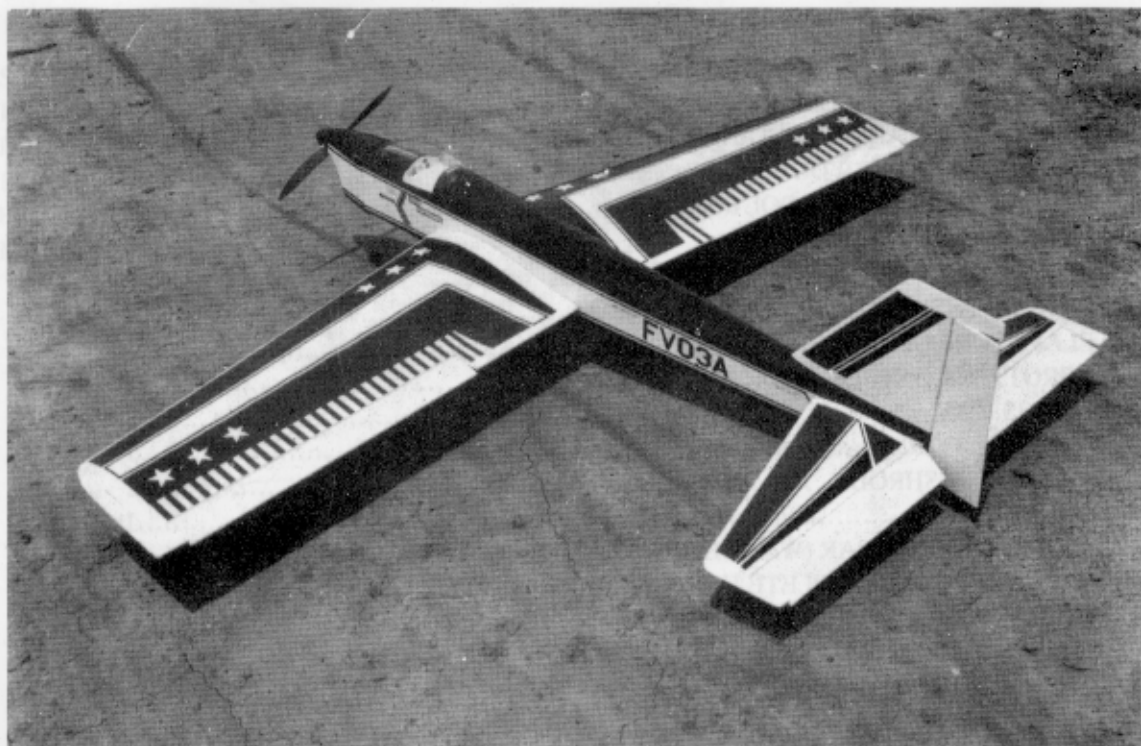


ALMOST READY TO FLY  
R/C SPORT PATTERN

# AVENGER



## ASSEMBLY GUIDE

### SPECIFICATION

WING SPAN:	67 IN/ 170 CM
WING AREA:	740 SQIN
LENGTH:	54 IN/ 140 CM
WEIGHT:	61/21 71/2 LBS/ 31 3,5 KG
RADIO:	4 CHANNELS 5 SERVOS
ENGINE:	53 - 90 2 CYCLES 60 90 4 CYCLES

# BILL OF MATERIAL

## WING

RIGHT WING ( W/PRE-ASSEMBLED TIP, AILERON, SERVO MOUNT, AND PRE-INSTALLED AILERON EXTENTION ).....	1
LEFT WING ( W/PRE-ASSEMBLED TIP, AILERON, SERVO MOUNT, AND PRE-INSTALLED AILERON EXTENTION ).....	1
ALUMINUM WING JOINER TUBE.....	1

## FUSELAGE

FUSELAGE (WITH HATCH).....	1
COWLING.....	1
ENGINE MOUNT( BOLTS AND CLAMPS SUPPLIED).....	1

## TAIL

SET OF STABILIZER ( W/PRE-ASSMBLED ELEVATOR).....	1
FIN( W/PRE-ASSEMBLED RUDDER).....	1
ALUMINUM STABILIZER JOINER TUBE.....	1
STABILIZER JOINER DOWEL.....	2
STABILIZER SECURITY BOLT SET.....	2

## HARDWARE

RUDDER PUSHROD (PRE-INSTALLED).....	1
ELEVATOR PUSHROD (PRE-INSTALLED).....	1
THROTTLE CONTROL ROD.....	1
CLEVIS.....	7
CONTROL HORN.....	5
AILERON PUSHROD.....	2
SPINNER.....	1
MAIN LANDING GEAR (W/COMPLETE HARDWARE).....	1 SET
TAIL WHEEL (W/COMPLETE HARDWARE).....	1 SET
FUEL TANK (COMPLETED HARDWARE W/O FUEL LINE).....	1
WHEEL.....	2

## MICELLANEOUS

PLASTIC WING BOLT.....	4
PLASTIC HATCH BOLT.....	2
SPARE COVERING MATCHING COLOR SHEET.....	1
EZ CONNECTOR.....	3
INSTRUCTION MANUAL.....	1
12"AILERON EXTENTION WIRE.....	2
AILERON Y - CONNECTOR.....	1
FUTABA TO JR OR HITECH CONVERSION WIRE.....	1
AILERON SERVO COVER.....	2

## REMARK

MOST HARDWARE PARTS ARE ALREADY INSTALLED BY FACTORY.

