

SECTION "A"

BUILDING THE CHASSIS FRAME



STATEMENT OF OWNERSHIP

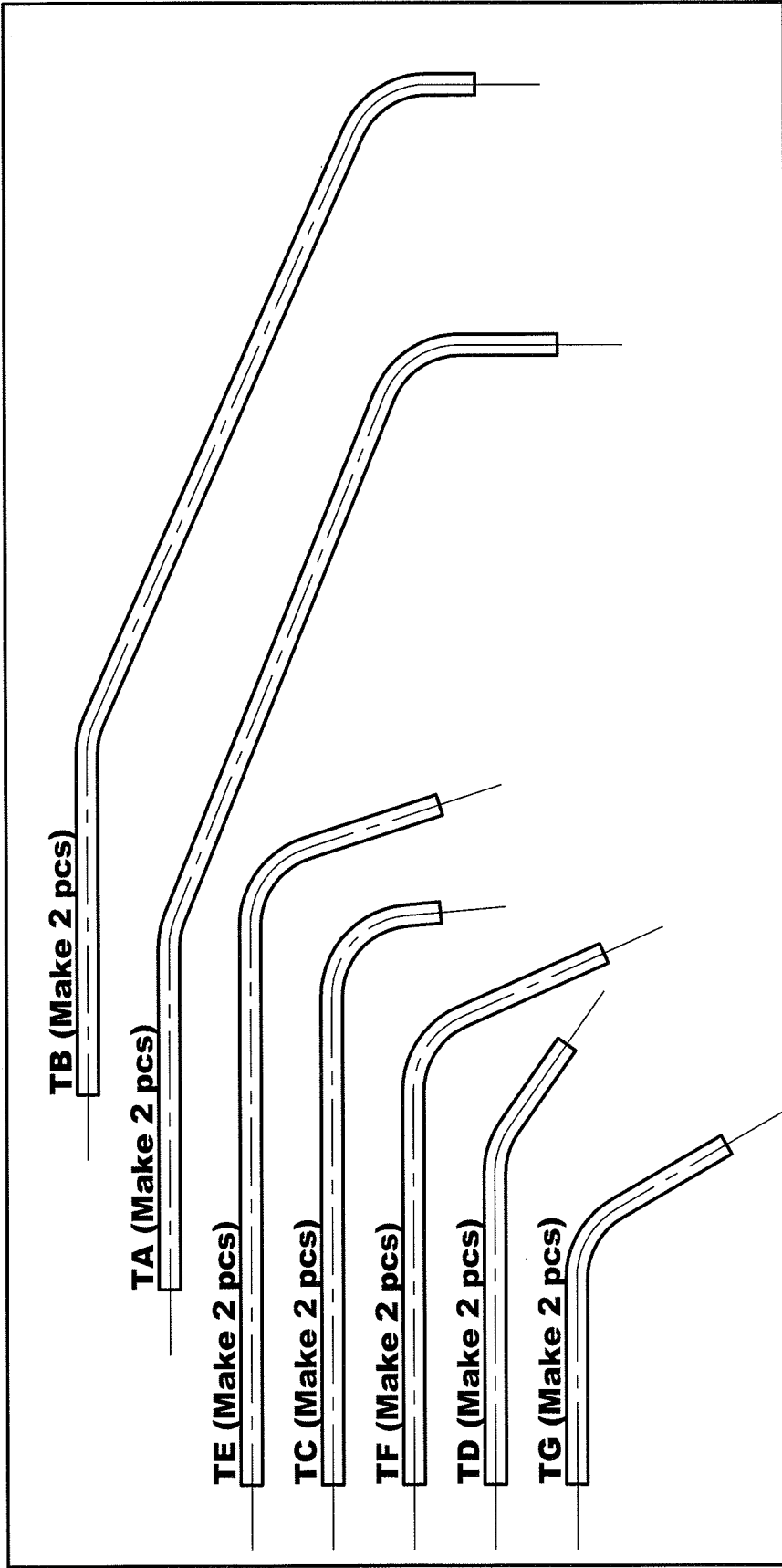
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TITLE

SECTION "A"
BUILDING THE CHASSIS FRAME

DWG No.

A01



TB (Make 2 pcs)

TA (Make 2 pcs)

TE (Make 2 pcs)

TC (Make 2 pcs)

TF (Make 2 pcs)

TD (Make 2 pcs)

TG (Make 2 pcs)

Making the Template Board for Bent Tubes

Start with a full 4'x8' sheet of $\frac{3}{4}$ " thick plywood or medium density fibreboard (MDF).

Use the dimensions & details shown on the next series of drawings to create full size templates for each bent tube as shown above.

You will need 2 tubes of each template (14 bent tubes total). Each tube is identified by a unique label (ie: TA, TB, etc...). This helps in locating where the tubes will be placed on the chassis frame later.

Place this template board on top of a table or saw horses to give you a solid flat working surface while doing your tube bending.



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TITLE

TEMPLATE BOARD FOR ALL BENT CHASSIS TUBES

DWG No.

A02

NOTES:

CLR = Center Line Radius of bend joints

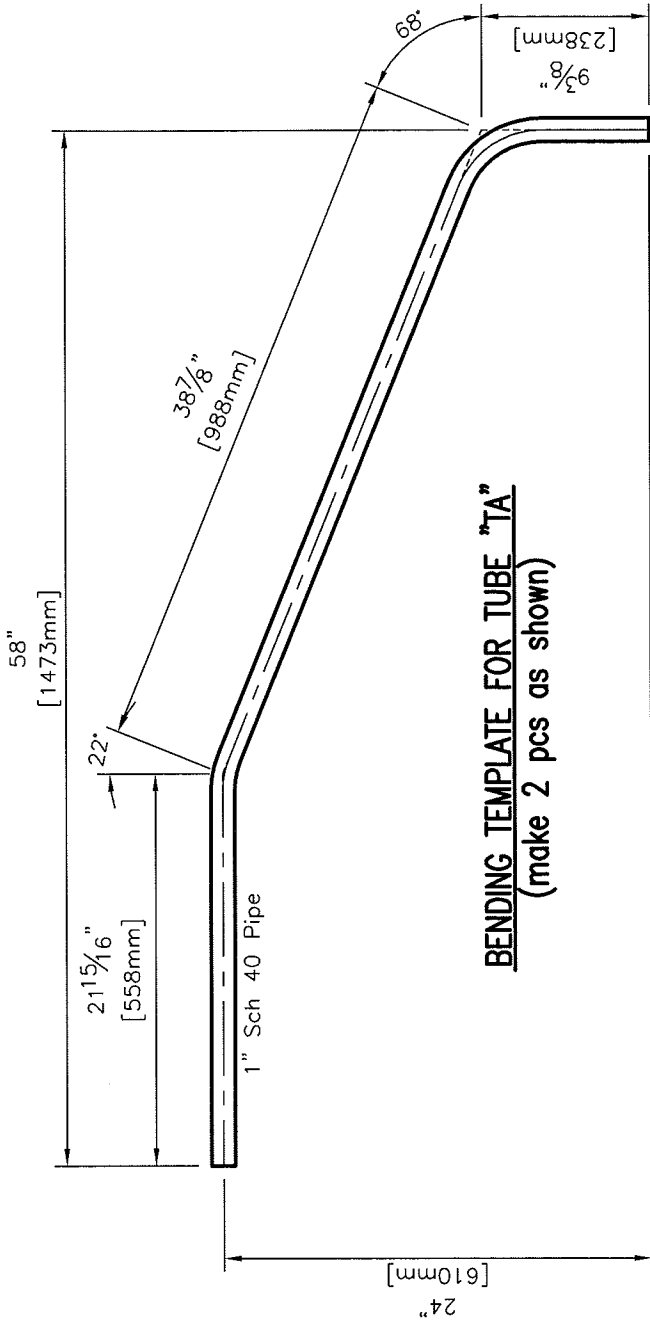
CLR shown = 5" radius

Use these dimensions to draw out the full scale templates of each bent tube on the template board.

