



Structural Power Cube

40 messages

Aidan Williamson <aidan.d.williamson@gmail.com>
To: Tom <tom.griffing@gmail.com>

Fri, Aug 15, 2014 at 7:38 PM

Hey Tom,

Hope all is well down your way. I saw a picture of a uPC running a log splitter. Awesome! I used the one that was built at the workshop to punch some 1" holes in 11ga steel the other day and it burned out. It had a good run, though!

Most of the interns here have left but there are a handful of us still here and we want to assemble the PowerCube kits you sent up. I was looking at the parts and although I didn't open any of the labeled bags (except engine module) it looks like everything is there. The only thing missing, as per the last workshop, are the muffler bolts and gaskets. We could maybe pick some up at the CarQuest in town but if they were supposed to come with the order then we should probably contact the vendor.

Best,
Aidan

Tom <tom.griffing@gmail.com>
To: Aidan Williamson <aidan.d.williamson@gmail.com>

Fri, Aug 15, 2014 at 10:04 PM

Greetings, Aidan;

I think that using the larger pulley on the motor axle doesn't provide enough torque and we should do something different.

We built three of the uPCs, this time using only the rubber belt from the motor to a pulley on the pump shaft. We experienced some over-heating on one of the motors - similar to your experience. On another, I mounted a small fan blade on the shaft underneath the motor, so it would blow air up through the windings for cooling. This motor didn't overheat, though we did have some issues with the rubber belt heating up and slipping off the shaft.

The vacuum cleaner motors turn very fast (~ 30,000 RPM) and usually require lots of air flow for cooling. Although we were able to split logs using our setup, the belt and pulley are a problem.

I still want to solve this and come up with a working solution. I'm still looking for a better motor/pulley combination.

If you haven't seen it, the modules are illustrated in this page:

http://opensourceecology.org/wiki/Structural_Power_Cube#Kit_Cost_Breakdown

. . . that is, all but the part that holds the battery in place. It is in the Sketchup model, though.

The muffler bolts are missing? I asked the guy from SmallEngineSuppliers to ship 4 sets of gaskets & bolts. Probably best to pick up some bolts - there were some in the OSE workshop last time, but they were a bit too short.

Tom
[Quoted text hidden]

Aidan Williamson <aidan.d.williamson@gmail.com>
To: Tom <tom.griffing@gmail.com>

Sat, Aug 16, 2014 at 8:20 AM

Morning!

I found em! I had checked the muffler box and one of the engine boxes but they were hiding at the bottom of the second engine box.

I did see the wiki page with the module documentation. Looks very straightforward.

Regarding the uPC, the only electrical motors I have experience with, really, are permanent magnet DC motors from treadmills. They often run at around 130V DC so rectifying wall current and filtering it through a capacitor would make them spin pretty well. I have one at home that I bought on ebay for 30-40 which is 130v and around 1500RPM at 2.5hp. That might be too slow but you could gear it up. They are heavier than the vacuum motors and a bit larger but it might work out.

This one is 120vDC at 6000rpm: [link](#)

-Aidan
[Quoted text hidden]

Aidan Williamson <aidan.d.williamson@gmail.com>
To: Tom <tom.griffing@gmail.com>, Marcin Jakubowski <marcin@opensourceecology.org>

Sat, Aug 16, 2014 at 4:54 PM

I have a question about the engine/pump mount piece. I was wondering if you had a suggestion as to how to go about cutting it for clearance fr the pump/engine. I was thinking I would bolt on the plates, mark the holes, take off the plates and torch it. What do you think?

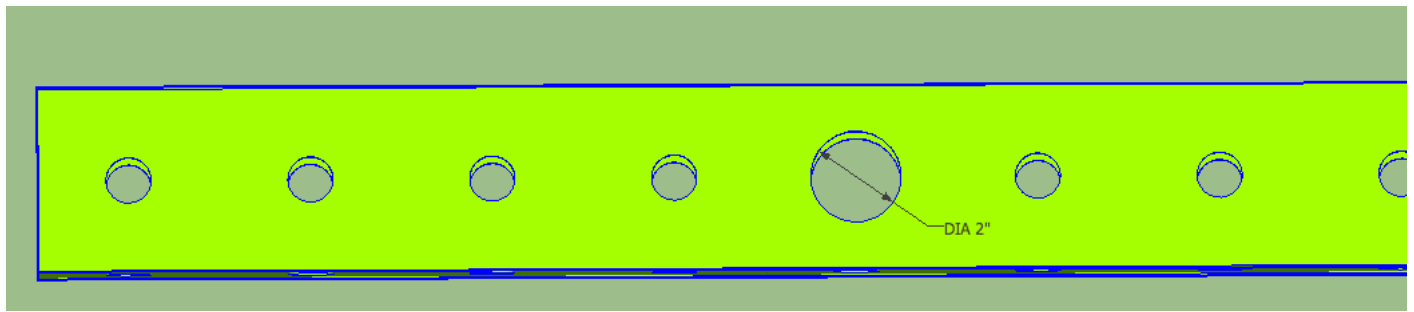
-Aidan
On 8/15/2014 10:04 PM, Tom wrote:
[Quoted text hidden]

Tom <tom.griffing@gmail.com>
To: Aidan Williamson <aidan.d.williamson@gmail.com>

Aidan;

My goal was to make minimal changes to the 4" x 4" tubing, as it should be reusable.

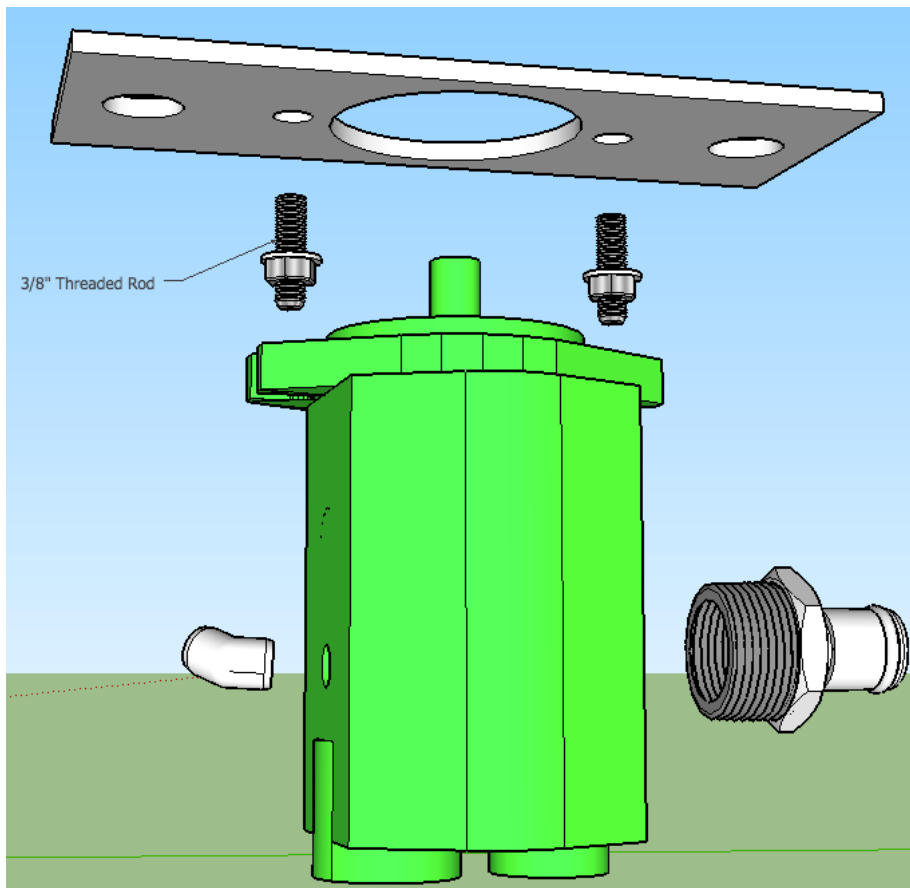
I made an omission - the 4" x 4" tube supporting the engine and pump should have the 1" hole on top and bottom enlarged to 2" for clearance for the shaft coupling - like so:



If I were cutting it, I'd just mark the circles with something like a socket about 1 1/2" to 1 3/4" outer diameter (allow for standoff of the marker), then cut the circles with the torch. If the engine plate is already cut to 2 1/4" diameter. The 1" holes securing the pump and engine plates should line up with holes already in the tube and will be secured with short bolts about 1 1/2" long.

Also: note that on the inside of the 4" x 4" tubing is a seam where it was welded lengthwise to form the tube. This seam should be oriented on the side facing the hydraulic reservoir. The seam is on the inside of the tube, and we will have them on the inside of three sides of the tube.

Please note that for the pump module, I have included "threaded rod" pieces about 2" long and 3/8" in diameter. These are to be welded in the pump plate and the top surface ground flat so these pieces must be aligned very well before welding:



Tom

[Quoted text hidden]

--
 "Democracy is a suggestion box for slaves."
 - Stefan Molyneux

Marcin Jakubowski <marcin@opensourceecology.org>
To: Aidan Williamson <aidan.d.williamson@gmail.com>
Cc: Tom Griffing <tom.griffing@gmail.com>

Sat, Aug 16, 2014 at 6:27 PM

I would also do a larger hole on tube verticals, so if we want to replace the pump with a different one, we can access the set screw for the engine shaft key. I am thinking it's relevant to test out a 1.35 cu in pump instead of 1.0 cu in to get us 30% more brick pressing speed - from 6 to 8 blocks per minute. This can be done if we max the pump at 2400 psi instead of 3100 with the given engine.

I think we need to try a log splitter 2 stage pump in our Power Cube for the Brick Press - <http://www.surpluscenter.com/Hydraulics/Hydraulic-Pumps/2-Stage-Log-Splitter-Pumps/22-GPM-DYNAMIC-2-STAGE-PUMP-9-7970.axd> - so we would want to have interchangeable pumps.

[Quoted text hidden]

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Sign up for our most ambitious Extreme Build Workshop to date - [Microhouse Prototype 3](#).

Marcin Jakubowski, Executive Director
Open Source Ecology
<http://opensourceecology.org>
See [Facebook](#) for updates.
[+1.816.846.0736](tel:+18168460736)

Aidan Williamson <aidan.d.williamson@gmail.com>
To: Tom <tom.griffing@gmail.com>

Mon, Aug 18, 2014 at 6:30 PM

any thoughts on where the solenoid should mount?