## **PRE-ASSEMBLY INFORMATION**

YOUR AVENGER HAS BEEN CONSTRUCTED, ALIGNED, AND COVERED. ALL THAT REMAIN FOR YOU TO DO IS TO FOLLOW THE ASSEMBLY INSTRUCTION PROVIDED IN THIS MANUAL. PLEASE READ MANUAL SEVERAL TIMES BEFORE STARTING ACTUAL ASSEMBLY TO FAMILIAZE YOURSELF WITH THE PROCEDURE. YOU WILL NEED THE FOLLOWING ITEMS TO COMPLETE THIS MODEL.

### **EQUIPMENT :**

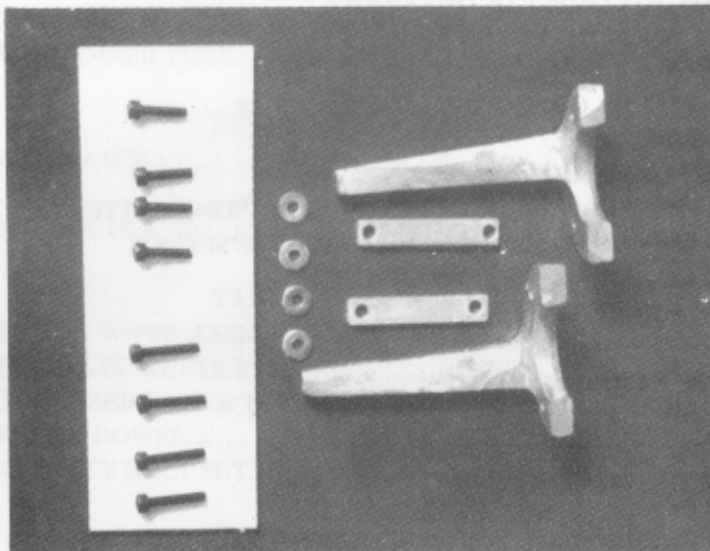
ENGINE: 53 - 90 2 CYCLES OR EQUIVALENT 4 CYCLES  
SUITABLE PROPELLER  
SILICONE TUBING FOR FUEL TANK  
RUBBER SPONGE FOR WRAPPING RECEIVER AND AIRBONE BATTERY.  
RADIO SYSTEM: MINIMUM FOUR CHANNELS AND FIVE SERVOS

### **TOOLS AND MATERIAL:**

SCREWDRIVER SET  
HEX ( ALLEN ) SCREWDRIVER SET  
DRILL AND DRILLBIT  
PLIERS SET  
EPOXY GLUE( 5 OR 15 MIN )  
MASKING TAPE.

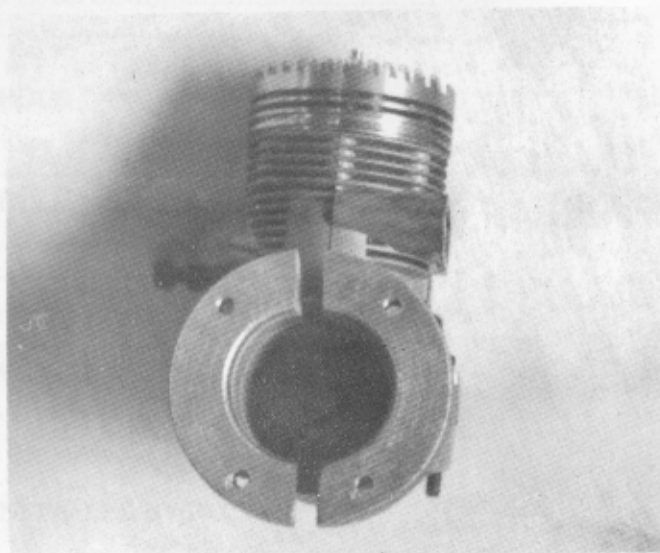
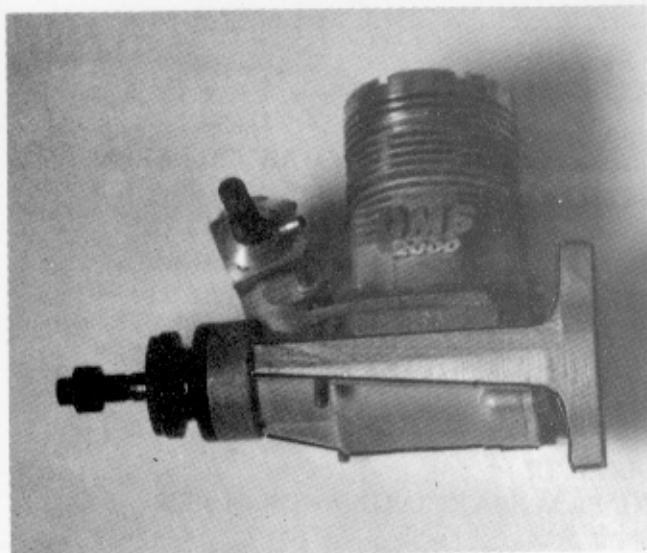
## MOUNTING THE ENGINE

YOUR ALUMINUM DIE CASTING ENGINE MOUNT( SUPPLIED ) HAS TWO PIECES (LEFT SIDE AND RIGHT SIDE ) , 2 CLAMPS , 8 BOLTS AND 4 WASHERS.



