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All Chrysler Motors Corporation Dealers are furnished printed schedules four times each year, showing courses being offered in the Training Center nearest to them.

See inside rear cover -- "Mobile Training Units"

## **Foreword**

This publication covers the electronic ignition system in detail. It's purpose is to give you a working knowledge of electronic ignition, including trouble shooting and maintenance requirements.

Component testing or trouble shooting the electronic ignition system remains the same regardless of distributor model. You may be servicing a six cylinder or eight cylinder system, or a heavy duty truck with a Holley distributor. Refer to your service manual for complete specifications.

The booklet is divided into four sections as follows:

1. Introduction
2. Electronic Ignition System Components
3. Trouble Shooting the Electronic Ignition System using the Electronic Ignition Tester.
4. Trouble Shooting the Electronic Ignition System when the Electronic Ignition Tester is not available.

Chrysler Motors Corporation  
U. S. Automotive Sales and Service

# INTRODUCTION

The Chrysler Electronic Ignition was first introduced in 1971 as a running change on models equipped with a 340 C.I.D. engine and a manual transmission.

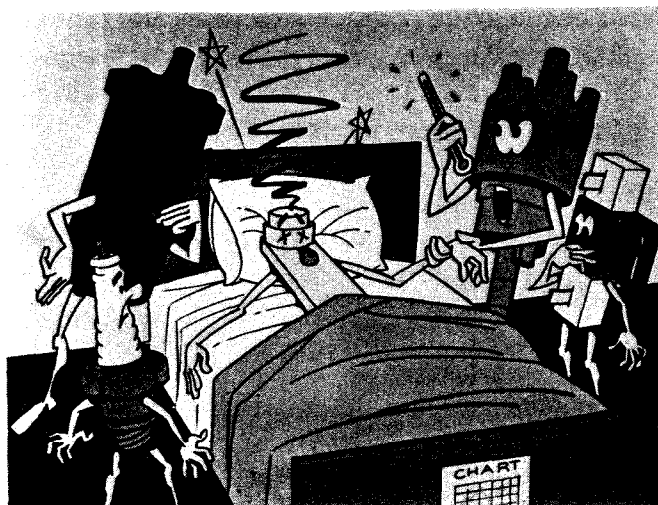
By the end of the 1972 model year, electronic ignition was standard equipment on all eight cylinder models sold in California and available as an extra cost option in other states. Starting with 1973 production all North American built cars will be equipped with electronic ignition.

In January 1972, engines in light duty conventional cab and compact model trucks were equipped with electronic ignition as an option. In June 1972 electronic ignition was made available on 318-3 and 413-1 engines on Motor Home Chassis.

**All Chrysler built truck engines in 1973 production will be equipped with electronic ignition.**

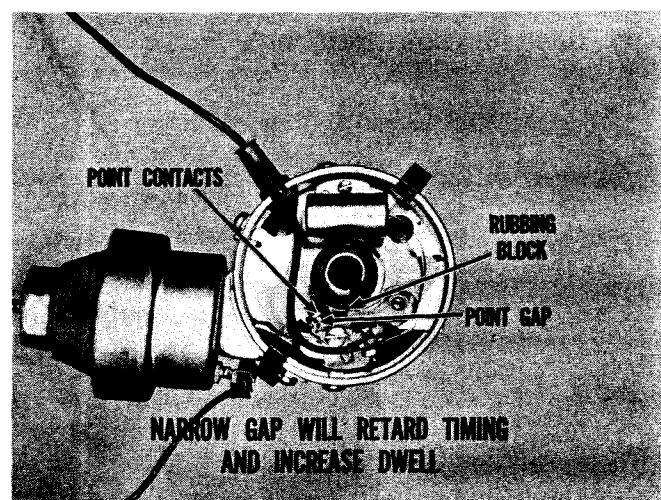
It's a fact that a misfire in one cylinder can increase undesirable exhaust emissions as much as ten times. Chrysler Engineers and others have found that an ignition system that has not been properly maintained is the most frequent cause of misfiring. Generally speaking, the breaker points have a shorter service life than any of the other ignition components. So, Chrysler Engineers have developed a new Electronic Ignition System that eliminates the breaker points and the service and performance problems associated with them. The new Electronic System controls ignition timing and dwell very accurately resulting in maximum exhaust emission control with minimum ignition system service.

## NOTES



### Figure 1

Before going any further with the electronic ignition system, let's review the periodic service required with breaker-point ignition. This will help you to appreciate the advantages of the new breakerless system. The breaker-point ignition has been steadily improved and is an excellent system. However, regular periodic service is required to maintain satisfactory ignition performance. Of all the breaker-point ignition components, the breaker-points have the shortest service life. Of course, spark plugs eventually wear out, but the coil, condenser and ballast resistor have been improved to the point that they should virtually last the life of the car.



### Figure 2

**In an engine equipped with breaker-point ignition, there is a slight but continuous change in ignition timing over the life of the points.**

That's because the contact gap closes and timing starts to retard as a result of rubbing-block wear. As the contact gap closes, the dwell in a breaker-point ignition system is also affected.

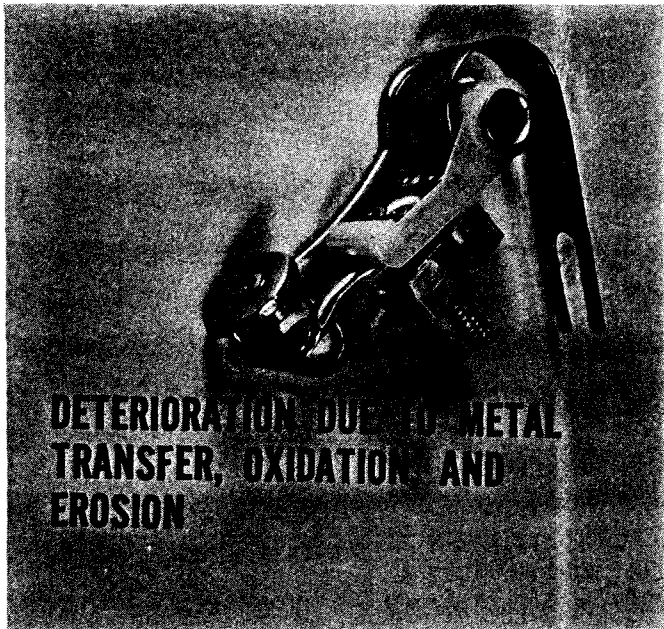


Figure 3

2

Engine performance can be maintained as the points wear by resetting the timing or readjusting the contact gap if the dwell is noticeably off. However, even when the breakerpoints are kept properly adjusted, they will deteriorate in normal usage due to metal transfer caused by arcing across the points, oxidation, and erosion. Eventually, this will cause misfiring.

#### NOTES



Figure 4

When the contacts deteriorate to the point where they cause misfiring, they should be replaced. When an engine begins to misfire, it also causes spark plug deterioration and shortens plug life considerably. Unfortunately, the average owner does not have a tune up performed often enough to prevent or for that matter, to correct misfiring.

With the electronic ignition system, periodic distributor service will be a thing of the past since the breaker-points have been replaced by electronic components and circuitry.

#### NOTES

# ELECTRONIC IGNITION COMPONENTS

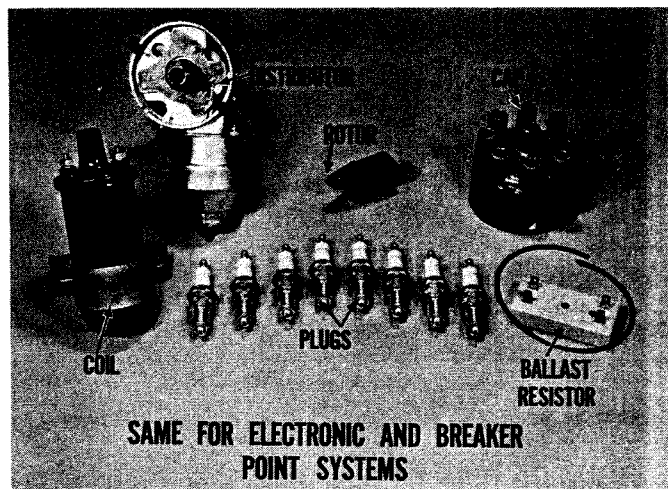


Figure 5

The distributor housing, the advance mechanism, the rotor and the distributor cap are the same for the new electronic ignition and the conventional breaker-point ignition. Both systems use the same type ignition coil and spark plugs. A new dual ballast resistor is used. This will be covered later. With the exception of the drive and advance mechanisms the components inside the electronic distributor are brand new. The pick-up unit and the reluctor have physically replaced the cam and breaker-points.

The word "physically" is used because although they do the same basic job, they actually do it quite differently. A condenser is no longer required and this will also be explained in later paragraphs.

## NOTES

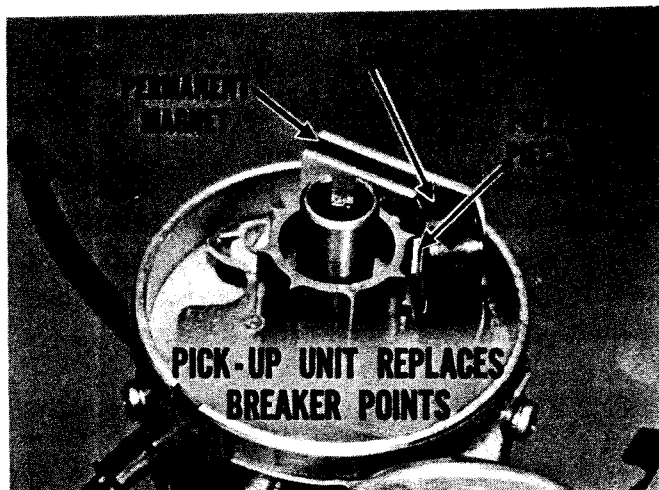


Figure 6

The pick-up unit consists of a permanent magnet and a coil that is wound around a pole piece. The pole piece is an extension of the mounting bracket and is attached to the permanent magnet. Because of the arrangement, the pick-up unit resembles a horseshoe type magnet with the reluctor end of the pole piece acting as one of the poles.

