AMERICA'S IGNITION SPECIALISTS

Mallory IGNITION

FOR OVER SEVENTY YEARS

HYFIRE® VII PRO CD IGNITION CONTROLS

INSTALLATION INSTRUCTIONS

Part No. 667, Universal 8-Cylinder
Part No. 667-6, Universal 6-Cylinder

Notice: This product is legal to sell, distribute or install on vehicles in California. Executive Order D-70-6.

NOTE: The HYFIRE® VII Pro CD Ignition Controls are not compatible with distributorless systems or positive ground applications. The RPM Limiter in the HYFIRE® VII Pro CD Ignition Controls will not work properly with odd-fire or semi-even fire V6 applications.

GENERAL INFORMATION

The HYFIRE® VII Ignition System is not for marine use.

The RPM limiter in the HYFIRE® VII Ignition System is not recommended as an engine speed governor. The use of the RPM limiters is not recommended for applications equipped with a catalytic converter. Similarly, forcing engine RPM past the RPM limiter continuously for long sustained intervals can cause problems resulting from fuel build up in the exhaust system that may adversely affect the application. The RPM limiting systems will not work properly with odd-fire V6 applications.

Ignition Ballast Resistor / Loom Resistance Wire:
The HYFIRE® VII Ignition Ignition's performance is not affected by the presence of the factory ignition resistors or ignition ballast resistors in the wire from the ignition switch. It is not necessary to install ignition ballast resistors as specified by the instructions for the particular distributor.

Ignition Coils:
The HYFIRE® VII Ignition Systems is designed to work with Mallory PROMASTER® Coil Part No. 28880. Avoid using any other type of ignition coil.

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 is one cause of electro-magnetic interference (EMI; ignition noise). EMI is one cause of false triggering (preignition; spark scatter) and premature ignition or accessory failures.

Spark Plug Gaps:
For street applications, use your engine manufacturer's specifications. For racing applications, start with your engine manufacturer's specifications, then experiment with and closely monitor various gaps to achieve maximum performance.

Electric Welding:
Disconnect the HYFIRE® VII Ignition System and unplug any distributor harnesses (if possible) before any welding is done on the vehicle.

External RPM Limiters:
- Mallory RPM Limiter Part Nos. 641-4, 641-6, 641-8, 642, 643 and 644 *WILL NOT* function with the HYFIRE® VII Ignition Systems.
- Mallory PRO TACH® Tachometer Part Nos. 657, 662 and 681 proportional controller that limit RPM *WILL NOT* function with the HYFIRE® VII Ignition Systems. Turn the LIMIT RPM knob slightly past 11,000 to prevent the RPM limiter from interfering with the tachometer's other functions.
- The Mallory HYFIRE® IV RPM Limiting Adapter Part No. 619L *WILL NOT* function with the HYFIRE® VII Ignition Systems.
- The Mallory HYFIRE® Staging Control Part Nos. 638, 638SP, 639 and 639SP are RPM limiters that function with the HYFIRE® VII Ignition Systems. These are RPM limiters for burnout, staging and starting line purposes while waiting for the green light.

Mallory PRO TACH® I, IV and IV:
The tachometer RPM tracking needle and shift light will work with the HYFIRE® VII Ignition Systems. However, the tachometer's proportional controller that limits RPM *WILL NOT* function with the HYFIRE® VII Ignition Systems. Turn the LIMIT RPM knob slightly past 11,000 to prevent the RPM limiter from interfering with the tachometer's other functions.

MOUNTING PROCEDURE

Step 1

Disconnect the battery (-) cable to cut power to the system.

Step 2

Select a convenient location to mount the HYFIRE® VII Ignition System. Keep the unit away from hot engine components or extreme heat such as the exhaust system and manifolds. Keep the unit away from moving devices, such as fans, belts and linkages. The location must be dry. Moisture will damage components inside the unit.

Step 3. Mounting to a flat surface with shock mounts

- Hold the unit in its mounting position and center punch the mounting pattern on the mounting surface for drilling mounting holes. Drill mounting holes using a 9/32" drill bit.
- Install the shock mounts into the bottom plate of the unit. Hold the unit in position where it will be mounted.
- From the backside of the mounting surface, insert the washers and the 1/4-20 nylock nuts onto the shock mount studs. Tighten each nut until snug.

WIRING PROCEDURE

Step 1

Ensure that your vehicle is equipped with a ground cable between the engine block and firewall (10 gauge or larger is required). *Refer to Figure 1 while performing the following steps.*

- Connect the HEAVY RED wire to the 12-volt battery (+) post or battery (+) terminal on the starter solenoid.
- Connect the HEAVY BLACK wire to chassis/frame ground.
- Connect wires between the COIL (+) and (-) terminals.
- Connect 12-volts from ignition switch to the +12V terminal.
- Connect the tach/RPM sensing wire and optional external RPM control to sockets.