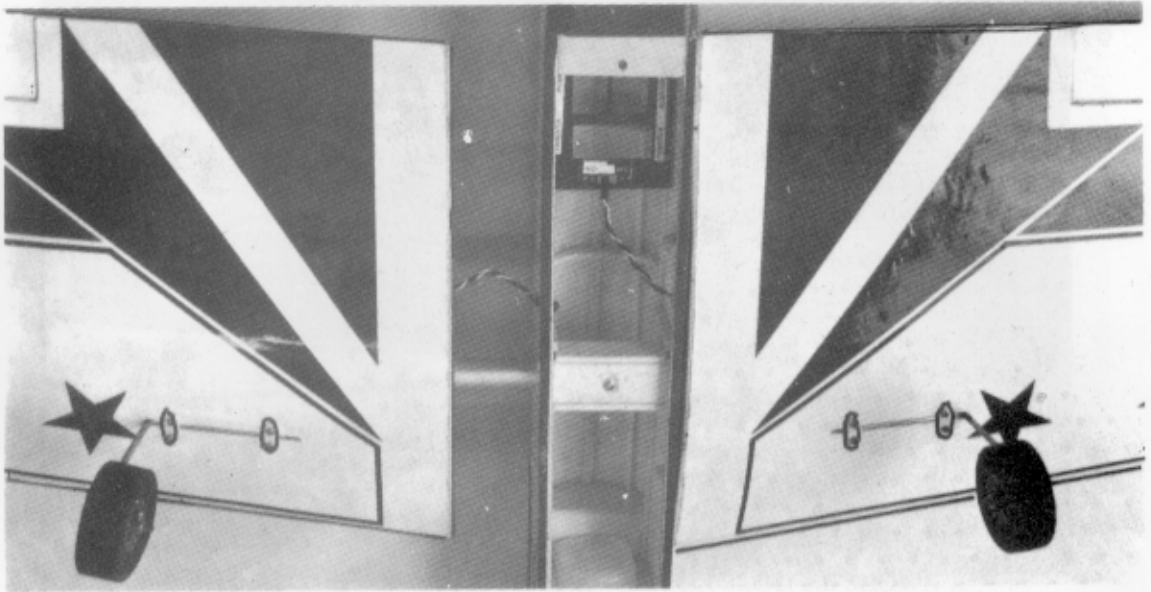
MOUNT YOUR ENGINE TO THE ENGINE MOUNT FIRST. USE A PIECE OF PAPER AND A PENCIL TO MARK THE POSITION OF 4 HOLES AT THE BACK OF THE ENGINE MOUNT. THIS PIECE OF PAPER WILL HELP YOU EASILY DRILL 4 HOLES ON THE FIRE WALL OF THE FUSELAGE TO MOUNT THE ENGINE TO YOUR DESIRED POSITION.

CUT THE COWLING TO FIT YOUR ENGINE , AND MOUNT IT TO THE FUSELAGE.



