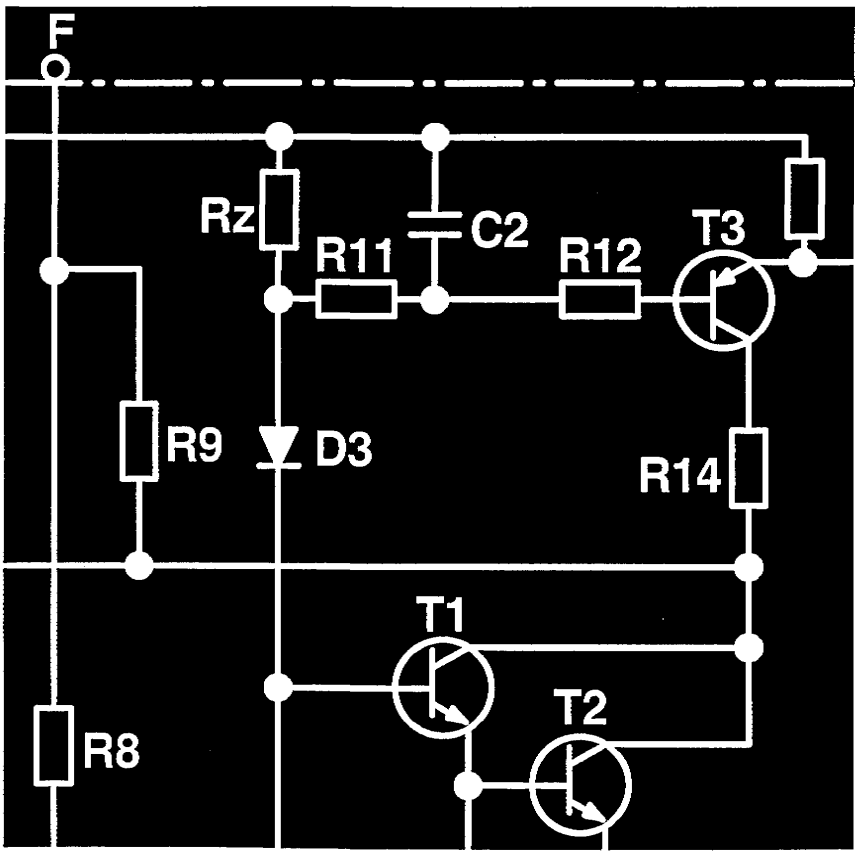



1992
BMW 525i, 525it, 535i, M5 (E34)
Electrical
Troubleshooting
Manual
Vehicles Produced 7/91 to 9/92

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SLIP CONTROL MODULE (ABS/ASC), A70 ..... 3450.1-00
SLIP CONTROL MODULE (ABS), A7 ..... 3450.0-01
SPEED SENSOR - ABS, LEFT FRONT, B2 ..... 3450.
SPEED SENSOR - ABS, LEFT REAR, B4 ..... 3450.
SPEED SENSOR - ABS, RIGHT FRONT, B1 ..... 3450.
SPEED SENSOR - ABS, RIGHT REAR, B3 ..... 3450.
SPLICE LOCATION VIEWS ..... 8000.0-00
START ..... 1240.0-00
STARTER, M6510 ..... 1240.0-01




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STARTER RELAY, K1 ..... 1240.0-01
STEERING COLUMN LENGTH ADJUST MOTOR, M82 ..... 3231.0-00
STEERING COLUMN POSITION SWITCH, S119z ..... 3231.0-00
SUNROOF MOTOR, M24 ..... 5410.0-03
SUNROOF POSITION SWITCH, S39 ..... 5410.0-02
SUNROOF SWITCH, S38 ..... 5410.0-02
SUNROOF SWITCH, S38 ..... 5410.2-01
SUPPLEMENTAL RESTRAINT SYSTEM (AIR BAG) ..... 3234.0-00
SUPPLEMENTAL RESTRAINT SYSTEM CONTROL MODULE, A12 3234.0-00
SUPPRESSION FILTER, C900 ..... 6424.0-01
SYMBOLS ..... 0140.0-00
TAIL LIGHT, LEFT, H25 ..... 6314.0-01
TAIL LIGHT, RIGHT, H30 ..... 6314.0-01
TELEPHONE HANDSET, U4 ..... 6561.0-01
TELEPHONE INTERFACE US, A192 ..... 6561.0-01
TELEPHONE TRANSCEIVER, H38 ..... 6561.0-00
TEMPERATURE SWITCH, B6235 ..... 1290.0-00
TEMPERATURE SWITCH, S36 ..... 6454.0-00
THIGH SUPPORT MOTOR, DRIVER'S, M65 ..... 5200.0-04
THIGH SUPPORT MOTOR, PASSENGER'S, M66 ..... 5200.0-04
THIGH SUPPORT POTENTIOMETER, R15 ..... 5200.0-06
THIGH SUPPORT SWITCH, DRIVER'S, S93 ..... 5200.0-04
THIGH SUPPORT SWITCH, PASSENGER'S, S94 ..... 5200.0-04
THROTTLE POSITION SENSOR, R6252 ..... 1210.7-05
THROTTLE POSITION SENSOR, S6250 ..... 1210.2-01
THROTTLE POSITION SENSOR, S6251 ..... 1210.4-07
THROTTLE POSITION SENSOR, S6251 ..... 2460.0-02
TRANSMISSION CONTROL MODULE (EGS), A8500 ..... 2460.0-00
TRANSMISSION CONTROL MODULE (EGS), A8500 ..... 2460.2-00
TRANSMISSION POSITION INDICATOR LIGHT, E82 ..... 6300.0-03
TRANSMISSION RANGE SELECTOR LIGHT, E9500 ..... 6300.0-03
TRANSMISSION VALVE UNIT, Y8505 ..... 2460.0-04
TRANSMISSION VALVE UNIT, Y8505 ..... 2460.2-01
TRUNK COMPARTMENT LIGHT, E32 ..... 6320.0-01
TRUNK LID LIGHT, E33 ..... 6320.0-02
TRUNK LID SWITCH, S61 ..... 6320.0-01
TRUNK LIGHT, LEFT, H90 ..... 6320.0-01
TRUNK LIGHT, RIGHT, H91 ..... 6320.0-01
TRUNK LOCK MOTOR, M17 ..... 5126.0-04
TURN/HAZARD LIGHTS ..... 6313.0-00
TURN LIGHT, LEFT FRONT, H7 ..... 6313.0-02
TURN LIGHT, LEFT REAR, H6 ..... 6313.0-02
TURN LIGHT, RIGHT FRONT, H4 ..... 6313.0-02
TURN LIGHT, RIGHT REAR, H5 ..... 6313.0-02
UNCOUPLING DIODE (KL61), V9501 ..... 1230.0-00
UNLOADER RELAY, TERMINAL 15, K9 ..... 0670.2-05
UNLOADER RELAY, TERMINAL 61, K61 ..... 1230.0-00
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VEHICLE SPEED SENSOR, B10 ..... 6200.0-06
VOLUME AIR FLOW SENSOR, B6233 ..... 1210.1-09
VOLUME AIR FLOW SENSOR, B6233 ..... 1210.2-09
WASHER FLUID LEVEL SWITCH, S64 ..... 6200.0-12
WASHER JET HEATER, LEFT, E51 ..... 6169.0-00
WASHER JET HEATER, RIGHT, E52 ..... 6169.0-00
WASHER PUMP, M4 ..... 6160.0-02
WASHER PUMP RELAY, K5 ..... 6160.0-02
WATER VALVE ASSEMBLY, Y4 ..... 6450.5-01
WHEEL CAMBER CONTROL MODULE, B22 ..... 6200.0-14
WIDE OPEN THROTTLE CUT-OFF RELAY, K86 ..... 6450.5-08
WINDOW LIMIT SWITCH, DRIVER'S, S43 ..... 5133.0-01
WINDOW LIMIT SWITCH, LEFT REAR, S45 ..... 5133.0-03
WINDOW LIMIT SWITCH, PASSENGER'S, S44 ..... 5133.0-01
WINDOW LIMIT SWITCH, RIGHT REAR, S46 ..... 5133.0-03
WINDOW MOTOR, DRIVER'S, M21 ..... 5133.0-04
WINDOW MOTOR, LEFT REAR, M20 ..... 5133.0-04
WINDOW MOTOR, PASSENGER'S, M23 ..... 5133.0-05
WINDOW MOTOR, RIGHT REAR, M22 ..... 5133.0-05
WINDOW MOTOR, RELAY, K90 ..... 5126.0-06
WINDOW SWITCH, LEFT REAR, S41 ..... 5133.0-01
WINDOW SWITCH, RIGHT REAR, S42 ..... 5133.0-01
WINDOW SWITCH ASSEMBLY, FRONT CONSOLE, S40 ..... 5133.0-00
WINDSHIELD WASHER JET HEATERS ..... 6169.0-00
WIPER MOTOR, M3 ..... 6160.0-01
WIPER RELAY, K11 ..... 6160.0-00




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WIPER/WASHER FLUID LEVEL SWITCH, REAR, S176 ..... 6200.0–12
WIPER/WASHER INTERVAL CONTROL MODULE, REAR, A36 .. 6162.0–00
WIPER/WASHER SWITCH, S5 ..... 6160.0–00
ZKE CENTRAL LOCKING (ZV) ..... 5126.0–00
ZKE DOOR LOCK HEATING (TSH) ..... 5120.0–00
ZKE HEADLIGHT WASHER (SRA) ..... 6167.0–00
ZKE INTERIOR LIGHTS CONTROL (IB) ..... 6330.0–00
ZKE POWER WINDOWS (FH) ..... 5133.0–00
ZKE SUNROOF (SHD) ..... 5410.0–00



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## Schematics

The schematics divide the entire vehicle electrical system into individual circuits. Interacting electrical components are shown on one common schematic.

Switches and other components are represented in such a way that their general layout and function are self-explicit. They are arranged on the sheet such that the current path can be followed from positive (top) to negative (bottom).

**Important:** The components and wires are not drawn to scale. For instance, a lead with a length of over 1m can be shown as a lead which is only a few cm long. To enhance the clarity of the schematics, all connectors and splices between fuses and components as well as between grounds and components have been omitted. If this information should be required, it may be referenced in cells **0670.3 Fuse Details** and **0670.4 Ground Distribution**.

All circuit symbols used are listed and explained in cell **0140.0 Symbols**.

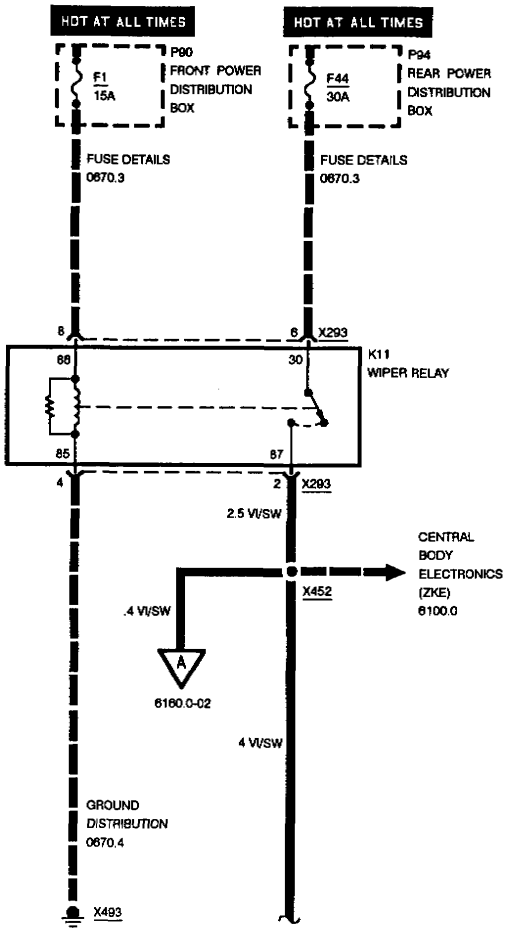
In cell **7000.0 Component Location Chart** all important connectors, ground points and components are listed in tabular form. It provides a precise description of the component locations in the vehicle.

In cell **7100.0 Component Location Views** the locations of the connectors and components which are difficult to locate are shown in photographs. In cell **8500.0 Connector Views** diagrams of all connectors with more than three pins are illustrated.

Included in this ETM are foldout block diagrams. These are overviews of the entire system (EGS, ABS, AC etc.) which helps understand the relationships between various components and control unit of the system being diagnosed.

## Example

General conventions can be explained based on the following schematic example.




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## General Conventions

1. Switches and relays are always shown in rest position (e.g. K11).

2. A component shown in a dashed frame signifies that the component is illustrated only in part (e.g. P90 and P91).

3. A component shown in a completely drawn frame signifies that the component is illustrated in full (e.g. K11).

4. The dashed line between pin 8 and pin 6 of connector X293 indicates that both pins belong to connector X293.

5. The dashed line from fuse 1 to pin 8 of connector X293 shows the positive supply of relay K11. If required, refer to cell 0670.3 Fuse Details at fuse F1 for the complete line progressing with plug connections, line branches, wire colors and cross sections.

6. The dashed line with an arrow at splice X452 indicates that several wires lead to splice X452. All lines leading to the connection are illustrated in cell 6100.0 Central Body Electronics (ZKE). An interrupted line with an arrow indicates that only this one wire leads to another circuit.

7. The dashed line from pin 4 of connector X293 to ground X493 shows the ground supply for relay K11. If required, refer to cell 0670.4 Ground Distribution at ground X493 for the complete line progression with all plug connections, line branches, wire colors and cross sections.

8. The interrupted line from splice X452 with an A in the open arrow is continued on page 6160.0-02. Termination of wire 4 VI/SW from splice X452 with a wavy line indicates that the wire is continued on the opposite page.





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# SYMBOLS


BATTERY


FUSE DETAILS

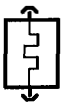

FUSIBLE LINK


CIRCUIT BREAKER


THERMO SWITCH


SOLENOID


SOLENOID CONTROLLED VALVE
OR CLUTCH SOLENOID

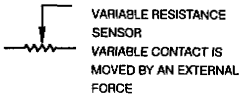

HEATING ELEMENT


LOUDSPEAKER OR HORN


LIGHT


PERMANENT MAGNET MOTOR
ONE SPEED


PERMANENT MAGNET MOTOR
TWO SPEEDS


VARIABLE RESISTANCE
SENSOR
VARIABLE CONTACT IS
MOVED BY AN EXTERNAL
FORCE


VARIABLE RESISTOR
RESISTANCE IS CHANGED
BY TEMPERATURE OR
PRESSURE

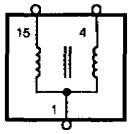


INDUCTIVE SENSOR


DIODE
CURRENT CAN FLOW ONLY
IN DIRECTION OF ARROW


ZENER DIODE
TO REGULATE VOLTAGE


LIGHT EMITTING DIODE



IGNITION COIL


CONTROL/POWER ELECTRONICS


RADIO



TRANSISTORIZED SWITCH


OXYGEN SENSOR



VEHICLE SPEED SENSOR



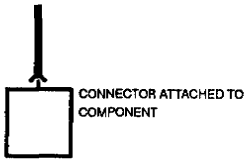
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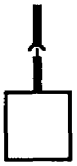
# SYMBOLS


ENTIRE COMPONENT SHOWN

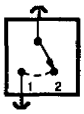

PART OF COMPONENT SHOWN


COMPONENT WITH SCREW TERMINALS

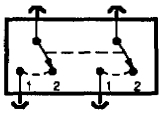

CONNECTOR ATTACHED TO COMPONENT


CONNECTOR ATTACHED TO COMPONENT LEAD (PIGTAIL)


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



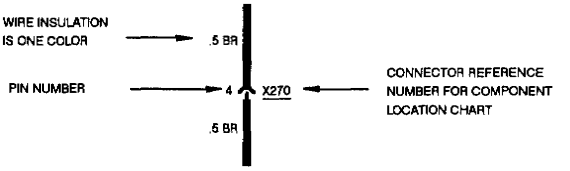
ONE POLE, TWO POSITION SWITCH

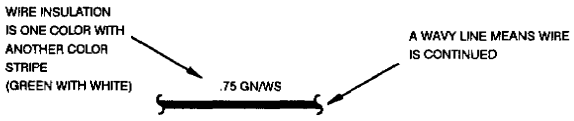


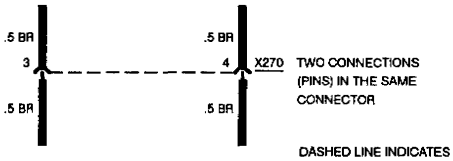
SWITCHES THAT MOVE TOGETHER

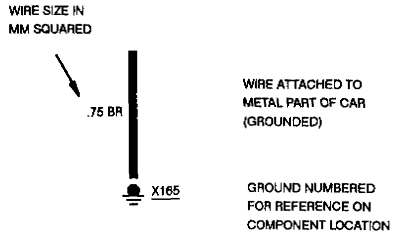
DASHED LINE SHOWS A MECHANICAL CONNECTION BETWEEN SWITCHES

| WIRE COLOR | |
|---|---|
| BL | BLUE |
| BR | BROWN |
| GE | YELLOW |
| GN | GREEN |
| GR | GRAY |
| OR | ORANGE |
| RS | PINK |
| RT | RED |
| SW | BLACK |
| VI | VIOLET |
| WS | WHITE |
| TR | TRANSPARENT |



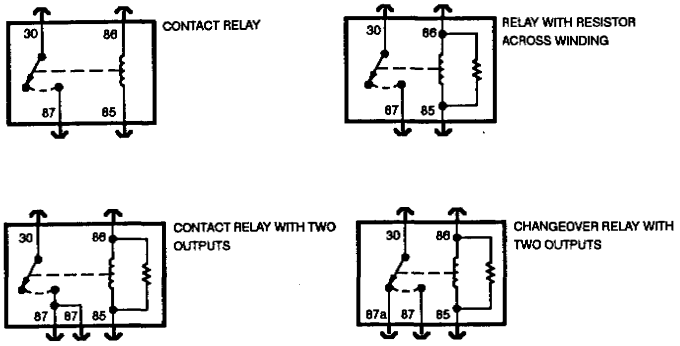



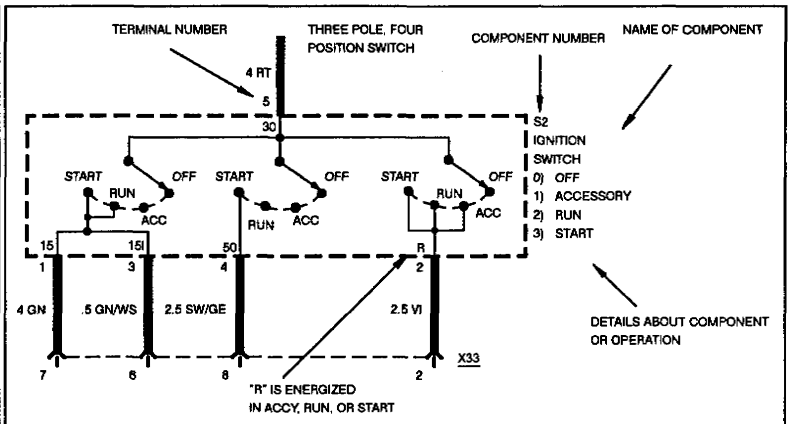





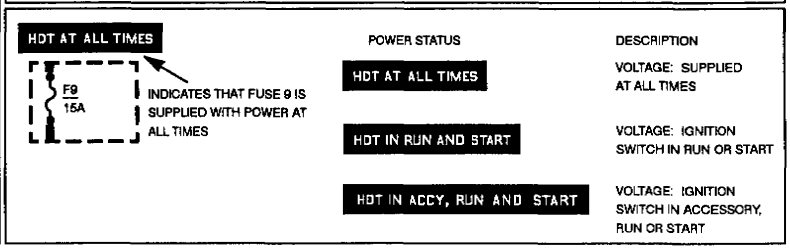

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| TERMINAL NUMBER | DESCRIPTION |
|---|---|
| 30 | RELAY INPUT |
| 85 | RELAY OUTPUT (WINDING) |
| 86 | RELAY INPUT (WINDING) |
| 87 | RELAY OUTPUT (ENERGIZED) |
| 87a | RELAY OUTPUT (AT REST) |




| TERMINAL NUMBER | DESCRIPTION | TERMINAL NUMBER | DESCRIPTION |
|---|---|---|---|
| 50 | VOLTAGE: IGNITION SWITCH IN START | 15I | VOLTAGE: IGNITION SWITCH IN RUN |
| 30 | VOLTAGE: SUPPLIED AT ALL TIMES | R | VOLTAGE: IGNITION SWITCH IN ACCESSORY, RUN OR START |
| 15 | VOLTAGE: IGNITION SWITCH IN RUN OR START | 31 | GROUND |

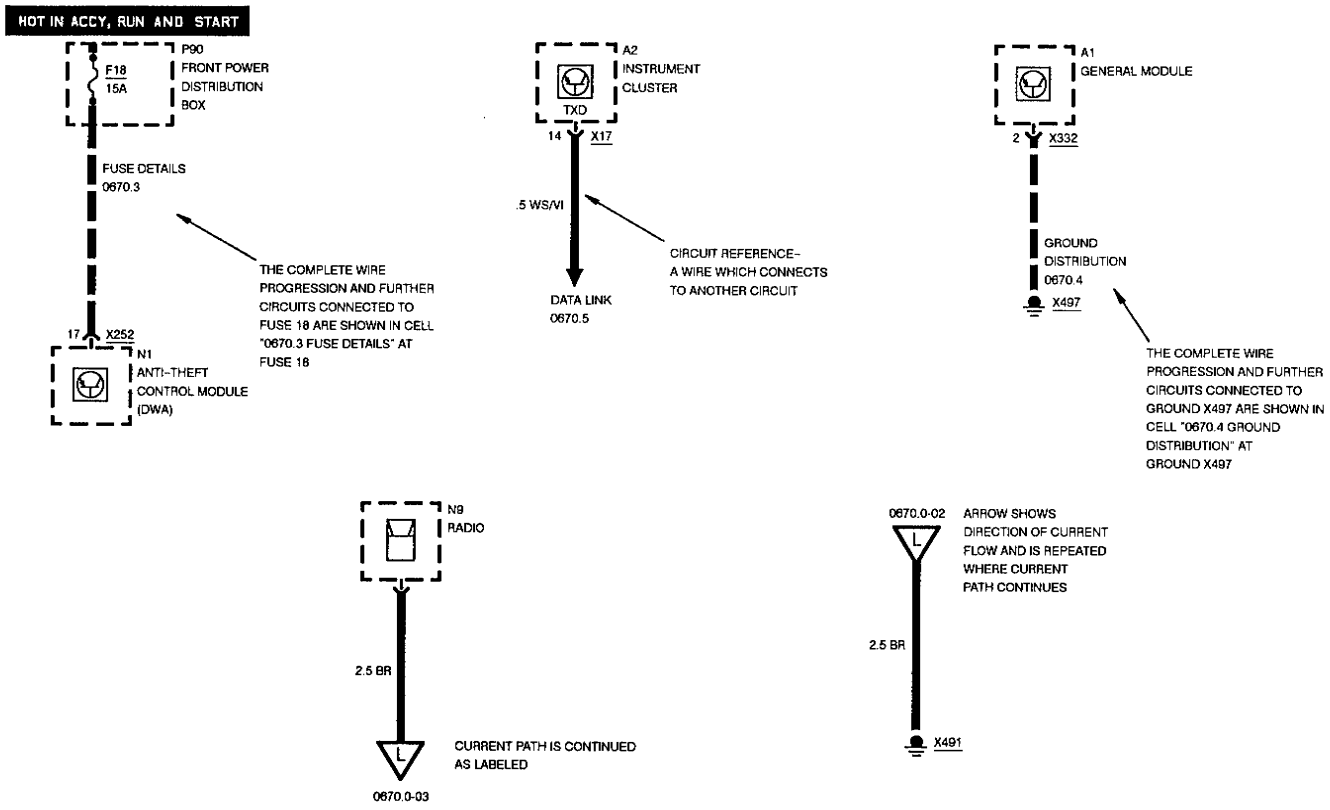




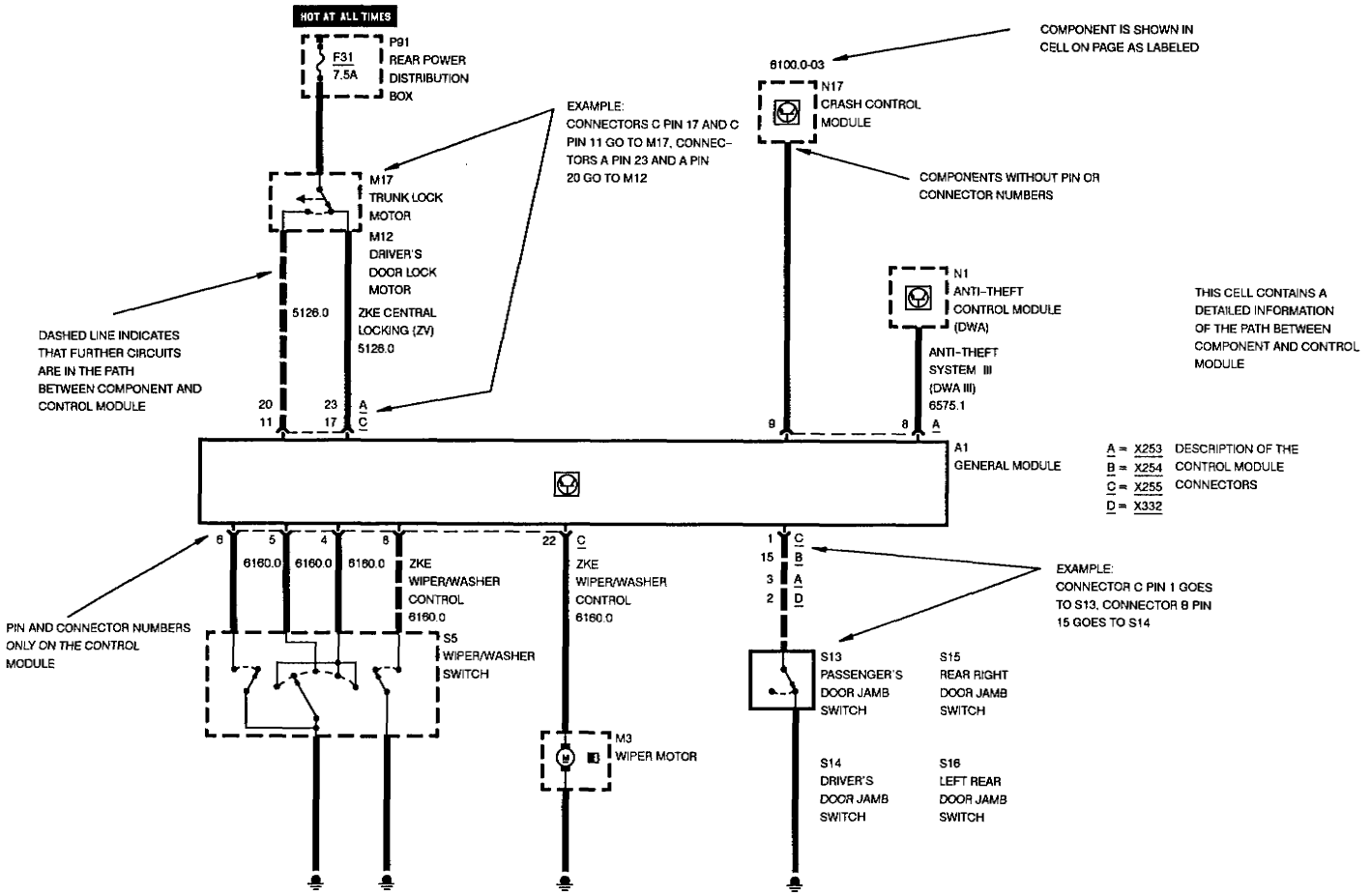

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# SYMBOLS






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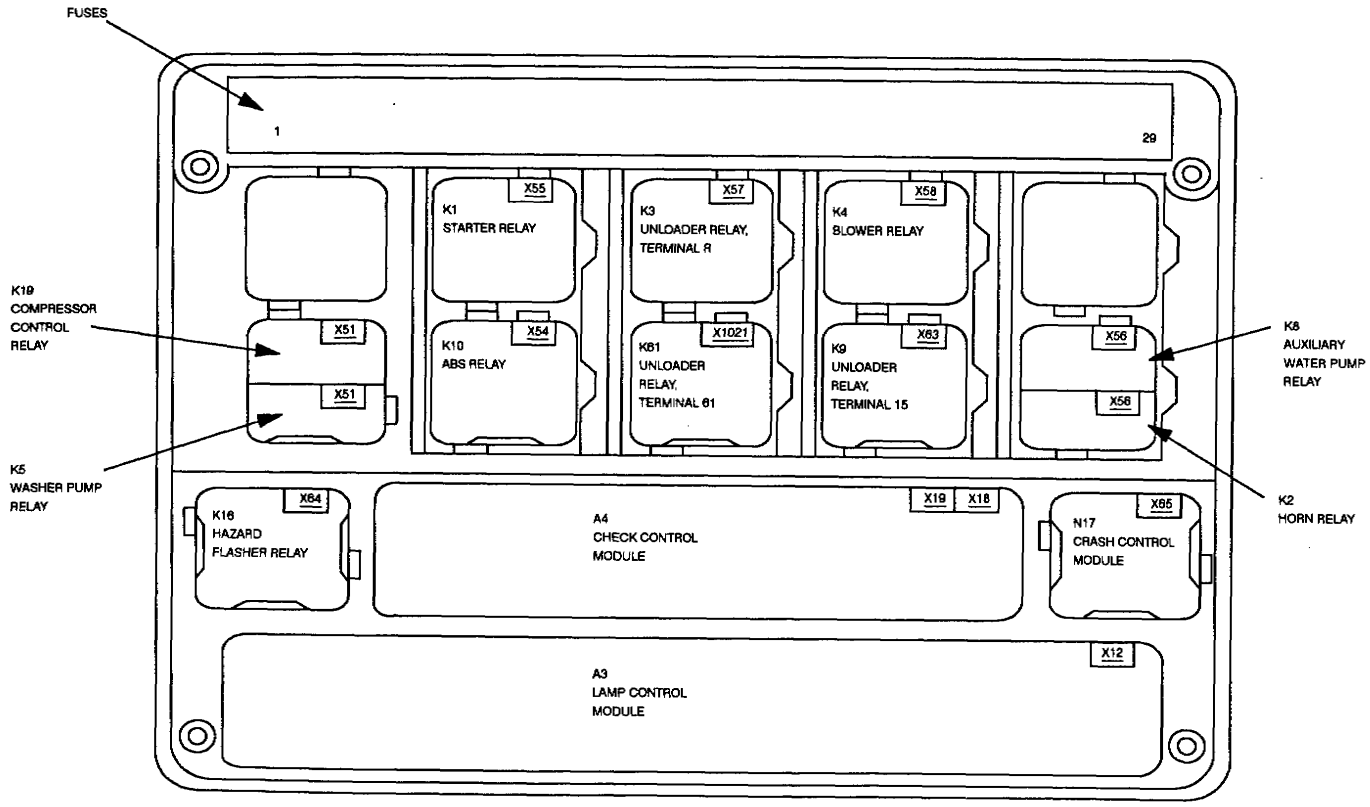
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# POWER DISTRIBUTION CHART

## FRONT POWER DISTRIBUTION BOX

ZKE

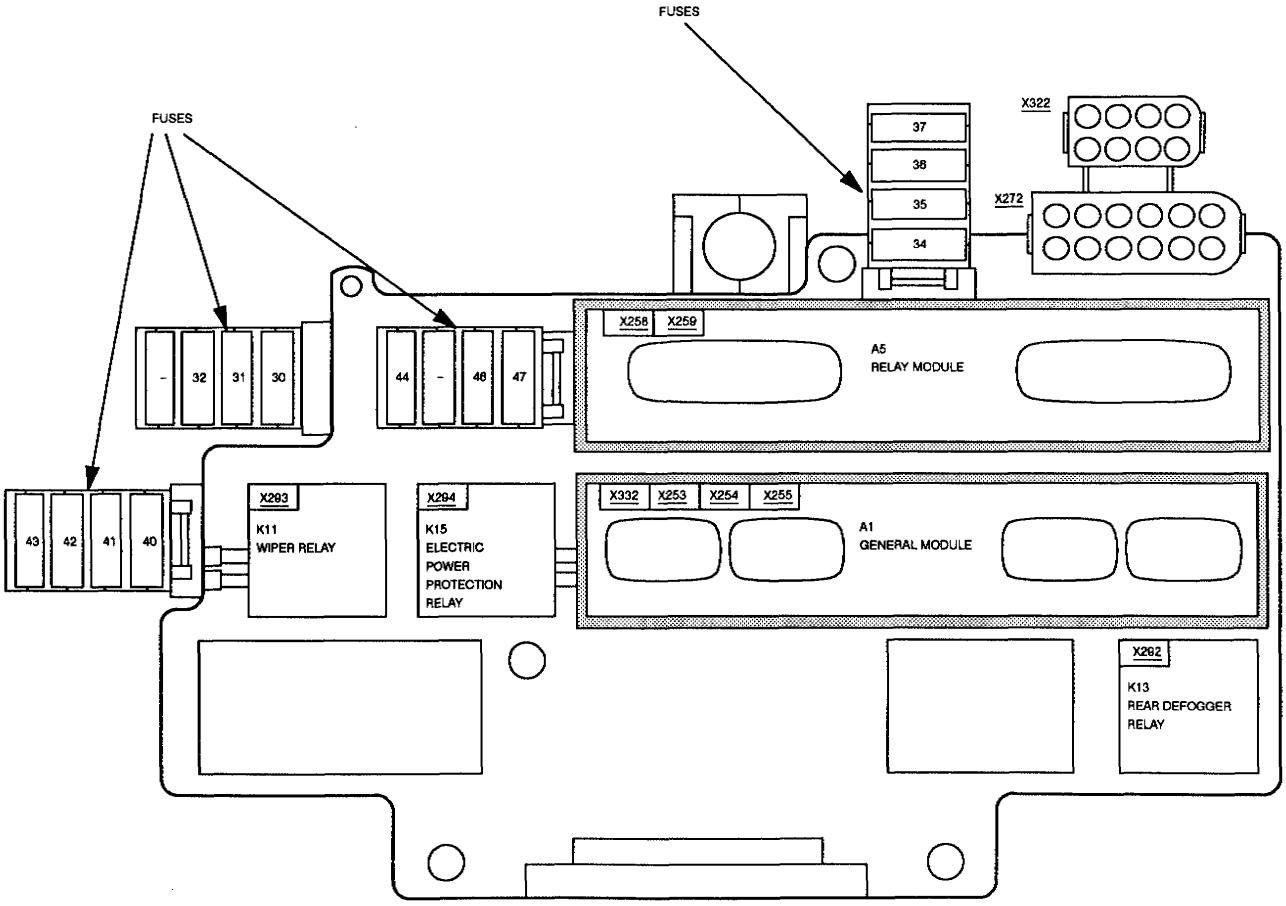





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# POWER DISTRIBUTION CHART

## REAR POWER DISTRIBUTION BOX WITH ZKE



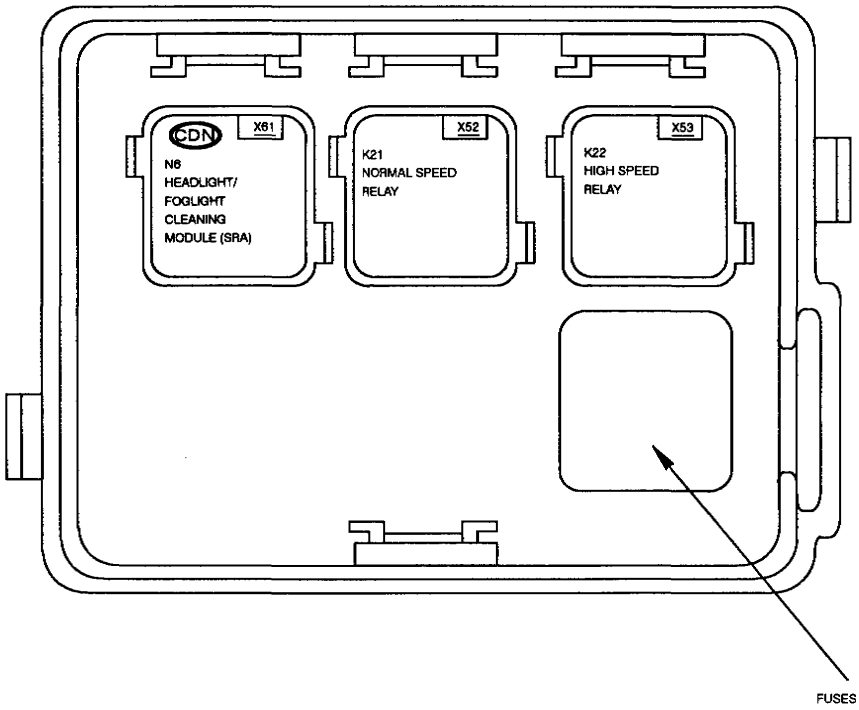



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# POWER DISTRIBUTION CHART

## AUXILIARY RELAY BOX






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# FUSE CHART

## FUSES 1 TO 29

| | | FUSE NUMBER | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| | | 15A | 7.5A | 7.5A | 7.5A | 10A | 15A | 15A | | 15A | 7.5A | 7.5A | 15A | 7.5A | 7.5A | 7.5A | 30A | 7.5A | 15A | 30A | 10A | 10A | 30A | 15A | 10A | 30A | 30A | 7.5A | 15A | 7.5A |
| 1210.1 | ENGINE CONTROL SYSTEM (DME M1.3, 6-CYLINDER M30 WITH EML) | | | | | | | | | | | | | | | | | ● | | | | | | ● | | | | | | |
| 1210.2 | ENGINE CONTROL SYSTEM (DME M1.3, 6-CYLINDER M30) | | | | | | | | | | | | | | | | | ● | | | | | | ● | | | | | | |
| 1210.4 | ENGINE CONTROL SYSTEM (DME M1.2, 6-CYLINDER S38) | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | | |
| 1210.7 | ENGINE CONTROL SYSTEM (DME M3.1, 6-CYLINDER M50) | | | | | | | | | | | | | | | | | ● | | | | | | ● | | | | | | |
| 1230.0 | CHARGING SYSTEM | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | ● | |
| 1240.0 | START | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| 1270.0 | ELECTRONIC THROTTLE CONTROL (EML 6-CYLINDER) | ● | | | | | | | | | | | | | | | | ● | | | ● | | | | | | | | | |
| 1290.0 | E-BOX FAN | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | ● | |
| 2460.0 | ELECTRONIC TRANSMISSION CONTROL (EGS 4HP-22) | ● | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| 2460.2 | ELECTRONIC TRANSMISSION CONTROL (EGS A4S 310R) | ● | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| 3231.0 | ELECTRIC STEERING COLUMN ADJUSTMENT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3240.0 | POWER ASSIST STEERING (SERVOTRONIC) | | | | | | | | | | | | | | | | | | | | | | | | | | | | ● | |
| 3450.0 | SLIP CONTROL (ABS) | ● | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| 3450.1 | SLIP CONTROL (ABS/ASC) | ● | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | ● |
| 5116.0 | POWER MIRRORS | | | | | ● | | | | | | | ● | | | | | | | | | | | | | | | | | |
| 5120.0 | ZKE DOOR LOCK HEATING (TSH) | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| 5126.0 | ZKE CENTRAL LOCKING (ZV) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5133.0 | ZKE POWER WINDOWS (FH) | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| 5200.0 | POWER SEATS | | | | | | | | | | | | ● | | | | | | | | | | | | | | | | | |



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# FUSE CHART

## FUSES 1 TO 29

| | | FUSE NUMBER | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| | | 15A | 7.5A | 7.5A | 7.5A | 10A | 15A | 15A | | 15A | 7.5A | 7.5A | 15A | 7.5A | 7.5A | 7.5A | 30A | 7.5A | 15A | 30A | 10A | 10A | 30A | 15A | 10A | 30A | 30A | 7.5A | 15A | 7.5A |
| **5200.1** | SEAT/MIRROR MEMORY SYSTEM (SM/SPM) | | | | | | | | | | | | ● | | | | ● | | ● | | | | | | | | | | | |
| **5203.0** | HEATED SEATS | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | | |
| **5410.0** | ZKE SUNROOF (SHD) | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| **5410.2** | DOUBLE PANEL POWER SUNROOF (ZKE) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **6100.0** | CENTRAL BODY ELECTRONICS (ZKE) | | | ● | ● | ● | | | | | | | | | | | | ● | | | | | | | ● | | | | | |
| **6133.0** | HORN | | | | | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| **6160.0** | ZKE WIPER/WASHER CONTROL | ● | | | | | | | | | | | | | | | | | | | | | | | ● | | | | | |
| **6162.0** | REAR WINDOW WIPER/WASHER CONTROL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **6167.0** | ZKE HEADLIGHT WASHER (SRA) | | | ● | ● | ● | | | | | | | | | | | | ● | | | | | ● | | | | | | | |
| **6169.0** | WINDSHIELD WASHER JET HEATERS | | | | | | | | | | | | ● | | | | | | | | | | | | | | | | | |
| **6200.0** | INSTRUMENT CLUSTER/ CHECK CONTROL (K/CC) | ● | | | | | | | | | | | | | | | | ● | | | ● | | | | | | | | | ● |
| **6213.2** | MULTI-FUNCTION CLOCK | ● | | | | | | | | | | | | | | | | | | | ● | | | | | | | | | |
| **6300.0** | LIGHT SWITCH DETAILS | | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | |
| **6301.0** | LAMP MONITOR (LKM) | ● | ● | ● | ● | ● | | ● | | | ● | ● | | ● | ● | ● | | | | | | | | | | | | | | |
| **6312.0** | HEADLIGHTS/ FOG LIGHTS | | ● | ● | | ● | | ● | | | ● | ● | | ● | ● | | | | | | | | | | | | | | | |
| **6313.0** | TURN/HAZARD LIGHTS | | ● | ● | | | ● | | | | | | | ● | ● | | | | | | | | | | | | | | | |
| **6314.0** | PARK/TAIL/ UNDERHOOD LIGHTS | | | | ● | ● | | | | | | | | | | ● | | | | | ● | | | | | | | | | |
| **6320.0** | LICENSE PLATE/ LUGGAGE COMPARTMENT LIGHTS | | | | | ● | | | | | | | | | | ● | | | | | | ● | | | | | | | | |
| **6322.0** | BACK UP LIGHTS | | | | | | | | | | | | ● | | | | | | | | | | | | | | | | | |



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# FUSE CHART

## FUSES 1 TO 29

| | | FUSE NUMBER | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| | | 15A | 7.5A | 7.5A | 7.5A | 10A | 15A | 15A | | 15A | 7.5A | 7.5A | 15A | 7.5A | 7.5A | 7.5A | 30A | 7.5A | 15A | 30A | 10A | 10A | 30A | 15A | 10A | 30A | 30A | 7.5A | 15A | 7.5A |
| **6325.0** | BRAKE LIGHTS | ● | | | | | | | | | | | | | | ● | | | | | | | | | | | | | | |
| **6330.0** | ZKE INTERIOR LIGHTS CONTROL (IB) | | | | | ● | | | | | | | | | | | | | ● | | ● | ● | | | | | | | | |
| **6332.0** | INTERIOR ACCESSORIES | | | | | ● | | | | | | | | | | | | | ● | | | ● | | | | | ● | | | |
| **6350.0** | CRASH CONTROL MODULE | | ● | | | | ● | | | | ● | ● | | | | | | | | | | | | | | | | | | |
| **6412.19** | PARK VENTILATION WITH IHKR/F3 | | | | | | | | | | | | | | | | | | | ● | ● | | | | | | | | | |
| **6424.0** | REAR WINDOW DEFOGGER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **6450.5** | INTEGRATED CLIMATE REGULATION WITH FILTER (IHKR/F3) | | | | | | | | | ● | | | | | | | | | | ● | ● | | | | | | | ● | | ● |
| **6454.0** | AUXILIARY FAN | | | | | | | | | ● | | | | | | | | | | | | | | | | ● | | | | ● |
| **6510.1** | RADIO/HIFI | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | |
| **6510.2** | RADIO PROVISIONS | | | | | | | | | | | | | | | | | | ● | | | | | | | | | | | |
| **6561.0** | CELLULAR TELEPHONE (PROVISIONS) | | | | | | | | | ● | | | | | | | | | ● | | | | | | | | | | | |
| **6571.0** | CRUISE CONTROL (TEMPOMAT) | ● | | | | | | | | | | | | | | | | ● | | | | | | | | | | | | |
| **6575.2** | ANTI-THEFT SYSTEM (ALPINE) | | | | | | | | | | | | | | | | | | ● | | | ● | | | | | | | | |
| **6581.0** | ON-BOARD COMPUTER (BCIV) | ● | | | | | | | | | | | | | | | | ● | | | ● | | | | | | | | | |



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# FUSE CHART

## FUSES 30 TO 49

| | | FUSE NUMBER | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 |
| | | 7.5A | 7.5A | | | 20A | | 30A | 20A | | | | 30A | 30A | 30A | 30A | | 30A | 30A | | |
| 1210.1 | ENGINE CONTROL SYSTEM (DME M1.3, 6-CYLINDER M30 WITH EML) | | | | | | | | | | | | | | | | | | | | |
| 1210.2 | ENGINE CONTROL SYSTEM (DME M1.3, 6-CYLINDER M30) | | | | | | | | | | | | | | | | | | | | |
| 1210.4 | ENGINE CONTROL SYSTEM (DME M1.2, 6-CYLINDER S38) | | | | | | | | | | | | | | | | | | | | |
| 1210.7 | ENGINE CONTROL SYSTEM (DME M3.1, 6-CYLINDER M50) | | | | | | | | | | | | | | | | | | | | |
| 1230.0 | CHARGING SYSTEM | | | | | | | | | | | | | | | | | | | | |
| 1240.0 | START | | | | | | | | | | | | | | | | | | | | |
| 1270.0 | ELECTRONIC THROTTLE CONTROL (EML 6-CYLINDER) | | | | | | | | | | | | | | | | | | | | |
| 1290.0 | E-BOX FAN | | | | | | | | | | | | | | | | | | | | |
| 2460.0 | ELECTRONIC TRANSMISSION CONTROL (EGS 4HP-22) | | | | | | | | | | | | | | | | | | | | |
| 2460.2 | ELECTRONIC TRANSMISSION CONTROL (EGS A4S 310R) | | | | | | | | | | | | | | | | | | | | |
| 3231.0 | ELECTRIC STEERING COLUMN ADJUSTMENT | | | | | ● | | | | | | | | | | | | | | | |
| 3240.0 | POWER ASSIST STEERING (SERVOTRONIC) | | | | | | | | | | | | | | | | | | | | |
| 3450.0 | SLIP CONTROL (ABS) | | | | | | | | | | | | | | | | | | | | |
| 3450.1 | SLIP CONTROL (ABS/ASC) | | | | | | | | | | | | | | | | | | | | |
| 5116.0 | POWER MIRRORS | | | | | | | | | | | | | | | | | | | | |
| 5120.0 | ZKE DOOR LOCK HEATING (TSH) | ● | | | | | | | | | | | | | | | | | | | |
| 5126.0 | ZKE CENTRAL LOCKING (ZV) | ● | ● | | | | | | ● | | | | | | | | | | ● | | |
| 5133.0 | ZKE POWER WINDOWS (FH) | ● | ● | | | | | | | | | | | | | | | | ● | | |
| 5200.0 | POWER SEATS | | | | | | | | | | | | | ● | ● | | | | | | |



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# FUSE CHART

## FUSES 30 TO 49

| | | FUSE NUMBER | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 |
| | | 7.5A | 7.5A | | | 20A | | 30A | 20A | | | | 30A | 30A | 30A | 30A | | 30A | 30A | | |
| 5200.1 | SEAT/MIRROR MEMORY SYSTEM (SM/SPM) | | | | | | | | | | | | | | | | | | | | |
| 5203.0 | HEATED SEATS | | | | | | | | | | | | | | | | | | | | |
| 5410.0 | ZKE SUNROOF (SHD) | ● | ● | | | | | | | | | | | | | | | | ● | | |
| 5410.2 | DOUBLE PANEL POWER SUNROOF (ZKE) | ● | | | | | | | | | | | | | | | | | | | |
| 6100.0 | CENTRAL BODY ELECTRONICS (ZKE) | ● | | | | | | | | | | | | | | | | | ● | | |
| 6133.0 | HORN | | | | | | | | | | | | | | | | | | | | |
| 6160.0 | ZKE WIPER/WASHER CONTROL | | | | | | | | | | | | | | | ● | | | | | |
| 6162.0 | REAR WINDOW WIPER/WASHER CONTROL | | | | | | | | ● | | | | | | | | | | | | |
| 6167.0 | ZKE HEADLIGHT WASHER (SRA) | | | | | | | | | | | | | | | | | | | | |
| 6169.0 | WINDSHIELD WASHER JET HEATERS | | | | | | | | | | | | | | | | | | | | |
| 6200.0 | INSTRUMENT CLUSTER/ CHECK CONTROL (K/CC) | | | | | | | | | | | | | | | | | | | | |
| 6213.2 | MULTI-FUNCTION CLOCK | | | | | | | | | | | | | | | | | | | | |
| 6300.0 | LIGHT SWITCH DETAILS | | | | | | | | | | | | | | | | | | | | |
| 6301.0 | LAMP MONITOR (LKM) | | | | | | | | | | | | | | | | | | | | |
| 6312.0 | HEADLIGHTS/ FOG LIGHTS | | | | | | | | | | | | | | | | | | | | |
| 6313.0 | TURN/HAZARD LIGHTS | | | | | | | | | | | | | | | | | | | | |
| 6314.0 | PARK/TAIL/ UNDERHOOD LIGHTS | | | | | | | | | | | | | | | | | | | | |
| 6320.0 | LICENSE PLATE/ LUGGAGE COMPARTMENT LIGHTS | | | | | | | | | | | | | | | | | | | | |
| 6322.0 | BACK UP LIGHTS | | | | | | | | | | | | | | | | | | | | |



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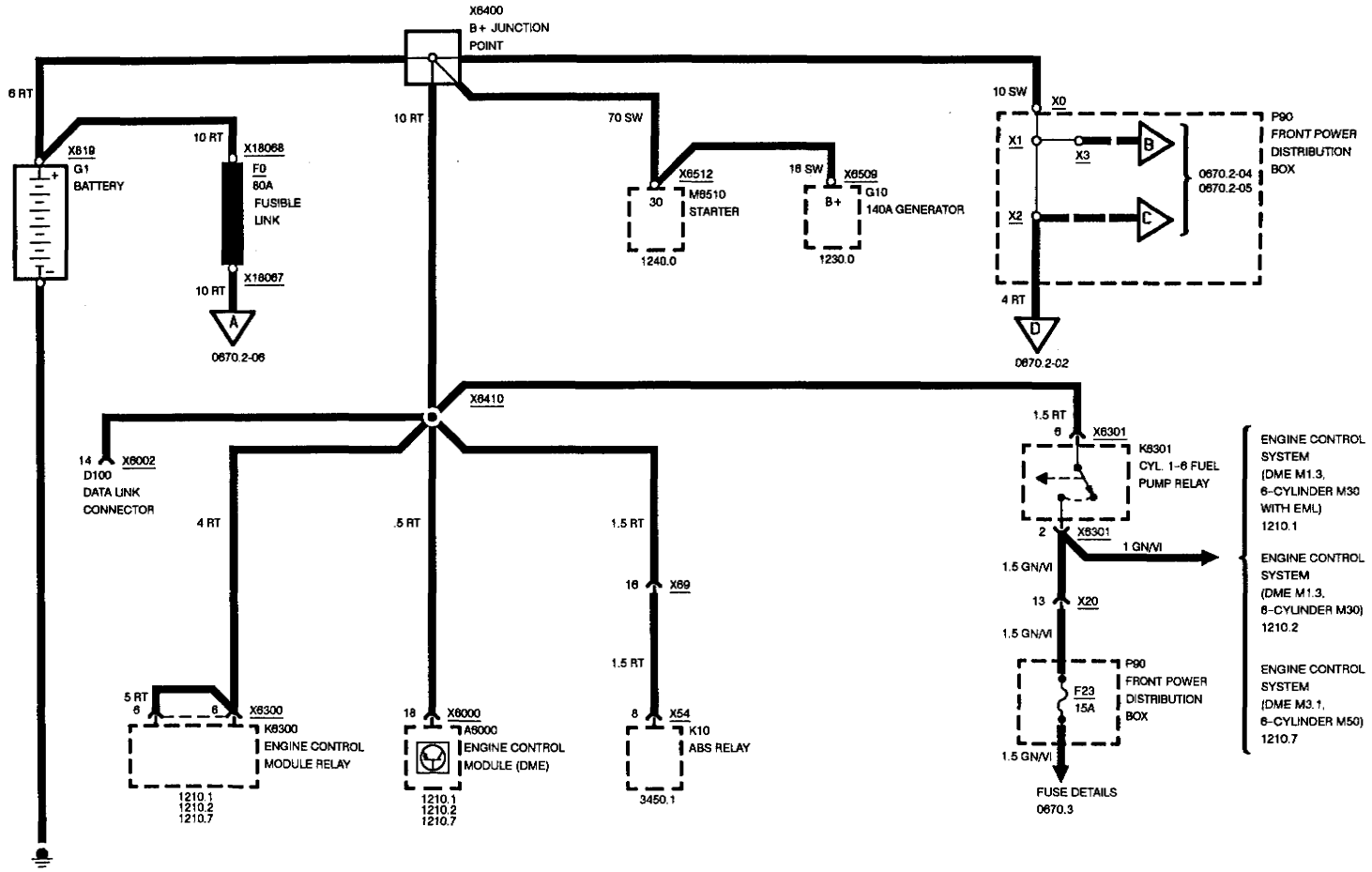
# FUSE CHART

## FUSES 30 TO 49

| | | FUSE NUMBER | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 |
| | | 7.5A | 7.5A | | | 20A | | 30A | 20A | | | | 30A | 30A | 30A | 30A | | 30A | 30A | | |
| **6325.0** | BRAKE LIGHTS | | | | | | | | | | | | | | | | | | | | |
| **6330.0** | ZKE INTERIOR LIGHTS CONTROL (IB) | ● | | | | | | | | | | | | | | ● | | | | | |
| **6332.0** | INTERIOR ACCESSORIES | | | | | | | | | | | | | | | | | | | | |
| **6350.0** | CRASH CONTROL MODULE | | | | | | | | | | | | | | | | | | | | |
| **6412.19** | PARK VENTILATION WITH IHKR/F3 | | | | | | | | | | | | | | | | | | | | |
| **6424.0** | REAR WINDOW DEFOGGER | | | | | | | | | | | | | | | | | ● | | | |
| **6450.5** | INTEGRATED CLIMATE REGULATION WITH FILTER (IHKR/F3) | | | | | | | | | | | | | | | | | | | | |
| **6454.0** | AUXILIARY FAN | | | | | | | | | | | | | | | | | | | | |
| **6510.1** | RADIO/HIFI | | | | | | | ● | | | | | | | | | | | | | |
| **6510.2** | RADIO PROVISIONS | | | | | | | ● | | | | | | | | | | | | | |
| **6561.0** | CELLULAR TELEPHONE (PROVISIONS) | | ● | | | | | | | | | | | | | | | | | | |
| **6571.0** | CRUISE CONTROL (TEMPOMAT) | | | | | | | | | | | | | | | | | | | | |
| **6575.2** | ANTI-THEFT SYSTEM (ALPINE) | | | | | | | | | | | | | | | | | | ● | | |
| **6581.0** | ON-BOARD COMPUTER (BCIV) | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
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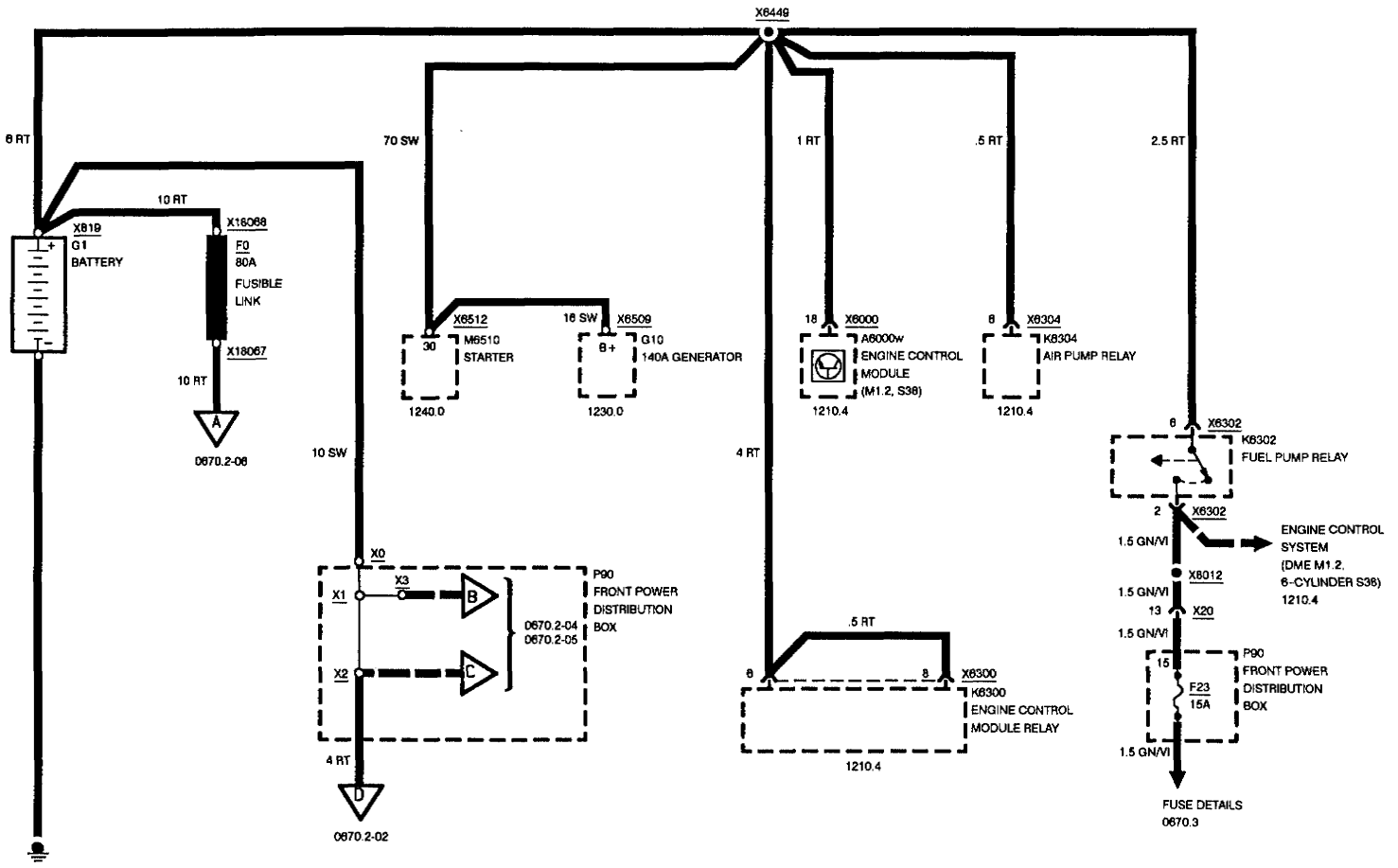


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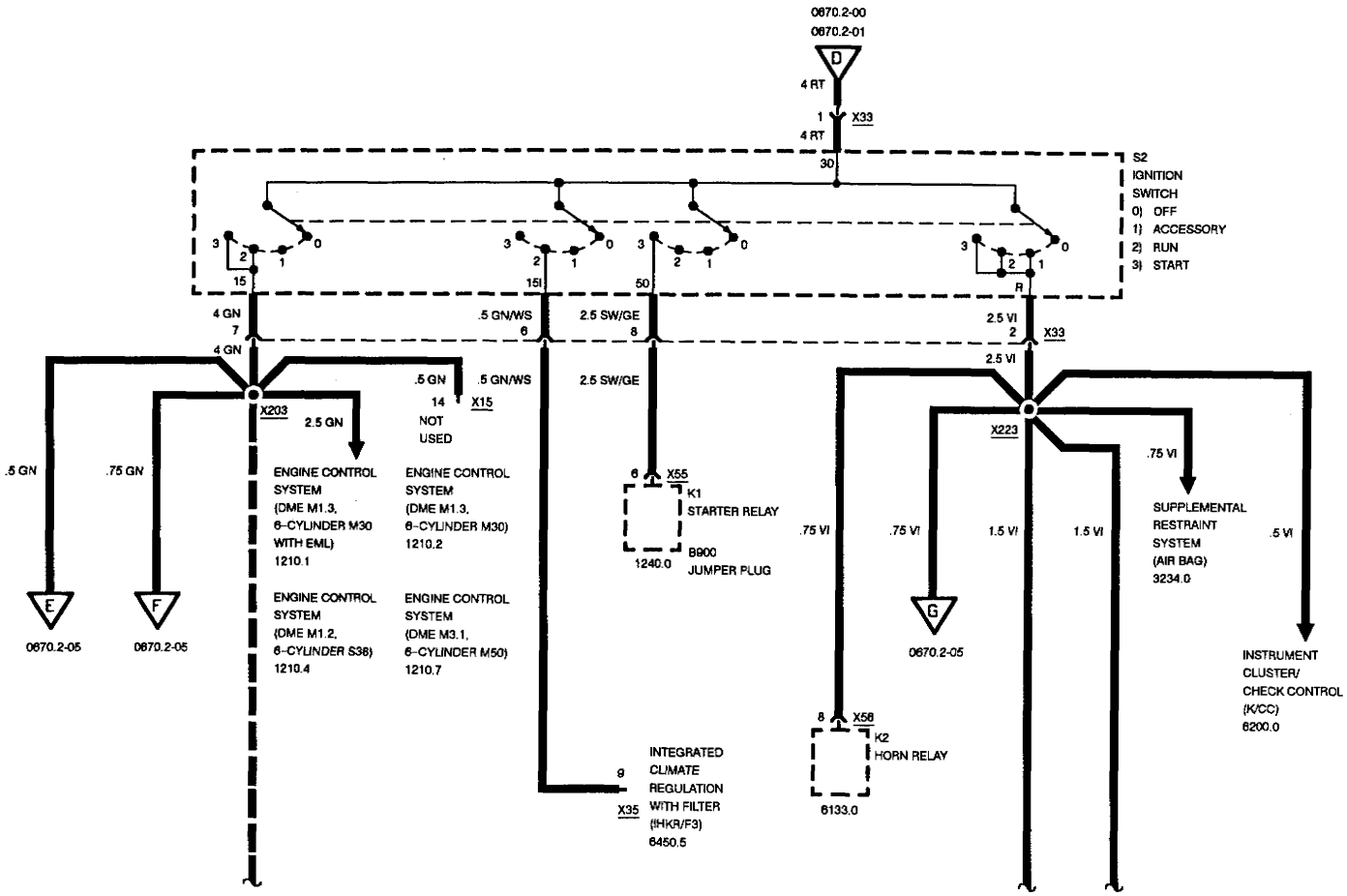





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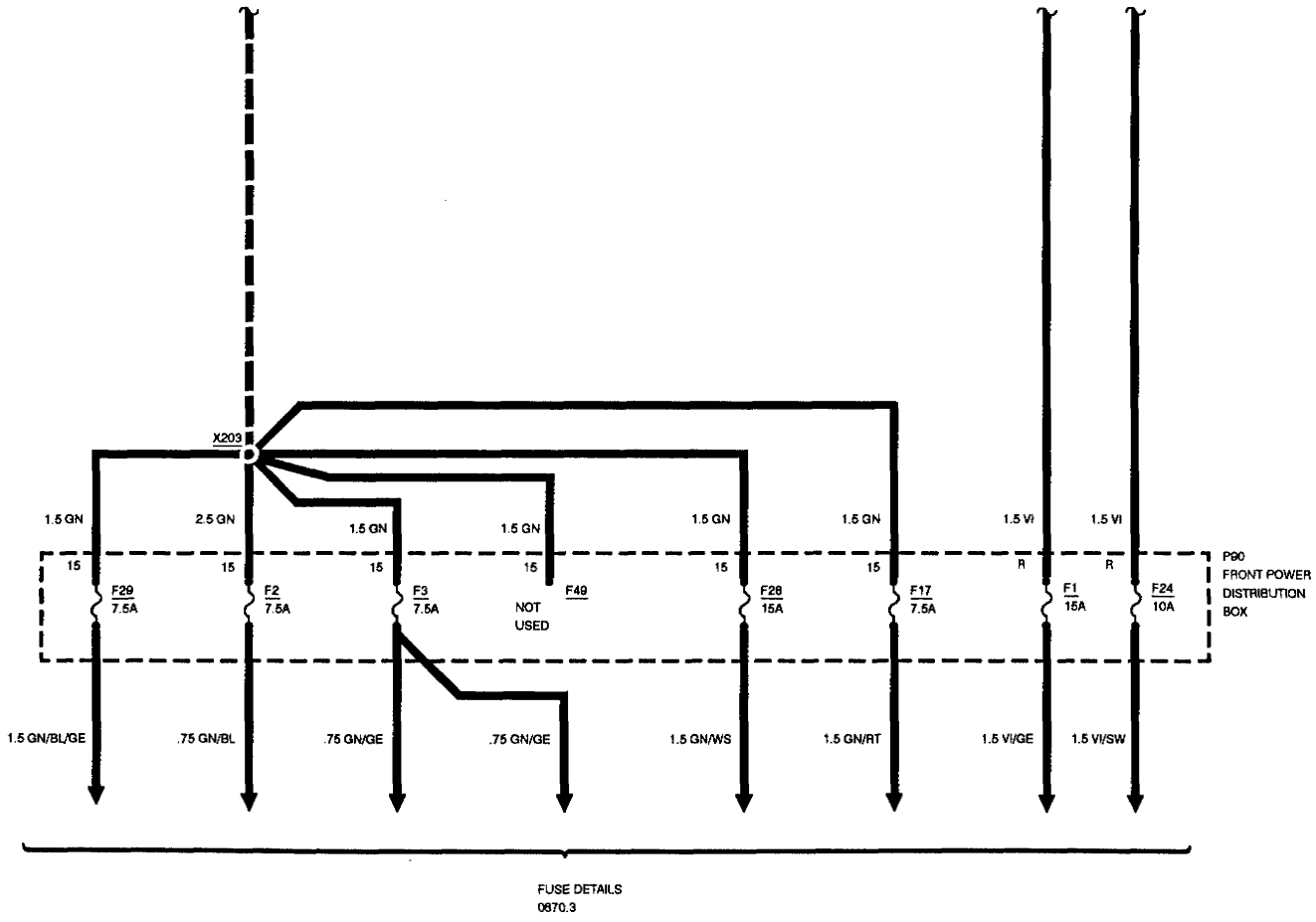
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## FRONT POWER DISTRIBUTION BOX






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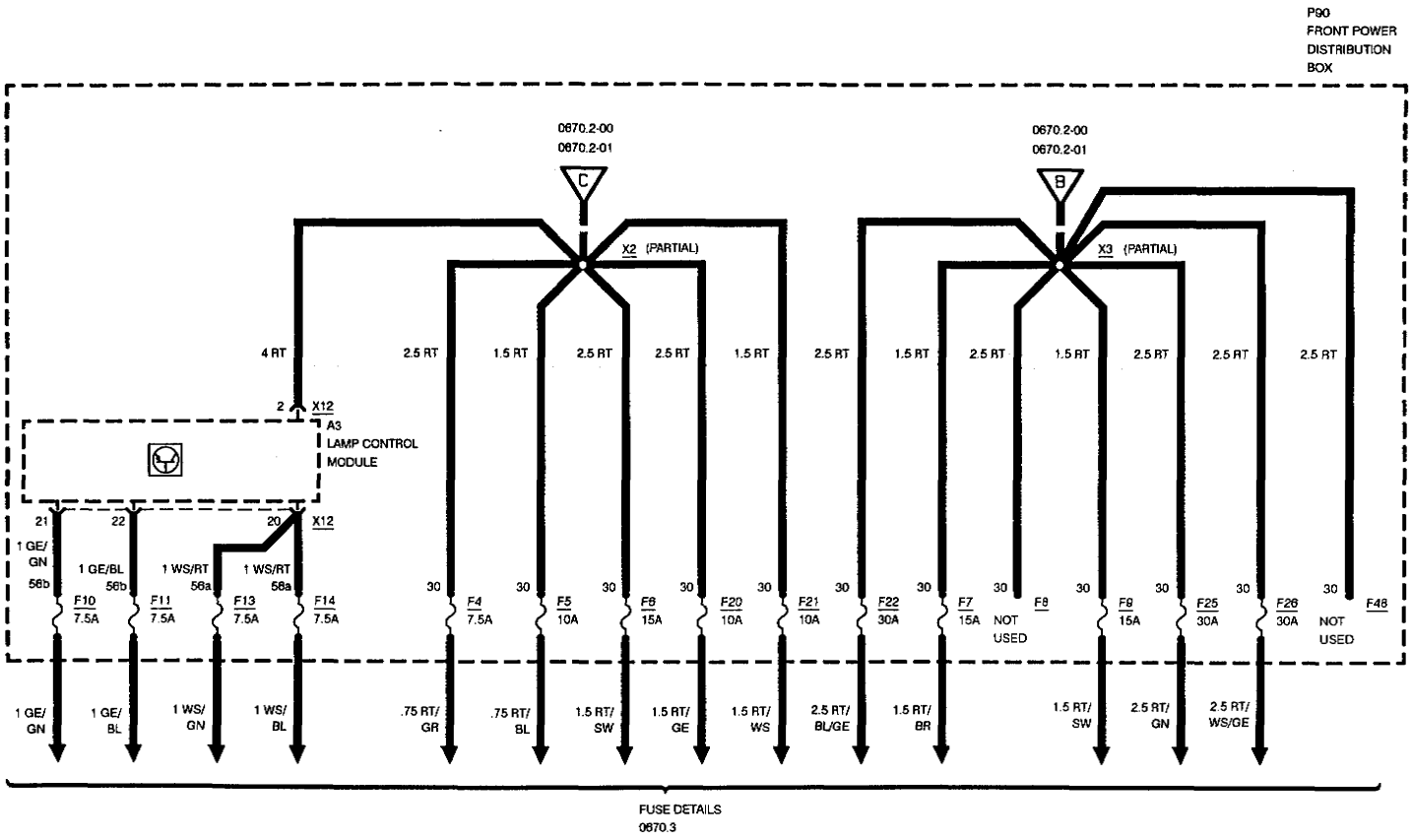



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## FRONT POWER DISTRIBUTION BOX

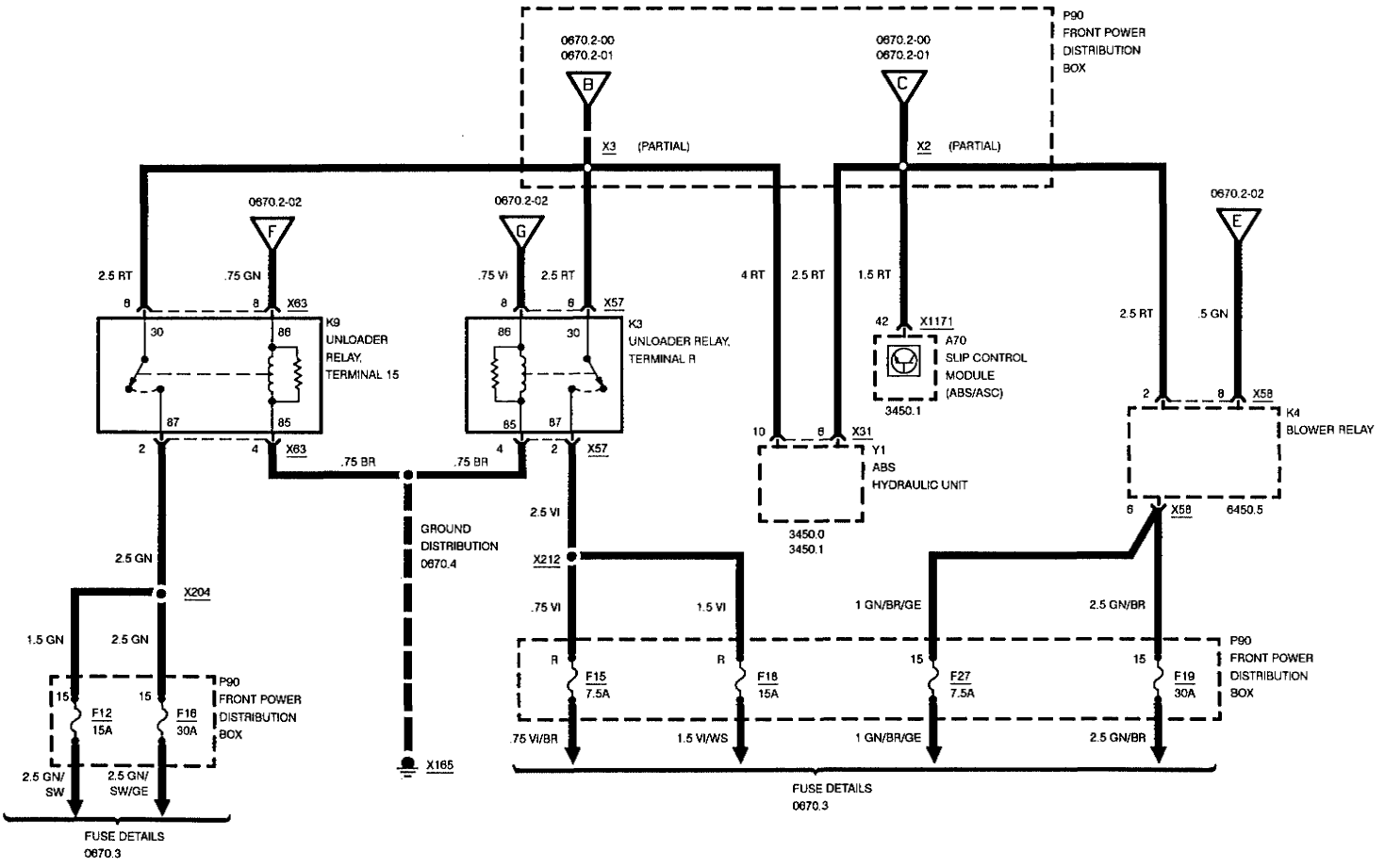





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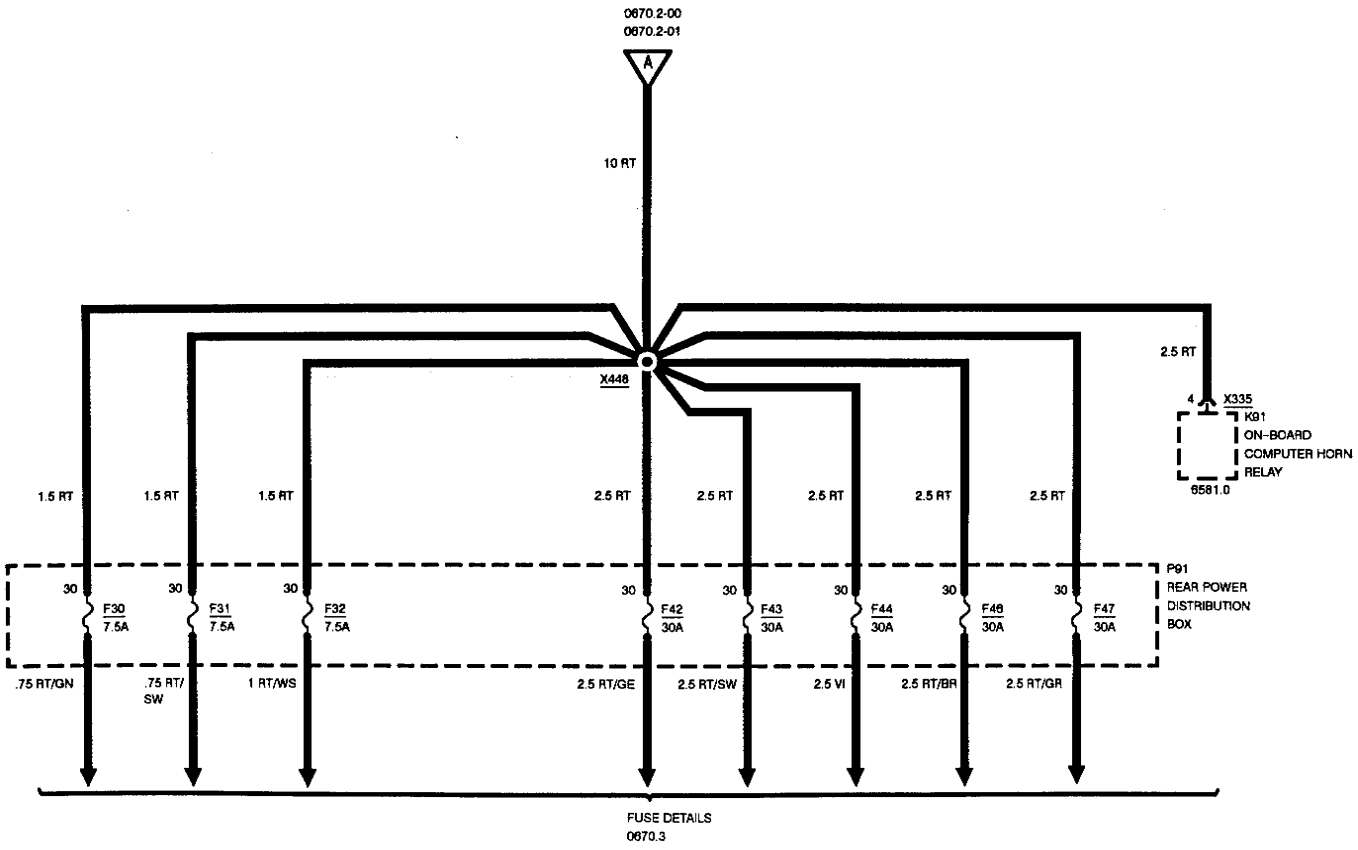
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## REAR POWER DISTRIBUTION BOX

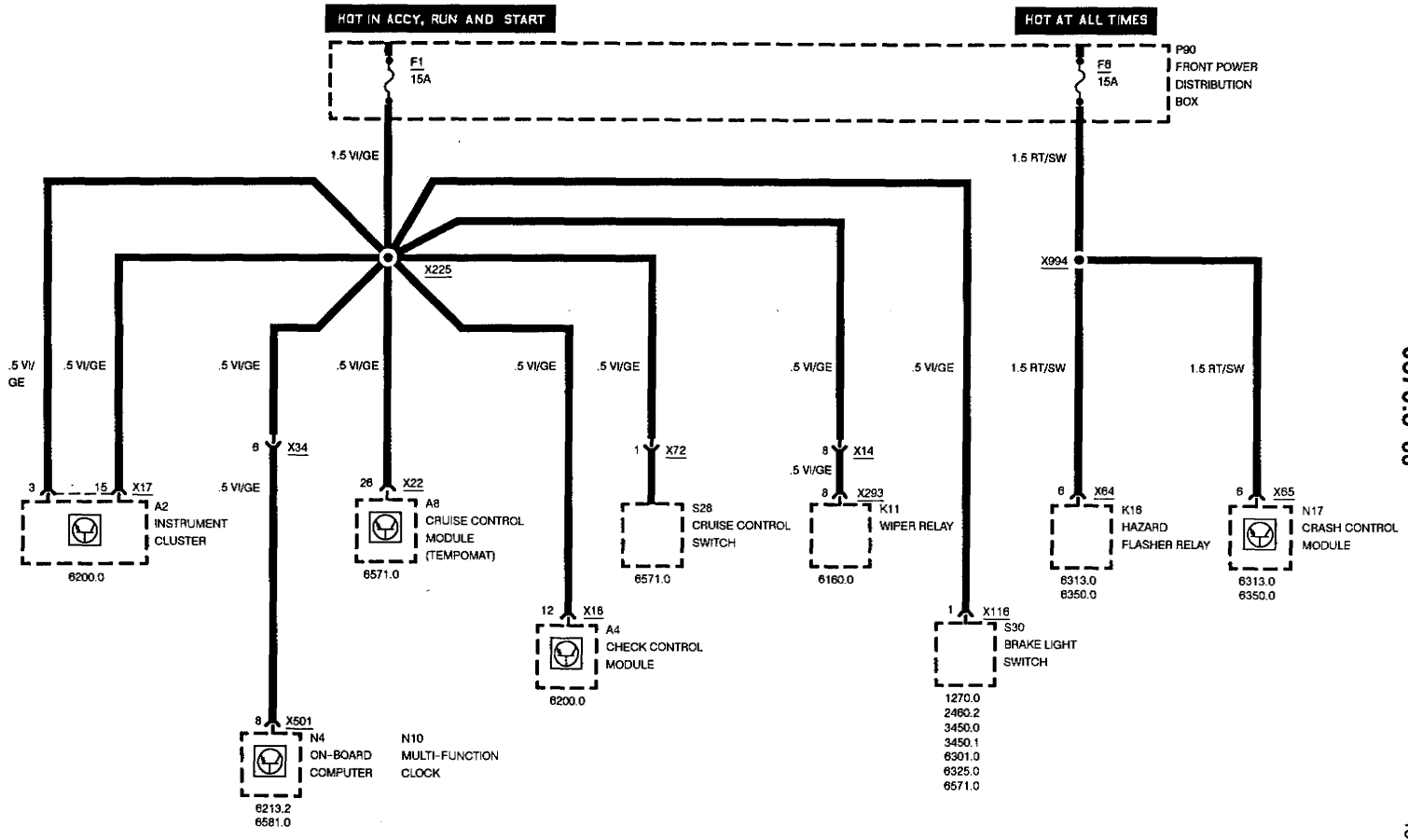



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# FUSE DETAILS

## FUSES 1 AND 6

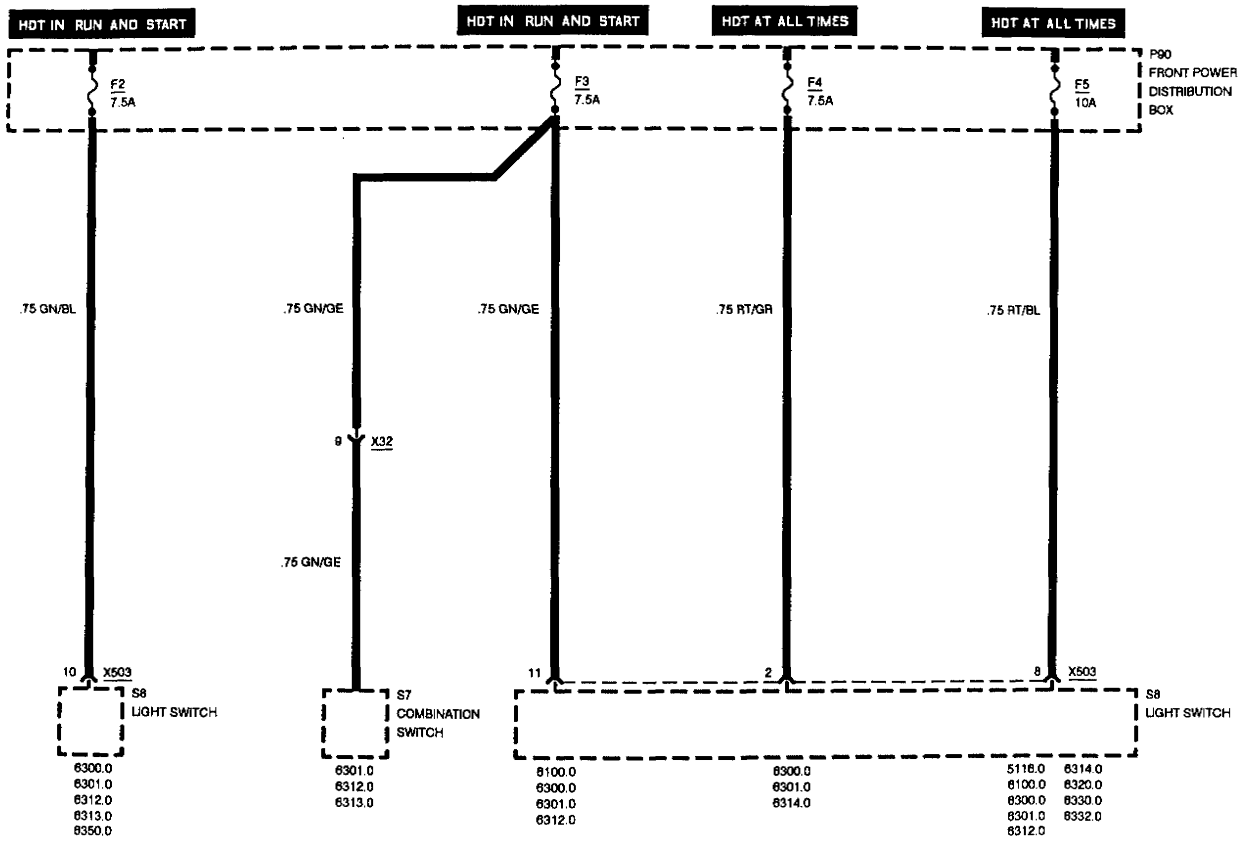





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# FUSE DETAILS

## FUSES 2, 3, 4, AND 5



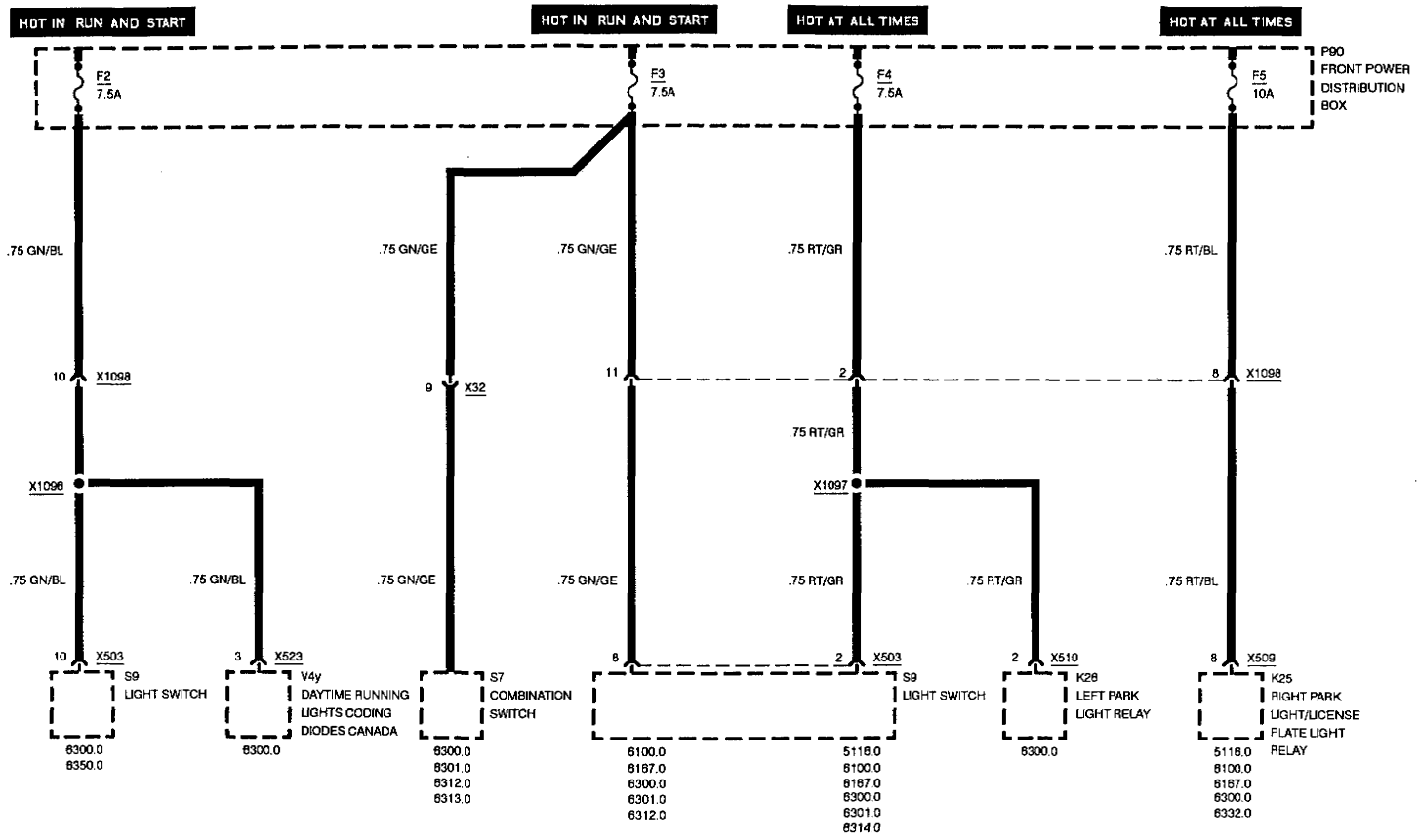



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# FUSE DETAILS

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## FUSES 2, 3, 4, AND 5

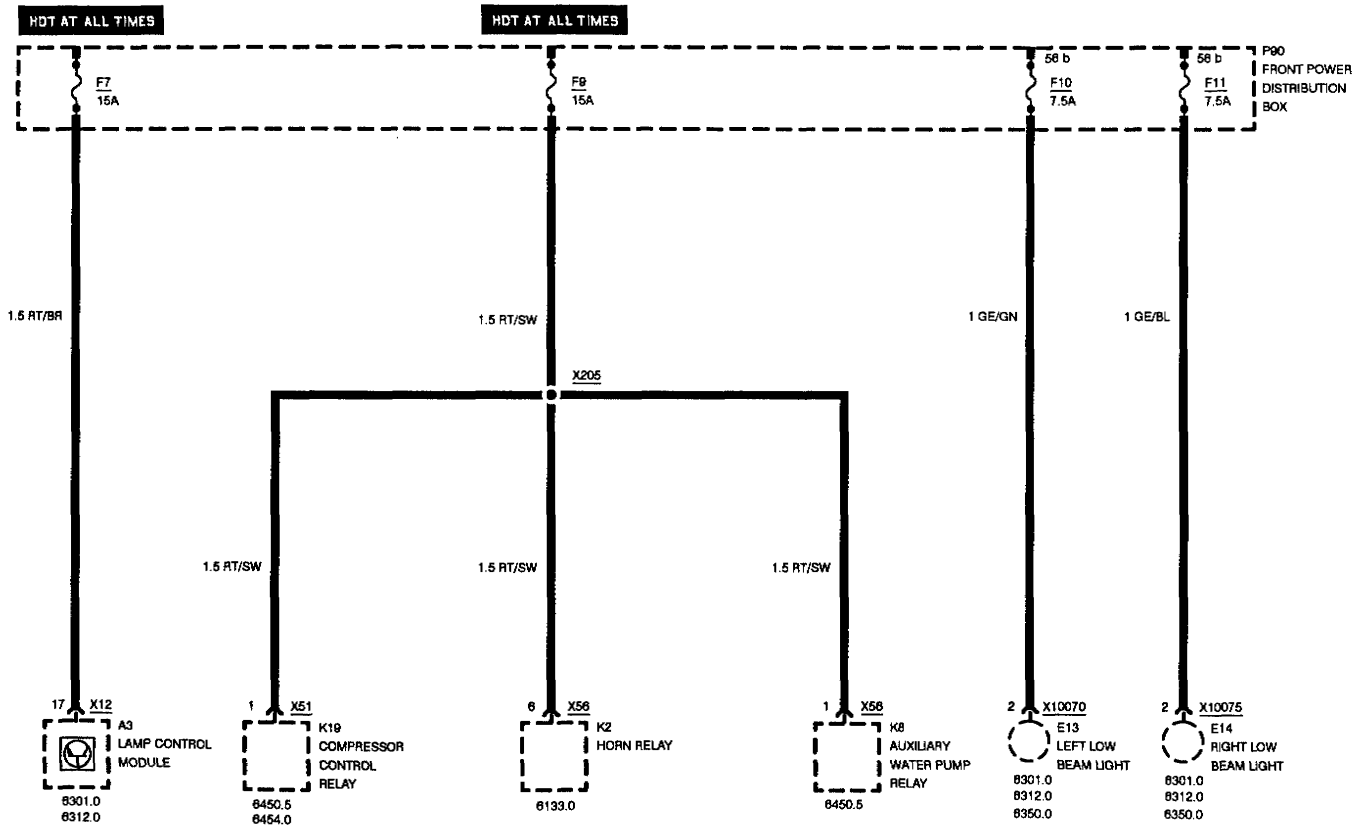





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# FUSE DETAILS

## FUSES 7, 9, 10, AND 11

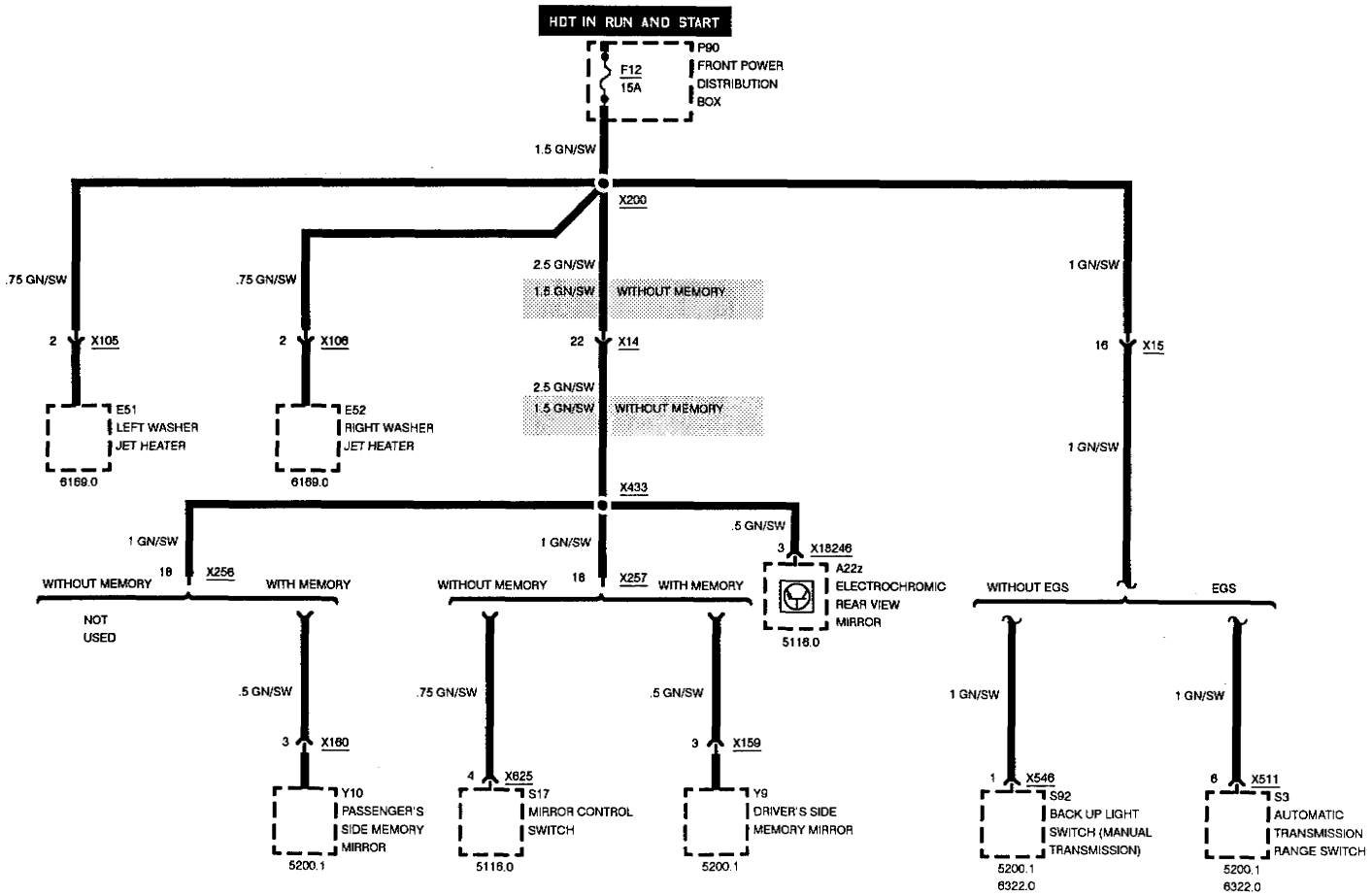





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# FUSE DETAILS

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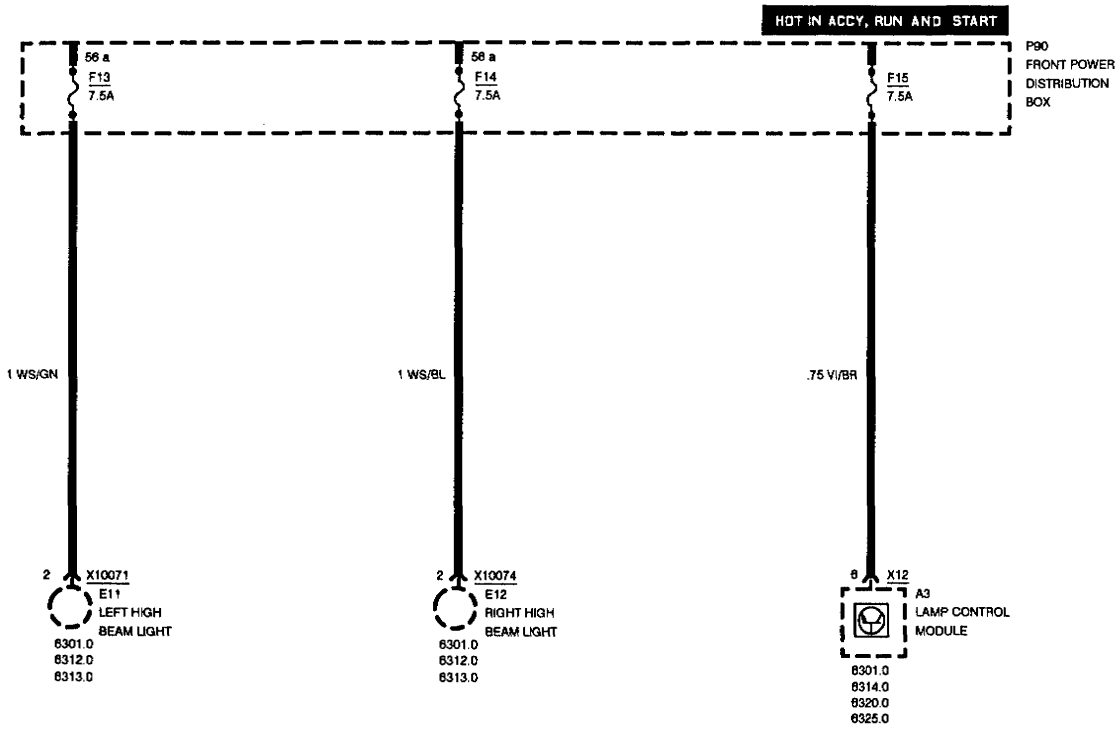





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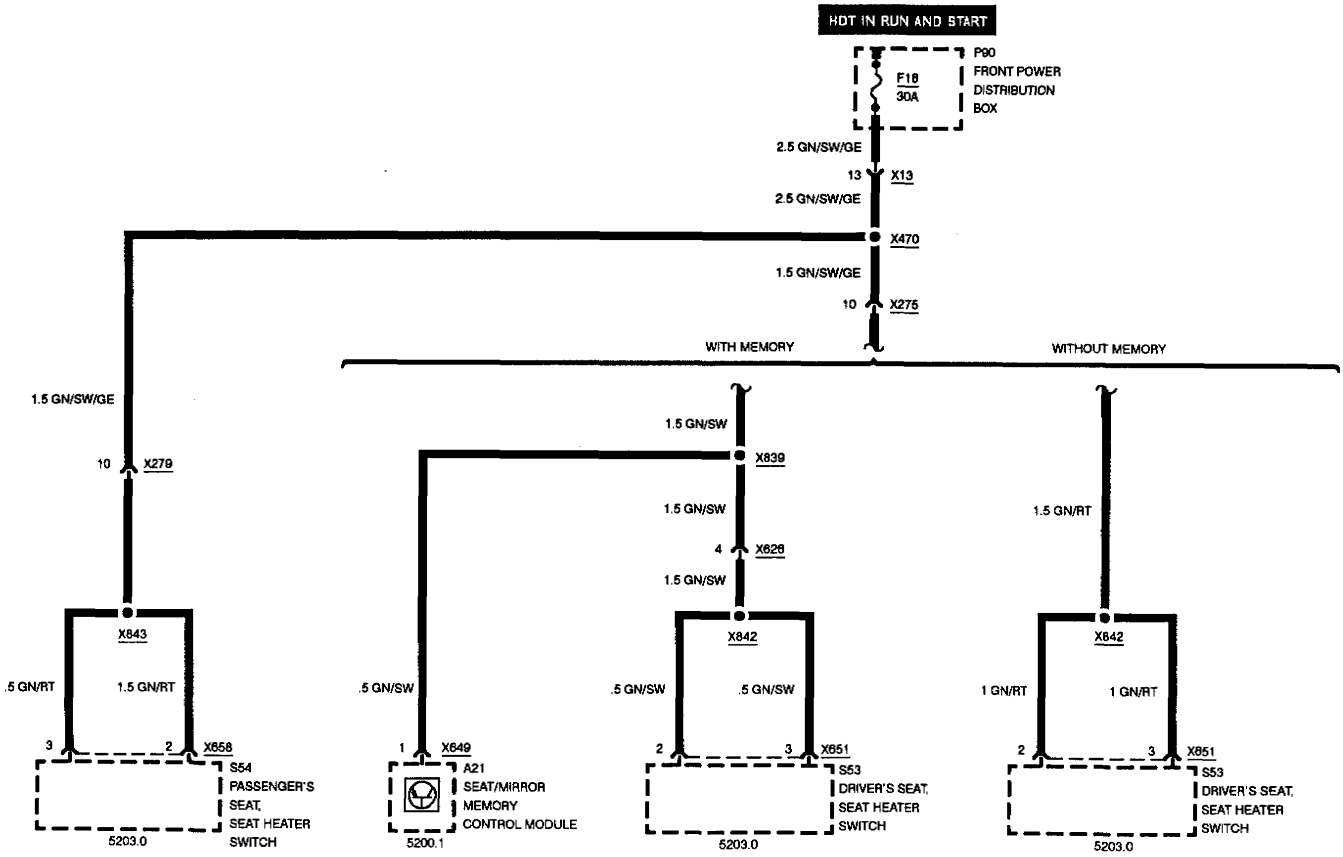
## FUSES 13, 14, AND 15




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# FUSE DETAILS

## FUSE 16

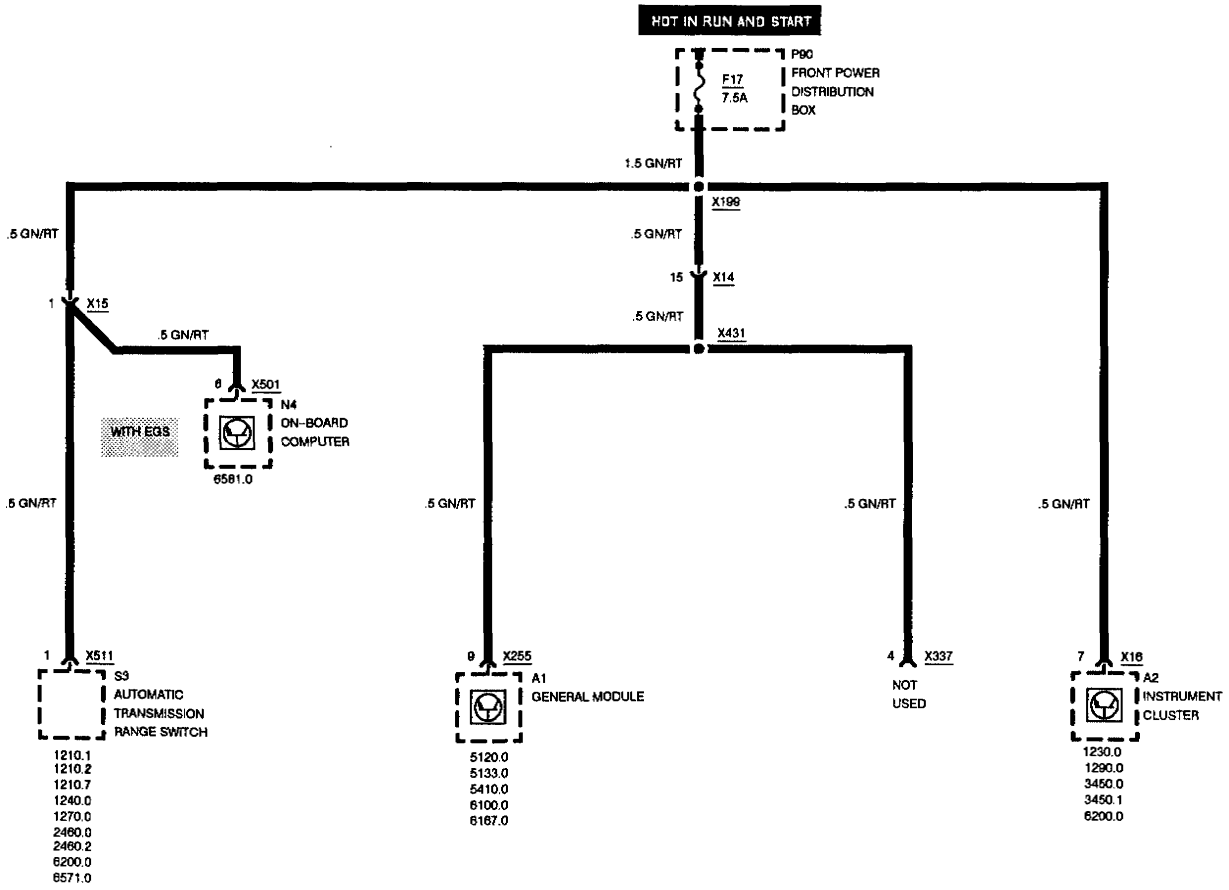





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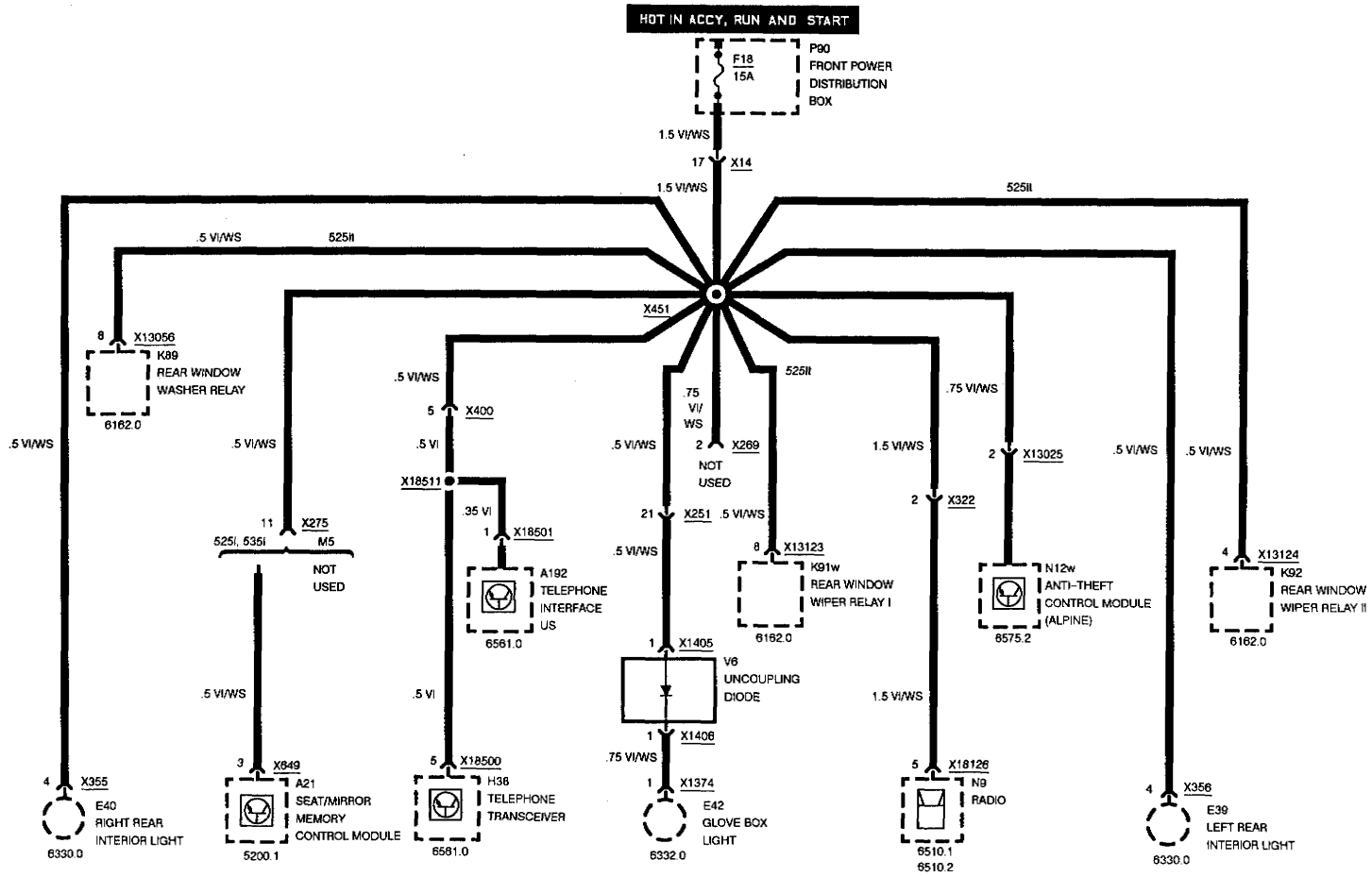
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# FUSE DETAILS

## FUSE 18

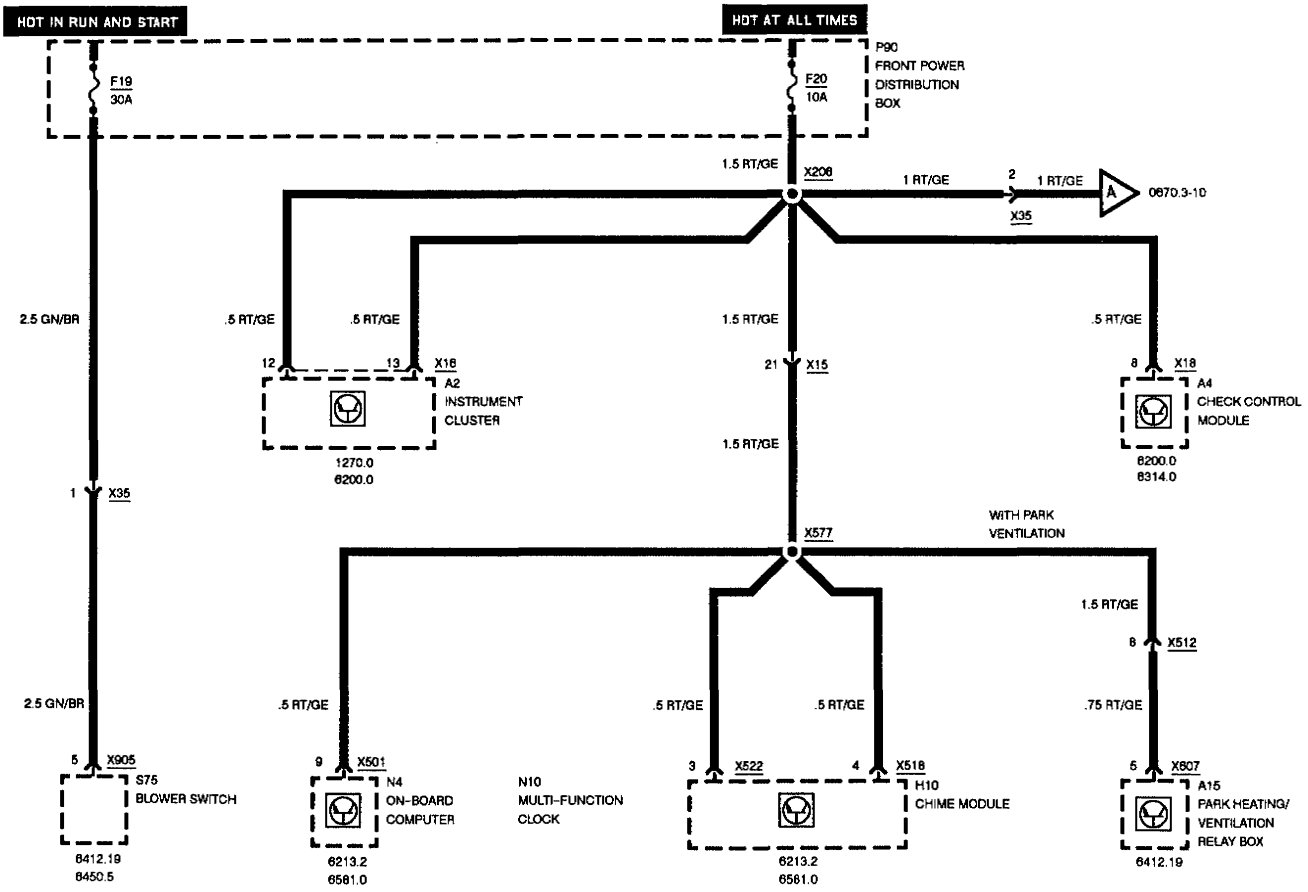





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# FUSE DETAILS

## FUSES 19 AND 20

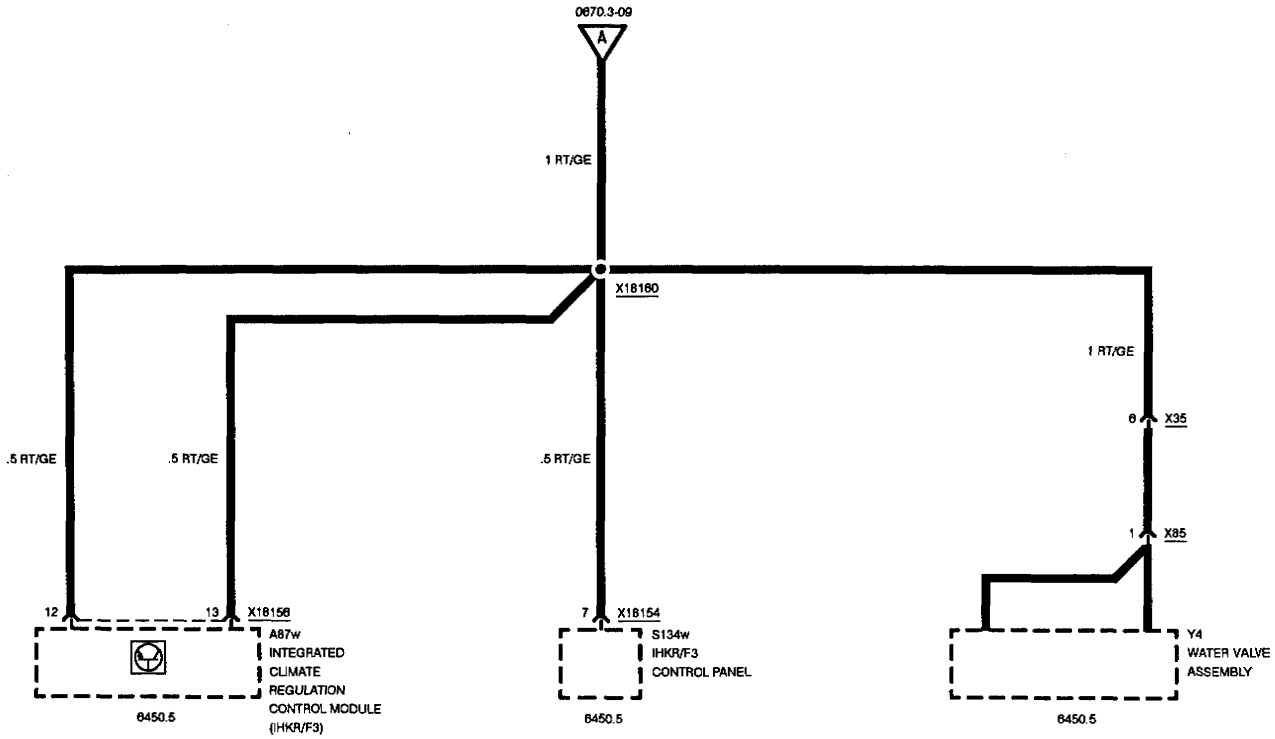





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# FUSE DETAILS

## FUSE 20

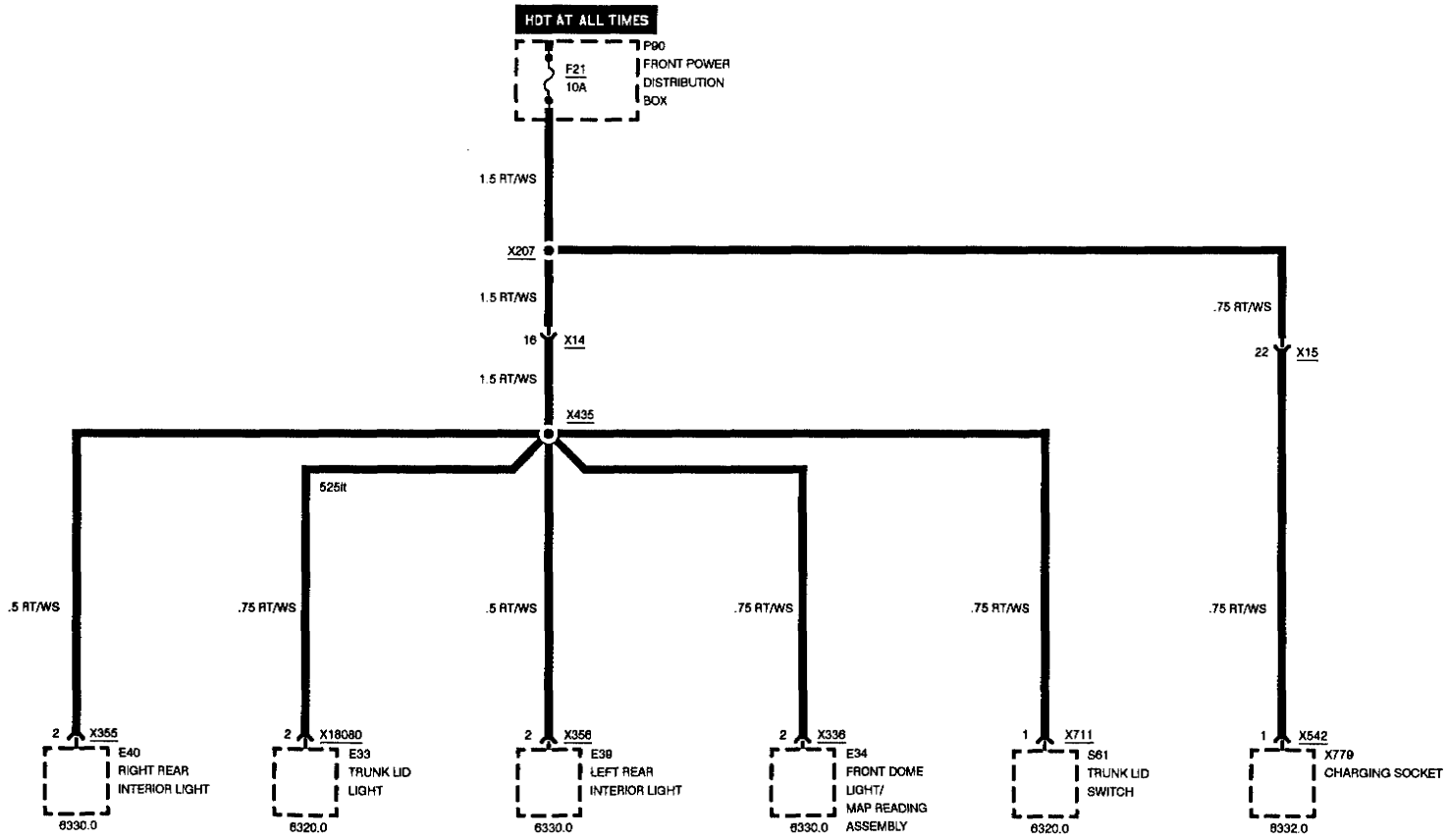





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# FUSE DETAILS

## FUSE 21

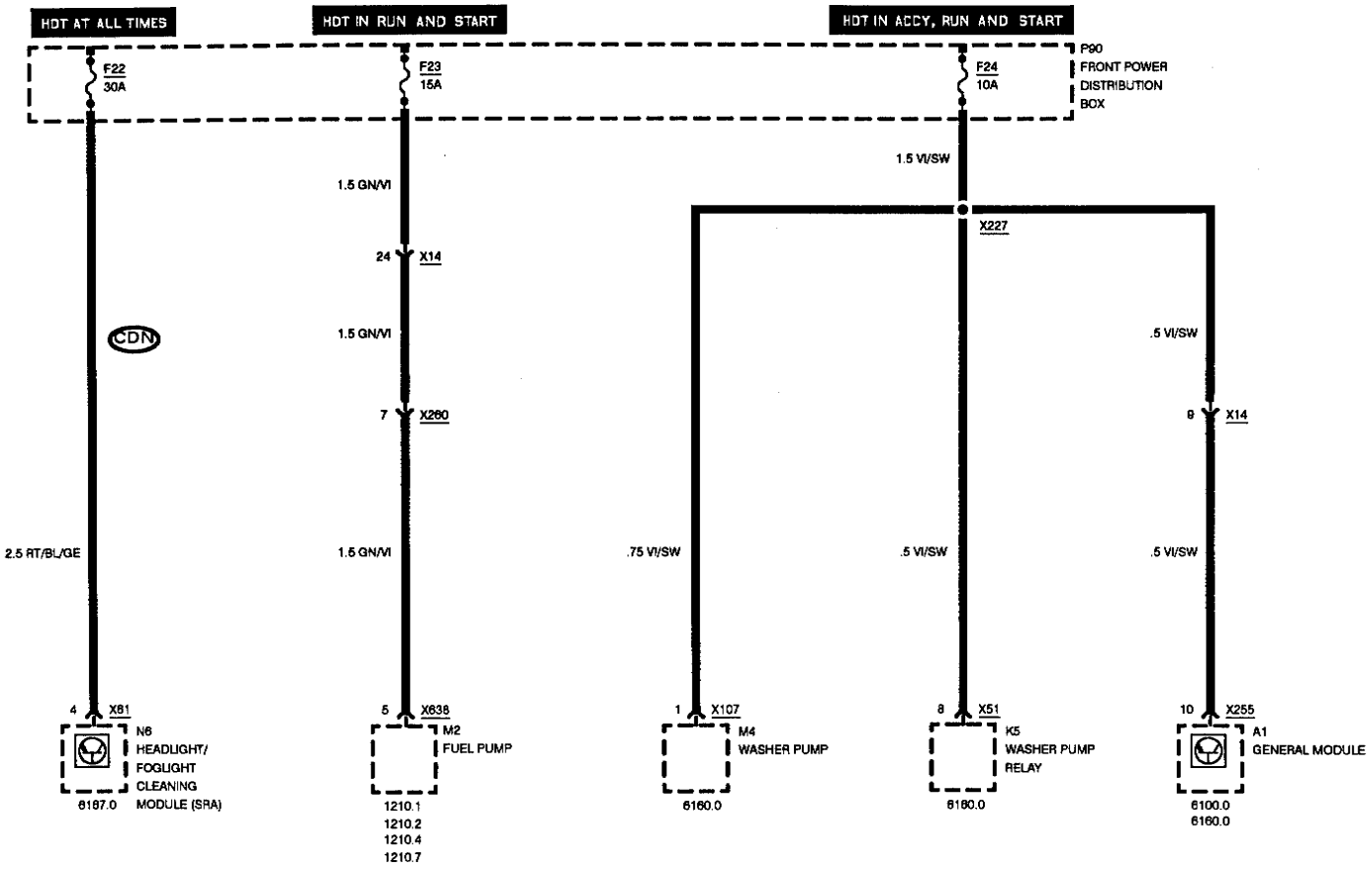





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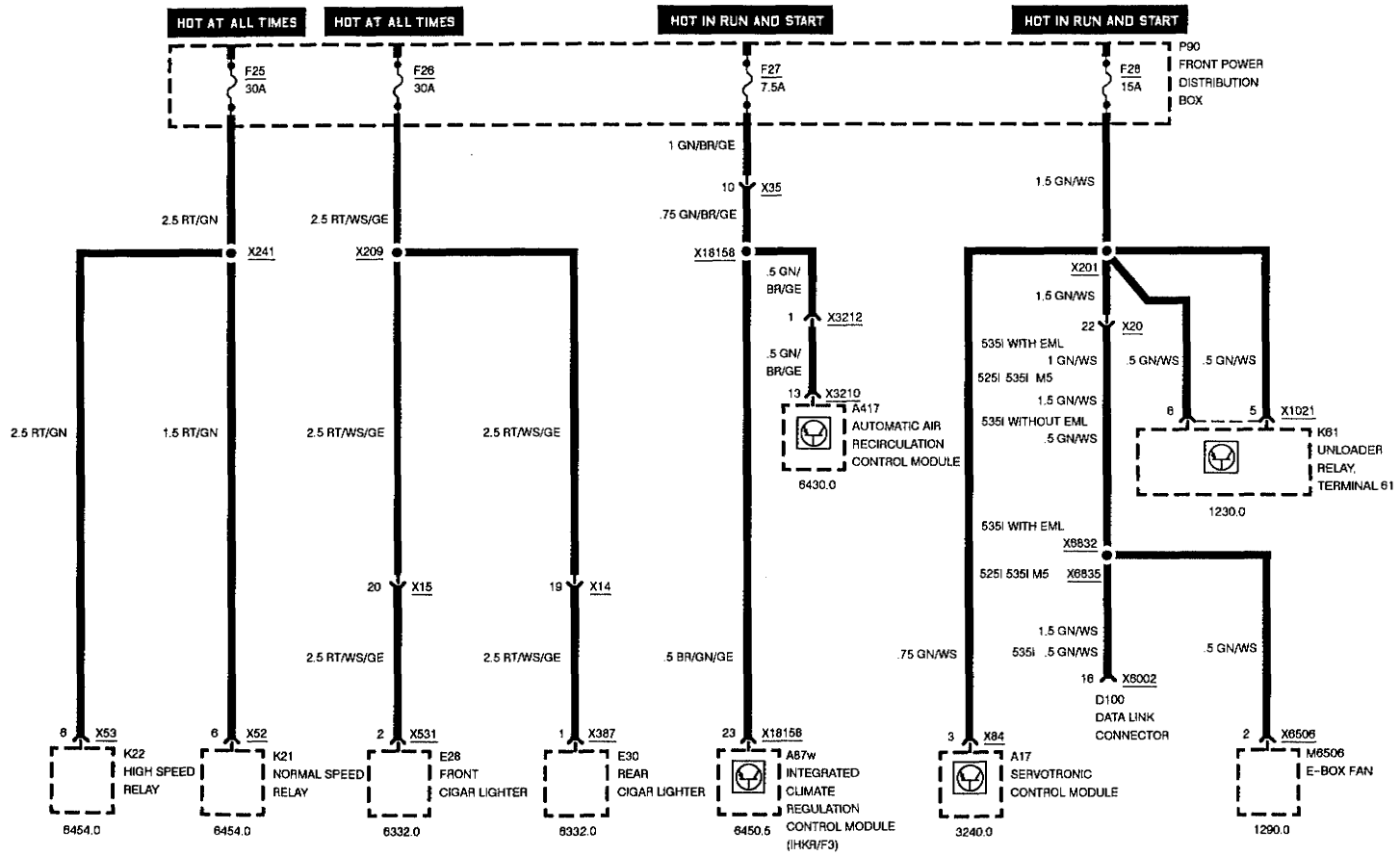
## FUSES 22, 23, AND 24




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# FUSE DETAILS

## FUSES 25, 26, 27, AND 28

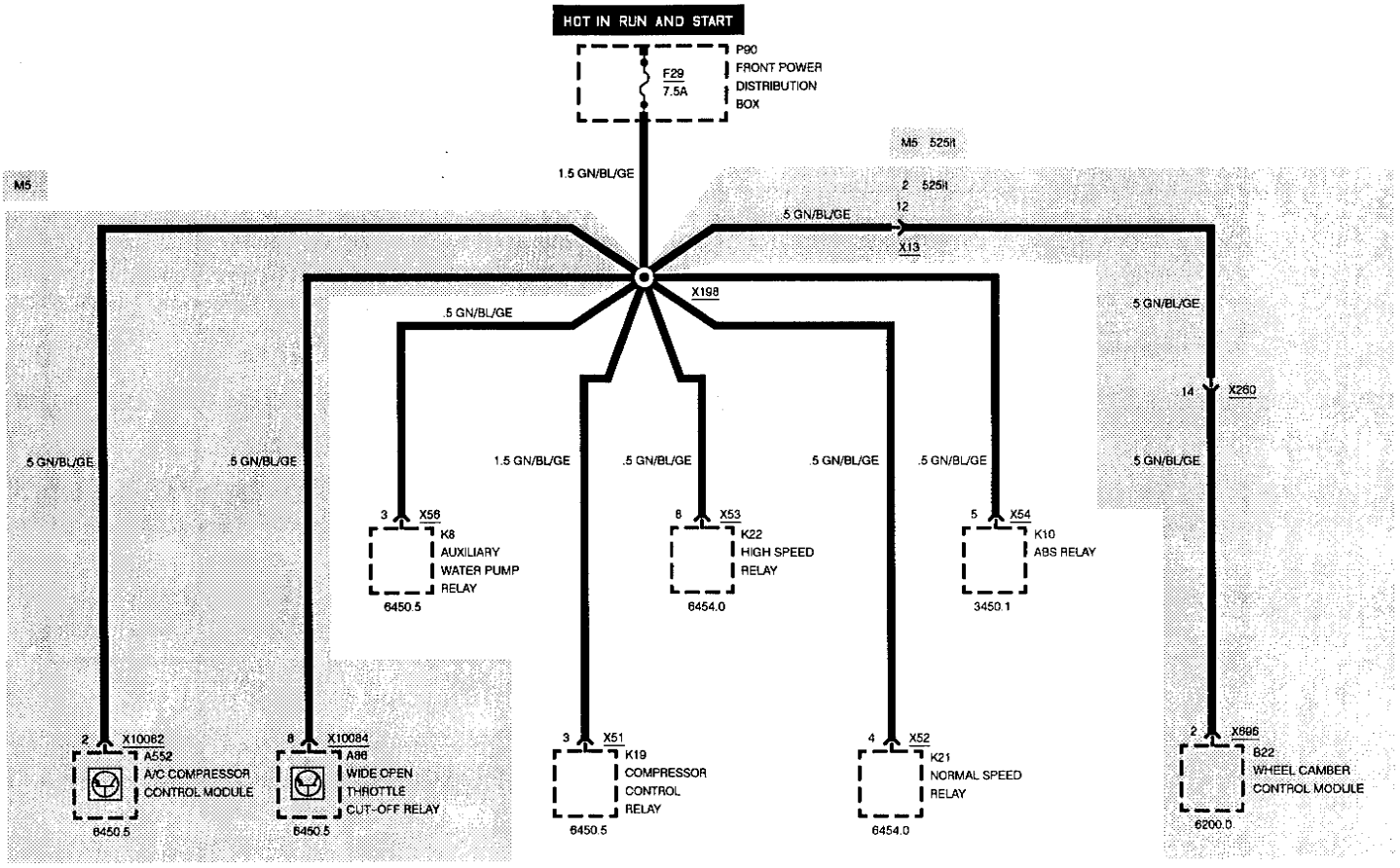





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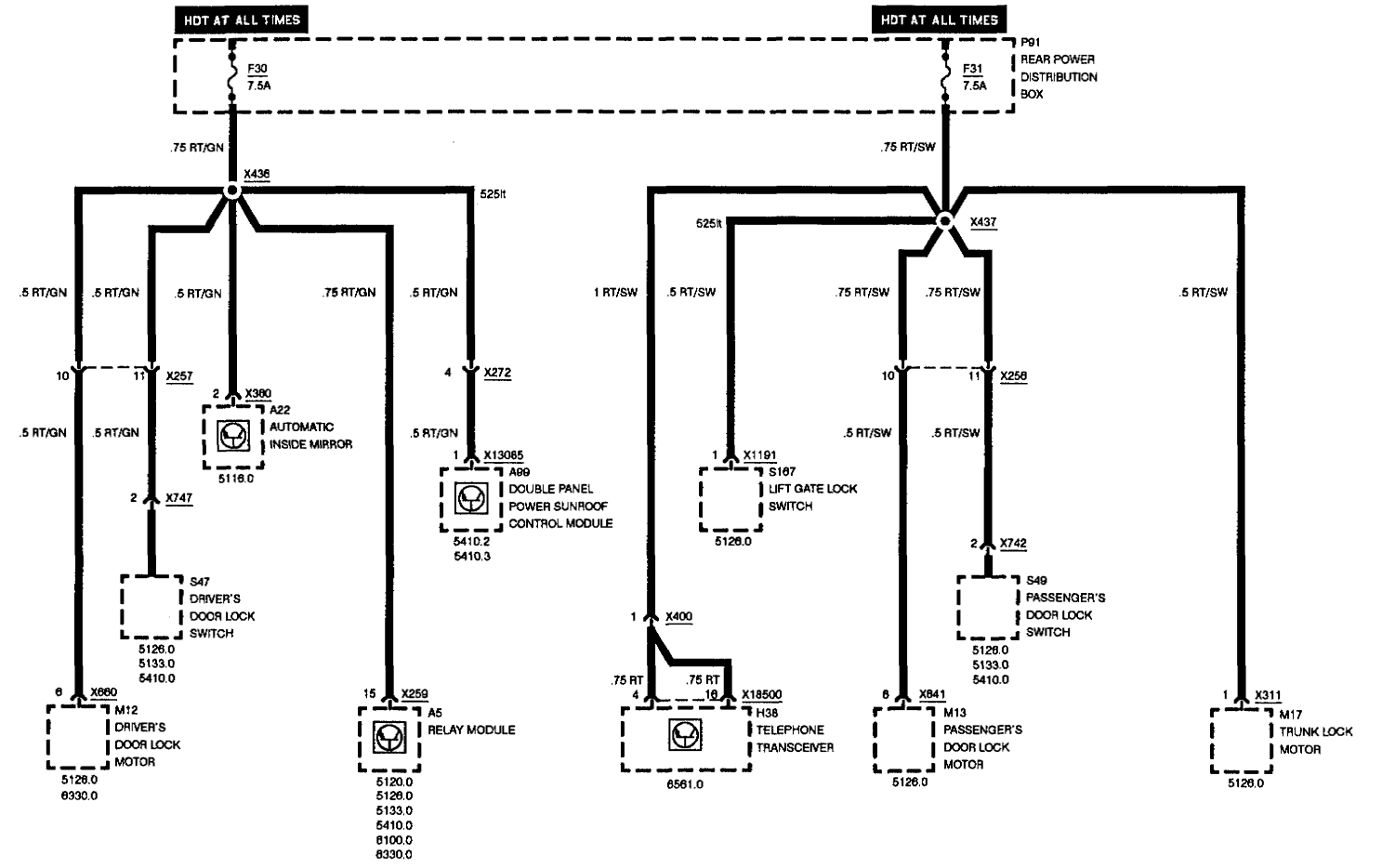
## FUSE 29




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# FUSE DETAILS

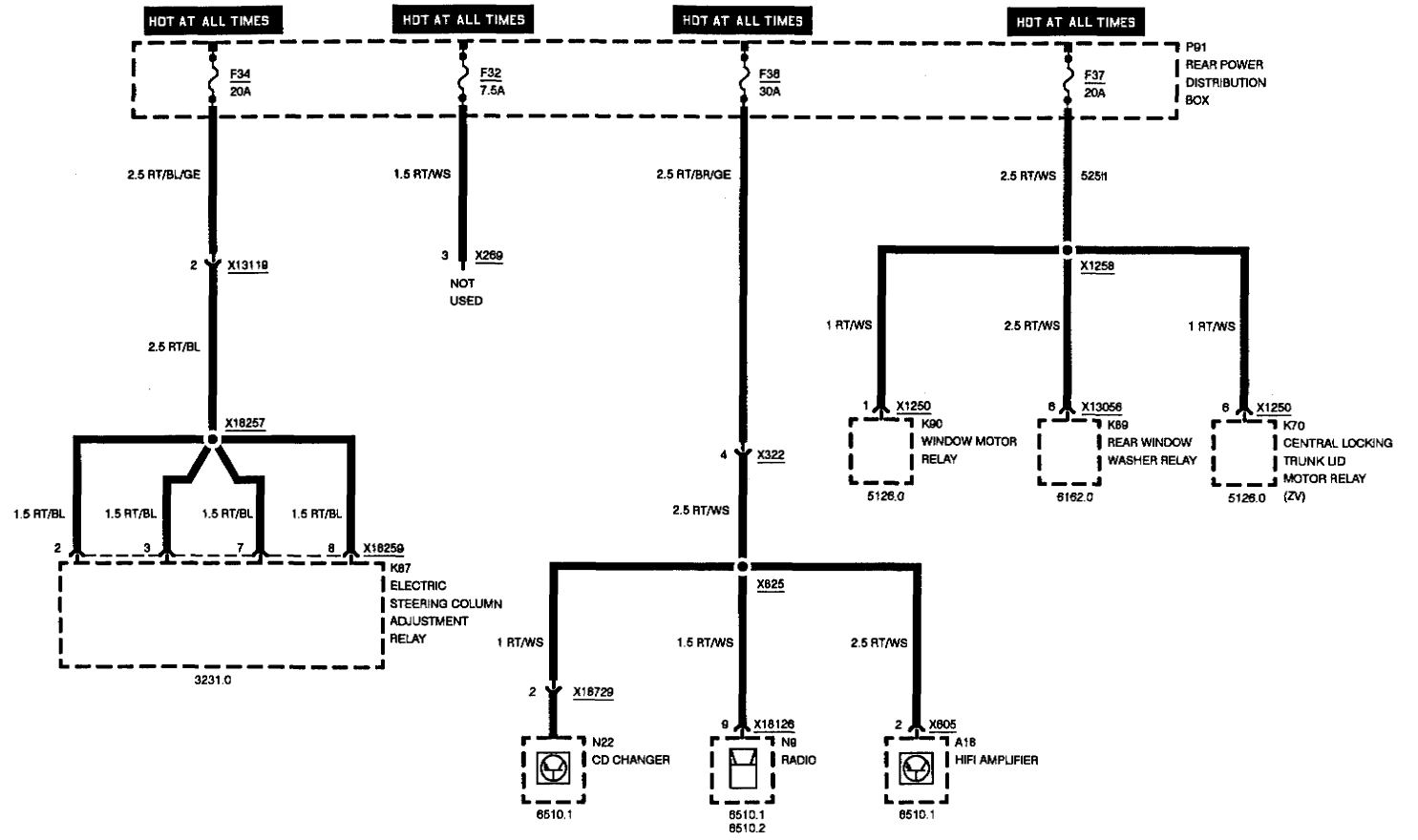
## FUSES 30 AND 31




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# FUSE DETAILS

## FUSES 32, 34, 36, 37, AND 40

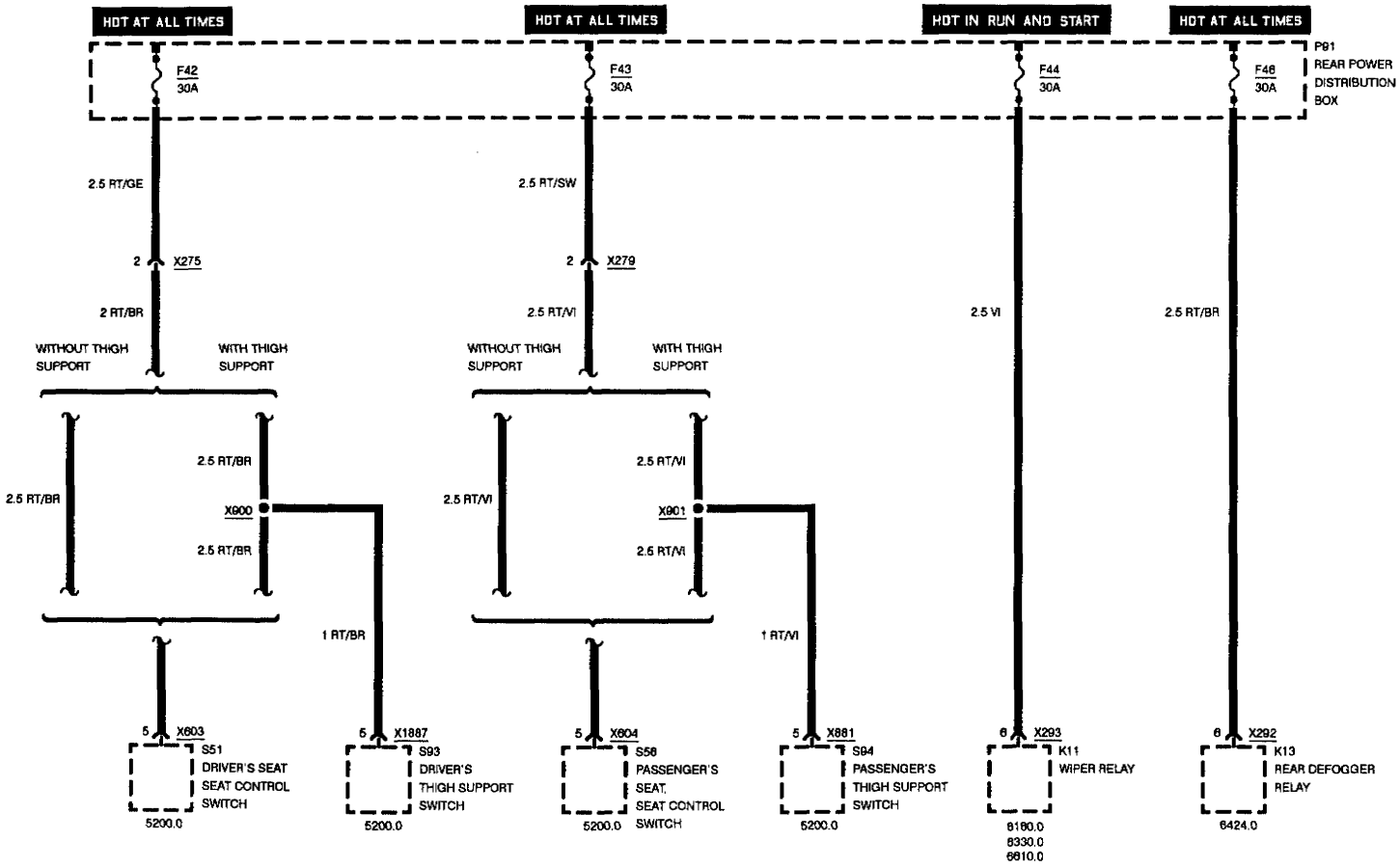





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# FUSE DETAILS

## FUSES 42, 43, 44, AND 46

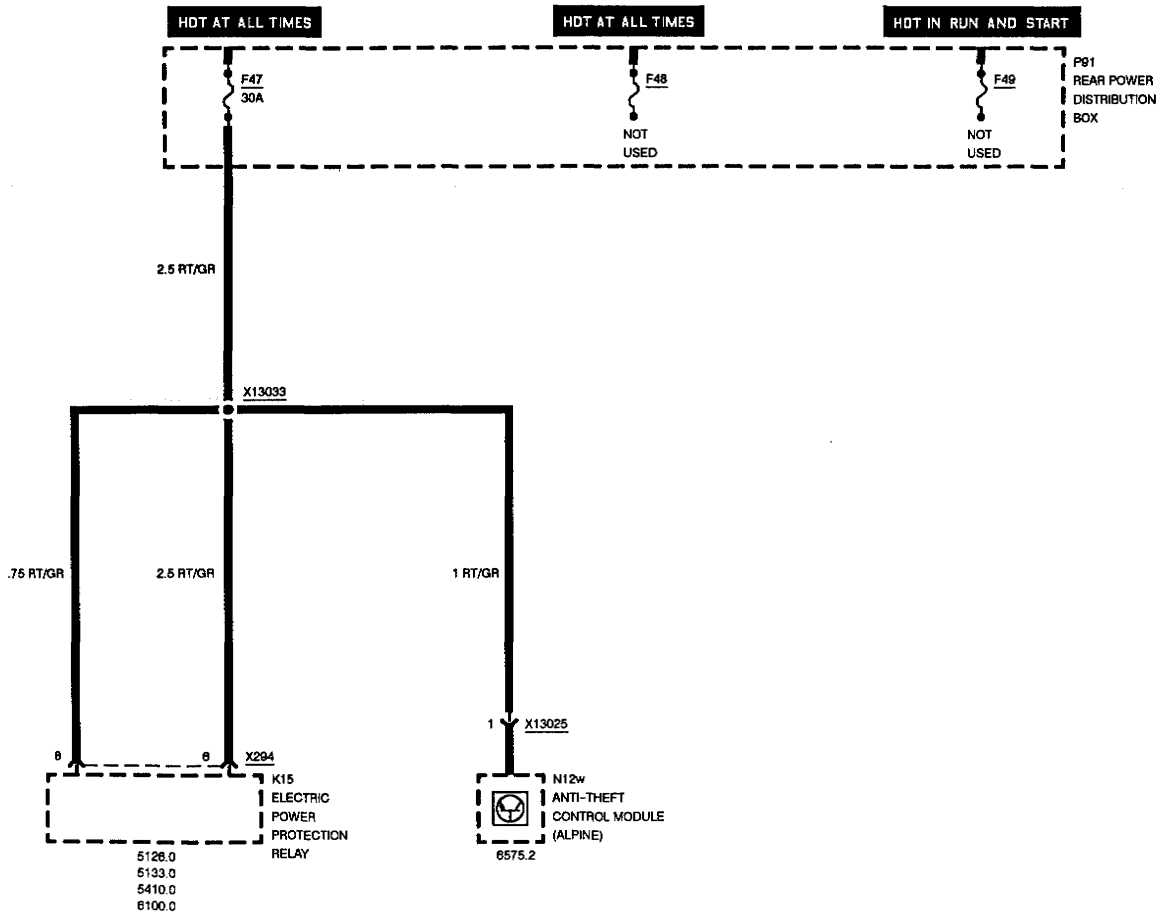





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# FUSE DETAILS

## FUSES 47, 48, AND 49



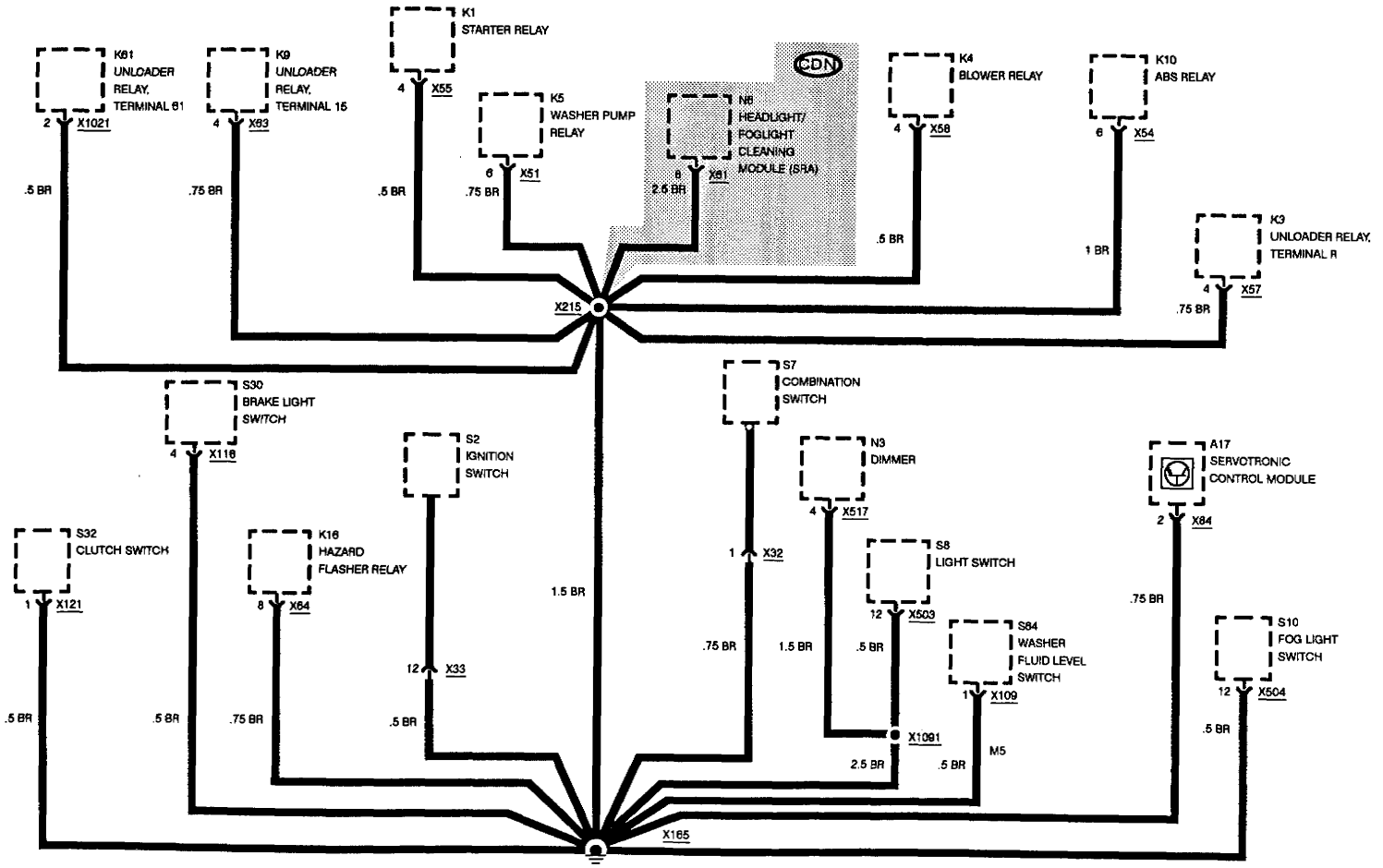



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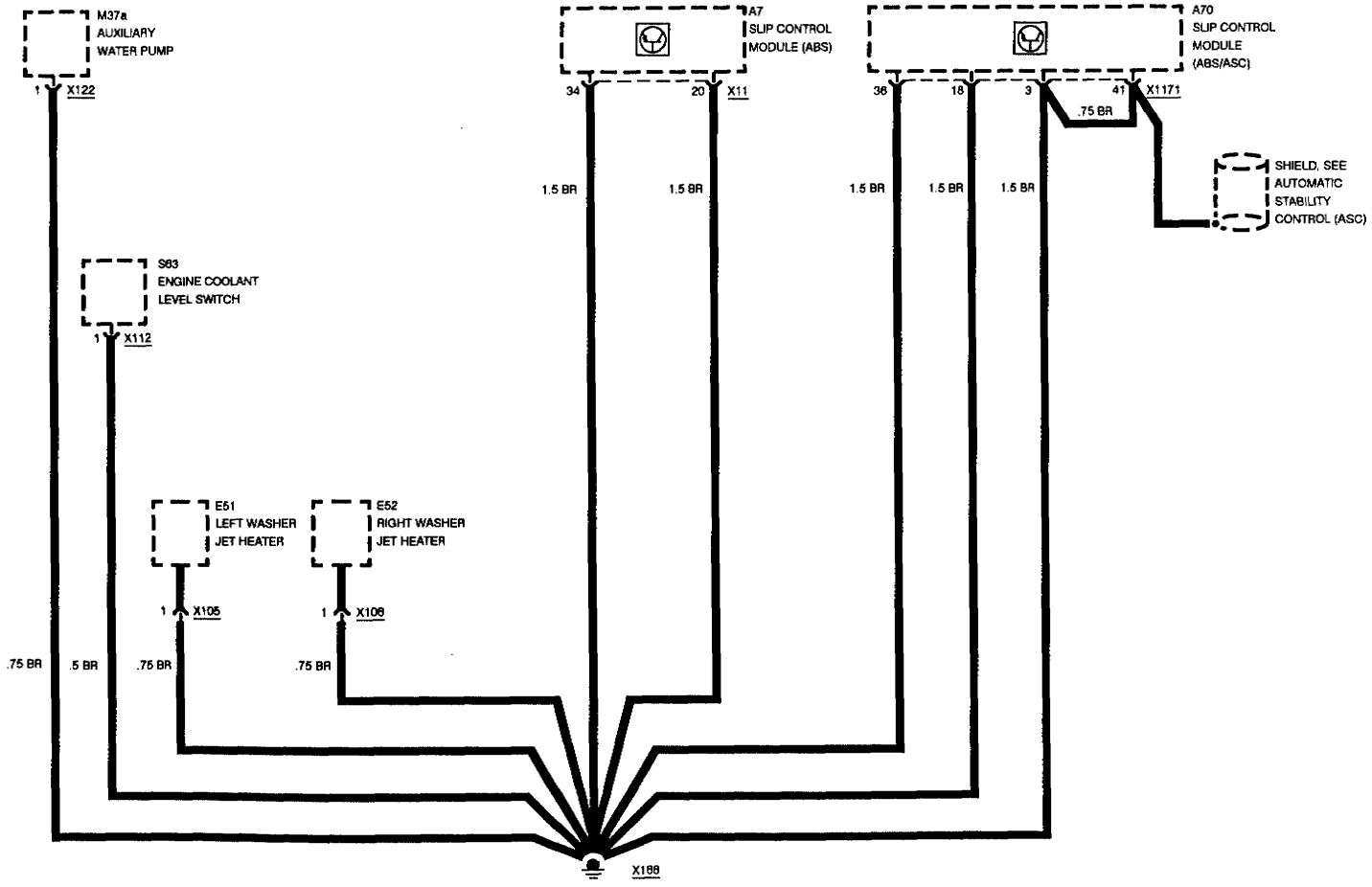





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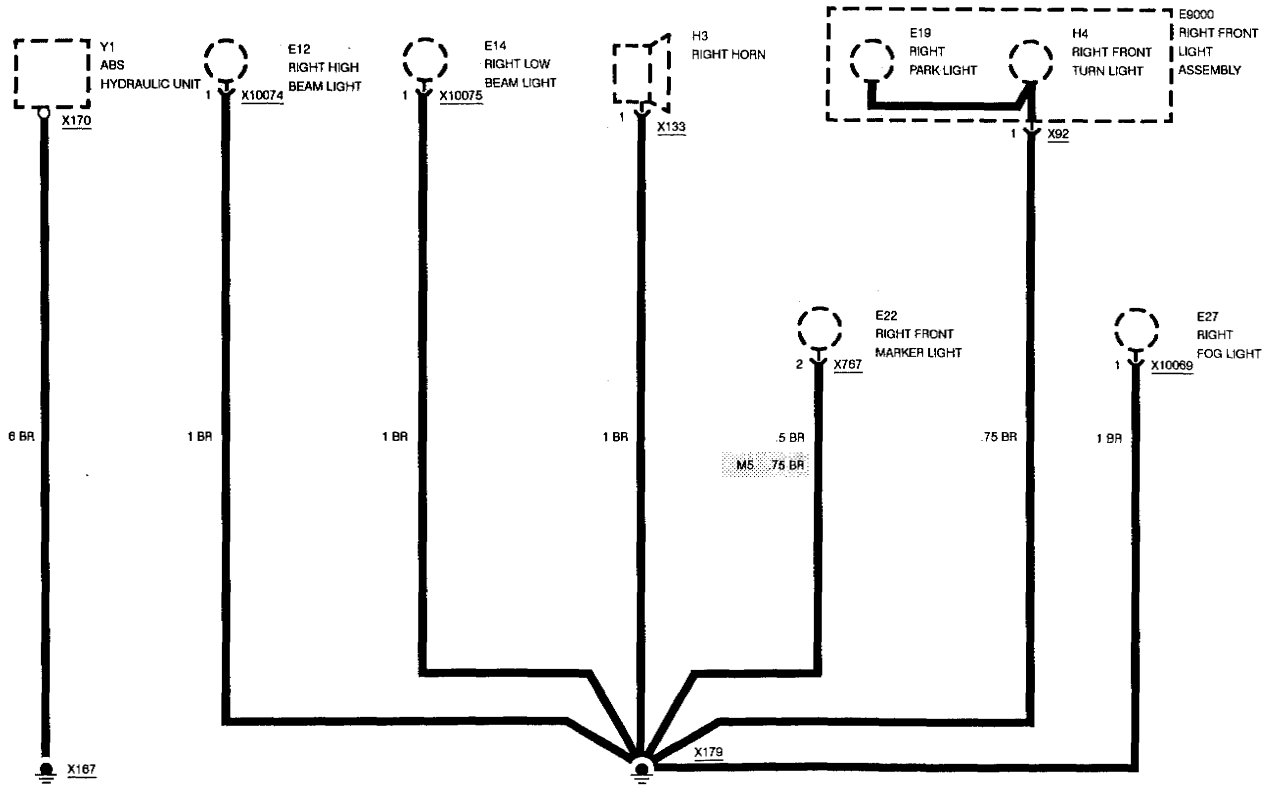
## GROUND X166




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## GROUNDS X167 AND X179

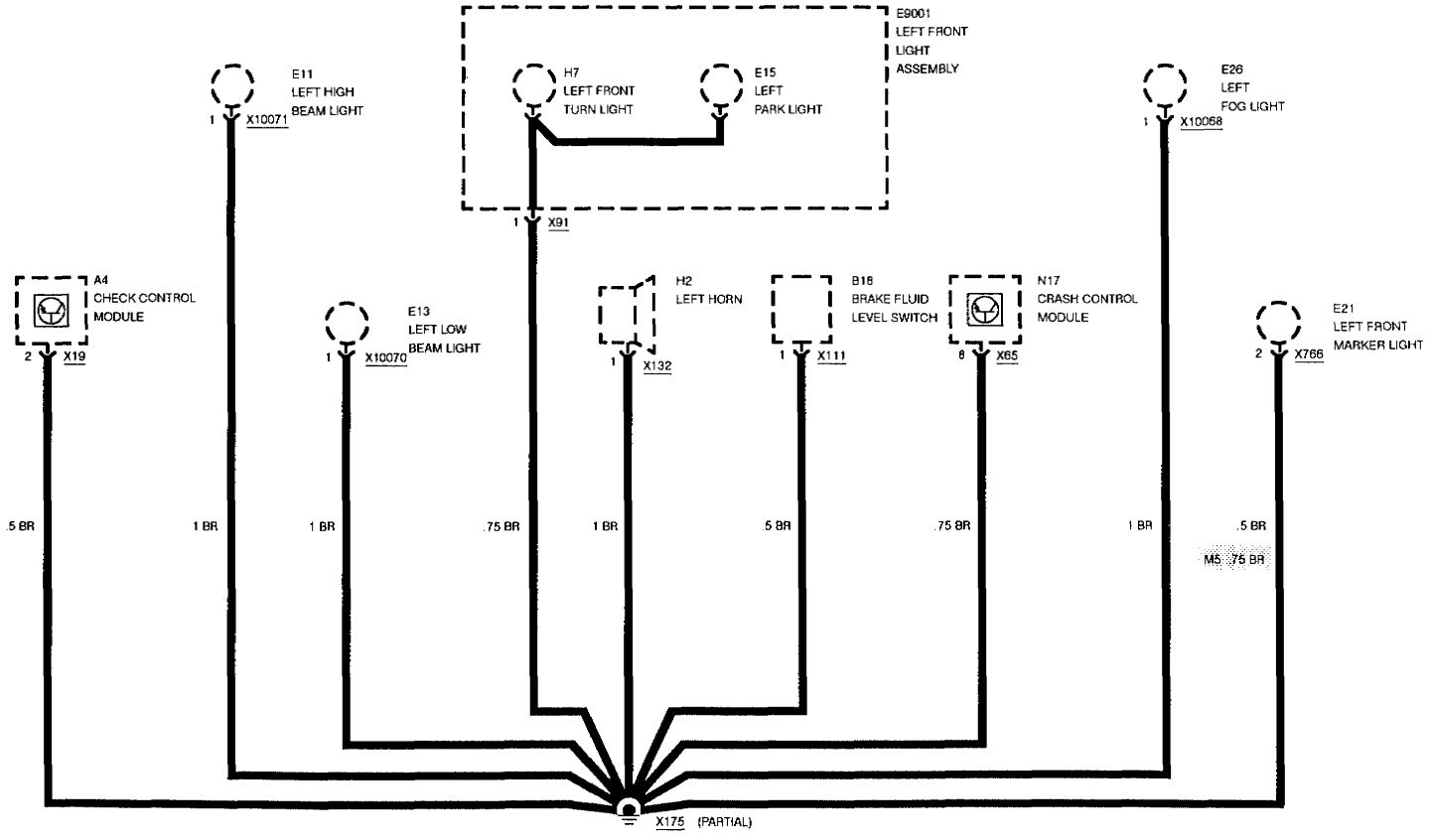





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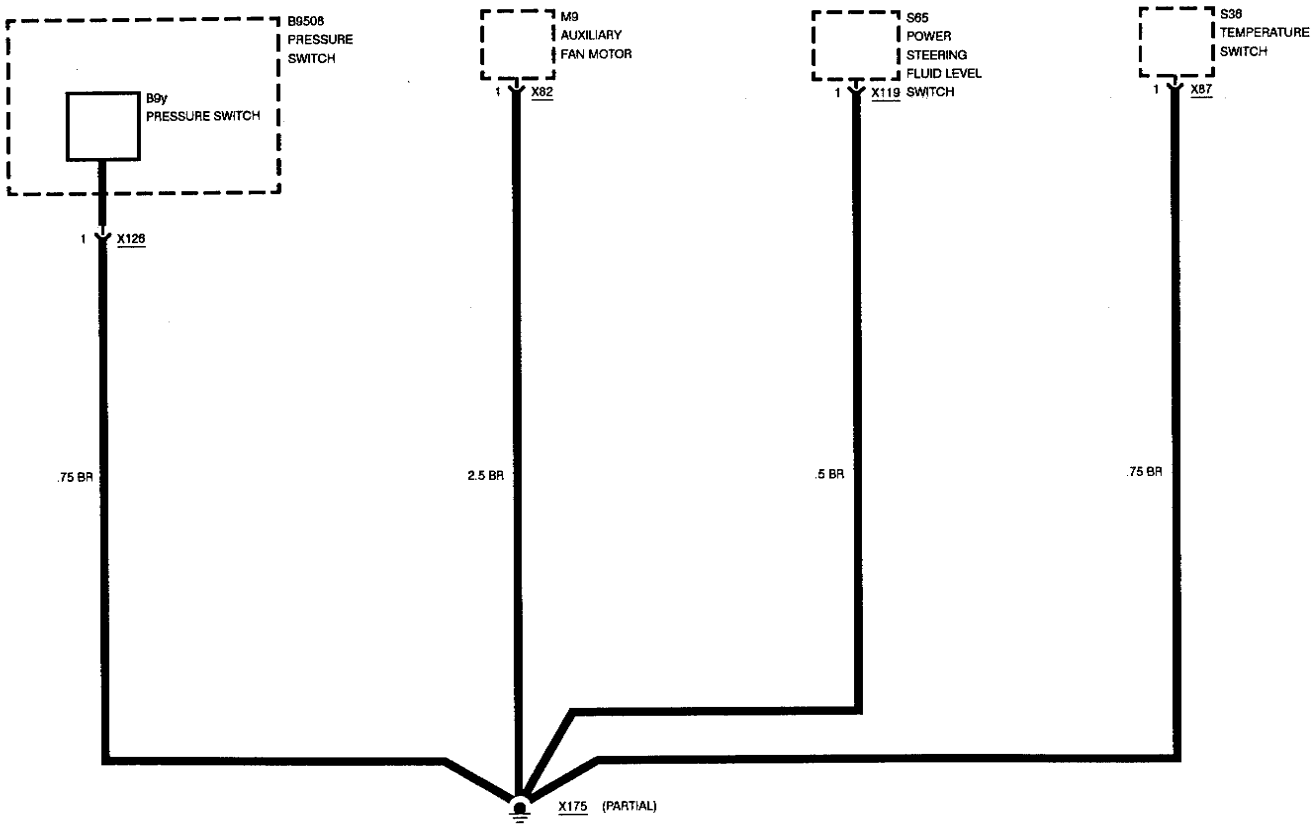





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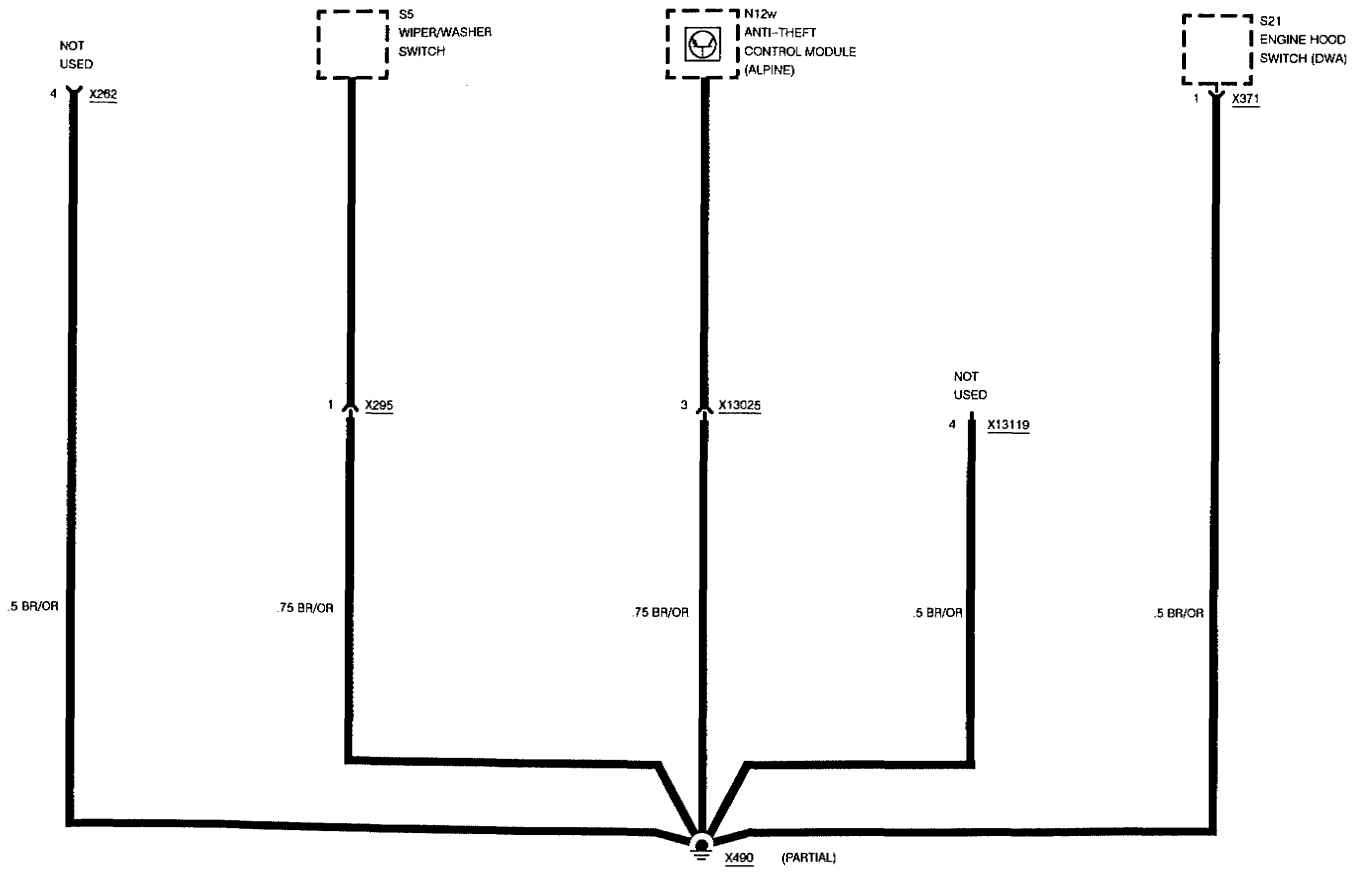
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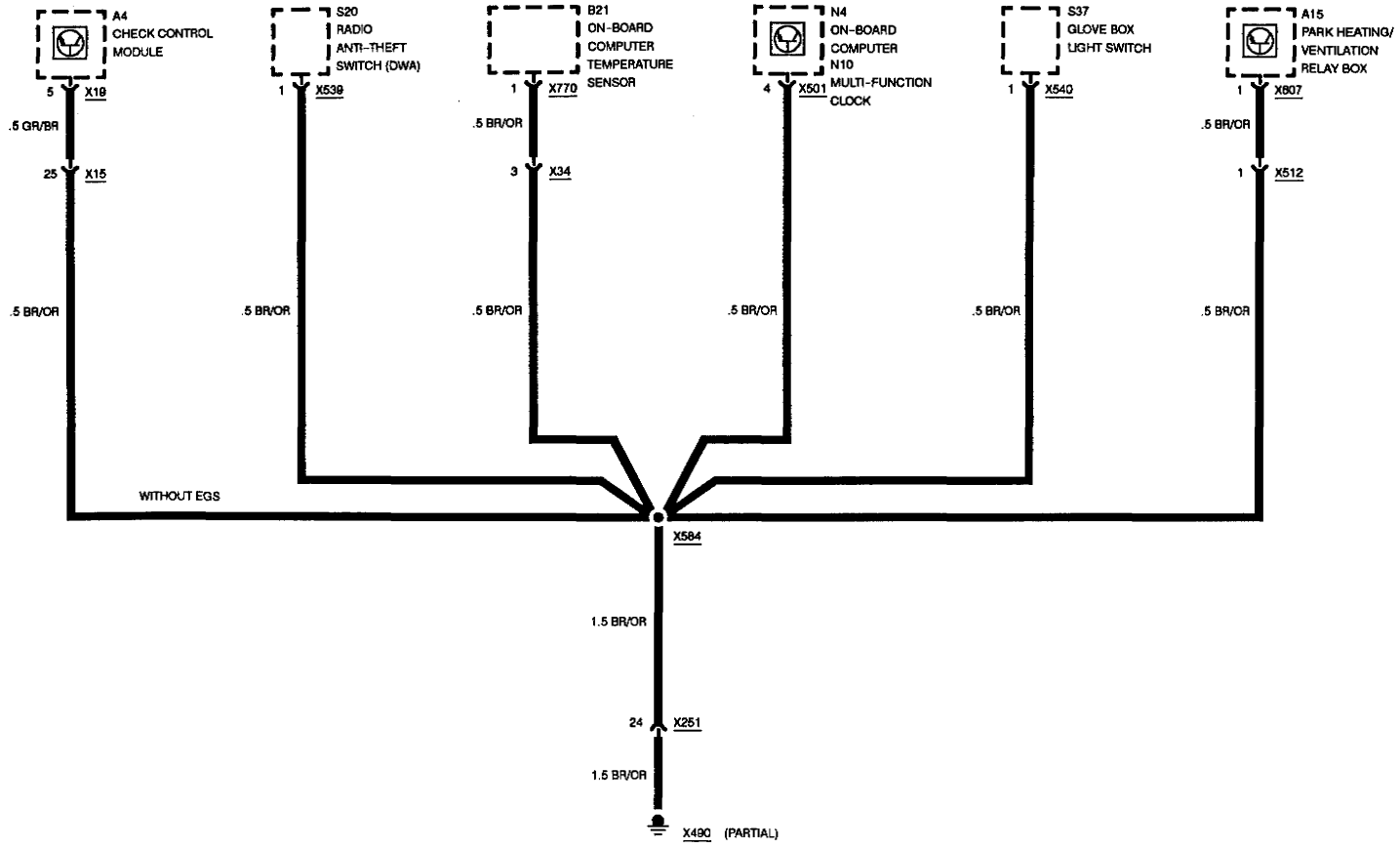





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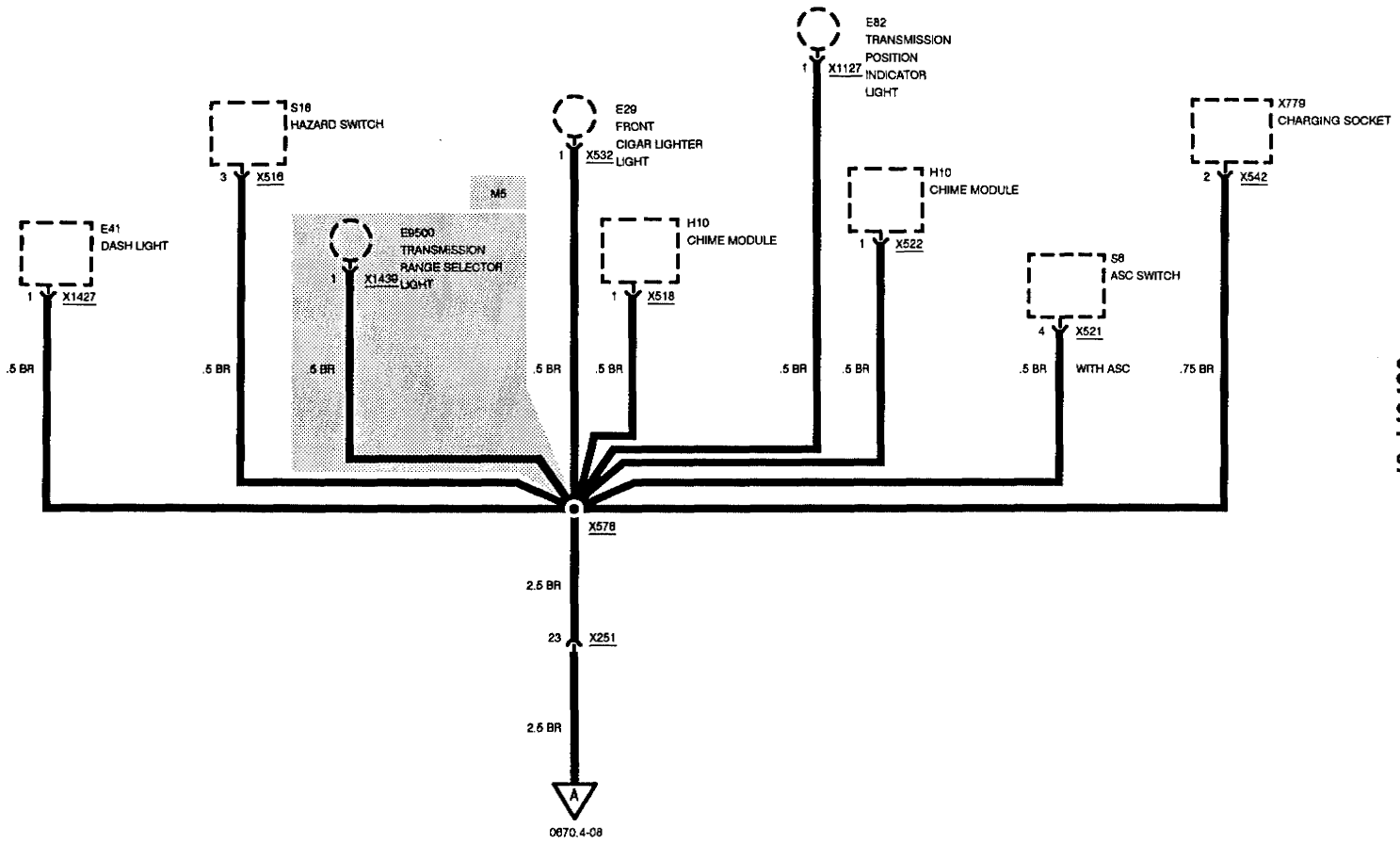





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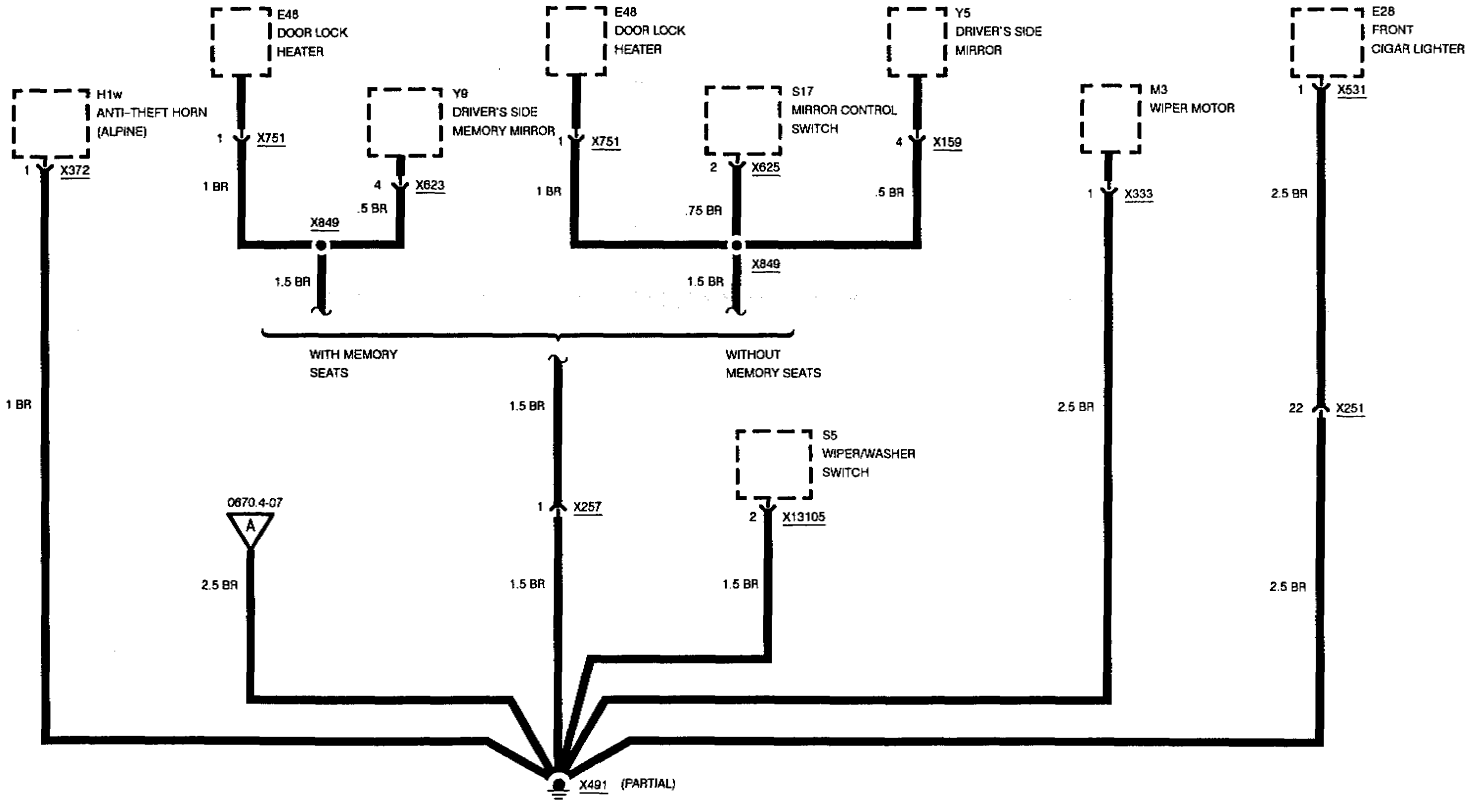





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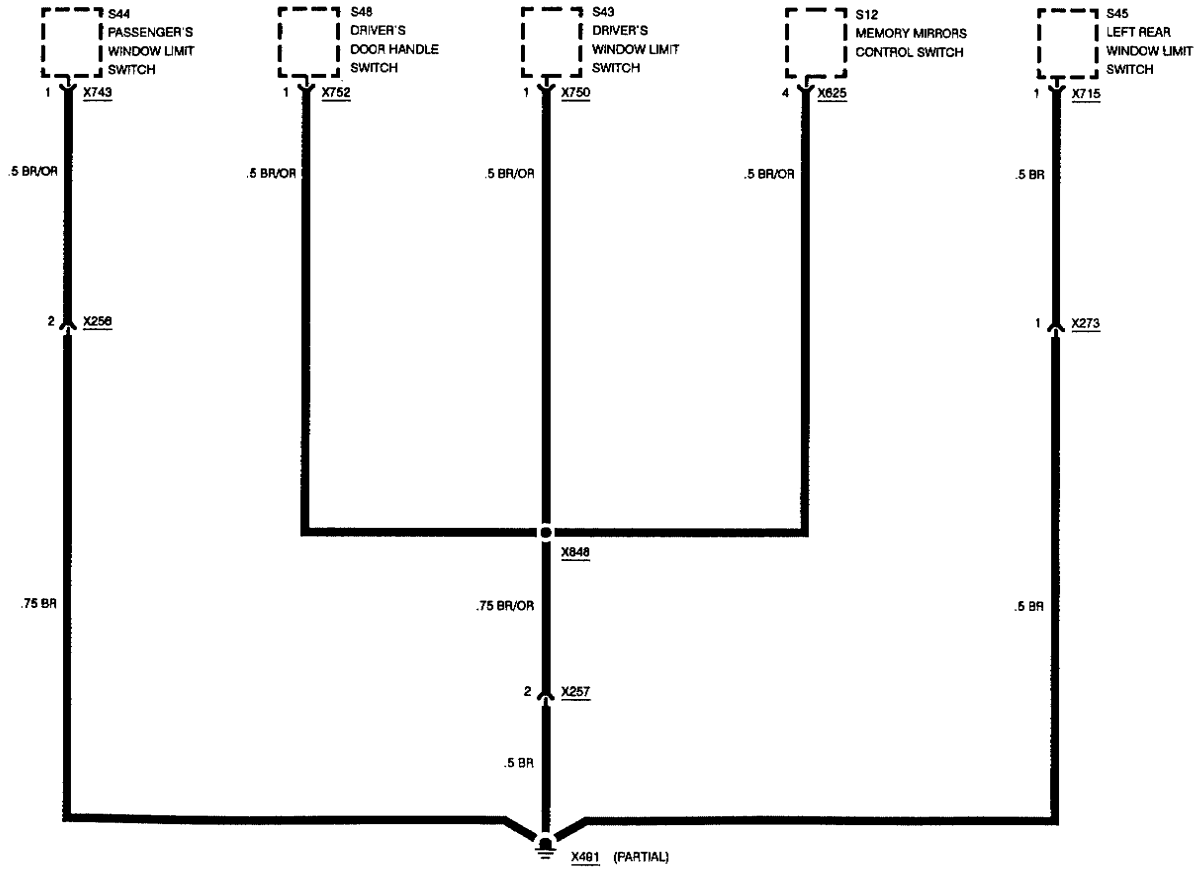





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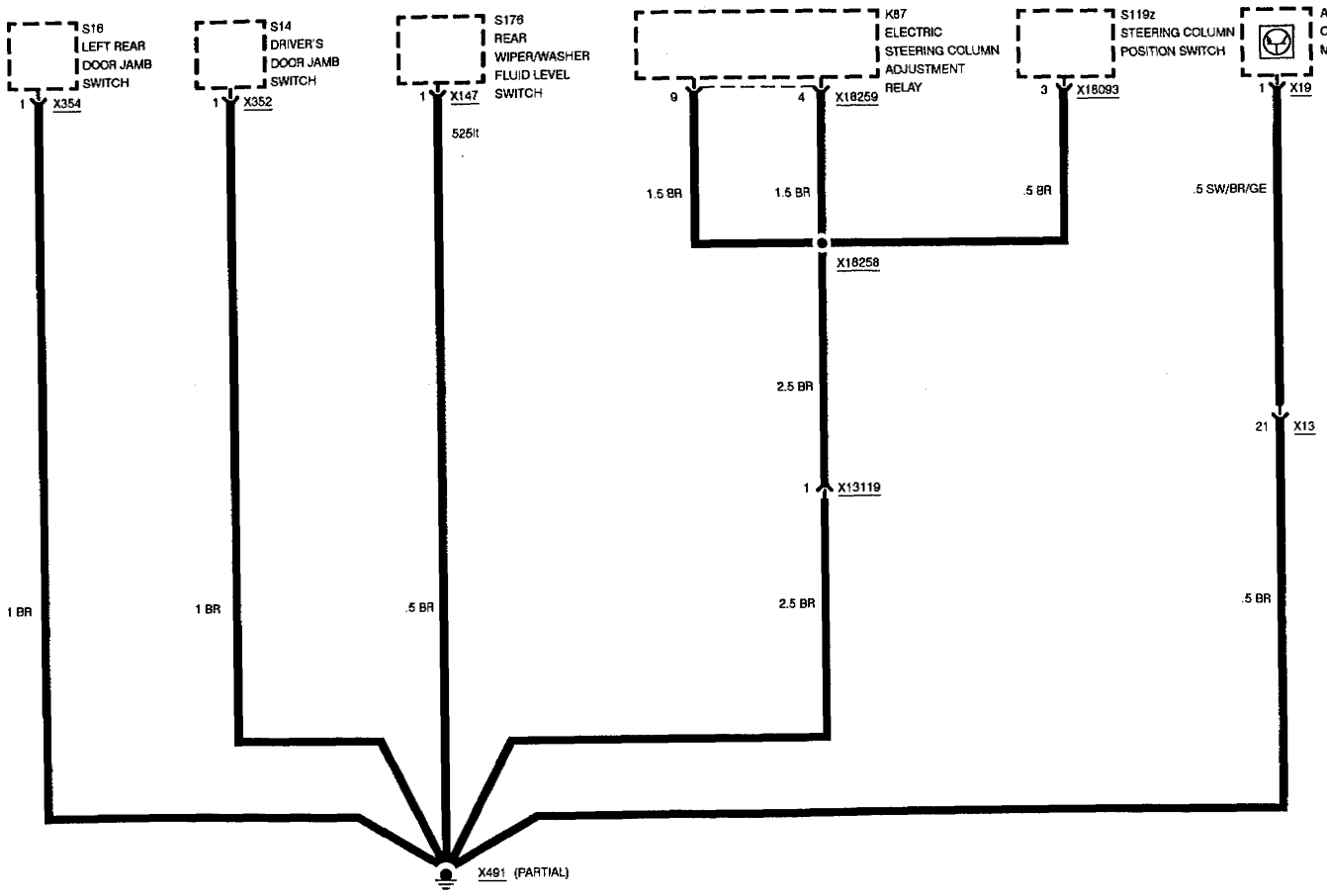





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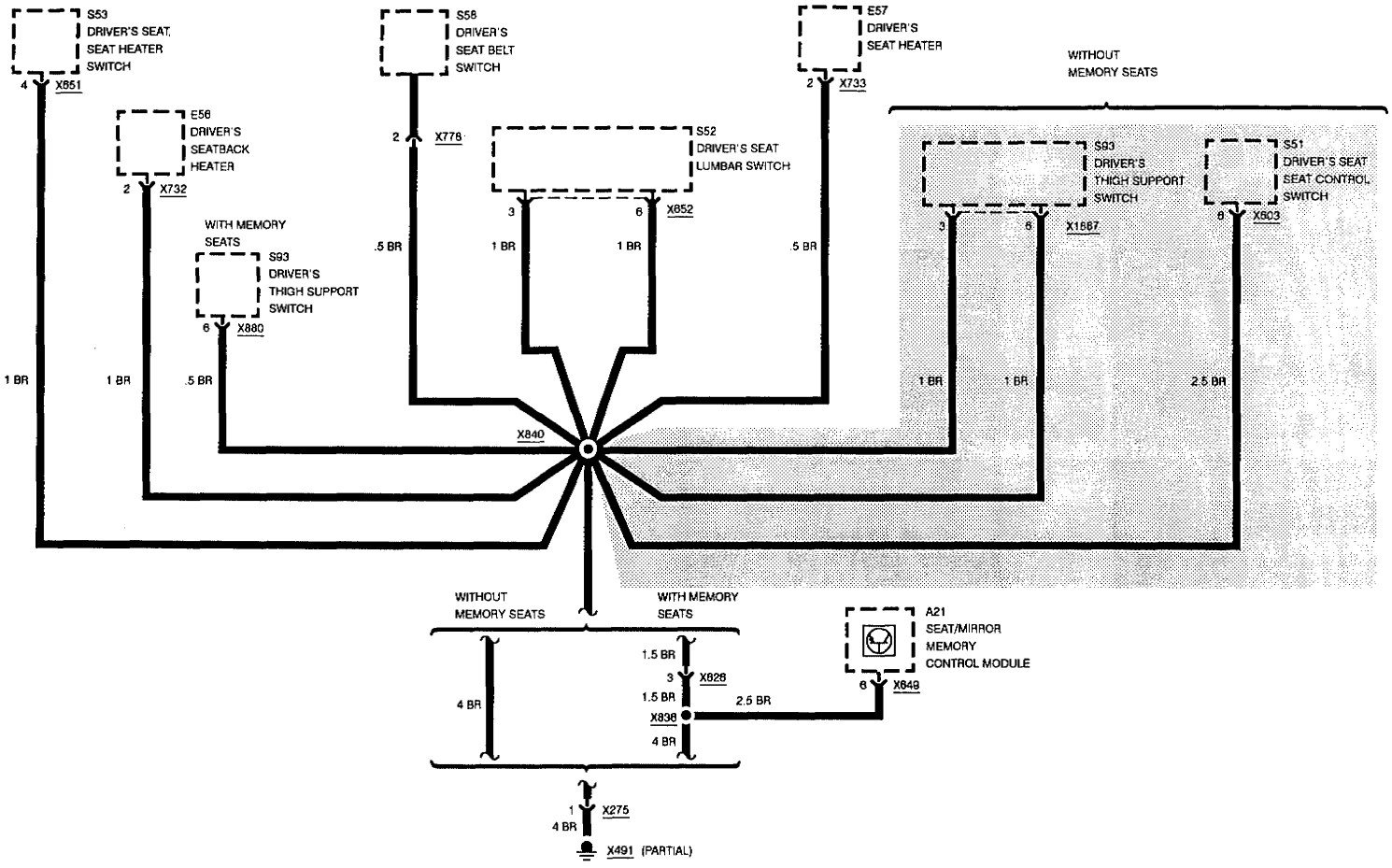





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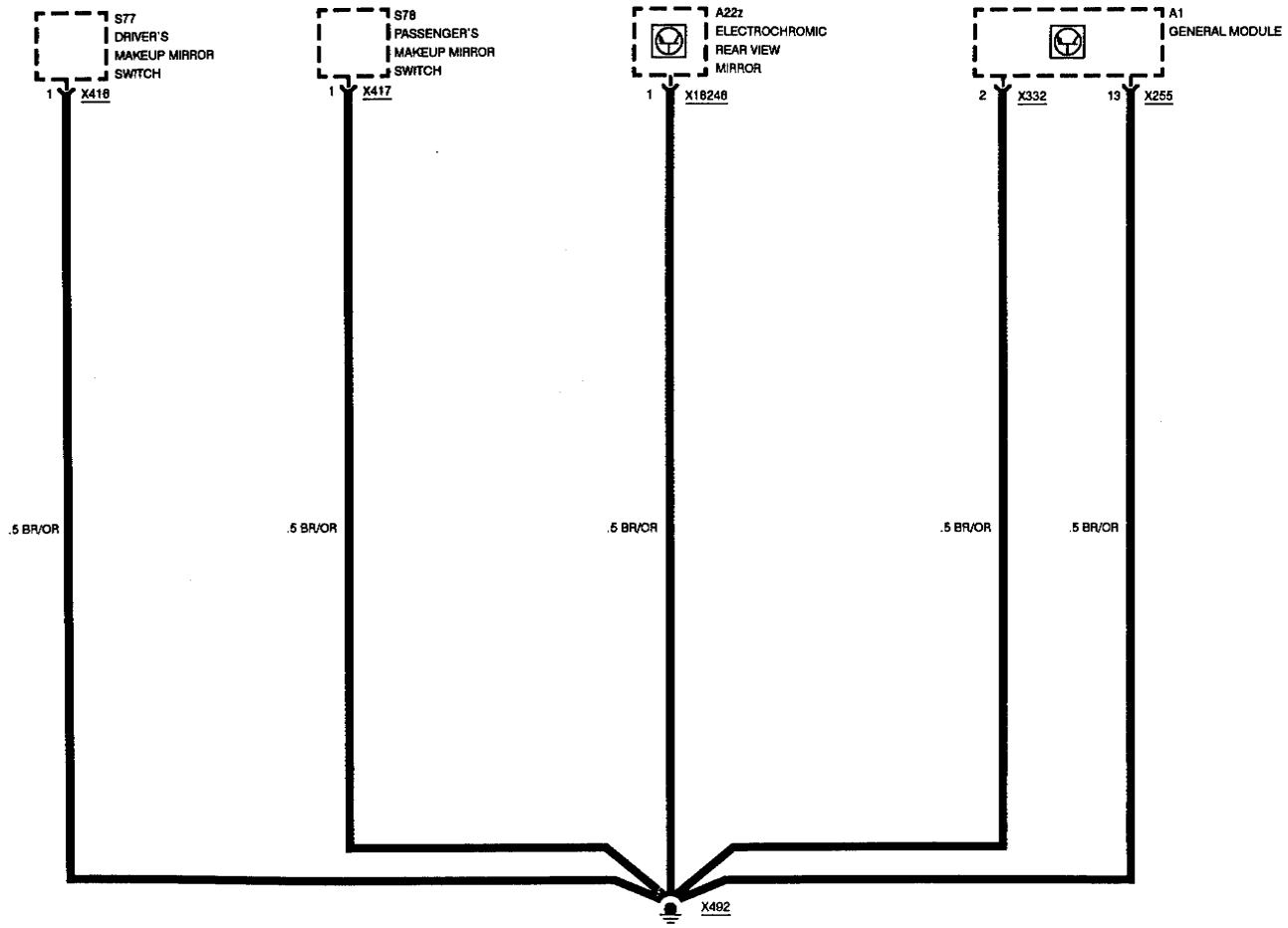
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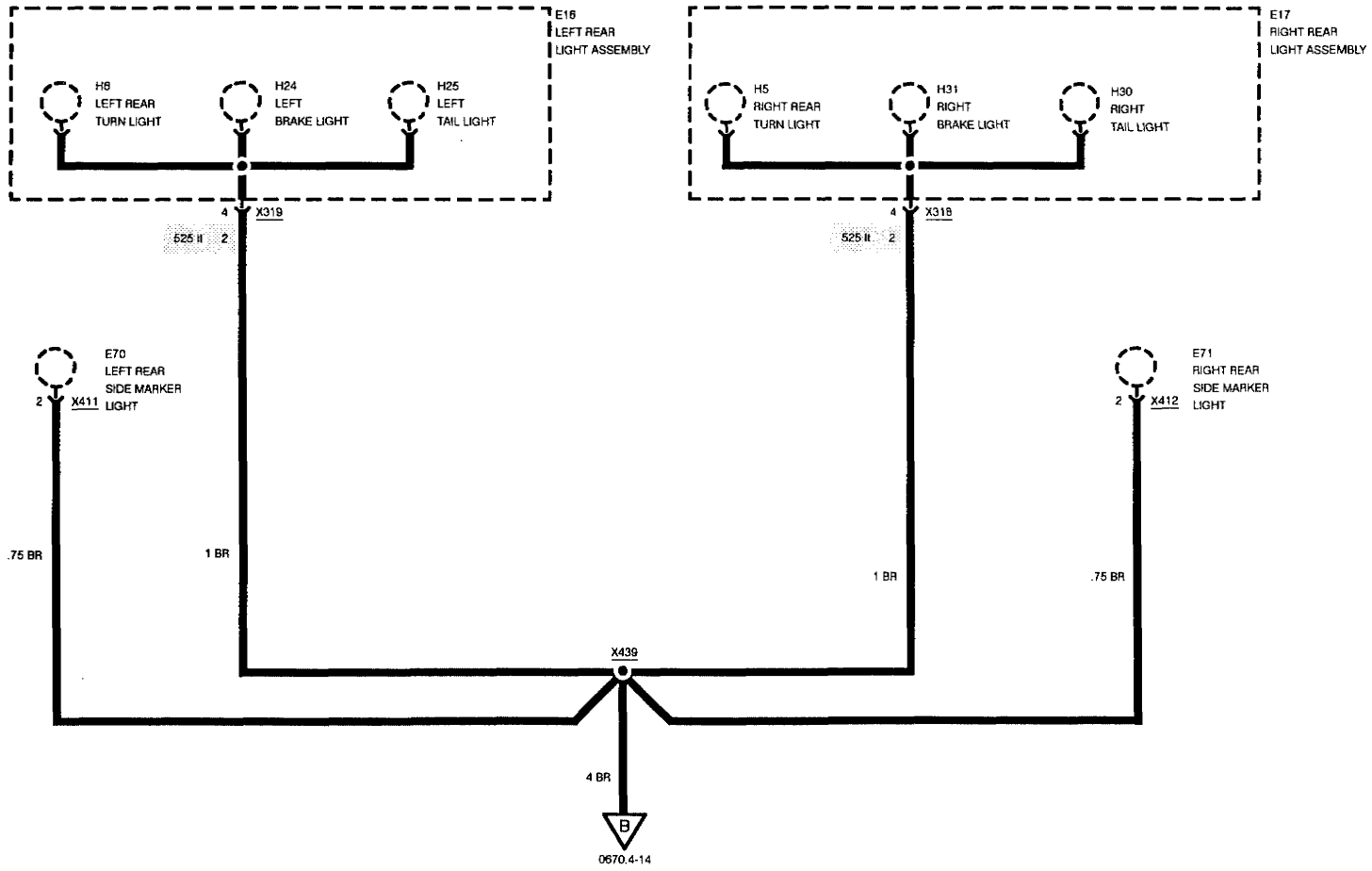





