DELCO-REMY

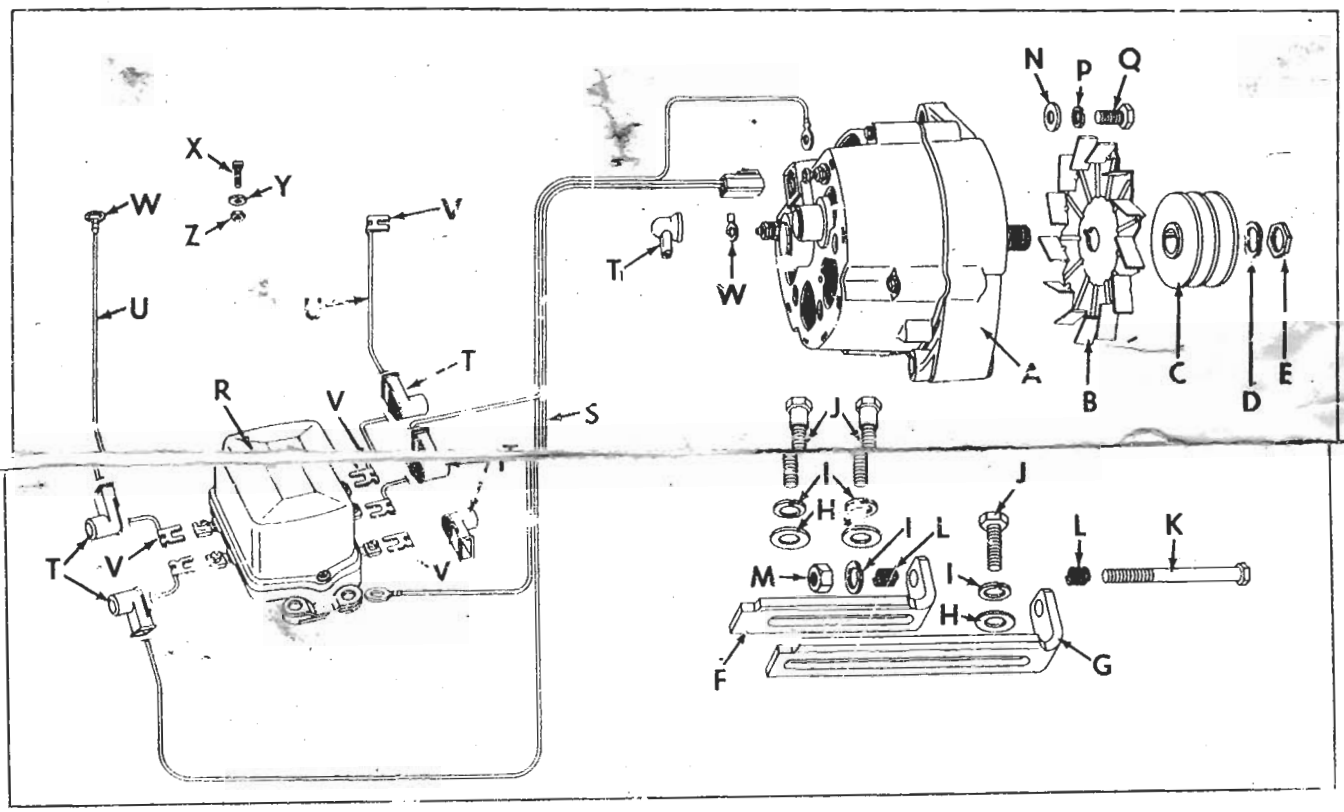
INSTRUCTION SHEET

DELCOTRON® Generator Application

UNIVERSAL DELCOTRON GENERATOR MOUNTING PACKAGE

The parts in this package are to be used for installing a 1-D Series, 12-volt, negative ground, clockwise rotation, Delcotron diode-rectified a.c. generator. This package includes all parts illustrated below, as well as additional parts which may be required on certain applications. A complete list and description of all parts is included. Also, for ease of identification, each illustration is coded to this parts list.