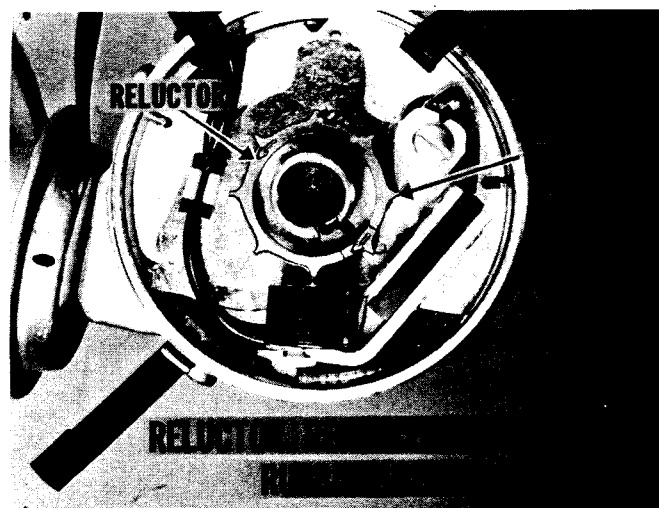
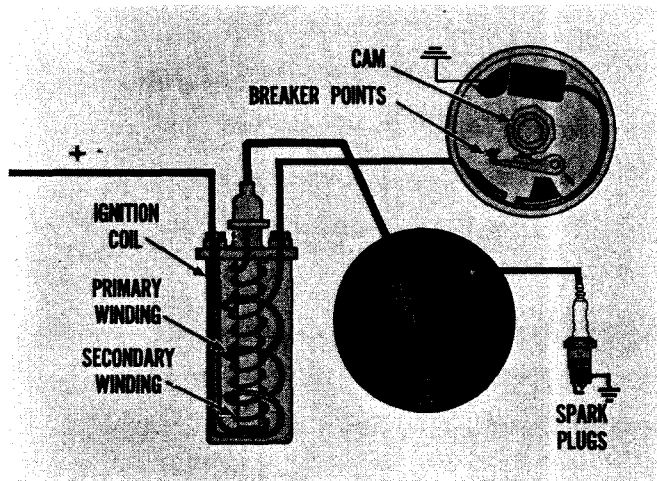


Figure 7

The reluctor is a gear like component that is attached to the distributor shaft in the same position as the cam in a breaker-point ignition. The reluctor is not a magnet but it does provide a better magnetic path than air. In other words, it is capable of reducing reluctance (resistance to magnetic flow) and that's why it is called a reluctor. More about this later.

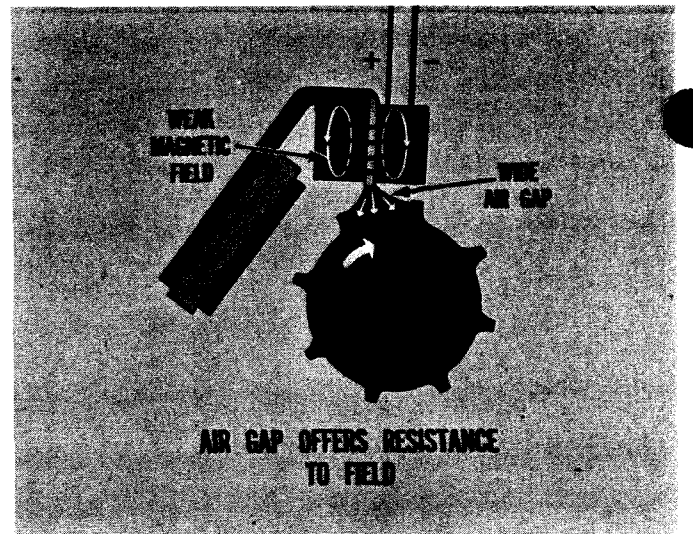
In a very general way, the reluctor and the pick-up unit do electrically what the cam and rubbing block do mechanically in a breaker-point ignition. Although the electronic distributor components replace the cam and breaker-points, they operate quite differently. For one thing, the pick-up unit is not a set of points, and there must be no contact between the reluctor and the pick-up unit.



4 **Figure 8**

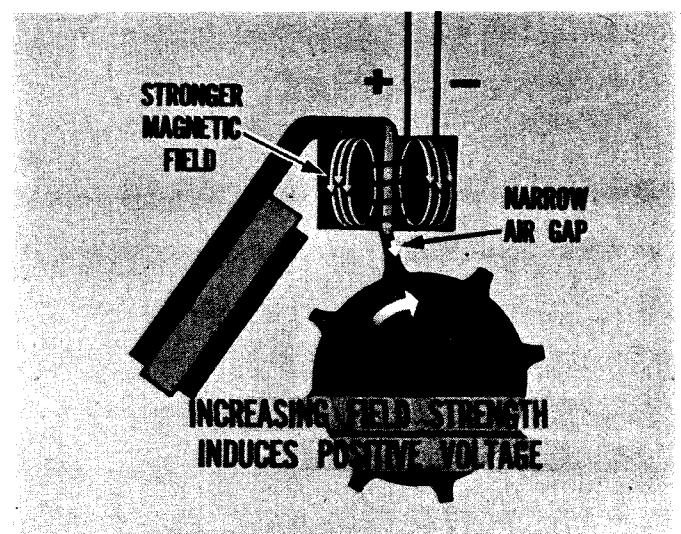
A short review of the breaker-point system will help you understand how the reluctor and pick-up unit work. In a breaker-point system, the current flowing through the primary winding of the ignition coil is interrupted when the breaker-points are opened by the rotating cam. The collapsing magnetic field in the ignition coil primary induces enough voltage in the ignition coil secondary to fire the plugs.

## NOTES



**Figure 9**

In the electronic ignition system a permanent magnet in the pick-up unit provides a magnetic field from the pole piece to the permanent magnet itself. This magnetic field passes through the coil that is wound around the pole piece. The magnetic field is relatively weak because the air gap between the pole piece and the magnet does not provide a good magnetic path between the two.



**Figure 10**

As a tooth of the reluctor approaches the pick-up, it provides a better path than the air gap and the strength of the magnetic field in the pick-up is increased. Increasing the field strength at the pick-up coil induces a positive voltage at one terminal of the coil. It should be understood that this voltage is induced as

a result of the changing (increasing) field strength and is not caused by physical movement of the field or the pick-up coil. The positive voltage continues to build until the reluctor tooth is exactly opposite the pole piece.

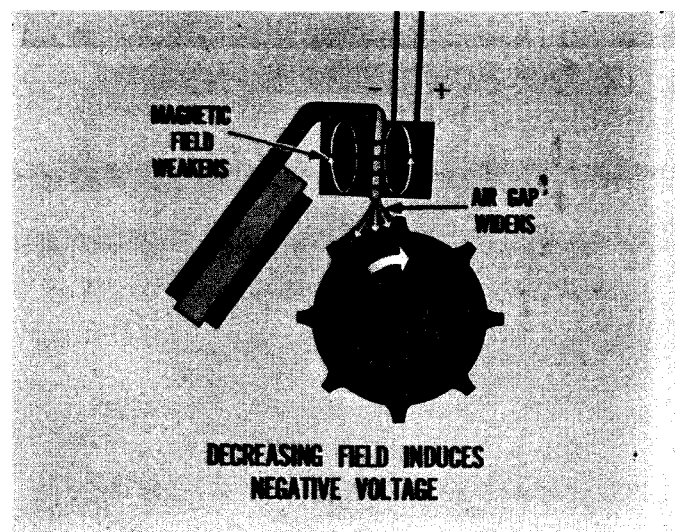


Figure 11

As soon as the reluctor tooth passes the pole piece, the air gap starts to increase and the field strength begins to decrease. The decreasing field strength through the coil winding induces a negative voltage at the same terminal of the coil winding. Again, the voltage is induced by the change (reduction) in field strength. *No voltage is induced in the pick-up coil unless the reluctor is moving. The rapid increase and decrease of the magnetic field as the rotating reluctor teeth approach and pass the pole piece is what induces the positive then the negative voltage.*

The induced voltage is very small. It's just a tiny electrical signal that is fed into the electronic control unit. The function of the signal voltage induced in the pick-up unit is not the same as that of the contacts in a breaker-point ignition which open and interrupt the primary current in the ignition coil. The pick-up voltage is a precisely timed signal. It triggers the electronic circuitry in the control unit and in turn this controls the interruption of the current flowing through the primary windings of the ignition coil. But let's consider primary current flow in greater detail.

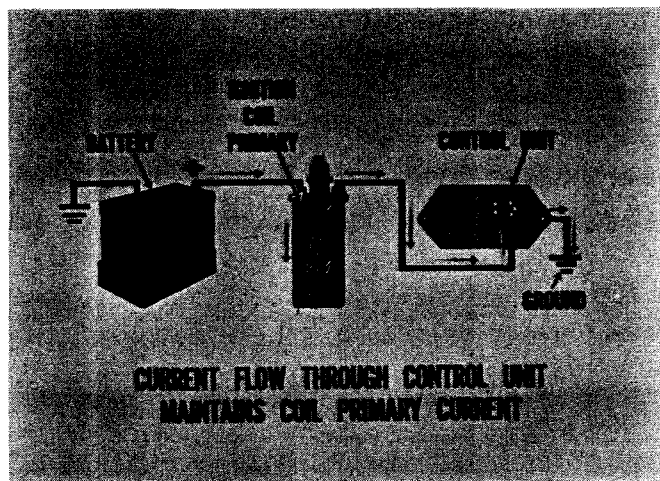


Figure 12

In the electronic ignition system, battery current flows through the primary winding of the ignition coil and then through the control unit which is grounded. This maintains current flow in the ignition coil primary winding pretty much the same as the closed contacts do in a breaker-point ignition. The control unit remains "on" or activated and current flows through the primary coil windings as long as a negative voltage from the pick-up is not applied to it.

