

## RC Boat Motor & Drive Line

The running hardware that was used for the Remote Control boat came from *Dumas Products* #1263 Painted Racer. They don't package this kit separately. But they will provide you the complete drive line hardware kit, call 1-800-458-2828. Also, you can get the metal trim fittings (1263FB) as well as the radio/motor kit (RMPKG-1).

The engine opening needs to be sealed with a quality sealant as you install all these parts. Start by cutting to size all the parts needed to attach or hold the motor, running hardware, rudder, servo, and battery. Start with the motor, motor mounts, and brackets.

**MOTOR ASSEMBLY.** Use the motor to shape the straps as you see in Figure 1. Center a strap on the mounts and mark mounts for pilot holes. After predrilling pilot holes, screw straps with motor in place to the mounts. Set aside this assembly for now.

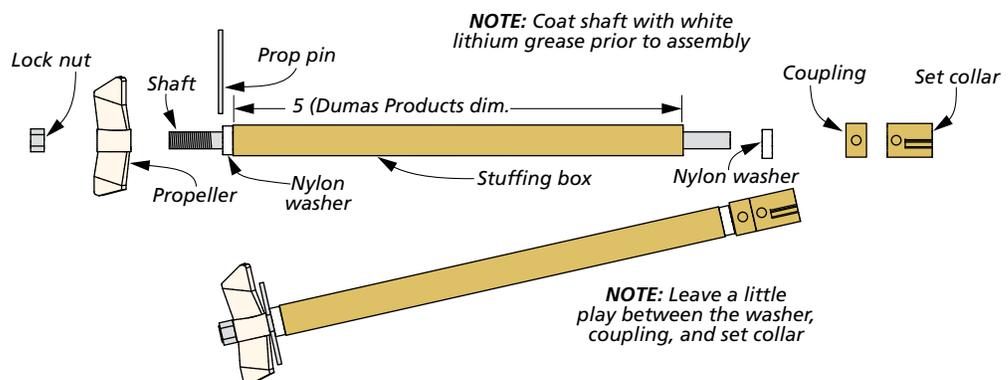
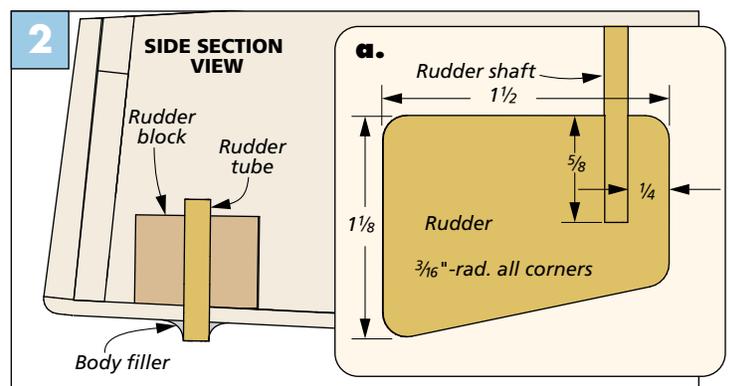
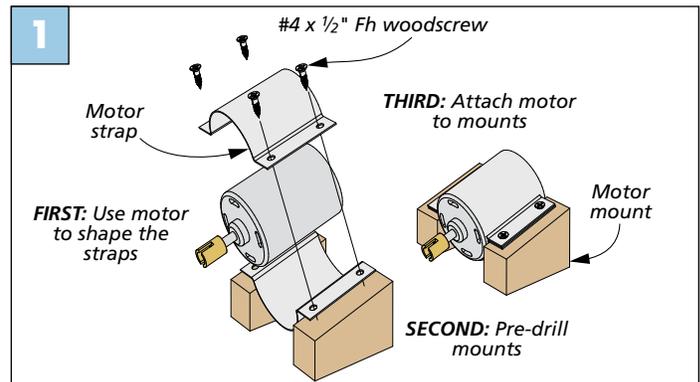
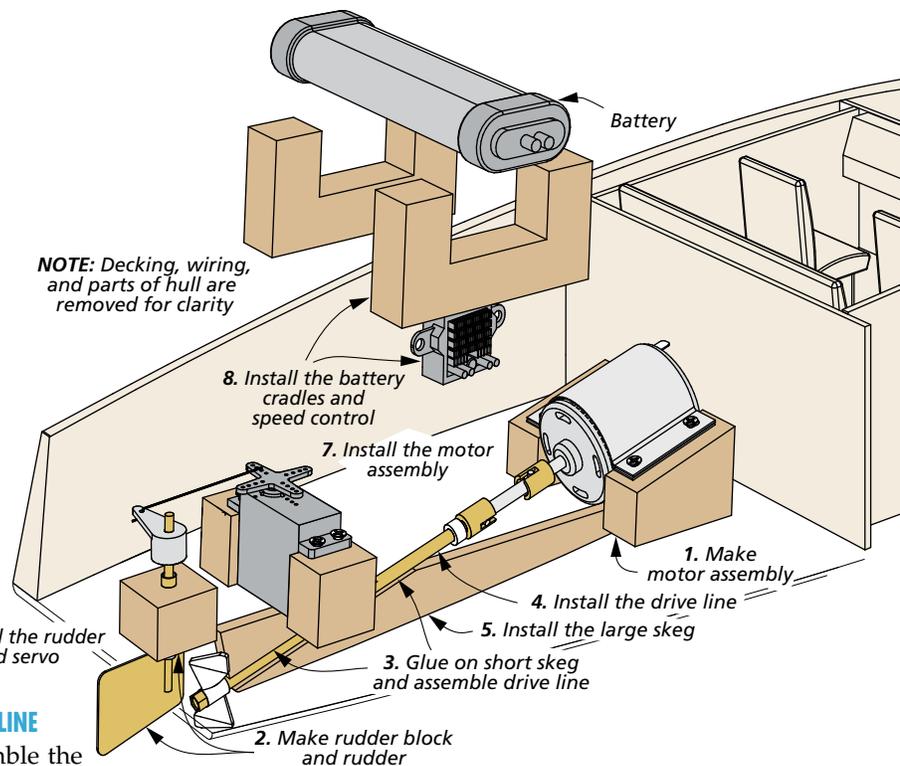
**RUDDER BLOCK.** The rudder block holds the tube that houses the shaft of the rudder. Slide the tube in the block so that about a  $\frac{1}{4}$ " sticks out of both ends (Figure 2). Apply epoxy to the bottom of the rudder block and press it in place. Clean up the rudder tube on the underside of the boat with a quality automotive body filler.

