

**DYNA 2000 DIGITAL IGNITION  
FOR  
YAMAHA ROAD STAR 1600  
KIT NUMBER DDK7-2  
INSTALLATION INSTRUCTIONS**

1. **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.
2. **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.
3. **REMOVE THE GAS TANK FROM THE BIKE** – Remove the three hex bolts holding down the speedometer bezel. Lift the speedo bezel up and back and pull the attached wiring from under the front of the tank to expose the two black connectors retaining the bezel. Turn the bezel such that the rear of the bezel is pointing forward over the handlebars. Rest the bezel over the handle bar without unplugging it. Remove the long bolt at the rear of the gas tank that goes through the frame and rear tank mounting tabs. Remove the vent hose from the top of the gas tank near the ignition key. Unplug the gas tank sender plug at the rear of the gas tank. Turn the petcock to the OFF position. Remove the fuel line from the petcock. Lift the rear of the gas tank and pull the tank rearward to remove it from the bike.
4. **POSITION THE DYNA 2000 MODULE** – Locate the DYNA 2000 ignition module and the main wiring harness in your kit. Plug the harness into the DYNA 2000 module. Locate the mounting plate included with your kit. Fasten the mounting plate to the back of the DYNA 2000 module using the four screws on the back of the module. Position the DYNA 2000 module in the under seat area behind the battery, behind and above the tool pouch. Using the supplied 10-32 pan head screws, attach the mounting plate to the bike by running the screws through the two frame holes above the DYNA 2000 module and into the mounting plate flanges.
5. **RUN THE HARNESS UP TO THE COILS** – Locate the three wire leg of the DYNA harness that contains a BLUE, a WHITE, and a RED wire. REFER TO THE WIRING DIAGRAM IN THESE INSTRUCTIONS. Route this leg of the harness along the left side of the frame backbone up to the ignition coil area under the gas tank.
6. **INSTALL THE RED AND WHITE WIRES ONTO THE REAR CYLINDER COIL** – Remove the ORANGE wire from the rear cylinder coil. Plug the WHITE wire in the DYNA harness onto the open coil terminal. Tape up the end of the ORANGE wire on the stock harness, it will not be used. Remove the RED/BLK wire from the coil. Plug the RED/BLK wire of the stock harness onto the piggy back terminal of the RED wire on the DYNA harness, then plug the RED wire back onto the coil primary terminal.

**DYNATEK**

164 S. VALENCIA ST. • GLENDORA, CA 91741 • (626) 963-1669 • FAX (626) 963-7399

7. **INSTALL THE BLUE WIRE ONTO THE FRONT CYLINDER COIL** – Route the BLUE wire on the DYNA harness over to the front cylinder ignition coil. Remove the GREY wire from the coil. Plug the BLUE wire in the DYNA harness onto the open coil terminal. Tape up the end of the GREY wire on the stock harness, it will not be used.
8. **INSTALL THE GROUND WIRE TO THE DYNA 2000** – Locate the 17 inch BLACK wire on the DYNA 2000 harness with a ¼ inch ring terminal at the end. Route this wire to the NEGATIVE battery post. Loosen the bolt on the battery post and install the ring terminal onto the battery post on top of the main ground wire. Re-tighten the battery post bolt.
9. **INSTALL THE TPS WIRES** – Locate the three wire leg of the DYNA harness that contains a BLUE, a BLACK, and a YELLOW wire. These wires are terminated with two triangular plugs. Route this leg of the harness up the left side of the upper frame backbone to the area between the cylinders. Here you will find a similar connector in the stock harness with BLUE, BLACK, and YELLOW wires. Unplug the stock harness connector and plug the DYNA harness into the mating TPS connector. Plug the other connector on the DYNA harness onto the open stock harness connector.
10. **INSTALL THE PICKUP WIRES** – Locate the two wire leg of the DYNA harness that contains a GREY and a BLUE wire with two connectors at the end. Route this leg under the seat latch area and forward on the left side of the bike (behind the rear cylinder). Here you will find a stock two wire connector with a GREY and BLACK wire coming up from the engine. Unplug the GREY and BLACK engine wires from the bike harness and plug the GREY and BLACK wires in the DYNA harness into them. Plug the other connector on the DYNA harness into the open plug on the stock harness.
11. **CONNECT THE SIDE STAND SAFETY** - The side stand safety input must be connected for the Dyna 2000 to operate. Included in the kit is an orange wire with a pin connector on one end. Plug this into the orange wire coming from the Dyna 2000 harness connector. The other end of this orange wire needs to be spliced into the factory ignition module harness. The Blue wire with a Black stripe located on the 8 pin connector is the side stand safety. A splice clip is provided to make this connection, however, soldering will ensure best long term reliability.

When the side stand is up or the transmission is in neutral or the clutch lever is pulled in, a ground will be supplied to the Orange wire through the stock harness. When the side stand is down and the clutch lever is out and the transmission is in gear all at the same time, the ground is taken away from the Orange wire and the ignition shuts off. This is the same way that the stock ignition safety kill works.

