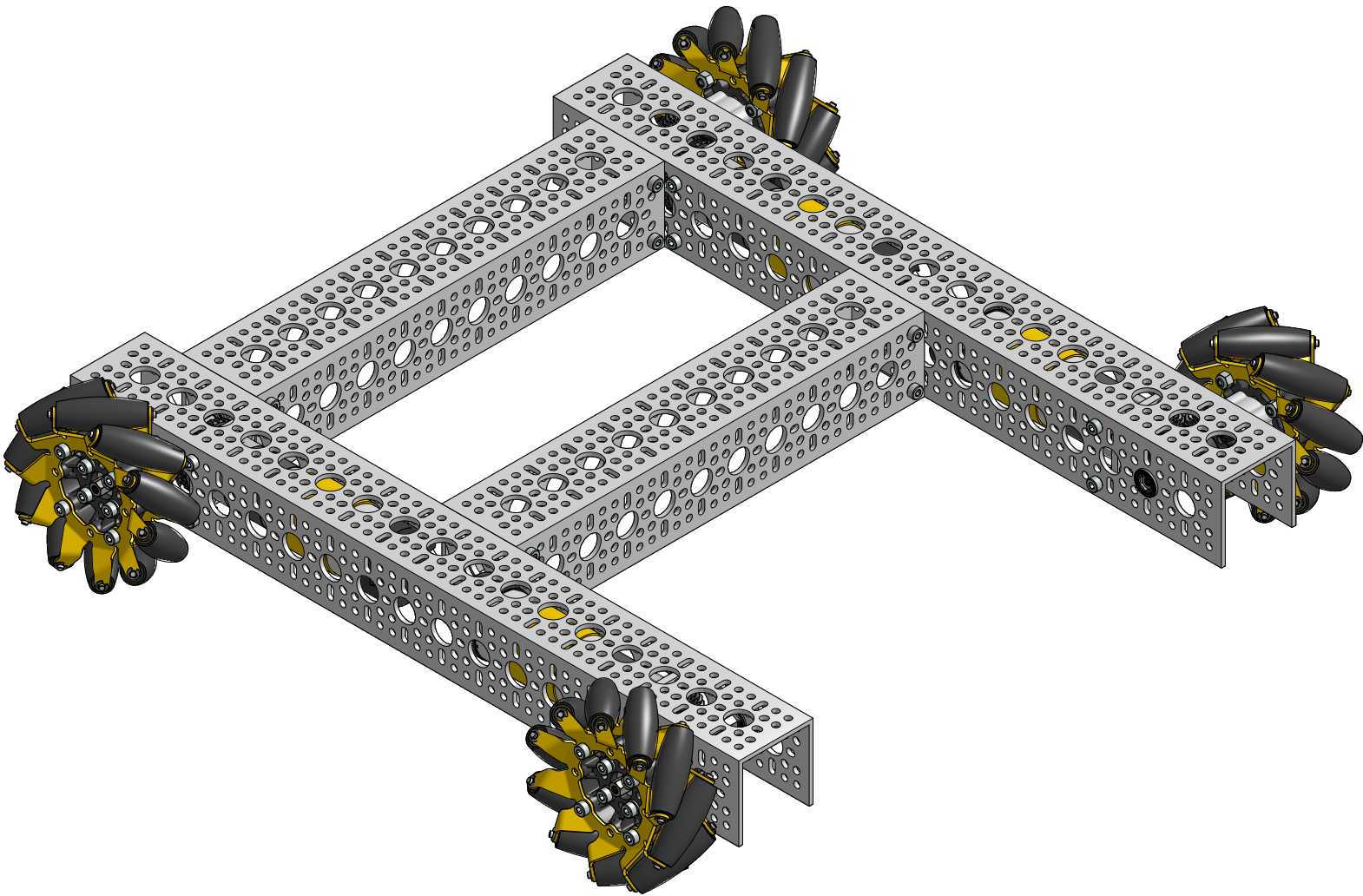
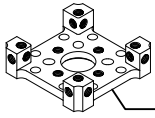


Assembly Instructions for **Strafer Chassis Kit**

SKU: 3209-0001-0003



Kit Contents:



Quad Block Mount
SKU: 1201-0043-0002
QTY: 8



Hole Reducer 1/4" ID
SKU: 2904-1025-0014
QTY: 4 (Two 2 packs)



