

SINGLE STAGE HIGH SPEED RETARD

(ADJUSTABLE IGNITION TIMING CONTROL)

Part No. 618-1

INSTALLATION INSTRUCTIONS

The Single Stage High Speed Retard must be used with a Mallory HYFIRE® Series of Electronic Ignition Controls or similar inductive storage or capacitive discharge ignition control.

The Single Stage High Speed Retard may be triggered by any Mallory Electronic Ignition Distributor (all models), original equipment or aftermarket electronic ignition amplifiers, magnetic trigger pulses (magnetic pickup distributor or crank trigger ignition) or another ignition timing accessory. Adapters are available separately for easy connection to 1974-89 Delco/GM HEI Systems, 1985-95 Delco/GM HEI/EST Systems and 1985-95 Ford TFI Systems. Also, adapters are available separately for easy connection to OEM magnetic pickup (non-computer; Motorcraft/Ford DuraSpark, Delco/GM HEI and Mopar/Chrysler Electronic Systems).

Notice: This product is legal to sell, distribute or install on vehicles in California under Executive Order D-70-30.

NOTE: The Single Stage High Speed Retard cannot be used with the Mallory HYFIRE™ Electronic Ignition Control Part No. 29037, point trigger distributors, odd-fire engines, direct or distributorless ignition systems, or positive ground applications. The Single Stage High Speed Retard is not for marine use.

PARTS LIST:

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| 1 Single Stage High Speed Retard | 1 Male (heat shrink) insulated disconnect terminal |
| 1 Velcro ^a hook and loop | 1 Female (heat shrink) insulated disconnect terminal |
| 1 Terminal, insulated open | 2 Screws, #8 |
| 1 Terminal, ring insulated | 1 Splice, butt crimp |
| 1 Terminal, spade | 1 Magnetic pickup harness (Part No. 29787) |

GENERAL INFORMATION

The Single Stage High Speed Retard is an adjustable timing retard control. The control knob provides the full adjustment range from zero to 15°.

The first way this unit can be used is as a conventional high speed retard that will retard the ignition timing when a switch is switched ON, and is only used for a short period of time. This is typically used in drag racing, and is recommended for nitrous oxide applications.

The second way is as a ping control. When used this way, the activation line is permanently connected to a 12 volt source. The control knob is set to 0°. If driving conditions or poor fuel quality result in engine knock or pinging, the control knob is used to retard the timing until the knock is suppressed.

The third way advances and retards ignition timing. Set the control knob at 4°. The engine is started and the distributor is reset so that the ignition timing at idle reads normally. Now the timing can be controlled from 4° advanced (when the control knob is set at 0°) to 11° retarded (when the control knob is set at 15°). This allows you to run the maximum timing you need for performance, but also compensate for altitude and fuel variations.

Spark Plug Wires

YOU MUST USE suppression type (carbon core; spiral core; suppression core) spark plug wire. We recommend spiral core ignition wire, such as Mallory PRO SIDEWINDER® Ignition Wire. Suppression type spark plug wires prevent false triggering and the possibility of premature ignition or accessory failures.

DO NOT USE solid core (copper core; stainless steel core) spark plug wire with any electronic ignition system or accessory. Solid core spark plug wire causes Electro Magnetic Interference (EMI; Radio Frequency Interference - RFI; ignition noise; static). EMI causes false triggering (preignition; spark scatter) and premature ignition or accessory failures. Prevent false triggering and the possibility of premature ignition or accessory failures, use suppression type spark plug wire (carbon core; spiral core; suppression core). We recommend spiral core ignition wire, such as Mallory PRO SIDEWINDER® Ignition Wire.

Electric Welding

Unplug all wires on the unit, and unplug the distributor harness before any welding is done on the vehicle.

8, 6 AND 4 CYLINDER ENGINES

There is one WHITE wire and one WHITE w/BLACK STRIPE wire that loop coming from the unit where other wires exit.

6-Cylinder Operation

Cut one of these wires - it does not matter which one is cut. Insulate the ends of the cut wire with tape or RTV silicone.

4-Cylinder Operation

Cut both wires. Insulate the ends of the cut wires with tape or RTV silicone.

8-Cylinder Operation

The wires are not cut. If wires are cut, solder and insulate the matching cut wires together.

MOUNTING PROCEDURE

Find a location to mount the unit. The unit must be mounted away from high heat producing parts such as headers or coolant lines. The unit should be mounted where the control knob can be adjusted. Use screws or Velcro^a fastening tape for attaching the unit to the dash or flat mounting surface.

WIRING PROCEDURE

Black Wire

Connect the BLACK wire to chassis/frame ground. DO NOT connect this wire to the engine block.

Red Wire

Connect the RED wire to 12 volts from ignition switch.

Trigger Input

Magnetic Pickup Connector—small PURPLE (MAG+) and small GREEN (MAG-) wires:

If you are using a magnetic pickup and the magnetic pickup wires are connected to the ignition control, transfer the magnetic pickup wires to the magnetic pickup connector on the unit.

If you are using a magnetic pickup and the magnetic pickup wires are connected to another timing accessory and this unit is connected between it and the ignition control, the magnetic pickup wires shall remain connected to that timing accessory. The magnetic pickup connector on the unit will not be used. Install the female (heat shrink) insulated disconnect terminal on the trigger output wire from the timing accessory and connect it to the GREEN wire with the male insulated disconnect terminal.

If you are using an electronic ignition distributor, install the female (heat shrink) insulated disconnect terminal on the trigger output wire from the ignition module and connect it to the GREEN wire with the male receptacle terminal.

Trigger Output

Connect the WHITE wire with the female insulated disconnect terminal to the point or electronic ignition amplifier trigger input terminal or wire on the inductive storage or capacitive discharge ignition control.

Orange Wire

Connect the ORANGE wire to a 12 volt source. The retard circuit starts when the 12 volt source is switched ON. Many types of switches can be used such as a dash mounted toggle switch, a push button switch on the steering wheel (such as a nitrous system switch), a switch on the transmission shifter or an RPM activated switch. When the 12-volt source for the retard circuit is switched OFF, the retard circuit reverts to normal ignition timing.

Bypass Feature

If you are using an electronic ignition distributor with a trigger output whereby using the (trigger input) GREEN wire, you can bypass the unit by disconnecting those wires connected to the GREEN wire and WHITE wire and connect those wires together. The male and female receptacle terminals make it easy for connects. This procedure must be followed if you are bypassing the inductive storage or capacitive discharge ignition control.

