HORN

ROOT END OF AILERON

REMOVE TRIANGULAR BLOCK FOR PROP CLEARENCE.

GLASS OVER

REMOVE

2.25"

3.0"

TAIL BOOM

.75 IN

1.5"

6"

PROP TIP

PROP BREAKER 1/8 IN ALUM ANGLE. FASTEN TO BOOM ON RIGHT SIDE. CENTER OVER PROP

MAKE TWO

FLAT PATTERN 3/16" THICK (.1875") LOW CARBON IRON (WROUGHT IRON) FORM TO FIT TIRE

2EA. 3/16" COUNTERSUNK BOLTS AFT END ONE FORWARD

2"

6 1/8"

COMPRESSION SPRING

WASHERS OR STEEL TUBE.

WASHERS

.032 ALUMINUM 2" WIDE. FIX LENGTH AT ASSEMBLY.

RECEIVE FOR SPRING

CABLE TO BRAKE LEVER

± TIRE

3/16" BOLTS 4 PLACES.

2"

1 3/4"

.125" 6061-T6 ALUMINUM.

USE HARDWARE STORE BOLTS 1" OF THREAD. HEAT & BEND TUBE. THEN WELD BOLTS STRAIGHT.

AILERON PUSH ROD NOT TO SCALE

.75 OD .058 WALL 4130 TUBE

31.25" C/L TO C/L ADJUST AT ASSEMBLY TO .2" AILERON TRAILING EDGE DROP.

BEND TUBE OUTBOARD 1.5 IN.

HORN 1/2" PLY

DOUBLER 1/2" PLY

TORQUE TUBE

5.5"

3/16" BOLTS 4 PLACES

CUT AWAY NOSE SKID

TOW HOOK HINGE POINT.

FORWARD

NOSE WHEEL 2 EACH .080 ALUM PLATES. ONE SKATEBOARD WHEEL BOLT TO NOSE SKID.

C/L

AILERON HORN

IMPROVED JAN 1986

1/2" PLY DOUBLER AFT SIDE

LEAVE THESE BLOCKS TRIM LATER AT ASSEMBLY AS AILERON STOPS

HAMILTON SEAT TANK : MODEL 200

COMPOSIT FAB DIVISION

1718 HAYES AVE.

LONG BEACH CA 90813

(213) 435-5318

OVERFLOW LINE RT. SIDE. RUN STRAIGHT DOWN AND OUT BOTTOM OF GLIDER

FILLER CAP

5 GAL CAPACITY TANK

SHUT OFF VALVE AND FUEL LINE TO ENGINE

SEAT MOUNTS ON ORIGINAL BRACKETS.

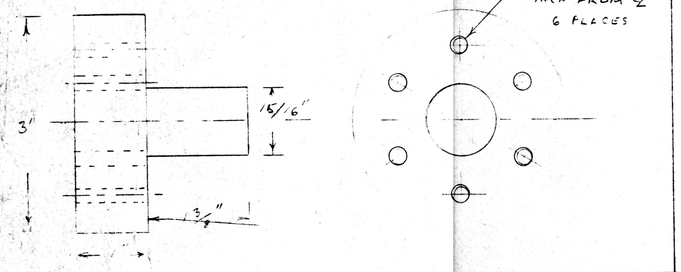
WINDROSE ENGINE MODIFICATIONS

SHEET E 1

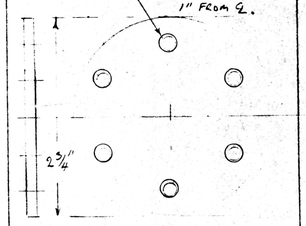
10-84

AILERON MODS.
PROP BREAKER
NOSE WHEEL
BRAKE
SEAT TANK.

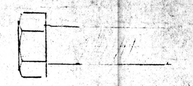
PROP HUB PULLER
MAKE ONE ANY ALUM.

