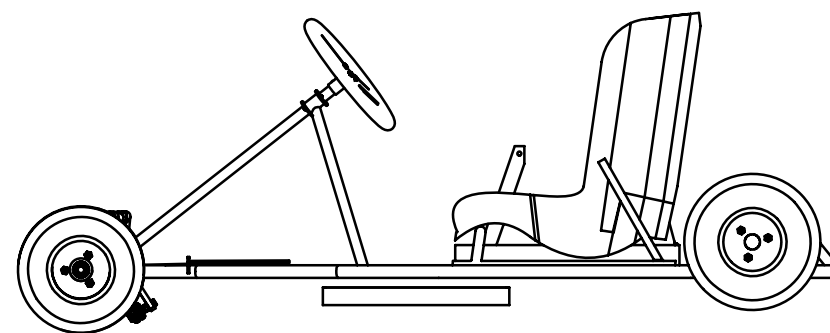
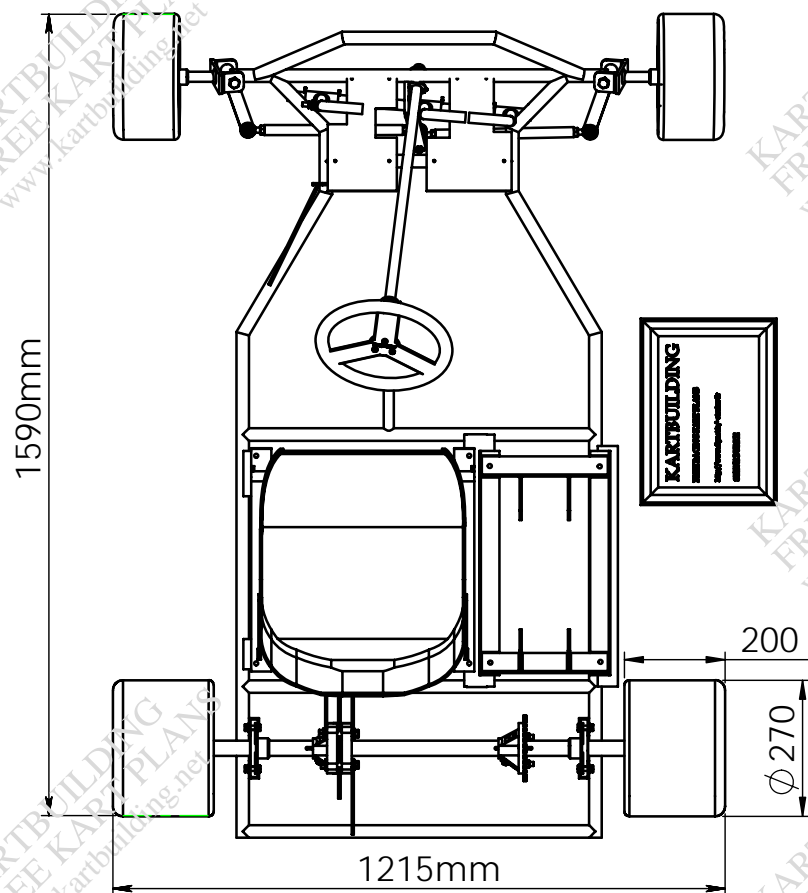


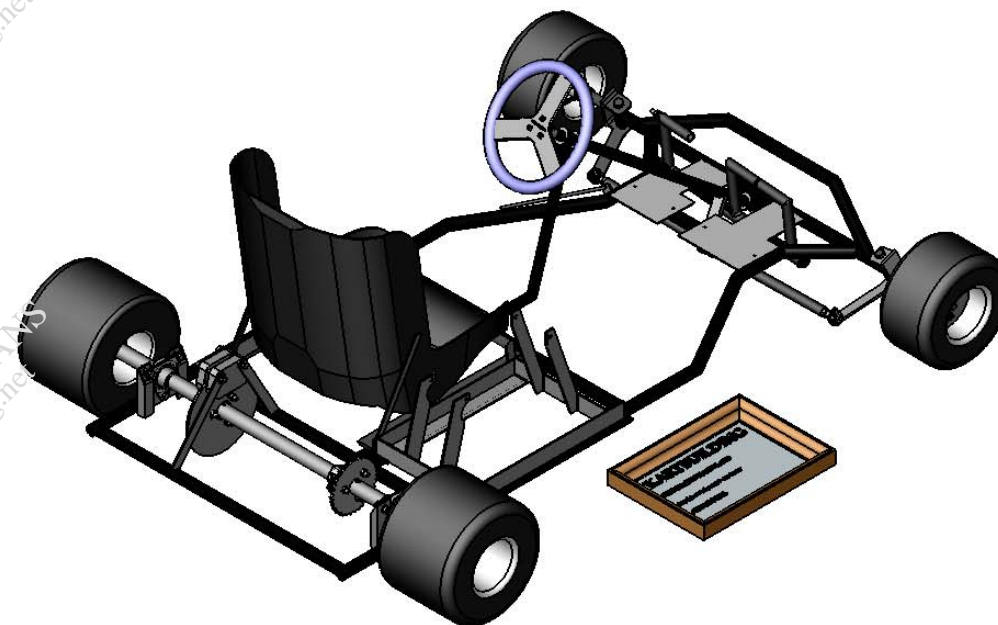
REAR ELEVATION



LEFT SIDE ELEVATION

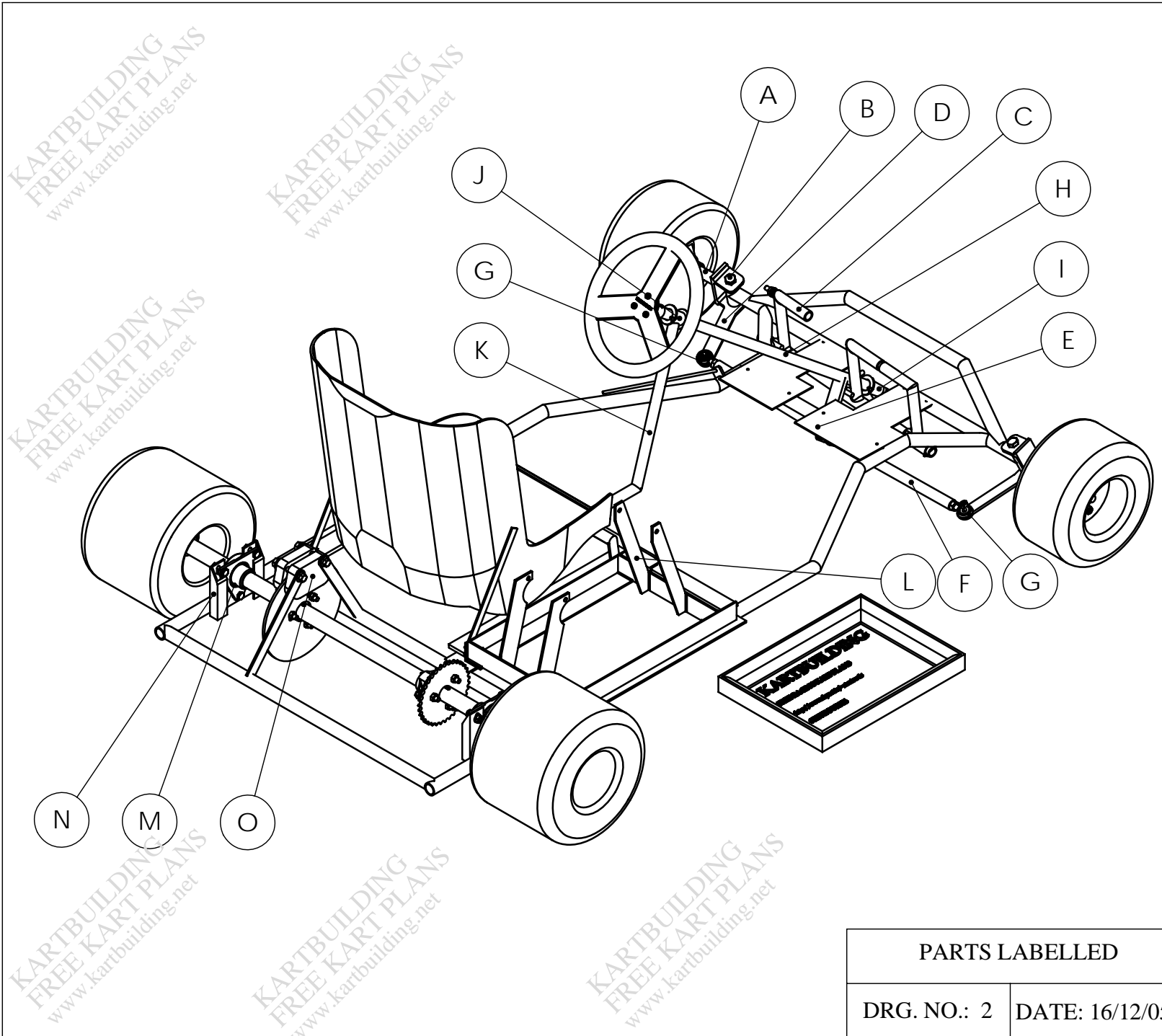


TOP PLAN



ISOMETRIC VIEW

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FREE RACING KART PLANS	
www.kartbuilding.net	
COMPLETE ASSEMBLY	
DRG. NO.: 1	DATE: 16/12/05
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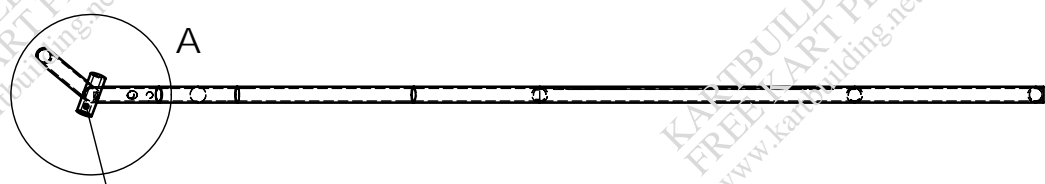
A - Front left Stub Axle
B - Front left King Pin
C - Pedals
D - Front Left Steering Arm
E - Floor Pan/ Foot Rests
F - Right Track Rod
G - Rose End Bearing
H - Steering Column
I - Steering Column End Bush
J - Steering Column Top Bush
K - Steering Column Support
L - Engine Cradle
M - Rear Axle Bearing
N - Rear Axle Carrier
O - Brake Components

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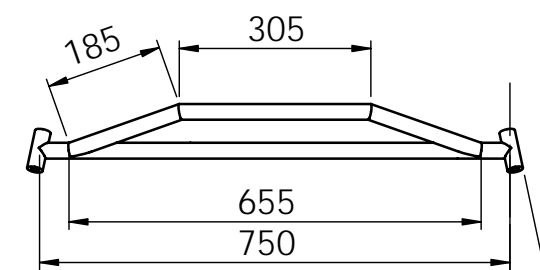
PARTS LABELLED		www.kartbuilding.net
DRG. NO.: 2	DATE: 16/12/05	© STEPHEN BURKE

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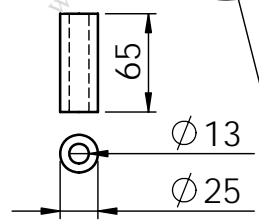


