IMPORTANT!!

FOLLOW THESE INSTRUCTIONS FOR INITIAL START-UP AND HEAT CYCLING!!

Please Read Before Assembling Your Engine!

After careful assembly of your new engine, follow these important steps during initial start-up.

1. Make sure you have oil pressure. Twin Cam engines pressurize the oil first, then run it through the oil filter before it starts to lubricate critical engine areas. The very last parts to see oil are the cylinder heads; coincidentally, the heads are quick to generate heat and need oil for lubrication and to carry heat away from these critical areas. **For this reason, we highly recommend using 5W30 motor oil for priming and initial fire-up.** During assembly, prime the lower end with a new oil filter in place (fill it with oil before installation), and be sure to pour 4-6 ounces of oil directly on the valve springs and valve stems. Leave the rocker lids off until you have verified oil flow to the rocker arms. Before starting the engine, cycle it in short bursts with the starter (plugs out but grounded). Install rocker lids after you have verified oil flow to the rocker area. Without oil, valve and guide damage can occur.

2. Start the engine in short stages (heat cycles). Perfect piston fit is a critical factor for engine performance and long engine life. An incredible amount of heat is generated between the rings, pistons and cylinders during initial start-up. It is at this point where clearances are the tightest and your rings, pistons and cylinders will meet for the first time. **Newly assembled EFI engines using ThunderMax engine management should bypass the usual process of letting the engine perform a full warm-up cycle to operating temperature on the sidestand until after the following heat-cycling steps are performed.** Follow the instructions below and you'll be rewarded with an engine that will last longer and perform better.

DO NOT ESTIMATE TIME - USE A WATCH

3. 1st, 2nd, 3rd and 4th fire-ups: These are very short run times! Each of these initial 4 start-ups should last only ten (10) seconds each at 1250 - 1400 rpms (just above idle speed). After each start-up, allow the cylinders to cool to room temperature. Don't rush it. Take your time. Your new parts need to get acquainted.

4. 5th, 6th 7th and 8th fire-ups: Run times increase slightly. Run these 4 start-ups at 1250 - 1400 rpms, 15-20 seconds each, with time to cool to room temperature between each time.

5. 9th, 10th and 11th fire-ups: With a fan blowing air at the engine, increase run times to 45 seconds each, again at 1250 -1400 rpms. Allow cooling to room temperature between runs, as before.

6. Next 2 runs: No more than 1-1/2 minutes each. Continue to use a fan, but don't neglect the cooling period. These first few minutes of run time are critical to establish cylinder and piston wear patterns and to protect the rings from overheating. *Remember: pistons don't die....they are murdered!* The absolute worst thing you could do is start a fresh engine and let it idle, while you kick back and watch it melt from the inside out.

7. Change the oil to 20/50 or 20/60 (hot summer). Now you can start the break-in process while riding the bike. Make your first rides short ones, with adequate cooling stops along the way. Don't lug the engine and avoid stop-and-go traffic. Pick a route that will allow you to ride at moderate speeds, while shifting through the rpm range. Keep rpm levels moderate; increase them gradually as you log on the miles. Since your new engine will generate significantly more power, it will likely realize an increase in operating temperature. A quality oil cooler is also a smart investment and is highly recommended.

Thanks for your purchase of our product. We welcome your feedback.

6655-A Amberton Drive, Elkridge, Maryland 21075 410-579-2828