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## SERVICE BULLETIN #51

DATE: August 10, 1998

SUBJECT: Flap clevis attachment rivets

APPLICABILITY: All Pulsar III aircraft

COMPLIANCE: Mandatory

FROM: SkyStar Aircraft Product Development

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To provide increased clearance between the flap actuator rod end and the upper wing skin, an additional clevis spacer plate was incorporated in all Pulsar III kits; however, a longer rivet was not provided. To ensure that the flap clevis is securely attached, longer rivets will need to be installed.

If you have already installed your flap clevises, carefully drill out the 1/4" long rivets that were originally sent with the kit, and install the P/N 95005.000 3/8" rivets provided with this Service Bulletin. If you have yet to install the flap clevises, be sure to do so with the 3/8" rivets.

Please note that as this is a blind rivet installation, you will get no visual indication that the rivets were originally too short. Be sure to check the part numbers and rivet lengths to ensure that you are installing the proper fastener.

If you have any questions, you are invited to call our Customer Service department at 208-454-2444 for more information.

13. The flap actuates through a clevis that is mounted to the upper flap skin surface, and reinforced with a partial rib. Transfer the clevis mark from the lower skin down onto the web face; cut a 1/2" square hole centered on this mark- note that the clevis is spaced away from the upper flap skin with two 1/8" thick spacers, so make the clevis hole in an appropriate location.

14. The clevis spacers (P/N 12027.205) will often curl somewhat when they are sheared at the factory; straighten them as required- this can usually be done by hand with the part held in a vise or clamped to a table. Dry fit the spacers and the clevis in the flap and mark the spacer location on the shank of the clevis; note that the clevis bolt hole center needs to be 3/8" forward of the web face of the flap. Bond prep the clevis and the spacers; use Hysol and firm clamping pressure to bond the parts together.

15. Dry fit the clevis assembly and the mid-rib P/N 120026.109 (left, -.110 right) to the flap. Note that the mid-rib is the same part and has the same part number as the end rib. The mid-rib will need to have its' forward flange bent the same as the end rib; the mid-rib flanges face inboard, and the mid-rib itself sits inboard of the clevis. Only the forward and upper flanges of the mid-rib attach to the adjacent flap skins- the lower flange stands off from the lower skin of the flap. Mark the rib and clevis in relation to each other; drill through the rib face and the clevis in two locations. Bond prep the surfaces; apply a small amount of Hysol to the adjoining faces, and rivet the rib to the clevis.

16. Re-fit the clevis and rib assembly to the flap. Transfer the mid rib upper flange location to the outside of the upper flap skin, and lay out 5 rivet locations centered on the flange. Drill through the flap skin at these locations. Make a centerline mark (the long way) down the mid-rib upper flange and then position the rib such that the centerline can be viewed through the rivet holes in the flap skin. Mark the hole locations on the rib flange; remove the rib and clevis assembly and drill the flange at the marked locations. Similar to the last procedure, transfer the clevis location to the upper flap skin, and lay out and drill the skin for five rivet holes. Cleco install the rib and clevis assembly and drill the clevis and spacers at the rivet hole locations. Deburr all the holes carefully. Bond prep the inside upper flap skin and the upper flange of the mid-rib; apply a small amount of Hysol to the flange and install the rib with P/N 95002.000 rivets. Rivet the clevis and spacer stack to the flap skin using the P/N 95005.000 rivets. Be sure to use the longer rivets for the clevis to skin attachment.

17. Layout the flap web rivet and end rib rivet positions on the flap skin. Set the flap back in position in the wing jig and double check the position and fit of the end ribs- you will have to relieve the rear spar for the flap clevis. Index mark the jig formers and flap, and remove the wing from the jig; reset the flap in the jig according to the index marks. With the end ribs firmly taped in place carefully drill the flap web and rib rivet holes at the marked locations with the flap in the jig so that the proper twist is established in the flap.

18. Debur the holes, bond prep the overlapping flap web skins, the inside flap skins in the rib flange areas, and the flanges of the ribs. Apply Hysol to all these mating surfaces, and rivet them securely in place (the Hysol that oozes into the rivet holes will eliminate any possibility of dissimilar metal corrosion between the stainless steel rivets and the aluminum flap skins). Set the flap back into the jig until the Hysol has cured completely. Letting the ribs and web bond set while the flap is in the jig assures that the subtle wing twist (washout) is transferred to the flap.

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