FRONT ELEVATION

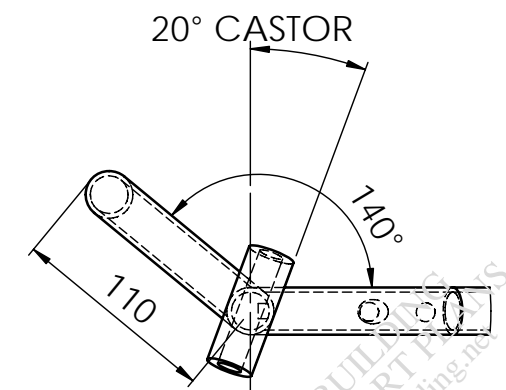


LEFT ELEVATION

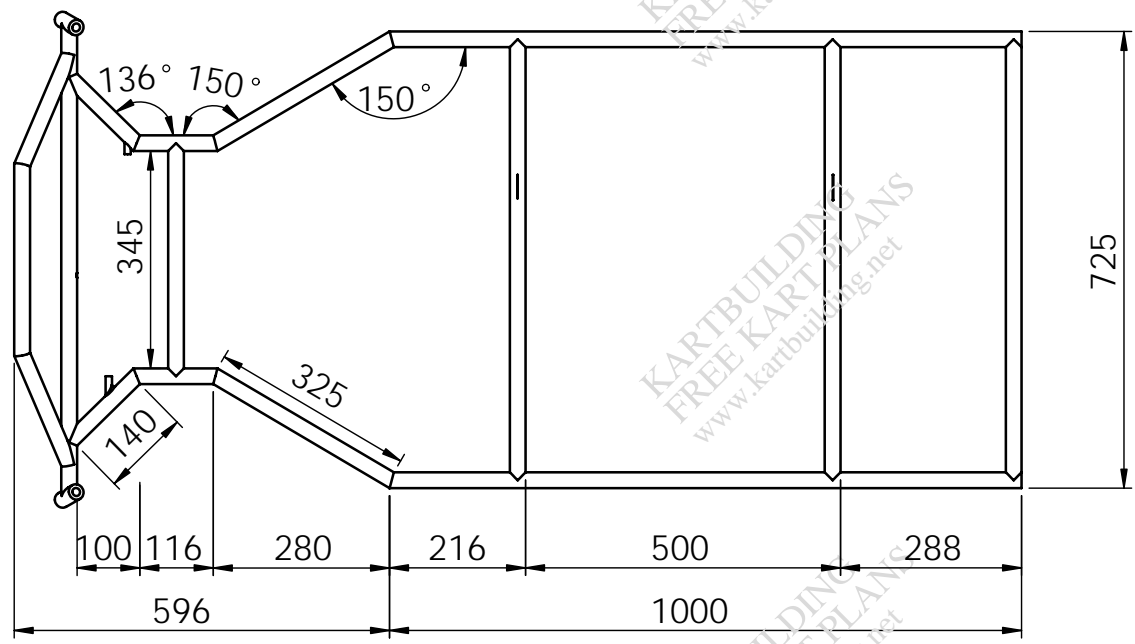
12° CAMBER



KING PIN MOUNTING PIECE



20° CASTOR
 A (1:4)
 DETAIL VIEW (A)



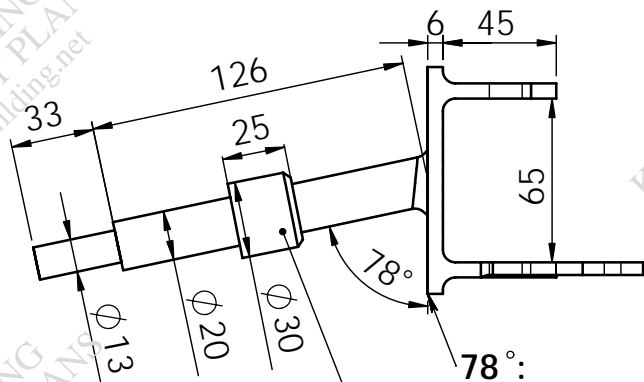
TOP PLAN

CHASSIS MATERIAL: 25mm O.D. (OUTSIDE DIAMETER) TUBING
 2-3mm WALL THICKNESS

CHASSIS		www.kartbuilding.net
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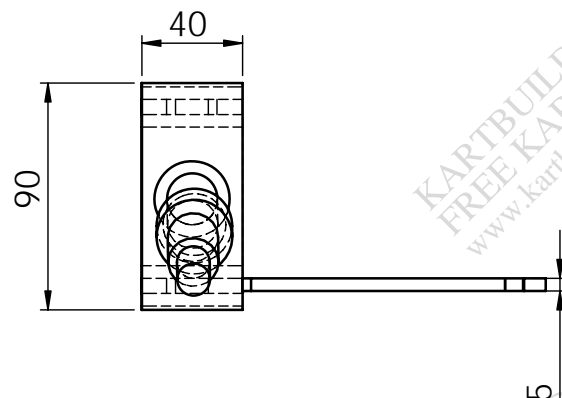
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30MM SHOULDER WELDED
OR GRUBSCREWED ONTO AXLE.

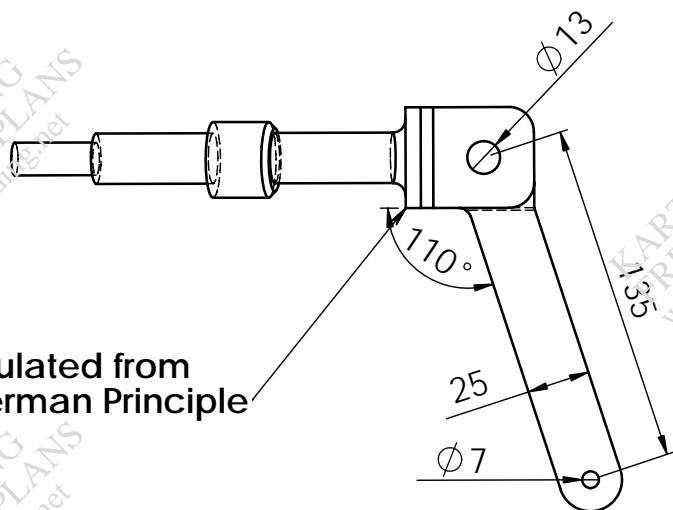
78°:
Required to Balance
out the 12° Camber Angle

FRONT ELEVATION



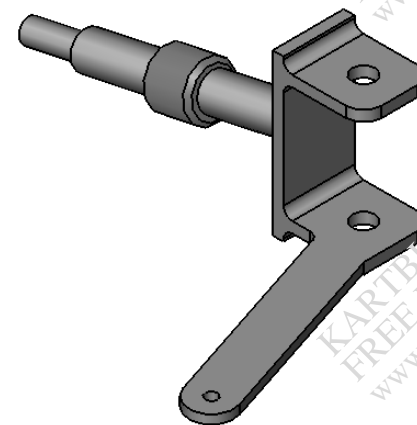
LEFT ELEVATION

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110°:
Calculated from
Ackerman Principle

TOP PLAN



ISOMETRIC

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MATERIAL: 6mm FLAT STEEL FOR "n" shape
5mm FLAT STEEL for Steering Arm

**LEFT STUB AXLE
& STEERING ARM**

KARTBUILDING

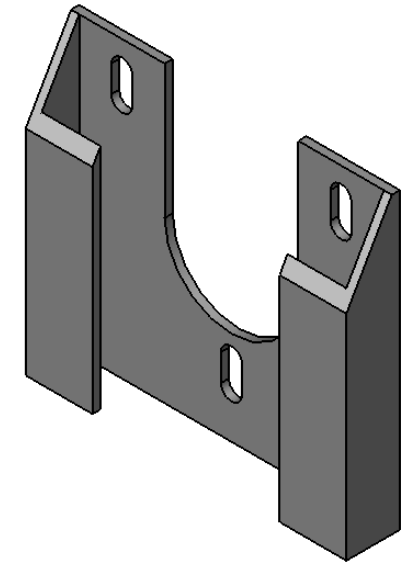
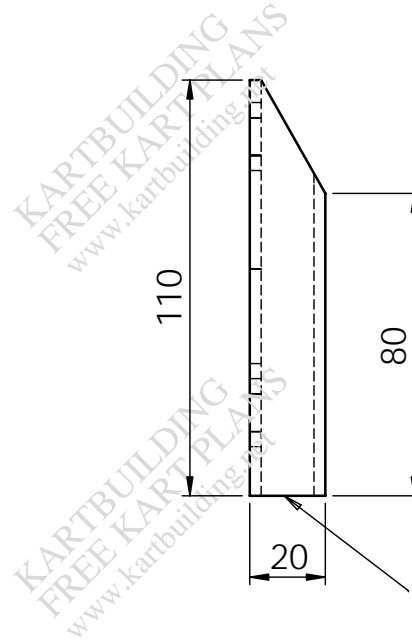
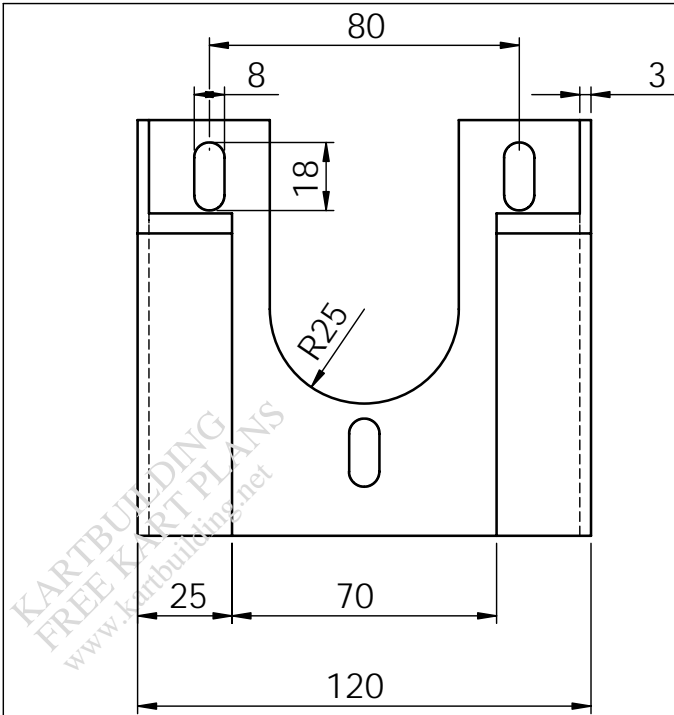
FREE RACING KART PLANS

STUB AXLES & KING PINS

www.kartbuilding.net

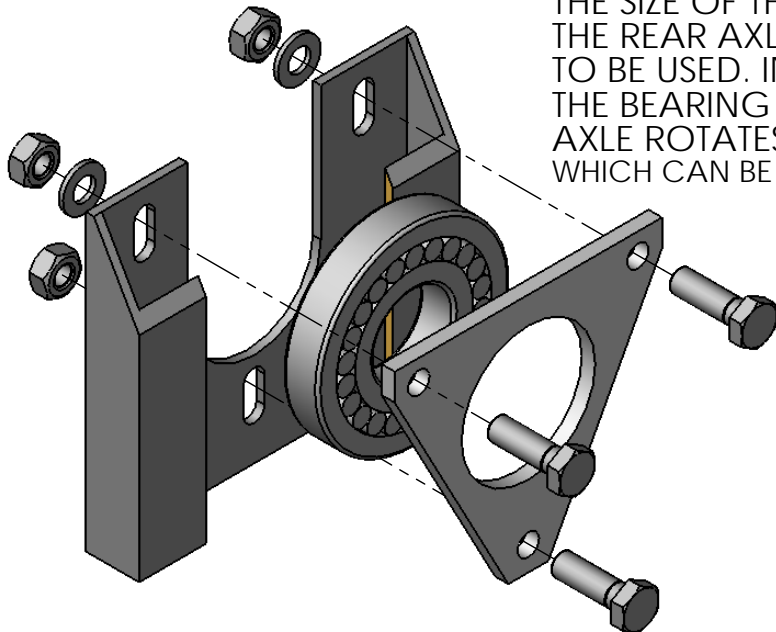
DRG. NO.: 4 DATE: 24/07/03

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THE UNDERNEATH CAN BE FILED TO GIVE A CURVED MATING SURFACE WITH THE CHASSIS. (SEE SHEET 6)

