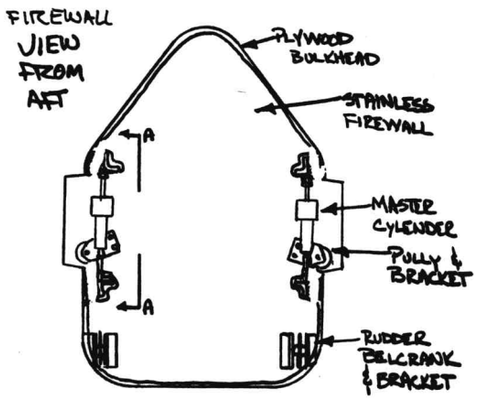
CHAPTER 15

FIREWALL AND ACCESSORIES

OVERVIEW: In this chapter you will install the stainless steel firewall over the plywood firewall bulkhead and Fiberfrax insulation. The rudder pully brackets, and rudder/brake belcrank brackets, are installed over the stainless firewall. To avoid chafing of the stainless on the bulkhead, a bead of silicone rubber sealant is run around the perimeter of the stainless between it and the Fiberfrax The brake master cylinders are located and temporarily installed. This chapter involves about eight hours work. CS 15, CS 72, BA, CS 75 and CS 71 Are available prefab.

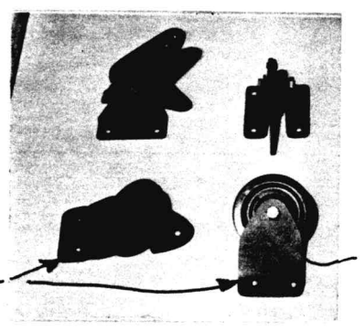


SEE VIEW A-A ON FOLLOWING PAGE

STEP 1

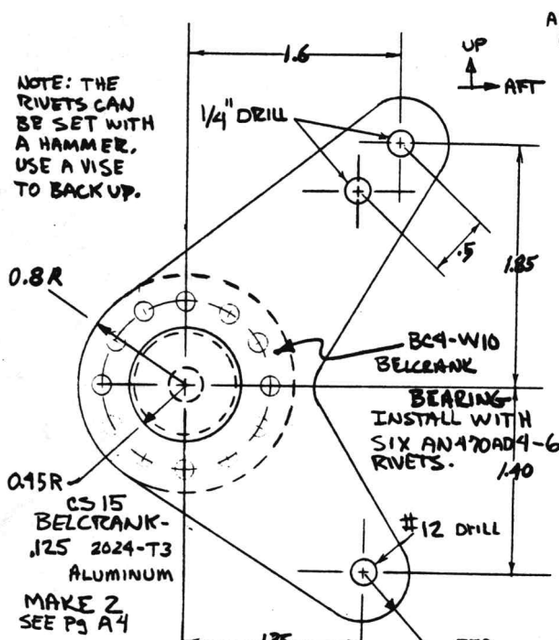
INSTALLING THE STAINLESS FIREWALL

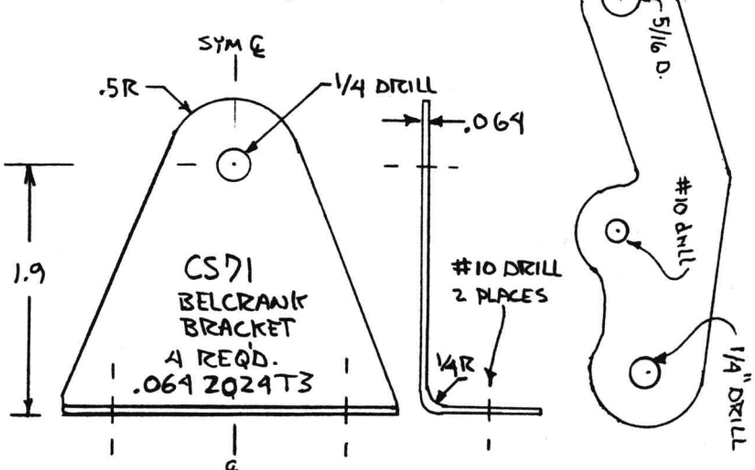
Trial fit the stainless firewall to your fuselage bulkhead, over the extrusions and six screw studs installed earlier. Trim as required. Fabricate the rudder pully brackets and belcrank brackets shown BELOW. Squeeze a 1/8-dia bead of silicone rubber sealant (bathtub caulk) onto the forward face of the stainless about one inch from the edge, all around. Push the stainless back into position on the fuselage and bolt the rudder pully brackets in position as shown on page A4 Use spring clamps to hold the top and bottom in position while the rubber cures (allow two days cure). If one of the blind screws turns during assembly, slot its end and use a screw driver to hold it while tightening the nuts.



