

DELTA MARK TEN Z INSTALLATION INSTRUCTIONS

READ & UNDERSTAND ENTIRE INSTRUCTIONS BEFORE BEGINNING

TOOLS & TIME: Typical installation time required is less than 30 minutes when the installer has completely read the instructions and has some knowledge of his machine. Allow adequate time, so that the installation will not be rushed. Tools required for installation are; a pair of needle nose pliers, a screwdriver, and in some cases a crimping tool.

GENERAL: The Mark Ten Z is a Capacitive Discharge Ignition System which adds to and compliments the Motorcycle standard ignition. The Mark Ten Z is designed for four cycle engines, and is compatible with all standard motorcycle coils. The system utilizes the standard motorcycle ignition consisting of a 12 volt negative ground battery, ignition coils, condensers and spark plugs. The points are retained; but with the patented circuit design, arcing, pitting, and metal erosion is substantially reduced. As a consequence, the points provide a margin of safety by maintaining a back-up ignition system. With the Mark Ten Z, point replacement and adjustment is reduced to significantly lower levels. When energized, the "Z" adds a capacitive discharge pulse in front of and in addition to the standard spark pulse. As a result, a faster more intense spark is generated by the spark plugs providing a better and more complete combustion of fuel.

The Mark Ten Z is designed for use on motorcycles with either one or two coils. Those machines using three coils will require an additional unit for the third coil.

The Mark Ten Z is completely sealed to protect against all weather elements and vibration.

ADJUSTMENT:

Standard point setting and timing is recommended. Spark plug gaps may be extended .005" to .010". This is recommended should smoother idle be desired. In some machines this may also enhance performance.

INSTALLATION & HOOK-UP:

1. Remove Motorcycle gas tank which exposes the bikes coils and frame.
2. Using clamps supplied, band the ignition unit to the cycle frame. Generally this can be done with the unit up high toward the neck on the front part of the A frame. Some cycles will have a solid gusseting between the frame for extra support. In these cases, it is possible to band the entire unit to the frame using the slotted cut outs and making one continuous band around the unit and frame. If the bands are routed over the top of the plastic case, use care in tightening to prevent breakage of the plastic.
3. Route the cables through the frame back to the coil area. Be sure the cables are free of any moving parts, and will not bind when front fork is turned.

NOTE: All connectors attached should mate with your machines standard connectors. If for some reason they do not, we recommend changing the connectors on the Mark Ten Z. Matching connectors should be available at your cycle dealers.

4. The six wires in the cable harness are connected as follows:

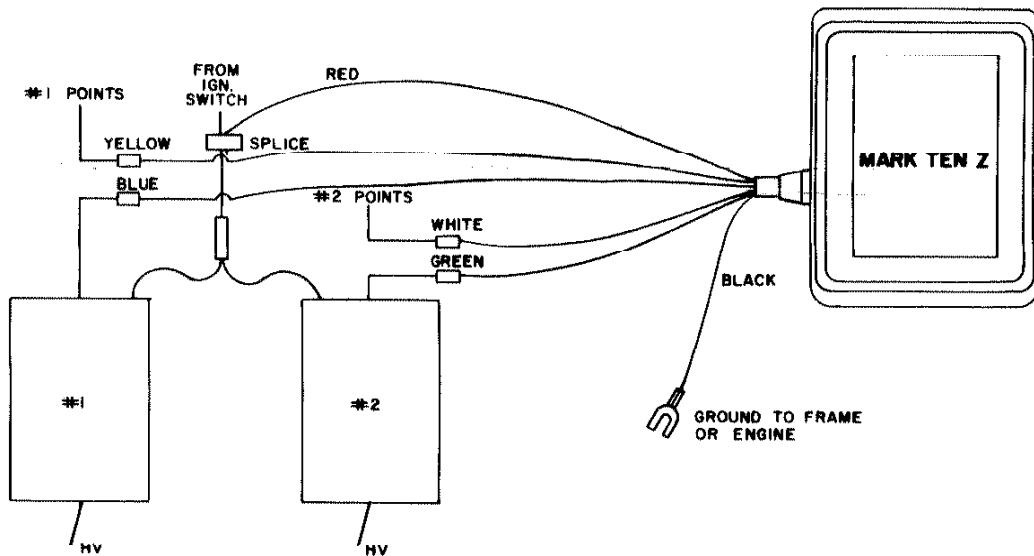
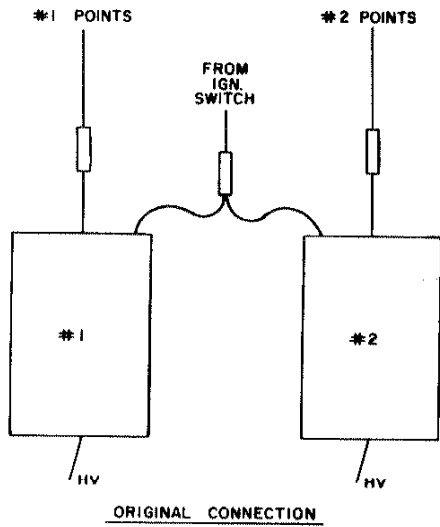
Red & Black	- Power Leads
Blue & Yellow	- First Coil Set
Green & White	- Second Coil Set

For Motorcycles using only one coil, use the Red-Black and Blue-Yellow wires and tape off the Green-White wires. Motorcycles with two coils will require all wires to be connected. NOTE: It does not matter which coil set goes to which coil.

