

Additional material from Stewart 51

Last revised 7/1/99

Appendix A: Additional drawings

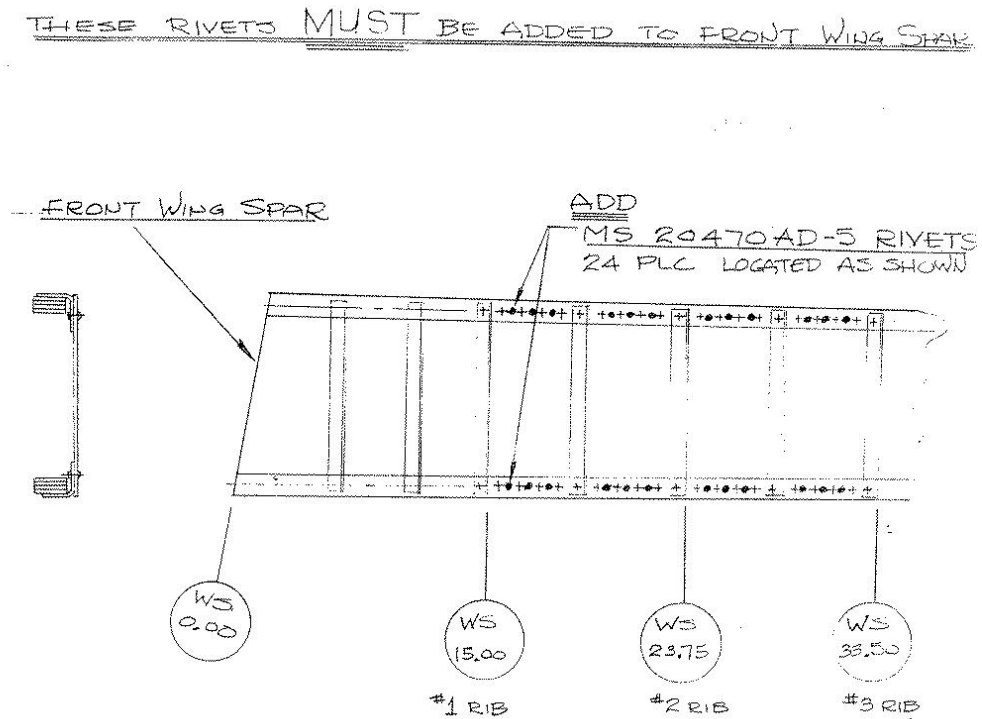


Figure A.1 This spar mod may be accomplished with AN3 bolts, if necessary.

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3120 AIRPORT WEST DRIVE
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INSTALLATION- FLAP & AILERON

8-17-95

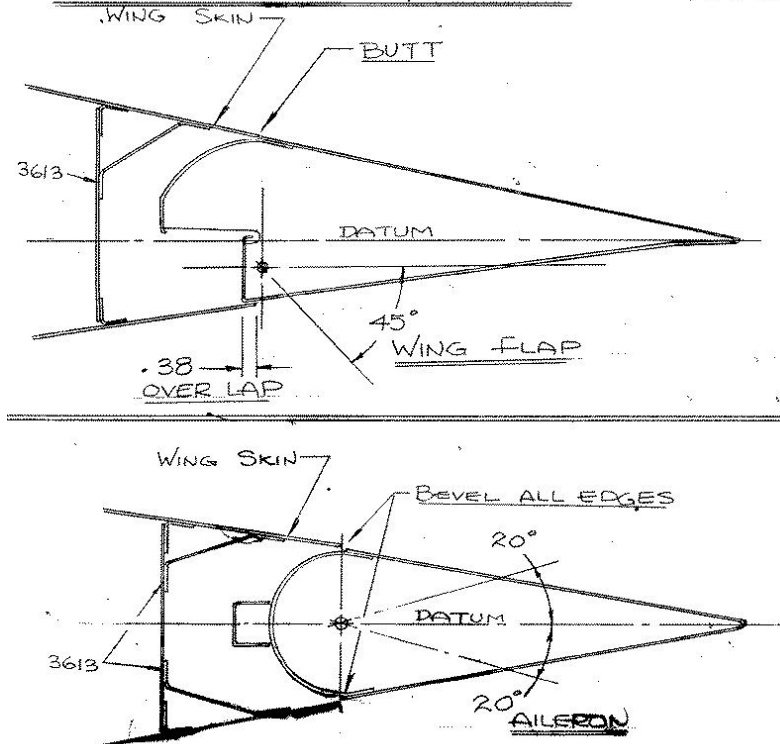


Figure A.2 How to trim the trailing edge of the wing skins.