**THE RUDDER.** Shape the rudder as detail 'a' shows. Scribe a line at the back of the rudder for the rudder shaft. Solder the shaft of the rudder in place. Set the rudder aside for now.

### ASSEMBLE THE DRIVE LINE

Now it's time to assemble the drive line. The drawing below shows all the pieces that make up this assembly. Starting at the back, drive the prop pin into the shaft. Then slide the nylon washer in front of the pin. Now you can attach the prop.

**STUFFING BOX.** Cut the stuffing box to length. The instructions from *Dumas Products* say the length is five inches, but confirm this length with your model. The washer and coupling at the top of the stuffing box needs to clear the bottom of the boat. The drawing below shows the stuffing box on our model. Before sliding the shaft into the stuffing box give it a coating of white lithium grease. Next, slide the nylon washer, set collar, and coupling onto the shaft. Leave a little play in this assembly as you tighten the collar and coupling.



## INSTALL THE DRIVE LINE

The drive line is housed between the short and long skeg. The short skeg holds the drive line in place while you epoxy it to the boat. The long skeg encases the drive line firmly in the bottom of the boat.

**SHORT SKEG.** Detail 'a' to the right shows where to cement the short skeg. Slide the drive line in place and tape it to the skeg (Figure 3). Also, tape over the slot on the underside of the boat where the stuffing box enters the boat. From the inside, fill around the stuffing box with epoxy and a layer of fiberglass (Figure 4). Once the epoxy cures, remove the tape from the bottom of the boat and glue the long skeg in place. Use body filler to shape the whole skeg (Figure 4a).

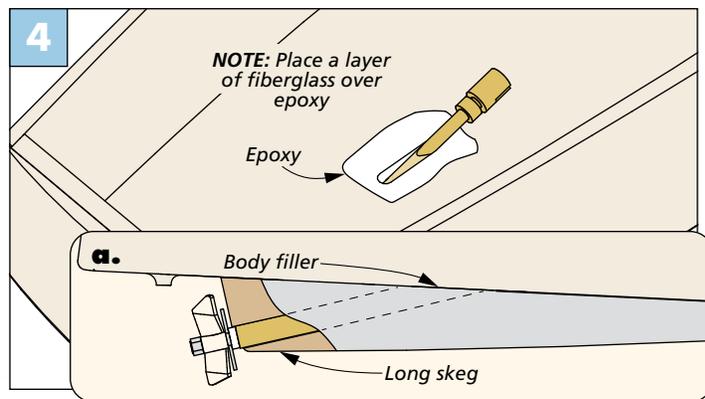
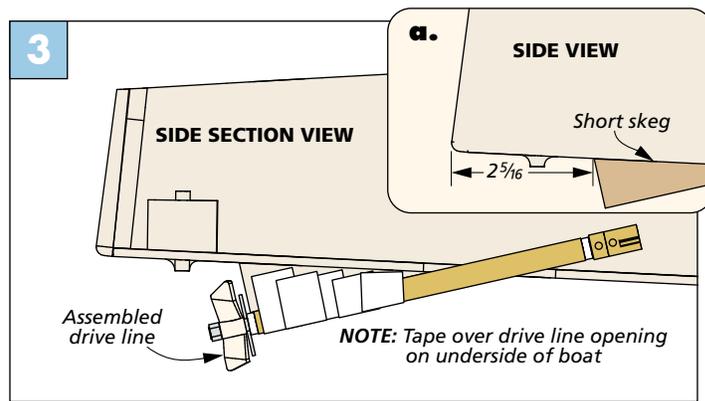
**THE RUDDER & SERVO.** Now it's time to install the rudder. The drawing to the right shows this, and the parts the rudder is tied to. Slide the rudder into the rudder tube and attach the rudder arm. Bend the end of the pushrod to fit the rudder arm as shown in detail 'a.' Leave the other end long for the moment.

Attach the servo horn to the servo (you can remove extra horns on the arm if the space is tight). To allow rudder arm and servo horn to swing freely, set them apart the distance shown in Figure 5. Mark the servo location, this is where you glue the servo blocks. Attach the pushrod to the servo horn, then

