



FLAT
FLT
WING

HRP TOP WING ASSEMBLY INSTRUCTIONS

CONGRATULATIONS

YOU HAVE PURCHASED THE #1 SPRINTCAR WING IN THE WORLD!!

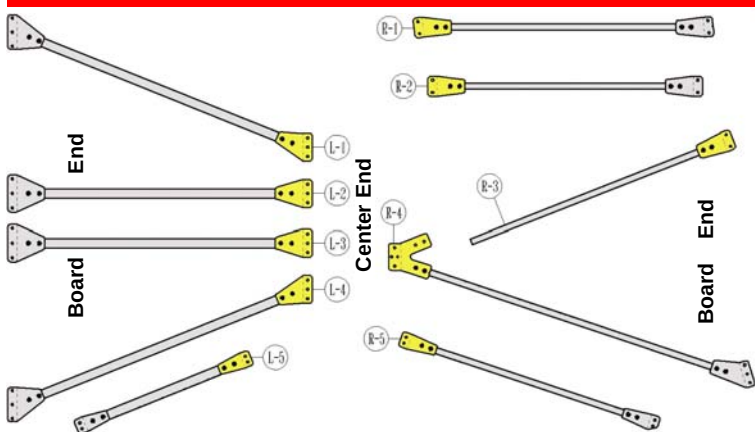
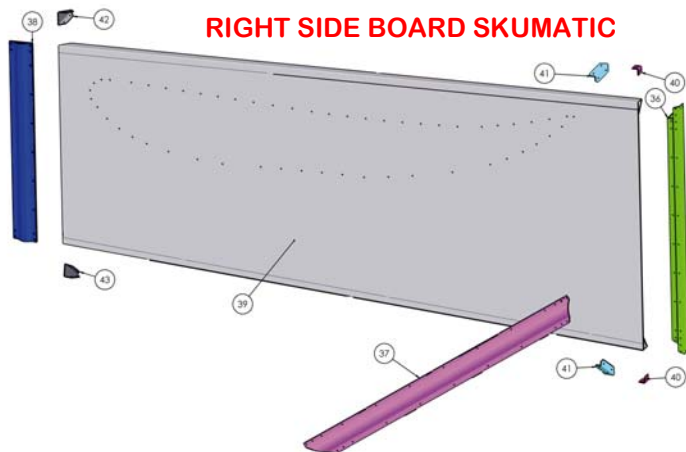
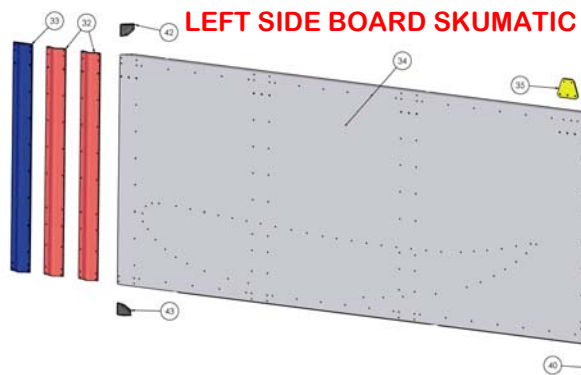
**Wind Tunnel Tested
Cad Designed and Engineered
CNC Processed for Accuracy and Quality**

Winning Starts with HRP!



***Please Read These Directions Thoroughly Before Starting!!!!!!
Check for All parts before Starting!!!!!!***

FILE LOCATION: H:\CADDRAW\EPS-BIT\HRP INSTR_INFO_LABELS\WINGS\FLT05xx HRP Flat Wing Assy 1-16.pdf

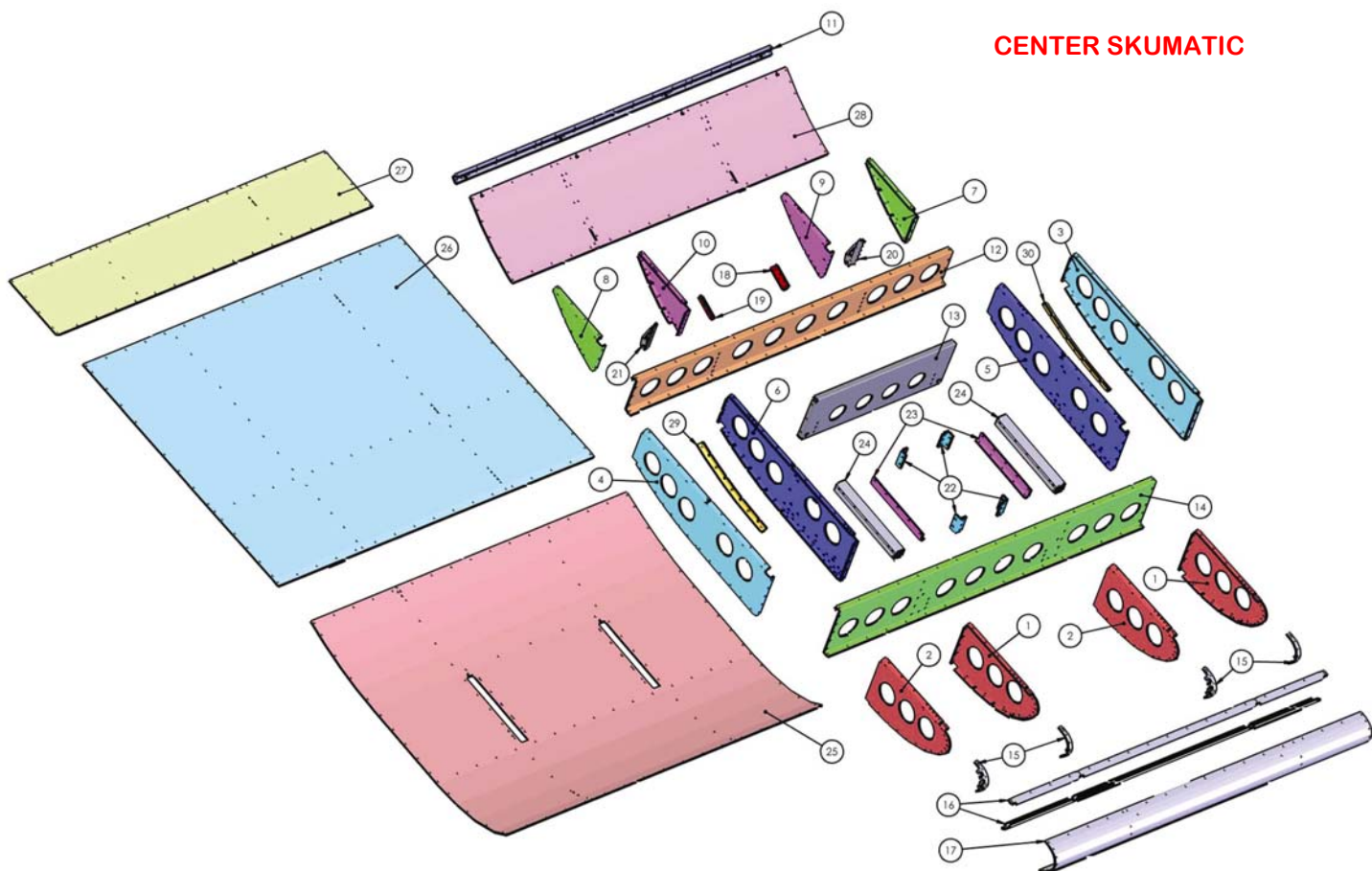


BRACE KIT SKUMATIC

**Yellow end should be Labeled
(see picture to left)**

4DL 2.0

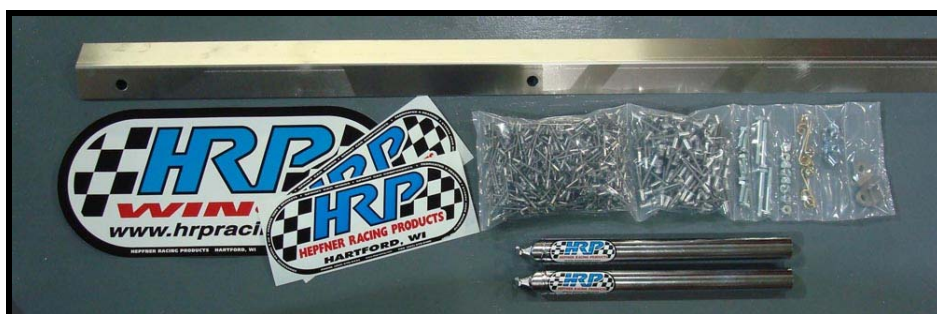
**Lead = nose of board
to nose of wing**



CENTER SKUMATIC

HRP#	CENTER PART DESCRIPTION	SKU#	QUA	CHECK
FLT5001-LH	LH Front Profile .020	1	2	
FLT5001-RH	RH Front Profile .020	2	2	
FLT5002-LH	LH Center Profile Outer .020	3	1	
FLT5002-RH	RH Center Profile Outer .020	4	1	
FLT5003-LH	LH Center Profile Inner .040	5	1	
FLT5003-RH	RH Center Profile Inner .040	6	1	
FLT5004-LH	LH Rear Profile Outer .020	7	1	
FLT5004-RH	RH Rear Profile Outer .020	8	1	
FLT5005-LH	LH Rear Profile Inner .020	9	1	
FLT5005-RH	RH Rear Profile Inner .020	10	1	
FLT5006	Back Edge	11	1	
FLT5007	Rear Cross Rib	12	1	
FLT5008	Middle Cross Rib	13	1	
FLT5009	Front Cross Rib	14	1	
VFT5010	Nose Wrap	15	4	
VFT5011	Nose Backer	16	2	
VFT5012	Nose Cap	17	1	
FLT5013-LH	LH Back Brace Support	18	1	
FLT5013-RH	RH Back Brace Support	19	1	
VFT5014-LH	LH Rear Wing Mount	20	1	
VFT5014-RH	RH Rear Wing Mount	21	1	
VFT5015	Center Support	23	2	
VFT5016	Alum. Extrusion	24	2	
FLT5017	Bottom Skin	25	1	
FLT5018	Top Skin	26	1	
FLT5019	Top Rear Skin	27	1	
FLT5020	Bottom Rear Skin	28	1	
FLT5022-RH	RH Inner Center Profile Brace-Center	29	1	
FLT5022-LH	LH Inner Center Profile Brace-Center	30	1	
VFT5023	.090 Runner Support	22	4	
HRP8865	Wicker Bill 1" Tall	-	1	

