



---

**1988**

---

**BMW 325/325i/325is**

---

**Electrical**

---

**Troubleshooting**

---

**Manual**

---

**BMW of North America, Inc.  
Montvale, New Jersey**

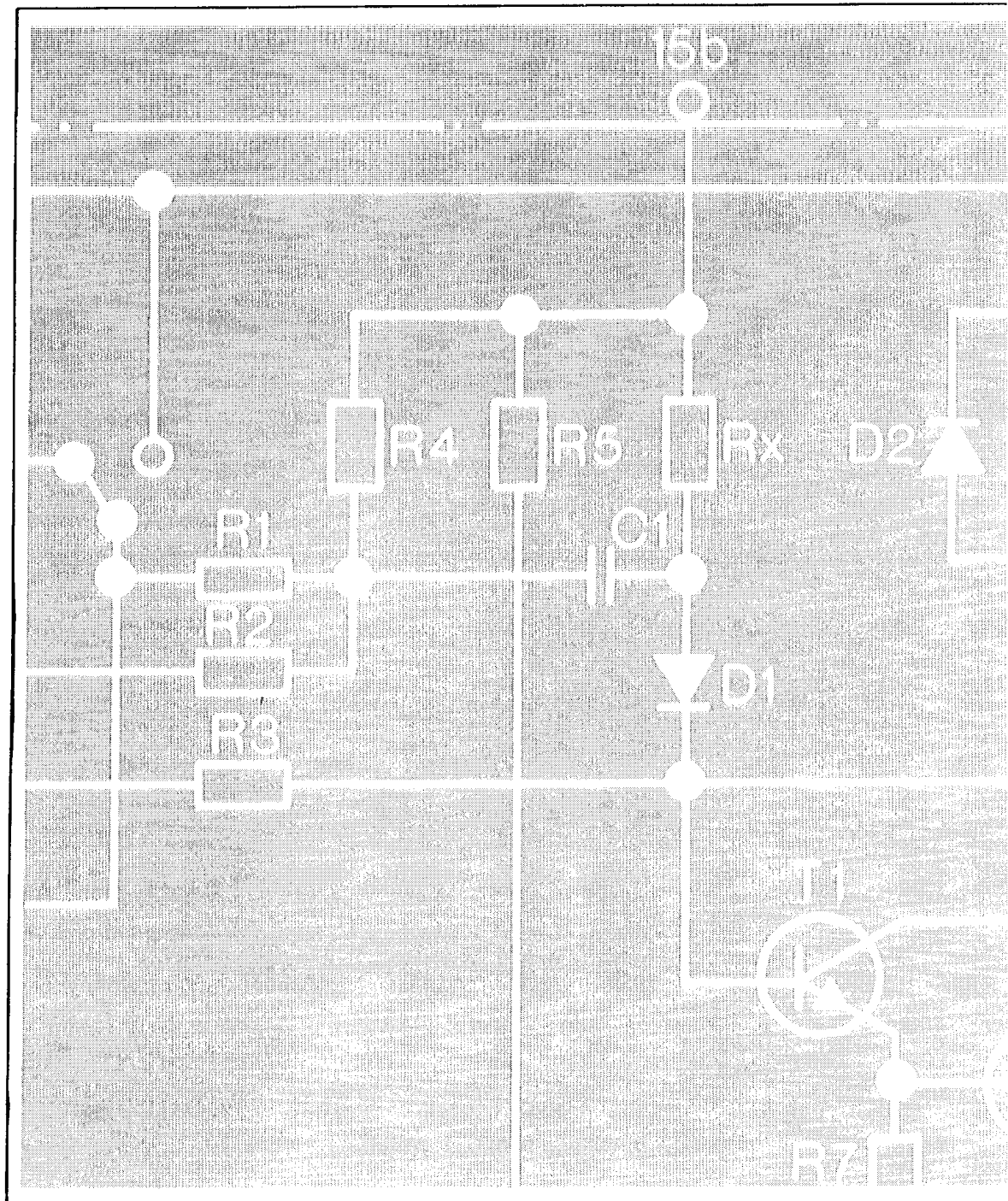
## FOREWORD

In the interests of continuing technical development work we reserve the right to modify designs and equipment.

