	REVISION RECORD		
LTR	CHANGES	BY	DATE
NC	RELEASED	D. B.	08/30/11

## D'Shannon Products, LTD

## INSTALLATION MANUAL DSPMM-01, Rev. A STC No. SA2200SW

INSTALLATION DRAWINGS

AND

INSTRUCTIONS FOR

MODIFICATION- NOSE GEAR TUNNEL

STRUCTURE

BEECH BONANZA A35, B35, C35, D35, E35, F35, G35

D'SHANNON PRODUCTS, LTD 800-291-7616, INT'L 763-559-5998

NEXT ASSY: DRAWN BY: D. B. ENGINEER: D. BRAUN CHECKED BY: D. B.	COVER SHEET
TOLERANCES .X10 .XXX01	D'SHANNON PRODUCTS, LTD
.XX03 .XXXX001 ANGLES ±5%	DWG. No. DSPMM-01-1 REVISION NC
UNLESS STATED	SCALE: NONE DATE 08/30/11 SH 1 OF 1

## NUMERICAL DRAWING LIST CONTROL

DWG. No.	DATED	RI	EV.	No. SHTS	EFF.	EΠ	EΠ	EO	EΠ	DESCRIPTION
DSPMM-01-1	08/30/11	NC		1						COVER SHEET
DSPMM-01-2	08/30/11	NC		1						NUMERICAL DWG. LIST
DSPMM-01-3	08/30/11	NC		1						INSTALLATION BILL OF MATERIAL
DSPMM-01-4	08/30/11	NC		1						GENERAL NOTES
DSPMM-01-5	08/30/11	NC		1						REMOVAL OF ORIGINAL BEECH RIVETS
DSPMM-01-6	08/30/11	NC		3						INSTALLATION SIDE REINFORCEMENT
DSPMM-01-8	08/30/11	NC		2						INSTALLATION TOP COVER FRONT
DSPMM-01-10	08/30/11	NC		3						INSTALLATION TOP COVER REAR
DSPMM-01-12	08/30/11	NC		3						INSTALLATION MOUNT REINFORCEMENT
DSPMM-01-13	08/30/11	NC		2						INSTALLATION MOUNT HOLES REAR
DSPMM-01-14	08/30/11	NC		2						TUNNEL REINFORCEMENT FORWARD
DSPMM-01-15	08/30/11	NC		1						INSTALLATION ENGINE MOUNTS REAR

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	REVISION RECORD								
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TOLERANCES .X10 .XXX01	D	'SHANI	VON	PR01	DU(	CTS,	L	TD
.XX03 .XXXX001 ANGLES ±5%	DW	G. No. D	SPMM	-01-2	REV	ISION	N	IC
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			ı	
27	DSPMM-01-14	48	MS2470AD3-5, 5	SOLID RIVET (SEE NOTE 4)
26	DSPMM-01-12	14	MS2470AD3-3. 3	SOLID RIVET (SEE NOTE 4)
	DSPMM-01-12	4	CR32126-3	CHERRYMAX RIVET
25				
24	DSPMM-01-12	4	MS2470AD3-5	SOLID RIVET (SEE NOTE 4)
23	DSPMM-01-6/-8/-10	155		SOLID RIVET (SEE NOTE 4)
55	DSPMM-01-6	147		SOLID RIVET (SEE NOTE 4)
21	DSPMM-01-15	12	MS20365-428	NUT
20	DSPMM-01-15	12	AN960D416L	WASHER (CUSTOMER SUPPLIED)
19	DSPMM-01-15	12	AN960D416	WASHER (CUSTOMER SUPPLIED)
18	DSPMM-01-15	12	AN4-11A/M/	BOLT (SEE NOTE 2)
17	DSPMM-01-15	1	35-910019-3	RHS MOTOR MOUNT (SEE NOTE 1)
16	DSPMM-01-15	1	35-910019-1	LHS MOTOR MOUNT (SEE NOTE 1)
15	DSPMM-01-13	1	71-20-01-12Z-2	RHS DRILL PATTERN ASSY (SEE NOTE 3)
14	DSPMM-01-13	1	71-20-01-12Z-1	LHS DRILL PATTERN ASSY (SEE NOTE 3)
13	DSPMM-01-14	1	71-20-01-11	REINFORCEMENT TEE
12	DSPMM-01-6	1	71-20-01-37-B-2	RHS INSIDE REINFORCEMENT REAR
11	DSPMM-01-6	1	71-20-01-37-A-2	RHS INSIDE REINFORCEMENT FRONT
10	DSPMM-01-6	1	71-20-01-37-B-1	LHS INSIDE REINFORCEMENT REAR
9	DSPMM-01-6	1	71-20-01-37-A-1	LHS INSIDE REINFORCEMENT FRONT
8	DSPMM-01-10	1	71-20-01-10	TOP COVER REAR
7	DSPMM-01-6	1	71-20-01-09-2	RHS SHIM
6	DSPMM-01-6	1	71-20-01-09-1	LHS SHIM
5	DSPMM-01-12	1	71-20-01-08-2	RHS MOUNT REINFORCEMENT
4	DSPMM-01-12	1	71-20-01-08-1	LHS MOUNT REINFORCEMENT
3	DSPMM-01-8	1	71-20-01-07	TOP COVER FRONT
2	DSPMM-01-6	1	71-20-01-06-2	SIDE REINFORCEMENT RIGHT
1	DSPMM-01-6	1	71-20-01-06-1	SIDE REINFORCEMENT LEFT
ITEM	LOCATION OF ITEMS	QTY.	PART NUMBER	DESCRIPTION

- 4. RIVET LENGTHS ARE TO BE DETERMINED BY THE INSTALLER. RIVETS ARE NOT SUPPLIED WITH THE KIT. WHERE SOLID RIVETS ARE CALLED OUT, BLIND RIVETS CAN BE SUBSTITUTED. ACCEPTABLE SUBSTITUTES INCLUDED CHERRY CR163-4-6 AND CR162-4CSK, CHERRY MAX CR3214 AND CR3224. AVEX RR-64 AND RV-14, AS WELL AS AD44H AND AK44H POP RIVETS.
- 3. DRILL FIXTURES ARE NOT PART OF THIS KIT. THEY MAY BE RENTED AT THE TIME OF INSTALLATION. CONTACT D'SHANNON PRODUCTS FOR RENTAL INFORMATION.
- 2. THE INSTALLER MUST DETERMINE THE CORRECT LENGTH AND GRIP LENGTH AS NO MORE THAN TWO ADDITIONAL WASHERS MAY BE USED UNDER THE HEAD OF THE BOLT OR UNDER THE NUT. TORQUE BOLTS PER BEECH MAINTENANCE MANUAL.
- 1. ENGINE MOUNTS MUST BE IN SETS OF CANTED OR STRAIGHT AS CALLED OUT IN BEECH PARTS MANUAL OR STC SA2200SW.