Exploded View Of Typical Installation



Universal Package Parts

ITEM	PART	DESCRIPTION	QUAN.
A	DELCOTRON		1
B	Fan (CW only)†		1
C	Pulley 2½" Dia.	For ⅜" Belt*	1
D	Spring Washer	(On DELCOTRON)	1
E	Shaft Nut	(On DELCOTRON)	1
	Shaft Nut (Long)	For Double Groove Pulley	1
F	Mounting Brkt.	Short "L" Shaped	1
G	Mounting Brkt.	Long "L" Shaped	1
H	Washer	⅜" x ⅞" x 1/16"	2
		7/16" x 13/16" x 1/16"	6
I	Lockwasher	⅜"	3
		7/16"	3

ITEM	PART	DESCRIPTION	QUAN.
J	Bolt	⅜"-16 x 1⅛"	2
		7/16"-14 x 1⅛"	2
		7/16"-14 x 1¾"	2
K	Bolt	⅜"-16 x 3½"	1
L	Bushing	7/16" to ⅜" x ¼"	6
		7/16" to 5/16" x ¼"	2
M	Nut	⅜"-16 Hex	1
N	Washer	5/16" x 27/32" x 1/16"	1
P	Lockwasher	5/16"	1
Q	Bolt	5/16"-18 x ¾"	1
R	Regulator		1
S	Wiring Harness	3 Conductor Cable	1
T	Terminal Boot	For Reg. Terminals	5
T1	Terminal Boot	For Delcotron Output Terminal	1

†For CCW Rotation Use 1959703 Fan
*For ½" Belt, Use 1 39886 Single Groove Pulley

Universal Package Parts

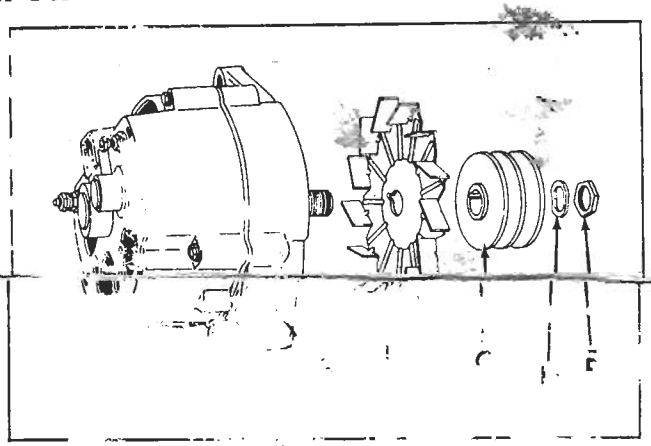
(Continued)

ITEM	PART	DESCRIPTION	QUAN.
U	Cable	12' of #14 Red	1
V	Terminal	Spade	4
W	Terminal	Eyelet 3/8"	1
		Eyelet 1/4"	1
X	Bolt	10-32 x 5/8"	1
Y	Washer	3/16" x 7/16" x 1/32"	1
Z	Nut	10-32 Hex	1
AA	Spacer	3/8" x 7/8" x 1/2"	1
BB	Spacer	7/16" x 1" x 1/2"	2

ITEM	PART	DESCRIPTION	QUAN.
CC	Nut	7/16"-14 Hex	3
DD	Bolt	5/16"-18 x 1"	2
EE	Washer	5/16" x 21/32" x 1/16"	4
FF	Adj. Brkt. Ext.		1
GG	Lockwasher	5/16"	2
HH	Nut	5/16"-18 Hex	2
JJ	Spacer	1/4" x 1/2" x 5/8"	3
KK	Screw	1/4"-14 x 1 1/4"	3

I. Preparing Generator For Installation

1. Remove shaft nut and spring washer from generator as illustrated. Generator shaft is designed with a 5/[illegible] key in end of shaft in place of a keyway.
2. Place fan, double groove pulley, spring washer and long nut on shaft. For 1/2" belt, 1939886 pulley.
3. Secure shaft in smooth jaw vise and tighten shaft nut with a torque wrench, until 40 [illegible] lb. ft. of torque is obtained. Use 5/16 [illegible] socket to assist assembly (or disassembly).

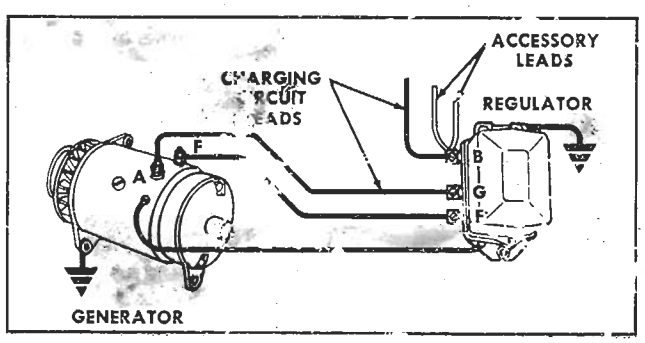


Disconnect Battery Before Working on Electrical System

If the battery is not first disconnected, an accidental or improper electrical contact to the regulator or generator can cause permanent damage.