Printed in USA

©Copyright BMW of North America, Inc.

Not to be reproduced wholly or in part  
without written permission of BMW of  
North America, Inc.  
P/N 01 00 1 467 826



**1988  
BMW 325/325i/325is  
Electrical  
Troubleshooting  
Manual**

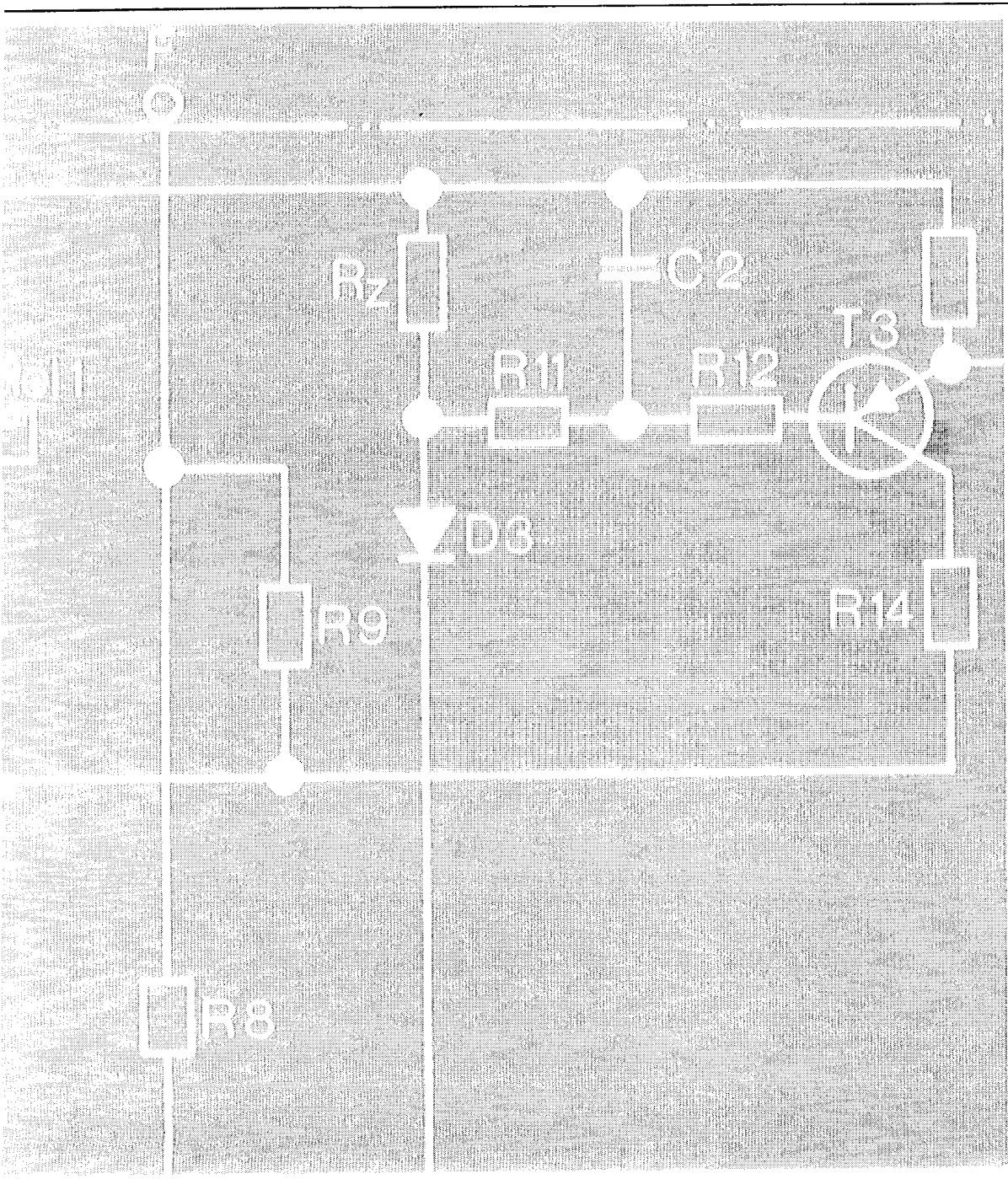
---

**CONTENTS**

---

Index .....	2
How To Use This Manual .....	3
Symbols .....	4
Wire Size Conversion Chart ...	3
Systematic Troubleshooting ..	6
Connector Views .....	8500-0
Power Distribution Box .....	0670-0
Fuse Data .....	0670-1
Component Location Chart ...	9000-0
Component Location Views ..	7000-0
Splice Location Views .....	8000-0

---



# Index — Alphabetical Listing of Electrical Circuits

	PAGE		PAGE		PAGE
Active Check Control . . . . .	6216-0	— Fuse 21 . . . . .	0670-10	— "Park Brake" . . . . .	3435-0
A/C Air Delivery Control . . . . .	6421-0	— Fuse 27 . . . . .	0670-11	— "Rear Lights" Fault . . . . .	6314-0
A/C Blower Controls . . . . .	6413-0	Gauges . . . . .	6210-1	— RH Turn . . . . .	6313-1
A/C Compressor Controls . . . . .	6452-0	Ground Distribution		— "Washer Fluid" Fault . . . . .	6216-2
A/C Temperature Control . . . . .	6411-0	— G103 . . . . .	0670-12	Injection Electronics . . . . .	1360-0
Antilock Braking System (ABS) . . . . .	3450-0	— G104 . . . . .	0670-13	Instrument Cluster . . . . .	6210-0
Auto-Charging Flashlight . . . . .	6100-1	— G106 . . . . .	0670-13	Lights	
Auxiliary Fan . . . . .	6454-0	— G200 . . . . .	0670-13	— A/C Control Power . . . . .	6300-1
Auxiliary Fuse . . . . .	0670-2		0670-14	— Back Up . . . . .	6322-0
Brake Warning System . . . . .	3435-0		0670-15	— Fog . . . . .	6312-0
Central Locking		— G201 . . . . .	0670-14	— Front Ashtray . . . . .	6300-1
— (2 Door) . . . . .	5126-0	— G300 . . . . .	0670-15	— Front Side Marker . . . . .	6314-0
— (4 Door) . . . . .	5126-2	Horns . . . . .	6100-0	— Front Turn/Park . . . . .	6314-0