[Quoted text hidden]

Tom <tom.griffing@gmail.com>
To: Aidan Williamson <aidan.d.williamson@gmail.com>

Mon, Aug 18, 2014 at 7:31 PM

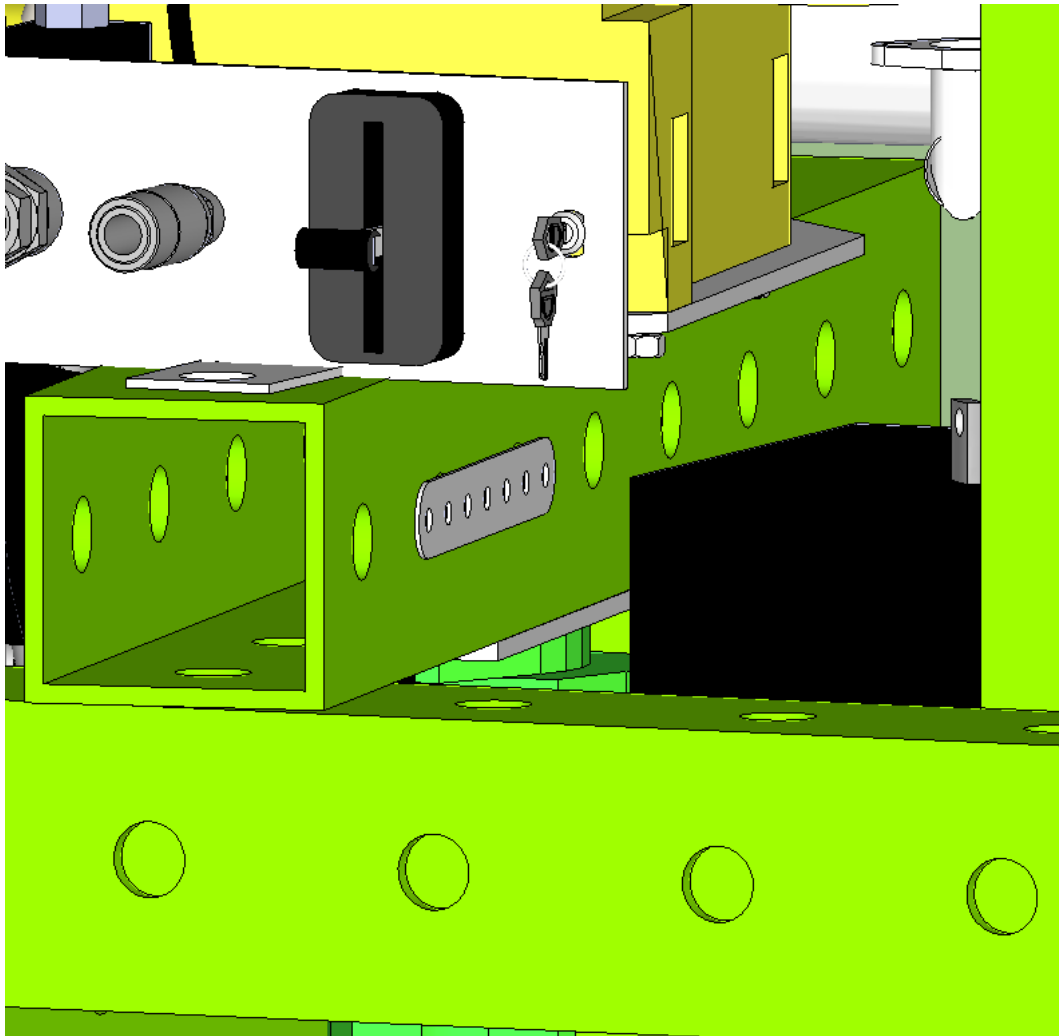
Aidan;

Good you asked.

I had placed it, but haven't drawn it yet, as it's difficult to draw.

I had in mind using a support bracket as on the other power cube I delivered - bent so two of the holes would align with the 4" holes in the structural steel.

Here is the area I had in mind - beside the battery:



I have only added the metal strip to show where I was thinking of placing it. The strip must be bent as before and bolted to the 4" tube, then the solenoid bolted to the metal strip. I'll try to draw it in more detail, but Sketchup doesn't have an image of a solenoid. Also, the tube is not aligned to the green axis and bending the metal strip is easier to do in person than in Sketchup.

I'll work on it, but please ask if you don't understand my description.

Regards,

Tom

[Quoted text hidden]

Aidan Williamson <aidan.d.williamson@gmail.com>

Mon, Aug 18, 2014 at 7:38 PM

To: Tom <tom.griffing@gmail.com>

I understand. looks good. are there any of those strips in the kit?

thanks

Aidan

[Quoted text hidden]

Aidan Williamson <aidan.d.williamson@gmail.com>

Mon, Aug 18, 2014 at 7:42 PM

To: Tom <tom.griffing@gmail.com>

For throttle lever connection is there supposed to be some flat welded at 90 to the back of the control panel for the lever to bolt to like the last ones we built?

On 8/18/2014 7:31 PM, Tom wrote:

[Quoted text hidden]

Tom <tom.griffing@gmail.com>

Mon, Aug 18, 2014 at 7:46 PM

To: Aidan Williamson <aidan.d.williamson@gmail.com>

Aidan;

Yes - each box with an oil cooler should have 4 of these metal straps. The bolts are 5/16" x 1" and need a large washer for securing inside the tube. I had considered using another of the metal straps and welding nuts to the back side at 4" apart. this could simplify securing bolts / nuts. You can choose.

Tom

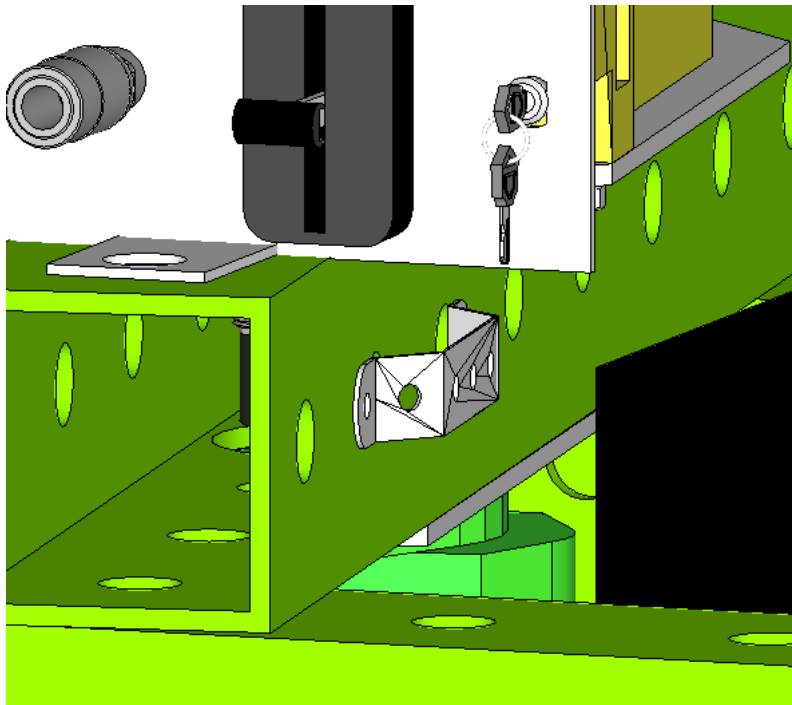
[Quoted text hidden]

Tom <tom.griffing@gmail.com>

Mon, Aug 18, 2014 at 8:09 PM

To: Aidan Williamson <aidan.d.williamson@gmail.com>

The metal strip is bent something like this - and the solenoid mounted on the bracket - I'll have to draw up a solenoid:



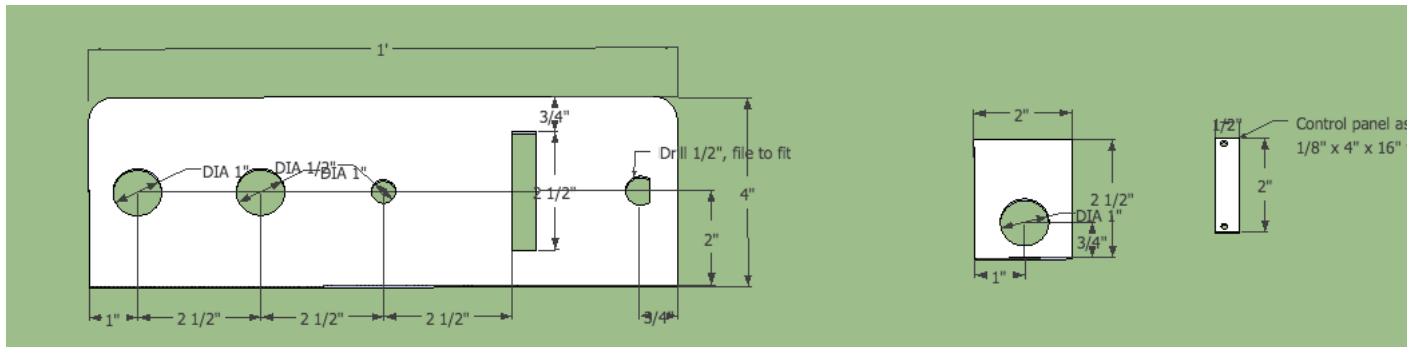
Tom
[Quoted text hidden]

Tom <tom.griffing@gmail.com>
To: Aidan Williamson <aidan.d.williamson@gmail.com>

Mon, Aug 18

Aidan;

Yes - I had drawn the metal piece, grouped with the control panel assembly, but haven't show it attached to the control panel yet:



Note that the dimensions for hole sizes and positions aren't shown - I will add them when I get to the shop and measure the holes in the throttle control. I believe they are 3/16" holes and are side welded to the control panel. Holes are roughly 1 1/2" - 1 3/4" apart. YMMV.