HRP#	SIDE BAORD PART DESC	SKU#	QUA	CHECK
VFT5080	LH Board Rear Upright	31	1	
FLT5081	LH Board Center Upright	32	2	
FLT5082-200	LH Board Front Edge 2.0 LEAD	33	1	
FLT5083-200	LH Board 2.0 LEAD Panel Only	34	1	
VFT5085	LH Board Brace Backer	35	1	
VFT5087	RH Board Rear Upright	36	1	
VFT5088	RH Board Diagonal	37	1	
FLT5089-200	RH Board Front Edge 0.50 LEAD	38	1	
FLT5090-200	RH Board 2.0 LEAD	39	1	
VFT5094	Cap Back Corner Outer	40	4	
VFT5095	Cap Back Corner Inside	41	4	
VFT5096	Front Cap Top	42	2	
VFT5097	Front Cap Bottom	43	2	
HRP#	BRACE PART DESC	SKU#	QUA	CHECK
FLT5110-200	LH # 1 Brace	L-1		
FLT5111-200	LH # 2 Brace	L-2		
FLT5112-200	LH # 3 Brace	L-3		
FLT5113-200	LH # 4 Brace	L-4		
FLT5114-200	LH # 5 Brace	L-5		
FLT5115-200	RH # 1 Brace	R-1		
FLT5116-200	RH # 2 Brace	R-2		
FLT5117-200	RH # 3 Brace	R-3		
FLT5118-200	RH # 4 Brace	R-4		
FLT5119-200	RH # 5 Brace	R-5		
HRP#	HARDWARE PIECES	SKU#	QUA	CHECK
AD41-43BS	1/8" Multi Grip		1000	
AD62-64BS	3/16" Multi Grip		200	
HHB_25-20_075-ZIC	HEX HEAD BOLT .75 LONG		6	
HHB_25-20_200-ZIC	HEX HEAD BOLT 2.00 LONG		4	
NYLOC_25-20_ZIC	NYLOC NUT 1/4 X 20		8	
HRP0301	D-ZUES Spring .325		4	
HRP0310	D-ZUES Button .400		4	
VFT5021	Entry Plate		2	
HRP8811	Easy Glide Post		2	
HRP9003	8" Oval Sticker		2	
HRP9010	15" Oval Wing Sticker		1	



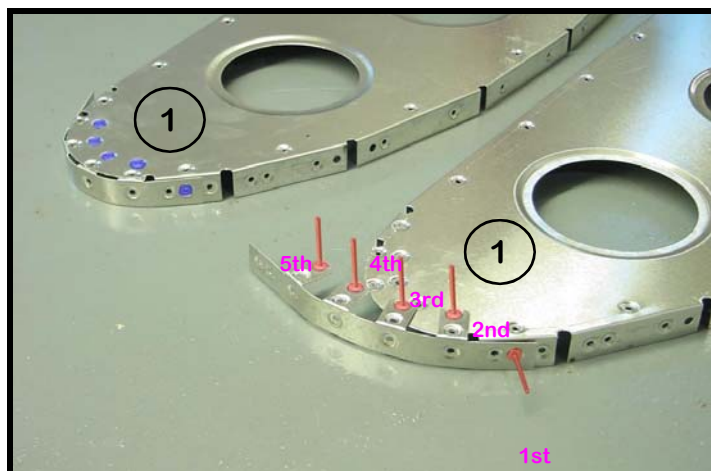
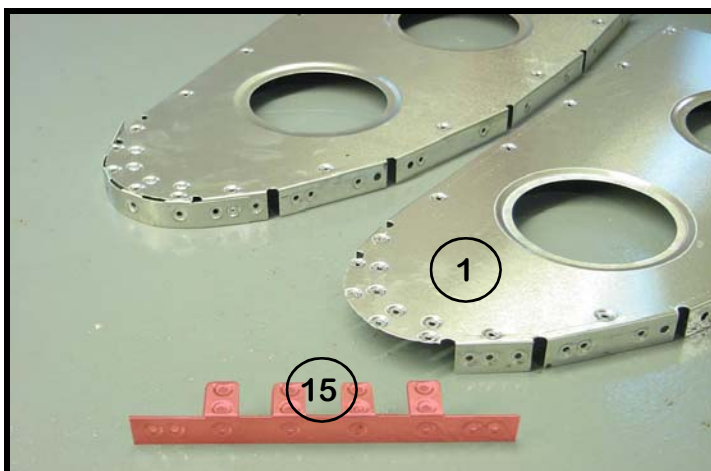
STEP #1

VERIFY ALL PARTS AND
QUANTITIES ARE CORRECT AND
NOT MISSING



STEP #2 TOOLS REQUIRED

- Rivet Gun (Suggest 2)
One for 1/8" rivets and 1 for 3/16" rivets
- Drill with 3/16 and 1/8 Drill bits
- 7/16 open end Wrench
- 7/16" Socket with Ratchet
- Hammer and Pin Punch
For all the rivets you install wrong!
- Saw Horses and Plywood for a Table



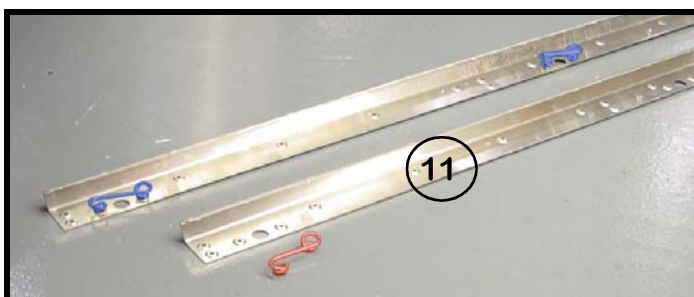
STEP #3

Rivet on (Item 15) Nose Wraps to
(Item 1) Nose Profiles

2 LH Front Profiles
2 RH Front Profiles

-use (5) 1/8" Multi-Grip rivets per Nose Profile

NOTE: Sequence is Important



STEP #4

Install D-Zeus Springs to (Item 11) Back Edge

-use (8) total 1/8" Multi-Grip Rivets

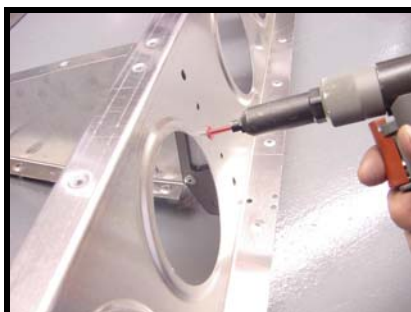
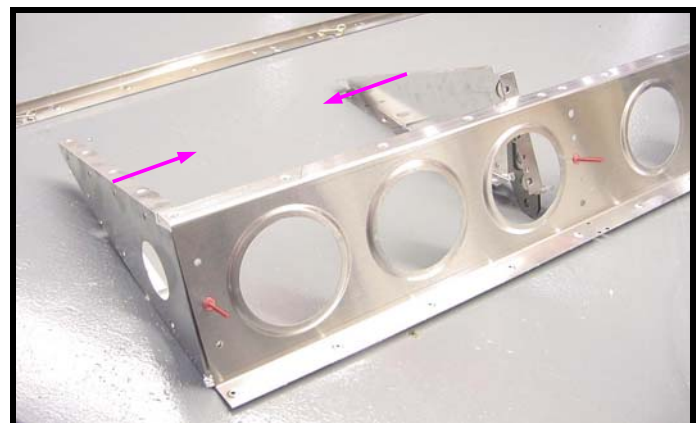
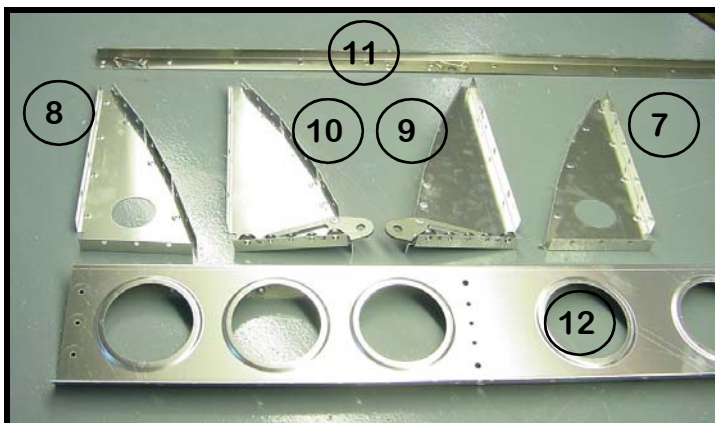
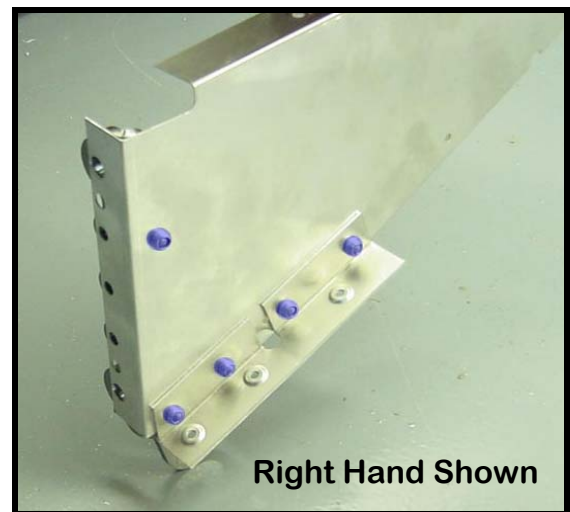
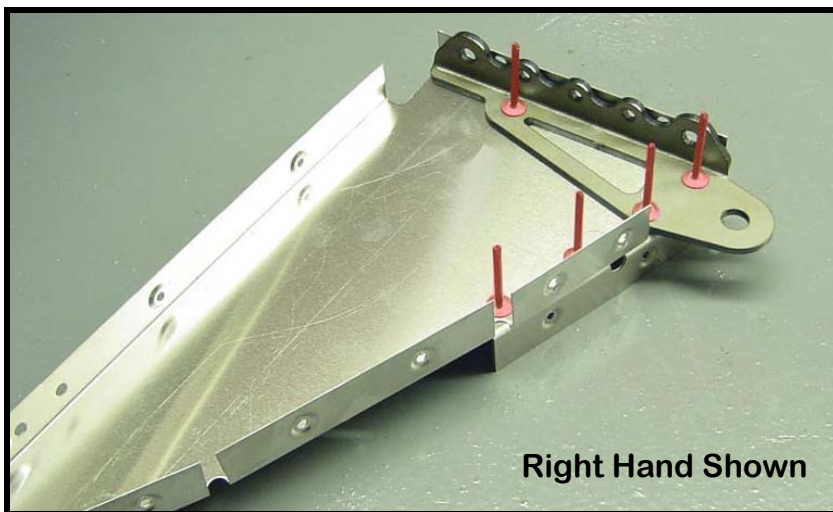
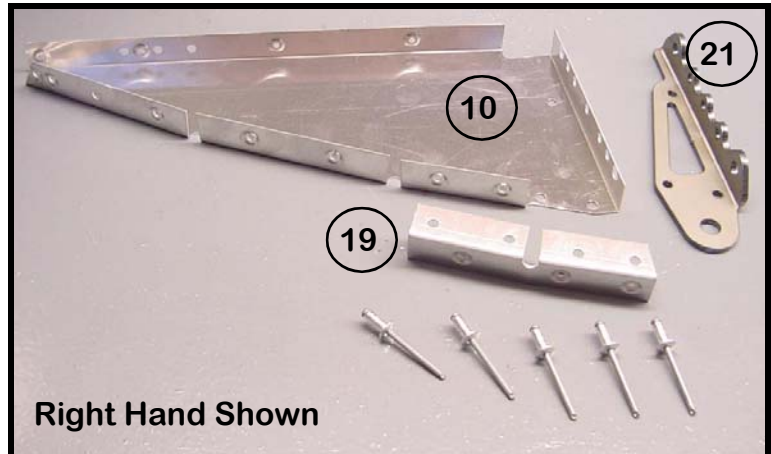
STEP #5