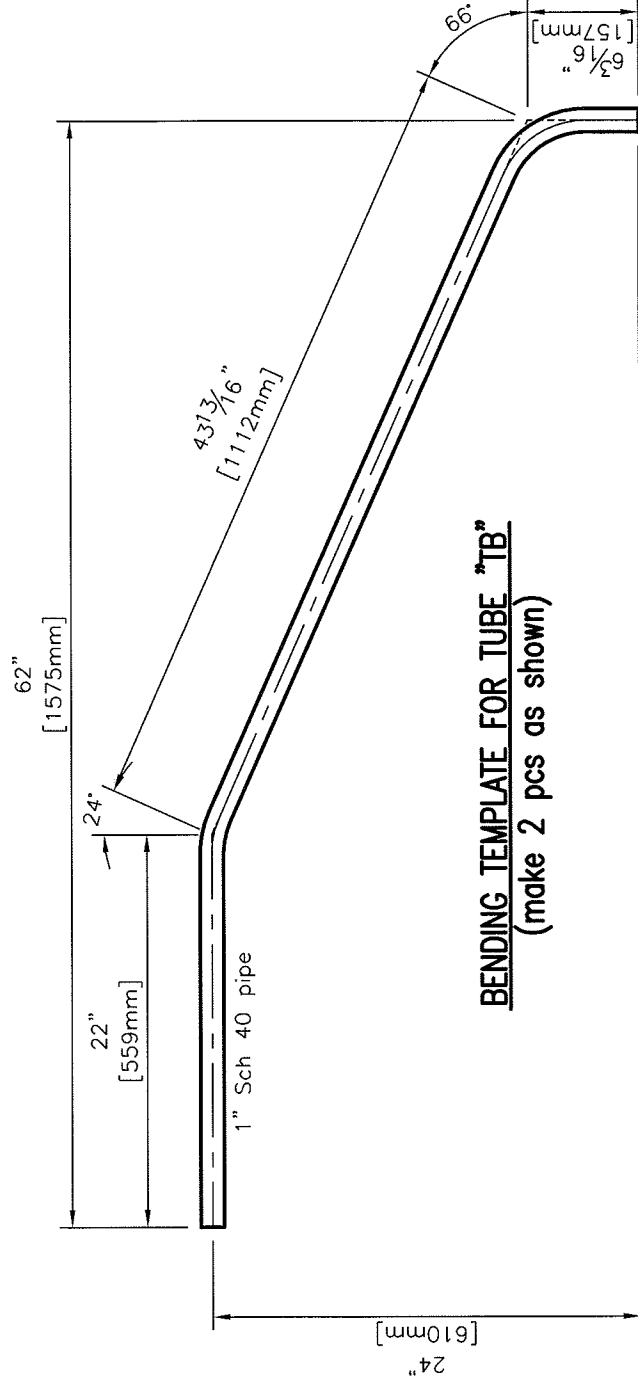
Once completed, use a tube bending machine to bend the steel tubes, as shown, then lay them on the template board to verify that each tube is bent correctly.

Occasionally, you may under-bend or over-bend a bent joint in your tube bending machine. If this occurs, simply use an acetylene gas torch to heat the bend joint & carefully apply force in the direction needed to fine adjust the bend angle.

TIP: Make each end of the tube approx. 3-6" longer than shown, then trim the ends using the templates as a guide.



BENDING TEMPLATE FOR TUBE "TA"
(make 2 pcs as shown)



BENDING TEMPLATE FOR TUBE "TB"
(make 2 pcs as shown)



STATEMENT OF OWNERSHIP

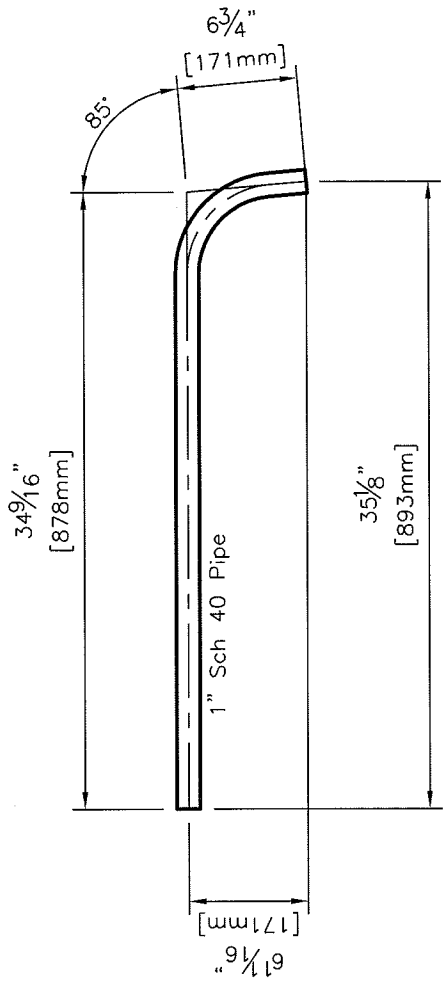
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TITLE

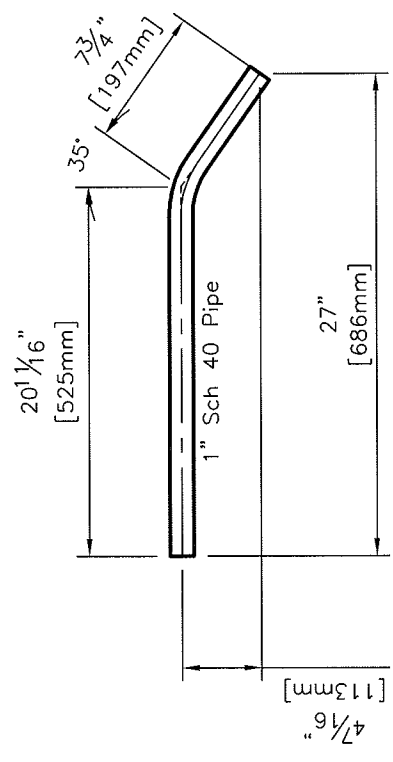
**BENDING DETAILS
TUBES "TA" & "TB"**

DWG No.

A03



BENDING TEMPLATE FOR TUBE "TC"
 (make 2 pcs as shown)



BENDING TEMPLATE FOR TUBE "TD"
 (make 2 pcs as shown)



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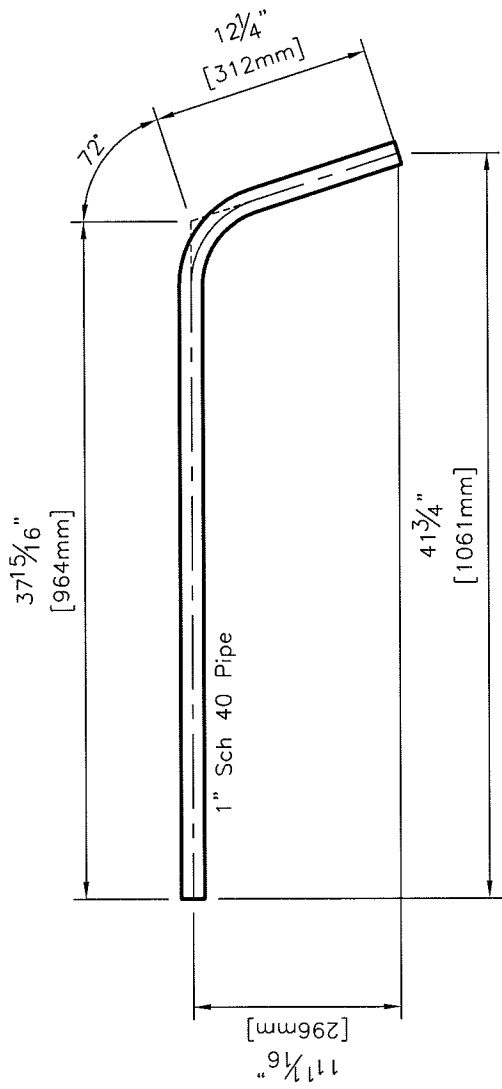
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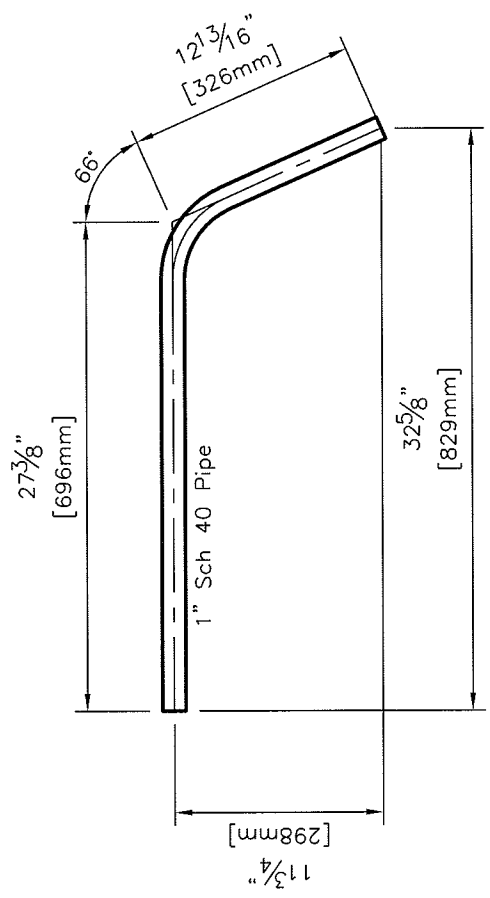
**BENDING DETAILS
 TUBES "TC" & "TD"**

DWG No.

A04



BENDING TEMPLATE FOR TUBE "TE"
 (make 2 pcs as shown)



BENDING TEMPLATE FOR TUBE "TF"
 (make 2 pcs as shown)



STATEMENT OF OWNERSHIP

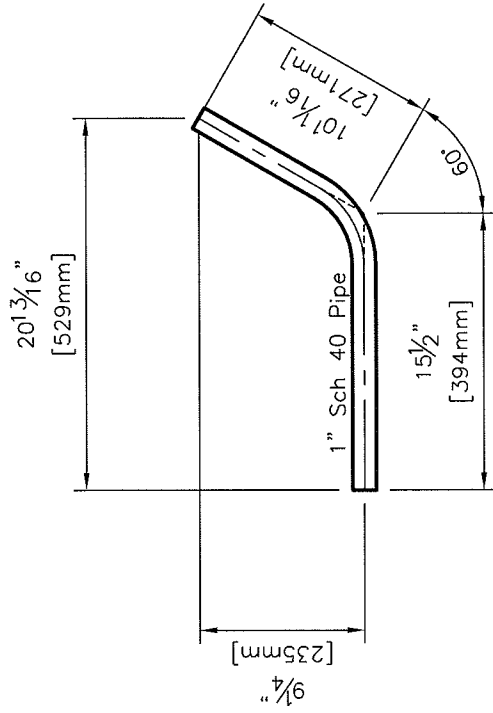
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TITLE

**BENDING DETAILS
 TUBES "TE" & "TF"**

DWG No.