5

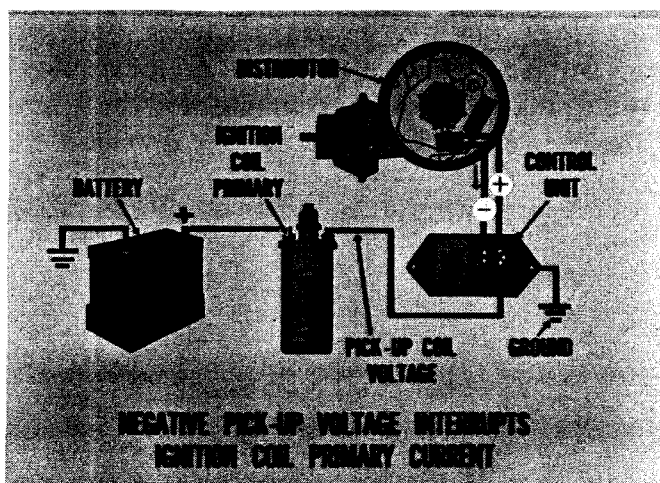


Figure 13

When the reluctor passes the pole piece, and the pick-up voltage turns negative, it deactivates or "turns off" the control unit circuitry. At this point, current cannot flow through the control unit to ground and therefore the current through the ignition coil primary winding is interrupted. Like in all induction coil-ignition systems, this interruption of the current flow in the primary circuit induces enough voltage in the secondary

windings of the ignition coil to fire the spark plug.

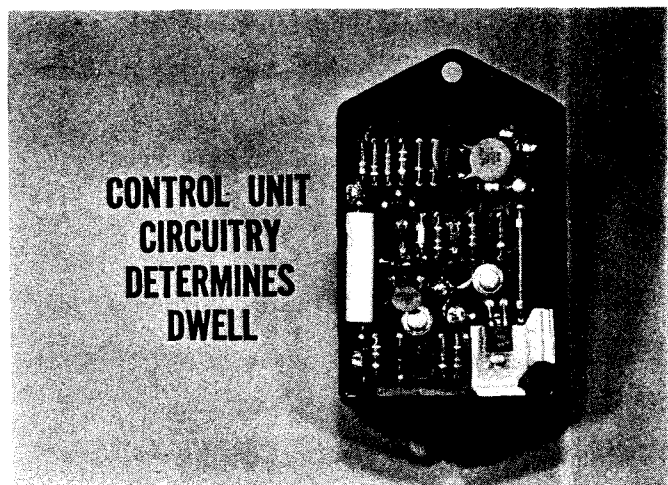


Figure 14

The control unit determines electronically how long the ignition coil primary current is allowed to flow before it is interrupted. In other words, it determines the dwell in the electronic system. Since the control unit circuitry is sealed and has no moving parts, the dwell cannot be changed. *The reluctor and the pick-up unit determine ignition timing. The control unit determines dwell.* However, it takes both of them working together to time the interruption of the ignition coil primary current and the firing of the plugs.

6

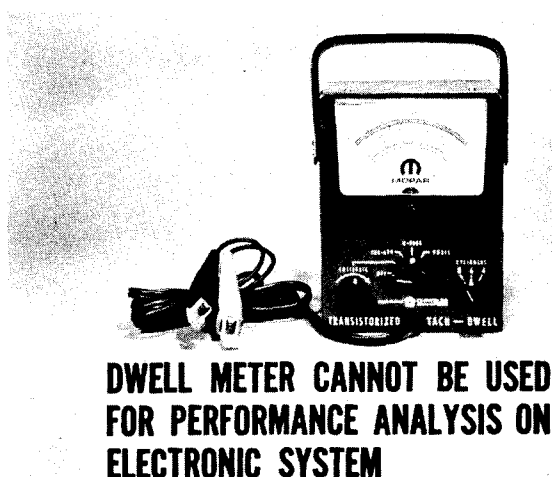


Figure 15

There is no reason to use a dwell meter when testing or checking an electronic ignition system. *Dwell will be correct unless the control*

*unit has been damaged and this possibility can be easily and quickly checked out with your electronic ignition tester.* On the other hand, your tachometer and timing light will operate just as well with this system as they will with a breaker point system.



Figure 16

The ballast resistor for the electronic system plays a dual role. On the one side is the half-ohm ballast resistor that is the same as in a breaker point system. It maintains constant primary current with variations in engine speed. This protects the ignition coil against high current flow at low engine speed. This ballast resistor is bypassed when cranking, to apply full battery voltage to the coil.

The other side of the dual unit is a five-ohm resistor. It protects the control unit by limiting current flow in the electronic part of the circuit. In a breaker-point ignition, the condenser helps the coil develop higher voltage because it speeds up the collapse of the magnetic field. It also increases ignition point life because it reduces arcing as the contacts open. The condenser is not needed in the electronic ignition because there are no points and the collapse of the field in the ignition coil primary is controlled by the electronic circuitry in the control unit.

# TROUBLESHOOTING With Electronic Ignition Tester

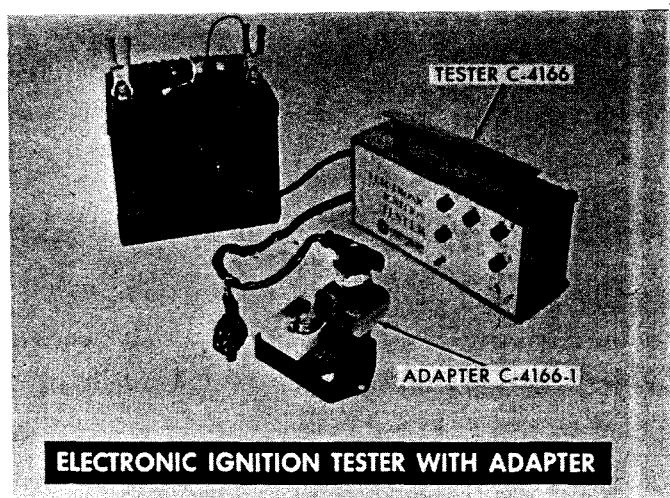


Figure 17

Because of design changes made in the new (1973) electronic control unit it was necessary to release an electronic adapter tester, that works with the present ignition tester C-4166. The adapter is number C-4166-1 and must be used when testing the 1973 control unit. It can also be used when testing earlier control units. The latest electronic ignition tester is numbered C-4166-A. It can be used to test all electronic ignition systems. *Learn to use the tester and you will find that it's a real time saver.* As you probably know, instructions for using the tester are included on the back panel of the instrument. Because of the limited space available, these instructions are quite condensed and a little extra explanation will help you get acquainted with this valuable diagnostic tool. The two leads with five-prong connectors are used to connect the test instrument into the car's ignition circuit, for on car testing. The test leads with the two alligator-type battery clips are not used for on-car testing—they are used only for bench-testing of electronic ignition components. Incidentally, the harness for the battery clip leads also includes a dual male-female connector which is used for bench-testing the pick-up unit. It is not used for on-car testing. There are two sets of instructions on the back of the instrument. The first set of instructions are for components or bench testing. Disregard them when

troubleshooting the system on the car. The diagnosis chart at the right side of the panel does not apply to bench testing.

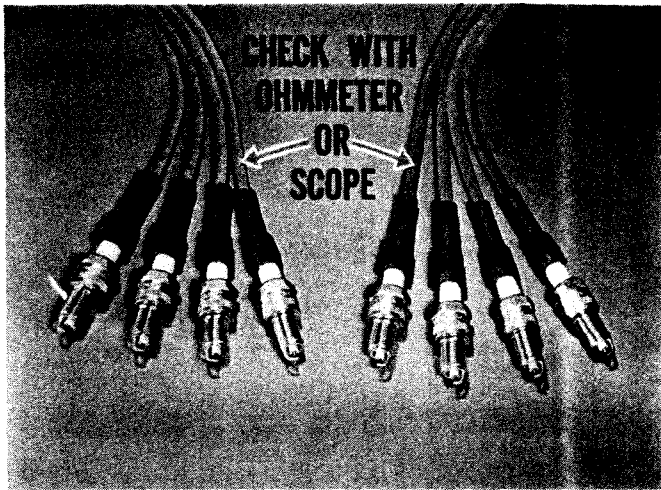
It is to be used only in connection with on-car testing. The 6-step system test instructions and the diagnosis chart are used for on-car troubleshooting. The chart is based on the condition of the lights on the front of the tester. When testing the system on the car the two green lights should come on as soon as the tester is connected into the system. This does not necessarily mean that everything is okay in the entire system but it does mean that you can proceed with the test. On the other hand, if both or either of the green lights do not come on, trouble exists which must be corrected before proceeding with the remainder of the test. The three red lights on the front of the tester are "trouble lights". If one or more of them comes "on" something is definitely wrong and the appropriate item indicated by an "x" on the chart should be checked. In other words an "off" condition in the green lights or an "on" condition with the red lights indicates trouble. Remember these thumb rules apply to on-car tests—they do not apply to bench testing which will be covered under a later heading. Although the instructions and chart on the back of the tester are complete, let's go through the on-car test procedure step-by-step.

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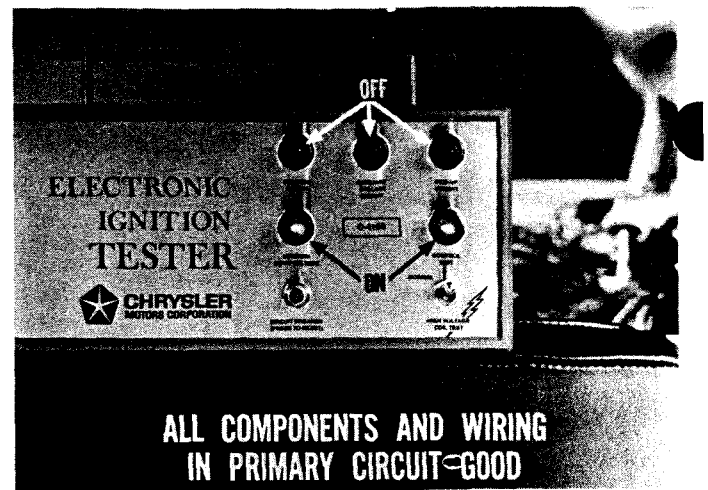
Figure 18

If performance problems exist, the first thing to check on the ignition system is the rotor and distributor cap for cracks or corroded terminals. Hairline cracks are sometimes difficult to see, so look the cap and rotor over very carefully.



