ARACHNID

SPIDERCARTS	00		Ver.	0.1.2.6		
			Authorized	Robert Dicken		
		Arachnid				

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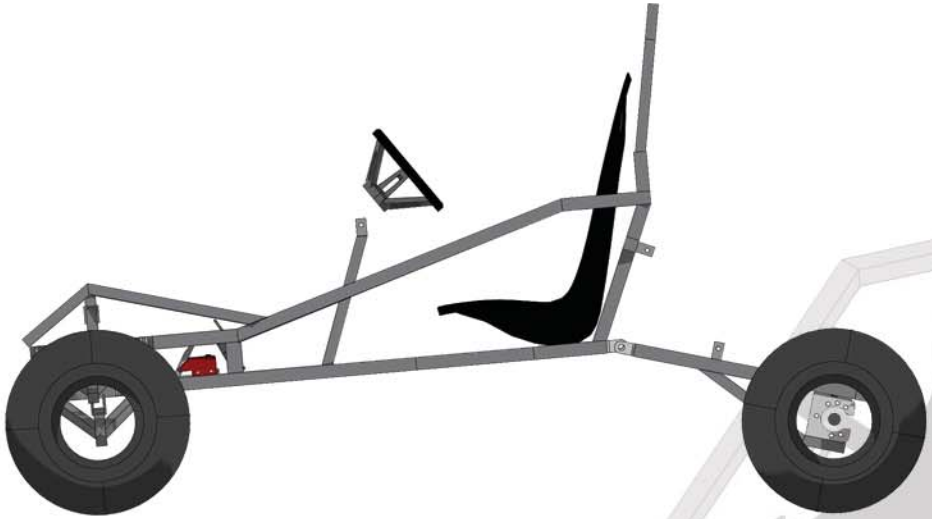

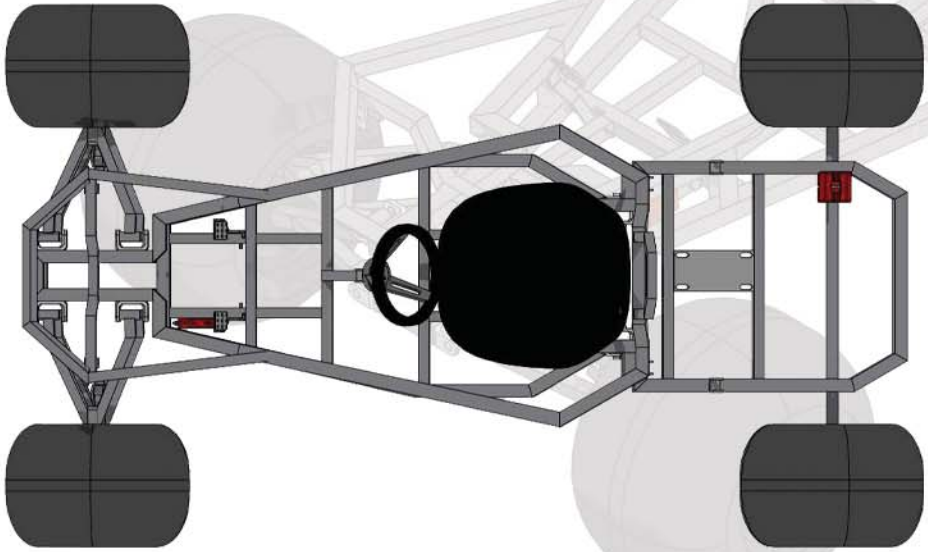

Length	86"
Width	29 1/2""
Wheel Base	54" Wide x 93" Long
Tires Rear	18" Balloon
Tires Front	18" Balloon
Clearance	14" to Frame
Chassis	1 1/4" #14 Square
Motor	6.5hp to Whatever
Transmission	Torque Converter
Brakes	Hydraulic Disc
Steering	Tie Rods/ Gear Box

SPIDERCARTS	02		Ver.	0.1.2.6		
			Authorized	Robert Dicken		
		Arachnid Specs				

Thank you and welcome to your new Arachnid Go Kart Plans.

As you can see these plans are easy, fun and full of great information to walk you through completing your Arachnid Go Kart.

Our special feature in this eBook is the "Exploded View". Exploded view is a brand new concept we have implemented and we think you will love it. Use this like a webpage with links. You just click on the part you need to build or get info on and it will take you right to it. So use the bookmarks and the exploded view to quickly navigate the eBook. Give it a whirl!

Tools section will just give you brief overview of tools you could use to build the Arachnid. Of course use what you have or find fits your needs.

Materials section will give you a shopping list for the raw metal you will need to finish your kart.

Step by Step will walk you through the correct order of the build.

Diagrams detail every part and section of the kart.

Parts List is a list of all the hardware needed to finish off the kart after you are done welding.

Revisions will be a work in progress. Sometimes we will get feedback on our designs and people tell us what might make the kart better. If we think they are good ideas they end up in the Revisions page. So feel free to let us know of anything we could improve on and we will post it.

Resources are just some of the internet sites we have found to be helpful.

Well that's it for now! Have fun and be careful.

One other note for those that are using my metric measurements... We obviously dont use the metric system here in the US but I have done my best to convert it for you. I might have missed something or miscalculated something. Also I am not sure how you buy your metal or what sizes are avaiable to you so I just did a straight conversion from what I use. This might not be right for you but I hope it helps as a reference.

SPIDERCARTS	03		Ver.	0.1.2.6		
			Authorized	Robert Dicken		
		Introduction				

Here is a list of tools that we used on our first karts.
This list is probably a minimum and any other tools that make your kart building easier would be that much better.

- A truck or trailer. Most of the metal houses carry steel in 20- 24 foot (6096mm-7315mm) lengths. They will sometimes cut them in half for you for a small charge but even a 12 foot (3657.6mm) piece of tubing can be hard to get home in moms minivan.

- We are going to need to measure and mark this new metal, so a tape measure and some good soap stone or a silver sharpie will be needed.

- Cutting the metal can be done in a wide variety of ways. I would suggest a chop saw. They are not to expensive and very easy to use. Most of them have a angle guard so you can set it for different degrees when cutting.

- After cutting the metal there is usually very sharp edges. Now you can get a grinder and grind them all smooth or just be very careful with the cut metal till you weld it all together. The welding will melt the rough edges and you wont have to worry about them any longer. Your Choice!

- Some Vice grip clamps are handy to use as extra hands if you are tackling this project solo. Sometimes its nice to have another hand.

- We must hook all this metal together somehow, so a welder is a must. Now using 14 gauge (1.9mm) metal it doesn't have to be anything to big but more power is always better than not enough. If you don't weld or have a welder handy, you can always take it to your local welder and have him put it together for you. They might charge a bit but its good work!

- Protective gear is a must! Get some good gloves. Get some good eye protection. Always think safety first. There is no fun in getting hurt.

- Well the rest of the tools should be hanging out around the shop or garage. Socket sets, hammers, pliers, drills and drill bits, wire brush, hand grinder and maybe some painting supplies.
Well that should get us started. Lets get to work.

SPIDERCARTS	04		Ver.	0.1.2.6		
			Authorized	Robert Dicken		
		Tools				

Materials Needed

Below are the materials needed to complete all the cutting, fabrication and welding portions of building your new kart. There is a lot more that needs to go on it after it is built such as bearings, tires and wheels, motor, etc.

40 - Feet of 1 1/4" X 1 1/4" #14 gauge square tubing.
(13716mm of 31.8mm x 31.8mm square tubing that has 1.9mm walls)

40 - Feet of 1" X 1" #14 gauge square tubing.
(15240mm of 25.4mm x 25.4mm square tubing that has 1.9mm walls)

2 - foot of 1 1/2" x 1 1/2" x 1/8 thick Angle Iron
(609.6mm of 38.1mm x 38.1mm x 3.2mm thick Angle Iron)

8 - 1-2 TL Bushings (1" Diameter, 2"Length and takes a 5/8 bolt)
(Length 50.8mm, width 25.4mm and a 15.9mm Hole)

4 - 5/8" Fine Thread Nuts (15.9mm)

20 - Spindle Brackets - Part # 411300

02 - Bearing Hangers - Part # 400175

01 - Motor Mount Plate 5" X 12" (Needs to be cut to 5" x 10") - Part # 400367
(Motor mount is 127mm x 304.8mm (cut to 127mm x 254mm)

09 - Shock Mount Weldments - Part # 300805

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		Materials				

Suggested Steps

The order you decide to build these parts is up to you but I would like to give a simple step by step guidline.

1. First start with the MainFrame. Cut and layout all the parts for the main frame. Spend some time making sure they are straight and flat. Be sure to measure "Criss-Cross" to double check all your cuts.

2. Then start in on the second layer of the main frame. Welding in the risers and rails. Be sure to pre-drill any parts that need hole as you might not be able to get the drill in once you have welded. Then move on to the front suspension. This is a bit tricky but once its done it looks great! I would do the roll bar next. Weld it flat, then weld it onto the frame. Its super easy after all that front end work!

3. Weld on the weldments next in the given locations. Steering brackets, shock mount tabs, Bearing hangers, and all the spindle brackets. Once again make sure it is all straight. Make changes needed for your specific hardware or custom thing you may want to add.

4. Finally Put on all your hardware and remember this is a project and "Plans" only for a kart concept... This is your project so you can change anything! Might want bigger shocks or a different seat or no shocks at all? Just take the time to make it the kart you want... put on all the hardware to make sure it all fits then take it all back off and get it ready to paint. I use Hammered Finish spray paint if I am painting it myself. Have fun!

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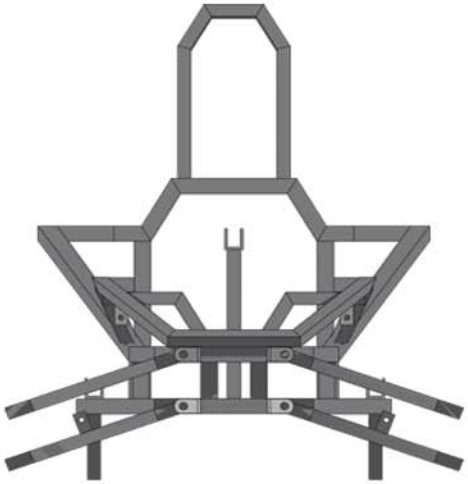
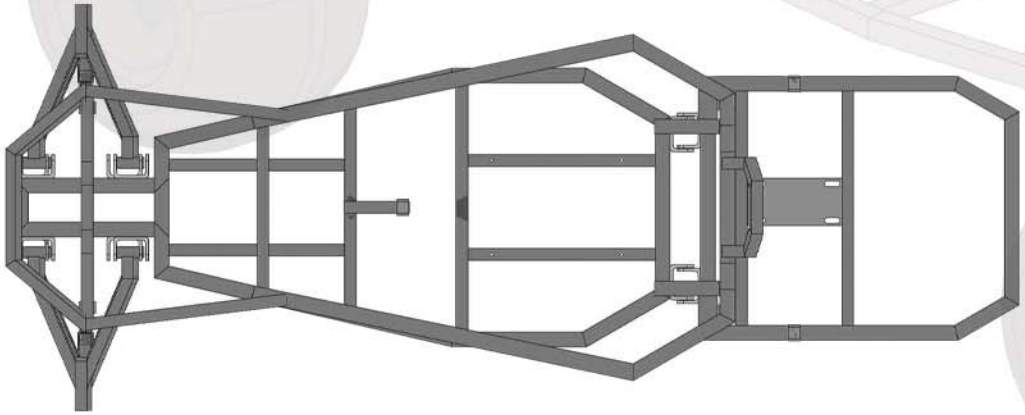
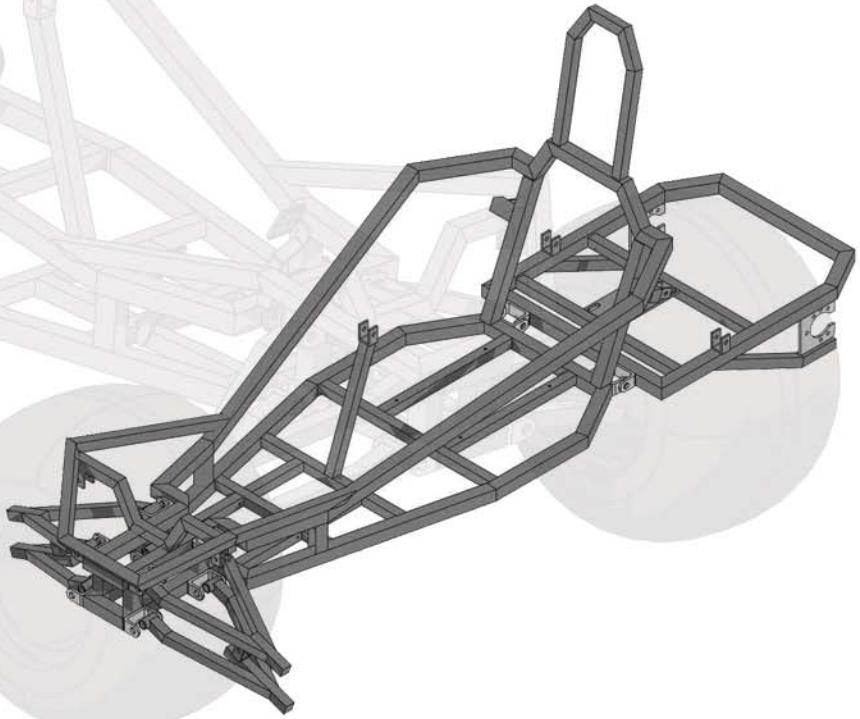
			Authorized	Robert Dicken		
		Steps				







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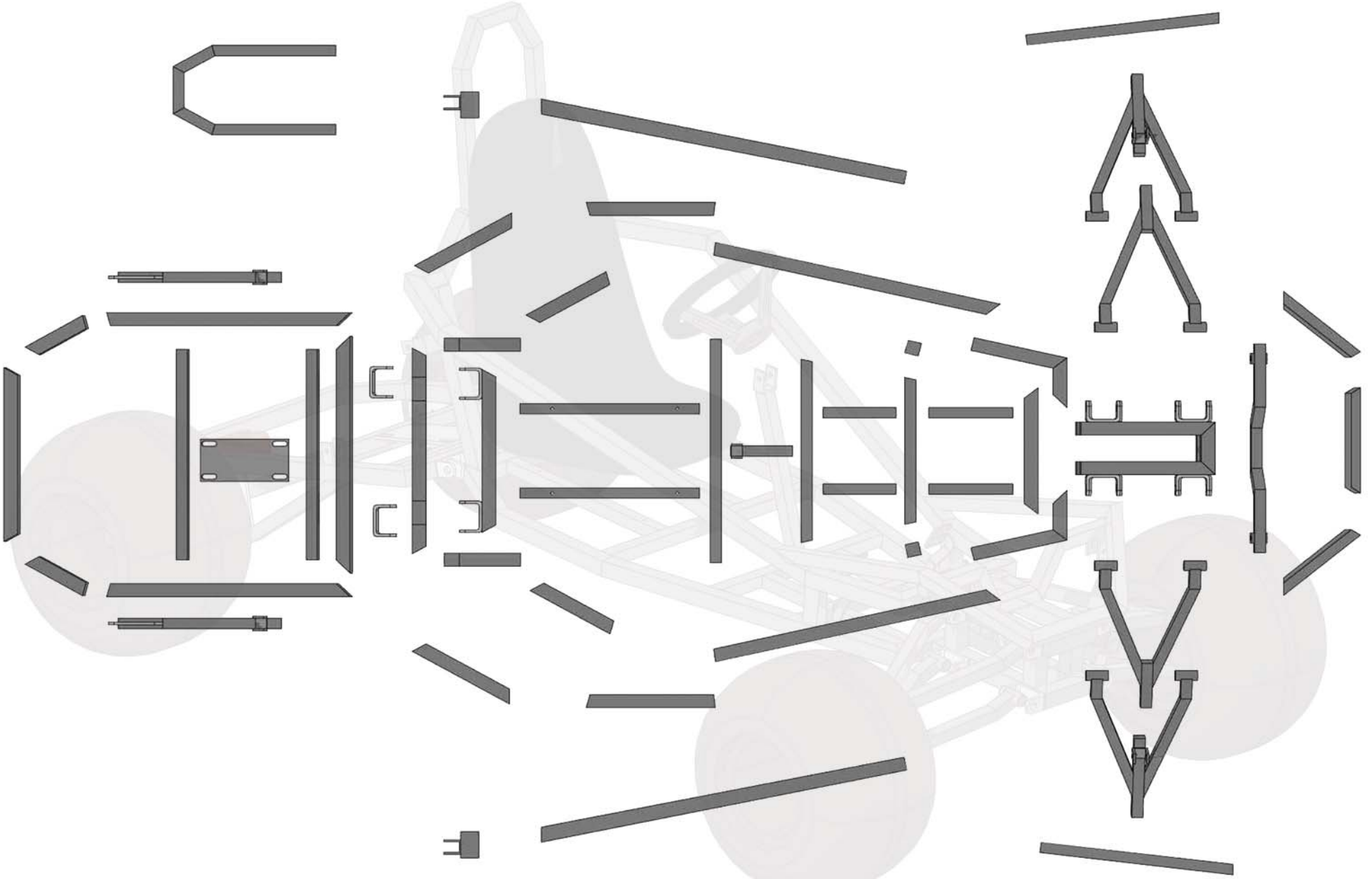
		Total Weld				



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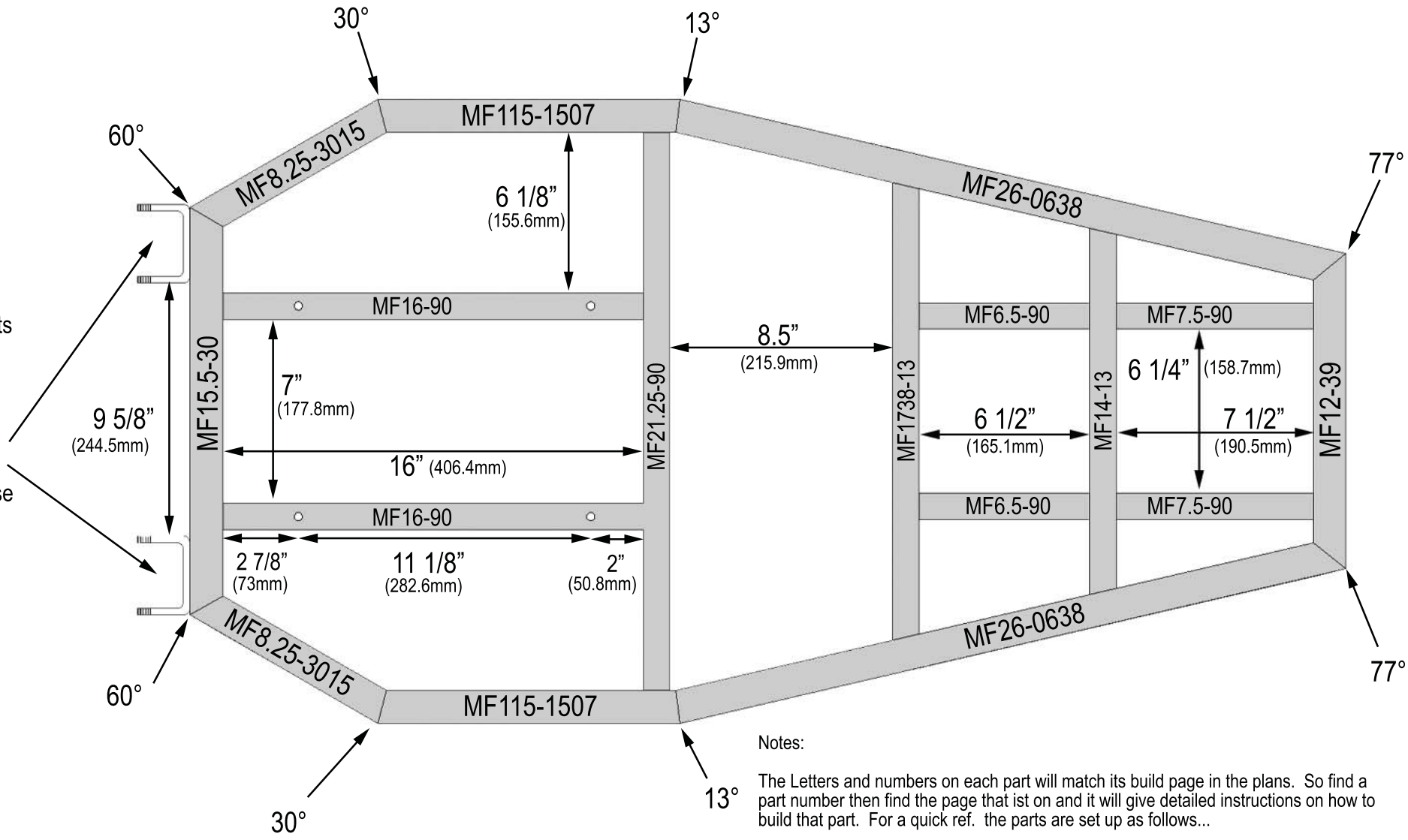
		Exploded View				



Notes:

These 2 parts are weldments and are easier to just buy. They are spindle brackets we will use here for the pivot points for the subframe suspen-sion.

Notes:

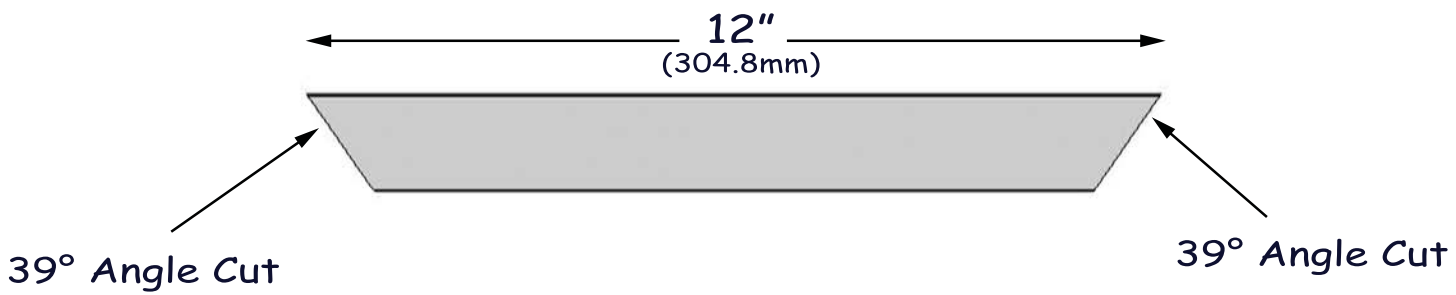
The Letters and numbers on each part will match its build page in the plans. So find a part number then find the page that ist on and it will give detailed instructions on how to build that part. For a quick ref. the parts are set up as follows...

MF=Main Frame
The first number is the length
The second number is the angle to cut...

You can use this page as a quick ref for this section once you have all the parts...

SPIDERCARTS	09		Ver.	0.1.2.6		
			Authorized	Robert Dicken		
		Main Frame				

Top View

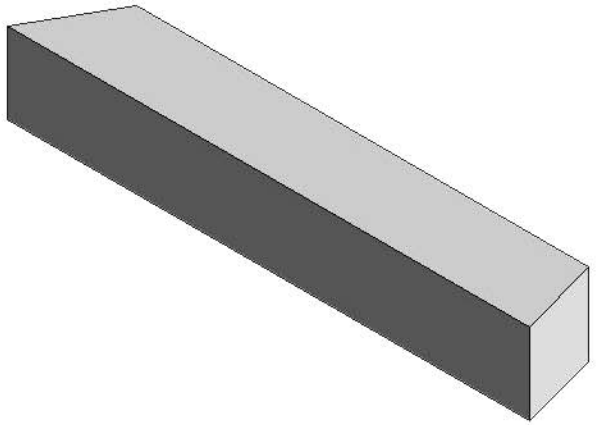


Notes

This part is very easy to make!
Use the 1 1/4" (31.8mm) Square tubing, make a 39° cut then measure 12" (304.8mm) and cut another 39°. Make sure they mirror each other. Thats it!

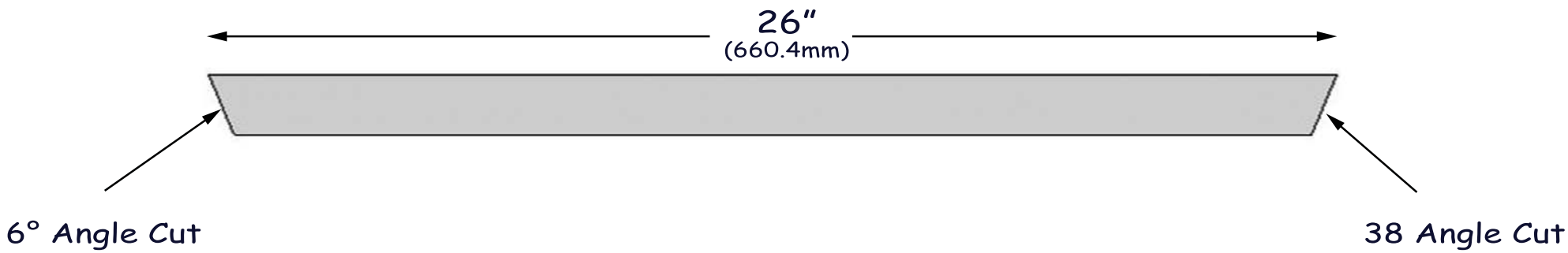
This is Part Number MF12-39
You will need 1 of these.

