

1999-2000 YAMAHA V STAR 650

DYNA 3000 IGNITION INSTALLATION INSTRUCTIONS

1. REMOVE THE BATTERY – The stock ignition location is behind the battery. Remove the right side cover. Remove the battery, NEGATIVE terminal first. Pay close attention to wire mounting locations for reverse installation of the battery. Finally, the stock ignition box is located behind a dust panel.
2. REMOVE THE STOCK IGNITOR BOX – Remove the two screws retaining the ignitor box. Unplug the two harness plugs and remove the box from the bike.
3. SET THE ADVANCE AND REV LIMIT MODES – Start by selecting ADVANCE MODE #1 and a REV LIMIT of 7000 (all dip switches in the OFF/down position). These are the stock settings that will give you a good baseline to start with. NOTE: Mode selections are read only when the key is first turned on. Making new mode selections will only take effect when the key is cycled off/on. For more information about the ignition timing settings, read “ADVANCE CURVES” below.
4. MOUNT THE DYNA 3000 MODULE TO THE BIKE – Mount the DYNA 3000 module to the stock location. Plug the two harness connectors into the ignition.
5. REPLACE THE BATTERY – This is a good time to start the bike to make sure everything is working properly. You should notice that the bike starts better than with the stock ignition. The DYNA 3000 ignition requires much fewer rotations of the engine to start than the stock ignition.
6. REPLACE THE SIDE COVER – Your installation should be complete. If you have any trouble starting the bike, inspect all wiring connections. You should be able to see the LED on the DYNA 2000 module blink when the ignition key is turned on. If you don't, check your RUN/STOP switch and/ or the battery voltage and wiring.

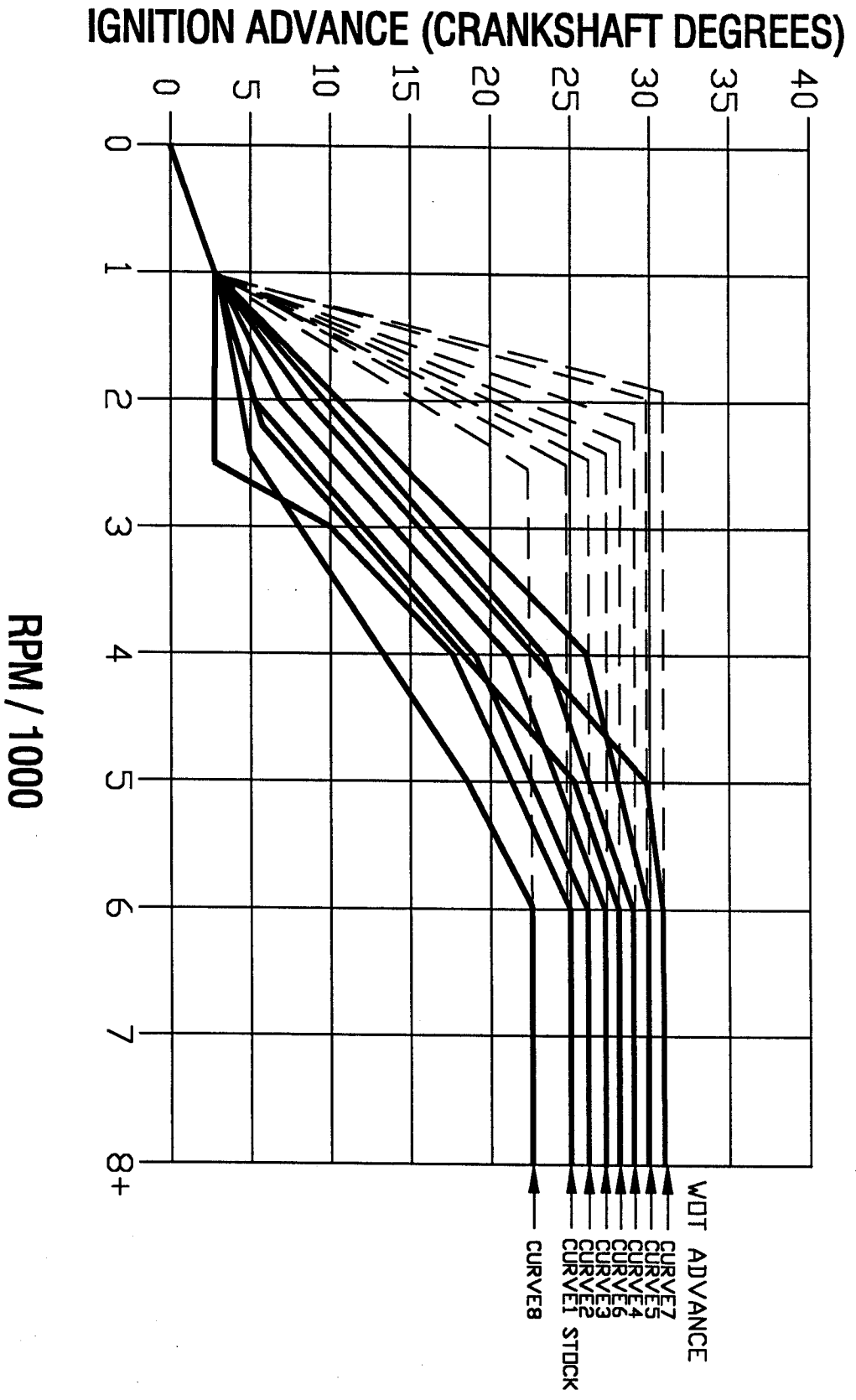
THE ADVANCE CURVES:

The DYNA 3000 ignition for the Yamaha V-Star 650 has eight built-in advance curves. Curves 1 through 4 are most similar to the stock advance curve. These curves should be used with a motor that has not been internally modified. Curve 1 or 2 should work best with a totally stock bike. If you add a jet kit and a new exhaust you should be able to run curves 3 or 4 for best power. Advance curve #3 will give you a little more advance on the top end and a little more advance in the mid range cruising speeds than the stock module. Putting a jet kit in the carb will wake up the motor a bit. With a jet kit, you may be able to run curve #4 for even more power. But don't try the more aggressive curves without a jetting change and premium fuel. Curves 5 through 7 are traditional best power curves for v twin engines. If you increase the compression and improve your cylinder head flow with cams and/or porting you may be able to run these more aggressive curves. A stock, unmodified V Star motor will not run well with these aggressive curves. Curve 8 is a retard curve for nitrous and blower applications. See DYNA 3000 IGNITION CURVES graph for an explanation of the ignition curves.

THE STATUS LED:

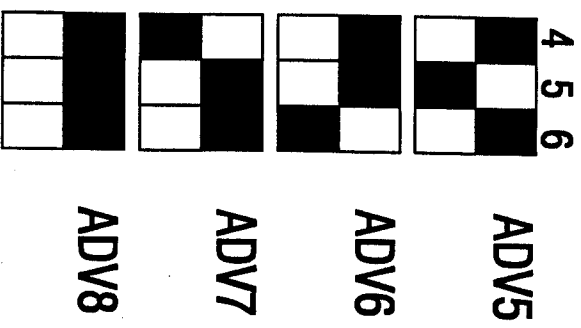
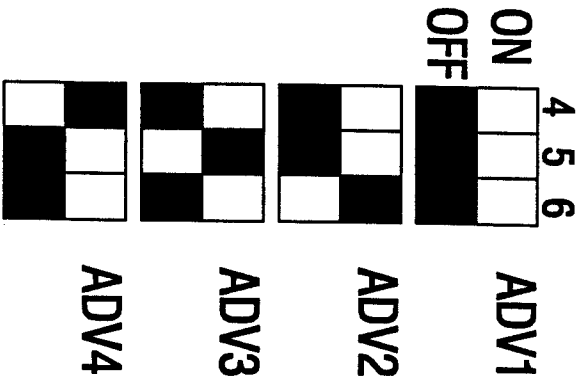
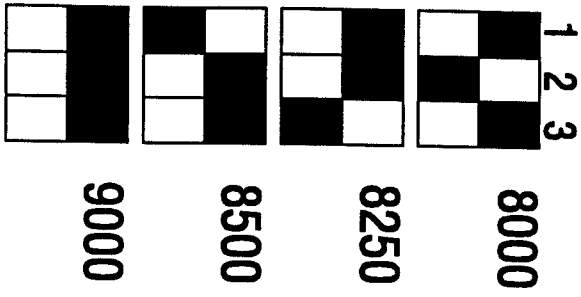
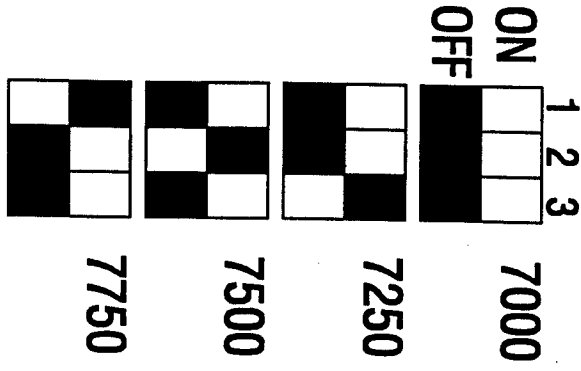
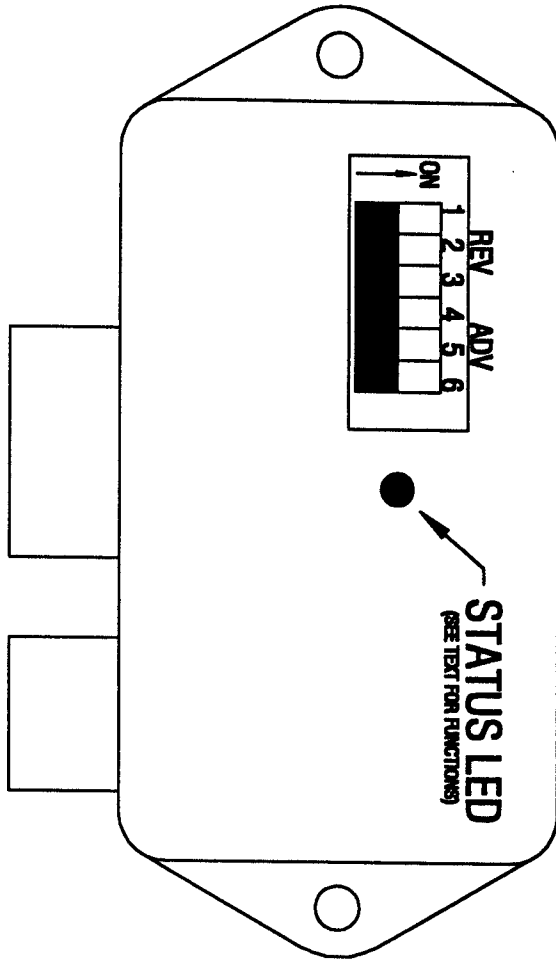