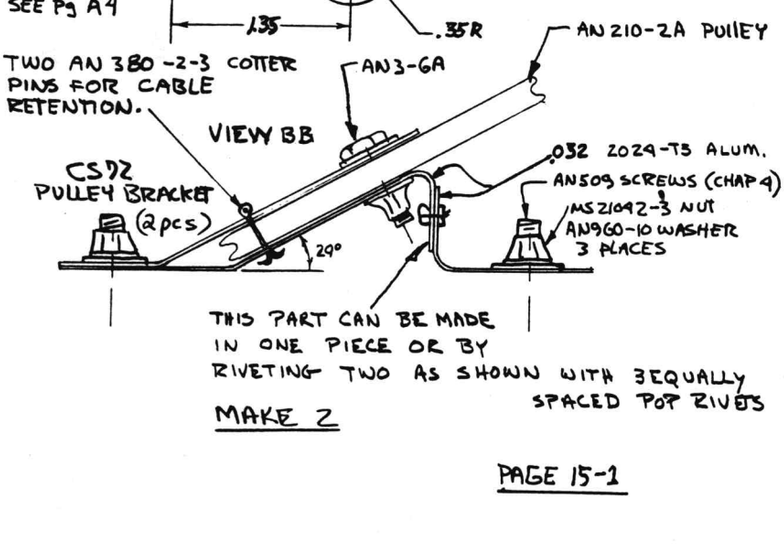
RUDDER PULLY AND BELLCRANK ASSEMBLIES

ALL DRAWINGS BELOW ARE FULL SIZE

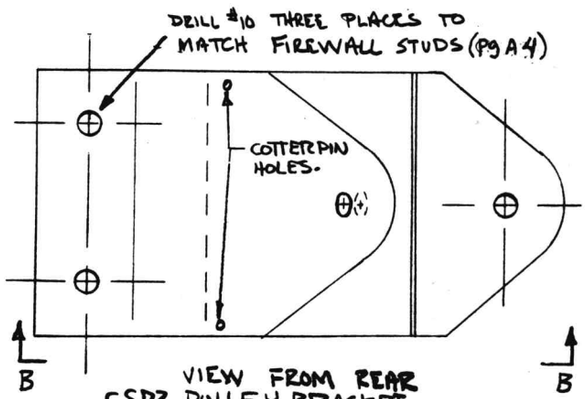




see pg A4.



MAKE 2



VIEW FROM REAR
CS72 PULLEY BRACKET
TWO REQ'D.

NOTE: THE THREE #10 HOLES IN THE RUDDER PULLY BRACKETS MATCH THE SCREWS IN THE FIREWALL

STEP 2

INSTALLING THE BELCRANK BRACKETS

Assemble the rudder/brake belcranks and their brackets. Position the assembly on the firewall with the belcrank OFFSET FROM the rudder cable slot in the firewall (as shown on page A4). Drill through the stainless, asbestos and plywood with a #10 drill as shown.

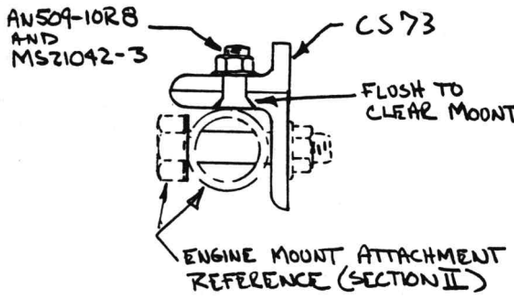
The inboard holes enter into the baggage compartment. Install AN3-6A bolts and MS21042-3 nuts using AN960-10 washers against the plywood inside the baggage compartment. To put nuts on the outboard side, it is necessary to grind a hole through the outside fuselage skin (use your dremel) and dig out some foam. These holes are filled flush with dry micro after installation of the nuts and washers.

STEP 3

INSTALLING THE BRAKE MASTER CYLINDERS

The aircraft is designed for cleveland or Gerdes reservour-type brake master cylinders, available from distributors. The brake master cylinders are positioned vertically between the upper and lower engine mount attach fittings as shown. Since the lengths of various master cylinders are different, you need to vary the height of the lower master cylinder mount angle to attain the correct position of the top actuating arm shown.

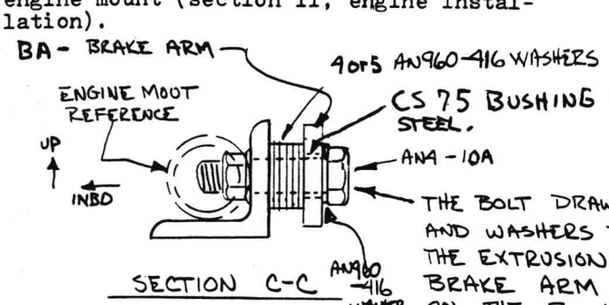
Make two CS73 brackets, one right-hand, one, left. Clamp the lower brackets into position and drill as shown. Counter-sink the lower side for a flush AN509 screw as shown. This will prevent interference with the engine mount which is installed in section II. Install the brackets with AN509-10R-8 screws. Another bolt through the bracket will be installed later with the engine mount.



SECTION B-B

LOOKING AFT AT LEFT LOWER.

Install the upper brake arm as shown using CS75 so the arm is free to move, even though the 1/4" bolt is tight. This bolt is later replaced with a longer one that bolts through the welded steel engine mount (section II, engine installation).



SECTION C-C

LOOKING AFT