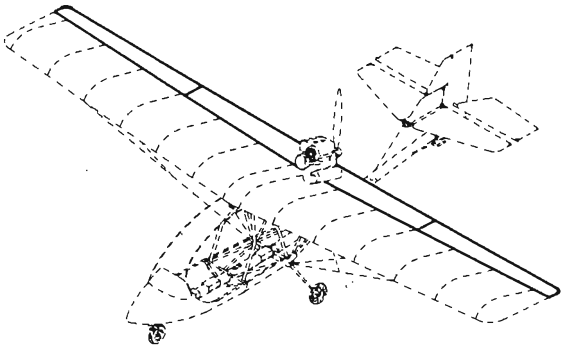
SECTION 6 - AILERONS/FLAPS



DOC # 902-1 DATE 03/28/90

SECTION 6

AILERONS/FLAPS

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AILERON ASSEMBLY

NOTE: Before starting the following assembly sequence, notice the INBOARD end of the Aileron Leading Edge Spar (2) has TWO (2) 3/16" (4.8 mm) diameter holes. One hole located at 5 1/2" (13.97 cm) and another at 7" (17.78 cm) from the end of the tube. The LONGEST Compression Strut (7) is to be located at the INBOARD end of the tube.

1. Assemble as illustrated attaching the Anchor "Plate" Nuts (1) FIRST. Use the Eyebolt (4) to align the Anchor Nut (1). Position the Nut on the INSIDE CENTERLINE of the Leading Edge Spar (2). The INSIDE edge has the 1/2" (12.7 mm) holes. Drill and deburr TWO (2) 1/8" (3.2 mm) diameter attachment holes. DO NOT attach the Eyebolts and Washers (14) at this time.

NOTE: If the Forward or Aft Tips (5) and (6) DO NOT fit "snuggly" into each end of the Compression Struts then install the Tips and "Dimple" near the end of the Struts with a Center-Punch APPROXIMATELY 3/8" (9.5 mm) from each end of the Tube.

OPTIONAL: Use LARGE Rubber Bands or Masking Tape to hold the Frame into place.

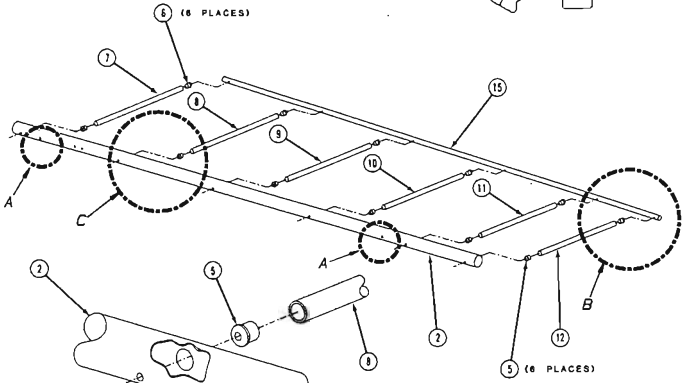
IMPORTANT: If you use Masking Tape you will have to remove ALL residue left by the Tape BEFORE slipping on the Aileron Covers.

2. Assemble the opposite Aileron EXACTLY the SAME.

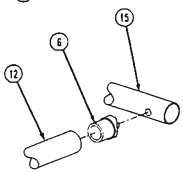
Item	P/N	Qty	Description
1	10530	2	1/4" - 28 Anchor (Plate) Nut
2	45207	1	Aileron Leading Edge Spar Assembly
3	20201	4	1/8" x 1/4" Grip Stainless Steel Rivet (CCPQ-44)
4	10372	2	AN43B-20A Eyebolt
5	71001	6	Forward Compression Strut Tip
6	71002	6	Aft Compression Strut Tip
7	45270	1	Aileron Compression Strut (12.46)
8	45271	1	Aileron Compression Strut (11.84)
9	45272	1	Aileron Compression Strut (11.21)
10	45273	1	Aileron Compression Strut (10.58)
11	45274	1	Aileron Compression Strut (9.96)
12	45275	1	Aileron Compression Strut (9.33)
13	20225	6	3/16" x 1/2" Grip Aluminum Rivet (AAP-68)
14	10560	4	1/4" Washer
15	45208	1	Aileron Trailing Edge Spar

AILERON

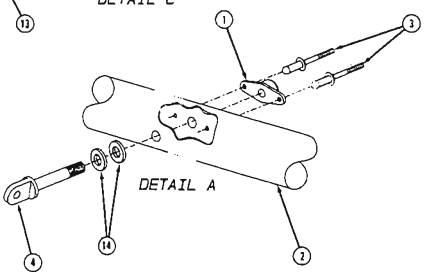




DETAIL C



DETAIL B



DETAIL A

FLAP ASSEMBLY

IMPORTANT: BEFORE starting the following sequence POSITIVE IDENTIFICATION of the RIGHT and LEFT Flap MUST BE ESTABLISHED.

