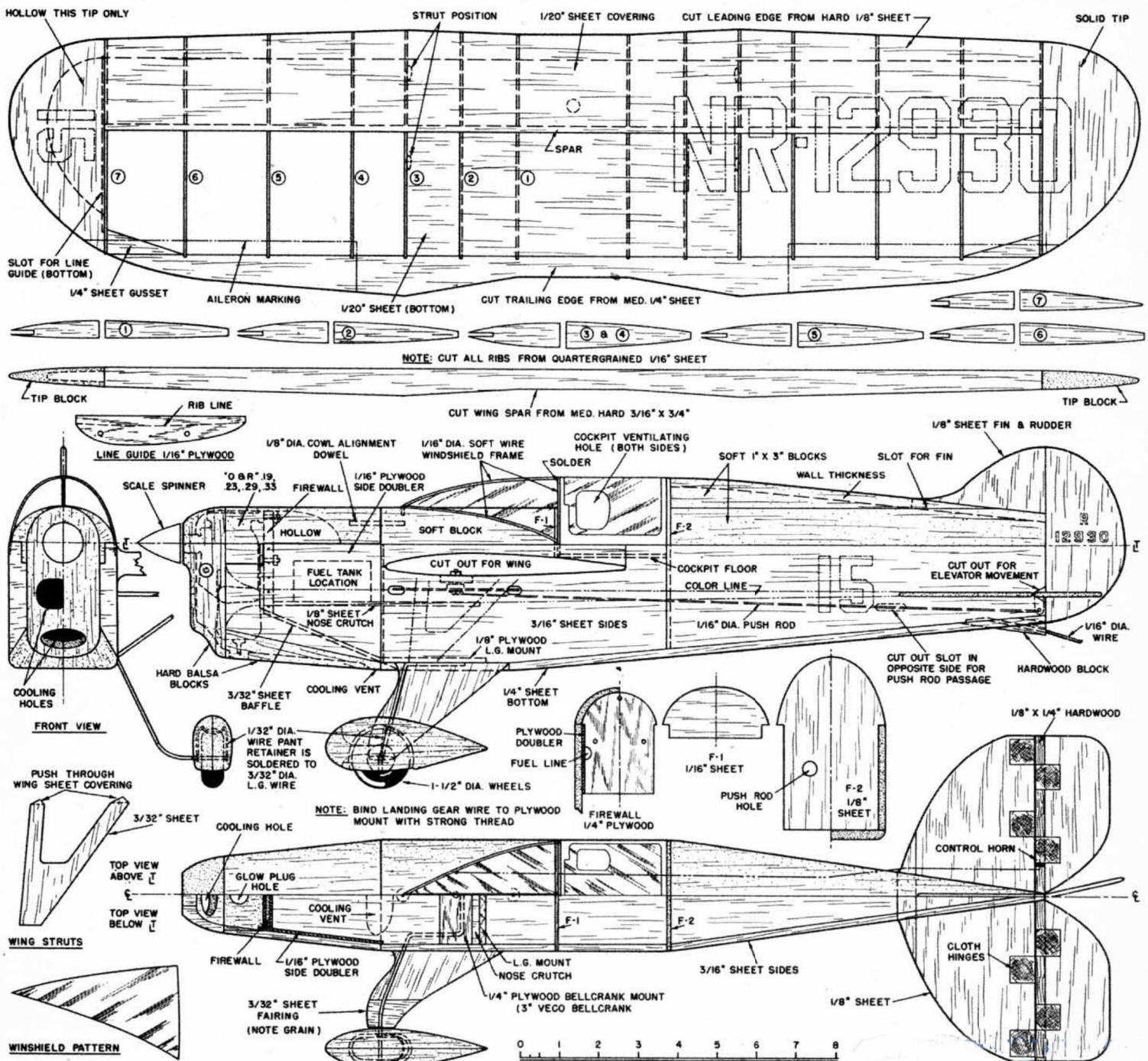


Art Chester Racer

■ One of the most popular racing planes to catch the fancy of the model builders is the *Jeep*. This trim little ship was built back in 1935 and powered by a 375 cu. in. displacement Menasco engine. In its first major test during the 1936 National Air Races at Los Angeles it took second place in the Greve Trophy race with a speed of 230.47 mph.

For team racing it is suggested that the wheels be increased in size to 2" for better take-off and landing characteristics. The plans show the installation of an O&R .19, .23, .29, or .33. Any of these engines will give excellent performance, but the .29 or any other engine of the same displacement is required under the team racing rules.