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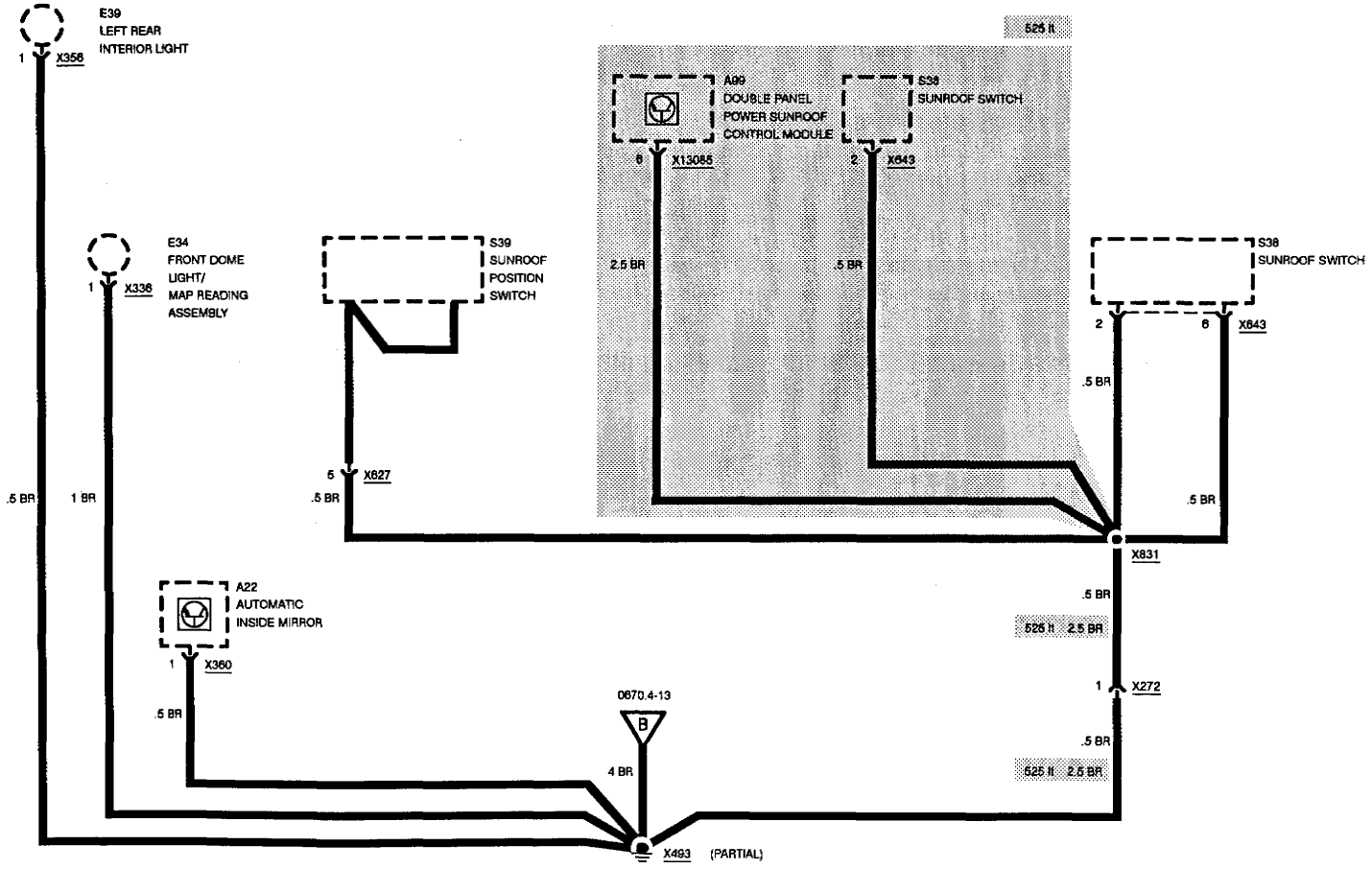





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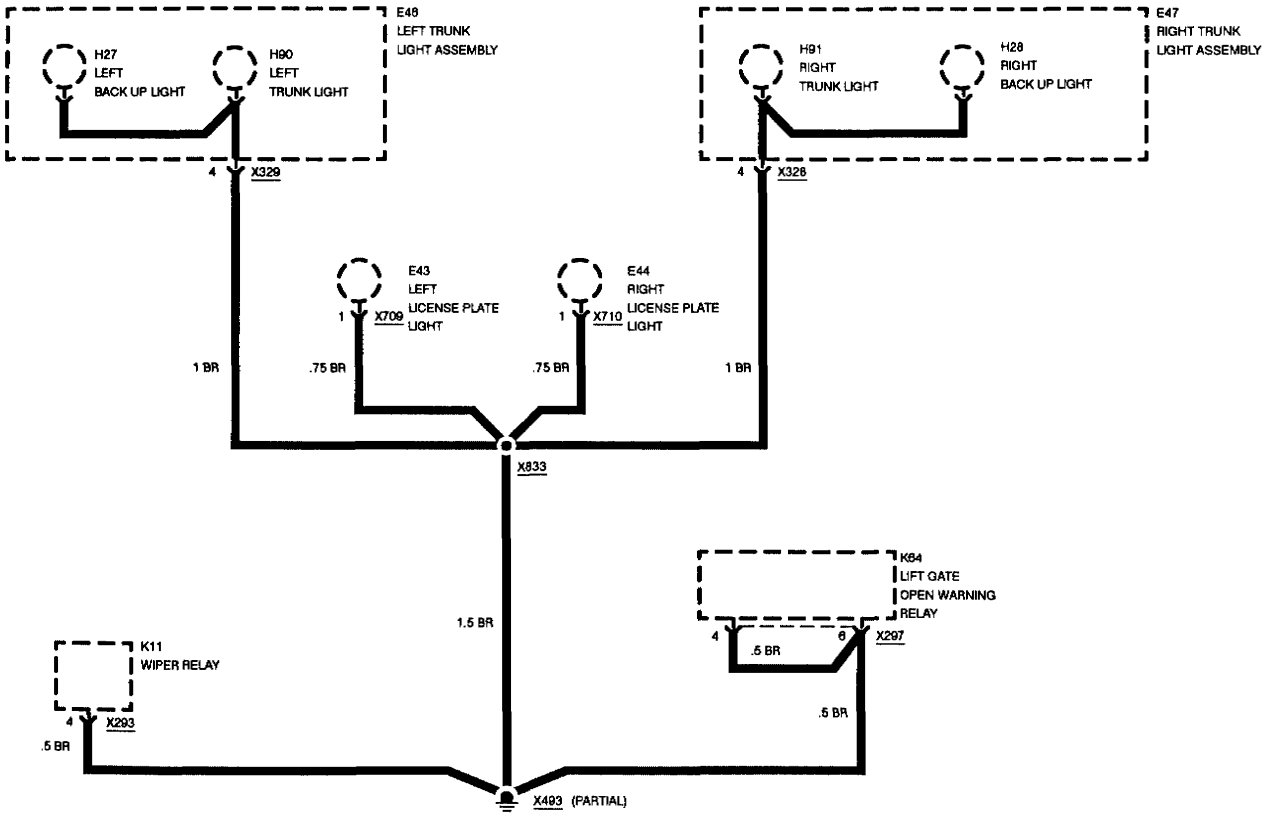





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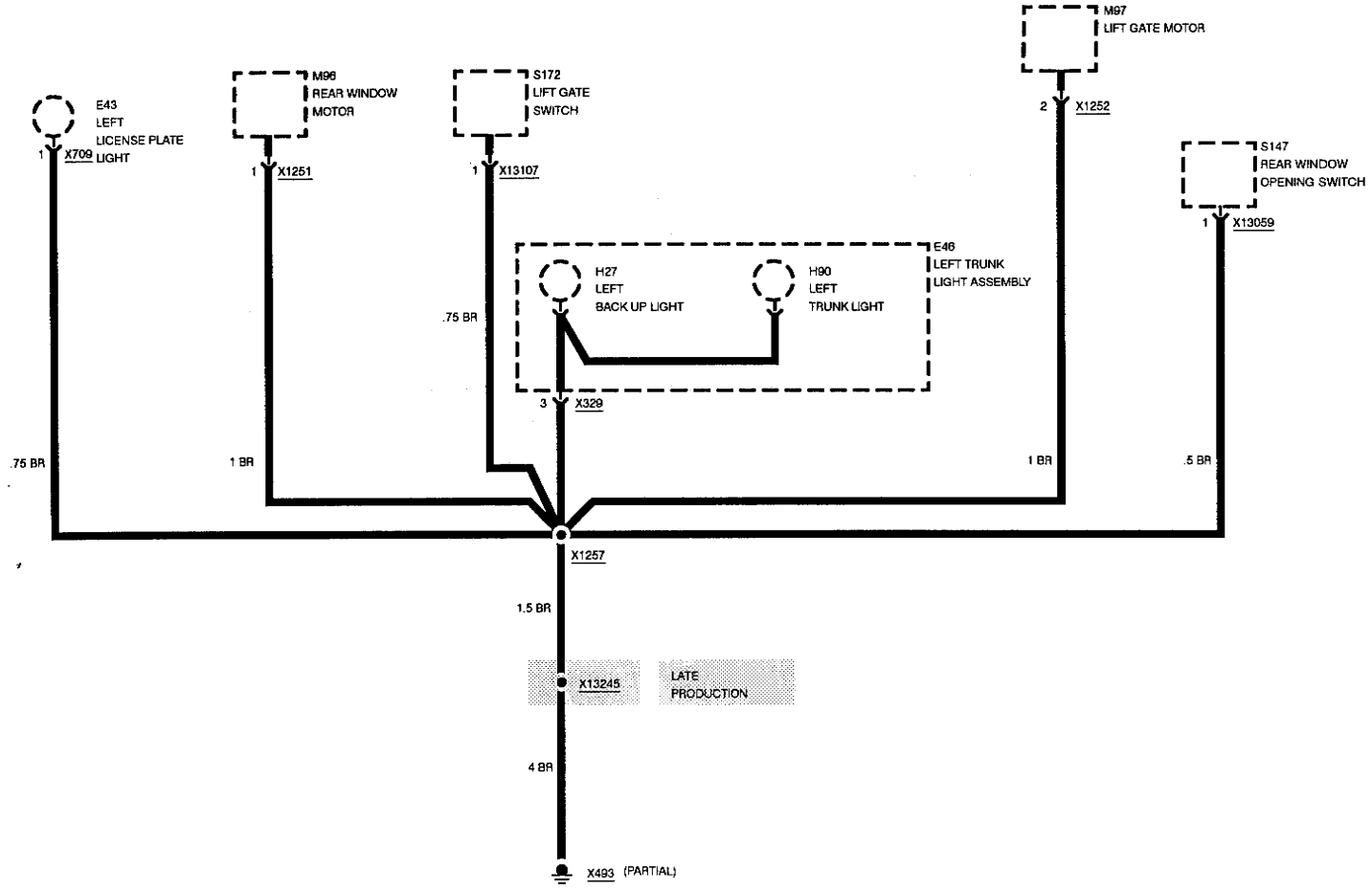



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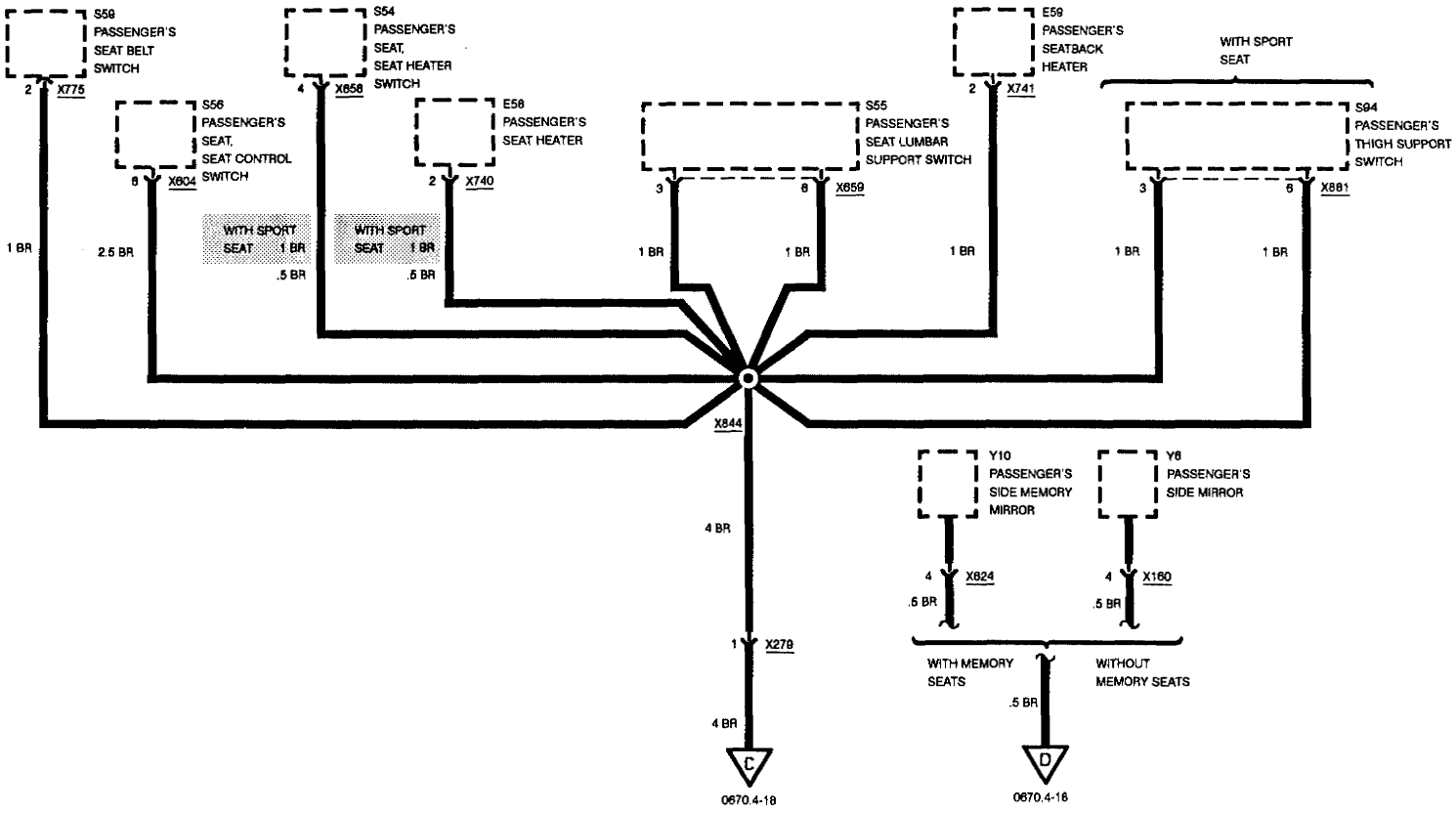





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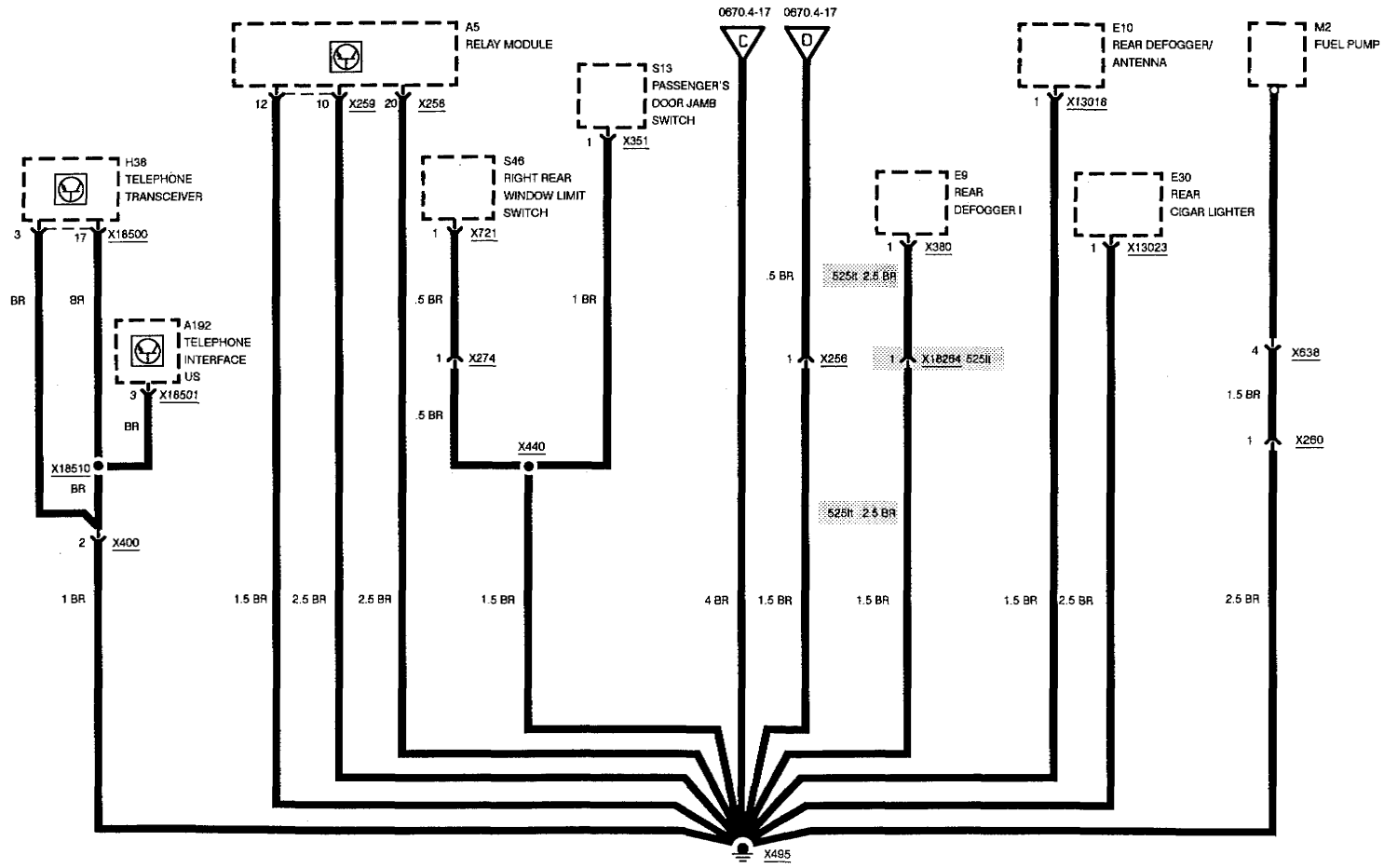





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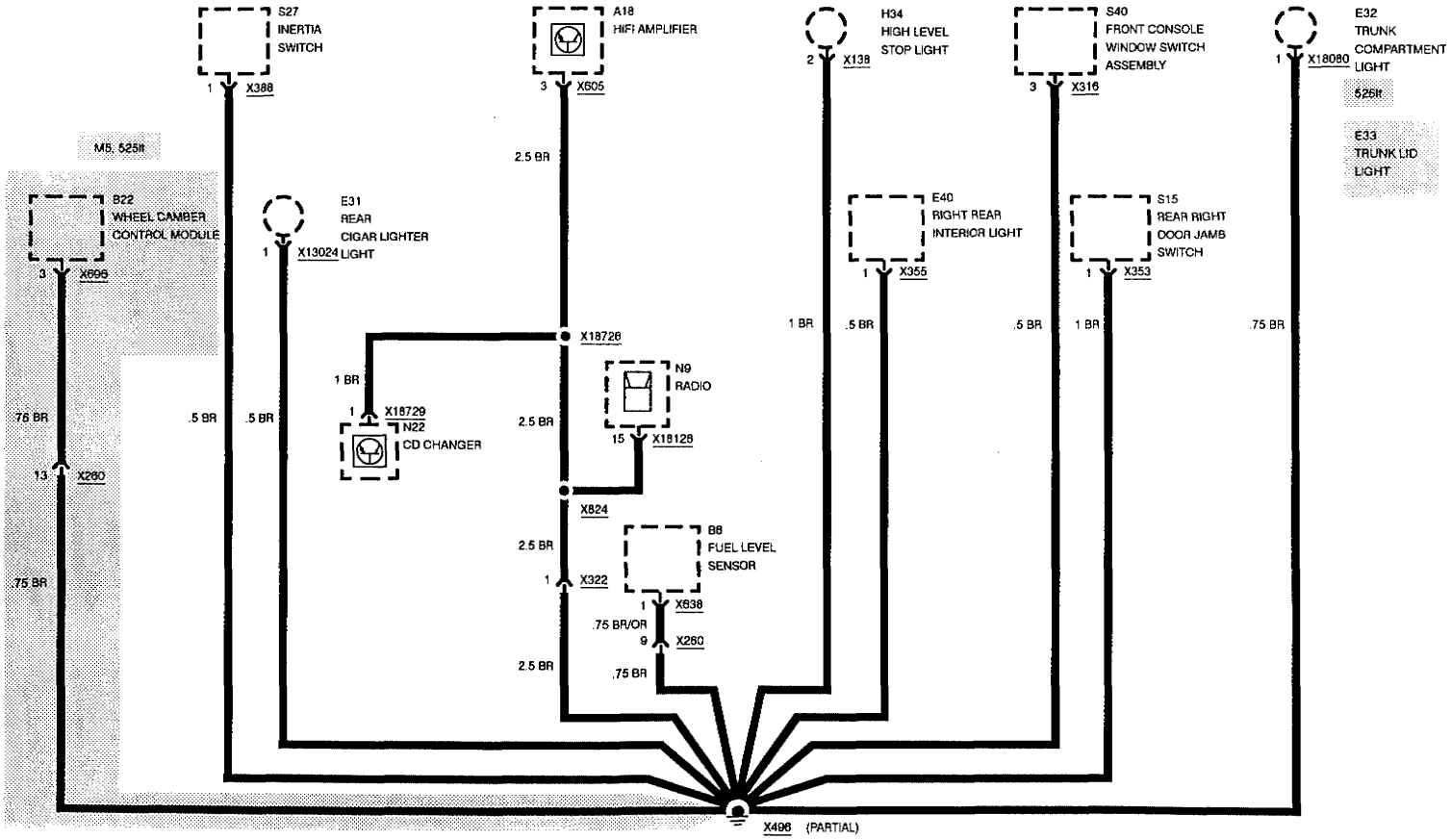
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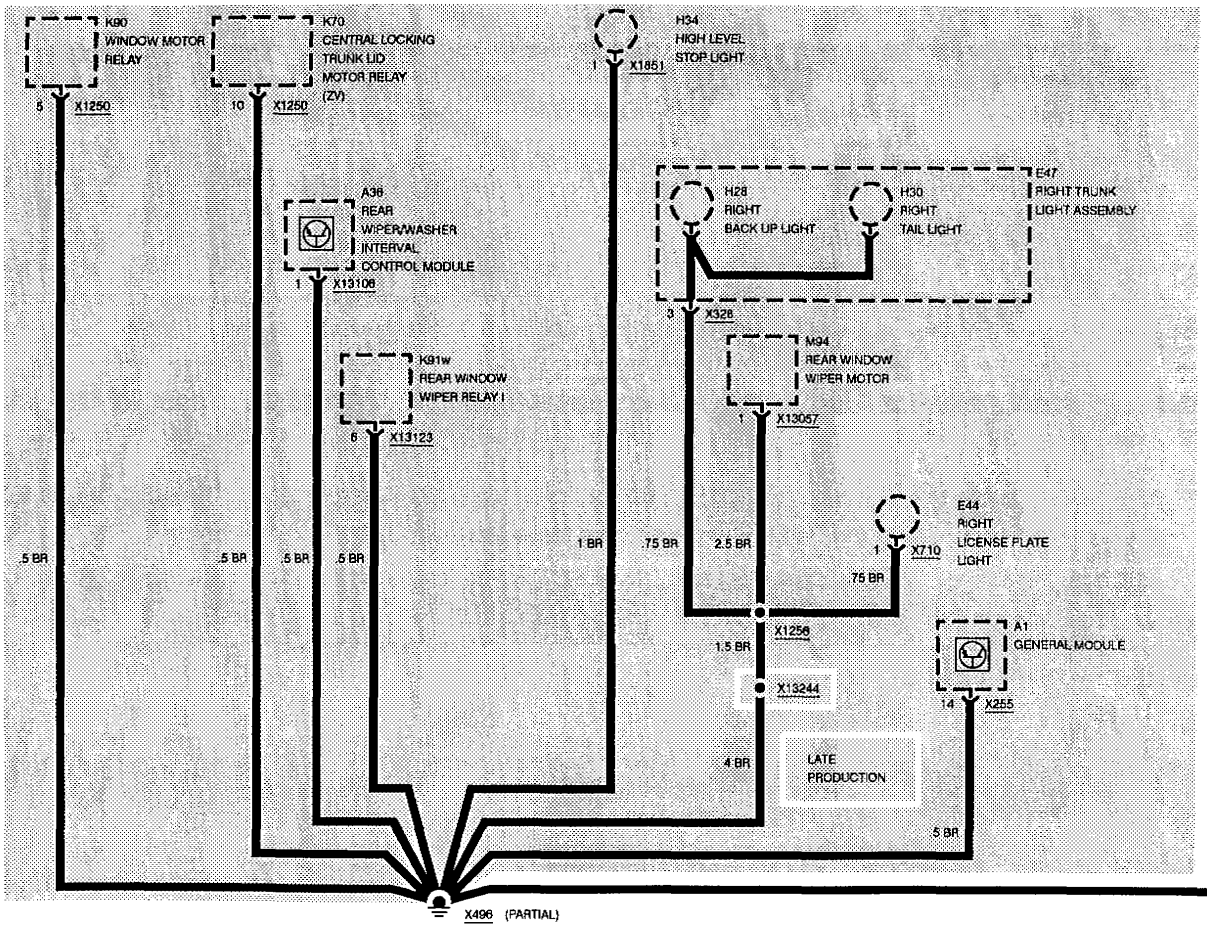



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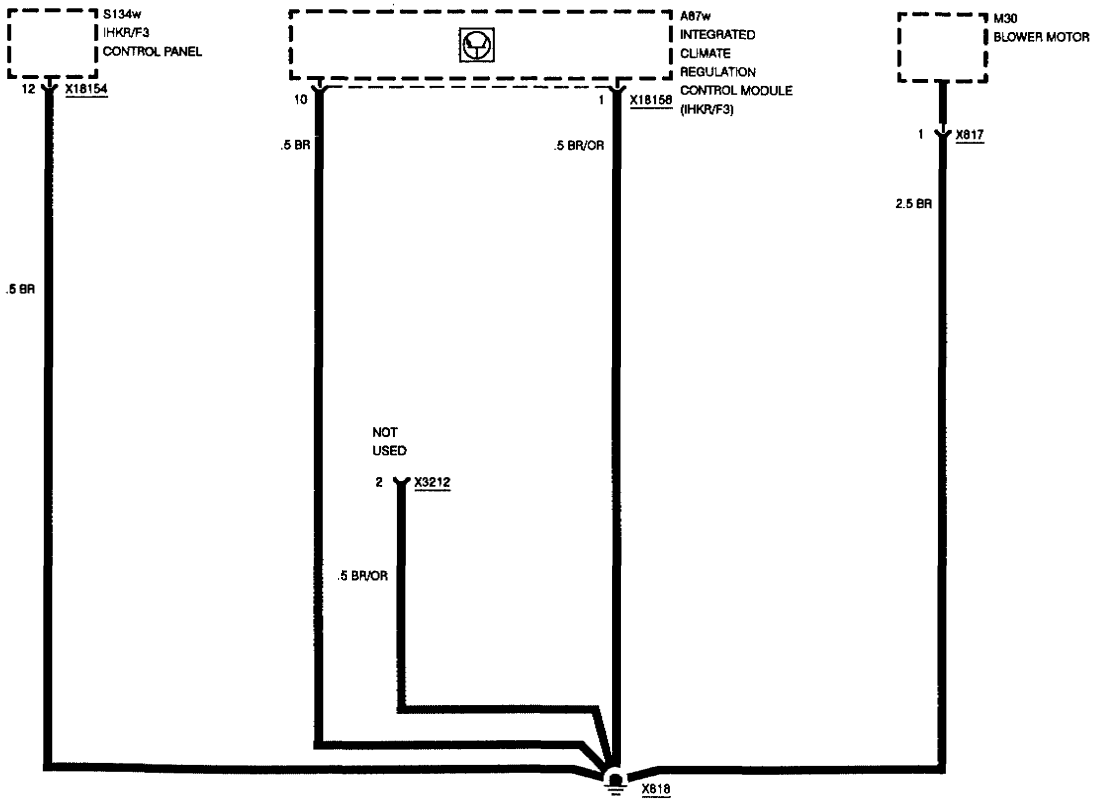
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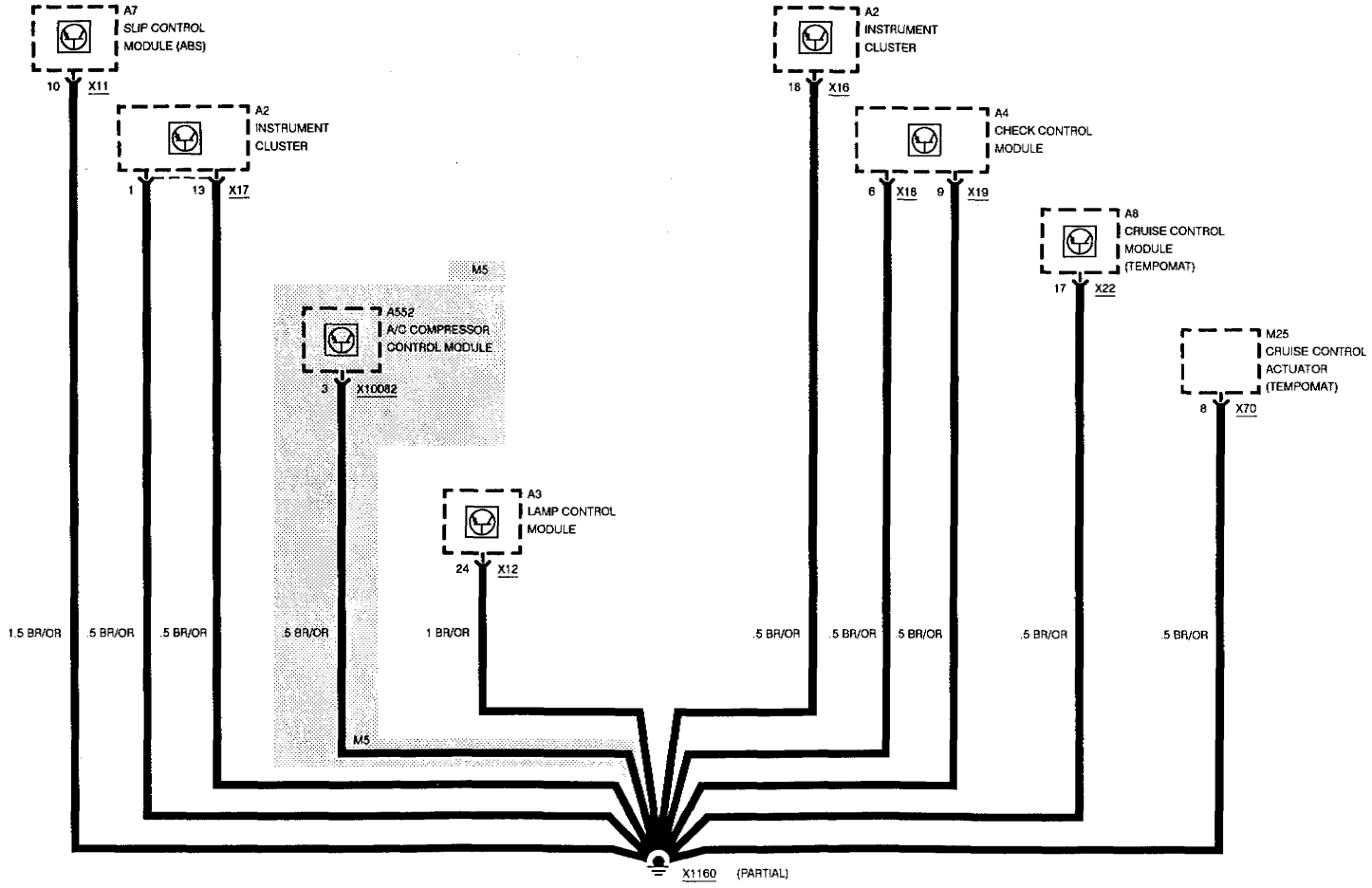





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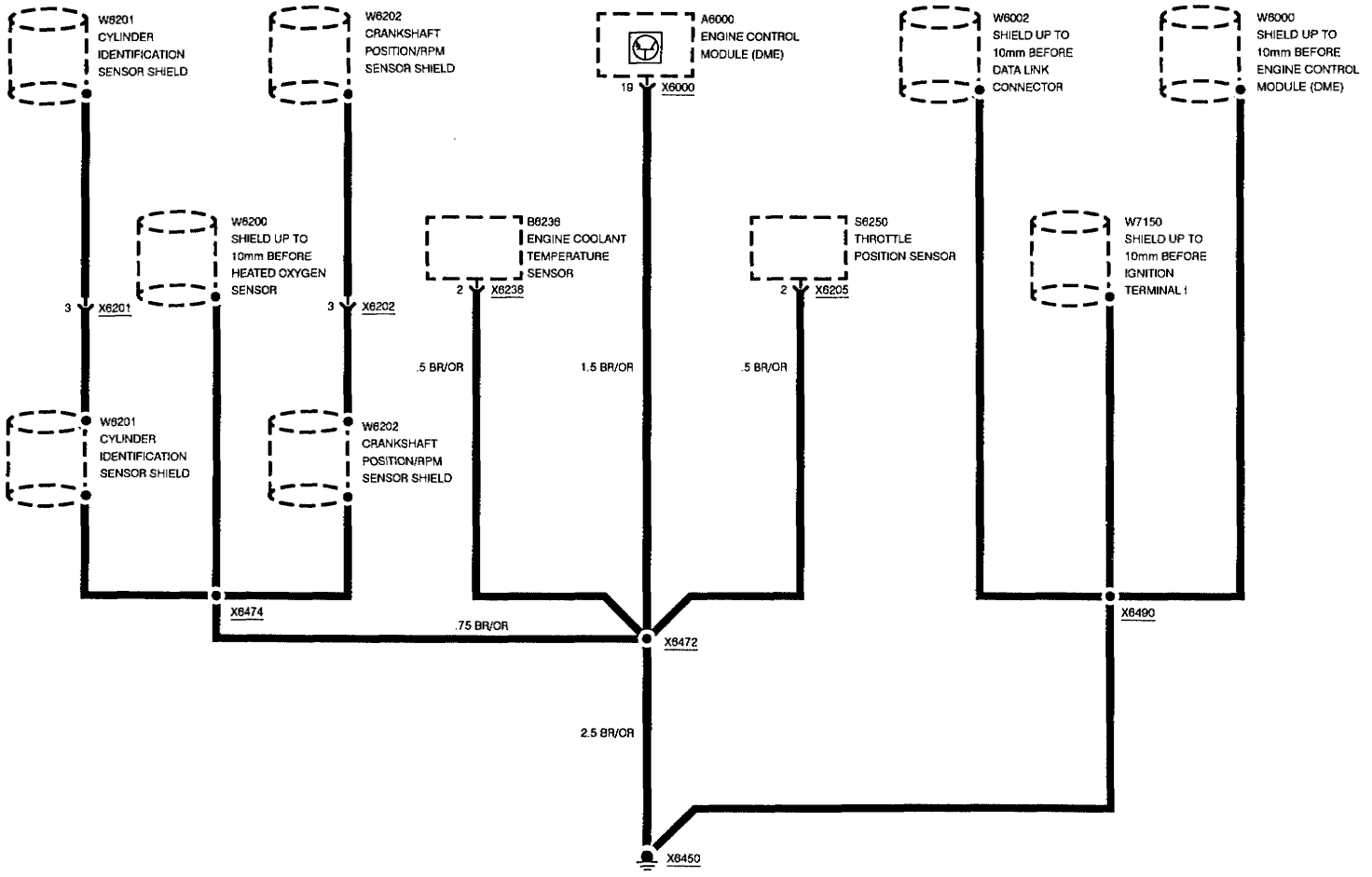



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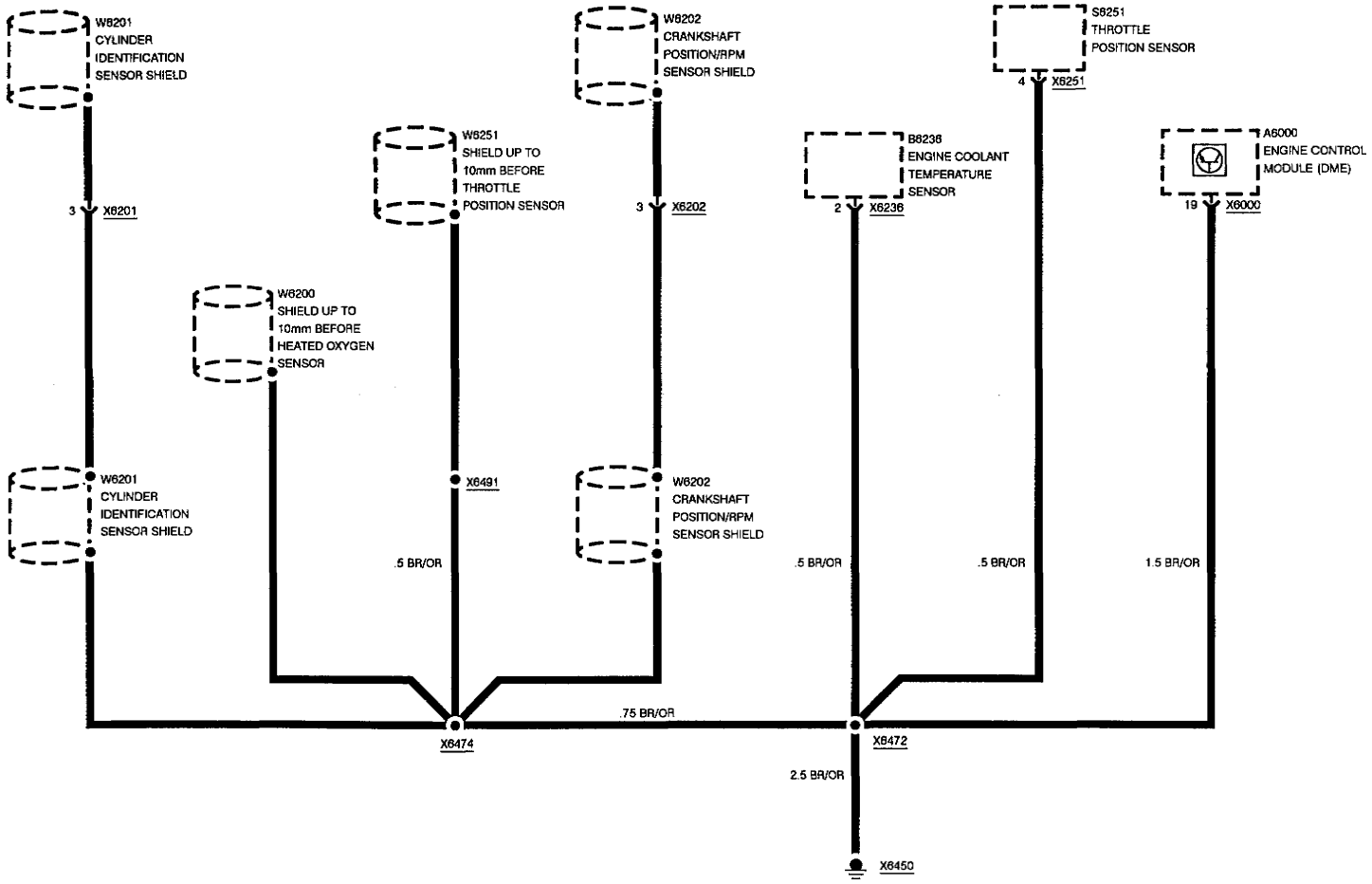



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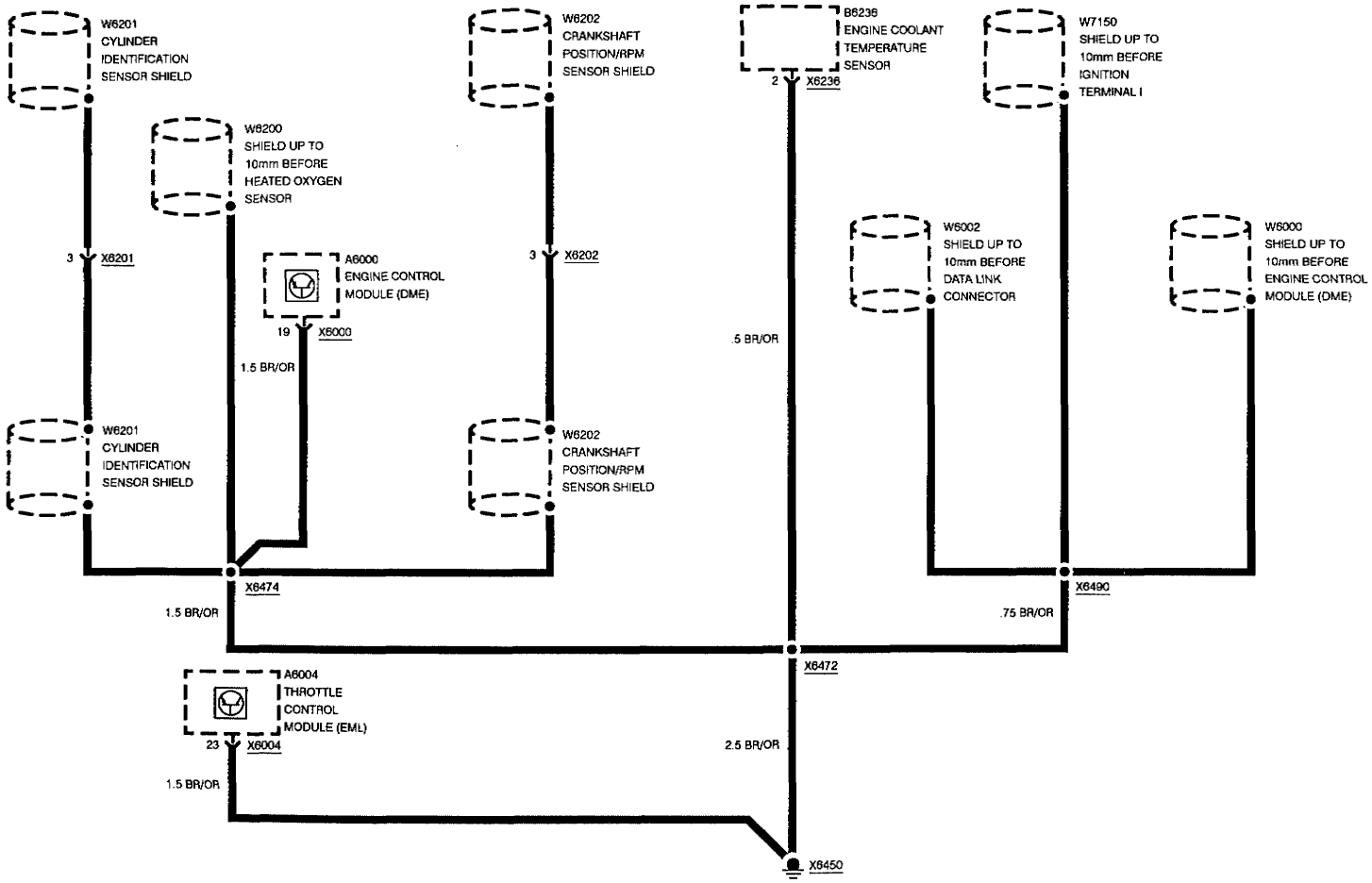
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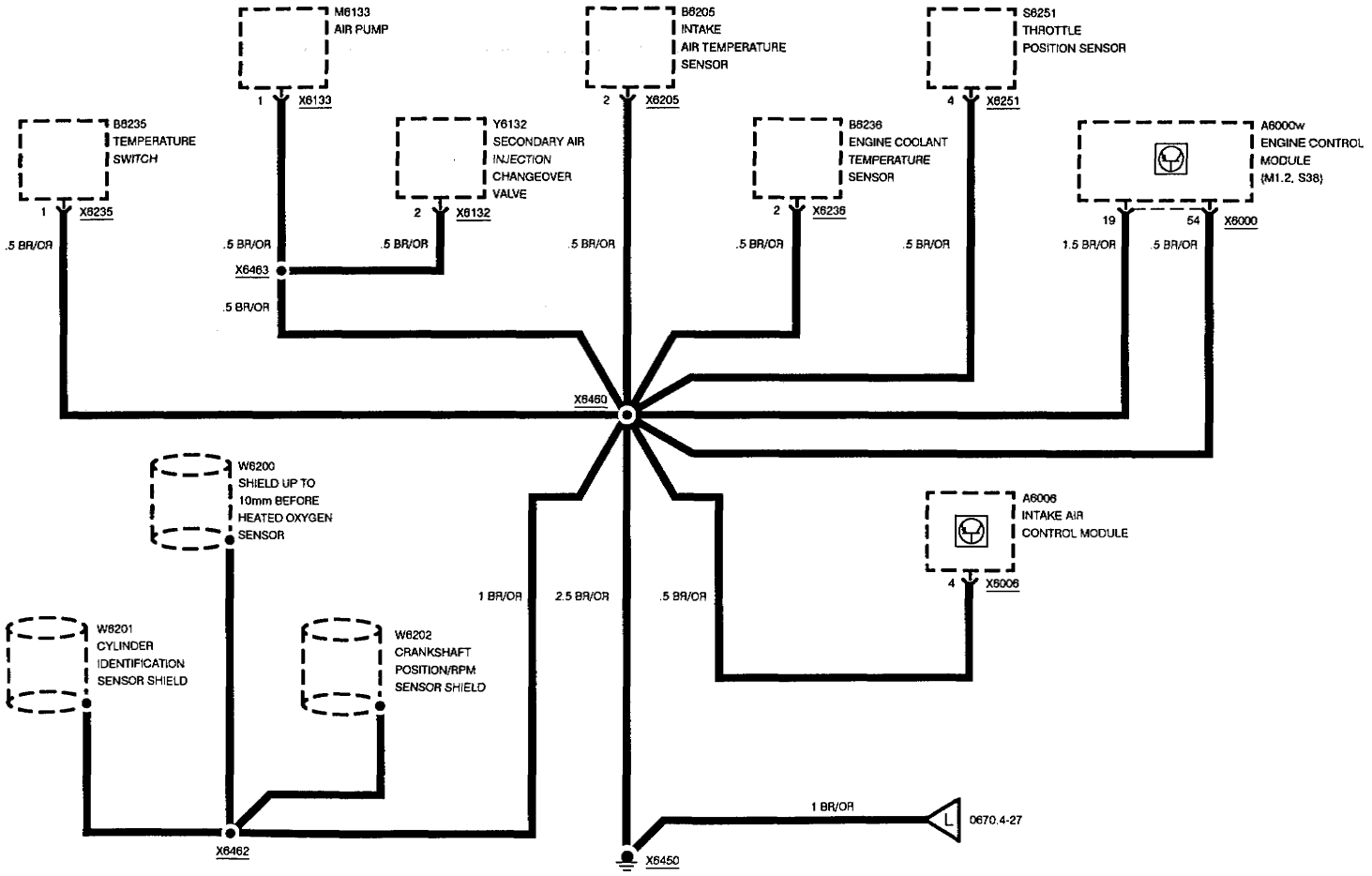
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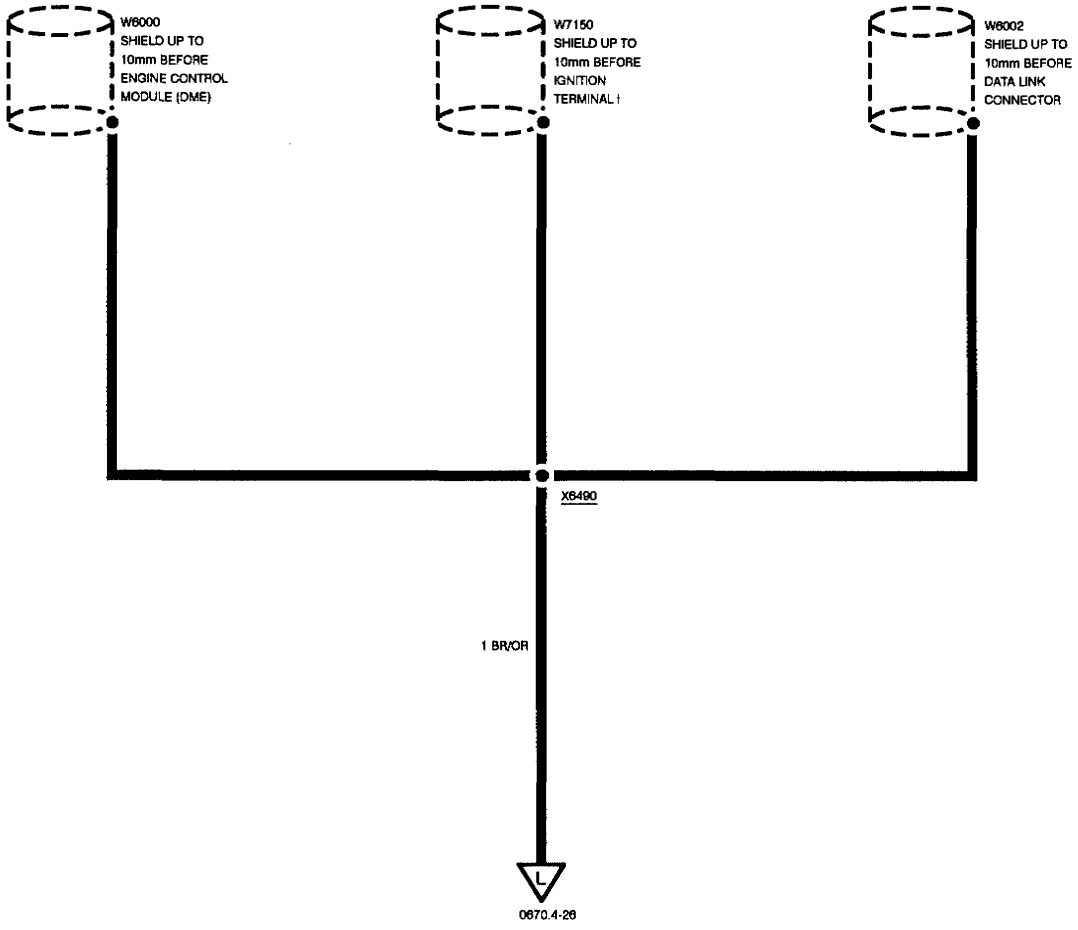



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## GROUND X6450



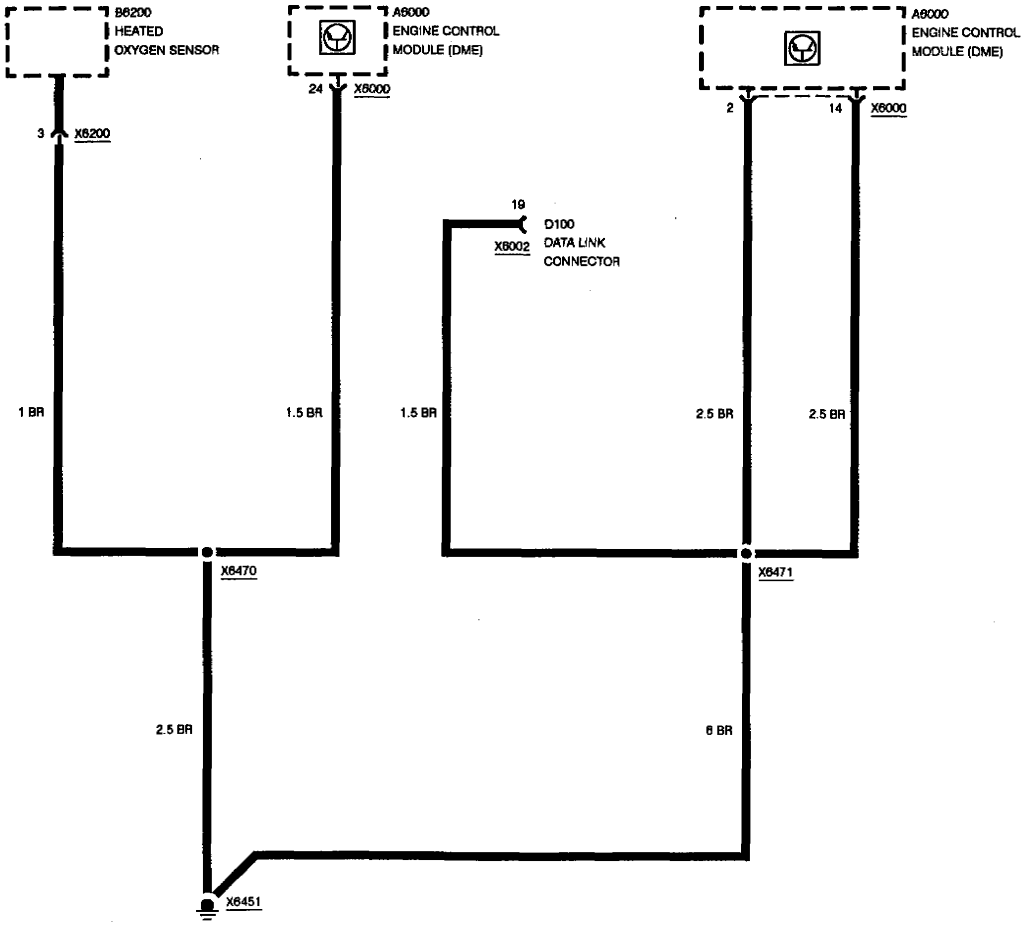



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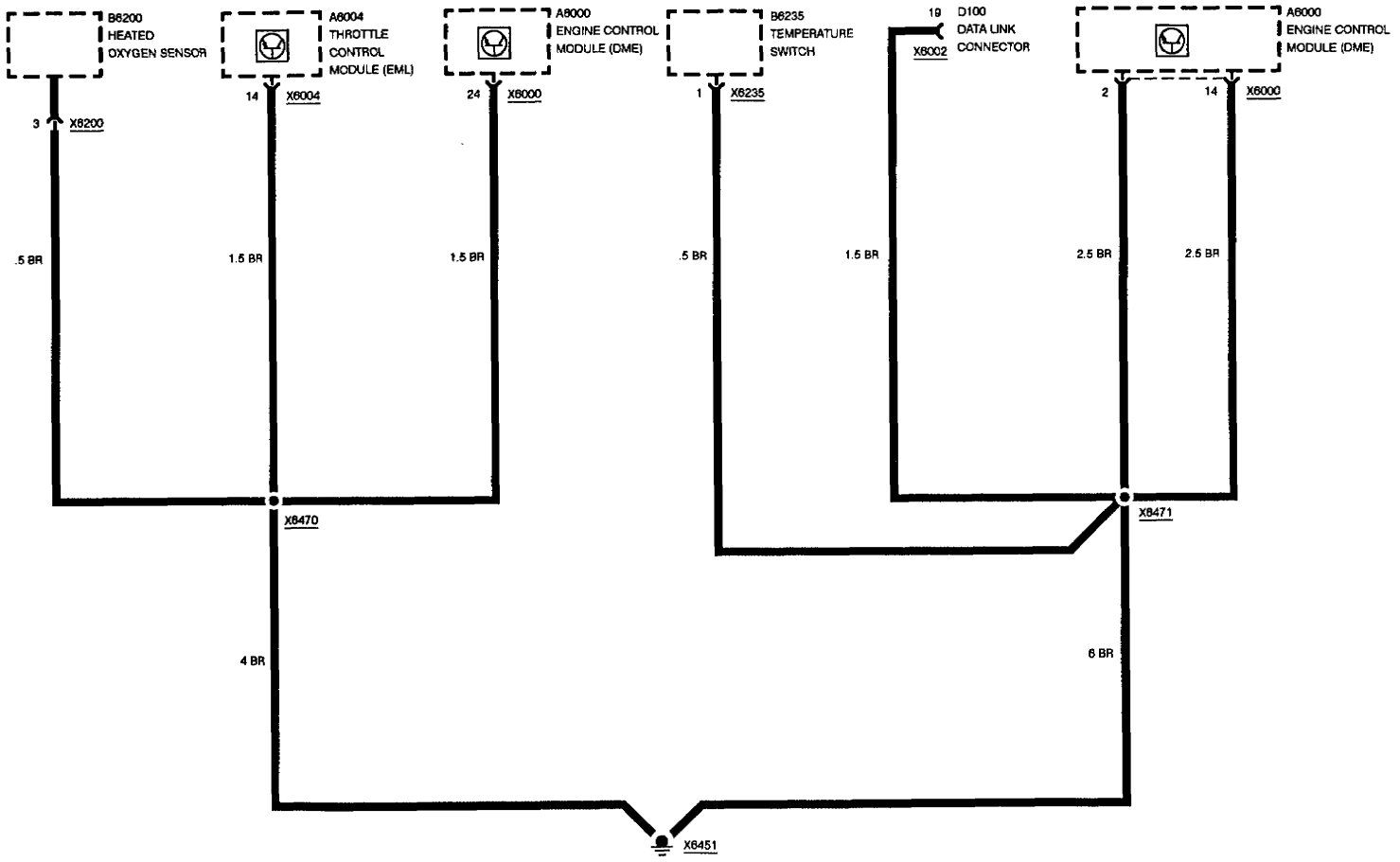



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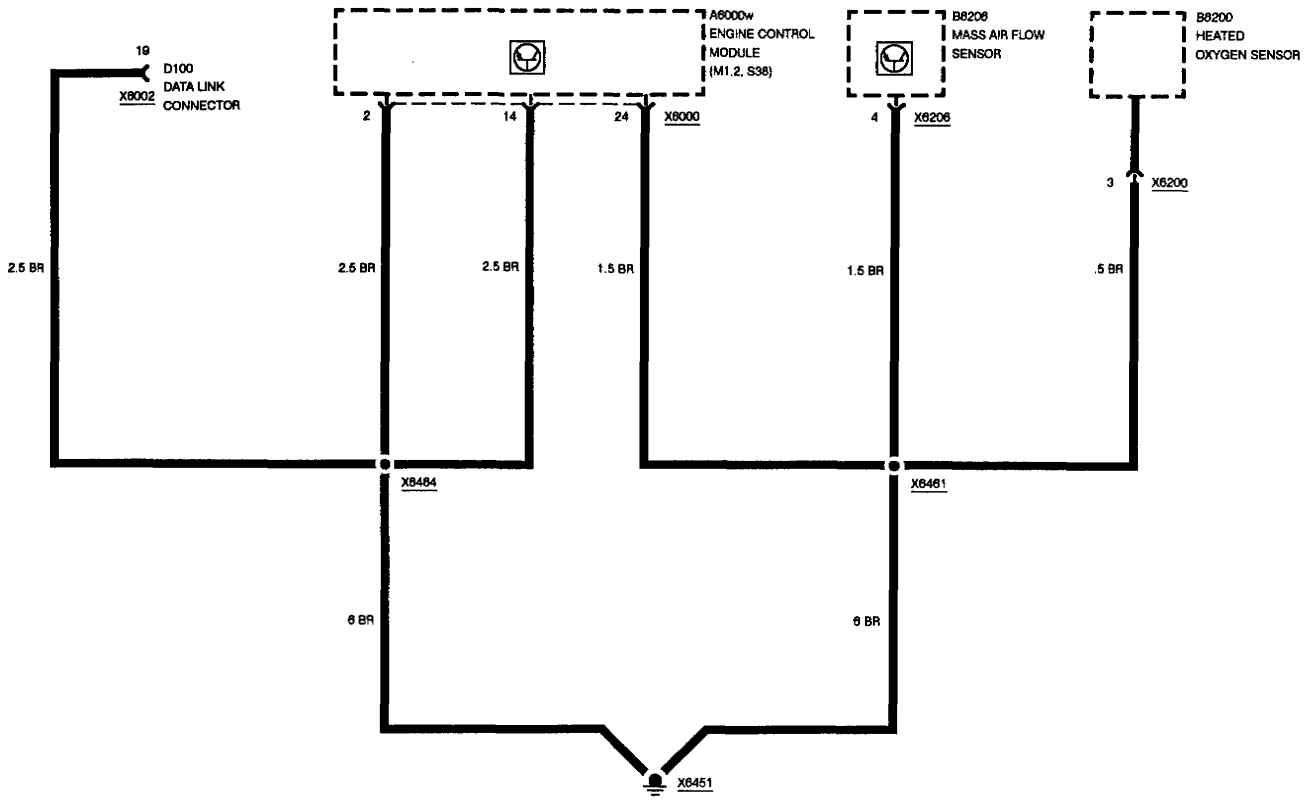
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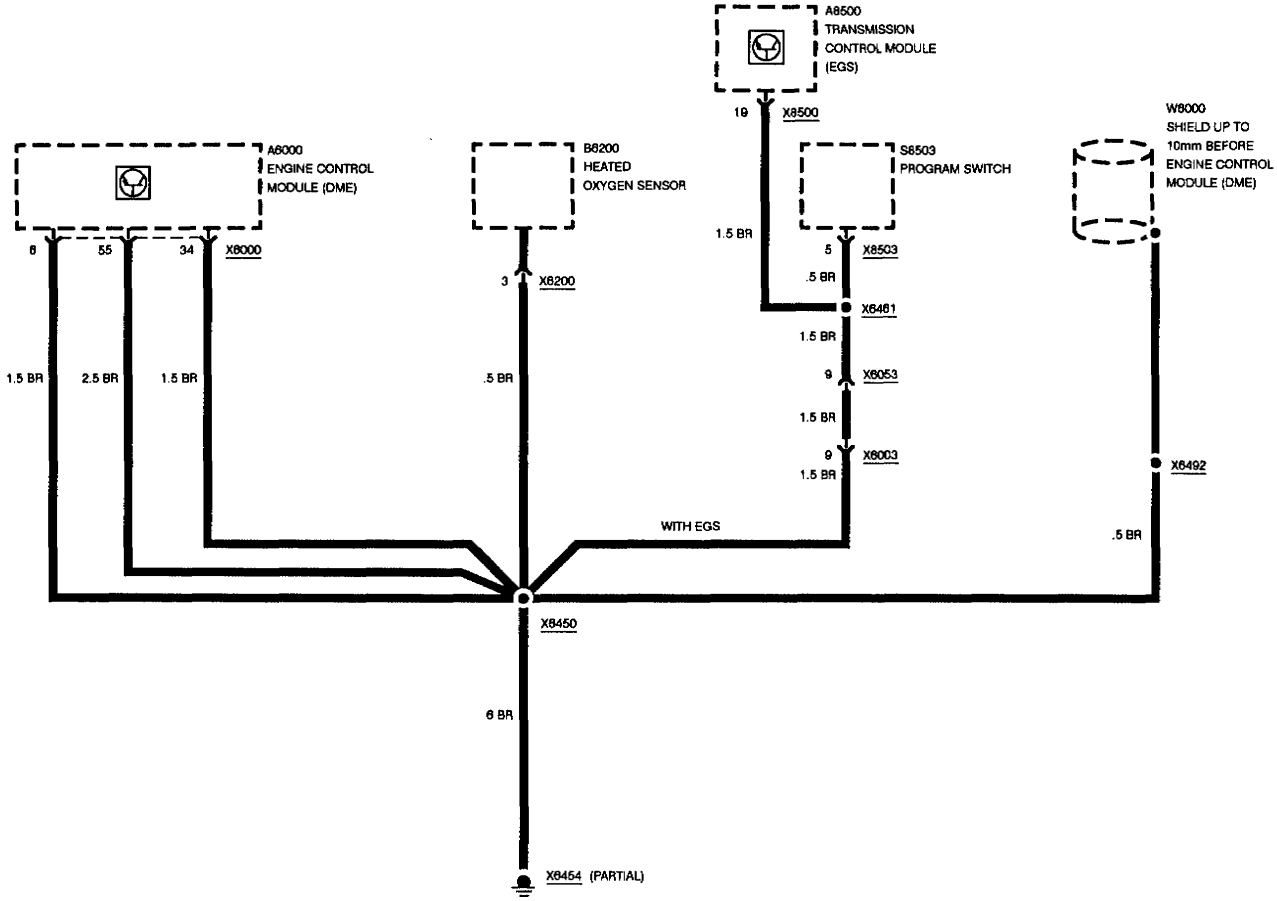



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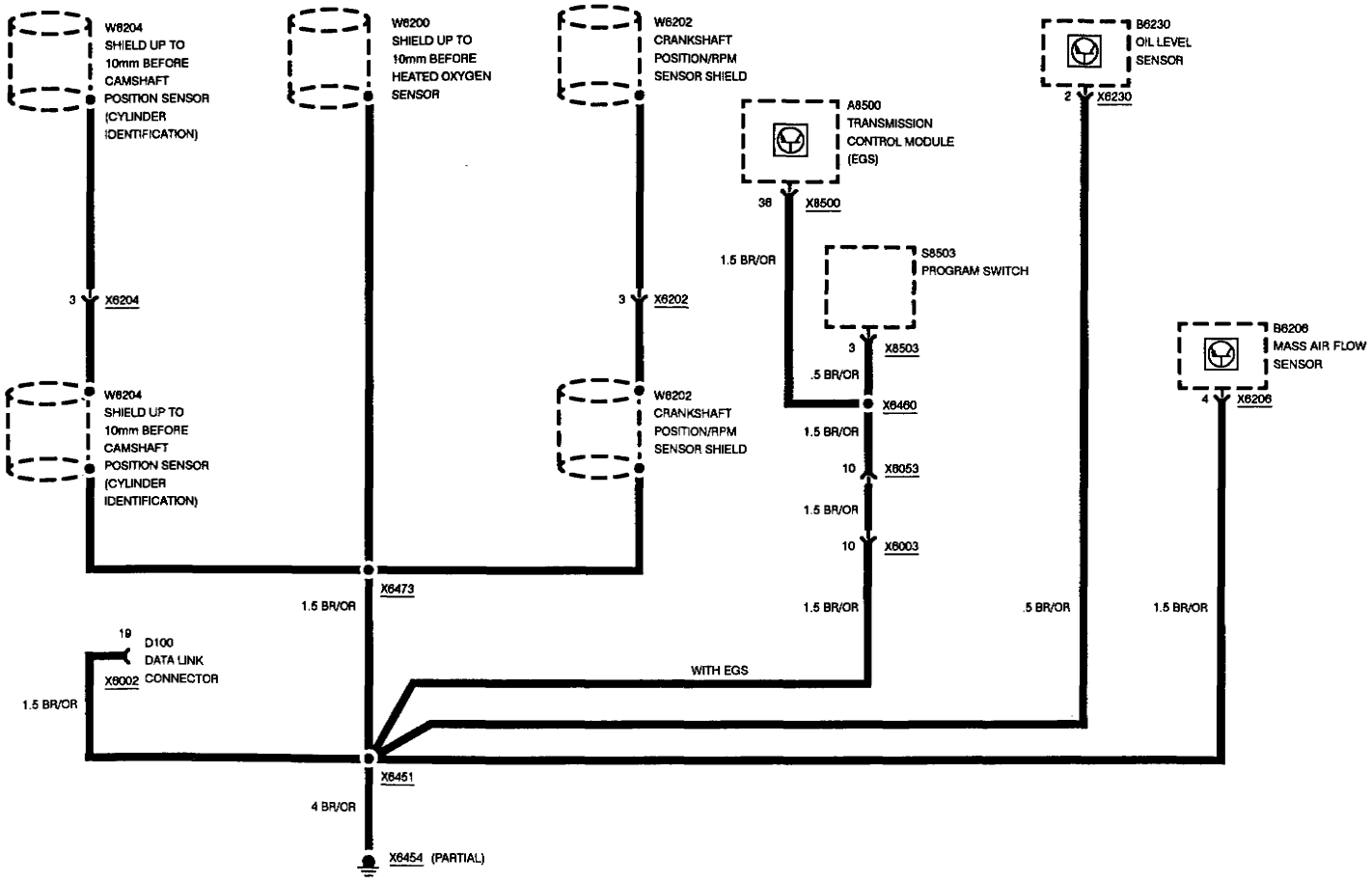



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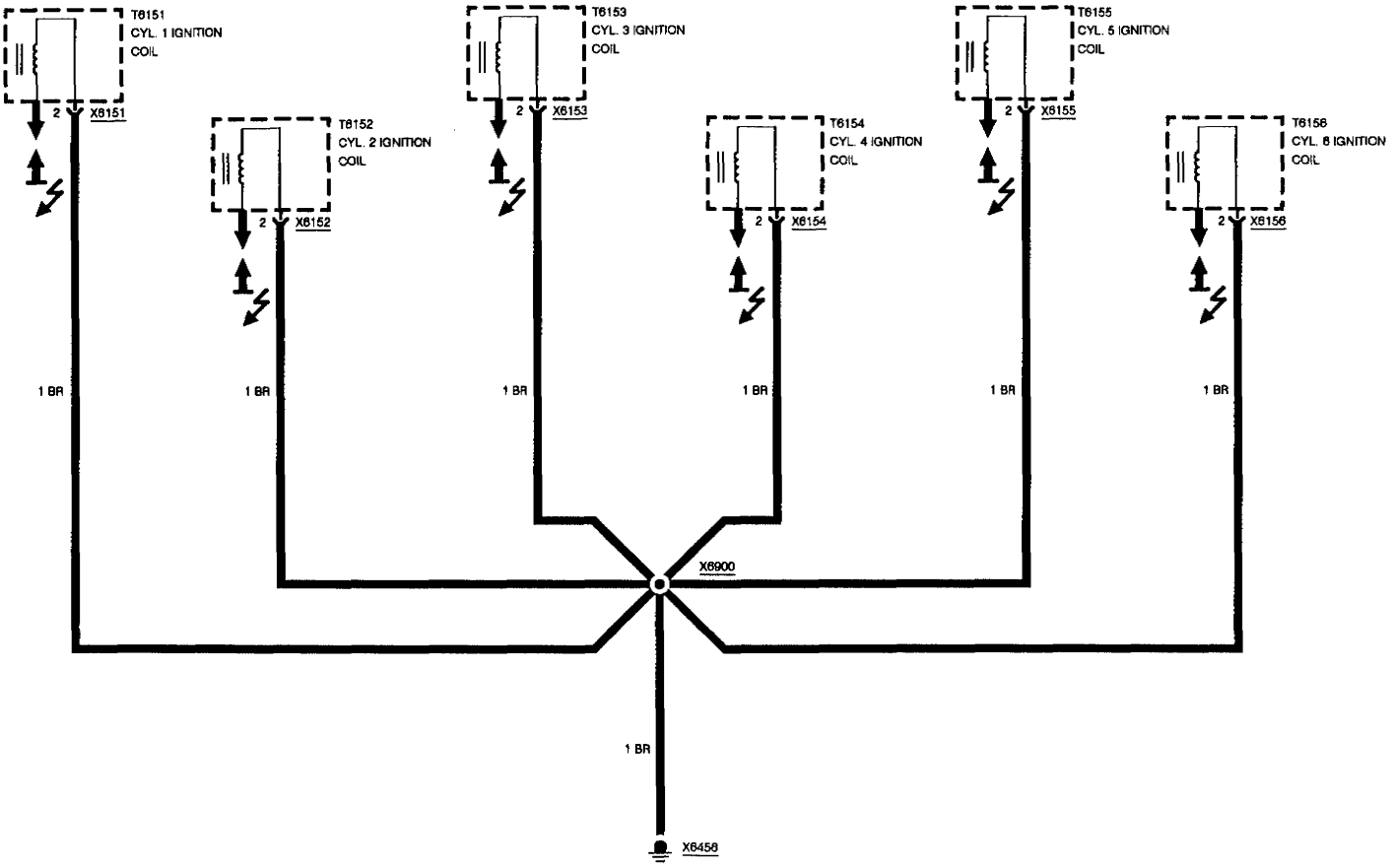
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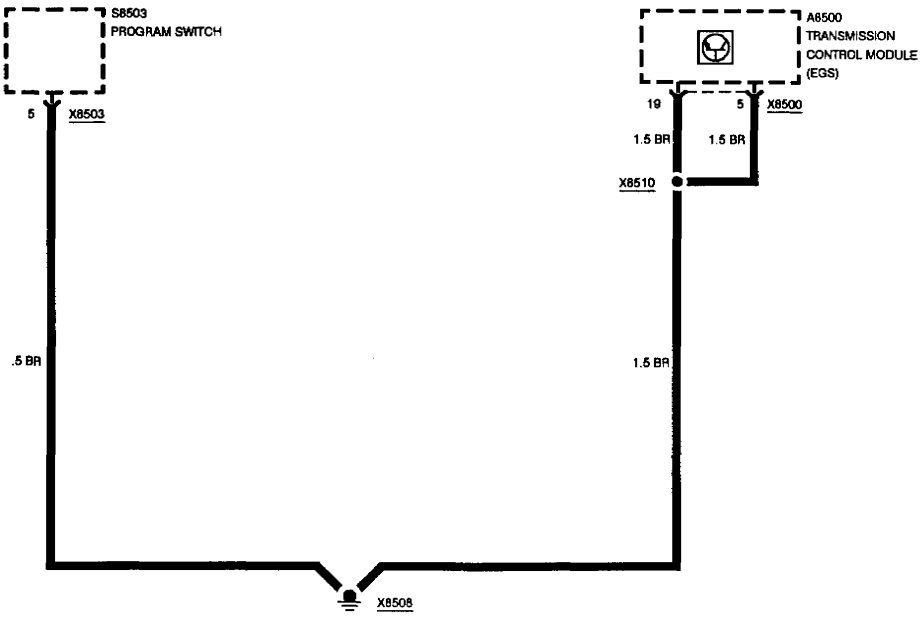

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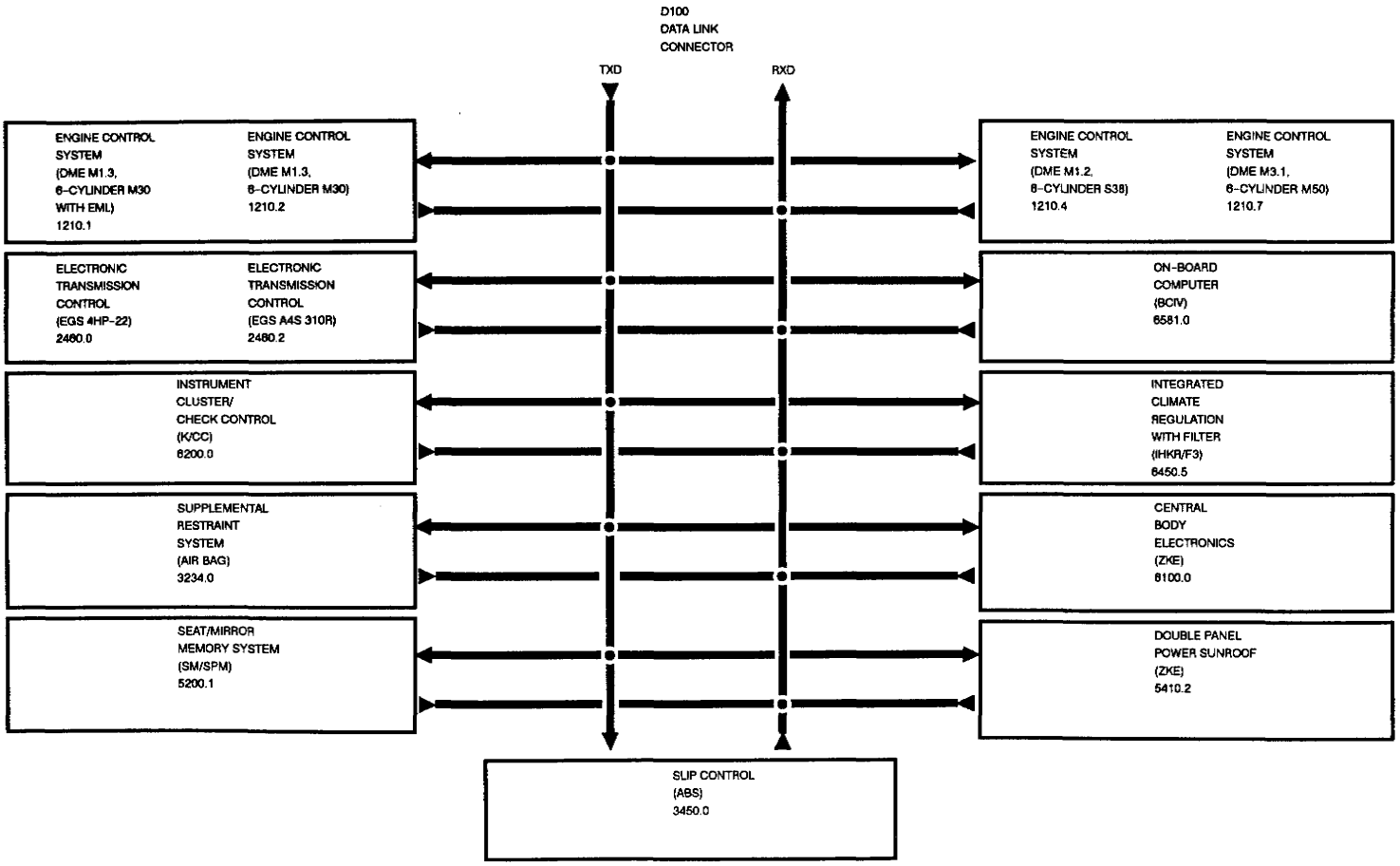

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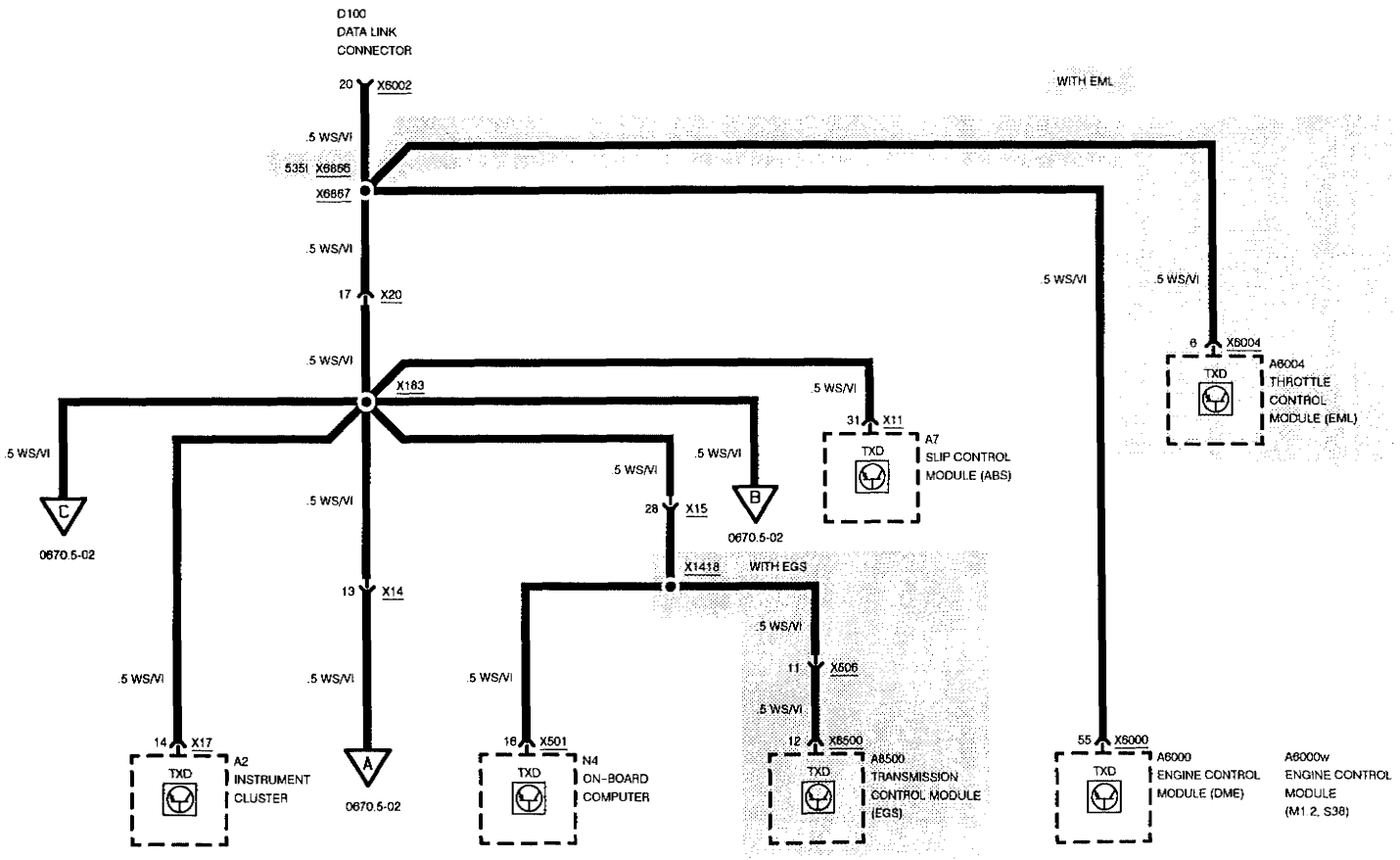





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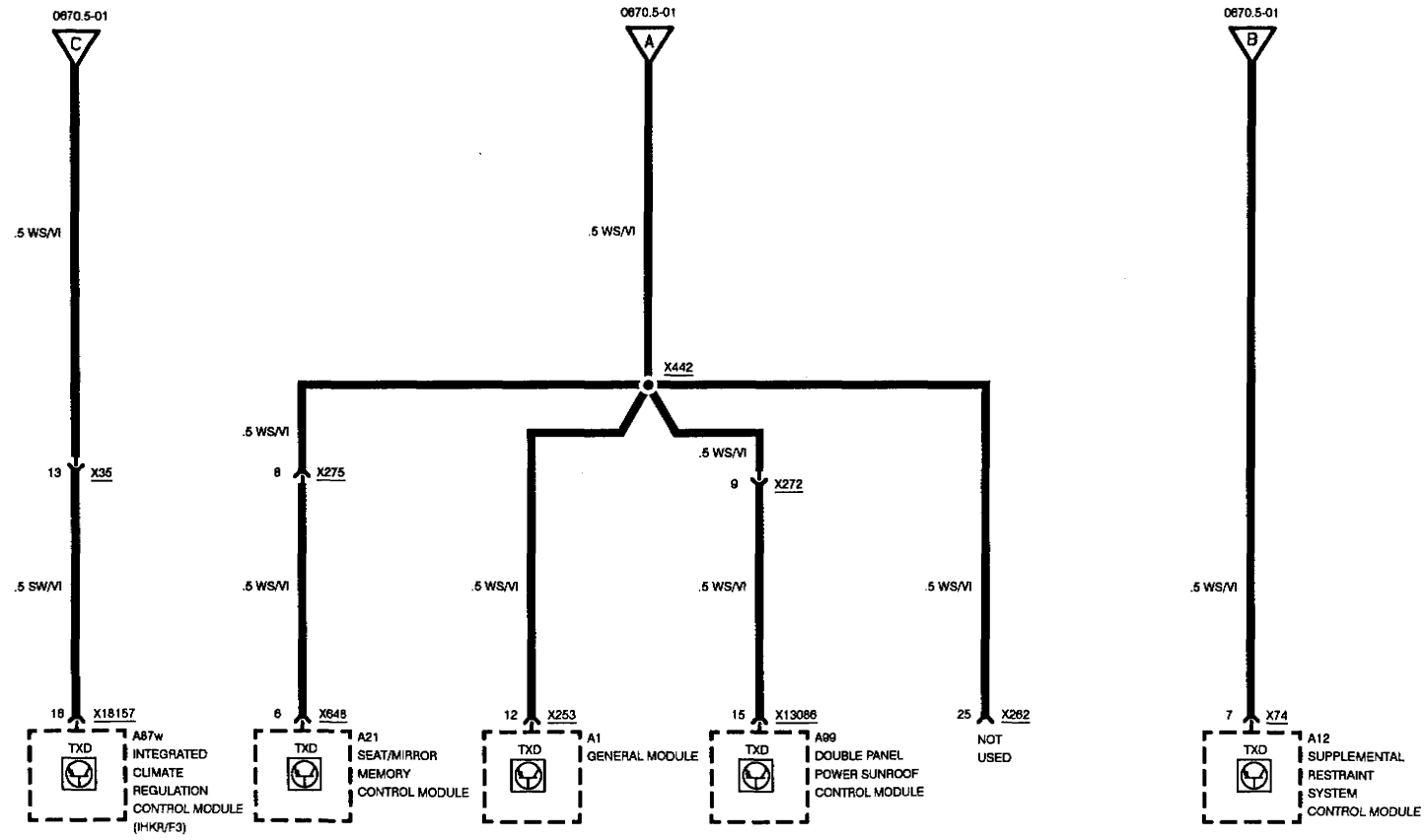
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## TXD, PIN 20




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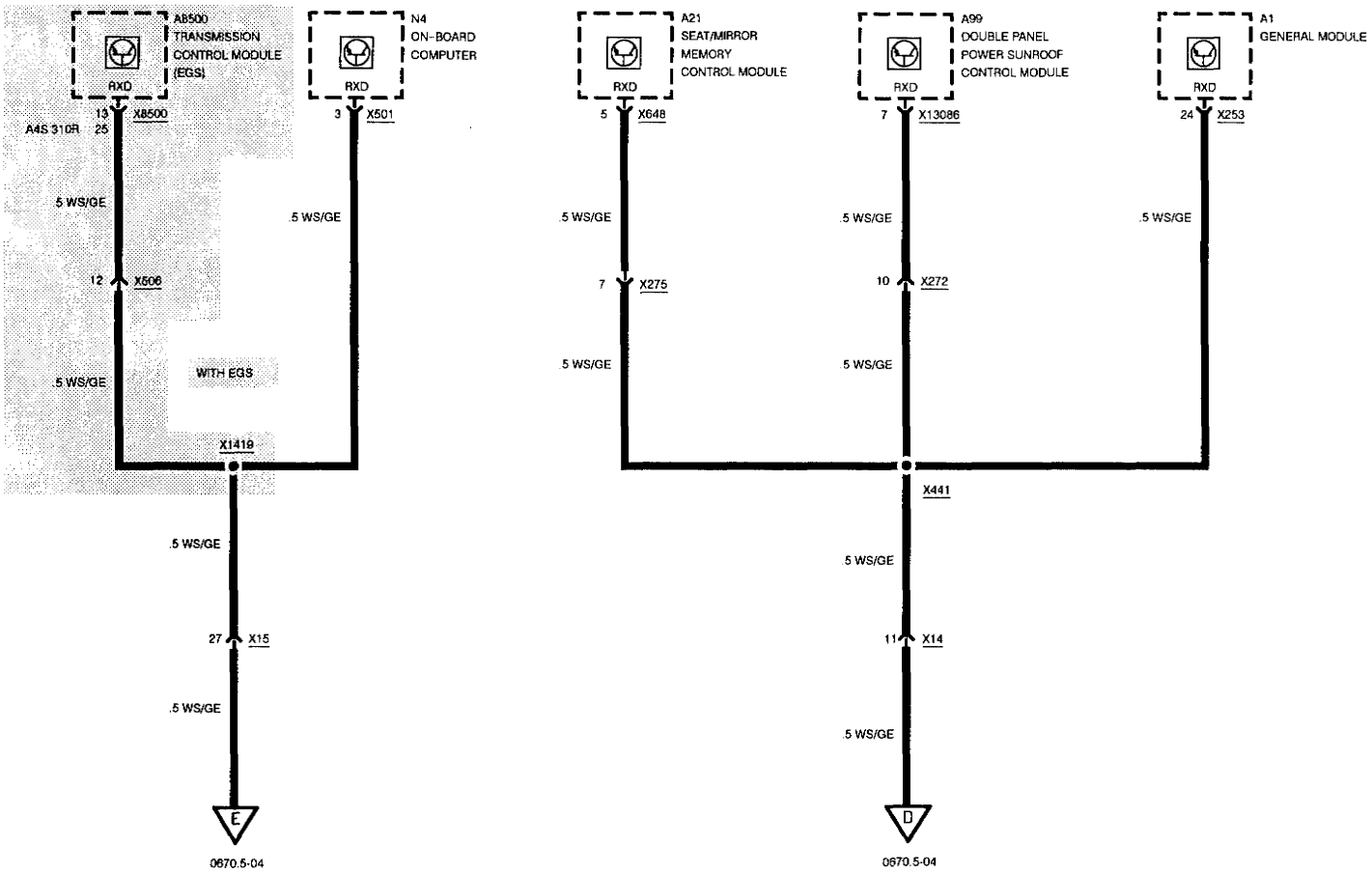





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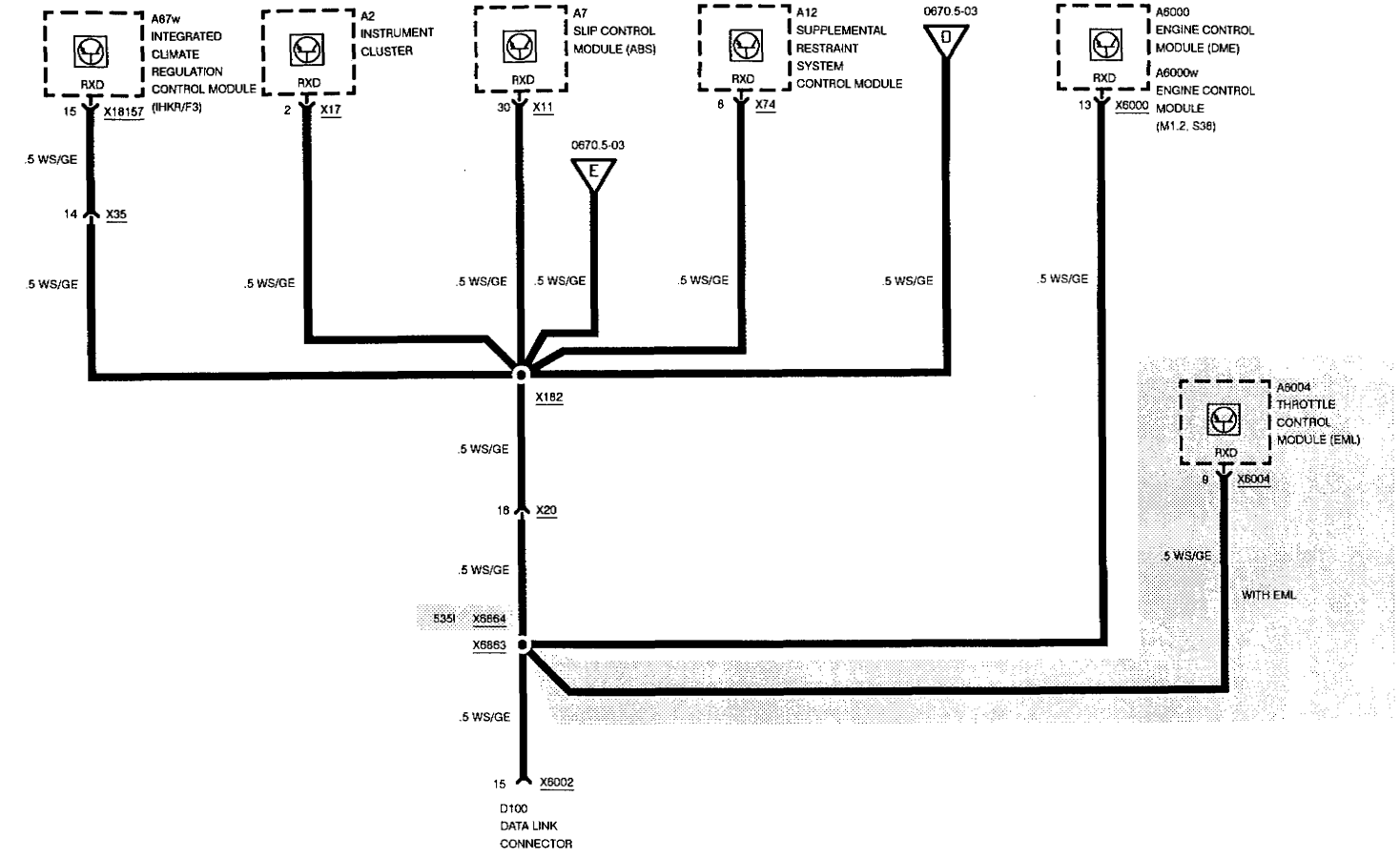





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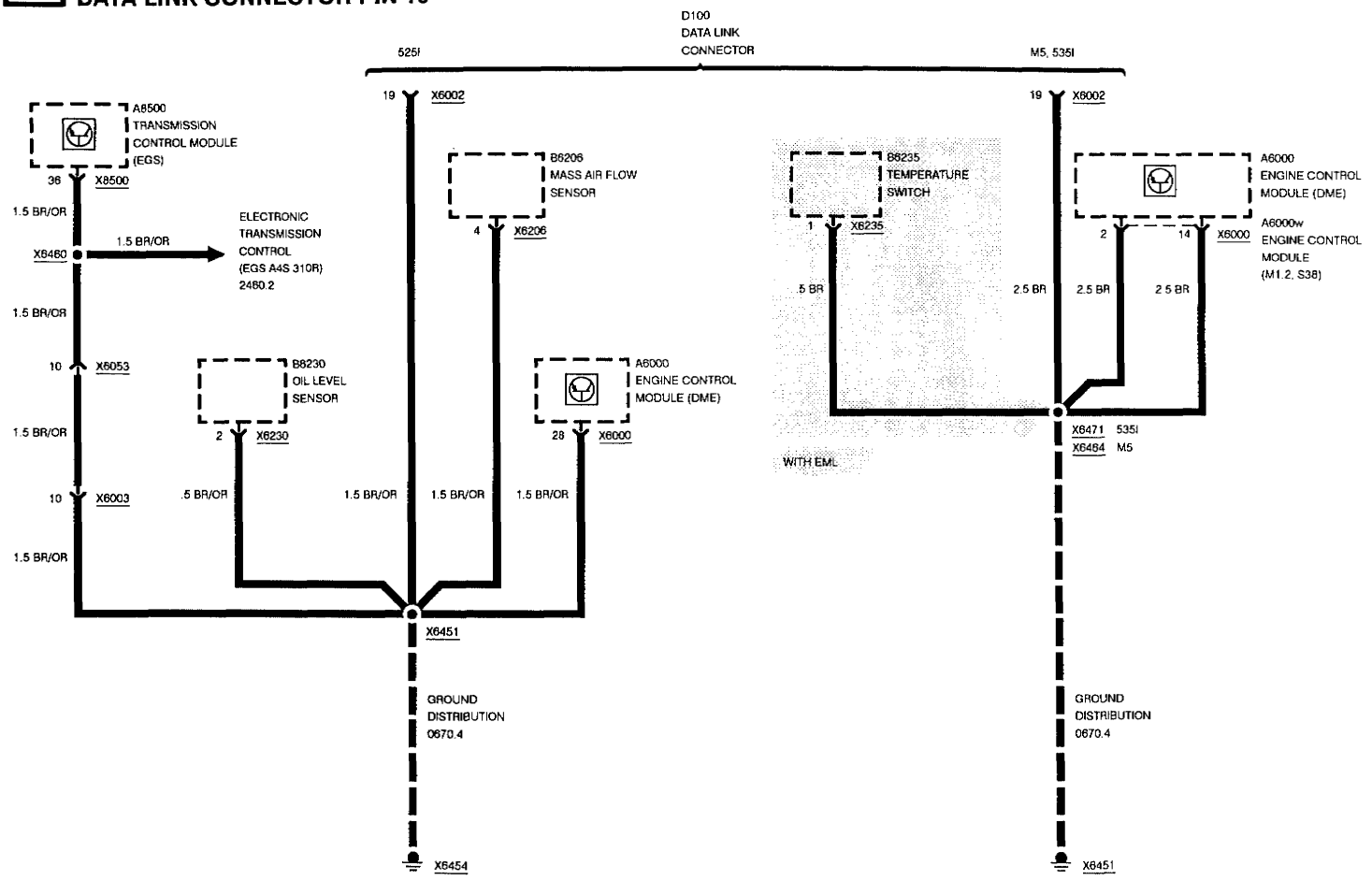
## RXD, PIN 15




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# DATA LINK

## DATA LINK CONNECTOR PIN 19

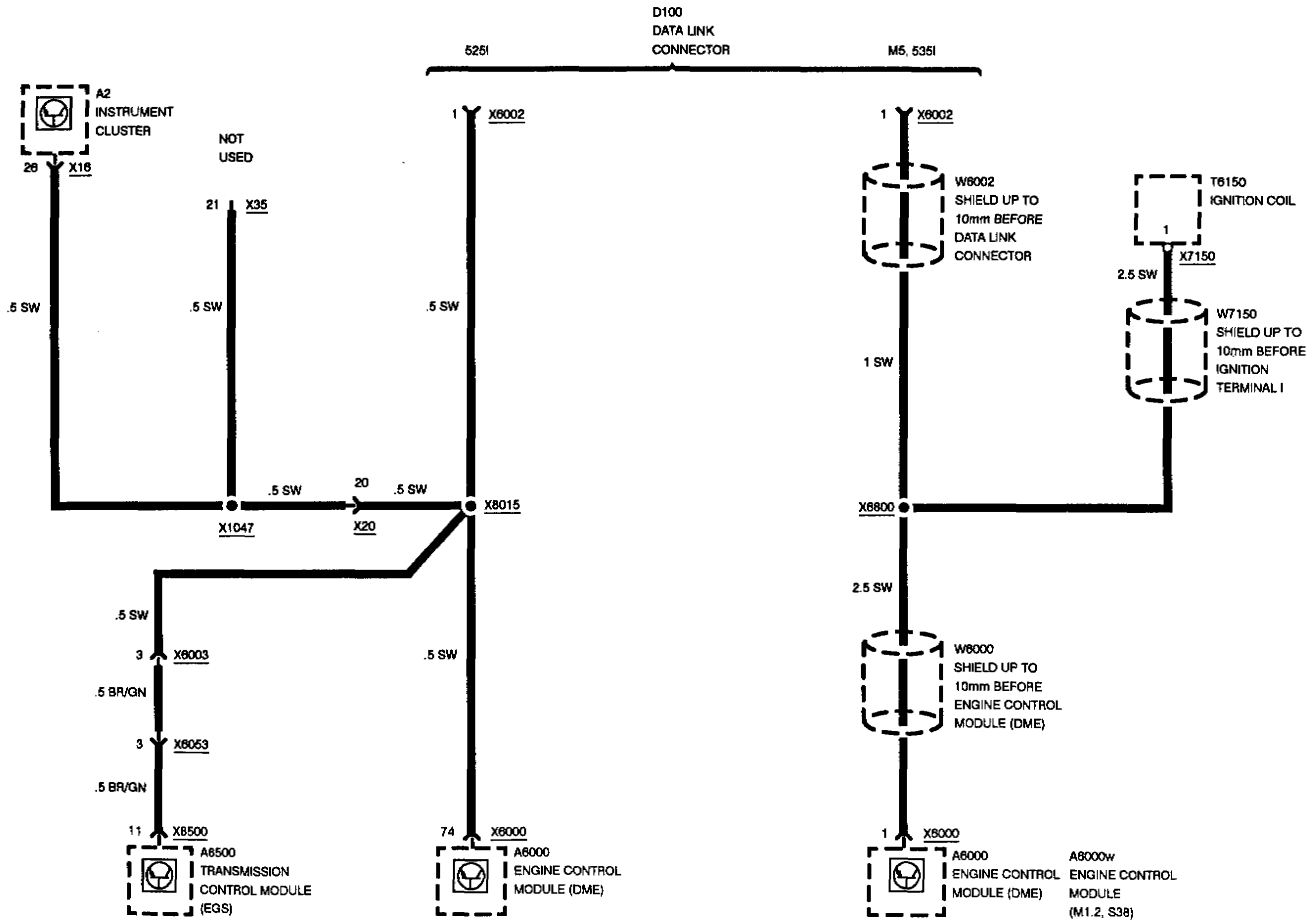





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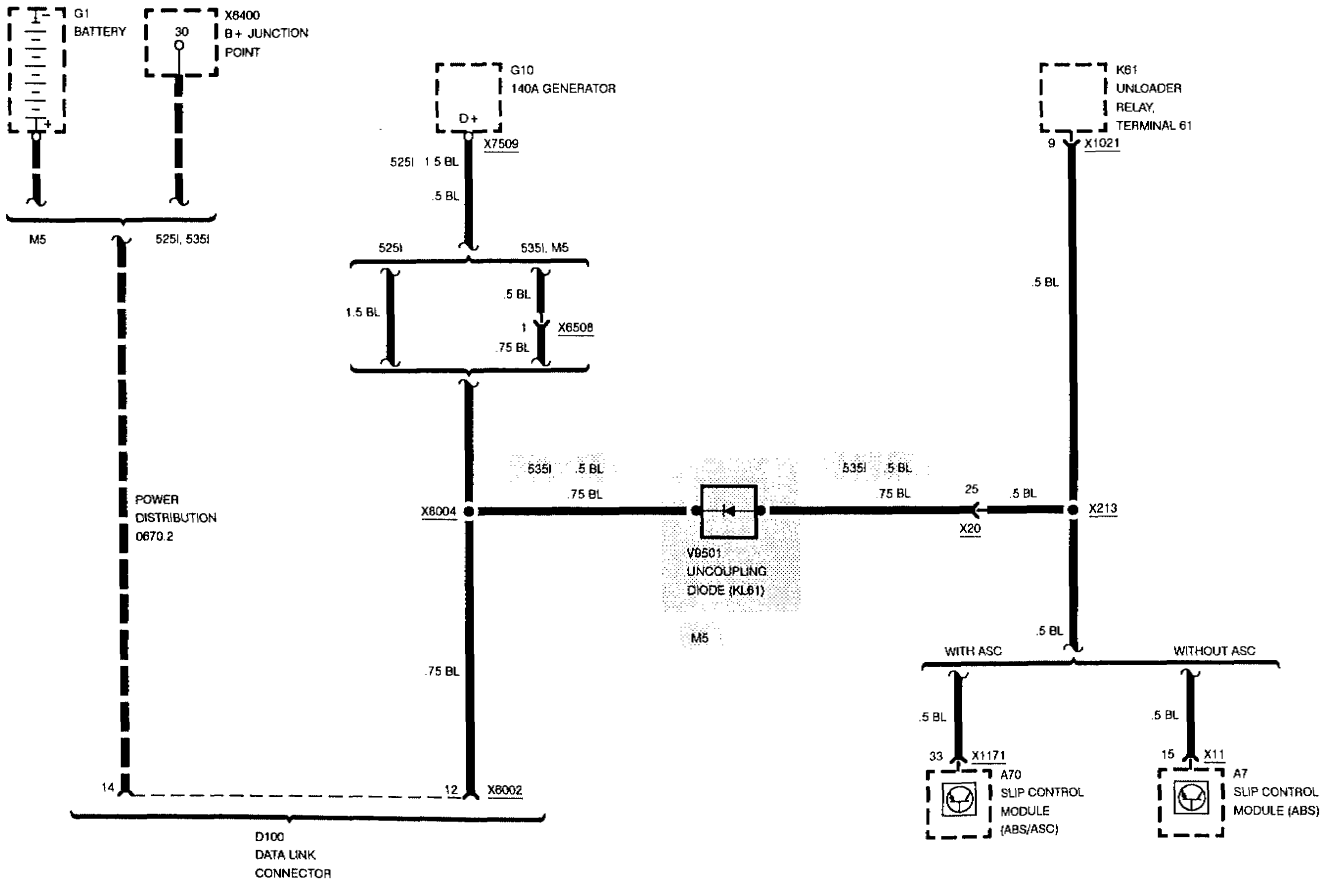
## DATA LINK CONNECTOR PIN 1






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## DATA LINK PINS 12 AND 14

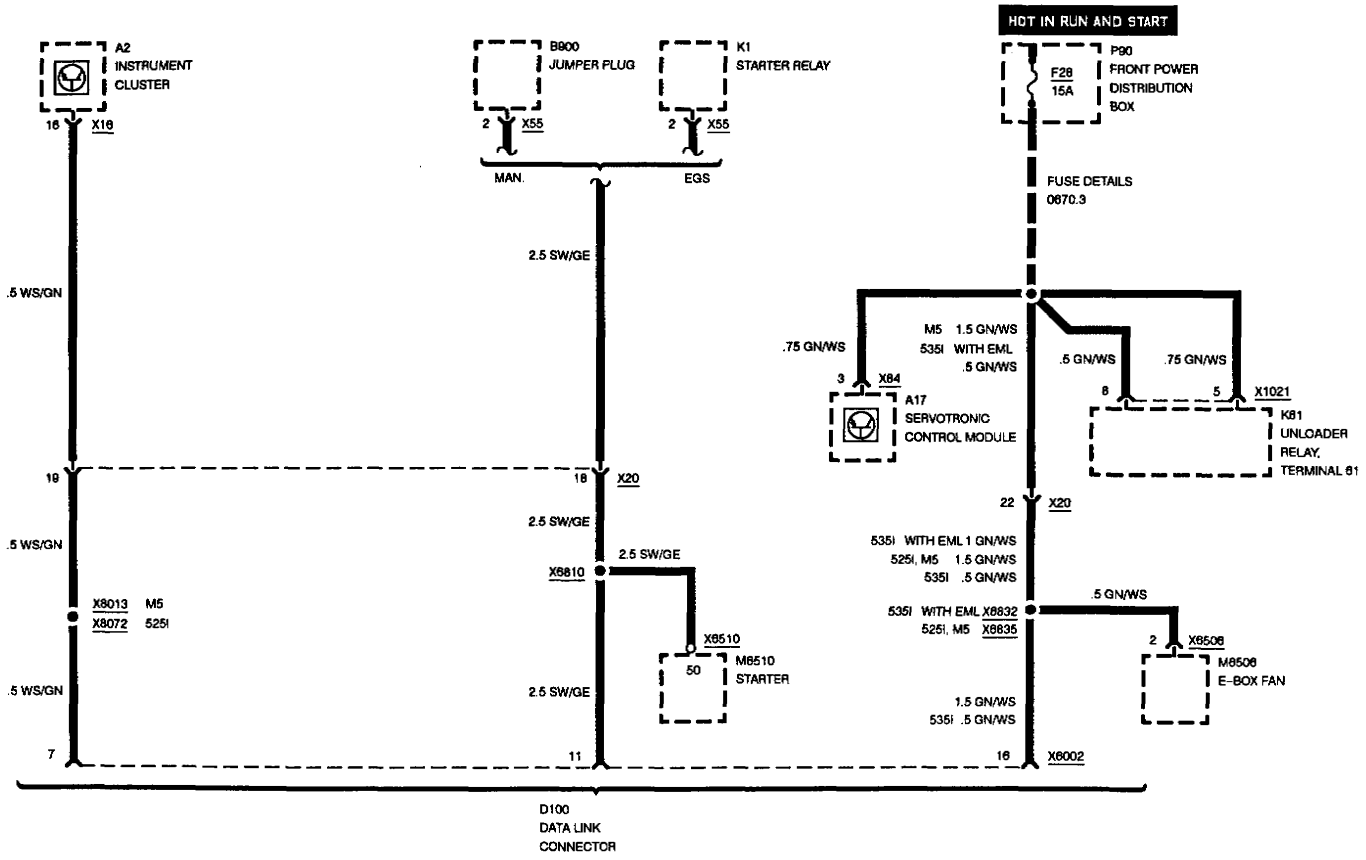





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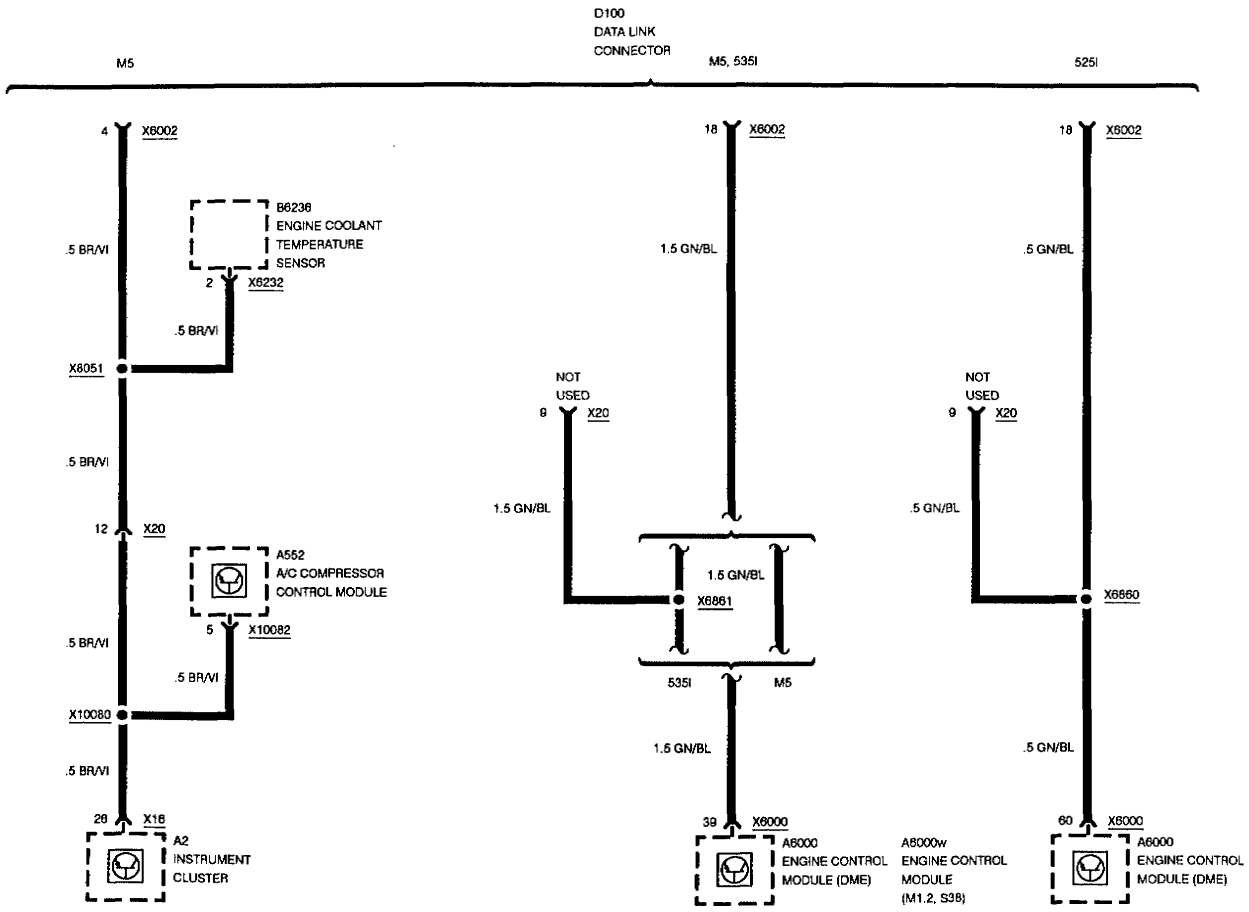
## DATA LINK CONNECTOR PINS 7, 11, AND 16




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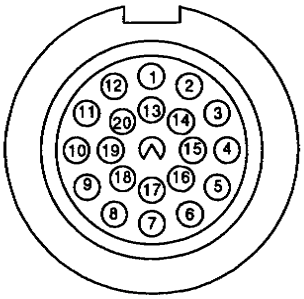
# DATA LINK

## DATA LINK CONNECTOR PINS 4 AND 18




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## DATA LINK CONNECTOR (X6002)

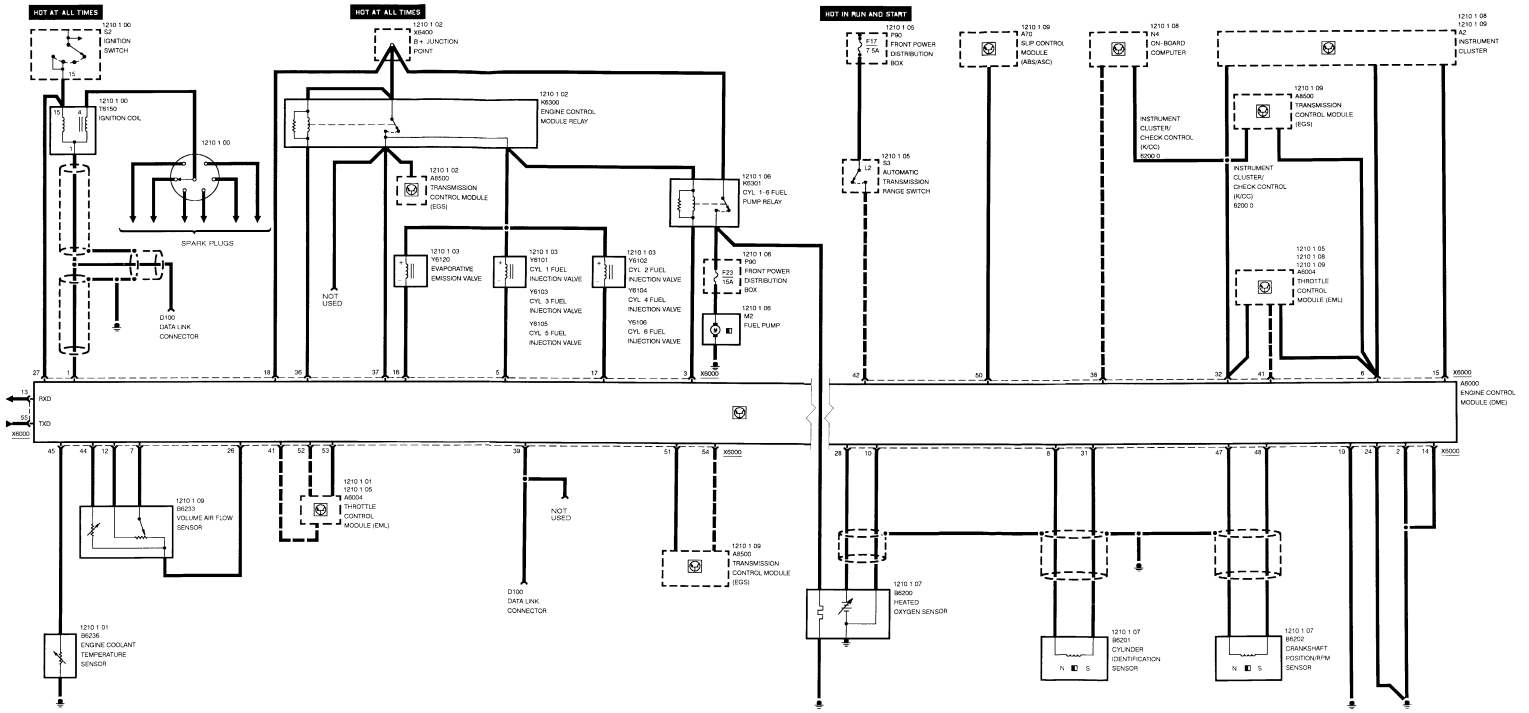



| PIN NUMBER | TERMINAL NUMBER | TERMINAL DESCRIPTION | | WIRE COLOR |
|---|---|---|---|---|
| 1 | 1 | IGNITION COIL | | SW |
| 2 | – | NOT OCCUPIED | | |
| 3 | – | NOT OCCUPIED | | |
| 4 | FT | VOLTAGE: TEMPERATURE SENSOR | M5 | BR/VI |
| 5 | – | NOT OCCUPIED | | |
| 6 | – | NOT OCCUPIED | | |
| 7 | SI | SERVICE INDICATOR REMINDER | | WS/GN |
| 8 | – | NOT OCCUPIED | | |
| 9 | – | NOT OCCUPIED | | |
| 10 | – | NOT OCCUPIED | | |
| 11 | 50 | VOLTAGE: IGNITION SWITCH IN START | | SW/GE |
| 12 | 61(D+) | GENERATOR CHARGE INDICATOR | | BL |
| 13 | – | NOT OCCUPIED | | |
| 14 | 30 | VOLTAGE: HOT AT ALL TIMES | | RT |
| 15 | RXD | RECEIVE | | WS/GE |
| 16 | 15S | VOLTAGE: IGNITION SWITCH IN RUN | | GN/WS |
| 17 | – | NOT OCCUPIED | | |
| 18 | PGSP | ENGINE CONTROL (DME) PROGRAMMING LINE | | GN/BL |
| 19 | 31 | GROUND | | BR |
| 20 | TXD | TRANSMIT | | WS/VI |



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## Pin Assignments

### X6000

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | A | Ignition terminal | Ignition coil | Primary signal | Oscilloscope | Engine test, test step 05 |
| 2 | M | Ground | Ground point | Ground | | |
| 3 | A | EKP relay and TR signal (crankshaft reference) | EKP relay and electronic transmission control unit | Ground with superimposed signal | ON | Can only be measered when crankshaft rotating |
| 4 | | Not used | | | | |
| 5 | A | Evaporative valve | Evaporative valve | Pulsed ground | CLOSED/OPEN | Perform component activation, ground = > closed |
| 6 | A | Engine speed signal | Instrument cluster | Square wave signal | | One signal per ignition |
| 7 | E | Air flow meter signal | Air flow meter | 0...5 V | Load signal ms | See status monitoring |
| 8 | E | Cylinder identification sensor (ignition) | Cylinder identification sensor (connection B) | | ON/OFF | See status monitoring |
| 9 | | Not used | | | | |
| 10 | M | Ground, oxygen sensor | Oxygen sensor | Ground | | |
| 11 | | Not used | | | | |
| 12 | A | Voltage supply, air flow meter | Air flow meter | - 5 V | | |
| 13 | E | RxD diagnostic data line | Diagnostic connector | > 10 V | | When cover of diagnostic connector closed |

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# DIGITAL ENGINE ELECTRONICS (DME 1.3, 6-CYLINDER M30 WITH EML)



| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 14 | M | Ground injection valves | Ground point | Ground | | |
| 15 | A | Indicator "Check engine" | Instrument cluster | Ground | | Comes on if emission related error code is stored, and comes on during starting |
| 16 | A | Injection valves cyl. (1+3+5) | Injection valve | Pulsed ground | Injection time ti | Ground = > injector valves open, see component activation |
| 17 | A | Injection valves cyl. (2+4+6) | Injection valve | Pulsed ground | Injection time ti | Ground = > injector valves open, see component activation |
| 18 | E | Hot at all times | Terminal 30 | > 10 V | | |
| 19 | M | Ground for electronics and sensor shields | Ground point | Ground | | |
| 20 | | Not used | | | | |
| 21 | | Not used | | | | |
| 22 | | Not used | | | | |
| 23 | | Not used | | | | |
| 24 | M | Ground, remaining output stages (except for ignition and injection valves) | Ground point | Ground | | |
| 25 | | Not used | | | | |
| 26 | M | Ground, air flow meter | Air flow meter | Ground | | |
| 27 | E | Ignition terminal 15 | Ignition switch | > 10 V | | |
| 28 | E | Oxygen sensor signal | Oxygen sensor | Pulsating voltage up to approx. 1 V | Voltage value | Can only be measured with the engine running at operating temperature |

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# DIGITAL ENGINE ELECTRONICS (DME 1.3, 6-CYLINDER M30 WITH EML)



| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 29 | | Not used | | | | |
| 30 | | Not used | | | | |
| 31 | E | Cylinder identification sensor (ignition) | Cylinder identification sensor (connection A) | | ON/OFF | See status monitoring |
| 32 | A | tI Measuring signal (KVA signal) | Instrument cluster | Square wave signal | Multimeter function pulse duration | Oscilloscope |
| 33 | | Not used | | | | |
| 34 | | Not used | | | | |
| 35 | | Not used | | | | |
| 36 | A | DME main relay | DME main relay terminal 85 | Ground | ON | Diagnosis not possible if not fitted, connect jumper at relay terminal 30 and 87 |
| 37 | E | U-Batt from DME main relay | Main relay terminal 87 | U-Batt | Voltage value | Perform status monitoring. Diagnosis not possible if signal not applied. Connect jumper terminal 30 and 87 on relay |
| 38 | E | Drive away protection | On-board computer | > 10 V | | |
| 39 | E | Programming voltage | Diagnostic connector | | | Only activated for control unit programming |
| 40 | | Not used | | | | |
| 41 | E | Auxiliary fan signal | EML control unit | 12 V | ON/OFF | |
| 42 | E | Drive range P/N | Transmission selector lever switch | Ground | ON | When position P/N |
| 43 | | Not used | | | | |
| 44 | E | Intake air temperature | Air quantity meter | 0...5 V | °C | Temperature dependent |

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# DIGITAL ENGINE ELECTRONICS (DME 1.3, 6-CYLINDER M30 WITH EML)



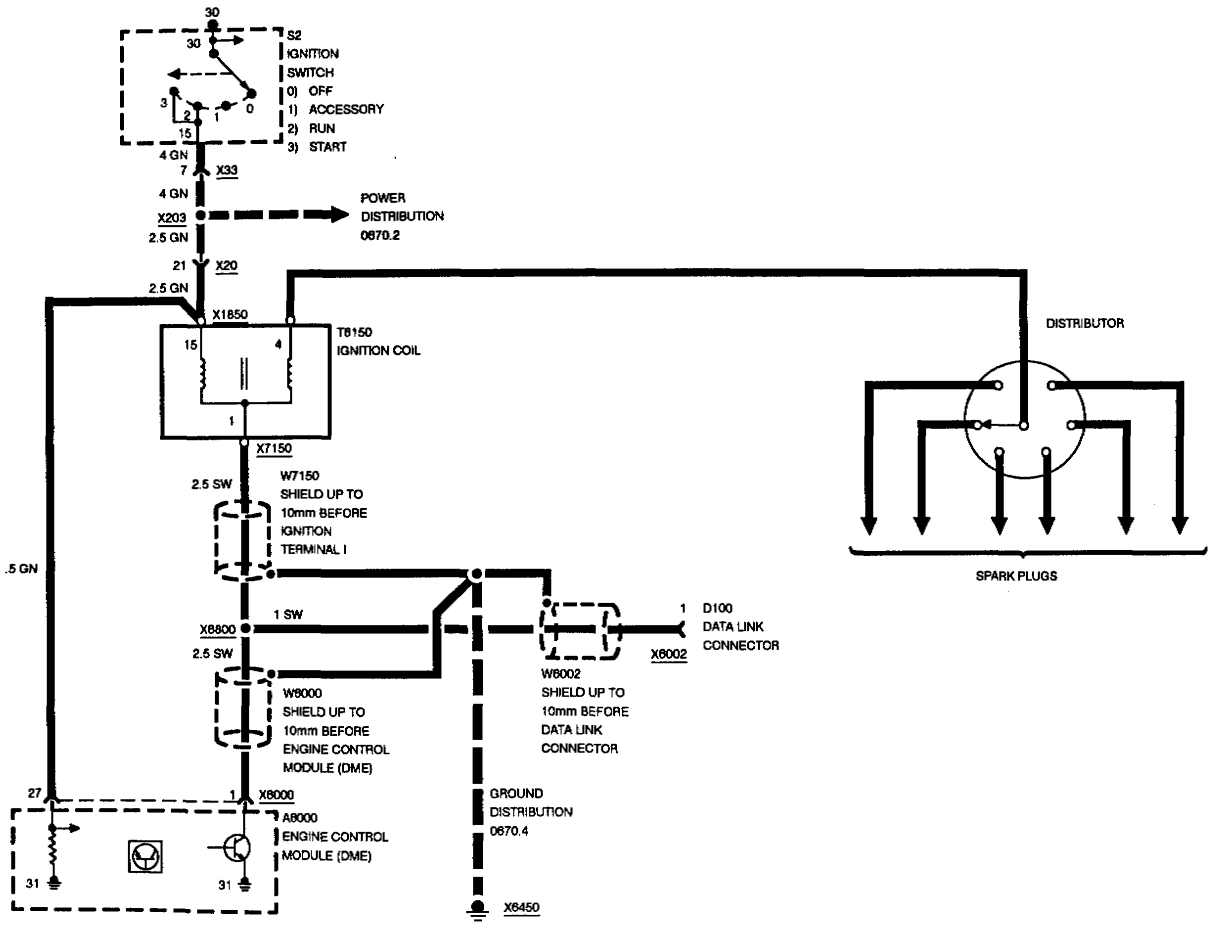
| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 45 | E | Engine coolant temp. | Engine coolant temp. sensor | 0...5 V | °C | Temperature dependent |
| 46 | | Not used | | | | |
| 47 | E | Inductive pulse generator (connection A) | Pulse generator engine speed, crankshaft position | A/C voltage | Engine speed | Between Pins 47 and 48 (can only be measured with crankshaft rotating) |
| 48 | E | Inductive pulse generator (connection B) | Pulse generator engine speed, crankshaft position | A/C voltage | Engine speed | Status monitoring at or above starting rpm |
| 49 | | Not used | | | | |
| 50 | E | Torque cutout signal | ABS/ASC control unit | | | |
| 51 | E | Ignition timing intervention | Electronic transmission control unit | Ground | ON | Only active during gear shift |
| 52 | E | Idle signal | EML control unit | Ground | ON | See status monitoring on set idle speed |
| 53 | E | Full load signal VL | EML control unit | Ground | ON | At full load (kick-down) |
| 54 | E | Torque converter clutch WK | Electronic transmission control unit EGS | Ground | ON (with engine running) | When WK engaged, see status monitoring |
| 55 | E/A | TxD diagnostic data line | Diagnostic connector | Ground | | When cover of diagnostic connector closed |

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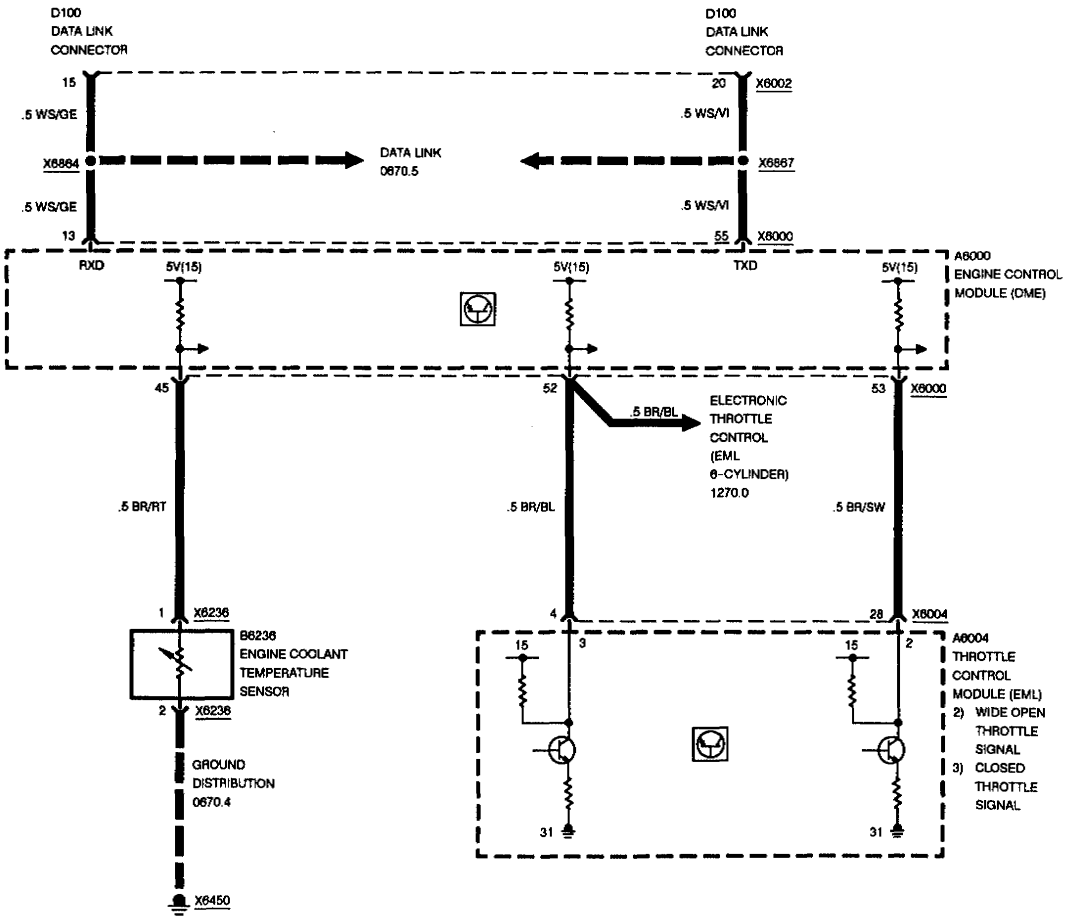
# ENGINE CONTROL SYSTEM (DME M1.3, 6-CYLINDER M30 WITH EML)






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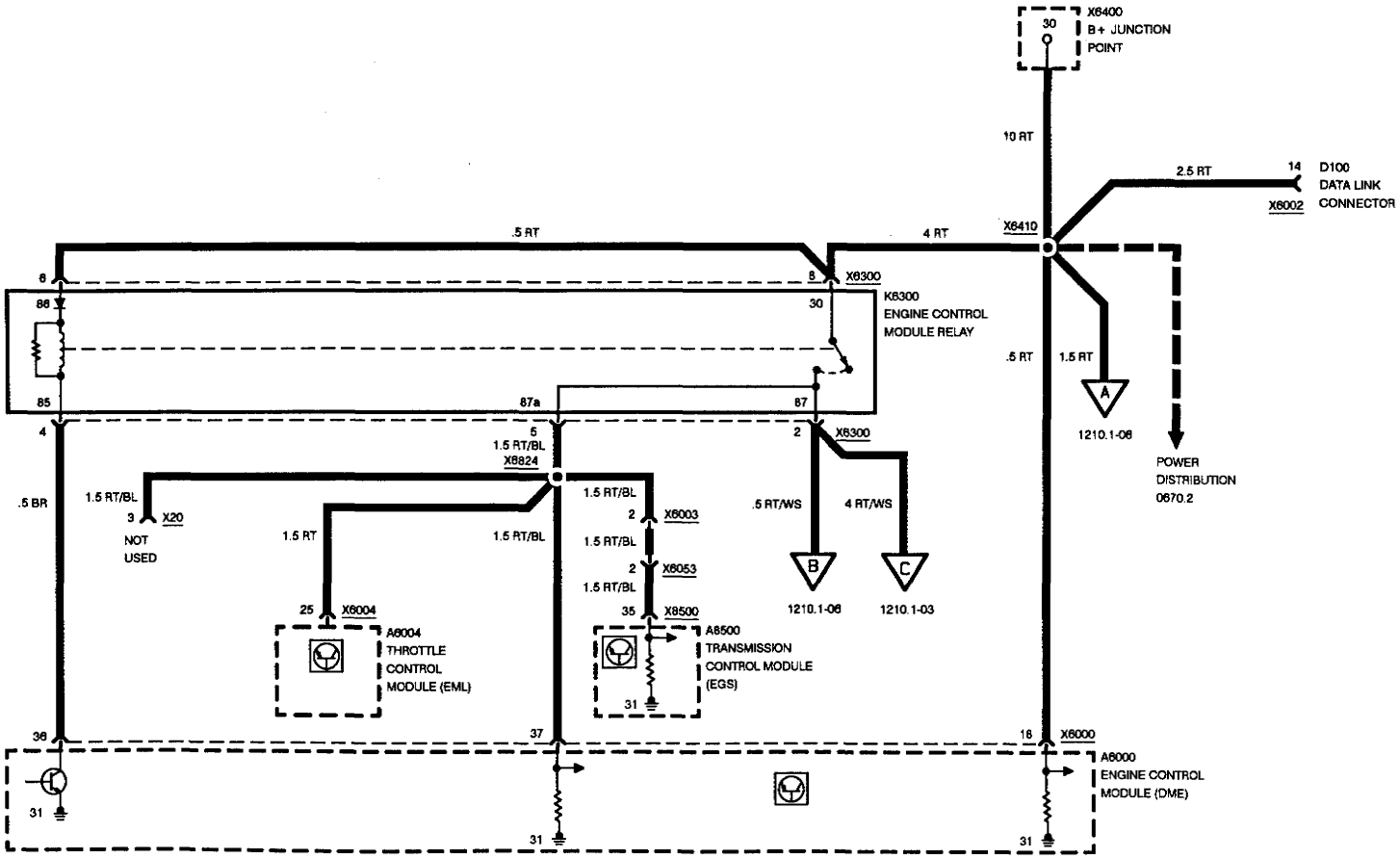
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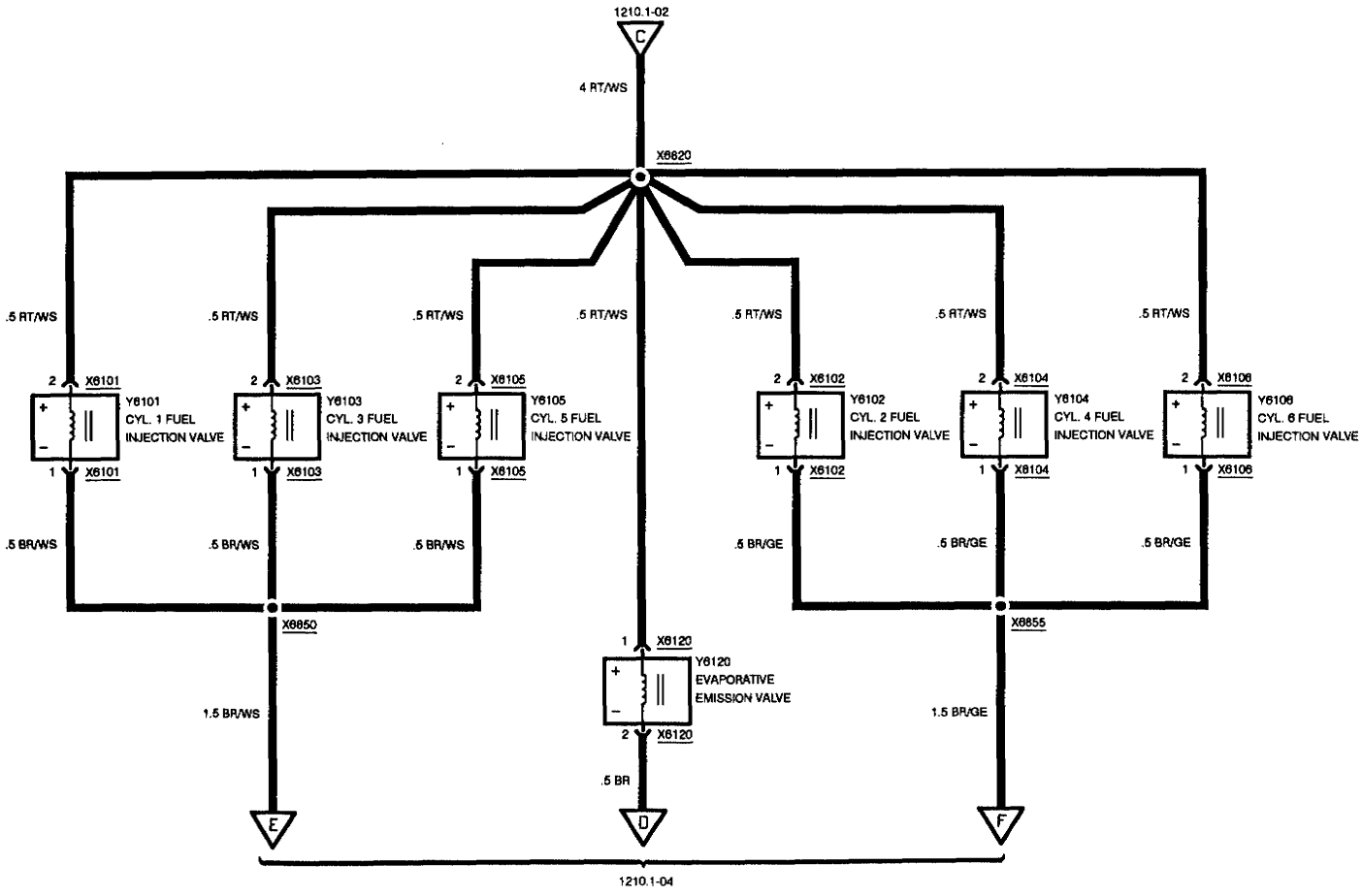





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# ENGINE CONTROL SYSTEM (DME M1.3, 6-CYLINDER M30 WITH EML)

## FUEL INJECTION VALVES

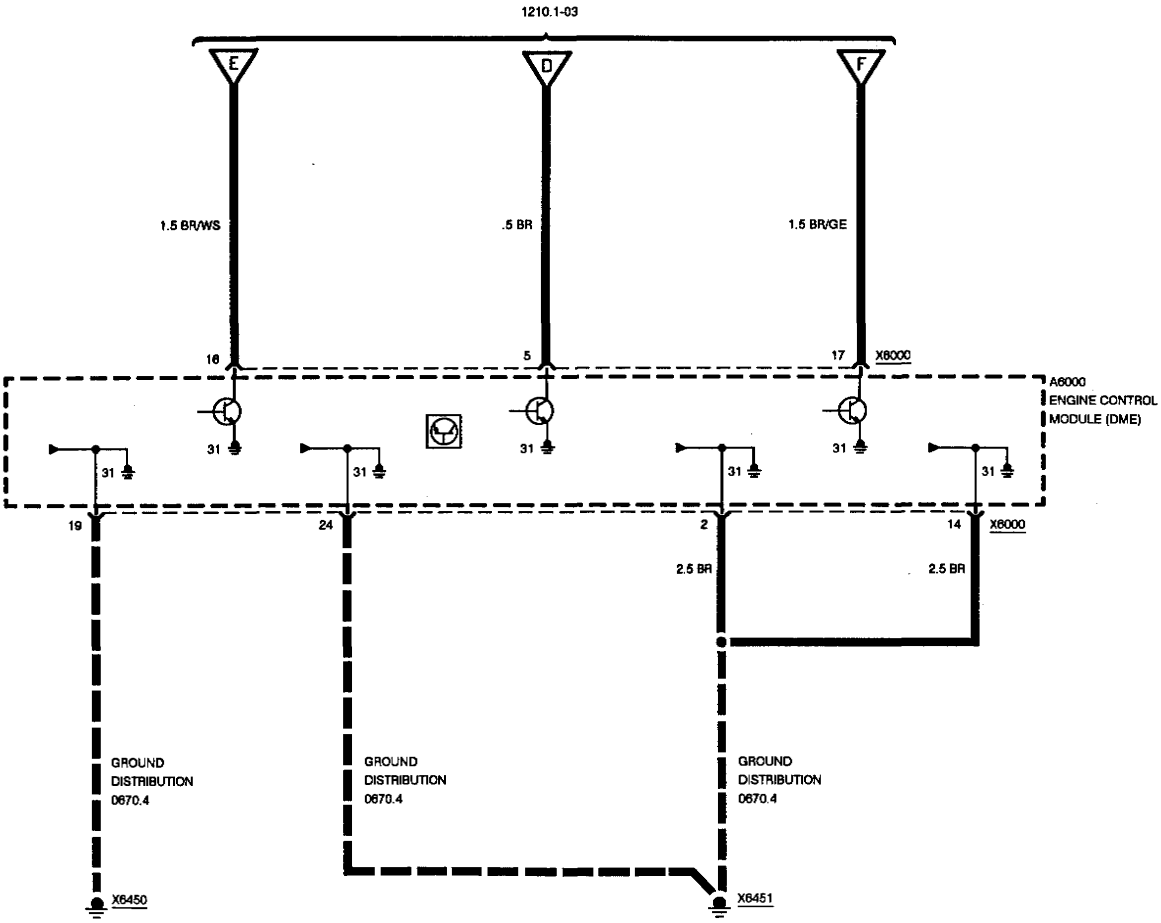





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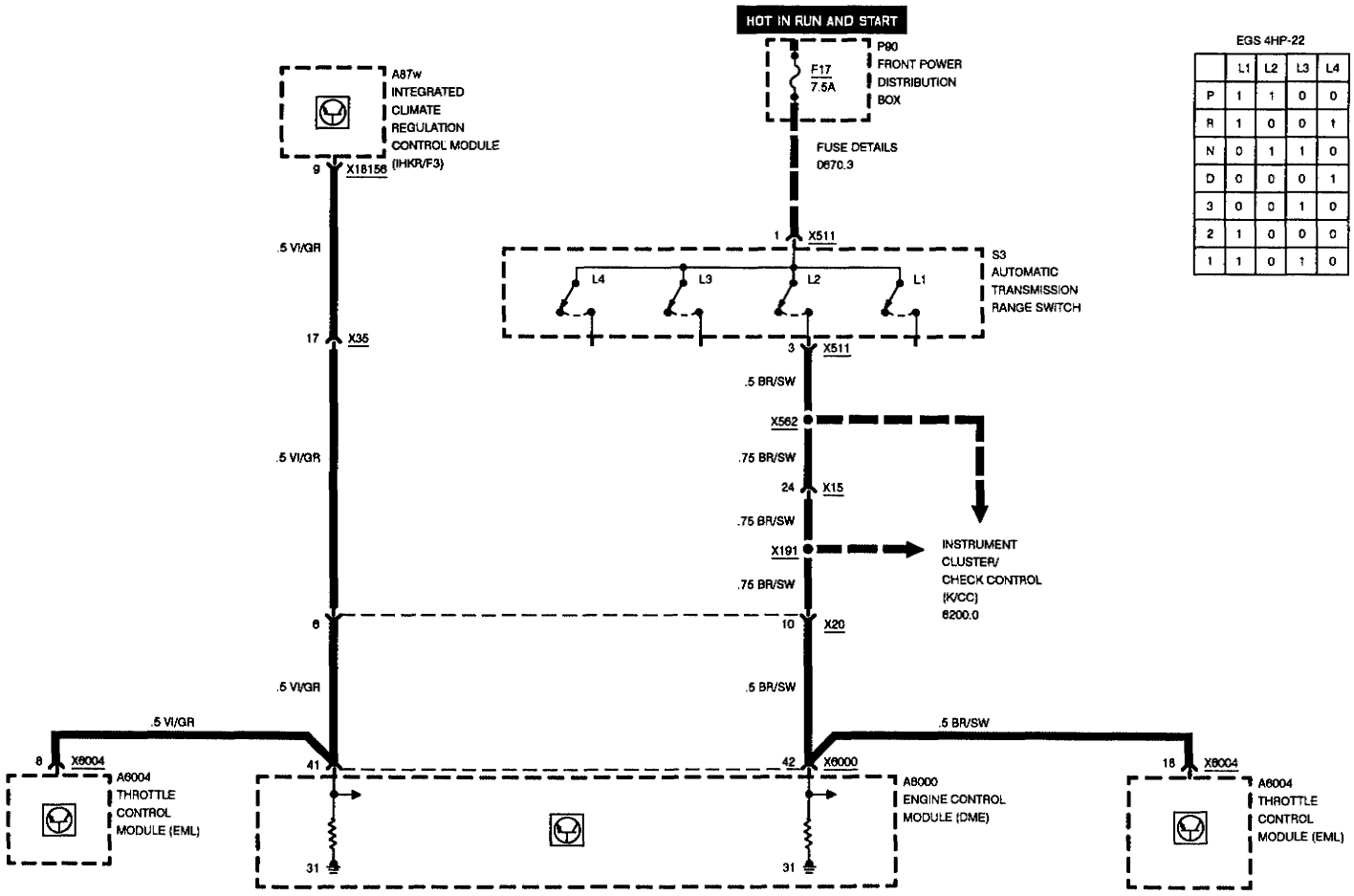
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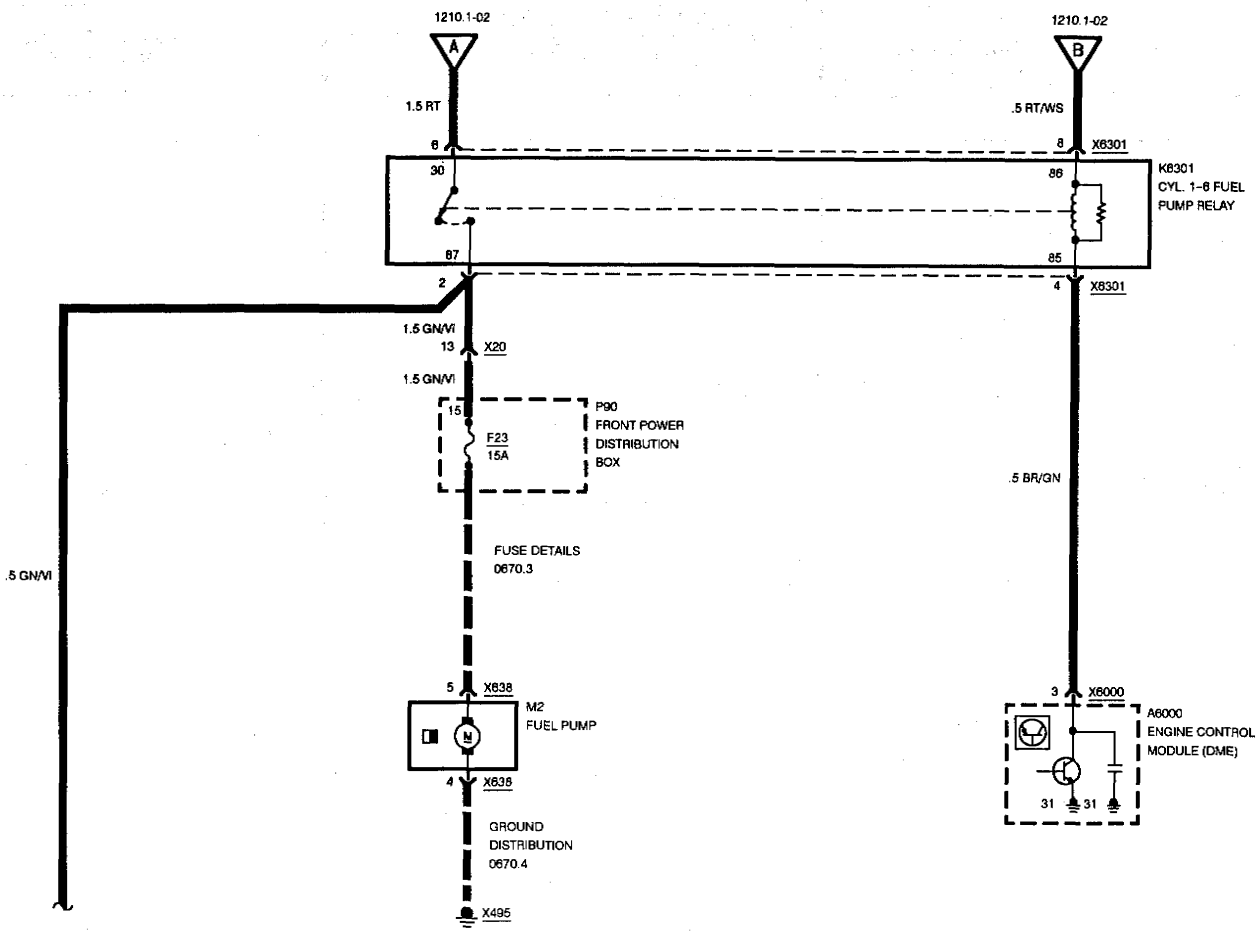



EGS 4HP-22

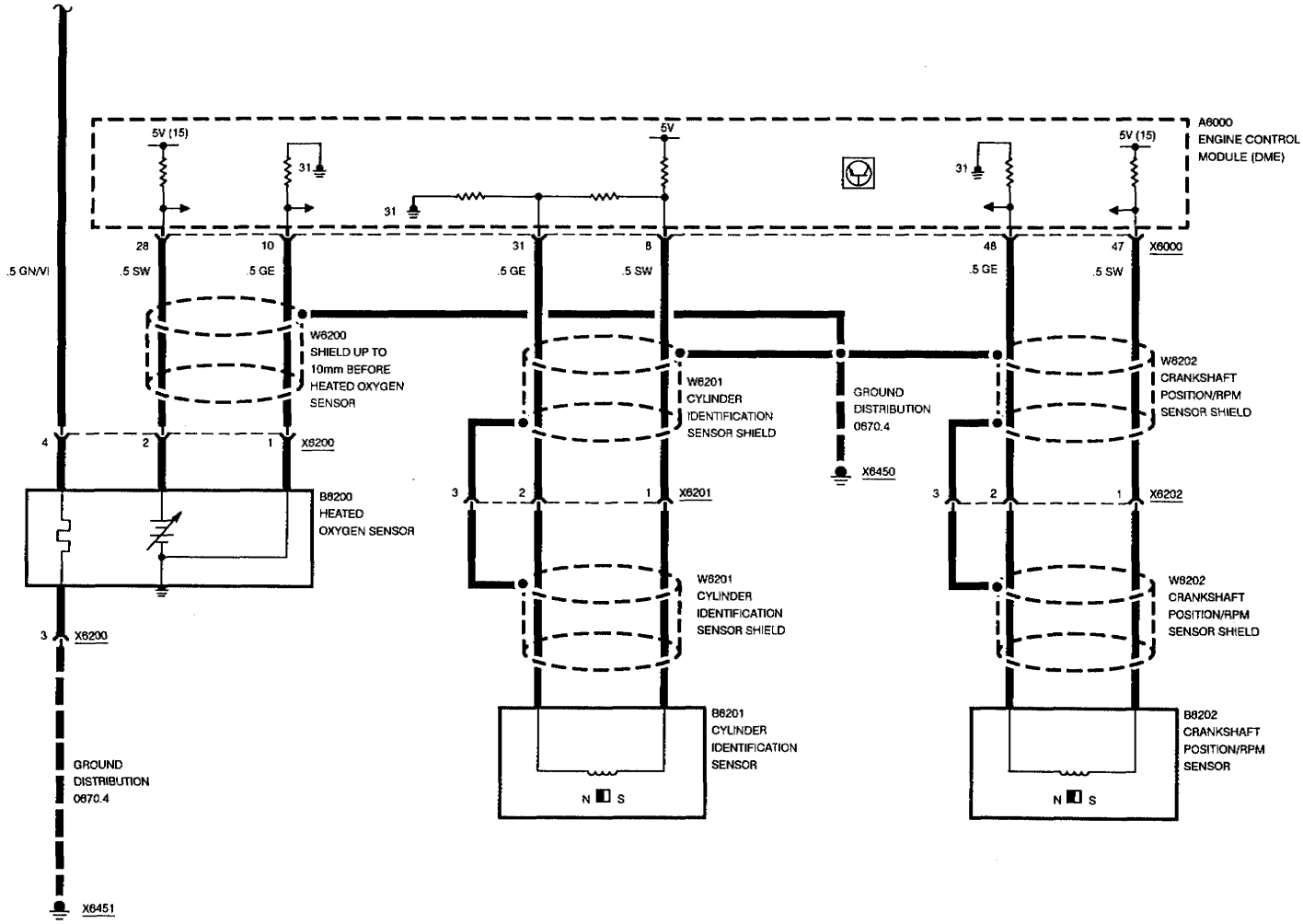
| | L1 | L2 | L3 | L4 |
|---|---|---|---|---|
| P | 1 | 1 | 0 | 0 |
| R | 1 | 0 | 0 | 1 |
| N | 0 | 1 | 1 | 0 |
| D | 0 | 0 | 0 | 1 |
| 3 | 0 | 0 | 1 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 1 | 1 | 0 | 1 | 0 |

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# ENGINE CONTROL SYSTEM (DME M1.3, 6-CYLINDER M30 WITH EML)



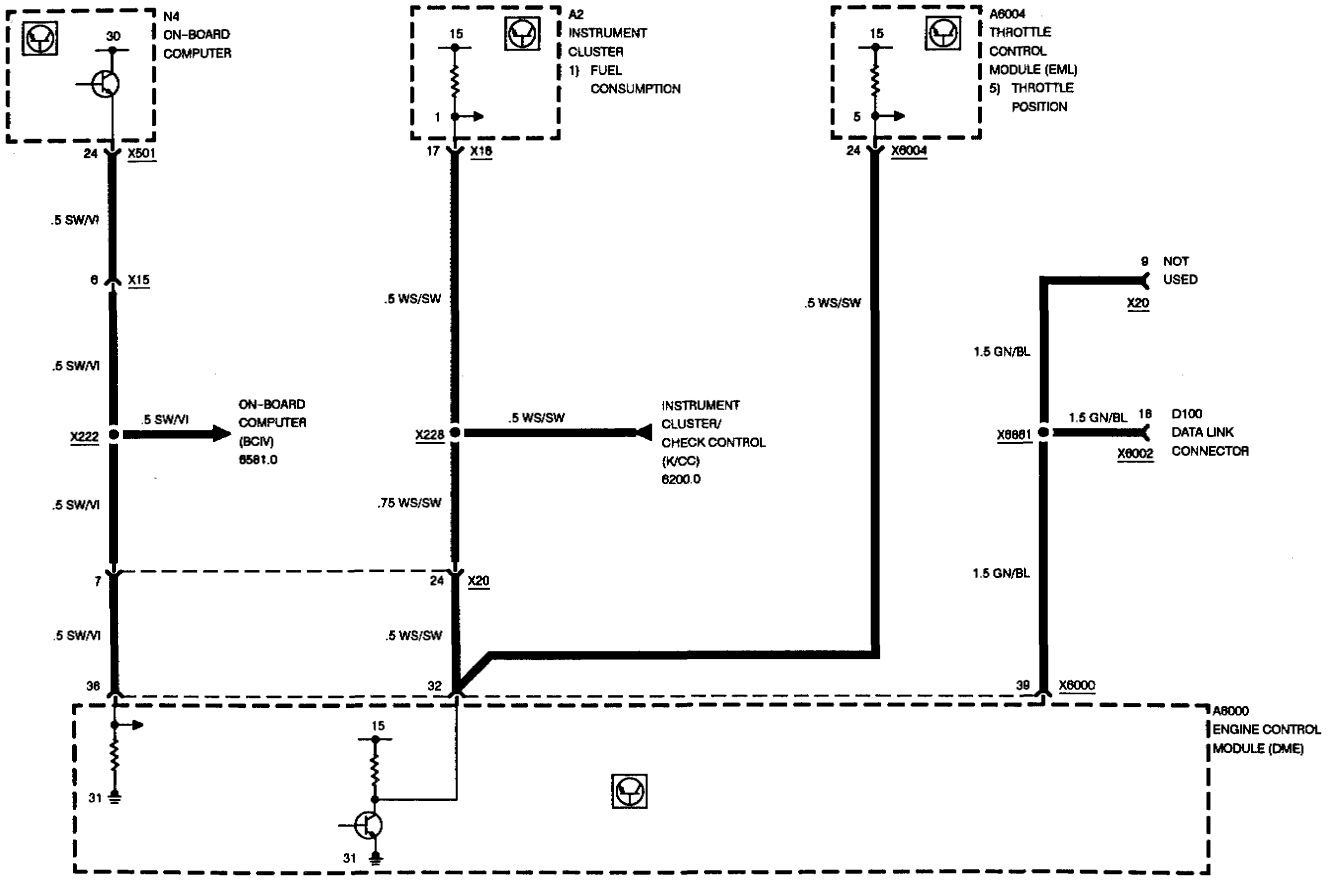

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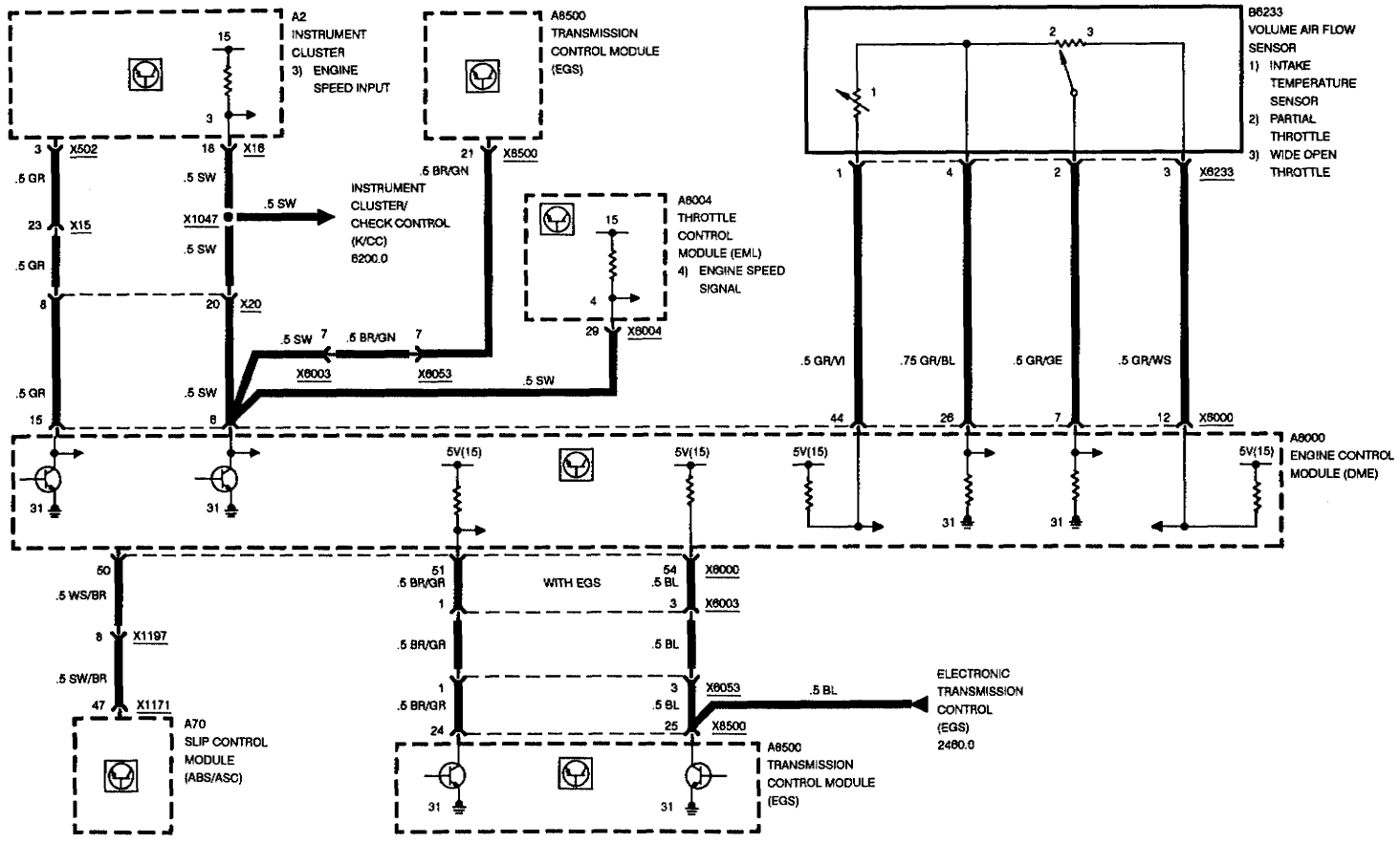
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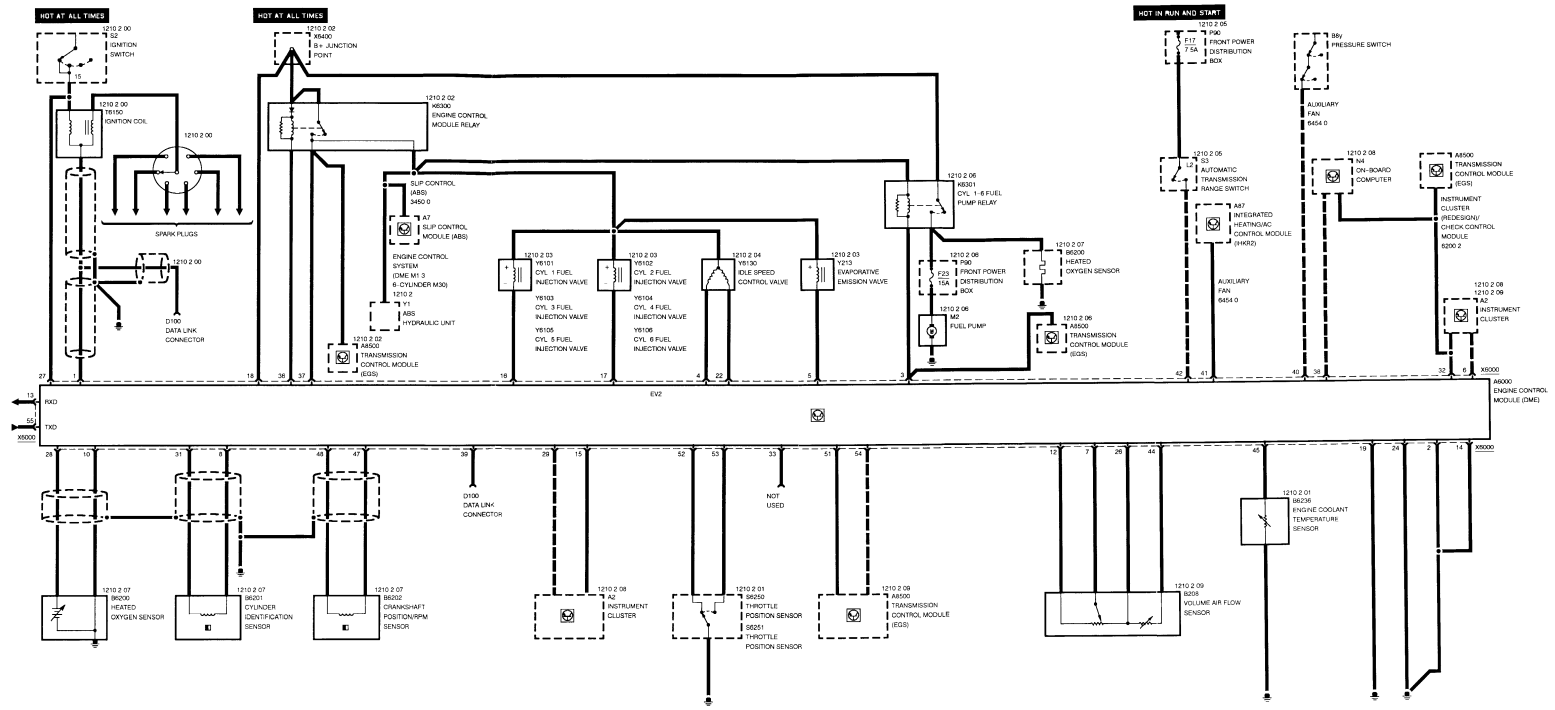





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## Pin Assignments

### X6000

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | A | Ignition terminal | Ignition coil | Primary signal | Oscilloscope | Engine test, test step 05 |
| 2 | M | Ground | Ground point | Ground | | |
| 3 | A | EKP relay and TR signal (crankshaft reference) | EKP relay and electronic transmission control unit | Ground with superimposed signal | ON | Can only be measered when crankshaft rotating |
| 4 | A | Idle speed actuator | Idle speed actuator | Pulsed ground | | Component activation |
| 5 | A | Evaporative valve | Evaporative valve | Pulsed ground | CLOSED/OPEN | Perform component activation, ground = > closed |
| 6 | A | Engine speed signal | Instrument cluster | Square wave signal | | One signal per ignition |
| 7 | E | Air flow meter signal | Air flow meter | 0...5 V | Load signal ms | See status monitoring |
| 8 | E | Cylinder identification sensor (ignition) | Cylinder identification sensor (connection B) | | ON/OFF | See status monitoring |
| 9 | | Not used | | | | |
| 10 | M | Ground oxygen sensor | Oxygen sensor | Ground | | |
| 11 | | Not used | | | | |
| 12 | A | Voltage supply, air flow meter | Air flow meter | - 5 V | | |
| 13 | E | RxD diagnostic data line | Diagnostic socket | > 10 V | | When cover of diagnostic connector closed |

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# DIGITAL ENGINE ELECTRONICS (DME M1.3, 6-CYLINDER M30)



| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 14 | M | Ground, injection valves | Ground point | Ground | | |
| 15 | A | Indicator "Check engine" | Instrument cluster | Ground | | Comes on if emission related error code is stored, and comes on during starting |
| 16 | A | Injection valves cyl. (1+3+5) | Injection valve | Pulsed ground | Injection time ti | Ground = > injector valves open, see component activation |
| 17 | A | Injection valves cyl. (2+4+6) | Injection valve | Pulsed ground | Injection time ti | Ground = > injector valves open, see component activation |
| 18 | E | Hot at all times | Terminal 30 | > 10 V | | |
| 19 | M | Ground for electronics and shielding the sensors | Ground point | Ground | | |
| 20 | | Not used | | | | |
| 21 | | Not used | | | | |
| 22 | A | Idle speed actuator | Idle speed actuator | Pulsed ground | | See component activation |
| 23 | | Not used | | | | |
| 24 | M | Ground, remaining output stages (except for ignition and injection valves) | Ground point | Ground | | |
| 25 | | Not used | | | | |
| 26 | M | Ground, air flow meter | Air flow meter | Ground | | |
| 27 | E | Ignition terminal 15 | Ignition switch | > 10 V | | |
| 28 | E | Oxygen sensor signal | Oxygen sensor | Pulsating voltage up to approx. 1 V | Voltage value | Can only be measured with the engine running at operating temperature |

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# DIGITAL ENGINE ELECTRONICS (DME M1.3, 6-CYLINDER M30)



| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 29 | E | Vehicle speed sensor | Instrument cluster | Square wave signal | km/h | |
| 30 | | Not used | | | | |
| 31 | E | Cylinder identification sensor (ignition) | Cylinder identification sensor (connection A) | | ON/OFF | See status monitoring |
| 32 | A | tI Measuring signal (KVA signal) | Instrument cluster | Square wave signal | Multimeter function pulse duration | |
| 33 | | Not used | | | | |
| 34 | | Not used | | | | |
| 35 | | Not used | | | | |
| 36 | A | DME main relay | DME main relay terminal 85 | Ground | ON | Diagnosis not possible if not fitted, connect jumper at relay terminal 30 and 87 |
| 37 | E | U-Batt from DME main relay | Main relay terminal 87 | U-Batt | Voltage value | Perform status monitoring. Diagnosis not possible if signal not applied. Connect jumper terminal 30 and 87 on relay |
| 38 | E | Drive away protection | On-board computer | > 10 V | | |
| 39 | E | Programming voltage | Diagnostic connector | | | Only activated for control unit programming |
| 40 | E | A/C compressor signal | Pressure switch, compressor relay | | ON/OFF | |
| 41 | E | Auxiliary fan signal | IHKR control unit | 12 V | ON/OFF | |
| 42 | E | Drive range P/N | Transmission selector lever switch | Ground | ON | When position P/N |
| 43 | | Not used | | | | |

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# DIGITAL ENGINE ELECTRONICS (DME M1.3, 6-CYLINDER M30)



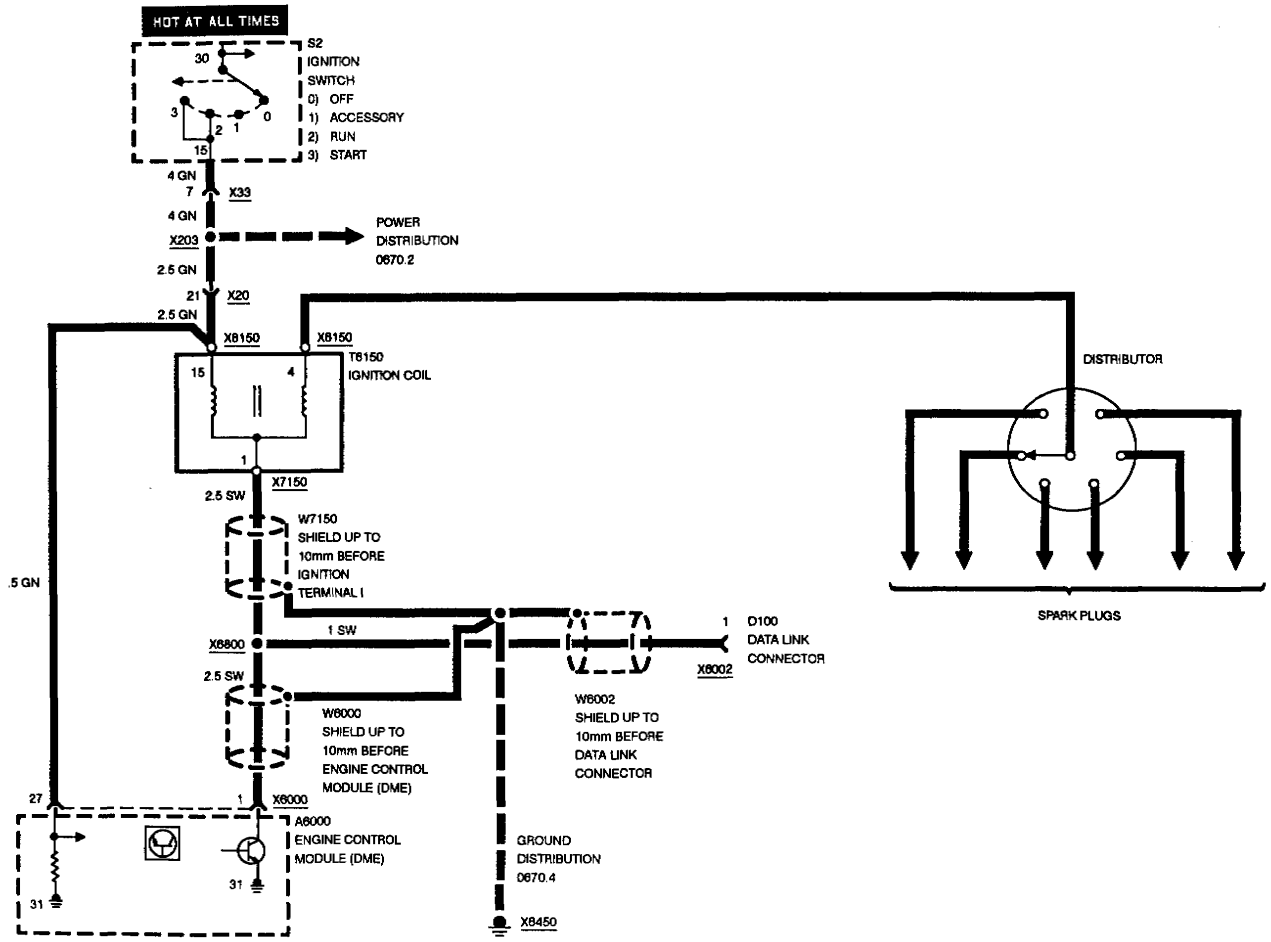
| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 44 | E | Intake air temperature | Air flow meter | 0...5 V | °C | Temperature dependent |
| 45 | E | Engine coolant temperature | Engine coolant temperature sensor | 0...5 V | °C | Temperature dependent |
| 46 | | Not used | | | | |
| 47 | E | Inductive pulse generator (connection A) | Pulse generator engine speed, crankshaft position | A/C voltage | Engine speed | Between Pins 47 and 48 (can only be measured with crankshaft rotation) |
| 48 | E | Inductive pulse generator (connection A) | Pulse generator engine speed, crankshaft position | A/C voltage | Engine speed | Status monitoring at or above starting rpm |
| 49 | | Not used | | | | |
| 50 | | Not used | | | | |
| 51 | E | Ignition timing intervention | Electronic transmission control unit (EGS) | Ground | ON | Only active during gear shift |
| 52 | E | Idle signal | Throttle switch | Ground | ON | See status monitoring on set idle speed |
| 53 | E | Full load signal VL | Throttle switch | Ground | ON | At full load (kick-down) |
| 54 | E | Torque converter clutch WK | Electronic transmission control unit (EGS) | Ground | ON (with engine running) | When WK engaged, see status monitoring |
| 55 | E/A | TxD diagnostic data line | Diagnostic socket | Ground | | When cover of diagnostic connector closed |

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# ENGINE CONTROL SYSTEM (DME M1.3, 6-CYLINDER M30)

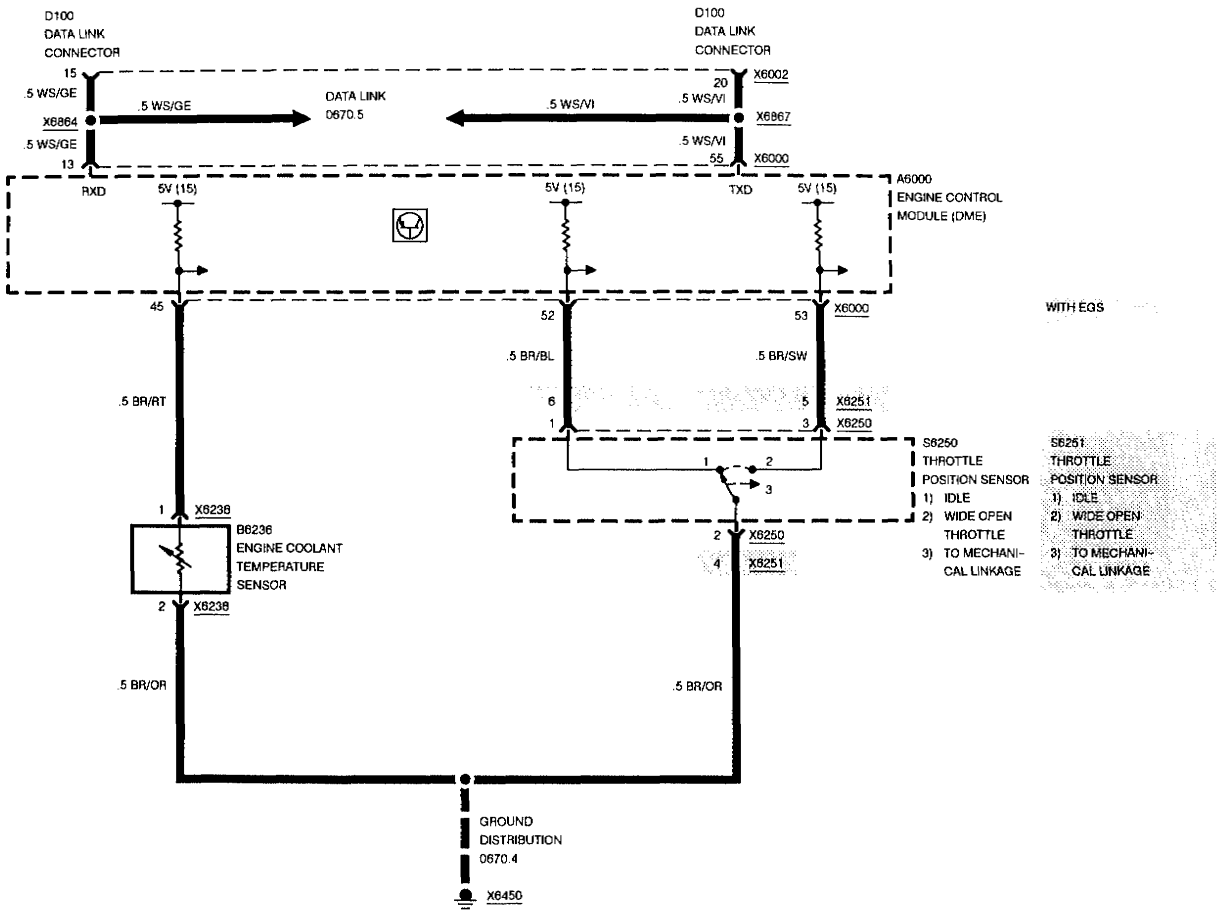





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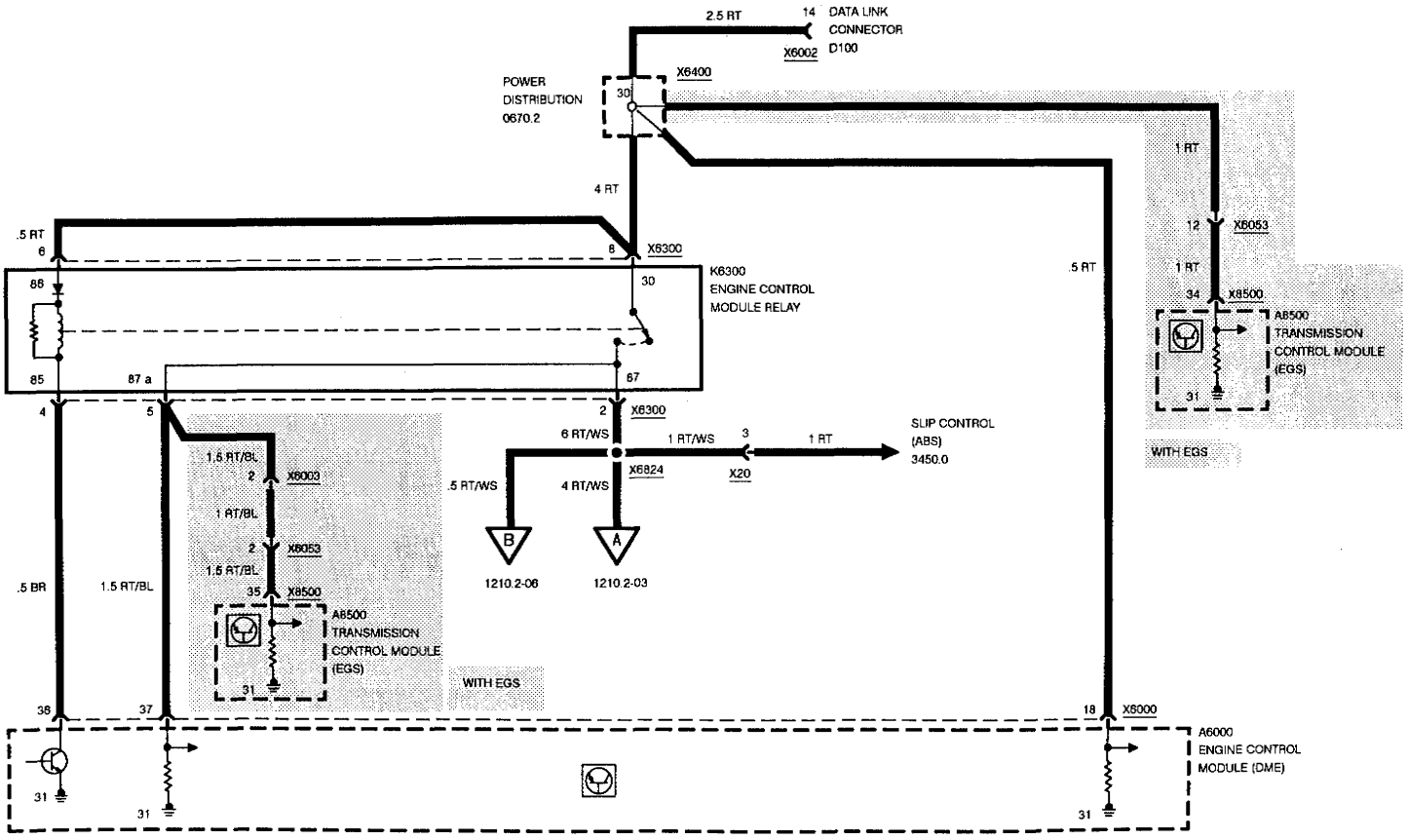
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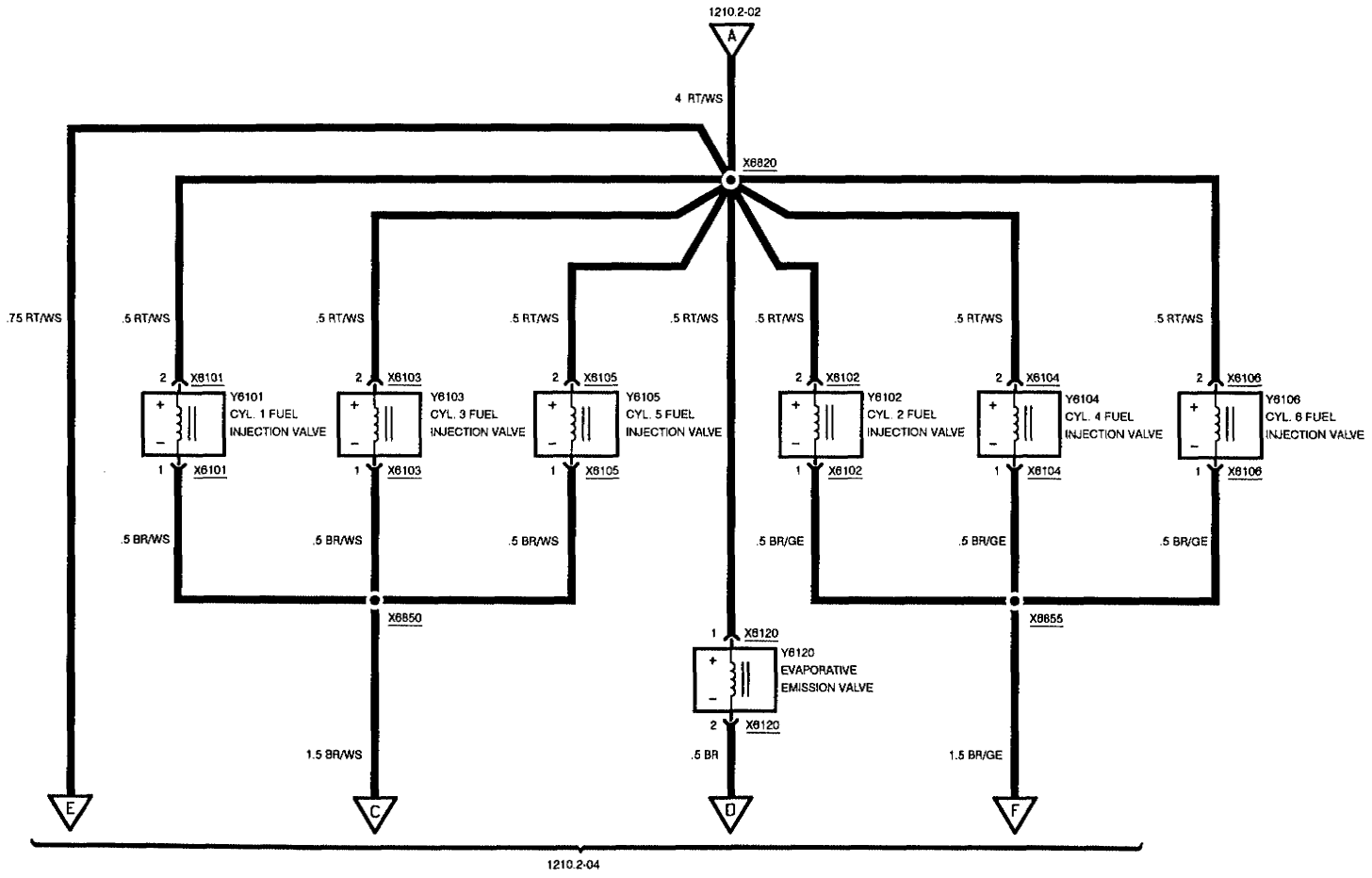





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# ENGINE CONTROL SYSTEM (DME M1.3, 6-CYLINDER M30)

## FUEL INJECTION VALVES

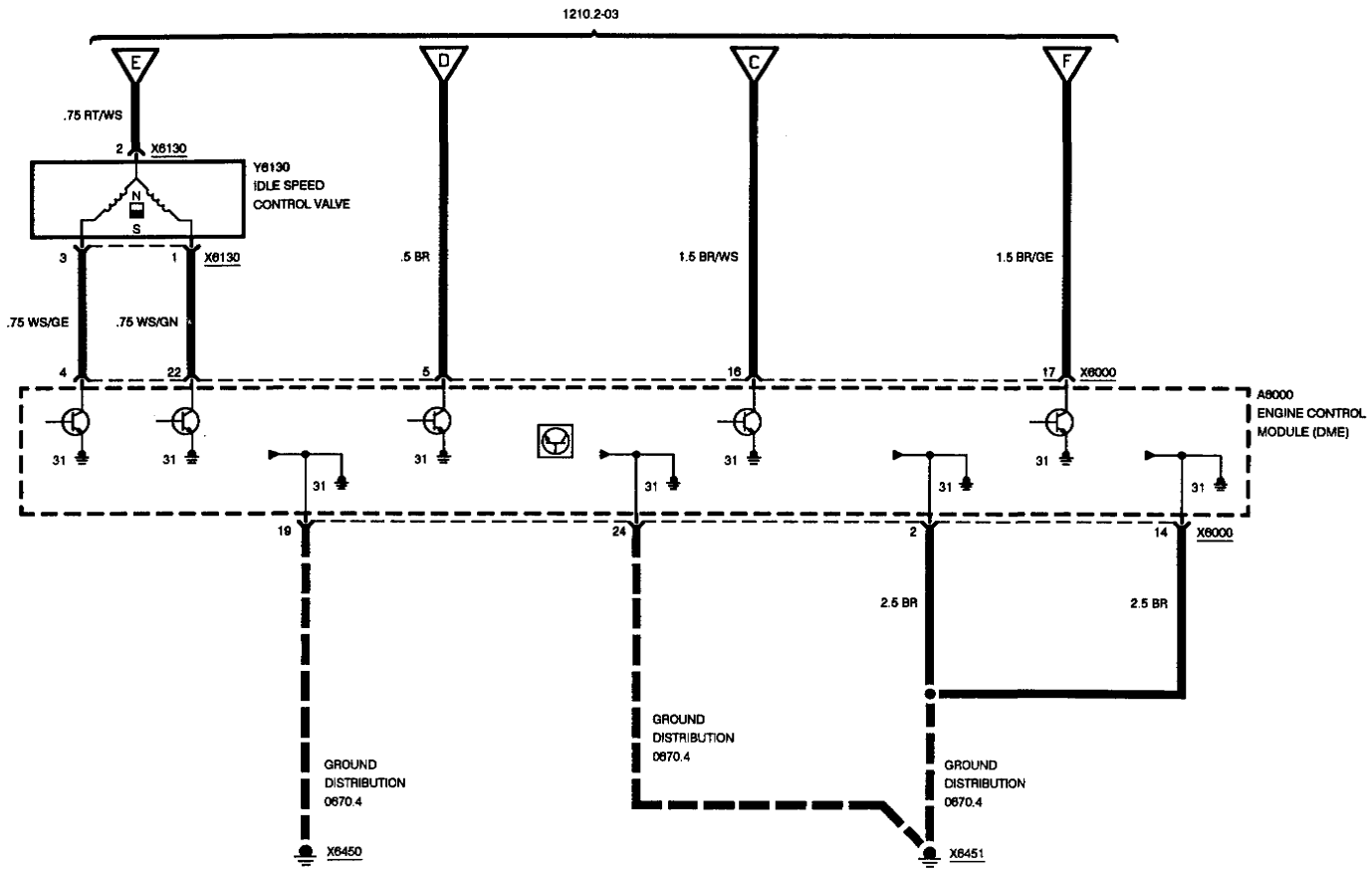




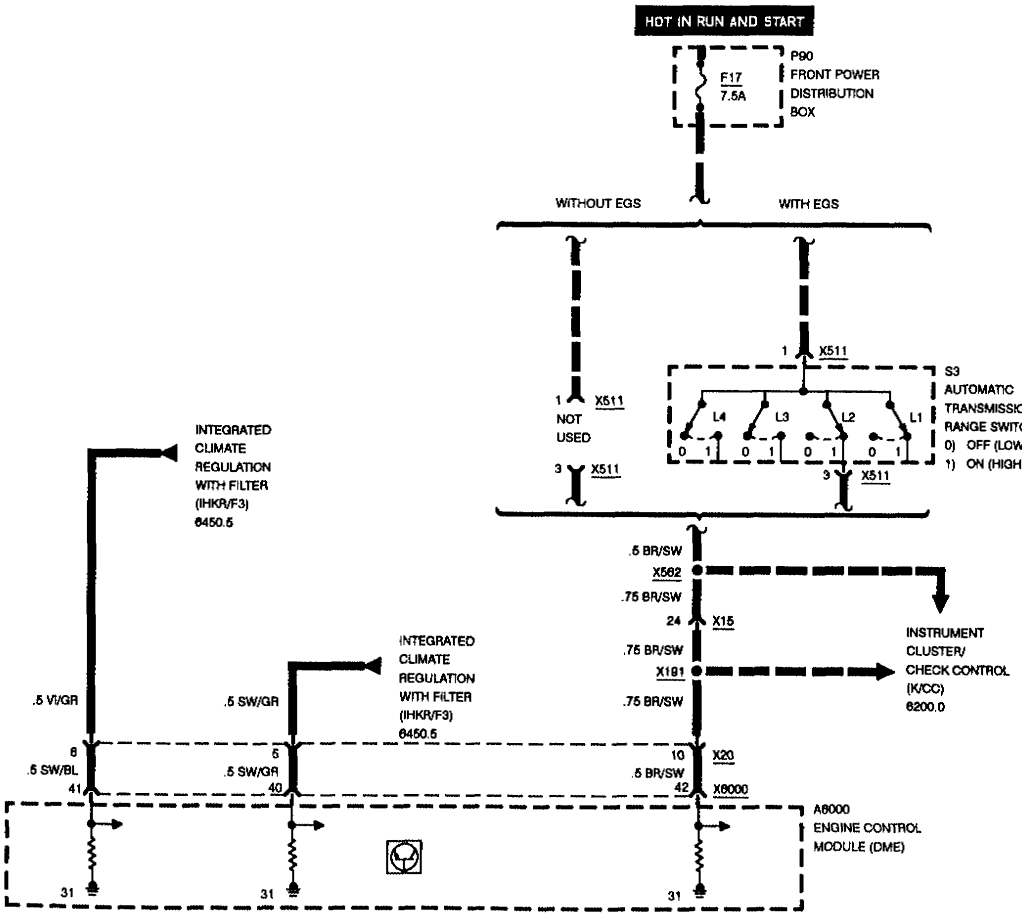

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# ENGINE CONTROL SYSTEM (DME M1.3, 6-CYLINDER M30)






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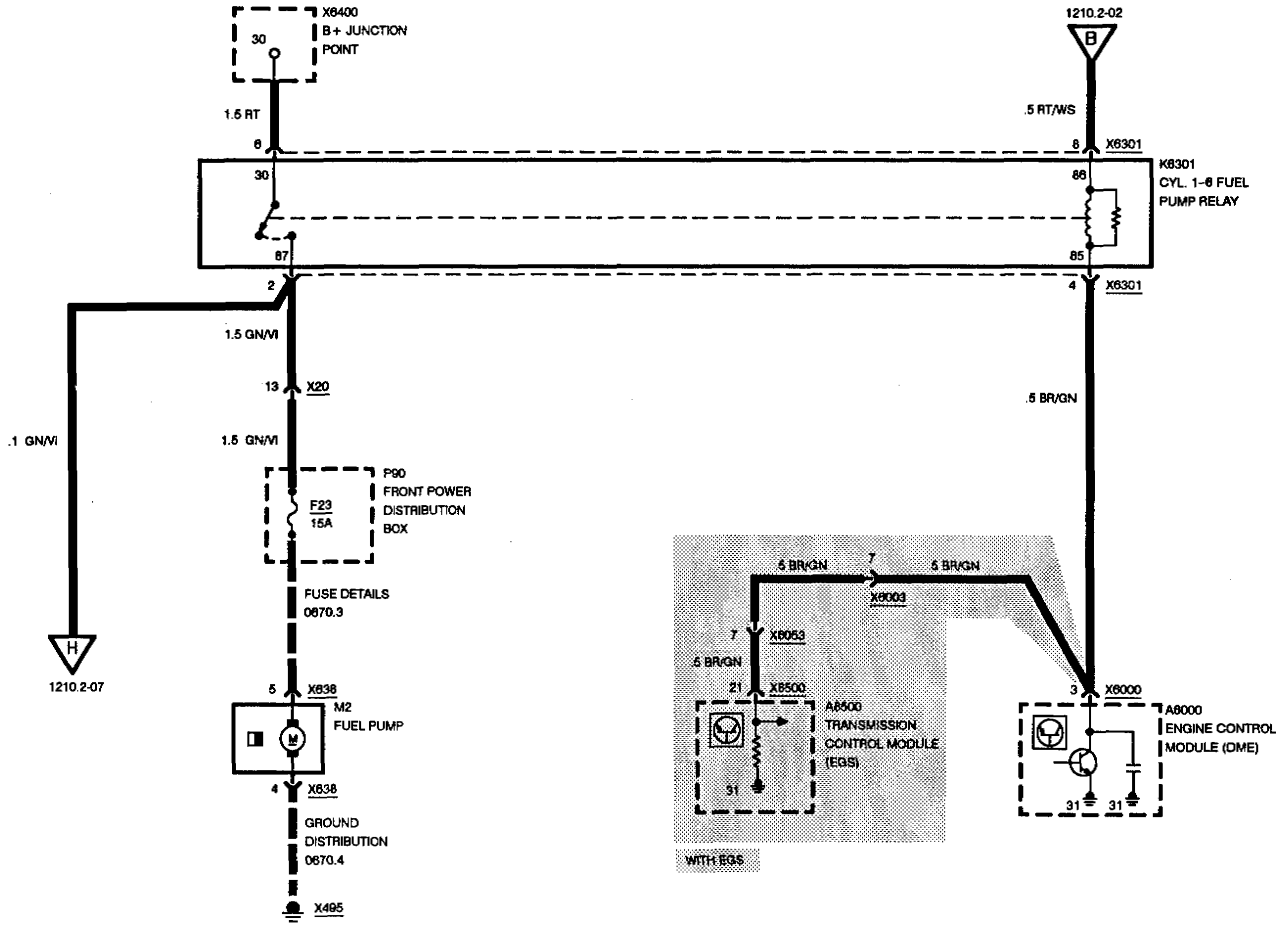

