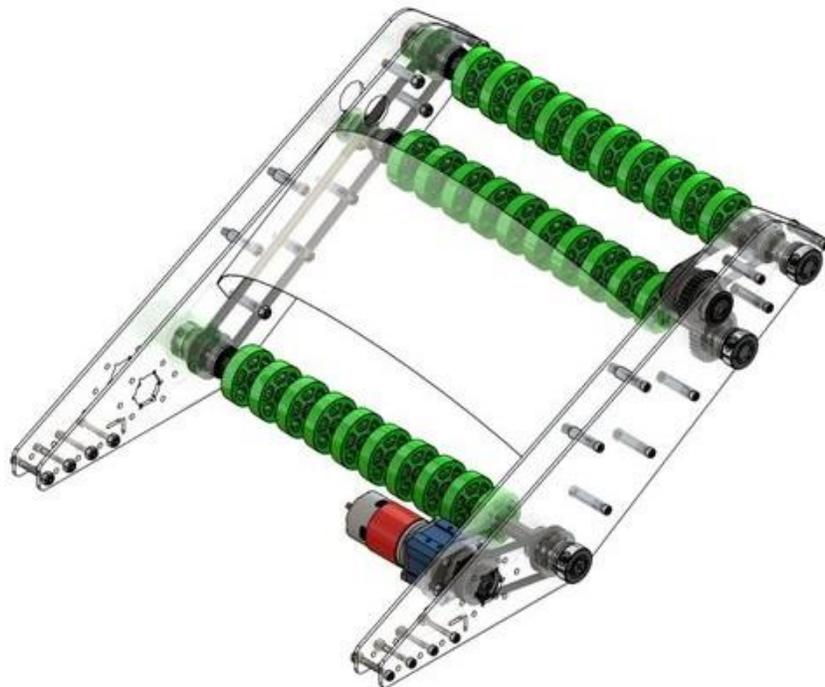


# **AndyMark**<sup>®</sup>

## 2023 Everybot Intake Kit

(am-4938)  
*Assembly Guide*



Revision #	Date	Author	Purpose
0	1/23/2023	Ethan Scime	Original Document
1	3/16/2023	Peyton Yeung	Revised Part QTY & Step 7

N. Massouda	3/16/23
_____ Reviewer Name	_____ Date Reviewed

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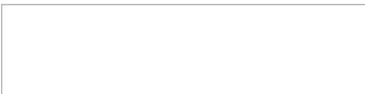
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4	Recommended Tools List
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## Parts & Tools

### Recommended Tools List

Component	Part #	QTY	Photo
Fold up 12 Set Hex	am-3864	1	
3/8-7/16 Open-End Wrench	am-2745	1	

### EveryBot Intake Kit Parts List

Component	Part #	QTY	Photo
Polycarbonate Intake Plate	am-4938_in-plate	4	
Polycarbonate Intake Hood	am-4938_hood	1	
2" Compliant Wheel 1/2" Hex Bore Green 35 Durometer	am-3462_green	30	
Red Tacky Grease, 14.2 gram	am-2768	1	
Sport Gearbox Motor Kit, RS-550 or RS-700	am-3991	1	 ○ x2 ○ x2    ● x2 ● x2
Sport Gearbox, 4:1, Standard Duty, Hex Shaft	am-3972_004	1	

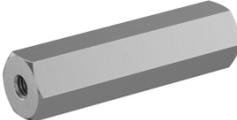


AndyMark 775a RedLine Motor	am-3775a	1	
Belt, Timing, HTD 5mm Pitch, 9mm Wide, 60T, 300-5M-09	am-4902	2	
Belt, Timing, HTD 5mm Pitch, 9mm Wide, 150T, 750-5M-09	am-4911	1	
3ft long Shaft, Stock, 1/2"W Hex, Aluminum, 7075	am-2291-3	1	
Churro 500 Cross Hex Tube, 2' +/- 0.125", 6005A Aluminum	am-3101-2	1	

## EveryBot Hardware Kit Parts List

Component	Part #	QTY	Photo
Spacer, 0.375 OD x 0.192 ID x 1.000 Long Aluminum	am-3876	16	
Screw, SHCS, 10-32 x 1500	am-1014	24	
Nut, Nylock, 10-32	am-1042	26	
57 Sport Flange Mount	am-4132	1	



Pulley Half, 24T HTD 500 Hex Bore	am-3403	6	
Gear, 36T 20DP 14.5PA 500 Hex Bore, 4140 Steel, Plated	am-4709	2	
Bearing, 1/2" Hex Bore, Heavy Duty Inner Race, FR8ZZ-HexHD	am-2986	14	
Standoff, 1/2 OD x .192 ID x 2 IN Long Steel F-F Standoff	am-1692	1	
Spacer, 500 Hex Molded 0.063 inches long	am-3948-063	2	
Spacer, 500 Hex Molded 0.125 inches long	am-3948-125	3	
Spacer, 500 Hex Molded 0.188 inches long	am-3948-188	3	
Spacer, 500 Hex Molded 0.250 inches long	am-3948-250	1	
Spacer, 500 Hex Molded 0.375 inches long	am-3948-375	4	
Spacer, 500 Hex Molded 0.500 inches long	am-3948-500	2	

Washer, Fender #10 x 3/4	am-1523	3	
Screw, BHCS, 10-32 x 500, Zinc, Patched	am-1676	2	
Collar Clamp, HD, 500 Hex, 1 part, Silver	am-1526	7	
Screw, SHCS, 10-32 x 750	am-1047	2	
Screw, SHCS, 10-32 x 500	am-1002	3	

## Assembly

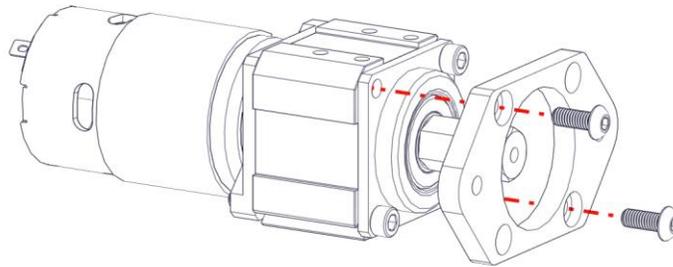
### Step 1

Begin by assembling the AndyMark sport gearbox (am-3972\_004) with Redline motor (am-3775a) using the steps in the guide linked below.



