

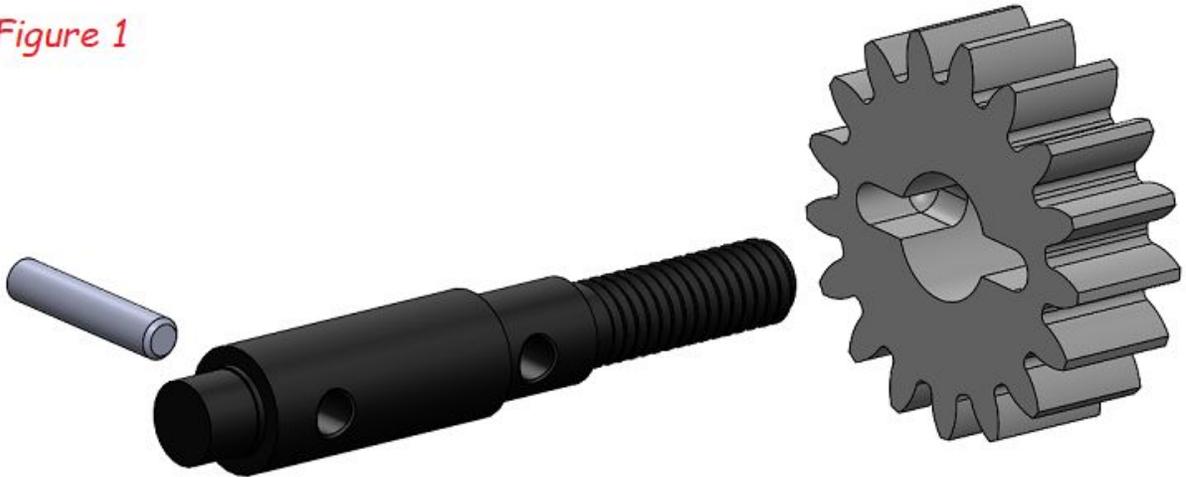
Bag 1 - Right Front Assembly

You will need everything from Bag 1, other than the following items which you'll need to save for later:

- 1pc- PA0300702 C-Mount
- 1pc- 60240 Link Ball
- 2pcs- 50100 3x10mm BH Screws
- 2pcs- 13858 Steering Bushings
- 3pcs- 13871 2x14mm CH Screws

Step 1: Assemble the PA0301301 Gear Shaft, one of the 08027 2x10mm Pins, and the PA0301201 17T Gear as shown in Figure 1.

Figure 1



Step 2: Insert the completed Gear Shaft from Step 1 into the lower half of the PA0300501 Portal Housing (R) while using a 68033 4x8x3mm Bearing as shown in Figure 2. When complete, you should have what Figure 3 illustrates.

Figure 2

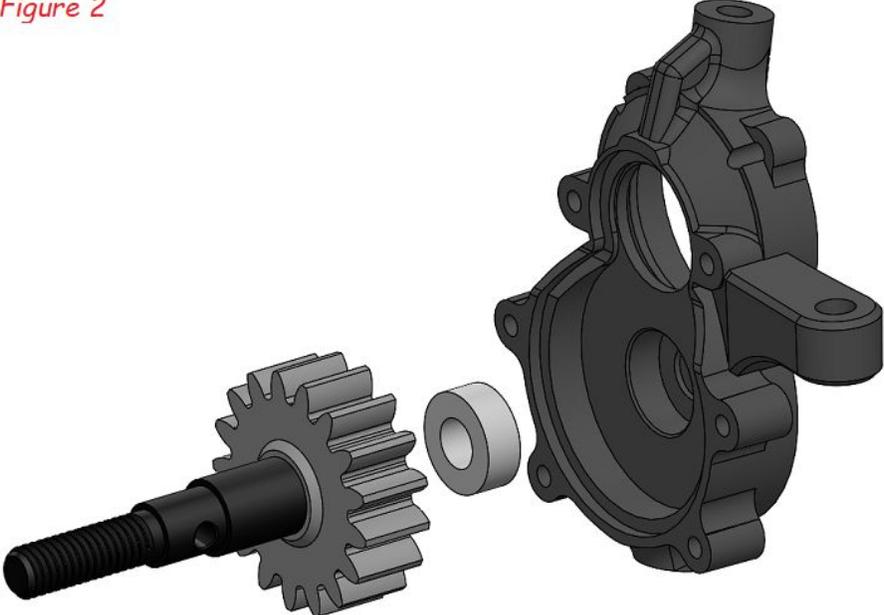
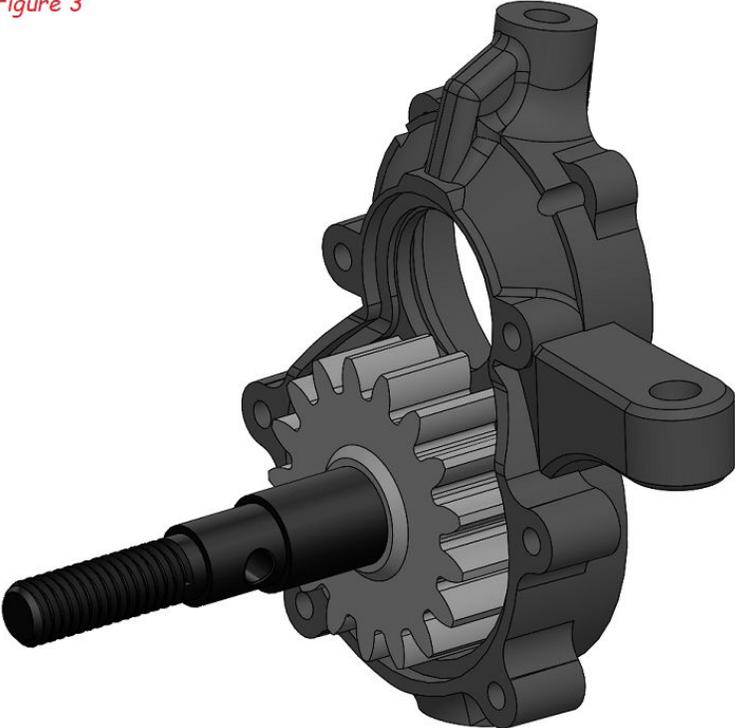


Figure 3



Step 3: Using the PA0301501 CV Shaft, the PA0301001 CV Coupler, the 13866 Joint Pin, and the PA0301001 CV Output, assemble the drive shaft as shown in Figure 4. Figure 5 shows the completed unit. **NOTE 1:** There will NOT be a grub screw installed to secure the pin as you may be used to seeing in other CV joints. For this design, the bearing captures the pin. **NOTE 2:** We recommend using black grease on the CV Coupler, which will help prolong the life of the parts.

Figure 4

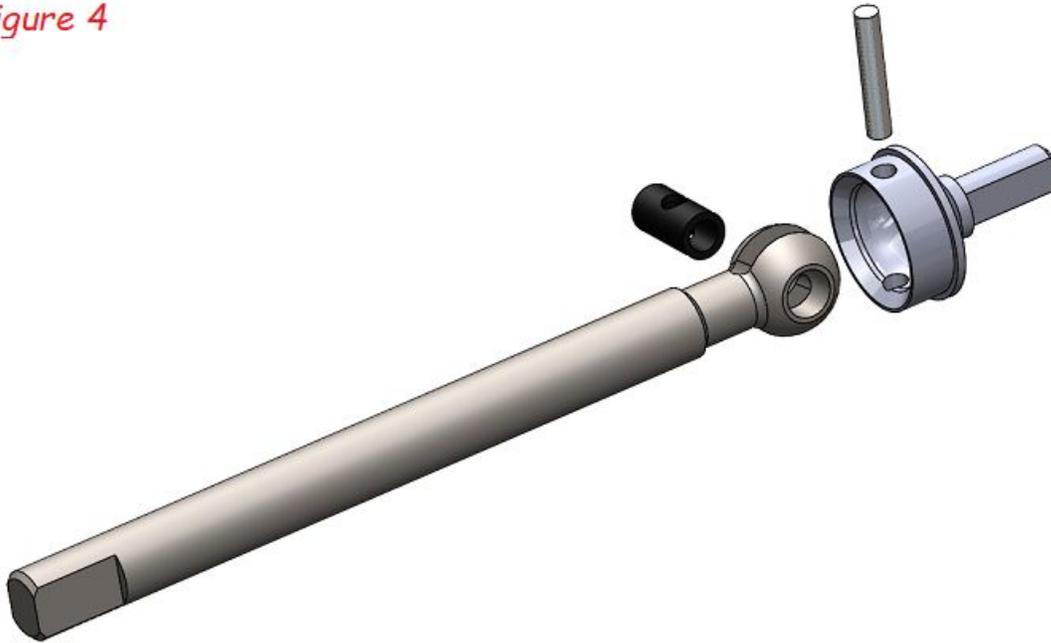
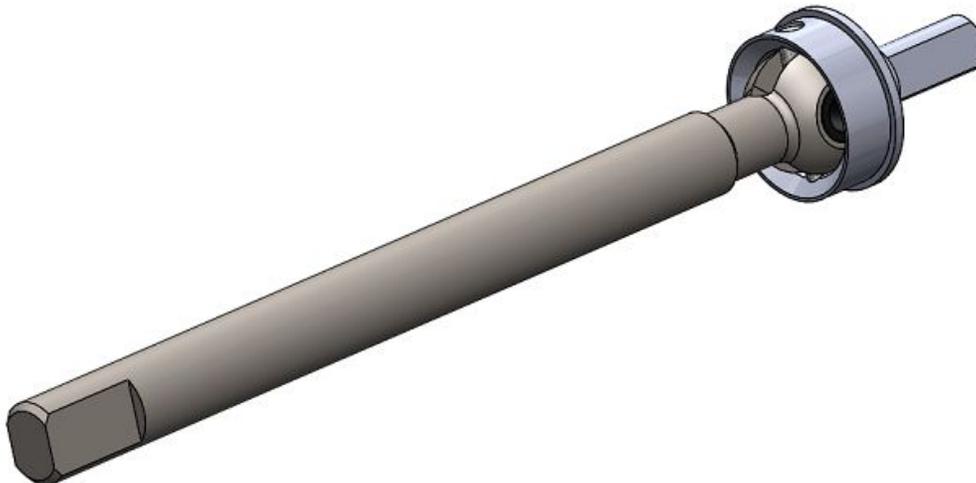


Figure 5



Step 4: Using your completed items from Step 2 and Step 3, use the 98054 12x18x4mm Bearing to assemble them together as shown in Figure 6. Once together, it should look exactly like Figure 7.

Figure 6

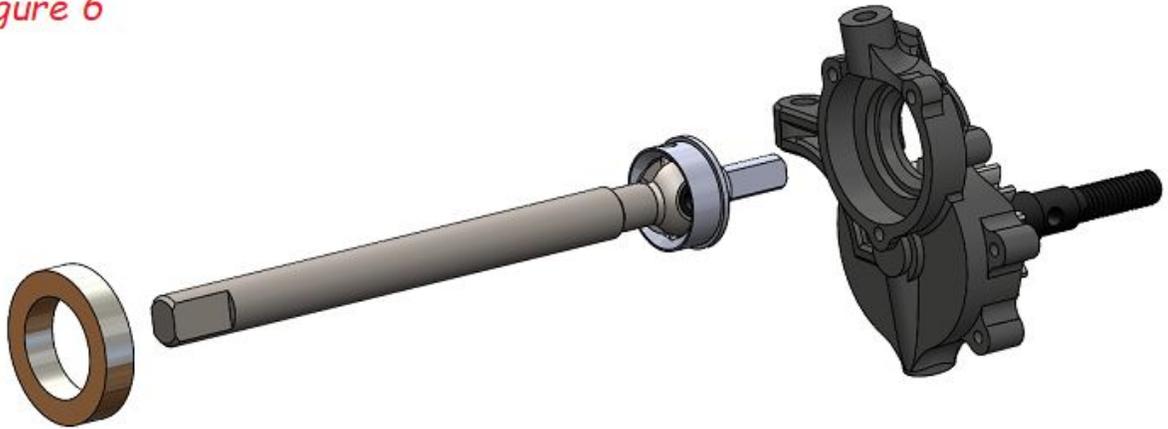
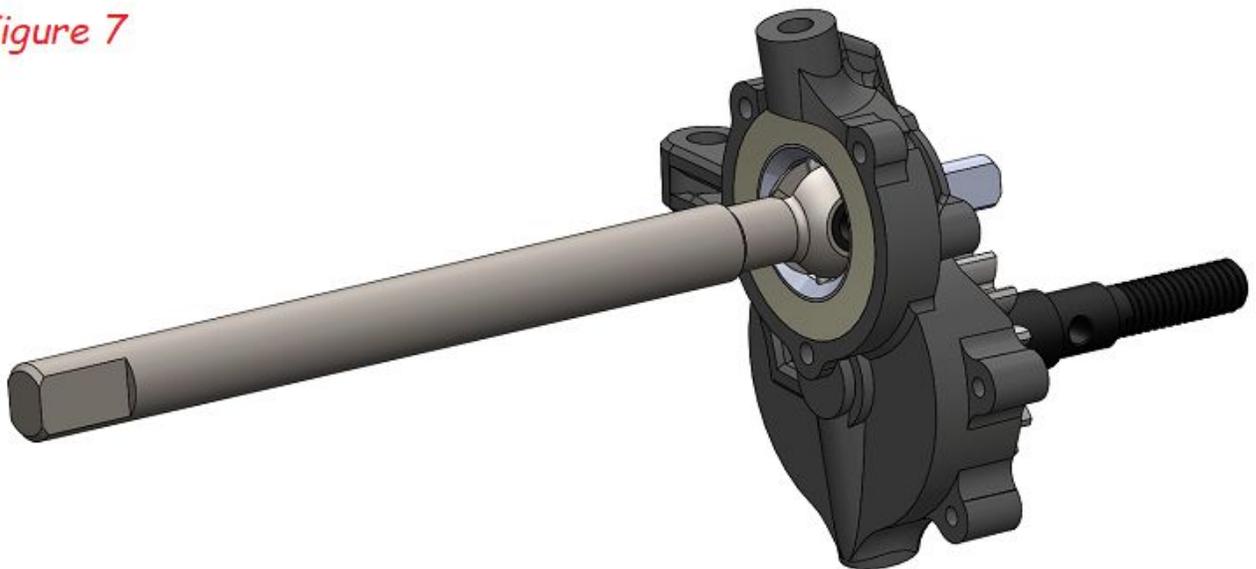


Figure 7



Step 5: Install the 3pcs of 13869 2x4mm BH Screws into the corresponding holes as shown in Figure 8. Figure 9 shows the finished product for this step.

Figure 8

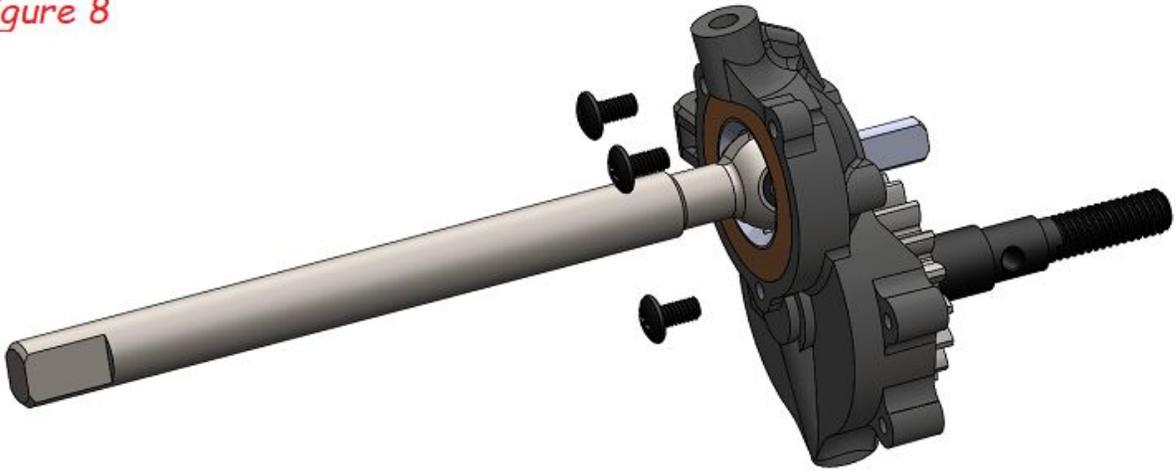
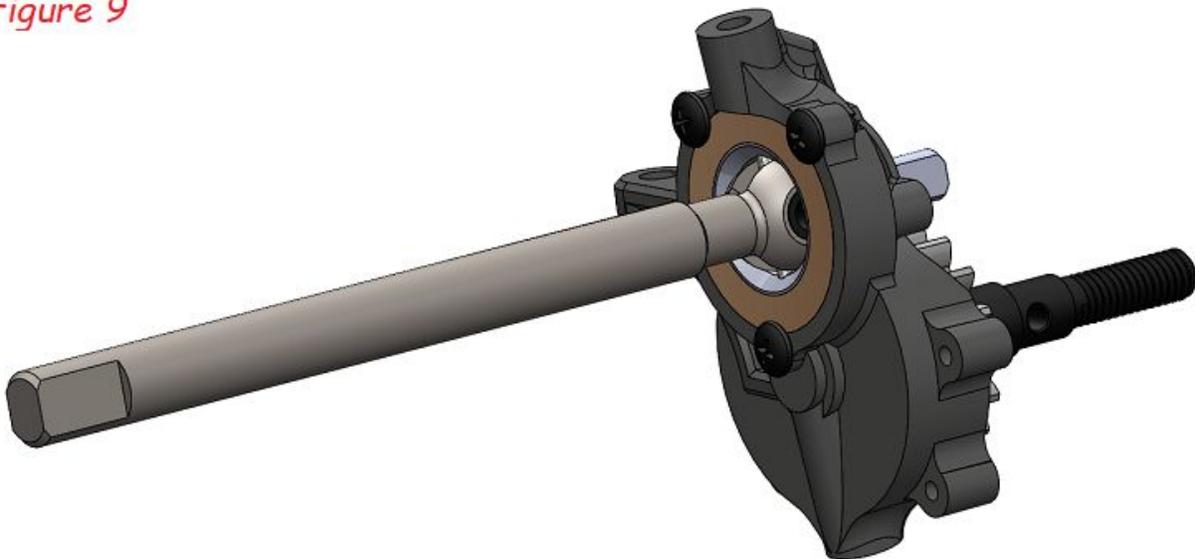


Figure 9



Step 6: Take the PA0301101 8T Gear and install it onto the flat spot of the CV Output from Step 5 assembly. **NOTE:** Although the 8T gear can slide onto the CV Output in either direction, be sure that the flat side of the gear goes toward the CV Output as shown in Figure 10 and Figure 11.

Figure 10

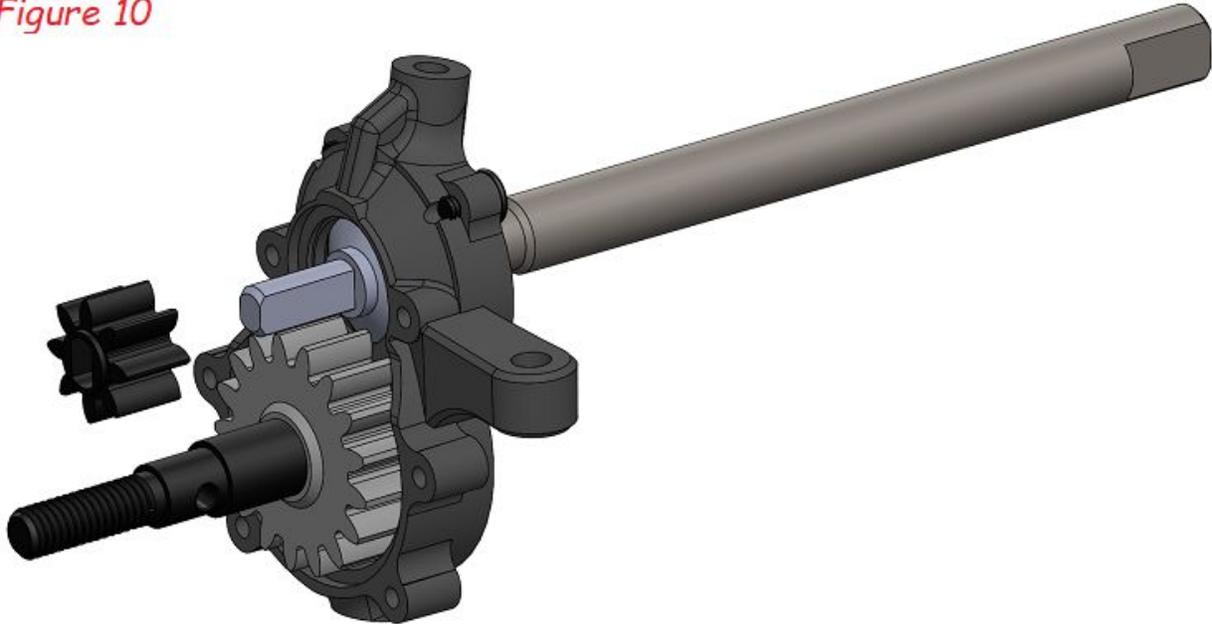
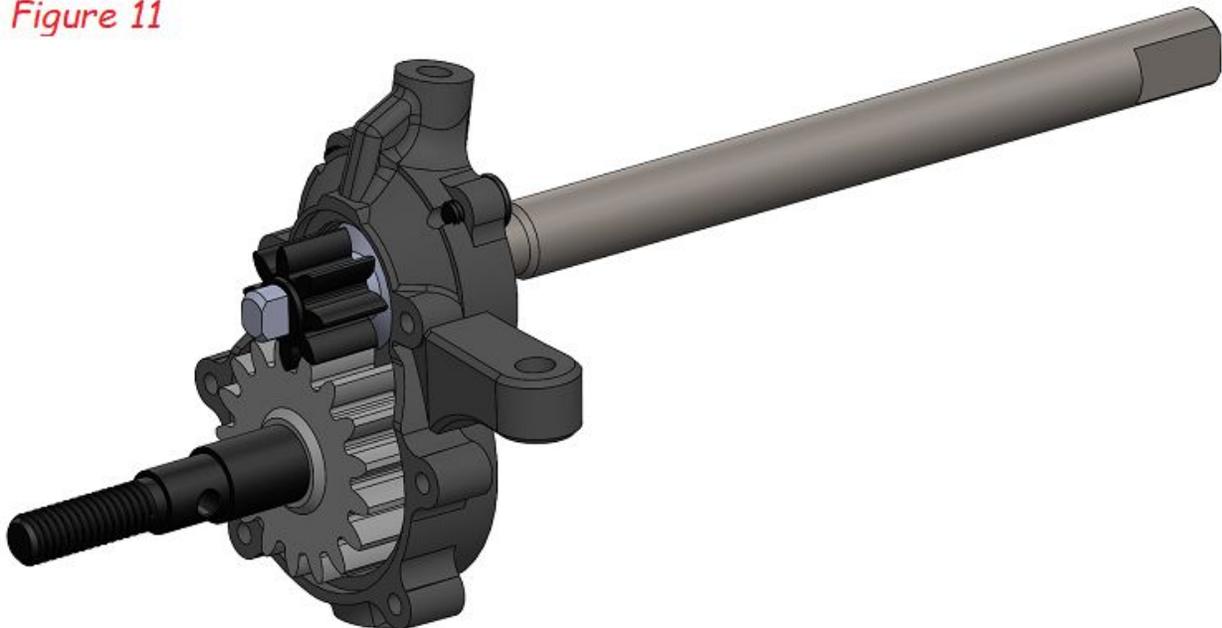


Figure 11



Step 7: Take the PA0300401 Portal Outer Cover and install the remaining 68033 4x8x3mm Bearing into the upper hole and the 98052 6x12x4mm Bearing into the lower hole as shown in Figure 12 and Figure 13.