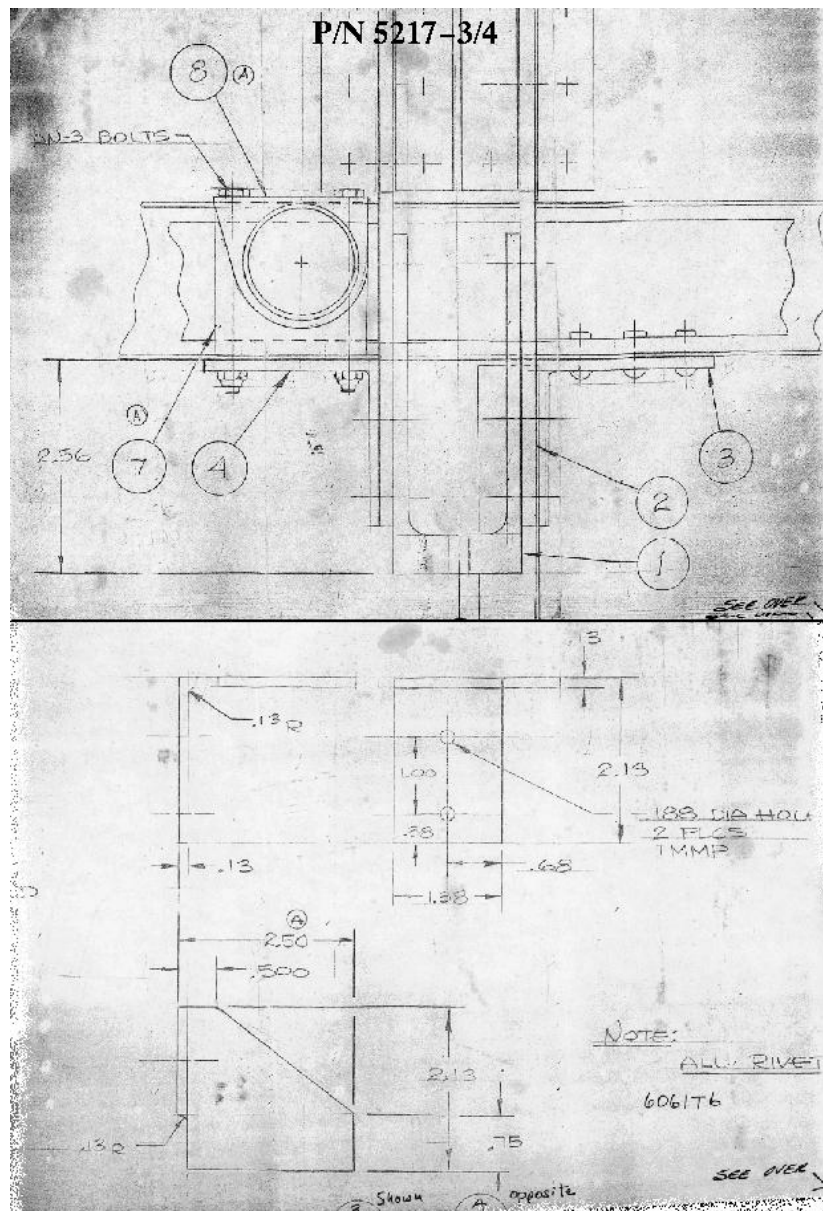
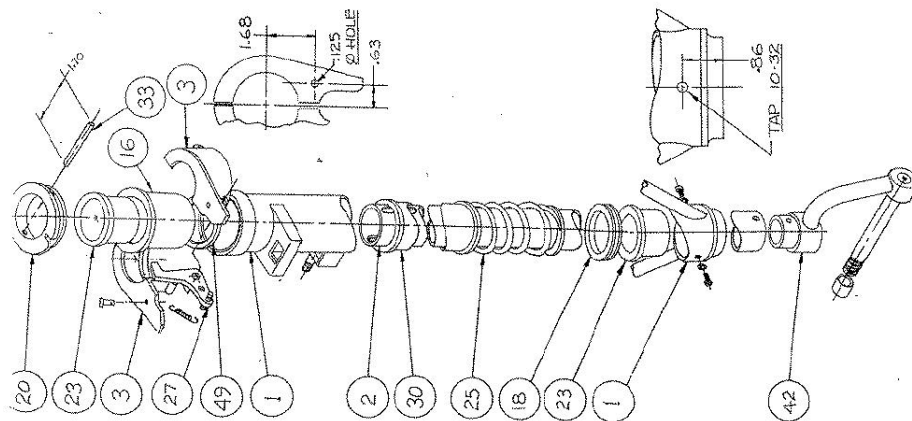


Figure A.4 The anti-sway brackets (p/n 5217-3/4) for the aft wing attach fittings.



TAIL WHEEL STRUT ASSEMBLY

PREPARATION:

1. De-burr all parts and round sharp edges.
2. Drill and tap two #10-32 holes at bottom of strut -1, 180 degrees apart and .86" up from bottom of strut (See sketch).
3. Drill two .125" diameter holes in -3 (See sketch).
4. Steering clamp -3 must be free to rotate when assembled in place. To insure this, spray paint or layout dye, on inside of -3. Loosely assemble -3 in place on -1. Rotate to locate any high spots. Remove high spots until -3 rotates smoothly when BOLTED in place on -1.
5. Make -33 pin by cutting head and thread from close tolerance 5/16 bolt. -33 should be 1.70" long. Check for close but free fit in -2 piston.
6. Install -23 bushing in -1, be sure it is bottomed.
7. Next install -18 being sure it is bottomed AND free to rotate.
8. Install two #10 screws in -1 to engage -18 WITHOUT locking it.
9. Lock wire or lock washer the #10 screws.

ASSEMBLY:

1. Use a good general purpose grease when assembling.
2. Stack -25 spring, -30 spacer, -49 teflon washer, -16 bushing, -23 bushing and -20 guide on -2 piston. To do this, you will need to make a ring which is about .5" long, seats on -20 and allows -2 piston to pass through, as you compress -25 spring.

CAUTION !!

3. You will need a fixture that exerts about 100 pounds of force, to compress the spring.
BE VERY CAREFUL TO CONTAIN THIS ASSEMBLY. prior to installing -33 pin. If the assembly were to slip or dislodge in any way, **SERIOUS** injury could result.
4. CAREFULLY, align the slot in -2 piston with the hole in -20 guide and install -33 pin.
5. CAREFULLY, remove fixture pressure from the assembly, allowing -33 pin to assume the spring pressure.
6. This assembly can now be greased and lowered into -1 strut. Some pressure will be required to install -3 clamp.
7. Align the slot in -3 clamp with the slot in -20 guide. Place -27 lock in its slot and install AN-4 bolts.
8. Place two .125 diameter clavis pins in the holes in -3 clamp and install -26 springs.
9. Press -42 tail wheel fork, into -2 piston, **BE SURE TO ALIGN** axle 90 degrees to steering lock slot in -3, then drill .250 diameter and install AN4 bolt.
10. When installing wheel on axle, a spacer tube will be required to prevent the tire from contacting -42 fork.
11. The axle will require some reduction in diameter, to slide the wheel in place. Secure wheel with washer, nut and cotter pin.

Figure A.5 Assembly of the tail strut.

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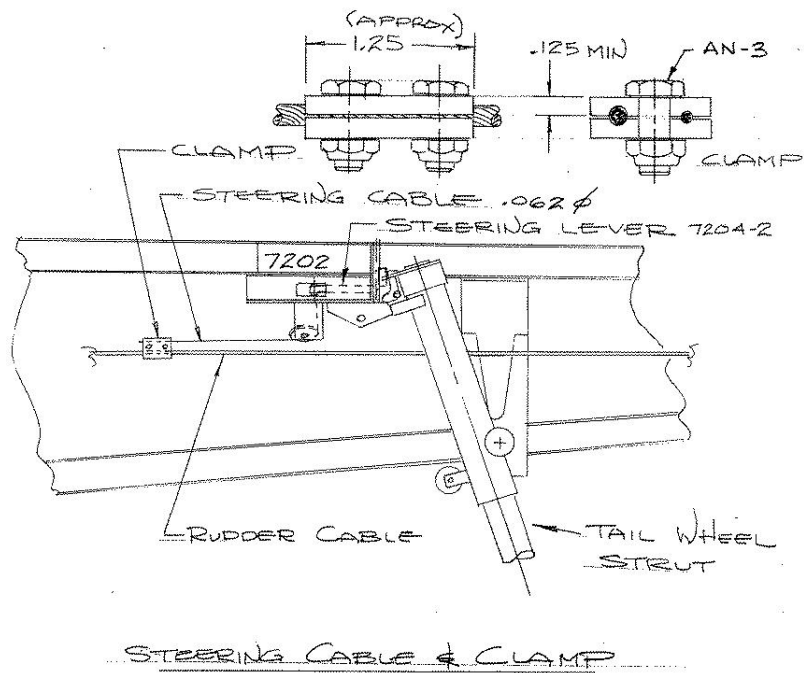


Figure A.6 Sketch for fabrication of steering cable clamps.

