2018 Arctic Cat Mountain Cat Packing List

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____Top Gear Ratio _____

____Spare Gear (if ordered) Ratio_

____Bottom Gear
____Bottom Gear Hub
____Belt
____Spare Belt (if ordered)

____Hardware Kit
____Bottom Cover w/ speed sensor
____Oil Tank with Hardware
____Oil Pump Housing/Hardware/Hose

____Instructions

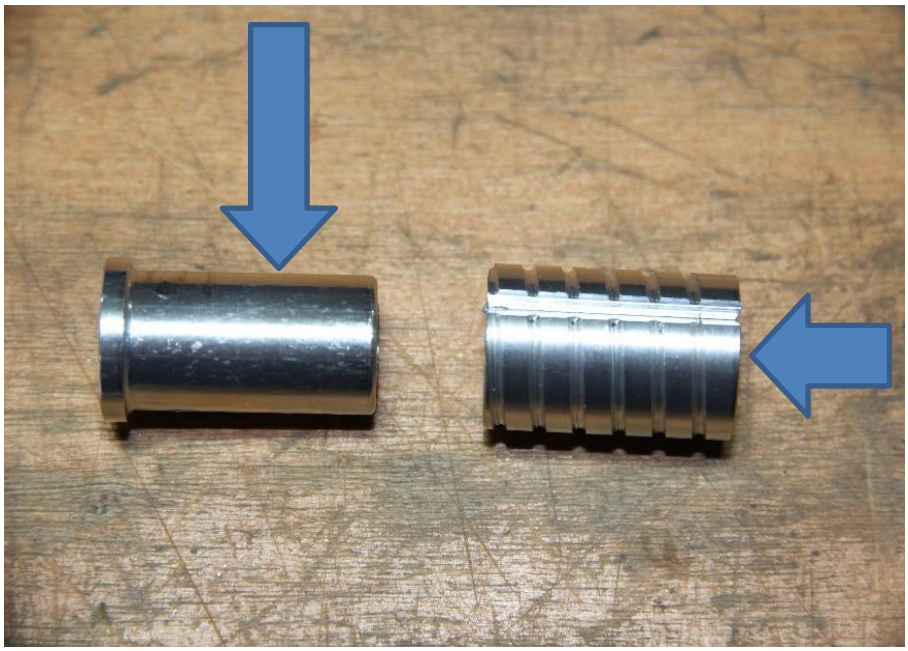
Arctic Cat 2018 Mountain Cat

With oil injection

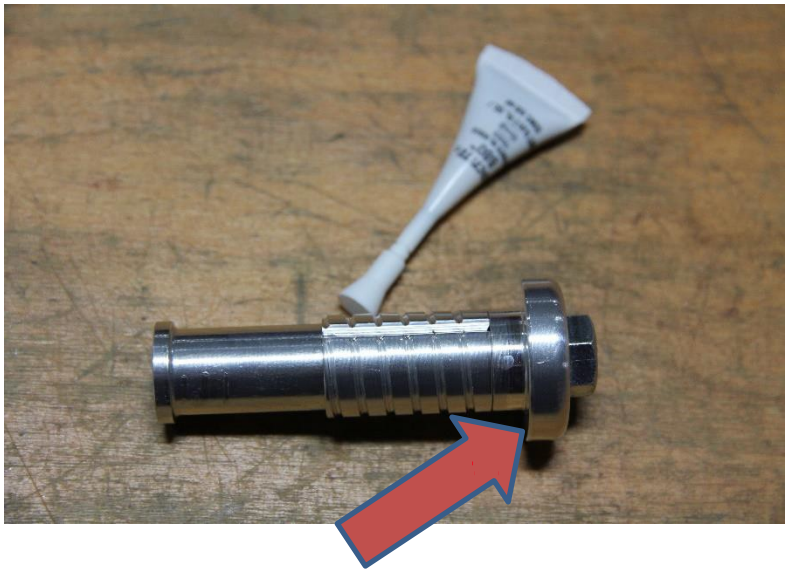
1. Remove the right-hand body panel for access to factory chain case and oil reservoir.
   (Throttle side) You may also choose to remove the factory exhaust or aftermarket turbo from this area.
2. To remove the oil reservoir (If reservoir hasn't already been removed) the easiest way is to leave the oil tank connected to the chain case and remove the 11 bolts that hold the cover to the case attached to the sled. You will need a T30 torque bit.
3. You will need to remove the electric oil pump from the stock tank. Disconnect the oil pump electrical connector and the speed sensor connector. Remove the 2 torque screws and remove the pump with a couple screw drivers prying lightly on opposite sides.
4. Remove the factory gears, chain, and tensioner.
5. Remove the retaining ring that holds the top bearing into the chain case.
6. You will need to heat the case with a hot air gun. Heat the area around the bearing not the bearing. This is done so the material will grow and the bearing will slide out. You may need to heat the case multiple times until you can get the bearing to slide out freely.