Due to the rather odd shape, it is necessary that the wing be constructed first. A "D" section type was chosen for its great strength and light weight. Cut out all ribs, leading edge, trailing edge and main spar. Mark rib locations on both sides of spar and construct the "D" section first, including the 1/20" sheet

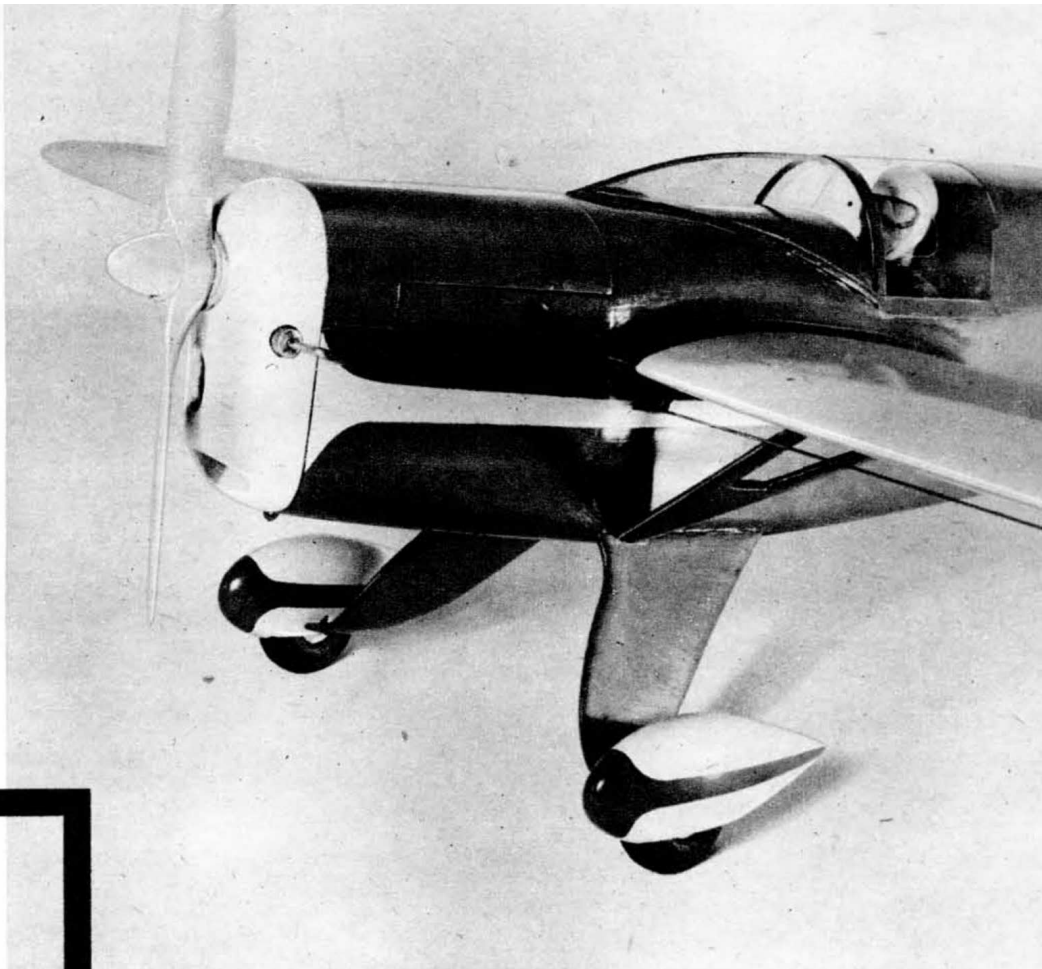
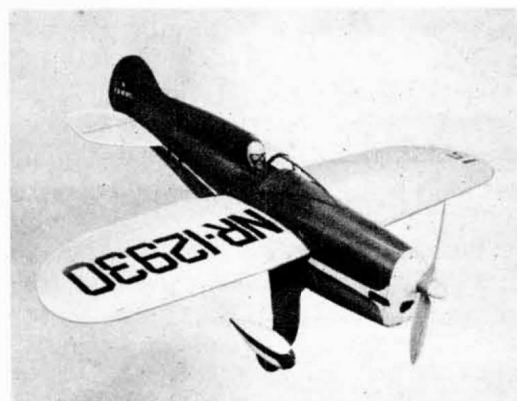
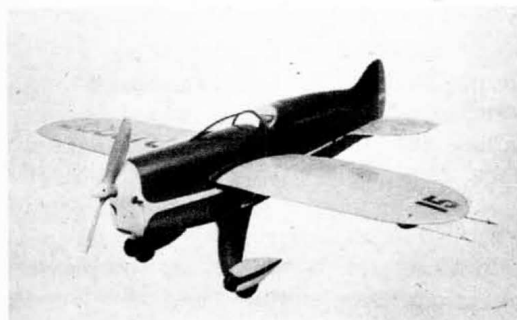
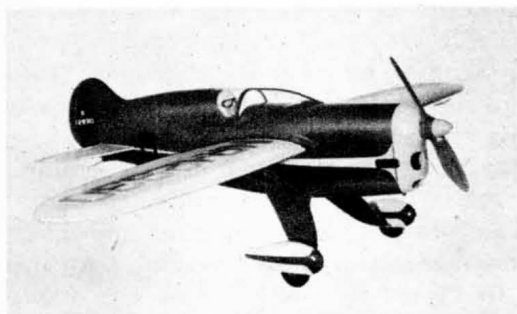


The model as presented here is a "natural" for either scale or team racing competition. If T/R, to gain speed you can eliminate wing struts, landing gear fairing, wheel pants. Include the motor shut-off, "pilot."