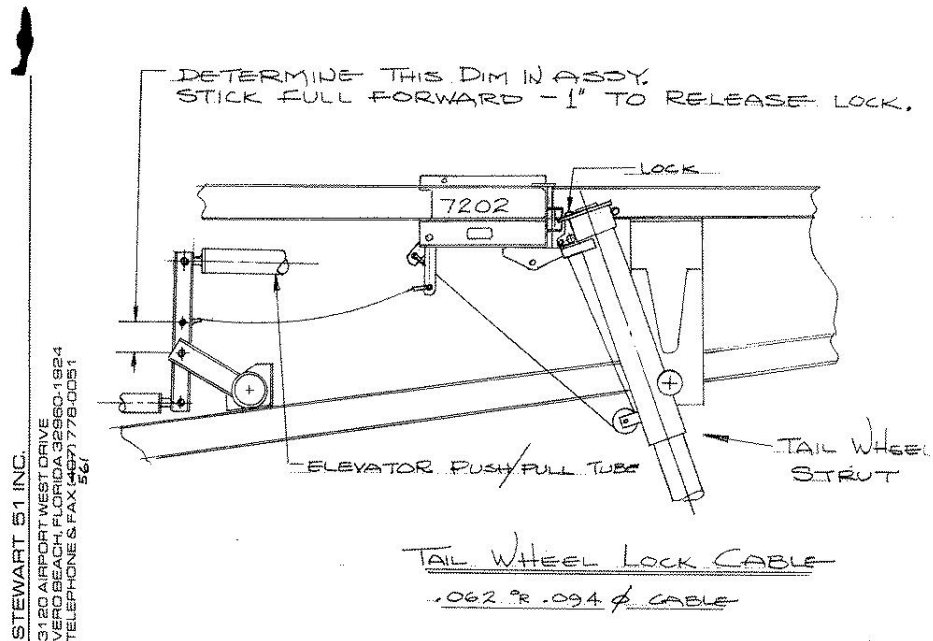


Figure A.7 Sketch for fabrication of tailwheel unlock cable.

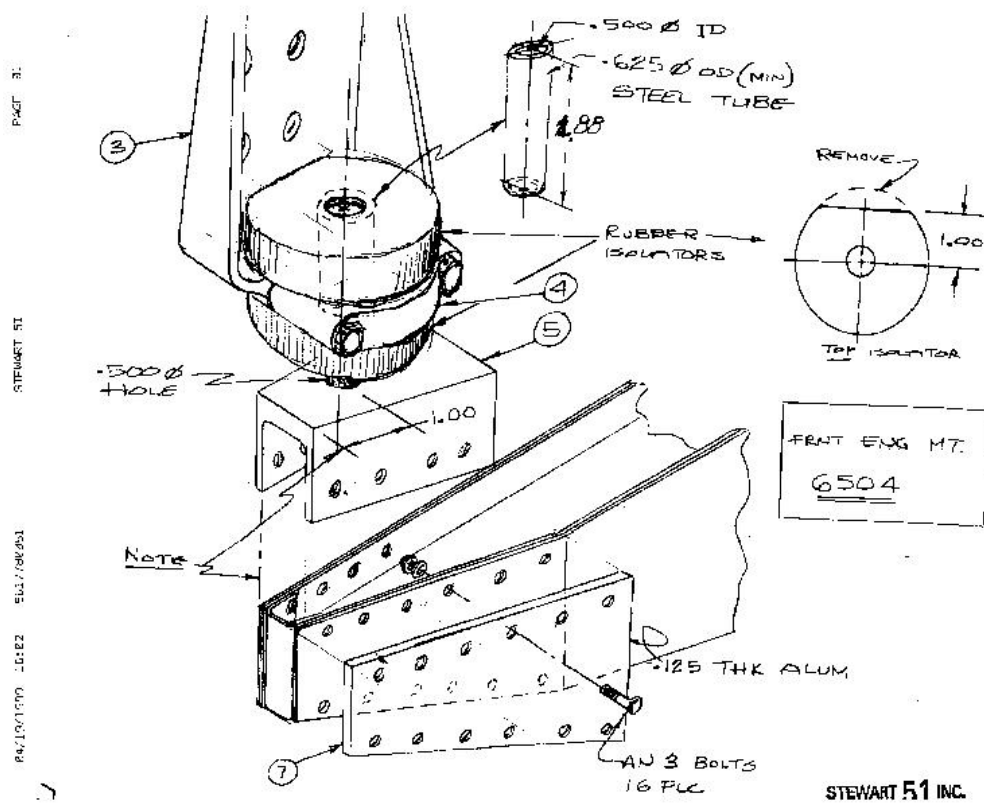
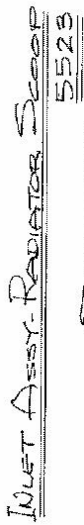
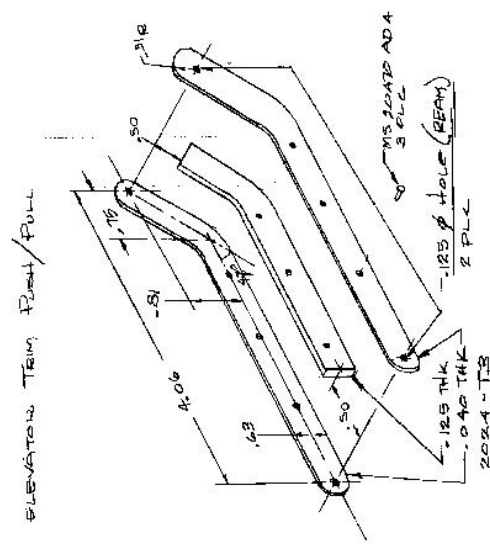


Figure A.8 Sketch showing installation of lord mounts on the bed.



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 ELEVATOR TRIM TAB INSTALLATION

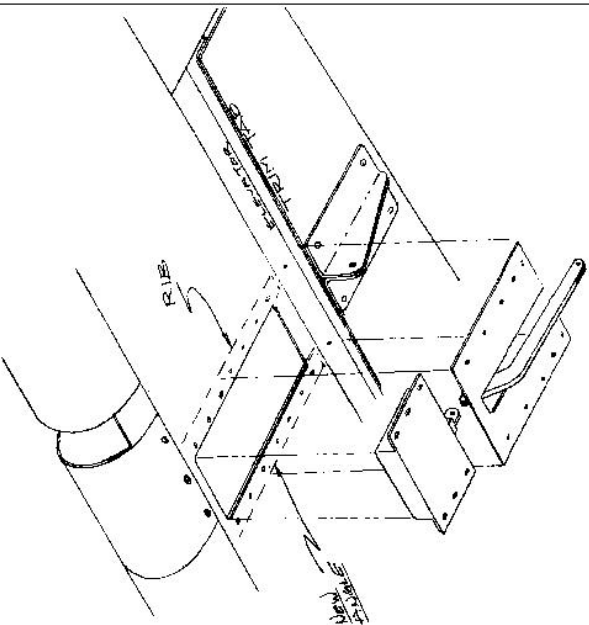


Figure A.10 The elevator trim arrangement retrofit to the prototype.

