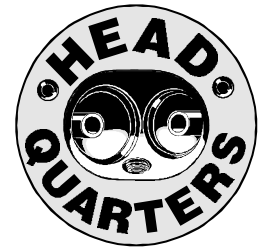


INSTALLATION INSTRUCTIONS

HEAD QUARTERS ELECTRONIC ADVANCE IGNITION MODULE KIT FOR HIGH COMPRESSION ENGINES

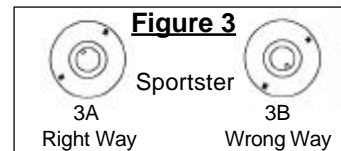
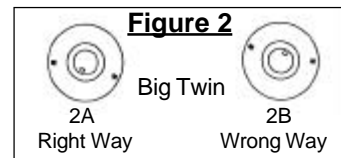
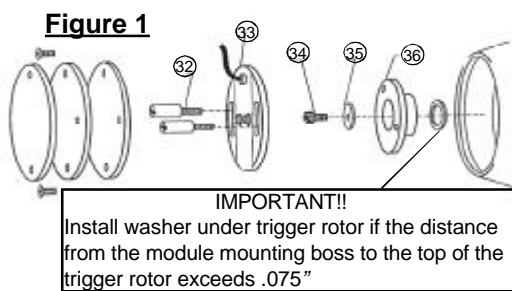


READ THROUGH THESE INSTRUCTIONS COMPLETELY BEFORE BEGINNING INSTALLATION

- STEP#1: REMOVE STOCK IGNITION COMPONENTS
STEP#2: INSTALL THE HEAD QUARTERS IGNITION COMPONENTS

NOTE: DO NOT use the washers under the standoffs.

- Clean out the ignition cavity in the cam cover. Replace oil seal if necessary.
- Refer to FIGURE 1. Secure Head Quarters Trigger Rotor (36) with the socket head screw (34) and flat washer (35) using blue Loc-Tite to prevent loosening. Align the locating pin with the notch in the cam. Torque screw to 25 inch pounds. Remove the timing plug from the observation hole. Remove the spark plugs. With the transmission in top gear, roll the bike until the front cylinder TDC timing mark is entering the rear of the hole or 5° BTDC. This will be the last mark to pass through the hole. Some TDC marks maybe a dot or a line, determine which is yours. Observe the position of the magnets and the locating pin in the Trigger Rotor. For Big Twins the locating pin will be positioned as shown in either FIGURE 2A or FIGURE 2B. 2A shows the correct position. If the locating pin is in the wrong position (2B), rotate the engine one more revolution which will bring the trigger rotor to the position shown in 2A. For Sportsters follow the same procedure using FIGURE 3A and FIGURE 3B.



DO NOT MOVE THE ENGINE POSITION UNTIL THE TIMING PROCEDURE IS COMPLETE.

- Install the Head Quarters ignition module (33) FIGURE 1 using the two standoffs (32) just tight enough so that the module can be rotated to set timing. Locate the module with the V notch in the module over the V groove area in the housing. This groove is at approximately at the 7 o'clock position on Big Twins and the 11 o'clock position on Sportsters (FIGURE 4).
- Carefully thread the cable from the Head Quarters ignition module through the hole in the housing. Leave enough cable to form a neat loop inside the housing to allow for timing adjustment.



Figure 4 - V notch in the 7 o'clock position

STEP#3: SET THE IGNITION TIMING

AT THIS POINT THE HEAD QUARTERS IGNITION MODULE STATIC TIMING IS SET USING THE ACCU-RAY FRONT CYLINDER TDC LIGHT. Read steps 5-13 completely.

- MAKE SURE the ignition switch is off. RECONNECT BATTERY GROUND CABLE.
- The RED wire from the Head Quarters module must now be temporarily connected directly to the positive (+) battery terminal. BE CAREFUL NOT TO SHORT THE BATTERY TO GROUND. Connect the red wire to the positive (+) battery terminal. DO NOT strip any of the other wires.
- Rotate the Head Quarters module counterclockwise to the full retard position. The ACCU-RAY (FIGURE 5) timing light may be on or off. Use the large disk magnet supplied in the hardware kit to turn this light on and off to get familiar with it. Place the magnet against the module in the area shown in FIGURE 6. When the side of the magnet with the orange dot facing, is facing you the light will turn off. Turning the magnet over will turn the light on. Leave the light in the off position.
- Slowly rotate the Head Quarters module clockwise until the ACCU-RAY front cylinder TDC light just turns on. Steps 7 & 8 may be repeated to insure accuracy. Tighten standoffs at this time. The gap between the top of the slot and standoff should be approximately .500" See FIGURE 7. If not, recheck that you are on the TDC mark, not the BTDC 35° mark.