An exceptional project, famous Chester "Jeep" racer makes fine U/C flying scale or team racing entry; the pants are removable

By AUBREY "RED" KOCHMAN

Construction is quite simple; if care is taken in selection of wood, a very sturdy yet light model will result. Red's model with O&R .29 weighed in at only 20 oz. As team racer use 1 oz. tank, bend tailskid to fit "stooge."



covering on both top and bottom. Cement rear portion of ribs to spar on the marks previously drawn. Add trailing edge, the sheet covering at center section and the tips, making sure to hollow out inboard tip as shown. Sand out any irregularities, especially where sheet covering joins leading edge.

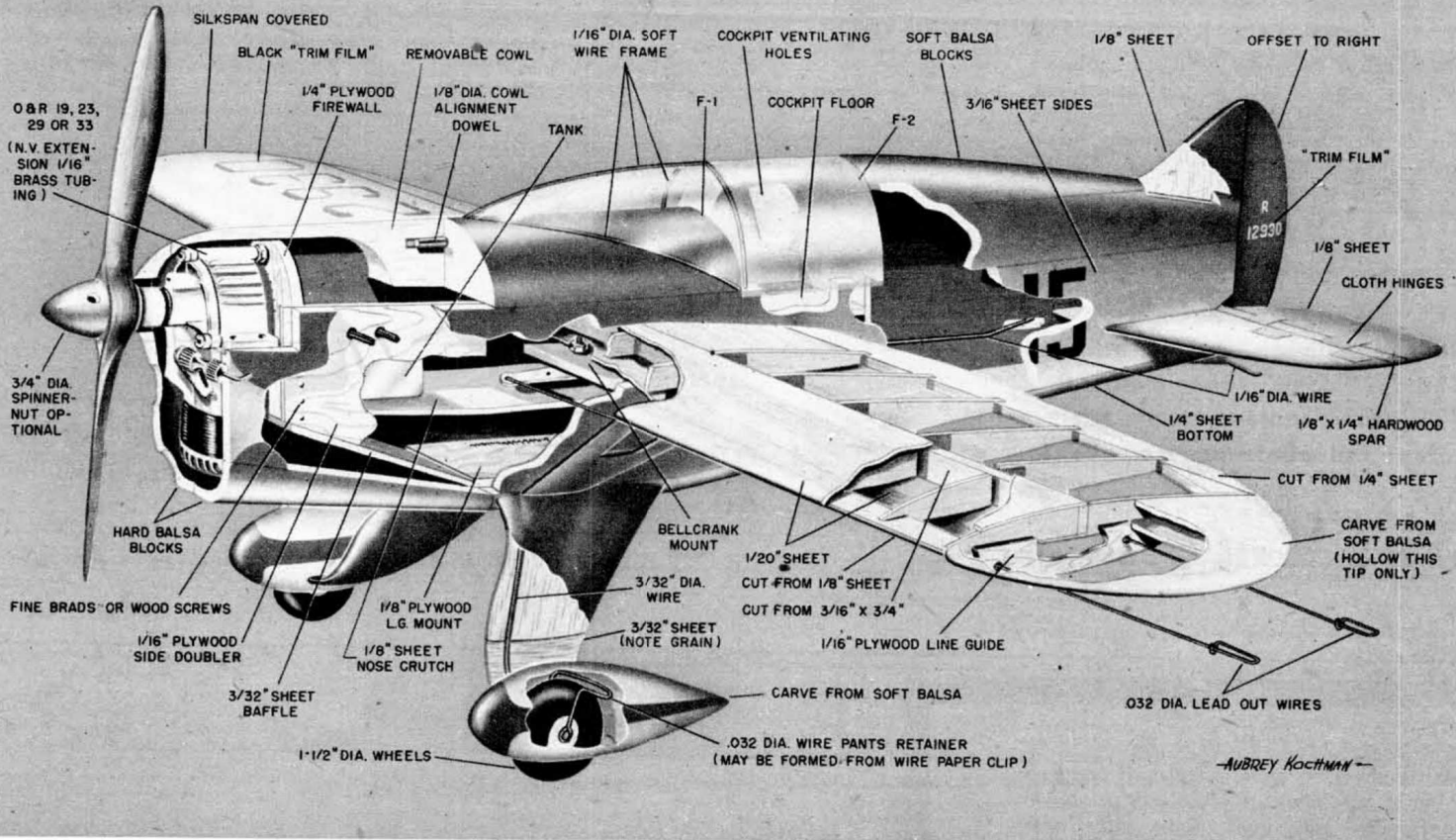
With the wing finished except for covering, we can turn to the fuselage. Cut sides from fairly soft 3/16" sheet and the bottom from 1/4" sheet of the same grade wood. Also cut out the two formers, the 1/4" plywood firewall and the 1/8" sheet nose crutch. Because of simplicity of construction, all fuselage parts should be cut out very accurately to insure strength and true alignment. Do not depend upon cement to fill the spaces between parts that do not fit properly.

