

## DYNA 3000 DIGITAL PERFORMANCE IGNITION KIT No. D3K7-3 1999-2001 YAMAHA ROADSTAR 1600

### INSTALLATION INSTRUCTIONS

#### Product Description

The Dyna 3000 digital ignition is designed to assist in tuning for optimum performance. The eight preprogrammed advance curves and adjustable RPM limiter will accommodate a wide range of engine builds and riding styles. For turbo and nitrous equipped bikes, a special timing retard feature is included. The Dyna 3000 is a direct plug in replacement module and does not require any modification to the bike's wiring.

#### Advance Curves

The eight advance curves are separated into two groups. The A curves rise aggressively in the mid rpm range to give you better mid range power. Most motors will run best with the A curves. These curves give you a choice of final timing from 30 degrees to 36 degrees. Curve 32A is most similar to the stock curve. The B curves bring in advance later (at higher RPM), and will generally be used if the A curves cause detonation or if the motor has been built with raised compression.

#### RPM Limits

The Dyna 3000 has eight selections for the RPM limit. **Caution!** The stock valve train may fail, causing severe engine damage, if the RPM limit is set over 5000 RPM. Use of a higher RPM limit will require making improvements to the valve train (e.g., installing heavier valve springs).

If an aftermarket carburetor without a Throttle Position Sensor is used, disconnect the stock TPS. The ignition will select the Wide Open Throttle curve with the TPS disconnected. The TPS can be disconnected by unplugging the 3 pin connector on the TPS harness.

#### Retard Mode

The Retard Mode feature is designed to reduce the ignition timing at all points along the advance curve by the amount selected by the programming switches. For example, if the switches are set to 3 degrees of retard, ignition timing will be 3 degrees less at every RPM. A minimum advance of 6 degrees has been programmed so that regardless of how the switches are set, there will never be less than 6 degrees at any RPM.

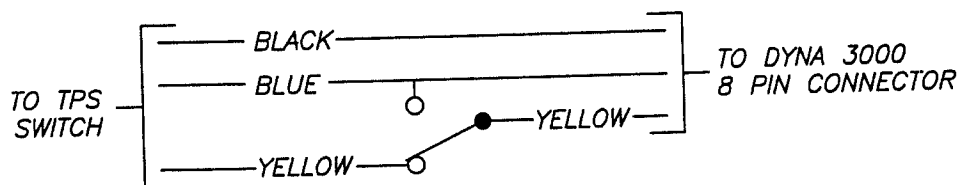
The retard mode is activated through the Throttle Position Sensor input. Wide Open Throttle is defined as 3.5 to 4.0 volts on the TPS input, and Closed Throttle is defined as below 1 volt. Raising the TPS input to 5 volts activates the Retard Mode, removing the amount of advance selected. A standard automotive relay or switch can be used to activate the retard mode.

### Module Installation

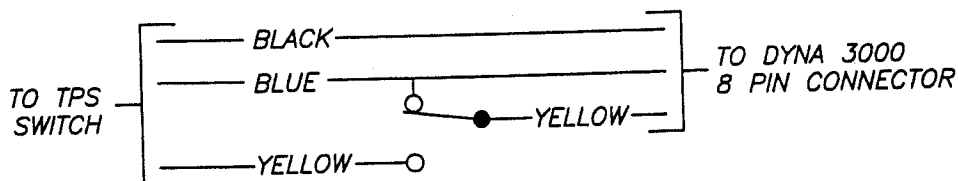
1. SET THE CURVE SWITCHES – Set the switches on the back of the performance ignition module. It is recommended that you start with curve 32A and a RPM limit of 5000.  
**Warning!** Do not set RPM limit higher than 5000 when using the stock valve train components.
2. REMOVE LEFT BODY SIDE COVER – Remove the hex bolt from the rear of the left body side cover and remove the cover from the bike.
3. REMOVE THE SEAT – Turn the ignition key counterclockwise without depressing, to activate the seat release mechanism. With the mechanism opened by the key, the seat will lift easily from the front. Remove the seat from the bike.
4. REMOVE THE IGNITION MODULE – The ignition module is located in front of the battery. Remove the cables from the battery, (-) cable first. Unfasten the electrical equipment tray by removing the nut at the rear of the fuse block, and the screw at the rear of the tray. Unplug the three ignition module connectors, and remove the rubber mounting strap. Install the Dyna 3000 ignition module. Fasten the electrical equipment tray. Connect the battery cables, (+) cable first.
5. RE-INSTALL THE LEFT SIDE BODY SIDE COVER AND SEAT. The “Check Engine” light should turn on for 1 to 2 seconds when the ignition is switched on. This indicates the module has passed its self test.