III. Removing Standard Equipment

1. Disconnect all leads from original generator and regulator. Identify charging circuit and accessory leads as illustrated.
2. Remove regulator and generator.
3. Check sections IV, VI, and VII to establish if generator mounting bracket, adjusting bracket, or fan belt must also be removed.

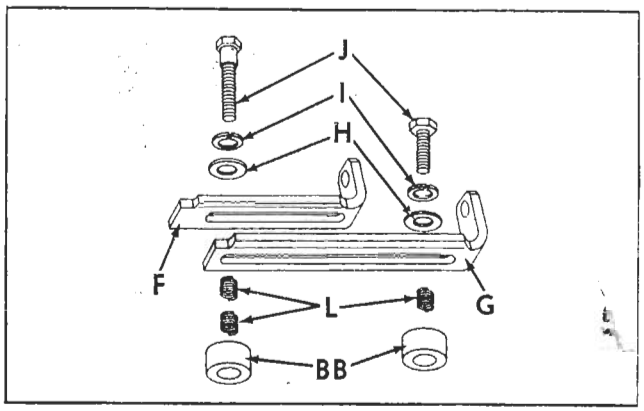


IV. Providing Mounting For Generator

Refer to **"A" Method, "B" Method, or "C" Method,** as indicated below, to provide generator mounting.

"A" Method (Use the set of matched brackets supplied in the package as illustrated).

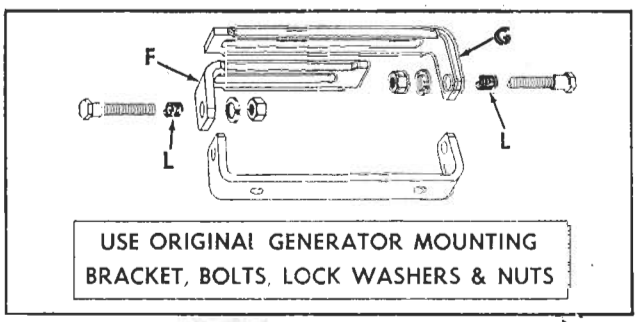
1. Remove original generator mounting bracket.
2. Use matched brackets to provide mounting for generator as described and illustrated below.



a. Position short "L" shaped bracket over long "L" shaped bracket so that brackets will form an "F" shape and provide approximately 2" distance between "ears."
b. Position loose generator mounting bracket assembly on original generator mounting bracket attaching boss.
c. Use 7/16" to 3/8" reducing bushings supplied as necessary to bush the mounting bracket slots when 3/8" engine bolts are required.
d. Position spacers between loose generator mounting bracket assembly and original generator mounting bracket attaching boss when necessary for clearance or future belt adjustment.
e. Insert original or longer bolts supplied with original lock washers and supplied flat washers and secure the loose bracket assembly to the engine boss.

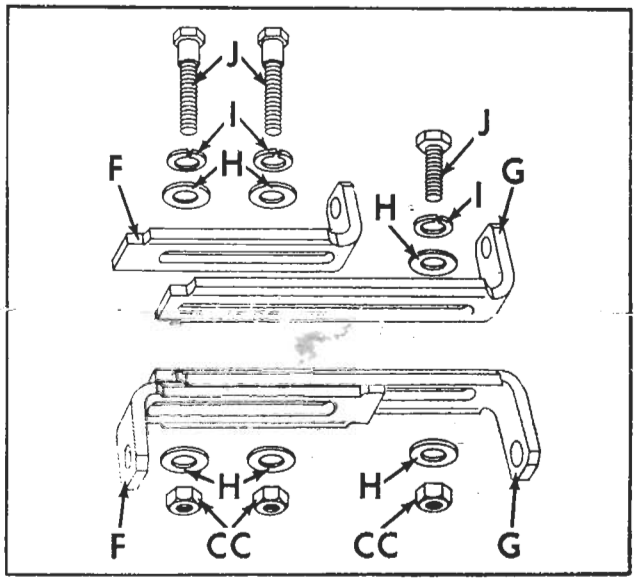
"B" Method (Use the set of matched brackets supplied in the package and an additional set of matched brackets, Package No. 1961205.)

