

Rhino Track Drive Module (am-3322) Assembly Instructions

Parts List

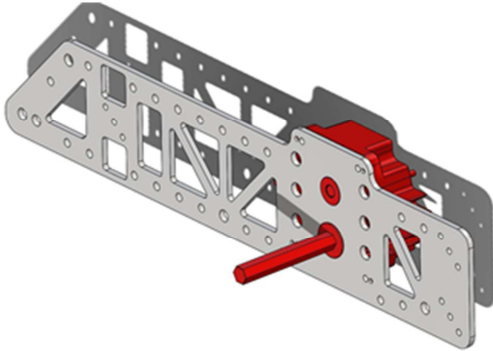
Part Number	Description	QTY
am-3318	Outside Plate	1
am-3319	Inside Plate	1
am-3320	Upper Bar	2
am-33298_half	Pulley for Timing Belt, Half, 20 tooth	8
am-0209	Bearing, 3/8" ID 1614ZZ	8
am-1266	10-24 x 1.25 thread forming screw	27
am-2234_half	Pulley for Timing Belt, Half, 42 tooth	4
am-2703	85 Tooth HTD Timing Belt	1
am-3288	65.5" Timing Belt, Blue Roughtop	1
am-2568	500EX Hub	1
am-2986	FR8ZZ-Hex 1/2" Bearing	1
am-3321	Turnbuckle	1
am-2569	Churro, 3.375" Long	10
am-1310	1/4-20 x 3/4 Thread Forming Screw	20
am-1297	3/8-16 Hex Head Screw, 4.25" long	6
am-2382	Collar Clamp, 3/8" Bore	2
am-0207a	250 Sprocket Spacer	1
am-1238	Collar Clamp, 1/2" Hex Bore	1
am-1260	#10-32 x 1.25" BHCS	6
am-1042	#10-32 Nylock Nut	6
am-1181	3/16 Thick, 0.51 id white plastic spacer	2
am-0243	1.86 Long, 0.38 id white plastic spacer	2
am-2243	0.82 Long, 0.38 id brass spacer	2
am-0441	0.985 Long, 0.38 id gray plastic spacer	2
am-1393	Washer, 3/8" id, flat	6
am-1394	Nylock Nut, 3/8-16	6

Tools Needed	Part Number
1/8" hex allen wrench	am-3172
7/64" hex allen wrench	am-3032
9/64" hex allen wrench	
3/8" wrench or socket	am-2475
5/16" Nut driver	am-2754
3/8" Nut driver	am-2755
Assembly drill	
1/2" wrench	am-2746
9/16" wrench (qty. 2)	

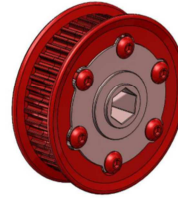
Important Notes for Assembly Preparation:

- This assembly does not include a gearbox, a bumper mounting kit, nor any motors.
- Before assembling this module, determine which gearbox will be used as an input device. For example, any of the Toughbox Mini, Sonic Shifters, or 3CIM4U gearboxes will work. This gearbox should have a 1/2" hex output shaft in order to fit with the 1/2" hex hub used in the module.
- This module is typically used on a drive train application, paired with another module. One module is assembled as a left module and the other as a right module. They will need to be assembled as mirror images of each other.
- Please see the Rhino Track Drive Module (am-3322) product page at www.andymark.com for more information such as CAD files, features, layout prints and the latest assembly instructions.

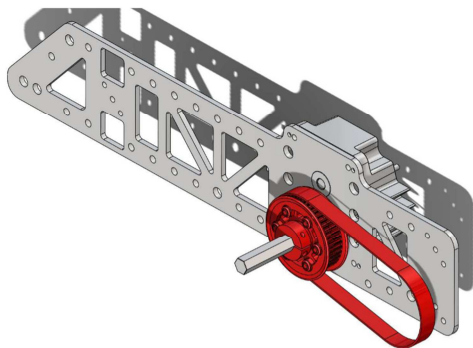
Step 1: Mount a user-supplied gearbox (not included) to the inside of the Inside Plate (am-3319). The gearbox should have a 1/2" hex output shaft in order to use the included hex hub.



