



DYNA 3000
DIGITAL PERFORMANCE IGNITION
Kit No. D3K7-4
1996-2000 YAMAHA ROYALSTAR 1300
Kit No. D3K7-5
1999-2000 YAMAHA VENTURE

INSTALLATION INSTRUCTIONS

1. LOCATE THE STOCK IGNITION MODULE - Remove the Ignition Key, then remove the seat. Remove and the Negative (Ground -) terminal from the battery first. Then remove the positive terminal, and then the battery from the battery tray. Remove the battery tray (box) from the frame rails, noting the routing of the battery cables and starter relay mounting (this will be very important for re-installing the battery box.) The stock module will then be exposed and can be removed from the bike.
2. SET THE ADVANCE AND REV LIMIT MODES USING THE DIP SWITCHES - Start by selecting ADVANCE MODE #1 and a REV LIMIT of 6000. These settings are identical to stock, and will give you a good baseline to start with. Advance curve #2 will maintain the advance on the top end. Advance curve #3 has increased midrange advance, which will pep up a stock motor with more power in the cruising rpm range. Putting a jet kit in the carb will wake up the motor even more. With a jet kit, you may be able to run curve #4 or #5 for even more power. But don't try these more aggressive curves without a jetting change and premium fuel. See: THE ADVANCE CURVES for more information. NOTE: Do not exceed 6500 rpm on a stock RoyalStar without aftermarket valve springs. Do not exceed 7500 rpm on a stock Venture without aftermarket valve springs.
3. MOUNT THE DYNA 3000 IGNITION - Mount the DYNA 3000 in the stock location as if it were the stock ignition.
4. REINSTALL THE BATTERY - After securing the new ignition to the stock location, replace the battery box. The battery cables and starter relay should be properly remounted to the plastic battery box. Place the battery back in the tray, making sure the polarity of the battery matches the battery cables (RED = +, BLACK = -).
5. START THE BIKE - Before installing the seat, this is a good time to start the bike to make sure everything is working properly. Turn the ignition key on. You should be able to see both LED's on the DYNA 3000 module flash once when the ignition key is turned on (the LED's can be seen from the side of the bike, looking through the frame). If you don't see both diagnostic LED's flash once, check your connections, engine stop switch, and/or the battery voltage.
6. REPLACE THE SEAT. Your installation is complete. If you have any trouble starting the bike, inspect all wiring connections.

THE ADVANCE CURVES

The DYNA 3000 ignition for the Yamaha RoyalStar has eight built-in advance curves. Curve#1 is identical to the stock curve, however you may notice an increase in fuel mileage, and slightly faster idle. Curve #2 is very similar to the stock

