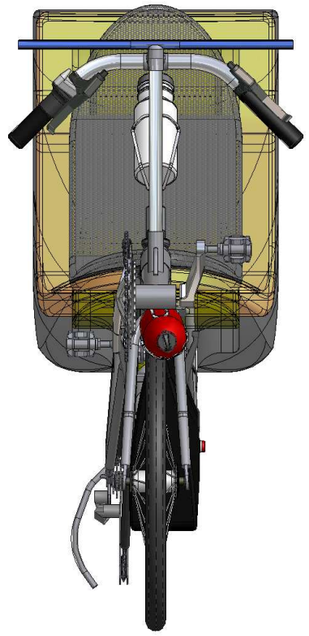
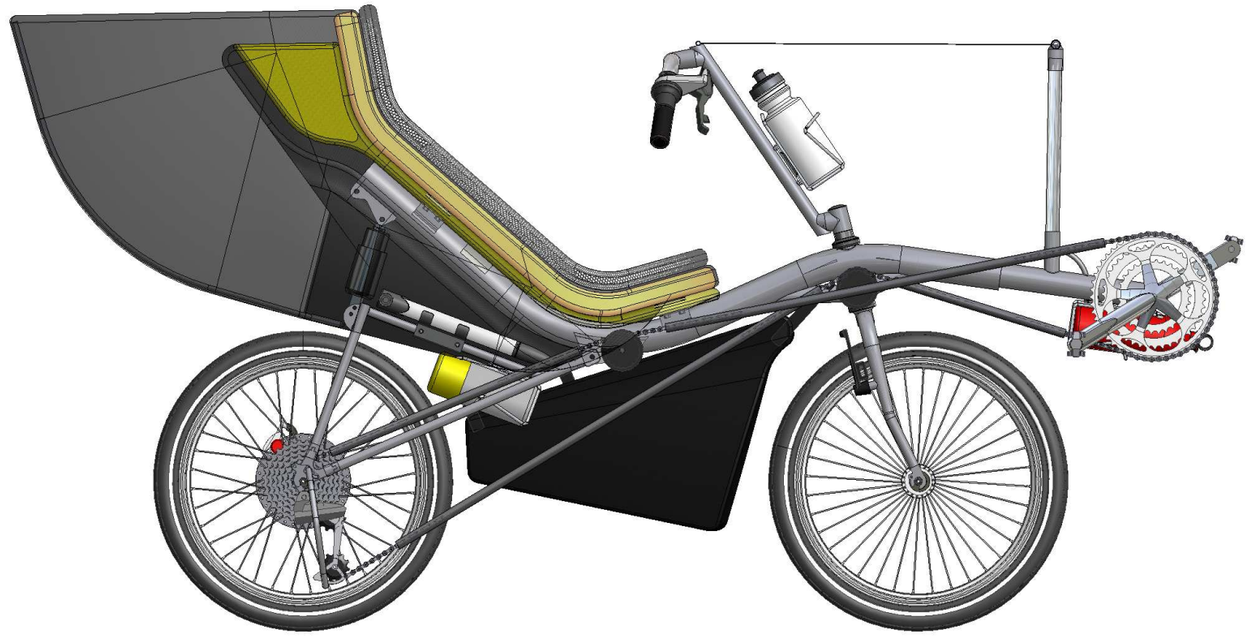
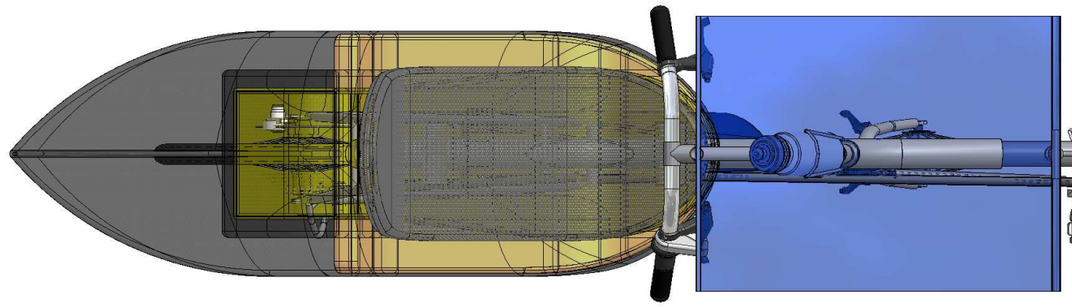
These are the plans of Feng Huo Lun, as built in Adelaide by Olly and Ting, and ridden from Beijing to Paris in 2007. They may be reproduced freely for non-commercial purposes.

The intention was to design a bike with optimal aerodynamics and speed within the constraints imposed by self supported touring.

Feng Huo Lun can folded into a normal sized bike box, and has similar carrying capacity to a diamond frame touring bike with four panniers, She weighs 17kg unloaded, including a nylon shade canopy for protection from rain and sun.







Acknowledgement - Inspiration and advice
Wu Yi Ting
Bruce Steer
Ian Graysome
Ben Goodall (Trisled)
Ian Humphries (Flying Furnature)
Kevin Kao (TW bents)
The Sims family (Greenspeed)
Noel Buckley
Framebuilders List
The Fibreglass Factory, Lonsdale, SA.
Appologies to those I have lost track of.

-Donated parts and materials:
TW bents (Taiwan)
Cane creek (USA)
Velocity (Australia)
Terracycle (USA)

TITLE: FENG HUO LUN	PAGE TITLE: INTRODUCTION
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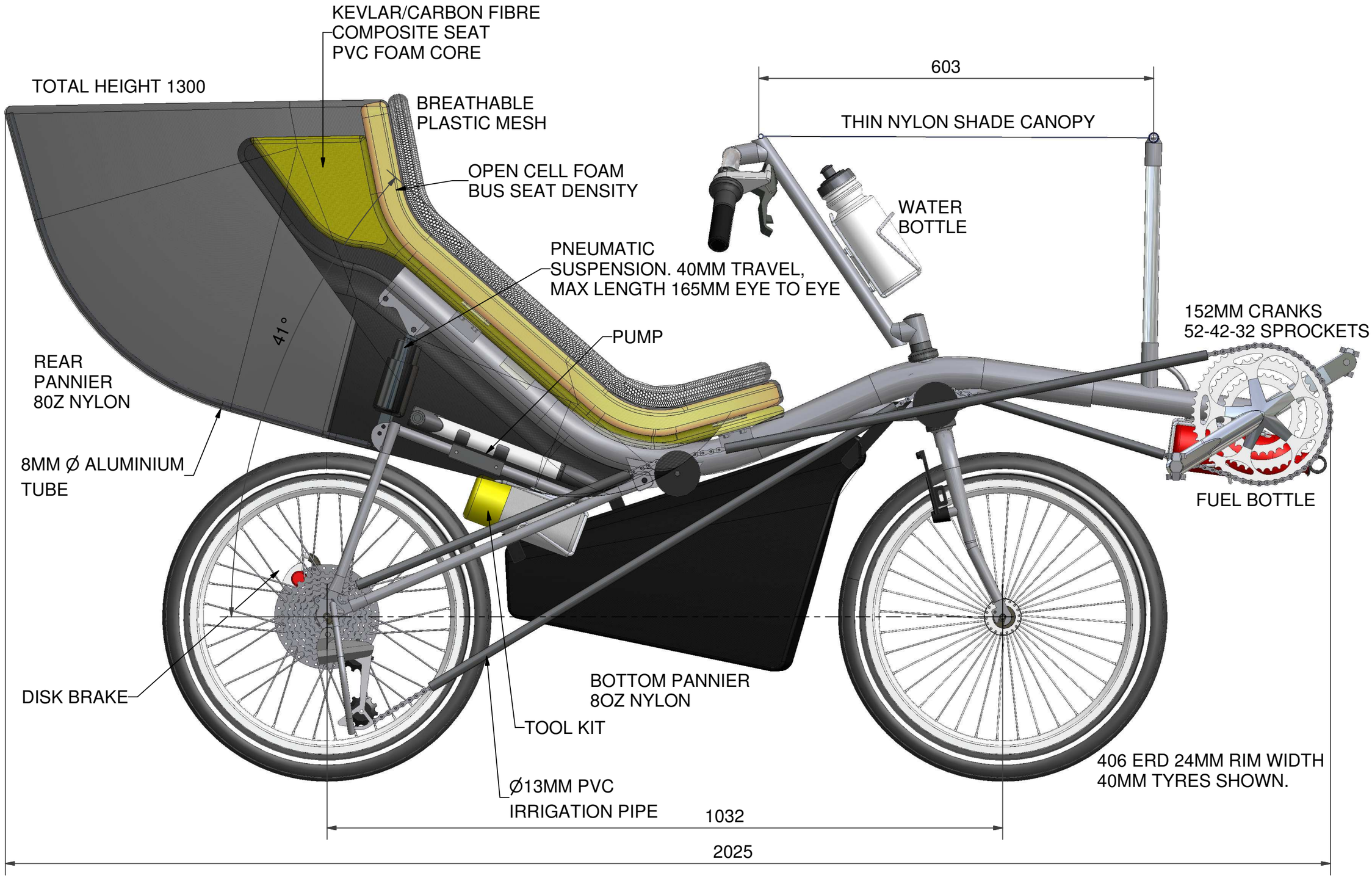

HEAD TUBE ANGLE: 76°
FORK OFFSET: 40
TRAIL: 43
BOTTOM BRACKET CENTRE HEIGHT 561
SEAT HIGHT: 562 (BOTTOM OF CURVE AND ALLOWING 40 FOR SPONGE)

TITLE: FENG HUO LUN	PAGE TITLE: SIDE ELEVATION
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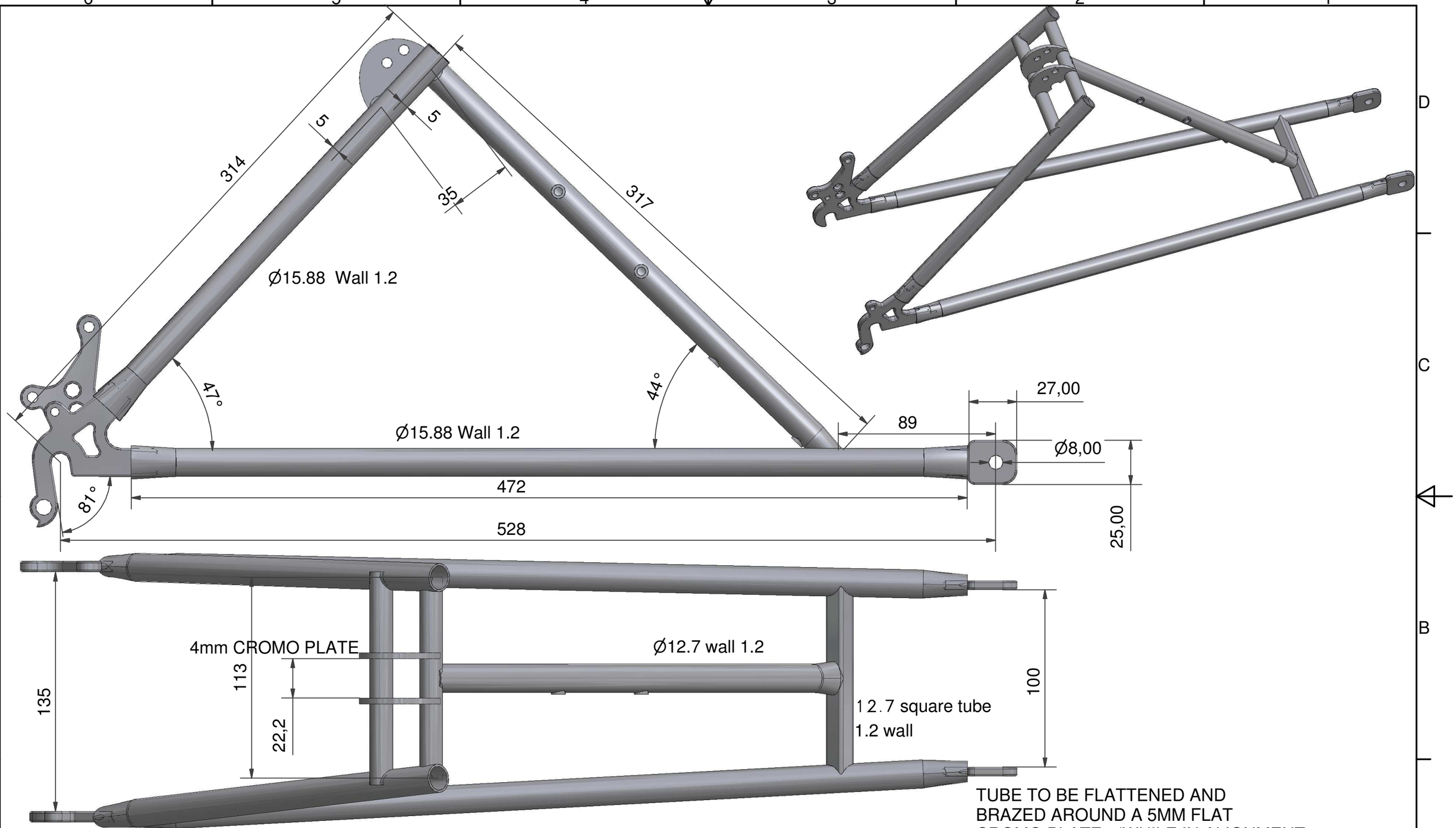

REAR TRIANGLE CAN BE OFFSET TO ALLOW
A SYMMETRICAL WHEEL BUILD TO A PARTUCULAR
(PROBABLY ASYMMETRICAL) HUB.

TUBE TO BE FLATTENED AND
BRAZED AROUND A 5MM FLAT
CROMO PLATE. (WHILE IN ALIGNMENT
JIG, AXLE IN PLACE.)

