

SUBJECT:

REPLACEMENT OF WING TANK DRAIN VALVES

MODELS AFFECTED:

M20 Model B, C, D, E, F and G series aircraft without "screw in" flush drain valves.

TIME OF COMPLIANCE:

At Owner's option.

INTRODUCTION:

Any time resealing of wing tank or replacement of the wing tank drain valve is required, convert to screw in type called out in this publication. This will result in simplified future repairs as well as enabling fast, complete draining of wing tank by removal of valve.

INSTRUCTIONS:

1. Drain all fuel from tank and remove top inboard access panel.
2. Carefully drill out the four 1/8 inch rivets holding the flush drain valve.
3. Remove drain valve and thoroughly remove old sealant from this area.
4. Working from underside of wing, locate and drill 7/16 inch hole for new F391-53S valve. (See Fig. 1) Make certain that the hole edge on outside skin surface is free of burrs.
5. To aid in locating the two #30 holes for F391-53SMP-2 valve nut ears temporarily insert drain valve in 7/16" hole from inside the tank. Thread nut on from outside a maximum of 1-1/2 turns.
6. Align valve nut as in Figure 1 and pushing nut up flush with skin, mark the position of the two holes.
7. Remove entire assembly drill and countersink 2 each #30 holes as marked.
8. Locate 1 inch .032 patch, centered on old drain valve hole and drill the four #30 holes in the patch.
9. Deburr all holes and clean all metal chips from interior of tank.
10. Using Turco 657 wipe Sol or Methyl Ethyl Ketone, thoroughly clean all metal surfaces to be sealed.
11. Mix the PR 1422 Al/2 sealant per instructions and apply a drop on each of the two #30 drain nut holes in the tank skin. Position drain nut and rivet in place.
12. Position patch plate in tank and rivet in place.
13. Apply a 1/32 to 1/16 inch brush coat of PR 1422 Al/2 sealant over the internal patch, forcing the sealant into all gaps and extending 1/2 inch beyond. Also apply sealant to both ears of valve drain nut taking care not to seal notches on side.

Instructions cont...

14. Allow brush sealant to cure tack free (approx. 10 hours) before applying PR 1005-L protective seal coat.
15. Brush on a smooth, continuous coat of PR 1005-L with a brush. The film should extend one inch beyond the sealant area. Allow to cure 20 minutes at 75°F or until tack free and apply second coat.
16. Sealing of removable access panels.
 - a. According to Step 10, clean metal surfaces to be sealed and then allow to dry 10 minutes.
 - b. Mix PR 1403-G-B2 sealant per instructions, apply 1/32 to 1/16 inch coat to either faying surface.
 - c. Assemble parts immediately, tighten screws to obtain as near as possible, a metal to metal contact.
 - d. Remove excess extruded sealant from wing surface.
17. After allowing cure time of 30 hours, insert drain valve torque 40-65 in. lbs. - fill tanks and check for leaks and proper valve drainage.

S.B. Kit M20-188-1: F-391-53S Valve Assy 2 ea.
 F-391-53SMP-2 Nut Plate 2 ea.
 M20-188-3 Patch Plate
 (.032 x 1 x 1 2024-T3 Alum). 2 ea.
 AN 426 AD4-4 Rivet12 ea.

S.B. Kit M20-188-2A: PR 1422 Al/2 Sealant
 PR 1403-G-B2 Sealant
 PR 1005-L Sealer