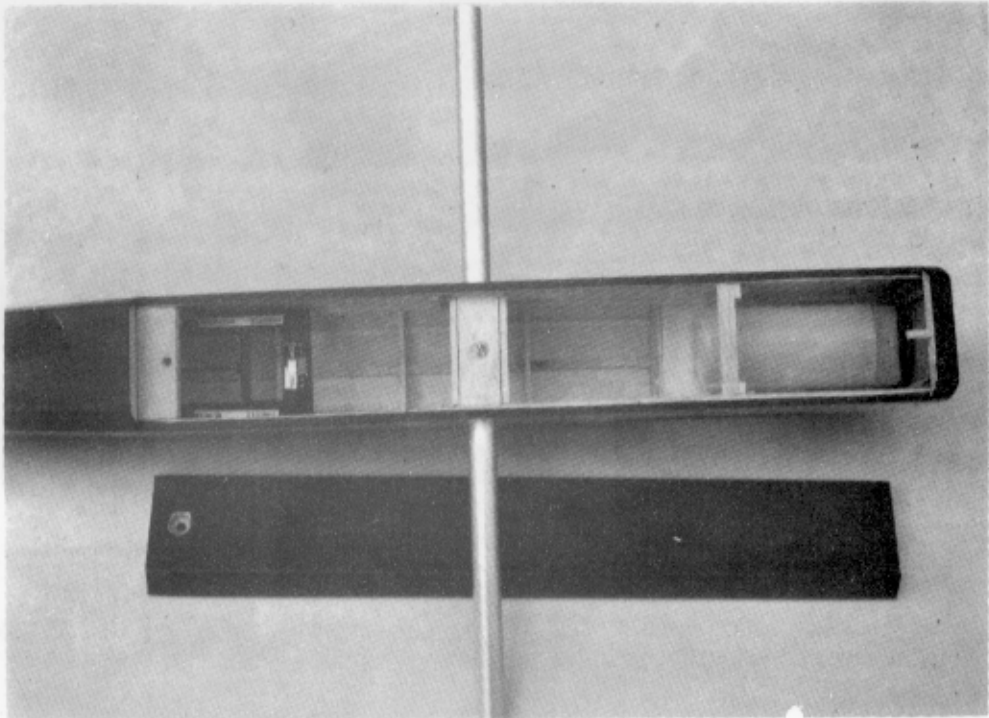
## MAIN LANDING GEAR ASSEMBLY

TURN THE WING PANNEL OVER, INSTALL THE LANDING GEAR INPLACE ( AS SHOWN ). USE 8 SCREWS SUPPLIED TO MOUNT THE RETAINING BRACKETS IN PLACES

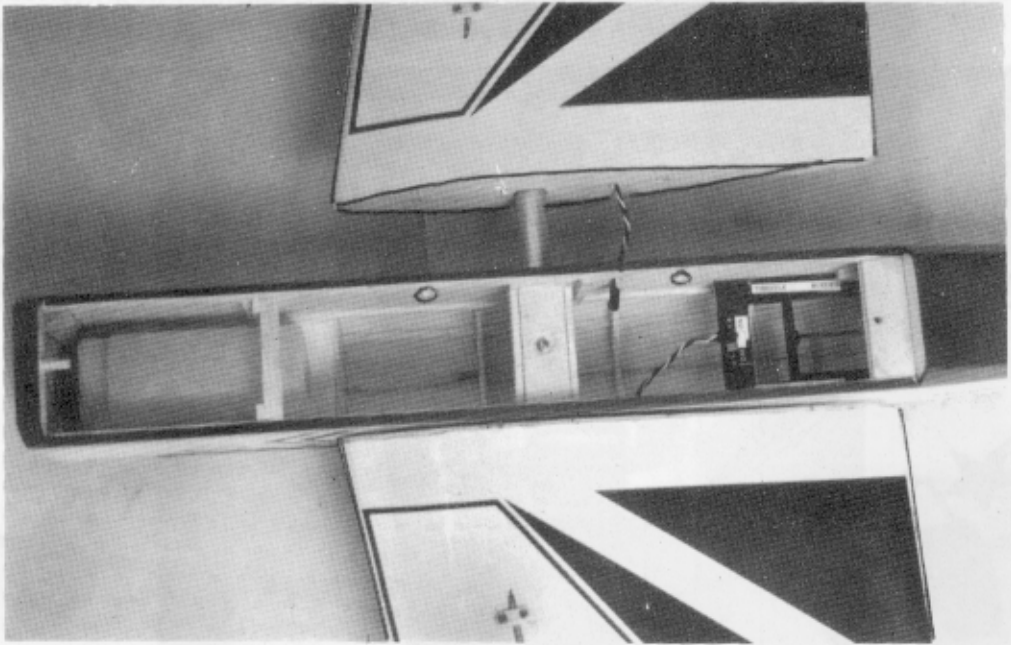


## MOUNTING THE WING

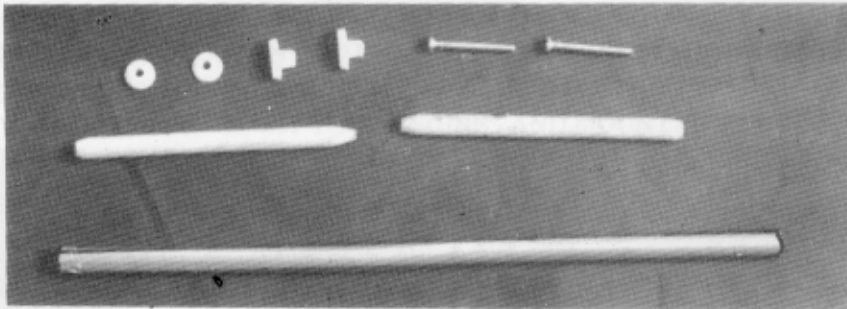
INSERT THE ALUMINUM WING JOINER TUBE THROUGH THE FUSELAGE AND SCREW IT TO THE POSITION ( AS SHOWN ).



INSERT THE LEFT AND RIGHT WING PANNEL TO THEIR PLACES. USE THE PLASTIC BOLTS SUPPLIED TO MOUNT THE WING TO THE FUSELAGE ( AS SHOWN ).