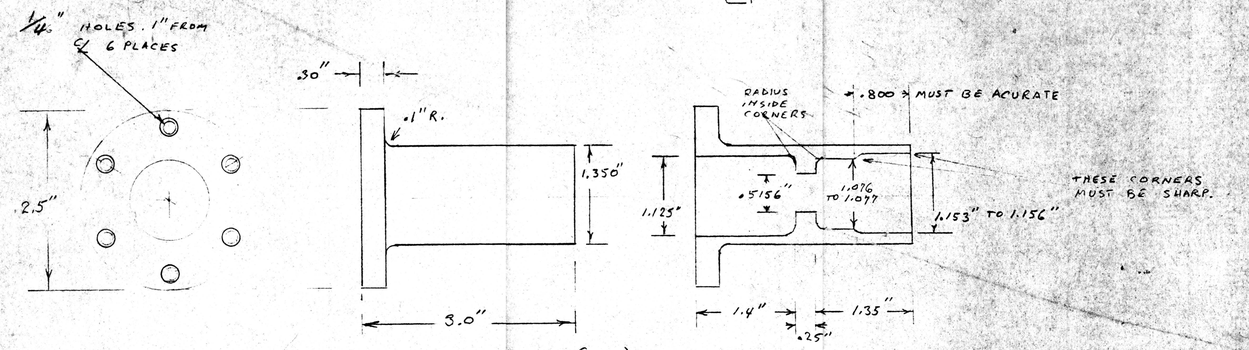


PROP MOUNT PLATE
1/8" 6061-T6 ALUM.