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LTR.	CHANGES	BY	DATE
NC	RELEASED	D. B.	08/30/11

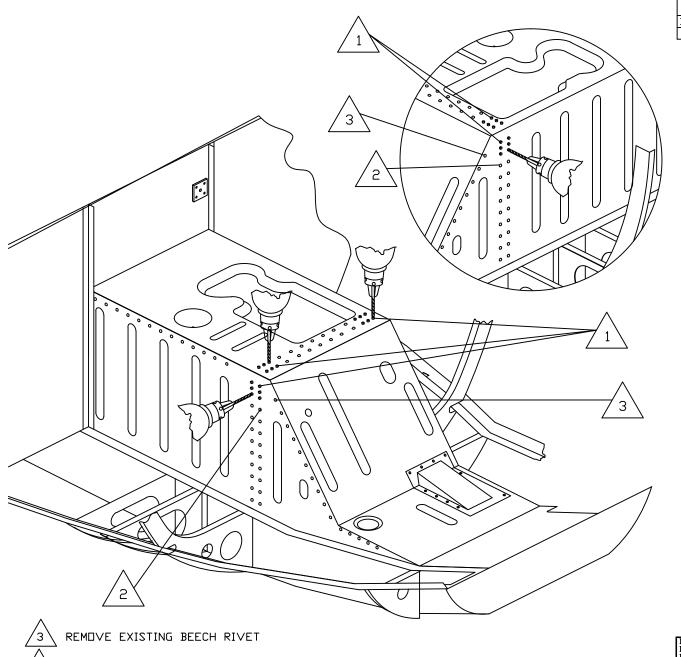
NEXT ASSY: DRAWN BY: D. B. ENGINEER: D. BRAUN CHECKED BY: D. B.		I١	ISTA	4LL	ATIC	]N	BILL	_ 0	- MA	TEF	RIAL
TOLERANCES .X10 .XXX01	D	' .	SHA	4 <i>N1</i>	VON	F	PROI	DUC	CTS,	L	TD
.XX03 .XXXX001 ANGLES ±5%	DW	G.	No.	Ι	SPMM	1-0	1-3	REV	ISION	1	ИC
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## **GENERAL NOTES: MODIFICATION - NOSE GEAR TUNNEL STRUCTURE**

- 1. THE INSTALLATION DOES NOT REQUIRE THE USE OF THE DRILL PATTERN ASSEMBLIES ITEM (14)
  70-20-01-12Z-1 (LH) OR ITEM (15) 70-20-01-12Z-2 (RH). THERE ARE SEVERAL WAYS TO DRILL
  THE REAR ENGINE MOUNT HOLES IN THE KEEL. RENTAL OF THESE DRILLING FIXTURES IS AT THE
  DISCRETION OF THE STC HOLDER.
- 2. INSIDE THE TUNNEL ON THE STRUCTURAL BULKHEAD FRAME AT THE REAR ENGINE MOUNT BOLTS IS A FORMED BRACKET. THE BRACKET HOUSED AND GUIDED THE CABLE THAT TRAVELS FROM THE STEP TO THE NOSE GEAR. THIS CABLE RETRACTS THE STEP WHEN THE NOSE GEAR RETRACTS. REMOVE THE RIVETS THAT ATTACH THE BRACKET AND REPLACE WHEN THE TUNNEL SECTION DOUBLERS ARE INSTALLED. IF A PERMANENT STEP IS INSTALLED, REMOVE THE CABLE BRACKET AND DISCARD BOTH THE CABLE AND THE BRACKET. RECORD THE CHANGE IN THE APPROPRIATE PAPERWORK.
- 3. THE BOLTS THAT HOLD THE ENGINE MOUNT BRACKETS TO THE AIRFRAME ARE AN960-4-A-M. THE LENGTH OF THE BOLT IS TO BE DETERMINED BY THE INSTALLER. THERE MAY BE A TOTAL OF SIX (6) THICK WASHERS USED AS LONG AS AT LEAST ONE WASHER IS UNDER EACH END OF THE FASTENER. REFERENCE THE BEECH H-35 OR LATER PARTS CATALOG FOR THE GENERAL LENGTH. WHEN SELECTING THE LENGTH, MAKE SURE THAT THE FASTENER DOES NOT INTERFERE OR CONFLICT WITH CABLES, ETC. DUE TO MINOR VARIATIONS IN KEEL BOX SECTION THICKNESS, AND/OR THE DOUBLERS INSTALLED, MAKE SURE THAT THE BOLT GRIP LENGTH IS CORRECT FOR THE HOLE AT THE TRANSITION POINT WHERE THE BOLT RESTS IN THE MOUNT WHEN THE NUTS ARE SNUGGED UP. THERE WILL BE A SLIGHT INTERFERENCE FIT AT THE GRIP AND THREADS TRANSITION IN THE NEW STRUCTURE. THE BOLT WILL BE LARGER UNDER THE HEAD DUE TO THE MANUFACTURING AND/OR PLATING PROCESS. DO NOT PUSH THE BOLT THROUGH THE NEW DRILLED HOLES IN THE DOUBLERS TO THE HEAD BECAUSE THE SHANK OR GRIP MAY TRY TO EXTRUDE THE NEW DOUBLERS AT THE HEAD OF THE BOLT.
- 4. USE CLECOS TO INSTALL THE DOUBLERS IN PLACE WHILE DRILLING.
- 5. IT IS STRONGLY RECOMMENDED THAT PRIOR TO THE INSTALLATION OF ANY OF THE DOUBLERS, CLEAN, ETCH AND FINISH THE AREA USING THE PROPER PRIMER.
- 6. INSTALL ALL THE DOUBLERS WITH RIVETS AS CALLED OUT IN THE PARTS LIST. FILL ALL HOLES. IT IS PERMISSIBLE TO OVERSIZE TO LARGER RIVET HOLES BUT NO MORE THAN TWO SIZES LARGER, AND ONLY WHEN THE EDGE DISTANCE FROM THE RIVET HOLE IS AT LEAST 1.5 TIMES THE DIAMETER OF THE RIVET HOLE. RIVET LENGTH, SIZE AND TYPE IS DETERMINED BY THE INSTALLER. RIVETS, BOLTS, WASHERS, NUTS, PRIMER AND ETCH ARE NOT FURNISHED BY THE STC OR PMA HOLDER.
- 7. THE WEIGHT AND C.G. CHANGE OF THIS KIT IS TO BE DETERMINED BY THE INSTALLER DUE TO THE DIFFERENCES IN ALTERNATORS, BAFFLES, CRANKCASE, CYLINDERS, SHAFTS, MAGNETOS, ETC.
  NOTE ITEMS ADDED AND REMOVED FOR WEIGHT AND BALANCE PURPOSES. IT IS RECOMMENDED THAT THE AIRCRAFT IS WEIGHED AFTER COMPLETION.

NEXT ASSY: DRAWN BY: D. B. ENGINEER: D. BRAUN CHECKED BY: D. B.	l			GEN	ERAL	NDT	ES		
TOLERANCES .X10 .XXX01	D	'SH	ANI	VON	PRO	DU	CTS,	, LTD	)
.XX03 .XXXX001 ANGLES ±5%	DW	G. No	. DS	PMM-	-01-4	REV	ISION	NC	
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NEXT ASSY: DRAWN BY: D. B. ENGINEER: D. BRAUN CHECKED BY: D. B.