A05



BENDING TEMPLATE FOR TUBE "TG"
 (make 2 pcs as shown)



TITLE

**BENDING DETAILS
 TUBES "TG" & "TH"**

DWG No.

A06

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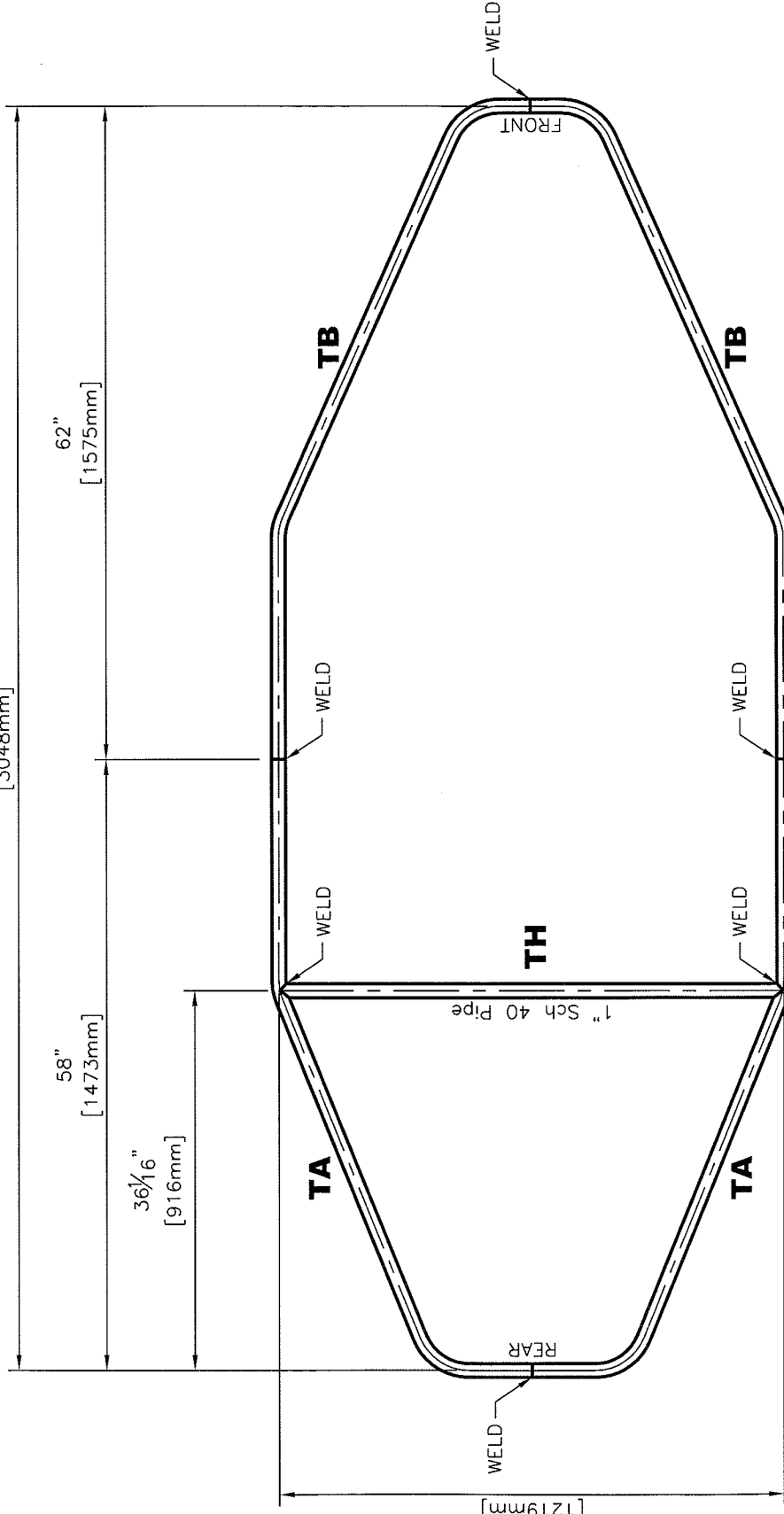
120"
[3048mm]

62"
[1575mm]

58"
[1473mm]

36 1/16"
[916mm]

48"
[1219mm]



MID-FRAME WELDED ASSEMBLY



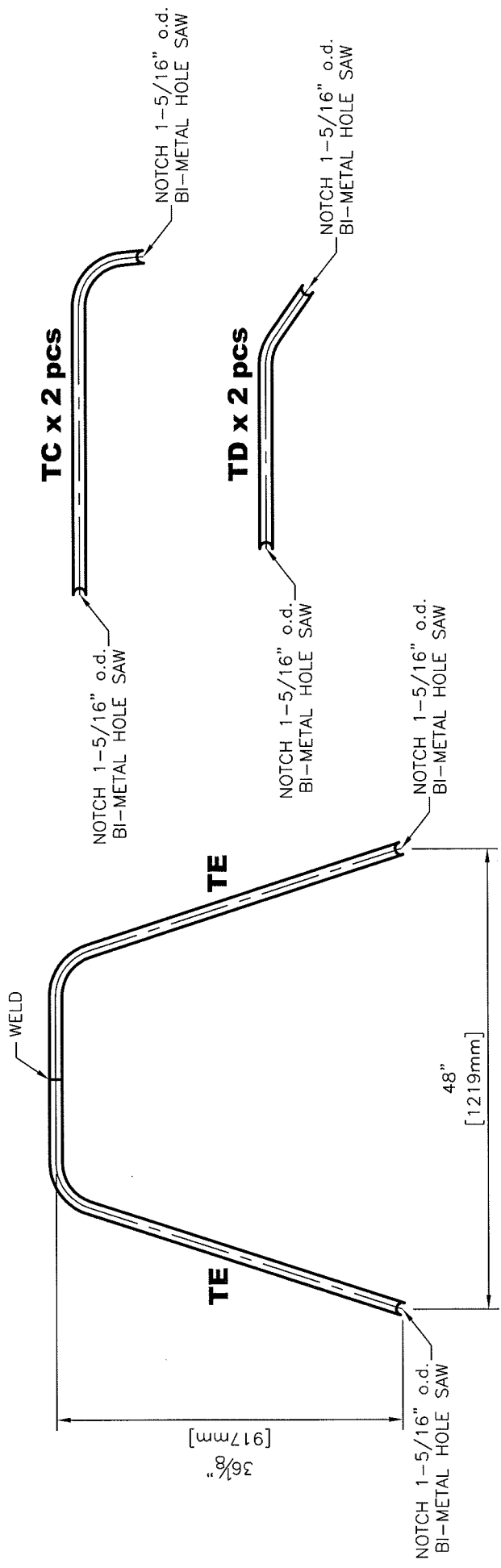
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TITLE

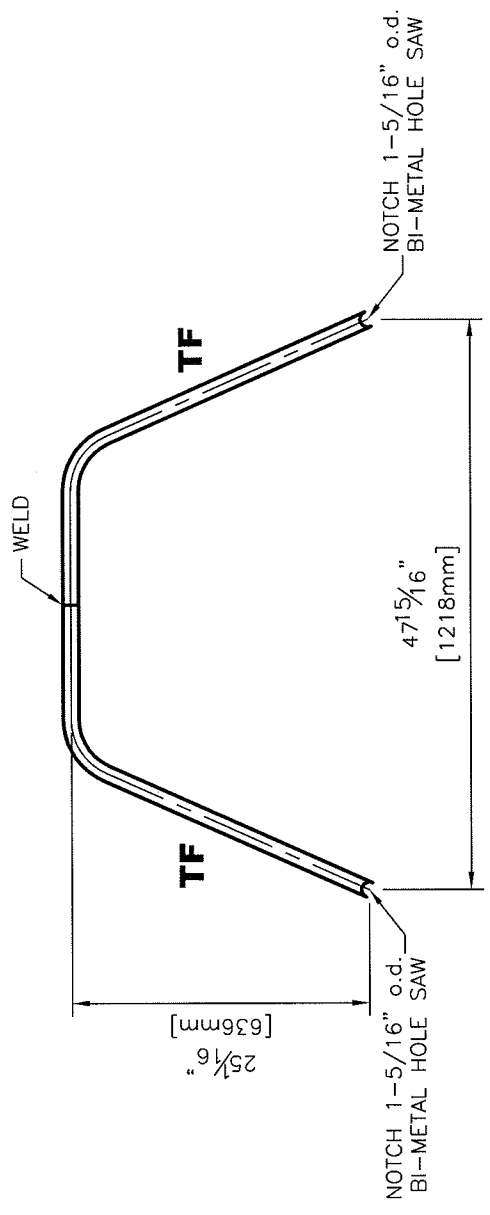
PRE-ASSEMBLY OF
BENT TUBES

DWG No.

