

## ELECTRONIC SUPER-MAG® MAGNETO ELECTRONIC CONTROL BOX WIRING INSTRUCTIONS

### GENERAL INFORMATION

#### Primary Wires:

16AWG/600V or larger wire must be used on all wiring. All grounds must be made to the engine block. Do not ground to chassis or anodized surfaces.

#### Spark Plug Wires:

Spiral core suppression spark plug wire must be used between the coil/transformer and the distributor cap - *minimum length 18" required*. Mallory PRO SIDEWINDER® Ignition Wire is highly recommended. When running dual ignition systems, both coil/transformer wires must be spiral core suppression spark plug wire even if the second ignition is not electronic.

#### Spark Plug Gaps:

The SUPER-MAG® Magneto has tremendous output. Experiment and closely monitor spark plugs and spark plug gaps for maximum performance. Set spark plug gap clearances from 0.018" to 0.022".

#### Electronic Control Box Switches:

DO NOT use the MASTER switch OFF to turn off the engine. Turn the MASTER switch OFF after the engine has died. The Electronic Control Box may be damaged if the MASTER switch is OFF, or switched OFF, while the engine is running. The Electronic Control Box may be damaged if the starter is engaged while the MASTER switch is OFF. Use the kill switch or turn the START / BUZZ switch to BUZZ to turn off the engine.

When running dual ignition systems, the START / BUZZ switch for one ignition may be switched to BUZZ to turn off that ignition while the engine is running. The MASTER switch must remain ON. The engine will remain running on the other ignition. Similarly, put that START / BUZZ switch back to the START to resume operation.

#### 36V and 9V Battery Lights

The Electronic Control Box uses six 9-volt *alkaline* batteries. Always install *new* alkaline batteries. DO NOT recharge batteries.

Change the batteries or change the Electronic Control Box immediately if a light is OFF.

Change the batteries or change the Electronic Control Box within 15 minutes of usage if a light is red. The 36V and/or 9V light may change from green to red during a run. Do not panic. There is enough voltage in the batteries to finish the run, then change the batteries or change the Electronic Control Box.

#### WARNING

- NEVER CONNECT ANY PART OF THIS IGNITION SYSTEM TO 12-VOLT.
- CHANGE THE BATTERIES OR CHANGE THE ELECTRONIC CONTROL BOX IMMEDIATELY IF A BATTERY LIGHT IS OFF.
- DO NOT USE THE MASTER SWITCH (OFF) TO TURN OFF THE ENGINE.
- THE ELECTRONIC CONTROL BOX MAY BE DAMAGED IF THE STARTER IS ENGAGED WHILE THE MASTER SWITCH IS OFF.
- Disconnect and remove the magneto generator before arc welding.
- On dual ignition systems, each ignition system must run independent of the other.
- To prevent internal damage to transformers, the transformer must be mounted with the high voltage terminal coming from the bottom and positioned such that it does not come closer than 2.5" from the nearest metallic surface.