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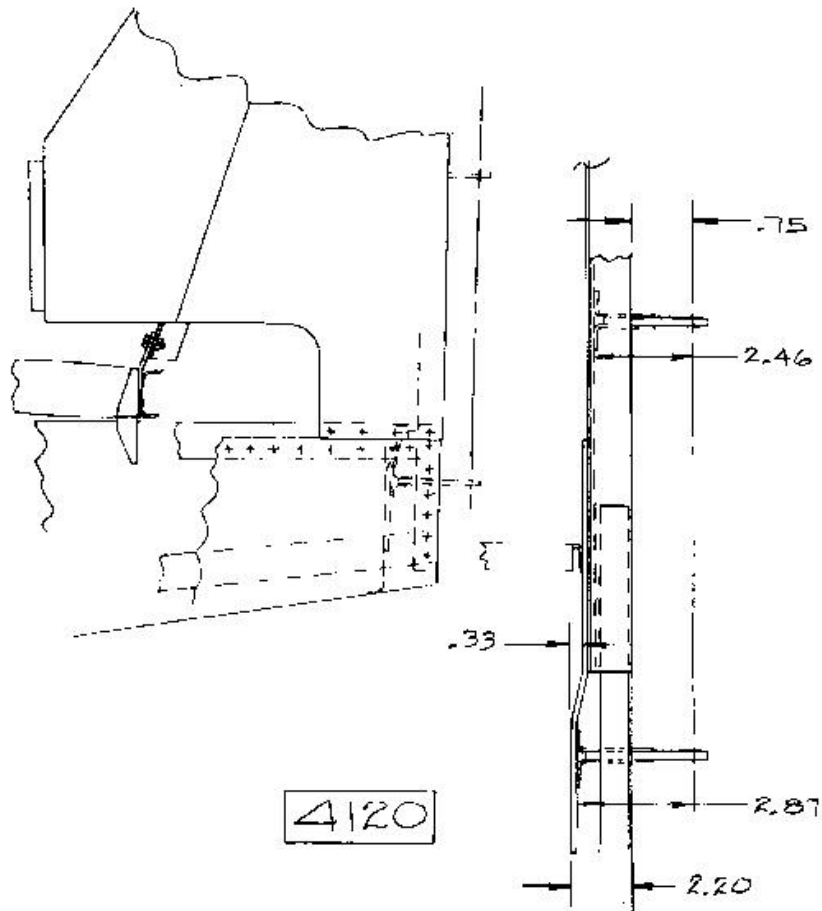


Figure A.11 Attaching the vertical stabilizer.

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INSTRUCTIONS : CRANKCASE - GEAR BOX CONCENTRICITY ALIGNMENT

The location of the two .620 diameter crankcase dowels where the transmission bell housing usually mounts is not always known precise enough for proper mating of a reduction gear assembly. By using the piloted reamer and the bushings provided in the alignment kit and following this procedure, the dowel holes in the rear case can be match reamed to obtain the proper alignment.

(1) Remove the crankcase dowels and replace with the two hardened bushings. Press the bushings in flush with the surface. These bushing are sized to accept the .4375 diameter pilot on the tip of the reamer.

(2) Detach the bell housing(rear case) from the gear box and bolt it to the crankcase. Snug the bolts but DO NOT over-tighten.

(3) Mount a dial indicator on the flywheel or the end of the crankshaft. Indicate on the 12.00° O.D. of the snap diameter that locates the reduction gear assembly. Bump the bell housing as necessary to achieve concentricity, a total indicator reading of no more than .0005, and then tighten the bolts. **NOTE:** When indicating for concentricity, the crankshaft should be positioned vertically to minimize any gravitational influence.

(4) With a 1/2" electric drill, use the piloted reamer to ream out the undersize holes in the bell housing to a diameter of .620.

(5) Remove bushings and reinstall dowels.

It must be understood that this procedure modifies the bell housing to match only that particular crankcase. Mounting the gear box on a different engine block would require sleeving the holes and repeating the above procedure.

Revised: 3/3/99

Figure A.12 Mating the Florida Airboat Power PSRU to the block.

SS1-D
SPINNER BLADE CUT-OUT

TO: OWEN SMITH

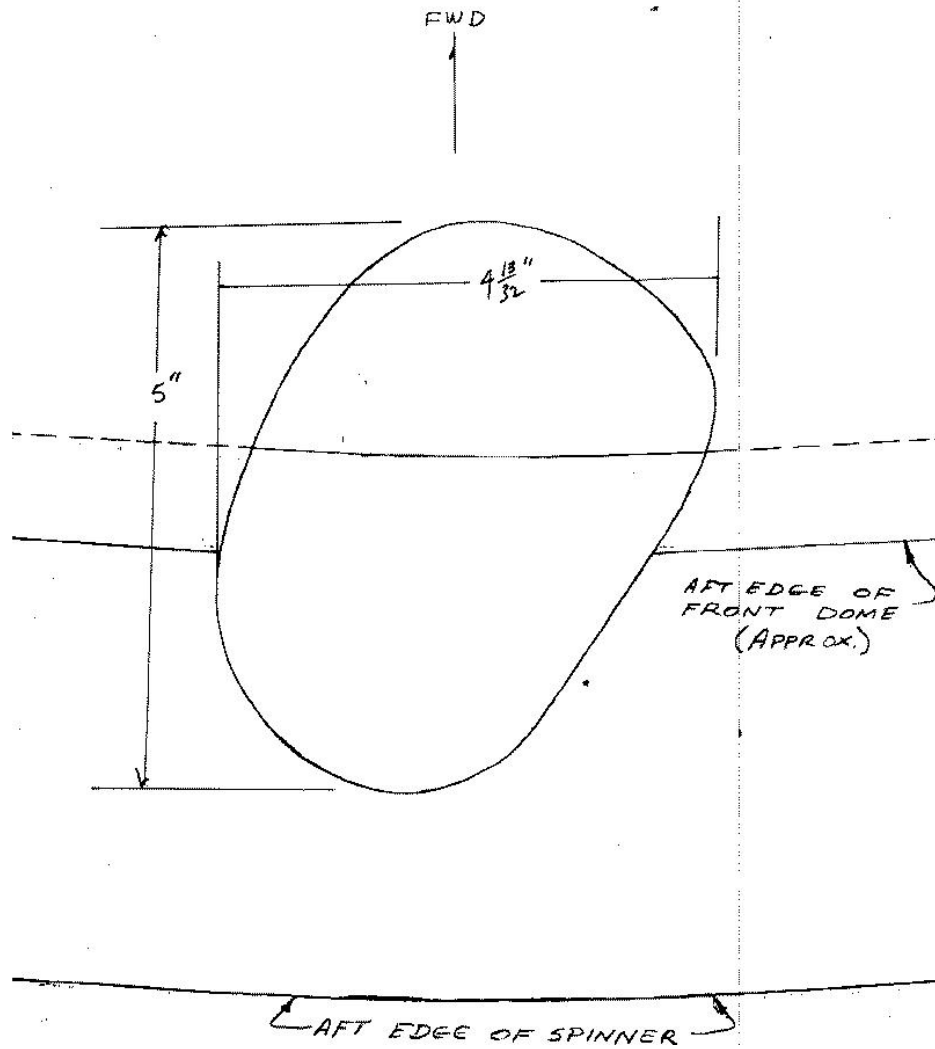


Figure A.13 Propeller cutout template (scale as necessary on a Xerox machine before use).