A07



WINDSHIELD ROLLBAR



ROLLBAR BEHIND DRIVER'S HEAD



STATEMENT OF OWNERSHIP

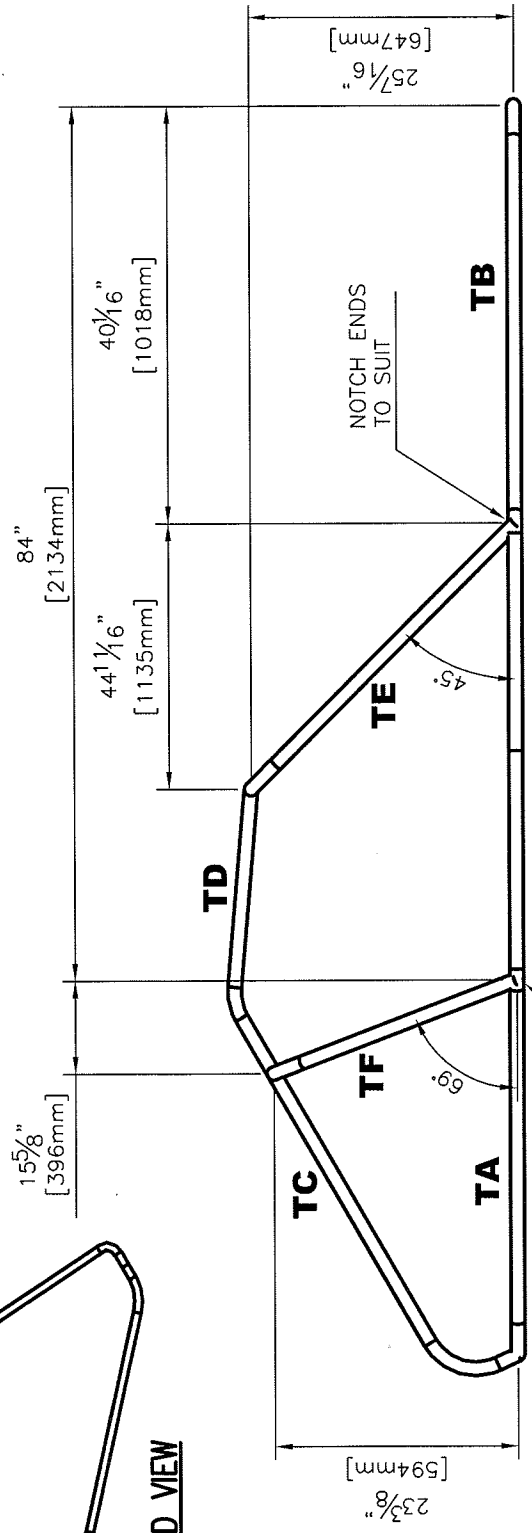
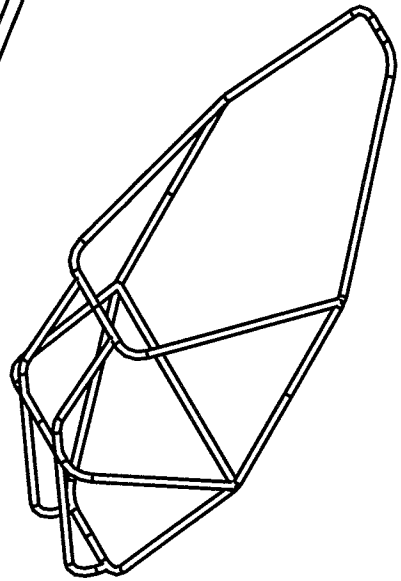
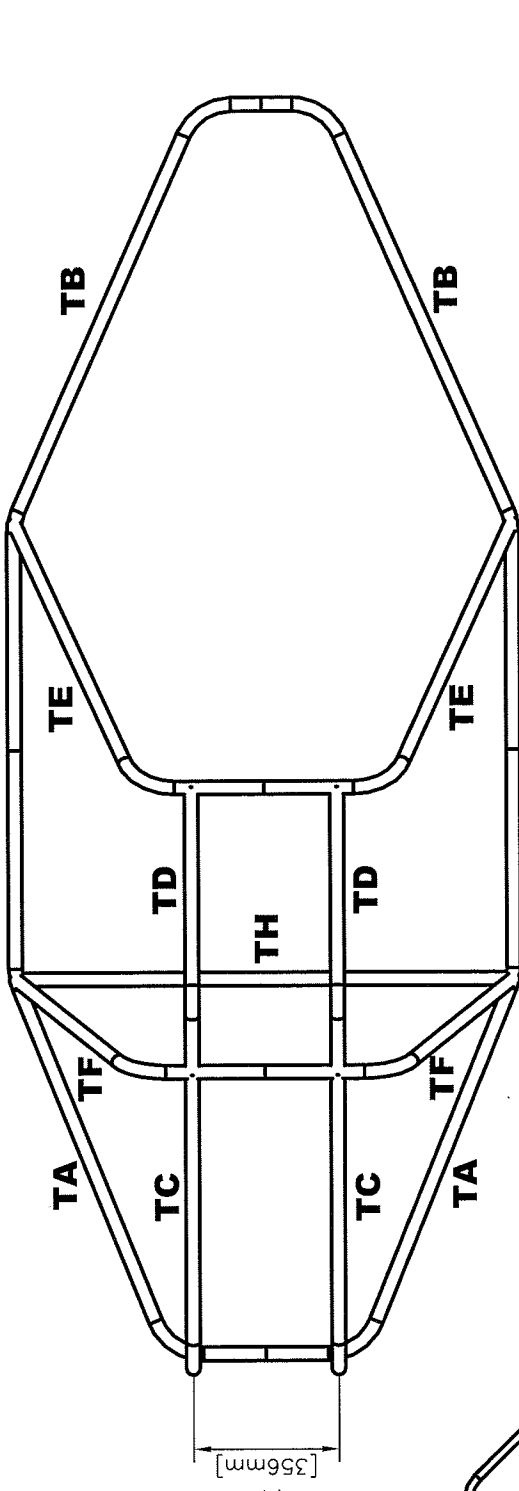
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TITLE

PRE-ASSEMBLY OF BENT TUBES

DWG No.

A08



TITLE

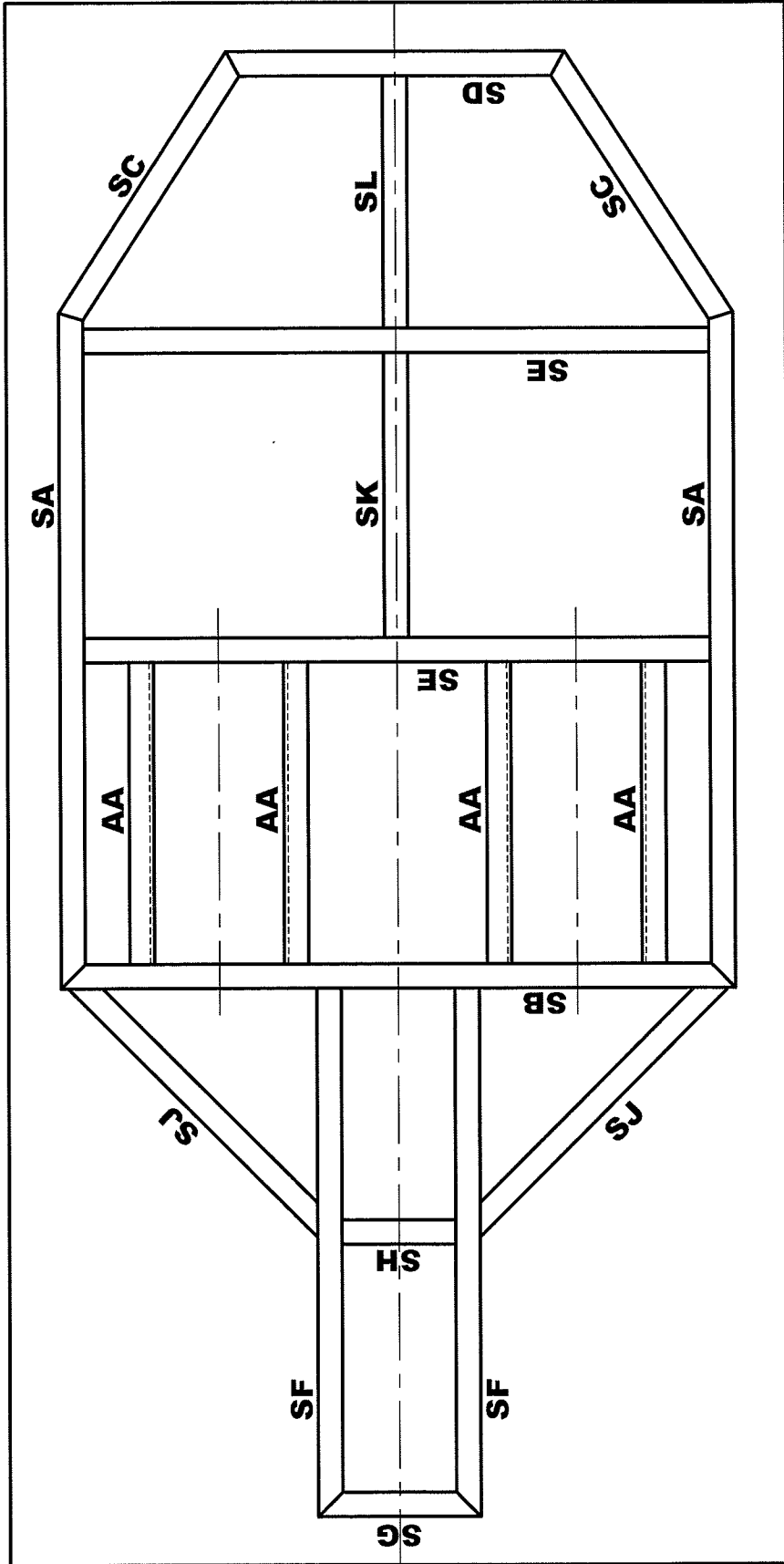
ASSEMBLY OF
UPPER ROLLAGE

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DWG No.