Charge . . . . .	1230-0	Ignition Key Warning . . . . .	6131-0	— Glove Box . . . . .	6100-1
Cigar Lighter . . . . .	6100-1	Indicators		— Hazard Switch . . . . .	6313-0
Component Location Chart . . . . .	9000-0	— Active Check Control Alarm . . . . .	6210-1	— Headlights . . . . .	6312-0
Component Location Views . . . . .	7000-0	— "Brake Lights" Fault . . . . .	6216-1	— Instrument Cluster . . . . .	6300-1
Connector Views . . . . .	8500-0	— "Brake Lining" Wear . . . . .	3435-0	— Interior . . . . .	6330-0
Cruise Control . . . . .	6571-0	— "Brake" Warning . . . . .	3435-0	— License . . . . .	6320-0
Fuel Economy Gauge . . . . .	6210-3	— Charge . . . . .	6210-0	— Map Reading Light . . . . .	6100-1
Fuel Gauge . . . . .	6210-1	— "Coolant" Level Fault . . . . .	6216-2	— Park . . . . .	6314-0
Fuse Data Chart . . . . .	0670-1	— "Engine Oil" Fault . . . . .	6216-2	— Rear Ashtray . . . . .	6300-1
Fuse Details		— Fasten Seatbelts . . . . .	6216-2	— Rear Side Marker . . . . .	6320-0
— Fuse 4 . . . . .	0670-6	— Fog Lights . . . . .	6312-0	— Stop . . . . .	6325-0
— Fuse 5 . . . . .	0670-6	— High Beam . . . . .	6312-1	— Tail . . . . .	6314-0
— Fuse 6 . . . . .	0670-6	— Inspection . . . . .	6210-2	— Trunk . . . . .	6320-0
— Fuse 8 . . . . .	0670-7	— LH Turn . . . . .	6313-1	— Turn/Hazard . . . . .	6313-1
— Fuse 9 . . . . .	0670-11	— "License Plate" Fault . . . . .	6320-0	Light Switch Details . . . . .	6300-0
— Fuse 10 . . . . .	0670-8	— "Low Beam" Fault . . . . .	6312-1	Multifunction Clock . . . . .	6581-0
— Fuse 12 . . . . .	0670-7	— Low Fuel Warning . . . . .	6210-1	On-Board Computer . . . . .	6581-2
— Fuse 19 . . . . .	0670-7	— Oil Pressure Warning . . . . .	6210-1	Power Antenna . . . . .	6500-0
— Fuse 20 . . . . .	0670-9	— Oil Service . . . . .	6210-2	Power Distribution . . . . .	0670-0