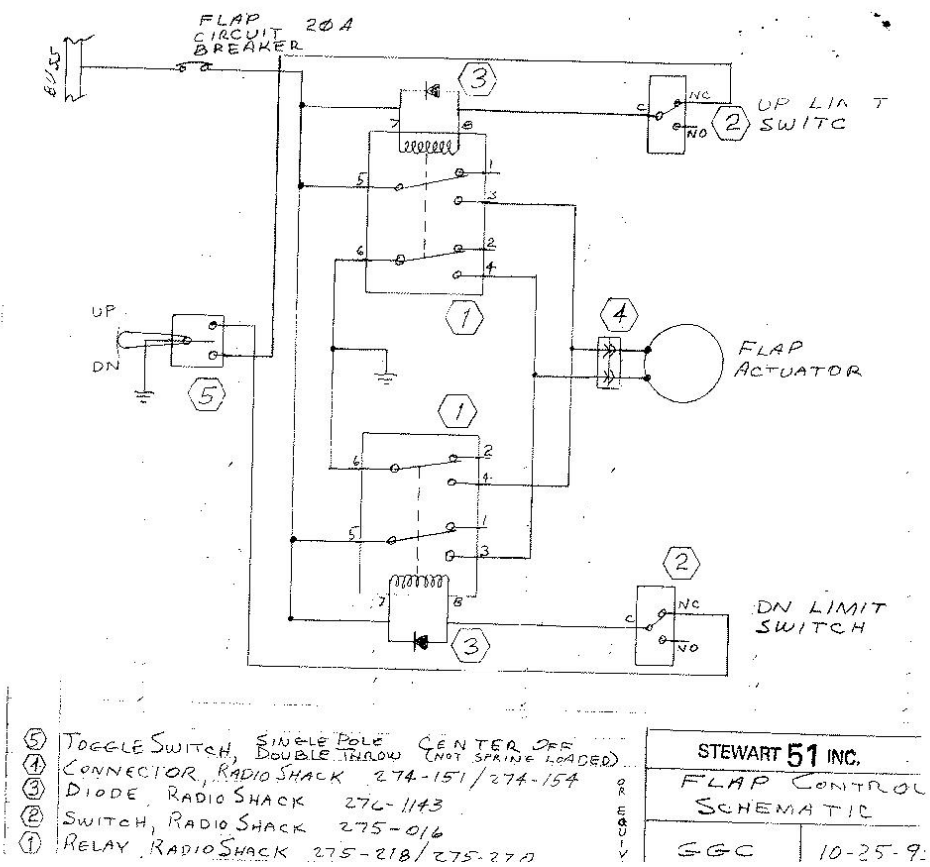


Figure A.14 Circuit used for the flap limit switches.

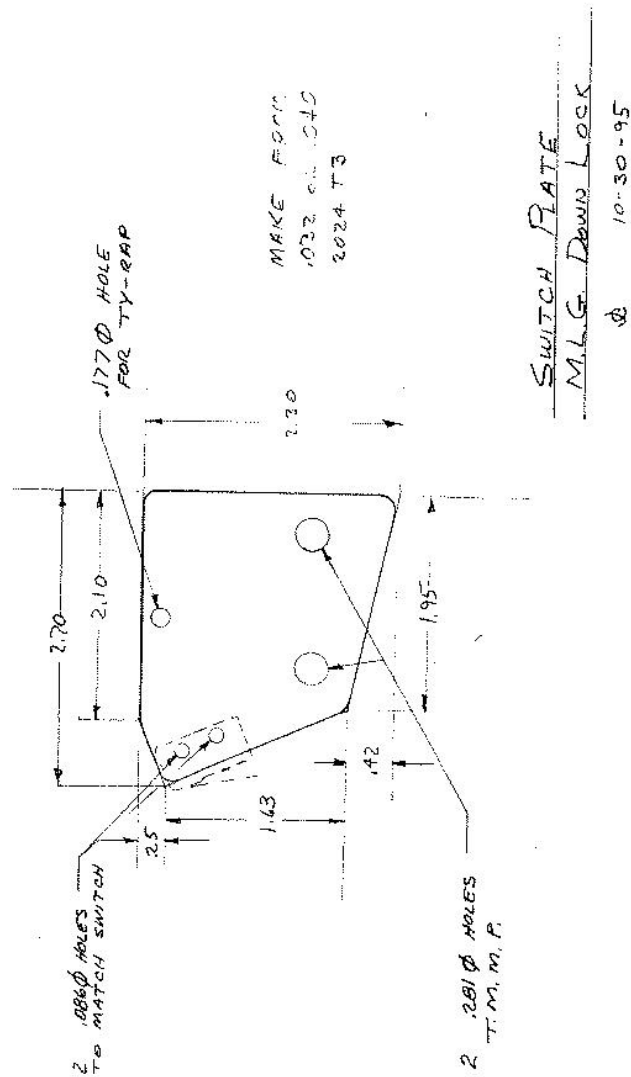


Figure A.16 Downlock switch plate fabrication drawing.