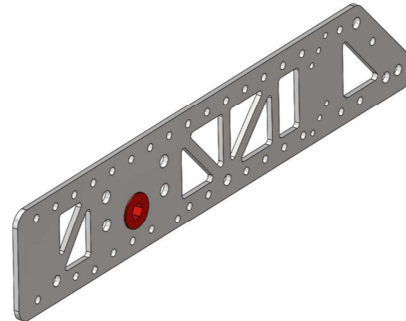
Step 2: Fit together two of the 42 tooth pulley halves (am2234_half) using the keyed tabs on the inside face. Assemble 500EX Hex Hub (am-2568) into the center of the 42 tooth pulley (am-2234). Fasten this hub and pulley assembly with 6 #10-32 BHCS (am-1260) and Nylock Nuts (am-1042), with the nuts positioned on the side opposite the aluminum hub face.



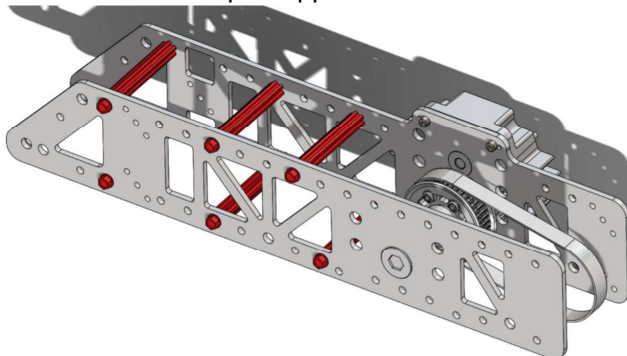
Step 3: Slide the pulley and hub assembly on the gearbox's hex output shaft with the Nylock nuts positioned facing out. Slide the 1/2" hex bore collar clamp (am-1238) on the gearbox hex output shaft, adjacent to the hex hub aluminum face. Place the 85 tooth belt (am-2703) around the 42 tooth pulley (am-2234).



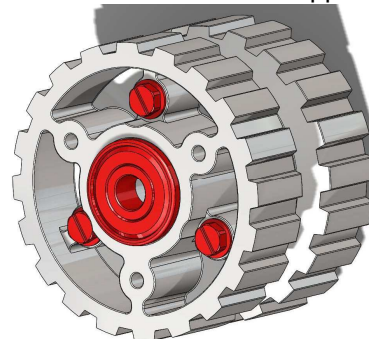
Step 4: Press the 1/2" hex flange bearing (am-2986) into the 1.125" diameter hole on the Outside Plate (am3318). Press in this bearing so the bearing flange is positioned on the inside face of the Outside Plate. This bearing should be a reasonably tight press fit. The left hand module Outside Plate is shown below.



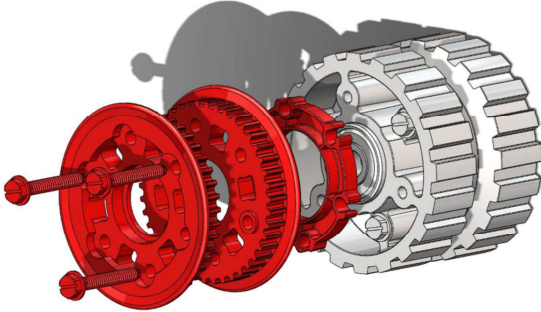
Step 5: Mount six churros (am-2569) to the Inside Plate, sticking out the same side as the gearbox output shaft, each with a 1/4-20 screw (am-1310). Mount Outside Plate to the six churros (am-2569), aligning the Outside and Inside Plate edges with the 1/4-20 thread forming screws (am-1310). Churros do not need to be pre-tapped.



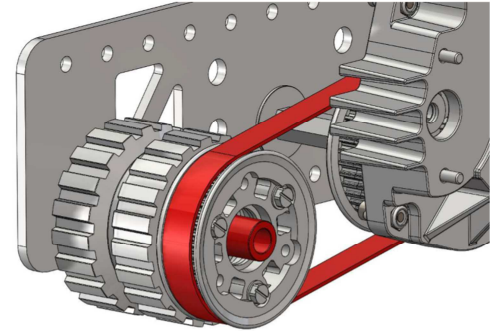
Step 6: Assemble the Wheel Pulleys (4): Place two 20 tooth black pulley halves (am-3298) together, aligning the assembly keys on the inside face. Screw in 3 of the 10-24 x 1.25" screws (am-1266) into each side of the pulley assembly, fastening 6 total. The screw heads should be recessed in the wheel and thread into the smaller holes on the opposite half.