Tom
[Quoted text hidden]

Aidan Williamson <aidan.d.williamson@gmail.com>
To: Tom <tom.griffing@gmail.com>

Mon, Aug 18, 2014 at 8:34 PM

Hey Tom,
I actually noticed that right after I emailed but was called away to dinner. Thanks for the info.
Best,

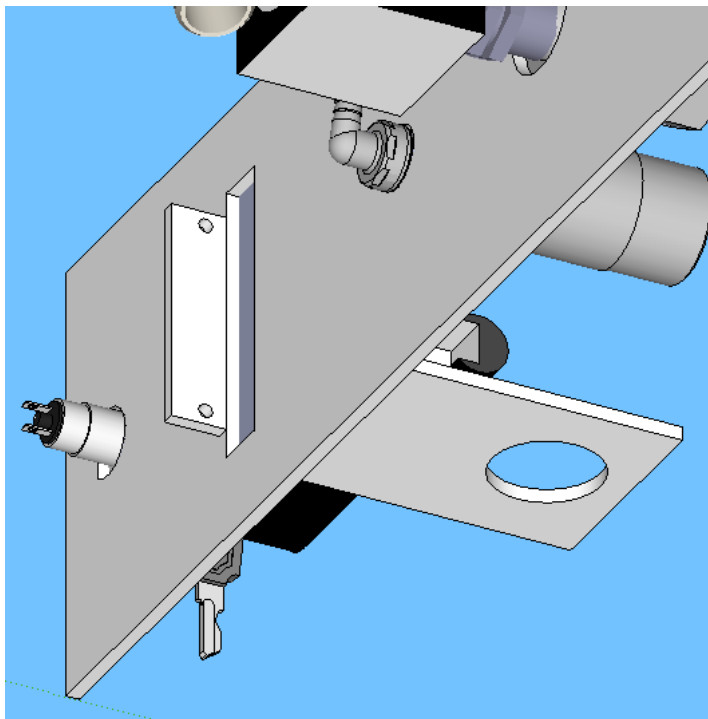
Aidan
[Quoted text hidden]

Tom <tom.griffing@gmail.com>
To: Aidan Williamson <aidan.d.williamson@gmail.com>

Mon, Aug 18, 2014 at 9:09 PM

Aidan;

I've added it to the drawing - even without exact dimensions. On the Power Cube I delivered, I think it was welded on the other side of the slot for the throttle control, but I wanted it on the opposite side for the future. Can you verify this is correct?:



Tom
[Quoted text hidden]

Aidan Williamson <aidan.d.williamson@gmail.com>
To: Tom <tom.griffing@gmail.com>

Mon, Aug 18, 2014 at 9:57 PM

the power cubes we built here have it on the opposite side from the drawing
I torched the control panel 5 mins ago. shot a video. will upload soon
[Quoted text hidden]

Aidan Williamson <aidan.d.williamson@gmail.com>
To: Tom <tom.griffing@gmail.com>

Tue, Aug 19, 2014 at 4:42 PM

Hi Tom,
I'm trying to assemble the control panel hydraulics.
I don't think what you send is fitting together properly - or i'm doing it wrong.
I attached a picture of my present status.

None of the elbows fit into the pressure bypass valve except for the one that is already in.
Also, how do I put the case drain barb into the Tee? Do I need a 3/4M to 1/4F reducer?
How do the hoses attach to the fittings?

Thanks,
Aidan
On 8/18/2014 8:16 PM, Tom wrote:
[Quoted text hidden]



2014-08-19 17.01.31.jpg
2642K

Tom <tom.griffing@gmail.com>
To: Aidan Williamson <aidan.d.williamson@gmail.com>

Aidan;

This is an excellent check of my modular packaging - though I think I already see some issues - some in the information, some in parts organization and maybe some missing parts.

Your review is very helpful . . . Thank you.

One thing to note is that two of the elbows pictured have flare fittings on the end that connects to the hoses with matching JIC fittings. Here is the photo of the elbows with JIC connectors:



JIC 10M x 3/4 NPTM 90 ELBOW

Item Number: 9-2501-10-12

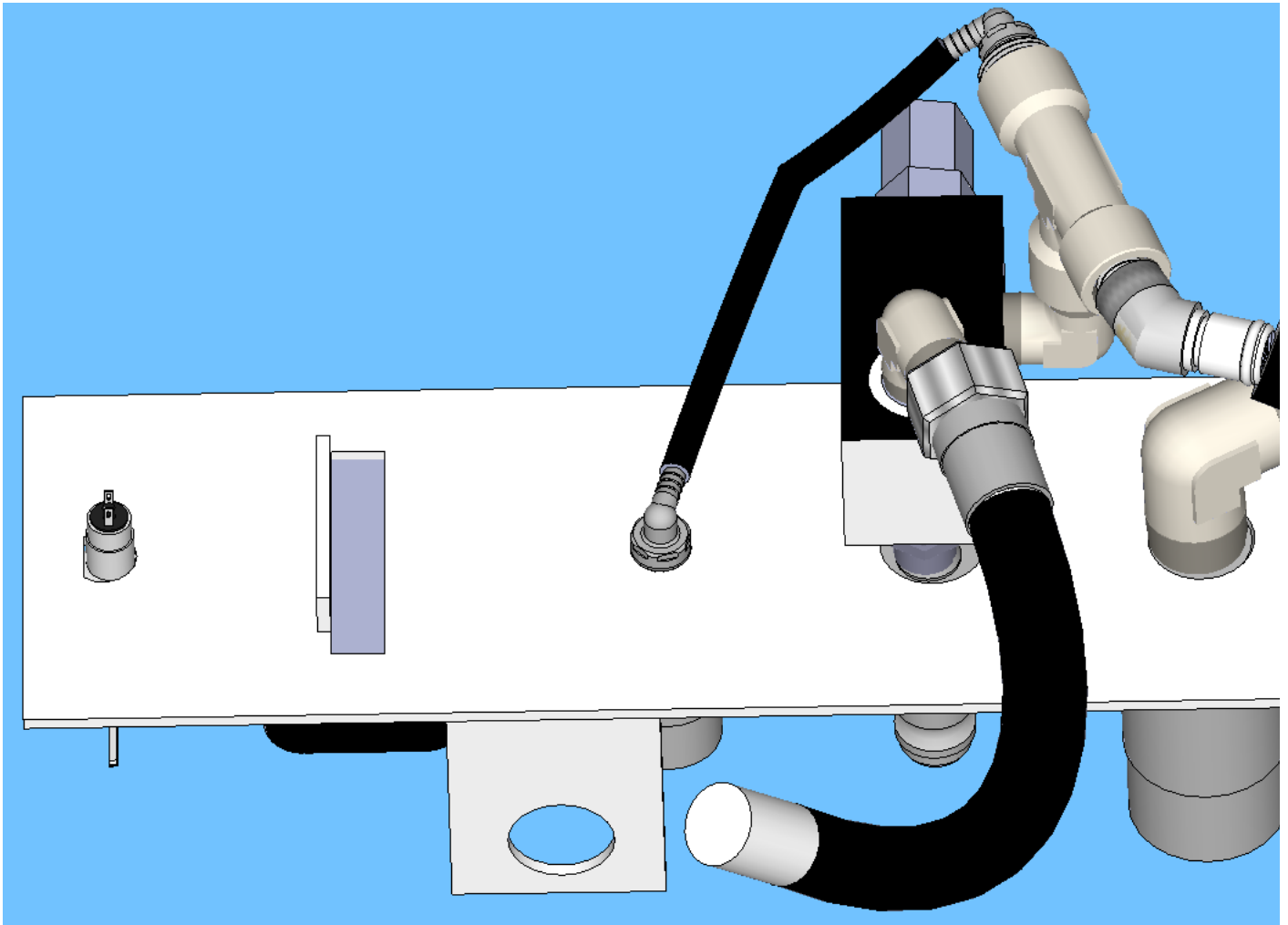
83 In Stock

The JIC fittings don't require teflon tape, as they seal via the flange. This is the same for the end of each hose with fittings.

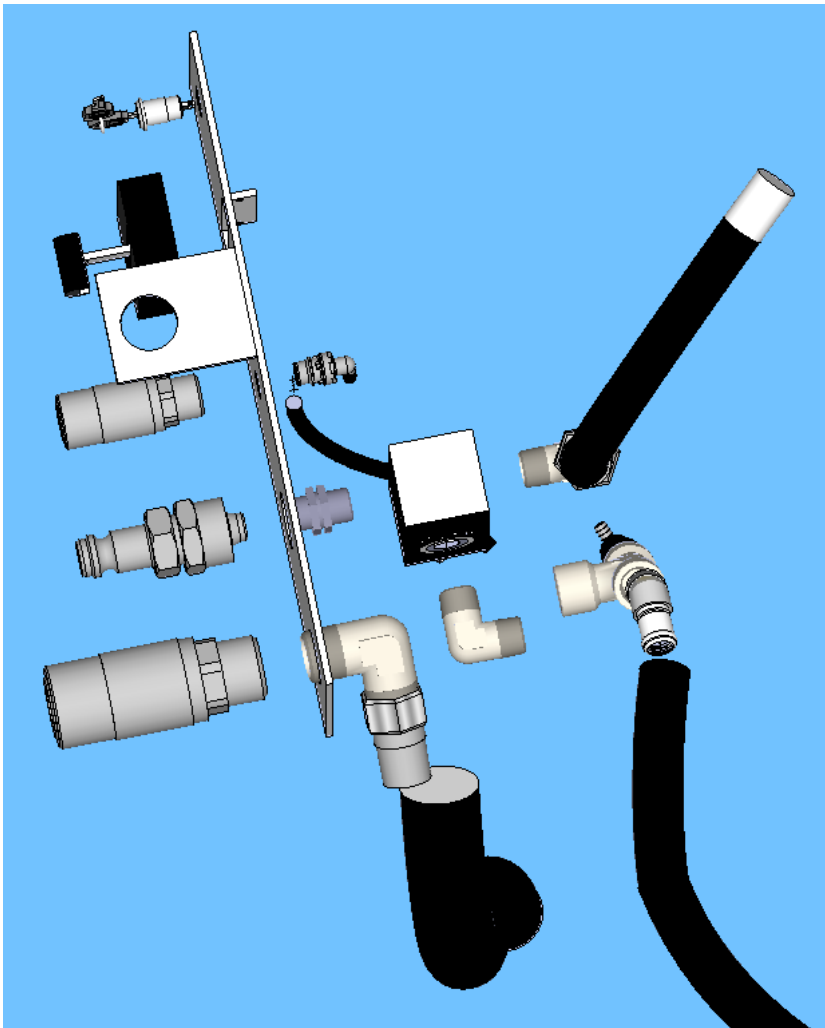
Your picture shows three elbows with JIC fittings, though there should only be two - one 3/4" and one 1/2".

