

AMERICA'S IGNITION SPECIALISTS

Mallory

IGNITION

FOR OVER SIXTY YEARS

SINGLE STAGE HIGH SPEED RETARD ADJUSTABLE IGNITION TIMING CONTROL

Part No. 618-1

INSTALLATION INSTRUCTIONS

The Single Stage High Speed Retard Part No. 618-1 is legal to sell, distribute or install on vehicles in California under Executive Order D-70-30.

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 early model Delco/GM HEI Systems, late model GM HEI/EST Systems and Ford TFI Systems. Also, Adapters and Harnesses are available separately for easy connection to OEM magnetic pickup (non-computer; Ford DuraSpark, GM HEI and Mopar/Chrysler Electronic Systems).

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, distributorless ignition systems or positive ground applications. The Single Stage High Speed Retard is not for marine use.

The Single Stage High Speed Retard must be used with one of the Mallory HYFIRE® Series of Electronic Ignition Controls or any comparable inductive storage or capacitive discharge ignition control. Any application other than a Mallory HYFIRE® Ignition System Part No. 29026A, 629, 630, 692, 693, or 697 requires the Mallory Ignition Control Harness Part No. 633 or 29348 for proper connections.

PARTS LIST:

1 - Single Stage High Speed Retard (control unit)	2 - Terminal, Receptacle 1/4"
1 - Terminal, Insulated Open	2 - Screw, #8
1 - Terminal, Ring Insulated	1 - Screw, #6 x 1/4"

GENERAL INFORMATION

The Single Stage High Speed Retard is a finger tip adjustable ignition timing retard control. The finger tip adjustment knob provides the full adjustment range of zero to 15°.

The first way the Single Stage High Speed Retard can be used is as a conventional high speed retard that will retard the ignition timing when a switch is moved ON, and is only used for a short period of time. This is typically used in drag racing, and is especially recommended for nitrous oxide applications.

The second way the Single Stage High Speed Retard can be used 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 disappears.

The third way the Single Stage High Speed Retard control knob is set at 4°. The engine is started and the

distributor is reset so that the idle timing 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.

The Single Stage High Speed Retard may be used with any electronic ignition using one of the Mallory HYFIRE® Electronic Ignition Controls or any comparable types of high inductive storage or capacitive discharge ignition control with a point or electronic ignition amplifier trigger. Any application other than a Mallory HYFIRE® Part No. 29026A, 629, 630, 692, 693, and 697 requires the Mallory Ignition Control Harness Part No. 633 or 29348 for proper connections.

The control unit can be plugged into to virtually anything. It can be plugged into one of the existing Mallory HYFIRE® Electronic Ignition Control Part Nos. 29026A, 629, 630, 692, 693 or 697, or Mallory HYFIRE® IV RPM Limiting Adapter Part No. 619L.

Mallory Ignition Control Harness Part No. 633 or 29348:

The control unit can be plugged into virtually any aftermarket ignition control including the Mallory HYFIRE® Electronic Ignition Control Part Nos. 29026, 29028, 29029, 667, 690, and 695, MSD™ 6 and 7 Ignition Controls, or Crane HI-6 and HI-7 Ignition Controls once the Mallory Ignition Control Harness Part No. 633 or 29348 has been added to that ignition control.

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 radio frequency interference (ignition noise; static). Radio frequency interference 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 the control unit four wire harnesses, and unplug the distributor harness before any welding is done on the vehicle.

MOUNTING PROCEDURE

Using the mounting holes on the control unit as a template, mark and drill two 1/8" holes for the mounting screws. The control unit must be mounted where the control can be adjusted, and away from high heat producing parts such as headers or coolant lines.

WIRING PROCEDURE

8-Cylinder, 6-Cylinder or 4-Cylinder Engine Operation: There is one WHITE wire and one WHITE w/BLACK STRIPE wire that loop coming from the Remote Timing Control's electronic module where the harness exits.

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.

- **GROUND:** Connect the BLACK (18AWG) wire coming from the control unit to the engine or chassis ground. Use the supplied crimp terminals and sheet metal screw for this if necessary.
- **IGNITION TIMING RETARD CIRCUIT:** Connect the ORANGE wire to 12-volts/ON/OFF. The retard circuit starts when the ORANGE wire receives 12-volts. When the 12-volts is shut-OFF from the ORANGE wire, the retard circuit reverts to normal ignition timing.