Step 2

Choose one method listed below for wiring the unit. Follow steps outlined in the corresponding sections.

a) Wiring to an electronic ignition or magnetic pickup. *Refer to Figures 2 and 3, and trace wires for hookup.*

b) Wiring to other timing accessories. *Refer to Figures 4, 5, 6 and 7, and trace wires for hookup.*

Figure 1

RPM LIMITER

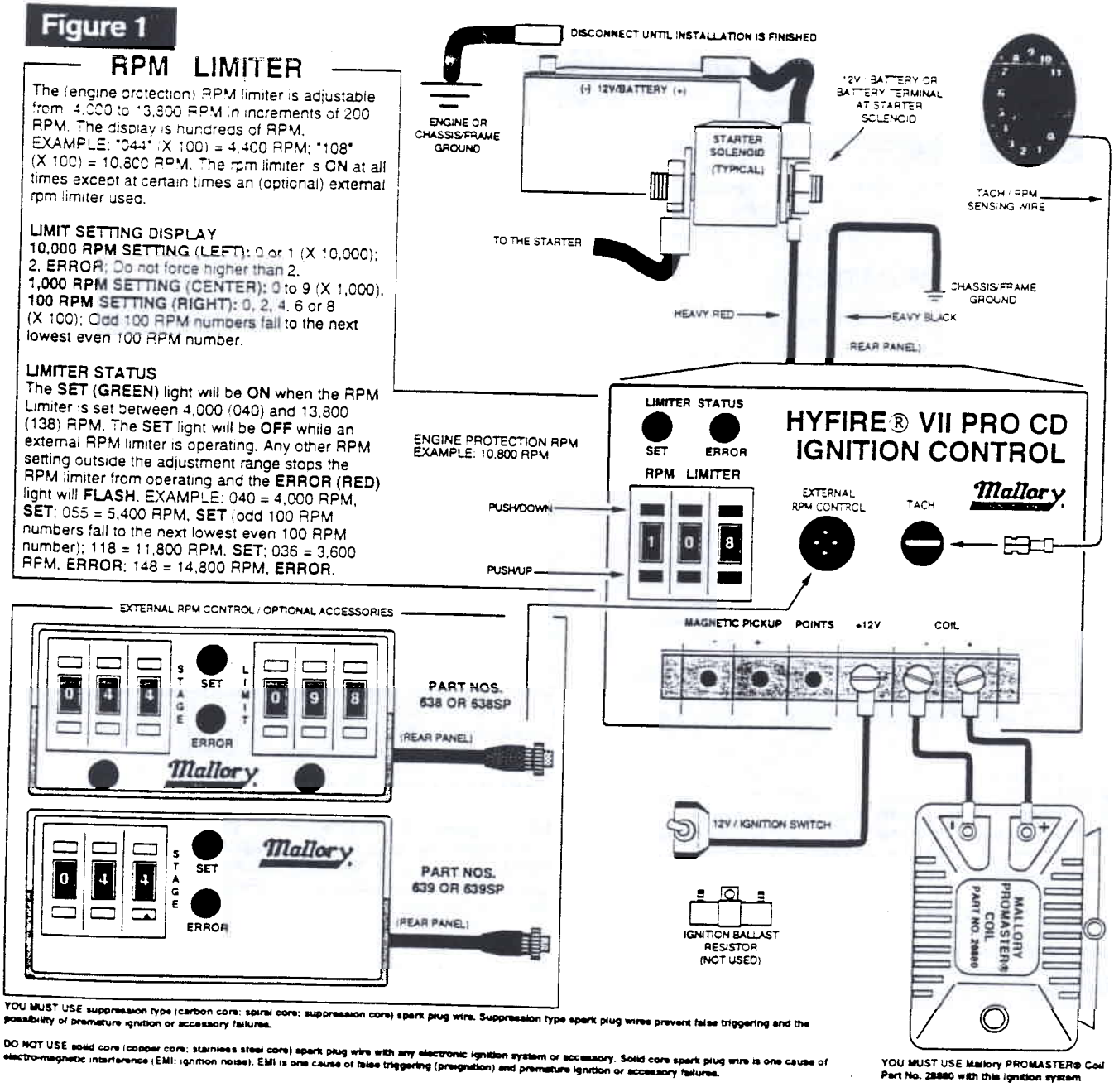
The (engine protection) RPM limiter is adjustable from 4,000 to 13,800 RPM in increments of 200 RPM. The display is hundreds of RPM. EXAMPLE: "044" (X 100) = 4,400 RPM; "108" (X 100) = 10,800 RPM. The rpm limiter is **ON** at all times except at certain times an (optional) external rpm limiter used.

LIMIT SETTING DISPLAY

10,000 RPM SETTING (LEFT): 0 or 1 (X 10,000); 2, **ERROR**; Do not force higher than 2.
1,000 RPM SETTING (CENTER): 0 to 9 (X 1,000).
100 RPM SETTING (RIGHT): 0, 2, 4, 6 or 8 (X 100); Odd 100 RPM numbers fall to the next lowest even 100 RPM number.