TITLE: FENG HUO LUN	PAGE TITLE: REAR TRIANGLE
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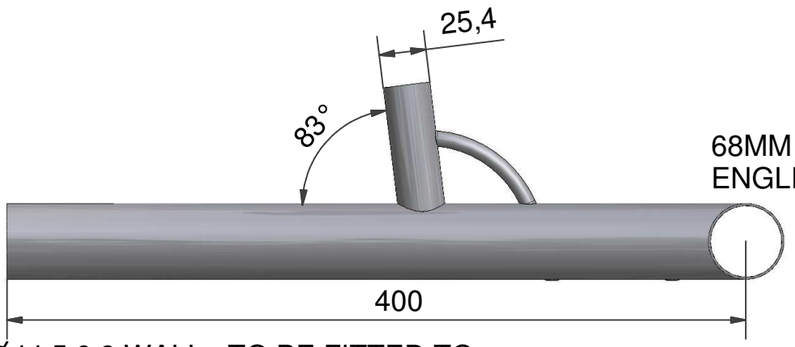
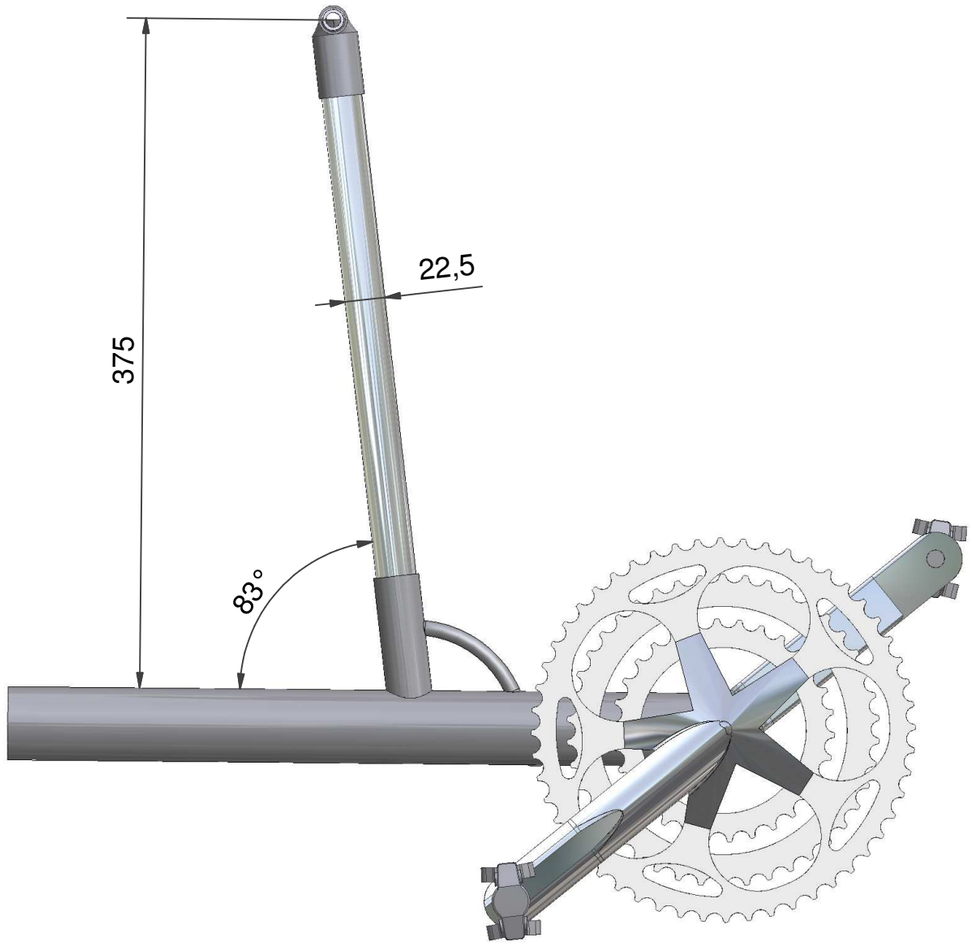
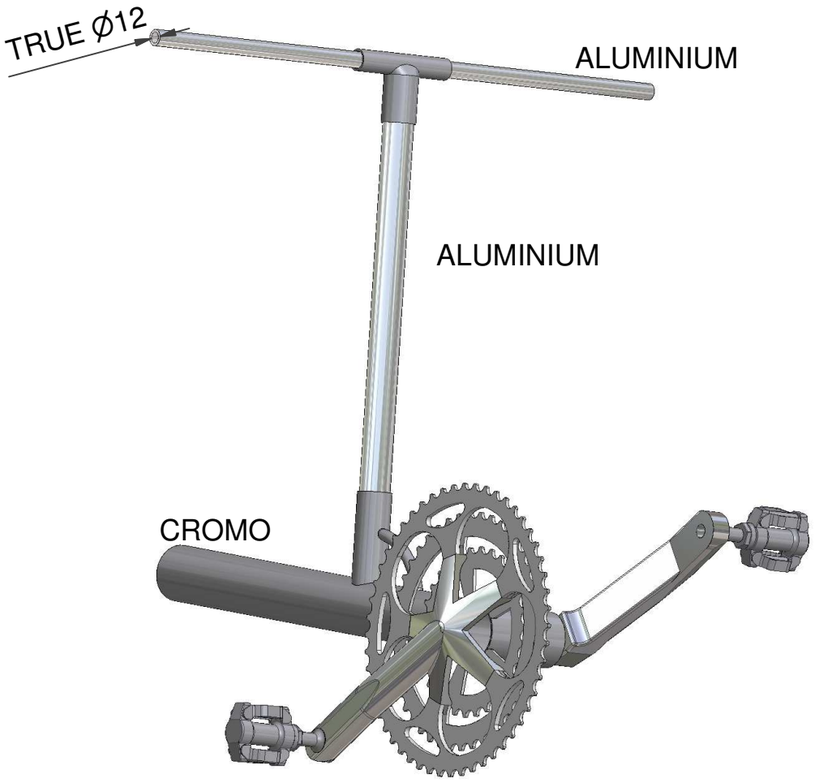
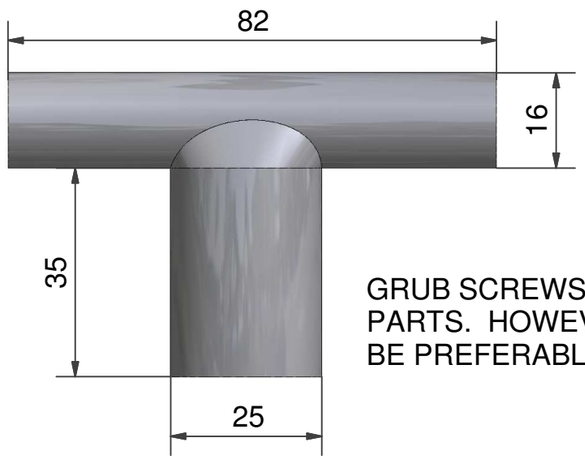


68MM BOTTOM BRACKET SHELL
ENGLISH THREAD.

Ø44.5 0.9 WALL. TO BE FITTED TO FRAME WITH ALUMINIUM SHIM. (PERFECTLY FITTING OD SIZE NOT AVAILABLE TO MATCH FRAME TUBING WITHOUT A SHIM)







GRUB SCREWS WERE USED TO CONNECT THE PARTS. HOWEVER A CLAMP SYSTEM WOULD BE PREFERABLE.

TITLE: FENG HUO LUN	PAGE TITLE: CRANK BOOM	
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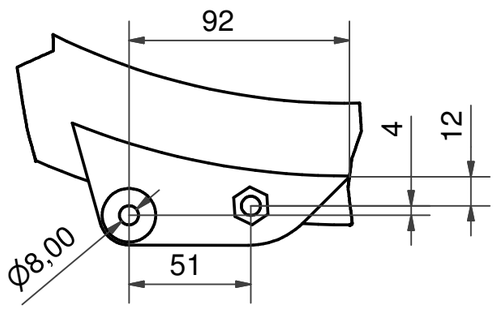
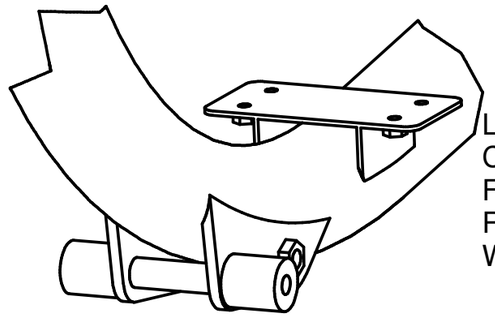
H (0.40 : 1)



C (0.40 : 1)



LETTING THE SEAT CLAMP OVER THE FRAME WITH A QUICK RELEASE SKEWER WOULD BE BETTER.

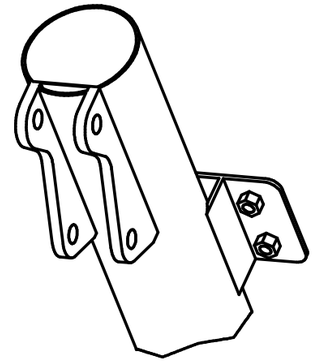
OUTER CROMO Ø22.5 0.9 WALL

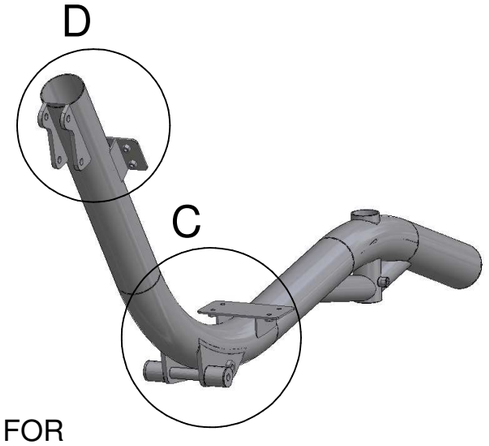
INNER CROMO Ø12.7 1.2 WALL

8MM ID BRASS BUSHING PRESSED THEN REAMED. THE PIVOT AXLE IS AN 8MM HIGH TENSILE STEEL BOLT.

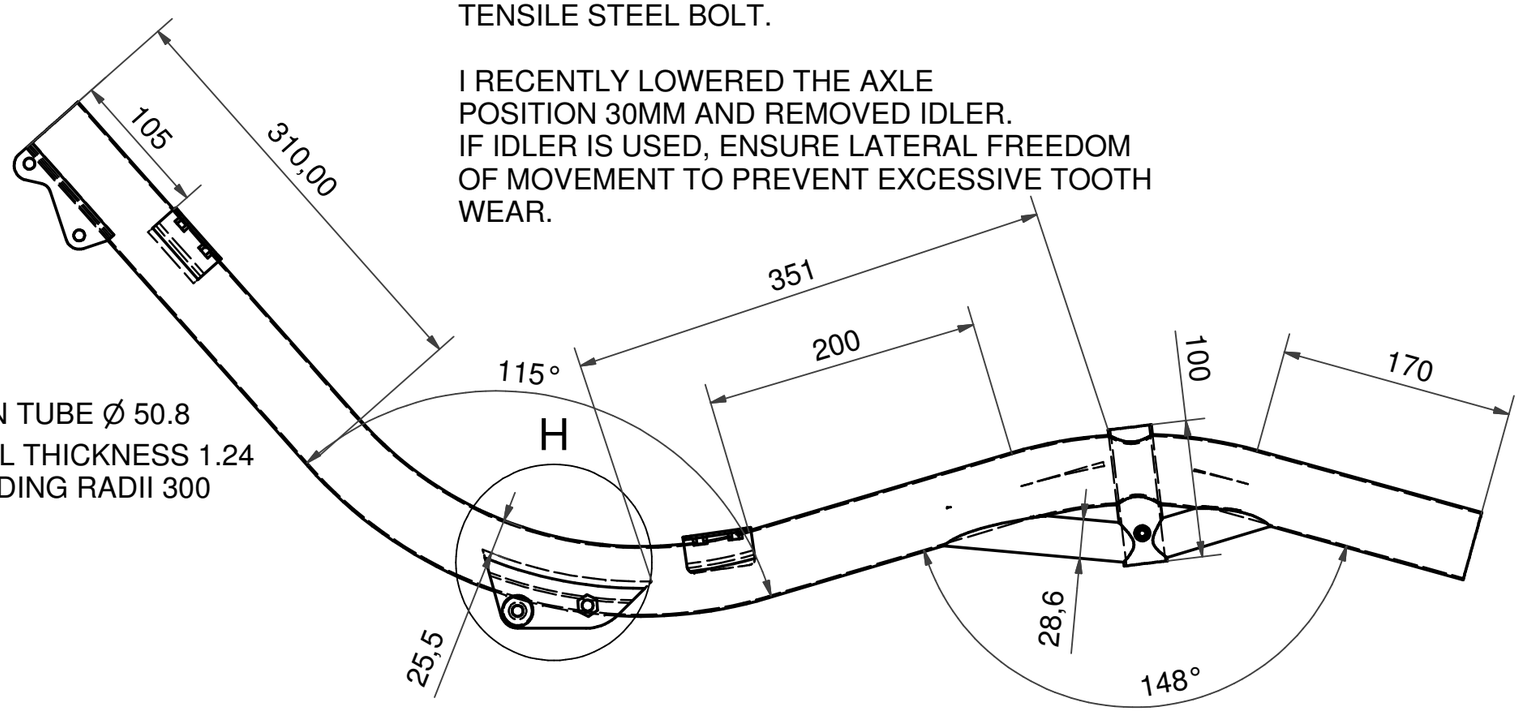
I RECENTLY LOWERED THE AXLE POSITION 30MM AND REMOVED IDLER. IF IDLER IS USED, ENSURE LATERAL FREEDOM OF MOVEMENT TO PREVENT EXCESSIVE TOOTH WEAR.

D (0.40 : 1)





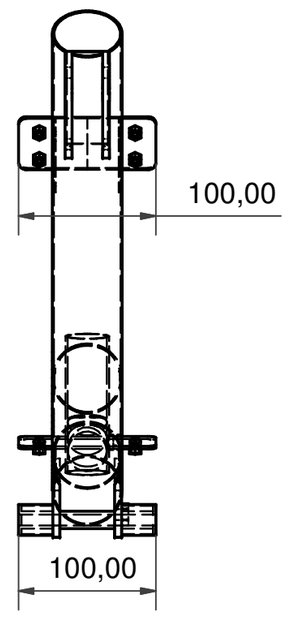
22.2 GAP BETWEEN LUGS FOR SUSPENSION BOSS. HOLES Ø8 LUGS FROM 4MM CROMO PLATE



MAIN TUBE Ø 50.8

WALL THICKNESS 1.24

BENDING RADII 300



NOTE: I RECENTLY EXTENDED THE HEAD TUBE. IT SHOULD BE AT LEAST 150MM. THIS REDUCES STRESS ON THE HEAD SET BEARINGS AND MOVES THE BRAKES FURTHER FROM THE CHAIN, AND THRE RIDERS LEGS TO PREVENT THE CABLE FROM RUBBING ON LEGS.

TITLE: FENG HUO LUN	PAGE TITLE: FRAME
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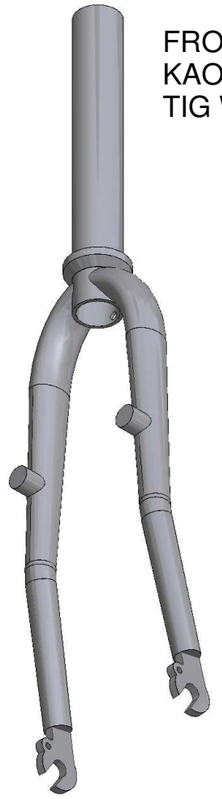
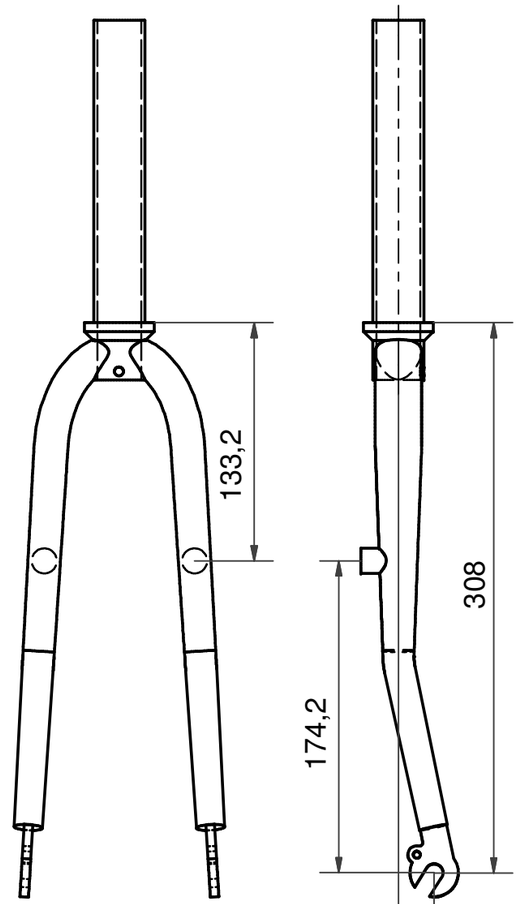
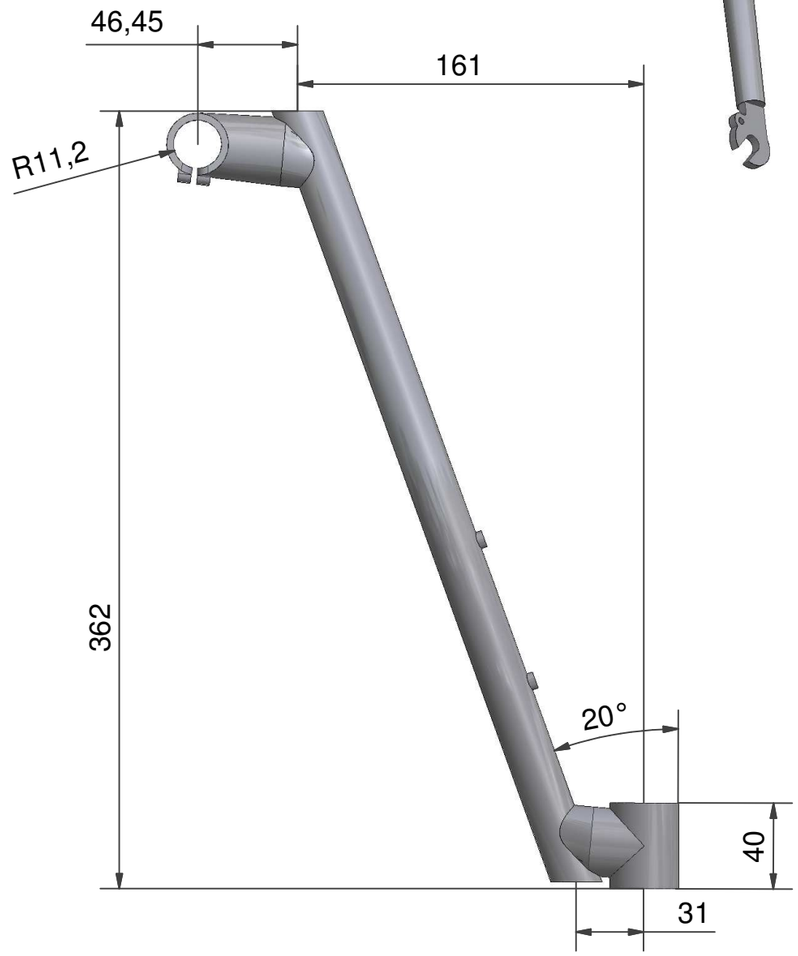
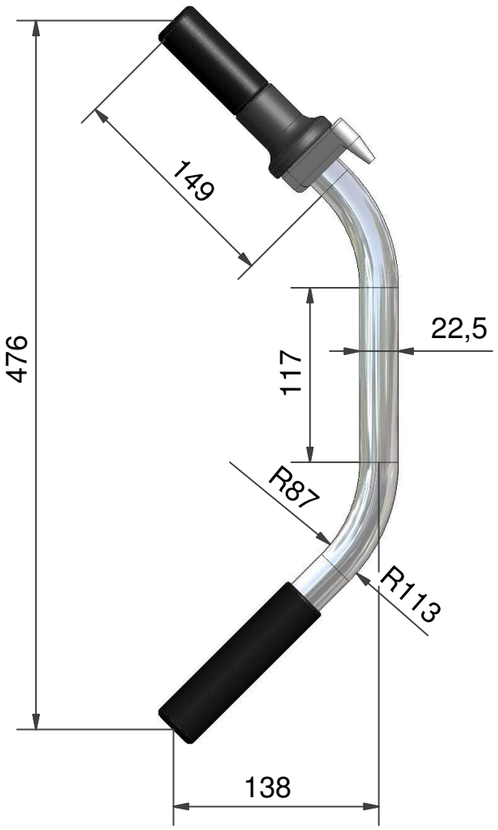
THE ORIGINAL PLAN WAS FOR UNDER-SEAT STEERING, HOWEVER THIS INTERFERED WITH FRONT BRAKE LEVERS. WILL RE-VISIT THIS IN FUTURE.

FRONT FORK WAS KINDLY DONATED BY KEVIN KAO OF TW-BENTS IN TAIWAN.
TIG WELDED 4130 CROMO









TITLE: FENG HUO LUN	PAGE TITLE: STEERING
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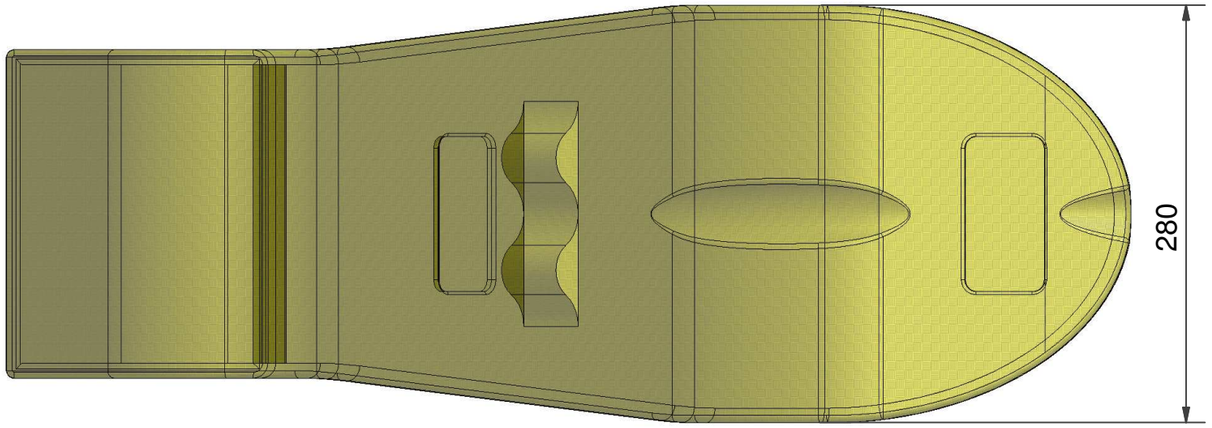
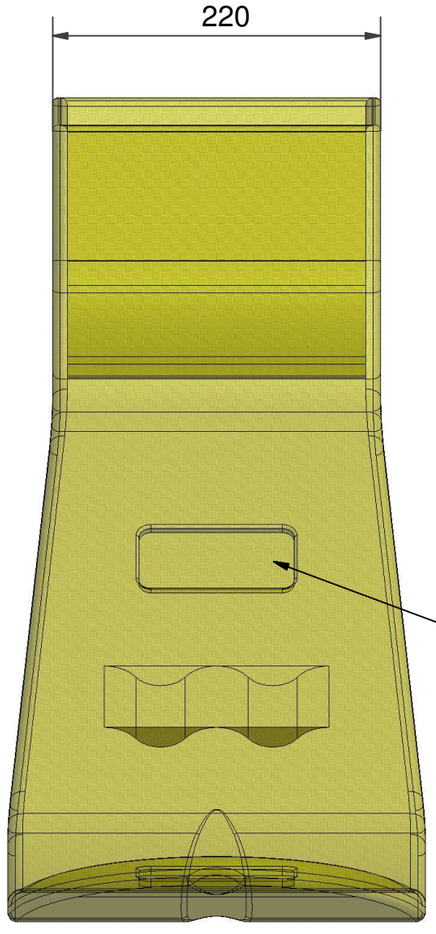
THE BOX BUILT INTO THE TOP OF THE SEAT WAS SO USEFUL I RECENTLY EXTENDED IT ANOTHER 40MM

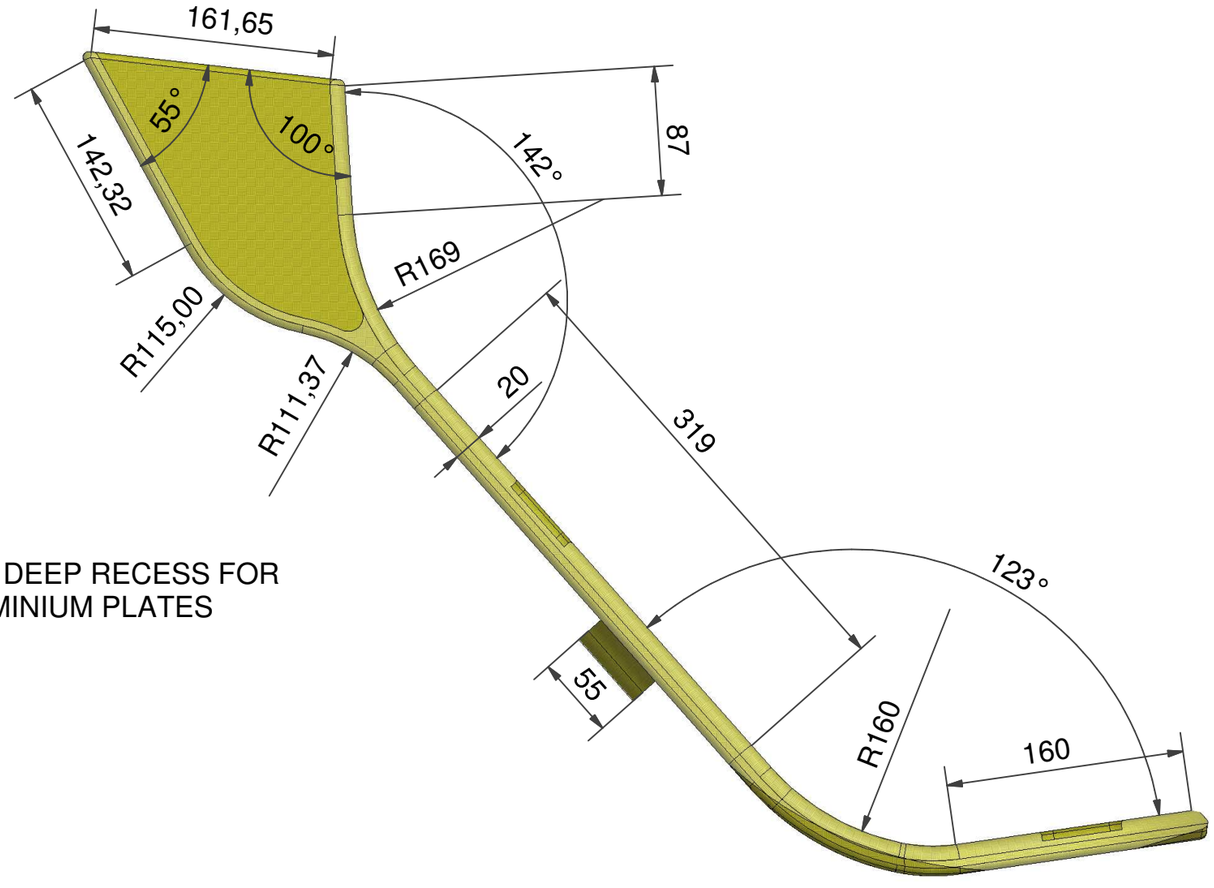
NEXT TIME I INTEND TO MAKE THE SEAT INTO A HOLLOW RECTANGULAR CROSS SECTION APPROX 150MM DEEP. THE STORAGE SPACE COULD BE USED FOR A TENT AND BED-ROLL. PANNIERS COULD THEN HANG OFF EITHER SIDE, AND THE BACK.

I PUT ALUMINIUM PLATES IN THE AREAS WITH BOLT HOLES FOR REINFORCING IF DOING THIS REMEMBER THE ALUMINIUM SHOULD BE ELECTRICALLY ISOLATED FROM ANY CARBON-FIBRE TO PREVENT ELECTROLISIS.





6MM DEEP RECESS FOR ALUMINIUM PLATES



SEAT TO USE TWO LAMINATED 10MM PVC FOAM CORES, WITH SOME COMBINATION OF KEVLAR OR CARBON FIBRE.

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