

# .....BLACKHAWK CARBON 29MM MIN. DIAM.....

- 1 CARBON FIBER BODY TUBE
- 3 CARBON PLATE FINS
- 6 TO 1 CONICAL GRAPHITE NOSE CONE
- 2 CNC MACHINED FIN GUIDES
- 12FT OF KEVLAR SHOCK CORD
- 12 IN. TOPFLITE NYLON PARACHUTE
- PRO LINE BLACK HIGH TEMP 2 PART EPOXY

WEIGHT 9 OZ. FINISHED AS SHOWN



BEVEL THE FINS IF YOU SO DESIRE AS THEY COME BLUNT.

FIN GUIDES SLOTS ARE LIGHTLY SANDED FOR A SMOOTH FIN FIT IF NEEDED.

MOUNT FINS 1 IN. FROM REAR OF TUBE.

EASY WAY....WRAP TUBE WITH 1.IN TAPE, FLUSH WITH TUBE EDGE.

SLIDE ON REAR FIN GUIDE. FLUSH TO TAPE EDGE.

TAPE IN PLACE IF NEEDED TO HOLD WHILE MARKING.

MARK ALL 3 FIN LOCATIONS ONTO TAPE.



REMOVE GUIDE AND TRANSFER MARKS FROM TAPE INTO LINES ON TUBE FOR FIN AND FRONT FIN GUIDE LOCATION.  
YOU CAN USE A DRAWER, DOOR EDGE OR STRAIGHT EDGE OF YOUR CHOICE.



SAND ON EACH SIDE OF ALL 3 LINES  $\frac{1}{4}$  IN FROM LINE, FOR GLUE ADHESION WHEN TACKING AND FILLETING FINS.