LIMITER STATUS

The **SET (GREEN)** light will be **ON** when the RPM Limiter is set between 4,000 (040) and 13,800 (138) RPM. The **SET** light will be **OFF** while an external RPM limiter is operating. Any other RPM setting outside the adjustment range stops the RPM limiter from operating and the **ERROR (RED)** light will **FLASH**. EXAMPLE: 040 = 4,000 RPM, **SET**; 055 = 5,400 RPM, **SET** (odd 100 RPM numbers fall to the next lowest even 100 RPM number); 118 = 11,800 RPM, **SET**; 036 = 3,600 RPM, **ERROR**; 148 = 14,800 RPM, **ERROR**.



YOU MUST USE suppression type (carbon core; spiral core; suppression core) spark plug 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 is one cause of electro-magnetic interference (EMI; ignition noise). EMI is one cause of false triggering (preignition) and premature ignition or accessory failures.

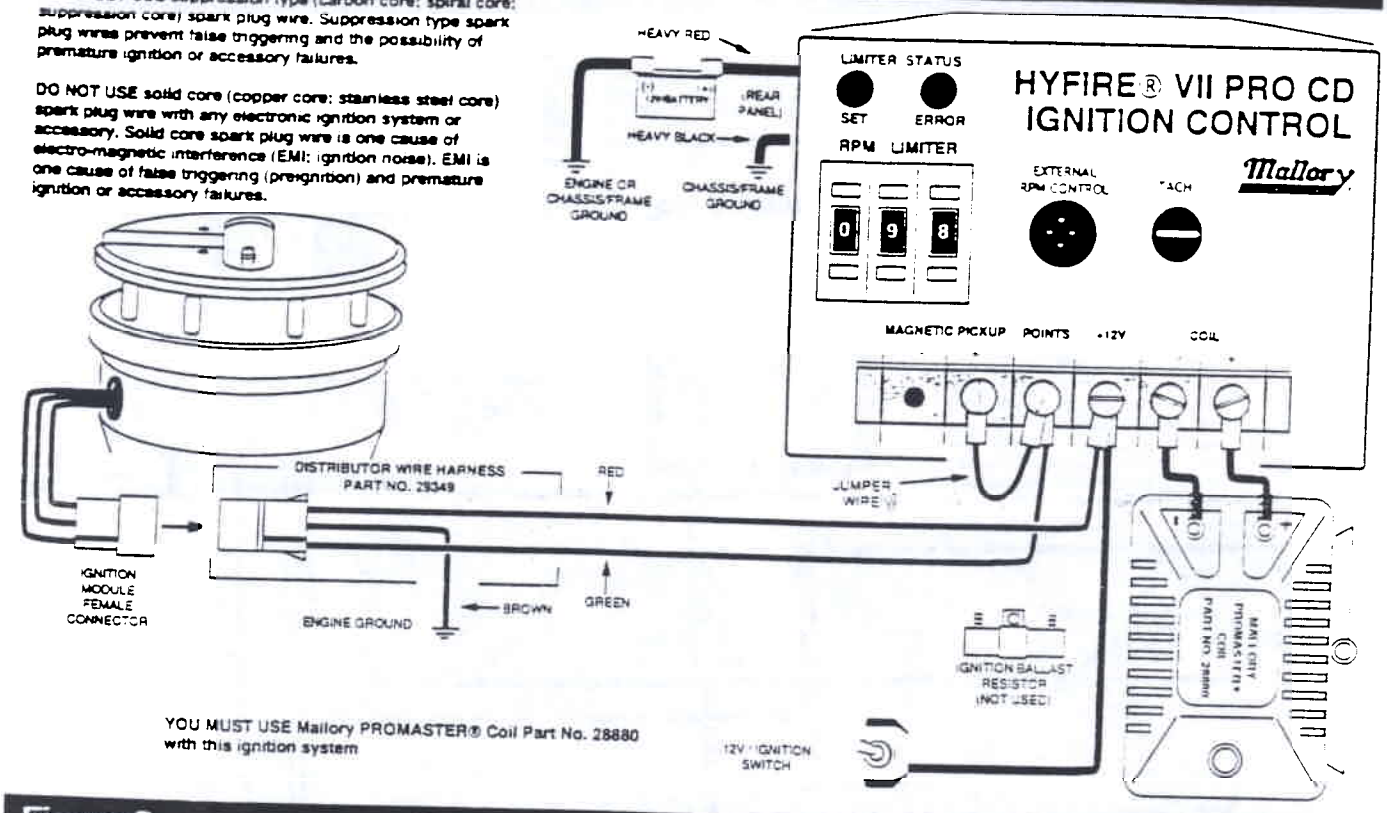
YOU MUST USE Mallory PROMASTER® Coil Part No. 28880 with this ignition system

Figure 2

HOOKUP TO A MALLORY UNILITE IGNITION, MAGNETIC BREAKERLESS IGNITION OR ELECTRONIC ADVANCE IGNITION (THREE WIRE: RED, BROWN, GREEN)

YOU MUST USE suppression type (carbon core; spiral core; suppression core) spark plug wire. Suppression type spark plug wires prevent false triggering and the possibility of premature ignition or accessory failures.

