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

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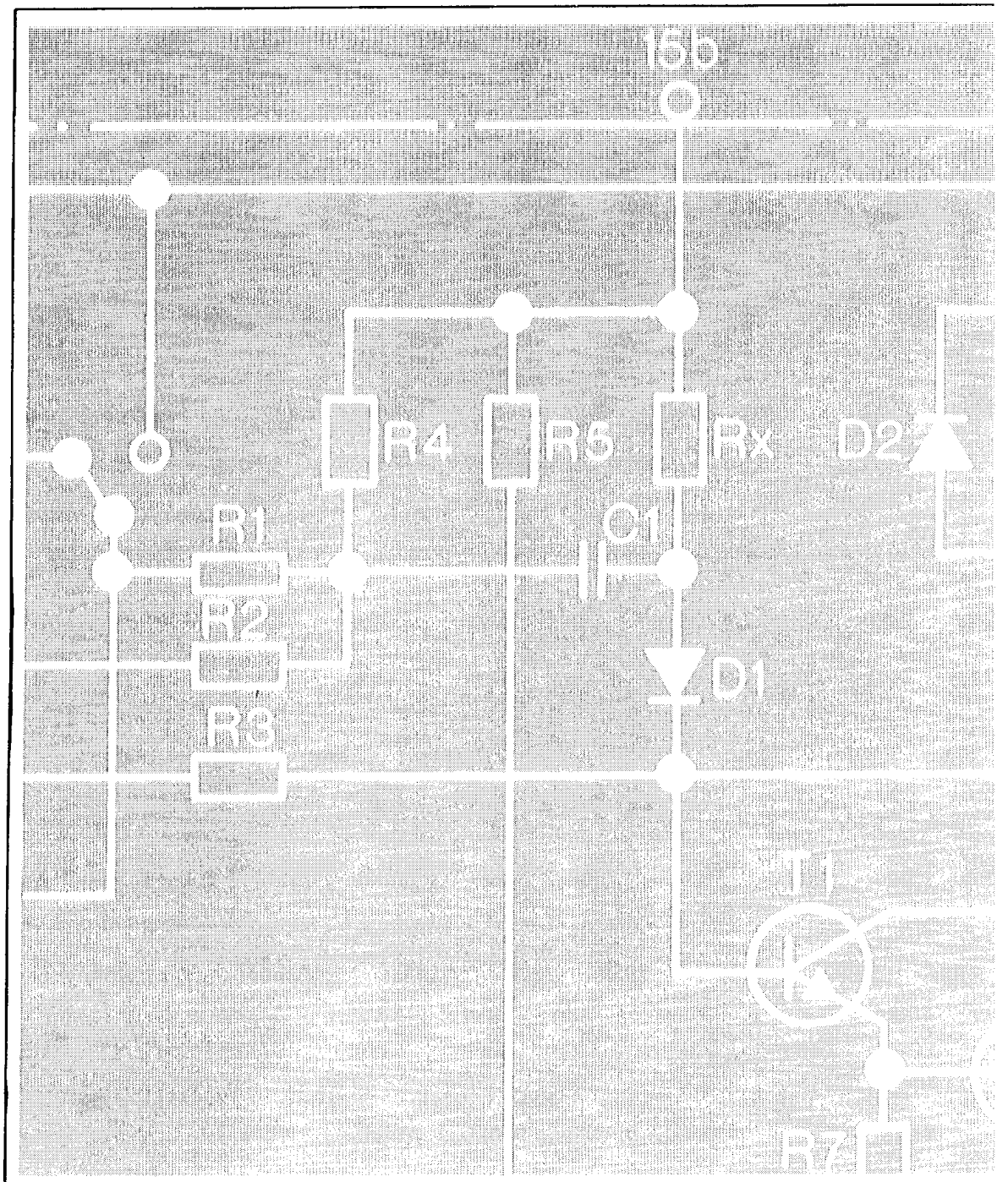
BMW of North America, Inc.
Montvale, New Jersey