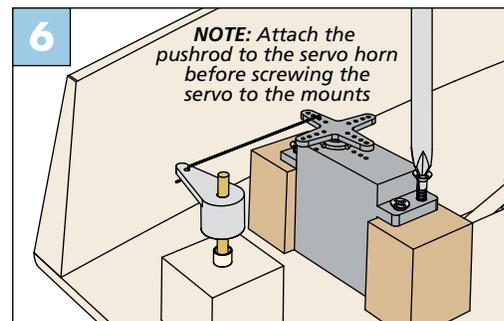
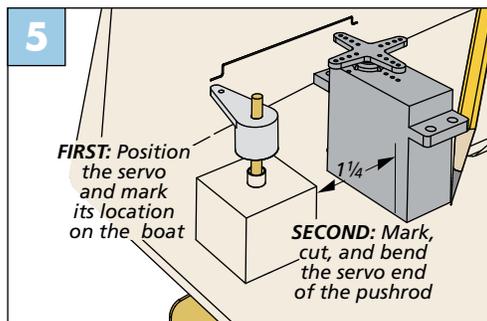
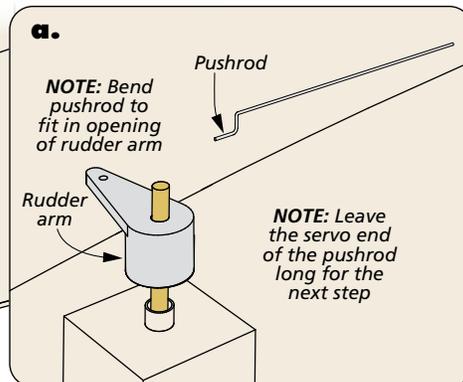
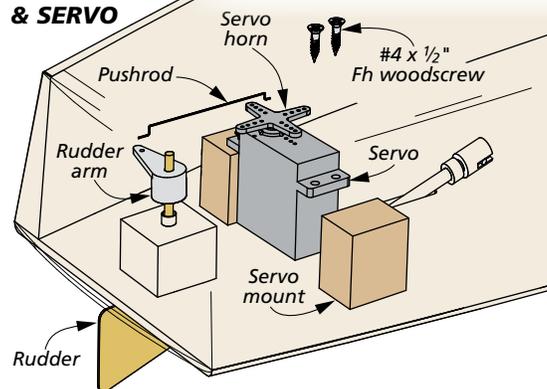
screw the servo to the mounts (Figure 6). Now it's time to align the motor to the drive train and install it.

**INSTALL THE MOTOR.** Slide the coupling rod into the coupling on the drive line. Align the rod to the coupling on the motor assembly, you might have to loosen the brackets and adjust the position of the motor. Then mark the location of the mounting blocks. Remove the coupling rod for the moment and glue the assembly to the boat. When cured, loosen the brackets enough to install the coupling rod (drawings at bottom of page).

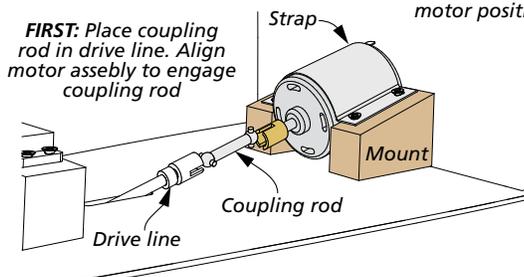
**FINAL DETAILS.** Attach the speed control to the hull of the boat. Glue the battery cradles in place. Then you can wire the boat with the instructions that came with the motor. **W**