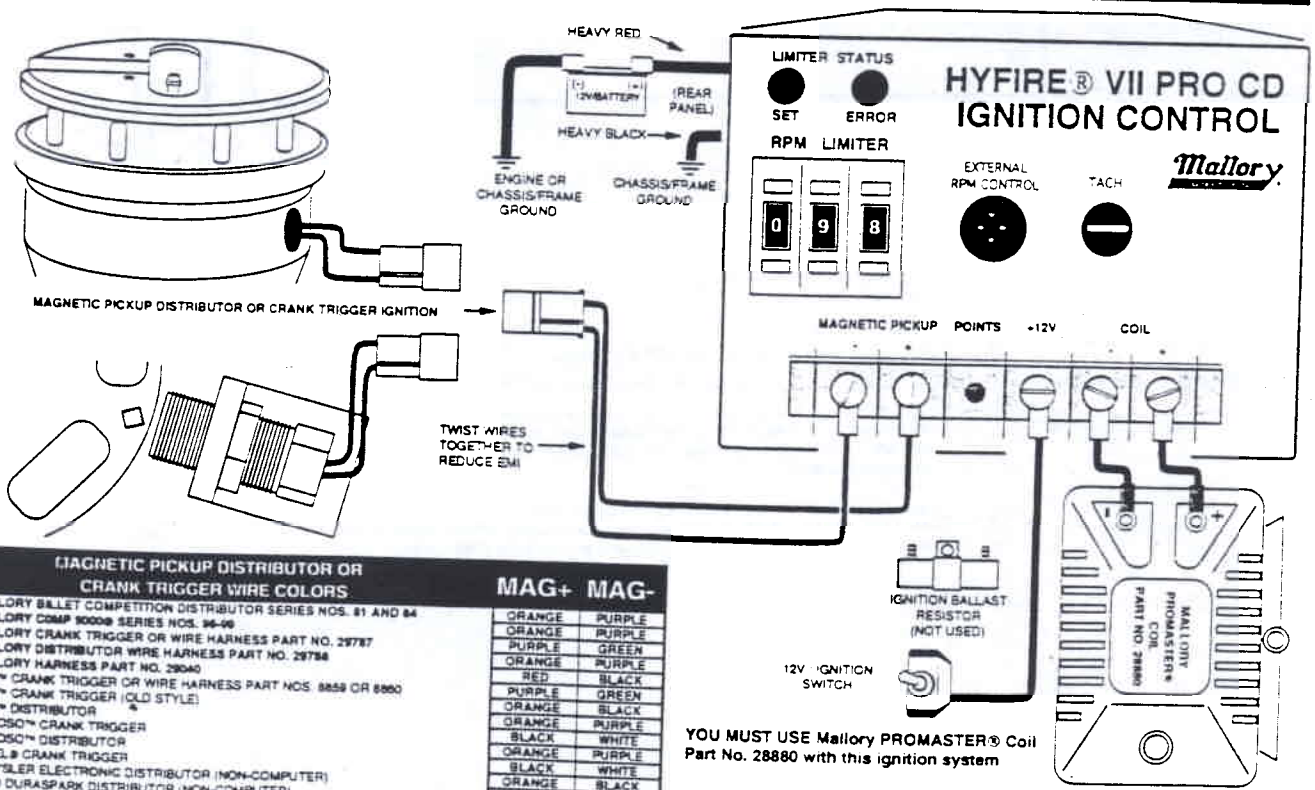
DO NOT USE solid core (copper core; stainless steel core) spark plug wire with any electronic ignition system or accessory. Solid core spark plug wire is one cause of electro-magnetic interference (EMI; ignition noise). EMI is one cause of false triggering (preignition) and premature ignition or accessory failures.



