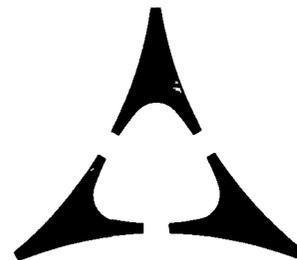


TECHNICAL SERVICE BULLETIN

Dodge

**DART
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SERVICE DEPARTMENT

The objective of this bulletin is to furnish all Dodge dealers and their service personnel with information regarding 1966 Dodge fleet models equipped with a Motorola Transistor Ignition System.

This system is manufactured by Motorola Automotive Products, Franklin Park, Illinois. Warranty service and parts information can be obtained through local Motorola Service Stations.

The Motorola Transistor Ignition System consists of a newly designed ignition coil, ballast resistor, transistor simplifier and all the necessary wiring to complete the installation. These parts are used in conjunction with our conventional ignition system components as shown in Figure 1.

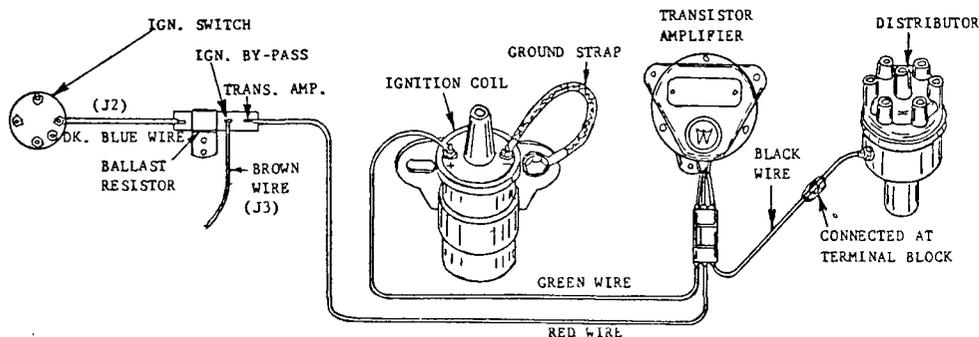


Figure 1 Motorola Transistor Ignition System

If you encounter a malfunction in this system, the following information as outlined below, will assist you in diagnosing and correcting the condition.

NOTE: The following information applies to only the transistor ignition components. Be sure to check the remaining portion of the ignition system as outlined in the appropriate 1966 Service Manual.

(Over)

February 23, 1966

No. D66-60

ELECTRICAL

Motorola
Transistor
Ignition
System

MODELS: All
1966 Dodge Fleet
Models So Equipped

P-669-C

OF INTEREST TO:	
DEALER	
MANAGER	
SERVICE MGR.	
PARTS MGR.	
TECHNICIANS	

CHECK-OUT PROCEDURE

It is necessary to perform several voltmeter checks on a transistor ignition system to be sure it is installed and operating correctly. Connect a DC voltmeter to the ballast resistor as shown in the figures below and proceed as follows to check out the system.

I. Voltage Check

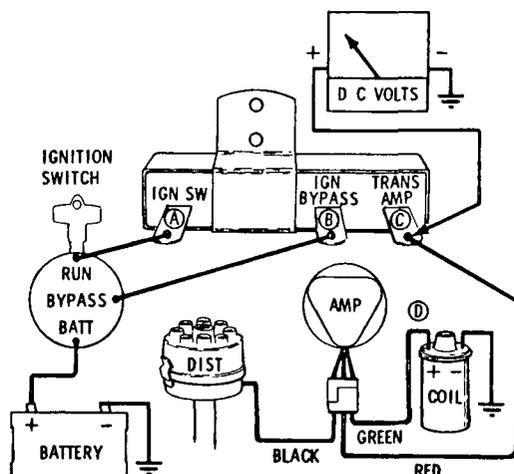


Figure 2

1. Refer to Figure 2. With the ignition "ON", engine not running, and the distributor breaker points "OPEN", the voltmeter should read 9.5 volts, i.e. battery voltage.
2. With ignition "ON", engine not running, and the distributor breaker points "CLOSED", the voltmeter should read approximately 3 to 5 volts.
3. With engine running at idle, the voltmeter should read approximately 6 to 8 volts.