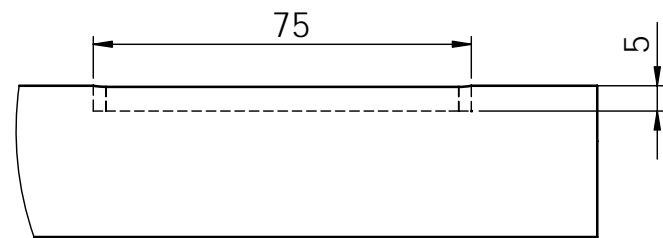
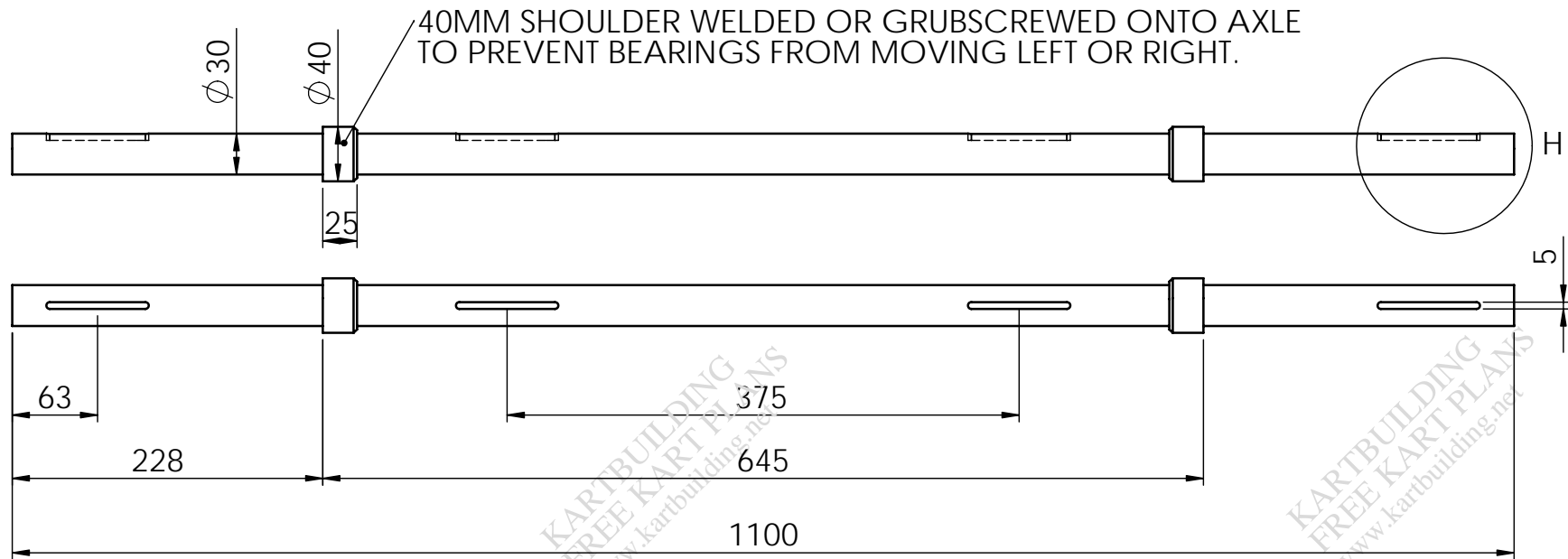
THE SIZE OF THE ABOVE BRACKET DEPENDS SOLELY ON THE SIZE OF THE BEARING. THE REAR AXLE CARRIER ALLOWS A STANDARD ROLLER BEARING TO BE USED. IN COMBINATION WITH THE TRIANGULAR FACE PLATE, THE BEARING CAN BE SECURELY HELD IN POSITION WHILE THE REAR AXLE ROTATES. NOTE: THERE ARE OTHER SIMPLER SOLUTIONS AND BEARINGS WHICH CAN BE USED INSTEAD.



- MATERIAL:
- 3MM FLAT STEEL
 - BENT TO SHAPE

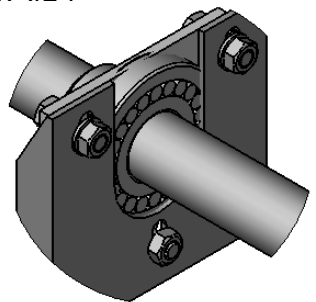
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FREE RACING KART PLANS

REAR AXLE CARRIER		www.kartbuilding.net
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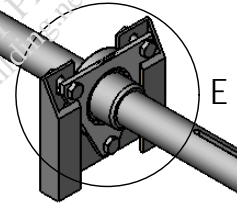


DETAIL H - KEYWAY

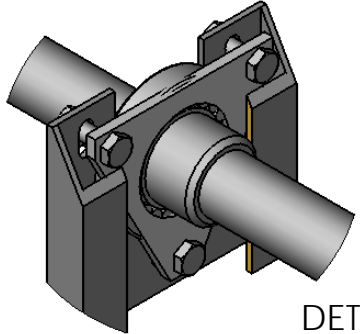
DETAIL F



F



E



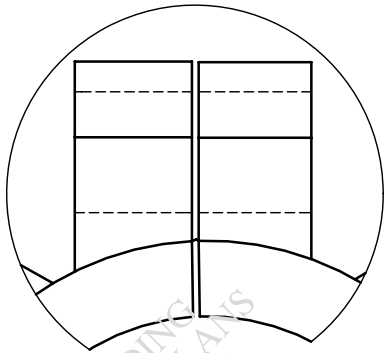
DETAIL E

- MATERIAL:
- DIAMETER 30 STEEL BAR
 - KEYWAYS TO BE MILLED OR GROUND

KARTBUILDING
FREE RACING KART PLANS

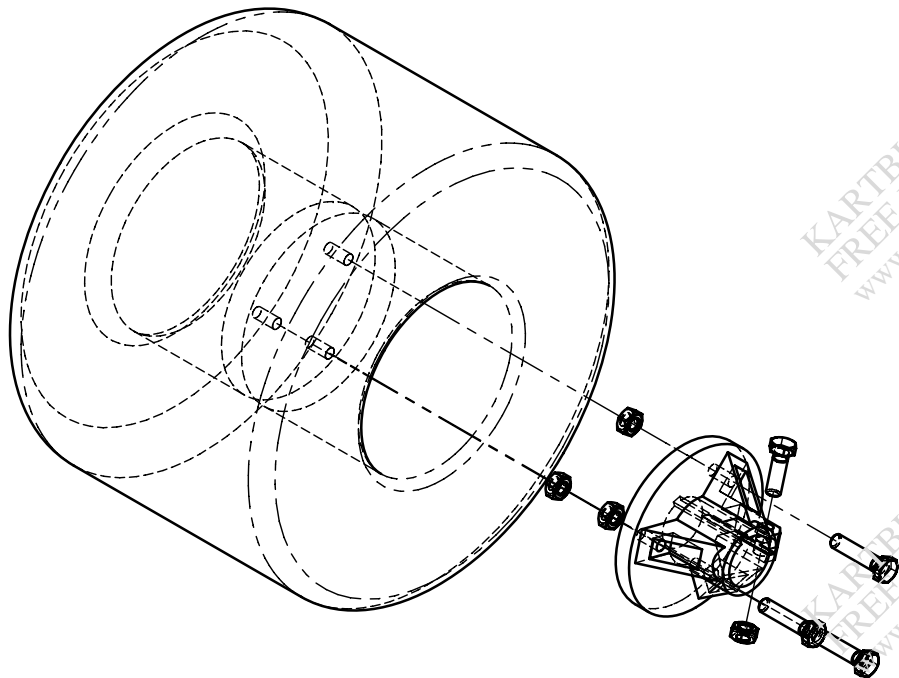
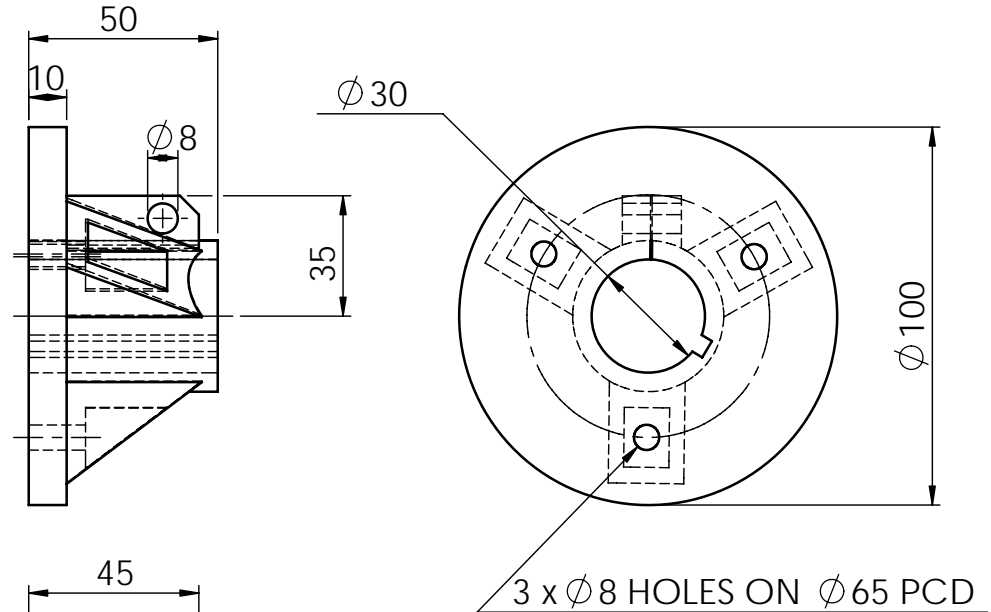
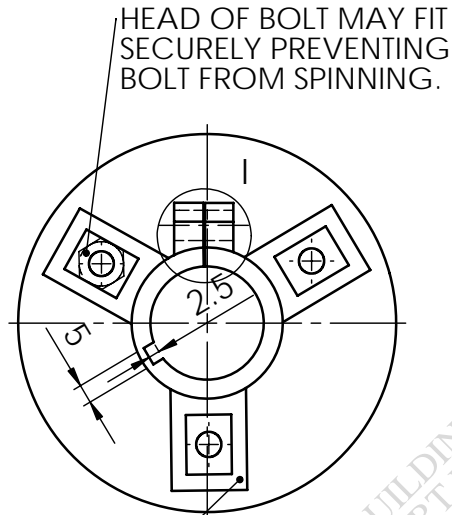
REAR AXLE		www.kartbuilding.net
DRG. NO.: 6	DATE: 24/07/03	© STEPHEN BURKE

1MM SLIT TO ALLOW PINCH BOLT TO SECURE HUB ONTO AXLE



DETAIL I

3 REINFORCING SHOULDERS EQUI. SPACED. CAN BE WELDED IN PLACE IF REQUIRED.



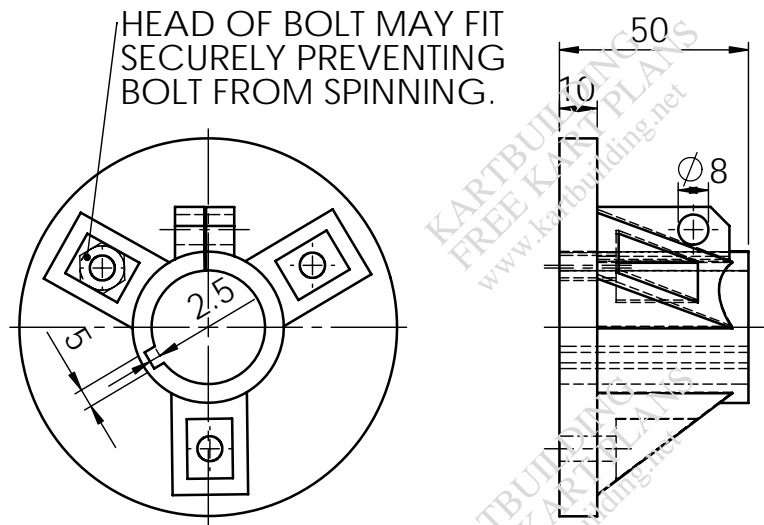
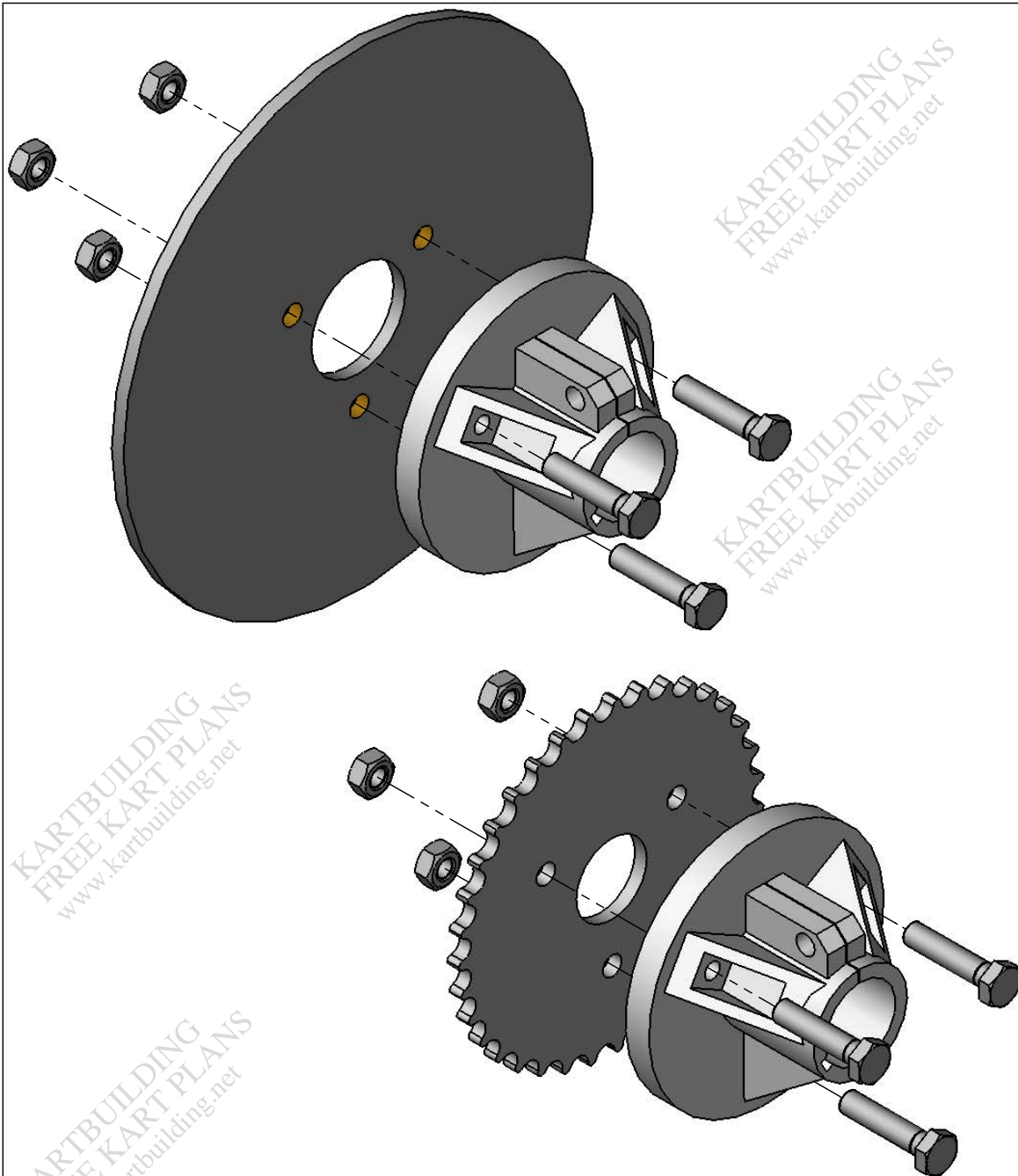
NOTE:
IT MAY BE POSSIBLE TO BUY THESE ALUMINIUM HUBS FROM A KARTING CATALOGUE! THE HUB MUST SUIT THE TYPE OF WHEEL BEEN USED!

