

Revision History		
cription	Checked	Date
ng with dimension	Devin Adams	3/11/16
ufacturing notes	Ty Crouch	4/01/16
ormatting changes	Grant Getts	4/08/16

Α

Suggested Steps for Manufacturing this part: 1. Cut 4 2.5" by 4" rectangles from the stock 2. Mark and drill the 4 holes. Clamp all 4 rectangles together and drill through all at the

Cut off corners to a size that suits you. Just make sure to leave at least .5" material between the holes

4. Grind any sharp corners or edges into radii.

NOTE: The leaders pointing to the holes tell you which

	NAME	DATE						
	Ty Crouch	3/10/2016	TITLE:					
C	Devin Adams	3/11/2016		Dre		പ	$n \sim 1$	\sim
	Grant Getts	3/29/2016		DIC	JC	еп	ng	e
)	Tyler Crouch	4/01/2016					-	
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Revison History				
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ing	Devin Adams	03/10/16		
d Steps	Ty Crouch	04/01/16		
ections	Ty Crouch	04/08/16		

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Suggested Steps for Manufacturing this part:

1. Cut 6" of stock material

2. Mark and drill 4 holes on top face. One will be drilled later.

3. Drill the hole in the side face

4. Deburr holes and grind any

sharp corners or edges into radii.

NOTE: The leaders to the holes tell where that hole interfaces with other parts.

	NAME	DATE							
	Aaron Skousen	03/10/16	TITLE:						
)	Devin Adams	3/11/16		Ц ;+	ch S		~ 1	\sim	
	Grant Getts	3/29/16			CH 2	Ie e		Ð	
)	Tyler Crouch	4/01/16							
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ing	Grant getts	03/09/16
d Steps	Tyler Crouch	04/01/16
ections	Tyler Crouch	04/01/16

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Suggested Steps for Manufacturing this part:

- 1. Cut rectangle stock
- 2. Mark and drill 2 holes.
- 3. Round corners

NOTE: The leaders to the holes tell where that hole interfaces with other parts.

	NAME	DATE						
	Aaron Skousen	03/09/16	TITLE:	–		\ A /L.	. 1	
,	Grant Getts	03/11/16		Fr	ont	wne	el	
	Grant Getts	03/29/16	N	Λου	ntir	na Brc	acke	et
)	Tyler Crouch	04/01/16	-			9 -		
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d Steps	Tyler Crouch	04/01/16		
ections	Grant Getts	04/08/16		

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Suggested Steps for Manufacturing this part:
1. Cut 2 4"x3" rectangles from stock
2. Mark and drill 3 holes:
Center hole and the holes
above and below.
3. Cut off corners, leaving at least .5" material around holes.
4. Deburr holes and grind any sharp corners or edges into radii.
5. After attaching to the Vertical Bar, drill Spring Pin holes with hand drill at locations where Handlebar is comfortable for the person pushing the trailer.

NOTE: The leaders to the holes tell where that hole interfaces with other parts.

	NAME	DATE						
	Grant Getts	3/9/16	TITLE:		nndla	h	ar	
)	Tyler Crouch	3/12/16			Indie	30	a	
	Grant Getts	3/29/16		F	Rrack		ł	
D	Tyler Crouch	4/01/16	1	L	JUCI		I	
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d Steps	Aaron Skousen	03/29/16		
WS	Grant Getts	04/08/16		



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ing	Tyler Crouch	03/14/16		
nsions	Tyler Crouch	03/23/16		



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ing	Tyler Crouch	03/14/16	
d Steps	Aaron Skousen	03/24/16	

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ing	Grant Getts	03/11/16		

- 0.250 Thru, Typ These four holes of the corner braces are too small without modifying the part. Using a 17/64 drill bit, enlarge these four holes by drilling them out.