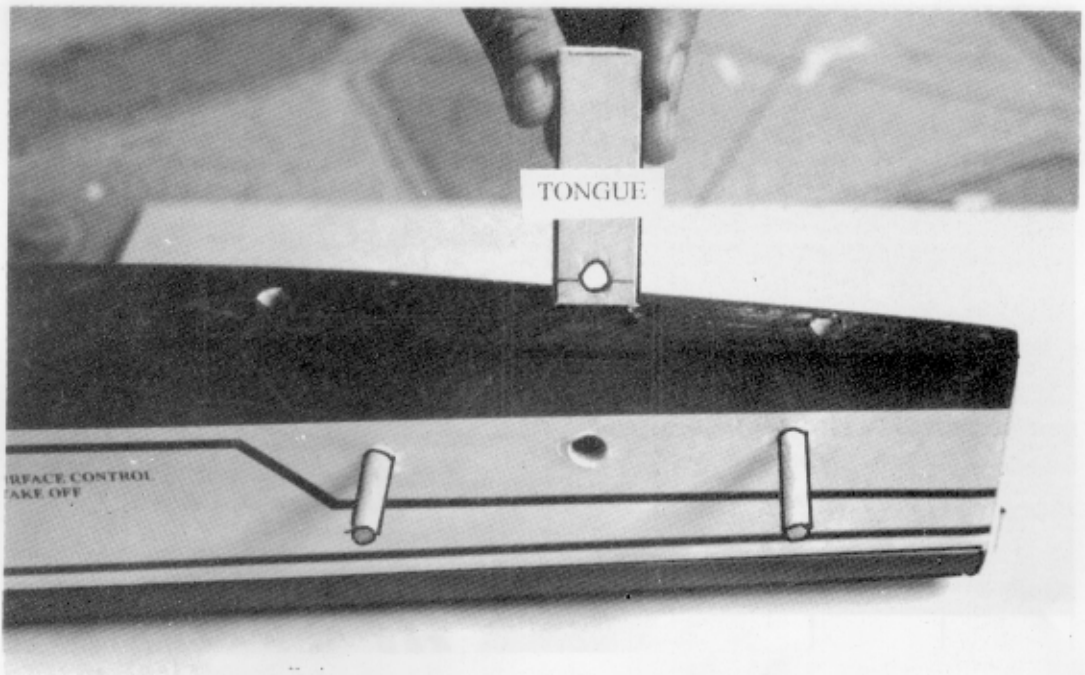


**HORIZONTAL STAB WITH ELEVATOR AND  
VERTICAL FIN WITH RUDDER**

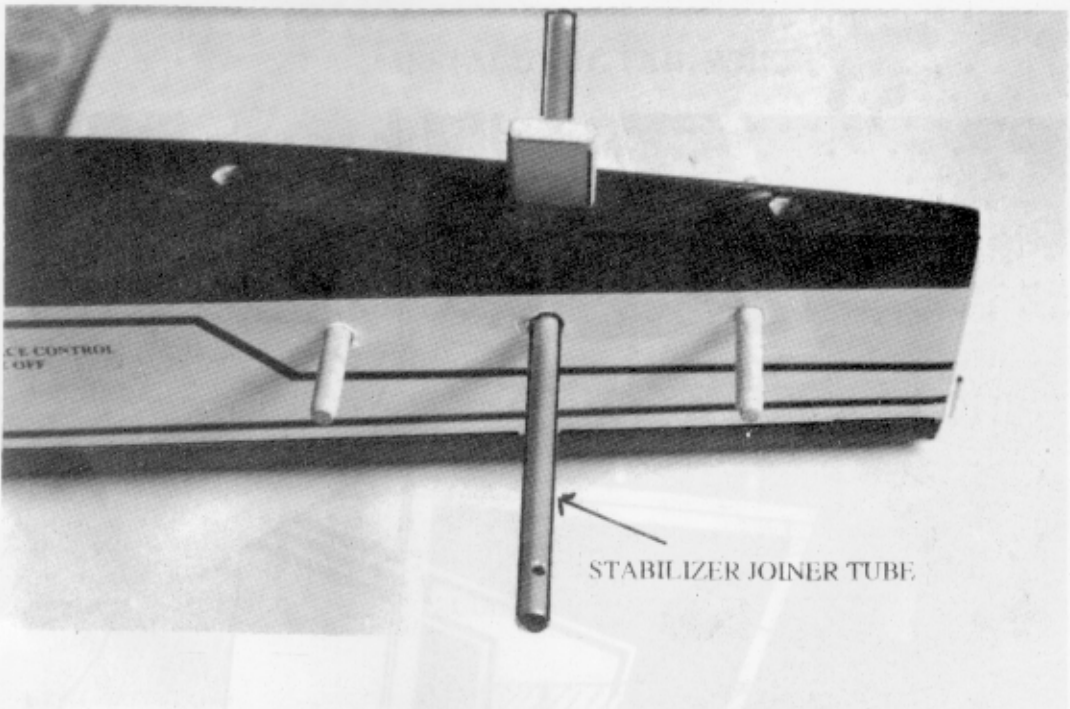


INSERT TWO DOWELS INTO THE FUSELAGE, MAKE SURE THEY ARE PARALLEL TO THE WING BEFORE EPOXY THEM.