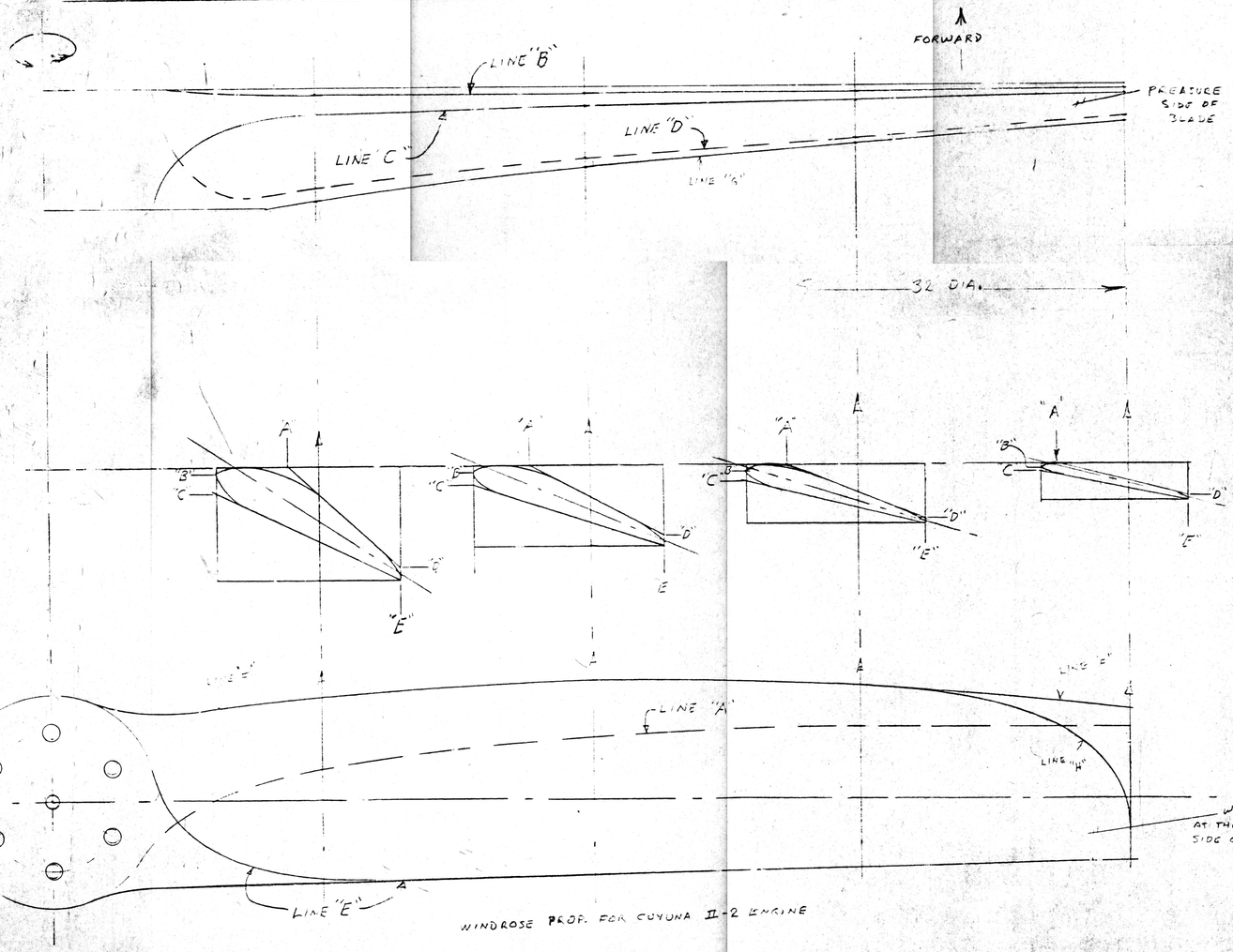


PROP HUB - ENGINE BOLT 1/2" COURSE THREAD. SAW OFF TO LENGTH SO BOLT DOES NOT BOTTOM OUT. INSTALL WITH SPLIT WASHER UNDER HEAD. TORQUE TO 450 TO 500 INCH-POUNDS

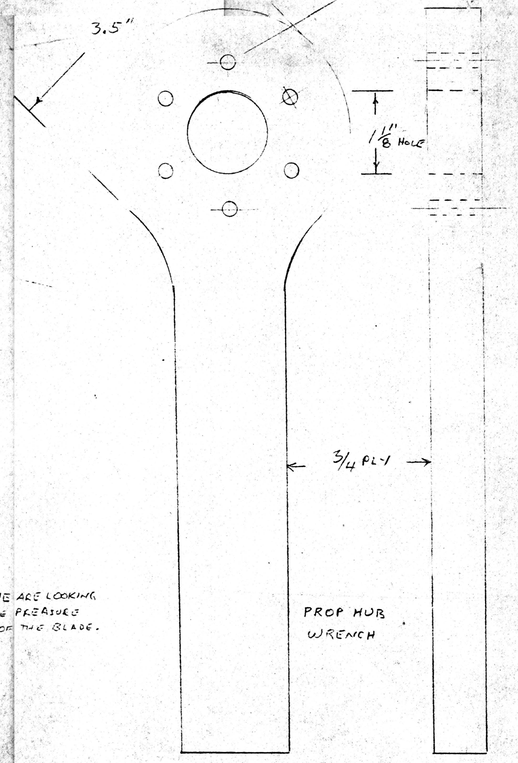




PROP HUB: MILD STEEL (1018)



WINDROSE PROP. FOR CUYUNA II-2 ENGINE



TO BUILD THE WINDROSE PROP.

1. LAMINATE THE BLANK FROM 7 PLYS OF 1/4" HARDWOOD. WE USED MAPLE.
2. BANDSAW FLAT PATTERN. USE LINE "F" AT TIPS. SAND TO LINES.
3. BANDSAW EDGE PATTERN. SAND TO LINES.
4. DRAW LINES "A" AND "E" ON FLAT SURFACES.
5. DRAW LINES "C" AD "D" ON EDGES.
6. USING AN ACCURATE DRILL PRESS, DRILL THE CENTER HOLE AND 6 BOLT HOLES. 7/32"
7. CLAMP THE BLANK TO THE TABLE AT THE CENTER, AND USING A HEAVY DUTY HAND HELD DISC SANDER, OR AUTO POLISHER, AND 60 GRIT SANDING DISCS, GRIND FLAT SURFACES A-D AND C-E.
8. DRAW LEADING EDGE LINE "B" ON THE BLANK, AND USING THE 4 PROFILE DRAWINGS AS A GUIDE HAND SAND THE LEADING AND TRAILING EDGES.
9. BANDSAW THE CURVE LINE "H" AND HAND SAND CURVES.
10. PUSH A 3/16" x 6" PIN THROUGH THE CENTER HOLE, AND BALLANCE THE PROP. NO WIND CLOSE ALL SHOP DOORS & WINDOWS. SAND HEAVY BLADE AND-OR SIDE.
11. VARNSH 3 COATS & BALLANCE AGAIN. ADD VARNSH TO LIGHT BLADE.

