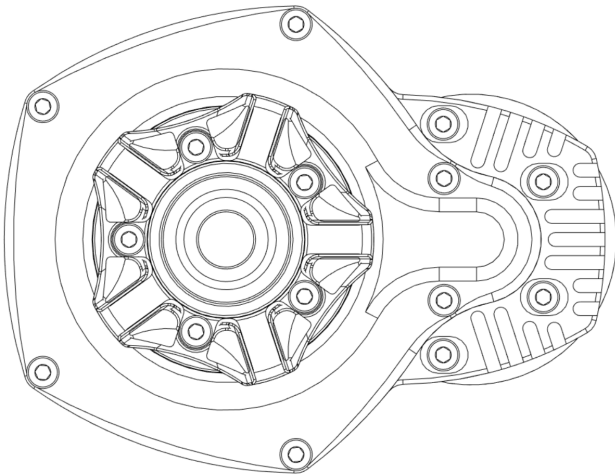


APEX Jump Drive - Install Instructions



This guide will take you through the installation of your apex jump drives.

To complete the installation you will need some grease suitable for use in steel gears and both medium strength and high strength threadlocker.

We recommend Lucas Oil ["Red and Tacky"](#) Grease, Loctite 243 or similar for medium and Loctite 270 or 278 for high strength.

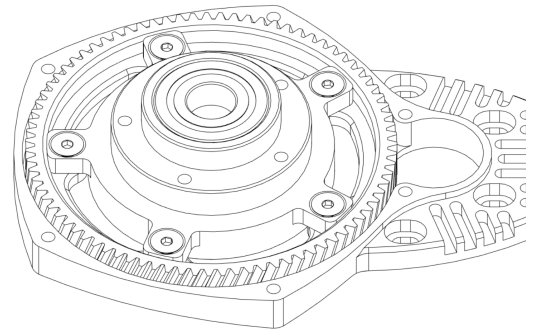
All screws and grubs should be installed with threadlock.

Take Them Apart.

The Jump Drives ship partially assembled. Before fitting the drive you will need to remove the following parts:

1. The push fit wheel adapter. (5 * M4x10 screws)
2. The main case lid. (6 * M4x16 screws)
3. The sliding motor mount (4 * M4x10 screws)

You should have the assembly shown to the right. The gear and hub are factory fitted and thread locked so do not need user disassembly. If the centre bearing is not fitted then you must place the 10mm M12 spacer inside then push in the bearing provided.



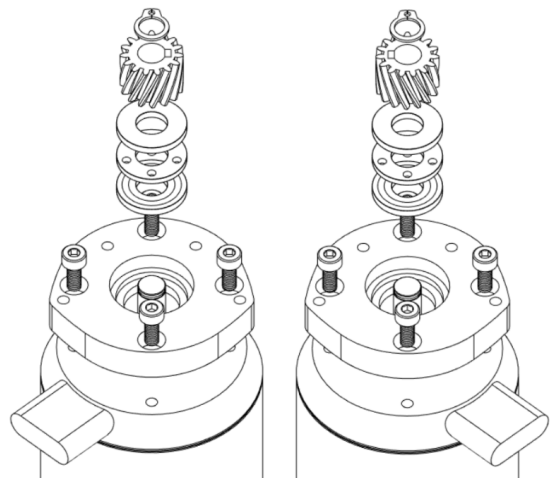
Prep the Motors

Motor mounting plates are screwed to the motors using 4 * M4x10 screws from your parts bag. **You should make one left and one right assembly as shown, This also shows our recommended cable exit positions**

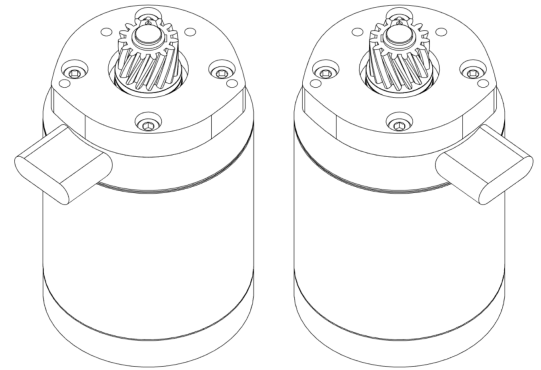
Next thrust bearing is placed on the motor shaft. You should put some grease in here as you assemble the bearing, it may be difficult to get to later.