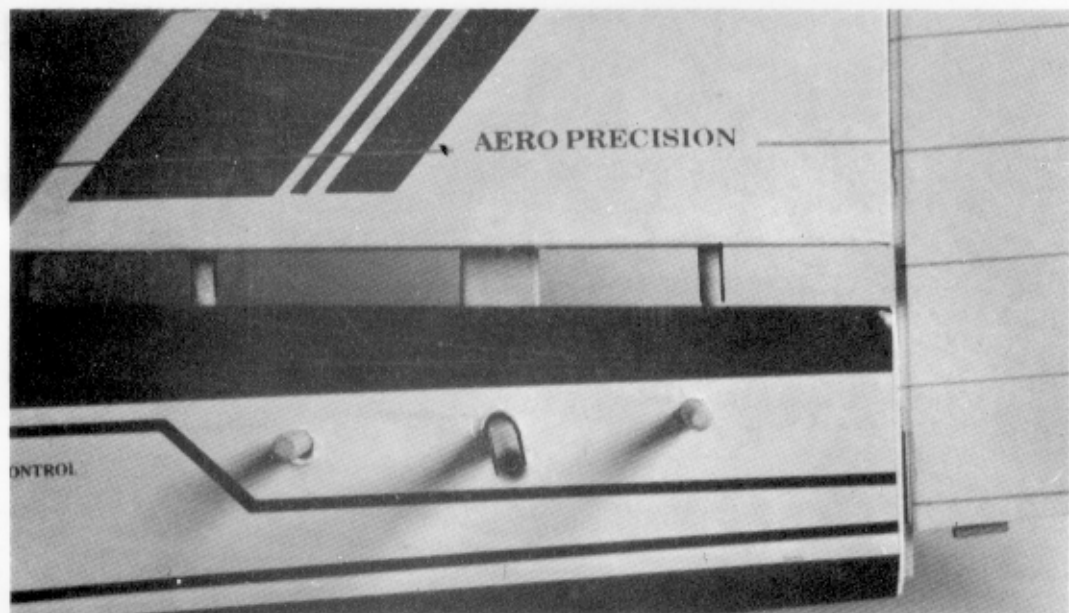




INSERT THE TONGUE INTO THE RUDDER SLOT ( AS SHOWN ).

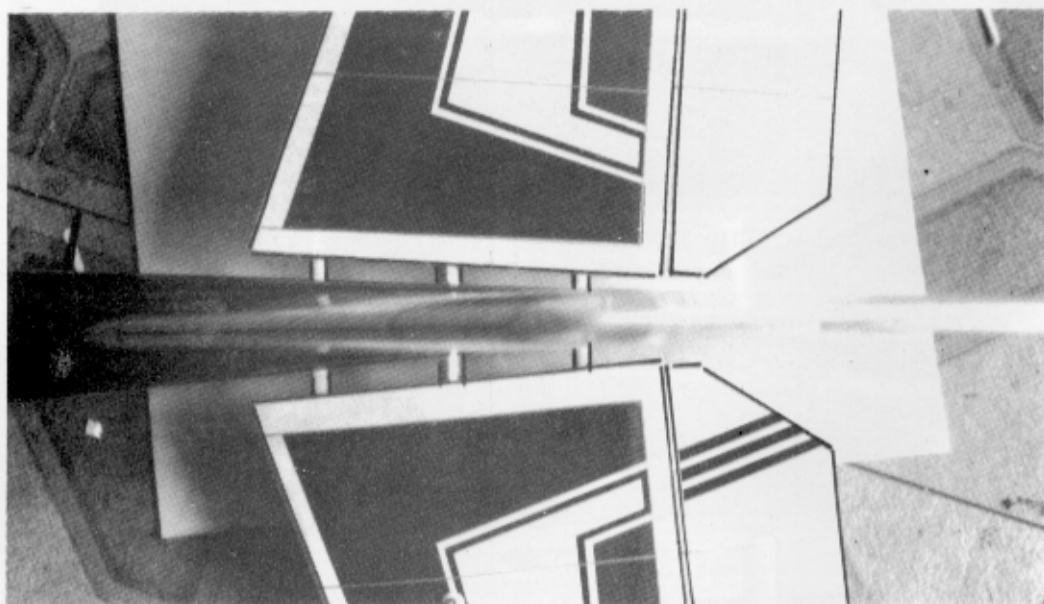


INSERT THE STABILIZER ALUMINUM TUBE THROUGH THE HOLE TO KEEP THE TONGUE IN PLACE ( AS SHOWN ).



