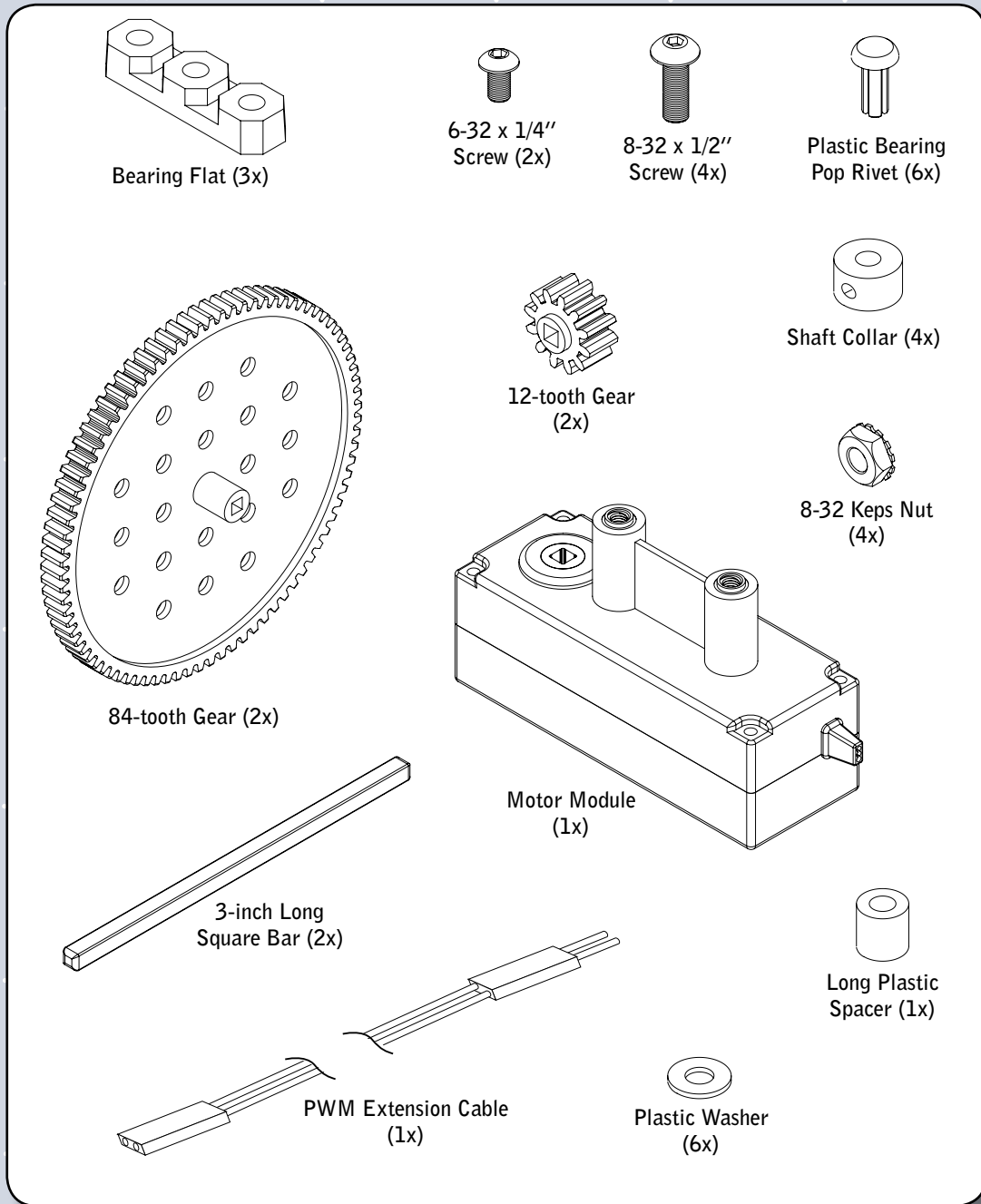


VEXplorer Wrist Kit

This kit will add an additional "wrist" joint to the basic VEXplorer robot. By integrating the wrist joint into the VEXplorer arm. The VEXplorer will gain significant dexterity.



Limited 90-day Warranty

This product is warranted by Innovation First against manufacturing defects in material and workmanship under normal use for ninety (90) days from the date of purchase from authorized Innovation First dealers. For complete warranty details and exclusions, check with your dealer.