REMOVAL OF ORIGINAL BEECH RIVETS

TOLERANCES .X\_\_\_.10 .XXX\_\_\_.01

D'SHANNON PRODUCTS, LTD

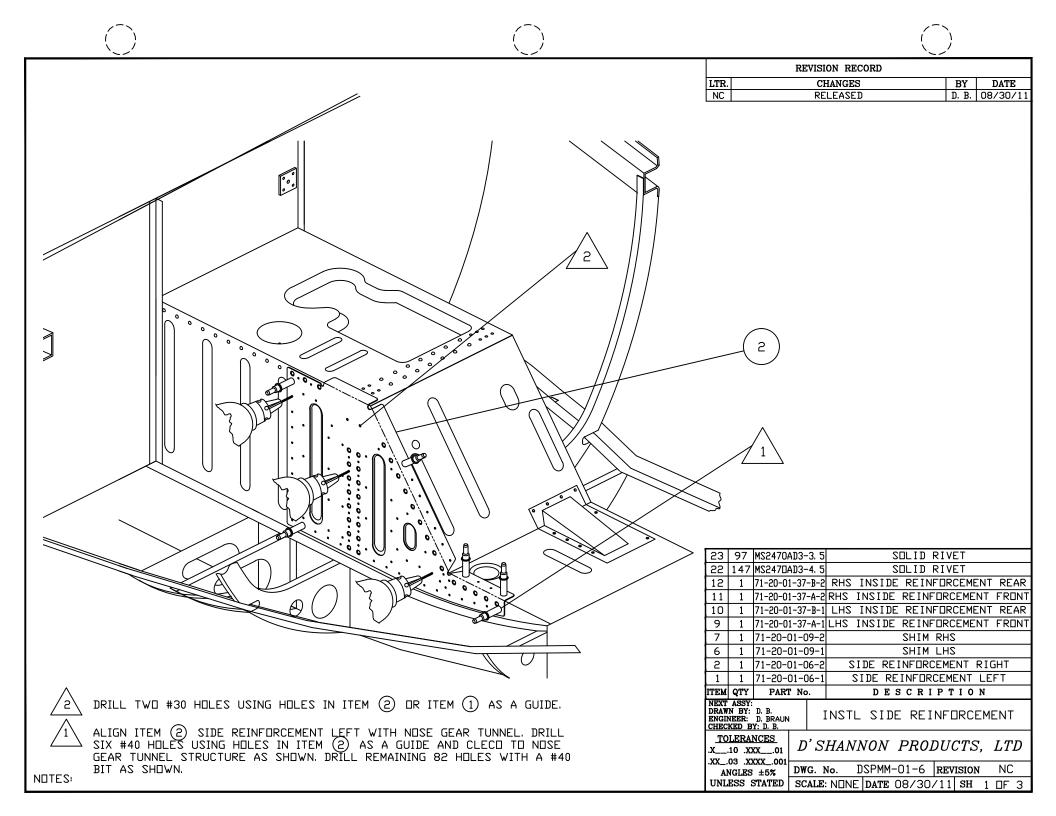
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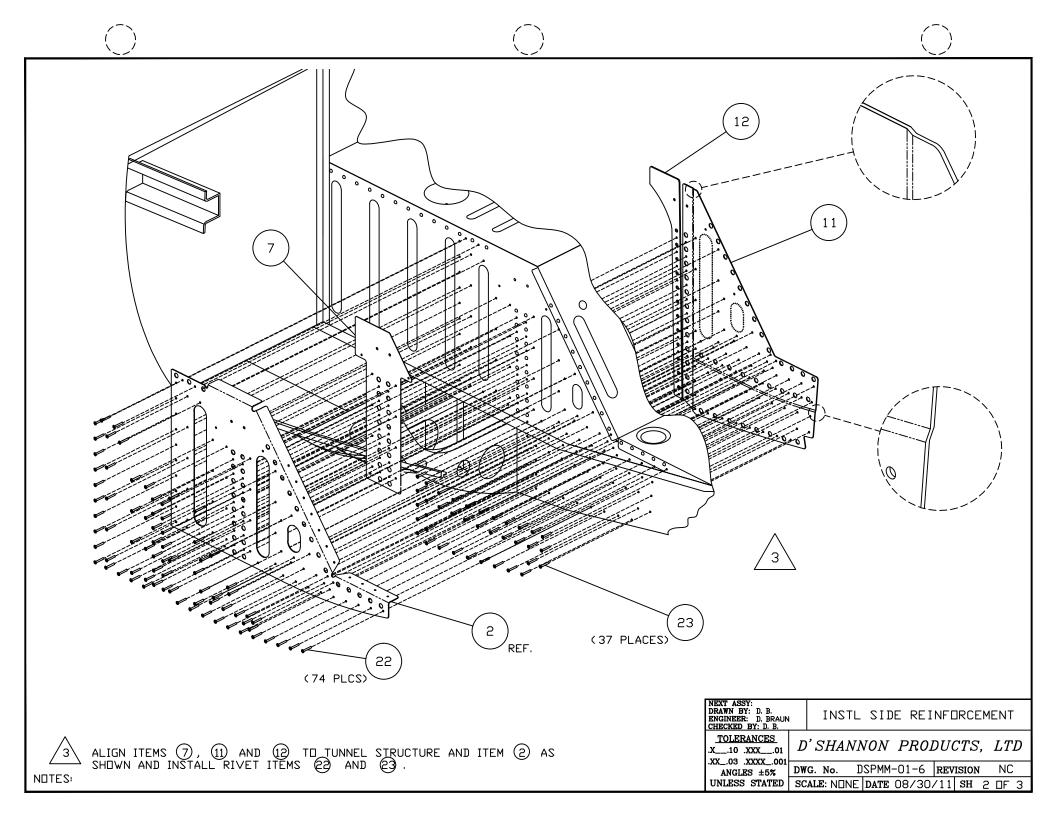
ANGLES ±5% DWG. No. DSPMM-01-5 REVISION NO. UNLESS STATED SCALE: NDNE DATE 08/30/11 SH 1 DF 1 DSPMM-01-5 REVISION