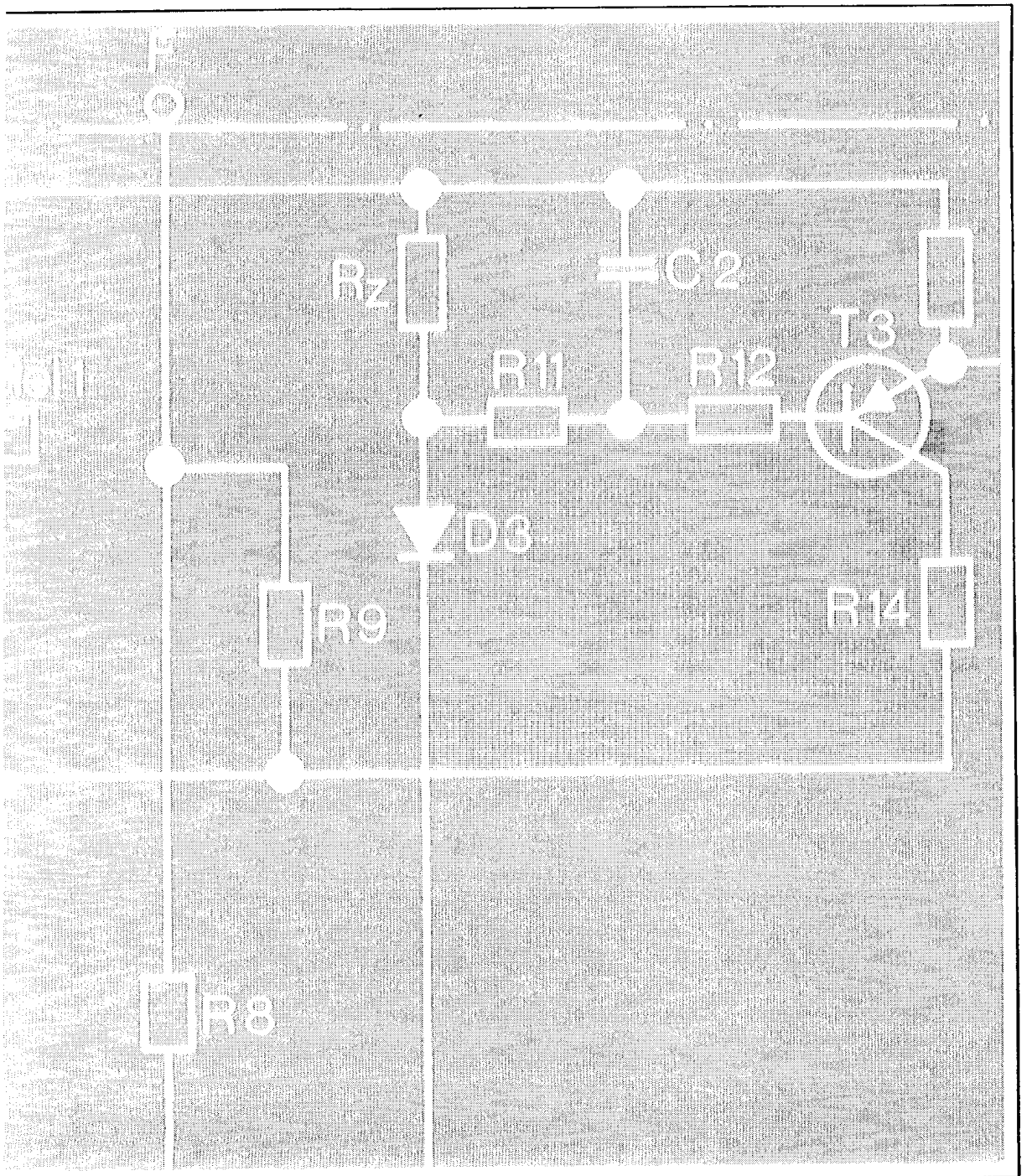
FOREWORD

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

Printed in USA

P/N 01 00 1 467 826





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

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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