1. Assemble the LEFT Flap as illustrated EXCEPT DO NOT ATTACH the Eyebolts (4) at this time. They are for alignment of the Anchor Nut (1). Attach the LONGEST Compression (7) Strut INBOARD and the SHORTEST (15) OUTBOARD.

NOTE: If the Forward or Aft Tips (5) and (6) DO NOT fit "snuggly" into each end of the Compression Struts then install the Tips and "Dimple" near the end of the Struts with a Center-Punch APPROXIMATELY 3/8" (9.5 mm) from each end of the Tube. Refer to Pages 6-6 and 6-7 if necessary.

OPTIONAL: Use LARGE Rubber Bands to hold the Frame into place or Masking Tape.

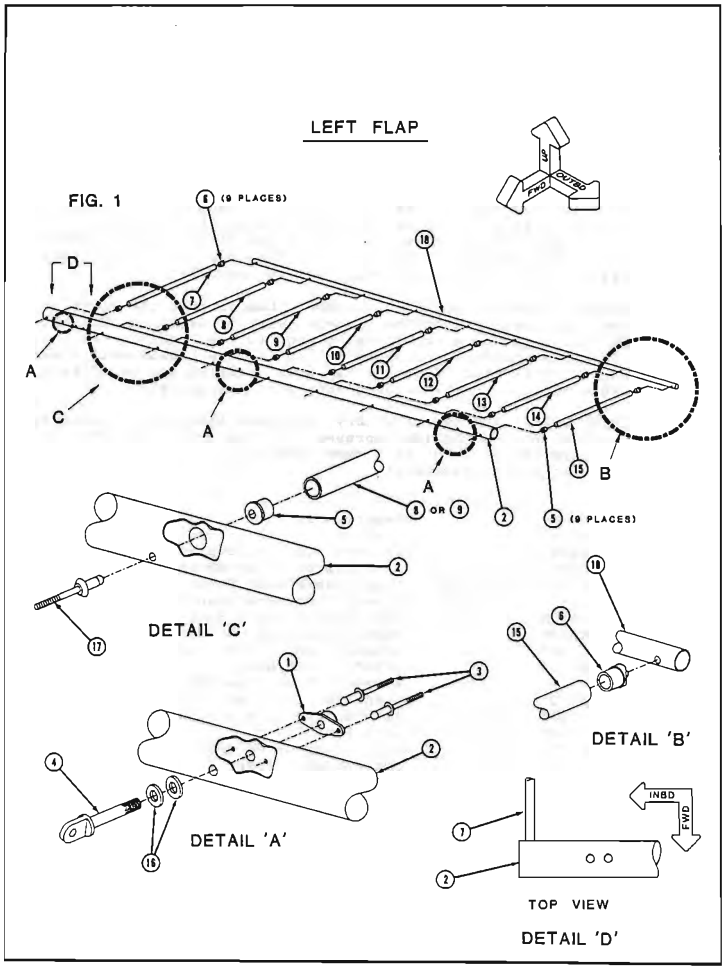
IMPORTANT: If you use Masking Tape you will have to remove ALL residue left by the Tape BEFORE slipping on the Aileron Covers.