YOU MUST USE Mallory PROMASTER® Coil Part No. 28880 with this ignition system

Figure 3

HOOKUP TO A MAGNETIC PICKUP DISTRIBUTOR OR CRANK TRIGGER



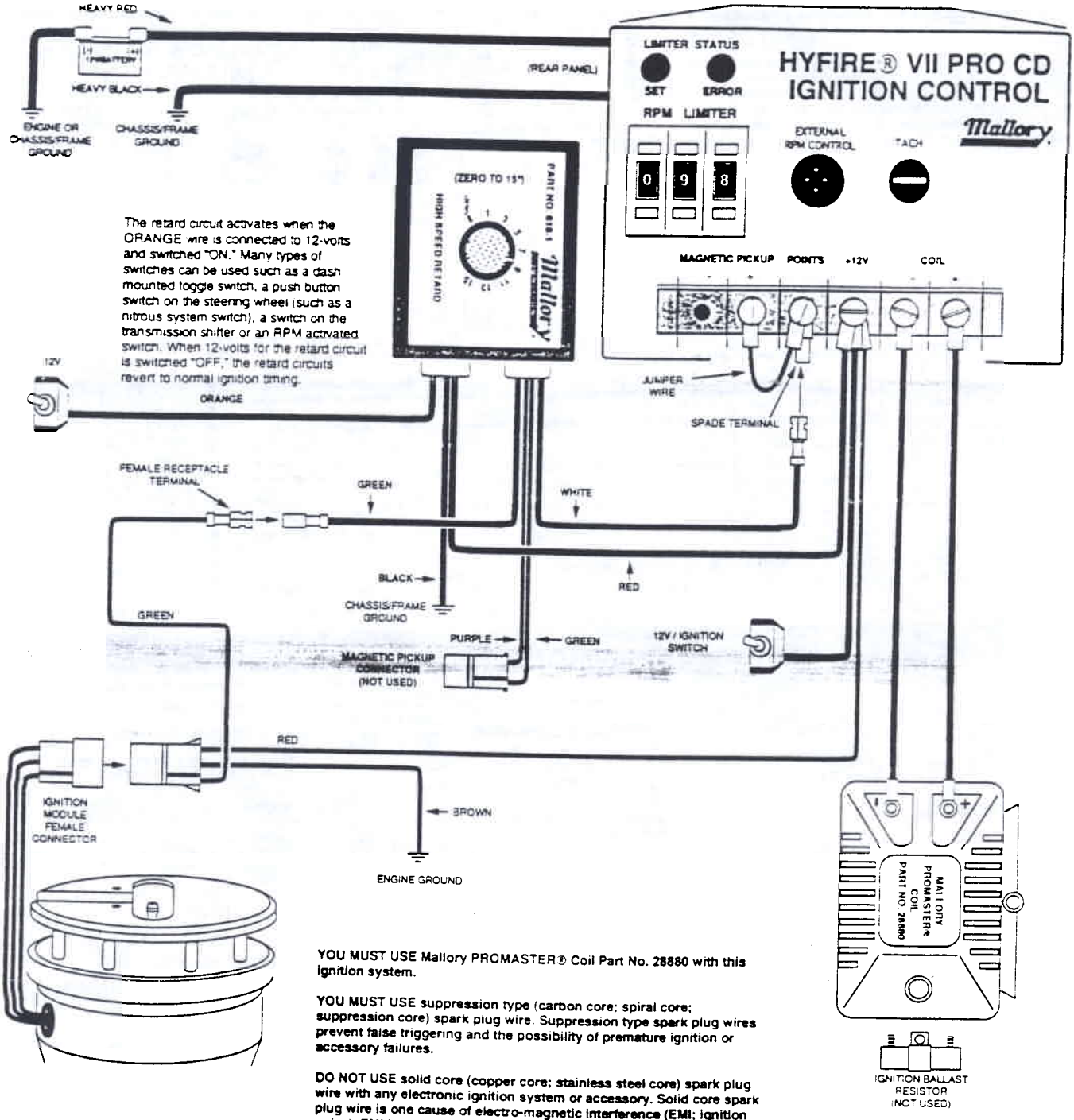
YOU MUST USE Mallory PROMASTER® Coil Part No. 28880 with this ignition system

YOU MUST USE suppression type (carbon core; spiral core; suppression core) spark plug 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 is one cause of electro-magnetic interference (EMI; ignition noise). EMI is one cause of false triggering (preignition) and premature ignition or accessory failures.

MAGNETIC PICKUP DISTRIBUTOR OR CRANK TRIGGER WIRE COLORS	MAG+	MAG-
MALLORY BALLET COMPETITION DISTRIBUTOR SERIES NOS. 81 AND 84	ORANGE	PURPLE
MALLORY COMP 9000® SERIES NOS. 96-99	ORANGE	PURPLE
MALLORY CRANK TRIGGER OR WIRE HARNESS PART NO. 29787	PURPLE	GREEN
MALLORY DISTRIBUTOR WIRE HARNESS PART NO. 29784	ORANGE	PURPLE
MALLORY HARNESS PART NO. 29040	RED	BLACK
MSD™ CRANK TRIGGER OR WIRE HARNESS PART NOS. 8859 OR 8860	PURPLE	GREEN
MSD™ CRANK TRIGGER (OLD STYLE)	ORANGE	BLACK
MSD™ DISTRIBUTOR	ORANGE	PURPLE
MOROSO™ CRANK TRIGGER	BLACK	WHITE
MOROSO™ 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

Figure 4 HOOKUP TO A MALLORY TIMING ACCESSORY AND A MALLORY UNILITE IGNITION, MAGNETIC BREAKERLESS IGNITION OR ELECTRONIC ADVANCE IGNITION (THREE WIRE: RED, BROWN, GREEN)