	NAME	DATE					
	Devin Adams	3/11/16	TITLE:				
)	Grant Getts	3/11/16	Со	rne	er Br	ac	e
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)	Checked	Date					
ing	Devin Adams	03/11/16					
d Steps	Aaron Skousen	03/29/16					
ections	Tyler Crouch	04/08/16					

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Suggested Steps for Manufacturing this part:
1. Cut off curved ends of handlebar with riveted brackets.
2. Mark and drill the holes in both sides of the handlebar
3. Deburr holes and grind any sharp corners or edges into radii.
4. Insert Spring Pin so the pin head comes out the outside of the handlebar.

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NOTE: The leaders to the holes tell where that hole interfaces with other parts.

-Handlebar Bracket, Spring Pin

	NAME	DATE						
	Aaron Skousen	3/10/16	TITLE:					
)	Devin Adams	3/11/16			2 N N N N	Inh	ar	
	Grant Getts	3/29/16			JIIG	ien	a	
)	Aaron Skousen	3/29/16						
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Checked	Date							
Tyler Crouch	03/11/16							
Grant Getts	03/23/16							
	n History Checked Tyler Crouch Grant Getts							

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-This black sleeve needs to be removed, shortened, and replaced. It can be cut with scissors.

	NAME	DATE						
	Devin Adams	3/11/16	TITLE:					
	Tyler Crouch	3/11/16	Praka					
	Tyler Crouch	3/23/16			DIUI		,	
	Grant Getts	3/23/16	_					
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Revision History		
cription	Checked	Date
ng with dimensions	Grant Getts	3/11/16
ufacturing notes	Ty Crouch	4/01/16
ew deleted, stock ut added	Ty Crouch	4/08/16

Α

Suggested Steps for Manufacturing this part: 1. Cut correct length of stock. It is better to cut it longer than needed than to cut it too short. 2. Grind end smooth. 3. Mark and drill holes, following the notes, deburring the holes as you go. NOTE: The leaders to the holes tell where that hole interfaces with other parts. Stock: 1" x 1" by 1/8" wall

and use the Axle as a stencil for the other hole.

	NAME	DATE						
	Grant Getts	3/10/16	TITLE:					
D	Tyler Crouch	3/10/16					Da	ır
	Grant Getts	3/29/16		Lei	I DC	126	DU	lí lí
D	Tyler Crouch	04/01/16						
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ing	Devin Adams	03/11/16						
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essary ensions	Grant Getts	04/08/16						

Α

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NOTE: The leaders to the holes tell where that hole interfaces with other parts.

Stock: 1"x1"x1/16" Wall Thickness

	NAME	DATE						
	Grant Getts	s 3/9/16	TITLE:					
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	Grant Getts	ts 3/29/16	Л	IGU		126	DC	וג
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Revision History		
cription	Checked	Date
ng with dimensions	Grant Getts	3/11/16
ufacturing notes	Ty Crouch	4/01/16
ded, manufacturing s edited	Ty Crouch	4/08/16

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NOTE: The leaders to the holes tell where that hole interfaces with other parts.

	NAME	DATE						
	Devin Adams	3/10/16	TITLE:					
)	Grant Getts	3/11/16	Η	Vna	stei	nus	ρĪ	-n
	Aaron Skousen	3/24/16						
)	Tyler Crouch	04/01/16			В	ar		
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Revision History		
cription	Checked	Date
ng with dimension	Grant Getts	3/11/16
ufacturing notes	Ty Crouch	4/01/16
leted, stock callout dded	Ty Crouch	4/08/16

Α

Suggested Steps for Manufacturing this part: 1. Cut correct length of stock. It is better to cut it longer than needed than to cut it too short. 2. Grind end smooth. 3. Mark and drill holes, following the notes, deburring the holes as you go.

NOTE: The leaders to the holes tell where that hole interfaces with other parts.

