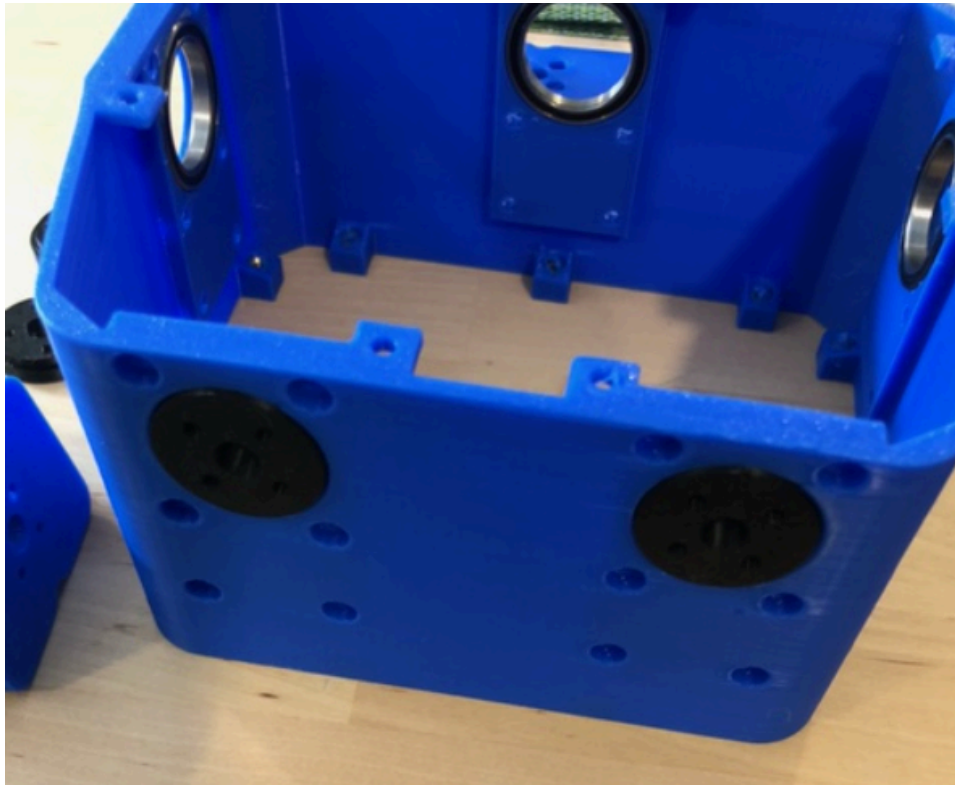


LWP main body (chest) build instructions

Ensure you have set all your servos to 90 degrees before proceeding with this portion of the build.

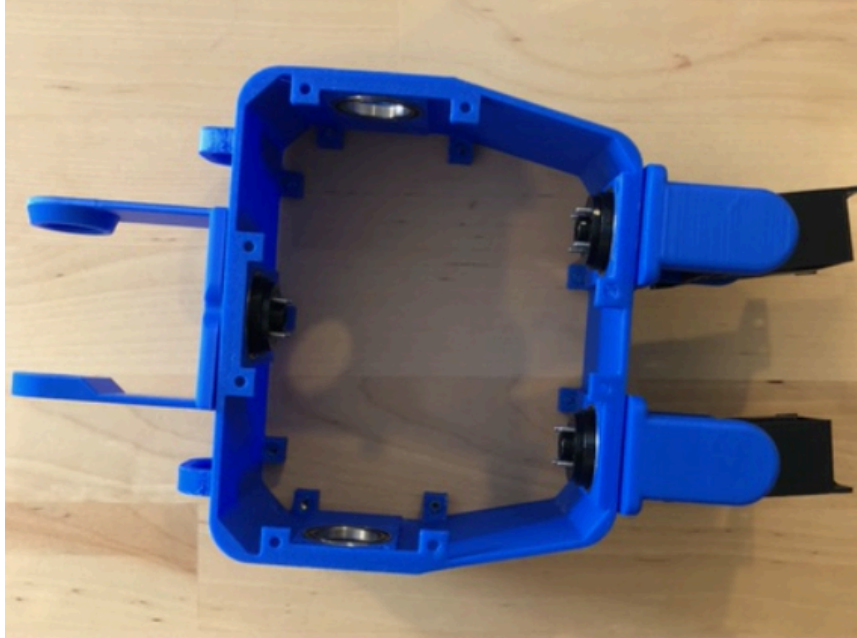


Chest, five larger bearings (installed), ten joint spacers, neck, and hips. Shoulders not pictured.