Iso View



SPIDERCARTS	10		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1 1/4" Square Tubing	
		Part / MF12-39			Qty-1	

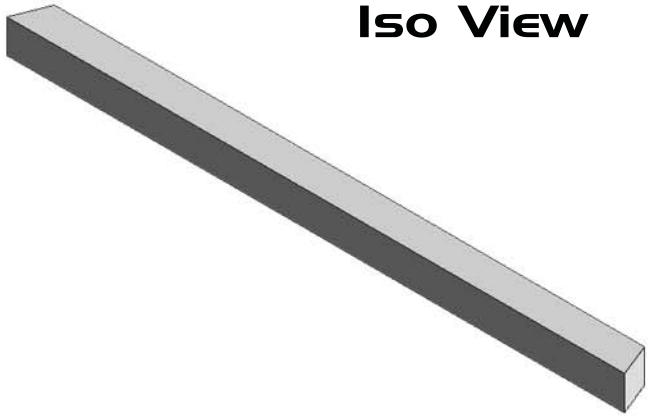
Top View



Notes

Use the 1 1/4" (31.8mm) Square tubing, make a 6° cut then measure 26" (660.4mm) and make a 38° cut. Make sure they mirror each other. Thats it!

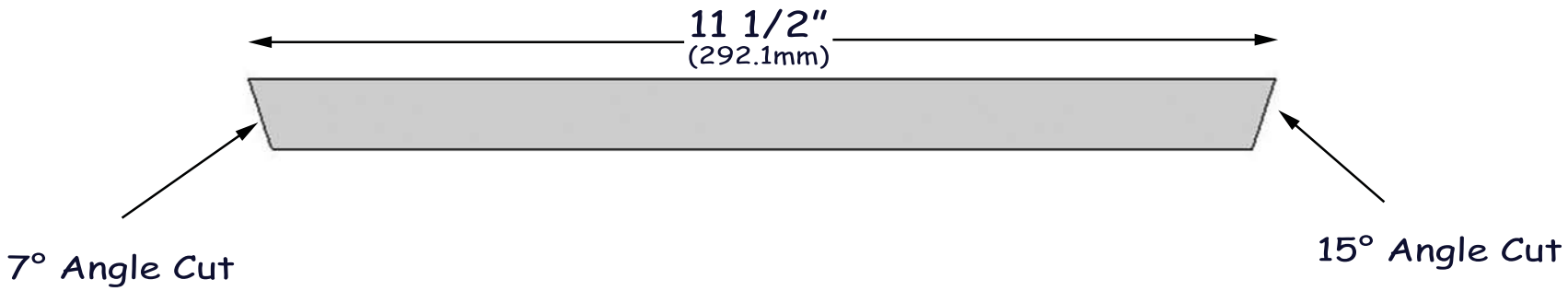
Iso View



This is Part Number MF26-0638
You will need 2 of these.

SPIDERCARTS	11		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1 1/4" Square Tubing	
		Part / MF26-0638			Qty-2	

Top View

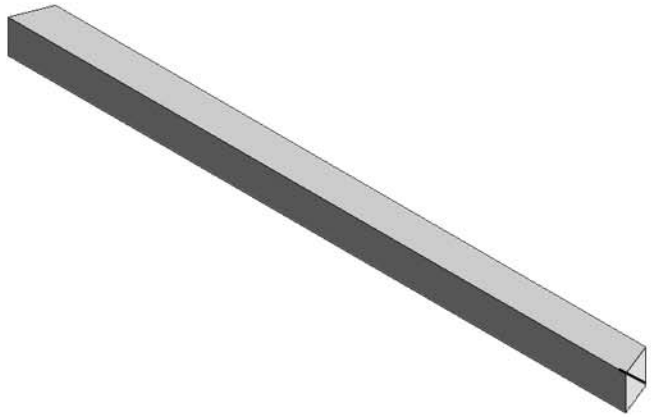


Notes

Use the 1 1/4" (31.8mm) Square tubing, make a 7° cut then measure 11 1/2" (292.1mm) and make a 15° cut. Make sure they mirror each other. Thats it!

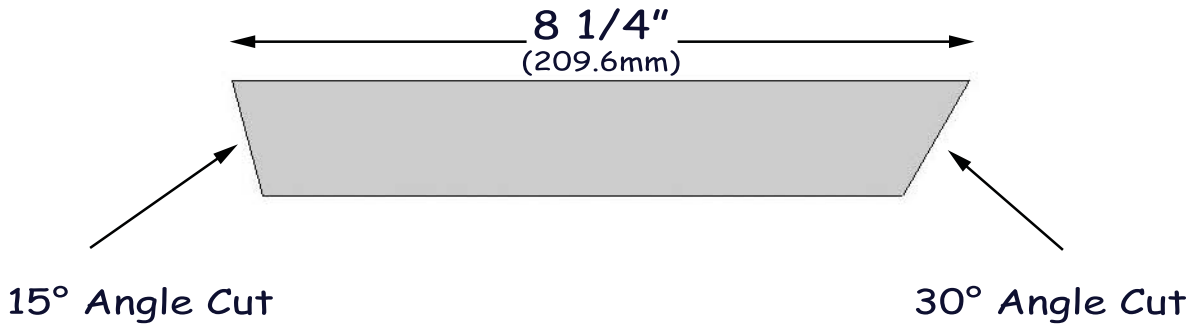
This is Part Number MF115-1507
You will need 2 of these.

Iso View



SPIDERCARTS	12		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1 1/4" Square Tubing	
		Part / MF115-1507			Qty-2	

Top View

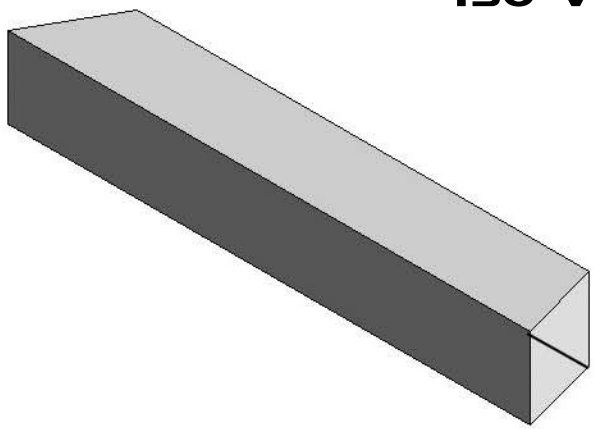


Notes

Use the 1 1/4" (31.8mm) Square tubing, make a 15° cut then measure 8 1/4" (209.6mm) and cut a 30°. Make sure they mirror each other. Thats it!

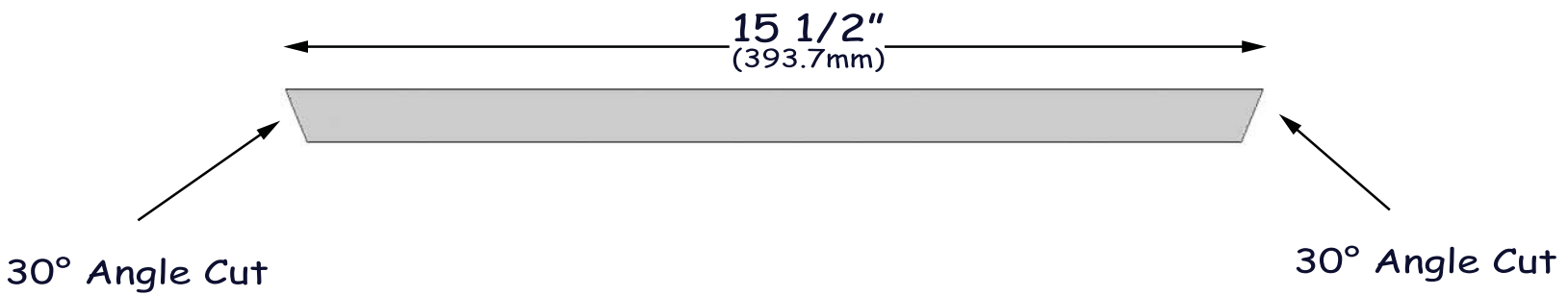
This is Part Number MF825-3015
You will need 2 of these.

Iso View



SPIDERCARTS	13		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1 1/4" Square Tubing	
		Part / MF825-3015			Qty-2	

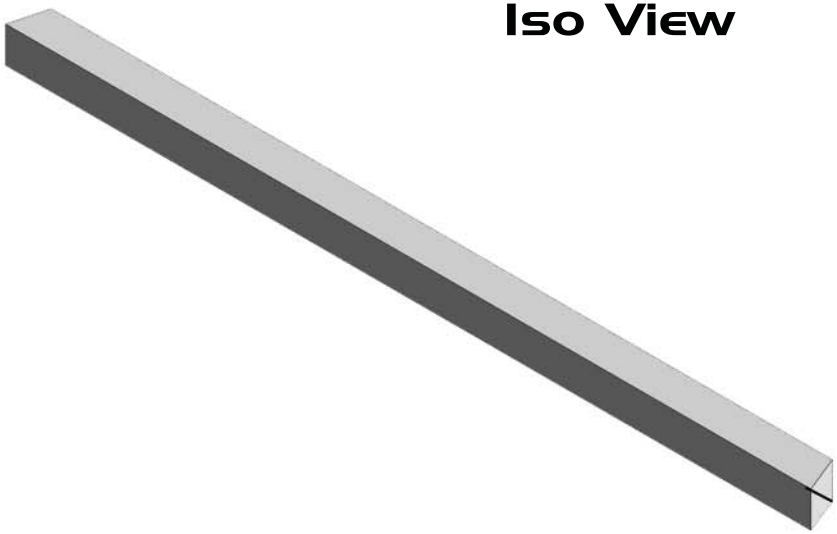
Top View



Notes

Use the 1 1/4" (31.8mm) Square tubing, make a 30° cut then measure 15 1/2" (393.7mm) and cut a 30°. Make sure they mirror each other. Thats it!

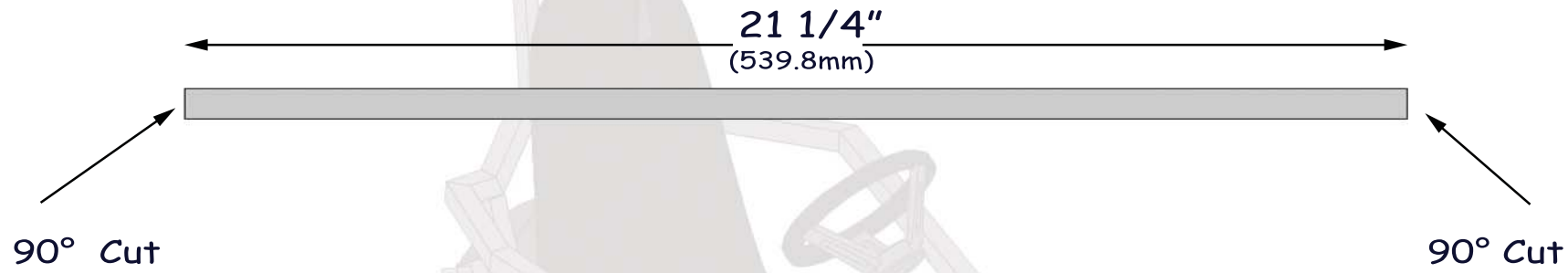
Iso View



This is Part Number MF155-30
You will need 1 of these.

SPIDERCARTS	14		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1 1/4" Square Tubing	
		Part / MF155-30			Qty-1	

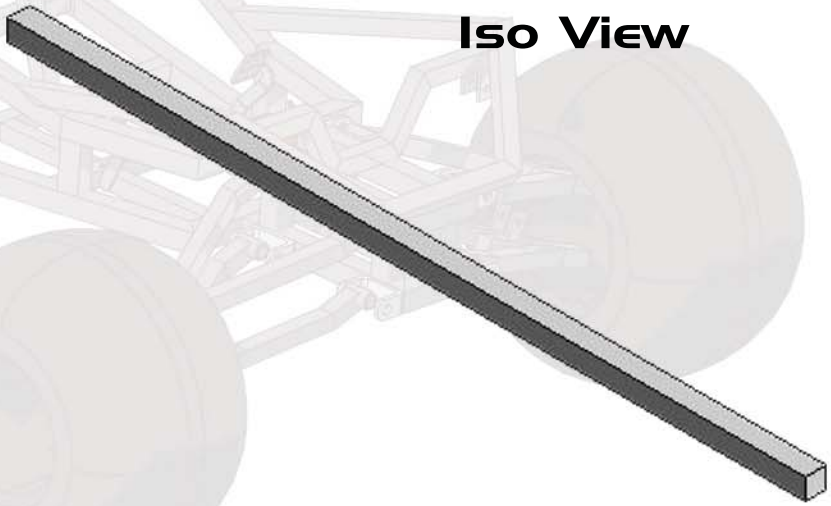
Top View



Notes

Use the 1" (25.4mm) Square tubing, make a 90° cut then measure 21 1/4" (539.8mm) and cut another 90°. Make sure they mirror each other. Thats it!

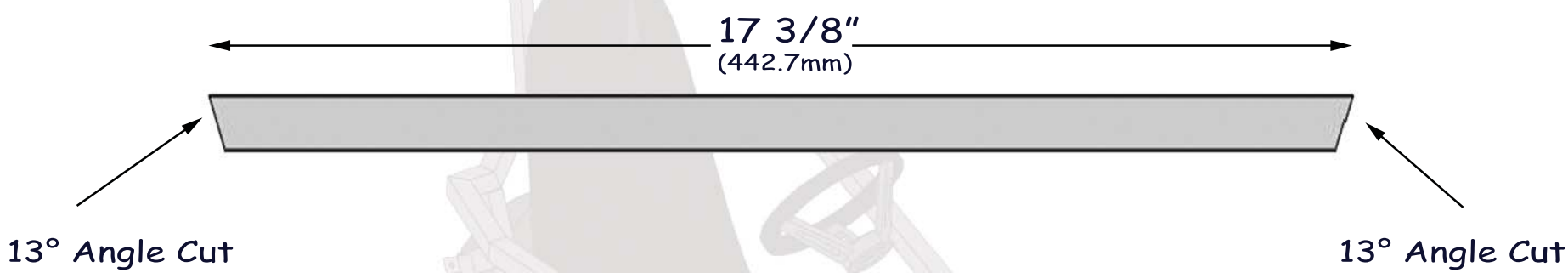
Iso View



This is Part Number MF21.25-90
You will need 1 of these.

SPIDERCARTS	15		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1" Square Tubing	
		Part / MF21.25-90			Qty-1	

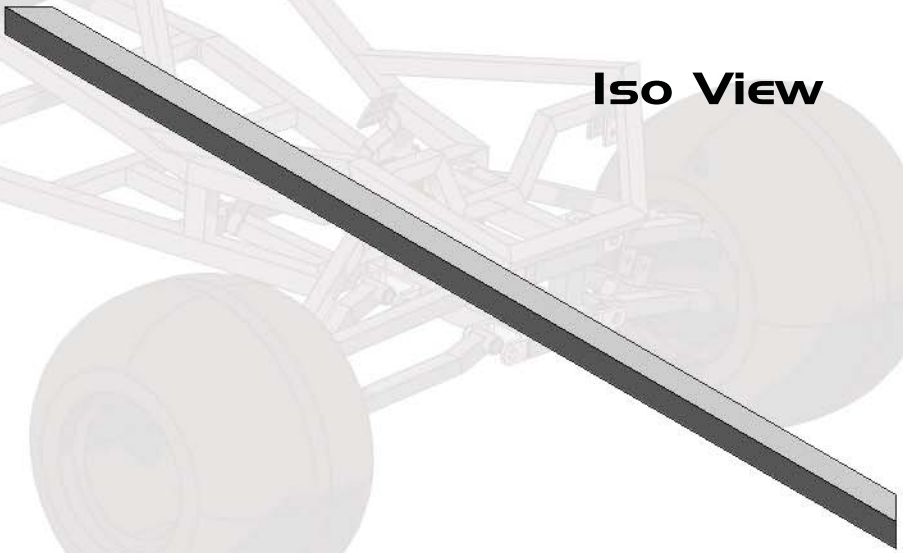
Top View



Notes

Use the 1" (25.4mm) Square tubing, make a 13° cut then measure 17 3/8" (442.7mm) and cut another 13°. Make sure they mirror each other. Thats it!

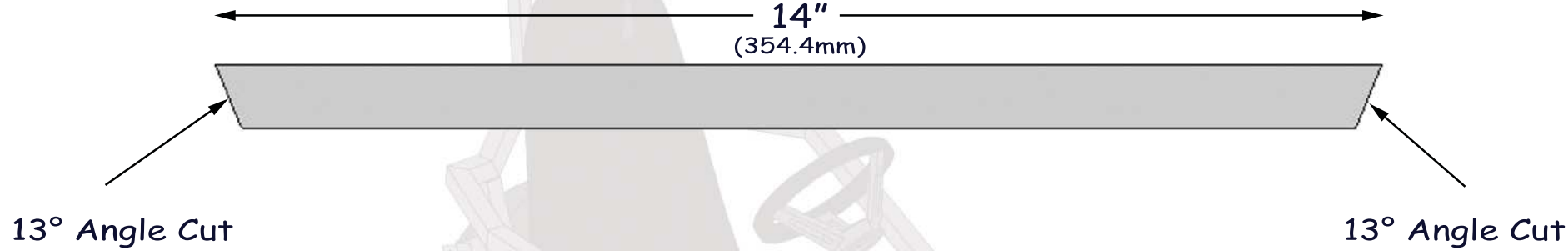
Iso View



This is Part Number MF1738-13
You will need 1 of these.

SPIDERCARTS	16		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1" Square Tubing	
		Part / MF1738-13			Qty-1	

Top View



Notes

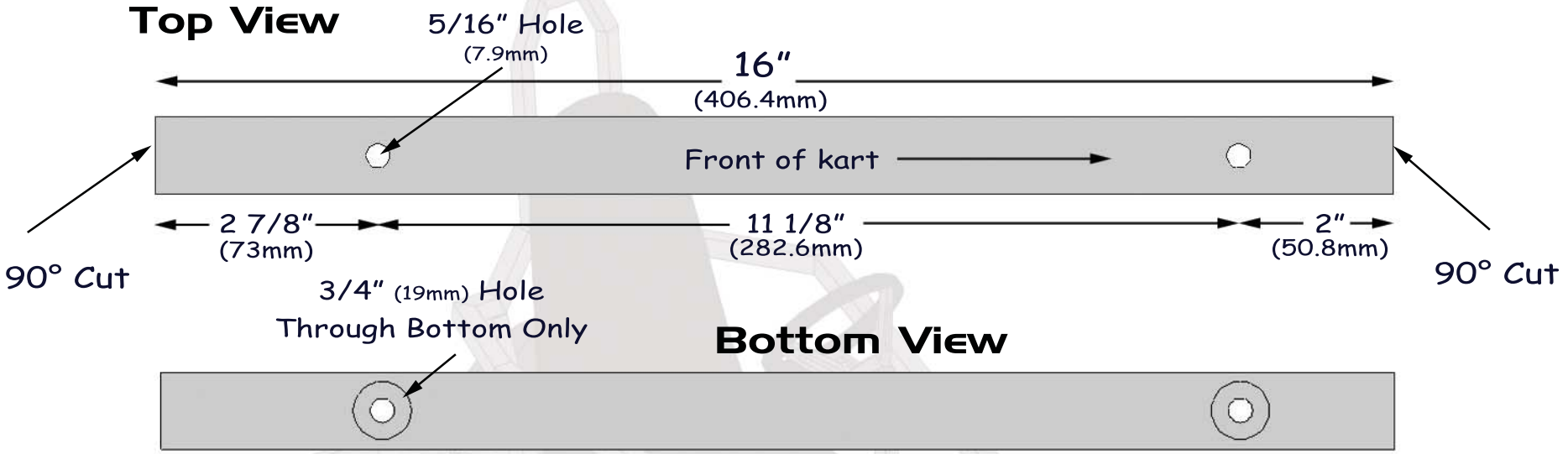
This part is very easy to make!
Use the 1" (25.4mm) Square tubing, make a 13° cut then measure 14" (354.4mm) and cut another 13°. Make sure they mirror each other. Thats it!

This is Part Number MF14-13
You will need 1 of these.

Iso View

SPIDERCARTS	17		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1" Square Tubing	
		Part / MF14-13			Qty-1	

Top View



Bottom View

Notes

Use the 1" (25.4mm) Square tubing, make a 90° cut then measure 16" (406.4mm) and cut a 90°. You need to drill 2 5/16" (7.9mm) holes as shown all the way through, then flip it over and drill a 3/4" (19mm) hole only through the bottom. This will allow you to put the nut on the seat bracket and tighten it with a socket from the bottom.

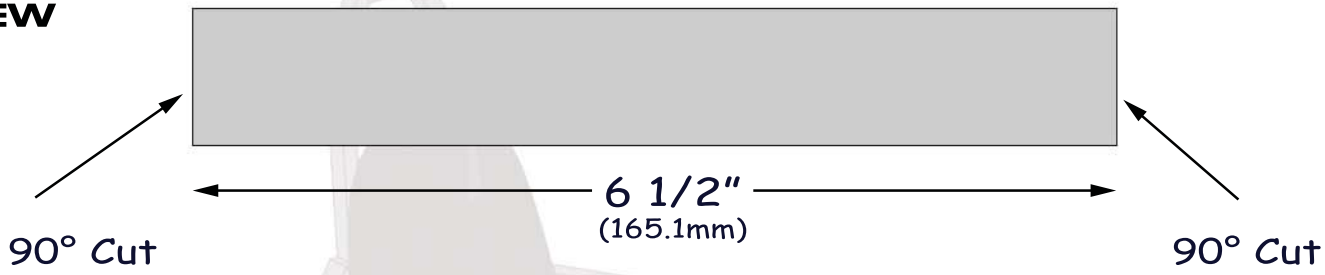
These are the rails that the seats are going to be bolted to, so if you are using the seats we suggested here in the plans then these holes are correct. If you are using some other seats then make the holes you need for your seat mounts.

This is Part Number MF16-90
You will need 2 of these.

Iso View

SPIDERCARTS	18		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1" Square Tubing	
		Part / MF16-90			Qty-2	

Top View

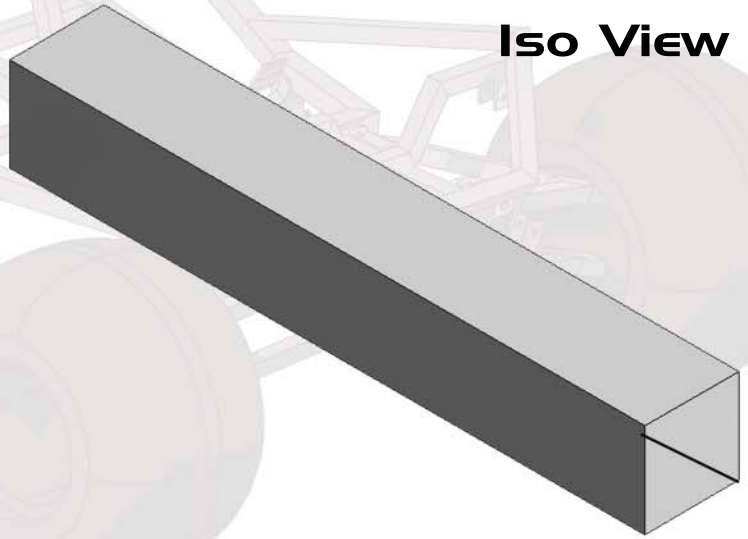


Notes

Use the 1" (25.4mm) Square tubing, make a 90° cut then measure 6 1/2" (165.1mm) and cut a 90°.