WINDROSE
SHEET E-2 10-84
PROP.
PROP HUB
PROP TOOLS

BAND SAW 1" TO

1½"

TAIL BOOM

.8125 HOLE ROUND EDGES

.25" 6061-T6 MAKE 2

SAFETY PLATES

.375 HOLES

.062 HOLES FOR SAFETY WIRE

.125" 6061-T6 MAKE 2

AN 3-10A BOLT
AN 970-3 WASHER
AN 365-1032 NUT
22 PLACES

AN 3-5A BOLT
AN 365-1032 NUT
16 PLACES

AN3-6A BOLT
AN 365-1032 NUT
12 PLACES

TOP VIEW

TRIM

5"

PYLON SIDE

1.5"X1.5"X.125" 6061-T6 ALUM ANGLE

GUSSET .125 6061-T6

13.5 IN. FROM BOTTOM OF BOOM AND PARALLEL.

ENGINE MOUNT PLATES

SAFETY WIRE

3/8" COARSE THREAD BOLT, 3.25 IN. FROM UNDER HEAD TO END. DRILL HEADS FOR WIRE.

.5 OD X .049 4130 STEEL TUBE 2.25 IN LONG

.5 ID X .8 OD NAPA AUTO HEATER HOSE 2.375" LONG

.8 ID X 1.1 OD NAPA HOSE, TOP 1⅛" LONG, BOTTOM 1" LONG

AN 970-6 WASHER

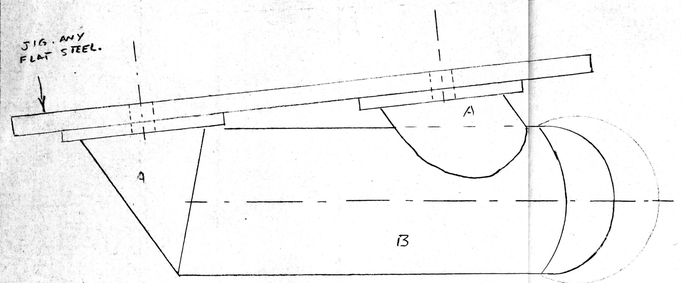
ENGINE

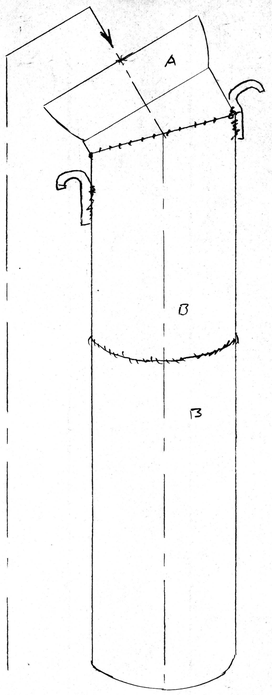
14."

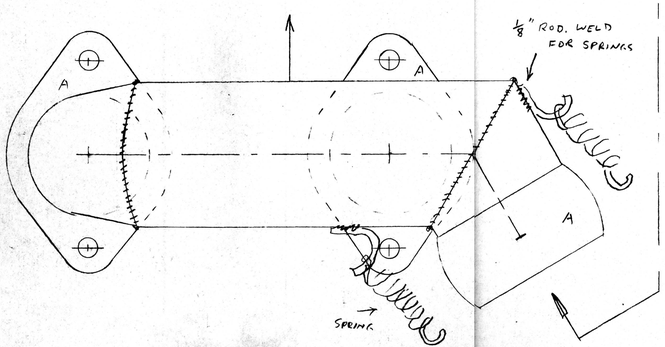
20.5"