Figure 12

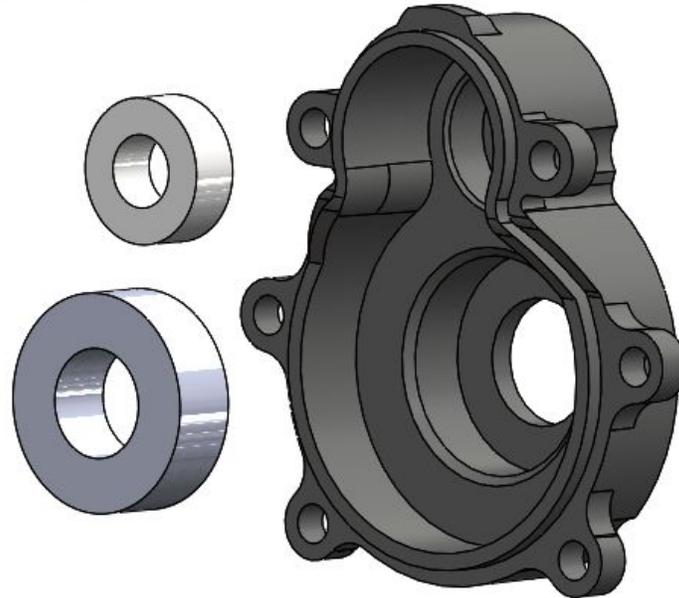
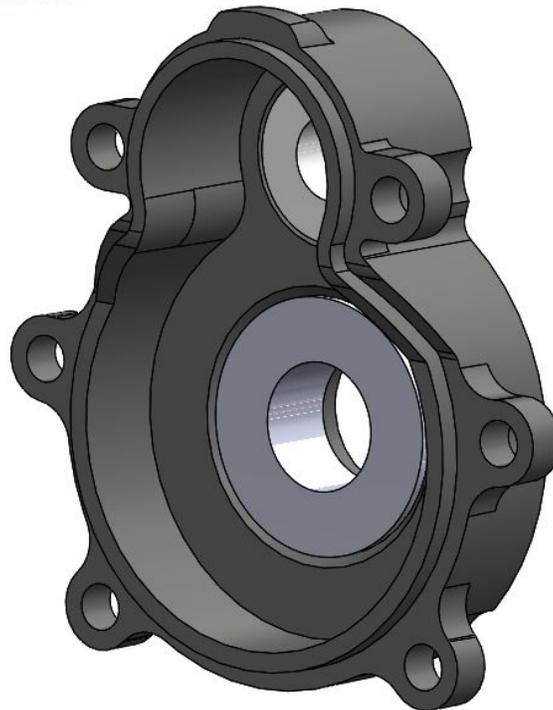


Figure 13

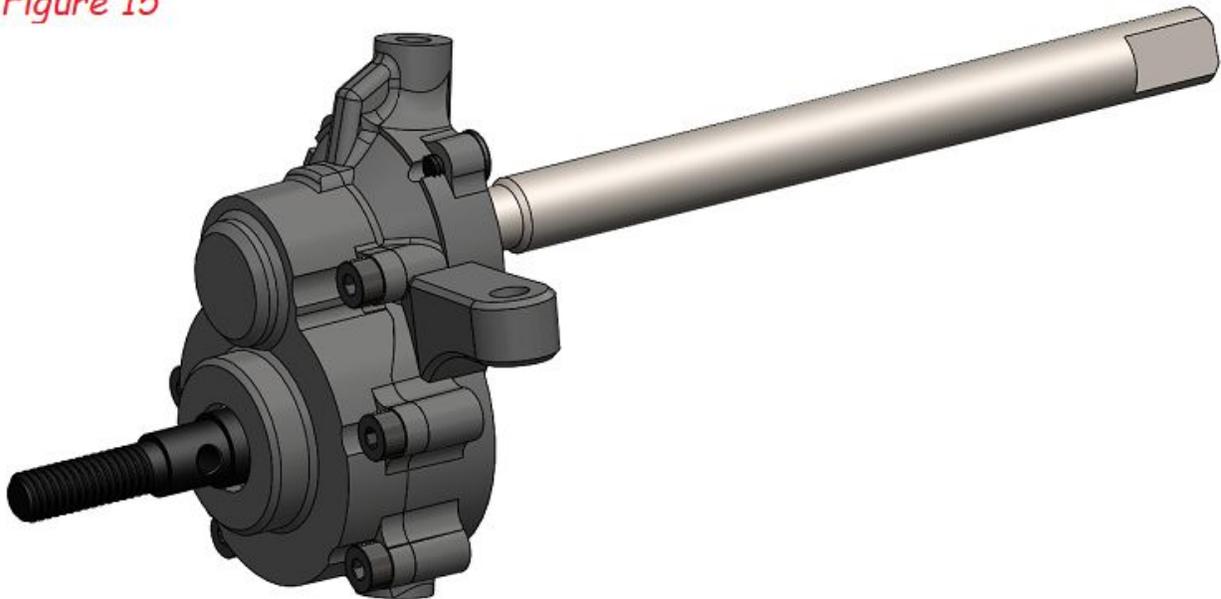


Step 8: Using the finished products from Step 6 and Step 7, along with the 6pcs of 13870 2x6mm CH Screws, assemble the items together as shown in Figure 14. **NOTE 1:** *Be sure to minimal force when tightening the screws, as they only need to be snug . Over-tightening them will result in the plastic housing stripping out.* **NOTE 2:** *We recommend using a small amount of black grease on the gears, which will help prolong the life of them.* Once completed, your item should look the same as Figure 15.

Figure 14



Figure 15



Step 9: Using your finished item from Step 8, install the remaining 08027 2x10mm Pin and the 180016S Wheel Hex onto the exposed Gear Shaft as shown in Figure 16. Figure 17 shows the final product. You can now set this assembly aside along with the hardware mentioned above to be used in future steps.

Figure 16

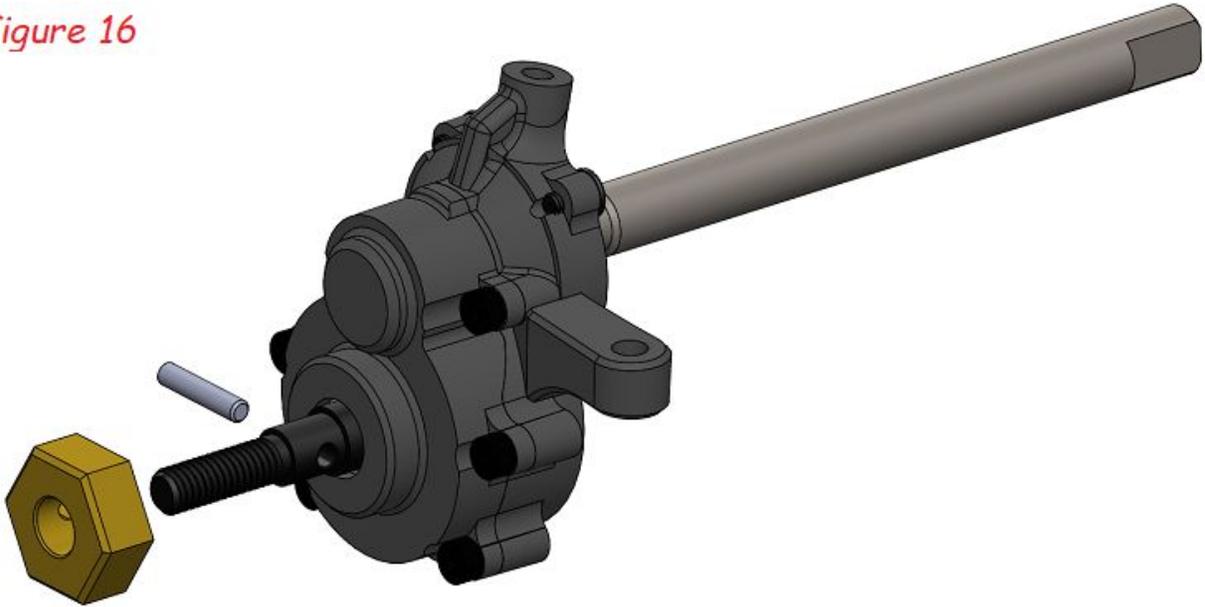
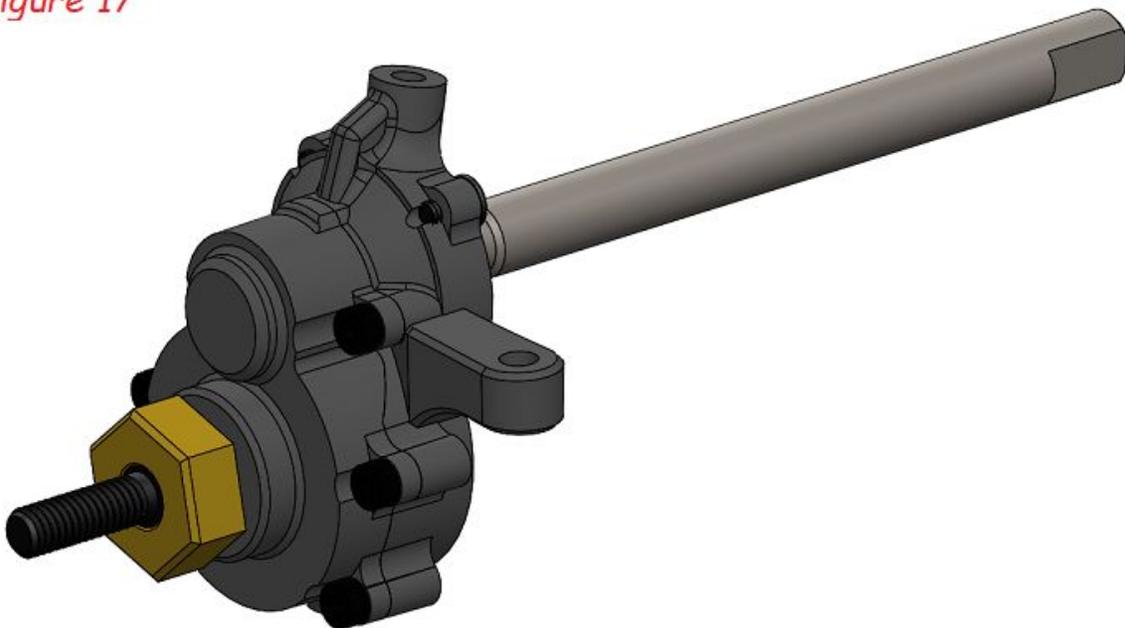


Figure 17



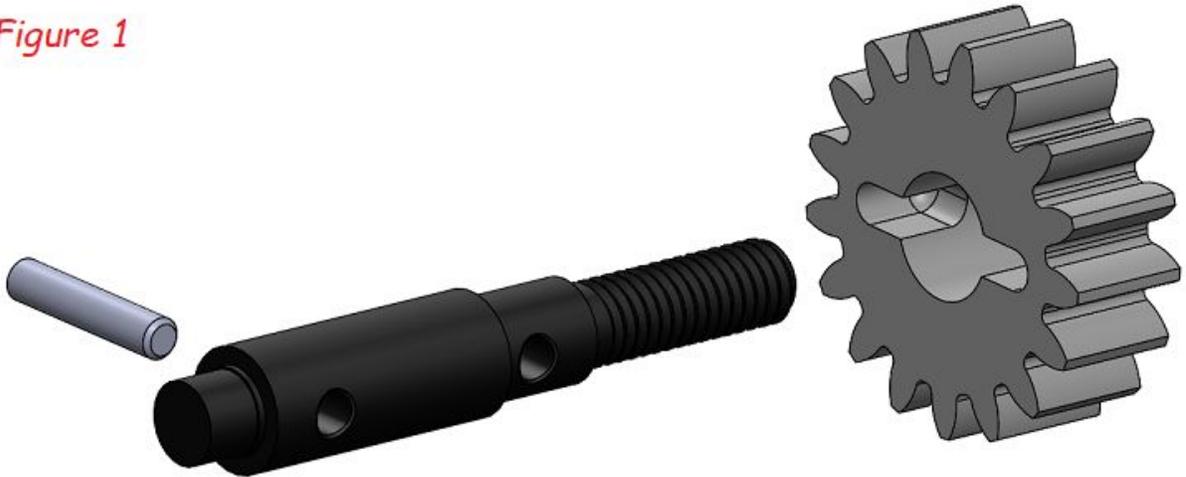
Bag 2 - Left Front Assembly

You will need everything from Bag 2, other than the following items which you'll need to save for later:

- 1pc- PA0300202 C-Mount
- 1pc- 60240 Link Ball
- 2pcs- 50100 3x10mm BH Screws
- 2pcs- 13858 Steering Bushings
- 3pcs- 13871 2x14mm CH Screws

Step 1: Assemble the PA0301301 Gear Shaft, one of the 08027 2x10mm Pins, and the PA0301201 17T Gear as shown in Figure 1.

Figure 1



Step 2: Insert the completed Gear Shaft from Step 1 into the lower half of the PA0300301 Portal Housing (L) while using a 68033 4x8x3mm Bearing as shown in Figure 18. When complete, you should have what Figure 19 illustrates.

Figure 18

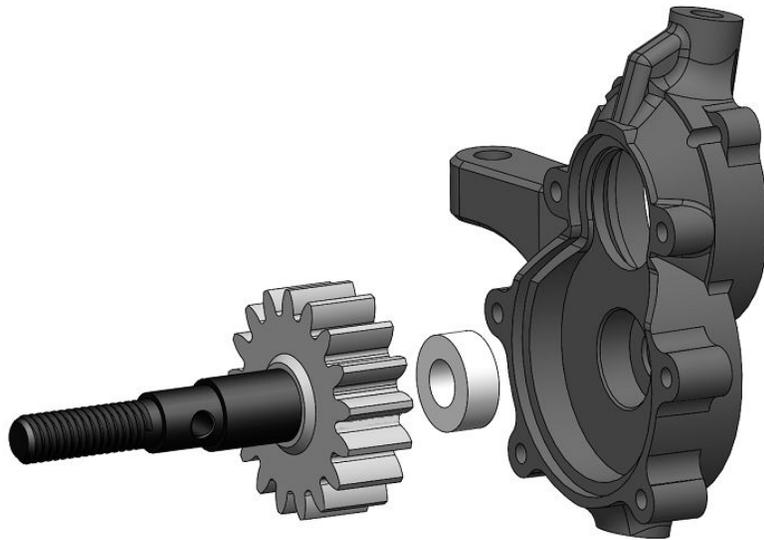
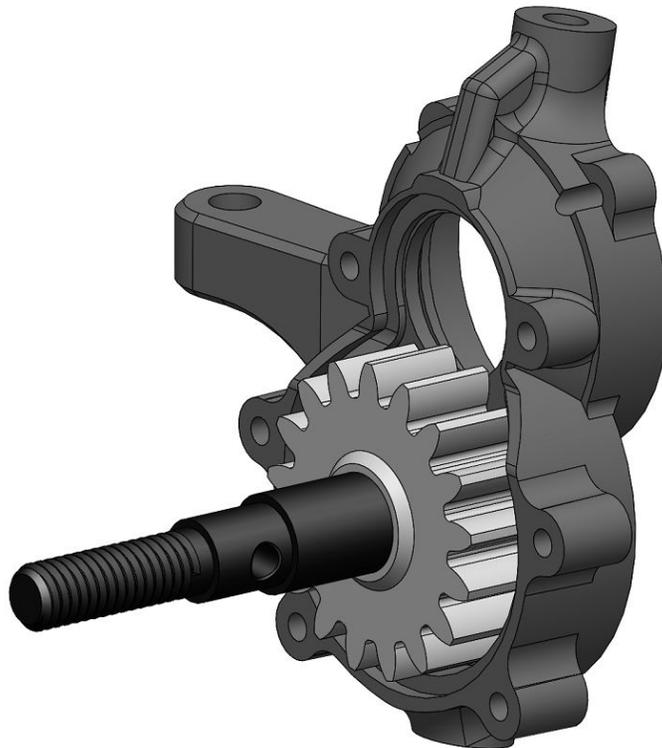


Figure 19



Step 3: Using the PA0300901 CV Shaft, the PA0301001 CV Coupler, the 13866 Joint Pin, and the PA0301001 CV Output, assemble the drive shaft as shown in Figure 4. Figure 5 shows the completed unit. **NOTE 1:** *There will not be a set screw installed to secure the pin as you may be used to seeing in other CV joints. For this design, the bearing captures the pin.* **NOTE 2:** *We recommend using black grease on the CV Coupler, which will help prolong the life of the parts.*

Figure 4

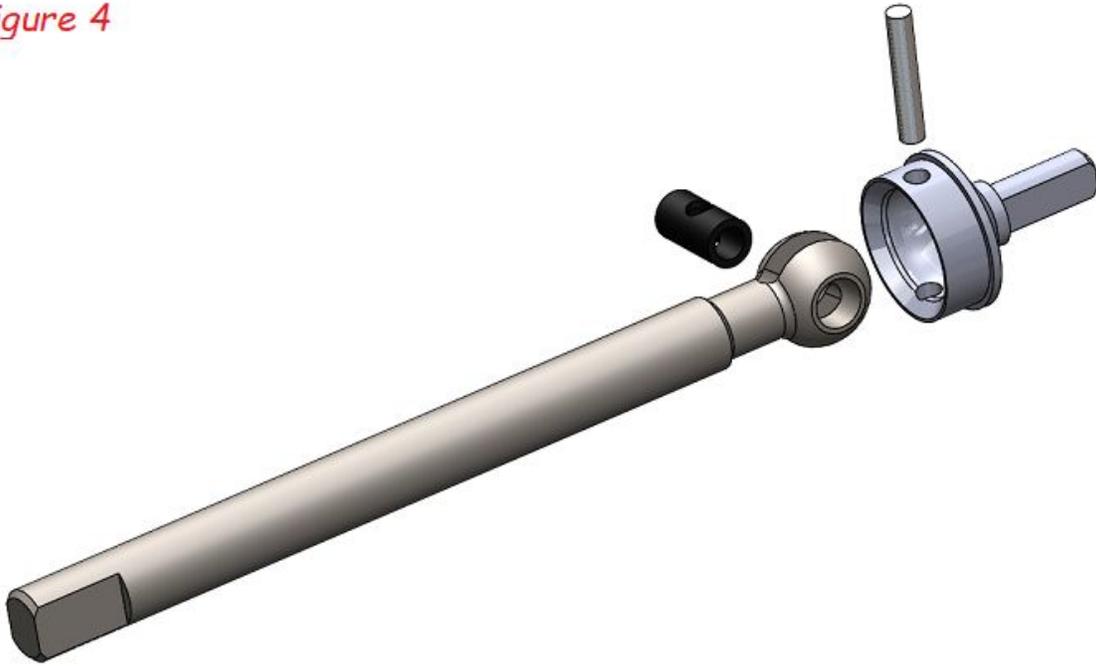
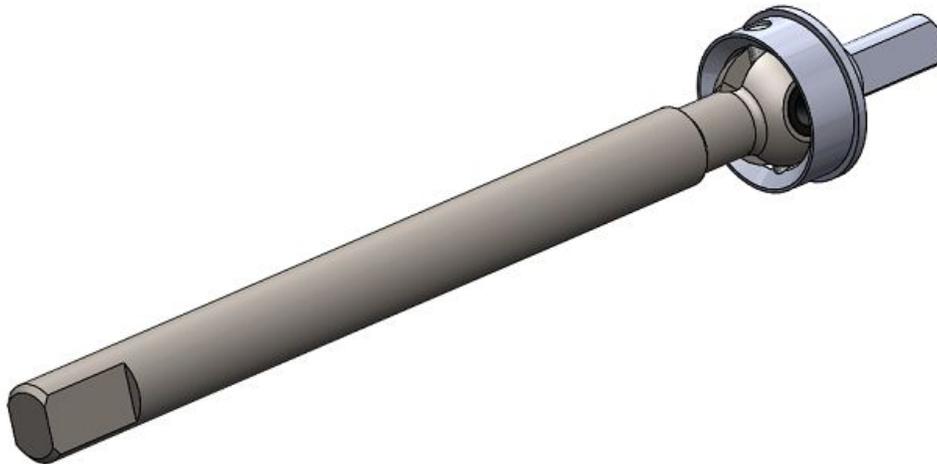


Figure 5



Step 4: Using your completed items from Step 2 and Step 3, use the 98054 12x18x4mm Bearing to assemble them together as shown in Figure 20. Once together, it should look exactly like Figure 21.

Figure 20

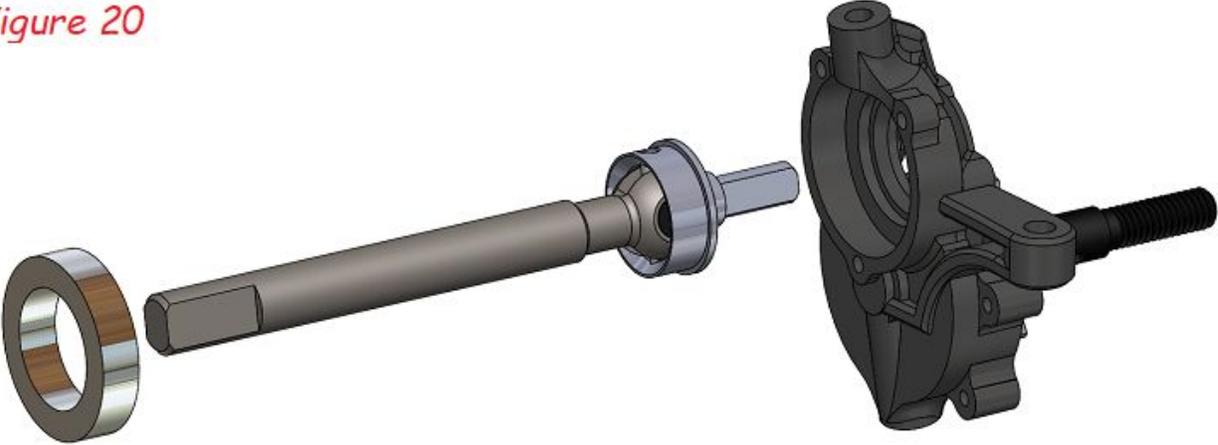
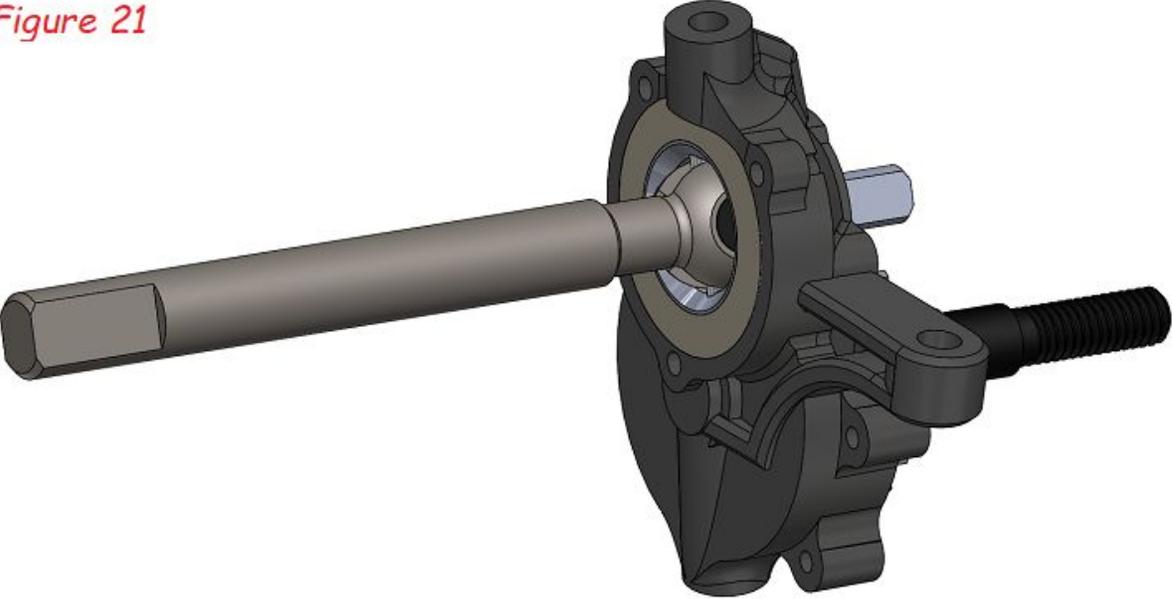


Figure 21



Step 5: Install the 3pcs of 13869 2x4mm BH Screws into the corresponding holes as shown in Figure 22. Figure 23 shows the finished product for this step.