The ORANGE wire activates the retard circuit when it is connected to a 12-volt source and switched ON. When the 12-volt source is switched OFF, the retard circuit reverts to normal ignition timing. Many types of switches can be used such as a button, micro or toggle switch, a nitrous system switch, a switch on the transmission shifter, or an RPM activated switch.

For the retard circuit to operate continuously, connect the ORANGE wire to the 12-volt wire coming from the ignition switch.

FOUR WIRE MATING PLUGS:

The connectors coming from the control unit are designed to plug directly into an existing Mallory HYFIRE® Electronic Ignition Control Part Nos. 29026A, 629, 630, 692, 693 or 697, or Mallory HYFIRE® IV RPM Limiting Adapter Part No. 619L and will only fit one way. Or, the connectors coming from the control unit are designed to plug directly into virtually any aftermarket ignition control including the Mallory HYFIRE® Electronic Ignition Control Part Nos. 29026, 29028, 29029, 667, 690, and 695, MSD™ 6 and 7 Ignition Controls, or Crane HI-6 and HI-7 Ignition Controls once the Mallory Ignition Control Harness Part No. 633 or 29348 has been added to that ignition control.

An additional Mallory Ignition Control Harness Part No. 29348 when used as a 4 foot extension will help to plug between the ignition control and the control unit.

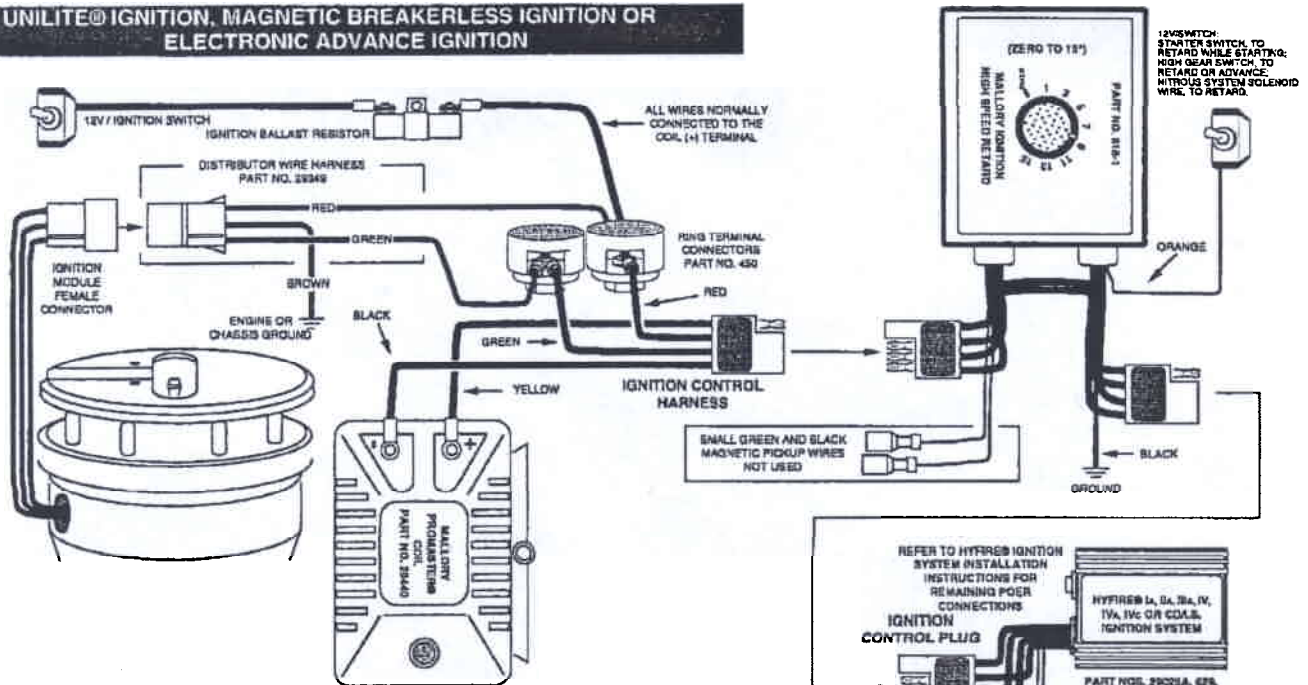
MAGNETIC INPUT TERMINALS:

Small GREEN (MAG +) and small BLACK (MAG -) wires; If you are using a magnetic pickup, such as a crank trigger, and the magnetic pickup wires are connected to the ignition control or Mallory HYFIRE® IV RPM Limiting Adapter Part No. 619L, transfer the magnetic pickup wires to the magnetic input terminals on the control unit.