NOTE: The 2 outer parts of the thrust bearing have slightly different size centre holes. One will be loose on the motor shaft whilst the other is snug. The loose one should be placed on first, then the bearing ring, then the snug one.

The 12mm Keyway is inserted into the slot on the motor shaft. The small gear can then be pushed over the shaft and keyway. Finally the Circlip can be placed into the clip groove if using Apex motors.



Apex JUMP DRIVE uses thrust bearings to reduce the strain on the motor bearings, for this reason it is important that the correct gear is installed on the correct side. Once built your motor assemblies should match those shown to the right. Double check this now.



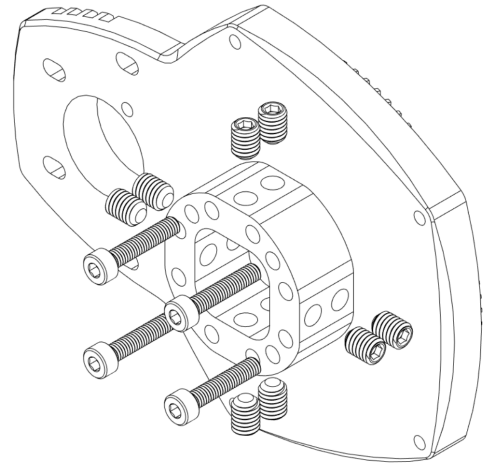
NOTE: If you're not using APEX motors with the circlip grooves then you will need to make sure the motor shaft is cut to the correct length. It should not protrude more than 2mm from the gear when installed. You will have to locktight the gear in place with a **high strength** threadlock, do this carefully so that no threadlock is introduced to the thrust bearings. It can also help to rough the shaft a little with some sand paper for the best grip. Make sure to leave these 24hr to fully cure before proceeding.

Prep the Truck Mounts

There are a few variants of the truck mount depending on which truck you have but they all work in the same way.

Firstly install all the M6x8 Grub screws from your parts bag.

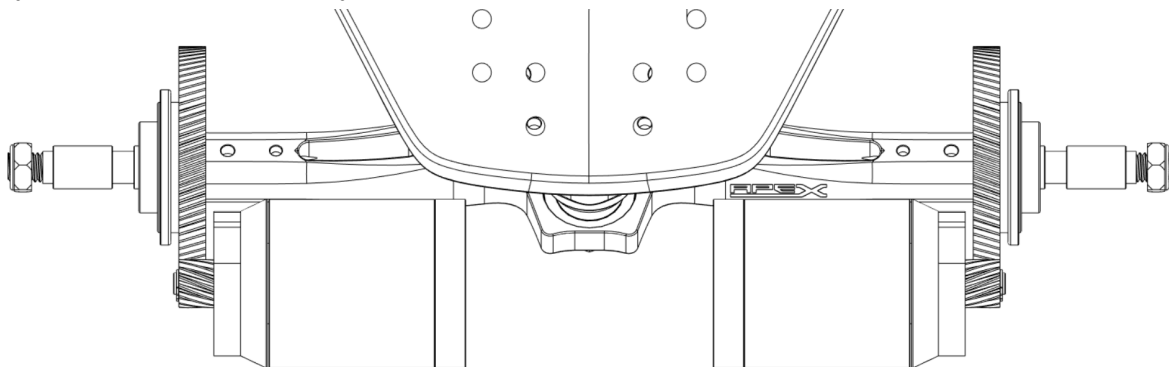
Next work out correct rotation for the truck adapter. For a standard Airs-Bro install we recommend keeping everything square as shown. However if you have clearance issues you can rotate the drive in 6 degree increments. You may need to use the different holes but there should always be 4 that line up.