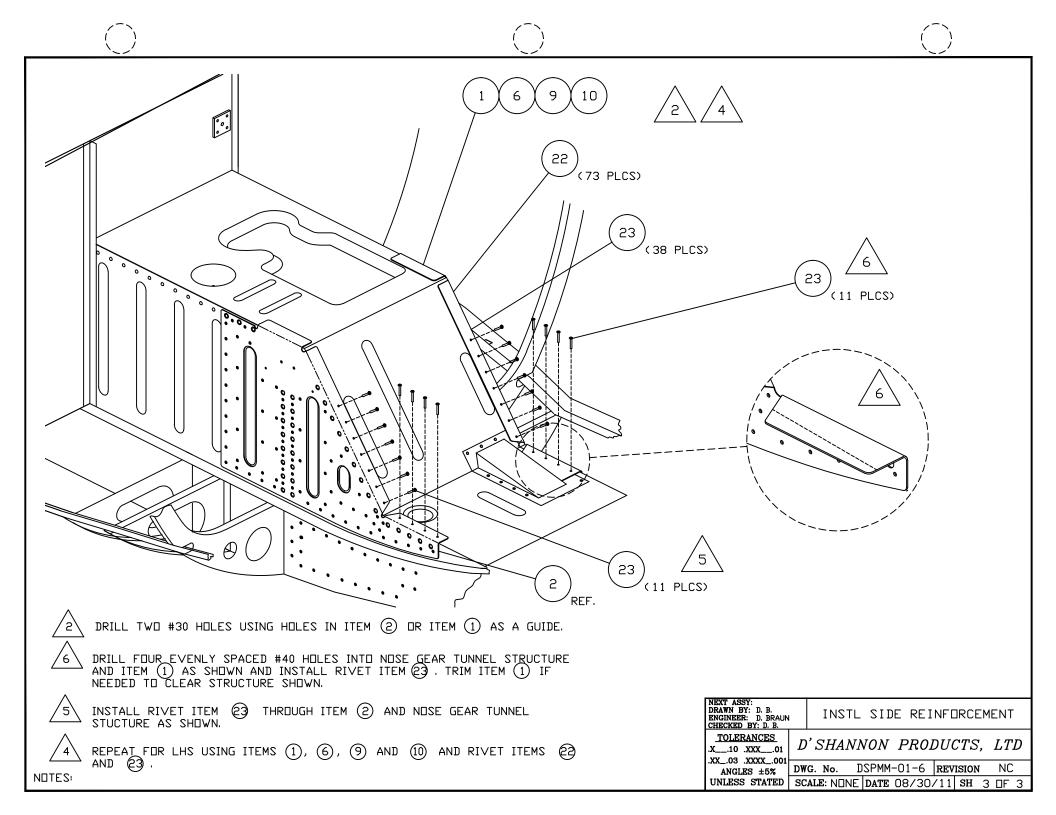
REMOVE EXISTING BEECH RIVETS (2 PLACES)

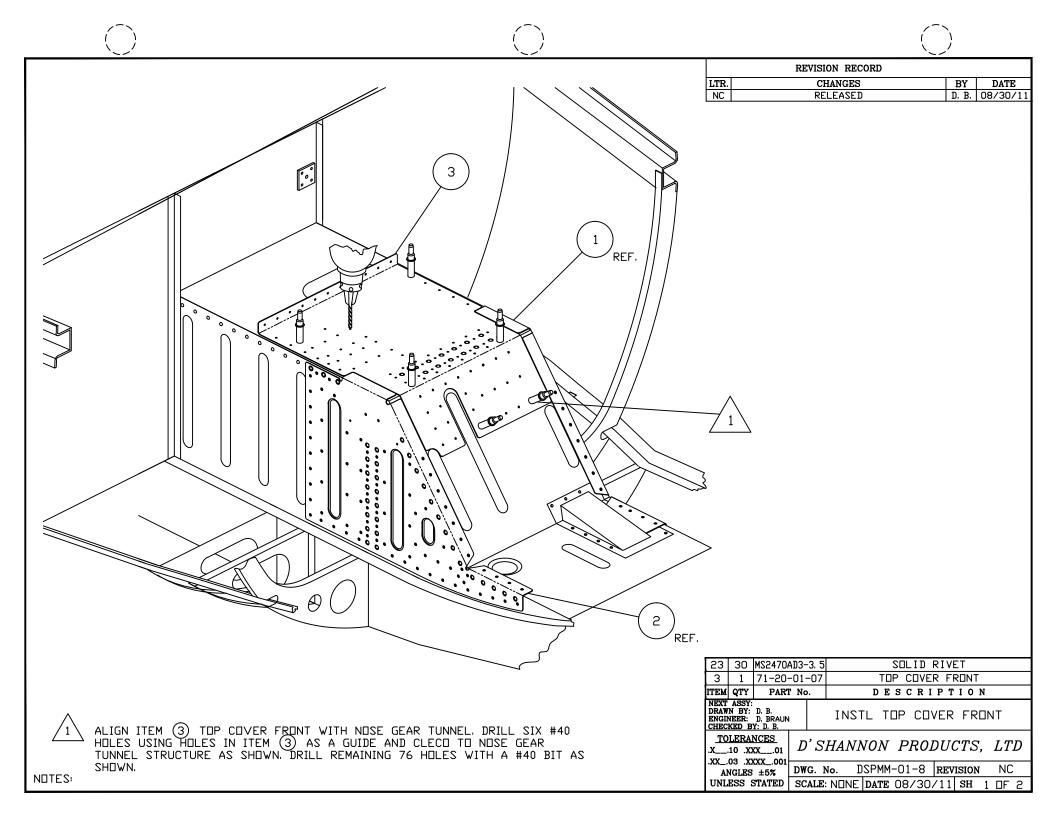
REMOVE EXISTING BEECH RIVETS (6 PLACES).