EGS 4HP 22

| | L1 | L2 | L3 | L4 |
|---|---|---|---|---|
| P | 1 | 1 | 0 | 0 |
| R | 1 | 0 | 0 | 1 |
| N | 0 | 1 | 1 | 0 |
| D | 0 | 0 | 0 | 1 |
| 3 | 0 | 0 | 1 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 1 | 1 | 0 | 1 | 0 |

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# ENGINE CONTROL SYSTEM (DME M1.3, 6-CYLINDER M30)

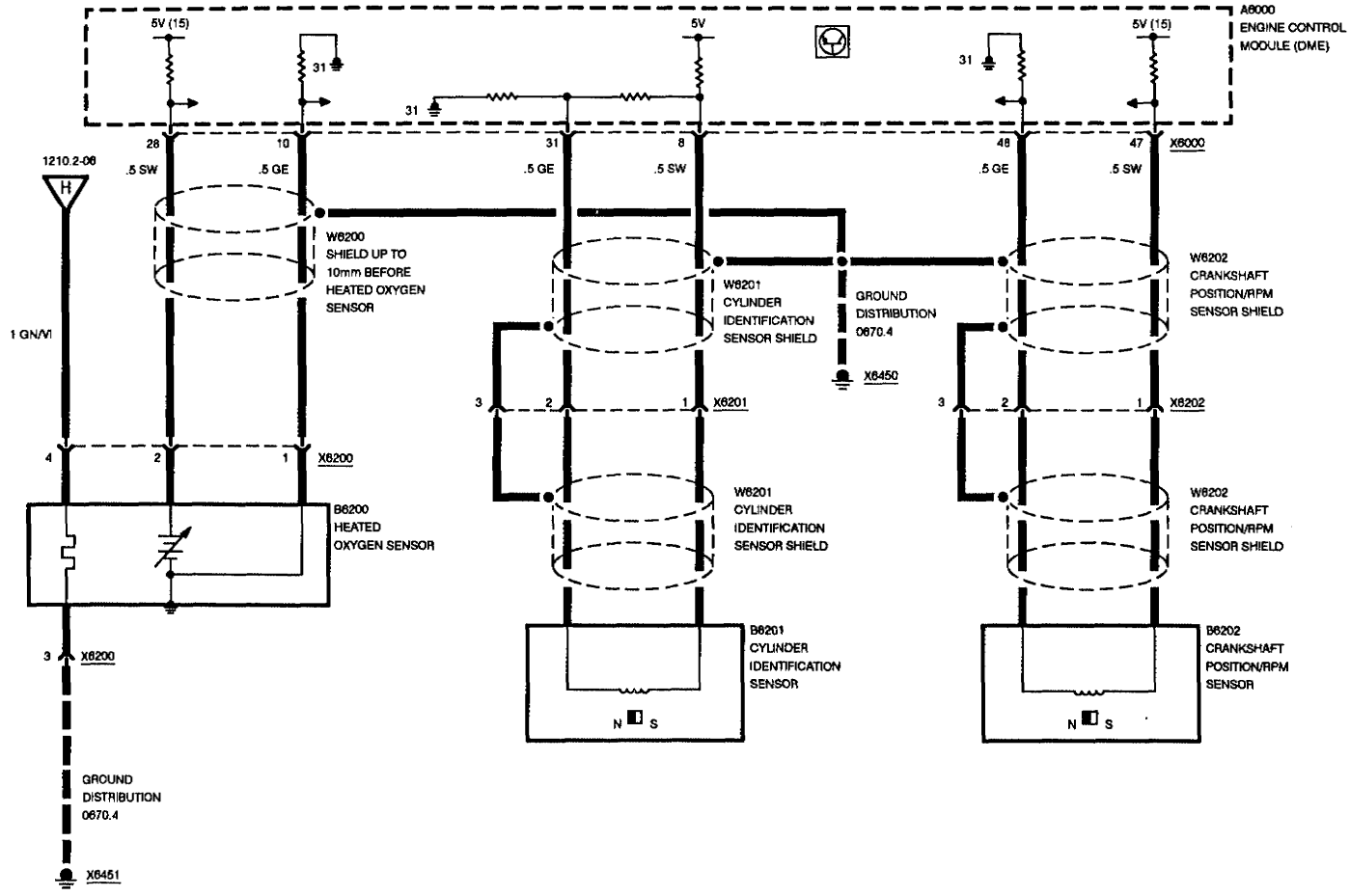





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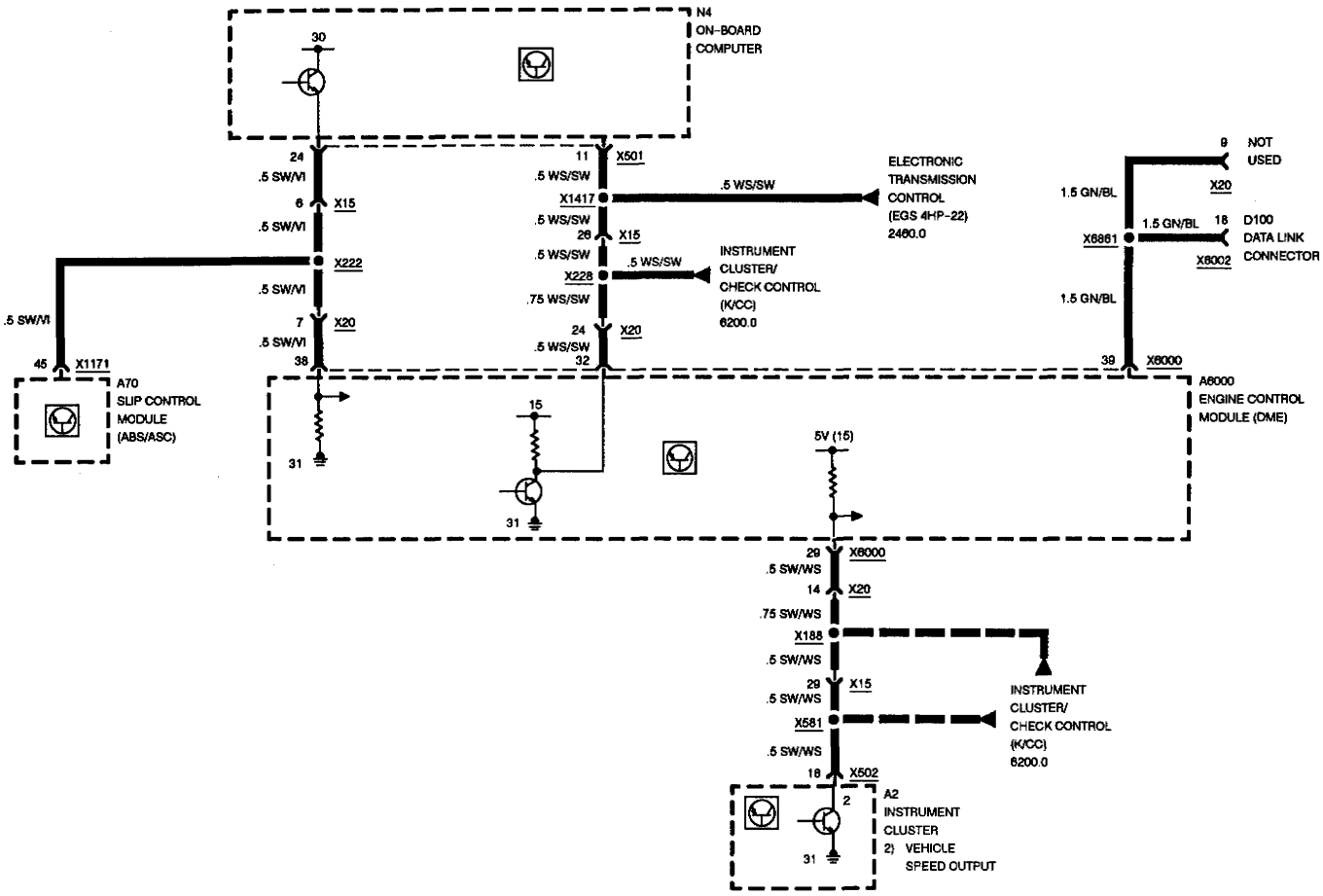
# ENGINE CONTROL SYSTEM (DME M1.3, 6-CYLINDER M30)





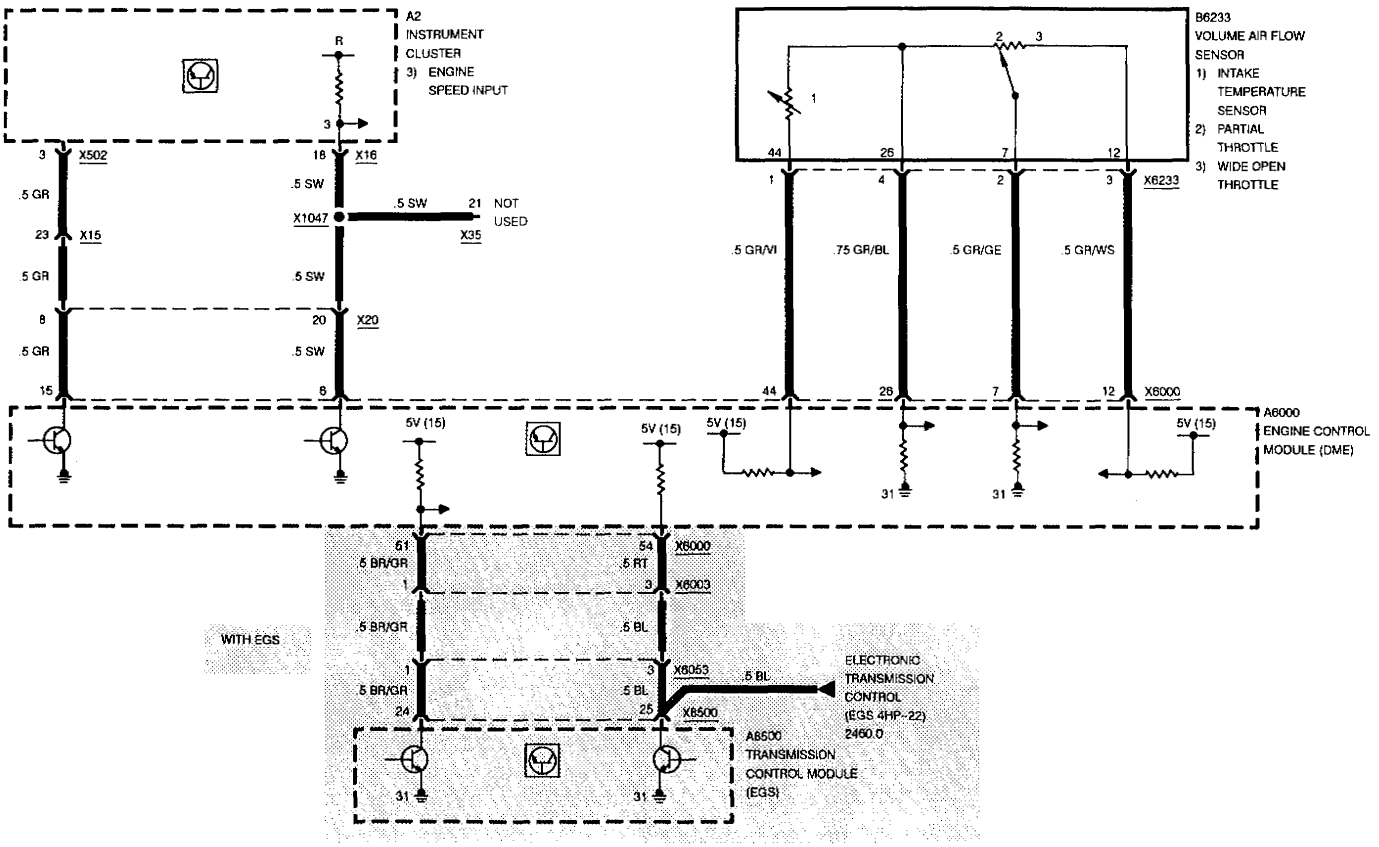

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# ENGINE CONTROL SYSTEM (DME M1.3, 6-CYLINDER M30)




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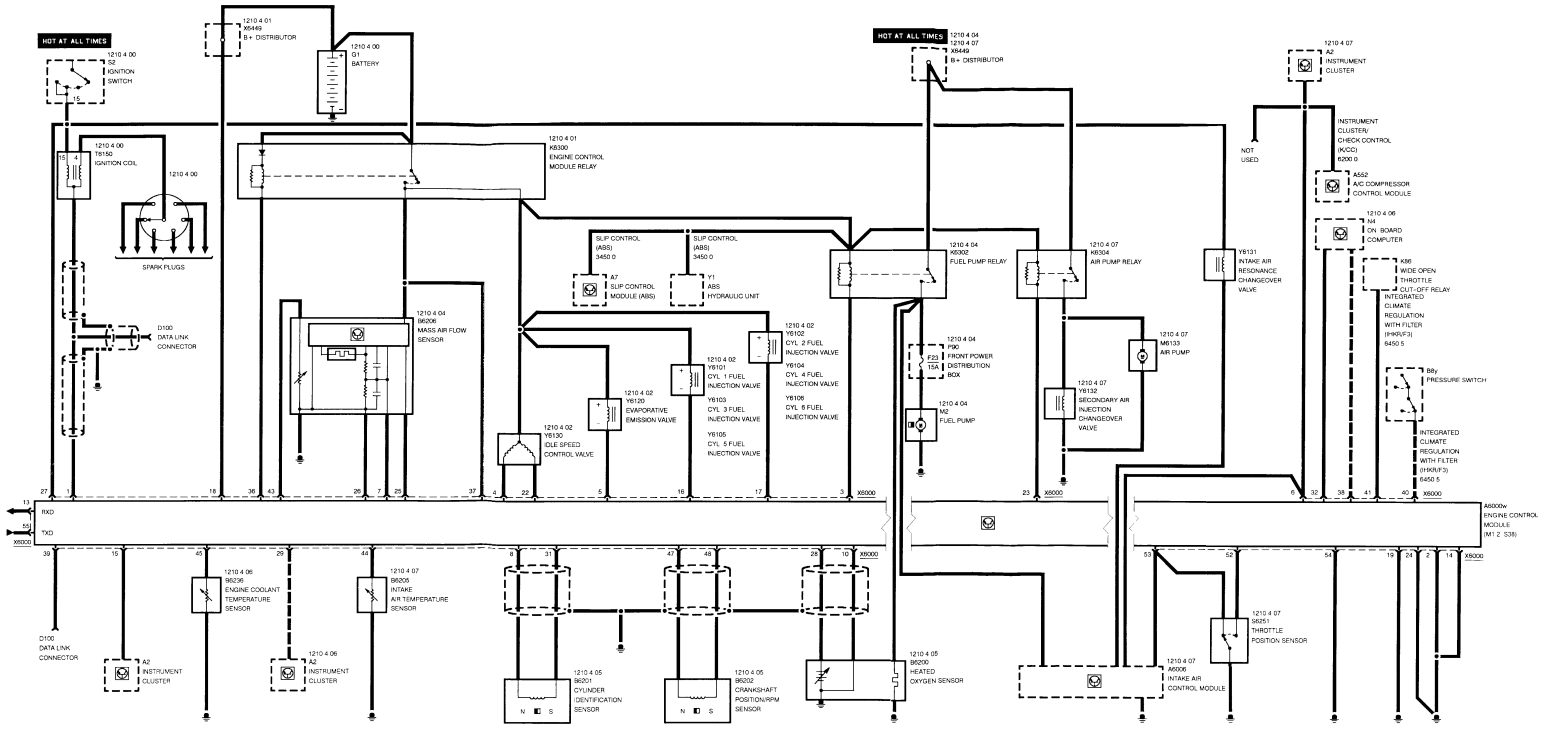
# ENGINE CONTROL SYSTEM (DME M1.3, 6-CYLINDER M30)



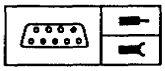

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## Pin Assignments

### X6000

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | A | Ignition terminal | Ignition coil | Primary signal | Oscilloscope | Engine test, test step 05 |
| 2 | M | Ground | Ground point | Ground | | |
| 3 | A | EKP relay and TR signal (crankshaft reference) | EKP relay and electronic transmission control unit | Ground with superimposed signal | ON | Can only be measured when crankshaft rotating |
| 4 | A | Idle speed actuator | Idle speed actuator | Pulsed ground | | Component activation |
| 5 | A | Evaporative valve | Evaporative valve | Pulsed ground | CLOSED/OPEN | Perform component activation, ground = > closed |
| 6 | A | Engine speed signal | Instrument cluster | Square wave signal | | One signal per ignition |
| 7 | E | Air flow meter signal | Air mass meter | 0...5 V | Load signal ms | See status monitoring |
| 8 | E | Cylinder identification sensor (ignition) | Cylinder identification sensor (connection B) | | ON/OFF | See status monitoring |
| 9 | | Not used | | | | |
| 10 | M | Ground, oxygen sensor | Oxygen sensor | Ground | | |
| 11 | | Not used | | | | |
| 12 | | Not used | | | | |
| 13 | E | RxD diagnostic data line | Diagnostic socket | > 10 V | | When cover of diagnostic connector closed |

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# DIGITAL ENGINE ELECTRONICS (DME 1.2, 6-CYLINDER S38)



| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 14 | M | Ground, injection valves | Ground point | Ground | | |
| 15 | A | Indicator "Check engine" | Instrument cluster | Ground | | Comes on if emission related error code is stored, and comes on during starting |
| 16 | A | Injection valves cyl. (1+3+5) | Injection valve | Pulsed ground | Injection time ti | Ground = > injector valves open, see component activation |
| 17 | A | Injection valves cyl. (2+4+6) | Injection valve | Pulsed ground | Injection time ti | Ground = > injector valves open, see component activation |
| 18 | E | Hot at all times | Terminal 30 | > 10 V | | |
| 19 | M | Ground for electronics and sensor shields | Ground point | Ground | | |
| 20 | | Not used | | | | |
| 21 | | Not used | | | | |
| 22 | A | Idle speed actuator | Idle speed actuator | Pulsed ground | | See component activation |
| 23 | A | Air pump relay signal | Air pump relay | Ground | | Ground = > Air pump on |
| 24 | M | Ground remaining output stages (except for ignition and injection valves) | Ground point | Ground | | |
| 25 | A | Preheating | Air mass meter | Voltage plus for - 0,5 second | | Signal stops 4 seconds after engine stops |
| 26 | M | Ground air flow meter | Air mass meter | Ground | | |
| 27 | E | Ignition terminal 15 | Ignition switch | > 10 V | | |





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# DIGITAL ENGINE ELECTRONICS (DME 1.2, 6-CYLINDER S38)



| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 28 | E | Oxygen sensor signal | Oxygen sensor | Pulsating voltage up to approx. 1 V | Voltage value | Can only be measured with the engine running at operating temperature |
| 29 | E | Vehicle speed sensor | Instrument cluster | Square wave signal | km/h | |
| 30 | | Not used | | | | |
| 31 | E | Cylinder identification sensor (ignition) | Cylinder identification sensor (connection A) | | ON/OFF | See status monitoring |
| 32 | A | ti Measuring signal (KVA signal) | Instrument cluster | Square wave signal | Multimeter function pulse duration | Oscilloscope |
| 33 | | Not used | | | | |
| 34 | | Not used | | | | |
| 35 | | Not used | | | | |
| 36 | A | DME main relay | DME main relay terminal 85 | Ground | ON | Diagnosis not possible if not fitted, connect jumper at relay terminal 30 and 87 |
| 37 | E | U-Batt from DME main relay | Main relay terminal 87 | U-Batt | Voltage value | Perform status monitoring. Diagnosis not possible if signal not applied. Connect jumper terminal 30 and 87 on relay |
| 38 | E | Drive away protection | On-board computer | > 10 V | | |
| 39 | E | Programming voltage | Diagnostic connector | | | Only activated for control unit programming |
| 40 | E | A/C compressor signal | Pressure switch, compressor relay | | ON/OFF | |
| 41 | E | Auxiliary fan signal | Full load cutoff relay | 12 V | ON/OFF | |

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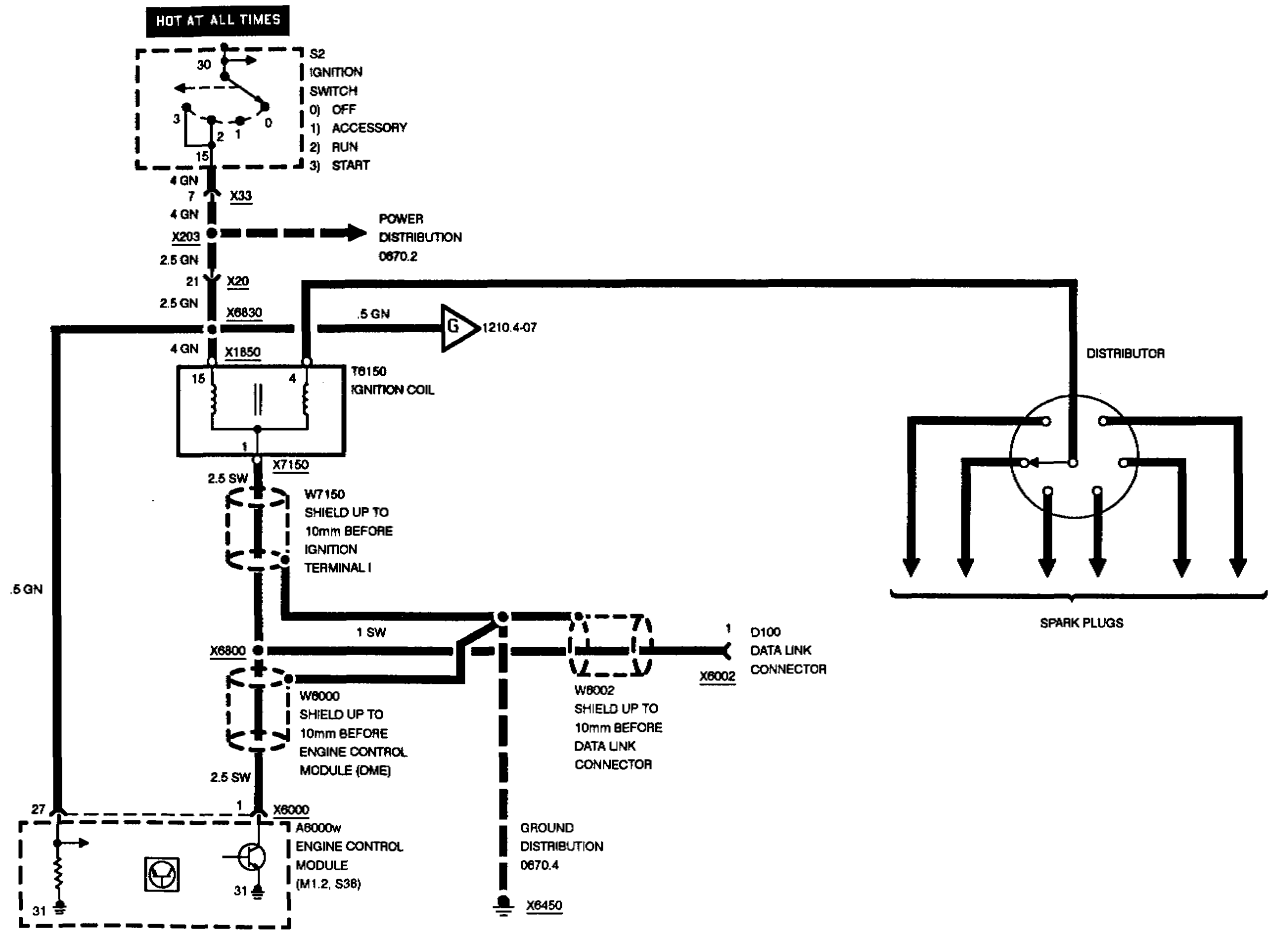
# DIGITAL ENGINE ELECTRONICS (DME 1.2, 6-CYLINDER S38)



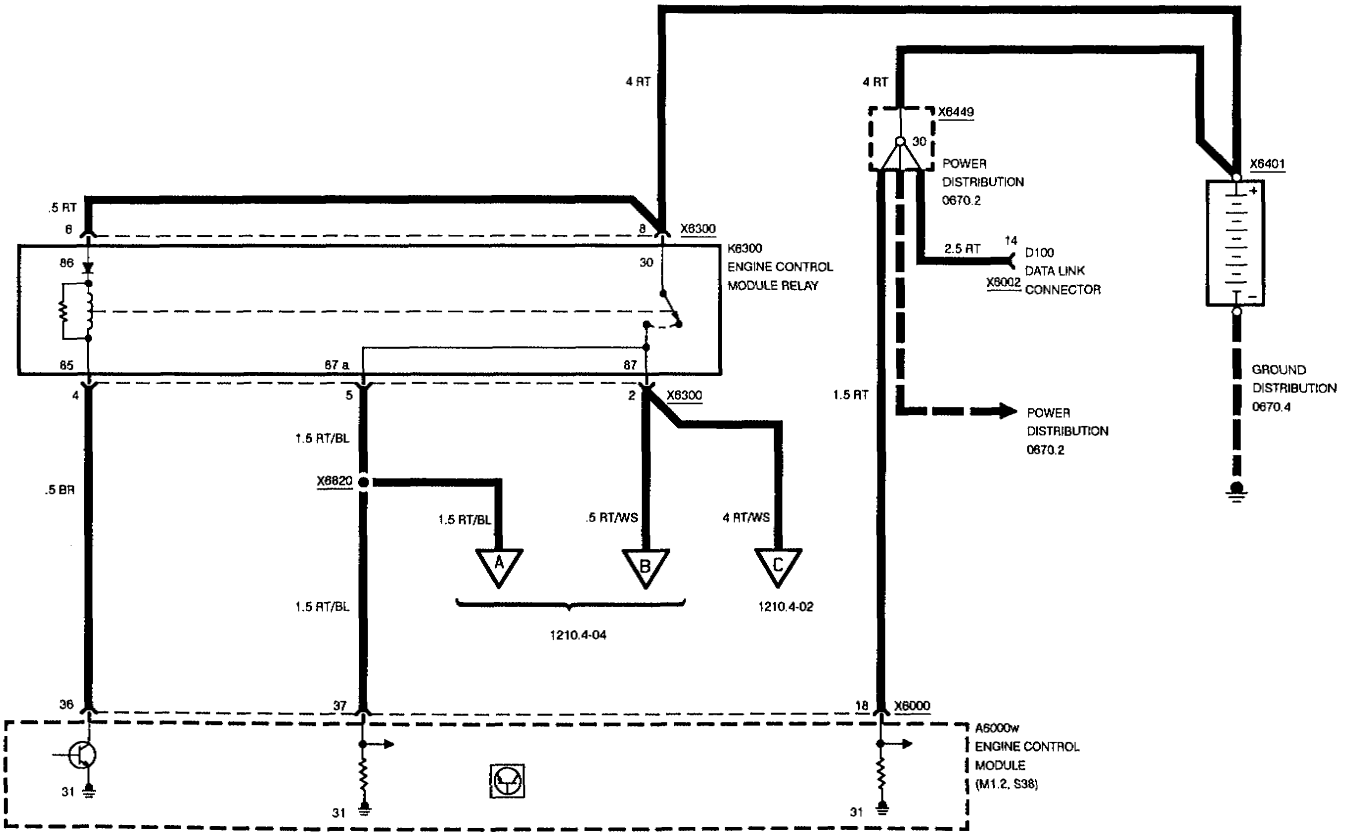
| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 42 | | Not used | | | | |
| 43 | E | Idle CO potentiometer | Air mass meter | 0...5 V | Voltage value | |
| 44 | E | Intake air temperature | Intake air temperature sensor | 0...5 V | °C | Temperature dependent |
| 45 | E | Coolant temperature | Coolant temperature sensor | 0...5 V | °C | Temperature dependent |
| 46 | | Not used | | | | |
| 47 | E | Inductive pulse generator (connection A) | Pulse generator, engine speed/crankshaft position | A/C voltage | Engine speed | Between Pins 47 and 48 (can only be measured with crankshaft rotation) |
| 48 | E | Inductive pulse generator (connection B) | Pulse generator, engine speed/crankshaft position | A/C voltage | Engine speed | Status monitoring at or above starting rpm |
| 49 | | Not used | | | | |
| 50 | | Not used | | | | |
| 51 | | Not used | | | | |
| 52 | E | Idle signal | Throttle switch | Ground | ON | See status monitoring on set idle speed |
| 53 | E | Full load signal VL | Throttle switch | Ground | ON | At full load (kick-down) |
| 54 | E | Coding signal | Fuel coding connector | Ground | | |
| 55 | E/A | TxD diagnostic data line | Diagnostic socket | Ground | | When cover of diagnostic connector closed |

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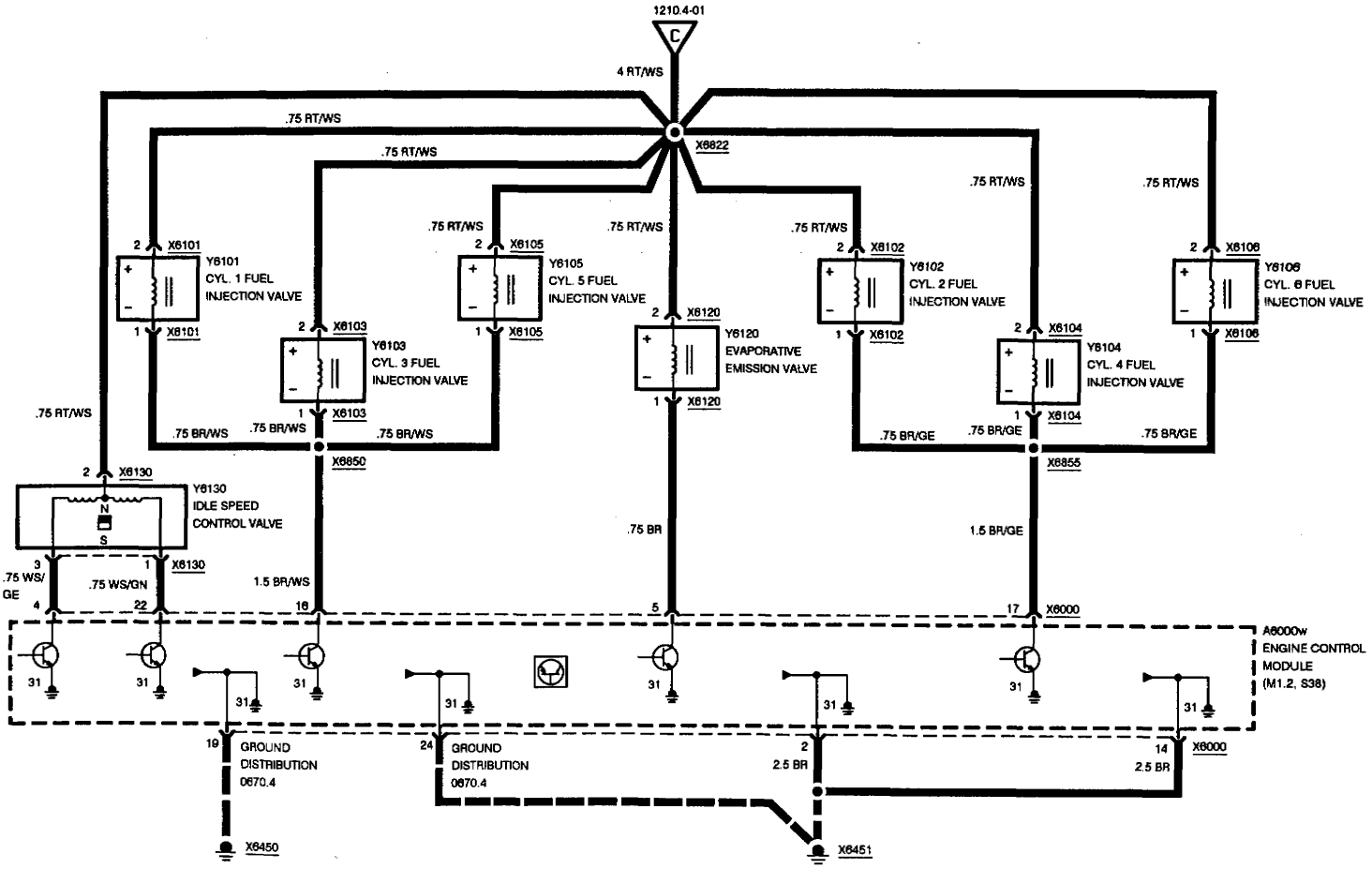
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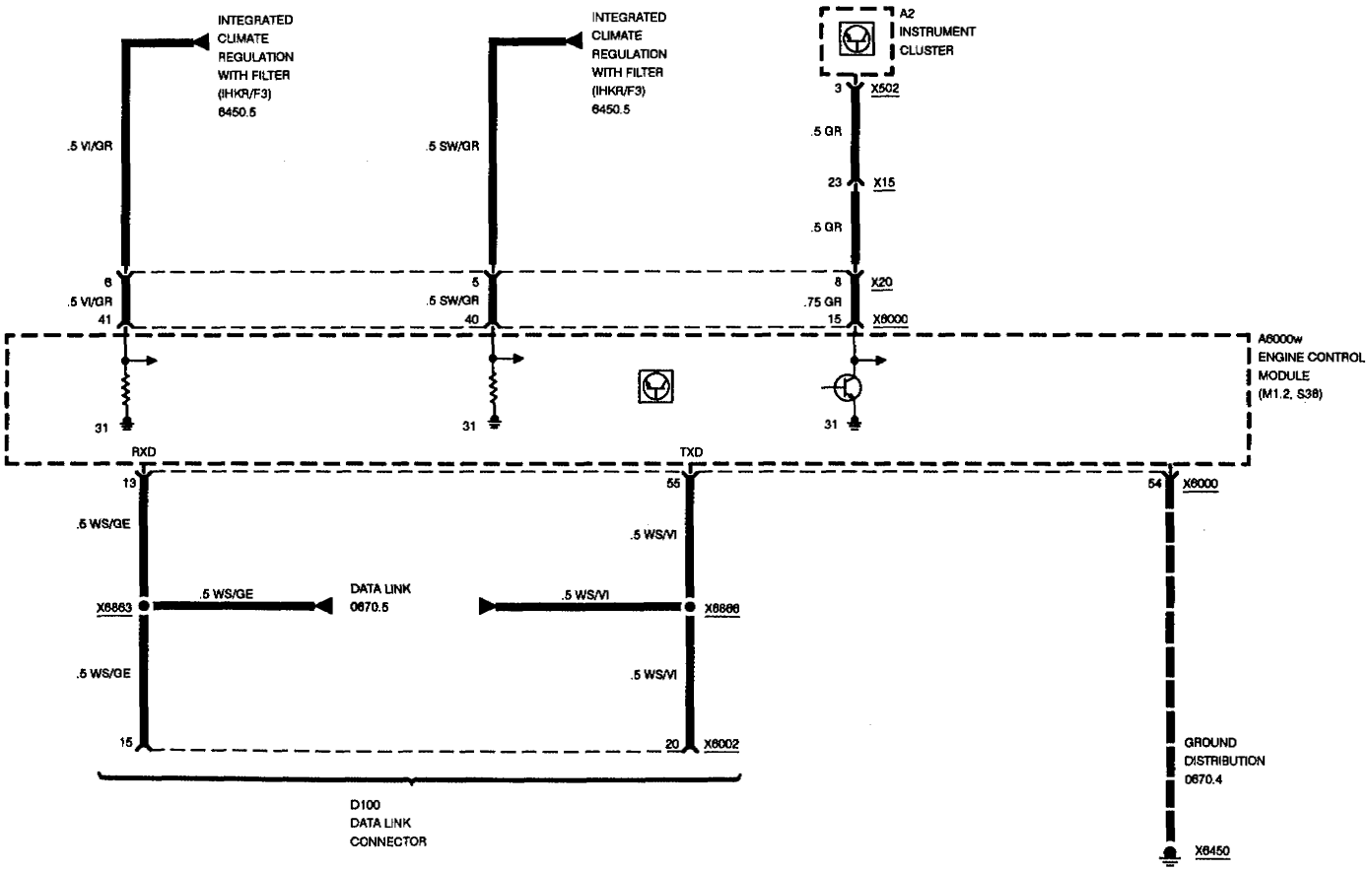

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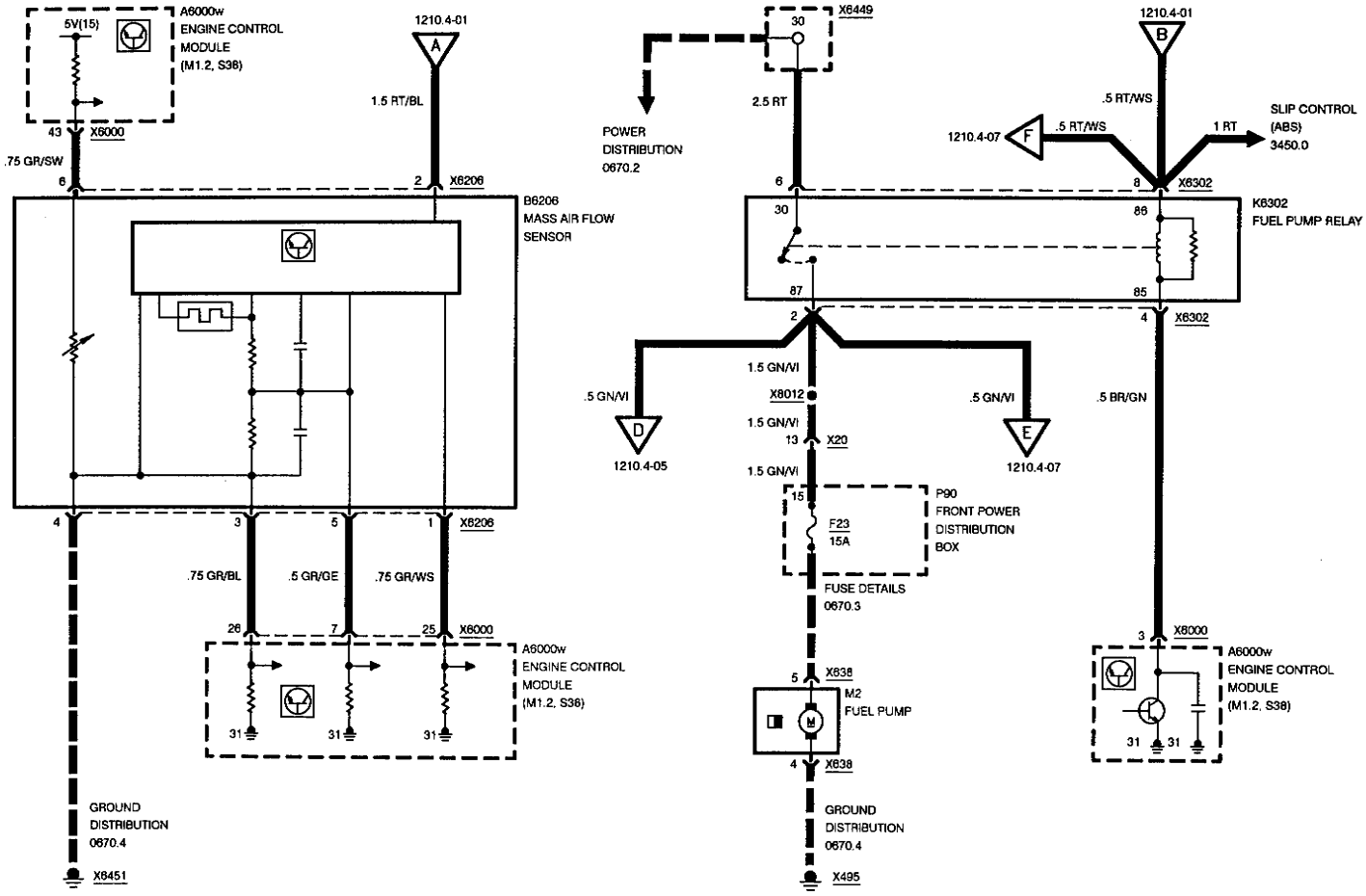



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# ENGINE CONTROL SYSTEM (DME M1.2, 6-CYLINDER S38)



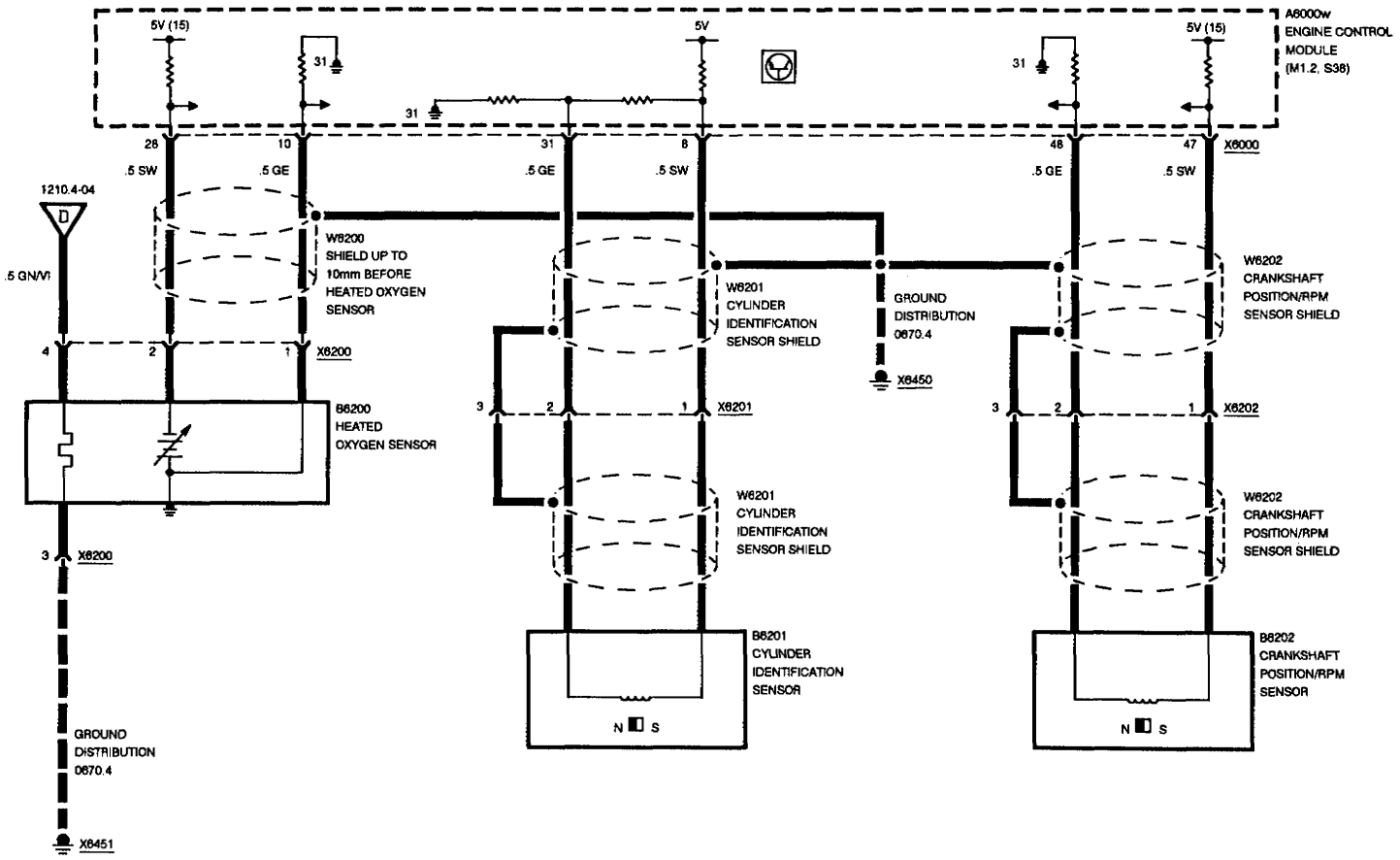





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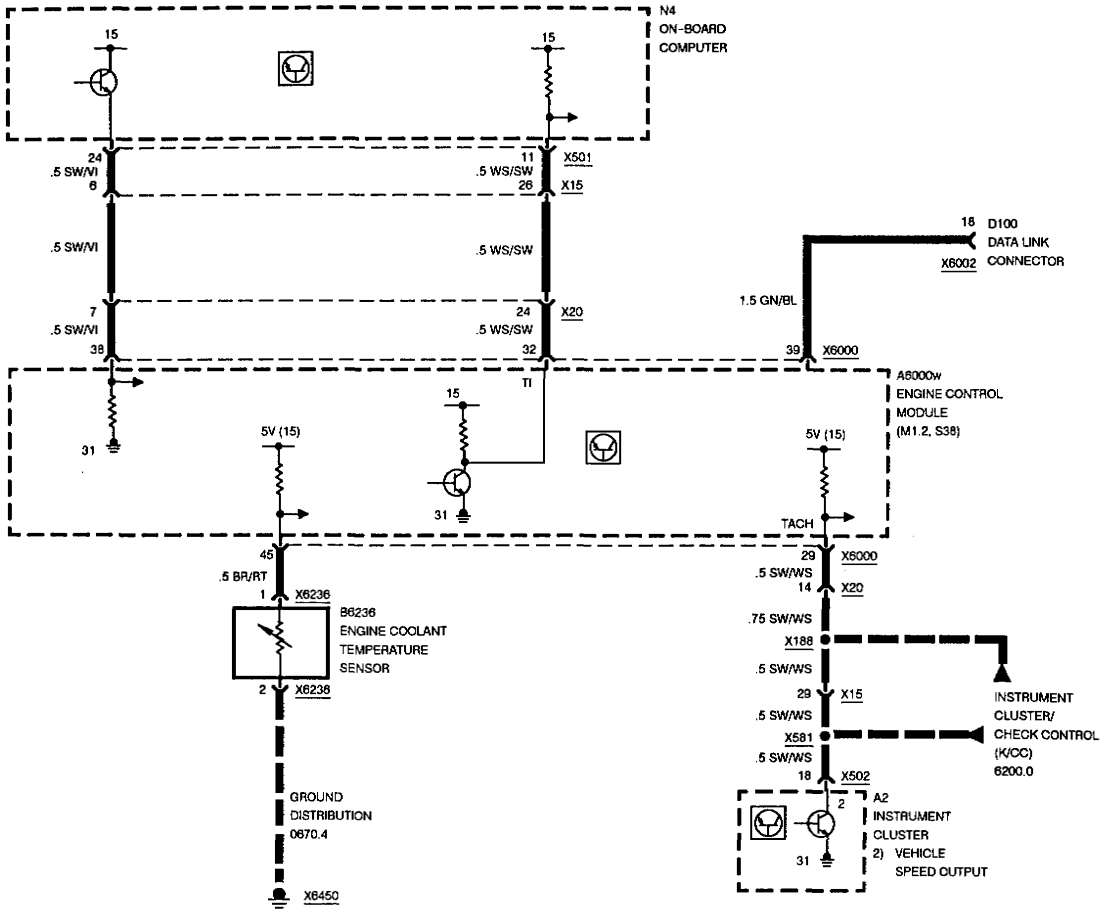
# ENGINE CONTROL SYSTEM (DME M1.2, 6-CYLINDER S38)



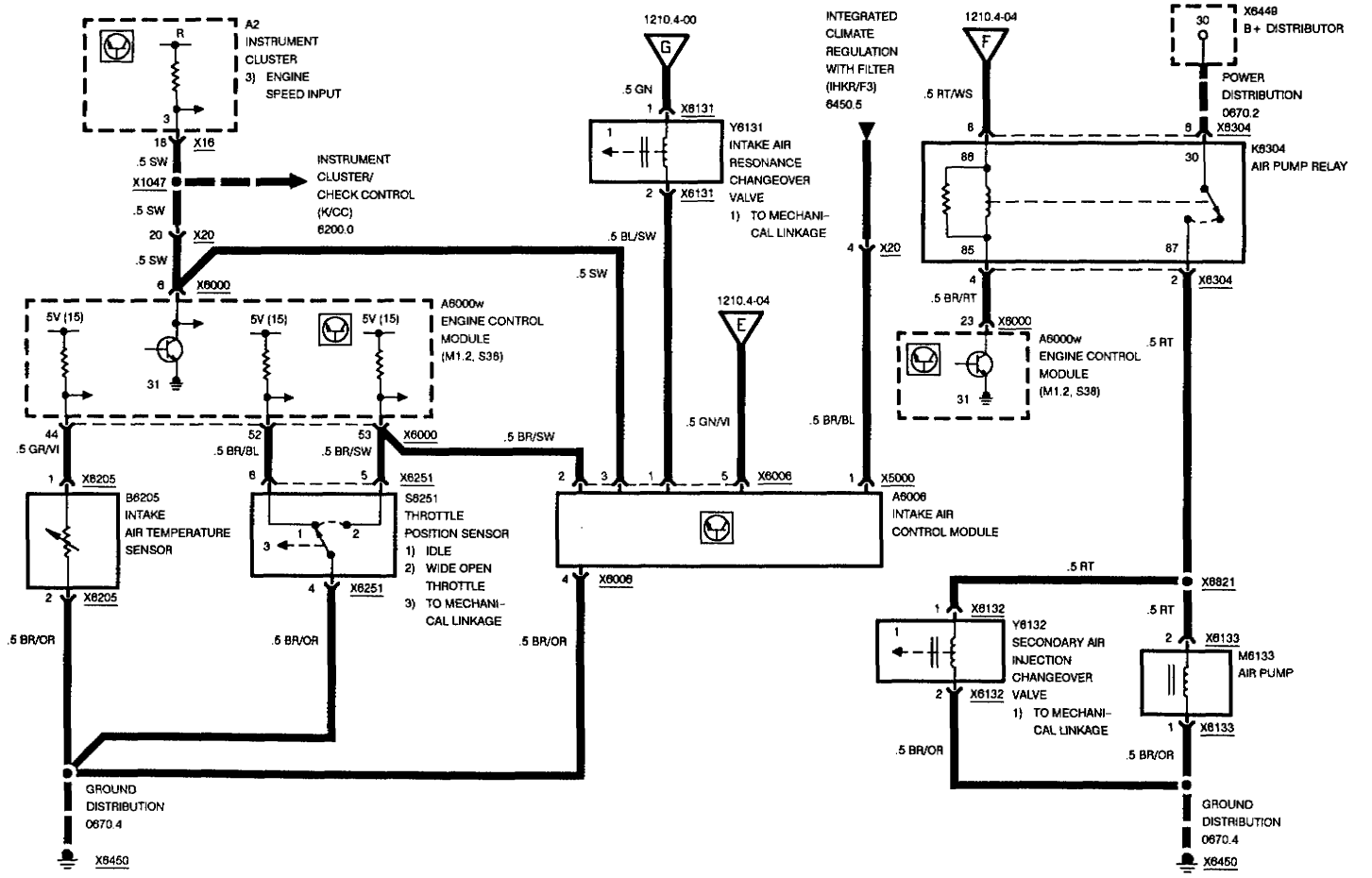





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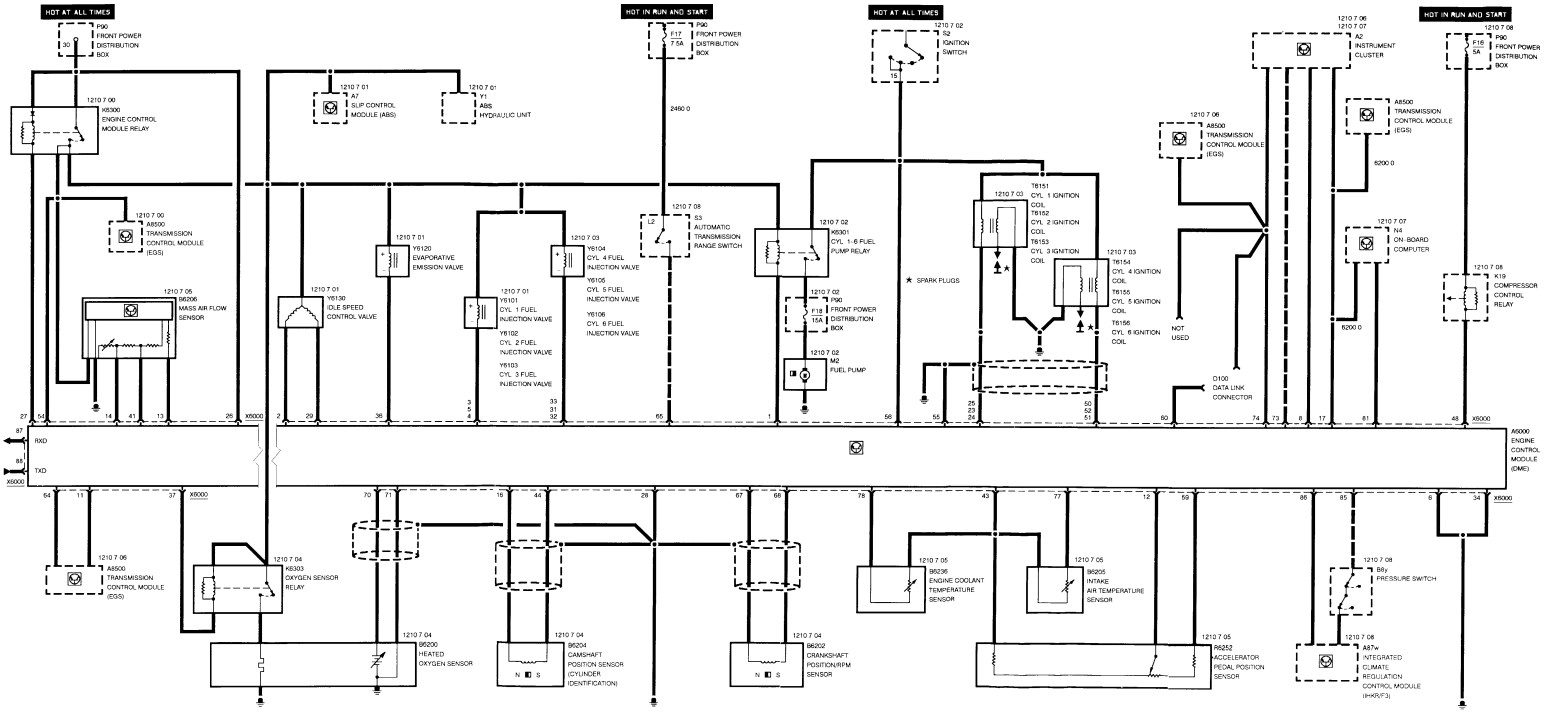

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## Pin Assignments

### X6000

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | A | EKP relay and TR signal (crankshaft reference) | EKP relay and EGS control unit torque converter clutch | Ground with super imposed engine speed signal | ON | Can only be measured with crankshaft rotating (the EKP relay does not switch if the TR signal is not applied) |
| 2 | A | Idle speed actuator | Idle speed actuator | Pulsed ground | | See status monitoring |
| 3 | A | Injection valve cyl. 1 | Injection valve (EV) 1 | Pulsed ground | Injection time ti | Ground = > injector valve open, see component activation |
| 4 | A | Injection valve cyl. 3 | Injection valve (EV) 3 | Pulsed ground | Injection time ti | Ground = > injector valve open, see component activation |
| 5 | A | Injection valve cyl. 2 | Injection valve (EV) 2 | Pulsed ground | Injection time ti | Ground = > injector valve open, see component activation |
| 6 | M | Ground, EV output stages | Ground point | Ground | | |
| 7 | | Not used | | | | |
| 8 | A | Defect lamp (US only) | Instrument cluster | Ground | | Comes on if emission related error code is stored, and comes on during starting |
| 9 | | Not used | | | | |

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# DIGITAL ENGINE ELECTRONICS (DME M3.1, 6-CYLINDER M50)



| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 10 | | Not used | | | | |
| 11 | A | Throttle valve position | EGS control unit | Pulsewidth modulated | Voltage value | Depends on throttle valve position, oscilloscope |
| 12 | E | Throttle valve potentiometer | Throttle valve potentiometer | 0.4–4.2V | Voltage value | Depends on throttle valve position |
| 13 | A | Preheating | Air mass meter | Voltage increase for approx. 0.5 sec | | Signal stops 4 sec after engine stop |
| 14 | M | Ground, air mass meter | Air mass meter | Ground | | |
| 15 | | Not used | | | | |
| 16 | E | Cylinder reference signal (ignition) | Cylinder reference sensor (connection B) | A/C voltage | Oscilloscope | One signal per camshaft revolution |
| 17 | A | ti measuring signal (KVA signal, fuel consumption signal) | Instrument cluster | Square wave signal | Multimeter function Pulse duration | Oscilloscope |
| 18 | | Not used | | | | |
| 19 | | Not used | | | | |
| 20 | | Not used | | | | |
| 21 | | Not used | | | | |
| 22 | | Not used | | | | |
| 25 | A | Ignition terminal 1 | Ignition coil 2 | Primary signal | Oscilloscope | Engine test, test step 05 |
| 25 | A | Ignition terminal 1 | Ignition coil 3 | Primary signal | Oscilloscope | Engine test, test step 05 |
| 25 | A | Ignition terminal 1 | Ignition coil 1 | Primary signal | Oscilloscope | Engine test, test step 05 |
| 26 | E | Steady voltage, terminal 30 | B + terminal point | > 10 V | | Diagnosis not possible if not fitted |

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# DIGITAL ENGINE ELECTRONICS (DME M3.1, 6-CYLINDER M50)



| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 27 | A | DME main relay | DME main relay terminal 85 | Ground | ON | Diagnosis not possible if not fitted – connect jumper at relay terminal 30 and 87 |
| 28 | M | Ground for electronics and shielding the sensors | Ground point | Ground | | |
| 29 | A | Idle speed actuator | Idle speed actuator | Pulsed ground | | Component activation |
| 30 | | Not used | | | | |
| 31 | A | Injection valve cyl. 5 | Injection valve | Pulsed ground | Injection time ti | Ground = > Injector valves open, see component activation |
| 32 | A | Injection valve cyl. 6 | Injection valve | Pulsed ground | Injection time ti | Ground = > Injector valves open, see component activation |
| 33 | A | Injection valve cyl. 4 | Injection valve | Pulsed ground | Injection time ti | Ground = > Injector valves open, see component activation |
| 34 | M | Ground, remaining output stages (except for ignition and EV) | Ground point | Ground | | |
| 35 | | Not used | | | | |
| 36 | A | Fuel evaporation control valve | TE valve | Pulsed ground | CLOSED/OPEN | Perform component activation, ground = > closed |
| 37 | A | Oxygen sensor heating | Oxygen sensor relay | Ground | ON | Ground = > Heating activated |
| 38 | | Not used | | | | |
| 39 | | Not used | | | | |
| 40 | | Not used | | | | |
| 41 | E | Signal air mass meter | Hot wire air mass meter | 0...5 V | Load signal in ms | See status monitoring |

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| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 42 | | Not used | | | | |
| 43 | M | Ground for sensors | Temperature sensor | Ground | | |
| 44 | E | Cylinder reference signal (ignition) | Cylinder reference sensor (connection A) | A/C voltage | Oscilloscope | One signal per camshaft revolution |
| 45 | | Not used | | | | |
| 46 | | Not used | | | | |
| 47 | | Not used | | | | |
| 48 | A | A/C compressor control | Compressor control relay | Ground | | Ground = > Compressor OFF |
| 49 | | Not used | | | | |
| 50 | A | Ignition terminal 1 | Ignition coil 4 | Primary signal | Oscilloscope | Engine test, test step 05 |
| 51 | A | Ignition terminal 1 | Ignition coil 6 | Primary signal | Oscilloscope | Engine test, test step 05 |
| 52 | A | Ignition terminal 1 | Ignition coil 5 | Primary signal | Oscilloscope | Engine test, test step 05 |
| 53 | | Not used | | | | |
| 54 | E | > 10 V from DME main relay | Main relay terminal 87 | > 10 V | Voltage value | Perform status monitoring. Diagnosis not possible if signal not applied – connect jumper terminal 30 and 87 on relay |
| 55 | M | Ground, ignition | Ground point | Ground | | |
| 56 | E | Ignition terminal 15 | Ignition switch | > 10 V | | |
| 57 | | Not used | | | | |
| 58 | | Not used | | | | |
| 59 | A | Component voltage | Throttle potentiometer | 5 V | | |
| 60 | E | Programming voltage | Diagnostic connector | | | Only activated for control unit programming |



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# DIGITAL ENGINE ELECTRONICS (DME M3.1, 6-CYLINDER M50)



| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 61 | | Not used | | | | |
| 62 | | Not used | | | | |
| 63 | | Not used | | | | |
| 64 | E | Ignition timing intervention | EGS control unit | Ground | ON | Only active during gearshift |
| 65 | E | Drive range P/N switch | Transmission selector lever | Ground | ON | When position P/N |
| 66 | | Not used | | | | |
| 67 | E | Inductive pulse generator (connection B) | Pulse generator Engine speed/position | A/C voltage | Engine speed | Between Pins 67 and 68 (can only be measured with crankshaft rotating) |
| 68 | E | Inductive pulse generator (connection A) | Pulse generator Engine speed/position | A/C voltage | Engine speed | Between Pins 67 and 68 (can only be measured with crankshaft rotating) |
| 69 | | Not used | | | | |
| 70 | E | Oxygen sensor signal | Oxygen sensor | Pulsating voltage up to approx. 1 V | Voltage value | Can only be measured with engine running at operating temperature |
| 71 | M | Ground oxygen sensor | Oxygen sensor | Ground | | |
| 72 | | Not used | | | | |
| 73 | E | Road speed signal | Instrument cluster | Square wave signal | km/h | Status monitoring |
| 74 | | Engine speed signal TD | Instrument cluster | Square wave signal | | One signal per ignition |
| 75 | | Not used | | | | |
| 76 | | Not used | | | | |
| 77 | E | Intake air temperature | Intake air temperature sensor | 0...5 V | °C | Temperature-dependent |

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# DIGITAL ENGINE ELECTRONICS (DME M3.1, 6-CYLINDER M50)



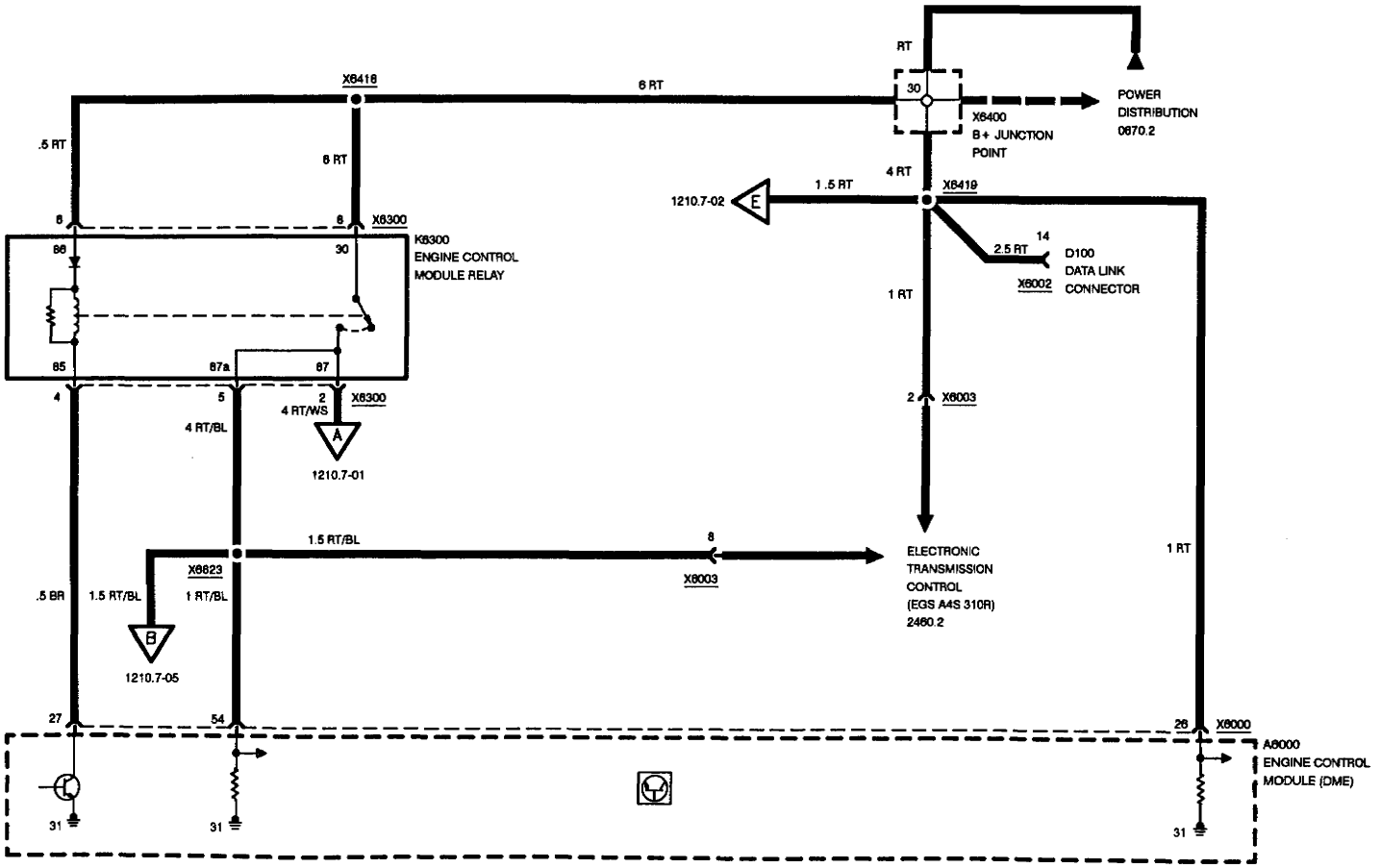
| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 78 | E | Engine temperature | Engine temperature sensor | 0...5 V | °C | Temperature-dependent |
| 79 | | Not used | | | | |
| 80 | | Not used | | | | |
| 81 | E | Drive-away protection | On-board computer | > 10 V | | |
| 82 | | Not used | | | | |
| 83 | | Not used | | | | |
| 84 | | Not used | | | | |
| 85 | E | Pressure signal | Pressure switch | | | |
| 86 | E | Compressor signal | IHKR control unit | | | |
| 87 | E | RxD diagnostic data line | Diagnostic connector | > 10 V | | When cover of diagnostic connector closed |
| 88 | E/A | TxD diagnostic data line | Diagnostic connector | Ground | | When cover of diagnostic connector closed |

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# ENGINE CONTROL SYSTEM (DME M3.1, 6-CYLINDER M50)

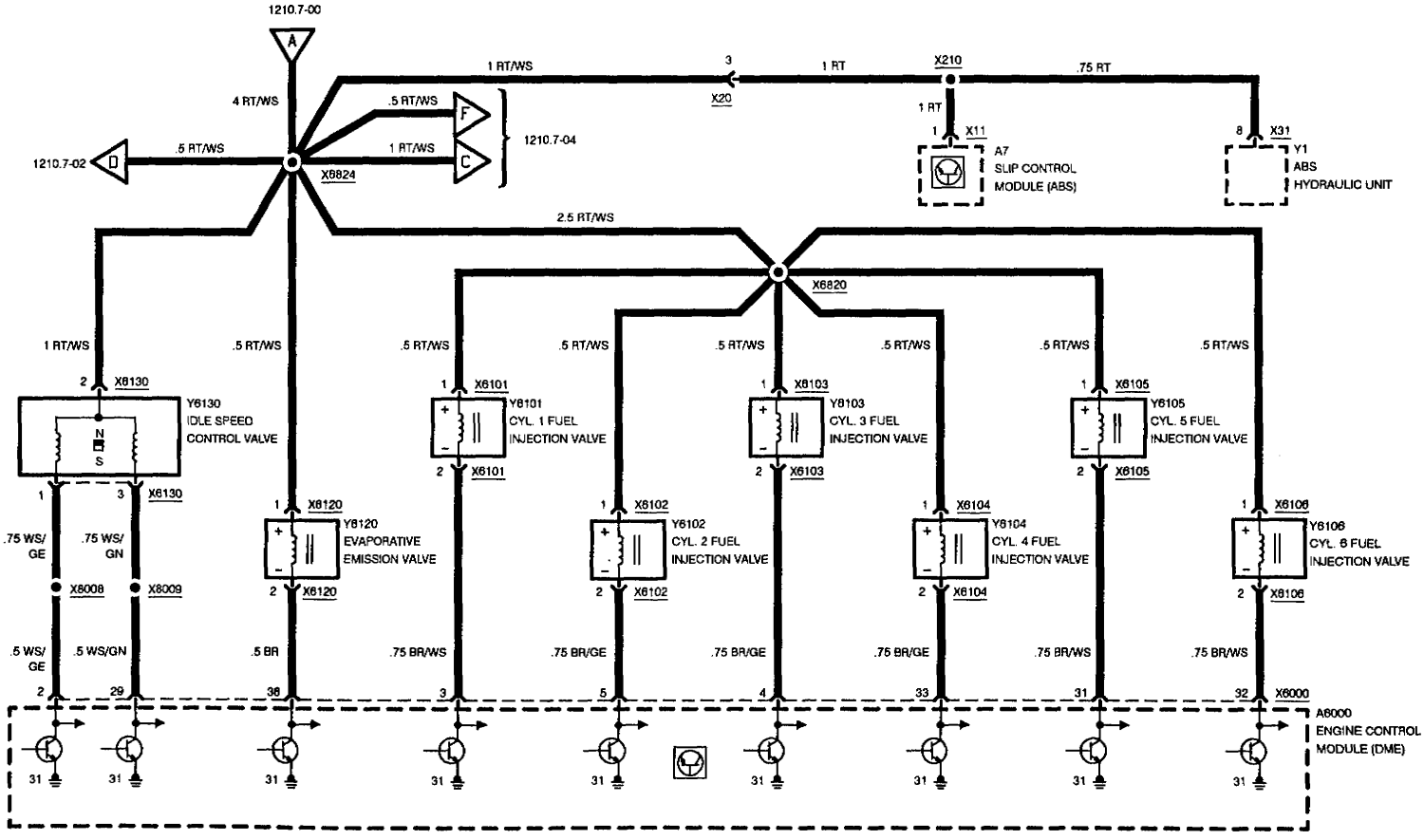
## POWER






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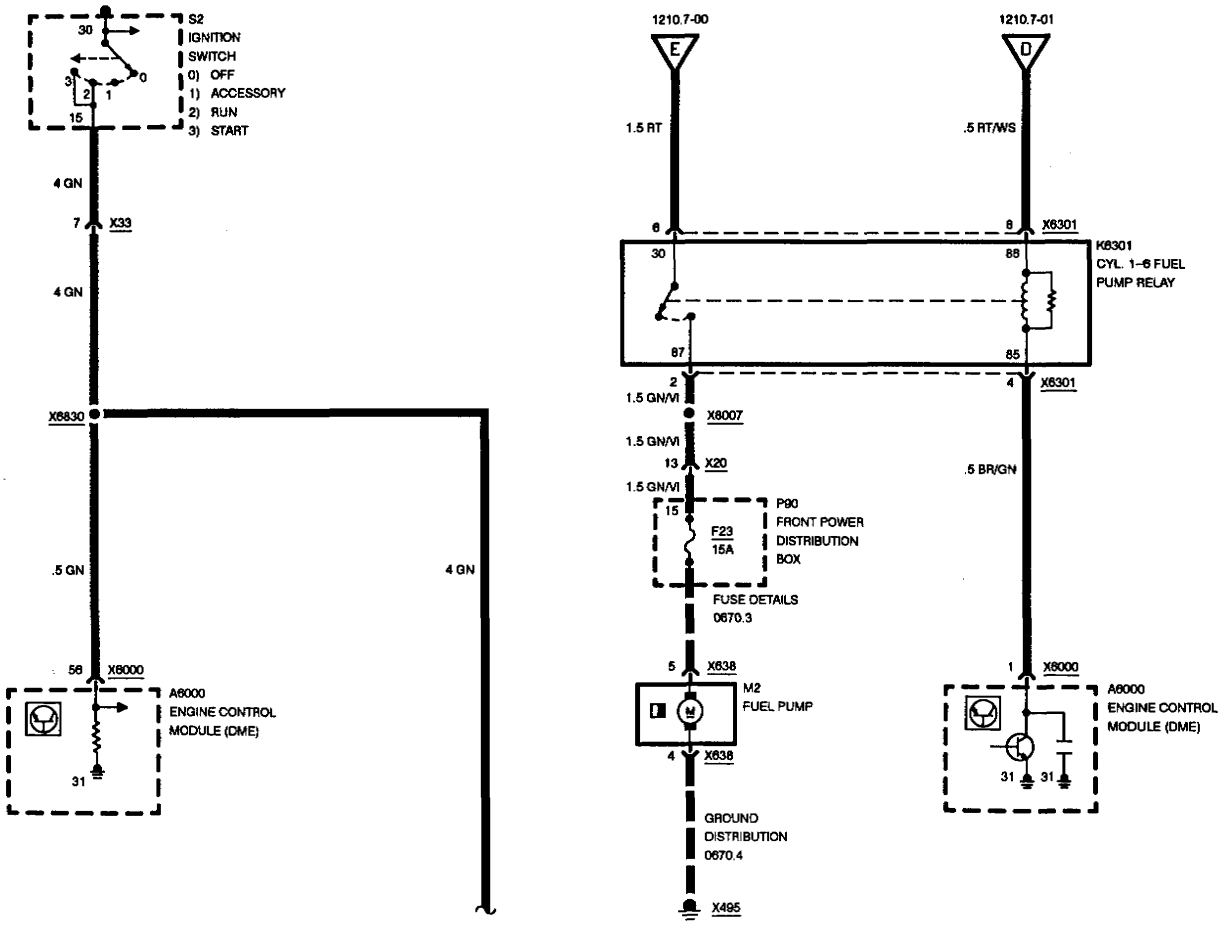




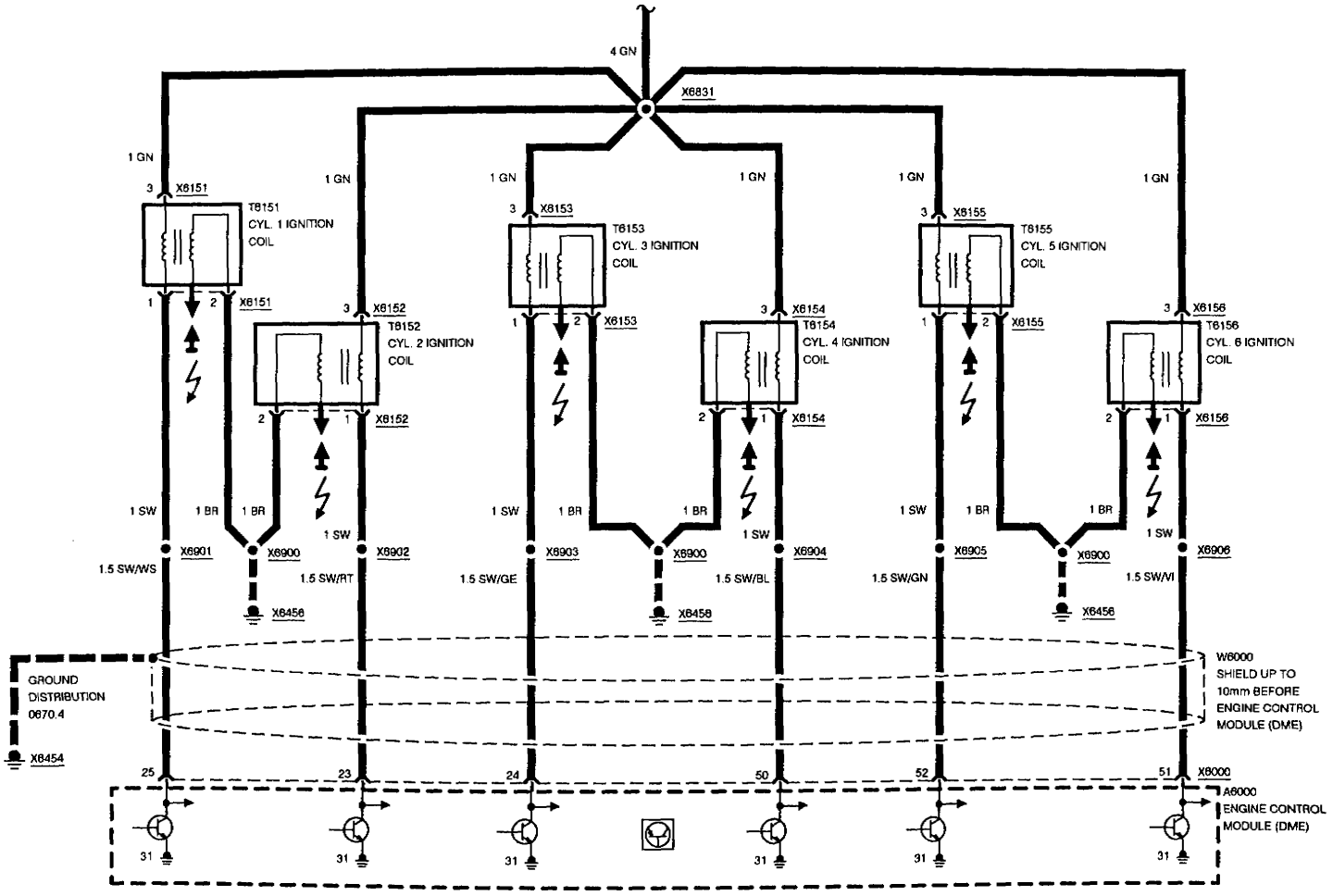

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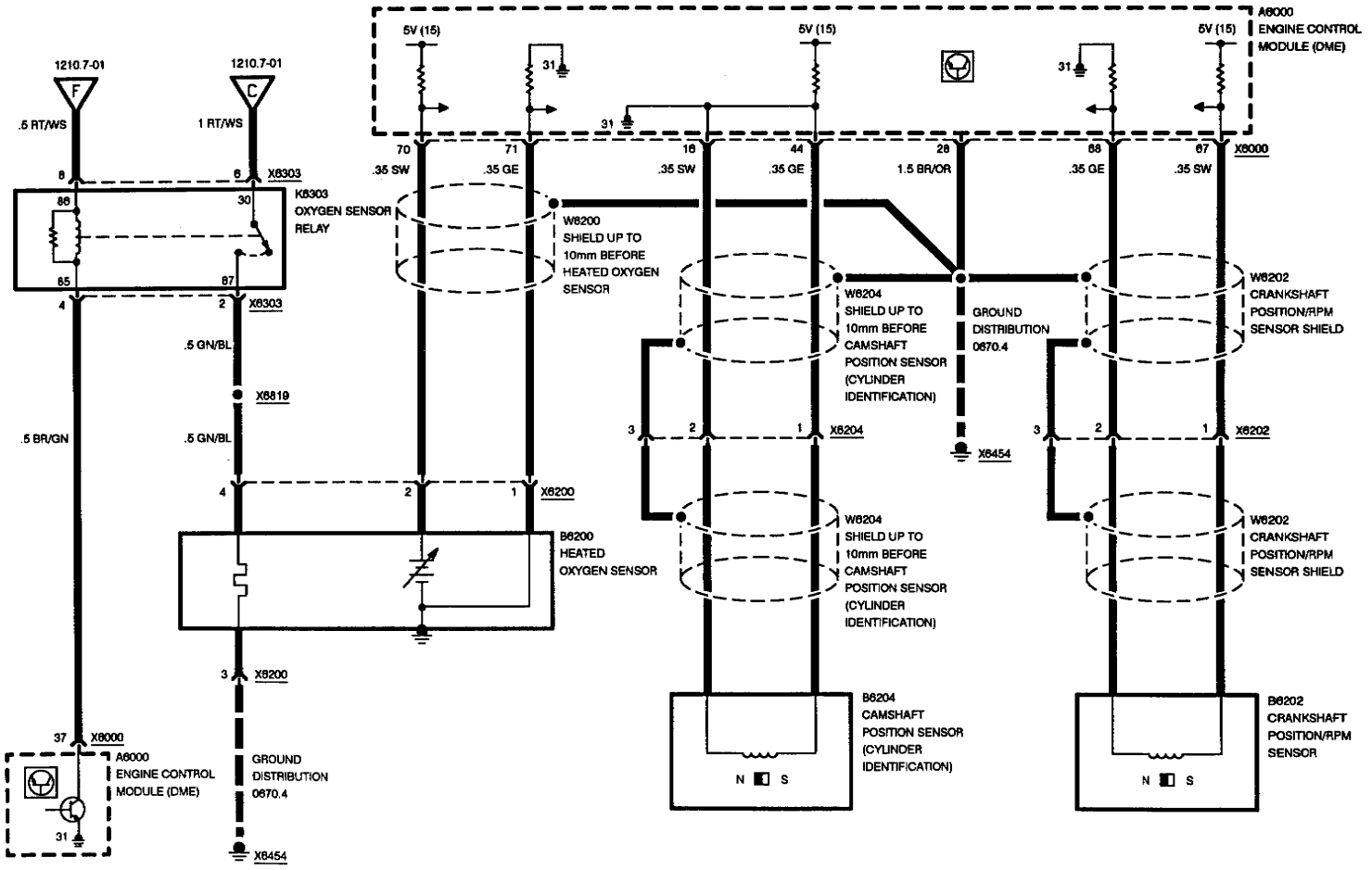



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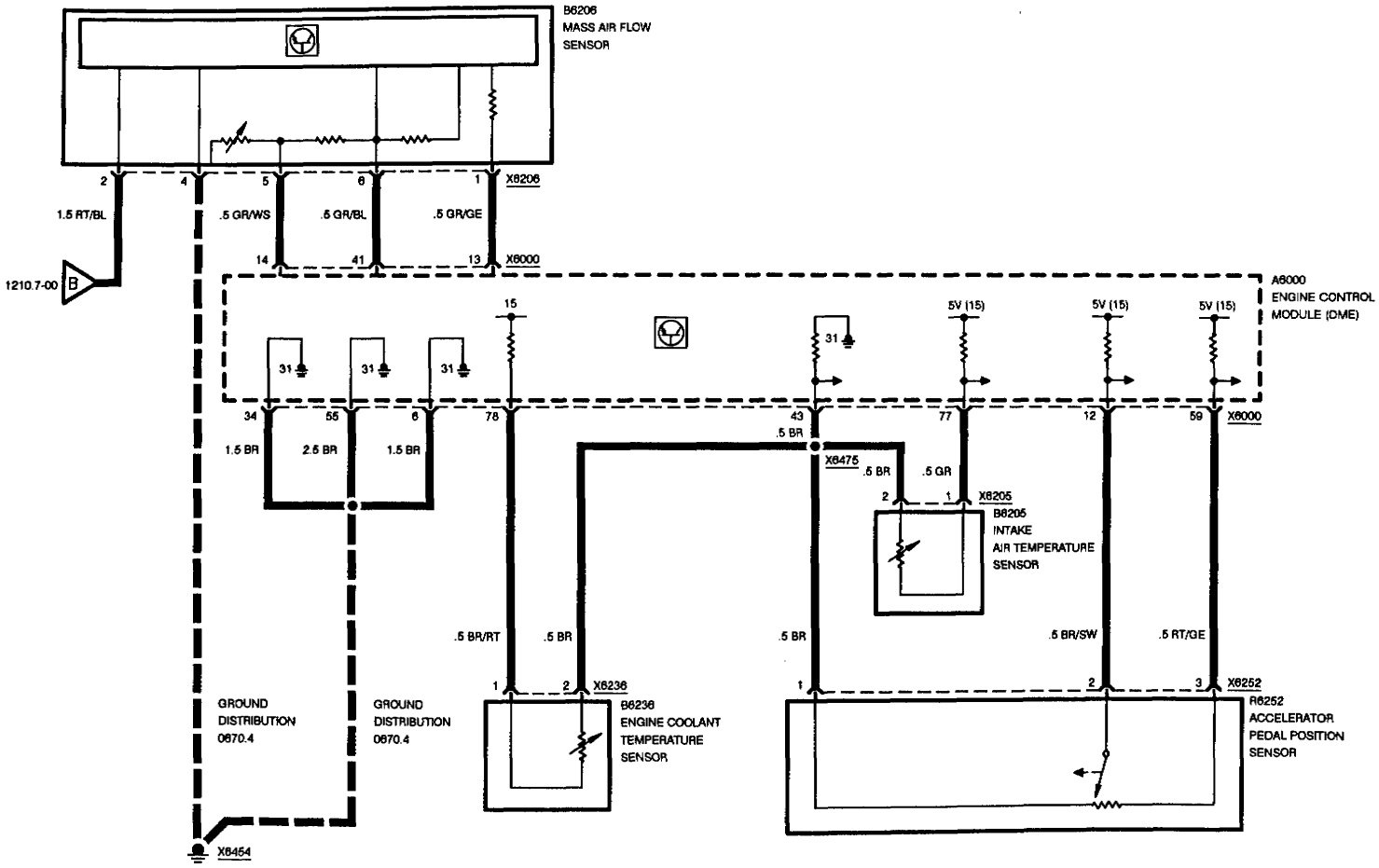

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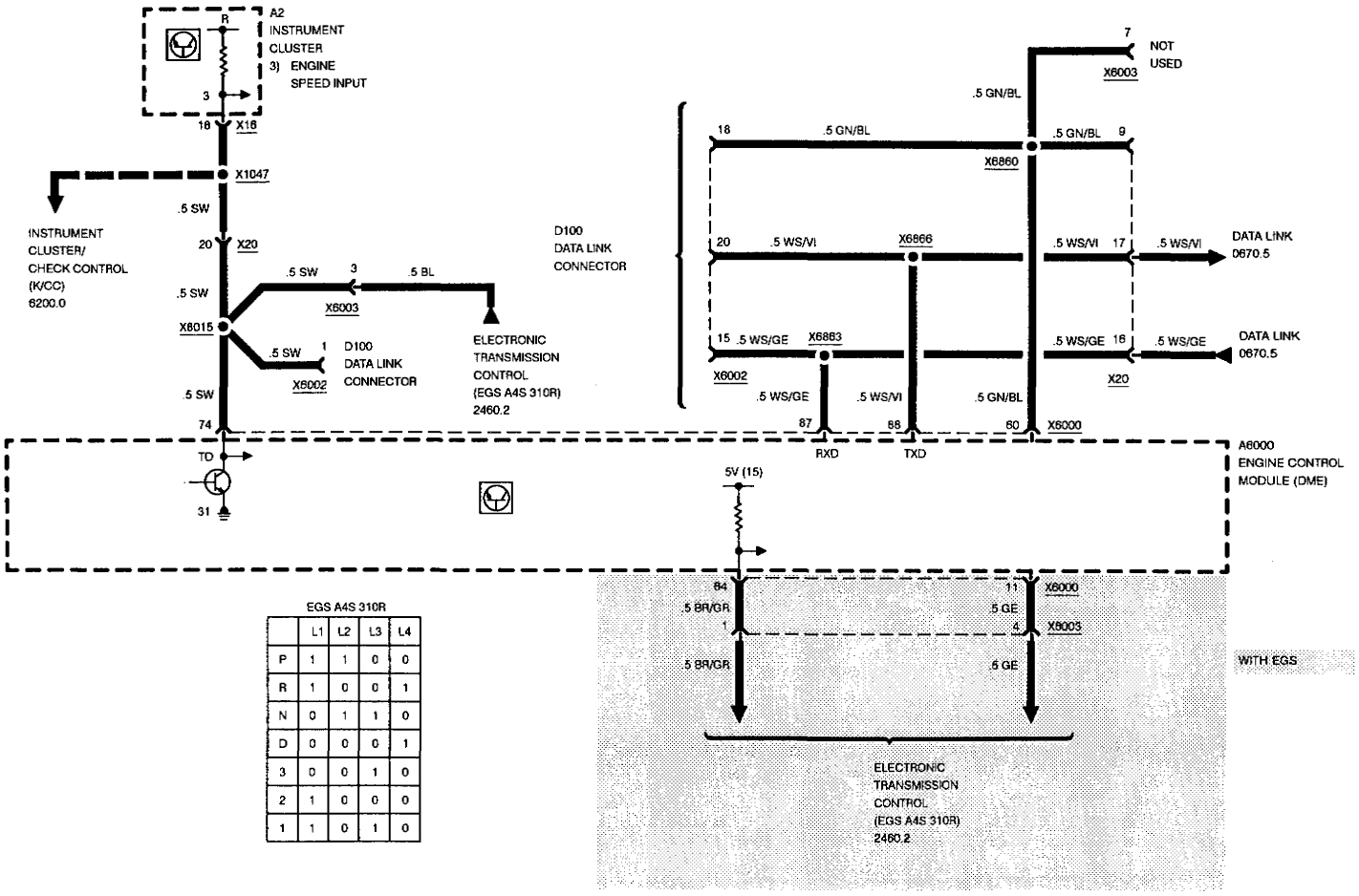
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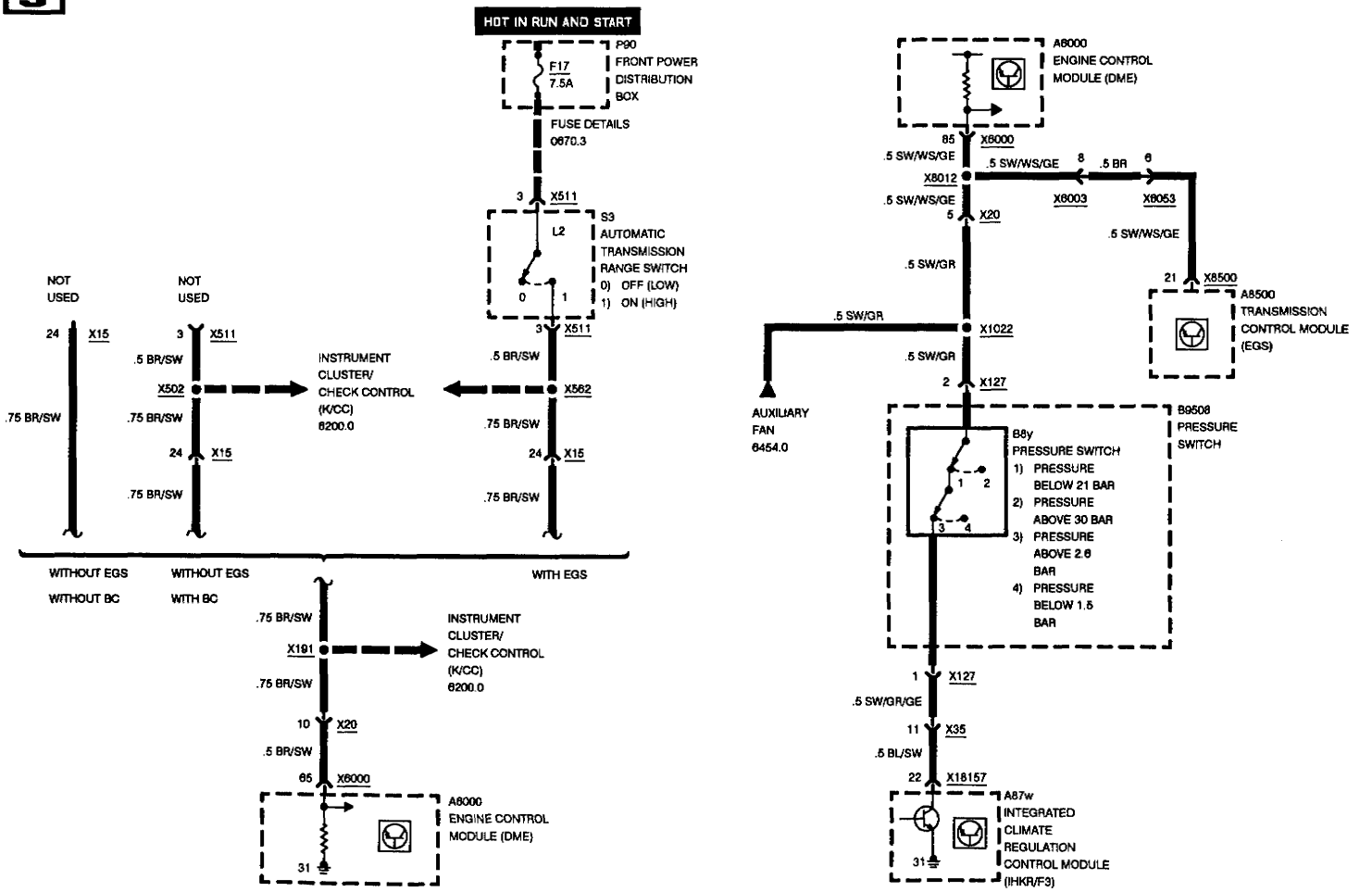



EGS A4S 310R

| | L1 | L2 | L3 | L4 |
|---|---|---|---|---|
| P | 1 | 1 | 0 | 0 |
| R | 1 | 0 | 0 | 1 |
| N | 0 | 1 | 1 | 0 |
| D | 0 | 0 | 0 | 1 |
| 3 | 0 | 0 | 1 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 1 | 1 | 0 | 1 | 0 |

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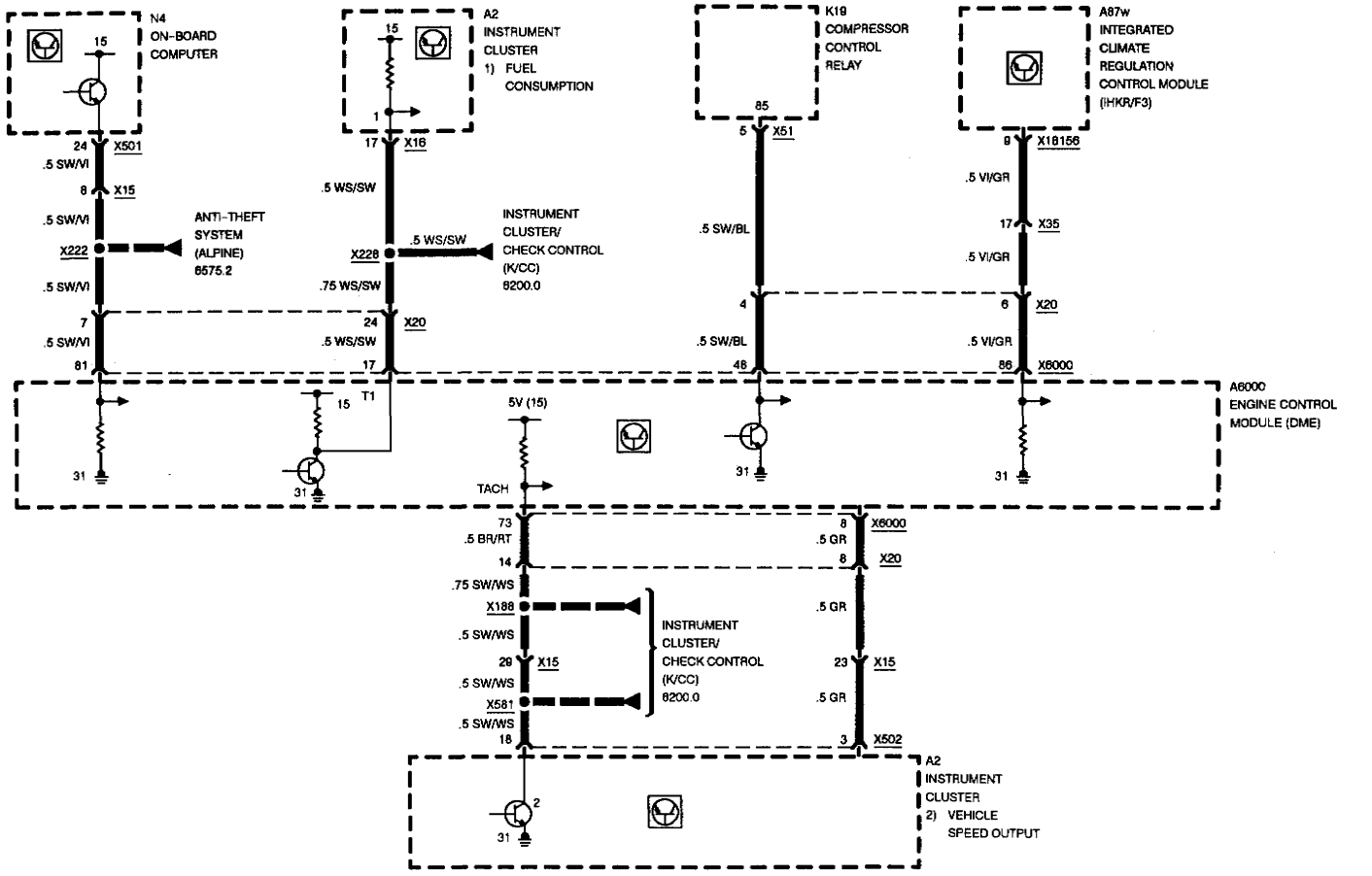
# ENGINE CONTROL SYSTEM (DME M3.1, 6-CYLINDER M50)






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# ENGINE CONTROL SYSTEM (DME M3.1, 6-CYLINDER M50)



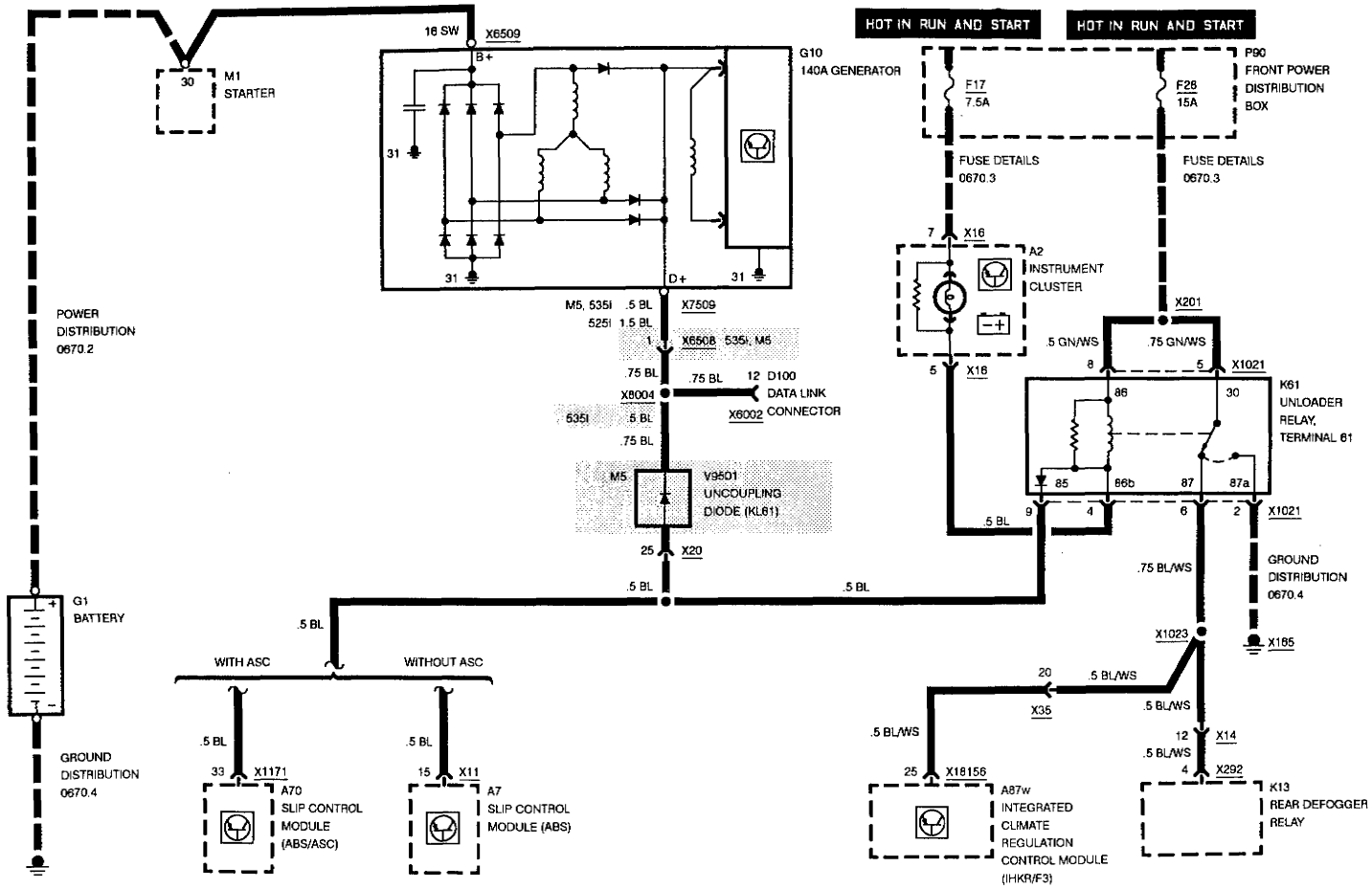



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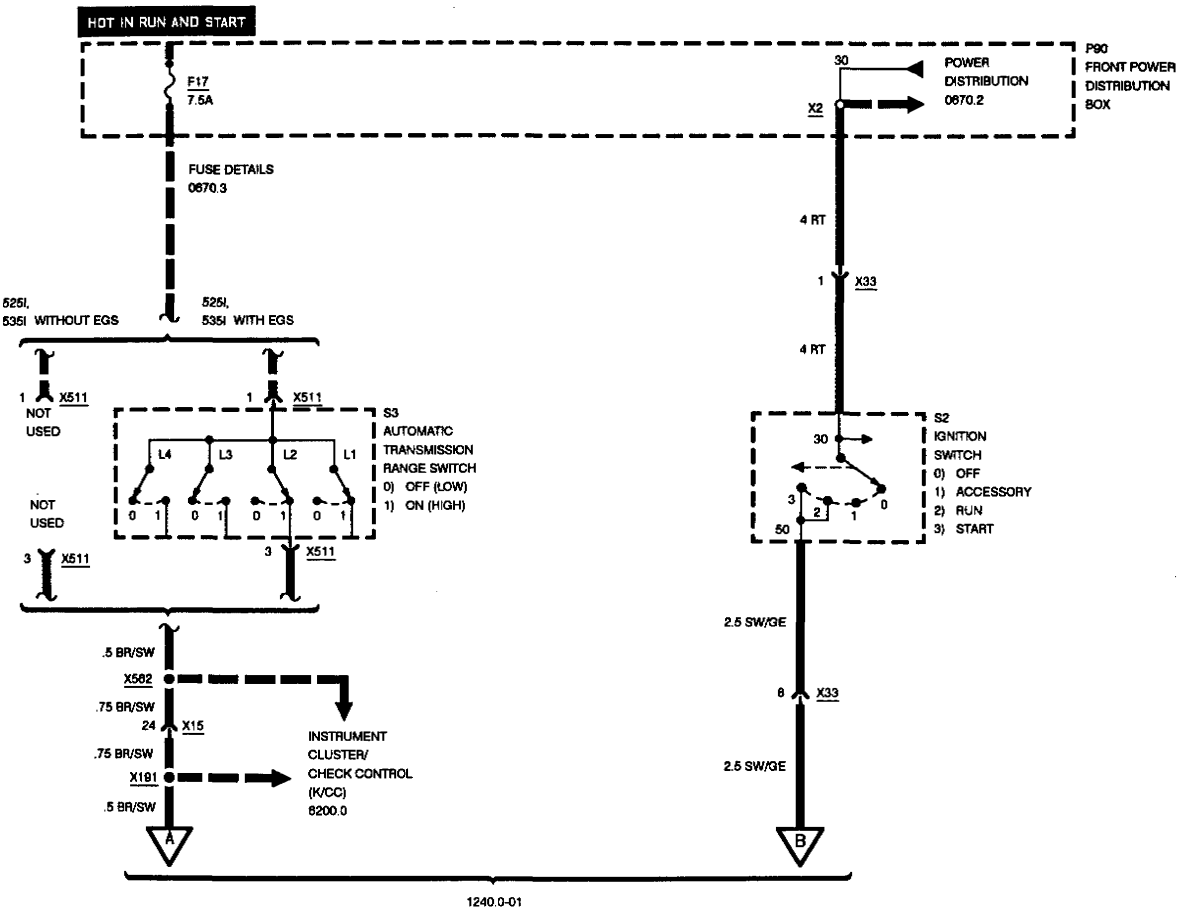
# CHARGING SYSTEM






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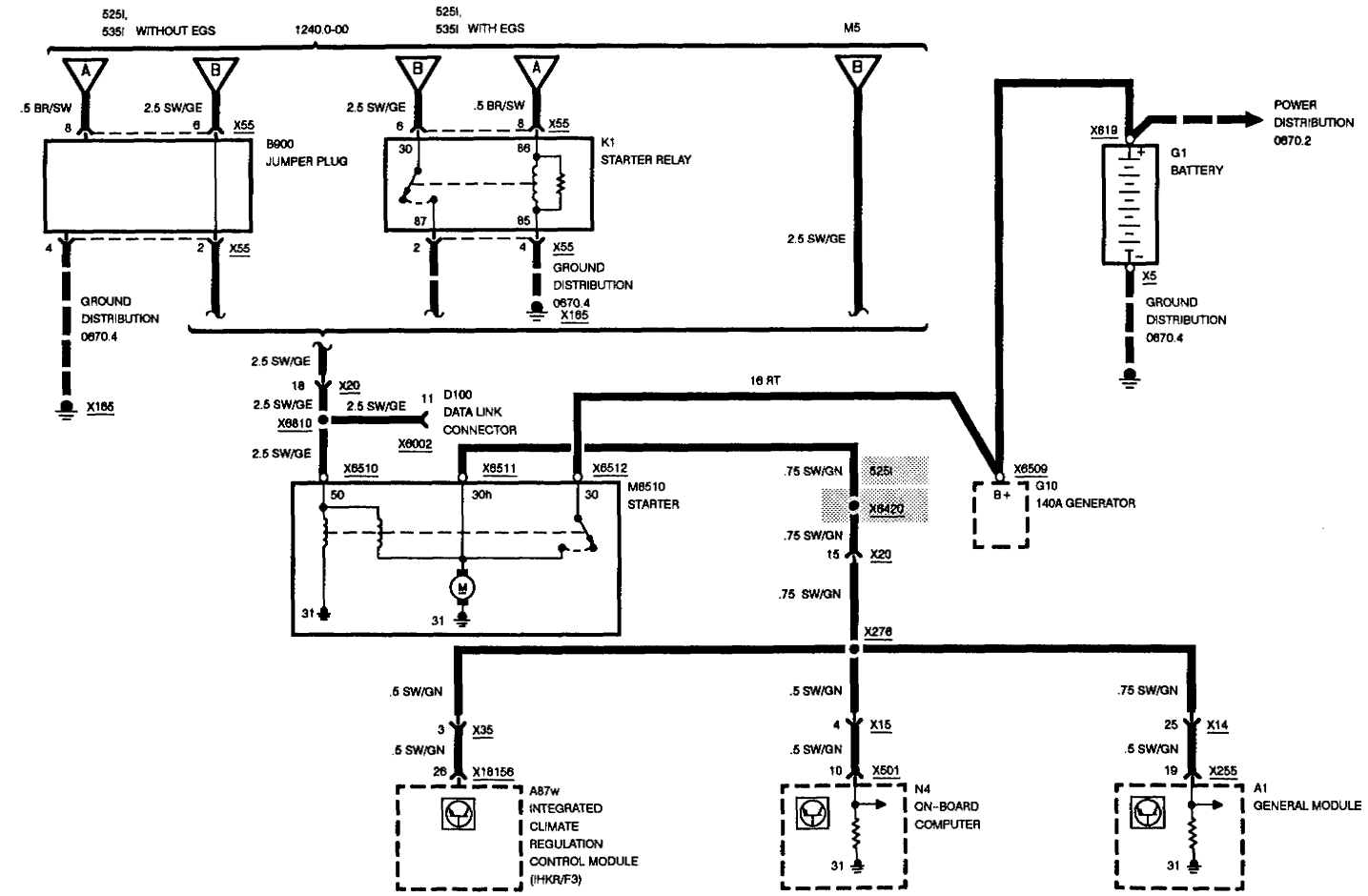
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EGS 4HP 22
EGS A4S 310R

| | L1 | L2 | L3 | L4 |
|---|---|---|---|---|
| P | 1 | 1 | 0 | 0 |
| R | 1 | 0 | 0 | 1 |
| N | 0 | 1 | 1 | 0 |
| D | 0 | 0 | 0 | 1 |
| 3 | 0 | 0 | 1 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 1 | 1 | 0 | 1 | 0 |

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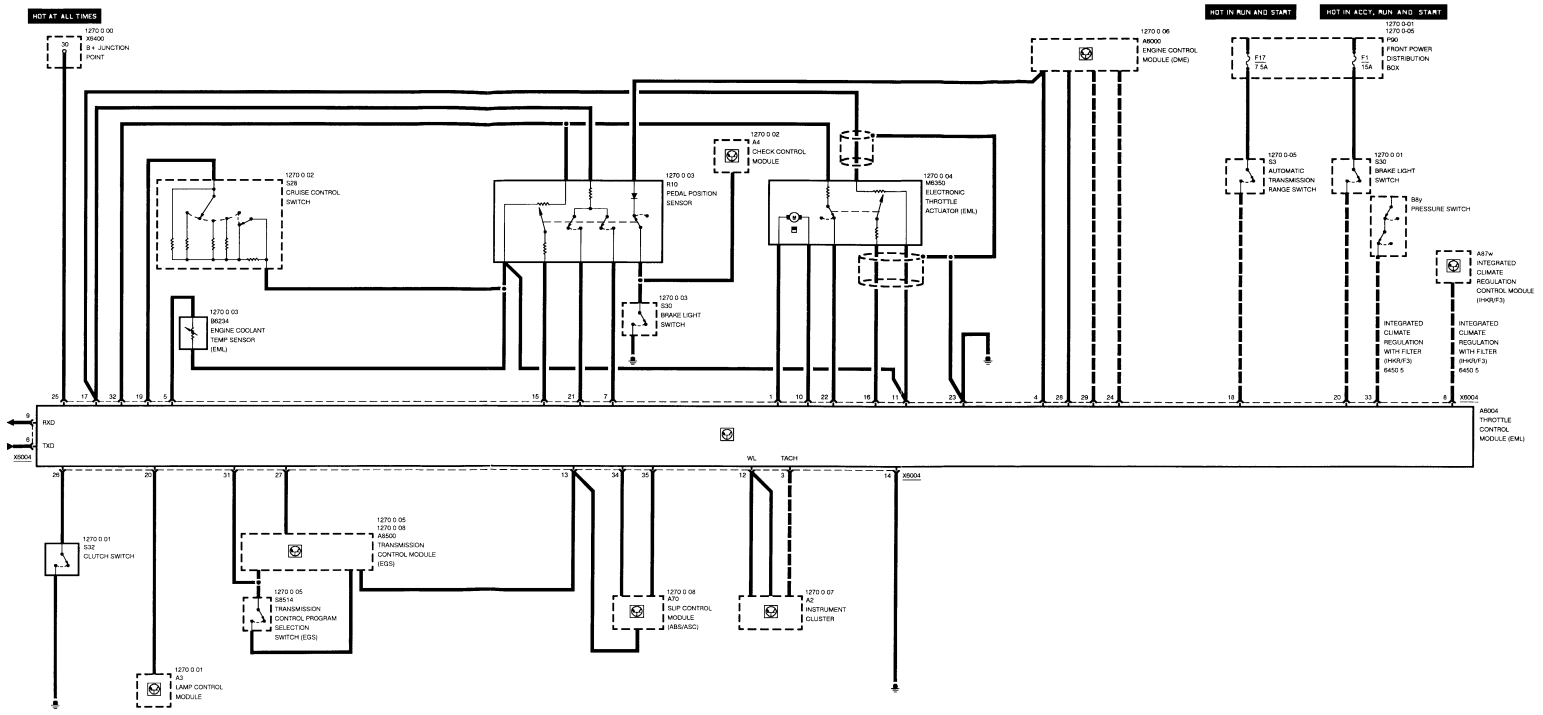





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# ELECTRONIC THROTTLE CONTROL (EML, 6-CYLINDER)



## Pin Assignments

### X6004

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | A/E | Drive throttle actuator | EML actuator | Square wave signal | | |
| 2 | | Not used | | | | |
| 3 | E | Vehicle speed signal | Instrument cluster | Square wave signal | | |
| 4 | A | Idle signal | DME control unit | approx. 0 V | | |
| 5 | A/E | Engine coolant temperature | Water temp sensor (EML) | approx. 0...5 V | | |
| 6 | E/A | Diagnosis | Diagnostic connector TxD | | | |
| 7 | E | Kick-down signal | Pedal position sensor | approx. 5 V | | |
| 8 | E | A/C system signal | IHKR/F3 control unit | approx. 12 V (ON) | | |
| 9 | E | Diagnosis | Diagnostic connector RxD | | | |
| 10 | A/E | Drive throttle actuator | EML actuator | Square wave signal | | |
| 11 | A | Electronic ground | Component ground | Ground | | |
| 12 | A | EML-warning lamp | Instrument cluster | | | |
| 13 | A | Throttle position signal | ASC/EGS | Square wave signal | | |
| 14 | E | Output ground | Ground point | Ground | | |
| 15 | E | Throttle position | Pedal position sensor | 0.4...4 V | | |
| 16 | E | Actuator position sensor | EML actuator | 1 V...4.6 V | | |
| 17 | A | 5 V (not short circuit proof) | Pedal position sensor/ EML actuator | 5 V | | |

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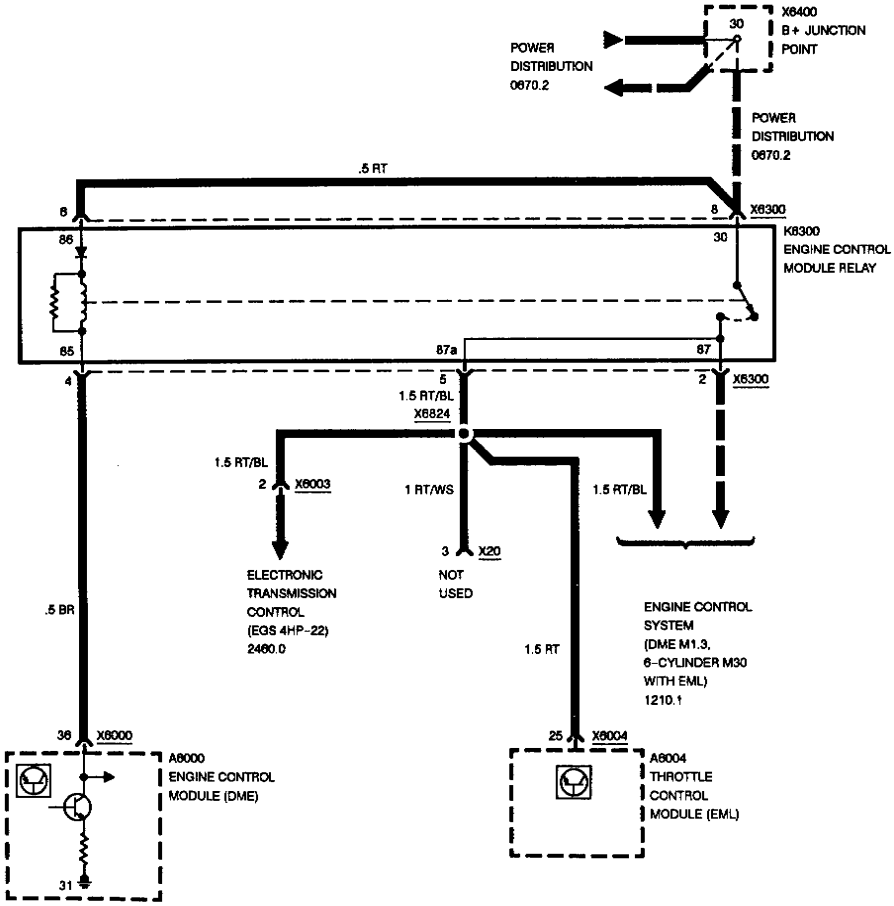
# ELECTRONIC THROTTLE CONTROL (EML, 6-CYLINDER)



| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 18 | E | P and N identifier (EGS) | Transmission range switch | approx. 12 V (ON)<br>approx. 0 V (OFF) | | |
| 19 | E/A | Cruise control switch signal | Cruise control switch | 0 V...5 V | | |
| 20 | E | Brake pedal signal | Brake light switch | approx. 12 V (ON)<br>approx. 0 V (OFF) | | |
| 21 | E | PWG 9° switch | Pedal position sensor | approx. 5 V (ON) | | |
| 22 | E | Throttle 17° switch | EML actuator | approx. 5 V (ON) | | |
| 23 | A | Electronic ground | Component ground | Ground | | |
| 24 | E | Injection signal ti | DME control unit | Square wave signal | | |
| 25 | E | Terminal 30 + | DME - relay | approx. on-board voltage | | |
| 26 | E | Clutch pedal signal | Clutch switch | approx. 0 V | | |
| 27 | A | Kick-down signal | EGS control unit | approx. 0 V (ON)<br>approx. 12 V (OFF) | | |
| 28 | A | Full load signal | DME control unit | approx. 0 V | | |
| 29 | E | Engine speed signal (TD) | DME control unit | Square wave signal | | |
| 30 | | Not used | | | | |
| 31 | E | S-program identification | EGS control unit | approx. 0 V | | |
| 32 | A | 5 V (not short circuit proof) | Pedal position sensor/<br>EML actuator | approx. 5 V | | |
| 33 | E | A/C compressor ON | Pressure switch | approx. 12 V (ON) | | |
| 34 | E | Decrease throttle position angle (DKR) | ABS/ASC-control unit | Square wave signal | | |
| 35 | E | Increase throttle position angle (DKE) | ABS/ASC-control unit | Square wave signal | | |

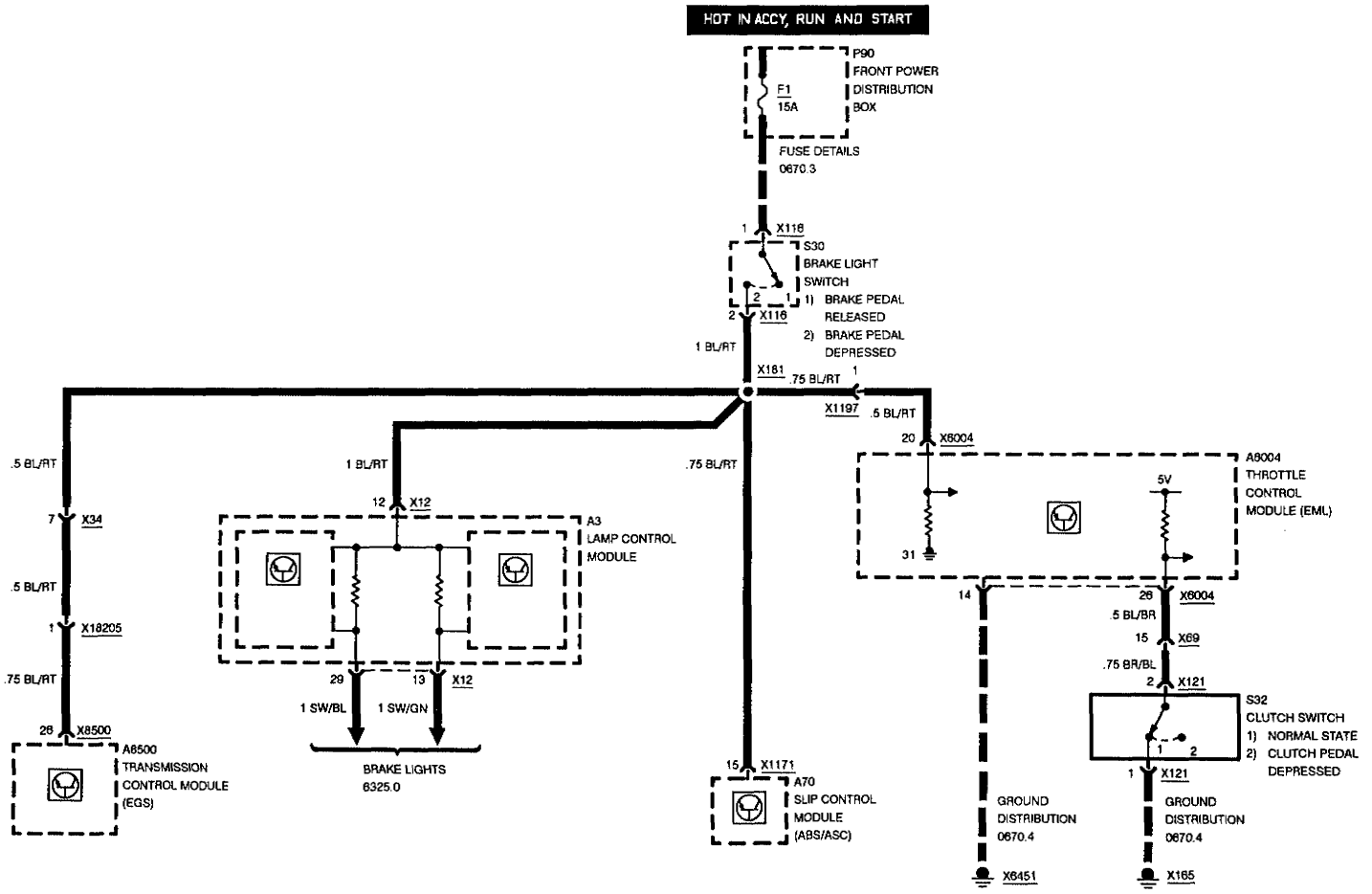
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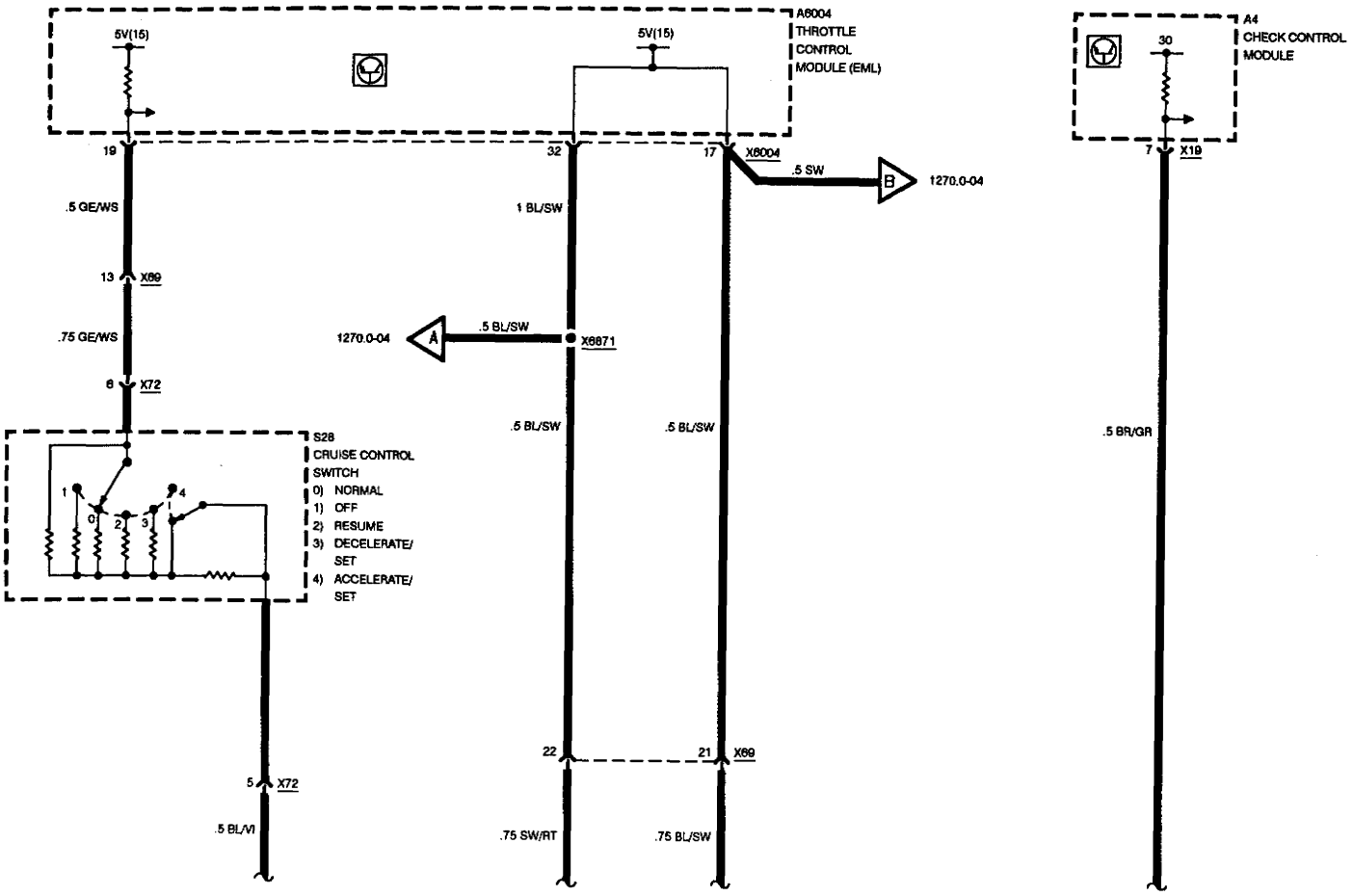

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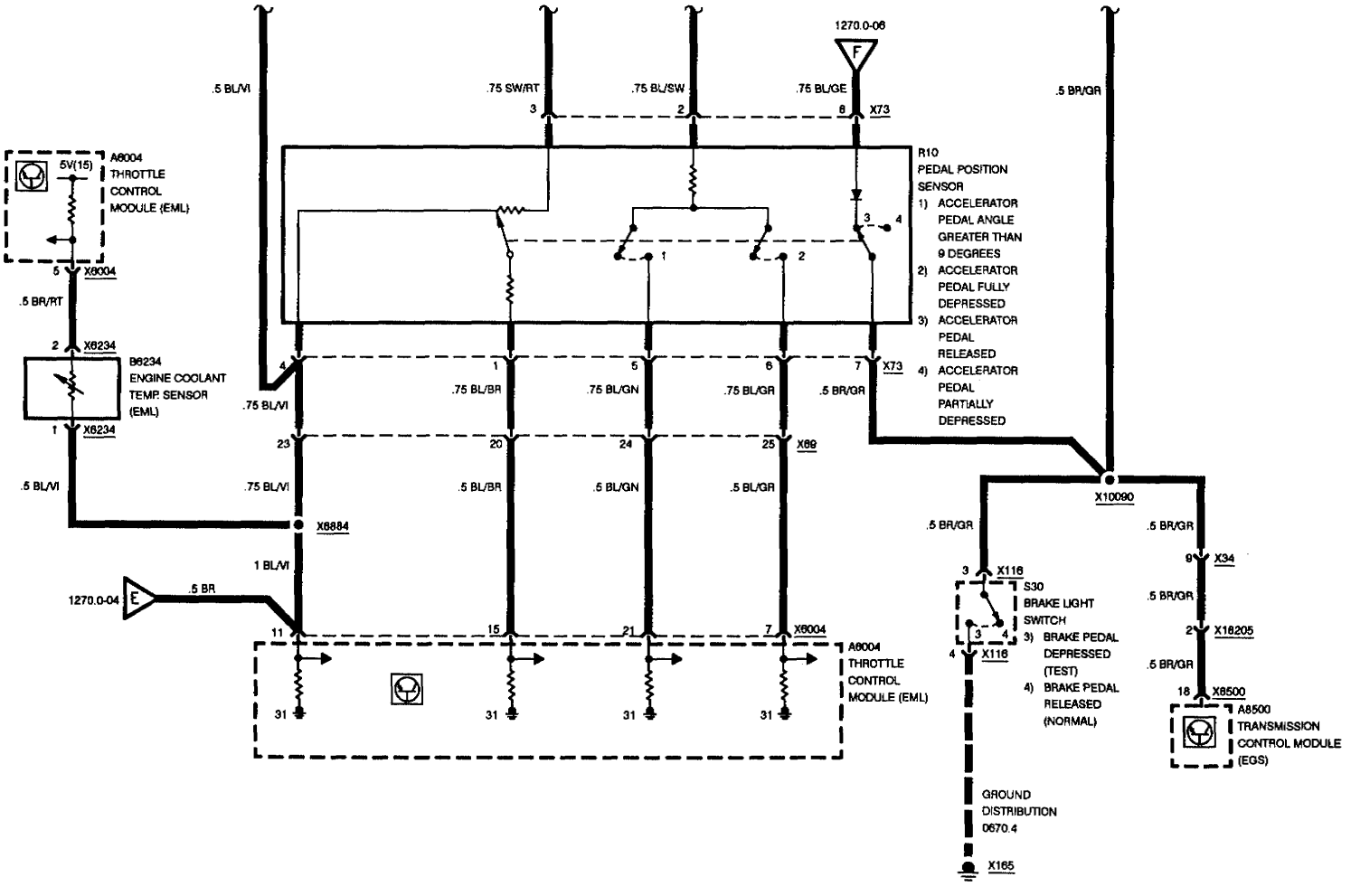
# ELECTRONIC THROTTLE CONTROL (EML 6-CYLINDER)

535i






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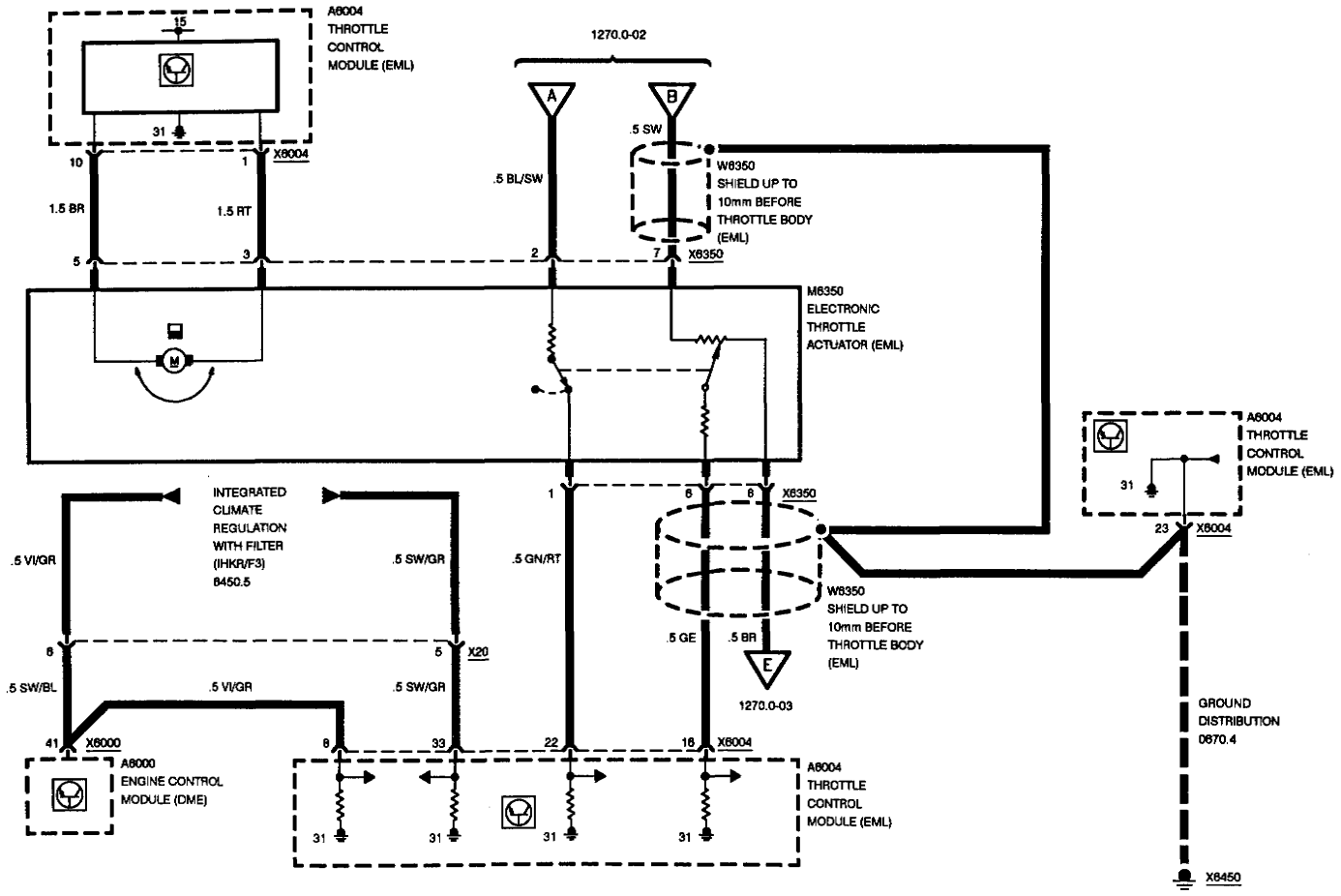



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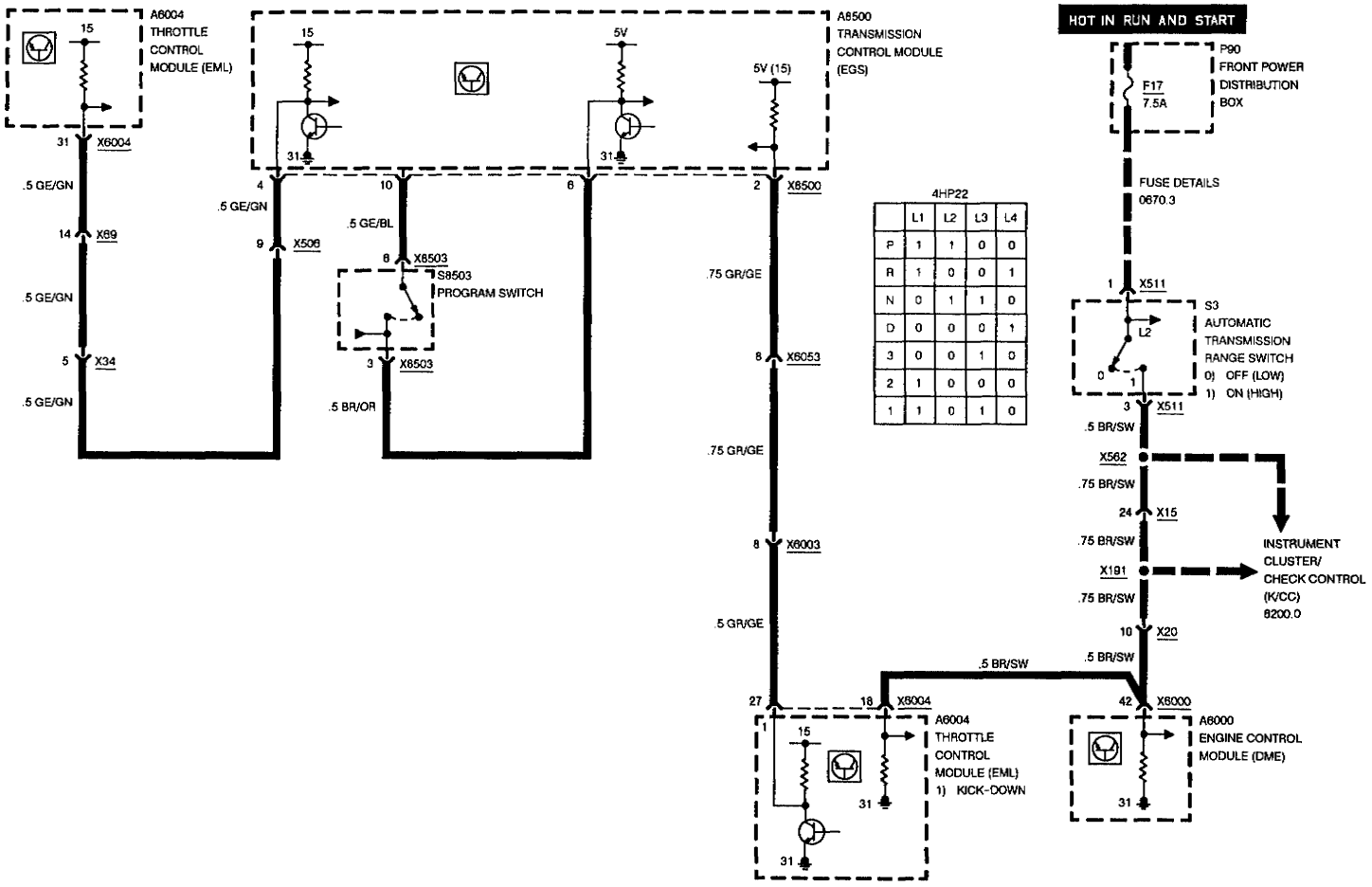





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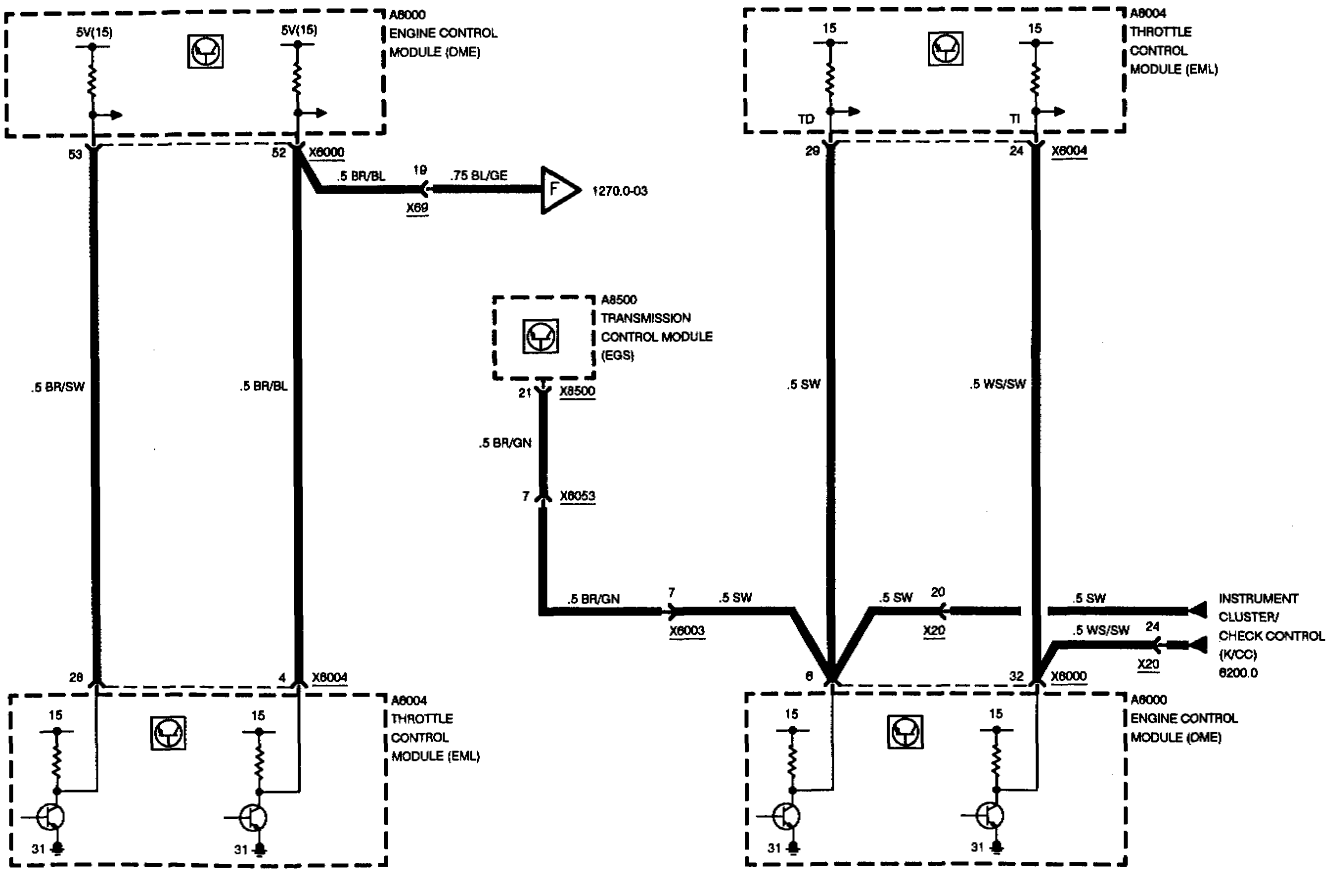



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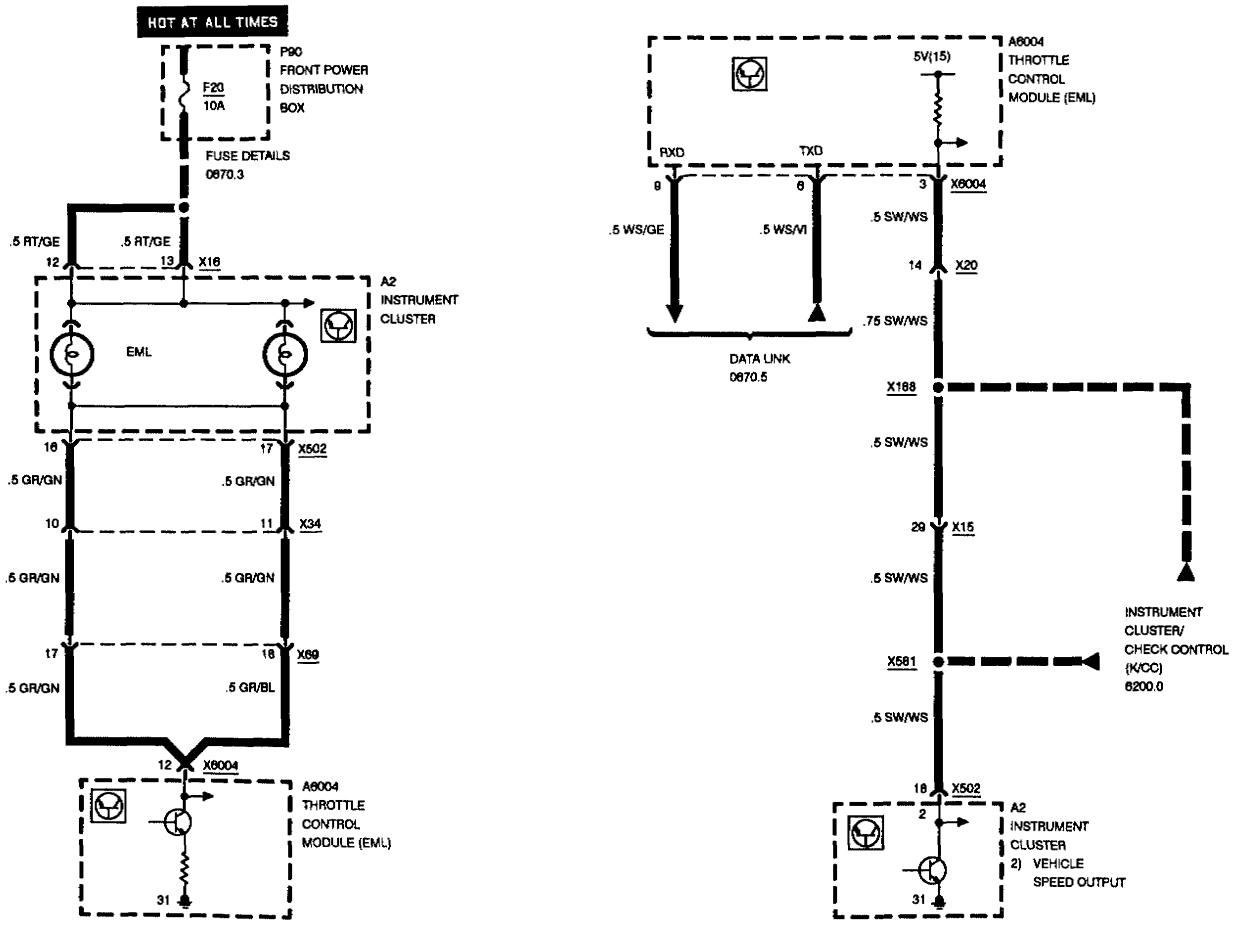
# ELECTRONIC THROTTLE CONTROL (EML 6-CYLINDER)

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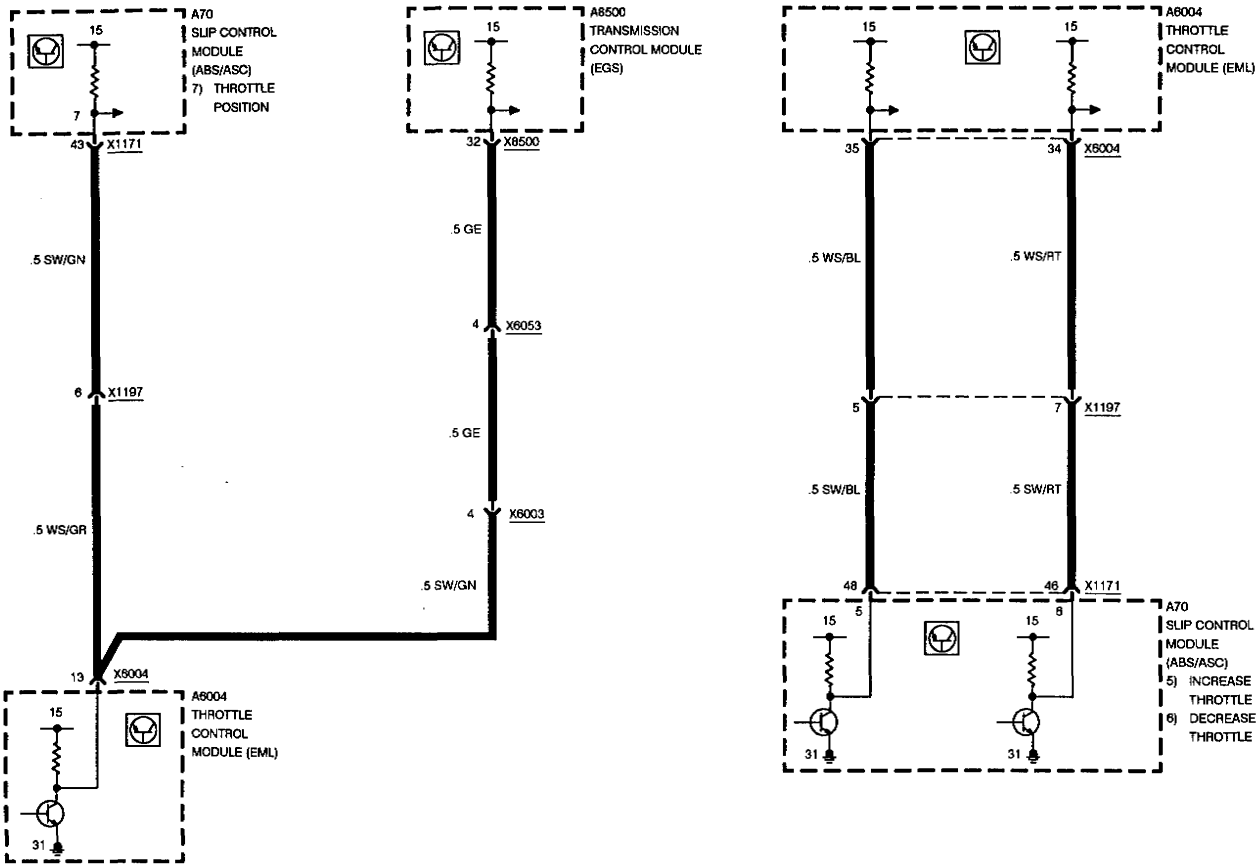

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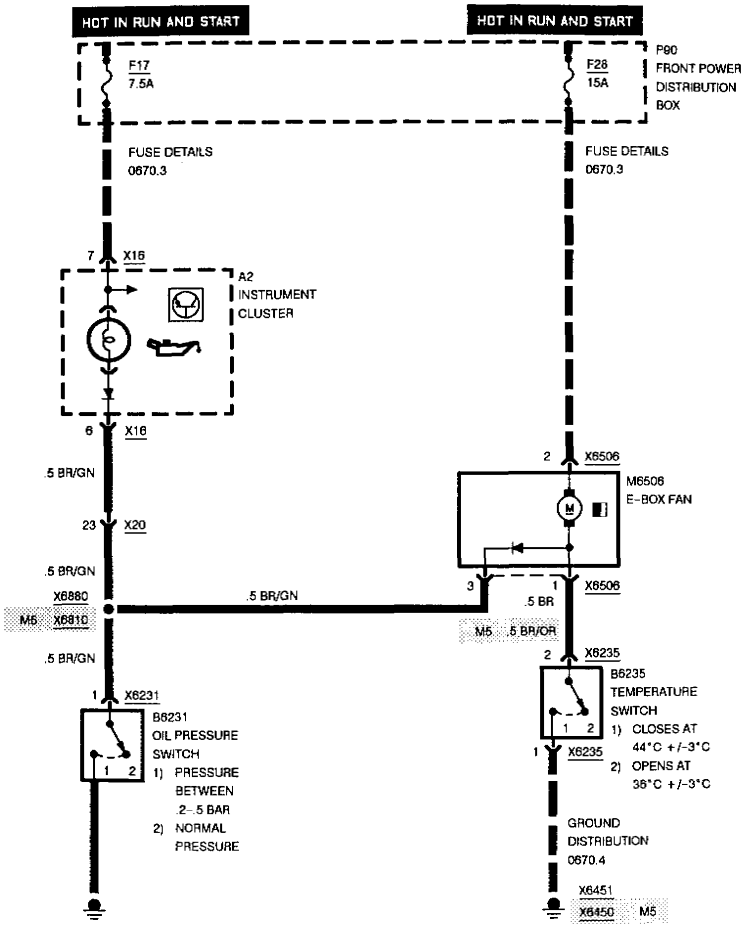
## ENGINE CONTROL SYSTEMS (DME)






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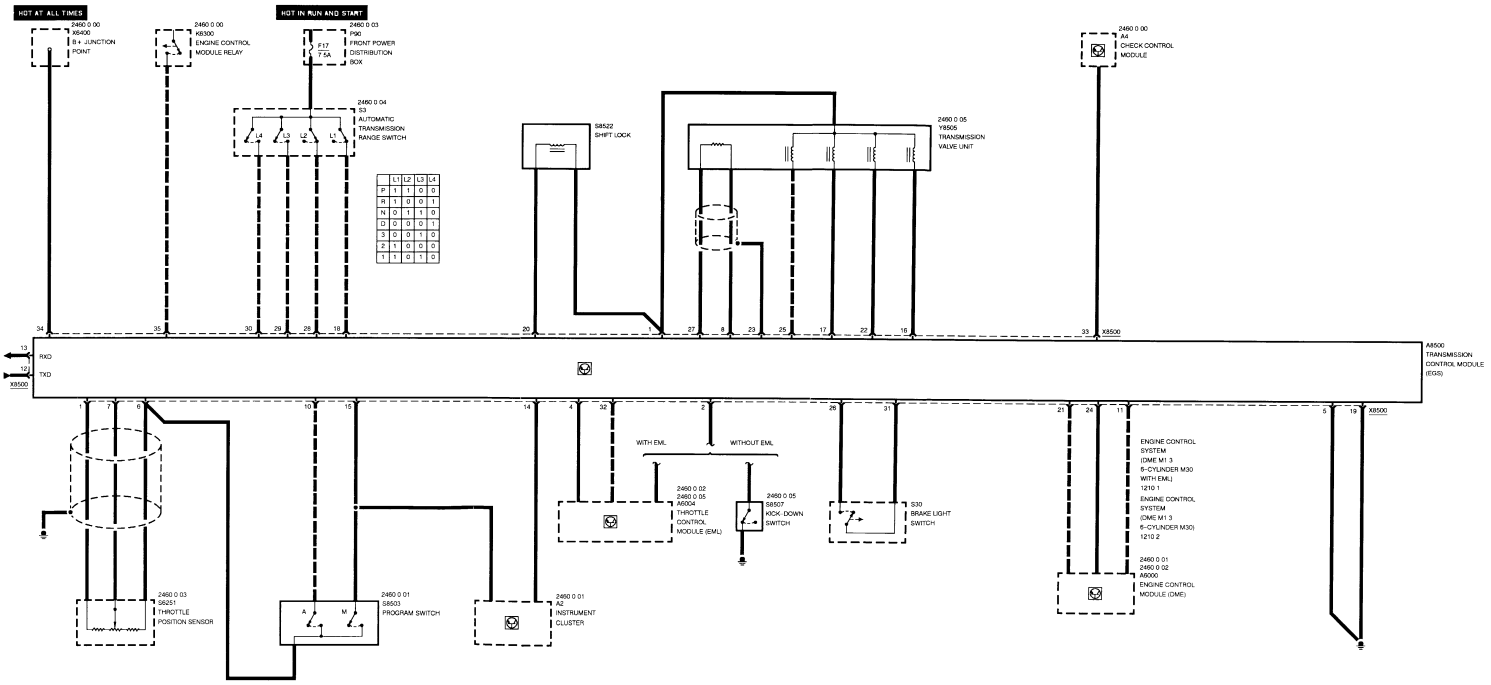
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# ELECTRONIC TRANSMISSION CONTROL (EGS 4HP-22)



## Pin Assignments

### X8500

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | A | Plus supply, solenoid valves, pressure regulators and shift lock solenoid | Gear shift unit | Active high | Component activation | This supply is switched off during mechanical emergency program, i.e. transmission relay in control unit deenergizes. |
| 2 | E | Kick-down | EML control unit (with EML) Kick-down switch (without EML) | Active low | Status display | |
| 3 | | Not used | | | | |
| 4 | E/A | EML control unit signal | EML control unit | Active low | Status display | Only in GS 1.26/1.27 |
| 5 | M | Ground, control unit | Ground | | | |
| 6 | A | Ground, program button | Program button/throttle switch | | | |
| 7 | E | Throttle signal | Throttle switch | Analog | Status display | According to pedal position |
| 8 | E | Output speed n-ab (+) | Gearshift unit | | Status display | |
| 9 | A | Voltage supply, throttle potentiometer | Throttle switch | | | DK (+) only without EML |
| 10 | E | A-program signal | Program button | Active low | Status display | Only in GS 1.26/1.27 |
| 11 | E | Fuel consumption display (tl signal) | DME control unit | | Status display | |
| 12 | E/A | TxD | | | | |
| 13 | E | RxD | | | | |



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| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 14 | A | Program signal | Instrument cluster | | Status display | |
| 15 | E/A | M-program signal | Program button, instrument cluster | | Status display | |
| 16 | A | Solenoid valve 1 | Gearshift unit | Active low | Component activation | |
| 17 | A | Solenoid valve, pressure regulation | Gearshift unit | Current control | Component activation | |
| 18 | E | Position switch L1 | Selector lever | Active high | Status display | |
| 19 | M | Ground, control unit | Ground | | | |
| 20 | A | Lifting solenoid, shift-lock | Shift-lock solenoid | Active low | Component activation | Only in GS 1.22/E7 regulation |
| 21 | E | Engine speed n-mot (TR signal) | DME control unit | | Status display | |
| 22 | A | Solenoid valve 2 | Gearshift unit | Active low | Component activation | |
| 23 | A | Shield speed sensor | | Ground | | |
| 24 | A | Engine intervention | DME control unit | Active low | Component activation | |
| 25 | A | Solenoid valve, torque converter clutch | Gearshift unit | Active low | Component activation | |
| 26 | E | Brake test switch signal | Brake light switch | Active high | | Only in GS 1.22, 1.27 |
| 27 | E | Output speed n-ab (-) | Gearshift unit | | Status display | |
| 28 | E | Position switch L2 | Selector lever | Active high | Status display | |
| 29 | E | Position switch L3 | Selector lever | Active high | Status display | |
| 30 | E | Position switch L4 | Selector lever | Active high | Status display | |
| 31 | A | Brake test switch | Brake light switch | | | |
| 32 | E | Set throttle signal | EML control unit | Pulse width modulated | Status display | Correspond to accelerator pedal position |
| 33 | A | Fault display | Check control module (A4) | Active high | | |

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# ELECTRONIC TRANSMISSION CONTROL (EGS 4HP-22)



| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 34 | E | Voltage supply terminal 30 | Battery | Battery voltage | | Continuous supply |
| 35 | E | Voltage supply | DME main relay | | | Holding circuit DME |

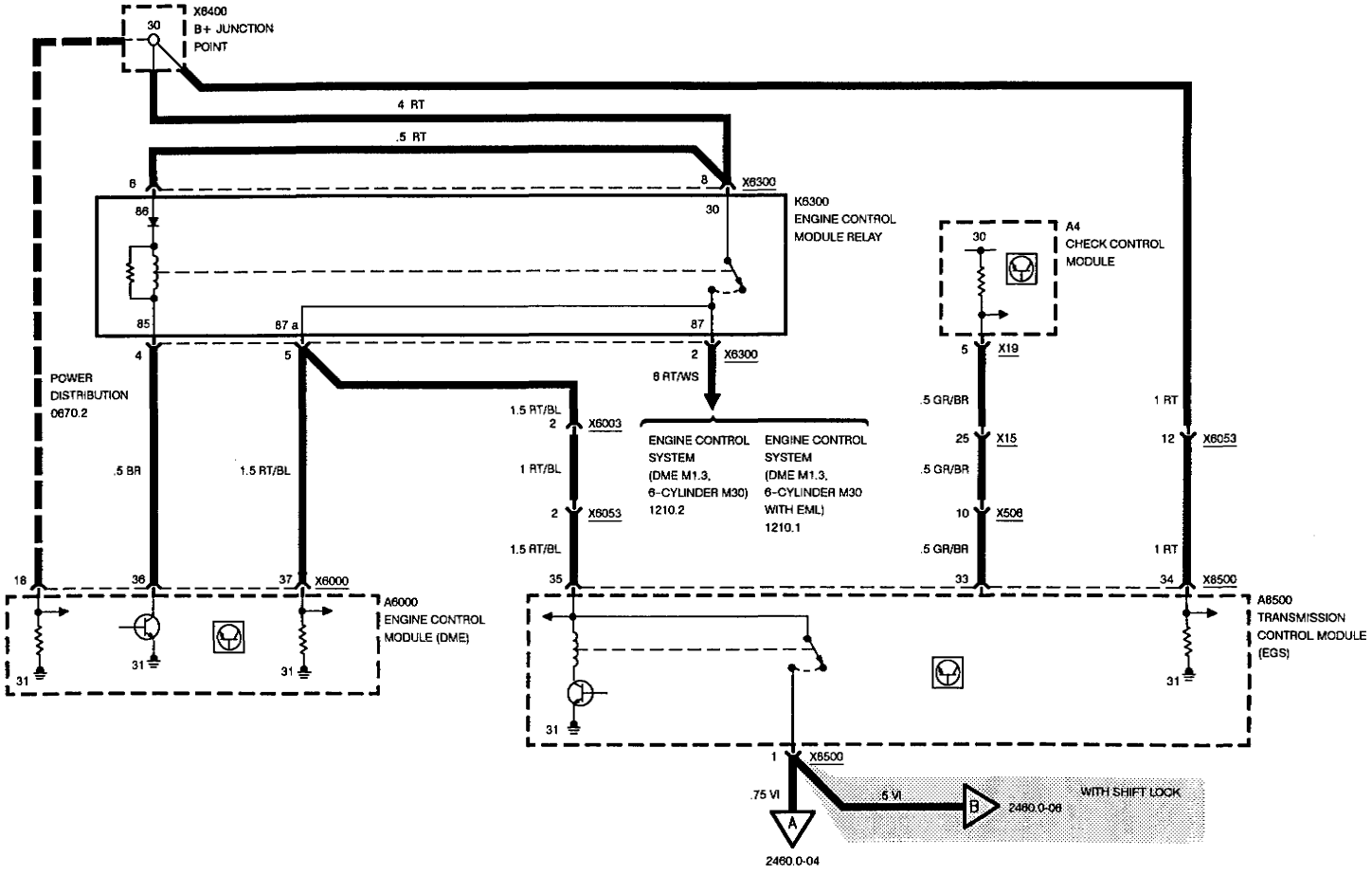




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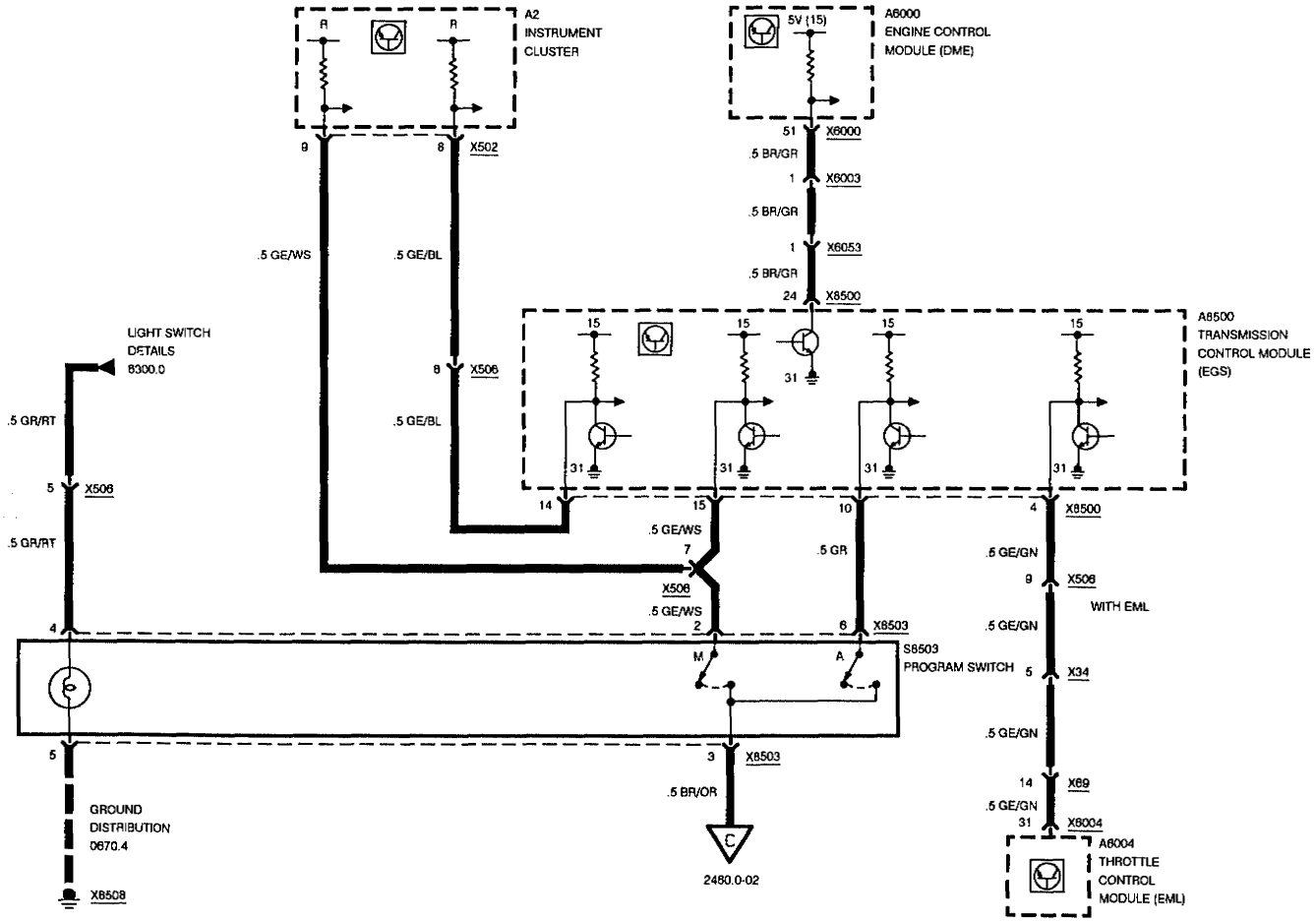





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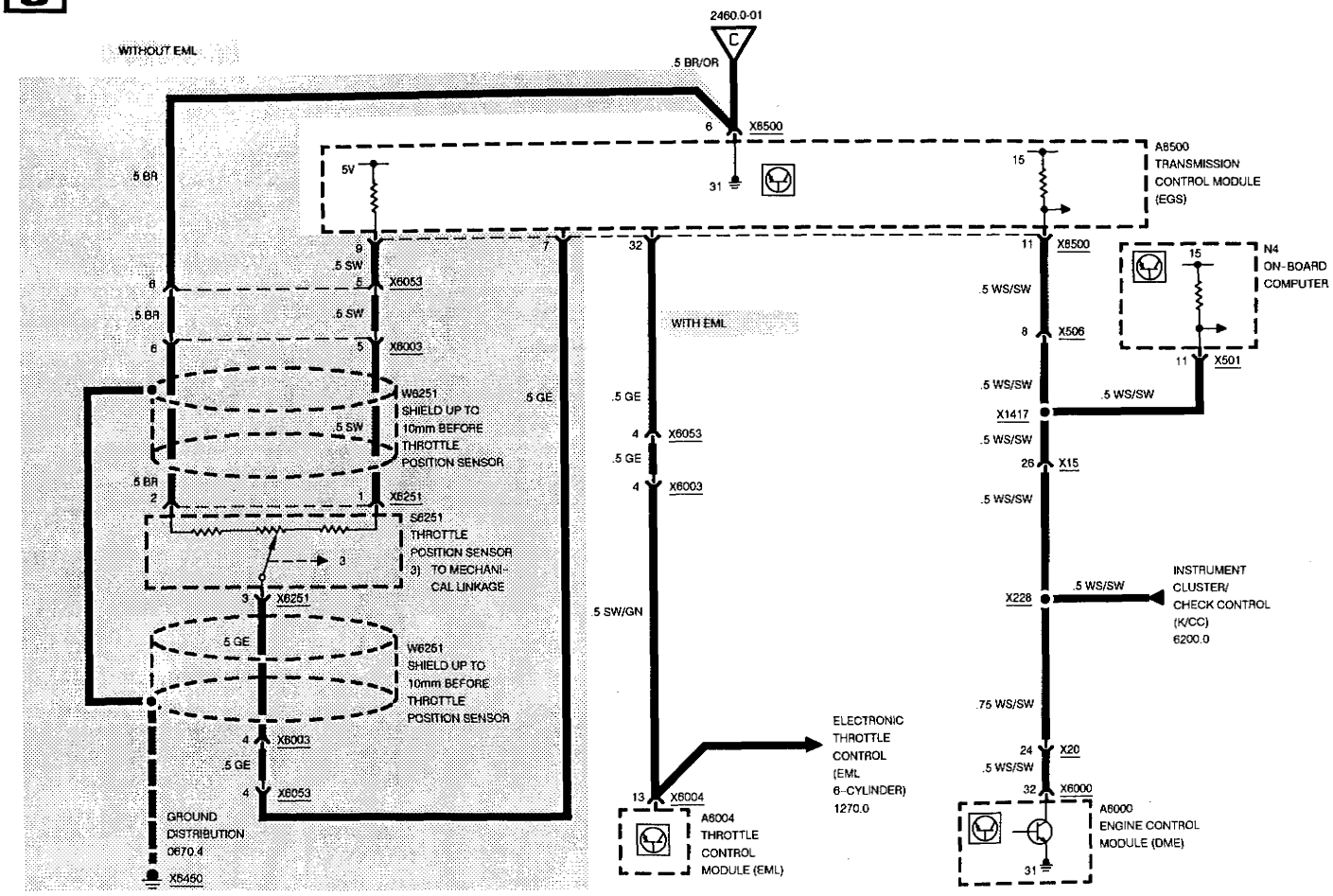
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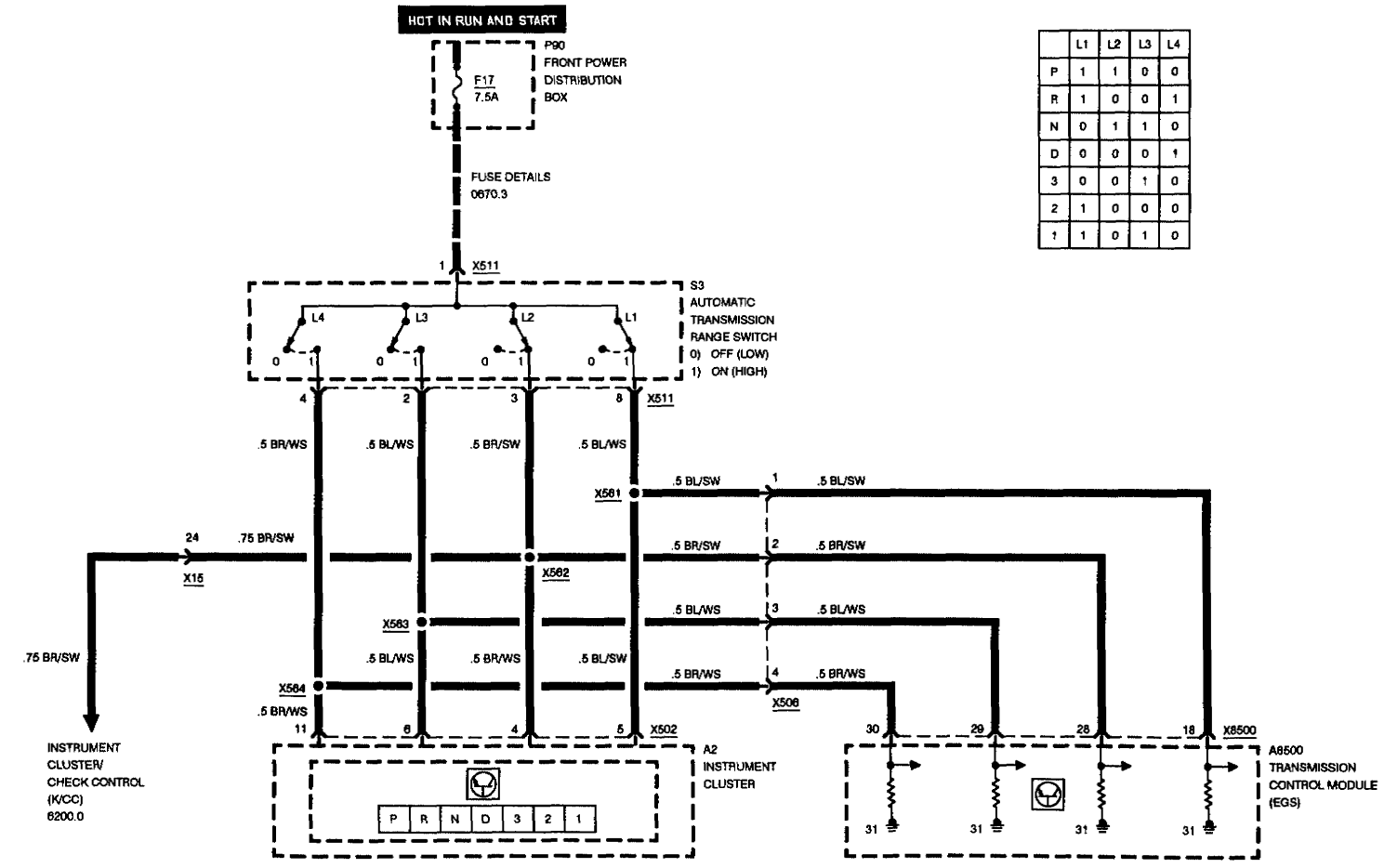

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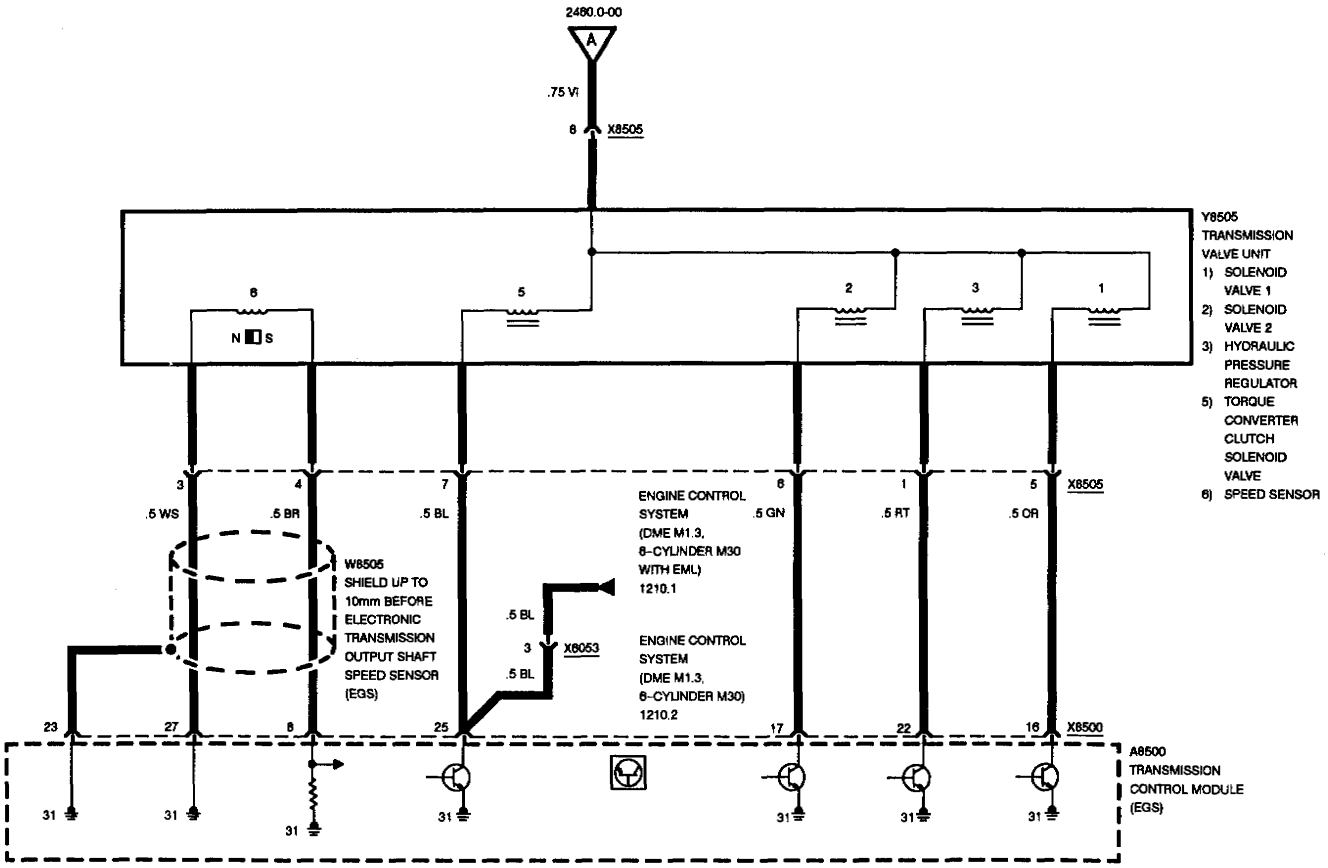



| | L1 | L2 | L3 | L4 |
|---|---|---|---|---|
| P | 1 | 1 | 0 | 0 |
| R | 1 | 0 | 0 | 1 |
| N | 0 | 1 | 1 | 0 |
| D | 0 | 0 | 0 | 1 |
| 3 | 0 | 0 | 1 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 1 | 1 | 0 | 1 | 0 |

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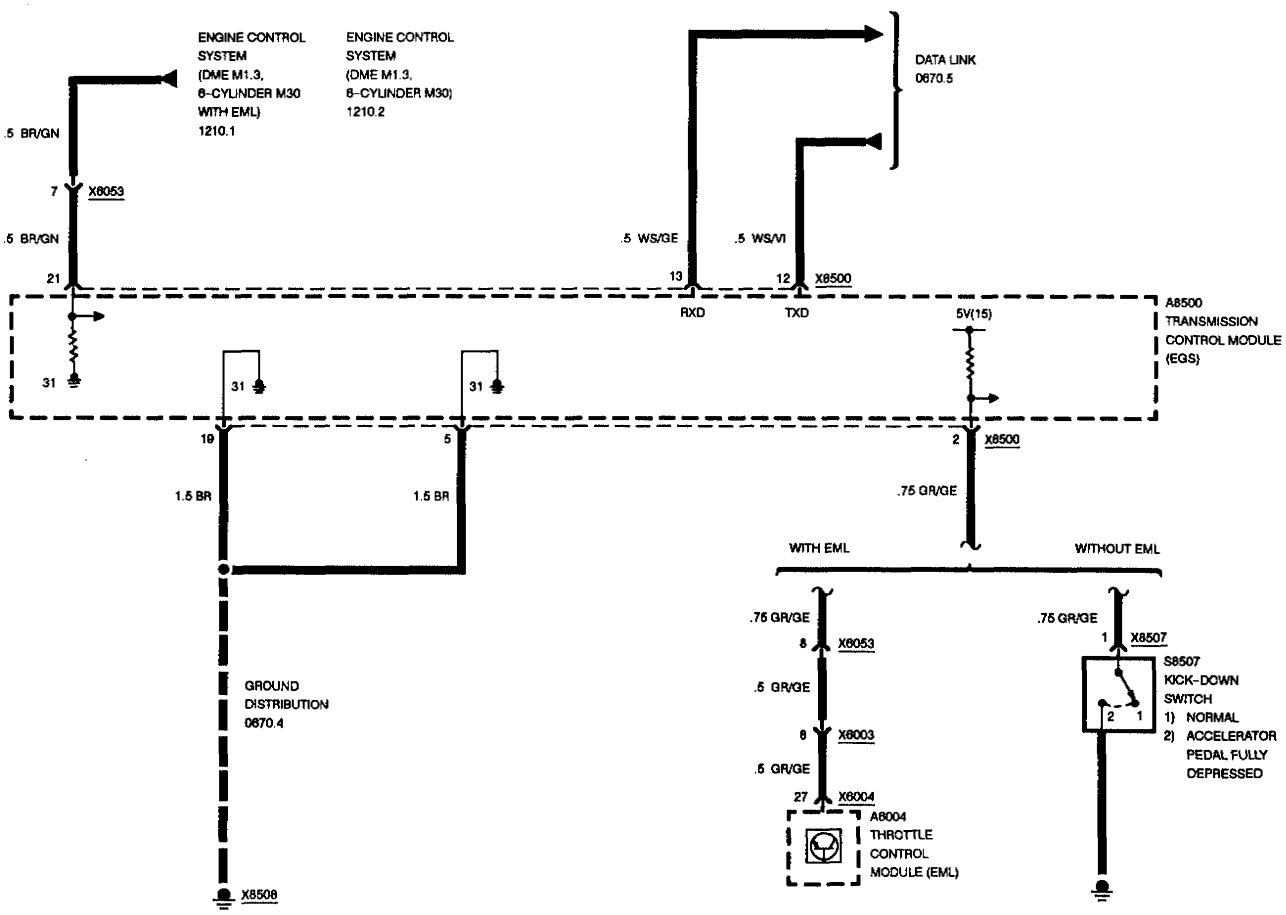





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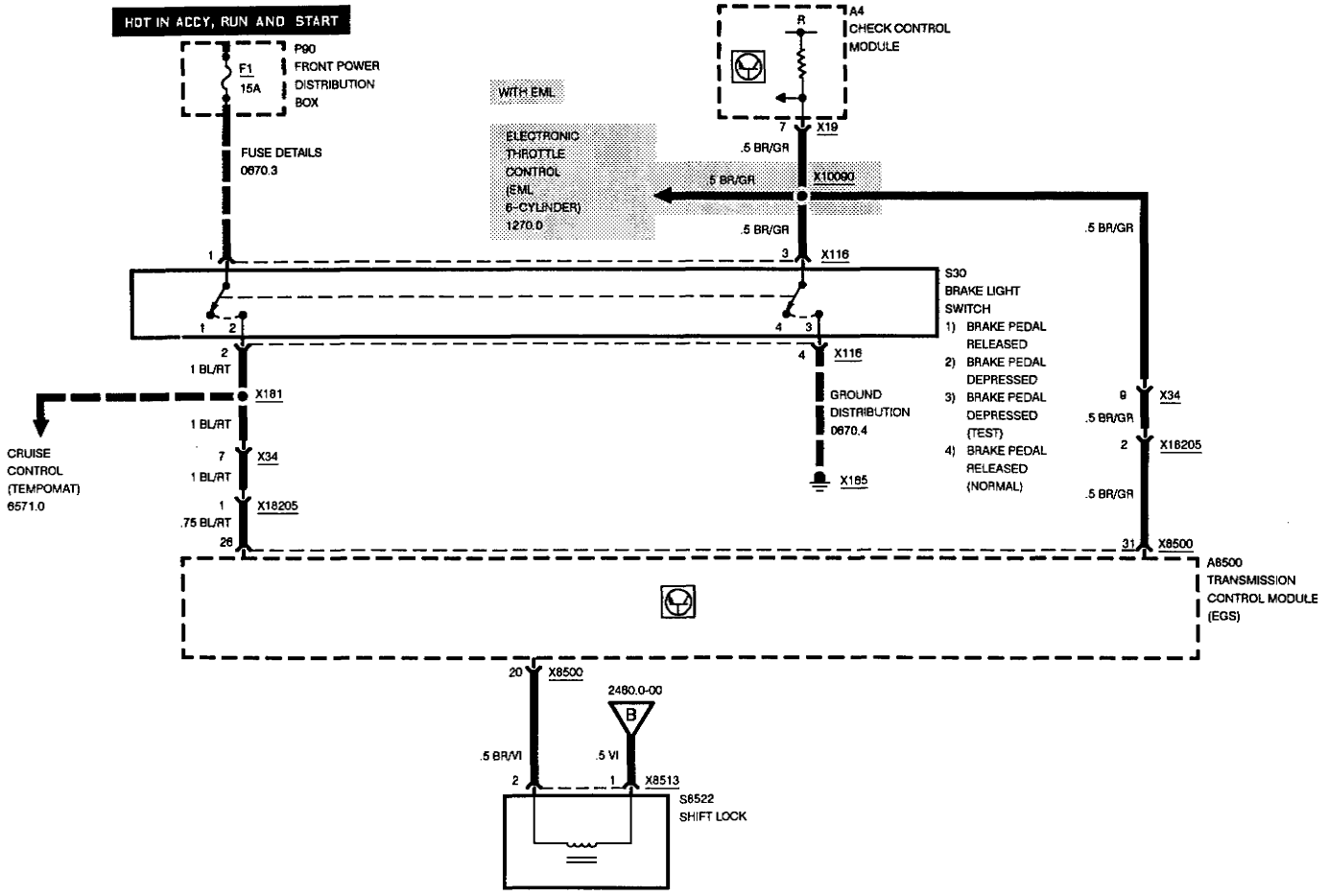





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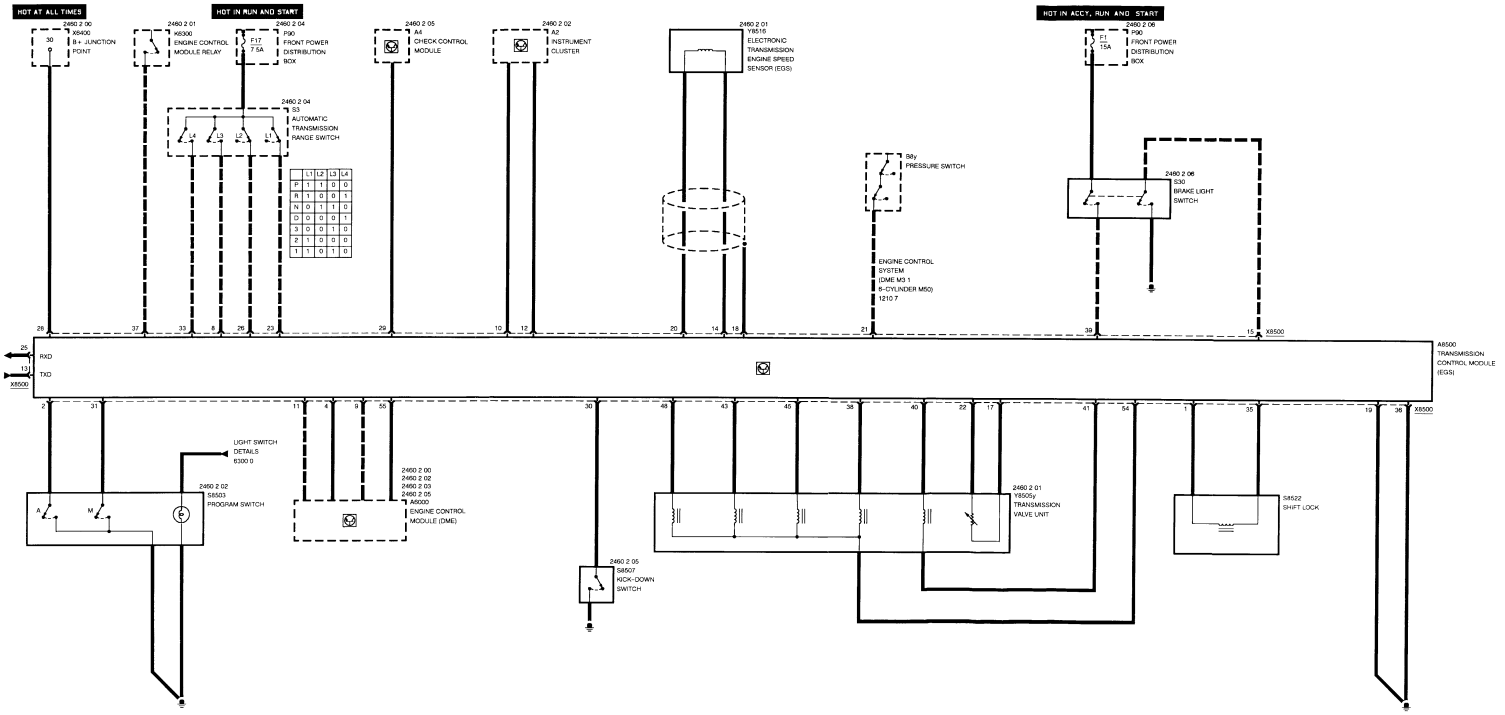
## SHIFT LOCK






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## Pin Assignments

### X8500

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | A | Shift lock solenoid control | Shift lock solenoid | | | |
| 2 | E | Automatic mode signal | Program switch | Ground | | |
| 3 | | Not used | | | | |
| 4 | A | Ignition timing intervention | DME control unit | Ground | | Active only during gear shifts |
| 5 | | Not used | | | | |
| 6 | | Not used | | | | |
| 7 | | Not used | | | | |
| 8 | E | Gear range signal L3 | Auto. trans. range switch | | | |
| 9 | E | ti Measuring signal (KVA) | DME control unit | Square-wave signal | Multimeter function pulse duration | Oscilloscope |
| 10 | A | Automatic mode indicator | Instrument cluster | | | |
| 11 | E | Engine speed signal (TR) | DME control unit | Ground with superimposed signal | | Can only be measured with crankshaft rotating |
| 12 | A | Manual mode indicator | Instrument cluster | | | |
| 13 | E/A | Diagnosis TxD | Diagnostic socket | | | |
| 14 | E | Transmission output shaft speed (-) | EGS RPM sensor | | | |
| 15 | E | Switch test signal | Brake light test switch | | | |



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# ELECTRONIC TRANSMISSION CONTROL (EGS A4S 310R)



| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 16 | | Not used | | | | |
| 17 | E | Analog ground (oil temperature sensor) | Transmission gear shift unit | | | |
| 18 | A | Shield, RPM sensor | EGS RPM sensor | Ground | | |
| 19 | M | Ground | Ground | Ground | | |
| 20 | E | Transmission output shaft speed (+) | EGS RPM sensor | | | |
| 21 | E | A/C compressor ON | Pressure switch | | | |
| 22 | E | Oil temperature signal (+) | Transmission gear shift unit | NTC | | |
| 23 | E | Gear range signal L1 | Auto. trans. range switch | | | |
| 24 | | Not used | | | | |
| 25 | E | Diagnosis RxD | Diagnostic socket | | | |
| 26 | E | Gear range signal L2 | Auto. trans. range switch | | | |
| 27 | | Not used | | | | |
| 28 | E | Terminal 30 voltage | Terminal 30 | | | |
| 29 | A | Fault indicator signal | Check control module | | | |
| 30 | E | Kick down signal | Kick down switch | Ground | | |
| 31 | E | Manual mode signal | Program switch | Ground | | |
| 32 | | Not used | | | | |
| 33 | E | Gear range signal L4 | Auto. trans. range switch | | | |
| 34 | | Not used | | | | |
| 35 | A | Solenoid ground | Shift lock solenoid | | | |
| 36 | M | Ground | Ground | Ground | | |
| 37 | E | Voltage supply | Relay 2, DME | | | |

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# ELECTRONIC TRANSMISSION CONTROL (EGS A4S 310R)

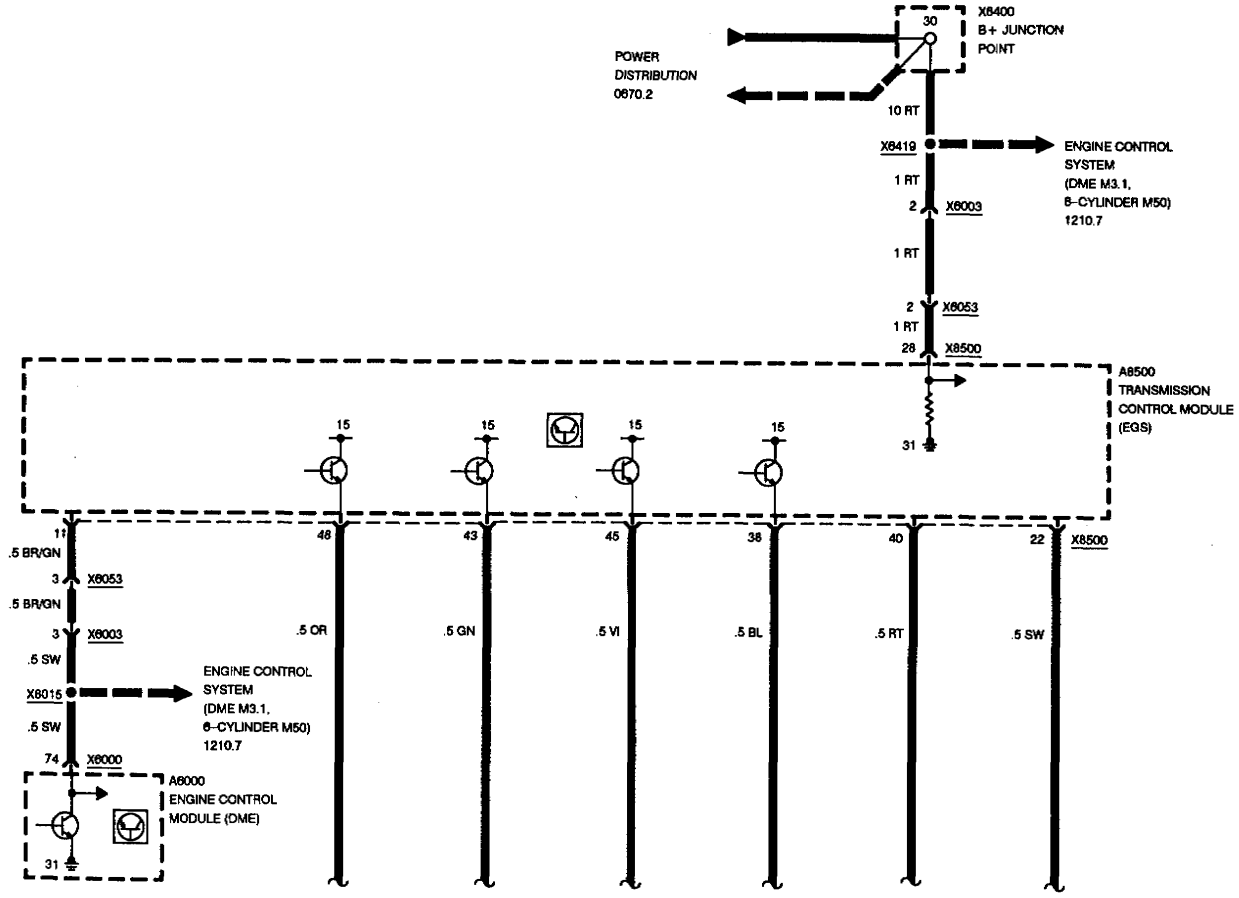


| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 38 | A | Torque converter clutch solenoid control | Transmission gear shift unit | | | |
| 39 | E | Brake pedal status | Brake light test switch | | | |
| 40 | A | Pressure regulator solenoid control (+) | Transmission gear shift unit | | | |
| 41 | A | Pressure regulator solenoid control (-) | Transmission gear shift unit | | | |
| 42 | | Not used | | | | |
| 43 | A | Solenoid 2 control (+) | Transmission gear shift unit | | | |
| 44 | | Not used | | | | |
| 45 | A | Band solenoid control (+) | Transmission gear shift unit | | | |
| 46 | | Not used | | | | |
| 47 | | Not used | | | | |
| 48 | A | Solenoid 1 control (+) | Transmission gear shift unit | | | |
| 49 | | Not used | | | | |
| 50 | | Not used | | | | |
| 51 | | Not used | | | | |
| 52 | | Not used | | | | |
| 53 | | Not used | | | | |
| 54 | A | Solenoid ground | Transmission gear shift unit | | | |
| 55 | E | Throttle position signal | DME control unit | Pulse width modulated | | |