2. Assemble the opposite (RIGHT) Flap in "mirror image".

3. Remove ALL the Part Number Labels and ANY reside left by them with a cleaning solvent.

4. Repeat Steps 1-3 for the opposite (RIGHT) Flap.

Item	P/N	Qty	Description
1	10530	3	1/4" - 28 Anchor (Plate) Nut
2	45235	1	Left Flap Leading Edge Spar
	45230		Right Flap Leading Edge Spar (not illustrated)
3	20202	6	1/8" x 1/4" Grip Stainless Steel Rivet
4	10372	3	AN43B-20A Eyebolt
5	71001	6	Forward Compression Strut Tip
6	71002	6	Aft Compression Strut Tip
7	45280	1	Flap Compression Strut (17.57)
8	45281	1	Flap Compression Strut (16.94)
9	45282	1	Flap Compression Strut (16.31)
10	45283	1	Flap Compression Strut (15.68)
11	45284	1	Flap Compression Strut (15.05)
12	45285	1	Flap Compression Strut (14.42)
13	45286	1	Flap Compression Strut (13.79)
14	45287	1	Flap Compression Strut (13.16)
15	45288	1	Flap Compression Strut (12.53)
16	10560	4	1/4" Washer
17	20225	6	3/16" x 1/2" Grip Aluminum Rivet (AAP-68)
18	45233		Flap Trailing Edge Spar


LEFT FLAP
FIG. 1
8 (9 PLACES)
18
D
7
6
9
10
11
12
13
14
15
B
A
C
A
A
8 OR 9
2
5 (9 PLACES)
5
2
17
DETAIL 'C'
1
3
2
4
20
16
DETAIL 'A'
18
6
15
DETAIL 'B'
INBD
FWD
7
2
TOP VIEW
DETAIL 'D'

FLAP AND AILERON COVER ATTACHMENT

1. Refer to Figure 1. LIGHTLY "dimple" the ends of the Compression Struts (3) and (4) as required ,if necessary to hold the Tips (1) and (2) into place with a Centerpunch.

NOTE: If the Forward or Aft Tips (5) and (6) DO NOT fit "snuggly" into each end of the Compression Struts then install the Tips and "Dimple" near the end of the Struts with a Center-Punch APPROXIMATELY 3/8" (9.5 mm) from each end of the Tube. "Dimple" AFTER the Tips (1) and (2) are installed.

OPTIONAL: Remove ALL Part Number Labels from the parts and clean ALL reside from the Labels with a Cleaning Solvent. ESPECIALLY if the aircraft is going to be sprayed with an Ultra-violet inhibiter such as "STITS" as the Labels will bleed through AFTER the "Stits" has been applied and be CLEARLY visible through LIGHT colored Wing and Tail surfaces.

HELPFUL HINT: The use of a Dry Silicone based spray such as (Dow-Corning) "Fabriglide" sprayed onto the Frames BEFORE the Covers are 'slipped on' will ease installation of the Flap and Aileron Covers dramatically.

Item	P/N	Description
1.	71001	Forward Aileron Compression Strut Tip
2.	71002	Aft Aileron Compression Strut Tip
3.	45280 thru 45288	Flap Compression Strut
4.	45270 thru 45275	Aileron Compresssion Strut
5.	45235	Left Flap Leading Edge Spar
	45230	Right Flap Leading Edge Spar
6.	45207	Leading Edge Aileron Spar
7.	20225	3/16" x 1/2" Grip Aluminum Rivet (AAP-68)
8.	45233	Flap Trailing Edge Spar
9.	45208	Aileron Trailing Edge Spar
10.	45639	Left Flap Cover
	45638	Right Flap Cover (not illustrated)
11.	45637	Left Aileron Cover
	45636	Right Aileron Cover (not illustrated)

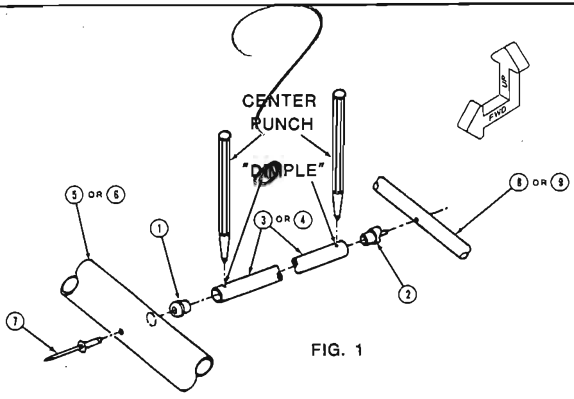
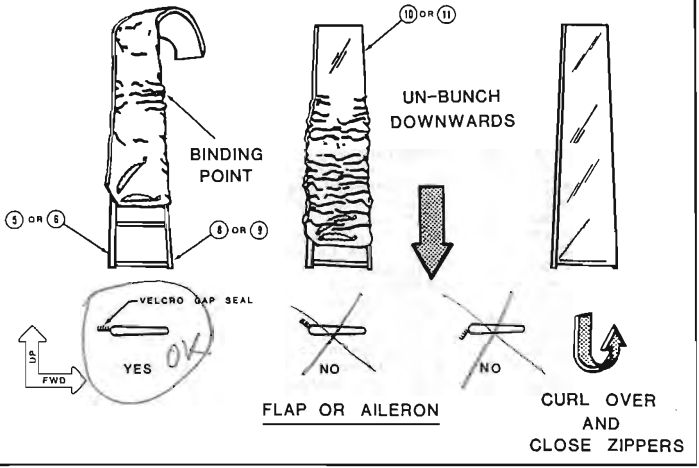