**Figure 19**

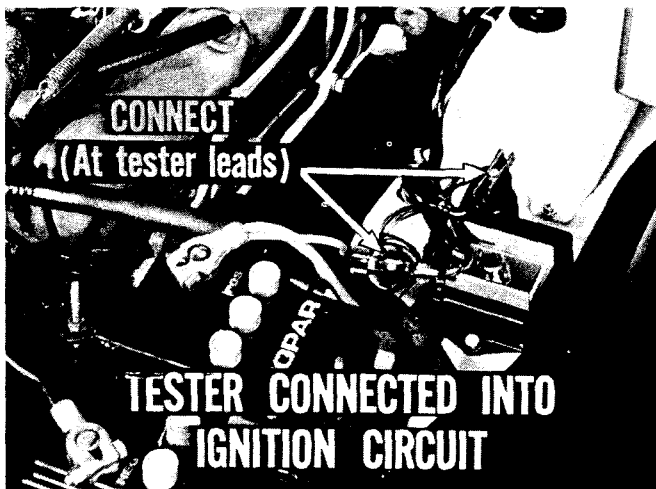
Visually inspect the secondary ignition cables and check their performance with an ohmmeter or an ignition oscilloscope. Then check the spark plugs and regap or replace them if necessary.



**Figure 21**

Turn the ignition switch *Don't start the engine*. Observe the tester, if both green lights on the front panel come on and all the red lights remain off, this indicates that all components and wiring in the primary circuit are good.

8



**Figure 20**

With the ignition switch off, remove the screw and disconnect the wiring harness from the control unit. Connect the wiring harness from the control unit. Connect the female connector of the tester to the control unit and the male connector to the wiring harness of the system to put the tester in the ignition system circuit.



**Figure 22**

The green light labeled "Ignition Input Voltage" must come on to indicate sufficient voltage for the tester to operate. It must remain on through all tests. If the light is off at anytime, it means that there is insufficient input voltage to the tester to complete the tests. If the green "Ignition Input Voltage" light does not come on, the first thing to do is to make sure that the battery is fully charged. If the battery is okay, check the battery terminal connections and make sure that the control unit is properly grounded. Also check the ignition switch and the wiring to and from the switch.



Figure 23

If the green light labeled "Control Unit" does not come on the control unit is faulty and must be replaced. Each test light is completely independent of the others, and if the control unit is good, this green light will be on even if there is a fault in the pick-up unit, the dual ballast resistor, or the remainder of the ignition primary circuit.

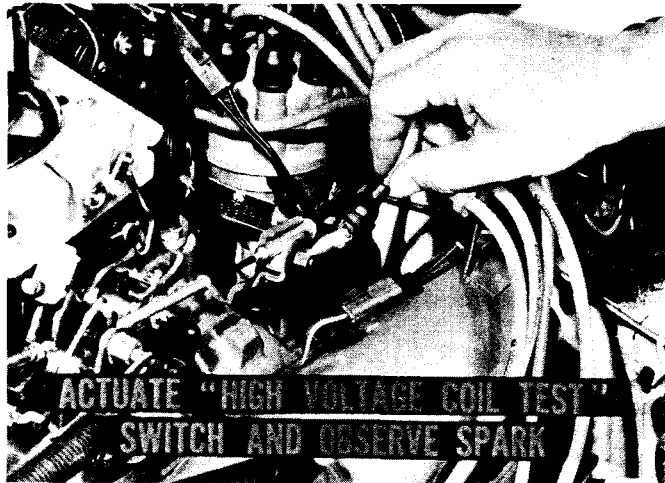


Figure 24

To complete checking the system, pull the ignition coil secondary wire from the distributor cap and hold it near the engine block. Actuate the "High Voltage Coil Test" switch and observe the length and intensity of the spark as you pull the wire slowly away from the block to increase the spark gap. A long blue spark indicates that coil output is okay.

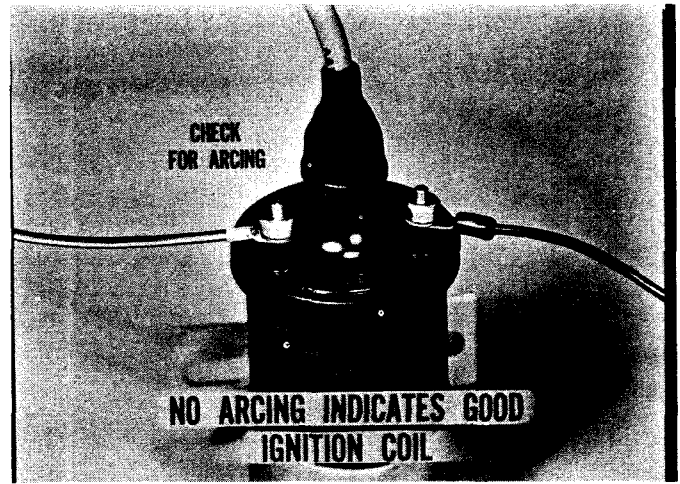


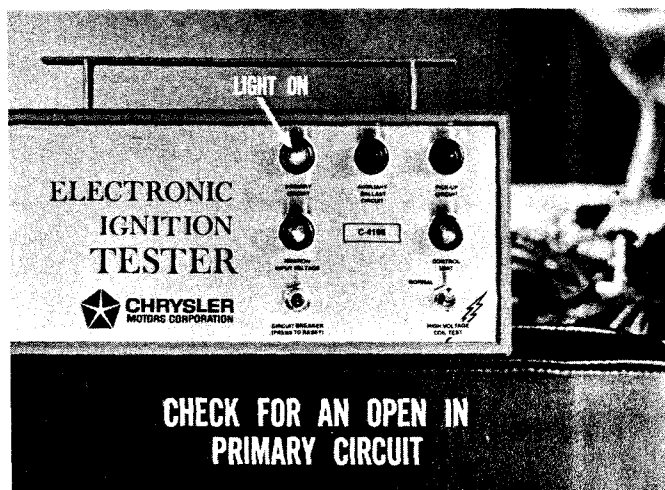
Figure 25

Move the coil wire away from the block until the spark no longer jumps to ground and closely observe the coil tower to make sure there is no arcing across the tower. If no arcing occurs, this completes the testing and indicates that the ignition coil is okay. If the primary circuit and the coil are okay but an ignition problem is evident. Check the spark plug cables with an ohmmeter or ignition oscilloscope and inspect spark plugs.



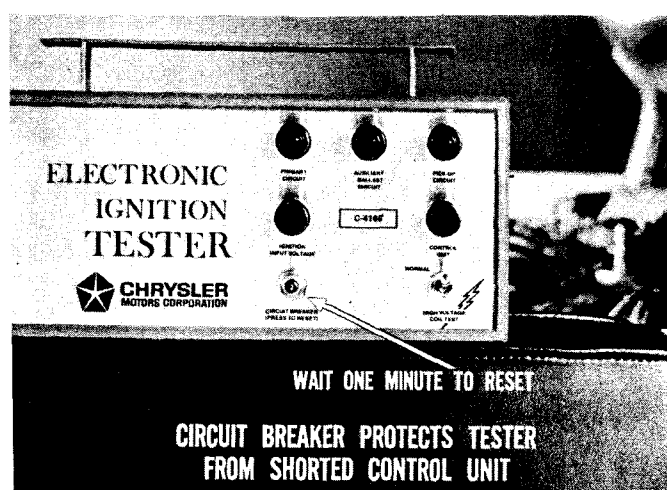
Figure 26

The red light labeled "Auxiliary Ballast Resistor" on the tester will light if the five-ohm side of the dual ballast resistor is bad. If the red light comes on, the dual ballast resistor must be replaced. The half-ohm (.5) side of the dual ballast resistor is checked with the rest of the primary circuit by the tester. When installing a new resistor make sure that the connectors are correctly installed.



**Figure 27**

If the red light labeled “Primary Circuit” on the tester panel comes on, check the ignition coil primary, the suppression capacitor, the half-ohm side of the dual ballast resistor, and the wiring harness for an open in the circuit. Replace any parts that are faulty or do not meet specifications.



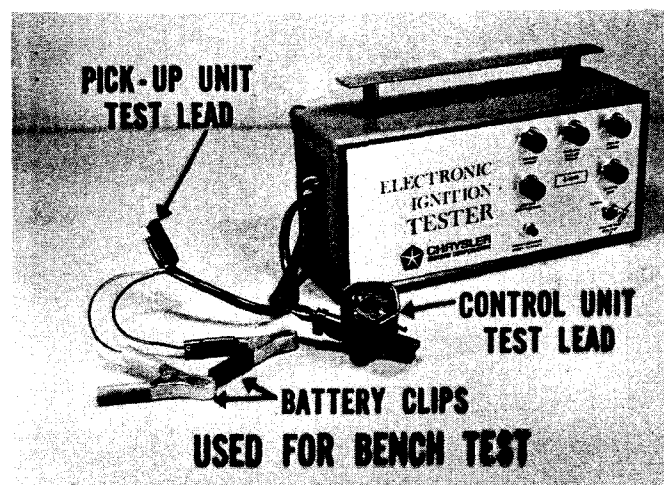
**Figure 29**

The electronic ignition tester is equipped with a circuit breaker to protect the tester from overloading when testing a shorted control unit. If the circuit breaker opens, the red button at the bottom of the panel will pop out. If it does, wait one full minute, then reset the circuit breaker by pushing the button in and continue testing.



**Figure 28**

If the red light labeled “Pick-up Circuit” comes on the pick-up unit or its wiring is faulty and the pick-up unit must be replaced. Even if the light does not come on, it’s a good idea to flex the wiring from the pick-up unit to double-check it. If the red light blinks while doing this, the pick-up unit wiring is bad and the unit should be replaced.



**Figure 30**

The tester can be used for bench testing the control unit and the pick-up unit independently. The test lead harness with the two battery clips and the pick-up unit connector is used for bench tests. A fully charged battery is also necessary for the bench tests. It is not necessary to ground the component being tested. Component tests are to be used to check new units prior to installation or to double-check units removed from the car.

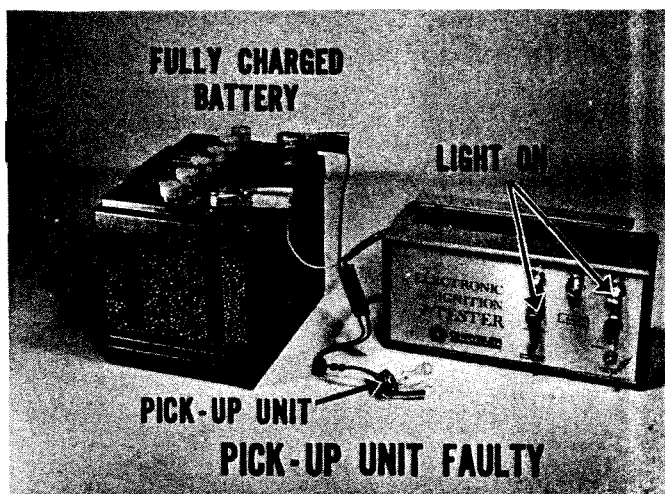


Figure 31

Hook the two battery clips to a fully charged battery. The red clip on the positive post and the black one on the negative post. To test the pick-up unit, mate the connector from the pick-up unit wiring with the pick-up connector test lead from the tester. If the red light labeled "Pick-up Circuit" comes on, the pick-up unit is faulty and must be replaced. If the light does not come on, double check the pick-up circuit by flexing the wiring from the pick-up unit. If the red light blinks when doing this, the wiring is bad and the pick-up unit cannot be used.