WINDROSE ENGINE MOUNT FOR FUYUNA II-2 ENGINE

SHEET E-3

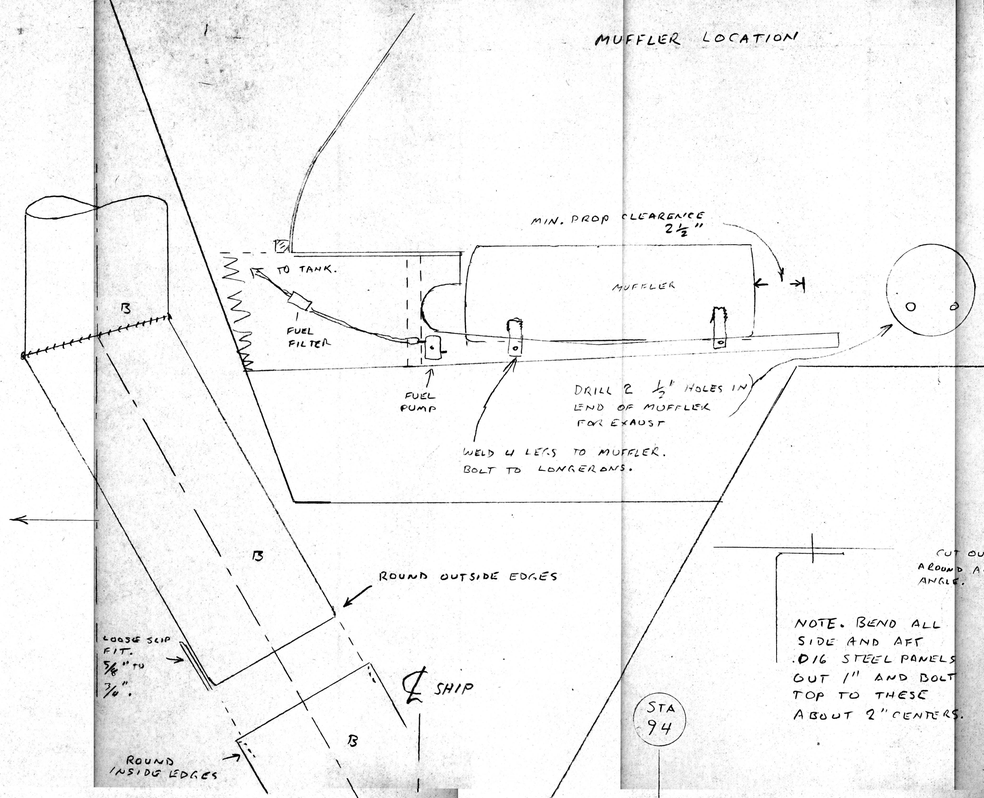


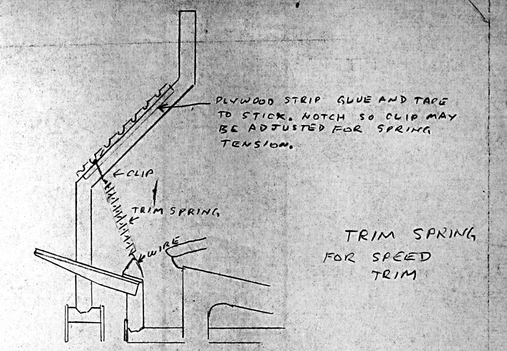




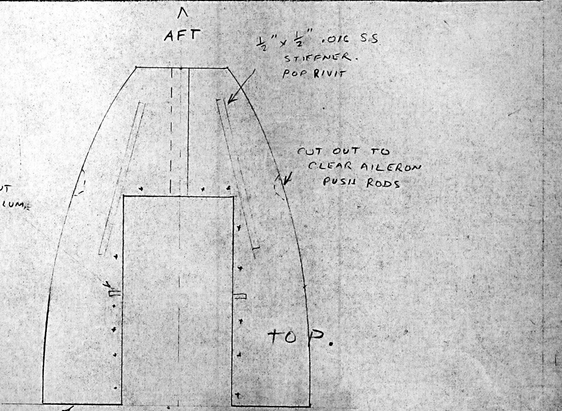
THE EXAUST SYSTEM IS MADE UP OF PARTS "A" SUPPLIED BY THE ENGINE MANUFACTURER, AND PARTS "B" WHICH ARE TUBING FROM A LOCAL MUFFLER SHOP. MAKE THE JIG PLATE, AND WELD UP THE ENGINE