Heavy Duty Ball Joint Upgrade!

Posted by Billabong - 06 Nov 2012 05:13

Made it to the shops today and found "my" solution to the diamond and steel dust getting into the ball joints.

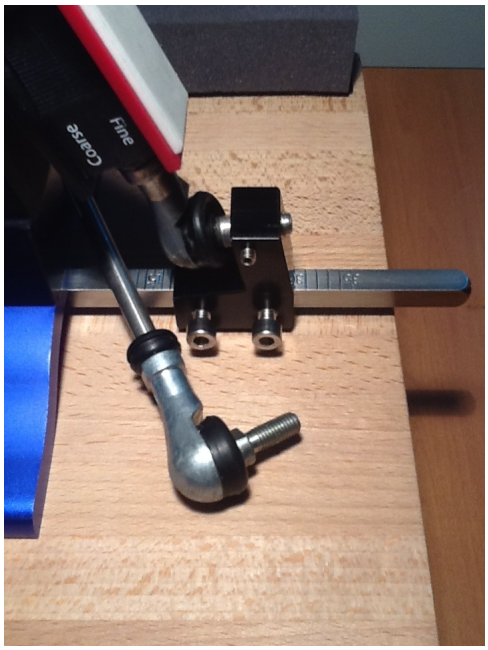
I have replaced the original (exposed) ball joints with fully enclosed versions.

It is a cup and ball principle rather than a ball and race.

In the original the race is made of nylon and I figure it may wear if dust gets into it.

We have all been searching for boots or similar to cover them without much luck.

So why not replace the joints with ones that are designed to be dust proof already?



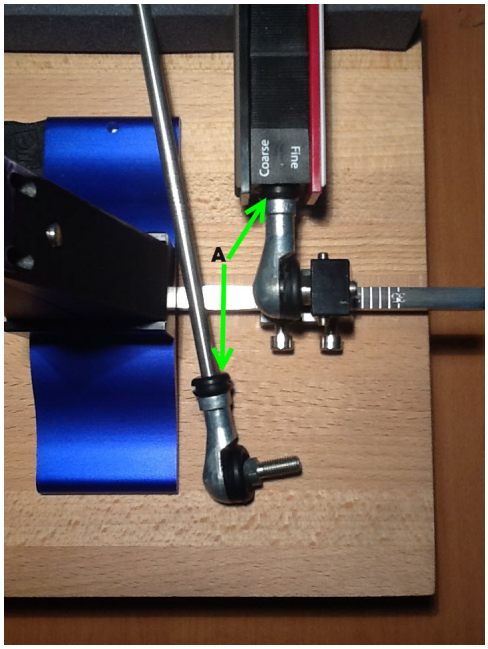
Pic 1!

Also in addition, the arrows "A" (below) show a rubber grommet I put on the arms.

I removed the original lock nut.

Figured I don't need the nut as loctite will keep the arms tight in the thread.

This will absorb some of the horrible bang you get when you bottom out the paddle.



As for the ball joints, I am very happy with the result and cheap enough.

They are called "heavy duty", sealed and lubricated.

Very smooth, not at all tight like the originals.

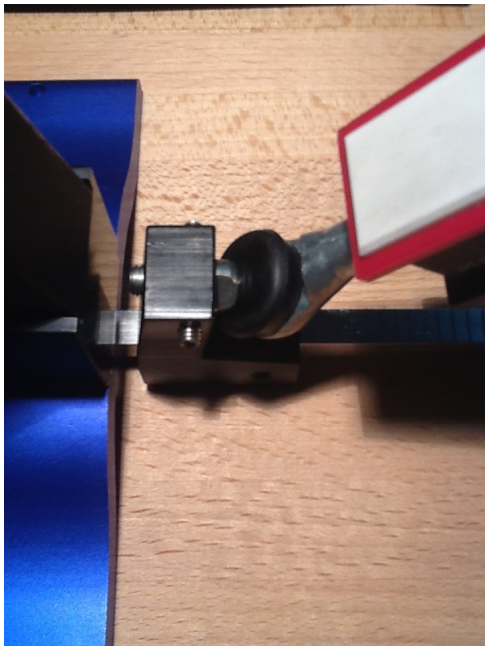
There is no allen key hole in the end of the stud for adjustment.

But I can use a spanner on the other side if I want.

I'm not using the micro-adjust anyway.

Another pic shows how well the seal protects the joint.

Put it on wrong way around to get a clear view.



That's It!

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Re: Heavy Duty Ball Joint Upgrade!
Posted by Billabong - 06 Nov 2012 05:19

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Side by side view!

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Re: Heavy Duty Ball Joint Upgrade!
Posted by Mikedoh - 06 Nov 2012 05:43

Nice one BillyB.

Does the stud screw off the ball . Wondering if a swap with original is possible.