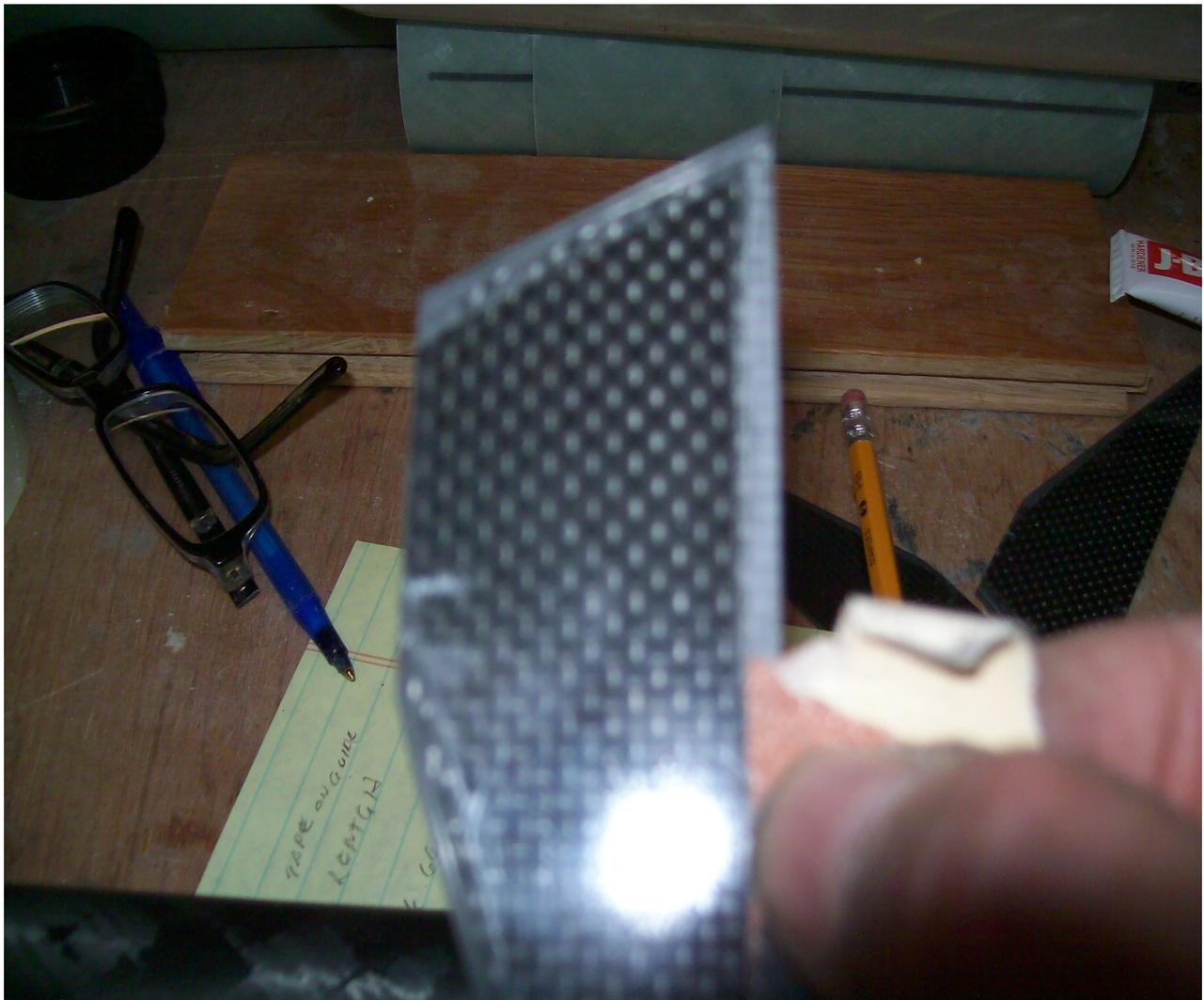


TAPE ON EACH SIDE OF LINE 1/4IN. IF YOU WISH TO PROTECT CARBON FINISH AND KEEP THE FILLETS NEAT.

AFTER SANDING, YOU WILL NEED TO REMARK YOUR LINES.

ALL 3 FINS.....

SAND THE ROOT EDGE [BOTTOM] OF FIN 1/4 IN UP ON EACH SIDE OF FIN FOR FILLET ADHESION WITH 60-80 GRIT.



MIXING THE PRO LINE EPOXY.....THIS IS DONE BY WEIGHT. 1 PART HARDNER TO 5.5 PARTS RESIN

OR 5.5 TO 1 MIX RATIO. A SMALL ACCURATE SCALE IS REQUIRED TO MIX CORRECTLY.

FOR TACKING THE FINS ON ½ GRAM OF HARDNER MIXED WITH 2.75 GRAMS OF RESIN WILL BE PLENTY. IF YOU FEEL UNCOMFORTABLE MIXING THIS SMALL OF AN AMOUNT OF PRO LINE, JB WELD CAN BE USED JUST FOR TACKING THE FINS ON.

PUT THE REAR FIN GUIDE INTO POSTION, AGAINST THE TAPE 1 IN. FROM REAR OF TUBE, MAKING SURE THE SLOTS ALIGN WITH THE LINES DRAWN ON TUBE,TAPE GUIDE INTO POSTION.

MAKE SURE ALL 3 FINS WILL SLIDE INTO POSTION EASILY IN THE GUIDE AND ON TUBE. REMOVE.

MIX EPOXY AND BUTTER ROOT EDGE OF FIN, VERY, VERY LIGHTLY. SLIP REAR OF FIN INTO GUIDE, LINE UP FRONT OF FIN WITH LINE. PUSH TIGHT TO TUBE. SLIP FRONT FIN GUIDE ON OVER FIN TIP, MAKING SURE FINS AND GUIDE ARE ALIGNED WITH LINE DRAWN ON TUBE. DON'T GLUE GUIDE TO TUBE!!!!

DO 1 FIN AT A TIME IF YOU ARE NEW AT THIS, IT IS NOT WORTH THE SMALL AMOUNT OF EPOXY WASTED FOR INCORRECT FIN ALIGNMENT!  
A WORK LIGHT PLACED ABOUT 1 FOOT AWAY FROM FINS TO ACT AS HEATLAMP WILL SPEED THE CURING TIME OF EPOXY A GREAT DEAL.



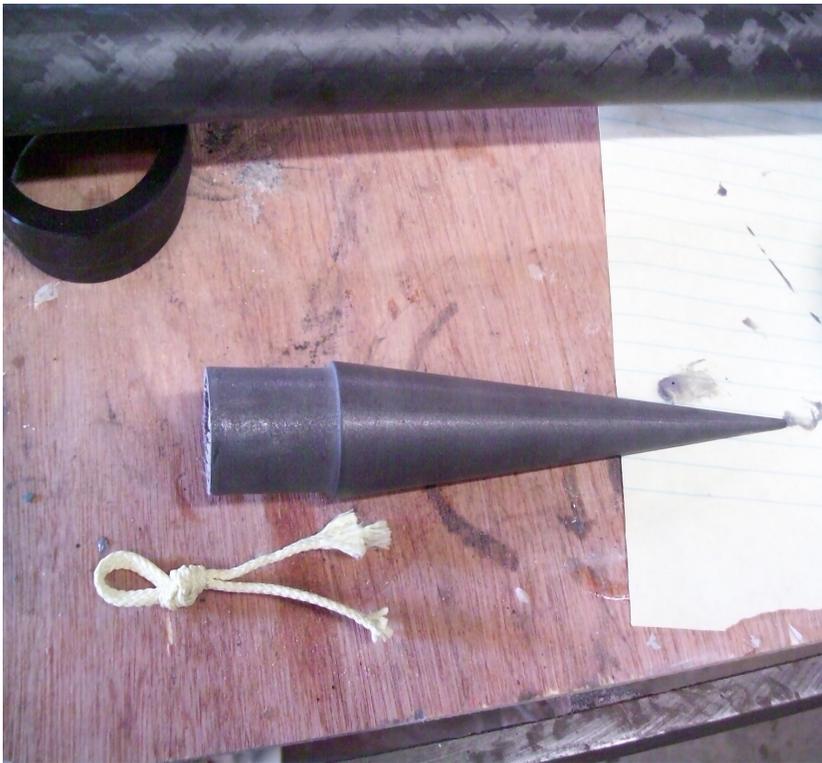
WHILE THE FINS ARE CURING.....

