

Driveline Maintenance

In today's world of kart racing, it is easy to sometimes overlook some very important items. All the time spent preparing tires, loading the trailer, and traveling to the races can be all for naught if our driveline maintenance is not up to par. The front and



rear axle bearings, the chain, the clutch, and the rear sprocket are all vital components in our quest for maximum speed.

The front bearings are quite simple to maintain. There are two trains of thought on this matter. Always look for a nice smooth feel as the bearing rotates, keeping an ear open for any grinding or roaring sound. If any of these concerns arise, replace the bearing. Most racers simply ignore the bearings until there is a problem. Since the bearings are relatively inexpensive, this is the method many racers take. The second is to remove a bearing shield on each bearing, wash out the grease with a spray carb cleaner, and add a little bit of oil. To remove the shield, grind down the tip of a small blade screwdriver, and gently work the tip under the edge of the shield and gently lift up. Be very careful not to bend the shield. After removing the grease, add a slight amount of medium weight oil, and snap the shield back into place. Be sure not to add too much oil, as the high-speed rotation of the bearing tends to sling the oil all over the wheels.

The rear bearings are maintained in a similar fashion. Same case here, a lot of racers simply ignore them until they act up. The most important thing here is to make sure we blow the moisture from washing away with compressed air after kart washing. Do not pry the cover out to try and add oil, anything you do to allow oil to enter, will also allow dirt and grit to enter as well. Removable shields are a great way to flush your bearings, and add oil. This will definitely add time to the life of the bearings. Several sizes are available to fit most bearings, contact me or your local kart shop for availability. To mount these to the

bearings, work the shield off with a small screwdriver and then remove the seal. Make sure to do this on the side of the bearing with the setscrews. This is important, if the other side is removed, it will render the bearing useless. This will expose the ball bearings. Now, we can flush the grease and add our lube, then replace the shield and we are all set. Make sure to flush and lube the bearings on a weekly basis. If you choose to not add the removable shields, make sure to spray a bit of lube around the bearing, and replace the bearings if you hear roaring, or gritty sound.

To maintain your chain, make sure it is thoroughly cleaned. I personally prefer to spin it on the rear sprocket and scrub with a toothbrush. Then I make sure I displace any moisture, and then my chain lube is added. The chain lube of choice for me is Tri-Flow. I like to coat the chain well, and then allow it to sit until the final preparations are made before raceday. At this point, I add a little more lube, and then hook everything up. Be careful not to overdo it, as too much oil will find its way into the clutch, causing it to slip.

In the event a chain is tossed off the sprocket, discard immediately. The chain may look to be good, however, more often than not, it twists up, and is extremely likely to be thrown again. If your luck is anything like mine, it will happen at the



most inopportune time. Replacement is a good insurance policy. Just another note, make sure to use a good quality chain.

The rear sprocket is pretty simple. The main goal here is to check and maintain alignment with the clutch sprocket. Several tools are available to do this, however, spinning the rear axle and visually inspecting that the sprocket is tracking in the center of the chain works very well. Repeat several times to verify alignment. Other than this, keep an eye out for worn teeth on the gear. This pretty much takes care of the sprocket.

Maintaining the clutch; Under no circumstance should your clutch get wet with water. Never! The only possible exception I can imagine is if you are racing and it begins to rain. Always remove your clutch to wash your kart. Besides, you cannot perform your weekly maintenance with it on the kart. With the clutch on your worktable, remove the snap ring retaining the sprocket and bell, and separate the bell from the rest of the clutch. Look for any areas of concern, and with a supply of dry compressed air,



blow the center section enough to remove all dust and particles from within the clutch. On occasion, brake cleaner can be used to assist with this, however I don't believe in using it weekly, and carb cleaner should not be used. Carb cleaner is more aggressive than brake cleaner, and can attack the cement that holds the friction material to the plates and that can lead to more problems.

Take the bell and sprocket assembly and thoroughly



wash out the inside of the bell, as well as the needle bearing in the sprocket. Brake cleaner does a good job with this and carb cleaner is ok in this case as well. When the parts are clean, a good drying with compressed air prepares us for reassembly. Taking one drop of heavy weight oil or a VERY small dab of lightweight grease, such as Vaseline, rub this into the needle bearing thoroughly to distribute it throughout. Note: Excess amounts of oil will find its way into the plates, and slipping is the result. Excessive chain lube can also attribute to this, so be careful with that as well. Replace the bell and snap ring, and it is ready to go.

The goal of this is to shed some light on common maintenance issues, and assist you in being better prepared on raceday. Keep an eye open and regularly inspect for problems. Most issues creep up over time, and a good preventative maintenance program can make a day at the track a much easier affair.

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