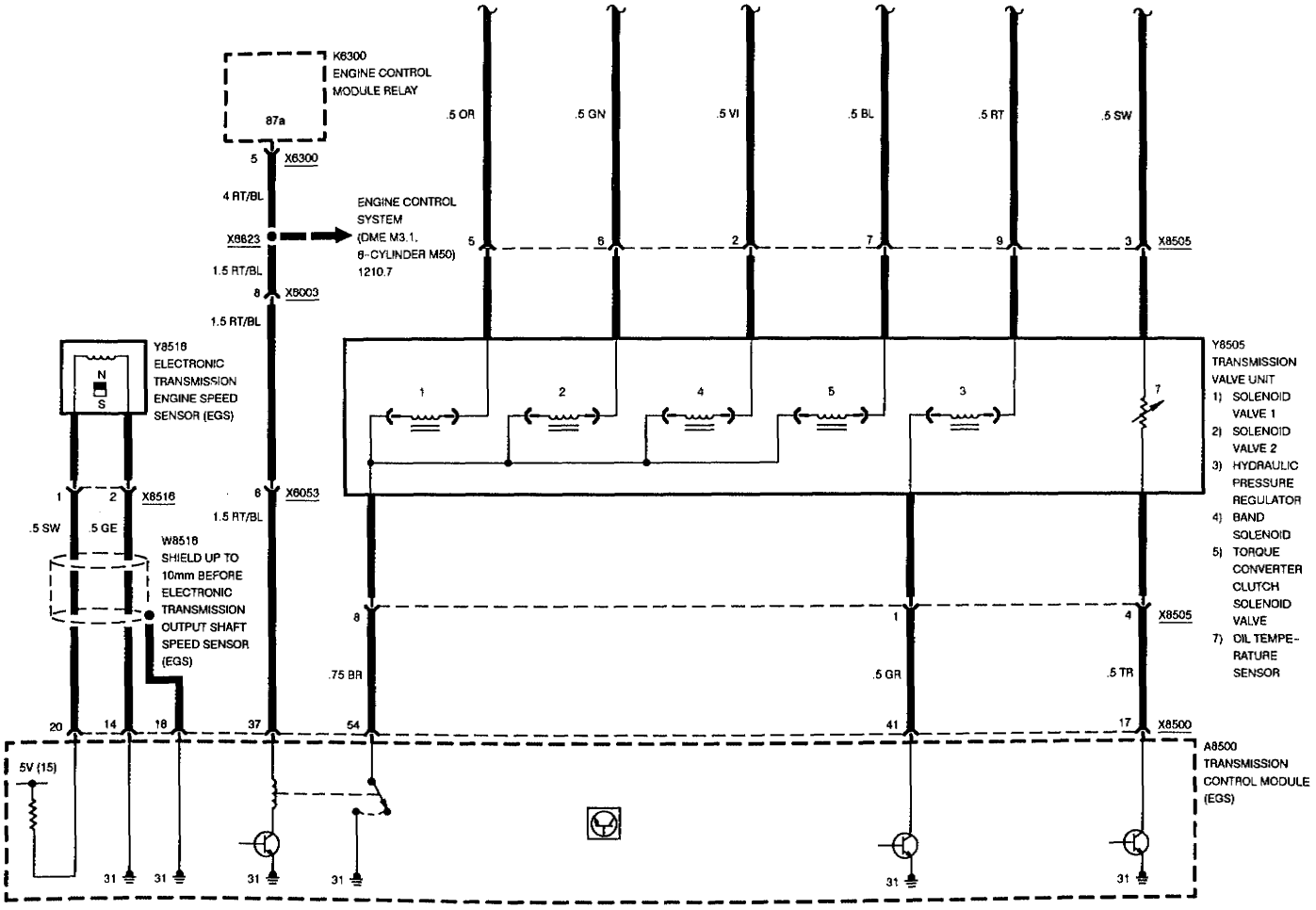
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# ELECTRONIC TRANSMISSION CONTROL (EGS A4S 310R)





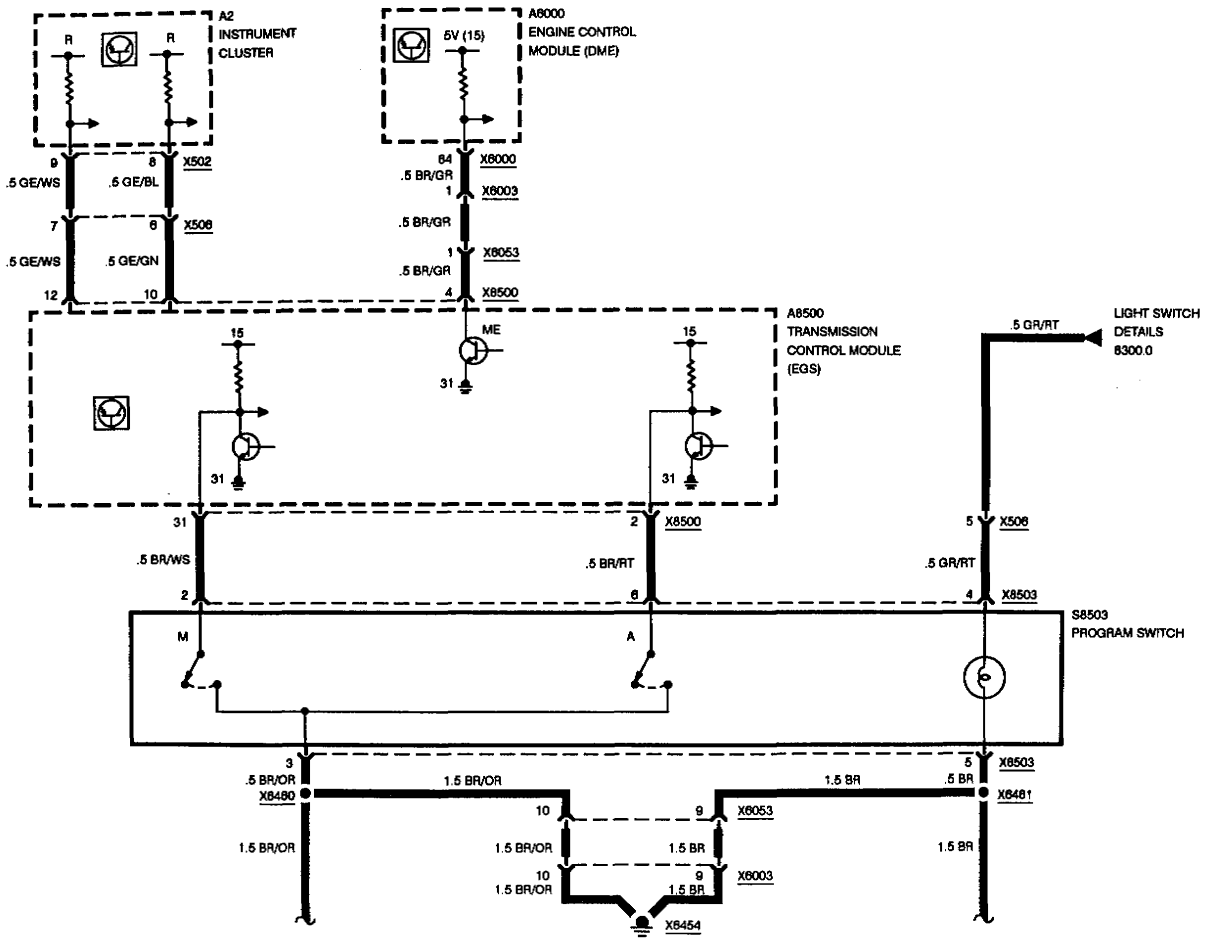

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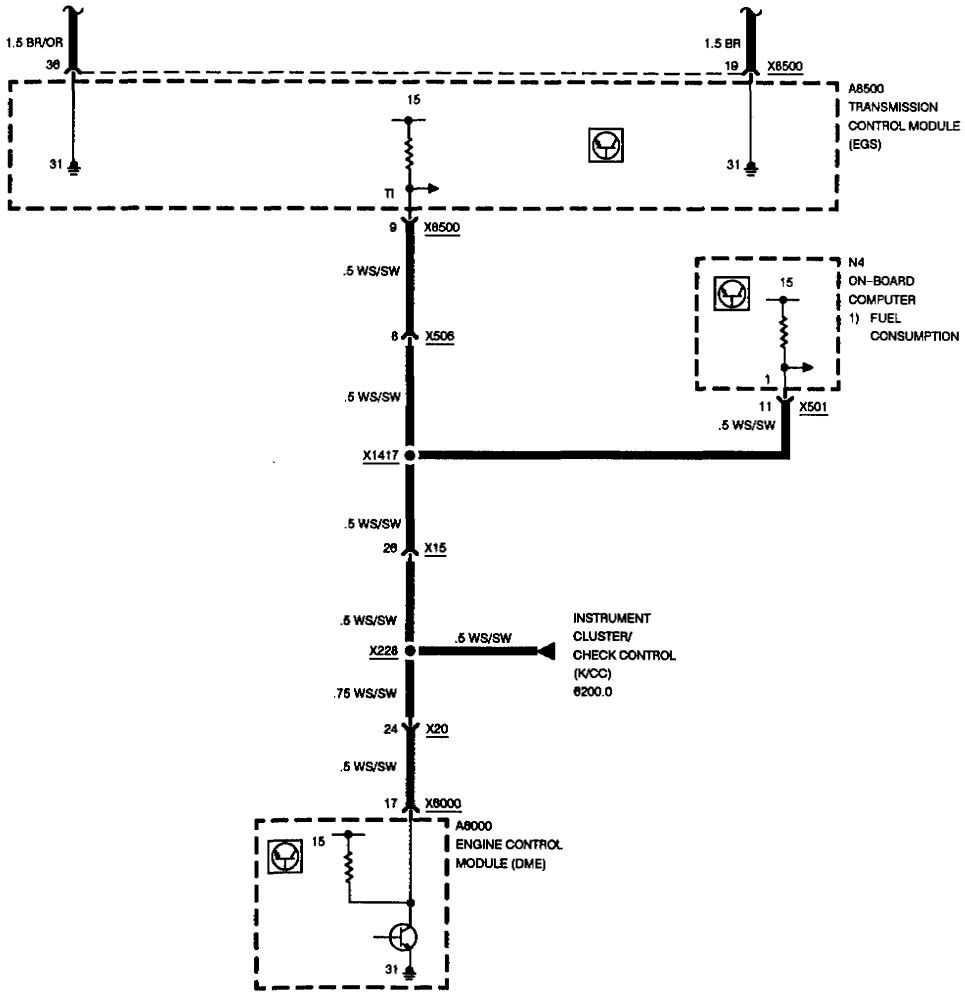

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# ELECTRONIC TRANSMISSION CONTROL (EGS A4S 310R)



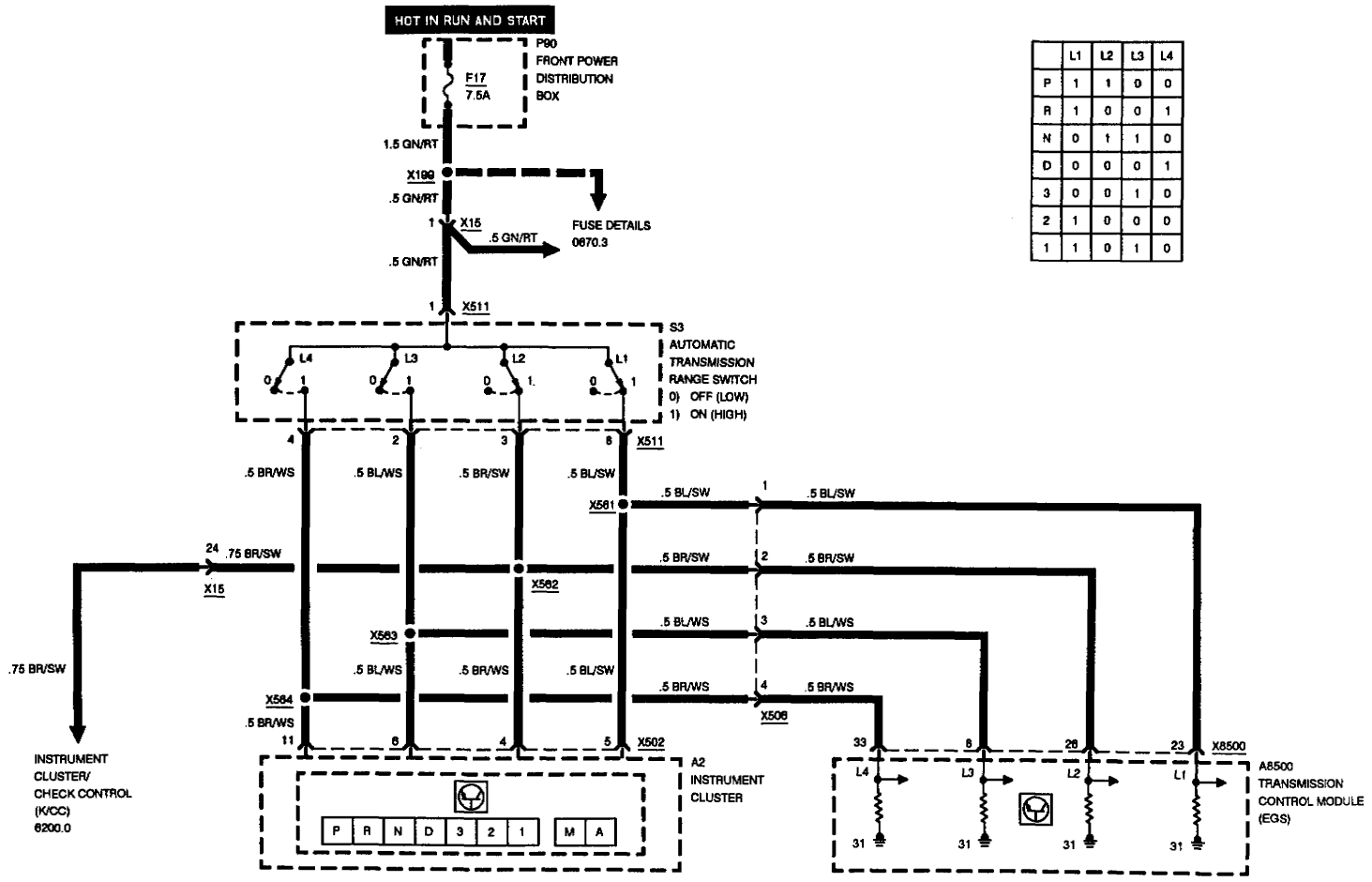



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# ELECTRONIC TRANSMISSION CONTROL (EGS A4S 310R)

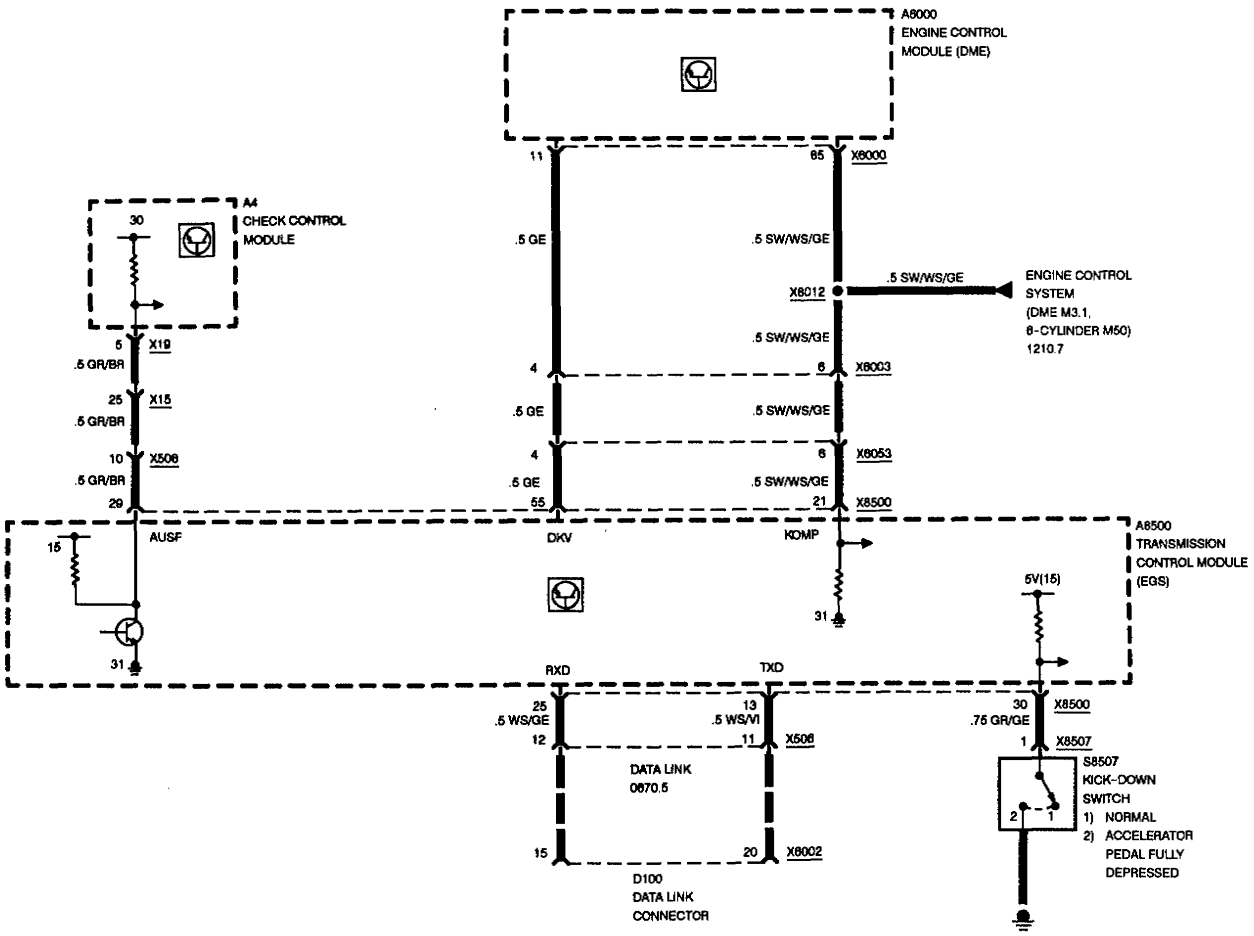



| | L1 | L2 | L3 | L4 |
|---|---|---|---|---|
| P | 1 | 1 | 0 | 0 |
| R | 1 | 0 | 0 | 1 |
| N | 0 | 1 | 1 | 0 |
| D | 0 | 0 | 0 | 1 |
| 3 | 0 | 0 | 1 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 1 | 1 | 0 | 1 | 0 |

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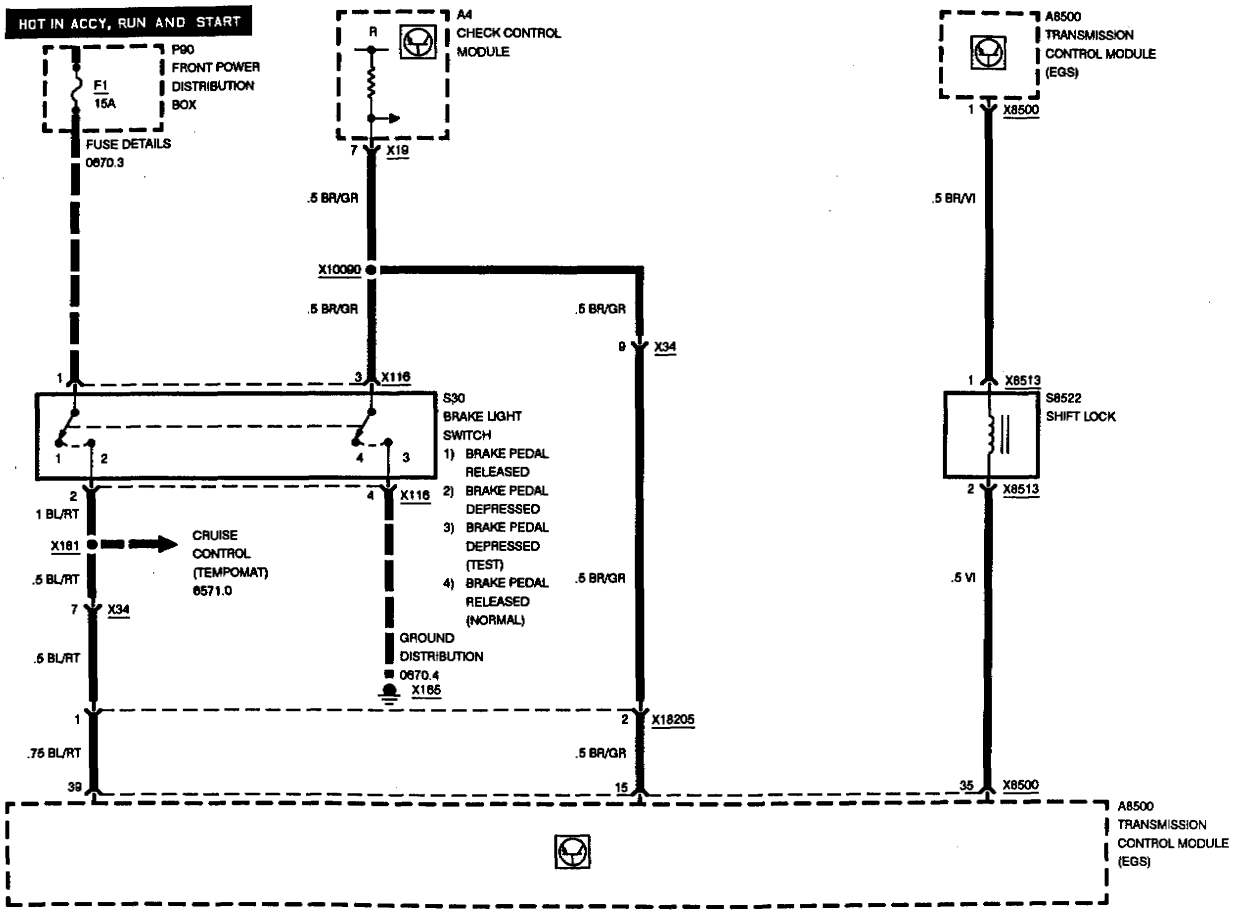
# ELECTRONIC TRANSMISSION CONTROL (EGS A4S 310R)






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# ELECTRONIC TRANSMISSION CONTROL (EGS A4S 310R)

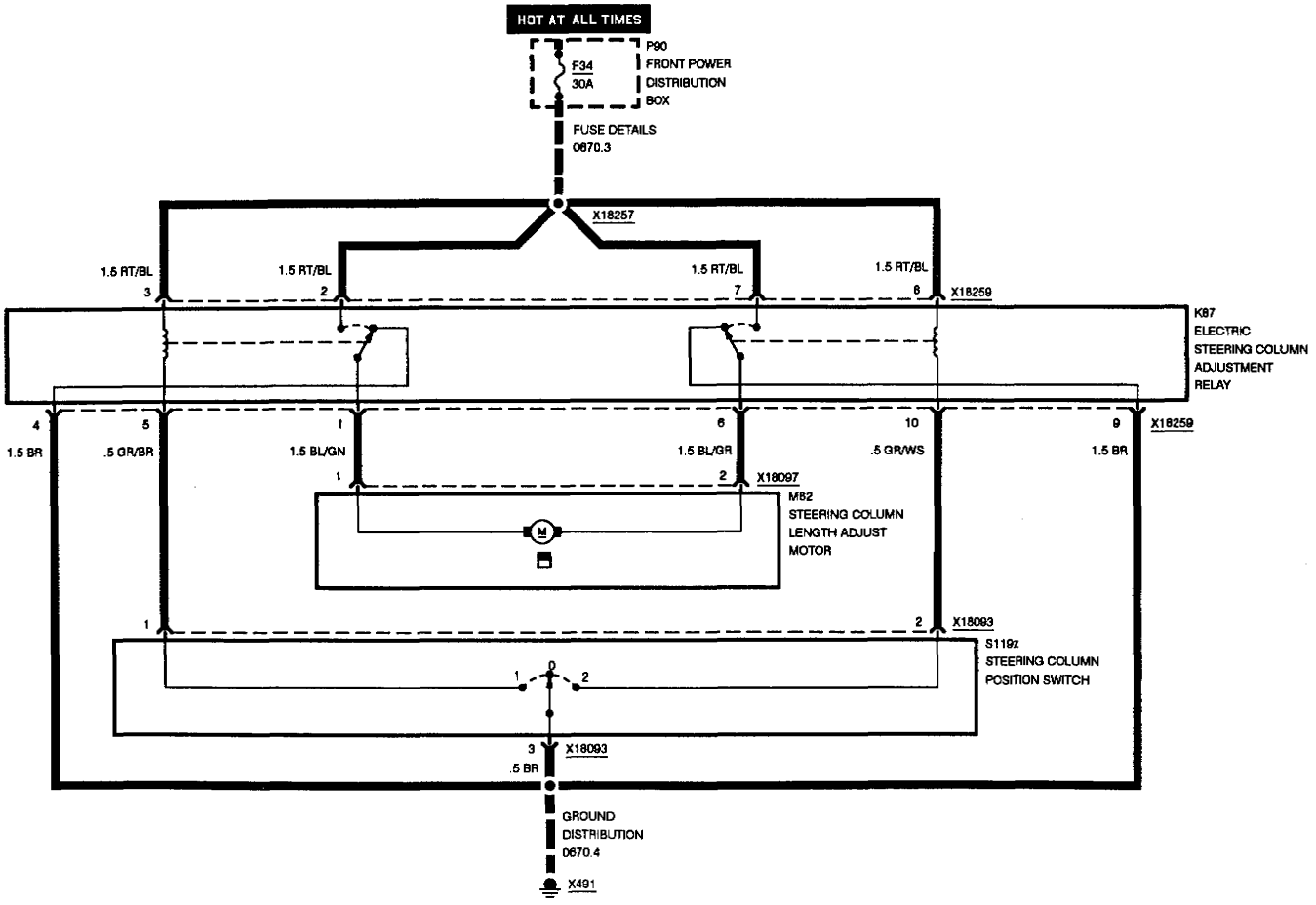





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# ELECTRIC STEERING COLUMN ADJUSTMENT

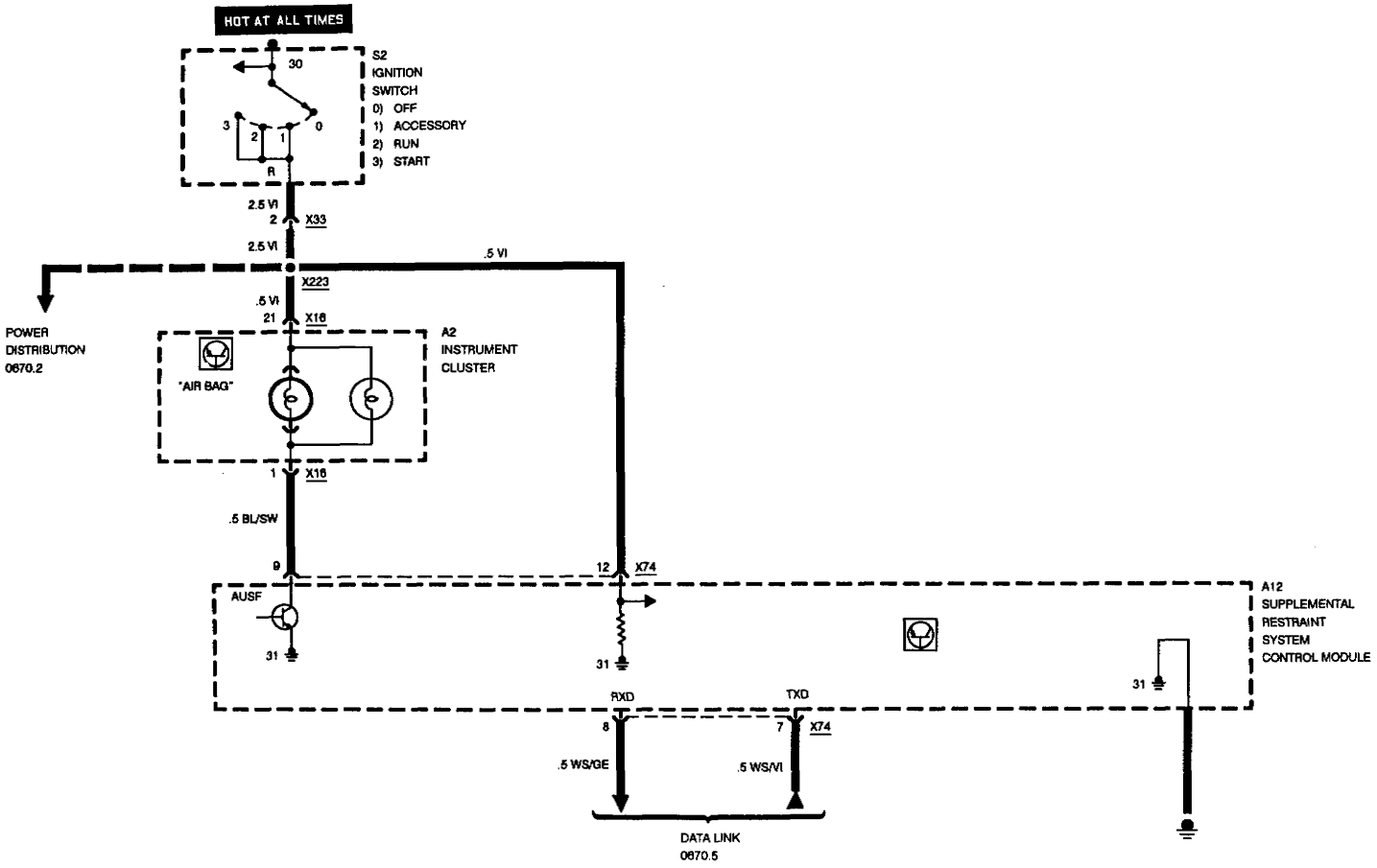





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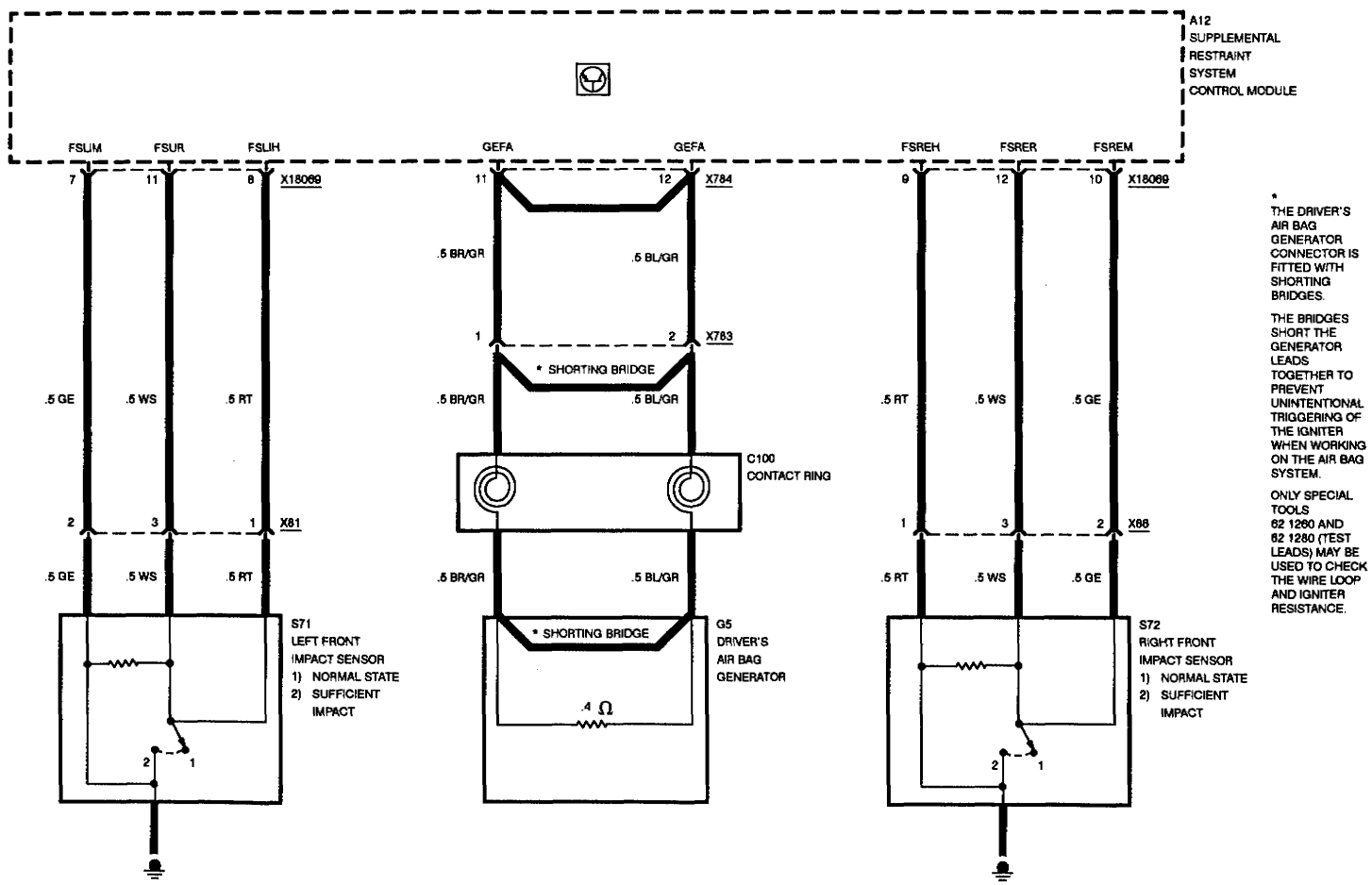
# SUPPLEMENTAL RESTRAINT SYSTEM (AIR BAG)






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# SUPPLEMENTAL RESTRAINT SYSTEM (AIR BAG)




* THE DRIVER'S AIR BAG GENERATOR CONNECTOR IS FITTED WITH SHORTING BRIDGES.

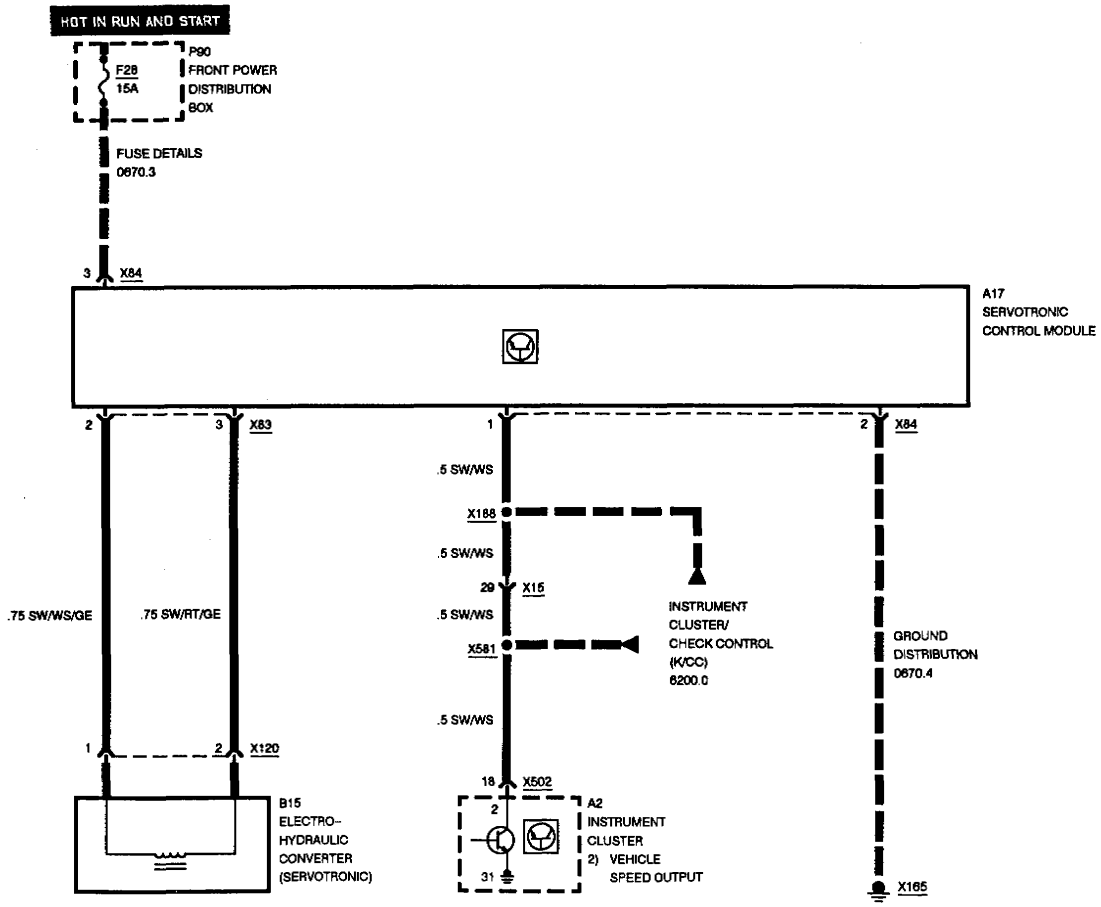
THE BRIDGES SHORT THE GENERATOR LEADS TOGETHER TO PREVENT UNINTENTIONAL TRIGGERING OF THE IGNITER WHEN WORKING ON THE AIR BAG SYSTEM.

ONLY SPECIAL TOOLS 62 1260 AND 62 1280 (TEST LEADS) MAY BE USED TO CHECK THE WIRE LOOP AND IGNITER RESISTANCE.

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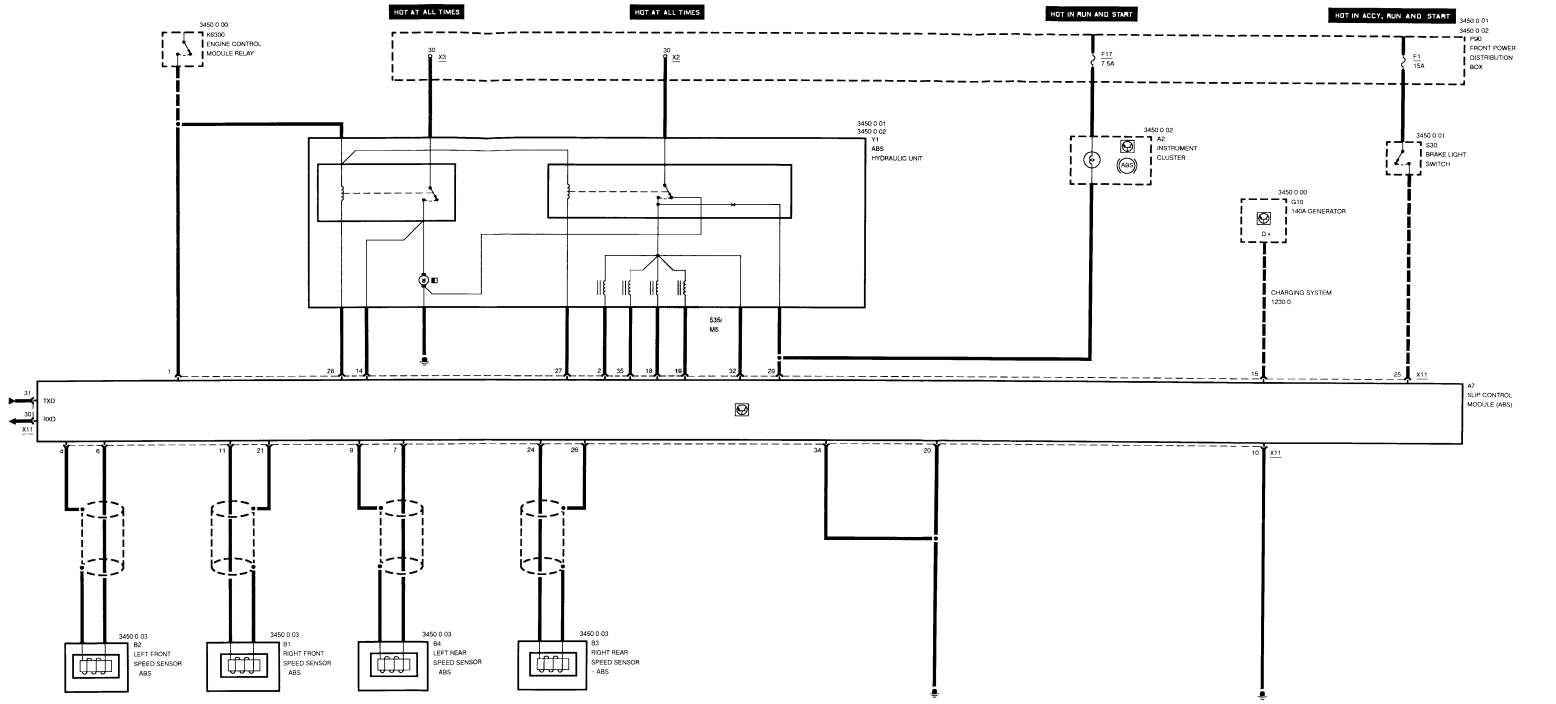
# POWER ASSIST STEERING (SERVOTRONIC)



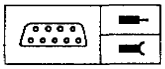



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## Pin Assignments

### X11

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | E | Battery voltage | DME Relay | approx. 12 V | | |
| 2 | A | Left front solenoid control | Front left solenoid valve | Ground | | |
| 3 | | Not used | | | | |
| 4 | E | Ground | Front left speed sensor | Ground | | |
| 5 | | Not used | | | | |
| 6 | E | Speed sensor signal | Front left speed sensor | | | |
| 7 | E | Speed sensor signal | Rear left speed sensor | | | |
| 8 | | Not used | | | | |
| 9 | E | Ground | Rear left speed sensor | Ground | | |
| 10 | M | Ground, control unit | Ground | Ground | | |
| 11 | E | Speed sensor signal | Front right speed sensor | | | |
| 12 | | Not used | | | | |
| 13 | | Not used | | | | |
| 14 | E | Pump relay monitor | Pump relay | | | |
| 15 | E | Battery voltage | Alternator | approx. 12 V | | |
| 16 | | Not used | | | | |
| 17 | | Not used | | | | |
| 18 | A | Rear left solenoid control | Rear left solenoid valve | Ground | | |
| 19 | A | Rear right solenoid control | Rear right solenoid valve | Ground | | 535i, M5 |

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# ANTILOCK BRAKE SYSTEM (ABS)

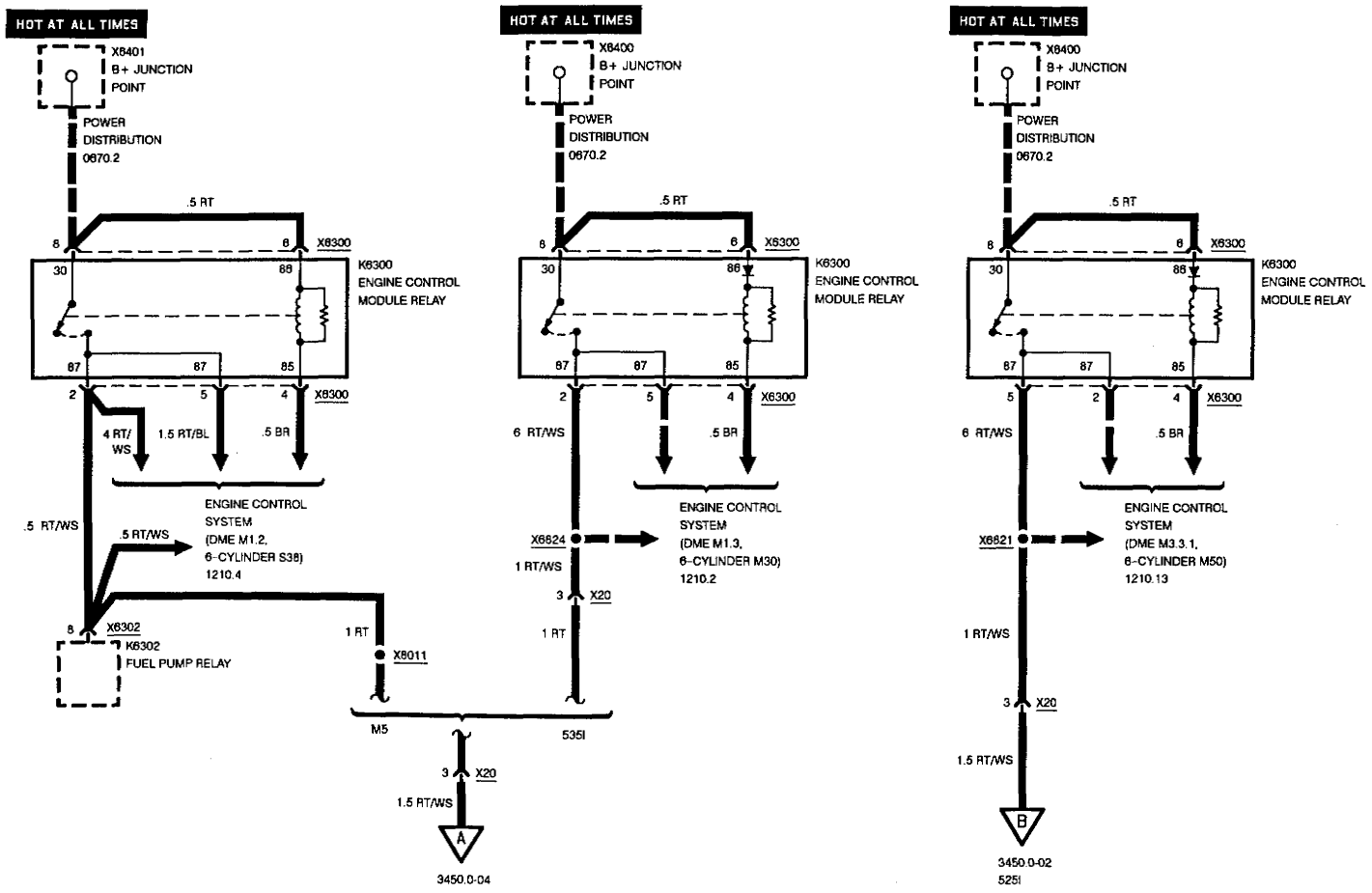


| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 20 | M | Ground, control unit | Ground | Ground | | |
| 21 | E | Ground | Front right speed sensor | Ground | | |
| 22 | | Not used | | | | |
| 23 | | Not used | | | | |
| 24 | E | Speed sensor signal | Rear right speed sensor | | | |
| 25 | E | Brake pedal status | Brake light switch | | | |
| 26 | E | Ground | Rear right speed sensor | Ground | | |
| 27 | A | Valve relay control | Valve relay | Ground | | |
| 28 | A | Pump relay control | Pump relay | Ground | | |
| 29 | A | Warning lamp control | Instrument cluster | Ground | | |
| 30 | A | RxD | Diagnostic connector | | | |
| 31 | E | TxD | Diagnostic connector | | | |
| 32 | E | Display, valve relay | Valve relay | | | |
| 33 | | Not used | | | | |
| 34 | M | Ground, control unit | Ground | Ground | | |
| 35 | A | Front right solenoid control | Front right solenoid valve | Ground | | |

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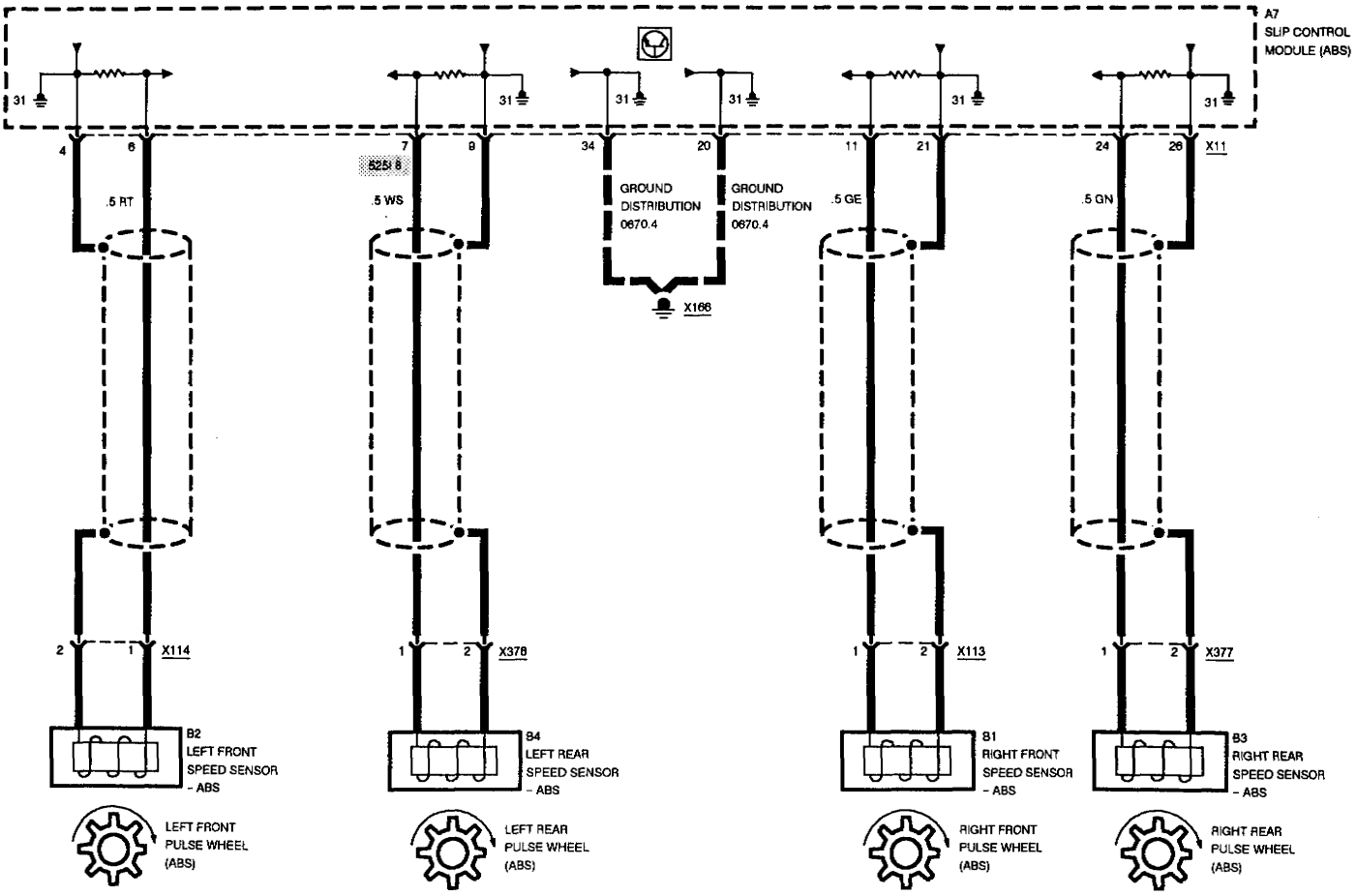
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# SLIP CONTROL (ABS)



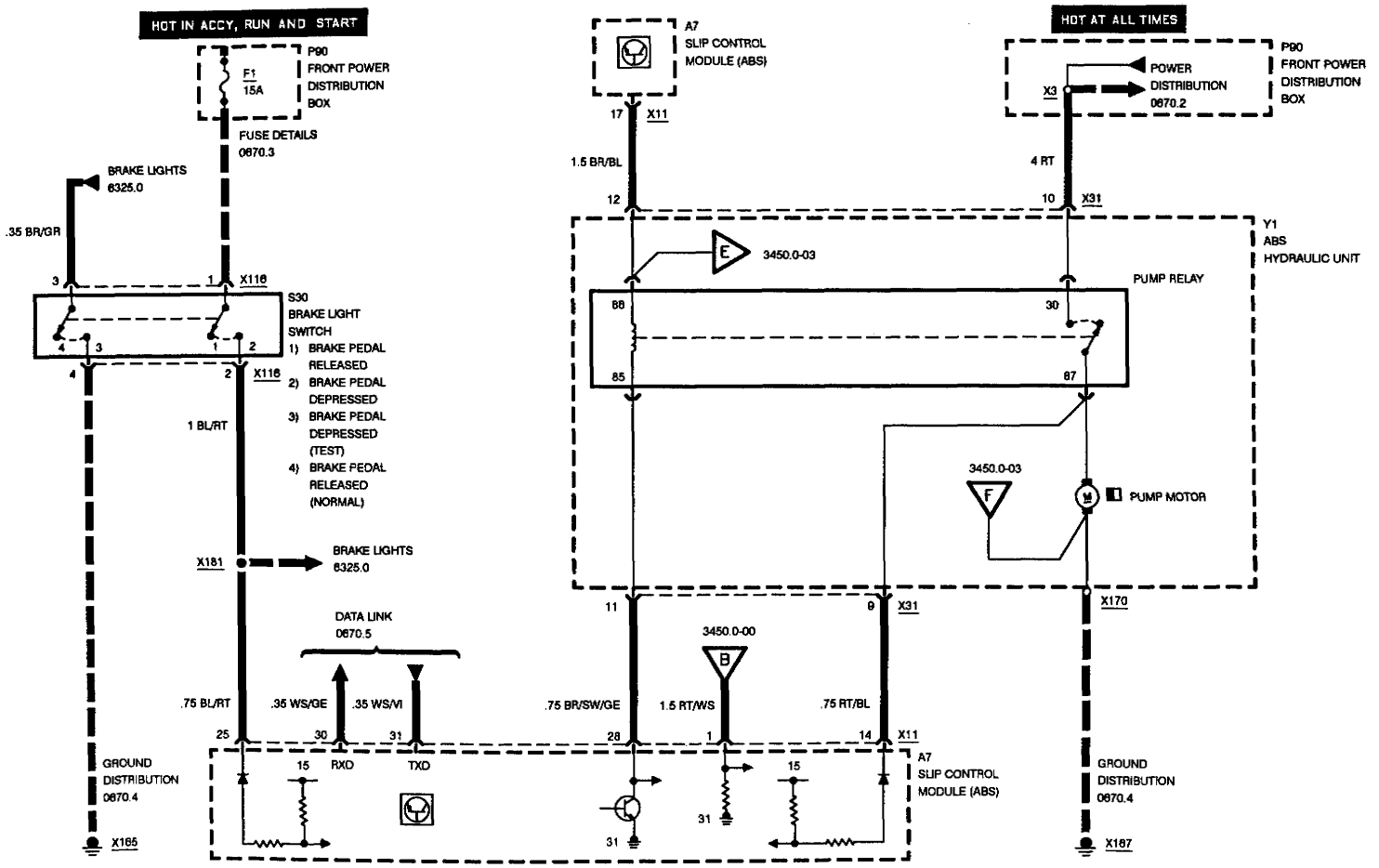

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# SLIP CONTROL (ABS)






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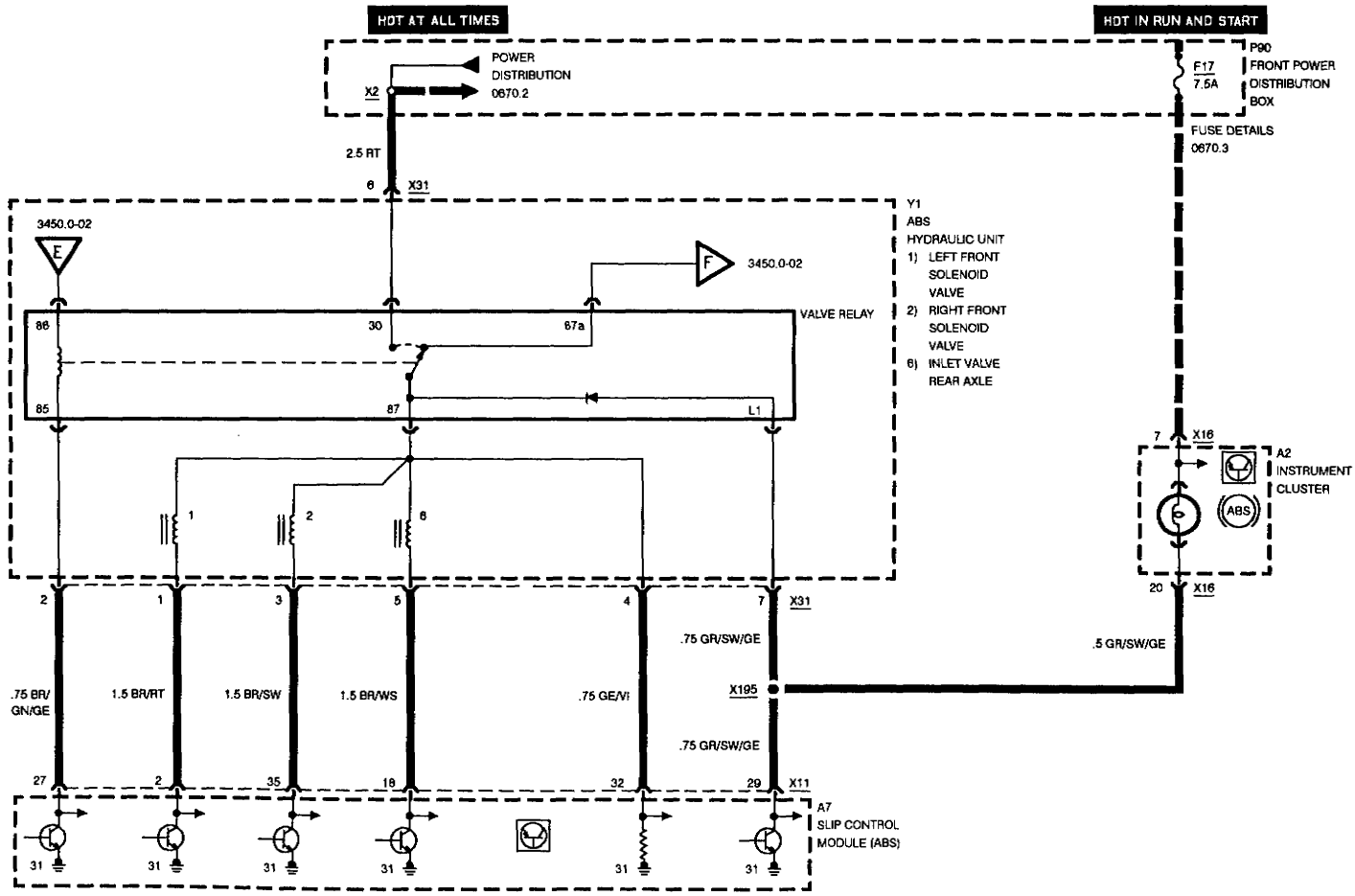





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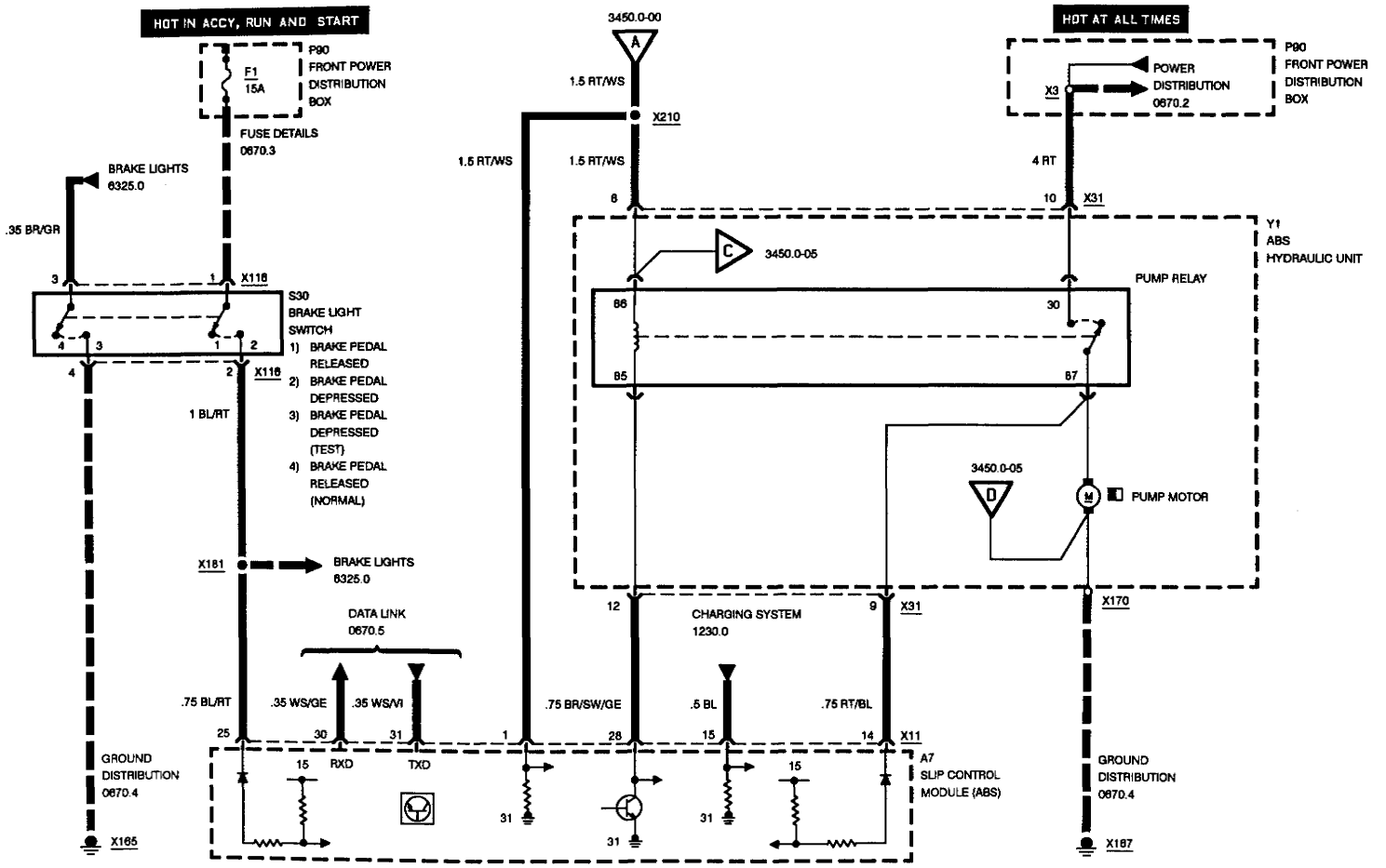
# SLIP CONTROL (ABS)

525i



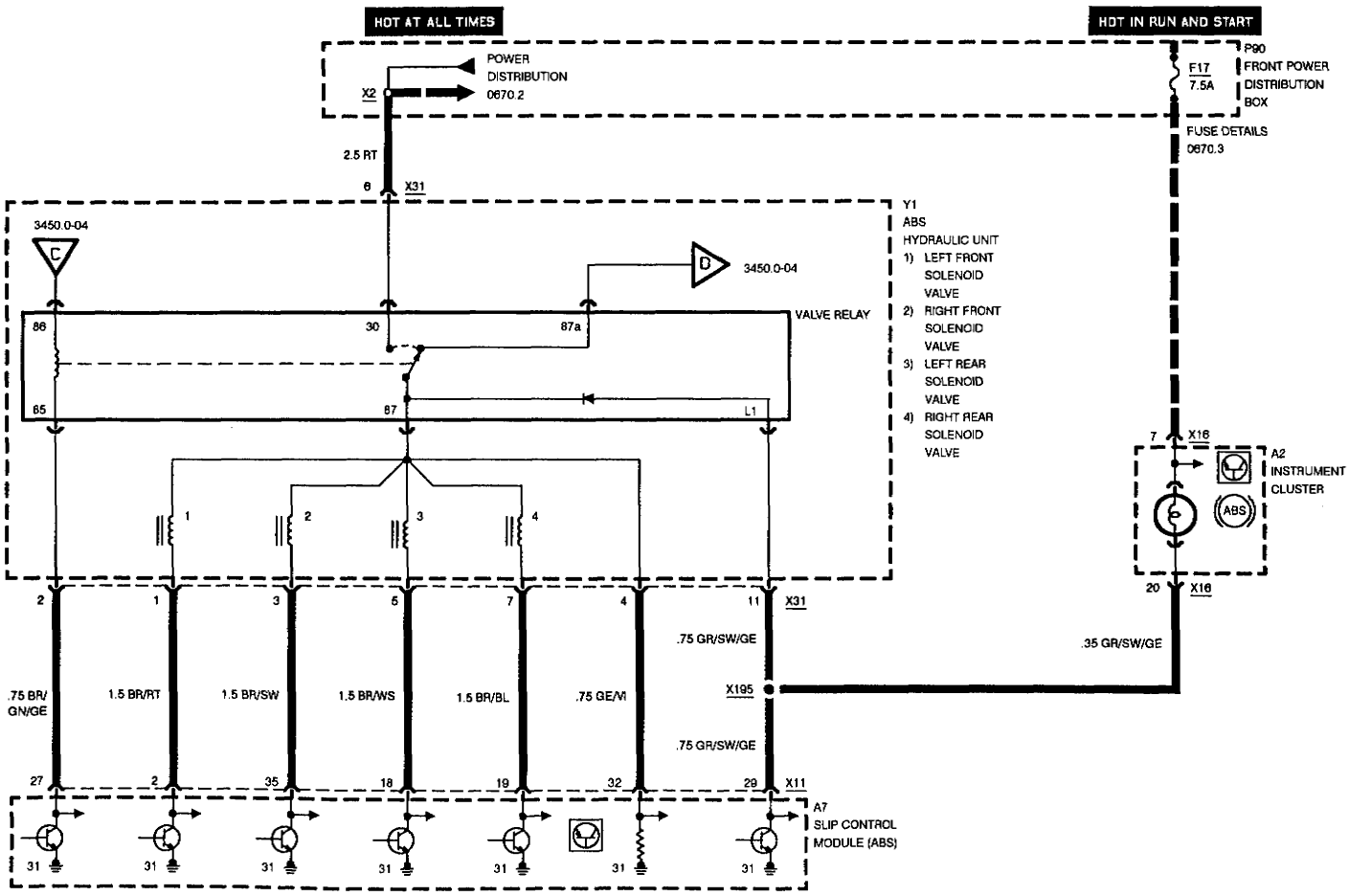



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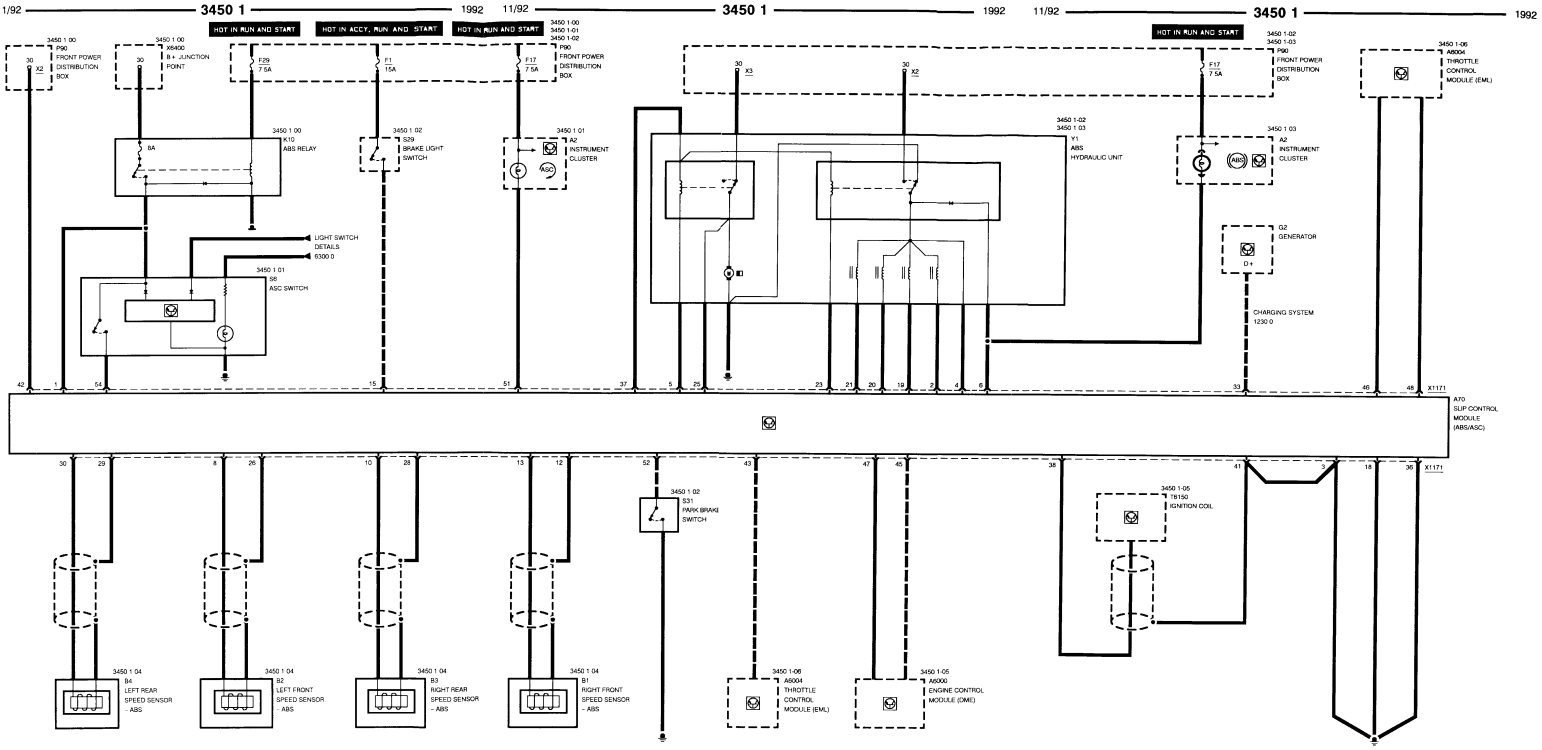

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## Pin Assignments

### X1171

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | E | Battery voltage | ABS relay | approx. 12 V | | |
| 2 | A | Right rear solenoid control | Right rear solenoid valve | Ground | | |
| 3 | M | Ground, control unit | Connection, Pin 41 and ground | Ground | | |
| 4 | E | Power | Valve relay | | | |
| 5 | E | Controlled ground | Pump relay | Ground | | |
| 6 | A | ABS lamp control | Instrument cluster | Ground | | |
| 7 | | Not used | | | | |
| 8 | E | Speed signal | Left front speed sensor | | | |
| 9 | | Not used | | | | |
| 10 | E | Speed signal | Right rear speed sensor | | | |
| 11 | | Not used | | | | |
| 12 | E | Sensor ground | Right front speed sensor | Ground | | |
| 13 | E | Speed signal | Right front speed sensor | | | |
| 14 | | Not used | | | | |
| 15 | E | Brake pedal status | Brake light switch | Ground | | |
| 16 | | Not used | | | | |
| 17 | | Not used | | | | |
| 18 | M | Ground, control unit | Ground | Ground | | |

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# AUTOMATIC STABILITY CONTROL (ASC)



| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 19 | A | Left rear solenoid control | Left rear solenoid valve | Ground | | |
| 20 | A | Right front solenoid control | Right front solenoid valve | Ground | | |
| 21 | A | Left front solenoid control | Left front solenoid valve | Ground | | |
| 22 | | Not used | | | | |
| 23 | E | Valve relay control | Valve relay | Ground | | |
| 24 | | Not used | | | | |
| 25 | E | Pump relay monitor | Pump relay | | | |
| 26 | E | Sensor ground | Front left speed sensor | Ground | | |
| 27 | | Not used | | | | |
| 28 | E | Sensor ground | Right rear speed sensor | Ground | | |
| 29 | E | Sensor ground | Left rear speed sensor | Ground | | |
| 30 | E | Speed signal | Left rear speed sensor | | | |
| 31 | | Not used | | | | |
| 32 | | Not used | | | | |
| 33 | E | Charging voltage | Alternator | approx. 12 V | | |
| 34 | | Not used | | | | |
| 35 | | Not used | | | | |
| 36 | M | Ground, control unit | Ground | Ground | | |
| 37 | A | Power signal | Pump relay | | | |
| 38 | E | Ignition timing signal | Ignition coil | | | |
| 39 | | Not used | | | | |
| 40 | | Not used | | | | |
| 41 | M | Ground | Connection, Pin 3 | Ground | | |
| 42 | E | Battery voltage | Power distribution box | approx. 12 V | | |

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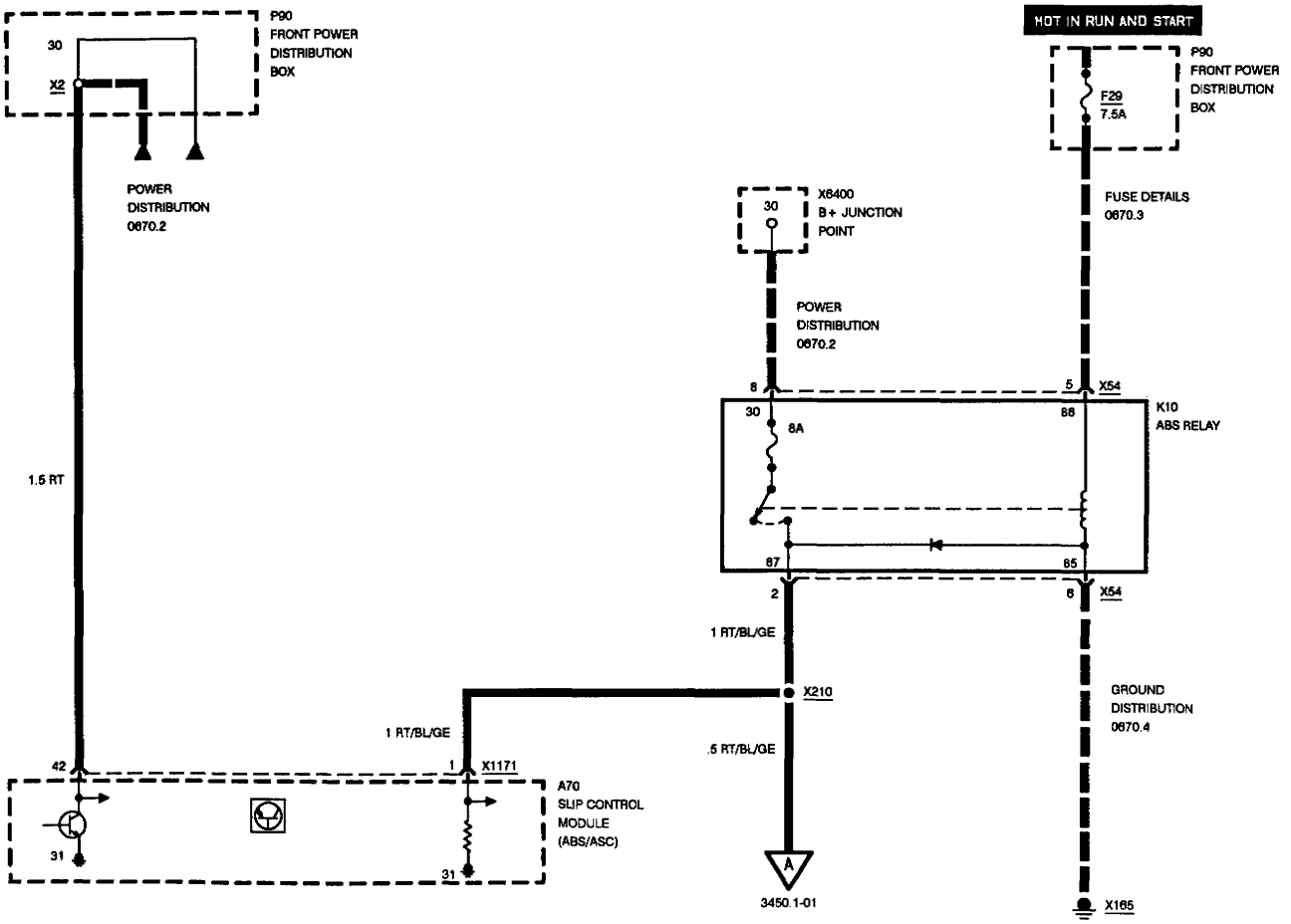
# AUTOMATIC STABILITY CONTROL (ASC)



| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 43 | A | EML-Signal | EML-Module | | | |
| 44 | | Not used | | | | |
| 45 | E | Ignition cut-off signal | DME-Module | | | |
| 46 | E | Throttle signal | EML-Module | | | |
| 47 | E | DME-signal | DME-Module | | | |
| 48 | E | Throttle signal | EML-Module | | | |
| 49 | | Not used | | | | |
| 50 | | Not used | | | | |
| 51 | A | ASC lamp control | Instrument cluster | Ground | | |
| 52 | E | Park brake signal | Park brake switch | Ground | | |
| 53 | | Not used | | | | |
| 54 | E | Switch signal | ASC-Switch | | | |
| 55 | | Not used | | | | |

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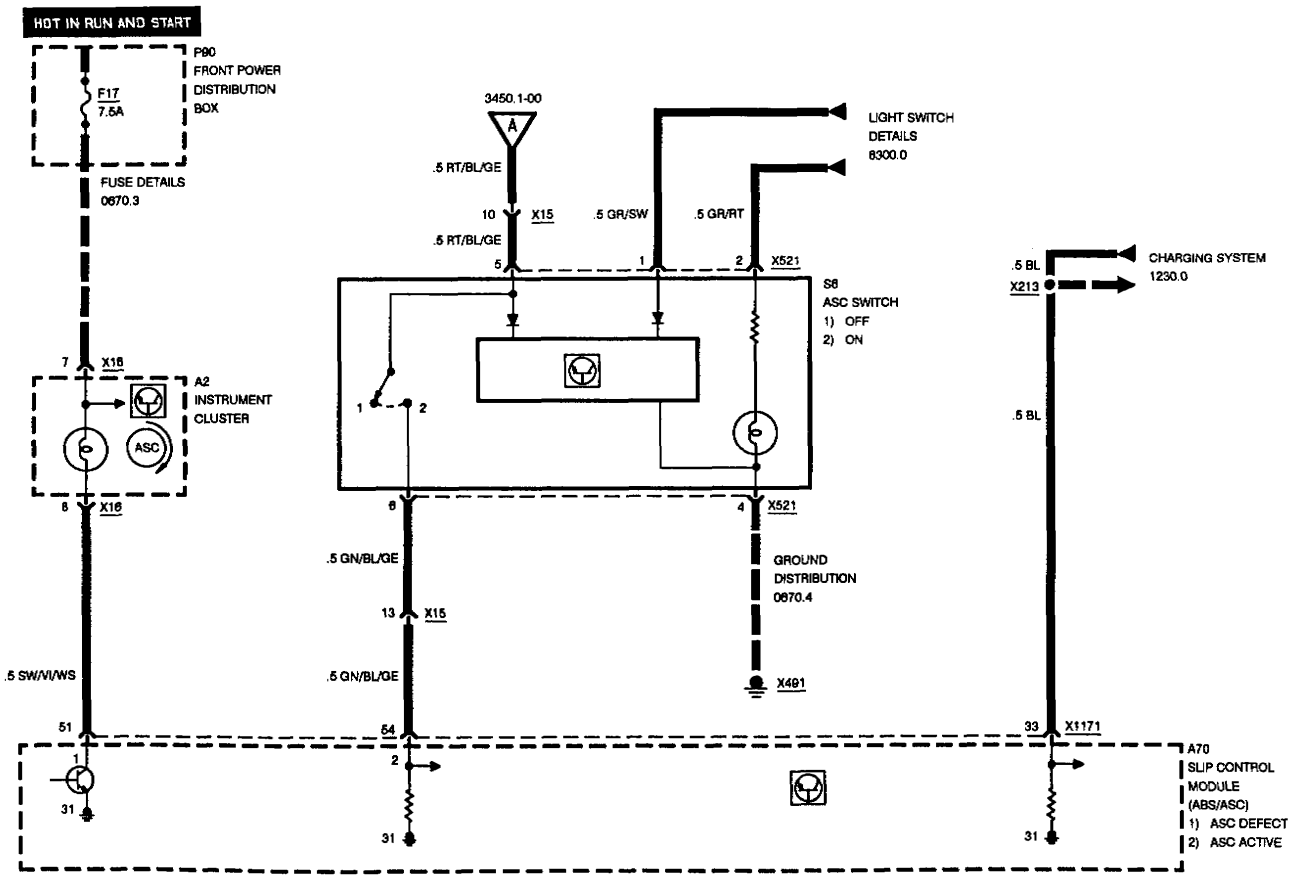
# SLIP CONTROL (ABS/ASC)






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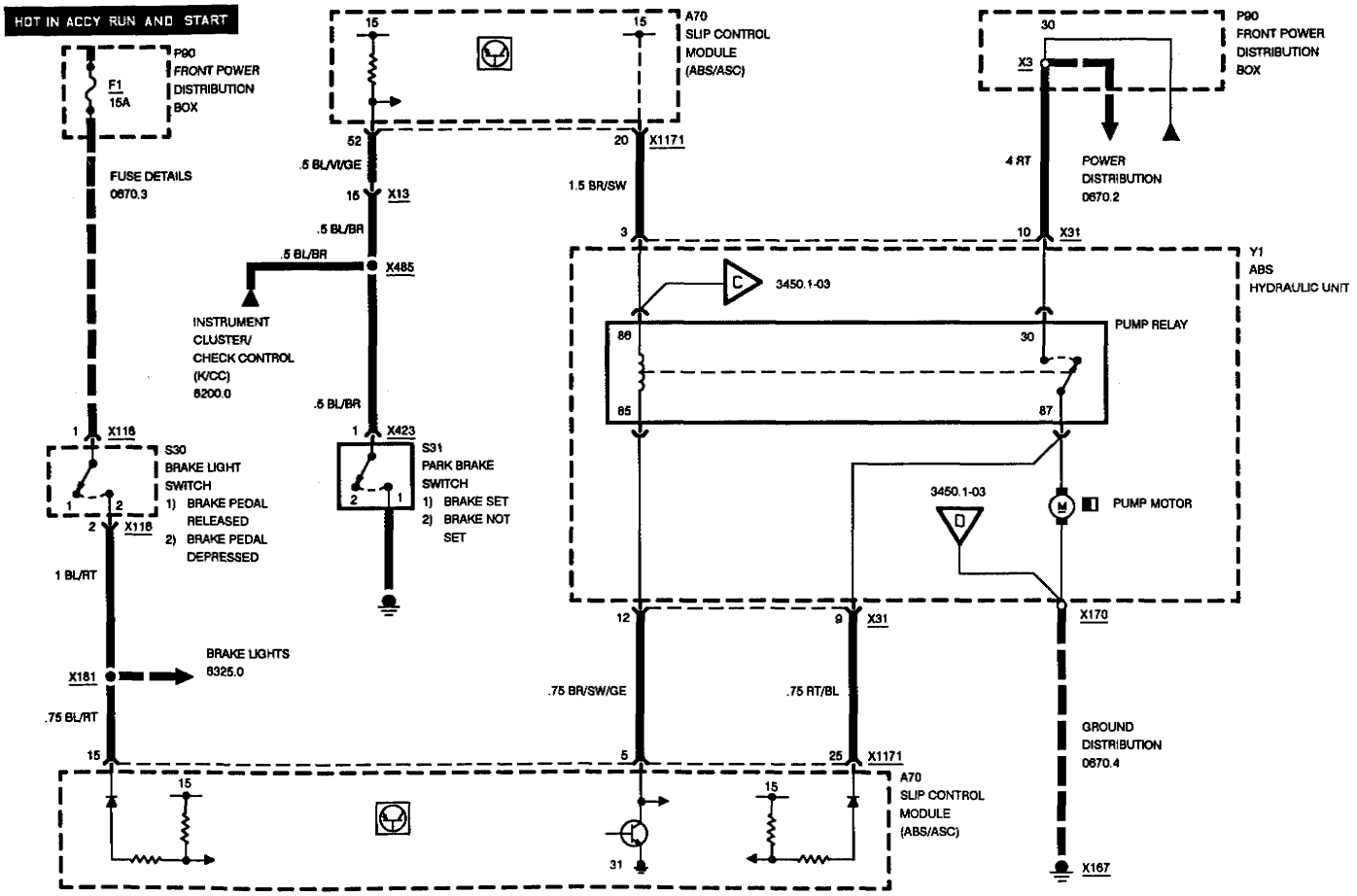
# SLIP CONTROL (ABS/ASC)




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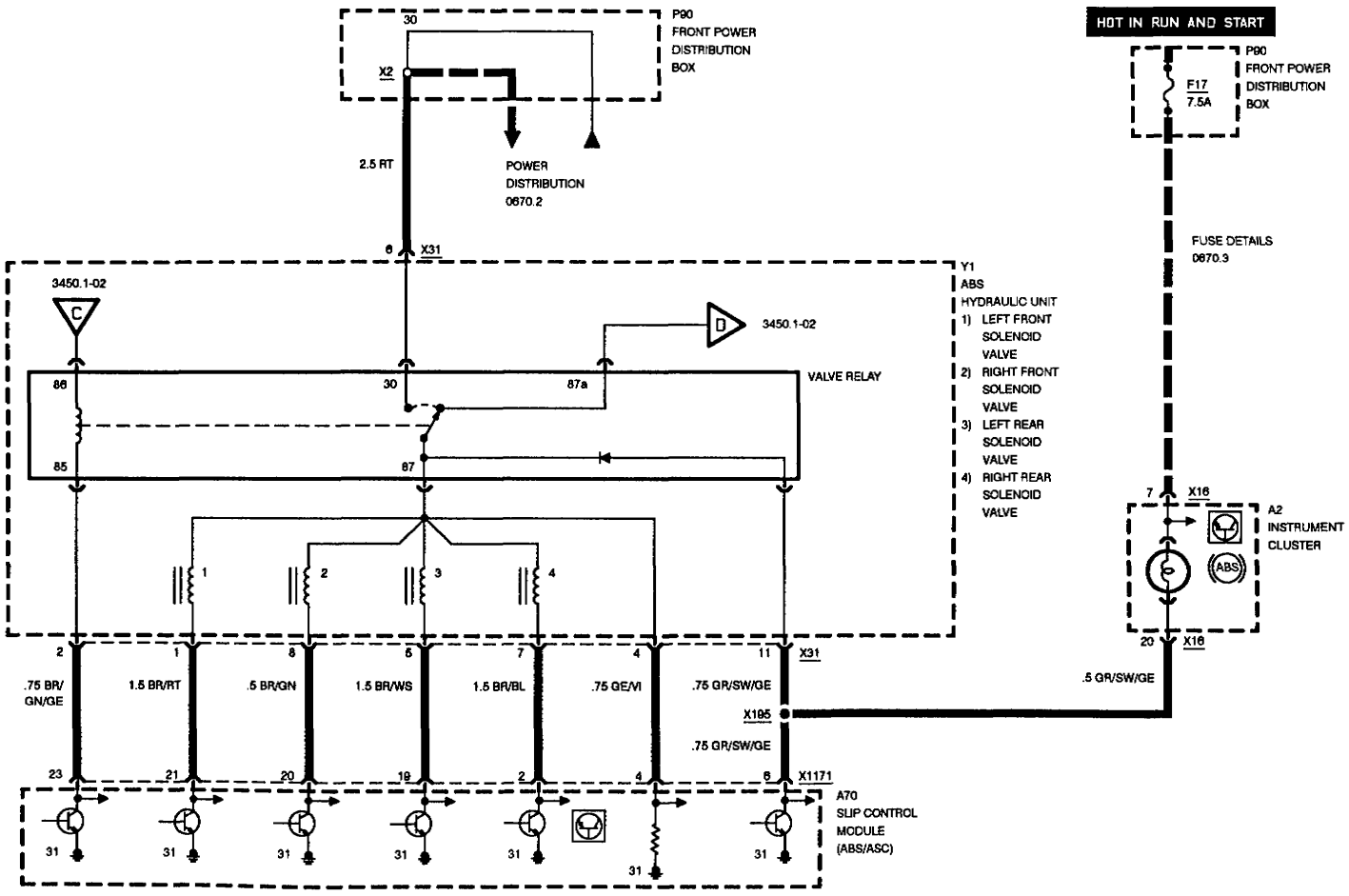
# SLIP CONTROL (ABS/ASC)






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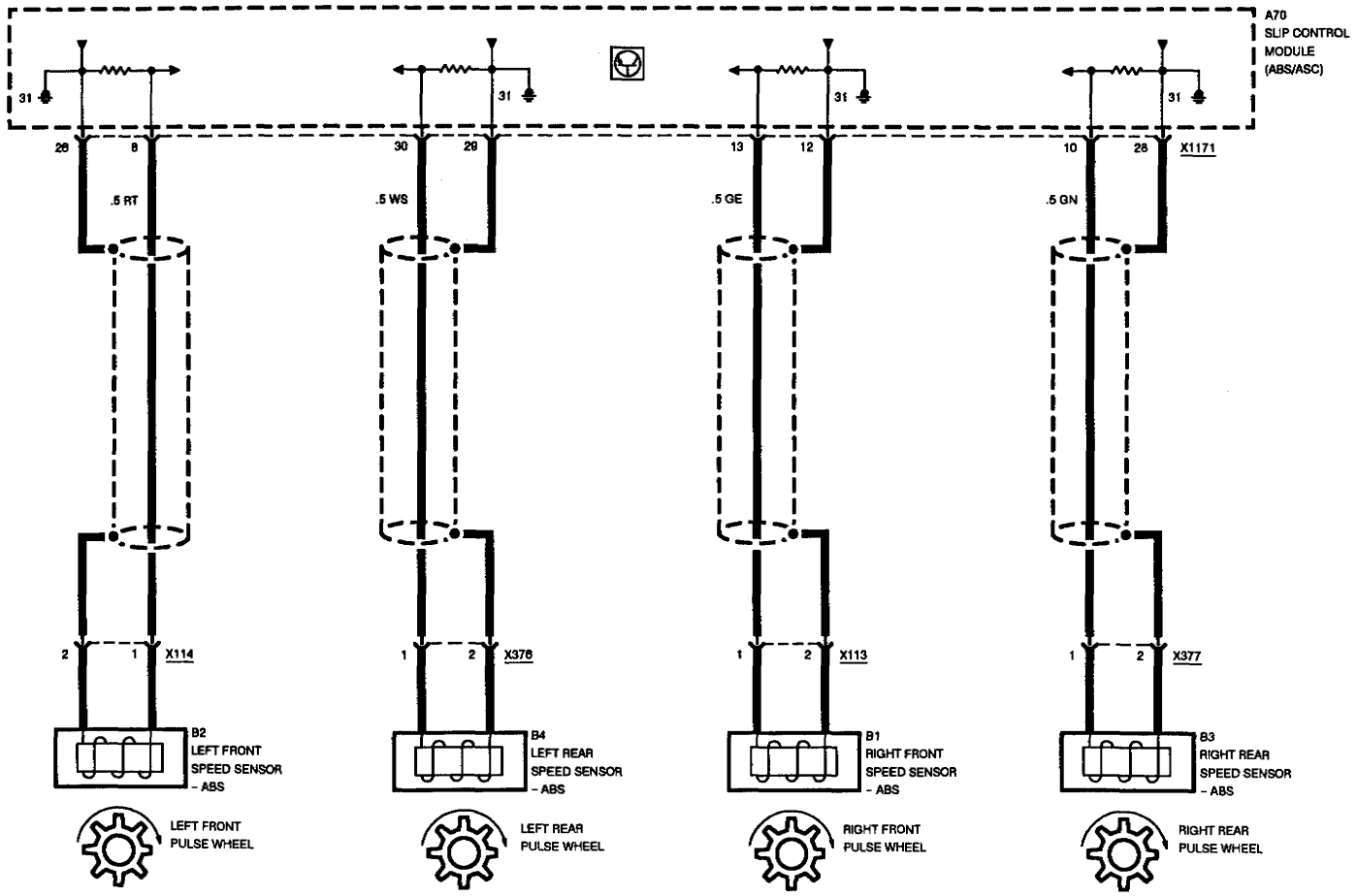
# SLIP CONTROL (ABS/ASC)






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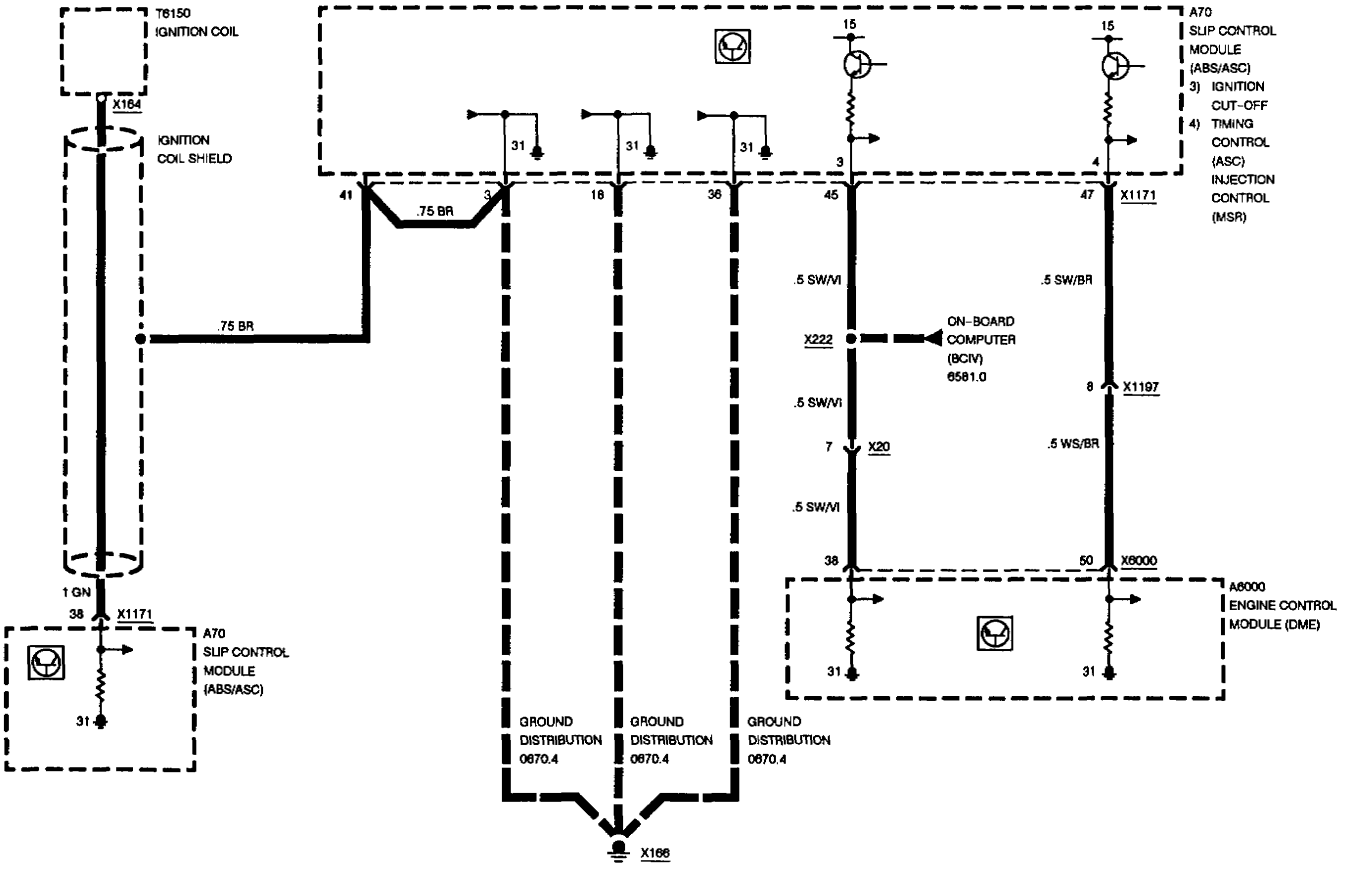
# SLIP CONTROL (ABS/ASC)




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# SLIP CONTROL (ABS/ASC)

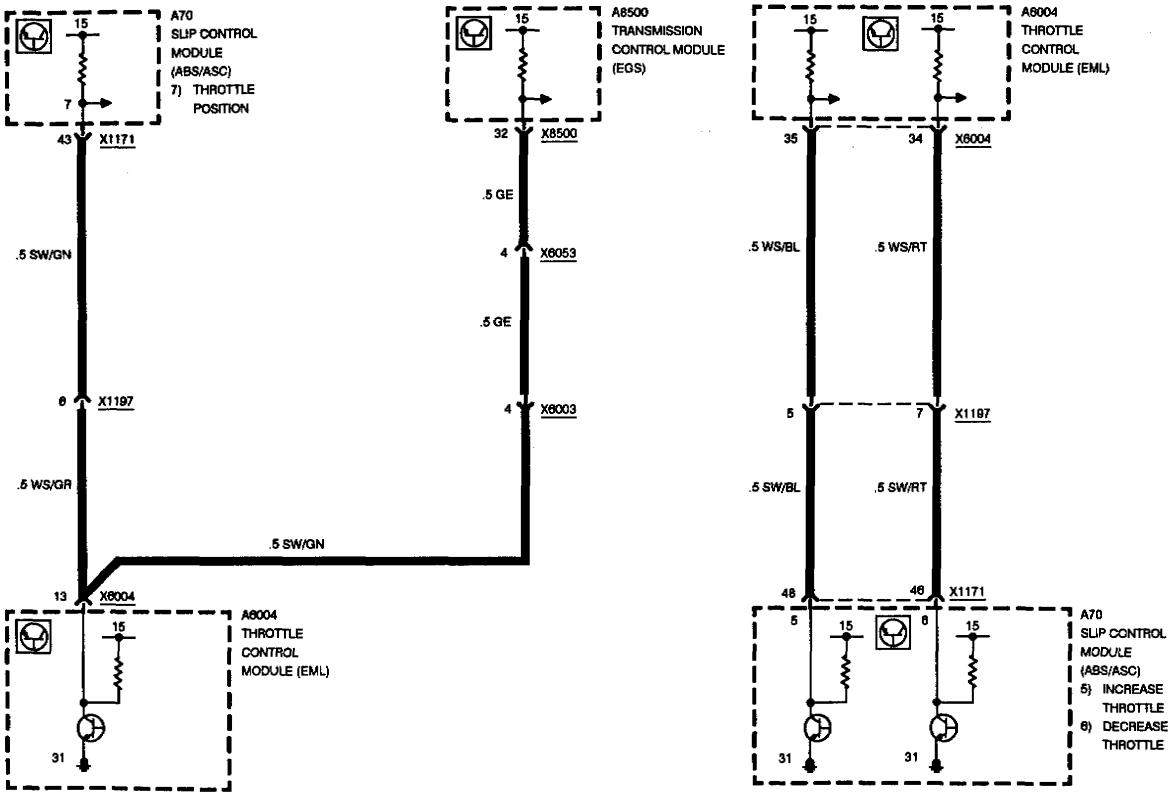
## ENGINE CONTROL (DME) INTERFACE




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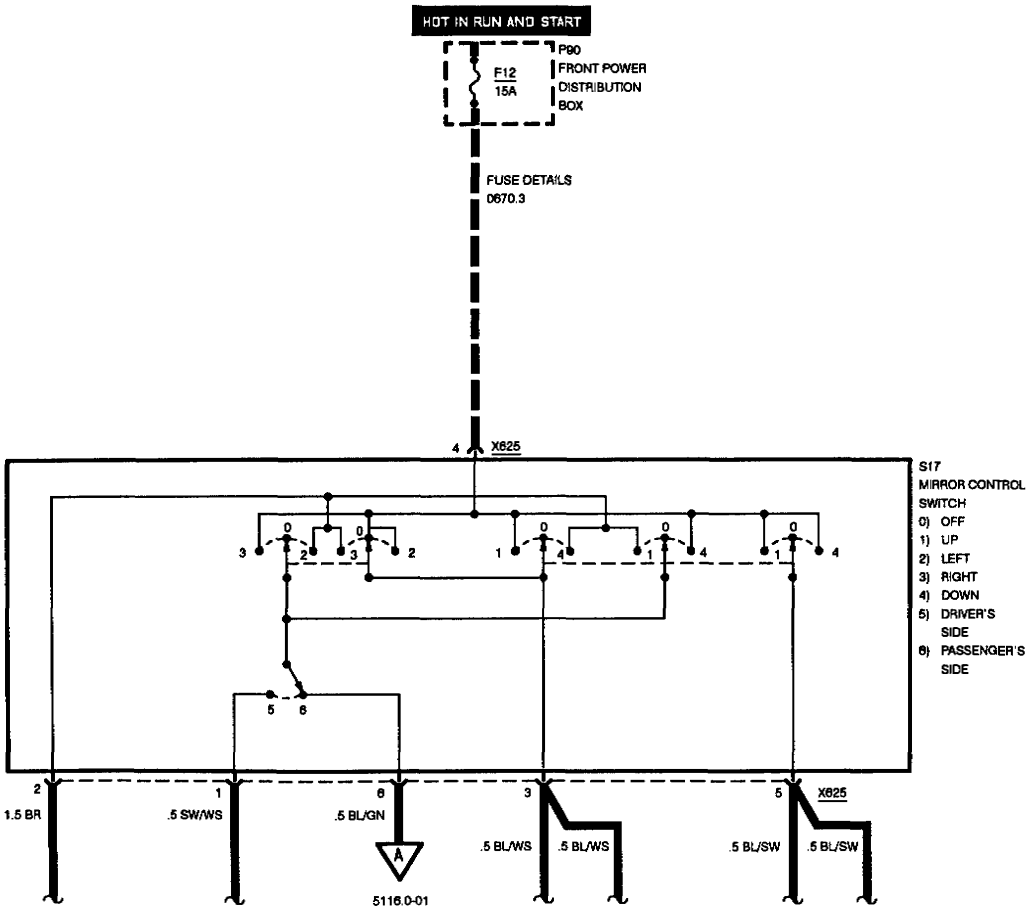
# SLIP CONTROL (ABS/ASC)

## EML INTERFACE



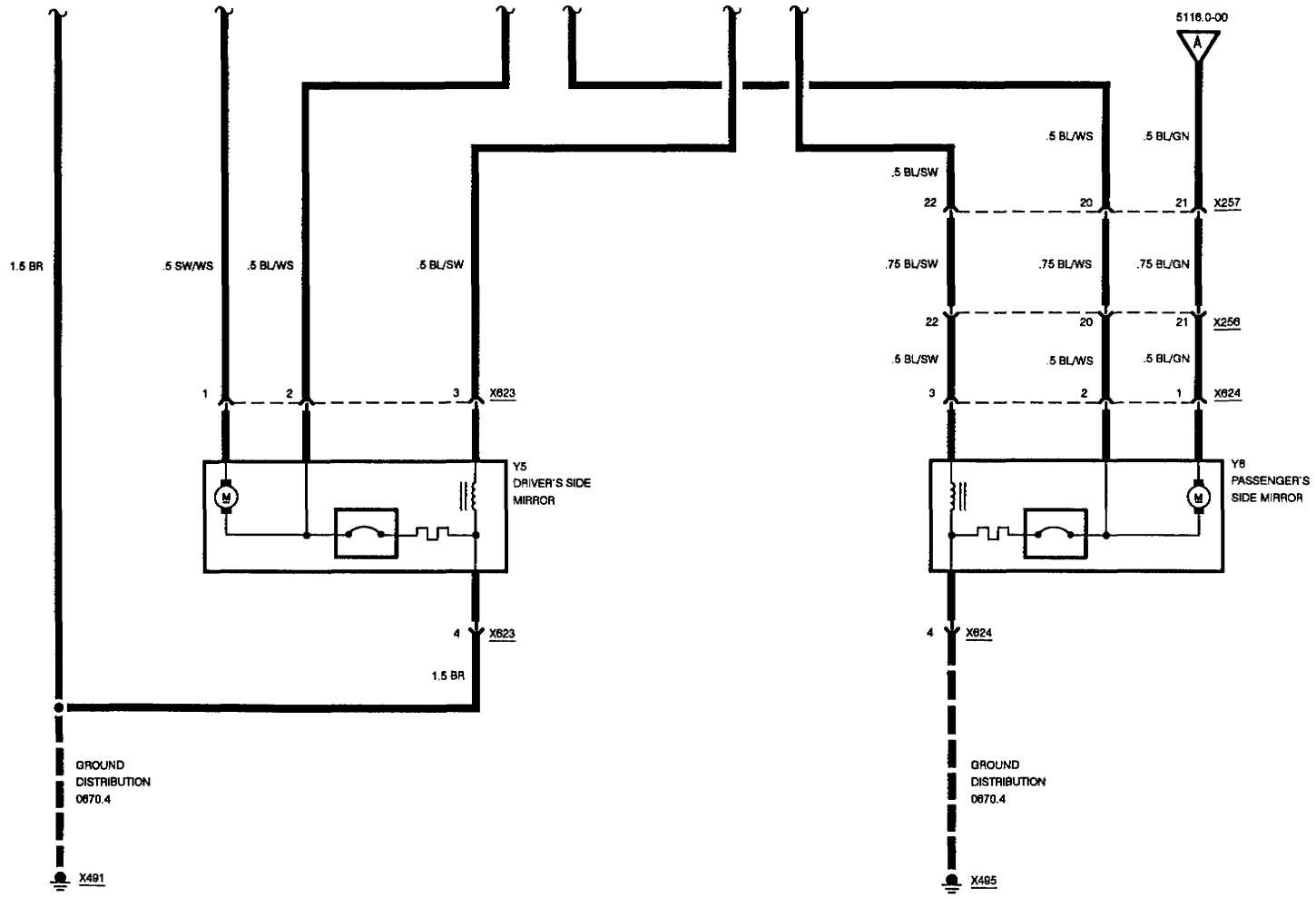

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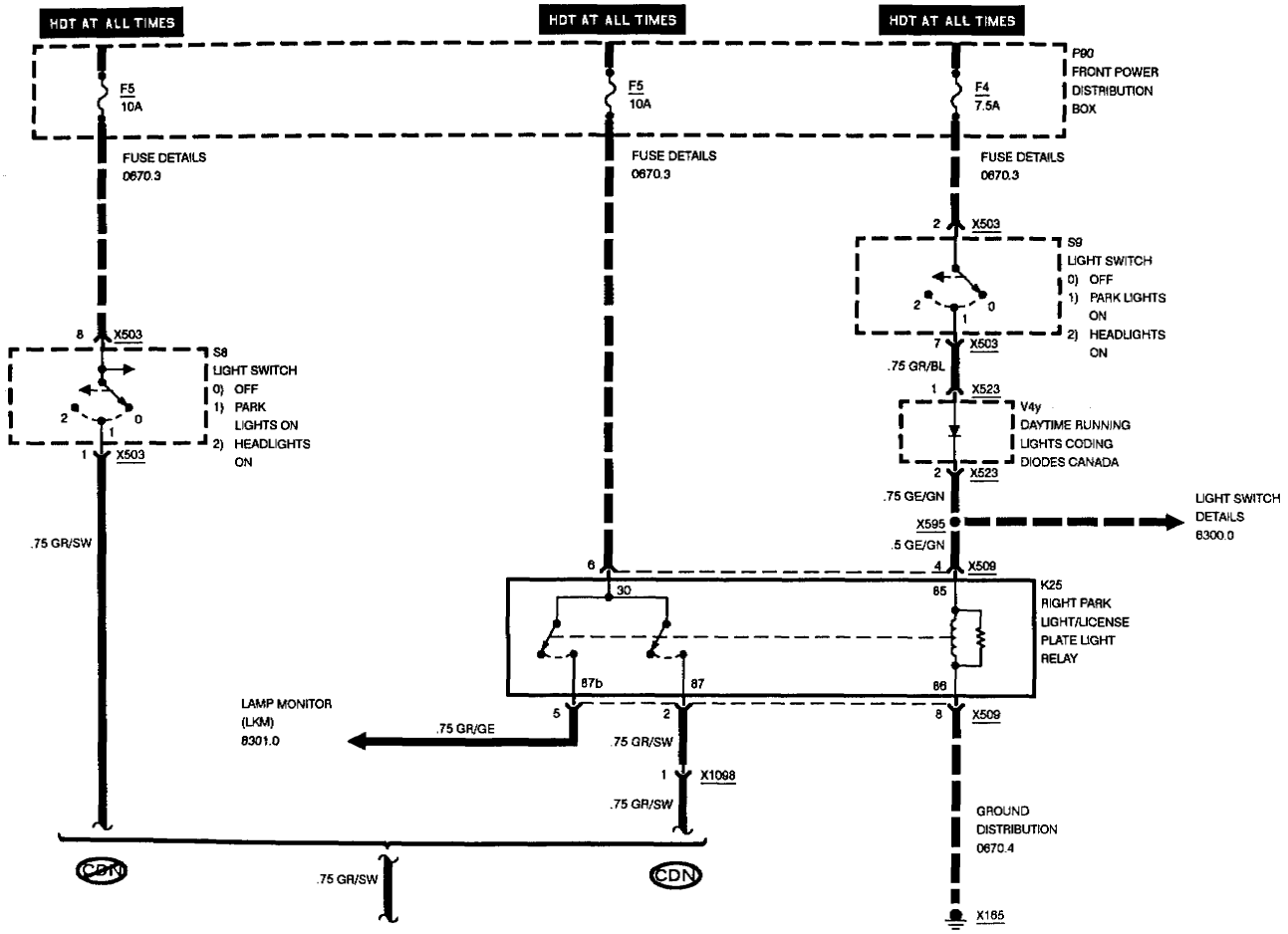

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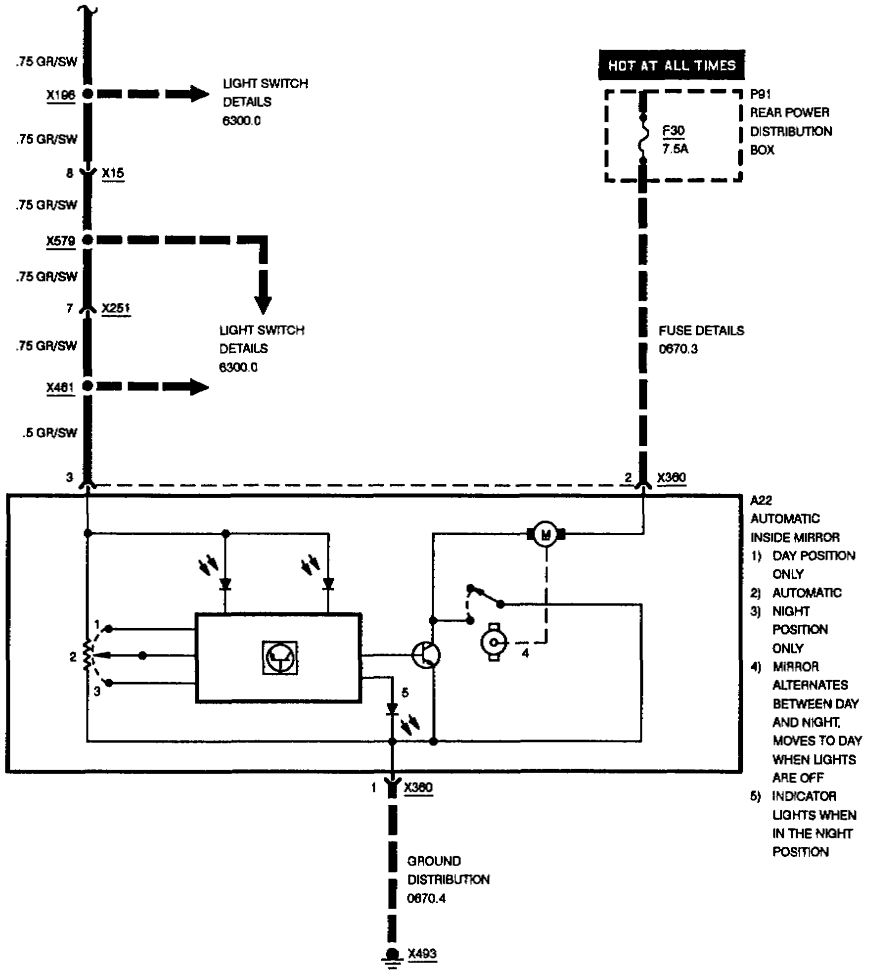
# POWER MIRRORS

## INSIDE MIRRORS





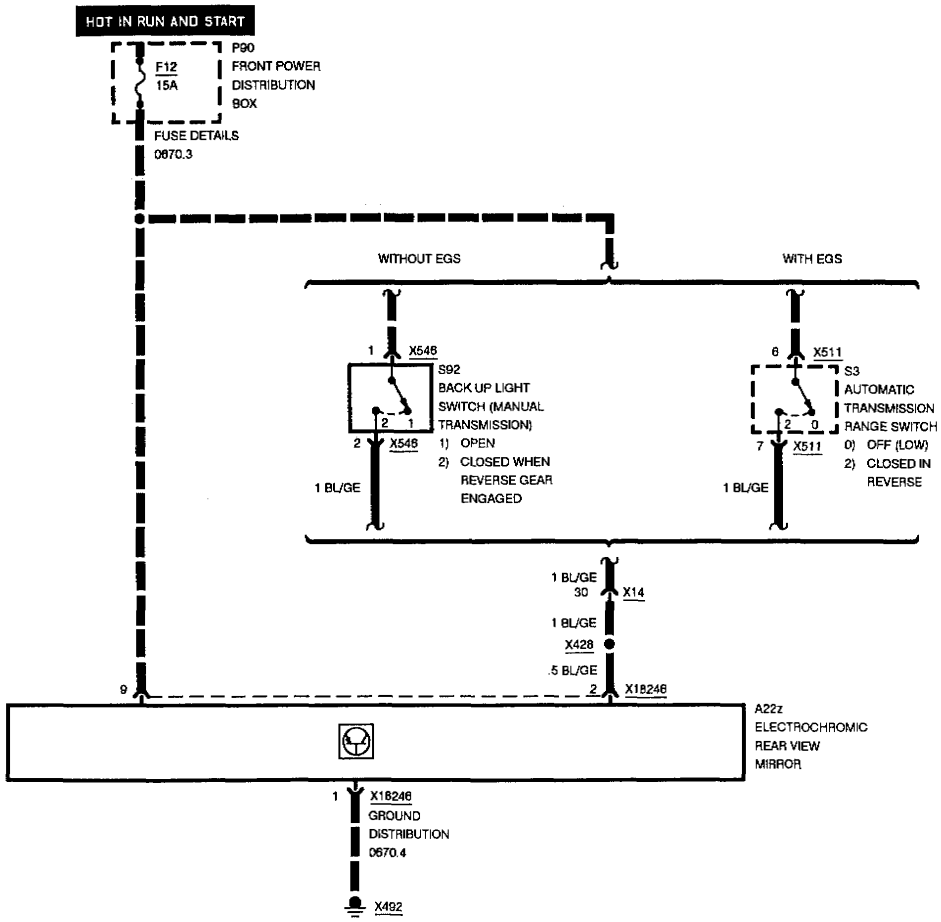

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# POWER MIRRORS

## ELECTROCHROMIC REAR VIEW MIRROR



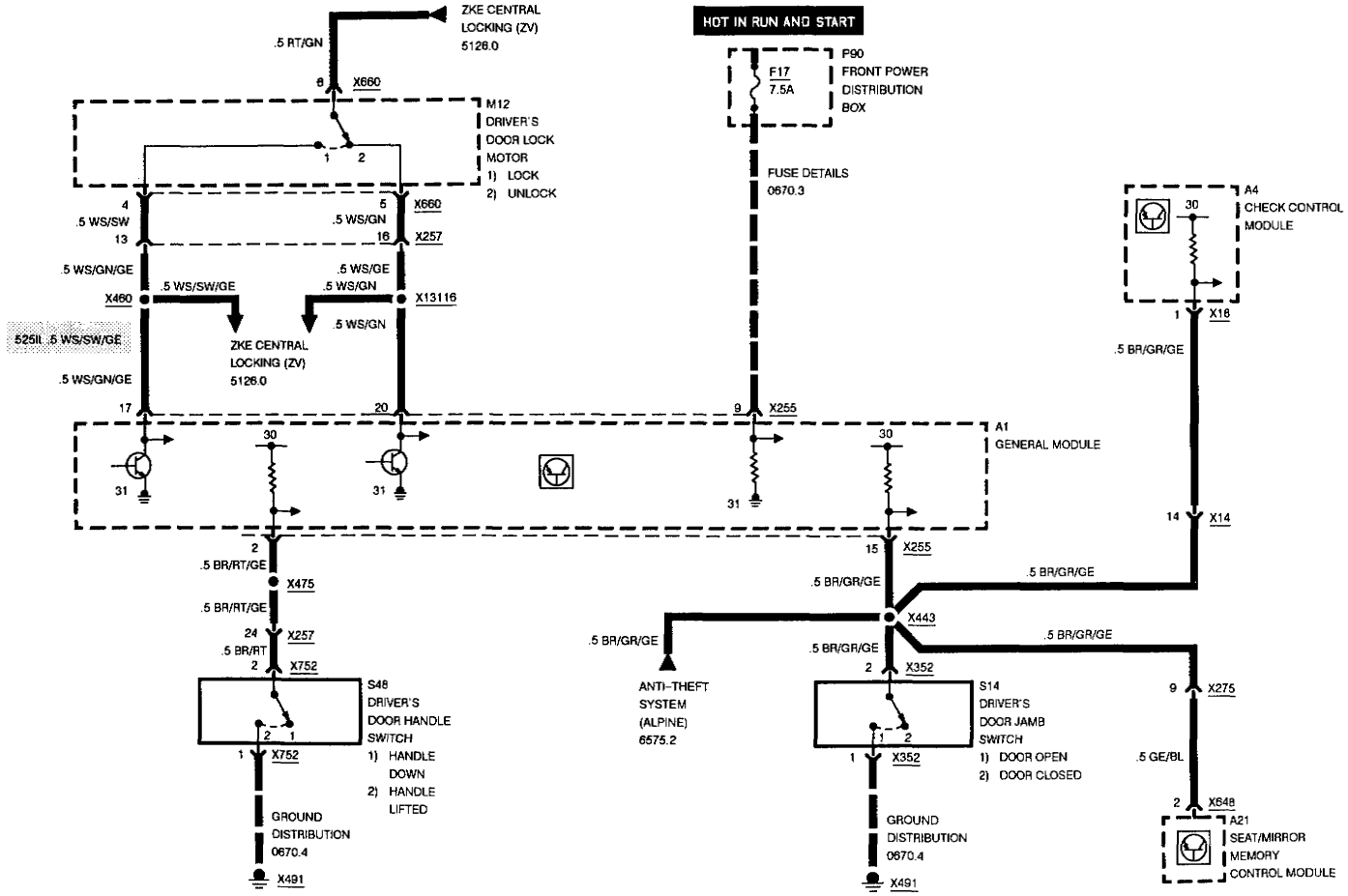



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# ZKE DOOR LOCK HEATING (TSH)

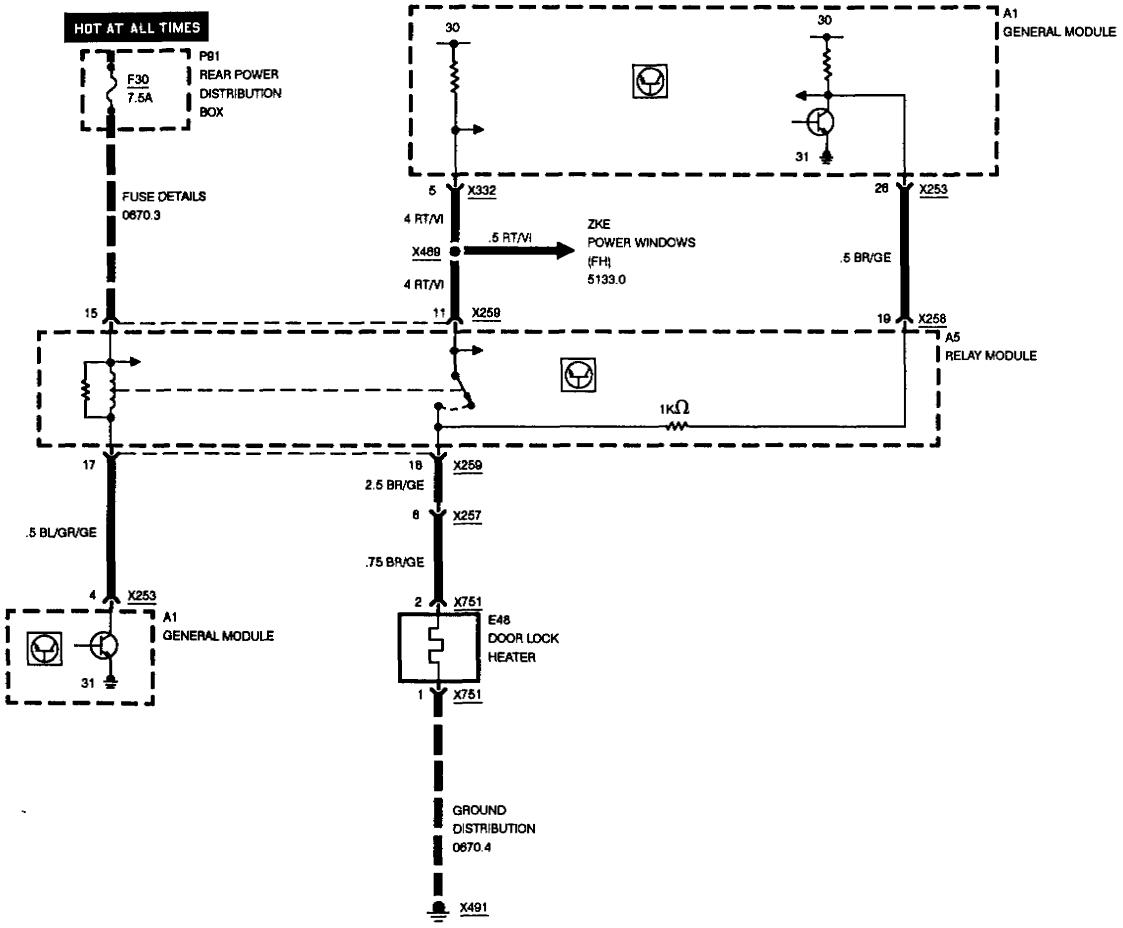
## INPUT DETAILS




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# ZKE DOOR LOCK HEATING (TSH)

## OUTPUT DETAILS

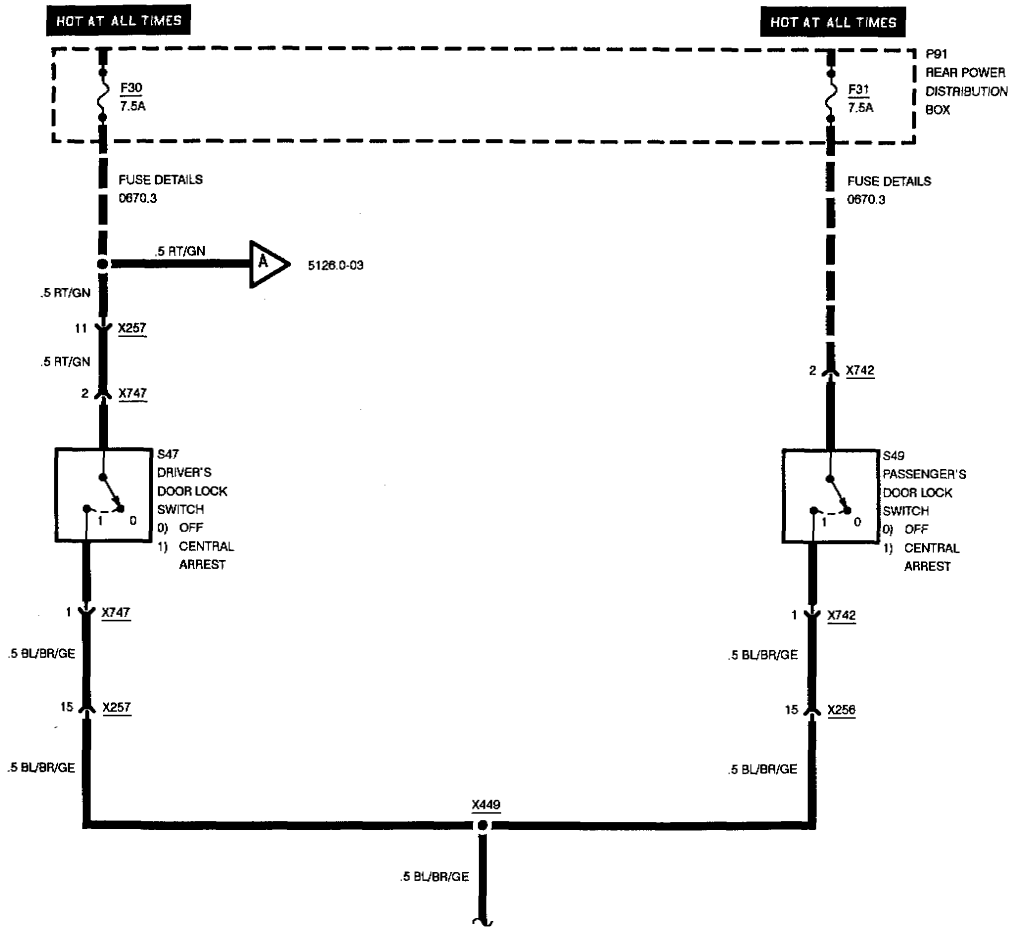





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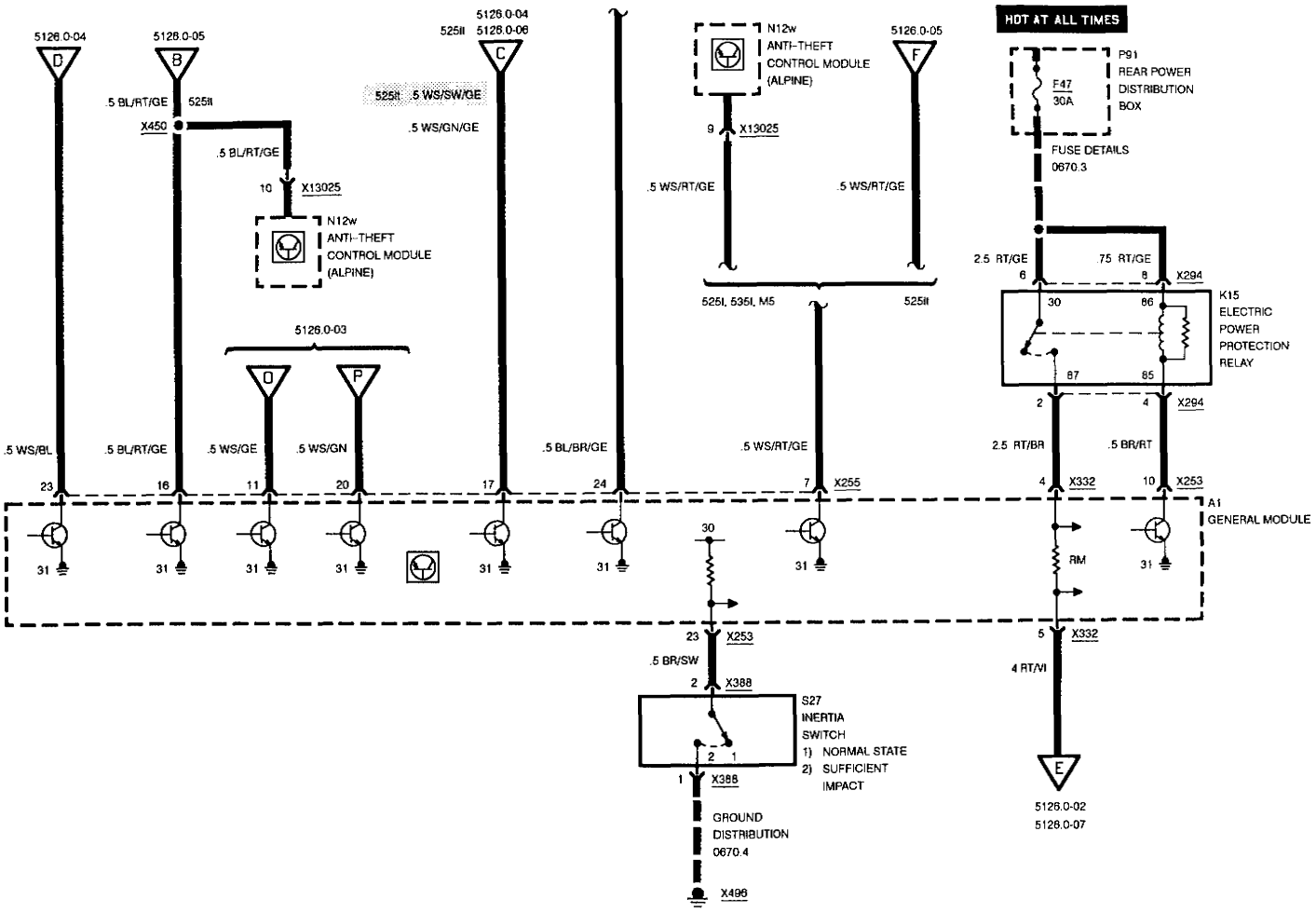
# ZKE CENTRAL LOCKING (ZV)

## INPUT DETAILS





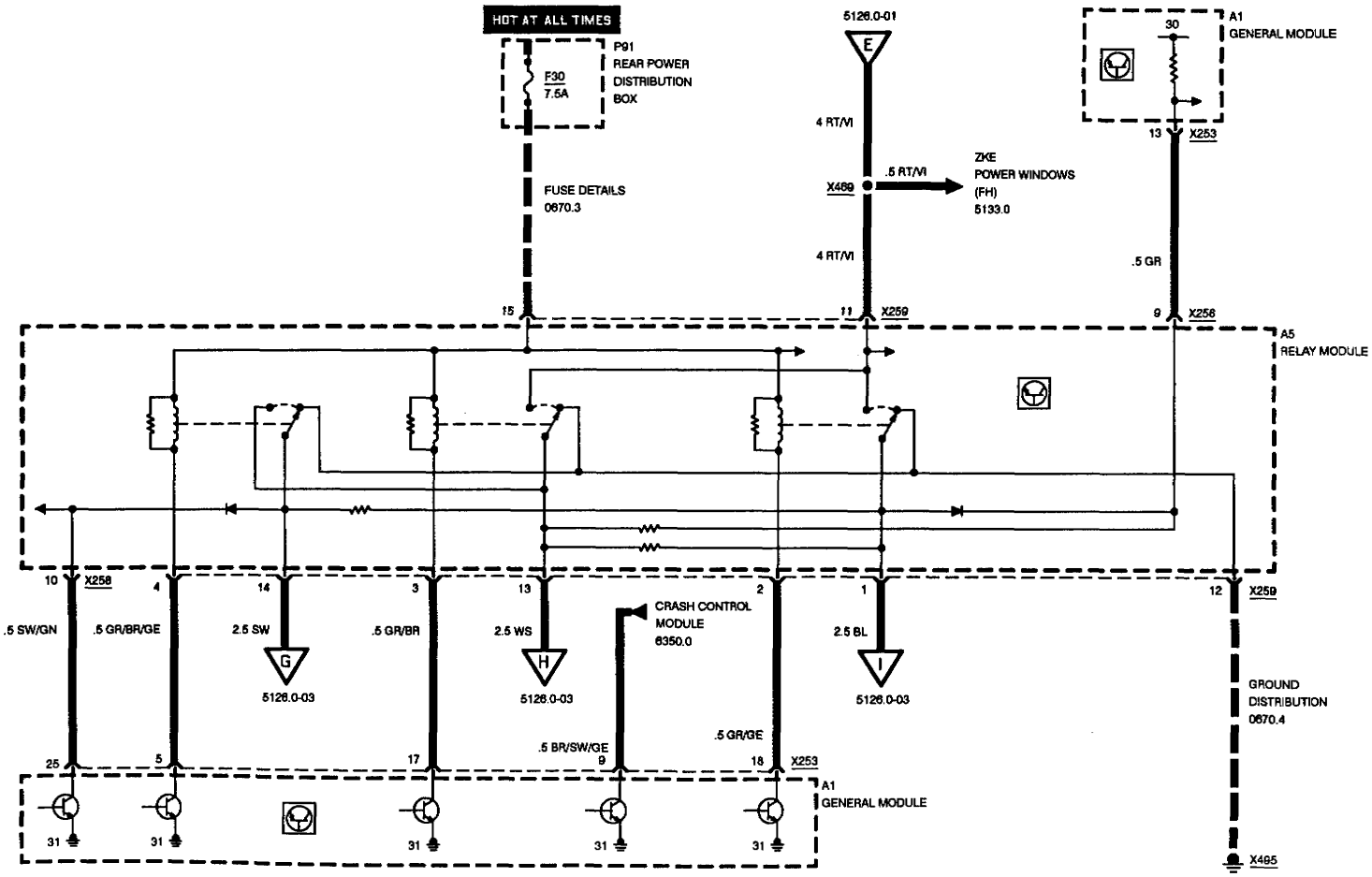

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# ZKE CENTRAL LOCKING (ZV)

## OUTPUT DETAILS

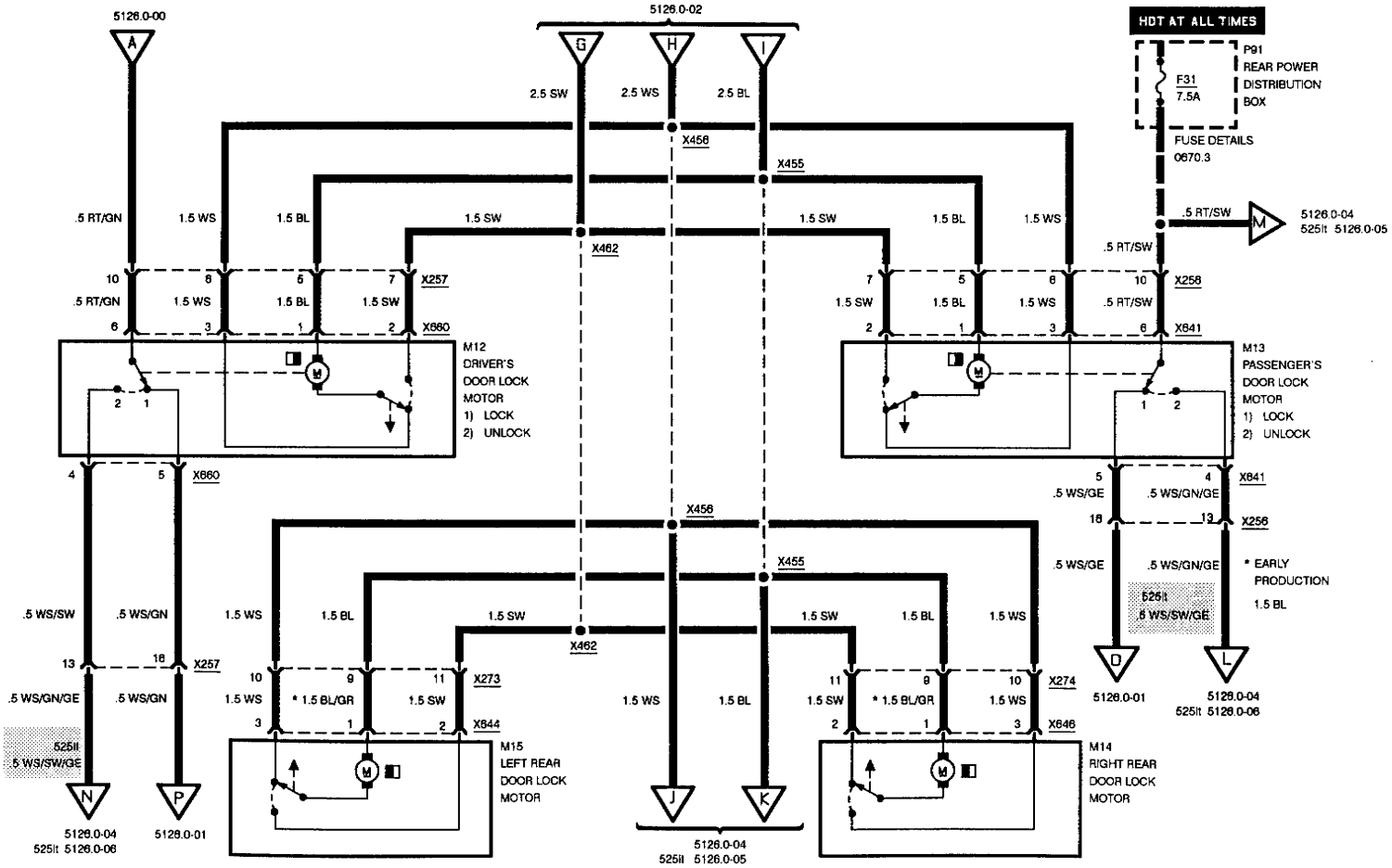





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# ZKE CENTRAL LOCKING (ZV)

## OUTPUT DETAILS

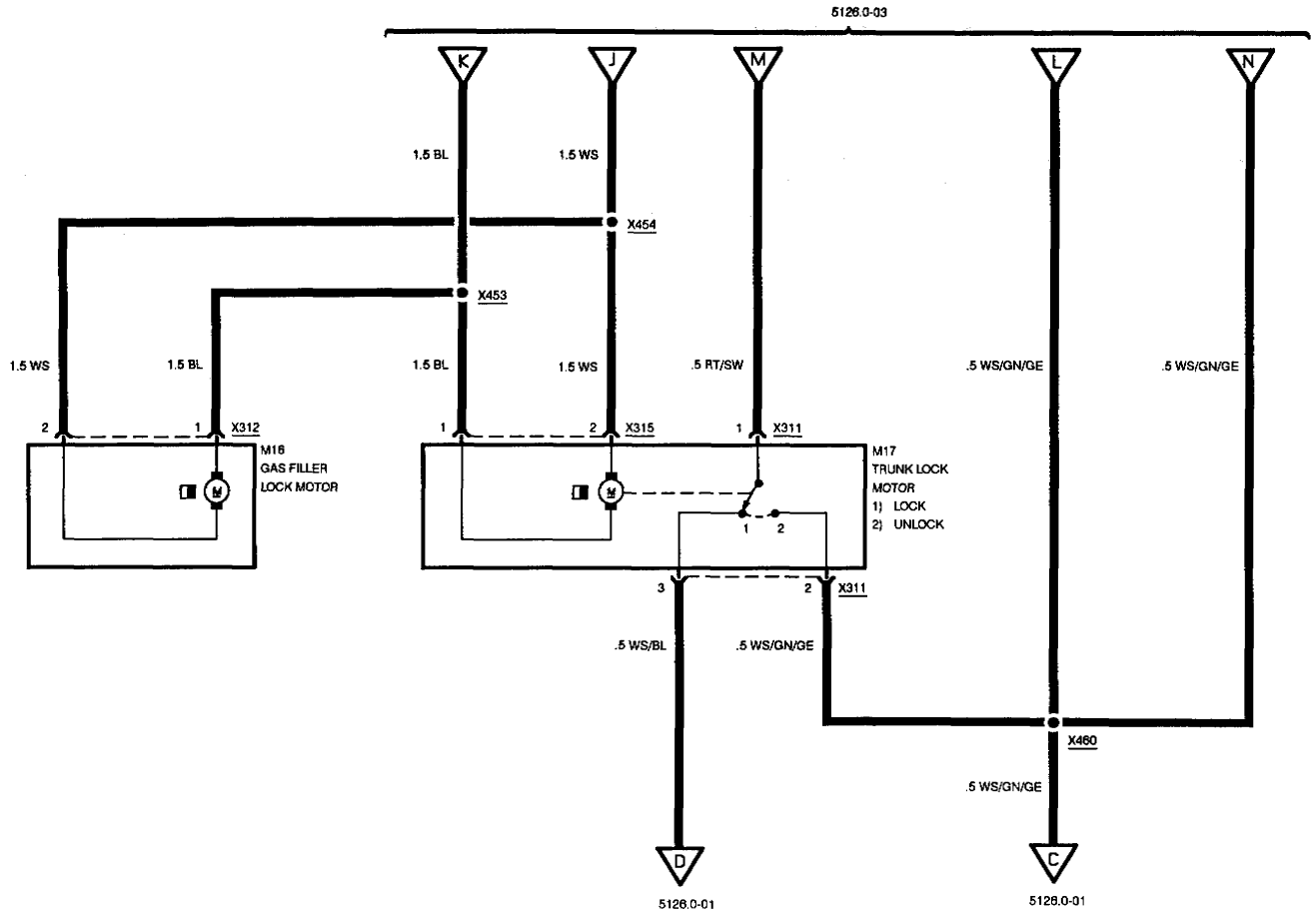





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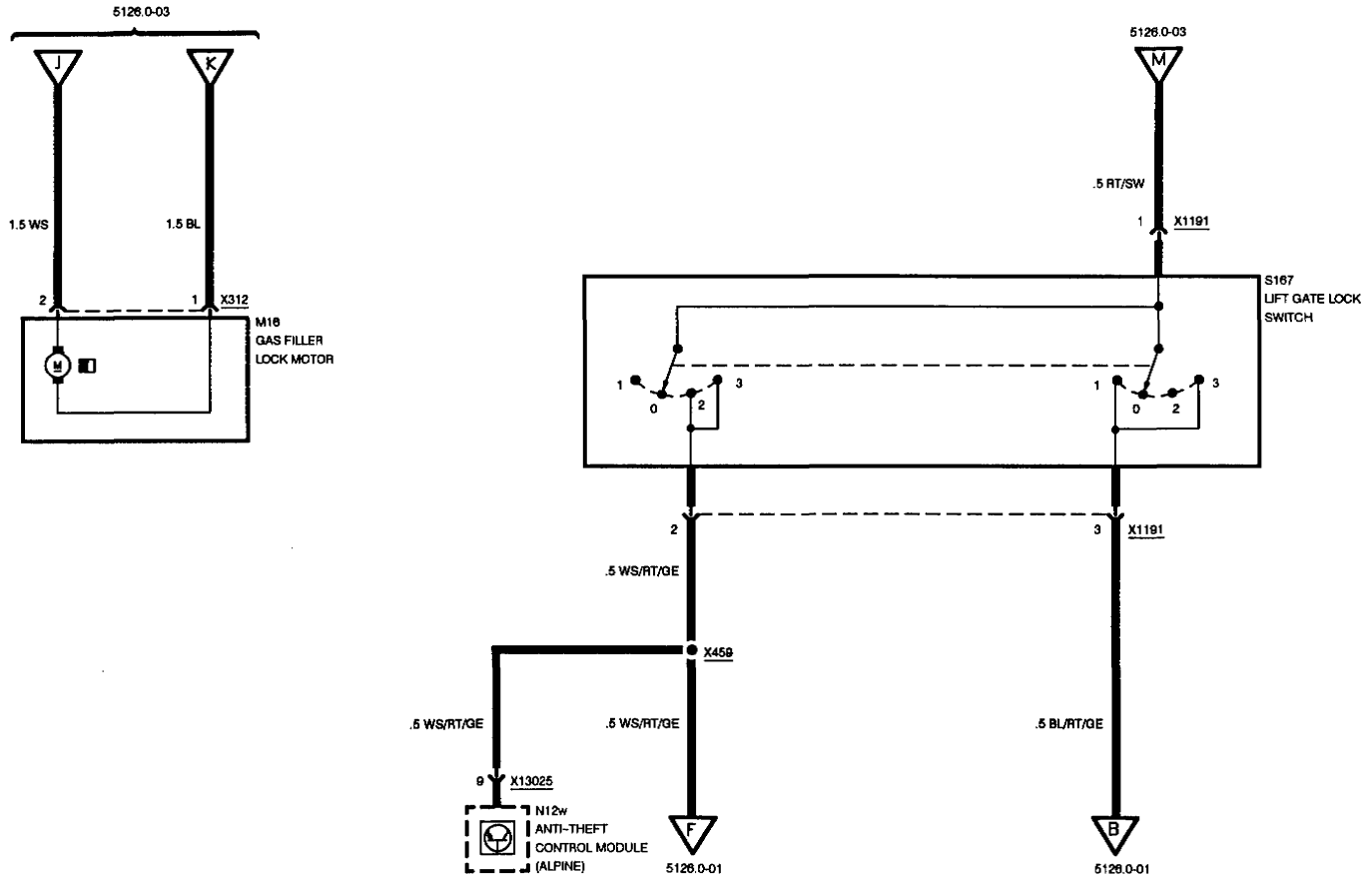
# ZKE CENTRAL LOCKING (ZV)

## OUTPUT DETAILS




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## OUTPUT DETAILS



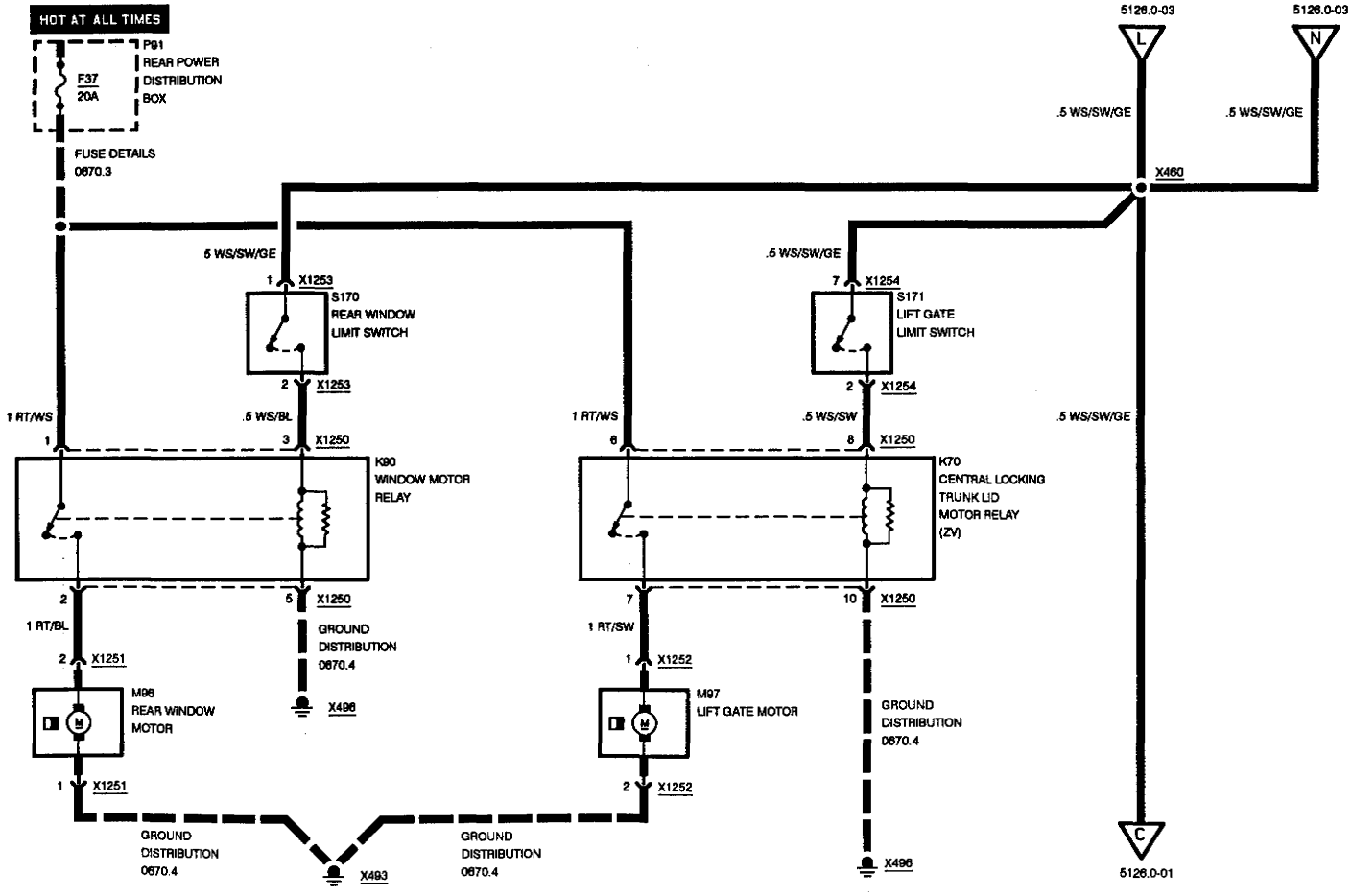



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# ZKE CENTRAL LOCKING (ZV)

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## OUTPUT DETAILS

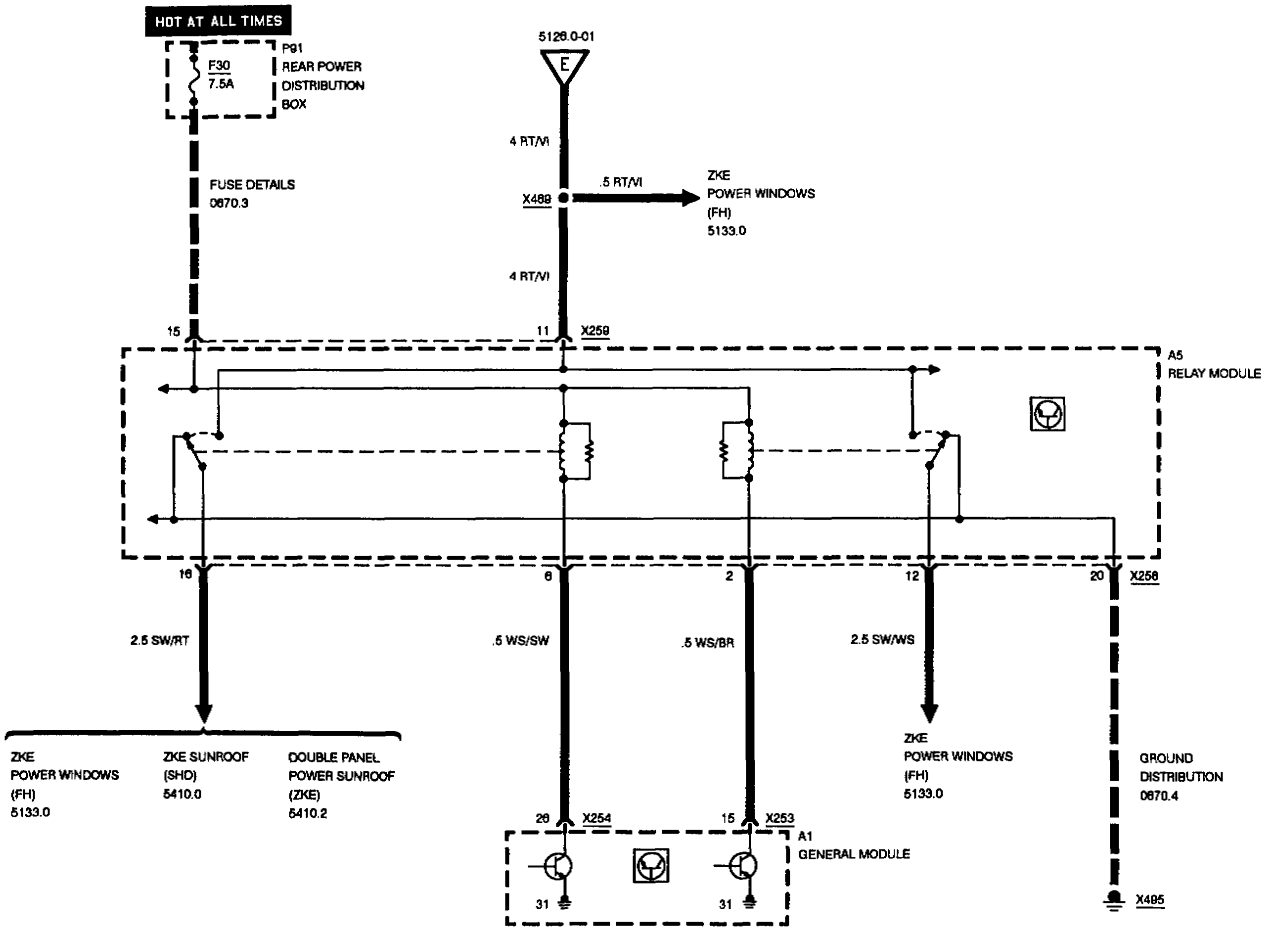





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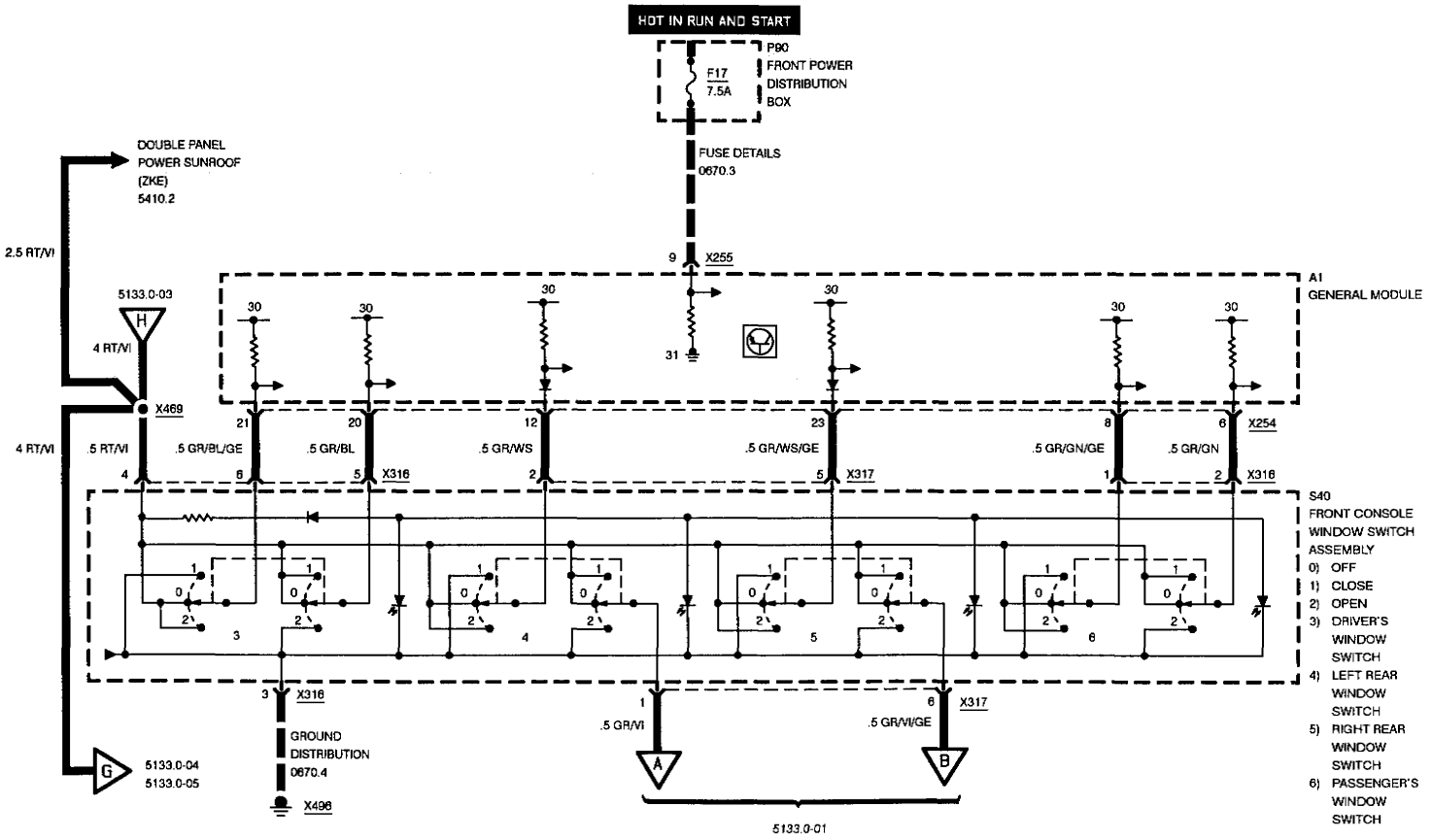
## OUTPUT DETAILS




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# ZKE POWER WINDOWS (FH)

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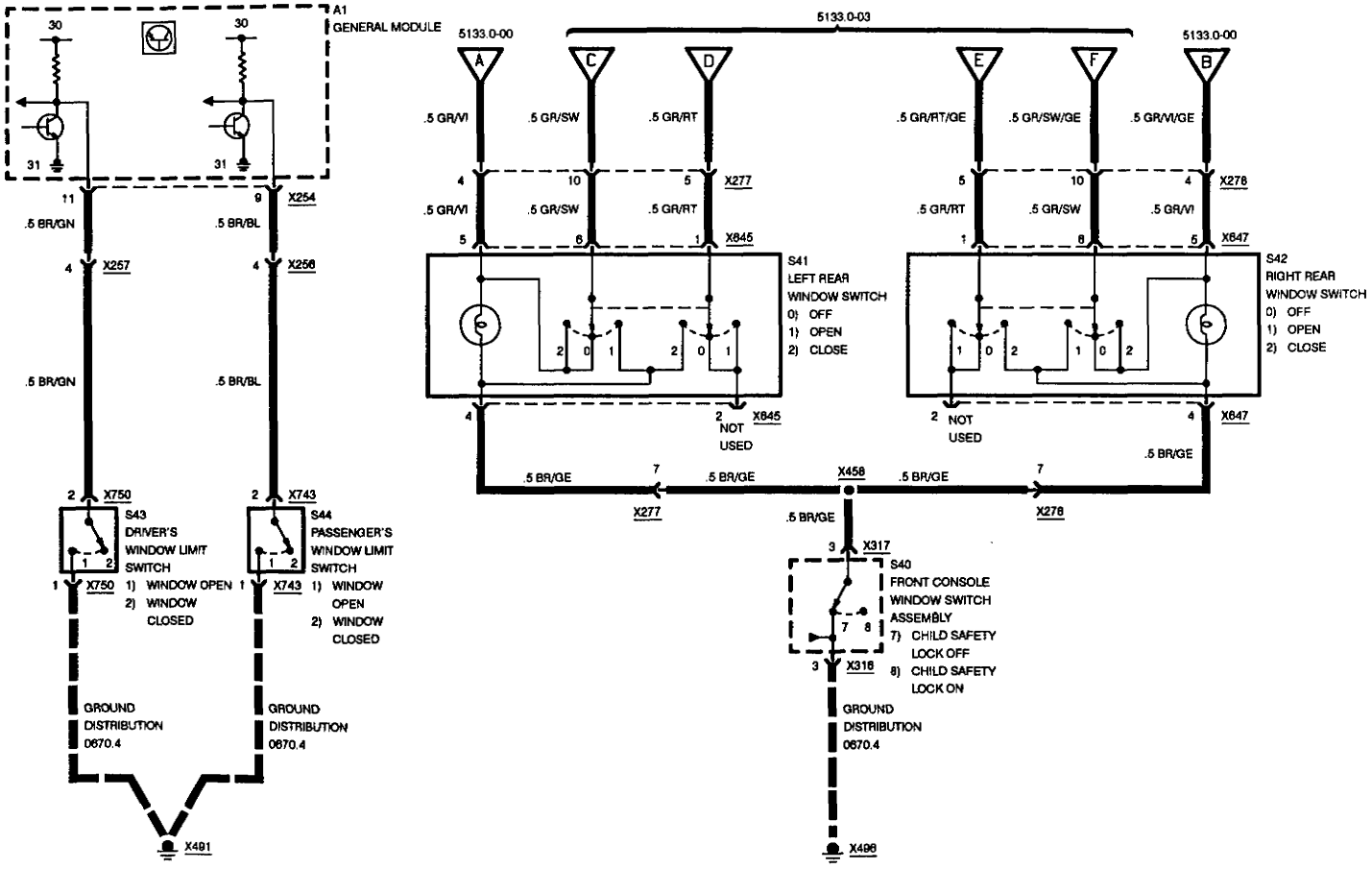





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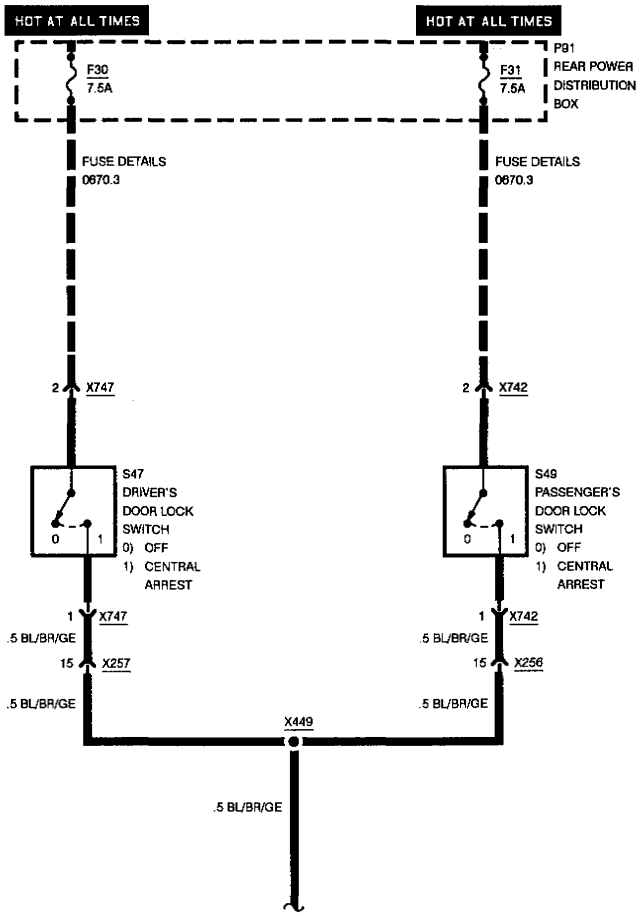
## INPUT DETAILS



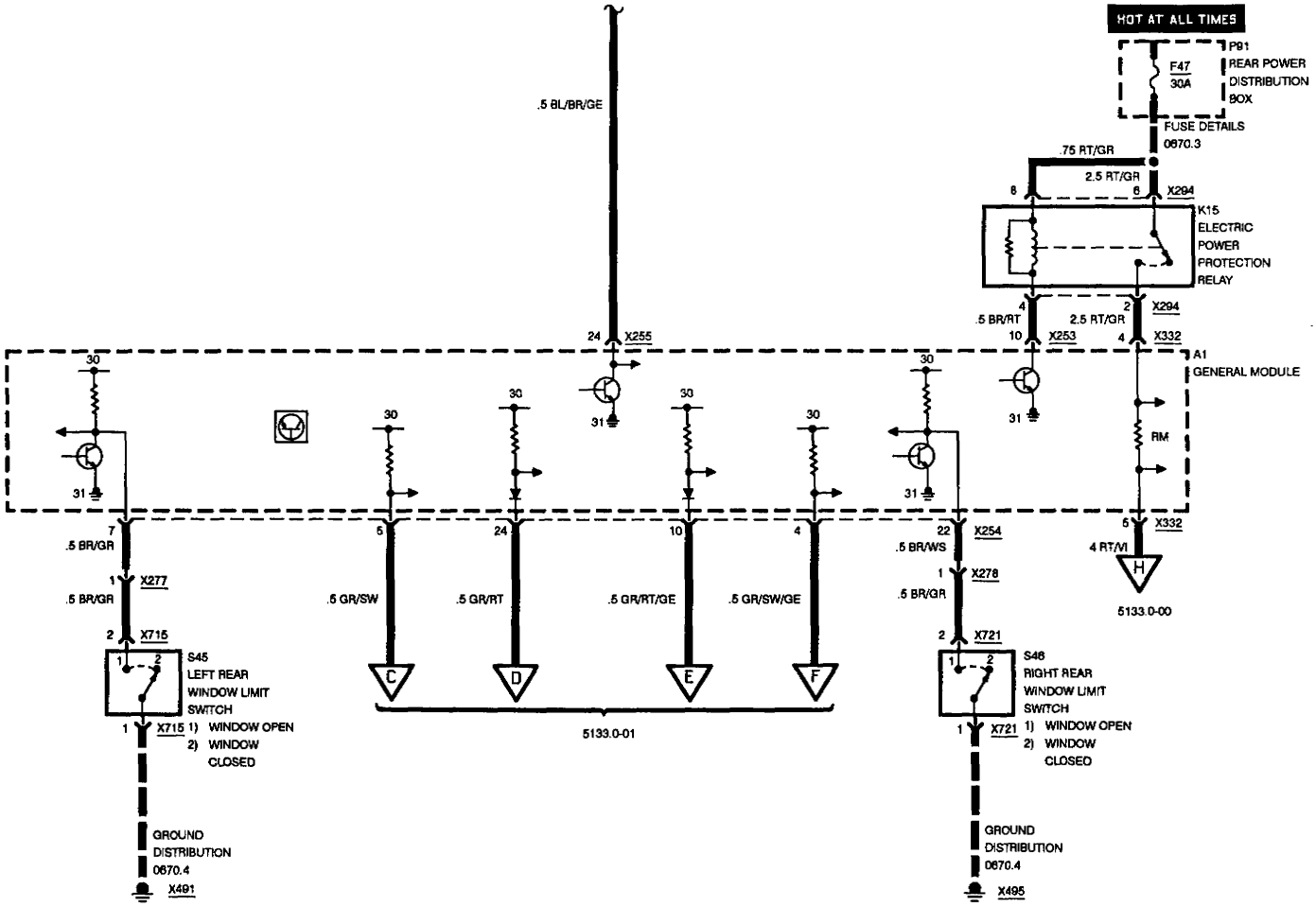

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# ZKE POWER WINDOWS (FH)

## INPUT DETAILS



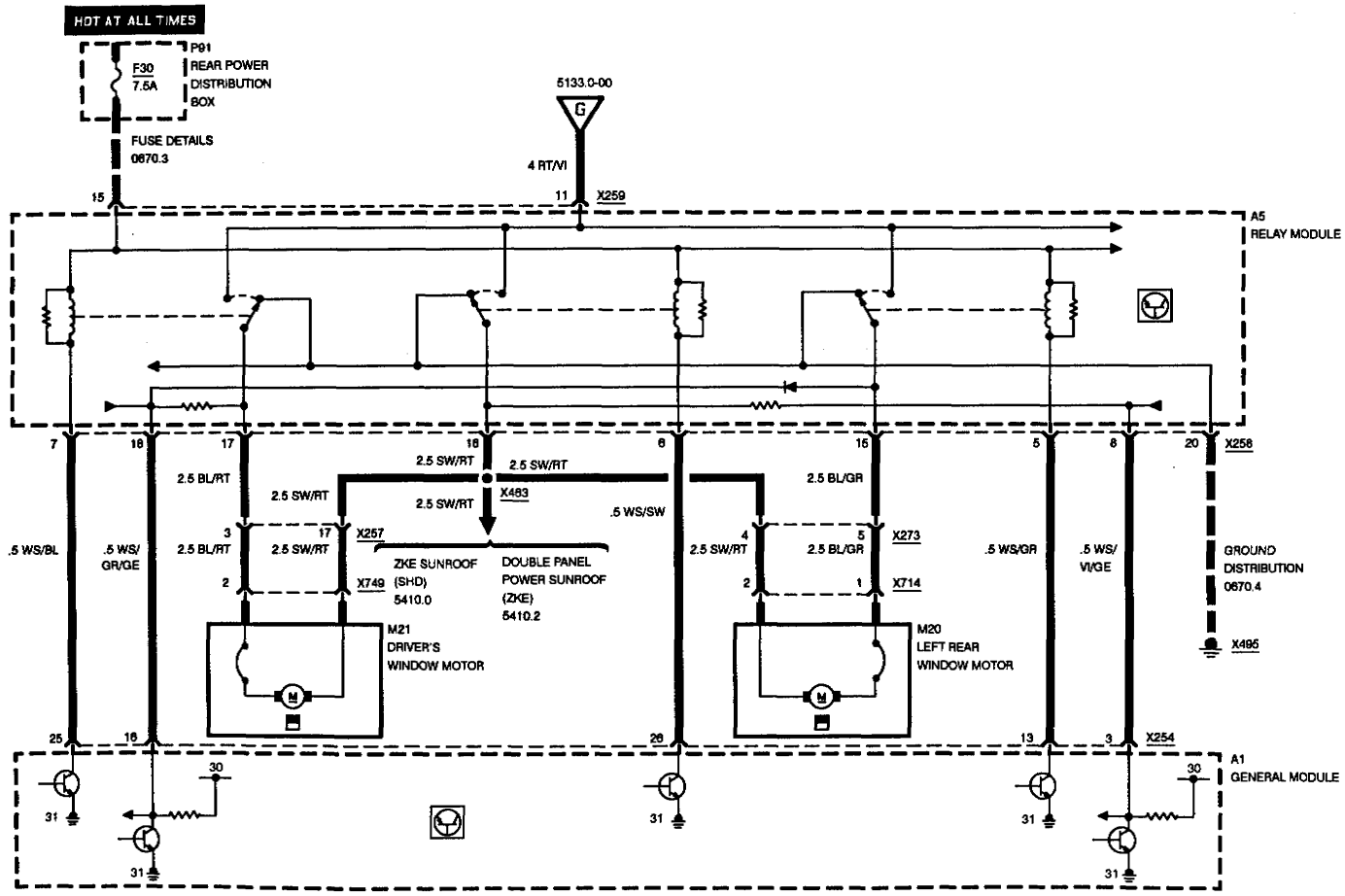

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# ZKE POWER WINDOWS (FH)

## LEFT SIDE OUTPUT DETAILS

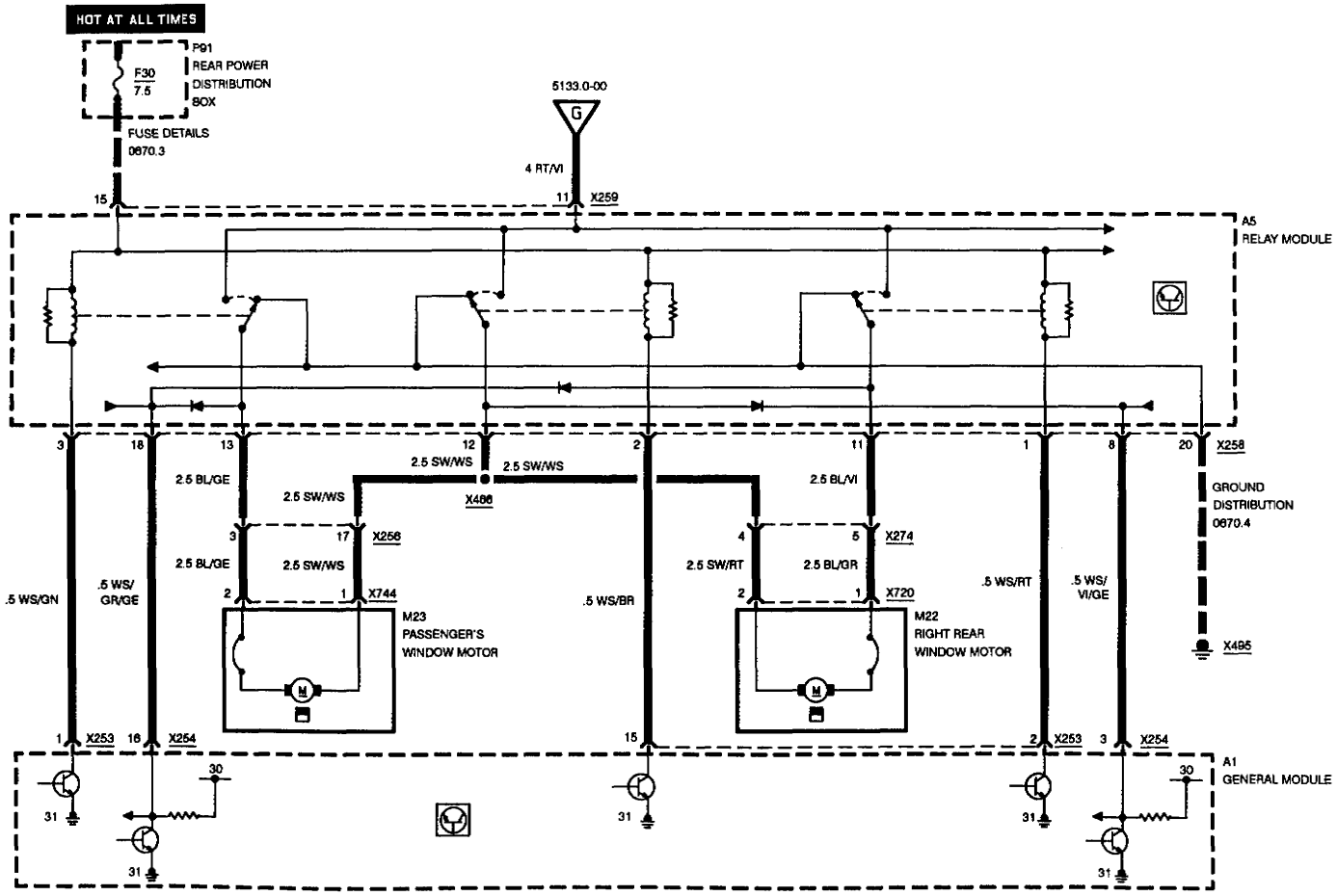





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# ZKE POWER WINDOWS (FH)

## RIGHT SIDE OUTPUT DETAILS

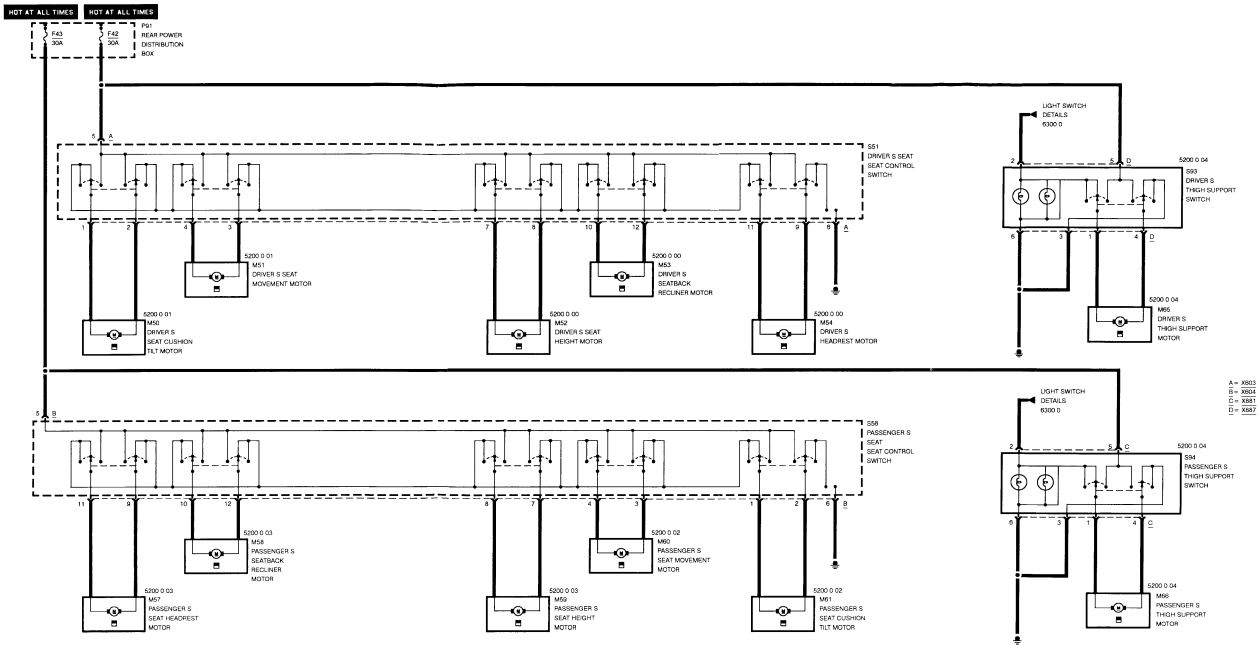





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## Pin Assignments

A = X603 12 Pins, black
B = X604 12 Pins, black
C = X881 6 Pins, white
D = X887 6 Pins, black

### X603 (Driver) and X604 (Passenger)

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | E/A | Seat cushion tilt control | Seat cushion tilt motor | | | |
| 2 | E/A | Seat cushion tilt control | Seat cushion tilt motor | | | |
| 3 | E/A | Seat cushion movement control | Seat movement motor | | | |
| 4 | E/A | Seat cushion movement control | Seat movement motor | | | |
| 5 | E | Battery voltage | Fuse | | | |
| 6 | M | Ground | Ground | | | |
| 7 | E/A | Seat cushion height control | Seat height motor | | | |
| 8 | E/A | Seat cushion height control | Seat height motor | | | |
| 9 | E/A | Headrest control | Headrest motor | | | |
| 10 | E/A | Recliner control | Seat back recliner motor | | | |
| 11 | E/A | Headrest control | Headrest motor | | | |
| 12 | E/A | Recliner control | Seat back recliner motor | | | |

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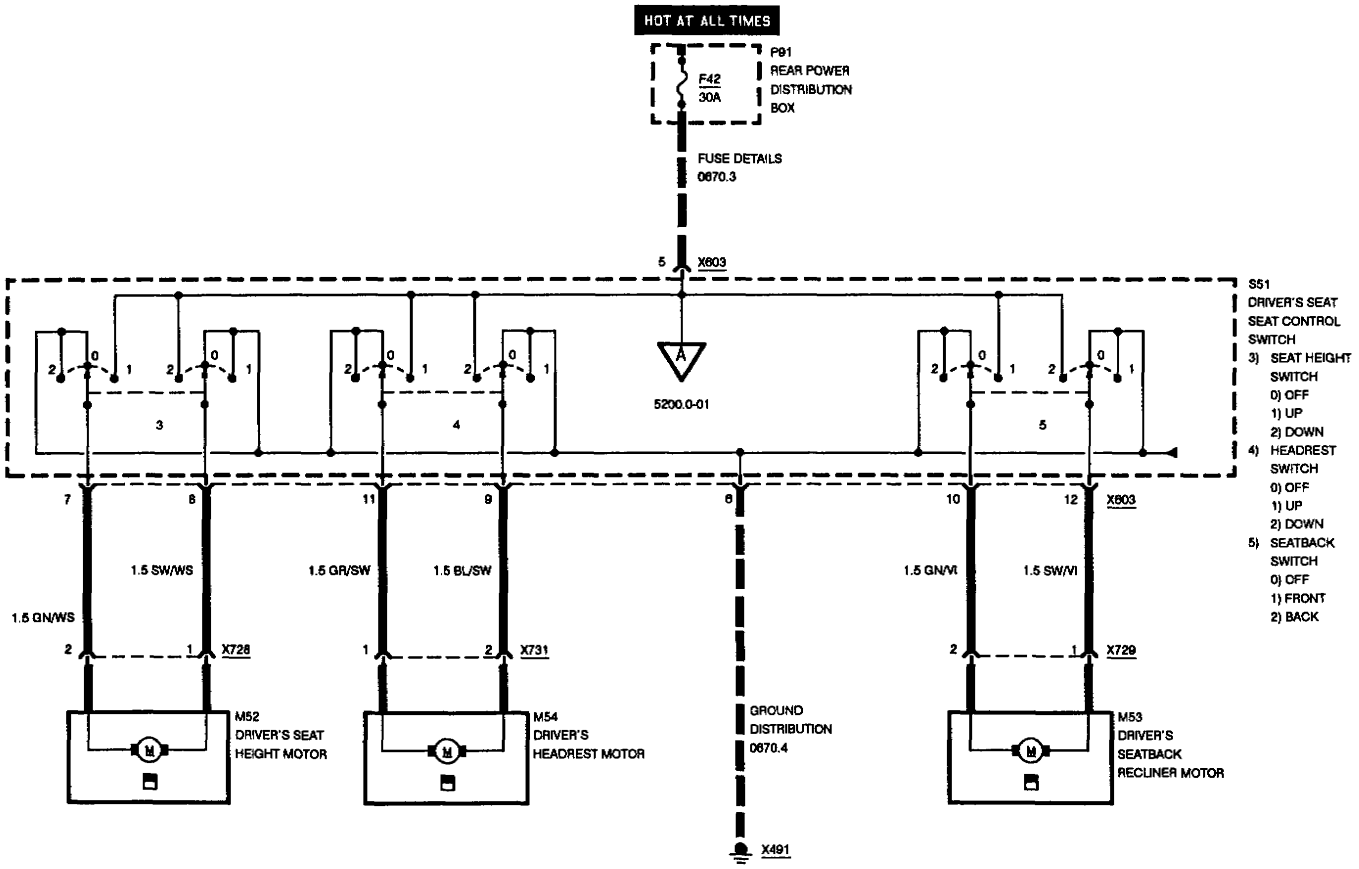
## X887 (Driver) and X881 (Passenger)

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | E/A | Thigh support control | Thigh support motor | | | |
| 2 | E | Switch illumination | Light switch | | | |
| 3 | M | Ground | Ground | | | |
| 4 | E/A | Thigh support control | Thigh support motor | | | |
| 5 | E | Battery voltage | Fuse | | | |
| 6 | M | Ground | Ground | | | |

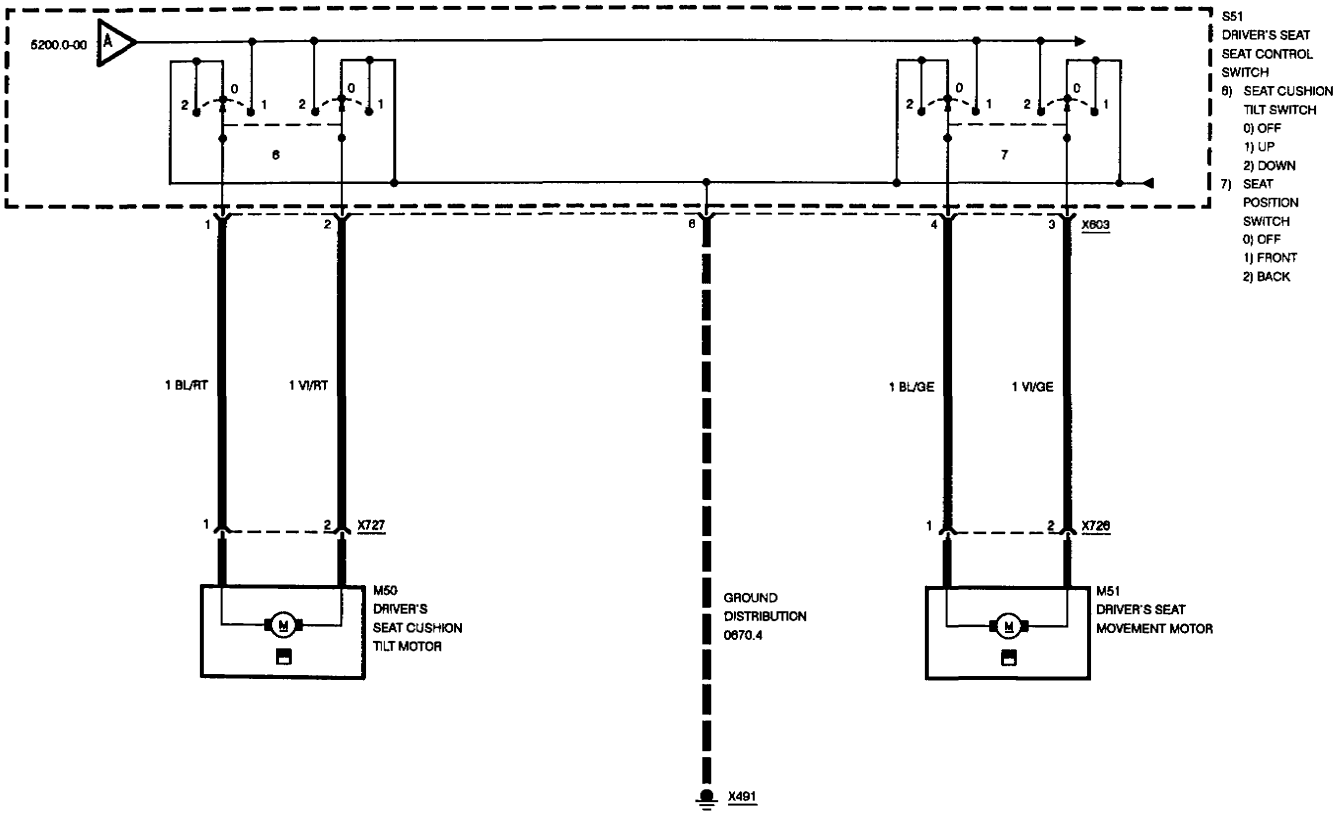
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# POWER SEATS
## DRIVER'S SEAT

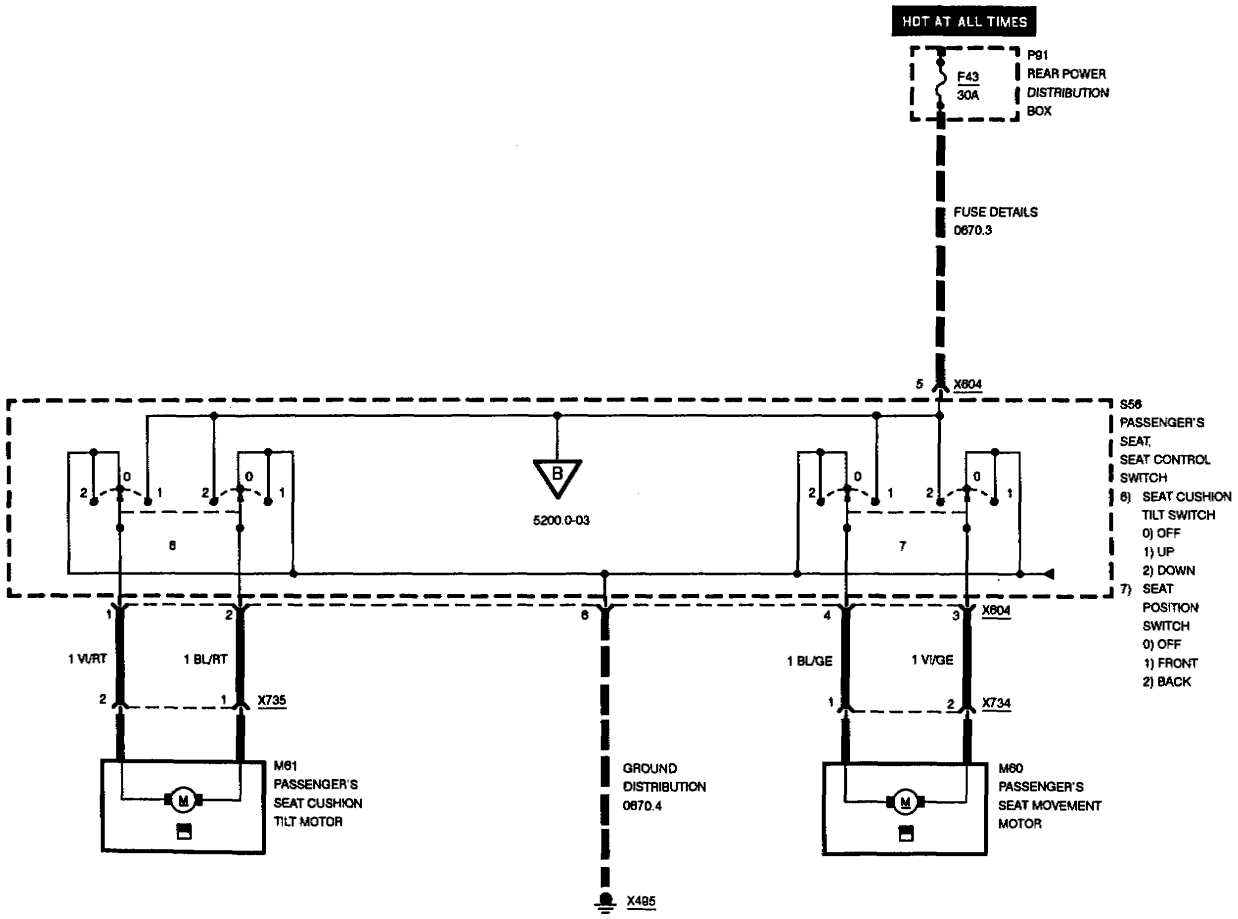



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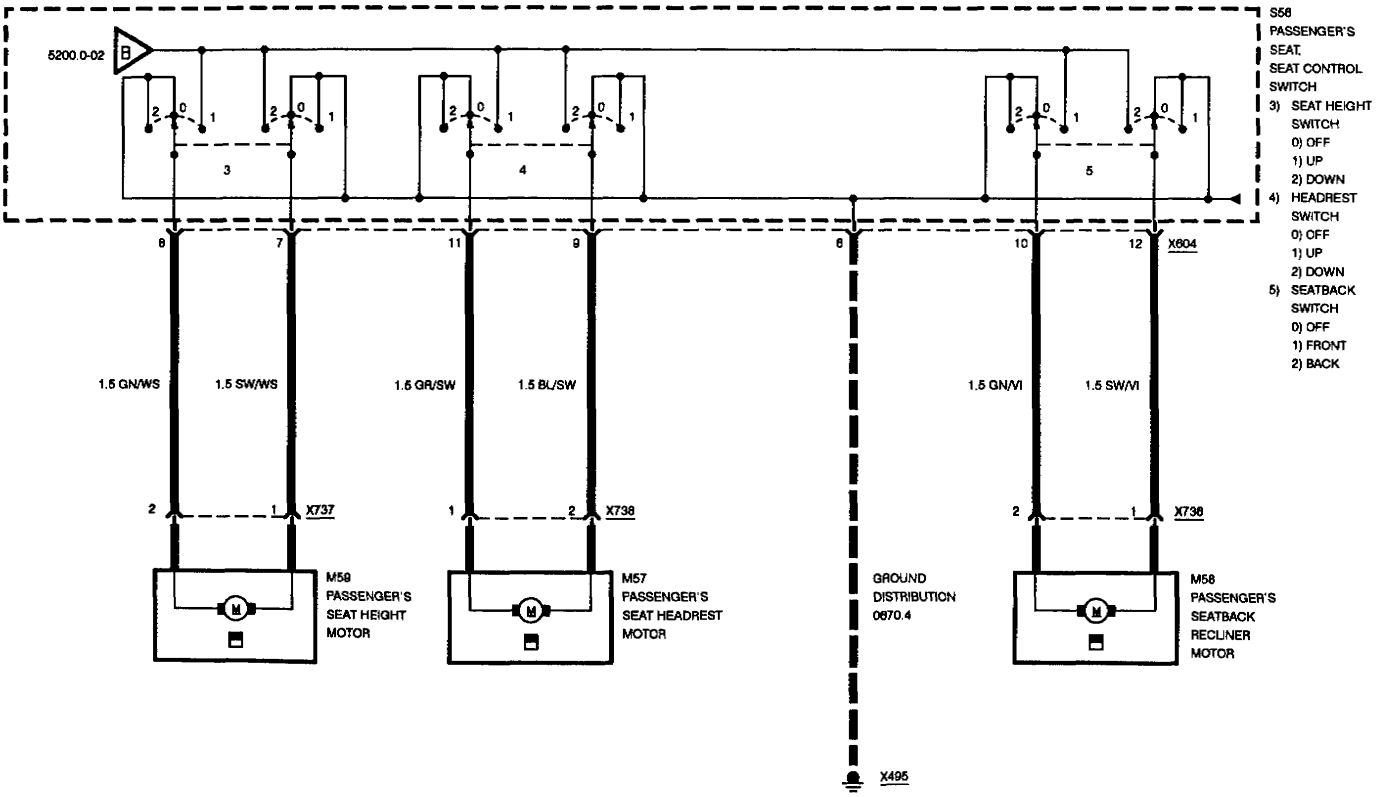



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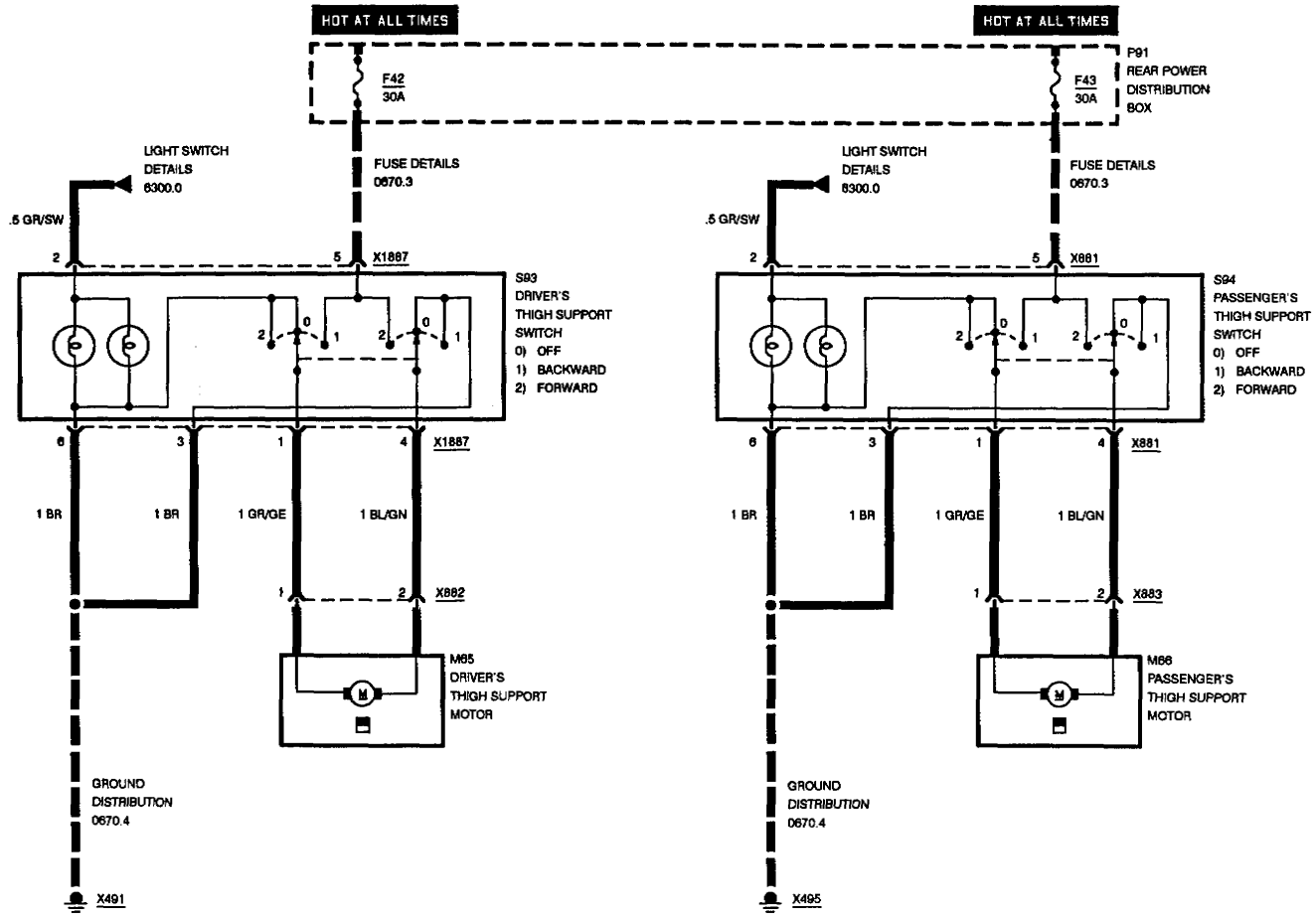