Figure 22

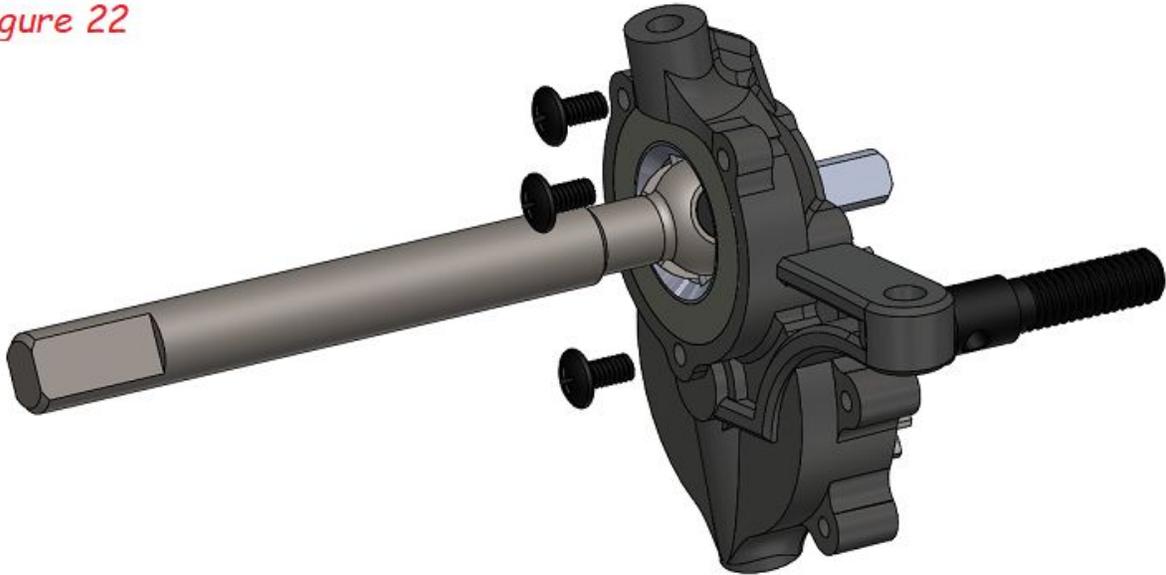
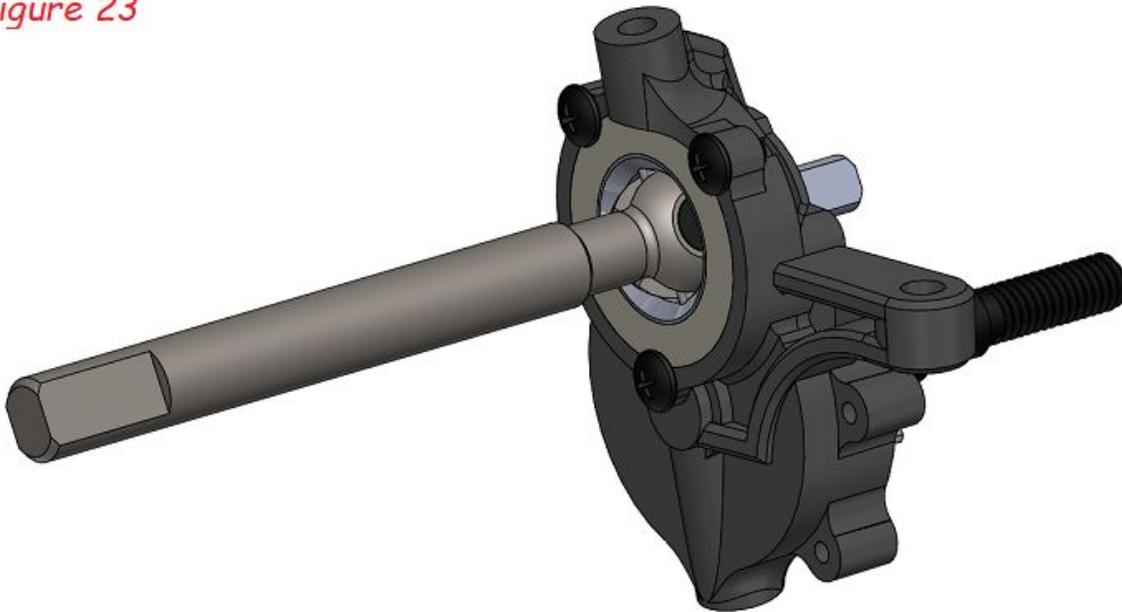


Figure 23



Step 6: Take the PA0301101 8T Gear and install it onto the flat spot of the CV Output from Step 5. **NOTE:** Although the 8T gear can slide onto the CV Output in either direction, be sure that the flat side of the gear goes toward the CV Output as shown in Figure 24 and Figure 25.

Figure 24

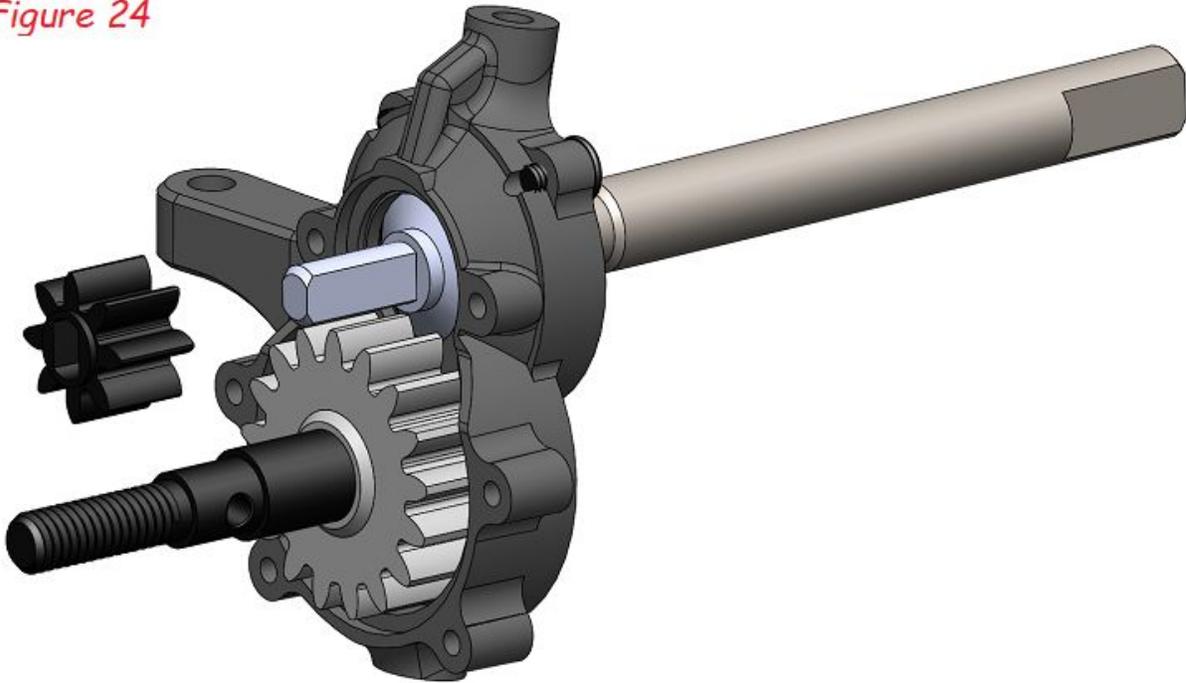
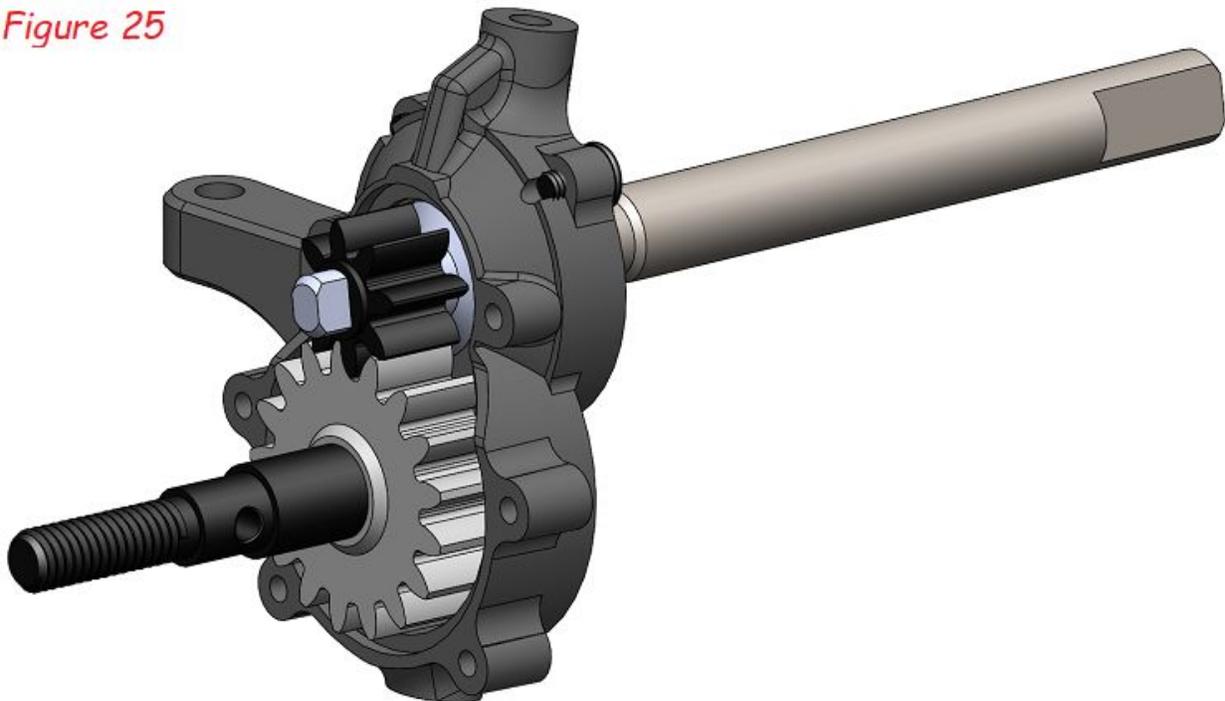


Figure 25



Step 7: Take the PA0300401 Portal Outer Cover and install the remaining 68033 4x8x3mm Bearing into the upper hole and the 98052 6x12x4mm Bearing into the lower hole as shown in Figure 12 and Figure 13.

Figure 12

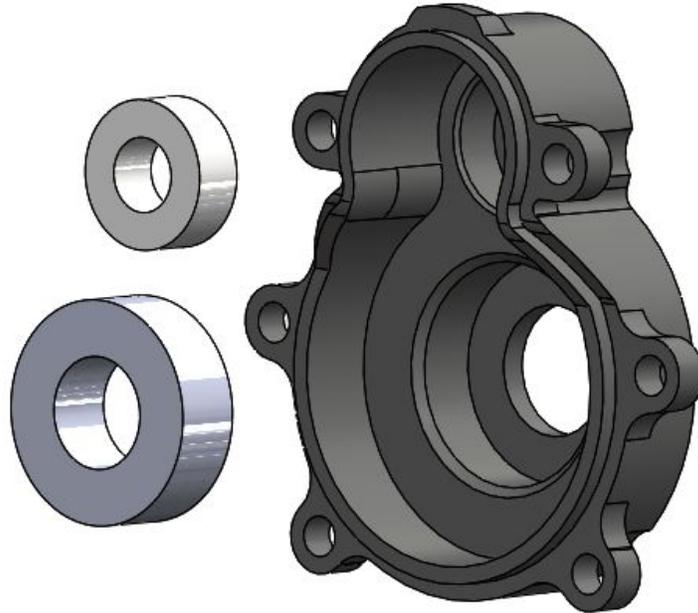
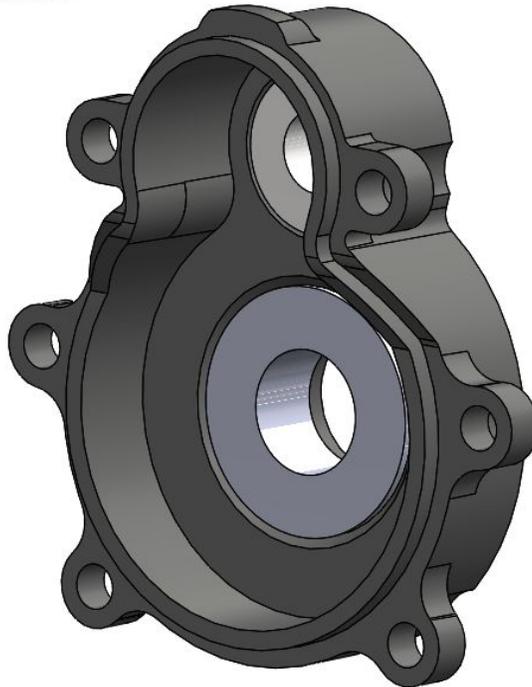


Figure 13



Step 8: Using the finished products from Step 6 and Step 7, along with the 6pcs of 13870 2x6mm CH Screws, assemble the items together as shown in Figure 26. **NOTE 1:** *Be sure to minimal force when tightening the screws, as they only need to be snug . Over-tightening them will result in the plastic housing stripping out.* **NOTE 2:** *We recommend using a small amount of black grease on the gears, which will help prolong the life of them.* Once completed, your item should look the same as Figure 27.

Figure 26

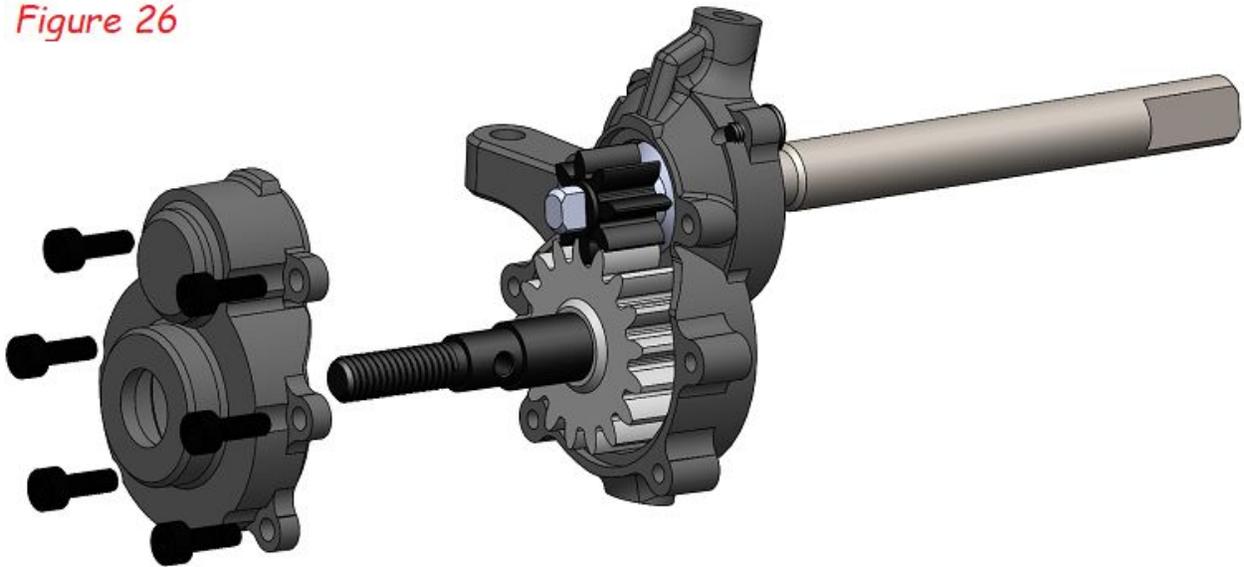
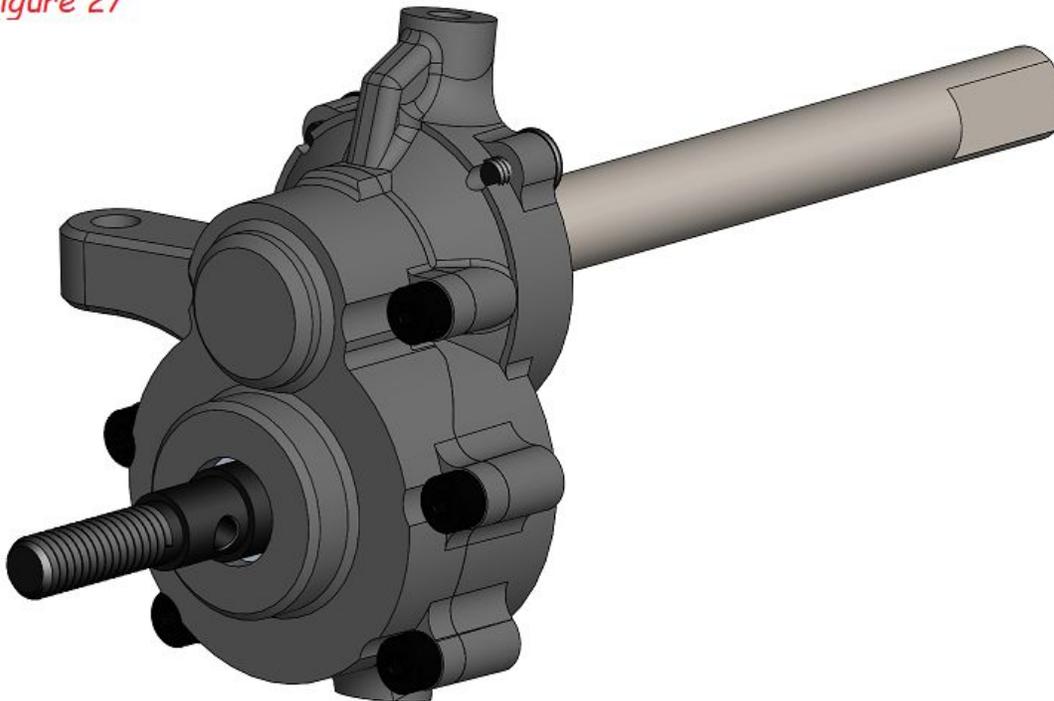


Figure 27



Step 9: Using your finished item from Step 8, install the remaining 08027 2x10mm Pin and the 180016S Wheel Hex onto the exposed Gear Shaft as shown in Figure 28. Figure 29 shows the final product. You can now set this assembly aside along with the hardware mentioned above to be used in future steps.

Figure 28

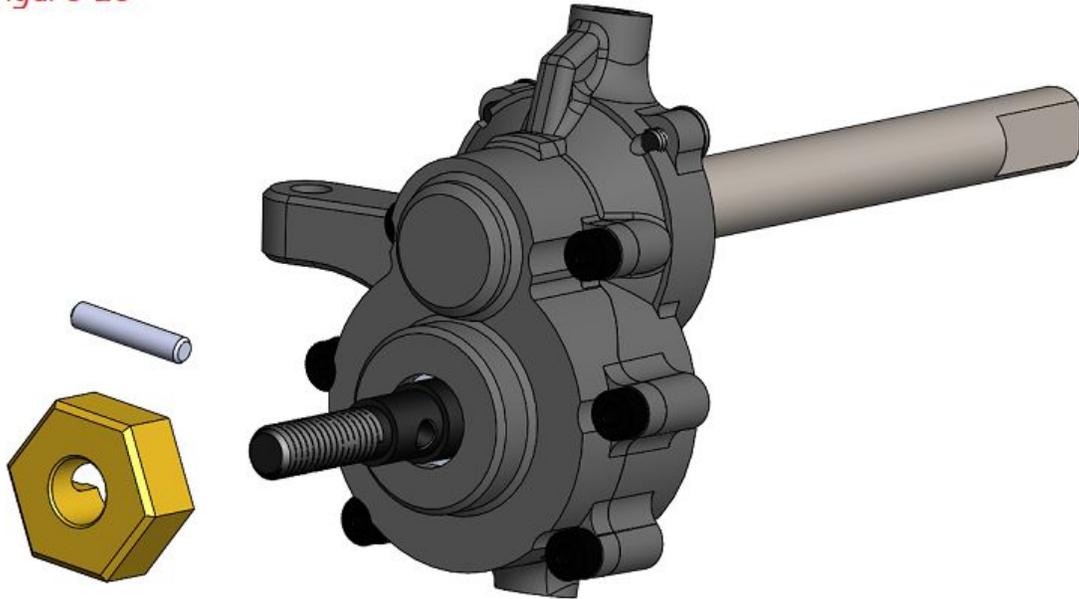
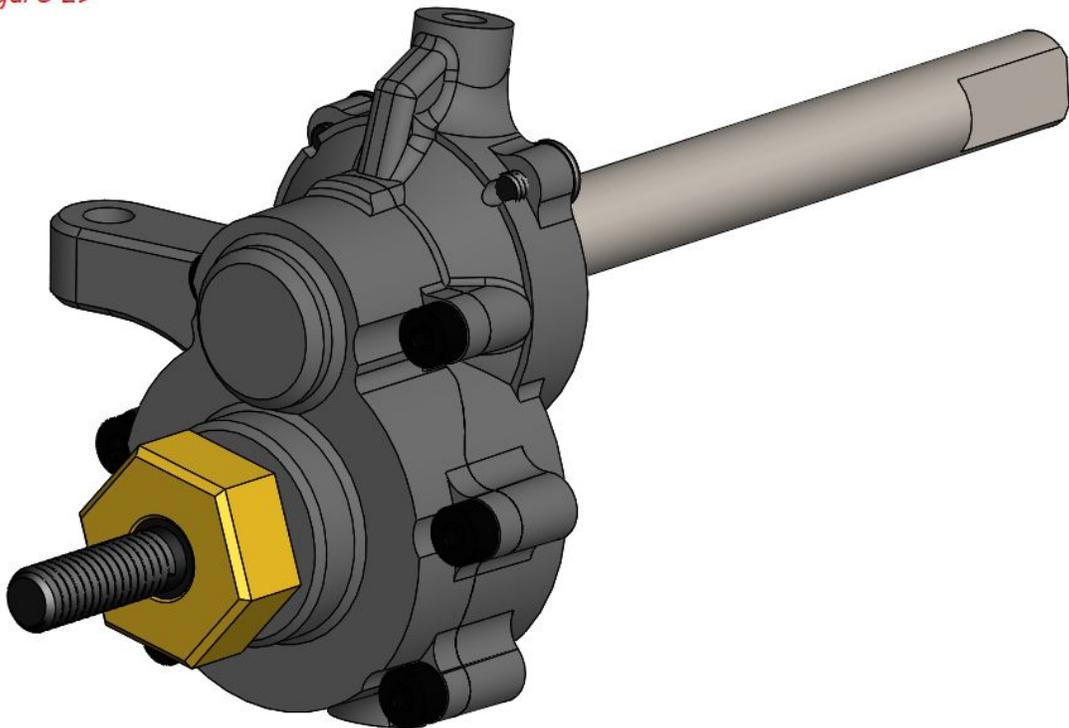


Figure 29



Bag 3 - Main Front Assembly

Step 1: Assemble the PA0300102 Axle Housing, the 68032 7x11x3mm Bearing, the 02139 5x10x4mm Bearing, the 13868 Gear Shaft, the PA0302201 11T Pinion Gear, and 1pc of the 13872 2x8mm FH Screws as shown in Figure 30. **NOTE:** *It is highly recommended to use blue thread locking compound on the threads of the screw during this step.* When everything is assembled properly, it should look just like the model in Figure 31.

