP 2 and 3	FLAP 3 and 4
Neutral position	Full up deflection position	Full up deflection position.

**NOTE:** Masking tape can be used to position the flaperon in the full up position, as illustrated in Figure 4.

13. Use flat wooden sticks (e.g. tongue depressors) on both sides of the flaps to ensure alignment and to protect the flaperon surface during clamping.
14. Remove the alignment needle / wire.



**Figure 4: Bonding of Driver plate**

15. Allow bonding resin to cure according to material datasheet.
16. Post-cure bond area according to Material Data Sheet.

## TESTING

17. Remove the masking tape and clamps.
18. Test to ensure full deflection aileron/flap is achieved and no play exists between the connected flaperons.

## MATERIAL SUPPLIED

- Flap driver plate:

Flap 1 and 2	1A-2.11.34
18m Flap 2 and 3	1A-2.11.34
18m Flap 3 and 4	1A-2.11.34
21m Flap 2 and 3	1C-2.11.24
21m Flap 3 and 4	1C-2.11.34 & 35

## MATERIAL REQUIRED

- Drill bits 0.8mm , 1.5mm
- File (smaller than 2 mm thickness)
- Acetone
- Sandpaper
- Bonding Resin: (40g MGS L285 resin, 16g MGS 285 or 287 hardener (fast or slow), 8g cotton flocks, 3g Cab-o-sil.) Laminating resin or bonding resin with similar properties may be used to perform the bond.
- Light pressure small clamps
- Masking tape

## MASS AND BALANCE

No change to mass or balance

## MANUALS

No change to Flight or Maintenance Manuals

## NOTES

This technical note must be implemented by an approved maintenance technician.