Cut out slot for the wing before beginning assembly. Because of its odd shape, the wing cannot be slipped through the slot. Therefore remove top portion of slot using a fine backsaw or razor blade. This piece will be cemented back after wing is in place. Also cut holes for lead-out wires and slot for the stabilizer. Notice that the sides are parallel at the wing root section back to former F-2.

Mark off this section and cut off the nose section. Score and crack the sides just enough at F-2 so that they may be cemented together at tail. Cement F-2 and nose crutch in place as shown. Cement the plywood side doublers to crutch. Use Weldwood glue and fine brads or wood screws to join firewall to the side doublers. Secure bellcrank to mount, install lead-out wires and pushrod and cement the unit in place.

Cut a small hole in the bottom sheeting of wing center section as indicated on wing plan to clear the bellcrank mounting bolt, and cement wing in place. Replace the side pieces above wing, trimming if necessary to insure a flush top line. Cement nose side pieces to the plywood side doublers. Add bottom sheet except for the piece that fits across at landing

ART CHESTER RACER



gear fairing. Cement former F-1 in place and also the soft block under windshield.

Using F-1 as a guide, carve block to shape. Spot the rear blocks in place and carve to outside shape using F-2 as a guide. Remove and hollow out. Permanently re-cement in place. Slot the block to receive 1/8" sheet fin and cement the fin in place. Cut stabilizer to outline shape. Cut out the elevators and cement them to hardwood spar.

Bind and cement control horn to spar and join stabilizer and elevators, using cloth hinges. Sand the unit smooth and round off all edges. Cement stabilizer in the slot previously cut in the fuselage sides and hook up the pushrod to control horn. Solder a small washer to the end of the pushrod to prevent any disengagement. Cement the rudder in place, offsetting it to the right to insure tight control lines during windy weather flights.

Bend the 3/32" dia. landing wire to shape and bind and cement it to the 1/8" plywood mount, using strong thread or fine wire. Cement the mount in place. When cement has thoroughly dried, dress bottom sheet firmly against landing gear wire so that an impression is made on the balsa. Cut away just enough of the impression to clear the wire and liberally cement and pin in place. Add the 3/32" sheet baffle and then cut away the bottom sheeting to form cooling vent as shown on the side and top views. Spot-cement the hard balsa lower cowl block in place and carve to outside shape. Remove and hollow as shown. Follow the same procedure for top and front cowl blocks, hollowing these just enough to clear engine.

At this point you may find that the O&R crankcase bolts are too short to pass through the 1/4" plywood firewall. If this is the case, substitute O&R .60 crankcase bolts. Temporarily bolt engine in place and cut out all the various openings that are required for its operation and maintenance.

If your *Jeep* is to be flown as scale, landing gear fairing sheets should next be cemented in place. Note direction of the grain. Groove the edge of the wood so that it fits snugly around wire. Dampen the portion to be bent with water to prevent cracking. It might also be wise to silk-cover the entire gear to prevent splitting on hard or rough landings.

The pants may be carved from two or four laminations of scrap balsa, whichever is easier and more convenient. Keep the walls as thick as possible. Bend the pants retainers as shown so that they fit rather tightly in the wheel wells. Paper clip wire works nicely as it can be bent much more easily than music wire and yet is strong enough to do the job.

Slip the wheels in place and mark their exact position on landing gear wire. Remove wheels and solder the inside loop of the retainers to landing gear wire. Replace the wheels and solder the outside loop in place. The position of wheels should be such that the outside loop of the retainer is flush with the end of the landing gear wire.

Fit the pants in place and cut a 3/32" slot on inside of each pant to clear the landing gear wire, and check that the pants when in place do not slip around or fall off by themselves. A little additional bending of the retaining wire will prevent this to a point where the model may be flown with the pants in place without fear of them falling off in flight. They will, however, pop off on hard landings without any damaging effects. Still, it is not recommended that the pants be left on when flying off rough or grassy sites.

Go over the entire model with fine sandpaper. Build up quite a heavy fillet at the wing-fuselage juncture with any good commercial fillet material.