## 2-1 INDEX

---

### Index — Alphabetical Listing of Electrical Circuits

	PAGE
Power Distribution Box . . . . .	0670-0
Power Mirrors . . . . .	5116-0
Power Windows	
— 2 Door . . . . .	5133-2
— 4 Door . . . . .	5133-0
Radio With Sound System . . .	6500-0
Radio Without Sound System .	6500-2
Rear Defogger . . . . .	6100-2
Seatbelt Warning . . . . .	6131-0
Service Interval Indicator . . .	6210-2
Speedometer . . . . .	6210-0
Splice Location Views Index . .	8000-0
Start	
— Automatic . . . . .	1240-0
— Manual . . . . .	1240-1
Sunroof . . . . .	5413-0
Tachometer . . . . .	6210-3
Temperature Gauge . . . . .	6210-1
Warnings	
— Ignition Key/Seatbelt . . . .	6131-0
Wiper/Washer . . . . .	6160-0

The purpose of this manual is to show electrical schematics in a manner that makes electrical troubleshooting easier. Electrical components which work together are shown together on one schematic. The Wiper-Washer schematic, for example, shows all of the electrical components in one diagram. At the top of the page is the fuse (positive) that powers the circuit. The flow of current is shown through all wires, connectors, switches, and motors to ground (negative) at the bottom of the page.

Within the schematic, all switches and sensors are shown "at rest," as though the Ignition Switch were off. For identification, component names are underlined and placed next to or above each component. Notes are included, describing how switches and other components work.

The power distribution schematic shows the current feed through all the connections from the Battery and Alternator to each fuse and the Ignition and Light Switches. If the Power Distribution schematic is combined with any other circuit schematic, a complete picture is made of how that circuit works. The Ground Distribution schematics show how several circuits are connected to common grounds.

All wiring between components is shown exactly as it exists in the vehicle; however, the wiring is not drawn to scale. To aid in understanding electrical operation, wiring inside complicated components has been simplified. The "Solid State" label designates electronic components.

WIRE SIZE CONVERSION CHART	
METRIC (CROSSECTIONAL AREA IN MM <sup>2</sup> )	AWG (AMERICAN WIRE GAUGE)
.5	20
.75	18
1	16
1.5	14
2	14
2.5	12
4	10
6	8
8	8
16	4
20	4
25	2
32	2

WIRE INSULATION	
ABBREVIATIONS	COLOR
BK	BLACK
BR	BROWN
RD	RED
YL	YELLOW
GN	GREEN
BU	BLUE
VI	VIOLET
GY	GRAY
WT	WHITE
PK	PINK