Attach truck adapter with 4 * M4x20 screws from your parts bag. **We recommend using high strength threadlocker here.**

Left and Right

In order for the thrust bearings to work correctly the helical gears must be assembled in the correct orientation. When viewed from above all the gears should be sloped at the same angles as shown below. Easy way to remember is that they should make a diamond shape <>.



Make sure to keep this in mind when progressing the assembly.

NOTE: On a 4WD, the front assembly needs to be reversed and the helix will look like this from above ><.

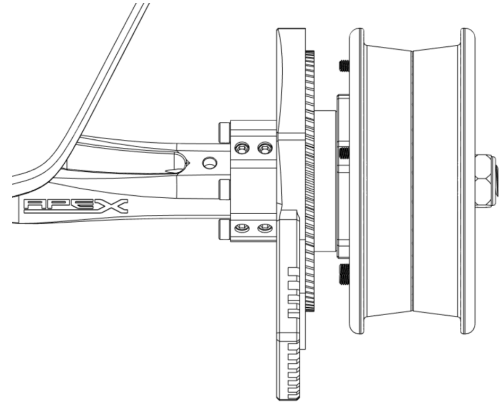
Bolt To Trucks

Firstly place the drive on the truck axle. Make sure you have the correct drive on the correct side.

In order to get things square it can be useful to place on the push-fit adapter (no screws), a wheel hub, and the wheel nut. Then tighten down till snug.

Next you can snug down the grub screws. It's recommended to do this in opposing pairs so that everything stays square during assembly. You should continue till all the grubs are snug.

Now repeat this but this time fully tightening the grub screws. These grubs should be very tight to ensure that the drives do not move around on the truck, but be careful not to round them.



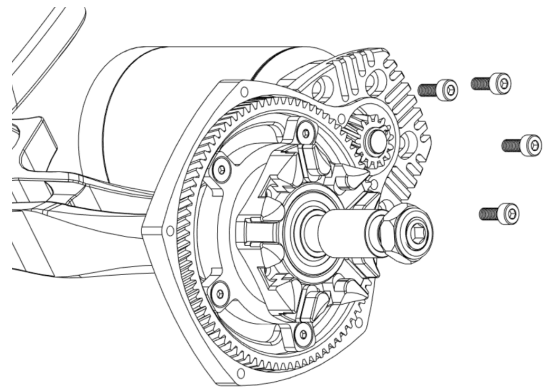
Fit the motors

The motor assembly can be offered up and secured using 4 * M4x10 screws you removed earlier.

These should be put in loosely at first to allow the backlash to be adjusted. Then slowly tighten them down as you adjust the backlash.

NOTE: You want the backlash set so that there is the smallest possible gap between the gear surfaces. If in permanent contact the steel gear wear will be heavily accelerated - you want a small gap between the gear surfaces. If you wiggle the big gear you should be able to feel a slight movement, you want this wiggle as small as you can get it whilst still being present.

It's a good idea to check this at multiple points around the gear as there may be small variations. It is also a good idea to recheck after you have finished fully tightening the screws.



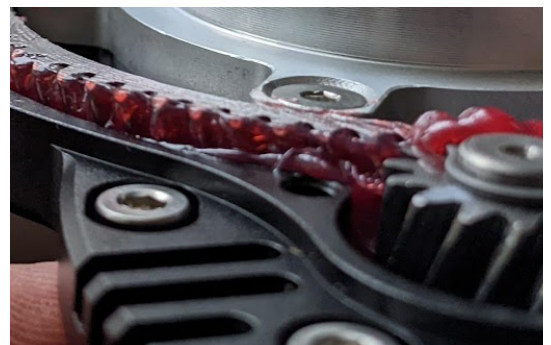
CHECK YOUR WORK

Now is a good time to double check that you have been thread locking everything and that the gears are in the right positions.

Grease The Gears

You can now apply the grease to the large ring gear. If you have a large syringe handy this can be a good tool to do this without too much mess, otherwise a lolly stick works well.

We recommend filling in all the teeth with the grease, this will be plenty to ensure smooth low wear operation.