THE KIT COMES WITH 12FT OF KEVLAR SHOCK CORD. CUT OFF A FEW INCHES TO MAKE A NOSE CONE HARNESS.

TIE OVERHAND KNOT TO MAKE LOOP FOR SHOCK CORD ATTACHMENT.

SPREAD LEADS AND GLUE TO OPPOSITE SIDE OF INTERIOR OF NOSE CONE.

YOU CAN USE THE LEFT OVER EPOXY FROM TACKING ON FINS FOR THIS IF DESIRED.



AFTER ALL 3 FINS ARE TACKED ON AND CURED. TIME FOR FILLETS. THESE ARE SURFACE MOUNTED FINS AND ALL THE STRENGTH HOLDING THE FINS ON ARE FROM CORRECTLY DONE FILLETS. TAKE YOUR TIME WHILE DOING THIS, THE RESULTS WILL BE WORTH IT! THIS IS THE SAME HIGH TEMP EPOXY THAT COMES WITH THE MONGOOSE SERIES AND IS MIXED BY WEIGHT AS STATED EARLIER.

TAPE FINS AND TUBES FOR THE FILLETS.  $\frac{1}{4}$  FROM EDGE OF FIN ON TUBE AND  $\frac{1}{4}$  FROM TUBE UP THE FIN.



THIS EPOXY IS STIFF ENOUGH AS IT COMES TO HOLD ITS SHAPE AND DO ALL 6 FILLETS AT THE SAME TIME. BUT IF YOU ARE NEW AT THIS, DO ONE SET AT A TIME AND DON'T HURRY, THIS EPOXY HAS A POT LIFE OF 25- 35 MIN DEPENDING ON OUTSIDE TEMPERATURE. PLENTY OF TIME FOR THIS.

USE A 3/8 DOWEL TO GET SAME RESULTS WE DID, WHILE SMOOTHING THE FILLETS. MIX YOUR EPOXY AT THE 1 TO 5.5 RATIO, I USED A TRIPLE BEAM, ANY ACCURATE SCALE WILL WORK. DON'T FORGET TO INCLUDE THE EMPTY WEIGHT OF MEASURING CONTAINERS IN YOUR CALCULATIONS!



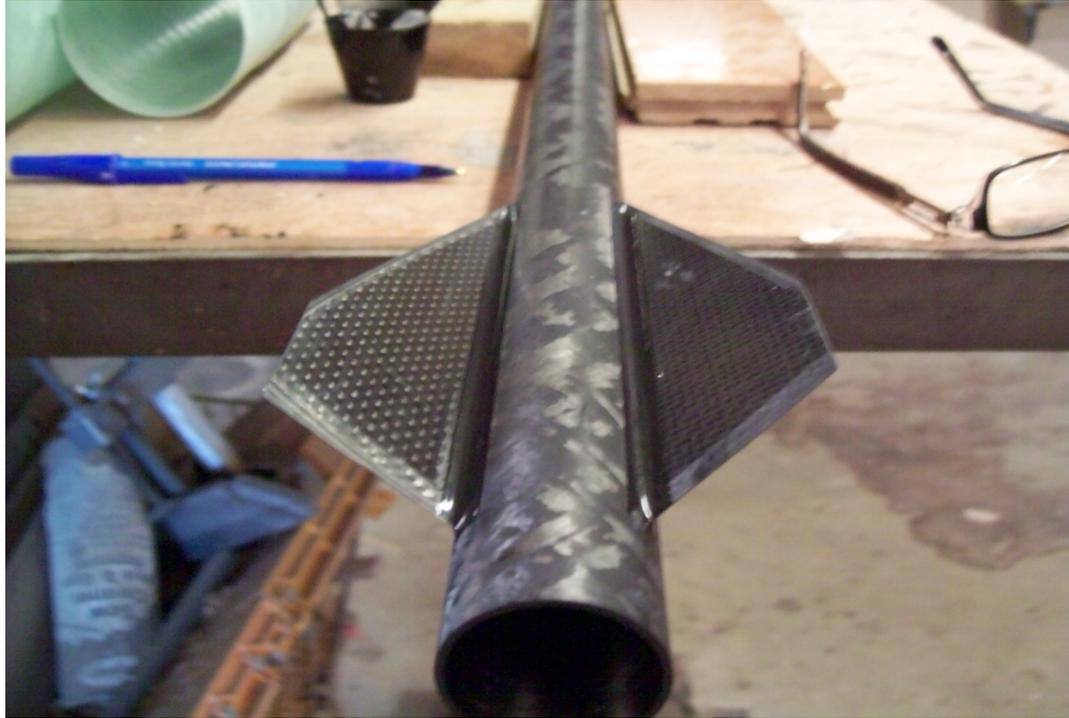
PUT SMALL AMOUNT OF EPOXY IN GROOVE TO BE FILLETED, SPREAD OUT EVENLY. IT IS BETTER TO ADD MORE IF NEEDED THAN HAVE TOO MUCH AND MAKE A MESS!

