



**WARNING!**

**1.877.FASTOYS**

TRINITY RACING DOES NOT TAKE RESPONSIBILITY FOR DAMAGES THAT MAY OCCUR DURING OPERATION OF YOUR VEHICLE UNDER IMPROPER JET SETTINGS. IT IS THE FINAL RESPONSIBILITY OF THE OWNER/RIDER TO ADJUST JETTING TO SPECIFIC RIDING CONDITIONS AND ELEVATION BEFORE RIDING.

**PLEASE FOLLOW ALL OF THESE INSTRUCTIONS CAREFULLY.**

# **CHEETAH CYLINDER INSTRUCTIONS**

## **PARTS AND INSTALLATION PROCEDURE**

1. After receiving your parts, check to see that everything is complete.
2. Your parts list should be as follows: Cylinder (1) with assembled powervalves (2), top-end gasket assembly (1), small zip ties (2), small hoses (2), stud extenders (2), cylinder head nuts (11), cylinder studs (11), water plugs (4), 8mm x 25mm (16), 8mm x 16mm (8), head (1), pistons & rings set (2), upper pins (2), bearings (2), o-ring kit (1), cast water inlet (1), cast water outlet (1), and reed assemblies (2). If you are building a stroker Cheetah, you should also have a crank assembly (1), with crank seals (2), and a side cover gasket (1).
3. Before assembly, all parts should be cleaned and closely inspected (be sure to clean all gasket surfaces completely).
4. If you are building a stroker Cheetah, install the crank and assemble the lower end. If you have tunnel porting, you will need to match-port the cases before assembly.
5. Install the two stud extenders to the two outside base studs on the base (intake side, before you install the base gasket).
6. Install powervalves into cylinder using gaskets & supplied hardware. Make sure the powervalves do not extend into the bore area. Minimum clearance should be .020" between piston rings and powervlve gate.
7. Install cylinder studs, long threaded side down just a little more than hand tight.
8. Make sure the water plugs under the cylinder are installed and below the surface before the base gasket is installed. Install the base gasket dry with no sealant.
9. The pistons should be installed on the rods with a little two-stroke oil on the bearing (make sure the clips are all the way in their groove and the markings on the clips are face up).
10. Install the cylinders with a very small amount of two-stroke oil on the cylinder walls. Tighten base bolts to 20 ft. lbs.
11. Install the o-rings to the cylinder using a small amount of grease.
12. Install the head and torque it to 20 ft. lbs. in a cross pattern.
13. Install the water inlet and outlets to the head with the supplied gaskets (the one with the water bleed goes to the intake side of the head), then install the rest of your parts as normal.
14. Install the powervalves (grooves face up, jets on powervlve assemblies face down) then attach the small hoses to the powervlve assemblies. Use the two small zip ties to hold them together and run the hoses to the bottom of the bike (these must face down toward the ground). Be sure to Loctite your powervlve bolts!
15. Install the reeds and manifolds to the cylinder and torque to 11 ft. lbs. (if supplied, run the reed spacers on the cylinder side, moving the reeds back).
16. Install the rest of your parts and you're done, but be sure to follow the break-in procedure.
15. Install the powervalves with the grooves facing up toward the piston. If the powrvlve mounting holes go into the water jacket, use silicone on the threads before installing them.

## **BREAK-IN PROCEDURE**

1. The break-in is very simple. All you have to do is start the motor and let it idle slowly. Do not rev the motor at this time (do not ride the bike yet). Do this until the cylinders get hot to the touch (approximately 3 minutes).
2. Turn the motor off and let it completely cool. After this, you must re-torque the base, head, reeds, and powervlve bolts.
3. After the first re-torque, you can start the bike again, and this time you can ride it. Please try not to lug or rev the motor (just ride it nice and easy).
4. After the first 20 minutes of riding time, you should let it completely cool again and then re-torque the bolts one more time. At this time, check the water (you want to keep it about 1/2 inch over the core; do not fill it all the way to the top).
5. Now you can go for a real ride, but try not to rev the bike past 9000 RPM, and don't lug the engine. Ride this way for approximately one hour, then let the bike completely cool again.
6. Continue to ride this way for a full tank of gas before you start racing the engine.
7. Congratulations! You can now let it all hang out if you so desire. Please use common sense and drive carefully.
8. Remember to watch your jetting! Also remember that big motors need air to run and your motor will need airbox modifications to run at its potential and be sure not to over-oil the air filter.
9. Please feel free to call Trinity Racing at 714.632.3434 or visit [www.TrinityRacing.com](http://www.TrinityRacing.com) if you have any questions.

**THANK YOU FOR YOUR BUSINESS. HAVE A FUN AND SAFE RIDE!**