CENTER
PUNCH
"DIMPLE"
UP
FWD
5 OR 6
1
3 OR 4
8 OR 9
2
7

FIG. 1


BINDING
POINT
5 OR 6
8 OR 9
10 OR 11
UN-BUNCH
DOWNWARDS
VELCRO GAP SEAL
YES OK
UP
FWD
NO
NO
FLAP OR AILERON
CURL OVER
AND
CLOSE ZIPPERS

FLAP HORN AND EYEBOLT ATTACHMENT TO FLAPS AND AILERONS

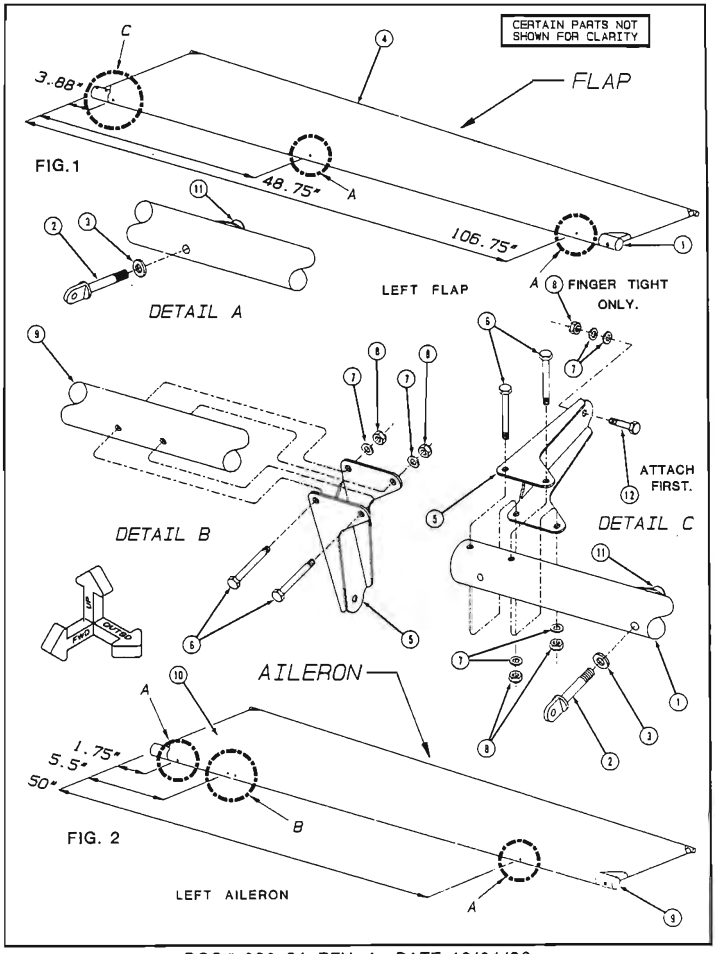
1. Refer to Figure 1. Measure OUTBOARD from the INBOARD edge of the Flap Leading Edge (1) and locate the 1/4" (6.4 mm) Eyebolt (2) [hinge point] attachment locations. Heat-cut and reveal the holes at the THREE [3] following locations: 3 7/8" (9.84 cm), 48 3/4" (123.8 cm), and 106 3/4" (271.15 cm).

2. Heat-cut the Gap Seal as required for Eyebolt (2) attachment. Tighten ALL Eyebolts to correct torque. DO NOT OVER TORQUE AND DISTORT THE TUBE. If correct torque CANNOT be reached without damaging the Flap Leading Edge (1) then back off the Eyebolt to the NEXT VERTICAL position. Repeat Steps 1. and 2. on the opposite (RIGHT) Flap in "mirror image".