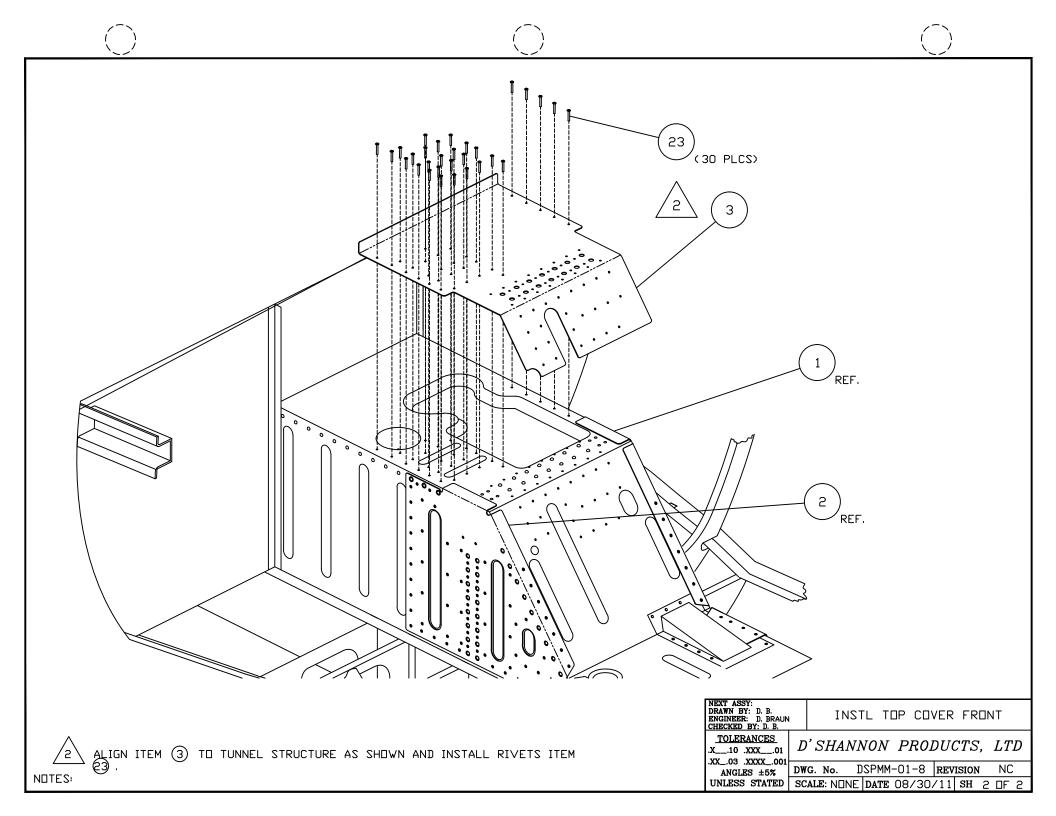
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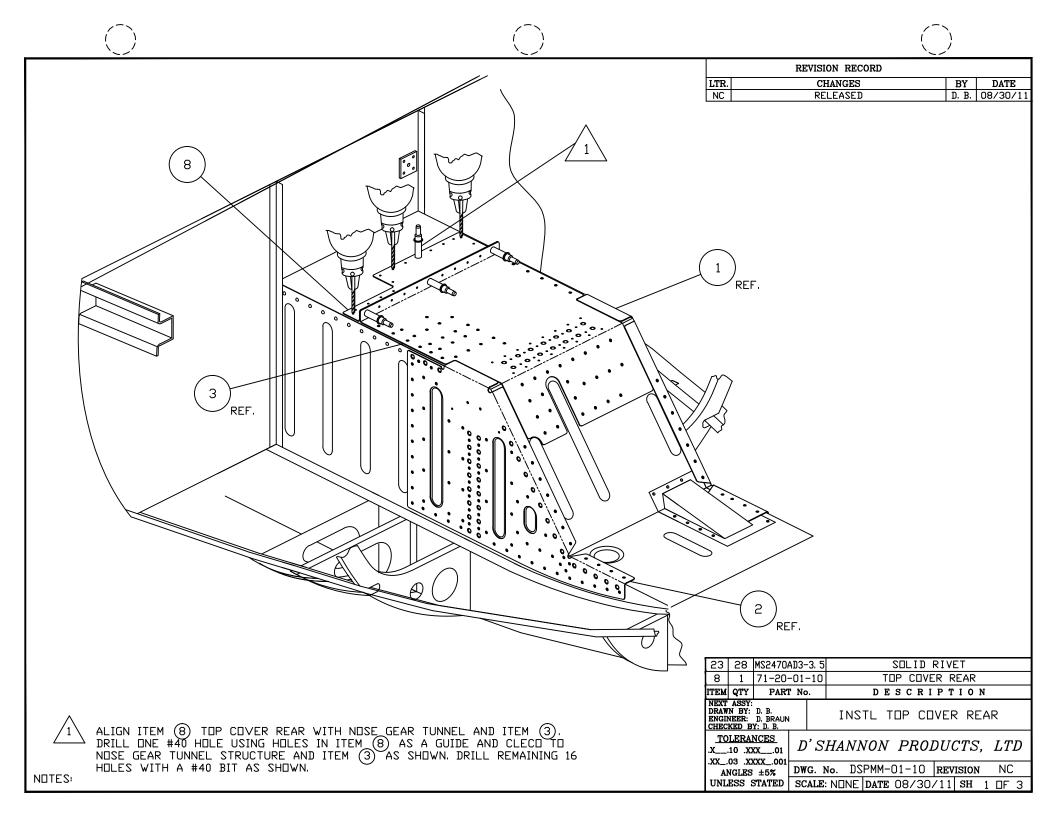