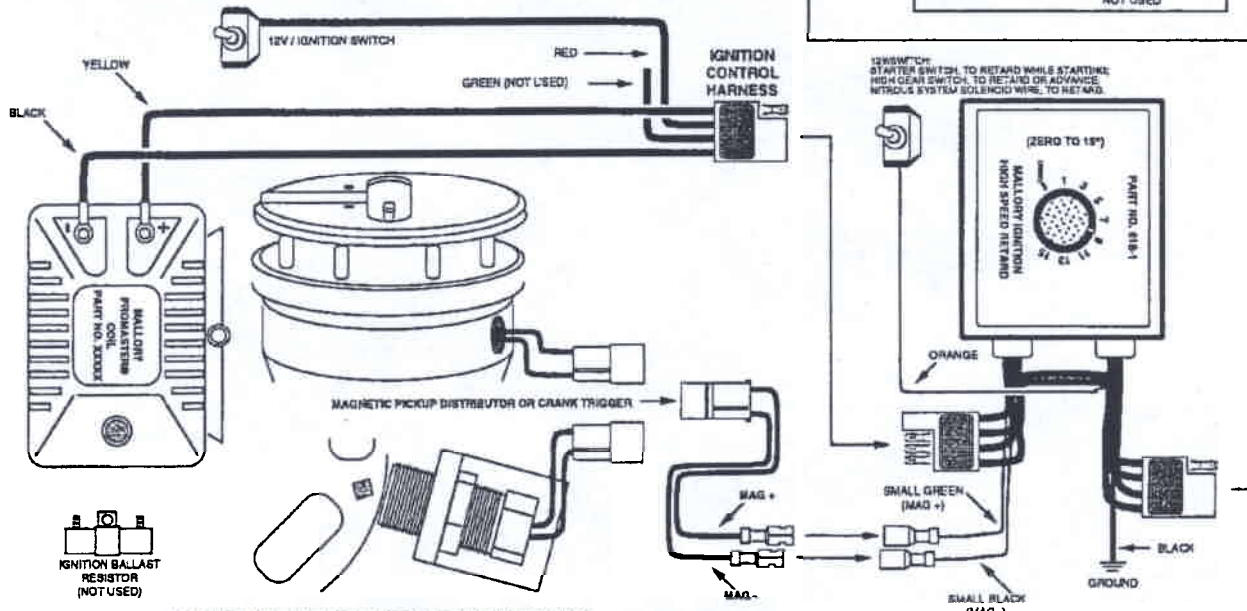
If you are using a magnetic pickup, such as a crank trigger, and the magnetic pickup wires are connected to another timing accessory, the magnetic pickup wires shall remain connected to that timing accessory. The magnetic input terminal on the control unit will not be used. The connectors (four wire mating plugs) on the control unit will connect between the timing accessory and the ignition control or Mallory HYFIRE® IV RPM Limiting Adapter Part No. 619L.

ADDENDUM: HYFIRE® IA, IIA, IIIA, IV, IVA, IVC AND C.D./I.S.