A09



Making the Template Board (or Welding Jig) for the Base Frame

Start with a full 4'x8' sheet of 3/4" thick plywood or medium density fibreboard (MDF). Alternatively, you could build a 4'x8' steel work table & use this template information to create a welding jig/fixture. To create a jig, weld angle steel at the perimeter of the outlines to create a repeatable pattern.

We have labelled each steel part with a series of letters. This is so you can easily reference the parts from the template board & the measured drawings.

Fabricate & place each steel part on the template board then tack weld on both sides of the frame. Then fully weld.



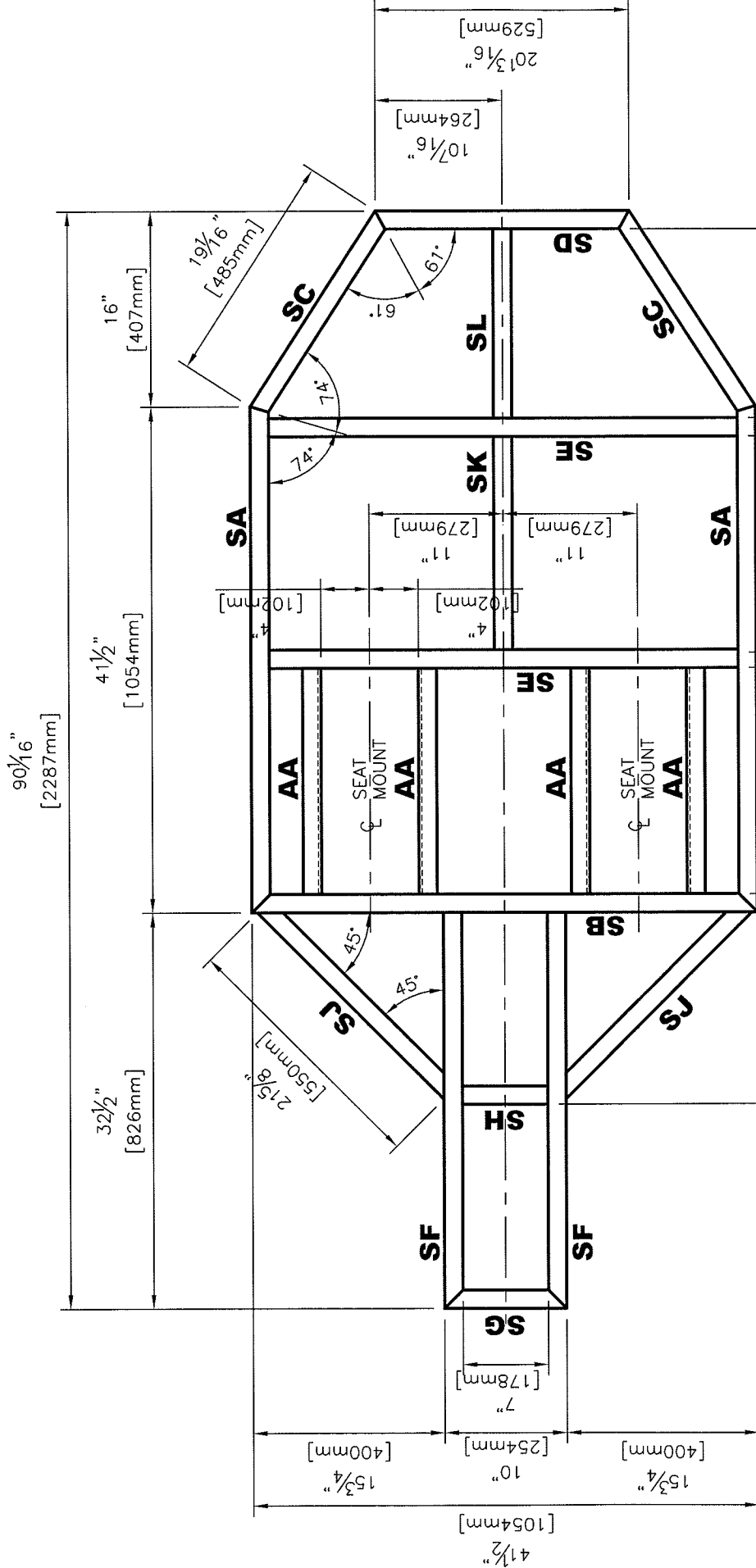
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TITLE
TEMPLATE BOARD/WELDING JIG FOR BASE FRAME

DWG No.

A10



MATERIALS LIST

ITEM	DESCRIPTION	QTY	LENGTH
SA	HSS 1.5"x1.5"x0.120"	2	41.5"
SB	HSS 1.5"x1.5"x0.120"	1	41.5"
SC	HSS 1.5"x1.5"x0.120"	2	19.06"
SD	HSS 1.5"x1.5"x0.120"	1	20.81"
SE	HSS 1.5"x1.5"x0.120"	2	38.5"
SF	HSS 1.5"x1.5"x0.120"	2	32.5"
SG	HSS 1.5"x1.5"x0.120"	1	10"
SH	HSS 1.5"x1.5"x0.120"	1	7"
SJ	HSS 1.5"x1.5"x0.120"	2	21.63"
SK	HSS 1.5"x1.5"x0.120"	1	17.75"
SL	HSS 1.5"x1.5"x0.120"	1	15.5"
AA	ANGLE L1.5"x1.5"x3/16"	4	4

BASE FRAME DETAILS
(make 1 welded assembly as shown)

NOTES:
1. HSS = HOLLOW STRUCTURAL STEEL
2. ANGLE = "L" SHAPED ANGLE STEEL



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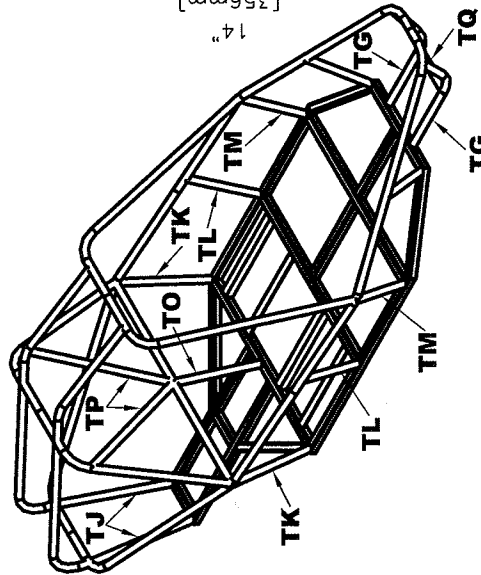
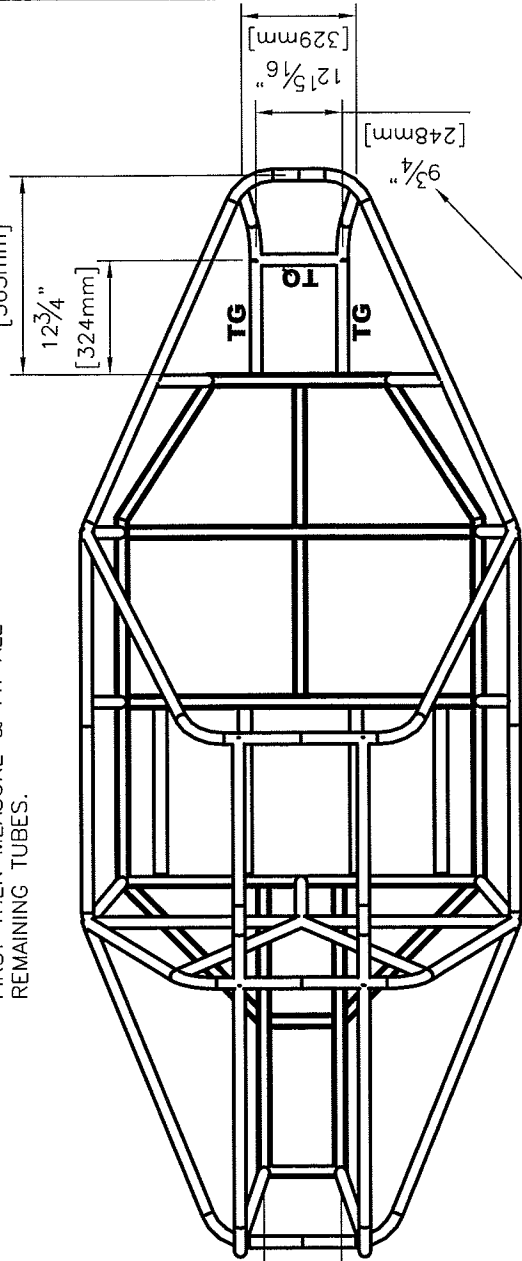
TITLE
BASE FRAME WELDED ASSEMBLY DETAILS

DWG No.