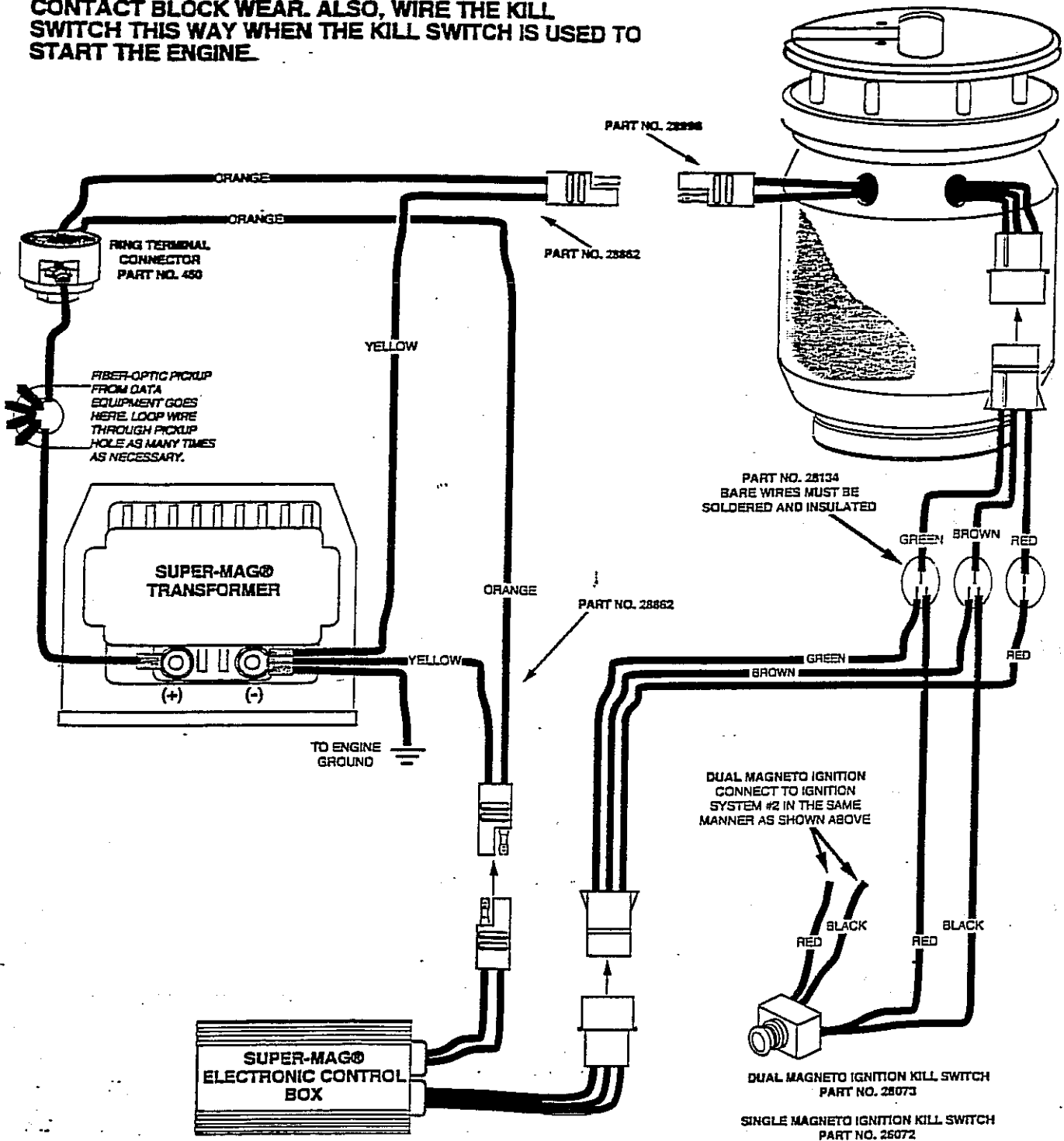
#### WIRING PROCEDURE

See Secondary and Primary Wiring Diagrams.

# PRIMARY WIRING DIAGRAM

## ELECTRONIC SUPER-MAG® MAGNETO

**NOTE: THE KILL SWITCH WIRED THIS WAY REDUCES CONTACT BLOCK WEAR. ALSO, WIRE THE KILL SWITCH THIS WAY WHEN THE KILL SWITCH IS USED TO START THE ENGINE.**



MADE IN U.S.A.

FORM 1341 (REV. A) 11/85

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PRINTED IN U.S.A.

## STATIC TIMING

### Step 1

Set #1 cylinder to the advance setting that you run at.

### Step 2

Find the #1 cylinder's spark plug wire on the distributor cap. Make a mark on the Adapter/Shield below the distributor cap, in line with the #1 cylinder's spark plug wire position on the distributor cap. Remove the distributor cap.

### Step 3

Put the band clamp and the magneto generator on the base. Do not tighten the band clamp.

### Step 4

Turn the Electronic Control Box's MASTER switch to ON and the START / BUZZ switch on the to BUZZ. The 36V and 9V battery lights must be green. Change the batteries or change the Control Box within 15 minutes of usage if a light is red.

### Step 5

**LEFT-HAND ROTATION:** While the buzzer is silent, hold the rotor clockwise and slowly turn the magneto generator counterclockwise. Stop turning the magneto generator when the buzzer begins sounding. Tighten the band clamp. The rotor must point to the mark on the Adapter/Shield.

**RIGHT-HAND ROTATION:** While the buzzer is silent, hold the rotor counterclockwise and slowly turn the magneto generator clockwise. STOP turning the magneto generator when the buzzer begins sounding. Tighten the band clamp. The rotor must point to the mark on the Adapter/Shield.

### Step 6

Turn the MASTER switch OFF. Install the distributor cap.

## STARTING AND RUNNING:

### Step 1

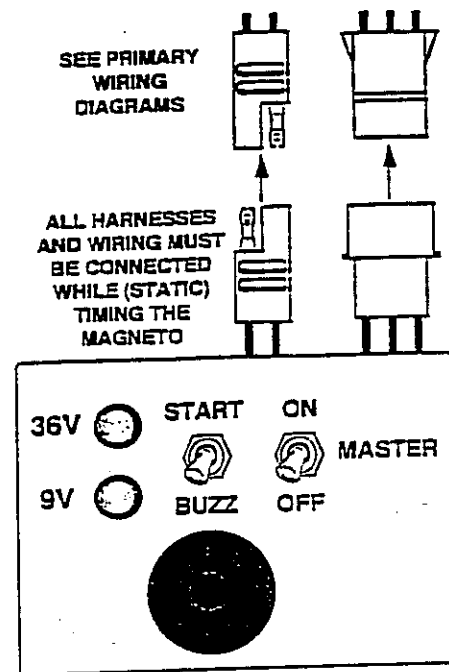
Turn the Electronic Control Box's MASTER switch ON and the START / BUZZ switch to BUZZ. The 36V and 9V lights should be green. If either, or both, lights have changed to red, the engine can be started. However, change the batteries or change the Electronic Control Box within 15 minutes of usage.

### Step 2

Engage the starter. Turn the Electronic Control Box's START / BUZZ switch to START when the engine is ready to start.

