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Rockford 1969 - Another exciting Fly-In has come and gone. With it came a new crop of T-18ers, more exciting than ever. As far as I know there were ten T-18's in attendance.

Many of you were probably disappointed in not getting a ride. I don't know whether anyone else was giving rides but I managed to take a few T-18 builders rides during the three days I was there. If you haven't flown at Rockford, you might not understand why many of us with fast airplanes are a little reluctant to do too much flying there. Threading your way through all the slow airplanes in the pattern is a rather tricky business. The runway traffic was handled in a much improved fashion however, with one side used for take-offs and the other side for landings. I never cease to be amazed that so many safe landings can be made with the average altitude at the turn from base to final of between 10 and 20 feet. This occurs so homebuilts can use one runway from the intersection while everyone else uses the other one.

Larry Larcom took me a ride in his very nice 160 hp T-18. Larry does immaculate workmanship and has turned out by far the quietest T-18 I've been in. His airspeed system had not been calibrated so I couldn't be sure how fast it would go. One thing which helped make it quiet was the use of fiberglass insulation throughout the aft fuselage. But more important was the good seal around the canopy. The canopy frame and rails were all standard except for a clamping latch at each of the two lower front corners. The deck under the canopy was upholstered and the upholstery was made oversize enough to press out against the canopy. The only disappointments were the poor forward visibility and the square tunnel jabbing my hip. In my T-18, I have very good over-the-nose visibility even in climbing attitude, but in his, I couldn't see anything but the instrument panel. I doubt if I could have raised the seat much because my hat already rubbed the canopy. I believe the difference is due to two things. First, my windshield frame is 3/4" higher than standard and Larry has a one piece canopy from M&R supply which does not buldge out according to the plans in the area over your head. Since it doesn't seem to hurt the speed any I strongly recommend raising the windshield frame. Even if it's already built, you can add spacers.

Larry did a fine job of finishing his airplane. In order to get nice smooth wing skins he stretched them over the wing framework and then drilled everything in place. This extra effort paid off in very tight, smooth skins.

Hugh Grammer also did an exceptional job of workmanship. His interior was very tasteful and had that truly show-room appearance. I didn't get a ride in it so I hope Hugh will give us a complete report for a future issue.

The weather people made such pessimistic predictions of the week-end weather situation along my return route that I decided to leave Thursday afternoon to get ahead of the front. So I missed the forum and only got a brief look at Russ Basye's beautiful tri-gear T-18 which arrived as I was leaving. So how about a report, Russ? Everyone is anxious to hear all about it.

Three trophies were awarded to T-18 builders by John Thorp, as follows: 1. Russ Basye - Outstanding Workmanship; 2. Ron Zimmerman, Best Modification; 3. Lu Sunderland, Best T-18.

Ron Zimmerman did a remarkable job of rebuilding his ship. No one would know by looking at it that it had ever been scratched. This time he completely flush riveted the wings and was very careful to get nice smooth leading edge bends. He said that this greatly

improved the stall characteristics.

Bill Johnson and his wife flew in from Seattle, having brought one of their children part way in their newly installed jump seat. Bill is presently machining parts for the retractable gear mod.

Al Neunteufel had his recently completed airplane there. He is very enthusiastic about the performance left after only a few hours is already talking about making some modifications to the cowling. After a fuel pump failure on take-off on his first flight, he says his church attendance has been very faithful.

Dallibie Wood was just there for one day and then had to leave due to business. Dr. Cottingham was there in 199V.

Don Carter arrived Thursday with his daughter, Debbie and camped right by his T-18. Don stirred up quite a bit of interest with his article on aerobatics in Newsletter No. 27 and gave some good advice on the subject at the T-18 Forum. This was that if you are not an expert at aerobatics, you should get some dual instruction before doing them. Even if you've had dual in slower airplanes, you should get some help from someone more experienced. Don hasn't yet solved an oil leakage problem in his Corvair supercharger so hasn't used it yet. He hasn't been successful in obtaining permission to use his T-18 for IFR flying but is still working on it since several Westcoast homebuilts have IFR approval.

