

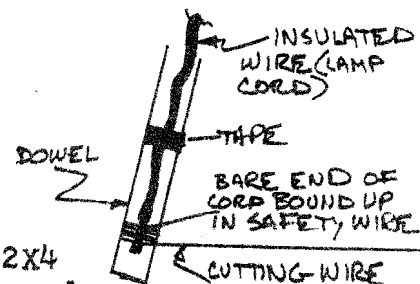
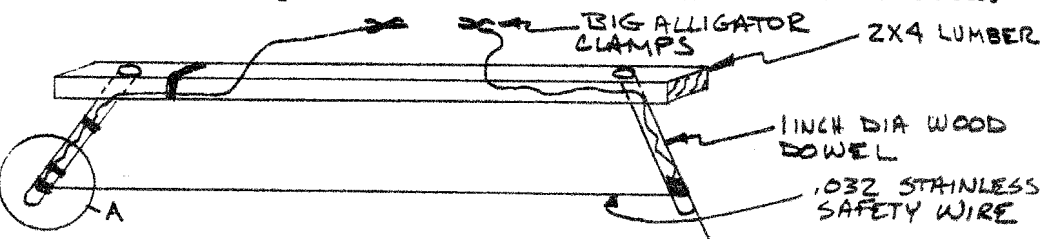
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PLANS The Powerplant installation and operating limitations section of the Adventure plans are finally nearing completion. This section has taken a good bit longer to finish than was anticipated last winter and your patience has been appreciated. The powerplant installation section will be sent to all plans holders as soon as the printing is complete.

TAILWHEEL CONVERSION A surprisingly large number of inquiries have been recieved asking about converting the Adventure to a tailwheel configuration. The simple nature of the single piece main gear spring and its attachment to the fuselage side make it a relatively easy modification to make. The main wheel axle location must be changed from the plans location (FS 53.5) forward to fuselage station 38. The shift forward requires that the mounting hardpoint in the side panels be moved forward quite a bit to allow mounting for the main spring. The main gear spring would be located forward of the spar in the cockpit, allowing a couple of additional inches of head room. The tailwheel spring would be mounted to the two tail attachment bulkheads at the rear of the fuselage. The whole modification shouldn't require any major modification to the plans layout of the fuselage and systems at all. The Adventure prototype is not easily adaptable to the tailwheel mod since it lacks the forward mounting provisions. I don't plan to convert the prototype, but I am willing to aid and abet any builder who would like to make the switch.

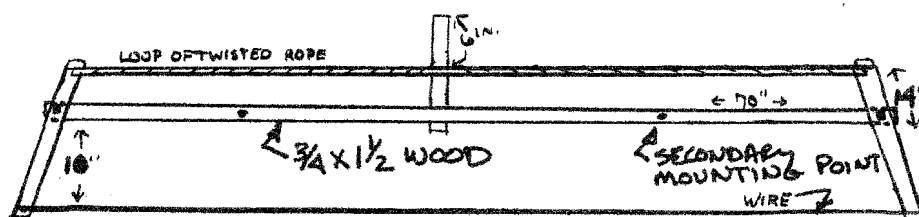
PITCH TRIM QUADRANT The plans call for a model Q12-061 Quadrastat trim control. The firm who makes these nice little units has elected not to supply them for our use. Airplanes appearantly scare the firm's legal department beyond reason. In any event, the Quadrastat will not be available from the Aircraft Spruce folks as previously indicated. A homebuilt friction type quadrant will be substituted in place of the Q12 unit. A supplimental plans page will be included with the powerplant section to cover the change.

HOT WIRE CUTTERS Inventing a new style of hot wire cutter must be a widespread compulsion among homebuilders. I've seen more variety in hot wire bows than I have in paint schemes! The introductory book on composites offered by Aircraft Spruce shows one of the basic types and I'll add sketches here of a couple of the other variations I've seen.

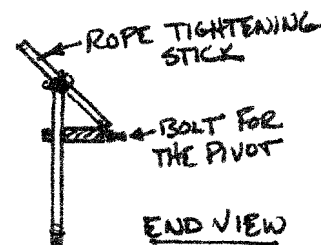


DETAIL A

This is the type which I use. Holes are bored into the 2X4 at an angle to hammer the dowel into. The wire is tensioned by winding the safety wire up onto the dowel rod by turning the dowel with a pair of vice-grip pliers. The 2X4 will bow when the wire is tightened cold and the springback keeps tension on the wire when it gets hot and stretches.



53.5  
38  
14.5



The second sketch comes from Adventure builder number 1, John Griffin, Jr in the Atlanta, GA area. He uses a much lighter frame made up of 3/4 X 1 1/2 lumber (1X2 in lumberyardese) and tensions the wire by using a tourniquet type of arrangement. He has all of his foam cut, and from the photos that I've seen, the cutter does a great job.

It is worth noting that both of these cutters use a nonconductive material (wood) for the upright wire supports. You hold onto these uprights and the nonconductive material reduces the risk of getting shocked.

DAG CLEANUP POSSIBILITIES A surprising number of folk seem to assume that because the Adventure possesses outstanding performance capability that all of the possible drag improvements have already been made. This is a long reach from being true. A number of possible (read: reasonable) efforts can still be made with significant results. I have a pet list of things that I would eventually like to try on the prototype and some that I'd like to coax an ambitious homebuilder into trying for me. The following is a list of possible cleanup efforts, the relative difficulty involved, and the potential gain in speed.

Cleanup item	How hard to do?	How much gain?
1. Add nosewheel fairing	Simple add on	2 mph
2. Add Wing root fairing and Horizontal Stabilizer root fairing.	Simple add on	1 mph
3. Seal known cowl leakage	Simple add on	1 mph
4. Recontour nose cowling, add propeller extension.	Moderate- requires cowling rework or replacement	2 mph
5. Rework exhaust system and cowl outlet for pipes to align exhaust and local flow	Moderate- more cowl rework.	1 to 2 mph
6. Convert to Tailwheel	Moderate rework, simple if done during construction.	3 mph
7. Install retractable nose gear	Extensive modification	5 mph
8. Install retractable main gear	Major modification and development effort	10 mph

As you might expect the easy items are the least rewarding but a few weeks work can still make a substantial improvement. A winters work could make greater strides yet. How much of it will ever be done? I really don't know.