MATERIAL:
 • ALUMINIUM
 • TURNED/MANUFACTURED
 • POSSIBLY WELD ON REINFORCING SHOULDERS.

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FREE RACING KART PLANS

REAR HUBS AND WHEELS		www.kartbuilding.net
DRG. NO.: 7	DATE: 24/07/03	© STEPHEN BURKE



NOTE:
 IT MAY BE POSSIBLE TO
 BUY THESE ALUMINIUM HUBS
 FROM A KARTING CATALOGUE!
 THE HUB MUST SUIT THE TYPE
 OF WHEEL BEEN USED!

THESE BRAKE AND SPROCKET CARRIERS ARE THE EXACT SAME AS THE HUBS USED FOR MOUNTING THE REAR WHEELS (DRG. NO. 07).

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FREE RACING KART PLANS

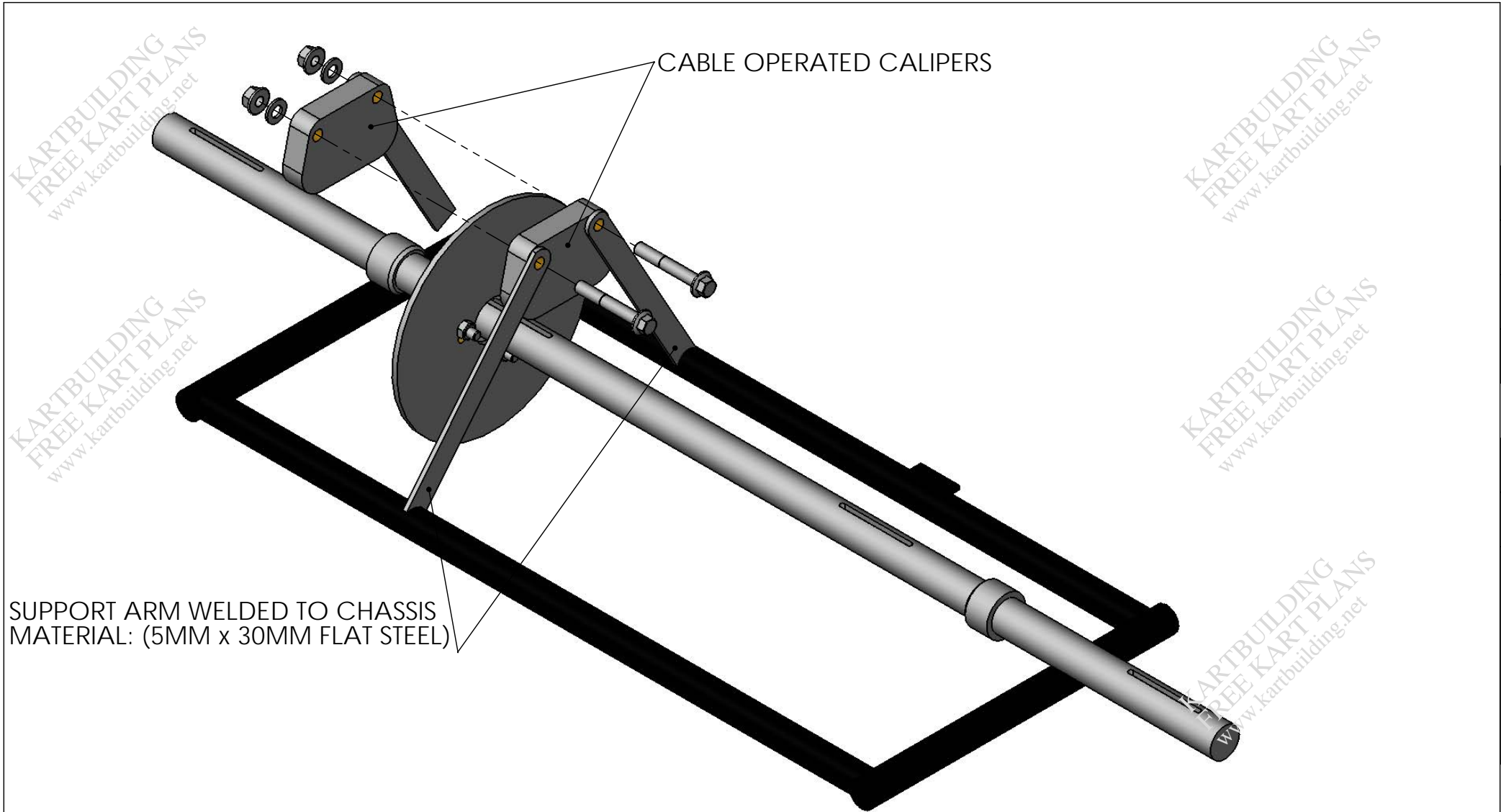
BRAKE, SPROCKET CARRIERS

www.kartbuilding.net

DRG. NO.: 8

DATE: 24/07/03

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SUPPORT ARM WELDED TO CHASSIS
MATERIAL: (5MM x 30MM FLAT STEEL)

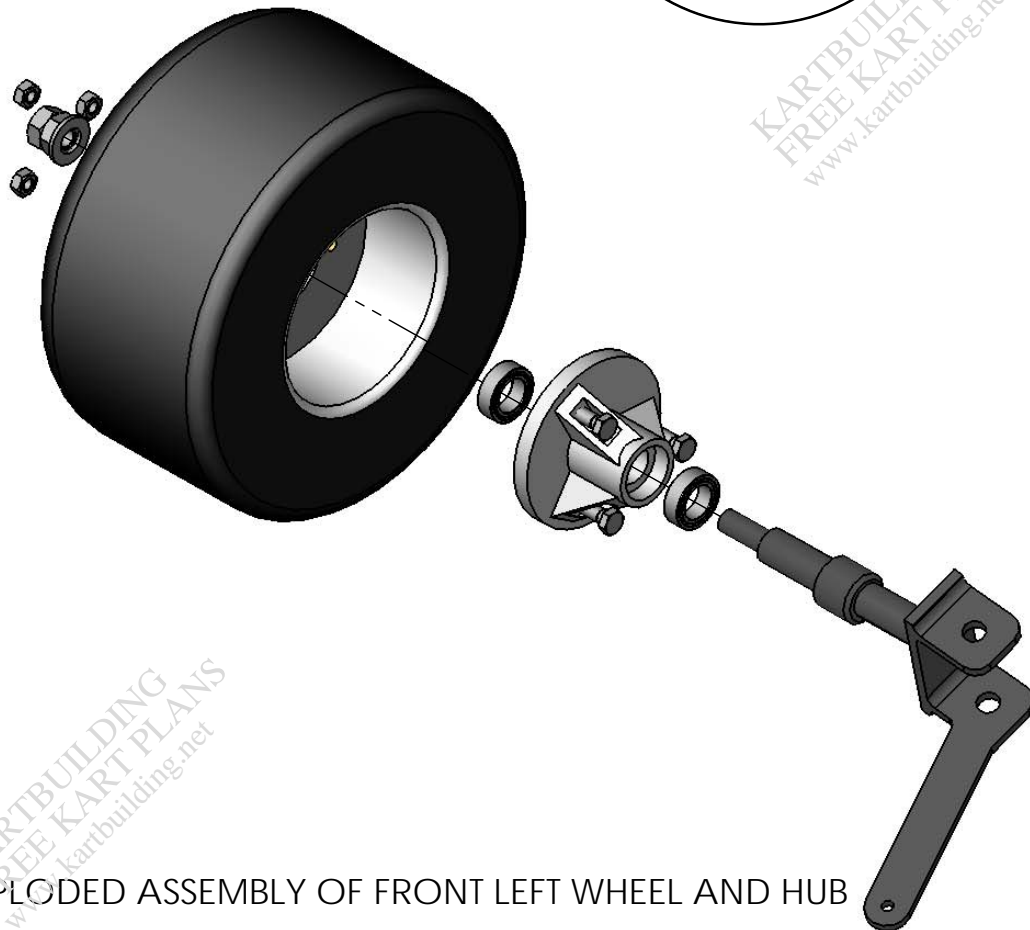
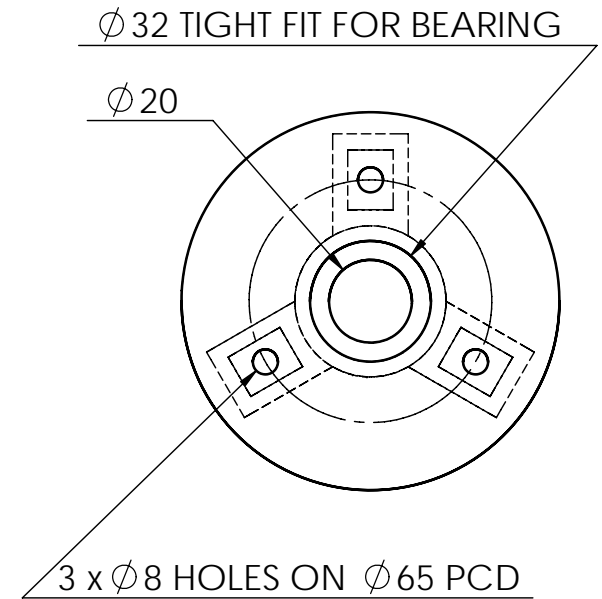
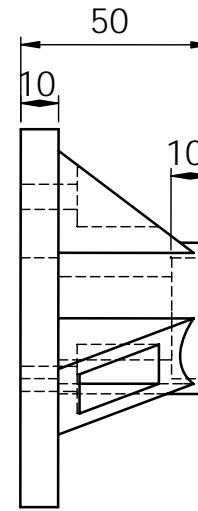
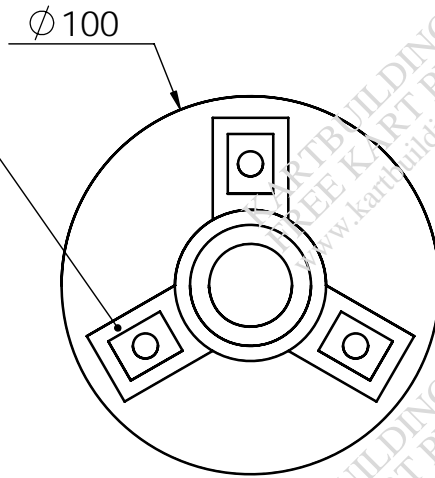
CABLE OPERATED CALIPERS

NOTE:
THERE ARE SEVERAL METHODS/ SOLUTIONS TO
PROVIDE THE BRAKES ON A KART. THE ABOVE
MANUALLY OPERATED DISC BRAKE AND CALLIERS
WAS OBTAINED FROM AN OLD RACING KART.