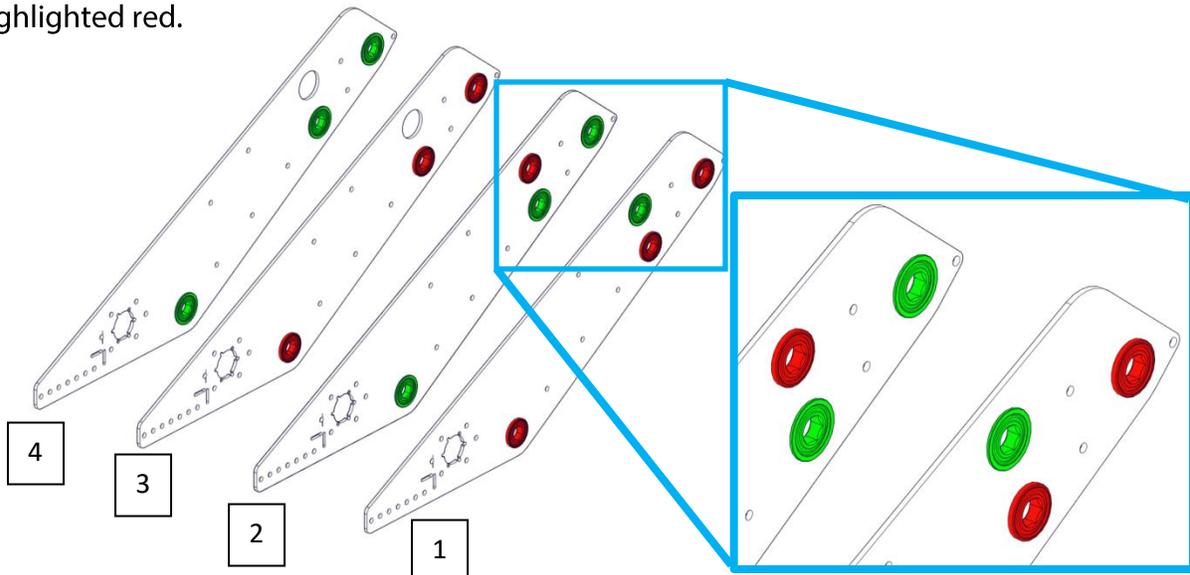
### Step 2

Attach the Sport Flange Mount (am-4132) to the completed Sport Gearbox with two 0.5" BHCS 10-32 screws (am-1676).



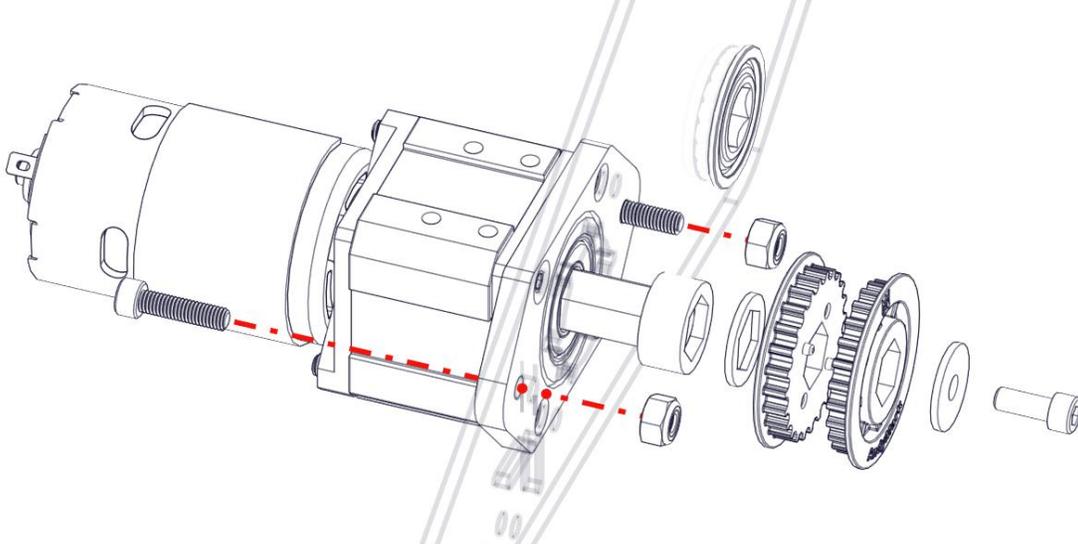
### Step 3

Setting aside the sport gearbox for a moment, press in the 14 1/2" hex bearings (am-2986) into the four intake plates (am-4938\_in-plate). Bearings with flanges facing towards the right in this view are highlighted green. Bearings with flanges facing the opposite direction are highlighted red.