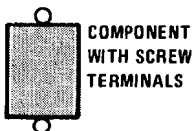
## 4 SYMBOLS



ENTIRE  
COMPONENT  
SHOWN



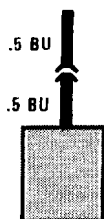
PART OF A  
COMPONENT  
SHOWN



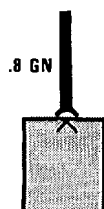
COMPONENT  
WITH SCREW  
TERMINALS



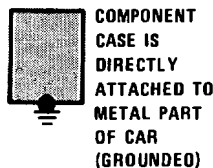
SOLID STATE  
(INCLUDES ONLY  
ELECTRONIC PARTS)



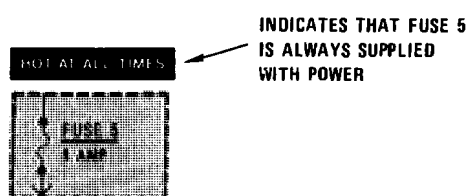
CONNECTOR ON  
COMPONENT  
LEAD (PIGTAIL)



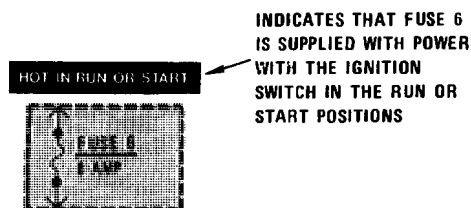
CONNECTOR  
ATTACHED TO  
COMPONENT



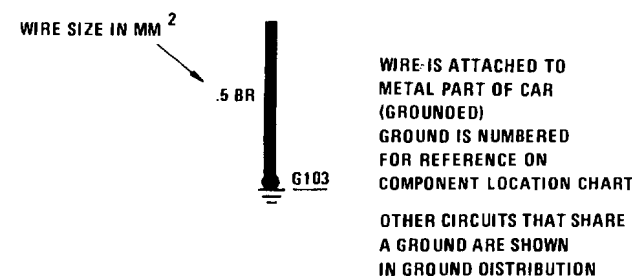
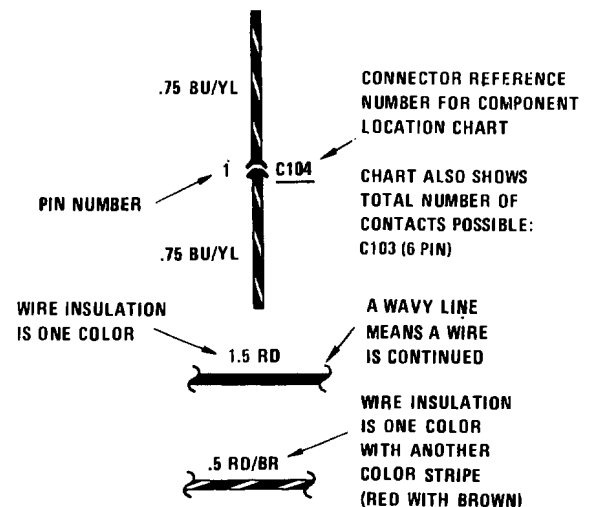
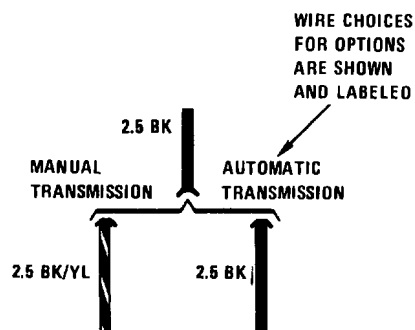
COMPONENT  
CASE IS  
DIRECTLY  
ATTACHED TO  
METAL PART  
OF CAR  
(GROUNDED)



INDICATES THAT FUSE 5  
IS ALWAYS SUPPLIED  
WITH POWER

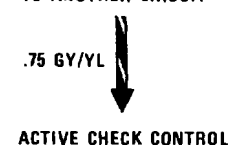


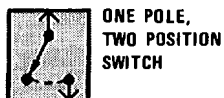
INDICATES THAT FUSE 6  
IS SUPPLIED WITH POWER  
WITH THE IGNITION  
SWITCH IN THE RUN OR  
START POSITIONS