6mm ID, 0.25mm Thick Shim
SKU: 2807-0609-0250
QTY: 12 (One 12 Pack)



Thrust Bearing 6mm ID
SKU: 1613-0514-0006
QTY: 4



4mm ID Steel Washer
SKU: 2801-0004-0008
QTY: 25 (One 25 pack)

17 Hole U-Channel
SKU: 1120-0017-0432
QTY: 2



Thrust Bearing 8mm ID
SKU: 1613-0516-0008
QTY: 4

10 Hole U-Channel
SKU: 1120-0010-0264
QTY: 2



Grommet
SKU: 2911-0014-0001
QTY: 12 (One 12 pack)



8mm REX Ball Bearing
SKU: 1611-0514-4008
QTY: 8 (Four 2 packs)

Depending on when you purchased your kit, you will receive one or the other of the below.



6mm ID, 4mm Length Spacer
SKU: 1512-0008-0040
QTY: 4 (One 4 Pack)



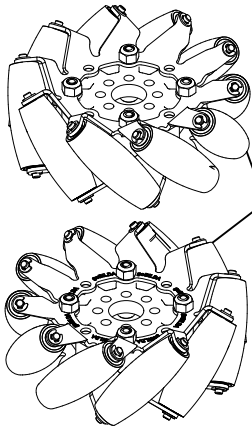
6mm Rex Bore Miter Gear
SKU: 2315-1006-0030
QTY: 4



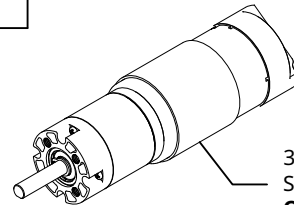
6mm ID, 1mm Thick Shim
SKU: 2807-0609-1000
QTY: 12 (One 12 Pack)



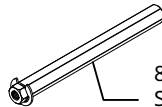
8mm Rex Bore Miter Gear
SKU: 2315-4008-0030
QTY: 4



96mm Mecanum Wheel Set
SKU: 3213-3606-0002
QTY: 4 (Two Right Slant, Two Left Slant)



312 RPM Yellow Jacket
SKU: 5202-0002-0019
QTY: 4



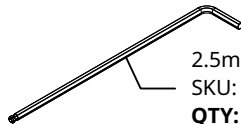
80mm Rex Shafting
SKU: 2106-4008-0800
QTY: 4



8mm REX Bore Hyper Hub
SKU: 1310-0016-4008
QTY: 4



8mm Length M4 Screw
SKU: 2800-0004-0008
QTY: 25 (One 25 pack)



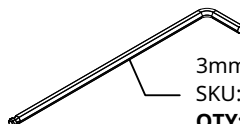
2.5mm Ball-End Hex L-Key
SKU: 4201-0090-0025
QTY: 1



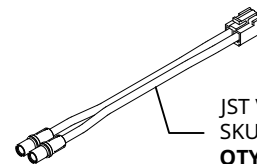
2mm Pattern Spacer
SKU: 1504-0032-0020
QTY: 4



11mm Length M4 Screw
SKU: 2800-0004-0011
QTY: 50 (Two 25 packs)