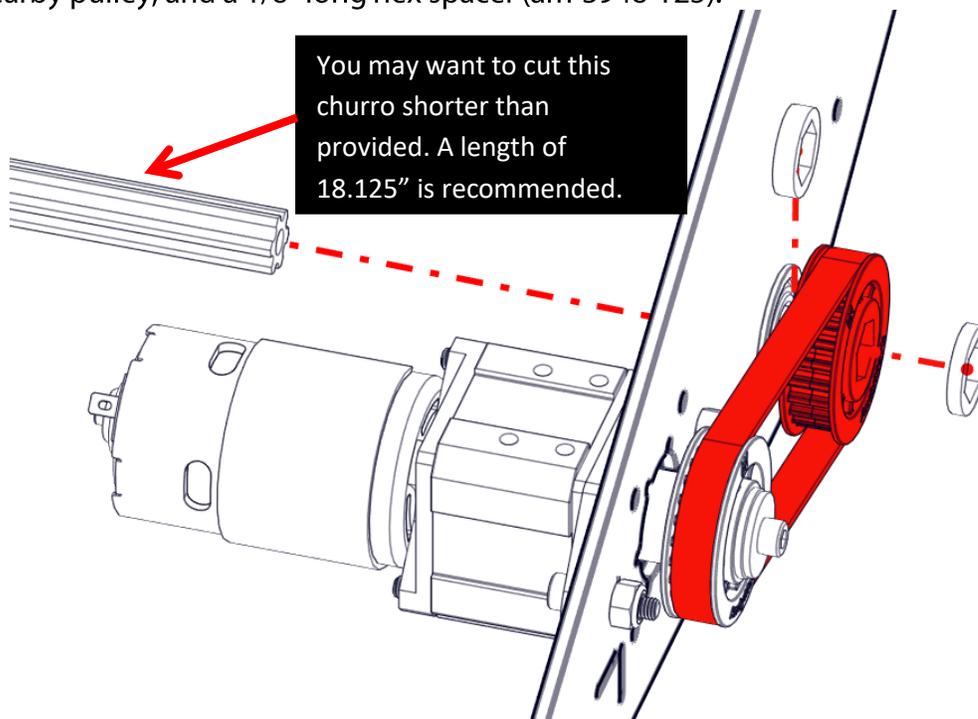
#### Step 4

Fasten the Sport Gearbox to intake plate [2] (am-4938\_in-plate) in the image in Step 3 using two  $\frac{3}{4}$ " long SHCS (am-1047) and two 10-32 nylock nuts (am-1042). Insert onto the drive shaft a  $\frac{3}{8}$ " long hex spacer (am-3948-375), a  $\frac{1}{16}$ " long hex spacer (am-3948-063), a 24T pulley (am-3403), a #10 fender washer (am-1523), and a  $\frac{1}{2}$ " 10-32 SHCS screw (am-1002).



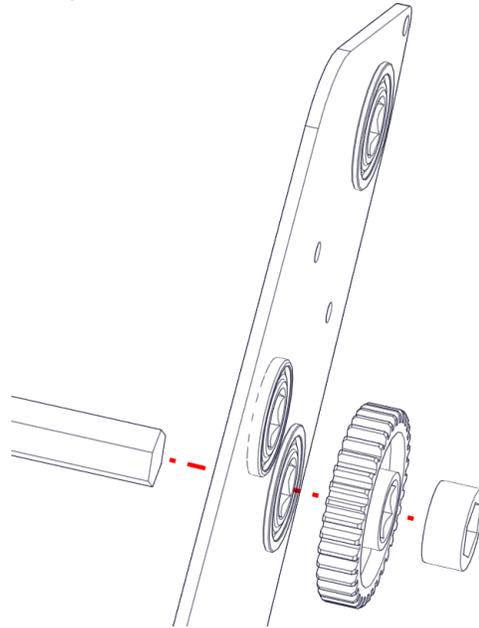
#### Step 5

Insert a  $\frac{1}{2}$ " churro (am-3101-2) through the lower hex bearing, a 0.188" long hex spacer (am-3948-188), a 24T pulley (am-3403) with a 60T timing belt (am-4902) wrapped around it and the nearby pulley, and a  $\frac{1}{8}$ " long hex spacer (am-3948-125).



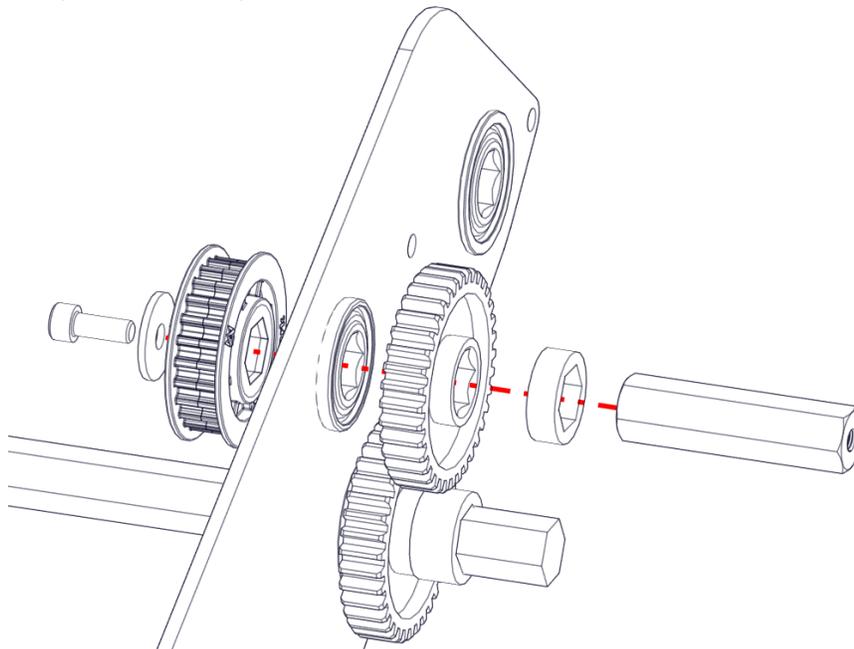
### Step 6

Cut a 1/2" hex shaft (am-2291-3) in half (each half should be roughly 18" long) and slide it through the second lowest hex bearing on the intake plate, a 36T gear (am-4709), and 3/8" long hex spacer (am-3948-375).