NOTE: The above voltmeter readings present average voltages and may vary from vehicle to vehicle. Some of the causes that contribute to these variations are: Condition of battery, breaker points, resistance in the ignition switch or wiring. With the engine running, the engine R.P.M. and distributor breaker point dwell settings will also affect these voltage readings. However, any marked deviation from

the above voltmeter readings indicates a malfunction which should be corrected. (Refer to "Trouble Shooting Procedure")

II. Ballast Resistor By-Pass Check

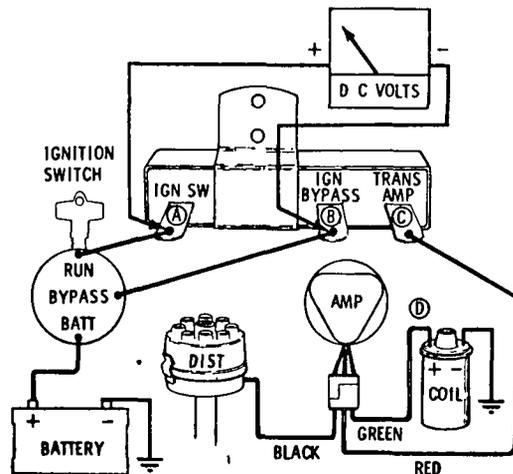


Figure 3

1. Refer to Figure 3. With ignition "ON", engine not running, and the distributor breaker points "OPEN", the voltmeter should read 0 volts.
2. With ignition "ON", engine not running, and the distributor breaker points "CLOSED", the voltmeter should read approximately 6 volts.
3. With ignition "ON", and the engine cranking, the voltmeter should read approximately 1 volt or less. When the engine starts, the voltmeter should read approximately 3 to 5 volts.

NOTE: Any marked deviations from the above voltmeter readings indicate a malfunction which should be corrected. (Refer to "Trouble Shooting Procedure")

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TROUBLE SHOOTING PROCEDURE

If the check out procedure has been performed and the system is still not functioning correctly, connect a DC voltmeter as shown in the figures below and proceed as follows:

- I. Connect the voltmeter as shown in Figure 4. With the ignition "ON", engine not running, distributor breaker points "CLOSED", and all accessories turned "OFF", the voltmeter should not read more than 1.5 volts. A higher voltage reading indicates one of the following conditions may exist and must be corrected.

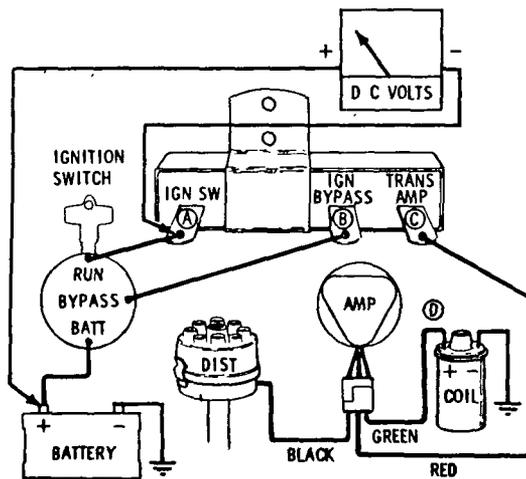


Figure 4

1. Excessive resistance in the circuit from the battery through the ignition switch to the ballast resistor. Check all wiring for incorrect installation or loose connections. Excessive resistance in the circuit between the battery and ballast resistor will cause hard starting, poor acceleration and sluggish engine performance.

II. Connect the voltmeter as shown in Figure 5. With the ignition "ON", engine not running, distributor breaker points "OPEN", and all accessories turned "OFF"; the voltmeter should read 9.5 volts or more (battery voltage) on all three ballast resistor terminals. Any marked deviation from the voltmeter reading indicates one of the following conditions may exist and must be corrected.

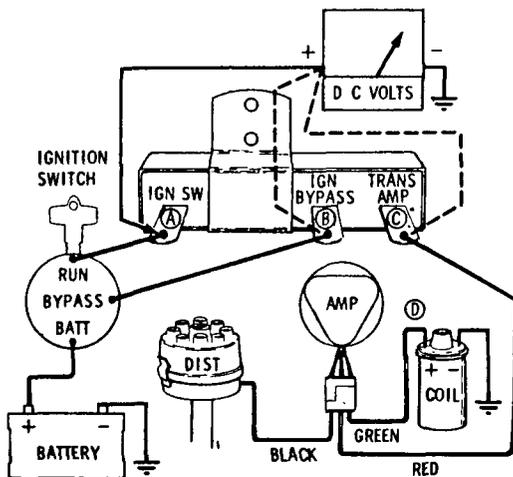


Figure 5

1. If the correct battery voltage (9.5 or more) is present at terminal "A" of the ballast resistor and there is no voltage at terminals "B" or "C", and the ballast resistor is cool, this indicates the ballast resistor is defective and must be replaced.
2. If the voltage at terminal "C" is lower than the voltage at terminal "A", the fault may be caused by one of the following conditions:
 - (a) Defective wiring to distributor breaker points. Repair as necessary.
 - (b) Shorted transistor amplifier. Turn off the ignition, disconnect the 3 prong connector at the amplifier. Turn the ignition on and if voltage at terminal "C" is now the same as terminal "A" the transistor amplifier is defective and must be replaced.
 - (c) If voltage at terminal "C" is still not the same as terminal "A", the installation may be incorrect. Check all wiring

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connections and be sure there are no other connections at the ballast resistor other than what is shown in Figure 5.

- (d) With the amplifier unplugged, disconnect the wiring connector from terminal "B" at the ballast resistor. If the voltage at terminal "C" is now the same as terminal "A", the ignition by-pass wiring is defective. If the voltage at terminal "C" is still lower than at terminal "A", the ballast resistor is defective and must be replaced.

III. Connect the voltmeter as shown in Figure 6. With the ignition "ON", engine not running, and the distributor breaker points "CLOSED", the voltmeter should read approximately 3 to 5 volts. If the voltmeter reads 9.5 volts or more (battery voltage), the fault may be caused by one of the following conditions:

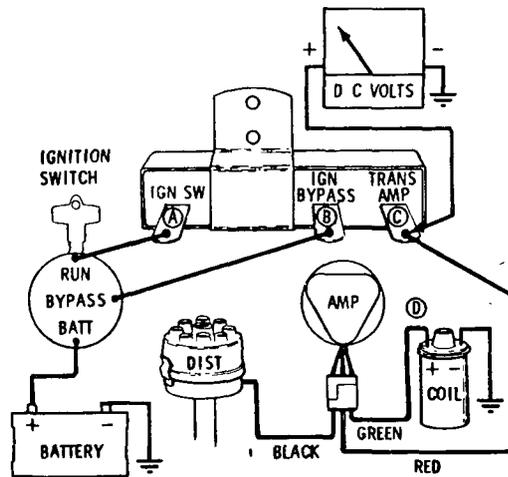


Figure 6

1. Distributor breaker points not closing or defective wiring to breaker points.
2. Defective transistor amplifier or ignition coil. Measure the voltage at the positive terminal of the ignition coil (D). If the voltmeter reads 9.5 volts or more (battery voltage), the ignition coil is im-

properly grounded or defective. If zero voltage is read at this point (D), the transistor amplifier is defective and must be replaced.

3. If the voltmeter reads zero volts at the transistor amplifier terminal (C) of the ballast resistor, and the ballast resistor is cool, the ballast resistor is defective and must be replaced.

If all voltages read as specified in the check out and trouble procedures, the ignition coil should be checked. This can be done by substituting a known good Motorola coil in the circuit.

POLICY: Information Only



R. H. KLINE
Manager - Service
DODGE DIVISION

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