5. Make all power connections first. (Red and Black Wires)
6. Connect the Black wire to the motorcycle frame or engine. (This connection must be free of paint and securely tightened).
7. Using the splicing connector supplied, connect the Red wire to the ignition switch lead. This lead provides 12 volts to the Mark Ten Z, and care should be exercised to insure proper connection. It is preferable to connect the splice as close to the ignition switch as possible (see figure for clarification).
8. Locate and identify the wires coming from the coils. On each coil, one wire goes to the ignition switch and one wire goes to the breaker points. Generally there will be a male/female connector within 6" of the coil on each wire. On two coil machines, the ignition wires normally come together into one common connector.
9. Select the first coil and separate the connector on the breaker points lead wire. Connect the "Z" Model Blue wire to the connection going to the coil. Connect the "Z" Model Yellow wire to the connection leading to the breaker points. (See figure and note connectors supplied will generally prevent incorrect connection).
10. Repeat Step 9 on the second coil. In this case, the "Z" Model Green wire goes to the coil connection, and the "Z" Model White wire goes to the connection leading to the breaker points.
11. Turn on the ignition switch, but do not start the engine. If proper connection has been made, you will hear a regular rhythmic ticking from the Mark Ten Z. You may have to get right next to it to hear. If no ticking is present, check the red wire connection and have someone else verify the sound.
12. Re-install gasoline tank and make all fuel line connections.

You have now completed the installation and can enjoy performance and riding pleasure heretofore unavailable.

To revert system to standard ignition, simply reverse the lead connections made in Steps 9 and 10.



NOTE: The Mark Ten Z is intended primarily for Motorcycles with four cycle (four stroke) engines. It may be adapted to a two cycle (two stroke) engine by following the general outline of instruction. The requirements for a two cycle engine are that it have a 12 volt negative ground battery and breaker point-coil ignition. These instructions will only serve as a guide for making the adaptation.

DELTA MARK TEN Z LIMITED WARRANTY

This warranty is extended to the original purchaser of the Mark Ten Z. The duration of this warranty is in two parts as follows:

- A. For a period of six (6) months from time of purchase should the Mark Ten Z fail, it will be repaired or replaced at Delta's option, without charge.
- B. For an additional period of two (2) years should the Mark Ten Z fail, Delta Products, Inc. will repair or replace the unit for a cost of \$16.00.

Delta Products, Inc. warrants that the Mark Ten Z is free from defects in material or workmanship. This warranty is void if the unit has been damaged by accident or unreasonable use, neglect, improper service or other causes not related to material or workmanship. The warranty is void if the Mark Ten Z has been altered in any way. To obtain warranty service, properly pack the Mark Ten Z and ship it prepaid to Delta Products, Inc., 630 South 7th Street, Grand Junction, Colorado 81501, Attn: Service Department. If the unit is beyond six months of age, but not over 30 months, enclose a check or money order for \$16.00. The unit will be repaired or replaced promptly and returned to the sender, postage paid. Returns must be accompanied by name and address of sender, brief description of failure, copy of purchase receipt and payment for service charges if any.

This warranty gives you specific legal rights, and you may also have other rights that vary from State to State.

This warranty is limited to the repair and/or replacement of the Mark Ten Z unit. Delta Products, Inc. shall not be liable for any consequential damages, loss of time or any other losses incurred by the purchaser in connection with the purchase, installation or use of the Mark Ten Z.

Some states do not allow the exclusion or limitation of implied warranties or consequential damages, so the above limitations or exclusions may not apply to you.

The foregoing warranty shall be the only warranty and shall be in lieu of all other warranties whether expressed or implied.

WARNING

The Mark Ten Z is designed for application only as an ignition system for Motorcycles. Any misuse of the product or usage beyond its designed application without written consent of Delta Products, Inc. will void any warranty. Delta Products, Inc. will not be responsible for any losses incurred by such misapplication.

HONDA GL-1000 GOLD WING
SUPPLEMENTAL INSTRUCTIONS

Please note there are a few differences in the instructions on the GL-1000 Honda.
READ COMPLETE MATERIAL.

Change 1 affects Item 1 of Instruction Sheet. The GL-1000 does not have a removeable gas tank. Exposure to coils is gained by lowering side panels and removing air cleaner assembly.

Change 2 affects Item 3 of Instruction Sheet. The GL-1000 connectors are just slightly smaller. The Mark Ten Z male connectors will mate to the GL-1000 female connectors okay. The GL-1000 male connectors will be loose in the Mark Ten Z female connectors, so using a pair of pliers squeeze the Mark Ten Z female connectors closed just a little before connecting.

Change 3 affects Item 7 & 8 of Instruction Sheet. The GL-1000 utilizes a ballast resistor which reduces the voltage at the coil power leads. The proper location to connect the Mark Ten Z Red Wire is to the top of the ballast resistor. This wire will provide a full 12 volt input to the Mark Ten Z. Other locations for power are suitable, but you must remember that you need a 12 volt source, switched on or off by the key, with at least a 10 amp fuse, and connection must not be made to the horn or turn buzzer circuits.

- Note 1. On the 1978 Model it is difficult to connect at the coils. A Gold Wing Installation Accessory Kit is available which sells for \$2.95. This kit is recommended on 1978 models and will ease the installation on earlier models.
- Note 2. Connection for the Green/White and Blue/Yellow wires may be made on the left side of bike behind lower side cover below seat. This connection area is the easiest point and is almost mandatory on 1978 models. There is a connection inside a boot which connects the coil lead, points lead and condenser lead. Do not break this connection. If connection in this area is desired, cut the leads going to the coil and splice in the Green/White and Blue/Yellow wires per instructions. It is imperative that the points and points condenser remain connected together. The wiring harness may be extended to reach this area. However, all necessary hardware and harness are included in the Gold Wing Accessory Kit.