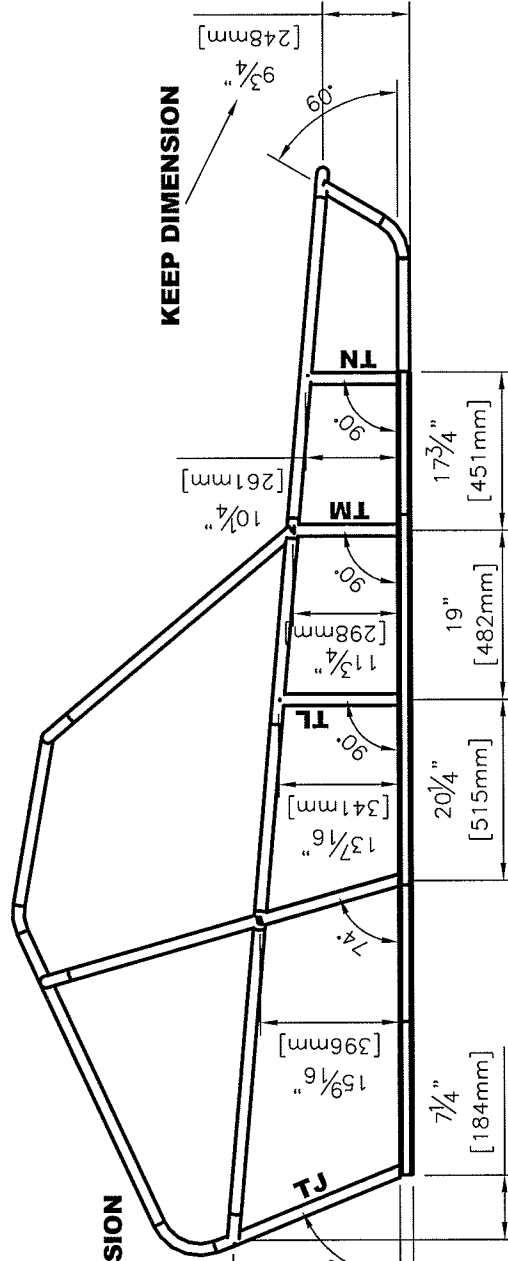
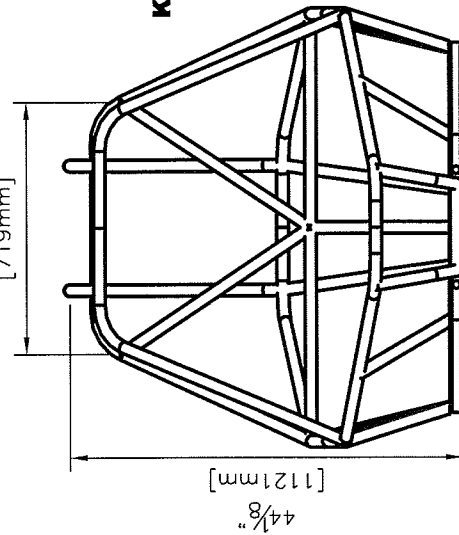
A11

NOTES:
 1. ALL MARRYING TUBES SHOWN ARE 1" Sch 40 PIPE.

ASSEMBLY TIP:
 POSITION TUBES "TG" & "TJ"
 FIRST THEN MEASURE & FIT ALL
 REMAINING TUBES.



VERY IMPORTANT DIMENSION!!
 TUBES "TG" SET POSITION OF
 LOWER SUSPENSION A-ARM
 MOUNTS.



KEEP DIMENSION

KEEP DIMENSION



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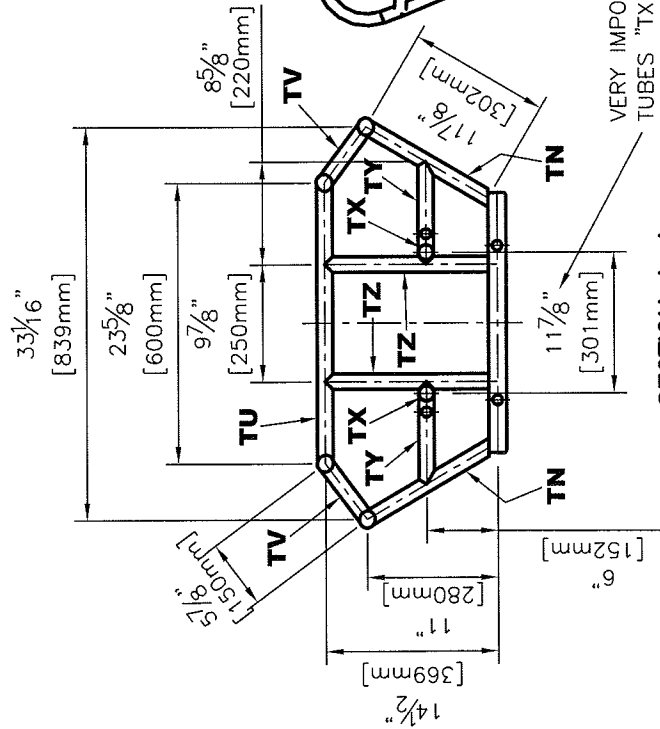
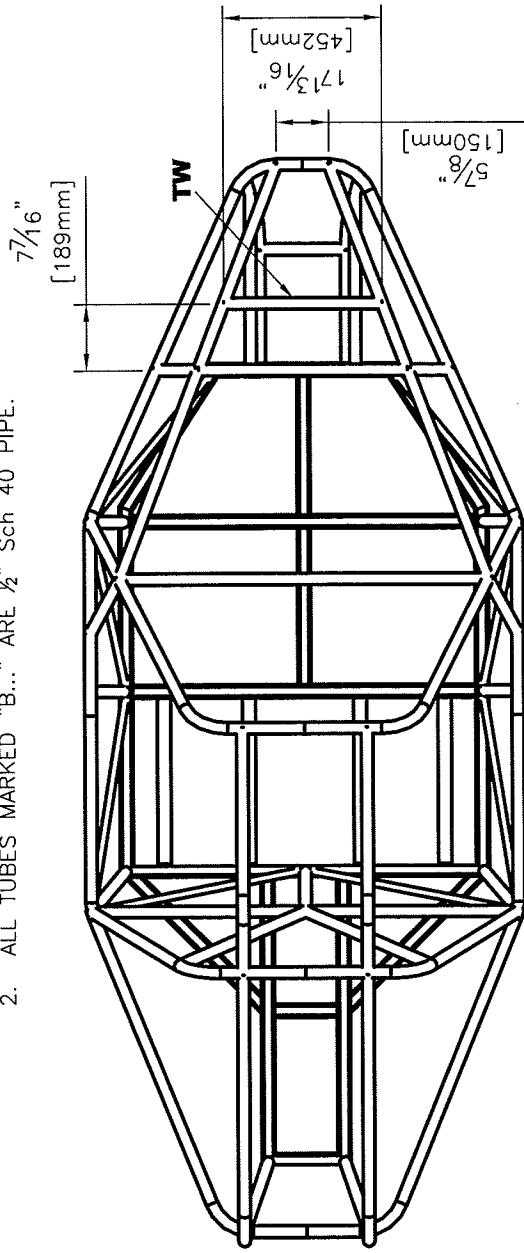
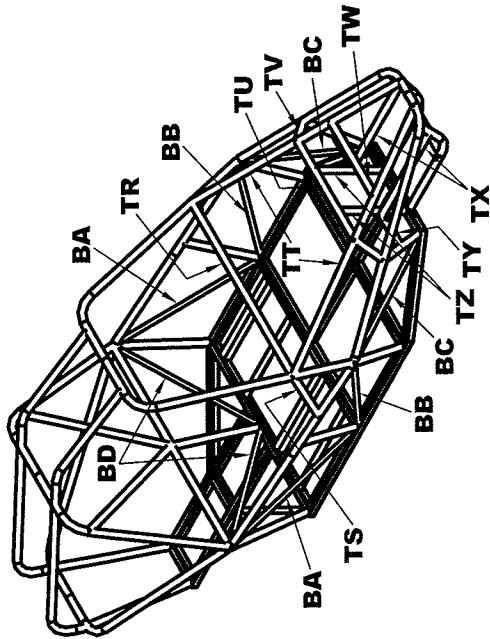
TITLE
**MARRYING THE UPPER ROLLCAGE
 WITH THE BASE FRAME**

DWG No.