UNILITE® IGNITION, MAGNETIC BREAKERLESS IGNITION OR ELECTRONIC ADVANCE IGNITION



MAGNETIC PICKUP DISTRIBUTOR OR CRANK TRIGGER



MAGNETIC PICKUP/CRANK TRIGGER COLOUR CODES

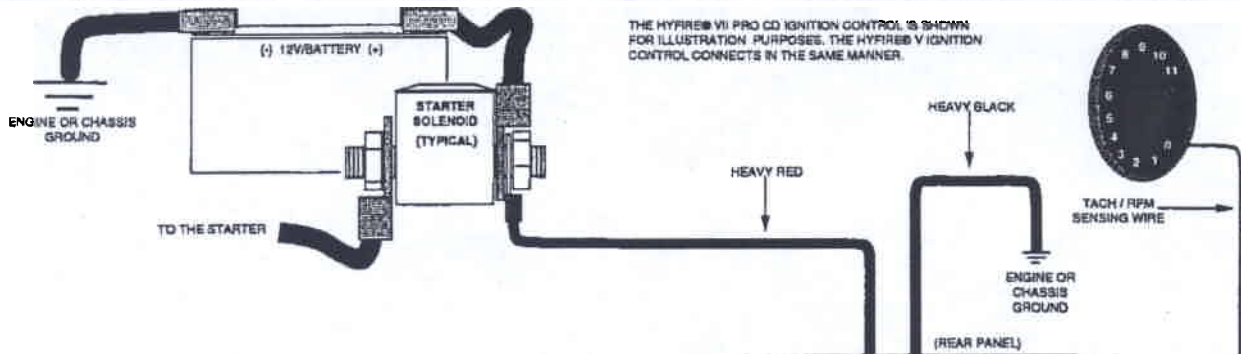
MAGNETIC PICKUP DISTRIBUTOR OR CRANK TRIGGER		PICKUP MAG +	PICKUP MAG -
MALLORY BILLET COMPETITION DISTRIBUTOR SERIES NOS. 81 AND 84		ORANGE	PURPLE
MALLORY COMP 9000 SERIES NOS. 90-99		ORANGE	PURPLE
MALLORY CRANK TRIGGER OR WIRE HARNESS PART NO. 28378		PURPLE	GREEN
MALLORY DISTRIBUTOR WIRE HARNESS PART NO. 28378		ORANGE	PURPLE
MALLORY HARNESS PART NO. 28040		RED	BLACK
M80™ CRANK TRIGGER OR WIRE HARNESS PART NOS. 8852 OR 8850		PURPLE	GREEN
M80™ CRANK TRIGGER (OLD STYLE)		ORANGE	BLACK
M80™ DISTRIBUTOR		ORANGE	PURPLE
MOROS™ CRANK TRIGGER		BLACK	WHITE
MOROS™ DISTRIBUTOR		ORANGE	PURPLE
ACCEL® CRANK TRIGGER		BLACK	WHITE
CHRYSLER ELECTRONIC DISTRIBUTOR (NON-COMPUTER)		ORANGE	BLACK
FORD DURASPARK DISTRIBUTOR (NON-COMPUTER)		ORANGE	PURPLE
GM DELCO HEI DISTRIBUTOR (NON-COMPUTER)		WHITE	GREEN

NOTE:

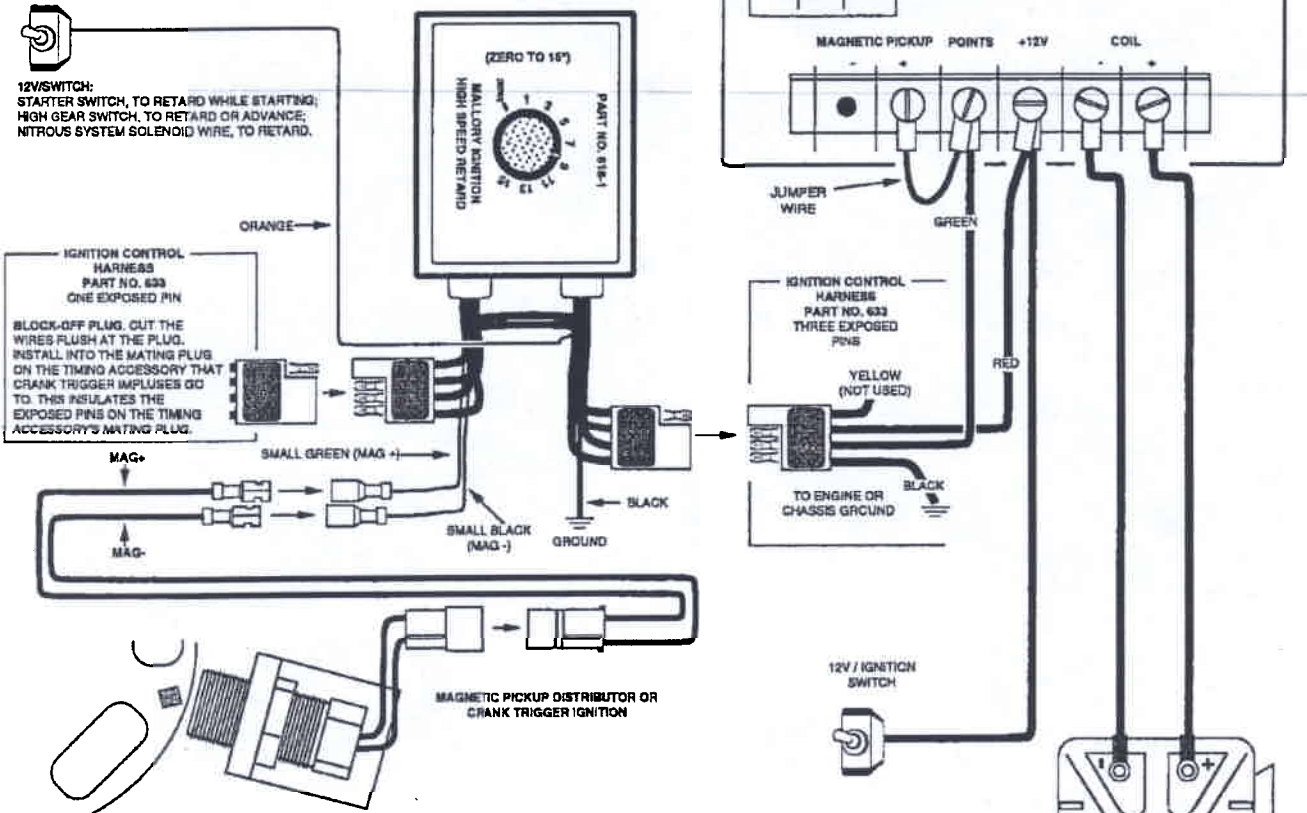
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ADDENDUM: HYFIRE® VII PRO CD IGNITION SYSTEM