Longer Landing Gear - I have made a new main landing gear for my T-18 which has proven to be best I've seen. Like Bill Johnson, I tapered only the outside 1.5 inch leg tubes to insure maximum torsional stiffness. A taper on the last few inches of the lower leg buys very little in simple bending deflection. I made a straight taper from the mid-point downward leaving a 0.030" wall thickness at the lower end. Then I left a 1.5" diameter by 0.125" ring at the very tip to prevent splitting. From the mid-point upward I made a straight taper down to 0.080" wall. This was left thicker to make it easier to weld. The inner 1.25" gear legs were simply made 2.5" longer, untapered. The cross tube was made of 1.25" by .080 wall thickness tubing. To facilitate heat treating and also simplify repair if one leg gets damaged, the gear was split down the middle. The cross tube was spliced with a 6" long piece of 1.5" dia x 0.125" tubing and four 5/16" bolts. At the apex, the gear was split on the centerline and then welded after heat treatment. Since some people have a hard time following my word pictures, I'll include a sketch (Figure 1). I used an oxyacetylene torch to weld the gear. Don't try it unless you are a good welder.

If the .090 plate stock is permitted to extend about 1/8" outside of the weld at the apex, then when it is later welded, the main part of the fitting will not be heated enough to disturb the heat treat properties. The two halves need to be welded at the apex only to take vertical shearing stresses. (It keeps one leg from slipping vertically relative to the other.) This is a much better arrangement than the stub tube splice I previously used.

John Thorp says Merrill Jenkins is now building his gears 2" longer. John does not object to this modification, but doesn't recommend adding much more length because it gets the wheels too far back and you might nose over.

Why extra length, tapering and a lighter cross tube? They all make the gear softer. Why the split down the middle? To facilitate heat treating in a smaller oven.