7. Use a couple screw drivers or picks to pry the bearing out. The case will be hot so proceed with caution.

8. After the bearing is removed use a clean towel to clean the area of any oil or debris that may be left.
9. On 2018 sleds there is already a pre- drilled hole in the shaft. You will need to use the supplied insert to hold on the top gear. Remove the plastic plug that is in the end of the shaft. You will need to prep the retainer to be inserted into the top shaft. Remove the from the assembly, you will need to put a light layer of grease on the outside of the threaded boss (left arrow) and the **INSIDE** of the sleeve (right arrow). Note picture with the blue arrows.



10. After coating with grease, reassemble the retainer like below picture. As you are inserting it into the shaft apply the green Loctite to the outside of the sleeve in the spirals. The Loctite is an extra measure to make sure the retainer doesn't move. You may need to tap the retainer in until the shaft bottoms out on the inside of the aluminum washer. Noted with the red arrow.



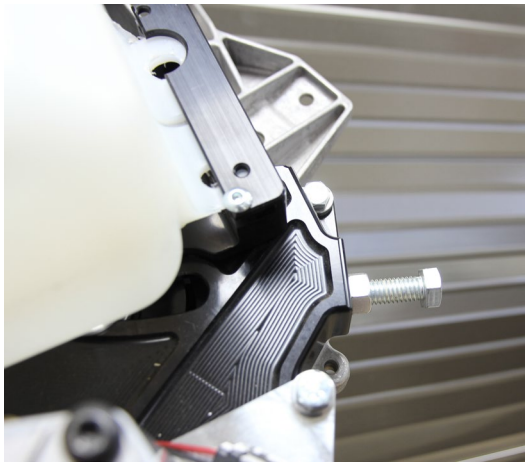
11. Now that the retainer is in place begin to tighten the bolt until the threaded boss is flush with the end of the sleeve. You may need to back off the top bolt to check your progress. When boss is flush you can remove the bolt and the washer, the washer can be discarded, the bolt can be cut down or use a different bolt to retain the top gear. Bolt should be about 1 ½ inches long. Allow the Loctite to setup approximately 30 minutes before torqueing the top bolt to spec.
12. Now you can install the top bearing.
13. You will need to re heat the chain case to insert the new bearing.
14. When the chain case is hot slide the bearing assembly onto the shaft, and into bearing pocket. Install snap ring back into the case groove.
15. You will NOT reuse the factory snap ring and the shim. The gear will press directly against the bearing.
16. Place the top gear with flanges onto the top jack shaft, fasten top gear to shaft with 3/8 bolt. You can use one supplied but make sure you cut it to 1 ½ inches or source a new one.

17. You will need to repack the bottom bearing with grease before installing a new seal that was supplied in the kit. The seal will snap into place with a little pressure.

18. The belt will be placed over the top gear and placed into the chain case before the next step.
19. Place supplied gear without the center hub into the chain case and over the bottom drive shaft. The center hub then can be placed onto the bottom drive shaft. Install the snap ring onto bottom drive shaft to retain the bottom gear. On 2018 kits you can install the ring with 2 ears over the end of the shaft it will slide into the bottom hub. On 2019 sled, use your factory snap ring to retain the bottom hub. Install 6 supplied bolts and torque to 20 ft lbs. Make sure to apply red or blue Loctite on the ends of each of the bolt.

20. Using 6 of the supplied small stainless-steel bolts to attach brackets to the cover. Place a small drop of blue Loctite on each of the screws, so they don't come loose.

21. On the front side install 2 screws with Loctite, it will keep the tank held in place.
22. Install bottom cover assembly in place of the old chain case cover. Make sure belt is pushed to the left when installing the assembly and the tensioner arm is placed over the tapered post in the chain case.
23. You can now start installing the bolts to secure the cover to the chain case attached to the sled. Torque the bolts to 10 ft lbs.
24. Install supplied 3 inch bolt and jam nut into right hand side of case. This will push the tensioner arm and idlers over to tension the belt.