Figure 30

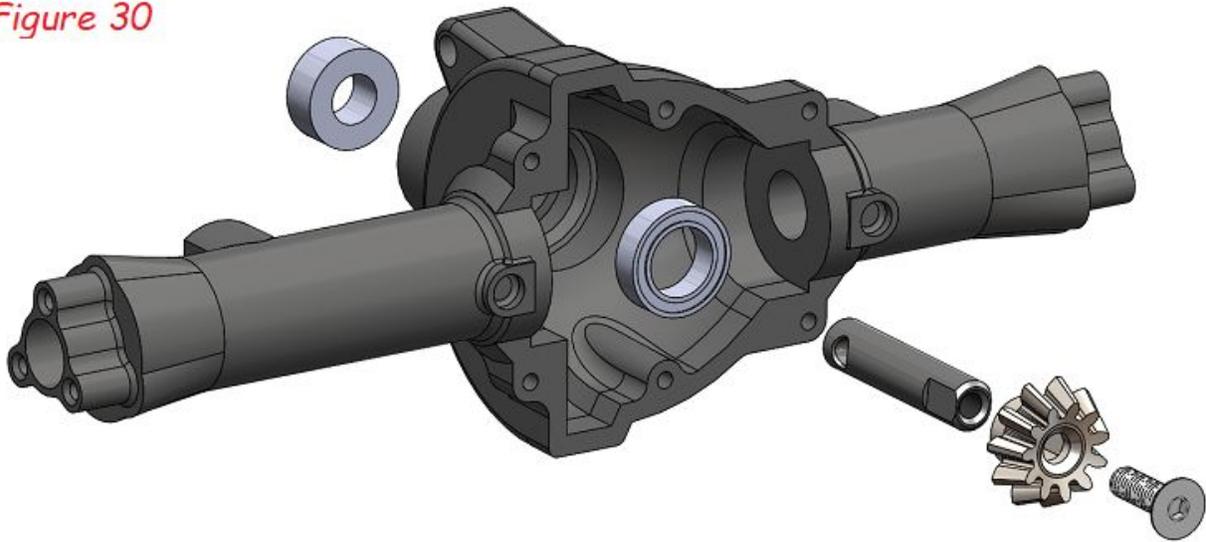
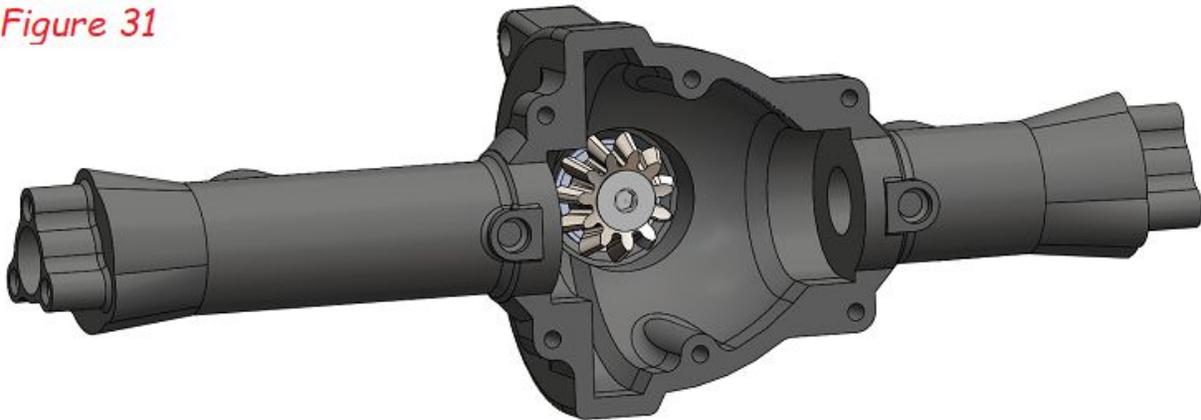


Figure 31



Step 2: Assemble the PA0302002 Spool, the PA0302102 32T Ring Gear, 4pcs of the 13872 2x8mm FH Screws, and the 2pcs of 02138 10x15x4mm Bearings as shown in Figure 32.

NOTE: *It is highly recommended to use blue thread locking compound on the threads of the screws during this step.* Figure 33 depicts the assembled unit.

Figure 32

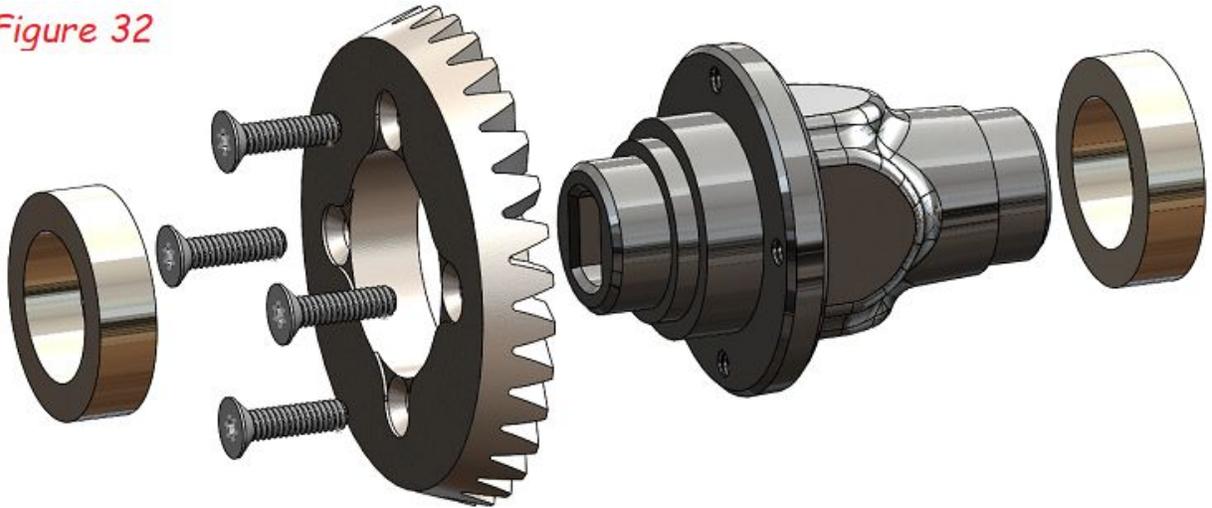
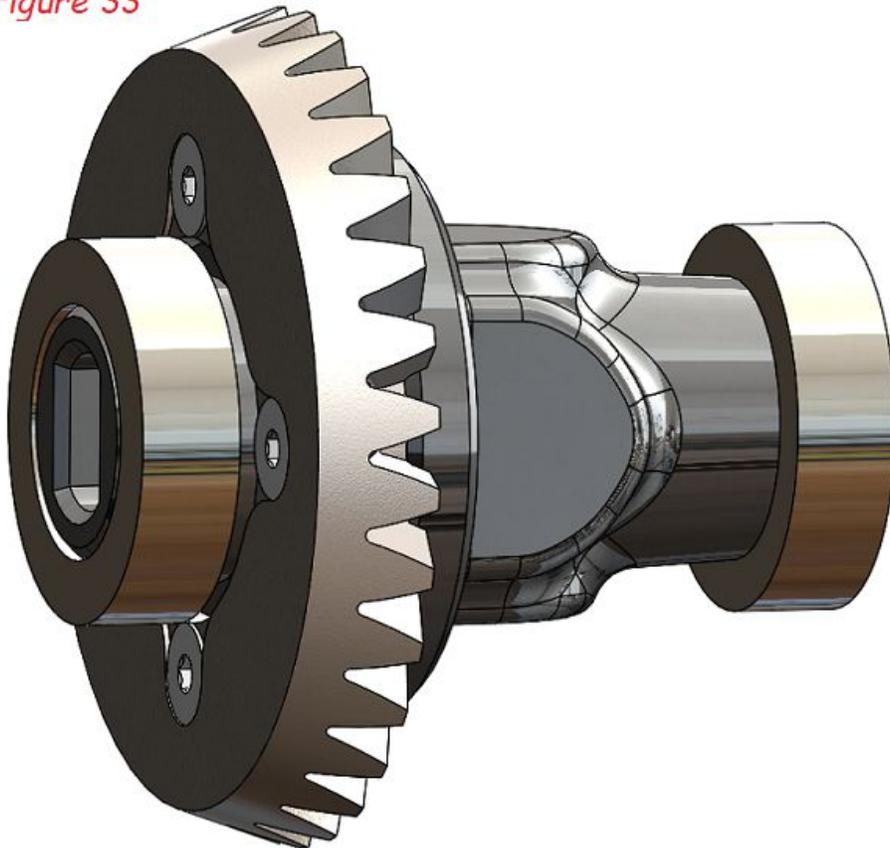


Figure 33



Step 3: Install the final product from Step 2 into the final product from Step 1 and mount the PA0300601 Diff Cover using the 6pcs of 13870 2x6mm CH Screws as shown in Figure 34.

NOTE 1: Be sure to minimal force when tightening the screws, as they only need to be snug. Over-tightening them will result in the plastic housing stripping out. **NOTE 2:** We recommend using a small amount of black grease on the gears, which will help prolong the life of them. When assembled, what you have should mimic what is shown in Figure 35.

Figure 34

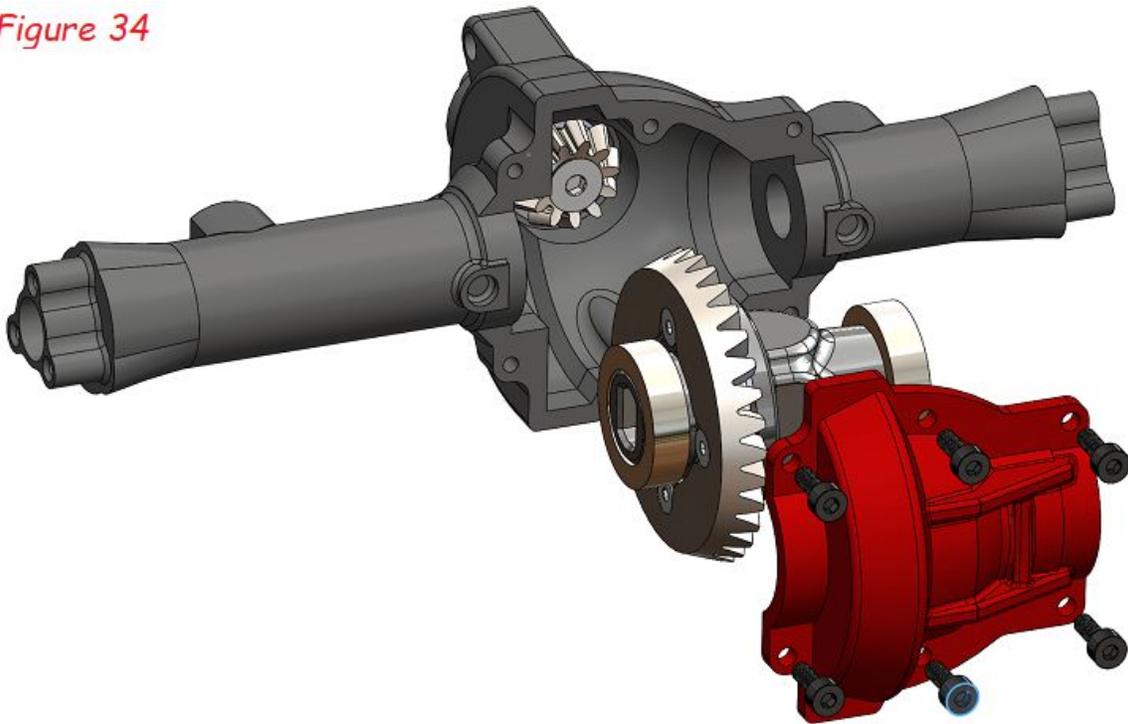
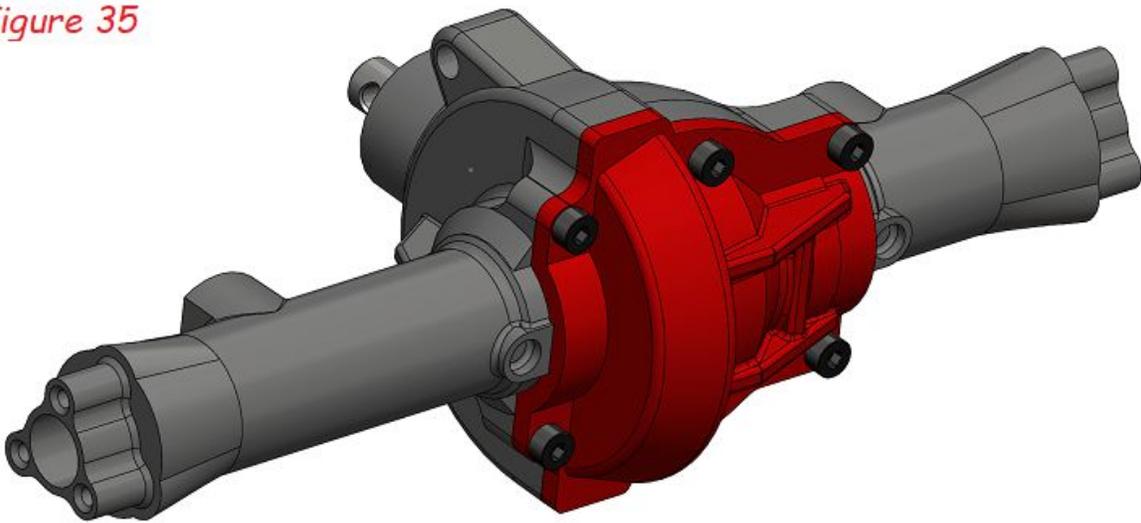


Figure 35



Step 4: Using the PA0300702 C-Mount and the 60240 Link Ball from Bag 1, assemble them together as shown in Figure 36 and Figure 37.

Figure 36

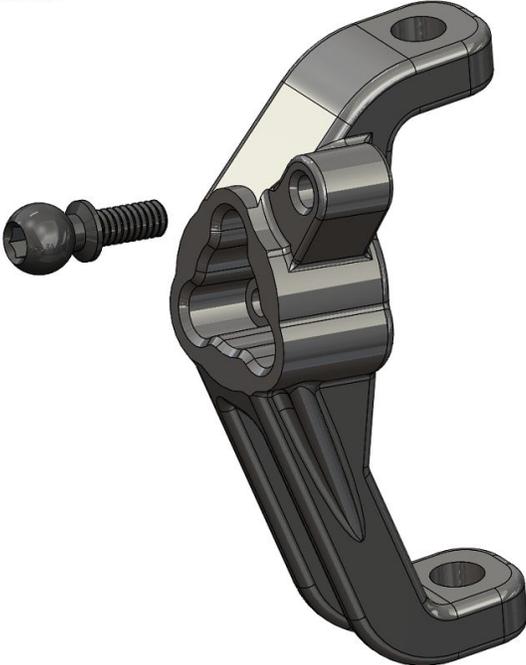
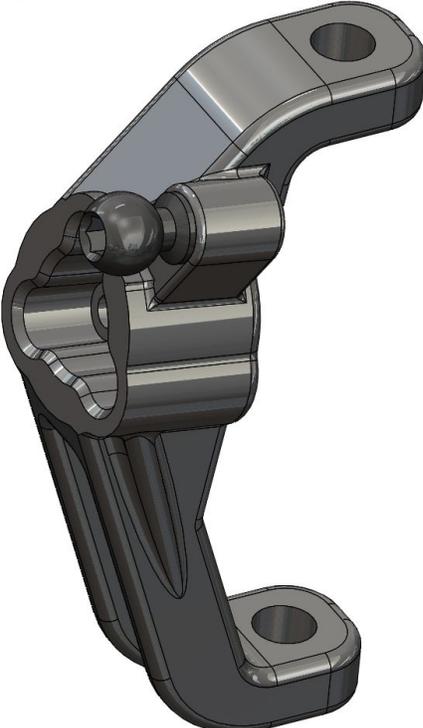


Figure 37



Step 5: Install what you've built from Step 4 with the 3pcs of 13871 2x14mm CH Screws from Bag 1 onto the assembly from Step 3 as shown in Figure 38. **NOTE:** *Be sure to note the orientation of the Axle Housing and the C-Mount, as they can be combined together a few different ways.* Figure 39 shows how it should look when finished.

Figure 38

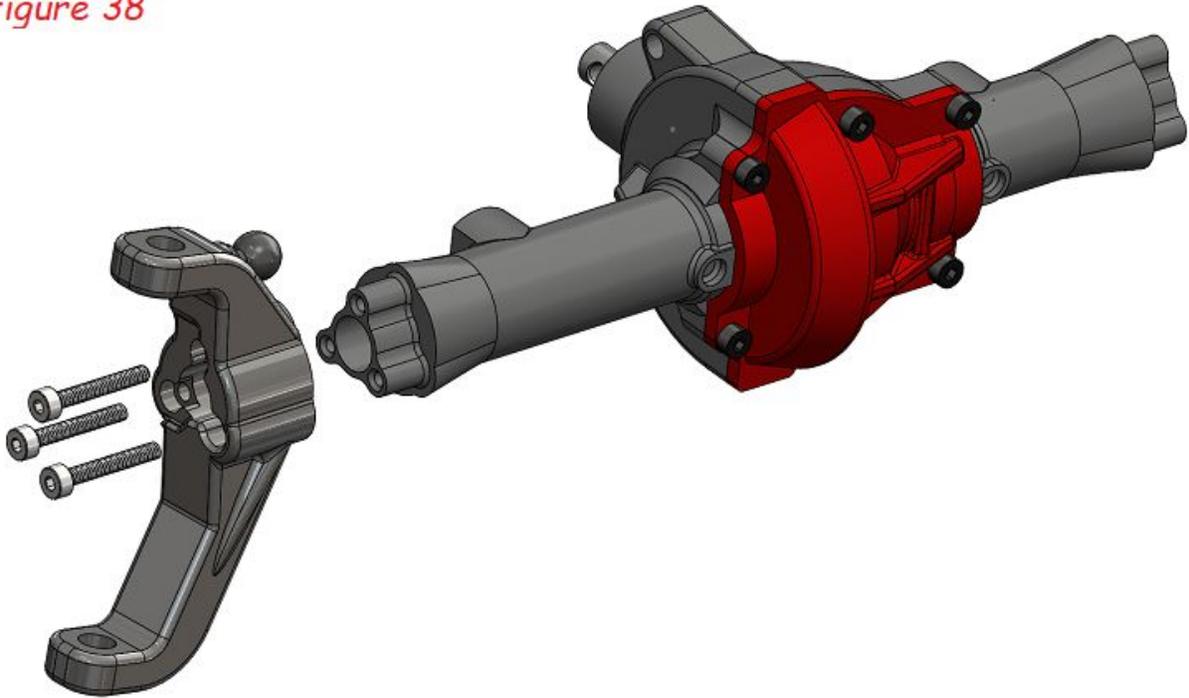
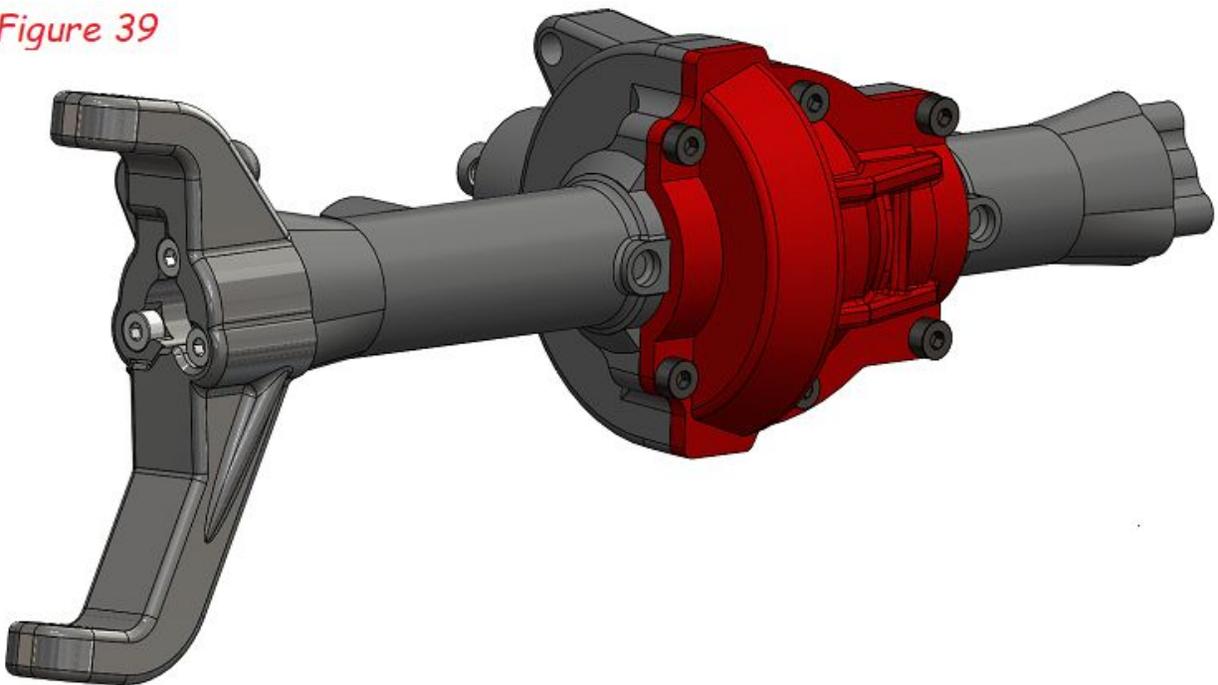


Figure 39

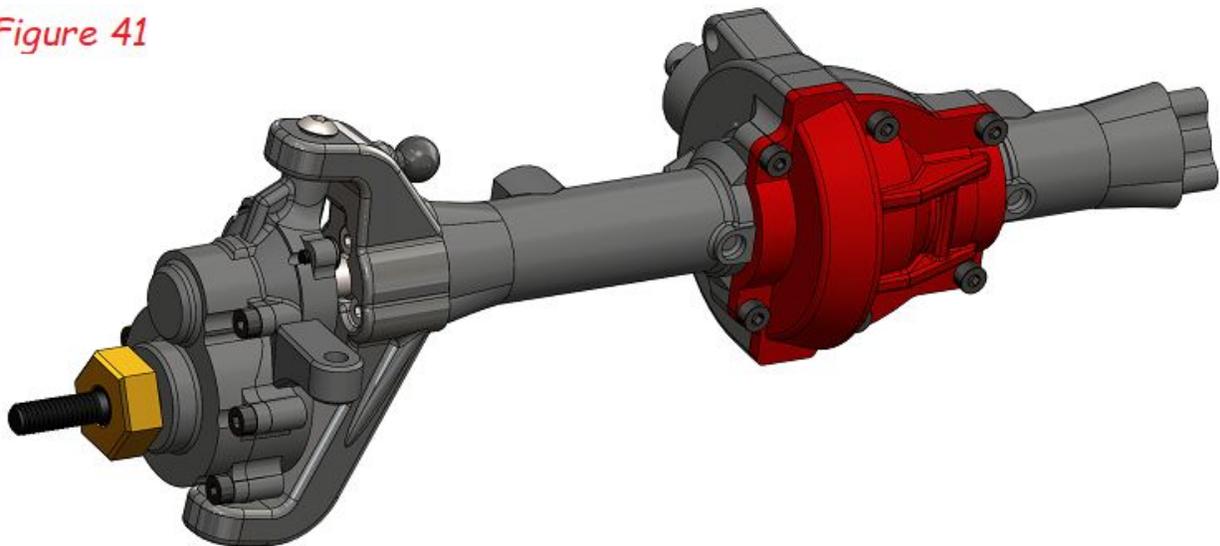


Step 6: Using the remaining items from Bag 1 (your final assembly, the 2pcs of 50100 3x10mm BH Screws, and the 2pcs of 13858 Steering Bushings), assemble everything together as shown in Figure 40. **NOTE 1:** You will more than likely have to rotate the drive shaft slightly to allow the flat slot to key into the spool and push in far enough to allow all holes to line up properly. **NOTE 2:** It may be necessary to slightly loosen these screws to allow completely free steering movement of the portal. Once completed, your assembly should mimic Figure 41.