## RUDDER & SERVO

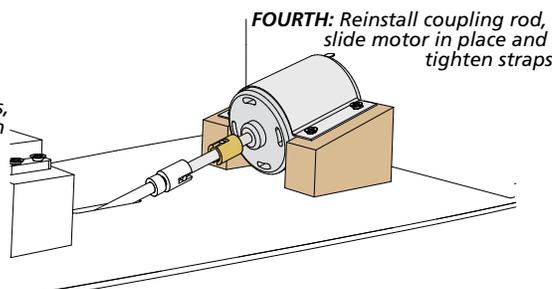


## INSTALLING MOTOR ASSEMBLY



**SECOND:** Fine tune motor position by loosening straps

**THIRD:** Mark mount locations, loosen straps, back motor away from drive line, then glue mounts in place

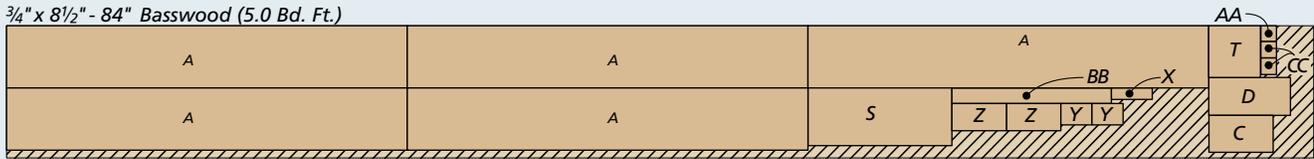


# Materials, Supplies & Cutting Diagram

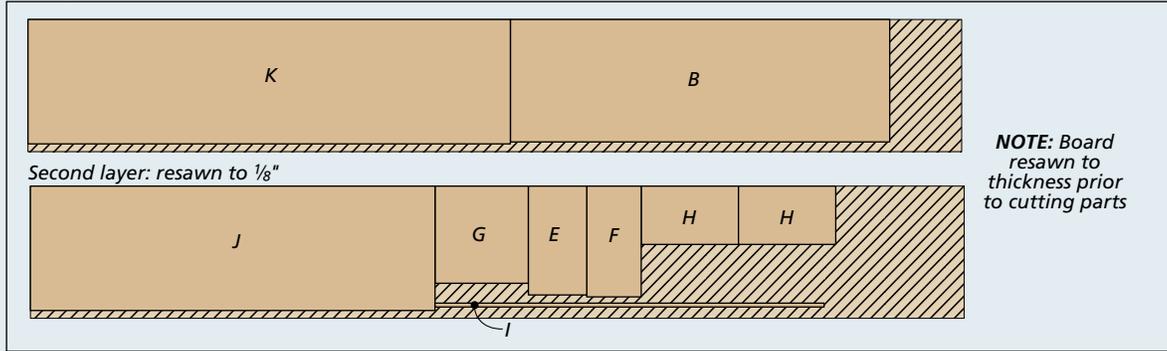
<b>A</b> Hull Sides (2)	$3\frac{5}{8} \times 4 - 25\frac{3}{4}$	<b>L</b> Gunwales (2)	$\frac{9}{32} \times \frac{1}{4} - 27$	<b>W</b> Windscreen Top Lip (2)	$\frac{3}{16} \times \frac{1}{8} - 3\frac{1}{2}$
<b>B</b> Bottom (1)	$\frac{1}{8} \times 7\frac{7}{8} - 24\frac{3}{8}$	<b>M</b> Transom (1)	$\frac{9}{32} \times \frac{5}{8} - 4\frac{1}{2}$	<b>X</b> Short Skeg (1)	$\frac{7}{32} \times \frac{11}{16} - 2\frac{13}{16}$
<b>C</b> Stern (1)	$\frac{1}{4} \times 2\frac{7}{16} - 5\frac{1}{4}$	<b>N</b> Dashboard (1)	$\frac{5}{8} \times 1 - 5\frac{1}{2}$	<b>Y</b> Motor Mounts (2)	$\frac{3}{4} \times 1\frac{3}{8} - 2$
<b>D</b> Stern Blocking (1)	$\frac{1}{4} \times 2\frac{11}{32} - 4\frac{3}{32}$	<b>O</b> Chair/Bench Base (1)	$\frac{3}{4} \times 1\frac{1}{4} - 8\text{rgh.}$	<b>Z</b> Battery Cradles (2)	$\frac{3}{4} \times 1\frac{3}{4} - 3\frac{1}{2}$