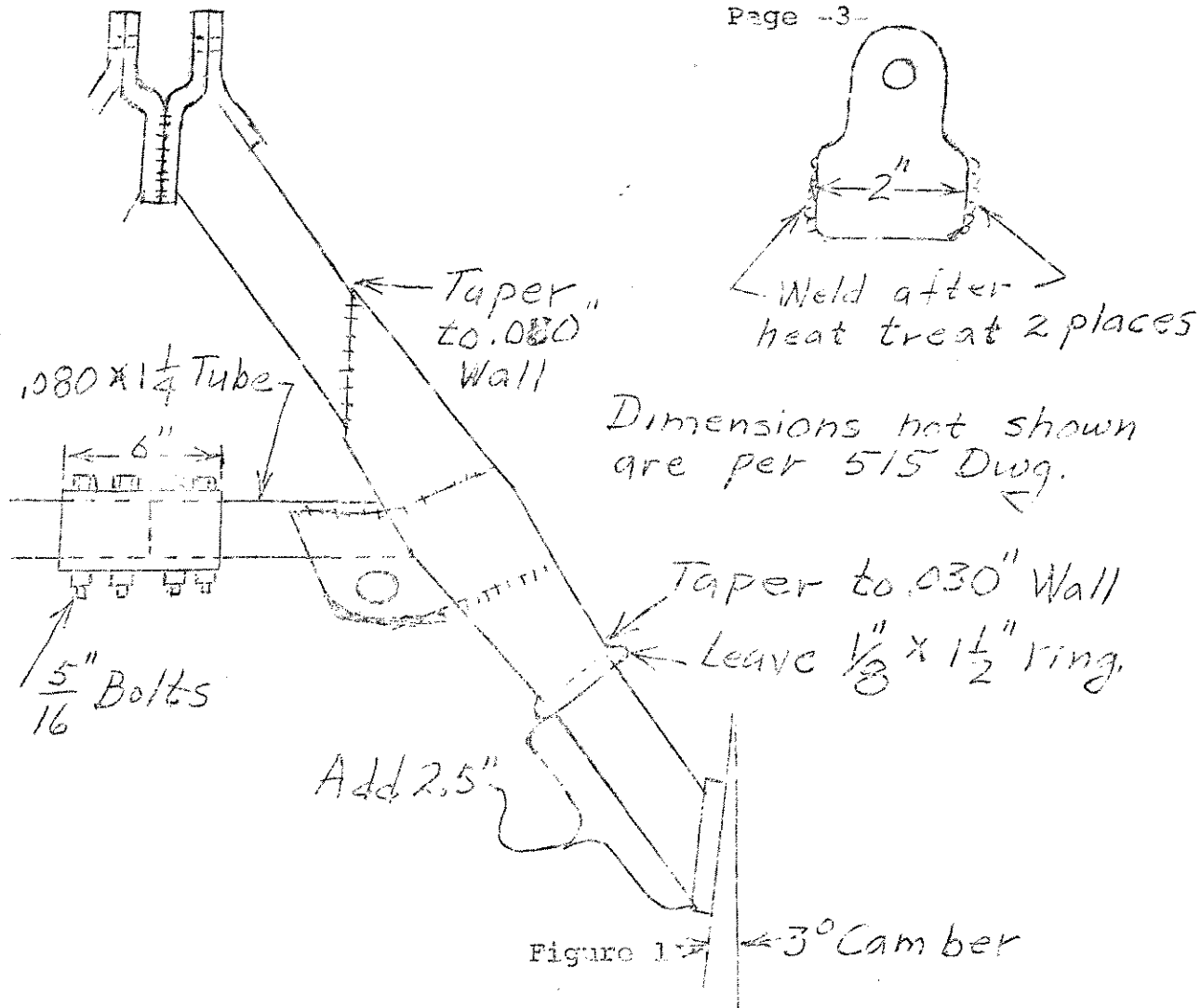


Figure 1

More than likely, the legs will warp during heat treatment. Straightening is simple if you have a husky chain or cable and a jack. After assembling the two halves, just attach the chain or cable to the two ends of the bent leg. Insert a jack in the middle and start jacking. This makes a mighty powerful crossbow but works like a charm. I ruined my bumper jack trying it, but a hydraulic jack borrowed from the local gas station did the trick. Now, if the axle pads aren't aligned exactly right, remember the sanding disc on a table saw like I described before. My first gear wore off my tires on the inside so on the new gear, I added one degree more camber. Make sure you don't have any toe in since that is destabilizing and can cause ground loops.

My new gear has really tamed my tiger. For some reason, it is much more stable on roll out. Instead of constantly having to use rudder and brakes to keep it rolling straight, I can almost sit back and relax. It is very noticeably softer on bumpy runways. When taxiing, it considerably reduces the stresses on the wing-fuselage attachments (which are much higher on the ground than in flight). In a three point attitude I can still see the ground 100 feet in front of the nose. This rod I strongly recommend.

Canopies - The article by Glen Breitspacher in Sport Aviation was well done and very interesting, especially to me since I also went down the route of forming canopies. His finished canopies are very fine and do conform precisely to the drawings. His story and the picture of the pile of scrapped canopies made me feel glad that I

had gone the simpler route of making a two piece canopy over a male mold. Now the novice that is much easier and gives quite satisfactory results. Of the first half dozen canopies we scrapped only one when it slipped off the clamps into the oven.

CAUTION: A forced landing has been reported caused by throttle cable failure. After two hours on a new T-18, the pilot was unable to reduce power so he came over the field and cut the engine with mixture control. On final, a Cessna got in his way so he elected to turn and re-apply power with mixture control. However, the engine would produce no more than 1000 rpm so he turned back to the field. Unable to reach the runway, he landed in trees, fortunately without major damage or serious injury. Probable cause - loose throttle cable clamp.