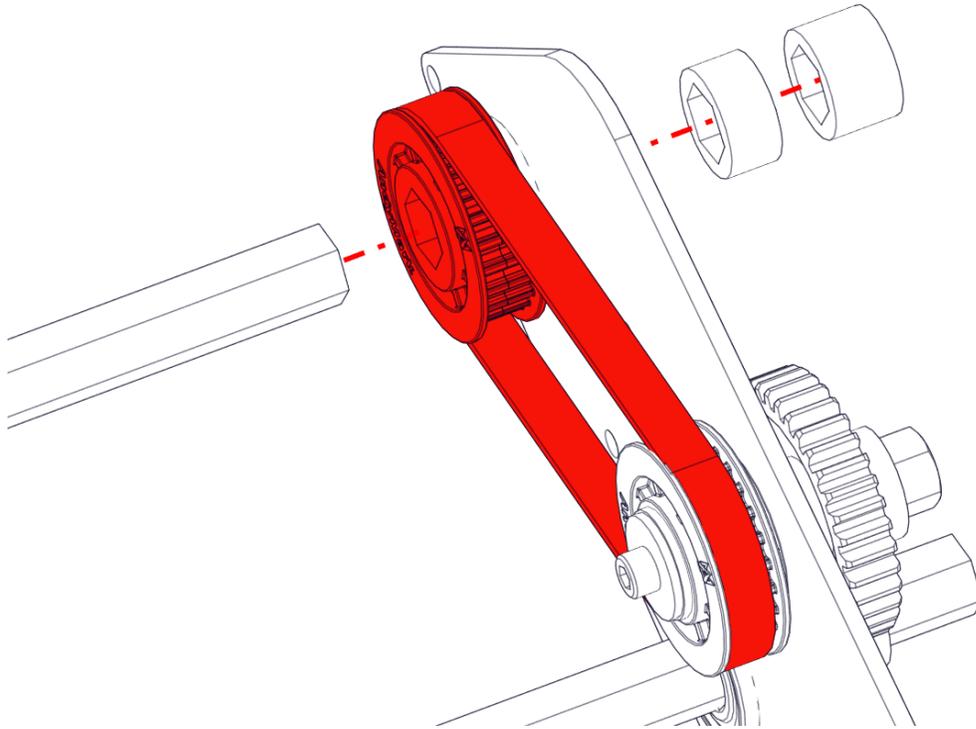
### Step 7

Insert the small 1/2" hex shaft (am-1692) into the bearing closest to the last bearing things were assembled through. Insert a 24T pulley (am-3403) captured with a #10 fender washer (am-1523), a 1/16" long hex spacer (am-3948-063), and 1/2" long 10-32 SHCS (am-1002) on the flanged side of the bearing. On the other side, slide on another 36T gear (am-4709) and 1/4" long hex spacer (am-3948-250).



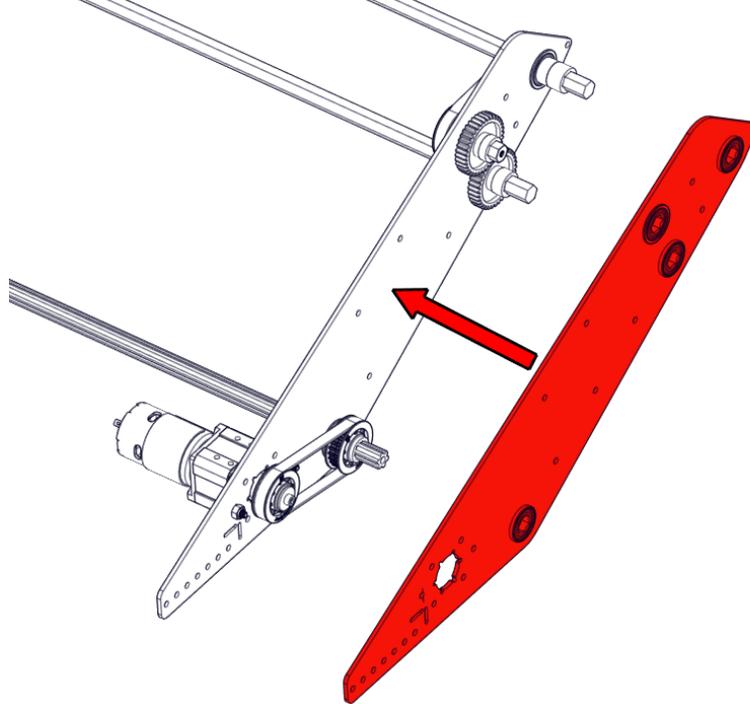
**Step 8**

Slide the second half of the hex shaft (am-2291-3) through a 24T pulley (am-3403) with a 60T timing belt (am-4902) wrapped around it and into the last 1/2" hex bearing. On the other side, slide on a 3/8" long hex spacer (am-3948-375) and a 1/2" long hex spacer (am-3948-500).