2801138  
Rev. 6-25-01

#### OPTIONAL WIRING FOR RETARD MODE FEATURE

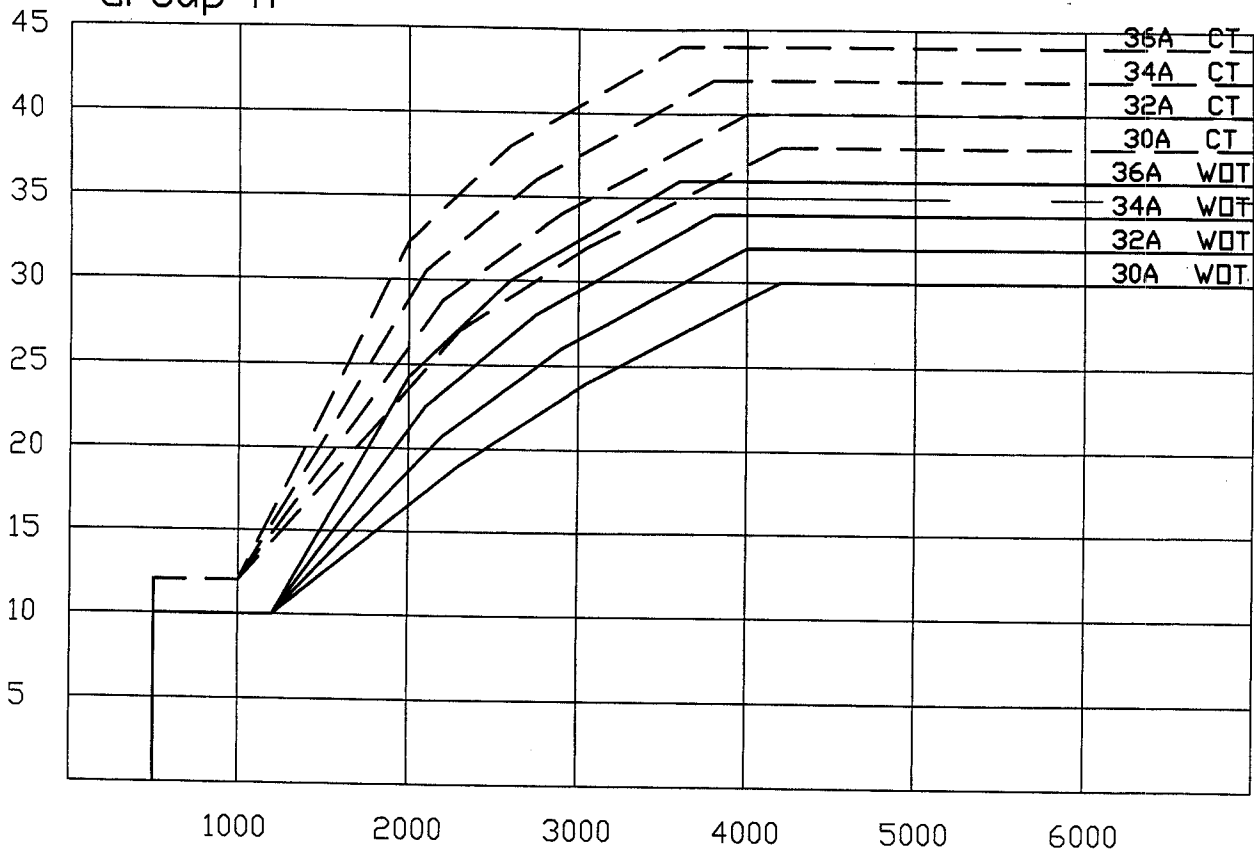


#### NORMAL OPERATION

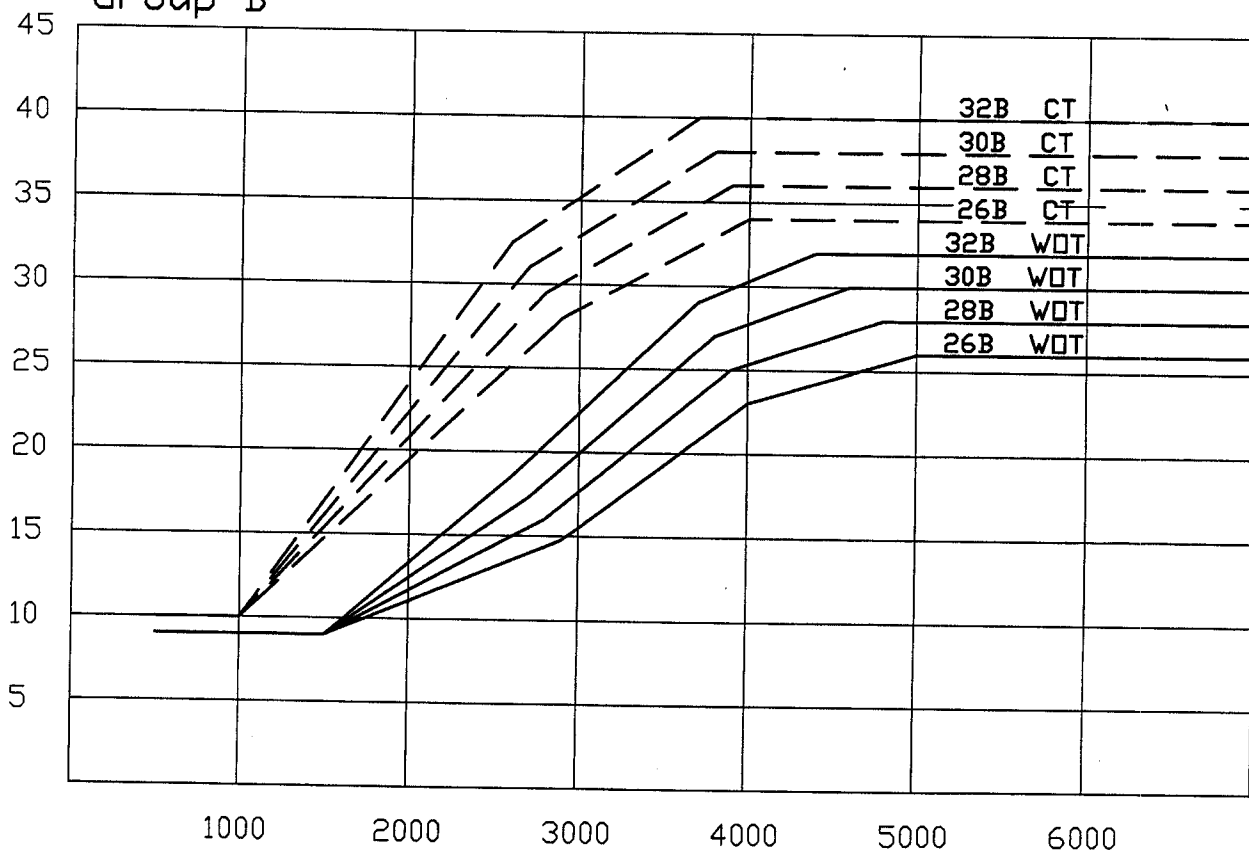


#### RETARD ACTIVATED

### Group A



### Group B



Advance varies smoothly between Wide Open Throttle and Closed Throttle, based on TPS sensor.  
 WOT = Wide Open Throttle. CT = Closed Throttle.

RPM LIMIT	SW1	SW2	SW3	ADVANCE	SW4	SW5	SW6	RETARD	SW7	SW8
4250	OFF	OFF	OFF	CURVE 26B	OFF	OFF	OFF	3 DEG	OFF	OFF
4500	OFF	OFF	ON	CURVE 28B	OFF	OFF	ON	6 DEG	OFF	ON
4750	OFF	ON	OFF	CURVE 30B	OFF	ON	OFF	9 DEG	ON	OFF
5000	OFF	ON	ON	CURVE 32B	OFF	ON	ON	12 DEG	ON	ON
5500	ON	OFF	OFF	CURVE 30A	ON	OFF	OFF	<b>ROADSTAR</b> <b>1101140</b> 2804183		
6000	ON	OFF	ON	CURVE 32A	ON	OFF	ON			
6500	ON	ON	OFF	CURVE 34A	ON	ON	OFF			
7000	ON	ON	ON	CURVE 36A	ON	ON	ON			

SCALE: 2X

<b>DYNATEK</b>			
164 S. VALENCIA ST., GLENDORA, CA 91741			
ROADSTAR 1600 D3K PROGRAMMING LABEL			
PART NO. 2804184			
DATE	REV	DRAWN	FILE
6-18-01		L. SOZA	2804183