Innovation First, Inc.
1519 IH 30 W
Greenville, TX 75402

For More Information, and additional Parts & Pieces refer to:
www.VexRobotics.com

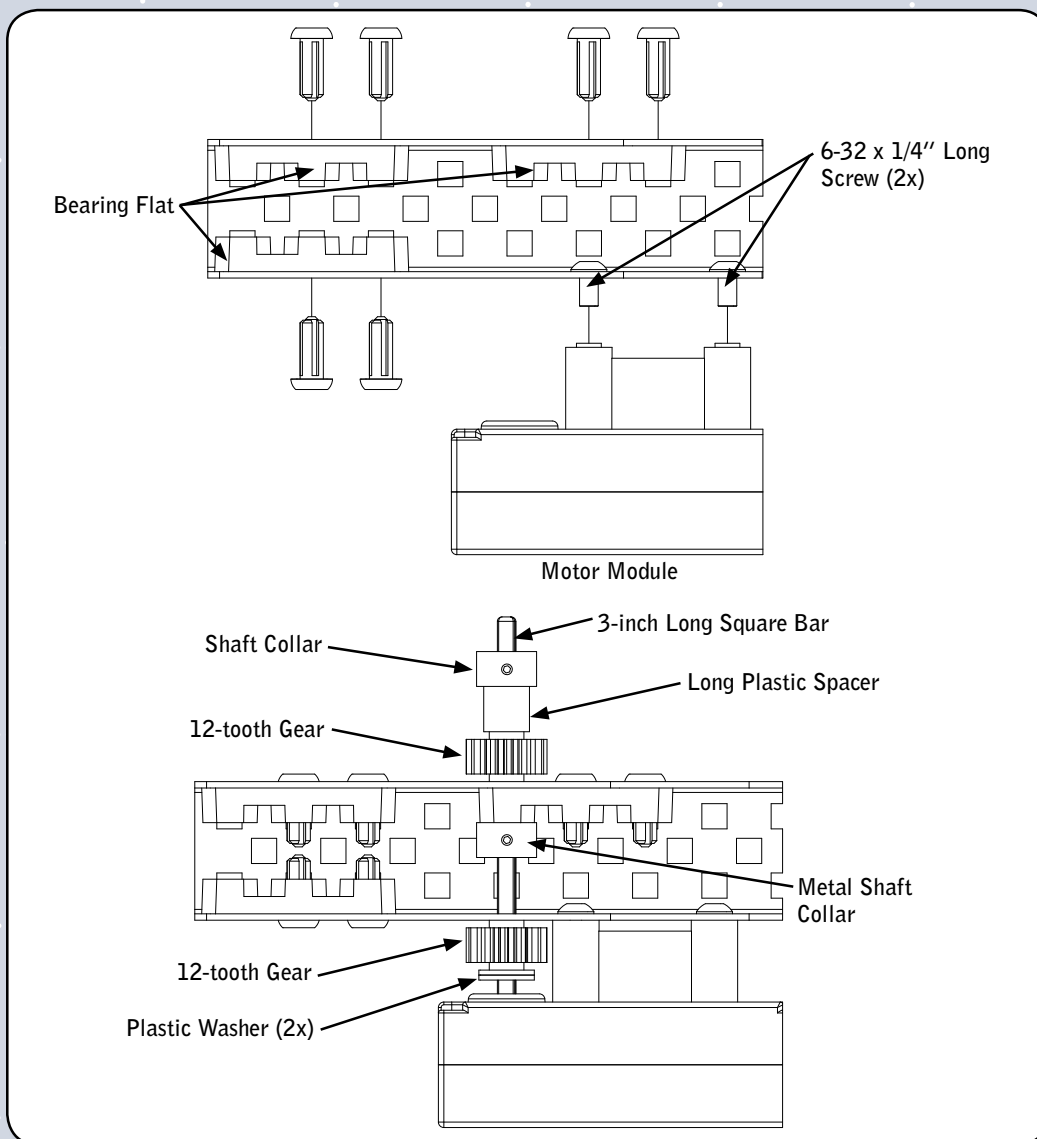
09/07

VEXplorer Wrist Kit, continued

If the VEXplorer robot has already been assembled, disconnect the Claw Motor from the VEXplorer Receiver Motor Port and remove the claw assembly from the arm assembly. These must be separate to complete construction of the Wrist Kit.

The first step in assembling the wrist-joint is to mount the Motor Module and Bearing Flats onto the VEXplorer arm structure. The Motor Module attaches using the (2x) 1/4" Long 6-32 screws. The Bearing Flats mount using (2x) of the Plastic Bearing Pop Rivets each. Place the rivets in the holes as shown in the figure below.

The next step is to install the motor shaft (square bar) and gears which will drive the wrist assembly. Install the 3-inch Long Square Bar, and the other components as shown. Make sure the Allen Screws in the Shaft Collars are accessible as shown.