PART WHILE BOLTED TO THIS JIG SO THAT IT WILL FIT TIGHTLY ON THE ENGINE. THE REST SHOULD BE TACK WELDED TOGETHER WITH THE ENGINE AND MUFFLER IN PLACE ON THE GLIDER.

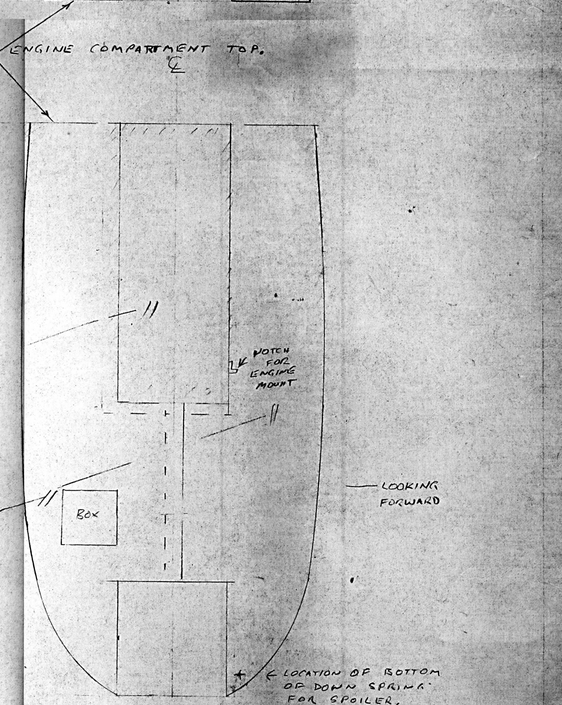
MUFFLER LOCATION



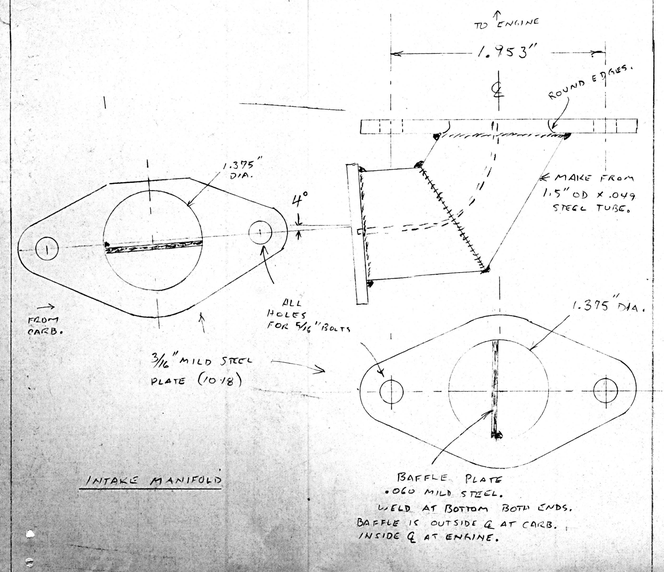


NOTE. BEND ALL SIDE AND AFT .016 STEEL PANELS OUT 1" AND BOLT TOP TO THESE ABOUT 2" CENTERS.