Assemble Left & Right Inner Profile/Brackets
 RH ASSY (Item 10) Rear Inner Profile
 (Item 21) Rear Wing Mount
 (Item 19) Back Brace

LH ASSY (Item 9) Rear Inner Profile
 (Item 20) Rear Wing Mount
 (Item 18) Back Brace

Insert (5) 3/16 Rivets Thru Each Assy

Duplicate Process for opposite side

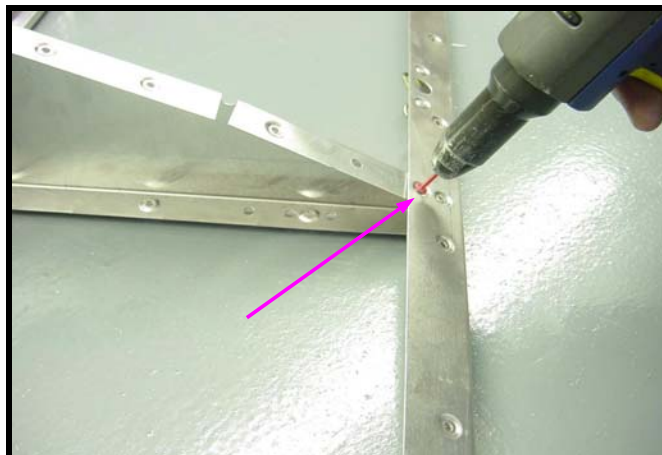
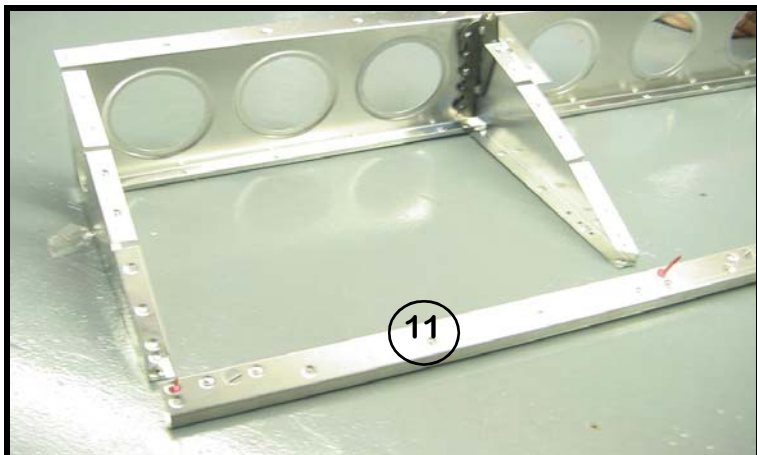


STEP #6

Assemble Rear Profile Assembly

-First install (1) 3/16 Rivet Thru (Item 12) Rear Cross Rib
 Into Each Rear Profile (Items 7,8,9,10)

NOTE: Direction of Profile Flanges

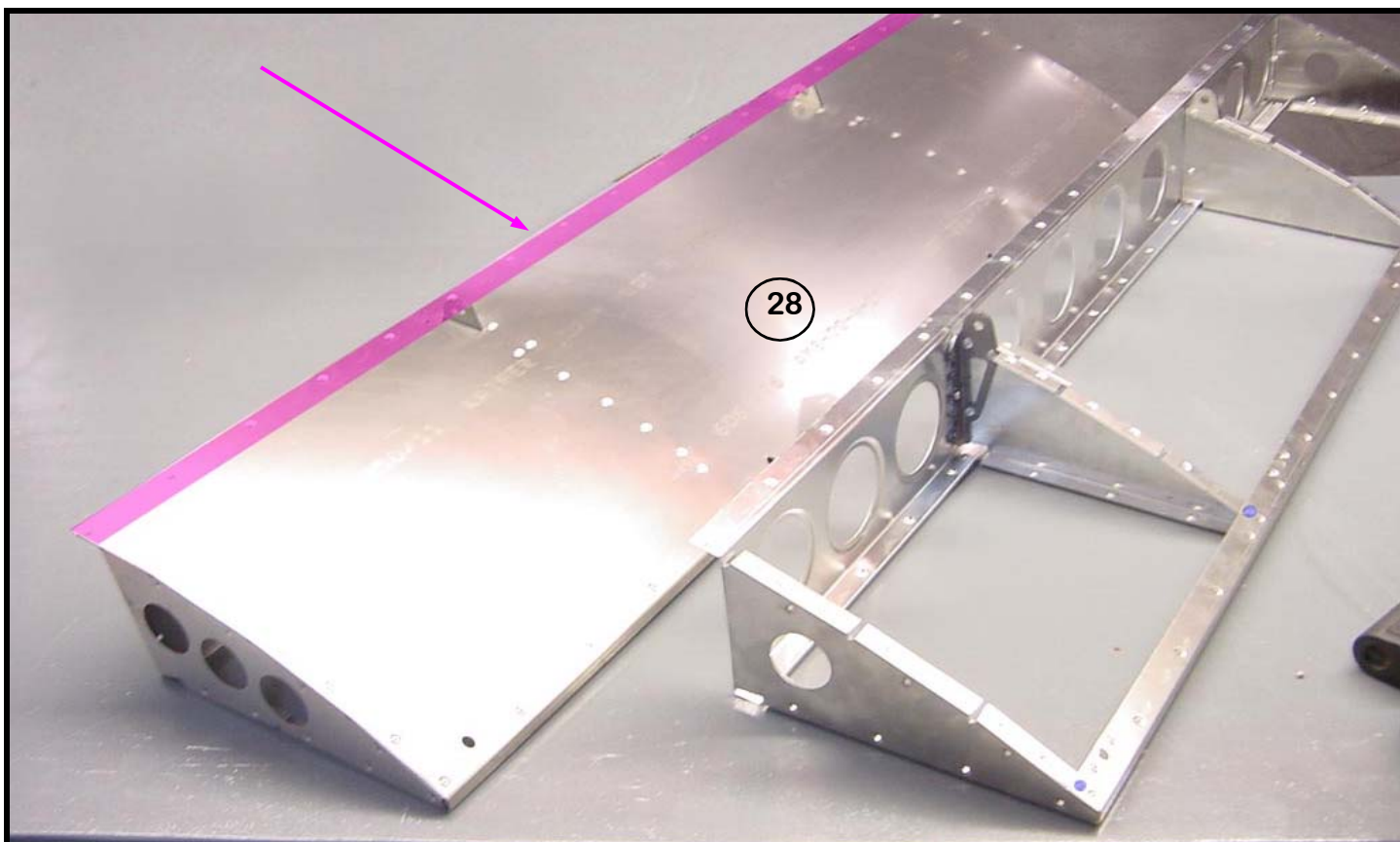


STEP #7

Attach (Item 11) Back Edge to Rear Profile Assembly

Insert (1) 1/8 Rivet into Each Profile

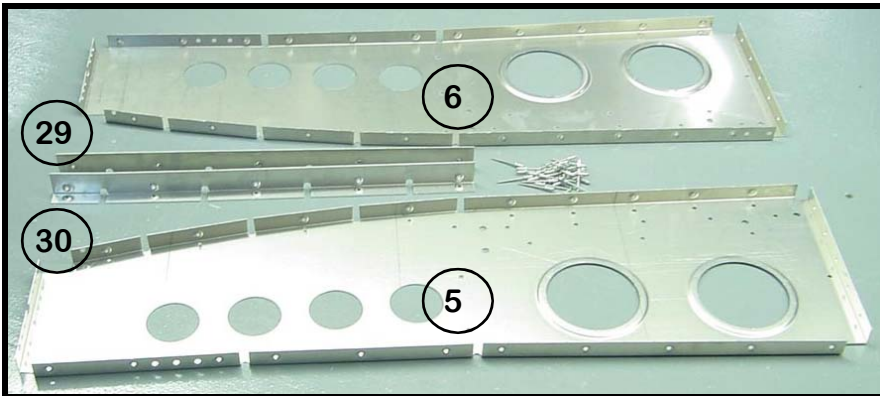
NOTE: Use Second Hole From the Back. See Arrow (rear hole will be used for Skin!!!)



STEP #8

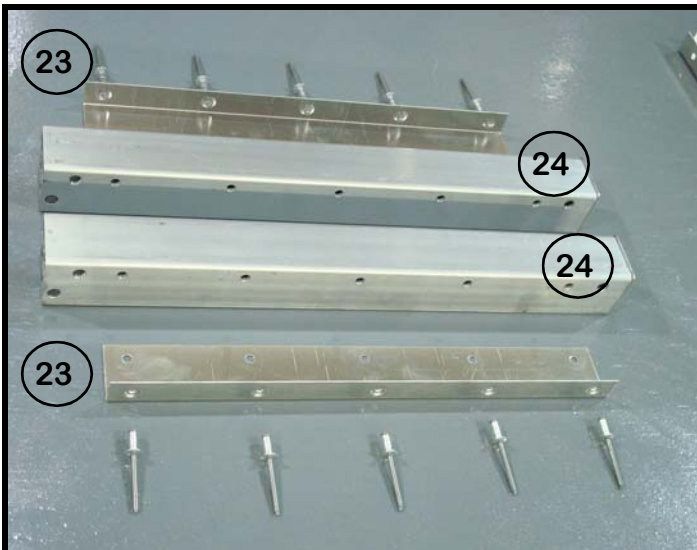
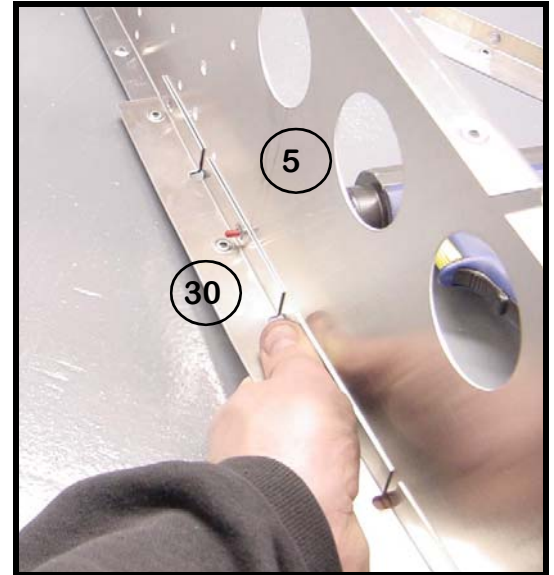
Attach (Item 28) Lower Rear Skin to Rear Profile Assembly
With 1/8" Rivets

NOTE: Do Not Install Rivets Into Rear Cross Rib (Area Shaded in Purple-Lower Skin will over lap later)



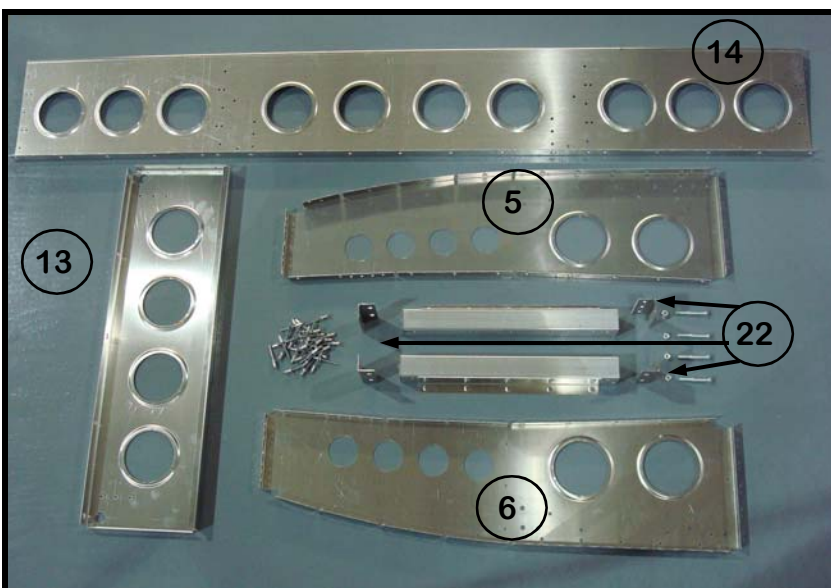
STEP #8

Attach (Item 29,30) Center Profile Strip Insert to (Item 5,6)
Use (5) 1/8 Rivets into Each Strip



STEP #9

Rivet (Item 23) Center Skin Support to
(Item 24) Alum Runner Make a LH & RH Assembly



STEP #10

Organize Parts for Center Assembly

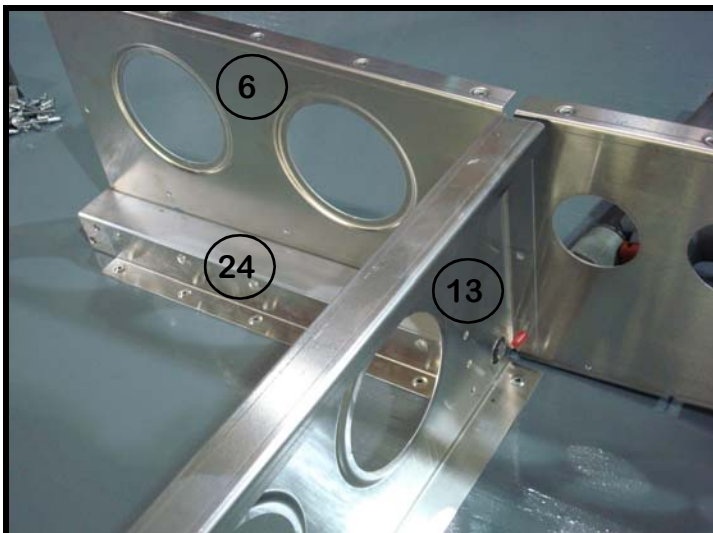
(Item 5) LH Center Profile Inner .040
(Item 6) RH Center Profile Inner .040
(Item 13) Middle Cross Rib
(Item 14) Front Cross Rib
(Item 24) Alum Extrusion Assy LH & RH
(Item 22) Runner Supports 4 Required
HHB_25-20_200_ZIC 4 Required
NYLOC_25-20_ZIC 4 Required

Uses all 3/16 Multi-Grips



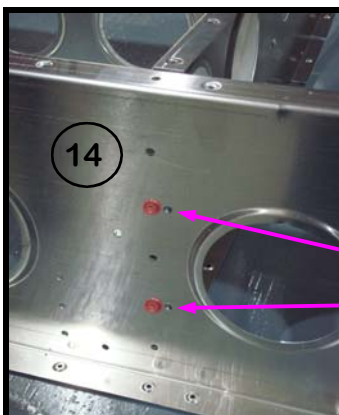
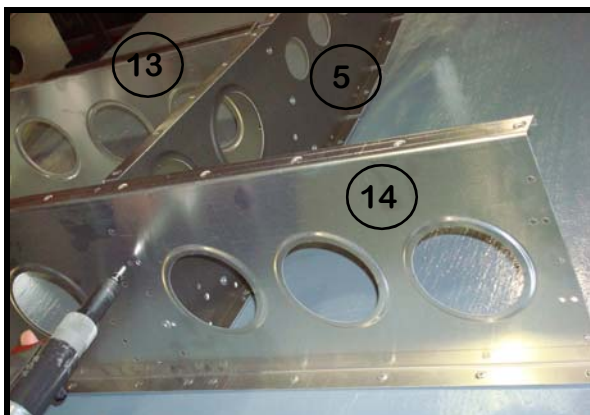
STEP #11

Rivet Runners to (Item 5,6) Center Profiles
1 LH / 1 RH use (5) 3/16 Rivets



STEP #12

Rivet Center (Item 13) Middle Rib to (Item 5,6) Center Profiles (3) 3/16 Rivets Each Side