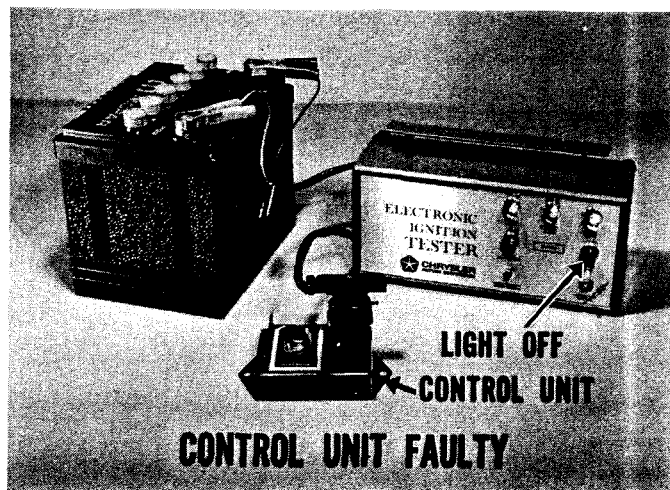


Figure 32

To bench test the control unit, simply plug the five pin female tester lead into the control unit with the clips still connected to the battery. If the green light labeled "Control Unit" does not come on, the control unit is faulty.

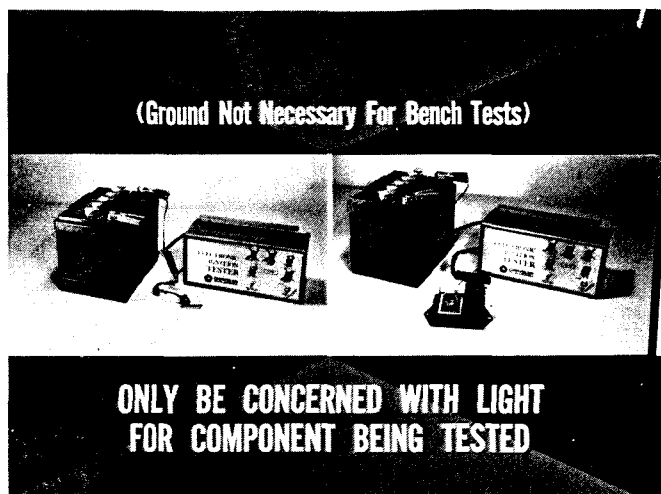


Figure 33

When bench testing the pick-up unit, the green "Control Unit" light will be off, and the red "Primary Circuit" and red "Auxiliary Ballast Circuit" lights will be on. This is normal because there is no input for these components, when bench testing the pick-up unit. When bench testing the control unit, all three red lights will be on because the ballast resistor, pick-up unit and coil primary circuits are not connected into the tester circuit. So, when bench testing you need only be concerned with the green in-put voltage light-which must be on to indicate sufficient voltage and the green "Control Unit" light. All other can be ignored.

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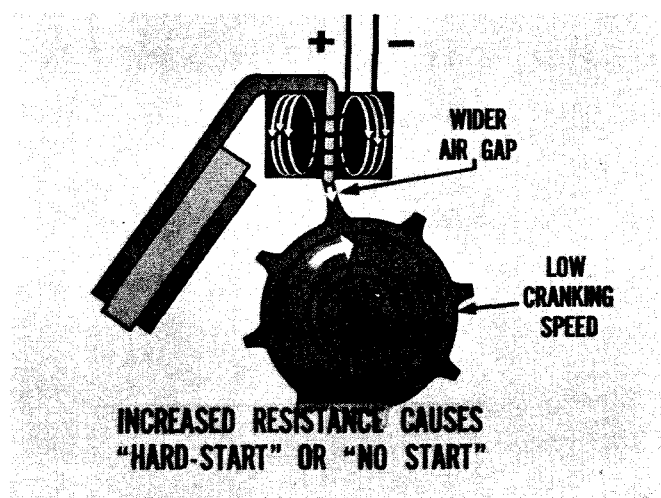


Figure 34

There is an adjusting slot on the distributor plate that can be used to change the air gap between the reluctor tooth and the pole piece of the coil. Unlike breaker-points reducing the air gap will

not retard the timing. Since dwell is determined by the control unit and is independent of the pick-up unit, changing the air gap will not affect timing or dwell. However, the gap between the pick-up and reluctor should be properly set. *One of the main advantages of the electronic ignition system is improved starting; because with no points, the possibility of arcing across the points at starting has been eliminated.* However, a pick-up gap that is too wide can cause starting problems. As the air gap between the reluctor and the pole piece is increased, field strength decreases. In addition, low cranking means low reluctor speed. The combination of weak field and slow changes in field strength results in very low voltage in the pick-up unit. This "weak signal" condition can cause hard starting. In fact there may even be a "no start" condition if the gap is too wide. If you get a "hard-start" condition, don't immediately blame the pick-up gap and change the adjustment. Make sure that the fuel system and the rest of the ignition system are okay. Although setting the pick-up gap correctly is a must when installing a new pick-up unit, the gap does not change or increase in service and does not require periodic adjustment. The main reason for the minimum air gap specification is to make sure the reluctor doesn't contact the pole piece as the vacuum plate moves.

2



Figure 35

When checking the pick-up gap, a .010" feeler gauge should not slip between the end of the pick-up coil core and an aligned reluctor tooth. **Caution:** - A feeler gauge can be forced between

the pick-up coil and reluctor tooth when the air gap is properly adjusted, so do not use force when checking with a .010" feeler. If it is necessary to set pick-up air gap, loosen the pick-up adjusting screw, align a reluctor tooth with the pick-up core and insert an .008" feeler between the reluctor tooth and pick-up core. Tighten the pick-up adjusting screw with the .008" feeler in place.

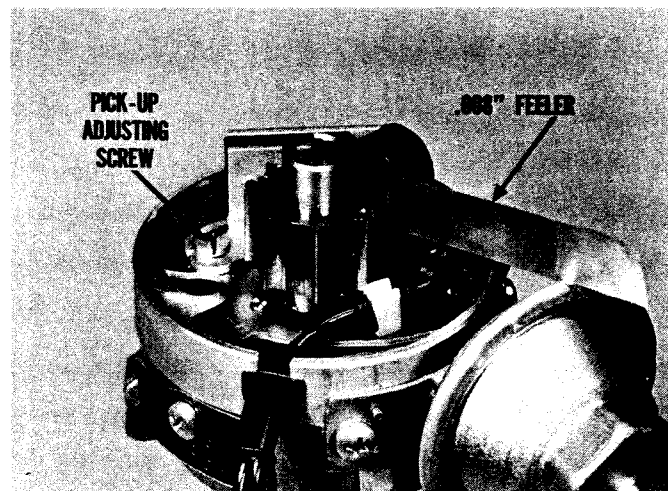


Figure 36

It will be necessary to use nonmagnetic feeler gauge because a feeler gauge that is attracted to the magnetism of the pole piece will give a false "feel" or drag. If nonmagnetic feeler gauges are not available, brass shim stock of the proper thickness can be used.

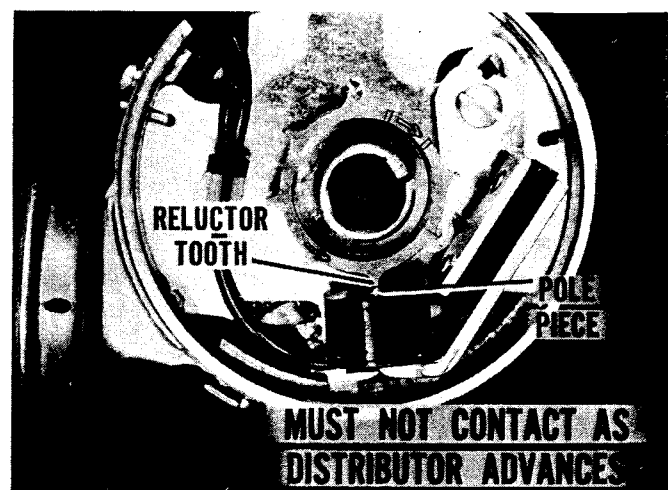


Figure 37

After setting the air gap, run the distributor on a test stand and apply vacuum to make sure

hat the reluctor teeth do not strike the pick-up core during vacuum advance check.

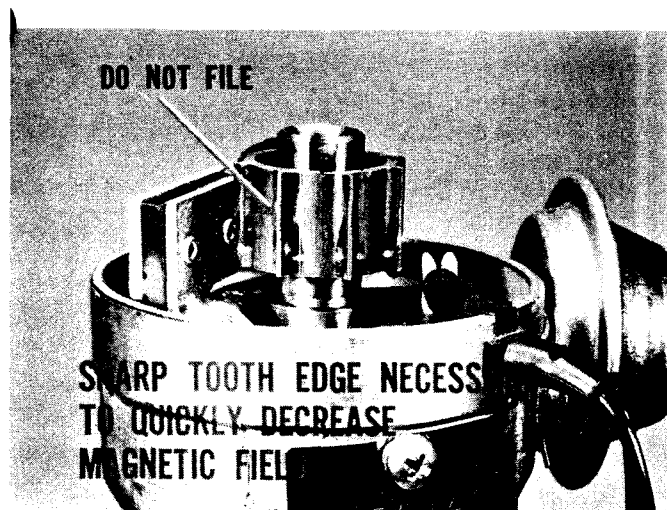


Figure 38

The reluctor teeth may appear to you to be a little rough at the edges. Do not try to clean them up by filing the edges. You may file too much and round the edges of the teeth. A sharp edge is needed to quickly decrease the magnetic field and induce the negative voltage in the pick-up coil. If the teeth are rounded, the voltage signal to the control unit will be erratic.