<b>E</b> Front Former (1)	$\frac{1}{8} \times 6\frac{15}{16} - 3\frac{11}{16}$	<b>P</b> Chair/Bench Seat (1)	$\frac{11}{32} \times 1\frac{17}{64} - 9\text{rgh.}$	<b>AA</b> Rudder Block (1)	$\frac{3}{4} \times 1 - 1$
<b>F</b> Rear Former (1)	$\frac{1}{8} \times 7\frac{11}{64} - 3\frac{7}{16}$	<b>Q</b> Chr./Bnch. Seat Bck. (1)	$\frac{19}{64} \times 1\frac{7}{8} - 9\text{rgh.}$	<b>BB</b> Long Skeg (1)	$\frac{7}{32} \times \frac{15}{16} - 10\frac{1}{4}$
<b>G</b> Cabin Floor (1)	$\frac{1}{8} \times 6\frac{1}{4} - 5\frac{15}{16}$	<b>R</b> Engine Cover Trim (1)	$\frac{1}{8} \times \frac{3}{8} - 15\text{rgh.}$	<b>CC</b> Servo Blocks (2)	$\frac{3}{4} \times 1 - 1\frac{1}{32}$
<b>H</b> Cabin Sidewalls (2)	$\frac{1}{8} \times 3\frac{1}{16} - 6\frac{1}{4}$	<b>S</b> Engine Cover Block (1)	$\frac{1}{2} \times 3\frac{3}{4} - 9\frac{1}{4}$		
<b>I</b> Cleats (4)	$\frac{1}{8} \times \frac{1}{4} - 25\text{rgh.}$	<b>T</b> Life Ring (1)	$\frac{17}{32} \times 3\frac{3}{8} - 3\frac{3}{8}$		
<b>J</b> Sub Deck (1)	$\frac{1}{8} \times 7\frac{15}{16} - 26$	<b>U</b> Windscreen Sides (2)	$\frac{3}{16} \times 1\frac{7}{8} - 3\frac{15}{32}$		
<b>K</b> Decking (1)	$\frac{1}{8} \times \frac{5}{16} - 992\text{rgh.}$	<b>V</b> Windscreen Fronts (2)	$\frac{3}{16} \times 2\frac{1}{16} - 3\frac{1}{2}$		