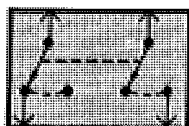
DIODE  
CURRENT CAN  
FLOW ONLY IN  
THE DIRECTION  
OF THE ARROW

CIRCUIT REFERENCE -  
A WIRE WHICH CONNECTS  
TO ANOTHER CIRCUIT

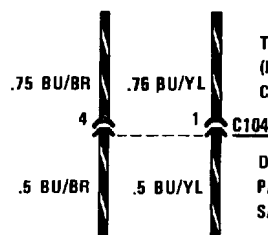




ONE POLE,  
TWO POSITION  
SWITCH



SWITCHES THAT  
MOVE TOGETHER  
  
DASHED LINE SHOWS  
A MECHANICAL  
CONNECTION  
BETWEEN SWITCHES



TWO CONNECTIONS  
(PINS) IN THE SAME  
CONNECTOR  
  
DASHED LINE SHOWS  
PARTS OF THE  
SAME CONNECTOR



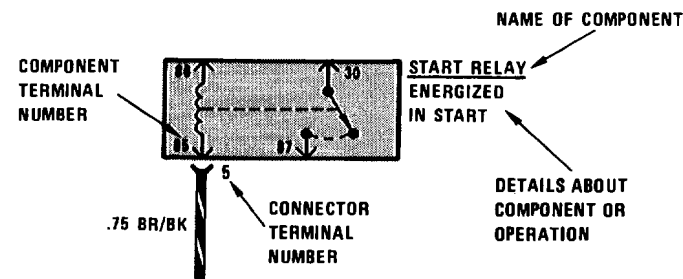
WHEN COIL IS  
ENERGIZED, SWITCH  
IS PULLED CLOSED

RELAY SHOWN  
WITH NO  
CURRENT  
FLOWING  
THROUGH  
COIL

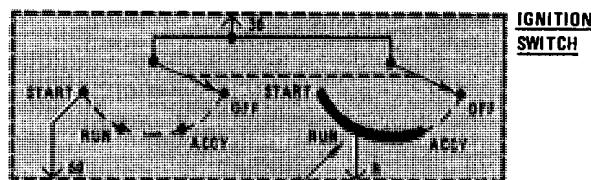


RELAY SHOWN  
WITH RESISTOR  
ACROSS COIL  
  
RESISTOR ACROSS COIL  
IS FOR NOISE  
SUPPRESSION

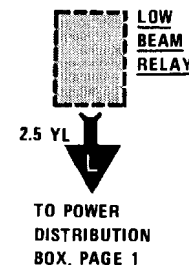
RELAY SHOWN  
WITH RESISTOR  
ACROSS COIL



TWO POLE, FOUR  
POSITION SWITCH

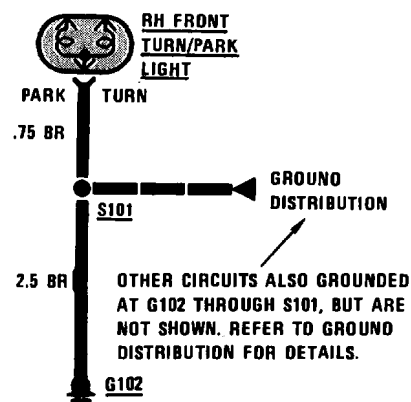


"R" IS ENERGIZED  
IN ACCY, RUN OR START



CURRENT PATH  
IS CONTINUED  
AS LABELED.  
THE ARROW SHOWS  
DIRECTION OF CURRENT  
FLOW AND IS REPEATED  
WHERE CURRENT  
PATH CONTINUES.

FROM LOW  
BEAM RELAY,  
PAGE 5



LIGHT  
EMITTING  
DIODE