1. Use one pair of brackets to provide support for the second pair of brackets as described and illustrated below.



a. Position short "L" shaped bracket over long "L" shaped bracket so that brackets will form a "U" shape and provide approximately 6" distance between "ears."
b. Position the loose mounting bracket support assembly, just assembled, over the original d.c. generator mounting bracket. In some cases, either or both "L" bracket "ears" may be placed inside the original d.c. generator mounting bracket "ears."
c. Slide brackets as necessary to fit original d.c. generator mounting bracket.
d. Use 7/16" to 3/8" reducing bushings or use 7/16" to 5/16" reducing bushings supplied as necessary to bush the holes in "L" bracket "ears" to accept the 3/8" or 5/16" original generator mounting bolts.
e. Secure the loose mounting bracket support assembly to the original d.c. generator mounting bracket using original generator mounting bolts, lock washers and nuts.

2. Use second pair of brackets to provide mounting for the generator as described and illustrated below.



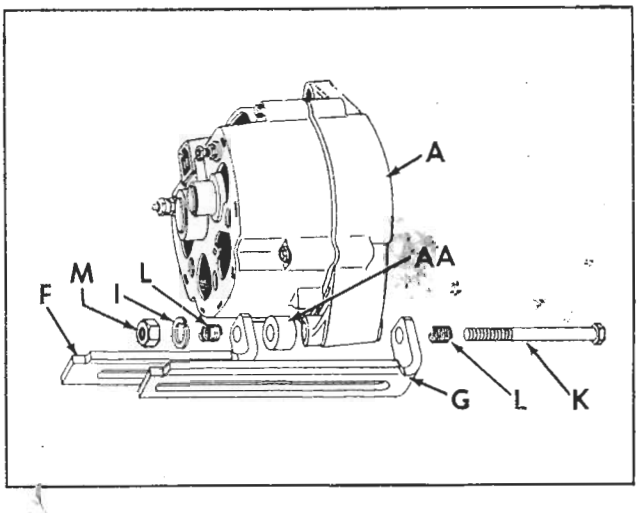
a. Position short "L" shaped bracket over long "L" shaped bracket so that brackets will form an "F" shape and provide approximately 2" distance between "ears".
b. Position loose generator mounting bracket assembly on support bracket assembly.
c. Secure all brackets to one another using three 7/16" bolts, six plain washers, three lock washers and three nuts provided. Leave bolts finger tight.

"C" Method (Use original a.c. generator mounting bracket only. Discard matched brackets supplied.)

1. Use original a.c. generator mounting bracket to provide mounting for the generator as described below.
   a. Drill out or bush **mounting bracket** holes if necessary to accept the proper 3/8" generator mounting bolt.
   b. Position sufficient washers or spacers between original a.c. generator mounting bracket "ears" to provide approximately 2" distance between bracket "ears."

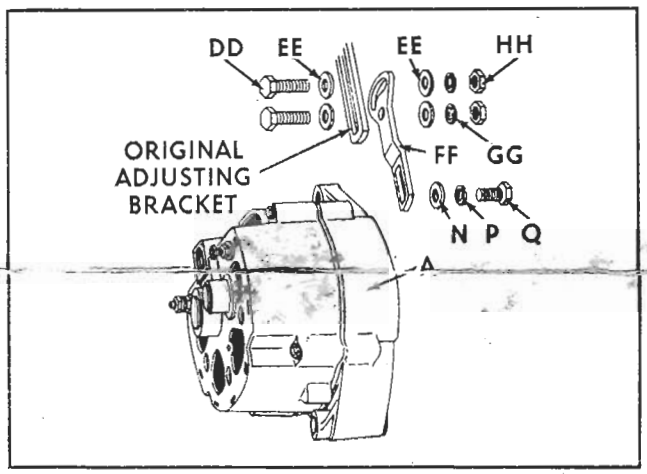
V. Assembling Generator To Mounting Bracket

1. Hold generator in mounting position and slide matched mounting brackets forward or backward to obtain proper bracket span, as well as to align generator pulley and engine pulleys. Use spacer if necessary as illustrated. NOTE: For best generator bearing, brush, and belt life, on a single belt drive, align engine pulleys with inside generator pulley groove whenever possible.
2. Use 7/16" to 3/8" reducing bushings supplied as necessary to bush the **mounting bracket** holes to accept the proper 3/8" generator mounting bolt.
3. Secure the generator to the mounting bracket using bolt, lockwasher and nut supplied.