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FREE RACING KART PLANS	
www.kartbuilding.net	
BRAKES	
DRG. NO.: 9	DATE: 24/07/03
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3 REINFORCING SHOULDERS
EQUI. SPACED. CAN BE WELDED
IN PLACE IF REQUIRED.



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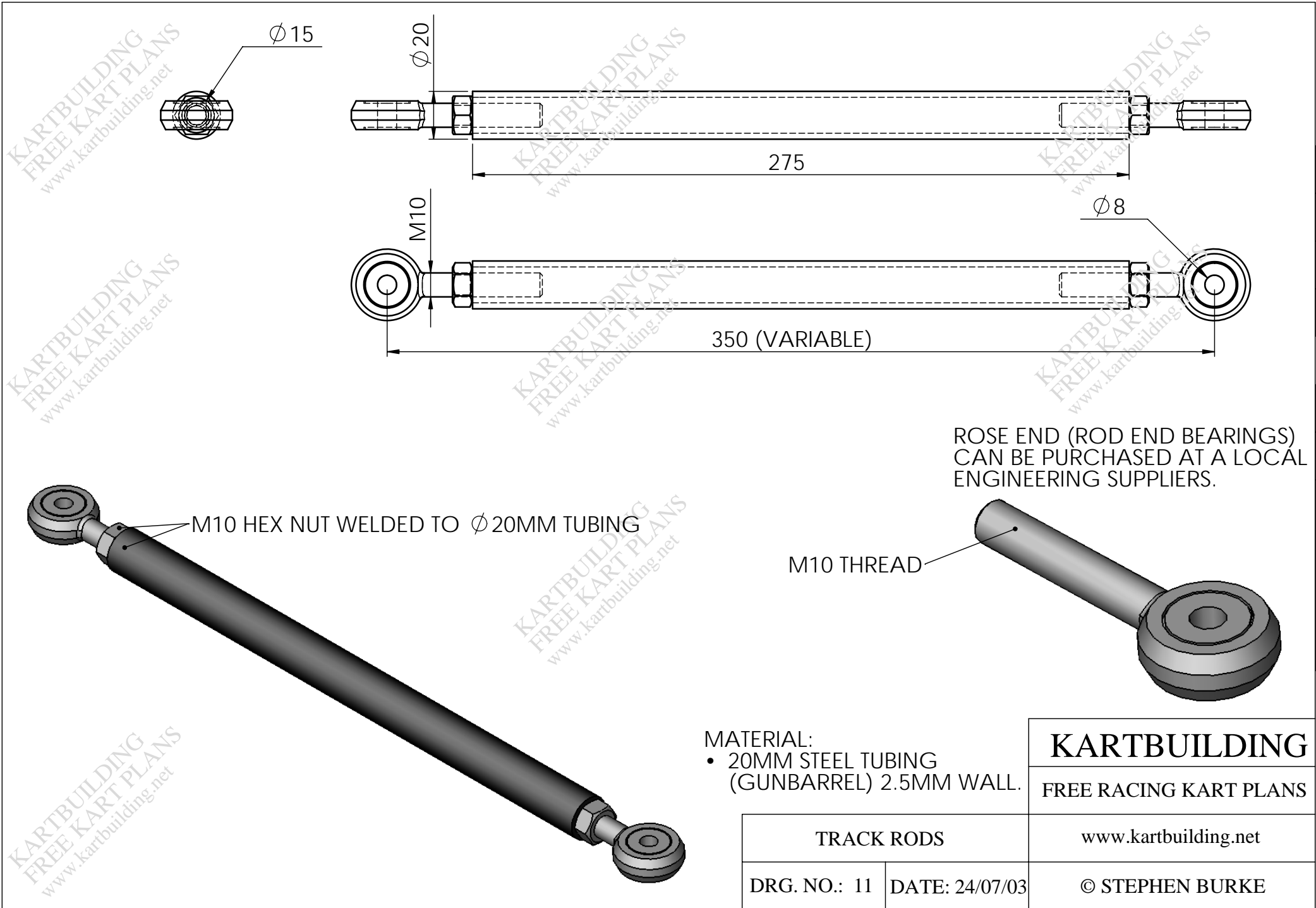
EXPLODED ASSEMBLY OF FRONT LEFT WHEEL AND HUB

NOTE:
IT MAY BE POSSIBLE TO
BUY THESE ALUMINIUM HUBS
FROM A KARTING CATALOGUE!
THE HUB MUST SUIT THE TYPE
OF WHEEL BEEN USED!

- MATERIAL:
- ALUMINIUM
 - TURNED/MANUFACTURED
 - POSSIBLY WELD ON REINFORCING SHOULDERS.

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FRONT HUBS AND WHEELS		www.kartbuilding.net
DRG. NO.: 10	DATE: 24/07/03	© STEPHEN BURKE



ROSE END (ROD END BEARINGS)
CAN BE PURCHASED AT A LOCAL
ENGINEERING SUPPLIERS.

M10 HEX NUT WELDED TO $\phi 20$ MM TUBING

M10 THREAD

- MATERIAL:
- 20MM STEEL TUBING (GUNBARREL) 2.5MM WALL.

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www.kartbuilding.net	
TRACK RODS	© STEPHEN BURKE
DRG. NO.: 11	DATE: 24/07/03

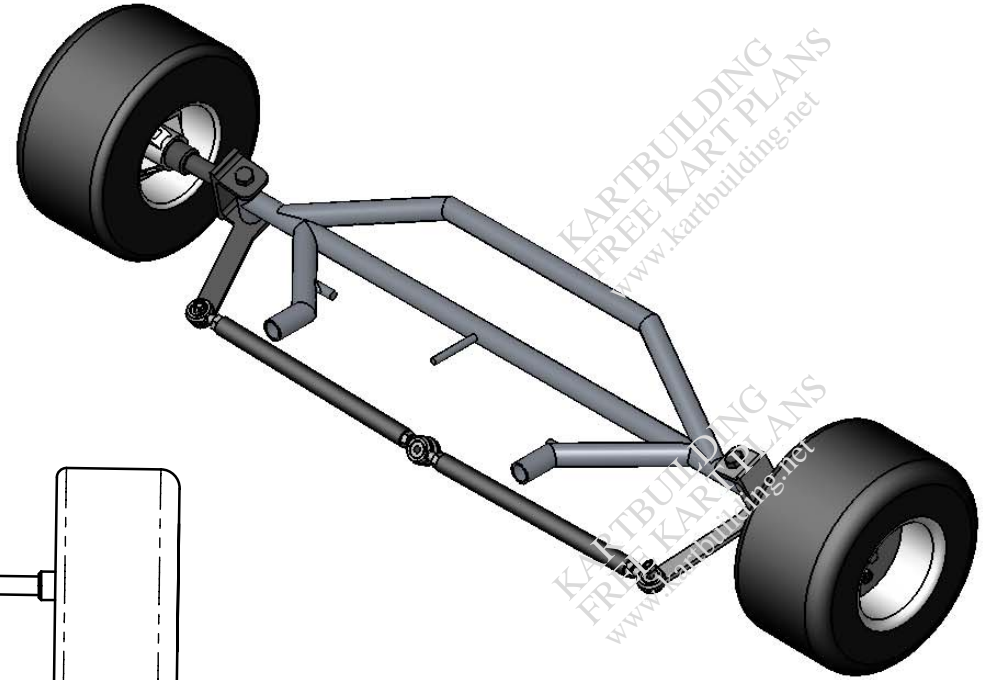
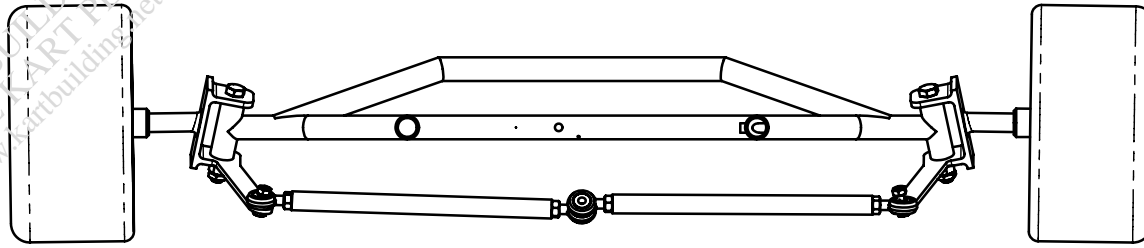
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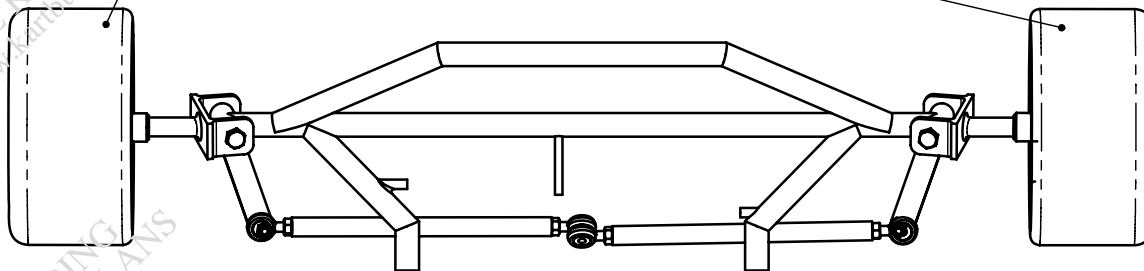
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FRONT WHEELS MUST BE PARALLEL
THIS CAN BE ADJUSTED VIA THE ROSE ENDS THREAD
ON THE TRACK RODS.



TRACK ROD
PUSHED TO THE LEFT
(OR)
PULLED TO THE RIGHT

TRACK ROD
PUSHED TO THE RIGHT
(OR)
PULLED TO THE LEFT

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FRONT STEERING	
DRG. NO.: 12	DATE: 24/07/03