The control panel module parts should look like this:

Assembled:



Exploded:



The BOM lists some extra parts for the control panel:

Qty	Part#	Description	Supplier	Unit Price	Si
1		21" - 1/4" Rubber Fuel line (6" for hyd. Fluid, 15" for fuel)	Hardware Store	\$3.00	
2		1" Hose Clamp	Hardware Store	\$0.50	
2		1/4" Hose Clamp	Hardware Store	\$0.50	
2		Washer: 1"	Hardware Store	\$0.60	
1	1/8" x 4"	Flat Iron	Local Steel Supplier	\$1.23	
1	9-1556	1/2 NPT 16 GPM 1000-2500 PSI RELIEF VALVE	SurplusCenter.com	\$42.95	
1	9-5605-8-8-8	1/2 X 1/2 X 1/2 NPTF TEE	SurplusCenter.com	\$4.70	
1	9-5404-12-8	3/4 NPT x 1/2 NPT HEX NIPPLE	SurplusCenter.com	\$2.55	
1	9-5500-8-8	1/2 NPTM TO 1/2 NPTM 90 ELBOW	SurplusCenter.com	\$2.60	
1	28-1478	1/4" NPTM X 1/4" I.D. HOSE BARB STEEL ELBOW	SurplusCenter.com	\$0.49	
1	9-2501-10-12	JIC 10M x 3/4 NPTM 90 ELBOW	SurplusCenter.com	\$5.39	
1	928-C	3/4" QUICK COUPLER S40-6 F/F	SurplusCenter.com	\$25.95	
1	9-6314	1/4" NPT QUICK COUPLER S40-2	SurplusCenter.com	\$17.95	
1	1-2849	49" THROTTLE CONTROL CABLE W/ T-LEVER	SurplusCenter.com	\$4.95	
1	9-4503-8-8	1/2 HOSEBARB M x 1/2 NPT M 45 DEGREE HOSEBARB ELBOW	SurplusCenter.com	\$2.15	
2	9-2501-12-12	JIC 12M x 3/4 NPTM 90 ELBOW	SurplusCenter.com	\$5.59	

From the photo you sent, you're missing some parts:

- 1/2" rubber hose
- 1/8" x 4" steel - 12" and 1/2"
- 1" hose clamps
- 1/4" hose clamps
- 1" Washer
- 3/4" NPT x 1/2" NPT Hex Nipple
- 1/4" NPTF x 1/2" NPTM Bushing
- Keyswitch

8/24/2014

Gmail - Structural Power Cube

Throttle Lever
1/4" Fuel Line

And an extra part:

3/4" NPTM x JIC 12 Elbow

I ordered most all of these parts and packed them in the crate somewhere (though I think I owe two 1/4" NPTF x 1/2" NPTM Bushings). Can you check in the other boxes for the above parts

I'd like to "make up" the missing parts for all modules in one order - so I'll wait for the full review before ordering.

Regards,

Tom
[Quoted text hidden]

Aidan Williamson <aidan.d.williamson@gmail.com>
To: Tom <tom.griffing@gmail.com>

Wed, Aug 20, 2014 at 9:03 AM

Thanks for the response.
I didn't picture EVERYTHING in the control panel section. Only what I thought was relevant for the control panel plumbing.
1/2" rubber hose
1/8"x 4" steel - 12" and 1/2"
1" hose clamps
1/4" hose clamps
1" Washer
3/4" NPT x 1/2" NPT Hex Nipple
1/4" NPTF x 1/2" NPTM Bushing
Keyswitch
Throttle Lever
1/4" Fuel Line

My main points of confusion are:
What connects to the cushion valve? Right now I have an elbow to a T for the return and a nipple for the output quick connect. Nothing else appears to fit for the input.
How are hoses connected to the fittings? The hoses I have all terminate male.
The pictures aren't quite doing it for me.

Thanks Tom,
Aidan

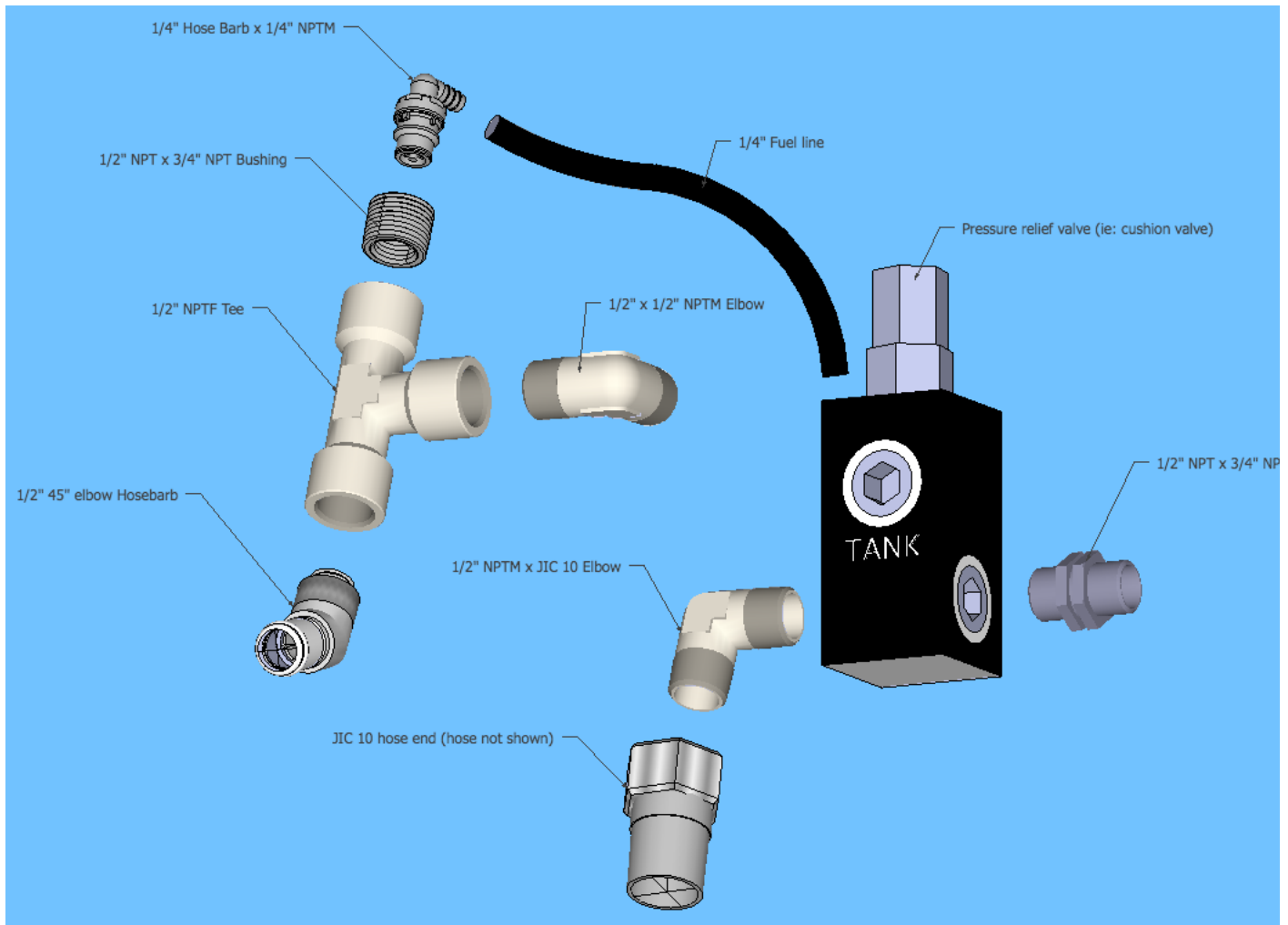
Oh just remembered that the sketchup is a bit misleading for the fuel tank and hydraulic tank. The hangers are spaced by 1 hole whereas in the skp it's two holes.
[Quoted text hidden]

Tom <tom.griffing@gmail.com>
To: Aidan Williamson <aidan.d.williamson@gmail.com>

Wed, Aug 21

Aidan;

Here is a diagram with all the parts for the Pressure Relief (ie: cushion) valve:



I think I included all parts, except maybe for the 1/2" NPT 3/4" NPT bushing.

Does this help?

Tom
[Quoted text hidden]

Aidan Williamson <aidan.d.williamson@gmail.com>
To: Tom <tom.griffing@gmail.com>

Wed, Aug 20, 2014 at 2:56 PM

That drawing is exactly what I needed to see!
From it, I still need:
1/2 nptm x jic 10
12 npt x 3/4npt bushing
female jic10 hoses. (the ones you sent were male)
[Quoted text hidden]

Tom <tom.griffing@gmail.com>
To: Aidan Williamson <aidan.d.williamson@gmail.com>

Wed, Aug 20, 2014 at 3:41 PM

Aidan;

In the photo you sent earlier, I saw the JIC 10 elbow:

1/2 nptm x jic 10

Here is the photo and it is the left-most elbow - the one with the smaller JIC opening:



For each power cube, there should be three hydraulic hoses: 2 are 3/4" inner diameter, 1 is 1/2" inner diameter. The shorter, smaller hose should be correct:

Zoom



**1/2" X 12" JIC 10F X JIC 10F
3500 PSI HYD HOSE**

ITEM NUMBER: 941-2212

PRICE: \$11.95

18 In Stock

QTY:

ADD TO CART

ADD TO WISHLIST

[CALCULATE SHIPPING](#)

This item is on page 87 of our current catalog

The other two are incorrect - and I'll add them to my list of items to send.

Good catch!

Tom
[Quoted text hidden]

Aidan Williamson <aidan.d.williamson@gmail.com>
To: Tom <tom.griffing@gmail.com>

Wed, Aug 20, 2014 at 3:50 PM

The elbow in the picture on the left is actually 3/4 nptm which does not fit into the cushion valve. Yes, the 1/2" hose is female.

I just found out that the 2" clearance hole for the coupler should not be concentric with the existing gridbeam hole. I think the best way to make it work is to put the engine mount plate on the gridbeam and align the bolt holes then mark the 2" hole to torch.