Don't depend on the FAA inspector to catch everything. Get one or more designees or chapter members to thoroughly go over everything before you fly. You'll be surprised at the things they find.

While we are on the subject, do you have a fancy push button throttle control that you can twist for fine control? If it is like mine, there is no provision to safety the end which screws into the fork at the carburetor. I drilled and safety wired mine to the fork.

Now, we should never again have forced landings or close calls due to the following reasons, right?

1. Loose throttle linkage.
2. Loose oil filler cap.
3. Loose crankshaft seal.
4. Bad motorcycle battery.
5. Injected nut through intake system.
6. Bad airspeed indicator.
7. Lost canopy.
8. Ground loops.
9. Broken non-standard tail spring.
10. Loose bolt in brake.
11. Fuel system failure or obstruction.
12. Clogged fuel tank vent tube.
13. Out of fuel.

All of the above have caused accidents or near misses. Can you find any that could not have been prevented? Very likely, the next one will fall into the same category. Better make this list part of your checklist.

Quince of Prevention - Lyle Fleming just had a spectrographic oil analysis run and discovered warning signs. Disassembly of the engine revealed three broken rings. Ads for this type of service appear in the Aviation Magazines. Sounds like a good idea.

Propellers - Does it necessarily make your T-18 go faster if you use a longer prop? No, according to John. If you decrease pitch and increase length, rate of climb will be increased, but not necessarily top speed. This is because, in the range of propeller blade angles, we are using, propeller efficiency is nearly proportional to blade angle. The higher the pitch, the higher the efficiency. But it can't be too long or the engine won't turn up enough rpm to get full horsepower. Of course, if a prop is too short, it loses efficiency. So, what is just right? It is hard to tell because of so many variables but people have tried out about all possible combinations. Indicated airspeed is usually fairly inaccurate because of system errors.

Unless a recent calibration check was made, the tachometer can be off up to 10%. Different prop blade thicknesses and widths are used. Induction systems greatly affect power. Test data is not available under the same conditions. Airframe drag is greatly affected by finish, cooling system losses, leaks around canopy. Weights vary ect. But wouldn't it be nice to have the best available data on every T-18 all summarized in one table? I've published the small amount of data a few people have supplied but this isn't adequate. If all you guys who have flown your T-18's will cooperate and send in some data, I'll publish a table in a future Newsletter. It should prove extremely valuable for both you and all those to come. Please sit down and fill out the attached form immediately or as soon as you can get the data. For those of you who don't get a form, it includes spaces for Serial No., N Number, name, address, engine model, horsepower, propeller length, pitch, max. level ft RPM at 2000 feet, OAT, MP, max level flight RPM at 5000 ft. OAT, MP, Max IAS and Tas at 2000 and 5000 feet, max rate of climb, aircraft weight during tests. Later, when you get your T-18 flying, why not send me this data.

Runaway T-18 - At least one T-18 has shaken the tail tie down and made a very short first flight across the driveway and into a ditch at full throttle after the owner had hand propped it with one in the cockpit. Fortunately, in this case the show was over in short order with only minor damage - like ruined prop and wheel pants and a bent gear. Thank goodness he lived in the woods and his rambunctious bird couldn't get away. But let's make sure we don't have anymore close ones of that sort.

It's simple to prevent. DON'T RUN ENGINE WITHOUT PILOT IN COCKPIT. Sounds familiar enough and the best of us probably have violated the rule and got away with it. But let's get some discipline -- like EAA about shoulder harness and sign a pledge to obey the rule. Just put your X here - _____.

Safety First - There have been too many close shaves on first flights. All of these could have been avoided. Before your first flight, why not talk to a T-18 pilot and let him advise you. A phone call can be made anywhere in the country for a couple of bucks and that is pretty cheap insurance. I'll be glad to talk to anyone. I'm usually home between 10 and 11 p.m.

Seats - Just received a set of plans in the mail from E.M. Wertz, 3655 W. 153 Place, Midlothian, Ill., 60145 for a T-18 seat. These plans are available from him for \$3.00.