A12

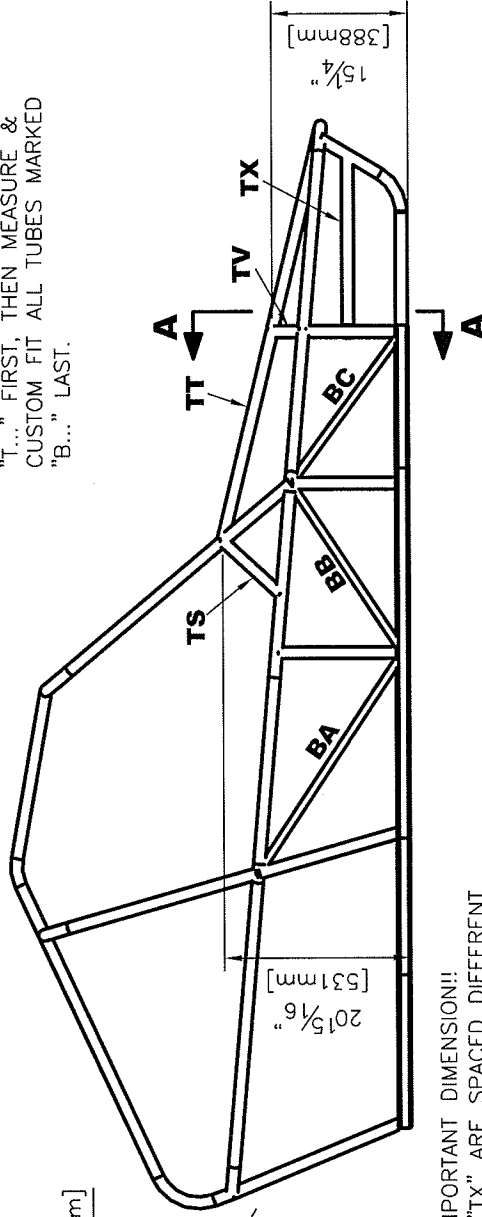
NOTES:

1. ALL TUBES MARKED "T..." ARE 1" Sch 40 PIPE.
2. ALL TUBES MARKED "B..." ARE 1/2" Sch 40 PIPE.



VERY IMPORTANT DIMENSION!!
TUBES "TX" ARE SPACED DIFFERENT
THAN TUBES "TG". TUBES "TX" SET
POSITION OF UPPER SUSPENSION
A-ARMS.

ASSEMBLY TIP:
INSTALL ALL TUBES MARKED
"T..." FIRST, THEN MEASURE &
CUSTOM FIT ALL TUBES MARKED
"B..." LAST.



STATEMENT OF OWNERSHIP

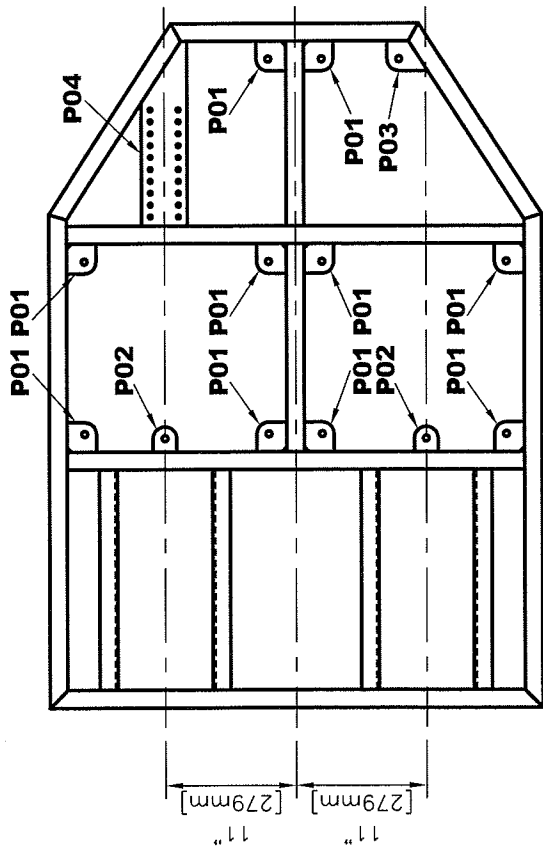
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TITLE

ADDING THE FINAL CHASSIS
TUBES & BRACING

DWG No.

A13



**PLAN VIEW OF CHASSIS FRAMING
IN THE DRIVER/PASSENGER COMPARTMENT**
(some chassis tubes omitted for clarity)

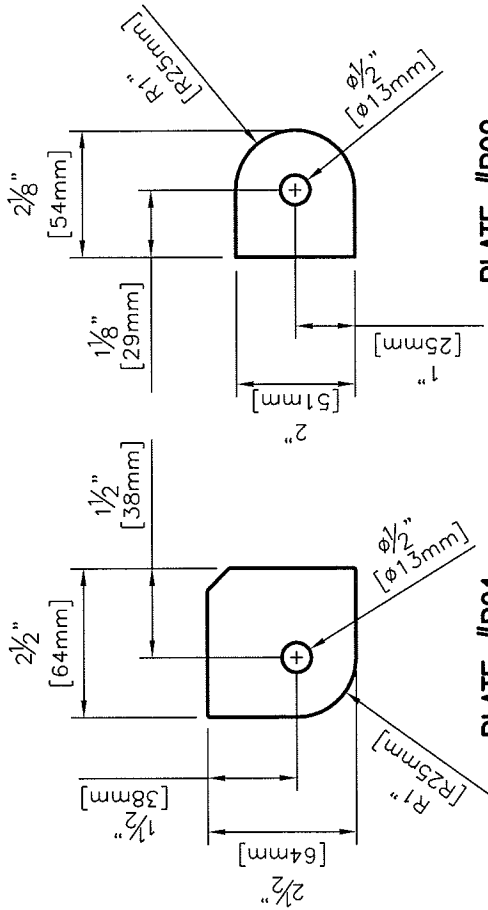


PLATE #P01
(make 10 pcs as shown)

PLATE #P02
(make 2 pcs as shown)

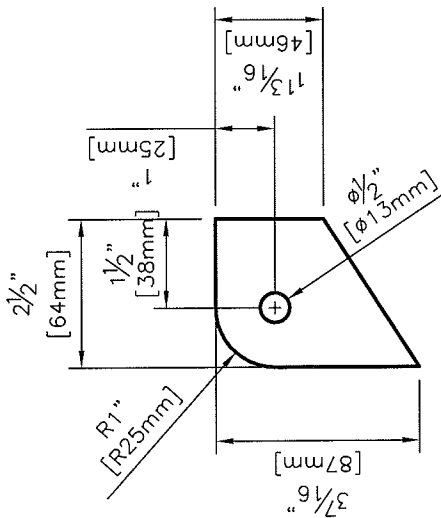


PLATE #P03
(make 1 pc as shown)

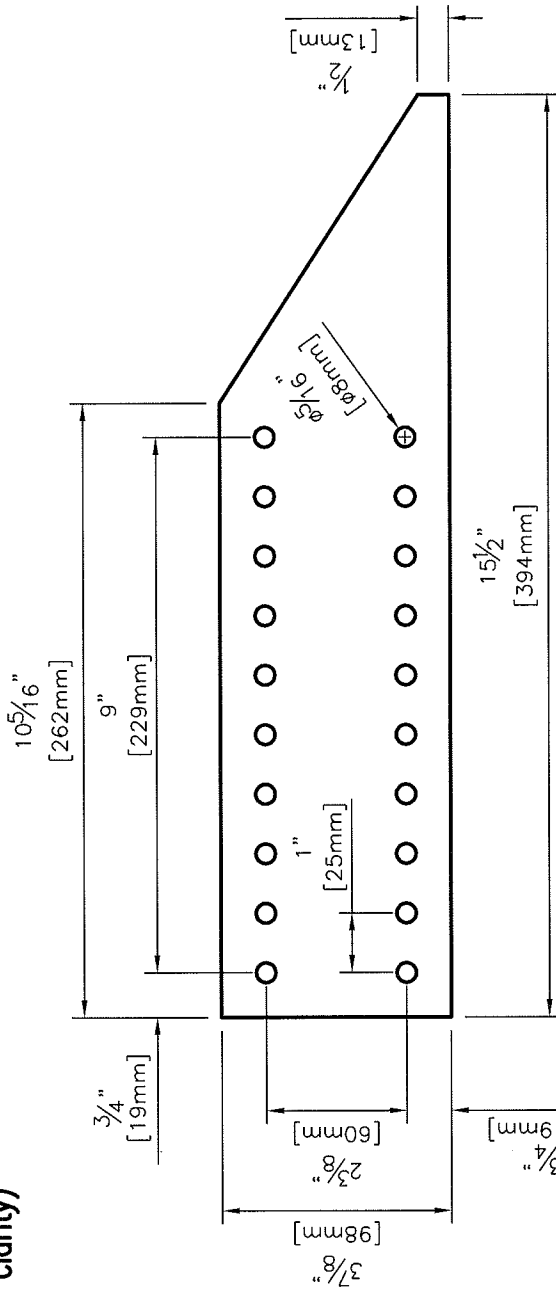


PLATE #P04
(make 1 pc as shown)

NOTES:

1. "P01" = FLOOR MOUNT TAB
2. "P02" = SEAT BELT MOUNT TAB
3. "P03" = FLOOR MOUNT TAB
4. "P04" = FOOT PEDAL BOX MOUNT
5. ALL PLATES 1/4" THICK MILD STEEL