Install two joint spaces per attachment point. They should slot firmly into the large bearing from the top and bottom. Note, due to printing irregularities, the joint spacers tend to catch on the body at certain points of rotation. Orient the spacers in such a way so that the catching point

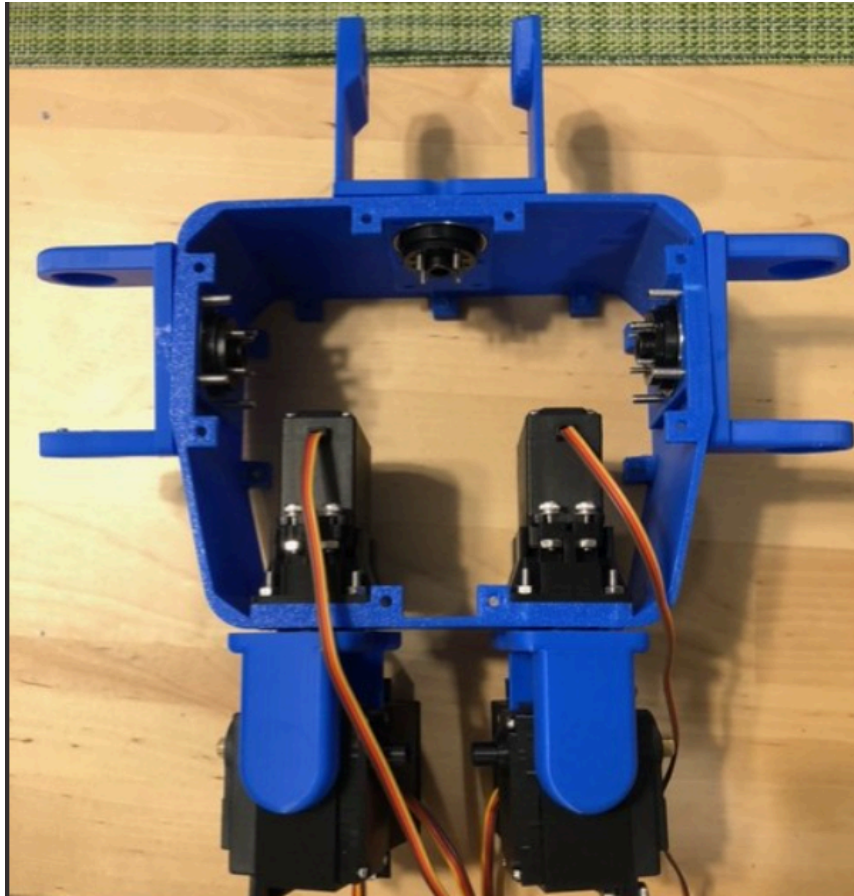
will not be a factor in the full range of motion of the joint. As an example: the hip joints should have the hips facing straight forward. The range of motion of the hips are limited to ~80 degrees. The catching point is in a very short angular range ~5 degrees. Our servos only operate over a 180 degree range and so this ~5 degree area can be avoided completely.