It is the type described in a recent issue of Sport Aviation. It has an aluminum tubular frame with a basket weave within the frame for support of cushions. It gets quite narrow at the shoulders and comes up quite high. It can be adjusted in all directions except sideways. I haven't seen one but Dick Cavin reports that it is very comfortable. It looks extra complicated to build and might crowd a tall person but certainly looks like a well designed seat.

Spray Painting - Unless you are a professional painter you are certain to forget this tip, but I'll pass it on anyway. To keep from causing runs in your freshly sprayed paint, never try to spray a full cover coat the first pass. The first coat should be very thin so you can see through it. Just barely wet the surface. Let stand a few minutes until it gets tacky, then spray a full wet coat. The trick

then is to hold the gun the right distance from the surface and keep it moving. If it gets too close, a run will result -- too far away and the paint dries before it reaches the surface. Let up on the trigger at the end of a pass when you turn around to change direction

Acrylic Enamel - The trend these days is to use acrylic enamel in automotive finishing and many homebuilders have begun using it. Ordinary enamel not only has the disadvantage of being slow drying but also cannot be rubbed out like lacquer. If you get a run in it or a bug lands on the fresh paint, you must let it dry a couple days, sand it out and then re-paint. The acrylic enamel handles just like lacquer. It dries immediately and can be rubbed out and polished. One word of caution. The instructions say that a second coat of acrylic can't be put on between 24 and 72 hours after the first coat. Don't believe them! I've tried a second coat at 20 hours and 80 hours with very sad results. So widen the safety margin on the sensitive period or the first coat will peckle up. The finish coat should be thinned quite a lot or the surface will have an orange peel effect. To rub out overspray, runs, or orange peel, use 100 wet or dry paper and then rubbing compound. Spray painting requires tons of patience, self-control and quite a bit of knowledge for a good job.

Air Filters - John is trying to find a source for the cellular type filter material which is commonly used in lawn mower engines. It looks like foam rubber. He had to change his filter in order to get it into his extra tight metal cowling.

Mandatory Bulletin - If you sell your T-18, give the owner the plans and notify John Thorp of the change of ownership. Why is this so important? We very nearly had a serious accident in a case where a T-18 was sold but the new owner did not get the plans and knew nothing of the tail modification. One tail tab became fatigued at the root rib attachment rivets and the rib became detached in flight. The tab fluttered at 155 mph but the pilot got down safely. He knew nothing of the tail mod because he didn't get the plans or T-18 Newsletters. The purchase of a set of plans licenses the owner to build one T-18 so, legally you can't keep the plans and build a second one anyway. And since an owner of a homebuilt needs the plans to make repairs, they should form a permanent part of the aircraft records.

Oil Seal Retainers - If you want to buy some real cheap insurance, just add a retainer to your crankshaft oil seal. Several T-18 owners have had problems with blown out oil seals. You will recall Lytle Fleming's forced landing in the ~~vicinity~~ of no where and Bill Warwick had two blown seals before he discovered a washer installed wrong in the breather. Lycoming now uses as standard equipment, on all engines, a split retainer ring which attaches to the front flange of the crankcase with four number 6 screws. It would be very easy to make such a retainer if you can't locate one. I strongly recommend that one be installed on all Lycoming engines. The flange on the O-380-S case isn't any too wide, but there is ample material to drill and tap for four number 6 screws.

Crankcase Breathers - On engines with breathers on the aft case, be sure to follow the instructions in the overhaul manual when installing the washer in the breather assembly or it can cause a blockage.

When installing a breather in an O-290-G engine, drill and tap the case on the upper forward left side of the case for a 3/4" pipe fitting. Be certain that the diameter at all points in the passage throughout fittings and tubing is at least 5/8".

Fuselage Splice - Since no aluminum company makes 15 foot sheets, you must splice the side skin. John Thorp recommends a rivet spacing of one inch. Either a simple lap or a flush splice at a frame can be made with one row of rivets for the lap and two rows, one on each side of joint, for the flush. It is foolish to go to any trouble to keep from having a splice. You'll never notice it.