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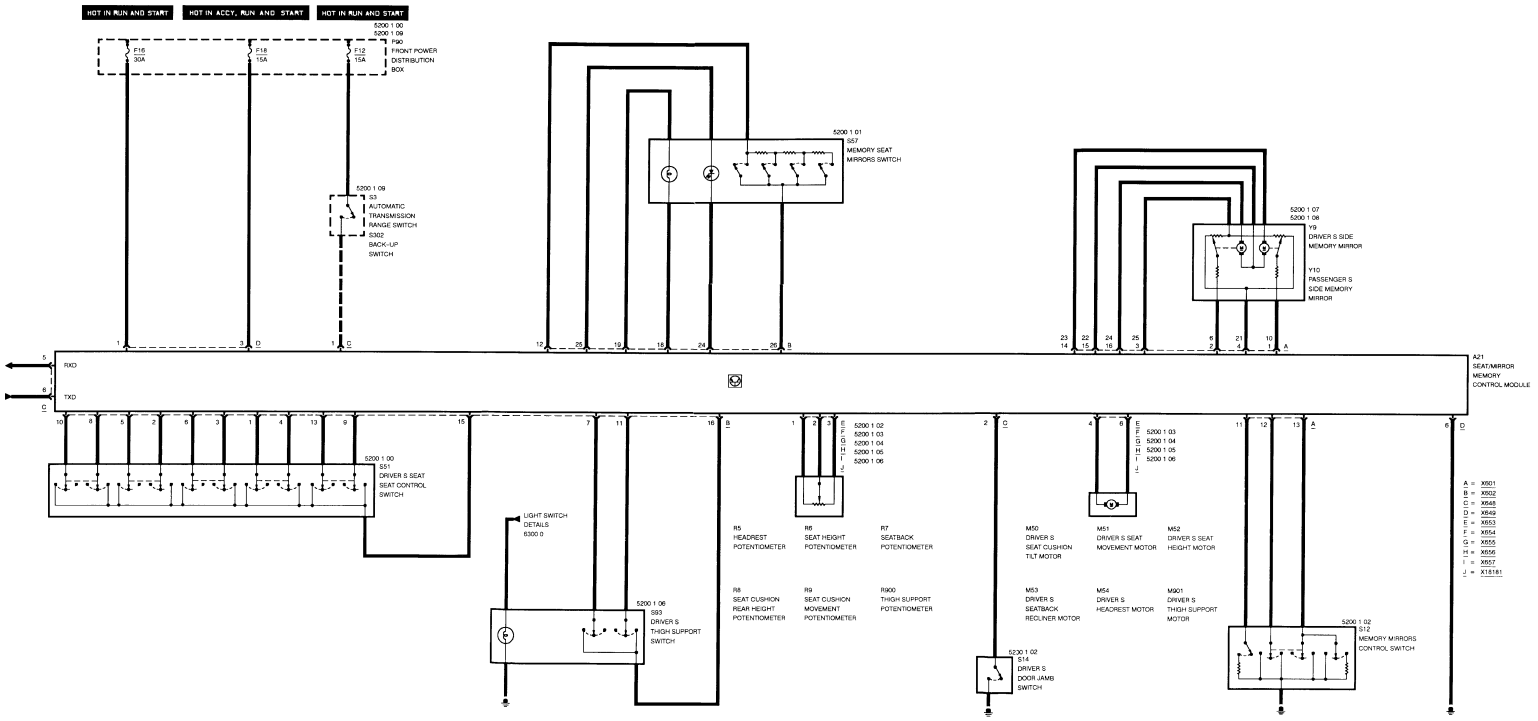
# POWER SEATS

## THIGH SUPPORT, WITH SPORT SEATS ONLY

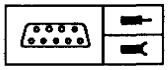



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## Pin Assignments

A = X601 26 Pins, white
B = X602 26 Pins, yellow
C = X648 6 Pins, black
D = X649 6 Pins, white
E = X653 6 Pins, black
F = X654 6 Pins, white
G = X655 6 Pins, blue
H = X656 6 Pins, green
I = X657 6 Pins, brown
I = X18181 6 Pins, yellow

### X601

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | E | Potentiometer connection | Driver's mirror | 0–4.5 V | Voltage value | |
| 2 | E | Potentiometer connection | Driver's mirror | 0–4.5 V | Voltage value | |
| 3 | A | Position potentiometer, voltage | Driver's mirror | 5 V | Voltage value | |
| 4 | M | Position potentiometer, ground | Driver's mirror | Ground | Voltage value | |
| 5 | | Not used | | | | |
| 6 | E | Potentiometer connection | Passenger's mirror | 0–4.5 V | Voltage value | |
| 7 | | Not used | | | | |
| 8 | | Not used | | | | |

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# MEMORY SEATS/MIRRORS (SM/SPM)



| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 9 | | Not used | | | | |
| 10 | E | Potentiometer connection | Passenger's mirror | 0–4.5 V | Voltage value | |
| 11 | E | Mirror select signal | Mirror control switch | Ground | Status display | |
| 12 | E | Mirror adjustment, L/R | Mirror control switch | Ground | Status display | |
| 13 | E | Mirror adjustment, L/R and U/D | Mirror control switch | Ground | Status display | |
| 14 | E/A | Connection, driver's mirror adjustment motor | Mirror adjustment motor, horizontal | | | |
| 15 | E/A | Connection, driver's mirror adjustment motor | Mirror adjustment motors, horizontal/vertical | | | |
| 16 | E/A | Connection, driver's mirror adjustment motor | Mirror adjustment motor, vertical | | | |
| 17 | | Not used | | | | |
| 18 | | Not used | | | | |
| 19 | | Not used | | | | |
| 20 | | Not used | | | | |
| 21 | M | Position potentiometer, ground | Passenger's mirror | Ground | Voltage value | |
| 22 | E/A | Connection, passenger's mirror adjustment motor | Passenger's mirror adjustment motor, horizontal/vertical | | | |
| 23 | E/A | Connection, passenger's mirror adjustment motor | Passenger's mirror adjustment motor, horizontal | | | |
| 24 | E/A | Connection, passenger's mirror adjustment motor | Passenger's mirror adjustment motor, vertical | | | |
| 25 | A | Position potentiometer voltage | Passenger's mirror | 5 V | Voltage value | |
| 26 | | Not used | | | | |

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# MEMORY SEATS/MIRRORS (SM/SPM)



## X602

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | E | Headrest down | Seat adjustment switch | Ground | Status display | |
| 2 | E | Tilt, down | Seat adjustment switch | Ground | Status display | |
| 3 | E | Height, down | Seat adjustment switch | Ground | Status display | |
| 4 | E | Headrest up | Seat adjustment switch | Ground | Status display | |
| 5 | E | Tilt, up | Seat adjustment switch | Ground | Status display | |
| 6 | E | Height, up | Seat adjustment switch | Ground | Status display | |
| 7 | E | Thigh support, backward | Thigh support switch | Ground | Status display | |
| 8 | E | Seat movement, back | Seat adjustment switch | Ground | Status display | |
| 9 | E | Backrest, back | Seat adjustment switch | Ground | Status display | |
| 10 | E | Seat movement, forward | Seat adjustment switch | Ground | Status display | |
| 11 | E | Thigh support, forward | Thigh support switch | Ground | Status display | |
| 12 | A | Memory switch voltage | Memory switch | 5 V | Status display | |
| 13 | E | Backrest, forward | Seat adjustment switch | Ground | Status display | |
| 14 | | Not used | | | | |
| 15 | E | Ground | Seat adjustment switch | Ground | | |
| 16 | E | Ground | Thigh support switch | | | |
| 17 | | Not used | | | | |
| 18 | A | Switch illumination (–) | Memory switch | Ground | | |
| 19 | A | Switch illumination (+) | Memory switch | 12 V | | |
| 20 | | Not used | | | | |
| 21 | | Not used | | | | |
| 22 | | Not used | | | | |

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| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 23 | | Not used | | | | |
| 24 | A | Memory switch LED (–) | Memory switch | Ground | | |
| 25 | A | Memory switch LED (+) | Memory switch | 2 V | | |
| 26 | E | Memory switch signal | Memory switch | Voltage value | | |

**X648**

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | E | Reverse gear signal | Back up switch | | | |
| 2 | E | Driver's door status | Driver's door jamb switch | | | |
| 3 | | Not used | | | | |
| 4 | | Not used | | | | |
| 5 | A | Diagnosis (RxD) | Diagnosis connector | | | |
| 6 | E | Diagnosis (TxD) | Diagnosis connector | | | |

**X649**

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | E | Terminal 15 voltage | Fuse | | | |
| 2 | | Not used | | | | |
| 3 | E | Terminal R voltage | Fuse | | | |
| 4 | | Not used | | | | |
| 5 | | Not used | | | | |
| 6 | M | Ground | Ground point | | | |



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# MEMORY SEATS/MIRRORS (SM/SPM)



## X653

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | A | Potentiometer voltage | Driver's headrest pot. | | | |
| 2 | E | Headrest position signal | Driver's headrest pot. | | | |
| 3 | M | Ground | Driver's headrest pot. | | | |
| 4 | E/A | Motor voltage/ground | Driver's headrest motor | | | |
| 5 | | Not used | | | | |
| 6 | E/A | Motor voltage/ground | Driver's headrest motor | | | |

## X654

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | A | Potentiometer voltage | Driver's seat height pot. | | | |
| 2 | E | Seat height position signal | Driver's seat height pot. | | | |
| 3 | M | Ground | Driver's seat height pot. | | | |
| 4 | E/A | Motor voltage/ground | Driver's seat height motor | | | |
| 5 | | Not used | | | | |
| 6 | E/A | Motor voltage/ground | Driver's seat height motor | | | |

## X655

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | A | Potentiometer voltage | Driver's seat back pot. | | | |
| 2 | E | Seat back position signal | Driver's seat back pot. | | | |
| 3 | M | Ground | Driver's seat back pot. | | | |

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# MEMORY SEATS/MIRRORS (SM/SPM)



| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 4 | E/A | Motor voltage/ground | Driver's seat back recliner motor | | | |
| 5 | | Not used | | | | |
| 6 | E/A | Motor voltage/ground | Driver's seat back recliner motor | | | |

## X656

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | A | Potentiometer voltage | Driver's seat rear height pot. | | | |
| 2 | E | Seat rear height signal | Driver's seat rear height pot. | | | |
| 3 | M | Ground | Driver's seat rear height pot. | | | |
| 4 | E/A | Motor voltage/ground | Driver's seat cushion tilt motor | | | |
| 5 | | Not used | | | | |
| 6 | E/A | Motor voltage/ground | Driver's seat cushion tilt motor | | | |

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# MEMORY SEATS/MIRRORS (SM/SPM)



## X657

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | A | Potentiometer voltage | Driver's seat potentiometer | | | |
| 2 | E | Seat cushion position signal | Driver's seat potentiometer | | | |
| 3 | M | Ground | Driver's seat potentiometer | | | |
| 4 | E/A | Motor voltage/ground | Driver's seat movement motor | | | |
| 5 | | Not used | | | | |
| 6 | E/A | Motor voltage/ground | Driver's seat movement motor | | | |

## X18181

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | A | Potentiometer voltage | Driver's seat thigh support pot. | | | |
| 2 | E | Thigh support position signal | Driver's seat thigh support pot. | | | |
| 3 | M | Ground | Driver's seat thigh support pot. | | | |
| 4 | E/A | Motor voltage/ground | Driver's seat thigh support motor | | | |
| 5 | | Not used | | | | |
| 6 | E/A | Motor voltage/ground | Driver's seat thigh support motor | | | |

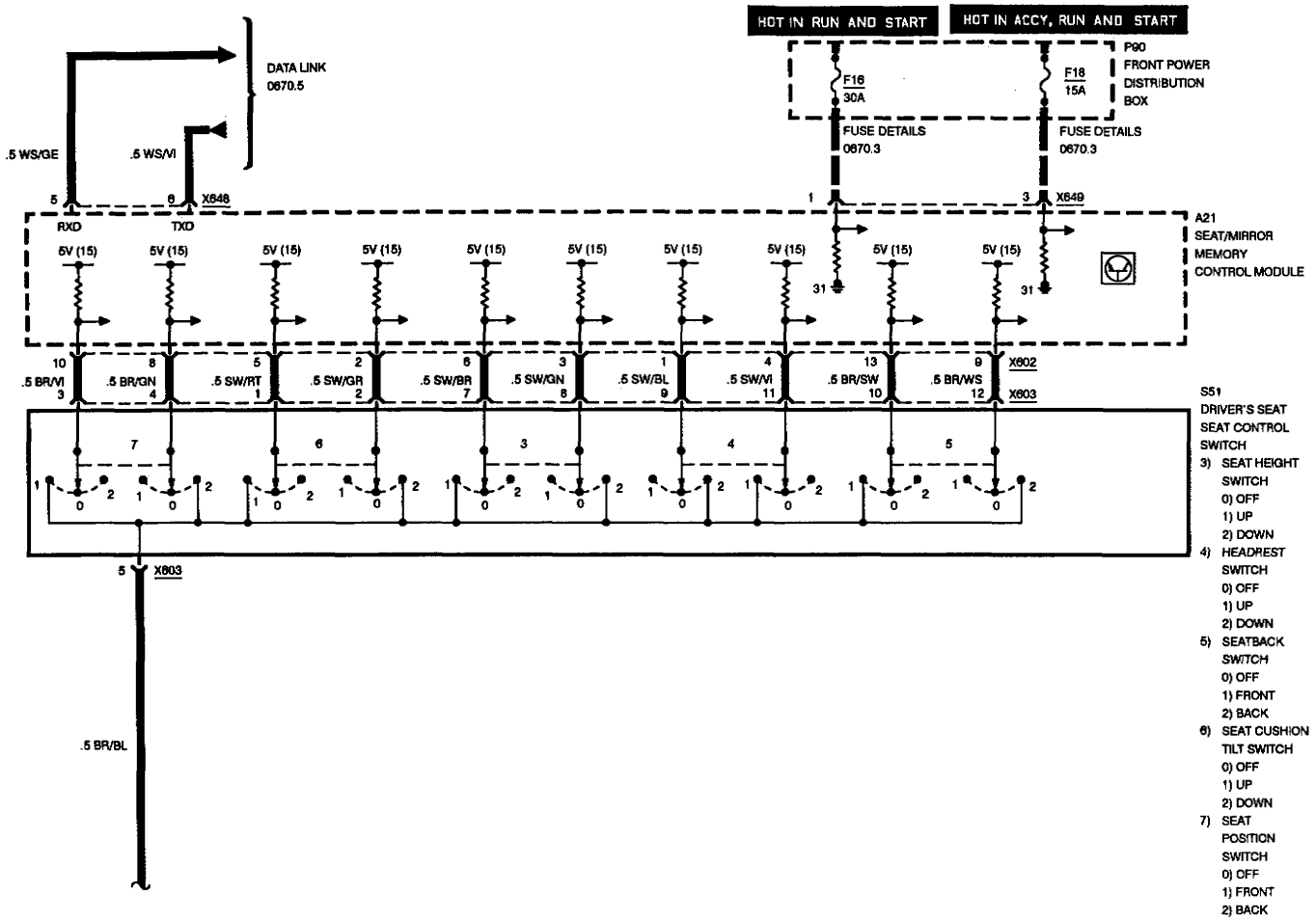




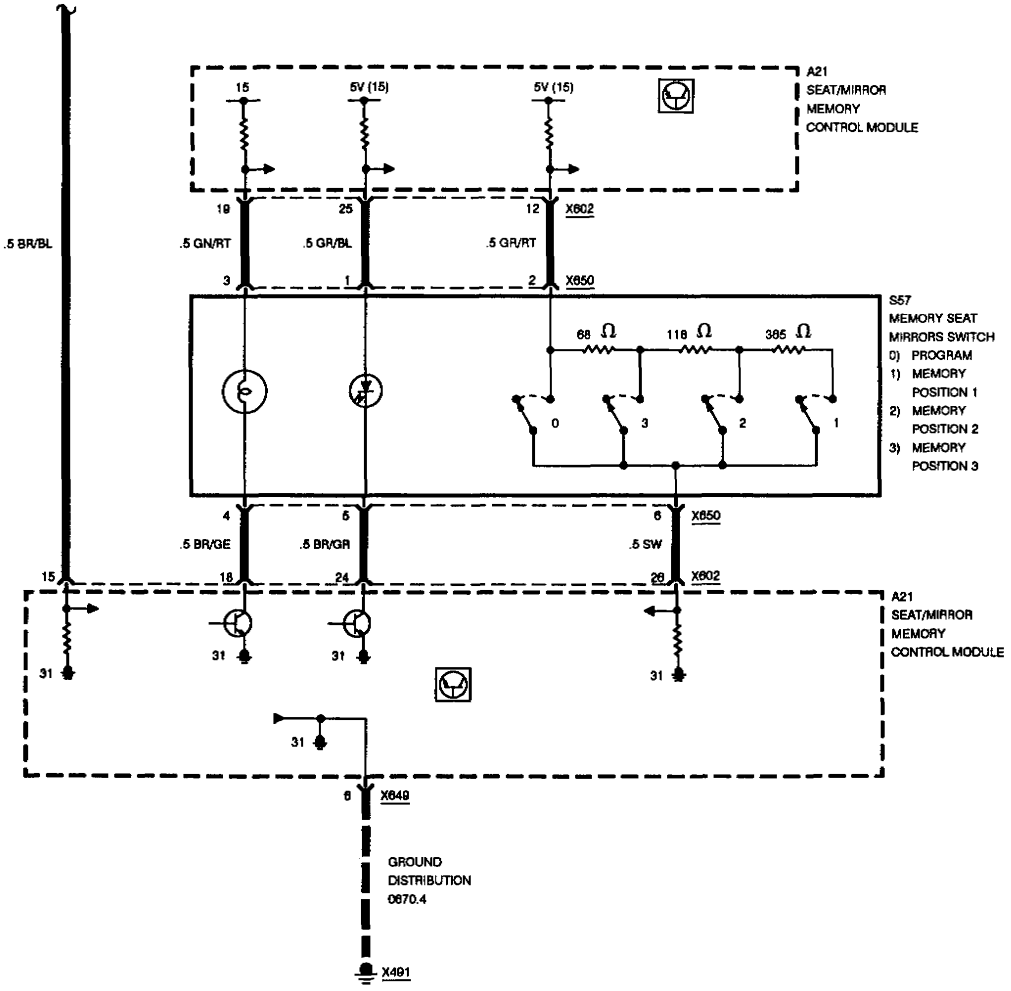
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# SEAT/MIRROR MEMORY SYSTEM (SM/SPM)



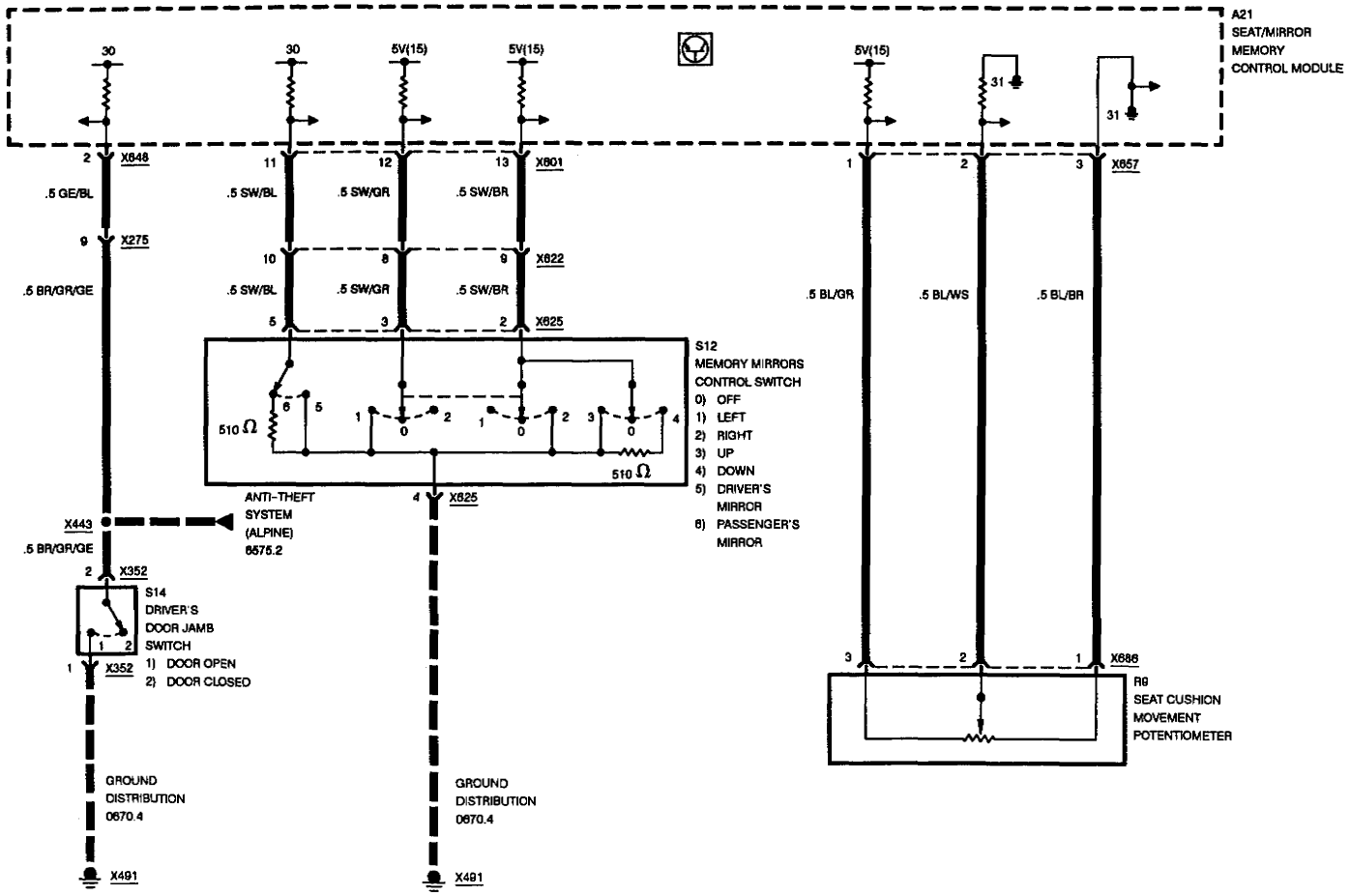



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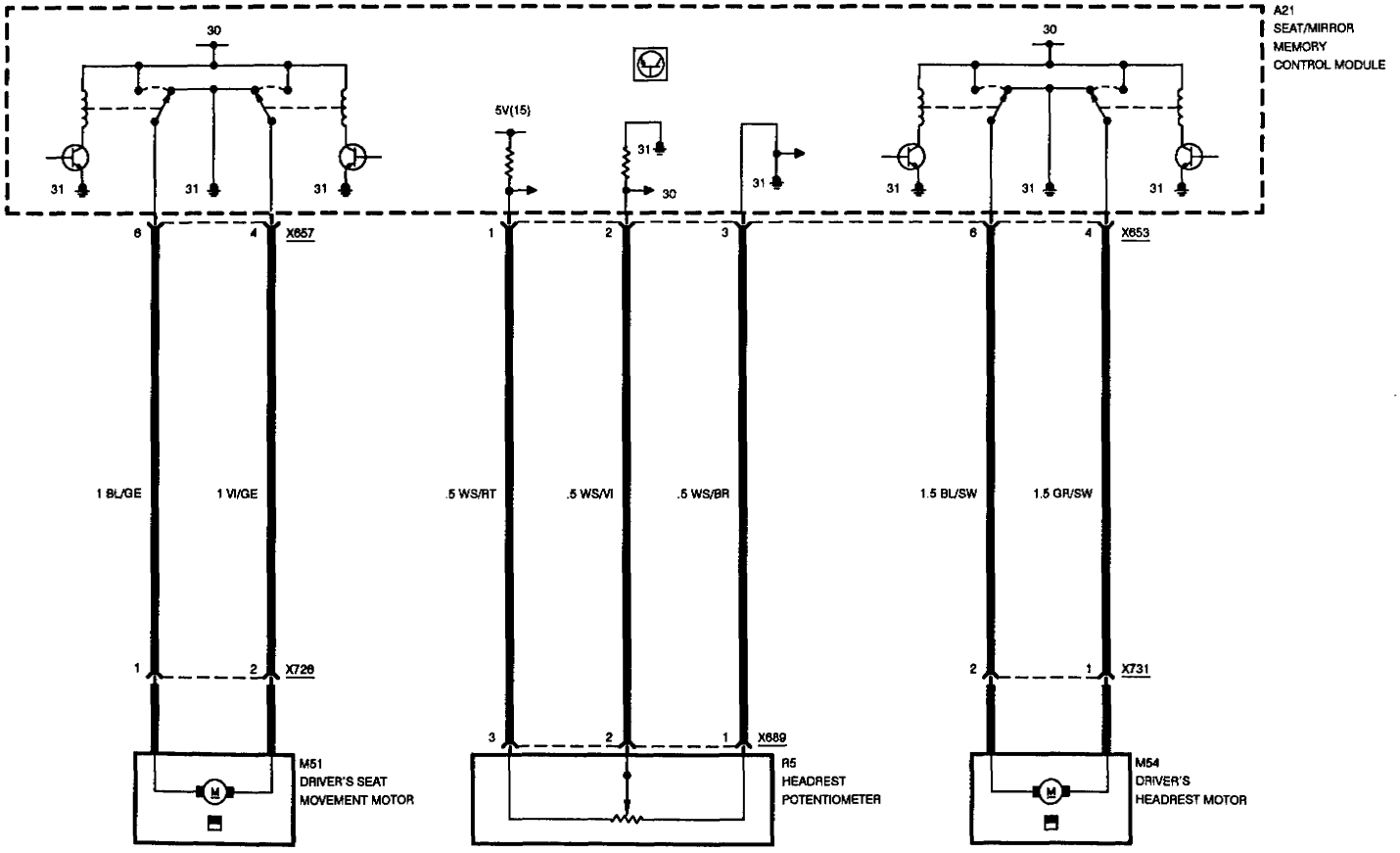





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# SEAT/MIRROR MEMORY SYSTEM (SM/SPM)

## SEAT

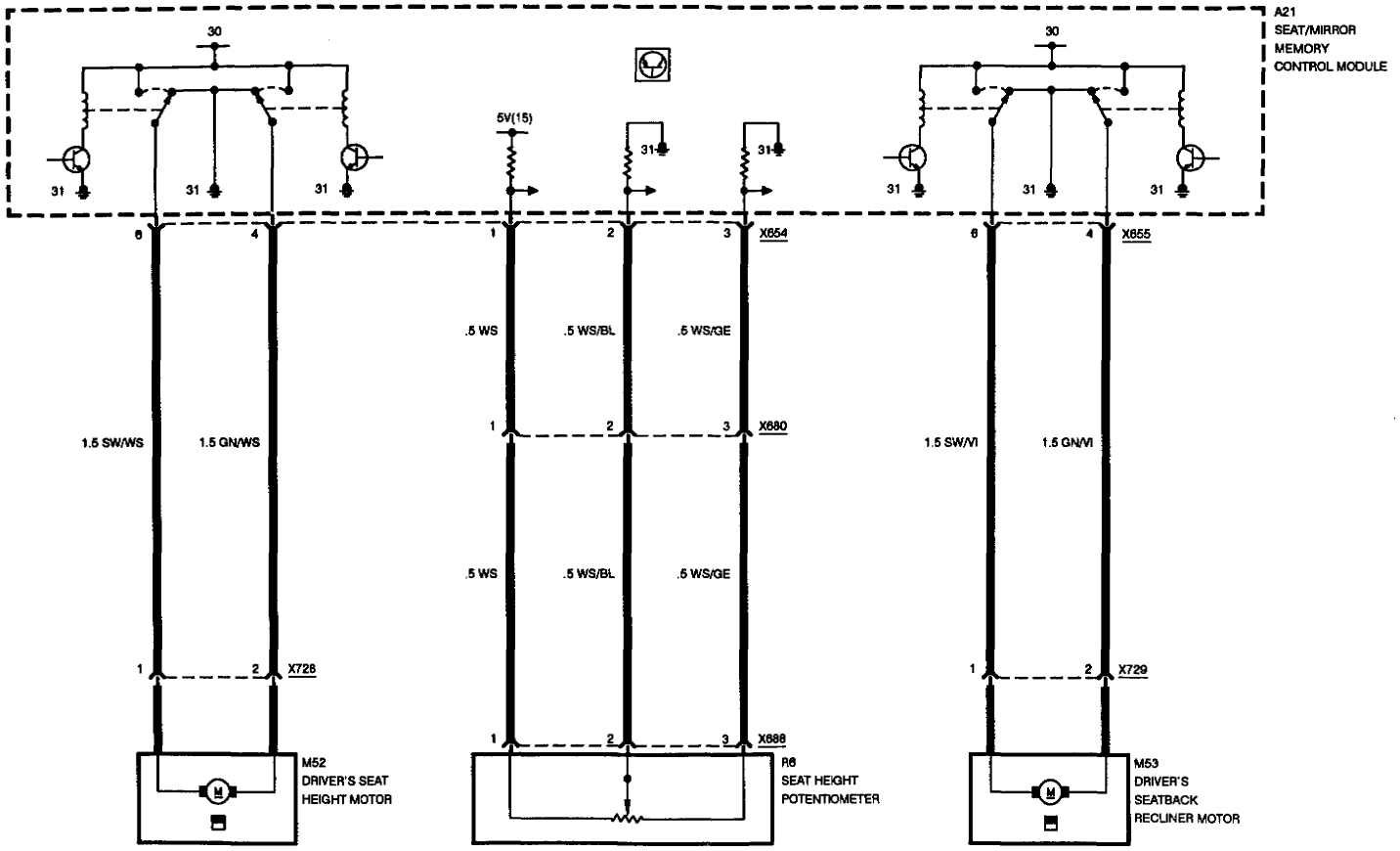





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# SEAT/MIRROR MEMORY SYSTEM (SM/SPM)

## SEAT

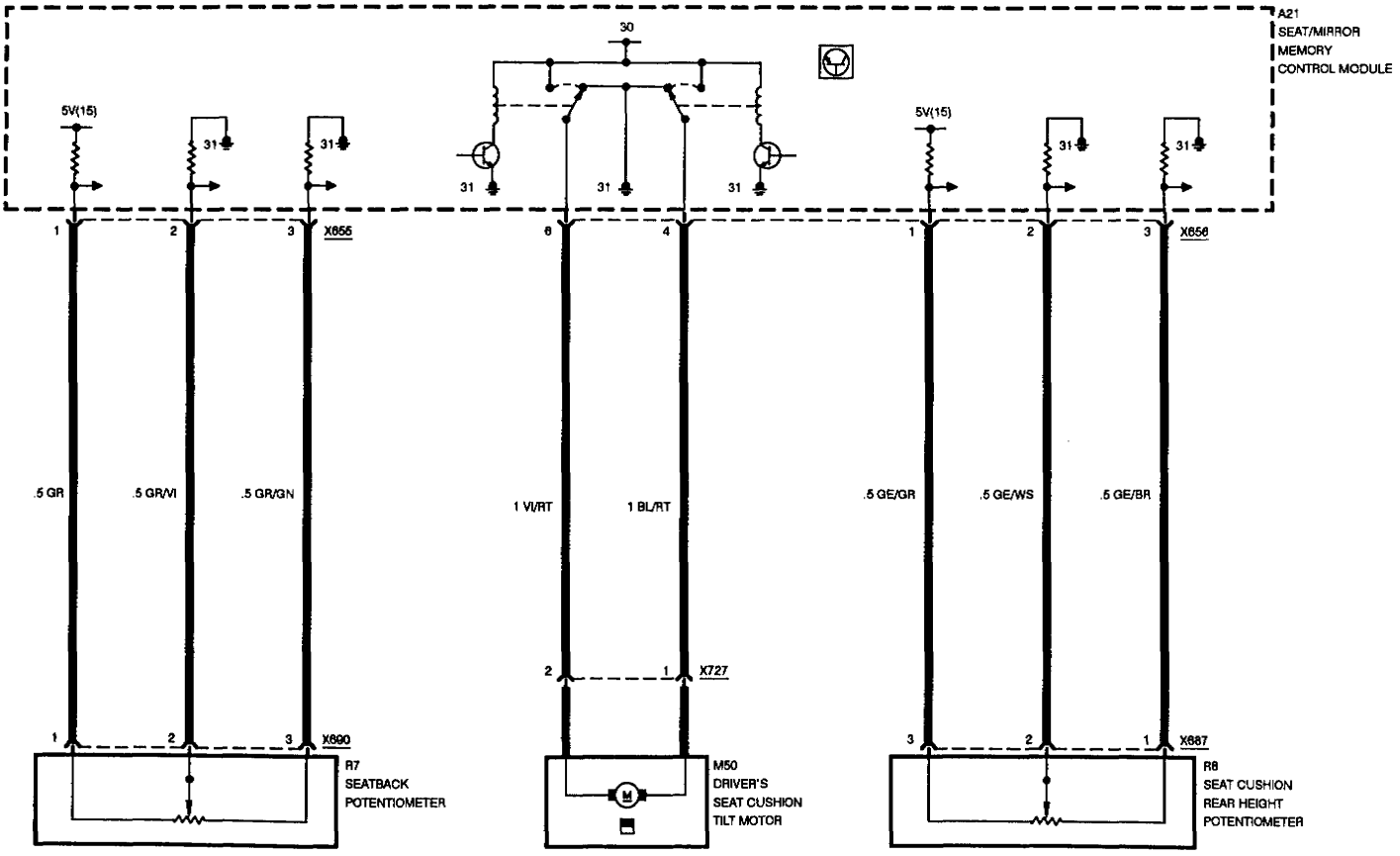





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# SEAT/MIRROR MEMORY SYSTEM (SM/SPM)

## SEAT

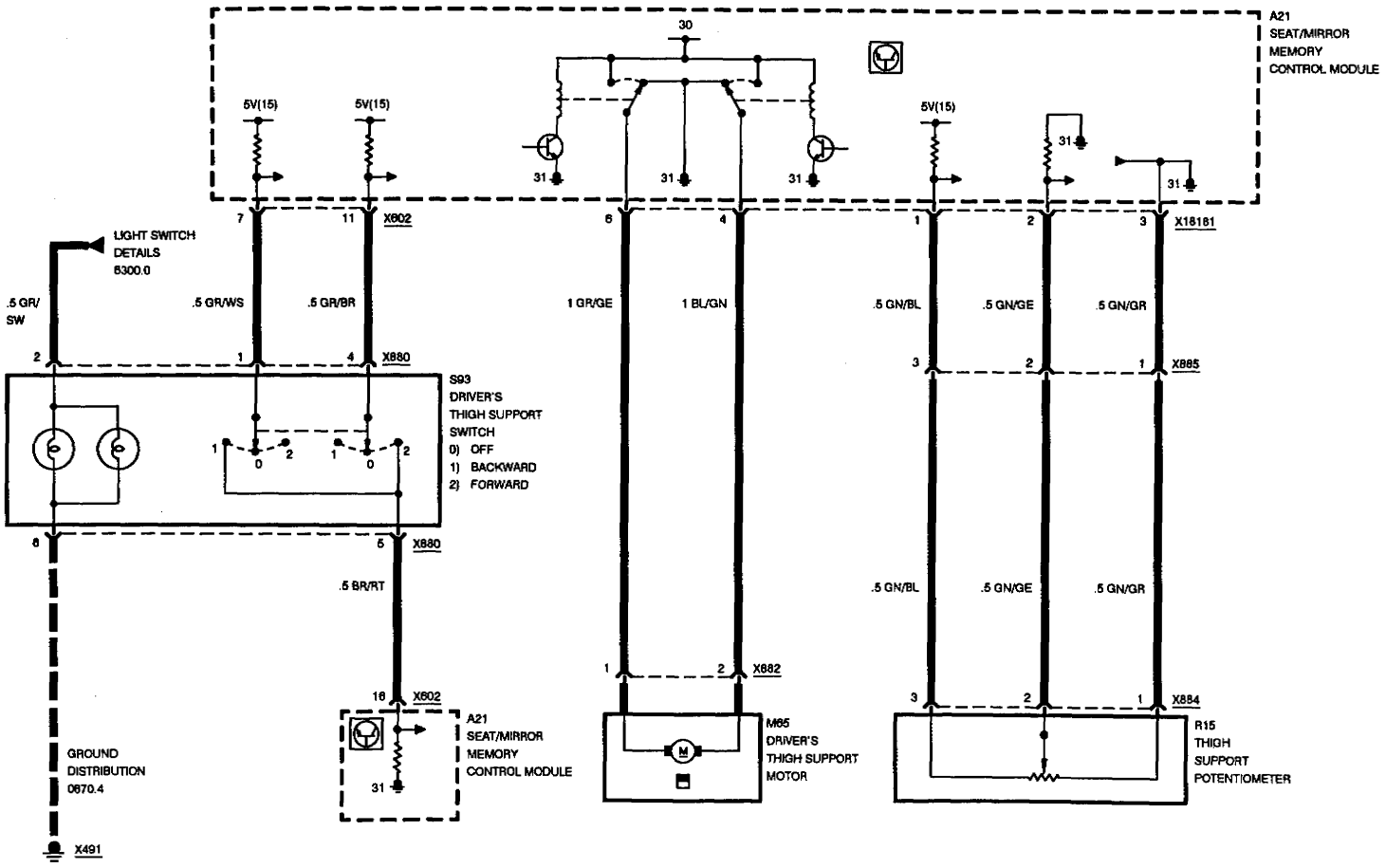





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# SEAT/MIRROR MEMORY SYSTEM (SM/SPM)

## WITH SPORT SEAT

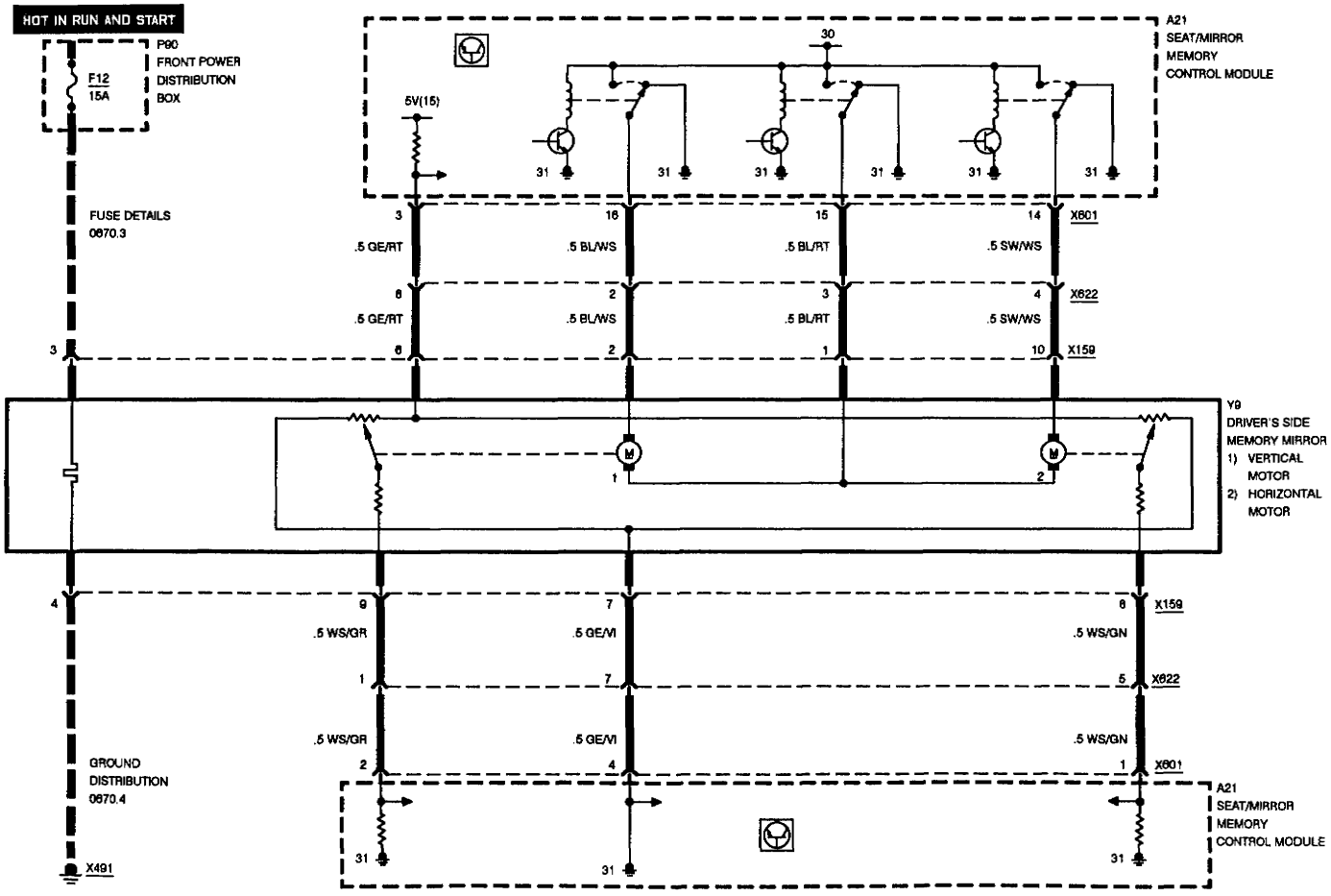





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# SEAT/MIRROR MEMORY SYSTEM (SM/SPM)

## MIRROR

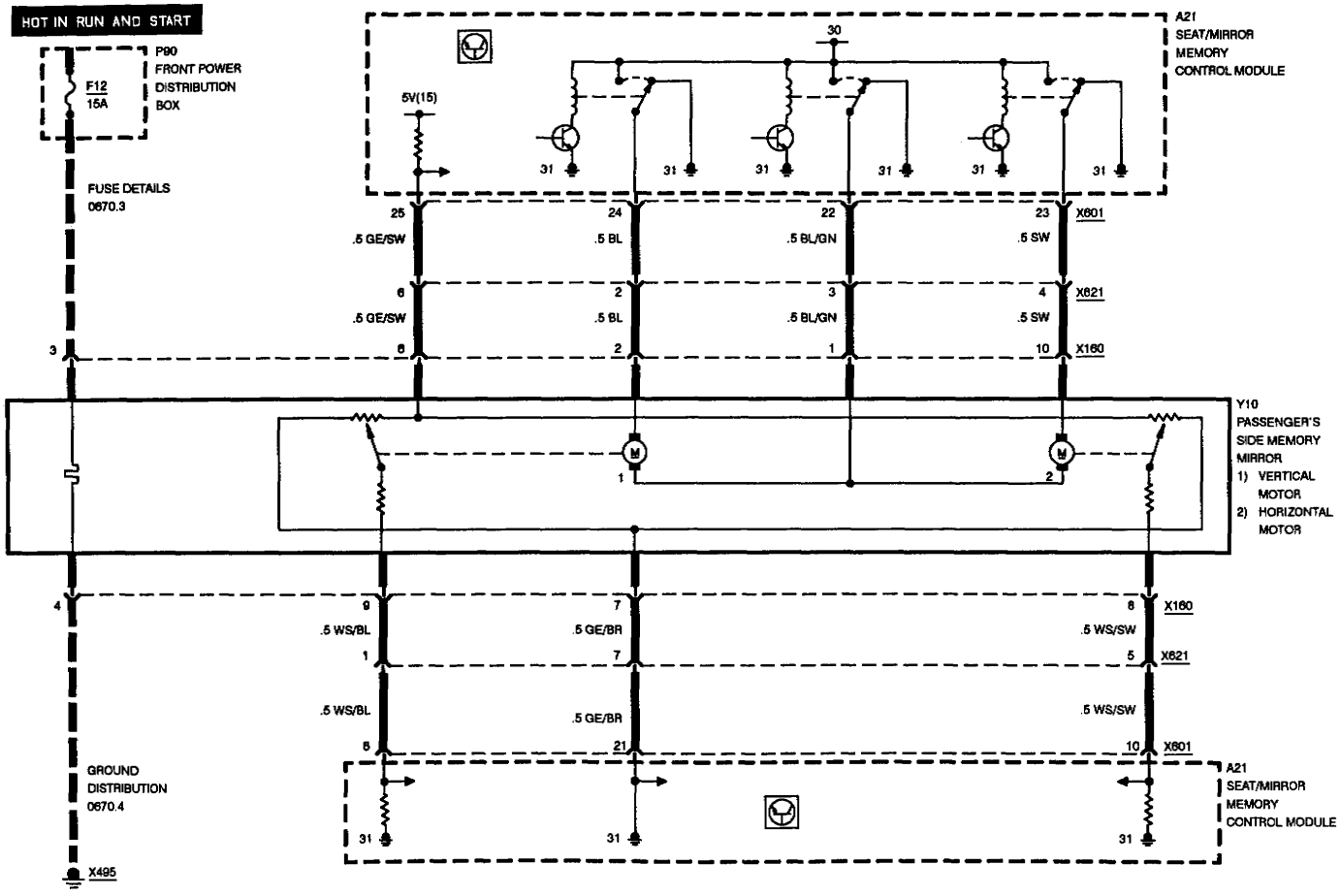





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# SEAT/MIRROR MEMORY SYSTEM (SM/SPM)

## MIRROR

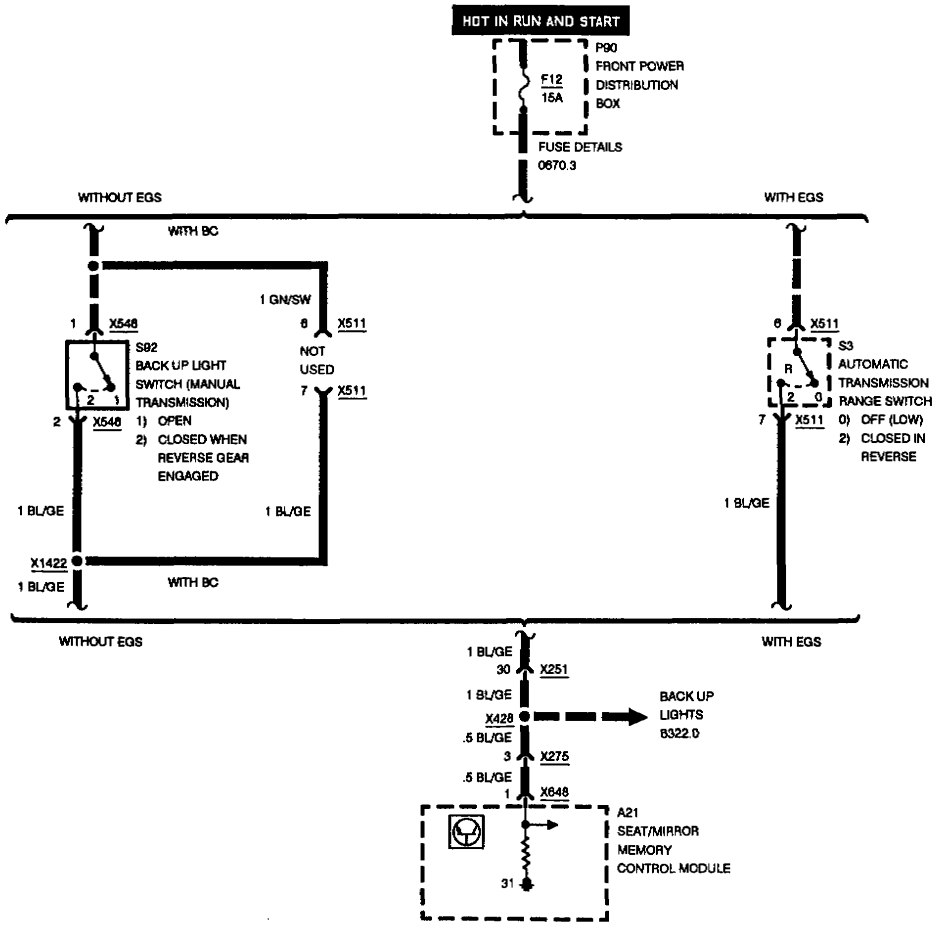





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# SEAT/MIRROR MEMORY SYSTEM (SM/SPM)

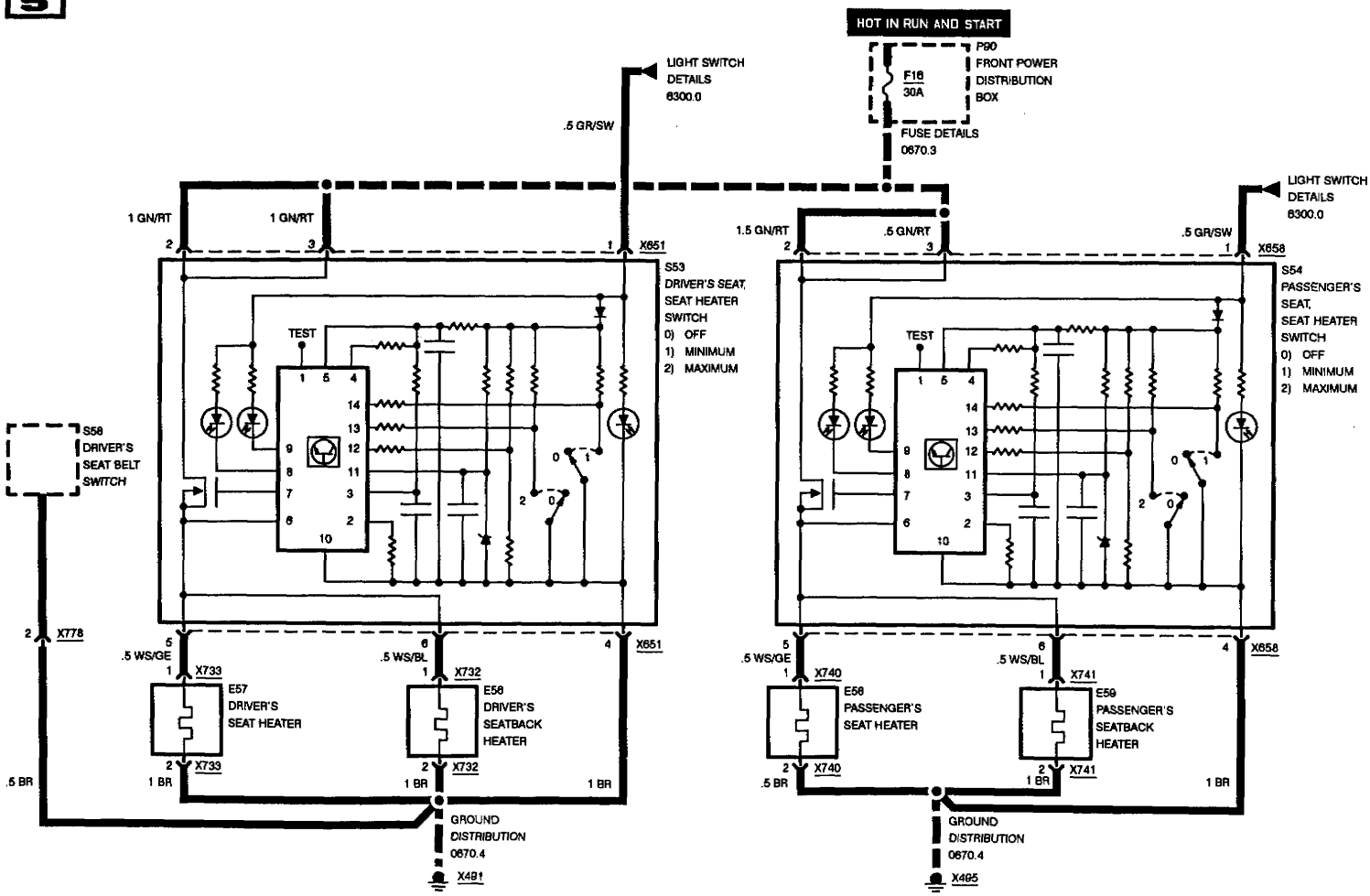





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# HEATED SEATS



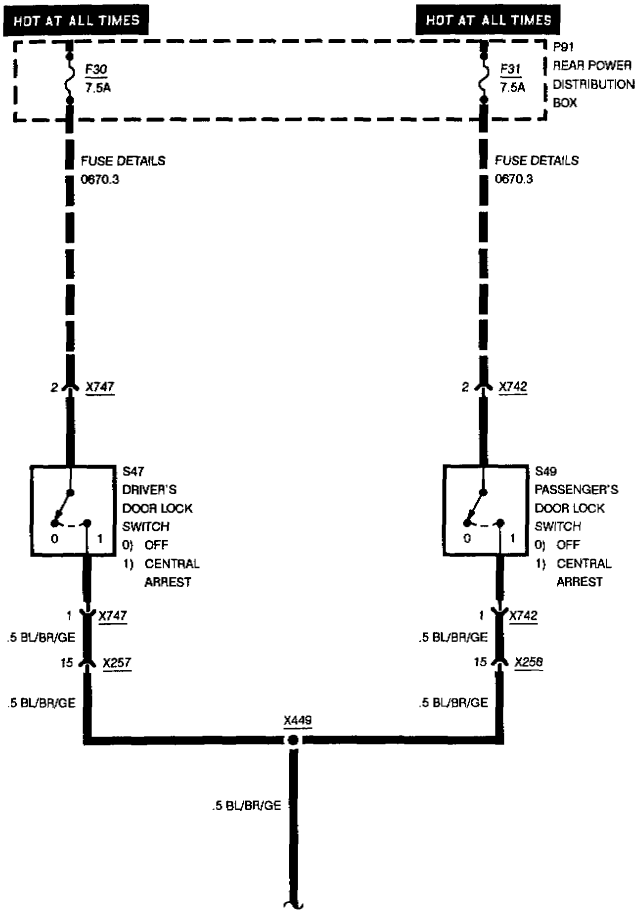



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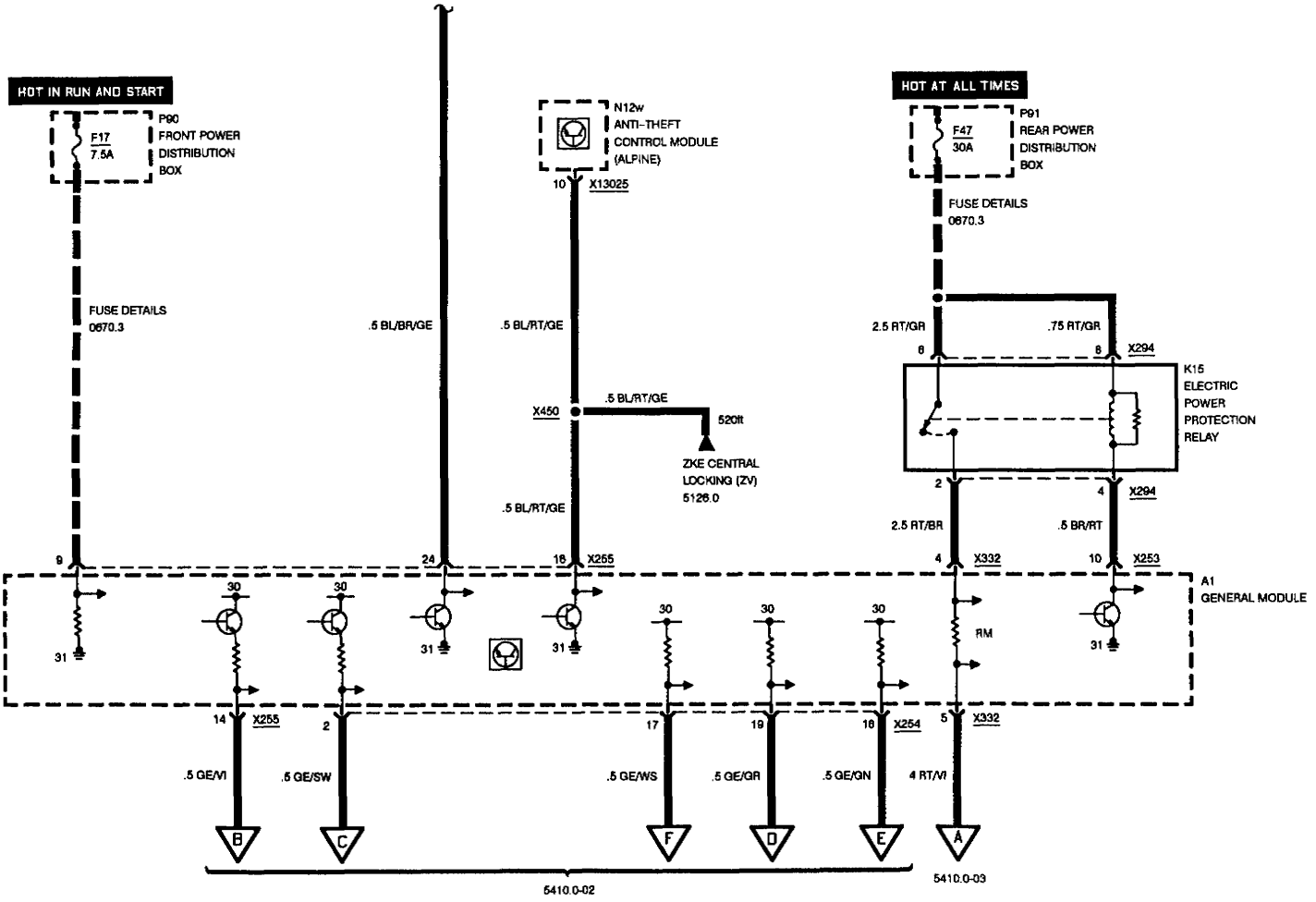
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# ZKE SUNROOF (SHD)

## INPUT DETAILS



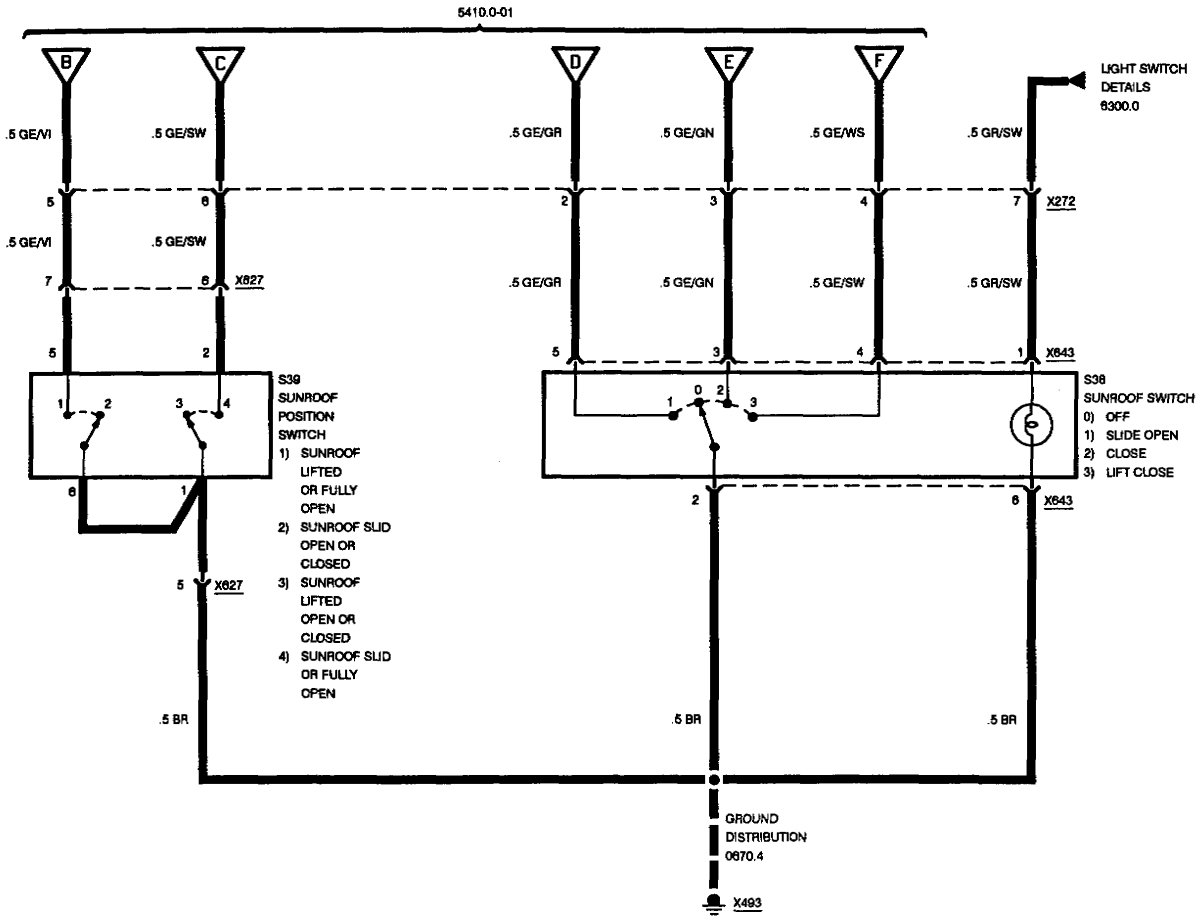

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# ZKE SUNROOF (SHD)

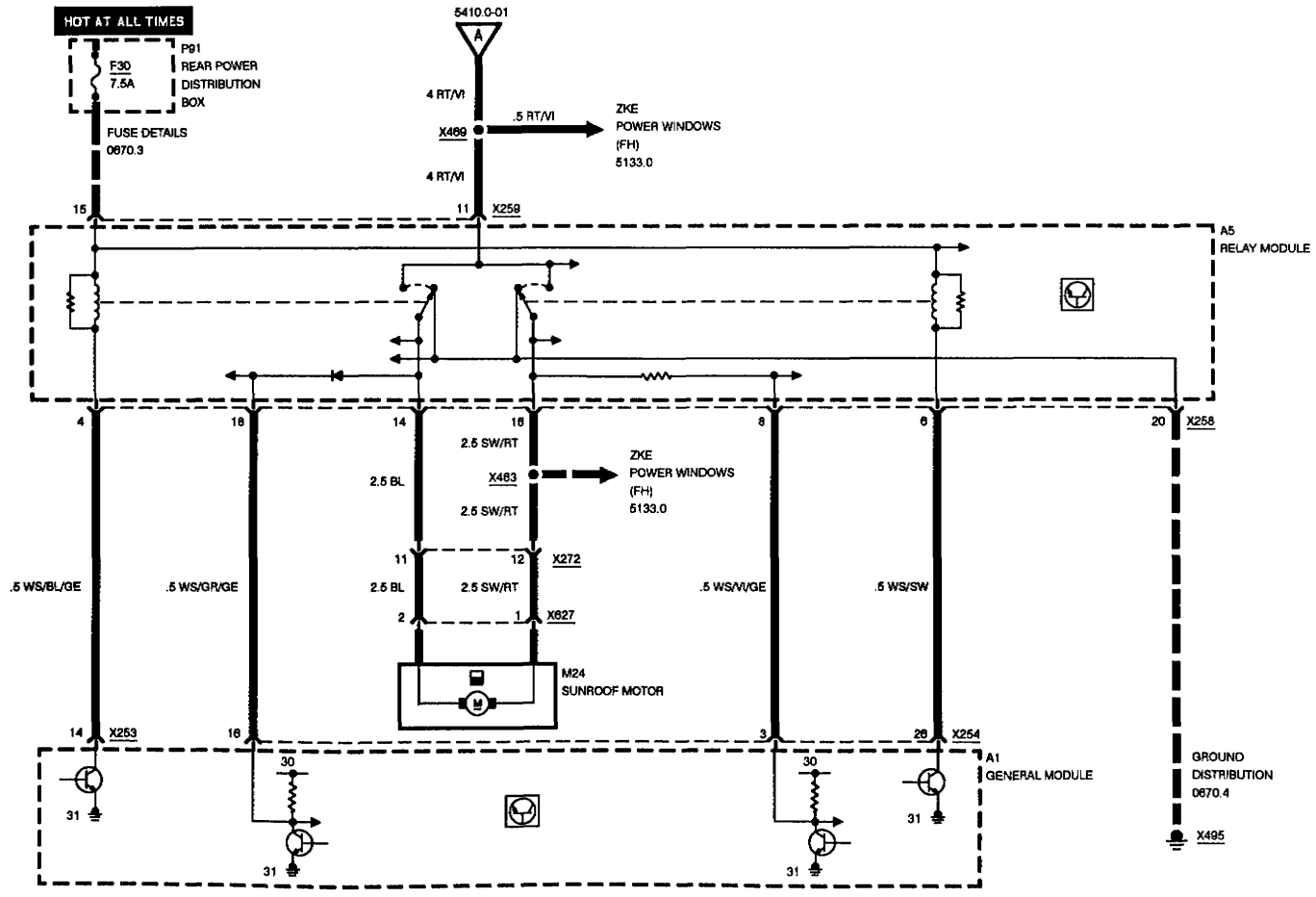
## INPUT DETAILS




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# ZKE SUNROOF (SHD)

## OUTPUT DETAILS

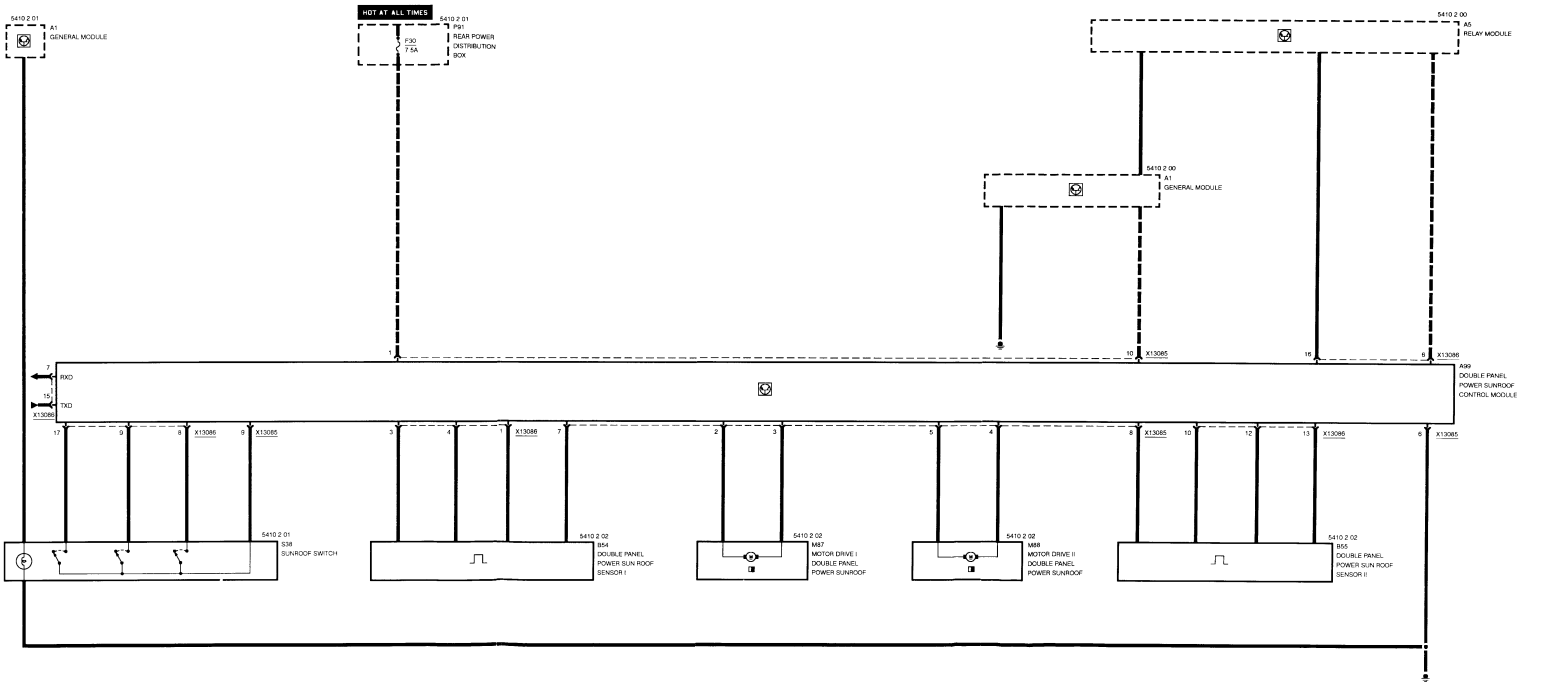





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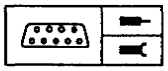
11/92 — 5410 2 — 1992
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# DOUBLE PANEL POWER SUNROOF (ZKE)





## Pin Assignments

A = X13085 10 Pins
B = X13086 18 Pins

### X13085

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | E | Power, terminal 30 | Power distribution box | approx. 12 V | | |
| 2 | E/A | Motor voltage/ground | Motor, front roof | | | |
| 3 | E/A | Motor voltage/ground | Motor, front roof | | | |
| 4 | E/A | Motor voltage/ground | Motor, rear roof | | | |
| 5 | E/A | Motor voltage/ground | Motor, rear roof | | | |
| 6 | M | Module ground | Ground | Ground | | |
| 7 | A | Power | Sensor, front roof | | | |
| 8 | A | Power | Sensor, rear roof | | | |
| 9 | A | Power | Switch, double panel power sunroof | | | |
| 10 | E | Power | General module | | | |

### X13086

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | E | Position contact | Sensor, front roof | | | |
| 2 | | Not used | | | | |





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# DOUBLE PANEL POWER SUNROOF (ZKE)

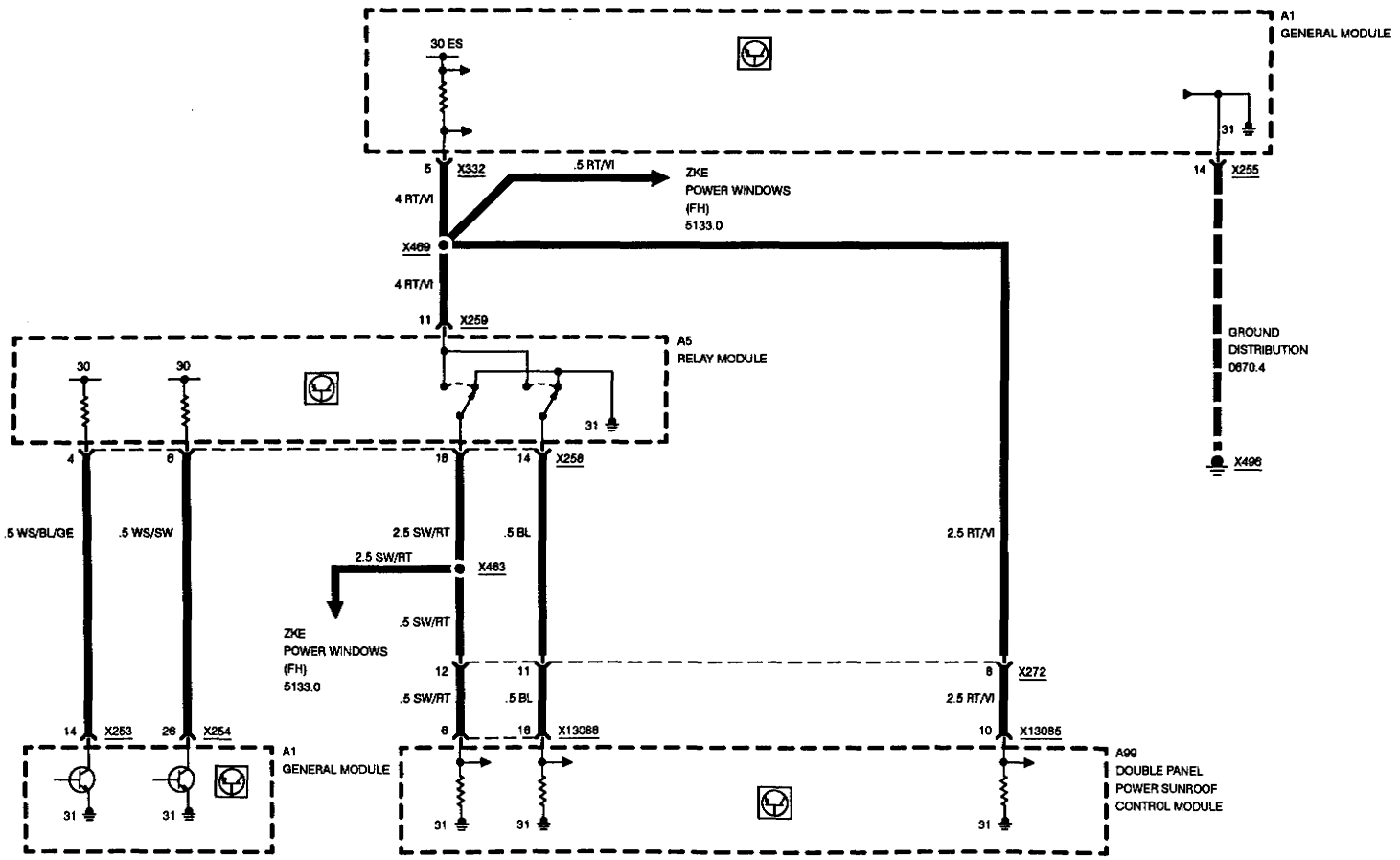


| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 3 | E | Position contact | Sensor, front roof | | | |
| 4 | E | Position contact | Sensor, front roof | | | |
| 5 | | Not used | | | | |
| 6 | E | Control signal | Relay module | | | |
| 7 | A | RxD | Diagnostic connector | | | |
| 8 | E | Switch, closed | Switch, double panel power sunroof | | | |
| 9 | E | Switch, closed | Switch, double panel power sunroof | | | |
| 10 | E | Position contact | Sensor, rear roof | | | |
| 11 | | Not used | | | | |
| 12 | E | Position contact | Sensor, rear roof | | | |
| 13 | E | Position contact | Sensor, rear roof | | | |
| 14 | | Not used | | | | |
| 15 | E | TxD | Diagnostic connector | | | |
| 16 | E | MSD+ | Relay module | | | |
| 17 | E | Switch closed | Switch, double panel power sunroof | | | |
| 18 | | Not used | | | | |

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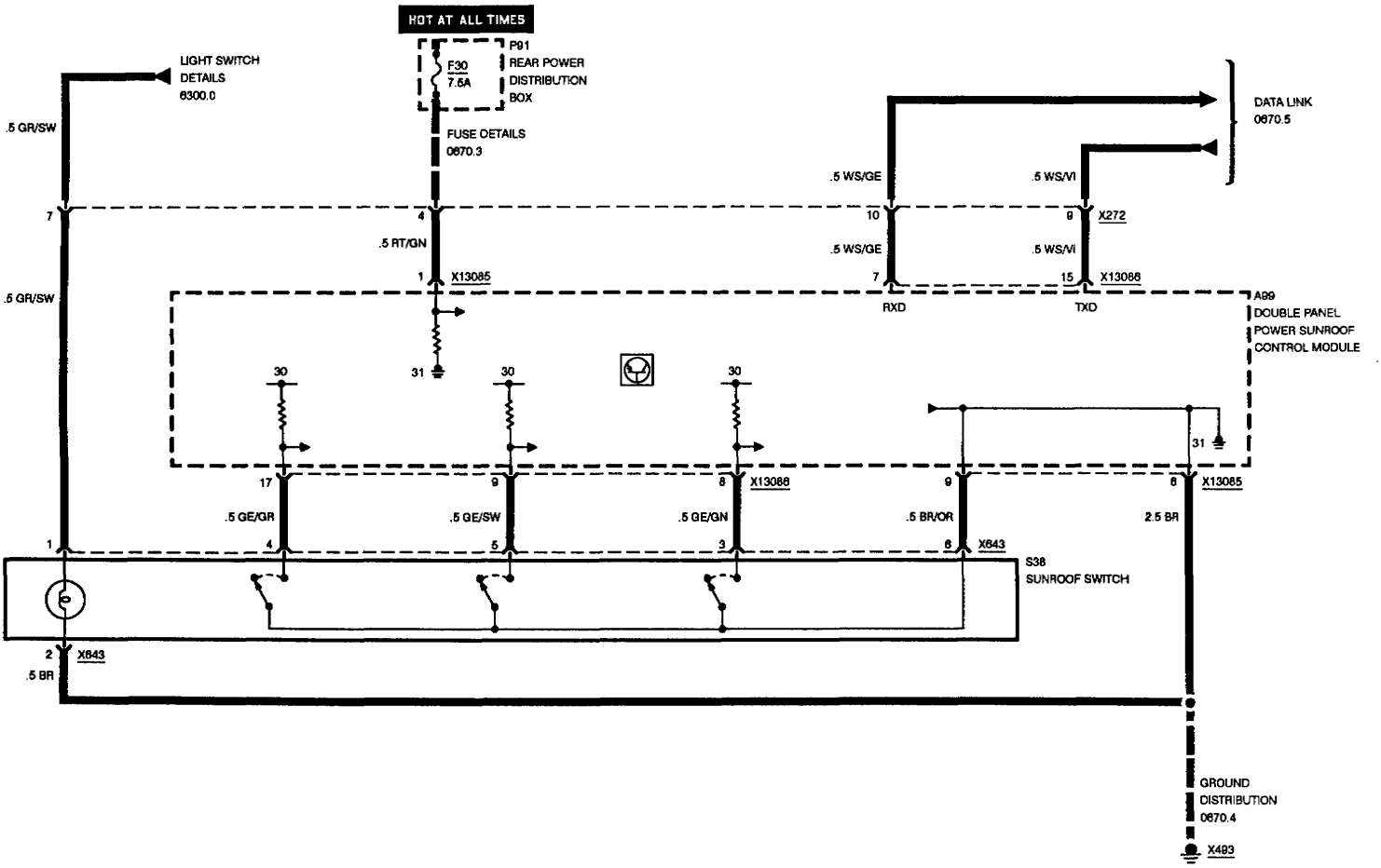
# DOUBLE PANEL POWER SUNROOF (ZKE)






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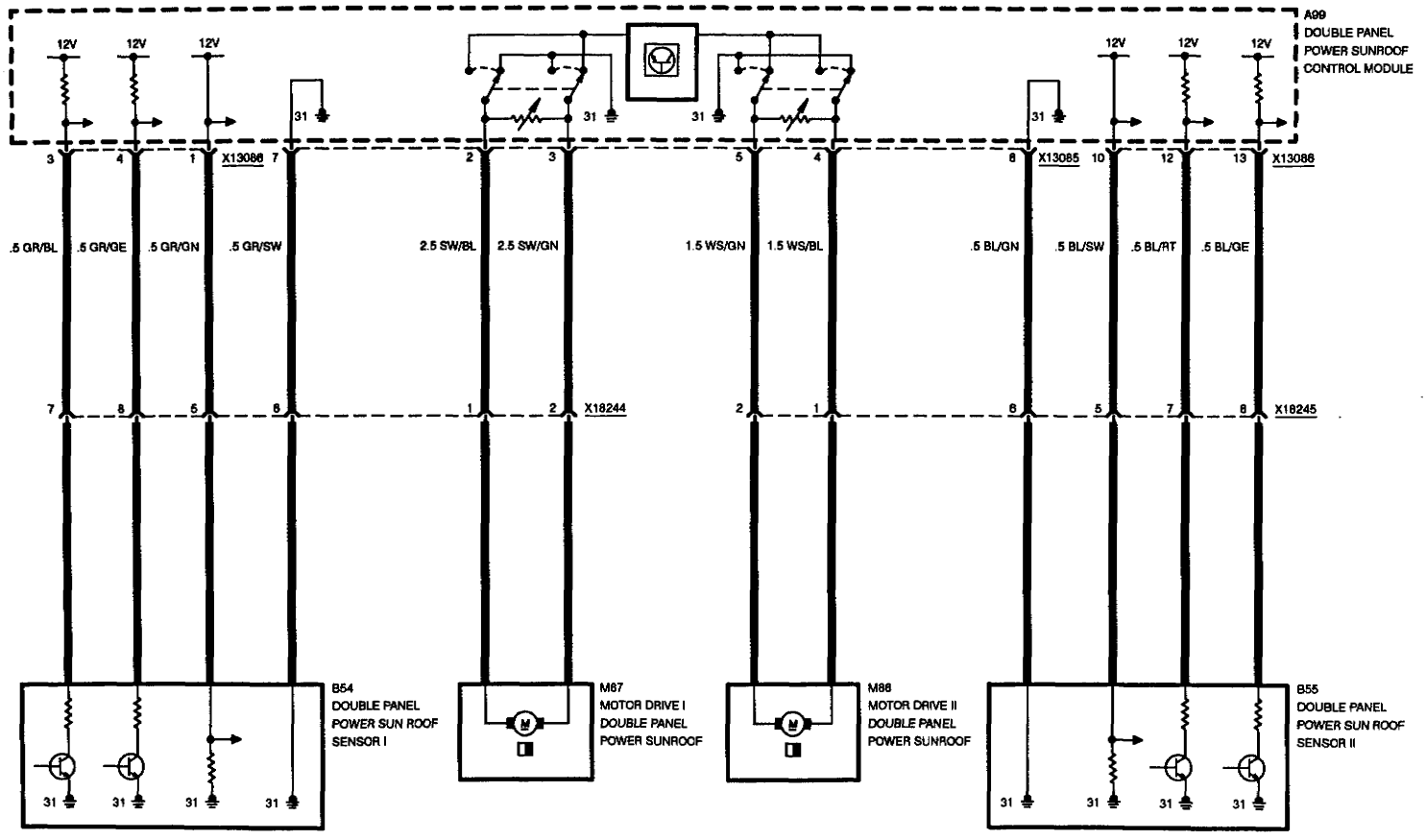
# DOUBLE PANEL POWER SUNROOF (ZKE)






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# DOUBLE PANEL POWER SUNROOF (ZKE)



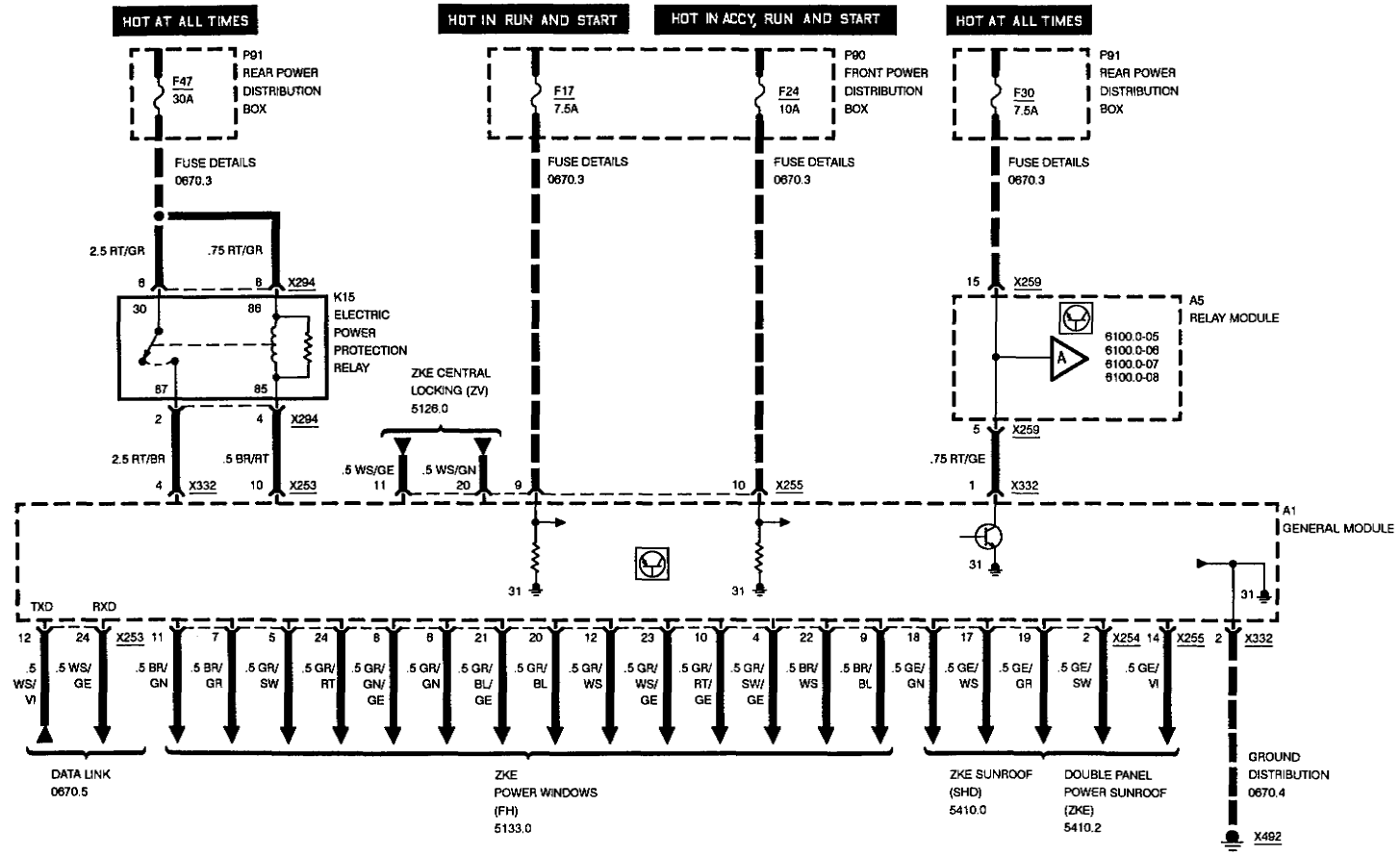



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# CENTRAL BODY ELECTRONICS (ZKE)

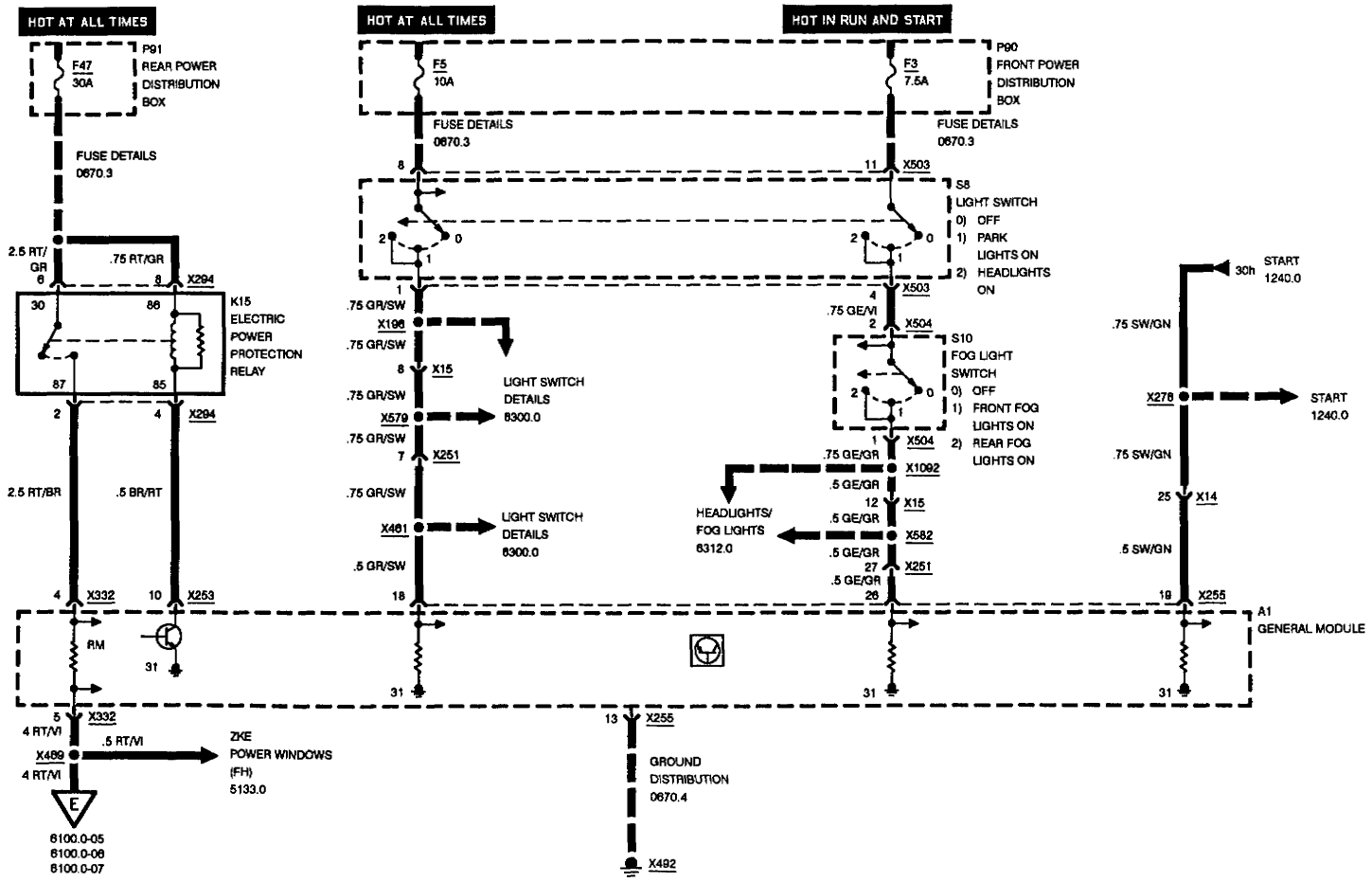
## GENERAL MODULE




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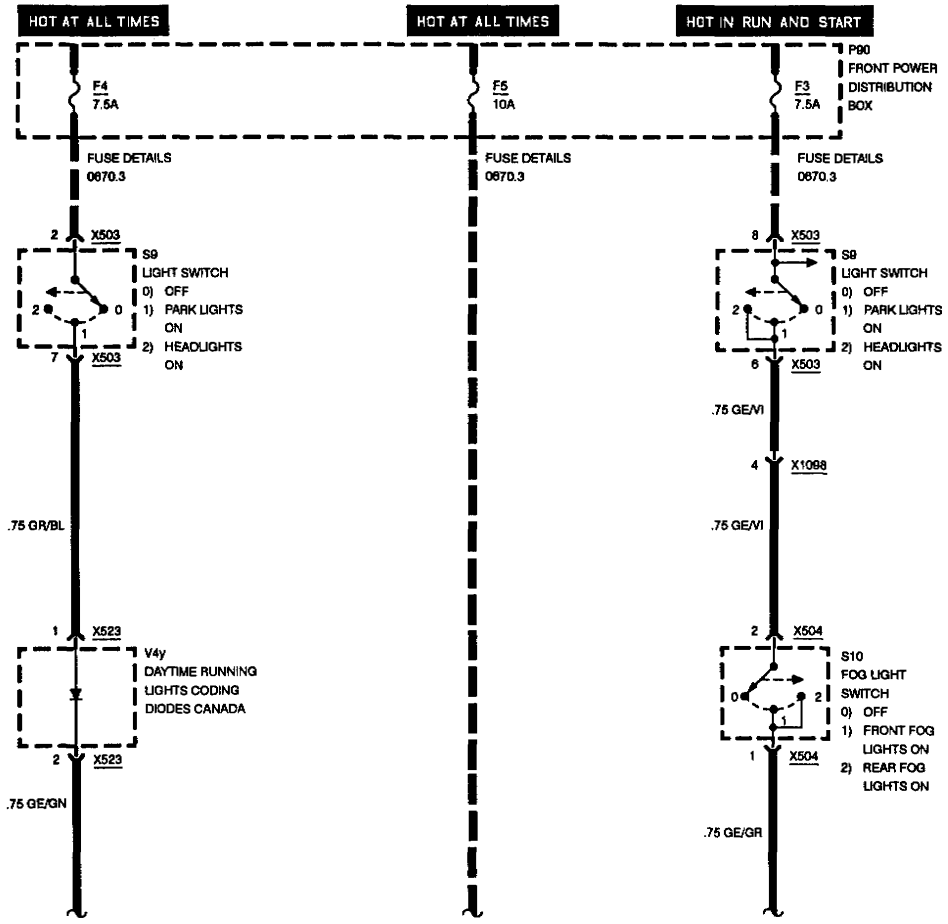
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## GENERAL MODULE

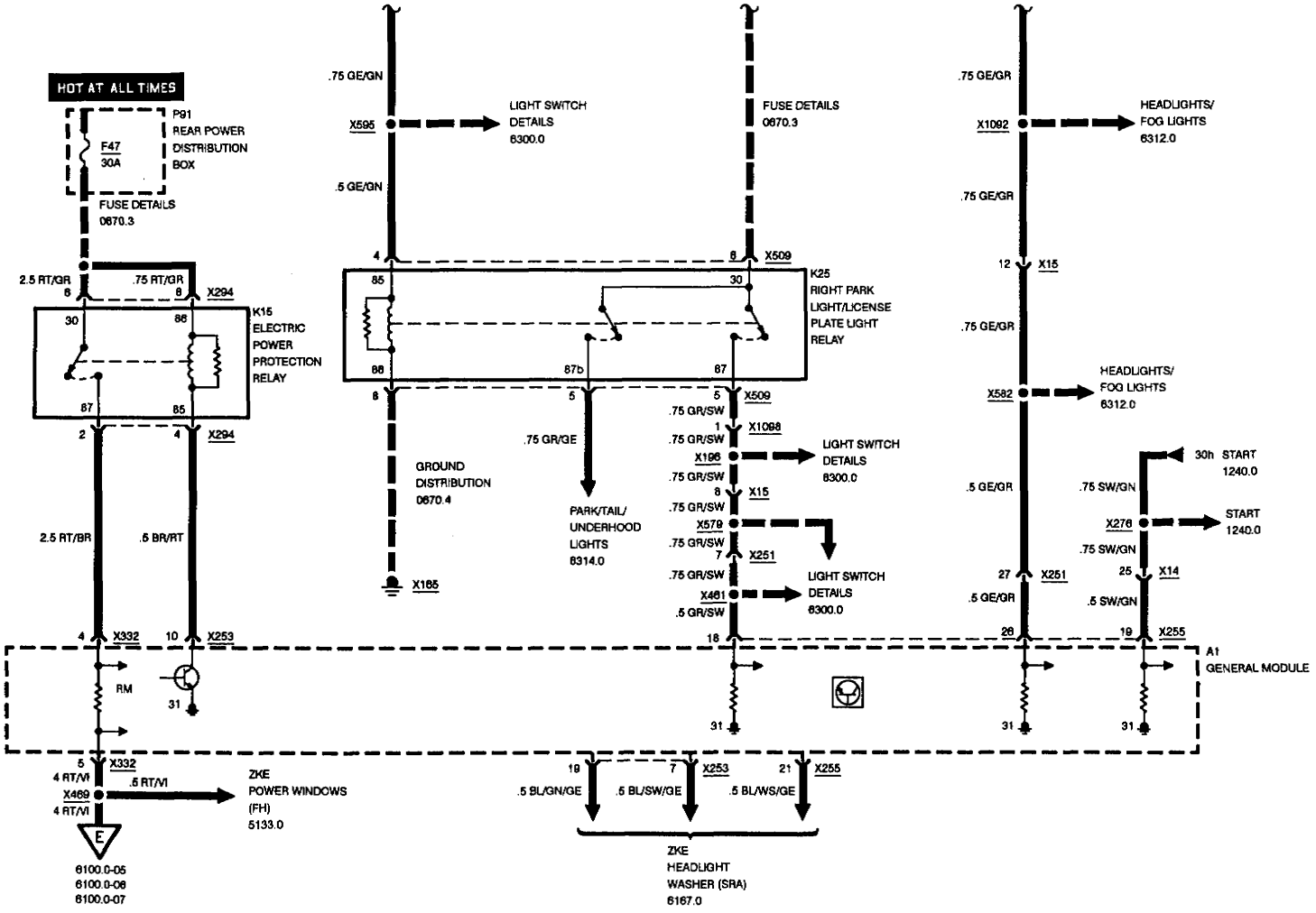





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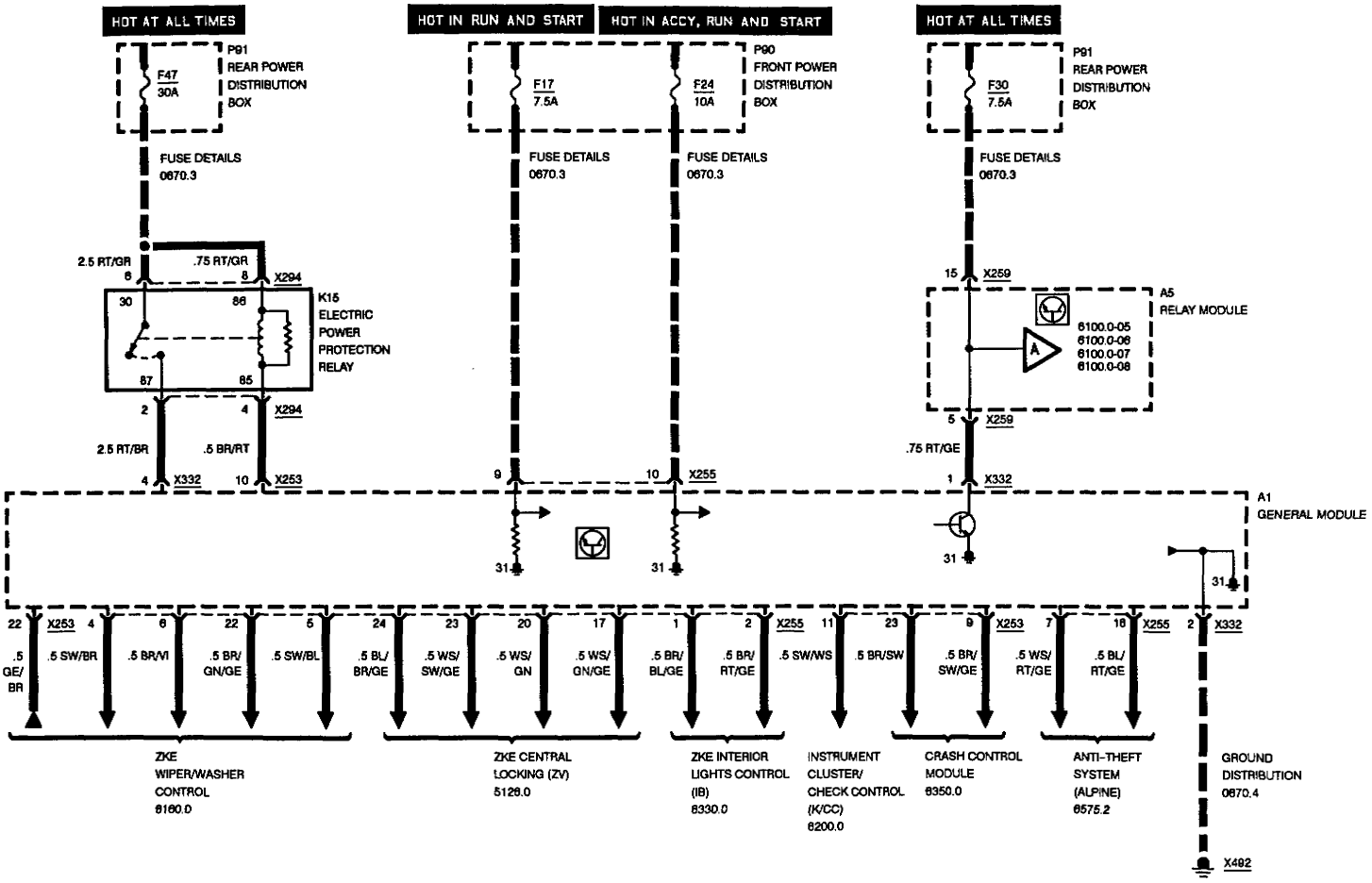

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# CENTRAL BODY ELECTRONICS (ZKE)

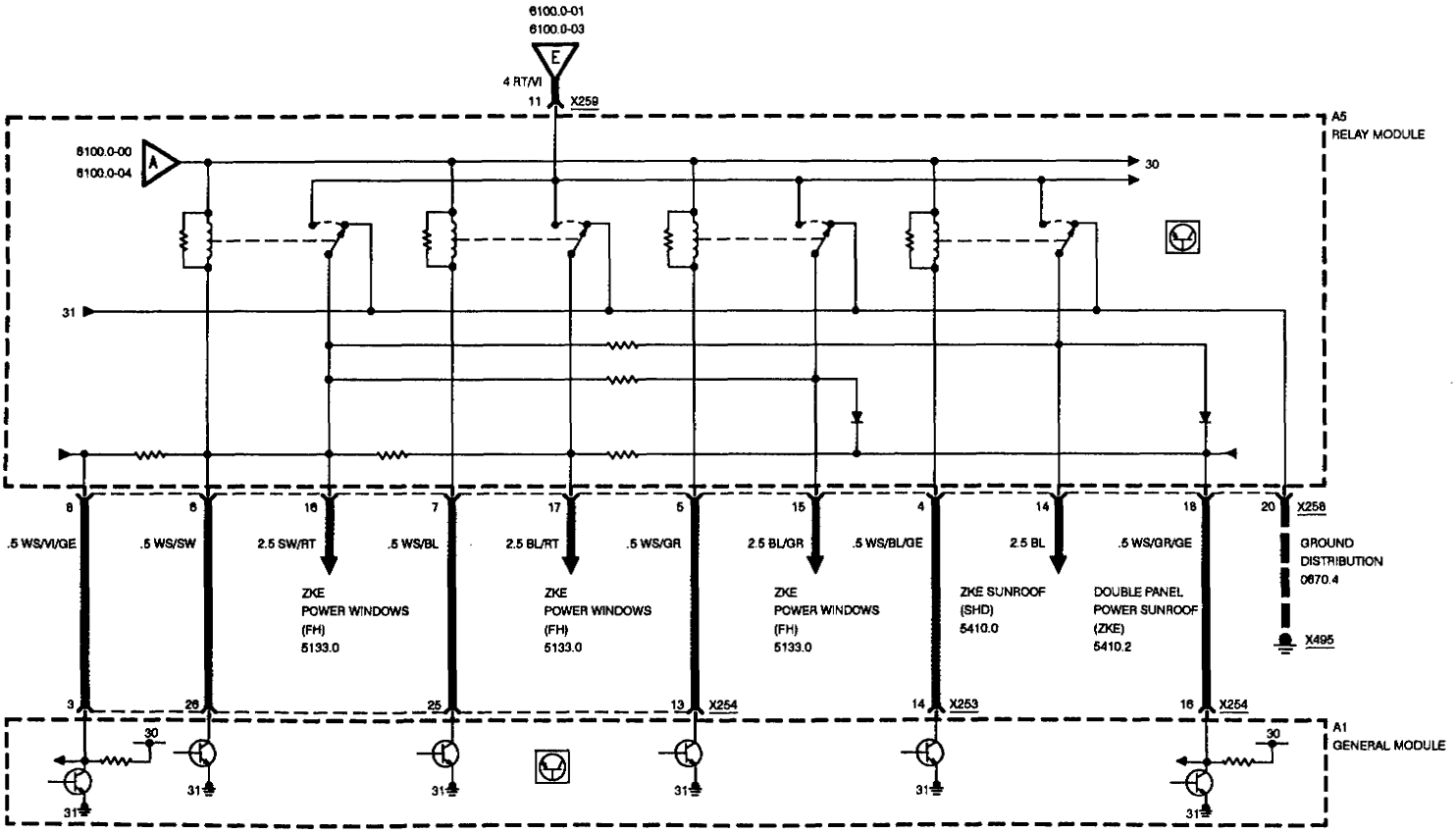
## GENERAL MODULE




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# CENTRAL BODY ELECTRONICS (ZKE)

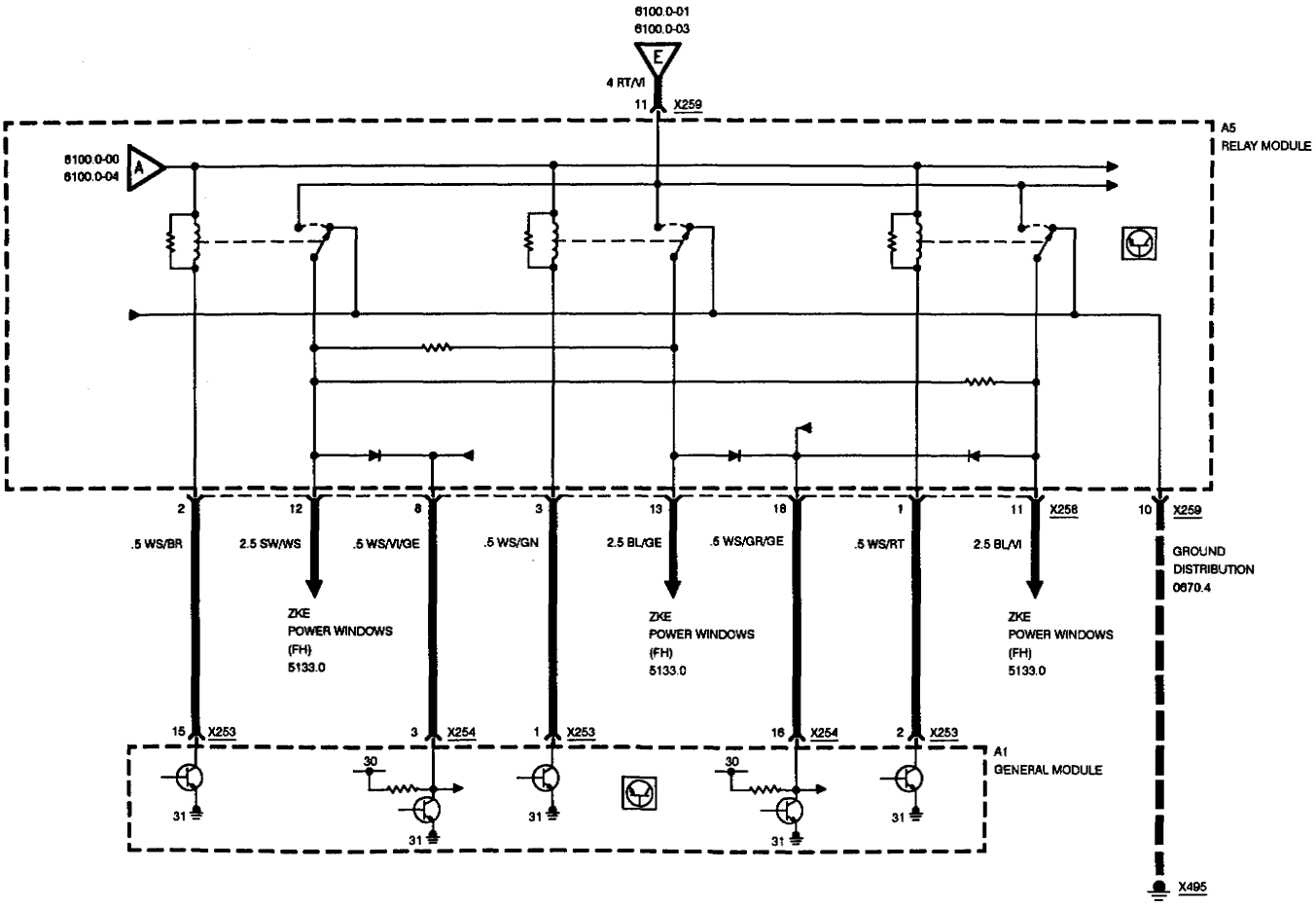
## RELAY MODULE




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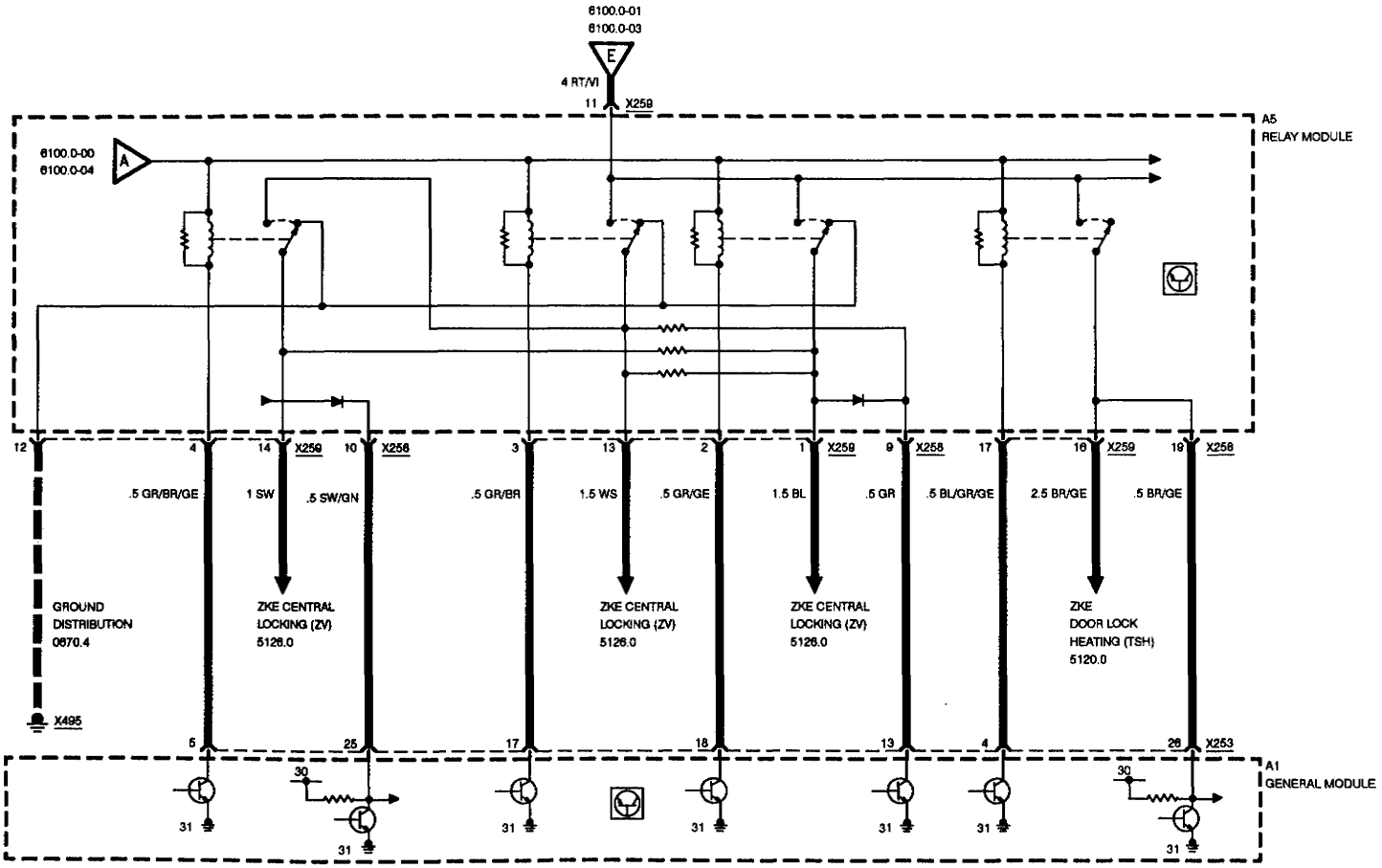
## RELAY MODULE



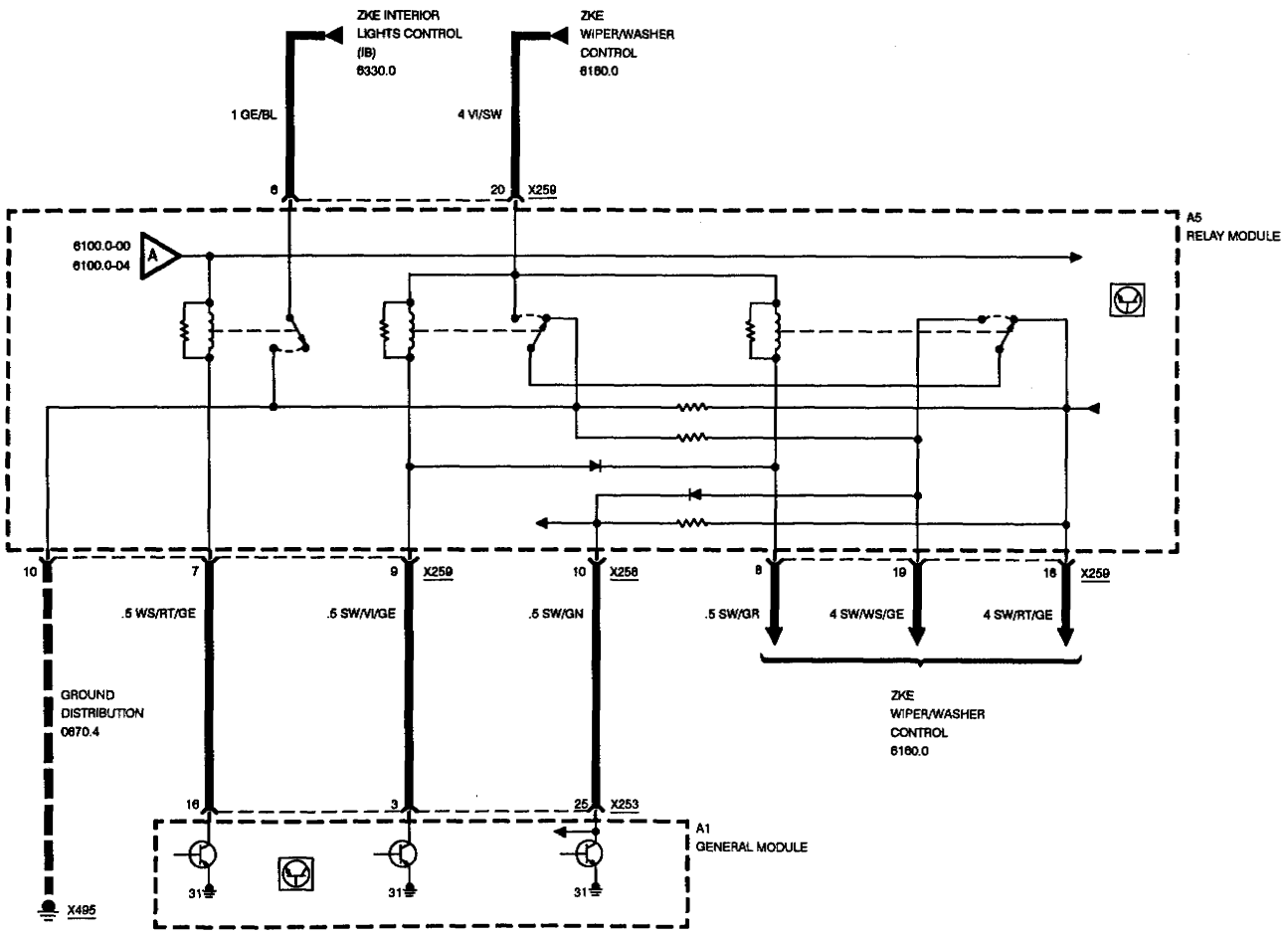

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# CENTRAL BODY ELECTRONICS (ZKE)

## RELAY MODULE

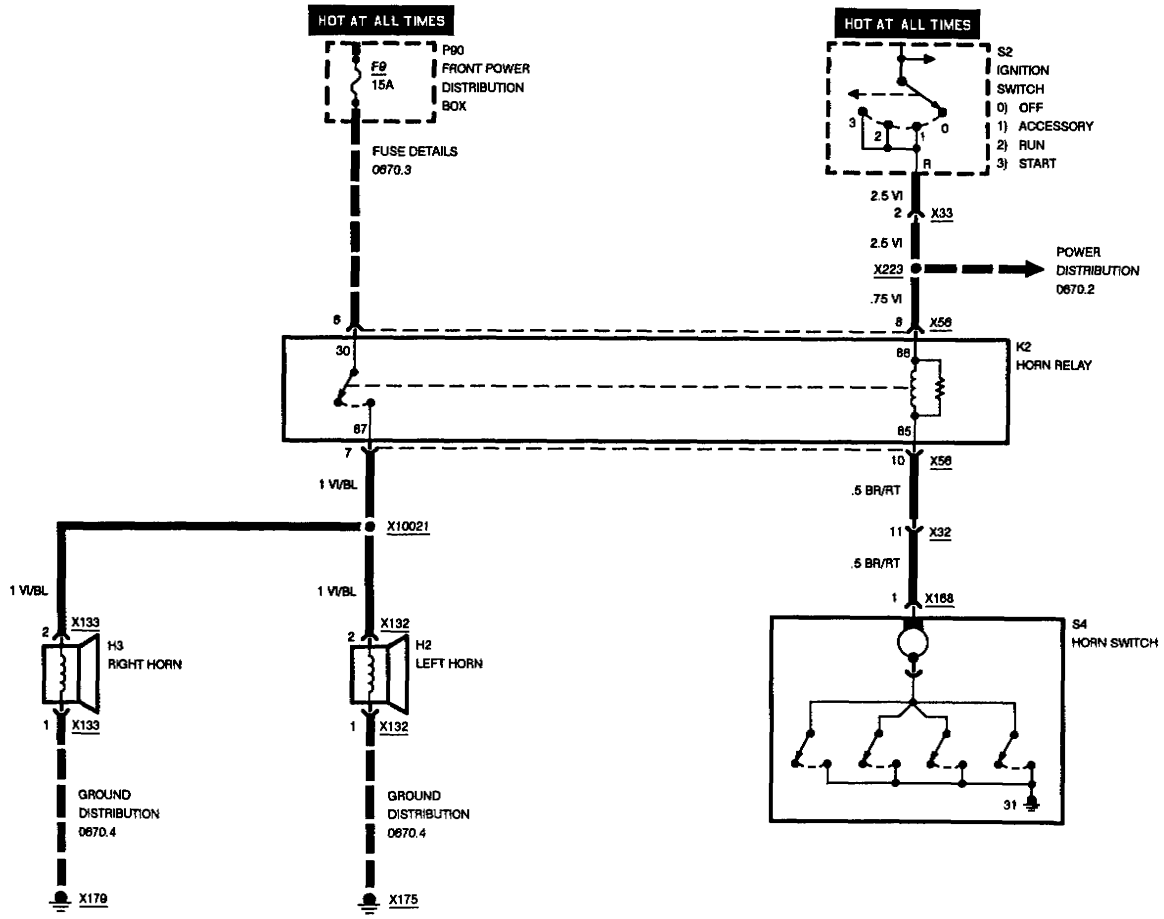



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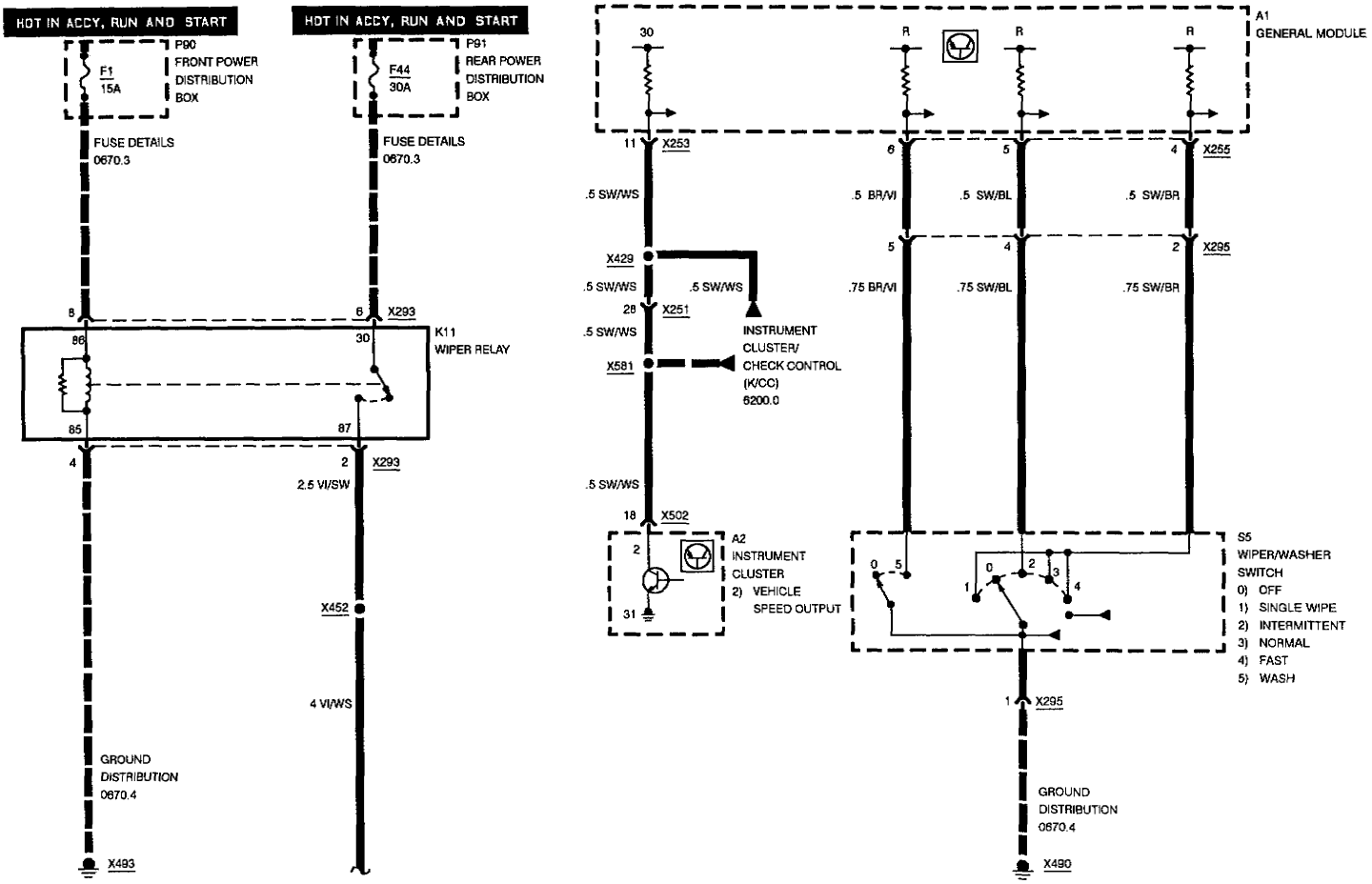



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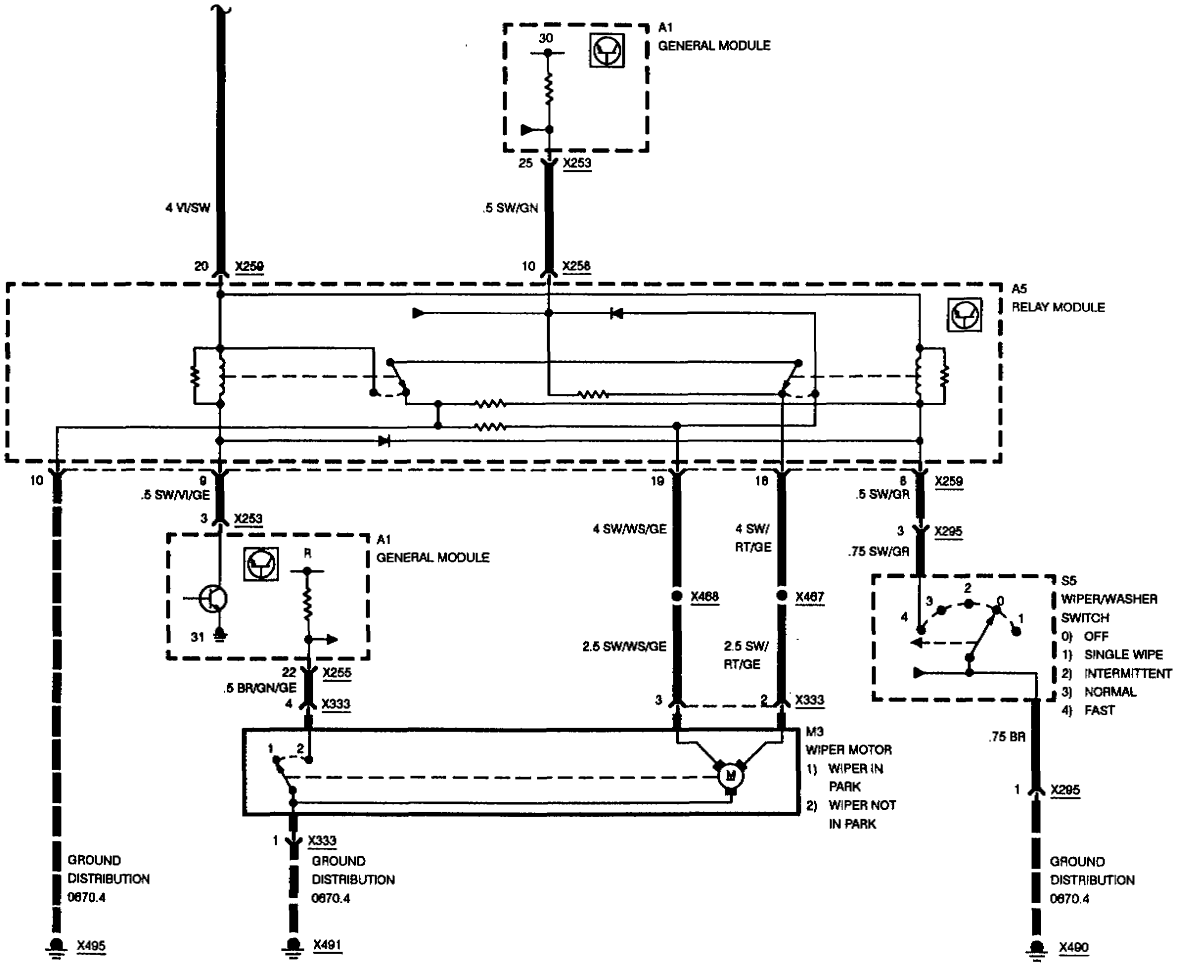
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# BMW 5 ZKE WIPER/WASHER CONTROL

## INPUT DETAILS



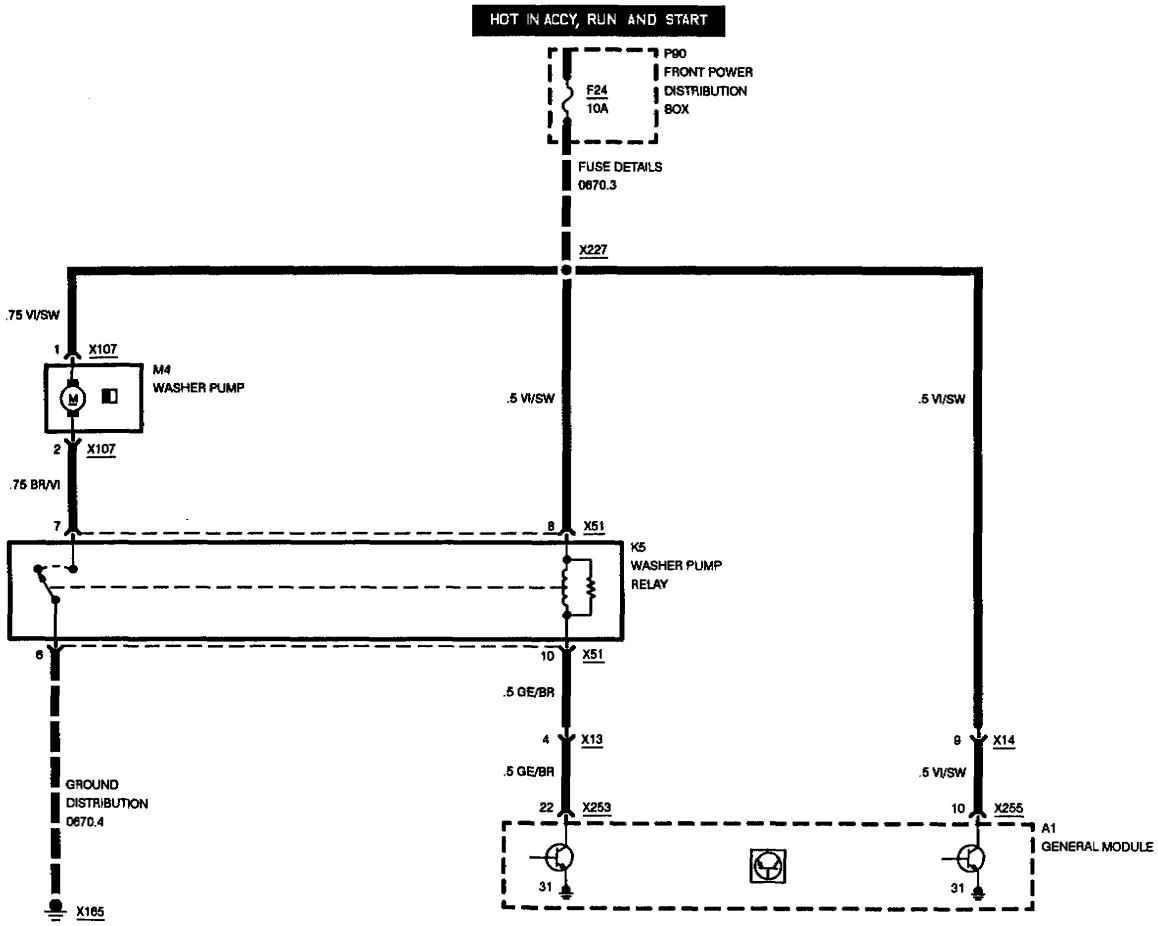

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# ZKE WIPER/WASHER CONTROL



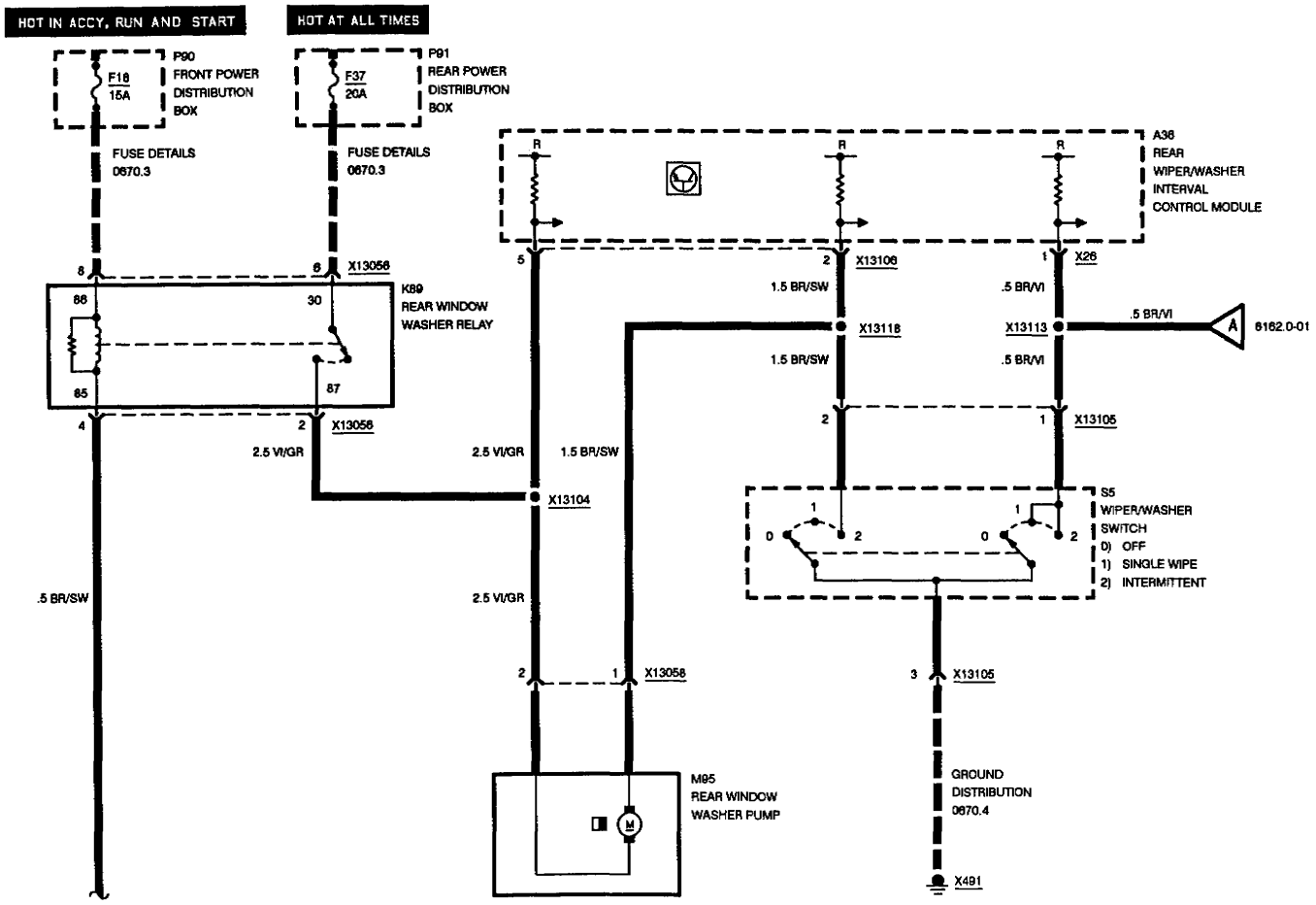



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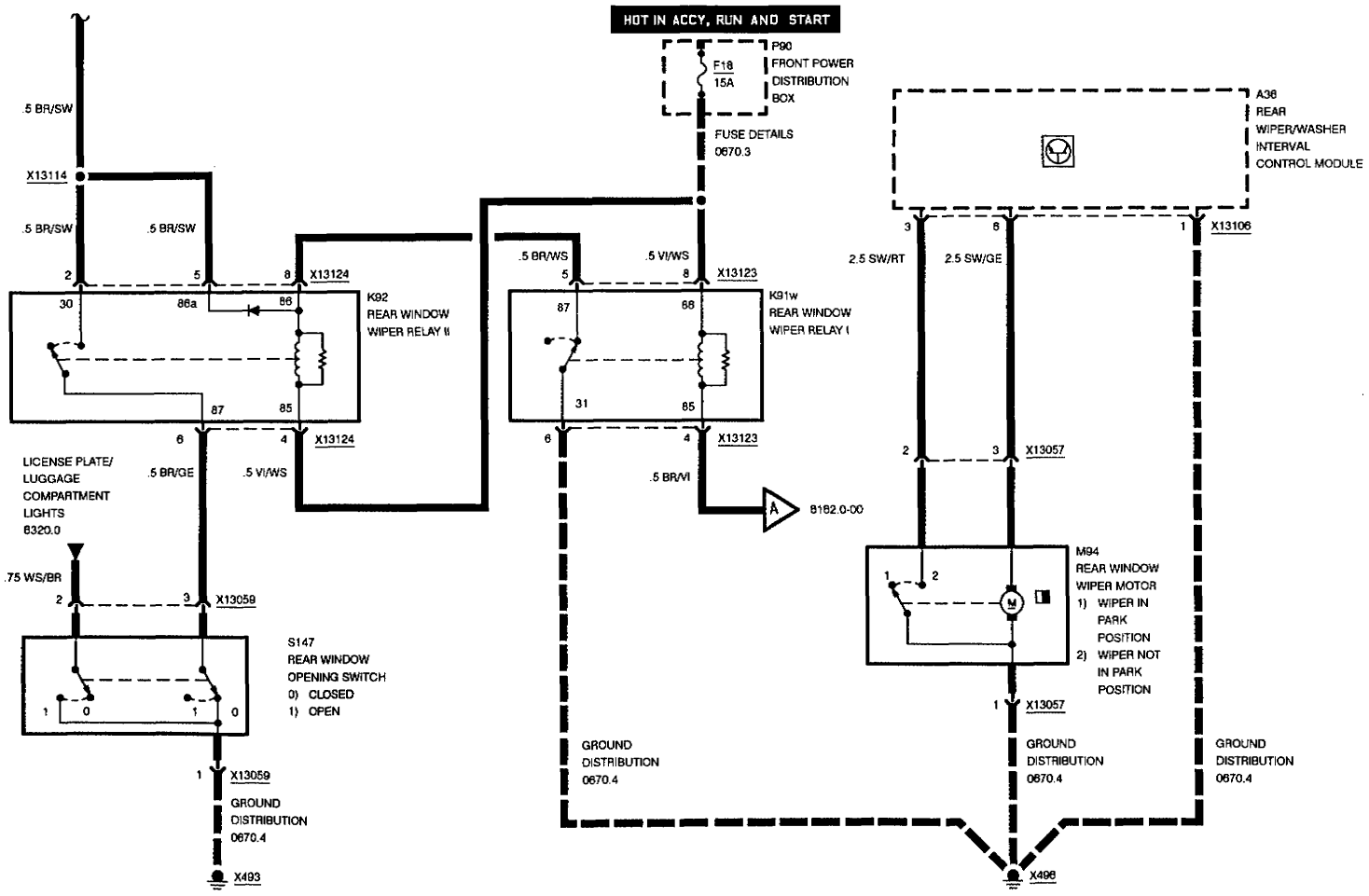
# REAR WINDOW WIPER/WASHER CONTROL

525it






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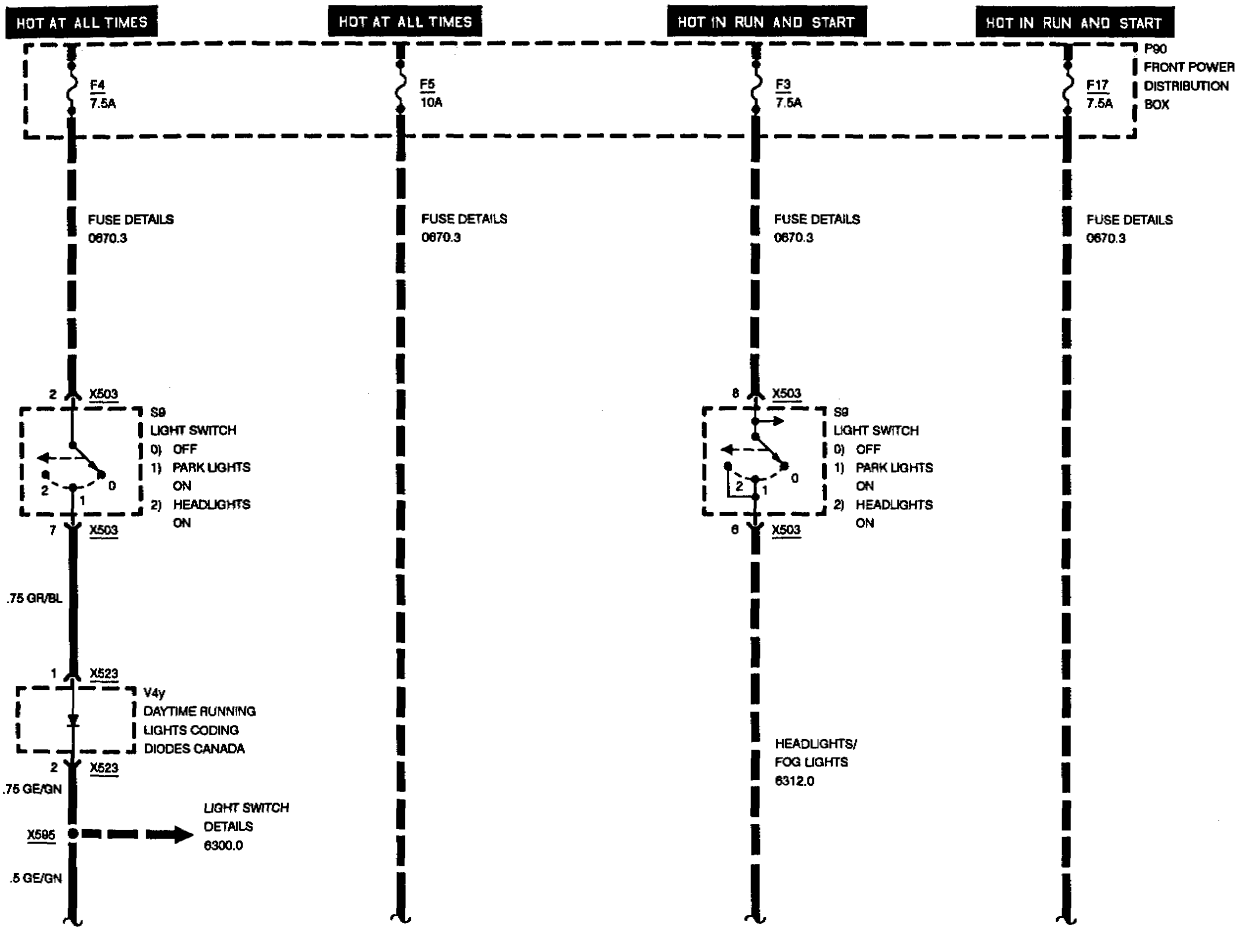



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# ZKE HEADLIGHT WASHER (SRA)

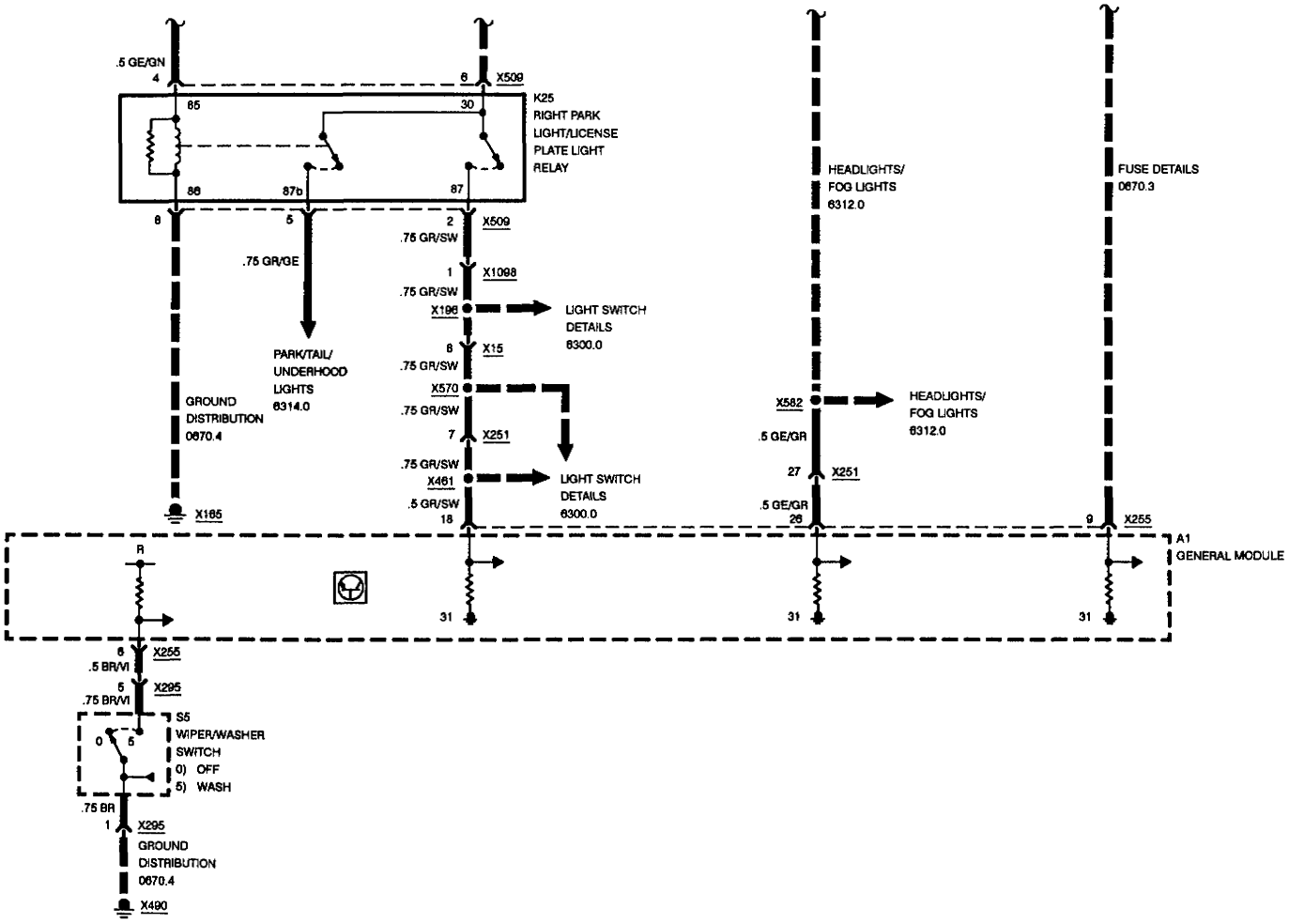
CDN

## INPUT DETAILS






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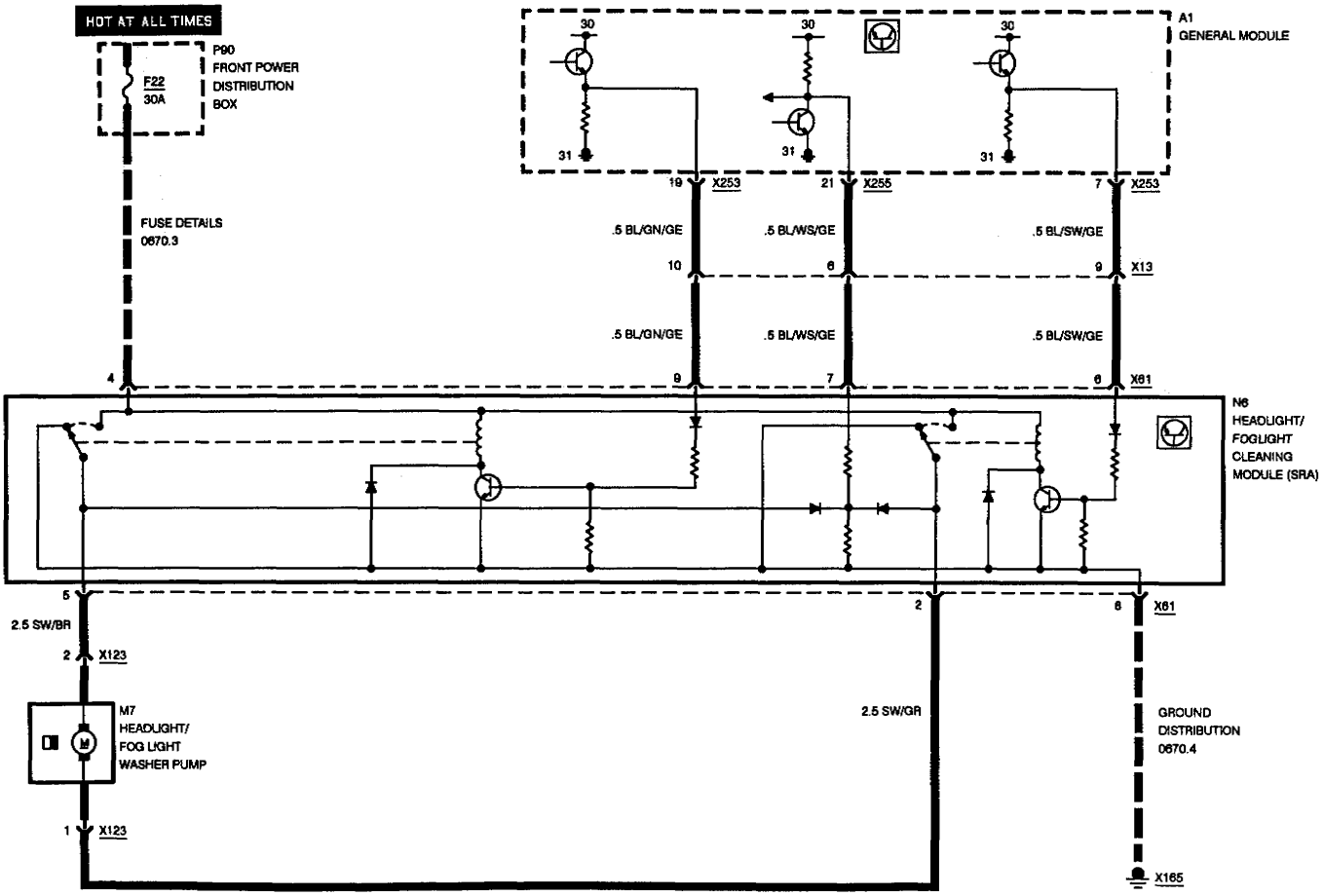



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# ZKE HEADLIGHT WASHER (SRA)

CDN

## OUTPUT DETAILS

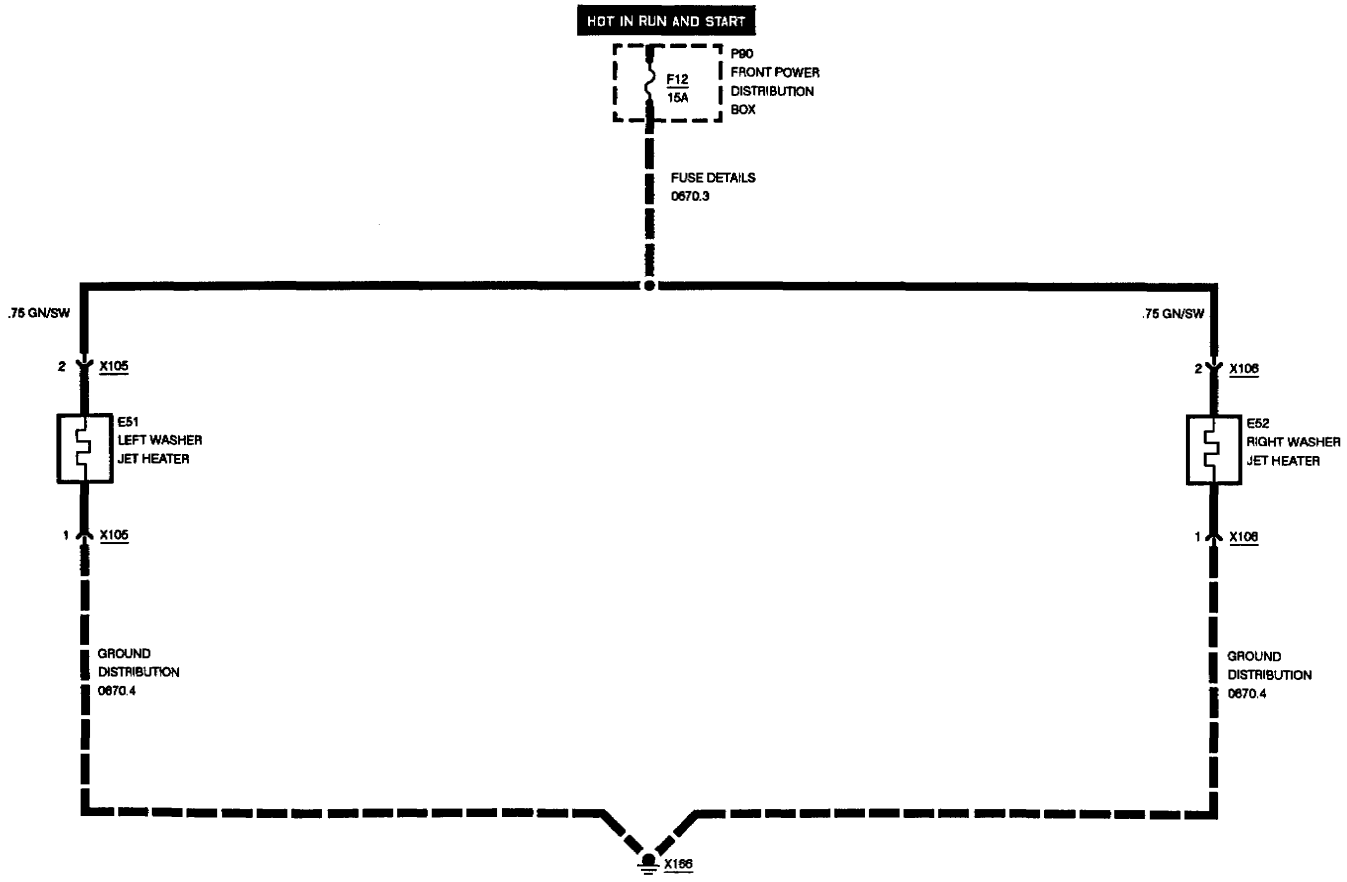





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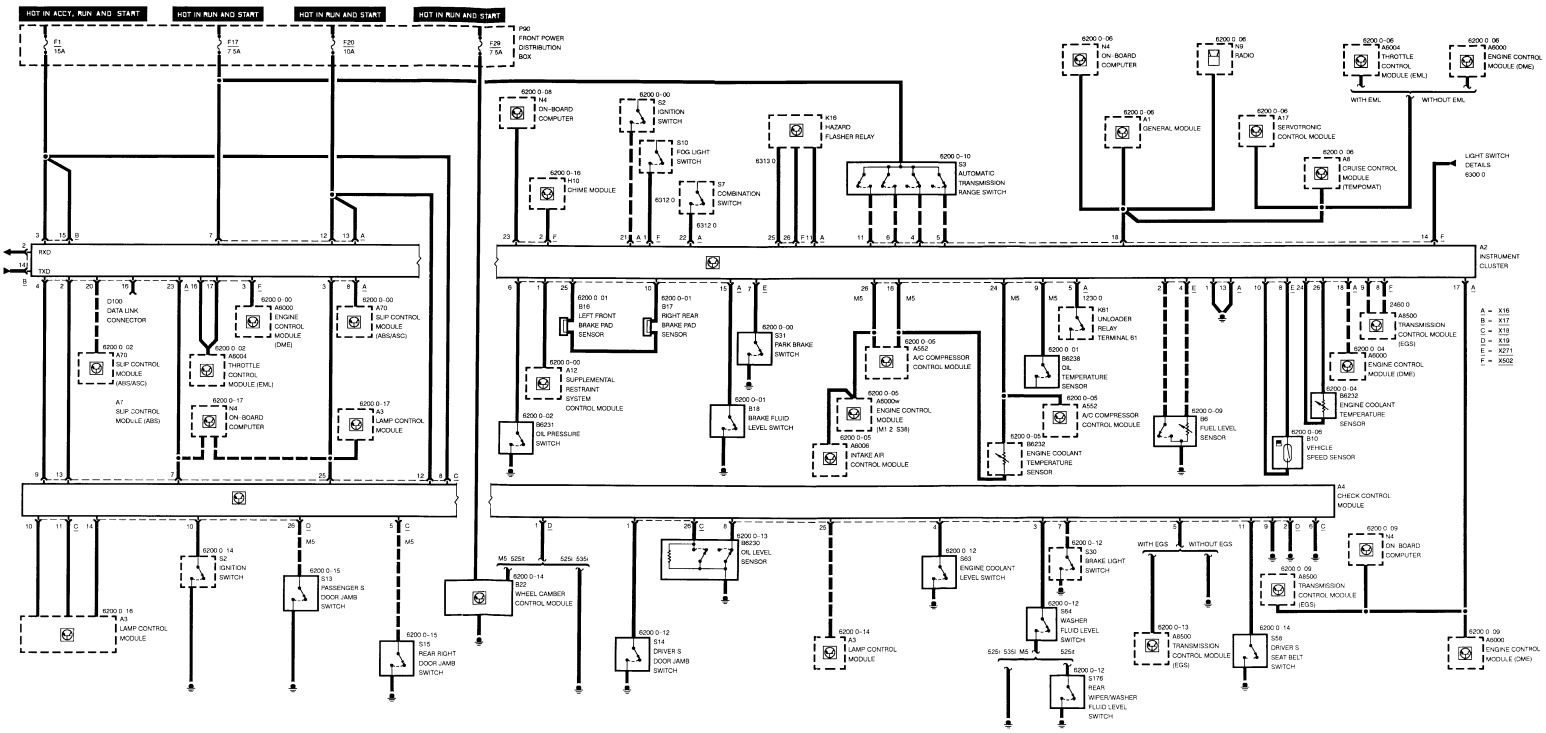
# WINDSHIELD WASHER JET HEATERS






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## Pin Assignments

A = X16 26 Pins, beige
B = X17 6 Pins, brown
C = X18 26 Pins, blue
D = X19 26 Pins, green
E = X271 12 Pins, gray
F = X502 26 Pins, white

### X16

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | A | Airbag indicator control | Diagnostic module (SRS) | Ground | | |
| 2 | E | Data line | Check control module | | | |
| 3 | A | Data line | Check control module,<br>Lamp control module,<br>On-board computer and radio | | | |
| 4 | E | Data line | Check control module | | | |
| 5 | E | Charge indicator control | Alternator | | | |
| 6 | E | Oil pressure indicator control | Oil pressure switch | Ground | | |
| 7 | E | Terminal 15 power | Fuse | | | |
| 8 | E | ASC indicator control | ABS/ASC control module | Ground | | |
| 9 | E | Oil temperature signal (M5) | Oil temperature sensor | | | |
| 10 | M | Ground, brake pad signal | Brake pad sensor | | | |
| 11 | E | Trailer turn signal indicator | Hazard flasher relay | | | |

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# INSTRUMENT CLUSTER/CHECK CONTROL (K/CC)



| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 12 | E | Terminal 30 power | Fuse | approx. 12 V | | |
| 13 | E | Terminal 30 power | Fuse | approx. 12 V | | |
| 14 | | Not used | | | | |
| 15 | E | Brake fluid warning | Brake fluid level switch | | | |
| 16 | A | SIA reset | Diagnostic connector | | | |
| 17 | E | ti signal for fuel economy | DME control unit | | | |
| 18 | E | TD signal for tachometer | DME control unit | | | |
| 19 | | Not used | | | | |
| 20 | E | ABS indicator control | ABS/ASC control unit | | | |
| 21 | E | Airbag indicator power | Terminal R, ignition switch | | | |
| 22 | E | High beam indicator power | Combination switch | | | |
| 23 | A | Data line | Check control module,<br>On-board computer and radio | | | |
| 24 | M | Temperature sensor ground | Ground | | | |
| 25 | E | Brake pad warning | Brake pad sensor | | | |
| 26 | E | Temperature gauge signal | Coolant temperature sensor | | | |

## X17

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | M | Ground | Ground | Ground | | |
| 2 | E/A | Diagnosis (RxD) | Diagnostic connector | | | |
| 3 | E | Terminal R power | Fuse | approx. 12 V | | |
| 4 | | Cluster programming | NV-RAM | | | |
| 5 | | Cluster programming | NV-RAM | | | |

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# INSTRUMENT CLUSTER/CHECK CONTROL (K/CC)



| | | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| | | Cluster programming | NV-RAM | | | |
| 7 | | Cluster programming | NV-RAM | | | |
| 8 | | Cluster programming | NV-RAM | | | |
| 9 | | Cluster programming | NV-RAM | | | |
| 10 | | Cluster programming | NV-RAM | | | |
| 11 | | Cluster programming | NV-RAM | | | |
| 12 | | Cluster programming | NV-RAM | | | |
| 13 | M | Ground | Ground | Ground | | |
| 14 | E | Diagnosis (TxD) | Diagnostic connection | | | |
| 15 | E | Terminal R power | Fuse | approx. 12 V | | |
| 16 | | Cluster programming | NV-RAM | | | |
| 17 | | Cluster programming | NV-RAM | | | |
| 18 | | Cluster programming | NV-RAM | | | |
| 19 | | Cluster programming | NV-RAM | | | |
| 20 | | Cluster programming | NV-RAM | | | |
| 21 | | Cluster programming | NV-RAM | | | |
| 22 | | Cluster programming | NV-RAM | | | |
| 23 | | Cluster programming | NV-RAM | | | |
| 24 | | Cluster programming | NV-RAM | | | |

## X18

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | E | Door open signal | Drivers door jamb switch | Ground | | |
| 2 | | Not used | | | | |





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# INSTRUMENT CLUSTER/CHECK CONTROL (K/CC)



| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 3 | | Not used | | | | |
| 4 | | Not used | | | | |
| 5 | E | Door open signal (M5) | Rear door jamb switches | Ground | | |
| 6 | M | Module ground | Ground | Ground | | |
| 7 | | Data line | Instrument cluster, on-board computer and radio | | | |
| 8 | E | Terminal 30 power | Fuse | approx. 12 V | | |
| 9 | A | Data line | Instrument cluster | | | |
| 10 | E | Data line | Lamp control module | | | |
| 11 | E | Data line | Lamp control module | | | |
| 12 | E | Terminal R power | Fuse | | | |
| 13 | A | Data line | Instrument cluster | | | |
| 14 | | Not used | | | | |
| 15 | | Not used | | | | |
| 16 | | Not used | | | | |
| 17 | | Not used | | | | |
| 18 | | Not used | | | | |
| 19 | | Not used | | | | |
| 20 | | Not used | | | | |
| 21 | | Not used | | | | |
| 22 | | Not used | | | | |
| 23 | | Not used | | | | |
| 24 | | Not used | | | | |

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# INSTRUMENT CLUSTER/CHECK CONTROL (K/CC)



| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 25 | E | Data line | Instrument cluster, on-board computer, lamp control module and radio | | | |
| 26 | E | Oil level signal | Oil level sensor | | | |

## X19

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | M<br>E | Ground, 525i/535i | Ground<br>Wheel camber control unit | Ground | | |
| 2 | M | Ground, control unit | Ground | Ground | | |
| 3 | E | Washer fluid level signal | Washer fluid level switch | Ground | | |
| 4 | E | Coolant level signal | Coolant level switch | Ground | | |
| 5 | M<br>E | Ground, without EGS<br>EGS fault signal | Ground<br>EGS control unit | Ground | | |
| 6 | | Not used | | | | |
| 7 | E | Brake pedal status | Brake light switch | Ground | | |
| 8 | E | Oil level signal | Oil level sensor | Ground | | |
| 9 | M | Ground, control unit | Ground | Ground | | |
| 10 | E | Ignition switch status | Ignition switch | Ground | | |
| 11 | E | Seat belt status | Drivers seat belt switch | Ground | | |
| 12 | | Not used | | | | |
| 13 | | Not used | | | | |
| 14 | E | Data line | Lamp control module | | | |
| 15 | | Not used | | | | |
| 16 | | Not used | | | | |





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# INSTRUMENT CLUSTER/CHECK CONTROL (K/CC)



| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 17 | | Not used | | | | |
| 18 | | Not used | | | | |
| 19 | | Lift gate open warning light | Lift gate open switch | | | |
| 20 | | Not used | | | | |
| 21 | | Not used | | | | |
| 22 | | Not used | | | | |
| 23 | | Not used | | | | |
| 24 | | Not used | | | | |
| 25 | | Light switch ON signal | Lamp control module | | | |
| 26 | E | Door open signal (M5) | Passengers door jamb switch | Ground | | |

## X271

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | | Not used | | | | |
| 2 | E | Fuel level warning signal | Fuel tank sensor | Ground | | |
| 3 | | Not used | | | | |
| 4 | E | Fuel level signal | Fuel tank sensor | | | |
| 5 | | Not used | | | | |
| 6 | | Not used | | | | |
| 7 | E | Park brake indicator control | Park brake switch | Ground | | |
| 8 | E | Vehicle speed input (+) | Vehicle speed sensor | | | |
| 9 | | Not used | | | | |
| 10 | E | Vehicle speed input (-) | Vehicle speed sensor | | | |





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# INSTRUMENT CLUSTER/CHECK CONTROL (K/CC)



| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 11 | | Not used | | | | |
| 12 | | Not used | | | | |

## X502

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | E | Fog light indicator control | Lamp control module | approx. 12 V | | |
| 2 | A | Sound tone signal | Chime module | | | |
| 3 | E | Check engine indicator control | DME control unit | Ground | | |
| 4 | E | Gear range signal | Transmission range switch (L2) | approx. 12 V | | |
| 5 | E | Gear range signal | Transmission range switch (L1) | approx. 12 V | | |
| 6 | E | Gear range signal | Transmission range switch (L3) | approx. 12 V | | |
| 7 | | Not used | | | | |
| 8 | E | Transmission mode signal | EGS control unit | | | |
| 9 | E | Transmission mode signal | EGS control unit | | | |
| 10 | | Not used | | | | |
| 11 | E | Gear range signal | Transmission range switch (L4) | approx. 12 V | | |
| 12 | | Not used | | | | |
| 13 | | Not used | | | | |
| 14 | E | Instrument illumination power | Dimmer | | | |
| 15 | | Not used | | | | |
| 16 | E | EML fault indicator control | EML control unit | | | |





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# INSTRUMENT CLUSTER/CHECK CONTROL (K/CC)



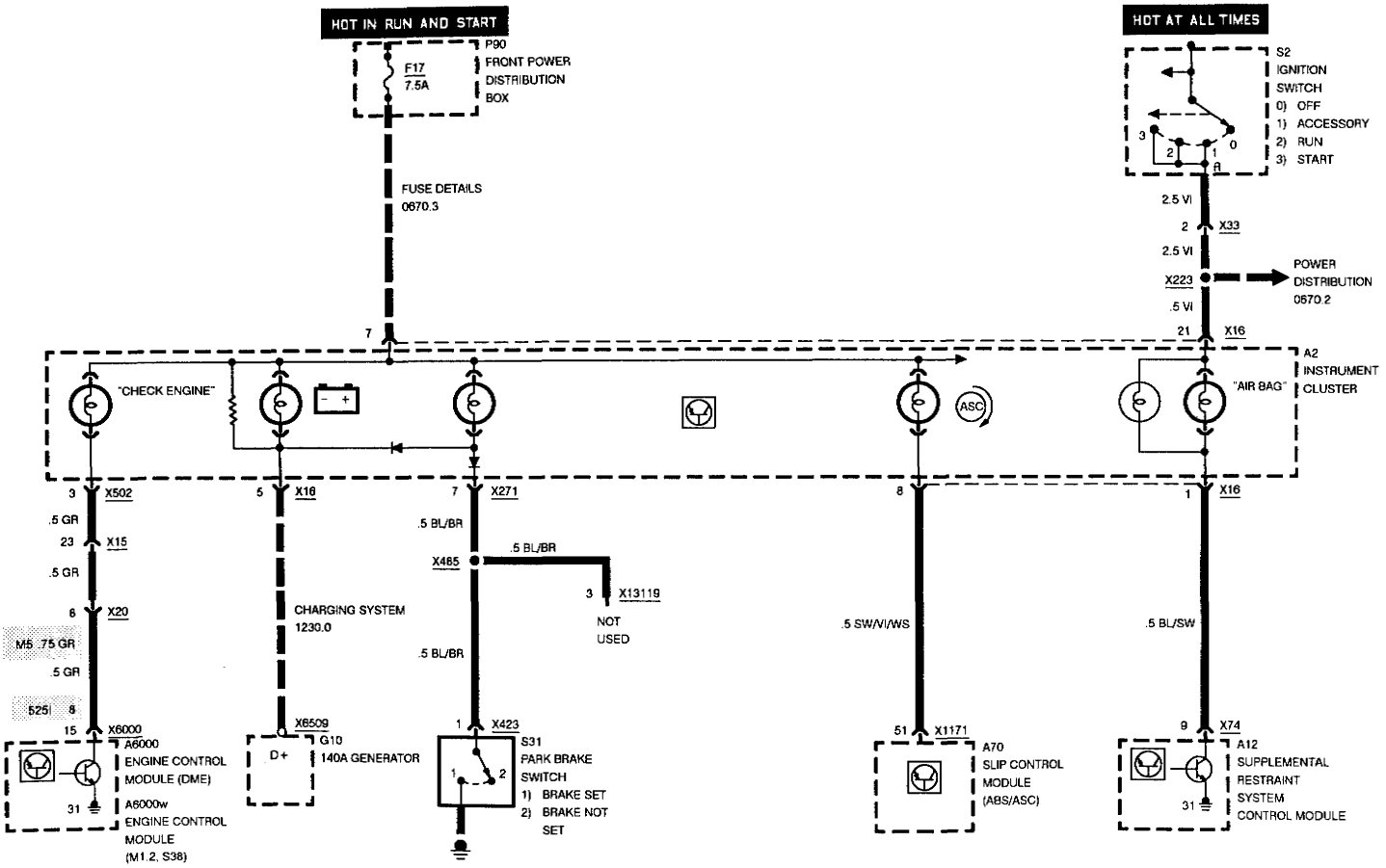
| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 17 | E | EML fault indicator control | EML control unit | | | |
| 18 | A | Vehicle speed signal | On-board computer, general module, radio, IHKR control unit, servotronic control unit, EML control unit, DME control unit, cruise control module | | | |
| 19 | | Not used | | | | |
| 20 | | Not used | | | | |
| 21 | | Not used | | | | |
| 22 | | Not used | | | | |
| 23 | A | Check control reset signal | On-board computer | | | |
| 24 | | Not used | | | | |
| 25 | E | Left turn indicator control | Hazard flasher relay | | | |
| 26 | E | Right turn indicator control | Hazard flasher relay | | | |

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# INSTRUMENT CLUSTER/ CHECK CONTROL (K/CC)

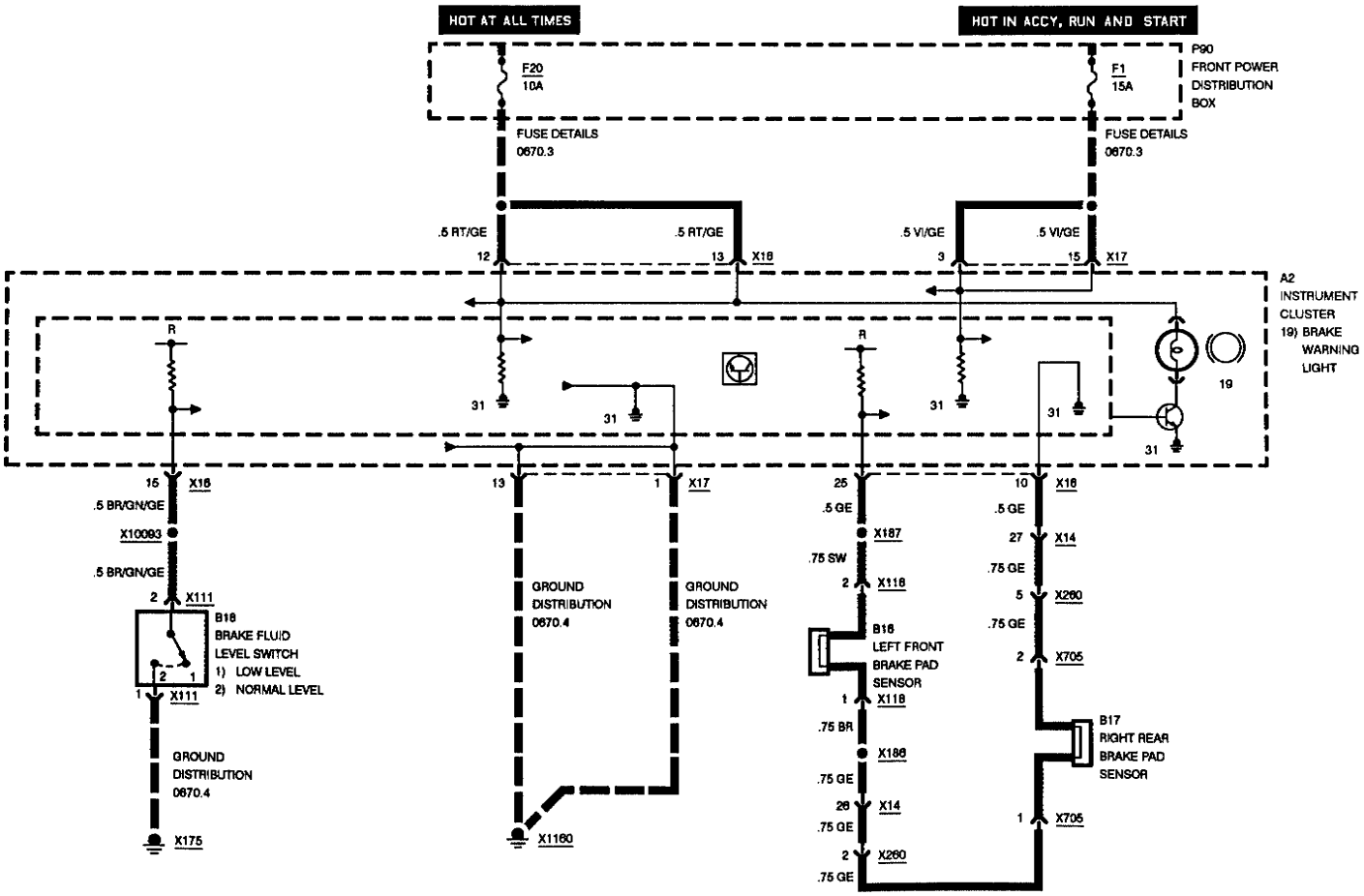
## INDICATORS




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# INSTRUMENT CLUSTER/ CHECK CONTROL (K/CC)

## INDICATORS

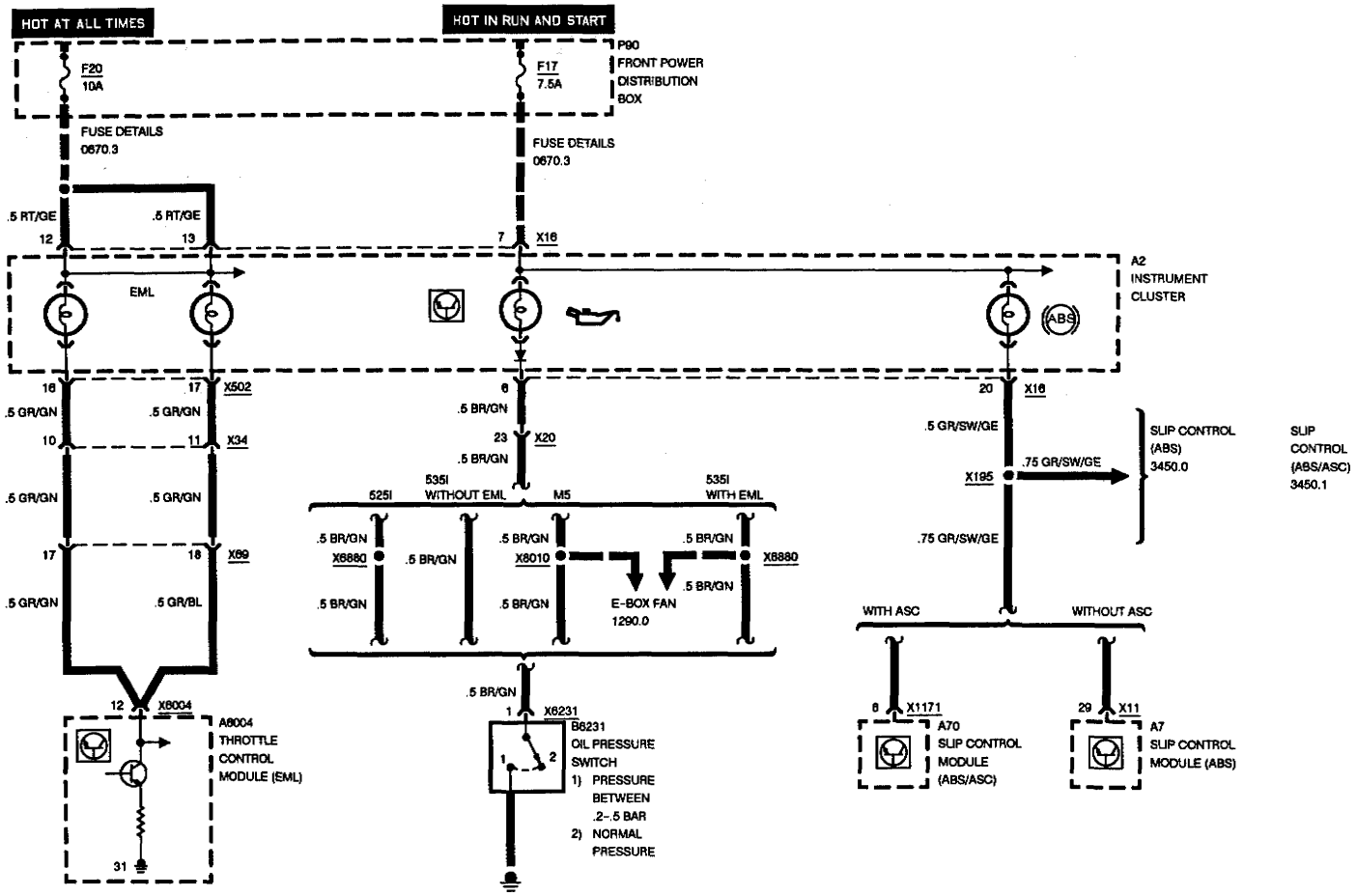





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# INSTRUMENT CLUSTER/ CHECK CONTROL (K/CC)

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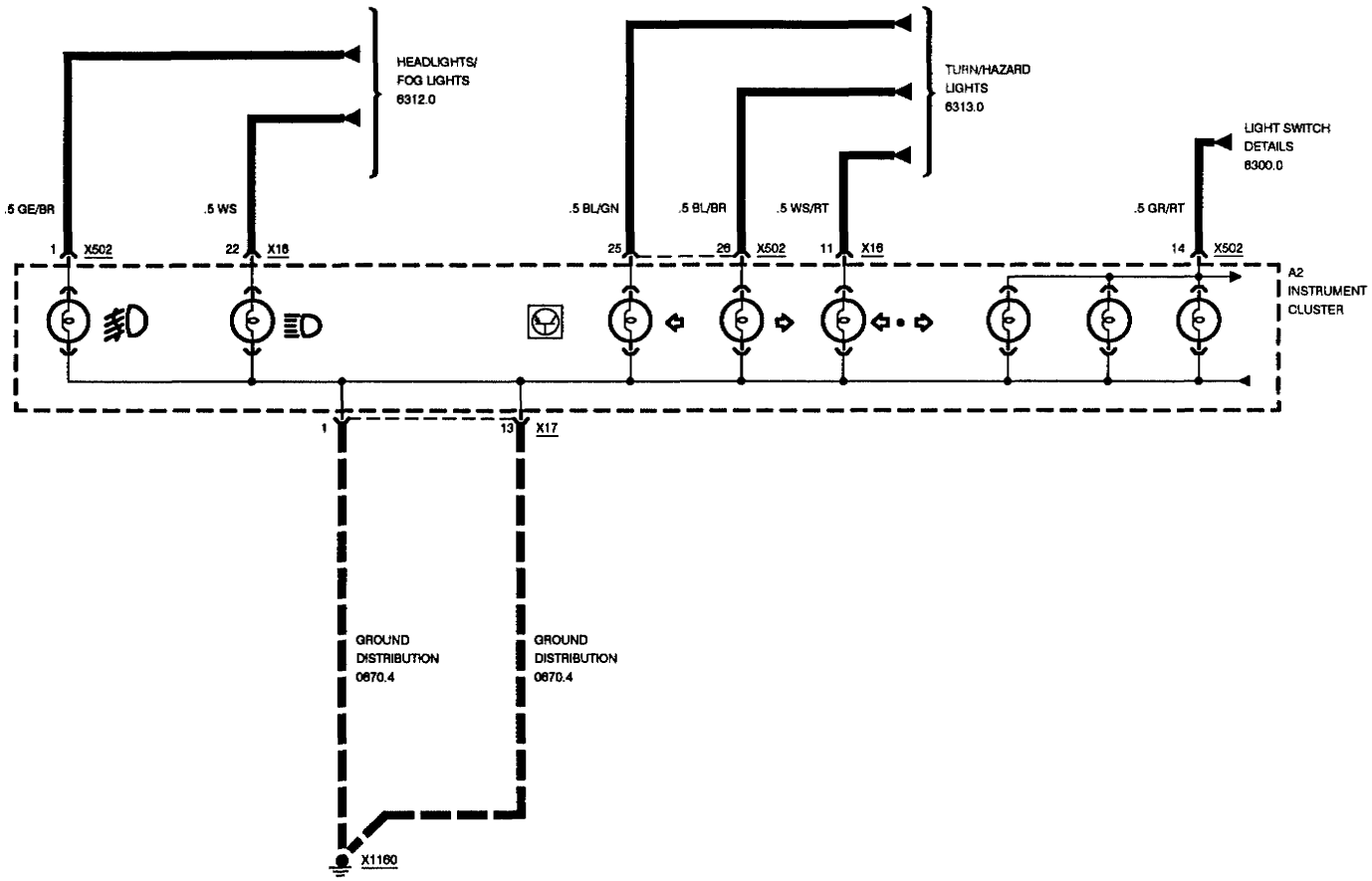





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# INSTRUMENT CLUSTER/ CHECK CONTROL (K/CC)

## INDICATORS





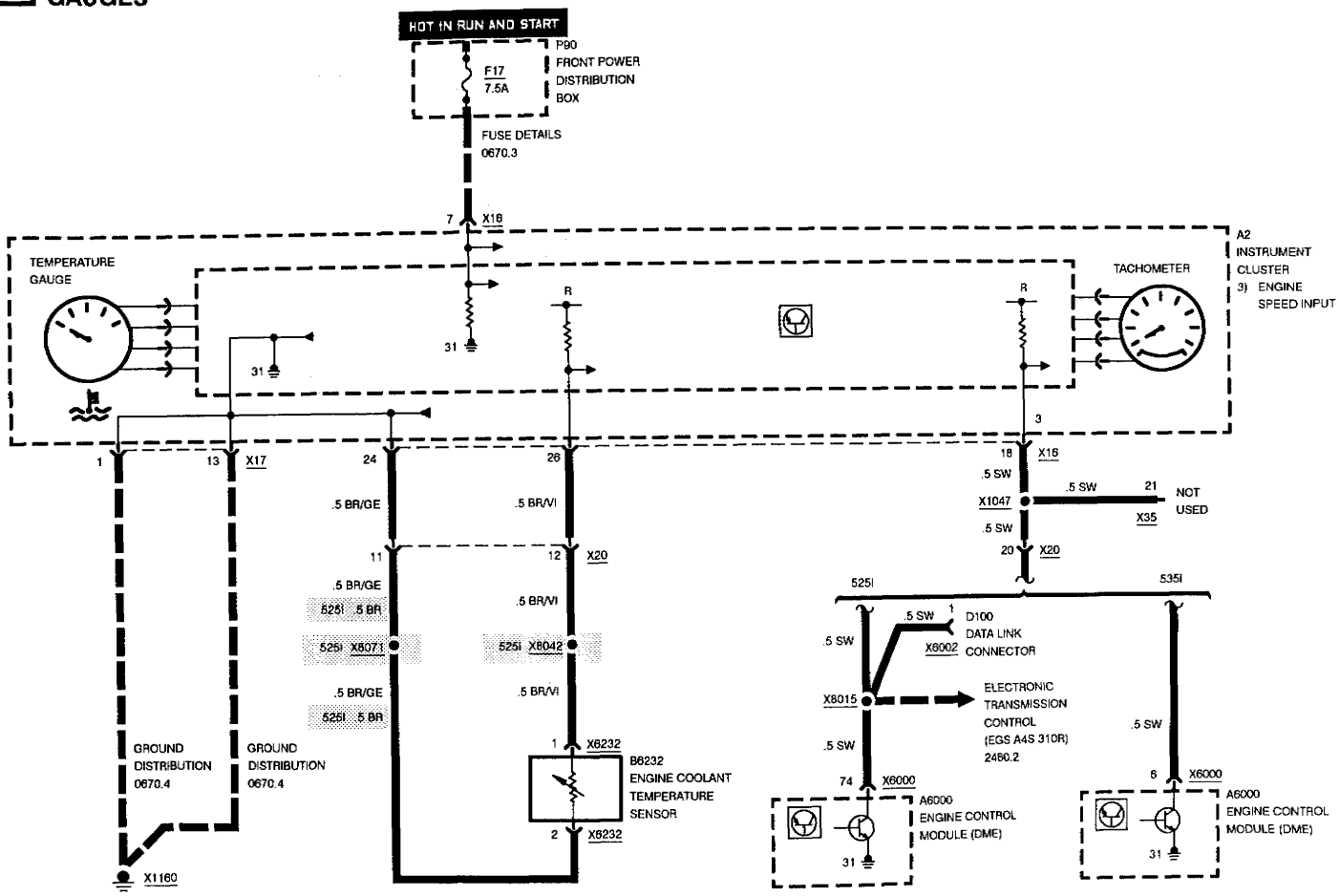

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# INSTRUMENT CLUSTER/ CHECK CONTROL (K/CC)

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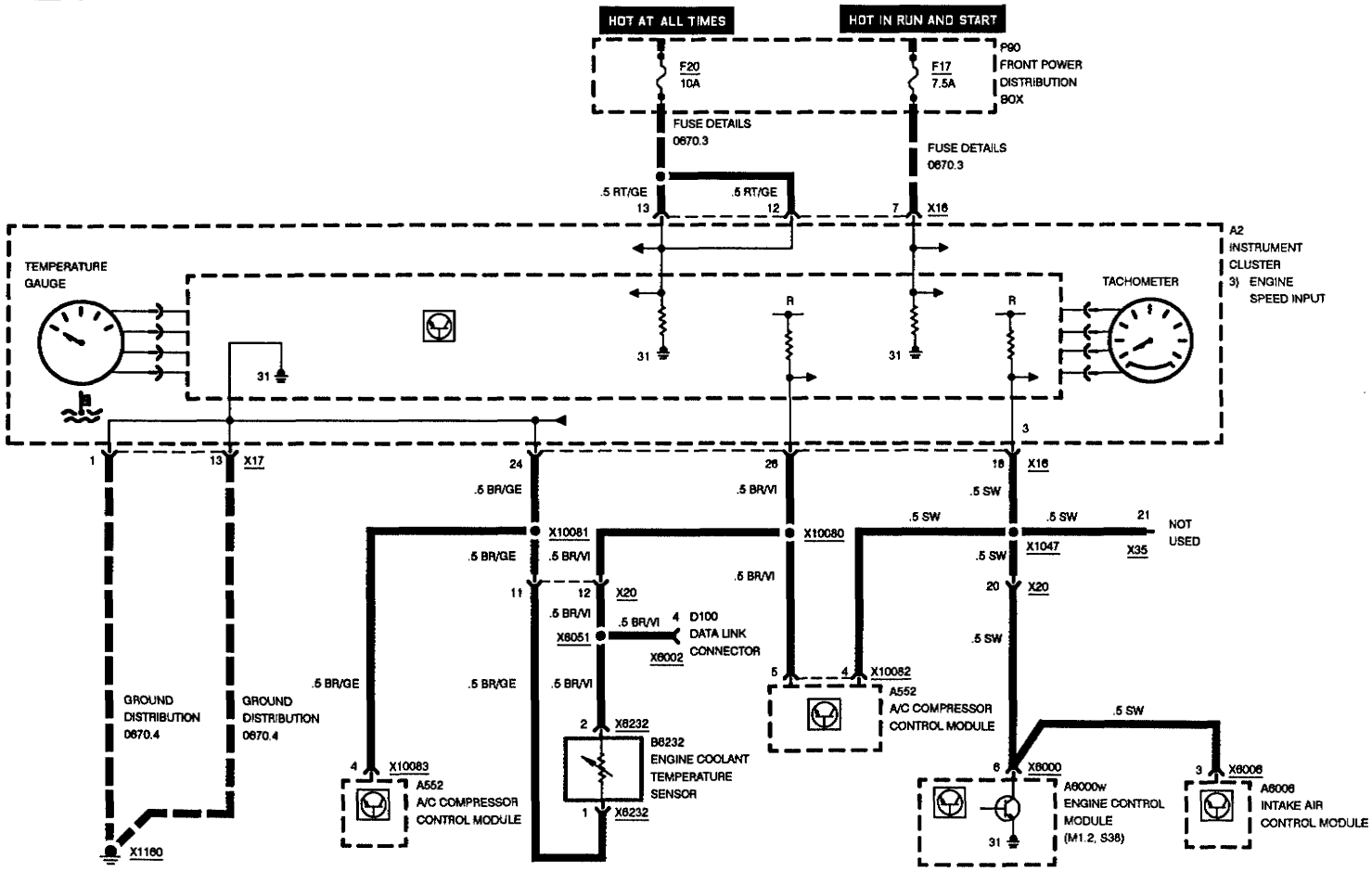
525i, 535i






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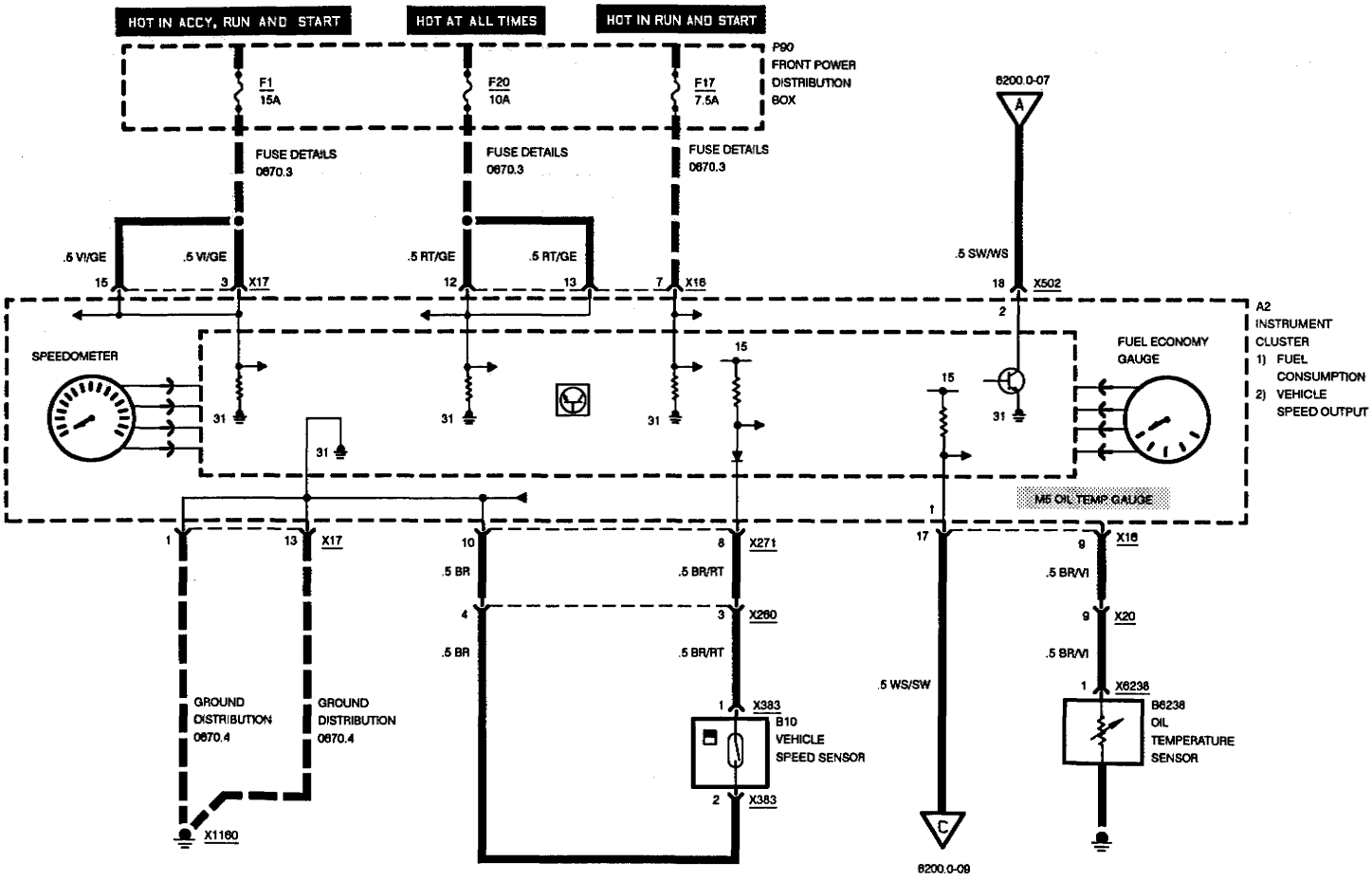





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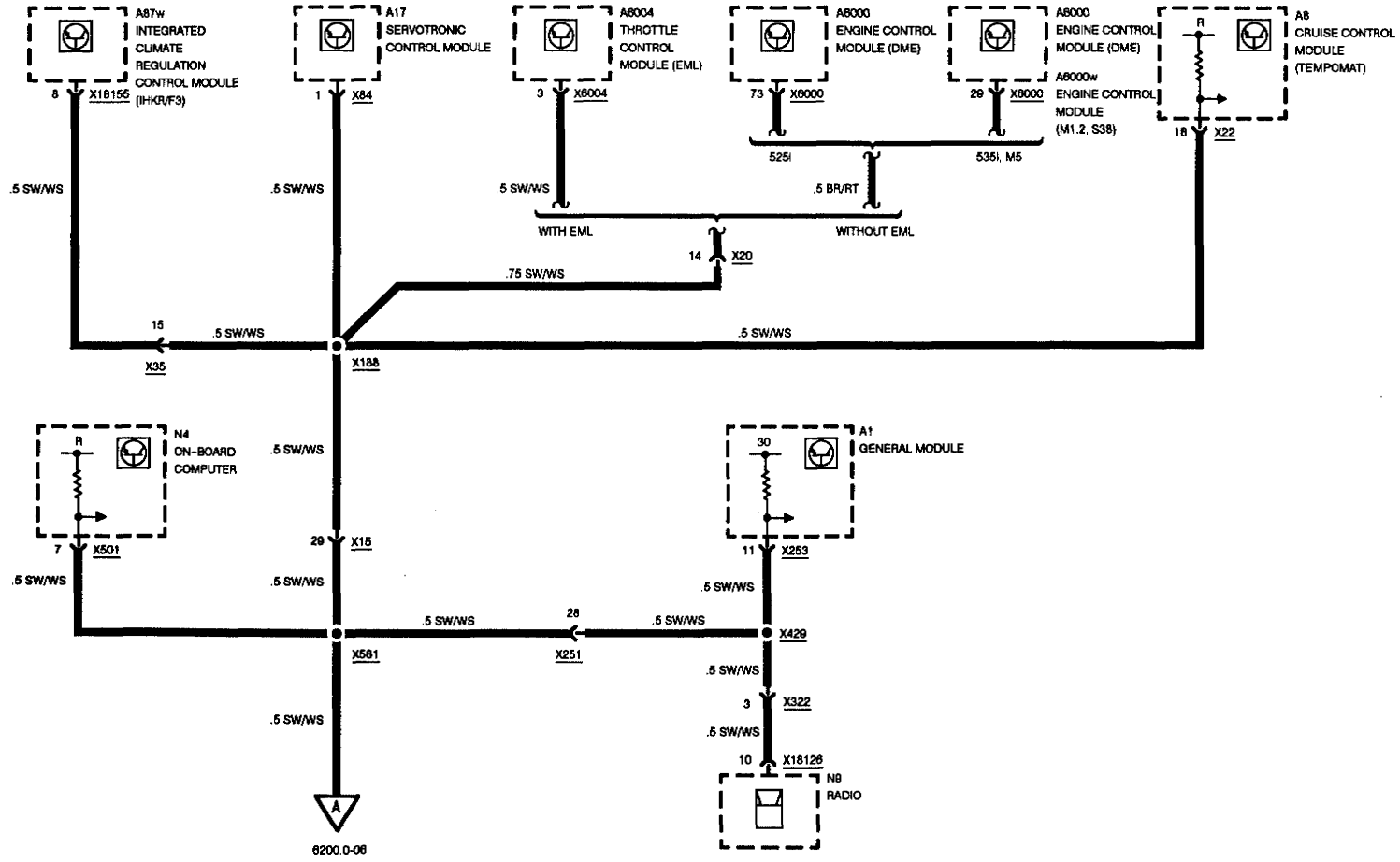





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# INSTRUMENT CLUSTER/ CHECK CONTROL (K/CC)