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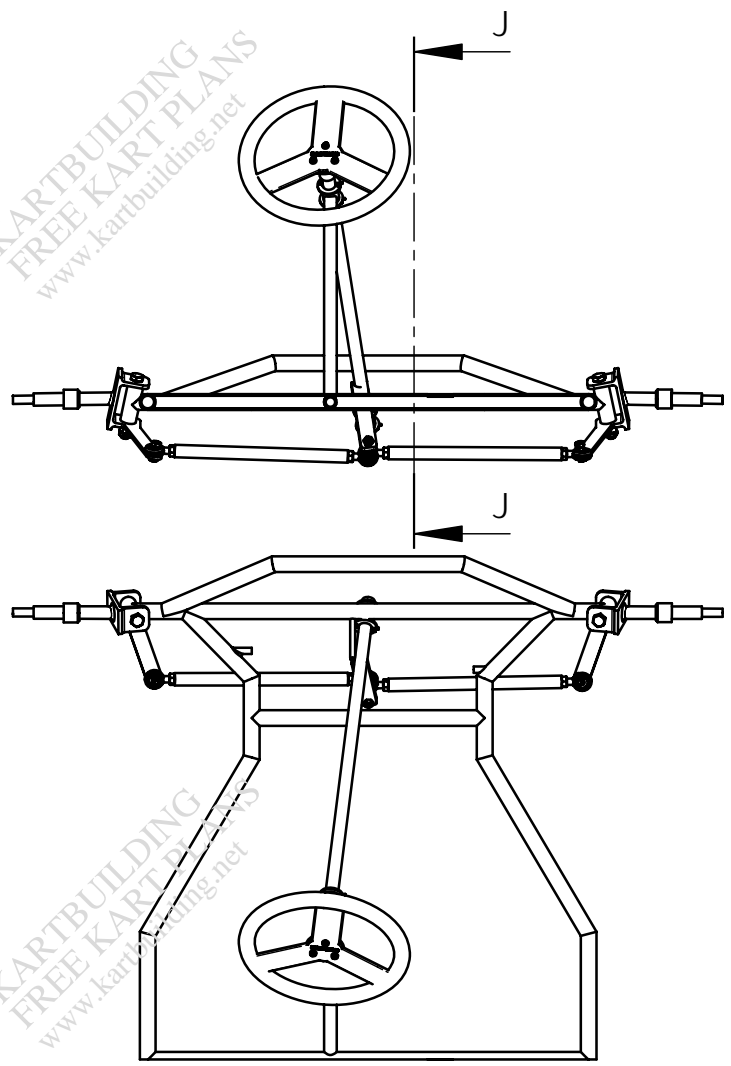
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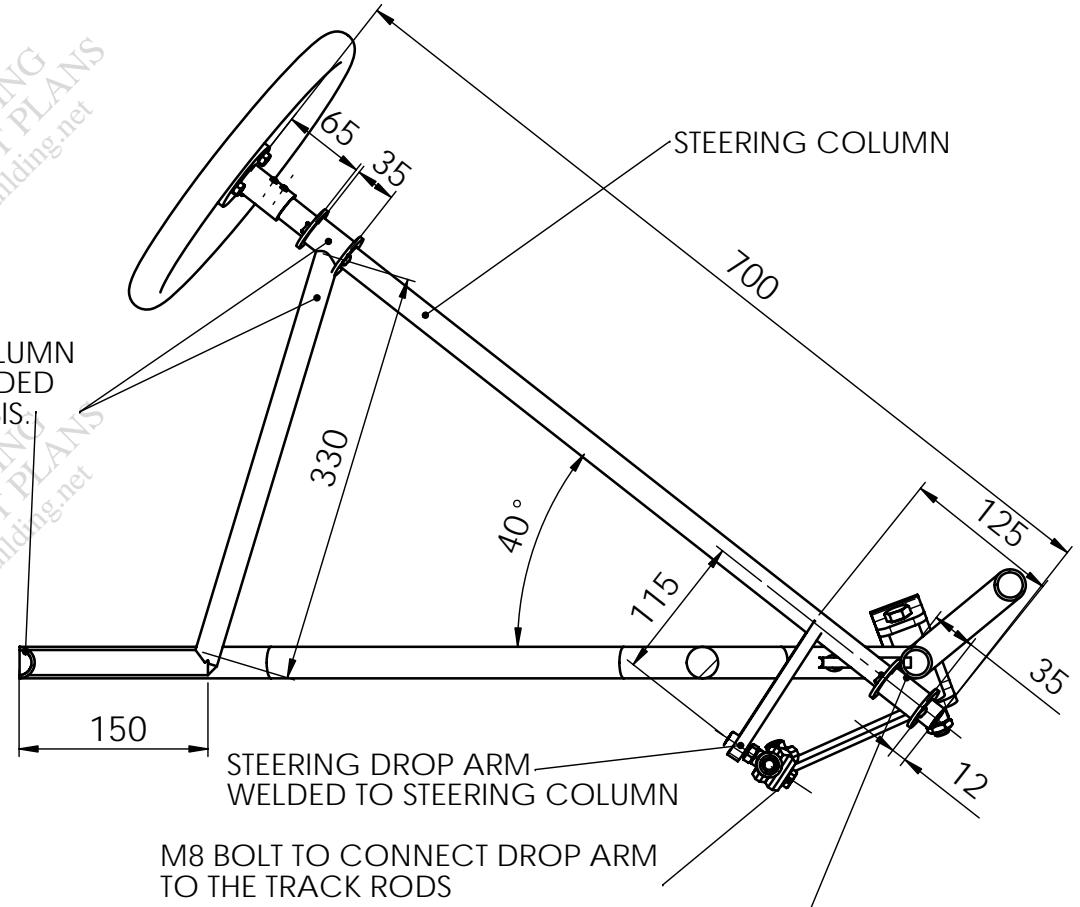
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STEERING COLUMN
SUPPORT WELDED
TO THE CHASSIS.



M8 BOLT TO CONNECT DROP ARM
TO THE TRACK RODS

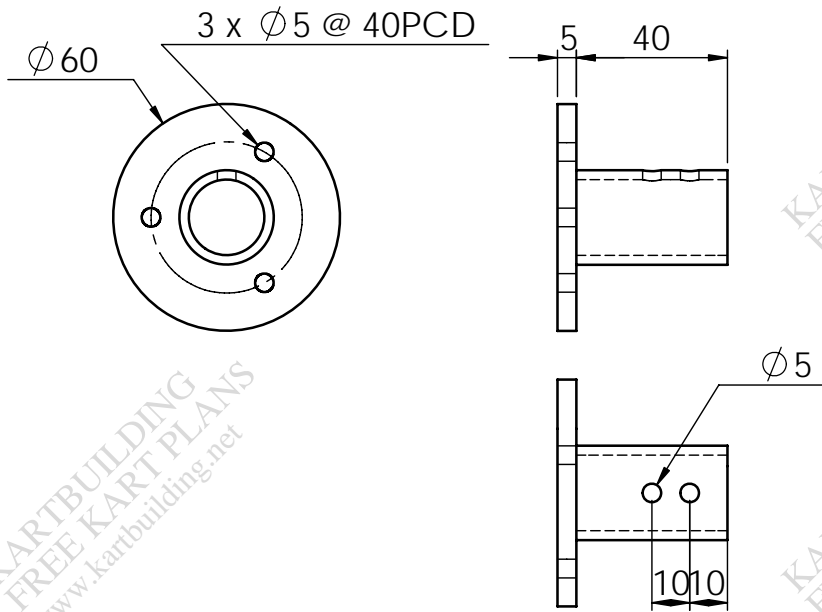
BOTTOM STEERING COLUMN
SUPPORT/BUSHING WELDED
TO THE CHASSIS.

SECTION J-J

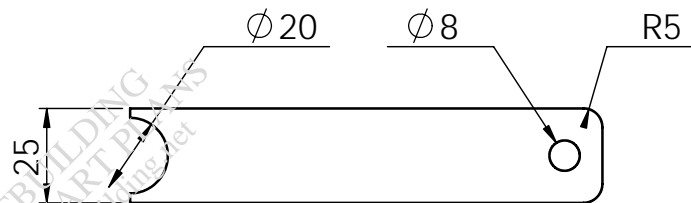
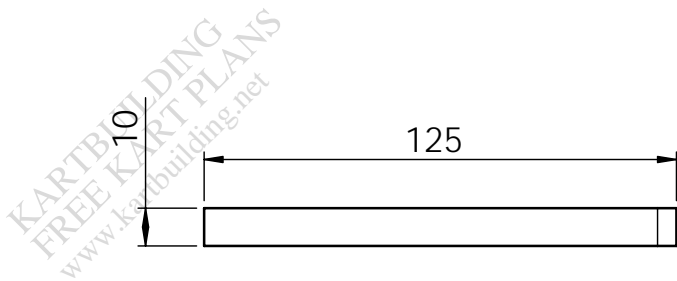
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STEERING COLUMN	
DRG. NO.: 13	DATE: 24/07/03

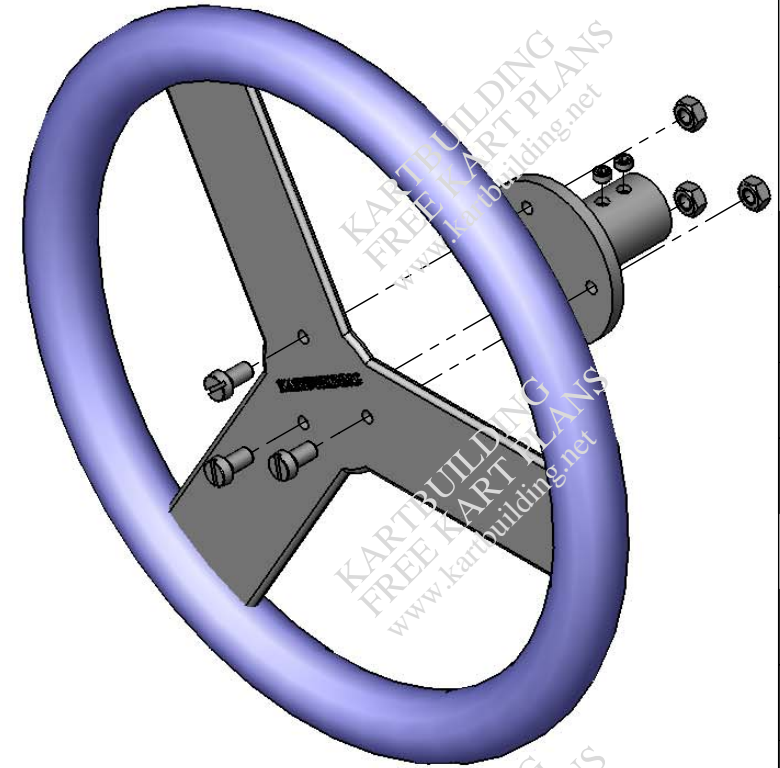
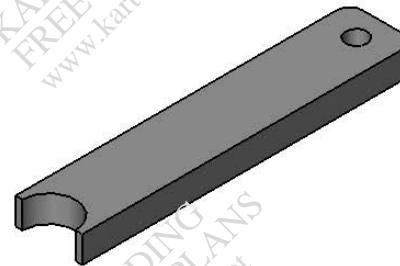
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STEERING COLUMN CAP

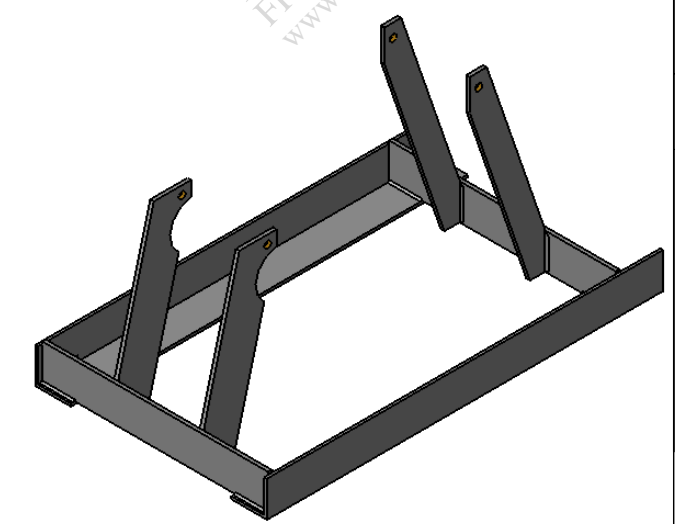
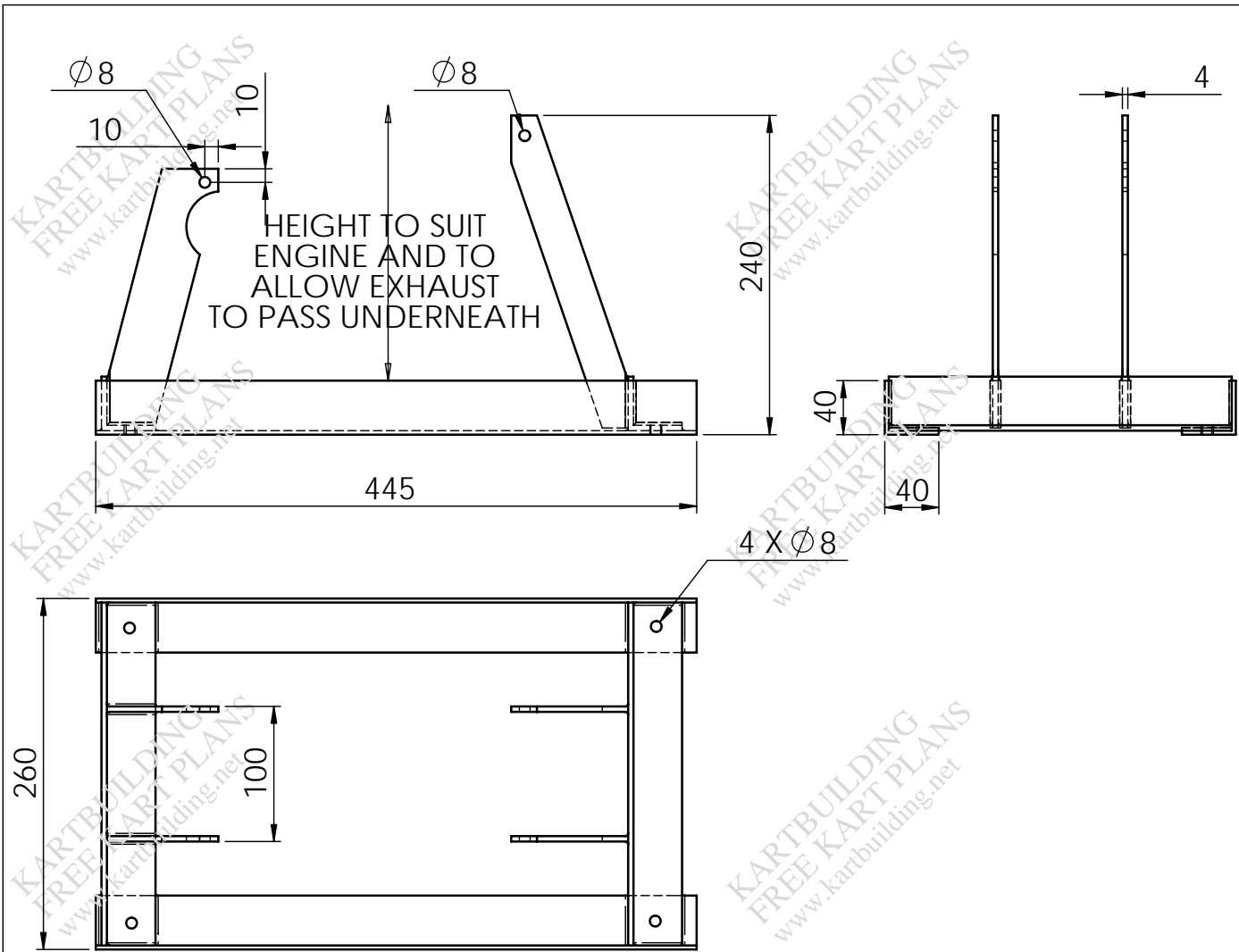


STEERING DROP ARM



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STEERING COLUMN PARTS		www.kartbuilding.net
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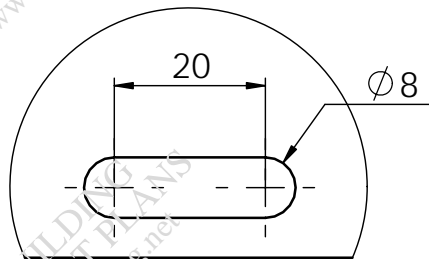
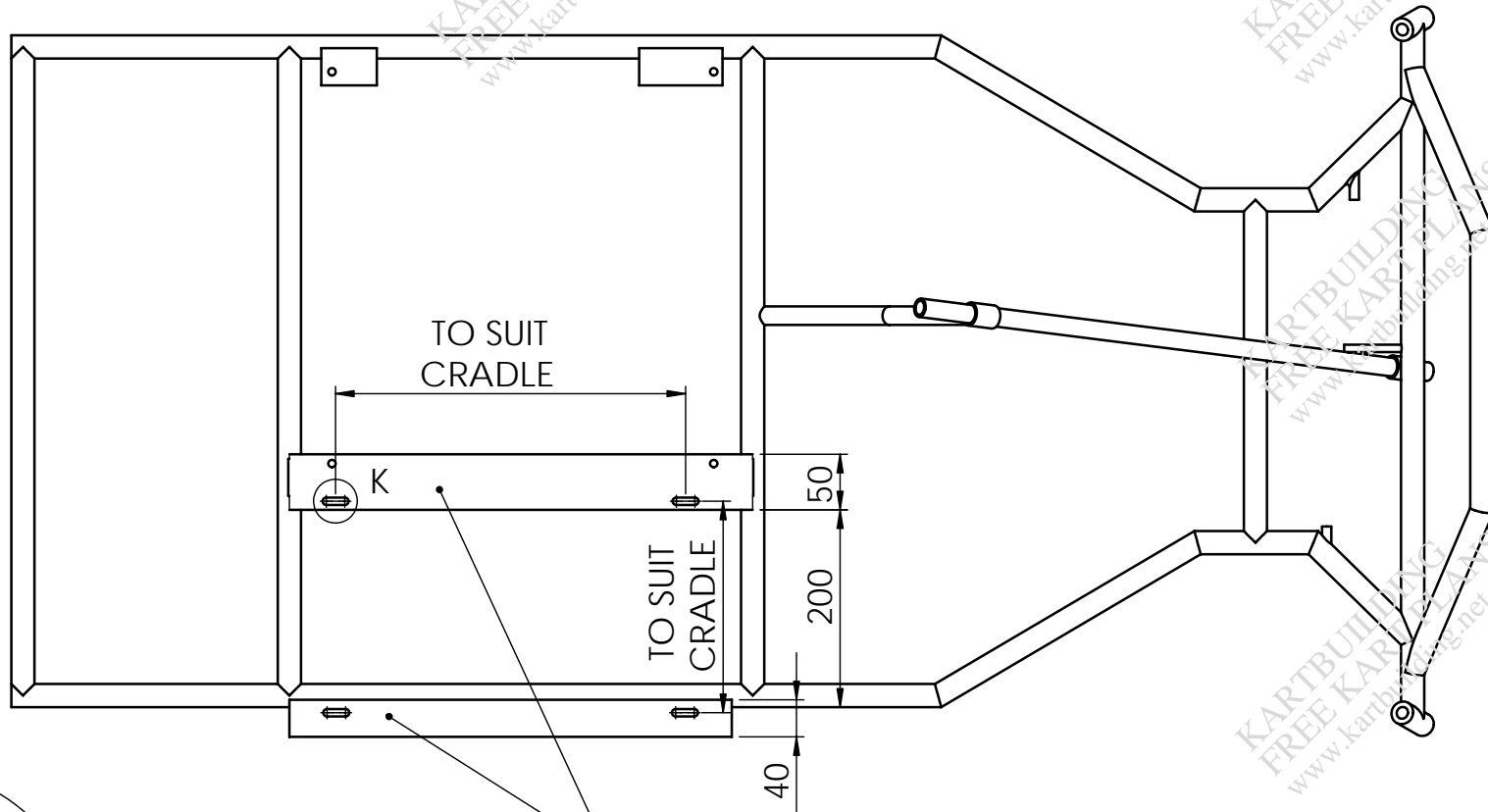


NOTE:
THE CRADLE MUST BE DESIGNED TO SUIT THE ENGINE, EXHAUST, AND MOUNTING HOLES. THREADED BAR MAY HAVE TO BE USED TO SECURE THE ENGINE TO THE CRADLE.

MATERIAL:
• FABRICATED FROM 4MM FLAT STEEL AND 40MM ANGLE IRON.

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ENGINE CRADLE	© STEPHEN BURKE
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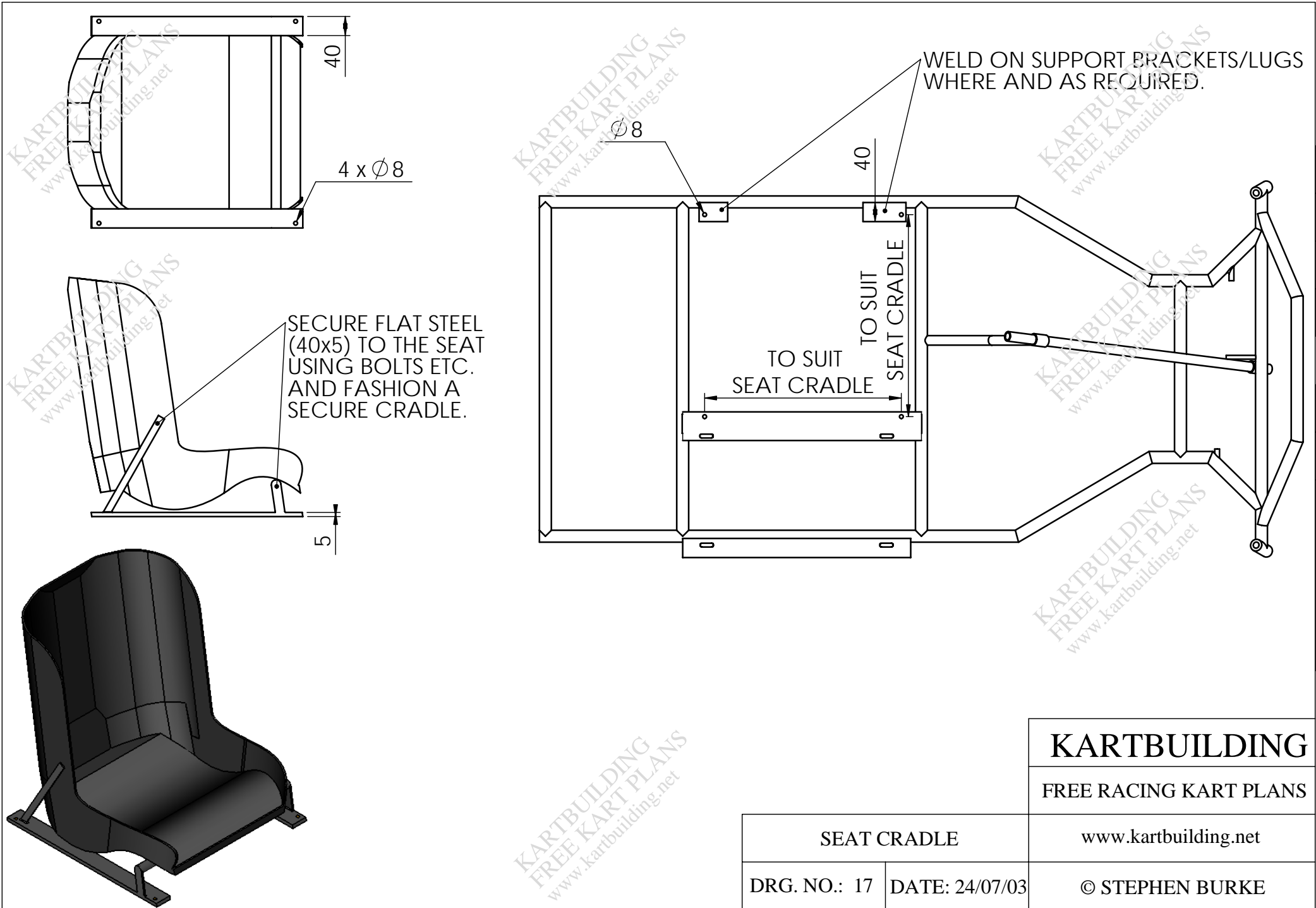
NOTE:
 NO HOLES ARE TO BE DRILLED IN THE CHASSIS.
 A LUG, OR EXTRA SUPPORT MEMBER MUST BE
 WELDED ONTO THE CHASSIS AND IN TURN CAN BE DRILLED.



DETAIL K
 SLOT TO ALLOW FOR
 CHAIN TENSIONING

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CHASSIS CRADLE SUPPORT	www.kartbuilding.net

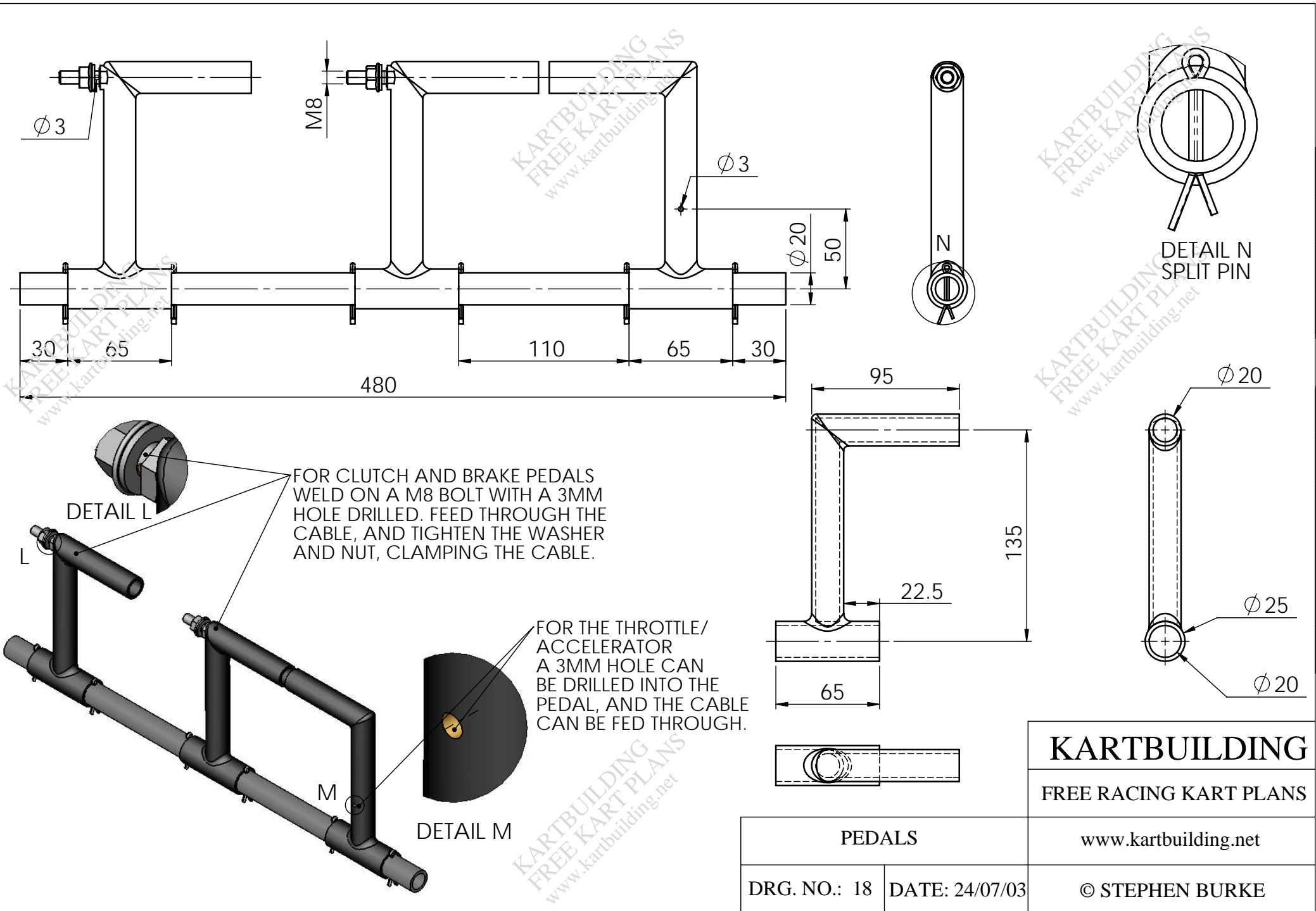
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SEAT CRADLE	
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FOR CLUTCH AND BRAKE PEDALS
WELD ON A M8 BOLT WITH A 3MM
HOLE DRILLED. FEED THROUGH THE
CABLE, AND TIGHTEN THE WASHER
AND NUT, CLAMPING THE CABLE.

FOR THE THROTTLE/
ACCELERATOR
A 3MM HOLE CAN
BE DRILLED INTO THE
PEDAL, AND THE CABLE
CAN BE FED THROUGH.

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PEDALS		www.kartbuilding.net
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CABLE SHEATHING STOP
(WELDED TO CHASSIS)

FLEXIBLE CABLE SHEATHING

PEDAL STOPS
OFFCUTS OF 6MM
ROUND BAR, WELDED TO THE CHASSIS

WELD/TACK ON PEDAL SHAFT TO
THE CHASSIS. IF YOU WANT TO
BOLT THE PEDAL SHAFT - A SPECIAL
LUG WILL HAVE TO BE WELDED TO
THE CHASSIS FIRST AS NOT TO DRILL
HOLES IN THE CHASSIS.

THERE IS A SLIGHT ANGLE BETWEEN THE PEDAL SHAFT AND THE CROSS MEMBERS IN THE CHASSIS. THIS IS BECAUSE THE SEAT IS ANGLED TO ONE SIDE, AND ALLOWS THE DRIVERS FEET REACH ALL THREE PEDALS. THE PEDAL SHAFT CAN BE HELD WITH A VISE-GRIPS/CLAMP TO DETERMINE THE CORRECT DISTANCE AND ANGLE BEFORE WELDING/SECURING THE PEDAL SHAFT TO THE CHASSIS.

KARTBUILDING

FREE RACING KART PLANS

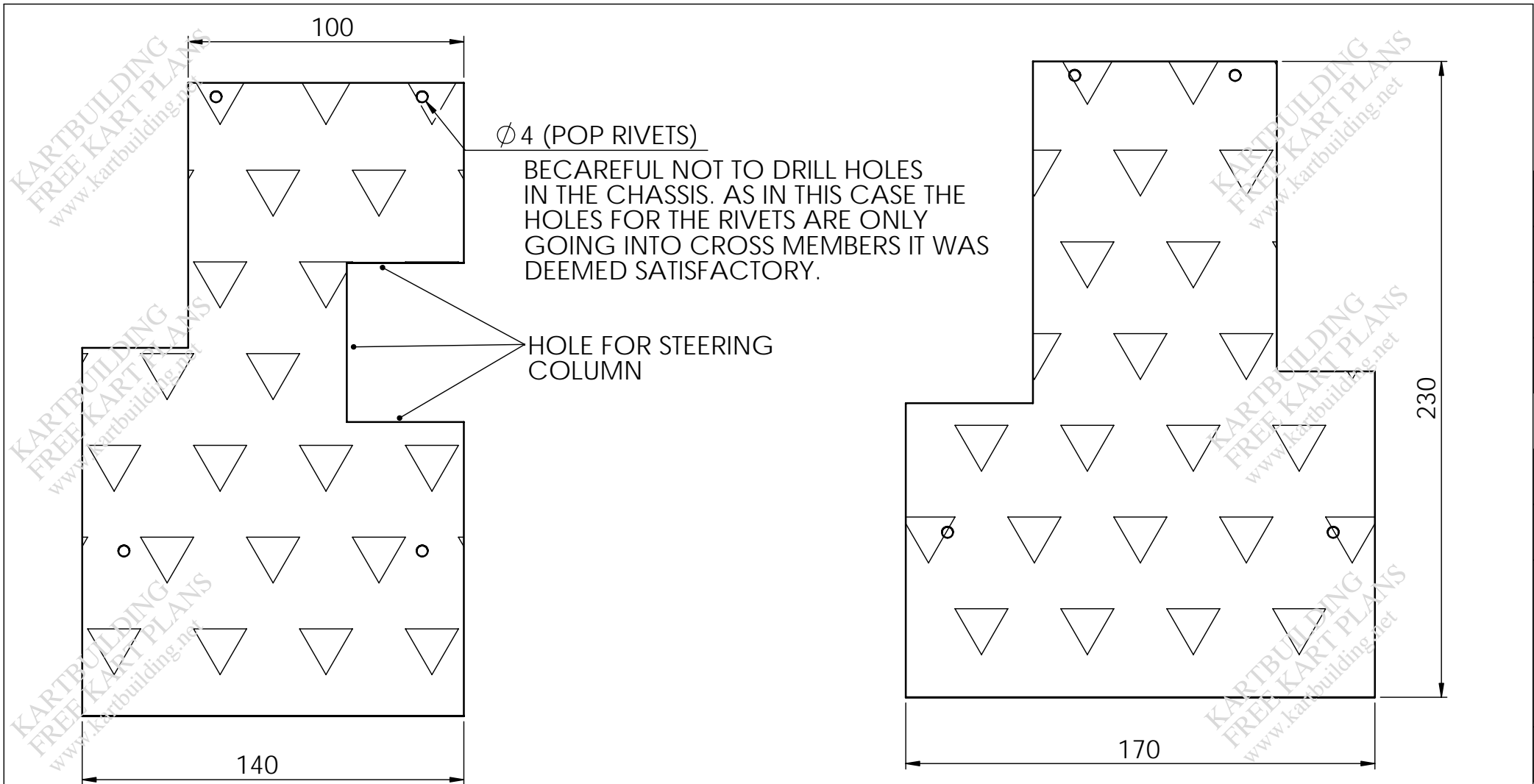
PEDALS IN POSITION

www.kartbuilding.net

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DATE: 24/07/03

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NOTE:
 TWO PIECES OF ALUMINIUM CAN BE FASIONED IN THE SHAPE OF THE PIECES ABOVE, **OR** AN ENTIRE SHEET OF ALUMINIUM OR CHECKER PLATE CAN BE USED TO COVER THE UNDERNEATH OF FRONT OF THE KART. IT DEPENDS ON TERRAIN AND COST.

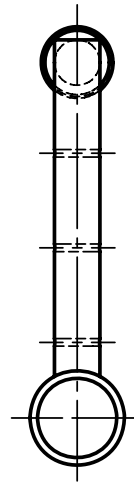
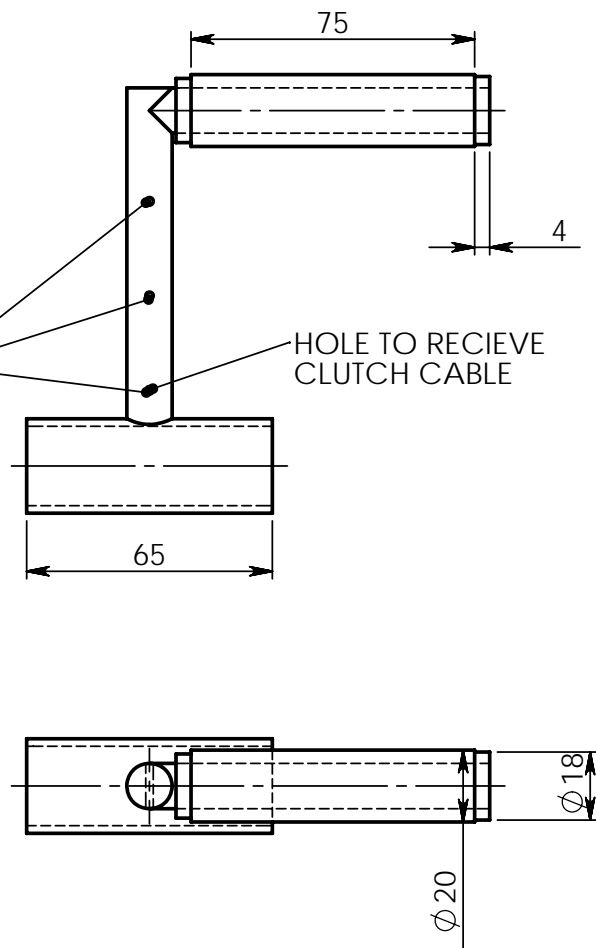
MATERIAL:

- FABRICATED FROM 3MM ALUMINIUM/CHECKER PLATE RIVITED TO THE CHASSIS.

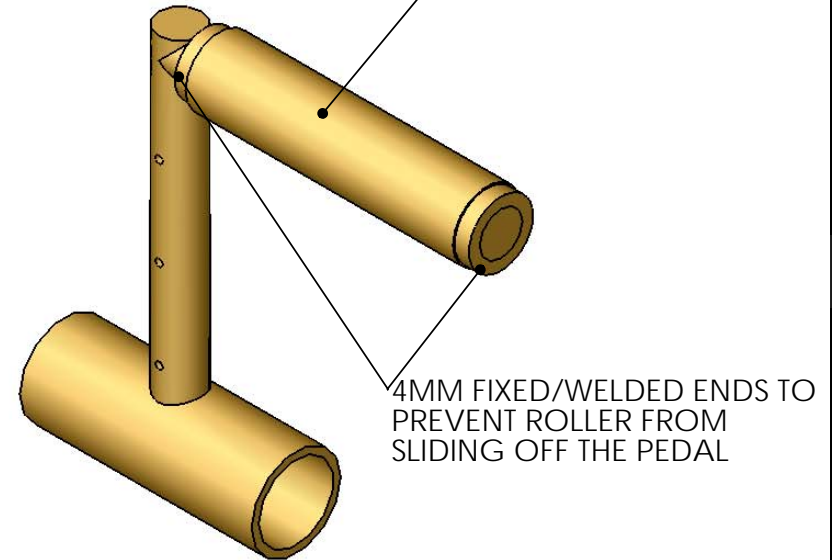
FLOOR PAN/ BASE		KARTBUILDING
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THERE ARE 3 DIFFERENT HOLES WHICH CAN RECIEVE THE CLUTCH CABLE. THE HOLE TOWARDS THE BOTTOM WILL ALLOW FOR BETTER CONTROL ON A SENSITIVE CLUTCH. THE HOLE AT THE TOP OF THE PEDAL IS FOR CLUTCHES WITH LONG TRAVEL WHICH ARE LESS SENSITIVE.



TUBING/PIPE WHICH CAN ROTATE FREELY



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AS THE CLUTCH PEDAL CAN BE OPERATING A MOTORCYCLE CLUTCH, IT NEEDS TO BE VERY SENSITIVE TO MOVEMENTS OF TEH DRIVERS FOOT, ESPECIALLY WHEN DISENGAGING THE CLUTCH AND TAKING OFF. AS A RESULT - A ROLLER (PIECE OF TUBING/PIPE WHICH CAN SPIN FREELY) WILL HELP THE DRIVER TO LET OUT THE CLUTCH MORE CAREFULLY TO PREVENT STALLING THE KART WHEN TAKING OFF.

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MODIFIED CLUTCH PEDAL

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