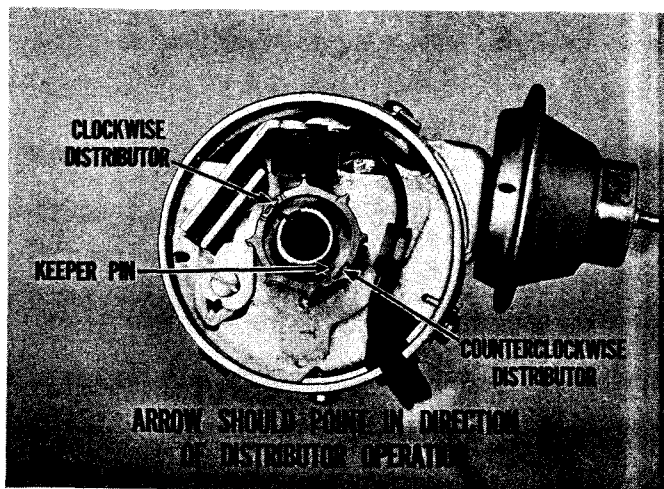


Figure 39

There are two small arrows on the reluctor that point in opposite directions. In a clockwise distributor, the arrow at the keeper pin that holds the reluctor in place should point clockwise. In a counter clockwise distributor, the arrow at the keeper pin should point counter-clockwise. If the arrow at the keeper does not point in

the direction of distributor rotation, remove the reluctor, turn it one-hundred-eighty degrees, and reinstall it. When removing the reluctor, be careful not to lose the keeper pin.

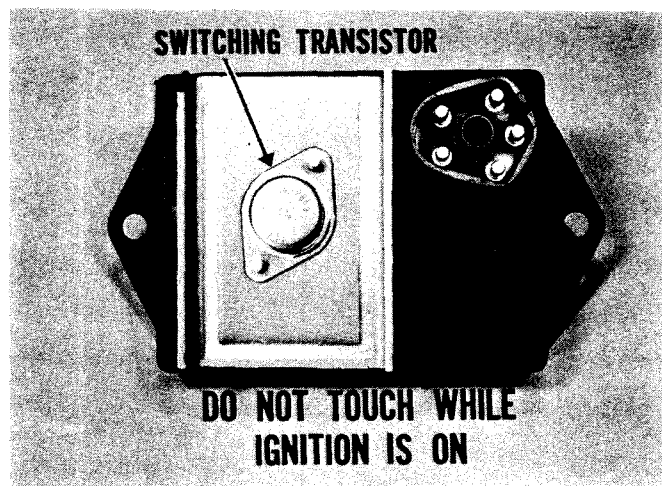


Figure 40

A new improved control unit is used in 1973. Some internal changes have been made to give better cold starting characteristics under very cold temperatures. The new control unit will have a new part number so check parts book before ordering. One control unit will be used on all model engines. The control units equipped with a speed limiter have been discontinued. Remember, this switching transistor will still give you a shock when the ignition is on.

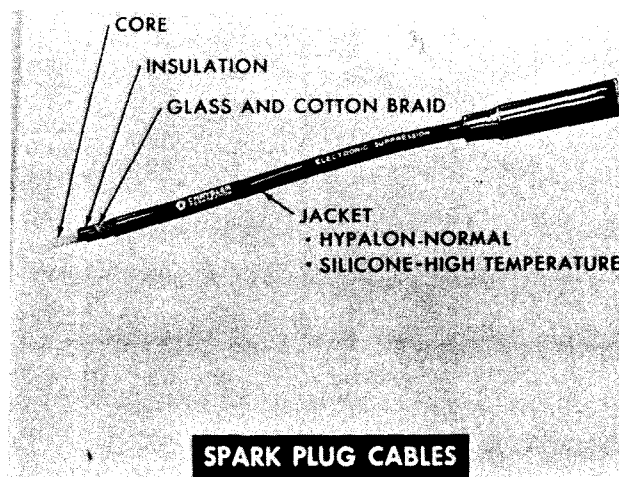
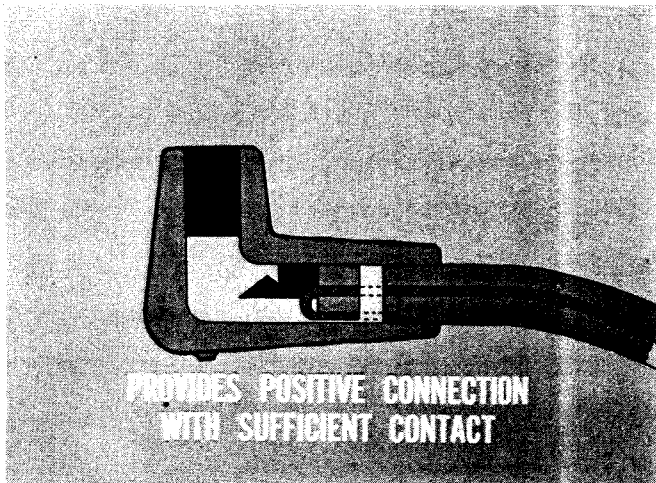


Figure 41

The new silicone ignition cables are equipped with a silicone-rubber outer covering that is highly flexible and is extremely heat resistant.

A fiberglass jacket has also been added which increases the strength and durability over the standard neoprene cables. This cable will be used on the rear four cylinders of the 400 and 440 Cubic Inch engines.

The hypalon Cable is used on all 225, 318, 360, 361 and 413 cubic inch engines. It will also be found on the front four cylinders of the 400 and 440 Cubic Inch engines.



4 Figure 42

At the terminals, the conductor has been wrapped back over the outer covering and the clip installed. This new construction provides a positive connection with sufficient contact for a good strong spark.



Figure 43

The increased strength and improved terminal construction of the new cables does not mean

that you can use the cable as a handle and pull it from the spark plug or the distributor cap. That's the easiest way in the world to disconnect the cable from the terminal and ruin the cable. Always remove the cable from the plug by firmly grabbing the terminal itself. The cover at the terminal is very flexible so this can be done quite easily.

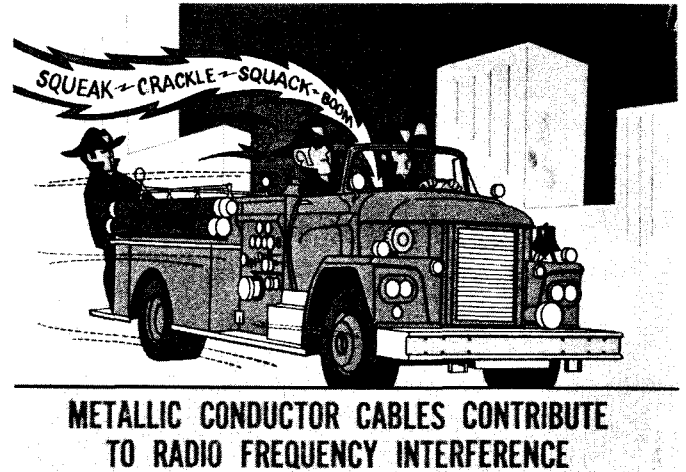


Figure 44

Metallic conductor ignition cables contribute substantially to what is known as "radio frequency interference," commonly referred to as R. F. I. In simple terms, this means that it can interfere with the other forms of communication equipment. The greatest danger from this interference lies in the fact that it can interfere with an even interrupt communication between community service vehicles such as police cars, fire trucks, ambulances and the like.

## NOTES

## TROUBLESHOOTING

### Without Electronic Ignition Tester

To properly test the Electronic Ignition System, the tester C-4166 should be used. In 1973, adapter C-4166-1, must be used with tester C-4166. But in the event they are not available, the system may be tested using a voltmeter and an ohmmeter. When ignition problems are suspected, the following procedure should be followed. Check battery and battery connections.



Figure 45

Chrysler Corporation hasn't used ignition cables with metallic conductors for about ten years. In addition, the Corporation has complied with the Federal Communications Commission and has removed all metallic conductor cables from their parts stock. You technicians can help out by refraining from installing any type of metallic conductor secondary cables on any car.

#### NOTES

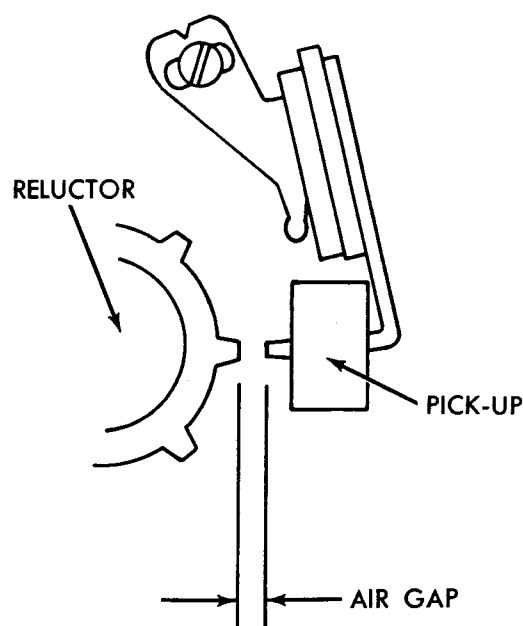
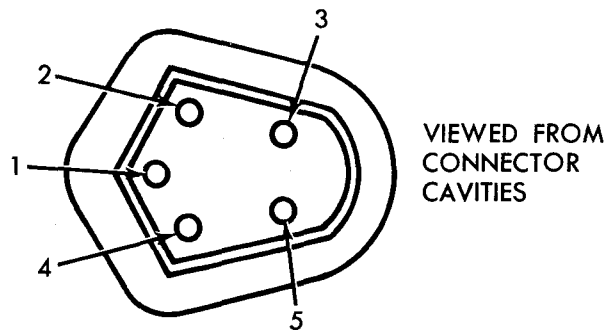