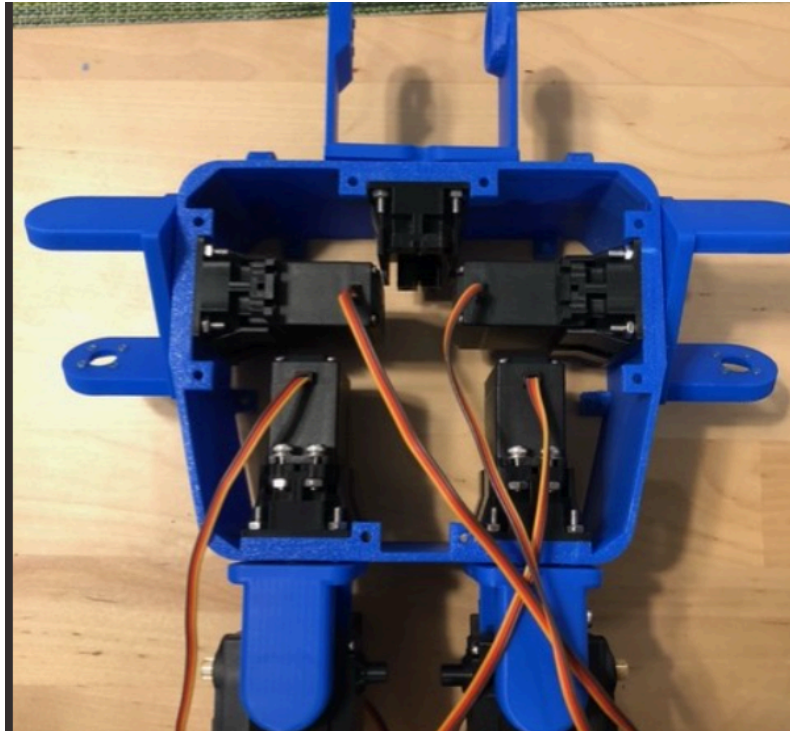
Neck and hips have been attached with servo disk on top of the joint. The servo spline receiver should be pointing away from the joint so it can be mated to the internal servo mounted on top of the joint. You may want to slide appropriately sized screws through the front two holes of each hip location. I tried to design the hips with a notch in the sides so screws can be installed after the hips have been installed. I didn't get the dimensions quite right and the screw causes a little damage when installed after the hips have been installed.



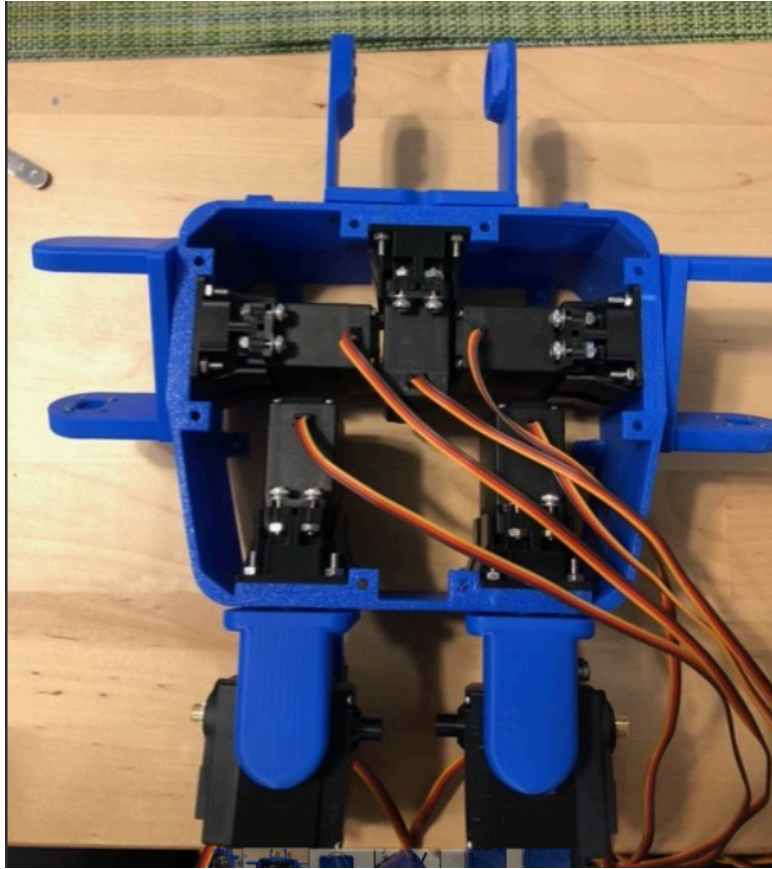
Internal servo holders. Will attach to internal joint area of the chest piece.



Internal servo holders have been installed over the hip joint locations. Two internal servos have been installed on the servo holder. Note, the spline of the servo should insert into the spline receiver on the servo disk installed on the top portion of the joint spacer assembly. That is a mouth full... Note, the servos have been set to 90 degrees and have been placed in their respective slots with both hips facing forward. Neutral position for the hips should be straight forward. Note, shoulders have been installed.



Next, install the other three servo holders and the two internal shoulder servos. Neck servo should be installed last. Pay attention to the joint position of the shoulders. They are essentially at a 45 degree angle from straight ahead (contrast to the hip joints which are pointed straight ahead)



Finally, install the neck servo with the neck set in the position pictured (straight across body). Note, the servo spline attachment point is to the left. This corresponds to the servo attachment point in the head. If you get this reversed then the robot will be forever looking backward.