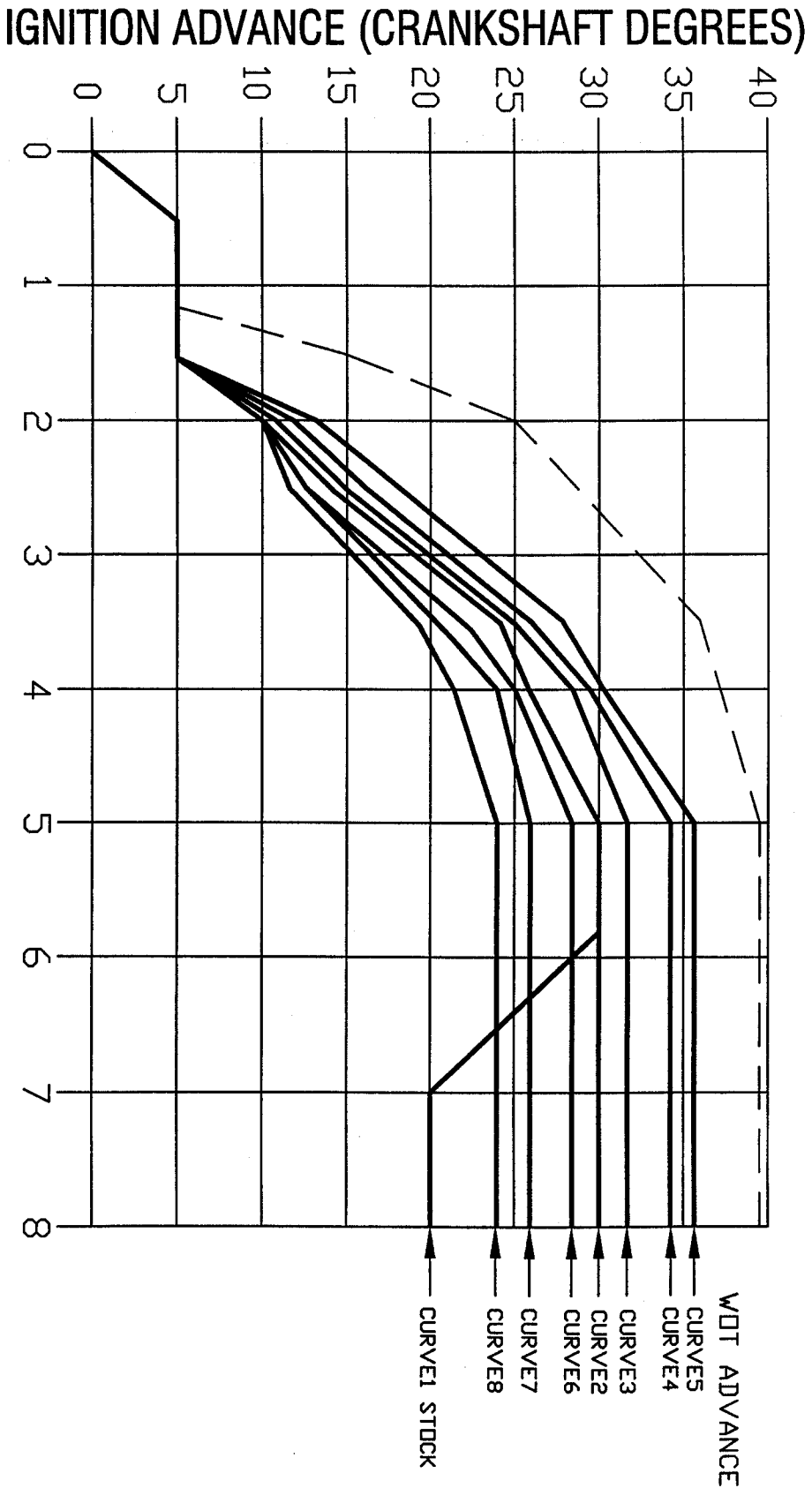
curve, except the timing is maintained on the top end for stronger over-rev. Curve 2 is a good starting point if you are not sure what your engine will like best. Curves 3 through 5 rise aggressively in the mid rpm range to give you better mid range power. These curves give you a choice of final timing from 32 degrees with curve 3 to 36 degrees with curve 5. Most engines will work best with one of these curves. The best way to optimize ignition timing is by putting your bike on a rear wheel dyno at a local shop to see which settings make the best horsepower. Curves 6 and 7 are more conservative curves, which rise more slowly across the rpm range. These curves are more appropriate for high revving, high compression engines

which would detonate with too much low-end advance. These curves are for extreme engines only. If your engine does not experience detonation with curves 1 through 5 then stay with them. If you do have a detonation problem try curves 6 and 7. Curve 8 is a retard curve for nitrous or blower applications. Each advance setting utilizes the Throttle Position Sensor (TPS) for part throttle increased advance (see the dashed line on the IGNITION CURVES chart).

THE STATUS LEDS

The STATUS LEDS located on the back of the DYNA 3000 are useful for giving you diagnostic information about the operation of your ignition. When you first apply power to the DYNA 3000 module, both STATUS LEDS will flash once, indicating the module is on. This is a good verification that your power wiring and ignition switches are working. The RED STATUS LED will then flash each time the magnetic pickup senses the engine rotating. This function will allow you to see that the DYNA 3000 module is communicating with the stock pickup. The GREEN TPS LED will show the operation of the TPS (Throttle Position Sensor). Twist the throttle more than 50%, and the GREEN TPS LED will illuminate, indicating the TPS is working properly. If the TPS is disconnected, the GREEN TPS 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 LINE INDICATES PART THROTTLE CURVE WHEN USING TPS SENSOR