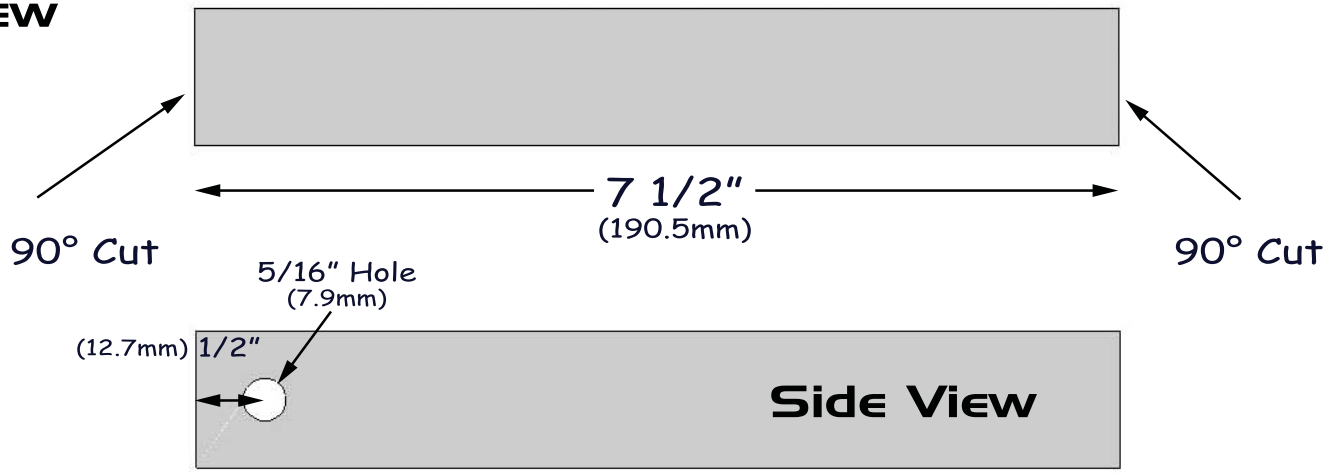
This is Part Number MF6.5-90
You will need 2 of these.

Iso View



SPIDERCARTS	19		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1" Square Tubing	
		Part / MF6.5-90			Qty-2	

Top View

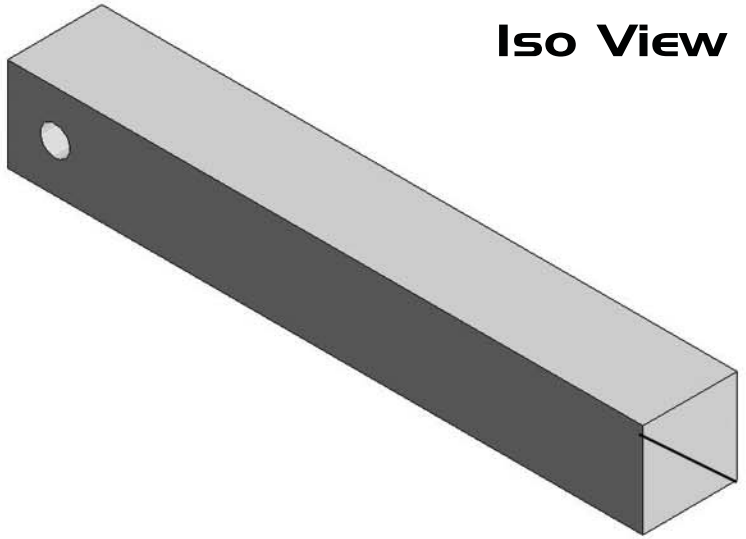


Notes

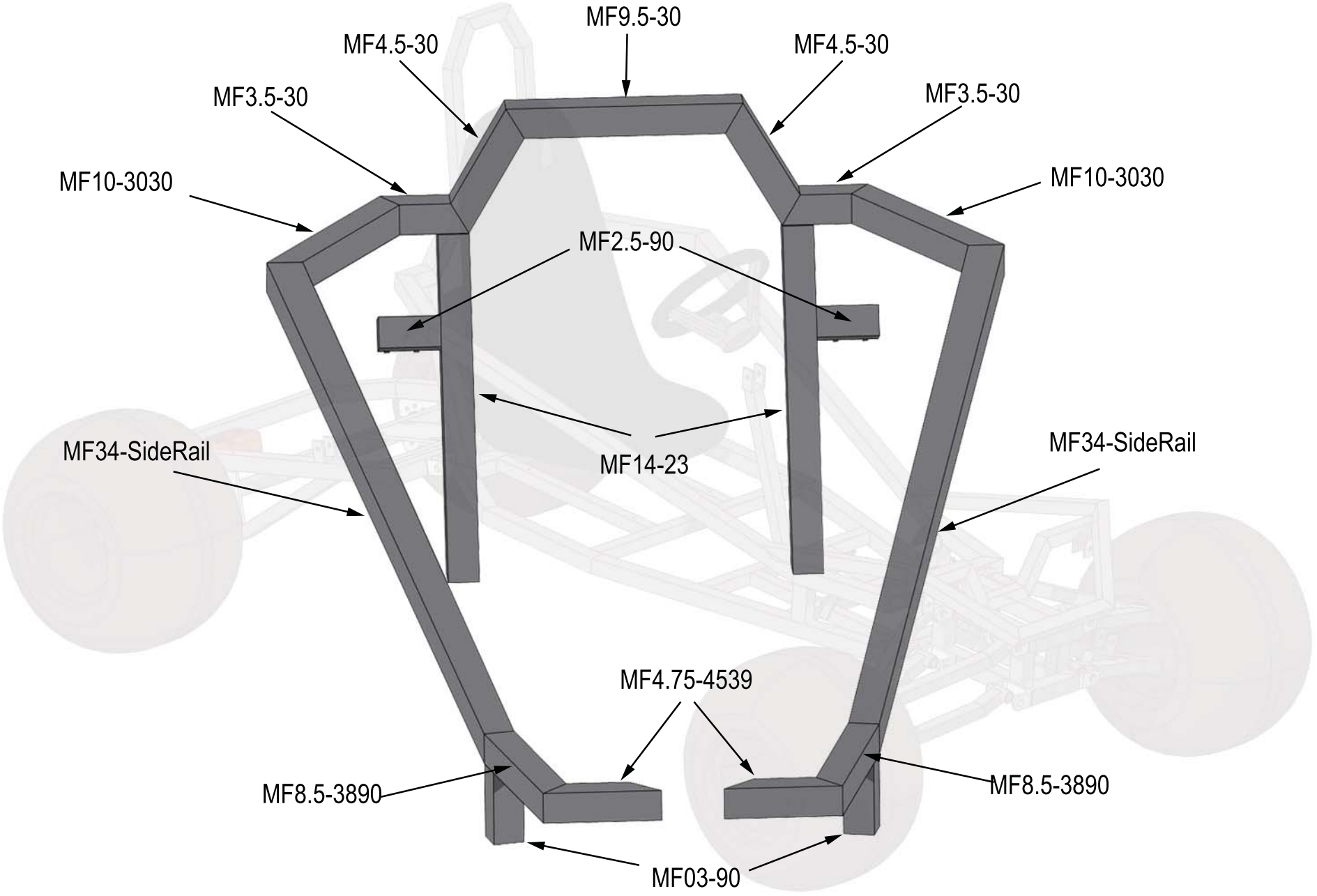
Use the 1" (25.4mm) Square tubing, make a 90° cut then measure 7 1/2" (190.5mm) and cut a 90°.
Drill a 5/16" (7.9mm) hole all the way through 1/2" (12.7mm) in from one end. This will be the hole for our pedals and will go toward the back of the kart and be through the sidewalls of the part when welding it in place.

This is Part Number MF7.5-90
You will need 2 of these.

Iso View

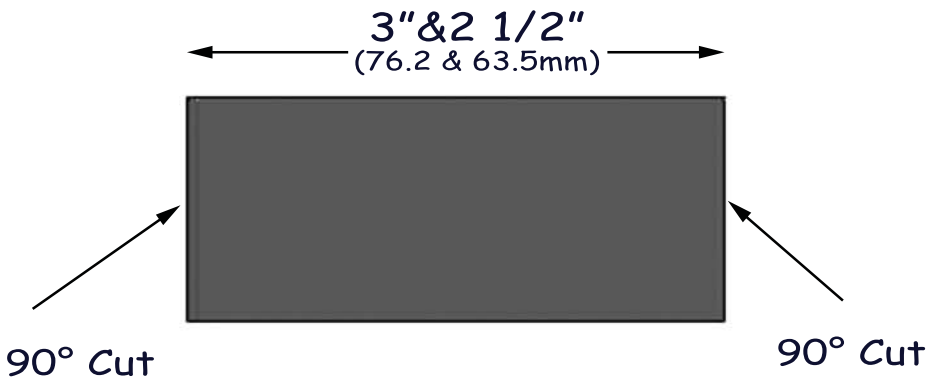


SPIDERCARTS	20		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1" Square Tubing	
		Part / MF7.5-90			Qty-2	



SPIDERCARTS	21		Ver.	0.1.2.6		Copyright is the property of Spidercarts and shall not be reproduced.
			Authorized	Robert Dicken		
		Main Frame Rails				

Top View



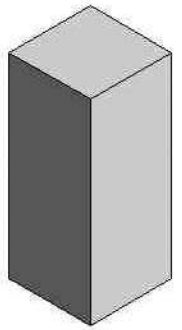
Notes

These will be used as riser blocks on the main frame and the suspension block.
Use the 1 1/4" (31.8mm) Square tubing, make a 90° cut then measure 3" (76.2mm) and cut a 90°.

This is Part Number MF03-90
You will need 6 of these.

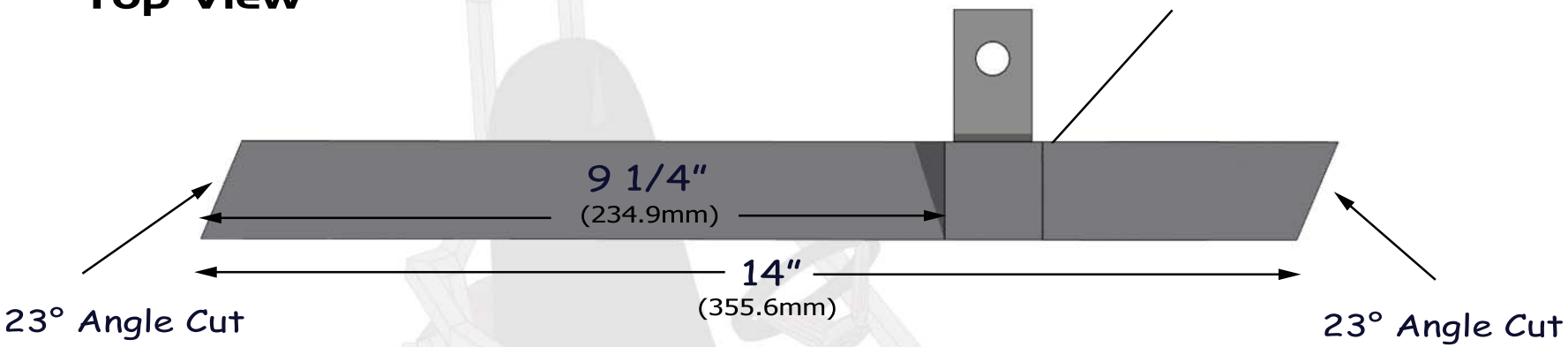
Go ahead and cut 2 more of these that are 2 1/2" (63.5mm) Long for part # MF2.5-90 which will be used for the rear-upper shock support. And once again you will need 2 of the MF2.5-90

Iso View



SPIDERCARTS	22		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1 1/4" Square Tubing	
		Part / MF03&2.5-90			Qty-6/2	

Top View

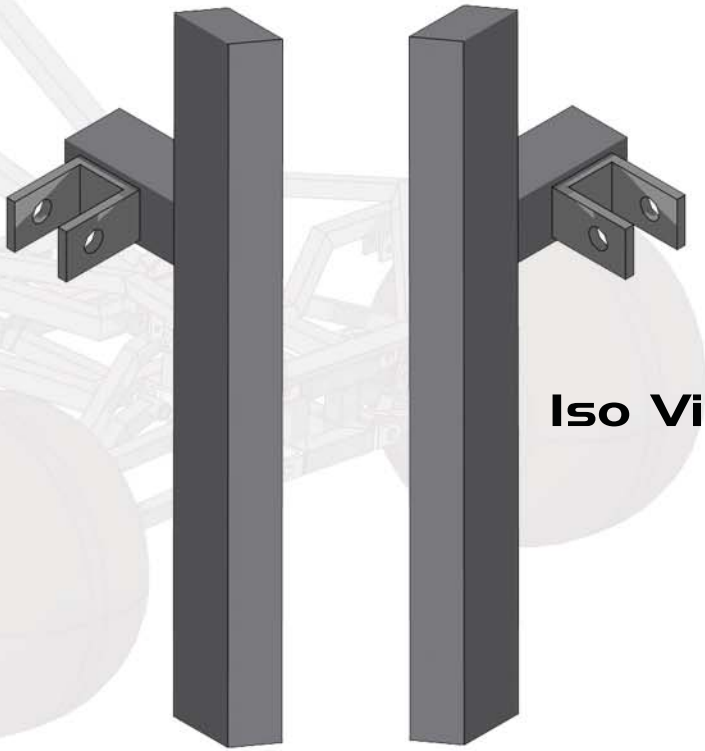


Notes

These are the rear uprights to connect the Main Frame with the Main Frame Rails. Also the Rear shock will mount to the MF2.5-90.

Use the 1 1/4" (31.8mm) Square tubing, make a 23° cut then measure 9 1/4" (234.9mm) and cut another 23°. Make sure they do not mirror each other.

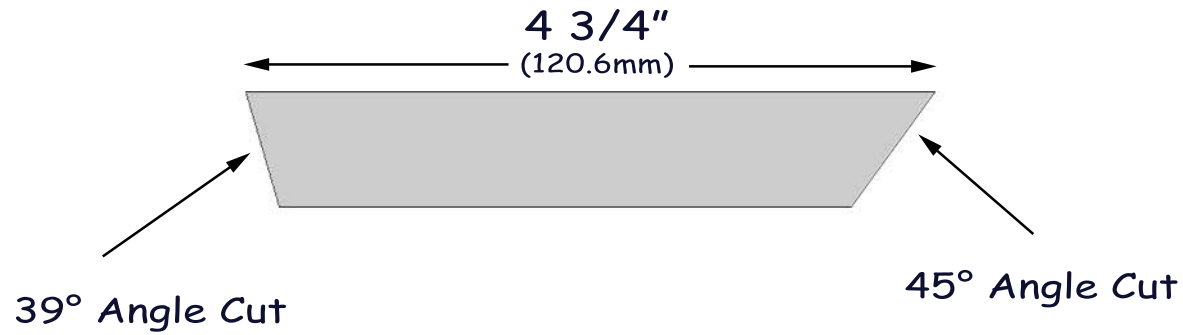
You will need to weld the MF2.5-90 on to this part as shown. The shock bracket is welded 1/2" (12.7mm) from the end of the MF2.5-90. Make sure these parts as a whole mirror each other as shown to the right.



Iso View

SPIDERCARTS	23		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1 1/4" Square Tubing	
		Part / MFI4-23			Qty-2	

Top View

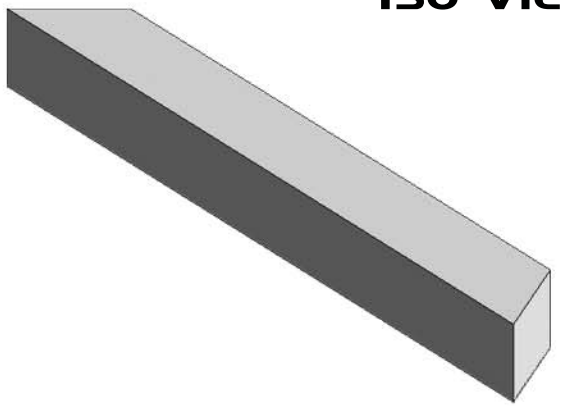


Notes

Use the 1 1/4" (31.8mm) Square tubing, make a 39° cut then measure 4 3/4" (120.6mm) and cut a 45°. Make sure they mirror each other.

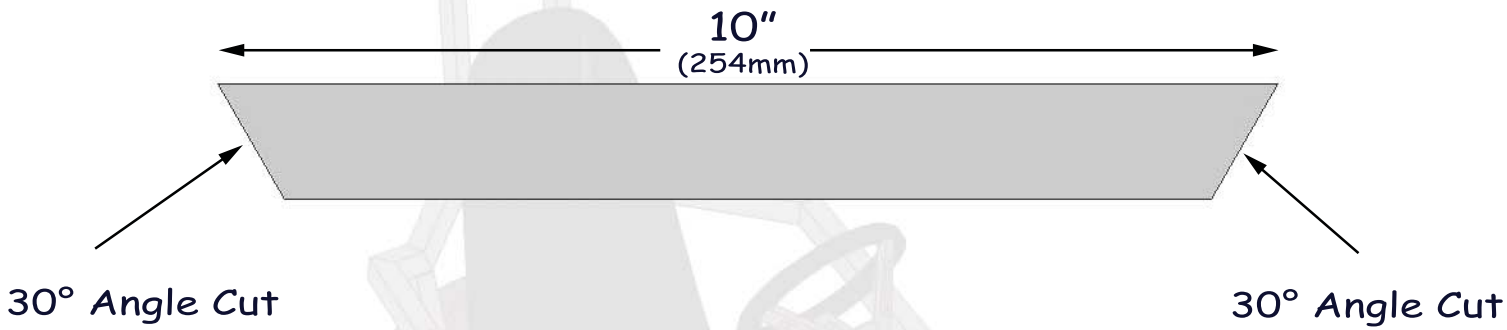
This is Part Number MF4.75-4539
You will need 2 of these.

Iso View



SPIDERCARTS	24		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1 1/4" Square Tubing	
		Part / MF4.75-4539			Qty-2	

Top View

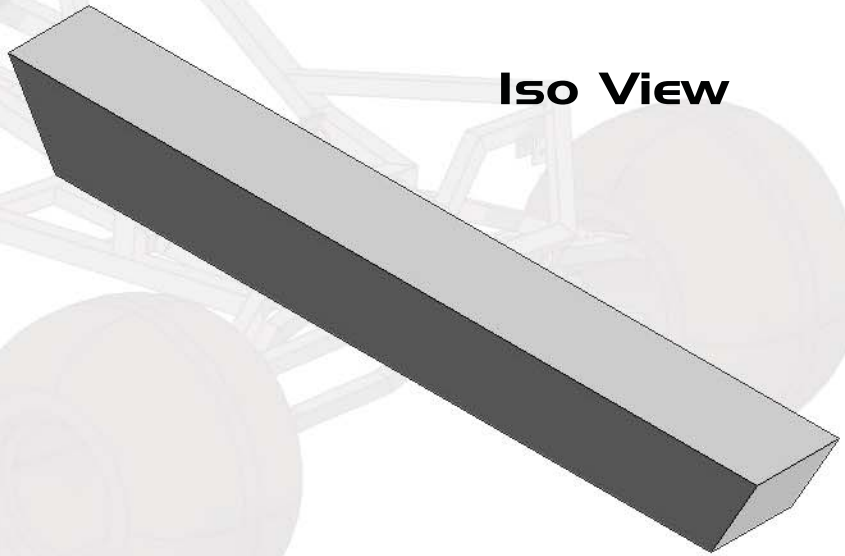


Notes

Use the 1 1/4" (31.8mm) Square tubing, make a 30° cut then measure 10" (254mm) and cut a 30°. Make sure they mirror each other. Thats it!

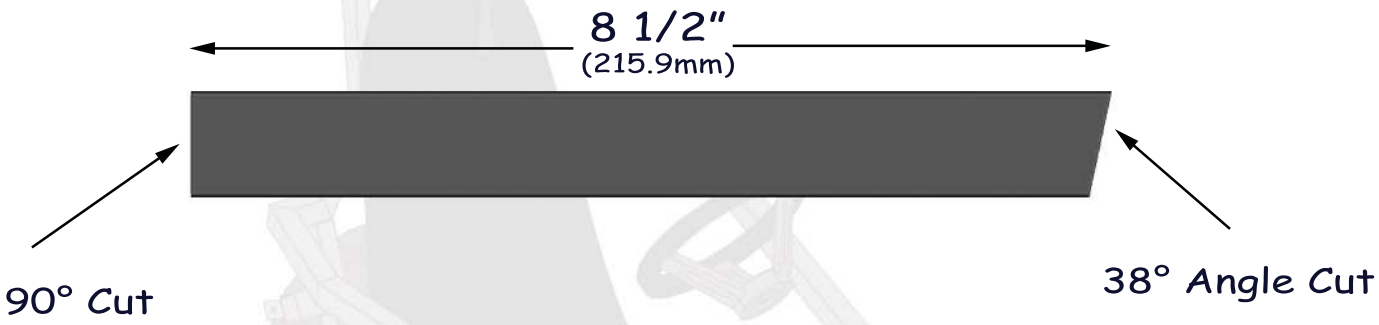
This is Part Number MF10-3030
You will need 2 of these.

Iso View



SPIDERCARTS	25		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1 1/4" Square Tubing	
		Part / MF10-3030			Qty-2	

Top View

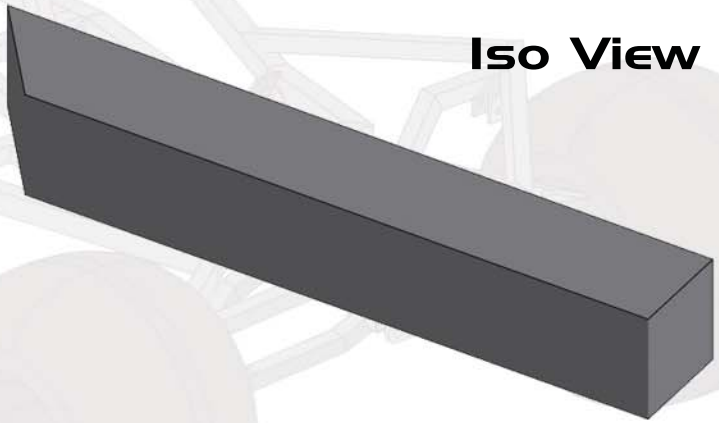


Notes

Use the 1 1/4" (31.8mm) Square tubing, make a 90° cut then measure 8 1/2" (215.9mm) and cut a 38°.

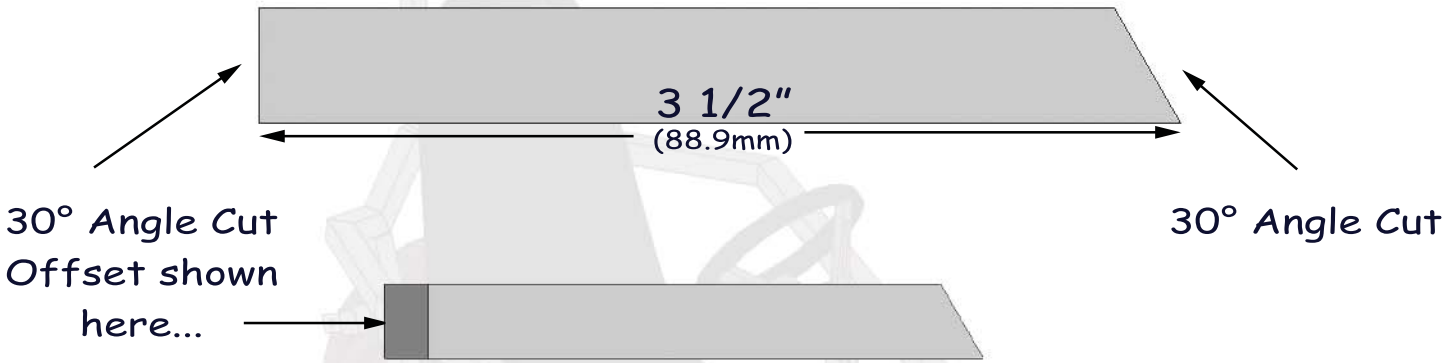
This is Part Number MF8.5-3890
You will need 2 of these.

Iso View



SPIDERCARTS	26		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1" Square Tubing	
		Part / MF8.5-3890			Qty-2	

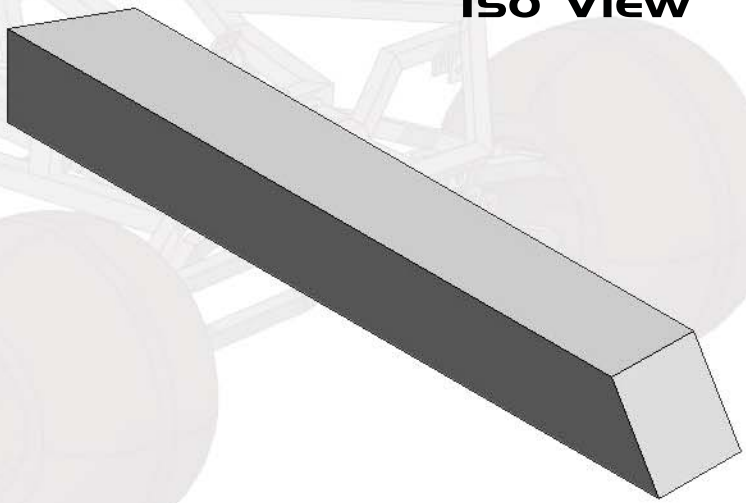
Top View



Notes

Use the 1 1/4" (31.8mm) Square tubing, make a 30° cut then rotate the tube 90° measure 3 1/2" (88.9mm) from the longest point and cut another 30°. So looking at the part as shown above there will be one straight edge with a 30° undercut and one 90° offset from it on the other side.

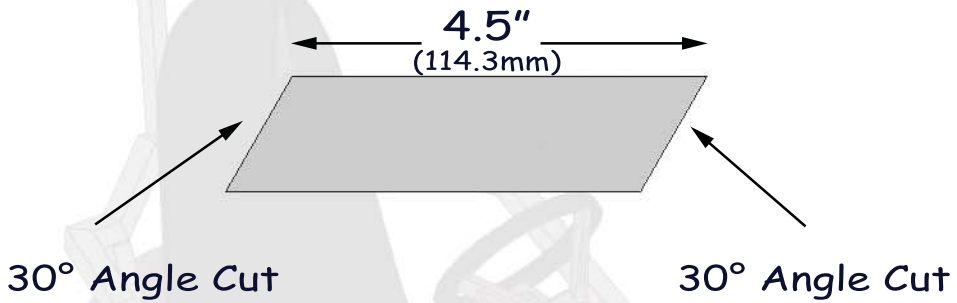
Iso View



This is Part Number MF3.5-30
You will need 2 of these.

SPIDERCARTS	27		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1 1/4" Square Tubing	
		Part / MF3.5-30			Qty-2	

Top View

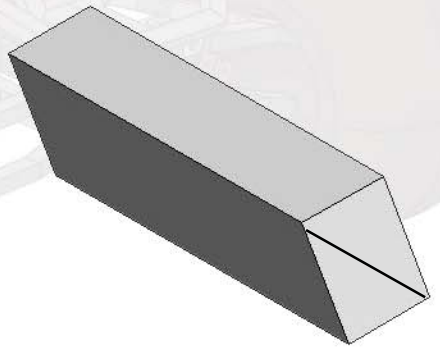


Notes

Use the 1 1/4" (31.8mm) Square tubing, make a 30° cut then measure 4.5" (114.3mm) and cut a 30°. Make sure they do not mirror each other. Thats it!

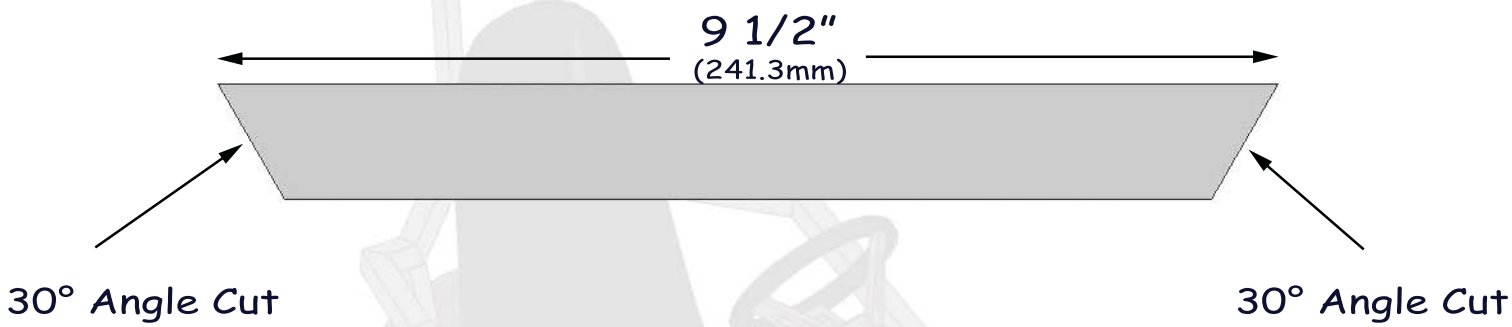
This is Part Number MF4.5-30
You will need 2 of these.

Iso View



SPIDERCARTS	28		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1 1/4" Square Tubing	
		Part / MF4.5-30			Qty-2	

Top View



Notes

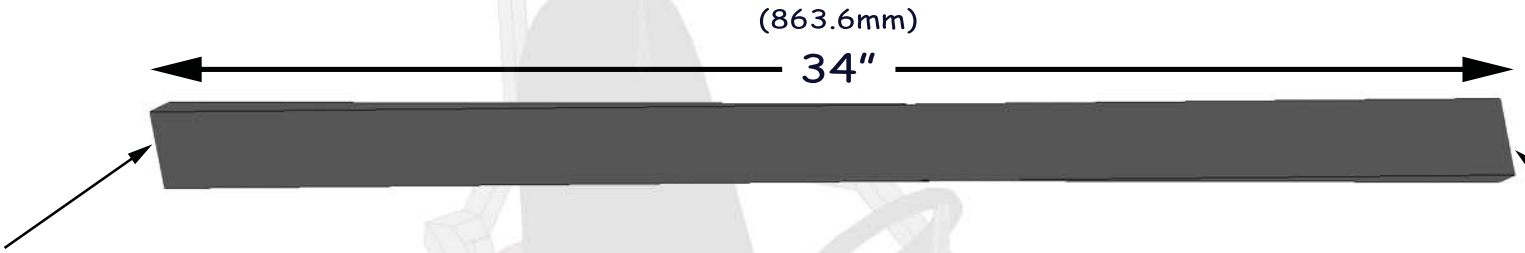
This one is the top of the back rail...
Use the 1 1/4" (31.8mm) Square tubing, make a 30° cut then measure 9 1/2" (241.3mm) and cut a 30°. Make sure they mirror each other.

This is Part Number MF9.5-30
You will need 1 of these.

Iso View

SPIDERCARTS	29		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1 1/4" Square Tubing	
		Part / MF9.5-30			Qty-1	

Top View



Hold up to rails and mark angle onsite

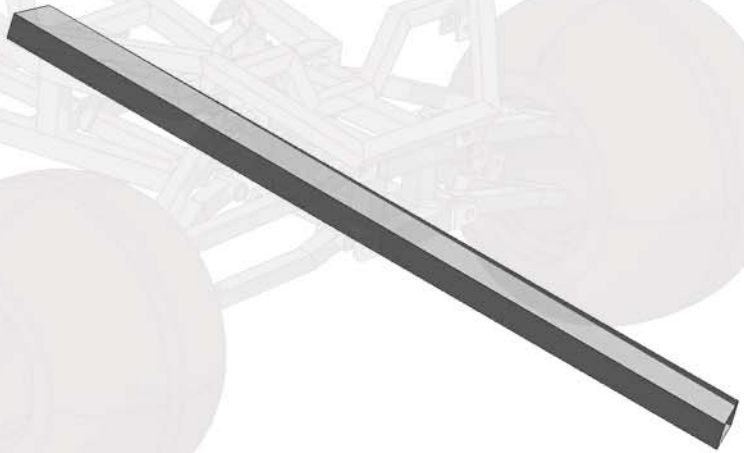
Hold up to rails and mark angle onsite

Notes

This is probably the trickiest cut on the frame. This is what is called a compound angle. It means that you have to cut an angle in 2 different directions.

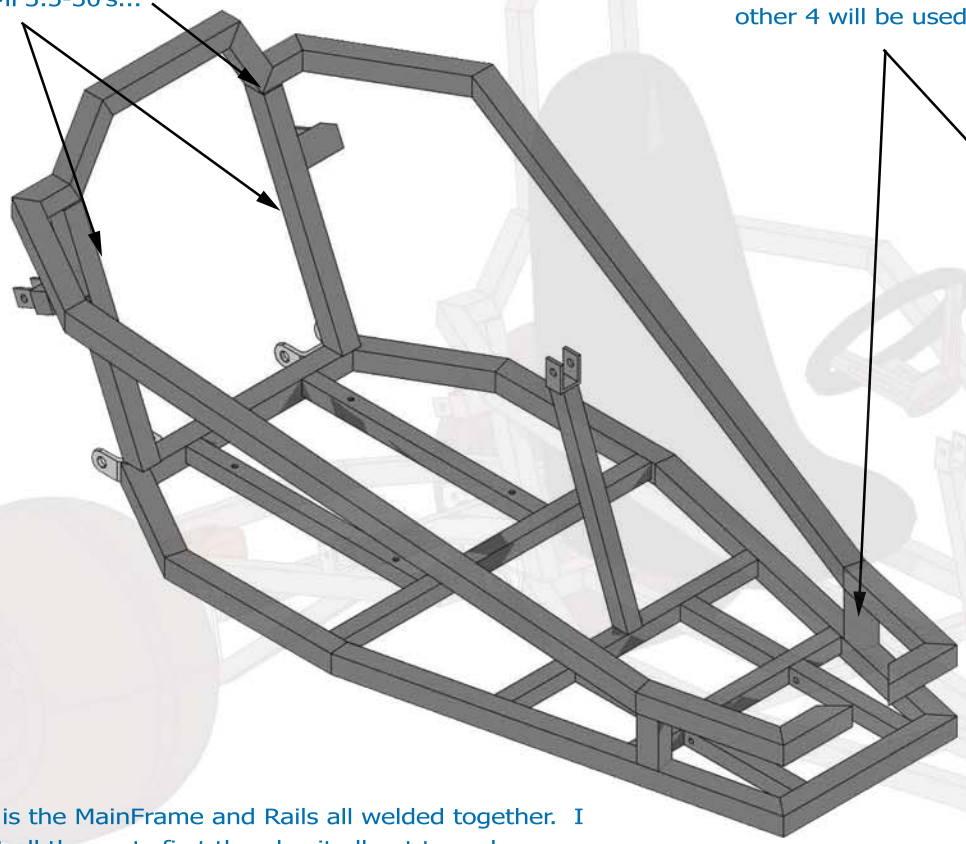
I would save this for last on the MainFrame. Weld everything else into place then start with a 35" (889mm) piece of 1 1/4" (31.8mm) tubing and hold it up to the rails already welded into place. Then mark on the piece the angles and length you need. Make sure you take your time here and start with a longer piece so you can work your way down to the proper length.

Iso View



SPIDERCARTS	30		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1 1/4" Square Tubing	
		Part / MF34-SideRail			Qty-2	

The uprights should be 12.5” (317.5mm) apart...
Measuring from the insides. Or just line them up on the inside edges of the MF3.5-30’s...



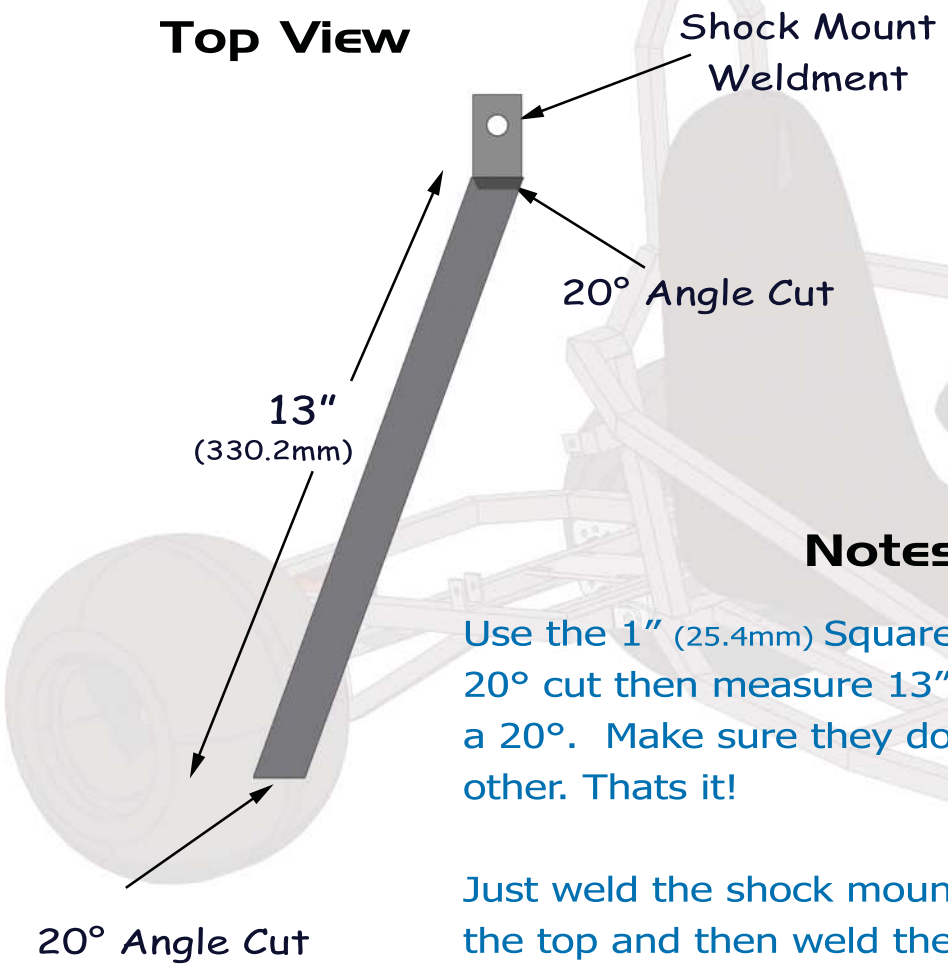
Two of the 3” (76.2mm) Risers, MF03-90 are placed Right before the weld between MF8.5-3890 and MF34-Siderail. The other 4 will be used for the suspension block.

Notes

OK well here is the MainFrame and Rails all welded together. I would cut out all the parts first then lay it all out to make sure you have cut everything right and I have given you the right measurements...LOL then weld it all to gether. start with the flat stuff on the bottom then the risers and uprights, then the rails...
Weld all the 1” (25.4mm) tubing flush with the top of the 1 1/4“ (31.8mm) so that when you put on any flooring it will mount up a lot better.
Remember to weld on the MF2.5-90 & Shock mount weld-ments on the uprights in the back...The MF14-23’s.

SPIDERCARTS	31		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken		
		Full Weld MainFrame				

Top View



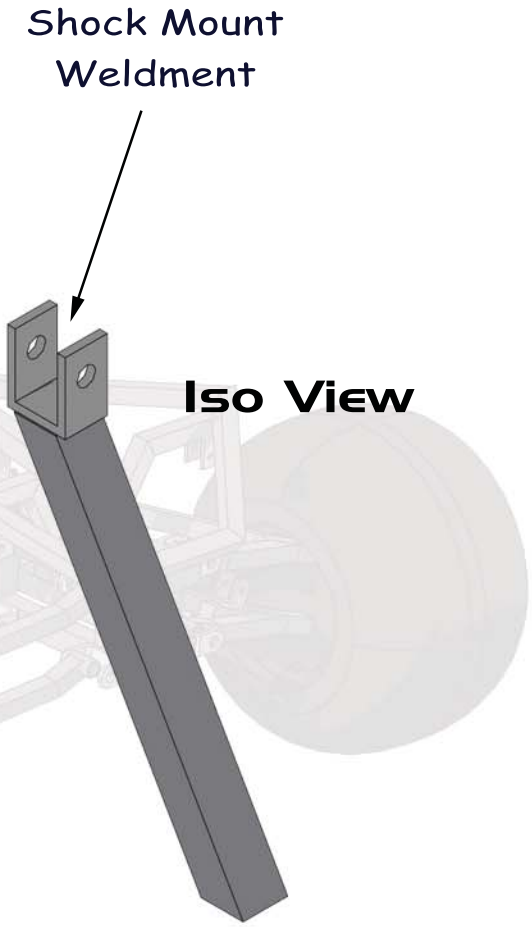
Notes

Use the 1" (25.4mm) Square tubing, make a 20° cut then measure 13" (330.2mm) and cut a 20°. Make sure they do not mirror each other. Thats it!

Just weld the shock mount weldment onto the top and then weld the whole thing onto the MF1738-13

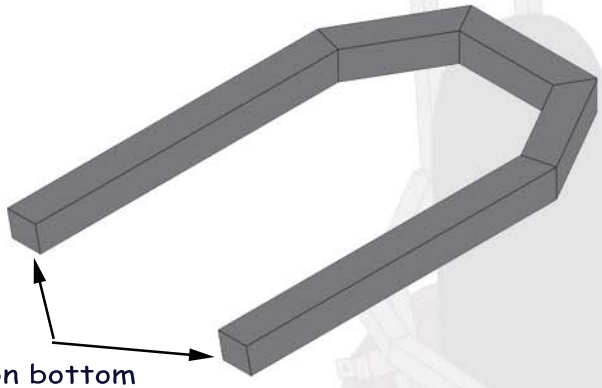
This is Part Number MF13-20
You will need 1 of these.

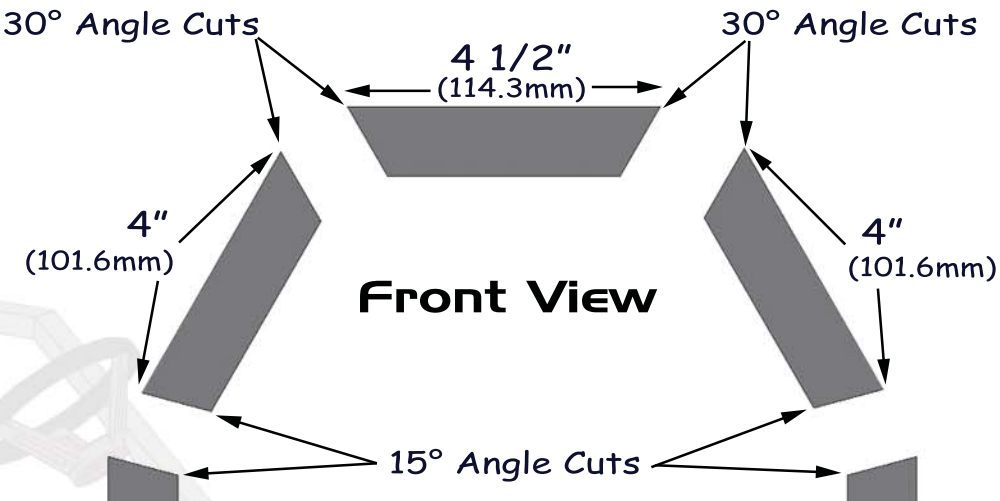
Iso View



SPIDERCARTS	32		Ver.	0.1.2.6	Metal Type	Copyright is the property of Spidercarts and shall not be reproduced.
			Authorized	Robert Dicken	1" Square Tubing	
		Part / MF13-20			Qty-1	

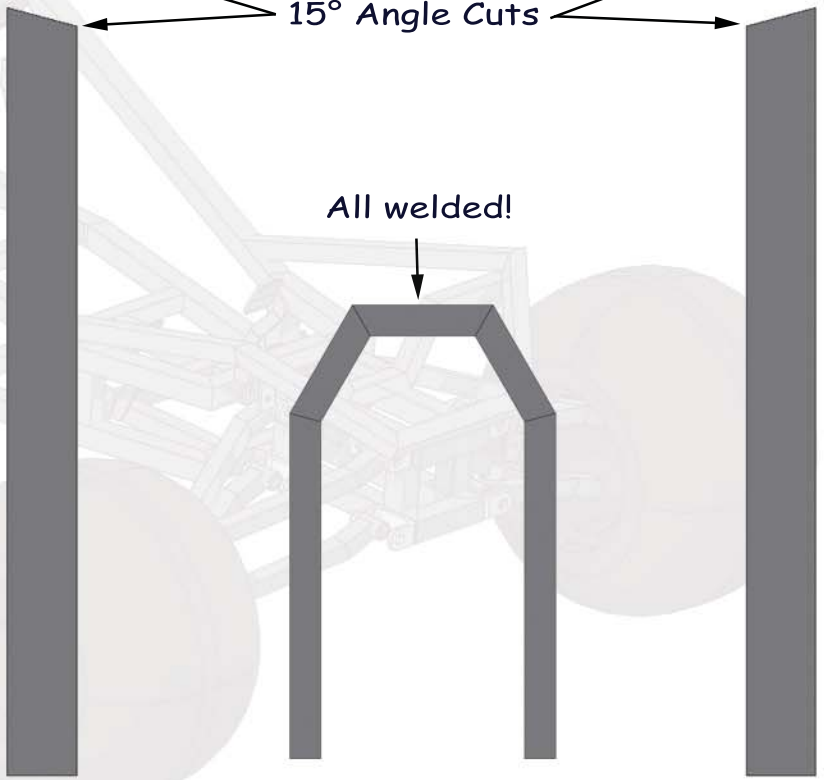
Iso View





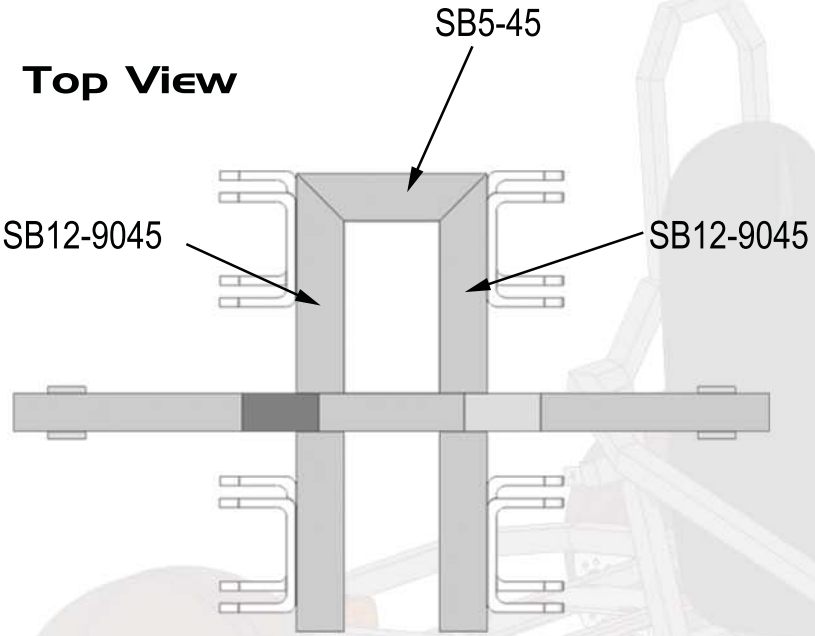
Notes

This roll bar is so easy I am not even going to break it out into parts... We can get it all here on this one page! The Roll bar is made using the 1" (25.4mm) tubing. Its 5 pieces... First one, cut a 30° then measure 4 1/2" (114.3mm) and cut another 30° mirred. Thats the top!
Next make a 30° cut and measure 4" (101.6mm) and make a 15° cut, you will need 2 of those...
Now make a 15° and measure 14 1/2" (368.3mm) and flip your metal to one side and make a 10° cut. Make SURE that you flip your metal 90° so the cuts are offset. Make 2 of those as well! Now just weld them all together as shown in the ISO view. When you weld it on you will rock it BACK that 10° we cut off the bottom to make room for your seat to move back...



SPIDERCARTS	33		Ver.	0.1.2.6		Copyright is the property of Spidercarts and shall not be reproduced.
			Authorized	Robert Dicken		
		Roll Bar				

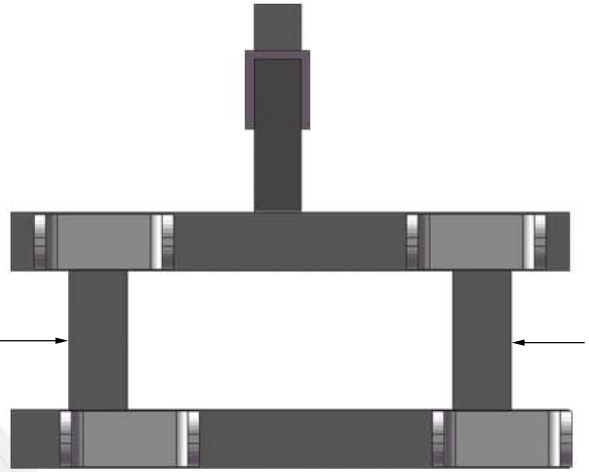
Top View

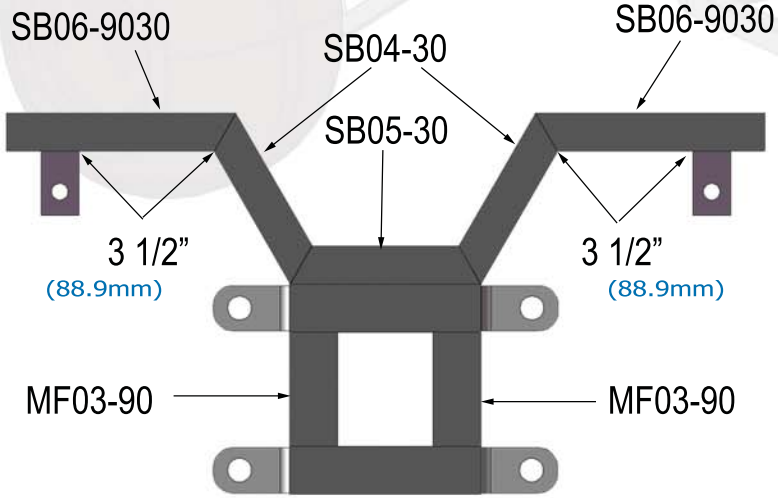


Notes:

These 2 parts are weldments and are easier to just buy. They are spindle brackets we will use here for the pivot points for the subframe suspension.

Side View



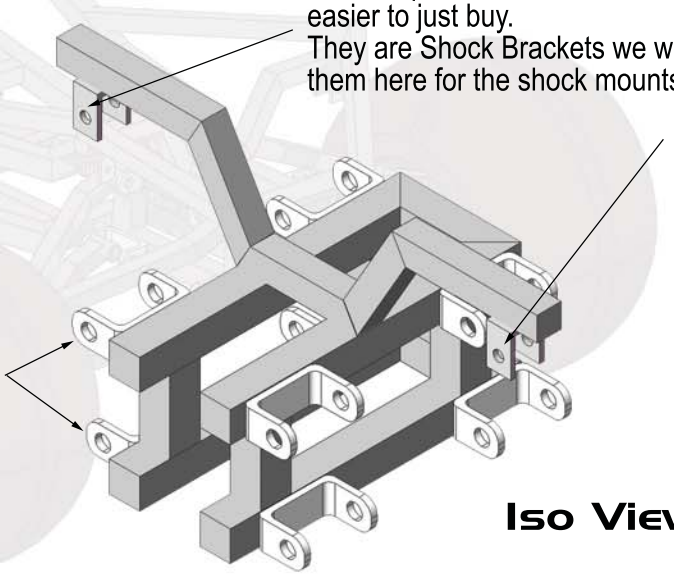


Front View

These 2 parts are weldments and are easier to just buy.
They are Shock Brackets we will use them here for the shock mounts...

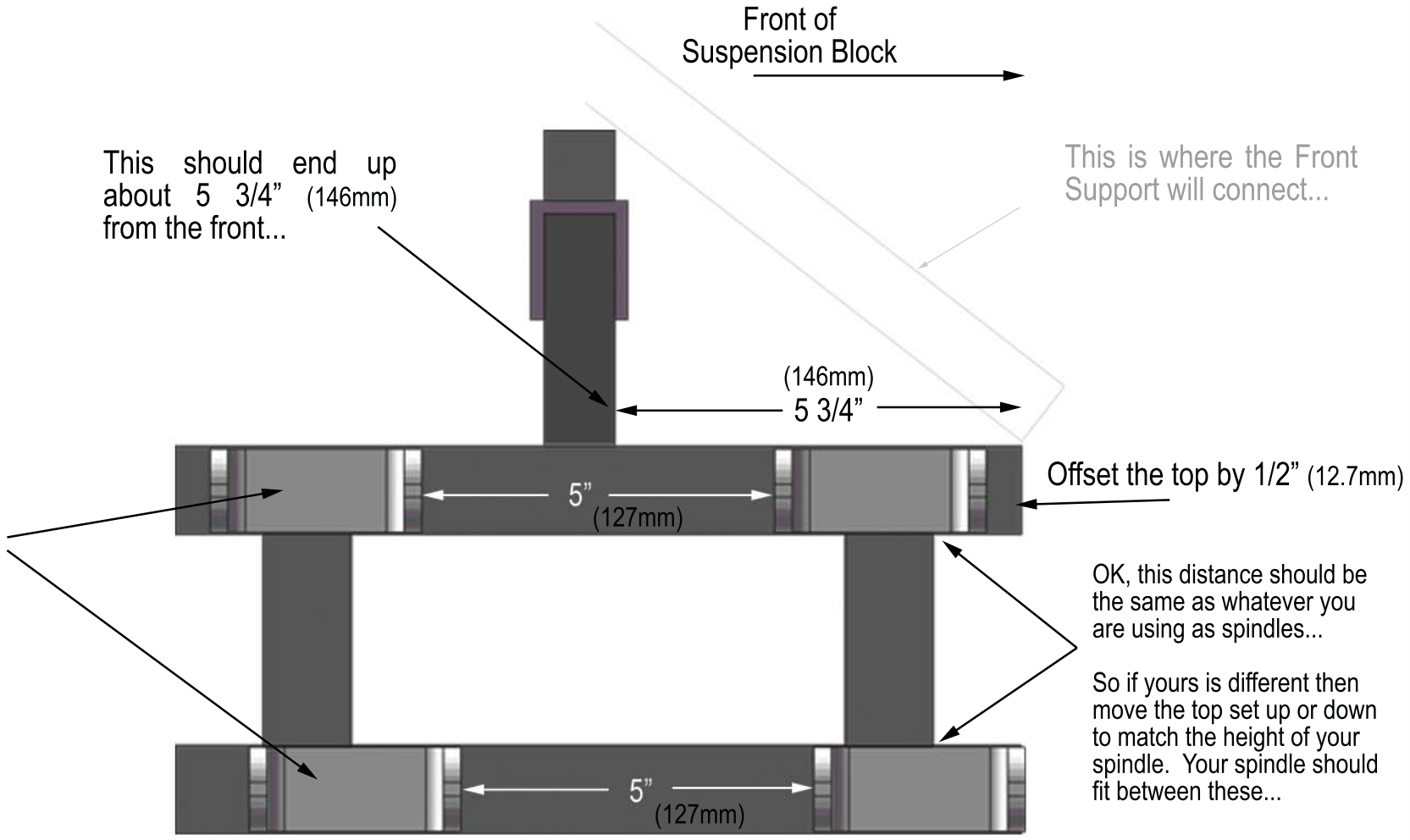
These 8 parts are weldments and are easier to just buy.

They are spindle brackets we will use here for the pivot points for the A-Arms.



Iso View

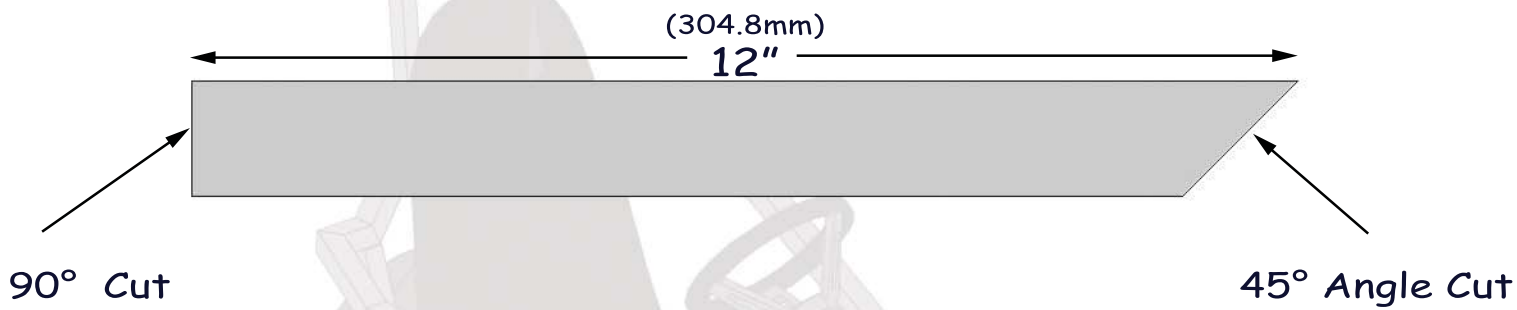
SPIDERCARTS	34		Ver.	0.1.2.6		Copyright is the property of Spidercarts and shall not be reproduced.
			Authorized	Robert Dicken		
		Front Suspension Block				



You are looking at the right side of the suspension block.
Make sure to do all this on the Left side as well. Just mirror it! You also might want to put a 5/8" (15.9mm) rod through the sets as you weld to make sure they line up with each other...

SPIDERCARTS	35		Ver.	0.1.2.6		
			Authorized	Robert Dicken		
		Suspension Block Measurements				

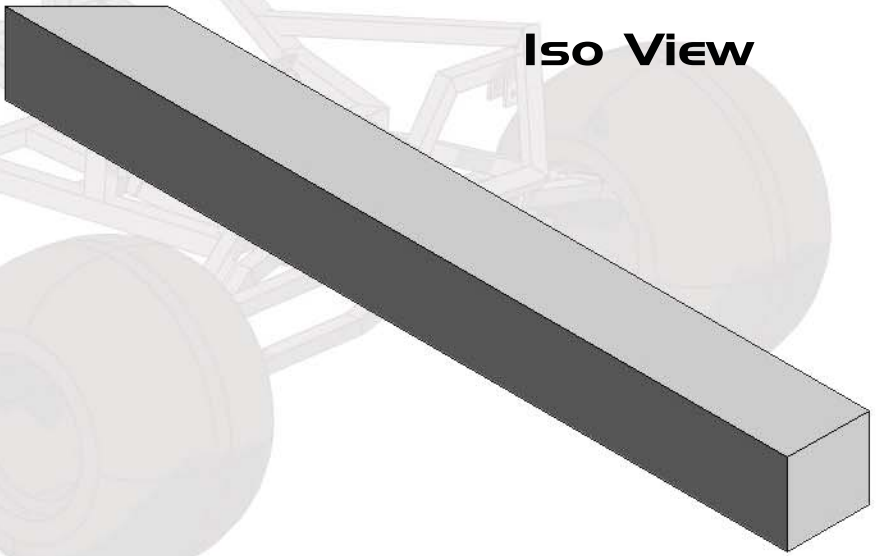
Top View



Notes

Use the 1 1/4" (31.8mm) Square tubing, make a 90° cut then measure 12" (304.8mm) and cut a 45°. Make sure you cut back into your measuerment so when you are done you still have a long side of 12" (304.8mm) as shown above.

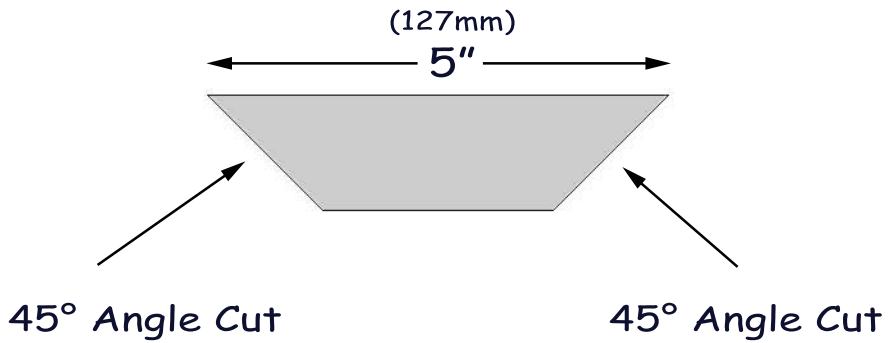
Iso View



This is Part Number SB12-9045
You will need 4 of these.

SPIDERCARTS	36		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1 1/4" Square Tubing	
		Part / SB12-9045			Qty-4	

Top View



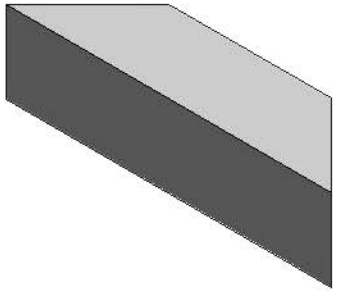
Notes

These are the front pieces for the Suspension Block

Use the 1 1/4" (31.8mm) Square tubing, make a 45° cut then measure 5" (127mm) and cut another 45°. Make sure they mirror each other. Thats it!

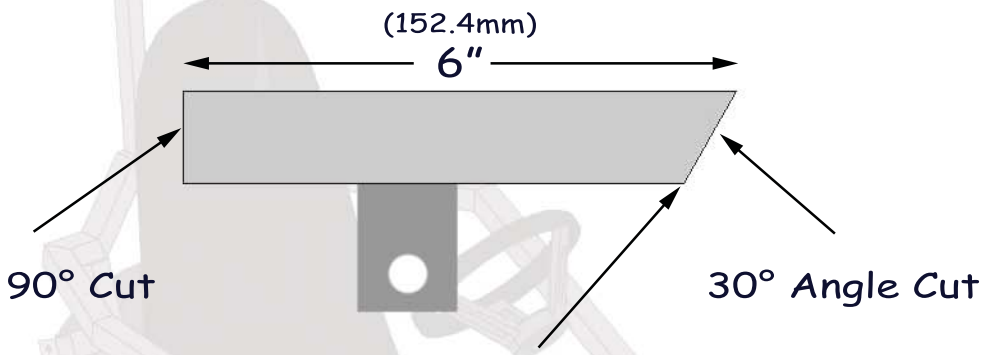
This is Part Number SB05-45
You will need 2 of these.

Iso View



SPIDERCARTS	37		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1 1/4" Square Tubing	
		Part / SB05-45			Qty-2	

Top View



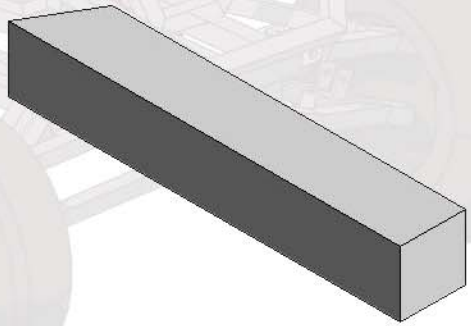
Notes

This is the outer piece of the upper front shock bracket. You will need to weld one of the Shock Bracket weldments, 3" (76.2mm) from the short side of the 30° cut.

Use the 1" (25.4mm) Square tubing, make a 90° cut then measure 6" (152.4mm) and cut a 30°. Make sure you end up with 6" (152.4mm) on your long side as shown above.

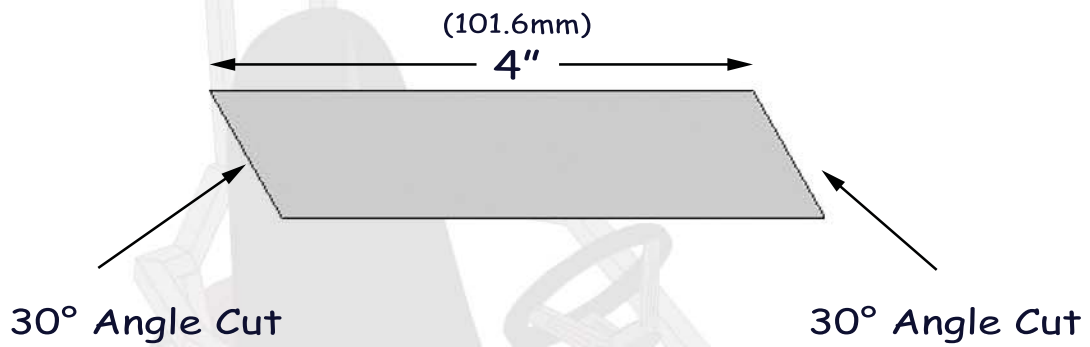
This is Part Number SB06-9030
You will need 2 of these.

Iso View



SPIDERCARTS	38		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1" Square Tubing	
		Part / SB06-9030			Qty-2	

Top View

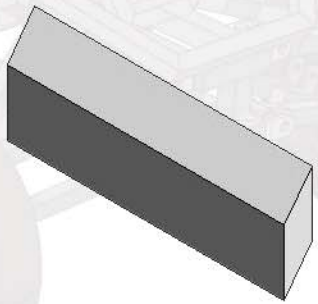


Notes

Use the 1" (25.4mm) Square tubing, make a 30° cut then measure 4" (101.6mm) and cut a 30°. Make sure they do not mirror each other.

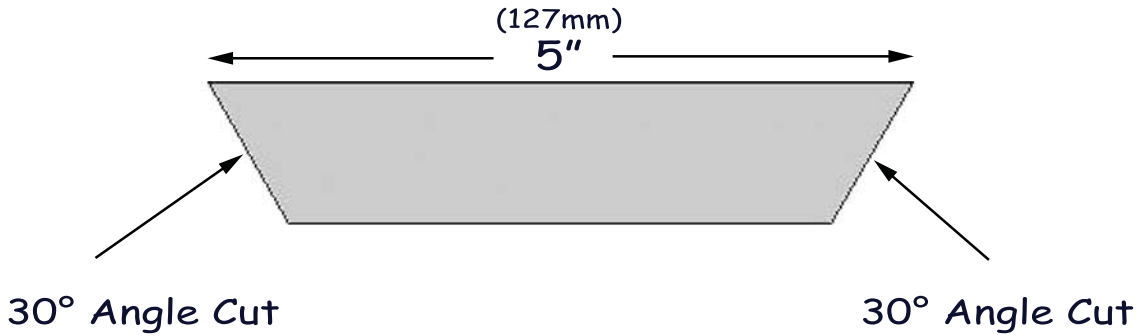
This is Part Number SB04-30
You will need 2 of these.

Iso View



SPIDERCARTS	39		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1" Square Tubing	
		Part / SB04-30			Qty-2	

Top View

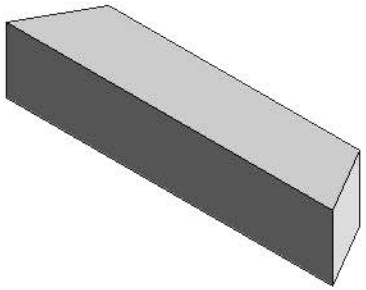


Notes

Use the 1" (25.4mm) Square tubing, make a 30° cut then measure 5" (127mm) and cut a 30°. Make sure they mirror each other.

This is Part Number SB05-30
You will need 1 of these.

Iso View

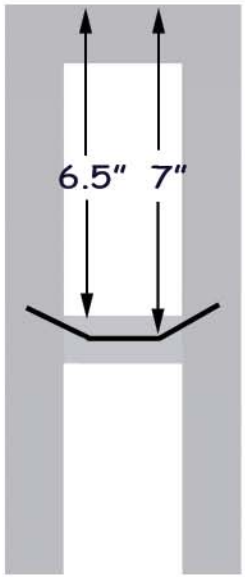


SPIDERCARTS	40		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1" Square Tubing	
		Part / SB05-30			Qty-1	

8" (203.2mm) Rack & Pinion part from Desertkart.com with two 6" (152.4mm) splines and two universal joints... To mount this Rack & Pinion I welded 2 1/2" (63.5mm) piece of 1x1" (25.4x25.4mm) tubing at 6 1/2" (165.1mm) from the very front of the suspension block, then welded the bracket that I purchased for that Rack & Pinion at 7" (177.8mm) from the very front of the Suspension Block.

When you buy the 6" (152.4mm) spline from DesertKart.com, but the steering shaft needs to be 25" (635mm) in length so you will need to weld in a 19" (482.6mm) steering shaft on to the 6" (152.4mm) spline... So buy a 20" (508mm) steering shaft and cut off 1" (25.4mm).

Top View



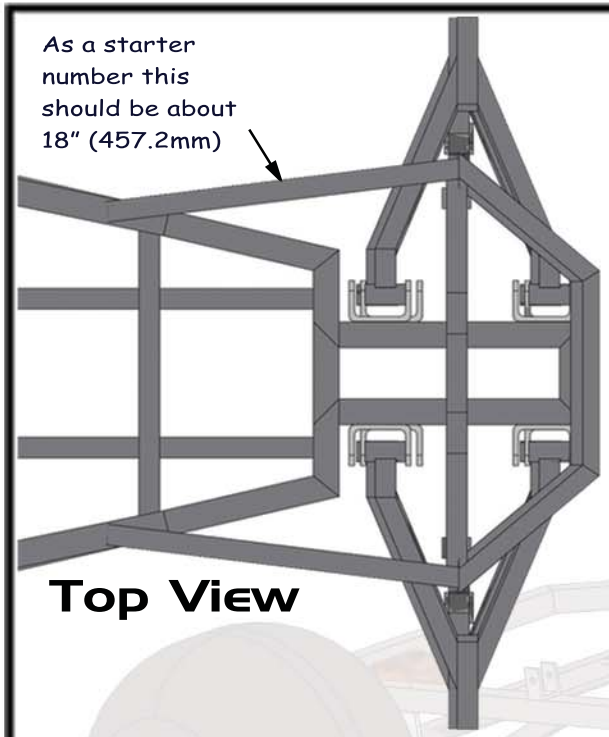
Notes

OK now on to the Suspension Block... Notice in this picture that there is a rack and pinion with boots setting down in the bottom of the suspension block. This is a part that I decided to buy so I could put the steering components where I wanted and at what angle I wanted. You may decide to go a different route but what ever you decide to do here make sure you weld on any brackets before you box this in or you may not be able to after it is all welded together.

2 1/2" (63.5mm) Support @ 6 1/2" (165.1mm) from the front.

SPIDERCARTS	41		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken		
		Rack & Pinion				

As a starter number this should be about 18" (457.2mm)

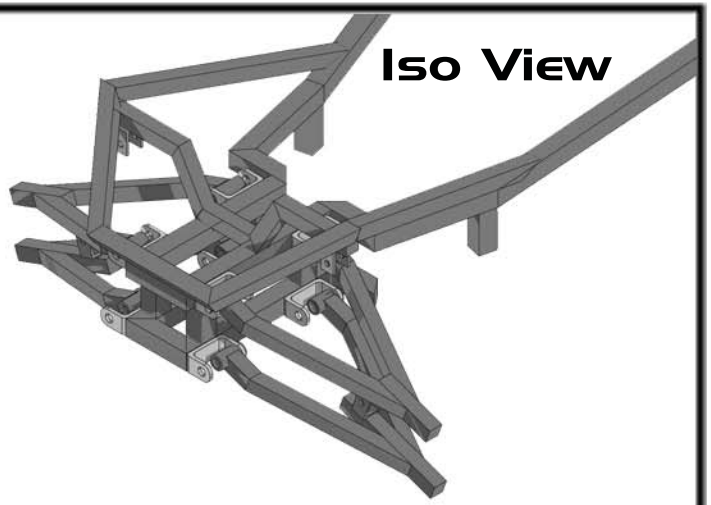


Top View

OK this is the most free-form section of the plans... I would do this last.
This is also a place where you might want to use your own ideas and make some changes. We are calling this the Front Support. It actually does several structural tasks but also finishes of the kart. If you wanted a full roll bar, this would be the place to make those changes. Instead of going to the fram rail like I do here you migh want to just contnue it up to a full roll bar above the seat back???

I have given some started measurements here but really the most important parts are the 3 I have singled out below on the left...

Best to start out with the 3 below, Weld it into place and mark the other 2 where you want them... Use the 1" Tubing for this!



Iso View

28° for Both Cuts

(254mm)
10"

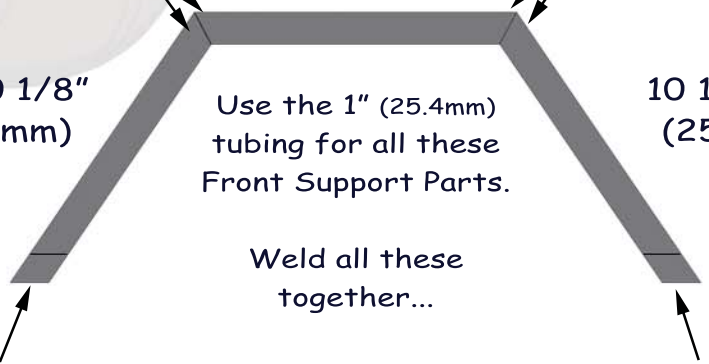
28° for Both Cuts

10 1/8"
(257.2mm)

Use the 1" (25.4mm) tubing for all these Front Support Parts.

Weld all these together...

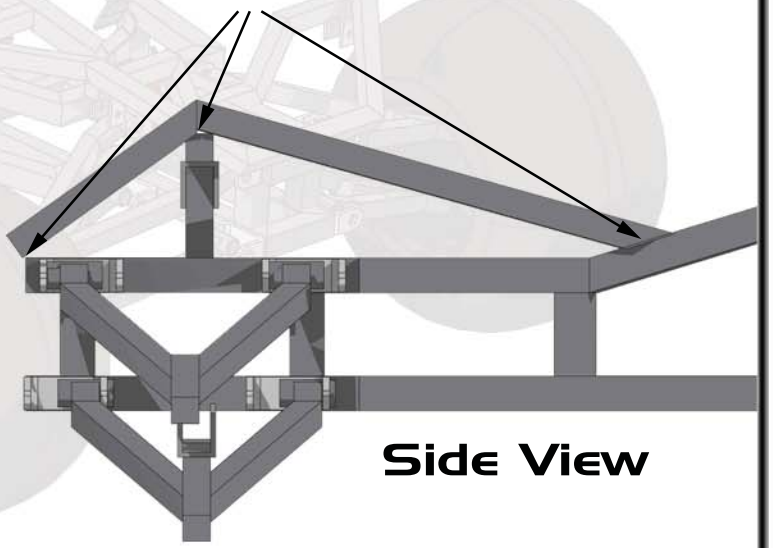
10 1/8"
(257.2mm)



34° - 36 both sides of this compound angle...

34° - 36 both sides of this compound angle...

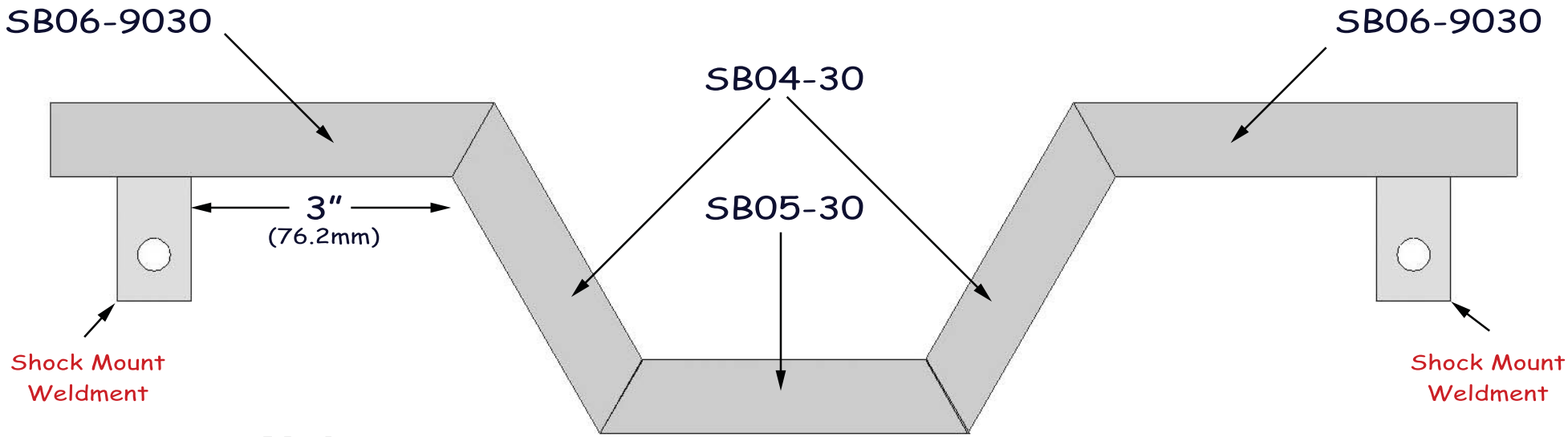
IMPORTANT!
Weld to the Suspension Block, Upper Shock support and the MF34-SiderRails...



Side View

SPIDERCARTS	42		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1" Square Tubing	
		Front Support				

Front View

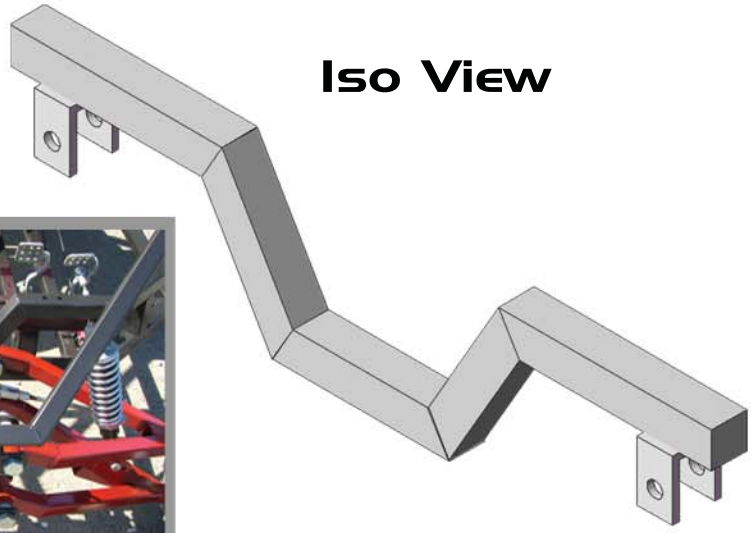


Notes

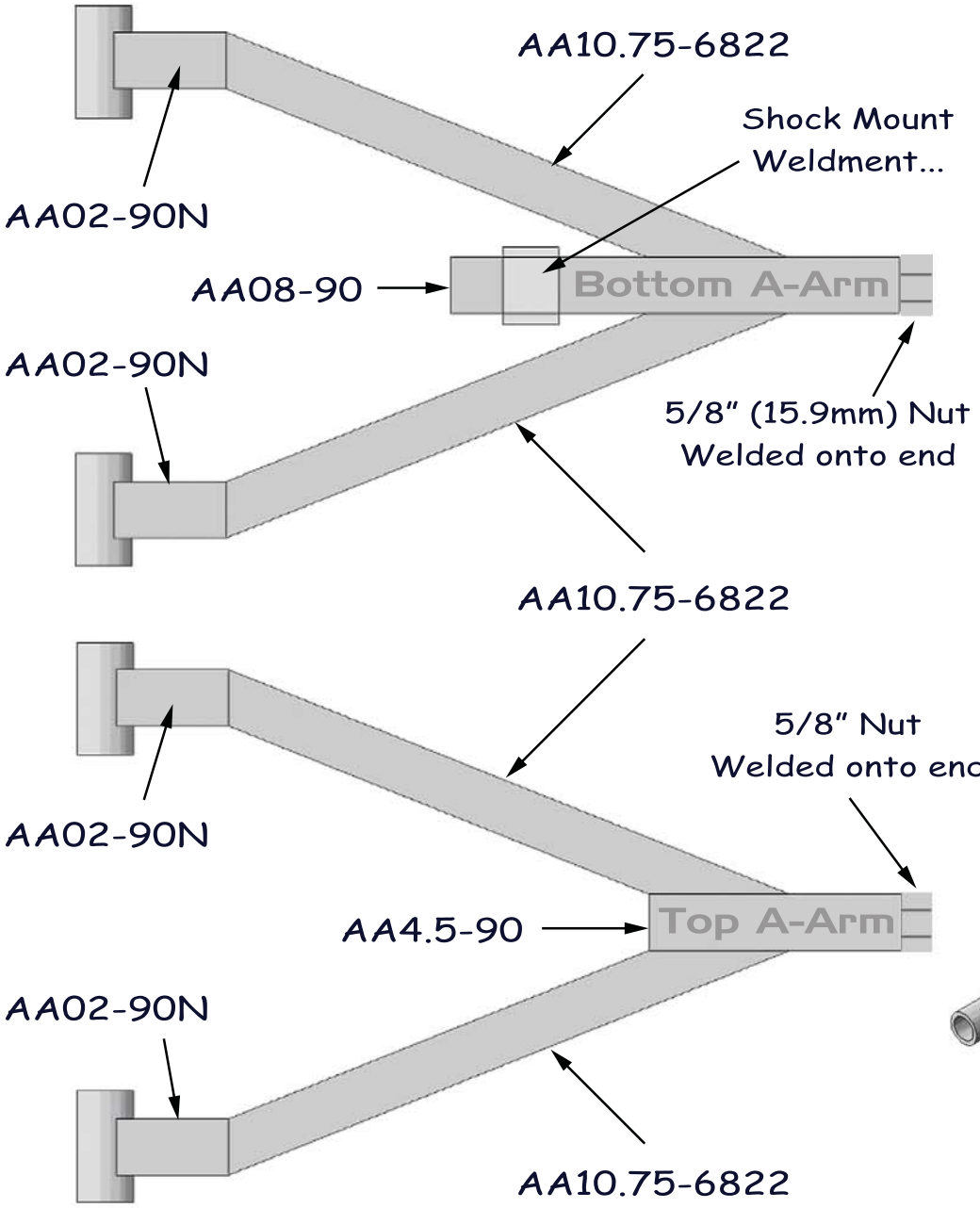
This is the upper support for the front shocks and a welding point for the front supports. Also on ours we pre-drilled holes for headlights on the top of the SB06-9030. I would suggest welding all of these parts together flat and then set it aside till you have the MainFrame, Suspension Block and the Roll Bar all welded together.

Remember all of the parts in this support are made out of the 1" (25.4mm) square tubing.

Iso View

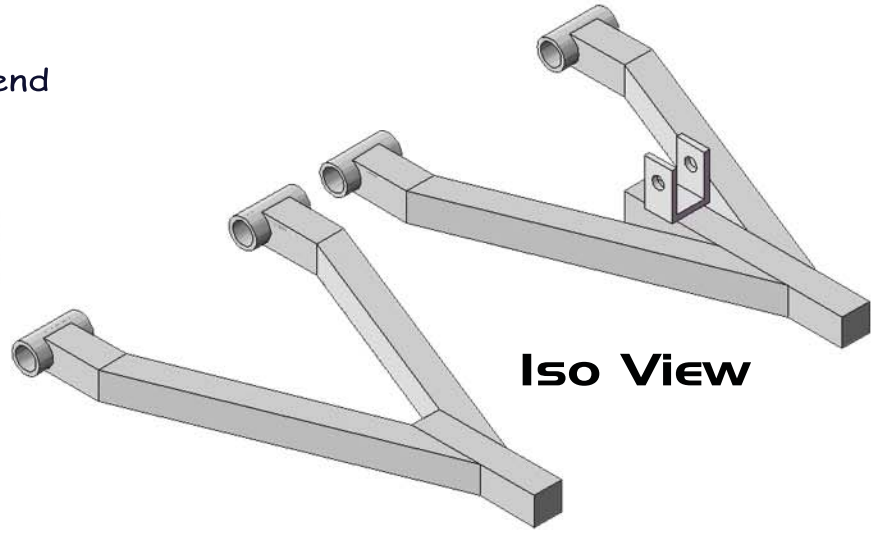


SPIDERCARTS	43		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1" Square Tubing	
		Upper Shock Mount				



Notes

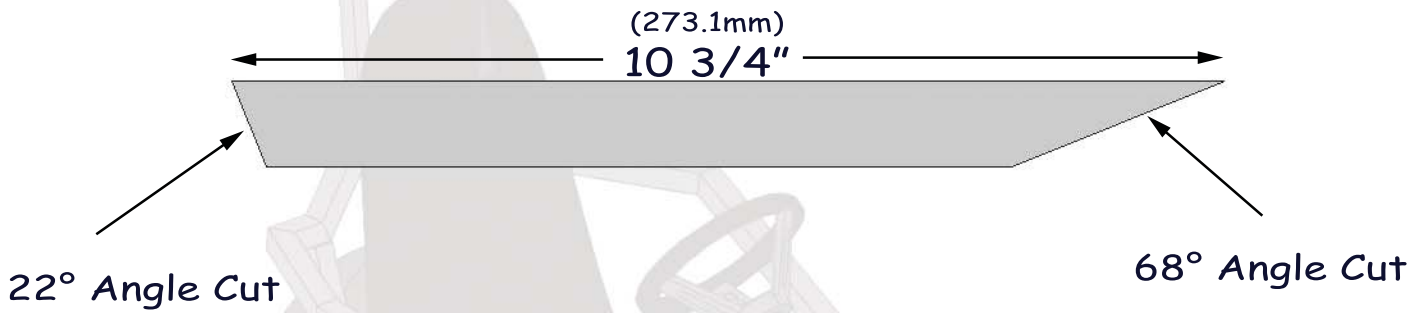
Use the 1" (25.4mm) Square tubing to make your A-Arms. These are a bit tricky. And kind of hard to do so take your time and go slow. The important thing here is to make sure all of thes come out about the same! Try to make all of your parts the same and even creat some sort of welding jig for them if needed. The bottom A-Arm has a bit longer center piece and a Shock Mount weldment, but other than that they are the same. You will weld on 5/8" (15.9mm) Fine thread nuts to the ends of these for your Rod Ends to thread into. Also we used bushings as the pivots at the other end...



Iso View

SPIDERCARTS	44		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1" Square Tubing	
		Upper & Lower A-Arms			2-Each	

Top View



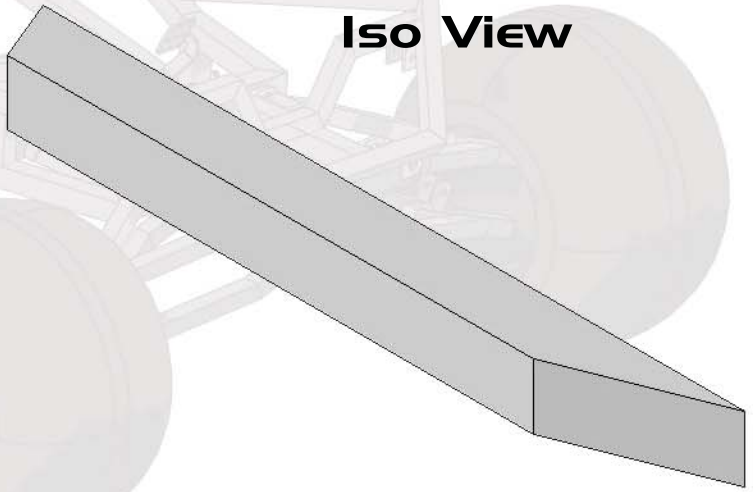
Notes

Use the 1" (25.4mm) Square tubing, make a 22° cut then measure 10 3/4" (273.1mm) and cut a 68°. Make sure they mirror each other. This is going to be a hard one for ya! Most chop saws will only go to a 45° with the gaurd. So you might have to cut this one with a hand saw or use a angle grinder with a cutting disc.
Make these all as close to the same as possible!

Remember to be careful! Safety First!

This is Part Number AA10.75-6822

Iso View



SPIDERCARTS	45		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1" Square Tubing	
		Part / AA10.75-6822			Qty-8	

Notes

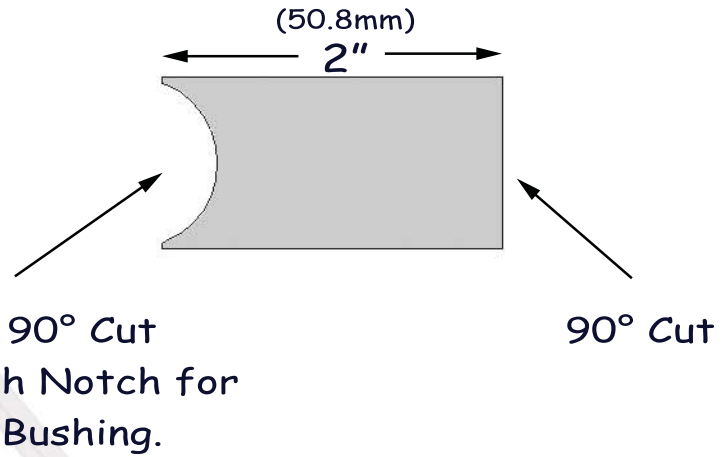
Use the 1” (25.4mm) Square tubing, make a 90° cut then measure 2” (50.8mm) and cut another 90°. You need to cut or grind a notch in one end for the 1-2 TL Bushings. The bushings are 1” (25.4mm) in diameter so make your notch just under a 1/2” (12.7mm) deep. You might want to weld it onto the AA10.75-6822 first so you have something to clamp or hold onto if you are using a grinder. Then center up the bushing and weld it into place. I like to save welding the bushings on untill I have the rest of the A-Arm welded to gether then you can run a 5/8” (15.9mm) Rod through 2 of the bushings and line them both up and clamp them and weld. That way you know they will be straight when you go to put them on the Suspension Block.

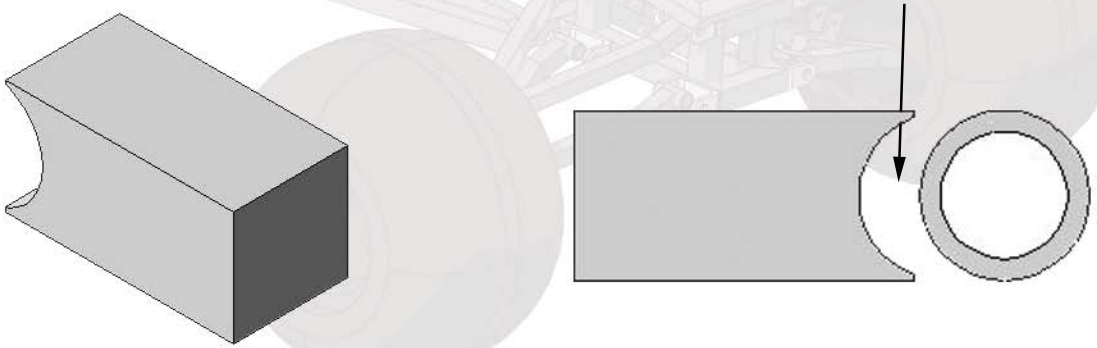
Make these all as close to the same as possible!

Remember to be careful! Safety First!

This is Part Number AA02-90N
You will need 8 of these.

Side View





SPIDERCARTS	46		Ver.	0.1.2.6	Metal Type	Copyright is the property of Spidercarts and shall not be reproduced.
			Authorized	Robert Dicken	1” Square Tubing	
		Part / AA02-90N			Qty-8	

Notes

Use the 1" (25.4mm) Square tubing, make a 90° cut then measure 8" (203.2mm) (or 4 1/2" (114.3mm) for the AA4.5-90) and cut another 90°. on the AA08-90 you will need to weld on a Shock Mount Weldment as shown. Nothing to weld on to the AA4.5-90. Just cut yourself a 4 1/2" (114.3mm) piece with 90° cuts and your done with those.

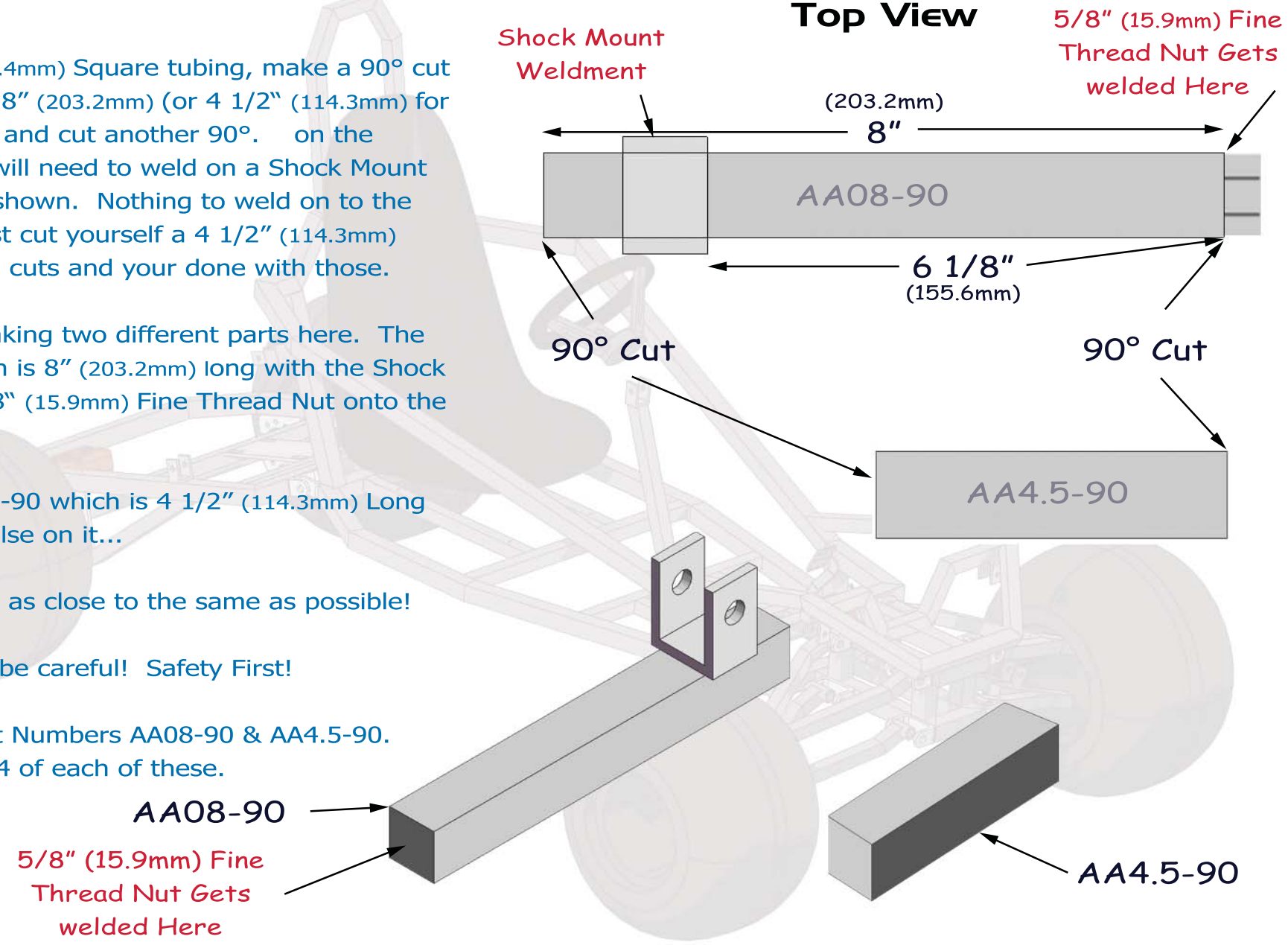
So you are making two different parts here. The AA08-90 which is 8" (203.2mm) long with the Shock Mount and 5/8" (15.9mm) Fine Thread Nut onto the opposite side.

And the AA4.5-90 which is 4 1/2" (114.3mm) Long with nothing else on it...

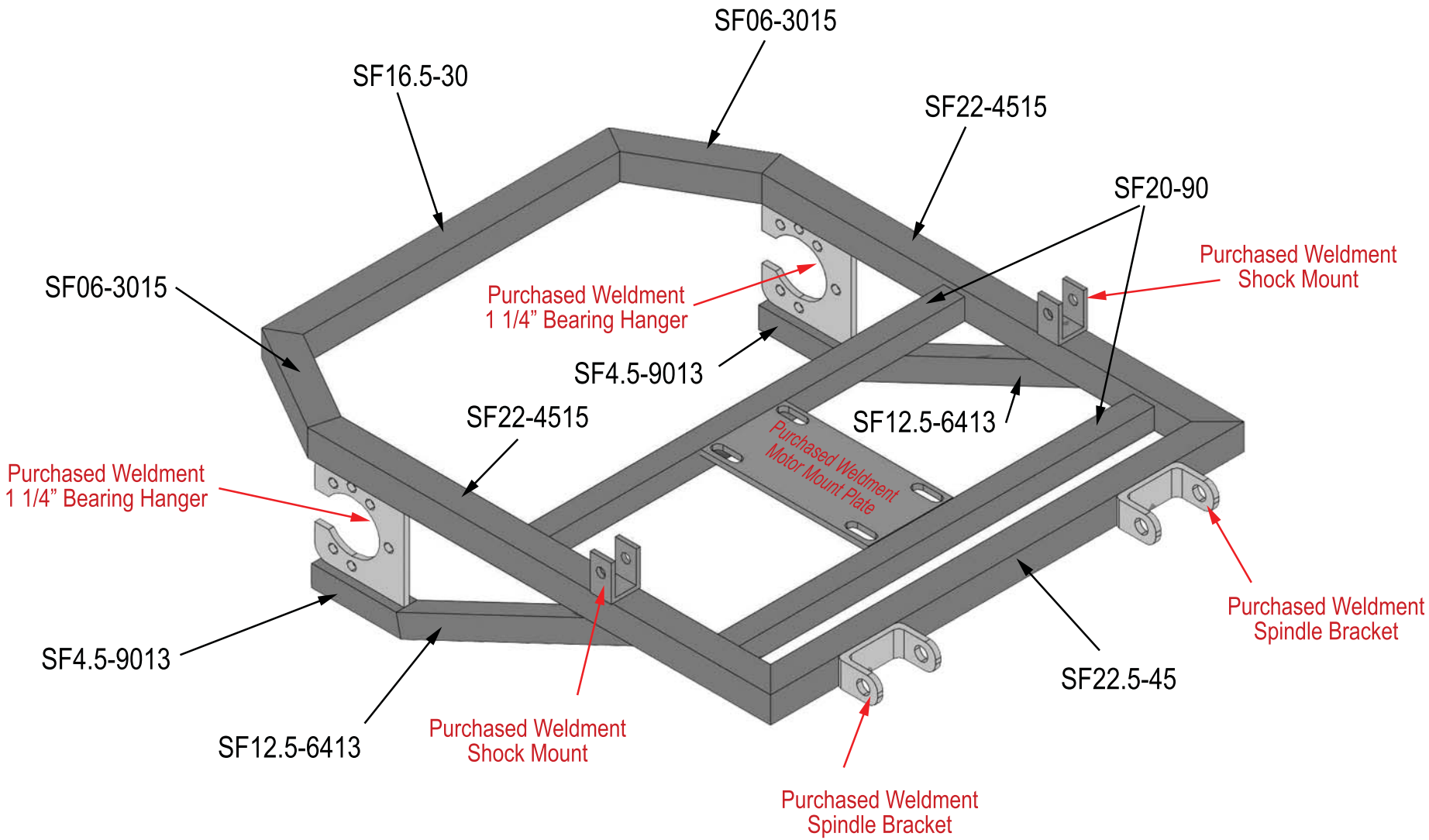
Make these all as close to the same as possible!

Remember to be careful! Safety First!

These are Part Numbers AA08-90 & AA4.5-90.
You will need 4 of each of these.

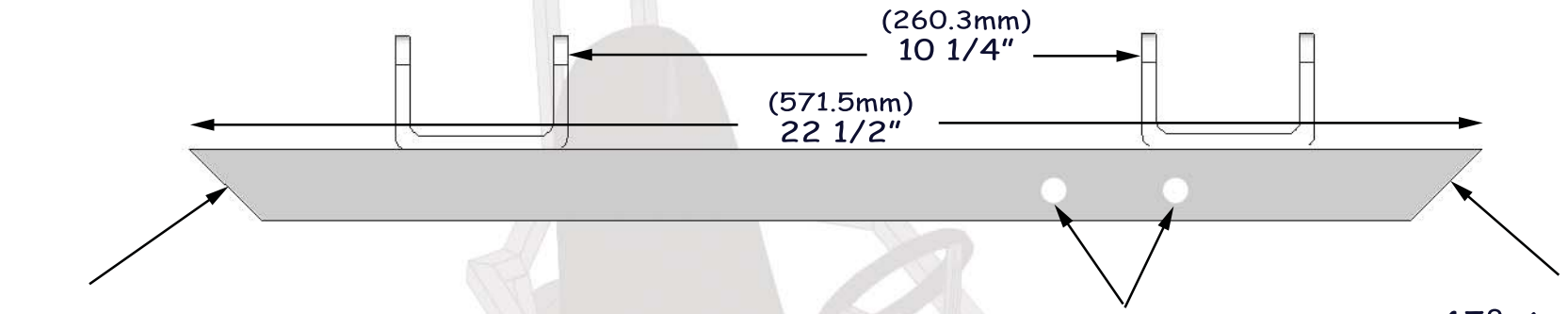


SPIDERCARTS	47		Ver.	0.1.2.6	Metal Type	Copyright is the property of Spidercarts and shall not be reproduced.
			Authorized	Robert Dicken	1" Square Tubing	
		Part / AA08/4.5-90			Qty-2/2	



SPIDERCARTS	48		Ver.	0.1.2.6		Copyright is the property of Spidercarts and shall not be reproduced.
			Authorized	Robert Dicken		
		Sub Frame				

Top View



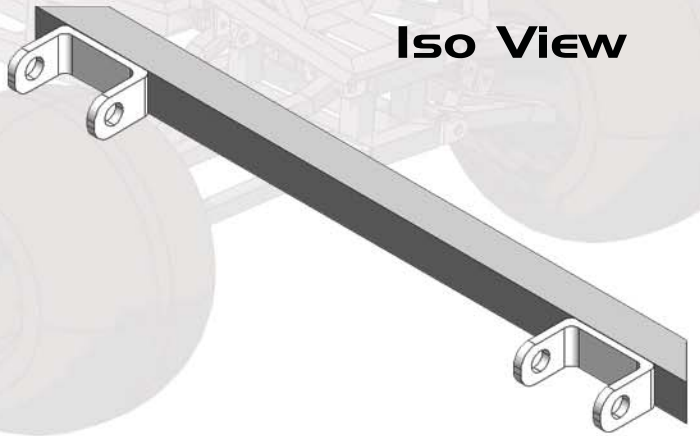
We arent giving electrical information in these plans because there are so many different set-ups, but I drilled two 5/16" (15.9mm) holes here for my starter relay... Might want to look into that kind of stuff before welding.

Notes

This is the front piece of the back Sub Frame. Use the 1 1/4" (31.8mm) Square tubing, make a 45° cut then measure 22 1/2" (571.5mm) and cut another 45°. Make sure they mirror each other. You will weld the Spindle Bracket Weldment on this part. They are 10 1/4" (260.3mm) apart. Might want to run a rod through these as well to make sure you are lined up...

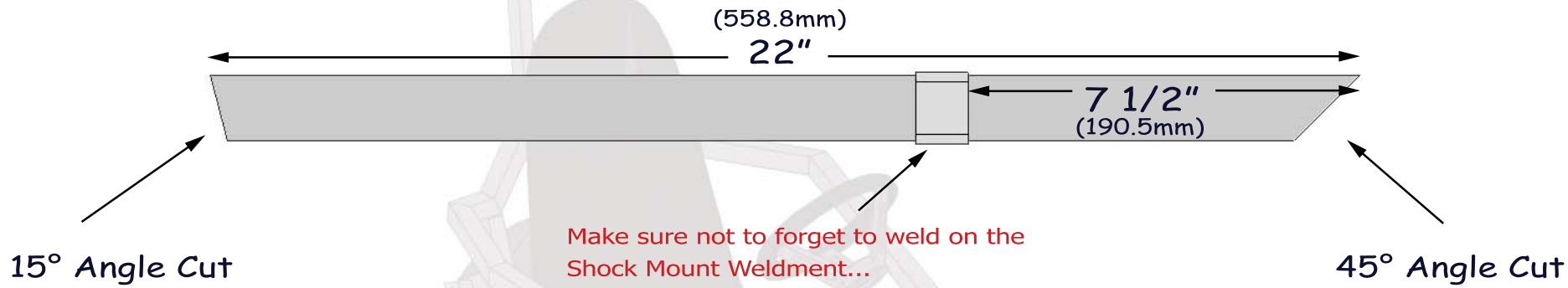
This is Part Number SF22.5-45
You will need 1 of these.

Iso View



SPIDERCARTS	49		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1 1/4" Square Tubing	
		Part / SF22.5-45			Qty-1	

Top View

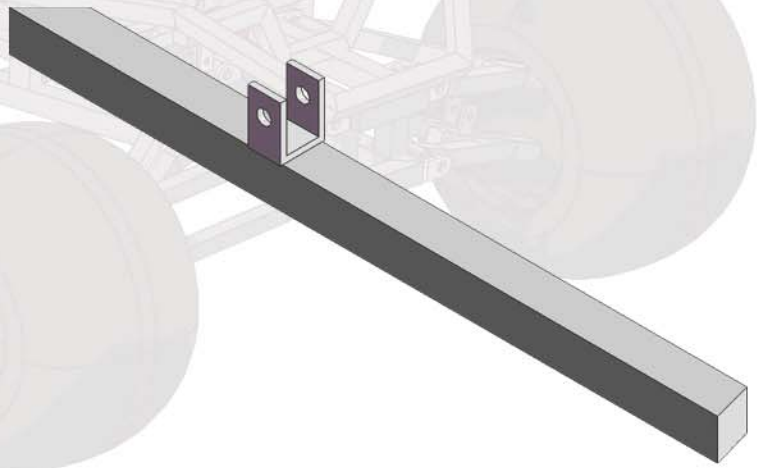


Notes

These are the sides of your Sub Frame.
Use the 1 1/4" (31.8mm) Square tubing, make a 15° cut then measure 22" (558.8mm) and cut a 45°.
Make sure they mirror each other.
You will need to weld on the Shock Mount Weld-ments on both of these. 7 1/2" (190.5mm) from the 45° end.

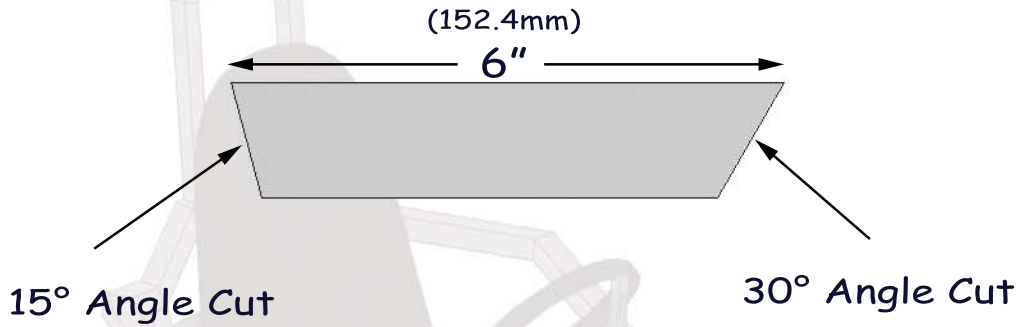
This is Part Number SF22-4515
You will need 2 of these.

Iso View



SPIDERCARTS	50		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1 1/4" Square Tubing	
		Part / SF22-4515			Qty-2	

Top View

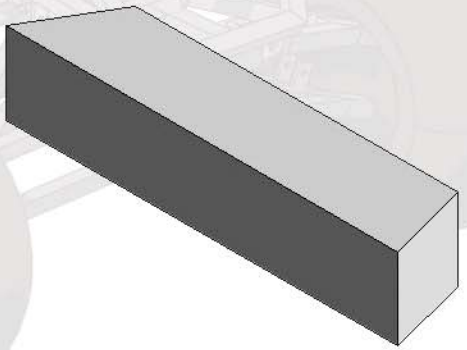


Notes

Use the 1 1/4" (31.8mm) Square tubing, make a 15° cut then measure 6" (152.4mm) and cut a 30°. Make sure they mirror each other. Thats it!

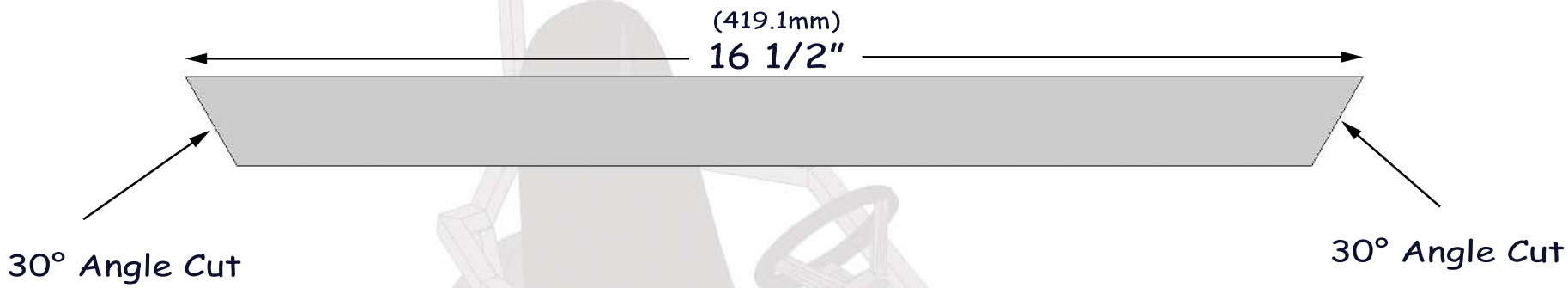
This is Part Number SF06-3015
You will need 2 of these.

Iso View



SPIDERCARTS	51		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1 1/4" Square Tubing	
		Part / SF06-3015			Qty-2	

Top View



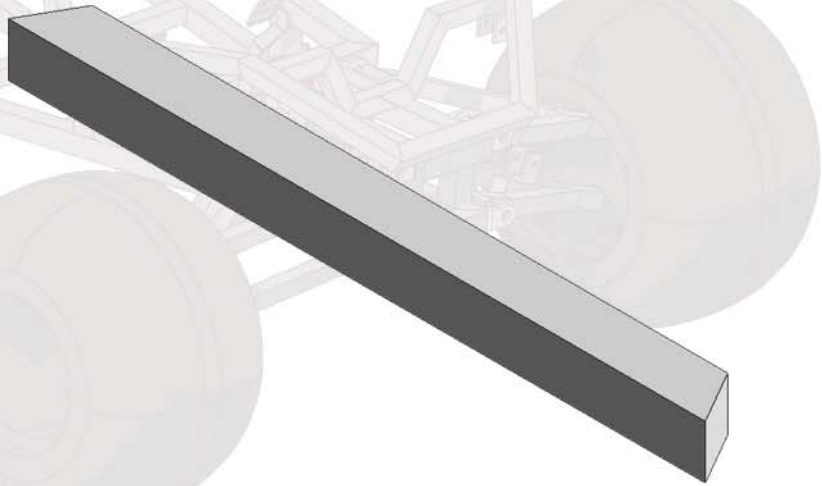
Notes

This is the back piece of the Sub Frame.
Really simple!

Use the 1 1/4" (31.8mm) Square tubing, make a 30° cut then measure 16 1/2" (419.1mm) and cut another 30°. Make sure they mirror each other.

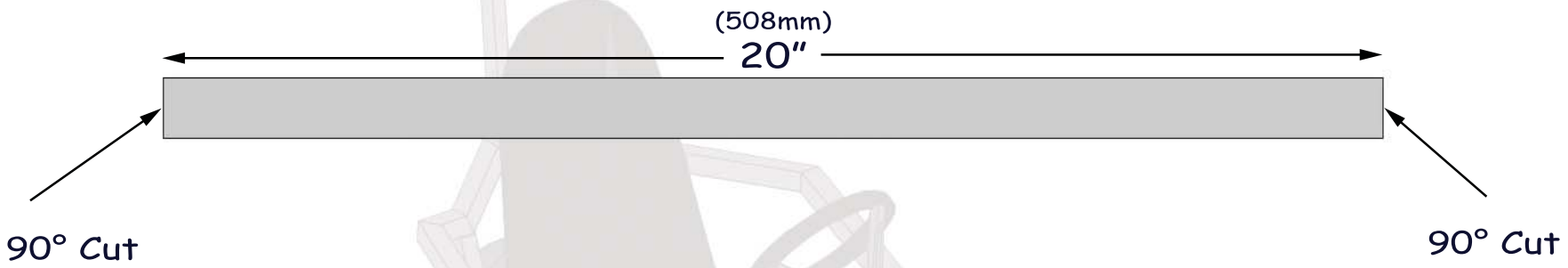
This is Part Number SF16.5-30
You will need 1 of these.

Iso View



SPIDERCARTS	52		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1 1/4" Square Tubing	
		Part / SF16.5-30			Qty-1	

Top View



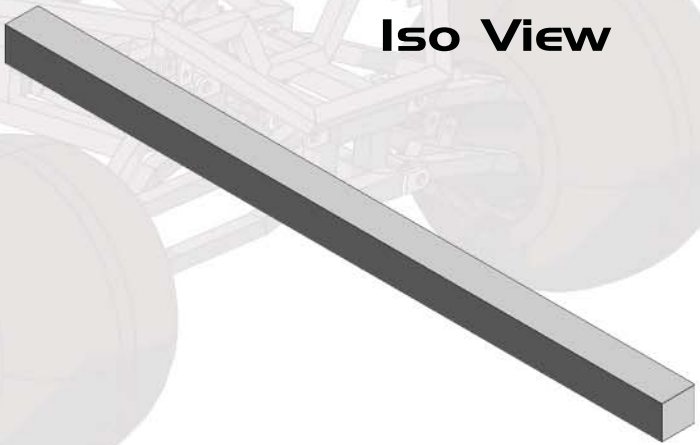
Notes

Use the 1" (25.4mm) Square tubing, make a 90° cut then measure 20" (508mm) and cut another 90°.
These are the supports for the Motor Mount Plate Weldment.

Just make sure they are welded good and strong and straight.

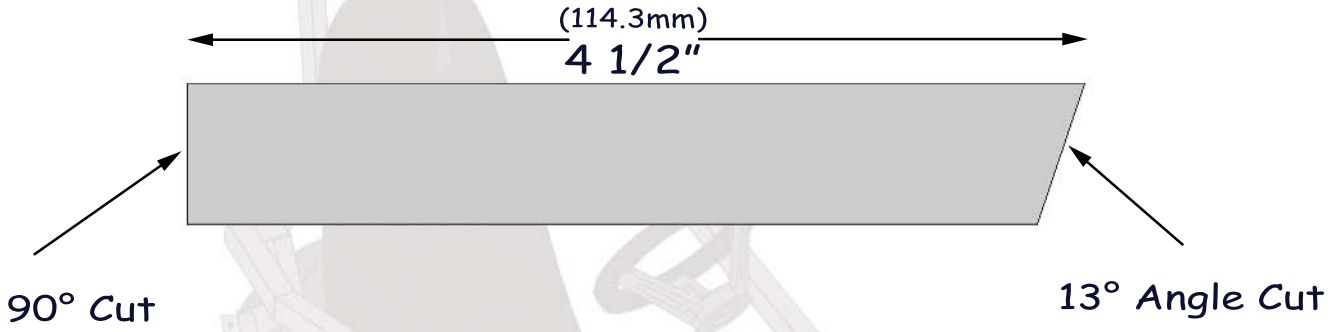
This is Part Number SF20-90
You will need 2 of these.

Iso View



SPIDERCARTS	53		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1" Square Tubing	
		Part / SF20-90			Qty-2	

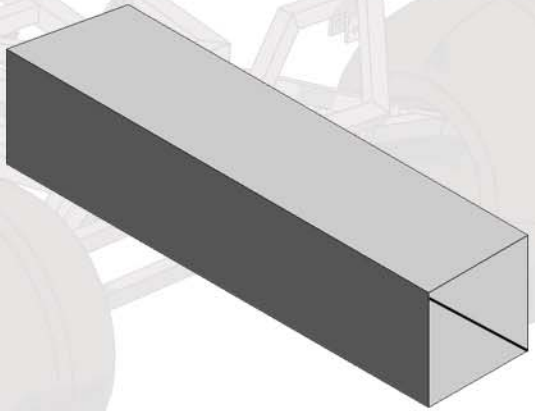
Top View



Notes

Use the 1" (25.4mm) Square tubing, make a 90° cut then measure 4 1/2" (114.3mm) and cut a 13°.
You will be welding this piece to the Bearing Hanger after you weld it to SF12.5-6413.

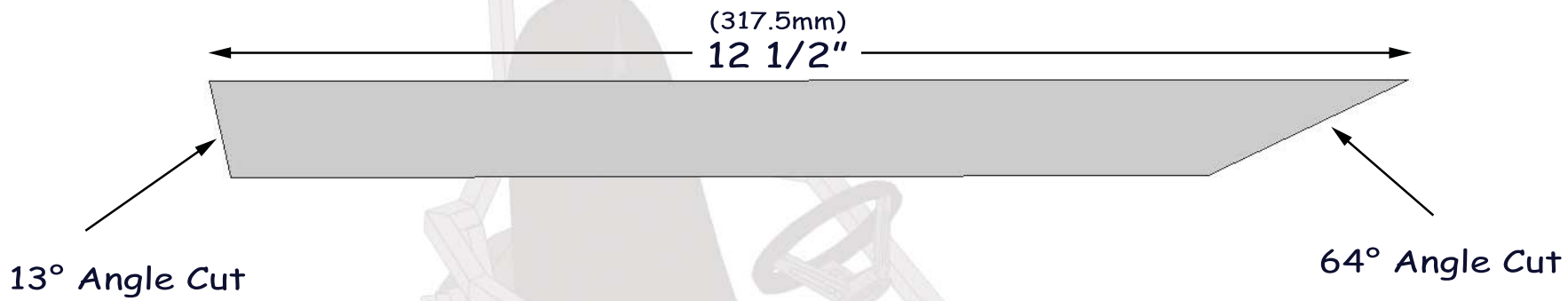
Iso View



This is Part Number SF4.5-9013
You will need 2 of these.

SPIDERCARTS	54		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1" Square Tubing	
		Part / SF4.5-9013			Qty-2	

Top View

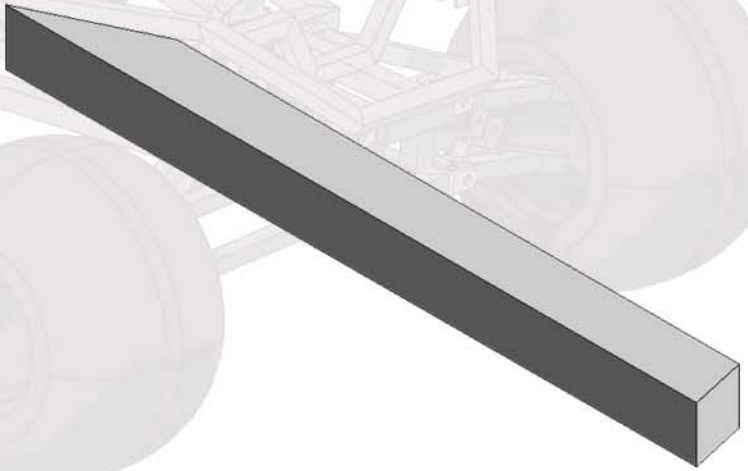


Notes

Use the 1" (25.4mm) Square tubing, make a 13° cut then measure 12 1/2" (317.5mm) and cut a 64°. Make sure they mirror each other.
This is another tricky cut so be careful!
This 64° cut will be steeper than you chop saw gaurd will go so you are back to a hand saw or a angle grinder with a cutting wheel again. Safety First!

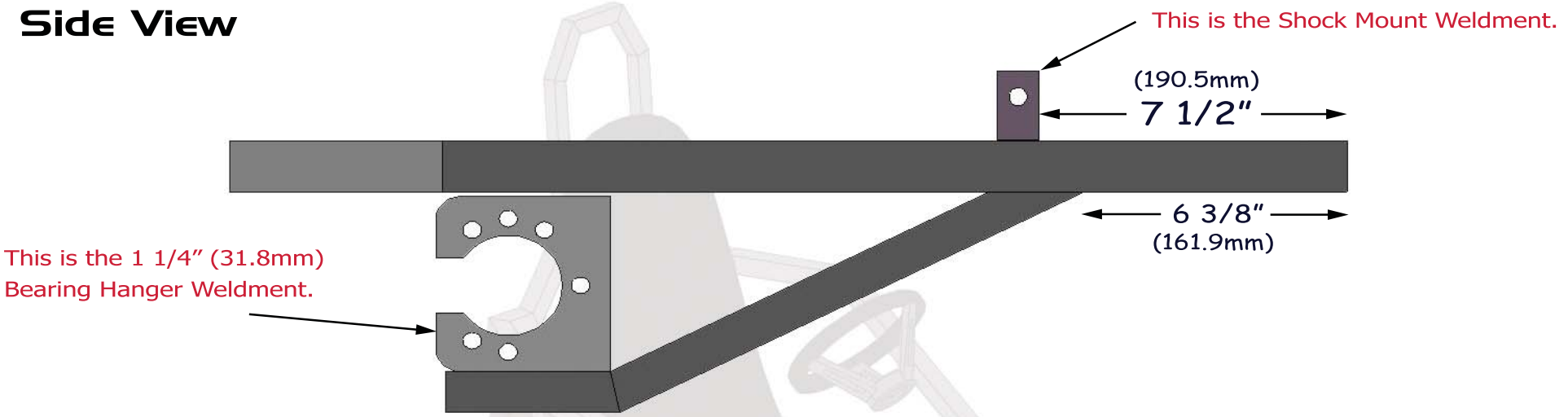
This is Part Number SF12.5-6413
You will need 2 of these.

Iso View



SPIDERCARTS	55		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1" Square Tubing	
		Part / SF12.5-6413			Qty-2	

Side View

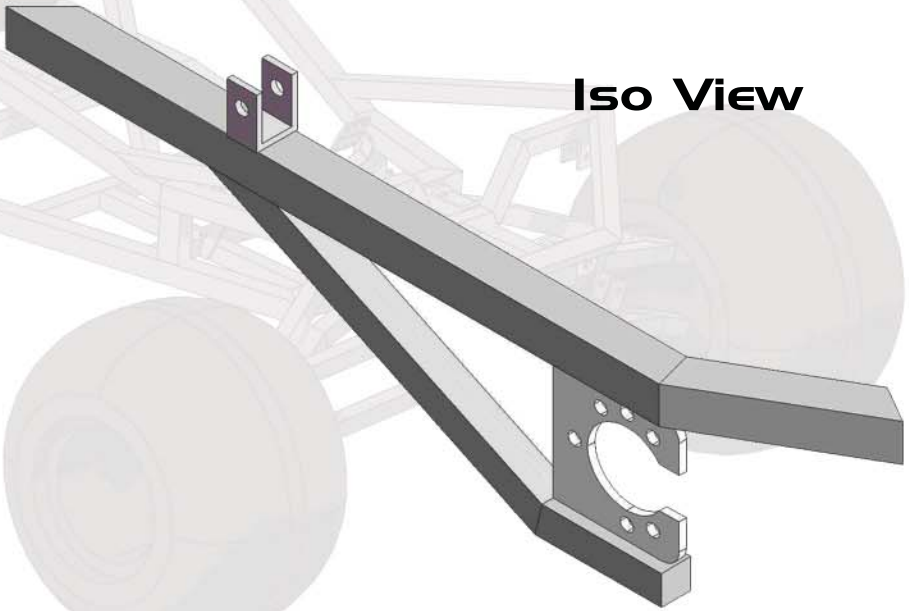


Notes

OK, here is one side of the Subframe....

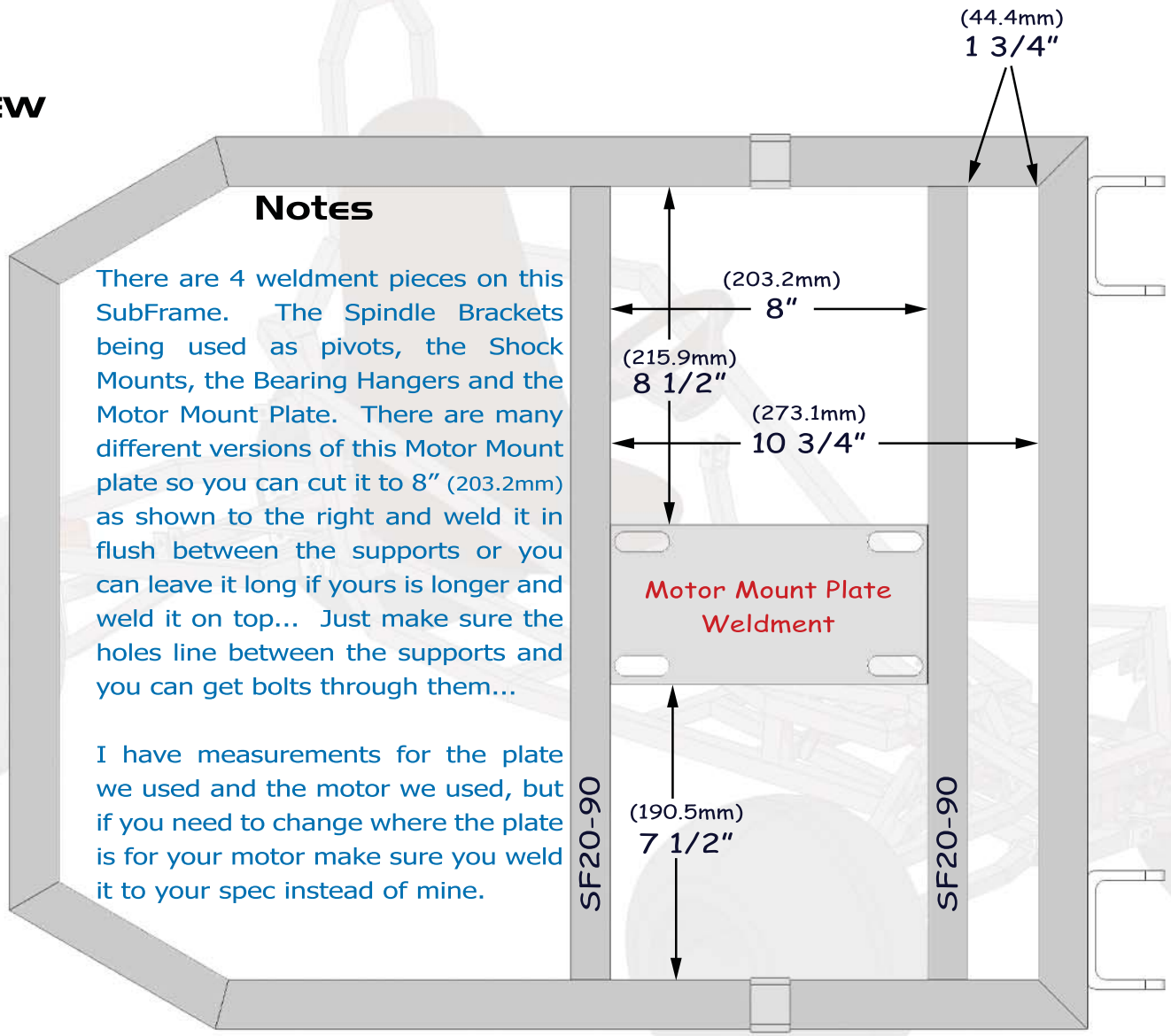
The order I like to do this is... Weld the Hanger to the SF22-4515 first. Line it up to the very end with the opening facing the back. Make sure it is straight and centered on the part. Then weld the SF4.5-9013 & SF12.5-6413 together at the 13° cuts, then line up the end of that to the end of the Hanger and weld it to both the hanger and the SF224515. Make sense?

Iso View



SPIDERCARTS	56		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken		
		Sub Frame Weldments				

Top View



Notes

There are 4 weldment pieces on this SubFrame. The Spindle Brackets being used as pivots, the Shock Mounts, the Bearing Hangers and the Motor Mount Plate. There are many different versions of this Motor Mount plate so you can cut it to 8" (203.2mm) as shown to the right and weld it in flush between the supports or you can leave it long if yours is longer and weld it on top... Just make sure the holes line between the supports and you can get bolts through them...

I have measurements for the plate we used and the motor we used, but if you need to change where the plate is for your motor make sure you weld it to your spec instead of mine.

SPIDERCARTS	57		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken		
		Motor Mount Info				

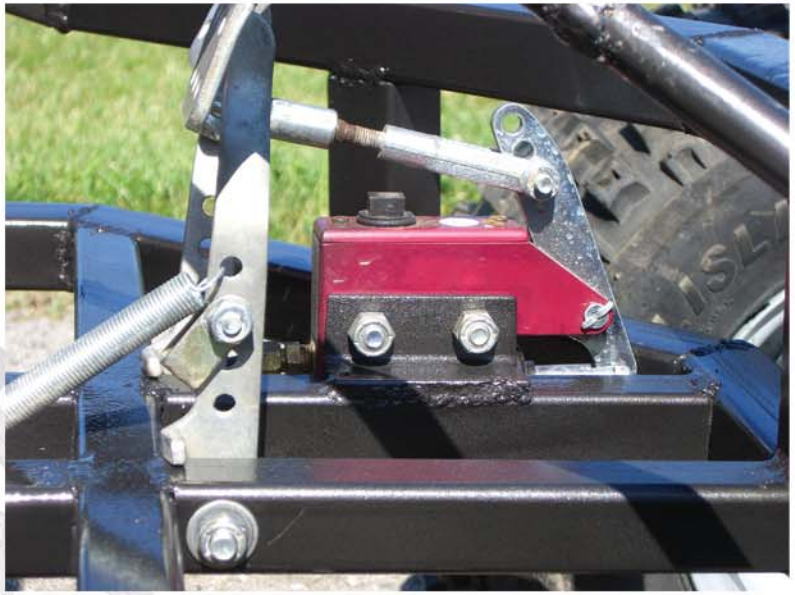
Clevis

Notes

I made my Tie-Rods with 1/4" (6.3mm) steel rod and two 1/4" (6.3mm) Clevis's. Really not ideal but on a budget you might get away with making your own... Really need real tierods, but I will show you this so you know how...

Cut your 1/4" (6.3mm) rod to 13 1/2"(342.9mm). Cut two of these. Then use a 1/4" (6.3mm) Fine Thread Die to cut threads on the rod. Cut about 2" (50.8mm) of threads. Then screw on a Clevis to each side with about 1/2" (12.7mm) coming through the inside and that will get you close for your alignment. you will have to adjust once you have everything put together.

SPIDERCARTS	58		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1/4" Steel Rod	
		Tie-Rod Fabrication			Qty-2	

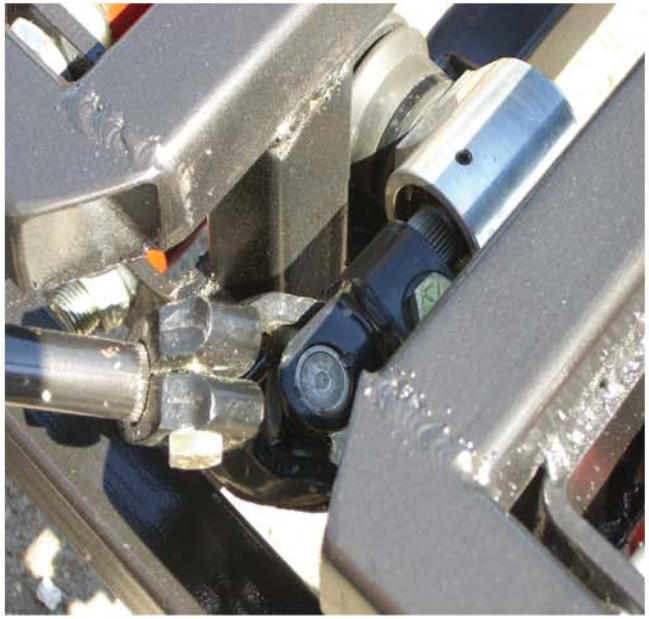
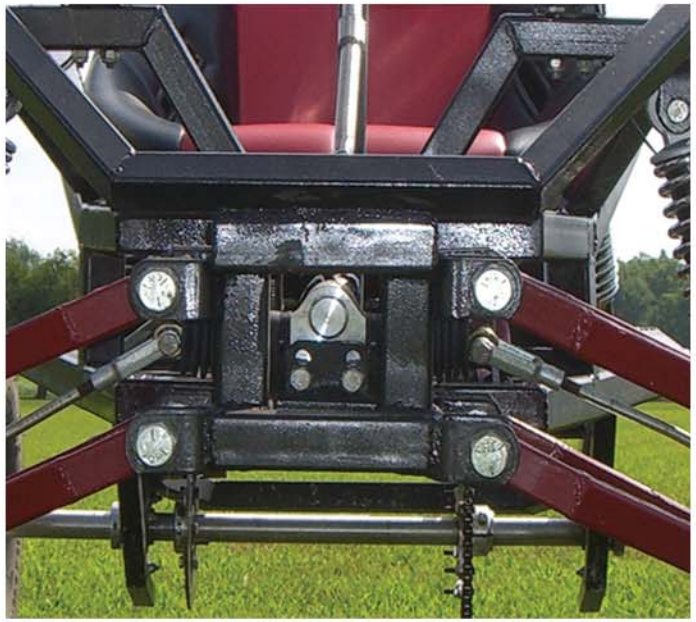


Notes

For the Master Cylinder and the Calipers I made a very simple bracket.

Use the 1’ (304.8mm) of 1” (25.4mm) angle iron I put in the materials list and simply cut a section the length of whatever kind of brake you are using and then drill holes to match your hardware and weld it onto the frame where it lines up with your disc. then on the front I welded the same type of bracket to the left MF7.5-90. Make sure you have enough room for the forward motion of the master cylinder to move without hitting the frame. Then I made my own part to connect the pedal to the Master Cylinder.

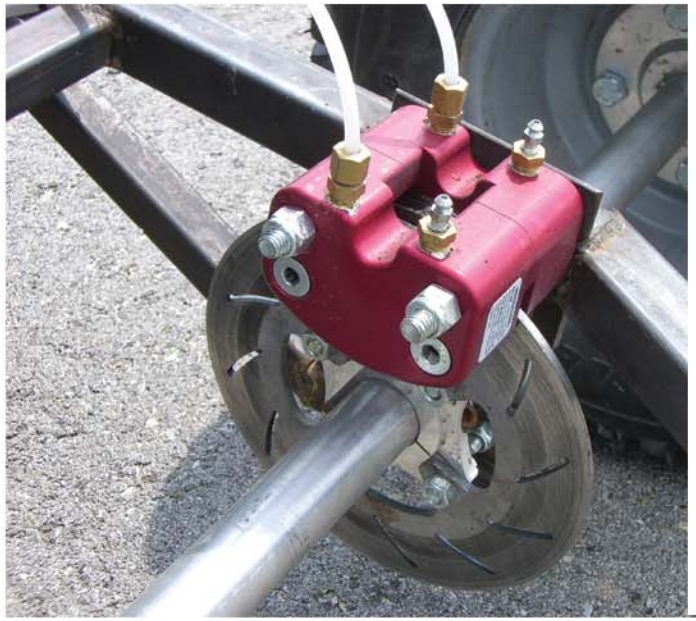
SPIDERCARTS	59		Ver.	0.1.2.6	Metal Type	
			Authorized	Robert Dicken	1/4” Steel Rod	
		Brake Brackets			Qty-2	

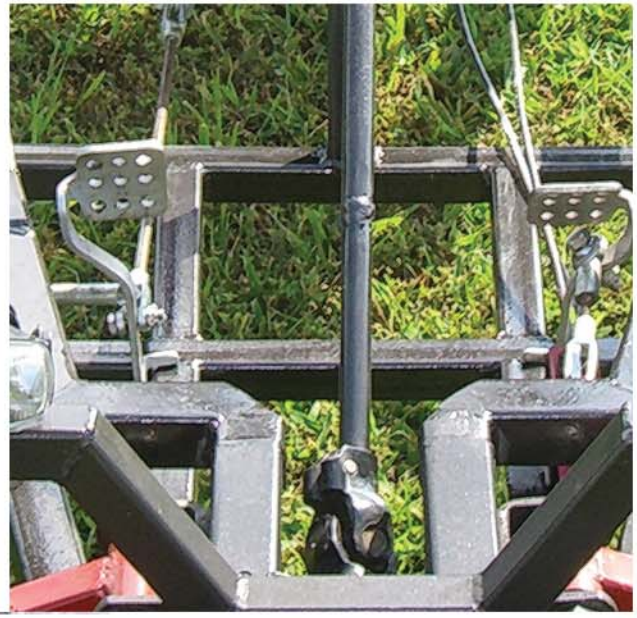



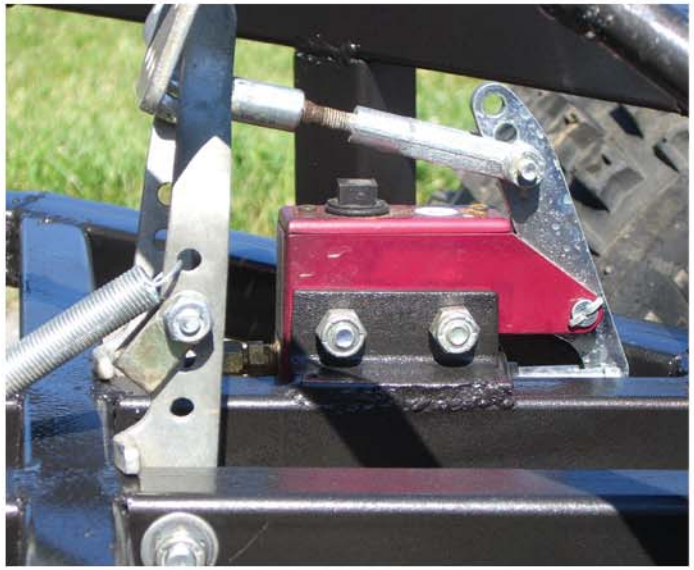


SPIDERCARTS	60		Ver.	0.1.2.6		Copyright is the property of Spidercarts and shall not be reproduced.
			Authorized	Robert Dicken		
		Rack & Pinion				

SPIDERCARTS	61		Ver.	0.1.2.6		Copyright is the property of Spidercarts and shall not be reproduced.
			Authorized	Robert Dicken		
		Spindle & Hub				







SPIDERCARTS	62		Ver.	0.1.2.6		Copyright is the property of Spidercarts and shall not be reproduced.
			Authorized	Robert Dicken		
		Brake Setup				

SPIDERCARTS	63		Ver.	0.1.2.6		Copyright is the property of Spidercarts and shall not be reproduced.
			Authorized	Robert Dicken		
		Misc Pics				

SPIDERCARTS	64		Ver.	0.1.2.6		Copyright is the property of Spidercarts and shall not be reproduced.
			Authorized	Robert Dicken		
		Completed 1				

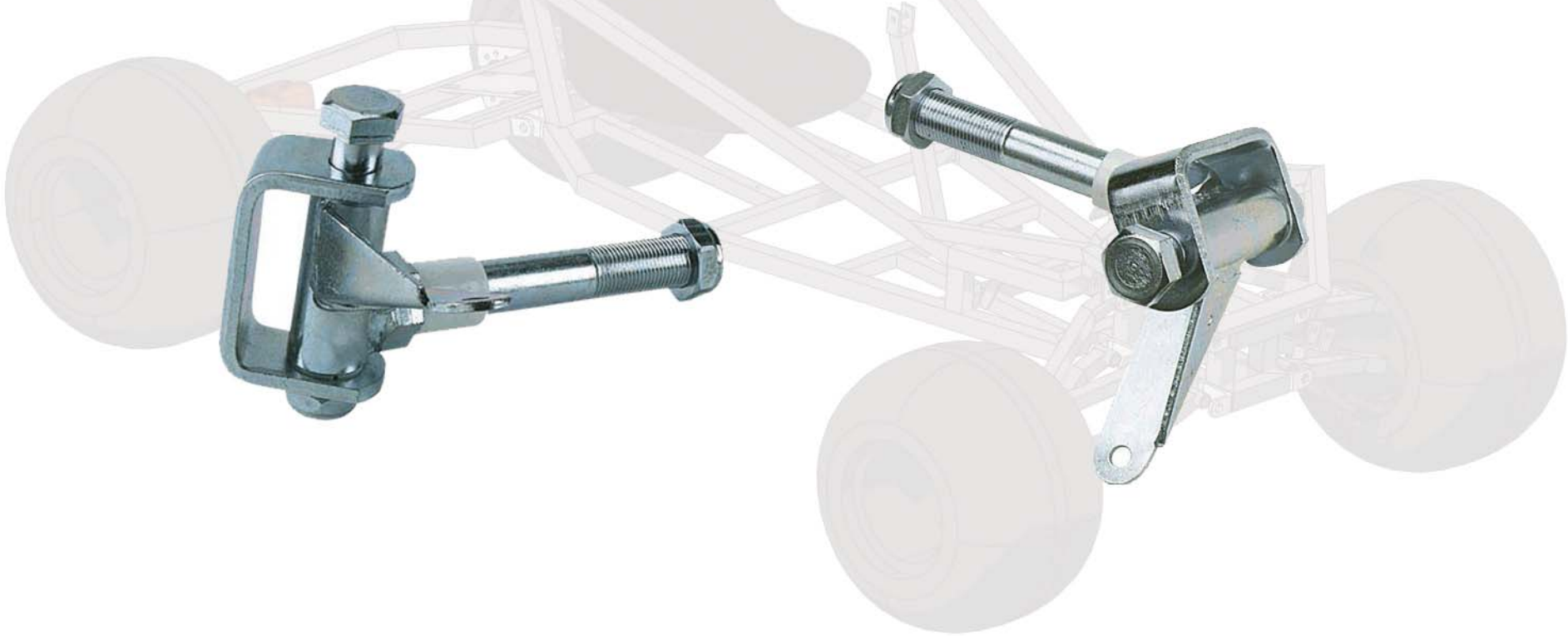
SPIDERCARTS	65		Ver.	0.1.2.6		Copyright is the property of Spidercarts and shall not be reproduced.
			Authorized	Robert Dicken		
		Completed 2				

SPIDERCARTS	66		Ver.	0.1.2.6		Copyright is the property of Spidercarts and shall not be reproduced.
			Authorized	Robert Dicken		
		Completed 3				

Spindle Brackets

This is another weldment. The spindles are what you attach your front wheels to and the spindle brackets hold the spindles. We use these brackets in this project for the A-Arms and for the Rear Pivot between the MainFrame and the SubFrame. You will need 20 of these Brackets for this project. If you decide to do a more simple version of the A-Arms and want to do only the lower A-Arm then you would need 12 of these brackets total...

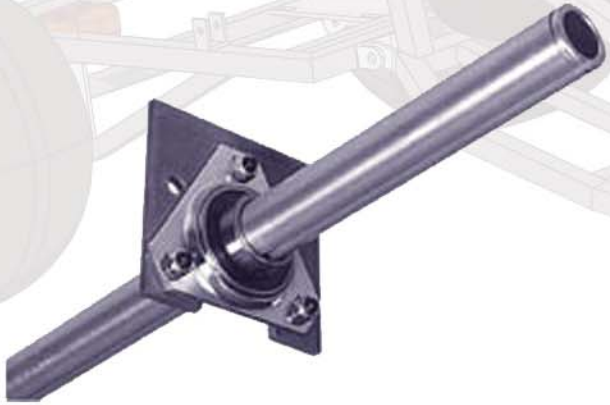
Make sure to buy one set of the spindles themselves as we do need one set of those.



SPIDERCARTS	67		Ver.	0.1.2.6		Copyright is the property of Spidercarts and shall not be reproduced.
			Authorized	Robert Dicken		
		Spindles / TA-411300			Qty - 20	

Bearing Hangers

The bearing hangers are so cheap I would suggest just buying them from a supplier. You can get the entire set with the bearings, hangers, and hardware for under $50.00. The hangers are what we call a weldment and get welded directly onto the frame. Then the bearings and hardware bolt right on to the hanger... For this project you will need to buy or make hangers to support 1”1/4 bearings.



SPIDERCARTS	68		Ver.	0.1.2.6		
			Authorized	Robert Dicken		
		Hangers / TA-400415			Qty - 2	

Notes

I would like to give some general notes about this project.

This project all together is generally a more advanced project. So please use your own creativity and add or adapt things you would like to see with your kart.

A note on the suspension... The suspension I show here in the plans is a bit advanced and you will have to set your alignment and toe just like you would have to with a car. So make sure to spend the time to do this after you are done with your kart. Also you have several different options with this suspension. You could do it as shown, or you could weld a spidle bracket onto the lower A-Arm and then do away with the top A-Arm all together, or you could even weld the lower A-Arms straight out from the frame and have no suspension at all... If you do the last method make sure to not weld on the bushings to the A-Arms or the spindle brackets to the Suspension Block. Just leave the notch out of the part and weld the A-Arms right on to the lower part of the Suspension Block.... Just Ideas!

Electrical...
We have provided no guidence on electrical systems in these plans. This is due to the fact that probably eveybody that builds this kart will put on a different style motor, with different electrical needs. Just remember to think out all of your needs with mounting batteries, relays, and wiring when you are building and welding things together. We show some picctures of some of the electrical on our kart so use this as a reference.

SPIDERCARTS	69		Ver.	0.1.2.6		
			Authorized	Robert Dicken		
		General Notes				

Notes 2

SPIDERCARTS	70		Ver.	0.1.2.6		
			Authorized	Robert Dicken		
		General Notes				

Arachnid Parts List

These parts are listed as reference only!

Please make sure the parts you purchase are the ones you need to fit your project as parts and prices may have changed.

Qty	Item	Price	Total	Vendor
4	18" Balloon Tire/Rim Assembly	$49.95	$199.80	BMI Karts
2	4 x 4 Billet Aluminum Rear Hub - 1 1/4"	$30.00	$60.00	BMI Karts
2	4 X 4 Wheel Hub - 5/8" Bearings	$12.99	$25.98	BMI Karts
1	Aluminum Sprocket Hub - Star 1 1/4"	$23.95	$23.95	BMI Karts
1	Sprocket #41 60T	$17.95	$17.95	BMI Karts
1	Steering Wheel 10"	$21.99	$21.99	BMI Karts
3	6" Steering Spline	$7.00	$21.00	Desert Design
2	Steering U-Joint	$23.00	$46.00	Desert Design
1	Rack & Pinion Mounting Bracket	$6.00	$6.00	Desert Design
1	8" Kart Steering rack	$89.00	$89.00	Desert Design
1	Steering Block - Upper	$6.60	$6.60	www.tsracing.com
1	Steering Wheel Hub	$8.79	$8.79	BMI Karts
1	5/8 Steering Shaft 20"	$12.95	$12.95	BMI Karts
1	Seat Covers	$31.99	$31.99	www.jegs.com
1	Dual Lock Sliders	$26.99	$26.99	www.jegs.com
1	Pro high Back Seat Black	$34.99	$34.99	www.jegs.com
4	5/8" X 5/8" Male Rod Ends-Right Hand	$10.00	$40.00	www.cometkartsales.com
1	Kill Switch	$3.00	$3.00	BMI Karts
20	5/8 Spindle Bracket	$3.50	$70.00	BMI Karts
2	Foot Pedals	$5.95	$11.90	BMI Karts
2	Mechanical Adjustable Shock (Front) 9 3/4" Eye to Eye	$16.65	$33.30	BMI Karts
2	Mechanical Adjustable Shock (Rear) 12" Eye to Eye	$24.99	$49.98	BMI Karts
7	Shock Mounting Tab	$5.00	$35.00	BMI Karts
2	YerfDog Shock Mounting Brackets (3 Hole for adjustment) or add 2 to the above number of tabs...	$12.95	$25.90	BMI Karts
1	1 1/4" Hydraulic Brake Kit	$179.95	$179.95	BMI Karts
1	Hydraulic Brake Line - Plastic (5 Feet)	$9.75	$9.75	BMI Karts
1	Master Cylinder Frame Bracket	$9.95	$9.95	BMI Karts
4	1/4" Clevis	$4.00	$16.00	Hardware Store
1	Motor Mount 12" x 5"	$5.95	$5.95	BMI Karts
1	Keystock 1/4"	$1.45	$1.45	BMI Karts
1	Misc nuts and bolts....	$40.00	$40.00	Hardware Store
1	1 1/4" Billet Aluminum Live Axle 45”	$45.00	$45.00	BMI Karts
1	1 1/4" Bearing Kit	$24.95	$24.95	BMI Karts
5	Chain $2.00/ft. x 5ft.	$2.00	$10.00	BMI Karts
2	2 Piece Billet Aluminum Locking Collar 1 1/4"	$5.00	$10.00	BMI Karts
1	Comet Torque Converter 1" Bore #41 Sprocket	$169.95	$169.95	BMI Karts
1	Tecumseh 10hp Horizontal (Just a Suggestion!)	$190.00	$190.00	Small Engine Warehouse
	Total		$1,616.01	

All parts are just suggestions... you can replace any of these parts with your own ideas...
All prices are estimates and are subject to change depending on who you buy them from...

Online Resources

Here are some of the best places we have found to get the parts needed to finish your kart. All of the parts needed can be purchased from these locations...

www.bmikarts.com

www.jegs.com

www.cometkartsales.com

www.gokartsupply.com

www.mfgsupply.com

www.jackssmallengines.com

www.gokartnminibikeparts.com

Thank you for your business.

I hope you have found these plans to be helpful and complete.

Building go karts can be a very rewarding hobby.

As always please use caution when riding your new go kart and be safe.

Please check back with our website as we are always adding new products.

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			Authorized	Robert Dicken		
		Thank You				