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Installation Tips 502 Stroker Crank Kit For the Yamaha YFZ-450

It is important to understand that you are making significant changes to your engine. Since all production engines vary from one to another, it is important to check the fit of your crank to insure that the crank and rod clear the cases before assembly. Sometimes there will be slight differences in cases, which may require slight modification of the cases. If you are not experienced with this, you should utilize the services of an experienced professional engine builder.

1. You should check for clearance between the big end of the connecting rod and the counterbalance. In some cases, you may need to trim the counter balancer. Install the crank and counterbalance in the cases (without any other parts for now) and bolt the cases together with two or three bolts (just snug). Carefully rotate the crank and check the clearance between the counterbalance and rod. If you have less than 0.030" clearance, use a Sharpie or other felt-tip pen and mark the counter balancer. Remove the counter balancer and carefully remove just enough material to provide 0.030" clearance. Check for clearance again and repeat the process, if necessary.
2. Before you install the head, be sure to check the piston-to-head clearance – about 0.040" is normal. It is also recommended that you "cc" the head so you know the exact compression ratio.
3. Install the adjustable cam sprocket on the intake cam. We suggest you set the cam timing at the stock position, and try other settings to alter the powerband to best suit your riding and application. For installation, see the included Adjustable Cam Sprocket Installation Sheet.
4. Since you are increasing the engine size, you will need to alter the carburetor jetting. It is not unusual for the engine not to start with stock jetting, due to it being excessively lean. The settings listed below are a STARTING POINT and may not be suitable for your use. Please take care to jet the engine properly for your conditions.

Main Jet 178 – 180
Pilot Jet 485
Needle CVP (Yamaha part # 5TA-14916-VP)