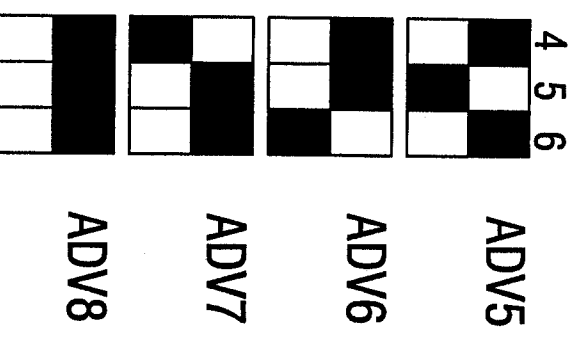
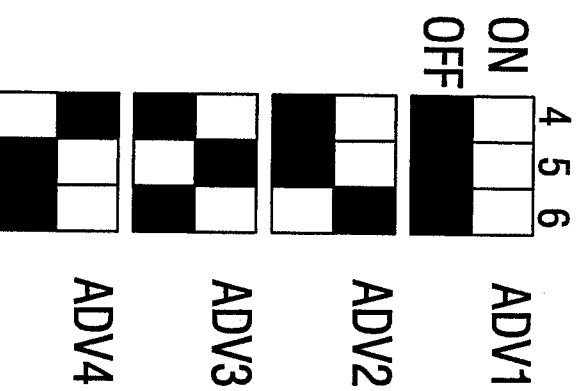
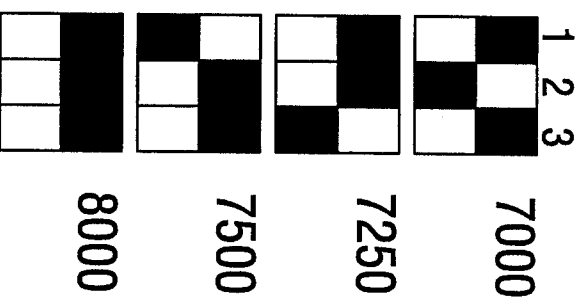
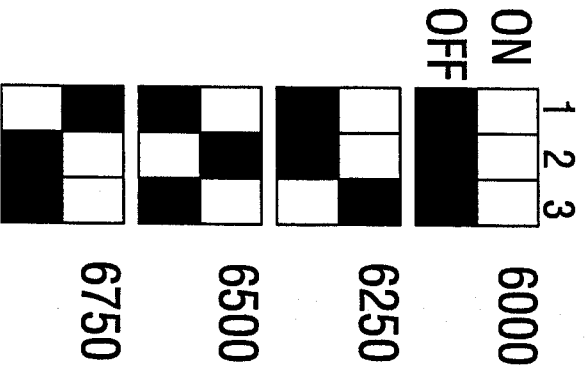
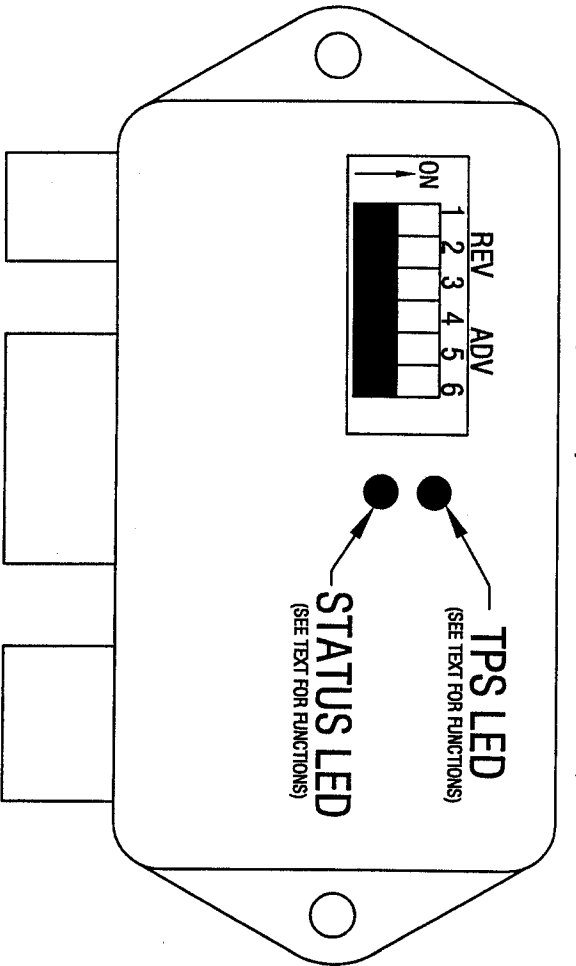


RPM / 1000

1996-2000 ROYALSTAR &
 1999-2000 VENTURE

DYNATEK	
164 S. VALENCIA ST., GLENORA, CA 91741 (626)953-1669	
TITLE	YAMAHA ROYALSTAR 1300 ADV. CURVES
DATE	8-14-00
MODEL	YAMAHA ROYALSTAR
REV	1.0

Example: All Dip Switches OFF (DOWN) = 6000 RPM Limit, Advance Curve1 Selected.



DYNATEK			
164 S. VALENCIA ST., GLENDBRA, CA. 91741 (662)263-1669			
TITLE DYNA3000 MODE SETTINGS			
DATE	MODEL	REV	
5-18-00	YAM ROYALSTAR 1300	1.0	