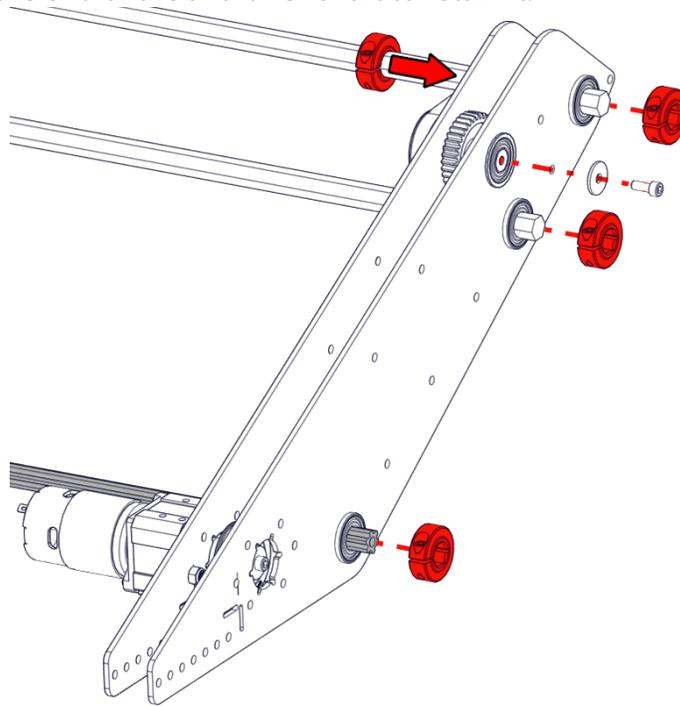
**Step 9**

Slide the rightmost plate [1] with its four installed hex bearings into place as shown.



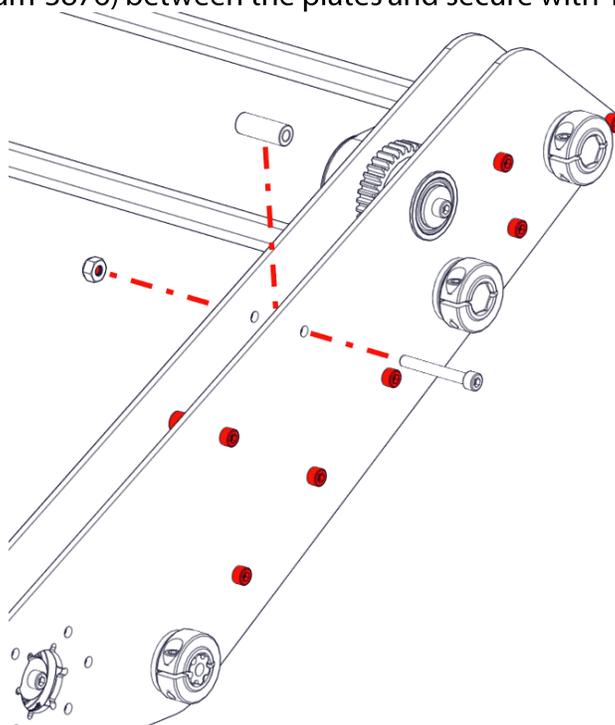
### Step 10

Place four shaft collars (am-1526) as shown onto each hex shaft. Notice that one shaft receives two collars. Additionally, place a #10 fender washer (am-1523) and a 1/2" 10-32 SHCS (am-1002) at the end of the short hex shaft to retain it.



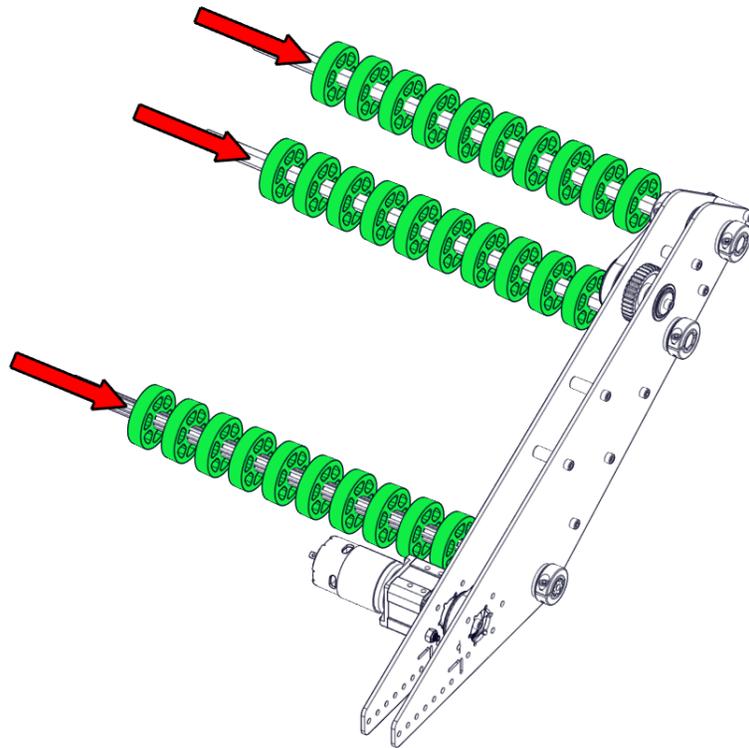
### Step 11

At the locations shown, slide eight 1.5" long 10-32 SHCS (am-1014) through the outer plate and a 1" long spacer (am-3876) between the plates and secure with 10-32 nuts (am-1042).