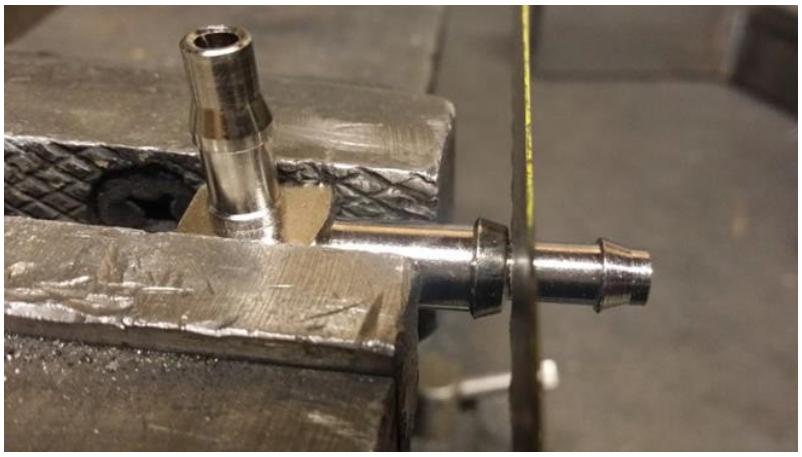


25. To tension the belt tighten the adjuster screw on the right side of the bottom cover. Belt tension should be 1/4 of an inch. When belt is tensioned tighten the locking nut on the tensioner bolt. Tighten the 9/16 bolt on the cover as well. You may need to use a short screw driver and install it into the slot on the end of screw and then tighten the nut with a wrench. To make tensioning easy you can use a colored marker to make indicator marks on the top edge of the bottom cover, as a quick reference.

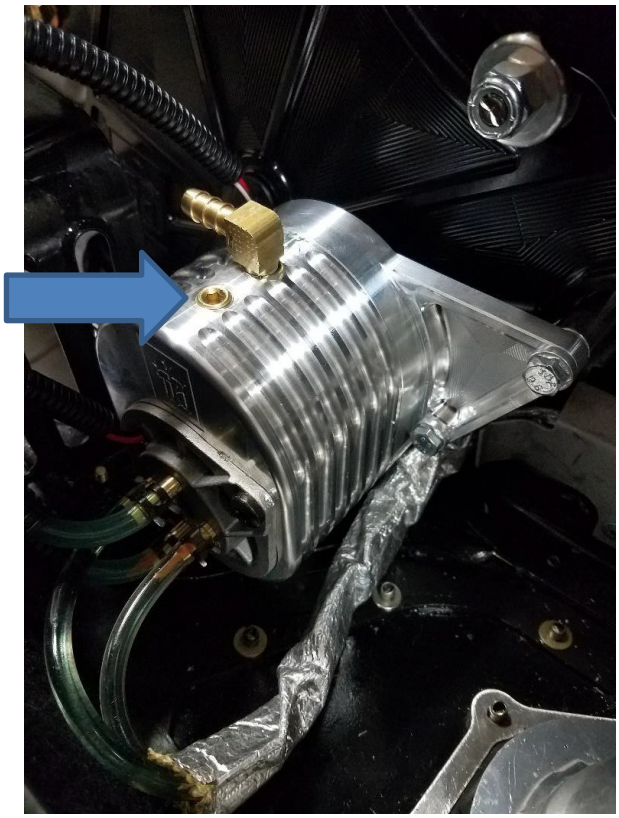
26. This chain case will grow as the sled gets warm. You may need to tension and or check tension multiple times after kit is installed. Make sure teeth on belt are properly aligned with the teeth on the gears. Always tension the belt when the sled is up to operating temperature!!!!
27. You will need to install the electric pump into the new supplied pump housing. Make sure to use Loctite on the bolts. Blue is preferred.

28. When installing the oil pump housing use the 2 supplied bolts and spacers to attach the tank to the chain case. The housing will be mounted on the lower right of the bottom cover. The spacers will rest on the ears of the bottom cover. Make sure to use Loctite on the bolts threading into the chain case. Torque to 10 ft lbs.

29. Now you can drill the holes in the plastic tank. The bottom holes should be drilled on the left back corner. The other hole will be drill on the left front corner on top of the tank. It is for the return line from the motor. Drill that hole close to where the stock line ends on top of tank. Drill holes with ½ drill bit.



30. On one of the supplied elbows you will need to trim off the extra nipple that is attached, like picture show. That nipple needs to go on the bottom of the tank. Make sure to clear tank and the elbows from any debris. Now you can install the nipples into the tank.
31. Attach the supplied plastic hose to the oil pump housing using a hose clamp. Then attach the hose to the plastic housing, you will need to coil the hose, a zip tie is handy to hold it in place.
32. You can put about half of a tank of oil into the plastic tank. You will need to bleed the air from the billet tank using the plug that sits in front of the 90-degree elbow. Remove the plug until oil comes out the top.



33. Install the plug back into the tank and tighten.
34. Now you can install the plastic tank into the brackets on the cover. Make sure to install the safety pin to keep tank from sliding out in a roll over. You will want to make sure to reconnect the oil pump and the speed sensor plugs back to the wire harness. Also make sure the hose has a coil and that it will not rub against the exhaust causing the hose to melt.
35. Put sled on a track stand, and make sure track is not touching the ground. Rotate the track by hand to make sure the belt and gears are aligned properly. If belt is loose retention.
36. Remember to check belt tension multiple times after the initial install of the belt drive. If belt is tighter than ¼ of an inch of deflection loosen the belt. If it is more, tighten the belt.