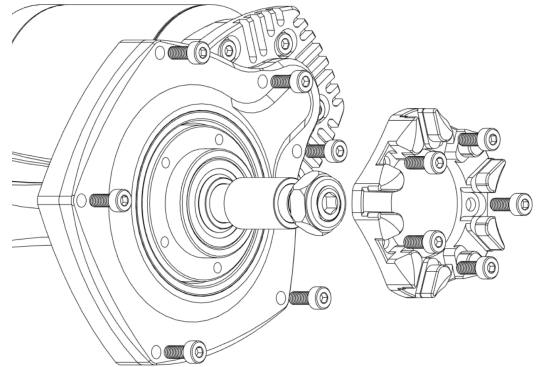
Shut the case

Whilst you have the grease handy you should apply some to the rubber seal in the lid and the part of the gear hub that it runs against.

Put the lid on and secure with the 6 * M4x16 screws you removed earlier.

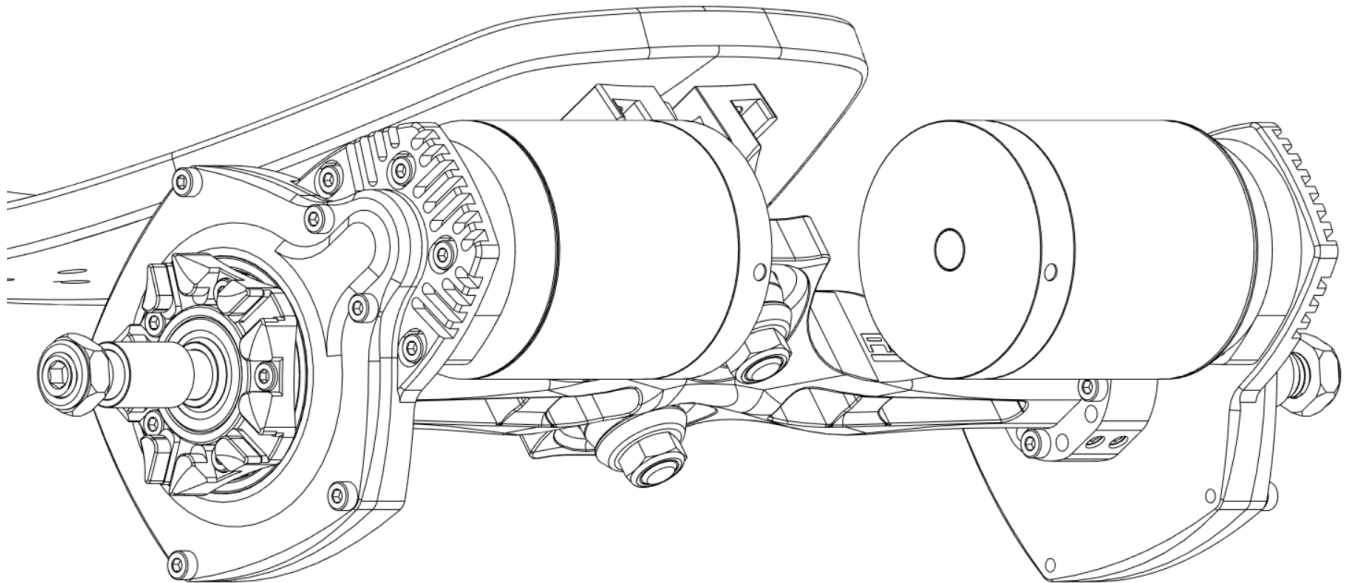
Then the push-fit wheel adapter can be secured with the 5 * M4x10 screws.

You should now be able to turn the drive by hand and ensure that there is no rubbing between the gear and case.



Ready to test

You are now ready to test motors and do any necessary ESC setup.



Wheels can be pushed onto the push fit adapters and wheel nuts tightened as normal. Wheel nuts should be tight enough to remove any sideways play in the wheel but not so tight as to add additional friction to the rotation. If your wheels have the correct bearing spacers inside you should be able to tighten the wheel nuts fully and then check that things still run smooth.