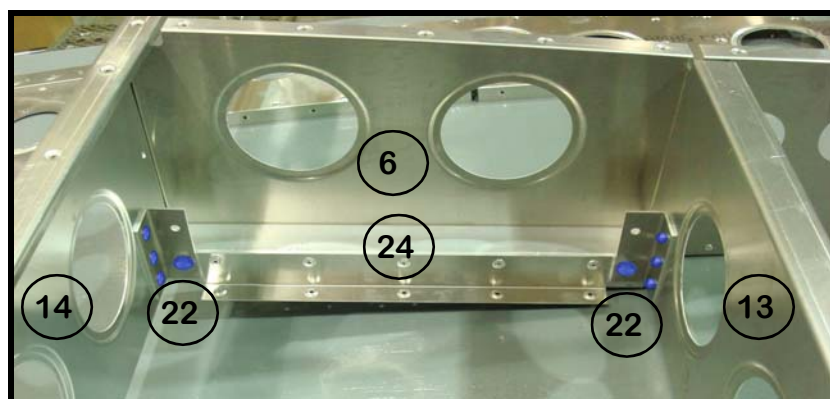
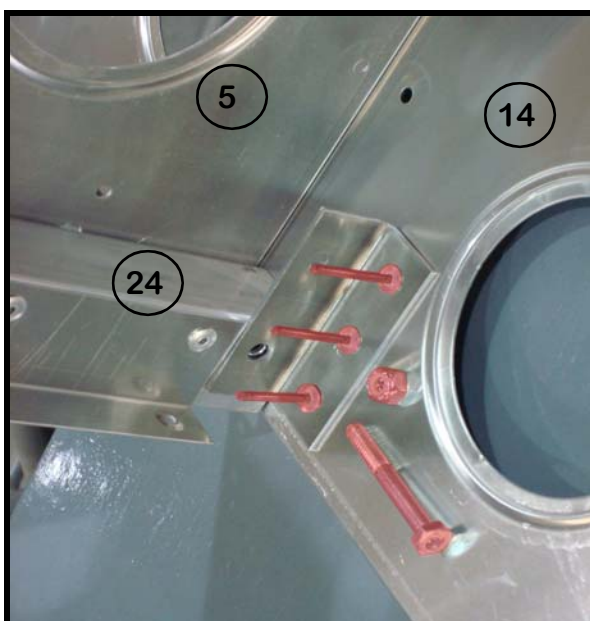


STEP #13

Rivet (Item 14) Front Rib to Front of (item 5,6) Center Profiles

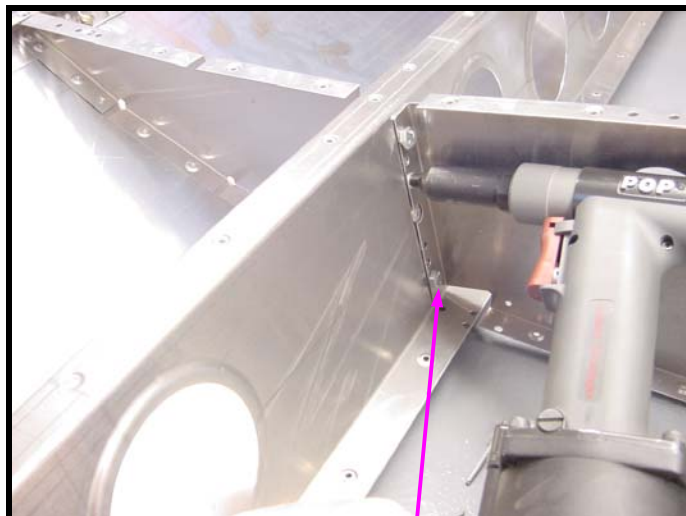
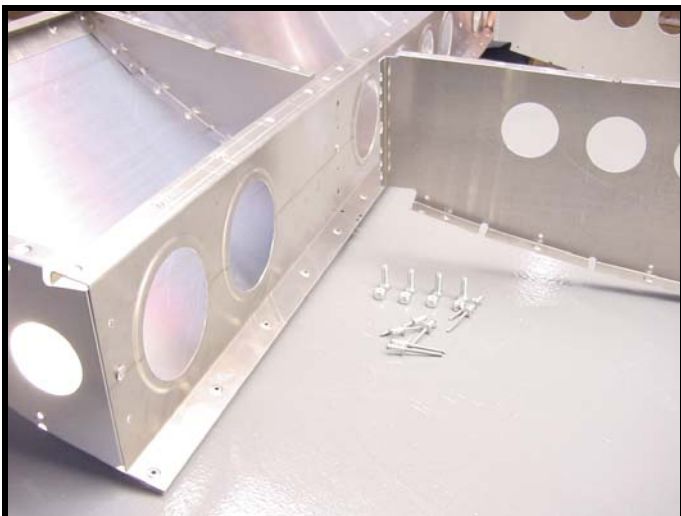
Note: only use (2) 3/16 Rivet Holes Next to Open Extra Holes (See photo to left)

Repeat on LH Side



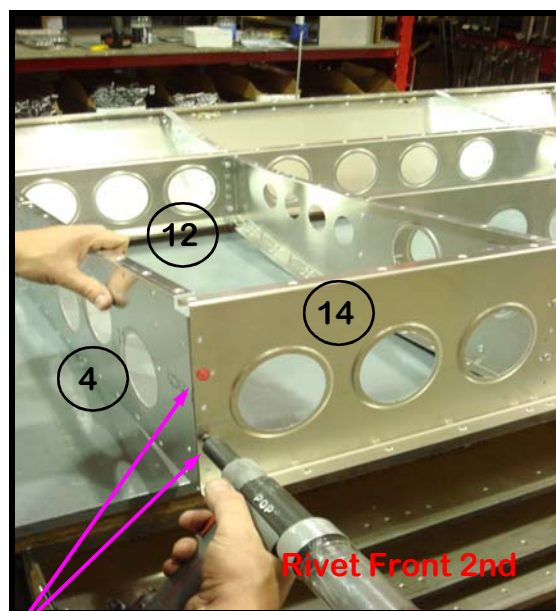
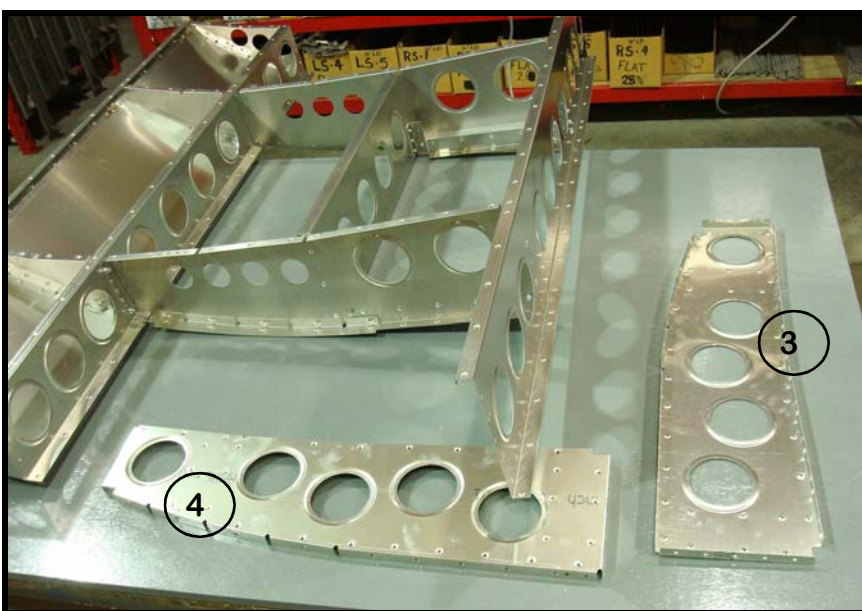
STEP #14

- Rivet (Item 22) .090 Runner Supports to (Item 14,13) Front & Middle Cross Rib
- Install Bolts Thru Item 22, Item 24 and Center Profiles Item 5,6



STEP #15

Bolt Then Rivet Rear Wing Assembly to Middle Wing Assembly
 Leave Bolts Loose before inserting rivets then bolt tight!!!



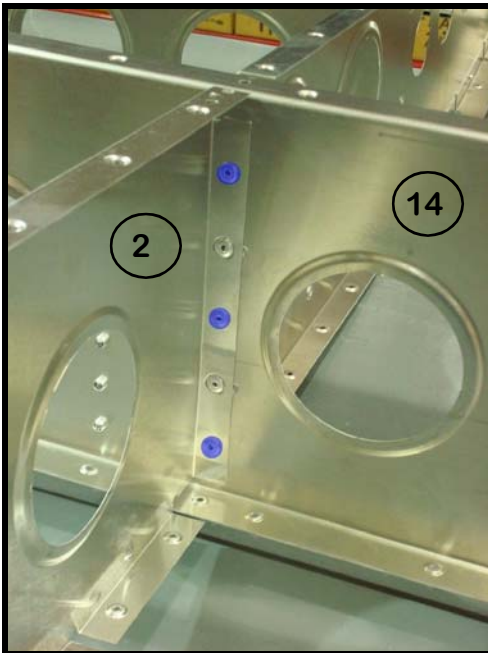
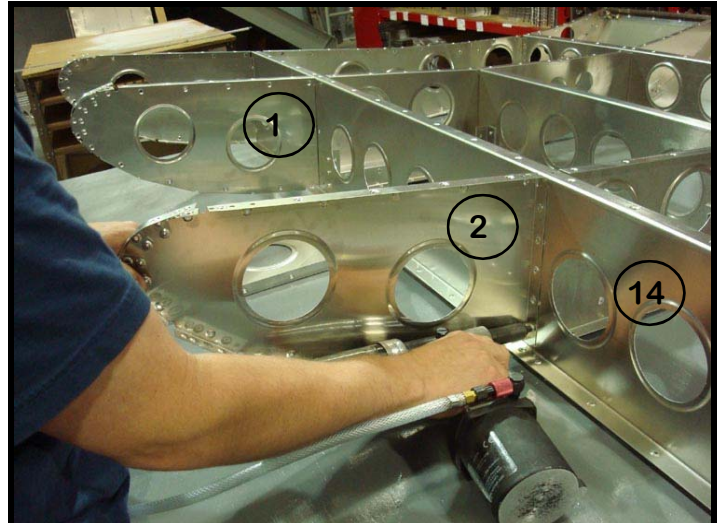
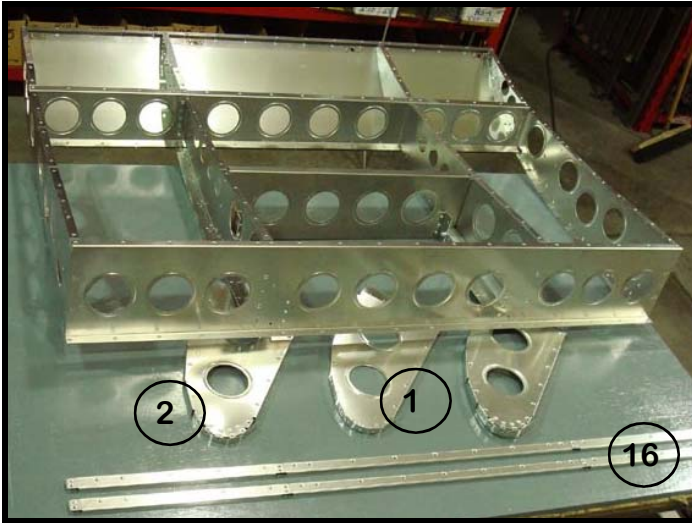
STEP #16

