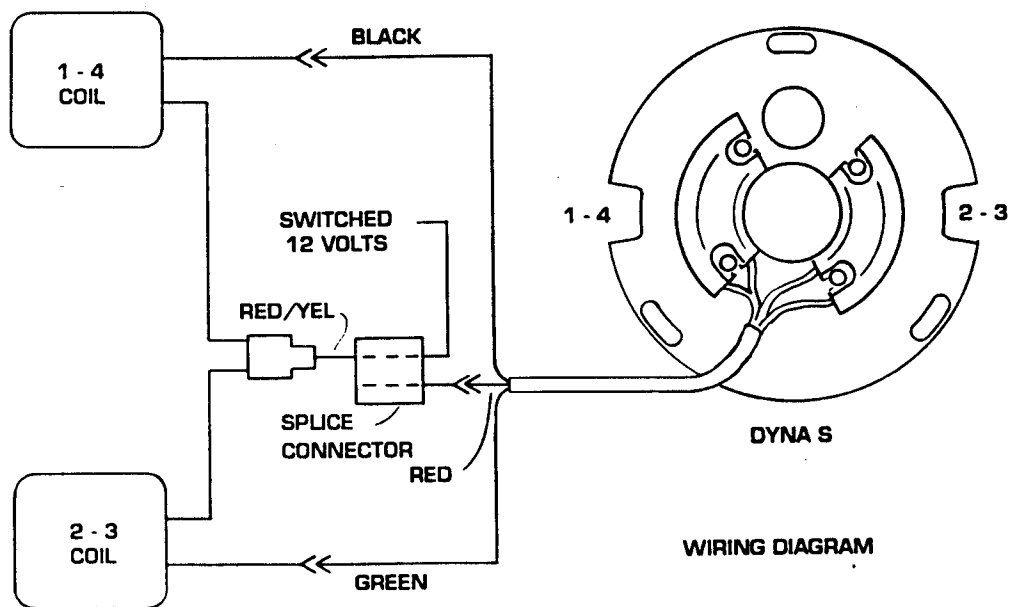


## DYNA S ELECTRONIC IGNITION INSTALLATION INSTRUCTIONS

PART NO. DS2-1 FOR KAWASAKI 900/1000 FOUR CYLINDER MOTORCYCLES  
PART NO. DS2-2 FOR KAWASAKI KZ550 & KZ650 FOUR CYLINDER MOTORCYCLES

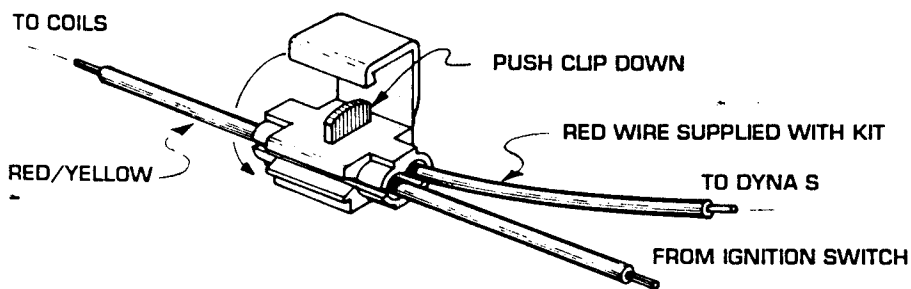
The DYNA S Electronic Ignition System was designed as a points replacement, but can be used on many late model motorcycles with the addition of a mechanical advancer. It was designed for use with stock, or other coils, or combinations of coils that have at least THREE OHMS primary resistance.



### INSTALLATION PROCEDURE-

- 1) Remove the points cover.
- 2) Remove the bolt and hex washer holding the spark advance assembly to the engine.
- 3) Remove the three screws holding the points plate to the engine. Disconnect the black and green point wires where they plug into the wire harness and remove the entire point/plate assembly. KZ650's have a blue wire for the oil pressure switch that must also be disconnected.
- 4) Remove the spark advance assembly from the engine.