Continental Engines - Questions have been asked about the possibility of using continental engines in the T-18. John says it would create c.g. problems but if you wanted to add enough lead in the tail, it would probably work.

Engine Baffles - Just had a look at John's latest Sky Scooter engine installation. I think the baffles are watertight! Except of course where the holes are supposed to be. Where a baffle touches the case, he seals the crack with silicone cement (metal seal, bathtub seal, etc.) He says it wastes energy to blow air through cracks.

Engine Wrenches - I told John that my new \$25. wrench wouldn't get the cylinder hold-down nut by the oil pressure relief valve so he showed me his wrench. It is a Sears Roebuck box end that has been heated and re-formed to fit. He says he has always felt that the Lycoming manual specified torques on these bolts are not high enough.

Bulletin - Lycoming has just published a bulletin on their engines raising the torque level on connecting rod nuts from 30 to 40 foot pounds.

Spinners - John says that Pershing Larson, 7059 N. Moselle Ave., Chicago, Ill., 60646 has made new tooling for his spinners because the spinners weren't quite smooth. I just saw a new spinner which John has and it is really smooth.

Gasket Cement - John says he will not use the liquid so-called non-hardening gasket cement because it really does get brittle with age. He showed me a can of the stuff he uses. It is a paste and comes in a can which looks like car wax but you can also get it in a tube. It is called Tite-Seal. They also make the liquid type but the paste type is better.

Frequent Questions and Problem Areas - Having visited, talked with, and answered letters from quite a number of T-18 builders, I can see that many of you are worrying about the very same things so I'll try to comment on the most frequently asked questions.

1. Does matched hole tooling really work? Yes. With the exception of the fin and the forward fuselage skin over the fuel tank, matched hole tooling should be used exclusively. It works well and will save a tremendous amount of time. The alignment of the various components can be maintained with the same precision as could be achieved with complex jigs and fixtures. To get the fuselage completely square so the horizontal tail lines up with the center wing, use matched hole tooling on the fuselage sides, bottom and top aft skins. With the

center wing, or at least the center wing spar, in place and the horizontal tail in place, sight across both and square up the fuselage. Then the two 45° hip skins can be drilled in place. This locks up the fuselage so it is no longer flexible in torsion. If you don't first make this simple alignment check, don't expect the fin and horizontal tail to line up with the wing.

2. Are flaps worthwhile? Absolutely yes. Not only do full flaps reduce stall speed about 5 mph but they also greatly increase the glide angle. This significantly cuts the landing roll and makes getting into small fields much easier. If you are in a big hurry to fly, you can skip the flaps and then add them later. But I believe it is much easier to install them when building the structure, especially the fuselage parts. You'll probably just let them go and never get around to installing them.

3. How do you form the flap and horizontal tail nose ribs? Although I've made quite an issue about how easy it is to form ribs when you follow instructions, these small ribs are a slight exception. In order to form the flange around the nose as shown on the plans, it is necessary, I believe, to anneal that portion of the metal with a torch. I asked John about this and he said that it is not necessary to continue the flange around the nose. Instead, a small cut-out can be made like in the nose ribs. Make it as small as possible to maintain strength.

4. Is performance adequate with 125 hp? In my opinion, the 125 hp engine is the engine for the T-18. Out of the eight T-18's at the Fly-In last summer, mine was the only one with a stock GPU. When people see the performance with the 125 they seem amazed. I've asked many T-18 builders across the country why they are putting big engines in airplanes and they usually say that they got the idea that the 125 wasn't big enough for good performance. They're wrong.

5. Is there enough baggage space with the hump cut off under the canopy? Yes, this even makes more space available when you also cut a hole in the top bulkhead like I did. When John changed the design and cut off the hump, he made a beautiful airplane out of a rather boxy looking one. Whereas chapter members used to make vice-cracks about the locks of the T-18, they now rave about it. You will be disappointed if you don't cut yours down. If you want to fly open cockpit (something mighty uncomfortable at T-18 speeds) just slide on a dummy head rest. Don Carter has flown his with the canopy simply removed.

6. What about the gear? Unless you are lucky enough to have a really big heat treat oven available, make the gear in two pieces as previously described. The standard gear is fine for hard surfaced runways but I think it is too stiff for comfort on rough sod strips. There are two ways to make it softer -- lengthen and taper the legs. Either or both methods can be used. Now don't get carried away adding length. Since the legs slant back, extending them moves the wheels back and they are not too far forward to begin with. Bill Johnson added 4-1/2" to his gear legs and with a 160 hp engine and constant speed prop he had to add lead in the tail to keep the empty airplane (with full tank) from nosing over on the ground. A third way to get a softer gear is to use Whitman type solid legs. Ron Zimmerman sells them or you can make your own. If you calculate the strength of a solid leg and a hollow one, you will find that the center 3/4" doesn't give you any appreci-

able strength. But Ron has compensated by saving weight in the A frame. Don't use 600X6 wheels unless you aren't interested in speed.

7. Are Pop rivets satisfactory? Yes. Use AN's if you are equipped, but if not, use pops. There are no reported problems with them on the many T-18s that use them. Stainless steel and monel are acceptable but don't use the aluminum type. Use the type whose stems break inside, designated B3. It won't buy much increase in speed to use flush rivets except on the front half of the wings. You gain mostly in appearance by using all flush rivets. I used them and I'm glad but it did make a few extra operations and took time. The actual dimpling time is insignificant but you have to take everything apart in order to dimple so you don't dare start riveting until you have all the holes drilled.

Aluminum Alloy Heat Treat - The following information taken from the Aircraft Mechanic's Pocket Manual should be of interest to all you "tin benders". Only the alloy designations have changed. 24S is now 2024 and 17S is now 2017. Unless you are making some parts out of soft material and then heat treating them your main interest may be in regard to AN rivets. The ones with the little dimple in the head are made of 2017 and normally can be driven as is. However, when they get too old, they become hard and may crack or at least expand dimpled holes too much. If a rivet rings when it is dropped on the floor, it is too hard and should be re-heat treated. If the rivets are put in a freezer immediately after heat treatment they will remain soft for some time. Can't seem to find out how long they will last but you won't have to worry for a number of months.

Aluminum alloy heat treatment is a process which may be applied only to the structural aluminum alloys 17S and 24S. These alloys are held at a constant temperature for a sufficient length of time, depending upon the thickness and nature of the material. The temperature limits for 17S and A17S is from 930-950°F. The temperature limits of 24S and A24S is from 910-930°F. After the material has been held at this temperature for a sufficient length of time, it is quenched rapidly in cold water to retain its hardness. The natural aging of 17S and 24S material is 90% complete after 24 hours and fully complete in four (4) days.

It has been found advisable to form aluminum alloys within one half hour after Solution Heat Treatment before the aging has progressed too far. During this period the metal may be worked with ease and without danger of cracking. It has been found that the aging of 17S and 24S material may be retarded for as much as 24 hours if it is kept at, or below, a temperature of 32°F. Aging can be retarded for longer periods if a lower temperature is maintained. In practice, an icebox containing dry ice is used to hold rivets, or small pieces of sheet, until the shop is ready to work them.

24S has a relatively rapid rate of room temperature aging as compared to 17S. The rate of aging of 24S is not only greater, but the material immediately after quenching develops greater strength than does 17S sheet, also less workability. For this reason it is necessary to work 24S more promptly after quenching than it is 17S, if comparable workability is to be achieved. While it might seem advantageous to use 17S rather than 24S to form sheet during the age hardening period, practically all aircraft shops use only 24S in order to gain the higher allowable strength and to standardize sheet stock.