Figure 5

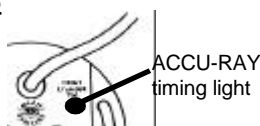


Figure 6

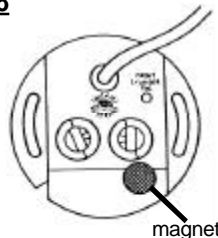
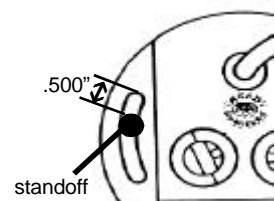


Figure 7



- The ignition system is now statically timed.
- Re-install the spark plugs.
- Disconnect the RED wire from the battery.
- Route the cable to the coil(s) making sure it does not touch hot surfaces. Cut the cable to length. Tighten the cable clamp.
- Re-install the timing plug into the observation hole.

STEP#4: CONNECT WIRES TO THE COIL(S)

CAUTION! CONNECTING THE WIRES INCORRECTLY CAN DAMAGE THE ELECTRONIC MODULE.

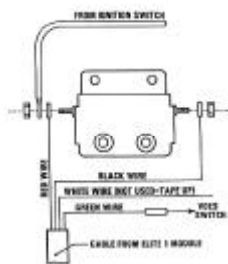
Head Quarters Ignition Systems may be used with any high quality coil with 2 or 3 ohms of primary resistance. Coils with higher resistance may be used, but the ignition energy will be drastically reduced.

The Coil Hook-up is shown in the following figures.

HEAD QUARTERS MODEL	SINGLE FIRE	DUAL PLUG
DUAL FIRE	FIGURE 8	FIGURE 9
SINGLE FIRE	FIGURE 10	FIGURE 11

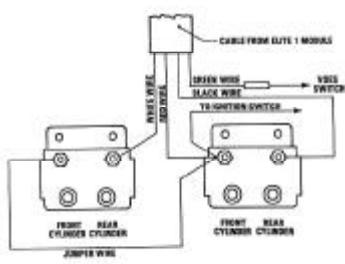
NOTE: For tach operation in Single Fire - use our tach adapter, HQ-51105. Other manufacturers tach adapters are not compatible with Head Quarters Module and must be removed.

Figure 8



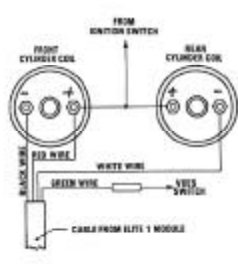
Dual Fire
Single Plug

Figure 9



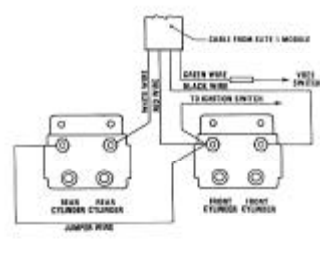
Dual Fire
Dual Plug

Figure 10



Single Fire
Single Plug

Figure 11



Single Fire
Dual Plug

STEP#5: SELECTING THE ADVANCE CURVE AND SETTING THE RPM LIMITER.

INITIAL SWITCH SETTINGS

Set the advance curve switch to position 3 for the correct coil set up. ie: single fire or dual fire. Set RPM limiter to position 4 in 50% VOES mode.

SWITCH POSITION		MAX ADVANCE @ RPM
1	MOST AGGRESSIVE	1500
2		2000
3		2250
4		2500
5		2750
6		3000
7		3250
8	LEAST AGGRESSIVE	3500

EXTREMELY IMPORTANT!

When choosing an advance curve, pick one that will have all the timing in by the time the motorcycle hits cruising RPM in 5th gear. Example; curve 5 will take last advance step at 2750 RPM. If the motorcycle will be cruising at 2700 RPM, then curve 4 would be the better choice, as its last step comes in at 2500 RPM. Failure to select the improper curve can result in overheating and severe engine damage.

Test ride the bike and note engine operation.

NOTE: WHEN CHANGING SWITCH SETTINGS, THE IGNITION SWITCH MUST BE TURNED OFF.

Select the next most aggressive curve (switch position 2). Test ride the bike again and note engine operation. If engine knock occurs go back to the previous setting. If engine does not knock, increase MAXIMUM ADVANCE (see chart) again until pinging occurs. When pinging occurs, switch back to the previous switch setting.

This is the IDEAL IGNITION ADVANCE curve for your bike. **We recommend only using advance curve 2 or 3.**

Set the RPM limiter to an appropriate setting for your engine. **NOTE: ONLY MODIFIED ENGINES WITH IMPROVED VALVE TRAIN SHOULD BE OPERATED PAST 6500 RPM.**

VOES MODE - We do not recommend using VOES.