DIP DOWEL IN ALCOHOL AND MAKE FIRST PULL LIGHTLY TO SMOOTH AND EVEN OUT. CLEAN EXCESS EPOXY OFF DOWEL AND KEEP DIPPING IN ALCOHOL AS NEEDED. MAKE FINAL PULL IN ONE EVEN STROKE FROM FRONT TO REAR, WITH THE SAME AMOUNT OF PRESSURE AND HOLDING IT AT THE SAME ANGLE. THIS WILL GIVE YOU PERFECT NEAT FILLETS.





I THEN WAITED 20-25 MIN WHILE FILLETS CURED UNDER WORK LIGHT TO CAREFULLY REMOVE TAPE. PULL BACK TAPE UPON ITSELF AT A 45 DEGREE ANGLE TO KEEP FROM LIFTING EDGE.



ONCE EPOXY HAS SET, YOU MAY PLACE IN CURING OVEN TO GIVE A STRONGER BOND. THE DASH OF A CAR IN THE SUN ALSO WORKS WELL AS CURING OVEN, BUT IS NOT ESSENTIAL .

INSTALLING RAIL BUTTONS OR LAUNCH LUG IF TOWER LAUNCHING IS NOT USED.

DRAW LINE BETWEEN FINS TO MOUNT. RAILBUTTONS SHOULD BE MOUNTED 1 AT REAR FIN, 1 AT FRONT FIN. LUGS THE SAME.

AN EASY WAY TO MEASURE IF YOU DON'T HAVE MARKING GUIDE: TAPE EDGE OF PAPER FLUSH WITH CENTER OF FIN.

MARK CENTER OF NEXT FIN ON PAPER. FOLD PAPER IN HALF, MARK ON CENTER FOR RAIL BUTTON LOCATION.

MARK CENTER BETWEEN REAR FINS. MARK CENTER BETWEEN FRONT FINS



GRIND DOWN RAIL BUTTON SCREW [SHORTEN] TO FIT THICKNESS OF TUBE.

DRILL HOLE WITH 1/8 BIT. INSTALL BUTTONS, WRAPPED SANDPAPER AROUND DOWEL TO REACH INSIDE TUBE AND ROUND SCREW OFF FLUSH.....THE SCREW TIP PROTRUDING THROUGH AIRFRAME. A DROP A CA TO HOLD AND STILL BE REMOVED IF NEEDED.



SHOCK CORD MAY BE ATTACHED TO AIRFRAME ESTES STYLE. JUST CA OR EPOXY THE END OF KEVLAR FAR ENOUGH INTO AIRFRAME THAT NOSE CONE WILL NOT INTERFERE OR ATTACH TO EYEBOLT ON FRONT OF MOTOR.

IT MAY ALSO BE EPOXIED TO A 1 IN. SECTION OF COUPLER. THEN THE COUPLER PIECE SLID DOWN INSIDE OF AIRFRAME SEVERAL INCHES AND EPOXIED TO TUBE THERE.

AFTER SECURING SHOCK CORD TO AIRFRAME, TIE OTHER END TO NOSE CONE HARNESS. THEN TIE A LOOP IN CORD APPROXIMATELY 2FT FROM NC FOR PARACHUTE ATTACHMENT. ADD YOUR 12 IN. TOPFLITE AND YOU ARE READY TO GO FLY!.

STEP BACK AND ADMIRE YOUR NEW WILDMAN BLACKHAWK CARBON 29MM ROCKET!! GET READY TO BLOW THE DOORS OFF ANY ROCKET WILLING TO DRAG RACE YOU!!