Figure 40



Figure 41



Step 7: Using the PA0300202 C-Mount and the 60240 Link Ball from Bag 2, assemble them together as shown in Figure 42 and Figure 43.

Figure 42



Figure 43



Step 8: Install what you've built from Step 7 with the 3pcs of 13871 2x14mm CH Screws from Bag 2 onto the assembly from Step 6 as shown in Figure 44. **NOTE:** *Be sure to note the orientation of the Axle Housing and the C-Mount, as they can be combined together a few different ways.* Figure 45 shows how it should look when finished.

Figure 44

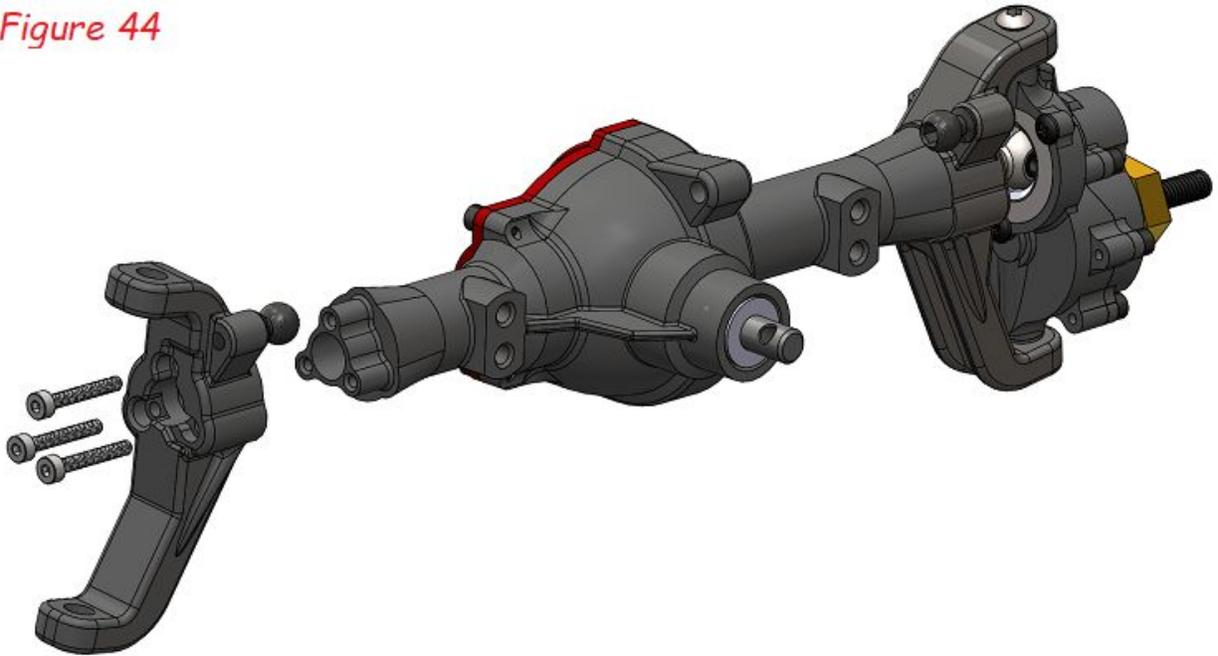
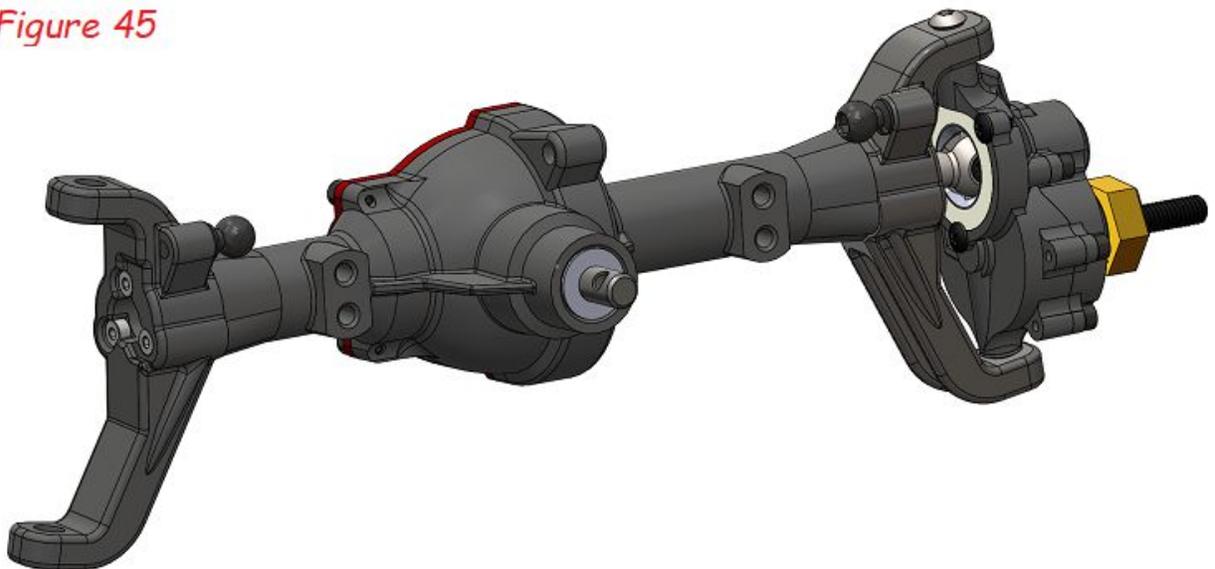


Figure 45



Step 9: Using the remaining items from Bag 2 (your final assembly, the 2pcs of 50100 3x10mm BH Screws, and the 2pcs of 13858 Steering Bushings), assemble everything together as shown in Figure 46. **NOTE 1:** You will more than likely have to rotate the drive shaft slightly to allow the flat slot to key into the spool and push in far enough to allow all holes to line up properly. **NOTE 2:** It may be necessary to slightly loosen these screws to allow completely free steering movement of the portal. Once completed, your assembly should mimic Figure 47.

Figure 46

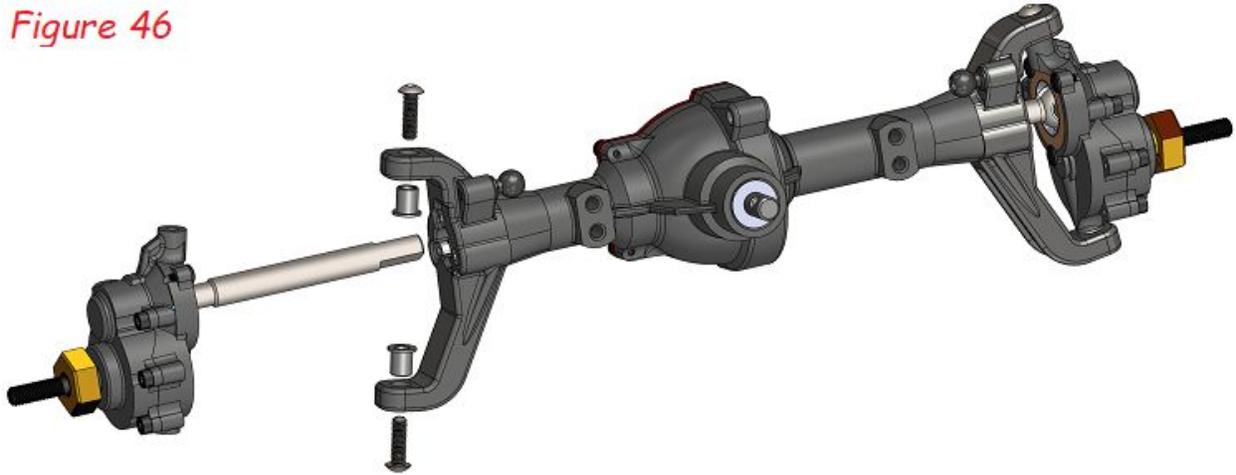
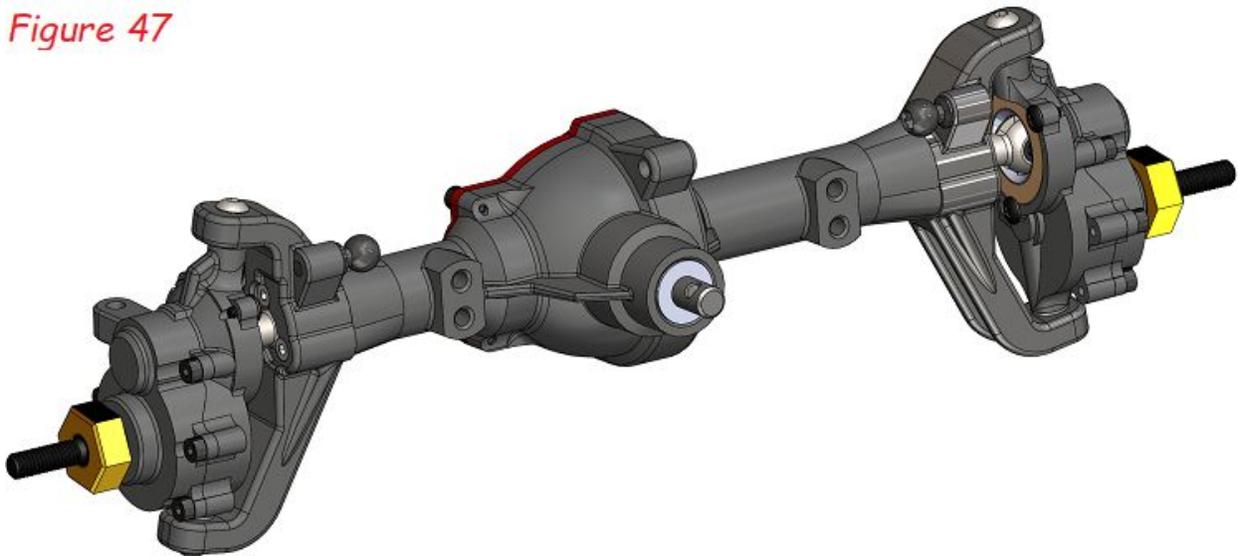


Figure 47



Step 10: Take the PA0302301 Lower Link Mount and the PA0302801 Panhard Bar Mount and mount them to your assembly from Step 9 using the 4pcs of 82045 3x8mm BH Screws as shown in Figure 48. **NOTE:** *Be sure to note the orientation of both mounts as they can be installed a few different ways.* Figure 49 shows them installed.

Figure 48

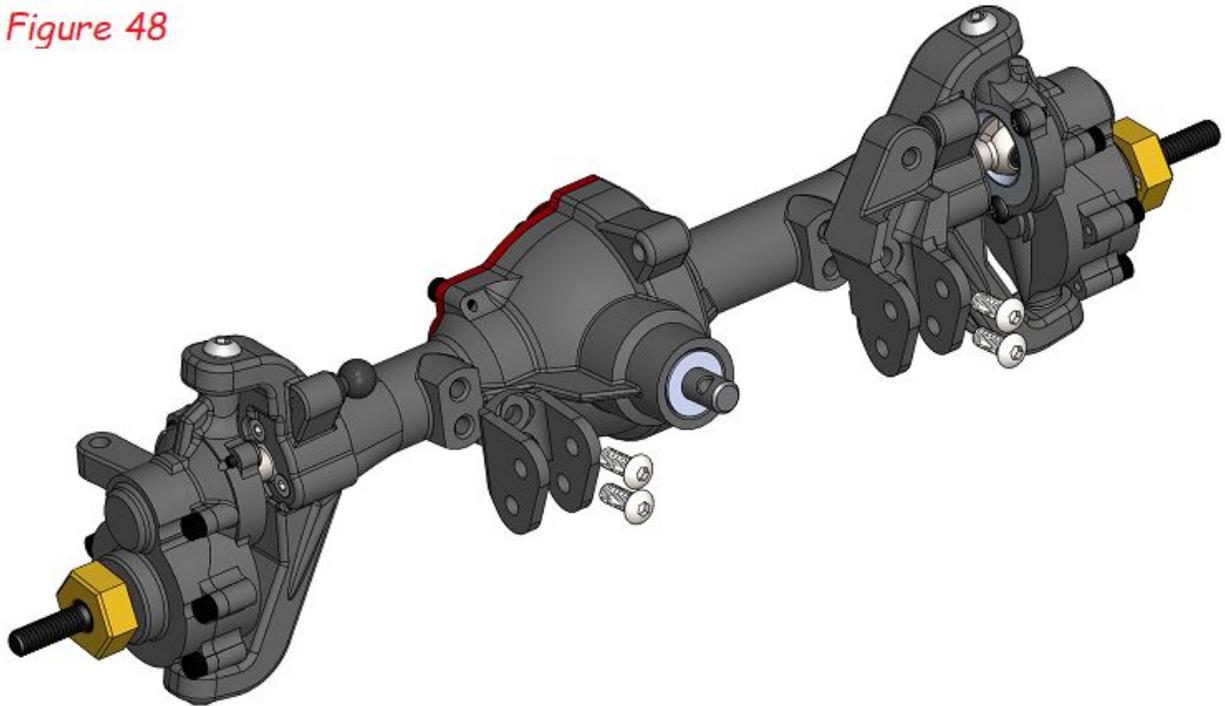
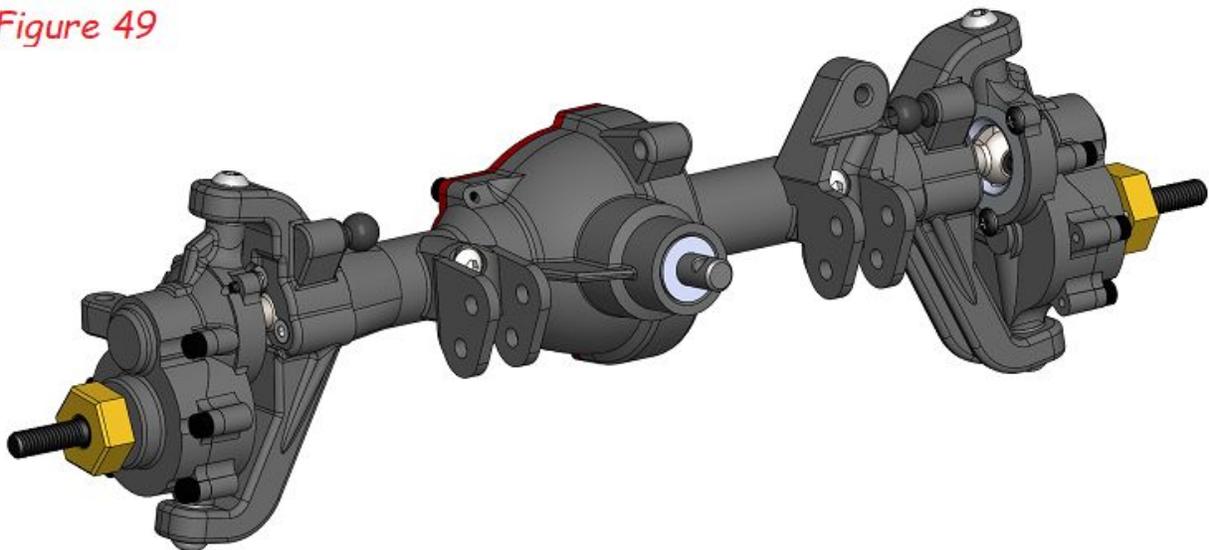


Figure 49

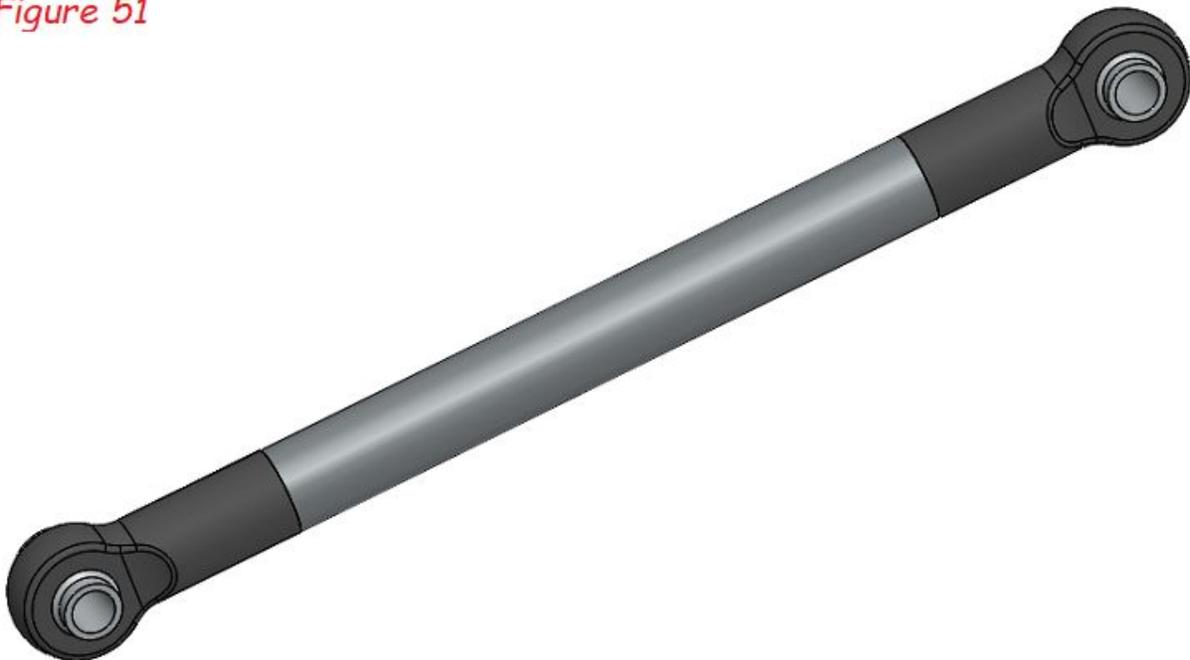


Step 11: Assemble the 2pcs of 13874 Rod Ends, the PA0302901 Servo Link, the 2pcs of 18052 Suspension Balls, and the 2pcs of 13840 3x18mm Grub Screws as shown in Figure 50. **NOTE:** *The grub screws have hexes cut into one end of each of them, allowing you to install them using a 1.5mm hex wrench. Install the Grub Screws into each end of the Servo Link first, using blue thread locking compound. Then, thread the Rod Ends onto the exposed portion of the Grub Screws and pop the Suspension Balls into the Rod Ends.* Figure 51 shows the assembled item.

Figure 50



Figure 51



Step 13:

A. Take your Everest Gen 7 crawler and remove the front axle assembly by disconnecting the four links and shocks from it; you can now also remove the upper part of the shocks and the passenger side upper link altogether.

B. Remove the drive cup from the input shaft on the original axle and mount it onto your new portal axle.

C. Mount the front portal assembly to the vehicle the same way your original front axle was installed (aside from only using the driver's side upper link, which is flipped around so that the link curve is bowed out toward the frame rail).

D. Mount your lower links using the bottom holes on both the Lower Link Mount and the Panhard Bar Mount (this is a good starting point).

- For C & D, you'll use the 2pcs of 82049 3x16mm BH Screws and 2pcs of the 02102 M3 Lock Nuts to mount the lower links, and the 82047 3x20mm BH Screw and the remaining 02102 M3 Lock Nut to mount the remaining upper link as shown in Figure 54. ***NOTE: For the best result when mounting upper link, put the screw through the passenger side of the hole first, so that the head of the screw is against the portal axle housing. Now, slide the link ball over the screw threads that are exposed, and tighten the lock nut against the link ball.*** Once assembled, the position of the hardware should be as shown in Figure 55.