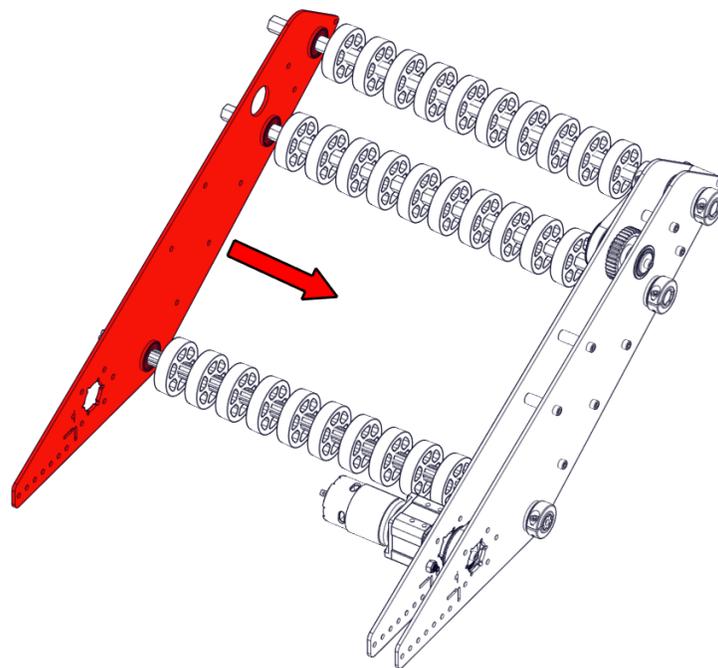
Step 12

Slide ten 2" 35A compliant wheels (am-3462\_green) onto each intake shaft with roughly equal spacing as shown.



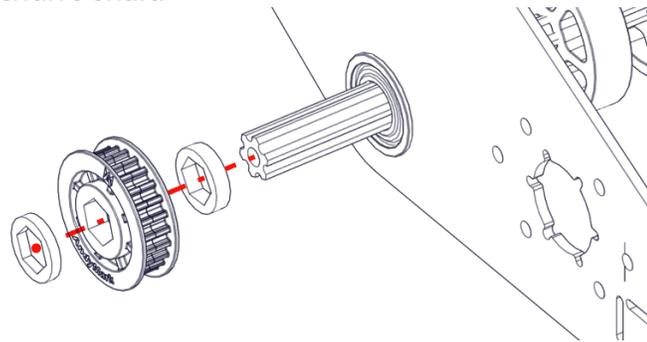
Step 13

Slide on the next intake plate [3] shown by the diagram in Step 3.



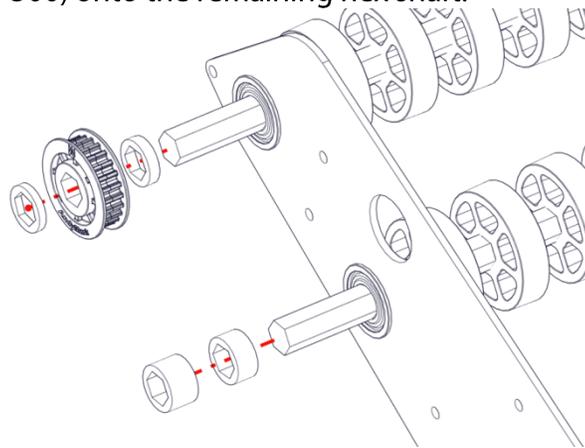
**Step 14**

Slide a 0.188" long hex spacer (am-3948-188), 24T pulley (am-3403), and 1/8" long hex spacer (am-3948-125), onto the churro shaft.



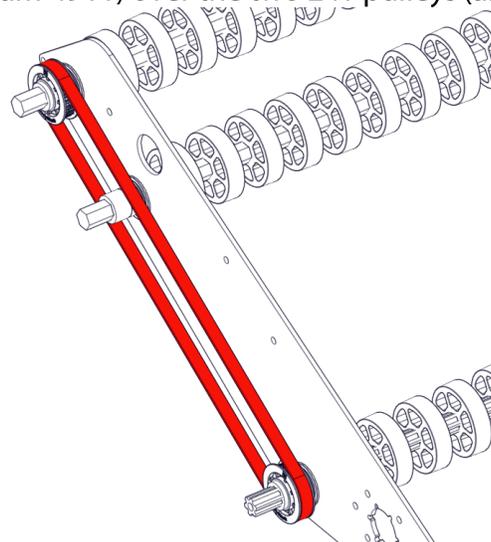
**Step 15**

Slide a 0.188" long hex spacer (am-3948-188), 24T pulley (am-3403), and 1/8" long hex spacer (am-3948-125) onto the upper hex shaft and a 3/8" long hex spacer (am-3948-375) and 1/2" long hex spacer (am-3948-500) onto the remaining hex shaft.



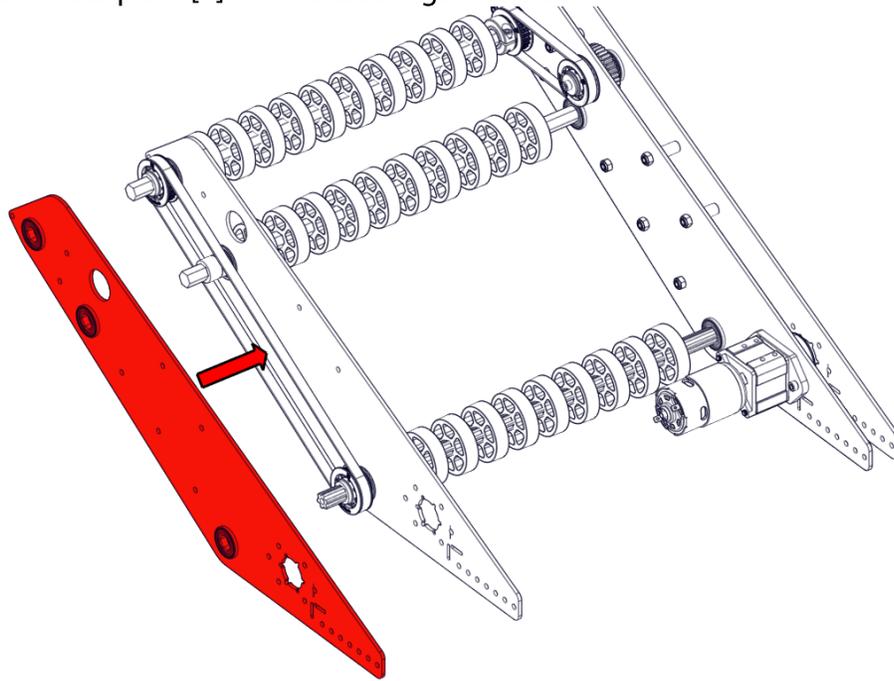
**Step 16**

Slip on the 150T timing belt (am-4911) over the two 24T pulleys (am-3403).