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	Grant Getts	3/10/16	TITLE:						
)	Devin Adams	3/11/16		пуротепозе					
	Grant Getts	3/29/16	Rottom Bar					r	
)	Tyler Crouch	04/01/16					DU		
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Revision History		
cription	Checked	Date
ng with dimension	Grant Getts	3/11/16
ufacturing notes	Ty Crouch	4/01/16
leted, stock callout dded	Grant Getts	4/08/16

Suggested Steps for Manufacturing this part: 1. Cut correct length of stock. It is better to cut it longer than needed than to cut it too short. 2. Grind end smooth. 3. Mark and drill holes, following the notes, deburring the holes as you go. NOTE: The leaders to the holes tell

where that hole interfaces with other parts.

Stock: 1" x 1" by 1/16" wall

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	Devin Adams	3/10/16	TITLE:					
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)	Ty Crouch	04/01/16						
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Revision History		
cription	Checked	Date
ng with dimensions	Grant Getts	3/11/16
ufacturing notes	Grant Getts	3/23/16
iew deleted, stock ut added	Ty Crouch	4/08/16

	NAME	DATE							
	Aaron Skousen	03/10/16	TITLE:						
)	Grant Getts	03/11/16	F	Back Cross Bar					
	Tyler Crouch	03/23/16	L						
)	Grant Getts	03/23/16							
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			F	Revision History		
		Revisio	on Descrip	otion	Checked	Date
		A	Original drawing v	vith dimensions	Grant Getts	3/11/16
		В	Added manufa	cturing notes	Grant Getts	3/23/16
		C	Unnecessary view callout c	deleted, stock dded	Ty Crouch	4/08/16
Corner Brace	-Corner Brace	'nru Typ	SUGGESTED S 1. CUT THIS BA 2. MARK THE	STEPS TO MAKE T AR TO LENGTH. PAIR OF HOLES DE LISING THE CO	THIS PART:	
3.400) 16.510 18.510 19.910	Corner Brace	BRACE AS A FIT FLUSH AG. 3. BEFORE DR ASSEMBLE TH BASE CROSS BRACES FITS S BASE BARS. A Stock: 1" x 1" by 1/16"	STENCIL. THE BR AINST THE BAR E ULLING THESE HO E BASE FRAME. I BAR WITH THE C SNUGGLY BETWI DJUST AS NEED	ACES NDS. DLES, ENSURE THE ORNER EEN THE ED.	
		Open Source The design in this drawing was created by a team of engineering students from Bridham Young Unjversity. It is intended	Material 6063 Aluminum	NAME DATE er Crouch 3/9/16 er Crouch 3/23/16 ant Getts 3/23/16 HERWISE SPECIFIED: NS ARE IN INCHES CFS:+.05	SE CROS dwg. no. P17	SS BAR
		to be open source and freely used.	DO NOT SCALE DRAWING	SCALE	E: 1:4 WEIGHT:	SHEET 1 OF 1
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Suggested Steps for Manufacturing this part (see Instructions for more details):

- 1. Mark the bend line 5 1/2'' from back edge.
- 2. Heat plastic in oven at 220 degrees for 15 minutes. It should be pliable but not fluid.
- Clamp the plastic to a table with a bar over the bend line. 3.
- Push the plastic to bend it. You will need to hold it for about 5 min at 90 degrees. 4.
- Repeat steps 2 4 until the plastic stays at the desired angle. 5.
- Cut out squares with hack saw or band saw. 6.
- 7. Mark and drill holes, following the notes.

Motion Source MATERIAL HDPF The design in this drawing was created by a team of engineering students from Brigham Young University. It is intended DO NOT SCALE DRAWING to be open source and freely used.