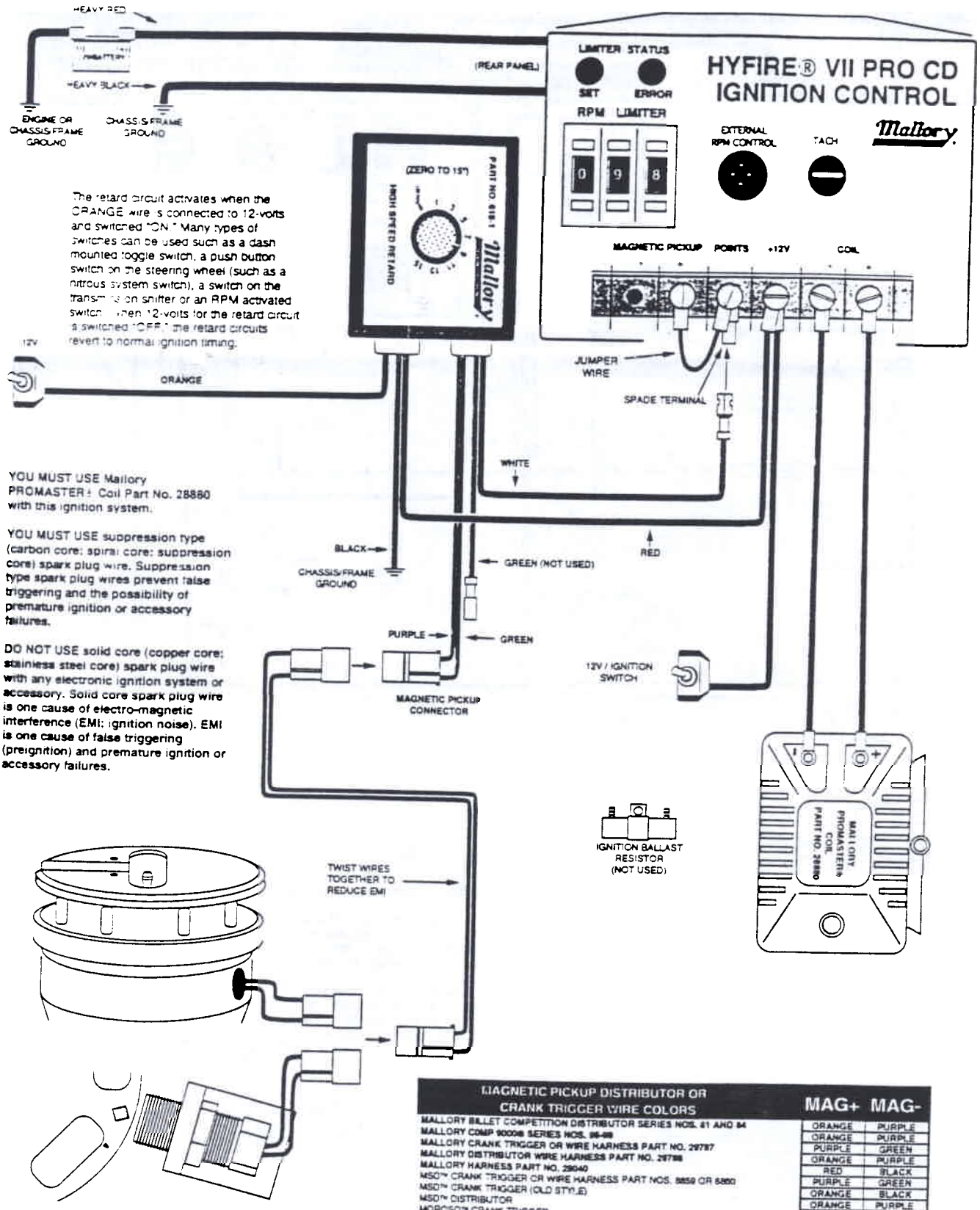


YOU MUST USE Mallory PROMASTER® Coil Part No. 28880 with this ignition system.

YOU MUST USE suppression type (carbon core; spiral core; suppression core) spark plug 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 is one cause of electro-magnetic interference (EMI; ignition noise). EMI is one cause of false triggering (preignition) and premature ignition or accessory failures.