3. Refer to Figure 1 and Detail 'C'. Locate the TWO [2] 3/16" (4.7 mm) diameter holes in the Flap Leading Edge. The INBOARD MOST hole is located at 5 1/2" (14.0 cm). Reveal and heat seal the hole. Attach the Bolt (12) to the Horn (5) orientated as illustrated BEFORE attaching the Flap Horn (5) as illustrated. Attach the Locknut (8) FINGER TIGHT ONLY. Heat cut around the Horn if required to facilitate attachment of the Horn (5). Use correct torque. DO NOT DISTORT THE TUBE.
NOTE: Horn (5) to be angled AFT when attached to the Aileron.

4. Refer to Figure 2. Repeat Steps 1-2 for the Aileron as illustrated. Measure OUTBOARD from the INBOARD edge of the Aileron Leading Edge. Heat-cut and reveal the TWO [2] 1/4" (6.4 mm) diameter holes at the following locations: 1 3/4" (4.44 cm) an 50" (127.0 cm). Attach the Horn (5) at 5 1/2" (14.0 cm). Use correct torque. Heat-cut the Gap Seal in the Aileron as required for Eyebolt attachment. Tighten the Eyebolts to correct torque. DO NOT OVER TORQUE AND DISTORT THE TUBE. Repeat on the opposite (RIGHT) Aileron in "mirror image".

Item	P/N	Qty	Description
1	45225		Flap Leading Edge Spar Assembly
2	10372	10	AN43B-20A Eyebolt
3	10560	10	1/4" Washer
4	45639		Left Flap Cover
	45638		Right Flap Cover (not illustrated)
5	45260	4	Flap Horn
6	10053	8	AN3-20A Bolt
7	10550	12	3/16" Washer
8	10500	10	3/16" Locknut
9	45207		Aileron Leading Edge Spar Assembly
10	45637		Left Aileron Cover
	45636		Right Aileron Cover (not illustrated)
11	10530		1/4" - 28 Anchor (Plate) Nut
12	10020	2	AN3-7 Bolt


CERTAIN PARTS NOT SHOWN FOR CLARITY
C
3.88"
4
FLAP
FIG.1
48.75"
A
106.75"
11
2
3
DETAIL A
LEFT FLAP
A
8
FINGER TIGHT ONLY.
9
8
7
7
8
5
7
ATTACH FIRST.
12
DETAIL B
DETAIL C
5
6
5
11
AILERON
7
8
1
3
2
10
A
1.75"
5.5"
50"
B
FIG. 2
LEFT AILERON
A
9

AILERON PUSHROD ASSEMBLY

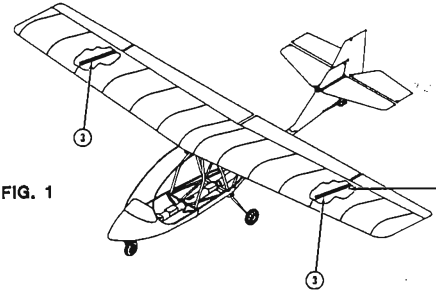
1. Refer to Figure 1 and Detail 'A'. Assemble as illustrated.

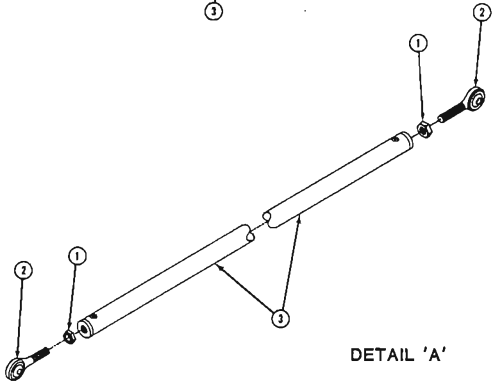
NOTE: Thread a Jam Nut (1) ALL THE WAY onto the Male Rod End Bearing (2). DO NOT Tighten the Jam Nut against the Pushrod at this time as it will be tightened in a later sequence AFTER it has been properly adjusted.

2. Assemble the remaining Aileron Pushrod Assembly (3) (not illustrated) as illustrated for the opposite side.

Item	P/N	Qty	Description
1	10631	4	1/4" Jam Nut
2	10700	4	1/4" - 28 Male Rod End Bearing
3	45699	2	Aileron Pushrod Assembly

FIG. 1





DETAIL 'A'