3mm Ball-End Hex L-Key
SKU: 4201-0090-0030
QTY: 1



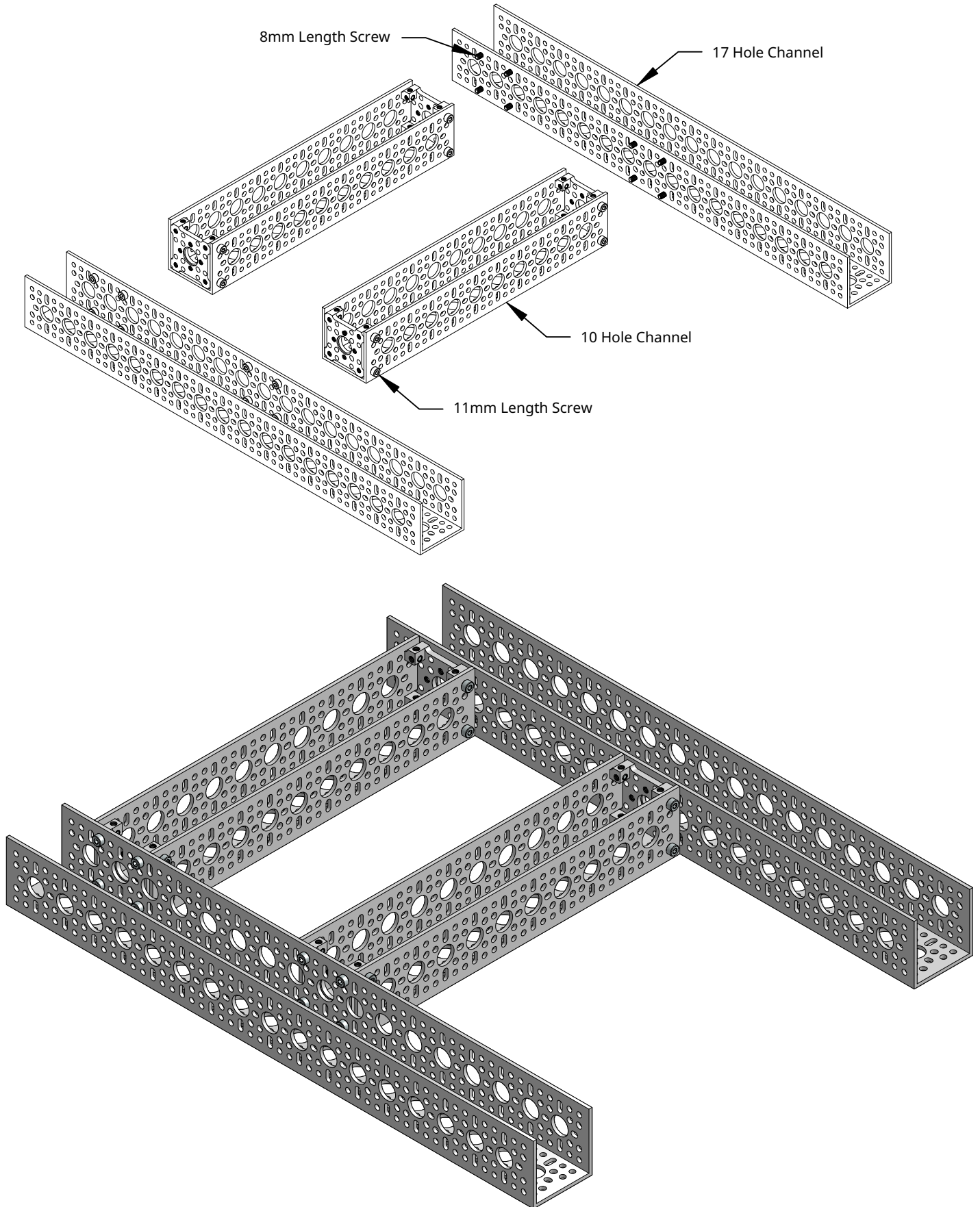
JST VH to Bullet Adaptor
SKU: 3801-0613-0100
QTY: 4



14mm Length M4 Screw
SKU: 2800-0004-0014
QTY: 50 (Two 25 packs)