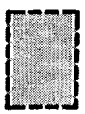
METRIC (CROSSECTIONAL AREA IN MM²)	AWG (AMERICAN WIRE GAUGE)
.5	20
.75	18
1	16
1.5	14
2	14
2.5	12
4	10
6	8
8	8
16	4
20	4
25	2
32	2

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

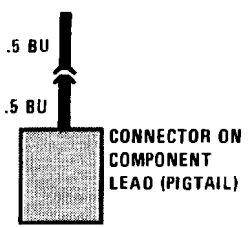
ENTIRE COMPONENT SHOWN



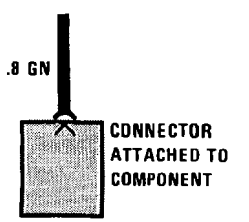
PART OF A COMPONENT SHOWN

COMPONENT WITH SCREW TERMINALS

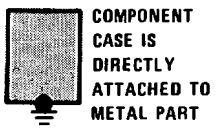
SOLID STATE (INCLUDES ONLY ELECTRONIC PARTS)



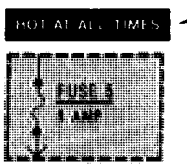
CONNECTOR ON COMPONENT LEAD (PIGTAIL)



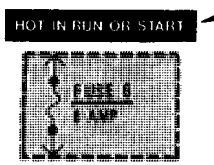
CONNECTOR ATTACHED TO COMPONENT



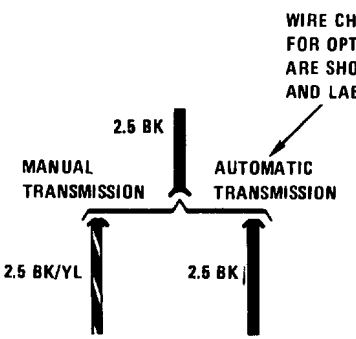
COMPONENT CASE IS DIRECTLY ATTACHED TO METAL PART OF CAR (GROUNDED)



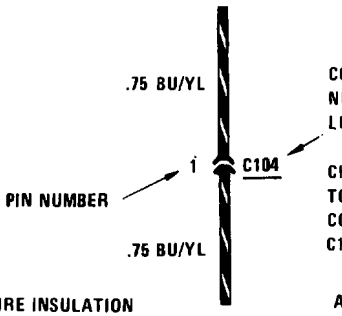
INDICATES THAT FUSE 5 IS ALWAYS SUPPLIED WITH POWER



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

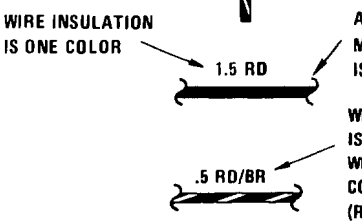


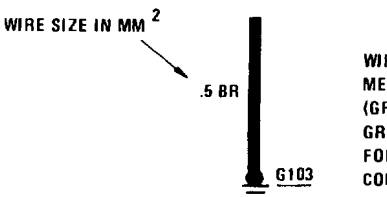
WIRE CHOICES FOR OPTIONS ARE SHOWN AND LABELED



CONNECTOR REFERENCE NUMBER FOR COMPONENT LOCATION CHART

CHART ALSO SHOWS TOTAL NUMBER OF CONTACTS POSSIBLE: C103 (6 PIN)