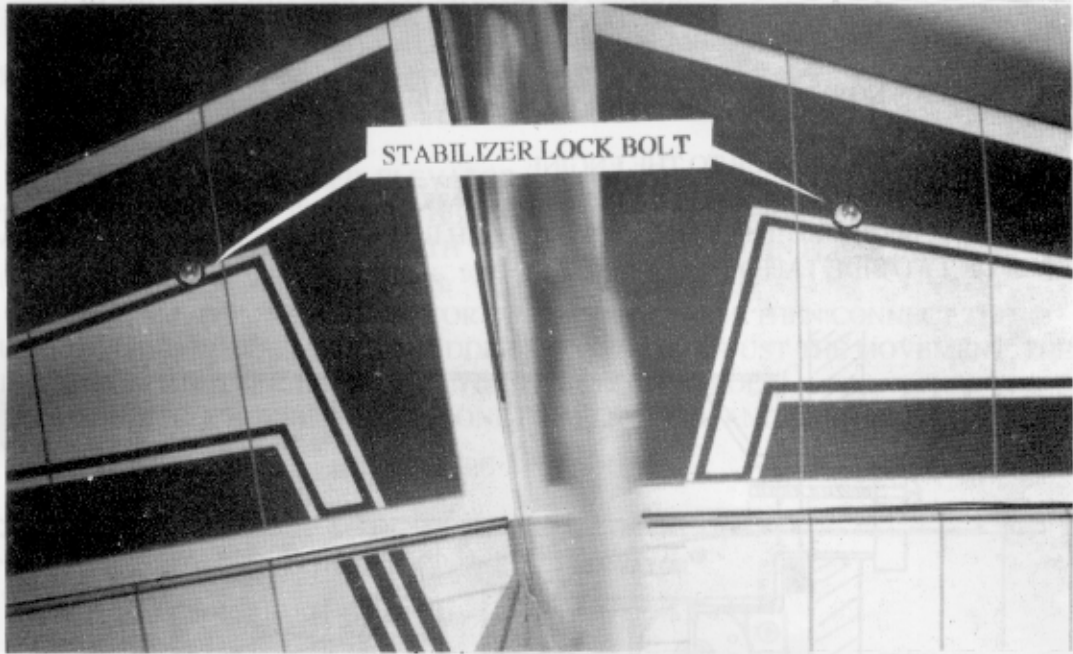
NOW INSTALL THE FIN WITH DOWEL ASSEMBLED BY FACTORY. PUT A LITTLE BIT EPOXY ON THE TOP OF THE TONGUE AND PRESS THE FIN DOWN FIRMLY . REMEMBER TO MAKE SURE THE PIN ON THE RUDDER SHOULD GET INTO THE TUBE GUIDE ( AS SHOWN ).

VERTICAL FIN WITH RUDDER



INSERT BOTH PANNELS OF STABILIZER TO THE FUSELAGE AS SHOWN.



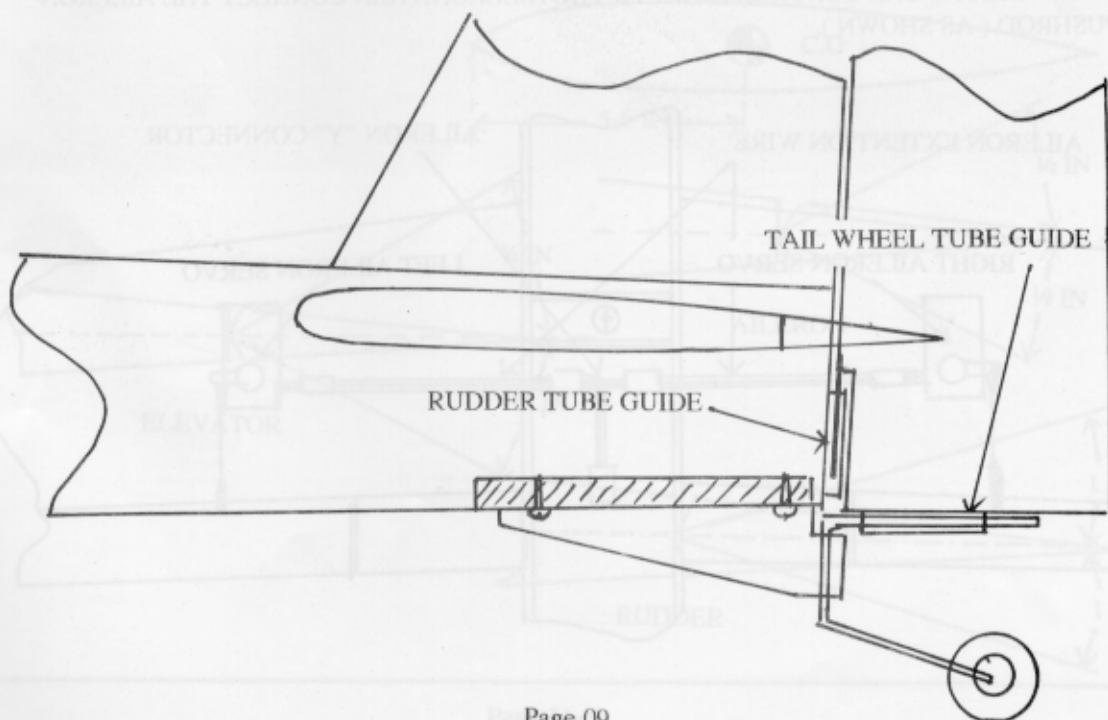


STABILIZER LOCK BOLT

SECURE STABILIZER BY TWO BOLTS ( AS SHOWN ).

### INSTALL THE TAIL WHEEL

INSERT THE TAIL WHEEL INTO THE TUBE GUIDE, THEN SCREW IT TO THE FUSELAGE ( AS SHOWN ).