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TITLE

**INSTALLING TABS & MOUNTS
IN THE DRIVER'S COMPARTMENT**

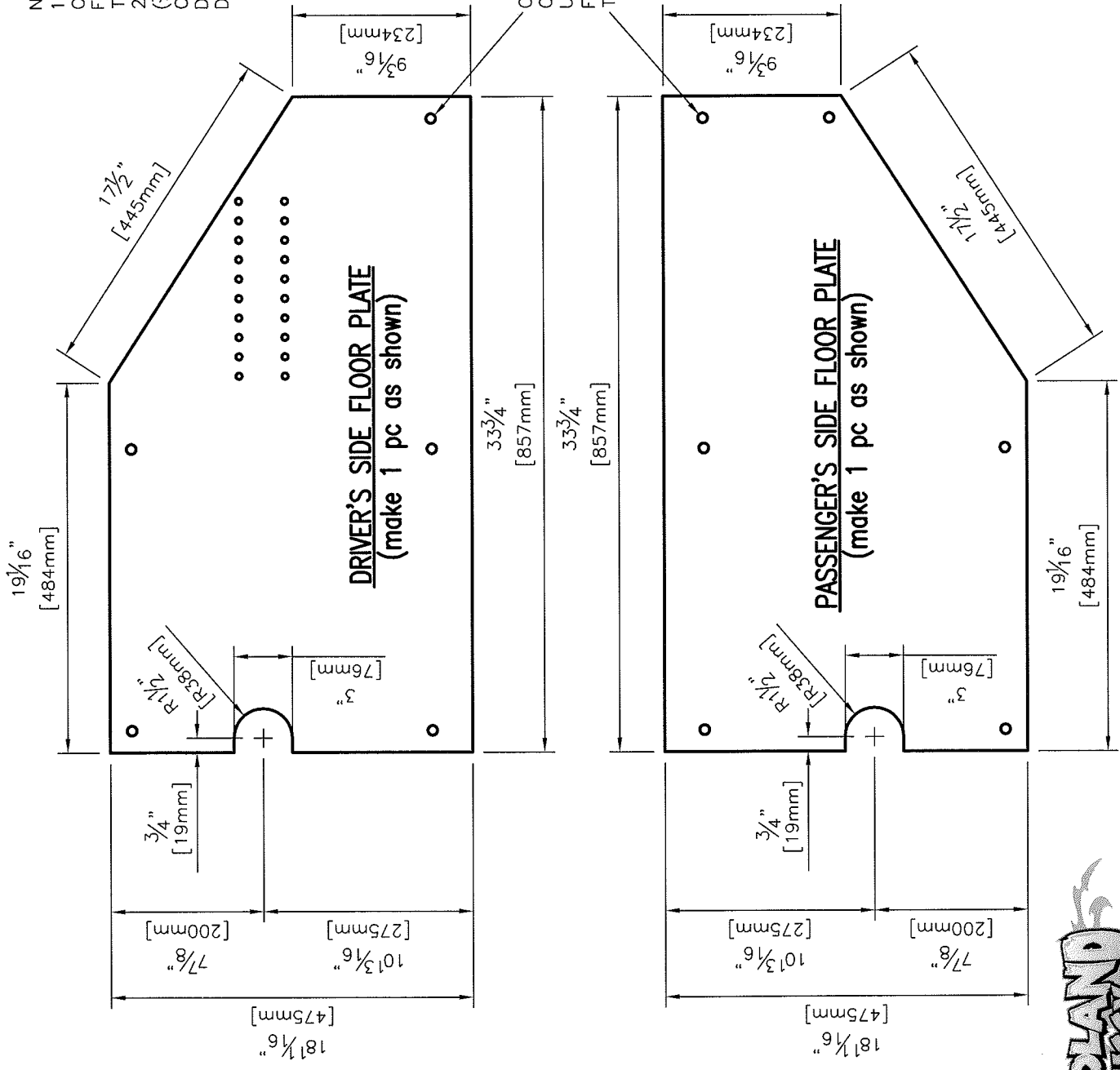
DWG No.

A14

NOTES:

1. USE 1/4" THICK DIAMOND or CHECKER PLATE ALUMINUM PLATE FOR ALL FLOOR PLATES SHOWN ON THIS PAGE.
2. PLATES ARE SLIGHTLY SMALLER (3/8" REVEAL) THAN OPENING IN CHASSIS FRAMING TO ALLOW FOR DRAINAGE OF WATER & DEBRIS DURING DRIVING.

CLAMP FLOOR PLATES IN PLACE IN CHASSIS, THEN DRILL HOLES FROM UNDERSIDE USING MOUNTING PLATES FROM DRAWING "A14" AS A GUIDE. THIS ENSURE AN EXACT FIT.



TITLE

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DETAILS OF FLOOR PLATES

DWG No.

A15

CONGRATULATIONS!

If you have made it this far, then you are about 1/3 of the way through the major fabrication of your buggy project.

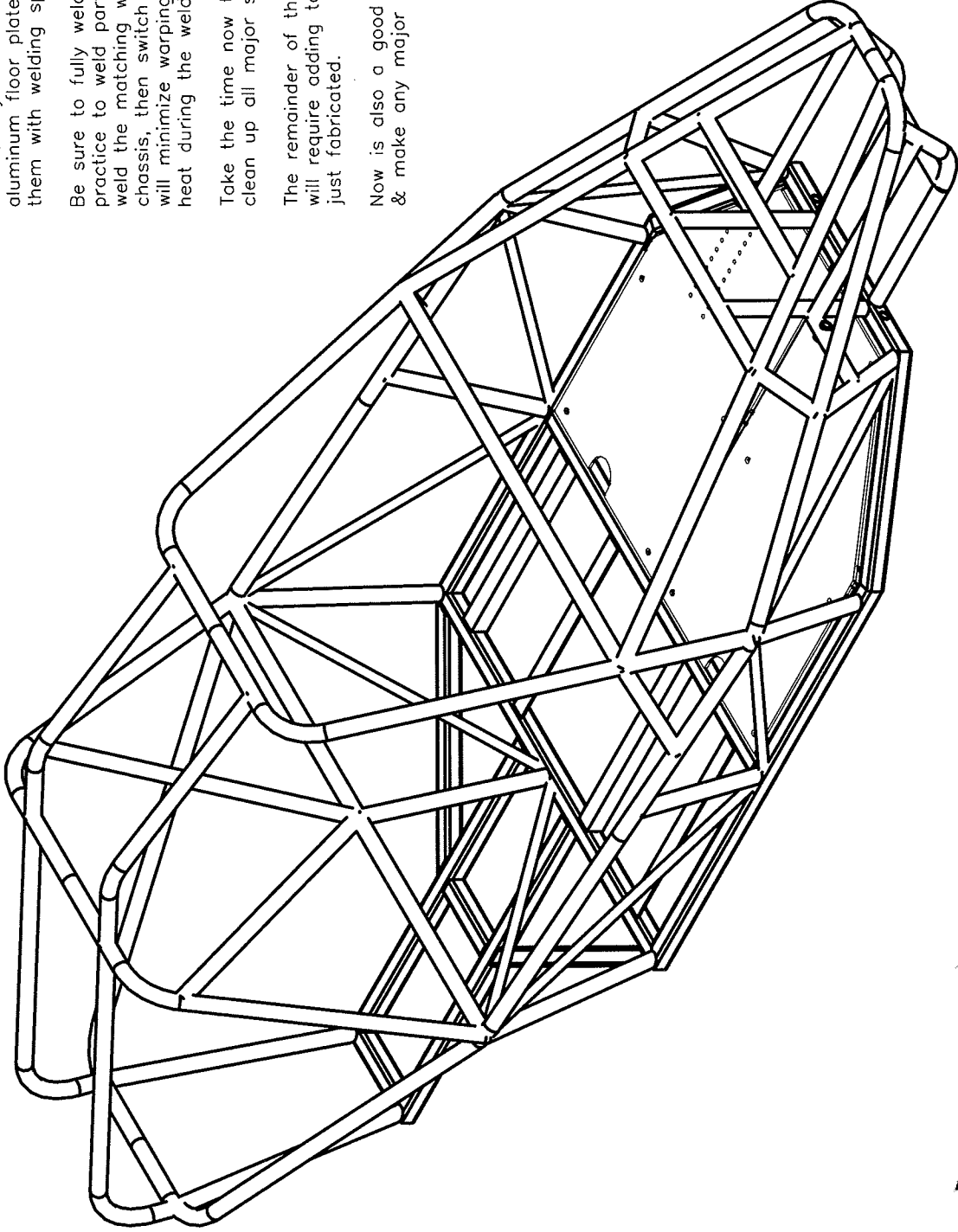
This is a great time to fully weld the entire chassis frame, if you have not already done so. Remove the aluminum floor plates prior to welding to avoid damaging them with welding spatter.

Be sure to fully weld ALL joints. It is good welding practice to weld part of the chassis on one side then weld the matching welds on the opposite side of the chassis, then switch back & forth. This welding method will minimize warping & twisting of the chassis due to heat during the welding process.

Take the time now to remove welding spatter & generally clean up all major structural welds.

The remainder of the fabrication from this point forward will require adding to the basic chassis frame you have just fabricated.

Now is also a good time to test fit your engine & seats & make any major chassis changes as necessary.



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TITLE

FULLY WELD CHASSIS & INSPECT WELDS

DWG No.

A16