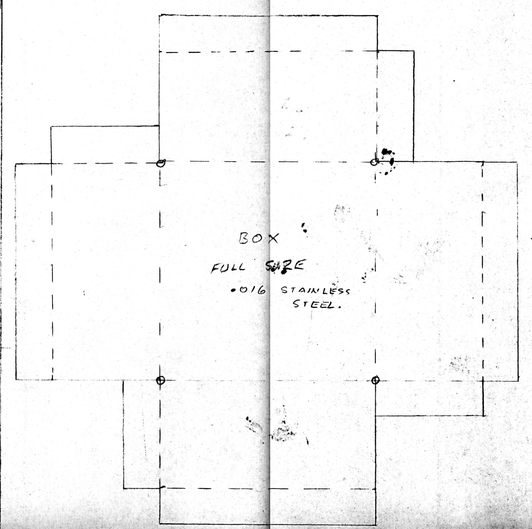


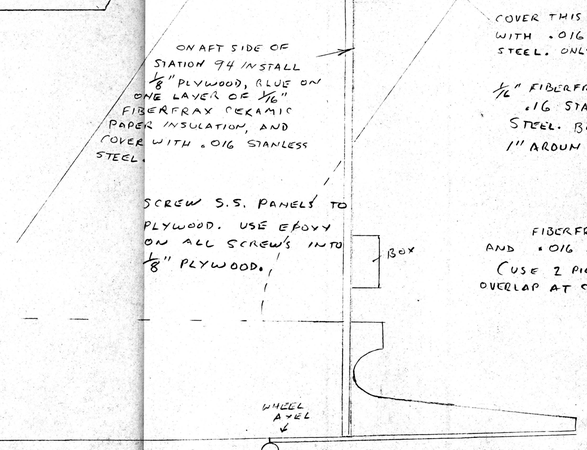


EXAUST SYSTEM FULL SIZE

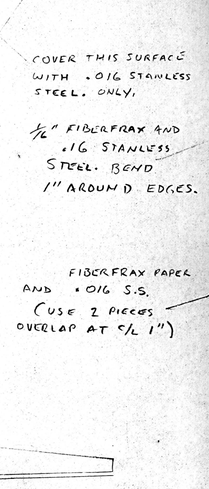


INTAKE MANIFOLD





THE SPOILER LEVER ON THE LEFT HAND SIDE MUST GO AFT. PAST THE FIREWALL FOR FULL TRAVEL. AT ASSEMBLY, LOCATE THE POINT OF INTERFERENCE. CUT A 3" SQUARE HOLE IN THE FIREWALL. MAKE THE "BOX" SHOWN FULL SIZE, LEFT, BY CUTTING ON THE SOLID LINES AND FOLDING ON THE DOTTED LINES. POP RIVIT BOX TOGETHER AND TO THE FIREWALL.



FIREWALL
SCALE 1/4

WINDROSE. SHEET E-4
FIREWALL.
INTAKE MANIFOLD.
EXAUST MANIFOLD
MUFFLER INSTALATION

3.70"

℄
PLAN VIEW

7/8" HOLES IN 1/4" 6061 T6
MOUNTING PLATES
ROUND OFF EDGES OF HOLES
SEE END VIEW

TAIL BOOM SIDE VIEW
BOTTOM OF BOOM

SAFETY WIRE
4 BOLTS

3/16" BOLTS 12 PLACES

1/2" ODX.035" WALL 4130 TUBE
OVER MOUNT BOLTS
2.05" LONG

AN3-10A BOLTS
AN 970-3 WASHERS
AN 365-1032 NUTS
22 PLACES

INSIDE STIFFNER
PYLON AFT SIDE

1.5"X1"X.125"
6061-T6 ALUM
ANGLE

5.71"

3/16" BOLTS 16 places ?

GUSSET .125"
6061-T6

see this → 13.4"

SAFETY PLATES
2 REQ .125" 6061 T6

1.8" LONG. ?

℄ BOLT

TORQUE
130. IN LBS.

SIDE VIEW

ENGIN

℄ BOLTS

℄ BOLTS

1" LONG ?

SEC. THROGH CENTR
OF BOLT

ENGIN
LOKING FORWARD
END VIEW

℄ PROP SHAFT

WINDROSE
SHEET E-5
ROTAX 447
ENGINE MOUNT
OCT 1986