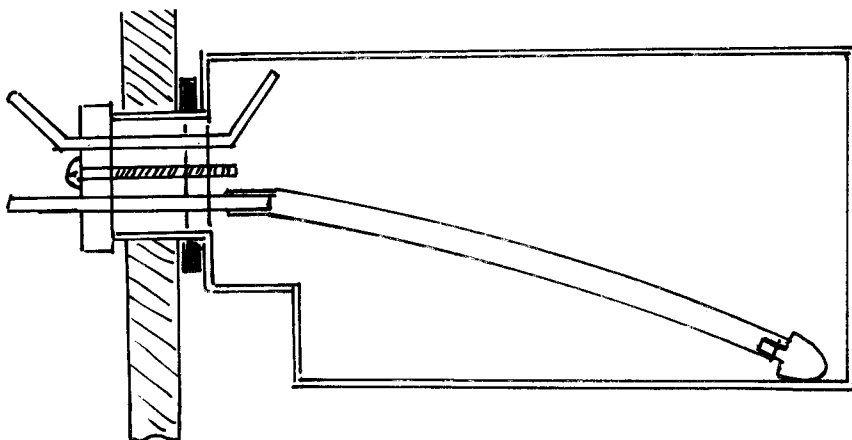


## FUEL TANK ASSEMBLY

YOU CAN NOW MAKE THE FUEL TANK ASSEMBLY. WE PREFER THE "Z-LINE" SYSTEM:

1. THE FUEL PICK-UP TO THE ENGINE.
2. THE OVERFLOW MUFFLER PRESSURE LINE.

( WE SUGGEST SECURING THE TANK IN PLACE WITH EITHER SILICONE, ADHESIVE FOAM RUBBER OR TWO SIDE TAPE.)

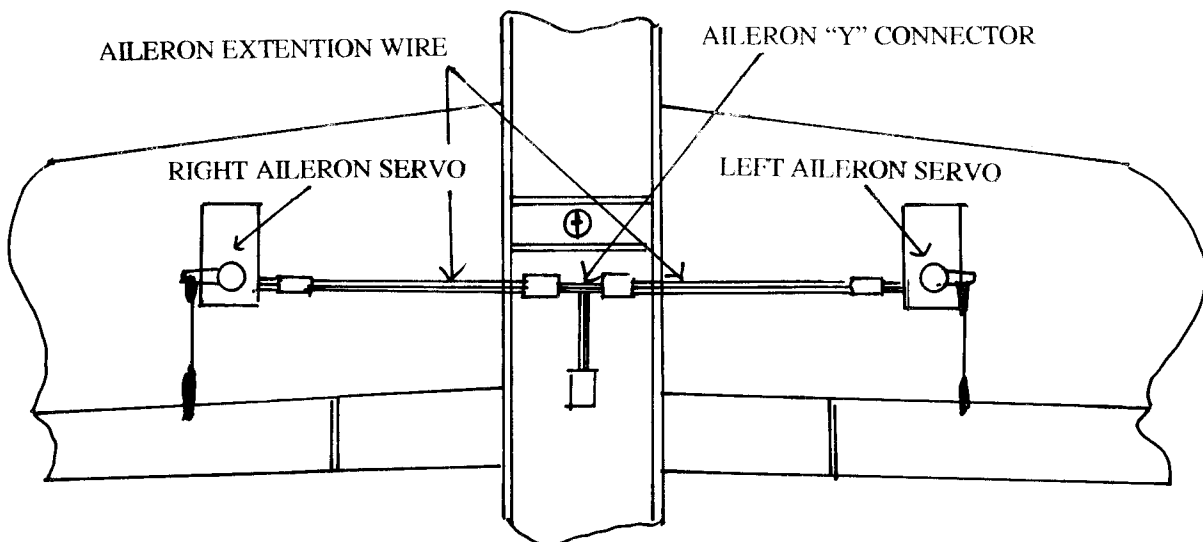


## INSTALL THE SERVOS

### AILERON SERVOS

AILERON SERVO POSITIONS ARE IN BOTH SIDES OF THE WING. CONNECT THE SERVO CONNECTOR TO THE SERVO EXTENSION WIRE ( PRE-INSTALLED BY FACTORY ). PUT THE SERVOS INTO THEIR PLACES , THEN MOUNT THEM BY SERVO SCREWS. ( AS SHOWN ).

MOUNT THE CONTROL HORN TO THE AILERON, THEN CONNECT THE AILERON PUSHROD ( AS SHOWN ).



## RUDDER, ELEVATOR AND THROTTLE SERVOS

RUDDER, ELEVATOR AND THROTTLE SERVOS ARE MOUNTED TO THE "SERVO MOUNT" INSTALLED INSIDE THE FUSELAGE. ( AS SHOWN)

UNSCREW THE TWO SCREWS THEN SLIDE THE SERVO MOUNT FORWARD IN ORDER TO REMOVE IT.

INSTALL THE RUDDER, ELEVATOR AND THROTTLE SERVOS. LABELS ARE STUCK ON THE SERVO MOUNT TO SHOW THE LOCATION OF EACH SERVO.

PUT THE SERVO MOUNT WITH THREE SERVOS FITTED IN PLACE IN THE FUSELAGE, HOLD IT WITH 2 SCREWS.

INSTALL THE "EZ" CONNECTOR TO THE SERVO ARM. THEN CONNECT THE PUSHRODS AND RUDDER TO THE RUDDER SERVO ARM. ADJUST THE MOVEMENT, THEN TIGHTEN THE BOLT ON "EZ" CONNECTOR TO HOLD CONTROL.

SAME PROCEDURE WILL BE DONE FOR ELEVATOR AND THROTTLE CONTROL SYSTEMS.