The rest of the PC is coming together well.

-Aidan
[Quoted text hidden]

Aidan Williamson <aidan.d.williamson@gmail.com>
To: Tom <tom.griffing@gmail.com>

Wed, Aug 20, 2014 at 6:18 PM

It's not the hole in the tube that is the problem - it's the engine mount plate. I'm making new ones. The bolt spacing on them is not suitable for the gridbeam. Also, it was impossible to put a 3/4 bolt through the bolt hole closer to the engine shaft.

Best,
Aidan
On 8/20/2014 3:41 PM, Tom wrote:
[Quoted text hidden]

Tom Griffing <tom.griffing@gmail.com>
To: Aidan Williamson <aidan.d.williamson@gmail.com>

Aidan;

Another good catch on the elbow. I've added it to the list.

About the 2" holes . . . why shouldn't they be concentric? Oh . . . looking at the drawing, I think I see the issue. The holes for the engine shaft and 4 engine bolts are correct - the issue is tl

The engine plates will have to be re-cut from 1/4" x 8" steel, as follows:

Can you do this?

Tom

On Wed, Aug 20, 2014 at 6:18 PM, Aidan Williamson <aidan.d.williamson@gmail.com> wrote:
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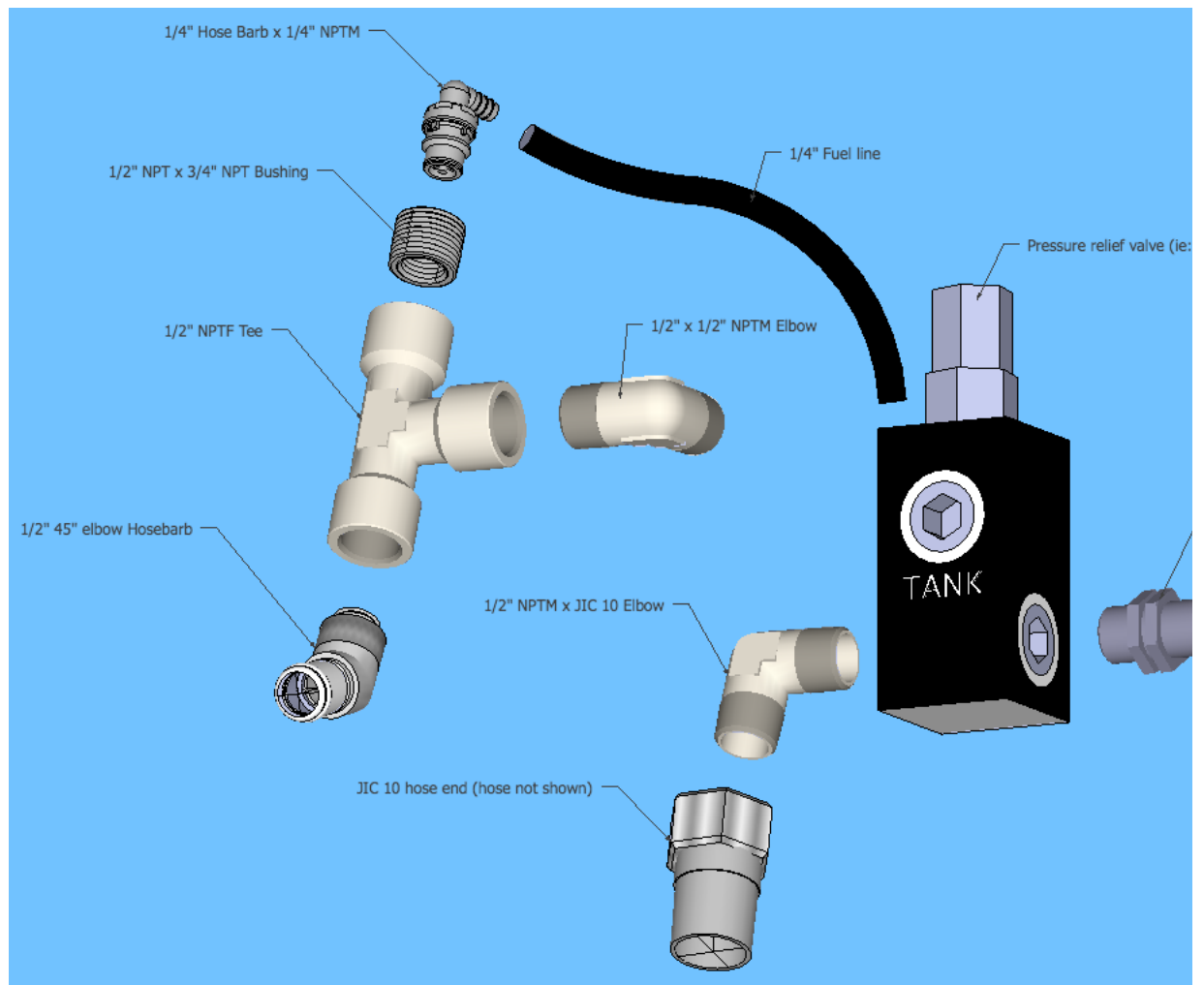
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Keyswitch

Throttle Lever

1/4" Fuel Line

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JIC 10M x 3/4 NPTM 90 ELBOW

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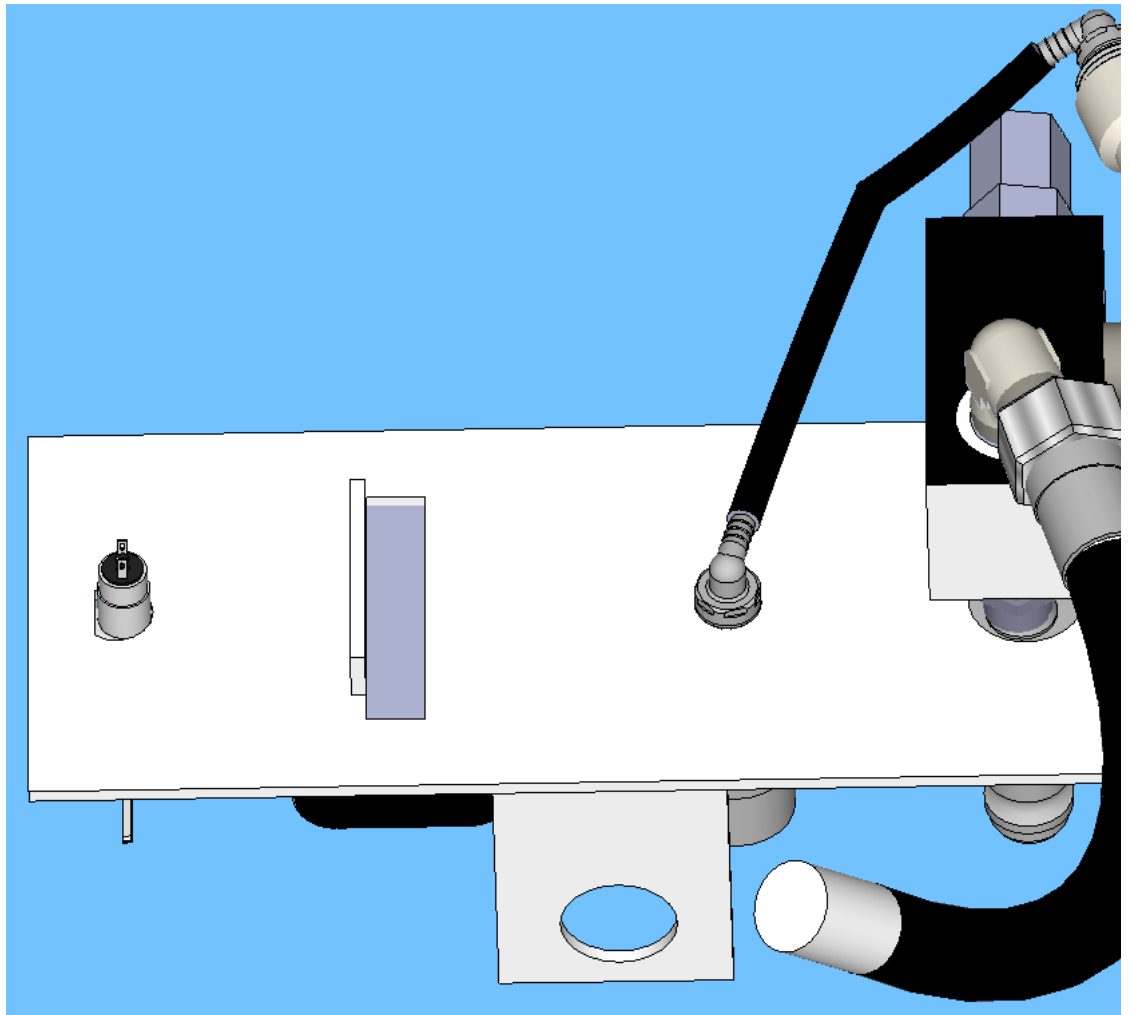
83 In Stock