Solution Heat Treatment is usually done in a salt bath heated by gas, oil, or electricity, or in an electric furnace.

The length of time that material must be soaked at the proper temperature depends upon the nature of the material, the thickness of the material and the type of heat-treating equipment available. Heavier material requires a longer soaking period.

When various thicknesses are treated at one time the soaking time necessary for the heaviest material should be used. The lighter material will not be injured by a moderately long soaking. This is not true of Alclad material which must be heated as rapidly as possible and soaked for the shortest possible time. If this is not done, the alloying elements of the base material will diffuse through the pure aluminum coating and destroy the corrosion resistance. For this reason Alclad up to .019 gauge should not be re-heat treated, .050 to .077 gauge should not be re-heat treated more than one time and .078 to .125 gauge should not be re-heat treated any number of times without affecting them."

Forming the Dash - A number of builders have had trouble forming the dash. The common problem is getting cracks in the inner flange. This undoubtedly is due to the 90 degree bend on the flange. John says that it is not necessary to make the bend 90 degrees. I recommend that on all fuselage frames, the inside flange should be bent about 45 degrees in the curved portions and 90 degrees in the straight portions. The form block should be cut out and radiused for 90 degree bends all around the inside edge, but when the frame is formed over it, just don't wipe the corners all the way down with the rubber mallet. The frames look much rougher if you try to form them over form blocks with 45 degree bevels cut into them.

Stall Spoilers - John recommends that everybody now flying re-read my article in Sport Aviation on tuft testing and then add the spoilers. A recent stall spin accident after an apparent engine failure emphasizes the need for these. They don't hurt the speed any and are mighty good insurance. I still haven't permanently attached mine but plan to just bond them on.

Materials Lists - Mr. A.D. Ishov had been supplying materials lists for the T-18 but they are no longer available since he passed away several years ago.

T-18 NEWSLETTERS - The T-18 Newsletter publishing and mailing costs are paid for by donations from T-18 builders. The total donation requested to date is \$4.00. If you are a recent plans purchaser, I will send you copies of all back issues and put your name on the mailing list for future issues if you will send me \$4.00. No foreign checks please but I can get foreign currency exchanged ok. If you have sold your plans, please notify me of the new purchaser's name and address plus the plans number.

Material for the Newsletter is solicited from anyone with an idea. Don't worry about literary style, just get me the information. You guys who are flying, don't forget to fill out the data form and return it. Whatever you do, don't neglect it. Thanks.

T-18 PERFORMANCE DATA

Date _____

PLANS SERIAL NO. _____ REGISTRATION NO. N _____

OWNER'S NAME _____

Street _____ City _____ State _____

Zip _____

Engine Make _____ Model _____ H.P. _____

Propeller Const Speed (yes, no) Length _____ Pitch _____

Max RPM Static _____ OAT _____ Alt. _____

Max Level Flt. at 5000' RPM _____ TAS _____ CAT _____ MP _____

Max Level Flt. at 2000' RPM _____ TAS _____ CAT _____ MP _____

Was Airspeed Calibrated? _____ How? _____

Max Ground Speed (TAS) _____ RPM _____ Weight _____

ALT _____ MP _____ CAT _____

Oil Temp at 70° OAT? _____ 90° OAT? _____

Oil Cooler Type _____ Where Located _____

Max Rate of Climb at gross _____

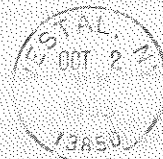
Cruise Speed _____ Fuel Consumption _____ RPM _____ MP _____

Construction Cost _____ Time _____

First Flight Date _____ Empty Weight _____

cg Most Fwd Sta. _____ Gross _____ Empty _____ Aft. _____

Please fill out as soon as possible and return. If you don't have all the data, get what you can within a week and return form. Send remainder when available. If you don't have your airplane flying, save this and mail to me when you fly. Luther D. Sunderland, 5 Griffin Drive, Apalachin, New York, 13732.



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