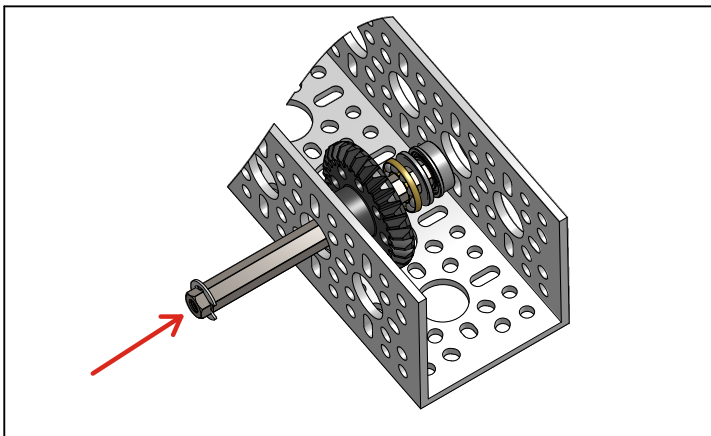
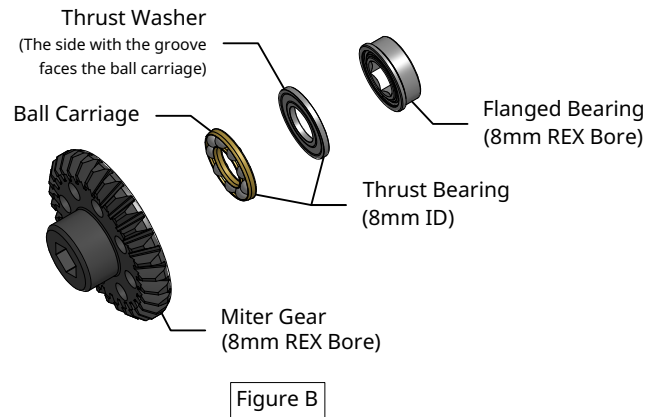
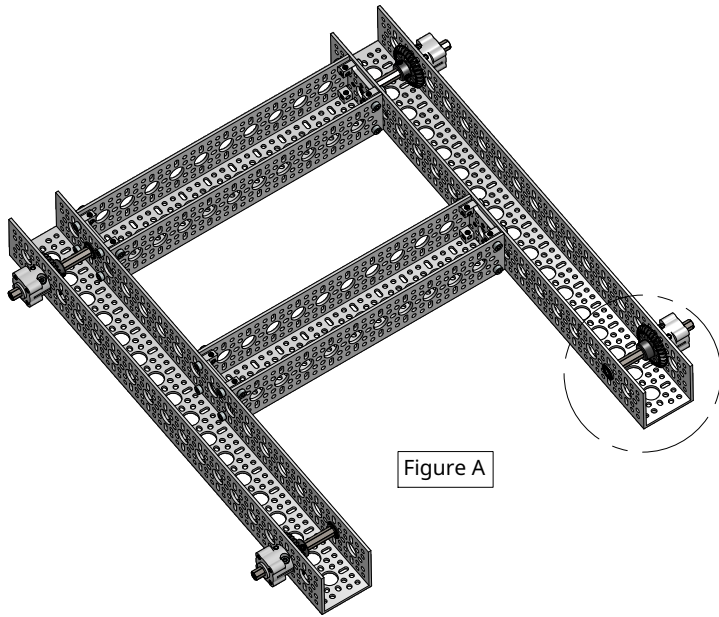
STEP 1 - Chassis Frame Assembly

Use sixteen 11mm length screws to attach four Quad Block Mounts to the ends of the two 10 Hole channels as shown. These channels will be the "crossbars" of the chassis. Then use sixteen 8mm length screws to fasten the crossbars to the 17 hole channels as shown.



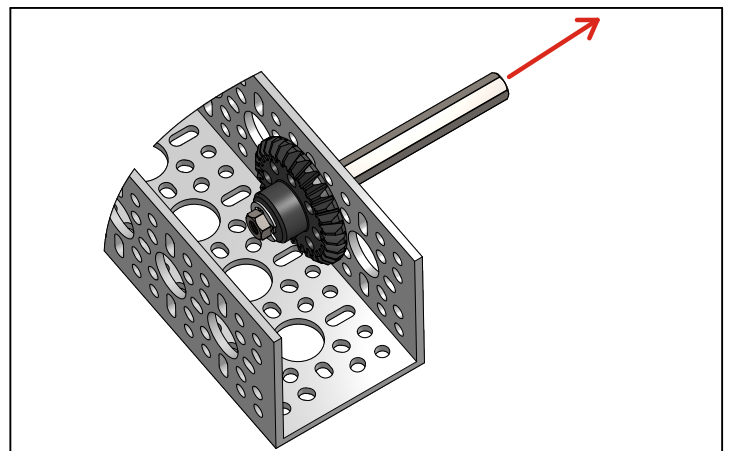
STEP 2 - Output Shaft Assemblies

When this page is complete, your chassis will look like Figure A. The sub-steps on this page show the process of assembling one output shaft in the circled area within figure A. Once you complete one output shaft assembly, repeat the process for the other three corners of the chassis.