Never mind on my wonderings. Just realized keeping ball from turning would be tough

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Re: Heavy Duty Ball Joint Upgrade!
Posted by Billabong - 06 Nov 2012 06:12

Mikedoh wrote:

Nice one BillyB.

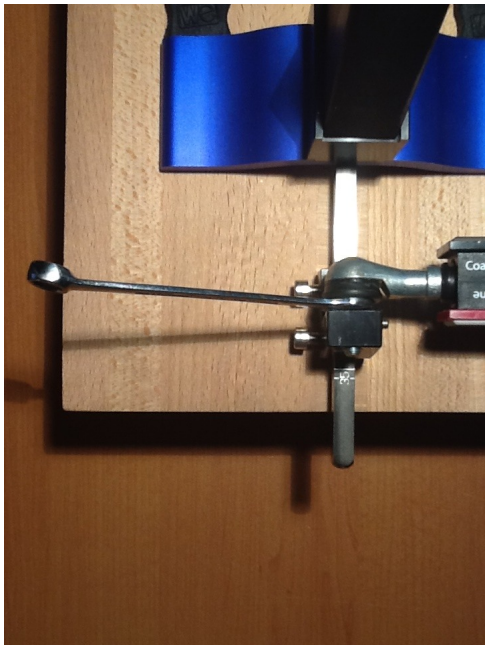
Does the stud screw off the ball . Wondering if a swap with original is possible.

Never mind on my wonderings. Just realized keeping ball from turning would be tough

It is a heavy duty version of the original.

Easy five minute swap, there is a place for a spanner at the front.

Only two faces though. (not a hex)



The guy in the bearing shop said the allen socket in the end of the original is specialty.

edit - I'm going to put a thumb screw on the end of that stud!

Drill a larger hole part way into the "L" bracket from the outside, so a slightly larger female socket will fit over it, then .....

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Re: Heavy Duty Ball Joint Upgrade!

Posted by wickededge - 06 Nov 2012 08:36

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That looks awesome! The socket in the end is custom done after the fact. The process is pretty simple: first drill a hole, then use a broach to cut out the corners.

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Re: Heavy Duty Ball Joint Upgrade!

Posted by Billabong - 06 Nov 2012 08:47

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wickededge wrote:

The process is pretty simple: first drill a hole, then use a broach to cut out the corners.

Every day I learn something.

Thanks Clay.

edit - For anyone searching for one. (or two)

They are called Ball Joint Rod Ends (Female) - 1/4"-28 UNF.

Best option would be from a bearing stockist.

Very commonly used in automotive and machinery applications.

Retail price was $10AU each.

The guy had them on a rack in the front of the store, sells them often.

Part number SQY6-RS here.

pdf.directindustry.com/pdf/fujian-longxi...72328-222939-_2.html

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Re: Heavy Duty Ball Joint Upgrade!

Posted by Geocyclist - 06 Nov 2012 22:07

Great write up and photos Chris. Thanks.

Did the grommets come with the ball end or where they separate? In any case it looks far more elegant than cutting the finger off a rubber glove.

Refreshing to hear an Aussie call a wrench a spanner. It's been a while but have worked my entire

career with English manufactures.

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Re: Heavy Duty Ball Joint Upgrade!
Posted by Geocyclist - 06 Nov 2012 22:10

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Forgot to add for Clay; this heavy duty ball joint plus 50 pounds of lead weights should solve your problem of the base lifting up while stropping.

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Re: Heavy Duty Ball Joint Upgrade!
Posted by Rmorris7 - 06 Nov 2012 22:10

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That is a great looking idea. I wish I had the talent the rest of you guys have.

Robmorris7

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Re: Heavy Duty Ball Joint Upgrade!
Posted by Billabong - 06 Nov 2012 23:05

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Geocyclist wrote:

Great write up and photos Chris. Thanks.

Did the grommets come with the ball end or where they separate?

No, just another reaction from an action, they are 1/4" x 1/2" cable grommets, from a hardware store.

Refreshing to hear an Aussie call a wrench a spanner. It's been a while but have worked my entire career with English manufactures.

I forget to allow for these differences, as long as the meaning is the same I guess?

But be careful with the word "root" over here.

edit - Google root and Australia to see what I mean.

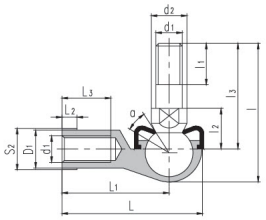
Geocyclist wrote:

this heavy duty ball joint plus 50 pounds of lead weights should solve your problem of the base lifting up while stropping.

Ha, the ball joints are light in weight, very smooth also.

They are alloy, where the the original are steel with a nylon bearing race.

(HD alloy= 34grams and steel= 30grams.)



It might not be obvious in my pics, but my board is about 3" thick and weighs 3.5kg.

Unfortunately the new crossbar hangs over the sides now, but I'm happy!

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