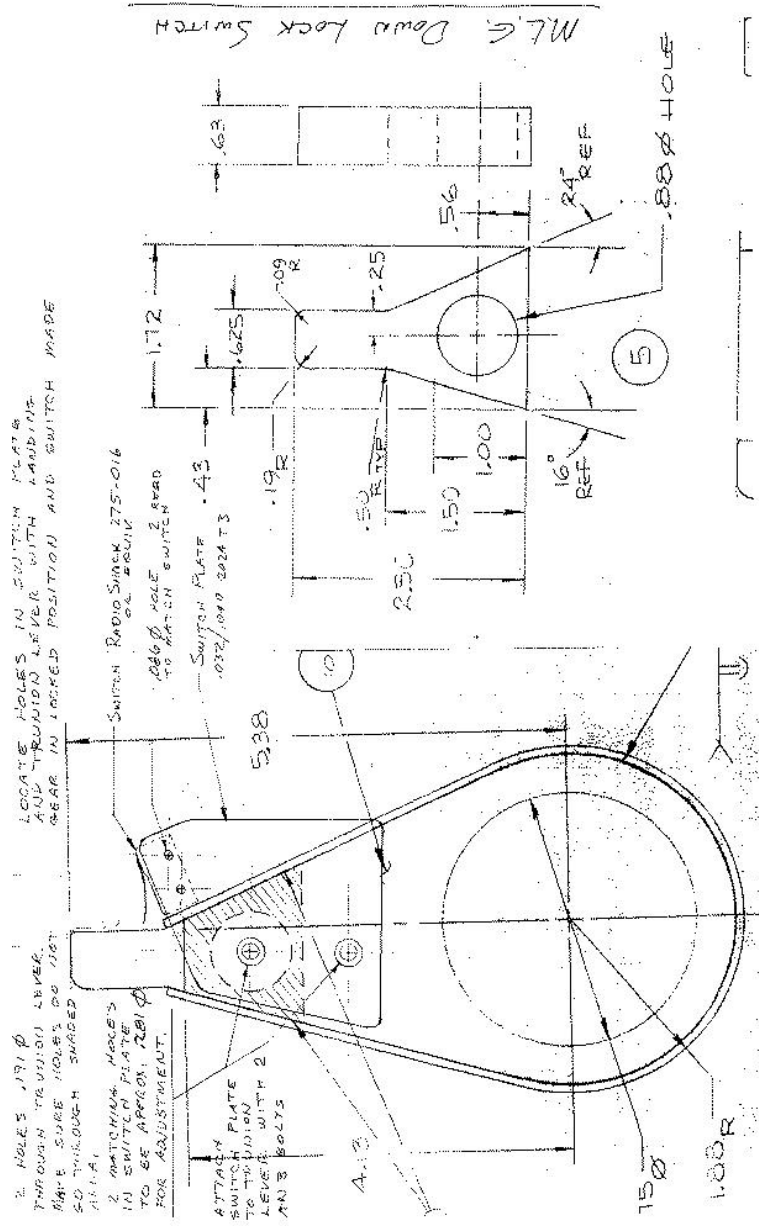


Figure A.17 Installation drawing for the main gear downlock switch.

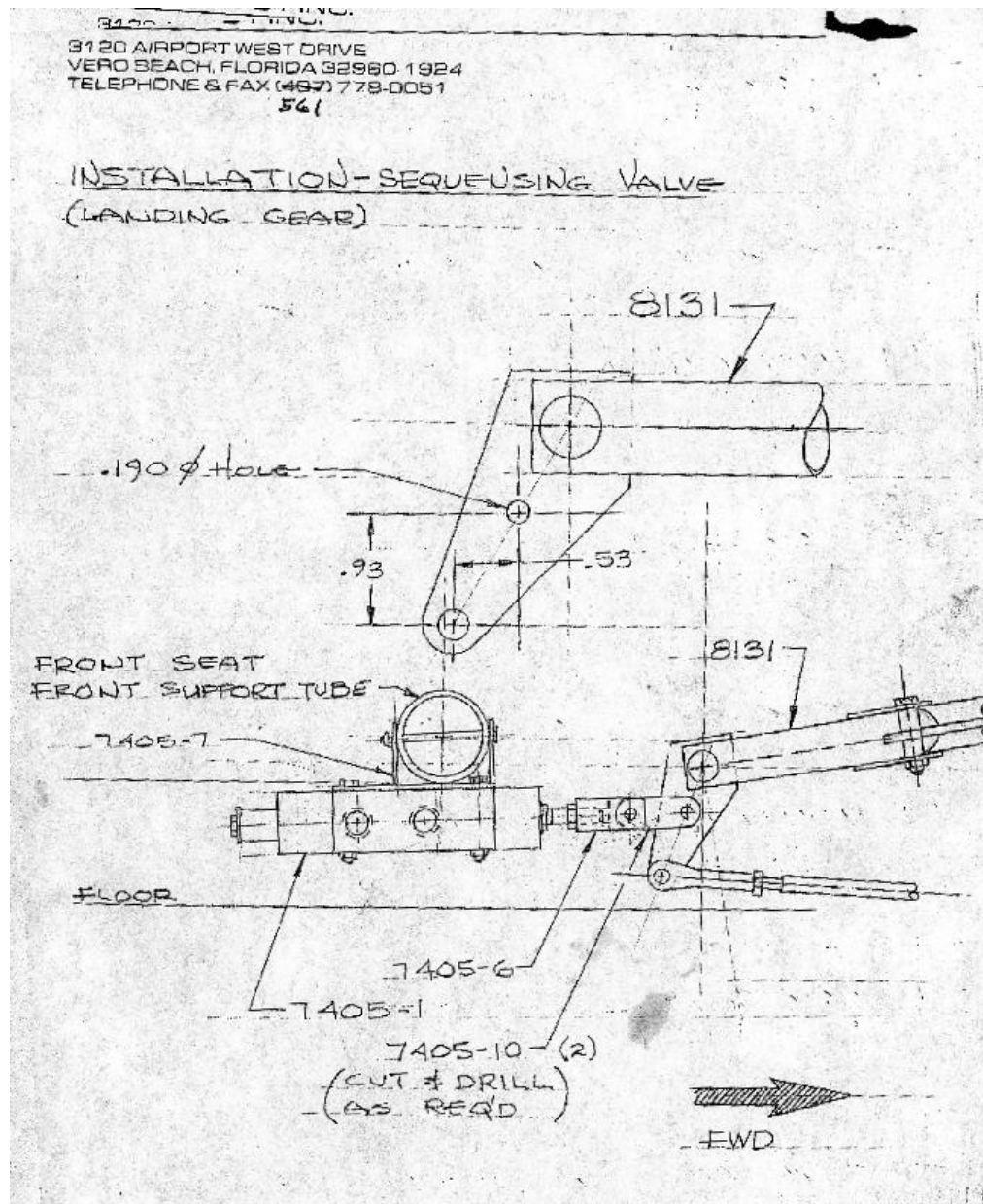


Figure A.18 Installation drawing for the gear selector (spool) valve.

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ADD THIS NOTE TO 7011-2

UP LOCK PART.