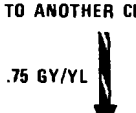


WIRE IS ATTACHED TO METAL PART OF CAR (GROUNDED)
GROUND IS NUMBERED FOR REFERENCE ON COMPONENT LOCATION CHART

OTHER CIRCUITS THAT SHARE A GROUND ARE SHOWN IN GROUND DISTRIBUTION

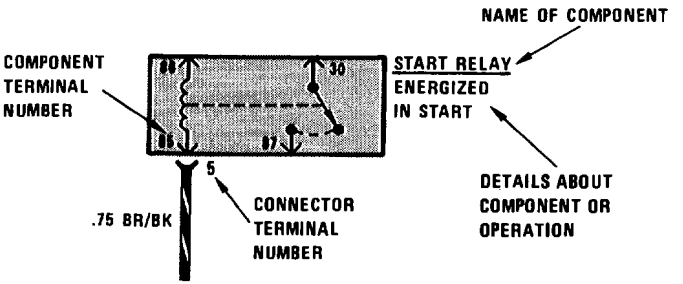
DIODE
CURRENT CAN FLOW ONLY IN THE DIRECTION OF THE ARROW

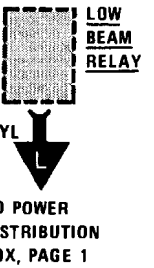
CIRCUIT REFERENCE – A WIRE WHICH CONNECTS TO ANOTHER CIRCUIT

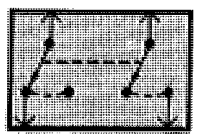


ACTIVE CHECK CONTROL

ONE POLE,
TWO POSITION
SWITCH



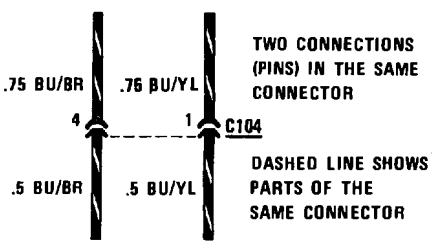




SWITCHES THAT
MOVE TOGETHER

DASHED LINE SHOWS
A MECHANICAL
CONNECTION
BETWEEN SWITCHES

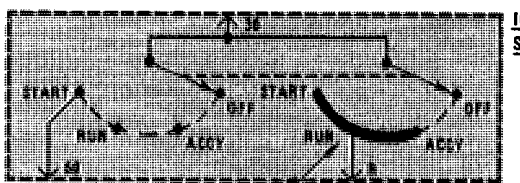
CURRENT PATH
IS CONTINUED
AS LABELED.
THE ARROW SHOWS
DIRECTION OF CURRENT
FLOW AND IS REPEATED
WHERE CURRENT
PATH CONTINUES.



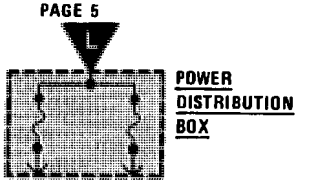
TWO CONNECTIONS
(PINS) IN THE SAME
CONNECTOR

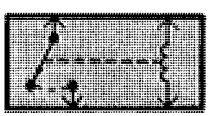
DASHED LINE SHOWS
PARTS OF THE
SAME CONNECTOR

TWO POLE, FOUR
POSITION SWITCH



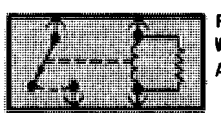
FROM LOW
BEAM RELAY,
PAGE 5





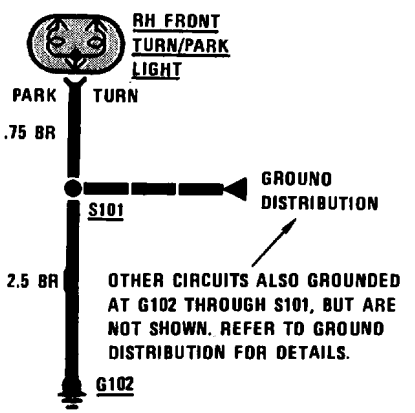
RELAY SHOWN
WITH NO
CURRENT
FLOWING
THROUGH
COIL

WHEN COIL IS
ENERGIZED, SWITCH
IS PULLED CLOSED



RELAY SHOWN
WITH RESISTOR
ACROSS COIL

RESISTOR ACROSS COIL
IS FOR NOISE
SUPPRESSION



LIGHT
EMITTING
DIODE