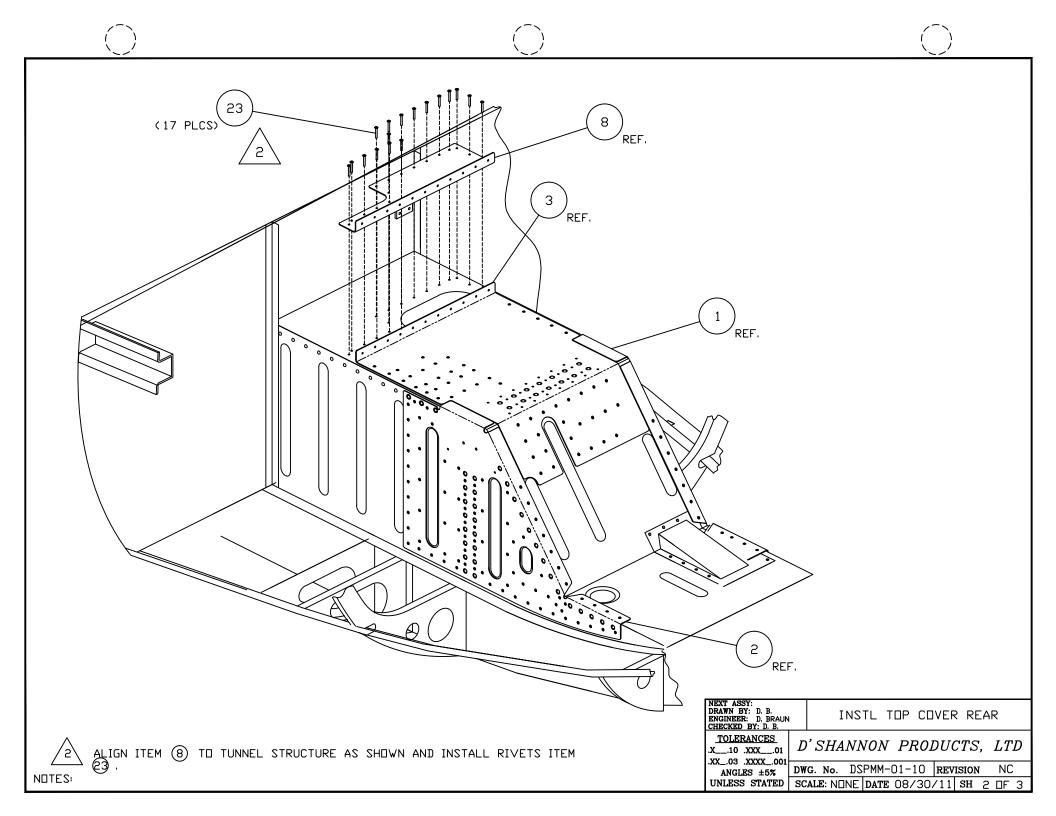


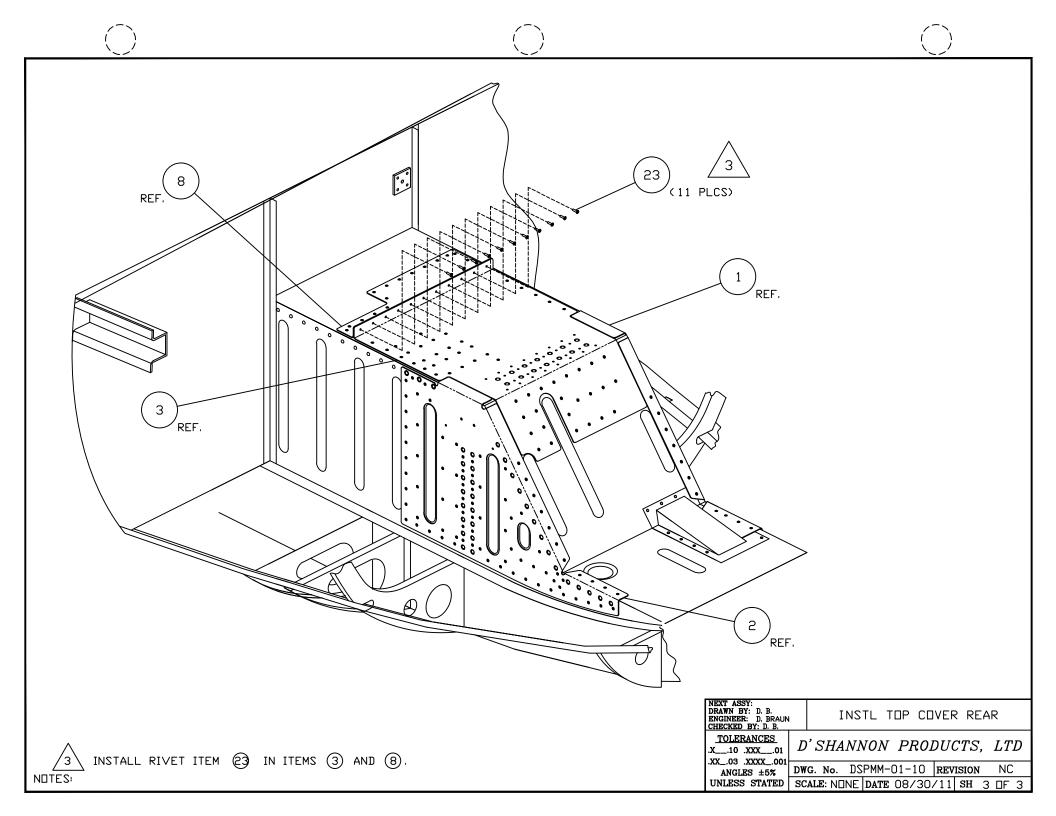


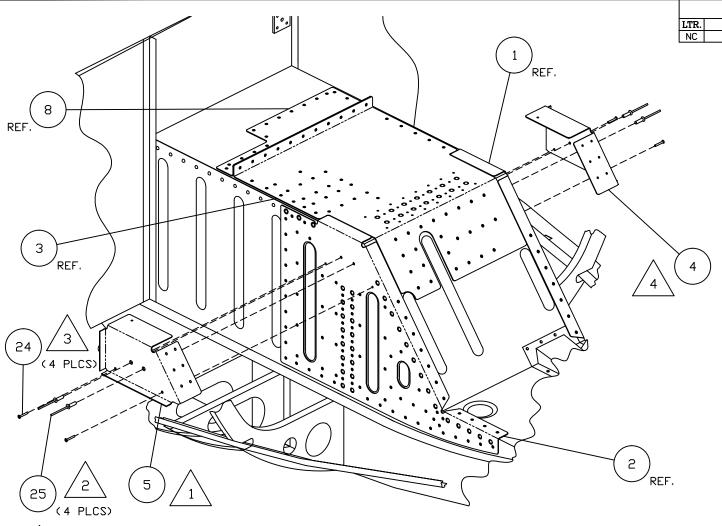












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REPEAT THE OPERATIONS FOR THE LHS OF THE NOSE GEAR TUNNEL USING ITEM 4 LHS MOUNT REINFORCEMENT AND ITEMS 2 AND 4 AS SHOWN.

INSTALL RIVET ITEM (24) AS SHOWN.

INSTALL RIVET ITEM (5) THROUGH ITEMS (5),(2),(7),(1),(12) AND THE NOSE GEAR TUNNEL STRUCTURE. ASSURE THE COUNTERSUNK RIVETS ITEM (5) ARE SET SO THAT THE HEADS DO NOT PROTRUDE AS TO INTERFERE WITH THE INSTALLATION OF THE ENGINE MOUNTS.

ALIGN ITEM (5) RHS MOUNT REINFORCEMENT WITH THE NOSE GEAR TUNNEL AND SIDE AND TOP REINFORCEMENTS AS SHOWN. DRILL THE CENTER OF THE COUNTERSUNK HOLES TO THE PROPER SIZE FOR THE RIVETS BEING USED PER THE RIVET MANUFACTURER'S INSTRUCTIONS.

26	14	MS24/0AD3-4	ZULIN KIAFI						
25	4	CR32126-3	CHERRYMAX RIVET						
24	4	MS2470AD3-5	SOLID RIVET						
5	1	71-20-01-08-2	RHS MOUNT REINFORCEMENT						
4	1	71-20-01-08-1	LHS MOUNT REINFORCEMENT						
ITEM	QTY	PART No.	DESCRIPTION						

NEXT ASSY: DRAWN BY: D. B. ENGINEER: D. BRAUN CHECKED BY: D. B.