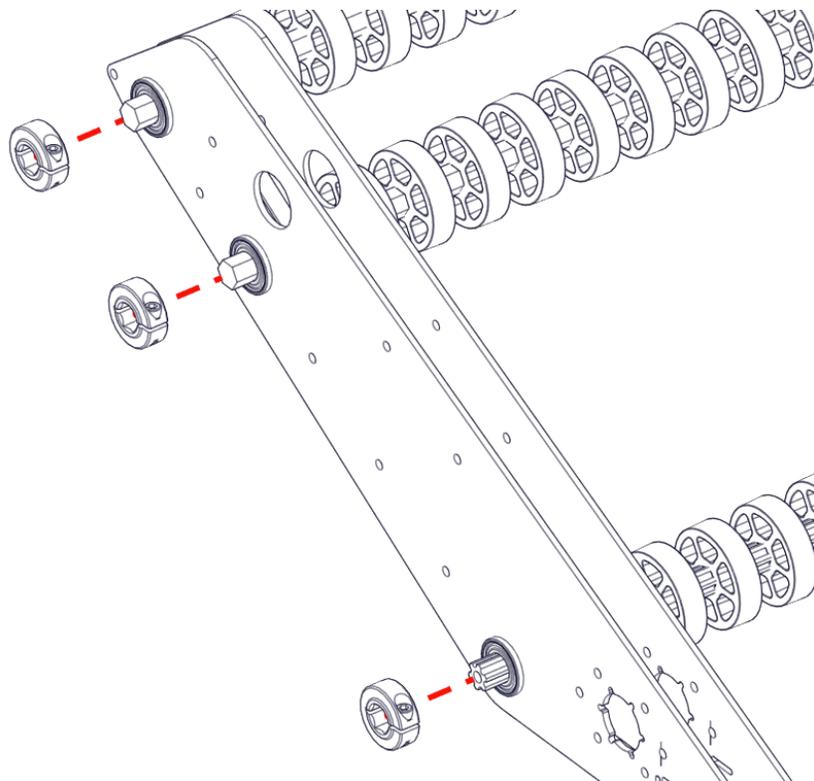
Step 17

Slide on the last intake plate [4] with its bearings installed.



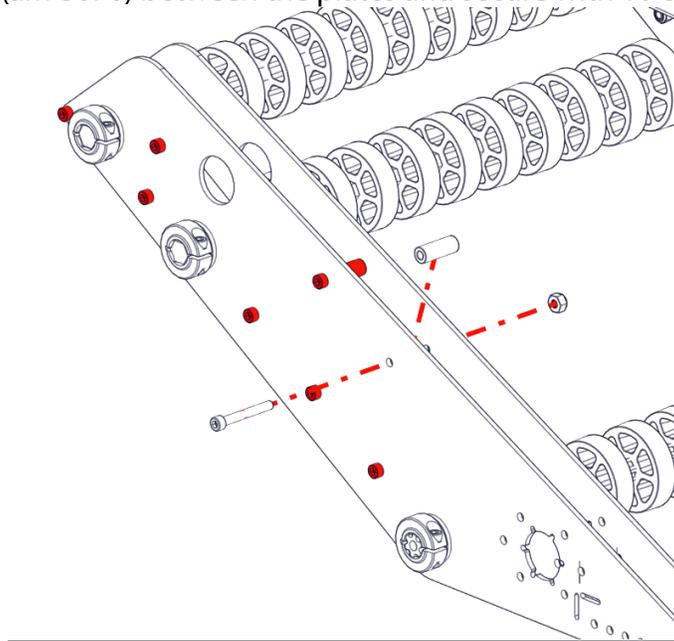
Step 18

Slide on three shaft collars (am-1526) to secure the hex shafts in place.