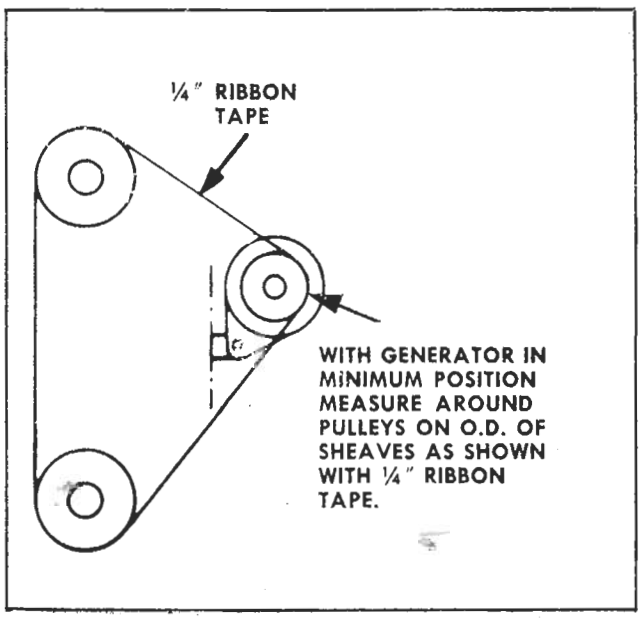
VI. Attaching Adjusting Bracket To Generator

1. The generator adjusting bracket must be properly aligned with the generator adjusting lug to permit belt/s to be tightened and to permit future belt adjustment.
   a. If original bracket is too short or does not provide proper alignment with the generator, the adjusting bracket extension provided may be used as illustrated.
   b. Move adjusting bracket to an alternate location when necessary.
   c. Reoperate original bracket if necessary.
2. Secure the adjusting bracket or adjusting bracket extension to the generator adjusting lug.



VII. Selecting Fan Belt

1. For best results, replace worn fan belt/s.
2. If longer or shorter belt than the original is needed, proceed as follows:
   a. With the generator installed and the adjusting bracket attached, loosen adjusting bracket attaching bolt to permit the generator to be rotated toward the engine as far as possible.
   b. Use a steel ribbon tape as illustrated to measure around the pulleys to obtain a minimum belt length. (Adhesive tape wrapped around the pulleys will aid in measuring.)
   c. Add 3/4" to this measurement to obtain the belt length.
3. Choose a fan belt (or matched belts for a dual belt drive) with the proper length, having the same width and belt angle dimension as the original. An automotive quality, die-cut, cog-type, belt is always desirable.

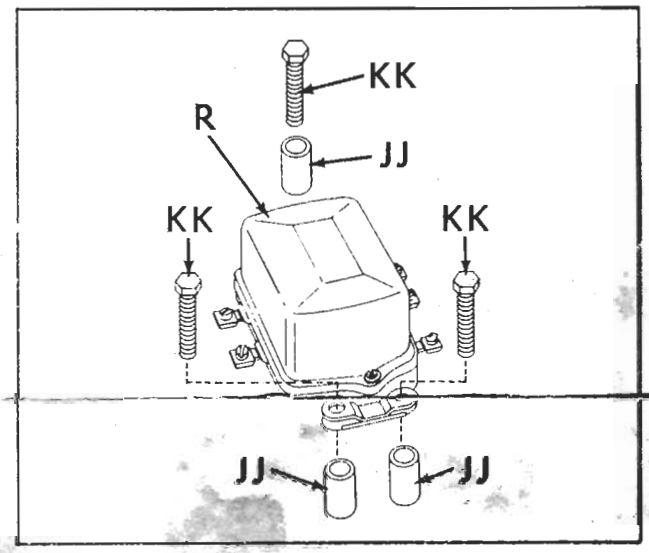


VIII. Installing and Adjusting Fan Belt/s

1. Be sure generator pulley is aligned with crankshaft pulley before installing belt/s. If difficulty is encountered in installing fan belt/s either loosen generator mounting and tip generator pulley towards engine pulleys until belt/s can be properly seated or use a cloth rag to place tension on belt/s and permit belt/s to be lifted into proper groove/s.
   NOTE: Do not use screw driver or other sharp object to seat belts.
2. After belt/s are installed, adjust belt tension to prevent slippage between the generator pulley and drive belt. Check by applying a torque wrench to generator shaft nut, exerting force in a clockwise direction. Adjust belt tension to a minimum of 15 lb. ft. of torque on a single belt drive and 30 lb. ft. of torque on a dual belt drive.
3. Check outboard clearances to be sure generator will not contact fender panel, torsion bars, wheel arms etc.
4. Tighten all generator mounting and adjusting bolts and nuts securely.

IX. Installing Regulator

1. If regulator terminals do not cause interference with sheet metal or etc., install regulator using original regulator mounting screws as indicated in step a. or b.
   a. Fasten regulator, in original regulator mounting location, if mounting holes line up.
   b. Punch or drill new holes if mounting holes do not line up.
2. If regulator terminals cause interference with sheet metal or etc., follow step a. or b.
   a. Place three spacers (½" C.D. ⅝" long) beneath regulator mounting feet and fasten regulator using three regulator mounting screws supplied.
   b. Punch or drill new holes to move regulator a short distance from original location to relieve interference. Use original regulator mounting screws.

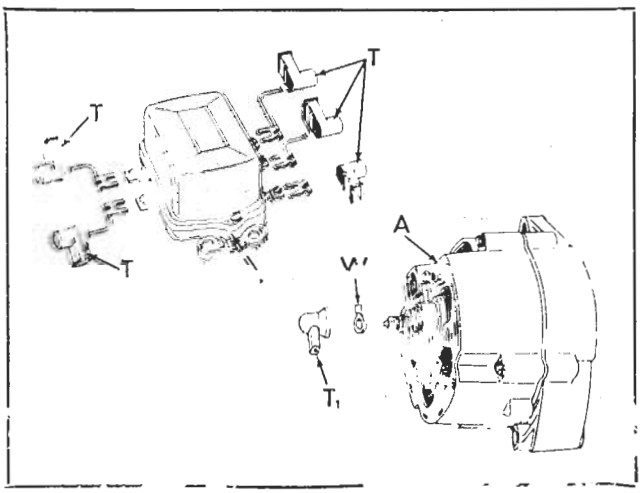


X. Do Not Polarize DELCOTRON Generator

This DELCOTRON generator must not be polarized. To attempt to do so will damage the regulator. Do not short across or ground any of the terminals on the regulator or generator.

XI. Protect The Wiring Harness and Terminals

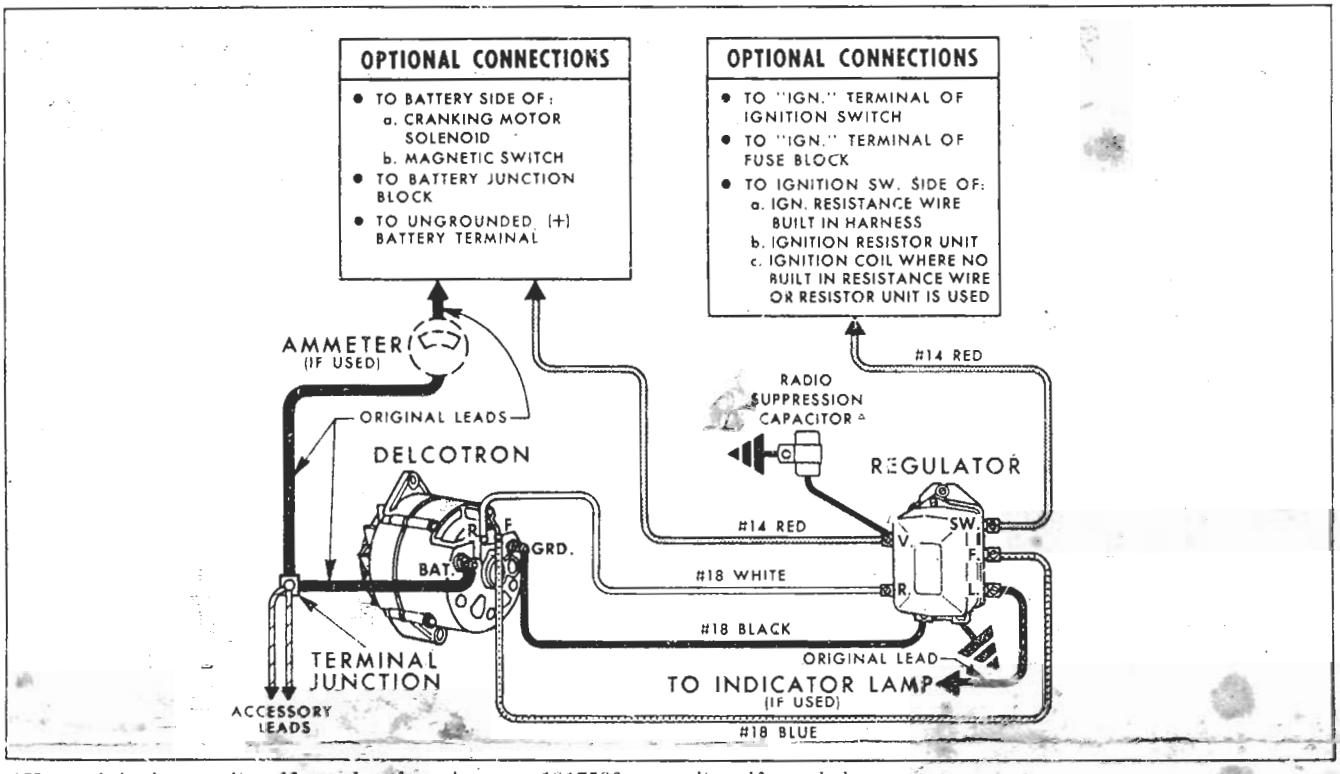
1. Shorts or grounds in the wiring harness can be caused by vibration, heat, oil, or pinching of wires. To prevent damage to the electrical equipment:
   a. Use the five terminal boots supplied to protect the adjoining terminals of the regulator, as illustrated.
   b. Cut off old terminal of original charging lead and thread lead through outer terminal boot supplied. Solder ¼" eyelet terminal to lead.
   c. Follow original wiring routing as much as possible.
   d. Leave sufficient slack in the wires to prevent damage due to engine vibration.
   e. Use existing clamps when possible or tape securely at vibration points to prevent insulation from wearing through.



XII. Wiring Of Units

1. Use wiring supplied in package and the original generator to battery leads to make connections on this installation as specified on the wiring diagram and in the wiring table.

NOTE: For all 1953-1960 Buick passenger cars, use wiring information furnished on instruction sheet DR-5007S.



△Use original capacitor if good, otherwise use 1917580 capacitor if needed.

WIRING TABLE (Negative Ground)

Gen. "BAT" To Original Battery Source	Accessory Source To Battery Source	Reg. "V" To Optional Connection	Reg. "R" To Gen. "R"	Reg. "F" To Gen. "F"	Reg. "GRD" To Gen. "GRD"	Reg. "SW" To Optional Connection	Reg. "L" To Indicator Lamp
Original Charging Leads‡	Original Accessory Leads‡	#14 Red	Rainbow Cable #18 White	Rainbow Cable #18 Blue	Rainbow Cable #18 Black	#14 Red♦	Original Indicator Lamp Lead*

‡Connect original charging circuit leads and accessory leads except indicator lamp lead, if used, which were disconnected from "GEN" (or "ARM") and "BAT" terminals of original d.c. regulator together, using bolt, washer and nut supplied. Insulate terminal junction with tape and secure to existing wire harness, to prevent vibration.

♦Connect to most convenient "optional connection" indicated in illustration. Scrape, splice, solder and tape to existing wire if necessary.

*Assemble terminal, supplied, to original lead if necessary. Leave "L" terminal open if indicator lamp is not used.

XIII. Completing Installation

1. Check generator mounting bolts, adjusting lug bolt, and pulley shaft nut for tightness.
2. Recheck wiring with wiring table and wiring diagram. Make sure all connections are tight.
3. Make sure **exposed terminals** of original harness which have **not** been used are **individually** taped to prevent short circuits.
4. Reconnect battery ground strap.
5. Check belt tension after generator has been in service a short time and adjust tension. (See Section VIII.)

DELCO-REMY DIVISION
General Motors Corporation
Anderson, Indiana
OSHAWA, ONTARIO