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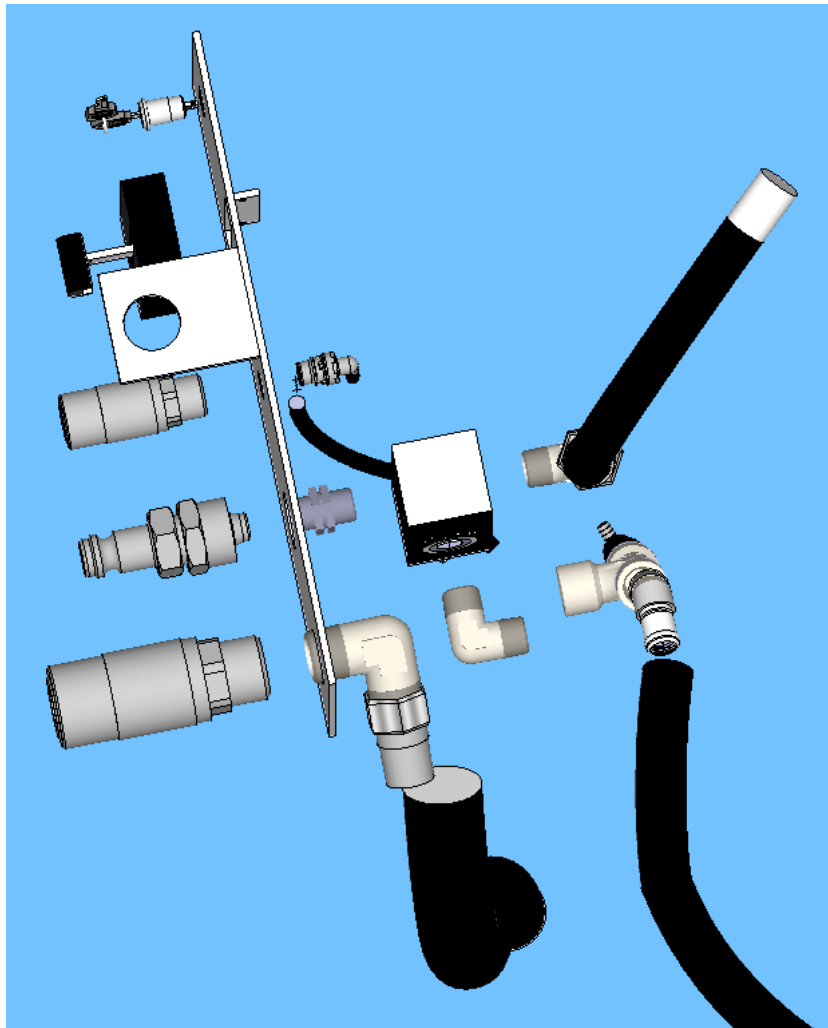
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Assembled:



Exploded:



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2		1/4" Hose
2		Washer
1	1/8" x 4"	FI
1	9-1556	1/2 NPT 16 GPM 1000-2500 PSI RELIEF V
1	9-5605-8-8-8	1/2 X 1/2 X 1/2 NPT
1	9-5404-12-8	3/4 NPT x 1/2 NPT HEX N
1	9-5500-8-8	1/2 NPTM TO 1/2 NPTM 90 EI
1	28-1478	1/4" NPTM X 1/4" I.D. HOSE BARB STEEL EI
1	9-2501-10-12	JIC 10M x 3/4 NPTM 90 EI
1	928-C	3/4" QUICK COUPLER S40
1	9-6314	1/4" NPT QUICK COUPLER
1	1-2849	49" THROTTLE CONTROL CABLE W/ T-L
1	9-4503-8-8	1/2 HOSEBARB M x 1/2 NPT M 45 DEGREE HOSEBARB EI
2	9-2501-12-12	JIC 12M x 3/4 NPTM 90 EI

From the photo you sent, you're missing some parts:

1/2" rubber hose
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 1/4" NPTF x 1/2" NPTM Bushing
 Keyswitch

Throttle Lever
1/4" Fuel Line

And an extra part:

3/4" NPTM x JIC 12 Elbow

I ordered most all of these parts and packed them in the crate somewhere (though I think I owe two 1/4" NPTF x 1/2" NPTM Bushings). Can you check I'd like to "make up" the missing parts for all modules in one order - so I'll wait for the full review before ordering.

Regards,

Tom

On 8/19/14, 4:42 PM, Aidan Williamson wrote:

Hi Tom,
I'm trying to assemble the control panel hydraulics.
I don't think what you send is fitting together properly - or i'm doing it wrong.
I attached a picture of my present status.

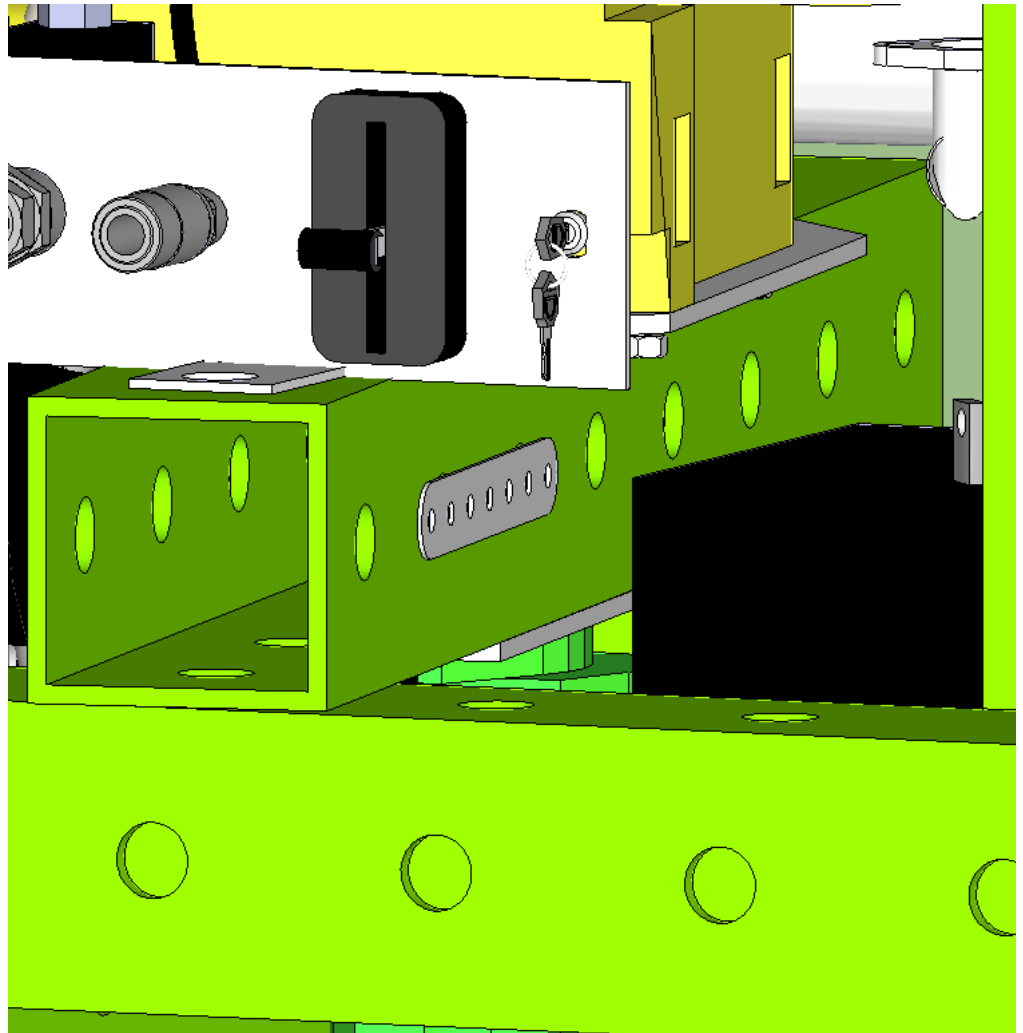
None of the elbows fit into the pressure bypass valve except for the one that is already in.
Also, how do I put the case drain barb into the Tee? Do I need a 3/4M to 1/4F reducer?
How do the hoses attach to the fittings?

Thanks,
Aidan

On 8/18/2014 8:16 PM, Tom wrote:

Aidan,

Yes - I had drawn the metal piece, grouped with the control panel assembly, but haven't show it attached to the control panel yet:



Note that the dimensions for hole sizes and positions aren't shown - I will add them when I get to the shop and measure the holes in the tr apart. YMMV.

Tom

On 8/18/14, 7:42 PM, Aidan Williamson wrote:

For throttle lever connection is there supposed to be some flat welded at 90 to the back of the control panel for the lever to bolt to lil

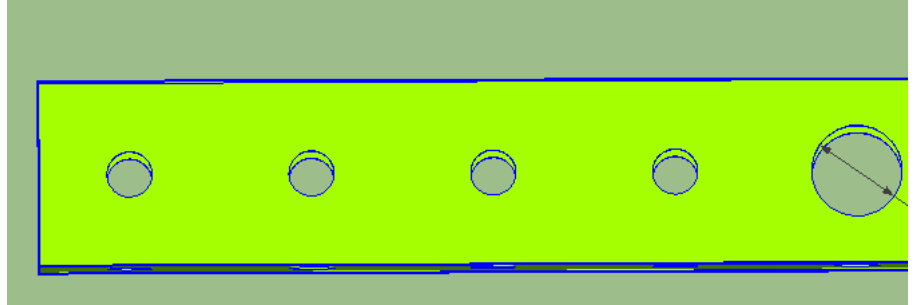
On 8/18/2014 7:31 PM, Tom wrote:

Aidan;

Good you asked.

I had placed it, but haven't drawn it yet, as it's difficult to draw.

I had in mind using a support bracket as on the other power cube I delivered - bent so two of the holes would align with the 4
Here is the area I had in mind - beside the battery:



I have only added the metal strip to show where I was thinking of placing it. The strip must be bent as before and bolted to the
a solenoid. Also, the tube is not aligned to the green axis and bending the metal strip is easier to do in person than in Sket

I'll work on it, but please ask if you don't understand my description.

Regards,

Tom

On 8/18/14, 6:30 PM, Aidan Williamson wrote:

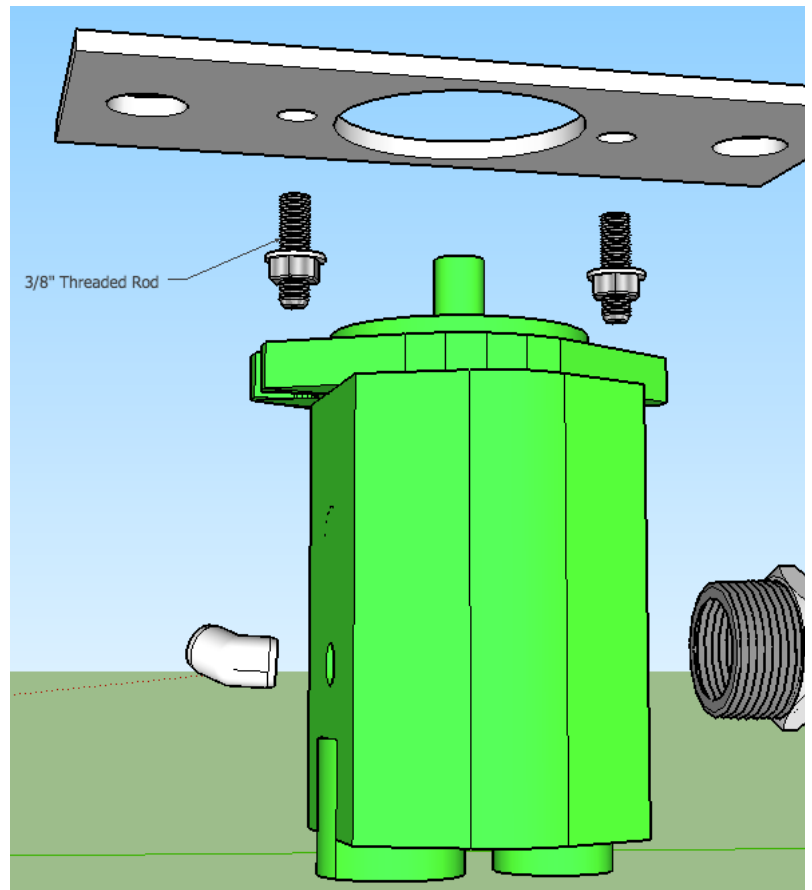
any thoughts on where the solenoid should mount?

On 8/16/2014 5:51 PM, Tom wrote:

Aidan;

My goal was to make minimal changes to the 4" x 4" tubing, as it should be reusable.

I made an omission - the 4" x 4" tube supporting the engine and pump should have the 1" hole on top and bott



If I were cutting it, I'd just mark the circles with something like a socket about 1 1/2" to 1 3/4" outer diameter (to be cut to match). The pump plate is already cut to 2 1/4" diameter. The 1" holes securing the pump and engine. The pump plate

Also: note that on the inside of the 4" x 4" tubing is a seam where it was welded lengthwise to form the tube. Nuts or washers from lying flat inside the tube, and we will have them on the inside of three sides of the tube.

Please note that for the pump module, I have included "threaded rod" pieces about 2" long and 3/8" in diameter support tube. Note that these pieces must be aligned very well before welding:



Tom

On 8/16/14, 4:54 PM, Aidan Williamson wrote:

I have a question about the engine/pump mount piece. I was wondering if you had a suggestion as to how to cut the holes, take off the plates and torch it. What do you think?

-Aidan

On 8/15/2014 10:04 PM, Tom wrote:

Greetings, Aidan;

I think that using the larger pulley on the motor axle doesn't provide enough torque and we should

We built three of the uPCs, this time using only the rubber belt from the motor to a pulley on the engine. On another, I mounted a small fan blade on the shaft underneath the motor, so it worked better. Some issues with the rubber belt heating up and slipping off the shaft.

The vacuum cleaner motors turn very fast (~ 30,000 RPM) and usually require lots of air flow for cooling.

I still want to solve this and come up with a working solution. I'm still looking for a better motor/pump.

If you haven't seen it, the modules are illustrated in this page:

http://opensourceecology.org/wiki/Structural_Power_Cube#Kit_Cost_Breakdown

... that is, all but the part that holds the battery in place. It is in the Sketchup model, though.

The muffler bolts are missing? I asked the guy from SmallEngineSuppliers to ship 4 sets of gas muffler bolts, but they were a bit too short.

Tom

On 8/15/14, 7:38 PM, Aidan Williamson wrote:

Hey Tom,

Hope all is well down your way. I saw a picture of a uPC running a log splitter. Awesome! other day and it burned out. It had a good run, though!

Most of the interns here have left but there are a handful of us still here and we want to as open any of the labeled bags (except engine module) it looks like everything is there. The maybe pick some up at the CarQuest in town but if they were supposed to come with the

Best,
Aidan

--
"Democracy is a suggestion box for slaves."
- Stefan Molyneux

--
"Democracy is a suggestion box for slaves."
- Stefan Molyneux

--
"Democracy is a suggestion box for slaves."
- Stefan Molyneux

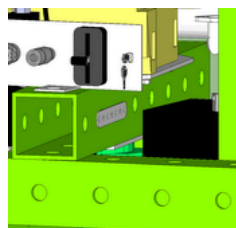
--
"Democracy is a suggestion box for slaves."
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"Democracy is a suggestion box for slaves."
- Stefan Molyneux

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"Democracy is a suggestion box for slaves."
- Stefan Molyneux

Tom Griffing

10 attachments



noname
50K



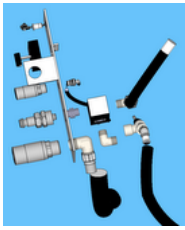
1/2" X 1/2" JIC 10F X JIC 10F
3500 PSI HYD HOSE
ITEM NUMBER: 841-0212
PRICE: \$11.95
18 In Stock

QTY:

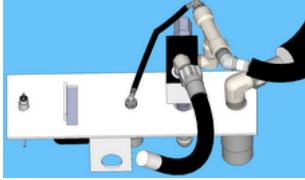
 This item is an integral part of our network building.

noname
122K

noname
21K



noname
66K



noname
117K

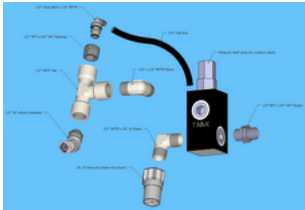


JIC 10M x 3/4 NPTM 90 ELBOW
Item Number: 9-2501-10-12
83 In Stock

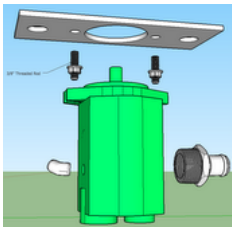
noname
33K



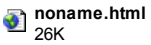
noname
124K



noname
110K



noname
44K



noname.html
26K

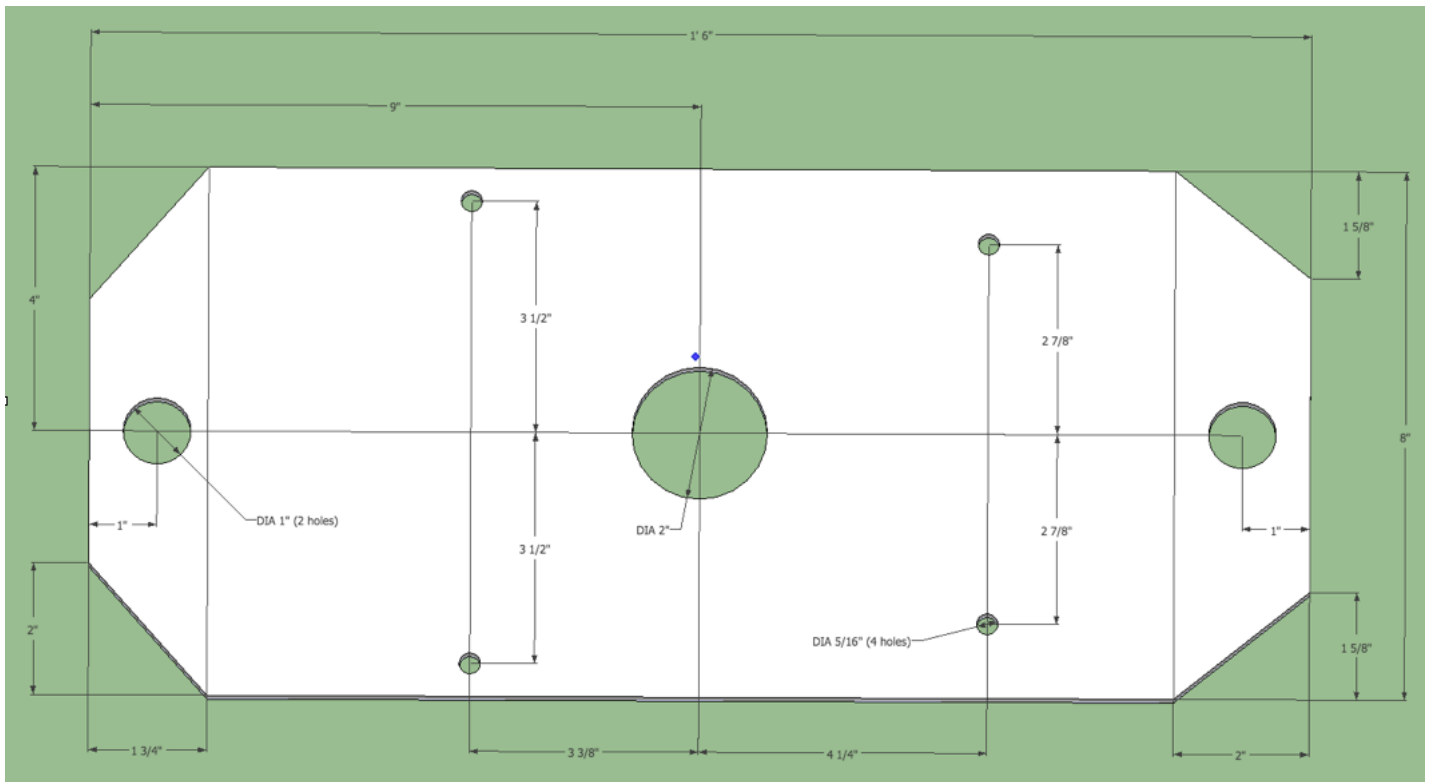
Tom <tom.griffing@gmail.com>
To: Aidan Williamson <aidan.d.williamson@gmail.com>

Wed, Aug 20, 2014 at 8:15 PM

Aidan;

I composed a message saying as much, but after hitting "Send", it failed to send and I didn't see it.

Here is the latest on the engine plate:



Thanks for taking care of this.

Tom
[Quoted text hidden]

Aidan Williamson <aidan.d.williamson@gmail.com>
To: Tom <tom.griffing@gmail.com>

Wed, Aug 20, 2014 at 10:35 PM

No problem.
This assembly is taking longer than expected - as expected.
Most everything else seems good. What is the red tube in the hydraulic reservoir bag for?
-Aidan
[Quoted text hidden]

Tom <tom.griffing@gmail.com>
To: Aidan Williamson <aidan.d.williamson@gmail.com>

Thu, Aug 21, 2014 at 12:27 PM

Aidan;

So, is everything else there for assembly? If so, I can go ahead and order the missing parts.

"Red tube"? I don't remember a red tube. Can you describe it better? Plastic or steel? How big? Photo?