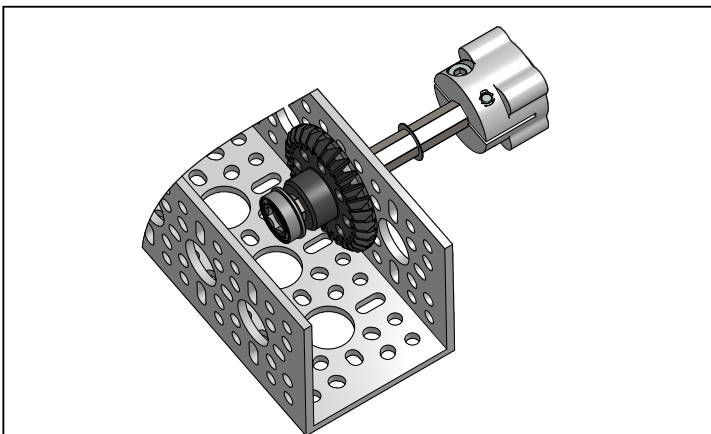
Step 2.1

Slide the shaft (non-E-clip side first) through the second hole from the end. Slide the Miter Gear, thrust bearing and flanged bearing onto the shaft. Refer to Figure B above for order & orientation of the parts. Note only one thrust washer from the thrust bearing is used.



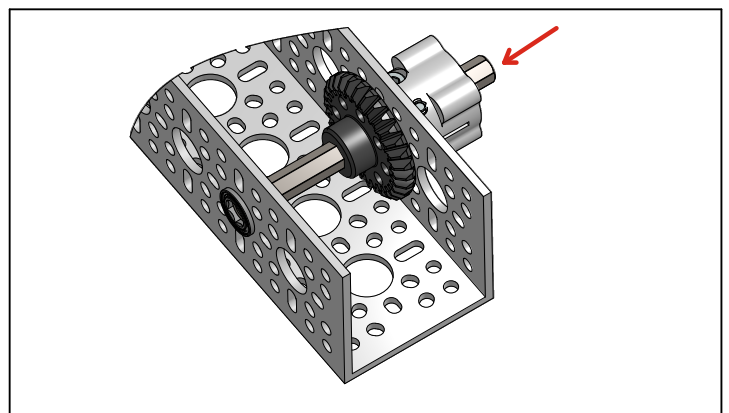
Step 2.2

Pull the shaft all the way through until the E-clip contacts the miter gear and the bearing is seated in the 14mm hole.



Step 2.3

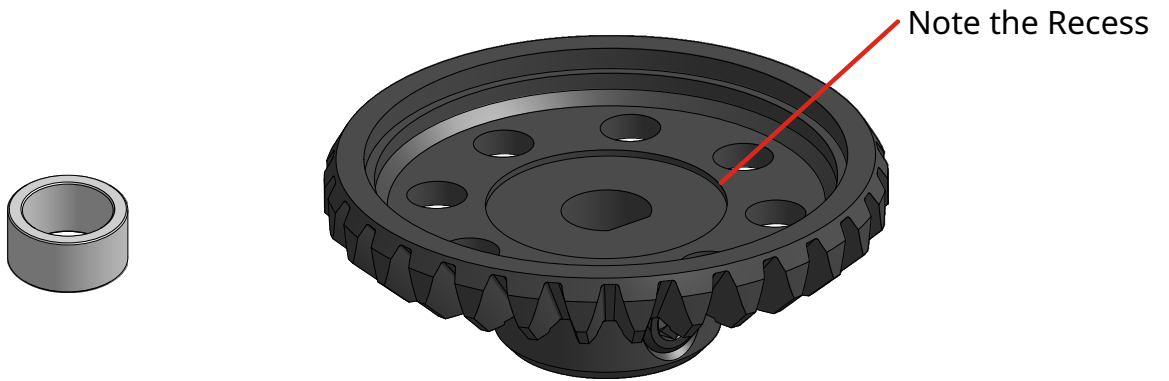
Slide a bearing (with the flange closest to the E-clip) on the end of the shaft as shown. Slide an 8mm ID shim and a hub onto the other end of the shaft as shown.



