

T-51 ASSEMBLY

Familiarity with Kit Parts, Part Numbers, Adhesive, Rivets, etc.

The kit should be inventoried as soon as it is received. Check to make sure all parts on the packing list are in the kit. If there are any missing parts, notify Titan Aircraft as soon as possible. Parts that are missing and noted as "Back Ordered" or "Items BO" on the packing list will be shipped as soon as they become available. Any parts missing from your kit that are not marked as back ordered will need to be brought to Titan Aircraft's attention within the first 7 days of receiving your kit. After the first 7 days you will be charged for any item not on the back order list.

A Titan part number prefix specifies the aircraft model and the major assembly or purpose. The part number will begin with T or M. T is for Tornado and M is for Mustang. There are parts that are common to both the Tornado and Mustang, so some part numbers will begin with the letter T. The second letter designates a major assembly or purpose. Second letters are: F- fuselage, W- wing, G- gear, T- tail, C- control, P- power plant, E- electrical or instrumentation, H- hardware and J- jigs or tools. For example, the MW in the part number MW02-4 would mean Mustang Wing; a TW prefix would mean Tornado Wing; an MG prefix would mean Mustang Gear; an MC prefix would mean Mustang control; etc.

The leading edge D-cells are shipped in foam saddles. The saddles should be used as wing stands during assembly and can be used later to store the wings if they are removed from the aircraft. When in use, be sure the root end of the wing is placed in the saddle so the aluminum leading edge does not contact the floor.

Throughout the assembly instructions print references will not include the revision suffix. For example, print number *T51-02-INS-0385-A* will be noted as *T51-02-INS-0385*.

Layouts, centerlines, and other marks should be made with a fine tip marker such as a Sharpie. Pencils should not be used on aluminum.

Parts will need to be drilled and temporarily attached with clecos. After fitting an assembly, the clecos will be removed, chips cleaned out and parts deburred

before riveting or bolting anything permanently.

CAUTION: Acetone, MEK, lacquer thinner, gasoline, paint thinner and many other **solvents can destroy the EPS foam** inside the leading edge D-cell. When cleaning in the area of the D-cell it is important to use a cloth or paper towel that is only damp with the solvent. Dripping any solvent into the D-cell through drill holes, around rivets heads or through any opening will destroy the EPS foam and **severely weaken the wing structure.**

Surfaces will need to be prepared prior to bonding throughout the kit. Wipe the area clean with acetone or MEK paying attention to the caution above. If the area is not pre-sanded, sand the area to be bonded with #80 sandpaper and clean again with acetone or MEK.

Uralane adhesive will be used in many places. Uralane should last about 6 months if stored properly. Storing Uralane in sealed containers in the freezer will increase its shelf life. Moisture contamination and even high humidity can shorten its shelf life to a week or two. Part A (the clear part) will become cloudy and start to form a skin on its surface as it goes bad.

When applying the Uralane glue it is recommended to use a tongue depressor with one end cut-off. The depressor allows you to spread a thin layer of Uralane on the bonding surfaces. (Be sure to use the correct amount of hardener when mixing. Too much hardener does not allow the glue to settle.) Uralane is measured by weight for mixing. The proper ratio is: part A (the clear part) 10 parts by weight to part B (the greenish brown part) 4 parts by weight. Warm the work area to at least 70° F (21° C). Uralane should not be used if the room temperature is below 70° F (21° C). Cure time is about 24 hours. Full strength will be reached in 7 days. The skins are attached with flush rivets and Uralane adhesive. SK series 1/8" flush Pop rivets are supplied in the kit for this purpose. Solid MS-20426 rivets may be used however, the builder will have to supply these extra rivets and the build time is likely to increase. (NOTE: The T-51 kit includes MS-20424 solid rivets but they are for use in other areas.) SD series dome head Pop rivets are supplied in the kit and are to be used any place that does not require flush rivets. Rivet callouts will be found on the prints. A #30 hole (#30 drill = .1285 dia.) will work well for the 1/8" Pop rivets supplied in the kit. The 1/8" flush Pop rivets will require either dimpled or countersunk holes. Material .032" or thicker should be countersunk with a 120° countersink tool (solid MS 20426 rivets require a 100° countersink tool). Material .025 and thinner will need to be dimpled with 1/8" dimple dies.

By

Date

Checked

Date

Approved

Date