- (1) Dumas Cast Metal Trim Kit
- (1)  $\frac{1}{16}$ " x  $\frac{1}{8}$ " x  $3\frac{1}{2}$ " Windscreen Plastic
- (1) Dumas Drive Kit (1263 Painted Racer)
- (1) Tube White Lithium Grease

$\frac{3}{4}$ " x  $8\frac{1}{2}$ " - 84" Basswood (5.0 Bd. Ft.)

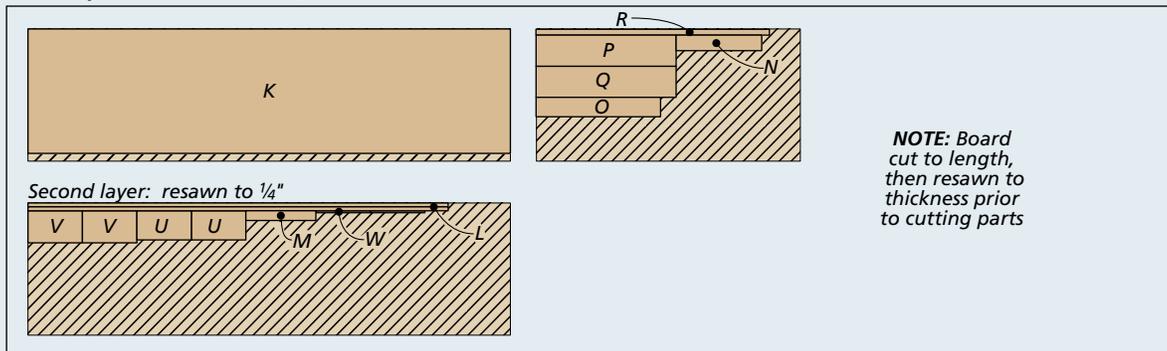


$\frac{3}{4}$ " x  $8\frac{1}{2}$ " - 60" Basswood (3.5 Bd. Ft.)  
First layer: resawn to  $\frac{1}{8}$ "



**NOTE:** Board resawn to thickness prior to cutting parts

$\frac{3}{4}$ " x  $8\frac{1}{2}$ " - 48" Mahogany (2.8 Bd. Ft.)  
First layer: cut board at  $3\frac{1}{2}$ ", resawn to  $\frac{1}{4}$ "



**NOTE:** Board cut to length, then resawn to thickness prior to cutting parts

**WINDSCREEN FOOTPRINT**

*Pattern for windscreen assembly*

**NOTE:** Set printer to "Actual size" for full size pattern