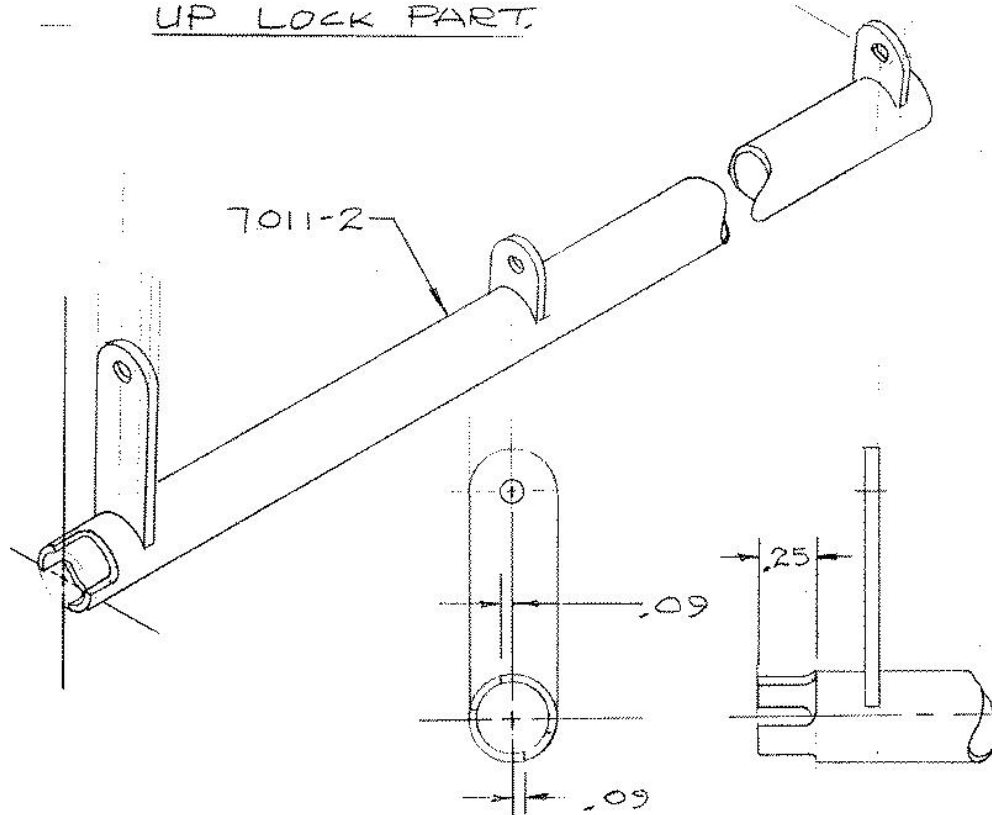


Figure A.19 Drawing depicting modifications to p/n 7011-2.

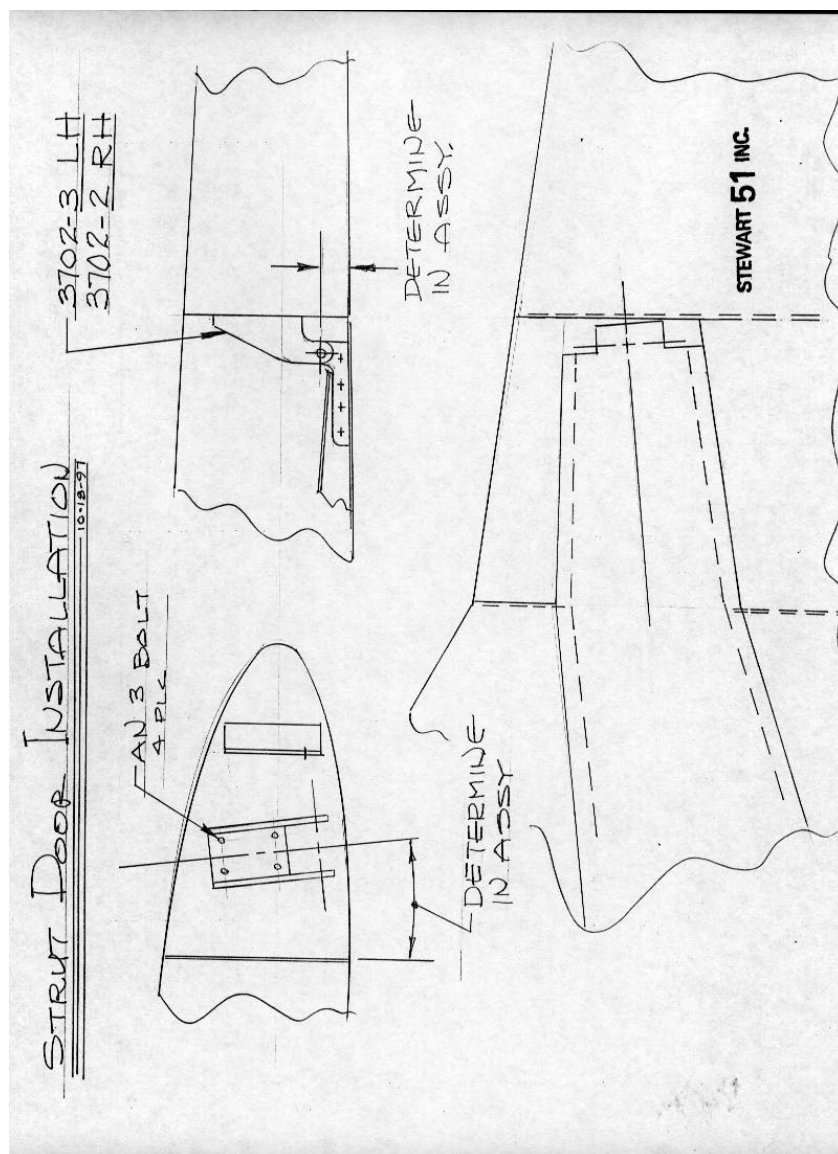


Figure A.20 Installation drawing for the strut door.