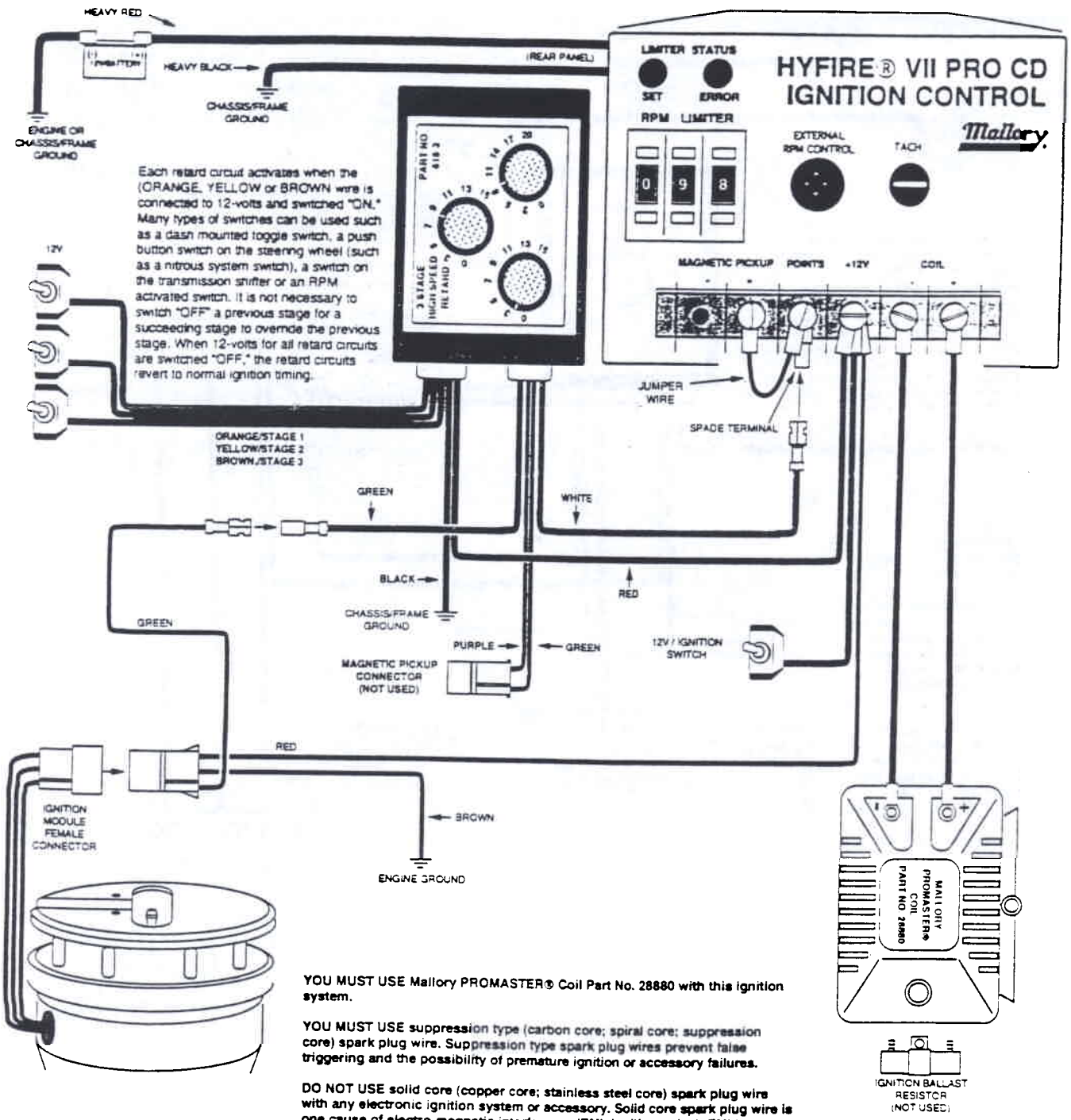
Figure 5 HOOKUP TO A MALLORY TIMING ACCESSORY AND A MAGNETIC PICKUP DISTRIBUTOR OR CRANK TRIGGER



MAGNETIC PICKUP DISTRIBUTOR OR CRANK TRIGGER WIRE COLORS	MAG+	MAG-
MALLORY BILLET COMPETITION DISTRIBUTOR SERIES NOS. 41 AND 84	ORANGE	PURPLE
MALLORY COMP 9000® SERIES NOS. 36-69	ORANGE	PURPLE
MALLORY CRANK TRIGGER OR WIRE HARNESS PART NO. 29787	PURPLE	GREEN
MALLORY DISTRIBUTOR WIRE HARNESS PART NO. 29788	ORANGE	PURPLE
MALLORY HARNESS PART NO. 29040	RED	BLACK
MSD™ CRANK TRIGGER OR WIRE HARNESS PART NOS. 8859 OR 8860	PURPLE	GREEN
MSD™ CRANK TRIGGER (OLD STYLE)	ORANGE	BLACK
MSD™ DISTRIBUTOR	ORANGE	PURPLE
MOROSO™ CRANK TRIGGER	BLACK	WHITE
MOROSO™ 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

Figure 6

HOOKUP TO A MALLORY TIMING ACCESSORY AND A MALLORY UNILITE IGNITION, MAGNETIC BREAKERLESS IGNITION OR ELECTRONIC ADVANCE IGNITION (THREE WIRE: RED, BROWN, GREEN)