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Open Source

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Revison History							
)	Checked	Date					
ing	Tyler Crouch	03/11/16					
d Steps	Aaron Skousen	03/29/16					
nents	Tyler Crouch	04/08/16					



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DESCRIPTION	QTY.
ustom (See Drawing P13)	1
ustom (See Drawing P14)	1
Custom (See Drawing P1)	2
1.5x1/4-20UNC Hex Bolt	3
w Profile Nylock 1/4-20 Nut	3



	DESCRIPTION	QTY.	
	Custom (See Drawing P12)	1	
	L Bracket (See Drawing P7)	4	R
	Custom (See Drawing P2)	1	D
ng	Custom (See Drawing P5)	1	
	Custom (See Drawing P11)	1	
	.25" Aluminum Spacer for .25" Bolt	2	
	Washer 7/8" for 1/4" Bolt	13	
	Hex Bolt 2.5"x 1/4-20 UNC	4	
	Nylock Nut Low Profile 1/4-20 UNC	9	
	Custom (See Drawing P6)	1	
		1	
ng	Custom (See Drawing P3)	2	
	Hex Bolt 3"x 1/4-20 UNC	2	
	Hex Bolt 1.5"x 1/4-20 UNC	2	
	Hex Bolt 1.75"x 1/4-20 UNC	1	

	NAME	DATE							
	Tyler Crouch	04/06/16	TITLE:						
)	Grant Getts	04/07/16		Front Wheel Mounting Sub Assembly					
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	DESCRIPTION	QTY.
	Custom (See Drawing P12)	1
	L Bracket (See Drawing P7)	4
	Custom (See Drawing P2)	1
ng	Custom (See Drawing P5)	1
	Custom (See Drawing P11)	1
	.25" Aluminum Spacer for .25" Bolt	2
	Custom (See Drawing P18)	1
	Washer 7/8" for 1/4" Bolt	18
	Hex Bolt 1.75"x 1/4-20 UNC	4
	Hex Bolt 2''x 1/4-20 UNC	2
	Nylock Nut Low Profile 1/4-20 UNC	6

	NAME	DATE						
	Tyler Crouch	04/06/16	TITLE:					
	Grant Getts	04/07/16						
			Foo	Footrest Sub Assem				
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#4 Washers go directly against the aluminum tube

	NAME	DATE							
	Tyler Crouch	04/01/16	TITLE:	D.					
)	Grant Getts	4/6/16		Back Frame					
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DESCRIPTION	QTY.
Custom (See Drawing P12)	1
L Bracket (See Drawing P7)	4
Corner Brace (see drawing P8)	2
	1
Custom (See Drawing P17)	1
5" Aluminum Spacer for .25" Bolt	2
Custom (See Drawing P11)	1
See Drawing P10	2
Washer 7/8" for 1/4" Bolt	12
ock Nut Low Profile 1/4-20 UNC	18
Hex Bolt 1.5"x 1/4-20 UNC	16
Hex Bolt 3"x 1/4-20 UNC	2

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DESCRIPTION	QTY.
Custom (See Drawing P12)	1
L Bracket (See Drawing P7)	4
Custom (See Drawing P14)	2
Custom (See Drawing P13)	2
Custom (See Drawing P1)	4
Custom (See Drawing P15)	2
	1
.375" Aluminum Spacer for .25" Bolt	4
Custom (See Drawing P11)	1
See Drawing P10	2
Washer 7/8" for 1/4" Bolt	6
Hex Bolt 1.5"x 1/4-20 UNC	2
Nylock Nut Low Profile 1/4-20 UNC	6
Custom (See Drawing P9)	1
Hex Bolt 2.75"x 14/-20 UNC	2
Hex Bolt 3"x 1/4-20 UNC	2

	NAME	DATE						
	Tyler Crouch	04/06/16	TITLE:					
	Grant Getts	04/07/16	Frame Connections					
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For more details on connections between each sub-assembly, see Frame Connections Sub-Assembly, Drawing A6.

	NAME	DATE						
	Grant Getts	04/07/16	TITLE:					
)	Devin Adams	04/07/16		Fυ	ll Ass	sem	bly	,
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1	Matthew Curti	4/8/16	TITLE:	Seat Features		
D	Cheryl Woo	4/8/16				
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