12. **RE-INSTALL THE GAS TANK** – Set the gas tank back onto the bike. Make sure the two black plugs at the front of the gas tank are accessible to the right of the ignition switch. Re-install the vent tube at the front top of the tank. Plug the gas gauge sender plug back in at the rear of the tank. Plug the fuel line back onto the petcock. Turn the petcock to the ON or RESERVE position. Replace the bolt through the frame that retains the rear of the tank.
13. **RE-INSTALL THE SPEEDOMETER BEZEL** – Push the two black plugs retaining the bezel back under the front of the gas tank. Set the bezel back onto the tank. Re-install the three hex bolts that retain the bezel.

#### 14. RE-INSTALL THE LEFT SIDE BODY SIDE COVER

15. SET THE MODE SWITCHES – Locate the two mode switches on the end of the DYNA 2000 module. For beginning settings, set the REV LIMIT mode switch to 4500 rpm and set the ADVANCE MODE switch to curve 3. This will give you a little higher rev limit than stock. Curve three will give you about the same final timing at higher rpm as stock, but you will get more mid range advance for more torque in the cruising rpm range.

#### ADVANCE CURVES

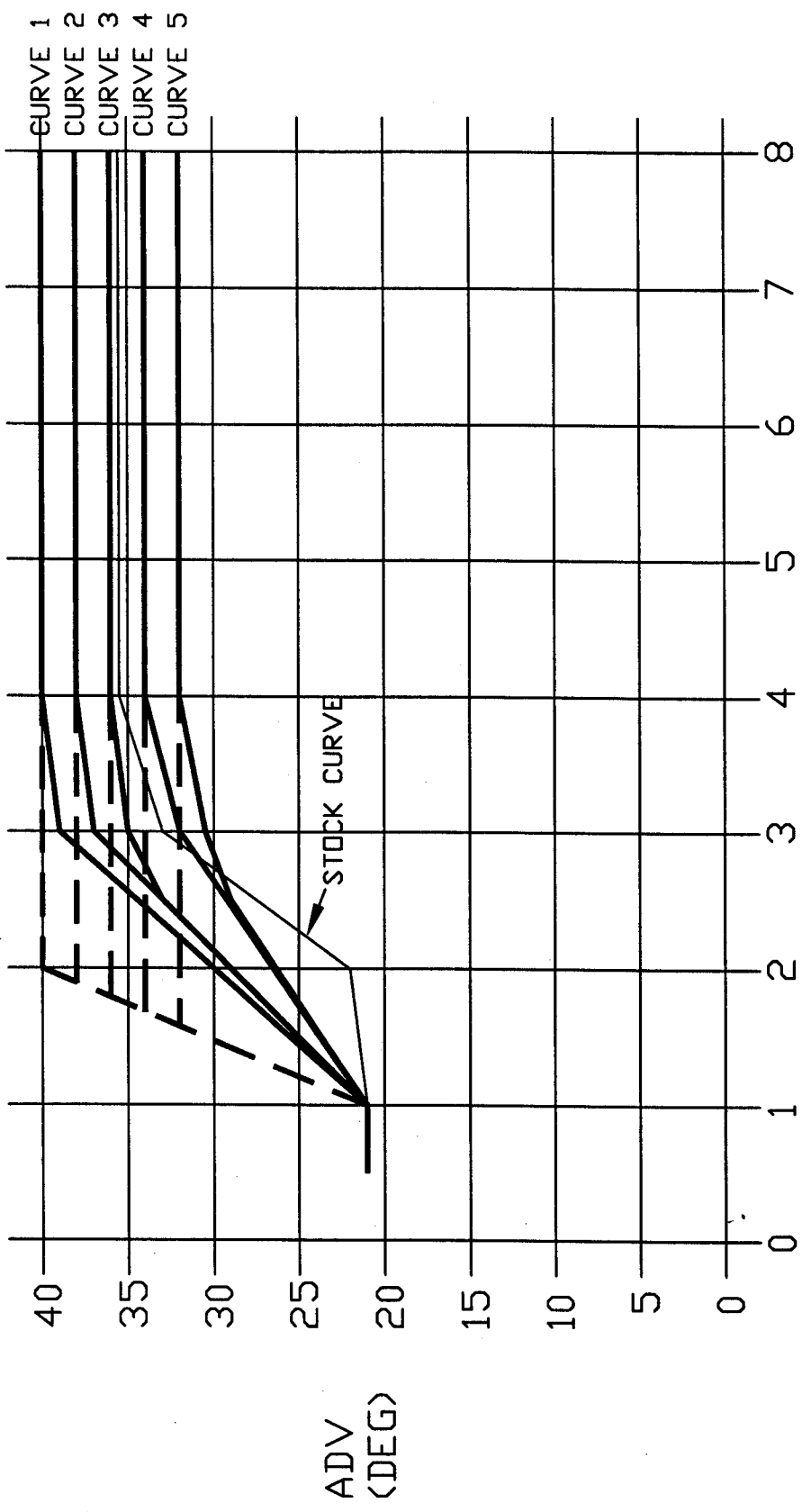
The DYNA 2000 ignition for the Yamaha Road Star has ten built-in advance curves. There are five curves which rise aggressively in the mid rpm range to give you better mid range power. These are curves 1 through 5. These curves give you a choice of final timing from 40 degrees with curve 1 to 32 degrees with curve 5. Most engines will work best with one of these curves. Curve 3 is most similar to the stock curve. Curve 3 is a good starting point if you are not sure what your engine will like best. The best way to optimize ignition timing is by putting your bike on a rear wheel dyno at a local shop to see which makes the best horsepower. Curves 6 through 10 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 through 10.