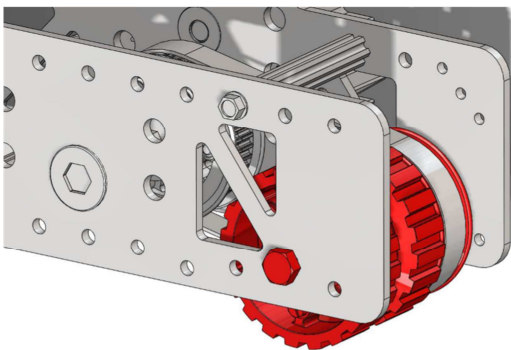
Step 7: Fit together two of the 42 tooth pulley halves (am-2234) using the keyed tabs. Place one 250 spacer (am-0207a) between the Wheel Pulley and the 42 tooth pulley (am-2234). Insert 3 screws (am1266) into the holes on the outside face of the 42 tooth pulley (am-2234) so that they align with the opposite side screws on the Wheel Pulley. These screws will thread into the body of the closest Wheel Pulley half.



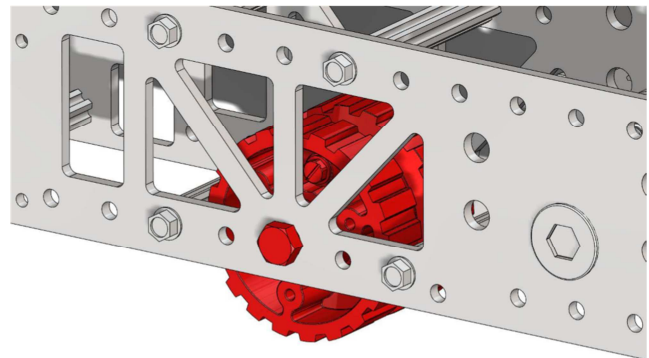
Step 8: Install back Pulley Wheel assembly (with the 42 tooth pulley assembled) by placing the gray plastic spacer (am-0441) inside the 42 tooth pulley and wrapping the 85 tooth belt (am-2703) around the 42 tooth pulley. (picture below shown without Inside Plate)



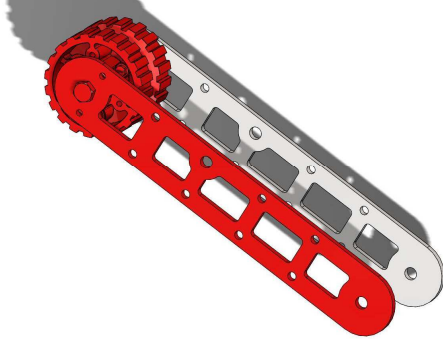
Step 9: Move the pulley into position at the 3/8" axle hole at the back of the Main Body. Insert the 3/8 axle bolt (am-1297) into 3/8 hole of Main Body, through Outside Plate, 3/8" washer (am-1393), Pulley Wheel, gray plastic spacer (am-0441), and Inside Plate. Be sure the 85 tooth timing belt is in position as this wheel is installed. Thread the 3/8-16 nut (am-1394) on 3/8" bolt, tightening until Pulley Wheel does not spin. Loosen this nut 1/2 turn so the Pulley Wheel spin freely.



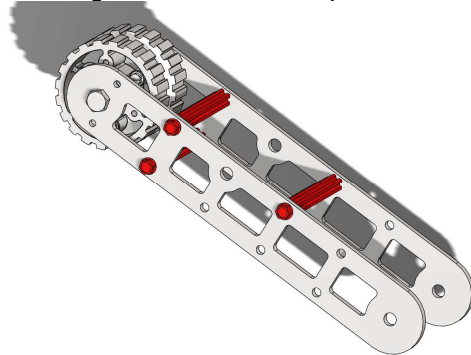
Step 10: Install middle Pulley Wheel by inserting 3/8 axle bolt (am-1297) into the middle of Main Body, through Outside Plate, 3/8" washer (am-1393), Pulley Wheel, gray plastic spacer (am-0441), and Inside Plate. Thread the 3/8-16 nut (am-1394) on end of 3/8" bolt, tightening until Pulley Wheel does not spin. Loosen this nut 1/2 turn so the Pulley Wheel spins freely.