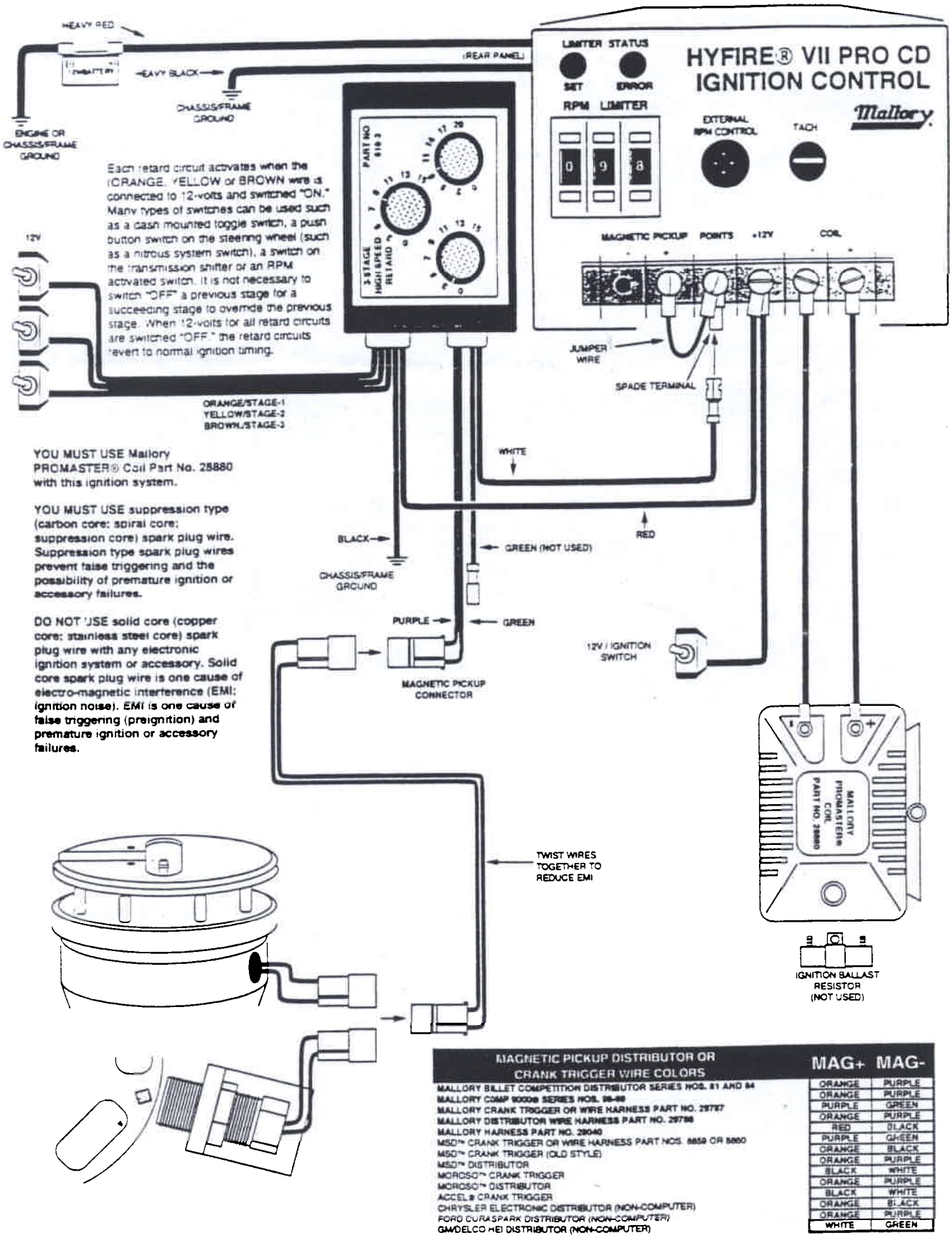


YOU MUST USE Mallory PROMASTER® Coil Part No. 28880 with this ignition system.

YOU MUST USE suppression type (carbon core; spiral core; suppression core) spark plug 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 is one cause of electro-magnetic interference (EMI; ignition noise). EMI is one cause of false triggering (preignition) and premature ignition or accessory failures.

Figure 7 HOOKUP TO A MALLORY TIMING ACCESSORY AND A MAGNETIC PICKUP DISTRIBUTOR OR CRANK TRIGGER



Each retard circuit activates when the ORANGE, YELLOW or BROWN wire is connected to 12-volts and 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. It is not necessary to switch "OFF" a previous stage for a succeeding stage to override the previous stage. When 12-volts for all retard circuits are switched "OFF," the retard circuits revert to normal ignition timing.

YOU MUST USE Mallory PROMASTER® Coil Part No. 28880 with this ignition system.

YOU MUST USE suppression type (carbon core; spiral core; suppression core) spark plug 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 is one cause of electro-magnetic interference (EMI; ignition noise). EMI is one cause of false triggering (preignition) and premature ignition or accessory failures.

MAGNETIC PICKUP DISTRIBUTOR OR CRANK TRIGGER WIRE COLORS

	MAG+	MAG-
MALLORY BILLET COMPETITION DISTRIBUTOR SERIES NOS. 81 AND 84	ORANGE	PURPLE
MALLORY COMP 9000® SERIES NOS. 96-99	ORANGE	PURPLE
MALLORY CRANK TRIGGER OR WIRE HARNESS PART NO. 29787	PURPLE	GREEN
MALLORY DISTRIBUTOR WIRE HARNESS PART NO. 29788	ORANGE	PURPLE
MALLORY HARNESS PART NO. 29040	RED	BLACK
MSD™ CRANK TRIGGER OR WIRE HARNESS PART NOS. 8859 OR 8860	PURPLE	GREEN
MSD™ CRANK TRIGGER (OLD STYLE)	ORANGE	BLACK
MSD™ DISTRIBUTOR	ORANGE	PURPLE
MOROSO™ CRANK TRIGGER	BLACK	WHITE
MOROSO™ 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