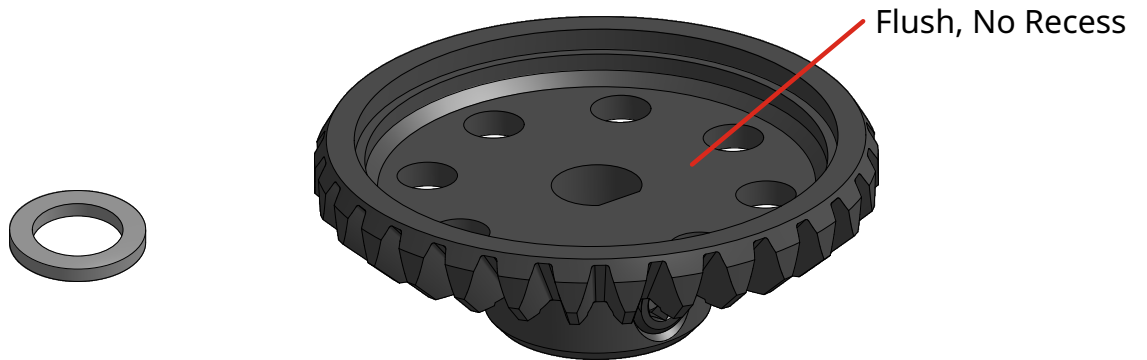
Step 2.4

While holding the miter gear in place, slide the shaft back until the bearing on the end containing the E-clip is properly seated in the channel wall. Then (still holding the miter gear) slide the hub all the way in and tighten its pinch bolts. Tighten the set-screws of the miter gear. Ensure both bearings are properly seated in their respective holes.

If your kit has 6mm ID, 4mm Length Aluminum Spacers and your 6mm D-Bore Miter Gear looks like below, go to Step 3A.

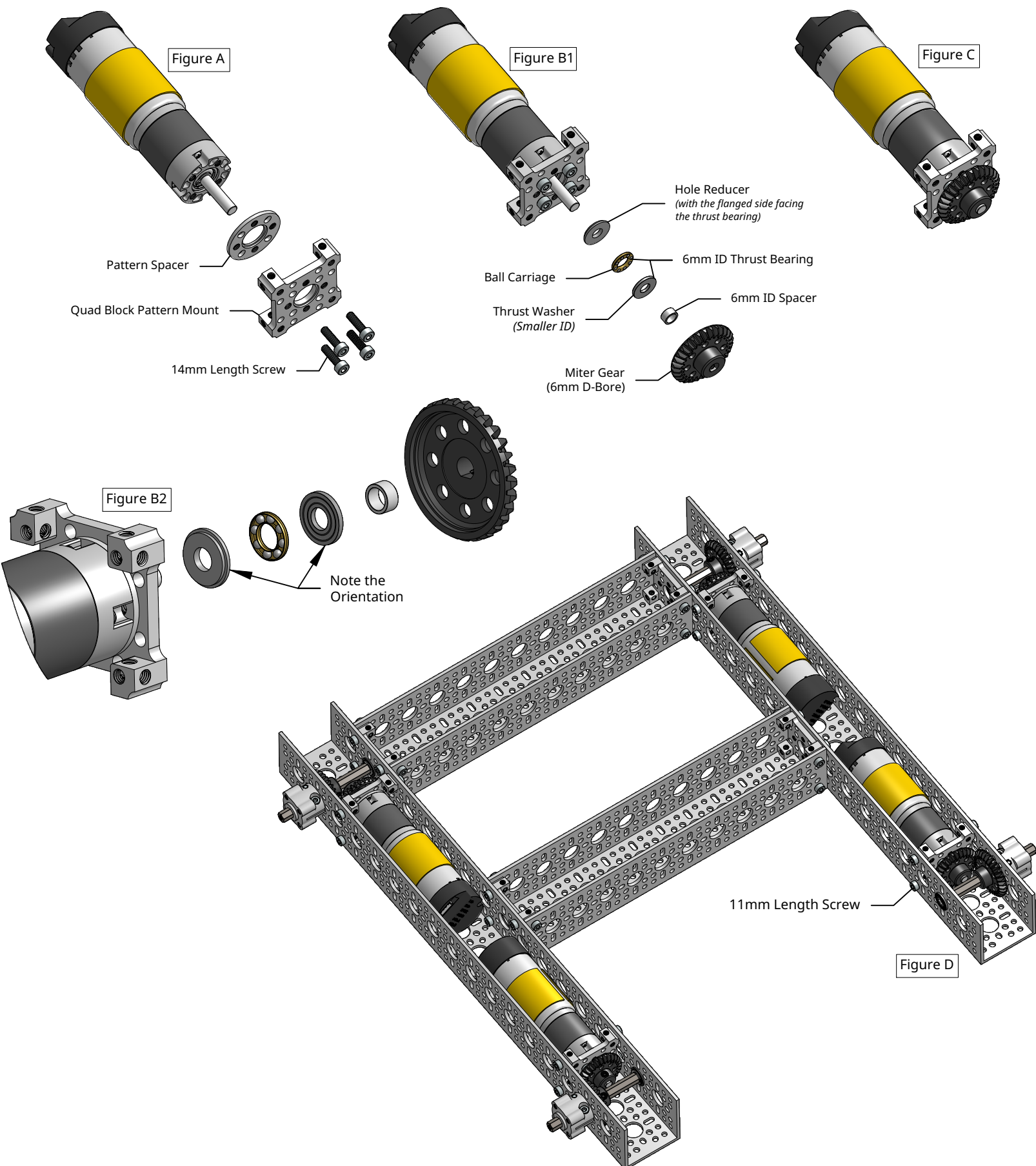


If your kit has 6mm ID, 1mm Thick Steel Shims and your 6mm D-Bore Miter Gear looks like below, go to Step 3B .



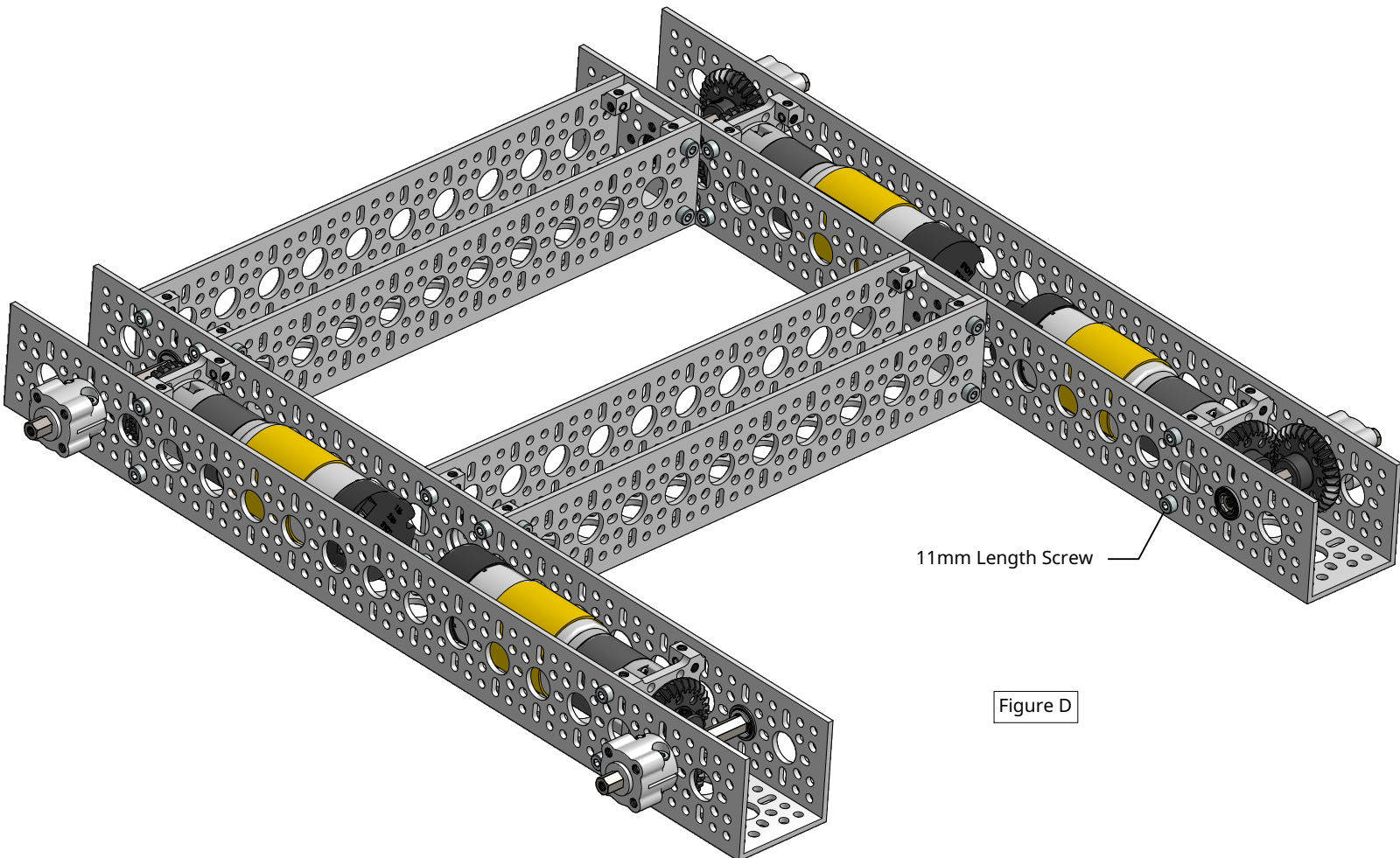
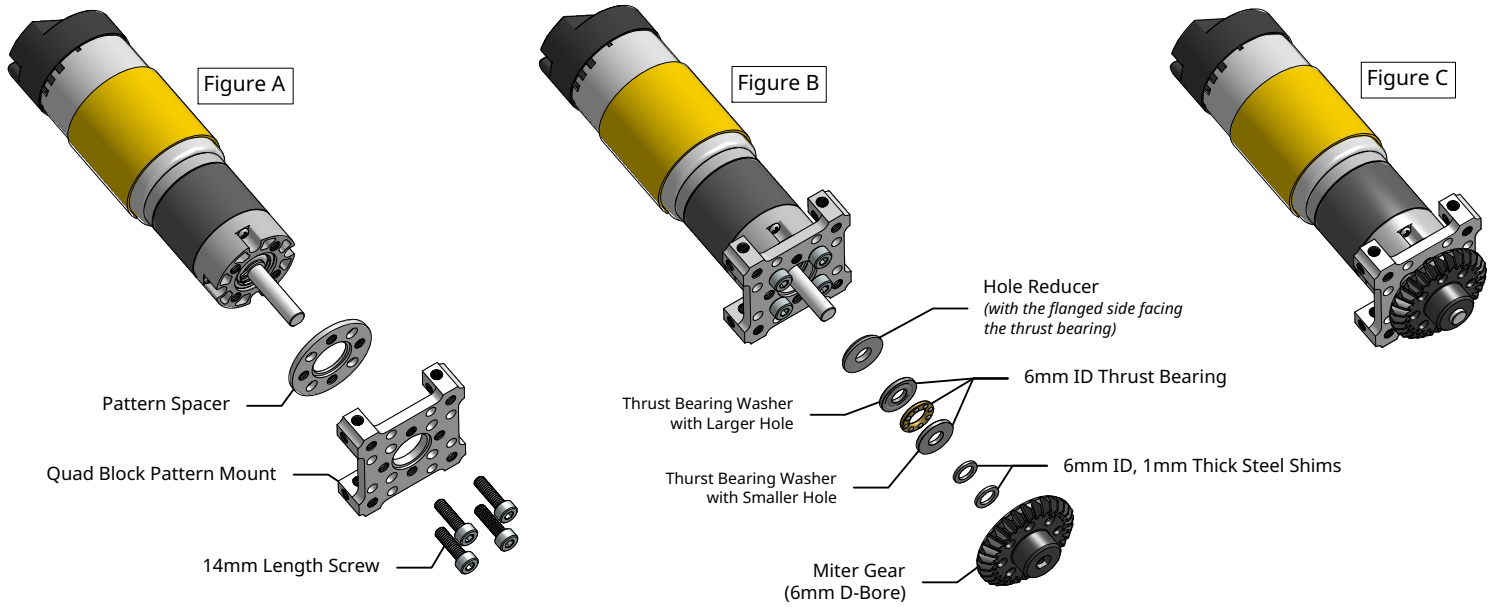
STEP 3A - Drive Motor Assemblies

When this page is complete, your chassis will look like Figure D. Create four drive motor assemblies as illustrated in Figures A-C below. Note that while the thrust bearings each come with 2 washers, we are only using one washer for each thrust bearing (the one with the slightly smaller ID). Next, using sixteen 11mm length screws, mount the drive motor assemblies into your chassis as shown in Figure C.



STEP 3B - Drive Motor Assemblies

When this page is complete, your chassis will look like Figure D. Create four drive motor assemblies as illustrated in Figures A-C below. Next, using sixteen 11mm length screws, mount the drive motor assemblies into your chassis as shown in Figure C.



STEP 4 - Wheels

The final step is to use sixteen 14mm length screws (each with a washer) to fasten the wheels to the Hyper Hubs. Note that each side of the robot gets one left slant wheel and one right slant wheel. Also note that each wheel's core has a shallow side and a deep side - the deep side will be towards the outside of the chassis (see Figure B). For ease-of-assembly and visibility, we have been looking at this chassis upside-down. Once you flip your chassis right-side-up and look down from above (Figure C), the rollers of the wheels should "point" towards the center of the chassis.