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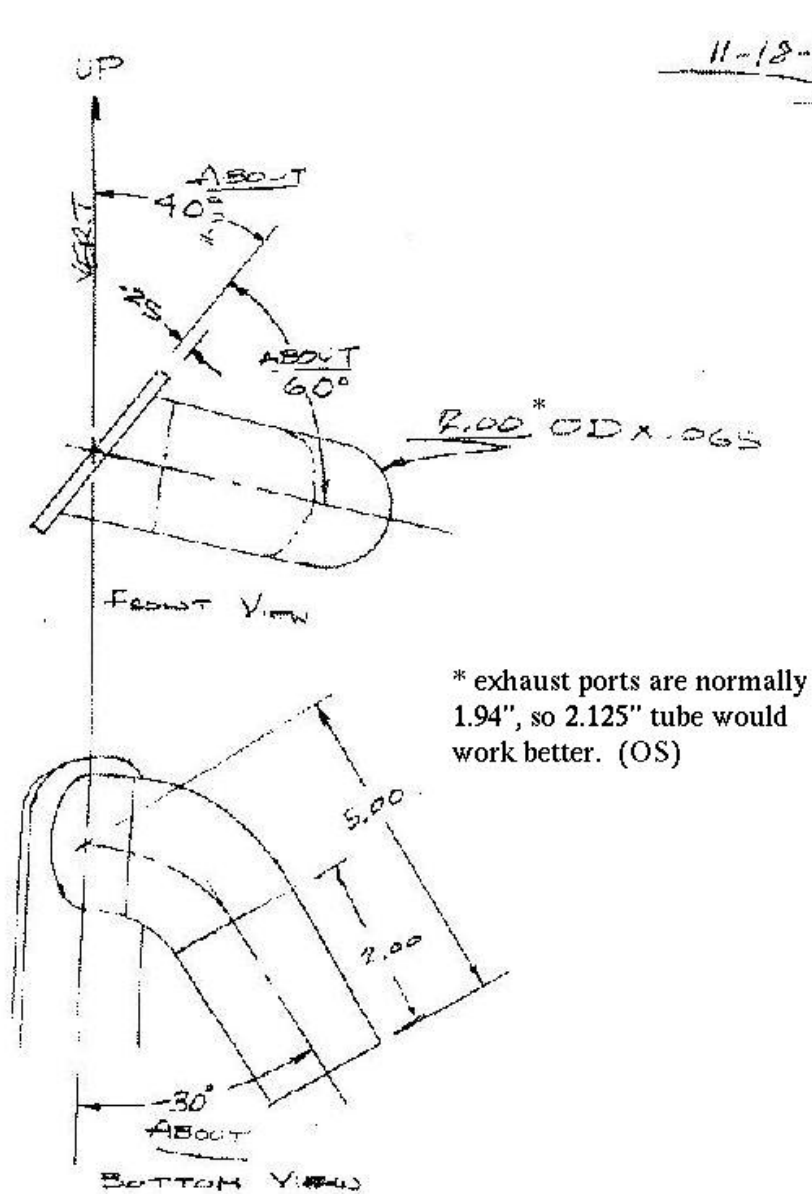


Figure A.21 Fabrication drawing for the exhaust stacks.

Appendix B: A partial list of drawings

DRWG NO	DESCRIPTION	DRWG NO	DESCRIPTION
3000-1/2	Wing, panel; assembly	5216	Fitting, wing attach, forward
3000-2/2	Wing, panel; assembly	5215	Fuselage, frame, FS234.76
3020-1/6	Wing, mate; assembly	5217	Fitting, wing attach, aft
3020-3/6	Wing, mate; assembly	5230	Windscreen; assembly
3020-4/6	Wing, mate; assembly	5231	Frame, windscreen; assembly
3100	Wing, front spar; assembly	5240	Canopy, frame; assembly
3200	Wing, rear spar; assembly	5241	Canopy, truck; assembly
3212-1/2	Wing, rib WS42.35; assembly	M5244	Canopy, rear track; installation
3213-1/2	Wing, rib WS53.00; assembly	5245	Canopy, front track; installation
3214-1/3	Wing, wheelwell; assembly	5250-1/2	Canopy crank; assembly
3214-2/3	Wing, wheelwell; assembly	5250-2/2	Canopy crank; assembly
3215	Pylon, attach; detail	5251	Canopy, skirt; pattern
3310	Hinge, bracket, flap	5300	Firewall, assembly
3400-1/2	Flap; assembly	M5320	Strut, cross; installation
3400-2/2	Flap; assembly	5400	Radiator, scoop; assembly
3500-1/2	Aileron; assembly	5410	Radiator, duct; assembly
3500-2/2	Aileron; assembly	5413	Actuator, radiator door
3510	Aileron, servo tab	5414	Radiator, door; assembly
3515	Aileron, servo tab; installation	5415	Radiator, scoop & duct; assembly
3600-1/2	Wing, skin; assembly	M5415	Radiator, scoop; installation
3600-2/2	Wing, skin; assembly	5500-1/2	Fuselage, skin panel
3910	Pitot, mast; assembly	5500-2/2	Fuselage, skin panel
4000-1/4	Elevator; assembly	M5502	Instrument, access panel
4000-2/4	Elevator; assembly	M5503	Fuselage, access panel, aft
4000-3/4	Elevator; assembly	M5545	Hoist tube; installation
4000-4/4	Elevator; assembly	6000-1/4	Engine, mount
4100	Stabilizer, vertical; assembly	6100-1/2	Spinner
4105	Fin, dorsal	6101	Spinner, backing plate; assembly
4120	Stabilizer, vertical, frame	6102	Spinner, forward bulkhead
4200-1/4	Rudder; assembly	6300	Engine; general arrangement
4200-2/4	Rudder; assembly	6401	Radiator, support assembly
4200-3/4	Rudder; assembly	6406	Firewall fitting, coolant line
4200-4/4	Rudder; assembly	6410	Cooling system; installation
4210	Rudder, trim tab	6415	Radiator; installation
4300-1/2	Stabilizer, horizontal; assembly	6420	Tank, oil; assembly
4300-2/2	Stabilizer, horizontal; assembly	6421	Tank, coolant; assembly
4311	Stabilizer, horizontal, frame	6800	Engine cowl; assembly
M5110	Seat; installation	6802	Engine cowl, frame
5200-1/5	Fuselage, frame; assembly	6810	Engine cowl, upper skin
5200-2/5	Fuselage, frame; assembly	6812	Engine cowl, lower skin
5200-3/5	Fuselage, frame; assembly	6813	Engine cowl, side skin
5200-4/5	Fuselage, frame; assembly	7000	Landing gear, strut; assembly
5200-4/5	Fuselage, frame; assembly	7006	Downlock, landing gear
5200-5/5	Fuselage, frame; assembly	7007	Landing gear, trunion; assembly
5210-1/2	Floor, cockpit	7009-1/2	Main gear uplock, installation
5210-2/2	Floor, cockpit	7009-2/2	Main gear uplock, installation
5211-1/2	Wheelwell	M7009	Main gear uplock; installation
5211-2/2	Wheelwell	7020	Landing gear, actuator & downlock; assembly
5214	Fuselage, frame, FS220.65	7116	Valve, strut, metering

DRWG NO	DESCRIPTION	DRWG NO	DESCRIPTION
7201-1/3	Tailwheel, strut; assembly	7405	Valve, sequencing
7202	Tailwheel, steering assembly	7410	Valve, sequencing; installation
7203	Tailwheel, steering bracket	7412	Hydraulic system; schematic
7205	Tailwheel, door; assembly	7801	Pad, jack
M7205	Tailwheel, door; installation	8016	Rudder, cable lever; installation
7208	Uplock, tailwheel	8022	Petals, rudder; installation
7300	Wheel, main; assembly	8023	Controls, elevator; installation
7305	Door, main strut	8045	Controls, aileron bellcrank; installation
7306-1/4	Door, main wheel	8047	Controls, aileron lever; installation
7306-2/4	Door, main wheel	8140	Console; installation
7306-3/4	Door, main wheel	8141	Landing gear select lever; assembly
7306-4/4	Door, main wheel	8300-1/2	Throttle, assembly
7400	Actuator, main gear	8300-2/2	Throttle, assembly
7401	Actuator, tailwheel		