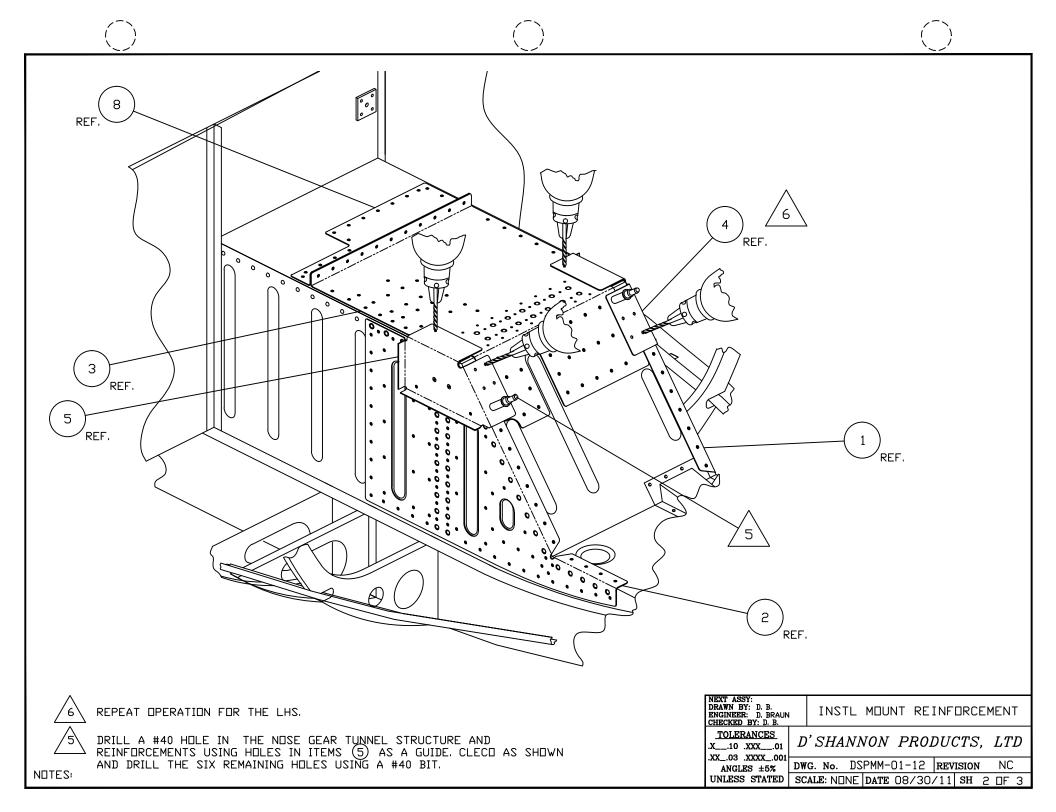
INSTL MOUNT REINFORCEMENT

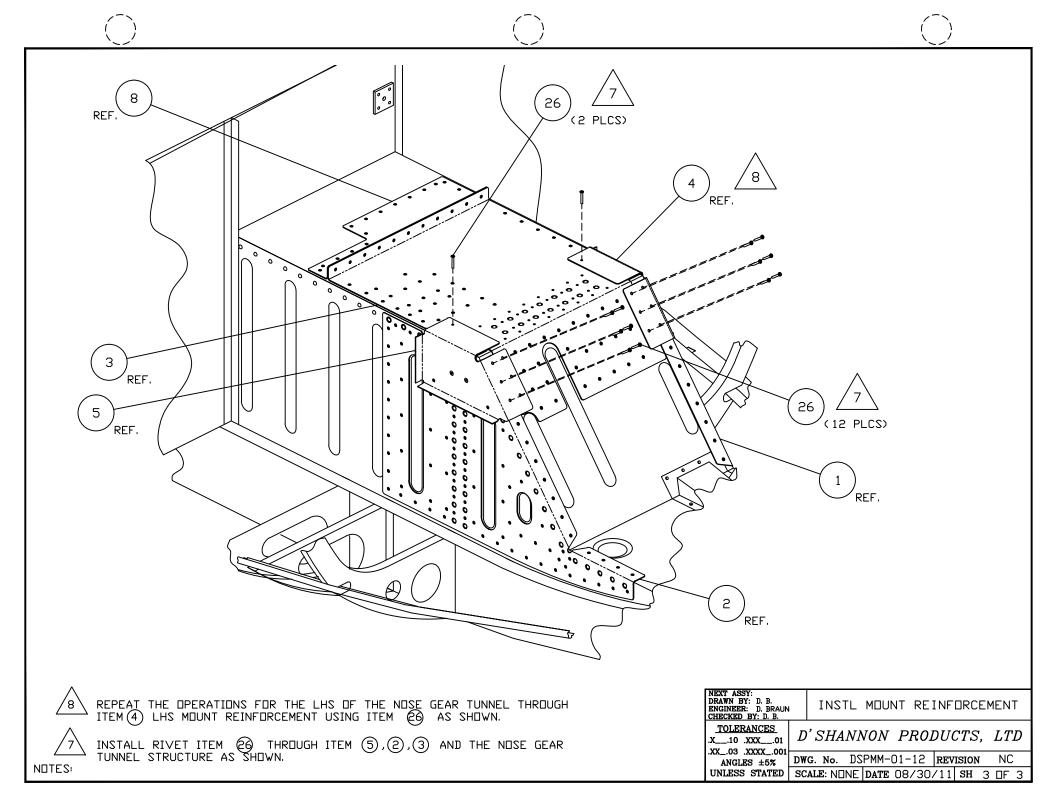
TOLERANCES .X\_\_.10 .XXX\_\_.01 .XX\_.03 .XXXX\_.001 ANGLES ±5%

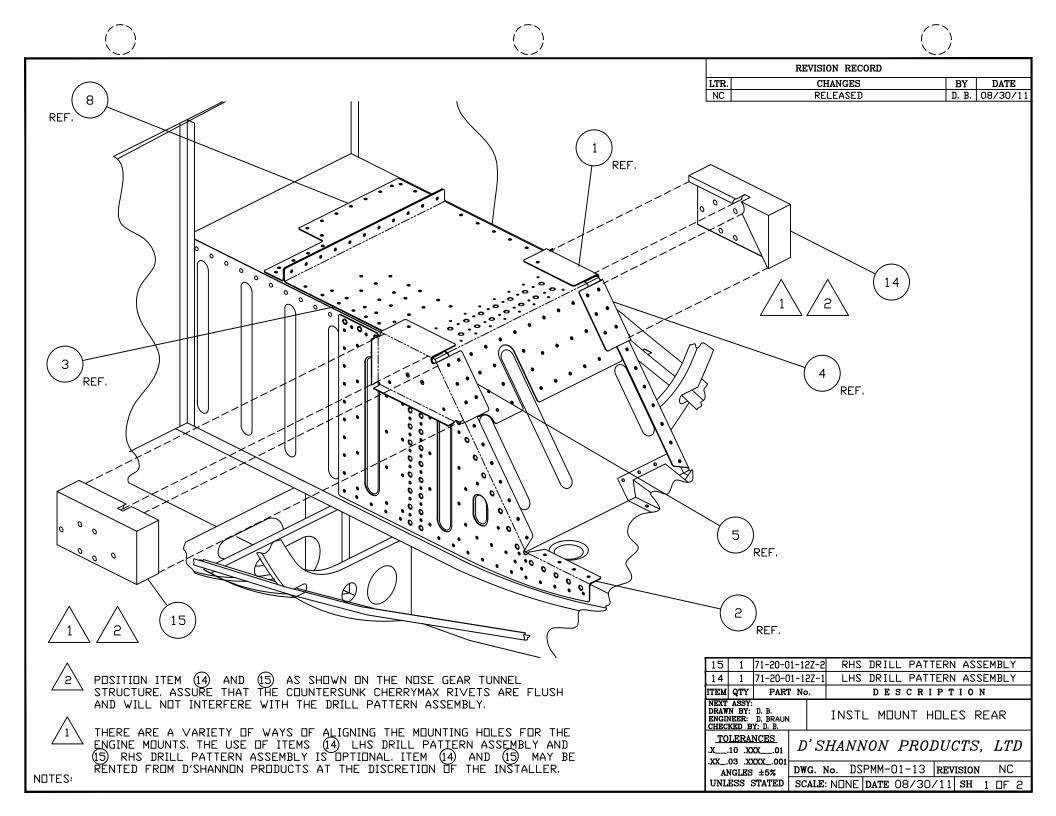
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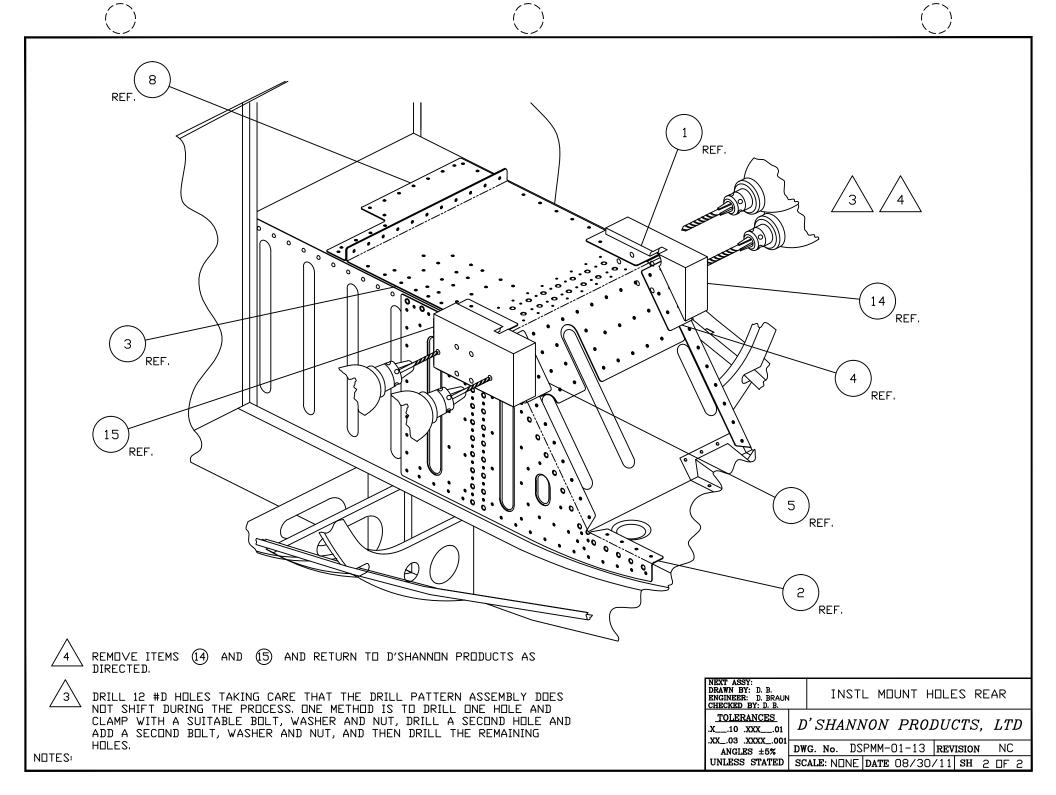
D'SHANNON PRODUCTS, LTD