Rivet on (Item 4) LH and (Item 3) RH Center Outer Profiles

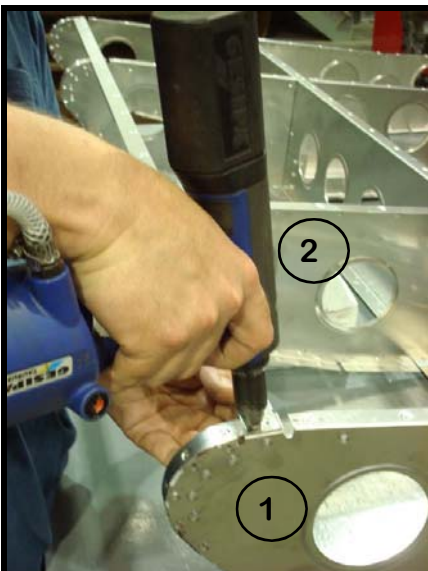
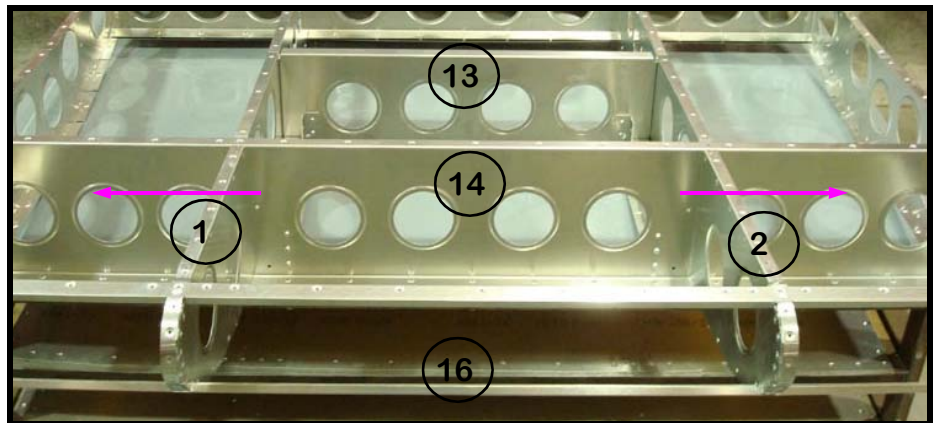
Rivet to (Item 12) Rear Cross Rib and
 Rear Assembly First

Then to (Item 14) Front Cross Rib only using Rivets (2)
 3/16 Rivets Each Side!

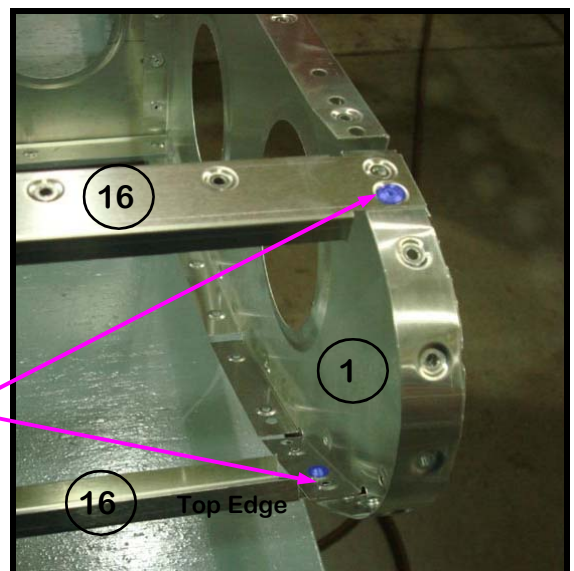
See above

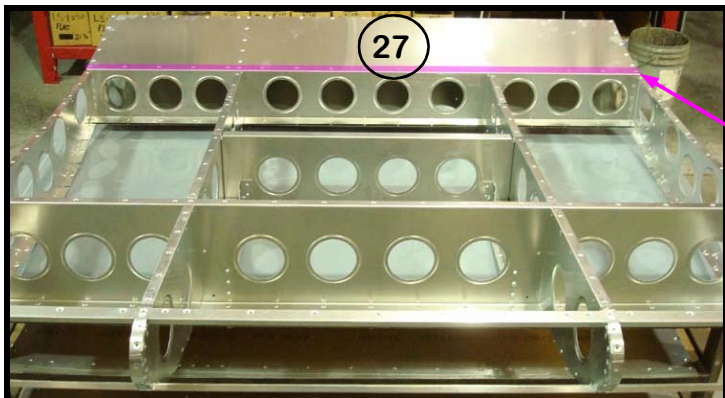


STEP #17
 Rivet on (Items 1,2) LH & RH Front Profiles 2 Each to (Item 14) and
 Middle Assembly
 Use (3) 3/16 Rivets for each Profile *Note: see left*
Note: Direction of Flanges see below



STEP #18
 Rivet on (Item 16)
 Nose Backers 2 Required
 with 1/8" Rivets
*Note: only use rivet holes not
 inline with main rivet line!!*



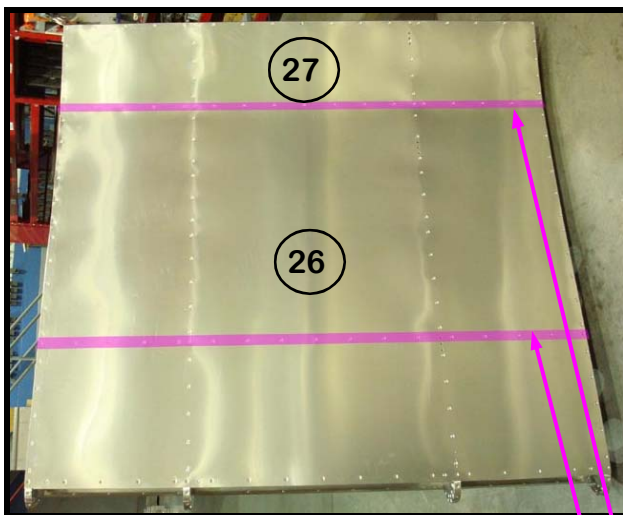


STEP #19

Rivet on (Item 27) Top Rear Skin

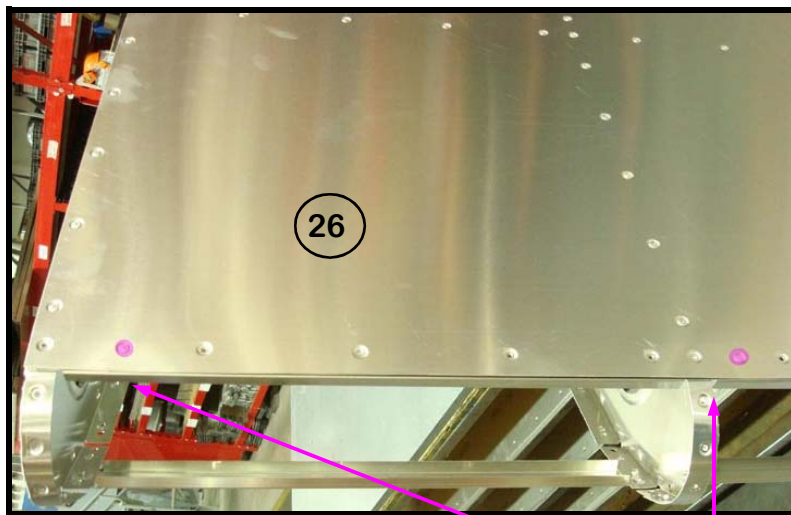
Note: No riveting along Front Main Rivet Line