Tom
[Quoted text hidden]

Aidan Williamson <aidan.d.williamson@gmail.com>
To: Tom <tom.griffing@gmail.com>

Thu, Aug 21, 2014 at 4:02 PM

Looks like a fuel line or an oil line. Camera is down right now, sorry. It's in the hydraulic reservoir parts. probably 1/4" hose about 6-12" in length

Everything else appears to be here.

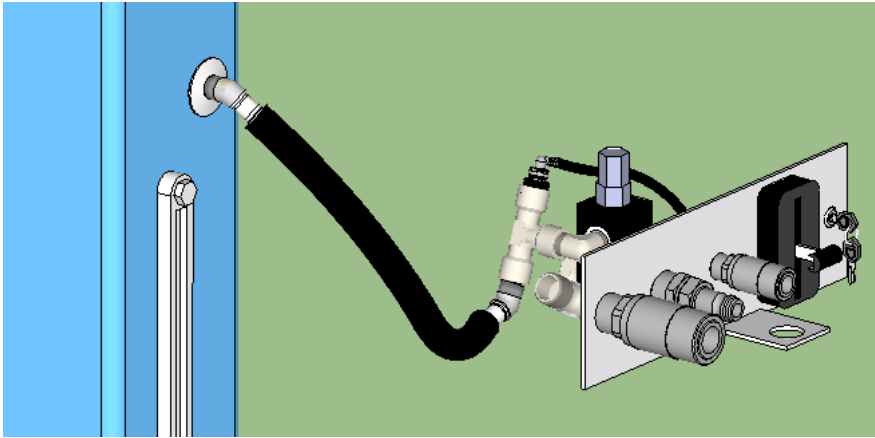
-Aidan
[Quoted text hidden]

Tom <tom.griffing@gmail.com>
To: Aidan Williamson <aidan.d.williamson@gmail.com>

Thu, Aug 21, 2014 at 4:46 PM

Aidan;

Oh . . . that's the 1/2" rubber hose that will connect between the hosebarb on the control panel to the Hydraulic reservoir:



I colored it black, but the one they had in the store was red.
There should be medium size hose clamps for this as well.
There should be enough of it for the two power cubes.

Tom

On 8/21/14, 4:02 PM, Aidan Williamson wrote:

Looks like a fuel line or an oil line. Camera is down right now, sorry. It's in the hydraulic reservoir parts. probably 1/4" hose about 6-12" in length

Everything else appears to be here.

-Aidan

On 8/21/2014 12:27 PM, Tom wrote:

Aidan;

So, is everything else there for assembly? If so, I can go ahead and order the missing parts.

"Red tube"? I don't remember a red tube. Can you describe it better? Plastic or steel? How big? Photo?

Tom

Aidan Williamson <aidan.d.williamson@gmail.com>
To: Tom <tom.griffing@gmail.com>

Thu, Aug 21, 2014 at 6:28 PM





ah, gotcha
thanks
[Quoted text hidden]

Tom <tom.griffing@gmail.com>
To: Aidan Williamson <aidan.d.williamson@gmail.com>

Fri, Aug 22, 2014 at 9:44 AM

Aidan;

Before issuing the order for the extra parts, can you verify nothing else is missing?

ITEM DETAILS	PRICE (e a.)	QTY	TOTAL PRICE
 <p>1/2 NPT TO 1/4 NPT BUSHING Item Number: 9-5406-8-4 <i>506 In Stock</i></p>	\$1.65	2 <small>REMOVE</small>	\$3.30
 <p>3/4\" X 36\" JIC 12F X JIC 12F 3000 PSI HYD HOSE Item Number: 951-2236 <i>79 In Stock</i></p>	\$23.95	2 <small>REMOVE</small>	\$47.90
 <p>3/4\" X 18\" JIC 12F X JIC 12F 3000 PSI HYD HOSE Item Number: 951-2218 <i>66 In Stock</i></p>	\$17.95	2 <small>REMOVE</small>	\$35.90
 <p>JIC 10M X 1/2 NPTM 90 ELBOW Item Number: 9-2501-10-8 <i>125 In Stock</i></p>	\$2.40	2 <small>REMOVE</small>	\$4.80

Tom
[Quoted text hidden]

--
"Democracy is a suggestion box for slaves."
- Stefan Molyneux

Aidan Williamson <aidan.d.williamson@gmail.com>
To: Tom <tom.griffing@gmail.com>

Fri, Aug 22, 2014 at 9:48 AM

looks good!
[Quoted text hidden]

Tom <tom.griffing@gmail.com>
To: Aidan Williamson <aidan.d.williamson@gmail.com>

Fri, Aug 22, 2014 at 10:10 AM

Aidan;

The order is on the way - Surplus Center Order # I0341819

They say 7 - 10 business days (but I've found it's usually quicker).

Regards,

Tom





On 8/22/14, 9:48 AM, Aidan Williamson wrote:

looks good!

On 8/22/2014 9:44 AM, Tom wrote:

Aidan;

Before issuing the order for the extra parts, can you verify nothing else is missing?

	ITEM DETAILS	PRICE (e a.)	QTY	TOTAL PRICE
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	3/4" X 18" JIC 12F X JIC 12F 3000 PSI HYD HOSE Item Number: 951-2218 <i>66 In Stock</i>	\$17.95	2 <small>REMOVE</small>	\$35.90
	JIC 10M X 1/2 NPTM 90 ELBOW Item Number: 9-2501-10-8 <i>125 In Stock</i>	\$2.40	2 <small>REMOVE</small>	\$4.80

Tom

Aidan Williamson <aidan.d.williamson@gmail.com>
To: Tom <tom.griffing@gmail.com>

Fri, Aug 22, 2014 at 10:15 AM

Thanks Tom.

I will be leaving FeF on Monday so I probably won't get to finish this power cube. The current status is:

- Marcin asked us to remake the engine plate from 1/2" steel.
- We are remaking the pump plates to have the same bolt spacing (8" from center) as the engine plates so that we can use the same 1" bolts.
- Radiator and tank assemblies are complete. Overall about 50% complete.

In case you want to see a 2 min video of the control panel being torched: <https://www.youtube.com/watch?v=ZeuBIPsT2Js>

-Aidan

[Quoted text hidden]

Tom <tom.griffing@gmail.com>
To: Aidan Williamson <aidan.d.williamson@gmail.com>

Fri, Aug 22, 2014 at 10:21 AM

Aidan;

Pretty good video - he wasn't even wearing gloves! Audio could be replaced by a "jingle", as it couldn't be understood.

Sorry to hear that you won't be able to finish the Power Cube - thanks for all the help so far.

1/2" steel for the engine plate? That's pretty strong. Remaking the pump plate - makes sense. Will it be 1/2" steel as well?

Tom

[Quoted text hidden]

Aidan Williamson <aidan.d.williamson@gmail.com>
To: Tom <tom.griffing@gmail.com>

Fri, Aug 22, 2014 at 10:26 AM

Haha that was me not wearing gloves...

The pump plate will be 1/4". We had already cut some 1/4" steel for the engine plate when marcin requested half so we will reuse it for the pump plates. I have sketchup files of the new plates... do you want me to send them to you so you can incorporate them into your model?

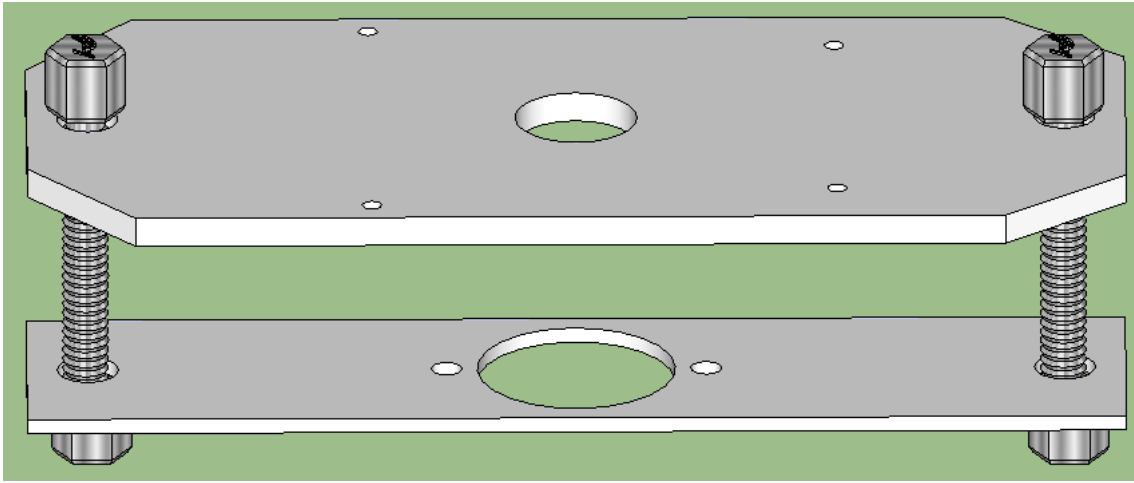
[Quoted text hidden]

Tom <tom.griffing@gmail.com>
To: Aidan Williamson <aidan.d.williamson@gmail.com>

Fri, Aug 22, 2014 at 10:33 AM

Yep . . . eye protection from time to time as well.

I just updated the Sketchup drawing. I hope they look like this?



Tom

[Quoted text hidden]

--

"Democracy is a suggestion box for slaves."

- Stefan Molyneux

Aidan Williamson <aidan.d.williamson@gmail.com>

Fri, Aug 22, 2014 at 10:34 AM

To: Tom <tom.griffing@gmail.com>

yes except the pump plate as the same profile as the engine plate. I was thinking about cutting it down but my accomplice - Mathias- thinks it's better to leave it 8" wide. What do you think? I'm thinking it would be difficult to access the set screw on the coupler if you want to switch out pumps to a different pump type.

[Quoted text hidden]

Tom <tom.griffing@gmail.com>

Fri, Aug 22, 2014 at 10:52 AM

To: Aidan Williamson <aidan.d.williamson@gmail.com>

Oh . . . you mean use 1/4" x 8" steel for the pump plate? I'd think 1/4" x 6" steel would be plenty strong - But that's just me.

The weak point is the thin parts near the large hole. When it was shorter, the 1/4" x 4" steel would have been strong enough - but we just extended it by 8", so it's more of an issue.

To be sure, you'd have to get a mechanical engineer to do an analysis on it.

Let me know what you decide.

Tom

[Quoted text hidden]