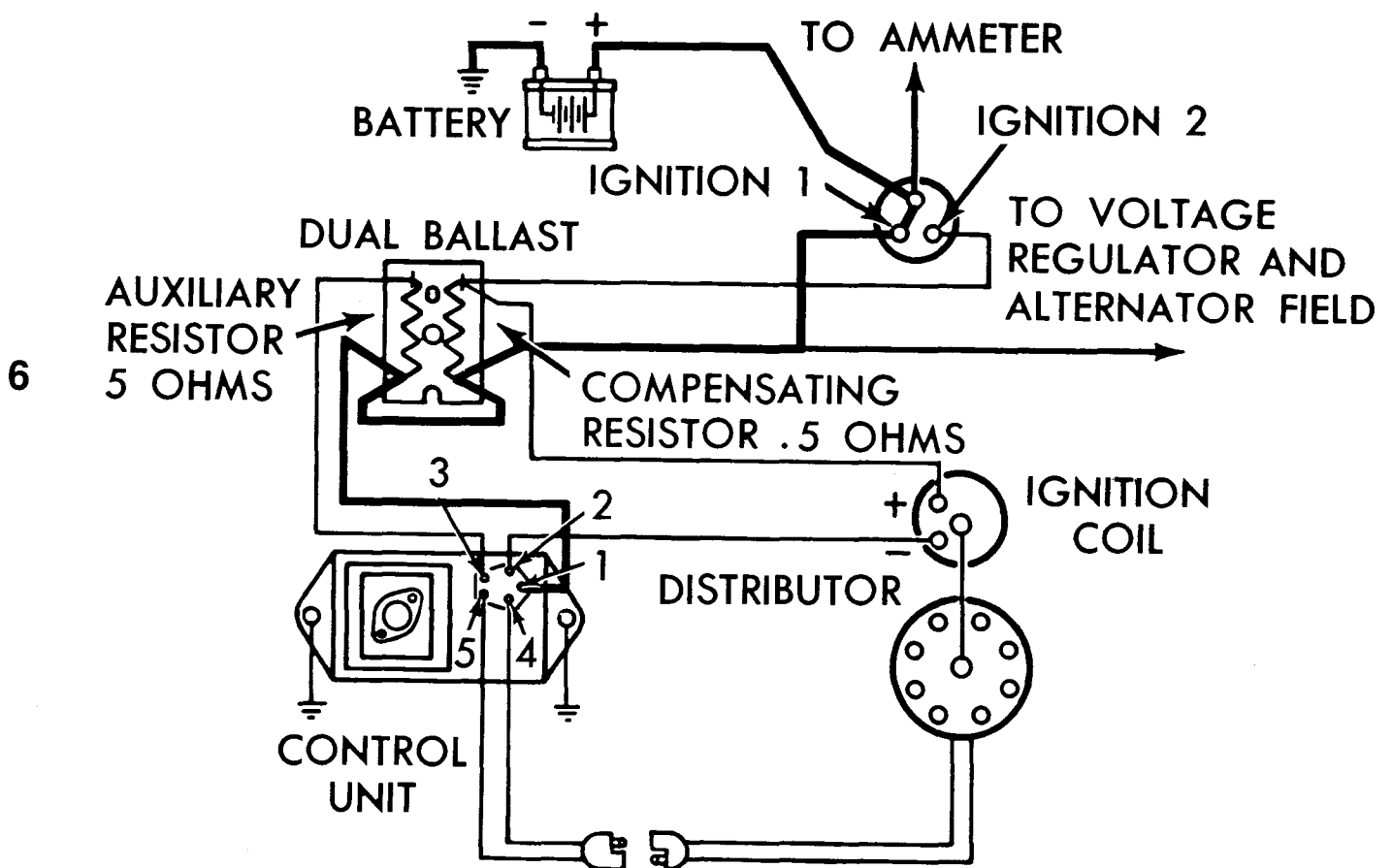
Figure 46

Check the air gap between the reluctor tooth and the pick-up coil. To set the air gap, loosen the pick-up coil hold down screw. Insert a .008" nonmagnetic feeler gauge between the reluctor tooth and the pick-up coil. Adjust the pick-up coil. Adjust the pick-up so that the .008" feeler gauge is snug. Tighten hold down screw. Visually inspect all secondary cables at the coil, distributor and spark plugs for cracks and tightness. Check primary wires at the ignition coil and ballast resistor for tightness. If the above checks do not determine the problem, the following steps will determine if a component is faulty.

**Figure 47**



Remove the multi-wiring connector from the control unit. Figure 47 shows the connector cavities. (Female pins) Turn the ignition switch "on". Connect the negative lead of a voltmeter to a good ground.



**Figure 48**

Connect the positive lead of the voltmeter to the wiring harness connector cavity No. 1 (Figure 47). Available voltage at cavity No. 1 should be within one volt of battery voltage with all accessories off. If there is more than a one volt difference, Figure 48 shows the circuit that must be checked.

**NOTE:** See wiring diagrams in appropriate service manual for *correct* wiring color codes.

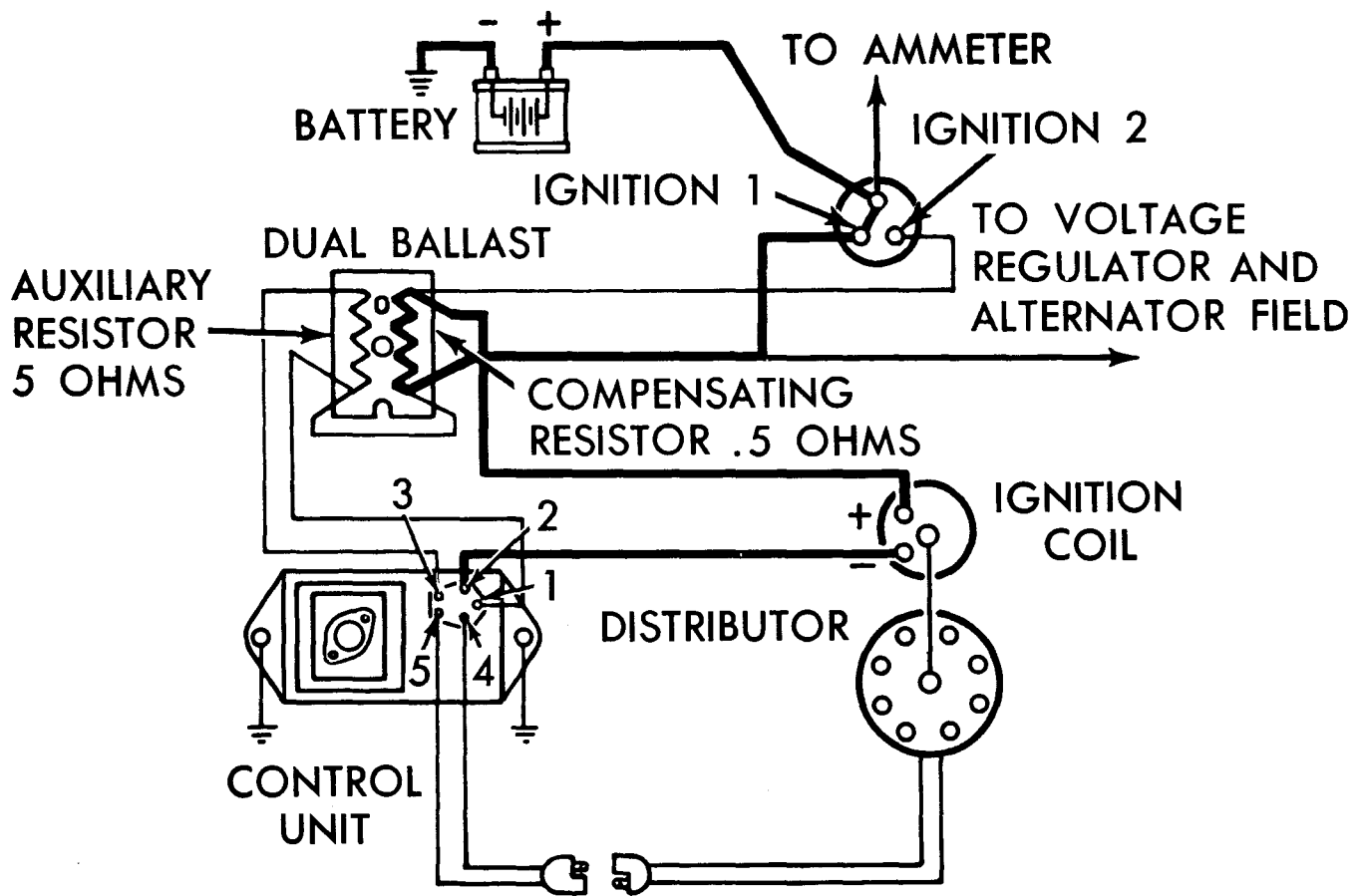


Figure 49

### NOTES

Connect the positive lead of the voltmeter to the wiring harness connector cavity No. 2 (Figure 47). Available voltage at cavity No. 2 should be within one volt of battery voltage, with all accessories off. If there is more than a one volt difference, Figure 49 shows the circuit that must be checked.