Figure 54

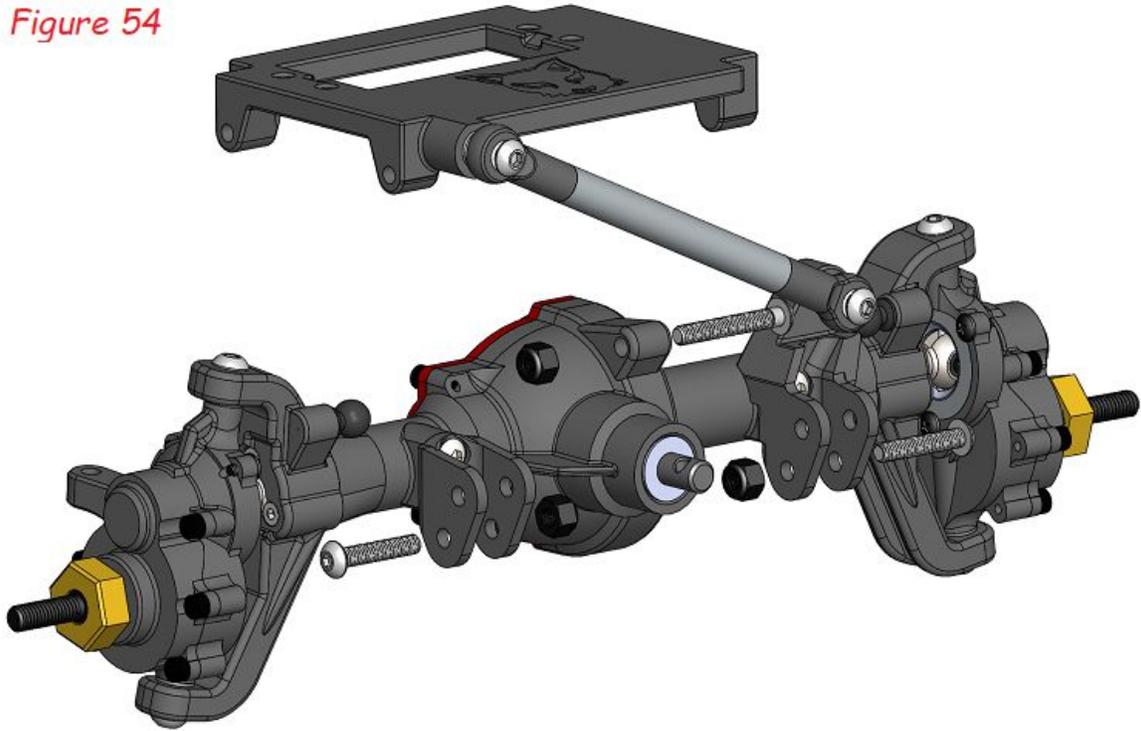
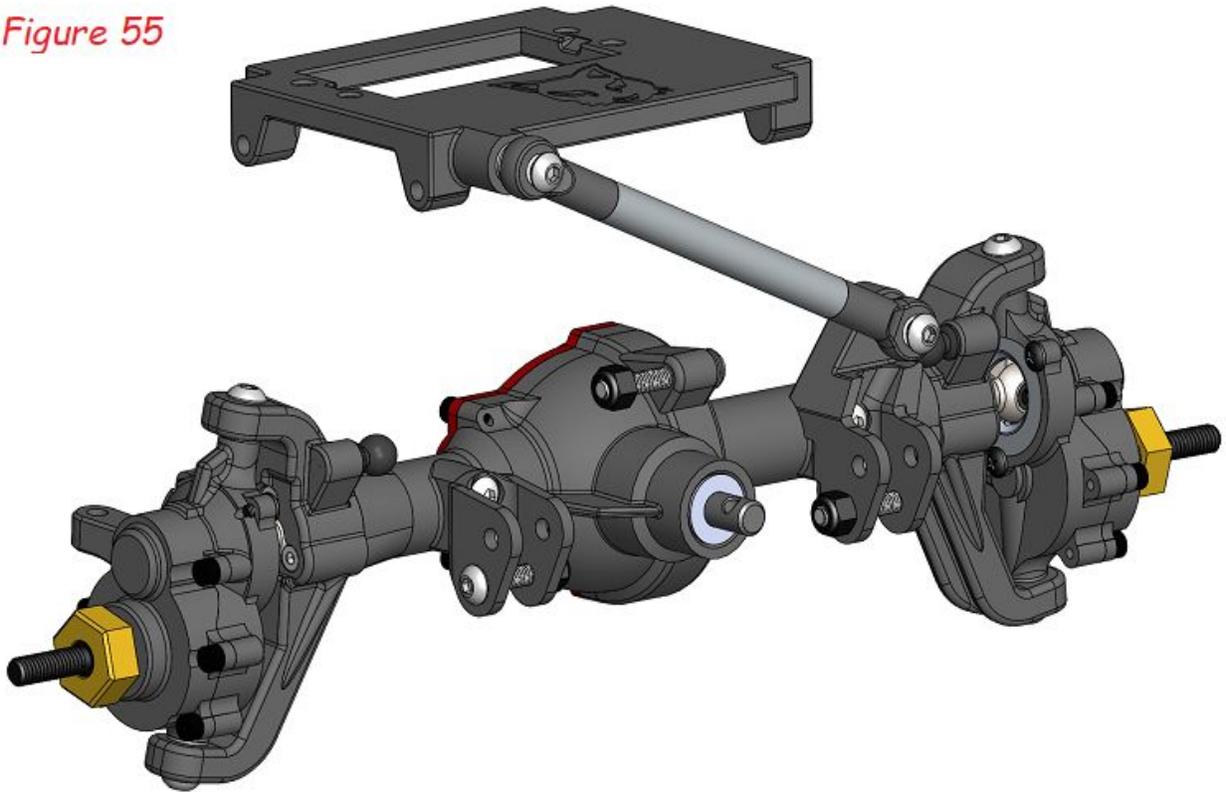


Figure 55



Step 14:

- A. Move your front bumper mount forward two holes, in which you're occupying the two furthest-forward holes on the frame rails.
- B. Remove the screws that attach the fenders to the chassis only (not the screws that go into the bumper mounts).
- C. Insert the 4pcs of 50100 3x10mm BH Screws through mounting holes on the fenders (if you don't have fenders, just skip to the next step).
- D. Position the PA0300803 Servo Mount so that the screw tabs are facing down. While guiding the screws through the fender mounting holes on the side rails, thread the screws in to secure the fenders, side rails, and Servo Mount together as shown in Figure 56.

NOTE 1: The fenders are not shown in the model to better illustrate the position of the screw holes needed to install the Servo Mount. **NOTE 2:** You may need to trim the bottom of your body posts to ensure clearance for the Panhard Bar throughout the suspension movement.

Figure 56



Step 15: Now, remove the servo from your original Everest Gen 7 axle and install it onto the Servo Mount using the same hardware. The servo will mount on top of the Servo Mount, with the servo spline facing down and toward the driver's side of the vehicle as shown in Figure 58 and Figure 59.

Figure 58

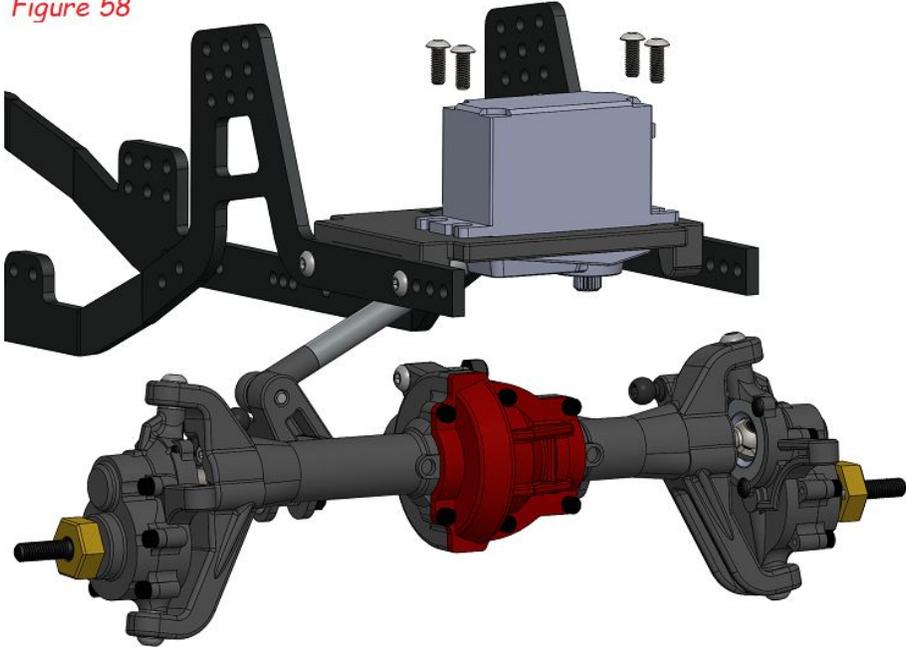
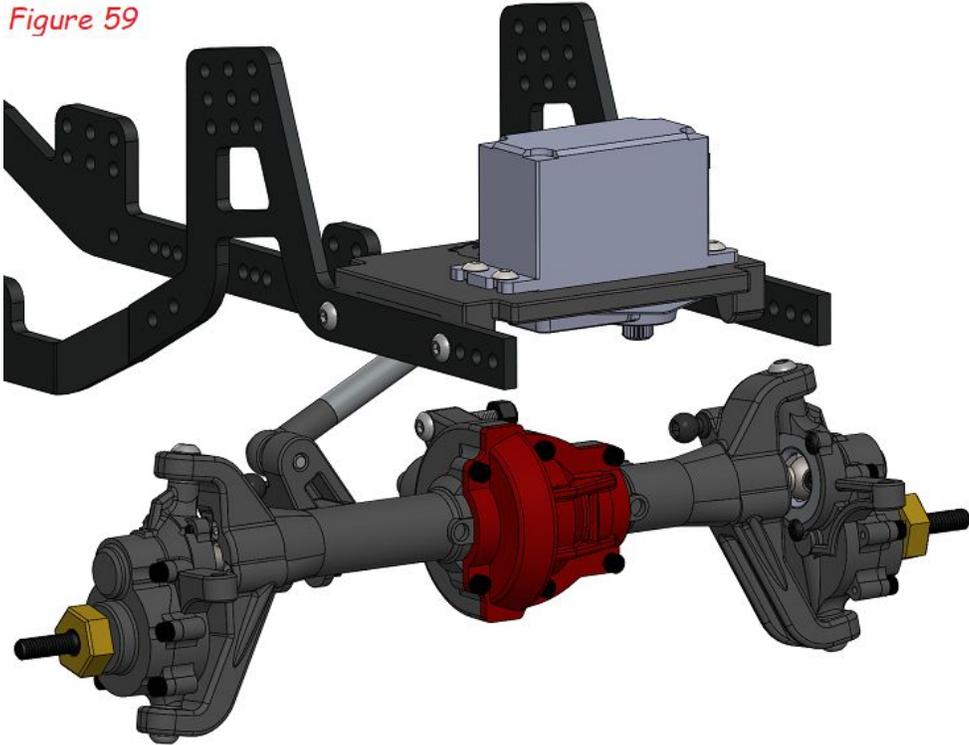


Figure 59



Bags 4 & 5 - Rear Portal Assembly

Step 1: Assemble the PA0300102 Axle Housing, the 68032 7x11x3mm Bearing, the 02139 5x10x4mm Bearing, the 13868 Gear Shaft, the PA0302201 11T Pinion Gear, and 1pc of the 13872 2x8mm FH Screws as shown in Figure 30. **NOTE:** *It is highly recommended to use blue thread locking compound on the threads of the screw during this step.* When everything is assembled properly, it should look just like the model in Figure 31.

Figure 30

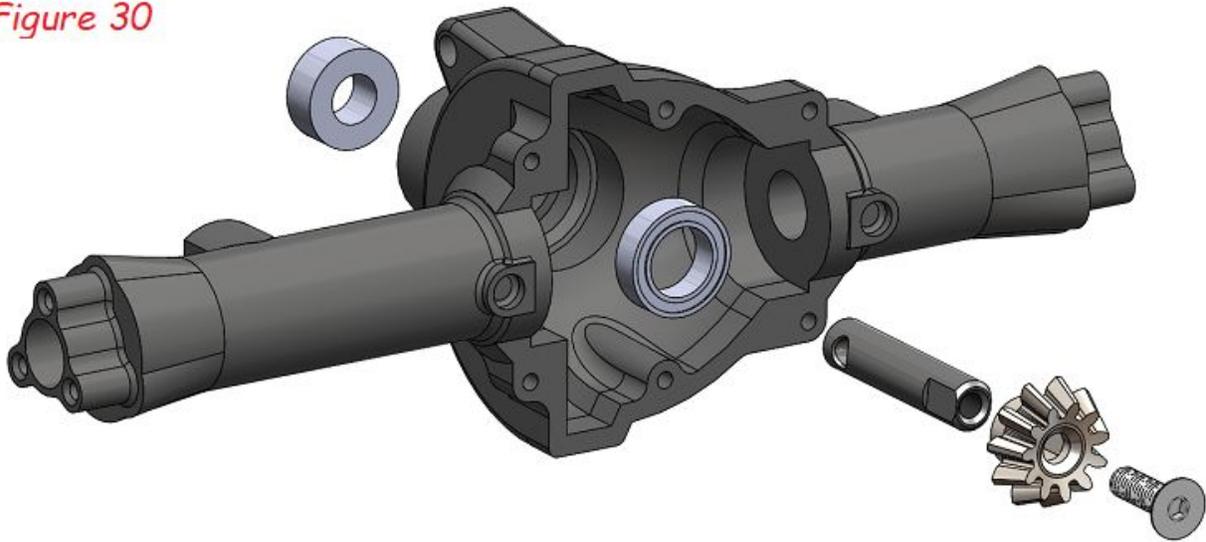
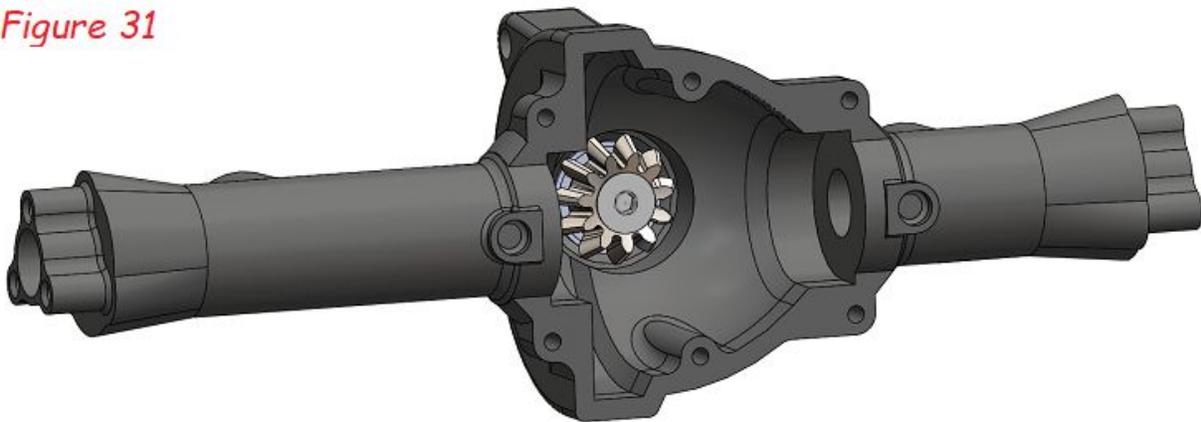


Figure 31



Step 2: Assemble the PA0302002 Spool, the PA0302102 32T Ring Gear, 4pcs of the 13872 2x8mm FH Screws, and the 2pcs of 02138 10x15x4mm Bearings as shown in Figure 32.

NOTE: It is highly recommended to use blue thread locking compound on the threads of the screws during this step. Figure 33 depicts the assembled unit.

Figure 32

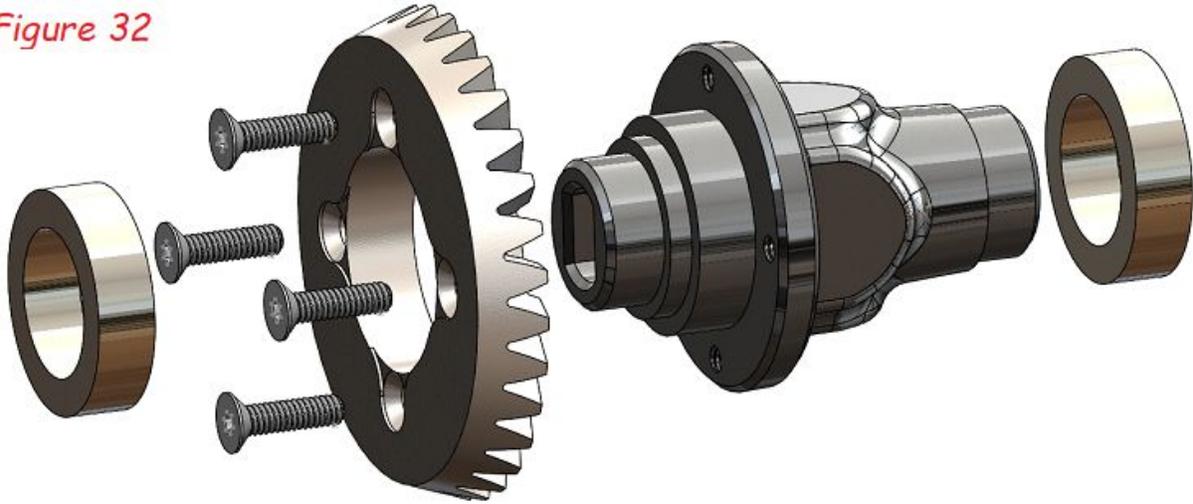
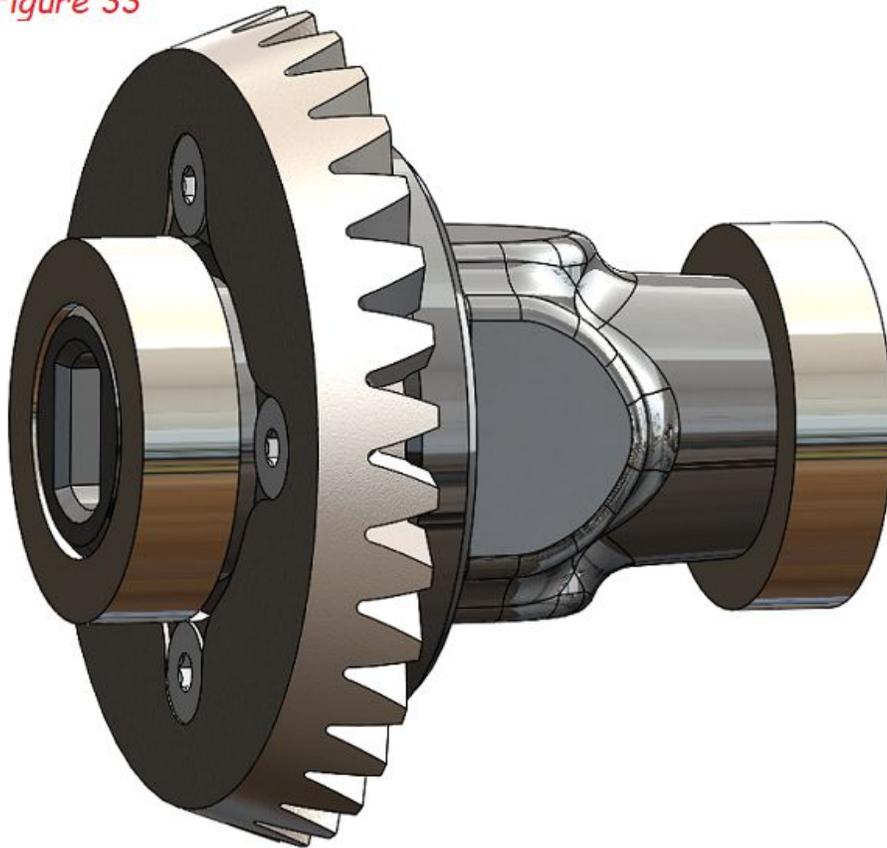


Figure 33



Step 3: Install the final product from Step 2 into the final product from Step 1 and mount the PA0300601 Diff Cover using the 6pcs of 13870 2x6mm CH Screws as shown in Figure 34.

NOTE 1: Be sure to minimal force when tightening the screws, as they only need to be snug . Over-tightening them will result in the plastic housing stripping out. **NOTE 2:** We recommend using a small amount of black grease on the gears, which will help prolong the life of them.

When assembled, what you have should mimic what is shown in Figure 35.

Figure 34

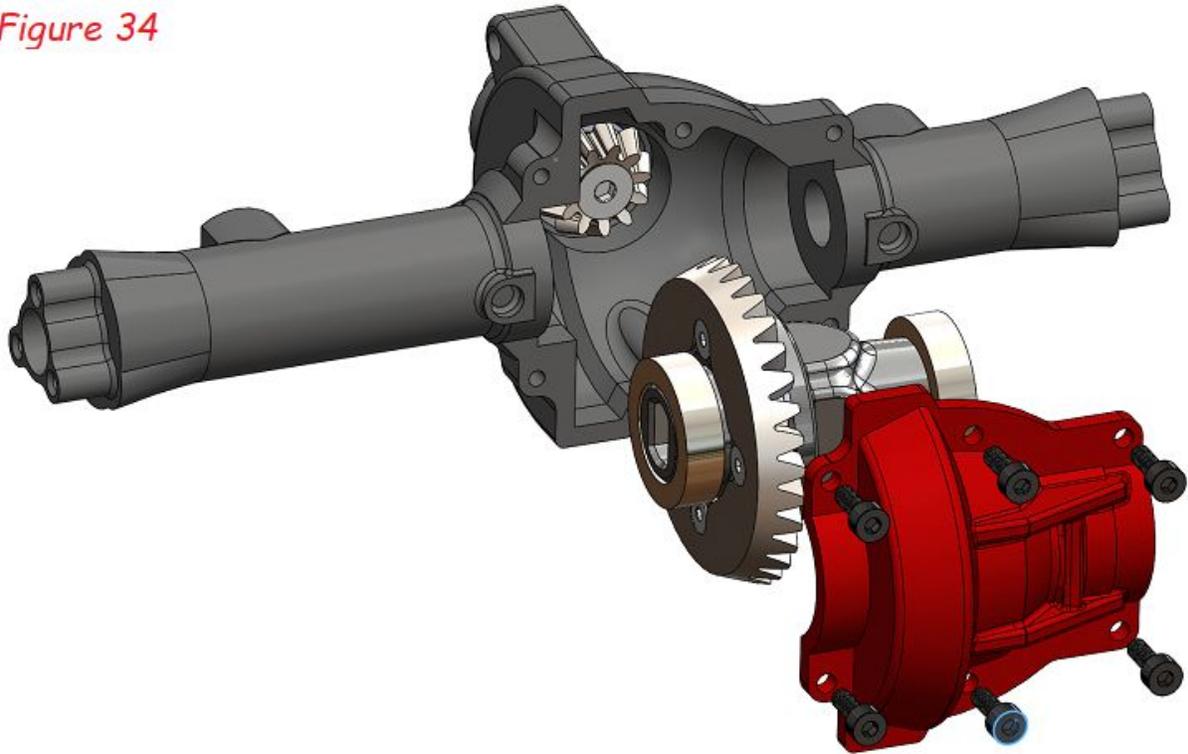
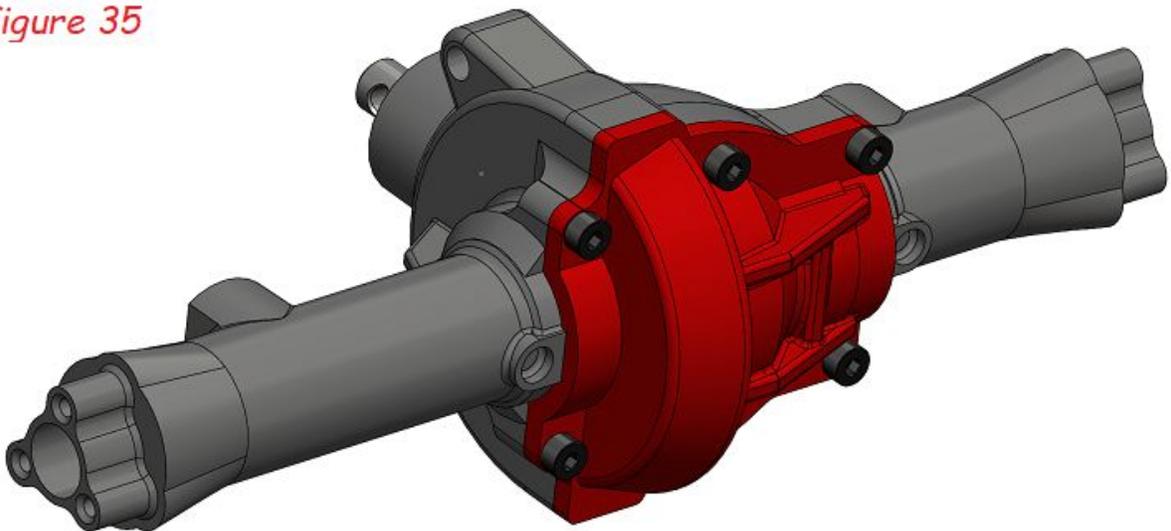


Figure 35



Step 4: Take 1pc of the 60240 Link Ball and install it into the PA0302401 Rear Portal Housing as shown in Figure 60. Once installed, it will look like Figure 61.