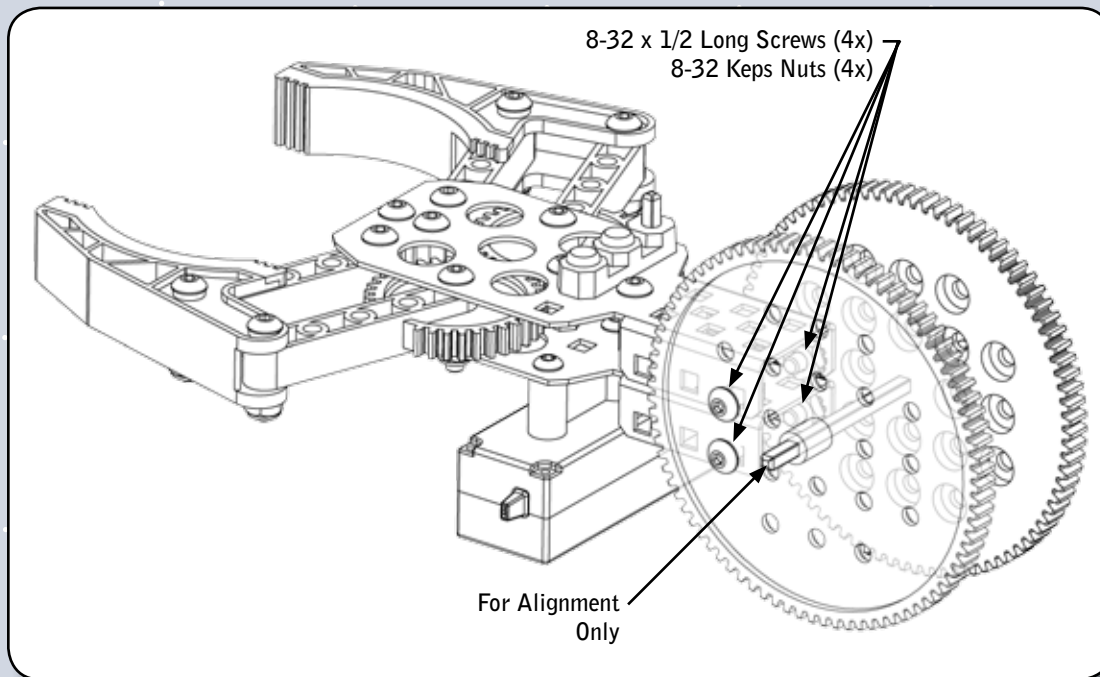
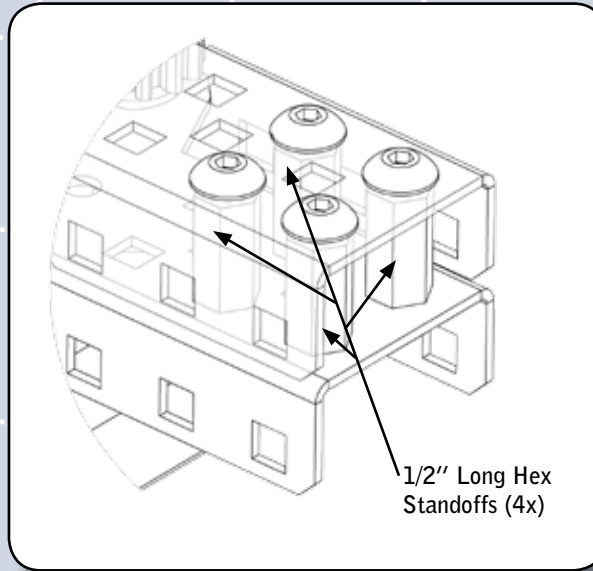
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VEXplorer Wrist Kit, continued

The VEXplorer claw assembly must be modified for use with the wrist joint. The claw comes pre-assembled with (4x) 1/2" Long Hex Standoffs installed in the back.

Remove these standoffs by removing their four mounting screws.

Once these standoffs are removed, attach the two 84-tooth Gears onto the sides of the claw assembly using (4x) 8-32 x 1/2" Long Screws, and (4x) Keps Nuts, as shown below.