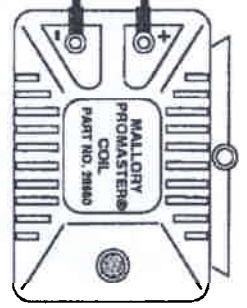


MAGNETIC PICKUP DISTRIBUTOR OR CRANK TRIGGER

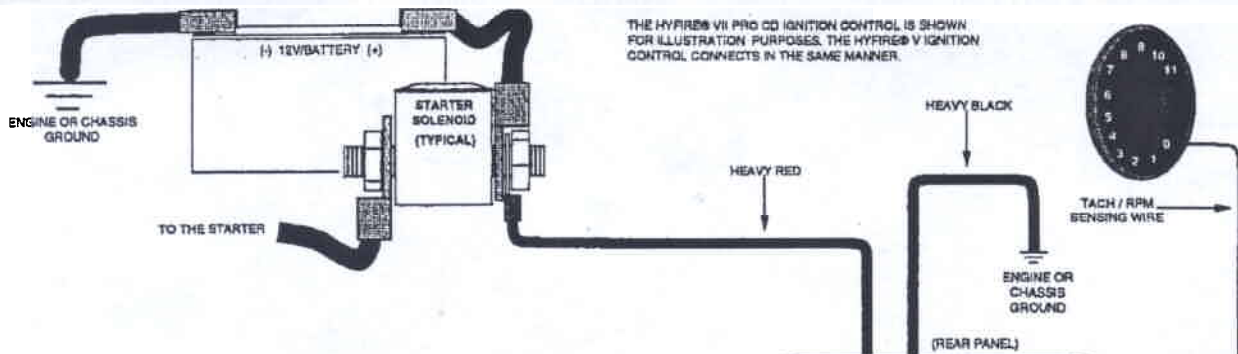


MAGNETIC PICKUP/CRANK TRIGGER COLOUR CODES

MAGNETIC PICKUP DISTRIBUTOR OR CRANK TRIGGER	PICKUP MAG+	PICKUP MAG-
MALLORY BULLET COMPETITION DISTRIBUTOR SERIES NOS. 81 AND 84	ORANGE	PURPLE
MALLORY COMP-9000B SERIES NOS. 95-99	ORANGE	PURPLE
MALLORY CRANK TRIGGER	PURPLE	GREEN
MALLORY DISTRIBUTOR WIRE HARNESS PART NO. 287M	ORANGE	PURPLE
MALLORY HARNESS PART NO. 2804D	RED	BLACK
MCD™ CRANK TRIGGER OR WIRE HARNESS PART NOS. 885E OR 886D	PURPLE	GREEN
MCD™ CRANK TRIGGER (OLD STYLE)	ORANGE	BLACK
MCD™ DISTRIBUTOR	ORANGE	PURPLE
MCD™ CRANK TRIGGER	BLACK	WHITE
ACCEL CRANK TRIGGER	BLACK	WHITE



HYFIRE® VII PRO CD IGNITION SYSTEM



UNILITE® IGNITION, MAGNETIC BREAKERLESS IGNITION OR ELECTRONIC ADVANCE IGNITION