## SPEED SIGNAL

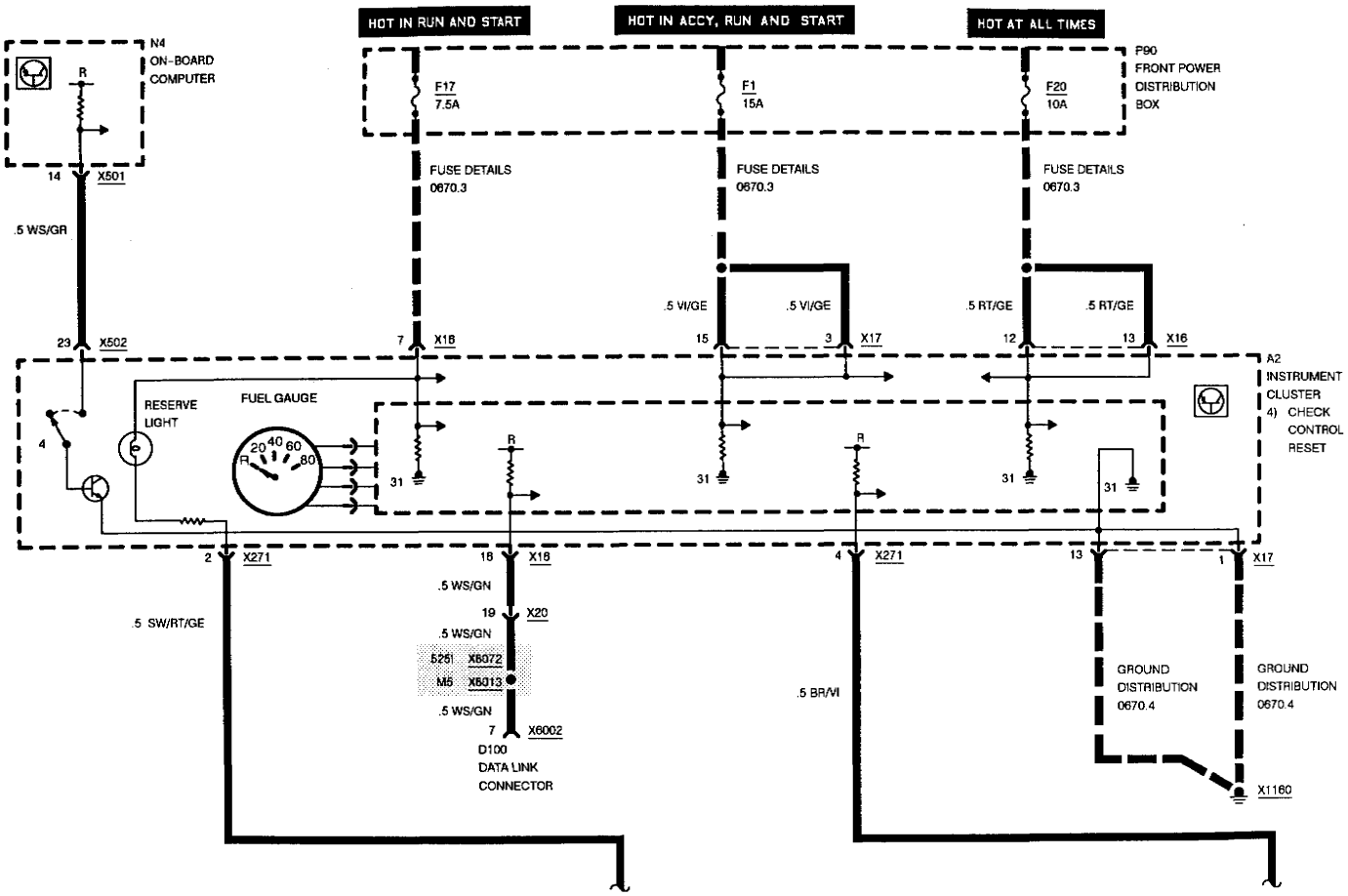





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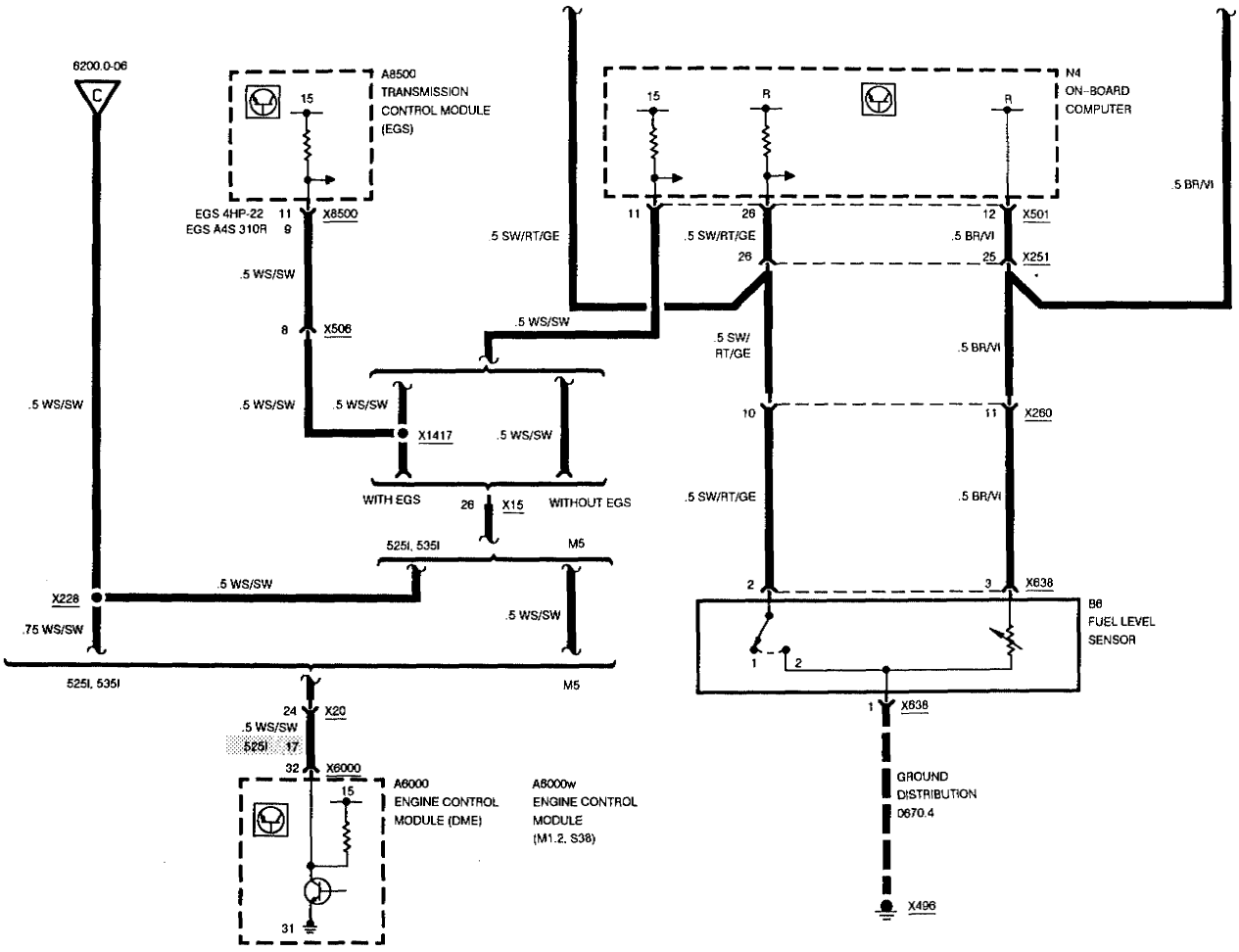
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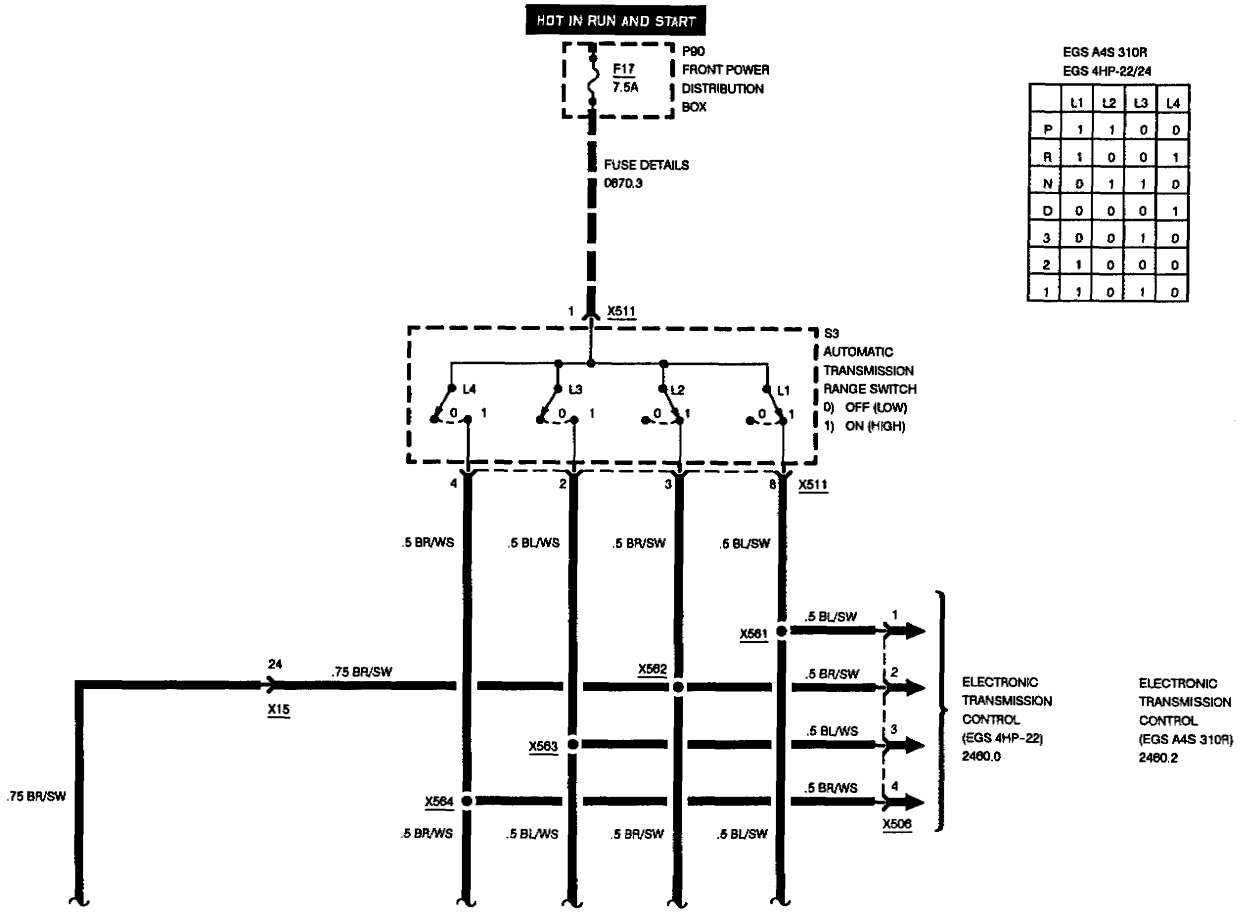





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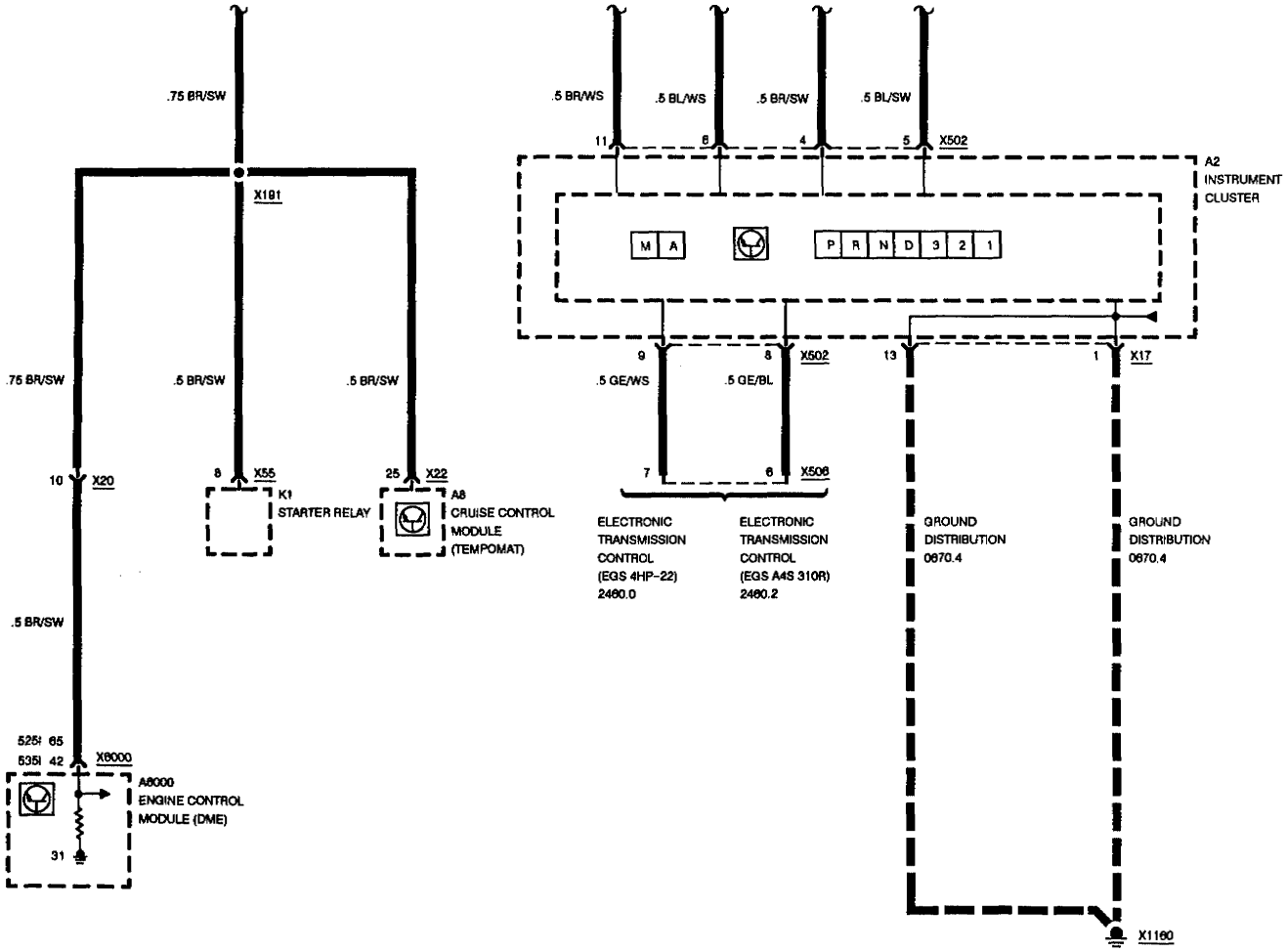

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EGS A4S 310R
EGS 4HP-22/24

| | L1 | L2 | L3 | L4 |
|---|---|---|---|---|
| P | 1 | 1 | 0 | 0 |
| R | 1 | 0 | 0 | 1 |
| N | 0 | 1 | 1 | 0 |
| D | 0 | 0 | 0 | 1 |
| 3 | 0 | 0 | 1 | 0 |
| 2 | 1 | 0 | 0 | 0 |
| 1 | 1 | 0 | 1 | 0 |

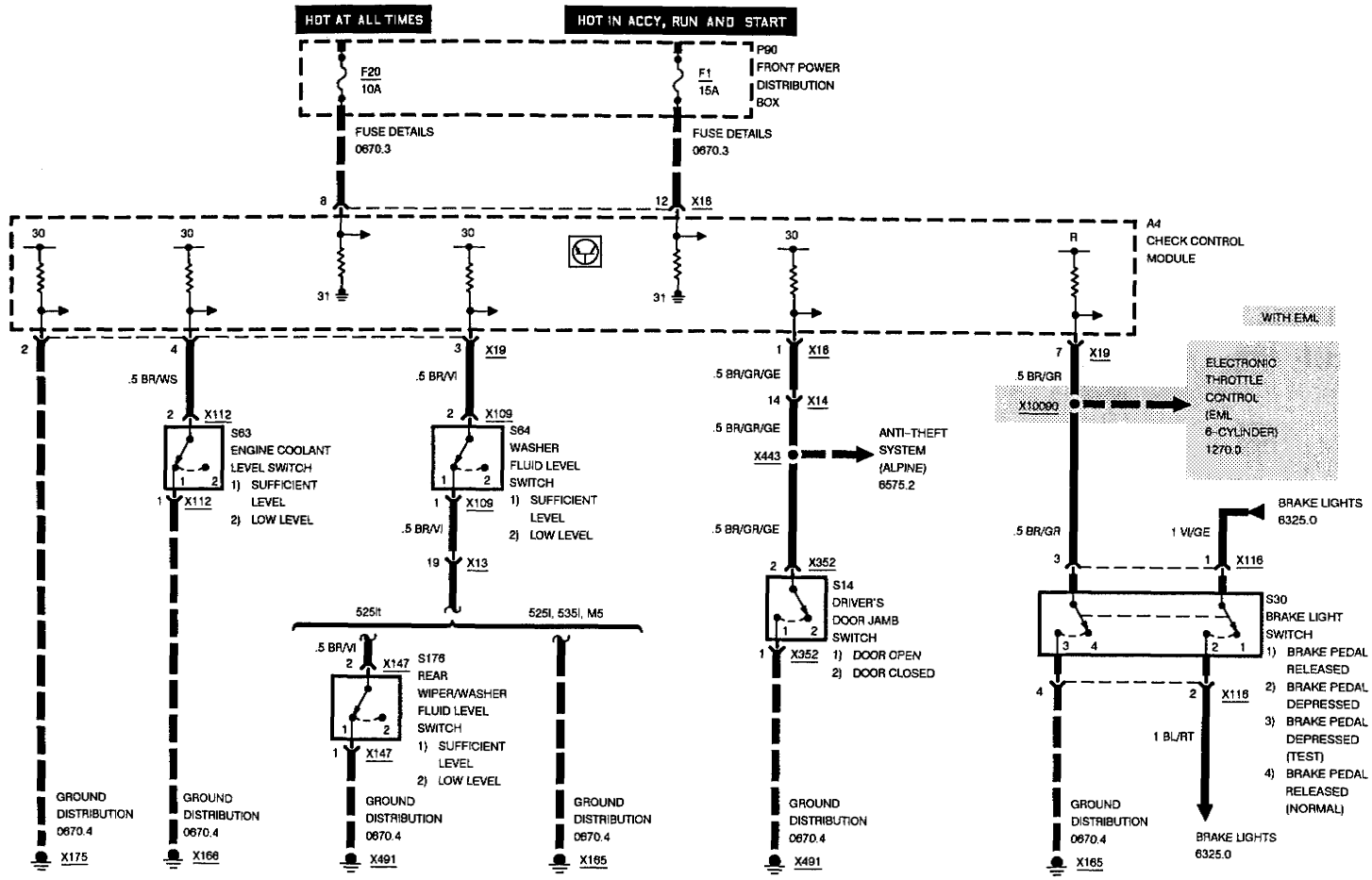
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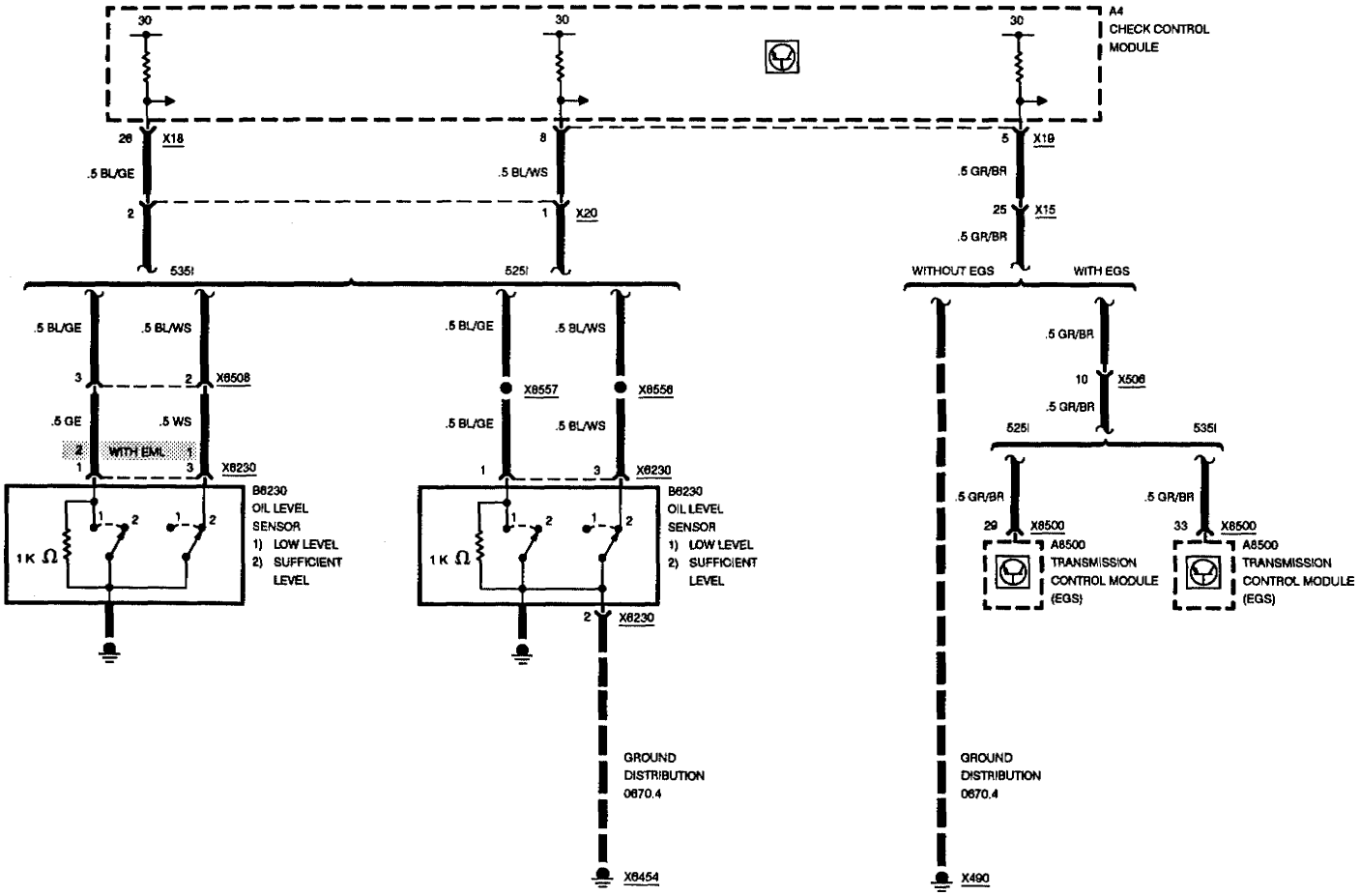
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## CHECK CONTROL




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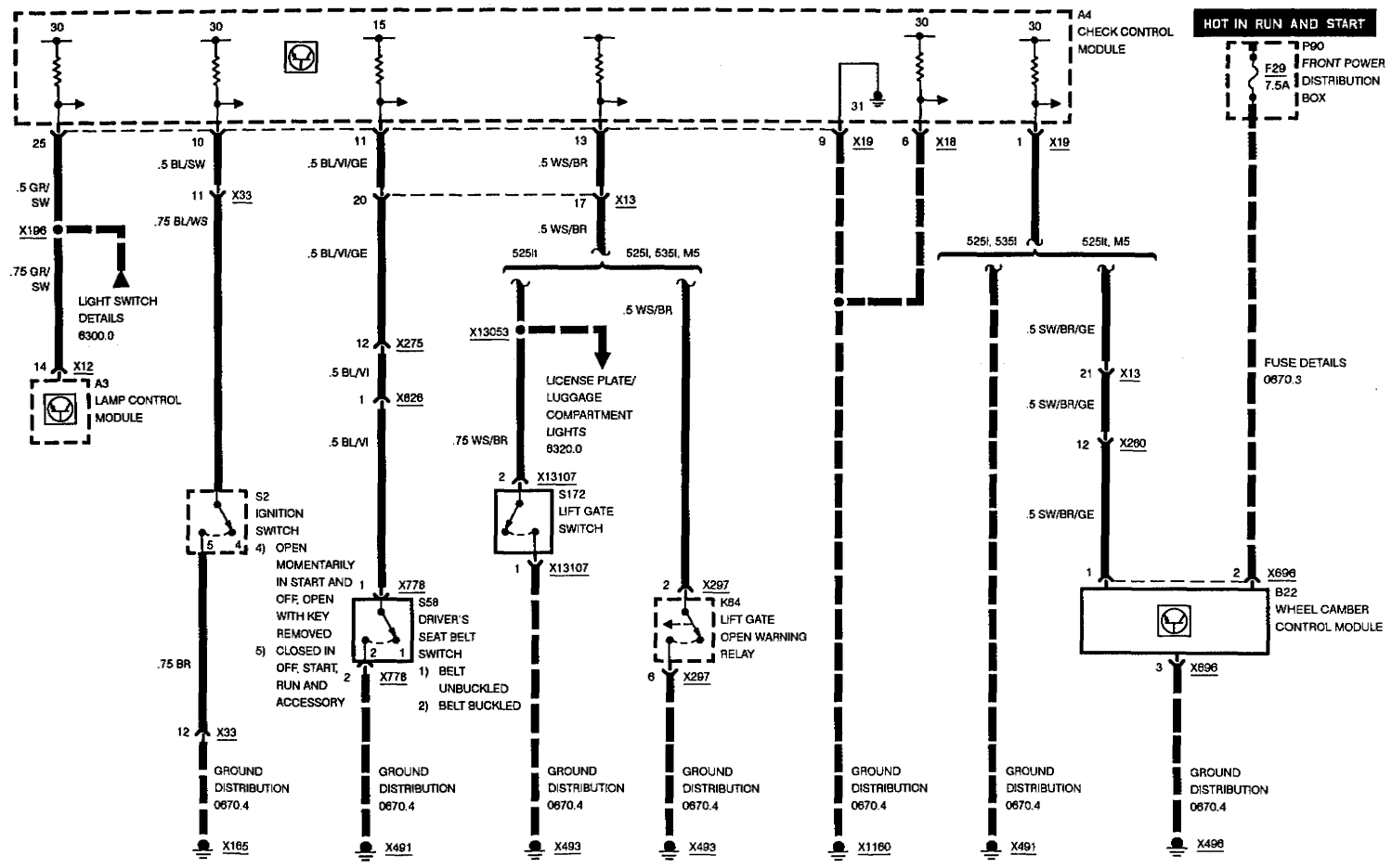





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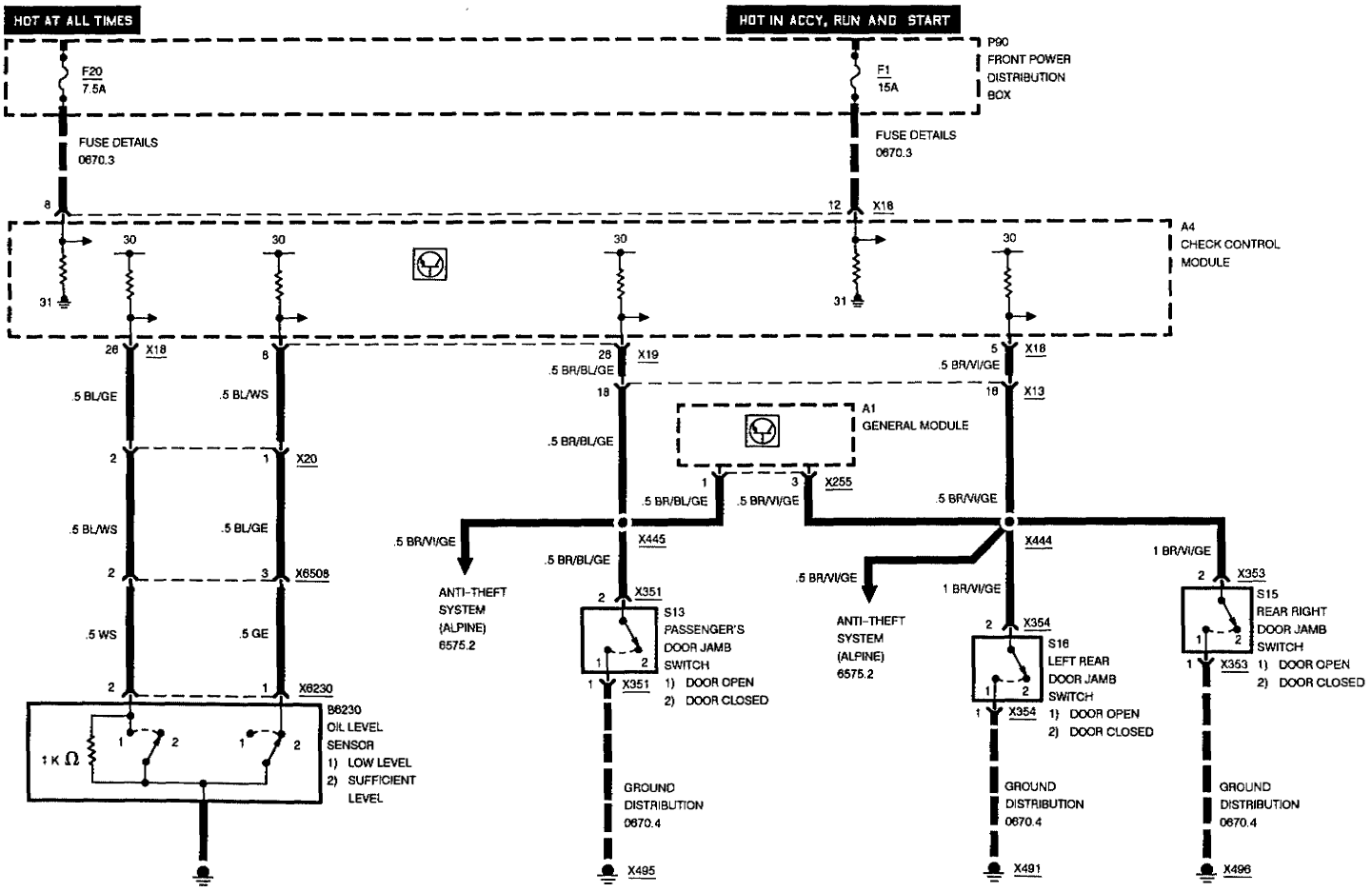
## CHECK CONTROL






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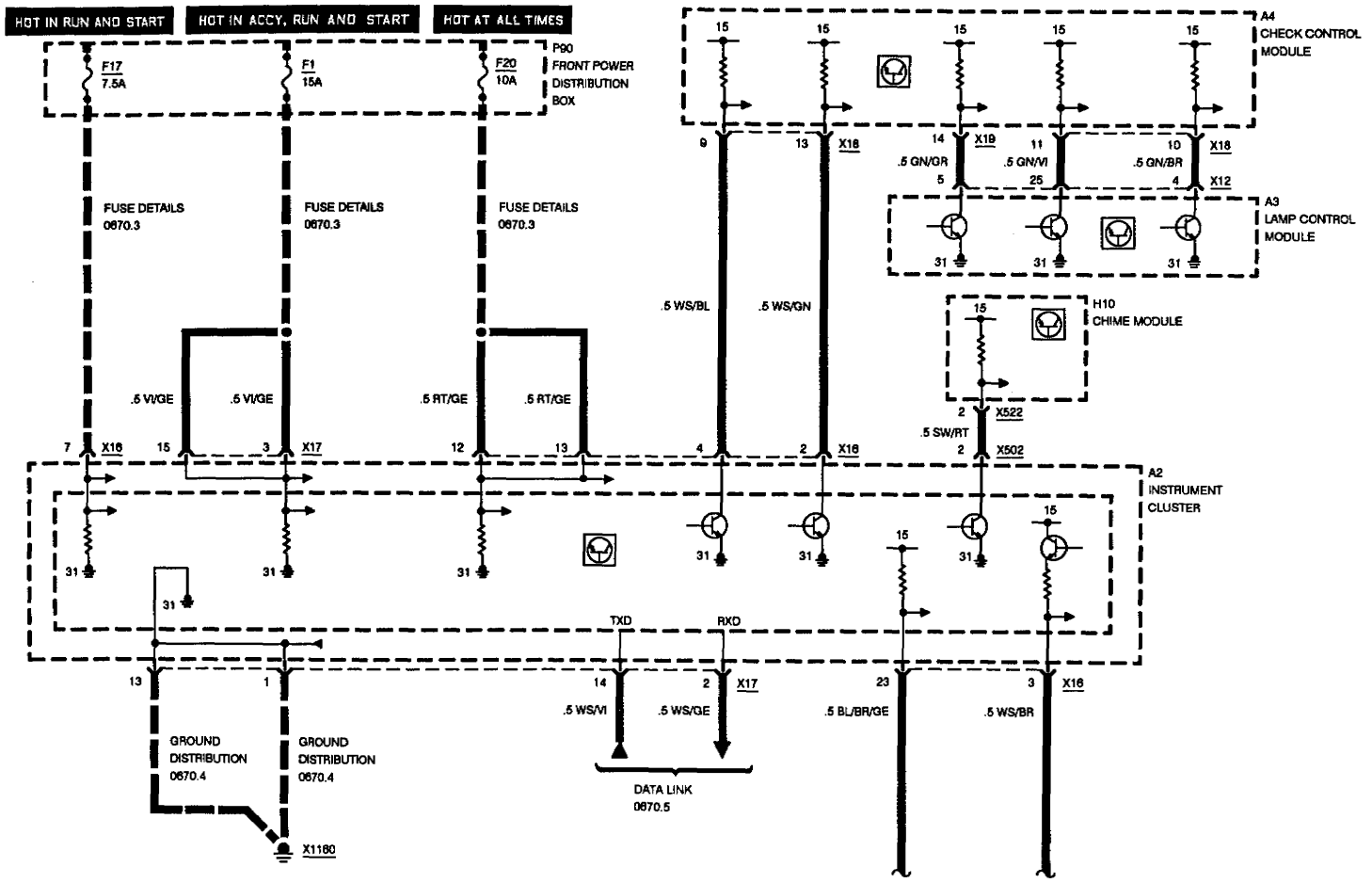




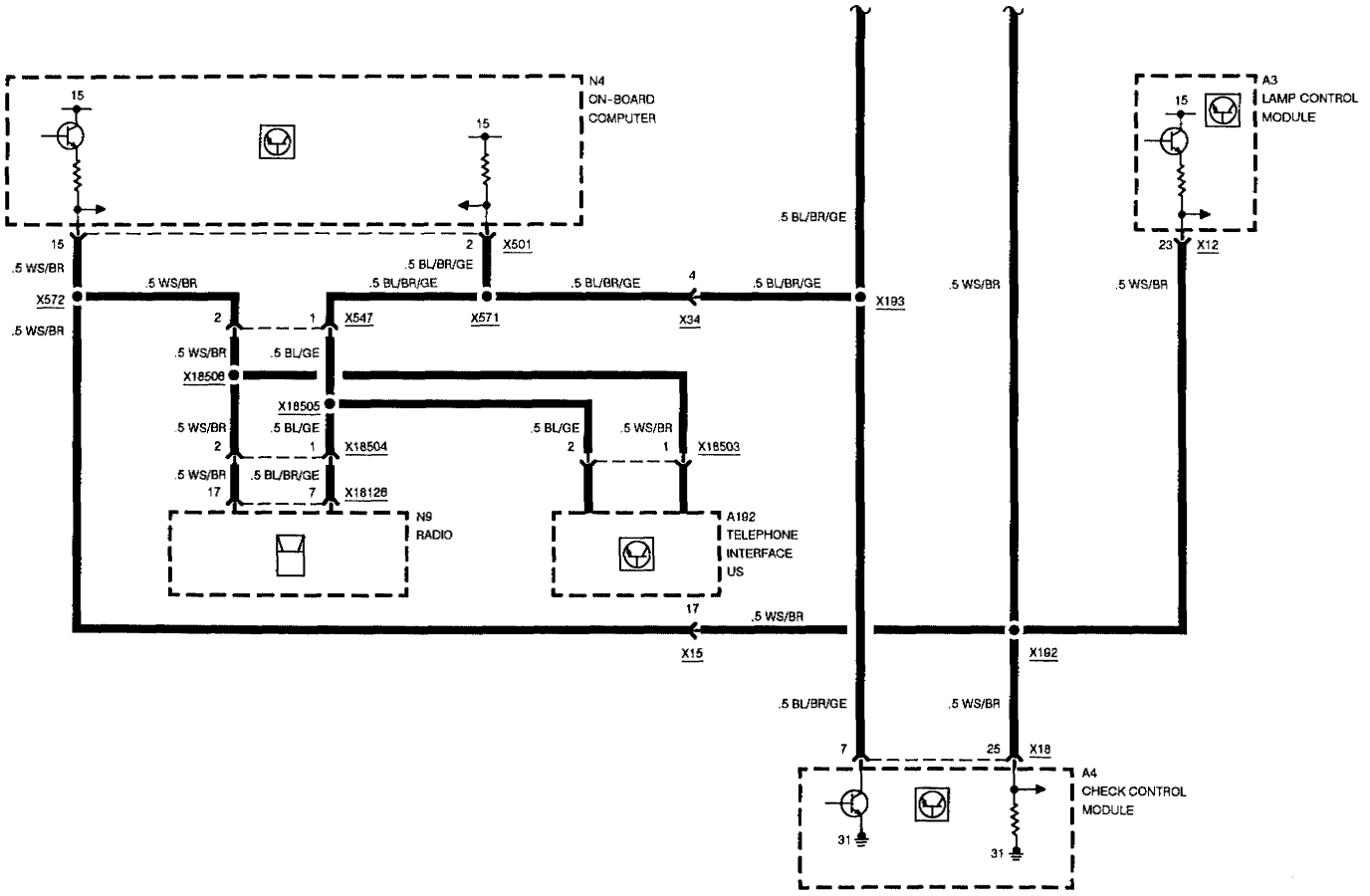

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# INSTRUMENT CLUSTER/ CHECK CONTROL (K/CC)

## DATA LINK



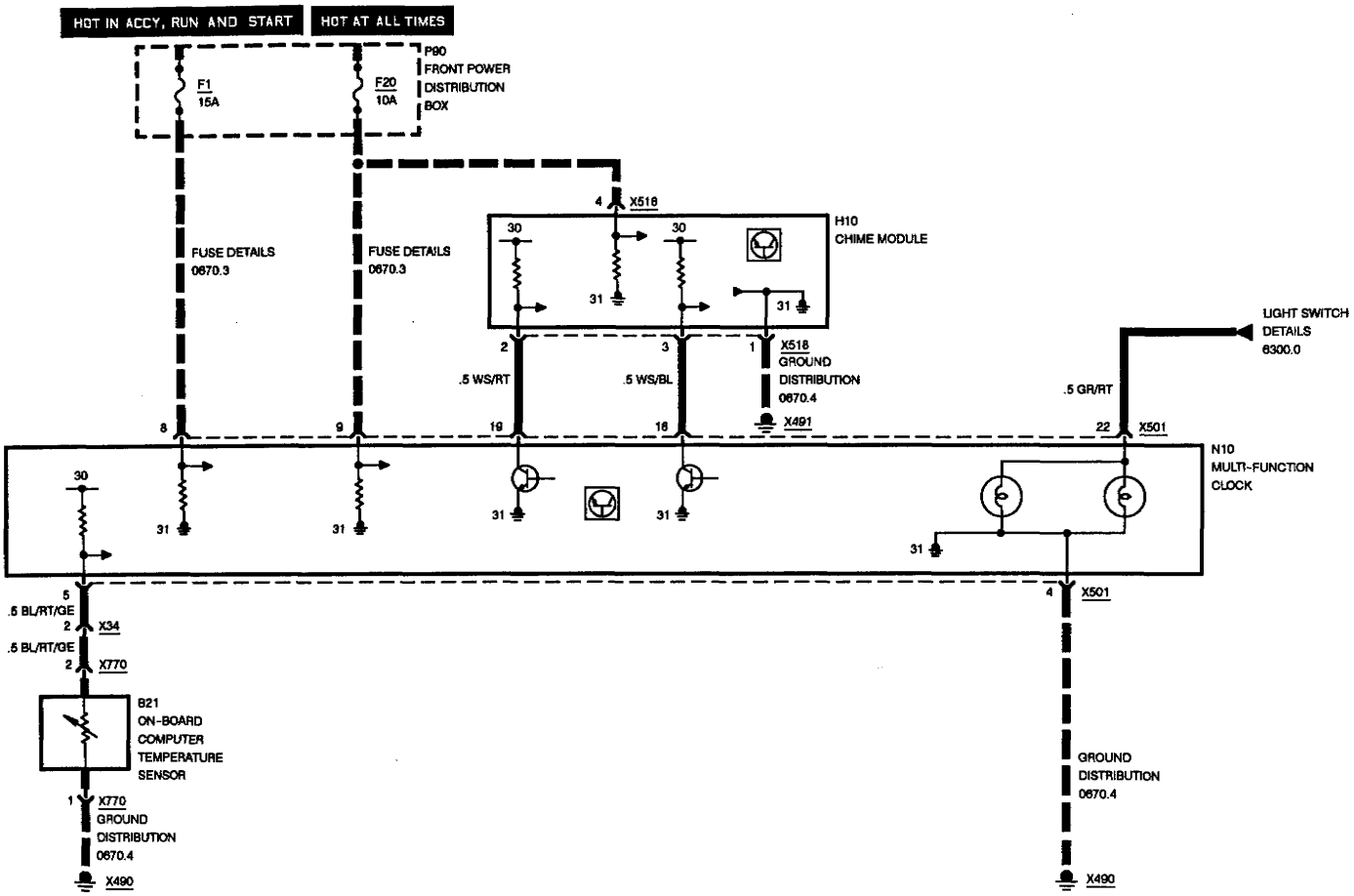

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# CLOCK

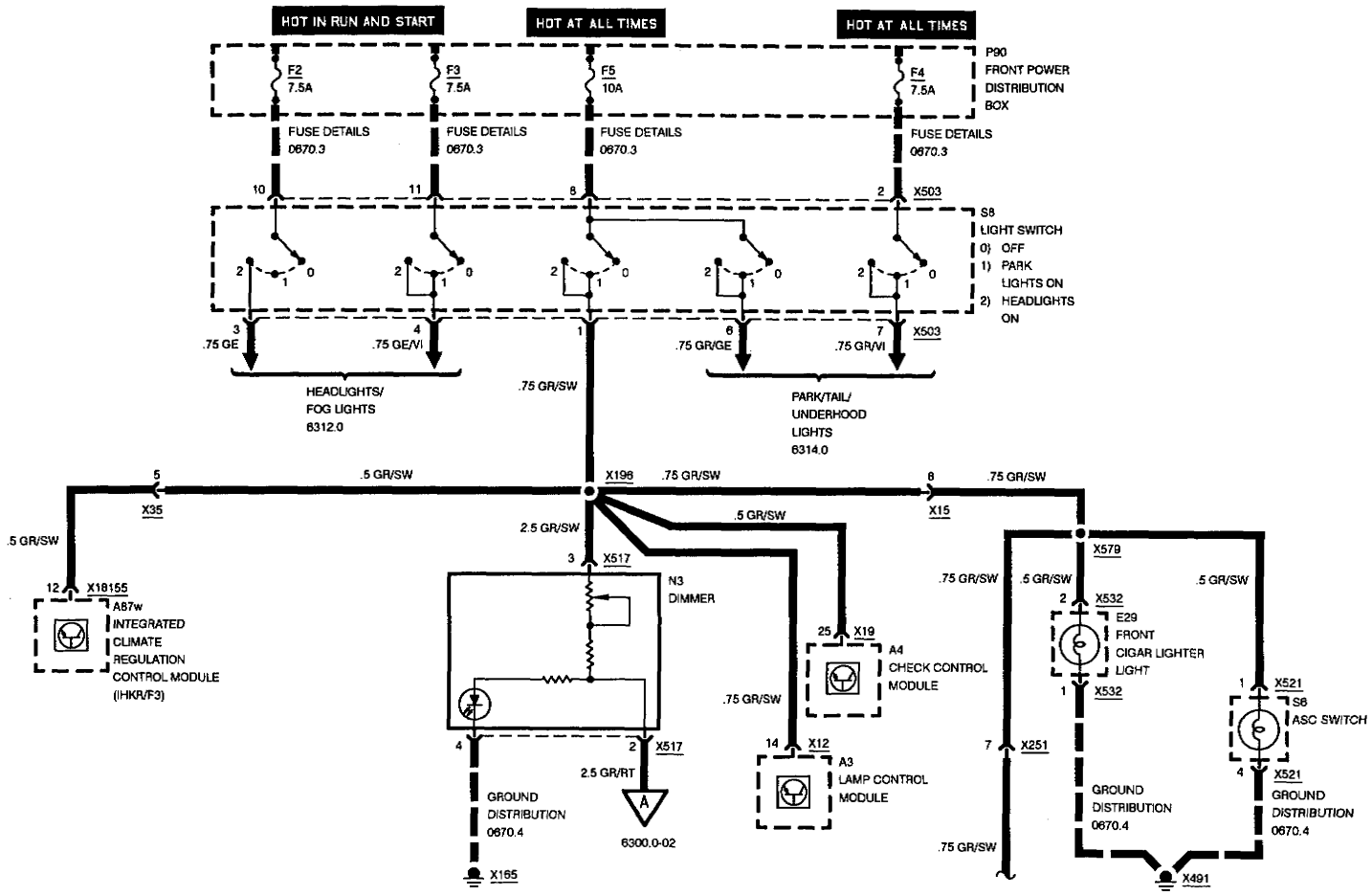
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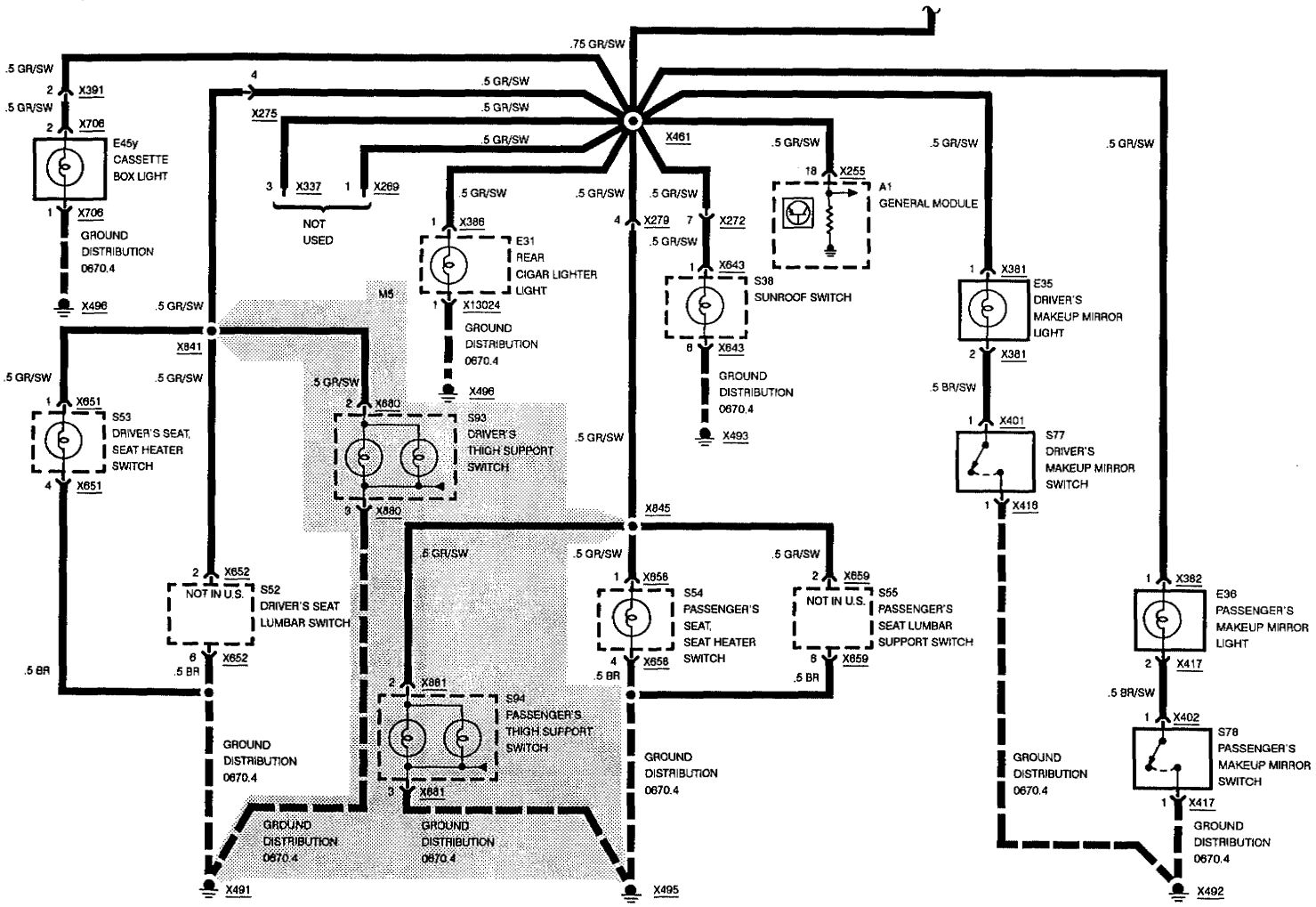
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# LIGHT SWITCH DETAILS






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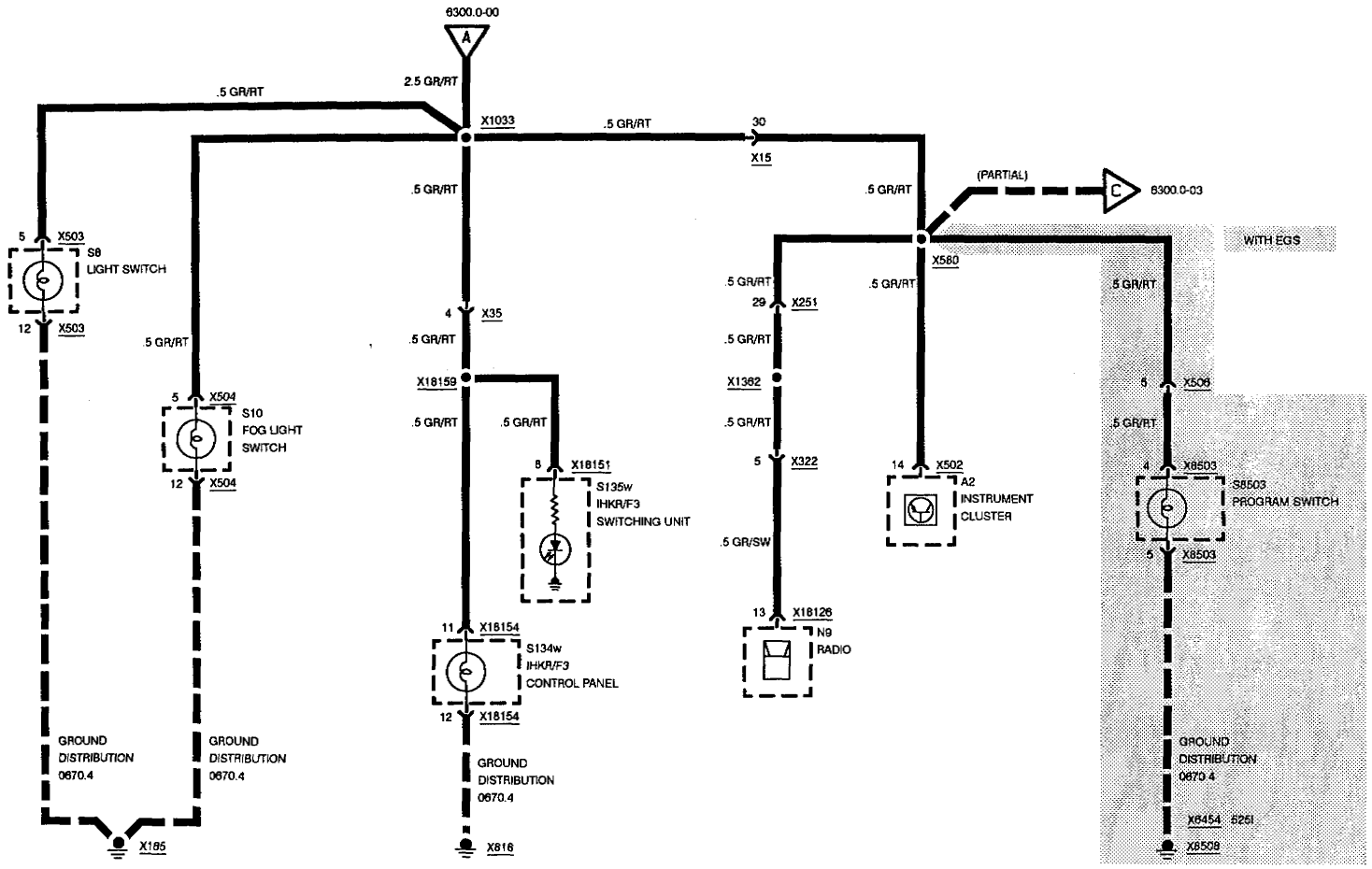



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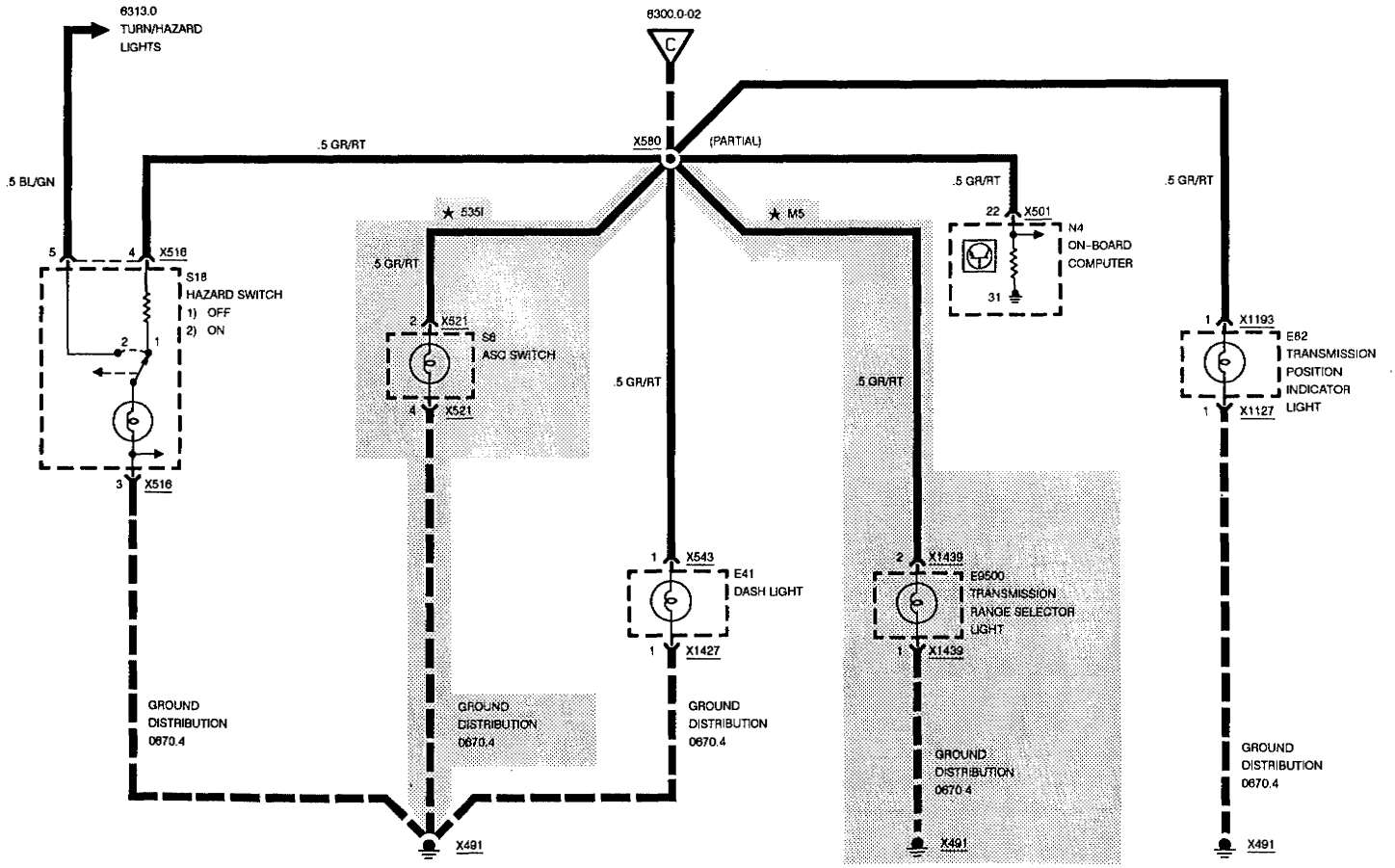





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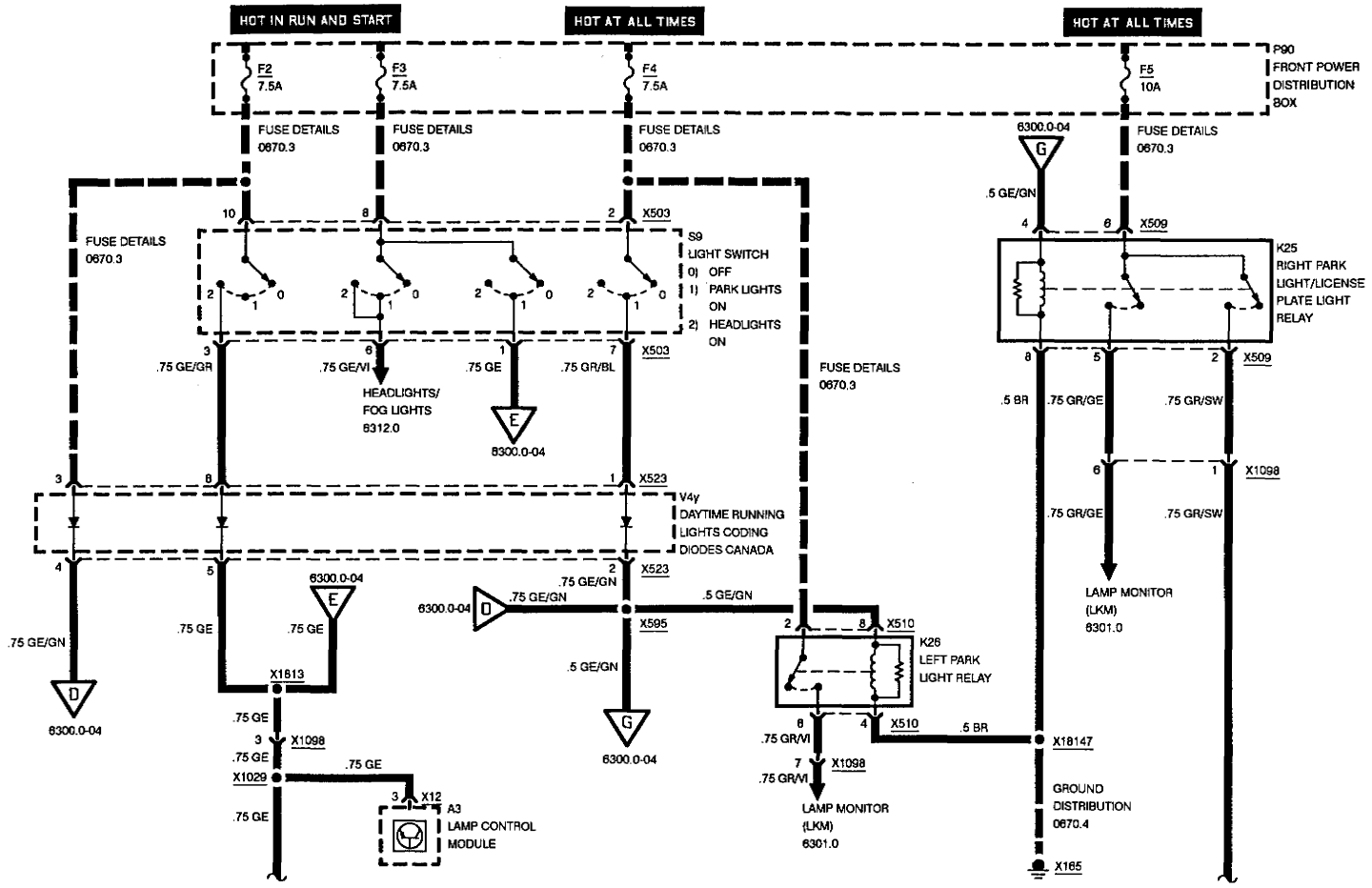



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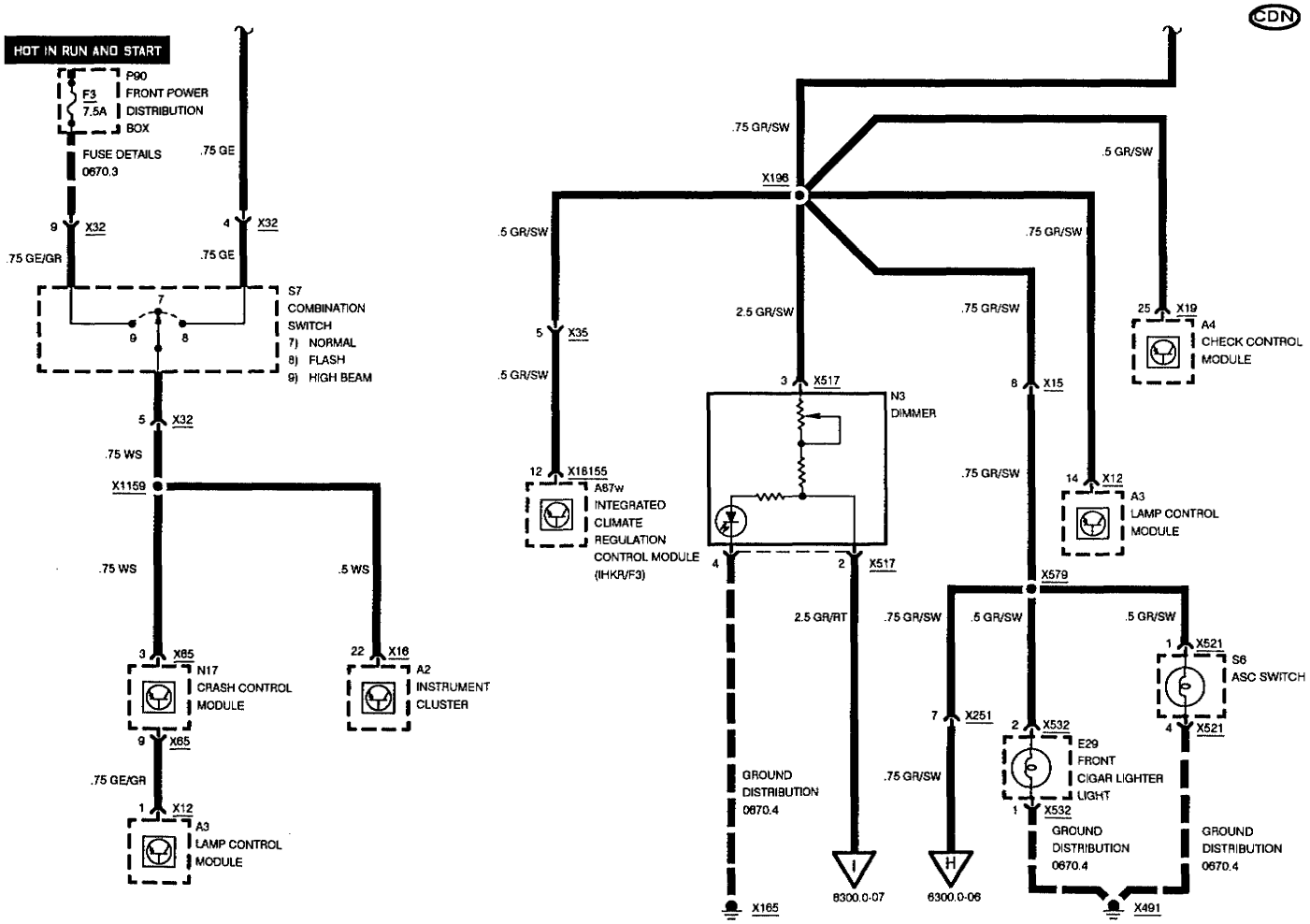







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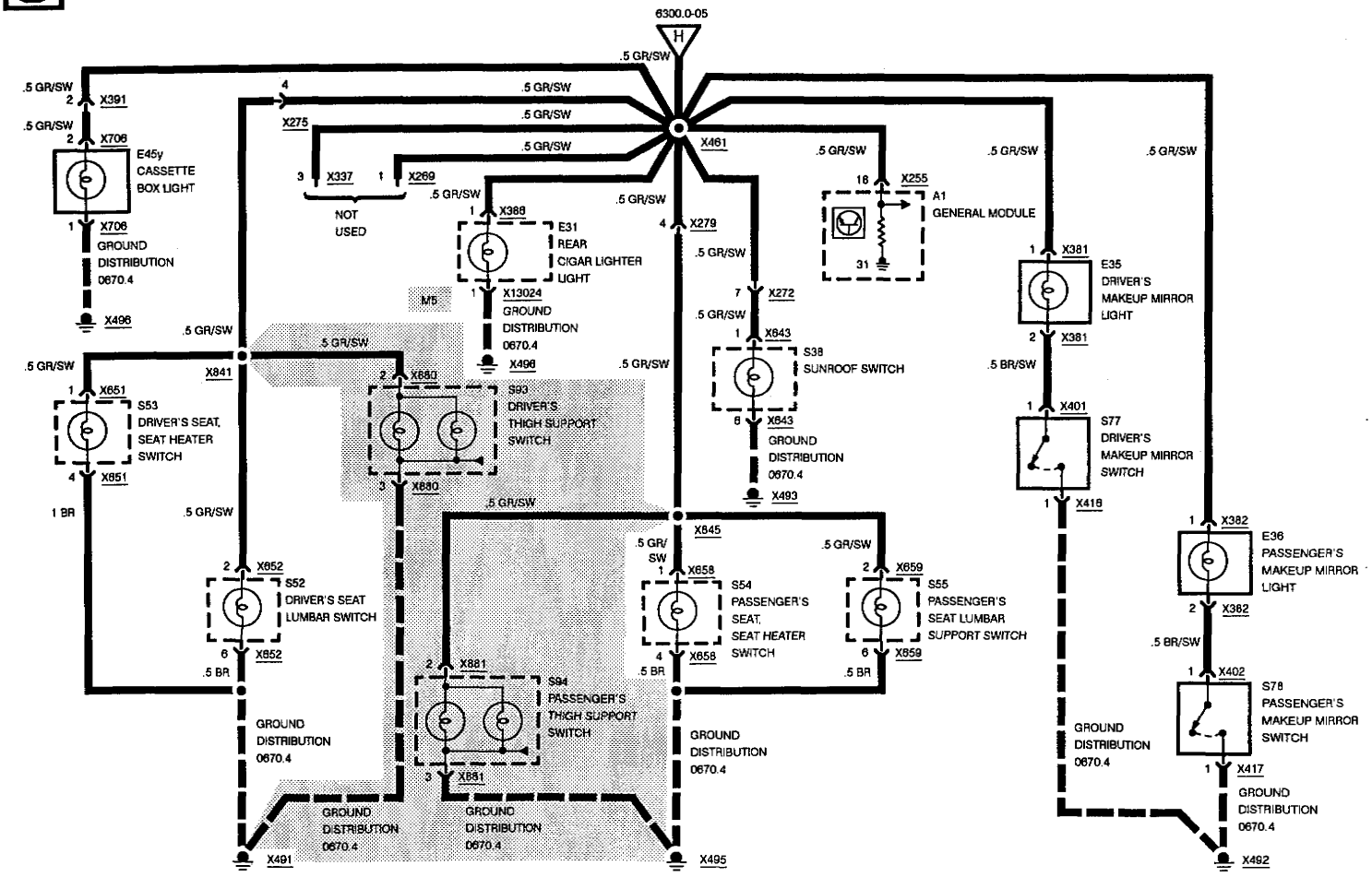



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# LIGHT SWITCH DETAILS



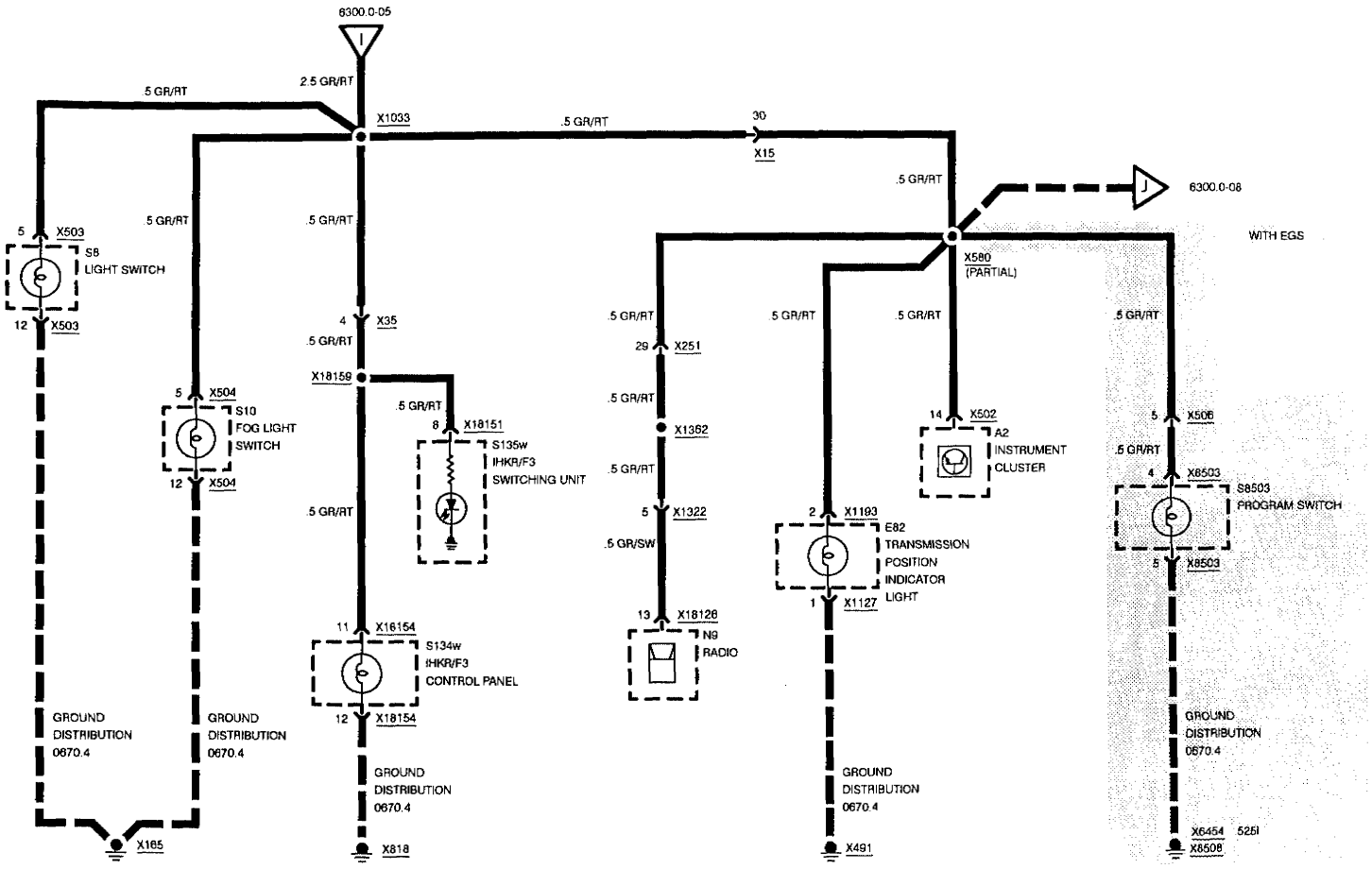





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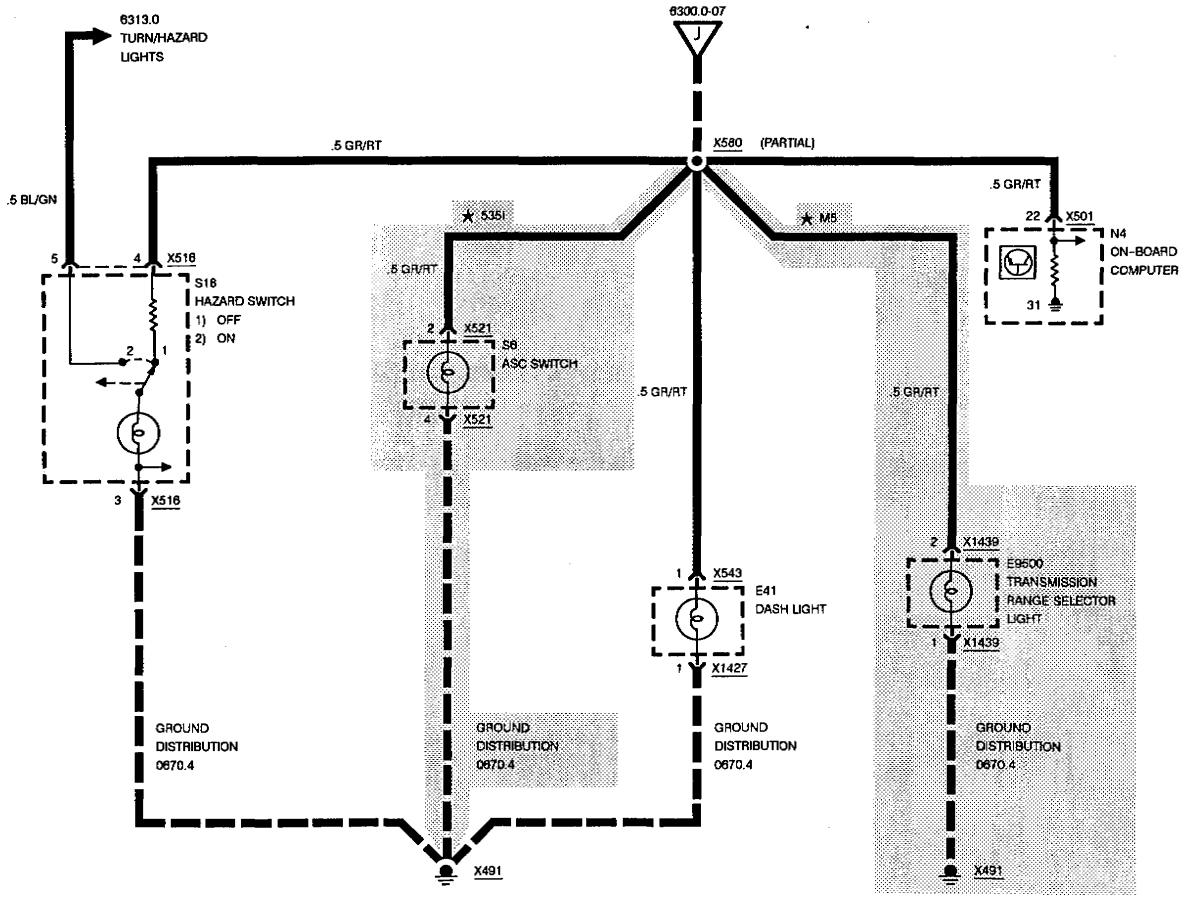
# LIGHT SWITCH DETAILS

CDN





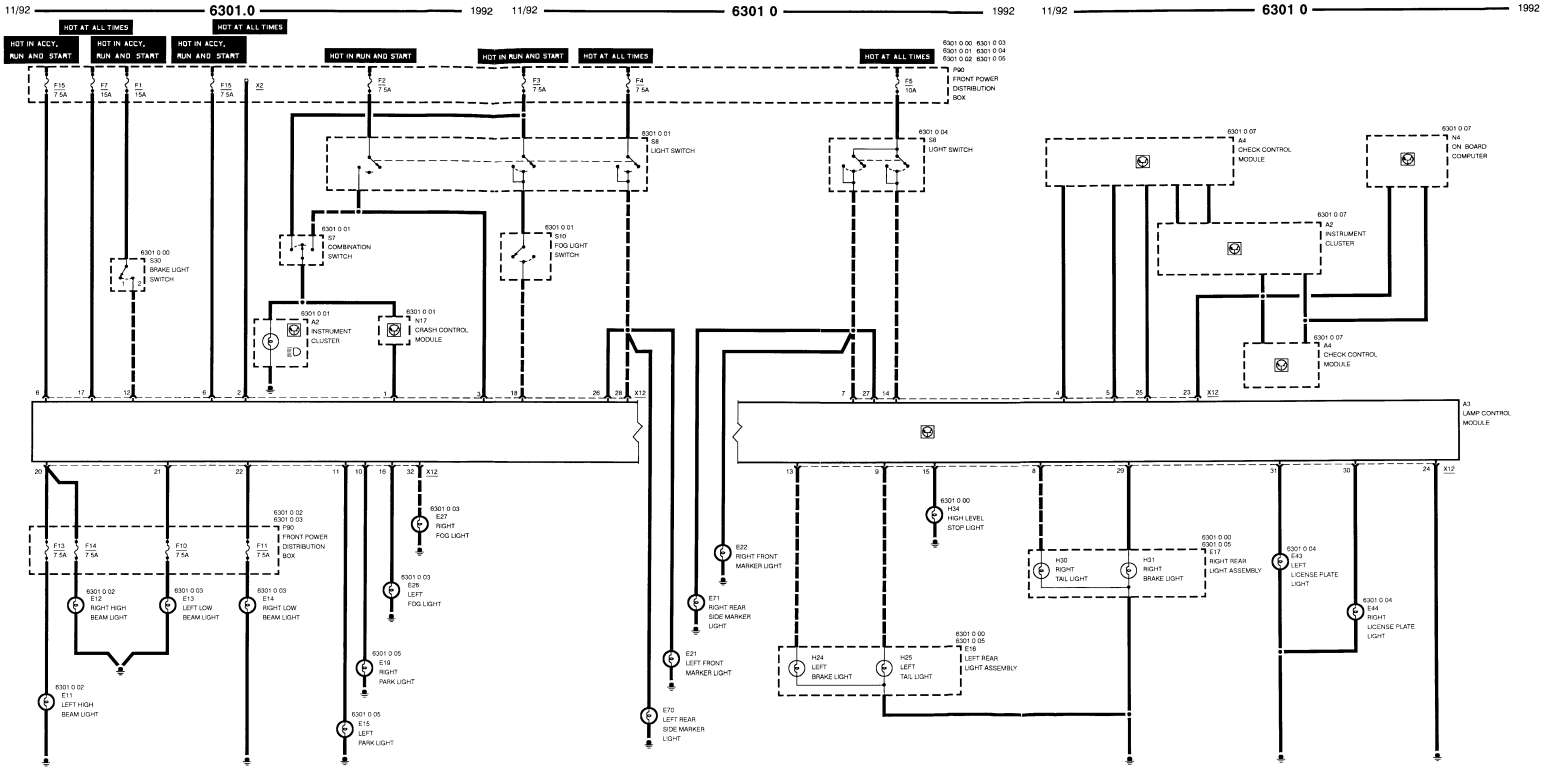

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# LAMP MONITOR (LKM)



## Pin Assignments

### X12

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | E | High beam signal | Crash control unit | approx. 3.5 V–5 V<br>approx. 0 V | ON<br>OFF | |
| 2 | E | LKM voltage supply | Power distribution box | approx. 12 V | | |
| 3 | E | Headlights signal | Light switch | approx. 3.5 V–5 V<br>approx. 0 V | ON<br>OFF | |
| 4 | A | Data link to CCM | Check control module | | | |
| 5 | A | Data link to CCM | Check control module | | | |
| 6 | E | Terminal R power | Power distribution box | approx. 12 V | | |
| 7 | E | Right tail light signal | Light switch | approx.12 V<br>approx. 0 V | ON<br>OFF | |
| 8 | A | Right tail light power | Right rear light assembly | approx. 12 V<br>approx. 0 V | ON<br>OFF | |
| 9 | A | Left tail light power | Left rear light assembly | approx. 12 V<br>approx. 0 V | ON<br>OFF | |
| 10 | A | Right park light power | Right front light assembly | approx. 12 V<br>approx. 0 V | ON<br>OFF | |
| 11 | A | Left park light power | Left front light assembly | approx. 12 V<br>approx. 0 V | ON<br>OFF | |
| 12 | E | Brake pedal status | Brake light switch | approx. 12 V<br>approx. 0 V | ON<br>OFF | |

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# LAMP MONITOR (LKM)



| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 13 | A | Left brake light power | Left rear light assembly | approx. 12 V<br>approx. 0 V | ON<br>OFF | |
| 14 | E | Park lights signal | Light switch | approx. 12 V<br>approx. 0 V | ON<br>OFF | |
| 15 | A | High level stop light power | High level stop light | approx. 12 V<br>approx. 0 V | ON<br>OFF | |
| 16 | A | Left fog light power | Left fog light | approx. 12 V<br>approx. 0 V | ON<br>OFF | |
| 17 | E | Fog lights power | Power distribution box | approx. 12 V | | |
| 18 | E | Fog light signal | Fog light switch | approx. 12 V<br>approx. 0 V | ON<br>OFF | |
| 19 | | Not used | | | | |
| 20 | A | High beam light power | Fuses/Power distribution box | approx. 12 V<br>approx. 0 V | ON<br>OFF | |
| 21 | A | Left low beam power | Left low beam light | approx. 12 V<br>approx. 0 V | ON<br>OFF | |
| 22 | A | Right low beam power | Right low beam light | approx. 12 V<br>approx. 0 V | ON<br>OFF | |
| 23 | E | Data link to CCM | Check control module | | | |
| 24 | M | Ground, control unit | Body ground | approx. 0 V | None | |
| 25 | E | Data link to CCM | Check control module | | | |
| 26 | E | Left tail light signal | Light switch | approx. 12 V<br>approx. 0 V | ON<br>OFF | |
| 27 | E | Right park light signal | Light switch | approx. 12 V<br>approx. 0 V | ON<br>OFF | |
| 28 | E | Left park light signal | Light switch | approx. 12 V<br>approx. 0 V | ON<br>OFF | |

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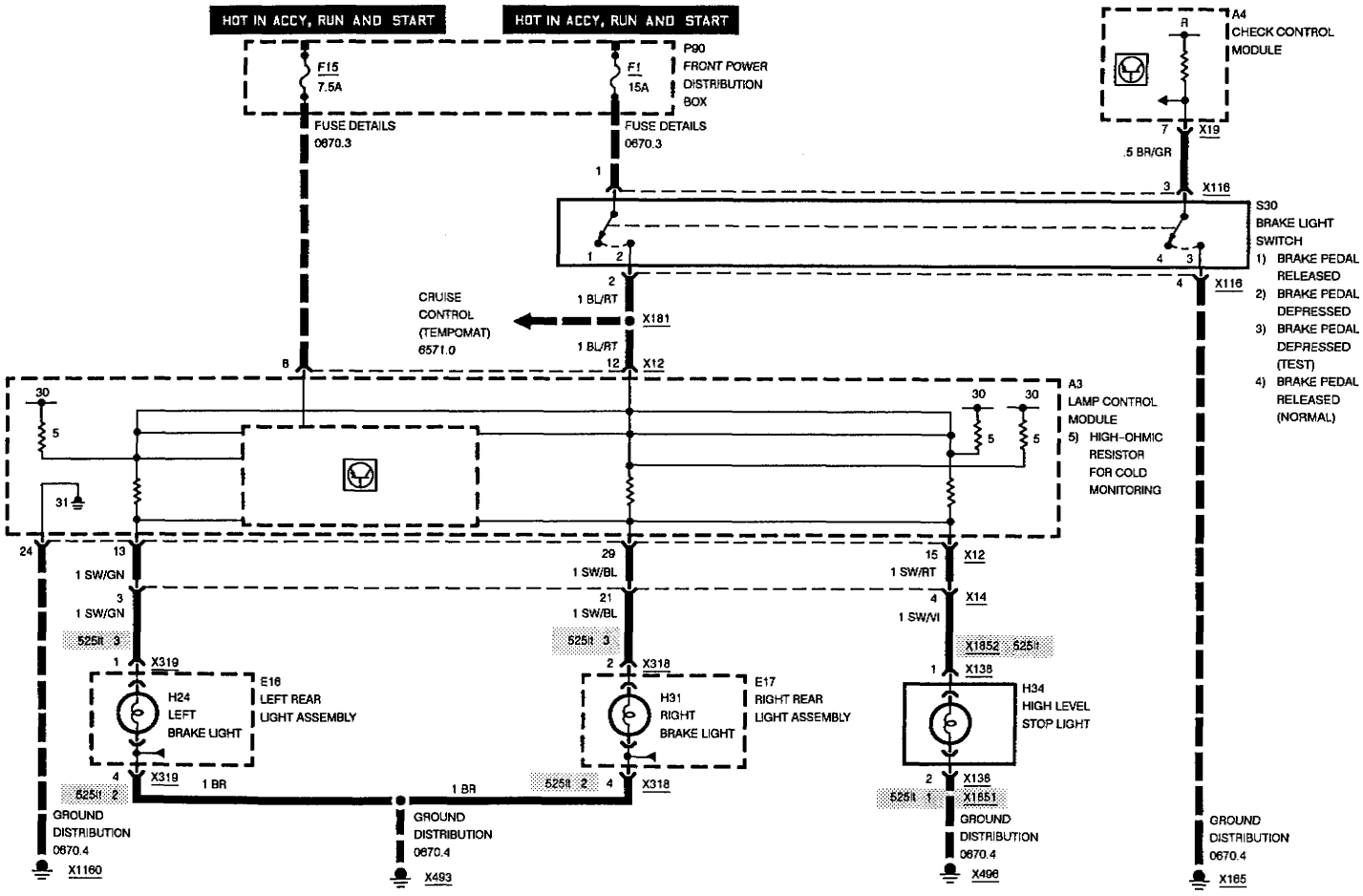
## LAMP MONITOR (LKM)

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 29 | A | Right brake light power | Right brake light | approx. 12 V<br>approx. 0 V | ON<br>OFF | |
| 30 | A | Right license plate light power | Right license plate light | approx. 12 V<br>approx. 0 V | ON<br>OFF | |
| 31 | A | Left license plate light power | Left license plate light | approx. 12 V<br>approx. 0 V | ON<br>OFF | |
| 32 | A | Right fog light power | Right fog light | approx. 12 V<br>approx. 0 V | ON<br>OFF | |



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# LAMP MONITOR (LKM)

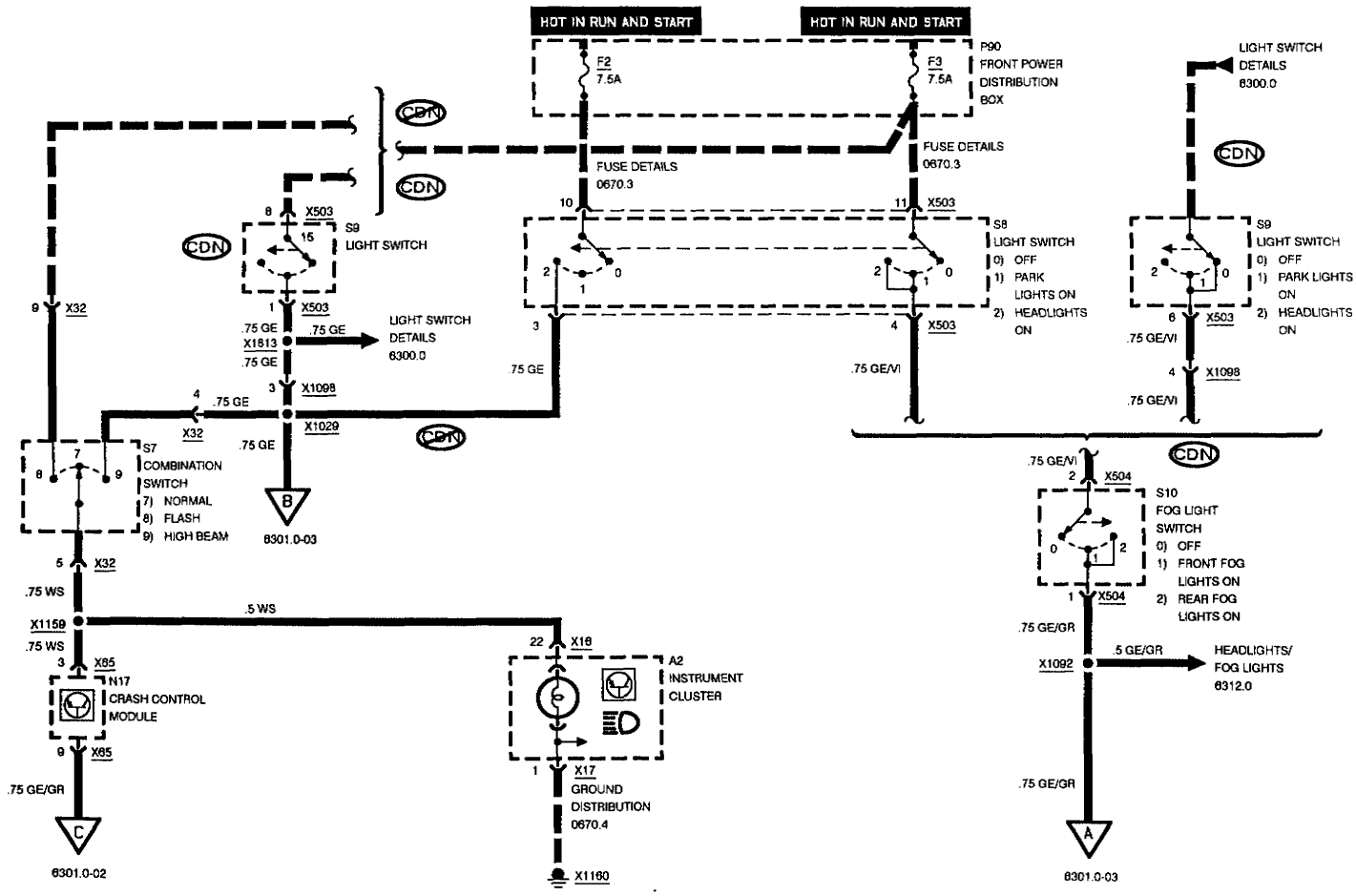





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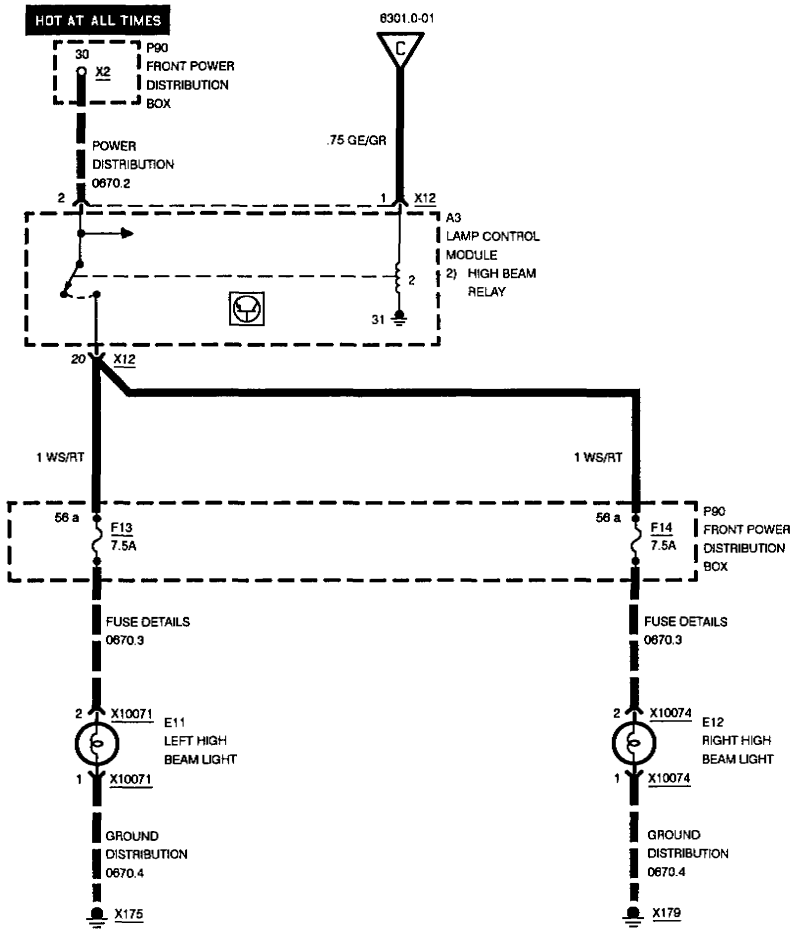





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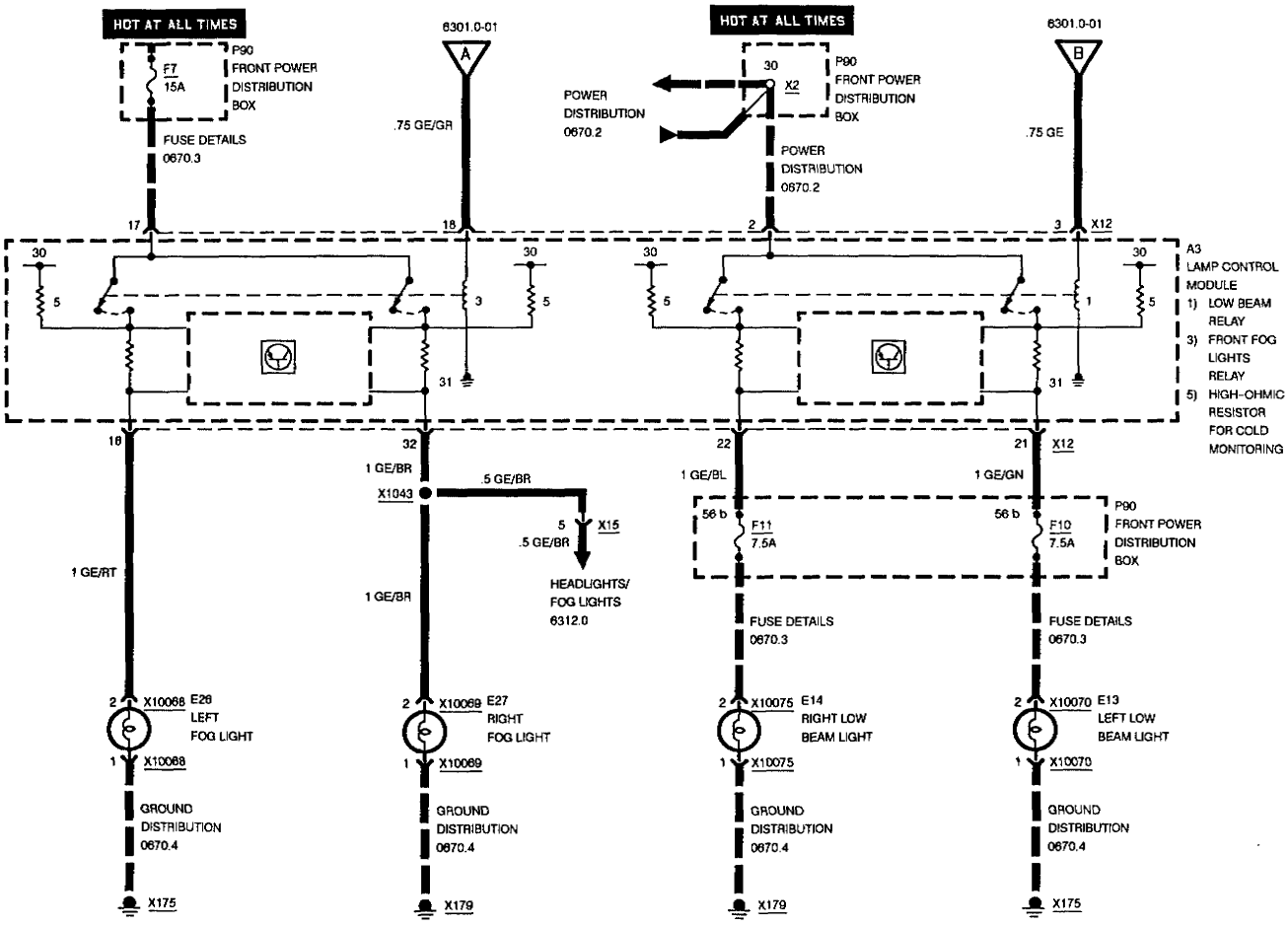
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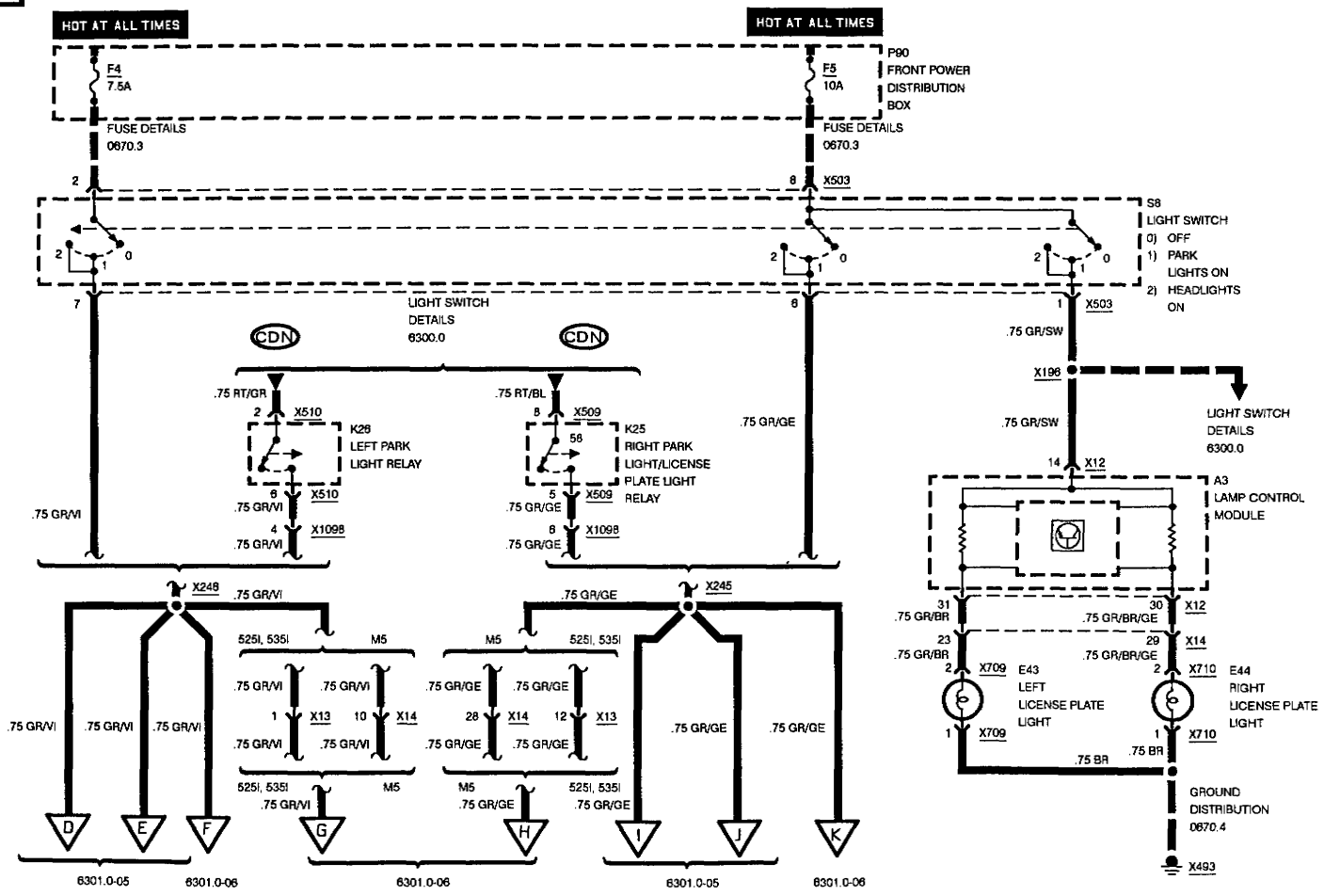
# LAMP MONITOR (LKM)





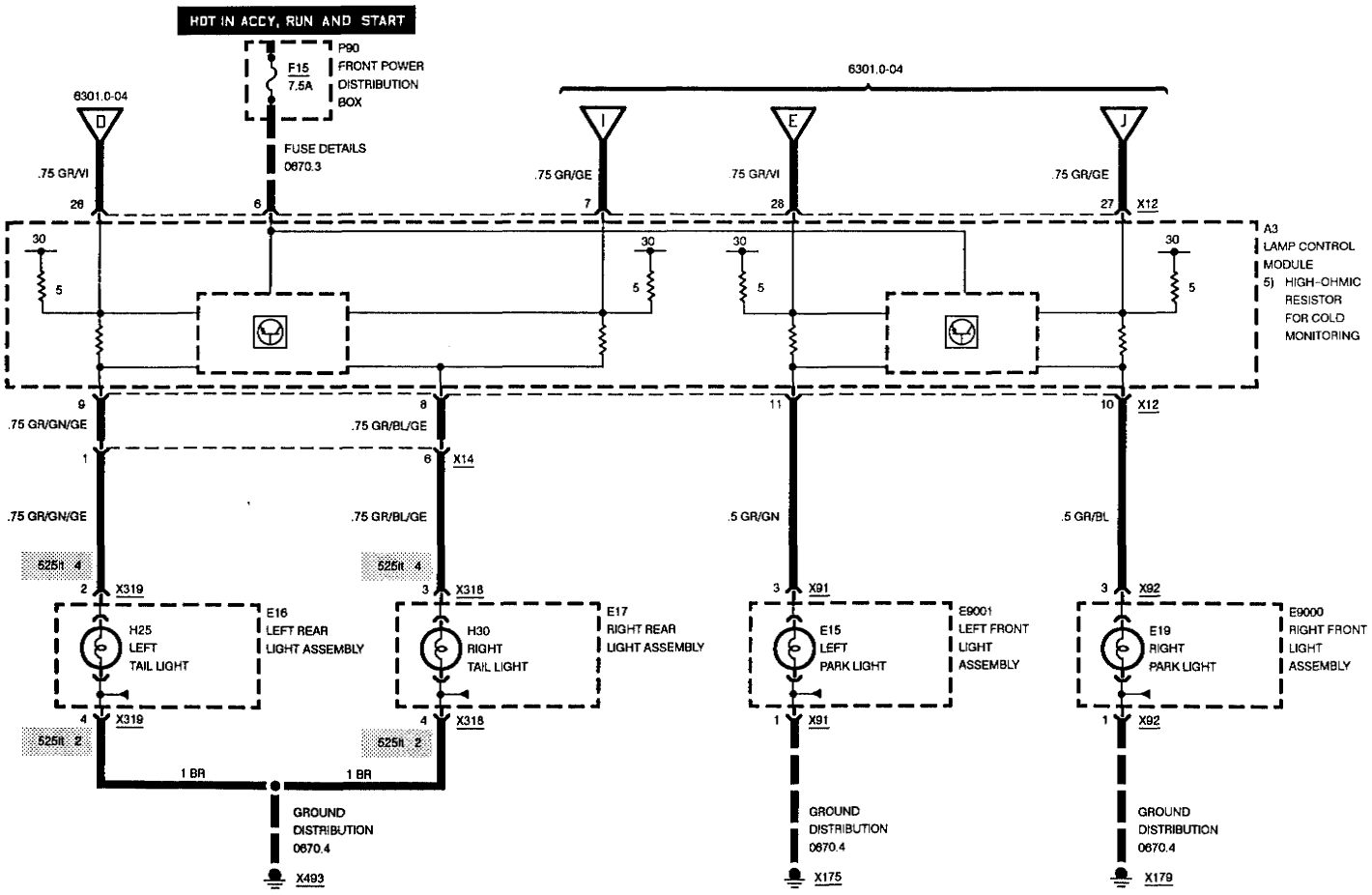

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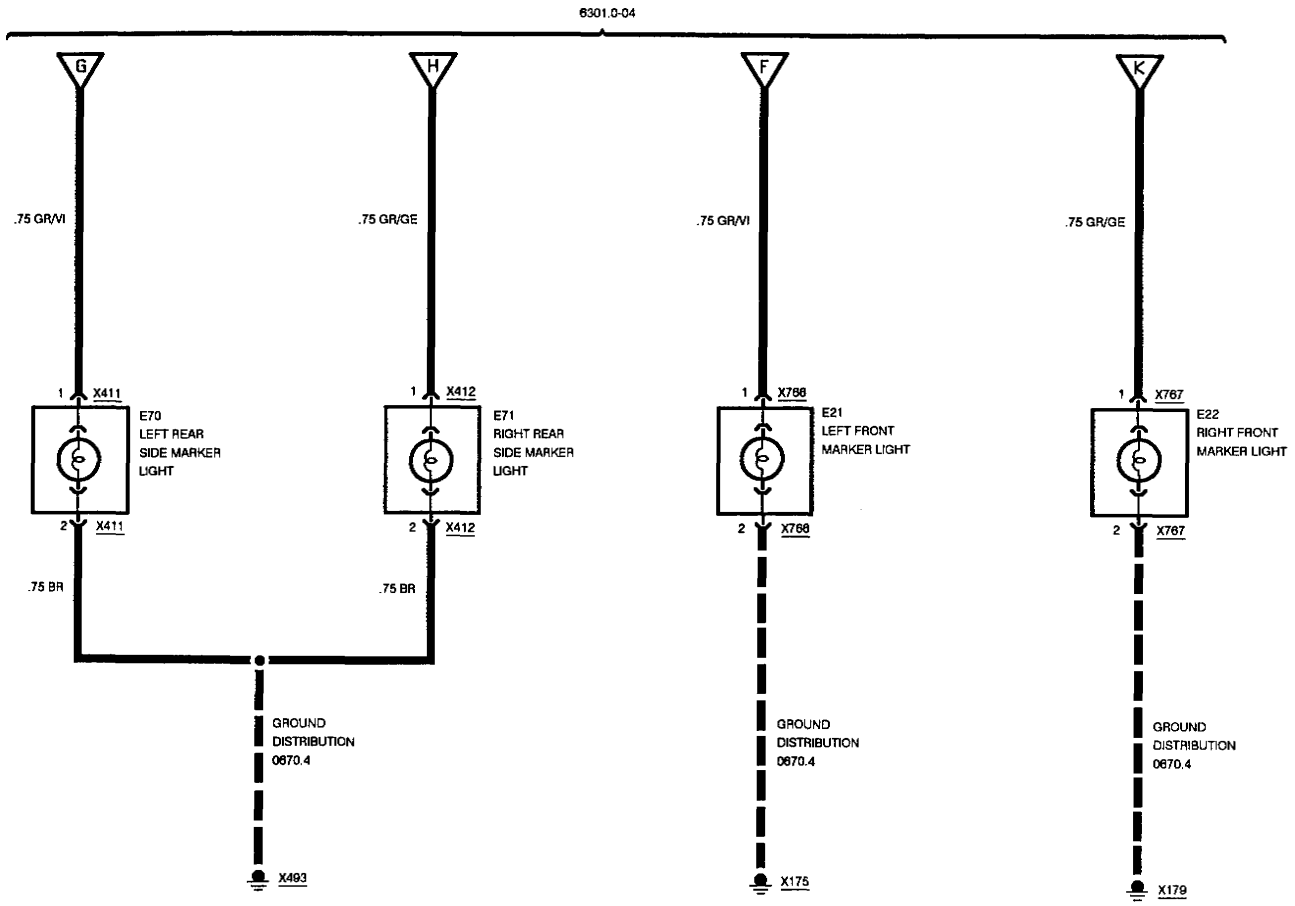





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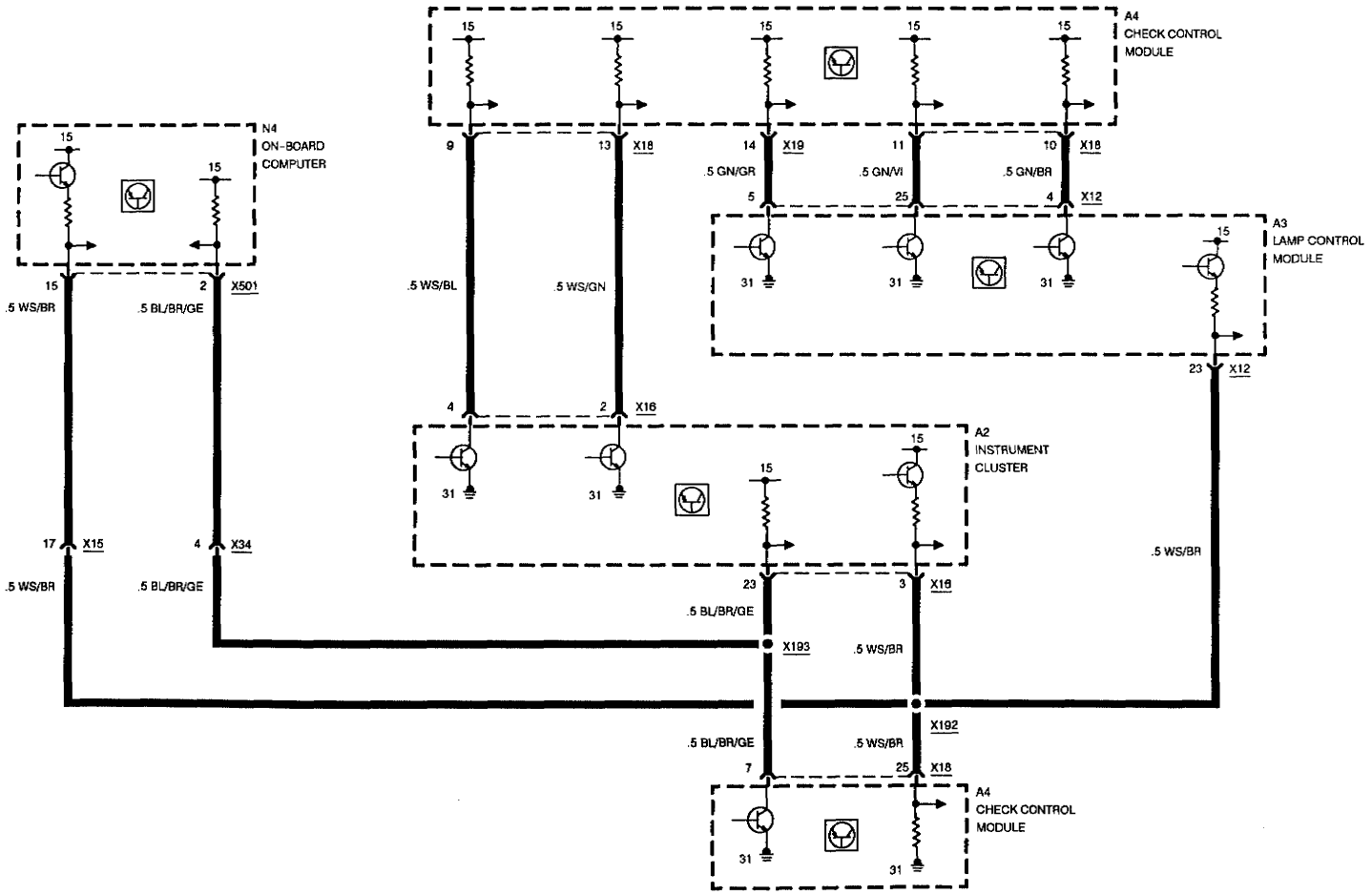
# LAMP MONITOR (LKM)






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# LAMP MONITOR (LKM)

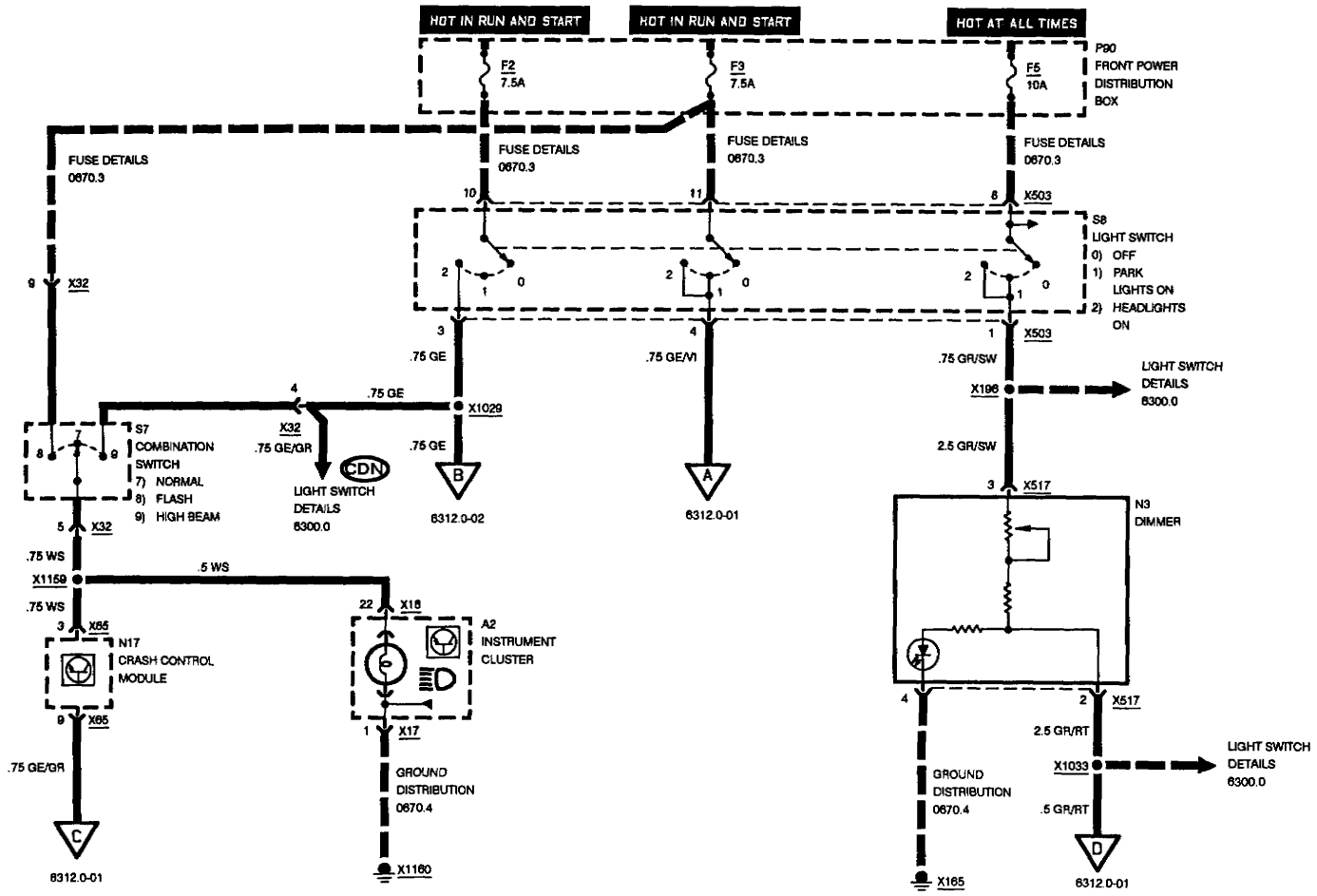





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# HEADLIGHTS/ FOG LIGHTS

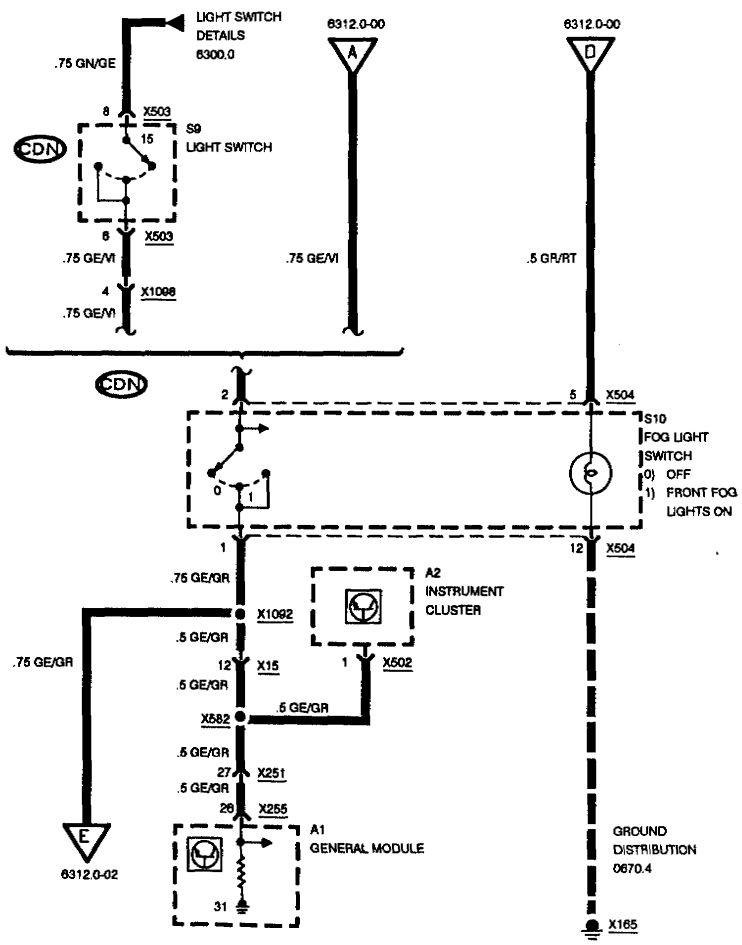


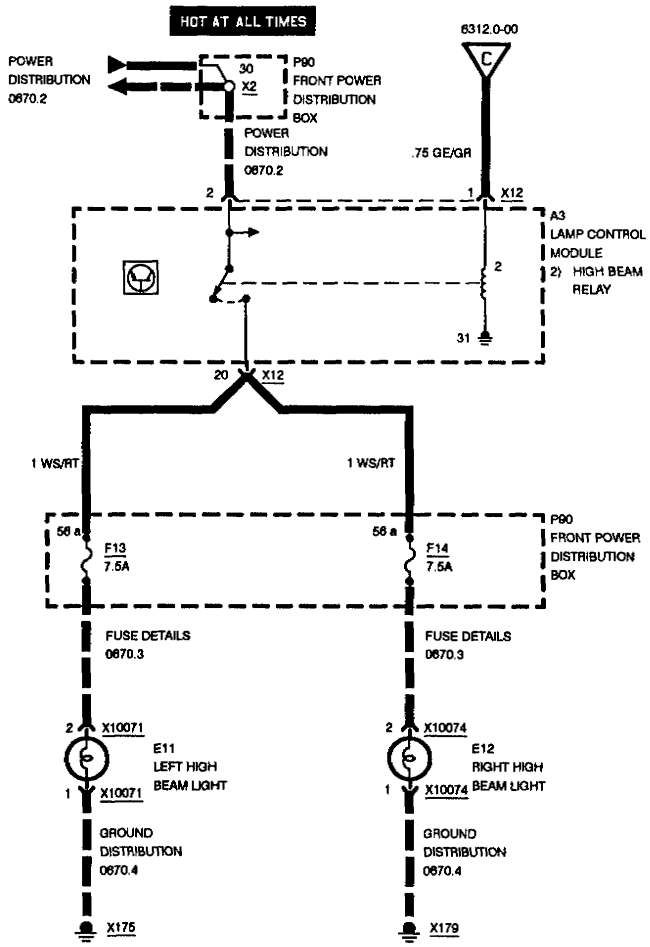



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# HEADLIGHTS/ FOG LIGHTS



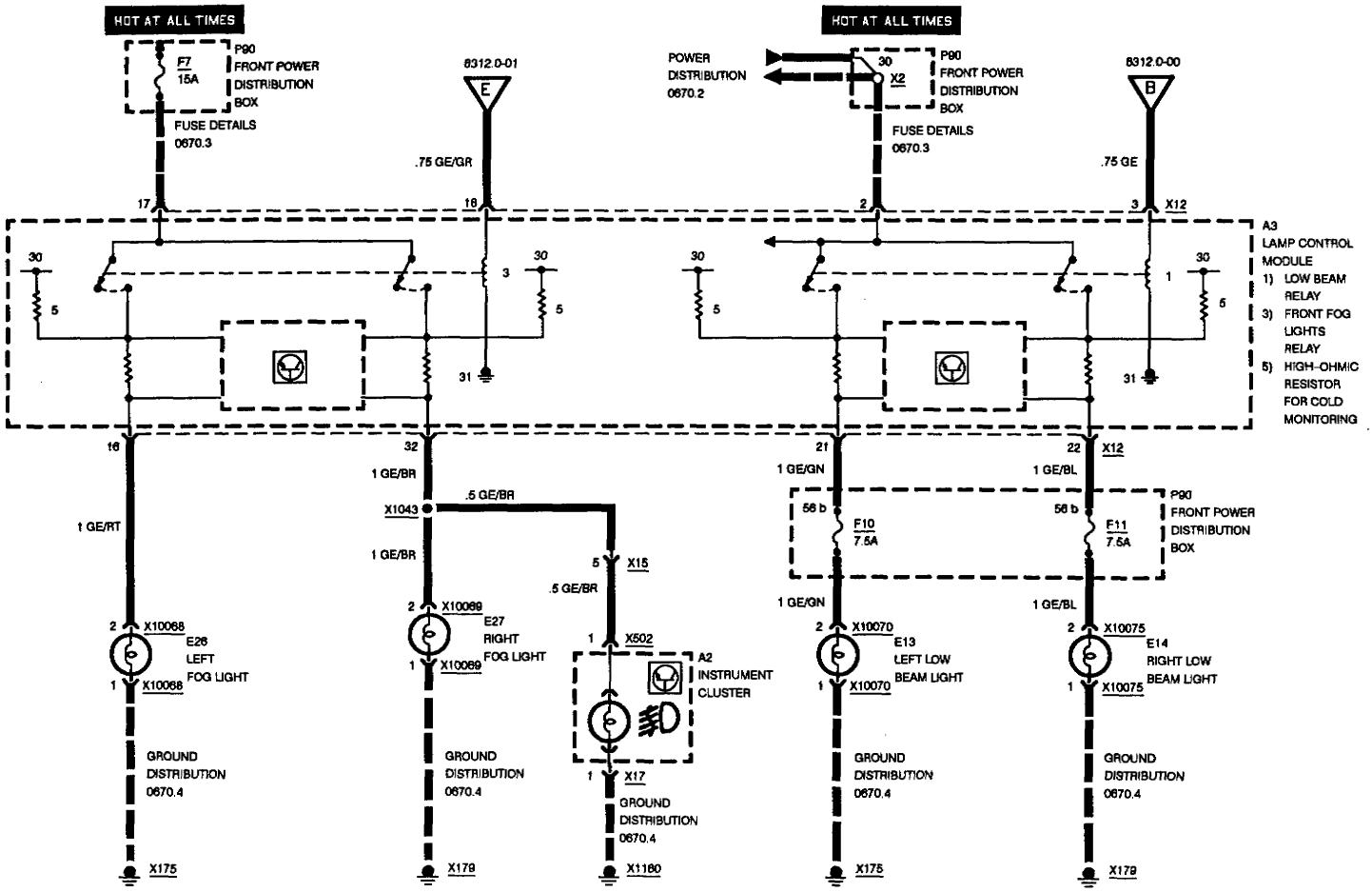



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# HEADLIGHTS/ FOG LIGHTS

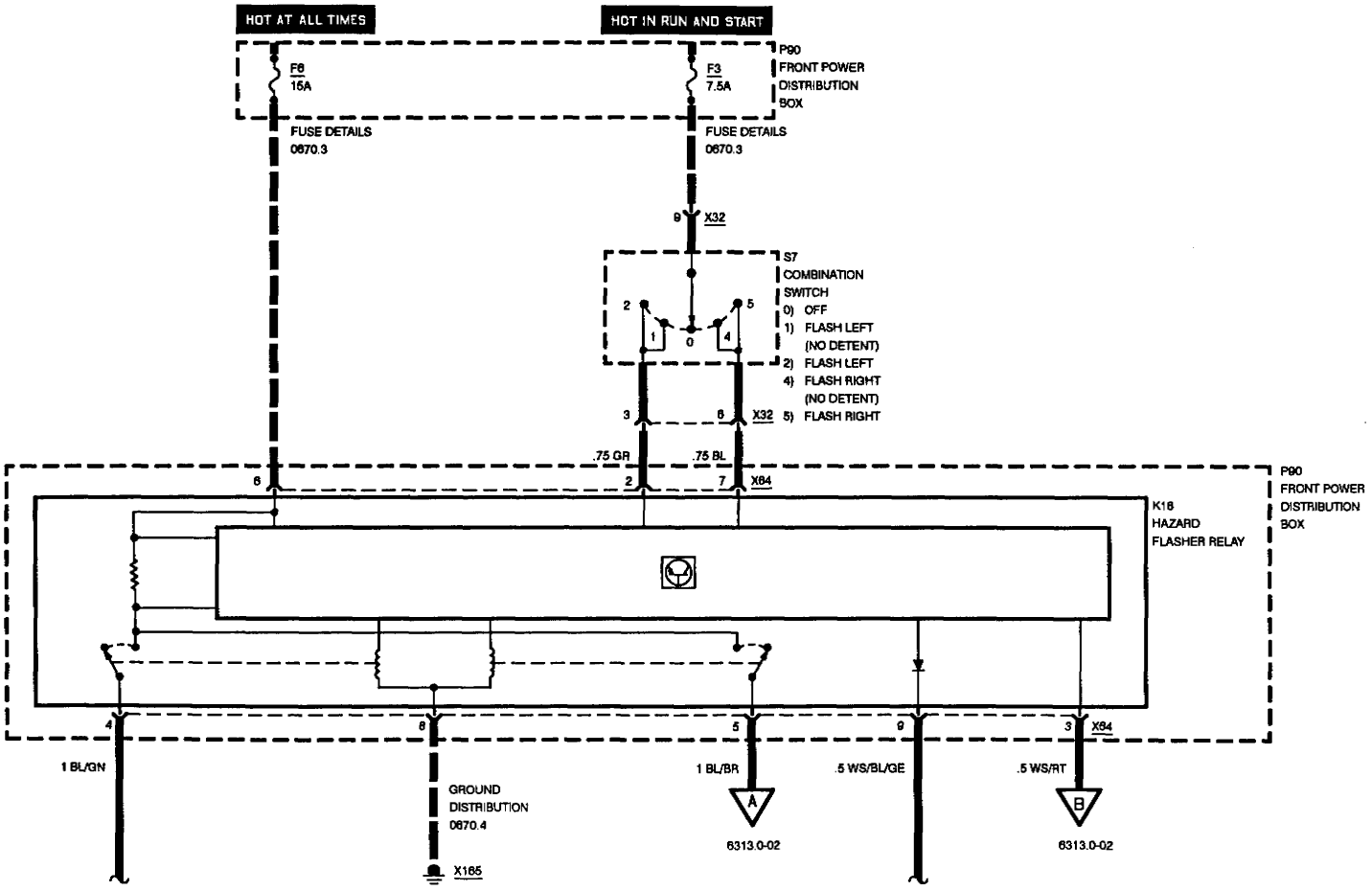





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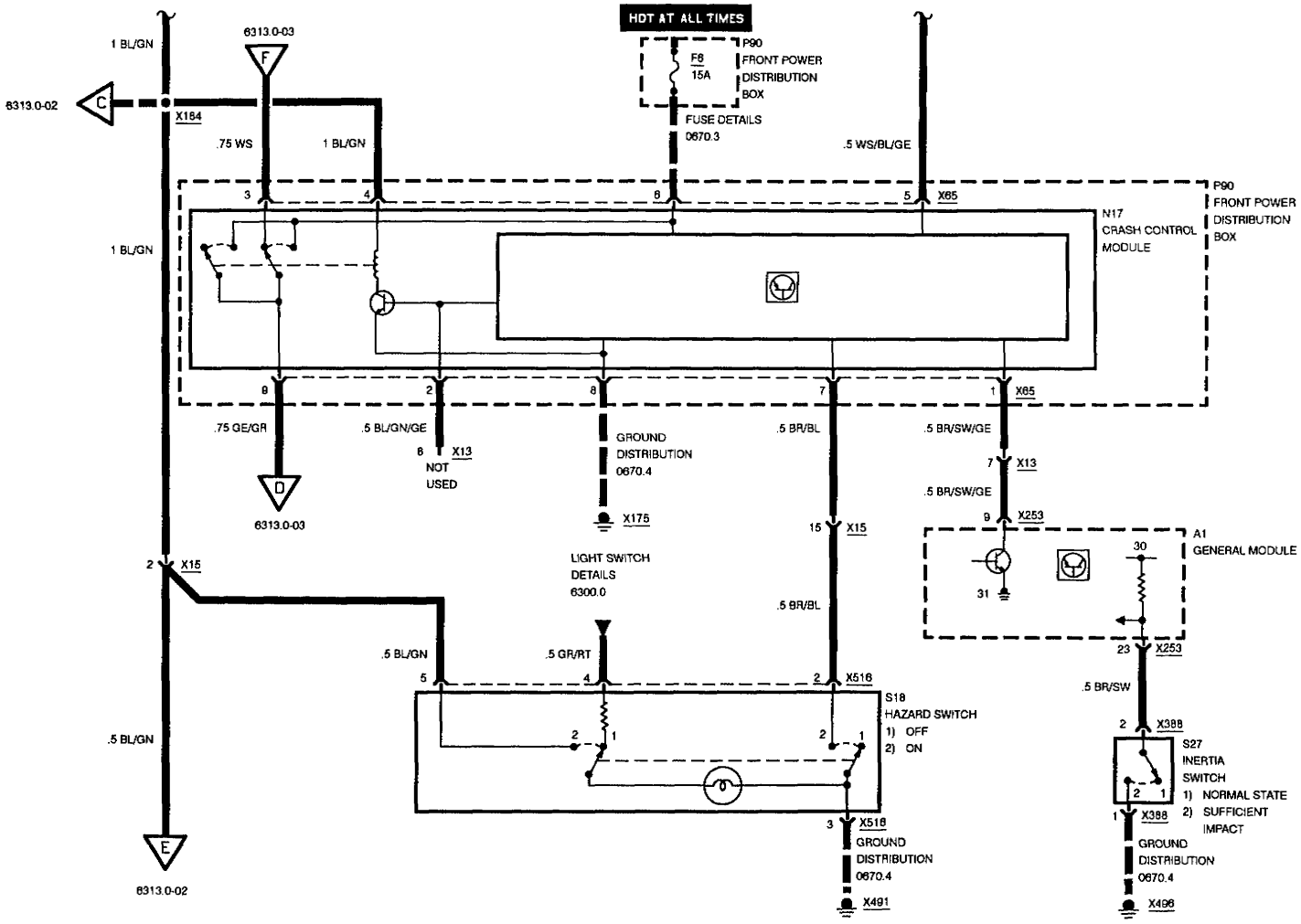
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# TURN/HAZARD LIGHTS





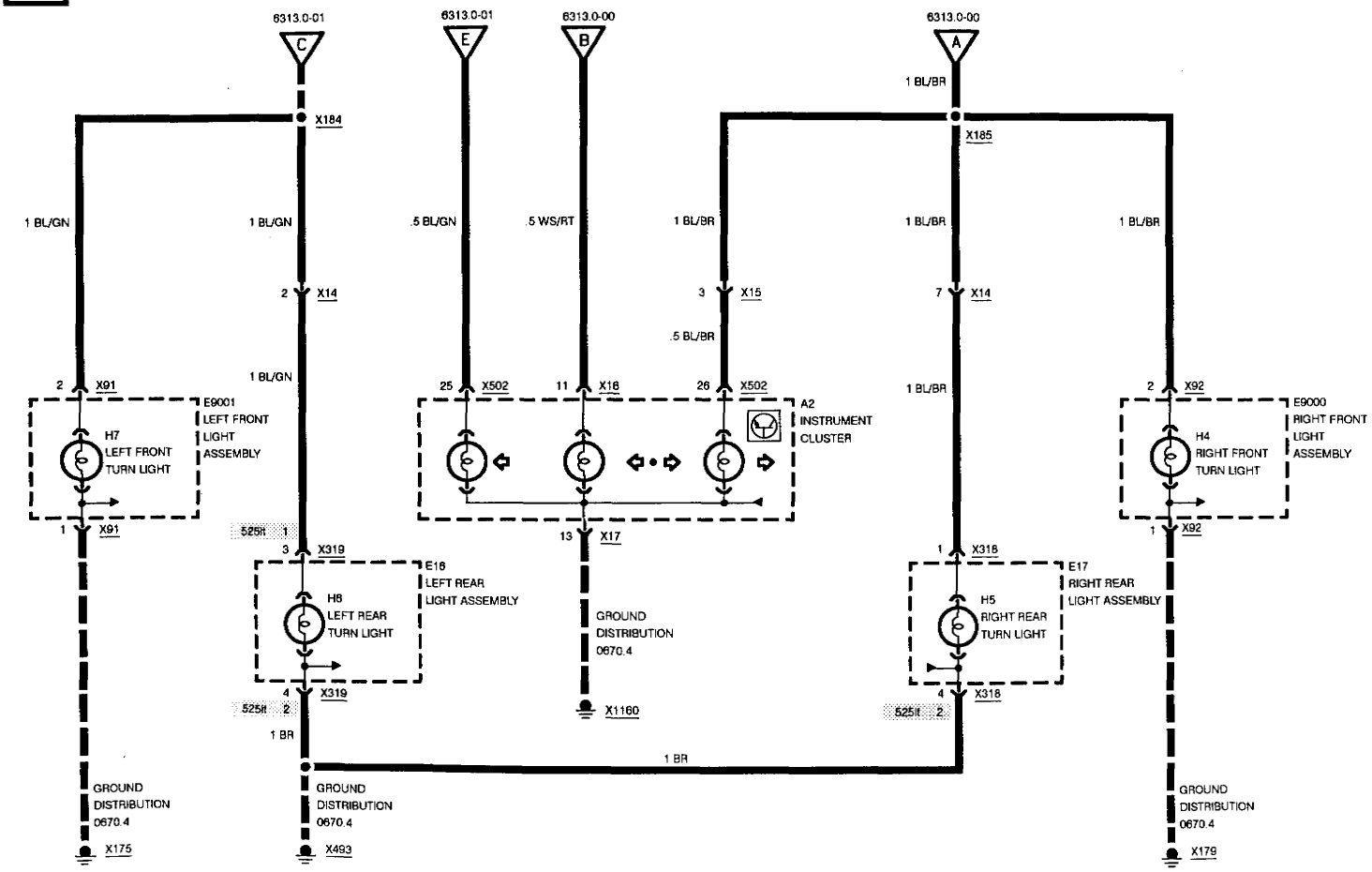

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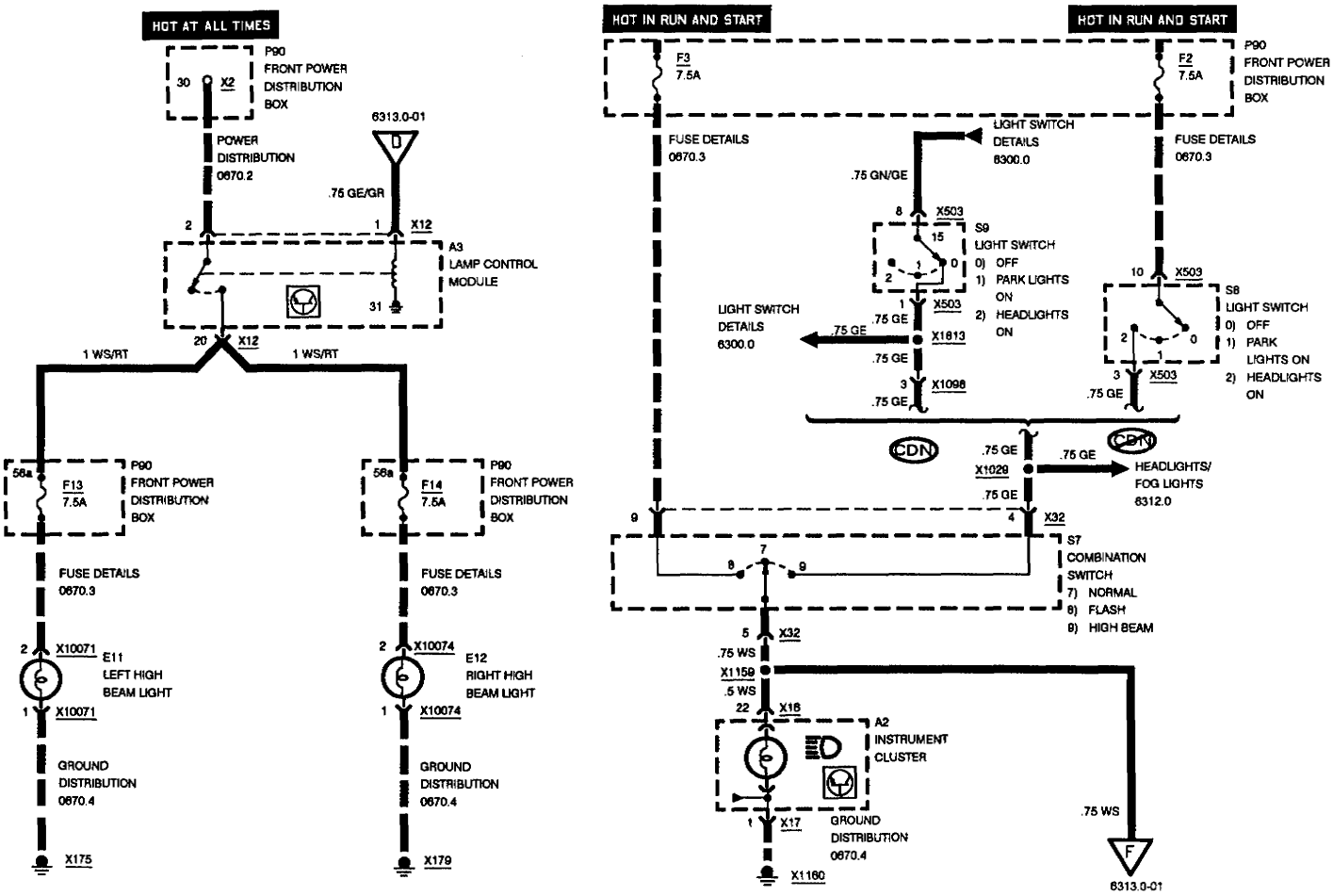
# TURN/HAZARD LIGHTS






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# TURN/HAZARD LIGHTS

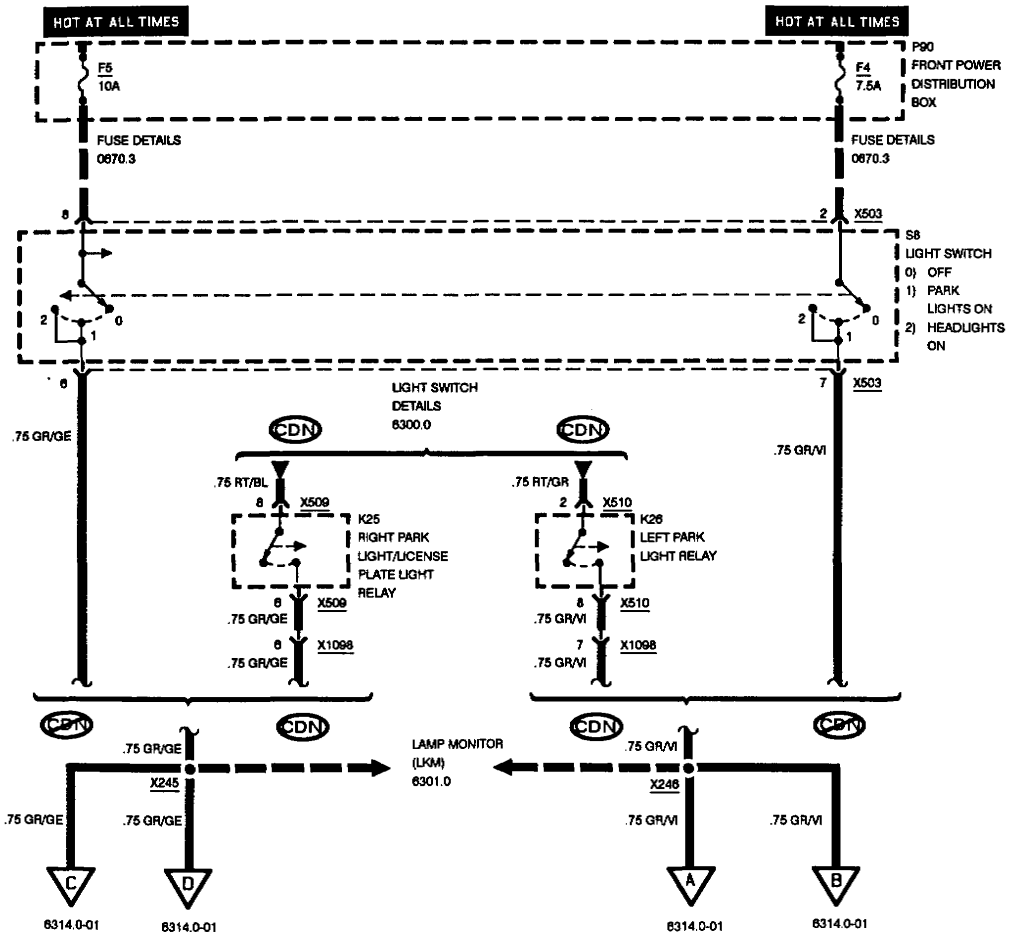





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# PARK/TAIL LIGHTS



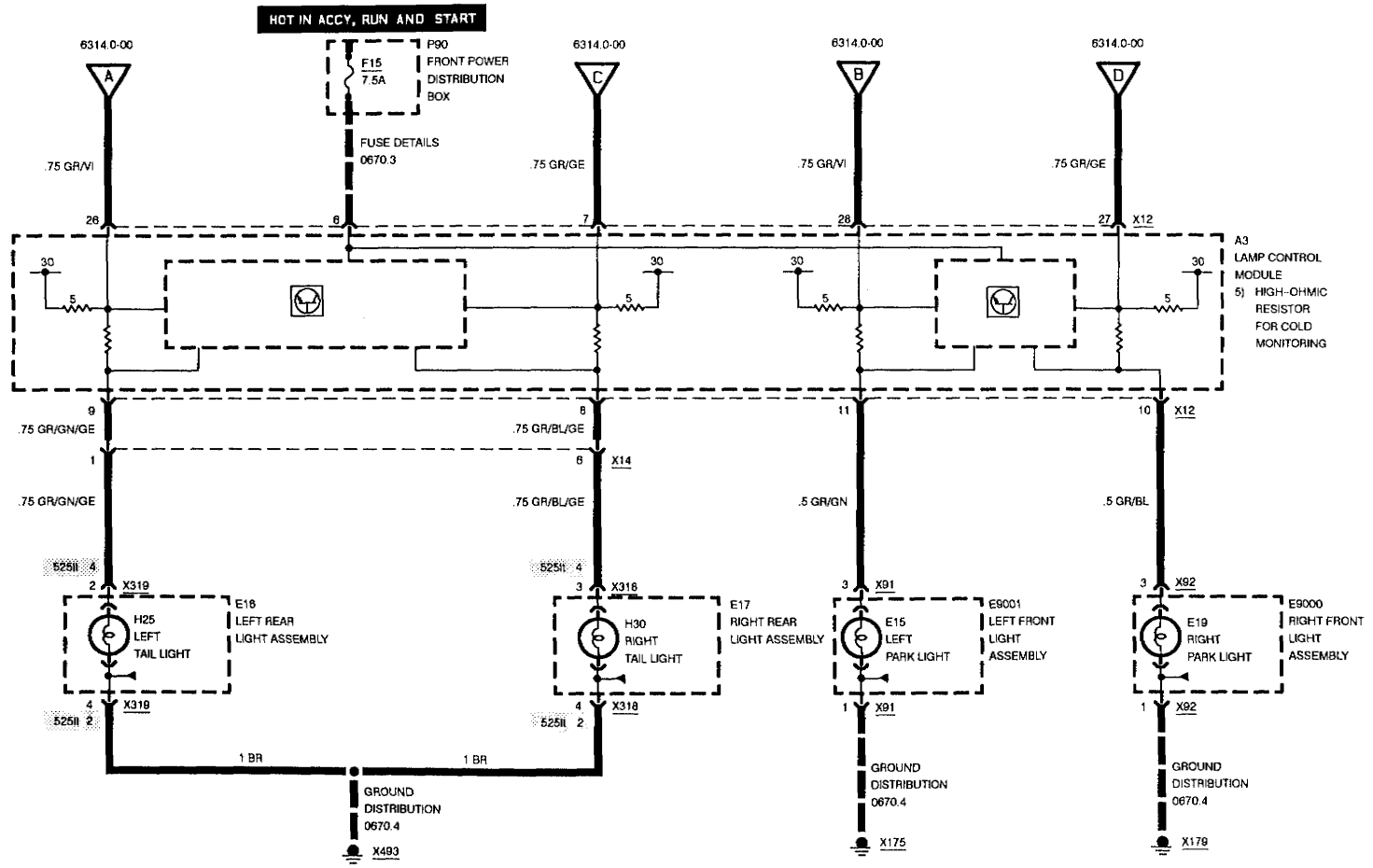



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# PARK/TAIL LIGHTS

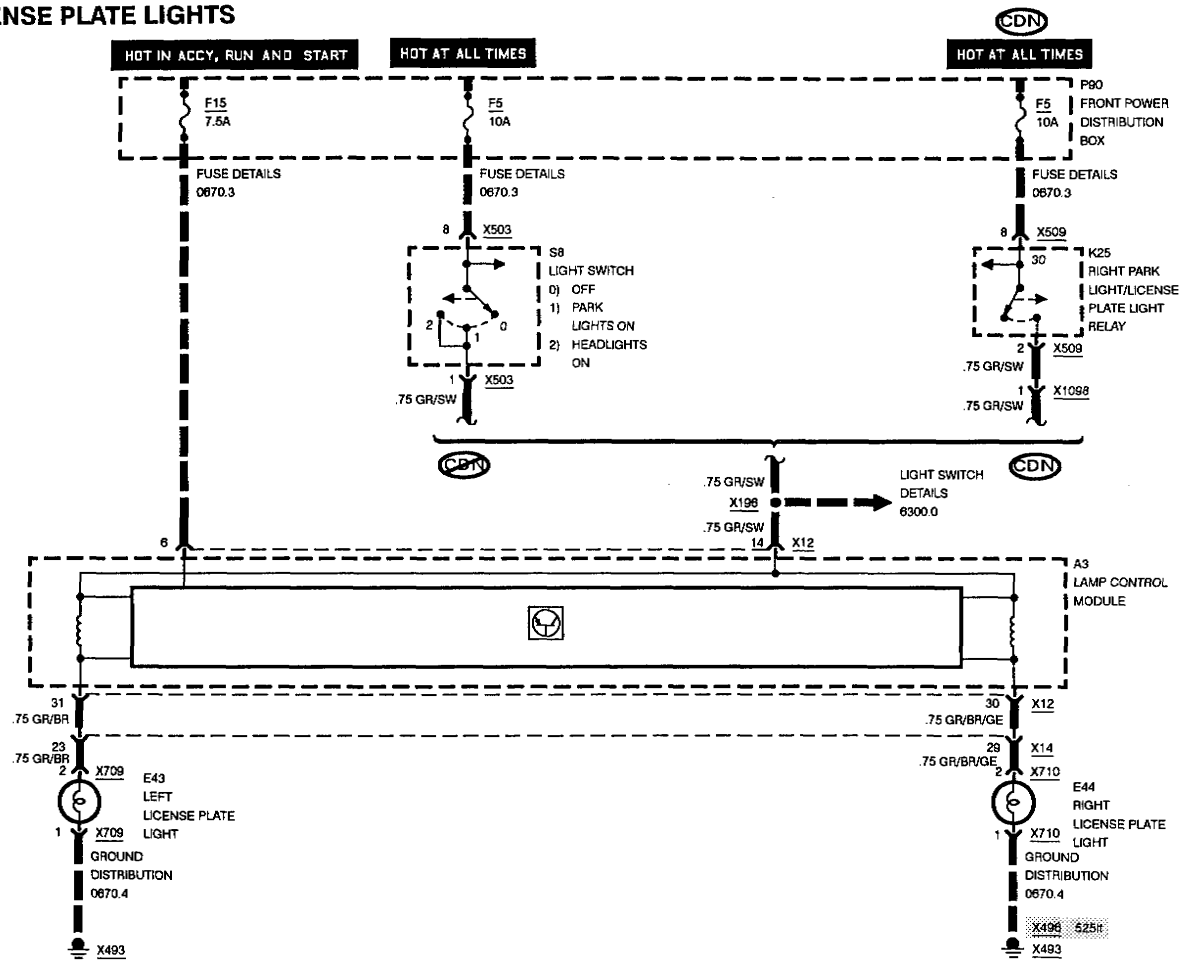
## FRONT AND REAR PARK LIGHTS




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# LICENSE PLATE/ LUGGAGE COMPARTMENT LIGHTS

## LICENSE PLATE LIGHTS

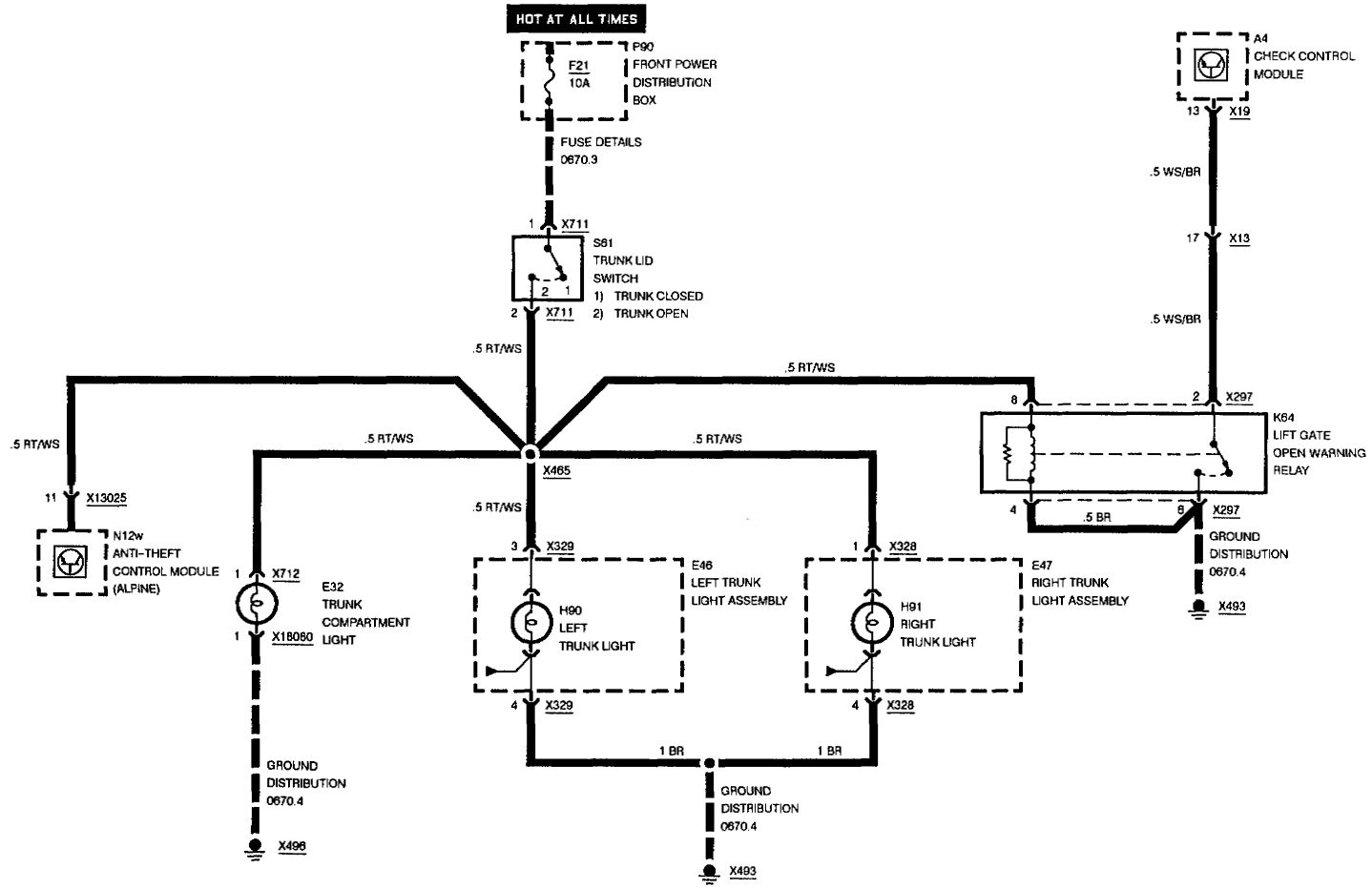





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# LICENSE PLATE/ LUGGAGE COMPARTMENT LIGHTS

## TRUNK LIGHTS



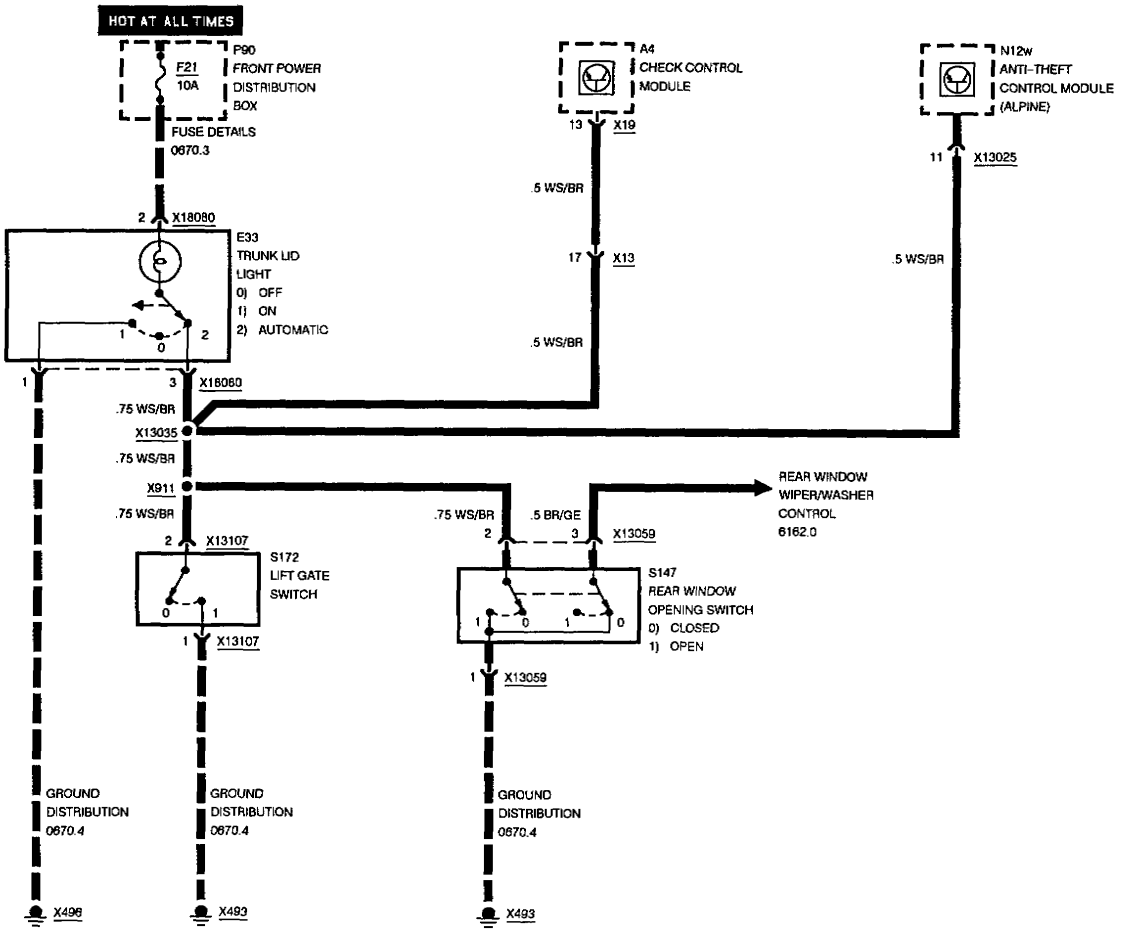



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# LICENSE PLATE/ LUGGAGE COMPARTMENT LIGHTS

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## TRUNK LIGHTS



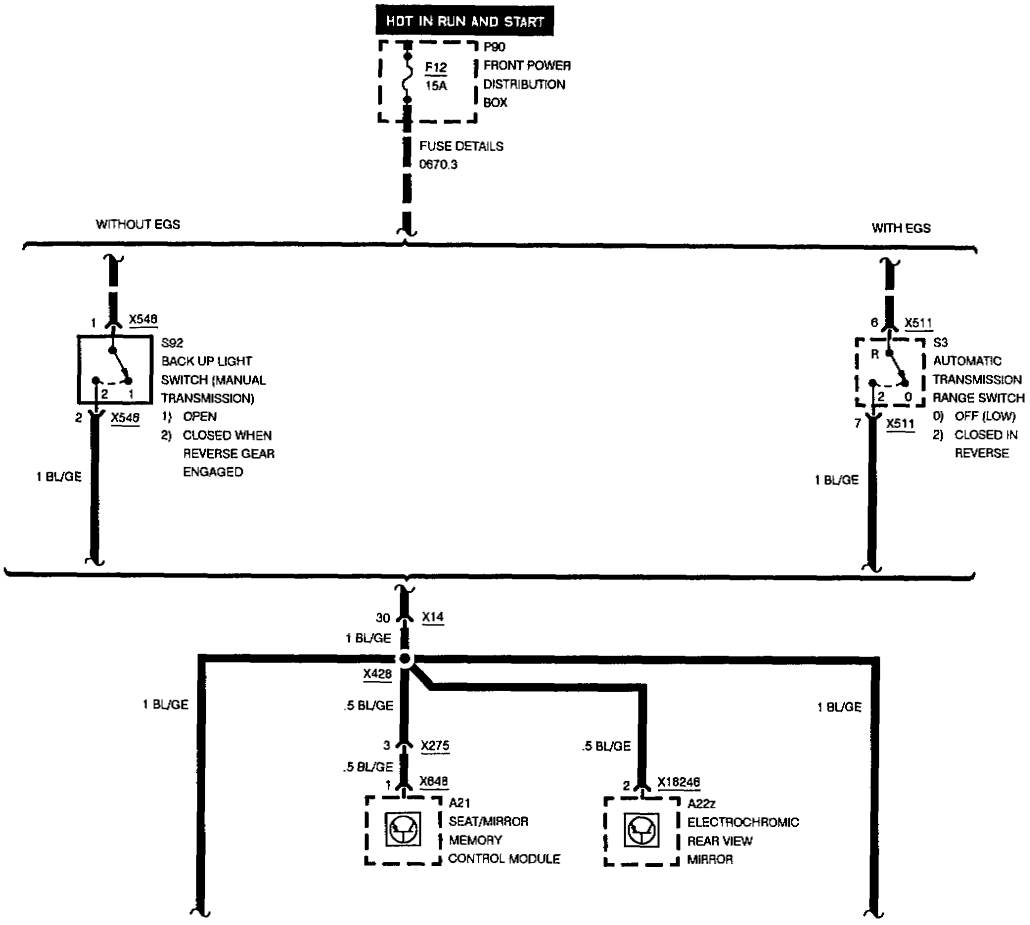



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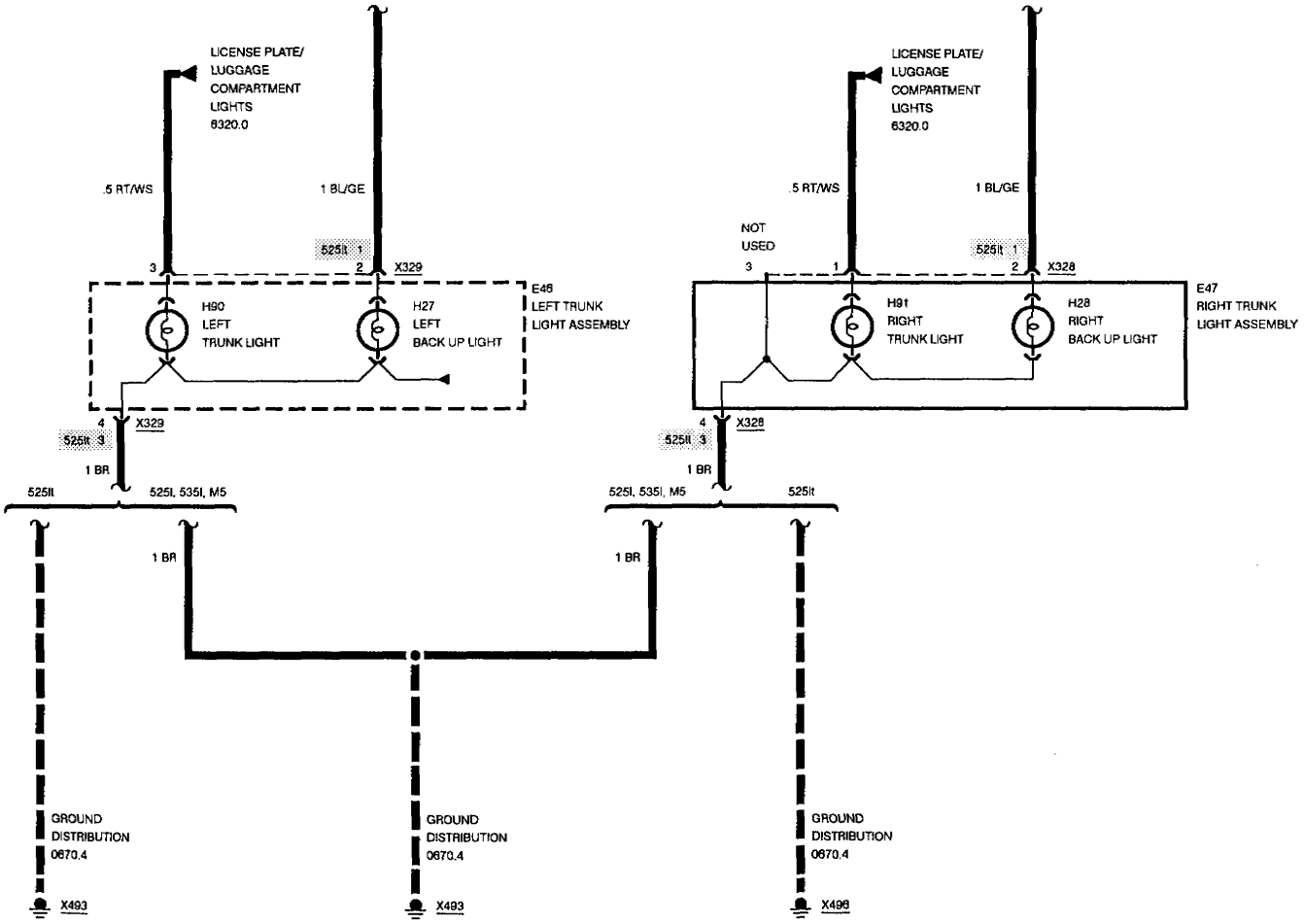
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# BACK UP LIGHTS





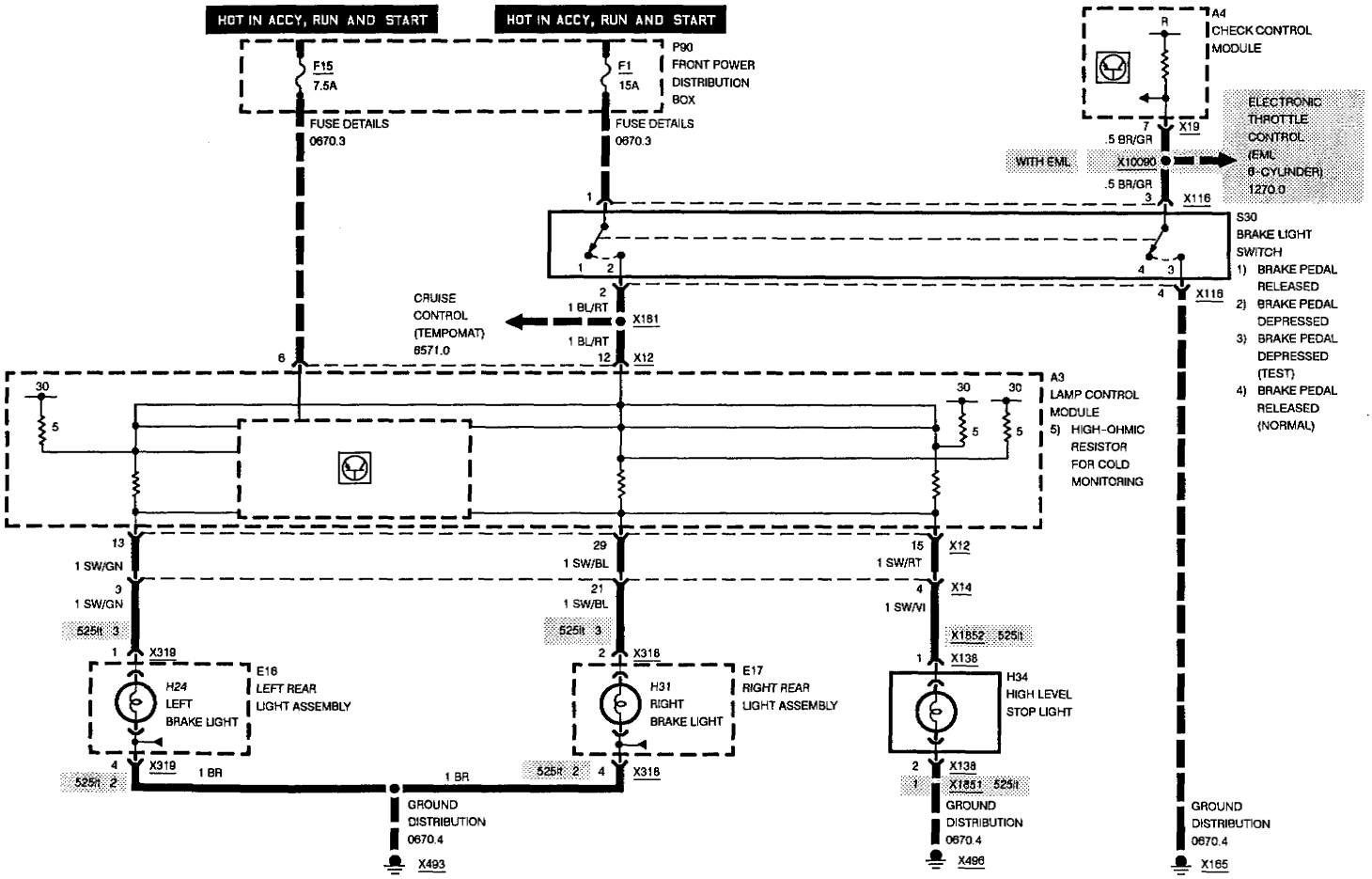

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# BRAKE LIGHTS



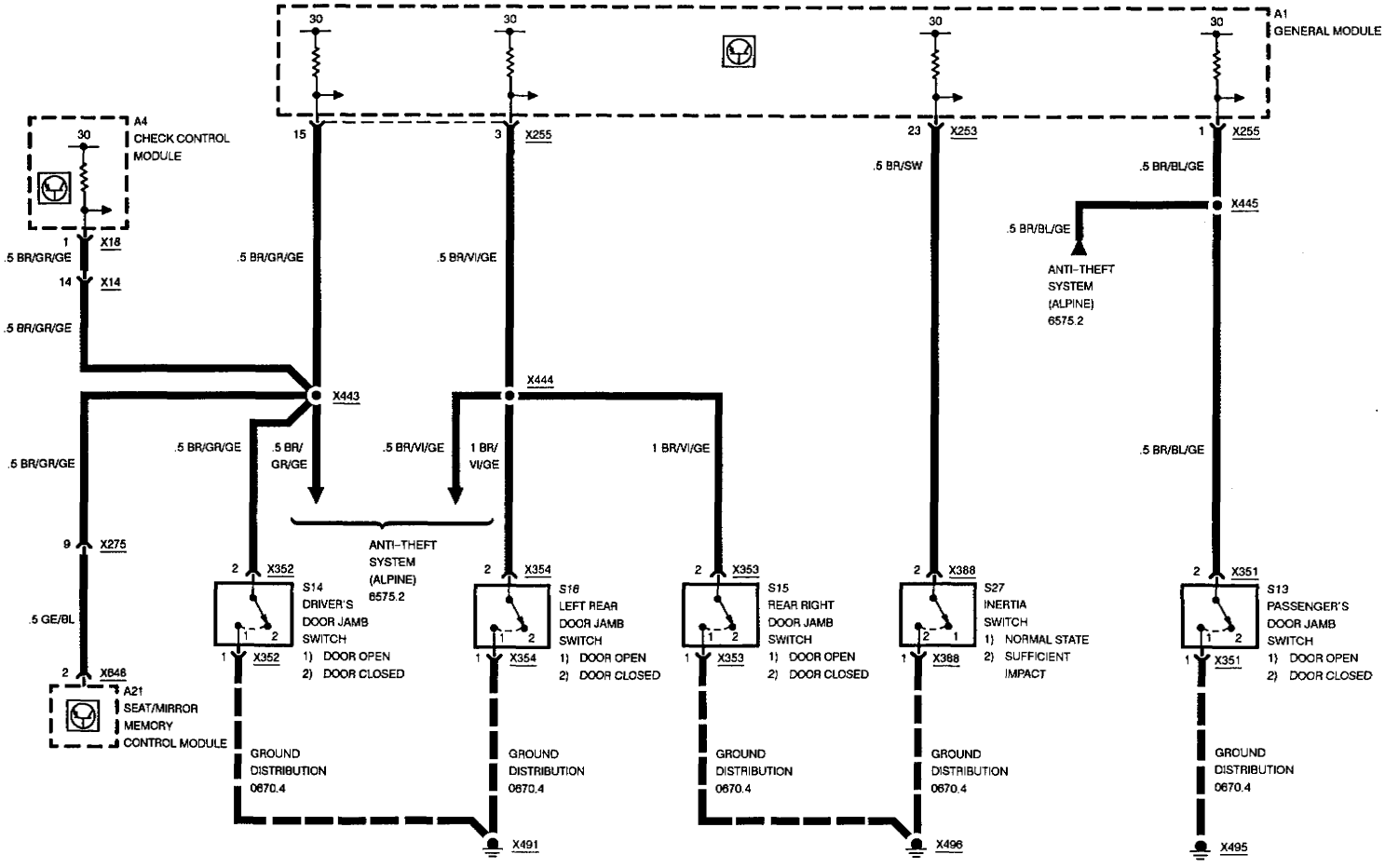



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# ZKE INTERIOR LIGHTS CONTROL (IB)

## INPUT DETAILS

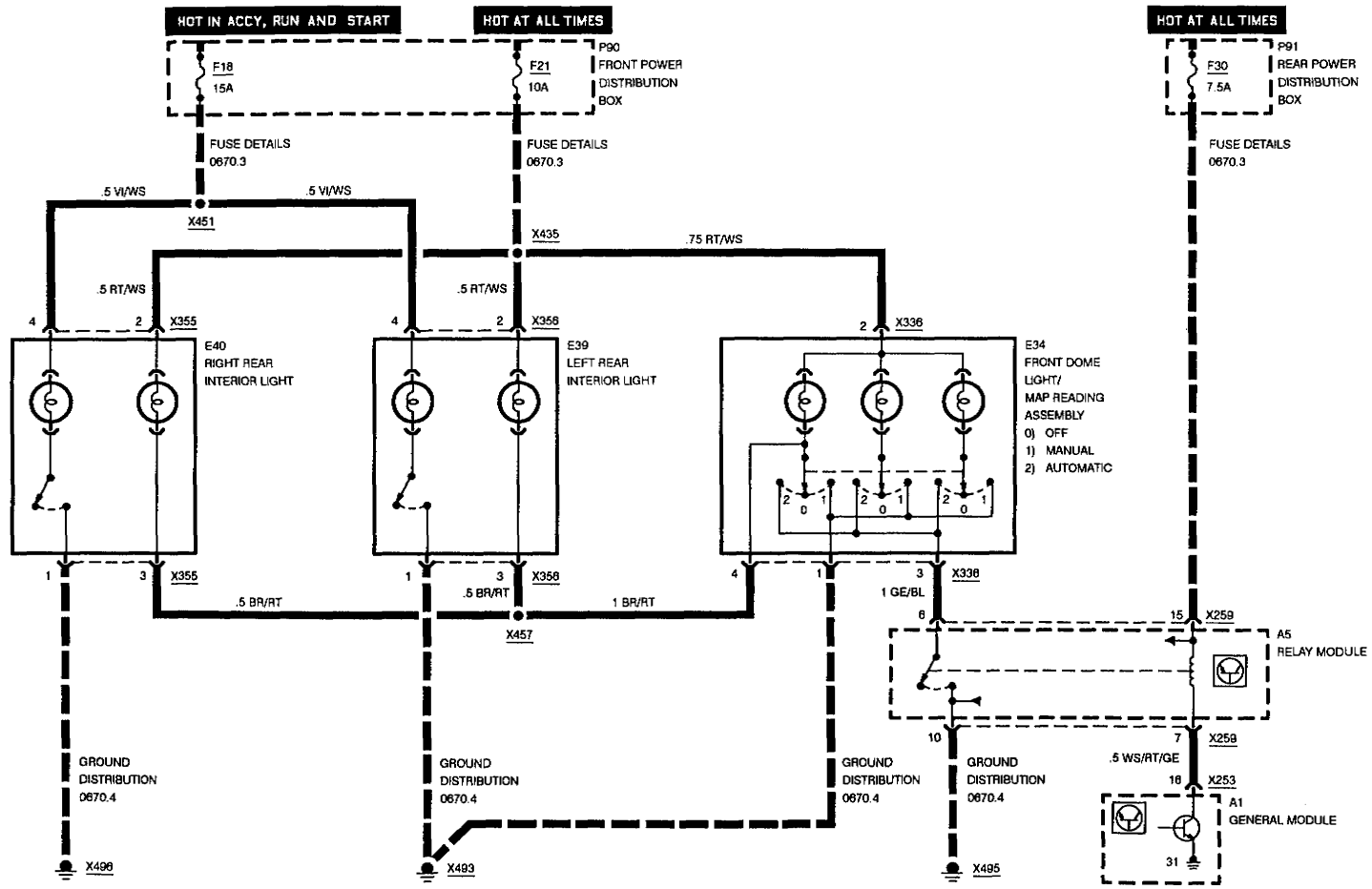





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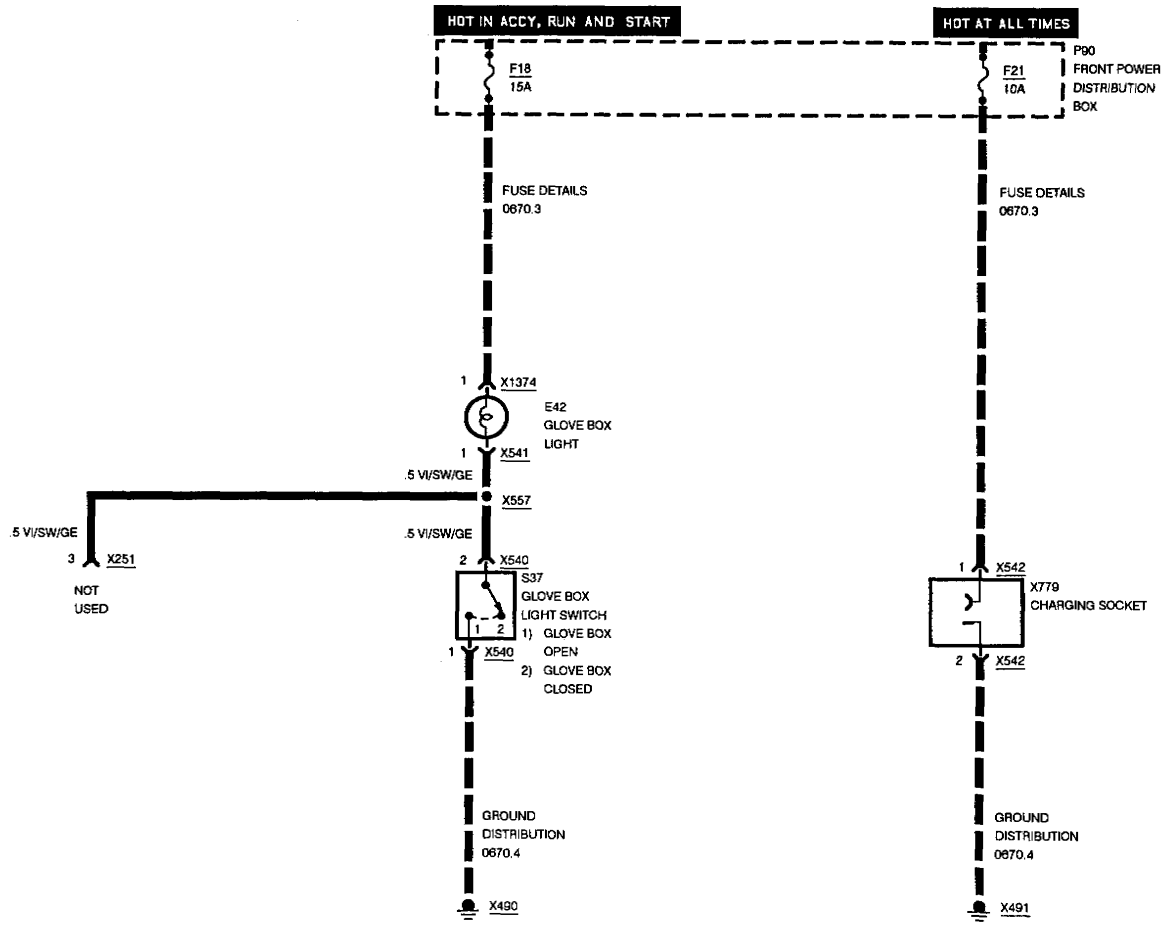
# ZKE INTERIOR LIGHTS CONTROL (IB)

## OUTPUT DETAILS

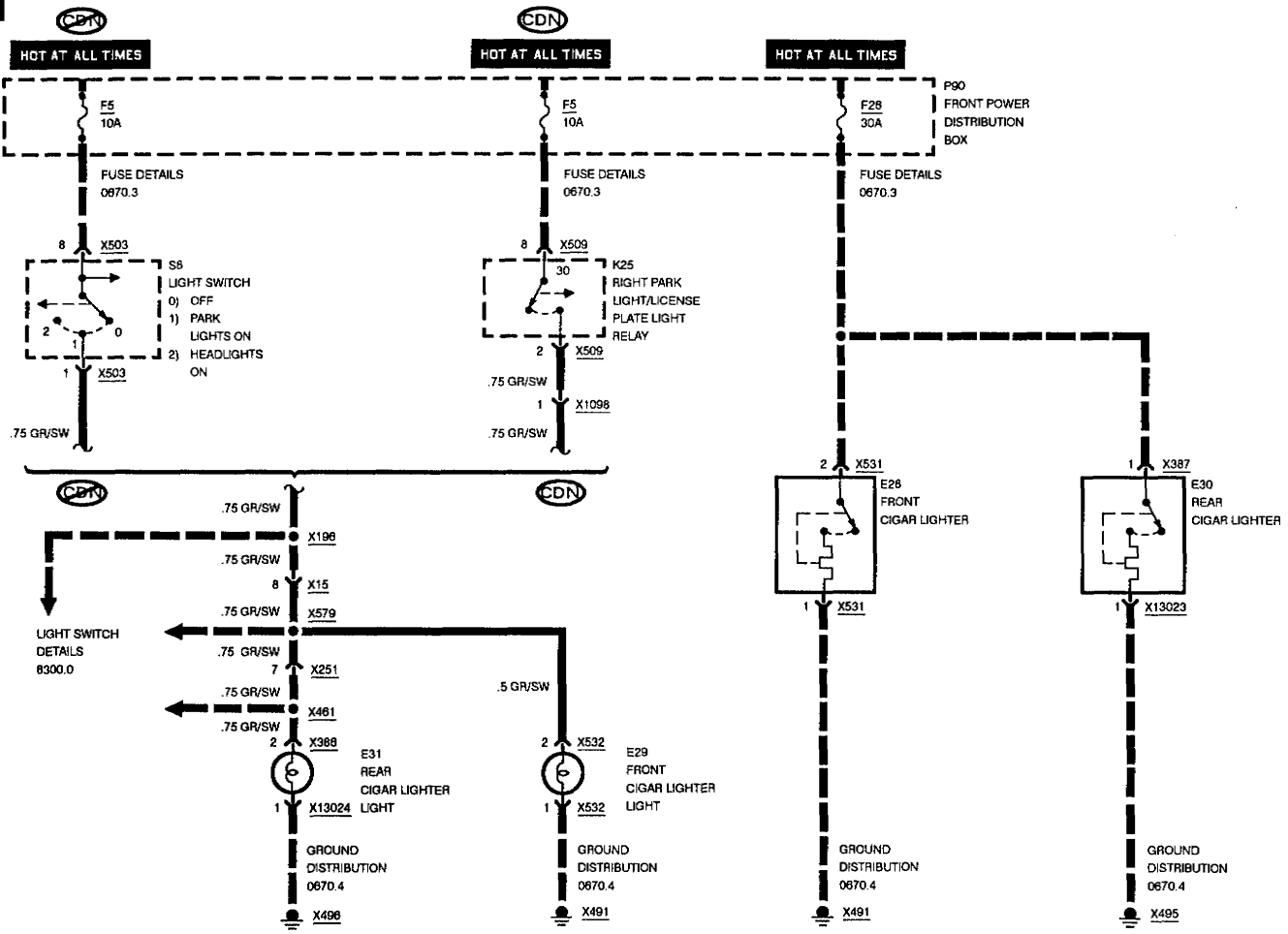





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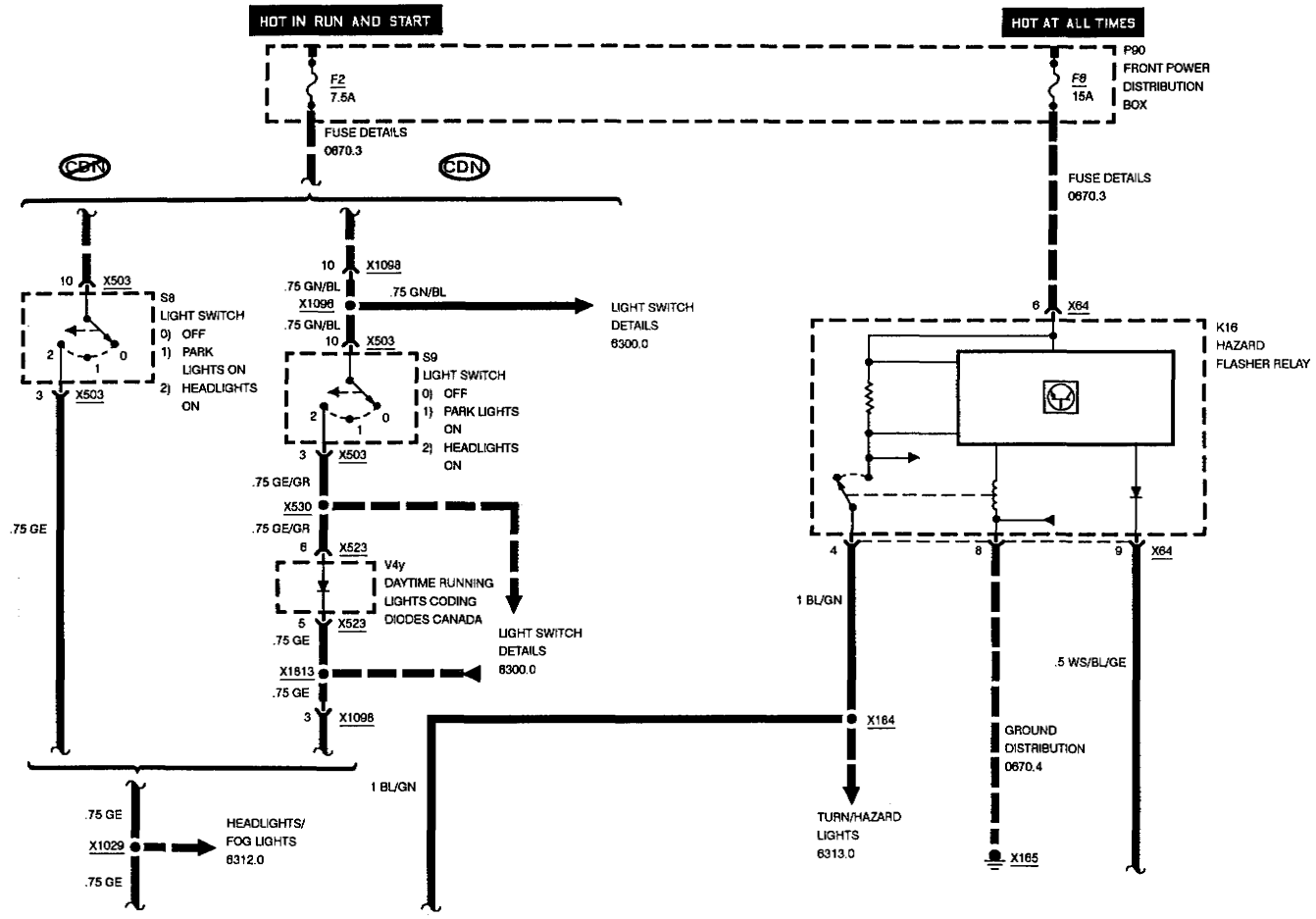



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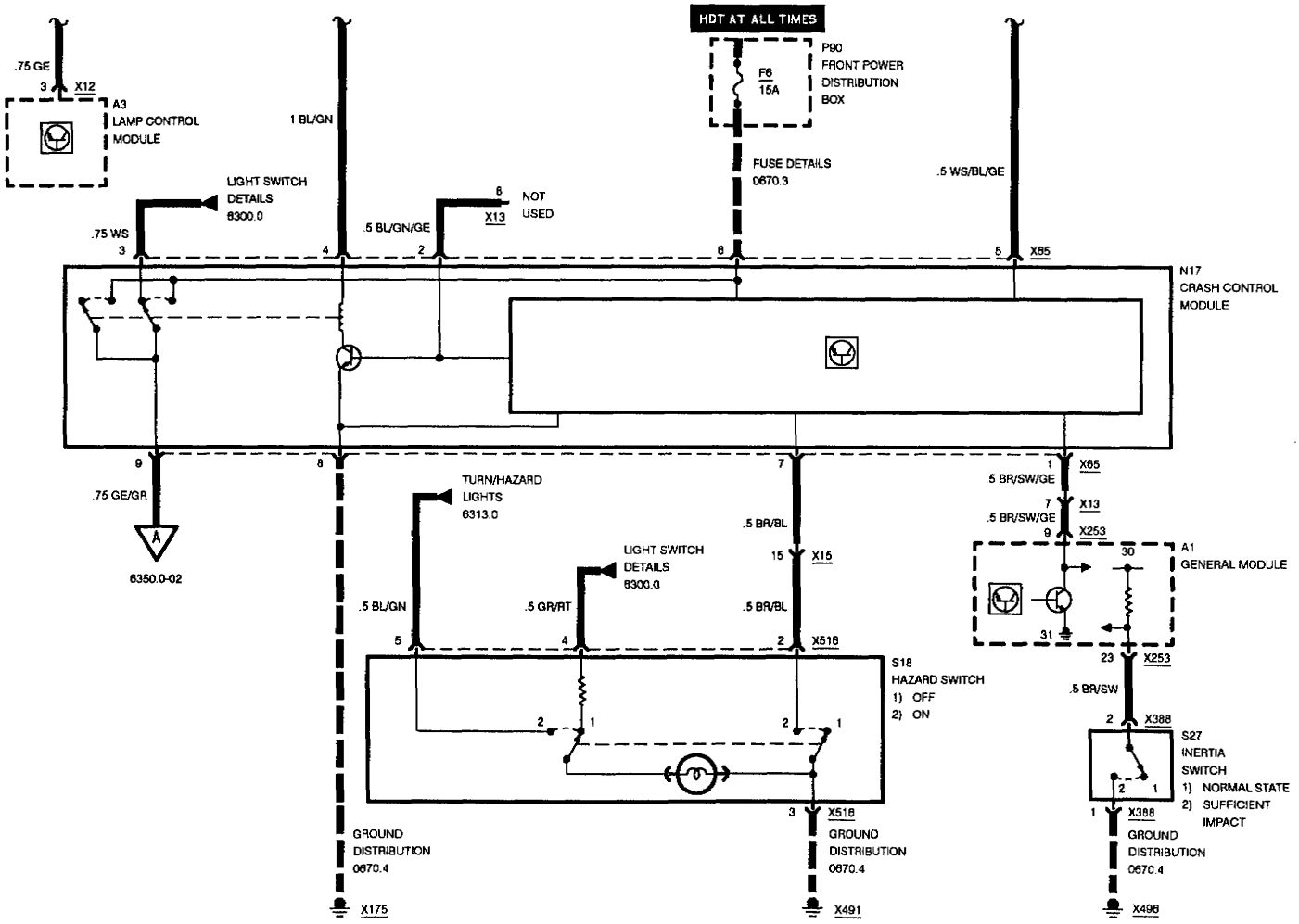

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# CRASH CONTROL MODULE





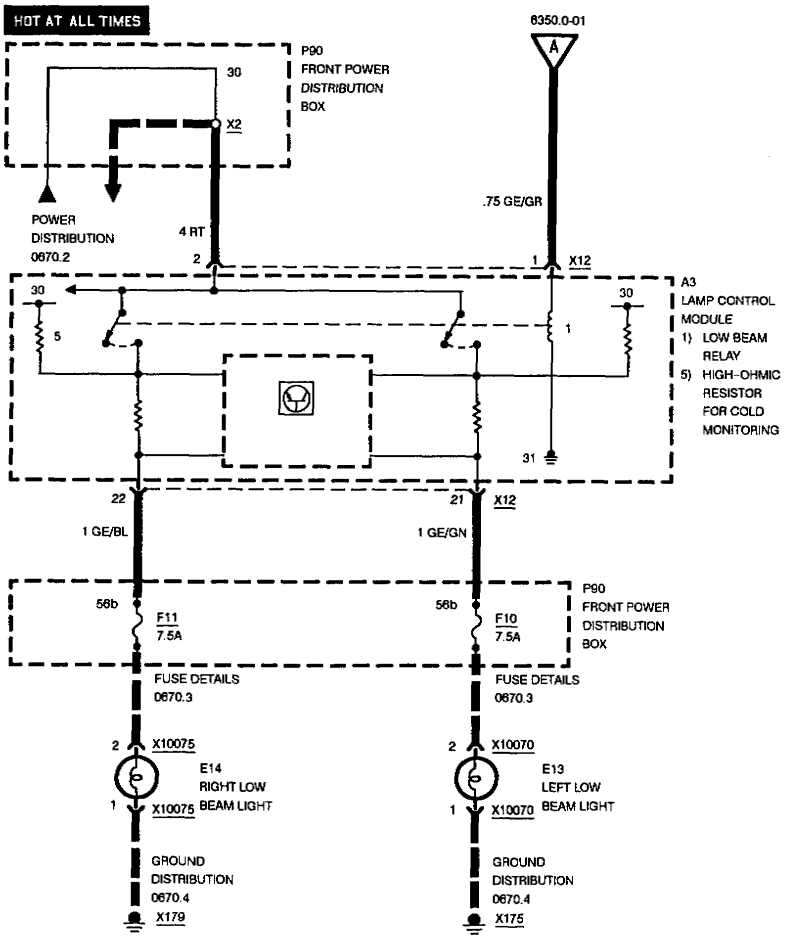

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# CRASH CONTROL MODULE

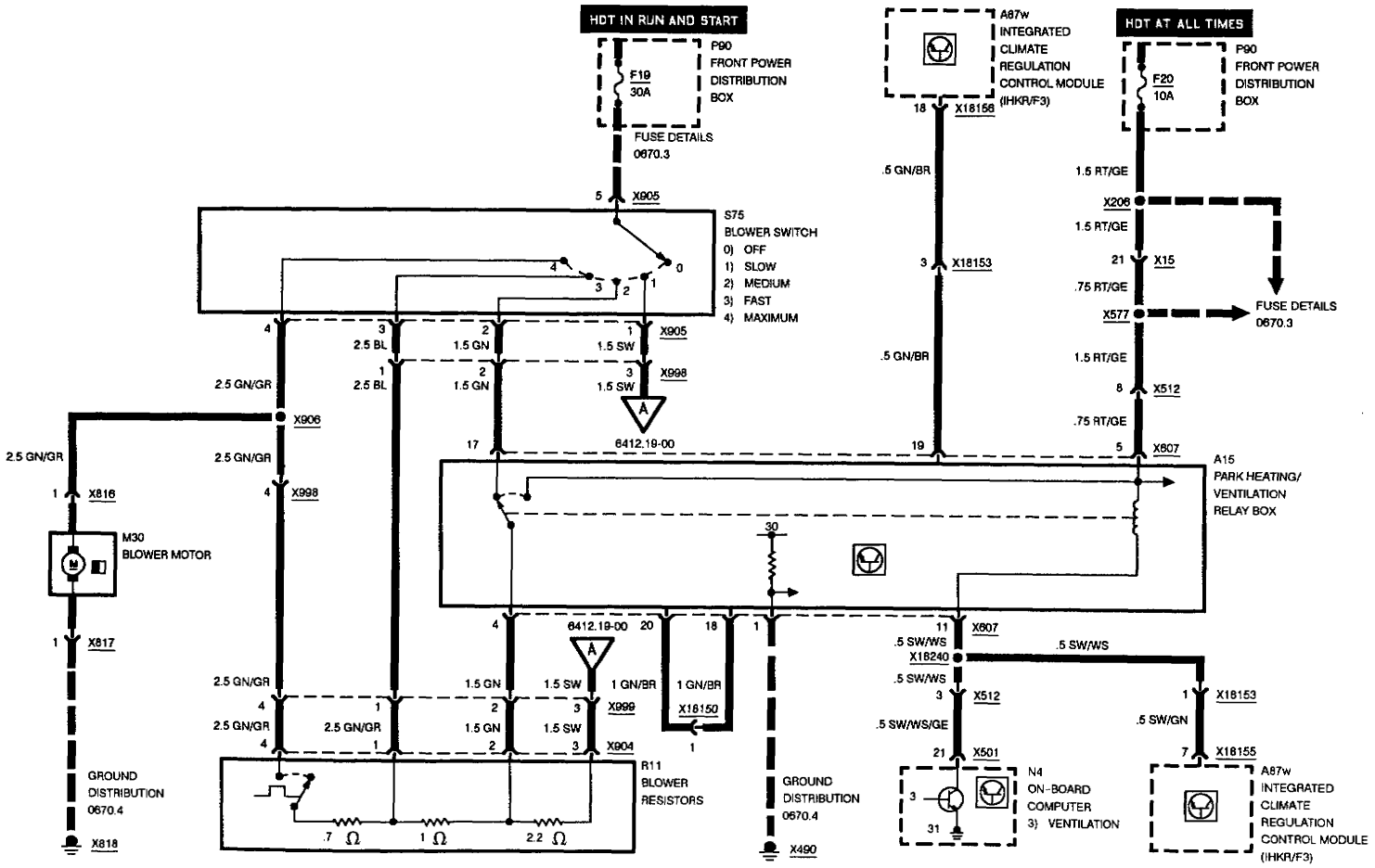





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# PARK VENTILATION WITH IHKR/F3