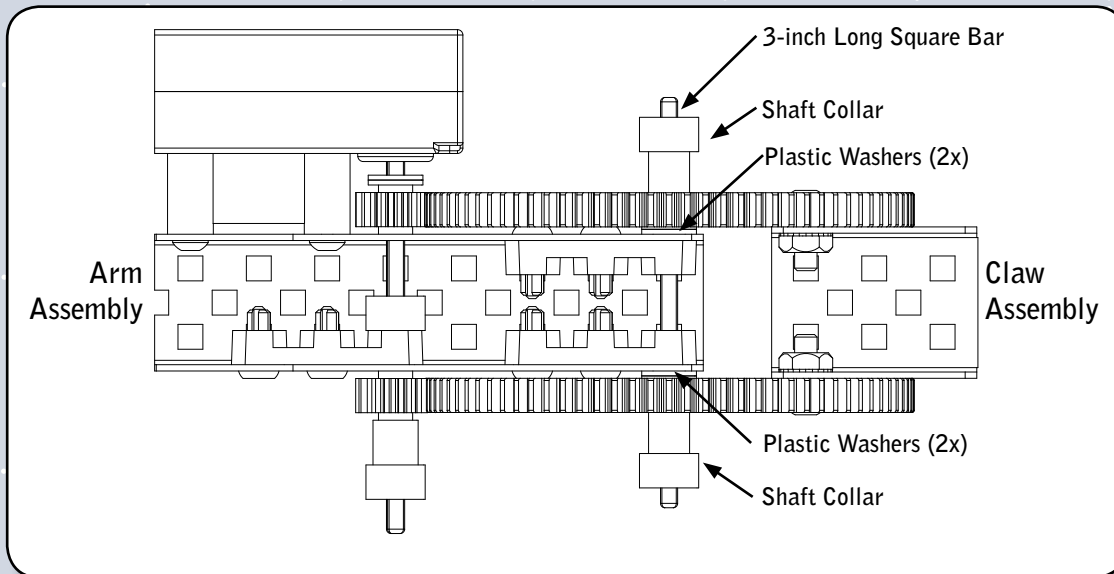


Ensure that the center holes of the two 84-tooth Gears are properly aligned, before tightening the attachment screws. It may help to install a shaft through the center holes during the attachment, to ensure proper alignment. Remove shaft after tightening.

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VEXplorer Wrist Kit, continued

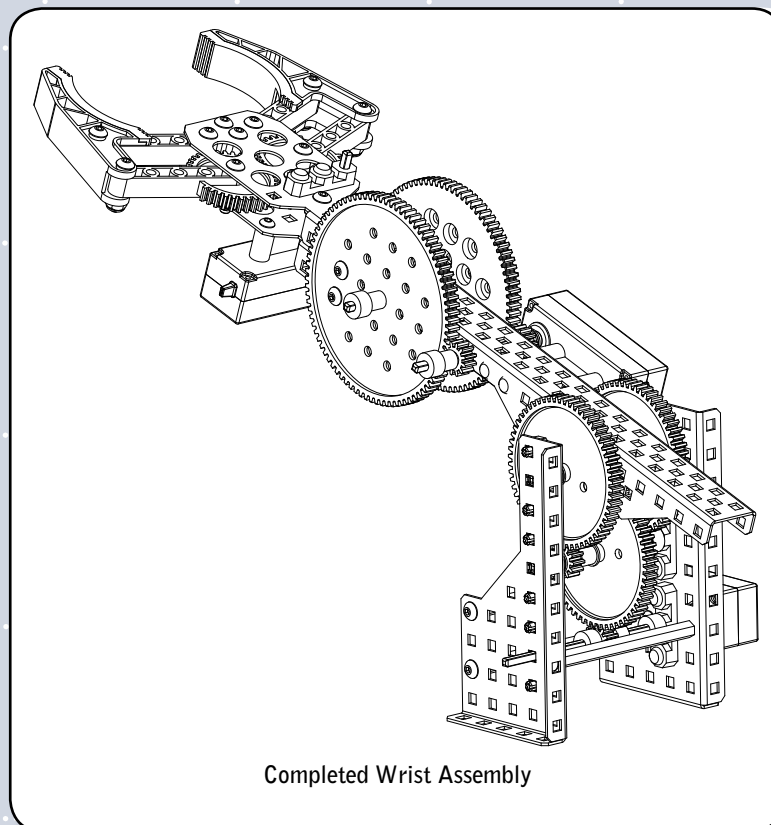
Attach the claw assembly to the arm assembly with a 3-inch Long Square Bar, as shown. Make sure to insert two Plastic Washers in-between the 84-tooth Gear, and the arm, on each side. If assembled correctly, the 84-tooth Gears should mesh with the 12-tooth Gears, and the wrist should turn easily.



After finishing the mechanical assembly, connect the Wrist Motor to the VEXplorer Receiver. Plug the motor cable into an available motor port corresponding to the controller channel you'd like to use to control the robot wrist. Use the included PWM Extension Cable to reconnect the Claw Motor to a motor port.

Consult the VEXplorer instruction manual for additional information on mapping motors to control channels using the VEXplorer Transmitter & Receiver.

Using zip-ties from the VEXplorer Kit ensure the motor wires are securely fastened to the arm in such a way that they do not impede the arm's motion.



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