### NOTES

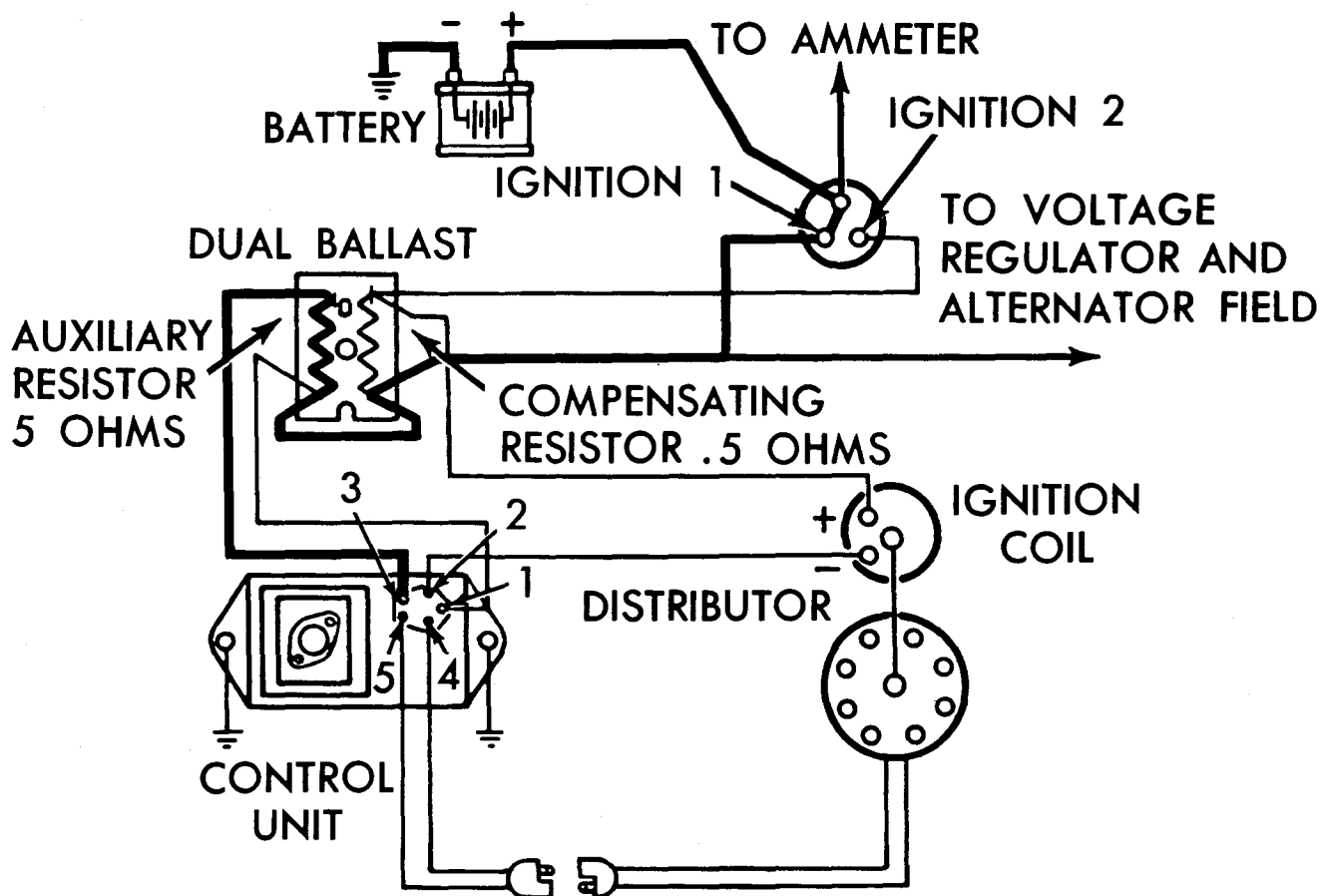
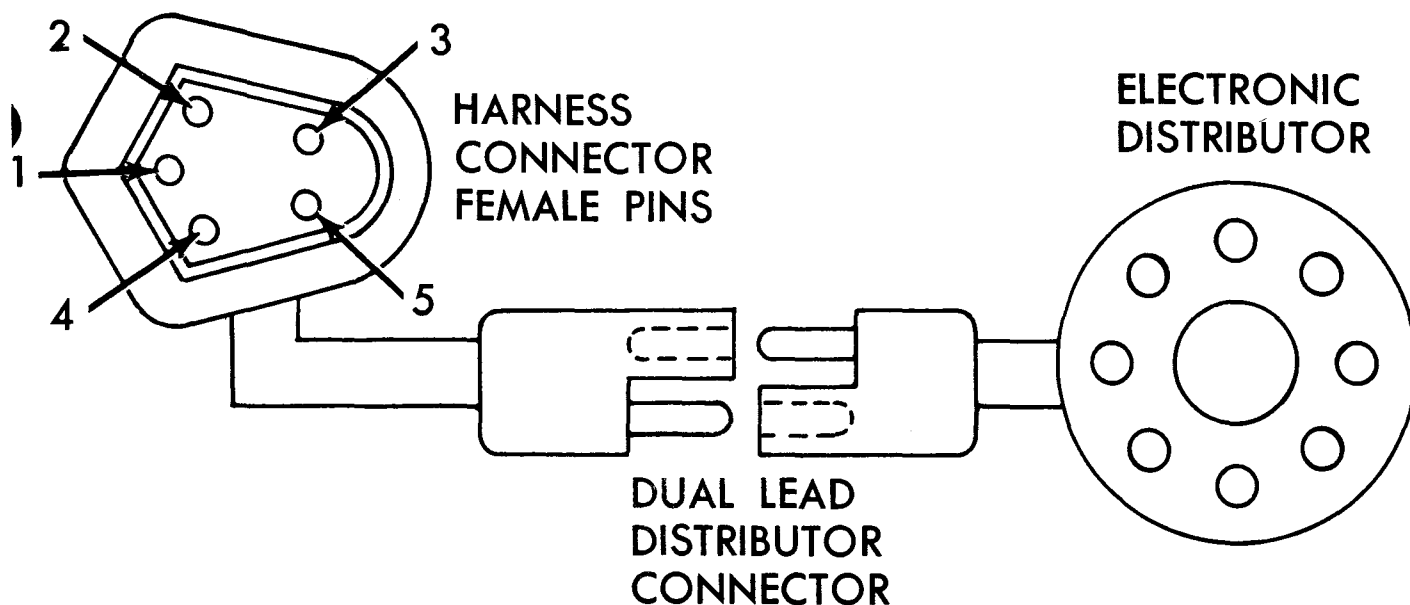


Figure 50

# NOTES

Connect the positive lead of the voltmeter to the wiring harness connector cavity No. 3 (Figure 47). Available voltage at cavity No. 3 should be within one volt of battery voltage, with all accessories off. If there is more than a one volt difference, Figure 50 shows the circuit that must be checked. Turn ignition switch "off".

## NOTES

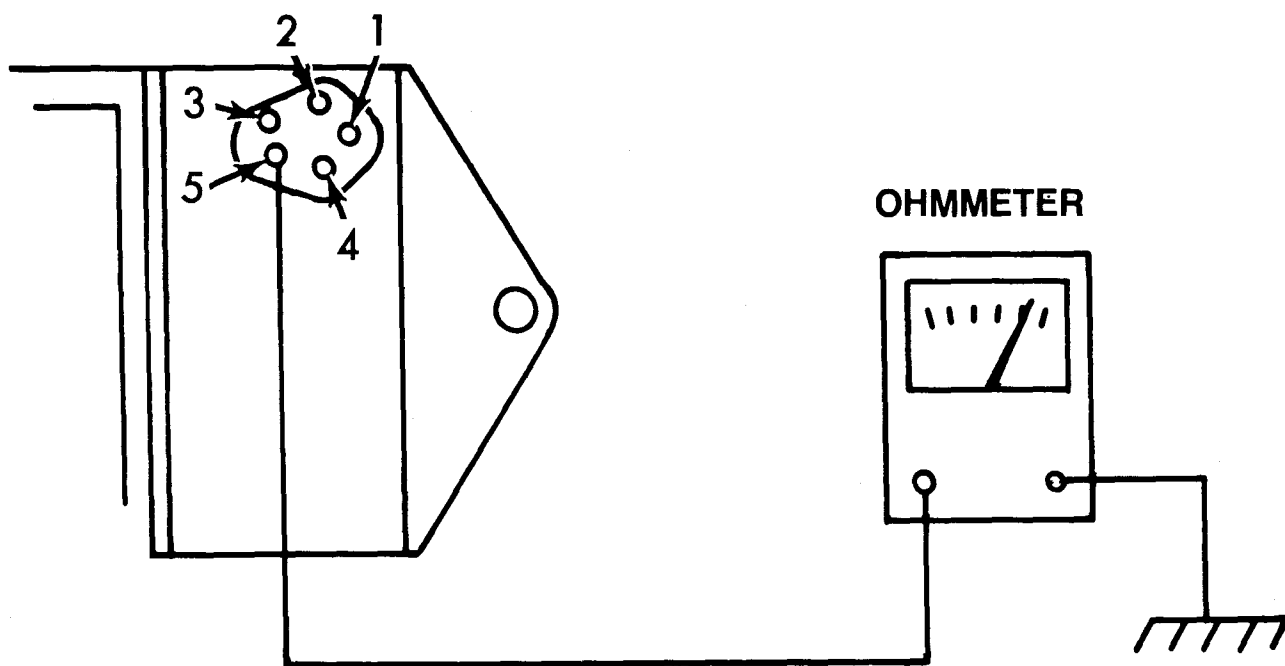


**Figure 51**

### NOTES

Connect an ohmmeter to wiring harness connector cavities No. 4 and No. 5. The ohmmeter resistance reading should be between 350 to 550 ohms. If reading is higher or lower than specified, disconnect the dual lead connector coming from distributor. Using the ohmmeter, check the resistance at the dual lead connector coming from the distributor. If the reading is not between 350 and 550 ohms, replace the pick-up coil assembly in the distributor. If the reading is within specs, check the wiring harness from the dual lead connector back to the control unit. Connect one ohmmeter lead to a good ground and the other lead to either dual lead connector pin of the distributor harness. Ohmmeter should show an open circuit. If the ohmmeter shows continuity, the pick-up coil in the distributor must be replaced.

### NOTES



**Figure 52**

**Summary; Figures 46 through 52**

**REMEMBER:** The electronic ignition tester does a complete job of testing *circuits and components*. If a problem does not show up when making the checks in figures 46 through 52, it means that the control unit or ignition coil is faulty. It is very unlikely that both units would fail at the same time. It then becomes a matter of trying a new control unit and, or, an ignition coil to see which one restores secondary voltage.

Connect one ohmmeter lead to a good ground and the other lead to the control unit connector pin No. 5. The ohmmeter should show continuity between ground and the connector pin. If continuity does not exist, tighten the bolts holding the control unit to the firewall. Then recheck, if continuity does not exist, the control unit must be replaced.

Reconnect wiring harness at control unit and distributor. *NOTE: Whenever removing or installing the wiring harness connector at the control unit, the ignition switch must be "off". Otherwise the control unit could be damaged.* Remove the high voltage cable from the center tower of the distributor. Hold the cable approximately 3/16" from the ground. Crank engine. If arcing does not occur, replace the control unit. Crank the engine again. If arcing still does not occur, replace the ignition coil.



### MOBILE TRAINING UNITS

Each Chrysler Corporation Training Center operates Mobile Units for technical instruction in certain locations not situated near a Center. All Mobile Units are full-equipped with the necessary manuals, hand tools, Special Tools, and training components, to assure the Student the same high level of instruction offered in the Training Centers.

Staffed by professional Automotive Service Training Instructors. Mobile Units travel from one location to another instructing technicians in various subjects, scheduled and publicized well in advance to offer as many technicians as possible the opportunity to attend.

Mobile Unit Schedules are available from all Regional Offices or Parts Sales and Service District Managers.

See inside front cover - "Training Center"