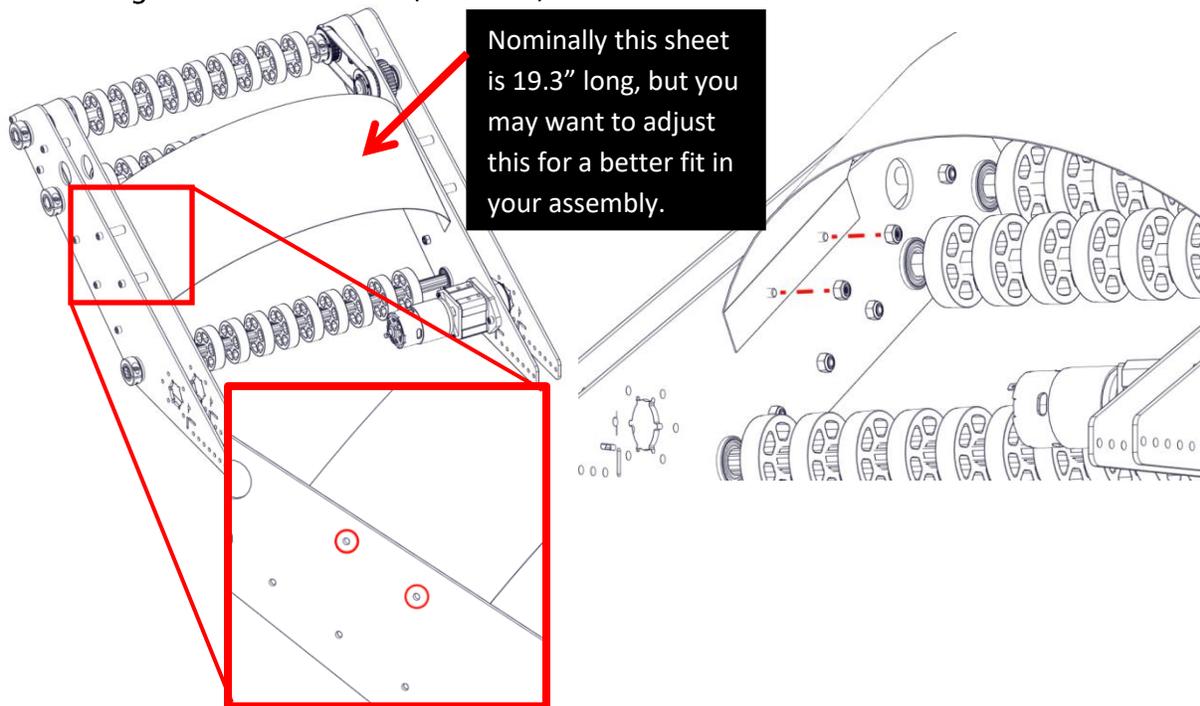
Step 19

At the locations shown, slide eight 1.5" long 10-32 SHCS (am-1014) through the outer plate and a 1" long spacer (am-3876) between the plates and secure with 10-32 nuts (am-1042).



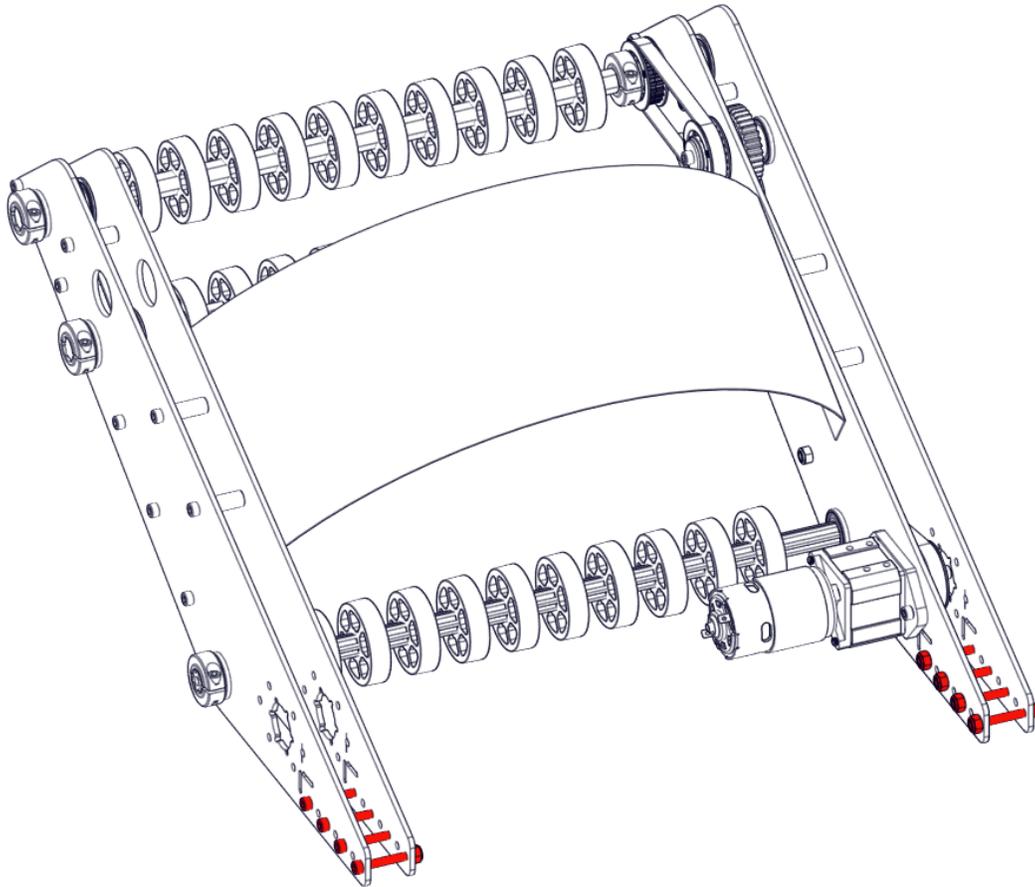
Step 20

Cut and bend the provided polycarbonate sheet (am-4938\_hood) to fit between the inner intake plates as shown. Then remove the top screws (am-1014) in the intake plates to match drill the holes in the polycarbonate sheet shown. Finally, replace the screws and hold on the sheet using the two 10-32 nuts (am-1042).



Step 21

Additional 1.5" long 10-32 screws (am-1014) and 10-32 nylock nuts (am-1042) are provided to mount the intake to the rest of the 2023 Everybot.



# Appendices

## Appendix A | 1:1 Spacer Guide

The following images are 1:1 copies of the size of each hex spacer sold by AndyMark. To determine what size spacer you have, all you need to do is hold your spacer up to each box. The box that matches that spacer's size has a corresponding label that is that spacer's length.



0.063"



0.100"



0.125"



0.188"



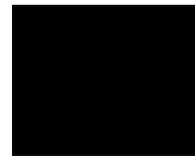
0.250"



0.375"



0.500"



1.000"



5mm Hex



3/8" Hex



1/2" Hex