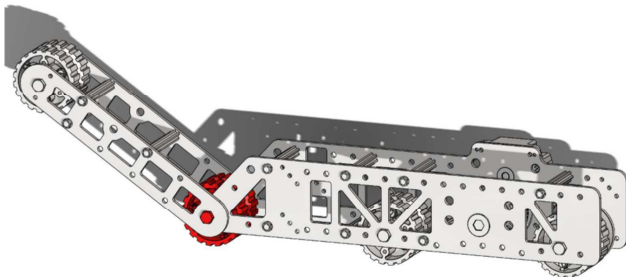
Step 11: Install 3/8" axle bolt (am-1297) through outside of Upper Plate (am-3320), through white nylon spacer (am-1181), Pulley Wheel Assembly, brass spacer (am-2243) and opposite Upper Plate. Thread the 3/8-16 nut (am-1394) on end of 3/8" bolt (am-1297), tightening until Pulley Wheel does not spin. Loosen this nut 1/2 turn so the Pulley Wheel spins freely.



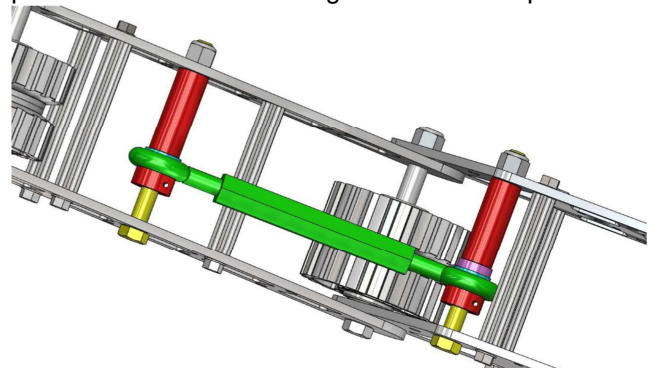
Step 12: Fasten 3 churros (am-2569) between two Upper Plates with six 1/4-20 screws (am-1310). Two churros mount behind the Pulley Wheel. One churro is placed in the middle of the Upper Plate. 3/8" dia. holes are aligned as seen in the picture.



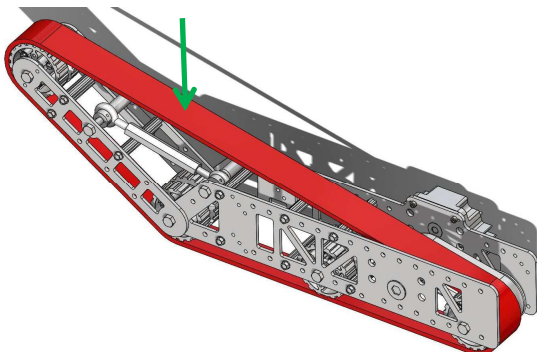
Step 13: Position Upper Arm assembly onto Main Body assembly so Upper Plates are outside of the Main Body plates, the 3/8" holes are aligned, and the Upper Arm is positioned as shown. Insert the 3/8" axle bolt (am-1297) into the 3/8" holes at this hinge, through these parts: Upper Plate, Outside Plate, 3/8" washer (am-1393), Pulley Wheel, brass spacer (am-2243), 3/8" washer (am-1393), Upper Plate, Inside Plate. Tighten the 3/8 nut (am-1394) on axle bolt. Back off the nut 1/2 turn.



Step 14: Adjust the turnbuckle (am-3321) to be short. Insert 3/8" bolts for turnbuckle mounting through non-used 3/8" holes, one on Upper Arm and one on Main Body. Install 3/8" collar clamps (am-2382), turnbuckle eye, white spacer (am-0243), and 3/8" washers (next to turnbuckle) on axle. Install 3/8-16 Nuts onto turnbuckle bolts and tighten. Position collar clamps (am-2382) on outside of eye bolt portion of turnbuckle and tighten collar clamps.



Step 15: Install blue tread timing belt (am-3288) over pulleys. Turn turnbuckle body, lengthening the turnbuckle until belt is tight. Our version of "tight" is a deflection of 3/4" with a 10kg load applied down on the belt at a location shown by the arrow below.



Step 16: Install back churro along with 2 - 1/4-20 screws.