NOTES:

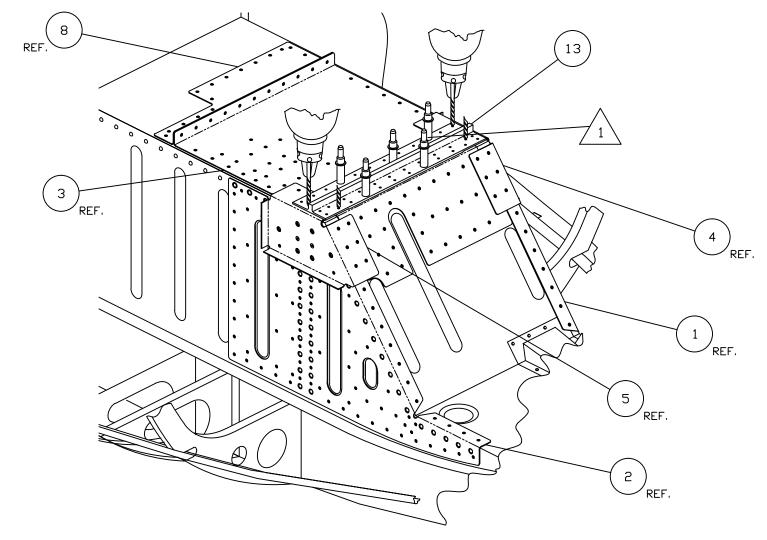








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ALIGN ITEM 13 REINFORCEMENT TEE WITH THE NOSE GEAR TUNNEL AND SIDE AND TOP REINFORCEMENTS AS SHOWN. DRILL 5 #40 HOLES USING ITEM 13 AS A GUIDE AND CLECO AS SHOWN. DRILL THE REMAINING 43 HOLES THROUGH ITEMS 1,2,3,4,5 AND NOSE GEAR TUNNEL STRUCTURE.

27	48	MS2470AD3-	-5, 5	SOLID RIVET
13	1	71-20-01	-11	1 REINFORCEMENT TEE
ITEM	QTY	PART No.		DESCRIPTION
	ASSY: N BY:		TU	UNNEL REINFORCEMENT FORWARD

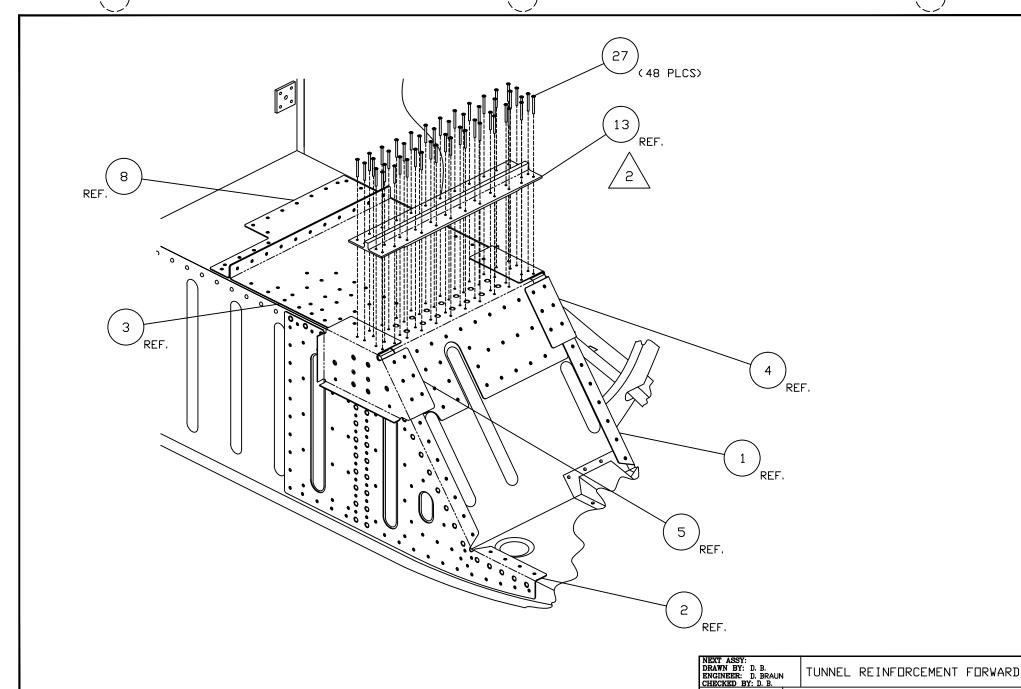
ENGINEER: D. BRAUN CHECKED BY: D. B.

TOLERANCES .X\_\_\_.10 .XXX\_\_\_.01 .XXX. 03 .XXXX\_.001 ANGLES ±5%

D'SHANNON PRODUCTS, LTD DWG. No. DSPMM-01-14 REVISION

UNLESS STATED | SCALE: NONE | DATE 08/30/11 | SH 1 OF 2

NDTES:



INSTALL RIVET ITEM (2) THROUGH ITEMS (3),(1),(2),(3),(4),(5) AND THE NOSE GEAR TUNNEL STRUCTURE.

TOLERANCES D'SHANNON PRODUCTS, LTD .X\_\_\_.10 .XXX\_\_\_.01

NDTES:

