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Steering and rear axels

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Topic: Steering and rear axels

Posted By: samcoombes
Subject: Steering and rear axels
Date Posted: 17 March 2008 at 15:04

Looking into making my own car for the Ringwood Grand Prix.

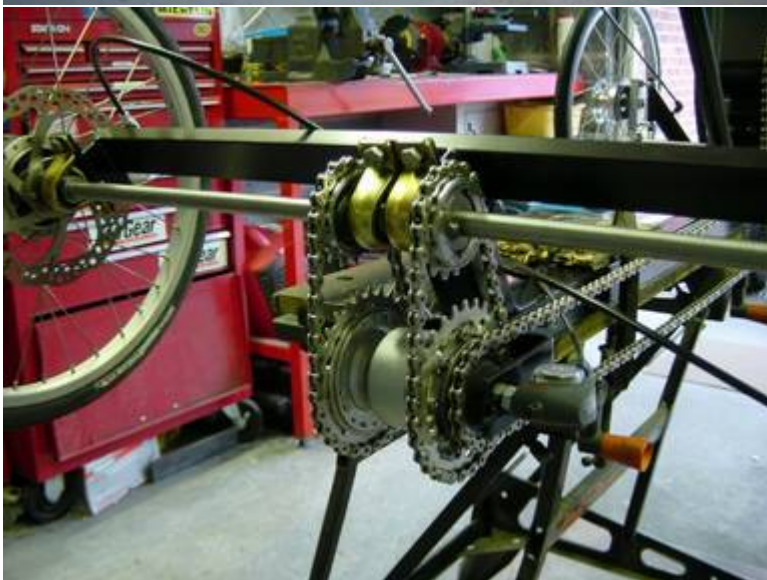
Could people post piccies of their steering and rear axels? These are the bits we are struggling to make!

Thanks

Replies:

Posted By: Neil
Date Posted: 17 March 2008 at 15:15

Heres some of rear axels





Posted By: Jes@GCRE
Date Posted: 17 March 2008 at 15:31

Struggling to find decent ones of steering.

We use the "push - pull" system cribbed from the famous Adrian Tom's cars a long time ago:



It's on fire.
It's on FIRE!!
IT'S ON FIRE!!!!

82:46

Great Central Racing
15/5/1993 - 27/9/2008
"It was a hell of a ride."

Posted By: samcoombes
Date Posted: 17 March 2008 at 15:32

blimey, very well engineered. Where can I get those bearing sets from? Also what hubs are best to use? We're looking for wheelchair ones, but they are hard to get and fit to the axle!

Posted By: samcoombes
Date Posted: 17 March 2008 at 15:33

thanks, I cant get on with that type of steering - would prefer "handle bars" like the yellow Royce car.

Posted By: Jes@GCRE
Date Posted: 17 March 2008 at 15:39

No one uses them in the championship but several teams use joy sticks for steering.

The pillow block bearings come from my local bearing supplier - Arrow Engineering (Ruaby). But I'm sure lots of people stock them. Reference is SBPP 203F. They are 17mm shaft and the housing is pressed steel so not too heavy.

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Posted By: samcoombes
Date Posted: 17 March 2008 at 15:42

thanks, will do a google and see if I can find them to buy online.

Dont 'spose you'd sell me what you've got in the pictures lol!?

Posted By: samcoombes
Date Posted: 17 March 2008 at 15:47

also which hubs have you got for your wheels?

Posted By: Jes@GCRE
Date Posted: 17 March 2008 at 15:48

There are 3 different cars in those pictures from 3 different builders but the bearings look pretty much the same.

I could supply them but only for the same price as you would get from a shop plus postage but if it helps then get in touch.

In fact, I could probably build you up a (1 wheel drive) transmission as fitted to that green chassis but you need to consider a few things:

- 1: Could you engineer something better.
- 2: Could you get someone else to get it machined cheaper (in which case I can send you some drawings).
- 3: Is it worth the money for just a single short race* or will something more crude do for that.

Jes

*Of course, there's nothing to stop you doing more than 1 race. There are lots of them to choose from after all! 😊

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Posted By: samcoombes
Date Posted: 17 March 2008 at 15:50

Thanks for your reply mate.

I've found this place:

http://www.technobots.co.uk/acatalog/Online_Catalogue_Cast_Pillow_Block_Bearings_380.html

For the bearings. I'm ok with the running gear and crank etc.

So now it's just the hubs and the steering to source.... would be ideal to buy something ready made!

Posted By: samcoombes
Date Posted: 17 March 2008 at 15:51

sorry i'm looking at the 2 pictures you posted, the others look too complicated for me!

Posted By: Jes@GCRE
Date Posted: 17 March 2008 at 16:19

Those bearings look fine but very heavy at nearly 600g each.

They'll definately be up to the job though.

Posted By: samcoombes
Date Posted: 17 March 2008 at 16:22

cool, these look the same, but no weight mentioned:

<http://cgi.ebay.co.uk/ws/eBayISAPI.dll?ViewItem&rd=1&item=110193000641&ssPageName=STRK:MEWA:IT&ih=001>

What did you use to make the steering rods and the L shaped bits on the bottom of the front wheels? I was hoping to dismantle an old go kart or something and nick steering mech but no such luck in finding one!

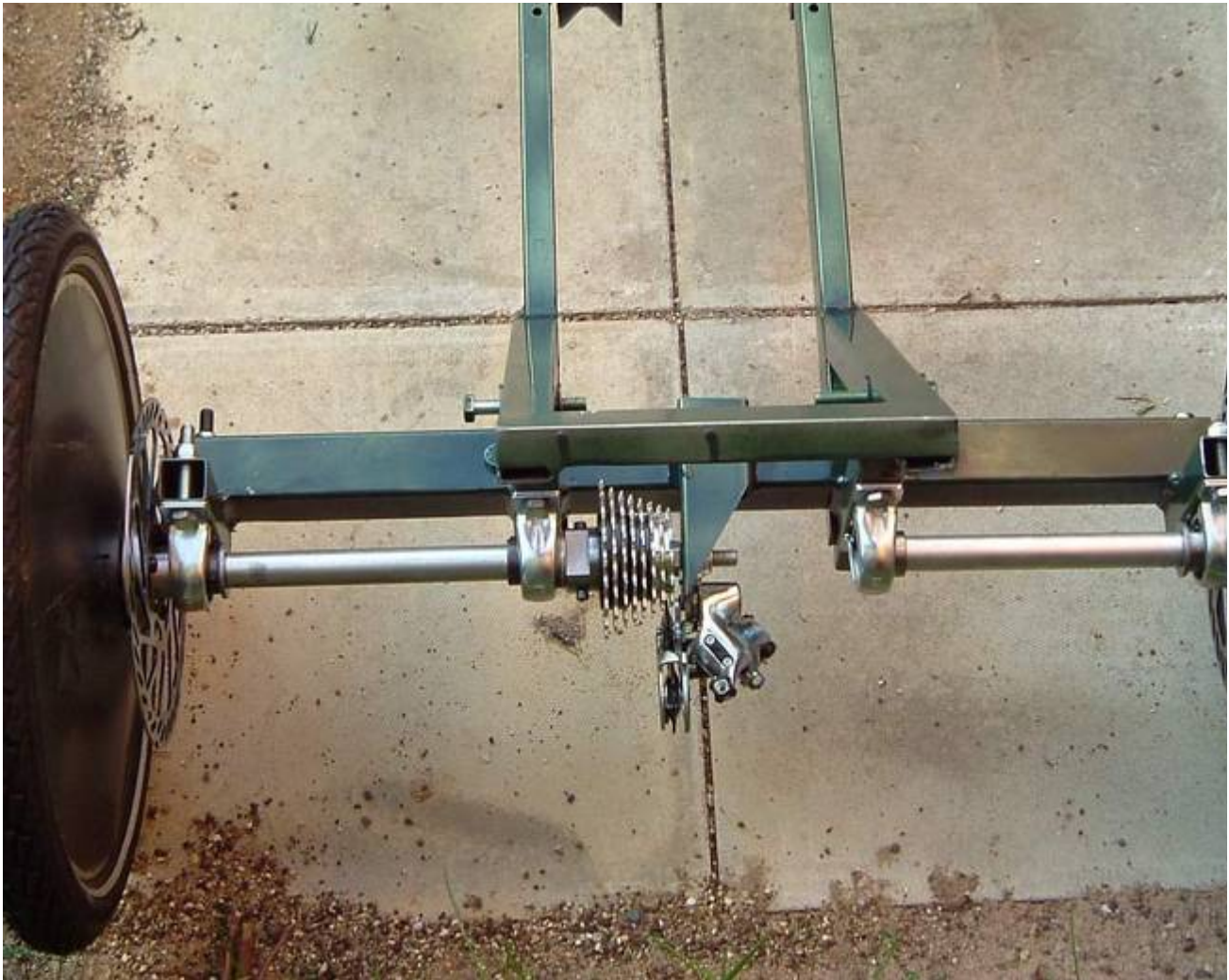
Looks like the push pull steering will be far easier to make to, it'll just take some getting used to!!

Posted By: samcoombes
Date Posted: 17 March 2008 at 16:25

oh, and do you have a better picture of the rear axle? Just want to see how you've got it all bolted together!

Thanks

Posted By: Jes@GCRE
Date Posted: 17 March 2008 at 16:33



It's pretty much the same as the 1st one Neil originally posted.
Nothing special, just aiming for simplicity which hopefully means reliability.

(This particular chassis has won Welsh 24 hour race the last 3 years in a row with 3 different teams).