Start with Back Edge and then Rivet along each Profile Forward



STEP #20

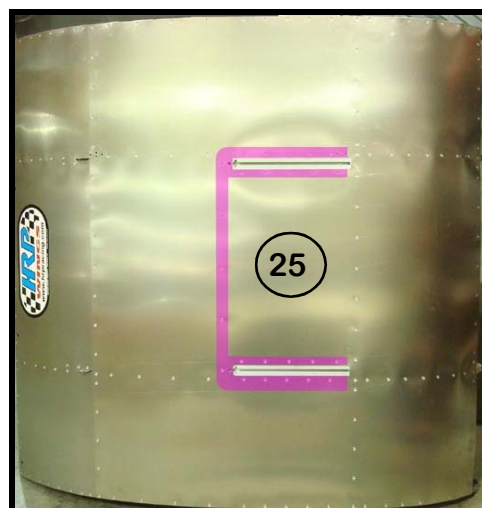
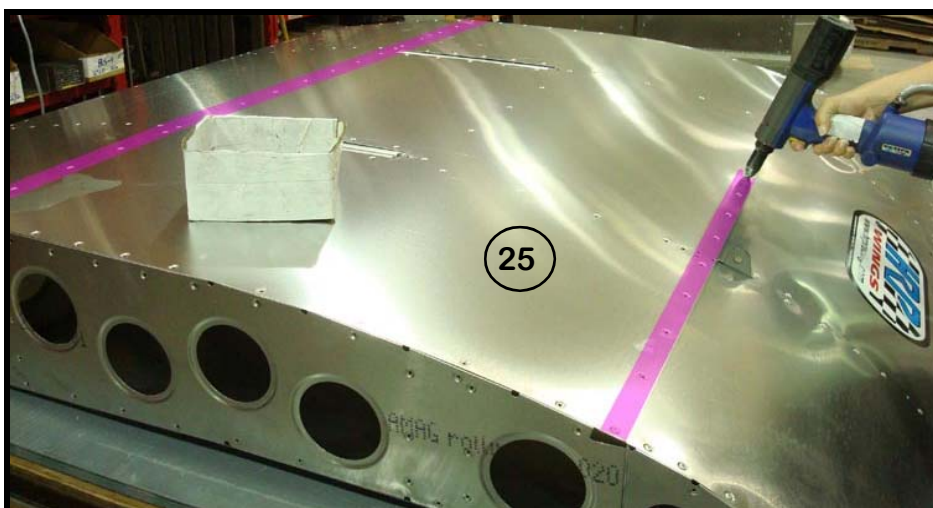
Rivet on (Item 26) Top Skin Start with Rivets that go thru Cross Ribs (Items 12,14) then Rivet from back to front into Profiles *Note: Rivet here First!!!*



STEP #21

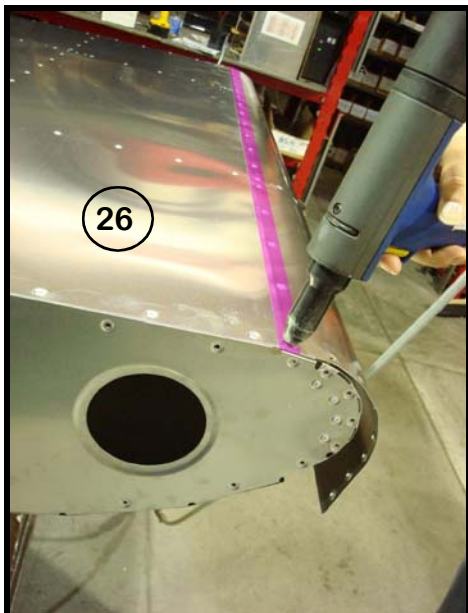
Rivet threw (Item 26) Into (Item 16)

Note: only rivet 4 rivets onto Nose Backer 2nd and 8th hole from each end!!!



STEP #22

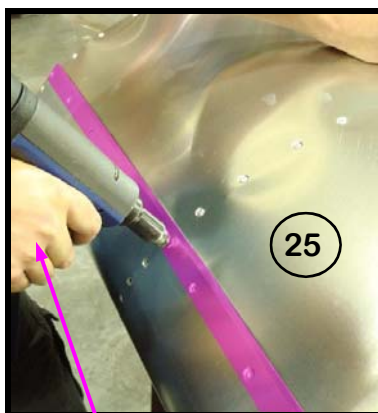
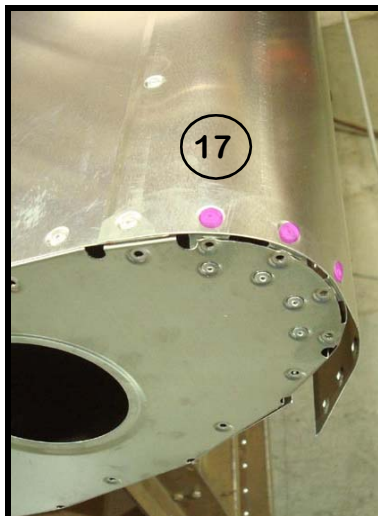
Rivet on (25) Bottom Skin Start with Rivets that go thru Cross Ribs then rivet around Slider Assembly and then Rivet from back to front into Profiles *Note: Again only rivet 4 rivets onto Nose Backer!!!*



STEP #23

Rivet on (Item 17) Nose Cap

1. Start with top row
2. Then rivet 3 down from top
3. Then rivet along bottom main row
4. Then finish remaining holes



STEP #24

Your Center Assembly is Complete
Check for Missing Rivets



STEP #25

Organize Side LH Side
Board pieces

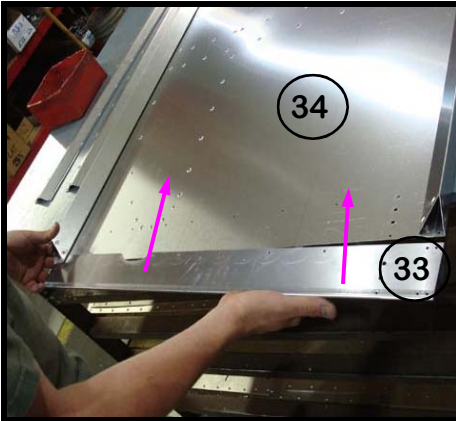
- 1 Req Item 31 Back Upright
- 2 Req Item 32 Center Upright
- 1 Req Item 33 Front Cap
- 1 Req Item 34 Board Panel
- 1 Req Item 35 Board Backer
- 2 Req Item 40 Corner Cap Outer
- 2 Req Item 41 Corner Cap Inner
- 1 Req Item 42 Front Cap Top
- 1 Req Item 43 Front Cap Bottom



STEP #26

Organize Side RH Side
Board pieces

- 1 Req Item 36 Back Upright
- 2 Req Item 37 Diagonal
- 1 Req Item 38 Front Cap
- 1 Req Item 39 Board Panel
- 2 Req Item 40 Corner Cap Outer
- 2 Req Item 41 Corner Cap Inner
- 1 Req Item 42 Front Cap Top
- 1 Req Item 43 Front Cap Bottom



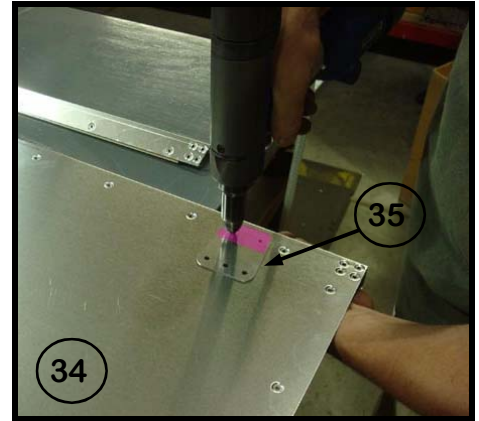
STEP #27

Stuff (Item 33) LH Front Cap onto front edge of LH Board
Note: Do not Rivet Yet



STEP #28

Rivet on 2 of (Item 32)
Note: Make sure rivet protrudes thru all layers!



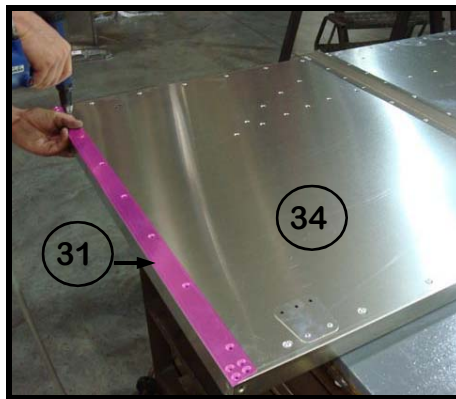
STEP #29

Rivet on (Item 35) LH Brace Backer
Note: Make sure rivet protrudes thru all layers!



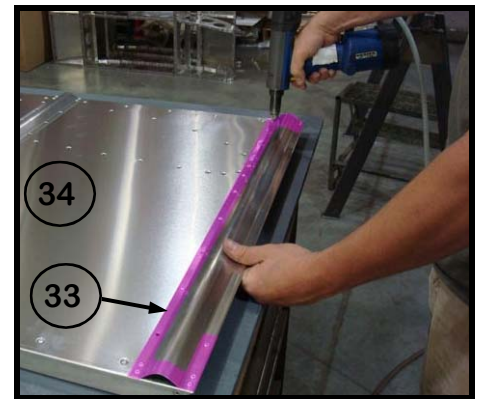
STEP #30

Rivet along Top & Bottom edge
Note: Make sure to squeeze up on Wrap around lip!



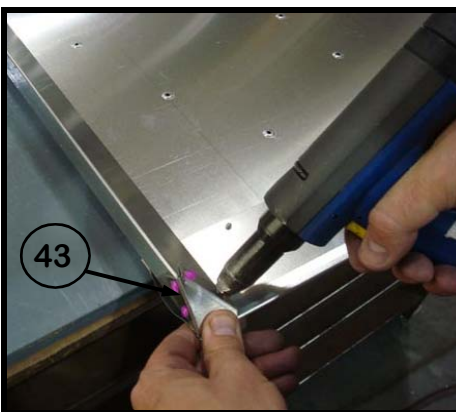
STEP #31

Rivet on (Item 31) LH Rear Upright
Note: Make sure to squeeze up on Wrap around lip!



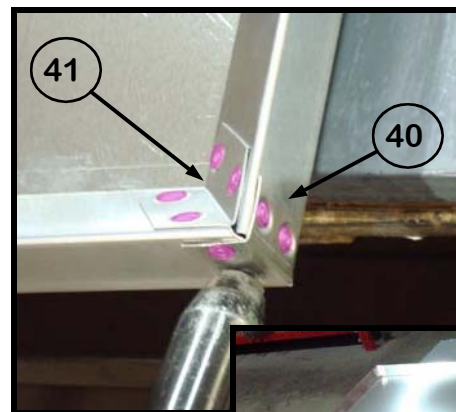
STEP #32

Rivet on Front edge
Note: All rivets to be insert from this side



STEP #33

Rivet on (Item 42 & 43) Front Cap Top & Front Cap Bottom



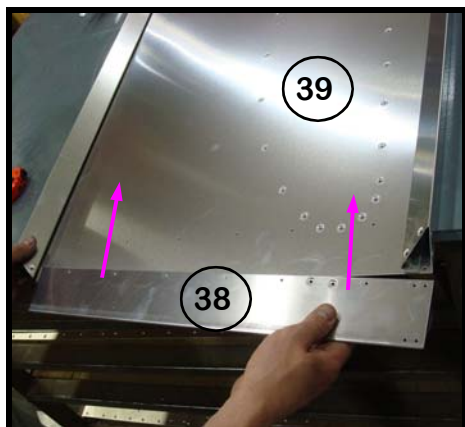
STEP #34

Rivet on (Item 40 & 41) Back Inner & Outer Corner Caps

Check to see if all your Rivets are in Place!

Your LH Board is now Complete!





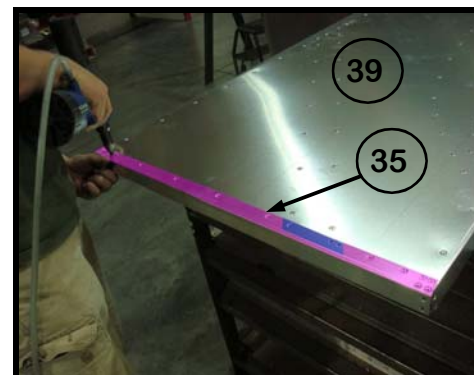
STEP #35

Stuff (Item 38) RH Front Cap onto front edge of LH Board
Note: Do not Rivet Yet



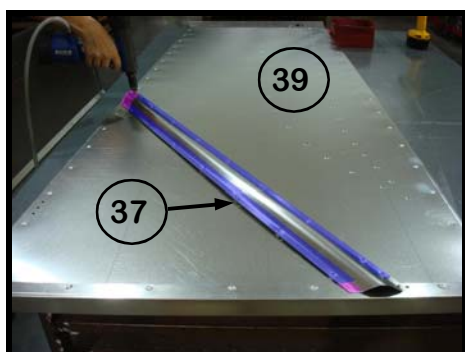
STEP #36

Rivet along Top & Bottom edge
Note: Make sure to squeeze up on Wrap around lip!



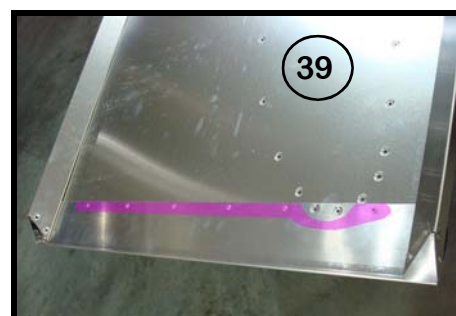
STEP #37

Rivet on (Item 36) RH Rear Upright
Note: Make sure to squeeze up on Wrap around lip! & Do Not rivet Holes in Blue Area



STEP #38

Rivet on (Item 37) RH Diagonal
Note: Rivet 4 holes from this side only, flip over then rivet remainder from opposite side!



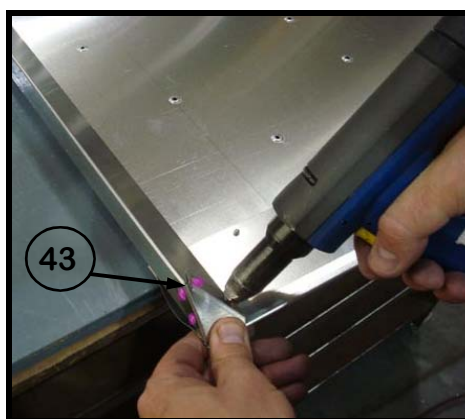
STEP #39

Rivet on Front edge
Note: 6 rivets to be inserted from this side only, must flip in Step 38 to finish!



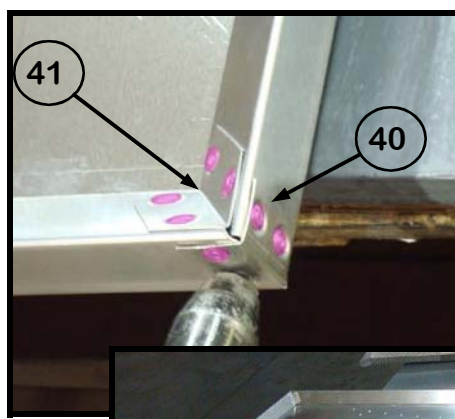
STEP #40

Rivet back side of Front Edge
Note: Make sure Rivet protrudes thru all layers!



STEP #41

Rivet on (Item 42 & 43) Front Cap Top & Front Cap Bottom



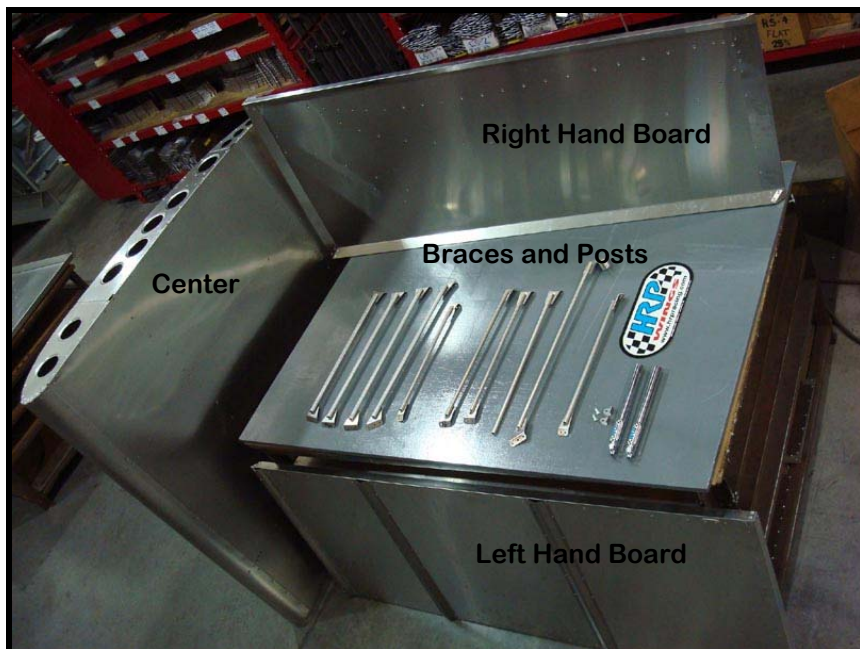
STEP #42

Rivet on (Item 40 & 41) Back Inner & Outer Corner Caps

Check to see if all your Rivets are in Place!

Your RH Board is now Complete!





STEP #43

Organize the assembled Center, LH & RH Boards And Remainder of Components

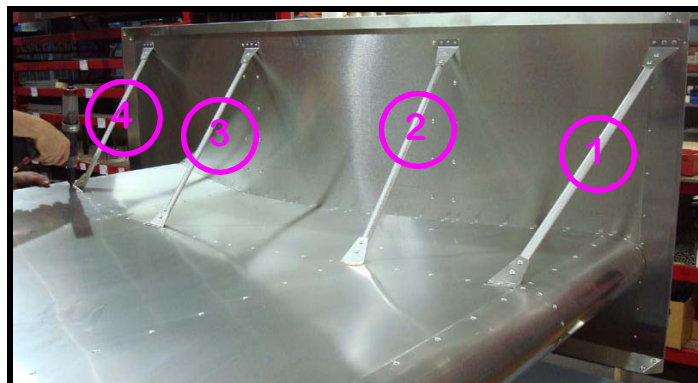
STEP #44

Assemble Sides to center, starting with very last hole in Profile, Then insert one near the front



STEP #45

Insert all Rivets in Profile on both LH and RH Boards



STEP #46

Rivet on LH Braces Starting with #1 (front) Working your way to the rear, DO NOT do # 5 yet!

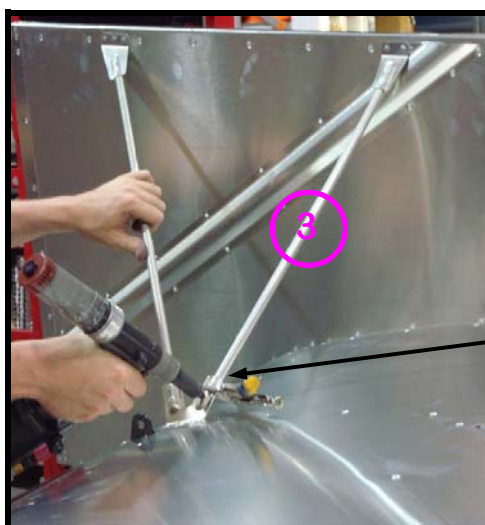
Note: See page 2 for brace layout



STEP #47

Rivet on RH Braces Starting with #1 (front) Working your way to the rear, DO NOT do # 3 & 5 yet!

Note: See page 2 for brace layout



STEP #48

Rivet on Brace # 3 into board only!

Use a vise grip and Clamp the other end! Drill out 2 - 3/16 holes and insert 2 rivets



STEP #49

Rivet on RH Board Brace #5

Note: Only 3 Rivets !
See Step 49!



STEP #50

Rivet on LH Board Brace #5

Note: Only 3 Rivets !
See Step 49!



STEP #51

Drill and insert the 4 Rivet on each
#5 Brace



STEP #52

If not done already apply HRP 15" oval
Sticker 2" from back Edge



STEP #53

Insert Posts and Entry Plates



STEP #54

D-Zues on Wicker Bill



STEP #55

Check for any missing
rivets....

Your HRP Wing is Complete

Congratulations!!!
You have Just Finished
Assembling the Best
Sprint Car Wing in the World!

And you are ready to bolt it on your car

Good Luck!!!