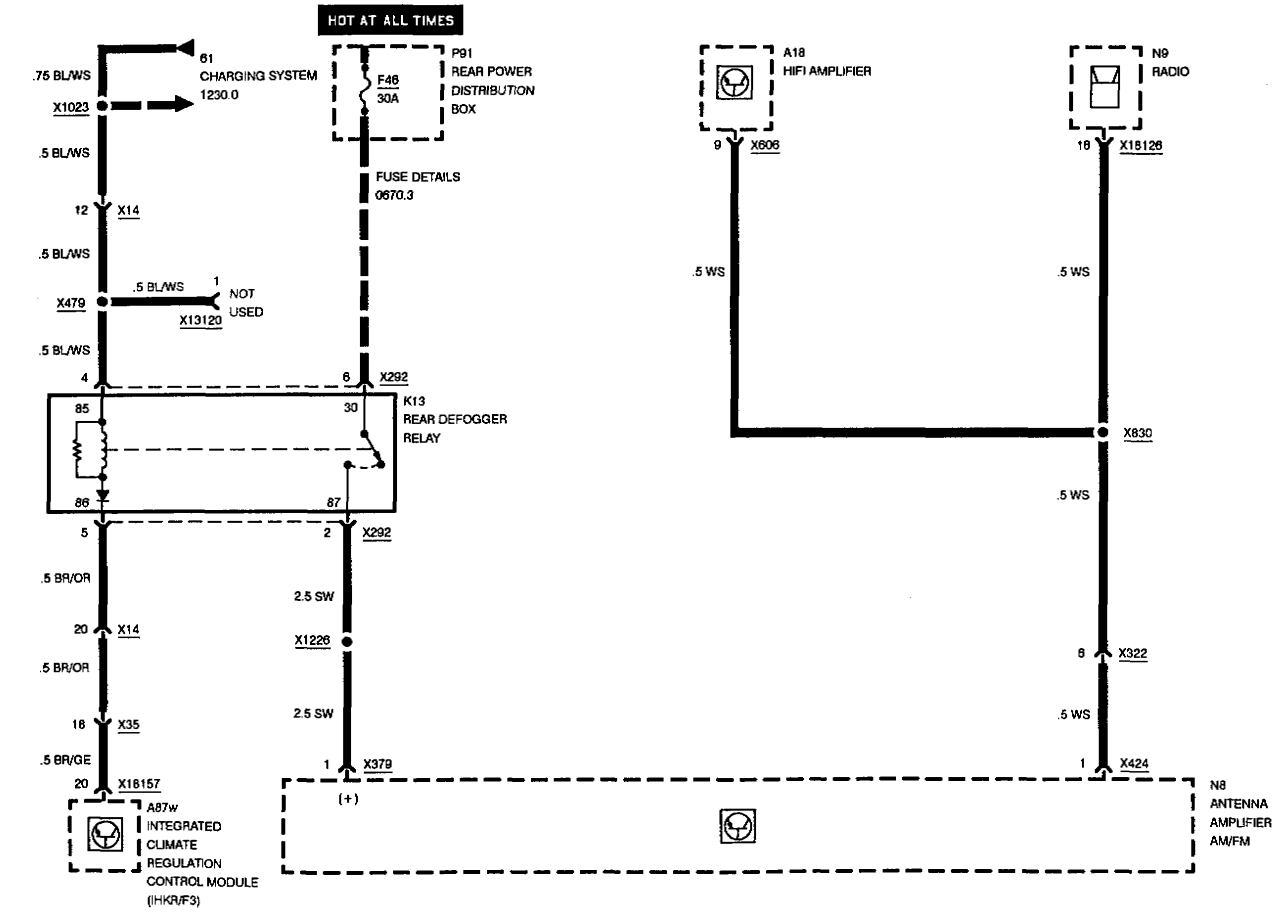





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# REAR WINDOW DEFOGGER

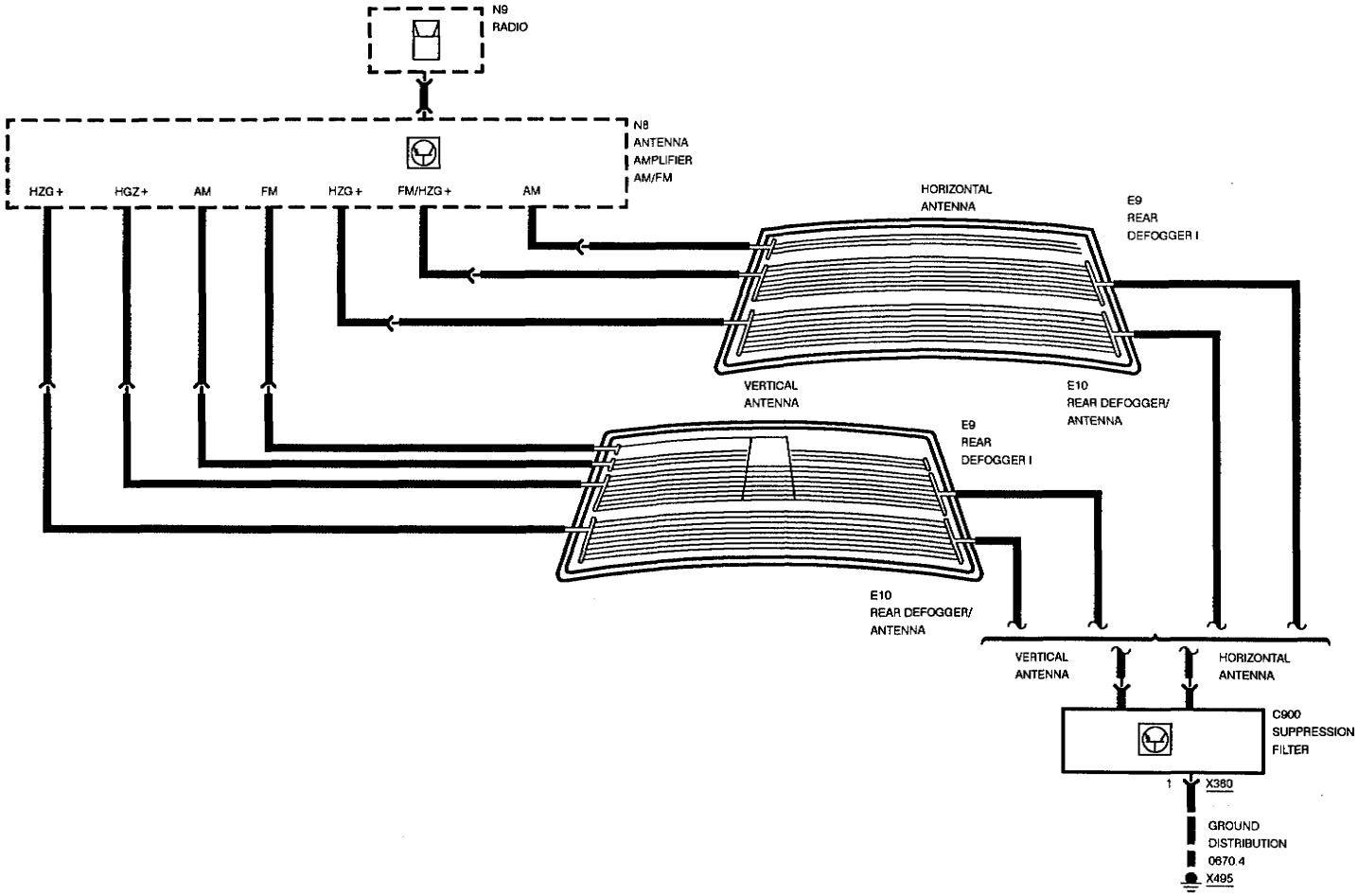





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# REAR WINDOW DEFOGGER

## REAR WINDOW ANTENNA

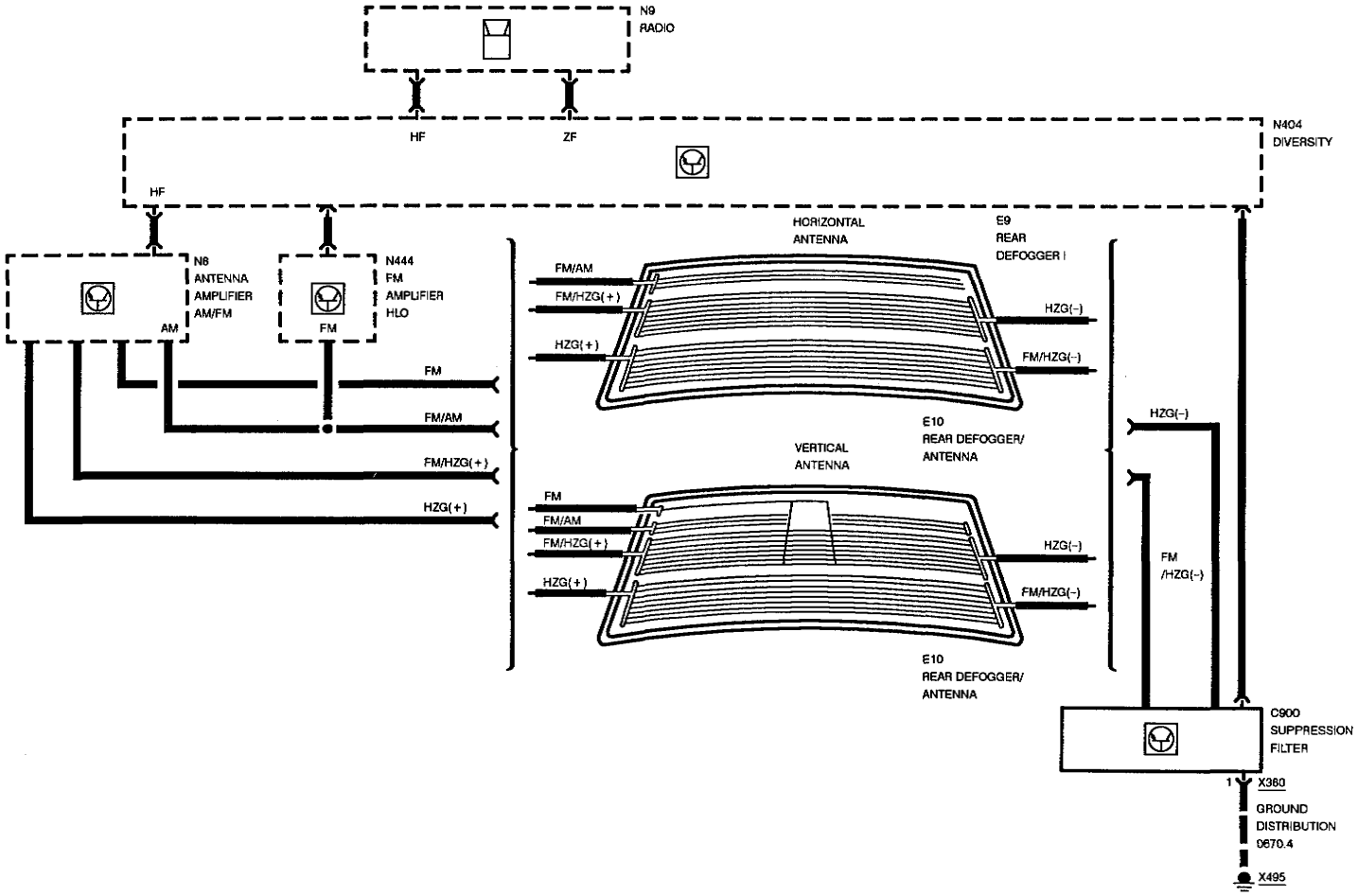





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# REAR WINDOW DEFOGGER

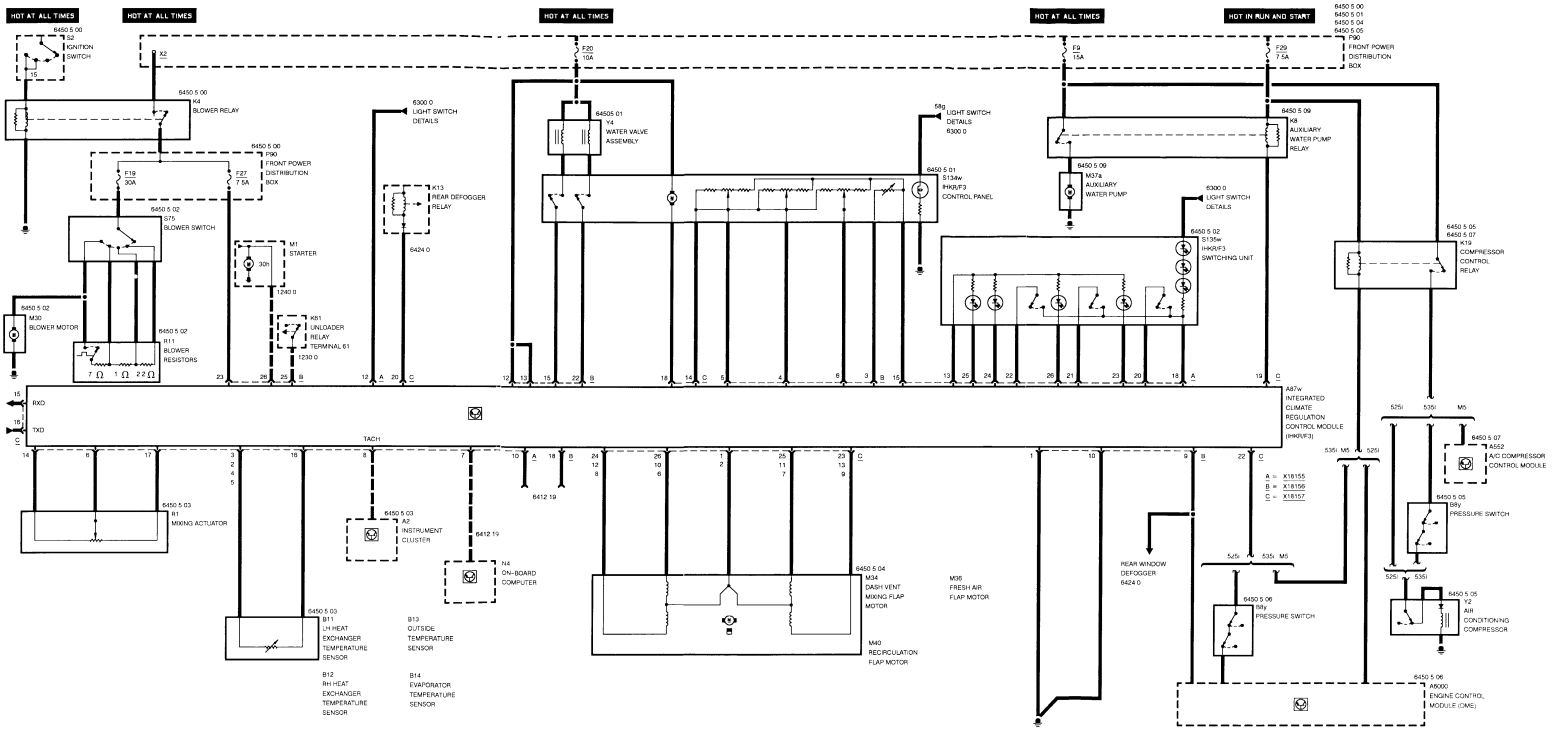
## 3-ANTENNA-DIVERSITY






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# INTEGRATED CLIMATE REGULATION WITH FILTER (IHKR/F3)



## Pin Assignments

A = 18155 26 Pins, white
B = 18156 26 Pins, black
C = 18157 26 Pins, blue

### X18155

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | | Not used | | | | |
| 2 | E | Right heater temperature | Right heater sensor | approx. 0.7 V to 4.3 V | 0° C to 90° C | approx. 5 V with temperature sensor disconnected |
| 3 | E | Left heater temperature | Left heater sensor | approx. 0.7 V to 4.3 V | 0° C to 90° C | approx. 5 V with temperature sensor disconnected |
| 4 | E | Outside temperature | Outside temperature sensor | approx. 0.5 V to 4.5 V | -40° C to 40° C | approx. 5 V with temperature sensor disconnected |
| 5 | E | Evaporator temperature | Evaporator sensor | approx. 1.6 V to 3.4 V | -5° C to 26° C | approx. 5 V with temperature sensor disconnected |
| 6 | E | Nominal mixing value | Temp. dist. pot. | approx. 1.6 V to 2.7 V | approx. 0% to 100% | |
| 7 | E | Independent ventilation | Relay box | approx. 0 V<br>approx. 11 V | ON<br>OFF | |





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# INTEGRATED CLIMATE REGULATION WITH FILTER (IHKR/F3)



| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 8 | E | Road speed signal | Instrument cluster | Frequency (square-wave) | km/h | |
| 9 | | Not used | | | | |
| 10 | E | Independent heating | Relay box | approx. 0 V<br>approx. 11 V | ON<br>OFF | |
| 11 | | Not used | | | | |
| 12 | E | Terminal 58K | Light switches | approx. 12 V | | Light ON |
| 13 | A | Voltage supply for function light | Switching unit | approx. 10 V<br>approx. 4 V<br>approx. 6 V | | Light OFF<br>Light ON, function light On<br>Light ON, function light OFF |
| 14 | A | Plus for mixing air control | Temp. dist. pot. | approx. 4.7 V | | |
| 15 | A | Ground for control wheels and interior sensors | Control switch | approx. 0 V | | |
| 16 | A | Ground for temperature sensors | Temperature sensors | approx. 0 V | | |
| 17 | A | Ground for mixing air control | Temp. dist. pot. | approx. 0 V | | |
| 18 | E | Ground for illumination and switches | Switching unit | | | |
| 19 | | Not used | | | | |
| 20 | E | Push button for air conditioning | Switching unit | approx. 0 V<br>approx. 10 V | ON<br>OFF | |
| 21 | E | Push button for air recirculation | Switching unit | approx. 0 V<br>approx. 10 V | ON<br>OFF | |
| 22 | E | Push button for rear window defogger | Switching unit | approx. 0 V<br>approx. 10 V | ON<br>OFF | |
| 23 | A | Function light, air conditioning | Switching unit | approx. 7.5 V<br>approx. 8.5 V | | LED ON (light OFF)<br>LED OFF (light OFF) |

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# INTEGRATED CLIMATE REGULATION WITH FILTER (IHKR/F3)



| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 24 | A | Function light, rear window defogger | Switching unit | approx. 7.5 V<br>approx. 8.5 V | | LED ON (light OFF)<br>LED OFF (light OFF) |
| 25 | A | Function light, air recirculation | Switching unit | approx. 7.5 V<br>approx. 8.5 V | | LED ON (light OFF)<br>LED OFF (light OFF) |
| 26 | A | Function light, air recirculation control | Switching unit | approx. 7.5 V<br>approx. 8.5 V | | LED ON (light OFF)<br>LED OFF (light OFF) |

## X18156

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | E | Ground for electronics | Ground | 0 V | | |
| 2 | | Not used | | | | |
| 3 | E | Interior temperature sensor | Control switch | approx. 1.7 V to 3.4 V | 10° C to 40° C | approx. 5 V with temperature sensor disconnected |
| 4 | E | Nominal air flow value | Control switch | approx. 0.6 V–4 V | OFF (approx. 100%) | |
| 5 | E | Nominal temperature value, left | Control switch | approx. 0.5 V to 4.2 V | 16° C to 32° C | |
| 6 | E | Nominal temperature value, right | Control switch | approx. 0.5 V to 4.2 V | 16° C to 32° C | |
| 7 | | Not used | | | | |
| 8 | | Not used | | | | |
| 9 | A | Auxiliary fan signal | DME control unit | approx. 0 V<br>approx. 12 V | ON<br>OFF | |
| 10 | E | Ground for electronics | Ground | 0 V | | |
| 11 | | Not used | | | | |
| 12 | E | Plus voltage supply for control unit | Connector terminal 30 | approx. 12 V | | |





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# INTEGRATED CLIMATE REGULATION WITH FILTER (IHKR/F3)



| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 13 | E | Plus voltage supply for control unit | Connector terminal 30 | approx. 12 V | | |
| 14 | | Not used | | | | |
| 15 | A | Right water valve activation | Control switch | Frequency (square-wave voltage) | 0% to 100% | At 0% approx. 0 V<br>at 100% approx. 12 V |
| 16 | | Not used | | | | |
| 17 | | Not used | | | | |
| 18 | E | Terminal 15 (independent ventilation only) | | approx. 12 V | | |
| 19 | | Not used | | | | |
| 20 | | Not used | | | | |
| 21 | | Not used | | | | |
| 22 | A | Left water valve activation | Control switch | Frequency (square-wave voltage) | 0% to 100% | At 0% approx. 0 V<br>at 100% approx. 12 V |
| 23 | E | Plus voltage supply for control unit | Connector terminal 15 | approx. 12 V | | |
| 24 | | Not used | | | | |
| 25 | E | Terminal 61 | Unloader relay terminal 61 | approx. 0 V<br>approx. 12 V | OFF<br>ON | when engine stationary<br>when engine running |
| 26 | E | Terminal 30h | Starter | approx. 12 V | | when starting |

## X18157

| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 1 | A | Plus for flap motors | All flap motors | approx. 11 V | | |
| 2 | A | Plus for flap motors | All flap motors | approx. 11 V | | |

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# INTEGRATED CLIMATE REGULATION WITH FILTER (IHKR/F3)



| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 3 | | Not used | | | | |
| 4 | | Not used | | | | |
| 5 | | Not used | | | | |
| 6 | A | Footwell, flap motor activation | Footwell flap motor | Frequency (square-wave voltage) | 0% to 100% | approx. 11 V when motor OFF |
| 7 | A | Footwell, flap motor activation | Footwell flap motor | Frequency (square-wave voltage) | 0% to 100% | approx. 11 V when motor OFF |
| 8 | A | Footwell, flap motor activation | Footwell flap motor | Frequency (square-wave voltage) | 0% to 100% | approx. 11 V when motor OFF |
| 9 | A | Footwell, flap motor activation | Footwell flap motor | Frequency (square-wave voltage) | 0% to 100% | approx. 11 V when motor OFF |
| 10 | A | Fresh air flap motor activation | Fresh air flap motor | Frequency (square-wave voltage) | 0% to 100% | approx. 11 V when motor OFF |
| 11 | A | Fresh air flap motor activation | Fresh air flap motor | Frequency (square-wave voltage) | 0% to 100% | approx. 11 V when motor OFF |
| 12 | A | Fresh air flap motor activation | Fresh air flap motor | Frequency (square-wave voltage) | 0% to 100% | approx. 11 V when motor OFF |
| 13 | A | Fresh air flap motor activation | Fresh air flap motor | Frequency (square-wave voltage) | 0% to 100% | approx. 11 V when motor OFF |
| 14 | A | Plus for control wheels in control switch | Control switch | approx. 5 V | | |

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# INTEGRATED CLIMATE REGULATION WITH FILTER (IHKR/F3)



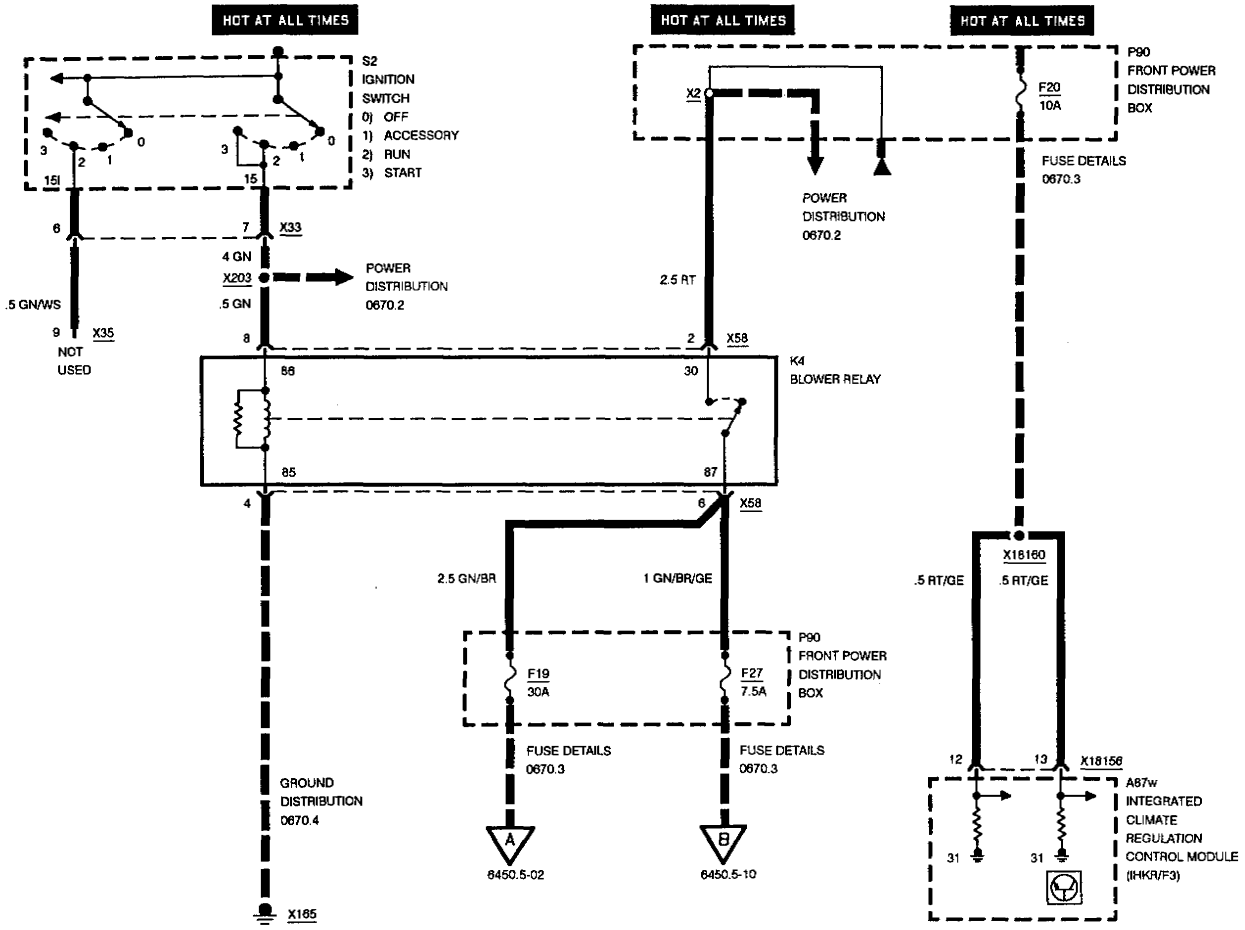
| Pin | Type | Description/Function | Connection | Type of Signal | Tester Display | Measurement Notes |
|---|---|---|---|---|---|---|
| 15 | A | Diagnosis RxD | Diagnostic connector | Frequency | | |
| 16 | E | Diagnosis TxD | Diagnostic connector | Frequency | | |
| 17 | | Not used | | | | |
| 18 | A | Switching unit sensor fan activation | Control switch | approx. 0 V<br>approx. 12 V | | At ignition ON<br>approx. 3 minutes after ignition OFF |
| 19 | A | Auxiliary water pump activation | Relay, auxiliary water pump | Ground | | |
| 20 | A | Rear window defogger activation | Rear window defogger relay | approx. 0 V<br>approx. 12 V | ON<br>OFF | |
| 21 | | Not used | | | | |
| 22 | A | Activation, A/C compressor | DME control unit | approx. 0 V<br>approx. 12 V | ON<br>OFF | |
| 23 | A | Mixing flap motor activation | Mixing flap motor | Frequency (square-wave voltage) | 0% - 82% at ventilation flap switch OFF<br>100% at ventilation switch ON | approx. 11 V with motor OFF |
| 24 | A | Mixing flap motor activation | Mixing flap motor | Frequency (square-wave voltage) | 0% - 82% at ventilation flap switch OFF<br>100% at ventilation switch ON | approx. 11 V with motor OFF |
| 25 | A | Mixing flap motor activation | Mixing flap motor | Frequency (square-wave voltage) | 0% - 82% at ventilation flap switch OFF<br>100% at ventilation switch ON | approx. 11 V with motor OFF |
| 26 | A | Mixing flap motor activation | Mixing flap motor | Frequency (square-wave) | 0% - 82% at ventilation flap switch OFF<br>100% at ventilation switch ON | approx. 11 V with motor OFF |

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# INTEGRATED CLIMATE REGULATION WITH FILTER (IHKR/F3)

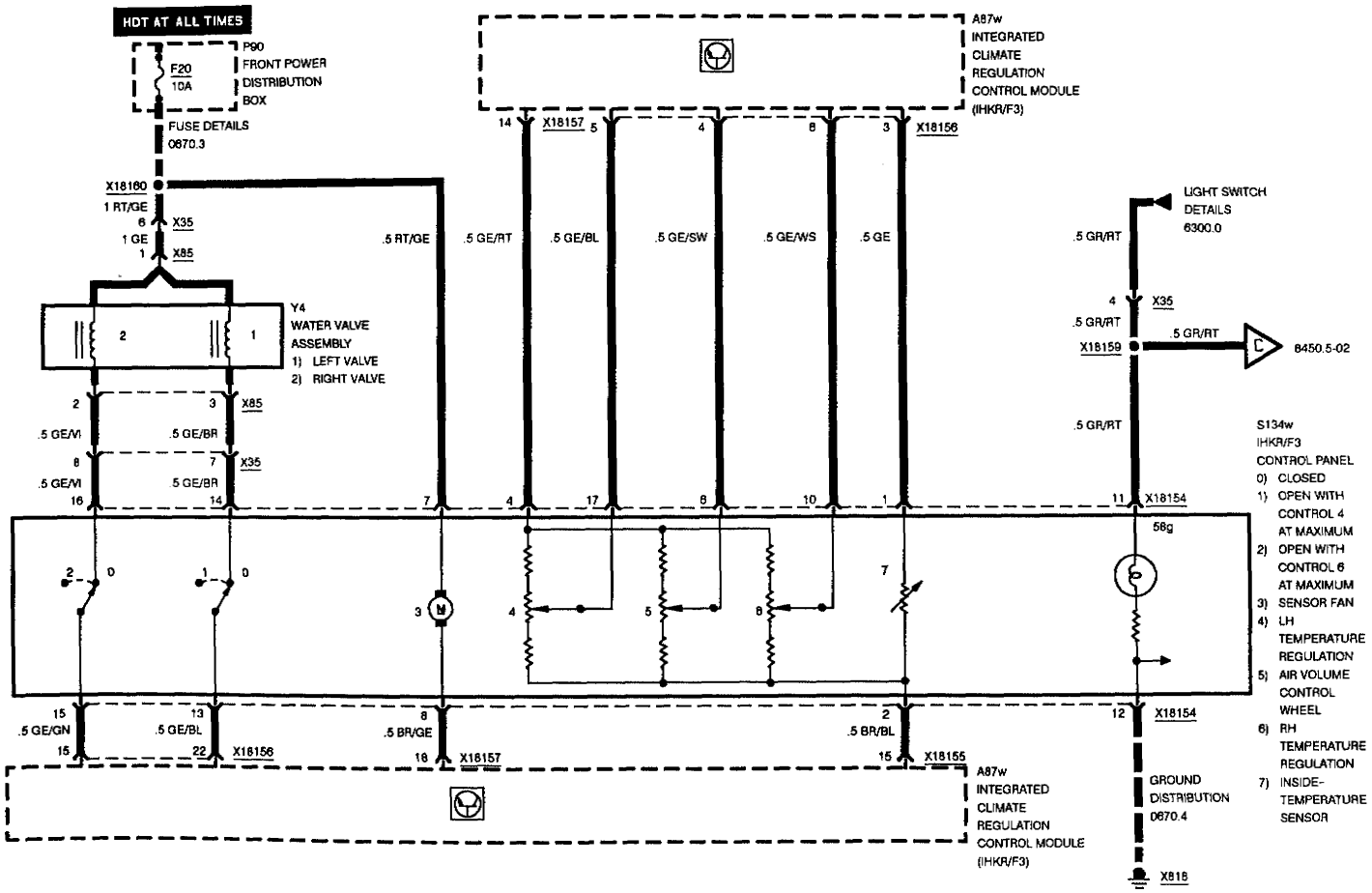
## POWER





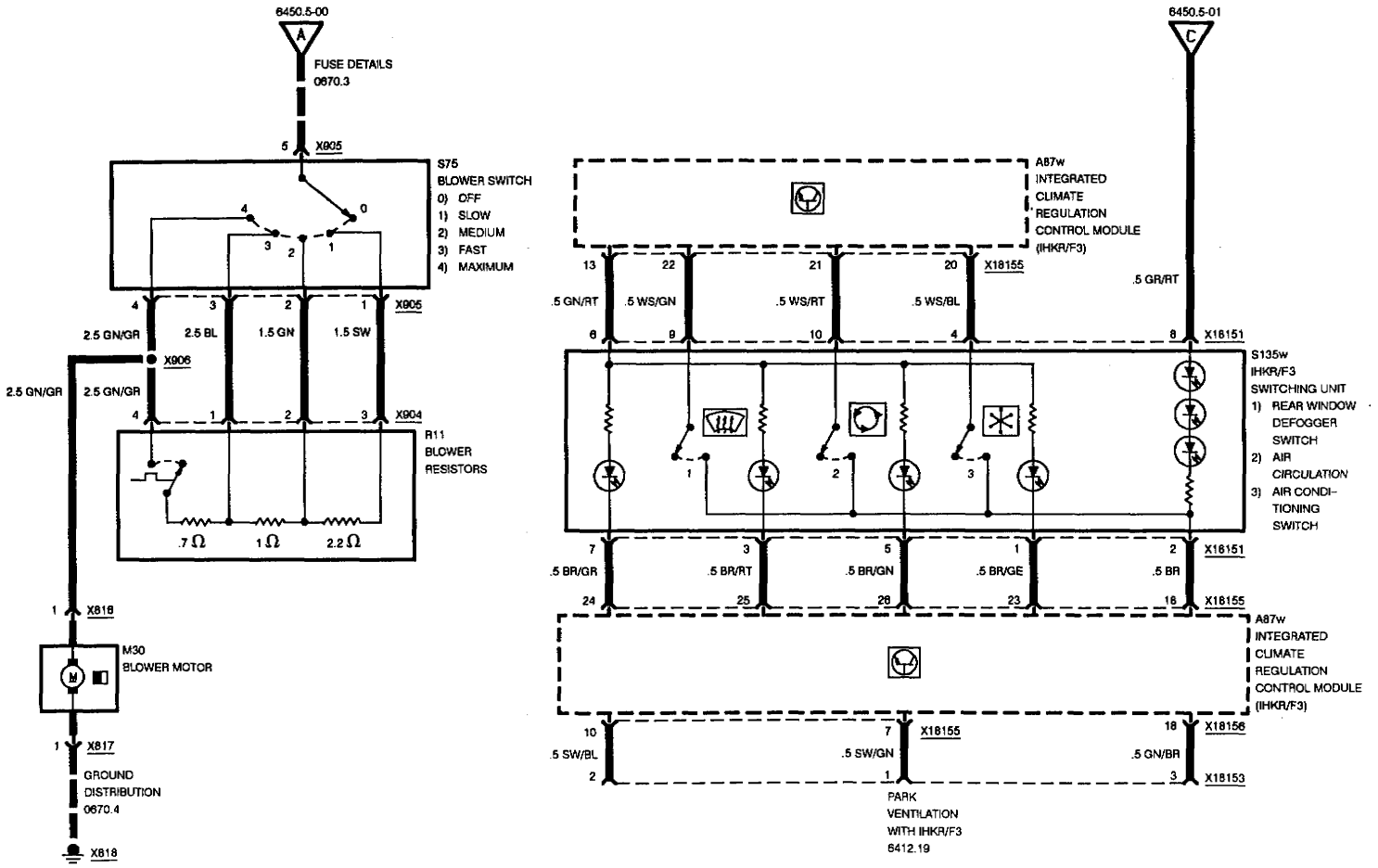

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# INTEGRATED CLIMATE REGULATION WITH FILTER (IHKR/F3)




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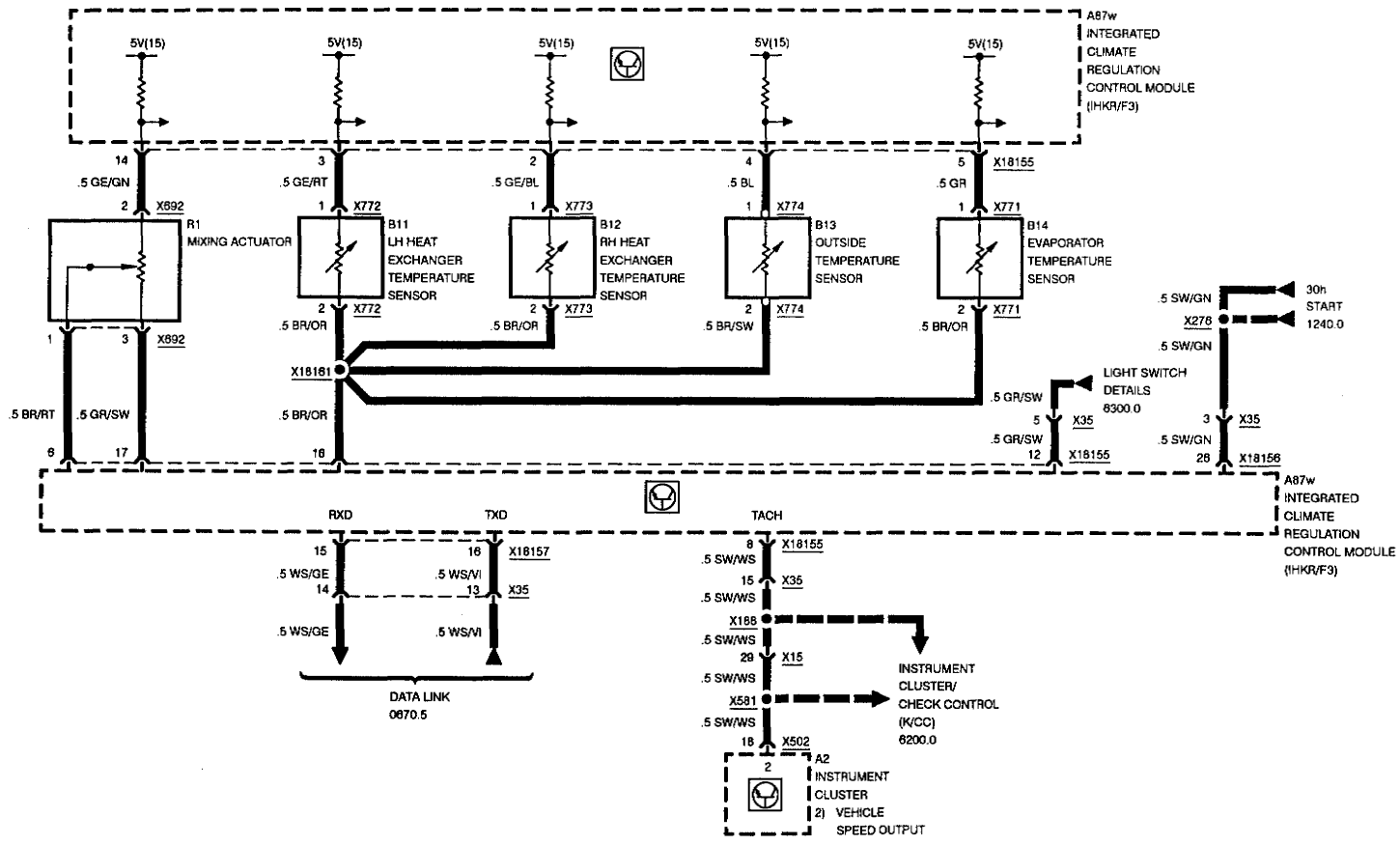
# INTEGRATED CLIMATE REGULATION WITH FILTER (IHKR/F3)




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# INTEGRATED CLIMATE REGULATION WITH FILTER (IHKR/F3)

## TEMPERATURE CONTROLS

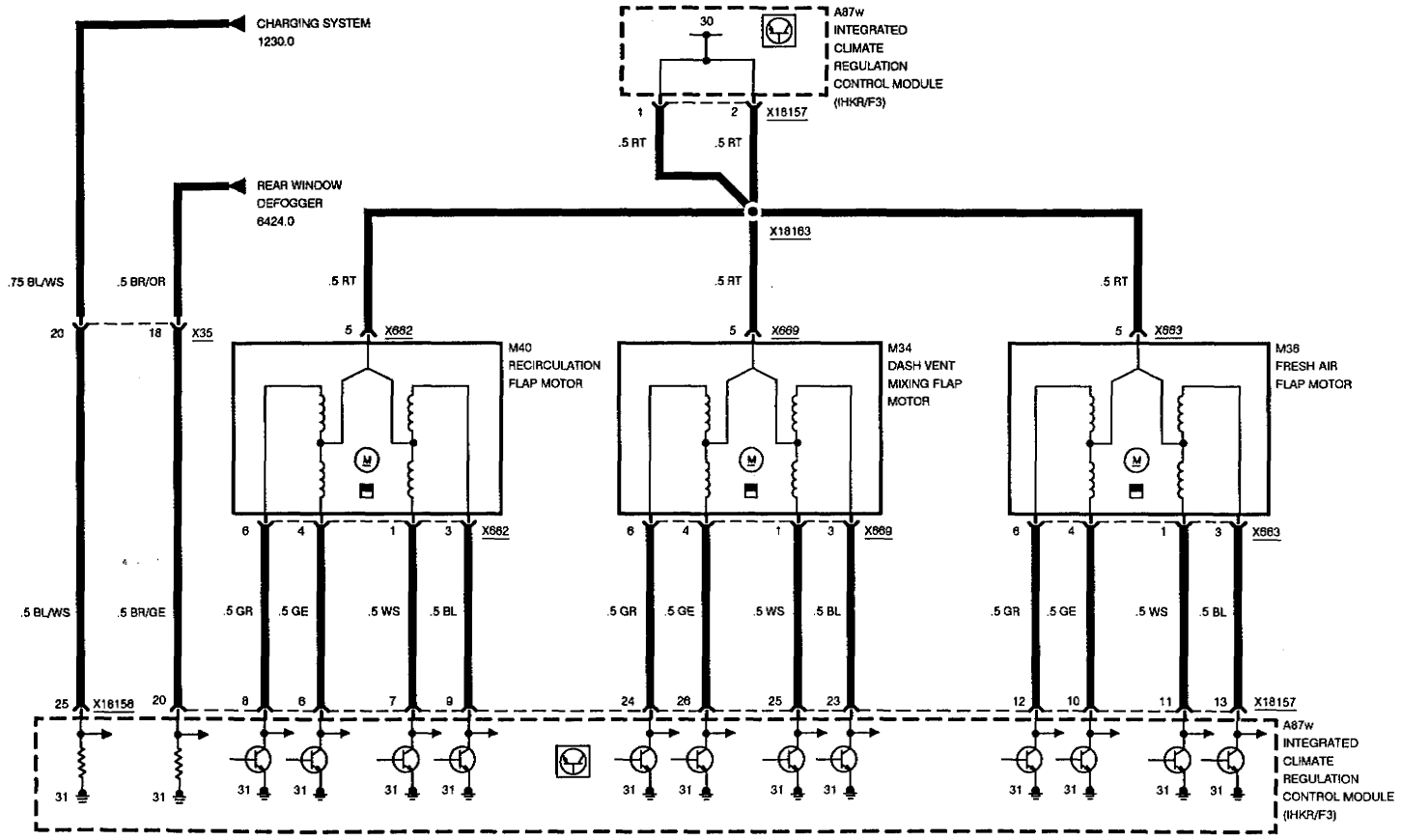





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# INTEGRATED CLIMATE REGULATION WITH FILTER (IHKR/F3)

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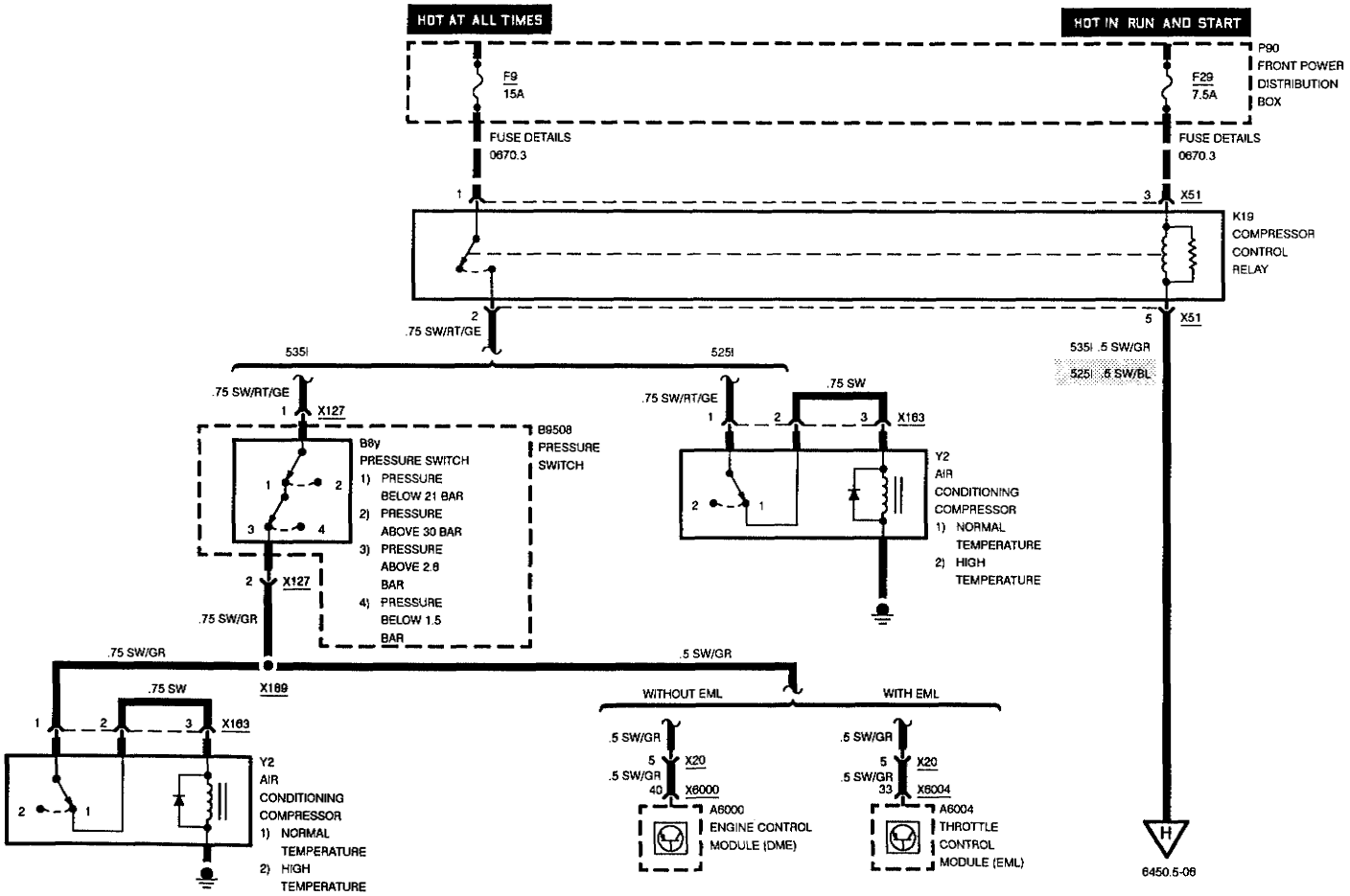





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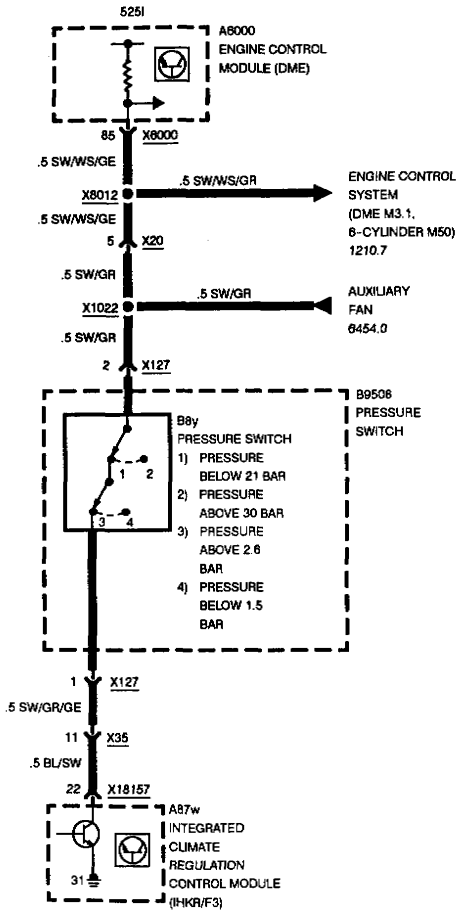
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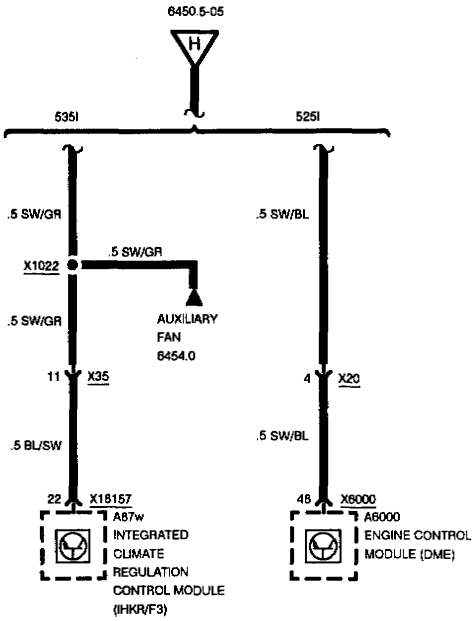
## COMPRESSOR CONTROLS




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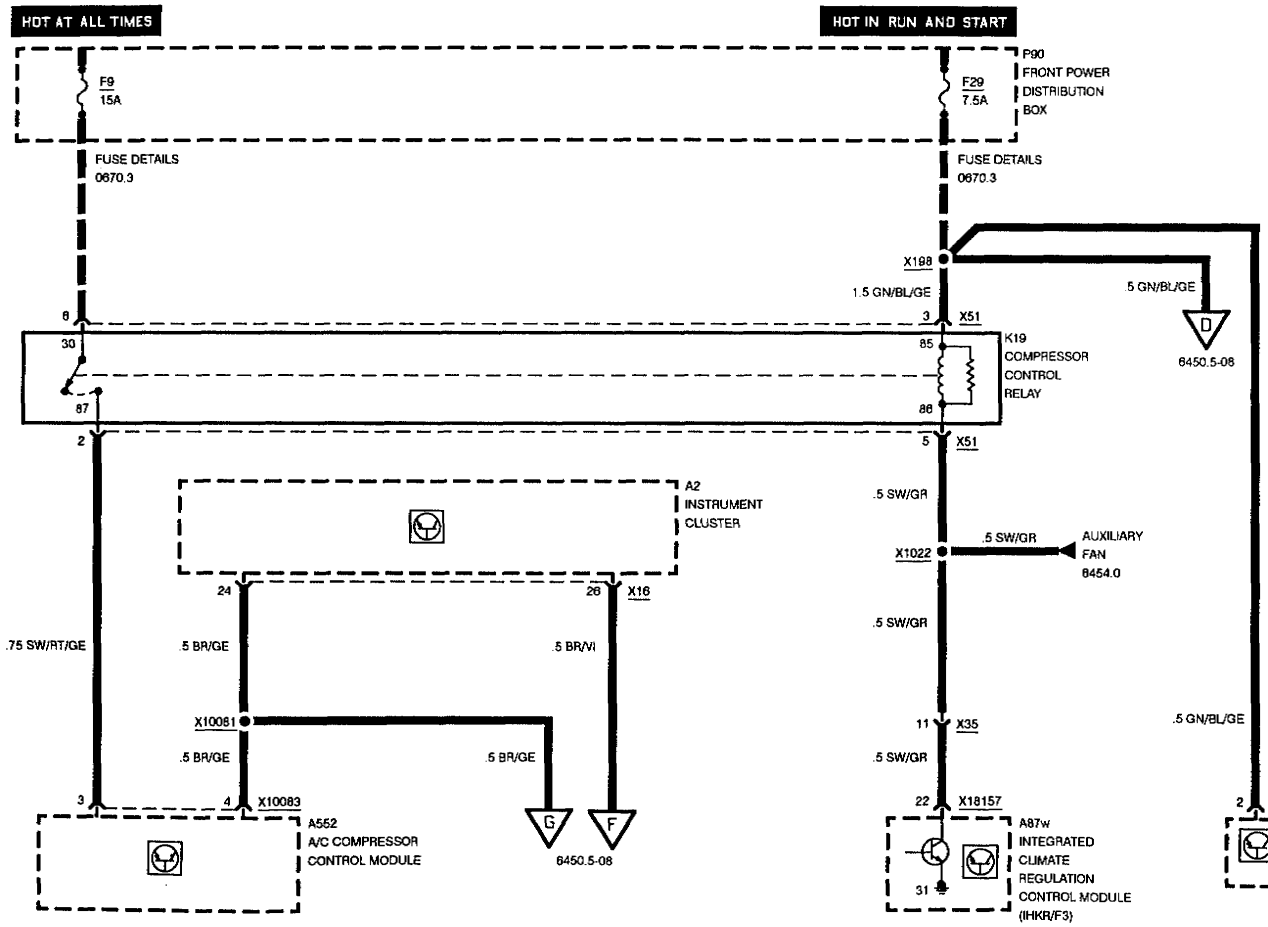






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# INTEGRATED CLIMATE REGULATION WITH FILTER (IHKR/F3)

## COMPRESSOR CONTROL FOR M5

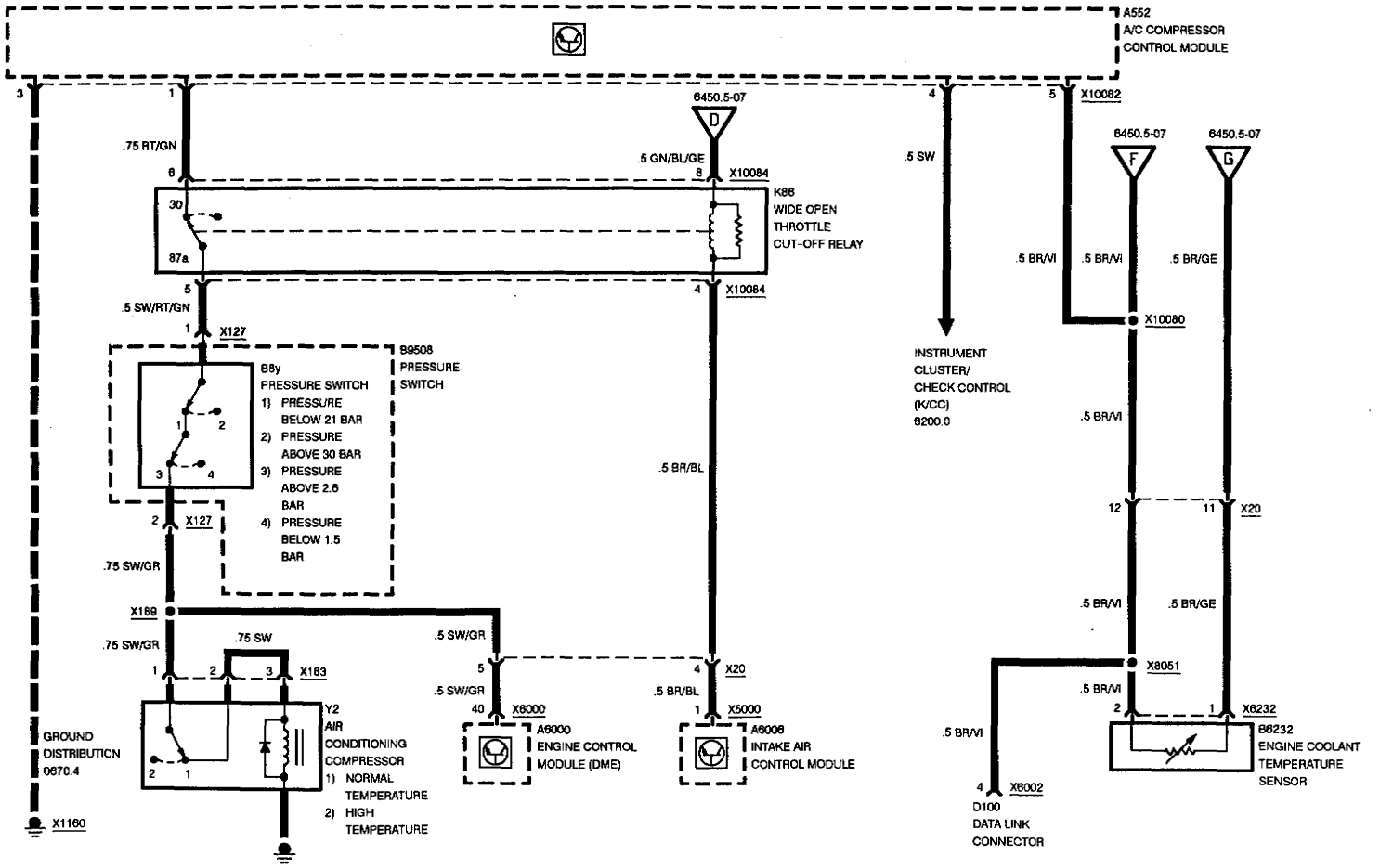





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# INTEGRATED CLIMATE REGULATION WITH FILTER (IHKR/F3)

## COMPRESSOR CONTROL FOR M5

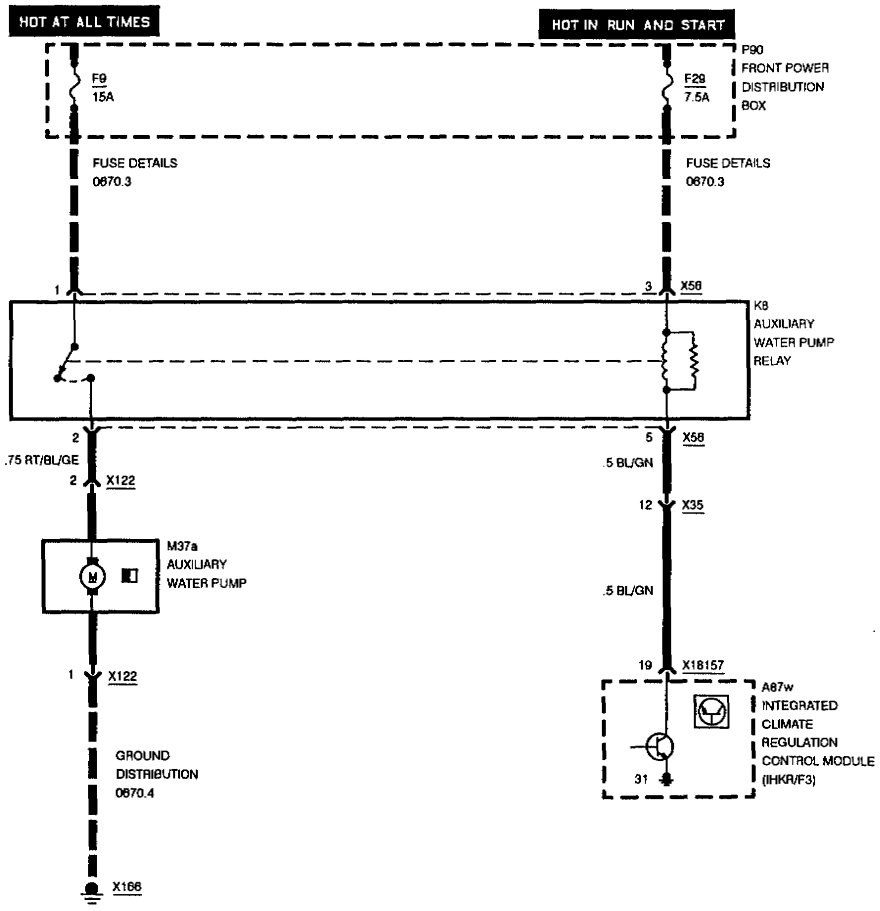





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# INTEGRATED CLIMATE REGULATION WITH FILTER (IHKR/F3)

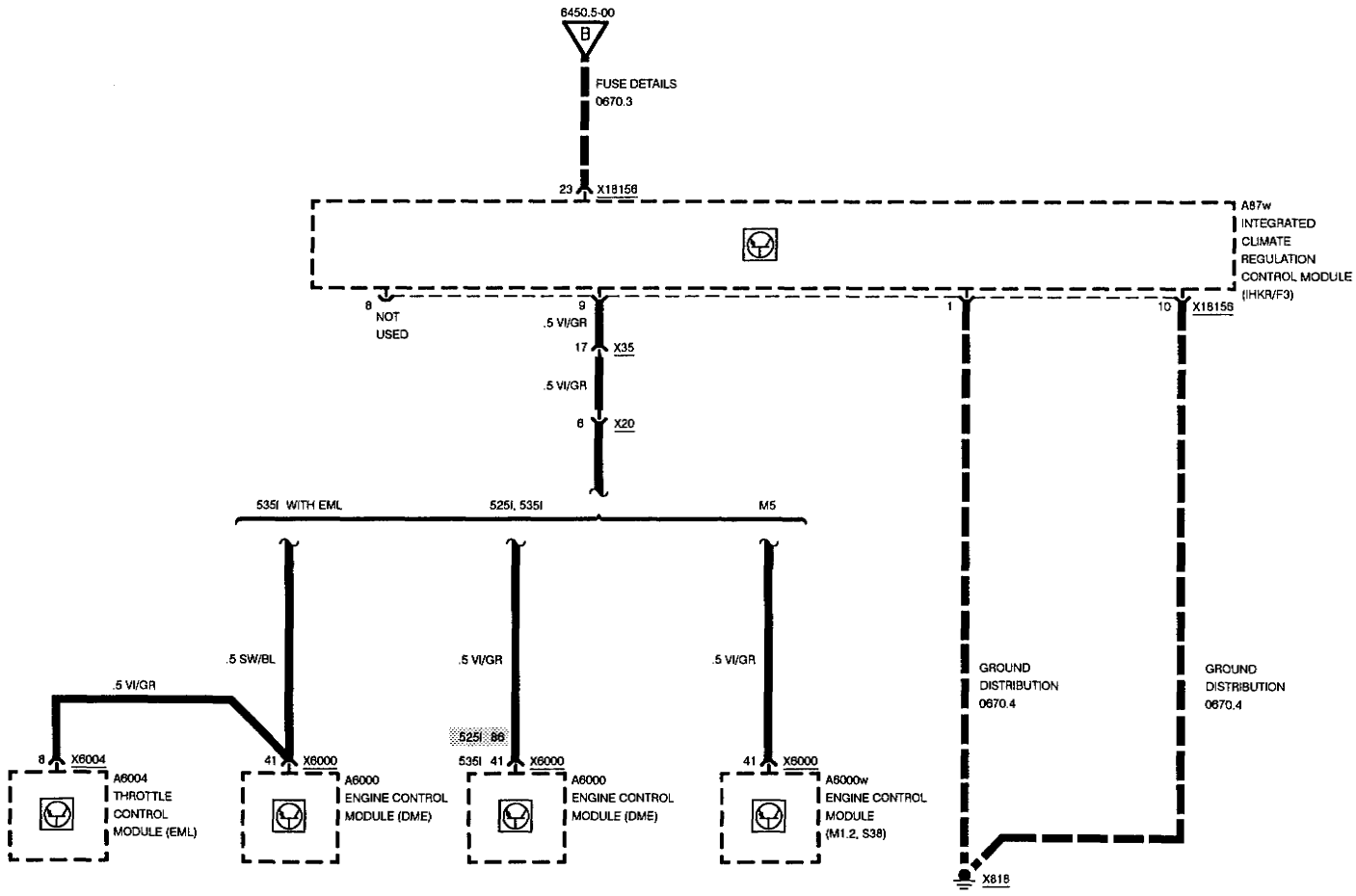
## AUXILIARY WATER PUMP






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# INTEGRATED CLIMATE REGULATION WITH FILTER (IHKR/F3)

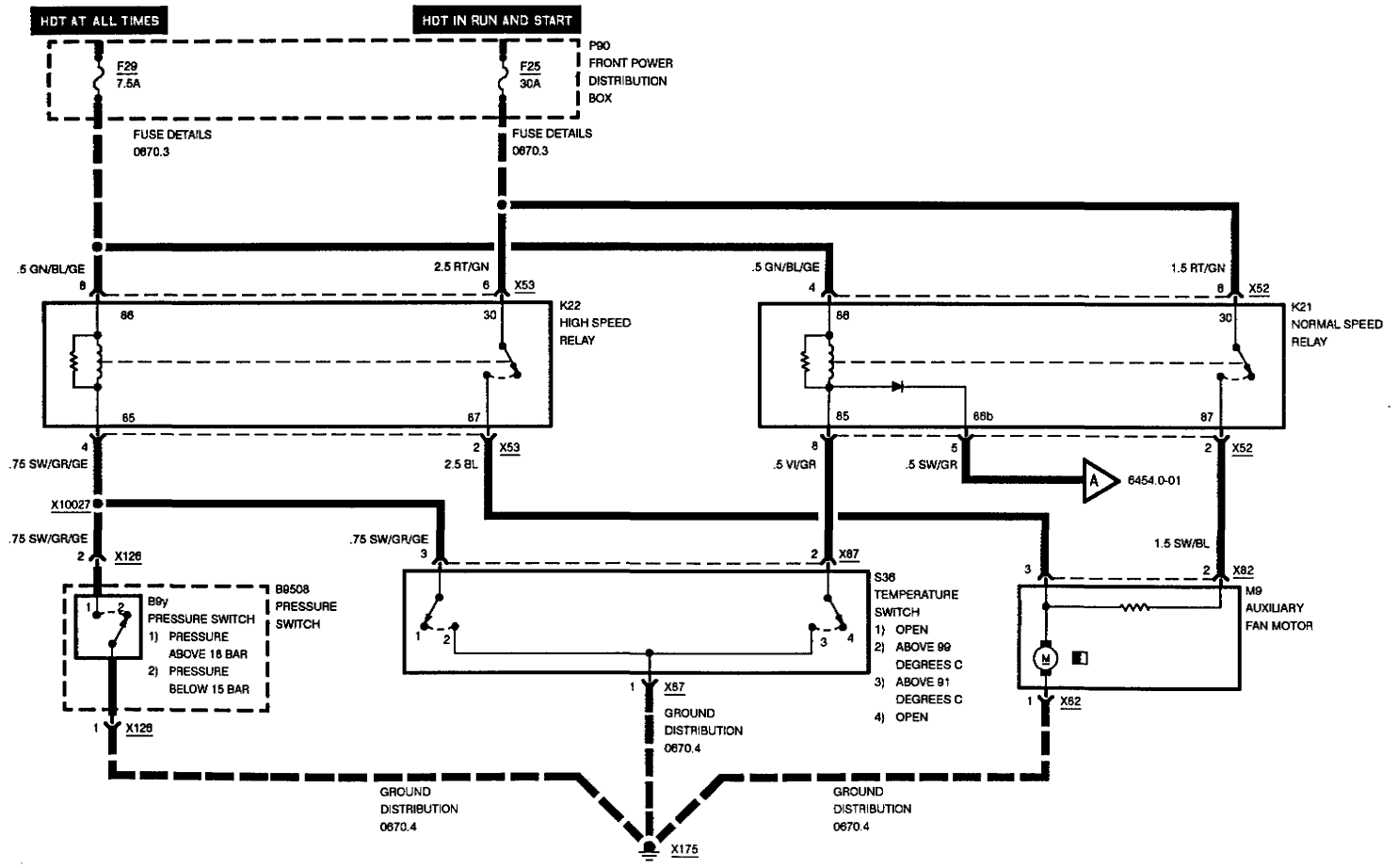



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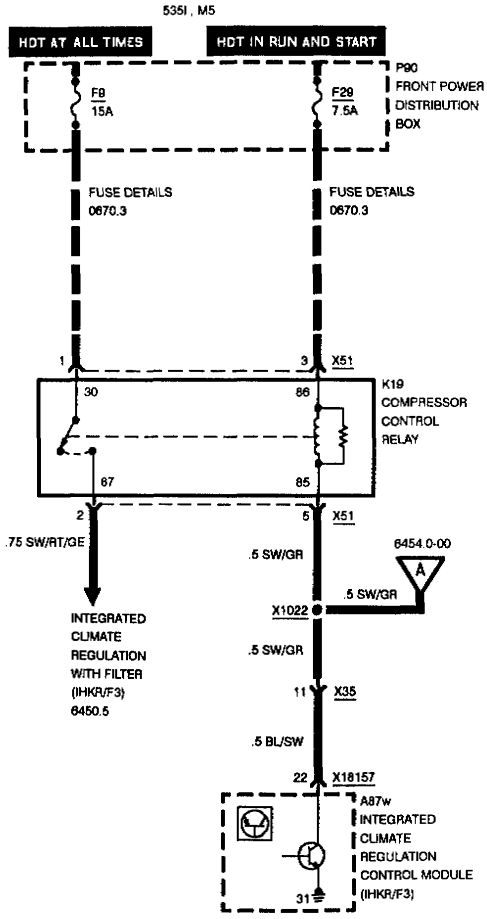
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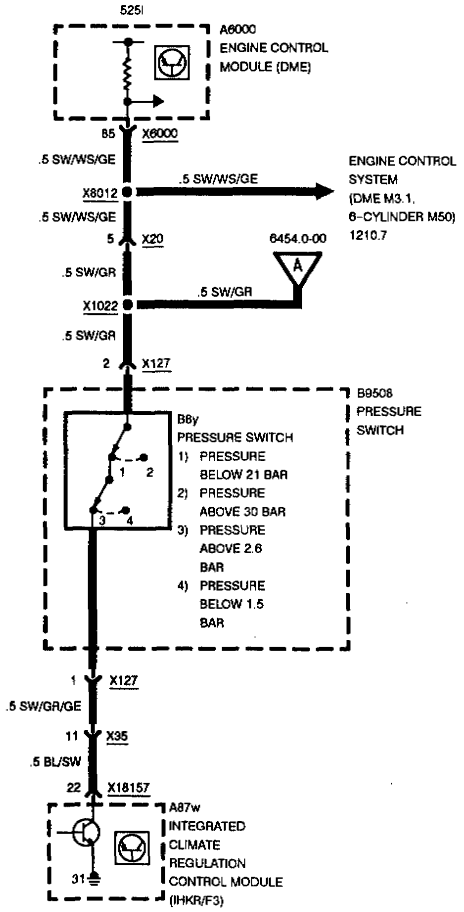





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# AUXILIARY FAN



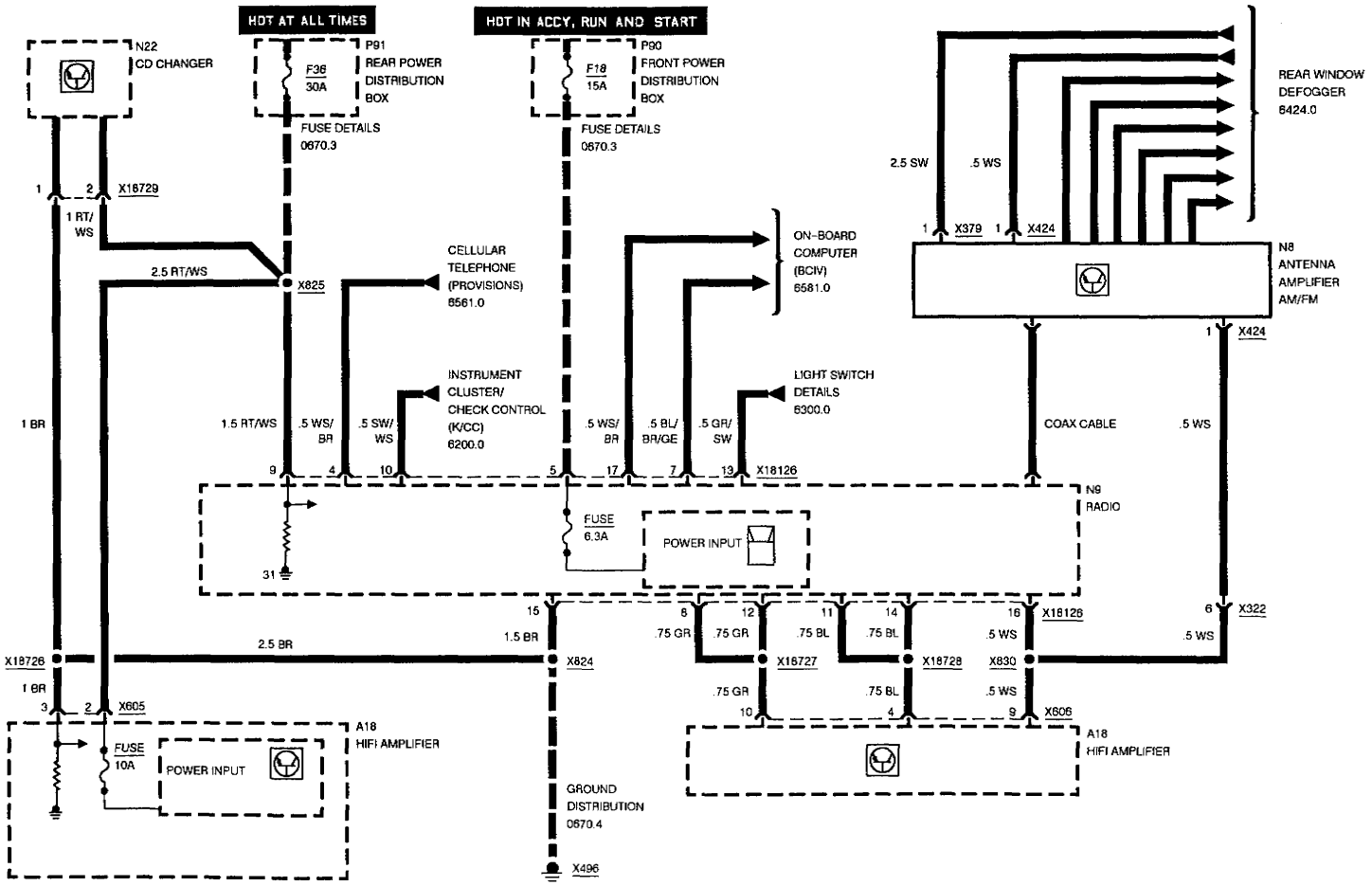






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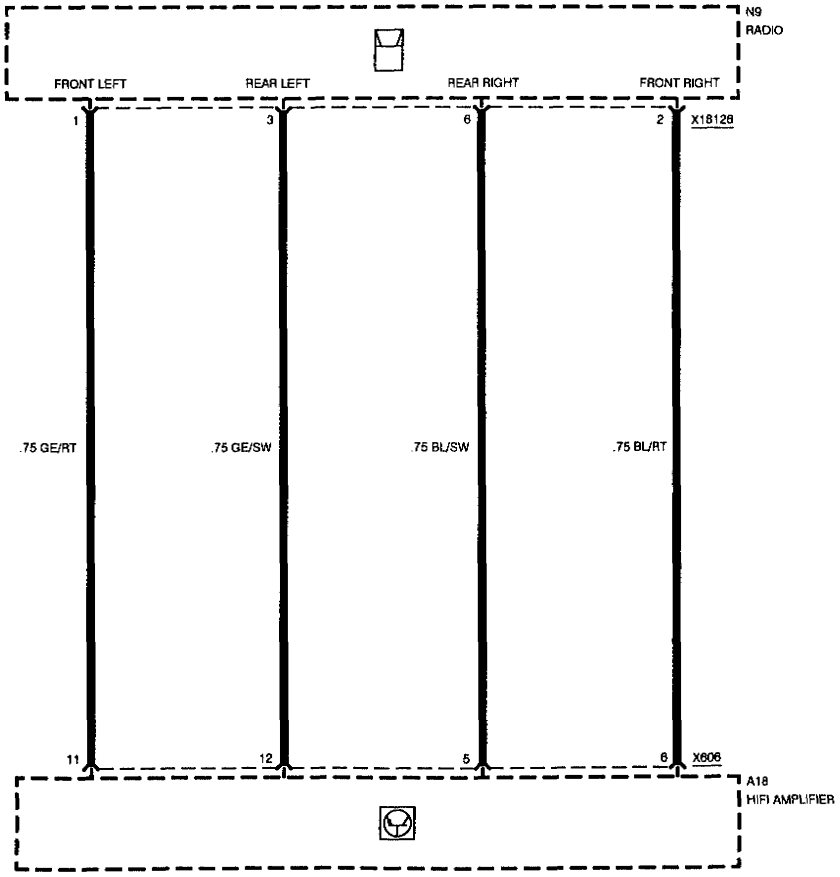
# RADIO/HIFI

## HIFI, 10-SPEAKER SYSTEM



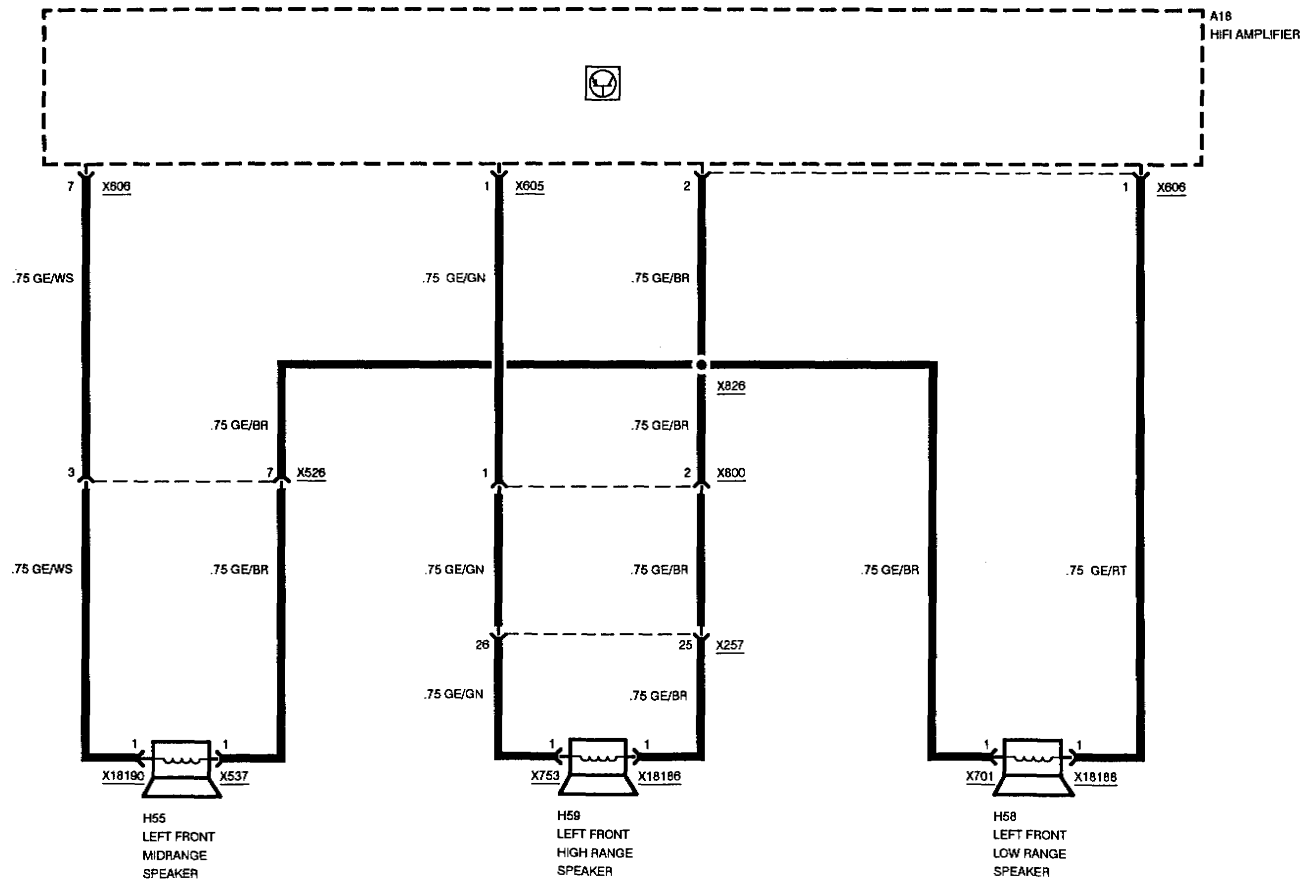

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## HIFI, 10-SPEAKER SYSTEM






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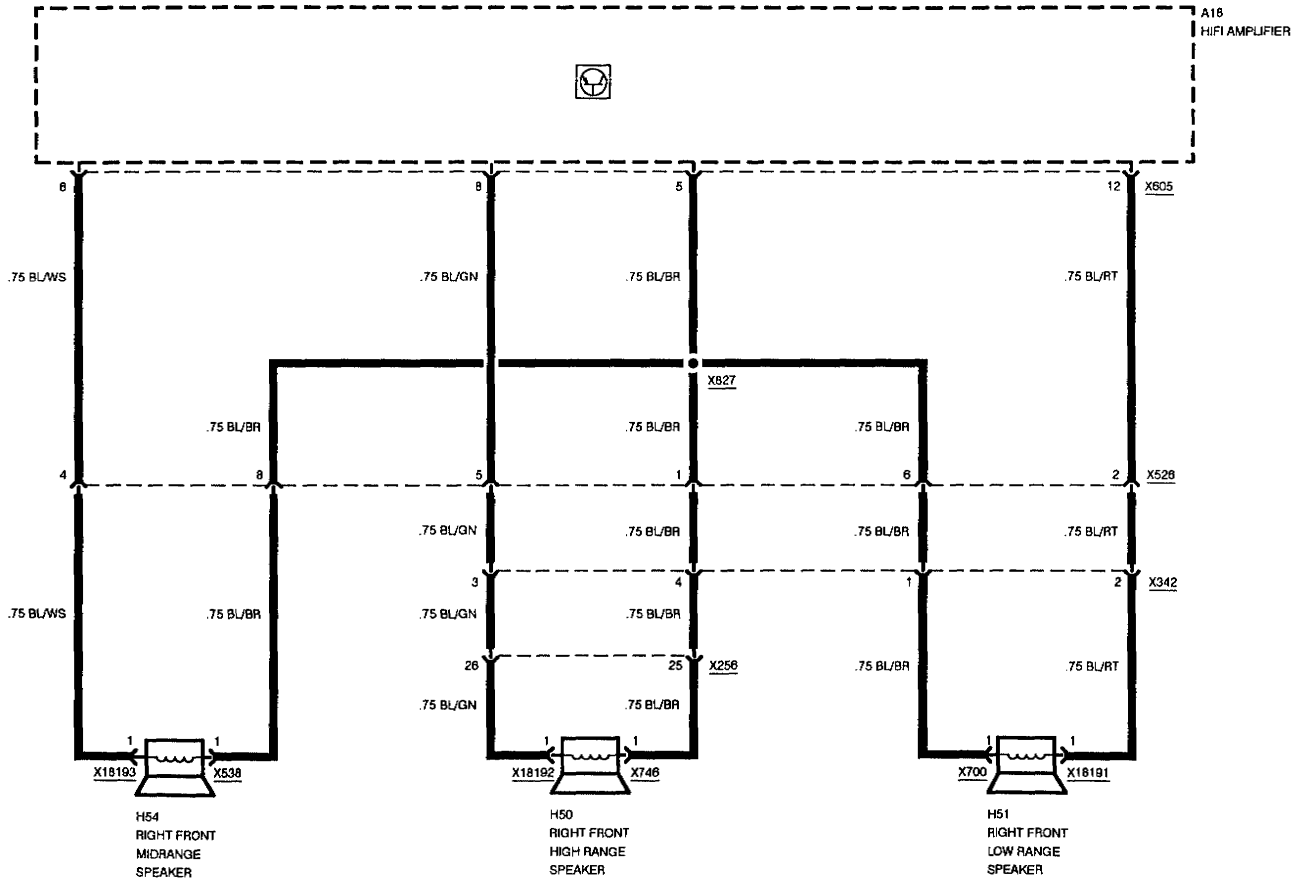





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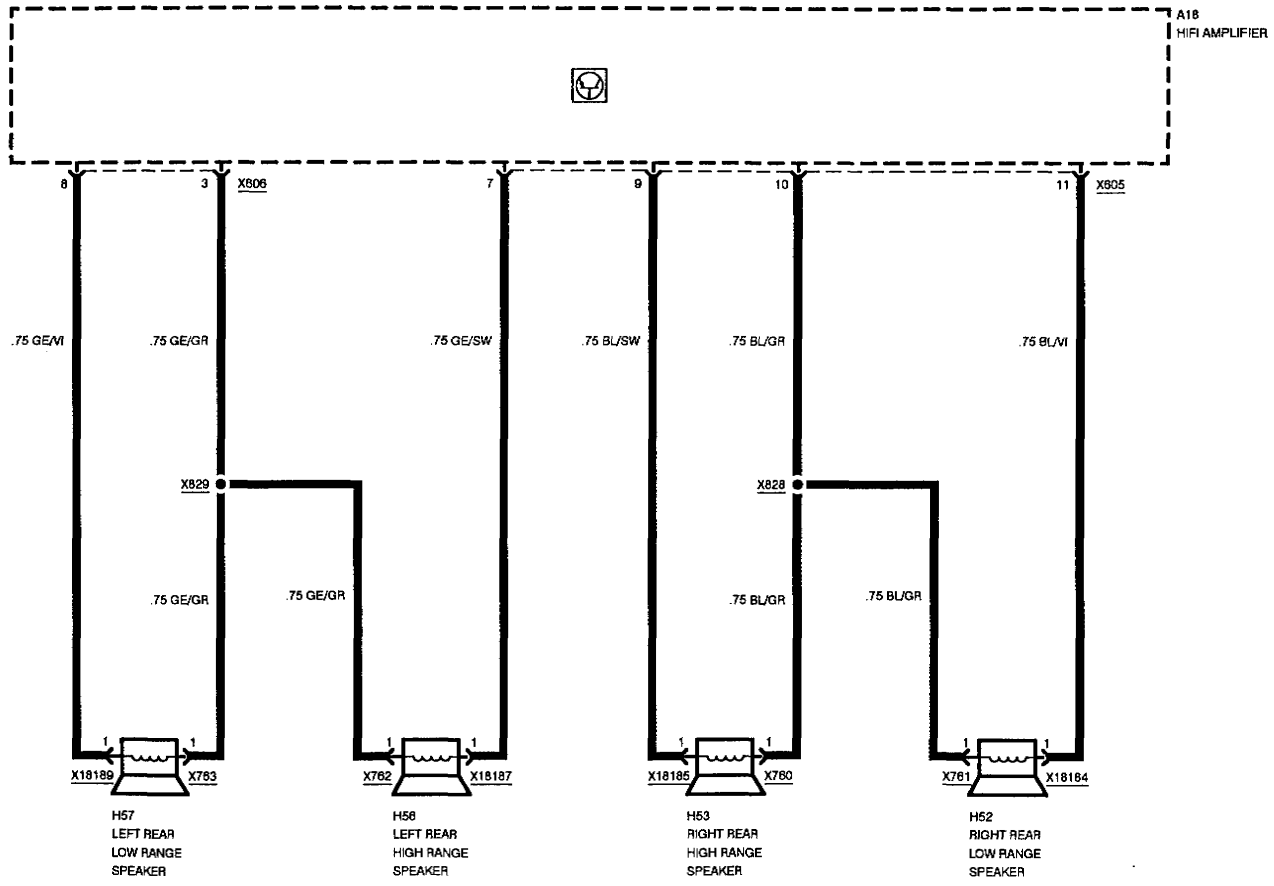
# RADIO/HIFI

## HIFI, 10-SPEAKER SYSTEM






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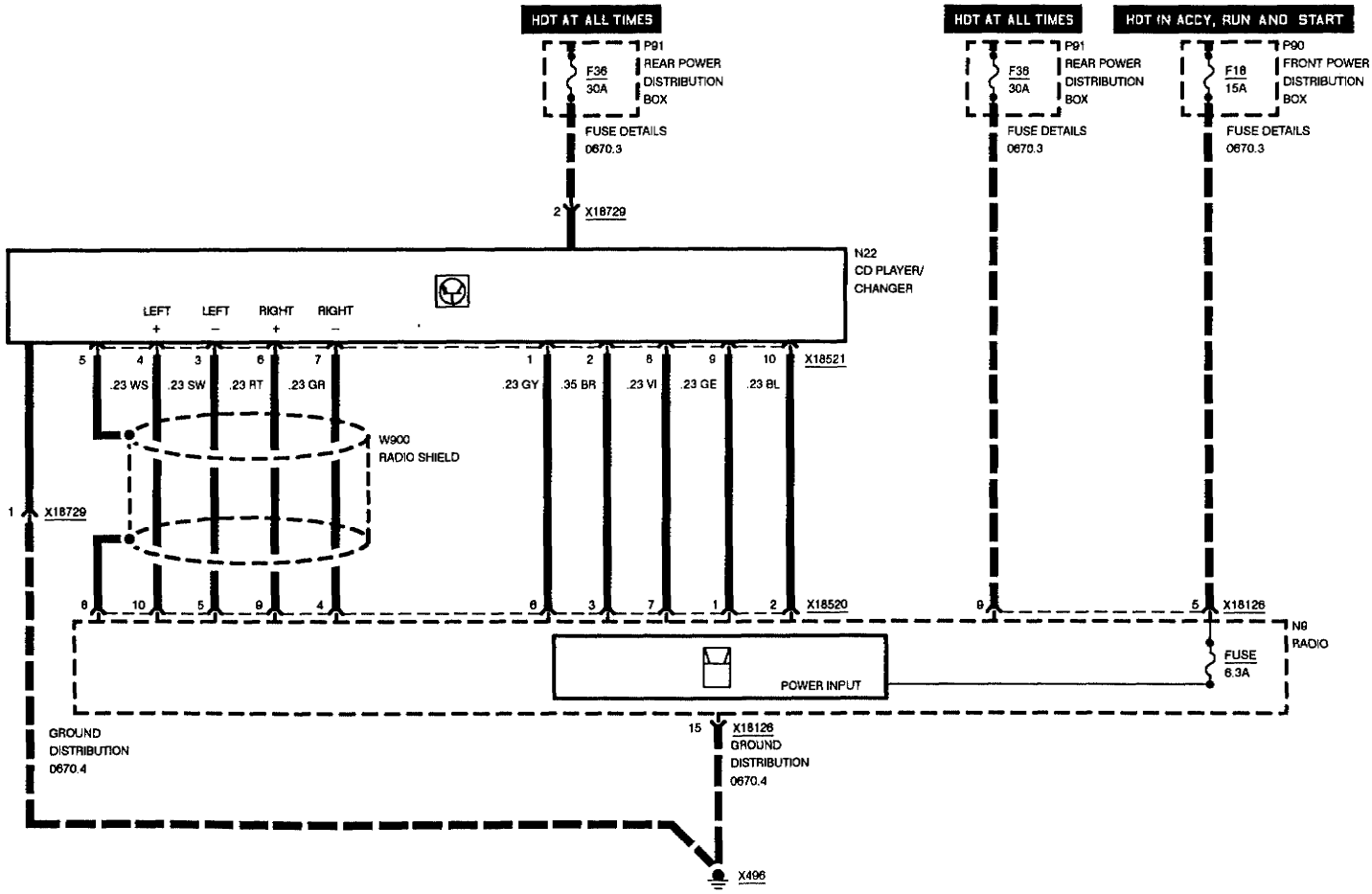





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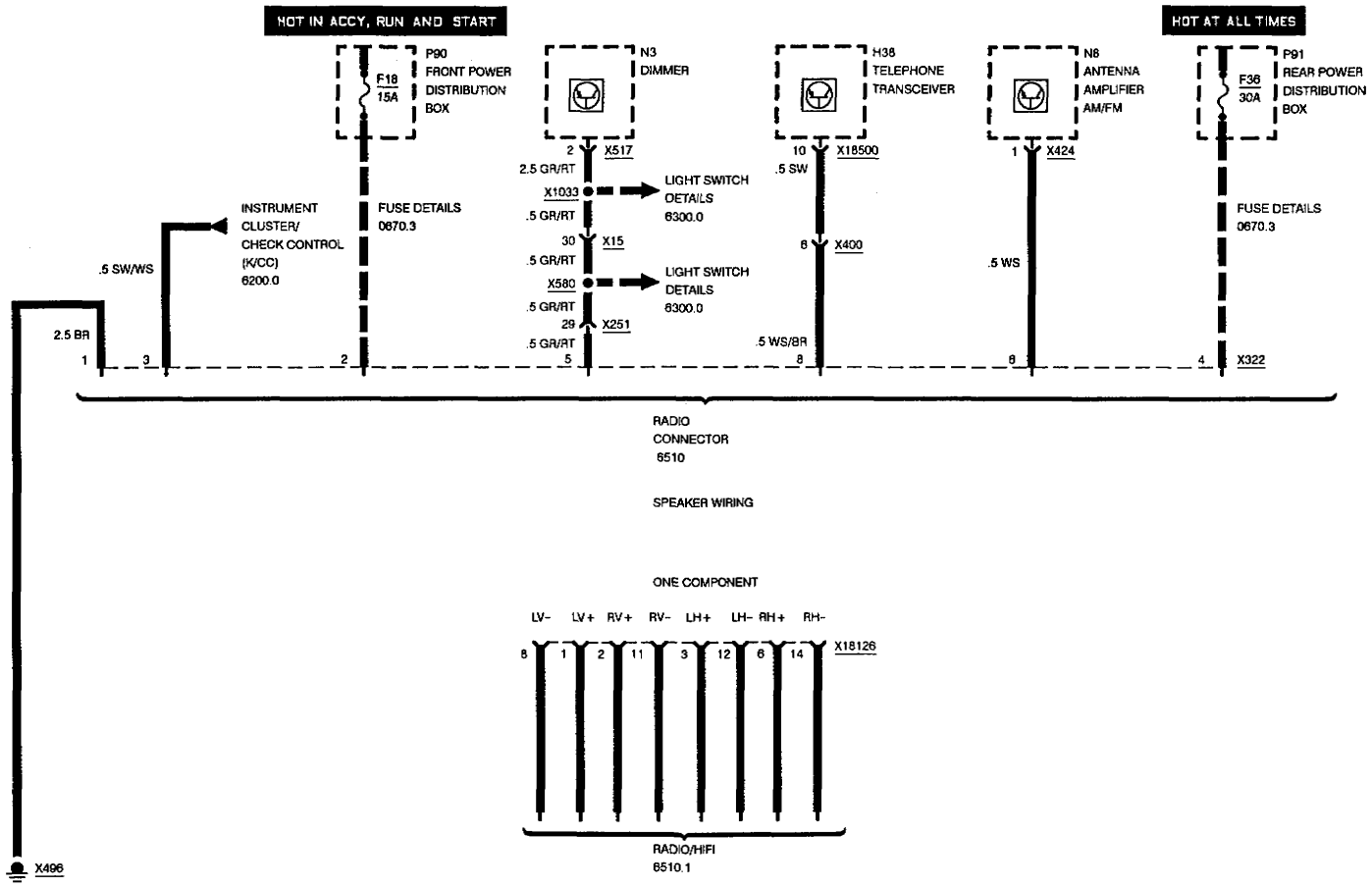
## HIFI WITH CD, 10-SPEAKER SYSTEM






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# RADIO PROVISIONS



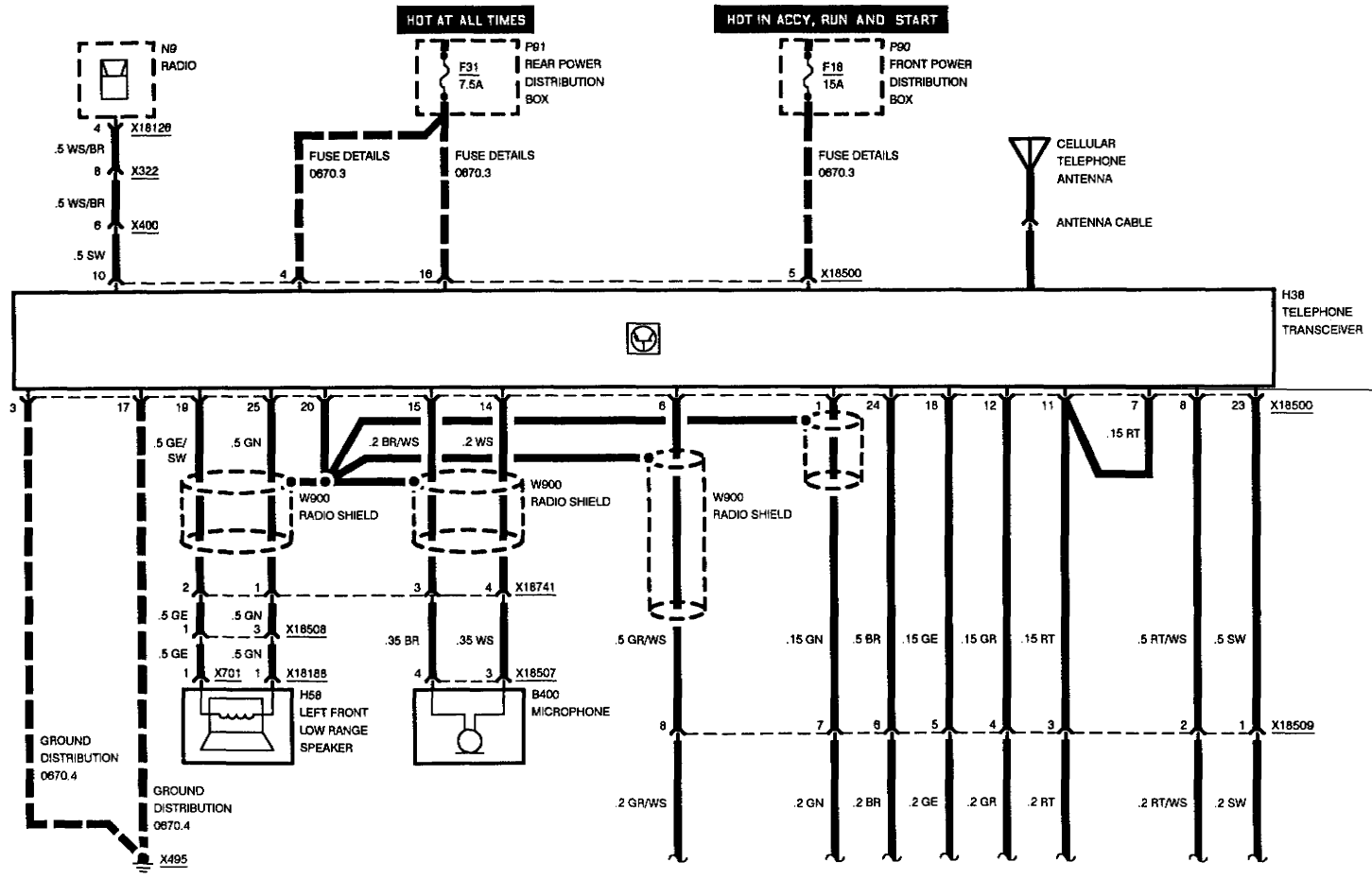



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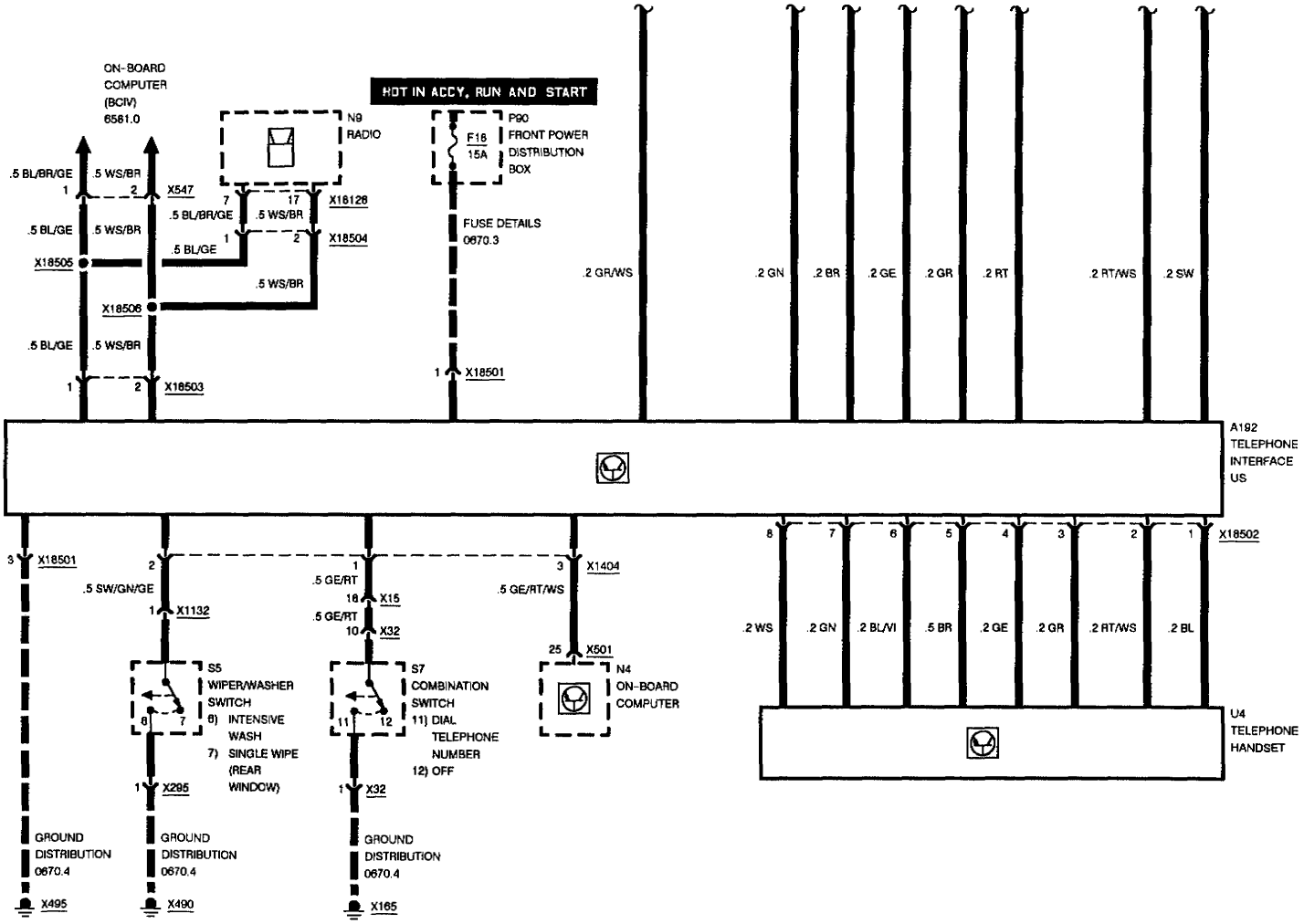
# CELLULAR TELEPHONE (PROVISIONS)

## WITH INTERFACE






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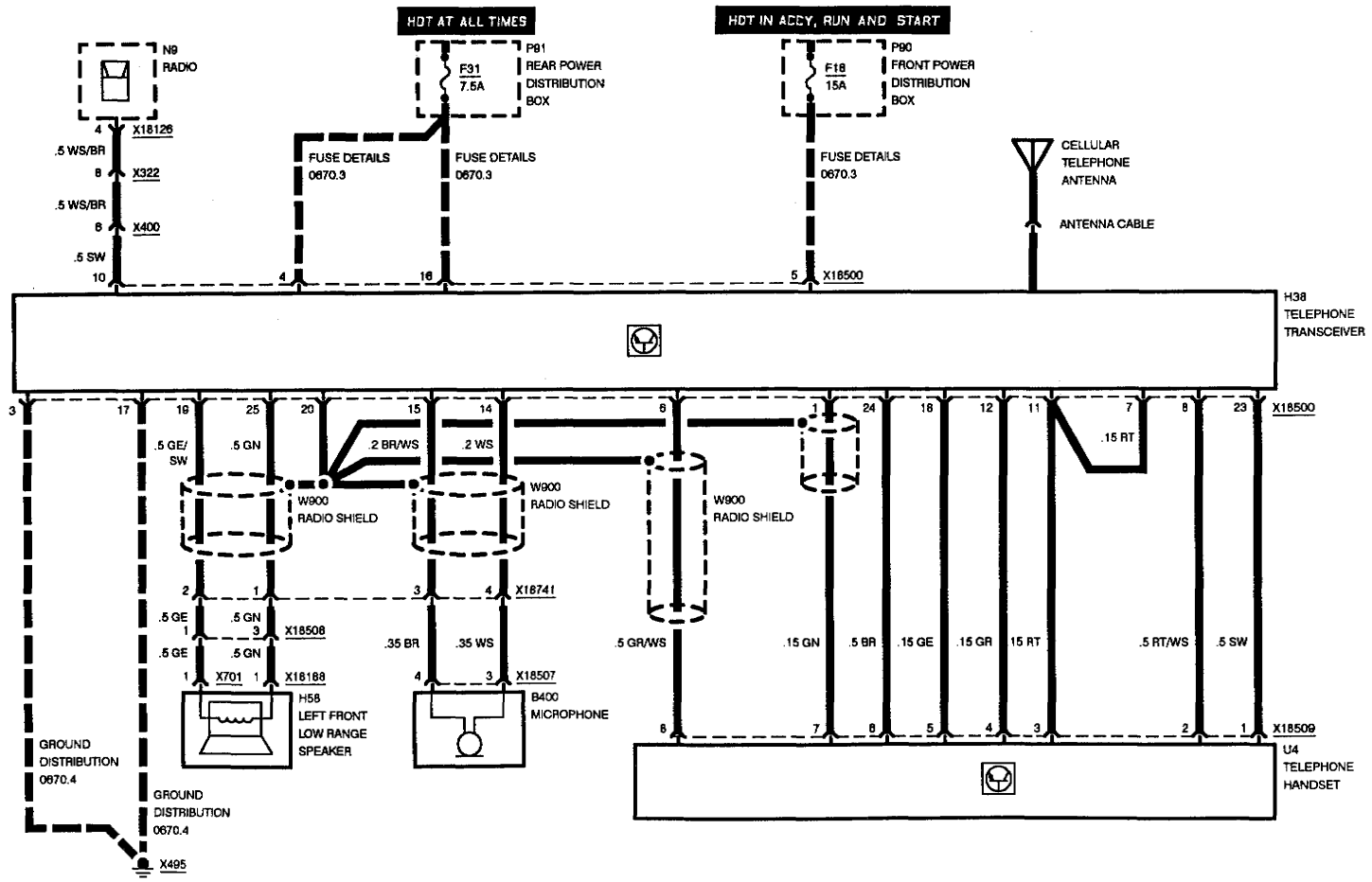





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# CELLULAR TELEPHONE (PROVISIONS)

## WITHOUT INTERFACE

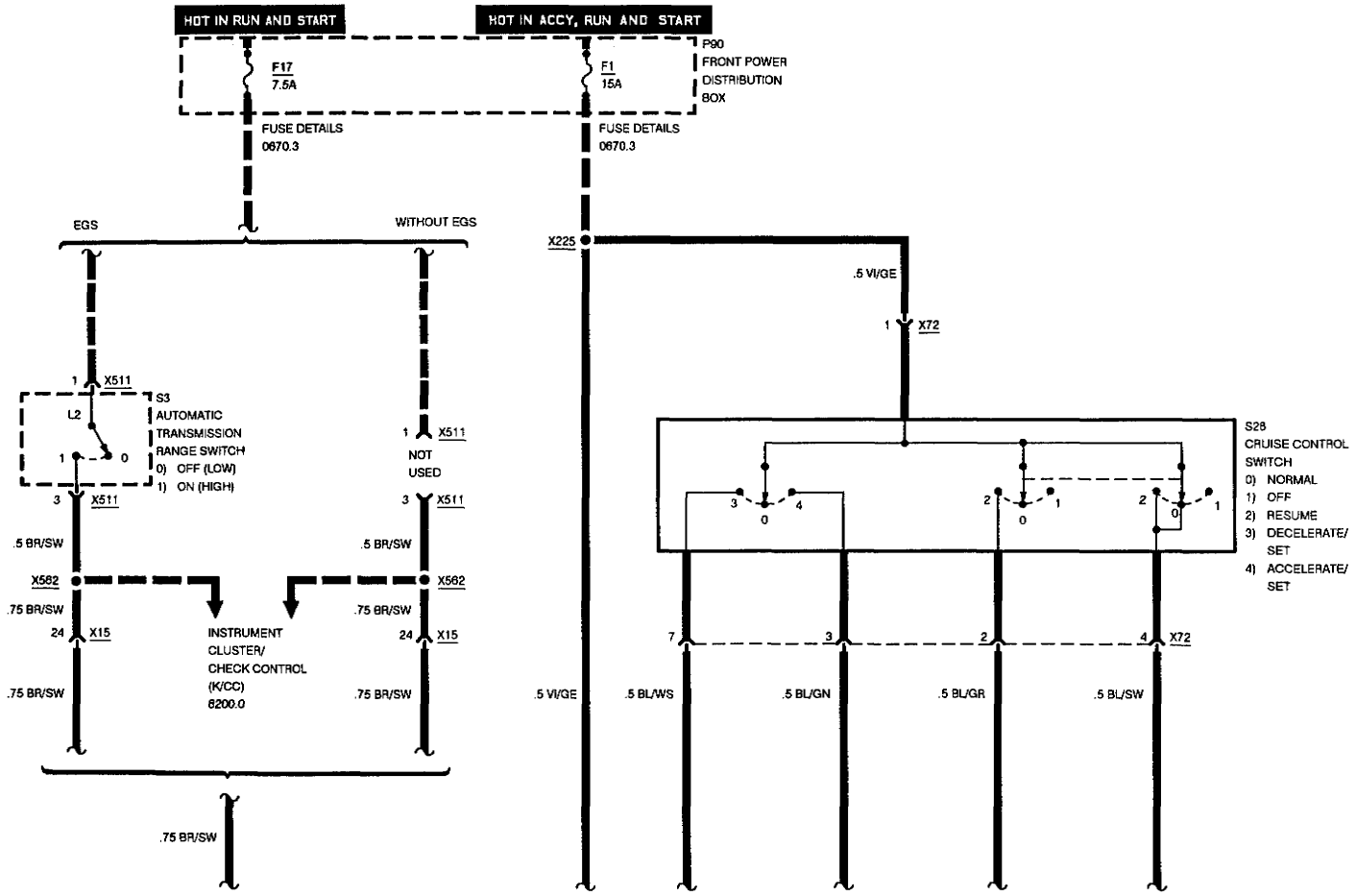




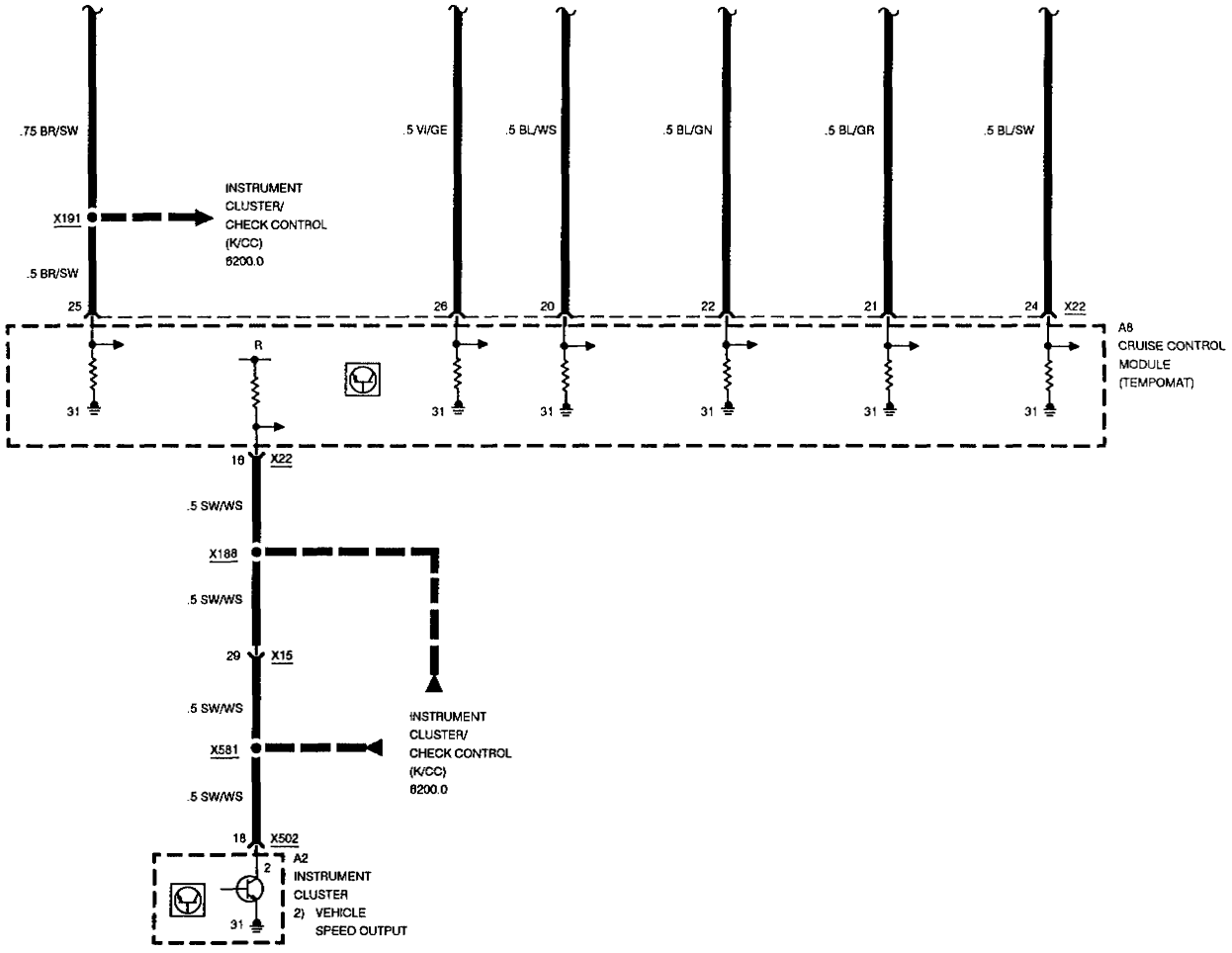

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# CRUISE CONTROL (TEMPOMAT)

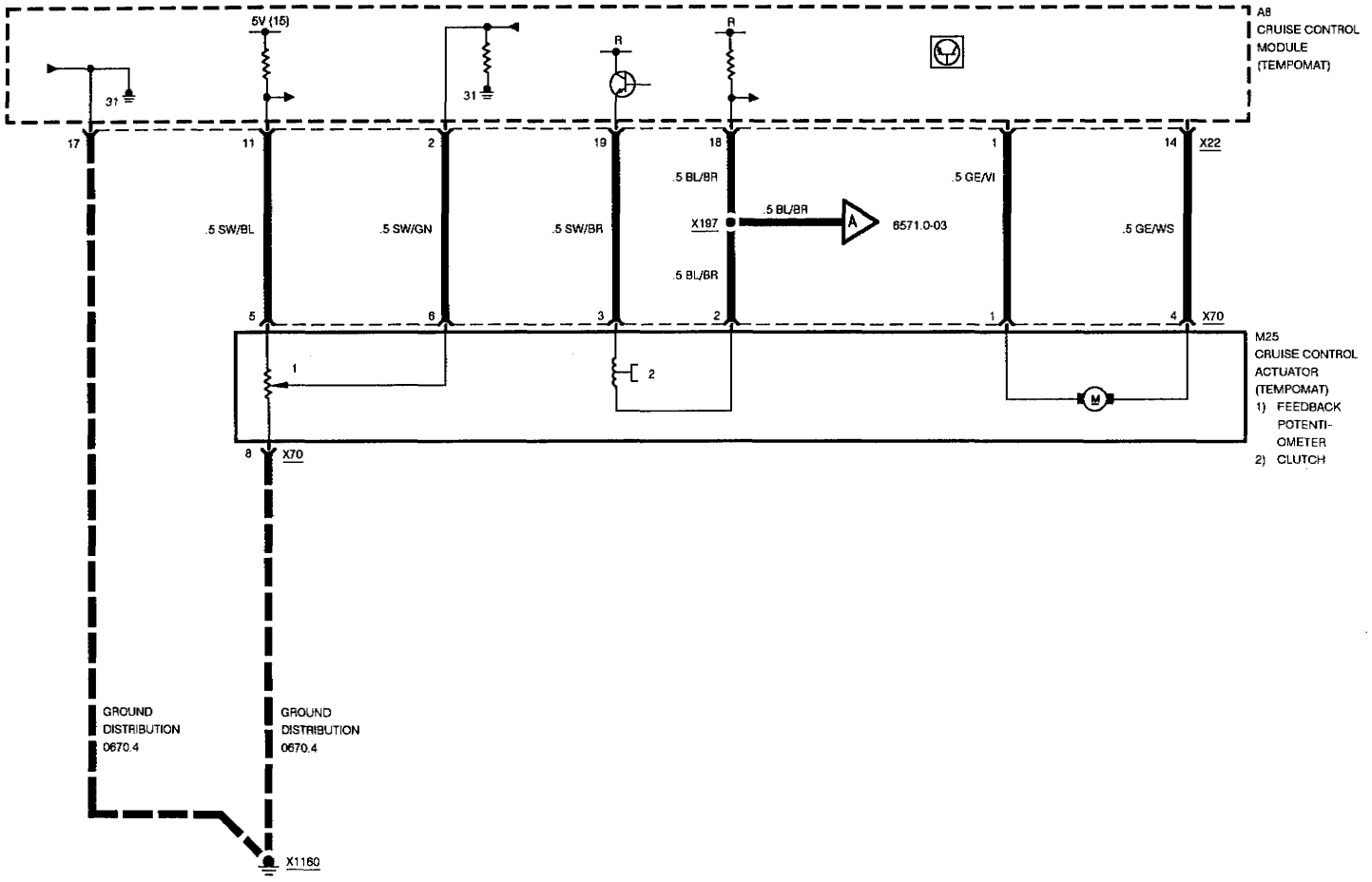



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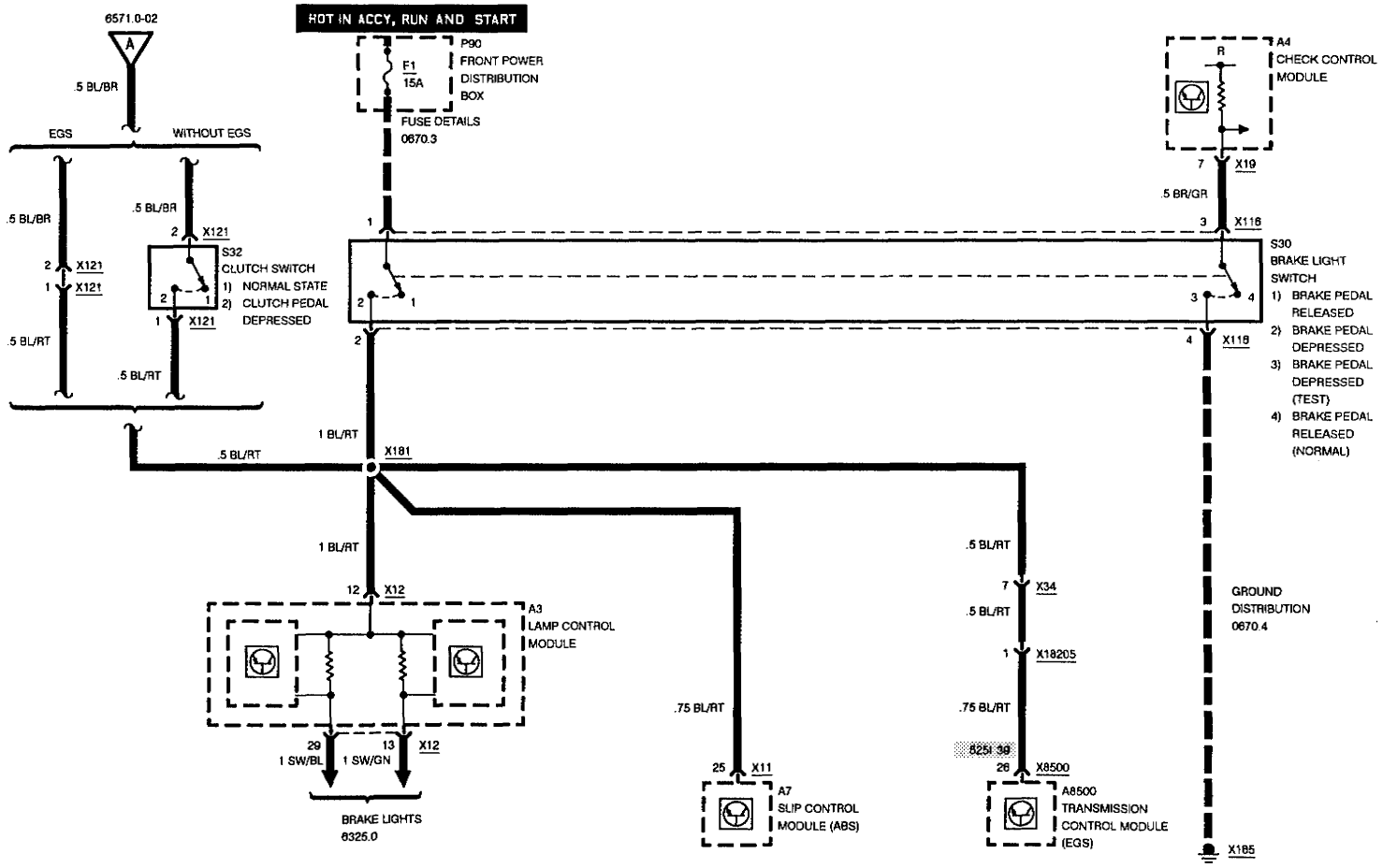
# CRUISE CONTROL (TEMPOMAT)






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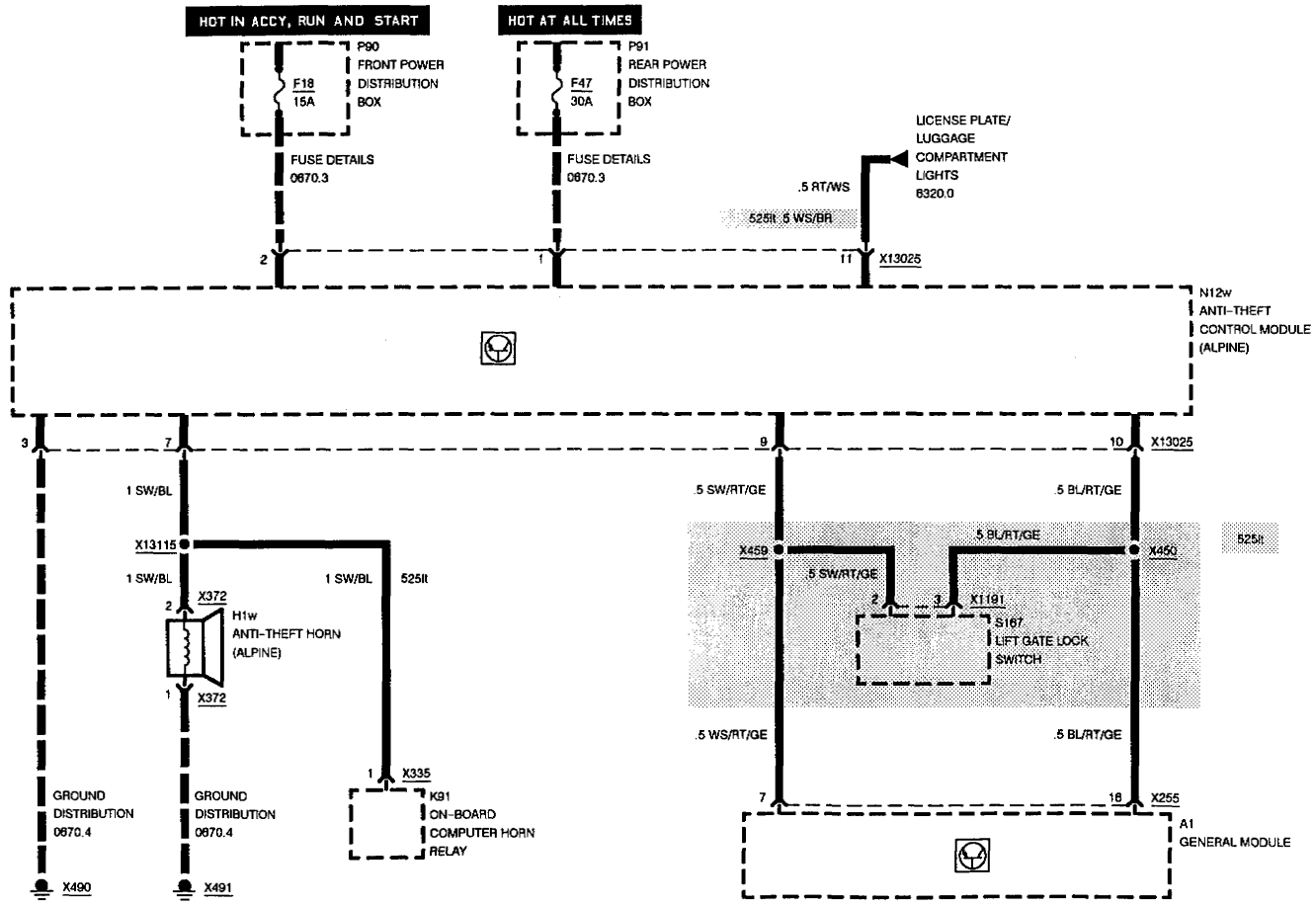
# CRUISE CONTROL (TEMPOMAT)






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# ANTI-THEFT SYSTEM (ALPINE)

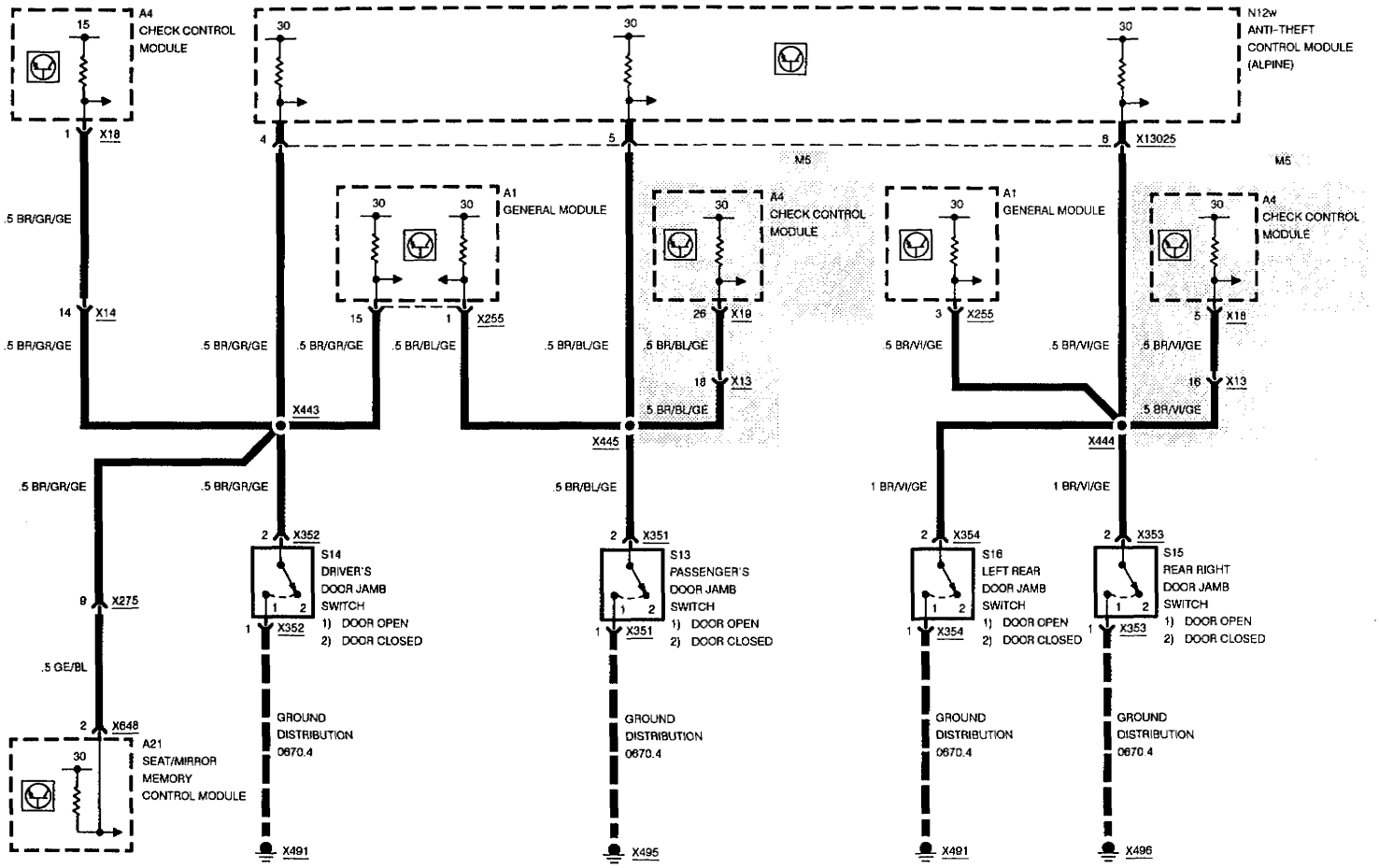





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# ANTI-THEFT SYSTEM (ALPINE)

## FRONT AND REAR DOOR JAMB SWITCHES

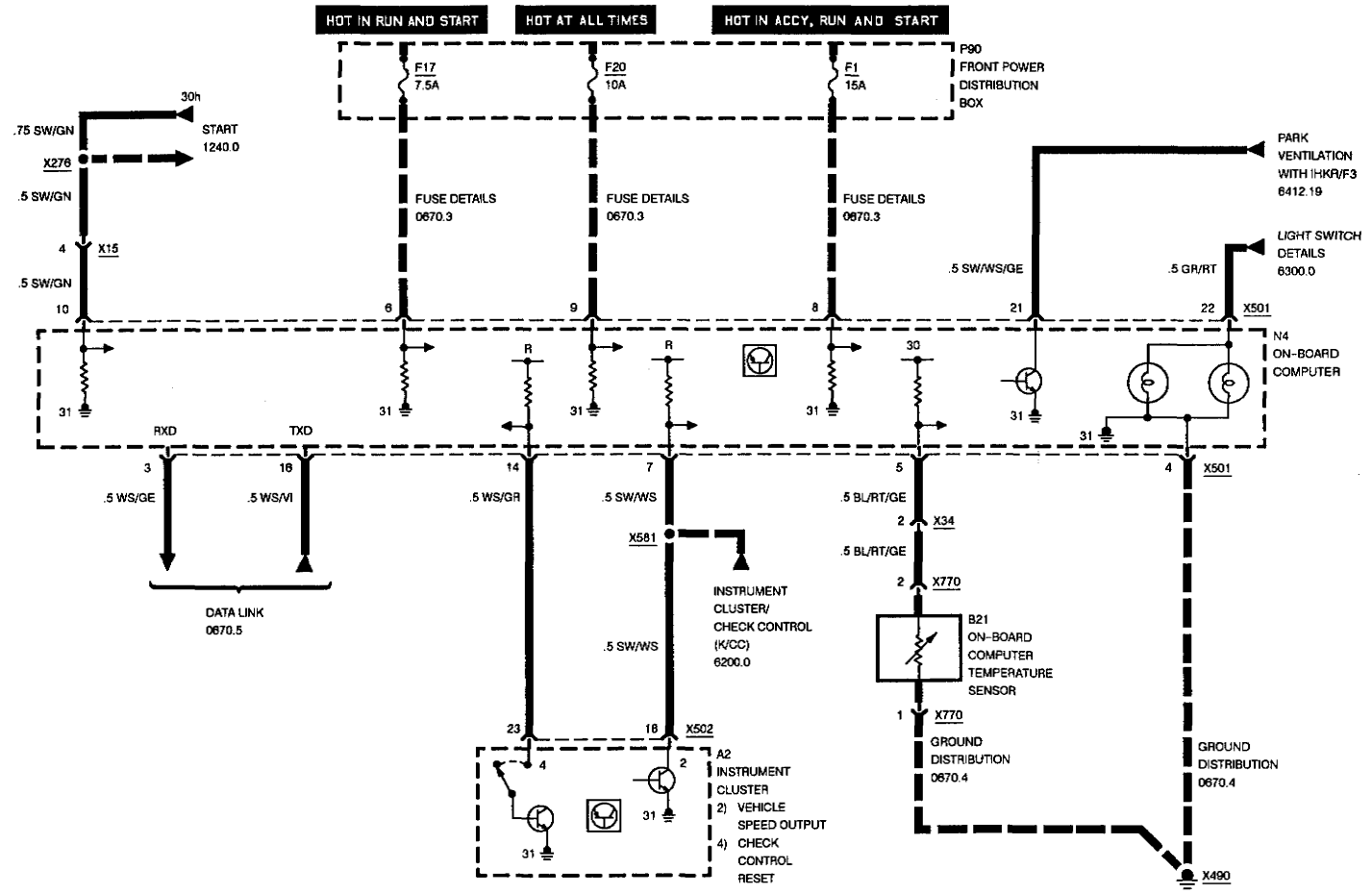





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# ON-BOARD COMPUTER (BCIV)



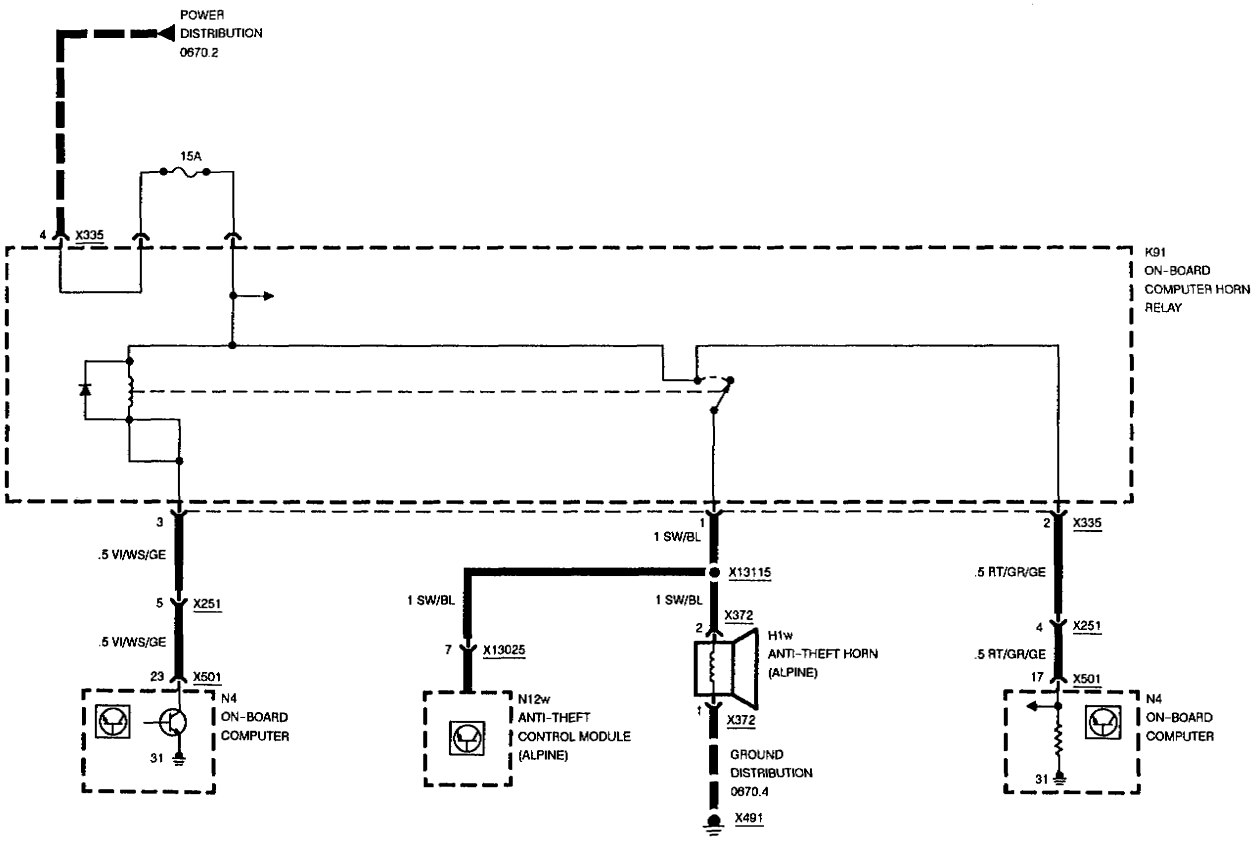



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# ON-BOARD COMPUTER (BCIV)

## ANTI-THEFT HORN, PARK VENTILATION

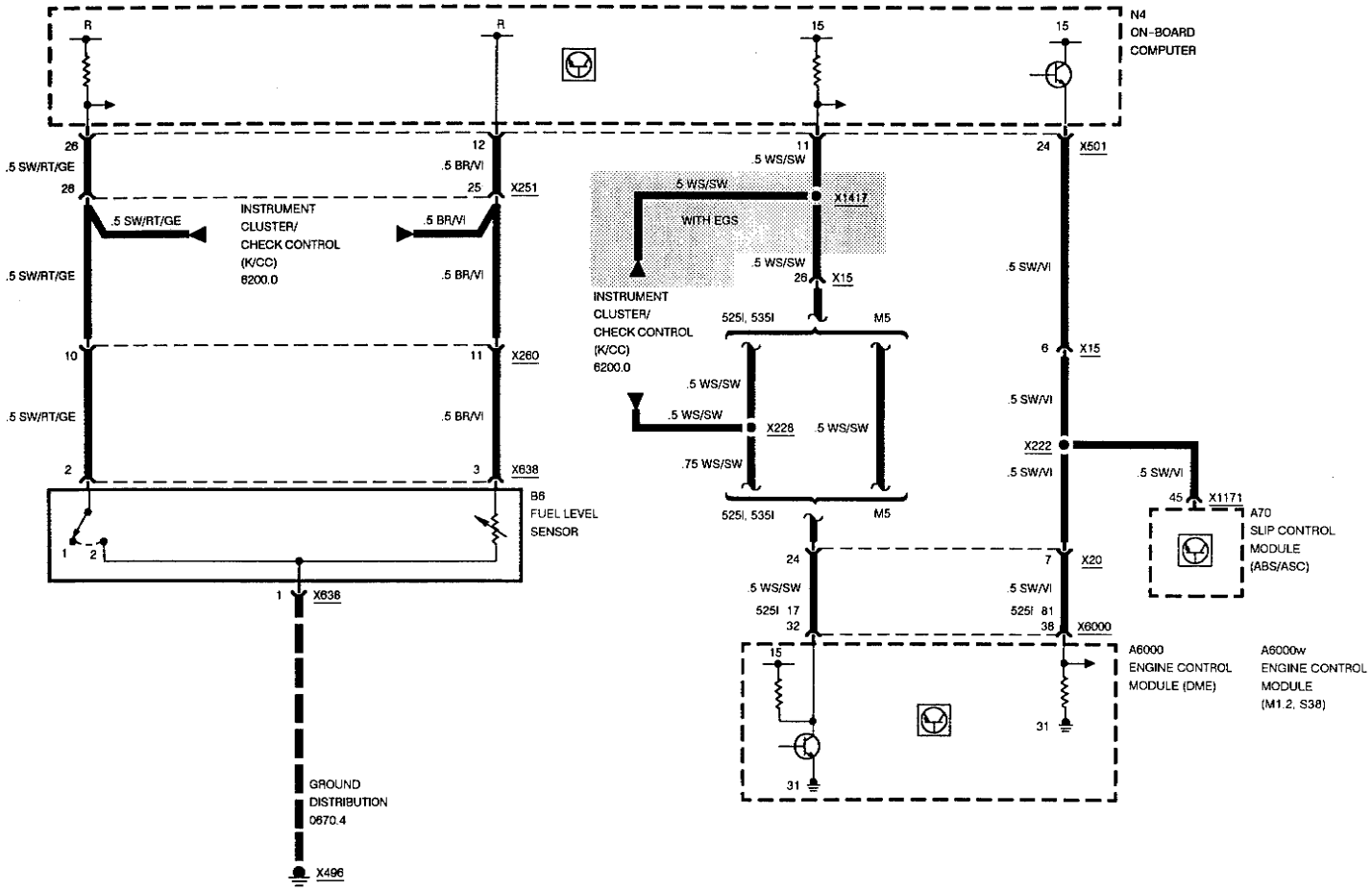





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# ON-BOARD COMPUTER (BCIV)

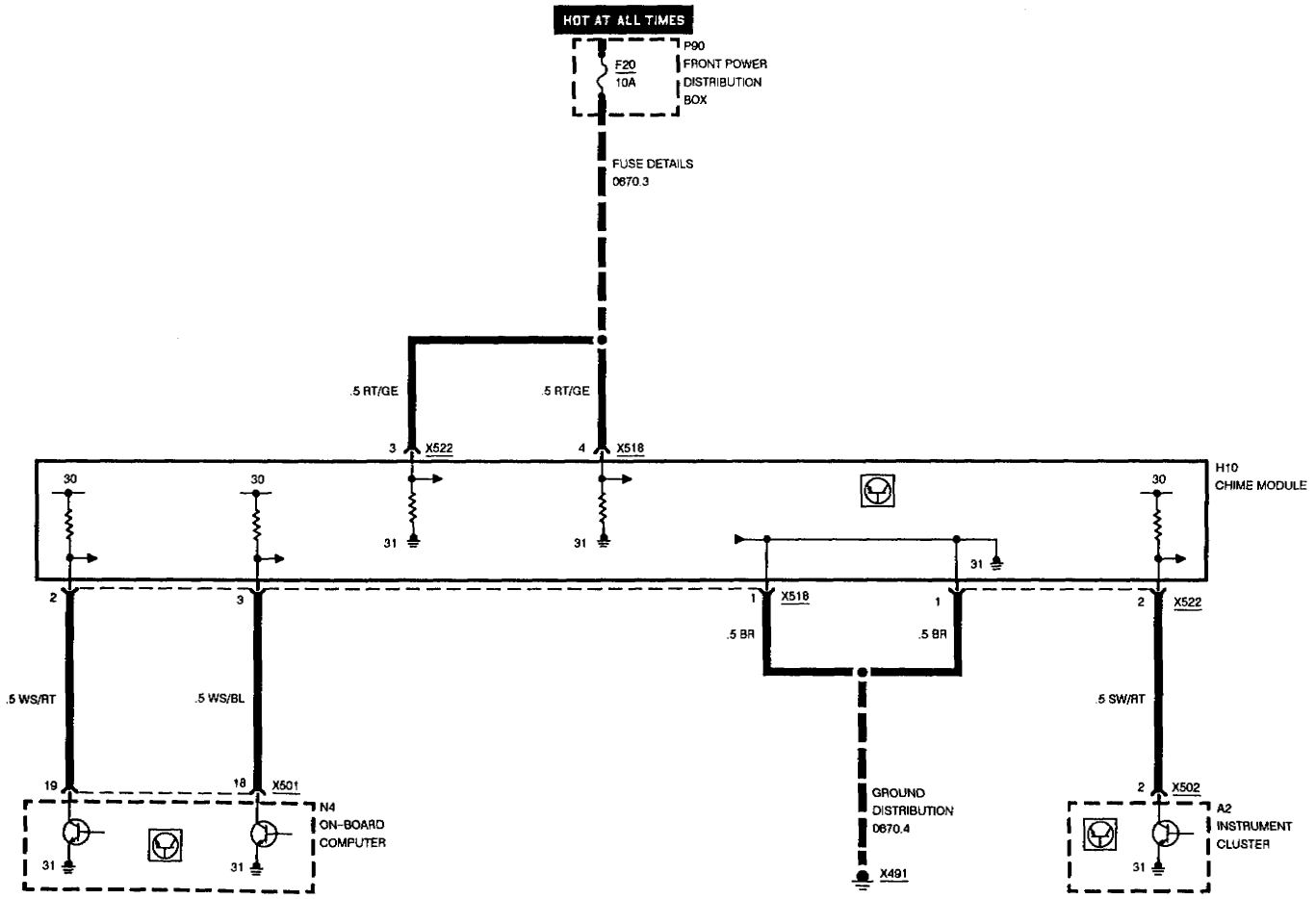
## FUEL GAUGE, CODE




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# ON-BOARD COMPUTER (BCIV)

## CHIME MODULE

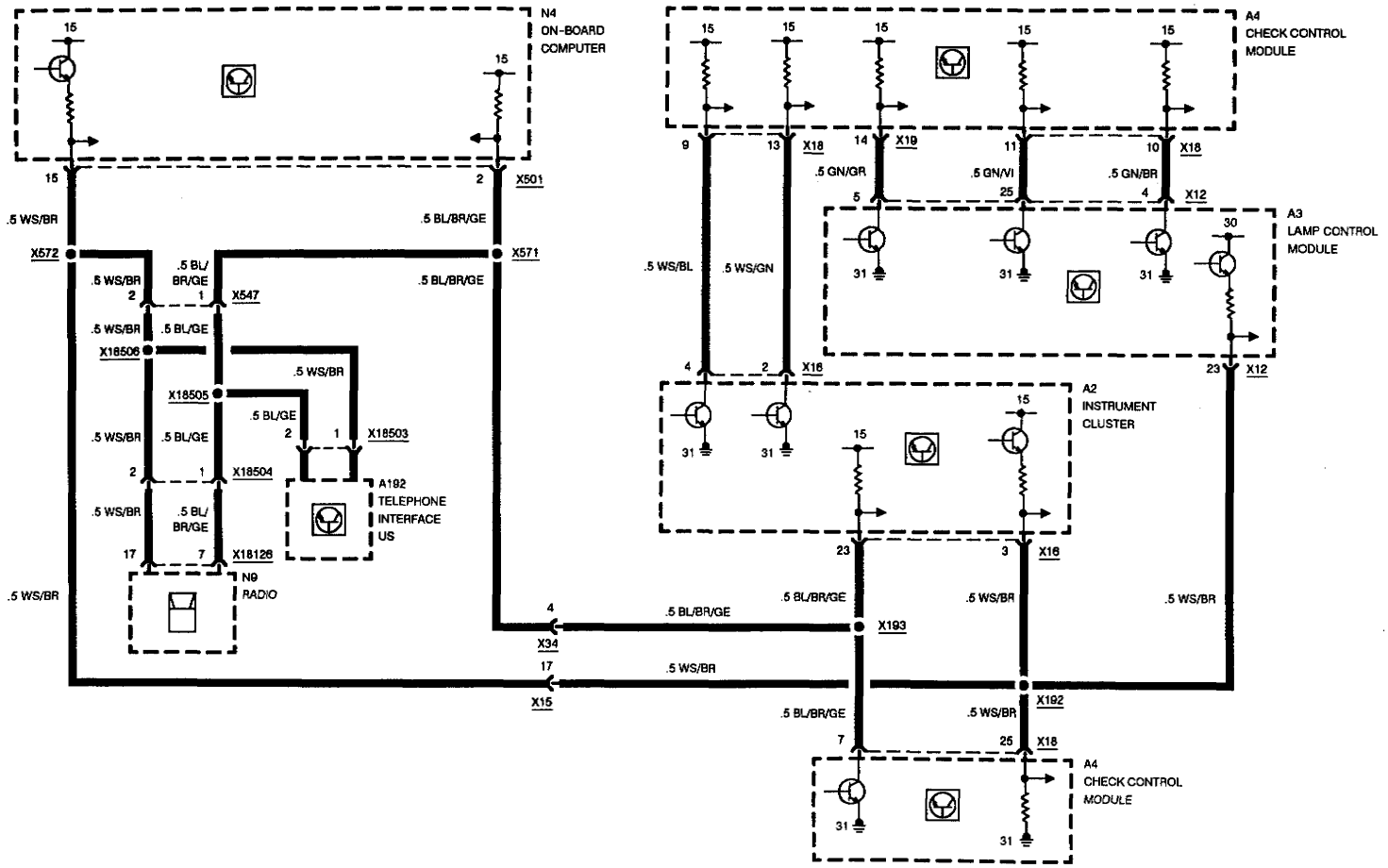





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# ON-BOARD COMPUTER (BCIV)

## DATA LINK

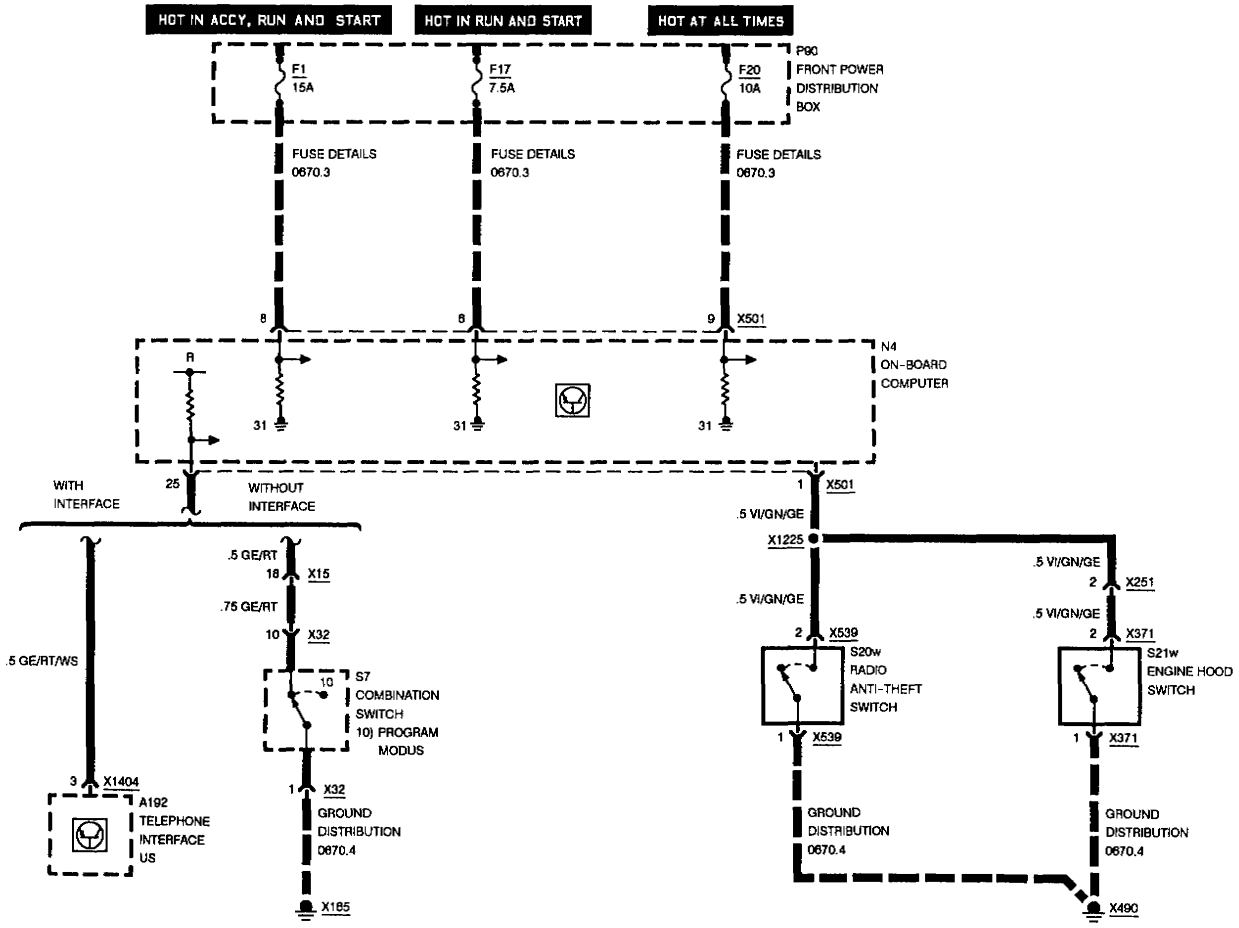





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# ON-BOARD COMPUTER (BCIV)






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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE - FIGURE 7100.0 | 8500.0 |
|---|---|---|---|---|
| A1 | GENERAL MODULE | In Rear Power Distribution Box | | |
| A2 | INSTRUMENT CLUSTER | LH side of dash | | |
| A3 | LAMP CONTROL MODULE | In Front Power Distribution Box | | |
| A4 | CHECK CONTROL MODULE | In Front Power Distribution Box | | |
| A5 | RELAY MODULE | In Rear Power Distribution Box | | |
| A8 | CRUISE CONTROL MODULE (TEMPOMAT) | Below LH side of dash | | |
| A12 | SUPPLEMENTAL RESTRAINT SYSTEM CONTROL MODULE | LH footwell | | 19-3 |
| A17 | SERVOTRONIC CONTROL MODULE | Behind LH footwell trim | | 18-2 |
| A18 | HIFI AMPLIFIER | In LH rear side of luggage compartment | | 32-1 |
| A18 | HIFI AMPLIFIER | In LH rear side of luggage compartment | | 32-2 |
| A21 | SEAT/MIRROR MEMORY CONTROL MODULE | Underside of LH front seat | | 24-1 |
| A36 | REAR WIPER/WASHER INTERVAL CONTROL MODULE | RH side of luggage compartment | | 33-2 |
| A99 | DOUBLE PANEL POWER SUNROOF CONTROL MODULE | In roof panel | | 31-1 |
| A22z | ELECTROCHROMIC REAR VIEW MIRROR | Center of windshield header | | |
| A552 | A/C COMPRESSOR CONTROL MODULE | RH side of LH footwell behind LH footwell trim | | 18-1 |
| A87w | INTEGRATED CLIMATE REGULATION CONTROL MODULE (IHKR/F3) | LH side of RH footwell | | 21-3 |

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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE – FIGURE 7100.0 8500.0 |
|---|---|---|---|
| A6000 | ENGINE CONTROL MODULE (DME) | In E-Box | |
| B1 | RIGHT FRONT SPEED SENSOR – ABS | Behind RH front wheel | |
| B2 | LEFT FRONT SPEED SENSOR – ABS | Behind LH front wheel | 06-1 |
| B3 | RIGHT REAR SPEED SENSOR – ABS | Behind RH rear wheel | 06-2 |
| B4 | LEFT REAR SPEED SENSOR – ABS | Behind LH rear wheel | |
| B6 | FUEL LEVEL SENSOR | In RH side of luggage compartment | 32-3 |
| B10 | VEHICLE SPEED SENSOR | Under rear of car | 07-2 |
| B11 | LH HEAT EXCHANGER TEMPERATURE SENSOR | LH side of IHKR/F3 Plenum | 21-2 |
| B12 | RH HEAT EXCHANGER TEMPERATURE SENSOR | LH side of RH footwell | 21-3 |
| B13 | OUTSIDE TEMPERATURE SENSOR | Rear LH side of engine compartment | 17-2 |
| B14 | EVAPORATOR TEMPERATURE SENSOR | LH side of IHKR/F3 Plenum | 21-2 |
| B15 | ELECTRO- HYDRAULIC CONVERTER (SERVOTRONIC) | Behind LH front wheel | |
| B16 | LEFT FRONT BRAKE PAD SENSOR | Behind LH front wheel | 06-1 |
| B17 | RIGHT REAR BRAKE PAD SENSOR | Behind RH rear wheel | 06-2 |
| B18 | BRAKE FLUID LEVEL SWITCH | LH side of engine compartment | 10-3 |
| B21 | ON-BOARD COMPUTER TEMPERATURE SENSOR | Under LH front bumper | 06-3 |
| B55 | DOUBLE PANEL POWER SUN ROOF SENSOR II | In roof panel | 31-1 |
| B56 | INTERIOR TEMPERATURE SENSOR | Middle of heater control panel | |
| B900 | JUMPER PLUG | In Front Power Distribution Box | 08-1 |

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# COMPONENT LOCATION CHART



| COMPONENT | | PAGE – FIGURE 7100.0 | 8500.0 |
|---|---|---|---|
| B6200 . HEATED OXYGEN SENSOR | On catalytic converter | | |
| B6201 . CYLINDER IDENTIFICATION SENSOR | Top front of engine | 11–3 | |
| B6201 . CYLINDER IDENTIFICATION SENSOR | RH side of engine (M5) | | 13–1 |
| B6202 . CRANKSHAFT POSITION/RPM SENSOR | Top front of engine | 11–3 | |
| B6202 . CRANKSHAFT POSITION/RPM SENSOR | RH side of engine (M5) | | 13–1 |
| B6203 . CRANKSHAFT POSITION/RPM SENSOR | Front of engine | | |
| B6204 . CAMSHAFT POSITION SENSOR (CYLINDER IDENTIFICATION) | Front of engine | 12–1 | |
| B6205 . INTAKE AIR TEMPERATURE SENSOR | Front of engine on coolant inlet | 14–3 | |
| B6206 . MASS AIR FLOW SENSOR | RH front of engine | | |
| B6209 . HALL EFFECT CAMSHAFT SENSOR | Top front of engine | | |
| B6217 . HOT WIRE AIR MASS METER | Top front of engine | | |
| B6230 . OIL LEVEL SENSOR | Underside of oil pan | | 07–1 |
| B6231 . OIL PRESSURE SWITCH | Rear of engine | 11–1 | |
| B6231 . OIL PRESSURE SWITCH | Rear of engine below intake manifold | 11–2 | |
| B6231 . OIL PRESSURE SWITCH | Front of engine | 12–1 | |
| B6232 . ENGINE COOLANT TEMPERATURE SENSOR | Front of engine | 12–1 | |
| B6232 . ENGINE COOLANT TEMPERATURE SENSOR | Front of engine | 12–3 | |
| B6233 . VOLUME AIR FLOW SENSOR | Top center of engine | | 14–1 |
| B6234 . ENGINE COOLANT TEMP. SENSOR (EML) | Front of engine | 12–3 | |





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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE - FIGURE 7100.0 8500.0 |
|---|---|---|---|
| B6235 | TEMPERATURE SWITCH | In E-Box | 15-1 |
| B6235 | TEMPERATURE SWITCH | In E-Box | 15-2 |
| B6236 | ENGINE COOLANT TEMPERATURE SENSOR | Front of engine | 12-1 |
| B6236 | ENGINE COOLANT TEMPERATURE SENSOR | Front of engine | 12-2 |
| B6236 | ENGINE COOLANT TEMPERATURE SENSOR | Front of engine | 12-3 |
| B6238 | OIL TEMPERATURE SENSOR | Rear LH side of engine compartment | |
| B9508 | PRESSURE SWITCH | Front RH side of engine compartment | 16-2 |
| C100 | CONTACT RING | Top of steering column | 22-1 |
| C900 | SUPPRESSION FILTER | In upper RH C-pillar | 30-2 |
| D100 | DATA LINK CONNECTOR | Rear LH side of engine compartment | 14-1 |
| E9 | REAR DEFOGGER I | In rear window | |
| E10 | REAR DEFOGGER/ANTENNA | In rear window | |
| E13 | LEFT LOW BEAM LIGHT | Front of car left | |
| E14 | RIGHT LOW BEAM LIGHT | Front of car right | |
| E15 | LEFT PARK LIGHT | Front of car left | |
| E16 | LEFT REAR LIGHT ASSEMBLY | Rear of car left | |
| E17 | RIGHT REAR LIGHT ASSEMBLY | Rear of car right | |
| E19 | RIGHT PARK LIGHT | Front of car right | |
| E26 | LEFT FOG LIGHT | Front of car left | |
| E27 | RIGHT FOG LIGHT | Front of car right | |





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# COMPONENT LOCATION CHART

| COMPONENT | | | PAGE – FIGURE 7100.0 8500.0 |
|---|---|---|---|
| E28 ... | FRONT CIGAR LIGHTER | Center console | |
| E29 ... | FRONT CIGAR LIGHTER LIGHT | Center of dash below front of console | |
| E30 ... | REAR CIGAR LIGHTER | Center console | |
| E31 ... | REAR CIGAR LIGHTER LIGHT | Center console | |
| E33 ... | TRUNK LID LIGHT | Underside of trunk lid | |
| E34 ... | FRONT DOME LIGHT/MAP READING ASSEMBLY | Center of windshield header | |
| E35 ... | DRIVER'S MAKEUP MIRROR LIGHT | Center of windshield header | |
| E36 ... | PASSENGER'S MAKEUP MIRROR LIGHT | Center of windshield header | |
| E39 ... | LEFT REAR INTERIOR LIGHT | In upper LH C-pillar | 30-3 |
| E40 ... | RIGHT REAR INTERIOR LIGHT | In upper RH C-pillar | |
| E41 ... | DASH LIGHT | Center of dash | |
| E42 ... | GLOVE BOX LIGHT | RH side of glove box above | |
| E43 ... | LEFT LICENSE PLATE LIGHT | Underside of trunk lid | |
| E44 ... | RIGHT LICENSE PLATE LIGHT | Underside of trunk lid | |
| E46 ... | LEFT TRUNK LIGHT ASSEMBLY | Underside of trunk lid | |
| E47 ... | RIGHT TRUNK LIGHT ASSEMBLY | Underside of trunk lid | |
| E48 ... | DOOR LOCK HEATER | LH front door in door at key lock assembly | |
| E51 ... | LEFT WASHER JET HEATER | On underside of engine hood | 17-3 |
| E52 ... | RIGHT WASHER JET HEATER | On underside of engine hood | 17-3 |
| E56 ... | DRIVER'S SEATBACK HEATER | In lower LH front seatback | |

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# BMW 5 COMPONENT LOCATION CHART

| COMPONENT | | | PAGE – FIGURE 7100.0 8500.0 |
|---|---|---|---|
| E57 | DRIVER'S SEAT HEATER | Underside of LH front seat | |
| E58 | PASSENGER'S SEAT HEATER | Underside of RH front seat | |
| E59 | PASSENGER'S SEATBACK HEATER | In lower RH front seatback | |
| E45y | CASSETTE BOX LIGHT | Center console | |
| E9000 | RIGHT FRONT LIGHT ASSEMBLY | Right | |
| E9001 | LEFT FRONT LIGHT ASSEMBLY | Left | |
| E9500 | TRANSMISSION RANGE SELECTOR LIGHT | Center console near gearshift lever | |
| F0 | FUSIBLE LINK | Below RH side of rear seat near battery | 29-3 |
| F52 | FUSE (10A) | In LH auxiliary relay box, engine compartment | 09-3 |
| F56 | AUTOMATIC CUT-OUT | In LH auxiliary relay box, engine compartment | 09-3 |
| G1 | BATTERY | Below RH side of rear seat | 29-3 |
| G5 | DRIVER'S AIR BAG GENERATOR | Top of steering column | 22-1 |
| G6509 | GENERATOR | In the engine compartment | |
| H2 | LEFT HORN | Front LH side of engine compartment | 16-1 |
| H3 | RIGHT HORN | Front RH side of engine compartment | 16-1 |
| H4 | RIGHT FRONT TURN LIGHT | Front of car | |
| H5 | RIGHT REAR TURN LIGHT | RH side of body rear end | |
| H6 | LEFT REAR TURN LIGHT | LH side of body rear end | |
| H7 | LEFT FRONT TURN LIGHT | Front of car | |
| H8 | RIGHT FRONT AUXILIARY TURN LIGHT | Front of car | |

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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE - FIGURE 7100.0 | 8500.0 |
|---|---|---|---|---|
| H9 | LEFT FRONT AUXILIARY TURN LIGHT | Front of car | | |
| H10 | CHIME MODULE | LH footwell | 20-2 | |
| H1w | ANTI-THEFT HORN (ALPINE) | Rear LH side of engine compartment | 17-2 | |
| H24 | LEFT BRAKE LIGHT | LH side of body rear end | | |
| H25 | LEFT TAIL LIGHT | LH side of body rear end | | |
| H26 | LEFT REAR FOG LIGHT | LH side of body rear end | | |
| H27 | LEFT BACK UP LIGHT | LH side of body rear end | | |
| H28 | RIGHT BACK UP LIGHT | RH side of body rear end | | |
| H29 | RIGHT REAR FOG LIGHT | RH side of body rear end | | |
| H30 | RIGHT TAIL LIGHT | RH side of body rear end | | |
| H31 | RIGHT BRAKE LIGHT | RH side of body rear end | | |
| H34 | HIGH LEVEL STOP LIGHT | At back of rear window shelf | | |
| H45 | RIGHT REAR SPEAKER | At back of rear window shelf | | |
| H46 | LEFT REAR SPEAKER | At back of rear window shelf | | |
| H50 | RIGHT FRONT HIGH RANGE SPEAKER | In upper RH front door | | |
| H51 | RIGHT FRONT LOW RANGE SPEAKER | Behind RH footwell speaker grille | | |
| H52 | RIGHT REAR LOW RANGE SPEAKER | Under rear window shelf | | |
| H53 | RIGHT REAR HIGH RANGE SPEAKER | Under rear window shelf | | |
| H54 | RIGHT FRONT MIDRANGE SPEAKER | In upper RH front door | | |
| H55 | LEFT FRONT MIDRANGE SPEAKER | In upper LH front door | | |





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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE – FIGURE 7100.0 | 8500.0 |
|---|---|---|---|---|
| H56 | LEFT REAR HIGH RANGE SPEAKER | Under rear window shelf | | |
| H57 | LEFT REAR LOW RANGE SPEAKER | Under rear window shelf | | |
| H58 | LEFT FRONT LOW RANGE SPEAKER | Behind LH footwell speaker grille | | |
| H59 | LEFT FRONT HIGH RANGE SPEAKER | In upper LH front door | | |
| H90 | LEFT TRUNK LIGHT | In LH forward side of luggage compartment | | |
| K1 | STARTER RELAY | In Front Power Distribution Box | | 08-1 |
| K2 | HORN RELAY | In Front Power Distribution Box | | 08-1 |
| K3 | UNLOADER RELAY, TERMINAL R | In Front Power Distribution Box | | 08-1 |
| K4 | BLOWER RELAY | In Front Power Distribution Box | | 08-1 |
| K5 | WASHER PUMP RELAY | In Front Power Distribution Box | | 07-3 |
| K8 | AUXILIARY WATER PUMP RELAY | In Front Power Distribution Box | | 08-1 |
| K9 | UNLOADER RELAY, TERMINAL 15 | In Front Power Distribution Box | | 07-3 |
| K10 | ABS RELAY | In Front Power Distribution Box | | 08-2 |
| K11 | WIPER RELAY | In Rear Power Distribution Box | | 28-3 |
| K13 | REAR DEFOGGER RELAY | In Rear Power Distribution Box | | 28-3 |
| K15 | ELECTRIC POWER PROTECTION RELAY | In Rear Power Distribution Box | | 28-3 |
| K16 | HAZARD FLASHER RELAY | In Front Power Distribution Box | | 08-2 |
| K19 | COMPRESSOR CONTROL RELAY | In Front Power Distribution Box | | 07-3 |
| K21 | NORMAL SPEED RELAY | In LH auxiliary relay box, engine compartment | | 09-3 |
| K22 | HIGH SPEED RELAY | In Front Power Distribution Box | | 09-3 |

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# COMPONENT LOCATION CHART



**COMPONENT**

PAGE – FIGURE
7100.0 8500.0

K25 ... RIGHT PARK LIGHT/LICENSE PLATE LIGHT RELAY ..... Below LH side of dash near hood release lever

K26 ... LEFT PARK LIGHT RELAY ..... Below LH side of dash near hood release lever

K31 ... CIGAR LIGHTER RELAY ..... Rear LH side of engine compartment in Front Power Distribution Box

K46 ... HIGH BEAM LIGHT RELAY ..... Rear LH side of engine compartment in Front Power Distribution Box

K47 ... FRONT FOG LIGHT RELAY ..... Rear LH side of engine compartment in Front Power Distribution Box

K48 ... LOW BEAM LIGHT RELAY ..... Rear LH side of engine compartment in Front Power Distribution Box

K52 ... WIPER/WASHER RELAY ..... In LH forward side of luggage compartment

K53 ... WIPER MOTOR RELAY ..... In LH forward side of luggage compartment

K61 ... UNLOADER RELAY, TERMINAL 61 ..... In Front Power Distribution Box ..... 08-2

K62 ... PARK HEATING RELAY ..... Below LH side of dash

K70 ... CENTRAL LOCKING TRUNK LID MOTOR RELAY (ZV) ..... RH side of luggage compartment ..... 33-2

K86 ... WIDE OPEN THROTTLE CUT-OFF RELAY ... Behind LH footwell trim ..... 18-1

K87 ... ELECTRIC STEERING COLUMN ADJUSTMENT RELAY ..... Below LH side of dash

K89 ... REAR WINDOW WASHER RELAY ..... RH side of luggage compartment ..... 33-2

K90 ... WINDOW MOTOR RELAY ..... RH side of luggage compartment ..... 33-2

K91 ... ON-BOARD COMPUTER HORN RELAY ..... Below LH side of rear seat ..... 29-1





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# BMW 5 COMPONENT LOCATION CHART

| COMPONENT | | | PAGE - FIGURE 7100.0 8500.0 |
|---|---|---|---|
| K92 | REAR WINDOW WIPER RELAY II | RH side of luggage compartment | 33-2 |
| K91w | REAR WINDOW WIPER RELAY I | RH side of luggage compartment | 33-2 |
| K6300 | ENGINE CONTROL MODULE RELAY | In E-Box | 15-1 |
| K6300 | ENGINE CONTROL MODULE RELAY | In E-Box | 15-2 |
| K6301 | CYL. 1-6 FUEL PUMP RELAY | In E-Box | 15-1 |
| K6301 | CYL. 1-6 FUEL PUMP RELAY | In E-Box | 15-2 |
| K6302 | FUEL PUMP RELAY | Rear RH side of engine compartment in E-Box | |
| K6303 | OXYGEN SENSOR RELAY | In E-Box | 15-1 |
| M2 | FUEL PUMP | In RH side of luggage compartment | 32-3 |
| M3 | WIPER MOTOR | Behind LH fresh air cowl | 09-1 |
| M4 | WASHER PUMP | Front RH side of engine compartment on washer fluid reservoir | 16-3 |
| M5 | INTENSIVE WASH PUMP | Front RH side of engine compartment on washer fluid reservoir | |
| M7 | HEADLIGHT/FOG LIGHT WASHER PUMP | Front RH side of engine compartment near windshield washer reservoir | |
| M9 | AUXILIARY FAN MOTOR | Behind front grille | 16-1 |
| M12 | DRIVER'S DOOR LOCK MOTOR | In lower LH front door | 27-1 |
| M13 | PASSENGER'S DOOR LOCK MOTOR | In lower RH front door | 27-3 |
| M14 | RIGHT REAR DOOR LOCK MOTOR | In lower RH rear door | |
| M15 | LEFT REAR DOOR LOCK MOTOR | In lower LH rear door | |
| M16 | GAS FILLER LOCK MOTOR | In RH side of luggage compartment | 33-1 |
| M17 | TRUNK LOCK MOTOR | Underside of trunk lid | 31-2 |

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# COMPONENT LOCATION CHART

| COMPONENT | | PAGE – FIGURE 7100.0 | 8500.0 |
|---|---|---|---|
| M20 ... LEFT REAR WINDOW MOTOR | In lower LH rear door | | |
| M21 ... DRIVER'S WINDOW MOTOR | In lower LH front door | 27-2 | |
| M22 ... RIGHT REAR WINDOW MOTOR | In lower RH rear door | | |
| M23 ... PASSENGER'S WINDOW MOTOR | In lower RH front door | 28-1 | |
| M24 ... SUNROOF MOTOR | Center of windshield header near rear view mirror | 23-3 | |
| M25 ... CRUISE CONTROL ACTUATOR (TEMPOMAT) | LH side of engine compartment | 09-2 | |
| M27 ... REAR LEFT HEADREST MOTOR | In upper LH front seatback | | |
| M28 ... REAR RIGHT HEADREST MOTOR | In upper RH front seatback | | |
| M30 ... BLOWER MOTOR | Rear LH side of engine compartment | 17-2 | |
| M34 ... DASH VENT MIXING FLAP MOTOR | LH side of RH footwell | 21-3 | |
| M36 ... FRESH AIR FLAP MOTOR | LH side of IHKR/F3 Plenum | 21-2 | |
| M40 ... RECIRCULATION FLAP MOTOR | LH side of IHKR/F3 Plenum | 21-2 | |
| M50 ... DRIVER'S SEAT CUSHION TILT MOTOR | Underside of LH front seat | 25-2 | |
| M51 ... DRIVER'S SEAT MOVEMENT MOTOR | Underside of LH front seat | 25-2 | |
| M52 ... DRIVER'S SEAT HEIGHT MOTOR | Underside of LH front seat | 25-2 | |
| M53 ... DRIVER'S SEATBACK RECLINER MOTOR | Underside of LH front seat | 25-2 | |
| M54 ... DRIVER'S HEADREST MOTOR | In upper LH front seatback | 28-2 | |
| M55 ... DRIVER'S SEAT LUMBAR SUPPORT MOTOR | Under LH front seat | | |
| M56 ... PASSENGER'S SEAT LUMBAR SUPPORT MOTOR | Under RH front seat | | |
| M57 ... PASSENGER'S SEAT HEADREST MOTOR | In upper RH front seatback | | |





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# COMPONENT LOCATION CHART



| COMPONENT | | PAGE - FIGURE 7100.0 8500.0 |
|---|---|---|
| M58 ... | PASSENGER'S SEATBACK RECLINER MOTOR | Under RH front seat |
| M59 ... | PASSENGER'S SEAT HEIGHT MOTOR | Under RH front seat |
| M60 ... | PASSENGER'S SEAT MOVEMENT MOTOR | Under RH front seat |
| M61 ... | PASSENGER'S SEAT CUSHION TILT MOTOR | Under RH front seat |
| M65 ... | DRIVER'S THIGH SUPPORT MOTOR | Underside of LH front seat ... 25-2 |
| M66 ... | PASSENGER'S THIGH SUPPORT MOTOR | Under RH front seat |
| M74 ... | SUN BLIND MOTOR | At back of rear window shelf |
| M80 ... | LEFT HEADLIGHT WIDENING MOTOR | Near LH headlight assembly |
| M81 ... | RIGHT HEADLIGHT WIDENING MOTOR | Near RH headlight assembly |
| M82 ... | STEERING COLUMN LENGTH ADJUST MOTOR | Bottom of steering column ... 20-3 |
| M87 ... | MOTOR DRIVE I DOUBLE PANEL POWER SUNROOF | In roof panel |
| M88 ... | MOTOR DRIVE II DOUBLE PANEL POWER SUNROOF | In roof panel ... 31-1 |
| M94 ... | REAR WINDOW WIPER MOTOR | Rear of luggage compartment on lift gate behind trim panel |
| M95 ... | REAR WINDOW WASHER PUMP | RH side of luggage compartment ... 33-3 |
| M96 ... | REAR WINDOW MOTOR | Rear of luggage compartment on lift gate behind trim panel ... 31-3 |
| M97 ... | LIFT GATE MOTOR | Rear of luggage compartment on lift gate behind trim panel ... 31-3 |
| M37a .. | AUXILIARY WATER PUMP | Rear LH side of engine compartment ... 08-3 |
| M6133 . | AIR PUMP | Top front of engine ... 11-3 |
| M6350 . | ELECTRONIC THROTTLE ACTUATOR (EML) | Top LH side of engine ... 14-1 |





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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE - FIGURE 7100.0 8500.0 |
|---|---|---|---|
| M6506 | E-BOX FAN | Rear RH side of engine compartment in E-Box | |
| M6510 | STARTER | LH side of engine compartment below intake manifold | |
| N1 | ANTI-THEFT CONTROL MODULE (DWA) | Below LH side of rear seat inside box on interior side of RH door sill | |
| N3 | DIMMER | LH side of dash | |
| N4 | ON-BOARD COMPUTER | Center of dash | |
| N6 | HEADLIGHT/FOGLIGHT CLEANING MODULE (SRA) | In LH auxiliary relay box, engine compartment | 09-3 |
| N8 | ANTENNA AMPLIFIER AM/FM | In upper LH C-pillar | 30-3 |
| N9 | RADIO | Center of dash | 22-3 |
| N17 | CRASH CONTROL MODULE | In Front Power Distribution Box | 08-2 |
| N22 | CD CHANGER | In luggage compartment | 32-2 |
| N50 | CLOCK | Center of dash | |
| N12w | ANTI-THEFT CONTROL MODULE (ALPINE) | Below RH side of rear seat | |
| N404 | DIVERSITY | In upper LH C-pillar | |
| N444 | FM AMPLIFIER HLO | In upper LH C-pillar | |
| P90 | FRONT POWER DISTRIBUTION BOX | Rear LH side of engine compartment | 14-1 |
| P91 | REAR POWER DISTRIBUTION BOX | Below LH side of rear seat | |
| P92 | AUXILIARY RELAY BOX | LH side of engine compartment | 09-2 |
| P93 | E-BOX | Rear RH side of engine compartment | |
| P95 | AUXILIARY FUSE BOX | LH side of engine compartment | |





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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE - FIGURE 7100.0 8500.0 |
|---|---|---|---|
| P96 | AUXILIARY FUSE BOX IN LUGGAGE COMPARTMENT | Below LH side of rear seat in Rear Power Distribution Box | |
| R1 | MIXING ACTUATOR | RH side of LH footwell | |
| R5 | HEADREST POTENTIOMETER | In lower LH front seatback | 28-2 |
| R6 | SEAT HEIGHT POTENTIOMETER | Underside of LH front seat | 24-3 |
| R7 | SEATBACK POTENTIOMETER | Underside of LH front seat | 24-3 |
| R8 | SEAT CUSHION REAR HEIGHT POTENTIOMETER | Underside of LH front seat | 24-2 |
| R9 | SEAT CUSHION MOVEMENT POTENTIOMETER | Underside of LH front seat | 24-2 |
| R10 | PEDAL POSITION SENSOR | On rear of throttle body | 21-1 |
| R11 | BLOWER RESISTORS | LH side of IHKR/F3 Plenum | 21-2 |
| R15 | THIGH SUPPORT POTENTIOMETER | In lower LH front seatback | |
| R6240 | RESISTOR | In the engine compartment | |
| R6252 | ACCELERATOR PEDAL POSITION SENSOR | Top front of engine compartment | |
| R6253 | ACCELERATOR PEDAL POSITION SENSOR | Top front of engine compartment | |
| S3 | AUTOMATIC TRANSMISSION RANGE SWITCH | Front of gearshift selector | 23-2 |
| S4 | HORN SWITCH | Top of steering column | |
| S5 | WIPER/WASHER SWITCH | Top of steering column | |
| S6 | ASC SWITCH | Center of console | |
| S7 | COMBINATION SWITCH | Top of steering column | |
| S8 | LIGHT SWITCH | LH side of dash | |

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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE - FIGURE 7100.0 8500.0 |
|---|---|---|---|
| S9 | LIGHT SWITCH | LH side of dash | |
| S10 | FOG LIGHT SWITCH | LH side of dash | |
| S12 | MEMORY MIRRORS CONTROL SWITCH | In upper LH front door | |
| S13 | PASSENGER'S DOOR JAMB SWITCH | Ahead of RH rear door | 30-1 |
| S14 | DRIVER'S DOOR JAMB SWITCH | Ahead of LH rear door | 30-1 |
| S15 | REAR RIGHT DOOR JAMB SWITCH | Rear RH door pillar | 30-1 |
| S16 | LEFT REAR DOOR JAMB SWITCH | LH rear door jamb | 30-1 |
| S17 | MIRROR CONTROL SWITCH | In upper LH front door | |
| S18 | HAZARD SWITCH | Center console below | |
| S23 | TRUNK LOCK SWITCH (DWA) | Underside of trunk lid | 31-2 |
| S27 | INERTIA SWITCH | Below LH side of rear seat | 29-1 |
| S28 | CRUISE CONTROL SWITCH | Top of steering column behind steering wheel | |
| S30 | BRAKE LIGHT SWITCH | LH side of dash on brake pedal support bracket | 19-1 |
| S31 | PARK BRAKE SWITCH | Below center of console | |
| S32 | CLUTCH SWITCH | LH side of dash on clutch pedal support bracket | 19-1 |
| S36 | TEMPERATURE SWITCH | RH top of radiator | 15-3 |
| S37 | GLOVE BOX LIGHT SWITCH | LH side of glove box | 23-1 |
| S38 | SUNROOF SWITCH | Center of windshield header near rear view mirror | 23-3 |
| S39 | SUNROOF POSITION SWITCH | Center of windshield header near rear view mirror | 23-3 |
| S40 | FRONT CONSOLE WINDOW SWITCH ASSEMBLY | Center console | |





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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE - FIGURE 7100.0 8500.0 |
|---|---|---|---|
| S41 | LEFT REAR WINDOW SWITCH | In upper LH rear door | |
| S42 | RIGHT REAR WINDOW SWITCH | In upper RH rear door | |
| S43 | DRIVER'S WINDOW LIMIT SWITCH | In upper LH front door | |
| S44 | PASSENGER'S WINDOW LIMIT SWITCH | In upper RH front door | |
| S45 | LEFT REAR WINDOW LIMIT SWITCH | In upper LH rear door | |
| S46 | RIGHT REAR WINDOW LIMIT SWITCH | In upper RH rear door | |
| S47 | DRIVER'S DOOR LOCK SWITCH | LH front door behind door panel | |
| S48 | DRIVER'S DOOR HANDLE SWITCH | LH front door behind door panel | |
| S49 | PASSENGER'S DOOR LOCK SWITCH | RH front door | |
| S51 | DRIVER'S SEAT SEAT CONTROL SWITCH | In rear of console | |
| S52 | DRIVER'S SEAT LUMBAR SWITCH | In rear of console | |
| S53 | DRIVER'S SEAT, SEAT HEATER SWITCH | In rear of console | |
| S54 | PASSENGER'S SEAT, SEAT HEATER SWITCH | In rear of console | |
| S55 | PASSENGER'S SEAT LUMBAR SUPPORT SWITCH | In rear of console | |
| S56 | PASSENGER'S SEAT, SEAT CONTROL SWITCH | In rear of console | |
| S57 | MEMORY SEAT MIRRORS SWITCH | In rear of console | |
| S58 | DRIVER'S SEAT BELT SWITCH | In LH front seat belt buckle | |
| S61 | TRUNK LID SWITCH | Underside of trunk lid left | |
| S63 | ENGINE COOLANT LEVEL SWITCH | Top rear of engine | 14-1 |
| S63 | ENGINE COOLANT LEVEL SWITCH | Top center of engine ahead of oil fill cap | 14-2 |





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# COMPONENT LOCATION CHART

| COMPONENT | | | PAGE – FIGURE 7100.0 8500.0 |
|---|---|---|---|
| S63 ... | ENGINE COOLANT LEVEL SWITCH | Front RH side of engine compartment | 16-2 |
| S64 ... | WASHER FLUID LEVEL SWITCH | Front RH side of engine compartment on washer fluid reservoir | 16-3 |
| S68 ... | LEFT REAR SEAT HEATER SWITCH | In rear console | |
| S69 ... | RIGHT REAR SEAT HEATER SWITCH | In rear console | |
| S71 ... | LEFT FRONT IMPACT SENSOR | Ahead of LH side shock tower | 09-2 |
| S72 ... | RIGHT FRONT IMPACT SENSOR | RH side of engine compartment ahead of RH side shock tower | |
| S75 ... | BLOWER SWITCH | Center of dash middle of heater control panel | |
| S76 ... | REAR WINDOW DEFOGGER SWITCH | Center of dash middle of heater control panel | |
| S77 ... | DRIVER'S MAKEUP MIRROR SWITCH | Above LH sun visor | |
| S78 ... | PASSENGER'S MAKEUP MIRROR SWITCH | Under roof center panel | |
| S85 ... | LEFT REAR SEAT CONTACT | Below LH side of rear seat | |
| S86 ... | RIGHT REAR SEAT CONTACT | Below RH side of rear seat | |
| S92 ... | BACK UP LIGHT SWITCH (MANUAL TRANSMISSION) | Below center console | |
| S93 ... | DRIVER'S THIGH SUPPORT SWITCH | LH front seat left | |
| S94 ... | PASSENGER'S THIGH SUPPORT SWITCH | RH front seat | |
| S147 .. | REAR WINDOW OPENING SWITCH | Rear of luggage compartment on lift gate behind trim panel | |
| S167 .. | LIFT GATE LOCK SWITCH | Rear of luggage compartment on lift gate in upper LH A-pillar | |
| S170 .. | REAR WINDOW LIMIT SWITCH | Rear of luggage compartment on lift gate behind trim panel | |
| S171 .. | LIFT GATE LIMIT SWITCH | Rear of luggage compartment on lift gate behind trim panel | |





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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE – FIGURE 7100.0 8500.0 |
|---|---|---|---|
| S176 | REAR WIPER/WASHER FLUID LEVEL SWITCH | RH side of luggage compartment | 33-3 |
| S198 | JET HEATER THERMOSWITCH | Front LH side of engine compartment | |
| S21w | ENGINE HOOD SWITCH | Back of LH side shock tower | 08-2 |
| S119z | STEERING COLUMN POSITION SWITCH | Below LH side of dash | |
| S134w | IHKR/F3 CONTROL PANEL | RH side of LH footwell | |
| S135w | IHKR/F3 SWITCHING UNIT | RH side of LH footwell | |
| S8503 | PROGRAM SWITCH | Below center console | |
| S8507 | KICK-DOWN SWITCH | RH side of LH footwell | |
| S8514 | TRANSMISSION CONTROL PROGRAM SELECTION SWITCH (EGS) | Below center console | |
| T6151 | CYL. 1 IGNITION COIL | RH side of engine | 13-2 |
| T6152 | CYL. 2 IGNITION COIL | RH side of engine | 13-2 |
| T6153 | CYL. 3 IGNITION COIL | RH side of engine | 13-2 |
| T6154 | CYL. 4 IGNITION COIL | LH side of engine | 13-2 |
| T6155 | CYL. 5 IGNITION COIL | LH side of engine | 13-2 |
| T6156 | CYL. 6 IGNITION COIL | LH side of engine | 13-2 |
| U4 | TELEPHONE HANDSET | Below center console | |
| V6 | UNCOUPLING DIODE | RH side of dash behind glove box | |
| V4y | DAYTIME RUNNING LIGHTS CODING DIODES CANADA | Behind LH side of dash center of windshield header | |

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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE - FIGURE 7100.0 | 8500.0 |
|---|---|---|---|---|
| X1 | B+ JUNCTION POINT | Below LH side of dash | | |
| X11 | CONNECTOR (35-PINS, NATURAL) | Rear RH side of engine compartment in E-Box | | 00-3 |
| X12 | CONNECTOR (35-PINS, BLACK) | Rear LH side of engine compartment in Front Power Distribution Box | | 00-2 |
| X13 | CONNECTOR (21-PINS, WHITE) | Behind LH footwell trim | 18-3 | 01-3 |
| X14 | CONNECTOR (30-PINS, YELLOW) | Behind LH footwell trim | 18-3 | 00-4 |
| X15 | CONNECTOR (30-PINS, WHITE) | LH footwell | 20-1 | 00-4 |
| X16 | CONNECTOR (26-PINS, NATURAL) | Rear of A2 instrument cluster | 22-2 | 01-1 |
| X17 | CONNECTOR (6-PINS, BROWN) | Rear of A2 instrument cluster | 22-2 | 01-4 |
| X18 | CONNECTOR (26-PINS, BLUE) | Rear LH side of engine compartment in Front Power Distribution Box | | 01-1 |
| X19 | CONNECTOR (26-PINS, GREEN) | Rear LH side of engine compartment in Front Power Distribution Box | | 01-1 |
| X20 | CONNECTOR (25-PINS, BLACK) | Rear LH side of engine compartment | 08-3 | 03-4 |
| X22 | CONNECTOR (26-PINS, BLUE) | Rear RH side of engine compartment in E-Box | | 01-1 |
| X31 | CONNECTOR (12-PINS, BLACK) | LH side of engine compartment | 10-3 | |
| X32 | CONNECTOR (12-PINS, WHITE) | LH footwell | 20-1 | 07-3 |
| X33 | CONNECTOR (12-PINS, BLACK) | LH footwell | 20-1 | 06-4 |
| X34 | CONNECTOR (12-PINS, WHITE) | LH footwell | 19-3 | 06-4 |
| X35 | CONNECTOR (21-PINS, BLACK) | LH footwell | 19-3 | 01-3 |
| X51 | CONNECTOR (10-PINS, BLACK) | Rear LH side of engine compartment in Front Power Distribution Box | | 15-2 |
| X52 | CONNECTOR (9-PINS, BLACK) | In LH auxiliary relay box, engine compartment | | 02-3 |
| X54 | CONNECTOR (9-PINS, BLACK) | Rear LH side of engine compartment in Front Power Distribution Box | | 02-3 |





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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE 7100.0 | FIGURE 8500.0 |
|---|---|---|---|---|
| X55 | CONNECTOR (9-PINS, BLACK) | Rear LH side of engine compartment in Front Power Distribution Box | | 02-3 |
| X56 | CONNECTOR (10-PINS, BLACK) | Rear LH side of engine compartment in Front Power Distribution Box | | 15-2 |
| X57 | CONNECTOR (9-PINS, BLACK) | Rear LH side of engine compartment in Front Power Distribution Box | | 02-3 |
| X58 | CONNECTOR (9-PINS, BLACK) | Rear LH side of engine compartment in Front Power Distribution Box | | 02-3 |
| X61 | CONNECTOR (9-PINS, BLACK) | In LH auxiliary relay box, engine compartment | 09-3 | 02-3 |
| X63 | CONNECTOR (9-PINS, BLACK) | Rear LH side of engine compartment in Front Power Distribution Box | | 02-3 |
| X64 | CONNECTOR (9-PINS, BLACK) | Rear LH side of engine compartment in Front Power Distribution Box | | 02-3 |
| X65 | CONNECTOR (9-PINS, BLACK) | Rear LH side of engine compartment in Front Power Distribution Box | | 02-3 |
| X67 | CONNECTOR (12-PINS, BLACK) | Front LH side of engine compartment near front left turn signal assembly | | 01-2 |
| X69 | CONNECTOR (25-PINS, BLACK) | Rear LH side of engine compartment | 08-3 | 03-4 |
| X70 | CONNECTOR (8-PINS, BLACK) | LH side of engine compartment ahead of LH side shock tower RH side of differential | | 01-5 |
| X72 | CONNECTOR (8-PINS, WHITE) | LH footwell | 19-3 | 13-2 |
| X73 | CONNECTOR (8-PINS, BLACK) | LH footwell | 21-1 | 03-1 |
| X74 | CONNECTOR (12-PINS, ORANGE) | LH footwell | 19-2 | 08-2 |
| X76 | CONNECTOR (6-PINS, BLACK) | Rear RH side of engine compartment in E-Box | | 04-1 |
| X79 | CONNECTOR (3-PINS, BLACK) | Rear RH side of engine compartment in E-Box | | 04-4 |
| X81 | CONNECTOR (3-PINS, ORANGE) | Ahead of LH side shock tower | 09-2 | 02-5 |
| X82 | CONNECTOR (3-PINS, BLACK) | Front of engine compartment behind front grille | | 04-5 |
| X83 | CONNECTOR (3-PINS, YELLOW) | Below LH side of dash | 18-2 | 04-5 |

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# COMPONENT LOCATION CHART

| COMPONENT | | | PAGE – FIGURE 7100.0 | 8500.0 |
|---|---|---|---|---|
| X84 | CONNECTOR (3-PINS, YELLOW) | Behind LH footwell trim | 18-2 | |
| X85 | CONNECTOR (3-PINS, BLACK) | LH side of engine compartment | | |
| X86 | CONNECTOR (3-PINS, ORANGE) | RH side of engine compartment ahead of RH side shock tower | | 04-4 |
| X87 | CONNECTOR (3-PINS, BLACK) | Front RH side of engine compartment near windshield washer reservoir RH top of radiator | | 02-5 |
| X88 | CONNECTOR (2-PINS, BLACK) | Below LH side of dash LH side of steering column | | |
| X105 | CONNECTOR (2-PINS, GRAY) | On underside of engine hood | 17-3 | |
| X106 | CONNECTOR (2-PINS, GRAY) | On underside of engine hood | 17-3 | |
| X107 | CONNECTOR (2-PINS, GRAY) | Front RH side of engine compartment on washer fluid reservoir | | |
| X109 | CONNECTOR (2-PINS, BLACK) | Front RH side of engine compartment on washer fluid reservoir | | |
| X110 | CONNECTOR (2-PINS, GRAY) | Front RH side of engine compartment on washer fluid reservoir | | |
| X111 | CONNECTOR (2-PINS, BLACK) | LH side of engine compartment | 10-3 | |
| X112 | CONNECTOR (2-PINS, BLACK) | Top center of engine ahead of oil fill cap (with EML) | | |
| X114 | CONNECTOR (2-PINS, BLACK) | LH side of engine compartment | 10-3 | |
| X116 | CONNECTOR (4-PINS, BLACK) | LH side of dash on brake pedal support bracket | | |
| X118 | CONNECTOR (2-PINS, BLACK) | Behind LH front wheel | 06-1 | |
| X120 | CONNECTOR (2-PINS, BLACK) | LH side of engine compartment | 10-3 | |
| X121 | CONNECTOR (2-PINS, WHITE) | LH side of dash on clutch pedal support bracket | | |
| X122 | CONNECTOR (2-PINS, BLACK) | Rear LH side of engine compartment | 08-3 | |
| X123 | CONNECTOR (2-PINS, GRAY) | Front RH side of engine compartment near windshield washer reservoir | | |





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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE - FIGURE 7100.0 | 8500.0 |
|---|---|---|---|---|
| X126 | CONNECTOR (2-PINS, WHITE) | Front RH side of engine compartment ahead of wheel well | 17-1 | |
| X127 | CONNECTOR (2-PINS, BLACK) | Front RH side of engine compartment ahead of wheel well | 17-1 | |
| X128 | CONNECTOR (2-PINS, BLACK) | LEFT FRONT TURN LIGHT, H7 | | |
| X129 | CONNECTOR (2-PINS, GRAY) | LEFT PARK LIGHT, E15 | | |
| X130 | CONNECTOR (2-PINS, YELLOW) | LEFT LOW BEAM LIGHT, E13 | | |
| X131 | CONNECTOR (2-PINS, WHITE) | LEFT HIGH BEAM LIGHT, E11 | | |
| X132 | CONNECTOR (2-PINS, BLACK) | LEFT HORN, H2 | | |
| X133 | CONNECTOR (2-PINS, BLACK) | RIGHT HORN, H3 | | |
| X134 | CONNECTOR (2-PINS, WHITE) | RIGHT HIGH BEAM LIGHT, E12 | | |
| X135 | CONNECTOR (2-PINS, YELLOW) | RIGHT LOW BEAM LIGHT, E14 | | |
| X136 | CONNECTOR (2-PINS, GRAY) | RIGHT PARK LIGHT, E19 | | |
| X137 | CONNECTOR (2-PINS, BLACK) | RIGHT FRONT TURN LIGHT, H4 | | |
| X159 | CONNECTOR (10-PINS, BLACK) | In lower LH front door | 27-2 | |
| X160 | CONNECTOR (10-PINS, BLACK) | PASSENGER'S SIDE MEMORY MIRROR, Y10 | 27-3 | |
| X163 | CONNECTOR (3-PINS, BLACK) | Front RH side of engine compartment on A/C compressor | | 02-5 |
| X165 | GROUND | LH side of dash | | |
| X166 | GROUND | Front RH side of engine compartment ahead of wheel well | | |
| X167 | GROUND | Front LH side of engine compartment | | |
| X168 | CONNECTOR (1-PINS, BLACK) | Underside of trunk lid | | |
| X175 | GROUND | Front LH side of engine compartment | | |

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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE – FIGURE 7100.0 | 8500.0 |
|---|---|---|---|---|
| X179 | GROUND | Front RH side of engine compartment ahead of wheel well | | |
| X251 | CONNECTOR (30-PINS, BLACK) | LH footwell | 20-1 | 14-4 |
| X252 | CONNECTOR (26-PINS, GREEN) | Below LH side of rear seat | | 01-1 |
| X253 | CONNECTOR (26-PINS, GREEN) | Below LH side of rear seat in Rear Power Distribution Box | | 01-1 |
| X254 | CONNECTOR (26-PINS, WHITE) | Below LH side of rear seat in Rear Power Distribution Box | | 01-1 |
| X255 | CONNECTOR (26-PINS, YELLOW) | Below LH side of rear seat in Rear Power Distribution Box | | 01-1 |
| X256 | CONNECTOR (26-PINS, BLACK) | Ahead of RH front door | 26-2 | 08-1 |
| X257 | CONNECTOR (26-PINS, BLACK) | In lower LH front door ahead of LH front door | 26-2 | 08-1 |
| X259 | CONNECTOR (20-PINS, WHITE) | Below LH side of rear seat front of battery | | 08-4 |
| X260 | CONNECTOR (21-PINS, BLACK) | Below RH side of rear seat | 29-2 | |
| X261 | CONNECTOR (1-PINS, (---)) | RH side of luggage compartment | | |
| X262 | CONNECTOR (26-PINS, BLUE) | Below LH side of rear seat in Rear Power Distribution Box | | 01-1 |
| X263 | CONNECTOR (26-PINS, BLACK) | Below RH side of rear seat near battery | | 01-1 |
| X269 | CONNECTOR (6-PINS, BLACK) | Below LH side of rear seat | | 15-3 |
| X271 | CONNECTOR (12-PINS, GRAY) | Rear of A2 instrument cluster | 22-2 | 08-2 |
| X272 | CONNECTOR (12-PINS, BLACK) | Below LH side of rear seat in Rear Power Distribution Box | | 06-4 |
| X273 | CONNECTOR (12-PINS, BLACK) | Ahead of LH rear door in wire grommet | 26-3 | 14-3 |
| X274 | CONNECTOR (12-PINS, BLACK) | Ahead of RH rear door in wire grommet | 26-3 | 14-3 |
| X275 | CONNECTOR (12-PINS, WHITE) | Underside of LH front seat | 26-1 | 07-2 |
| X277 | CONNECTOR (10-PINS, BLACK) | Ahead of LH rear door in wire grommet | 26-3 | 09-1 |





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## COMPONENT LOCATION CHART

| COMPONENT | | | PAGE - FIGURE 7100.0 | 8500.0 |
|---|---|---|---|---|
| X278 | CONNECTOR (10-PINS, BLACK) | Ahead of RH rear door in wire grommet | 26-3 | 09-1 |
| X279 | CONNECTOR (12-PINS, WHITE) | Under RH front seat | | 07-2 |
| X285 | CONNECTOR (26-PINS, GRAY) | In LH auxiliary relay box, engine compartment | | 10-4 |
| X286 | CONNECTOR (9-PINS, WHITE) | Below LH side of rear seat in Rear Power Distribution Box | | 02-3 |
| X288 | CONNECTOR (9-PINS, WHITE) | Below LH side of rear seat in Rear Power Distribution Box | | 02-3 |
| X289 | CONNECTOR (9-PINS, BLACK) | In LH forward side of luggage compartment | | 02-3 |
| X290 | CONNECTOR (9-PINS, BLACK) | Below LH side of rear seat in Rear Power Distribution Box | | 02-3 |
| X291 | CONNECTOR (9-PINS, BLACK) | Below LH side of rear seat in Rear Power Distribution Box | | 02-3 |
| X292 | CONNECTOR (9-PINS, WHITE) | Below LH side of rear seat in Rear Power Distribution Box | | 02-3 |
| X293 | CONNECTOR (9-PINS, WHITE) | Below LH side of rear seat in Rear Power Distribution Box | | 02-3 |
| X294 | CONNECTOR (9-PINS, WHITE) | Below LH side of rear seat in Rear Power Distribution Box | | 02-3 |
| X295 | CONNECTOR (8-PINS, BLACK) | LH footwell | 19-2 | 13-2 |
| X296 | CONNECTOR (9-PINS, BLACK) | In LH forward side of luggage compartment | | 02-3 |
| X297 | CONNECTOR (9-PINS, WHITE) | Below LH side of dash | | 02-3 |
| X299 | CONNECTOR (6-PINS, WHITE) | Below LH side of rear seat | | |
| X311 | CONNECTOR (3-PINS, BLACK) | Underside of trunk lid | 31-2 | 17-2 |
| X312 | CONNECTOR (6-PINS, BLACK) | In RH side of luggage compartment | | 17-2 |
| X315 | CONNECTOR (2-PINS, WHITE) | Underside of trunk lid | 31-2 | |
| X318 | CONNECTOR (4-PINS, BLACK) | In LH rear side of luggage compartment RIGHT REAR LIGHT ASSEMBLY, E17 | | 06-3 |
| X319 | CONNECTOR (4-PINS, BLACK) | In LH rear side of luggage compartment LEFT REAR LIGHT ASSEMBLY, E16 | | 06-3 |





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## BMW 5 COMPONENT LOCATION CHART

| COMPONENT | | | PAGE - FIGURE 7100.0 | 8500.0 |
|---|---|---|---|---|
| X322 | CONNECTOR (8-PINS, BLACK) | Below LH side of rear seat in Rear Power Distribution Box | | 13-2 |
| X323 | CONNECTOR (6-PINS, BLACK) | Center of windshield header near rear view mirror | | 06-1 |
| X328 | CONNECTOR (4-PINS, BLACK) | Underside of trunk lid | 31-2 | 06-3 |
| X328 | CONNECTOR (4-PINS, BLACK) | Underside of trunk lid | 31-3 | 06-3 |
| X329 | CONNECTOR (4-PINS, BLACK) | Underside of trunk lid LEFT TRUNK LIGHT ASSEMBLY, E46 | | 06-3 |
| X331 | CONNECTOR (5-PINS, BLACK) | Below LH side of rear seat in Rear Power Distribution Box | | 02-4 |
| X332 | CONNECTOR (5-PINS, NATURAL) | Below LH side of rear seat in Rear Power Distribution Box | | 03-2 |
| X333 | CONNECTOR (4-PINS, BLACK) | Behind LH fresh air cowl | 09-1 | 08-6 |
| X334 | CONNECTOR (4-PINS, WHITE) | Behind LH fresh air cowl | | 08-6 |
| X335 | CONNECTOR (4-PINS, BLACK) | Below LH side of rear seat in Rear Power Distribution Box | | 02-6 |
| X336 | CONNECTOR (4-PINS, WHITE) | Near rear view mirror | 23-3 | 06-5 |
| X337 | CONNECTOR (4-PINS, BLACK) | Below LH side of rear seat | 28-3 | 06-3 |
| X338 | CONNECTOR (4-PINS, BLACK) | In LH rear side of luggage compartment | | 06-3 |
| X339 | CONNECTOR (4-PINS, BLACK) | In LH rear side of luggage compartment | | 06-3 |
| X342 | CONNECTOR (4-PINS, WHITE) | RH side of dash above RH kick panel | | 06-3 |
| X351 | CONNECTOR (2-PINS, BLACK) | Ahead of RH rear door | | |
| X352 | CONNECTOR (2-PINS, BLACK) | Ahead of LH rear door | | |
| X353 | CONNECTOR (2-PINS, BLACK) | Front LH door pillar | | |
| X354 | CONNECTOR (2-PINS, BLACK) | LH rear door jamb | 30-2 | |
| X355 | CONNECTOR (3-PINS, WHITE) | In upper RH C-pillar | 30-2 | 05-2 |





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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE – FIGURE 7100.0 | 8500.0 |
|---|---|---|---|---|
| X356 | CONNECTOR (4-PINS, BLACK) | In lower RH C-pillar | 30-3 | 13-6 |
| X358 | CONNECTOR (3-PINS, BLACK) | Underside of trunk lid | | 03-3 |
| X360 | CONNECTOR (3-PINS, BLACK) | Underside of trunk lid | | 09-5 |
| X371 | CONNECTOR (2-PINS, BLACK) | LH side of windshield header above LH visor | | |
| X372 | CONNECTOR (2-PINS, GRAY) | Rear RH side of engine compartment | | |
| X374 | CONNECTOR (2-PINS, BLACK) | Below RH side of rear seat in lower LH front door | | |
| X375 | CONNECTOR (2-PINS, BLACK) | Below RH side of rear seat | 29-2 | |
| X376 | CONNECTOR (2-PINS, WHITE) | In Rear Power Distribution Box | 29-1 | |
| X376 | CONNECTOR (2-PINS, WHITE) | Below LH side of rear seat | | |
| X377 | CONNECTOR (2-PINS, WHITE) | Below RH side of rear seat | 29-2 | |
| X379 | CONNECTOR (1-PINS, BLACK) | In upper LH C-pillar | | |
| X380 | CONNECTOR (1-PINS, BLACK) | In upper RH C-pillar | | |
| X381 | CONNECTOR (2-PINS, BLACK) | DRIVER'S MAKEUP MIRROR LIGHT, E35 | | |
| X382 | CONNECTOR (2-PINS, BLACK) | PASSENGER'S MAKEUP MIRROR LIGHT, E36 | | |
| X383 | CONNECTOR (2-PINS, YELLOW) | Under rear of car near differential | 07-2 | |
| X386 | CONNECTOR (1-PINS, (---)) | REAR CIGAR LIGHTER LIGHT, E31 | | |
| X387 | CONNECTOR (1-PINS, (---)) | REAR CIGAR LIGHTER, E30 | | |
| X388 | CONNECTOR (2-PINS, BLACK) | Below LH side of rear seat | | |
| X389 | CONNECTOR (2-PINS, BLACK) | LEFT FRONT AUXILIARY TURN LIGHT, H9 | | |
| X390 | CONNECTOR (1-PINS, WHITE) | In upper RH C-pillar | 30-2 | |





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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE – FIGURE 7100.0 | 8500.0 |
|---|---|---|---|---|
| X391 .. | CONNECTOR (2-PINS, BLACK) ..... | Below center of console | | |
| X393 .. | CONNECTOR (6-PINS, BLACK) ..... | In LH rear side of luggage compartment ..... | | 04–1 |
| X400 .. | CONNECTOR (8-PINS, BLACK) ..... | In LH forward side of luggage compartment ..... | | 13–2 |
| X401 .. | CONNECTOR (1-PINS, BLACK) ..... | DRIVER'S MAKEUP MIRROR SWITCH, S77 | | |
| X402 .. | CONNECTOR (1-PINS, BLACK) ..... | PASSENGER'S MAKEUP MIRROR SWITCH, S78 | | |
| X405 .. | CONNECTOR (2-PINS, (---)) ..... | LH side of engine compartment | | |
| X406 .. | CONNECTOR (2-PINS, (---)) ..... | RH side of engine compartment | | |
| X407 .. | CONNECTOR (2-PINS, (---)) ..... | Under LH rear of car | | |
| X408 .. | CONNECTOR (2-PINS, (---)) ..... | Under RH rear of car | | |
| X409 .. | CONNECTOR (2-PINS, (---)) ..... | Under center of car | | |
| X413 .. | CONNECTOR (2-PINS, BLACK) ..... | At back of rear window shelf | | |
| X416 .. | CONNECTOR (1-PINS, BLACK) ..... | Above LH sun visor | | |
| X417 .. | CONNECTOR (1-PINS, BLACK) ..... | Under roof center panel | | |
| X423 .. | CONNECTOR (1-PINS, (---)) ..... | Below center of console | | |
| X424 .. | CONNECTOR (1-PINS, BROWN) ..... | In upper LH C-pillar ..... | 30–3 | |
| X490 .. | GROUND ..... | LH side of dash LH side of steering column inside box on interior side of LH door sill | | |
| X491 .. | GROUND ..... | LH side of dash LH side of steering column | | |
| X492 .. | GROUND ..... | LH side of LH footwell | | |
| X493 .. | GROUND ..... | Below LH side of rear seat | | |





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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE 7100.0 | FIGURE 8500.0 |
|---|---|---|---|---|
| X495 | GROUND | Underside of RH rear seat | | |
| X496 | GROUND | Underside of RH rear seat | | |
| X501 | CONNECTOR (26-PINS, GREEN) | Center of dash ON-BOARD COMPUTER, N4 | | 01-1 |
| X502 | CONNECTOR (26-PINS, BLACK) | Rear of A2 instrument cluster INSTRUMENT CLUSTER, A2 | 22-2 | 01-1 |
| X503 | CONNECTOR (12-PINS, BLACK) | LH side of dash | | 05-6 |
| X504 | CONNECTOR (12-PINS, BLACK) | FOG LIGHT SWITCH, S10 | | 05-6 |
| X506 | CONNECTOR (12-PINS, BLACK) | Front of gearshift selector | 23-2 | 06-4 |
| X507 | CONNECTOR (14-PINS, BLACK) | LH side of dash behind steering wheel INSTRUMENT CLUSTER, A2 | | 11-1 |
| X509 | CONNECTOR (9-PINS, WHITE) | Below LH side of dash near hood release lever | | 02-3 |
| X510 | CONNECTOR (9-PINS, WHITE) | Below LH side of dash near hood release lever | | 02-3 |
| X511 | CONNECTOR (8-PINS, BLACK) | Front of gearshift selector | 23-2 | 03-1 |
| X512 | CONNECTOR (8-PINS, BLACK) | Behind center of dashboard near gearshift lever below RH side of dash | | |
| X516 | CONNECTOR (5-PINS, BLACK) | Center of console HAZARD SWITCH, S18 | | 06-2 |
| X517 | CONNECTOR (4-PINS, BLACK) | DIMMER, N3 | | 06-3 |
| X518 | CONNECTOR (4-PINS, BLACK) | LH footwell | 20-2 | 06-3 |
| X521 | CONNECTOR (6-PINS, BLACK) | ASC SWITCH, S6 | | 15-6 |
| X522 | CONNECTOR (3-PINS, WHITE) | LH footwell | 20-2 | 05-2 |
| X523 | CONNECTOR (6-PINS, BLACK) | Behind LH side of dash center of windshield header | | 09-2 |
| X526 | CONNECTOR (8-PINS, BLACK) | LH footwell | 20-1 | 13-2 |
| X531 | CONNECTOR (2-PINS, WHITE) | FRONT CIGAR LIGHTER, E28 | | |





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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE - FIGURE 7100.0 | 8500.0 |
|---|---|---|---|---|
| X532 | CONNECTOR (2-PINS, NATURAL) | FRONT CIGAR LIGHTER LIGHT, E29 | | |
| X537 | CONNECTOR (1-PINS, NATURAL) | In upper LH front door | | |
| X538 | CONNECTOR (1-PINS, NATURAL) | In upper RH front door | | |
| X539 | CONNECTOR (2-PINS, BLACK) | Center of dash | | |
| X540 | CONNECTOR (2-PINS, BLACK) | GLOVE BOX LIGHT SWITCH, S37 | | |
| X541 | CONNECTOR (1-PINS, NATURAL) | RH side of dash | | |
| X542 | CONNECTOR (2-PINS, BLACK) | Under RH front seat | | |
| X543 | CONNECTOR (1-PINS, NATURAL) | LH side of dash | | |
| X544 | CONNECTOR (2-PINS, BLACK) | Behind dashboard | | |
| X546 | CONNECTOR (2-PINS, WHITE) | Below center of console LH side of gearshift selector | | |
| X547 | CONNECTOR (2-PINS, BLACK) | Behind center of dashboard RADIO, N9 | | |
| X550 | CONNECTOR (12-PINS, WHITE) | Below LH side of dash | | |
| X601 | CONNECTOR (26-PINS, WHITE) | Underside of LH front seat | 24-2 | 14-5 |
| X602 | CONNECTOR (26-PINS, YELLOW) | Underside of LH front seat | 24-1 | 14-5 |
| X603 | CONNECTOR (12-PINS, BLACK) | DRIVER'S SEAT SEAT CONTROL SWITCH, S51 | | 06-6 |
| X604 | CONNECTOR (12-PINS, BLACK) | PASSENGER'S SEAT, SEAT CONTROL SWITCH, S56 | | 06-6 |
| X605 | CONNECTOR (12-PINS, BLACK) | In LH rear side of luggage compartment | 32-1 | 02-1 |
| X605 | CONNECTOR (12-PINS, BLACK) | In LH rear side of luggage compartment | 32-2 | 02-1 |
| X606 | CONNECTOR (12-PINS, WHITE) | In LH rear side of luggage compartment | 32-1 | 02-1 |
| X606 | CONNECTOR (12-PINS, WHITE) | In LH rear side of luggage compartment | 32-2 | 02-1 |





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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE – FIGURE 7100.0 | 8500.0 |
|---|---|---|---|---|
| X607 | CONNECTOR (20-PINS, WHITE) | RH side of RH footwell behind RH footwell kickpanel | | 08-4 |
| X608 | CONNECTOR (12-PINS, BLACK) | Rear RH side of engine compartment | | 15-1 |
| X609 | CONNECTOR (15-PINS, BLACK) | In LH rear side of luggage compartment | | 12-3 |
| X616 | CONNECTOR (12-PINS, WHITE) | Below LH side of rear seat in Rear Power Distribution Box | | 08-5 |
| X619 | CONNECTOR (12-PINS, WHITE) | Below rear seat | | 07-2 |
| X620 | CONNECTOR (9-PINS, WHITE) | Below LH side of rear seat in Rear Power Distribution Box (M5) | | 16-1 |
| X621 | CONNECTOR (10-PINS, BLACK) | Ahead of RH front door | 26-2 | 09-1 |
| X622 | CONNECTOR (10-PINS, BLACK) | Ahead of RH front door | 26-2 | 09-1 |
| X623 | CONNECTOR (4-PINS, BLACK) | In lower LH front door | 27-2 | 13-6 |
| X624 | CONNECTOR (4-PINS, BLACK) | PASSENGER'S SIDE MIRROR, Y6 | 27-3 | 13-6 |
| X625 | CONNECTOR (6-PINS, BLACK) | MEMORY MIRRORS CONTROL SWITCH, S12 | 27-2 | 18-2 |
| X626 | CONNECTOR (8-PINS, BLACK) | Underside of LH front seat | 24-2 | 13-2 |
| X627 | CONNECTOR (8-PINS, BLACK) | Center of windshield header near rear view mirror | 23-3 | 03-1 |
| X628 | CONNECTOR (5-PINS, BLACK) | In RH side of luggage compartment | | |
| X629 | CONNECTOR (8-PINS, NATURAL) | In RH side of luggage compartment | | |
| X630 | CONNECTOR (13-PINS, BLACK) | Under rear of car | | |
| X632 | CONNECTOR (9-PINS, BLACK) | Below LH side of rear seat in Rear Power Distribution Box | | 02-3 |
| X638 | CONNECTOR (6-PINS, BLACK) | In RH side of luggage compartment | 32-3 | 09-4 |
| X641 | CONNECTOR (6-PINS, BLACK) | In upper RH front door | 28-1 | 09-4 |
| X642 | CONNECTOR (8-PINS, BLACK) | Below RH side of rear seat | | 18-3 |





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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE 7100.0 | FIGURE 8500.0 |
|---|---|---|---|---|
| X643 | CONNECTOR (6-PINS, BLUE) | SUNROOF SWITCH, S38 | | 08-3 |
| X644 | CONNECTOR (6-PINS, BLACK) | In RH side of luggage compartment | | 09-4 |
| X645 | CONNECTOR (6-PINS, BLACK) | LEFT REAR WINDOW SWITCH, S41 | | 17-2 |
| X646 | CONNECTOR (6-PINS, BLACK) | In lower RH rear door | | 09-4 |
| X647 | CONNECTOR (6-PINS, BLACK) | RIGHT REAR WINDOW SWITCH, S42 | | 17-2 |
| X648 | CONNECTOR (6-PINS, BLACK) | Underside of LH front seat | 24-2 | 17-2 |
| X649 | CONNECTOR (6-PINS, WHITE) | Underside of LH front seat | 24-2 | 16-6 |
| X650 | CONNECTOR (6-PINS, BLACK) | MEMORY SEAT MIRRORS SWITCH, S57 | | 17-2 |
| X651 | CONNECTOR (6-PINS, BLACK) | DRIVER'S SEAT, SEAT HEATER SWITCH, S53 | | 17-2 |
| X652 | CONNECTOR (6-PINS, BLUE) | DRIVER'S SEAT LUMBAR SWITCH, S52 | | 08-3 |
| X653 | CONNECTOR (6-PINS, BLACK) | Underside of LH front seat | 24-1 | 17-2 |
| X654 | CONNECTOR (6-PINS, WHITE) | Underside of LH front seat | 24-1 | 16-6 |
| X655 | CONNECTOR (6-PINS, BLUE) | Underside of LH front seat | 24-1 | 08-3 |
| X656 | CONNECTOR (6-PINS, GREEN) | Underside of LH front seat | 24-1 | 16-5 |
| X657 | CONNECTOR (6-PINS, BROWN) | Underside of LH front seat | 24-3 | 17-1 |
| X659 | CONNECTOR (6-PINS, BLACK) | Under RH front seat | | 17-2 |
| X660 | CONNECTOR (6-PINS, BLACK) | In upper LH front door | 27-1 | 09-4 |
| X672 | CONNECTOR (4-PINS, BLACK) | In LH forward side of luggage compartment | | 10-2 |
| X673 | CONNECTOR (2-PINS, BLACK) | Below LH side of rear seat | | |
| X674 | CONNECTOR (2-PINS, BLACK) | Below RH side of rear seat | | |





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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE – FIGURE 7100.0 | 8500.0 |
|---|---|---|---|---|
| X675 | CONNECTOR (4-PINS, WHITE) | In LH forward side of luggage compartment | | 16-2 |
| X676 | CONNECTOR (4-PINS, BLACK) | In LH forward side of luggage compartment | | 16-2 |
| X680 | CONNECTOR (3-PINS, BLACK) | Underside of LH front seat | 24-3 | 05-2 |
| X681 | CONNECTOR (4-PINS, WHITE) | Below RH side of dash | | 06-3 |
| X684 | CONNECTOR (3-PINS, BLACK) | In upper RH front door near door handle | | 02-5 |
| X685 | CONNECTOR (3-PINS, BLACK) | In upper LH front door near door handle | | 02-5 |
| X686 | CONNECTOR (3-PINS, BLUE) | In lower LH front seatback | | 07-1 |
| X687 | CONNECTOR (3-PINS, BLUE) | In lower LH front seatback | | 07-1 |
| X688 | CONNECTOR (3-PINS, BLUE) | In lower LH front seatback | | 07-1 |
| X689 | CONNECTOR (3-PINS, BLUE) | In lower LH front seatback | | 07-1 |
| X690 | CONNECTOR (3-PINS, BLUE) | In lower LH front seatback | | 07-1 |
| X692 | CONNECTOR (3-PINS, BLACK) | Center of dash (radio removed) | | |
| X692 | CONNECTOR (3-PINS, BLACK) | Behind center of dashboard | | 03-3 |
| X695 | CONNECTOR (3-PINS, BLACK) | Lower LH side of engine | | 03-3 |
| X696 | CONNECTOR (3-PINS, BLACK) | Under RH rear of car RH side of differential | | 07-5 |
| X700 | CONNECTOR (1-PINS, (---)) | Behind RH footwell speaker grille | | |
| X701 | CONNECTOR (1-PINS, (---)) | Behind LH footwell speaker grille | | |
| X705 | CONNECTOR (2-PINS, BLACK) | Near RH rear wheel well | 06-2 | |
| X706 | CONNECTOR (2-PINS, (---)) | CASSETTE BOX LIGHT, E45y | | |
| X709 | CONNECTOR (2-PINS, BLACK) | LEFT LICENSE PLATE LIGHT, E43 | | |

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# COMPONENT LOCATION CHART



## COMPONENT

PAGE - FIGURE
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| | | | |
|---|---|---|---|
| X710 .. | CONNECTOR (2-PINS, BLACK) ..... | RIGHT LICENSE PLATE LIGHT, E44 | |
| X711 .. | CONNECTOR (2-PINS, BLACK) ..... | Underside of trunk lid left | |
| X712 .. | CONNECTOR (1-PINS, NATURAL) ..... | TRUNK LID LIGHT, E33 | |
| X713 .. | CONNECTOR (2-PINS, BLACK) ..... | Behind RH rear wheel | |
| X714 .. | CONNECTOR (2-PINS, GRAY) ..... | In lower LH rear door | |
| X715 .. | CONNECTOR (1-PINS, (---)) ..... | In upper LH rear door | |
| X720 .. | CONNECTOR (2-PINS, GRAY) ..... | In lower LH rear door | |
| X721 .. | CONNECTOR (1-PINS, (---)) ..... | In upper RH rear door | |
| X726 .. | CONNECTOR (2-PINS, BLACK) ..... | Underside of LH front seat ..... | 26-1 |
| X727 .. | CONNECTOR (2-PINS, WHITE) ..... | Underside of LH front seat ..... | 25-1 |
| X728 .. | CONNECTOR (2-PINS, WHITE) ..... | Underside of LH front seat ..... | 26-1 |
| X729 .. | CONNECTOR (2-PINS, BLACK) ..... | Underside of LH front seat ..... | 26-1 |
| X730 .. | CONNECTOR (2-PINS, (---)) ..... | In upper LH front seatback | |
| X731 .. | CONNECTOR (2-PINS, WHITE) ..... | In upper LH front seatback | |
| X732 .. | CONNECTOR (2-PINS, WHITE) ..... | In upper LH front seatback | |
| X733 .. | CONNECTOR (2-PINS, BLACK) ..... | In lower LH front seatback | |
| X734 .. | CONNECTOR (2-PINS, BLACK) ..... | Under RH front seat | |
| X735 .. | CONNECTOR (2-PINS, WHITE) ..... | Underside of LH front seat ..... | 25-1 |
| X736 .. | CONNECTOR (2-PINS, BLACK) ..... | Under RH front seat | |
| X737 .. | CONNECTOR (2-PINS, WHITE) ..... | Under RH front seat | |





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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE - FIGURE 7100.0 8500.0 |
|---|---|---|---|
| X738 | CONNECTOR (2-PINS, (---)) | In upper RH front seatback | |
| X739 | CONNECTOR (2-PINS, YELLOW) | Under RH front seat | |
| X740 | CONNECTOR (2-PINS, WHITE) | Underside of LH front seat | 25-3 |
| X741 | CONNECTOR (2-PINS, WHITE) | In upper RH front seatback | |
| X742 | CONNECTOR (2-PINS, YELLOW) | In lower RH front door | 27-3 |
| X743 | CONNECTOR (2-PINS, BLACK) | In upper RH front door | 28-1 |
| X744 | CONNECTOR (2-PINS, GRAY) | In lower RH front door | 27-3 |
| X746 | CONNECTOR (1-PINS, (---)) | In upper RH front door | |
| X747 | CONNECTOR (2-PINS, YELLOW) | In lower LH front door | 27-1 |
| X749 | CONNECTOR (2-PINS, GRAY) | In lower LH front door | 27-2 |
| X750 | CONNECTOR (1-PINS, (---)) | In upper LH front door | 27-2 |
| X751 | CONNECTOR (2-PINS, WHITE) | In lower LH front door | 27-1 |
| X752 | CONNECTOR (2-PINS, GRAY) | In lower LH front door In upper LH front door left | 27-1 |
| X753 | CONNECTOR (1-PINS, (---)) | In upper LH front door | |
| X755 | CONNECTOR (2-PINS, BLACK) | LH side of engine compartment | |
| X756 | CONNECTOR (2-PINS, BLACK) | Near RH rear wheel well behind RH rear wheel | |
| X757 | CONNECTOR (2-PINS, BLACK) | Rear RH side of engine compartment | |
| X760 | CONNECTOR (1-PINS, (---)) | Under rear window shelf | |
| X761 | CONNECTOR (1-PINS, (---)) | Under rear window shelf | |
| X762 | CONNECTOR (1-PINS, (---)) | Under rear window shelf | |





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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE – FIGURE 7100.0 | 8500.0 |
|---|---|---|---|---|
| X763 | CONNECTOR (1-PINS, (---)) | Under rear window shelf | | |
| X764 | CONNECTOR (2-PINS, WHITE) | In RH side of luggage compartment | | |
| X765 | CONNECTOR (2-PINS, WHITE) | In RH side of luggage compartment | | |
| X768 | CONNECTOR (2-PINS, WHITE) | LEFT FOG LIGHT, E26 | | |
| X769 | CONNECTOR (2-PINS, GRAY) | Below LH side of dash | | |
| X770 | CONNECTOR (2-PINS, WHITE) | Under LH front bumper | 06-3 | |
| X771 | CONNECTOR (2-PINS, BLACK) | Below LH side of dash | | |
| X772 | CONNECTOR (2-PINS, WHITE) | RH side of LH footwell | | |
| X773 | CONNECTOR (2-PINS, WHITE) | RH side of dash | | |
| X774 | CONNECTOR (1-PINS, GRAY) | Near LH headlight assembly | | |
| X778 | CONNECTOR (2-PINS, BLACK) | Underside of LH front seat | 25-1 | |
| X779 | CHARGING SOCKET | LH side of glove box | 23-1 | |
| X783 | CONNECTOR (2-PINS, ORANGE) | Bottom of steering column | 20-3 | |
| X784 | CONNECTOR (12-PINS, ORANGE) | LH footwell | 19-3 | 06-4 |
| X785 | CONNECTOR (2-PINS, BLACK) | LH side of engine compartment | | |
| X790 | CONNECTOR (2-PINS, WHITE) | LEFT REAR SEAT HEATER, E66 | | |
| X791 | CONNECTOR (2-PINS, WHITE) | RIGHT REAR SEAT HEATER, E67 | | |
| X792 | CONNECTOR (2-PINS, BLACK) | LEFT REAR SEATBACK HEATER, E65 | | |
| X793 | CONNECTOR (2-PINS, BLACK) | RIGHT REAR SEATBACK HEATER, E68 | | |





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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE – FIGURE 7100.0 | 8500.0 |
|---|---|---|---|---|
| X794 .. | CONNECTOR (2-PINS, BLACK) ..... | Below LH side of rear seat | | |
| X796 .. | CONNECTOR (2-PINS, BLACK) ..... | Below RH side of rear seat | | |
| X798 .. | CONNECTOR (2-PINS, BLACK) ..... | In upper LH front seatback | | |
| X799 .. | CONNECTOR (2-PINS, BLACK) ..... | In upper RH front seatback | | |
| X800 .. | CONNECTOR (2-PINS, WHITE) ..... | Behind LH footwell trim ..... | 18-2 | |
| X811 .. | CONNECTOR (1-PINS, BLACK) ..... | Below RH side of rear seat near battery | | |
| X817 .. | CONNECTOR (1-PINS, BLACK) ..... | Between front footwells | | |
| X818 .. | GROUND ..... | LH side of dash LH side of steering column | | |
| X880 .. | CONNECTOR (6-PINS, WHITE) ..... | DRIVER'S THIGH SUPPORT SWITCH, S93 ..... | | 16-6 |
| X881 .. | CONNECTOR (6-PINS, WHITE) ..... | PASSENGER'S THIGH SUPPORT SWITCH, S94 ..... | | 16-6 |
| X882 .. | CONNECTOR (2-PINS, BLACK) ..... | Underside of LH front seat ..... | 26-1 | |
| X883 .. | CONNECTOR (2-PINS, BLACK) ..... | Under RH front seat | | |
| X884 .. | CONNECTOR (3-PINS, BLUE) ..... | In upper RH front seatback ..... | | 07-1 |
| X887 .. | CONNECTOR (6-PINS, WHITE) ..... | DRIVER'S THIGH SUPPORT SWITCH, S93 ..... | | 16-6 |
| X890 .. | CONNECTOR (2-PINS, BLACK) ..... | Behind LH front fog light | | |
| X898 .. | CONNECTOR (8-PINS, BLACK) ..... | Center of dash LH side of heater control panel ..... | | 03-1 |
| X899 .. | CONNECTOR (18-PINS, BLACK) ..... | Center of dash RH side of heater control panel ..... | | 13-3 |
| X900 .. | CONNECTOR (2-PINS, WHITE) ..... | Above LH footwell dash panel | | |
| X901 .. | CONNECTOR (2-PINS, WHITE) ..... | Above RH footwell dash panel | | |
| X904 .. | CONNECTOR (4-PINS, BLACK) ..... | LH side of RH footwell ..... | | 06-3 |





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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE – FIGURE 7100.0 | 8500.0 |
|---|---|---|---|---|
| X905 | CONNECTOR (5-PINS, BLACK) | Center of dash middle of heater control panel | | 09-3 |
| X945 | CONNECTOR (10-PINS, BLACK) | In RH side of luggage compartment | | 17-5 |
| X946 | CONNECTOR (4-PINS, BLACK) | Under rear window shelf | | 06-3 |
| X948 | CONNECTOR (2-PINS, BLACK) | At back of rear window shelf | | |
| X949 | CONNECTOR (5-PINS, BLACK) | Under rear window shelf | | 02-4 |
| X960 | BATTERY B+ START POINT | LH side of dash | | |
| X963 | CONNECTOR (1-PINS, (---)) | Below RH side of rear seat | | |
| X997 | CONNECTOR (2-PINS, WHITE) | Under rear of car behind RH rear wheel | | |
| X998 | CONNECTOR (4-PINS, BLACK) | Below LH side of dash | | 06-5 |
| X999 | CONNECTOR (4-PINS, BLACK) | Below LH side of dash | | 06-3 |
| X1021 | CONNECTOR (9-PINS, BLACK) | Rear LH side of engine compartment in Front Power Distribution Box | | 02-3 |
| X1024 | CONNECTOR (9-PINS, BLACK) | Below LH side of dash | | 02-3 |
| X1034 | CONNECTOR (3-PINS, BLACK) | Below LH side of dash | | 07-5 |
| X1035 | CONNECTOR (3-PINS, BLACK) | Near RH headlight assembly | | 07-5 |
| X1048 | CONNECTOR (1-PINS, (---)) | RH side of engine compartment | | |
| X1049 | CONNECTOR (1-PINS, (---)) | RH side of engine compartment | | |
| X1056 | CONNECTOR (9-PINS, BLACK) | Below LH side of dash | | 02-3 |
| X1086 | CONNECTOR (9-PINS, BLACK) | Below LH side of dash | | 02-3 |
| X1098 | CONNECTOR (12-PINS, BLACK) | Front of engine compartment | | 05-6 |





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## COMPONENT LOCATION CHART

| COMPONENT | | | PAGE - FIGURE 7100.0 | 8500.0 |
|---|---|---|---|---|
| X1099 | CONNECTOR (12-PINS, BLACK) | Front of engine compartment | | 05-6 |
| X1160 | GROUND | LH side of dash LH side of steering column | | |
| X1171 | CONNECTOR (55-PINS, NATURAL) | Rear RH side of engine compartment in E-Box SLIP CONTROL MODULE (ABS/ ASC), A70 | | 00-1 |
| X1191 | CONNECTOR (4-PINS, BLACK) | Rear of luggage compartment below brake fluid reservoir behind trim panel | | 06-3 |
| X1195 | CONNECTOR (9-PINS, BLACK) | Rear LH side of engine compartment in Front Power Distribution Box | | 02-3 |
| X1197 | CONNECTOR (8-PINS, WHITE) | In E-Box | 15-2 | 03-1 |
| X1221 | CONNECTOR (26-PINS, GREEN) | Below LH side of rear seat in Rear Power Distribution Box | | 10-4 |
| X1222 | CONNECTOR (6-PINS, WHITE) | In LH forward side of luggage compartment | | 04-1 |
| X1250 | CONNECTOR (10-PINS, BLACK) | RH side of luggage compartment behind side panel | | |
| X1250 | CONNECTOR (10-PINS, BLACK) | RH side of luggage compartment behind side panel | | 15-2 |
| X1251 | CONNECTOR (2-PINS, BLACK) | Rear of luggage compartment on lift gate behind trim panel | 31-3 | |
| X1252 | CONNECTOR (2-PINS, BLACK) | Rear of luggage compartment on lift gate behind trim panel | 31-3 | |
| X1253 | CONNECTOR (2-PINS, BLACK) | Rear of luggage compartment on lift gate behind trim panel | | |
| X1254 | CONNECTOR (2-PINS, BLACK) | Rear of luggage compartment on lift gate behind trim panel | | |
| X1374 | CONNECTOR (1-PINS, NATURAL) | GLOVE BOX LIGHT, E42 | | |
| X1386 | CONNECTOR (88-PINS, BLACK) | Rear RH side of engine compartment in E-Box | | 18-4 |
| X1388 | CONNECTOR (2-PINS, BLACK) | Rear RH side of engine compartment | | |
| X1389 | CONNECTOR (12-PINS, BLACK) | RH side of engine compartment | | 02-1 |
| X1405 | CONNECTOR (1-PINS, NATURAL) | RH side of dash | | |





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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE – FIGURE 7100.0 | 8500.0 |
|---|---|---|---|---|
| X1406 | CONNECTOR (1-PINS, NATURAL) | RH side of dash | | |
| X1427 | CONNECTOR (1-PINS, NATURAL) | DASH LIGHT, E41 | | |
| X1439 | CONNECTOR (2-PINS, BLACK) | TRANSMISSION RANGE SELECTOR LIGHT, E9500 | | |
| X1440 | CONNECTOR (1-PINS, BROWN) | Below LH side of dash | | |
| X1851 | CONNECTOR (1-PINS, BLACK) | At back of rear window shelf | | |
| X1852 | CONNECTOR (1-PINS, WHITE) | At back of rear window shelf | | |
| X3210 | CONNECTOR (26-PINS, BLUE) | LH side of dash LH side of steering column | | 01-1 |
| X3211 | CONNECTOR (4-PINS, BLACK) | Center of dash | | 05-1 |
| X3212 | CONNECTOR (4-PINS, BLACK) | LH footwell | 20-1 | 03-3 |
| X5000 | CONNECTOR (4-PINS, BLACK) | Rear RH side of engine compartment in E-Box | | 02-6 |
| X6000 | CONNECTOR (55-PINS, BLACK) | Rear RH side of engine compartment in E-Box ENGINE CONTROL MODULE (DME), A6000 | | 00-1 |
| X6002 | CONNECTOR (20-PINS, BLACK) | Rear LH side of engine compartment right of LH side shock tower | | 04-6 |
| X6003 | CONNECTOR (8-PINS, BLACK) | In E-Box | 15-1 | |
| X6003 | CONNECTOR (8-PINS, BLACK) | In E-Box | 15-2 | 03-1 |
| X6004 | CONNECTOR (35-PINS, BLACK) | Rear RH side of engine compartment in E-Box | | 00-3 |
| X6006 | CONNECTOR (5-PINS, GREEN) | Rear RH side of engine compartment in E-Box | | 02-4 |
| X6007 | CONNECTOR (35-PINS, NATURAL) | Above RH kick panel | | 00-3 |
| X6030 | CONNECTOR (18-PINS, BLACK) | In E-Box | | 19-1 |
| X6053 | CONNECTOR (12-PINS, BLACK) | RH side of dash behind glove box | | 02-1 |





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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE 7100.0 | FIGURE 8500.0 |
|---|---|---|---|---|
| X6101 | CONNECTOR (2-PINS, BLACK) | On engine bulkhead | | |
| X6102 | CONNECTOR (2-PINS, BLACK) | On engine bulkhead | | |
| X6103 | CONNECTOR (2-PINS, BLACK) | On engine bulkhead | | |
| X6104 | CONNECTOR (2-PINS, BLACK) | On engine bulkhead | | |
| X6105 | CONNECTOR (2-PINS, BLACK) | On engine bulkhead | | |
| X6106 | CONNECTOR (2-PINS, BLACK) | On engine bulkhead | | |
| X6120 | CONNECTOR (2-PINS, BLACK) | LH side of engine | | |
| X6130 | CONNECTOR (3-PINS, BLACK) | Top front of engine | | |
| X6132 | CONNECTOR (2-PINS, BLACK) | Front of engine LH side of engine (M5) | | |
| X6133 | CONNECTOR (2-PINS, BLACK) | Top front of engine | 11-3 | |
| X6151 | CONNECTOR (3-PINS, GRAY) | RH side of engine | | 15-4 |
| X6152 | CONNECTOR (3-PINS, GRAY) | RH side of engine | | 15-4 |
| X6154 | CONNECTOR (3-PINS, GRAY) | LH side of engine | | 15-4 |
| X6155 | CONNECTOR (3-PINS, GRAY) | LH side of engine | | 15-4 |
| X6156 | CONNECTOR (3-PINS, GRAY) | LH side of engine | | 15-4 |
| X6200 | CONNECTOR (4-PINS, BLACK) | LH side of engine | 10-1 | 13-5 |
| X6201 | CONNECTOR (3-PINS, BLACK) | Top front of engine | 11-3 | 03-5 |
| X6201 | CONNECTOR (3-PINS, BLACK) | Below intake manifold | | 03-5 |
| X6202 | CONNECTOR (3-PINS, BLACK) | Top front of engine | 11-3 | 03-5 |
| X6202 | CONNECTOR (3-PINS, BLACK) | Below intake manifold | | 03-5 |

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## COMPONENT LOCATION CHART

| COMPONENT | | | PAGE – FIGURE 7100.0 | 8500.0 |
|---|---|---|---|---|
| X6205 | CONNECTOR (2-PINS, BLACK) | Front of engine on coolant inlet | | |
| X6206 | CONNECTOR (7-PINS, BLACK) | Front LH side of engine compartment ahead of LH side shock tower | | 13-4 |
| X6217 | CONNECTOR (4-PINS, GRAY) | Top front of engine | | 09-6 |
| X6230 | CONNECTOR (3-PINS, BLACK) | LH side of engine | 10-2 | 03-5 |
| X6231 | CONNECTOR (2-PINS, BLACK) | Front of engine compartment below intake manifold | | |
| X6232 | CONNECTOR (2-PINS, BLACK) | Front of engine on coolant inlet | | |
| X6233 | CONNECTOR (5-PINS, BLACK) | Top center of engine ahead of oil fill cap | | 12-2 |
| X6234 | CONNECTOR (2-PINS, WHITE) | Front of engine LH side of engine | | |
| X6235 | CONNECTOR (2-PINS, BLACK) | Rear RH side of engine compartment in E-Box | | |
| X6236 | CONNECTOR (2-PINS, BLACK) | Top rear of engine on coolant inlet | | |
| X6238 | CONNECTOR (2-PINS, BLACK) | Front of engine LH side of engine | | |
| X6250 | CONNECTOR (3-PINS, BLACK) | LH side of engine compartment | | 03-5 |
| X6251 | CONNECTOR (6-PINS, BLACK) | Top front of engine on throttle body | | 02-2 |
| X6300 | CONNECTOR (9-PINS, BLACK) | Rear RH side of engine compartment in E-Box | | 02-3 |
| X6301 | CONNECTOR (9-PINS, BLACK) | Rear RH side of engine compartment in E-Box | | 02-3 |
| X6302 | CONNECTOR (9-PINS, BLACK) | Rear RH side of engine compartment in E-Box | | 02-3 |
| X6304 | CONNECTOR (9-PINS, BLACK) | Rear RH side of engine compartment in E-Box | | 02-3 |
| X6350 | CONNECTOR (8-PINS, BLACK) | Top front of engine near distributor | | 03-6 |
| X6400 | B+ JUNCTION POINT | In E-Box | | |
| X6450 | GROUND | Rear RH side of engine compartment | | |





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# COMPONENT LOCATION CHART

| COMPONENT | | | PAGE - FIGURE 7100.0 | 8500.0 |
|---|---|---|---|---|
| X6451 | GROUND | RH side of engine compartment near battery | | |
| X6452 | GROUND | Near E-Box left | | |
| X6453 | GROUND | Near E-Box left | | |
| X6454 | GROUND | Near battery | | |
| X6506 | CONNECTOR (4-PINS, BLACK) | In E-Box | 15-2 | 06-3 |
| X6508 | CONNECTOR (3-PINS, BLACK) | LH side of engine | 10-1 | 03-5 |
| X6510 | CABLE SOCKET STARTER TERMINAL 50 | LH side of engine compartment below intake manifold | | |
| X6511 | CABLE SOCKET ALTERNATOR TERMINAL 30h | Below intake manifold | | |
| X6512 | CABLE SOCKET STARTER TERMINAL 30h | LH side of engine | | |
| X8500 | CONNECTOR (55-PINS, BLACK) | Behind RH footwell kickpanel | | 00-1 |
| X8500 | CONNECTOR (35-PINS, BLACK) | Behind RH footwell kickpanel | | 00-3 |
| X8503 | CONNECTOR (6-PINS, BLUE) | Below center console | | 08-3 |
| X8505 | CONNECTOR (8-PINS, BLACK) | On LH side of transmission | | 11-2 |
| X8505 | CONNECTOR (16-PINS, BLACK) | On LH side of transmission | | 19-2 |
| X8507 | CONNECTOR (1-PINS, BLACK) | Rear RH side of engine compartment | | |
| X8508 | GROUND | Underside of RH rear seat | | |
| X8513 | CONNECTOR (2-PINS, WHITE) | Front of gearshift selector | 23-2 | |
| X8514 | CONNECTOR (6-PINS, BLUE) | Below center console front of gearshift selector | | 08-3 |
| X8516 | CONNECTOR (2-PINS, BLACK) | Under center of car | | |
| X8550 | CONNECTOR (48-PINS, BLUE) | Behind RH footwell kickpanel | | 16-4 |

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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE - FIGURE 7100.0 | 8500.0 |
|---|---|---|---|---|
| X8551 | CONNECTOR (10-PINS, BLACK) | On LH side of transmission | | 09-1 |
| X8575 | CONNECTOR (1-PINS, WHITE) | LH side of dash | | |
| X10051 | CONNECTOR (4-PINS, WHITE) | Behind LH side of dash | | 06-3 |
| X10063 | CONNECTOR (9-PINS, BLACK) | Rear LH side of engine compartment in Front Power Distribution Box | | 02-3 |
| X10082 | CONNECTOR (5-PINS, GREEN) | Behind LH footwell trim | 18-1 | 02-4 |
| X10083 | CONNECTOR (4-PINS, BLACK) | Behind LH footwell trim | 18-1 | 02-6 |
| X10084 | CONNECTOR (9-PINS, BLACK) | Below RH side of dash | | 02-3 |
| X10104 | CONNECTOR (18-PINS, WHITE) | In E-Box | | 19-1 |
| X10105 | CONNECTOR (8-PINS, WHITE) | In E-Box | | 03-1 |
| X10194 | CONNECTOR (16-PINS, BLACK) | Rear LH side of engine compartment | | 19-2 |
| X13018 | CONNECTOR (1-PINS, BLACK) | In rear window | | |
| X13023 | CONNECTOR (2-PINS, WHITE) | Center console | | |
| X13024 | CONNECTOR (2-PINS, BLACK) | Center console | | |
| X13025 | CONNECTOR (12-PINS, BLACK) | Below RH side of rear seat | 29-2 | |
| X13056 | CONNECTOR (9-PINS, BLACK) | RH side of luggage compartment behind side panel | | 02-3 |
| X13057 | CONNECTOR (3-PINS, BLACK) | Rear of luggage compartment on lift gate behind trim panel | | 05-2 |
| X13058 | CONNECTOR (2-PINS, GREEN) | RH side of luggage compartment behind side panel | | |
| X13059 | CONNECTOR (3-PINS, BLACK) | Rear of luggage compartment on lift gate behind trim panel | | 05-2 |
| X13085 | CONNECTOR (10-PINS, BLACK) | In roof panel | 31-1 | 09-1 |
| X13086 | CONNECTOR (15-PINS, BLACK) | In roof panel | 31-1 | 13-3 |





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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE – FIGURE 7100.0 | 8500.0 |
|---|---|---|---|---|
| X13105 | CONNECTOR (3-PINS, BLACK) | Below LH side of dash | | 03-3 |
| X13106 | CONNECTOR (6-PINS, BLACK) | RH side of luggage compartment behind side panel | | 15-5 |
| X13107 | CONNECTOR (4-PINS, WHITE) | | 31-3 | |
| X13119 | CONNECTOR (12-PINS, WHITE) | Below LH side of dash | | 06-4 |
| X13123 | CONNECTOR (9-PINS, BLACK) | RH side of luggage compartment | | 02-3 |
| X13124 | CONNECTOR (9-PINS, BLACK) | RH side of luggage compartment | | 02-3 |
| X13139 | CONNECTOR (10-PINS, BLACK) | Center of windshield header | | 09-1 |
| X18025 | CONNECTOR (4-PINS, BLACK) | LH side of engine compartment | | 05-1 |
| X18029 | CONNECTOR (4-PINS, BLACK) | Below LH side of dash | | 06-5 |
| X18049 | CONNECTOR (2-PINS, YELLOW) | In lower LH rear door | | |
| X18050 | CONNECTOR (2-PINS, BLACK) | RH front door | | |
| X18051 | CONNECTOR (2-PINS, WHITE) | In lower RH rear door | | |
| X18052 | CONNECTOR (2-PINS, YELLOW) | In lower RH rear door | | |
| X18067 | CONNECTOR (1-PINS, (---)) | Below RH side of rear seat near battery | | |
| X18068 | CONNECTOR (1-PINS, (---)) | Below RH side of rear seat near battery | | |
| X18080 | CONNECTOR (1-PINS, NATURAL) | TRUNK LID LIGHT, E33 | | |
| X18084 | CONNECTOR (2-PINS, WHITE) | LH front door | 27-1 | |
| X18093 | CONNECTOR (3-PINS, WHITE) | STEERING COLUMN POSITION SWITCH, S119z | | 03-3 |
| X18097 | CONNECTOR (2-PINS, BLACK) | Bottom of steering column | 20-3 | |
| X18126 | CONNECTOR (17-PINS, BLACK) | Behind radio | 22-3 | 04-2 |

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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE – FIGURE 7100.0 | 8500.0 |
|---|---|---|---|---|
| X18151 | CONNECTOR (10-PINS, BLACK) | IHKR/F3 SWITCHING UNIT, S135w | | 09-1 |
| X18153 | CONNECTOR (3-PINS, BLACK) | Behind center of dashboard near gearshift lever | | 05-2 |
| X18154 | CONNECTOR (18-PINS, BLACK) | IHKR/F3 CONTROL PANEL, S134w | | 13-3 |
| X18155 | CONNECTOR (26-PINS, WHITE) | LH side of RH footwell | 21-3 | 10-4 |
| X18156 | CONNECTOR (26-PINS, BLUE) | LH side of RH footwell | 21-3 | 10-4 |
| X18157 | CONNECTOR (26-PINS, BLUE) | LH side of RH footwell | 21-3 | 10-4 |
| X18181 | CONNECTOR (6-PINS, BLACK) | Underside of LH front seat | | 17-2 |
| X18184 | CONNECTOR (1-PINS, (---)) | Under rear window shelf | | |
| X18185 | CONNECTOR (1-PINS, (---)) | Under rear window shelf | | |
| X18186 | CONNECTOR (1-PINS, NATURAL) | In upper LH front door | | |
| X18187 | CONNECTOR (1-PINS, (---)) | Under rear window shelf | | |
| X18189 | CONNECTOR (1-PINS, (---)) | Under rear window shelf | | |
| X18190 | CONNECTOR (1-PINS, NATURAL) | In upper LH front door | | |
| X18191 | CONNECTOR (1-PINS, (---)) | Behind RH footwell speaker grille | | |
| X18192 | CONNECTOR (1-PINS, WHITE) | In upper RH front door | | |
| X18193 | CONNECTOR (1-PINS, (---)) | In upper RH front door | | |
| X18203 | CONNECTOR (4-PINS, (---)) | Below RH side of rear seat | | 06-5 |
| X18205 | CONNECTOR (2-PINS, WHITE) | Front of gearshift selector | 23-2 | |
| X18208 | CONNECTOR (4-PINS, BLACK) | Behind center of dashboard near gearshift lever | | 06-3 |
| X18209 | CONNECTOR (4-PINS, BLACK) | Behind center of dashboard near gearshift lever | | 06-5 |





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# COMPONENT LOCATION CHART

| COMPONENT | | | PAGE - FIGURE 7100.0 | 8500.0 |
|---|---|---|---|---|
| X18244 | CONNECTOR (8-PINS, BLACK) | Center of dash | | 03-1 |
| X18245 | CONNECTOR (8-PINS, BLACK) | In roof panel | 31-1 | 03-1 |
| X18259 | CONNECTOR (10-PINS, BLACK) | Below LH side of dash | | 15-2 |
| X18263 | CONNECTOR (2-PINS, WHITE) | Middle of heater control panel | | |
| X18500 | CONNECTOR (25-PINS, BLACK) | TELEPHONE TRANSCEIVER, H38 | | 19-4 |
| X18501 | CONNECTOR (3-PINS, YELLOW) | TELEPHONE INTERFACE US, A192 | | |
| X18507 | CONNECTOR (4-PINS, BLACK) | | | |
| X18508 | CONNECTOR (4-PINS, BLACK) | | | |
| X18509 | CONNECTOR (4-PINS, BLACK) | | | |
| X18520 | CONNECTOR (10-PINS, BLACK) | Behind radio | 22-3 | |
| X18521 | CONNECTOR (10-PINS, BLACK) | In LH rear side of luggage compartment | 32-2 | 19-3 |
| X18715 | CONNECTOR (1-PINS, BLACK) | Behind center of dashboard behind radio | | |
| X18729 | CONNECTOR (3-PINS, WHITE) | In LH forward side of luggage compartment | 32-1 | 05-2 |
| X18729 | CONNECTOR (3-PINS, WHITE) | In LH forward side of luggage compartment | 32-2 | 05-2 |
| X18736 | CONNECTOR (1-PINS, BLUE) | Inside box on interior side of LH door sill | | |
| X18741 | CONNECTOR (4-PINS, BLACK) | | | |
| Y1 | ABS HYDRAULIC UNIT | LH side of engine compartment | 10-3 | |
| Y4 | WATER VALVE ASSEMBLY | Rear LH side of engine compartment | 08-3 | |
| Y5 | DRIVER'S SIDE MIRROR | In upper LH front door | | |
| Y6 | PASSENGER'S SIDE MIRROR | In upper RH front door | | |



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# COMPONENT LOCATION CHART



| COMPONENT | | | PAGE – FIGURE 7100.0 8500.0 |
|---|---|---|---|
| Y9 | DRIVER'S SIDE MEMORY MIRROR | In upper LH front door | |
| Y10 | PASSENGER'S SIDE MEMORY MIRROR | In upper RH front door | |
| Y6101 | CYL. 1 FUEL INJECTION VALVE | On engine bulkhead | 13-3 |
| Y6102 | CYL. 2 FUEL INJECTION VALVE | On engine bulkhead | 13-3 |
| Y6103 | CYL. 3 FUEL INJECTION VALVE | On engine bulkhead | 13-3 |
| Y6104 | CYL. 4 FUEL INJECTION VALVE | On engine bulkhead | 13-3 |
| Y6105 | CYL. 5 FUEL INJECTION VALVE | On engine bulkhead | 13-3 |
| Y6106 | CYL. 6 FUEL INJECTION VALVE | On engine bulkhead | 13-3 |
| Y6120 | EVAPORATIVE EMISSION VALVE | LH side of engine compartment LH side of engine | 09-2 |
| Y6120 | EVAPORATIVE EMISSION VALVE | LH side of engine (near oil level stick) (M5) | |
| Y6130 | IDLE SPEED CONTROL VALVE | Front of engine | 12-1 |
| Y6130 | IDLE SPEED CONTROL VALVE | Top front of engine on throttle body (M5) | |
| Y6131 | INTAKE AIR RESONANCE CHANGEOVER VALVE | LH side of engine (near oil level stick) (M5) | |
| Y8514 | PROGRAM SWITCH | Below center of console front of gearshift selector | |
| Y8516 | ELECTRONIC TRANSMISSION ENGINE SPEED SENSOR (EGS) | Under center of car | |
| Y8505y | TRANSMISSION VALVE UNIT | In transmission | |



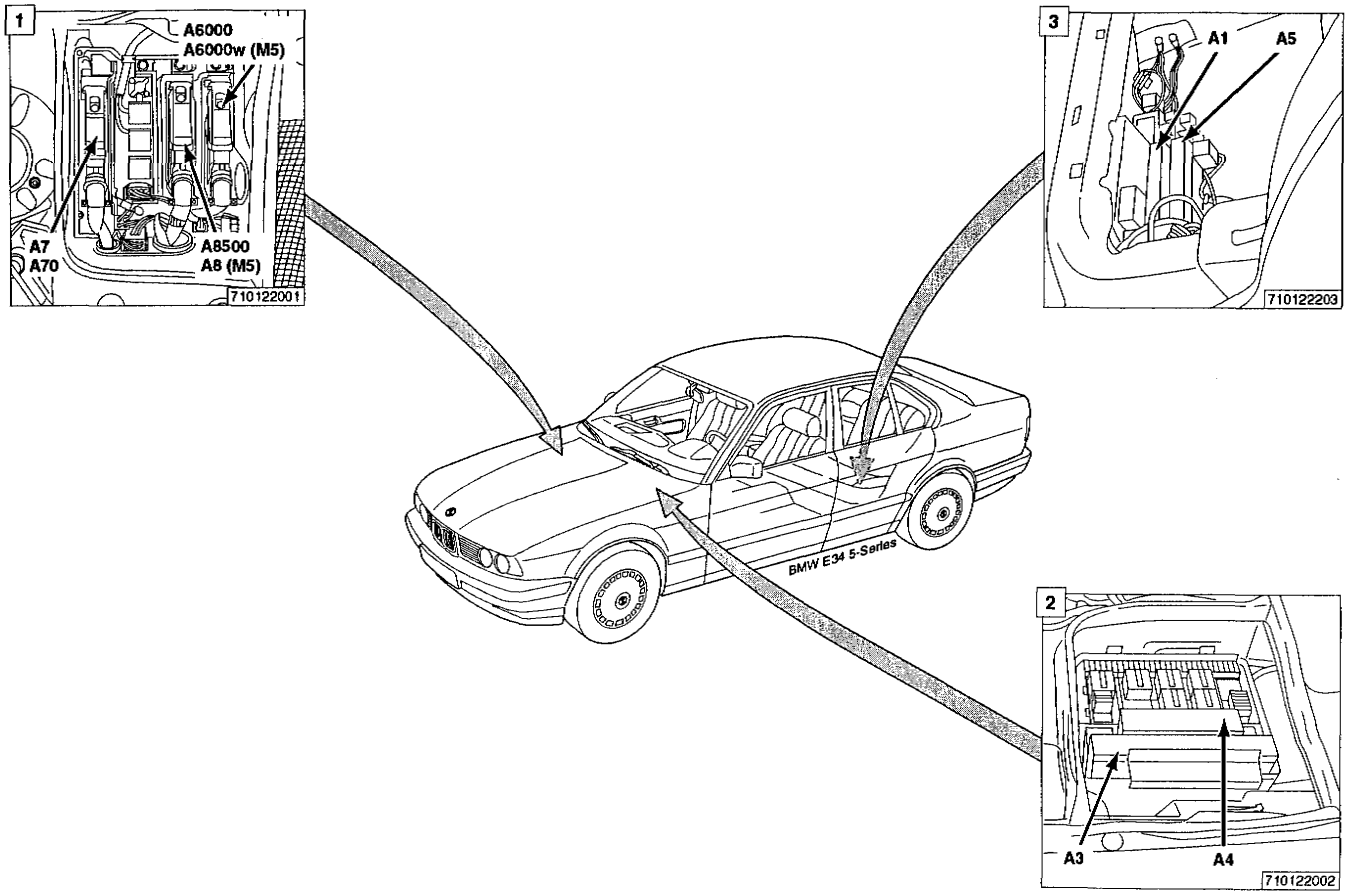


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# COMPONENT LOCATION VIEWS

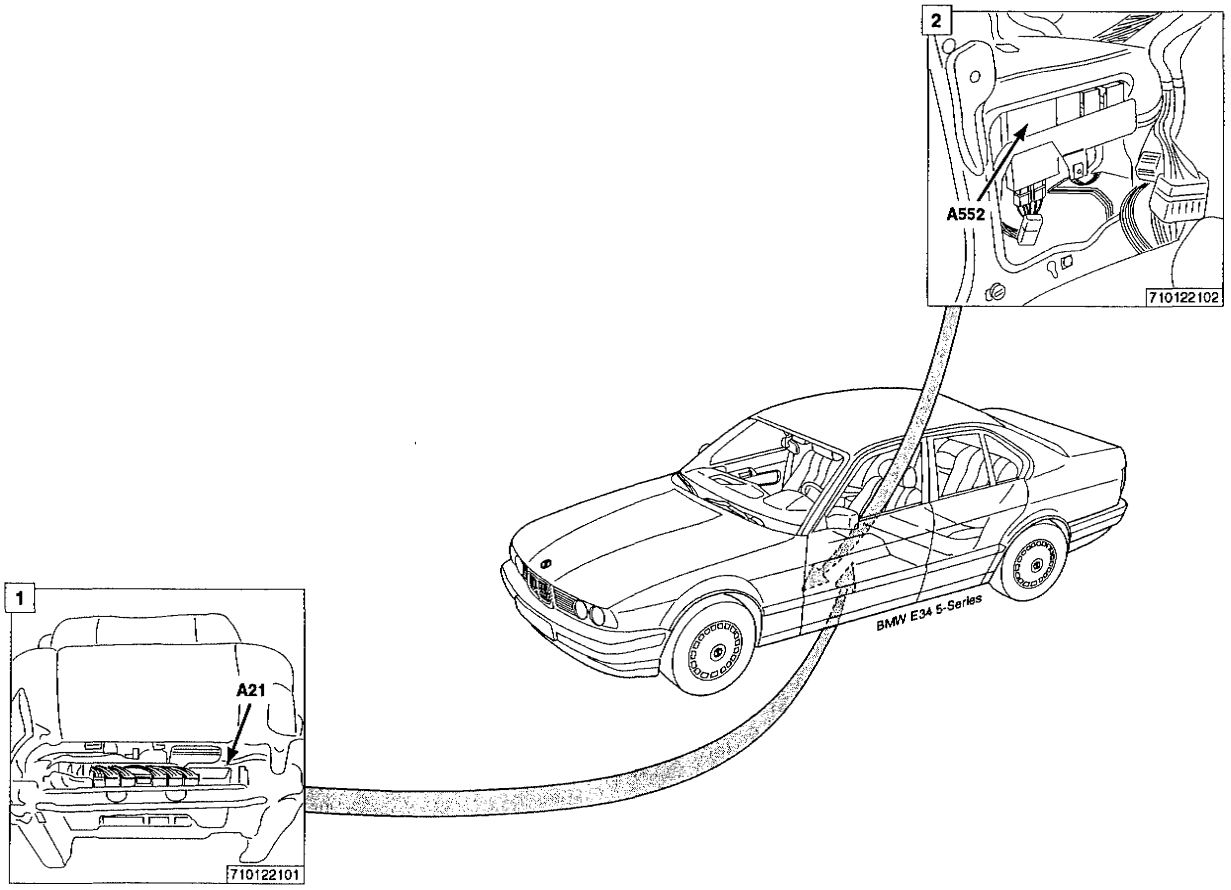
## ELECTRICAL CONTROL MODULE LOCATIONS




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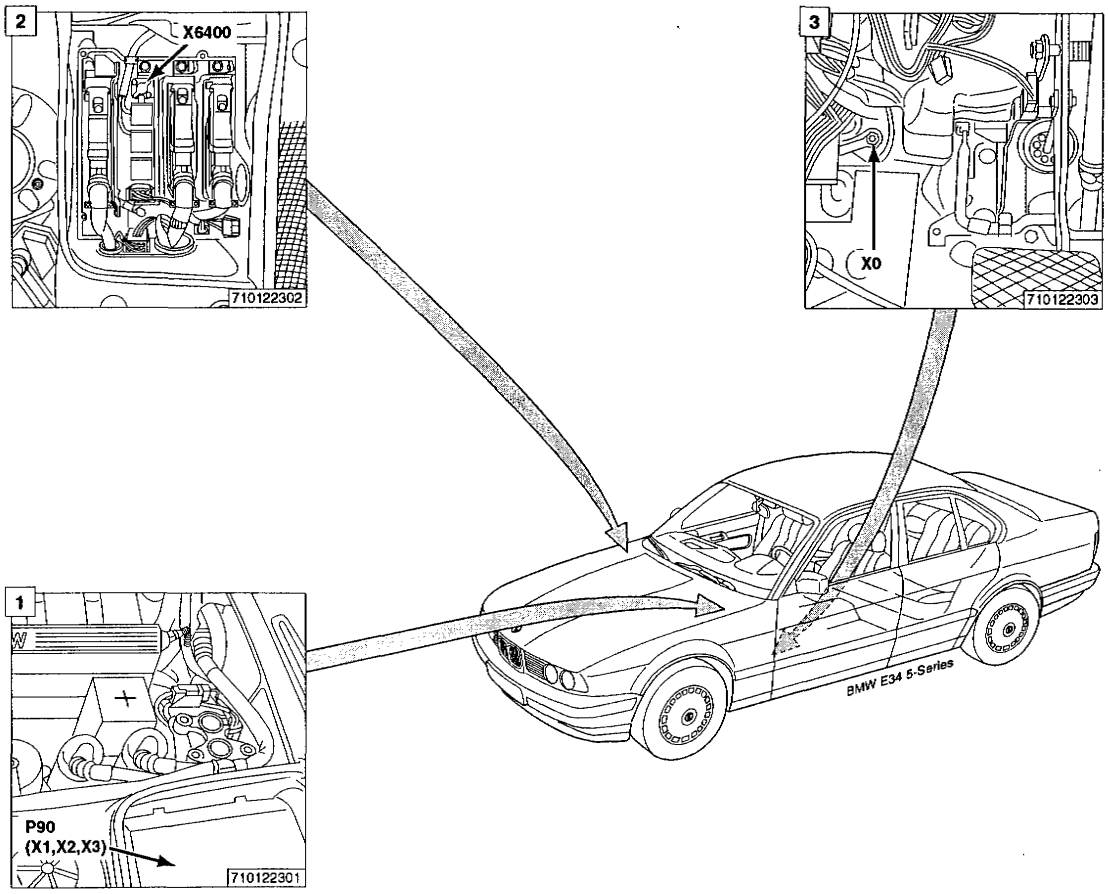





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# COMPONENT LOCATION VIEWS

| B(+) |
|---|
| P90 |
| X0 |
| X1 |
| X2 |
| X3 |
| X6400 |
| |
| |

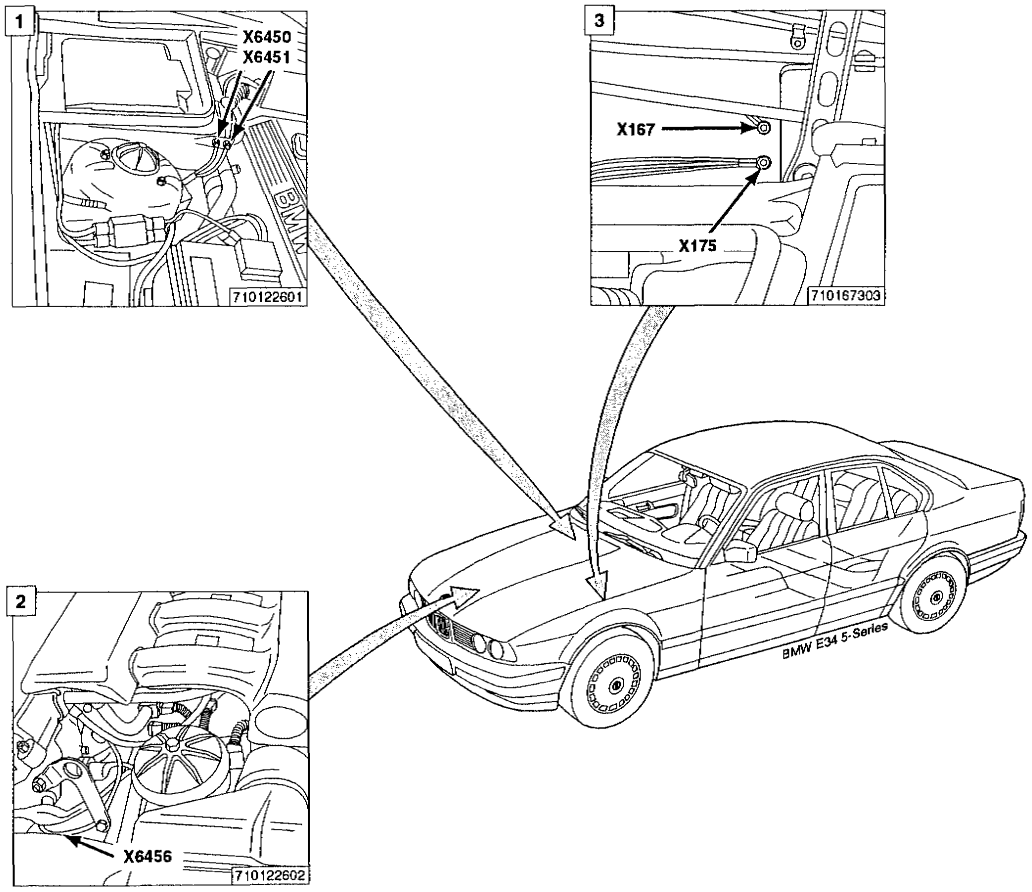



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## COMPONENT LOCATION VIEWS

**B(-)**

| |
|---|
| X167 |
| X175 |
| X6450 |
| X6451 |
| X6456 |
| |
| |
| |



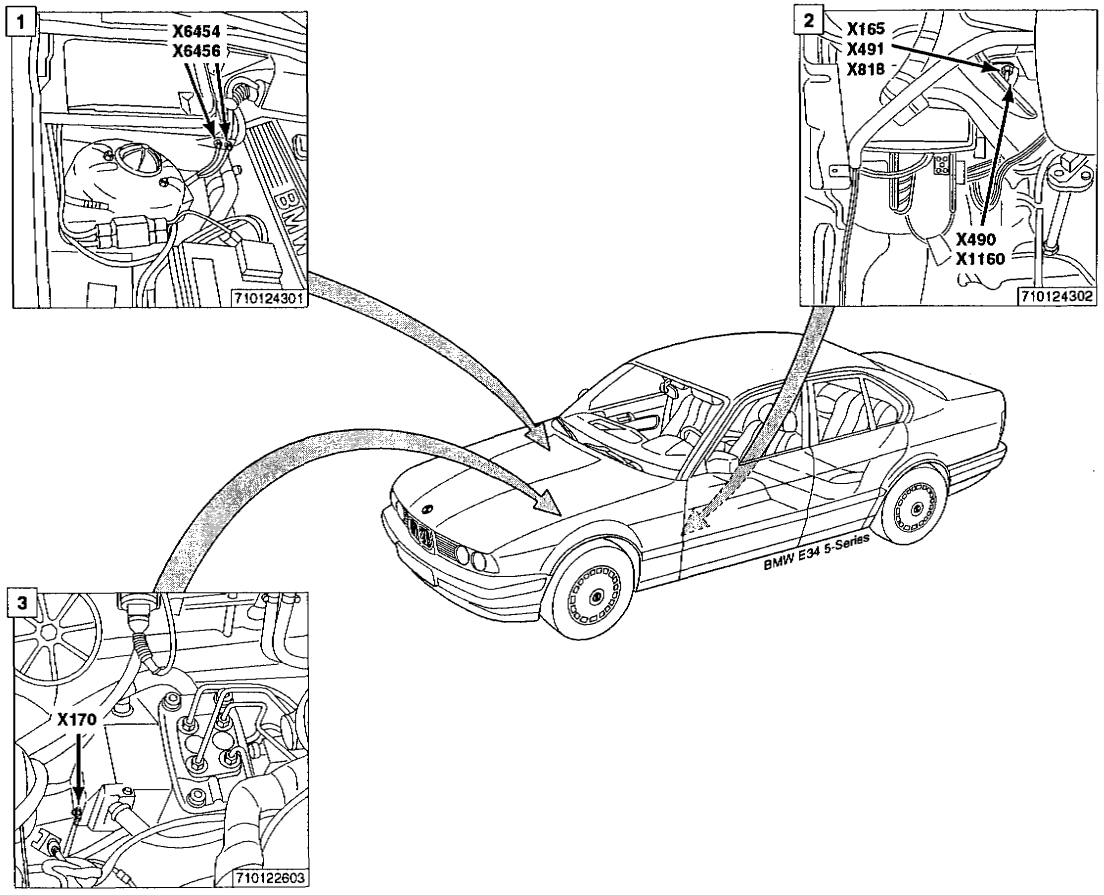

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# COMPONENT LOCATION VIEWS



**B(-)**

| |
|---|
| X165 |
| X170 |
| X490 |
| X491 |
| X818 |
| X1160 |
| X6454 |
| X6456 |
| |
| |

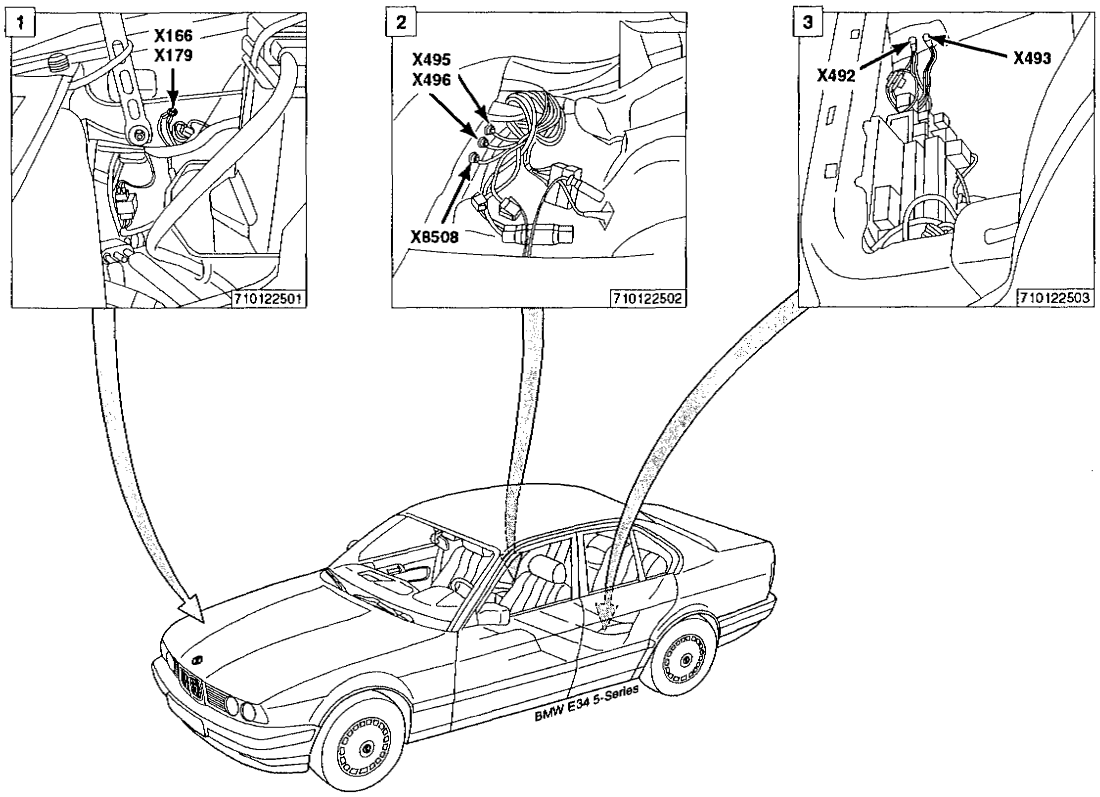



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## COMPONENT LOCATION VIEWS

**B(-)**

| |
|---|
| X166 |
| X179 |
| X492 |
| X493 |
| X495 |
| X496 |
| X8508 |
| |




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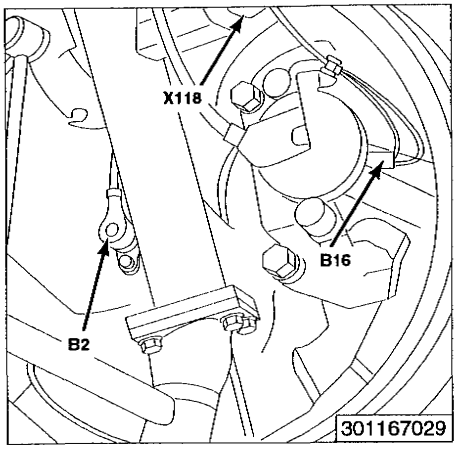



FIG. 1 - Behind LH front wheel

- B2 LEFT FRONT SPEED SENSOR – ABS
- B16 LEFT FRONT BRAKE PAD SENSOR
- X118 CONNECTOR (2-PINS, BLACK)

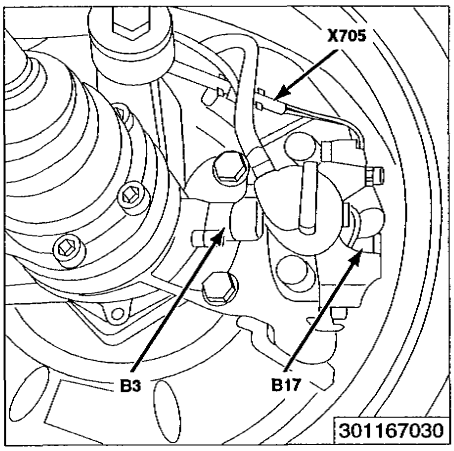



FIG. 2 - Behind RH rear wheel

- B3 RIGHT REAR SPEED SENSOR – ABS
- B17 RIGHT REAR BRAKE PAD SENSOR
- X705 CONNECTOR (2-PINS, BLACK)

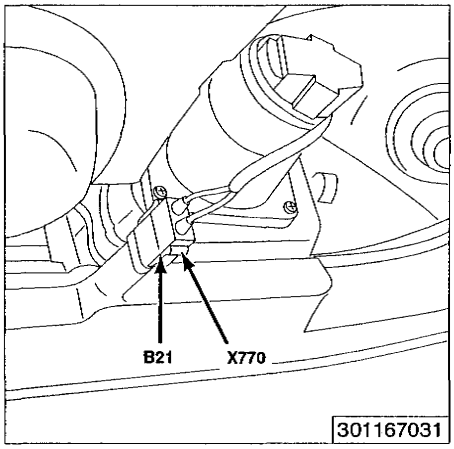



FIG. 3 - Under LH front bumper

- B21 ON-BOARD COMPUTER TEMPERATURE SENSOR
- X770 CONNECTOR (2-PINS, WHITE)

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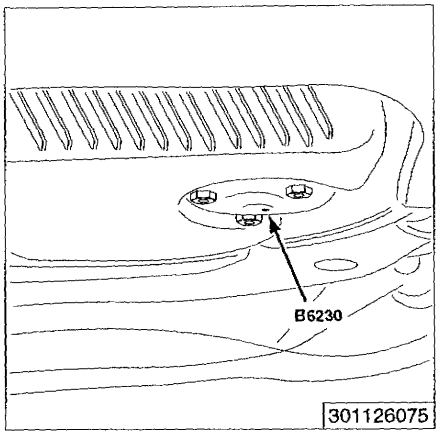



FIG 1 - Underside of oil pan

B6230 OIL LEVEL SENSOR

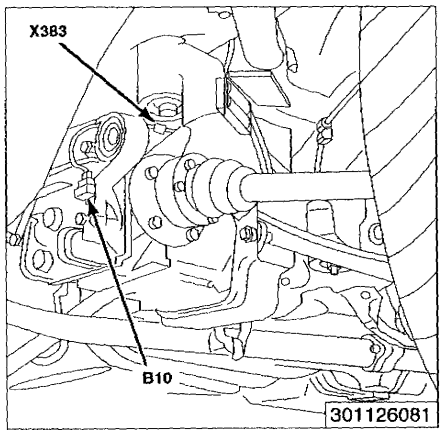



FIG 2 - Under rear of car

B10 VEHICLE SPEED SENSOR
X383 CONNECTOR (2-PINS, YELLOW)

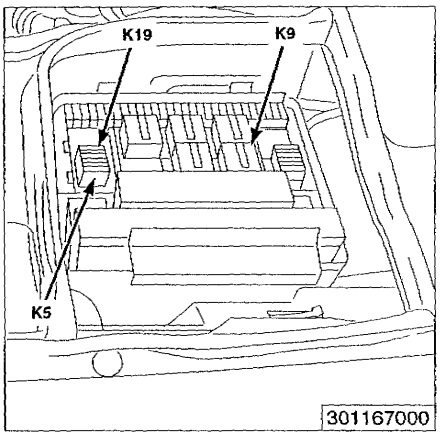



FIG 3 - In Front Power Distribution Box

K5 WASHER PUMP RELAY
K9 UNLOADER RELAY, TERMINAL 15
K19 COMPRESSOR CONTROL RELAY

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# COMPONENT LOCATION VIEWS



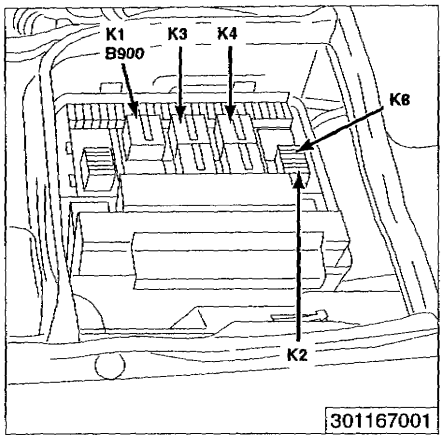



FIG 1 - In Front Power Distribution Box

| | |
|---|---|
| B900 | JUMPER PLUG |
| K1 | STARTER RELAY |
| K2 | HORN RELAY |
| K3 | UNLOADER RELAY, TERMINAL R |
| K4 | BLOWER RELAY |
| K8 | AUXILIARY WATER PUMP RELAY |

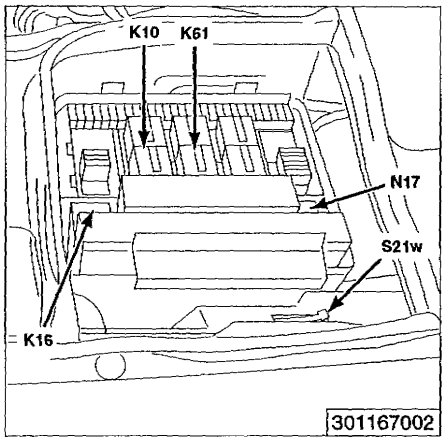



FIG 2 - In Front Power Distribution Box

| | |
|---|---|
| K10 | ABS RELAY |
| K16 | HAZARD FLASHER RELAY |
| K61 | UNLOADER RELAY, TERMINAL 61 |
| N17 | CRASH CONTROL MODULE |
| S21w | ENGINE HOOD SWITCH |

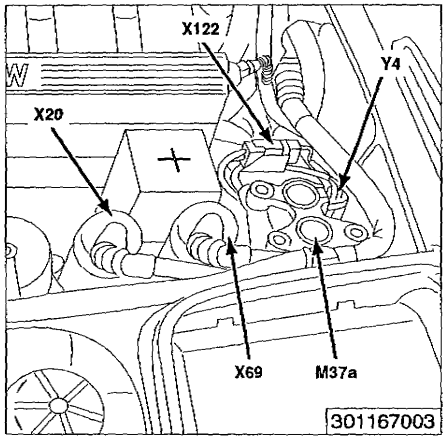



FIG 3 - Rear LH side of engine compartment

| | |
|---|---|
| M37a | AUXILIARY WATER PUMP |
| X20 | CONNECTOR (25-PINS, BLACK) |
| X69 | CONNECTOR (25-PINS, BLACK) |
| X122 | CONNECTOR (2-PINS, BLACK) |
| Y4 | WATER VALVE ASSEMBLY |

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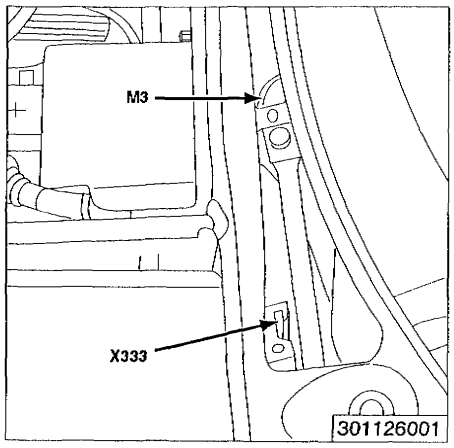



FIG 1 - Behind LH fresh air cowl

M3 WIPER MOTOR
X333 CONNECTOR (4-PINS, BLACK)

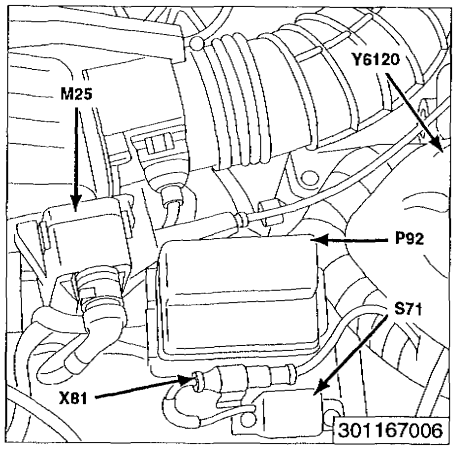



FIG 2 - LH side of engine compartment

M25 CRUISE CONTROL ACTUATOR (TEMPOMAT)
P92 AUXILIARY RELAY BOX
S71 LEFT FRONT IMPACT SENSOR
X81 CONNECTOR (3-PINS, ORANGE)
Y6120 EVAPORATIVE EMISSION VALVE

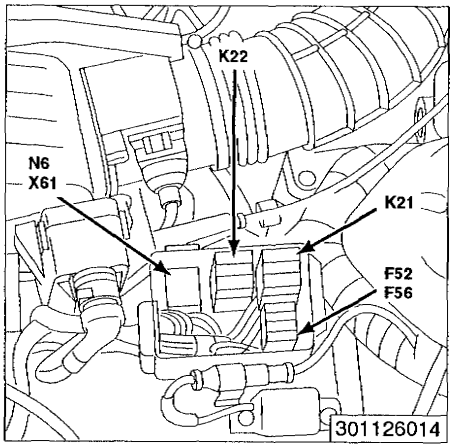



FIG 3 - In LH auxiliary relay box, engine compartment

F52 FUSE (10A)
F56 AUTOMATIC CUT-OUT
K21 NORMAL SPEED RELAY
K22 HIGH SPEED RELAY
N6 HEADLIGHT/FOGLIGHT CLEANING MODULE (SRA)
X61 CONNECTOR (9-PINS, BLACK)

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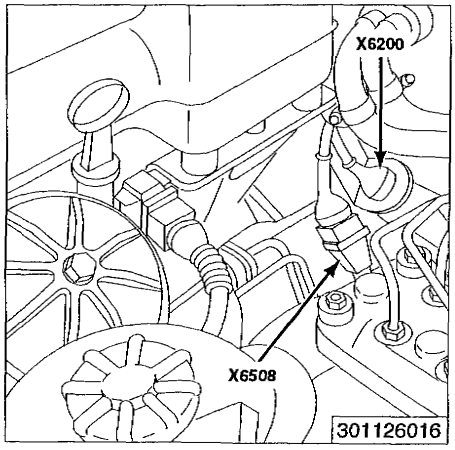



FIG 1 - LH side of engine (near oil level stick)

X6200 CONNECTOR (4-PINS, BLACK)
X6508 CONNECTOR (3-PINS, BLACK)

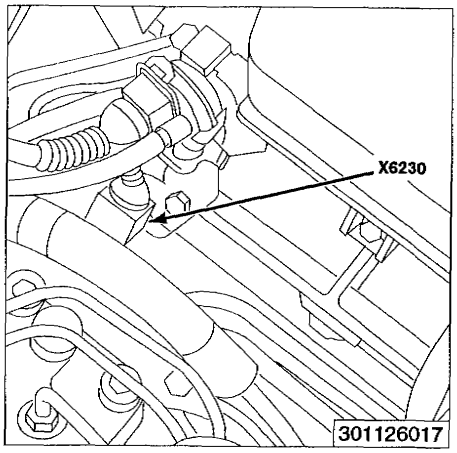



FIG 2 - LH side of engine

X6230 CONNECTOR (3-PINS, BLACK)

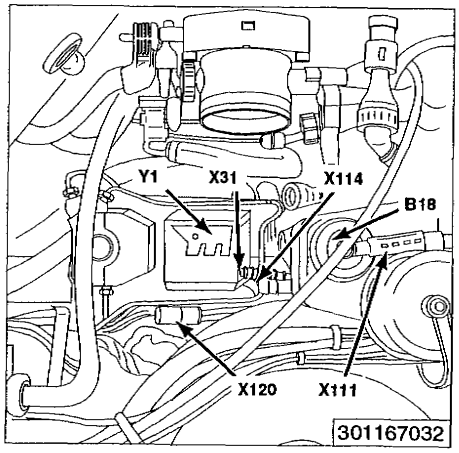



FIG 3 - LH side of engine compartment

B18 BRAKE FLUID LEVEL SWITCH
X31 CONNECTOR (12-PINS, BLACK)
X111 CONNECTOR (2-PINS, BLACK)
X114 CONNECTOR (2-PINS, BLACK)
X120 CONNECTOR (2-PINS, BLACK)
Y1 ABS HYDRAULIC UNIT

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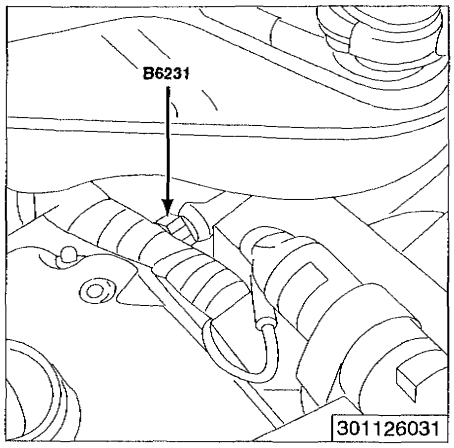



FIG 1 - Rear of engine (535i)

B6231 OIL PRESSURE SWITCH

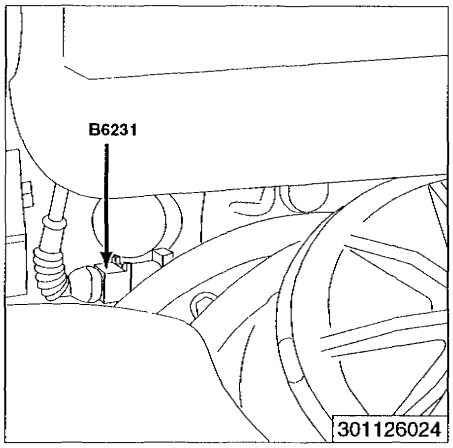



FIG 2 - Rear of engine (M5)

B6231 OIL PRESSURE SWITCH

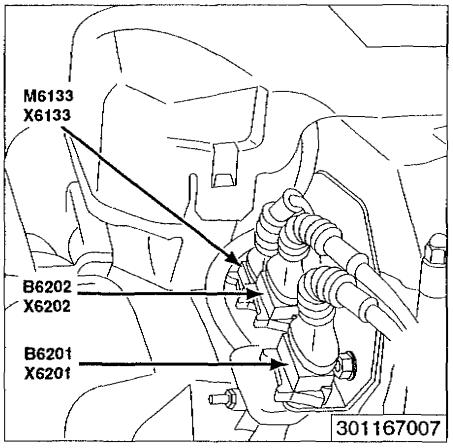



FIG 3 - Top front of engine (M5)

B6201 CYLINDER IDENTIFICATION SENSOR
B6202 CRANKSHAFT POSITION/RPM SENSOR
M6133 AIR PUMP
X6133 CONNECTOR (2-PINS, BLACK)
X6201 CONNECTOR (3-PINS, BLACK)
X6202 CONNECTOR (3-PINS, BLACK)

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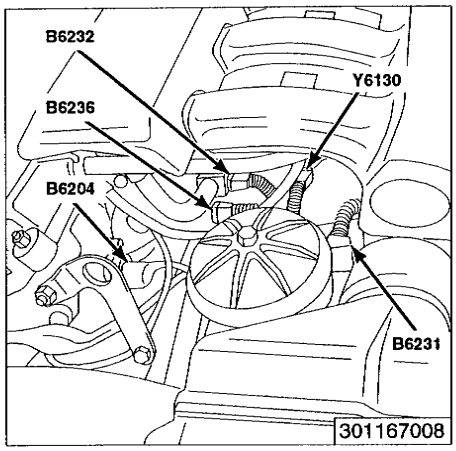



FIG. 1 - Front of engine (525i)

B6204 CAMSHAFT POSITION SENSOR (CYLINDER IDENTIFICATION)
B6231 OIL PRESSURE SWITCH
B6232 ENGINE COOLANT TEMPERATURE SENSOR
B6236 ENGINE COOLANT TEMPERATURE SENSOR
Y6130 IDLE SPEED CONTROL VALVE

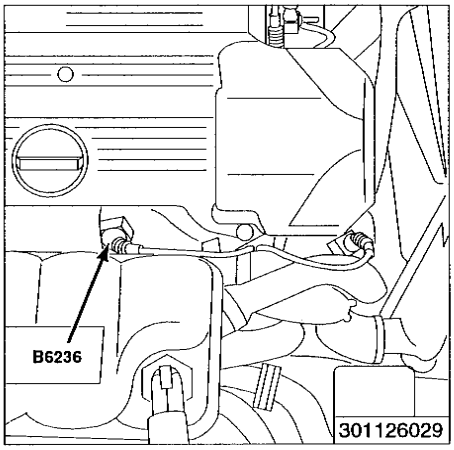



FIG. 2 - Front of engine (M5)

B6236 ENGINE COOLANT TEMPERATURE SENSOR

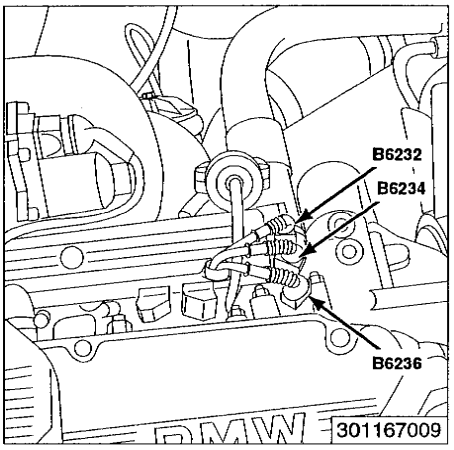



FIG. 3 - Front of engine (535i)

B6232 ENGINE COOLANT TEMPERATURE SENSOR
B6234 ENGINE COOLANT TEMP. SENSOR (EML)
B6236 ENGINE COOLANT TEMPERATURE SENSOR

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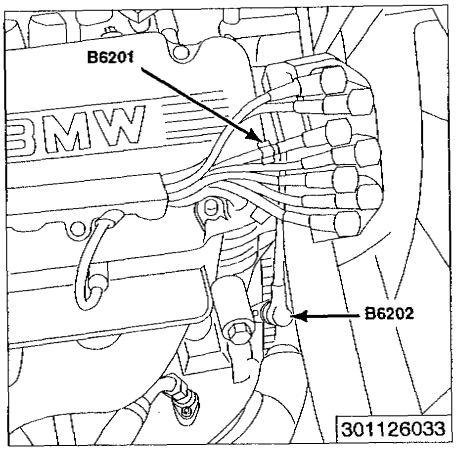



FIG. 1 - RH side of engine RH side of oil filter

B6201 CYLINDER IDENTIFICATION SENSOR
B6202 CRANKSHAFT POSITION/RPM SENSOR

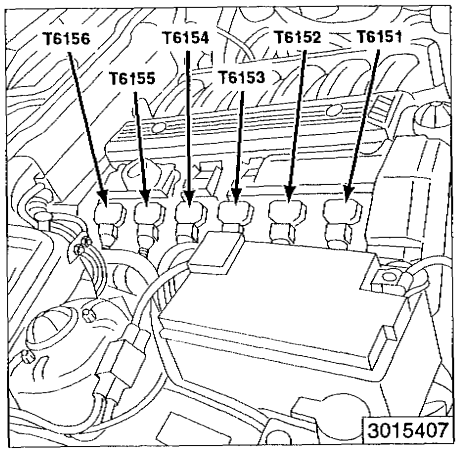



FIG. 2 - RH side of engine (525i)

T6151 CYL. 1 IGNITION COIL
T6152 CYL. 2 IGNITION COIL
T6153 CYL. 3 IGNITION COIL
T6154 CYL. 4 IGNITION COIL
T6155 CYL. 5 IGNITION COIL
T6156 CYL. 6 IGNITION COIL

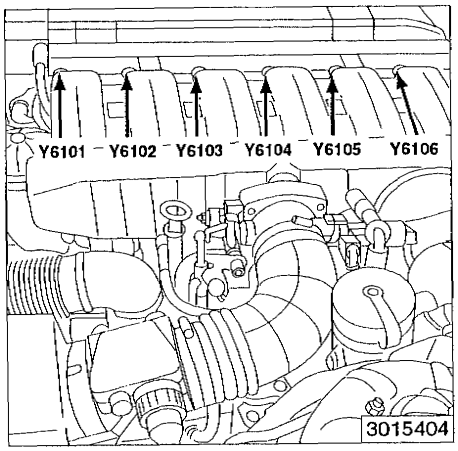



FIG. 3 - Front of engine (525i)

Y6101 CYL. 1 FUEL INJECTION VALVE
Y6102 CYL. 2 FUEL INJECTION VALVE
Y6103 CYL. 3 FUEL INJECTION VALVE
Y6104 CYL. 4 FUEL INJECTION VALVE
Y6105 CYL. 5 FUEL INJECTION VALVE
Y6106 CYL. 6 FUEL INJECTION VALVE



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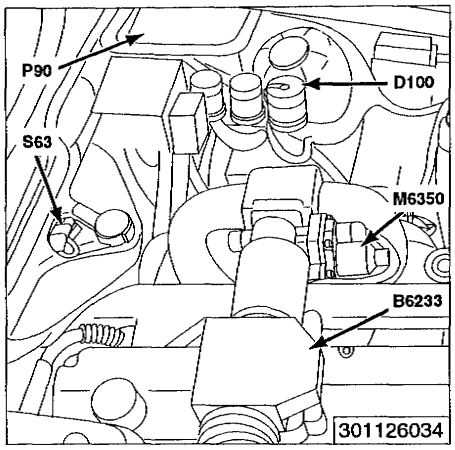



FIG. 1 - LH side of engine compartment (535i)

B6233 VOLUME AIR FLOW SENSOR
D100 DATA LINK CONNECTOR
M6350 ELECTRONIC THROTTLE ACTUATOR (EML)
P90 FRONT POWER DISTRIBUTION BOX
S63 ENGINE COOLANT LEVEL SWITCH

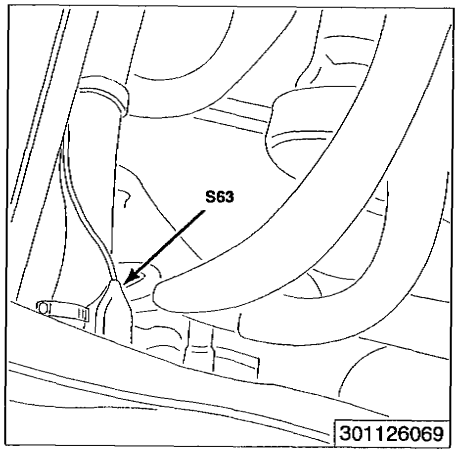



FIG. 2 - Top center of engine (525i)

S63 ENGINE COOLANT LEVEL SWITCH

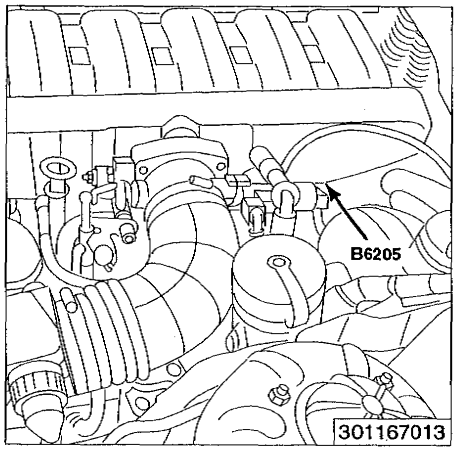



FIG. 3 - Front of engine

B6205 INTAKE AIR TEMPERATURE SENSOR

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# COMPONENT LOCATION VIEWS



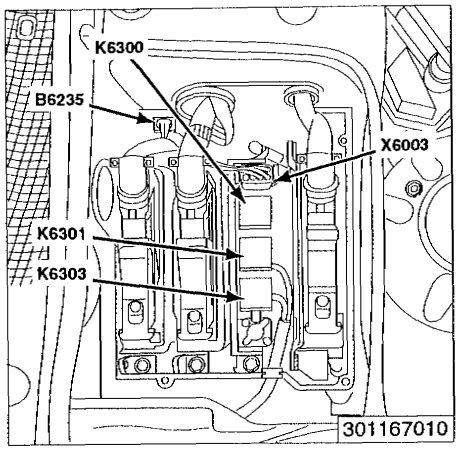



FIG. 1 - Rear RH side of engine compartment (525i)

B6235 TEMPERATURE SWITCH
K6300 ENGINE CONTROL MODULE RELAY
K6301 CYL. 1-6 FUEL PUMP RELAY
K6303 OXYGEN SENSOR RELAY
X6003 CONNECTOR (8-PINS, BLACK)

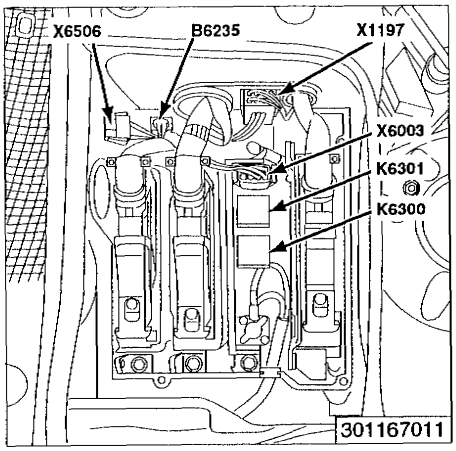



FIG. 2 - Rear RH side of engine compartment (535i)

B6235 TEMPERATURE SWITCH
K6300 ENGINE CONTROL MODULE RELAY
K6301 CYL. 1-6 FUEL PUMP RELAY
X1197 CONNECTOR (8-PINS, WHITE)
X6003 CONNECTOR (8-PINS, BLACK)
X6506 CONNECTOR (4-PINS, BLACK)

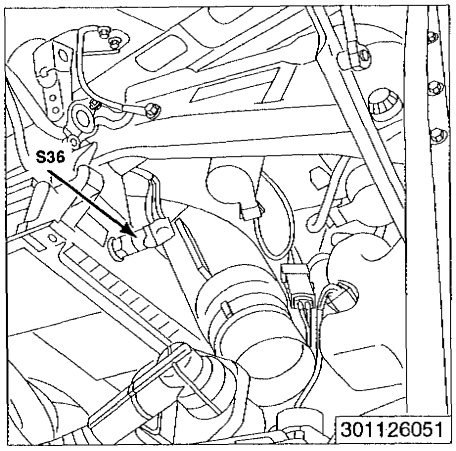



FIG. 3 - Front RH side of engine compartment

S36 TEMPERATURE SWITCH

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# COMPONENT LOCATION VIEWS



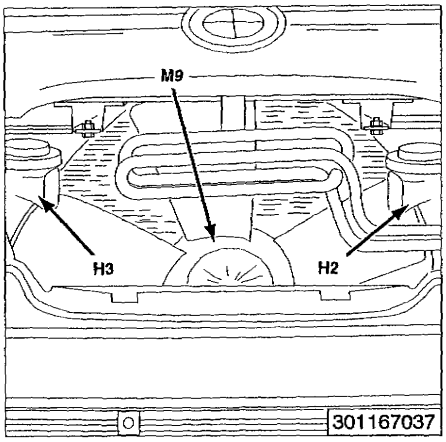



FIG 1 - Behind front grille

- H2 LEFT HORN
- H3 RIGHT HORN
- M9 AUXILIARY FAN MOTOR

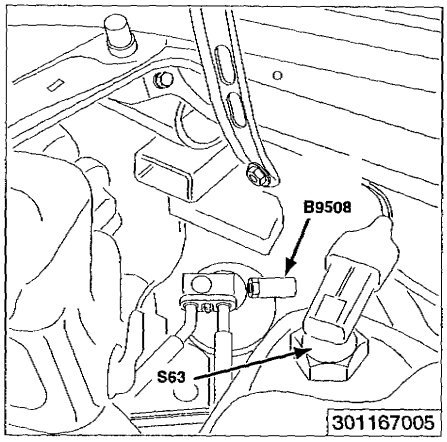



FIG 2 - Front RH side of engine compartment (M5)

- B9508 PRESSURE SWITCH
- S63 ENGINE COOLANT LEVEL SWITCH

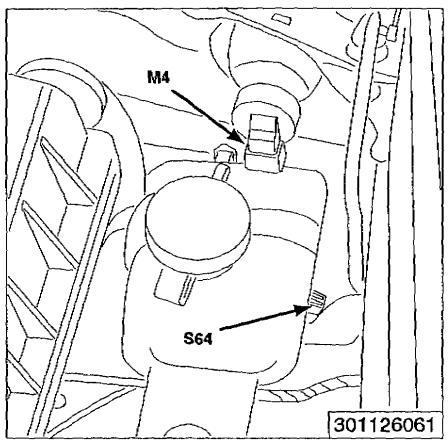



FIG 3 - Front RH side of engine compartment on washer fluid reservoir

- M4 WASHER PUMP
- S64 WASHER FLUID LEVEL SWITCH

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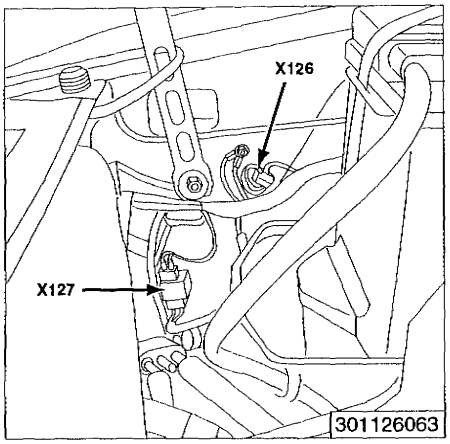



FIG 1 - Front RH side of engine compartment ahead of wheel well

X126 CONNECTOR (2-PINS, WHITE)
X127 CONNECTOR (2-PINS, BLACK)

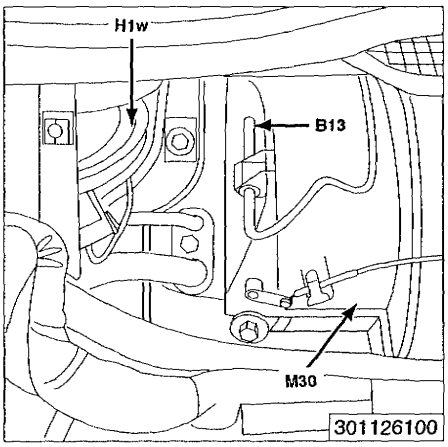



FIG 2 - Rear LH side of engine compartment

B13 OUTSIDE TEMPERATURE SENSOR
H1w ANTI-THEFT HORN (ALPINE)
M30 BLOWER MOTOR

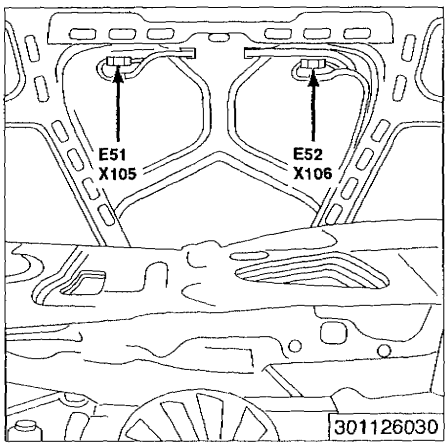



FIG 3 - On underside of engine hood

E51 LEFT WASHER JET HEATER
E52 RIGHT WASHER JET HEATER
X105 CONNECTOR (2-PINS, GRAY)
X106 CONNECTOR (2-PINS, GRAY)

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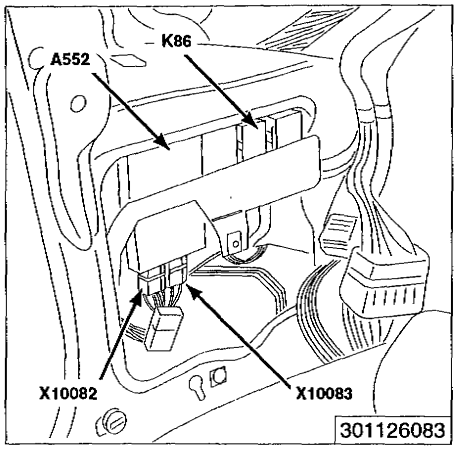



FIG. 1 - Behind LH footwell trim

| | |
|---|---|
| A552 | A/C COMPRESSOR CONTROL MODULE |
| K86 | WIDE OPEN THROTTLE CUT-OFF RELAY |
| X10082 | CONNECTOR (5-PINS, GREEN) |
| X10083 | CONNECTOR (4-PINS, BLACK) |

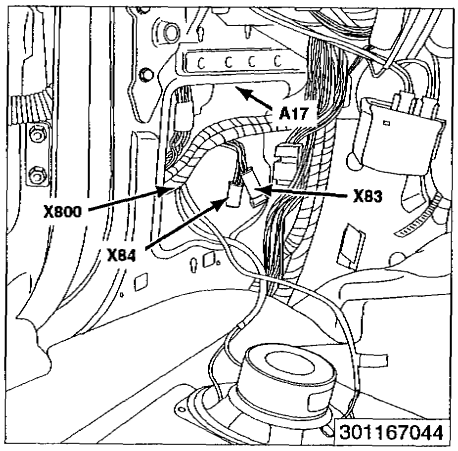



FIG. 2 - Behind LH footwell trim

| | |
|---|---|
| A17 | SERVOTRONIC CONTROL MODULE |
| X83 | CONNECTOR (3-PINS, YELLOW) |
| X84 | CONNECTOR (3-PINS, YELLOW) |
| X800 | CONNECTOR (2-PINS, WHITE) |

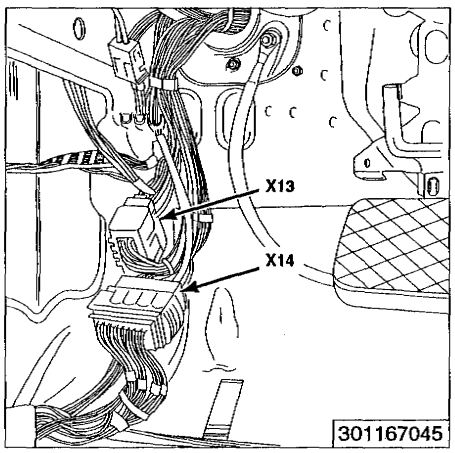



FIG. 3 - Behind LH footwell trim

| | |
|---|---|
| X13 | CONNECTOR (21-PINS, WHITE) |
| X14 | CONNECTOR (30-PINS, YELLOW) |

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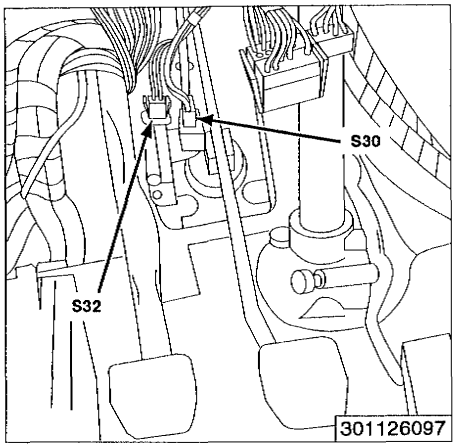



FIG. 1 - LH footwell

S30 BRAKE LIGHT SWITCH
S32 CLUTCH SWITCH

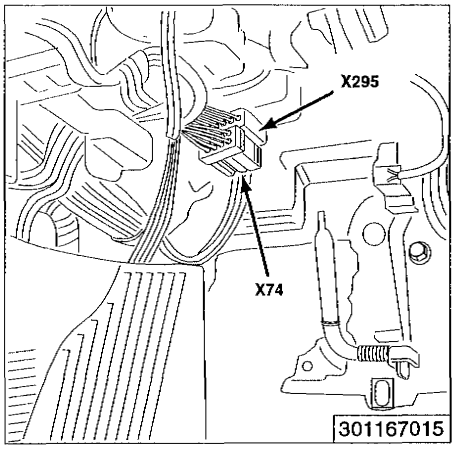



FIG. 2 - LH footwell

X74 CONNECTOR (12-PINS, ORANGE)
X295 CONNECTOR (8-PINS, BLACK)

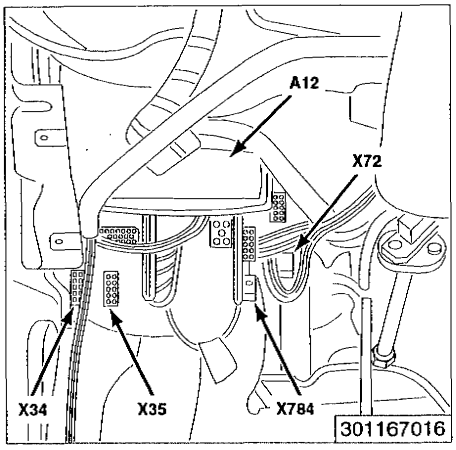



FIG. 3 - LH footwell

A12 SUPPLEMENTAL RESTRAINT SYSTEM CONTROL MODULE
X34 CONNECTOR (12-PINS, WHITE)
X35 CONNECTOR (21-PINS, BLACK)
X72 CONNECTOR (8-PINS, WHITE)
X784 CONNECTOR (12-PINS, ORANGE)

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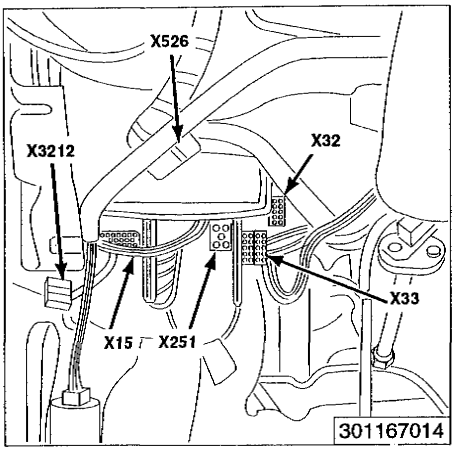



FIG. 1 - LH footwell

X15 CONNECTOR (30-PINS, WHITE)
X32 CONNECTOR (12-PINS, WHITE)
X33 CONNECTOR (12-PINS, BLACK)
X251 CONNECTOR (30-PINS, BLACK)
X526 CONNECTOR (8-PINS, BLACK)
X3212 CONNECTOR (4-PINS, BLACK)

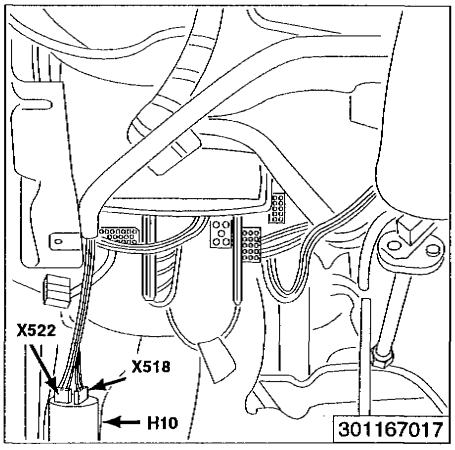



FIG. 2 - LH footwell

H10 CHIME MODULE
X518 CONNECTOR (4-PINS, BLACK)
X522 CONNECTOR (3-PINS, WHITE)

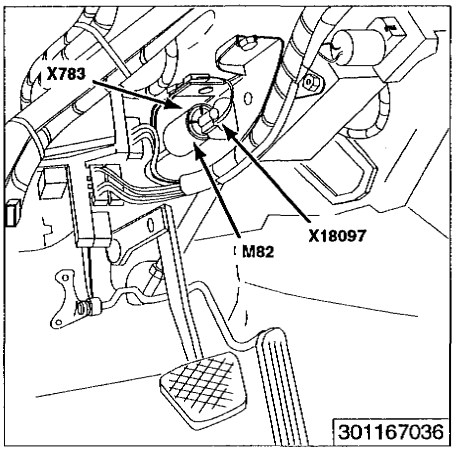



FIG. 3 - Below LH side of dash

M82 STEERING COLUMN LENGTH ADJUST MOTOR
X783 CONNECTOR (2-PINS, ORANGE)
X18097 CONNECTOR (2-PINS, BLACK)

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# COMPONENT LOCATION VIEWS



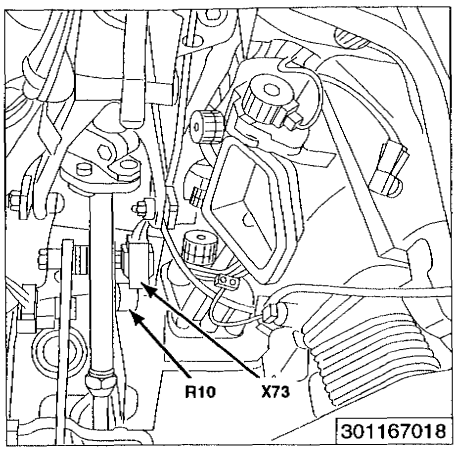



FIG. 1 - LH footwell

- R10 PEDAL POSITION SENSOR
- X73 CONNECTOR (8-PINS, BLACK)

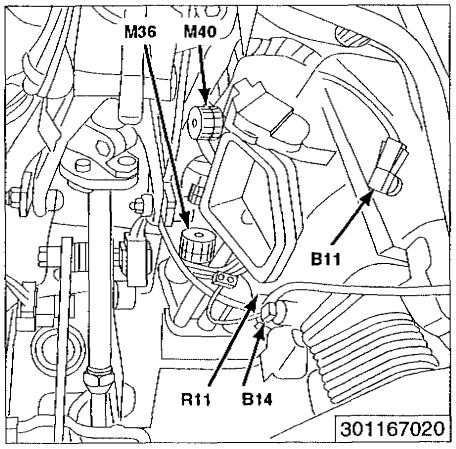



FIG. 2 - LH footwell LH side of IHKR/F3 Plenum

- B11 LH HEAT EXCHANGER TEMPERATURE SENSOR
- B14 EVAPORATOR TEMPERATURE SENSOR
- M36 FRESH AIR FLAP MOTOR
- M40 RECIRCULATION FLAP MOTOR
- R11 BLOWER RESISTORS

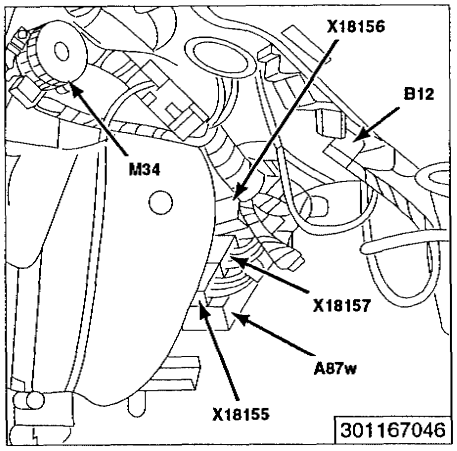



FIG. 3 - LH side of RH footwell

- A87w INTEGRATED CLIMATE REGULATION CONTROL MODULE (IHKR/F3)
- B12 RH HEAT EXCHANGER TEMPERATURE SENSOR
- M34 DASH VENT MIXING FLAP MOTOR
- X18155 CONNECTOR (26-PINS, WHITE)
- X18156 CONNECTOR (26-PINS, BLUE)
- X18157 CONNECTOR (26-PINS, BLUE)





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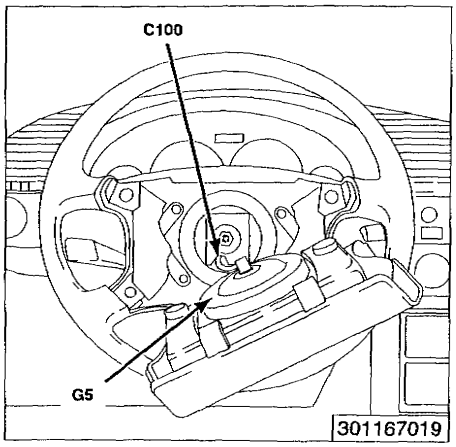



FIG 1 - Top of steering column

C100 CONTACT RING
G5 DRIVER'S AIR BAG GENERATOR

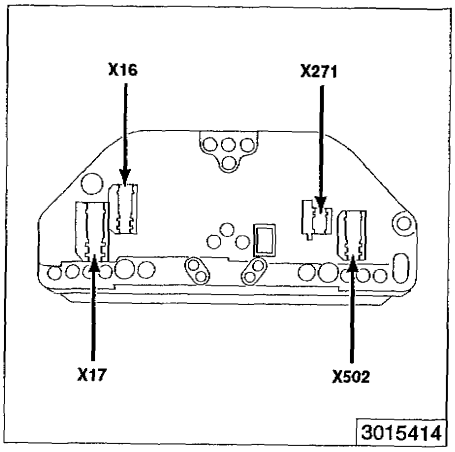



FIG 2 - Rear of A2 instrument cluster

X16 CONNECTOR (26-PINS, NATURAL)
X17 CONNECTOR (6-PINS, BROWN)
X271 CONNECTOR (12-PINS, GRAY)
X502 CONNECTOR (26-PINS, BLACK)

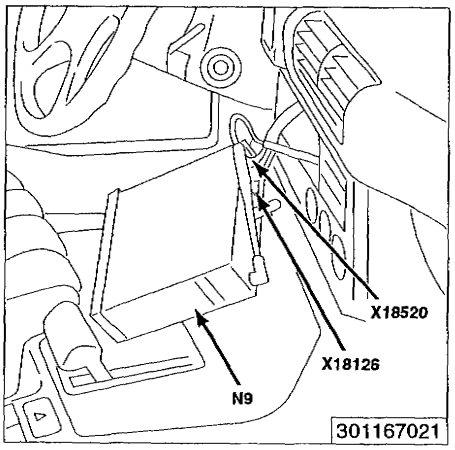



FIG 3 - Center of dash

N9 RADIO
X18126 CONNECTOR (17-PINS, BLACK)
X18520 CONNECTOR (10-PINS, BLACK)

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# COMPONENT LOCATION VIEWS



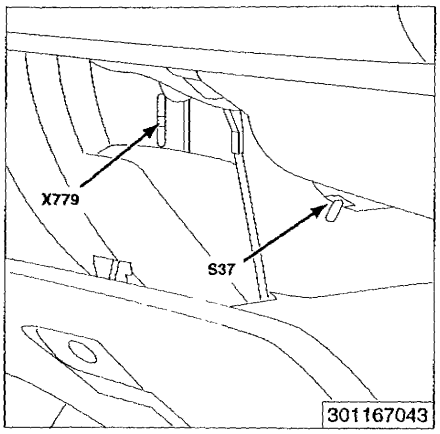



FIG 1 - LH side of glove box

S37 GLOVE BOX LIGHT SWITCH
X779 CHARGING SOCKET

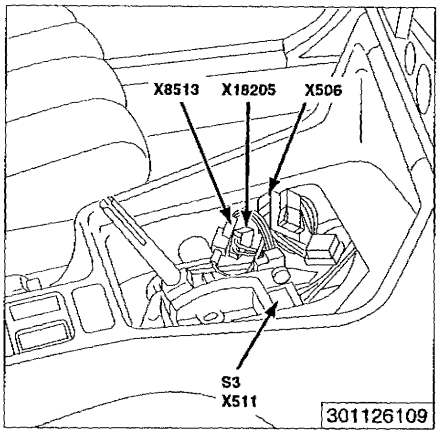



FIG 2 - Below center console front of gearshift selector

S3 AUTOMATIC TRANSMISSION RANGE SWITCH
X506 CONNECTOR (12-PINS, BLACK)
X511 CONNECTOR (8-PINS, BLACK)
X8513 CONNECTOR (2-PINS, WHITE)
X18205 CONNECTOR (2-PINS, WHITE)

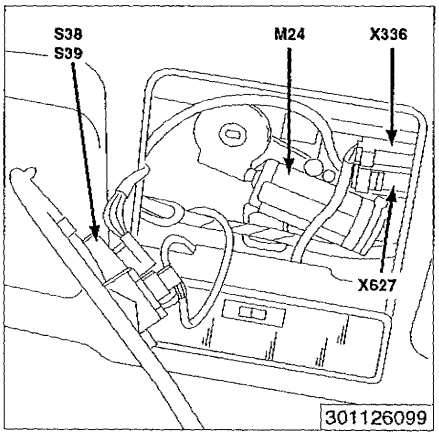



FIG 3 - Center of windshield header near rear view mirror

M24 SUNROOF MOTOR
S38 SUNROOF SWITCH
S39 SUNROOF POSITION SWITCH
X336 CONNECTOR (4-PINS, WHITE)
X627 CONNECTOR (8-PINS, BLACK)

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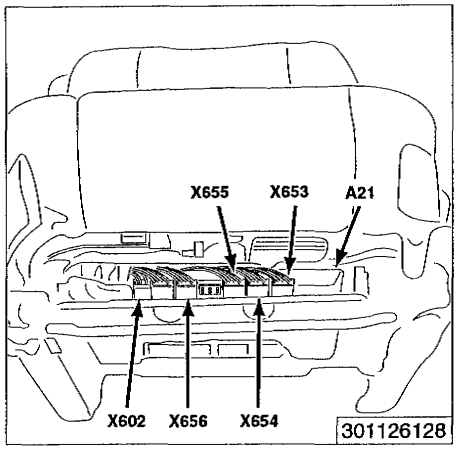



FIG. 1 - Underside of LH front seat

- A21 SEAT/MIRROR MEMORY CONTROL MODULE
- X602 CONNECTOR (26-PINS, YELLOW)
- X653 CONNECTOR (6-PINS, BLACK)
- X654 CONNECTOR (6-PINS, WHITE)
- X655 CONNECTOR (6-PINS, BLUE)
- X656 CONNECTOR (6-PINS, GREEN)

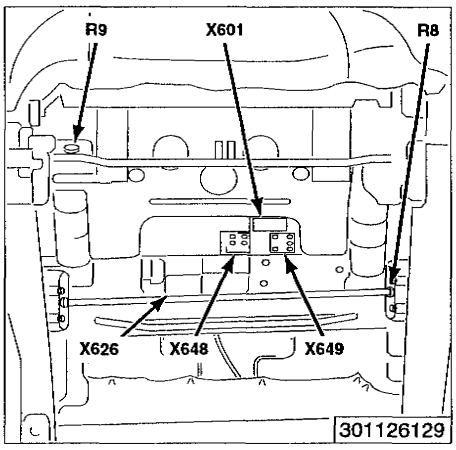



FIG. 2 - Underside of LH front seat

- R8 SEAT CUSHION REAR HEIGHT POTENTIOMETER
- R9 SEAT CUSHION MOVEMENT POTENTIOMETER
- X601 CONNECTOR (26-PINS, WHITE)
- X626 CONNECTOR (8-PINS, BLACK)
- X648 CONNECTOR (6-PINS, BLACK)
- X649 CONNECTOR (6-PINS, WHITE)

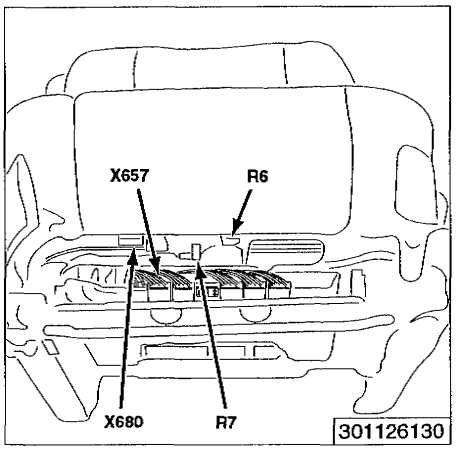



FIG. 3 - Underside of LH front seat

- R6 SEAT HEIGHT POTENTIOMETER
- R7 SEATBACK POTENTIOMETER
- X657 CONNECTOR (6-PINS, BROWN)
- X680 CONNECTOR (3-PINS, BLACK)

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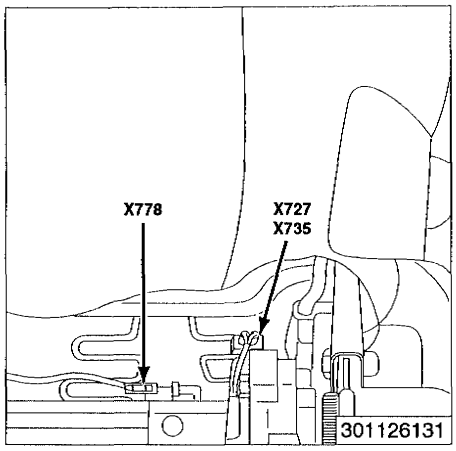



FIG. 1 - Underside of LH front seat

X727 CONNECTOR (2-PINS, WHITE)
X735 CONNECTOR (2-PINS, WHITE)
X778 CONNECTOR (2-PINS, BLACK)

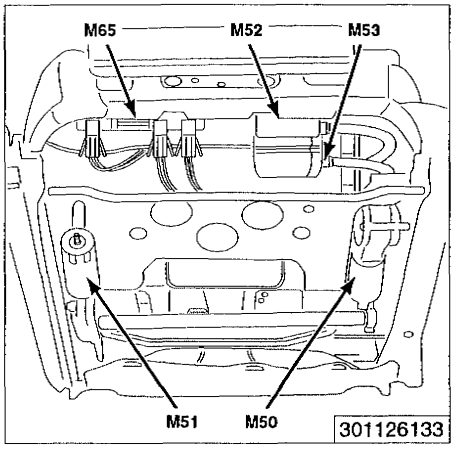



FIG. 2 - Underside of LH front seat

M50 DRIVER'S SEAT CUSHION TILT MOTOR
M51 DRIVER'S SEAT MOVEMENT MOTOR
M52 DRIVER'S SEAT HEIGHT MOTOR
M53 DRIVER'S SEATBACK RECLINER MOTOR
M65 DRIVER'S THIGH SUPPORT MOTOR

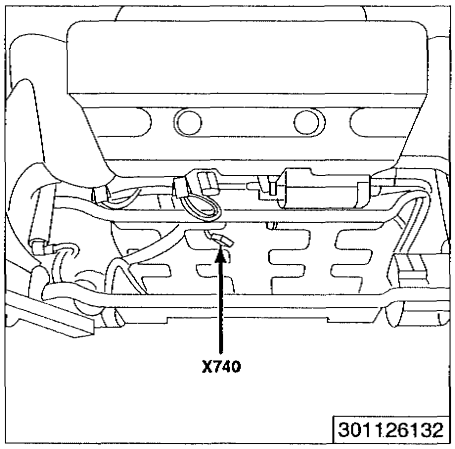



FIG. 3 - Underside of LH front seat

X740 CONNECTOR (2-PINS, WHITE)

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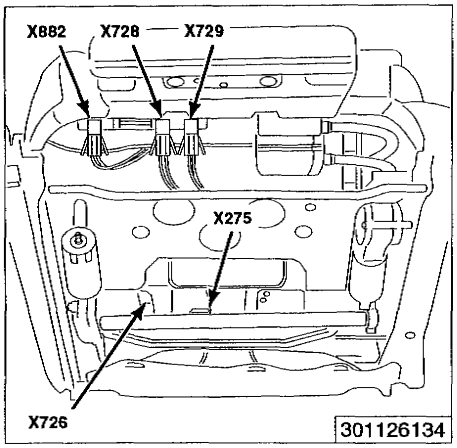



FIG. 1 - Underside of LH front seat

X275 CONNECTOR (12-PINS, WHITE)
X726 CONNECTOR (2-PINS, BLACK)
X728 CONNECTOR (2-PINS, WHITE)
X729 CONNECTOR (2-PINS, BLACK)
X882 CONNECTOR (2-PINS, BLACK)

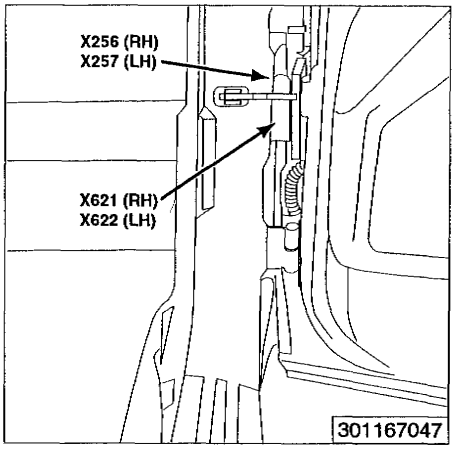



FIG. 2 - Passenger's door (LH similar)

X256 CONNECTOR (26-PINS, BLACK)
X257 CONNECTOR (26-PINS, BLACK)
X621 CONNECTOR (10-PINS, BLACK)
X622 CONNECTOR (10-PINS, BLACK)

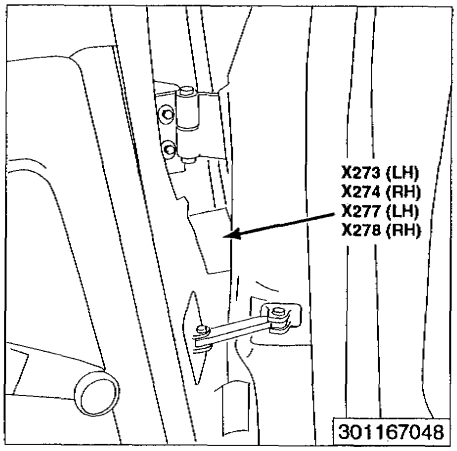



FIG. 3 - Ahead of LH rear door

X273 CONNECTOR (12-PINS, BLACK)
X274 CONNECTOR (12-PINS, BLACK)
X277 CONNECTOR (10-PINS, BLACK)
X278 CONNECTOR (10-PINS, BLACK)

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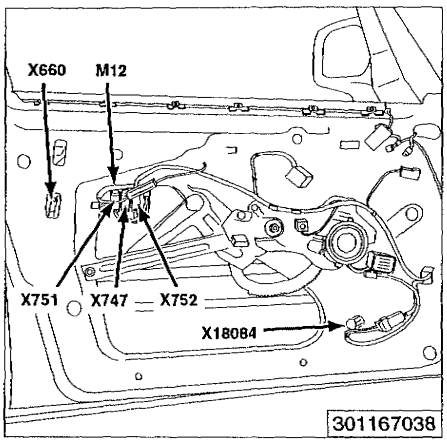



FIG 1 - In upper LH front door

| | |
|---|---|
| M12 | DRIVER'S DOOR LOCK MOTOR |
| X660 | CONNECTOR (6-PINS, BLACK) |
| X751 | CONNECTOR (2-PINS, WHITE) |
| X752 | CONNECTOR (2-PINS, GRAY) |
| X747 | CONNECTOR (2-PINS, YELLOW) |
| X18084 | CONNECTOR (2-PINS, WHITE) |

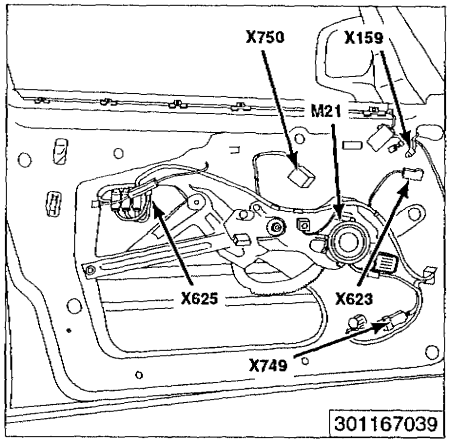



FIG 2 - In lower LH front door

| | |
|---|---|
| X159 | CONNECTOR (10-PINS, BLACK) |
| X623 | CONNECTOR (4-PINS, BLACK) |
| X625 | CONNECTOR (6-PINS, BLACK) |
| X749 | CONNECTOR (2-PINS, GRAY) |
| X750 | CONNECTOR (1-PINS, (---)) |
| M21 | DRIVER'S WINDOW MOTOR |

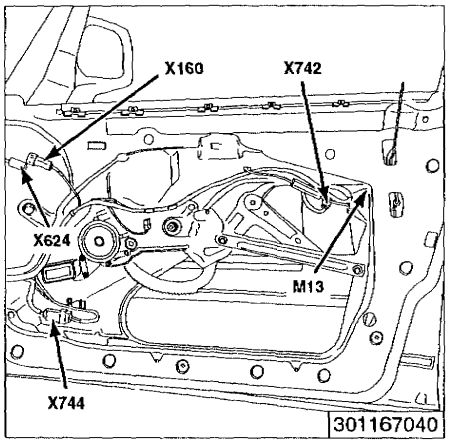



FIG 3 - In lower RH front door

| | |
|---|---|
| M13 | PASSENGER'S DOOR LOCK MOTOR |
| X160 | CONNECTOR (10-PINS, BLACK) |
| X624 | CONNECTOR (4-PINS, BLACK) |
| X742 | CONNECTOR (2-PINS, YELLOW) |
| X744 | CONNECTOR (2-PINS, GRAY) |



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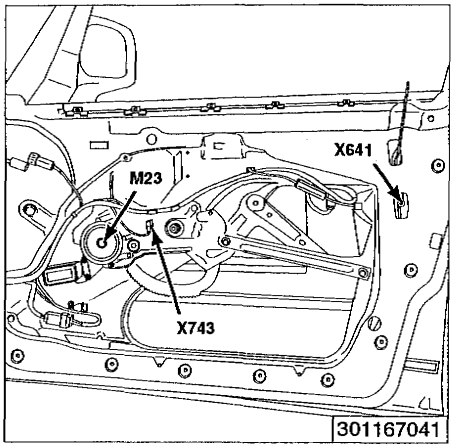



FIG. 1 - In lower RH front door

M23 PASSENGER'S WINDOW MOTOR
X641 CONNECTOR (6-PINS, BLACK)
X743 CONNECTOR (2-PINS, BLACK)

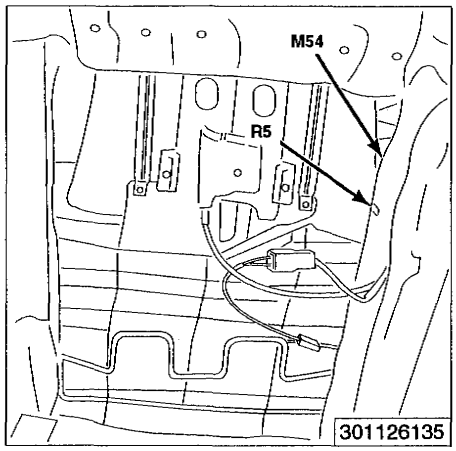



FIG. 2 - In upper LH front seatback

M54 DRIVER'S HEADREST MOTOR
R5 HEADREST POTENTIOMETER

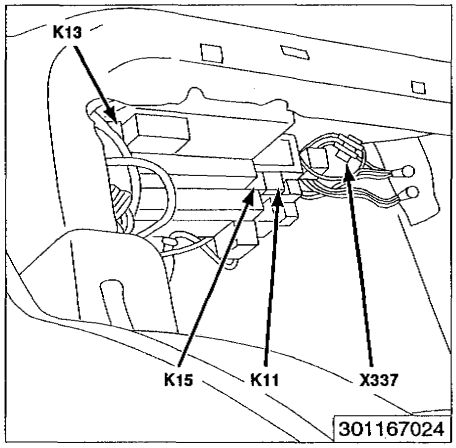



FIG. 3 - Below LH side of rear seat

K11 WIPER RELAY
K13 REAR DEFOGGER RELAY
K15 ELECTRIC POWER PROTECTION RELAY
X337 CONNECTOR (4-PINS, BLACK)

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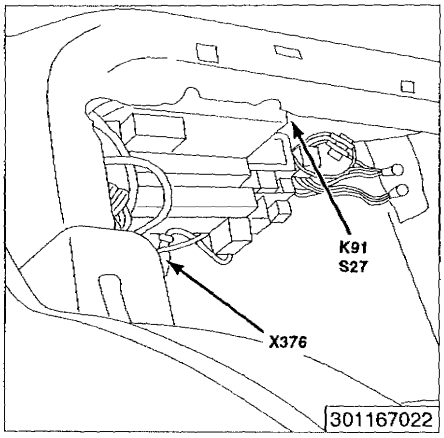



FIG 1 - Below LH side of rear seat

K91 ON-BOARD COMPUTER HORN RELAY
S27 INERTIA SWITCH
X376 CONNECTOR (2-PINS, WHITE)

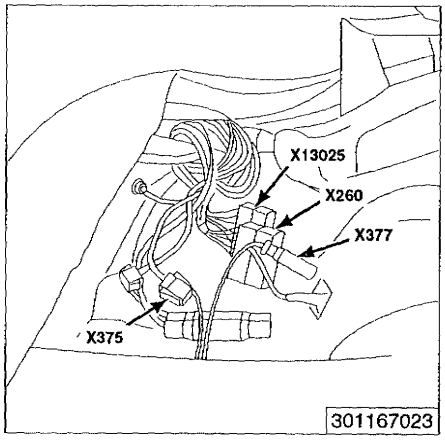



FIG 2 - Below RH side of rear seat

X260 CONNECTOR (21-PINS, BLACK)
X375 CONNECTOR (2-PINS, BLACK)
X377 CONNECTOR (2-PINS, WHITE)
X13025 CONNECTOR (12-PINS, BLACK)

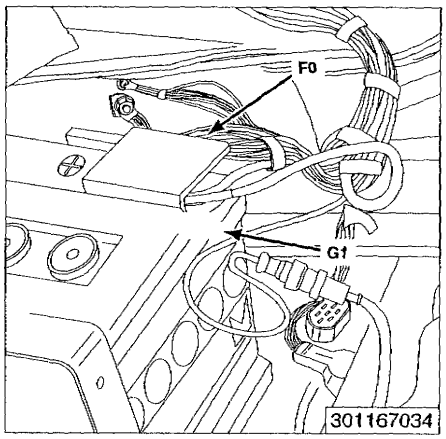



FIG 3 - Below RH side of rear seat

F0 FUSIBLE LINK
G1 BATTERY



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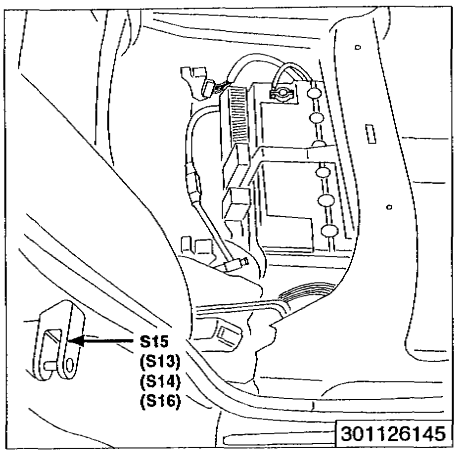



FIG. 1 - Ahead of RH rear door

- S13 PASSENGER'S DOOR JAMB SWITCH
- S14 DRIVER'S DOOR JAMB SWITCH
- S15 REAR RIGHT DOOR JAMB SWITCH
- S16 LEFT REAR DOOR JAMB SWITCH

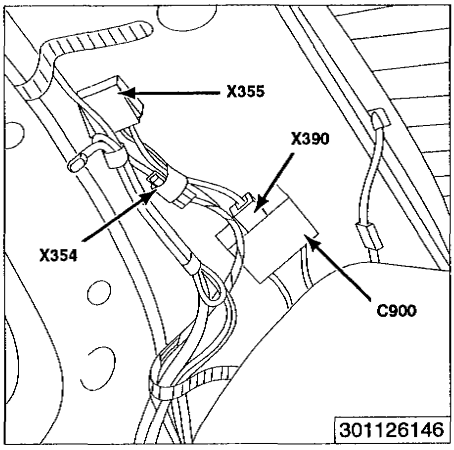



FIG. 2 - In upper RH C-pillar

- C900 SUPPRESSION FILTER
- X354 CONNECTOR (2-PINS, BLACK)
- X355 CONNECTOR (3-PINS, WHITE)
- X390 CONNECTOR (1-PINS, WHITE)

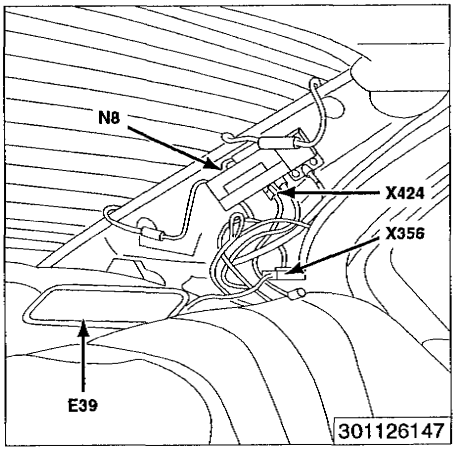



FIG. 3 - In upper LH C-pillar

- E39 LEFT REAR INTERIOR LIGHT
- N8 ANTENNA AMPLIFIER AM/FM
- X356 CONNECTOR (4-PINS, BLACK)
- X424 CONNECTOR (1-PINS, BROWN)

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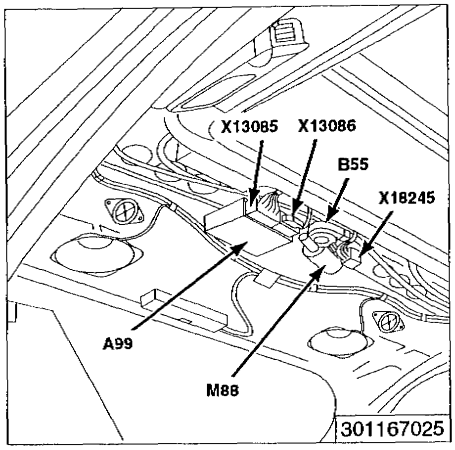



FIG. 1 - In roof panel Station Wagon only

| | |
|---|---|
| A99 | DOUBLE PANEL POWER SUN-ROOF CONTROL MODULE |
| B55 | DOUBLE PANEL POWER SUN ROOF SENSOR II |
| M88 | MOTOR DRIVE II DOUBLE PANEL POWER SUNROOF |
| X13085 | CONNECTOR (10-PINS, BLACK) |
| X13086 | CONNECTOR (15-PINS, BLACK) |
| X18245 | CONNECTOR (8-PINS, BLACK) |

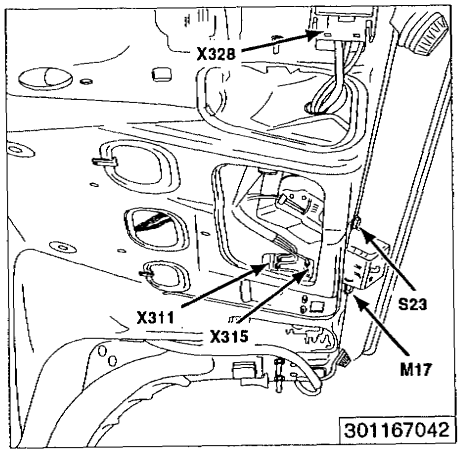



FIG. 2 - Underside of trunk lid

| | |
|---|---|
| M17 | TRUNK LOCK MOTOR |
| S23 | TRUNK LOCK SWITCH (DWA) |
| X311 | CONNECTOR (3-PINS, BLACK) |
| X315 | CONNECTOR (2-PINS, WHITE) |
| X328 | CONNECTOR (4-PINS, BLACK) |

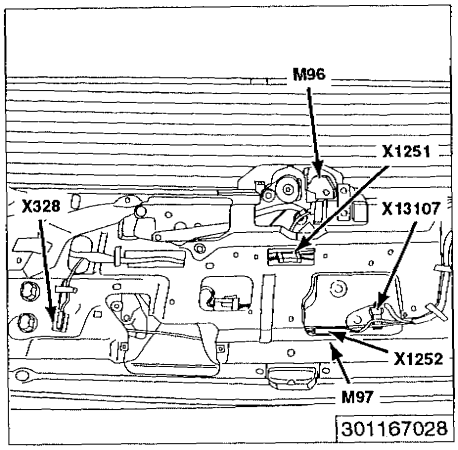



FIG. 3 - Underside of trunk lid Station Wagon only

| | |
|---|---|
| M96 | REAR WINDOW MOTOR |
| M97 | LIFT GATE MOTOR |
| X328 | CONNECTOR (4-PINS, BLACK) |
| X1251 | CONNECTOR (2-PINS, BLACK) |
| X1252 | CONNECTOR (2-PINS, BLACK) |
| X13107 | CONNECTOR (4-PINS, WHITE) |

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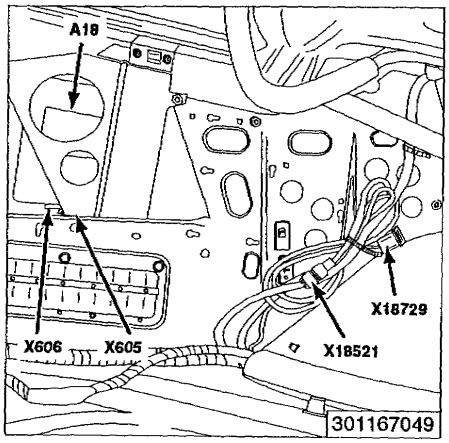



FIG 1 - In LH rear side of luggage compartment

| | |
|---|---|
| A18 | HIFI AMPLIFIER |
| X605 | CONNECTOR (12-PINS, BLACK) |
| X606 | CONNECTOR (12-PINS, WHITE) |
| X18521 | CONNECTOR (10-PINS, BLACK) |
| X18729 | CONNECTOR (3-PINS, WHITE) |

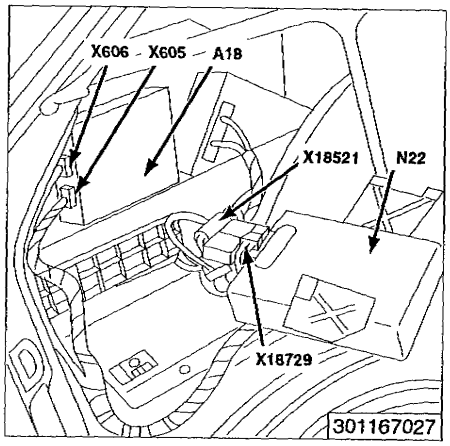



FIG 2 - In LH rear side of luggage compartment Station Wagon only

| | |
|---|---|
| A18 | HIFI AMPLIFIER |
| N22 | CD CHANGER |
| X605 | CONNECTOR (12-PINS, BLACK) |
| X606 | CONNECTOR (12-PINS, WHITE) |
| X18521 | CONNECTOR (10-PINS, BLACK) |
| X18729 | CONNECTOR (3-PINS, WHITE) |

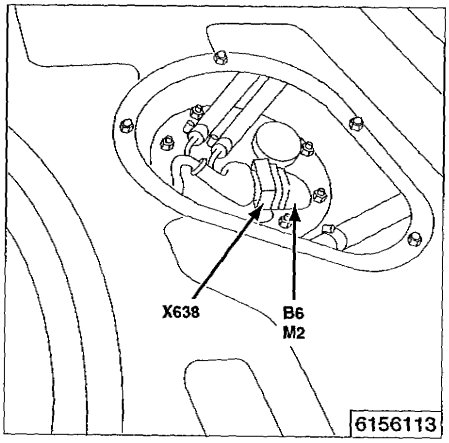



FIG 3 - RH side of luggage compartment

| | |
|---|---|
| B6 | FUEL LEVEL SENSOR |
| M2 | FUEL PUMP |
| X638 | CONNECTOR (6-PINS, BLACK) |

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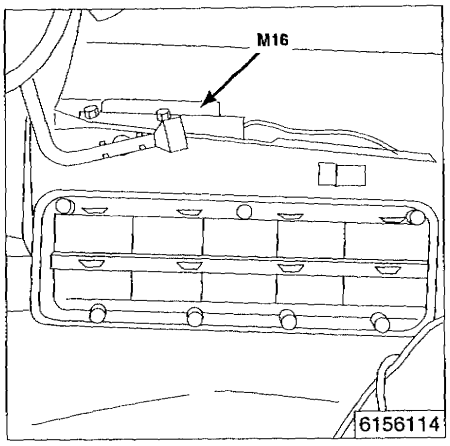



FIG 1 - RH side of luggage compartment

M16 GAS FILLER LOCK MOTOR

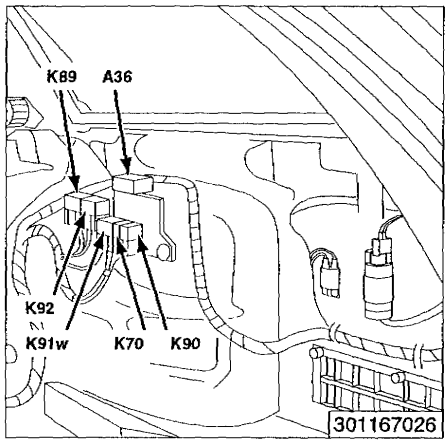



FIG 2 - RH side of luggage compartment

A36 REAR WIPER/WASHER INTERVAL CONTROL MODULE
K70 CENTRAL LOCKING TRUNK LID MOTOR RELAY (ZV)
K89 REAR WINDOW WASHER RELAY
K90 WINDOW MOTOR RELAY
K91w REAR WINDOW WIPER RELAY I
K92 REAR WINDOW WIPER RELAY II

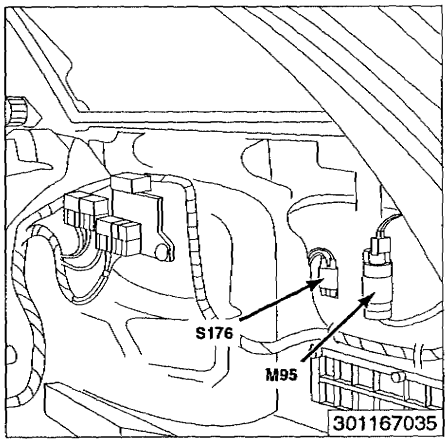



FIG 3 - RH side of luggage compartment

M95 REAR WINDOW WASHER PUMP
S176 REAR WIPER/WASHER FLUID LEVEL SWITCH

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# SPLICE LOCATION VIEWS

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| X223 | FRONT | 8000.0-03 |
| X225 | FRONT | 8000.0-03 |
| X228 | FRONT | 8000.0-03 |
| X241 | FRONT | 8000.0-03 |
| X245 | FRONT | 8000.0-03 |
| X246 | FRONT | 8000.0-03 |
| X276 | FRONT | 8000.0-03 |
| X282 | REAR | 8000.0-05 |
| X414 | REAR | 8000.0-05 |
| X426 | REAR | 8000.0-05 |
| X429 | REAR | 8000.0-05 |
| X431 | REAR | 8000.0-05 |
| X433 | REAR | 8000.0-05 |
| X435-X437 | REAR | 8000.0-05 |
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| X1023 | FRONT | 8000.0-03 |
| X1029 | FRONT | 8000.0-03 |
| X1033 | FRONT | 8000.0-03 |
| X1036 | FRONT | 8000.0-03 |
| X1043 | FRONT | 8000.0-03 |
| X1047 | FRONT | 8000.0-03 |
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| X1225 | INSTRUMENT | 8000.0-04 |
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| X1228 | REAR | 8000.0-05 |
| X1232 | INSTRUMENT | 8000.0-04 |
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| X1362 | REAR | 8000.0-05 |
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| X11252 | FRONT | 8000.0-03 |
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| X13244-X13246 | REAR | 8000.0-05 |
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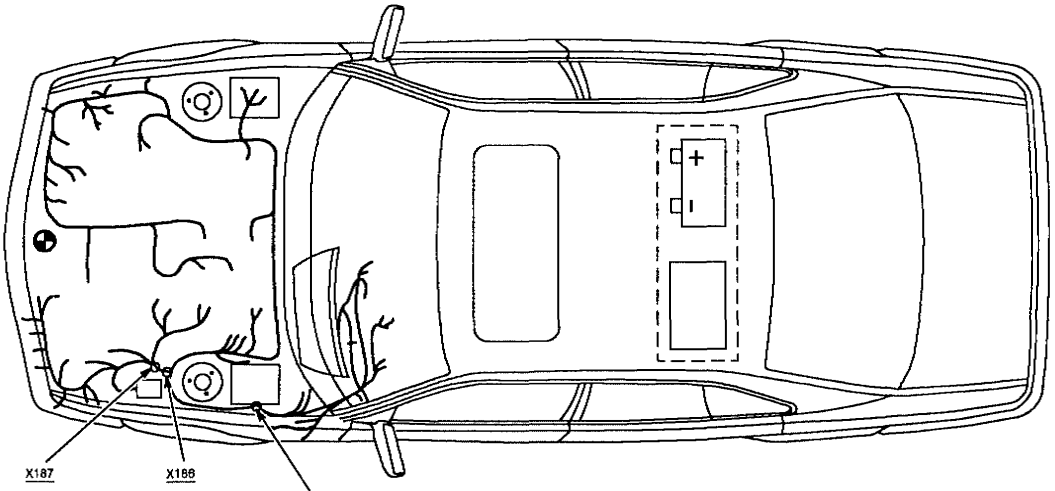



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# SPLICE LOCATION VIEWS

## FRONT HARNESS





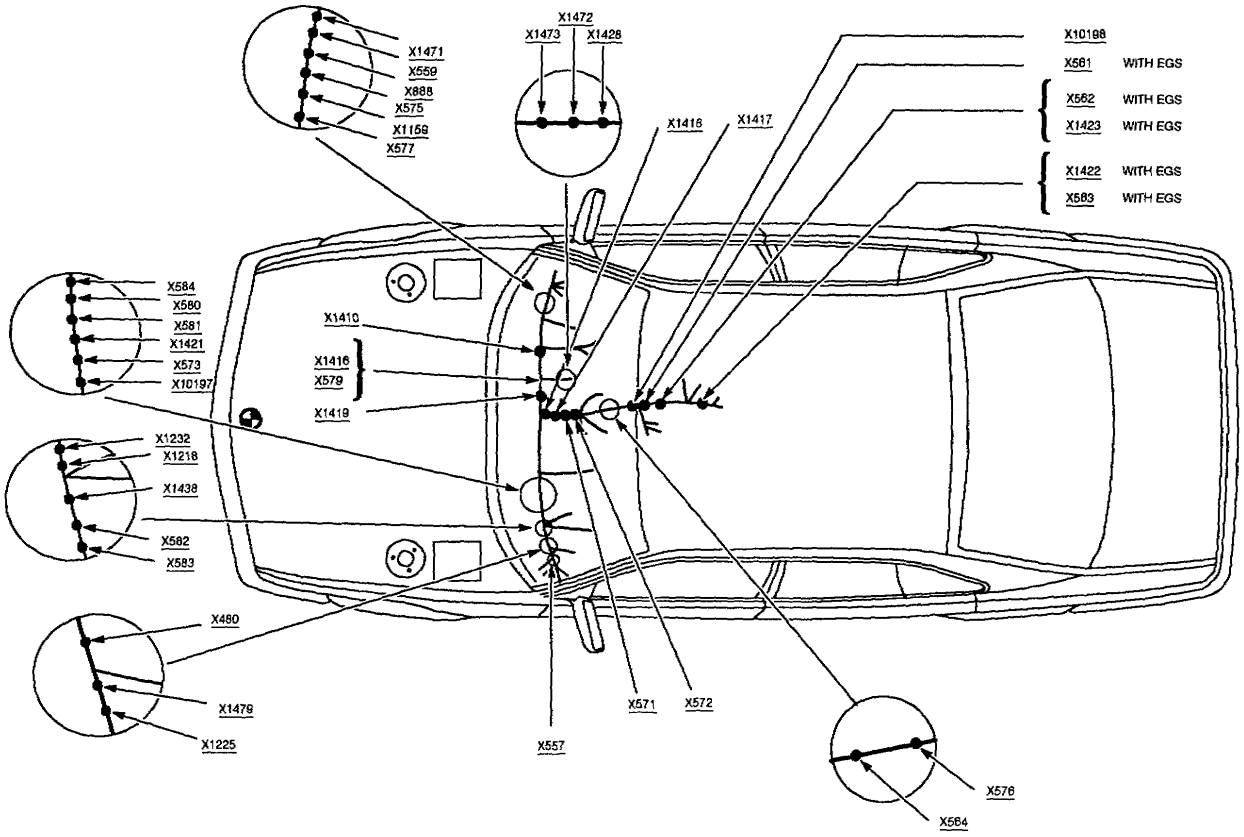

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| X182 | X198 | X213 | X1022 | X1152 | X10093 |
| X183 | X199 | X215 | X1023 | X1159 | X11247 |
| X184 | X200 | X222 | X1029 | X1194 | X11248 |
| X185 | X201 | X223 | X1033 | X1394 | X11249 |
| X186 | X203 | X225 | X1036 | X1399 | X11251 |
| X189 | X204 | X228 | X1043 | X10021 | X11252 |
| X191 | X205 | X241 | X1047 | X10027 | X11262 |
| X192 | X206 | X245 | X1092 | X10060 | |
| X193 | X207 | X248 | X1093 | X10080 | |
| X195 | X209 | X276 | X1094 | X10081 | |
| X196 | X210 | X994 | X1095 | X10090 | |

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BMW 5

# SPLICE LOCATION VIEWS

## INSTRUMENT HARNESS

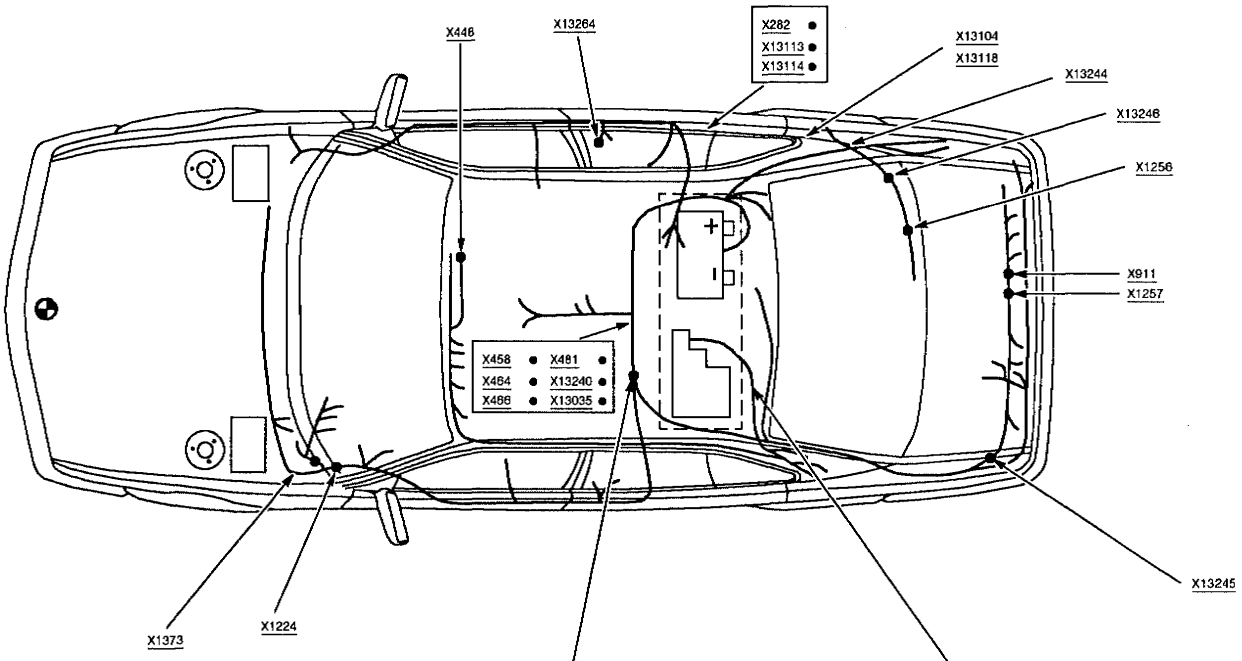



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# SPLICE LOCATION VIEWS

## REAR HARNESS






| | | | | |
|---|---|---|---|---|
| X414 | X451 | X467 | X1228 | X13250 |
| X429 | X455 | X468 | X1366 | |
| X433 | X456 | X470 | X1367 | |
| X435 | X459 | X475 | X13074 | |
| X443 | X460 | X479 | X13116 | |
| X444 | X461 | X488 | X13117 | |
| X445 | X462 | X489 | X13241 | |
| X446 | X463 | X833 | X13249 | |

| | | |
|---|---|---|
| X426 | X465 | X13259 |
| X431 | X469 | |
| X436 | X1226 | |
| X437 | X1258 | |
| X441 | X1294 | |
| X442 | X1362 | |
| X450 | X13115 | |
| X457 | X13248 | |

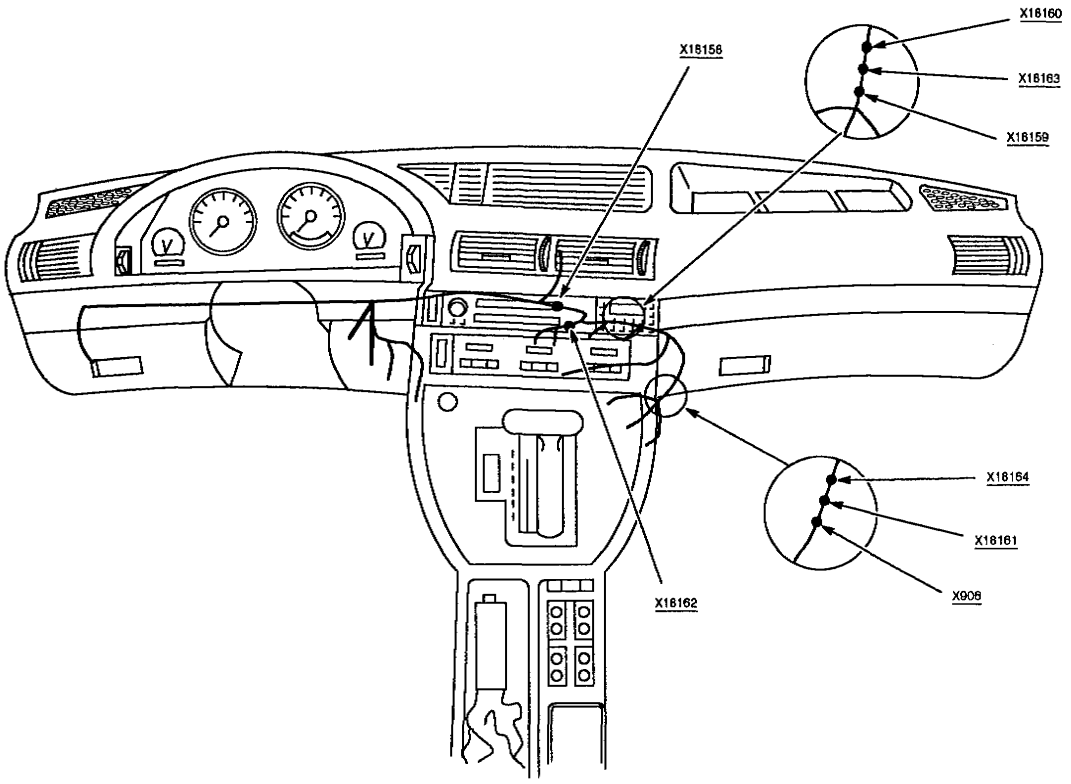




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# SPLICE LOCATION VIEWS

## IHKR/F3

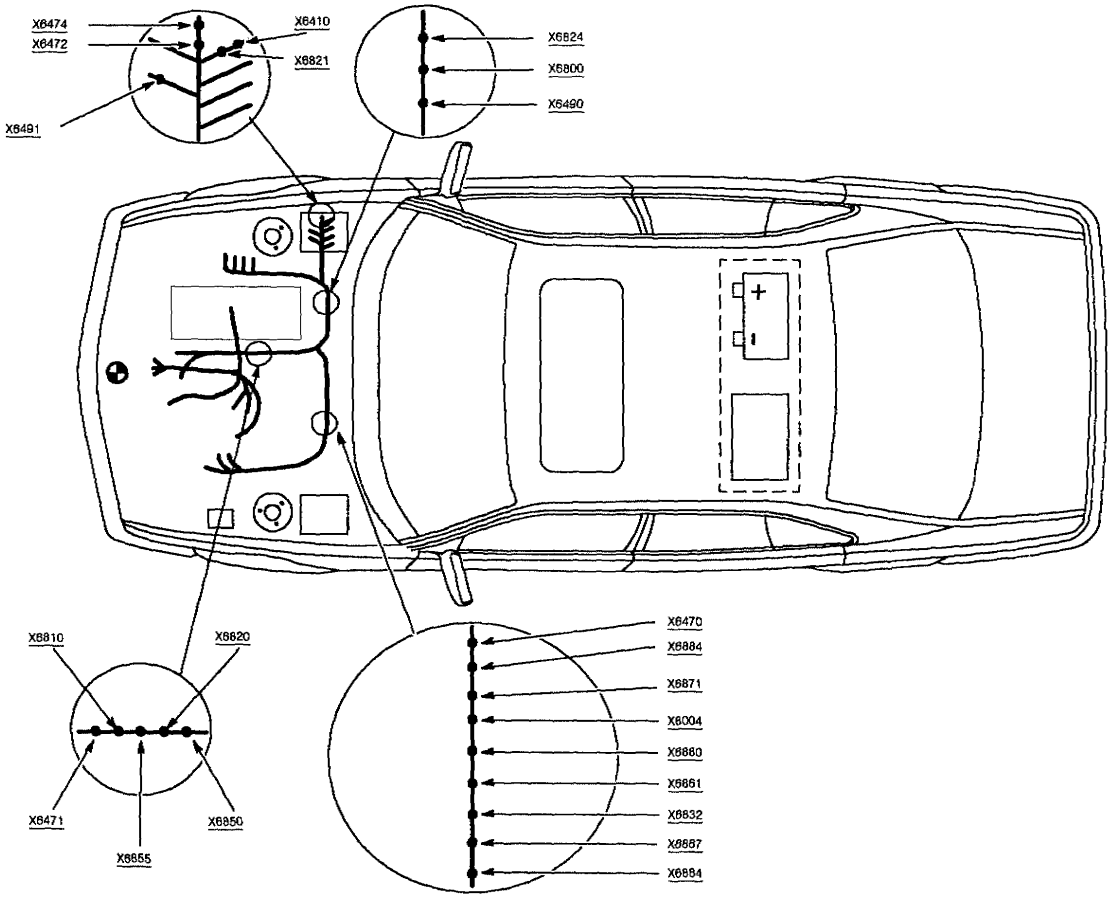





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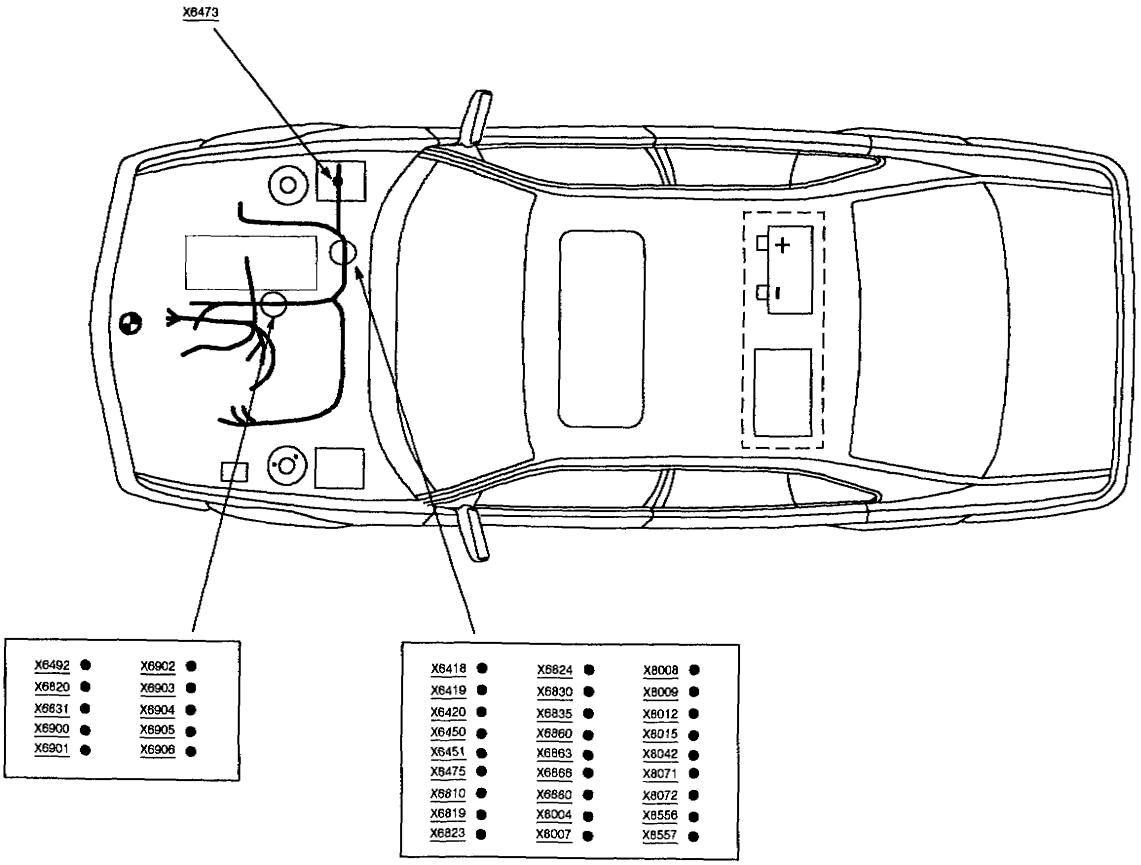
# SPLICE LOCATION VIEWS

## M30 ENGINE HARNESS






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# CONNECTOR VIEWS



FIG 1

B550001 00

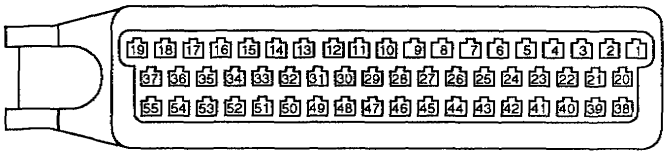



FIG 2

B350001 00

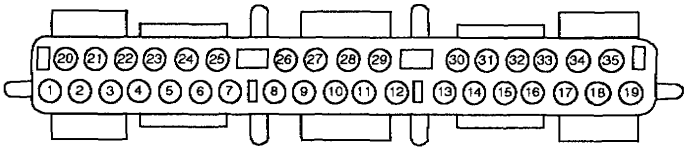



FIG 3

B350002 00

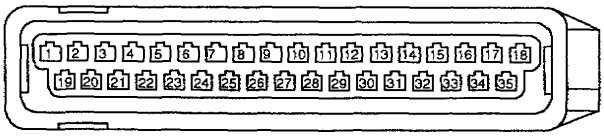
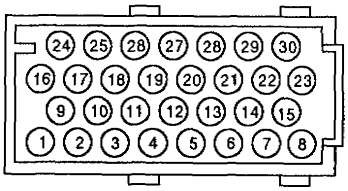



FIG 4

B300001 00








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# CONNECTOR VIEWS



**FIG. 1**

B260002.00

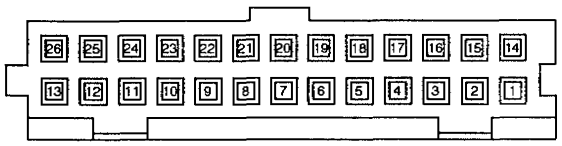



**FIG. 2**

B120015

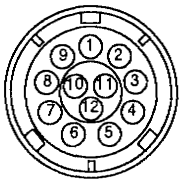



**FIG. 3**

B210001.00

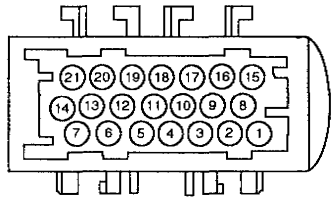



**FIG. 4**

B240001.00

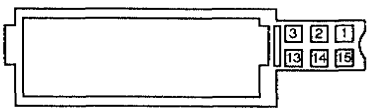



**FIG. 5**

B080003.00

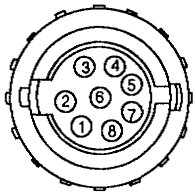
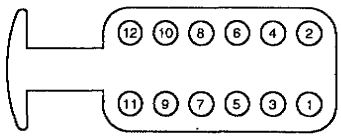



**FIG. 6**

B120013.00




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# CONNECTOR VIEWS



FIG. 1

B120002.02

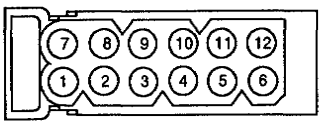



FIG. 2

B060040.00




FIG. 3

B090001.00

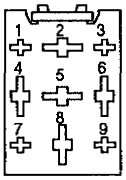



FIG. 4

B050005.00

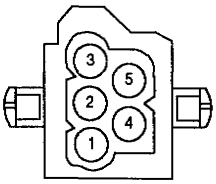



FIG. 5

B030006.00

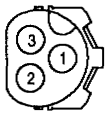
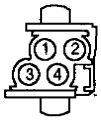



FIG. 6

B040003.00




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# CONNECTOR VIEWS



**FIG. 1**

B080002.00

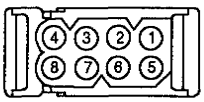



**FIG. 2**

B050006.00

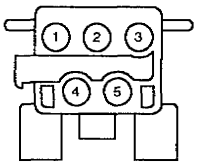



**FIG. 3**

B030001.00

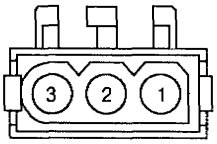



**FIG. 4**

B250001.00

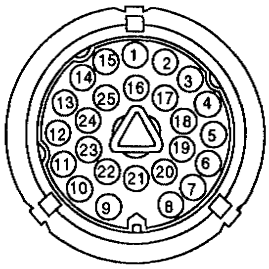



**FIG. 5**

B030015.10

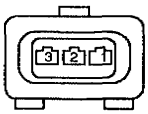
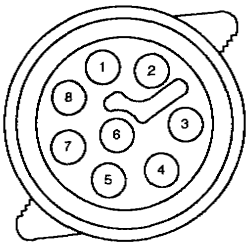



**FIG. 6**

B080009.00




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# CONNECTOR VIEWS



**FIG. 1**

B060017.00

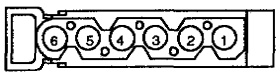



**FIG. 2**

B170001.00

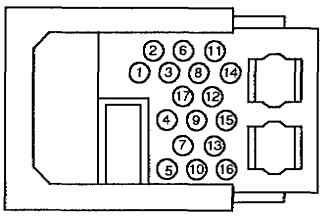



**FIG. 3**

B030013.00




**FIG. 4**

B030005.00

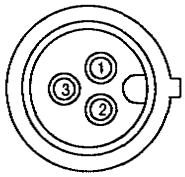


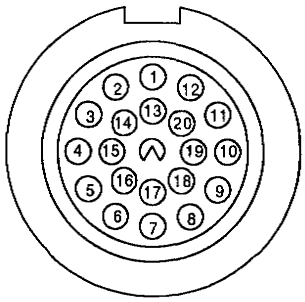

**FIG. 5**

B030012.00




**FIG. 6**

B200003.01




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# CONNECTOR VIEWS



FIG. 1

B040015.00

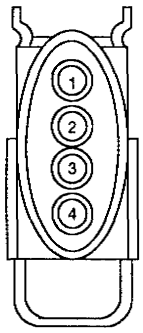



FIG. 2

B030003.04

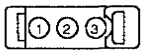



FIG. 3

B0300010.02

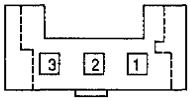



FIG. 4

B060002.00

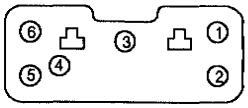



FIG. 5

B060002.00

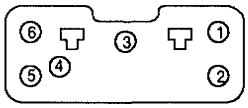
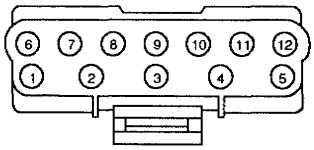



FIG. 6

B120006.00




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# CONNECTOR VIEWS



FIG. 1

B060006.00

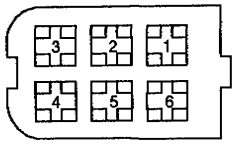



FIG. 2

B050003.00

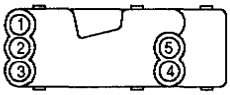



FIG. 3

B040004.00




FIG. 4

B120004.01

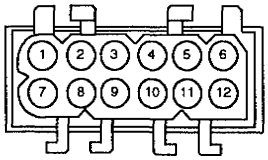



FIG. 5

B040002.00

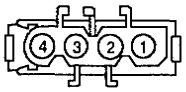
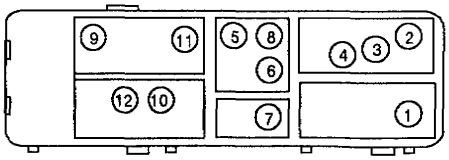



FIG. 6

B120008.00




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# CONNECTOR VIEWS



**FIG. 1**

B030030.00

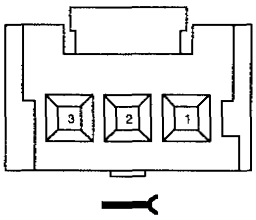



**FIG. 2**

B120002.03

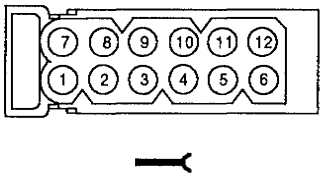



**FIG. 3**

B120004.05

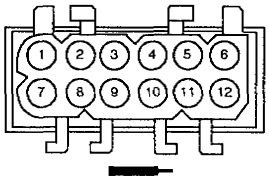



**FIG. 4**

B060013.00

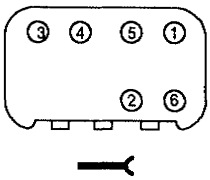



**FIG. 5**

B030009.00

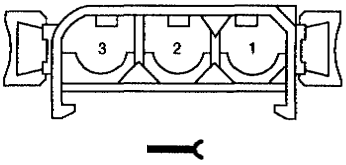
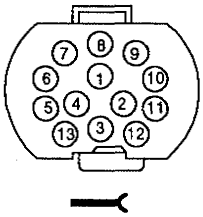



**FIG. 6**

B130002.01




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# CONNECTOR VIEWS



FIG. 1

B210002.00

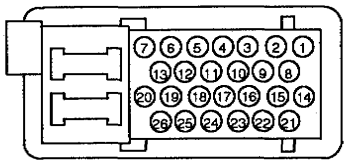



FIG. 2

B120011.00

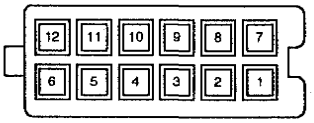



FIG. 3

B120011.00

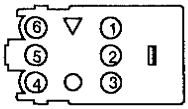



FIG. 4

B200001.00

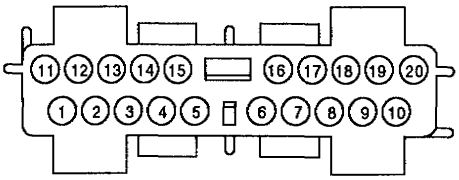



FIG. 5

B120005.00

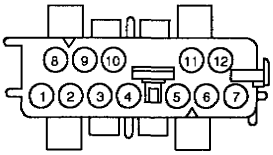
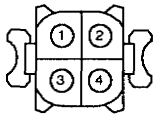



FIG. 6

B040010.00




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# CONNECTOR VIEWS



FIG. 1

B100008.00

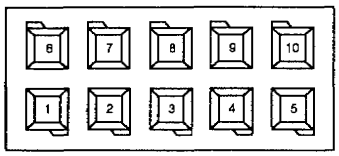



FIG. 2

B060023.00

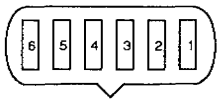



FIG. 3

B050002.00

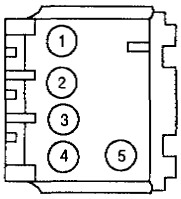



FIG. 4

B060009.00

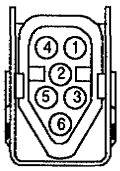



FIG. 5

B030022.00

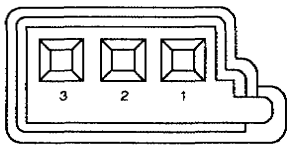
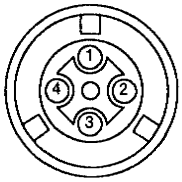



FIG. 6

B040016.00








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# CONNECTOR VIEWS



FIG. 1

B060010.01

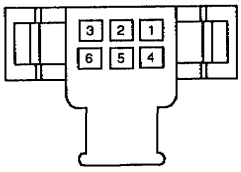



FIG. 2

B040013

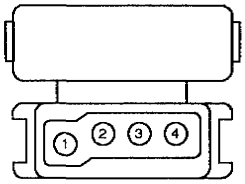



FIG. 3

B060035.00

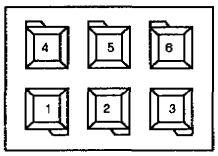



FIG. 4

B260005.00

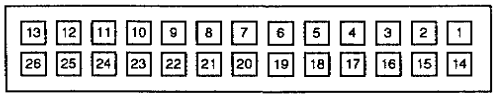
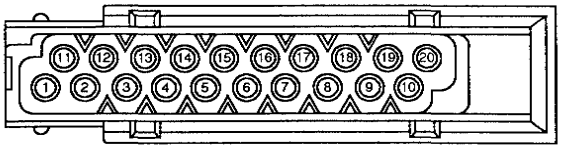



FIG. 5

B200007.00








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FIG. 1

B140002.00

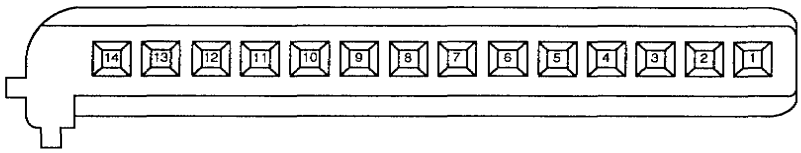



FIG. 2

B080005.00

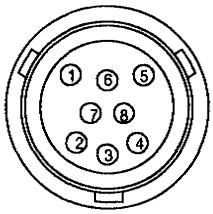
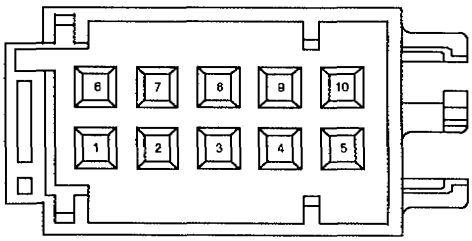



FIG. 3

B100009.00




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**FIG. 1**

B880001.00

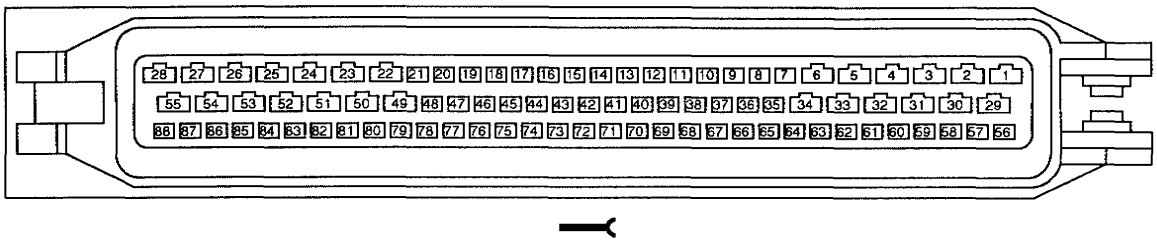


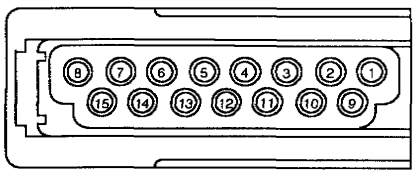

**FIG. 2**

B050006.00




**FIG. 3**

B150003.00




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# CONNECTOR VIEWS

FIG. 1

B080000.00

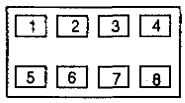



FIG. 2

B080001.00

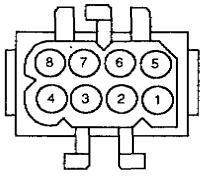



FIG. 3

B180000.00

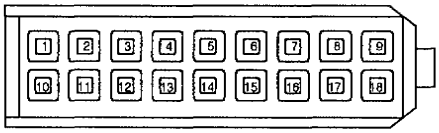



FIG. 4

B070005.00

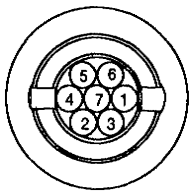



FIG. 5

B040018.01

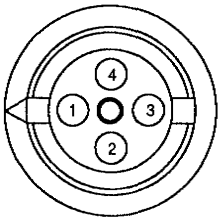
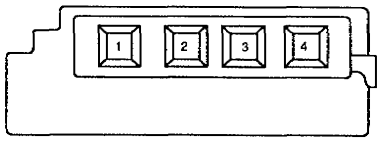



FIG. 6

B040020.00




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# CONNECTOR VIEWS



FIG. 1

B060035.02

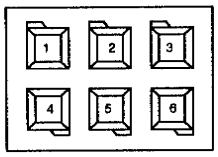



FIG. 2

B060035.01

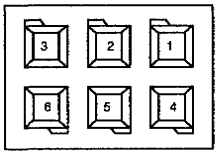



FIG. 3

B120003.01

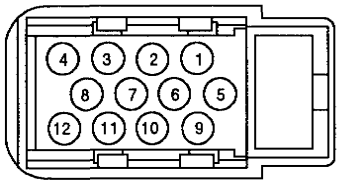



FIG. 4

B300002.00

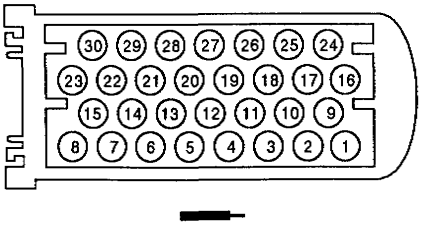
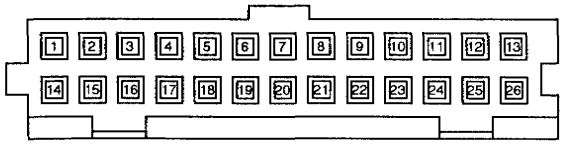



FIG. 5

B260002.00








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# CONNECTOR VIEWS



FIG. 1

B120014

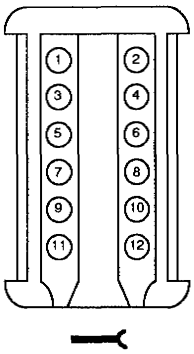



FIG. 2

B100004.00

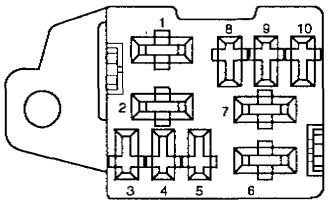



FIG. 3

B060038.00

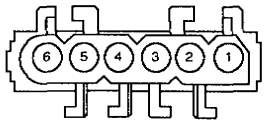



FIG. 4

B030015.08

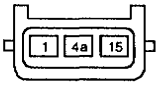



FIG. 5

B060019.00

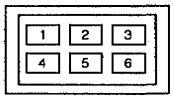
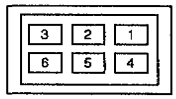



FIG. 6

B060019.03




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# CONNECTOR VIEWS



FIG. 1

B090007.00

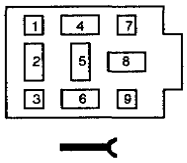



FIG. 2

B040022.00

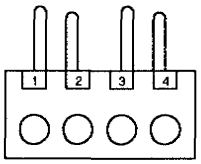



FIG. 3

B050013.00

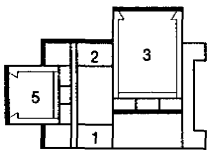



FIG. 4

B480000.00

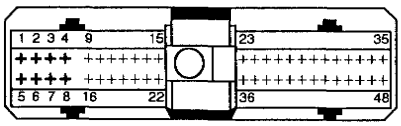



FIG. 5

B060005.07

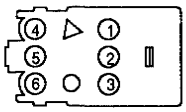
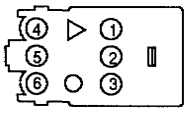



FIG. 6

B060005.08




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# CONNECTOR VIEWS



**FIG. 1**

B060005.09

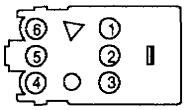



**FIG. 2**

B060005.10

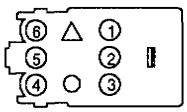



**FIG. 3**

B070007.00

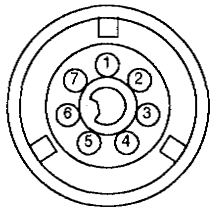



**FIG. 4**

B260001.00

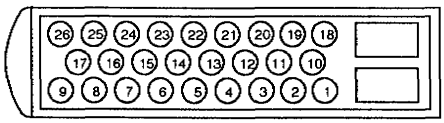
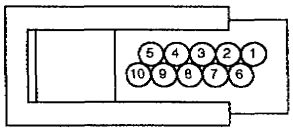



**FIG. 5**

B100007.00




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# CONNECTOR VIEWS



FIG. 1

B030003.00

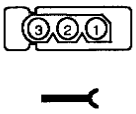



FIG. 2

B060013.00

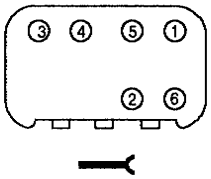



FIG. 3

B080006.00

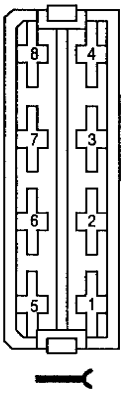
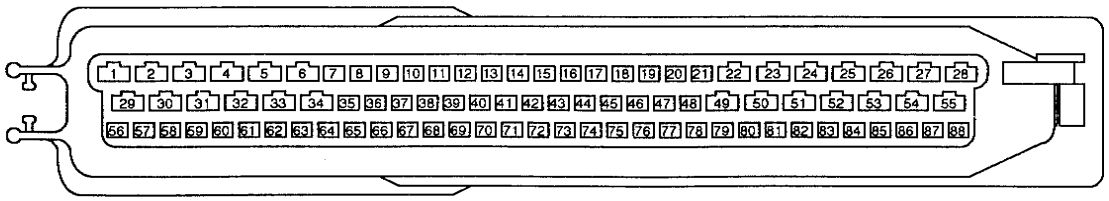



FIG. 4

B880002.01








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# CONNECTOR VIEWS



FIG. 1

B030004.04




FIG. 2

B060030.00

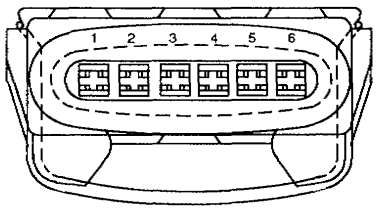



FIG. 3

B100013.00

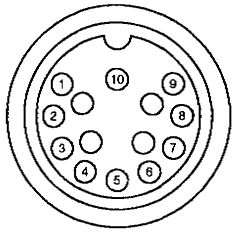
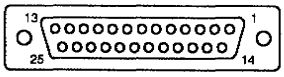



FIG. 4

B250003.00




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