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Posted By: samcoombes
Date Posted: 17 March 2008 at 16:36

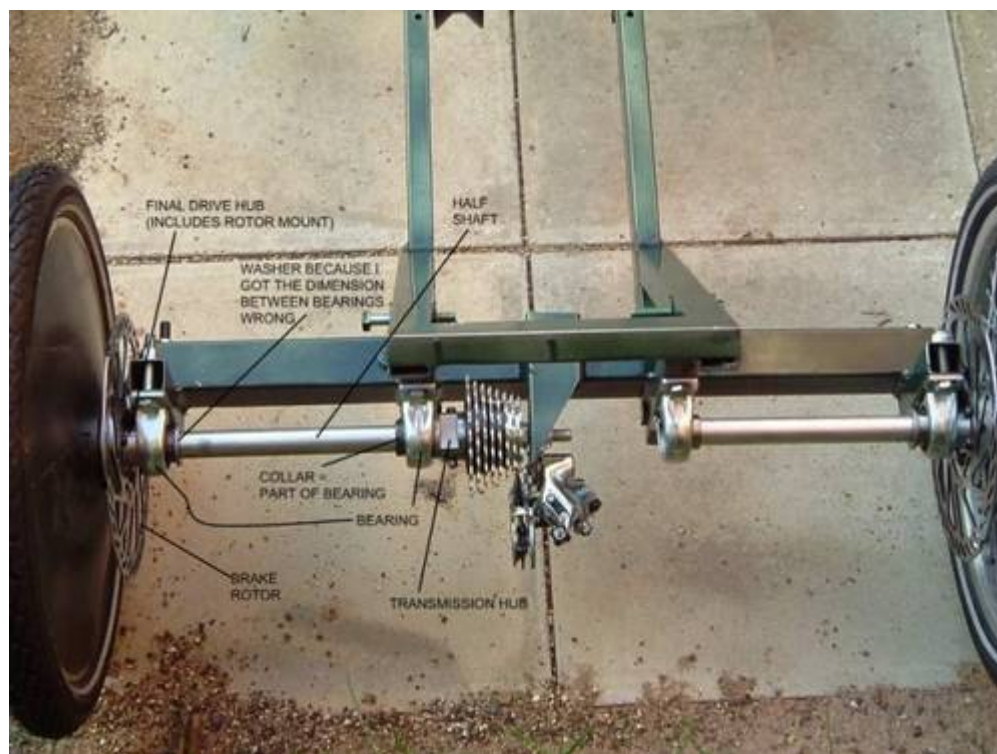
thanks, that's really helpful. Sorry for all the questions!

Is there a proper name for the little collars either side of the bearing? I can't find these to buy on the net.

So now I just need to find some hubs / wheels, and the bits to make the steering system.

Google here I come (again!)

Posted By: Jes@GCRE
Date Posted: 17 March 2008 at 16:50



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Posted By: samcoombes
 Date Posted: 17 March 2008 at 16:53

thanks, you can tell i'm a novice!

Where do the calipers fit onto your chassis, or am i being stupid!?

Posted By: webmaster
 Date Posted: 17 March 2008 at 17:01

Hubs pictured are custom machined to various designs, or sturmey archer (modified in the case of those taking drive, as in the pic Neil posted).

Royce will happily sell you hubs to the design they use for their car, but you have to then remember that machining very nice bike-type bits is what Royce do, so you're paying for Royce quality (including Royce wages, Royce tooling costs, Royce profit, etc). So they're £220 for a set of four - although as the hubs they're based on are standard, that might be considered a bargain!

<http://www.royce-uk.co.uk/>

 It's chess on wheels



il Padrino

Posted By: samcoombes
 Date Posted: 17 March 2008 at 17:03

i see, lots of money!

It's really jsut for something to do and have a laugh with the Grand Prix - hence we don't really want to spend lots and lots.

nevermind, i'll see what I can botch together to try and make something work, if not we'll leave it.

thanks for the advice ;-)

Posted By: webmaster
 Date Posted: 17 March 2008 at 17:12

Don't be put off by Royce's prices - like I said, you have to remember they need to turn a profit (or at least break even on occasional items like pedal car hubs) to survive. They also have to put in a certain amount of design work to be fairly sure they won't break and drop them in a legal action!

Other people who happen to have lathes for purposes other than making a living might be able to do it for a lot less, or a couple of drinks, or whatever.

Likewise an engineering firm working to a drawing of your own that doesn't call for a polished mirror finish, anodising, etc., might be able to do something for rather less just for having their name on the side of your car, if you ask nicely...

It's chess on wheels



il Padrino

Posted By: Jes@GCRE
Date Posted: 17 March 2008 at 17:46

samcoombes wrote:
Where do the callipers fit onto your chassis, or am I being stupid!?

At the ends of the rear axle.
Not fitted when those shots were taken.

It's a bracket made using RSA, me, and a hack saw.

Actually you can see them on the grey chassis in the 1st picture.

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Posted By: samcoombes
Date Posted: 18 March 2008 at 12:24

Jes, any chance of a photo of the steering on one of the front wheels? Just where it attaches to the wheel and chassis.

Also, how / where did you make / get your steering rods from?

Thanks

Posted By: Jes@GCRE
Date Posted: 18 March 2008 at 13:46



Bear in mind this is very crude, and allows for no castor or camber adjustment.

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Posted By: samcoombes
Date Posted: 18 March 2008 at 14:34

that's great, crude is fine, it's only for fun, not being taken seriously so that'll work a treat :-D

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