There is a red STATUS LED located next to the mode switches on the DYNA 3000 module. This LED is useful for giving you some diagnostic information about the operation of your ignition. The STATUS LED has several functions. When you first apply power to the DYNA 3000 module, the STATUS LED will blink once, indicating the module is on. This is a good verification that your ignition fuse, wiring and ignition switch is working. When the engine is cranking or running, the STATUS LED will pulse each time a signal is received from the magnetic pickup located in your engine. This function will allow you to see that the DYNA 3000 module is communicating with the pickup. When the ignition is ON, and the engine is NOT running, the STATUS LED will show the operation of the TPS (Throttle Position Sensor). Twist the throttle more than 50%, and the STATUS LED will illuminate, indicating the TPS is working properly. If the TPS is disconnected, the STATUS LED will illuminate and the ignition will stay on the Wide Open Throttle curve. Best mileage will be achieved when the TPS is operating properly. When the TPS is operating normally, the ignition will use a Part-Throttle advance curve for best gas mileage.

DYNA 3000 IGNITION CURVES
 NOTE - DASHED LINES INDICATE PART THROTTLE CURVE WHEN USING TPS SENSOR



DYNATEK	
144 S. VALERIEA ST., GLENDALE, CA 91741 (626)2963-1669	
TITLE YAMAHA V STAR 650 ADV. CURVES	
DATE 4-7-00	MODEL YAMAHA V STAR 650
REV 1.0	

Example: All Dip Switches OFF (DOWN) = 7000 RPM Limit, Advance Curve1 Selected.



DYNATEK		
164 S. VALENCIA ST., GLENDALE, CA 91741 (626)963-1669		
TITLE DYNA3000 MODE SETTINGS		
DATE 4-5-00	MODEL YAMAHA VSTAR 650	REV 1.0