- 5) Remove the points cam from the advance assembly.
- 6) Coat the advance assembly shaft with oil. While holding it with the 1-4 side pointing up, slip the DYNA S rotor over the shaft. A magnet approximately 1/4 inch in diameter will be noticed on one side of the rotor. This magnet must face to the left when the 1-4 side on the advance assembly is pointing up. Spread the weights and push the rotor down until it engages the weights. Ensure that the rotor rotates freely on the shaft as the advance weights move out and back.
- 7) Install the advance/rotor assembly on the engine making sure the pin on the advance assembly is engaged in the pinhole in the crankshaft. Reinstall the hex washer and bolt, and tighten. Ensure that the rotor is still free to rotate.
- 8) Install the DYNA S using the three screws previously removed, and tighten. On the KZ650, connect the spade terminal end of the blue wire included with the kit on the oil pressure switch, prior to installing the DYNA S.
- 9) Route the cable over to where the points originally plugged in, being careful to avoid the exhaust system. The grommet from the point cable may be used by slitting it with a razor blade to remove it. On the KZ650, route the blue wire along with the cable, securing it to the cable with cable ties or tape.
- 10) Connect the black and green wires to the receptacles where the original points connected, matching the colors. On the KZ650, connect the blue wire where the original blue wire plugged in.
- 11) Remove the fuel tank. Locate the two ignition coils. There is a red/yellow wire coming from each coil to a common junction in the wire harness. These wires carry the switched 12 volts to the coils. Using the splice connector provided, attach the separate red wire included in the kit to the red/yellow wire that goes to the coils, as shown below. Do not strip the wires.



**NOTE:** The location for obtaining switched 12 volts in Step 11 is one of several possible locations. If a more convenient source of switched 12 volts is available, it may be used, as long as it provides a sound connection. One such source is the 12 volt wire leading to the rear brake stop light switch, and in some cases, unused 12 volt receptacles can be found in the motorcycle's electrical system.

- 12) Plug the red wire coming from the DYNA S into the red wire installed in Step 11.
- 13) This completes the installation. Make sure that all connections are secure and that all colors match.

#### **TIMING PROCEDURE-**

**NOTE:**

- A) The left module fires cylinders 1-4, the right module fires cylinders 2-3, and each provides  $\pm 10^\circ$  of adjustment. Moving them counterclockwise advances the timing and clockwise movement retards the timing.
  - B) All timing adjustments should be made using the advance timing marks which are approximately 1/2 inch to the right of the F marks on the advance assembly.
- 1) To time the engine statically, connect a 12 volt test light from the junction of the black coil wires to ground (engine case). Do not disconnect the wires. Use a wrench on the advance assembly hex washer to rotate the engine.
  - 2) Turn ignition switch on. While holding the rotor in the fully advanced position (clockwise), slowly rotate engine forward until the test light turns on. The right hand advance mark for cylinders 1-4 should align with the fixed mark on the engine case.
  - 3) If the marks do not align, loosen the screws holding the DYNA S plate to the engine, and rotate it clockwise or counterclockwise, as appropriate, and retighten the screws.
  - 4) Rotate the engine backwards until the light goes out, and repeat Steps 2 and 3.
  - 5) After 1-4 timing is verified, connect the test light to the green coil wire, and repeat Step 2, using the 2-3 timing marks. If it is necessary to adjust the 2-3 timing, loosen the cap screws holding the right module using allen wrench supplied with the kit; and move it clockwise or counterclockwise as appropriate, (.010 inch equals 1°) and retighten screws.

- 6) Recheck timing and adjust as necessary using the above procedure until proper timing is verified.
- 7) The engine can also be timed dynamically using a strobe light in the normal manner. Use the advance marks and an engine speed of about 2500 RPM (full advance).
- 8) Replace timing cover and fuel tank.

#### **PROBLEM DIAGNOSIS-**

The DYNA S Electronic Ignition is manufactured from the highest quality parts and materials available, using the greatest care possible. Many times operational problems are due to improper installation or intermittent connections.

During timing, if the test light remains bright at all times, it indicates that there is a bad connection in the wiring. Ensure that there is 12 volts at the red wire.

The DYNA S uses two identical power modules, one for each pair of cylinders. If loss of ignition on four cylinders is experienced, it is not likely to be caused by the DYNA S. The probable cause would be loss of 12 volts to the coils or to the red wire on the DYNA S.

If loss of ignition on two cylinders is experienced, remove spark plugs, replace in caps, and lay them on cylinder head. Turn engine over and watch sparks to determine which are missing. Disconnect (key off) the DYNA S output wires and reconnect them in reverse. If sparks transfer to opposite plugs, it indicates a bad DYNA S power module. If they stay with the same plugs, it indicates a bad coil, or a problem somewhere in the wiring.

#### **DYNATEK**

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