#### STATUS LED

There is a STATUS LED located between the mode knobs on the DYNA 2000 module. This LED is useful for giving you some diagnostic information about the operation of your ignition. The STATUS LED has two functions. When you first apply power to the DYNA 2000 module, the STATUS LED will blink indicating the module is on. This is a good verification that your power wiring and ignition switch are 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 2000 module is communicating with the pickup.

2801108  
REV 1-26-00

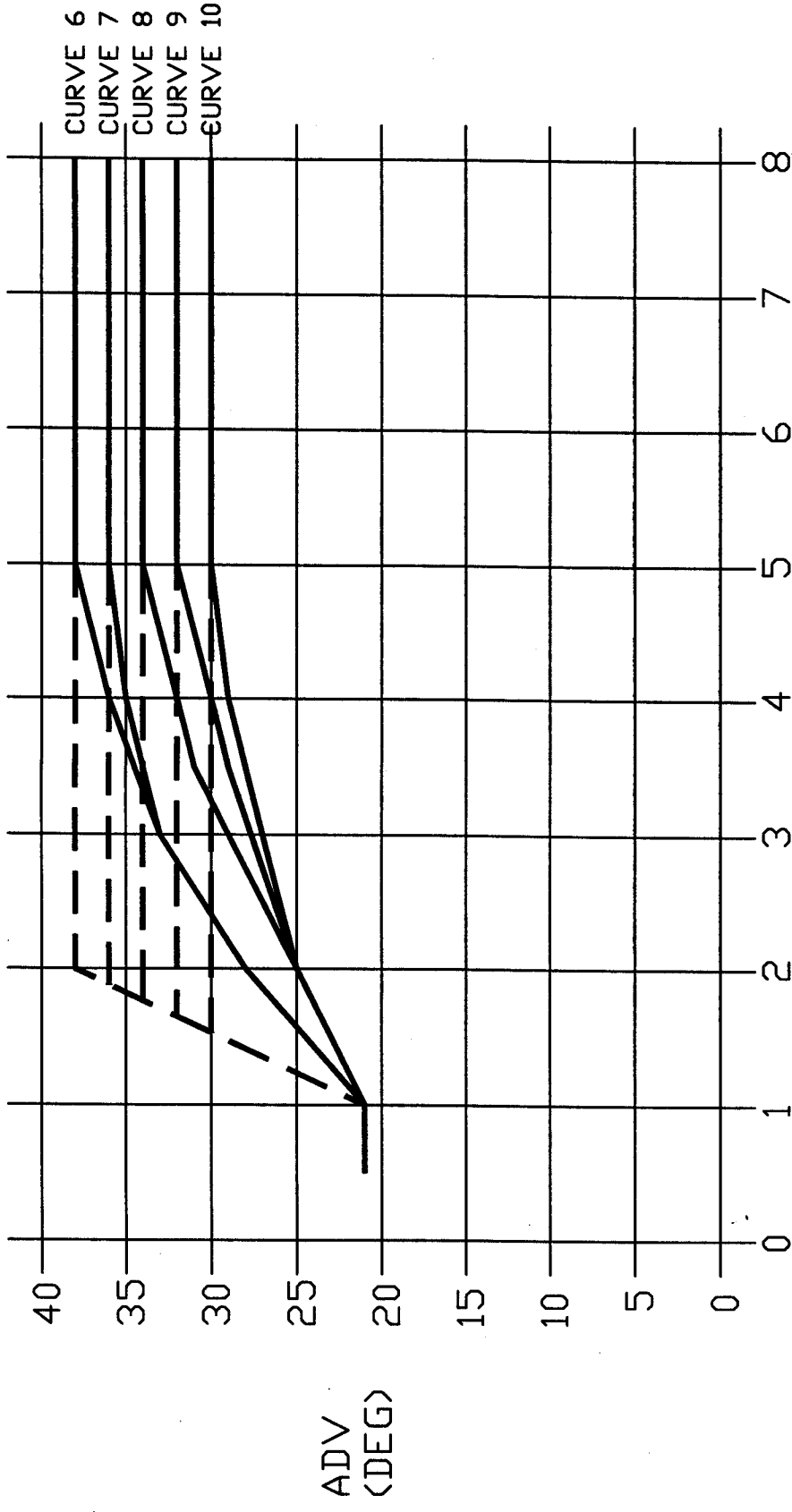
NOTE - DASHED LINES INDICATE LIGHT THROTTLE CURVE WHEN USING TPS



RPM/1000

ADV  
(DEG)

NOTE - DASHED LINES INDICATE LIGHT THROTTLE CURVE WHEN USING TPS



RPM/1000

ADV  
(DEG)