Figure 60

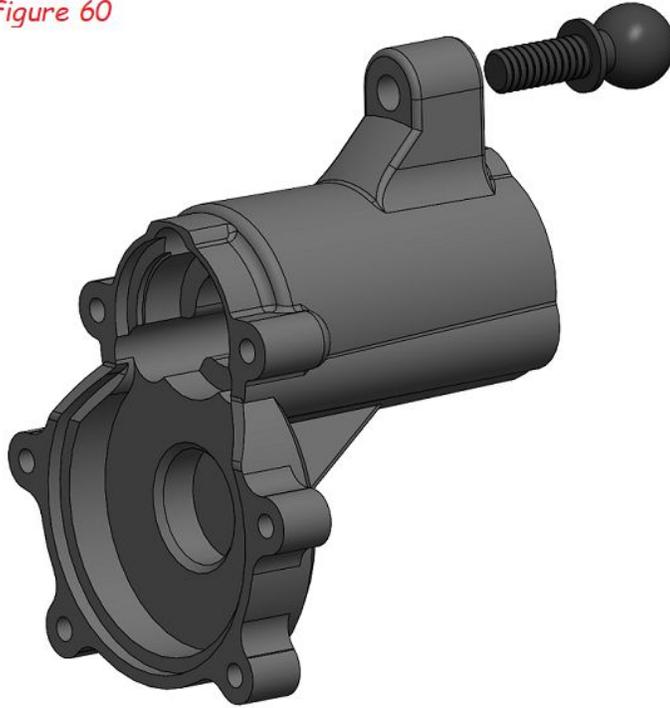
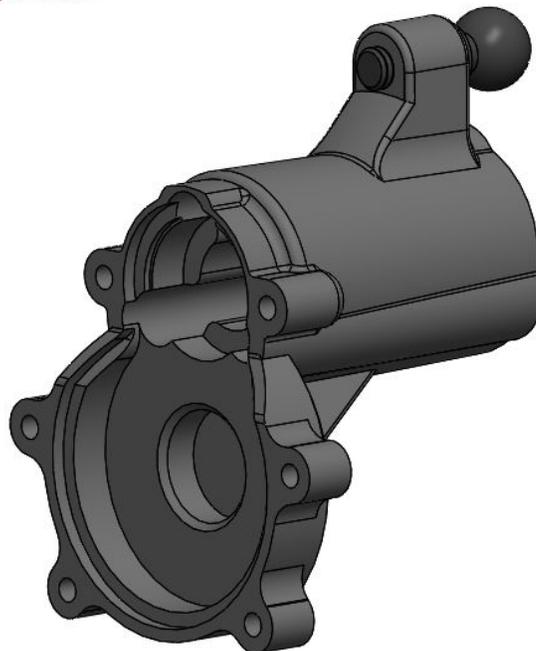


Figure 61



Step 5: Make a 2nd piece the same as Step 4 .

Step 6: Gather the 2pcs of 13867 6x10x3mm Bearings, 2pcs of the 68033 4x8x3mm Bearings, the 6pcs of 13871 2x14mm CH Screws, the assembly from Step 3, and the 2pcs of Rear Portal Housings from Step 4 and Step 5. Assemble everything together as shown in Figure 62.

NOTE: *Install all bearings last in this assembly.* When finished, the assembly should resemble Figure 63.

Figure 62

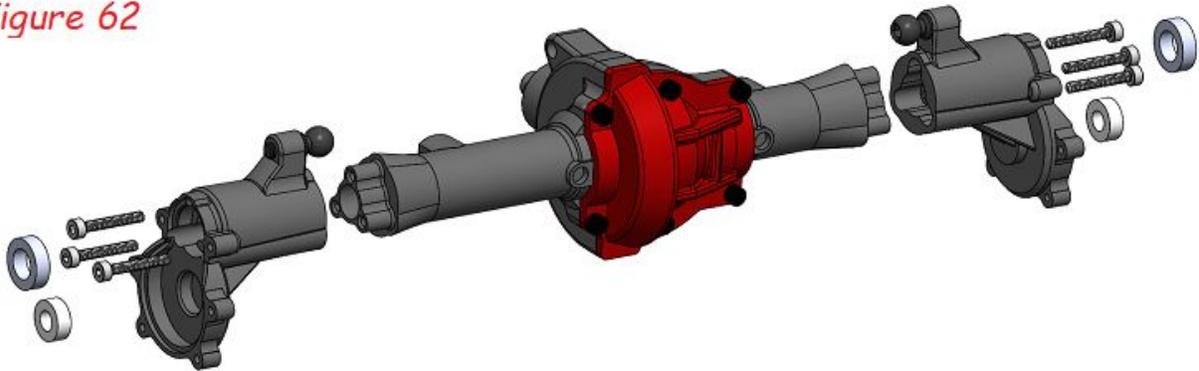
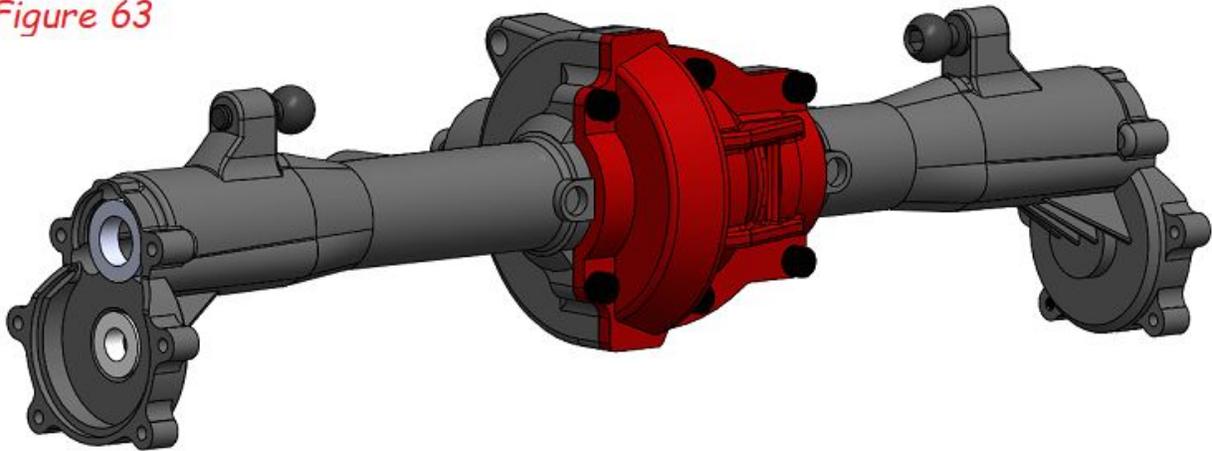
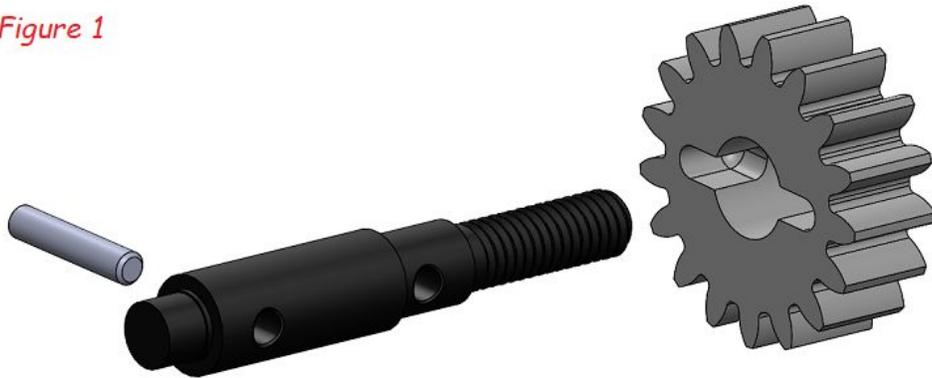


Figure 63



Step 7: Assemble one of the PA0301301 Gear Shafts, one of the 08027 2x10mm Pins, and one of the 17T Gear as shown in Figure 1.

Figure 1



Step 8: Make a 2nd piece the same as Step 7.

Step 9: Assemble the PA0302501 Long Rear Shaft, the PA0302601 Short Rear Shaft, and the parts from Step 6, Step 7, and Step 8 as shown in Figure 64. **NOTE 1:** *Be sure that the Long Rear Shaft is being inserted into the left side of the portal assembly when the Diff Cover is facing you and the Short Rear Shaft is inserted into the right side.* **NOTE 2:** *You will more than likely have to rotate the Rear Shafts slightly to allow the flat slots to key into the spool for them to push in as necessary.* The end result is shown in Figure 65.

Figure 64

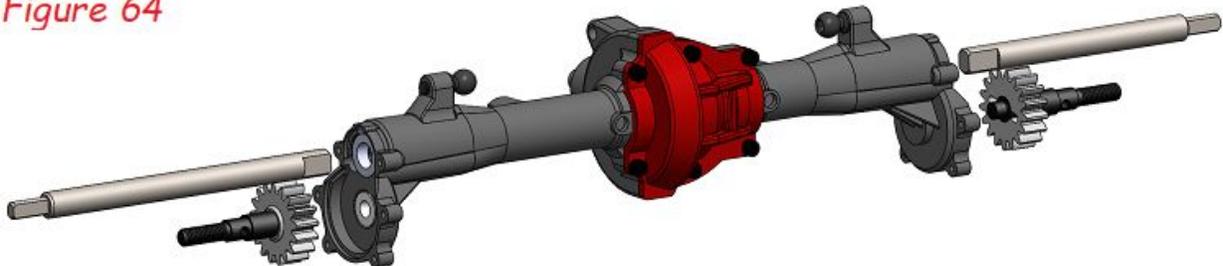
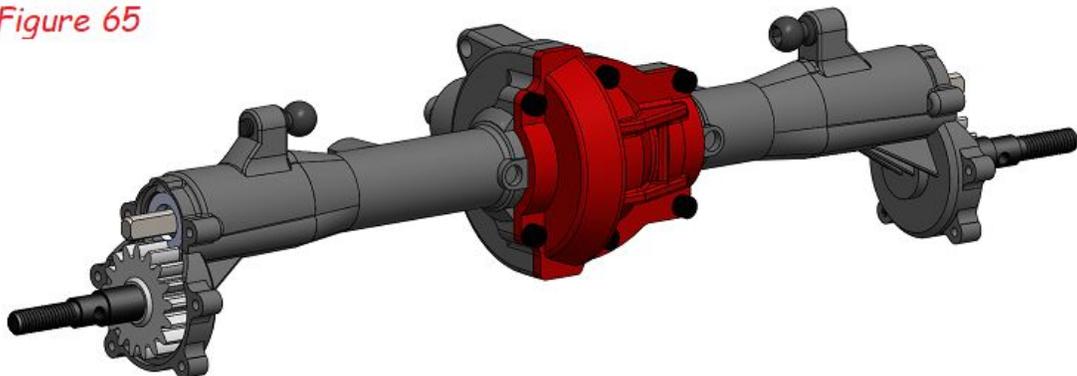


Figure 65



Step 10: Take one of the PA0300401 Portal Outer Covers and install the a 68033 4x8x3mm Bearing into the upper hole and a 98052 6x12x4mm Bearing into the lower hole as shown in Figure 12 and Figure 13.

Figure 12

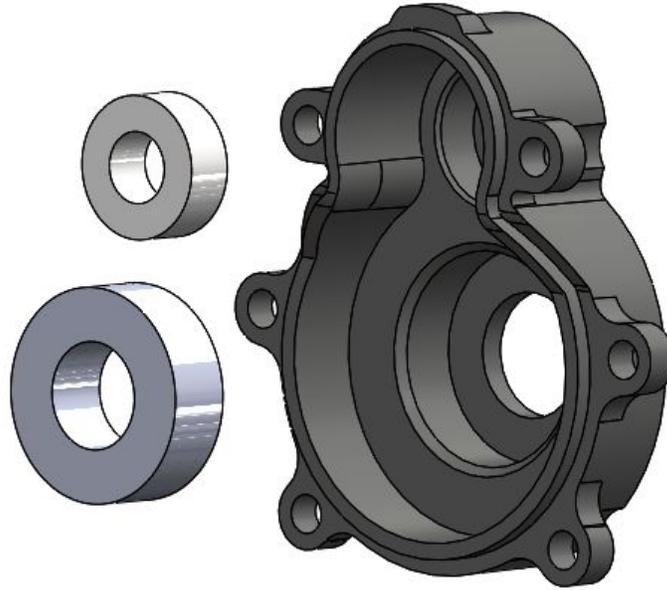
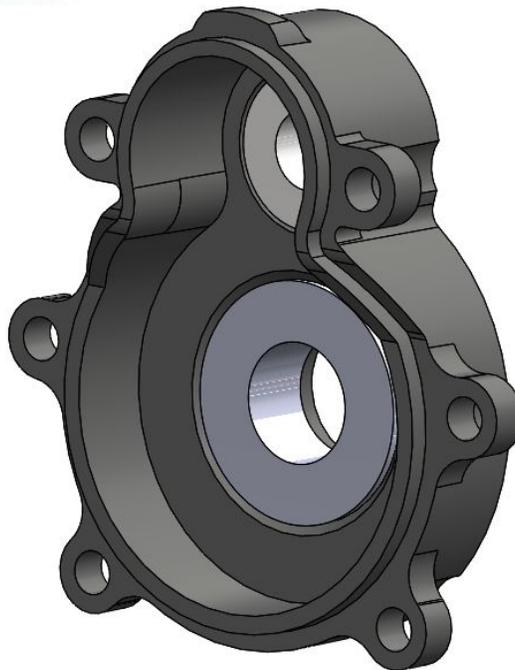


Figure 13



Step 11: Make a 2nd piece the same as Step 10.

Step 12: Take the parts from Step 11 and Step 12, the 2pcs of PA0301101 8T Gears, and the 12pcs of 13870 2x6mm CH Screws and assemble them to the item from Step 9 as shown in Figure 66. **NOTE 1:** Although the 8T gears can slide onto the CV Outputs in either direction, be sure that the flat side of the gears go toward the CV Outputs. **NOTE 2:** Be sure to minimal force when tightening the screws, as they only need to be snug . Over-tightening them will result in the plastic housing stripping out. **NOTE 3:** We recommend using a small amount of black grease on the gears, which will help prolong the life of them. When finished, the assembly should look like Figure 67.

Figure 66

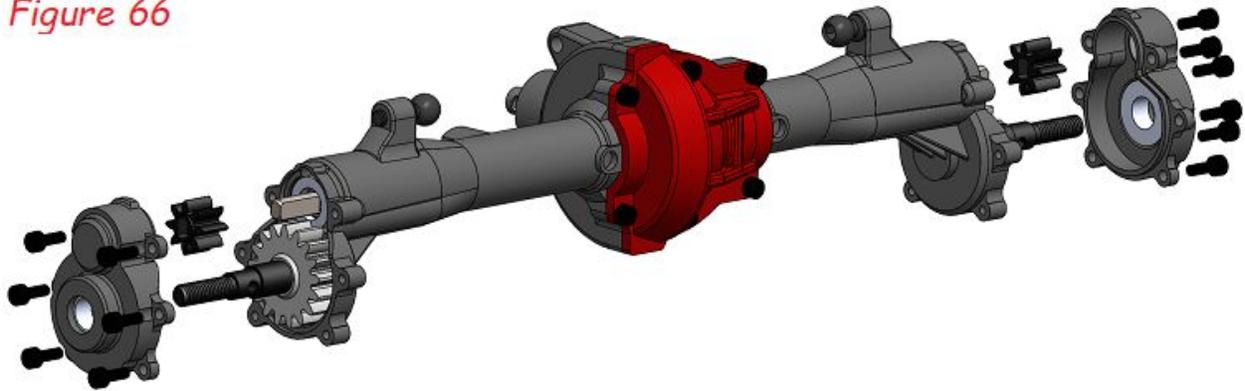
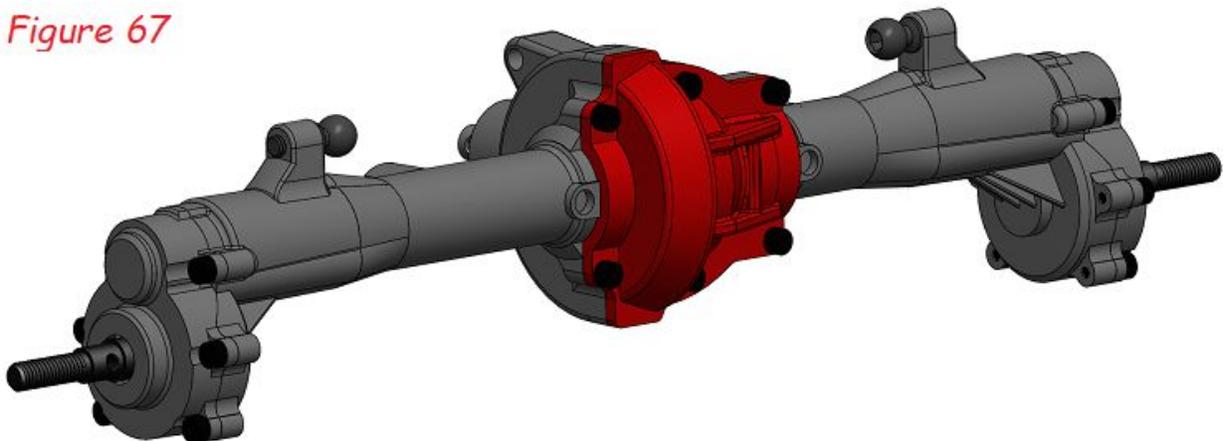


Figure 67



Step 13: Take the 2pcs of PA0302301 Lower Link Mounts and install them onto the assembly from Step 10 using the 4pcs of 82045 3x8mm BH Screws as shown in Figure 68. **NOTE: Be sure to note the orientation of both mounts as they can be installed a few different ways.** Figure 69 shows them installed.

Figure 68

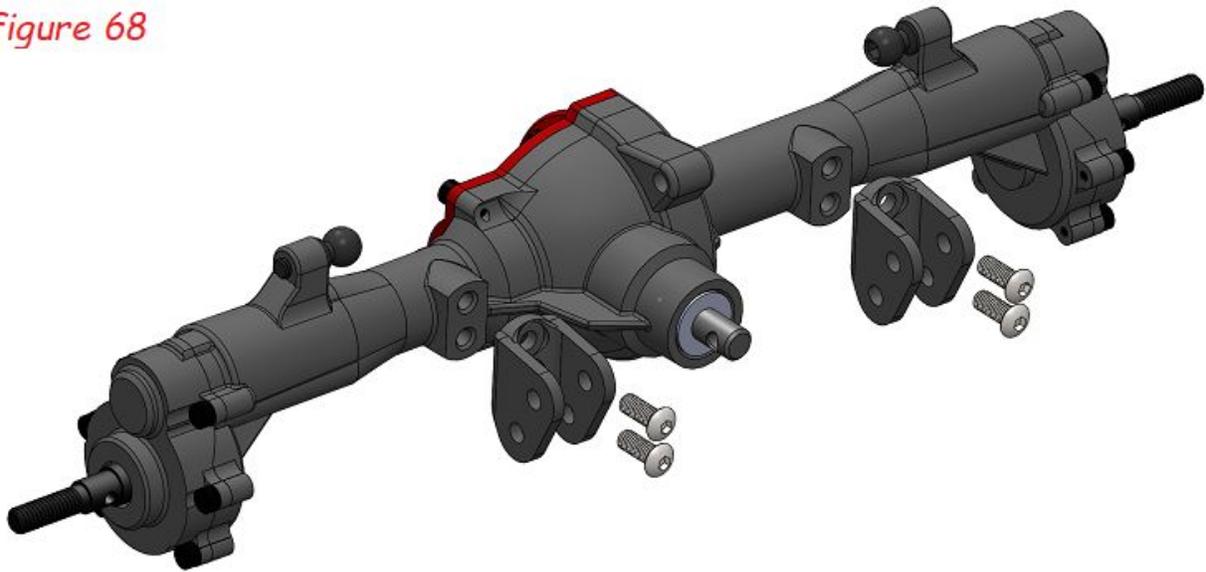
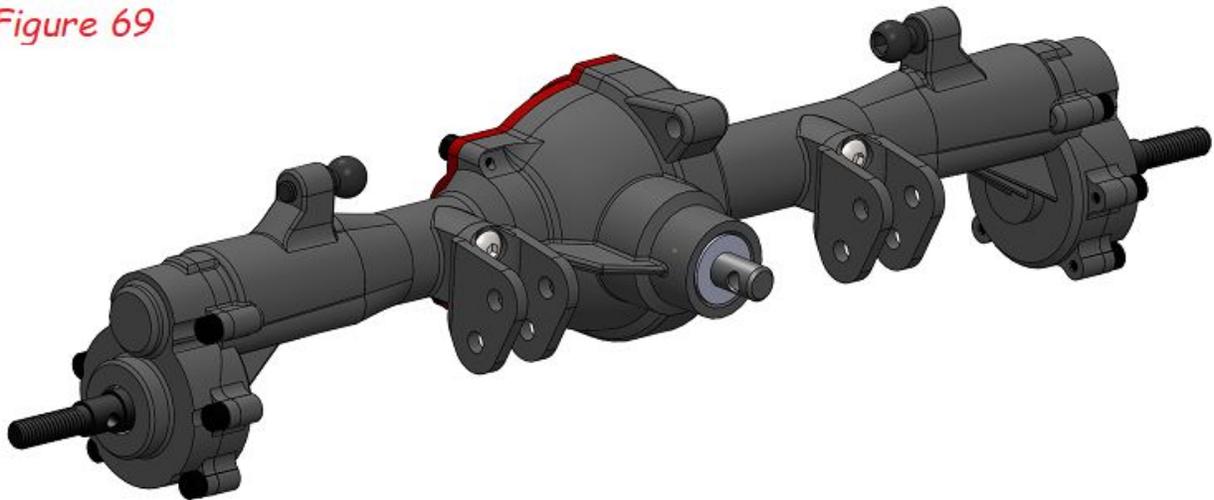


Figure 69



Step 14:

A. Take your Everest Gen 7 crawler and remove the rear axle assembly by disconnecting the four links and shocks from it; you can now also remove the upper part of the shocks.

