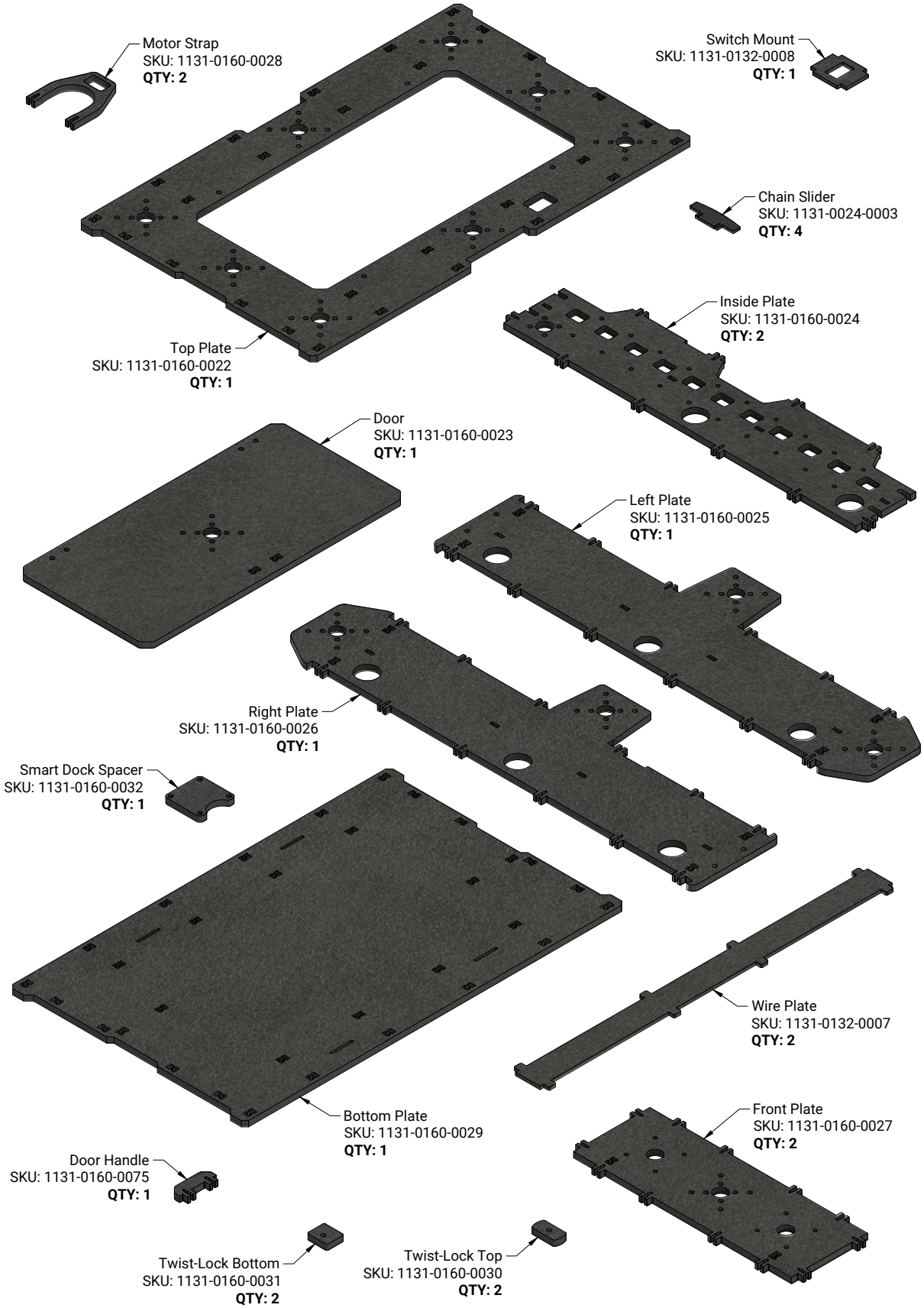
Assembly Instructions for

Overlander-6 All-Terrain Robot Platform (25lb Payload, 3.8mph)

SKU: 3209-0013-0002

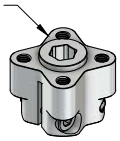
Kit Contents



Kit Contents *(Cont.)*

Wasteland Wheel
SKU: 3616-0014-0144
QTY: 6

Steel Pattern Spacer
SKU: 1531-0032-0020
QTY: 8 *(4 Packs)*



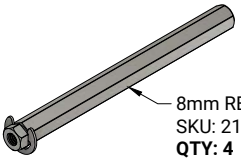
8mm REX® Hyper Hub
SKU: 1310-0016-4008
QTY: 6

8mm ID Bearing
SKU: 1627-0722-0008
QTY: 10

Saturn Planetary Gear Motor
SKU: 5304-8002-0071
QTY: 2

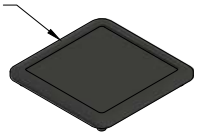
Plastic Hinge
SKU: 2902-0003-0001
QTY: 2 *(1 Pack)*

8mm REX® Bore Sprocket
SKU: 3307-4008-0010
QTY: 8

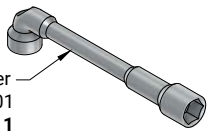


8mm REX® Shaft, 88mm Length
SKU: 2106-4008-0880
QTY: 4

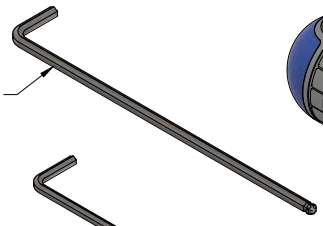
Chain Loop
SKU: 3315-0008-0052
QTY: 4



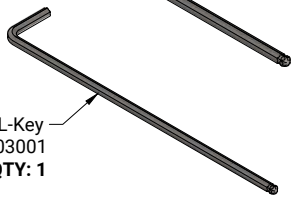
Pattern Cover Plate
SKU: 2927-0014-0001
QTY: 18 *(3 Packs)*



7mm Nut Driver
SKU: 4206-0070-0001
QTY: 1



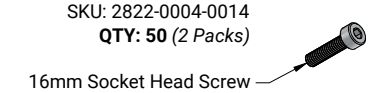
3mm Ball-End Hex-Plus L-Key
SKU: 5027104001
QTY: 1



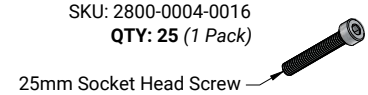
2.5mm Ball-End Hex-Plus L-Key
SKU: 5027103001
QTY: 1

2# Philips Head Screwdriver
SKU: 4208-0001-0002
QTY: 1

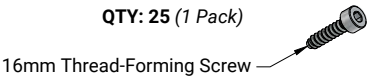
14mm Thread-Locking Screw
SKU: 2822-0004-0014
QTY: 50 *(2 Packs)*



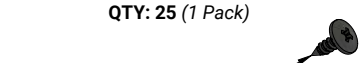
16mm Socket Head Screw
SKU: 2800-0004-0016
QTY: 25 *(1 Pack)*



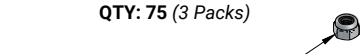
25mm Socket Head Screw
SKU: 2800-0004-0025
QTY: 25 *(1 Pack)*



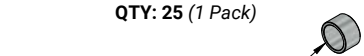
16mm Thread-Forming Screw
SKU: 2815-0004-0016
QTY: 25 *(1 Pack)*



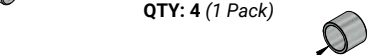
Truss-Head Screw
SKU: 2821-0008-0500
QTY: 75 *(3 Packs)*



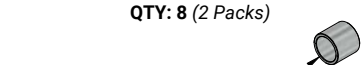
Locknut
SKU: 2812-0004-0007
QTY: 25 *(1 Pack)*



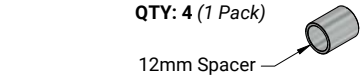
6mm Spacer
SKU: 1522-0010-0060
QTY: 4 *(1 Pack)*



8mm Spacer
SKU: 1522-0010-0080
QTY: 8 *(2 Packs)*



9mm Spacer
SKU: 1522-0010-0090
QTY: 4 *(1 Pack)*

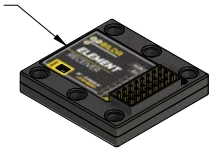


12mm Spacer
SKU: 1522-0010-0120
QTY: 12 *(3 Packs)*

Kit Contents *(Cont.)*

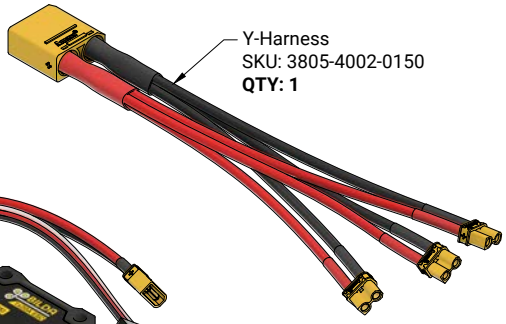
Element-6 Transmitter
SKU: 3111-2006-0001
QTY: 1

20V Smart Dock
SKU: 3104-0020-0001
QTY: 1

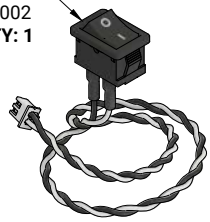


Element Receiver
SKU: 3112-0006-0001
QTY: 1

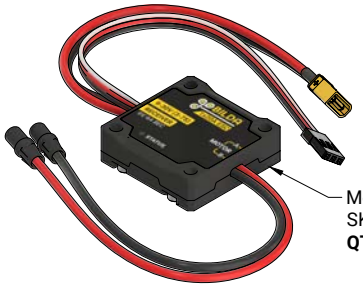
AA Battery
SKU: 3120-0150-0105
QTY: 5 *(1 Pack)*



Y-Harness
SKU: 3805-4002-0150
QTY: 1



Auxiliary Switch
SKU: 3103-0004-0002
QTY: 1



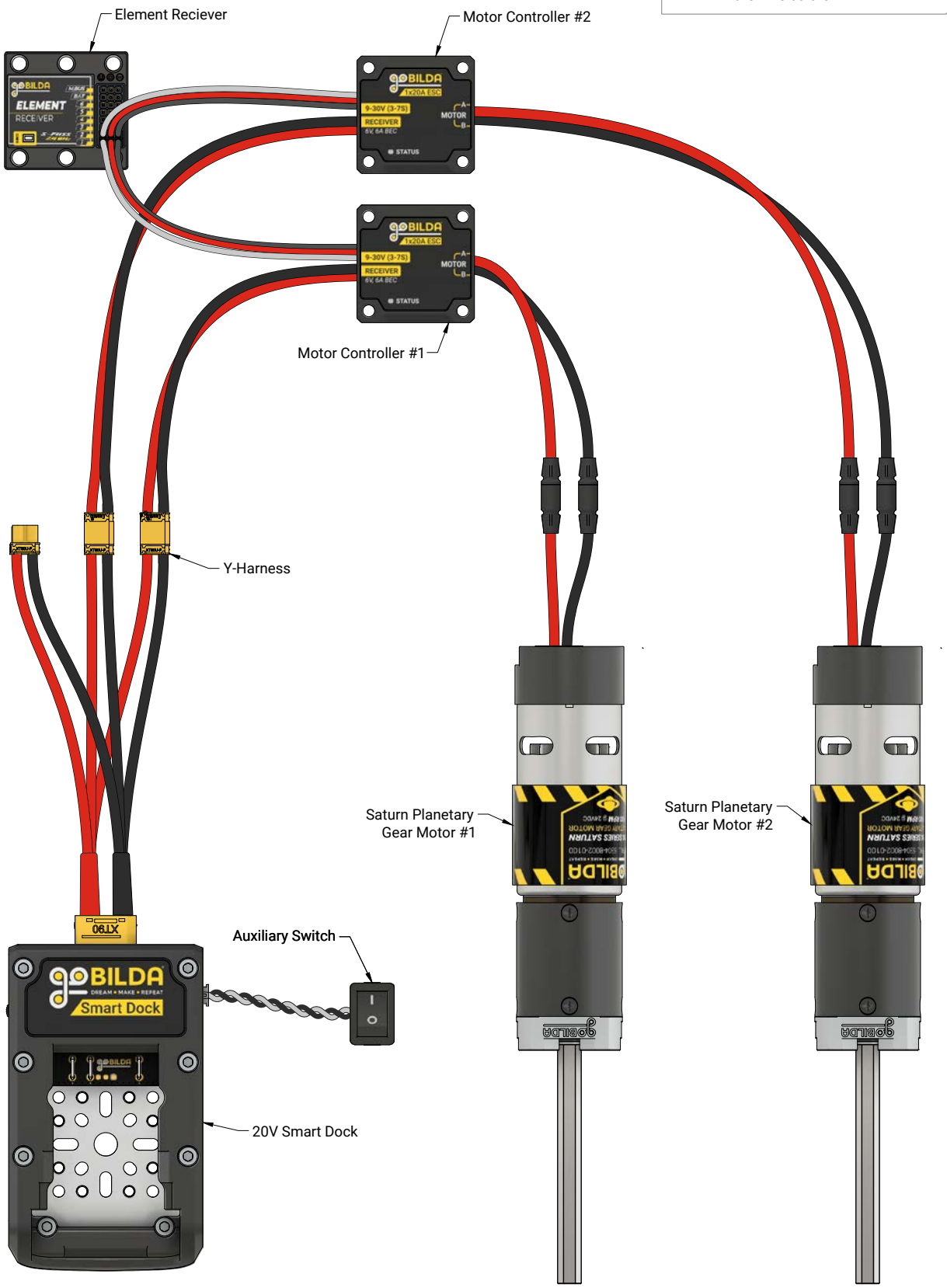
Motor Controller
SKU: 3105-0101-0020
QTY: 2

20V Battery Charger
SKU: 3101-1020-0001
QTY: 1

20V Battery
SKU: 3100-1020-0001
QTY: 1

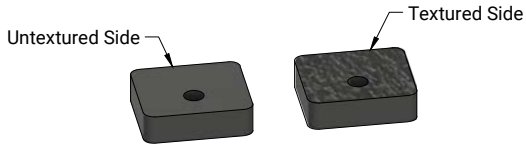
Wiring Diagram

Make sure to connect all wires according to this diagram. Note the wire colors.



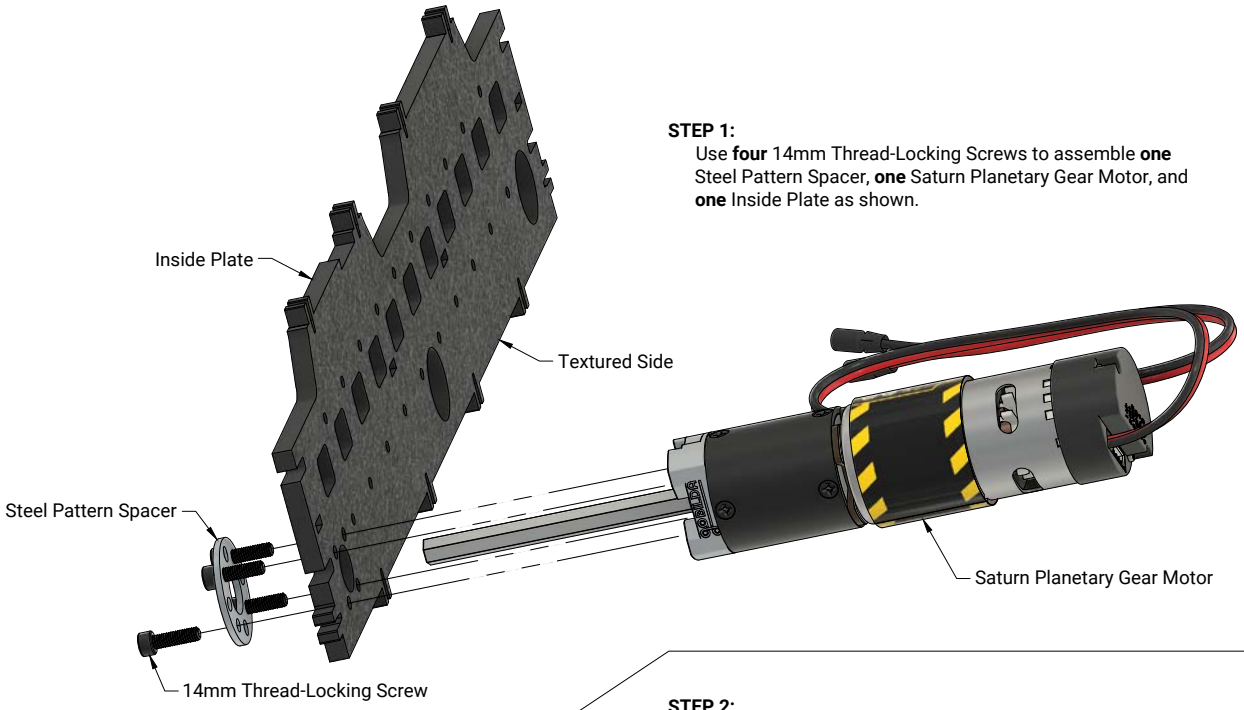
Before You Start:

When assembling with plastic plates, note the orientation of the plates' different textures and assemble as shown in each **STEP** illustration.



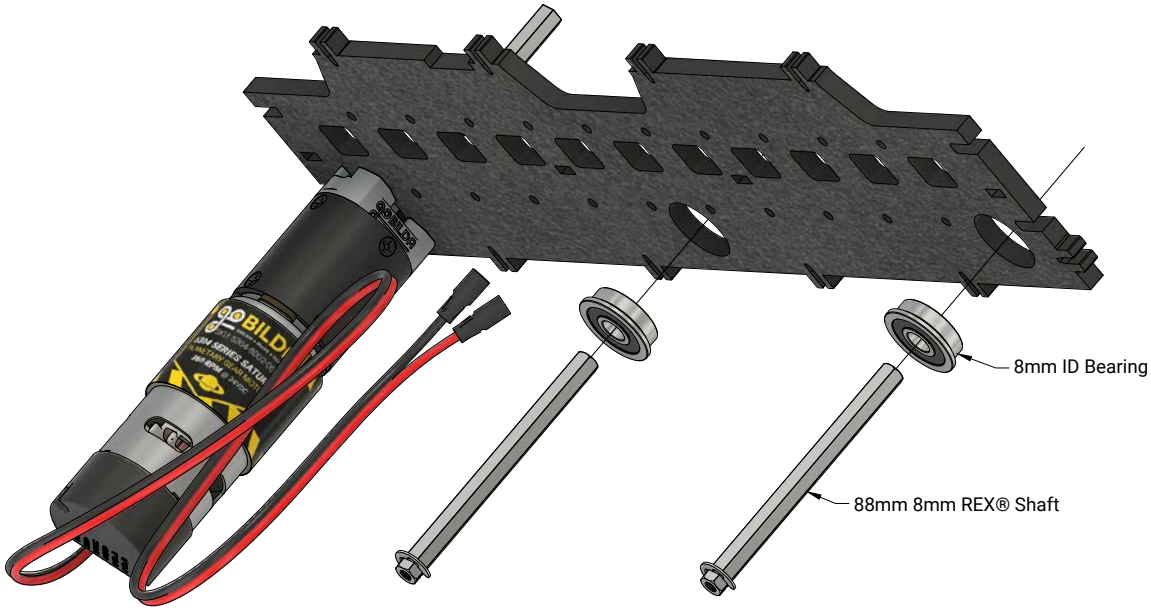
STEP 1:

Use **four** 14mm Thread-Locking Screws to assemble **one** Steel Pattern Spacer, **one** Saturn Planetary Gear Motor, and **one** Inside Plate as shown.



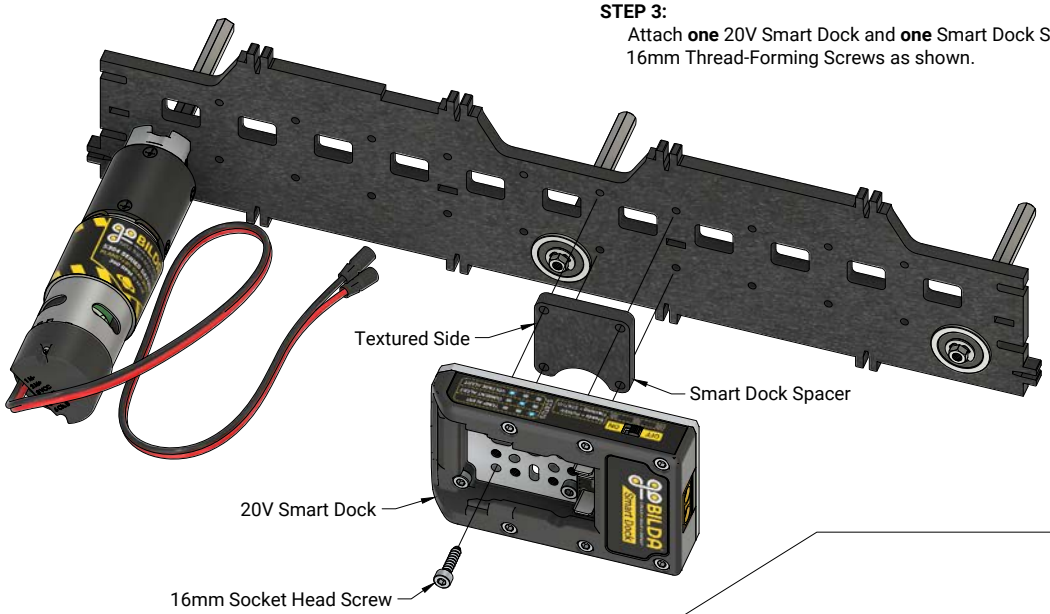
STEP 2:

Firmly press in **two** 8mm ID Bearings and insert **two** 8mm REX® Shafts into the Inside Plate as shown.



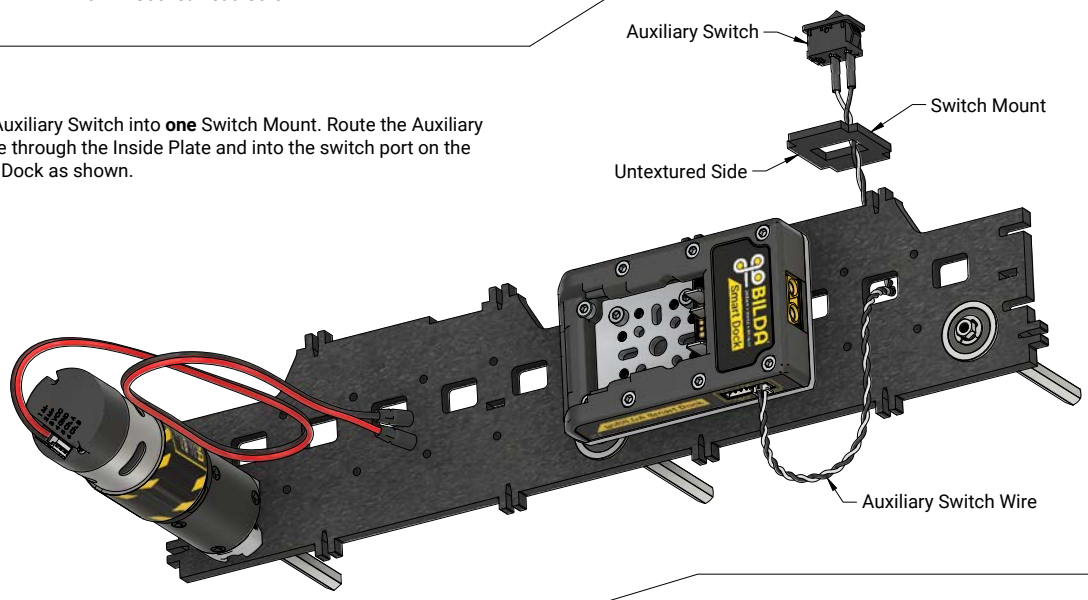
STEP 3:

Attach **one** 20V Smart Dock and **one** Smart Dock Spacer using **four** 16mm Thread-Forming Screws as shown.



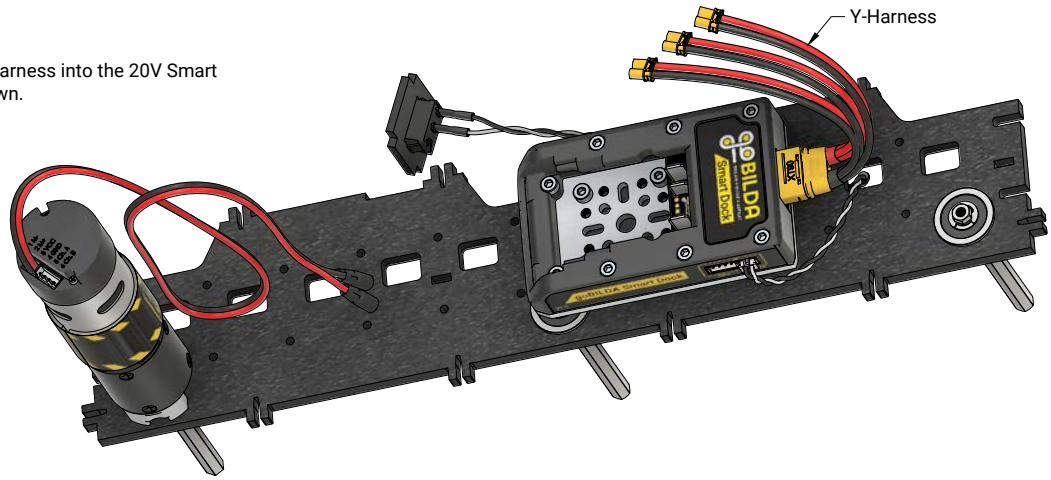
STEP 4:

Snap **one** Auxiliary Switch into **one** Switch Mount. Route the Auxiliary Switch Wire through the Inside Plate and into the switch port on the 20V Smart Dock as shown.



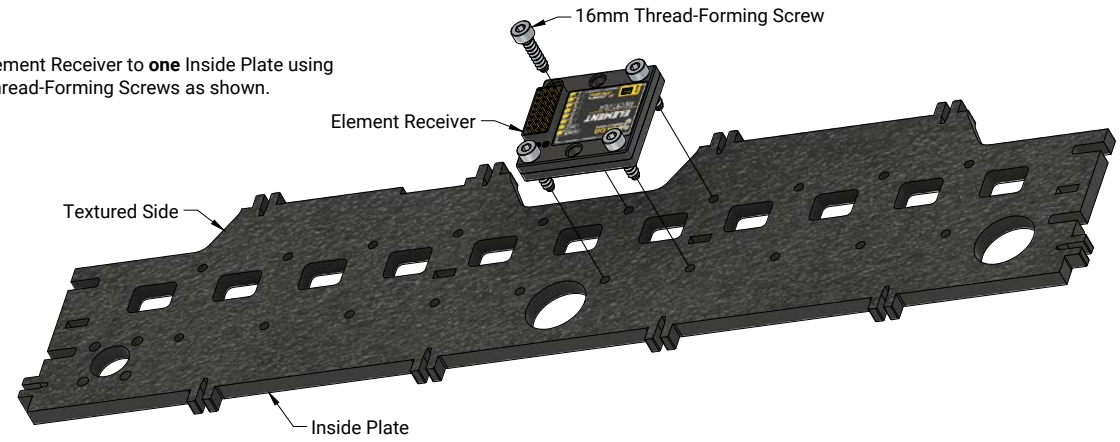
STEP 5:

Plug **one** Y-Harness into the 20V Smart Dock as shown.



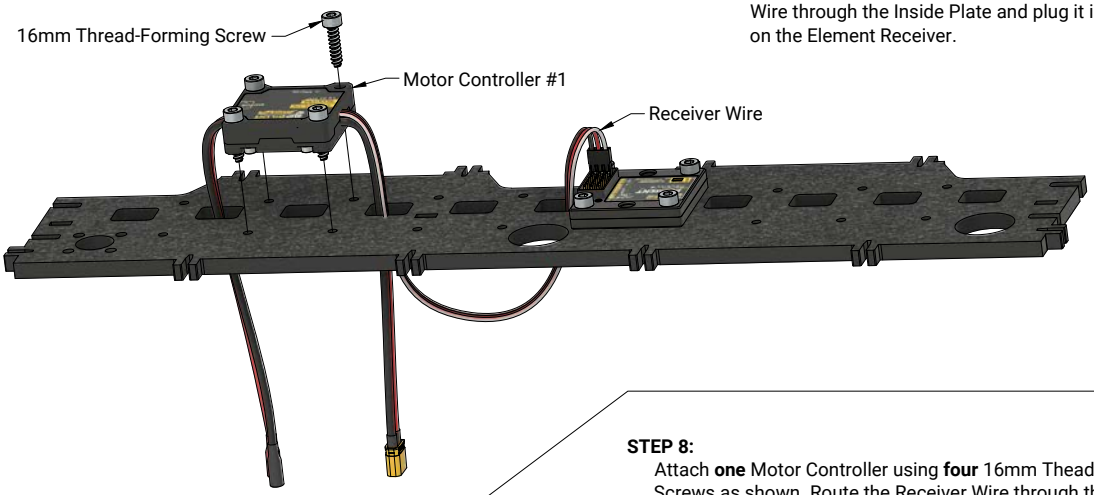
STEP 6:

Attach **one** Element Receiver to **one** Inside Plate using **four** 16mm Thread-Forming Screws as shown.



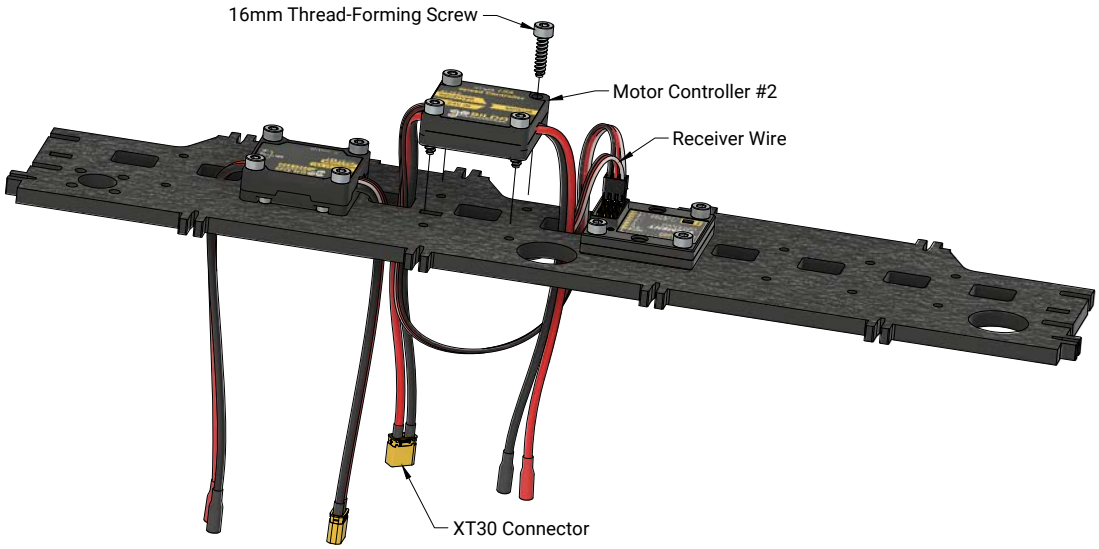
STEP 7:

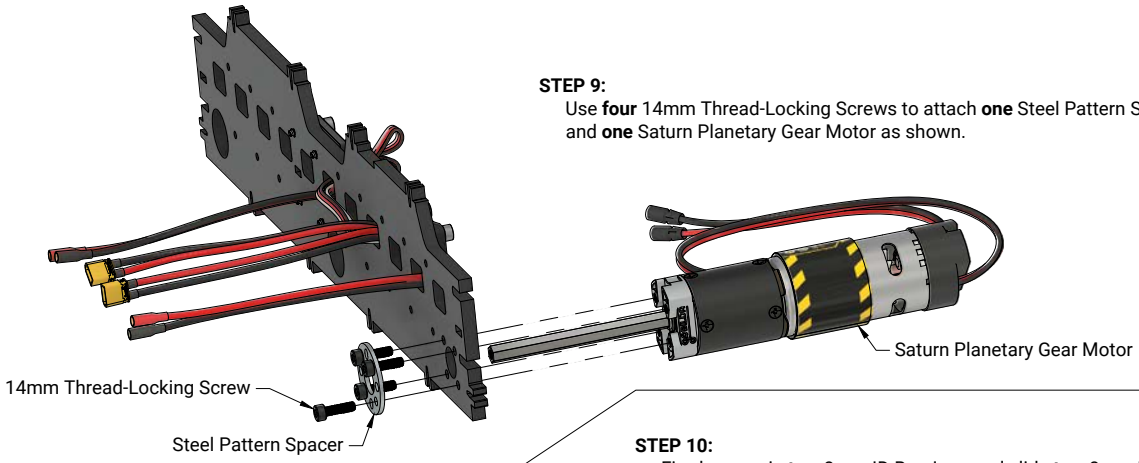
Attach **one** Motor Controller using **four** 16mm Thread-Forming Screws as shown. Route the Receiver Wire through the Inside Plate and plug it into Port #1 on the Element Receiver.



STEP 8:

Attach **one** Motor Controller using **four** 16mm Thead-Forming Screws as shown. Route the Receiver Wire through the Inside Plate and plug it into Port #2 on the Element Receiver. Note the location of the XT30 Connector.



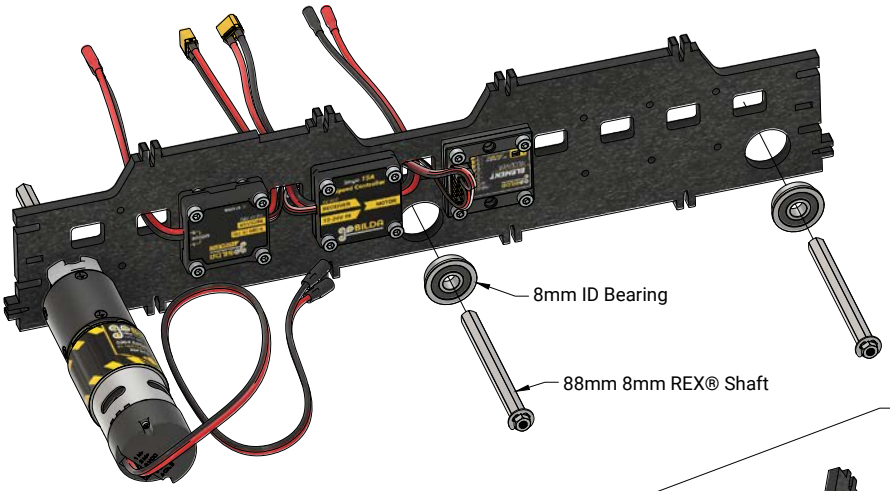


STEP 9:

Use **four** 14mm Thread-Locking Screws to attach **one** Steel Pattern Spacer and **one** Saturn Planetary Gear Motor as shown.

STEP 10:

Firmly press in **two** 8mm ID Bearings and slide **two** 8mm REX® Shafts into the Inside Plate as shown.



STEP 11:

Attach **one** Front Plate as shown. Make sure that the "prongs" of the Inside Plate fit snugly in the hole of the Front Plate when fully seated against the Inside Plate, then install **one** Truss-Head Screw as shown in **FIGURE 11-A**.

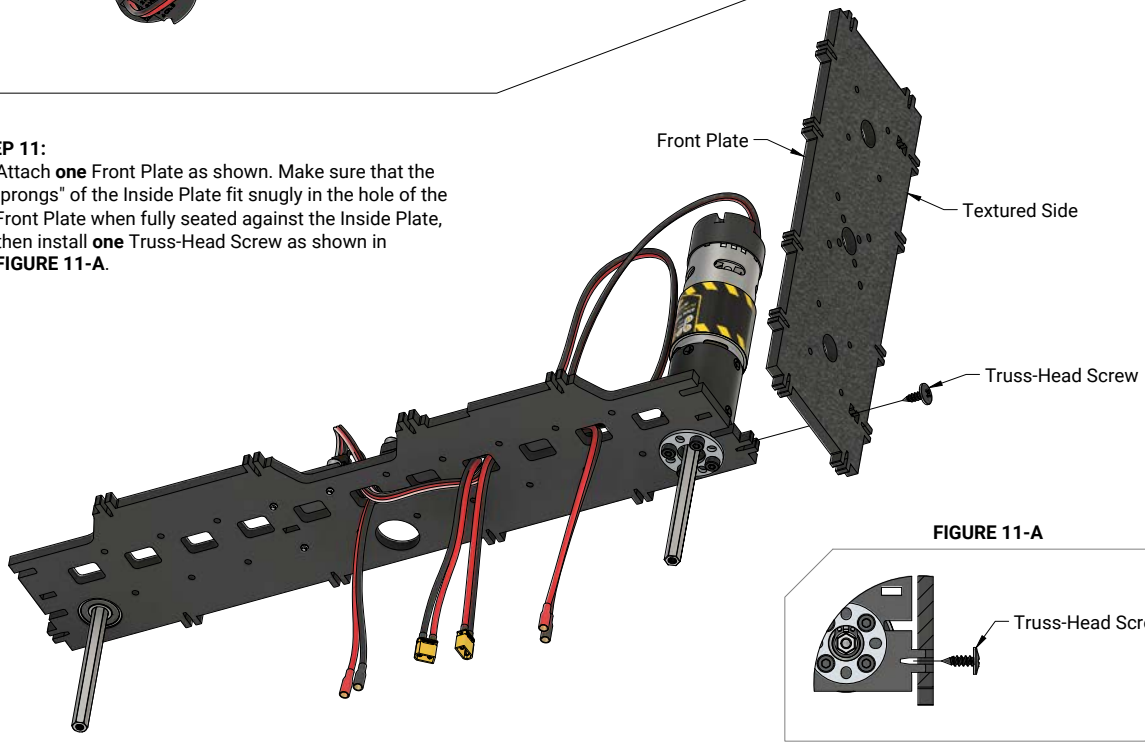
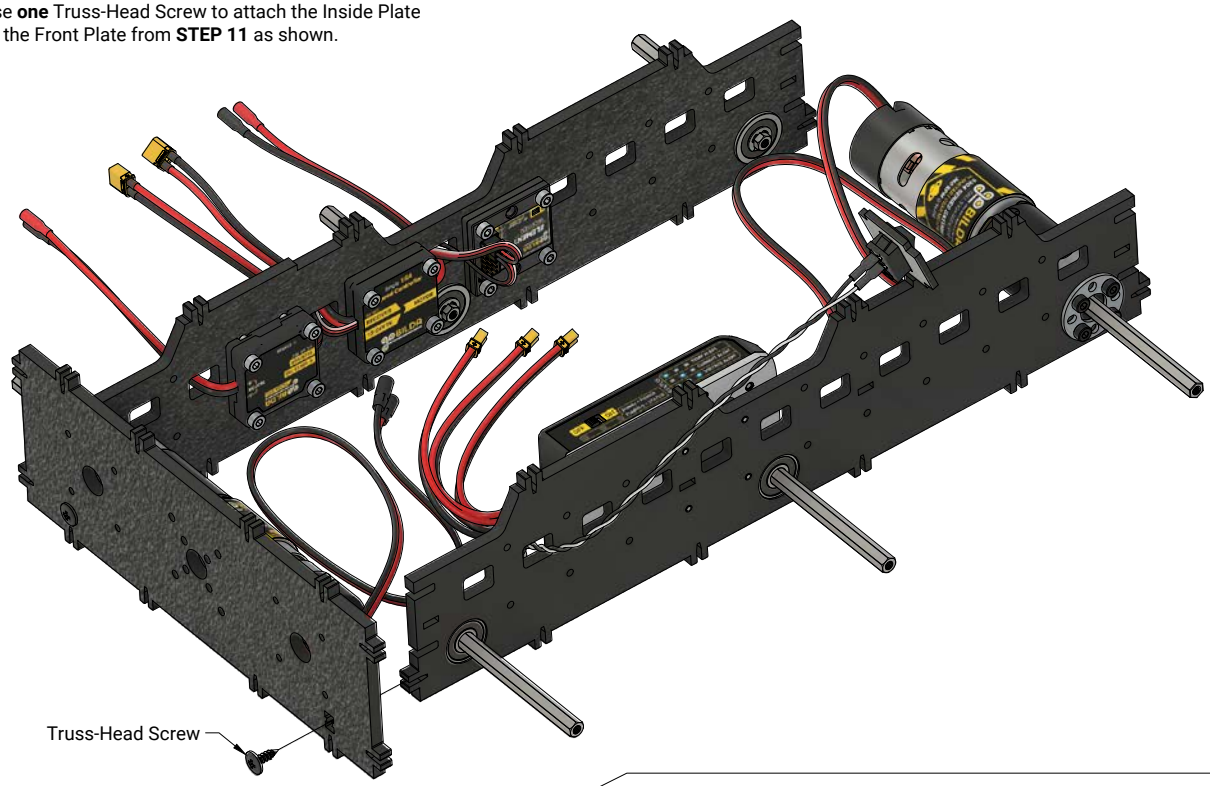


FIGURE 11-A

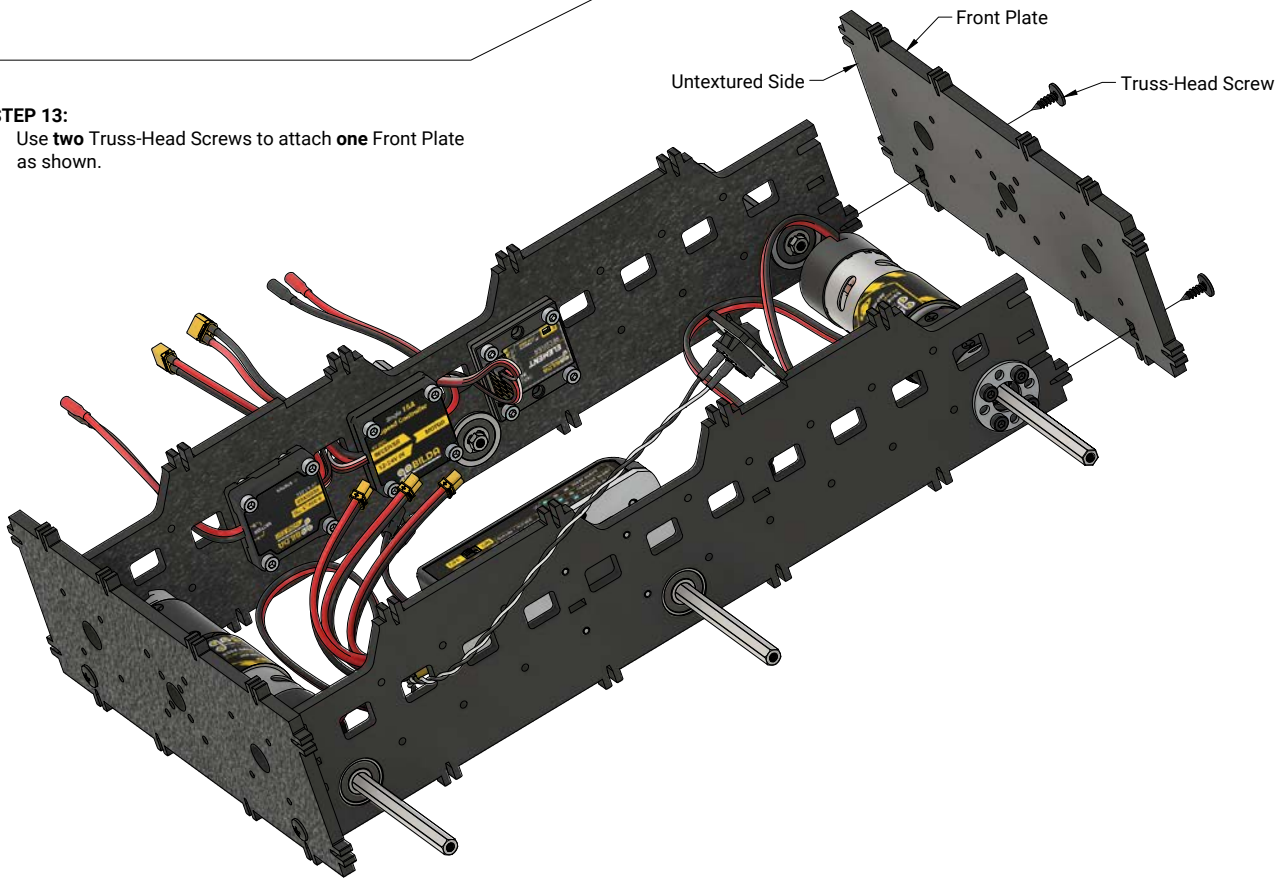
STEP 12:

Use **one** Truss-Head Screw to attach the Inside Plate to the Front Plate from **STEP 11** as shown.



STEP 13:

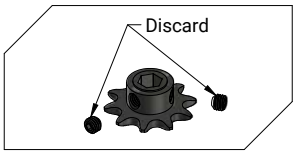
Use **two** Truss-Head Screws to attach **one** Front Plate as shown.

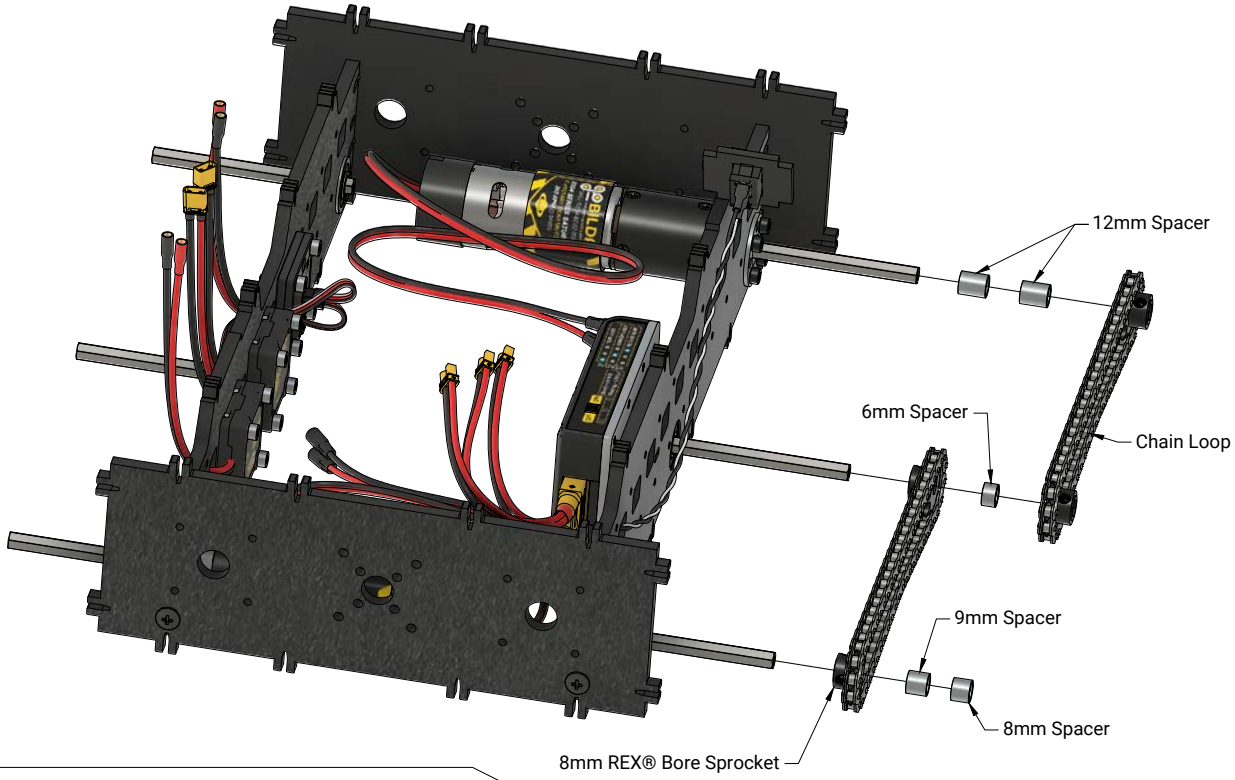


STEP 14:

Remove and discard two set-screws from four 8mm REX® Bore Sprockets as shown in **FIGURE 14-A.** Slide on **one** 6mm Spacer, **one** 8mm Spacer, **one** 9mm Spacer, **two** 12mm Spacers, **four** 8mm REX® Bore Sprockets and **two** Chain Loops as shown.

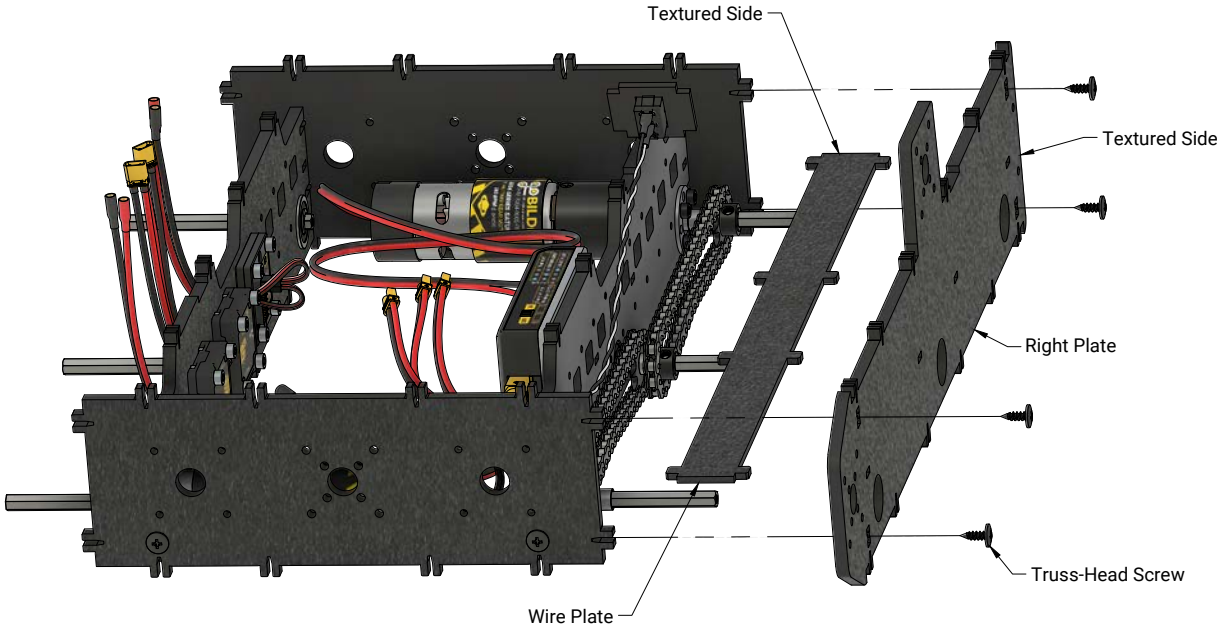
FIGURE 14-A





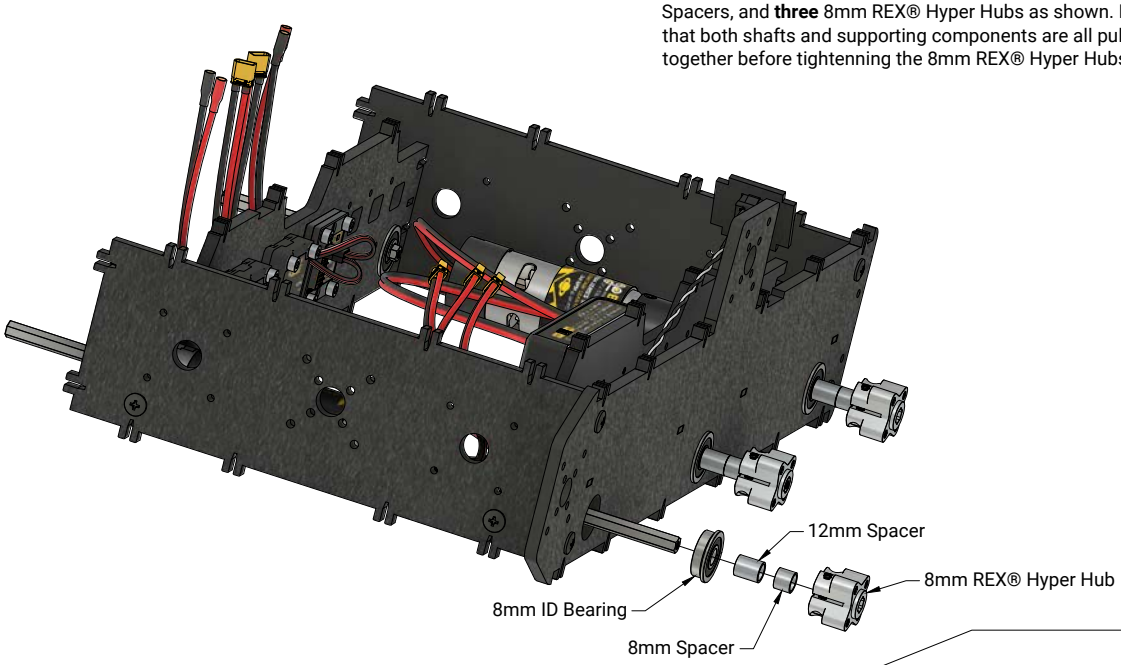
STEP 15:

Use **four** Truss-Head Screws to attach **one** Wire Plate and **one** Right Plate as shown.



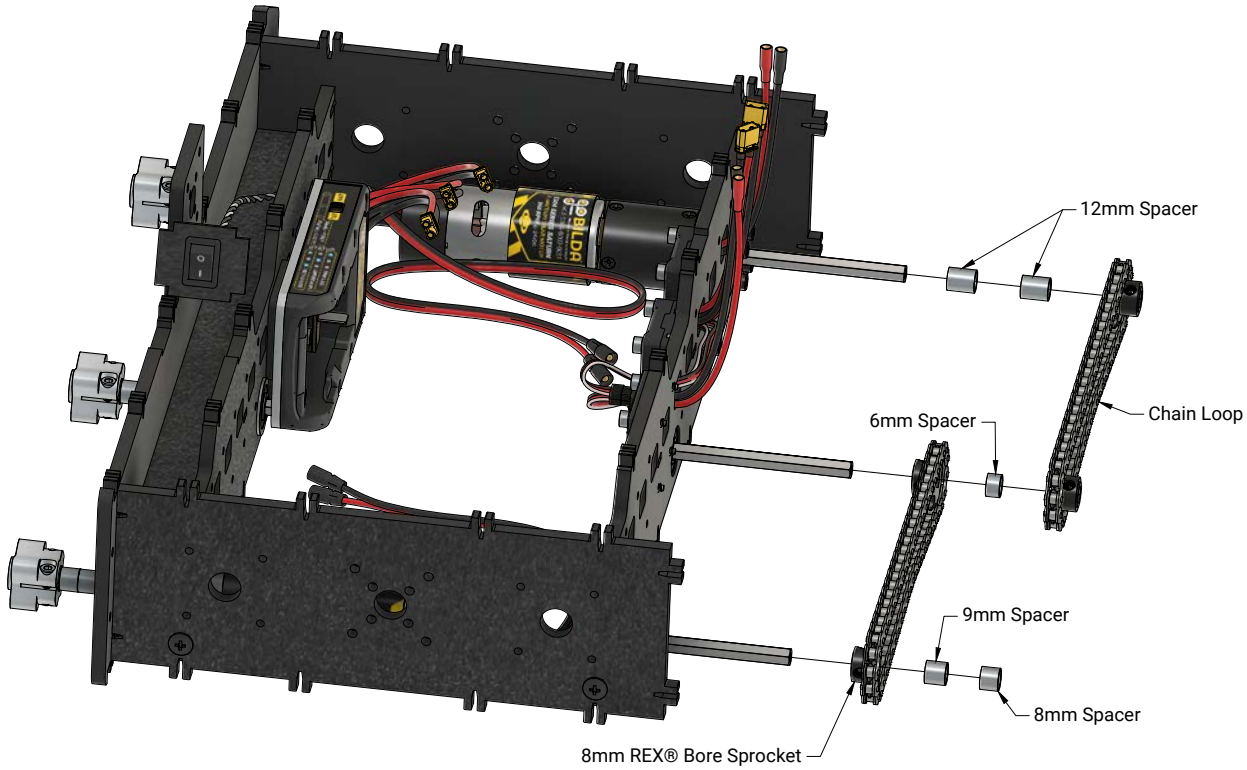
STEP 16:

Add **three** 8mm ID Bearings, **three** 12mm Spacers, **three** 8mm Spacers, and **three** 8mm REX® Hyper Hubs as shown. Ensure that both shafts and supporting components are all pulled tightly together before tightenning the 8mm REX® Hyper Hubs.



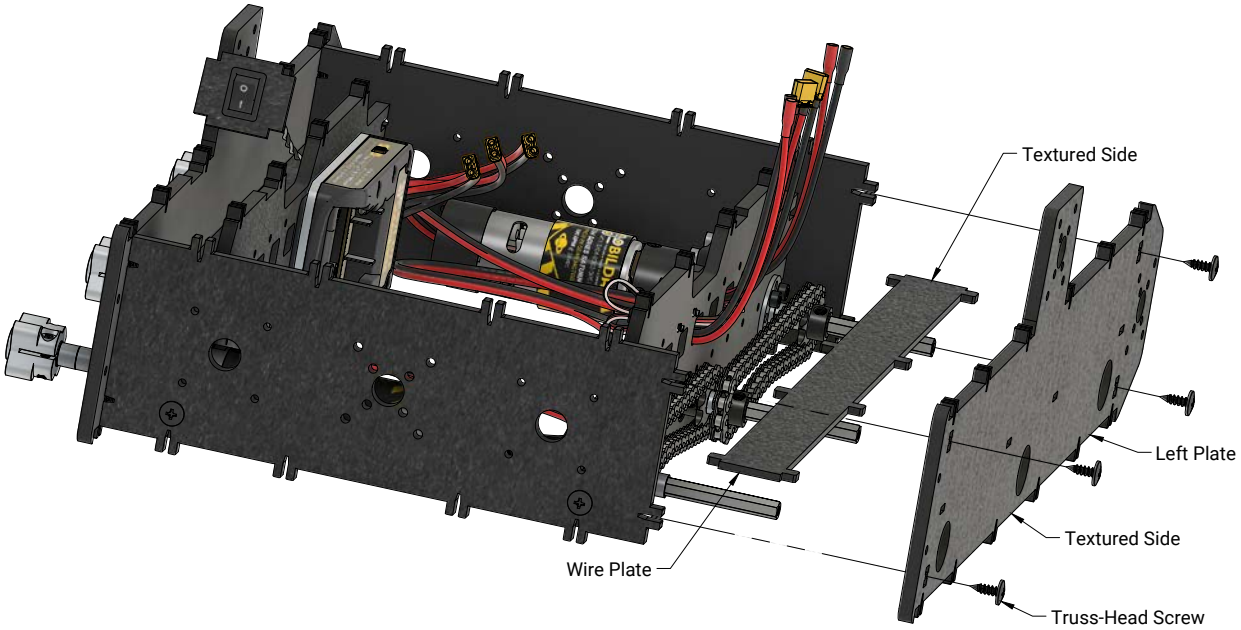
STEP 17:

Remove and discard two set-screws from four 8mm REX® Bore Sprockets as shown in **FIGURE 14-A.** Slide on **one** 6mm Spacer, **one** 8mm Spacer, **one** 9mm Spacer, **two** 12mm Spacers, **four** 8mm REX® Bore Sprockets and **two** Chain Loops as shown.



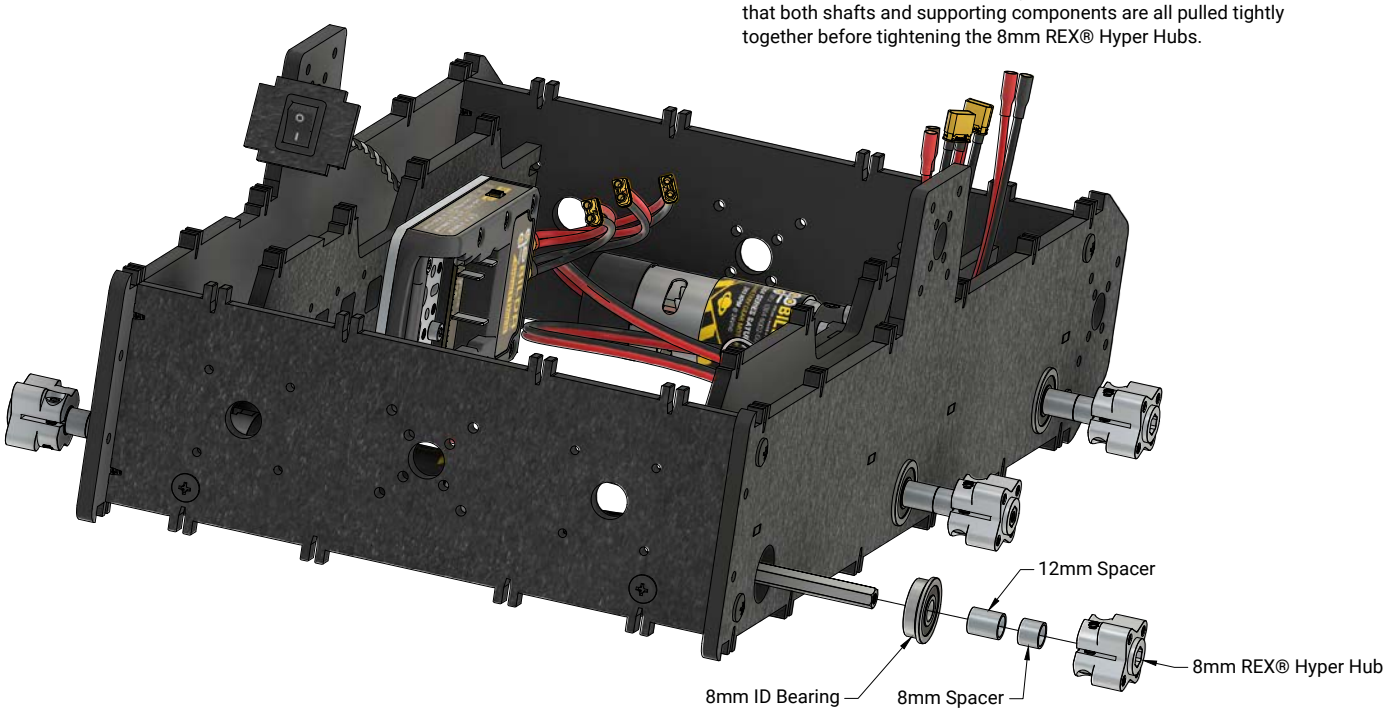
STEP 18:

Use **four** Truss-Head Screws to attach **one** Wire Plate and **one** Left Plate as shown.

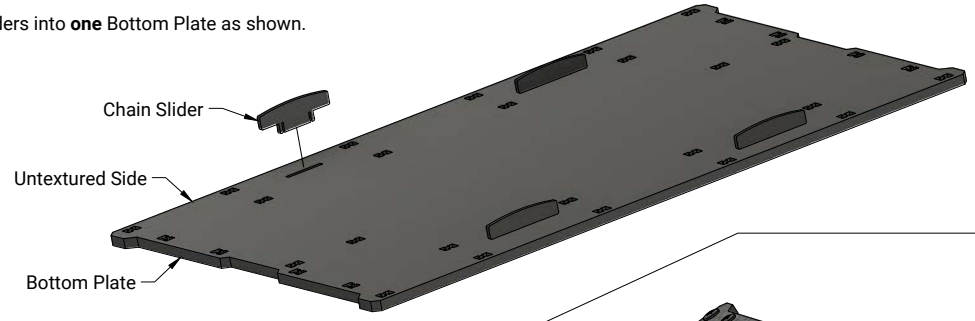


STEP 19:

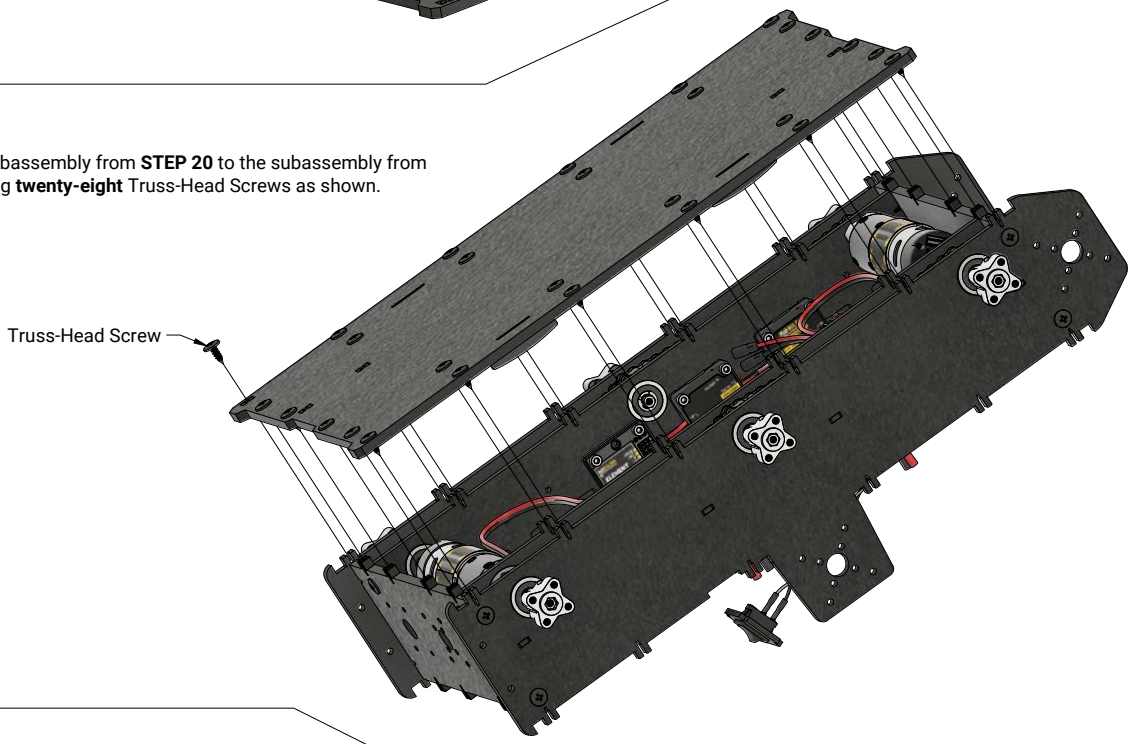
Add **three** 8mm ID Bearings, **three** 12mm Spacers, **three** 8mm Spacers, and **three** 8mm REX® Hyper Hubs as shown. Ensure that both shafts and supporting components are all pulled tightly together before tightening the 8mm REX® Hyper Hubs.

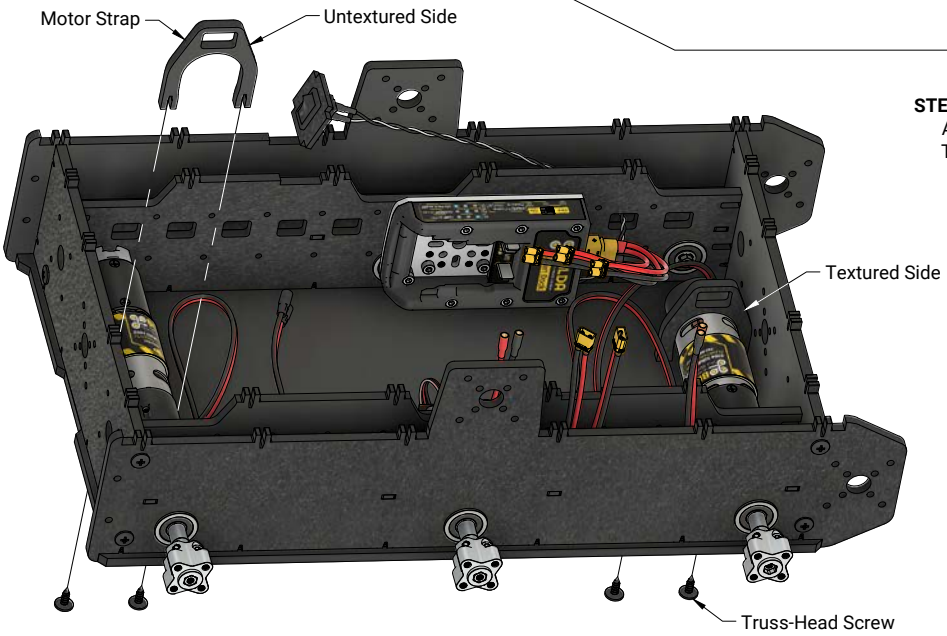


STEP 20:
Insert **four** Chain Sliders into **one** Bottom Plate as shown.



STEP 21:
Attach the subassembly from **STEP 20** to the subassembly from **STEP 19** using **twenty-eight** Truss-Head Screws as shown.

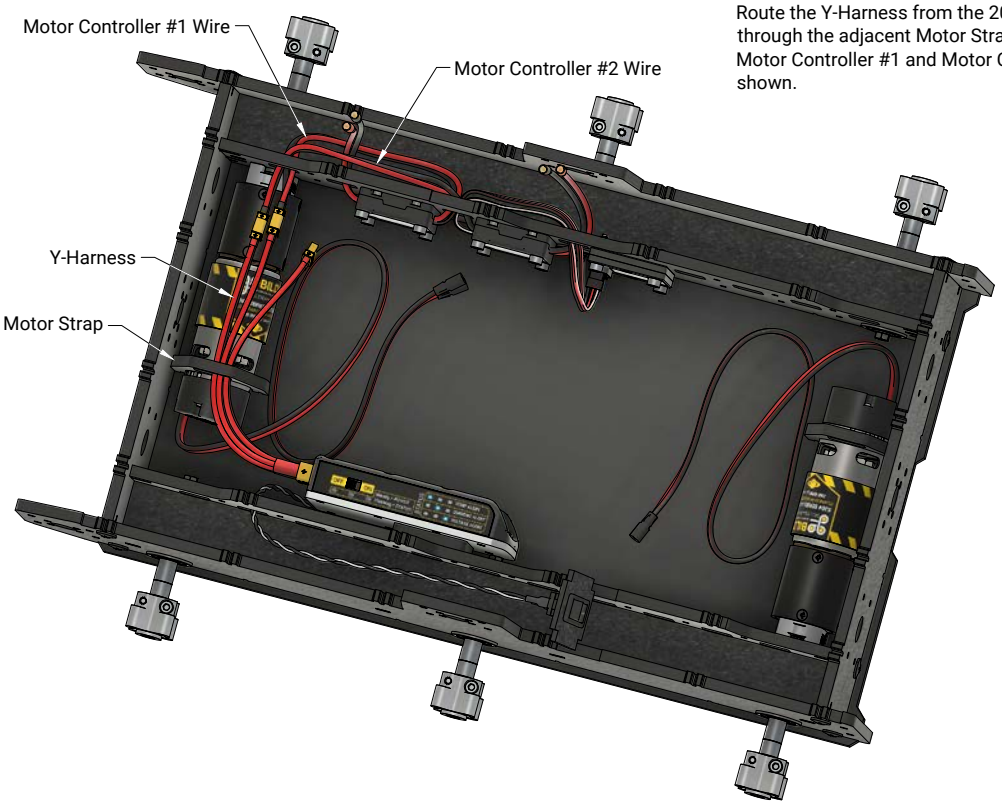




STEP 22:
Attach **two** Motor Straps using **four** Truss-Head Screws as shown.

STEP 23:

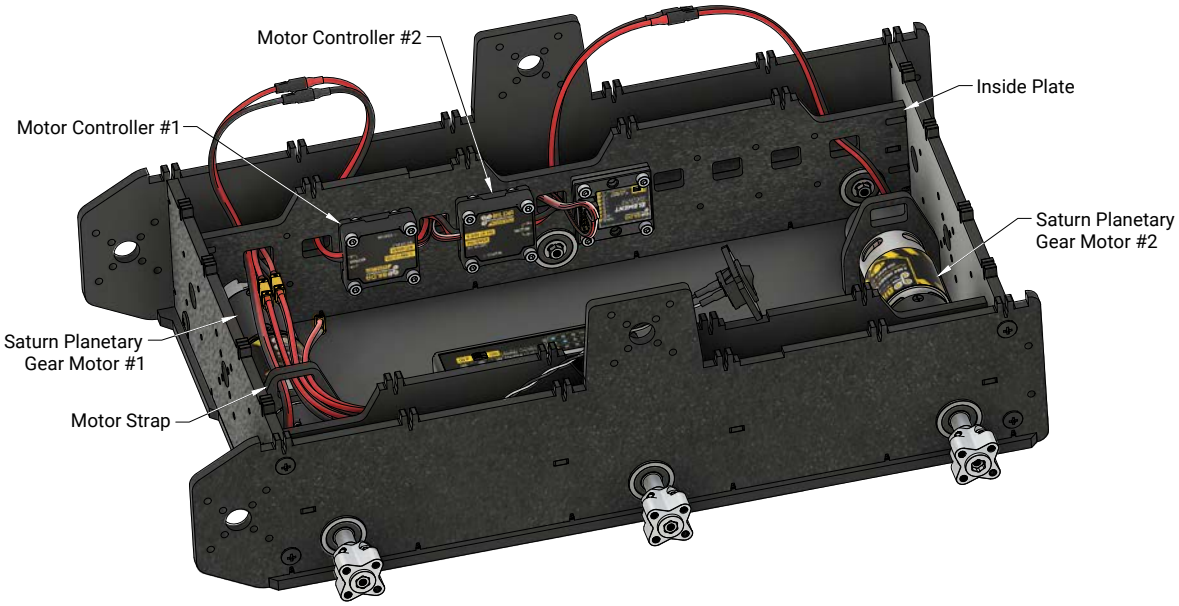
Route the Y-Harness from the 20V Smart Dock through the adjacent Motor Strap and plug it into Motor Controller #1 and Motor Controller #2 as shown.

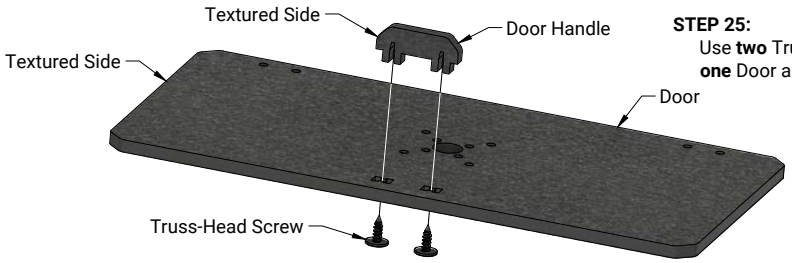


STEP 24:

Route the wire from Saturn Planetary Gear Motor #1 through the adjacent Motor Strap and Inside Plate and plug it into the wires from Motor Controller #1 as shown.

Route the wire from Saturn Planetary Gear Motor #2 through the Inside Plate and into the wires from Motor Controller #2 as shown.

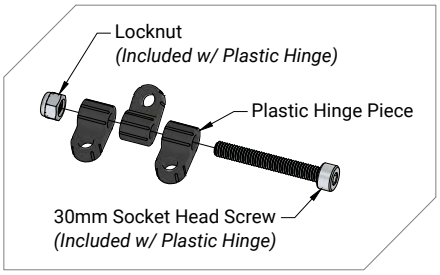




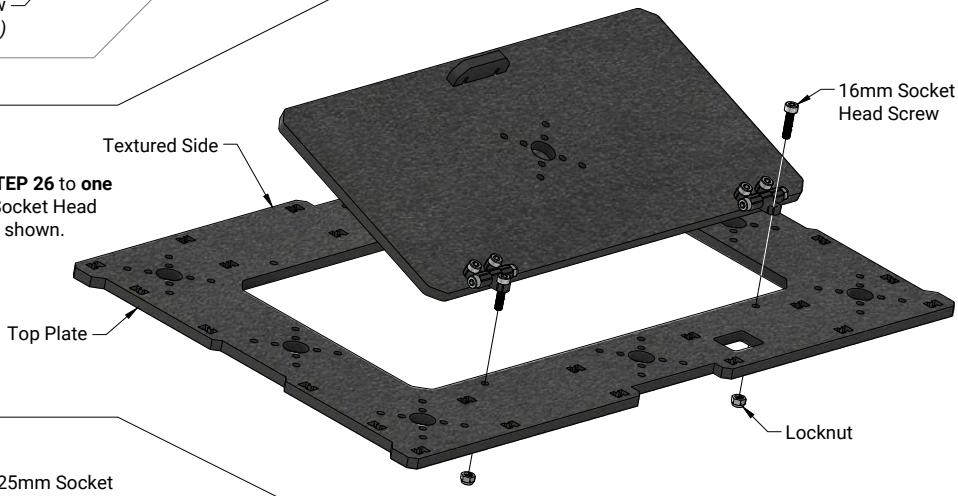
STEP 25:
Use **two** Truss-Head Screws to attach **one** Door Handle to **one** Door as shown.

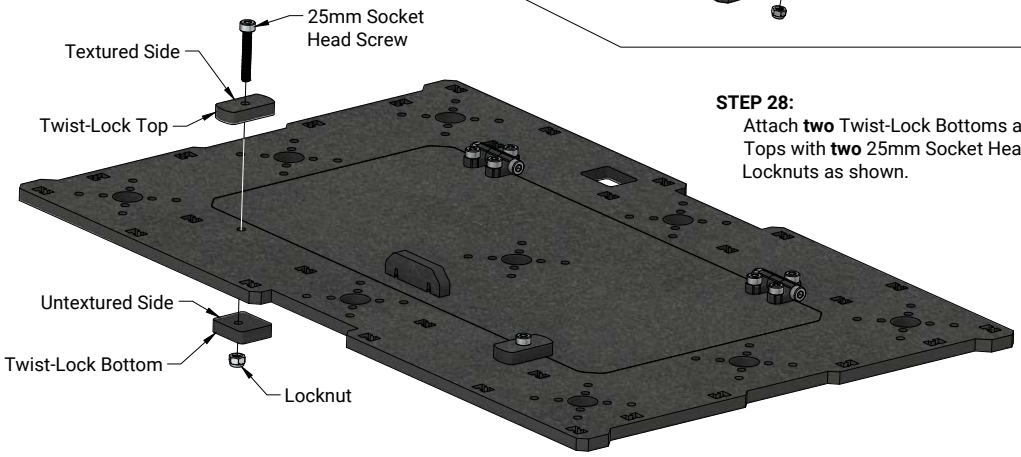
STEP 26:
Assemble **two** Plastic Hinges (**FIGURE 26-A**) and attach them to the Door using **four** 16mm Socket Head Screws and **four** Locknuts as shown. If a Plastic Hinge does not turn freely, loosen its 30mm Socket Head Screw slightly.

FIGURE 26-A



STEP 27:
Attach the assembly from **STEP 26** to **one** Top Plate using **two** 16mm Socket Head Screws and **two** Locknuts as shown.

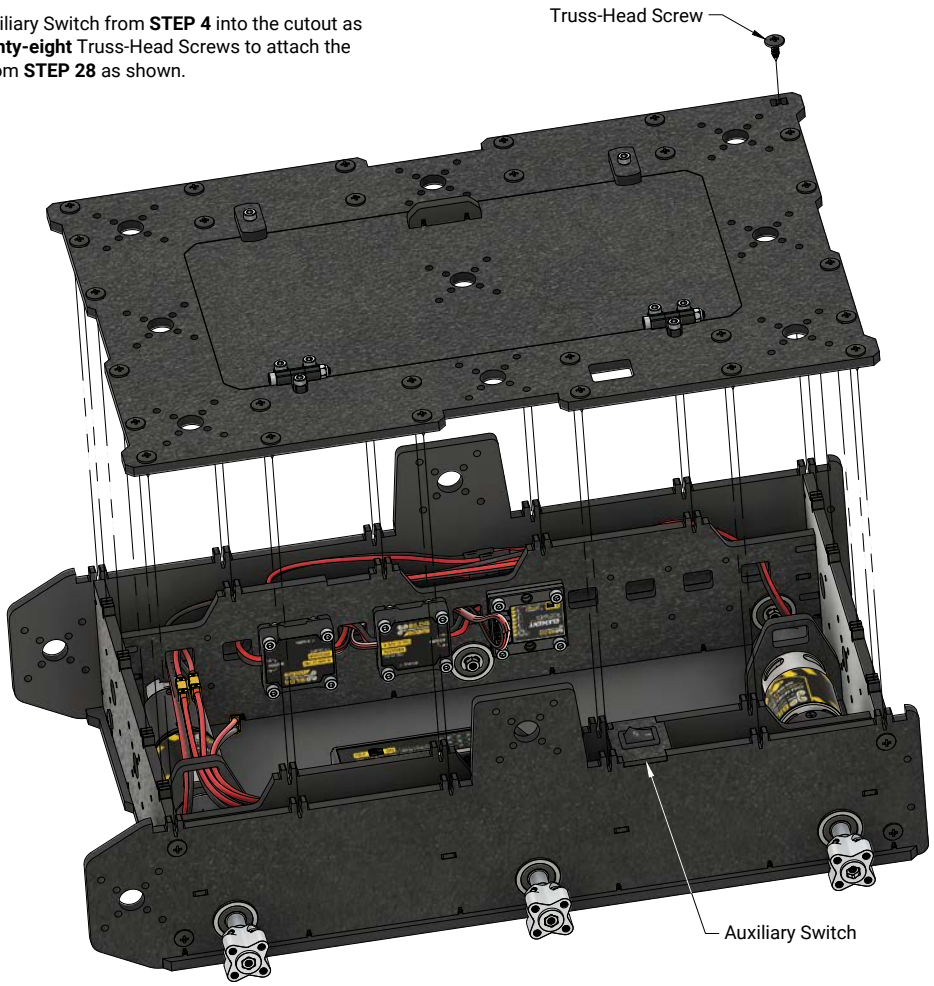




STEP 28:
Attach **two** Twist-Lock Bottoms and **two** Twist-Lock Tops with **two** 25mm Socket Head Screws and **two** Locknuts as shown.

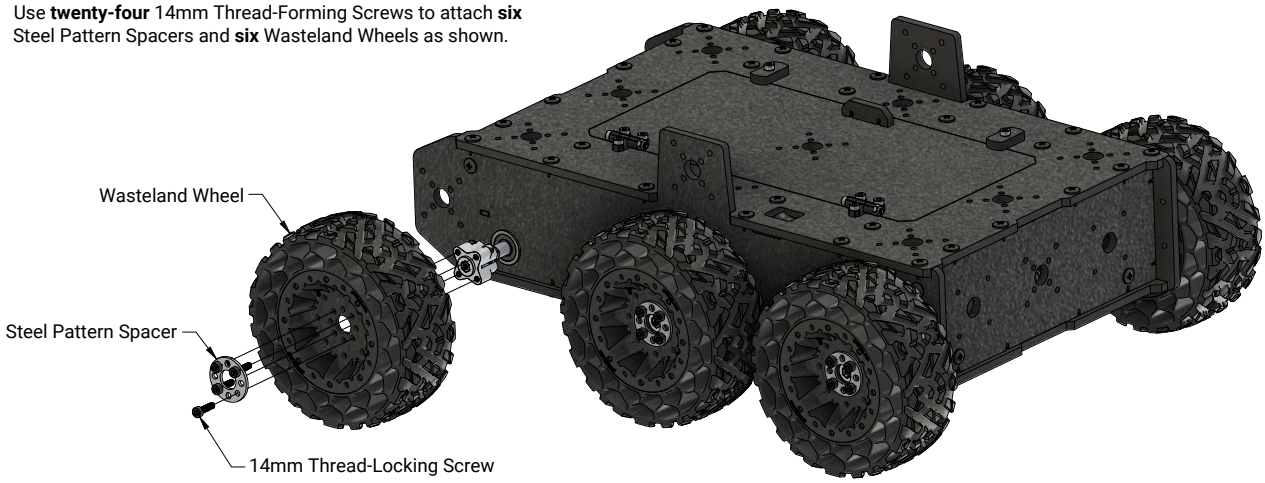
STEP 29:

Position the Auxiliary Switch from **STEP 4** into the cutout as shown. Use **twenty-eight** Truss-Head Screws to attach the subassembly from **STEP 28** as shown.



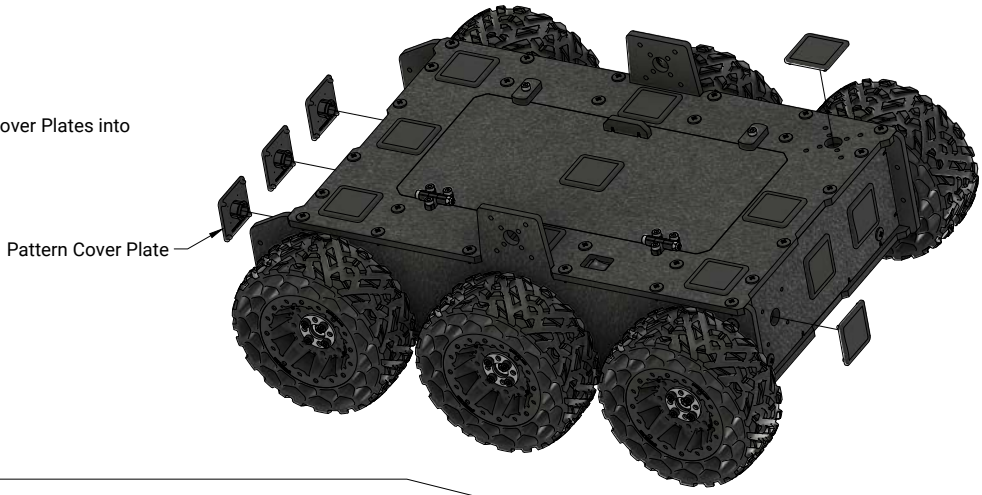
STEP 30:

Use **twenty-four** 14mm Thread-Forming Screws to attach **six** Steel Pattern Spacers and **six** Wasteland Wheels as shown.



STEP 31:

Press **fifteen** Pattern Cover Plates into place as shown.



STEP 32:

Pair the Element-6 Transmitter with the Overlander-6 All-Terrain Robot Platform:

1. Start with the transmitter and receiver powered off.
2. Turn the chassis kit on. The receiver's orange LED will blink slowly.
3. Press and release the Bind button on the receiver with the 2.5mm Ball-End Hex-Plus L-Key. The receiver's orange LED will blink quickly.
4. Ensure the left gimbal on the transmitter is all the way down.
5. Turn on the transmitter.
6. The orange LED on the receiver will stop blinking and turn on solid when paired.

Congratulations!

Your Overlander-6 All-Terrain Robot Platform is now assembled!
Whether it's exploration, customization, or project ideas no one else has dreamed of before, your new chassis is ready for it all!