NOTE: If VOES switch is not used, RPM limiter will still function. The green wire must be taped off so it does not touch ground.

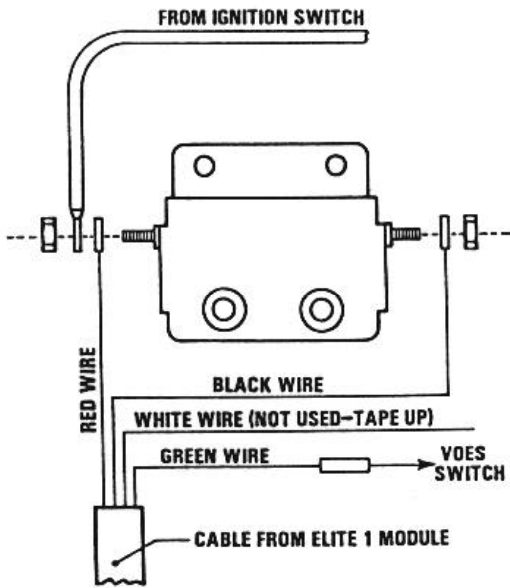
Re-install the ignition side cover(s). The installation is now complete.

WARRANTY

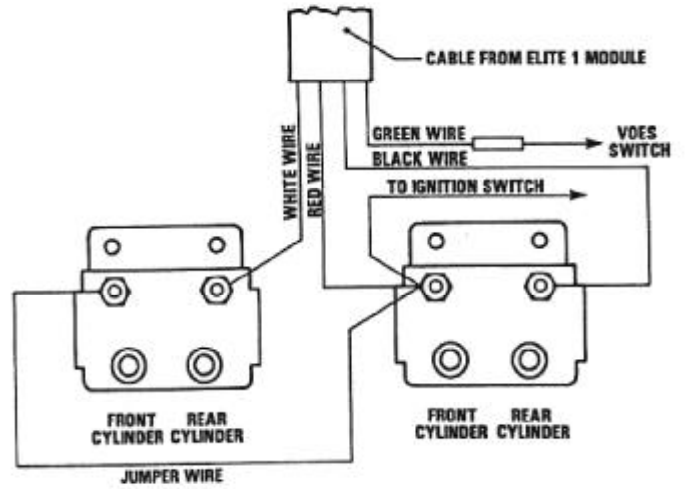
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- 2.Delivers the defective product or component to Engine Electronics, Inc. with proof of purchase date: and
- 3.Has installed and used the product in a normal manner consistent with Engine Electronics, Inc.'s printed instructions.

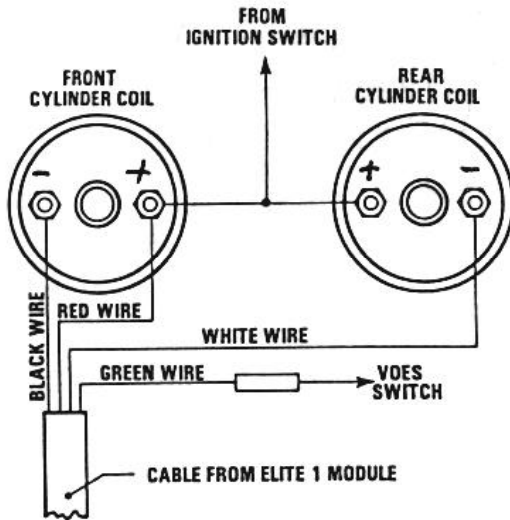
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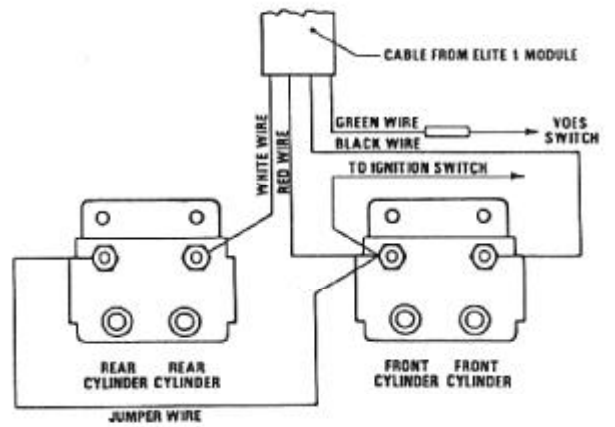
Dual Fire
Single Plug



Dual Fire
Dual Plug



Single Fire
Single Plug



Single Fire
Dual Plug