### Step 3

Use the kill switch or turn the START / BUZZ switch to BUZZ to turn off the engine. Turn the MASTER switch on the Electronic Control Box OFF after the engine has died. **WARNING: DO NOT** use the MASTER SWITCH (OFF) to turn off the engine.



## GENERATOR APPLICATIONS

DESCRIPTION:	RIGHT HAND ROTATION	LEFT HAND ROTATION	ELECTRONIC CONTROL BOX
	PART NO.	PART NO.	PART NO.
SUPER-MAG® V, 8 CYL.	29185-3	29175-3	634
SUPER-MAG® VI, 8 CYL.	29182-3	29183-3	634
SUPER-MAG® X, 8 CYL.	29180	29181	634

## TRANSFORMER APPLICATIONS

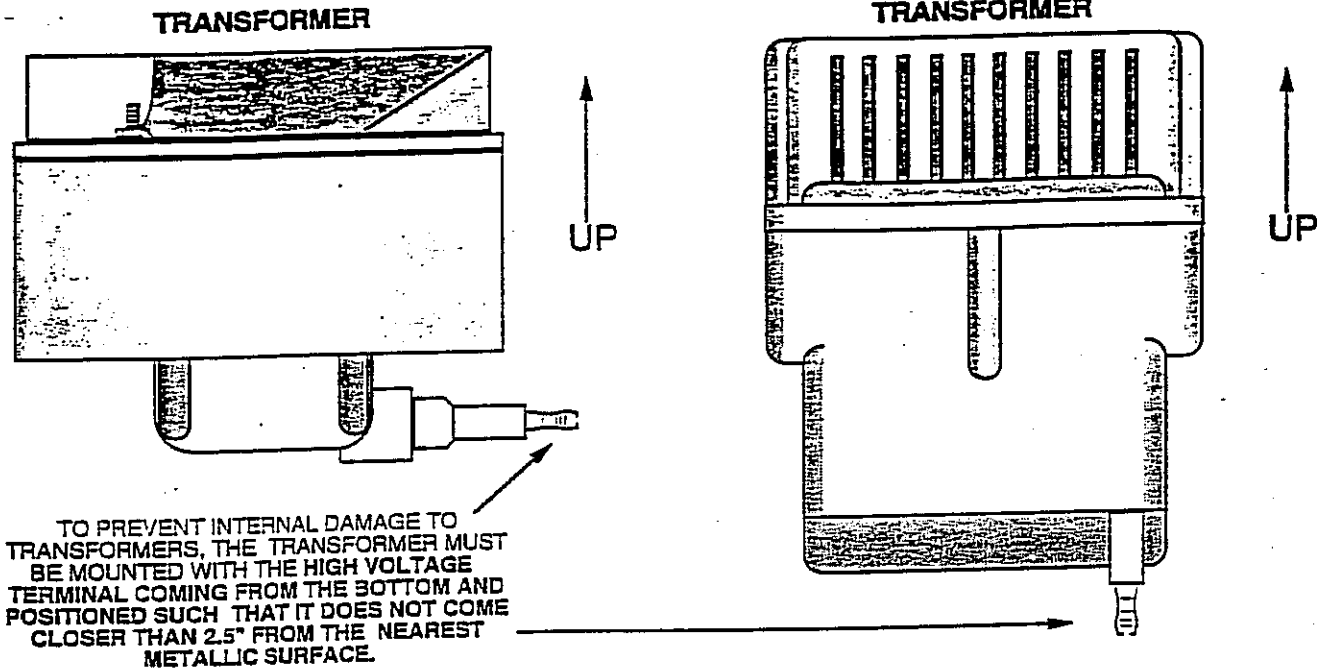
	BRACKET	
	PART NO.	PART NO.
SUPER-MAG® V TRANSFORMER	28990	29190
TRANSFORMER 35-1 Right Inductance, 1.5 ohm	28920(t)	29321
SUPER-MAG® VI TRANSFORMER	28900A	29190
TRANSFORMER 50-1 Right Inductance, 1.5 ohm	28940(t)	29321
SUPER-MAG® X TRANSFORMER; T/F, FC	28901(t)	29321
TRANSFORMER 35-1 Right Inductance, 1.5 ohm	28920(t)	29321

(t) Bracket not included

## SERVICE AND TUNE-UP PARTS

	PART NO.
PRO CAP	29745
WIRE RETAINER	29742
PRO CAP ADAPTER / SHIELD	29749
ROTOR / SHUTTER, RIGHT HAND SUPER-MAG® V	29792
ROTOR / SHUTTER, RIGHT HAND SUPER-MAG® VI	29794
ROTOR / SHUTTER, LEFT HAND SUPER-MAG® V	29791
ROTOR / SHUTTER, LEFT HAND SUPER-MAG® VI	29795
ELECTRONIC TRIGGER	606
HARNESS, GENERATOR 2 WIRE SHORT	28998
HARNESS, TRANSFORMER 2 WIRE LONG	28862
HARNESS, GENERATOR TO ELECTRONIC CONTROL BOX	28134

# SECONDARY WIRING DIAGRAM



TO TRANSFORMER HIGH VOLTAGE TERMINAL