B. Remove the drive cup from the input shaft on the original axle and mount it onto your new portal axle.

C. Mount the rear portal assembly to the vehicle the same way your original rear axle was installed. Be sure to mount your lower links using the bottom holes on both the Lower Link Mounts (this is a good starting point).

-You'll use the 2pcs of 82049 3x16mm BH Screws and 2pcs of 02102 M3 Lock Nuts to mount the lower links, while using the 82045 3x28mm BH Screw and the remaining 02102 M3 Lock Nut to mount the upper links as shown in Figure 70. Once assembled, the position of the hardware should be as shown in Figure 71.

Figure 70

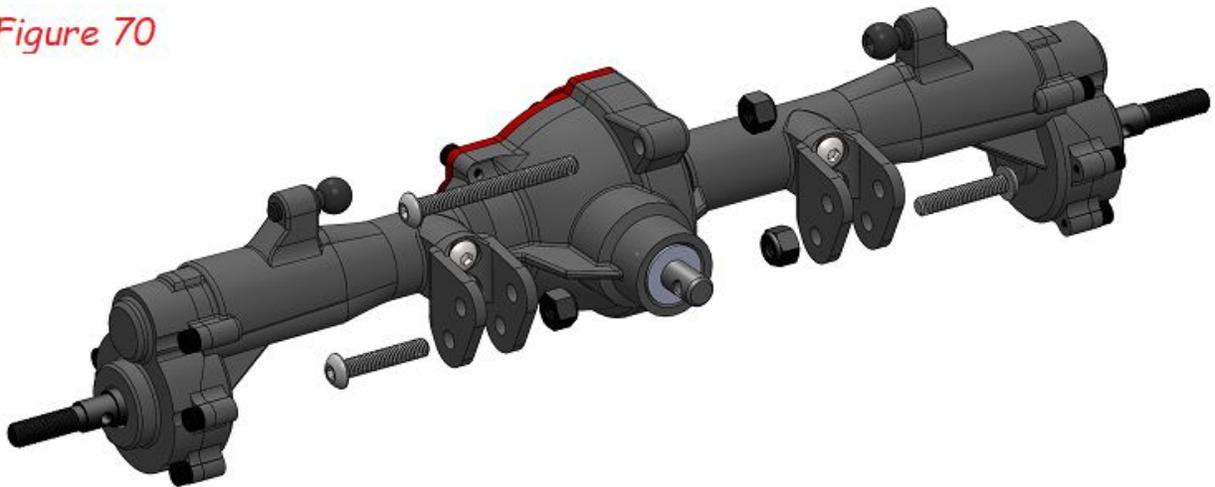
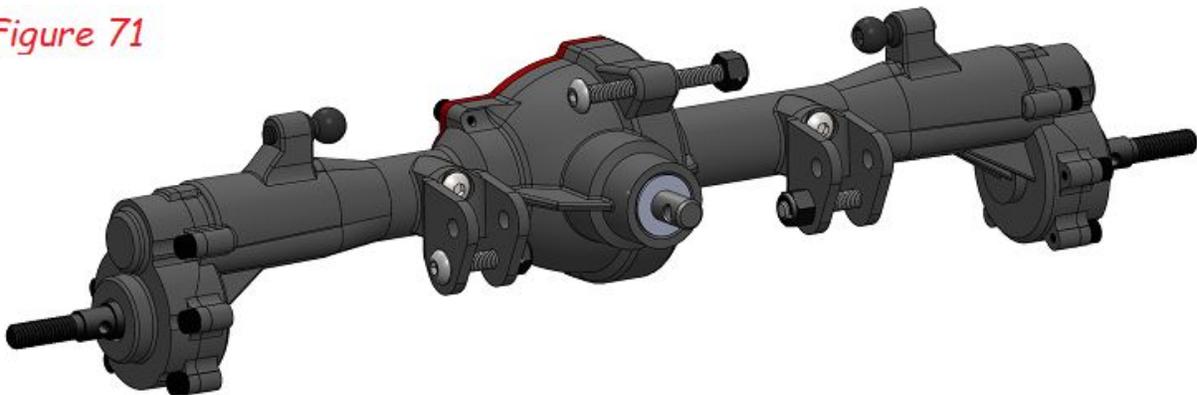


Figure 71



Step 15: Install the remaining 2pcs of 08027 2x10mm Pins and the 2pcs of 180016S Wheel Hexes onto the exposed Gear Shafts as shown in Figure 72. Figure 73 shows the final product.

Figure 72

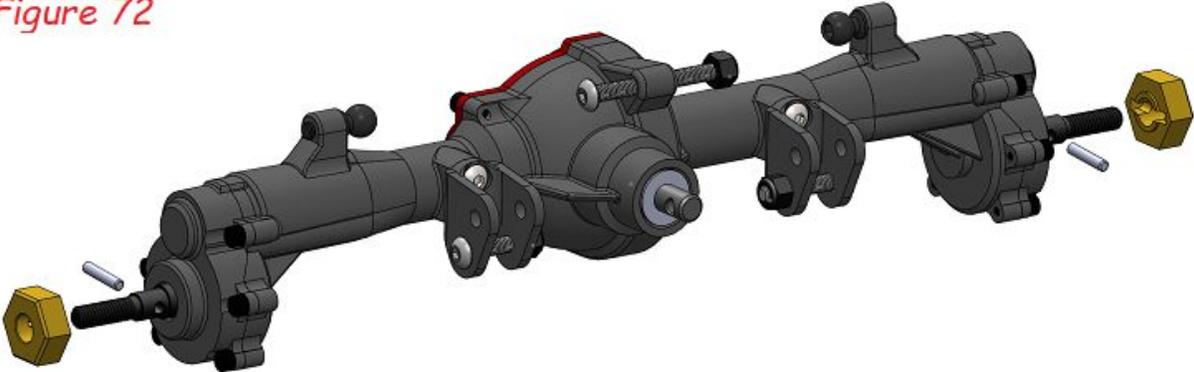
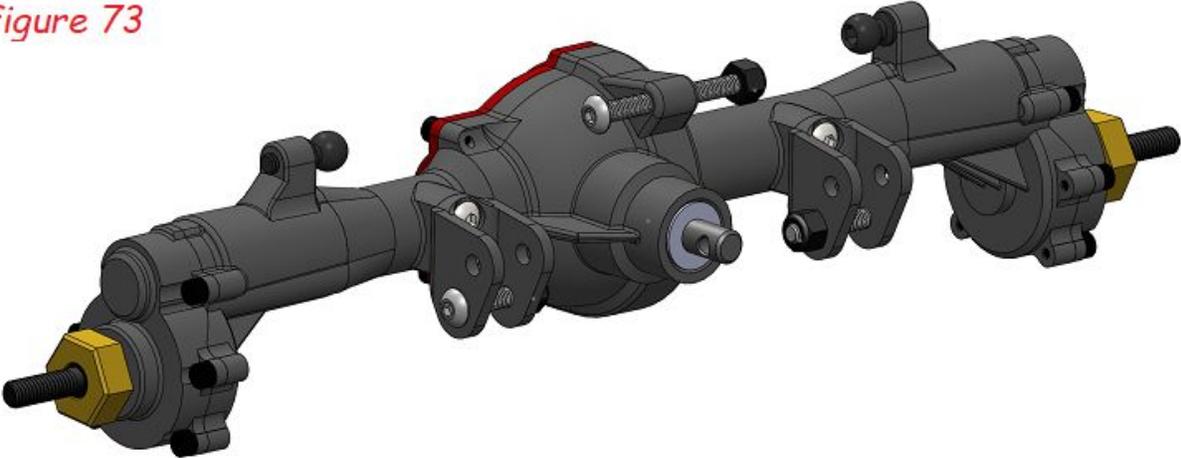


Figure 73



Bag 6 - Steering Assembly

Step 1: Using the PA0302701 Fixed Suspension Link, the 3pcs of 13874 Rod Ends, the 94180 Adjustable Link, the 3pcs of 18052 Suspension Balls, the PA0301802 Curved Steering Rod, the PA0302901 Steering Link, the 14582 3x14mm BH Screw, and the 3pcs of 13840 3x18mm Grub Screws, assemble the pieces together as shown in Figure 74. **NOTE 1:** *The curved portion of the Curved Steering Rod will point forward, the same direction as the screw hole in the Fixed Suspension Link.* **NOTE 2:** *When finished, the eyelet of the Fixed Suspension Link and the eyelet of the Rod End on each end of the Curved Steering Rod should be parallel with each other, and the eyelet of the Rod Ends on each end of the Steering Link should be perpendicular to each other.* **NOTE 3:** *Be sure to note the direction of the Suspension Ball flanges when installing them.* **NOTE 4:** *One side of the 94180 Adjustable Link has right-hand threads, while the other side has left-hand threads.* The completed steering link assembly is depicted in Figure 75.

Figure 74



Figure 75



Step 2: Mount the assembly from Step 1 to the front portal housing on your Everest Gen 7 as shown in Figure 76 using the 13858 Steering Bushing, the 2pcs of 82046 3x18mm Screws and the 2pcs of 02102 M3 Lock Nuts. The completed assembly is shown in Figure 77.

Figure 76

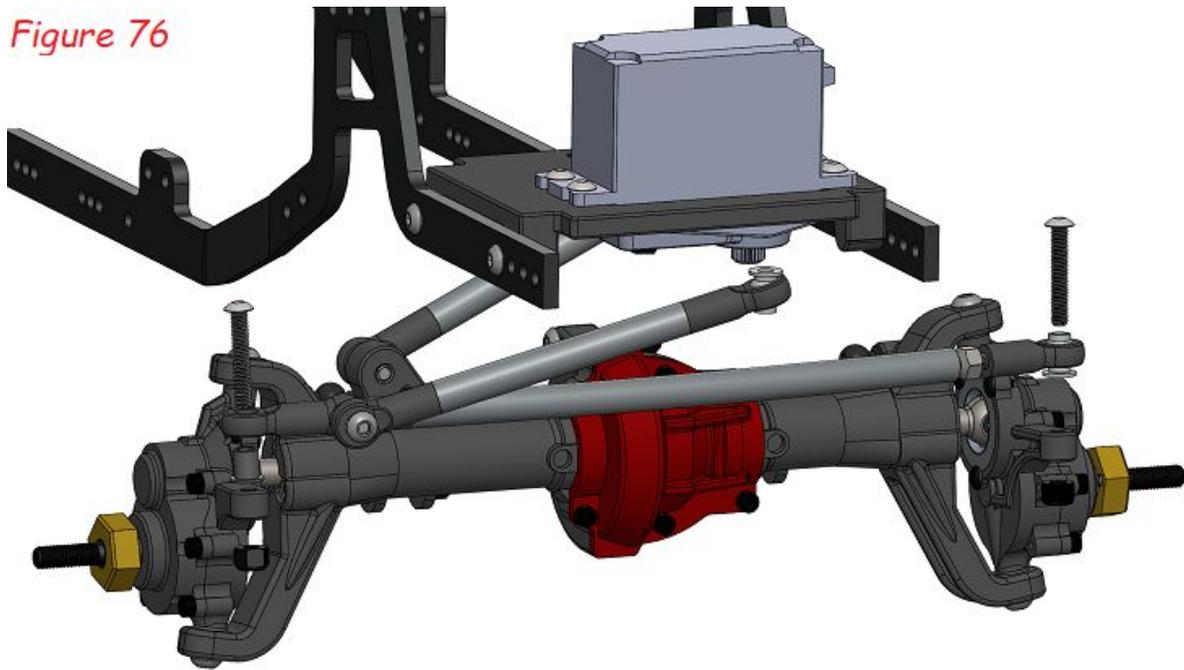
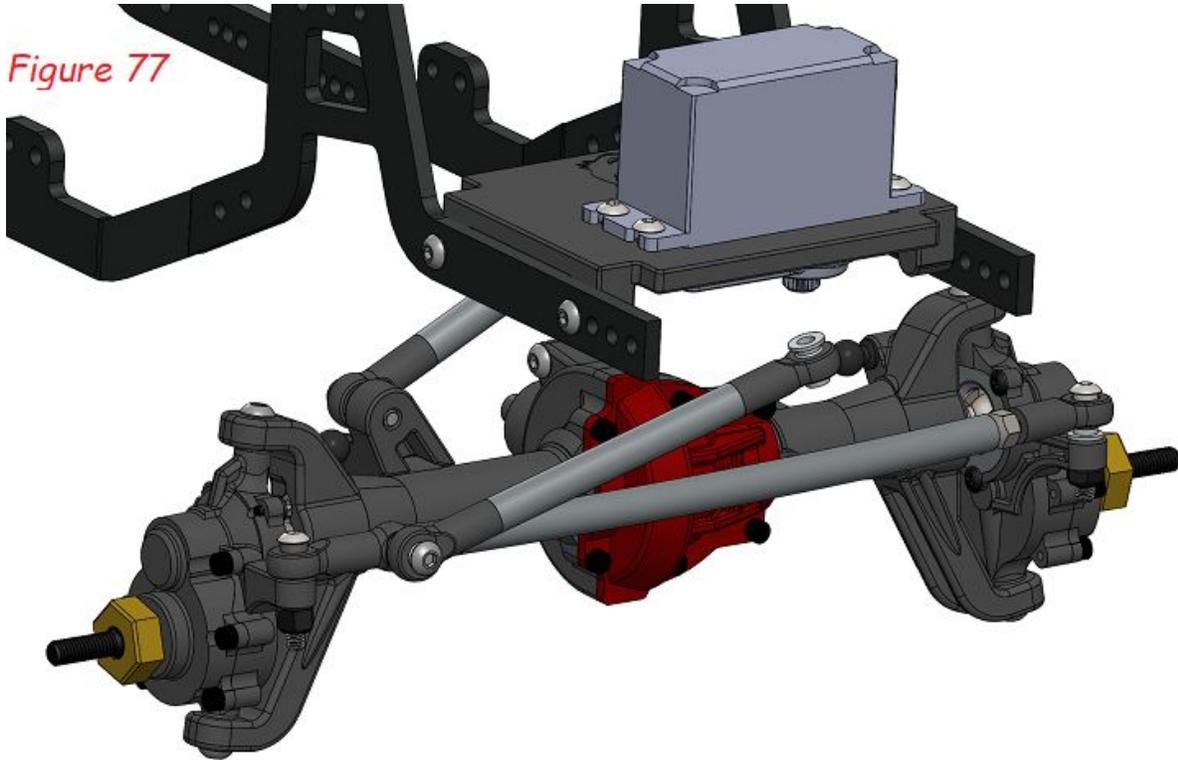


Figure 77



Step 3: You can now install your original servo horn (if you removed it) and mount the other end of the steering link to the horn using the original hardware from your Everest Gen 7 as shown in Figure 78.

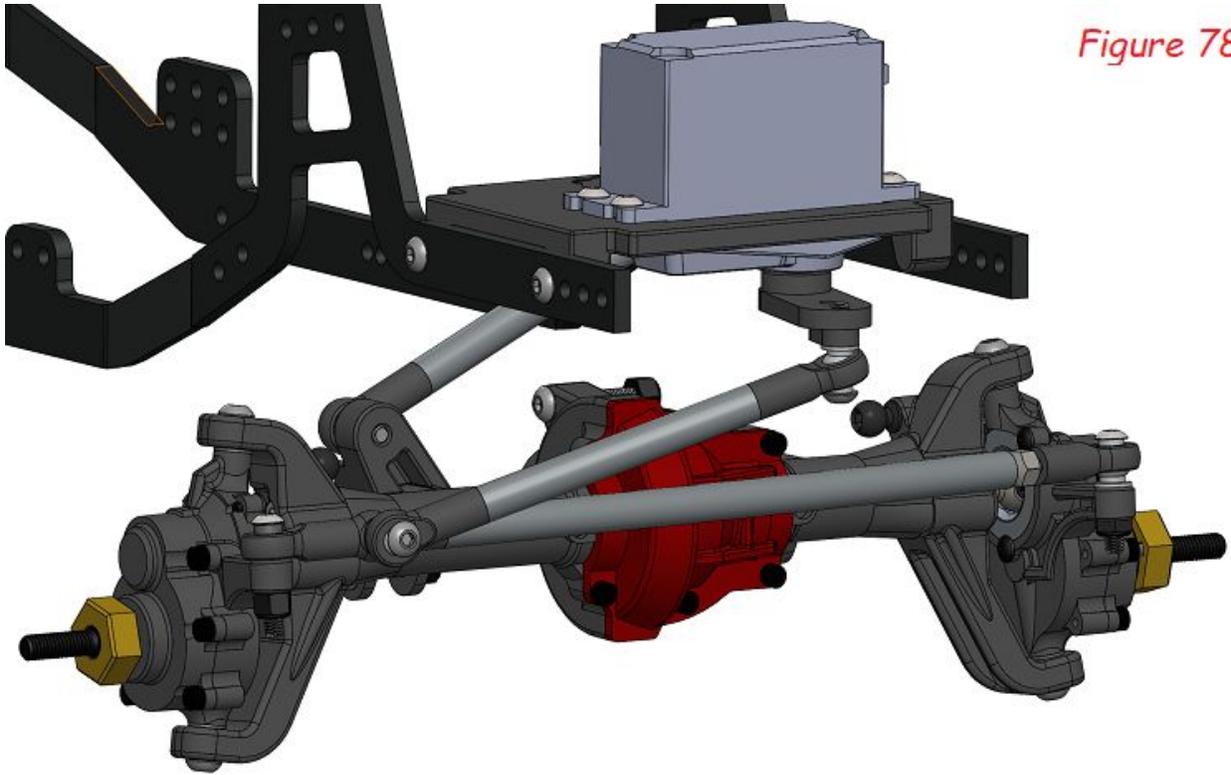


Figure 78

Bag 7 - Shock Mounts

Before removing any screws from your Gen 7, take note on the current positions of your body mounts and screws related to the frame rails.

Step 1: Using the 4pcs of PA0100101 Shock Mounts, the 12pcs of 50100 3x10mm BH Screws, and 8pcs of the 02102 M3 Lock Nuts, install the Shock Mounts onto your Everest Gen 7 frame rails as shown in Figure 79. **NOTE 1:** *The forward two screws on each of the front Shock Mounts will not use M3 Lock Nuts, as they will just thread into the Gen 7 body post mount.* Figure 80 shows the shock mounts installed. **NOTE 2:** *The body post mount & body posts are not shown to allow the recommended screw positions to be more visible.*

Figure 79

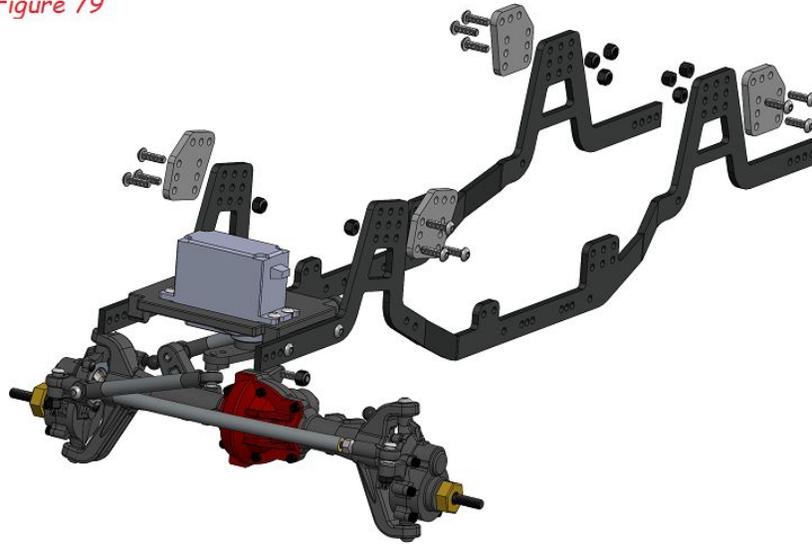
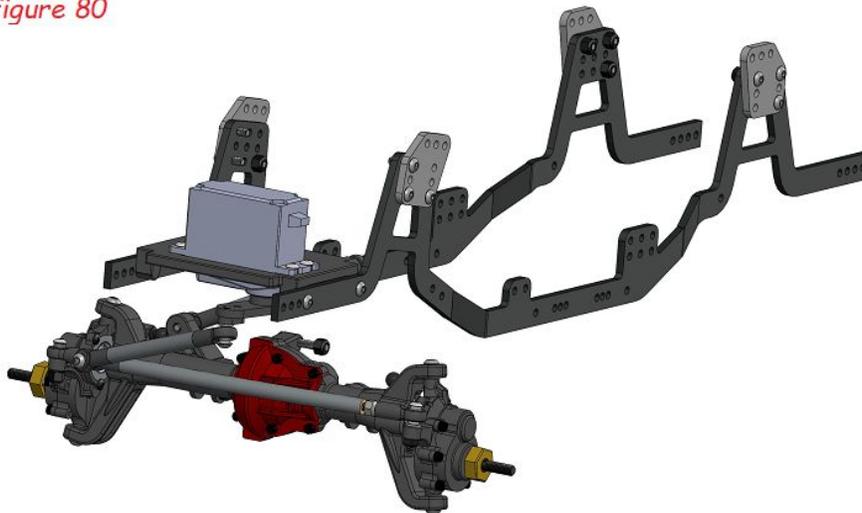


Figure 80



Step 2: To mount the bottom of each Everest Gen 7 shock to your new portal axles, start by popping the original suspension balls out of the lower eyelets on all four shocks. Now, pop the lower shock eyelets of each shock onto each of the 60240 Link Balls that are already installed on the front and rear portal axles.

Step 3: If your Everest Gen 7 originally had spacers between the upper shock balls and the frame rails, be sure to reinstall them when mounting the upper shock balls to Shock Mounts. Using the 4pcs of 82047 3x20mm BH Screws and the remaining 4pcs of 02102 M3 Lock Nuts, attach the top of the shocks to the Shock Mounts as shown in Figure 81. **NOTE 1:** *Only the upper shock balls are shown (not the shocks) to give a clear understanding of the recommended mounting positions to be used.* When finished, your assembly should mimic Figure 82.

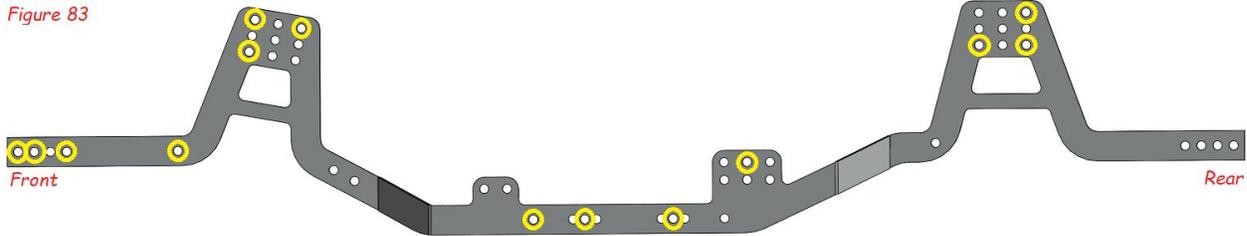
Figure 81



Figure 82



For reference, the holes circled in yellow below are the positions in which the portal axle assemblies and links should be installed. Feel free to make adjustments as you see fit, these are just the recommended positions to start with.



Here are a few pictures of the assembled model:

