

**1992**

**BMW  
850i  
(E31)**

**Electrical**

**Troubleshooting**

**Manual**

Vehicles Produced 7/91 to 8/92



## ELECTRICAL TROUBLESHOOTING MANUAL

**8 SERIES – E31 (850i)**

### **SCHEMATICS**

### **MODEL YEAR 1992**

0100.0	INDEX	3450.1	SLIP CONTROL (ABS/ASC)
0110.0	INTRODUCTION	3450.2	SLIP CONTROL (ABS/ASC+T)
0140.0	SYMBOLS	3715.1z	ELECTRONIC SHOCK ABSORBER CONTROLIII+ (EDC III+)
0670.0	POWER DISTRIBUTION CHART	5116.0	POWER MIRRORS
0670.1	FUSE CHART	5120.0	ZKE DOOR LOCK HEATING (TSH)
0670.2	POWER DISTRIBUTION	5126.0	ZKE CENTRAL LOCKING (ZV)
0670.3	FUSE DETAILS	5133.0	ZKE POWER WINDOWS (FH)
0670.4	GROUND DISTRIBUTION	5146.0	POWER SUN SHADES
0670.5	DATA LINK	5200.0	POWER SEATS
1210.6	ENGINE CONTROL SYSTEM (DMEM1.7, 12-CYLINDER M70)	5200.1	SEAT/MIRROR MEMORY SYSTEM (SM/SPM)
1230.0	CHARGING SYSTEM	5203.0	HEATED SEATS
1240.0	START	5212.0	LUMBAR SUPPORT
1270.1	ELECTRONIC THROTTLE CONTROL (EML12-CYLINDER)	5410.0	ZKE SUNROOF (SHD)
1290.0	E-BOX FAN	6100.0z	CENTRAL BODY ELECTRONICS (ZKE II)
2460.0z	ELECTRONIC TRANSMISSION CONTROL(EGS)	6133.0	HORN
3231.0	ELECTRIC STEERING COLUMN ADJUSTMENT	6160.0z	ZKE WIPER/WASHER CONTROL
3231.1	STEERING COLUMN MEMORY (LSM)	6164.0	ZKE WINDSHIELD WIPER PRESSURE CONTROL (ADV)
3234.0	SUPPLEMENTAL RESTRAINT SYSTEM (AIRBAG)	6167.0	ZKE HEADLIGHT WASHER (SRA)
3240.0	POWER ASSIST STEERING (SERVOTRONIC)	6169.0	WINDSHIELD WASHER JET HEATERS
		6210.0	BODY ELECTRONICS MODULE (EKM)
		6211.0	INSTRUMENT CLUSTER

## SCHEMATICS

6300.0	LIGHT SWITCH DETAILS	6424.0z	REAR WINDOW DEFOGGER/ANTENNA
6301.0	LAMP MONITOR (LKM)	6450.0	AUTOMATIC HEATING/AC CONTROL (IHKA)
6312.0	HEADLIGHTS/FOG LIGHTS	6454.0	AUXILIARY FAN
6313.0	TURN/HAZARD LIGHTS	6510.1	RADIO/HIFI
6314.0	PARK/TAIL/UNDERHOOD LIGHTS	6561.0	CELLULAR TELEPHONE (PROVISIONS)
6320.0	LICENSE PLATE/LUGGAGE COMPARTMENT LIGHTS	6575.1	ANTI-THEFT SYSTEM III (DWA III)
6322.0	BACK UP LIGHTS	6581.0z	MULTI-INFORMATION DISPLAY (MID)
6325.0	BRAKE LIGHTS	6610.0	INFRARED LOCKING (IRS)
6330.0z	ZKE INTERIOR LIGHTS (IB)	7000.0	COMPONENT LOCATION CHART
6332.0	INTERIOR ACCESSORIES	7100.0	COMPONENT LOCATION VIEWS
6350.0	CRASH CONTROL MODULE	8000.0	SPLICE LOCATION VIEWS
6412.2	PARK VENTILATION WITH IHKA	8500.0	CONNECTOR VIEWS

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# INDEX

ABS HYDRAULIC UNIT, Y1 .....	3450
ABS RELAY, K10 .....	3450.1-00
ACCELERATION SENSOR, RIGHT FRONT, B41 .....	3715.1-01
ACCELERATION SENSOR, RIGHT REAR, B48 .....	3715.1-01
ACCESSORY TABLE MICROSWITCH, S119 .....	3231.0-00
ACOUSTIC DEVICE, H10z .....	6210.0-08
AIR BAG GAS GENERATOR I, PASSENGER'S, G6 .....	3234.0-02
AIR BAG GENERATOR, DRIVER'S, G5 .....	3234.0-01
AIR CONDITIONING COMPRESSOR (IHKA), Y3 .....	6450.0-13
AIR CONDITIONING PRESSURE SWITCH, S96 .....	6450.0-12
AIR CONDITIONING RELAY, K33 .....	6454.0-01
ANTENNA AMPLIFIER AM/FM, N8 .....	6424.0-00
ANTI-THEFT CONTROL MODULE (DWA), N1 .....	6575.1
ANTI-THEFT HORN (DWA), H1 .....	6575.1-00
ANTI-THEFT SYSTEM III (DWA III) .....	6575.1
ASC SWITCH, S6 .....	3450
AUTOMATIC AIR RECIRCULATION CONTROL MODULE, A417 ..	6450.0-15
AUTOMATIC AIR RECIRCULATION SENSOR, B414 .....	6450.0-15
AUTOMATIC HEATING/AC CONTROL (IHKA) .....	6450.0
AUTOMATIC HEATING/AC CONTROL MODULE (IHKA), A11 ..	6450.0-00
AUTOMATIC HEATING AND AIR CONDITIONING SWITCH (IHKA), S26 .....	6450.0-01
AUXILIARY FAN .....	6454.0
AUXILIARY FAN MOTOR, M9 .....	6454.0-00
AUXILIARY FUSE BOX, P95 .....	0670.2-00
AUXILIARY TURN LIGHT, RIGHT FRONT, H8 .....	6313.0-02
AUXILIARY WATER PUMP RELAY, K8 .....	6450.0-11
BACK UP LIGHT, LEFT, H27 .....	6322.0-00
BACK UP LIGHT, RIGHT, H28 .....	6322.0-00
BACK UP LIGHTS .....	6322.0
BACK-UP SWITCH, S302 .....	6322.0-00
BATTERY I, RIGHT, G1z .....	0670.2-00
BATTERY II, LEFT, G4 .....	0670.2-06
BLOWER MOTOR, M30 .....	6450.0-01
BLOWER RELAY, K4 .....	6450.0-00
BODY ELECTRONICS MODULE, A25 .....	6210.0
BODY ELECTRONICS MODULE (EKM) .....	6210.0

BRAKE FLUID LEVEL SWITCH, B18 .....	6210.0-06
BRAKE LIGHT, LEFT, H24 .....	6325.0-00
BRAKE LIGHT SWITCH, S29 .....	6325.0-00
BRAKE LIGHTS .....	6325.0
BRAKE PAD SENSOR, LEFT FRONT, B16 .....	6210.0-05
BRAKE PAD SENSOR, RIGHT REAR, B17 .....	6210.0-05
BRAKE PRESSURE REGULATING SWITCH, B19 .....	6210.0-06
BRAKE PRESSURE SWITCH, B20 .....	6210.0-06
CASSETTE BOX LIGHT, E45y .....	6300.0-04
CD CHANGER, N22 .....	6510.1
CELLULAR TELEPHONE (PROVISIONS) .....	6561.0
CENTRAL BODY ELECTRONICS (ZKE) .....	6100.0
CENTRAL LOCKING TRUNK LID MOTOR RELAY (ZV), K70 ..	5126.0-02
CHARGING SYSTEM .....	1230.0
CLUTCH SWITCH, S32 .....	1270.1-09
COMBINATION SWITCH, S7 .....	6301.0-00
COMPACT INFRARED LOCKING, N13z .....	6610.0
COMPONENT LOCATION CHART .....	7000.0
COMPONENT LOCATION VIEWS .....	7100.0
COMPRESSOR CONTROL RELAY, K19 .....	6450.0-12
COMPRESSOR CUT-OFF RELAY, K60 .....	6450.0-12
CONCEALING HEADLIGHT MOTOR, LH, M18 .....	6312.0-06
CONCEALING HEADLIGHT MOTOR, RH, M19 .....	6312.0-06
CONCEALING HEADLIGHTS RELAY, K39 .....	6312.0-06
CONNECTOR VIEWS .....	8500.0
CONSUMER CUT-OFF RELAY I, K72 .....	6330.0-02
CONSUMER CUT-OFF RELAY II, K73 .....	6330.0-02
CONTACT RING, C100 .....	3234.0-01
CRASH CONTROL MODULE .....	6350.0
CRASH CONTROL MODULE, N17 .....	6350.0-01
CRUISE CONTROL SWITCH (EML), S11 .....	1270.1-02
CYL. 1 FUEL INJECTION VALVE, Y201 .....	1210.6-02
CYL. 1-6 AIR TEMPERATURE SENSOR, B224 .....	1210.6-08
CYL. 1-6 CRANKSHAFT POSITION/RPM SENSOR, B222 ..	1210.6-05
CYL. 1-6 CYLINDER IDENTIFICATION SENSOR, B220 ..	1210.6-05
CYL. 1-6 ENGINE CONTROL MODULE (DME), A211 .....	1210.6
CYL. 1-6 ENGINE CONTROL MODULE RELAY, K212 .....	1210.6-01



# INDEX

CYL. 1-6 EVAPORATIVE EMISSION VALVE, Y221 .....	1210.6-03
CYL. 1-6 FUEL PUMP RELAY, K210 .....	1210.6-04
CYL. 1-6 HEATED OXYGEN SENSOR, B301 .....	1210.6-05
CYL. 1-6 IGNITION COIL, T201A .....	1210.6-00
CYL. 1-6 MASS AIR FLOW SENSOR, B226 .....	1210.6-03
CYL. 1-6 THROTTLE BODY (EML), M202 .....	1270.1-05
CYL. 2 FUEL INJECTION VALVE, Y202 .....	1210.6-02
CYL. 3 FUEL INJECTION VALVE, Y203 .....	1210.6-02
CYL. 4 FUEL INJECTION VALVE, Y204 .....	1210.6-02
CYL. 5 FUEL INJECTION VALVE, Y205 .....	1210.6-02
CYL. 6 FUEL INJECTION VALVE, Y206 .....	1210.6-02
CYL. 7-12 AIR TEMPERATURE SENSOR, B225 .....	1210.6-16
CYL. 7-12 CRANKSHAFT POSITION/RPM SENSOR, B223 .....	1210.6-15
CYL. 7-12 CYLINDER IDENTIFICATION SENSOR, B221 .....	1210.6-15
CYL. 7-12 ENGINE CONTROL MODULE (DME), A212 .....	1210.6
CYL. 7-12 ENGINE CONTROL MODULE RELAY, K213 .....	1210.6-11
CYL. 7-12 EVAPORATIVE EMISSION VALVE, Y222 .....	1210.6-13
CYL. 7-12 FUEL PUMP, M11 .....	1210.6-14
CYL. 7-12 FUEL PUMP RELAY, K211 .....	1210.6-14
CYL. 7-12 HEATED OXYGEN SENSOR, B302 .....	1210.6-15
CYL. 7-12 IGNITION COIL, T202A .....	1210.6-10
CYL. 7-12 MASS AIR FLOW SENSOR, B227 .....	1210.6-13
CYL. 7-12 THROTTLE BODY (EML), M203 .....	1270.1-06
CYL. 7 FUEL INJECTION VALVE, Y207 .....	1210.6-12
CYL. 8 FUEL INJECTION VALVE, Y208 .....	1210.6-12
CYL. 9 FUEL INJECTION VALVE, Y209 .....	1210.6-12
CYL. 10 FUEL INJECTION VALVE, Y210 .....	1210.6-12
CYL. 11 FUEL INJECTION VALVE, Y211 .....	1210.6-12
CYL. 12 FUEL INJECTION VALVE, Y212 .....	1210.6-12
DASH LIGHT, E41 .....	6450.0-07
DASH VENT MIXING FLAP MOTOR, M34 .....	6450.0-08
DATA LINK .....	0670.5
DATA LINK CONNECTOR, D100 .....	0670.5
DAYTIME RUNNING LIGHTS CODING DIODE, V4 .....	6314.0-02
DEFROSTER FLAP MOTOR, M35 .....	6450.0-10
DIMMER, N3 .....	6300.0-02
DOOR HANDLE SWITCH, DRIVER'S, S48 .....	5120.0-00

DOOR HANDLE SWITCH, PASSENGER'S, S79 .....	6100.0-03
DOOR JAMB SWITCH, DRIVER'S, S14 .....	6575.1-01
DOOR JAMB SWITCH, PASSENGER'S, S13 .....	6575.1-01
DOOR LOCK HEATER, E48 .....	5120.0-00
DOOR LOCK MOTOR, DRIVER'S, M12 .....	5126.0-03
DOOR LOCK MOTOR, PASSENGER'S, M13 .....	5126.0-03
DOOR LOCK SWITCH, DRIVER'S, S47 .....	5126.0-00
DOOR LOCK SWITCH, PASSENGER'S, S49 .....	5126.0-00
DOOR MODULE, DRIVER'S, A23 .....	6100.0
DOOR MODULE, PASSENGER'S, A24 .....	6100.0
DOOR PANEL LIGHT, DRIVER'S, E78 .....	6300.0-04
DOOR PANEL LIGHT, PASSENGER'S, E79 .....	6300.0-04
E-BOX FAN .....	1290.0
E-BOX FAN, M201 .....	1290.0-00
EDC MOTOR, LEFT FRONT, Y401 .....	3715.1-02
EDC MOTOR, LEFT REAR, Y403 .....	3715.1-02
EDC MOTOR, RIGHT FRONT, Y402 .....	3715.1-02
EDC MOTOR, RIGHT REAR, Y404 .....	3715.1-02
EDC RELAY, K67 .....	3715.1-00
EDC SWITCH, S105 .....	3715.1-00
ELECTRIC POWER PROTECTION RELAY, K15 .....	5126.0-02
ELECTRIC POWER PROTECTION RELAY II, K30 .....	5126.0-02
ELECTRIC STEERING COLUMN ADJUSTMENT .....	3231.0
ELECTRO-HYDRAULIC CONVERTER (SERVOTRONIC), B15 .....	3240.0-00
ELECTROCHROMIC REAR VIEW MIRROR, A22z .....	5116.0-02
ELECTRONIC SHOCK ABSORBER CONTROL III+ (EDC III+) .....	3715.1
ELECTRONIC SHOCK ABSORBER CONTROL MODULE (EDC), A413 .....	3715.1-00
ELECTRONIC THROTTLE CONTROL (EML 12-CYLINDER) .....	1270.1
ELECTRONIC TRANSMISSION CONTROL (EGS) .....	2460.0
ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70) .....	1210.6
ENGINE COOLANT TEMPERATURE SENSOR, B207 .....	6210.0-07
ENGINE COOLANT TEMPERATURE SENSOR (EML), B209 .....	1270.1-03
EVAPORATOR TEMPERATURE SENSOR, B14 .....	6450.0-03
FINAL STAGE UNIT, N2 .....	6450.0-01
FLASHER LIGHT RELAY, K52z .....	6312.0-05
FOG LIGHT, LEFT, E26 .....	6312.0-03



# INDEX

FOG LIGHT, RIGHT, E27 .....	6312.0-03
FOG LIGHT SWITCH, S10 .....	6312.0-02
FOOTWELL FLAP MOTOR, LEFT, M31 .....	6450.0-09
FOOTWELL FLAP MOTOR, RIGHT, M32 .....	6450.0-08
FOOTWELL LIGHT, LEFT FRONT, E61 .....	6330.0-03
FOOTWELL LIGHT, RIGHT FRONT, E62 .....	6330.0-03
FRESH AIR FLAP MOTOR, M36 .....	6450.0-10
FRONT CIGAR LIGHTER, E28 .....	6332.0-03
FRONT CIGAR LIGHTER LIGHT, E29 .....	6332.0-03
FRONT CONSOLE WINDOW SWITCH ASSEMBLY, S40 .....	5133.0-00
FRONT DOME LIGHT/MAP READING ASSEMBLY, E34 .....	6330.0-03
FRONT POWER DISTRIBUTION BOX, P90 .....	0670.2
FUEL LEVEL SENSOR I, B6z .....	6210.0-08
FUEL LEVEL SENSOR II, B25 .....	6210.0-08
FUEL PUMP, M2 .....	1210.6-04
FUSE CHART .....	0670.1
FUSE DETAILS .....	0670.3
FUSIBLE LINK, F0 .....	0670.2-06
FUSIBLE LINK (50A), F99 .....	0670.2-00
GAS FILLER LOCK MOTOR, M16 .....	5126.0-03
GENERAL MODULE, A1 .....	6100.0
GENERATOR, G2 .....	1230.0-00
GLOVE BOX CENTRAL LOCKING SWITCH, S118 .....	5126.0-01
GLOVE BOX LIGHT, E42 .....	6332.0-00
GLOVE BOX LIGHT SWITCH I, S37z .....	6332.0-01
GLOVE BOX LIGHT SWITCH II, S113 .....	6332.0-01
GROUND DISTRIBUTION .....	0670.4
HAZARD FLASHER RELAY, K16 .....	6313.0-00
HAZARD SWITCH, S18 .....	6313.0-01
HEADLIGHT/FOGLIGHT CLEANING MODULE (SRA), N6 .....	6167.0-02
HEADLIGHT/FOGLIGHT WASHER PUMP, M7 .....	6167.0-02
HEADLIGHTS/FOGLIGHTS .....	6312.0
HEAT EXCHANGER TEMPERATURE SENSOR, LH, B11 .....	6450.0-03
HEAT EXCHANGER TEMPERATURE SENSOR, RH, B12 .....	6450.0-03
HEATED SEATS .....	5203.0
HIFI AMPLIFIER, A18 .....	6510.1
HIGH BEAM FLASHER LIGHT, LEFT, E69 .....	6312.0-05

HIGH BEAM FLASHER LIGHT, RIGHT, E70z .....	6312.0-05
HIGH BEAM LIGHT, LEFT, E11 .....	6312.0-05
HIGH BEAM LIGHT, RIGHT, E12 .....	6312.0-05
HIGH BEAM LIGHT RELAY, K46 .....	6312.0-05
HIGH LEVEL STOP LIGHT, H34 .....	6325.0-00
HIGH RANGE SPEAKER, LEFT FRONT, H59 .....	6510.1-01
HIGH RANGE SPEAKER, LEFT REAR, H56 .....	6510.1
HIGH RANGE SPEAKER, RIGHT FRONT, H50 .....	6510.1-02
HIGH RANGE SPEAKER, RIGHT REAR, H53 .....	6510.1
HIGH SPEED RELAY, K22 .....	6454.0-00
HORN .....	6133.0
HORN, LEFT, H2 .....	6133.0-00
HORN, RIGHT, H3 .....	6133.0-00
HORN RELAY, K2 .....	6133.0-00
HORN SWITCH, S4 .....	6133.0-00
IGNITION SWITCH, S2 .....	0670.2-02
IMPACT SENSOR, LEFT FRONT, S71 .....	3234.0-01
IMPACT SENSOR, RIGHT FRONT, S72 .....	3234.0-01
INDEX .....	0100.0
INERTIA SWITCH, S27 .....	6350.0-01
INFRARED LOCKING (IRS) .....	6610.0
INFRARED RECEIVER, N14 .....	6610.0-00
INSIDE DOOR HANDLE SWITCH, DRIVER'S, S89 .....	5120.0-00
INSIDE DOOR HANDLE SWITCH, PASSENGER'S, S90 .....	6100.0-03
INSTRUMENT CLUSTER .....	6211.0
INTENSIVE WASH PUMP, M5 .....	6160.0-02
INTENSIVE WASH RELAY, K42 .....	6160.0-02
INTERIOR ACCESSORIES .....	6332.0
INTERIOR LIGHT, LEFT REAR, E39 .....	6330.0-03
INTERIOR LIGHT, RIGHT REAR, E40 .....	6330.0-03
INTERIOR LIGHT RELAY, K29 .....	6330.0-03
INTRODUCTION .....	0110.0
IR/DWA LED, V5 .....	6610.0-00
JUMPER PLUG, B900 .....	1240.0-01
JUMPER PLUG FOR HORN/TELEPHONE, K51 .....	6133.0-00
LAMP CONTROL MODULE, A3 .....	6301.0
LAMP MONITOR (LKM) .....	6301.0



# INDEX

LICENSE PLATE LIGHT, LEFT, E43	6320.0-01
LICENSE PLATE LIGHT, RIGHT, E44	6320.0-01
LICENSE PLATE/LUGGAGE COMPARTMENT LIGHTS	6320.0
LIGHT ASSEMBLY I, LEFT REAR, E46z	0670.4-12
LIGHT ASSEMBLY I, RIGHT REAR, E47z	0670.4-12
LIGHT BAND, LEFT, E9046	0670.4-01
LIGHT BAND, RIGHT, E9047	0670.4-02
LIGHT SWITCH, S8	6300.0-00
LIGHT SWITCH DETAILS	6300.0
LOCK-SENSOR CONTROL MODULE, A26	6450.0-13
LONGITUDINAL ACCELERATION SENSOR, B49	3715.1-01
LOW BEAM LIGHT, LEFT, E13	6312.0-00
LOW BEAM LIGHT, RIGHT, E14	6312.0-00
LOW RANGE SPEAKER, LEFT FRONT, H58	6510.1-02
LOW RANGE SPEAKER, LEFT REAR, H57	6510.1
LOW RANGE SPEAKER, RIGHT FRONT, H51	6510.1-02
LOW RANGE SPEAKER, RIGHT REAR, H52	6510.1
LUMBAR SUPPORT	5212.0
MAKEUP MIRROR LIGHT, DRIVER'S, E35	6300.0-02
MAKEUP MIRROR LIGHT, PASSENGER'S, E36	6300.0-02
MAKEUP MIRROR SWITCH, DRIVER'S, S77	6300.0-02
MAKEUP MIRROR SWITCH, PASSENGER'S, S78	6300.0-02
MARKER LIGHT, LEFT FRONT, E21	6314.0-04
MARKER LIGHT, RIGHT FRONT, E22	6314.0-04
MEMORY MIRROR, DRIVER'S SIDE, Y9	5200.1-07
MEMORY MIRROR, PASSENGER'S SIDE, Y10	5200.1-08
MEMORY MIRRORS CONTROL SWITCH, S12	5200.1-06
MEMORY SEAT ADJUSTMENT SWITCH, DRIVER'S, S50	5200.1-00
MEMORY SEAT MIRRORS SWITCH, S57	5200.1-01
MID-HIGH RANGE SPEAKER, LEFT, H42	6510.1-01
MID-HIGH RANGE SPEAKER, RIGHT, H43	6510.1-02
MIDRANGE SPEAKER, LEFT FRONT, H55	6510.1-01
MIDRANGE SPEAKER, RIGHT FRONT, H54	6510.1-02
MIRROR, DRIVER'S SIDE, Y5	5116.0-01
MIRROR, PASSENGER'S SIDE, Y6	5116.0-01
MIRROR CONTROL SWITCH, S17	5116.0-00
MIXING ACTUATOR, R1	6450.0-04

MIXING FLAP MOTOR, LEFT, M39	6450.0-09
MULTI-INFORMATION DISPLAY (MID)	6581.0
MULTI-INFORMATION DISPLAY (MID), N4z	6581.0-00
NORMAL SPEED RELAY, K21	6454.0-00
OIL LEVEL SENSOR, B205	6210.0-07
OIL PRESSURE SWITCH, B206	6210.0-06
OUTSIDE TEMPERATURE SENSOR, B13	6450.0-03
PARK BRAKE SWITCH, S31	6210.0-04
PARK HEATING/VENTILATION RELAY BOX, A15	6412.2-02
PARK LIGHT, LEFT, E15	6314.0-01
PARK LIGHT, RIGHT, E19	6314.0-01
PARK LIGHT RELAY, LEFT, K26	6314.0-02
PARK LIGHT/LICENSE PLATE LIGHT RELAY, RIGHT, K25	6314.0-02
PARK/TAIL/UNDERHOOD LIGHTS	6314.0
PARK VENTILATION WITH IHKA	6412.2
PEDAL POSITION SENSOR, R10	1270.1-03
POWER ASSIST STEERING (SERVOTRONIC)	3240.0
POWER DISTRIBUTION	0670.2
POWER DISTRIBUTION CHART	0670.0
POWER MIRRORS	5116.0
POWER SEATS	5200.0
POWER SUN SHADES	5146.0
PRESSURE SENSOR/PLUNGER, Y16	3450.2-07
PRESSURE SWITCH, B9508	6450.0-12
PROGRAM SWITCH, S8517	2460.0-03
RADIO, N9	6510.1
RADIO/HIFI	6510.1
RADIO RECEIVER, N20	6510.1
REAR DEFOGGER/ANTENNA, E10	6424.0-01
REAR DEFOGGER I, E9	6424.0-01
REAR DEFOGGER RELAY, K13	6424.0-00
REAR POWER DISTRIBUTION BOX, P94	0670.2-07
REAR WINDOW DEFOGGER/ANTENNA	6424.0
REAR WINDOW DEFOGGER SWITCH, S76	6450.0-07
RECIRCULATION FLAP MOTOR, M40	6450.0-10
RELAY MODULE, A5	6100.0
SEAT BELT SWITCH, DRIVER'S, S58	6210.0-04



# INDEX

SEAT CONTROL SWITCH, DRIVER'S SEAT, S51 .....	5200.0-00
SEAT CONTROL SWITCH, PASSENGER'S SEAT, S56 .....	5200.0-01
SEAT CUSHION MOVEMENT POTENTIOMETER, R9 .....	5200.1-02
SEAT CUSHION REAR HEIGHT POTENTIOMETER, R8 .....	5200.1-02
SEAT CUSHION TILT MOTOR, DRIVER'S, M50 .....	5200.0-00
SEAT CUSHION TILT MOTOR, PASSENGER'S, M61 .....	5200.0-01
SEAT HEATER, DRIVER'S, E57 .....	5203.0-00
SEAT HEATER, PASSENGER'S, E58 .....	5203.0-00
SEAT HEATER SWITCH, DRIVER'S SEAT, S53 .....	5203.0-00
SEAT HEATER SWITCH, PASSENGER'S SEAT, S54 .....	5203.0-00
SEAT HEIGHT MOTOR, DRIVER'S, M52 .....	5200.0-00
SEAT HEIGHT MOTOR, PASSENGER'S, M59 .....	5200.0-01
SEAT HEIGHT POTENTIOMETER, R6 .....	5200.1-03
SEAT LUMBAR SUPPORT MOTOR/VALVE, DRIVER'S, M55z .....	5212.0-00
SEAT LUMBAR SUPPORT MOTOR/VALVE, PASSENGER'S, M56z .....	5212.0-00
SEAT LUMBAR SUPPORT SWITCH, PASSENGER'S, S55 .....	5212.0-00
SEAT LUMBAR SWITCH, DRIVER'S, S52 .....	5212.0-00
SEAT/MIRROR MEMORY CONTROL MODULE, A21 .....	5200.1
SEAT/MIRROR MEMORY SYSTEM (SM/SPM) .....	5200.1
SEAT MOVEMENT MOTOR, DRIVER'S, M51 .....	5200.0-00
SEAT MOVEMENT MOTOR, PASSENGER'S, M60 .....	5200.0-01
SEAT REMOTE CONTROL MODULE, PASSENGER'S, A34 .....	3231.0-00
SEATBACK HEATER, DRIVER'S, E56 .....	5203.0-00
SEATBACK HEATER, PASSENGER'S, E59 .....	5203.0-00
SEATBACK POTENTIOMETER, R7 .....	5200.1-03
SEATBACK RECLINER MOTOR, DRIVER'S, M53 .....	5200.0-00
SEATBACK RECLINER MOTOR, PASSENGER'S, M58 .....	5200.0-01
SEATBACK SWITCH, LH DRIVER'S, S104 .....	6210.0-04
SEATBACK SWITCH, LH PASSENGER'S, S122 .....	6210.0-04
SEATBACK SWITCH, RH DRIVER'S, S103 .....	6210.0-04
SEATBACK SWITCH, RH PASSENGER'S, S121 .....	6210.0-04
SERVOTRONIC CONTROL MODULE, A17 .....	3240.0-00
SIDE MARKER LIGHT, LEFT REAR, E9021 .....	0670.4-12
SIDE MARKER LIGHT, RIGHT REAR, E9022 .....	0670.4-12
SHIFT LOCK, S8522 .....	2460.0-01
SLIP CONTROL (ABS/ASC) .....	3450.1
SLIP CONTROL (ABS/ASC + T) .....	3450.2

SLIP CONTROL MODULE (ABS/ASC), A70 .....	3450.1
SLIP CONTROL MODULE (ABS/ASC + T), A9070 .....	3450.2
SPEAKER, RIGHT REAR, H45 .....	6510.0
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
START .....	1240.0
STARTER, M1 .....	1240.0-01
STARTER RELAY, K1 .....	1240.0-01
STEERING ANGLE SENDER, B40 .....	3715.1-01
STEERING COLUMN ADJUST POTENTIOMETER, R18 .....	3231.1-00
STEERING COLUMN ANGLE ADJUST MOTOR, M83 .....	3231.0-00
STEERING COLUMN ANGLE ADJUST POTENTIOMETER, R19z .....	3231.1-00
STEERING COLUMN LENGTH ADJUST MOTOR, M82 .....	3231.0-00
STEERING COLUMN MEMORY (LSM) .....	3231.1
SUN BLIND CONTROL MODULE, A82 .....	5146.0-00
SUN BLIND MOTOR, M74 .....	5146.0-00
SUN BLIND SWITCH, S110 .....	5146.0-00
SUNROOF MODULE, A33 .....	5410.0-01
SUNROOF MOTOR, M24 .....	5410.0-01
SUNROOF SWITCH, S38 .....	5410.0-01
SUPPLEMENTAL RESTRAINT SYSTEM (AIR BAG) .....	3234.0
SUPPLEMENTAL RESTRAINT SYSTEM CONTROL MODULE, A12 .....	3234.0
SUPPRESSION FILTER, C900 .....	6424.0-01
SYMBOLS .....	0140.0
TAIL LIGHT, LEFT, H25 .....	6314.0-04
TAIL LIGHT, RIGHT, H30 .....	6314.0-04
TAIL LIGHT, UPPER LEFT, H9025 .....	6314.0-01
TAIL LIGHT, UPPER RIGHT, H9030 .....	6314.0-01
TELEPHONE TRANSCEIVER, H38 .....	6561.0-00
TEMPERATURE SENSOR, B21z .....	6210.0-07
TEMPERATURE SWITCH, B210 .....	1290.0-00
TEMPERATURE SWITCH, S36 .....	6454.0-00
THIGH SUPPORT MOTOR, DRIVER'S, M65 .....	5200.0-02



# INDEX

THIGH SUPPORT POTENTIOMETER, R15 .....	5200.1-04
THIGH SUPPORT SWITCH, DRIVER'S, S93 .....	5200.0-02
THIGH SUPPORT SWITCH, PASSENGER'S, S94 .....	5200.0-02
THROTTLE CONTROL MODULE (EML), A220 .....	1270.1
TRANSMISSION CONTROL MODULE (EGS), A8500 .....	2460.0
TRANSMISSION RANGE LEVER LIGHT, S8515 .....	2460.0-05
TRANSMISSION RANGE SELECTOR LEVER LIGHT, S8518 .....	2460.0-03
TRANSMISSION VALVE UNIT, Y8505 .....	2460.0-02
TRUNK LID LIGHT, E33 .....	6320.0-03
TRUNK LID LIGHT, LEFT, E9033 .....	6320.0-03
TRUNK LID LIGHT, RIGHT, E9133 .....	6320.0-03
TRUNK LID LOCKING SWITCH, S117 .....	5126.0-01
TRUNK LID SWITCH, S81 .....	6320.0-03
TRUNK LOCK MOTOR, M17 .....	5126.0-02
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
TURN/HAZARD LIGHTS .....	6313.0
UNDERHOOD LIGHT, E20 .....	6314.0-04
UNDERHOOD LIGHT SWITCH, S19 .....	6314.0-04
UNLOADER RELAY, TERMINAL 15, K9 .....	0670.2-04
UNLOADER RELAY, TERMINAL 61, K61 .....	1230.0-00
UNLOADER RELAY, TERMINAL R, K3 .....	0670.2-04
VEHICLE SPEED SENSOR, B10 .....	6210.0-08
VENTILATION FLAP MOTOR, RIGHT, M33 .....	6450.0-08
VENTILATION FLAP MOTOR, LEFT, M38 .....	6450.0-09
WASHER FLUID LEVEL SWITCH, S64 .....	6210.0-06
WASHER FLUID LEVEL SWITCH, S136 .....	6210.0-06
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 PUMP, M37 .....	6450.0-11
WATER PUMP IN LUGGAGE COMPARTMENT, M86 .....	6167.0-02
WATER VALVE ASSEMBLY, Y4 .....	6450.0-02
WINDOW LIMIT SWITCH, LEFT REAR, S45 .....	5133.0-04

WINDOW LIMIT SWITCH, RIGHT REAR, S46 .....	5133.0-04
WINDOW MOTOR, DRIVER'S, M21 .....	5133.0-01
WINDOW MOTOR, LEFT REAR, M20 .....	5133.0-04
WINDOW MOTOR, PASSENGER'S, M23 .....	5133.0-03
WINDOW MOTOR, RIGHT REAR, M22 .....	5133.0-04
WINDOW SWITCH, PASSENGER'S, S97 .....	5133.0-02
WINDSHIELD WASHER JET HEATERS .....	6169.0
WIPER MOTOR, M3 .....	6160.0-01
WIPER PRESSURE CONTROL (ADV) RELAY, K12 .....	6164.0-01
WIPER PRESSURE CONTROL MOTOR (ADV), M6 .....	6164.0-01
WIPER RELAY I, K36 .....	6160.0-01
WIPER RELAY II, K37 .....	6160.0-01
WIPER RELAY III, K38 .....	6160.0-01
WIPER/WASHER SWITCH, S5 .....	6160.0-00
ZKE CENTRAL LOCKING (ZV) .....	5126.0
ZKE DOOR LOCK HEATING (TSH) .....	5120.0
ZKE HEADLIGHT WASHER (SRA) .....	6167.0
ZKE INTERIOR LIGHTS (IB) .....	6330.0
ZKE POWER WINDOWS (FH) .....	5133.0
ZKE SUNROOF (SHD) .....	5410.0
ZKE WINDSHIELD WIPER PRESSURE CONTROL (ADV) .....	6164.0

## 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 that is only a few cm long. To ensure clear arrangement, all connectors, lines branches and connected components from the fuses to the component and from the component to ground connection are not shown within the individual cells. If required, reference can be made to cells 0670.3 Fuse Details and 0670.4 Ground Distribution where all lines are illustrated with all plug connections, line branches and connected components.

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

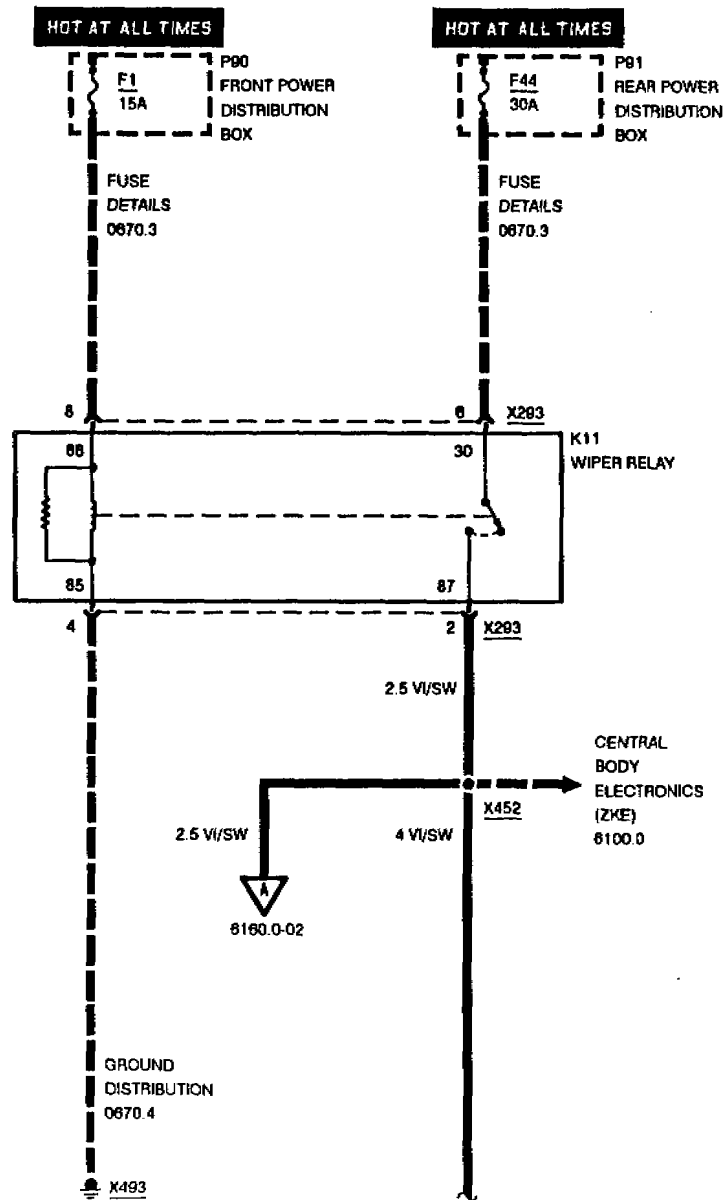
In cell 7000.0 Component Location Chart all important connectors, ground points and components are listed in tabular form. It provides a precise description of the component locations in the vehicle.

In cell 7100.0 Component Location Views the location of connectors and components which are difficult to locate are shown in line arts or illustrations. In cell 8000.0 Splice Location Views all splices are listed in numerical order and illustrations are provided to assist in locating splices on larger harnesses. In cell 8500.0 Connector Views diagrams of connectors with more than 2 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.





## INTRODUCTION

---

### 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 F1 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 V1/SW from splice X452 with a wavy line indicates that the wire is continued on the opposite page.



# SYMBOLS



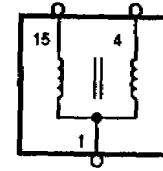
BATTERY



HEATING ELEMENT



VARIABLE RESISTANCE SENSOR  
VARIABLE CONTACT IS MOVED BY AN EXTERNAL FORCE



IGNITION COIL



FUSE DETAILS



LOUDSPEAKER OR HORN



VARIABLE RESISTOR  
RESISTANCE IS CHANGED BY TEMPERATURE OR PRESSURE



CONTROL/POWER ELECTRONICS



FUSIBLE LINK



INDUCTIVE SENSOR



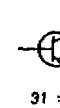
RADIO



LIGHT



DIODE  
CURRENT CAN FLOW ONLY IN DIRECTION OF ARROW



TRANSISTORIZED SWITCH



CIRCUIT BREAKER



PERMANENT MAGNET MOTOR  
ONE SPEED



ZENER DIODE  
TO REGULATE VOLTAGE



OXYGEN SENSOR



SOLENOID



PERMANENT MAGNET MOTOR  
TWO SPEEDS



LIGHT EMITTING DIODE

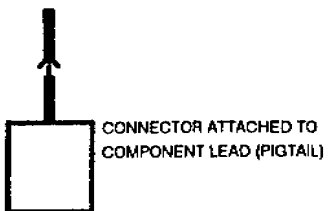
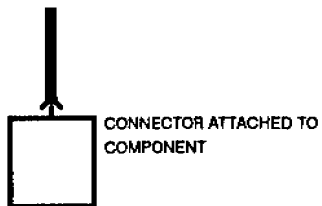
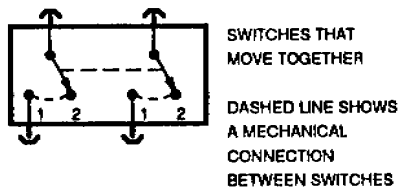
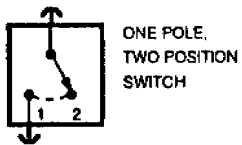
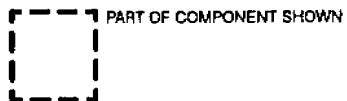
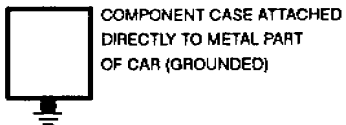


VEHICLE SPEED SENSOR

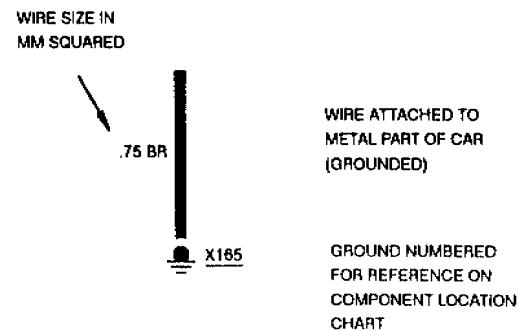
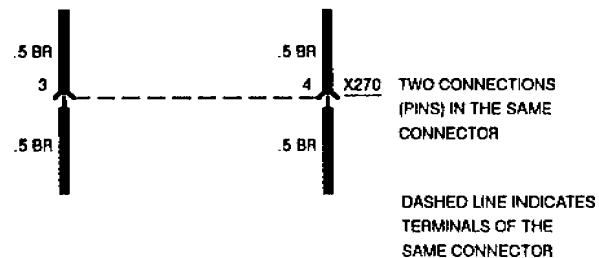
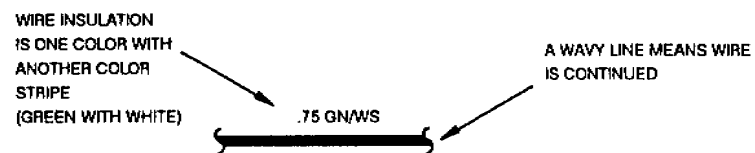
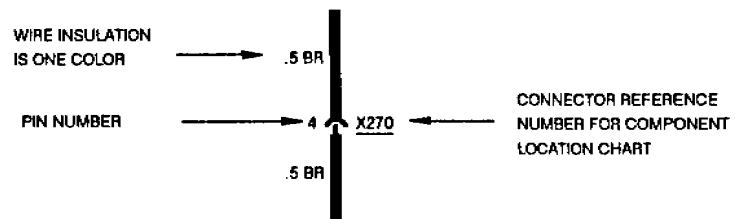


SOLENOID CONTROLLED VALVE  
OR CLUTCH SOLENOID

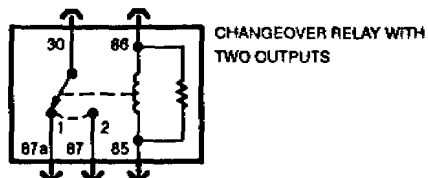
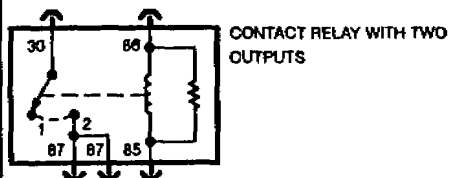
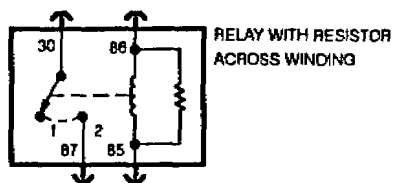
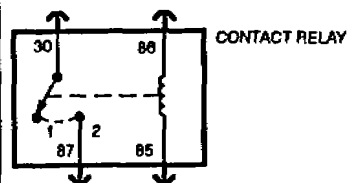
# SYMBOLS



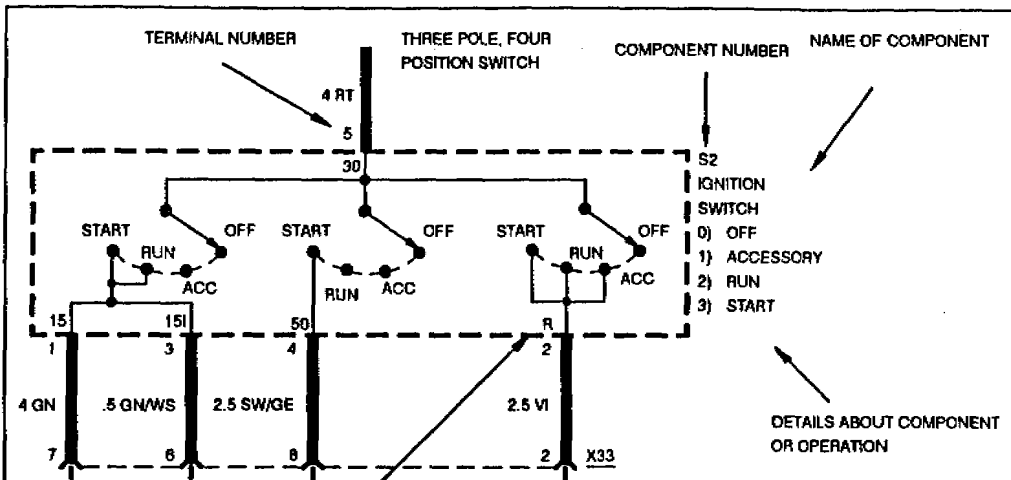
WIRE COLOR	
BL	BLUE
BR	BROWN
GE	YELLOW
GN	GREEN
GR	GRAY
OR	ORANGE
RS	PINK
RT	RED
SW	BLACK
VI	VIOLET
WS	WHITE
TR	TRANSPARENT



# SYMBOLS

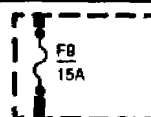


TERMINAL NUMBER	DESCRIPTION
30	RELAY INPUT
85	RELAY OUTPUT (WINDING)
86	RELAY INPUT (WINDING)
87	RELAY OUTPUT (ENERGIZED)
87a	RELAY OUTPUT (AT REST)



TERMINAL NUMBER	DESCRIPTION	TERMINAL NUMBER	DESCRIPTION
50	VOLTAGE: IGNITION SWITCH IN START	151	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

**HDT AT ALL TIMES**



INDICATES THAT FUSE 9 IS SUPPLIED WITH POWER AT ALL TIMES

**POWER STATUS**

**HOT AT ALL TIMES**

**HOT IN RUN AND START**

**HOT IN ACCY, RUN AND START**

**DESCRIPTION**

VOLTAGE: SUPPLIED AT ALL TIMES

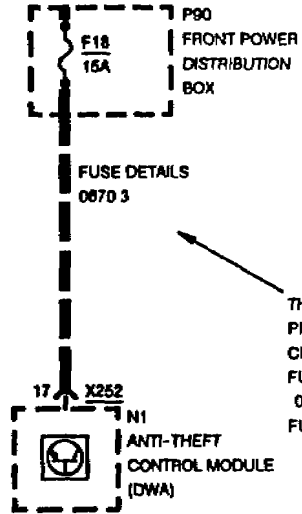
VOLTAGE: IGNITION SWITCH IN RUN OR START

VOLTAGE: IGNITION SWITCH IN ACCESSORY, RUN OR START

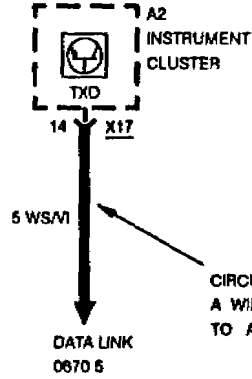


# SYMBOLS

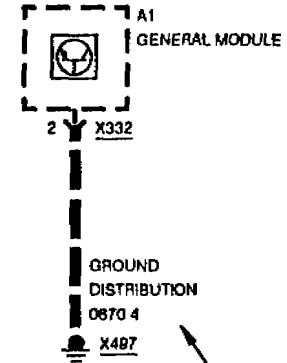
HOT IN ACCY, RUN AND START



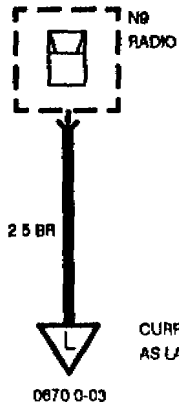
THE COMPLETE WIRE PROGRESSION AND FURTHER CIRCUITS CONNECTED TO FUSE 18 ARE SHOWN IN CELL 0670 3 FUSE DETAILS\* AT FUSE 18



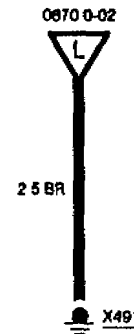
CIRCUIT REFERENCE- A WIRE WHICH CONNECTS TO ANOTHER CIRCUIT



THE COMPLETE WIRE PROGRESSION AND FURTHER CIRCUITS CONNECTED TO GROUND X497 ARE SHOWN IN CELL 0670.4 GROUND DISTRIBUTION AT GROUND X497

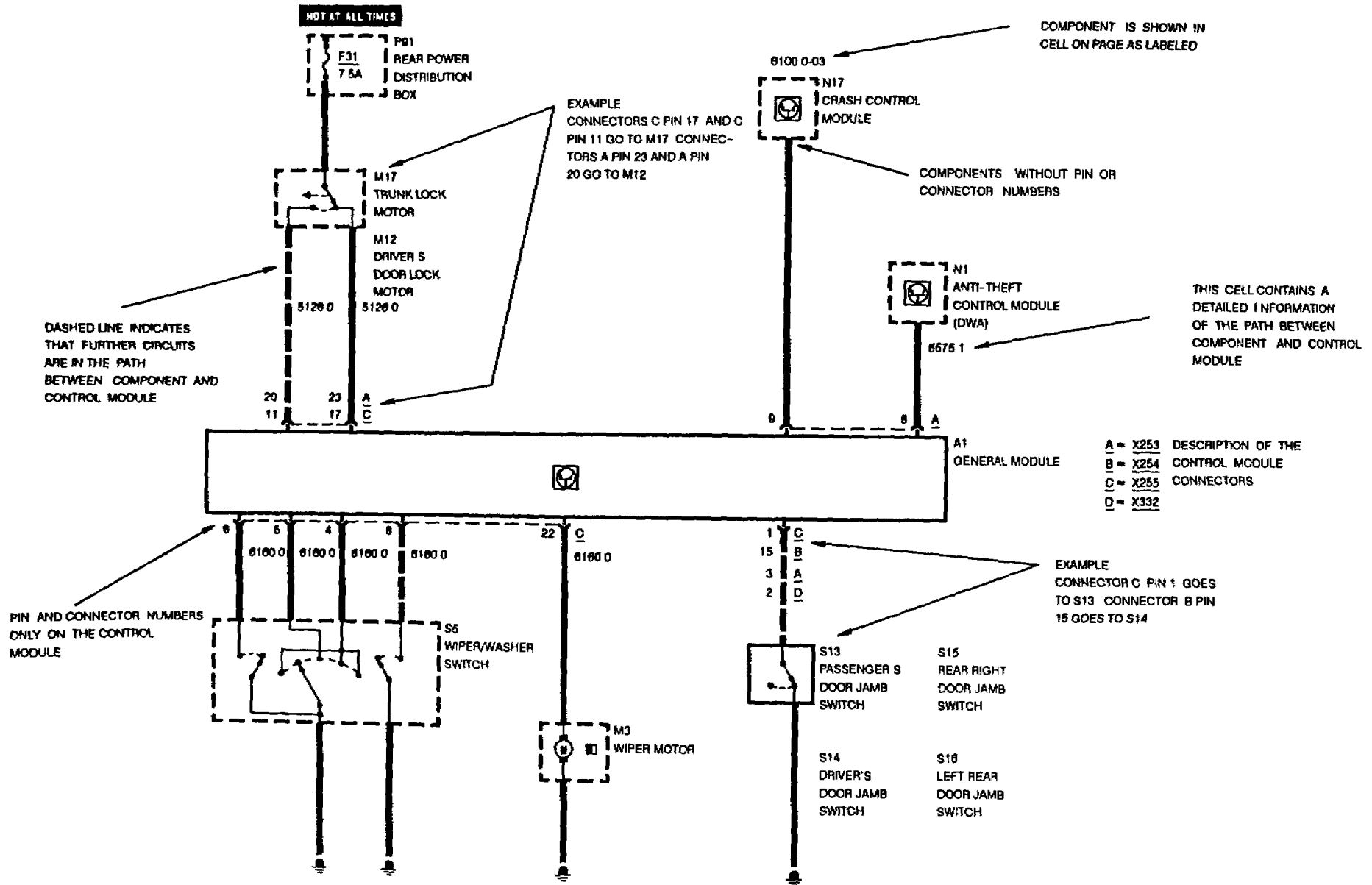


CURRENT PATH IS CONTINUED AS LABELED



ARROW SHOWS DIRECTION OF CURRENT FLOW AND IS REPEATED WHERE CURRENT PATH CONTINUES

**BMW**  
**8** **SYMBOLS**  
**BLOCK DIAGRAM**



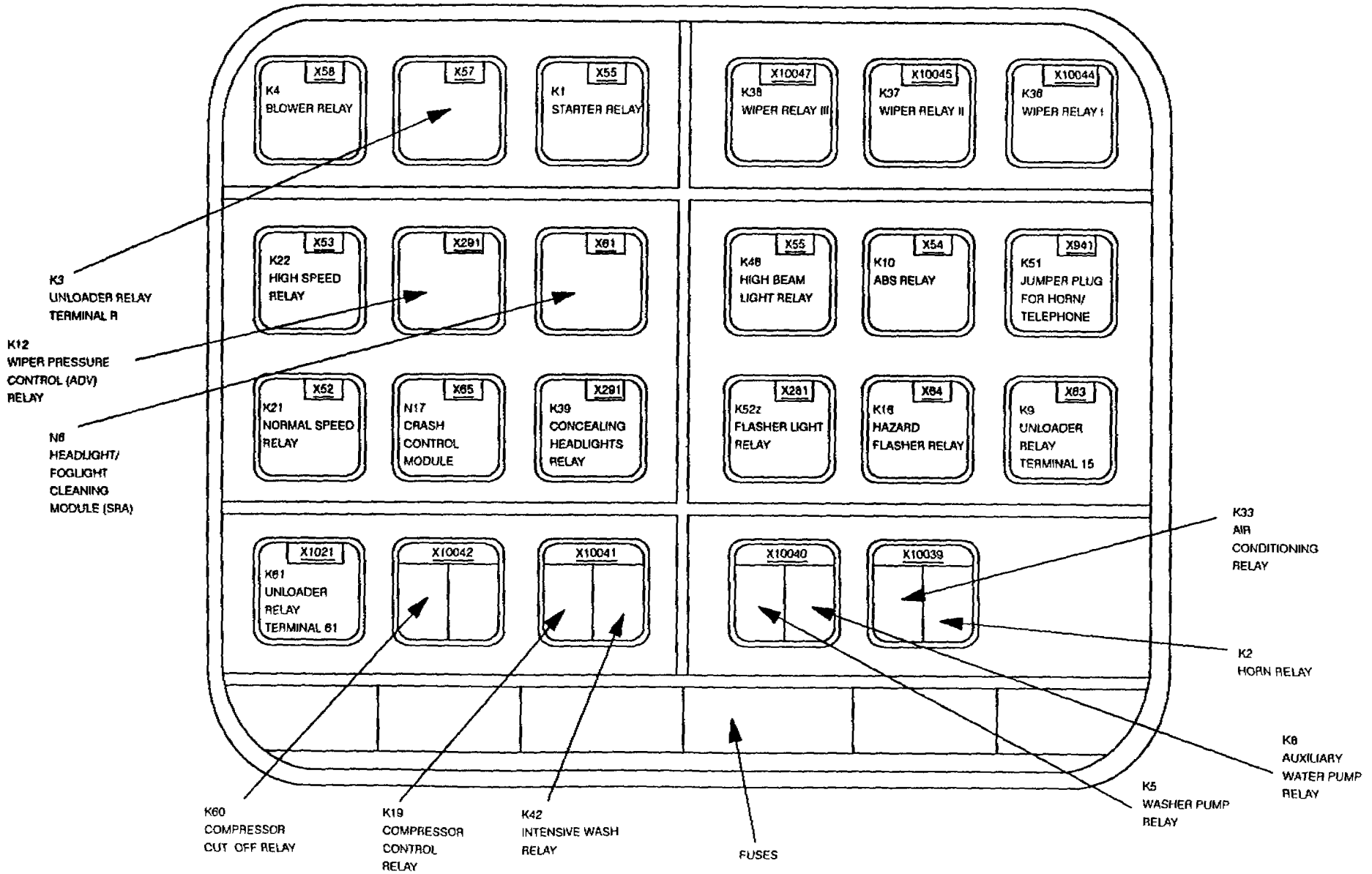
BMW  
8

0670.0



# POWER DISTRIBUTION CHART

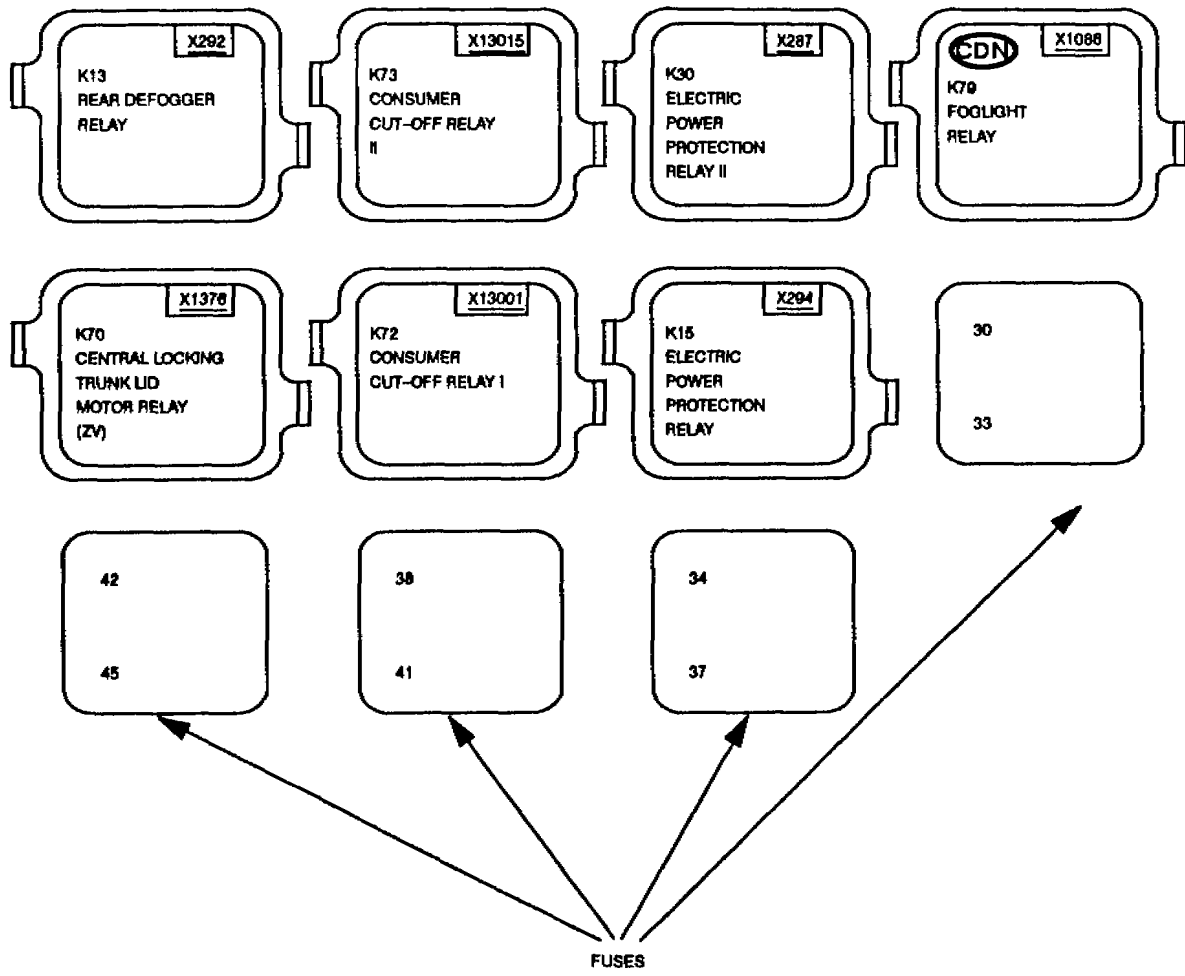
## FRONT POWER DISTRIBUTION BOX





# POWER DISTRIBUTION CHART

## REAR POWER DISTRIBUTION BOX







# 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		
	7.5A	7.5A	7.5A	7.5A	10A	15A	30A	7.5A	20A	7.5A	7.5A	15A	7.5A	7.5A	10A	20A	7.5A	7.5A	30A	30A	7.5A	30A	15A	15A	30A	15A	30A	15A	7.5A		
1210.6 ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)												●											●	●				●			
1230.0 CHARGING SYSTEM																		●													
1240.0 START												●																			
1270.1 ELECTRONIC THROTTLE CONTROL (EML 12-CYLINDER)	●							●				●																			
1290.0 E-BOX FAN																															
2460.0 ELECTRONIC TRANSMISSION CONTROL (EGS)								●				●																			
3231.0 ELECTRIC STEERING COLUMN ADJUSTMENT																															
3231.1 STEERING COLUMN MEMORY (LSM)																●		●													
3234.0 SUPPLEMENTAL RESTRAINT SYSTEM (AIR BAG)																															
3240.0 POWER ASSIST STEERING (SERVOTRONIC)																													●		
3450.1 SLIP CONTROL (ABS/ASC)								●									●												●	●	
3450.2 SLIP CONTROL (ABS/ASC+ T)								●									●														
3715.1 ELECTRONIC SHOCK ABSORBER CONTROL III+ (EDC III+)																		●											●		
5116.0 POWER MIRRORS												●					●	●													
5120.0 ZKE DOOR LOCK HEATING (TSH)																															
5126.0 ZKE CENTRAL LOCKING (ZV)																															
5133.0 ZKE POWER WINDOWS (FH)																														●	
5146.0 POWER SUN SHADES																		●													
5200.0 POWER SEATS																															



# 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
		7.5A	7.5A	7.5A	7.5A	10A	15A	30A	7.5A	20A	7.5A	7.5A	15A	7.5A	7.5A	10A	20A	7.5A	7.5A	30A	30A	7.5A	30A	15A	15A	30A	15A	30A	15A	7.5A
5200.1	SEAT/MIRROR MEMORY SYSTEM (SM/SPM)												●				●	●	●											
5203.0	HEATED SEATS																●													
5212.0	LUMBAR SUPPORT																													
5410.0	ZKE SUNROOF (SHD)															●														●
6100.0	CENTRAL BODY ELECTRONICS (ZKE II)															●														●
6133.0	HORN									●																				
6160.0	ZKE WIPER/WASHER CONTROL	●														●							●							●
6164.0	ZKE WINDSHIELD WIPER PRESSURE CONTROL (ADV)									●						●														●
6167.0	ZKE HEADLIGHT WASHER (SRA)		●													●													●	●
6169.0	WINDSHIELD WASHER JET HEATERS												●																	
6210.0	BODY ELECTRONICS MODULE (EKM)												●						●	●										
6211.0	INSTRUMENT CLUSTER	●										●							●	●										
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																		●											



# 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	
		7.5A	7.5A	7.5A	7.5A	10A	15A	30A	7.5A	20A	7.5A	7.5A	15A	7.5A	7.5A	10A	20A	7.5A	7.5A	30A	30A	7.5A	30A	15A	15A	30A	15A	30A	15A	7.5A	
6325.0	BRAKE LIGHTS			●					●																						
6330.0	ZKE INTERIOR LIGHTS (IB)															●															
6332.0	GLOVE COMPARTMENT LIGHT/ CIGAR LIGHTER/ CHARGING SOCKET		●	●	●	●																									
6350.0	CRASH CONTROL MODULE						●																								
6424.0	REAR WINDOW DEFOGGER/ ANTENNA																														
6450.0	AUTOMATIC HEATING/AC CONTROL (IHKA)	●																			●		●							●	
6454.0	AUXILIARY FAN																										●				●
6510.1	RADIO/HIFI																														
6561.0	CELLULAR TELEPHONE (PROVISIONS)									●																					
6575.1	ANTI-THEFT SYSTEM III (DWA III)																														
6581.0	MULTI- INFORMATION DISPLAY (MID)																														
6610.0	INFRARED LOCKING (IRS) NOT INSTALLED IN U.S. VEHICLES																														



# FUSE CHART

## FUSES 30 TO 43

	FUSE NUMBER													
	30	31	32	33	34	36	37	38	39	40	41	42	43	
	15A	7.5A	20A	7.5A	30A	15A	30A	30A	30A	15A	30A	30A	10A	
1210.8 ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)														
1230.0 CHARGING SYSTEM														
1240.0 START														
1270.1 ELECTRONIC THROTTLE CONTROL (EML 12-CYLINDER)														
1290.0 E-BOX FAN														
2460.0 ELECTRONIC TRANSMISSION CONTROL (EGS)														
3231.0 ELECTRIC STEERING COLUMN ADJUSTMENT										●				
3231.1 STEERING COLUMN MEMORY (LSM)										●				
3234.0 SUPPLEMENTAL RESTRAINT SYSTEM (AIR BAG)														
3240.0 POWER ASSIST STEERING (SERVOTRONIC)														
3450.1 SLIP CONTROL (ABS/ASC)														
3450.2 SLIP CONTROL (ABS/ASC+T)														
3715.1 ELECTRONIC SHOCK ABSORBER CONTROL III+ (EDC III+)			●											
5116.0 POWER MIRRORS														
5120.0 ZKE DOOR LOCK HEATING (TSH)													●	
5126.0 ZKE CENTRAL LOCKING (ZV)		●		●	●							●	●	
5133.0 ZKE POWER WINDOWS (FH)		●		●	●							●	●	
5146.0 POWER SUN SHADES			●											
5200.0 POWER SEATS								●	●					

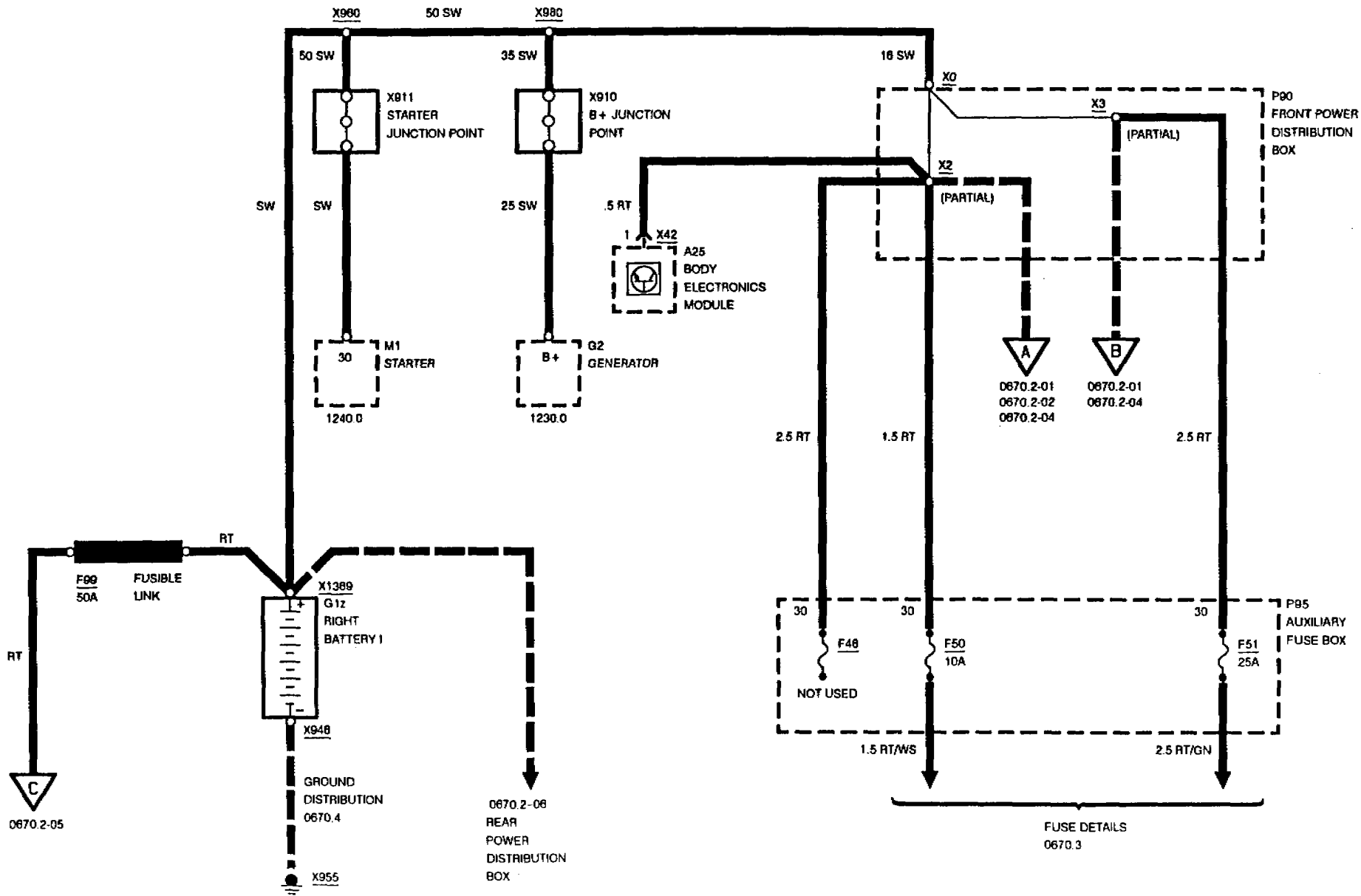






# POWER DISTRIBUTION

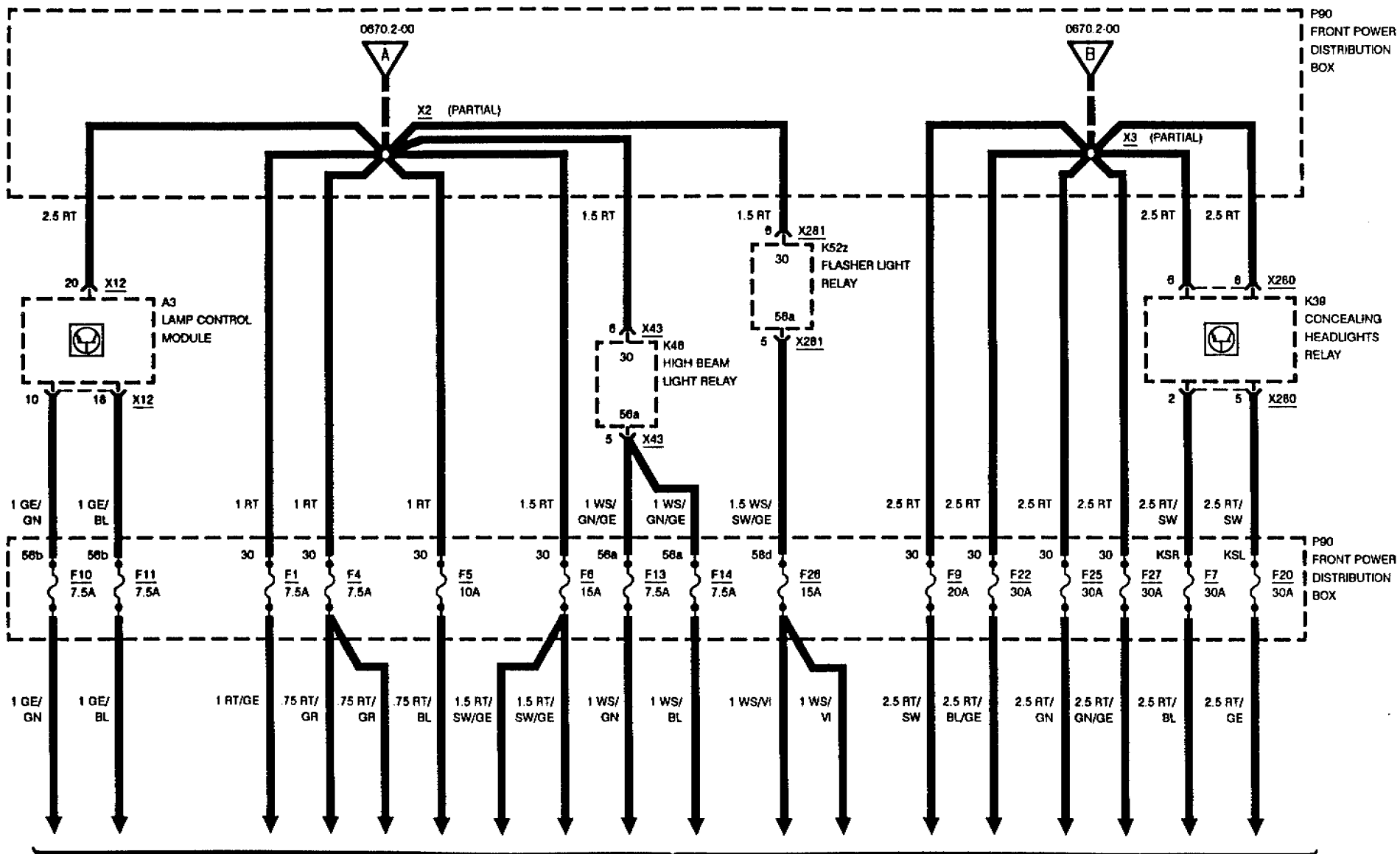
## FRONT POWER DISTRIBUTION BOX





# POWER DISTRIBUTION

## FRONT POWER DISTRIBUTION BOX



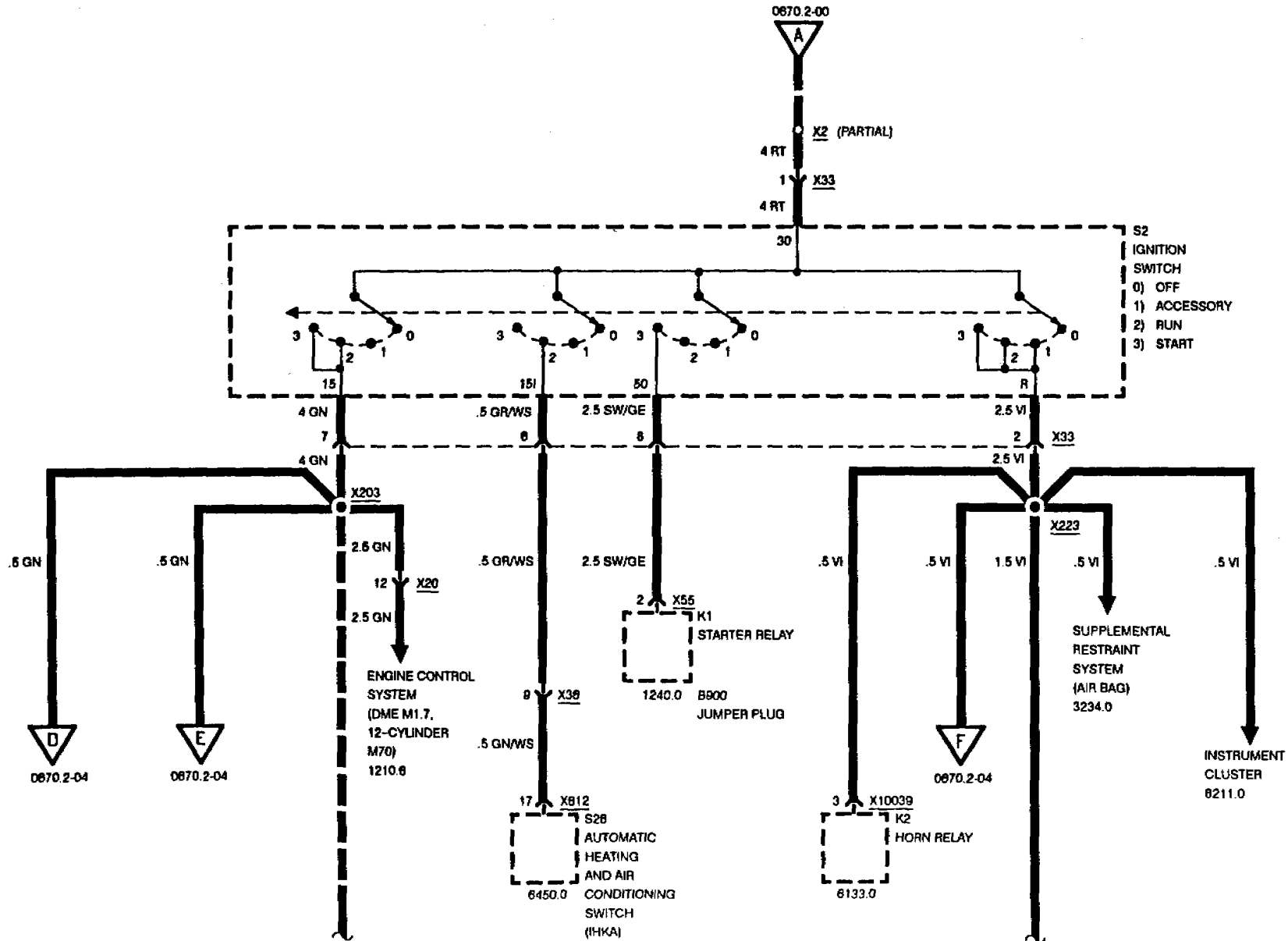
FUSE DETAILS  
0670.3

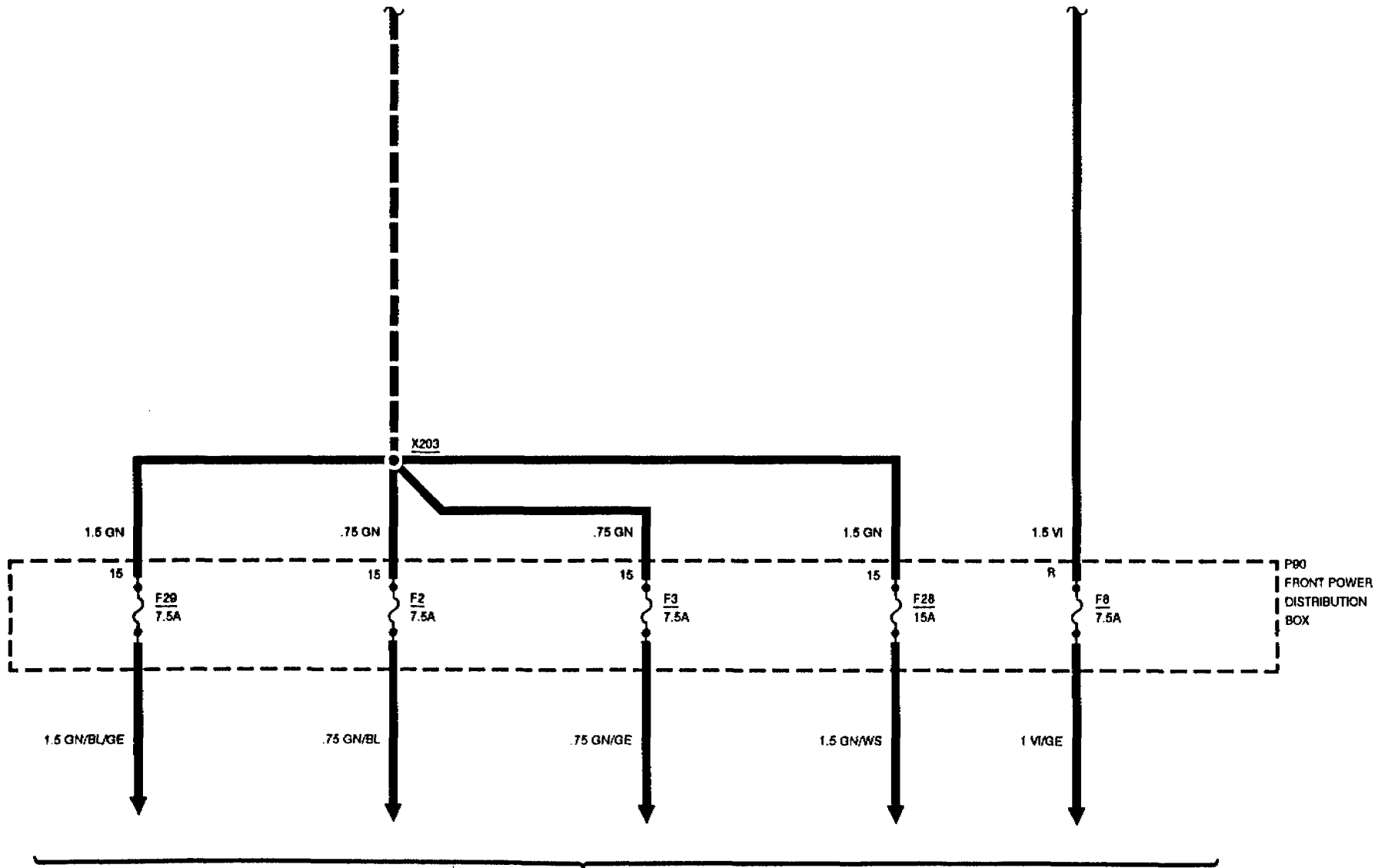




# POWER DISTRIBUTION

## FRONT POWER DISTRIBUTION BOX



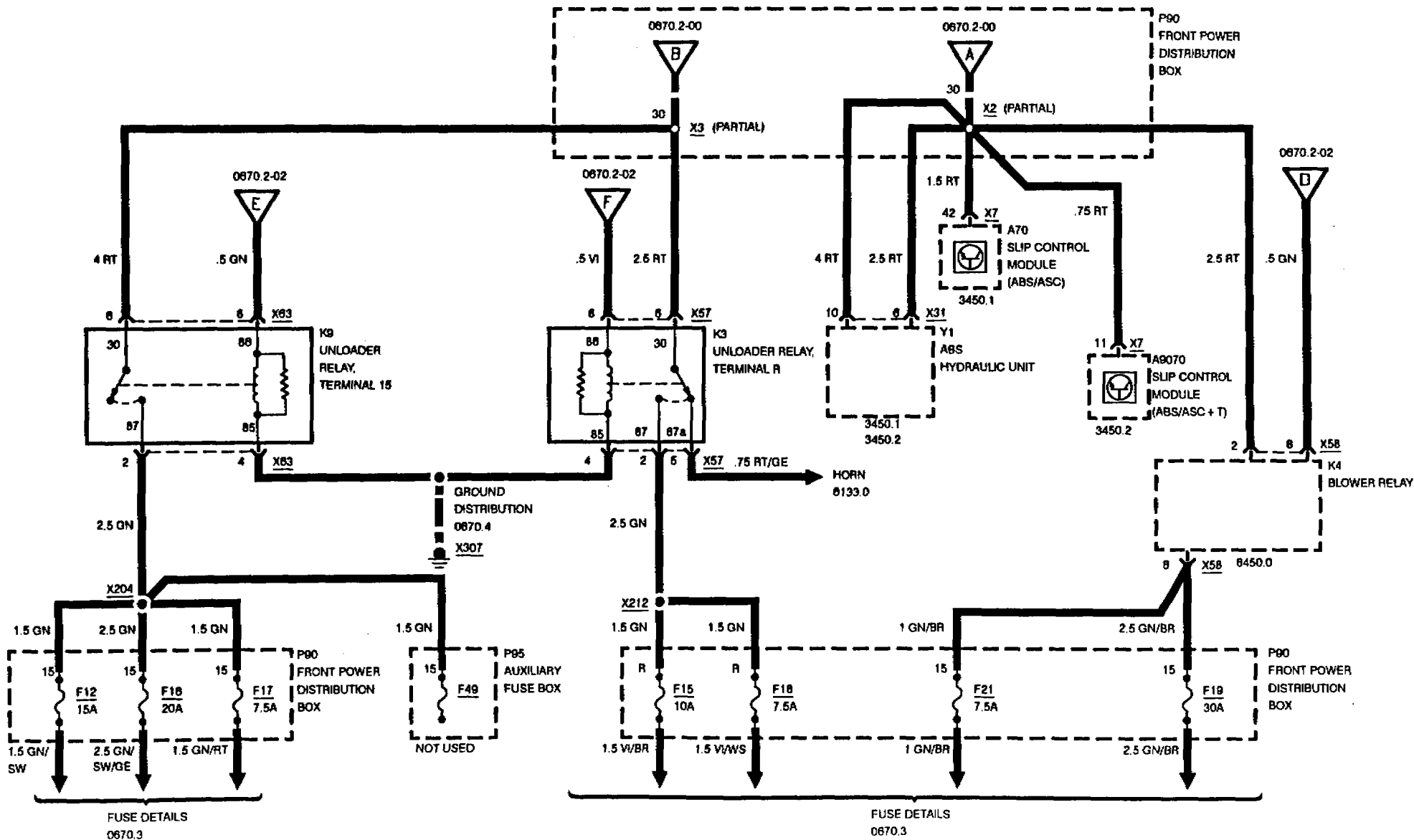


FUSE DETAILS  
0870 3



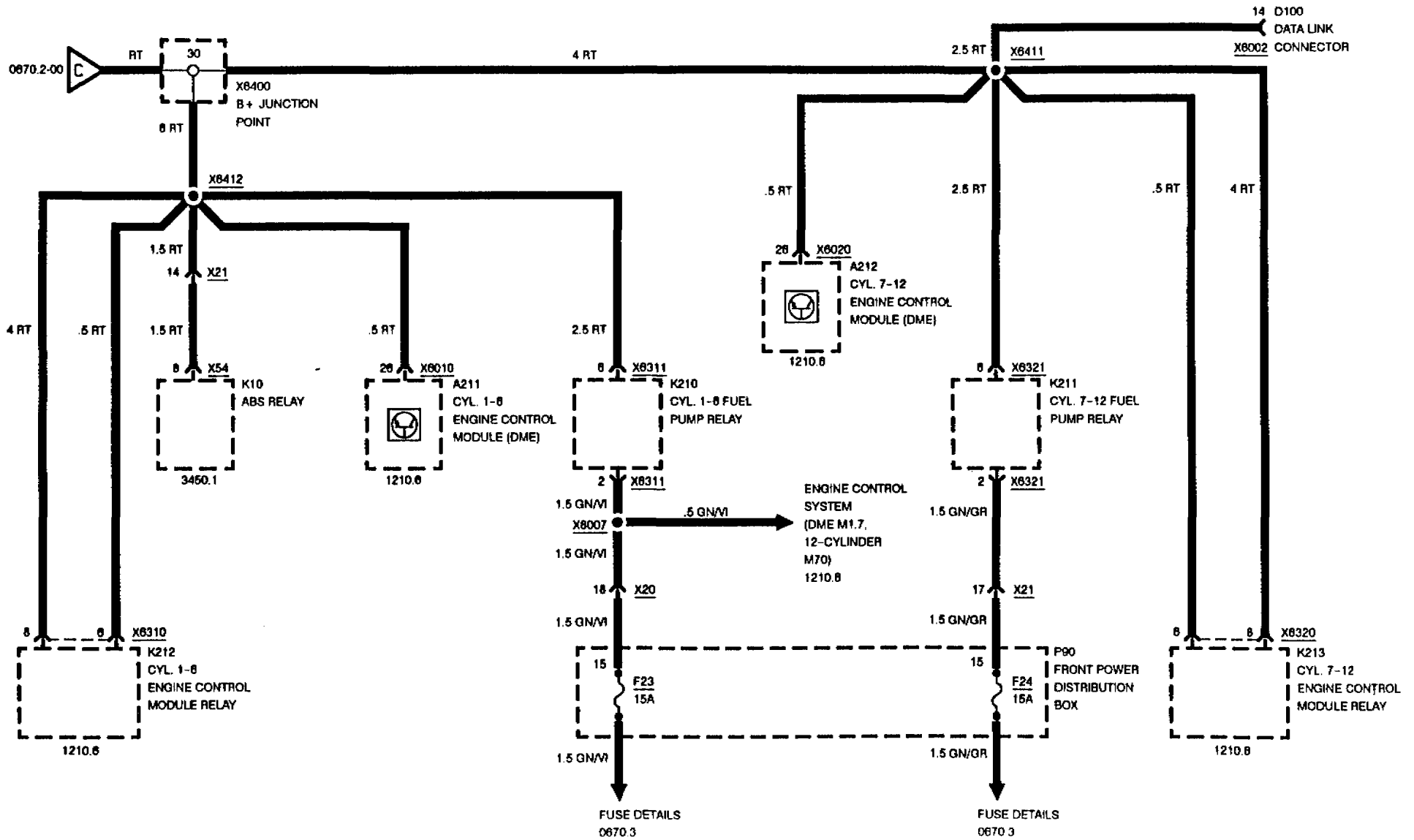
# POWER DISTRIBUTION

## FRONT POWER DISTRIBUTION BOX

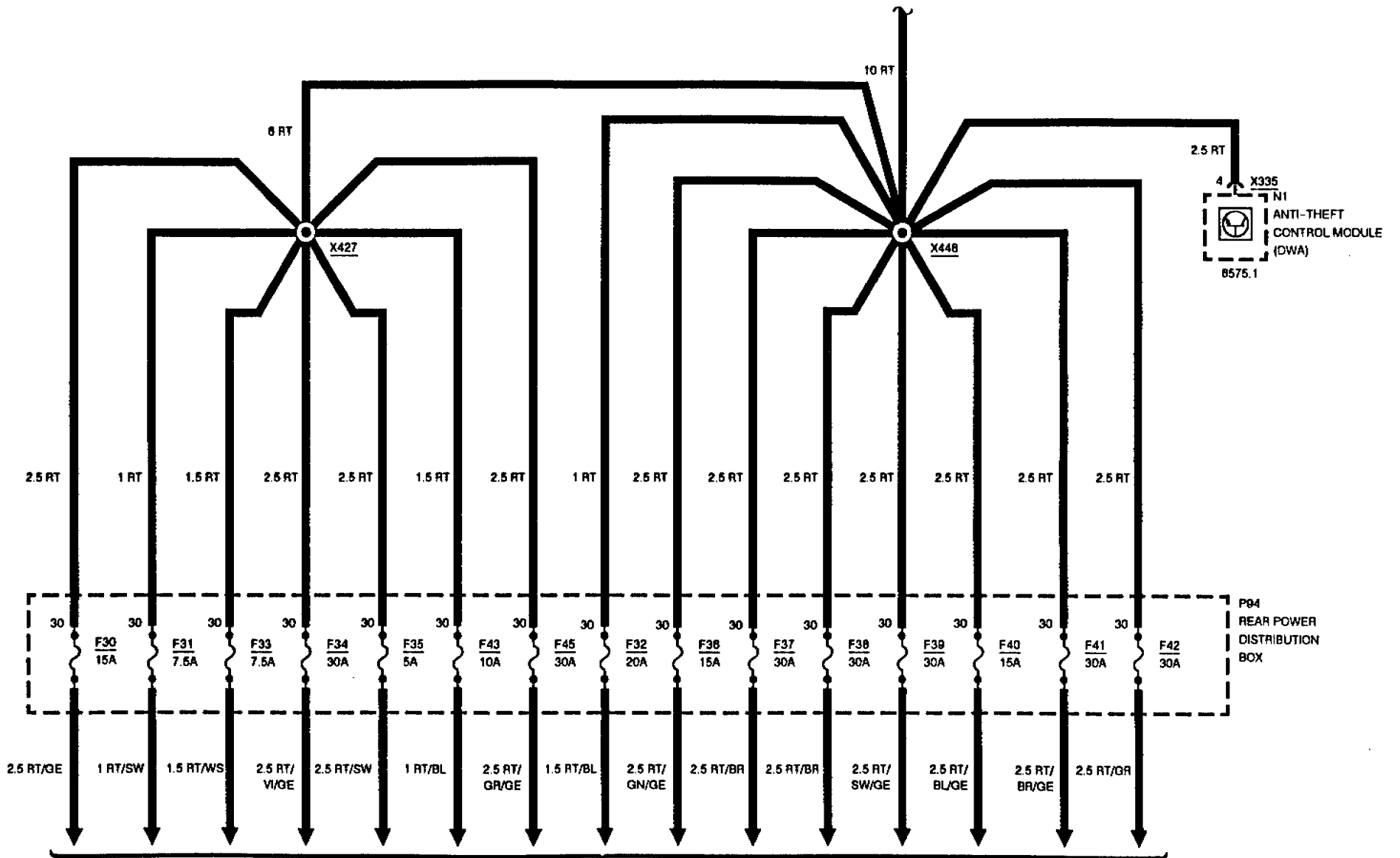




# POWER DISTRIBUTION





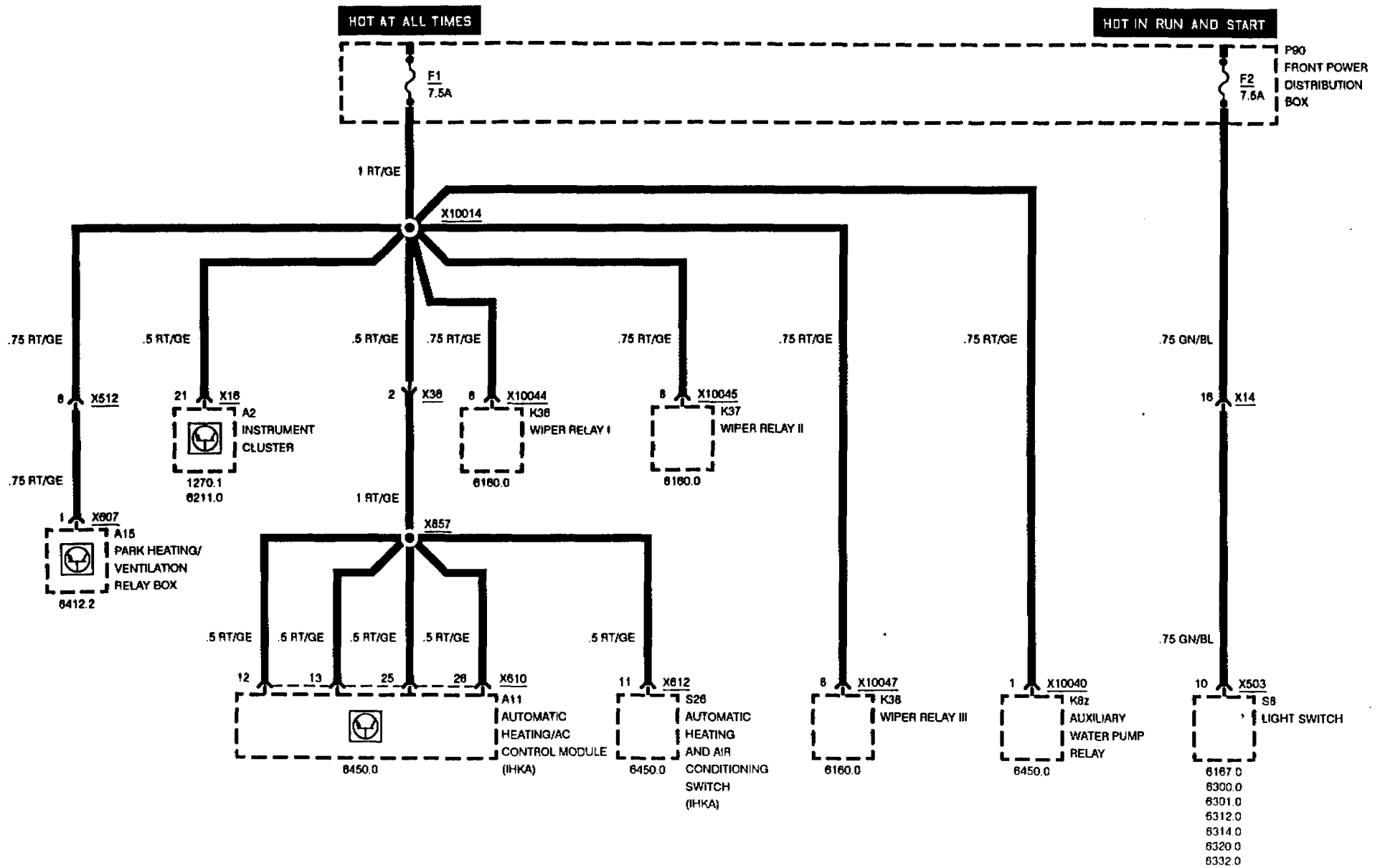


FUSE DETAILS  
0670.3



# FUSE DETAILS

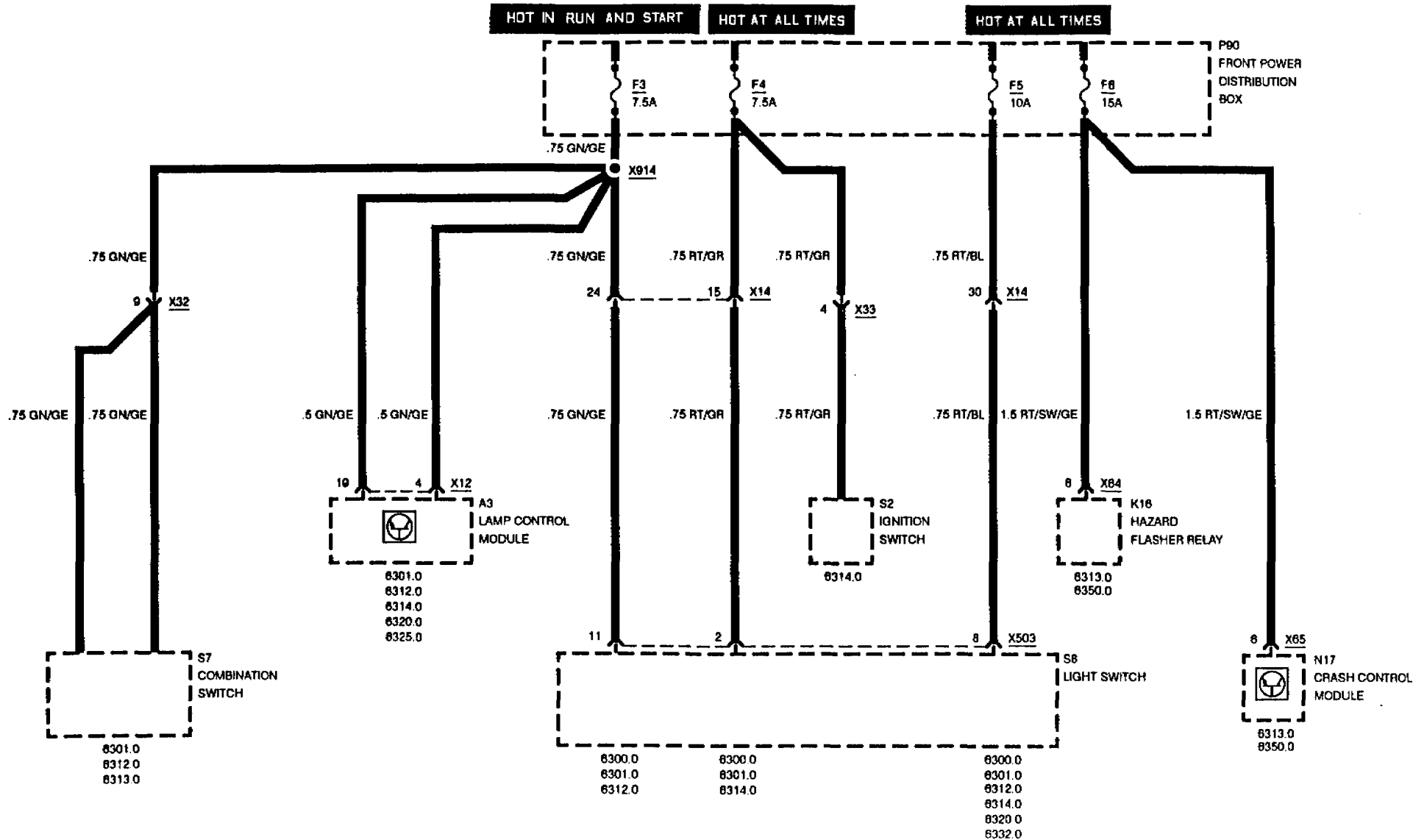
## FUSES 1 AND 2





# FUSE DETAILS

## FUSES 3, 4, 5, AND 6



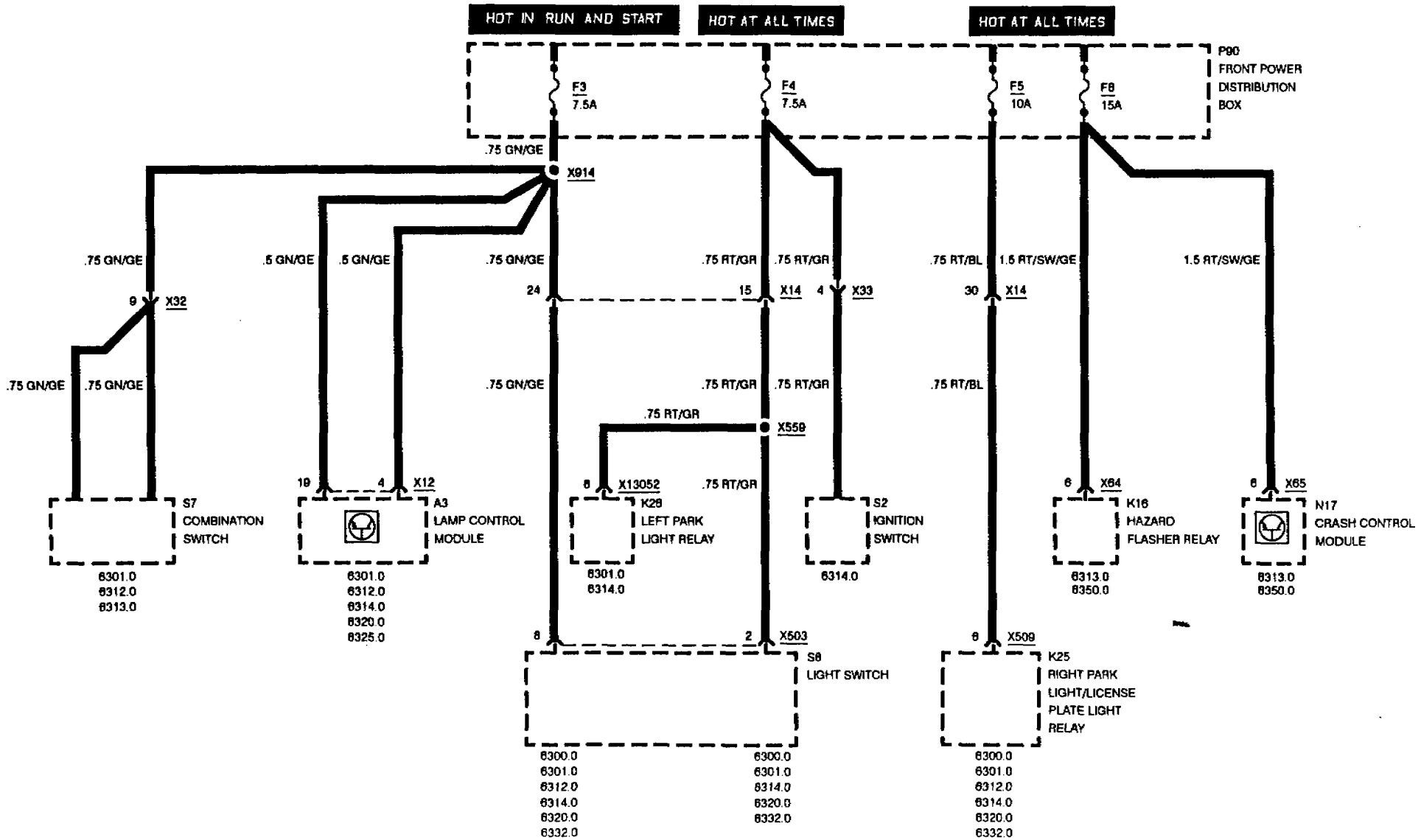




# FUSE DETAILS

## FUSES 3, 4, 5, AND 6

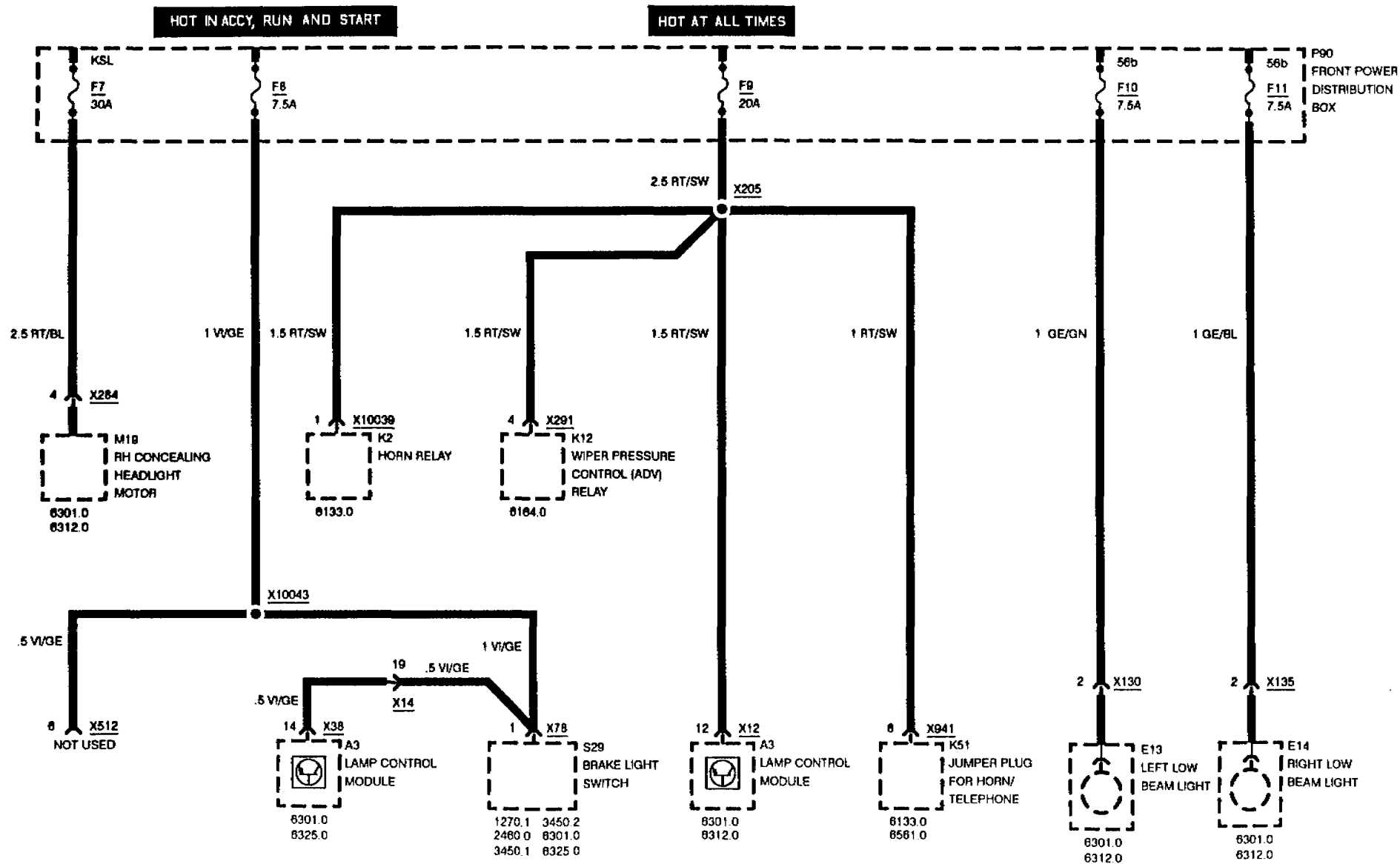
CDN





# FUSE DETAILS

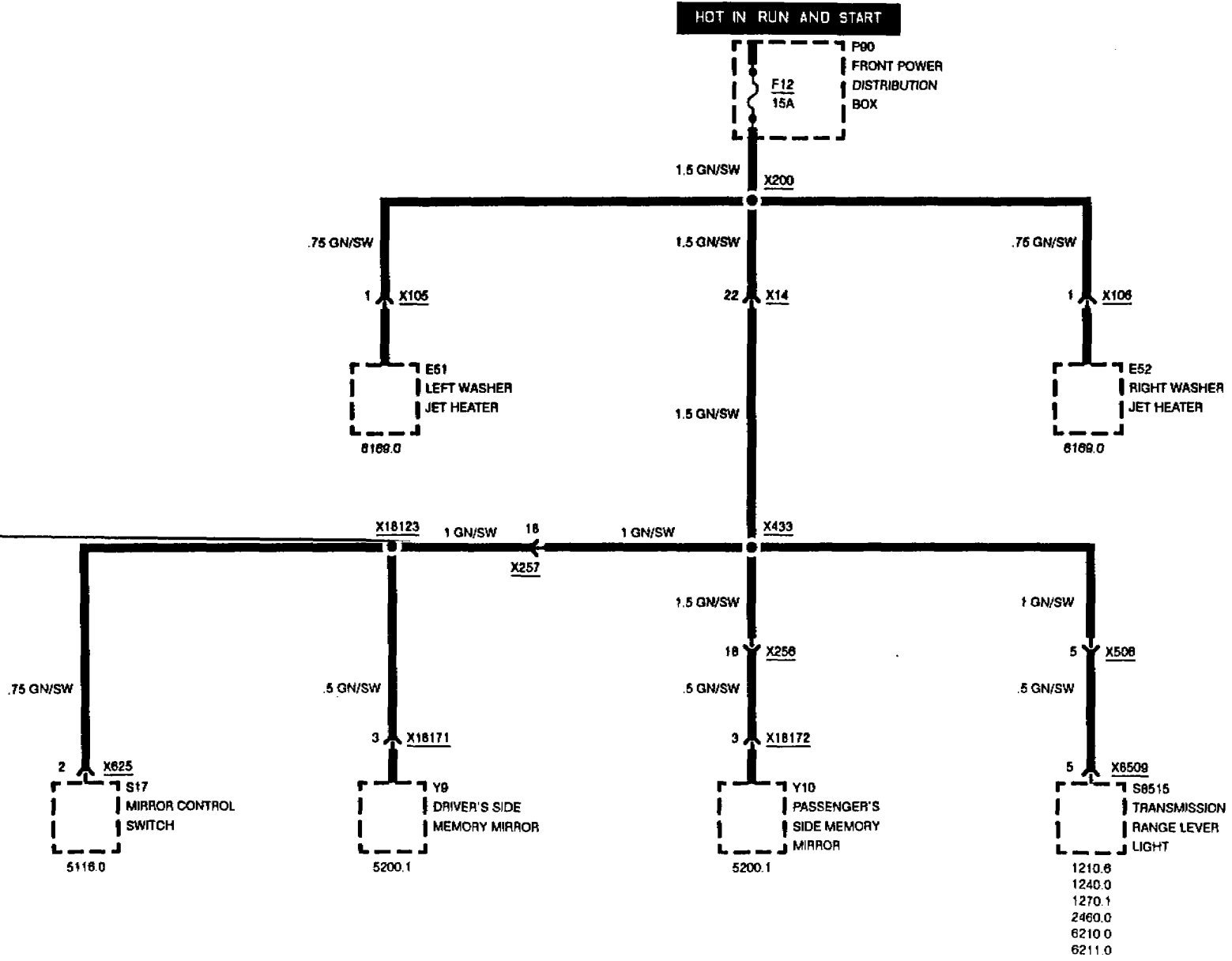
## FUSES 7, 8, 9, 10, AND 11





# FUSE DETAILS

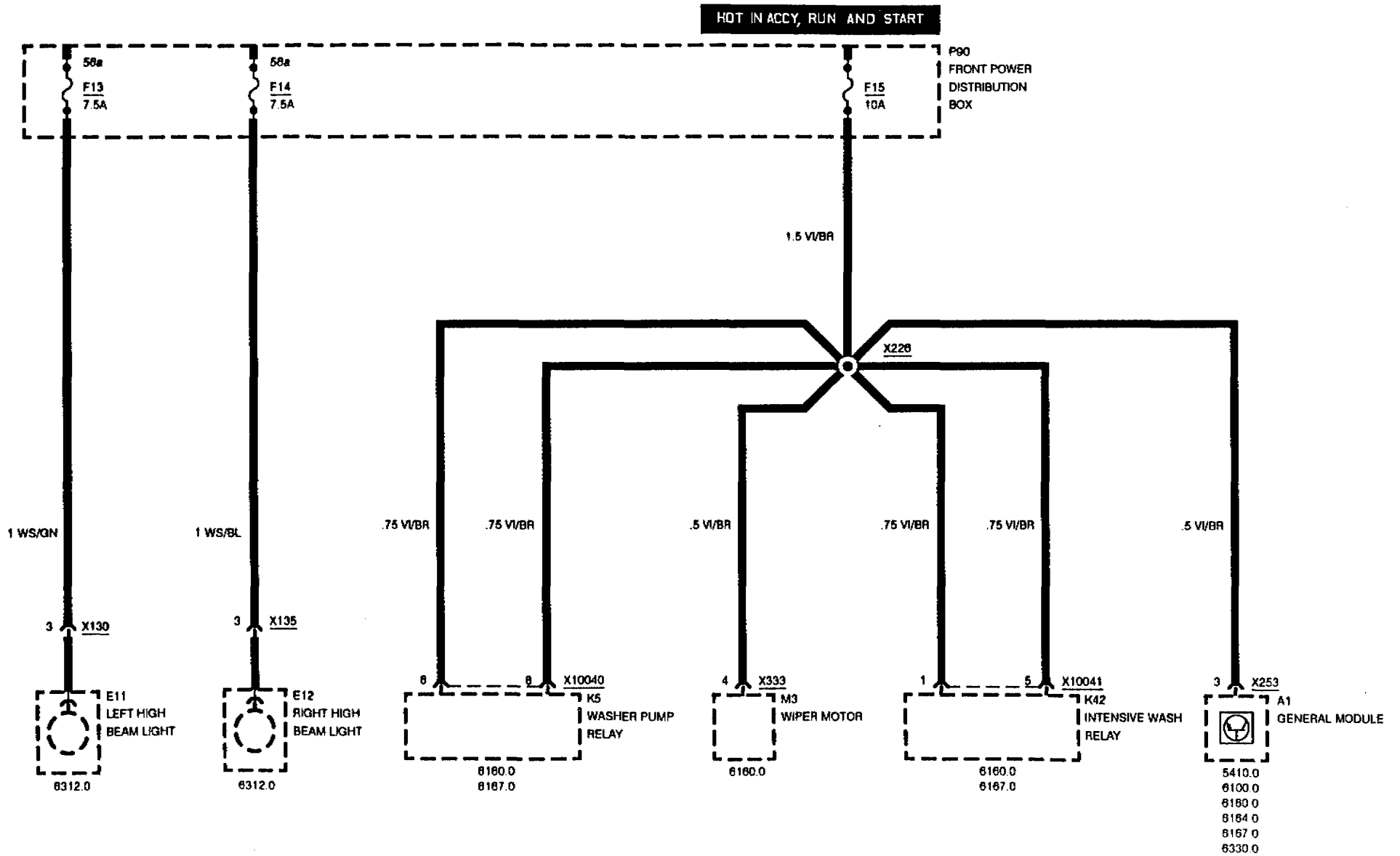
## FUSE 12





# FUSE DETAILS

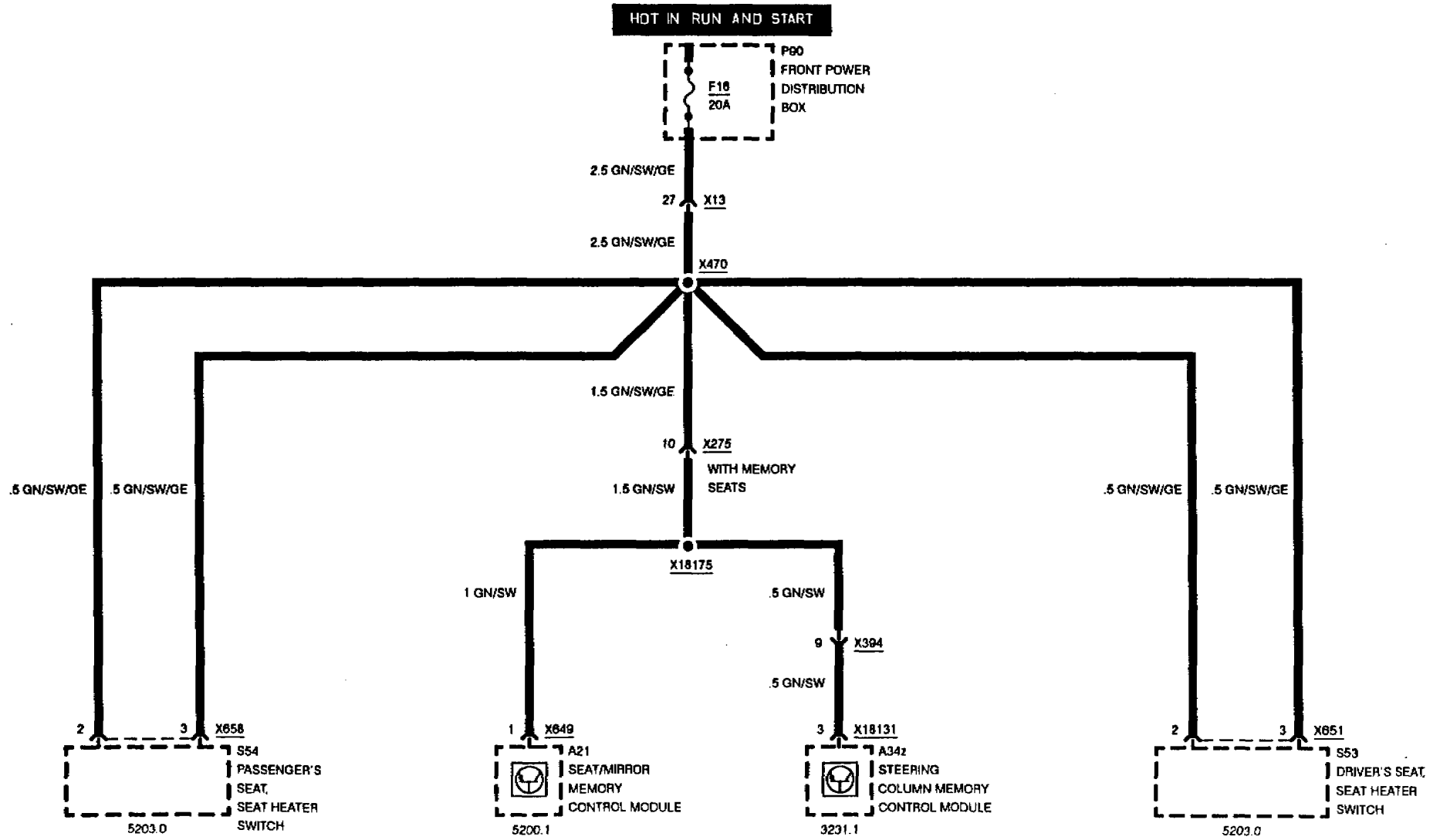
## FUSES 13, 14, AND 15





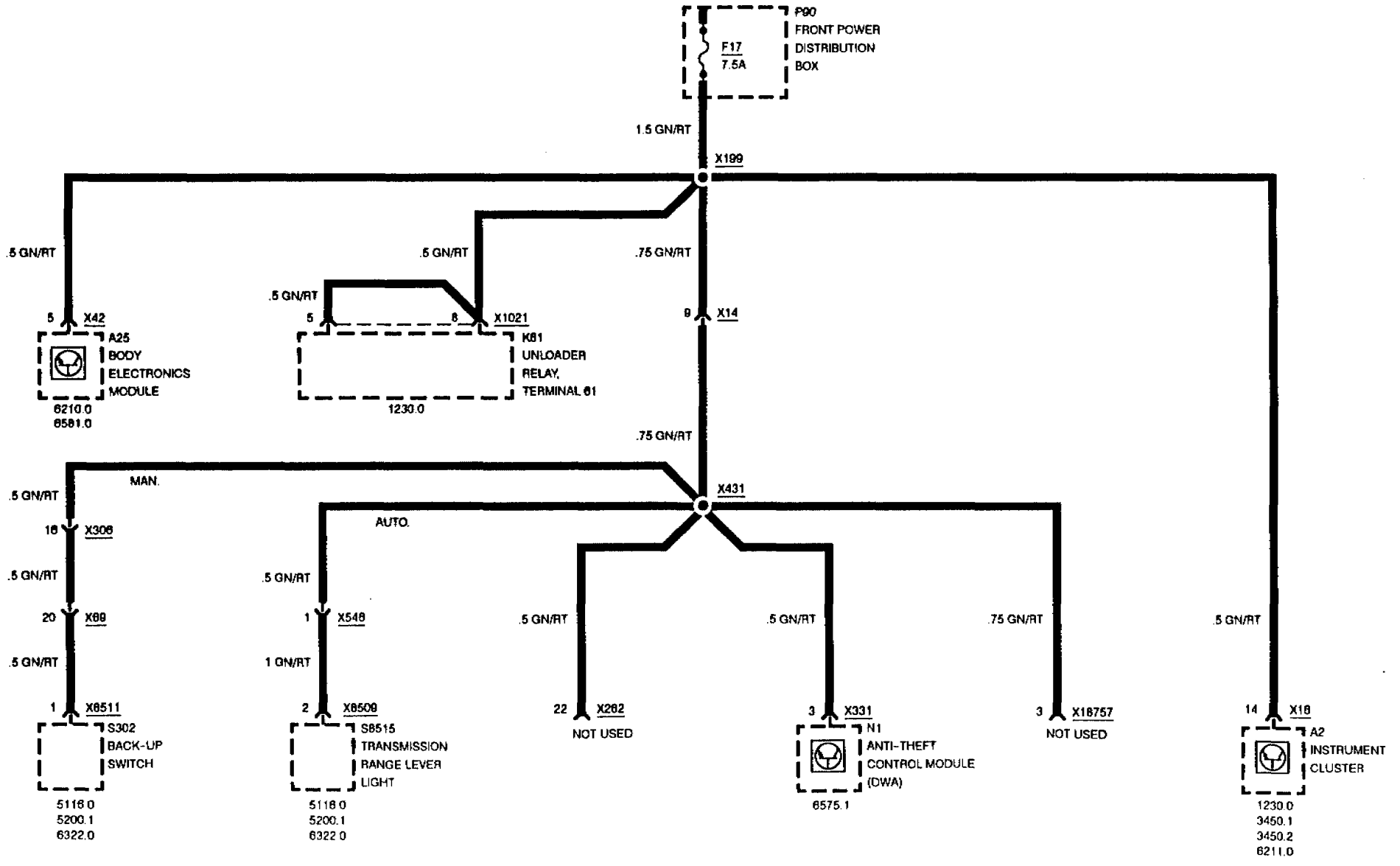
# FUSE DETAILS

## FUSE 16



**BMW**  
**8** **FUSE DETAILS**  
**FUSE 17**

**HOT IN RUN AND START**





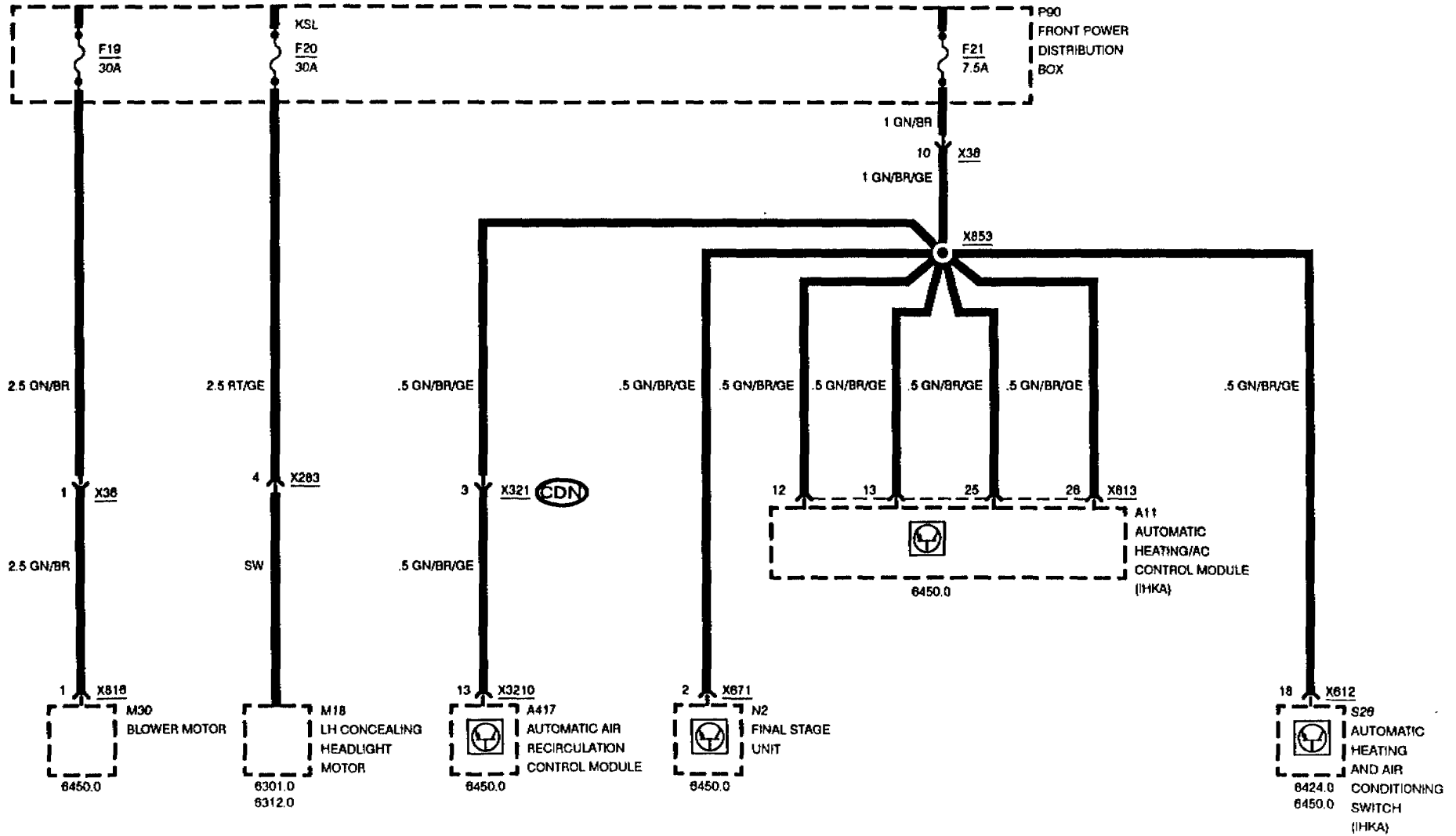


# FUSE DETAILS

## FUSES 19, 20, AND 21

HOT IN RUN AND START

HOT IN RUN AND START

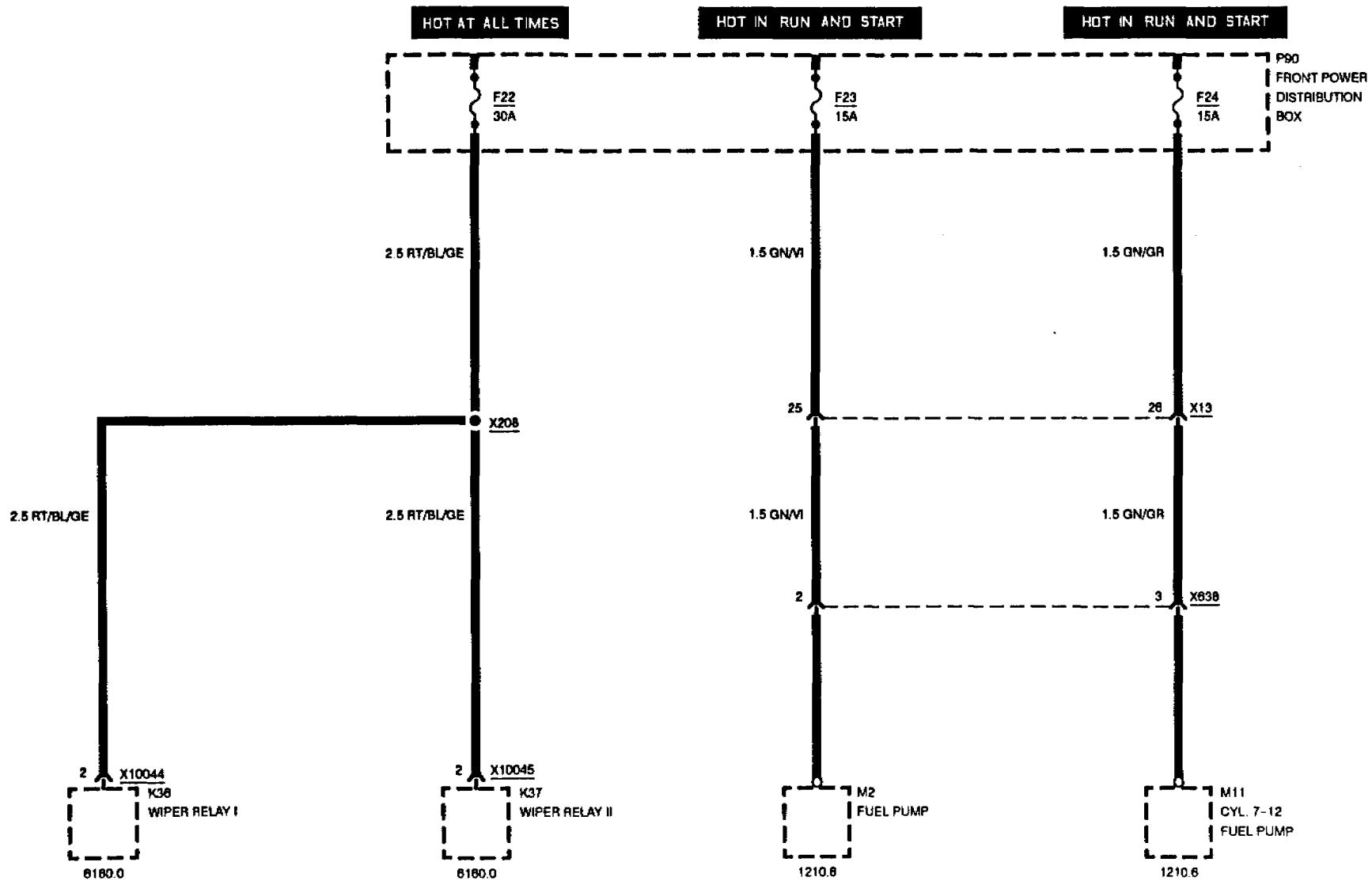






# FUSE DETAILS

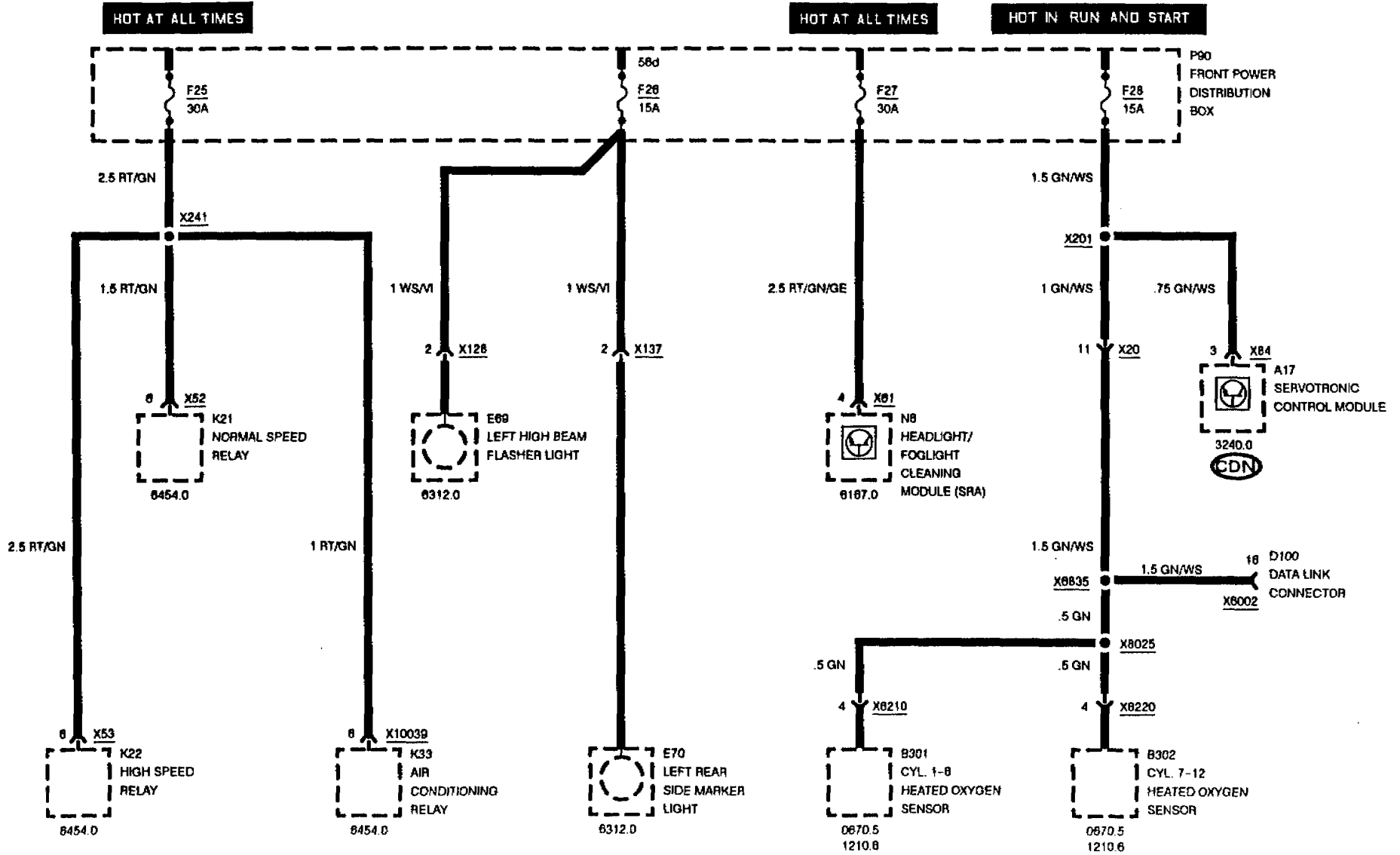
## FUSES 22, 23, AND 24





# FUSE DETAILS

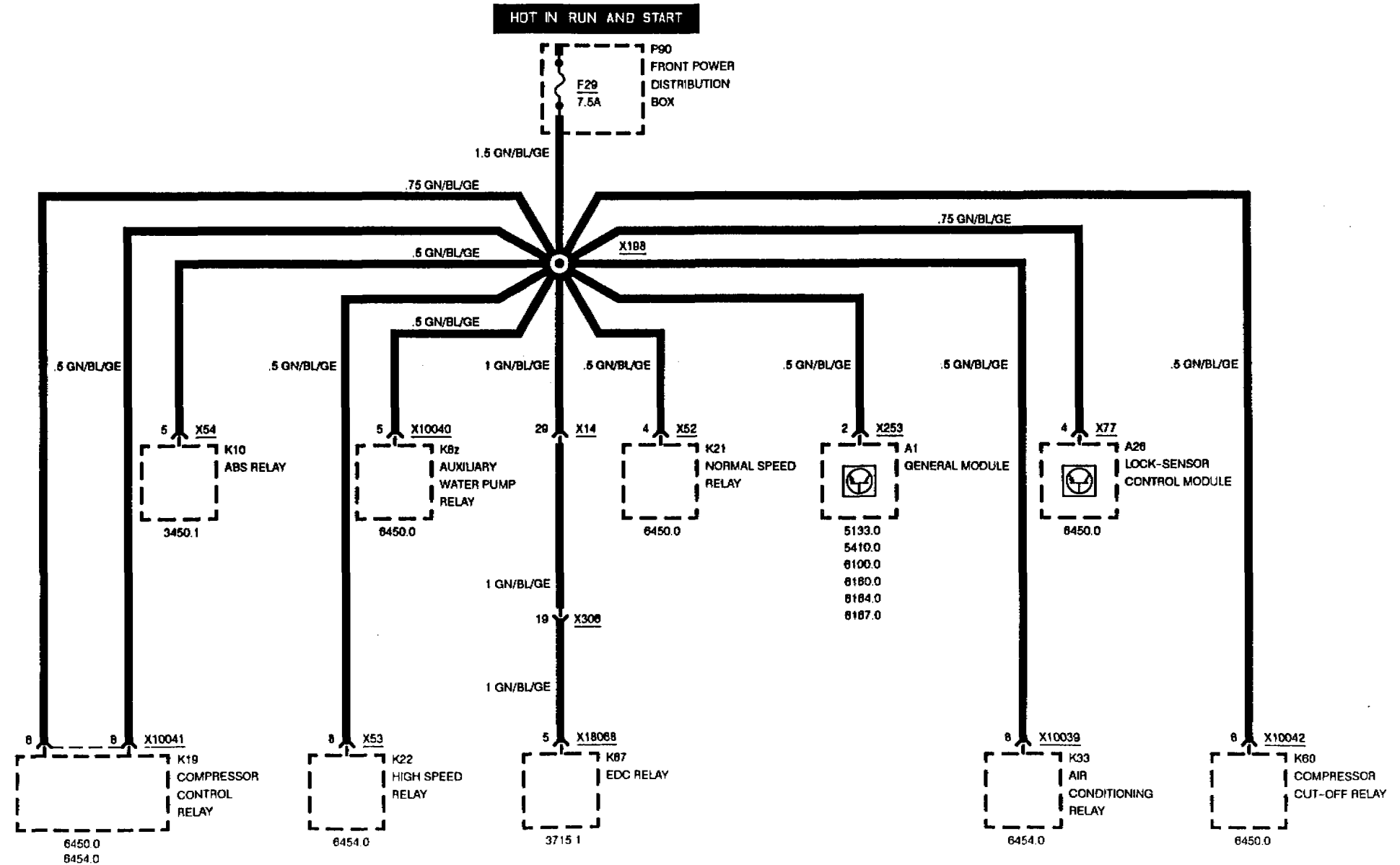
## FUSES 25, 26, 27, AND 28





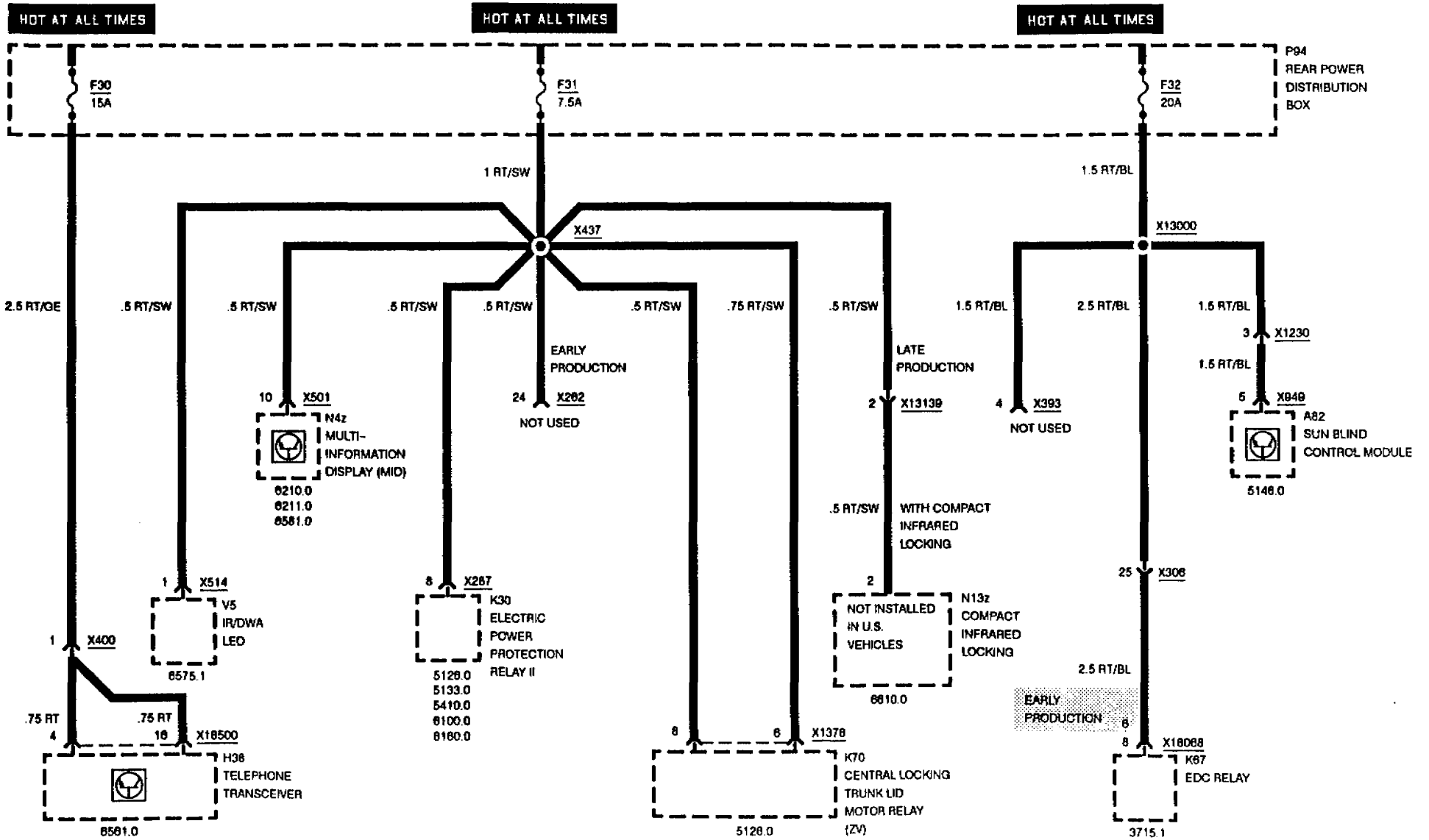
# FUSE DETAILS

## FUSE 29

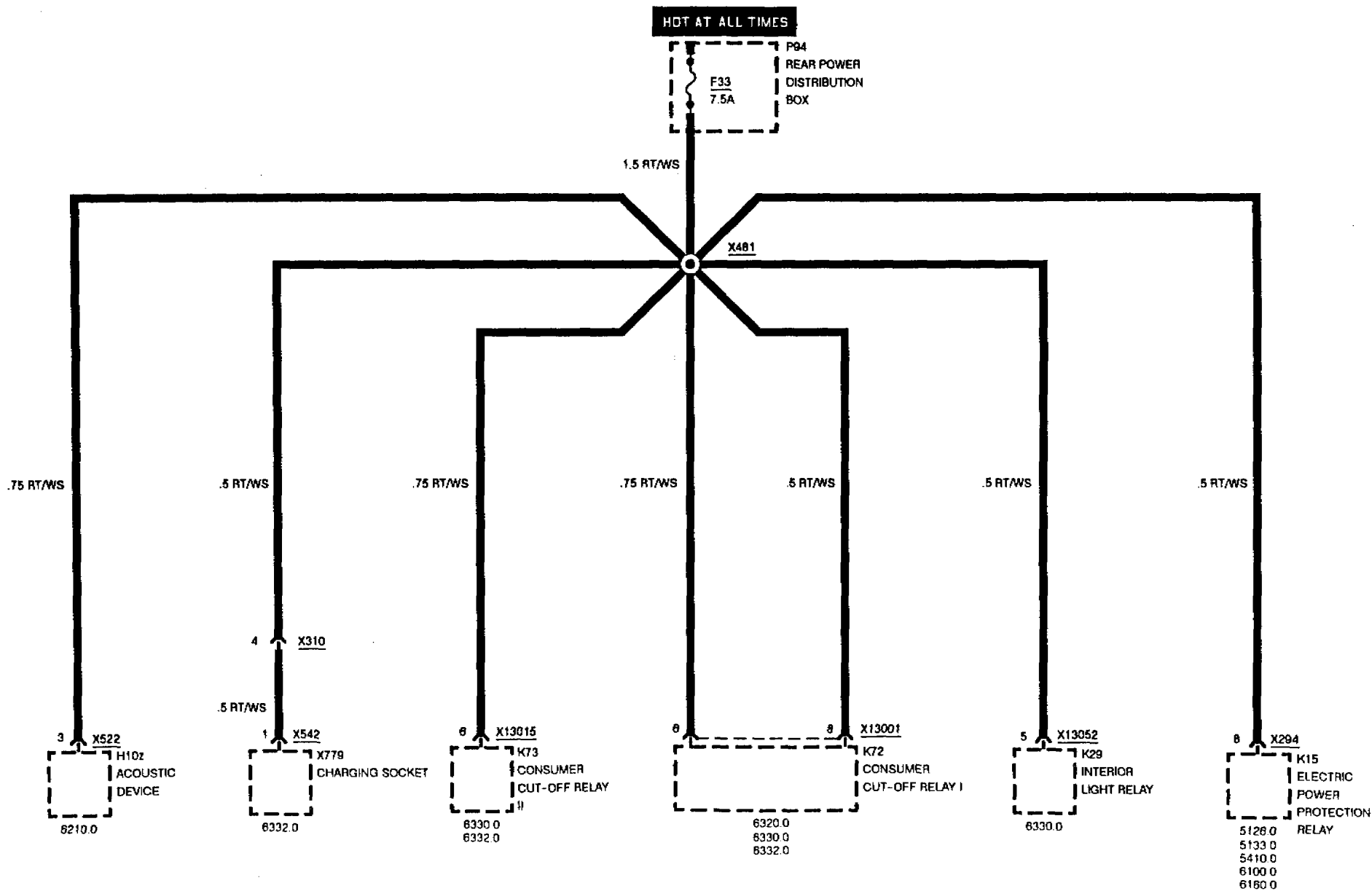


# FUSE DETAILS

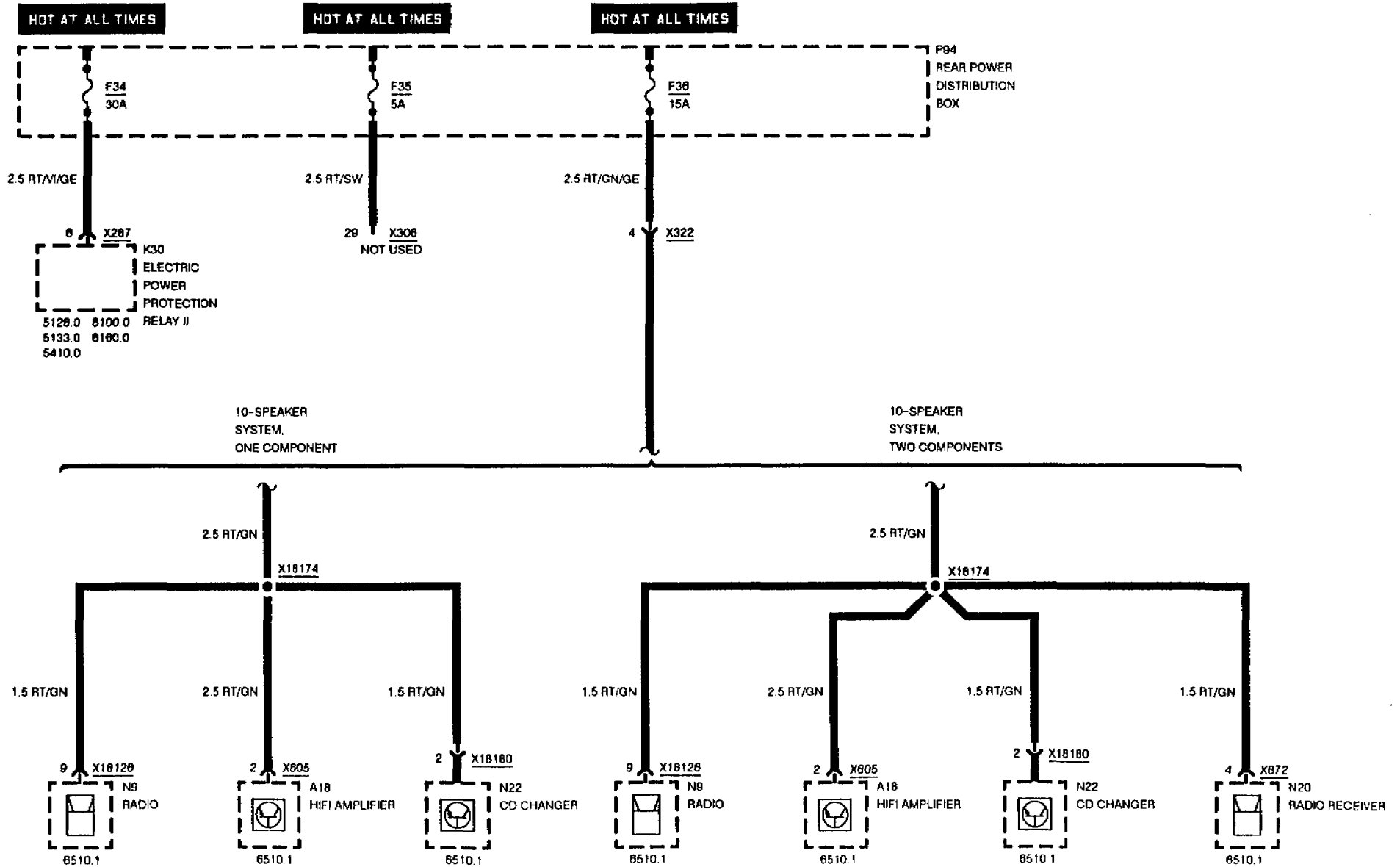
## FUSES 30, 31, AND 32



**BMW**  
**8** FUSE DETAILS  
FUSE 33



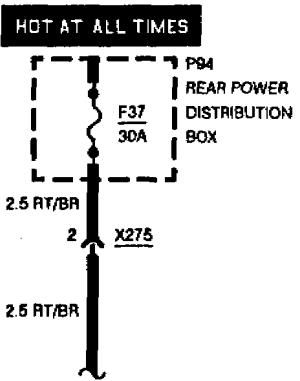
**BMW**  
**8** **FUSE DETAILS**  
**FUSES 34, 35, AND 36**





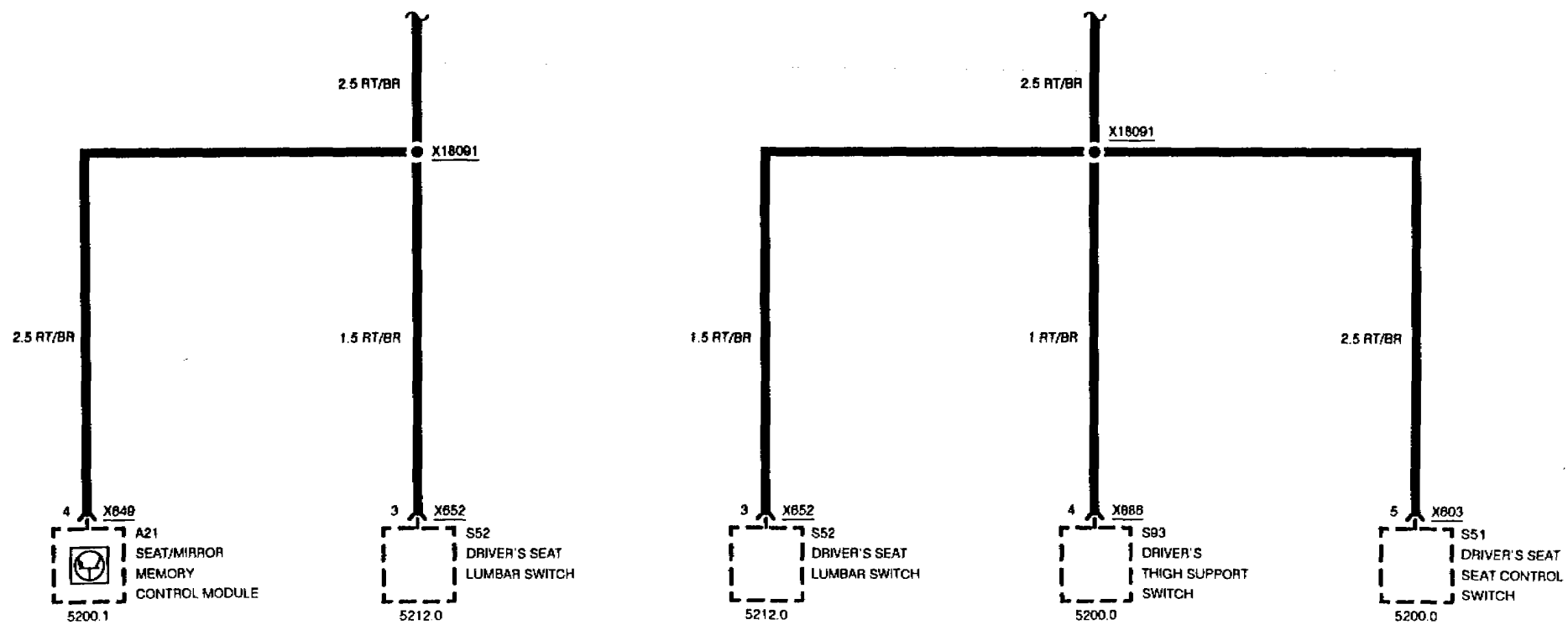
# FUSE DETAILS

## FUSE 37



WITH MEMORY

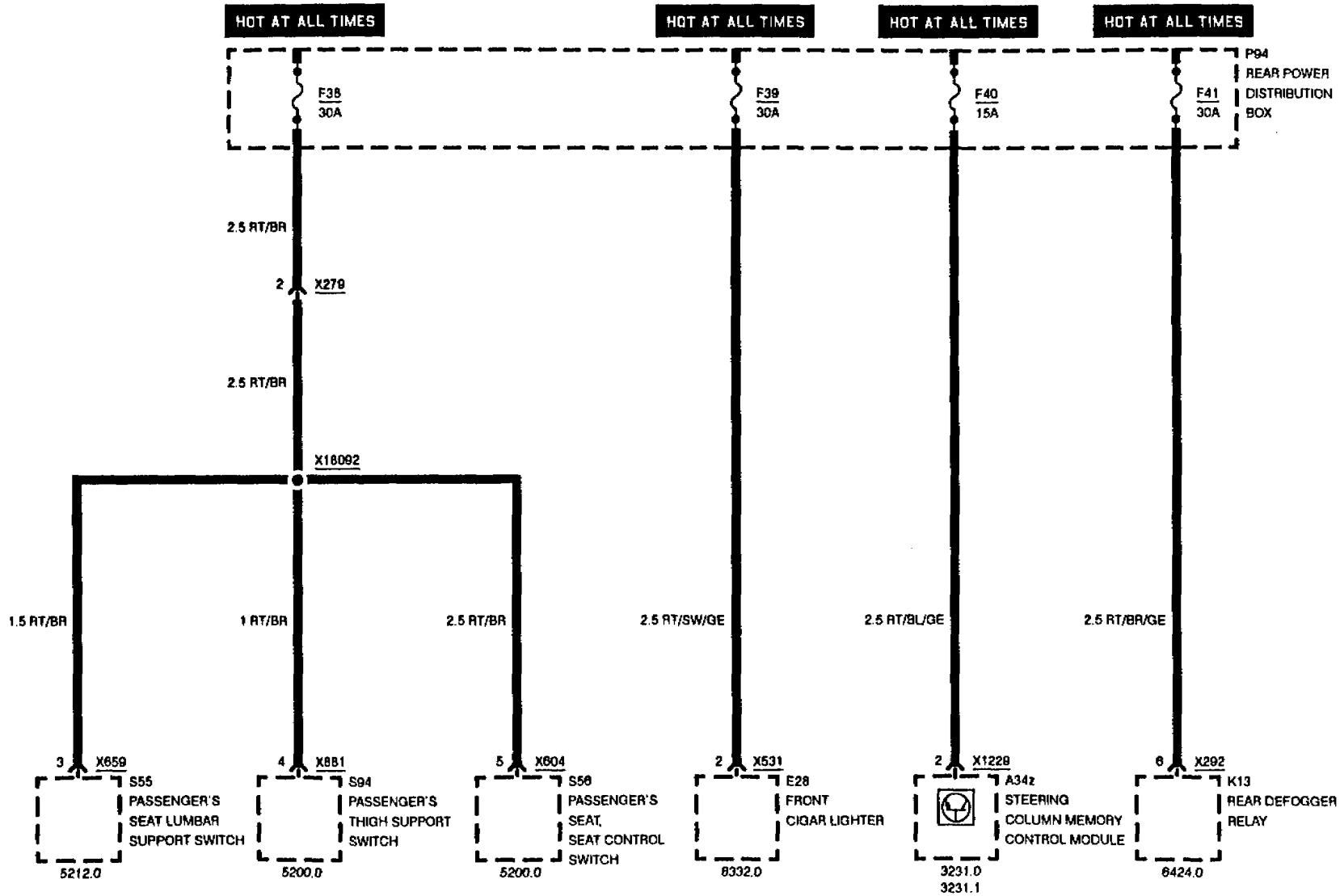
WITHOUT MEMORY





# FUSE DETAILS

## FUSES 38, 39, 40, AND 41

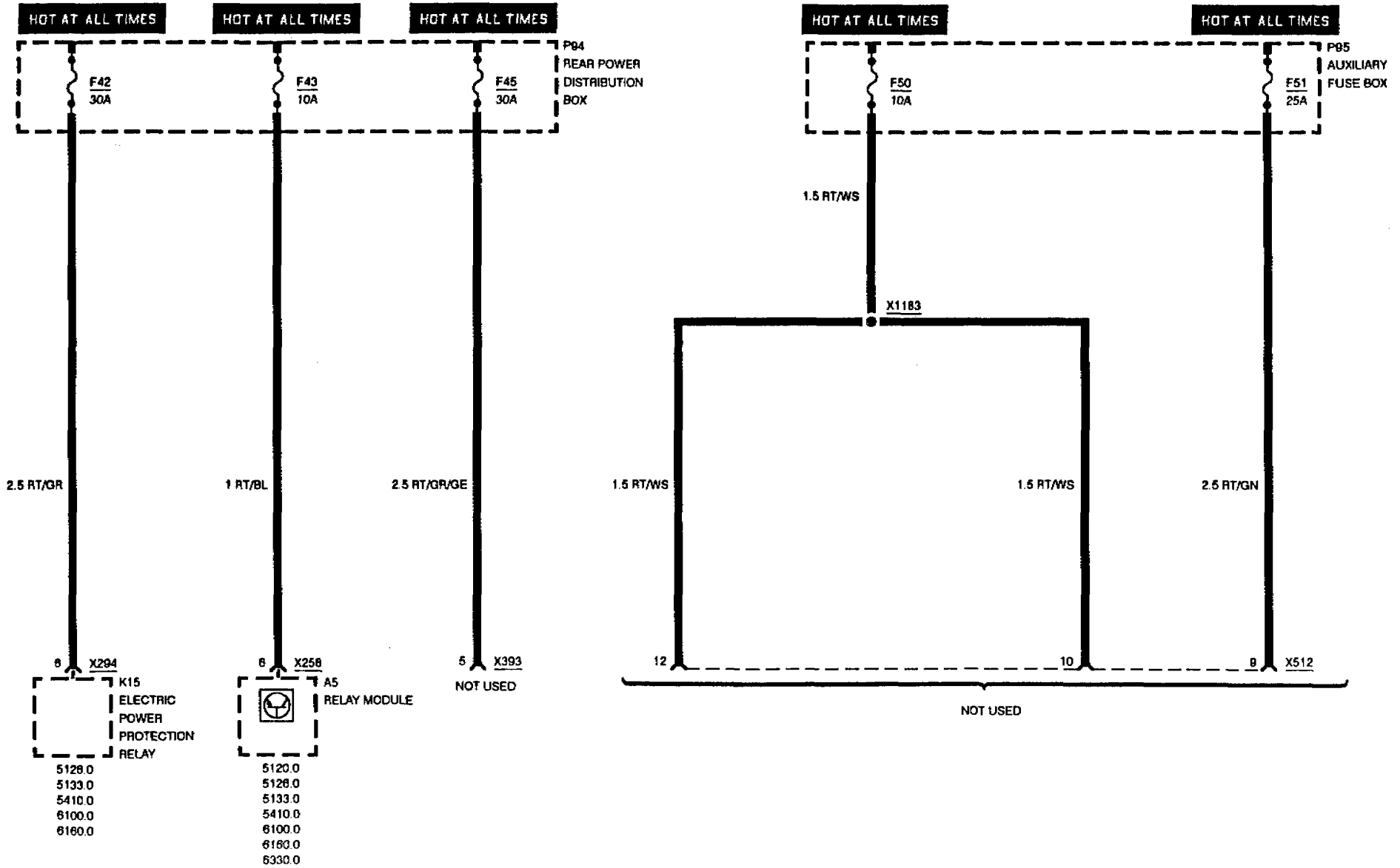






# FUSE DETAILS

## FUSES 42, 43, 45, 50, AND 51



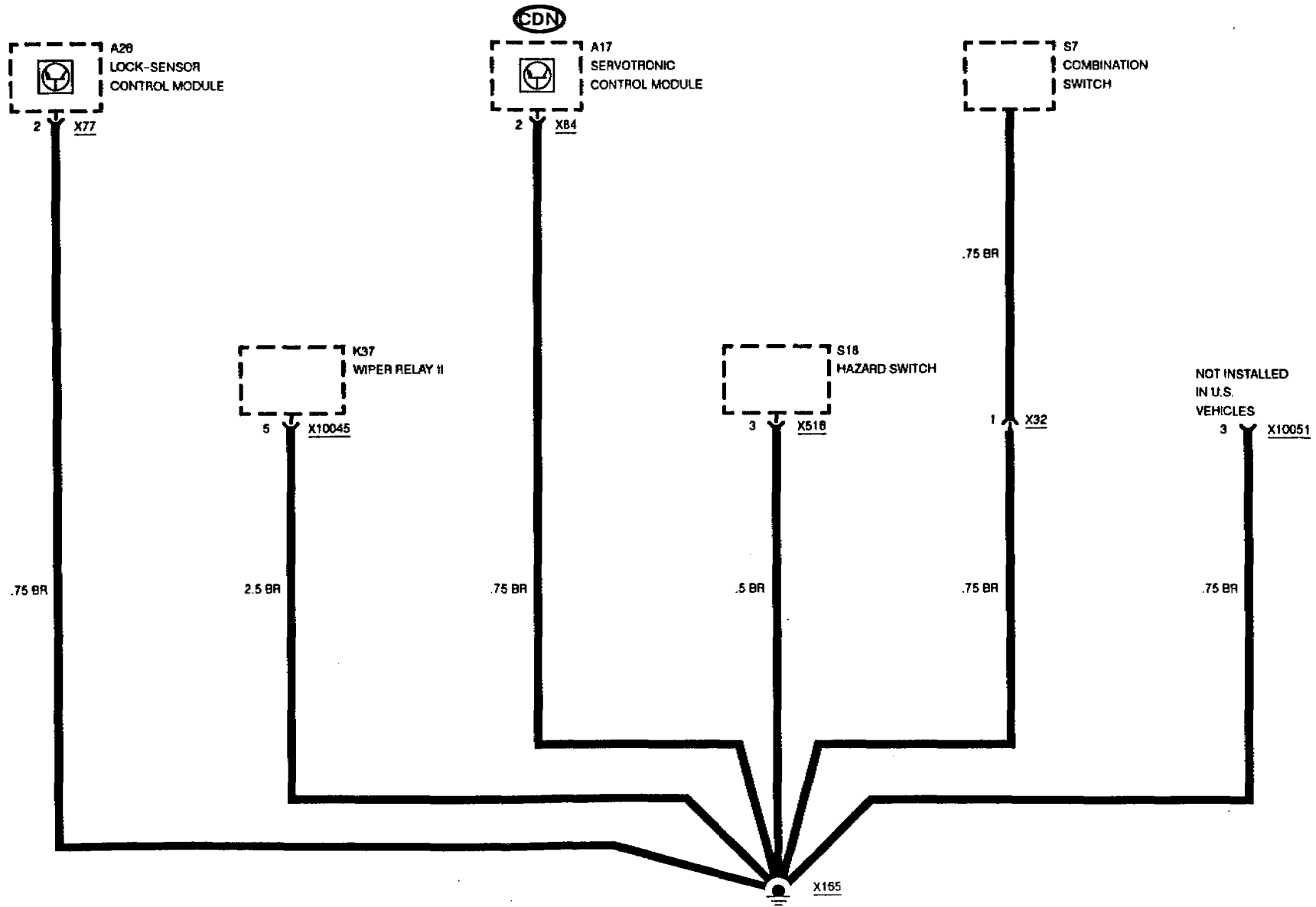
BMW  
8

0670.4



# GROUND DISTRIBUTION

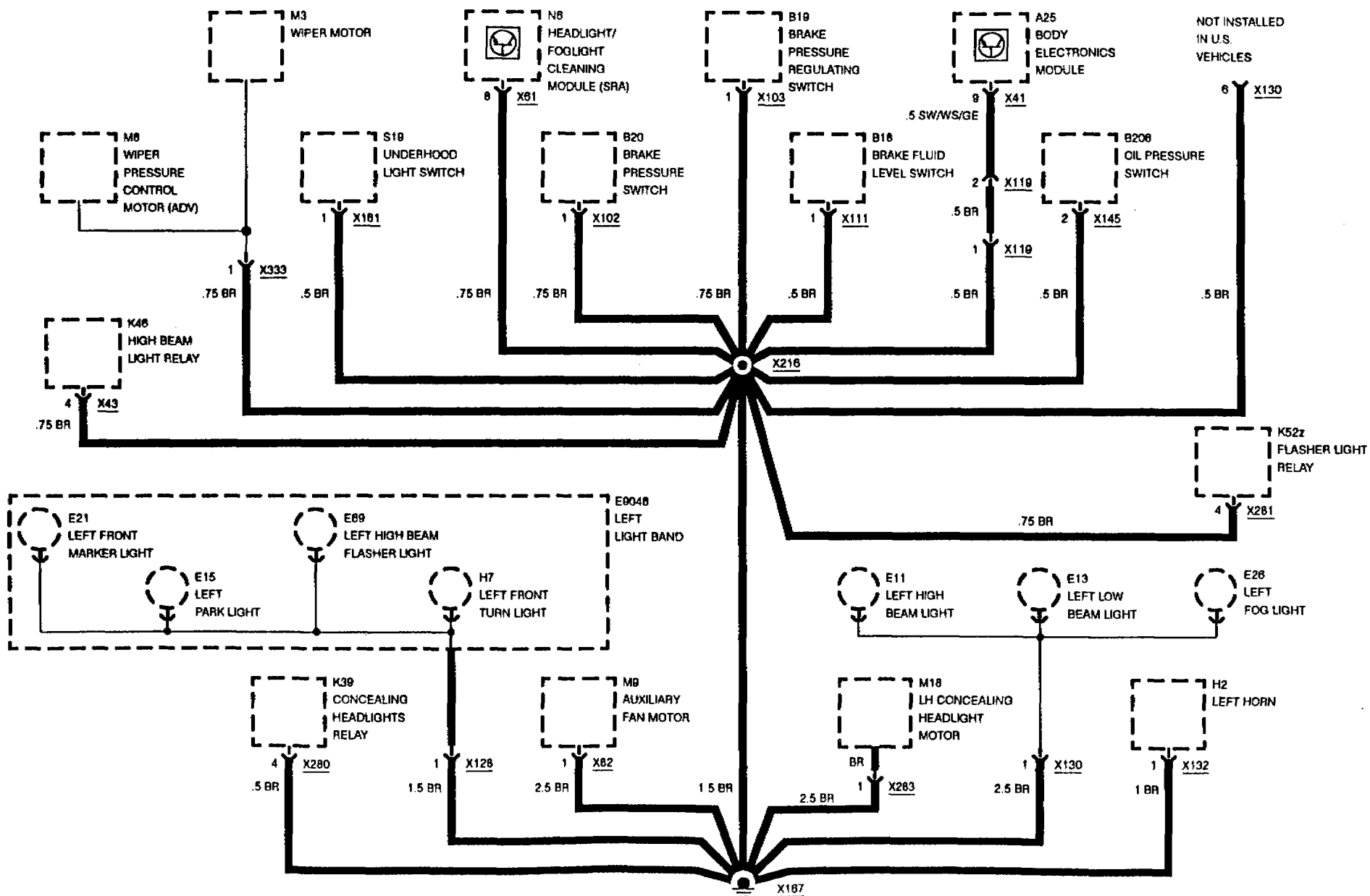
## GROUND X165





# GROUND DISTRIBUTION

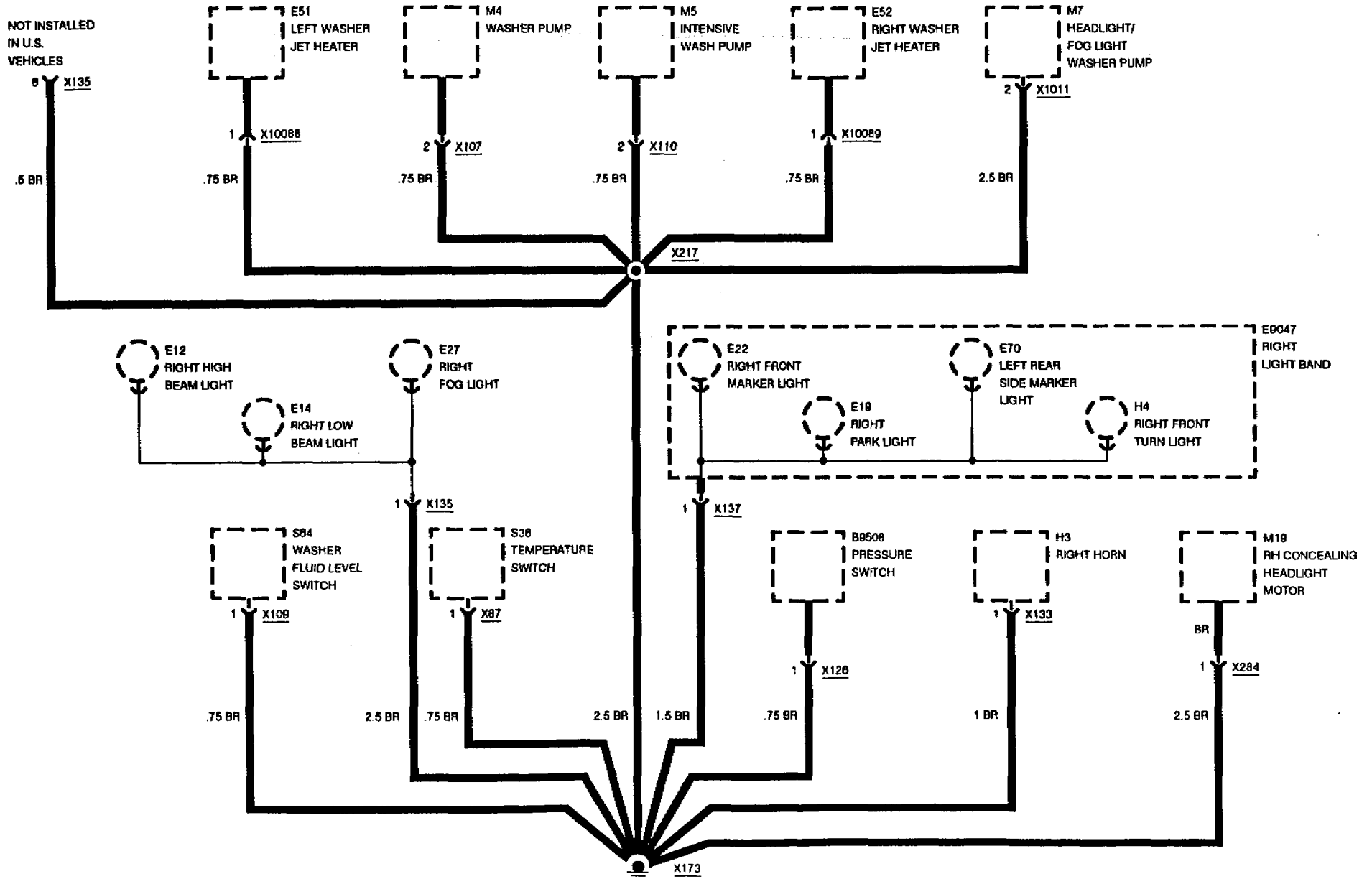
## GROUND X167





# GROUND DISTRIBUTION

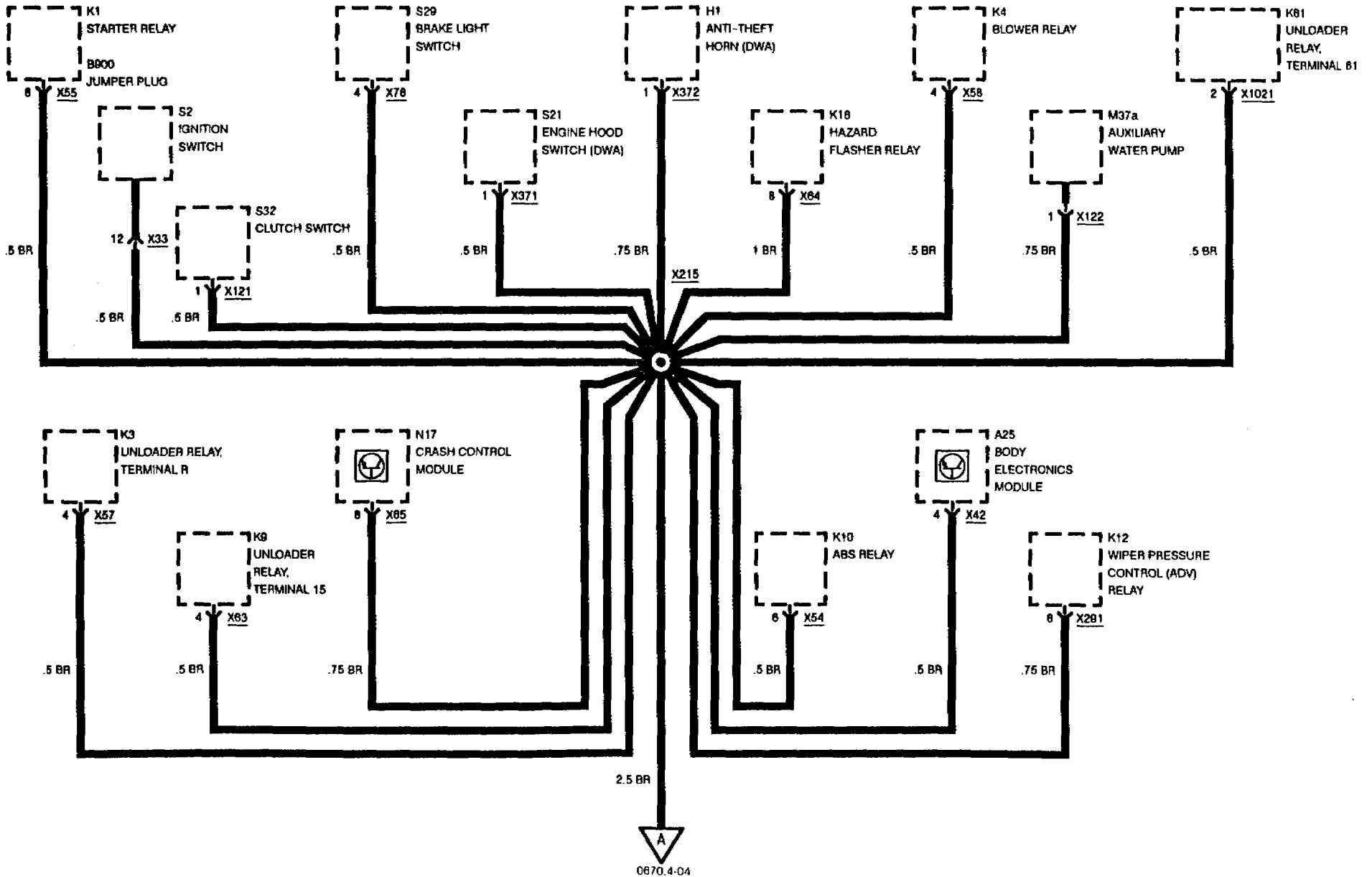
## GROUND X173





# GROUND DISTRIBUTION

## GROUND X307

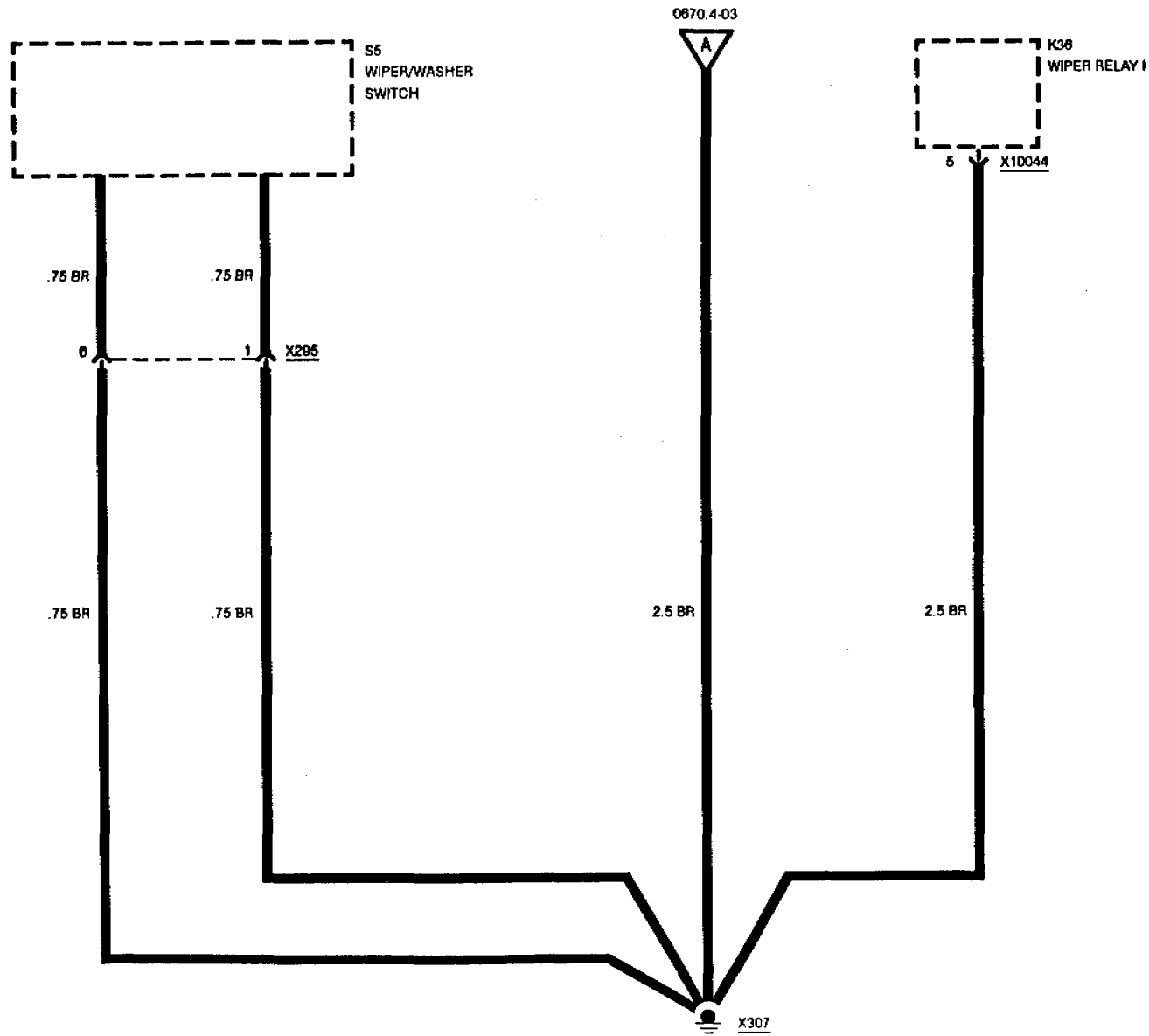


0670.4-04



# GROUND DISTRIBUTION

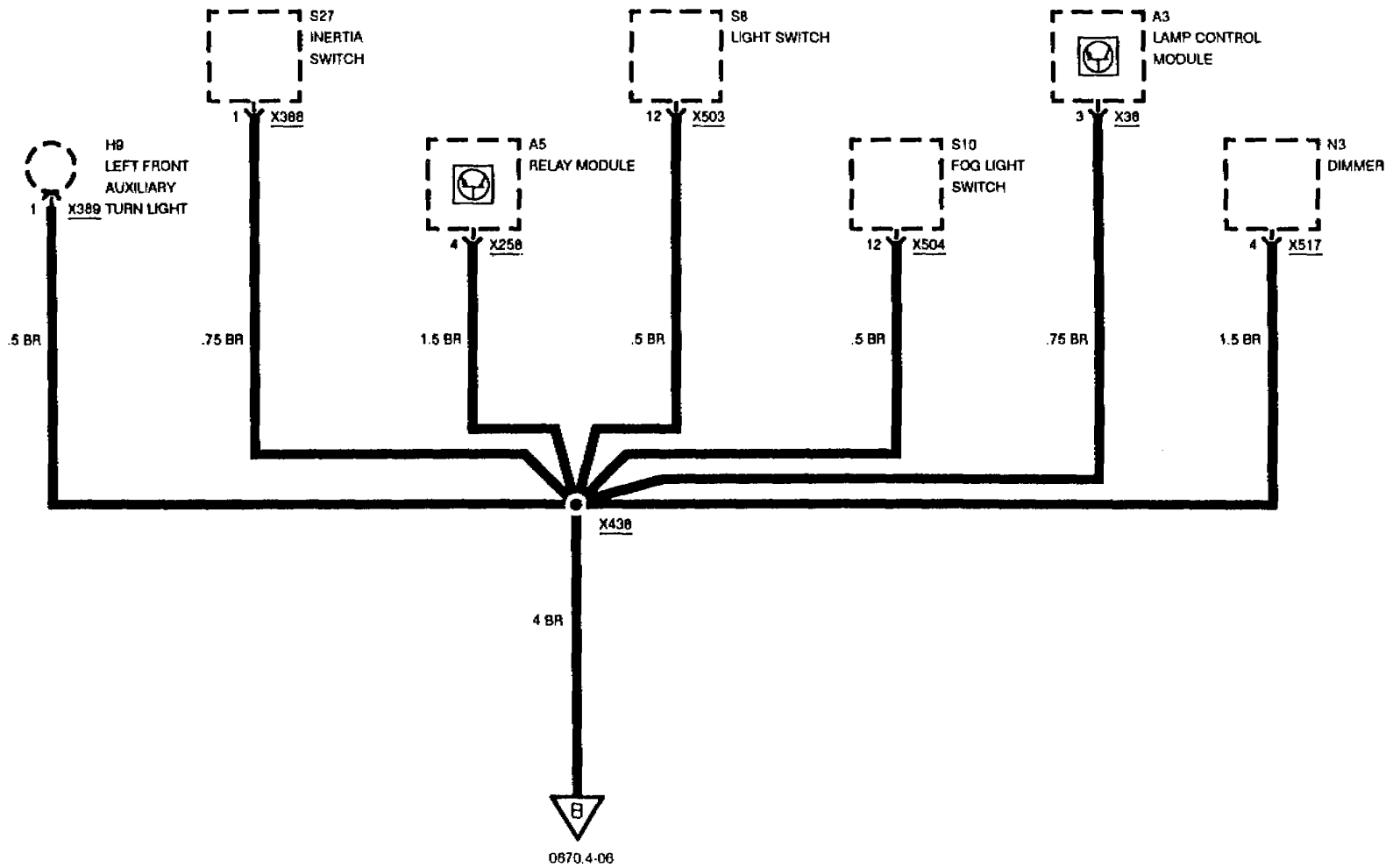
## GROUND X307





# GROUND DISTRIBUTION

## GROUND X490

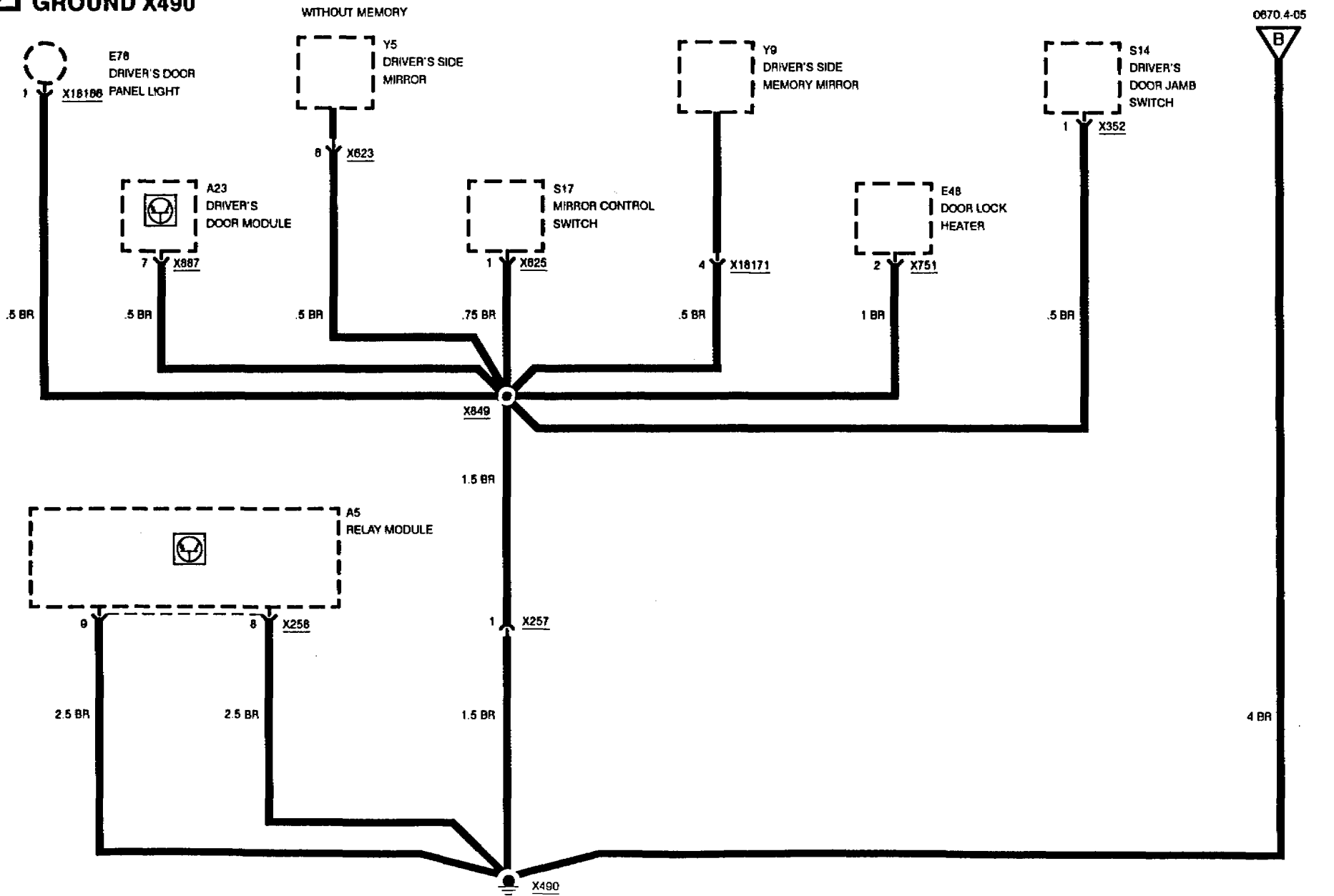






# GROUND DISTRIBUTION

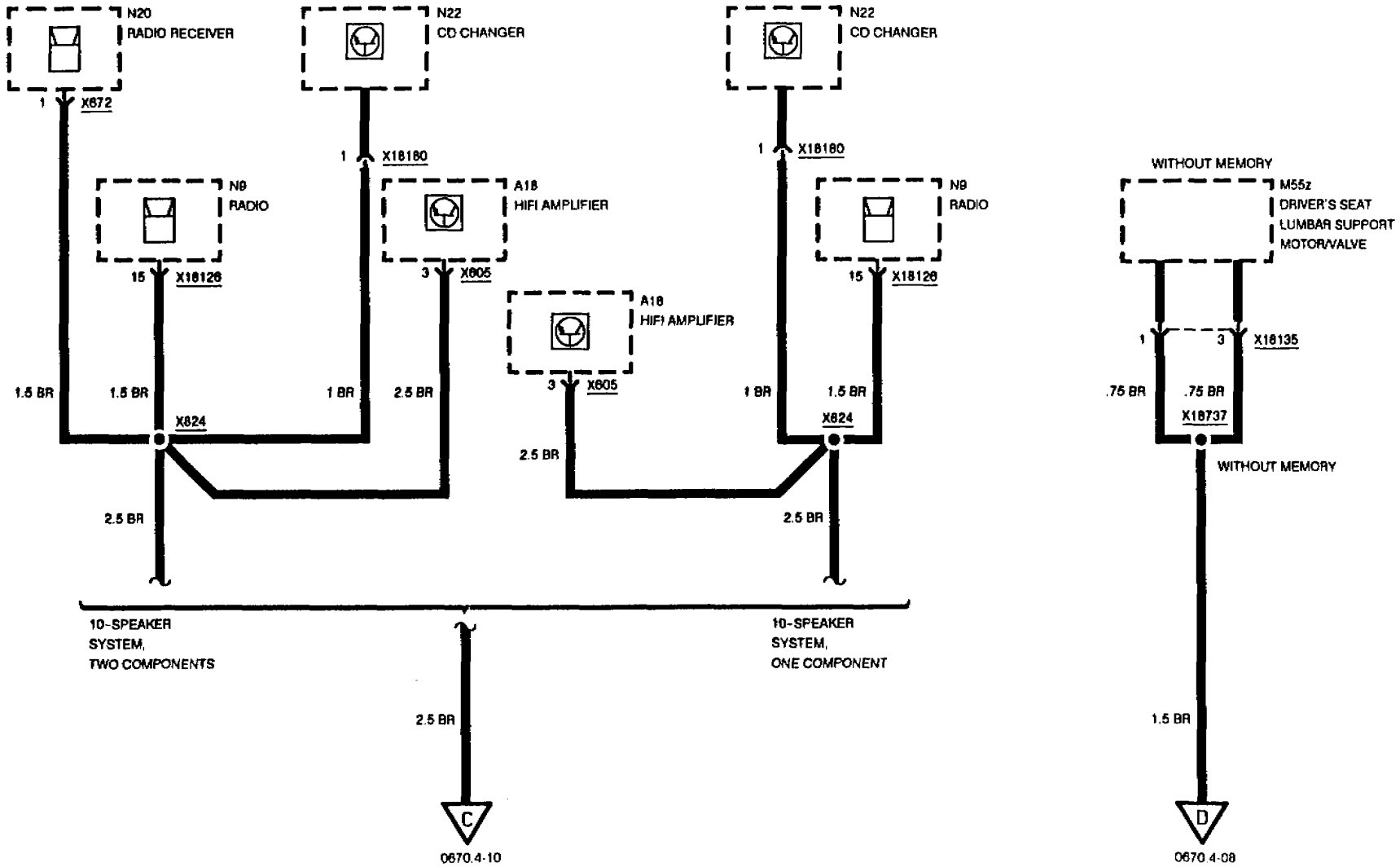
## GROUND X490





# GROUND DISTRIBUTION

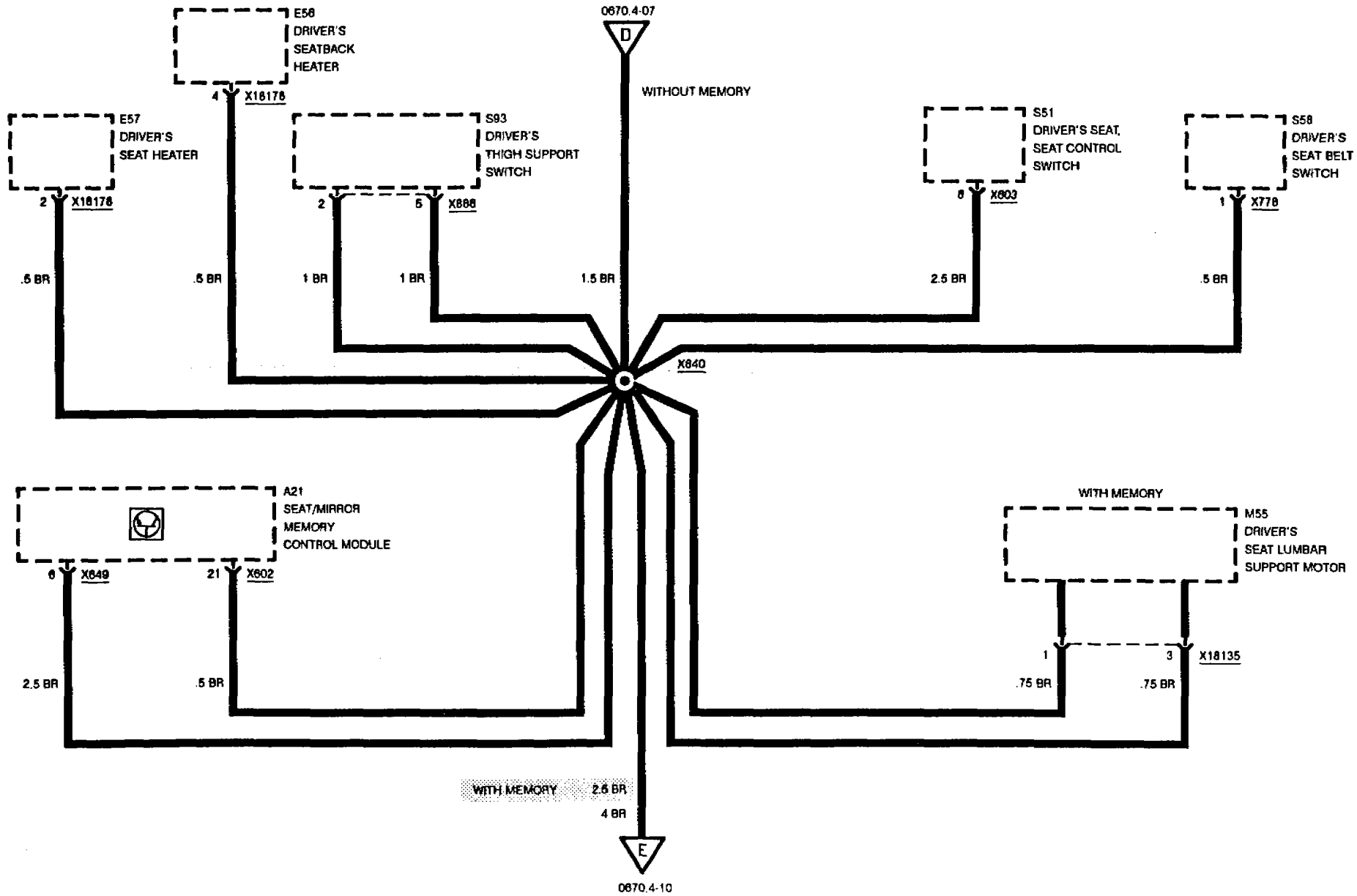
## GROUND X492





# GROUND DISTRIBUTION

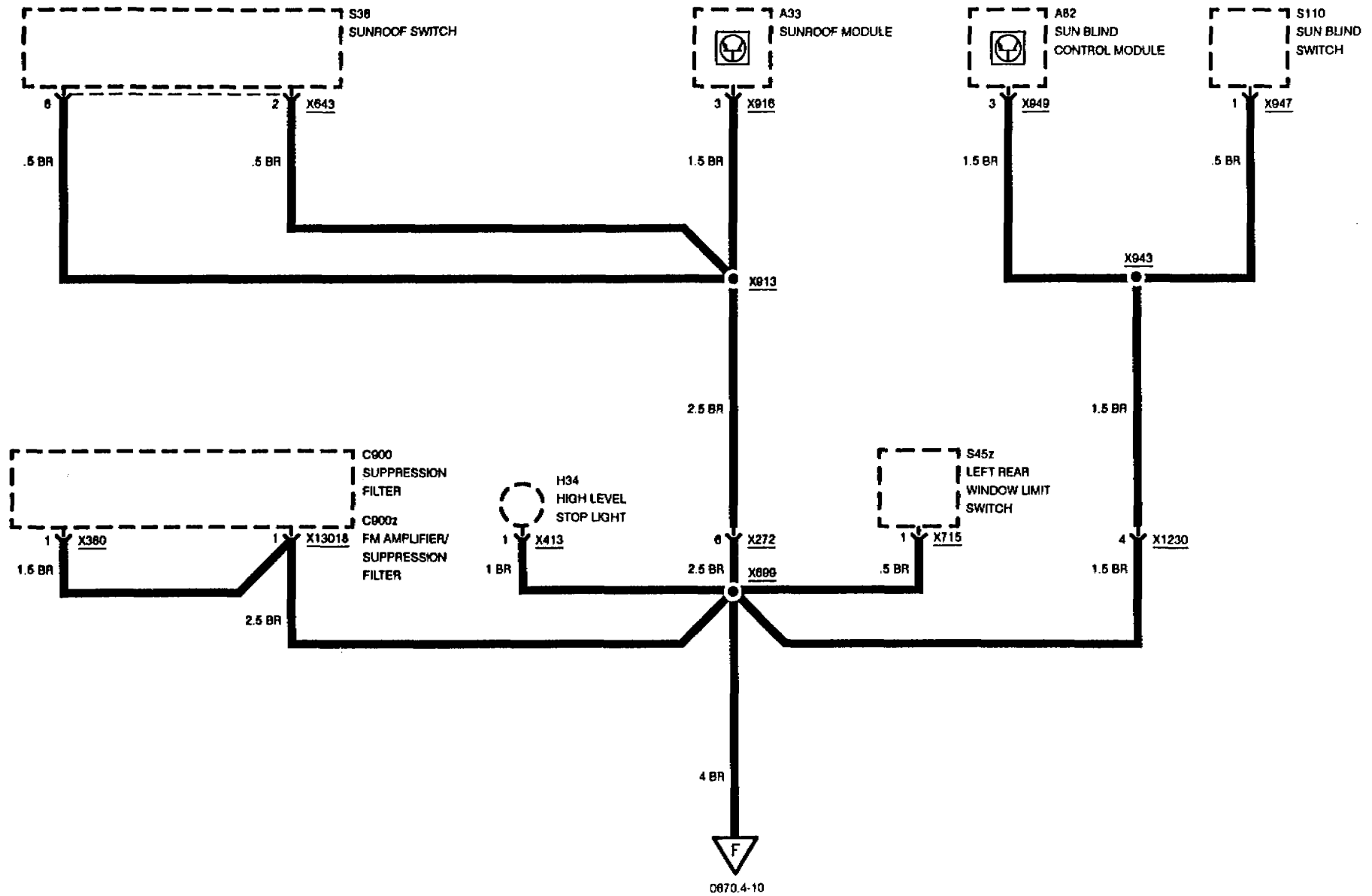
## GROUND X492





# GROUND DISTRIBUTION

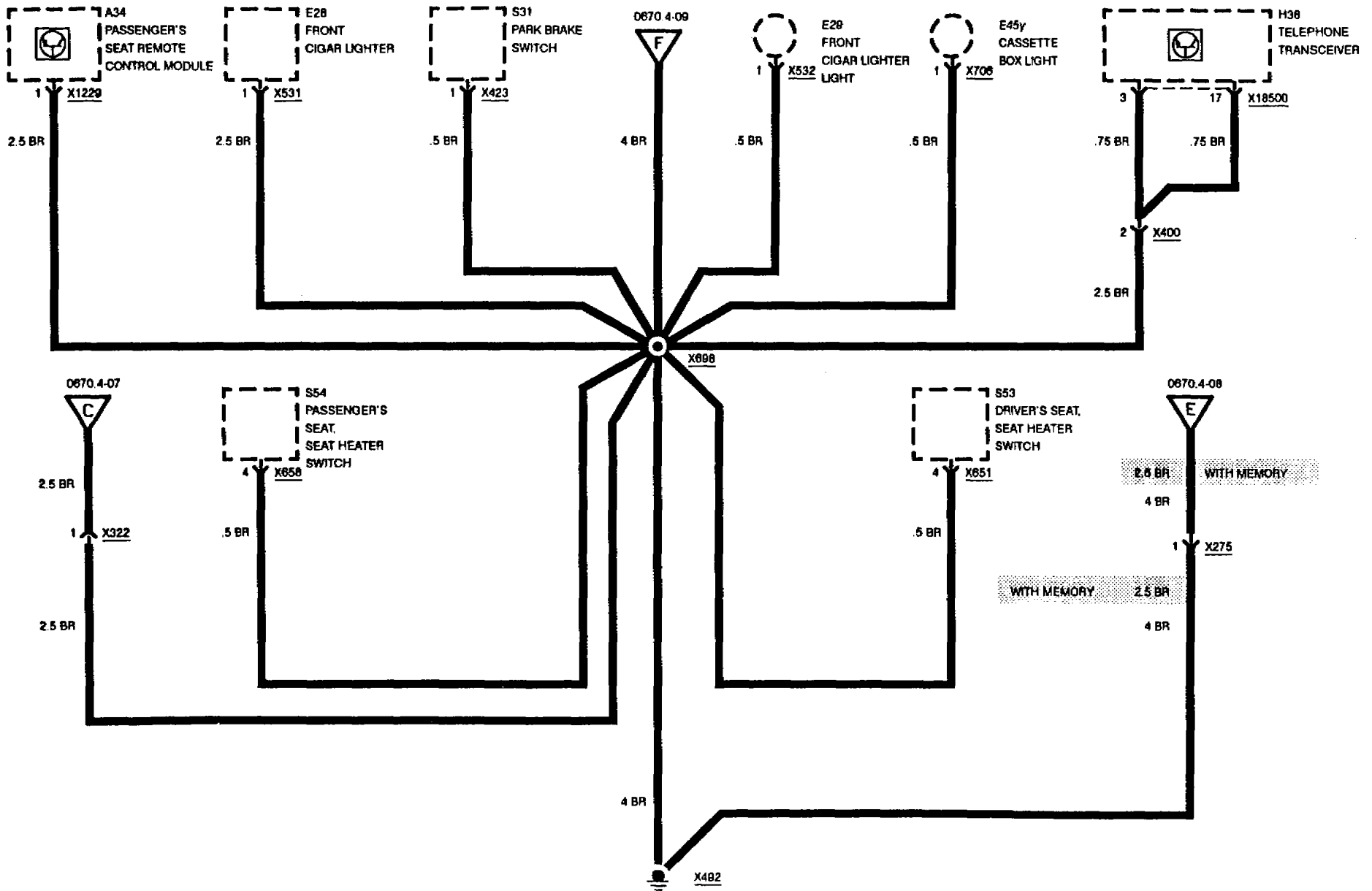
## GROUND X492





# GROUND DISTRIBUTION

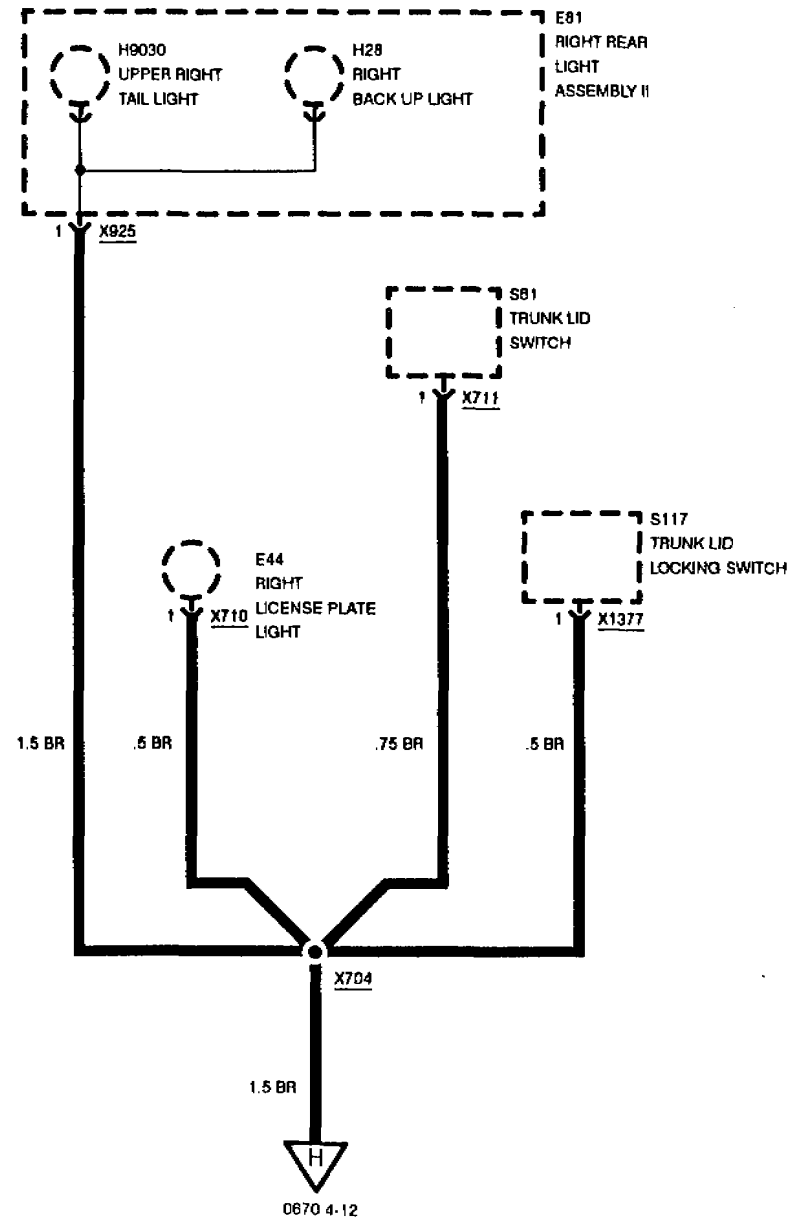
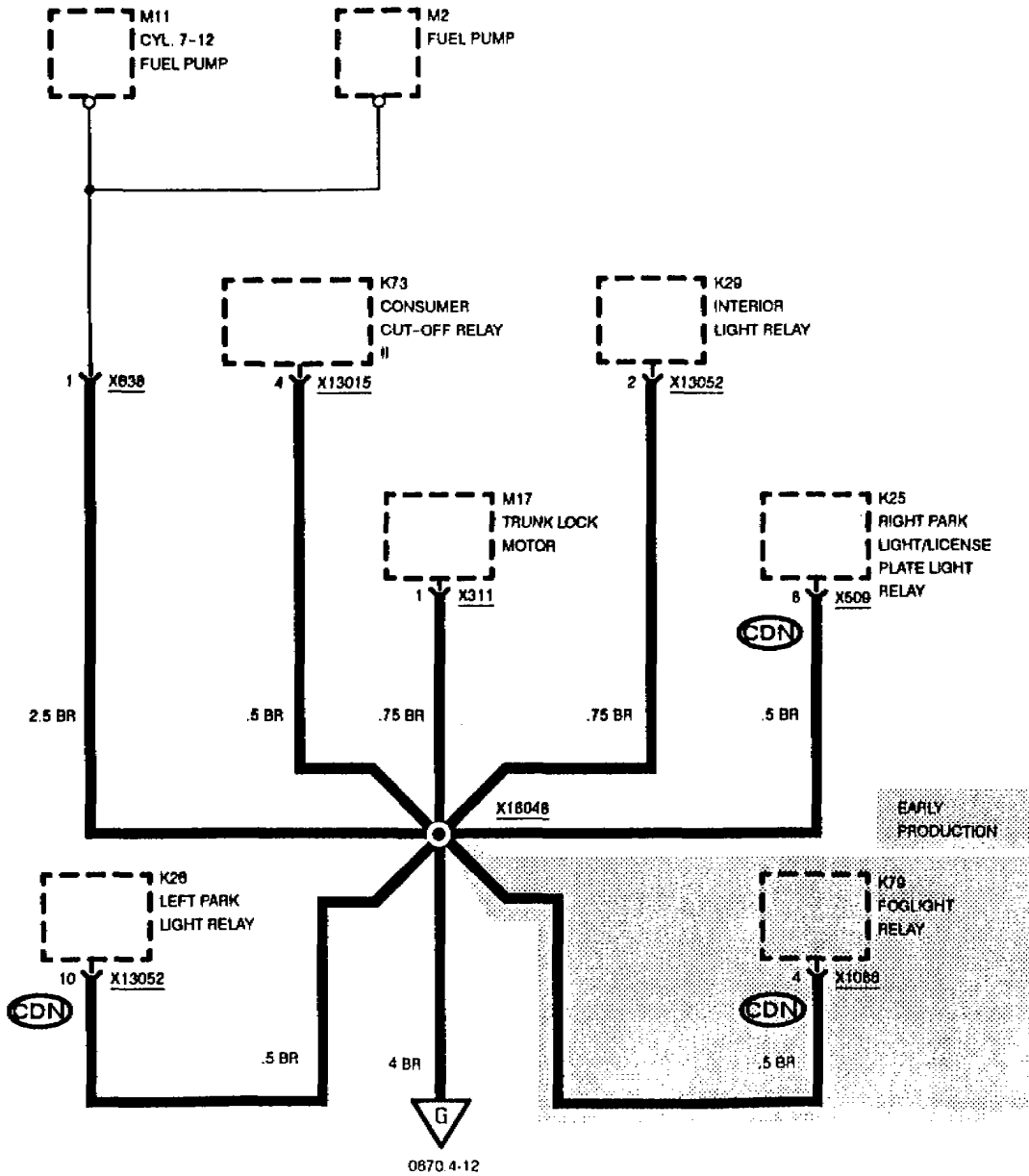
## GROUND X492





# GROUND DISTRIBUTION

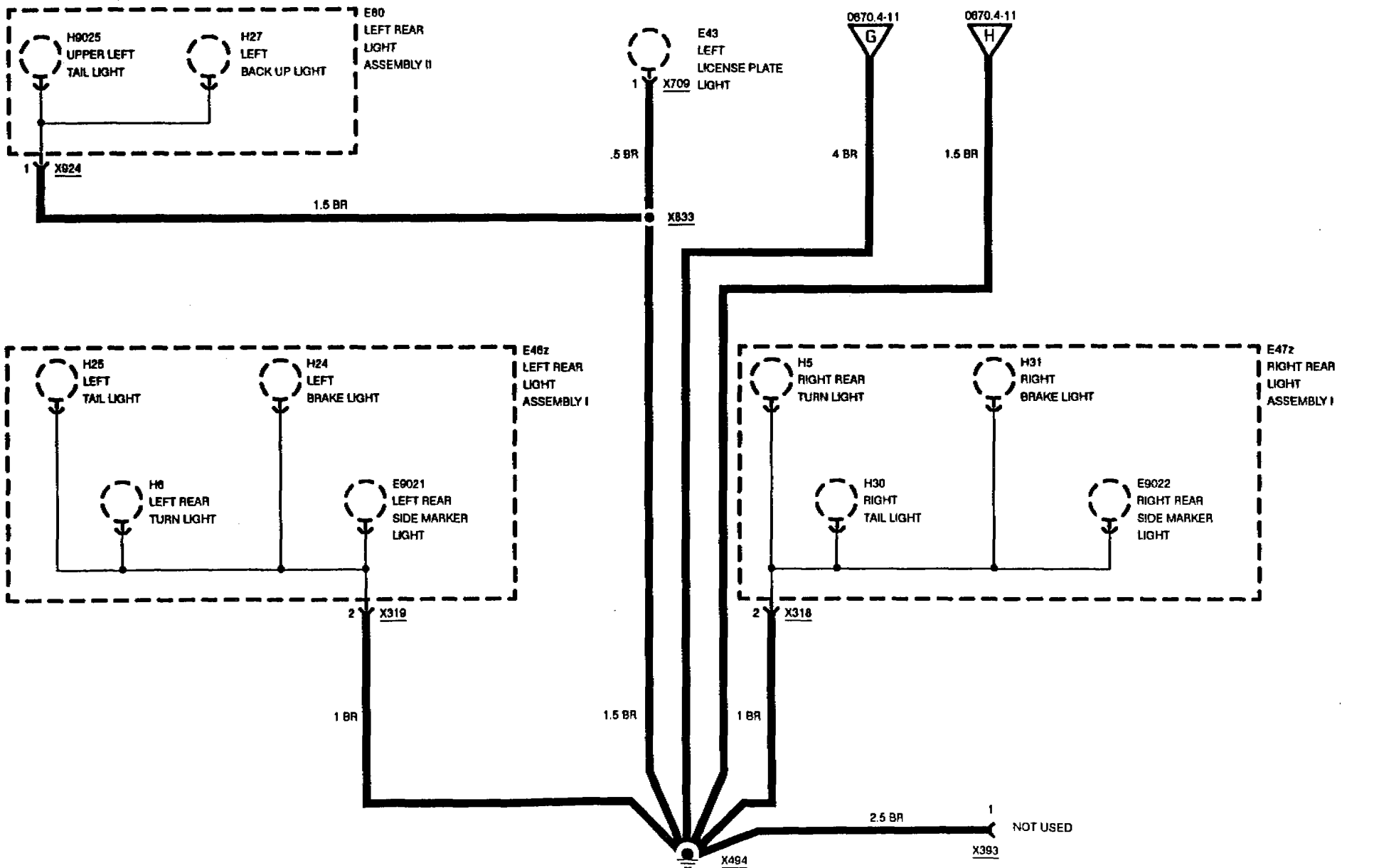
## GROUND X494





# GROUND DISTRIBUTION

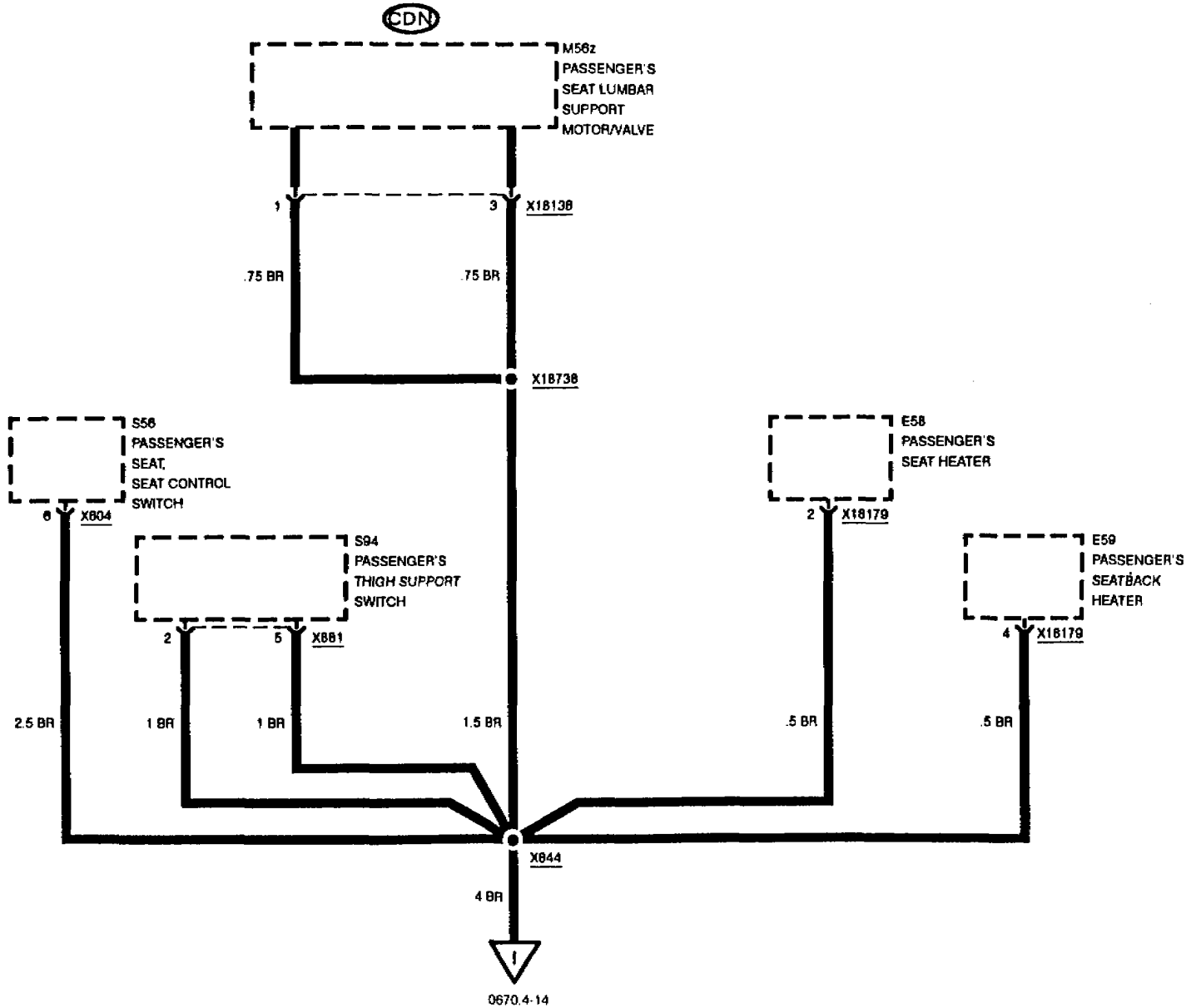
## GROUND X494





# GROUND DISTRIBUTION

## GROUND X495

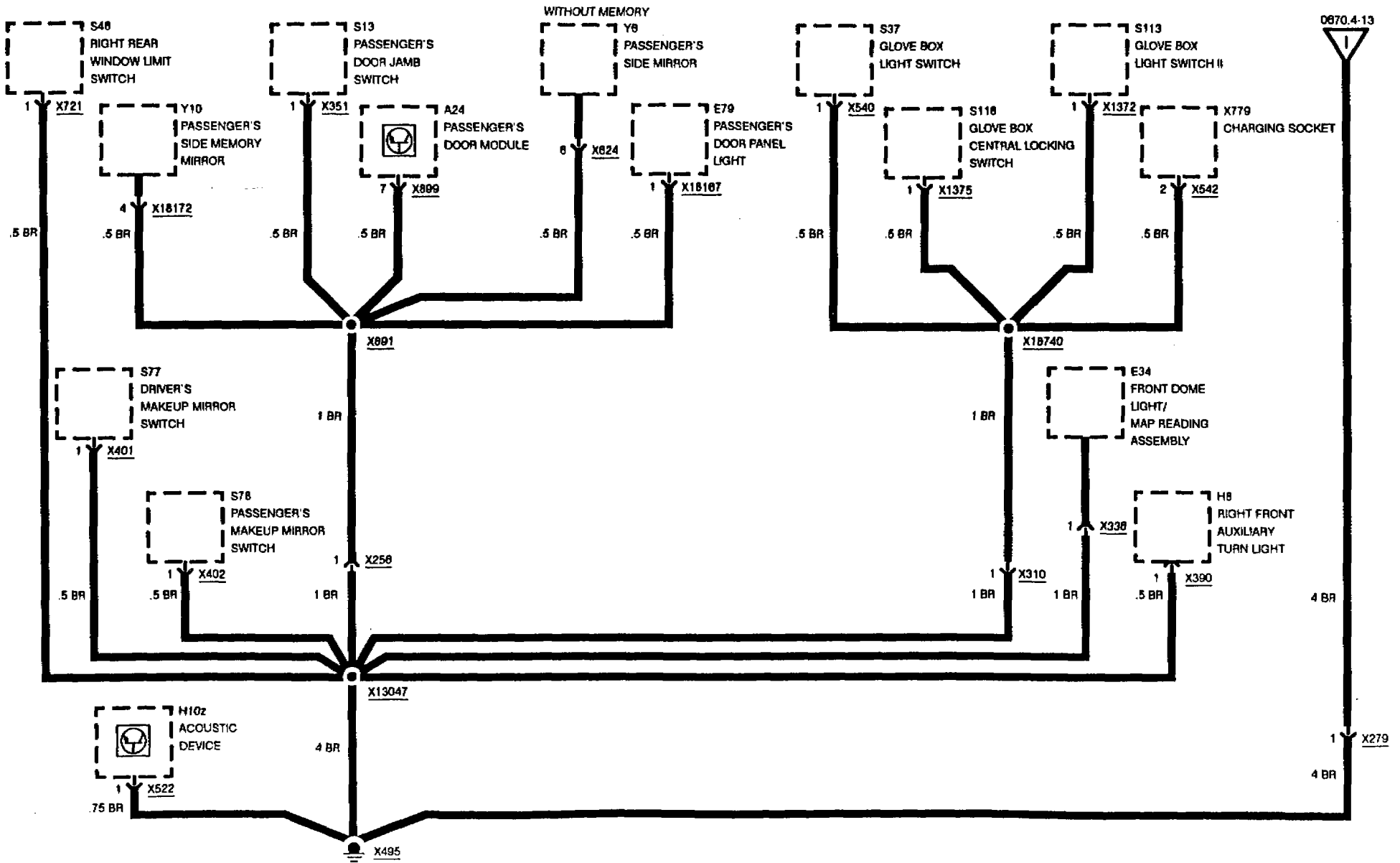






# GROUND DISTRIBUTION

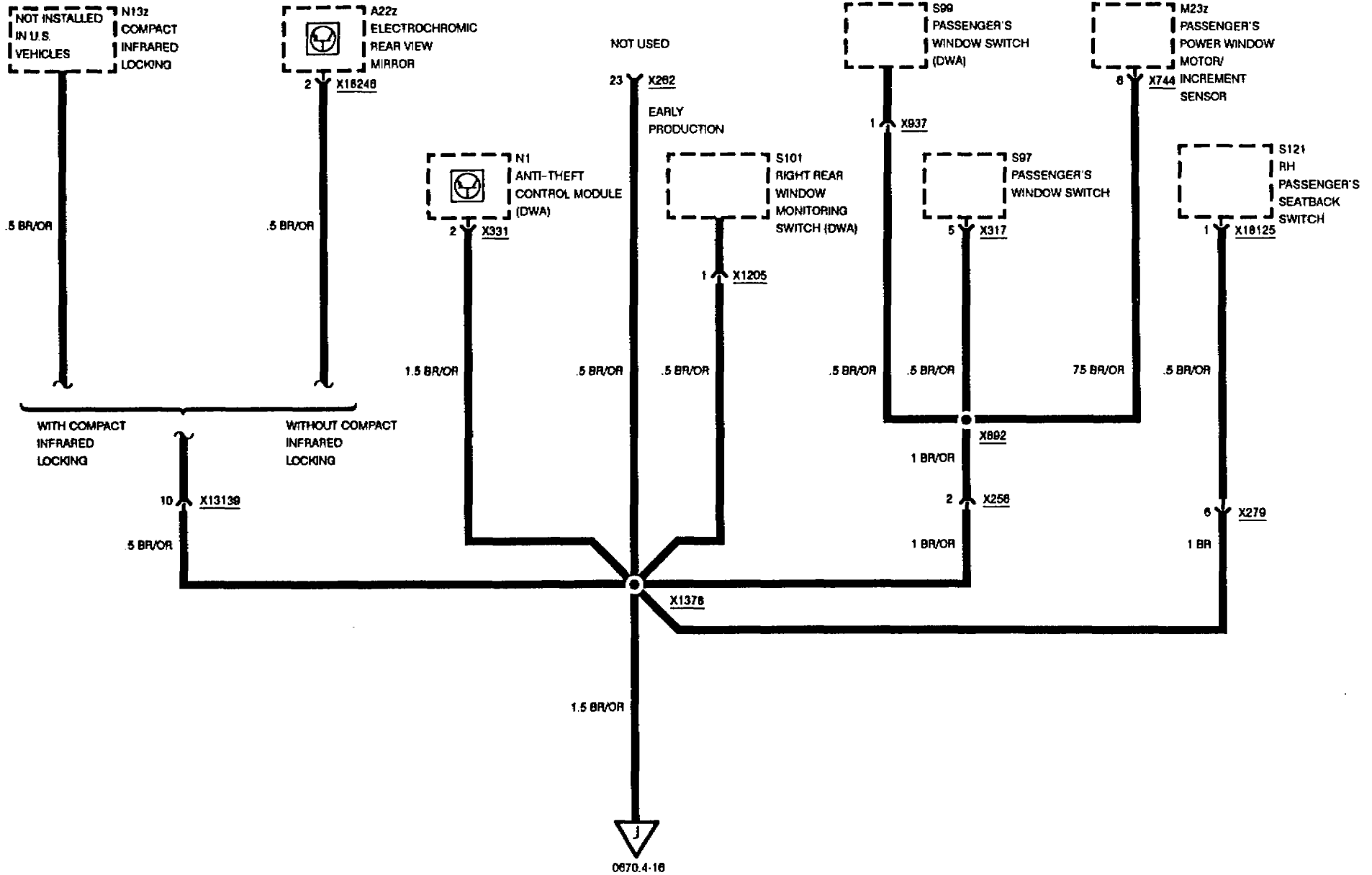
## GROUND X495





# GROUND DISTRIBUTION

## GROUND X497

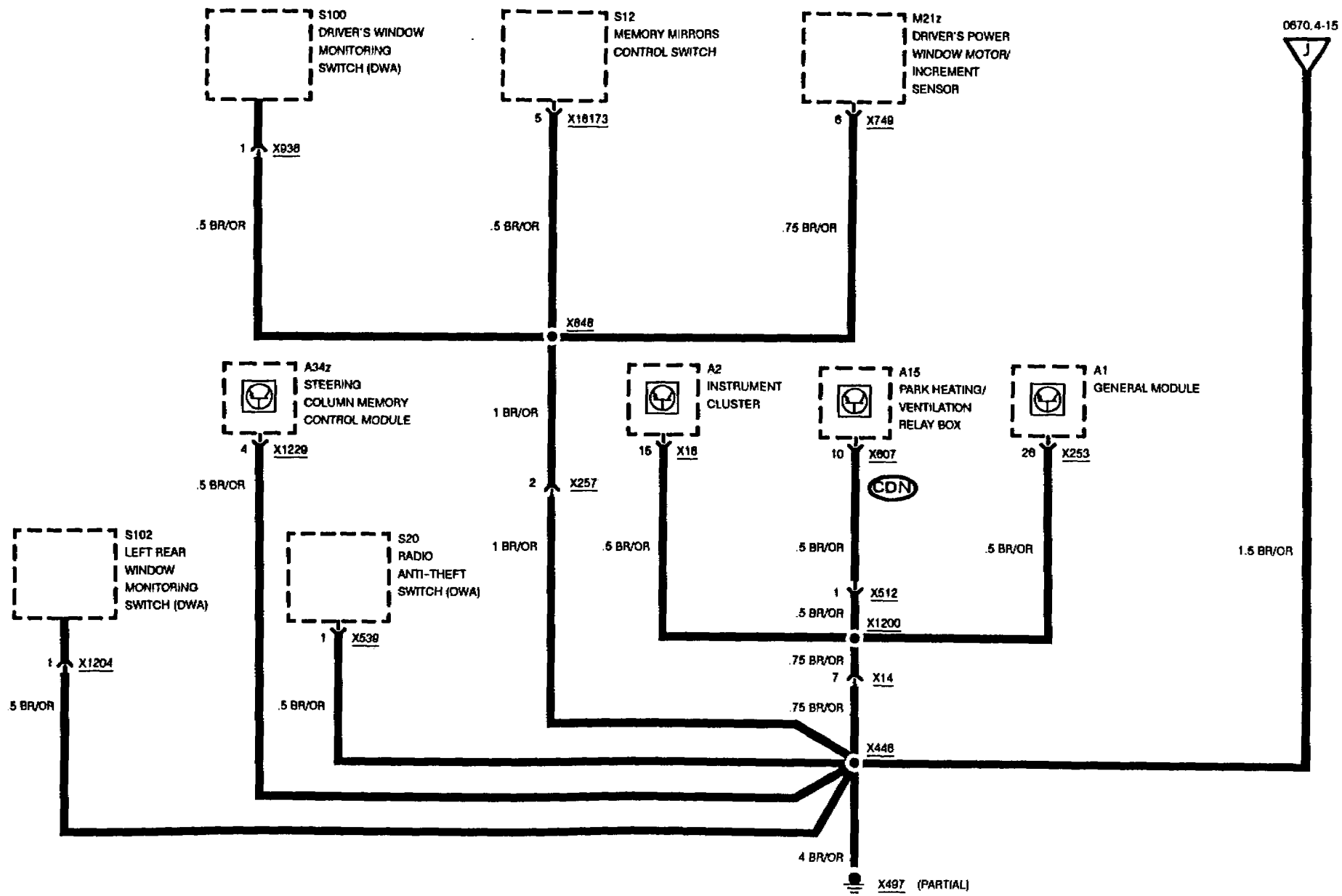


0670.4-16



# GROUND DISTRIBUTION

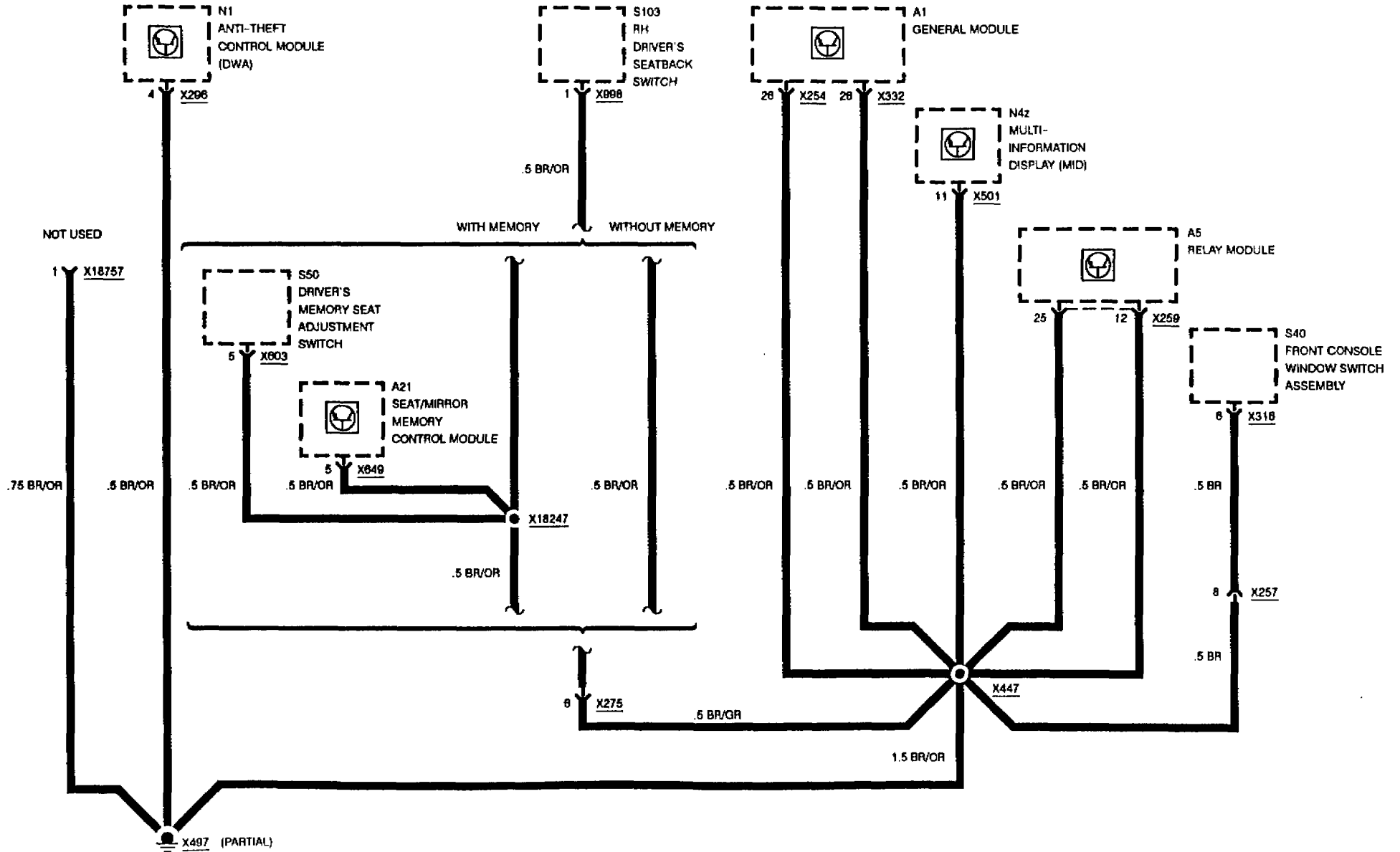
## GROUND X497





# GROUND DISTRIBUTION

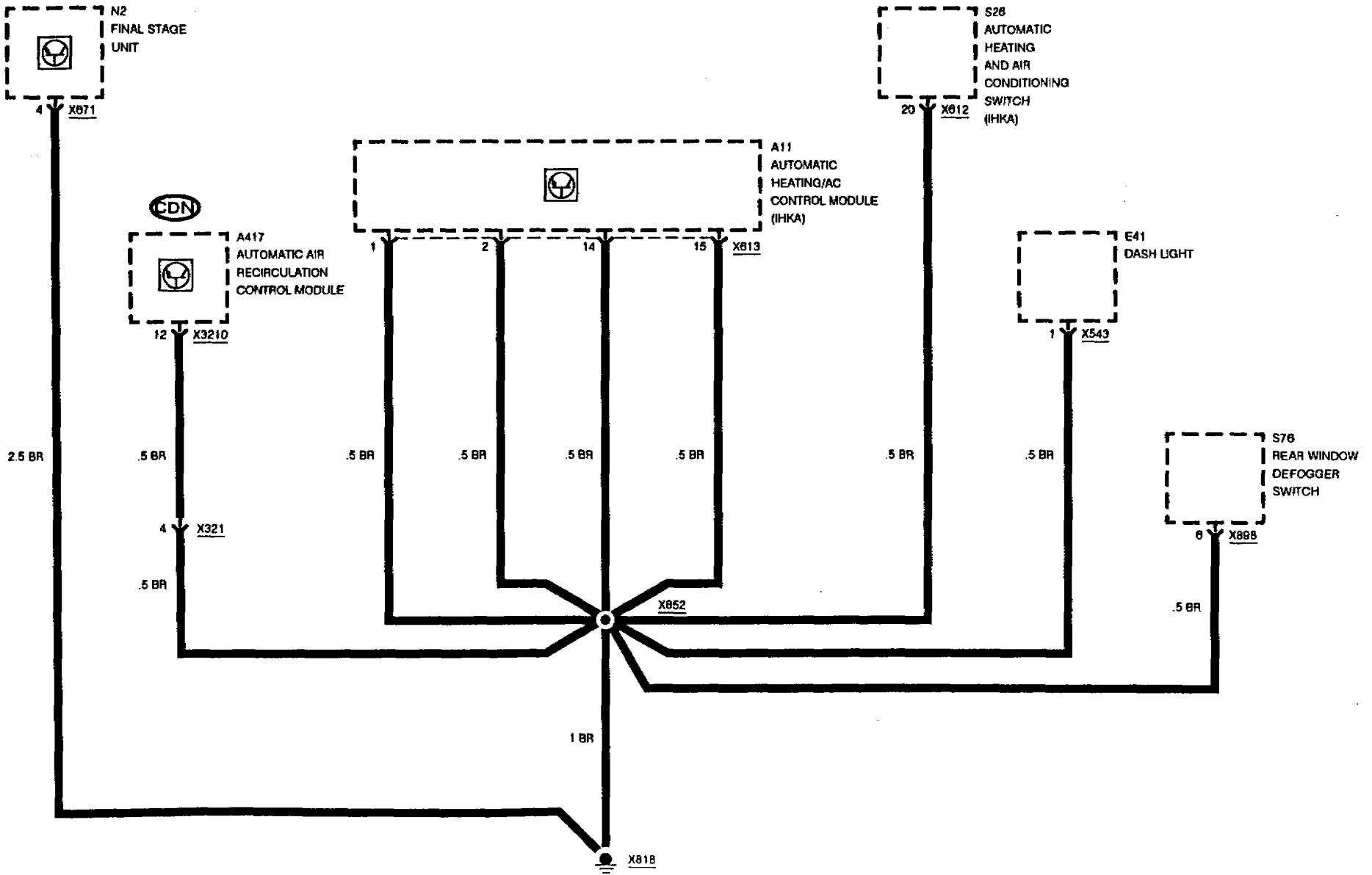
## GROUND X497





# GROUND DISTRIBUTION

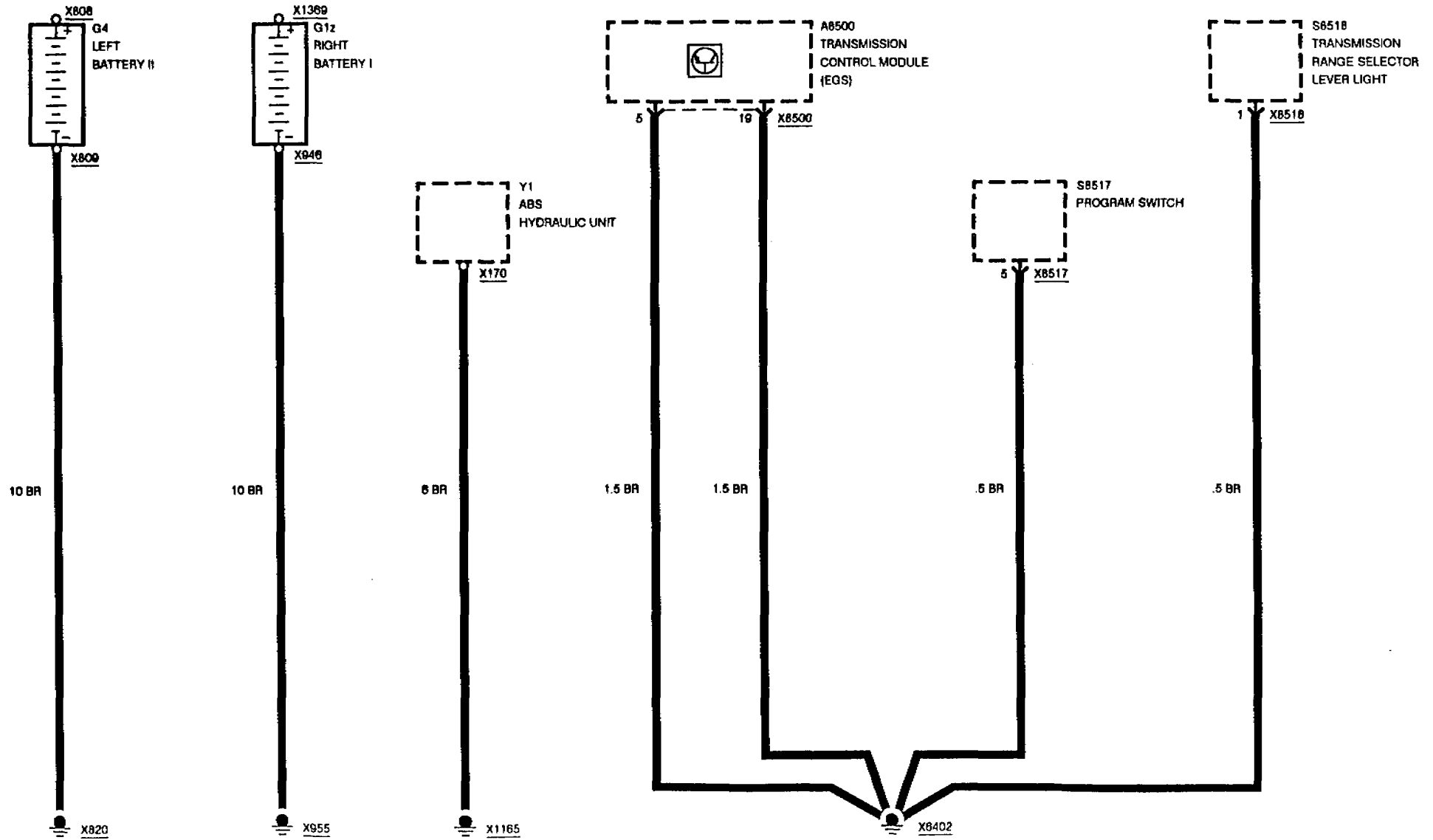
## GROUND X818





# GROUND DISTRIBUTION

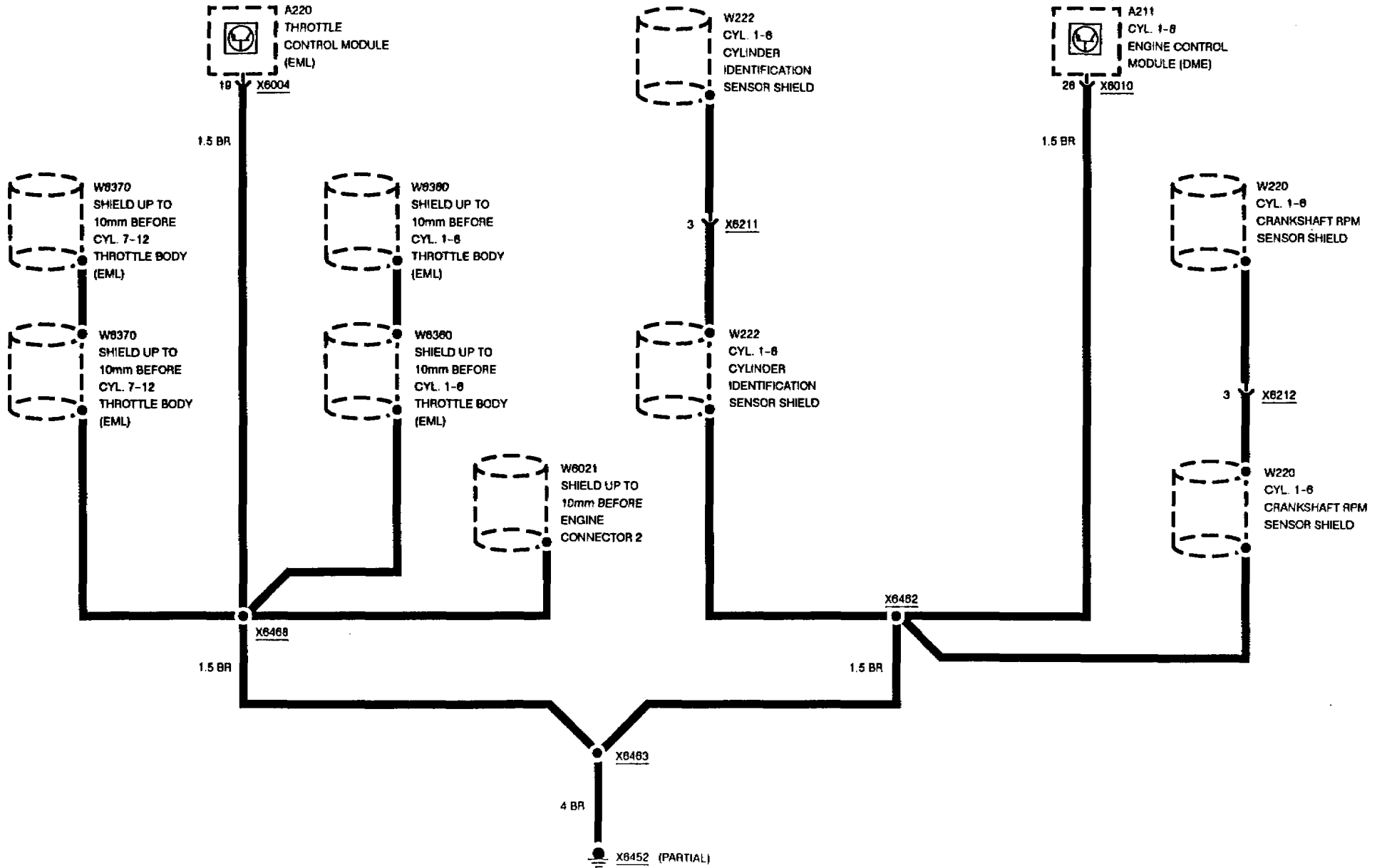
## GROUNDS X820, X955, X1165, AND X6402





# GROUND DISTRIBUTION

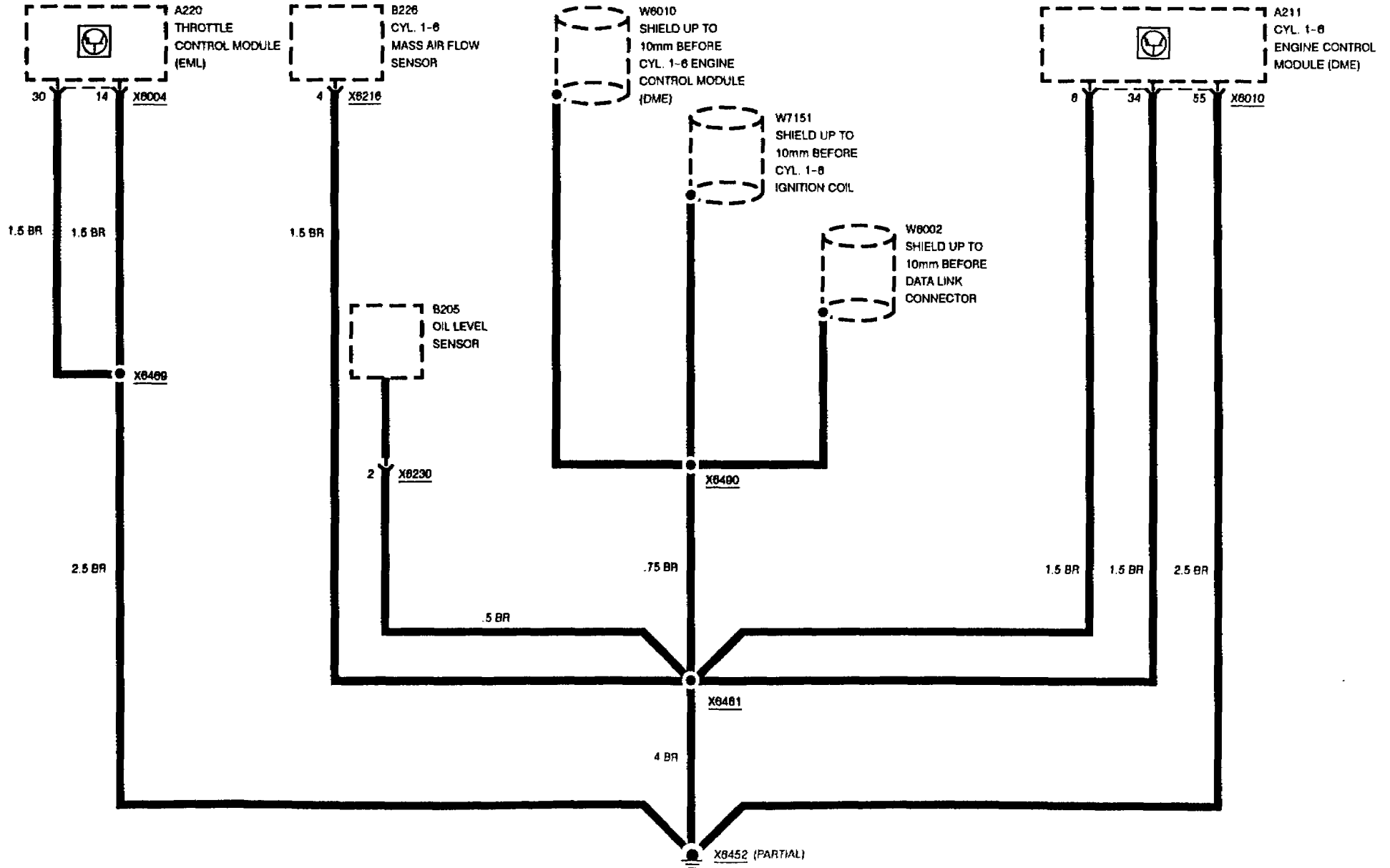
## GROUND X6452





# GROUND DISTRIBUTION

## GROUND X6452

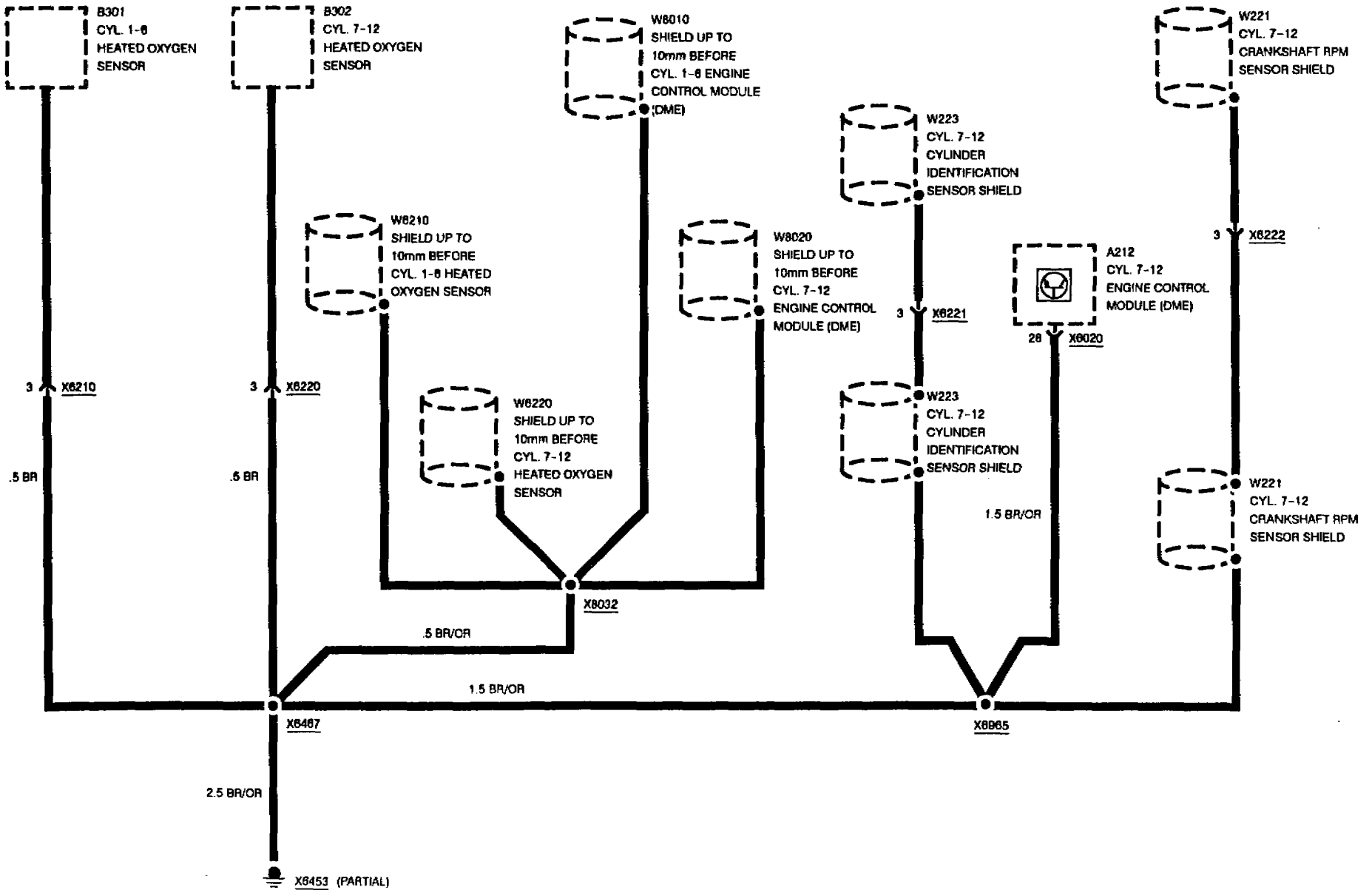






# GROUND DISTRIBUTION

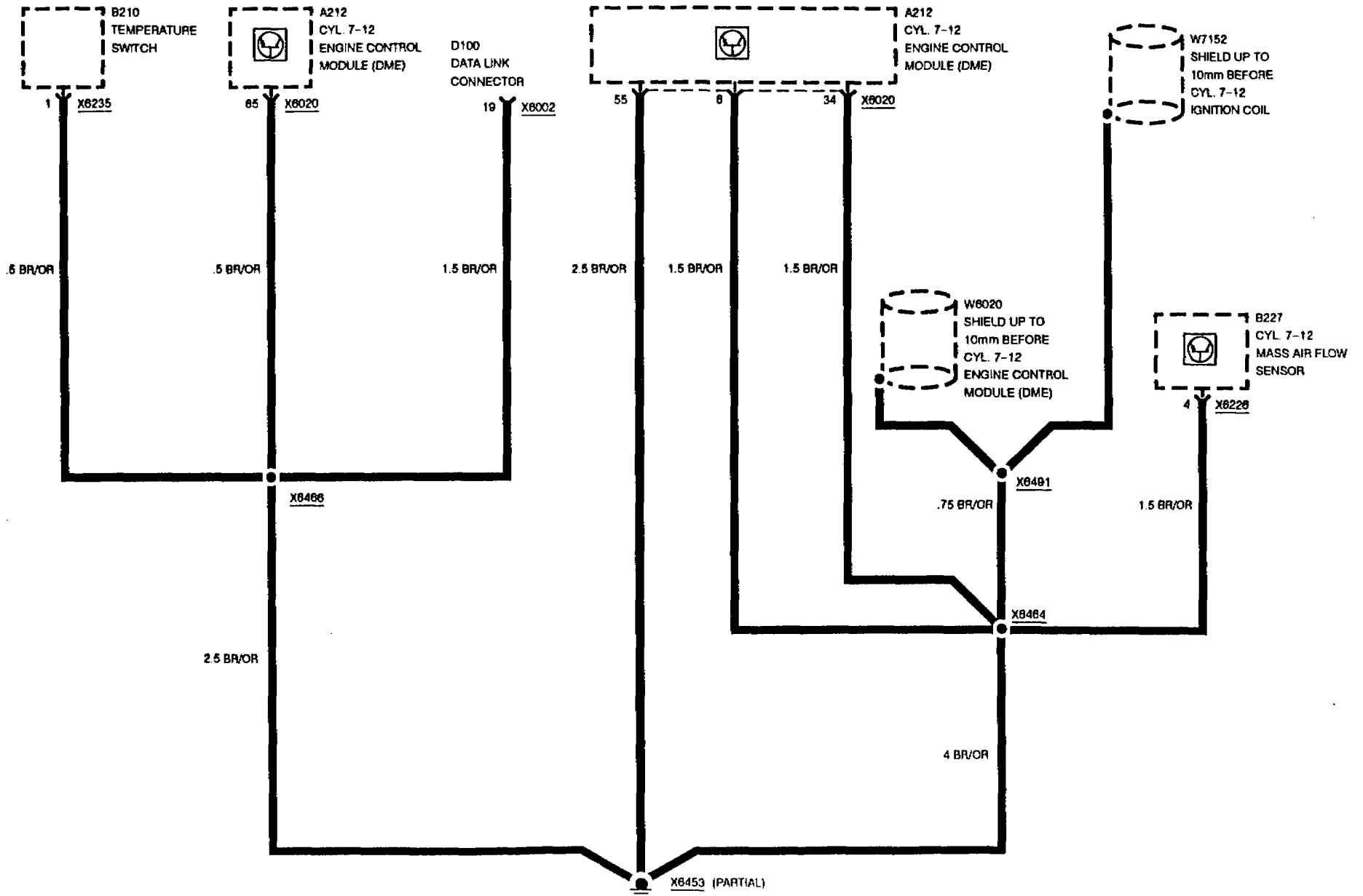
## GROUND X6453





# GROUND DISTRIBUTION

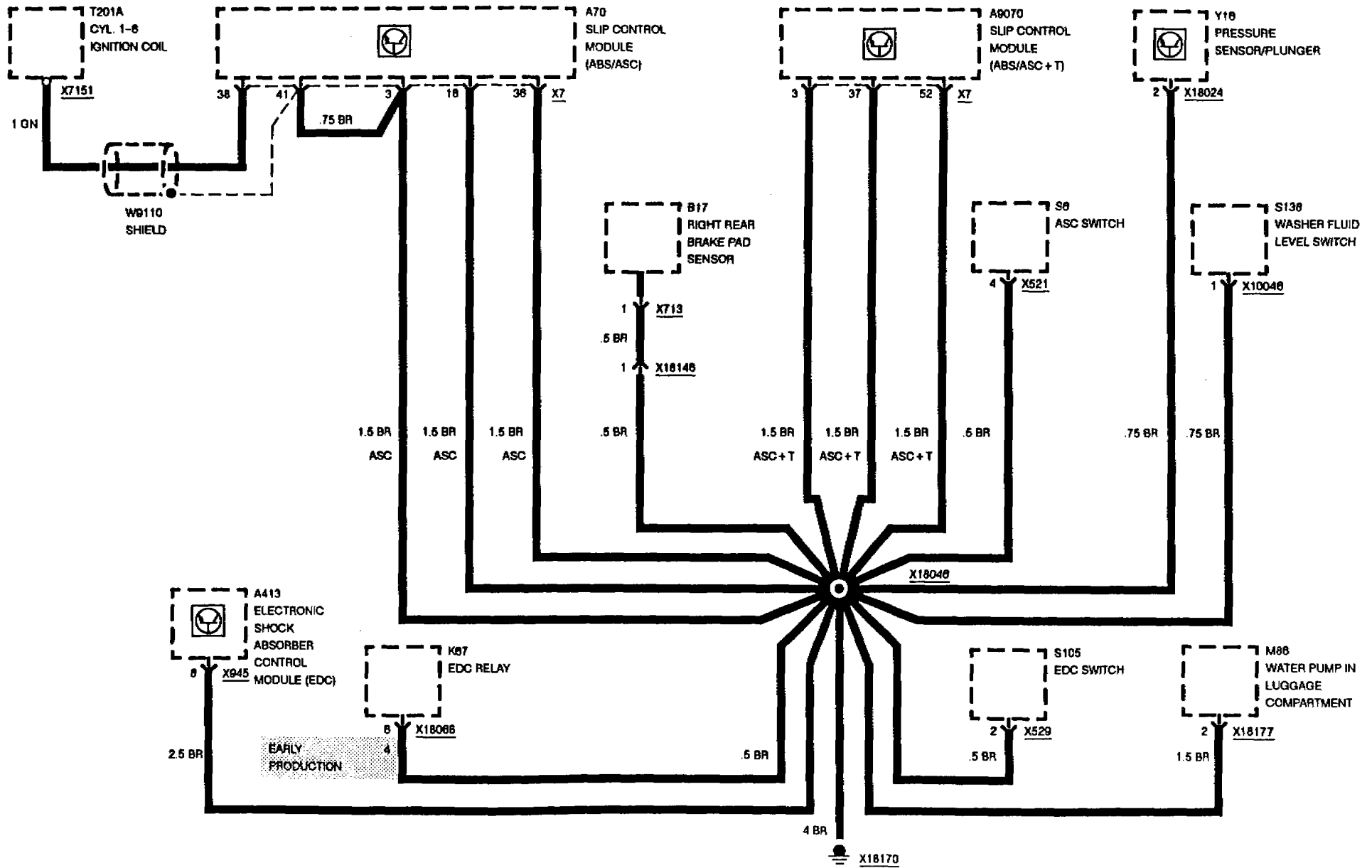
## GROUND X6453





# GROUND DISTRIBUTION

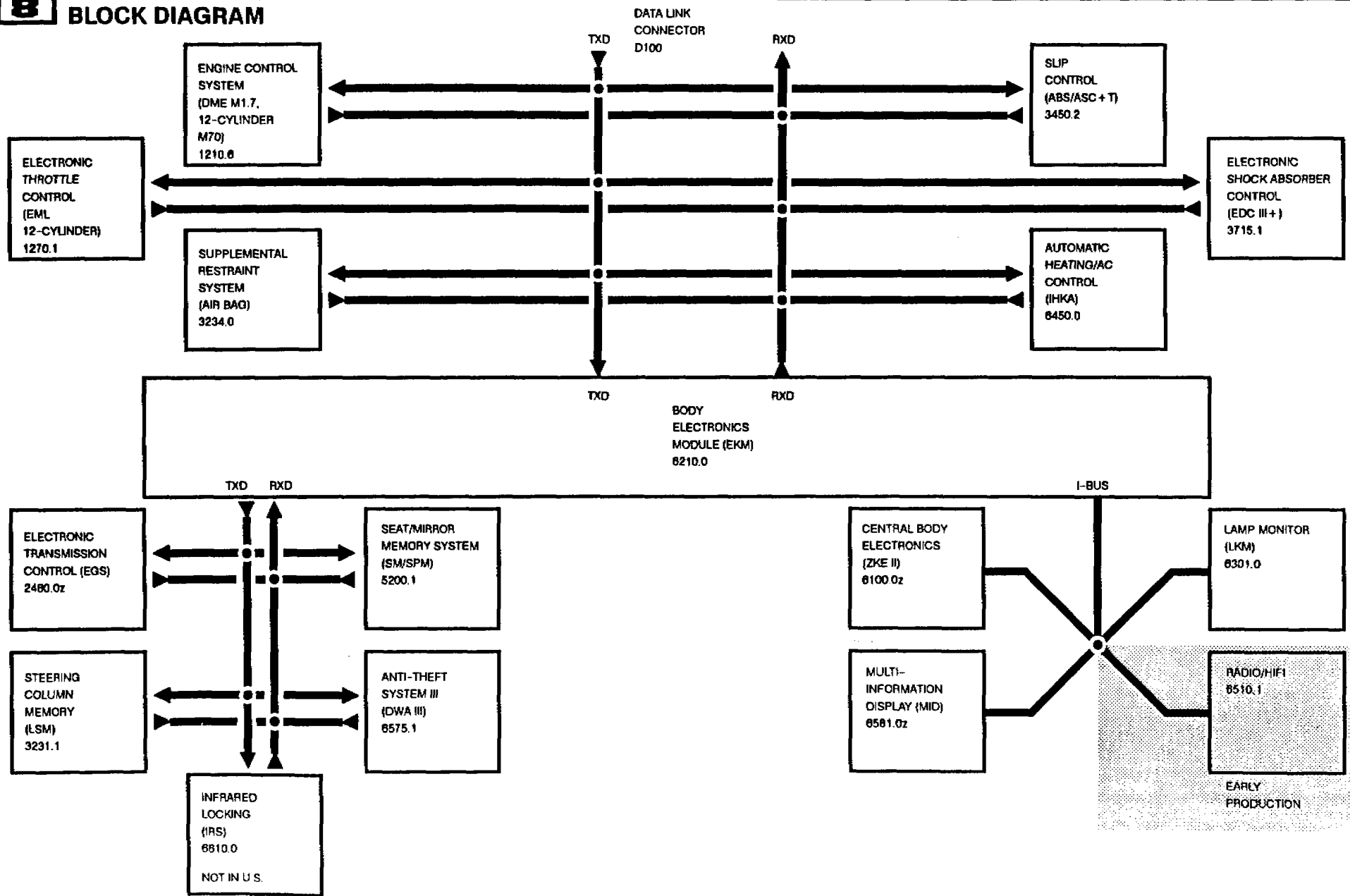
## GROUND X18170



BMW  
8

0670.5

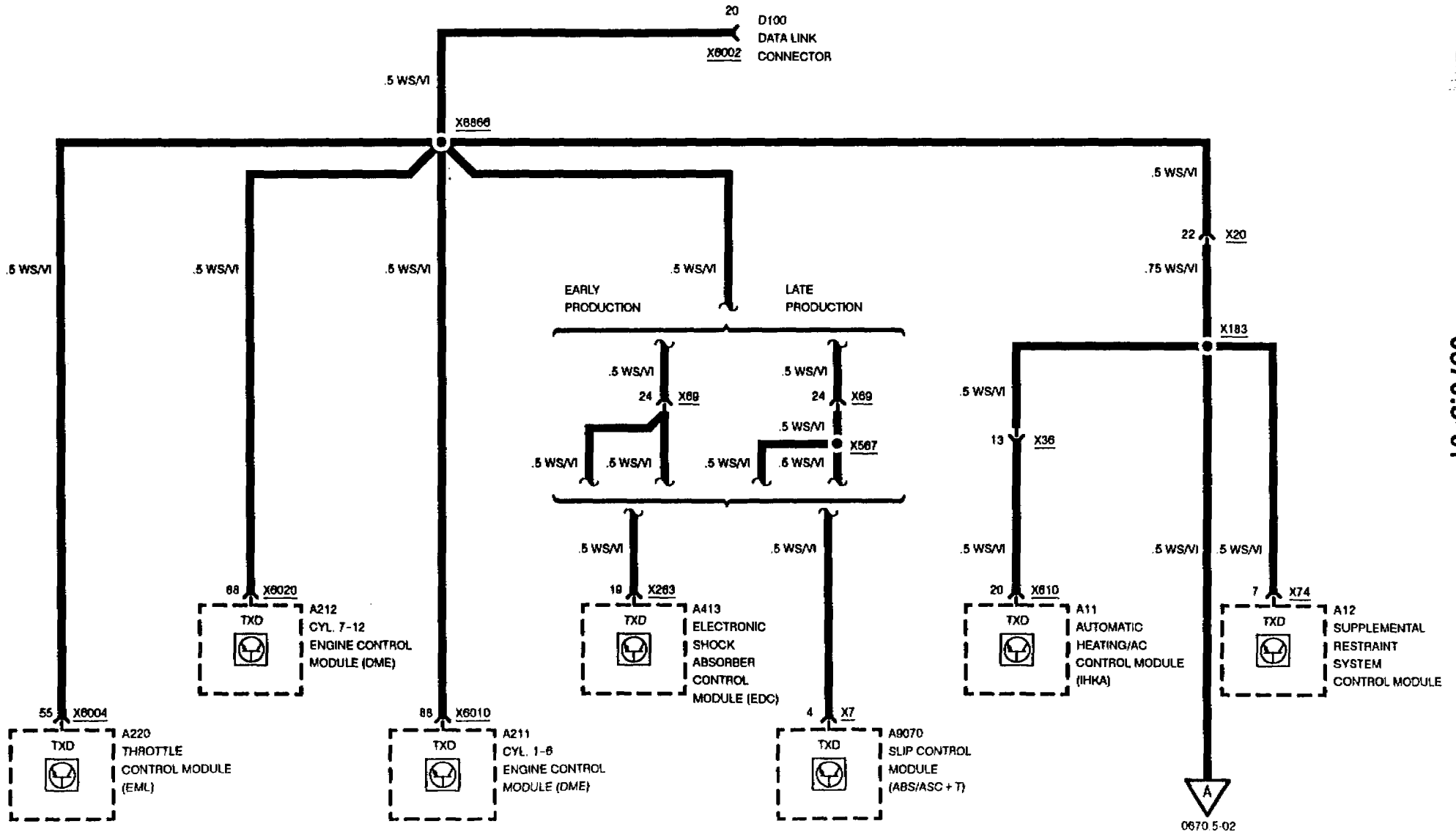
**BMW**  
**8** DATA LINK  
BLOCK DIAGRAM





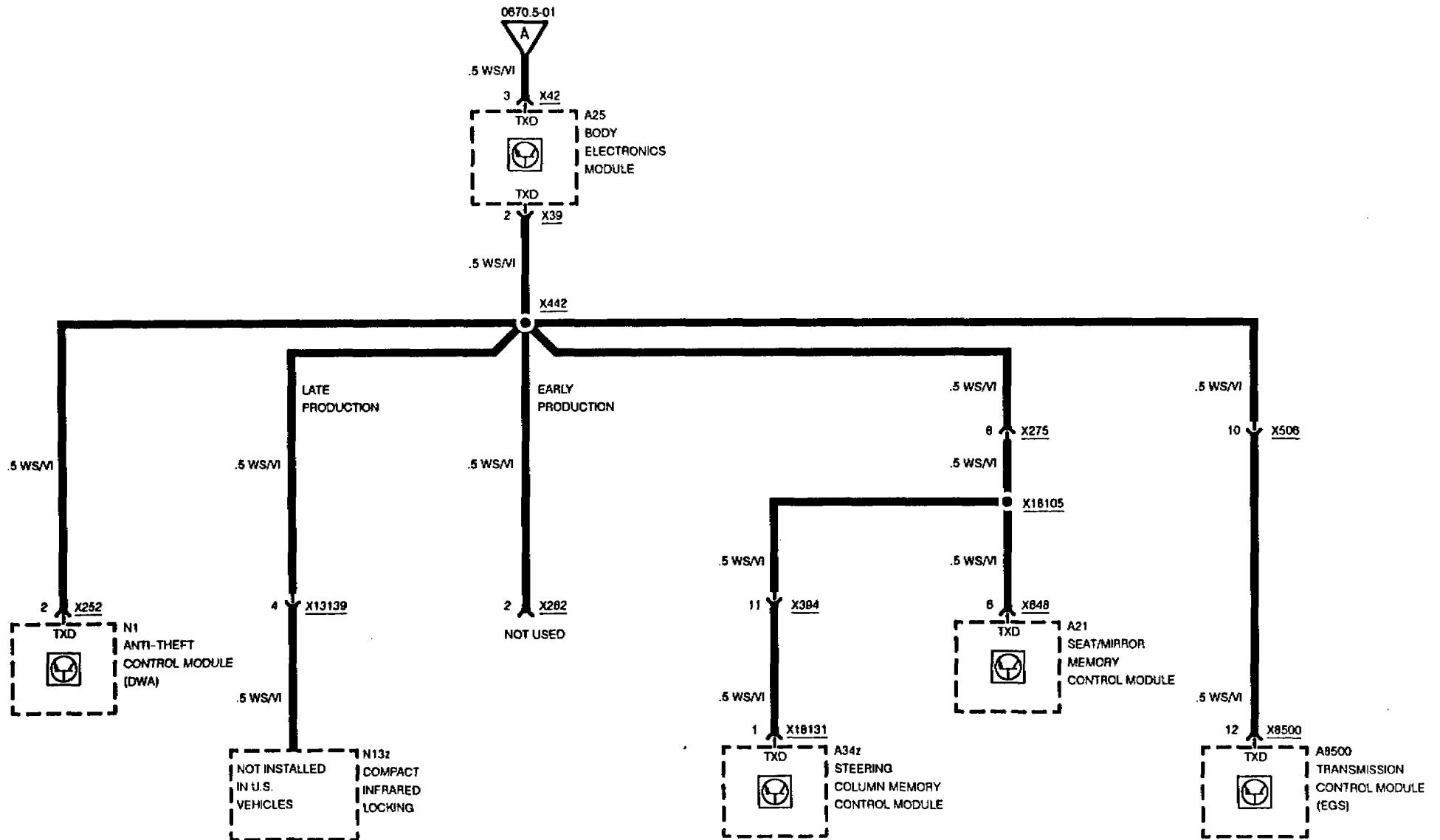
# DATA LINK

## TXD, PIN 20

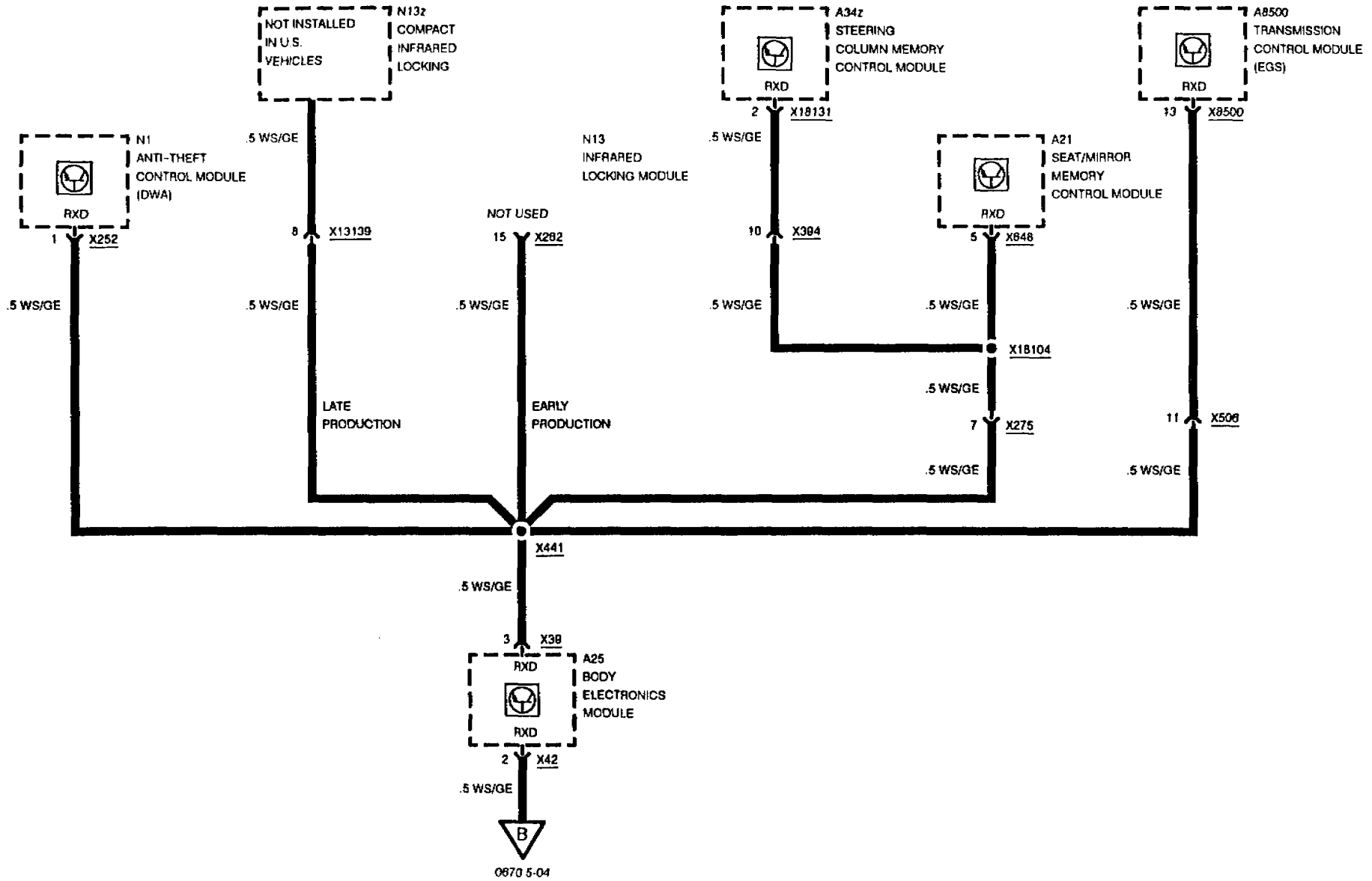


0670 5-02

**BMW**  
**8** DATA LINK  
TXD



**BMW**  
**8** DATA LINK  
RXD



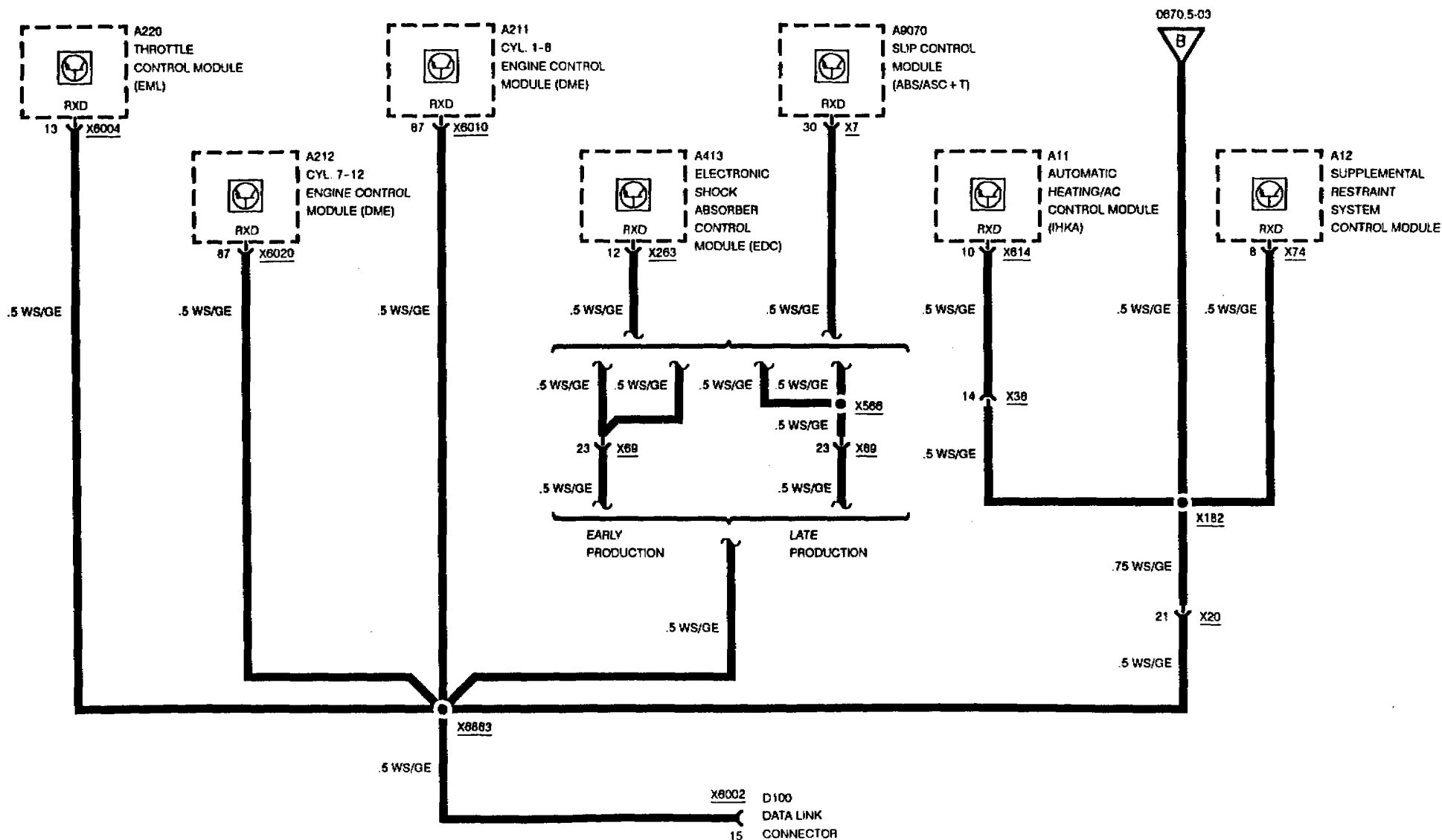
0670 5-04





# DATA LINK

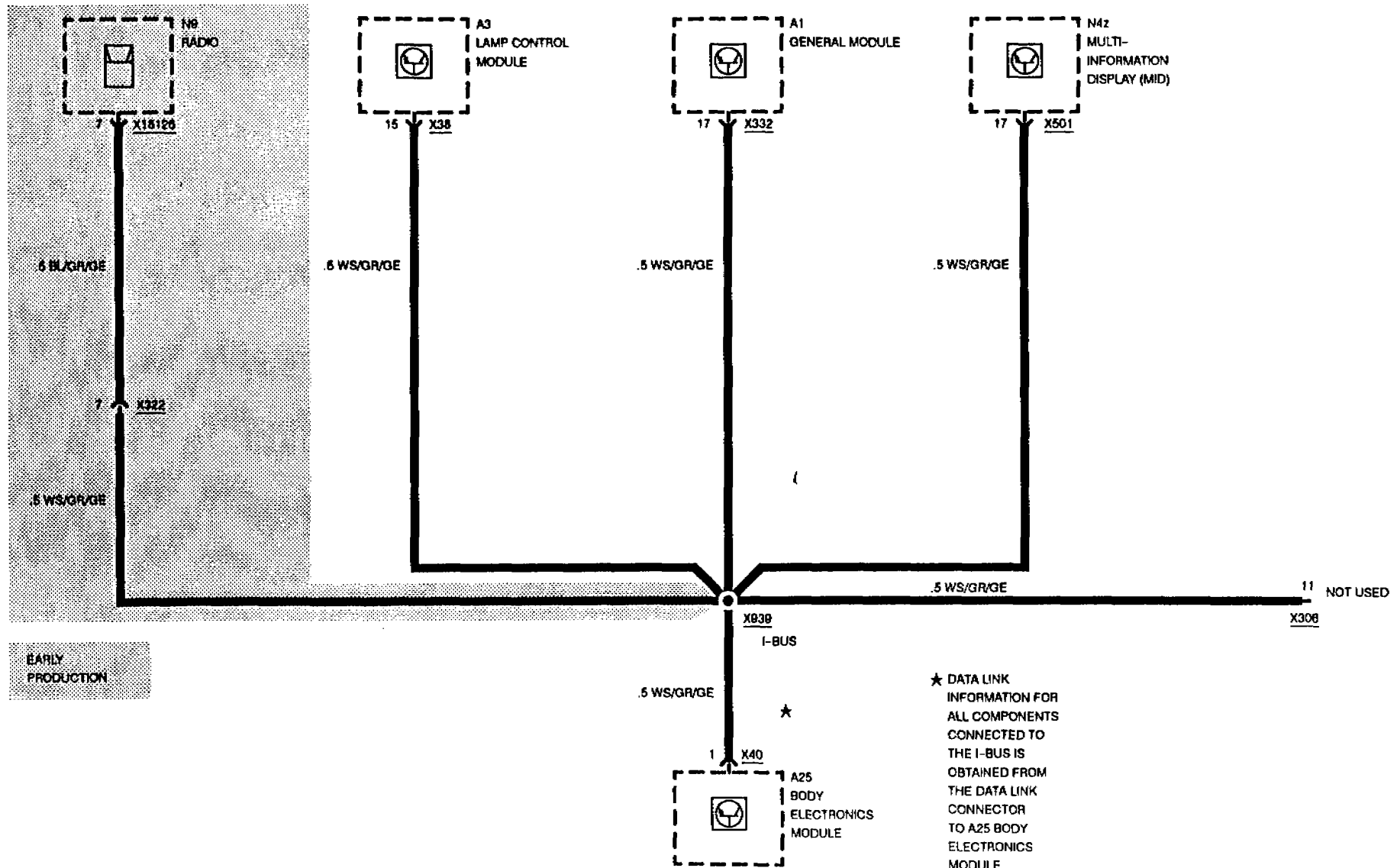
## RXD, PIN 15





# DATA LINK

## INSTRUMENTATION BUS (I-BUS)



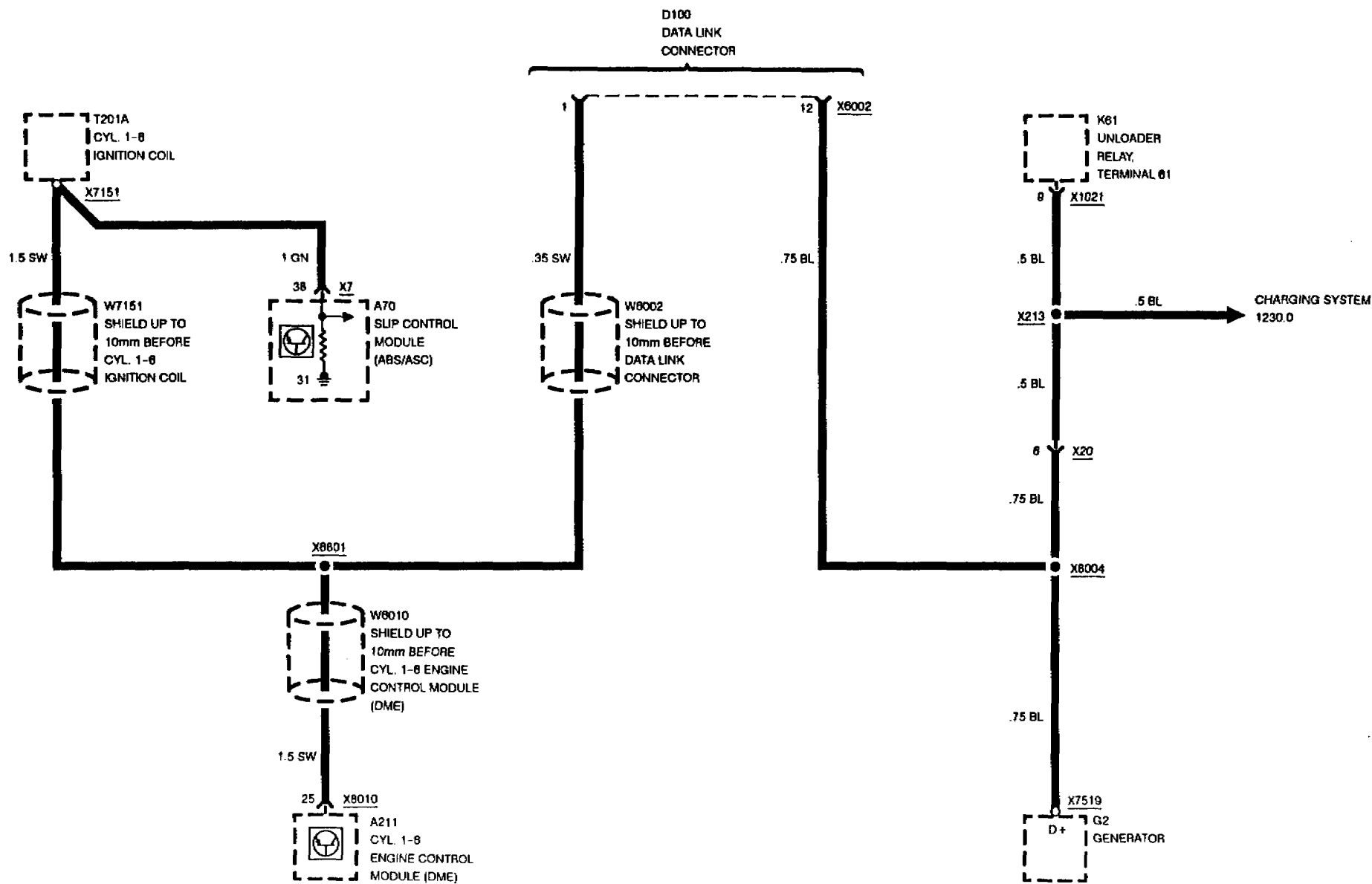
EARLY PRODUCTION

★ DATA LINK INFORMATION FOR ALL COMPONENTS CONNECTED TO THE I-BUS IS OBTAINED FROM THE DATA LINK CONNECTOR TO A25 BODY ELECTRONICS MODULE



# DATA LINK

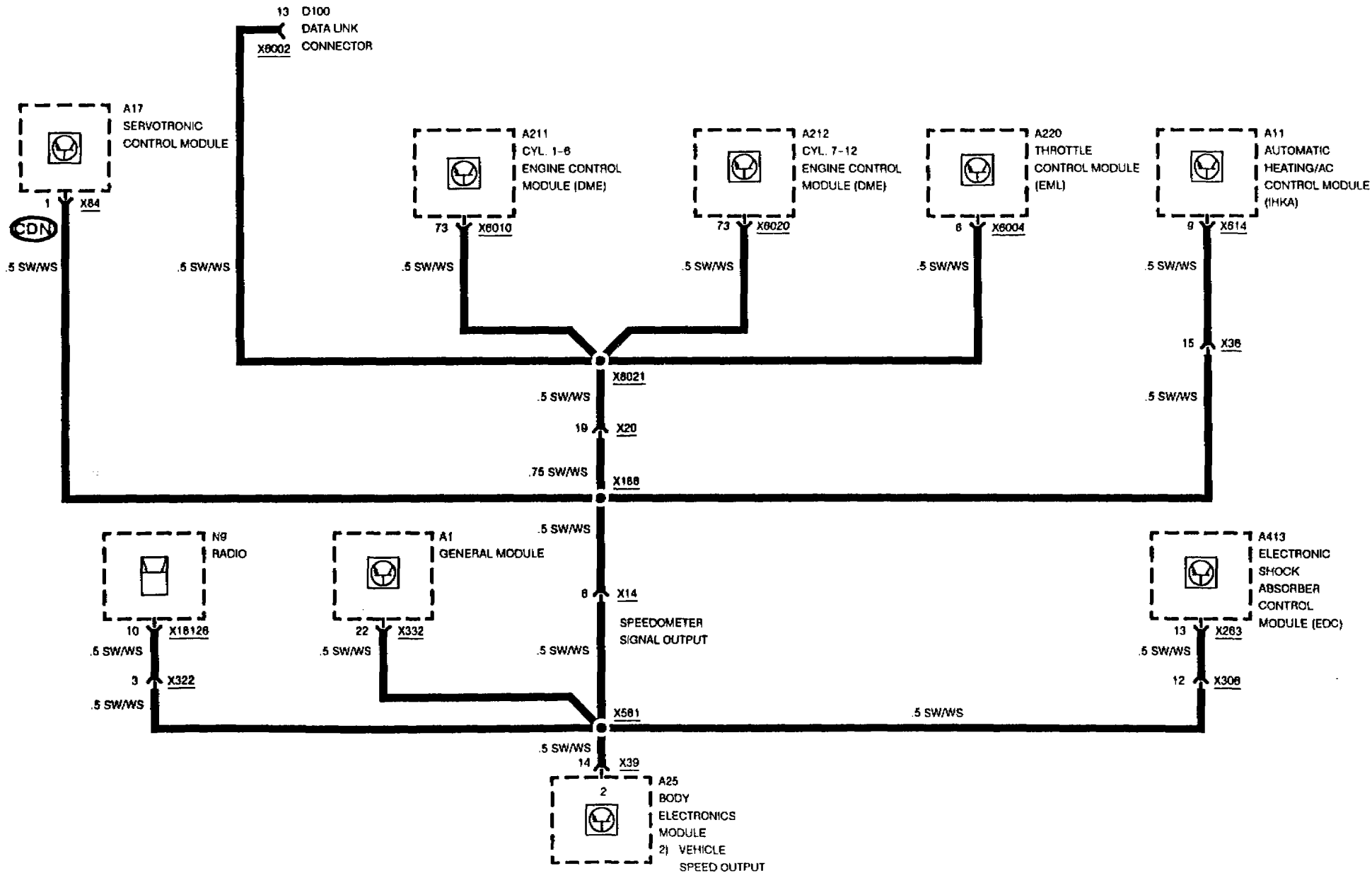
## DATA LINK CONNECTOR PINS 1 AND 12





# DATA LINK

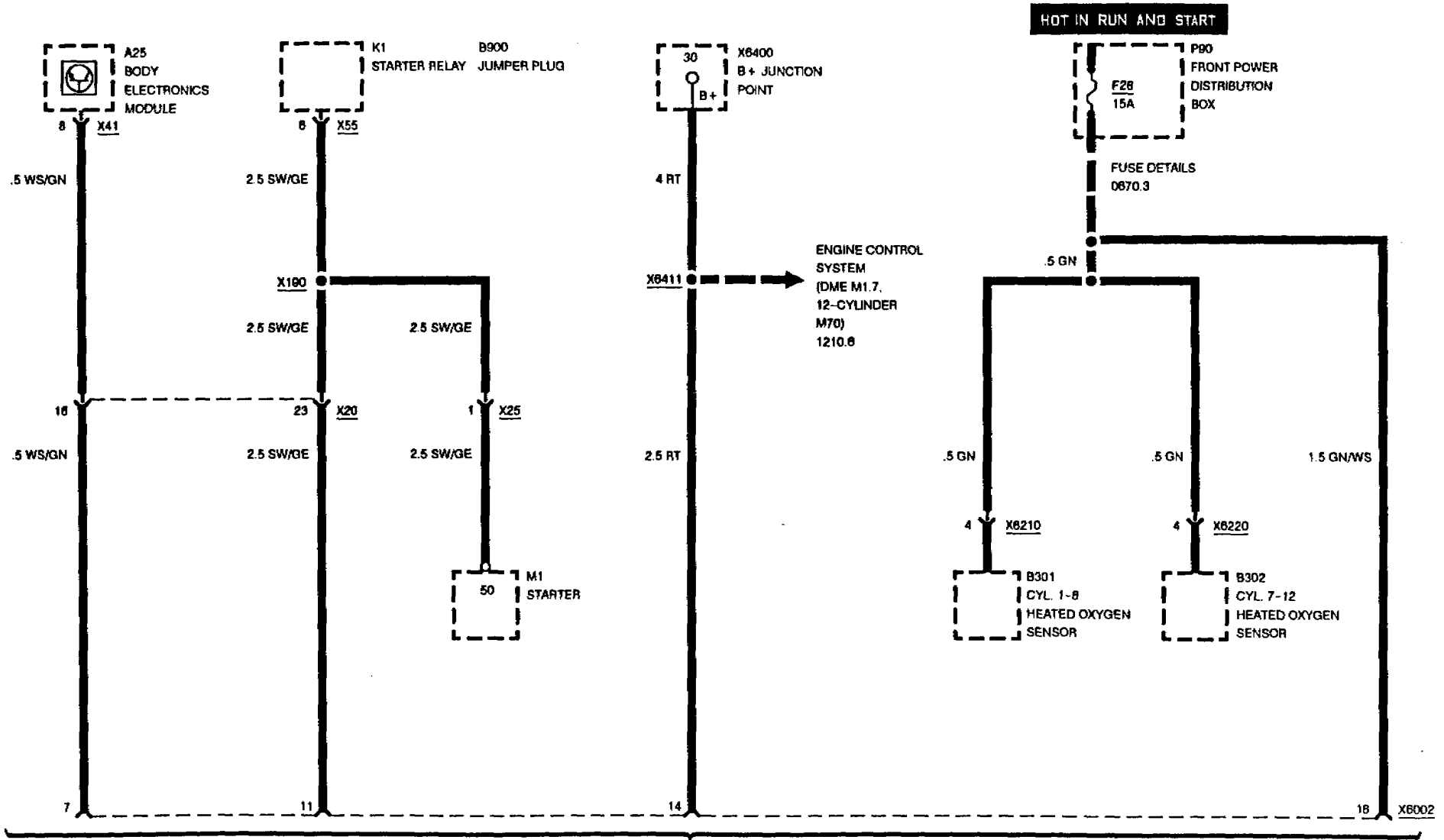
## DATA LINK CONNECTOR PIN 13





# DATA LINK

## DATA LINK CONNECTOR PINS 7, 11, 14, AND 16

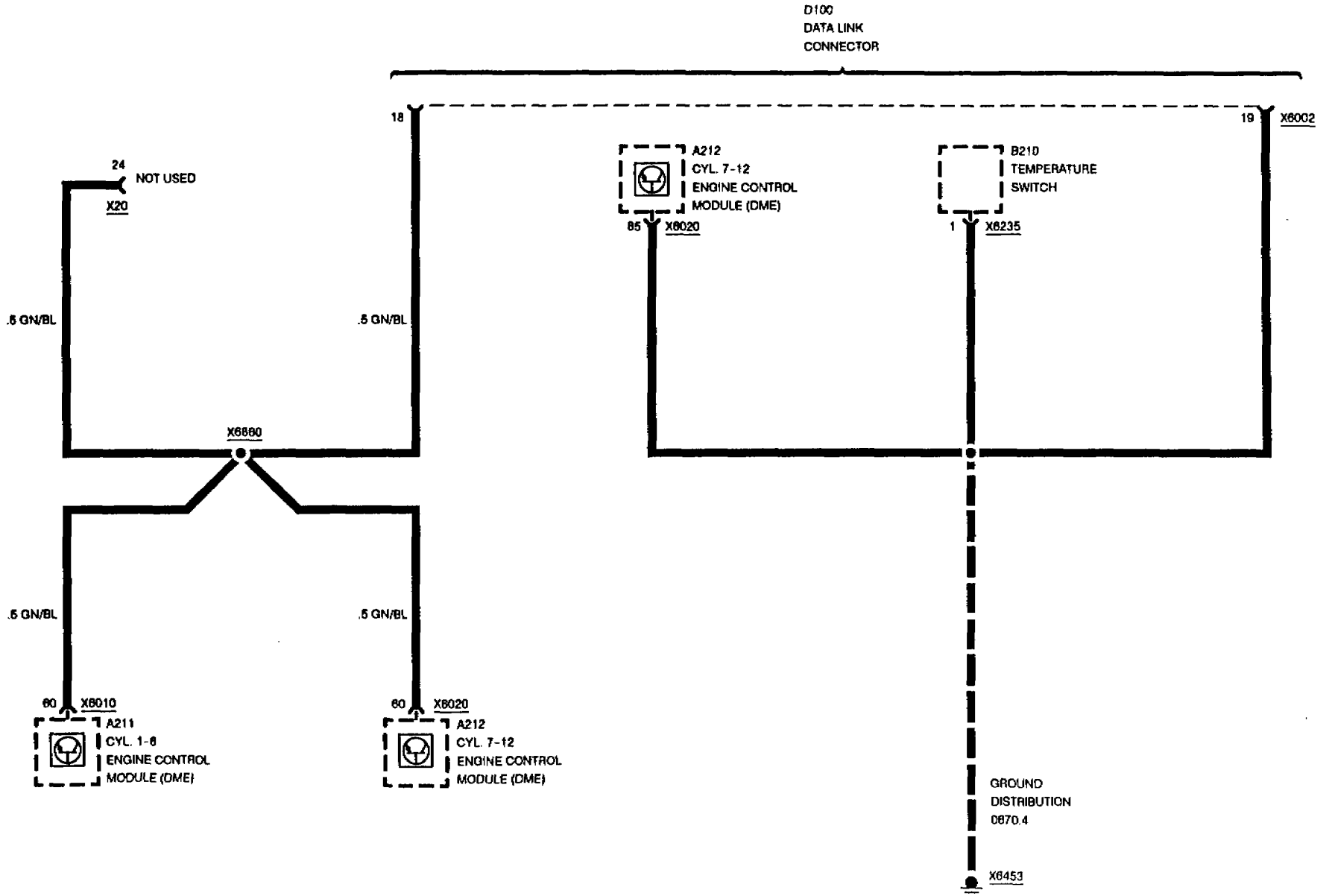


D100  
DATA LINK  
CONNECTOR



# DATA LINK

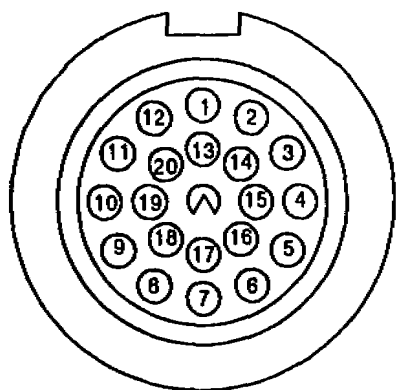
## DATA LINK CONNECTOR PINS 18 AND 19





# DATA LINK

## DATA LINK CONNECTOR (X6002)



PIN NUMBER	TERMINAL NUMBER	TERMINAL DESCRIPTION	WIRE COLOR
1	1	IGNITION COIL	SW
2	-	NOT OCCUPIED	
3	-	NOT OCCUPIED	
4	-	NOT OCCUPIED	
5	-	NOT OCCUPIED	
6	-	NOT OCCUPIED	
7	SI	SERVICE INTERVAL RESET	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	TACH	SPEEDOMETER SIGNAL OUTPUT	SW/WS
14	30	VOLTAGE: HOT AT ALL TIMES	RT
15	RXD	DIAGNOSTIC DATA LINK	WS/GE
16	15S	VOLTAGE: IGNITION SWITCH IN RUN AND START	GN/WS
17	-	NOT OCCUPIED	
18	-	PROGRAM SELECT FOR ENGINE CONTROL MODULE (DME)	GN/BL
19	31	GROUND	BR
20	TXD	DIAGNOSTIC DATA LINK	WS/VI

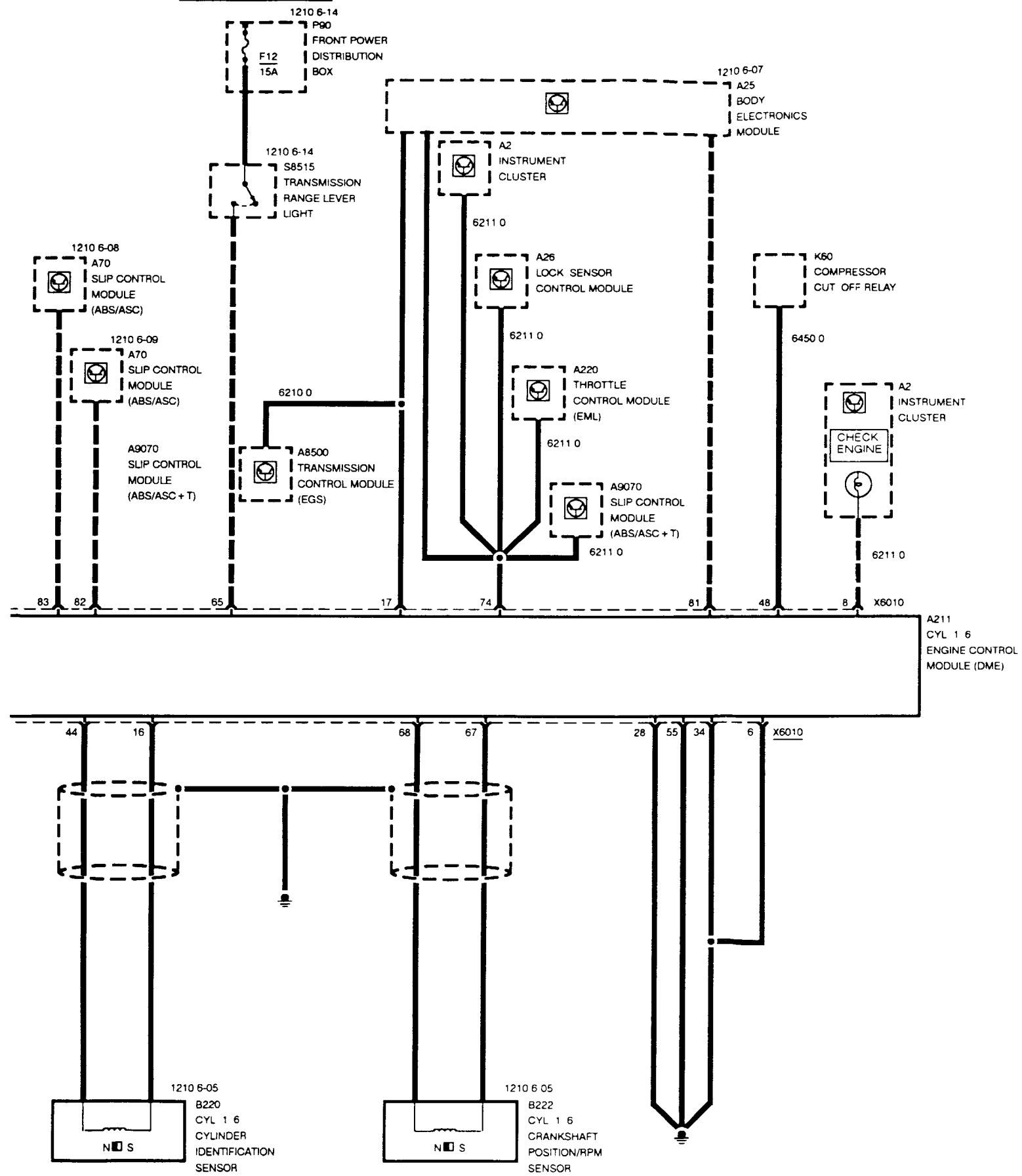
ENGINE CONTROL SYSTEM (DME M1 7, 12-CYLINDER M70)

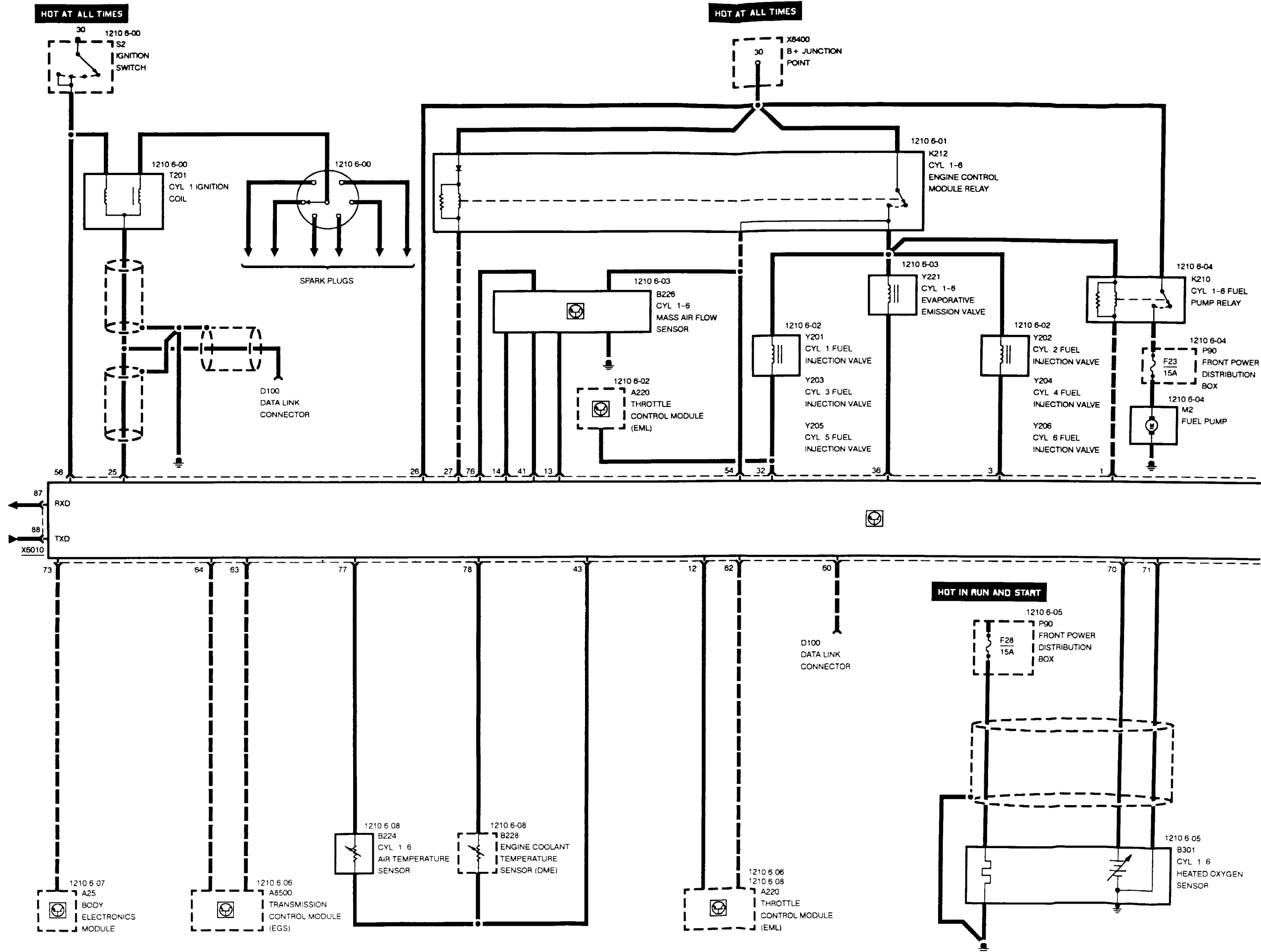
BLOCK DIAGRAM





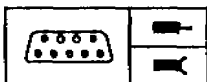
**HOT IN RUN AND START**







# ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)



## Pin Assignments

### X6010

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 su- perimposed en- gine speed signal	ON	Can only be measured when crankshaft rotating (the EKP relay does not switch if the TR signal is not applied)
2		Not used				
3	A	Injector valves cyl. 2-4-6	Injector valve EV	Ground clocked	Injection time ti	Ground => injector valves open, see component activation
4		Not used				
5		Not used				
6	M	Ground, EV output stages	Ground point	Ground		
7		Not used				
8	A	Defect lamp (US only)	Instrument cluster	Ground		
9		Not used				
10		Not used				
11		Not used				
12	E	Full load signal VL	EML control unit	Ground	ON	At full load (kick-down)



## ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
13	A	Burn off	Air mass meter	Voltage increase for approx. 0.5 sec		See chapter component testing
14	M	Ground, air mass meter	Air mass meter	Ground		
15		Not used				
16	E	Cylinder reference sensor (ignition)	Cylinder reference sensor (connection B)		ON/OFF	See status monitoring
17	A	ti measuring signal (KVA signal)	EKM control unit	Square wave signal	Multimeter function Pulse duration	
18		Not used				
19		Not used				
20		Not used				
21		Not used				
22		Not used				
23		Not used				
24		Not used				
25	A	Ignition terminal 1	Ignition coil 1	Primary signal	Oscilloscope	Engine test, test step 05
26	E	Battery voltage	B+ terminal point	U-Batt		Diagnosis not possible if not fitted
27	A	DME main relay	DME main relay terminal 85 (additionally, jumper to second DME main relay)	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		Not used				



## ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
30		Not used				
31		Not used				
32	A	Injector valves cyl. 1-3-5	EV and EML control unit	Ground clocked	Injection time ti	Ground => Injector valves open, see component activation
33		Not used				
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	Ground clocked	CLOSED/OPEN	Perform component activation, ground => closed
37		Not used				
38		Not used				
39		Not used				
40		Not used				
41	E	Signal, air mass meter	Air mass meter	0...5 V	Load signal in ms	See status monitoring
42		Not used				
43	M	Ground for sensors	Temperature sensors	Ground		
44	E	Cylinder reference (ignition)	Cylinder reference (connection A)		ON/OFF	See status monitoring
45		Not used				
46		Not used				
47		Not used				
48	A	Compressor cut-off signal	Compressor cut-off relay	Ground		



## ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
49		Not used				
50		Not used				
51		Not used				
52		Not used				
53		Not used				
54	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 to terminal 30 and 87 on relay
55	M	Ground Ignition	Ground point	Ground		
56	E	Ignition terminal 15	Ignition switch	U-Batt		
57		Not used				
58		Not used				
59		Not used				
60	E	Programming voltage	Diagnostic connector			Only activated for control unit programming
61		Not used				
62	E	Idle signal LL	EML control unit	Ground	ON	See status monitoring
63	E	Torque converter clutch (WK)	EGS control unit	Ground	ON (with engine running)	When WK engaged, see status monitoring
64	E	Ignition timing intervention	EGS control unit	Ground	ON	Only active during gearshift
65	E	Park/Neutral sensing	Transmission selector lever switch	Ground	ON	When position P/N



## ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
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	EKM control unit	Square-wave signal	km/h	
74	A	Engine speed signal (TD)	EKM control unit	Square-wave signal		One signal per ignition
75		Not used				
76	E	Idle CO-potentiometer	Air mass meter	0...5 V	Voltage value	
77	E	Intake air temperature	Intake air temperature sensor	0...5 V	0 C	Temperature-dependent
78	E	Engine temperature	Engine temperature sensor	0...5 V	0 C	Temperature-dependent
79		Not used				
80		Not used				
81	E	DWA signal	EKM control unit	Ground	OFF	U-Batt applied when DWA armed



## ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
82	E	ASC/MSR	ASC or ASC + T	U-Batt	ON	U-Batt => signal active
83	E	ASC/ZAB	Only for ASC without T	U-Batt	ON	U-Batt => signal active
84		Not used				
85		Not used				
86		Not used				
87	E	RxD diagnostic data line	Diagnostic connector	U-Batt		When cover of diagnostic connector closed
88	E/A	TxD diagnostic data line	Diagnostic connector	Ground		When cover of diagnostic connector closed

E = Input, A = Output, M = Ground



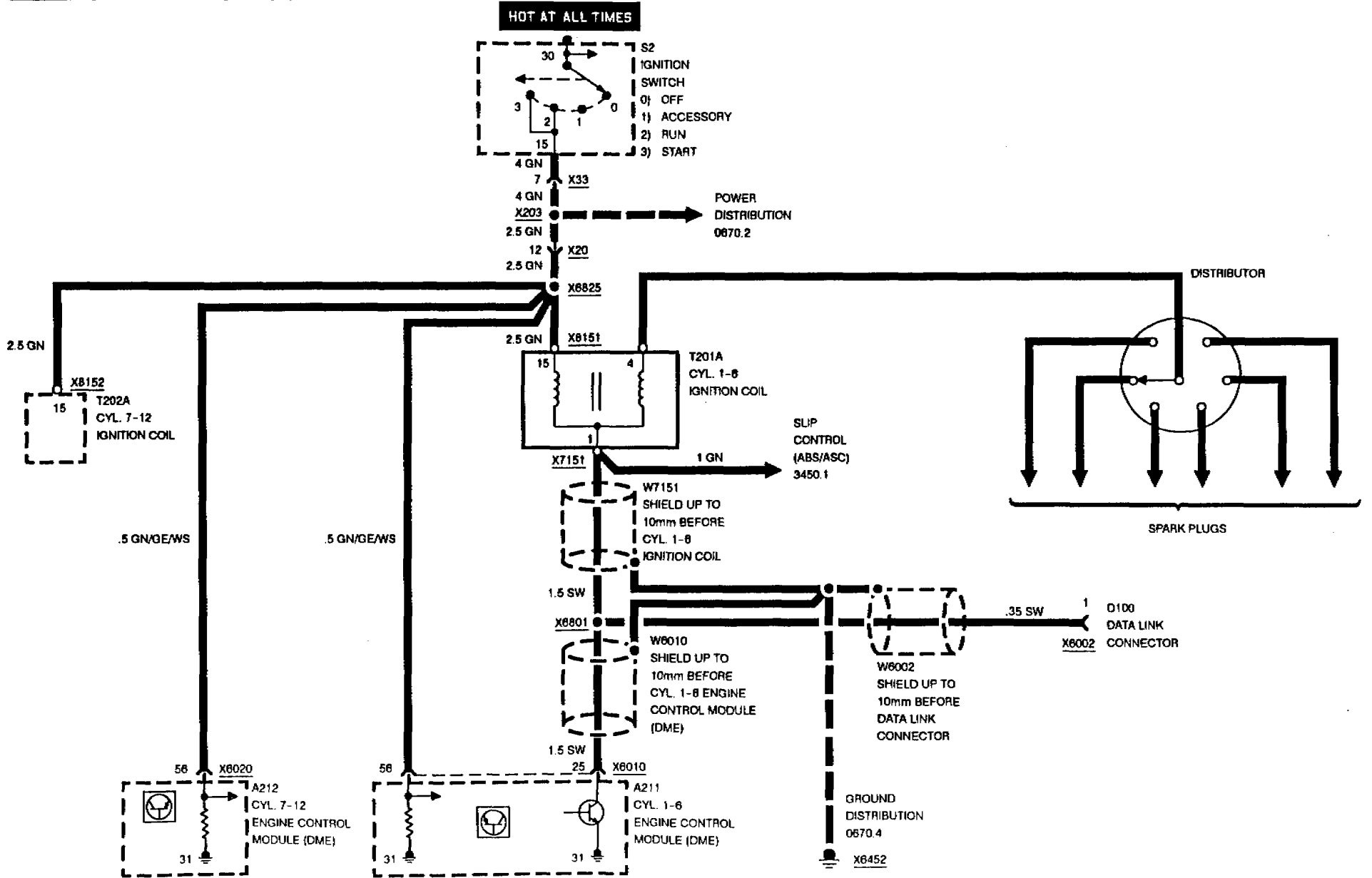
BMW  
**8**

1210.6



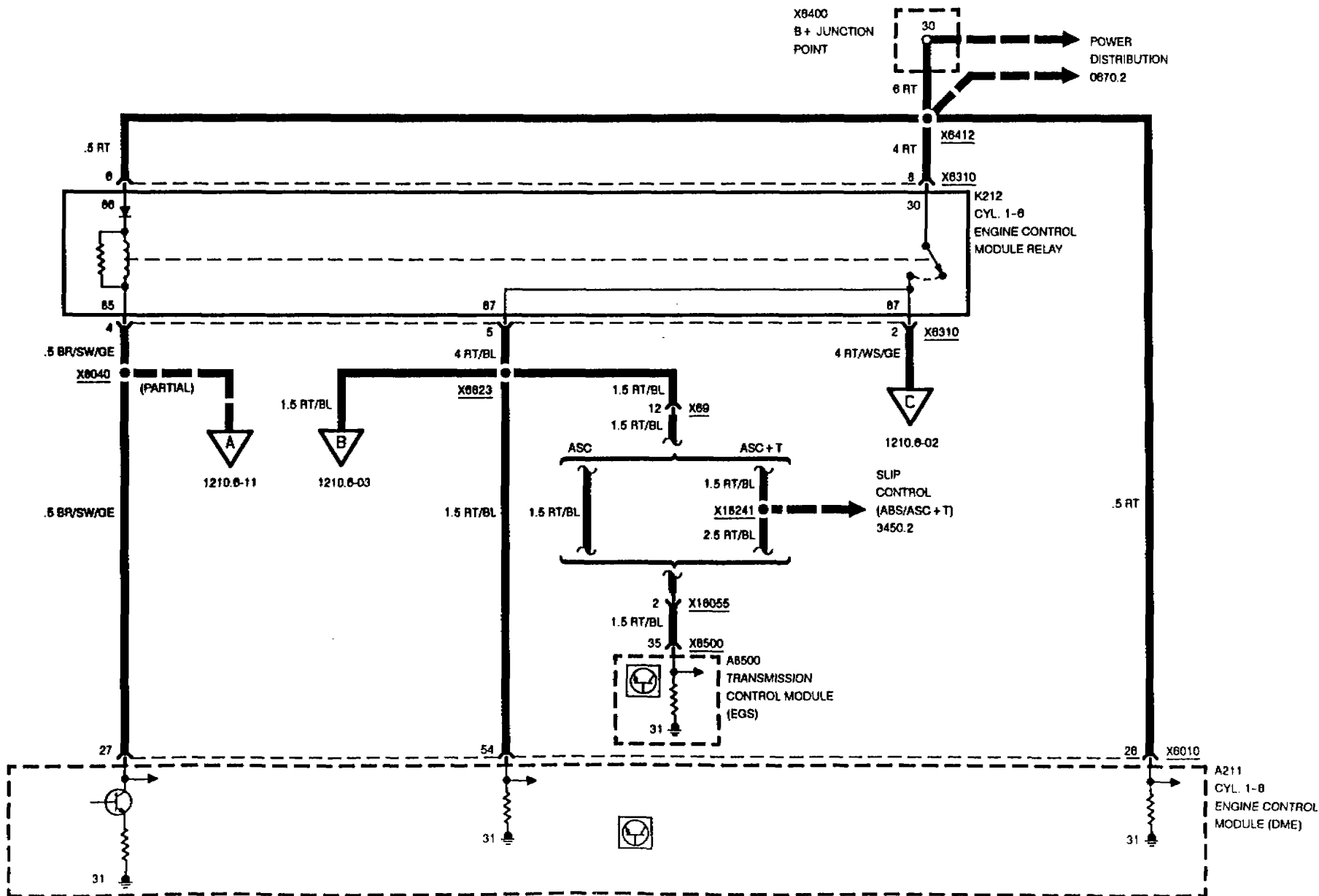
# ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

## CYL. 1-6 ENGINE CONTROL MODULE





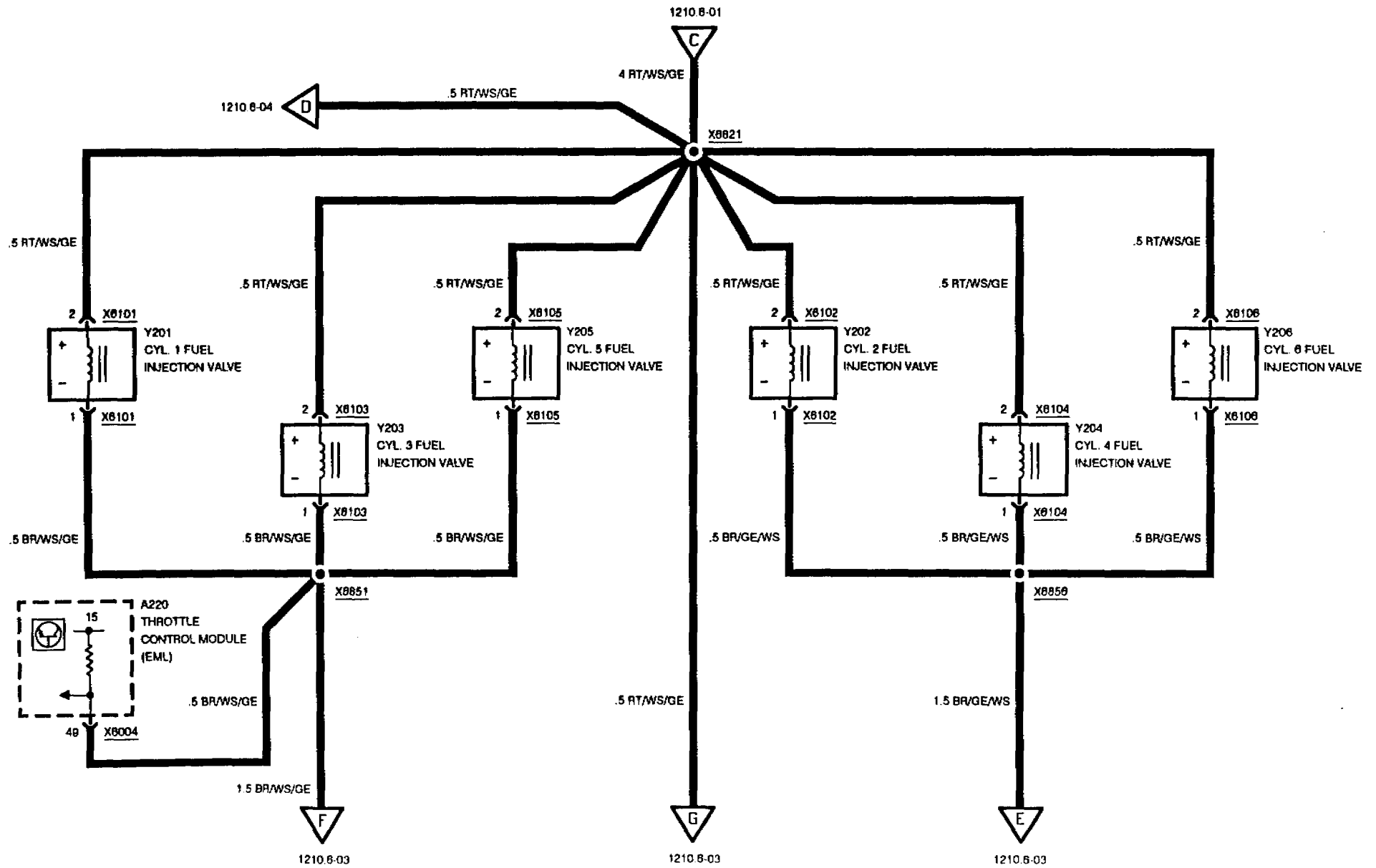
# ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70) CYL. 1-6 ENGINE CONTROL MODULE





# ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

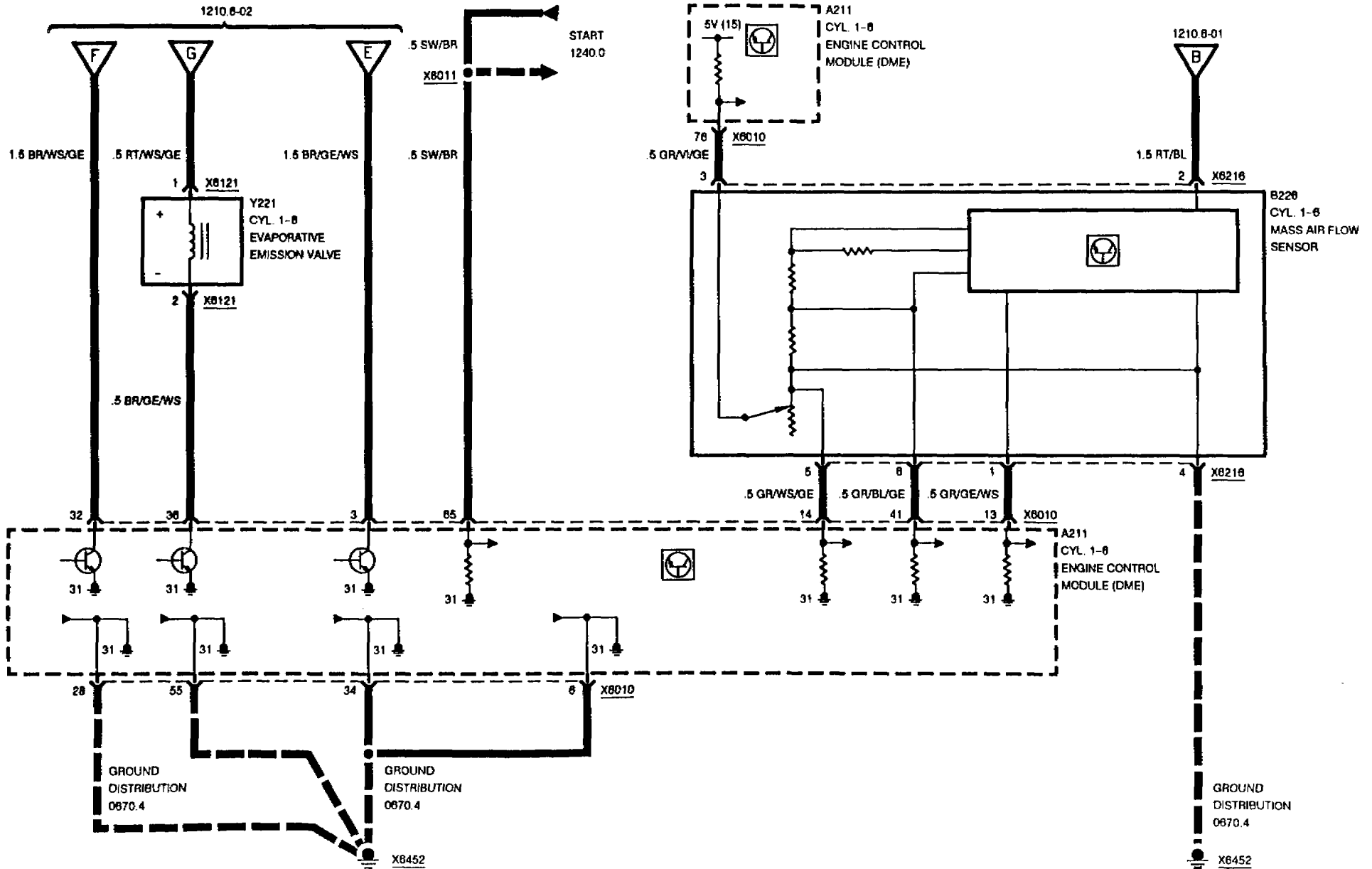
## FUEL INJECTION VALVES





# ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

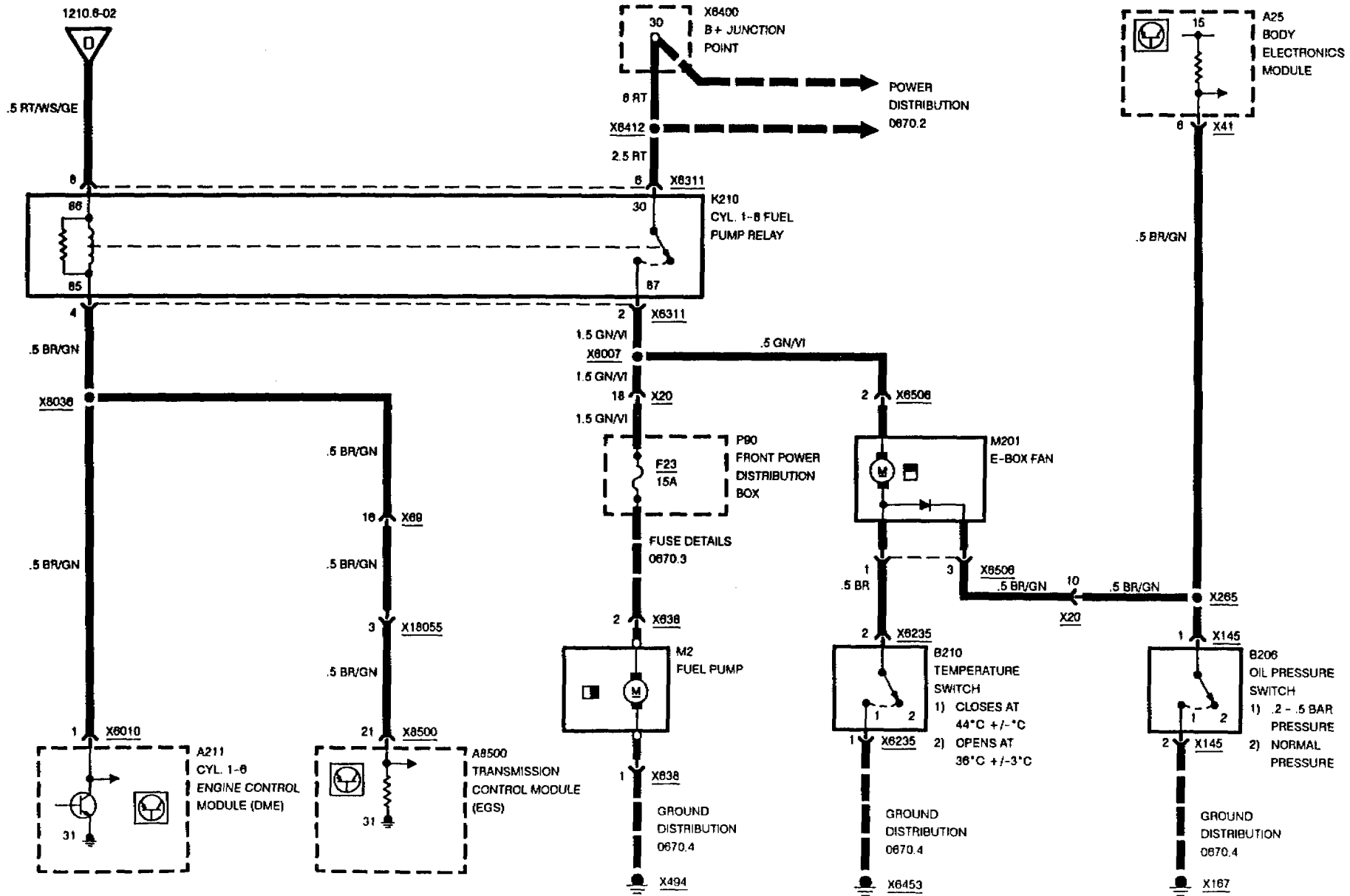
## CYL. 1-6 ENGINE CONTROL MODULE





# ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

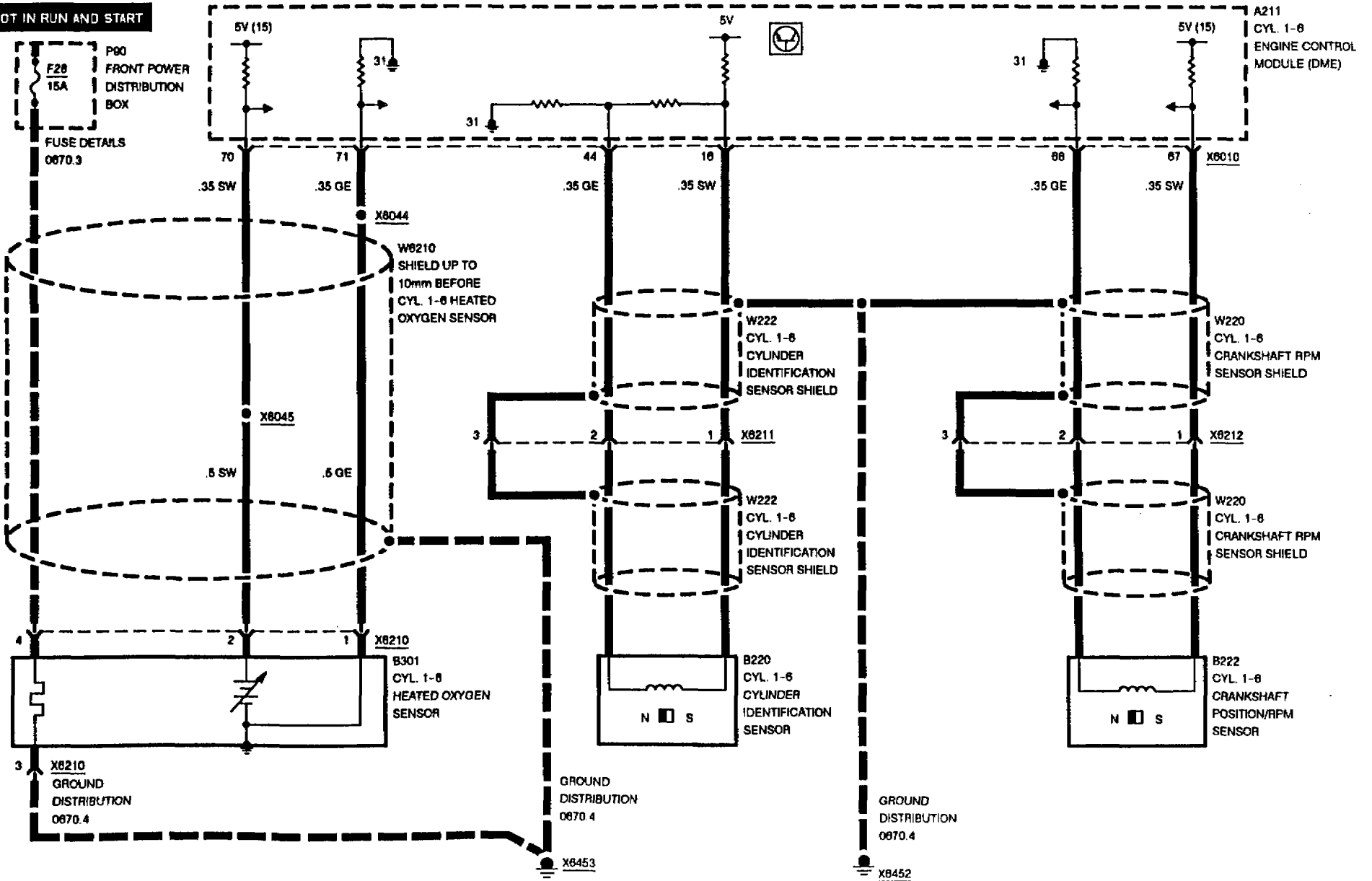
## CYL. 1-6 ENGINE CONTROL MODULE



# ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

## CYL. 1-6 ENGINE CONTROL MODULE

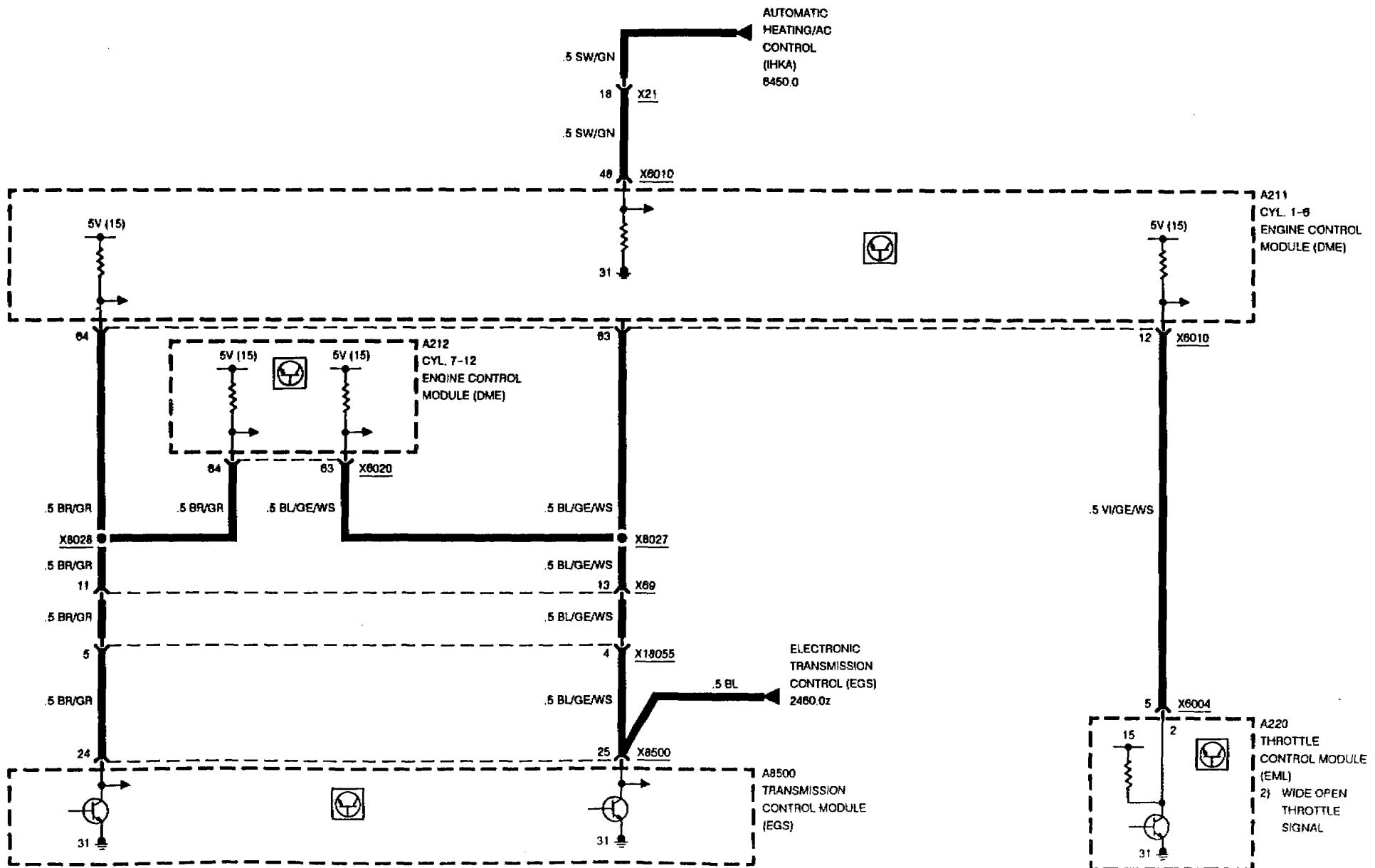
HOT IN RUN AND START





# ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

## CYL. 1-6 ENGINE CONTROL MODULE

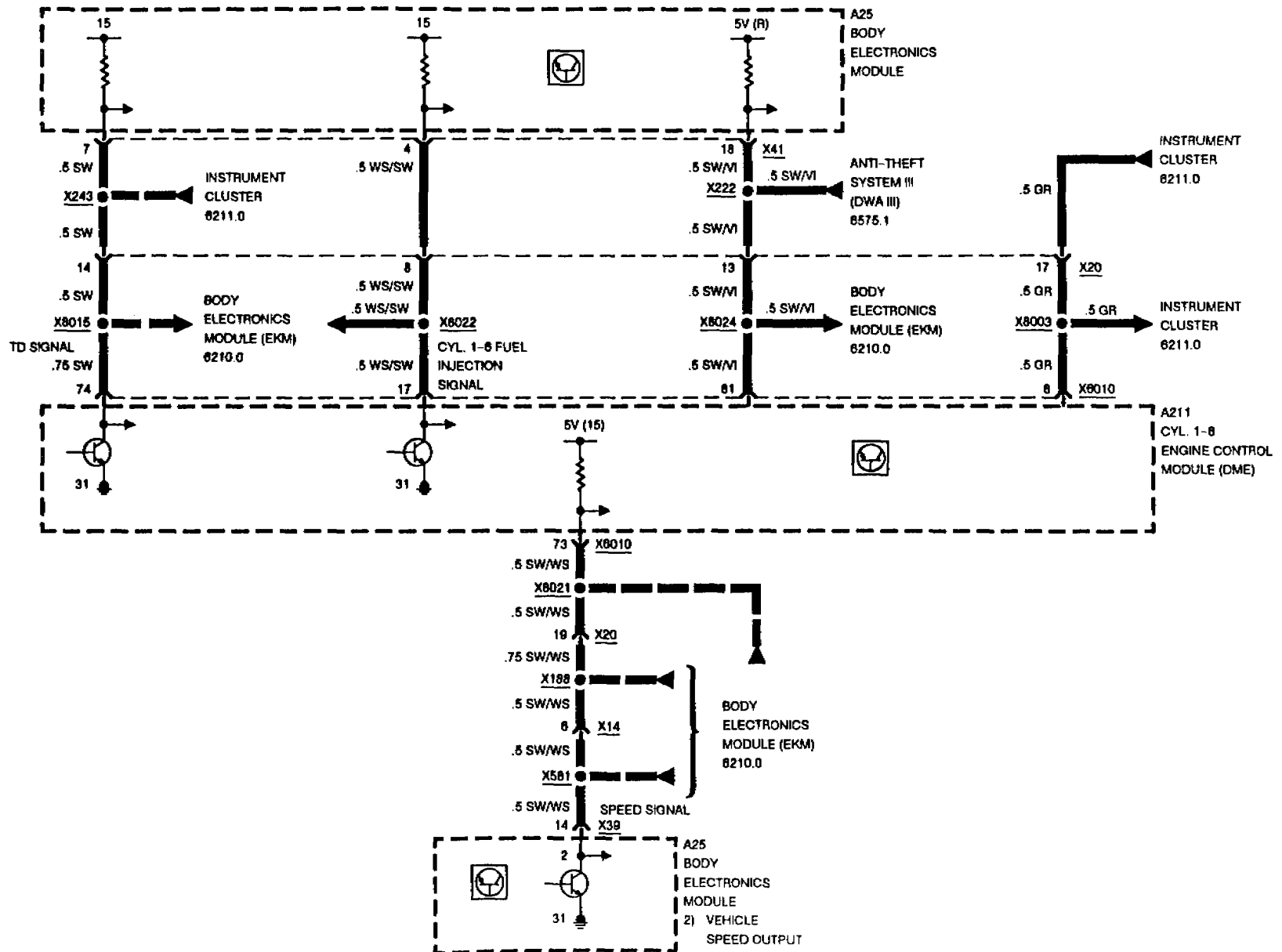






# ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

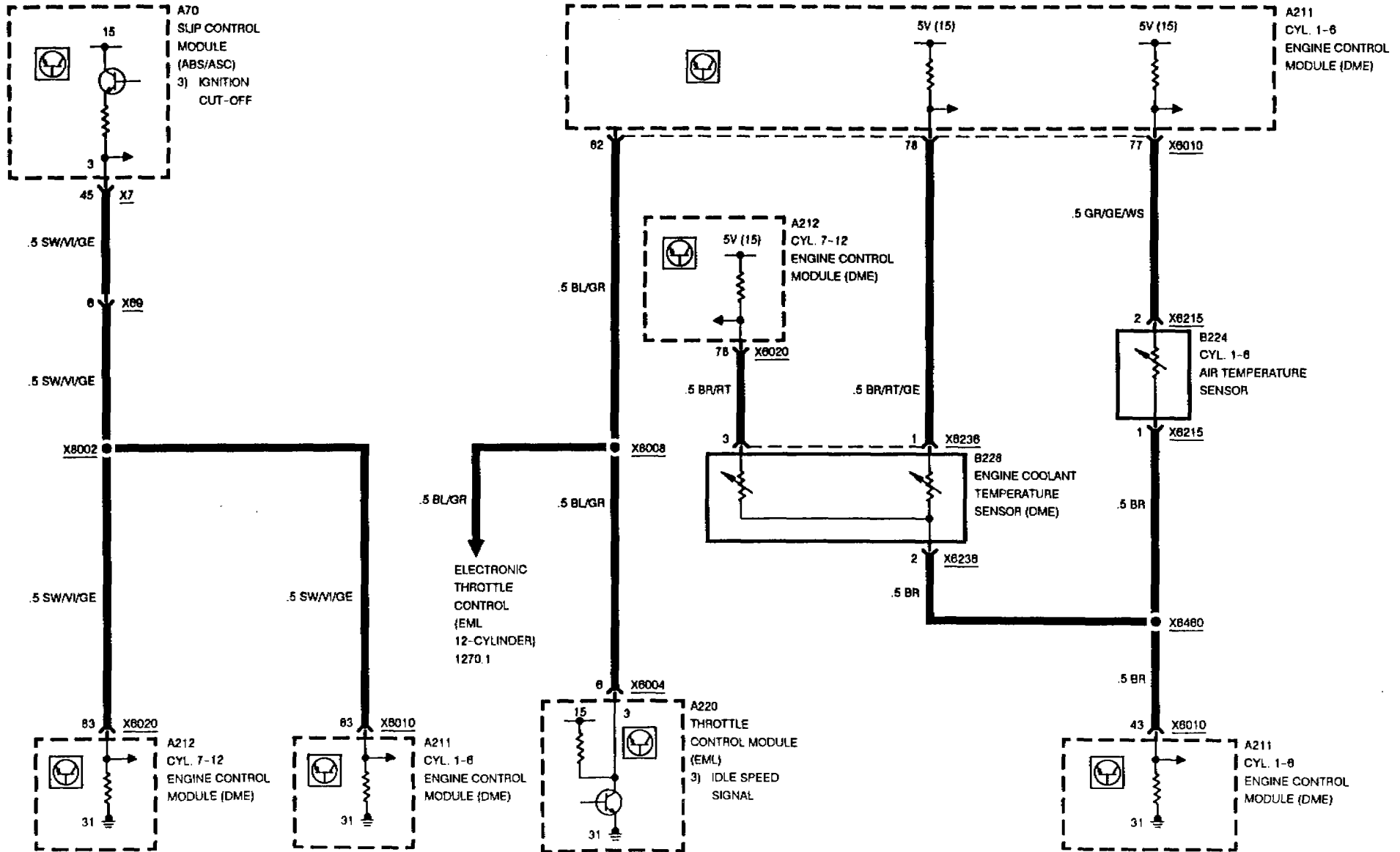
## CYL. 1-6 ENGINE CONTROL MODULE





# ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

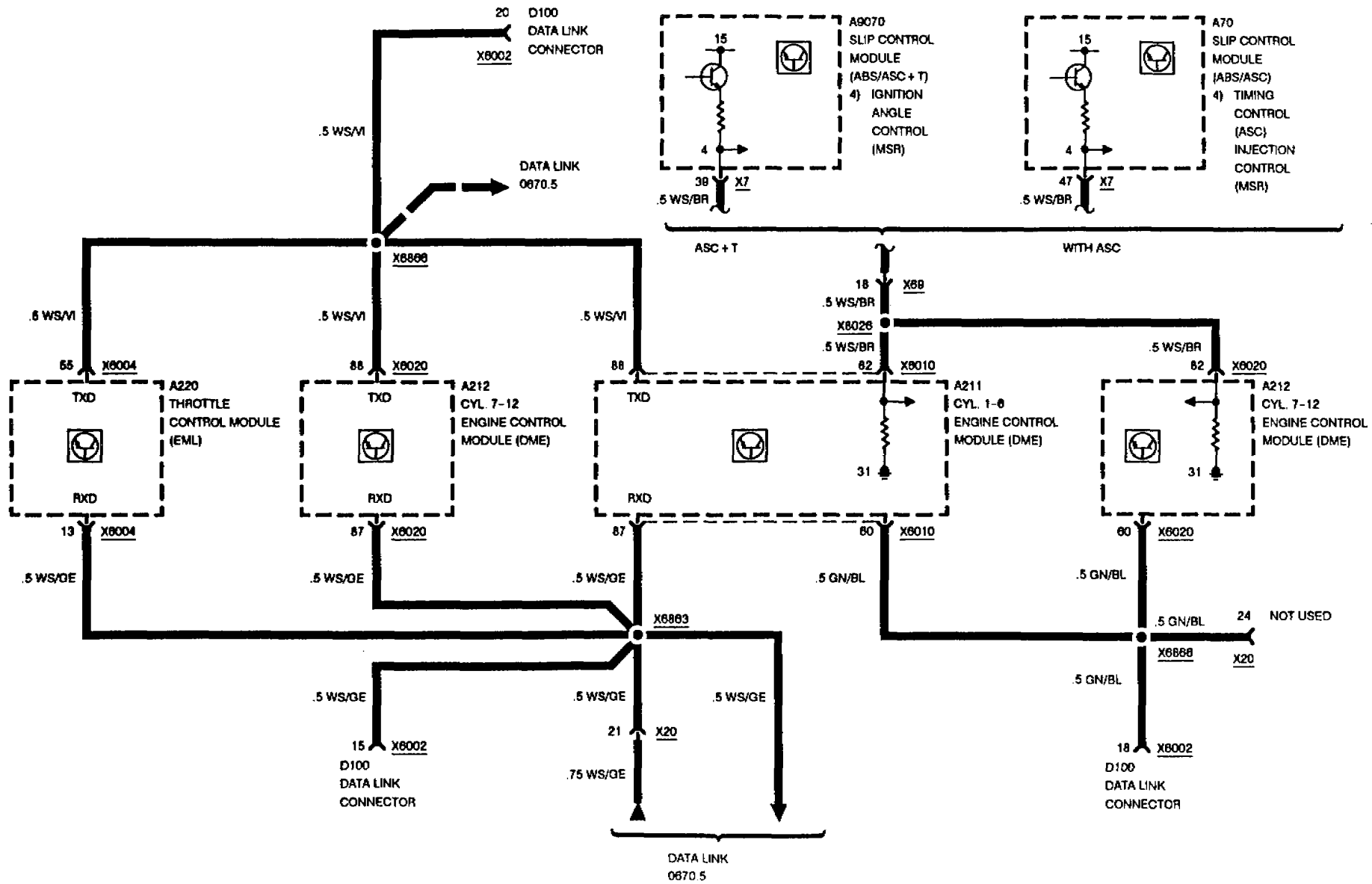
## CYL. 1-6 ENGINE CONTROL MODULE





# ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

## CYL. 1-6 ENGINE CONTROL MODULE



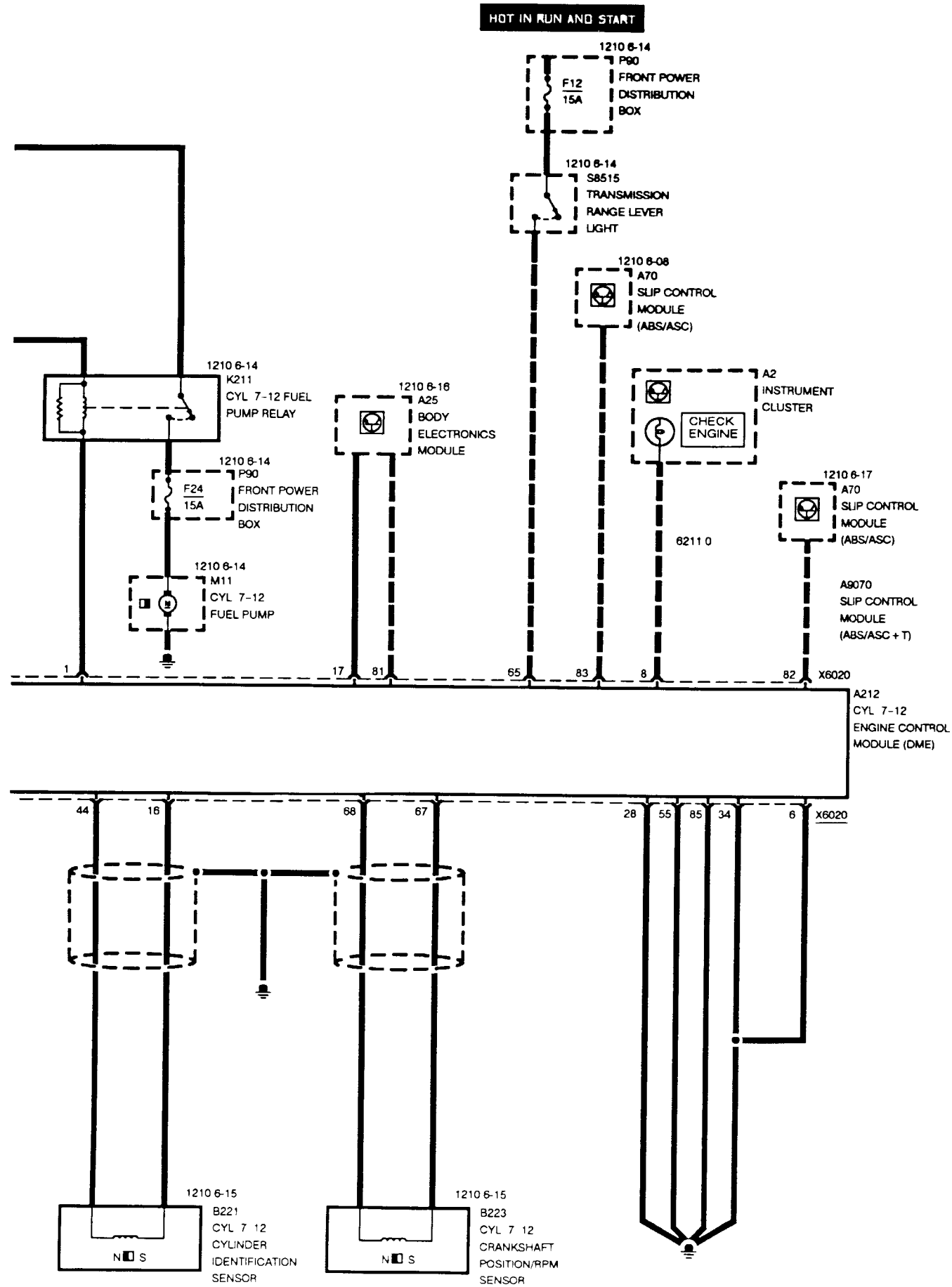
BMW  
8

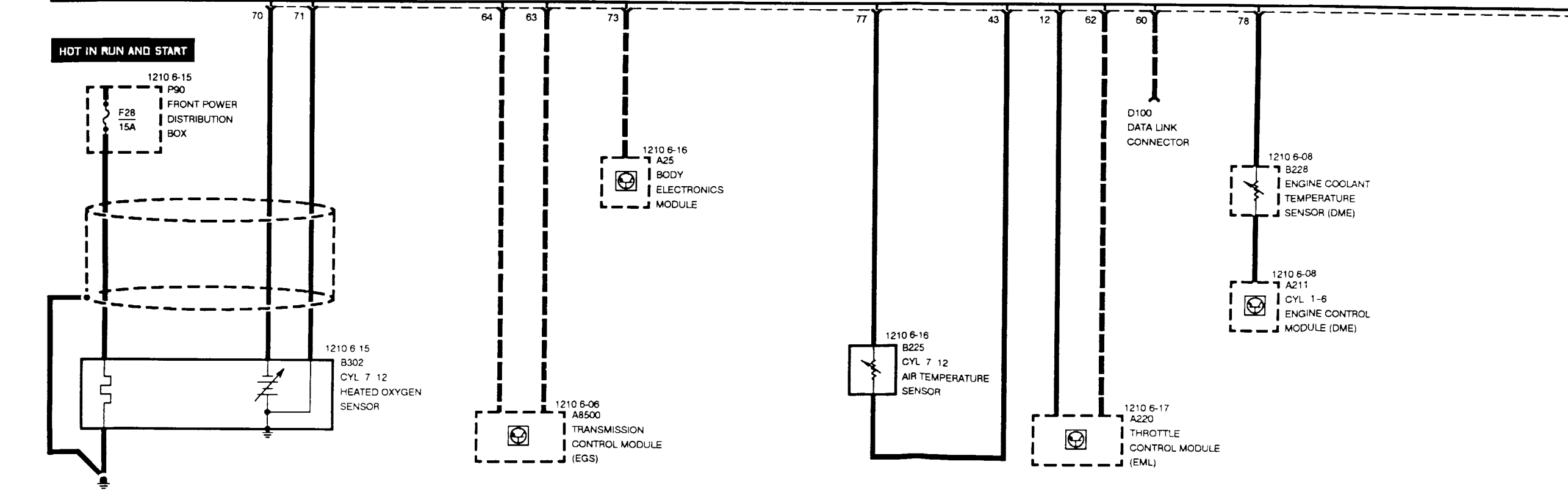
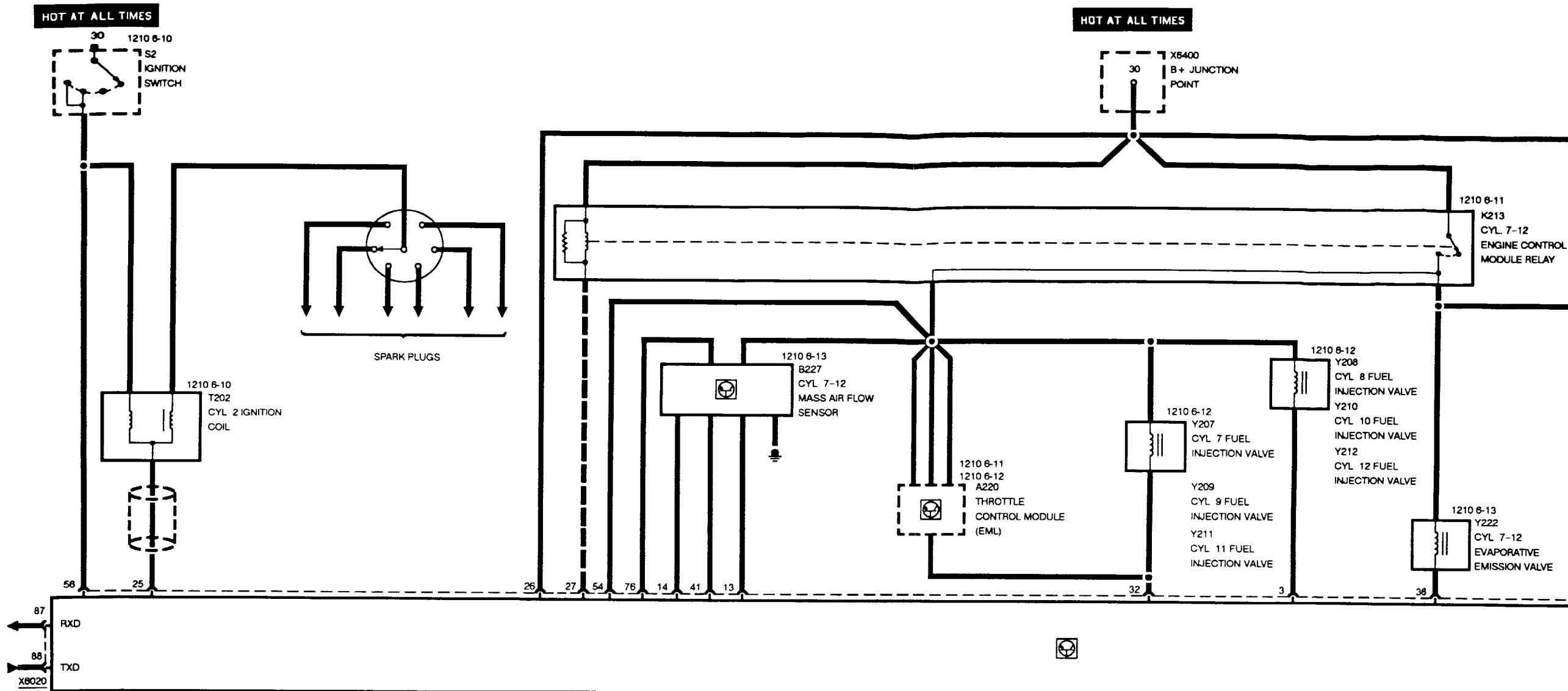
1210.6

**ENGINE CONTROL SYSTEM (DME M1 7, 12-CYLINDER M70)**

**BLOCK DIAGRAM**

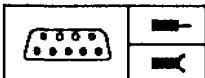








# ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)



## Pin Assignments

### X6020

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 superimposed engine speed signal	ON	Can only be measured when crankshaft rotating (the EKP relay does not switch if the TR signal is not applied)
2		Not used				
3	A	Injector valves cyl. 8-10-12	Injector valve EV	Ground clocked	Injection time ti	Ground => injector valves open, see component activation
4		Not used				
5		Not used				
6	M	Ground, EV output stages	Ground point	Ground		
7		Not used				
8	A	Defect lamp (US only)	Instrument cluster	Ground		
9		Not used				
10		Not used				
11		Not used				
12	E	Full load signal VL	EML control unit	Ground	ON	At full load (kick-down)





## ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
13	A	Burn off	Air mass meter	Voltage increase for approx. 0.5 sec		See chapter component testing
14	M	Ground, air mass meter	Air mass meter	Ground		
15		Not used				
16	E	Cylinder reference sensor (ignition)	Cylinder reference sensor (connection B)		ON/OFF	See status monitoring
17	A	ti measuring signal (KVA signal)	EKM control unit	Square wave signal	Multimeter function Pulse duration	
18		Not used				
19		Not used				
20		Not used				
21		Not used				
22		Not used				
23		Not used				
24		Not used				
25	A	Ignition terminal 1	Ignition coil	Primary signal	Oscilloscope	Engine test, test step 05
26	E	Battery voltage	B+ terminal point	U-Batt		Diagnosis not possible if not fitted
27	A	DME main relay	DME main relay terminal 85 (additionally, jumper to second DME main relay)	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		Not used				



## ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
30		Not used				
31		Not used				
32	A	Injector valves cyl. 7-9-11	EV and EML control unit	Ground clocked	Injection time ti	Ground => Injector valves open, see component activation
33		Not used				
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	Ground clocked	CLOSED/OPEN	Perform component activation, ground => closed
37		Not used				
38		Not used				
39		Not used				
40		Not used				
41	E	Signal, air mass meter	Air mass meter	0...5 V	Load signal in ms	See status monitoring
42		Not used				
43	M	Ground for sensor	Temperature sensor	Ground		
44	E	Cylinder reference (ignition)	Cylinder reference (connection A)		ON/OFF	See status monitoring
45		Not used				
46		Not used				
47		Not used				
48		Not used				



## ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
49		Not used				
50		Not used				
51		Not used				
52		Not used				
53		Not used				
54	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 to terminal 30 and 87 on relay
55	M	Ground ignition	Ground point	Ground		
56	E	Ignition terminal 15	Ignition switch	U-Batt		
57		Not used				
58		Not used				
59		Not used				
60	E	Programming voltage	Diagnostic connector			Only activated for control unit programming
61		Not used				
62	E	Idle signal LL	EML control unit	Ground	ON	See status monitoring
63	E	Torque converter clutch (WK)	EGS control unit	Ground	ON (with engine running)	When WK engaged, see status monitoring
64	E	Ignition timing intervention	EGS control unit	Ground	ON	Only active during gearshift
65	E	Park/Neutral sensing	Transmission selector lever switch	Ground	ON	When position P/N



## ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
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	EKM control unit	Square-wave signal	km/h	
74	A	Engine speed signal (TD)	EKM control unit	Square-wave signal		one signal per ignition
75		Not used				
76	E	Idle CO-potentiometer	Air mass meter	0...5 V	Voltage value	
77	E	Intake air temperature	Intake air temperature sensor	0...5 V	0 C	Temperature-dependent
78		Not used				
79		Not used				
80		Not used				
81	E	DWA signal	EKM control unit	Ground	OFF	U-Batt applied when DWA armed



## ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
82	E	ASC/MSR	ASC or ASC + T	U-Batt	ON	U-Batt => signal active
83	E	ASC/ZAB	Only for ASC without T	U-Batt	ON	U-Batt => signal active
84		Not used				
85	E	Identifier, DME control unit II	Ground point	Ground	DME cyl. 7...12	The DME control unit can only be selected with the diagnostic procedure when this link is set up.
86		Not used				
87	E	RxD diagnostic data line	Diagnostic connector	U-Batt		When cover of diagnostic connector closed
88	E/A	TxD diagnostic data line	Diagnostic connector	Ground		When cover of diagnostic connector closed

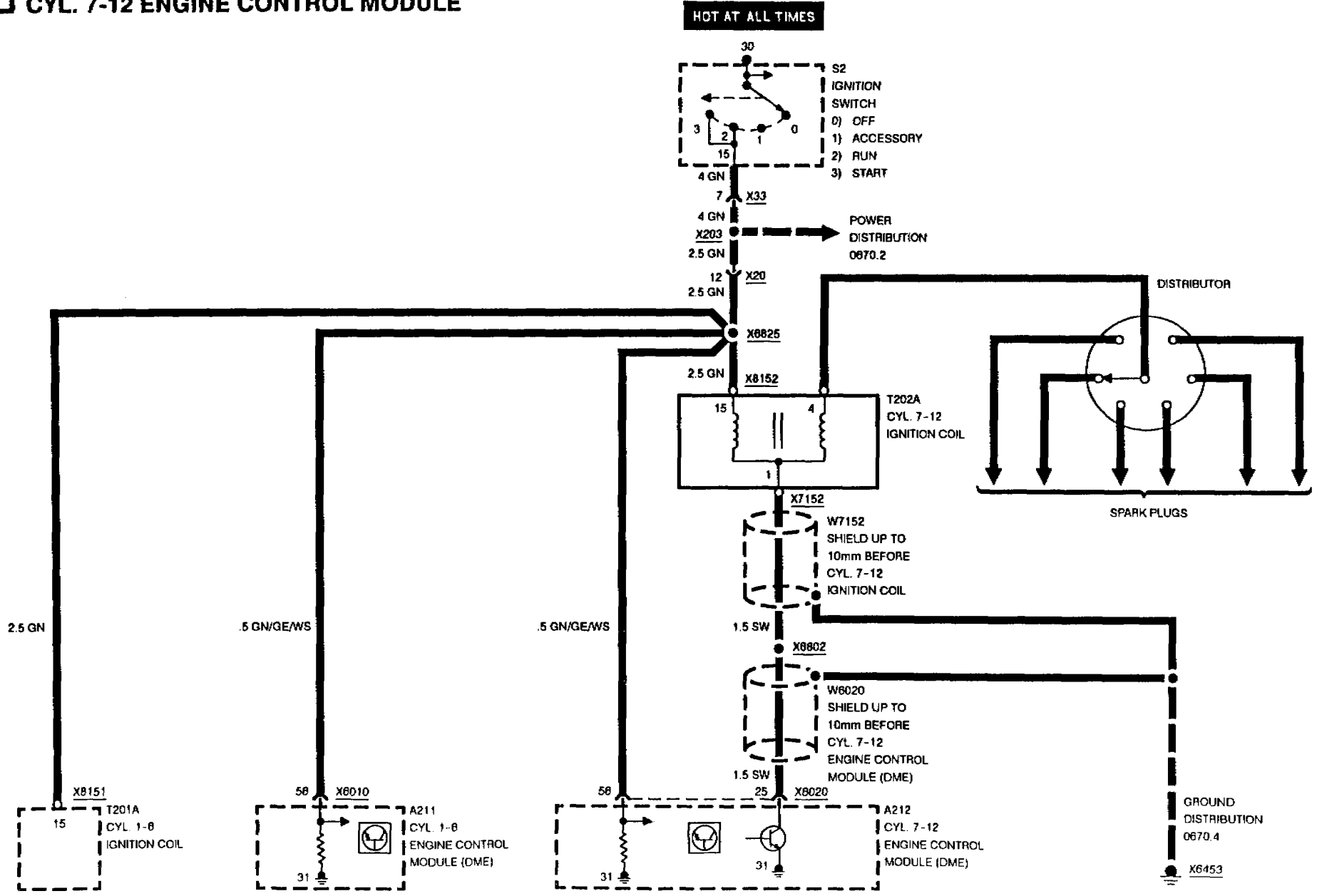
BMW  
**8**

1210.6



# ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

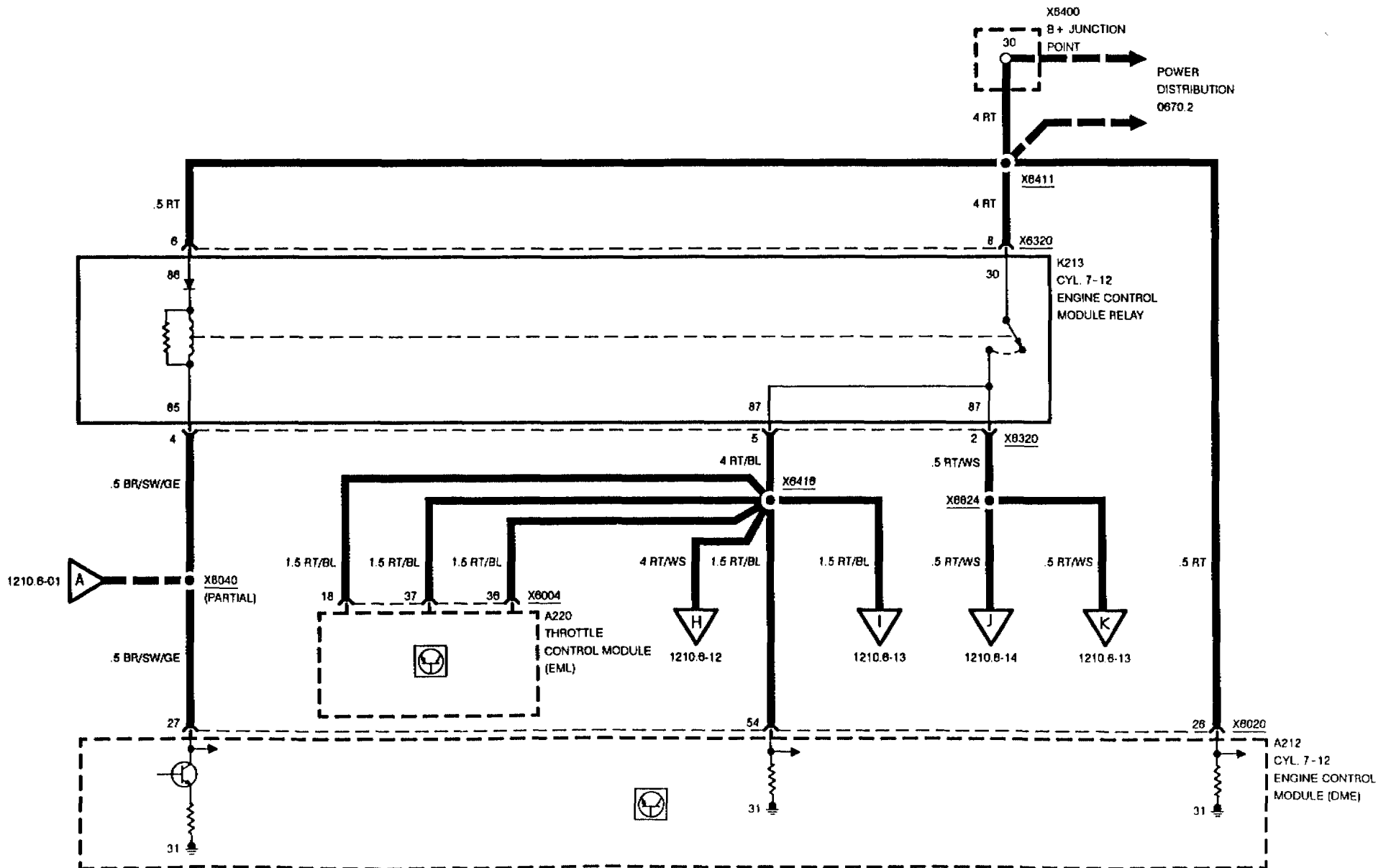
## CYL. 7-12 ENGINE CONTROL MODULE





# ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

## CYL. 7-12 ENGINE CONTROL MODULE

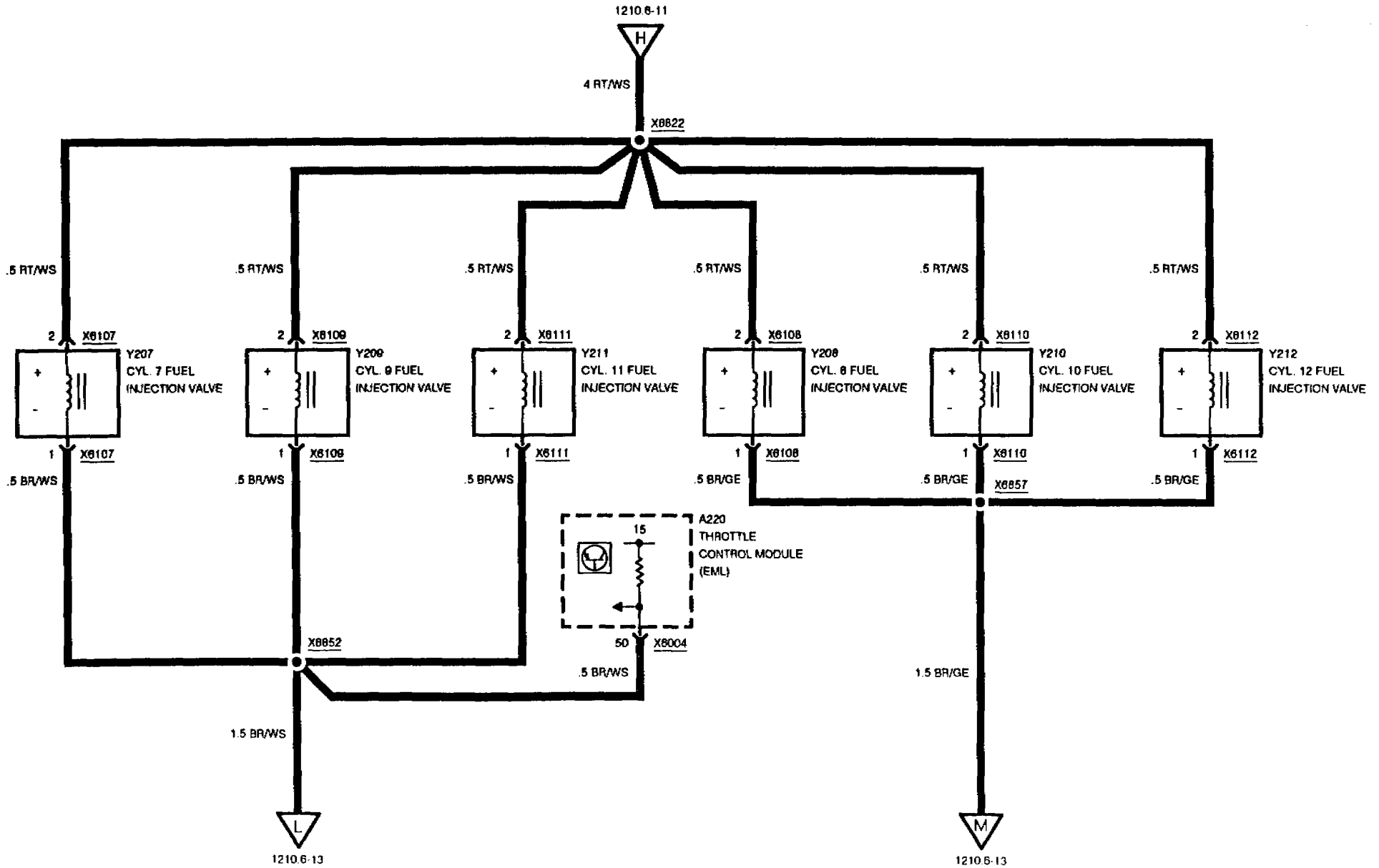






# ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

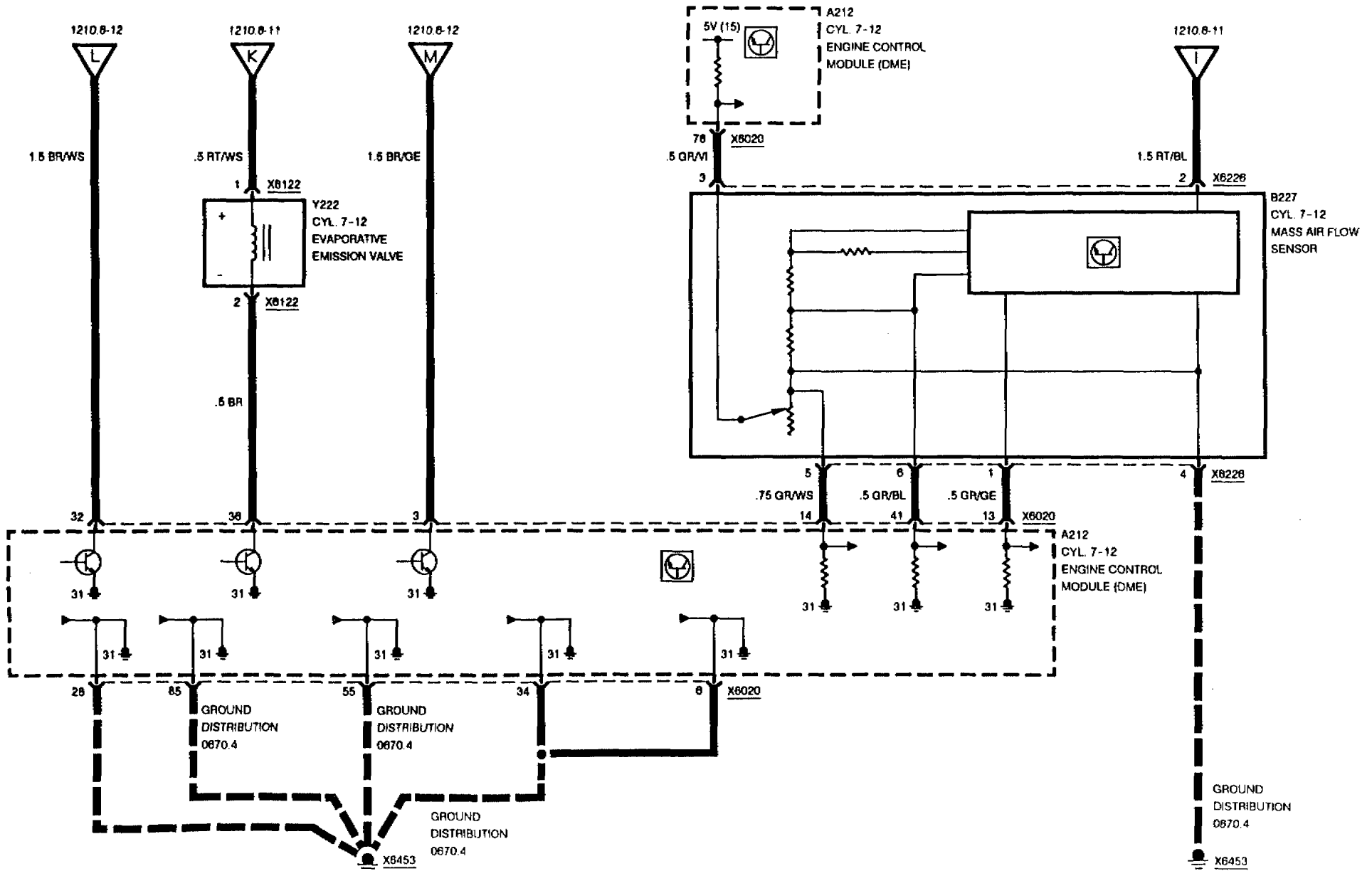
## FUEL INJECTION VALVES





# ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

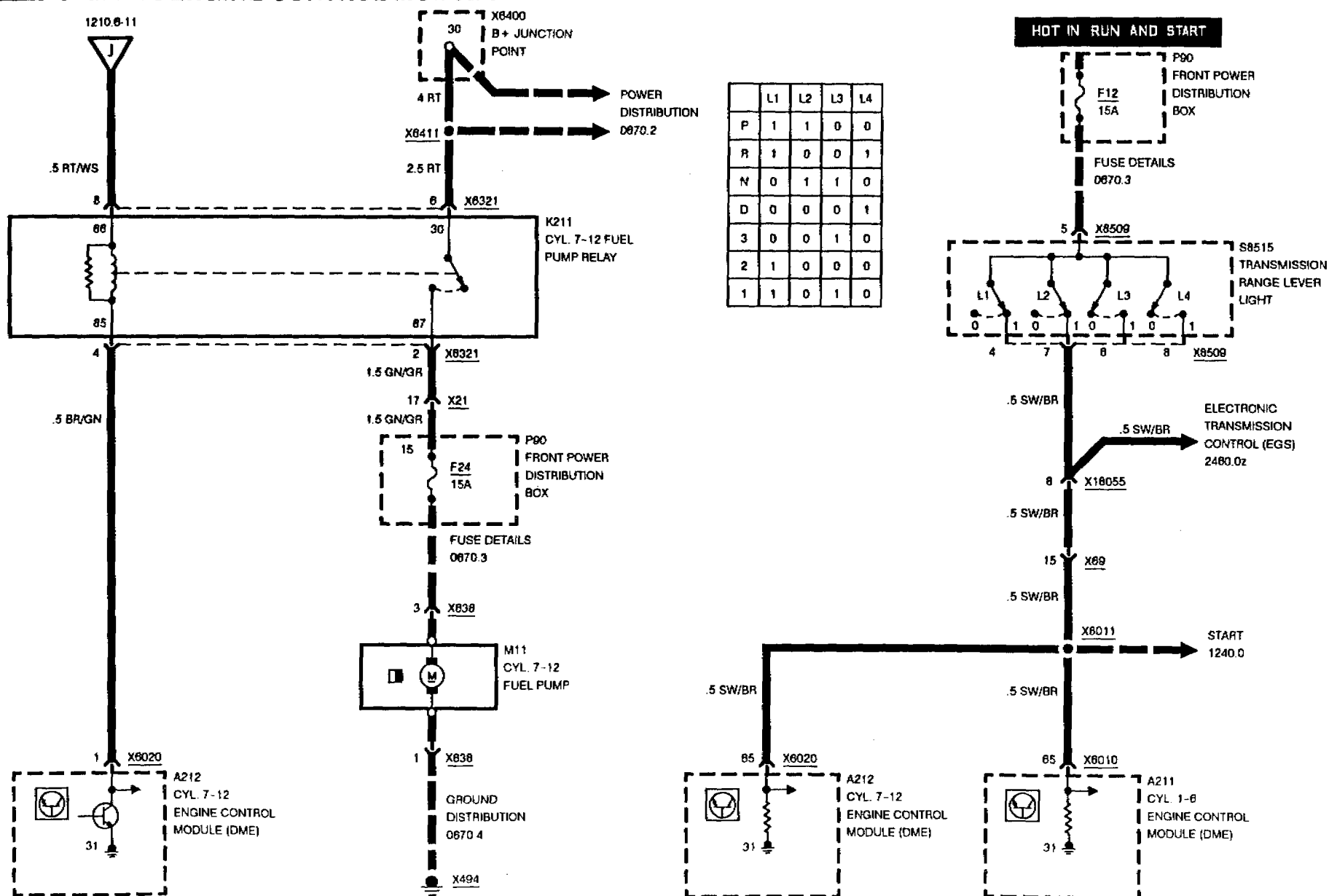
## CYL. 7-12 ENGINE CONTROL MODULE





# ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

## CYL. 7-12 ENGINE CONTROL MODULE

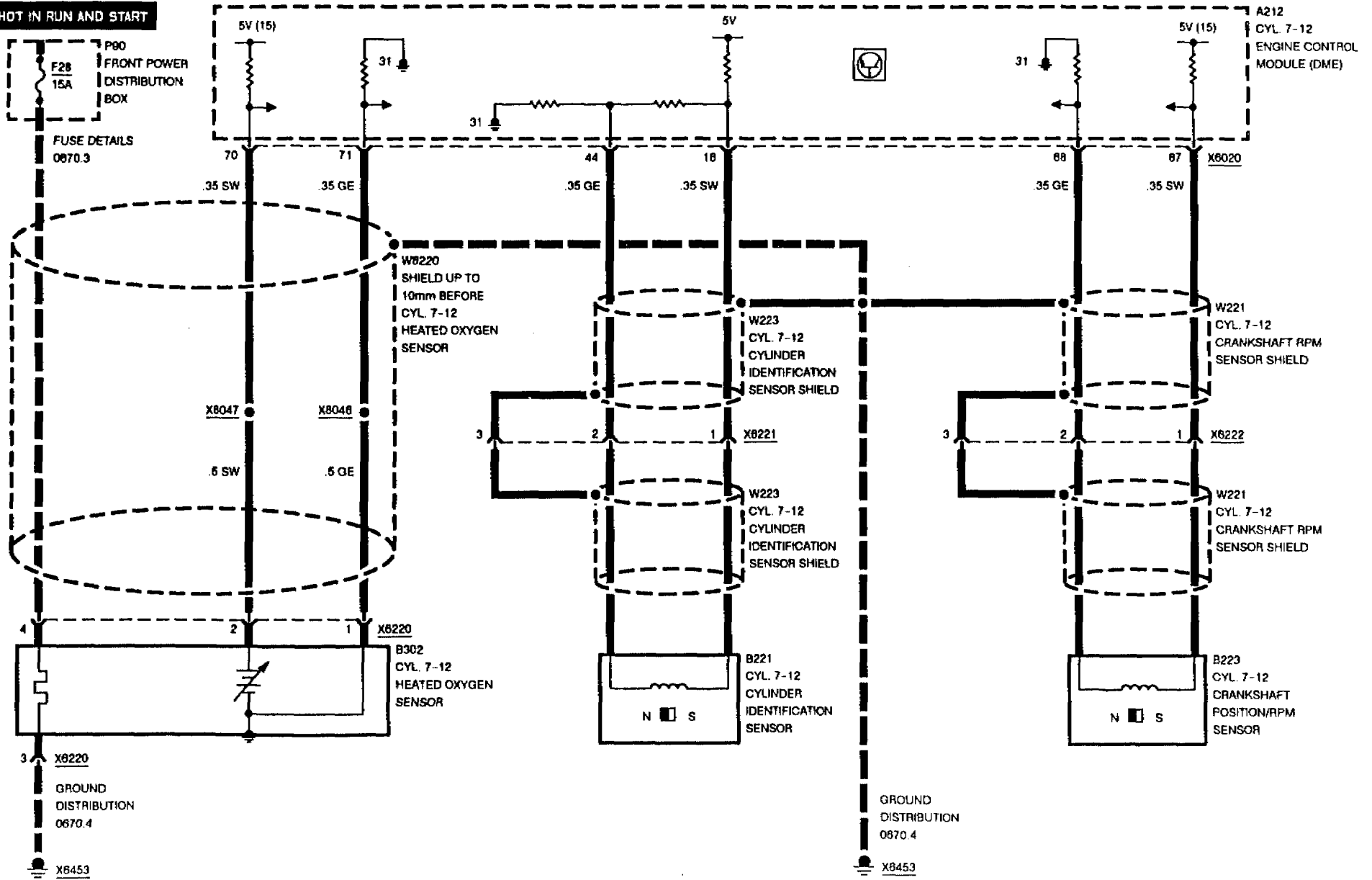




# ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

## CYL. 7-12 ENGINE CONTROL MODULE

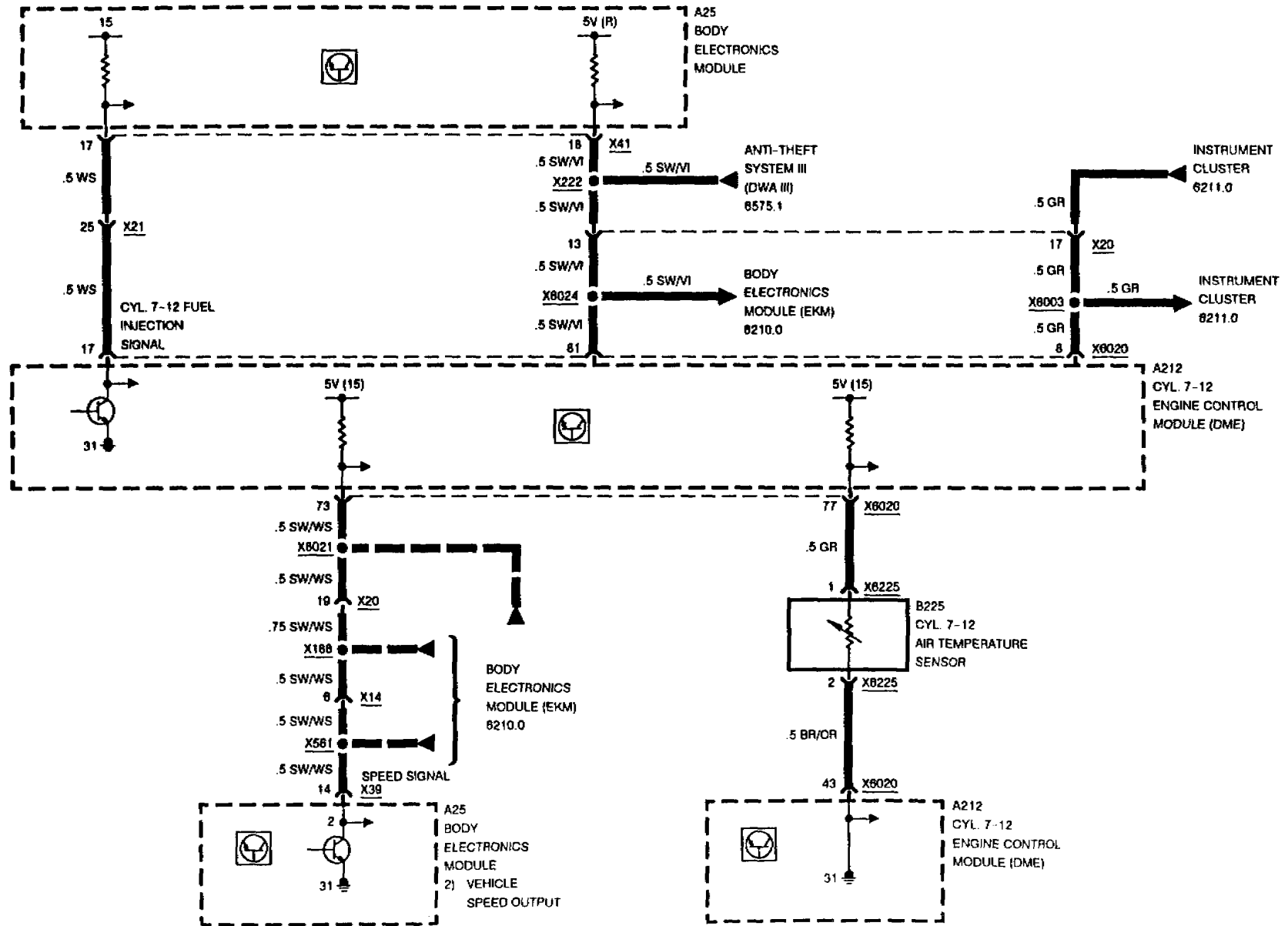
HOT IN RUN AND START





# ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

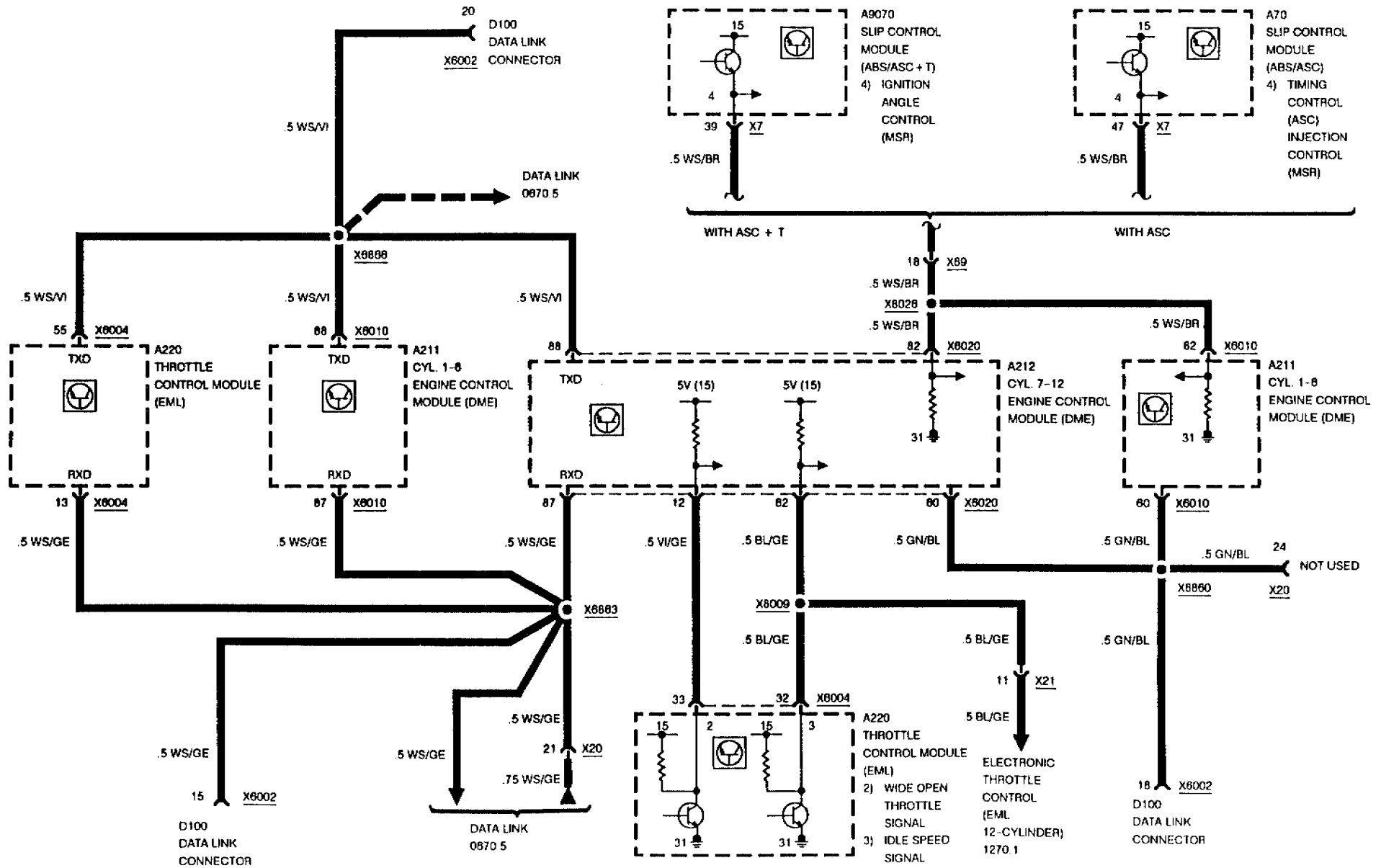
## CYL. 7-12 ENGINE CONTROL MODULE





# ENGINE CONTROL SYSTEM (DME M1.7, 12-CYLINDER M70)

## CYL. 7-12 ENGINE CONTROL MODULE



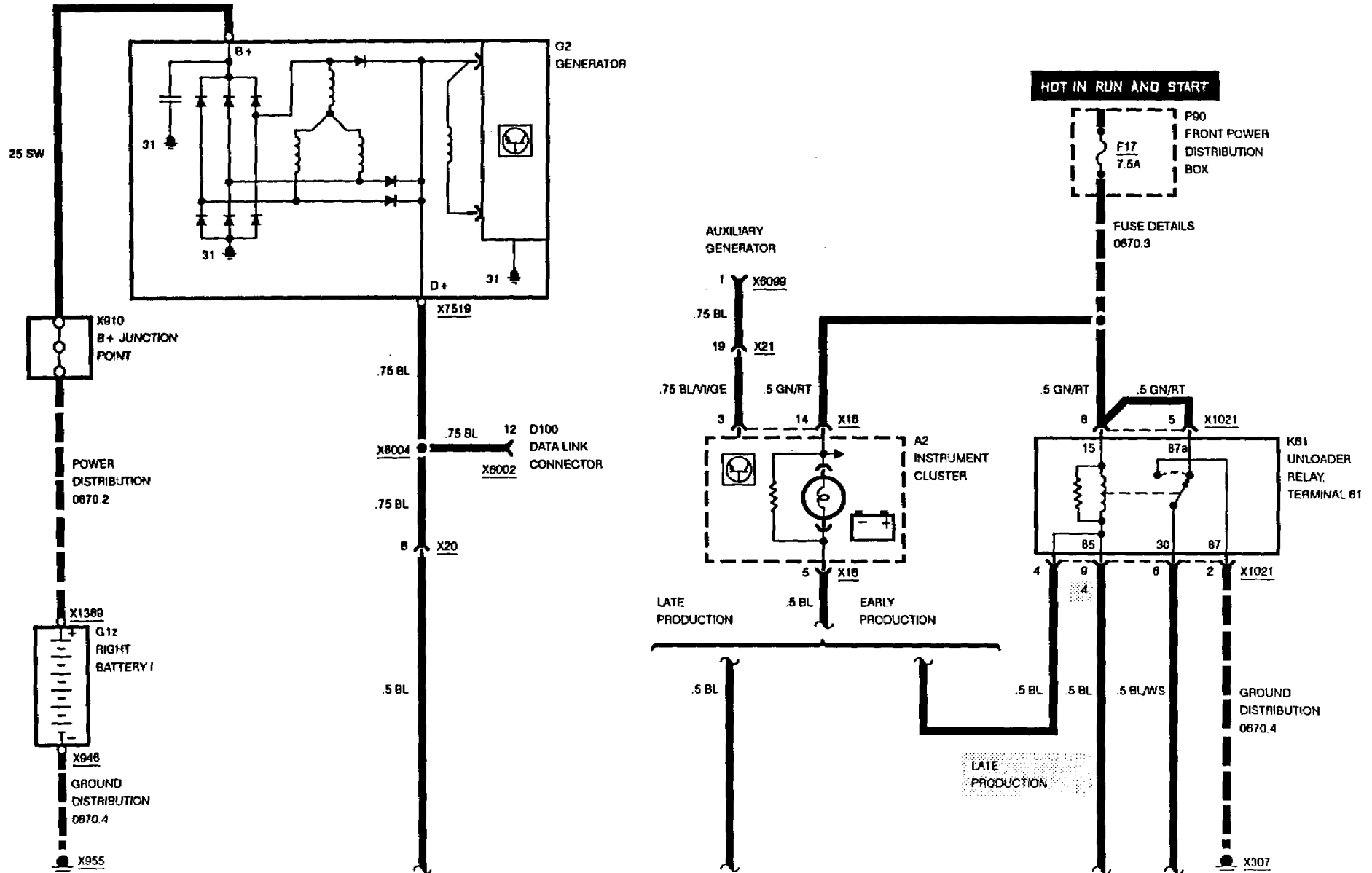
11/92

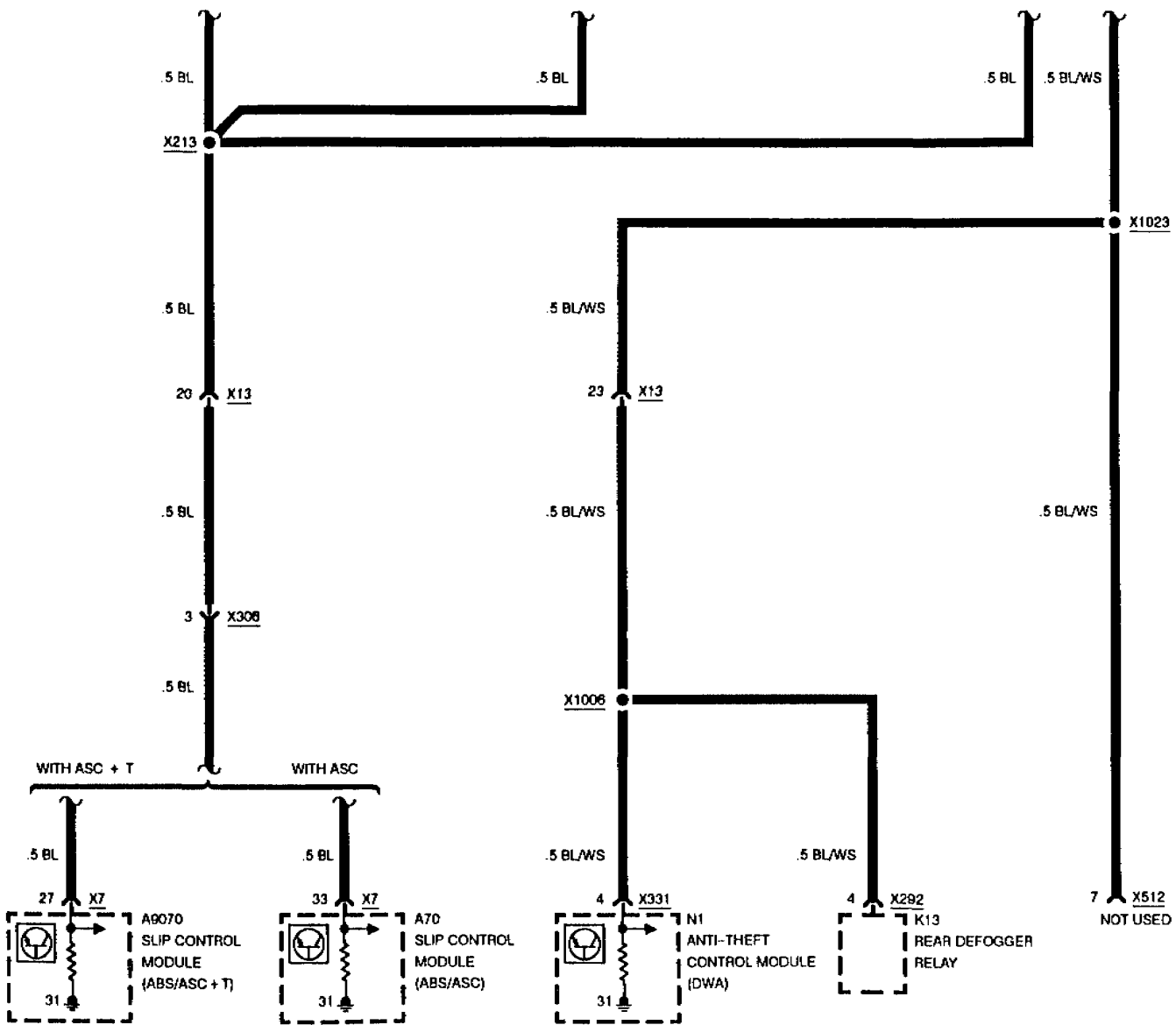
1210.6-17

1992



# CHARGING SYSTEM

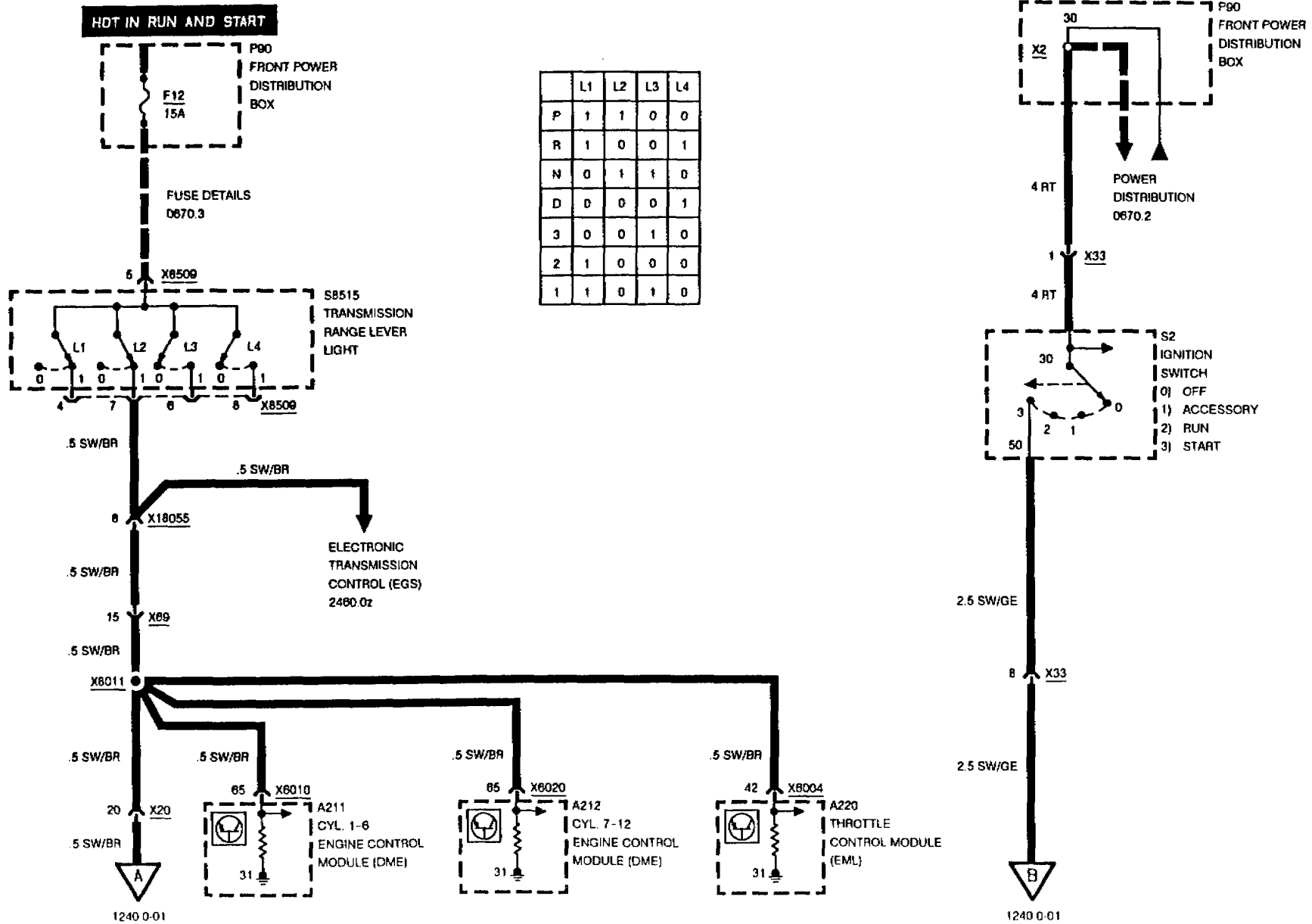






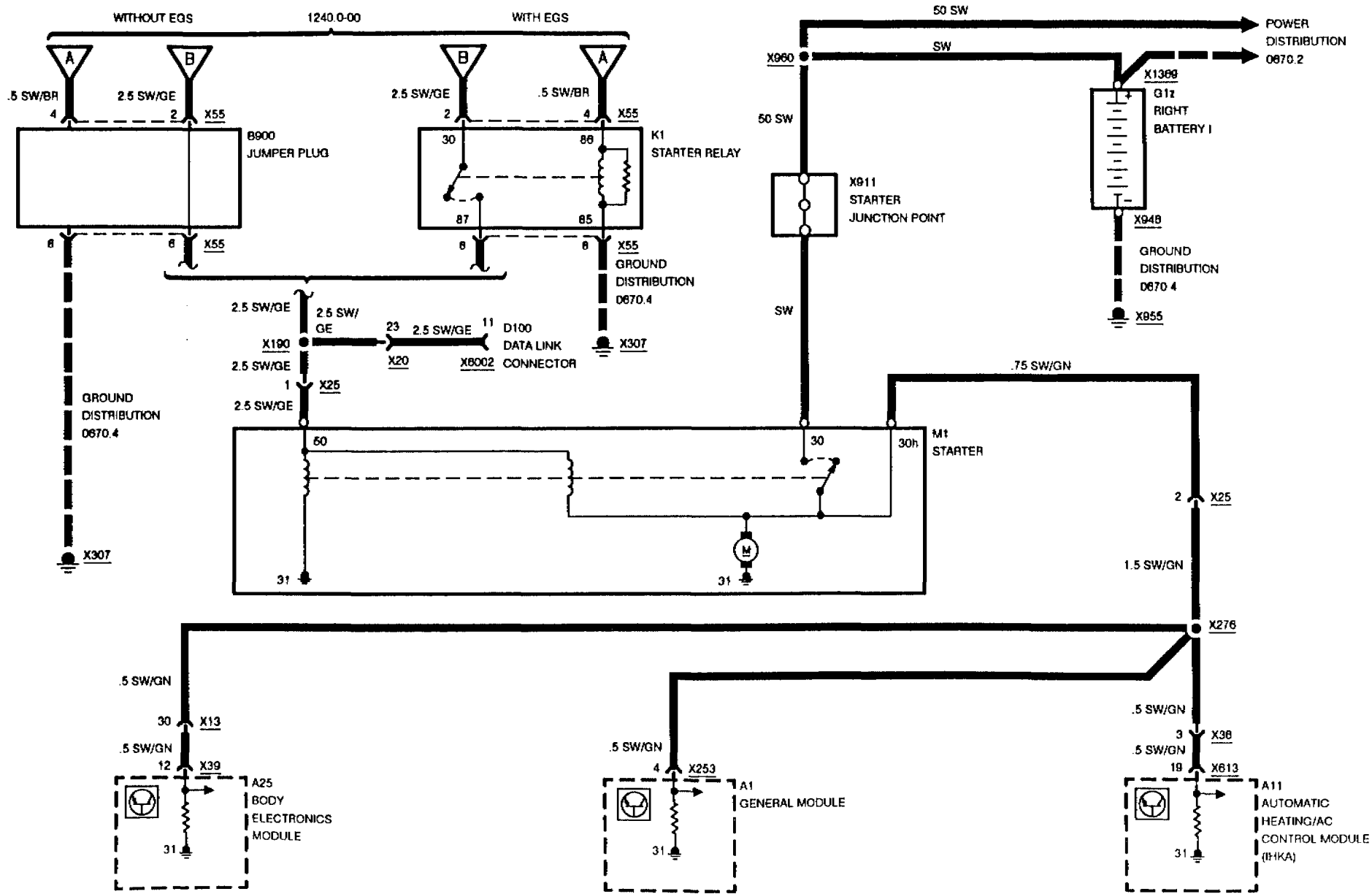


# START





# START



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1240.0-02

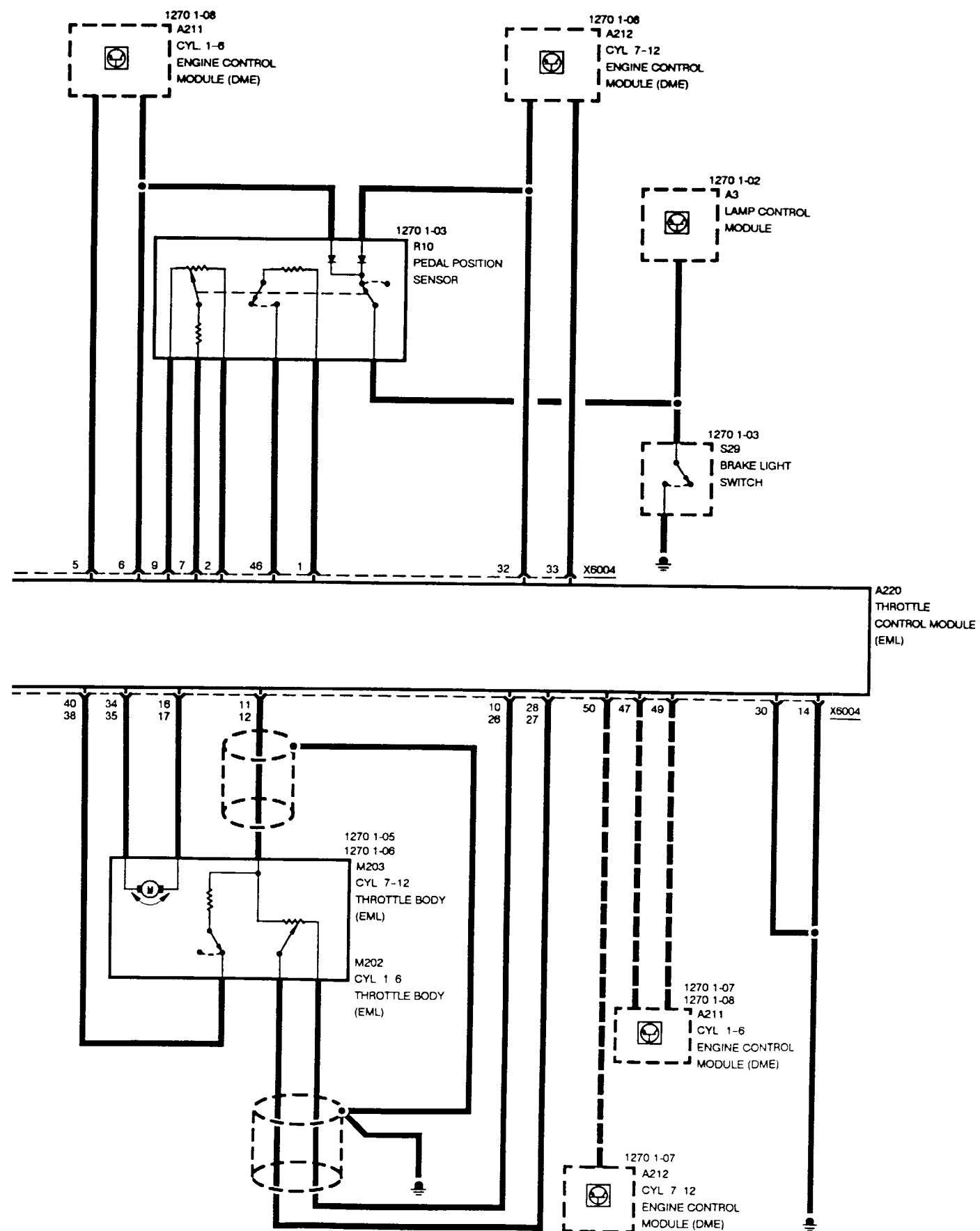


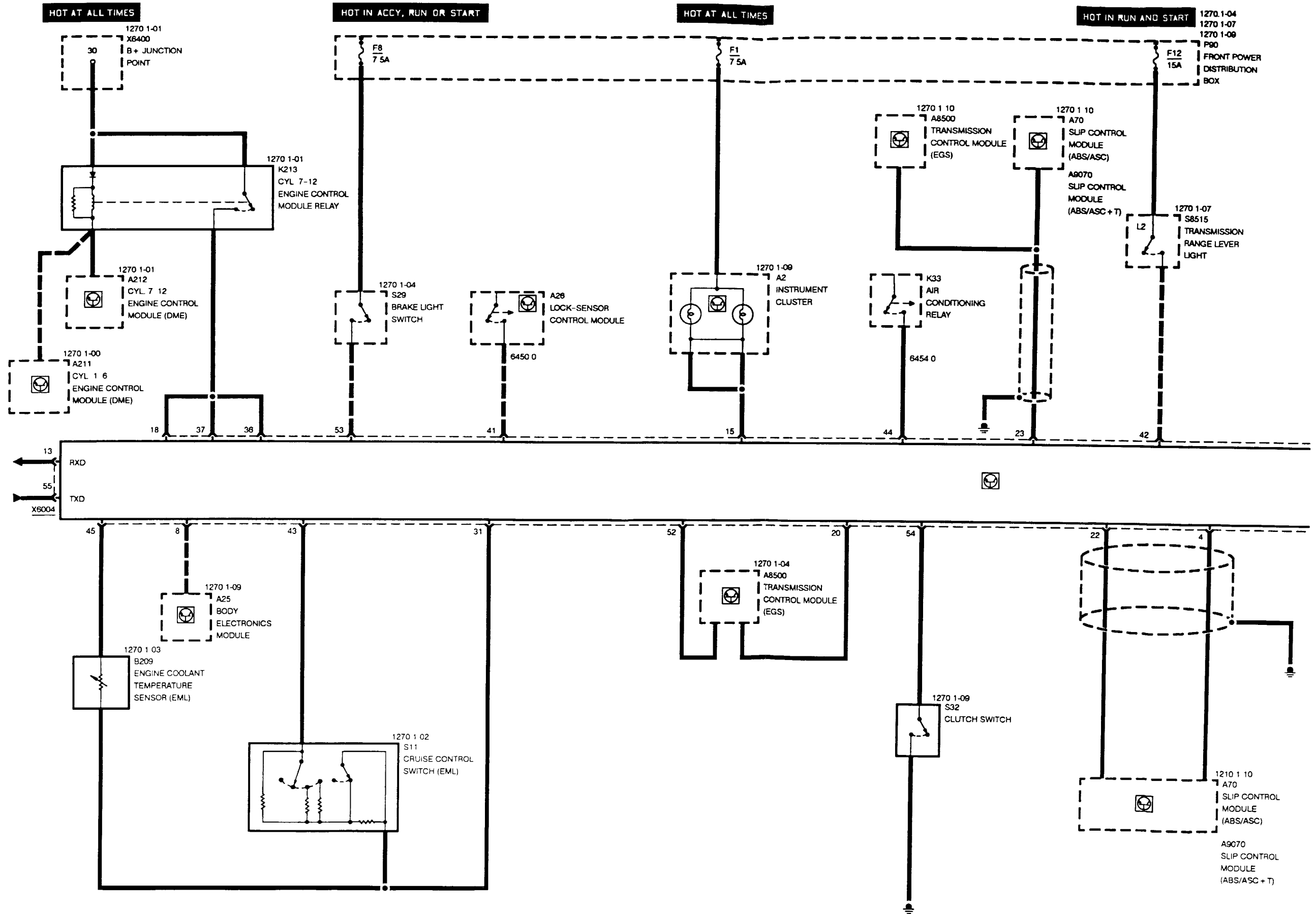
**ELECTRONIC THROTTLE CONTROL (EML 12-CYLINDER)  
BLOCK DIAGRAM**

11/92

1270 1

1992







# ELECTRONIC THROTTLE CONTROL (EML 12-CYLINDER)



## Pin Assignments

### X6004

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
1	A	5 V (not short-circuit-proof)	PWG switch	approx. 5 V	None	
2	M	Ground (electronic ground)	Component ground PWG			
3		Not used				
4	E	DK angle reduction (DKR)	ASC control unit	Square-wave signal	Defect code is stored	◆ M ◆14 approx. 100 Hz
5	A	Full load signal	DME control unit 1...6. cylinder	approx. 0 V open	ON OFF	
6	A	Idle signal	DME control unit 1...6. cylinder	approx. 0 V open	ON OFF	
7	E	PWG position	PWG potentiometer	approx. 0,4 V to 4 V	Angle	
8	E	Road speed signal	EKM control unit	Square-wave signal	None	◆ M ◆14
9	A	5 V (not short-circuit-proof)	PWG potentiometer	approx. 5 V	None	
10	M	Ground (electronic ground)	Component ground DK - 7...12. cylinder			
11	A	5 V (not-short-circuit-proof)	DK potentiometer DK 7...12. cylinder	approx. 5 V	None	
12	A	5 V (not-short-circuit-proof)	DK potentiometer DK 1...6. cylinder	approx. 5 V	None	



## ELECTRONIC THROTTLE CONTROL (EML 12-CYLINDER)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
13	E	Diagnosis	Diagnostic socket RxD			
14	M	Ground (Output ground)	Output ground DK 1...6. cylinder			
15	A	EML warning lamp	Instrument cluster	approx. 0 V	ON	*) With ignition switched off
*)	E	Voltage supply for defect code memory		approx. 12 V	None	
16	A	Drive throttle (DK) actuator	DK actuator DK - 7...12. cylinder	Square-wave signal	Defect code is stored	
17	A	Drive throttle (DK) actuator	DK actuator DK 1...6. cylinder	Square-wave signal	Defect code is stored	
18	E	Voltage supply (+)	DME main relay 2 7...12. cylinder	On-board voltage	None	
19	M	Ground	Ground point			
20	A	Kick-down signal	EGS control unit	approx. 0 V approx. 12 V	ON OFF	
21		Not used				
22	E	DK angle increase (DKE)	ASC control unit	Square-wave signal	Defect code is stored	◆ M ◆ 14 approx. 100 Hz
23	A	DK angle signal (DKV)	ASC/EGS	Square-wave signal	Defect code is stored	◆ M ◆ 14 approx. 100 Hz
24		Not used				
25		Not used				
26	M	Ground (electronic ground)	Component ground DK 1...6. cylinder			
27	E	Throttle position	DK potentiometer DK 1...6. cylinder	approx. 4,6 V to 1 V	Angle	





## ELECTRONIC THROTTLE CONTROL (EML 12-CYLINDER)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
28	E	Throttle position	DK potentiometer DK 7...12. cylinder	approx. 4,6 V to 1 V	Angle	
29		Not used				
30	M	Ground (output ground)	Output ground DK - 7...12. cylinder			
31	M	Ground (electronic ground)	Water temperature sensor			
32	A	Idle signal	DME control unit 7...12. cylinder	approx. 0 V open	ON OFF	
33	A	Full load signal	DME control unit 7...12. cylinder	approx. 0 V open	ON OFF	
34	A	Drive throttle (DK) actuator	DK actuator DK 7...12. cylinder	Square-wave signal	Defect code is stored	
35	A	Drive throttle (DK) actuator	DK actuator DK 1...6. cylinder	Square-wave signal	Defect code is stored	
36	E	Voltage supply (+)	DME main relay 2 7...12. cylinder	On-board voltage	None	
37	E	Voltage supply (+)	DME main relay 2 7...12. cylinder	On-board voltage	None	
38	E	Throttle 170 switch	DK switch DK 1...6. cylinder	approx. 5 V open	ON OFF	
39		Not used				
40	E	Throttle 170 switch	DK switch DK - 7...12. cylinder	approx. 5 V open	ON OFF	
41	E	A/C compressor ON	Lock sensor	On-board voltage open	ON OFF	



## ELECTRONIC THROTTLE CONTROL (EML 12-CYLINDER)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
42	E	P and N identifier (EGS)	Gear selector lever switch	approx. 12 V open	ON OFF	
43	E/A	FGR identifier	Cruise control switch	approx. 0 V to 5 V	Detected position	
44	E	A/C status signal	A/C relay/DME	approx. 12 V open	ON OFF	
45	E/A	Engine-coolant temperature	TMot EML sensor	approx. 0 V to 5 V	°C	
46	E	PWG > 9° switch	PWG switch	approx. 5 V open	ON OFF	
47	E	Engine speed signal (TD)	DME control unit 1...6. cylinder	Square-wave signal	None	
48		Not used				
49	E	Injection signal (ti)	DME control unit 1...6. cylinder	Square-wave signal	Defect code is stored	
50	E	Injection signal (ti)	DME control unit 7...12. cylinder	Square-wave signal	Defect code is stored	
51		Not used				
52	E	S-program identifier (EGS)	EGS control unit	ca. 0 V open	ON OFF	
53	E	Brake pedal position	Brake light switch	approx. 12 V open	ON OFF	
54	E	Clutch pedal position	Clutch switch			
55	E/A	Diagnosis	Diagnostic socket TxD			

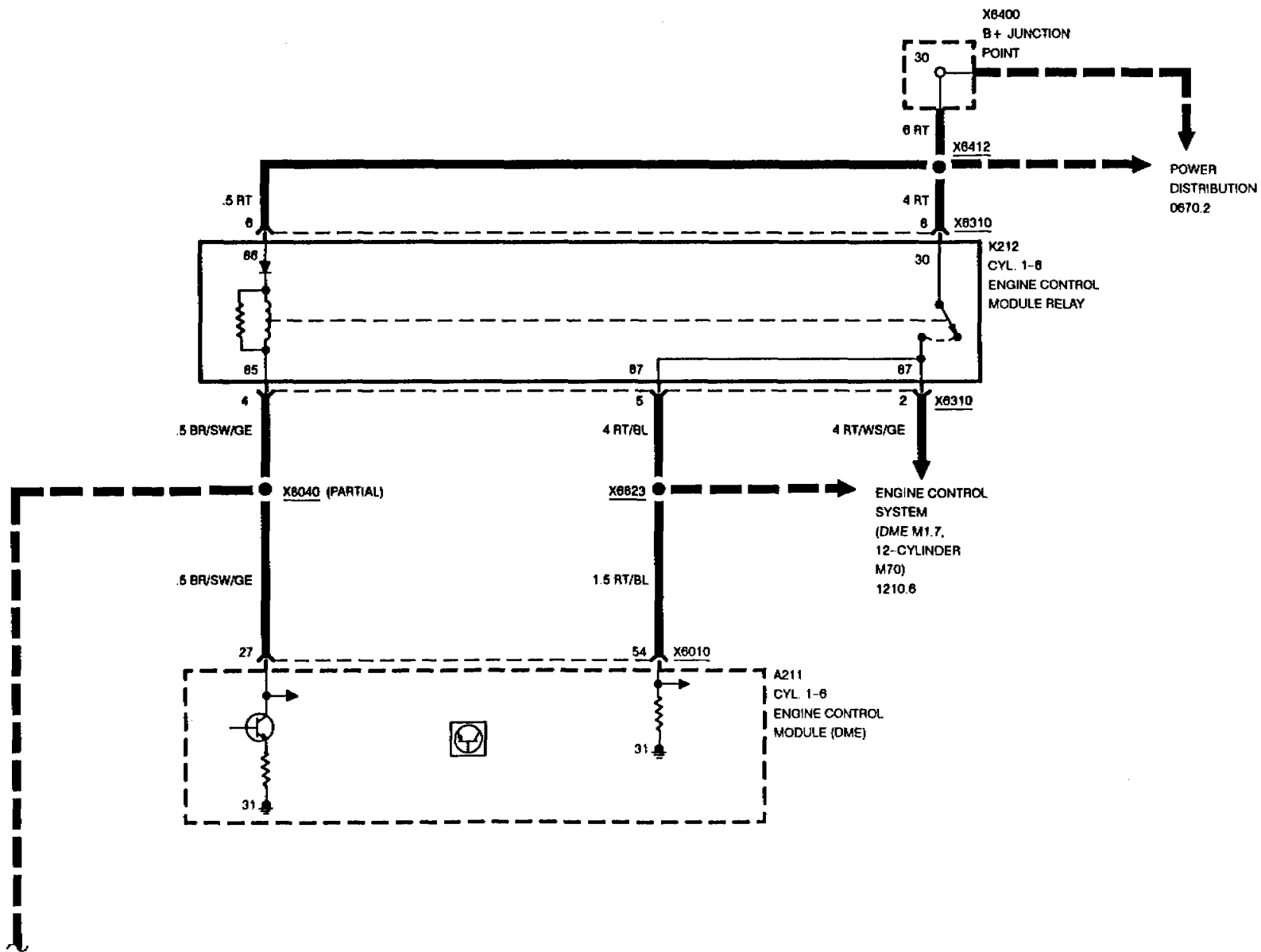
E = Input, A = Output, M = Ground

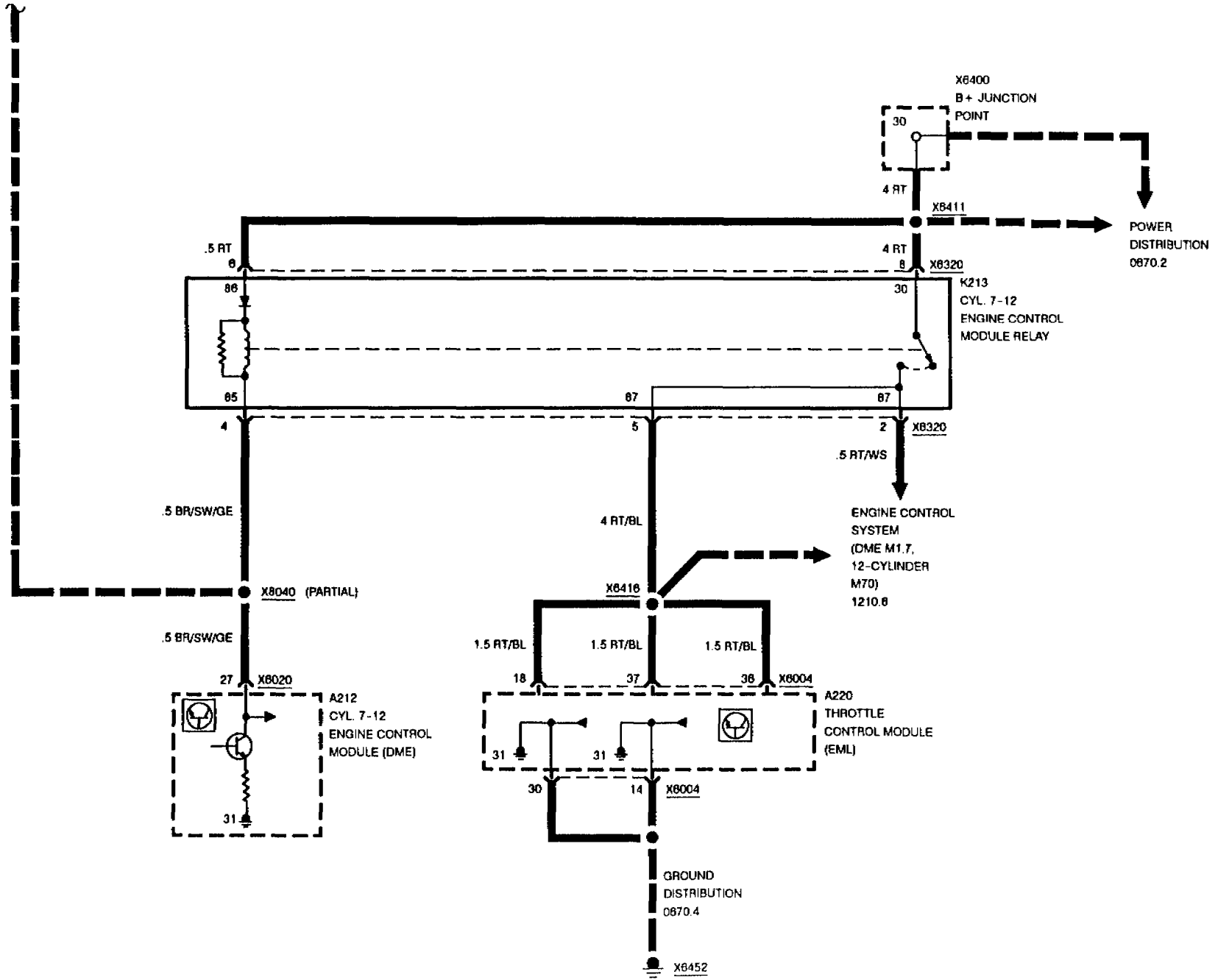
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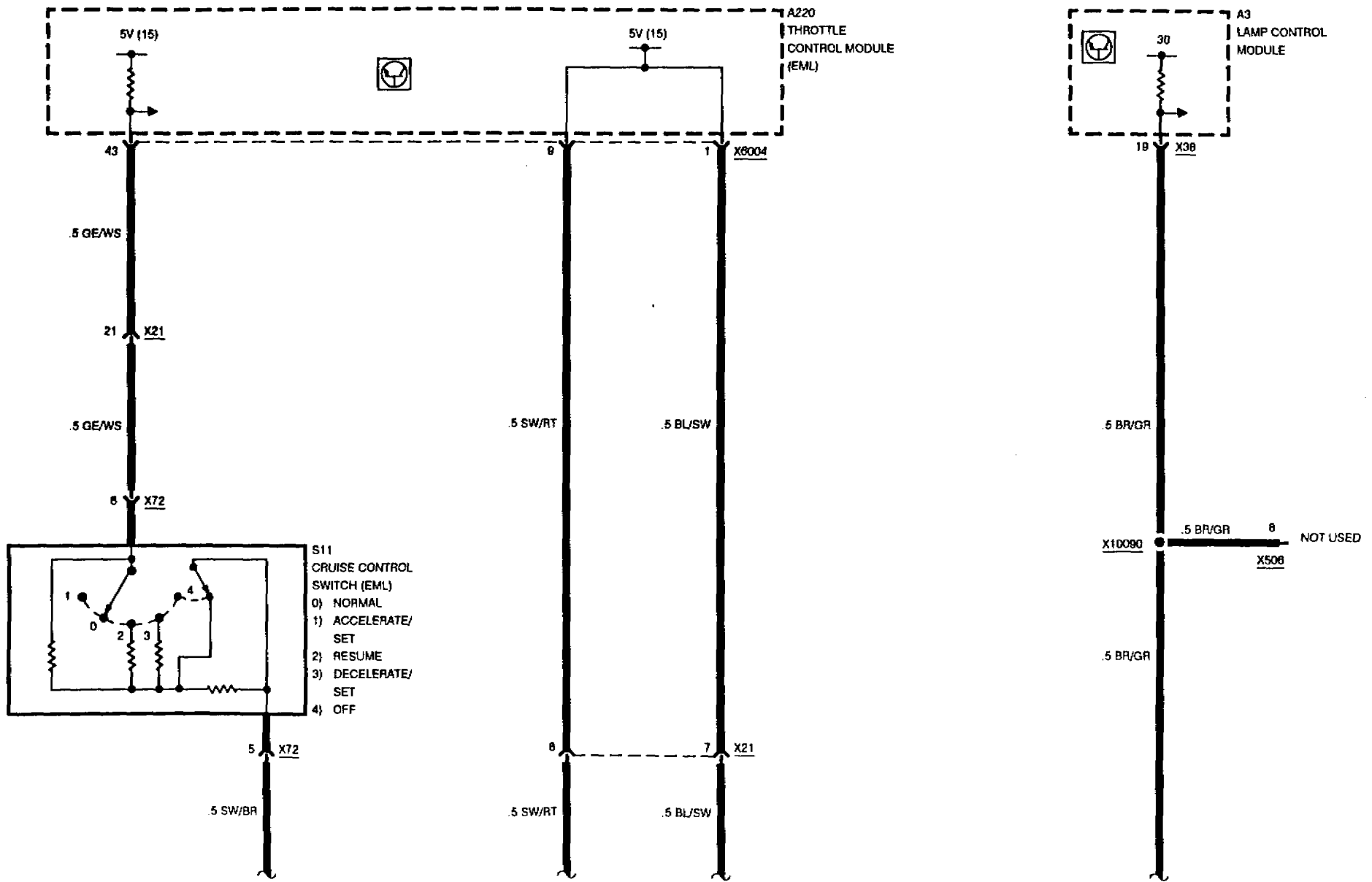
# ELECTRONIC THROTTLE CONTROL (EML 12-CYLINDER)

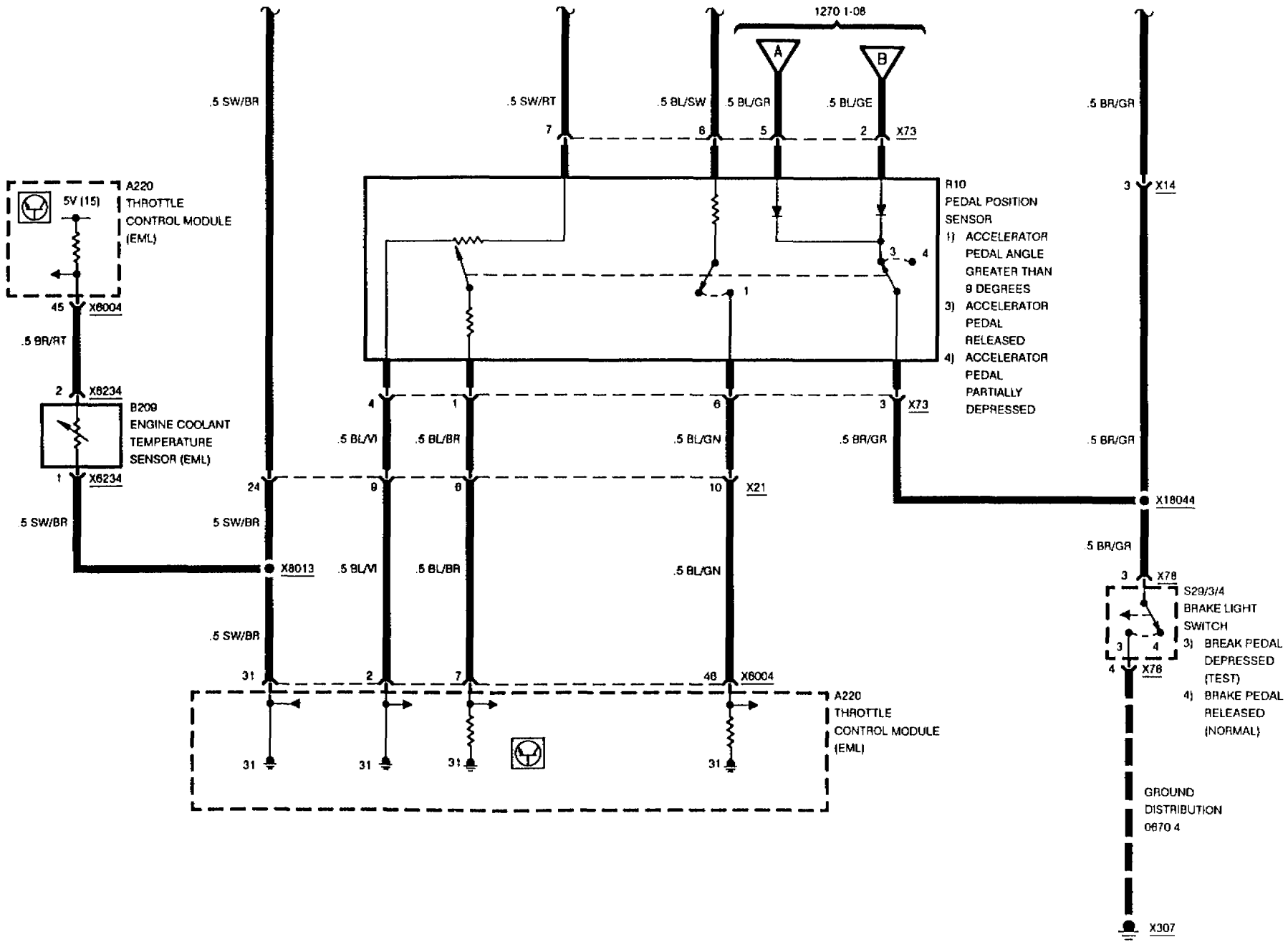






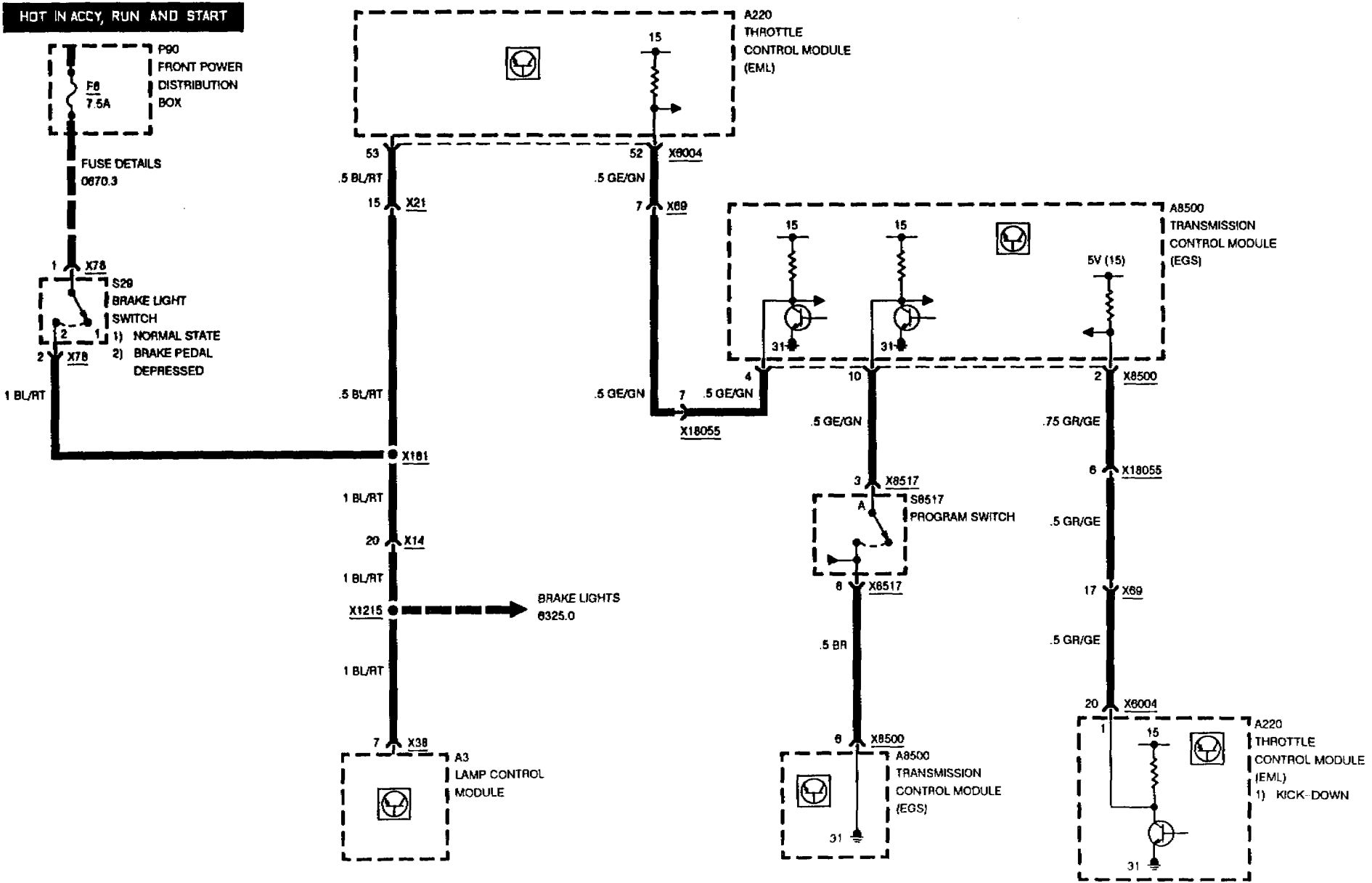
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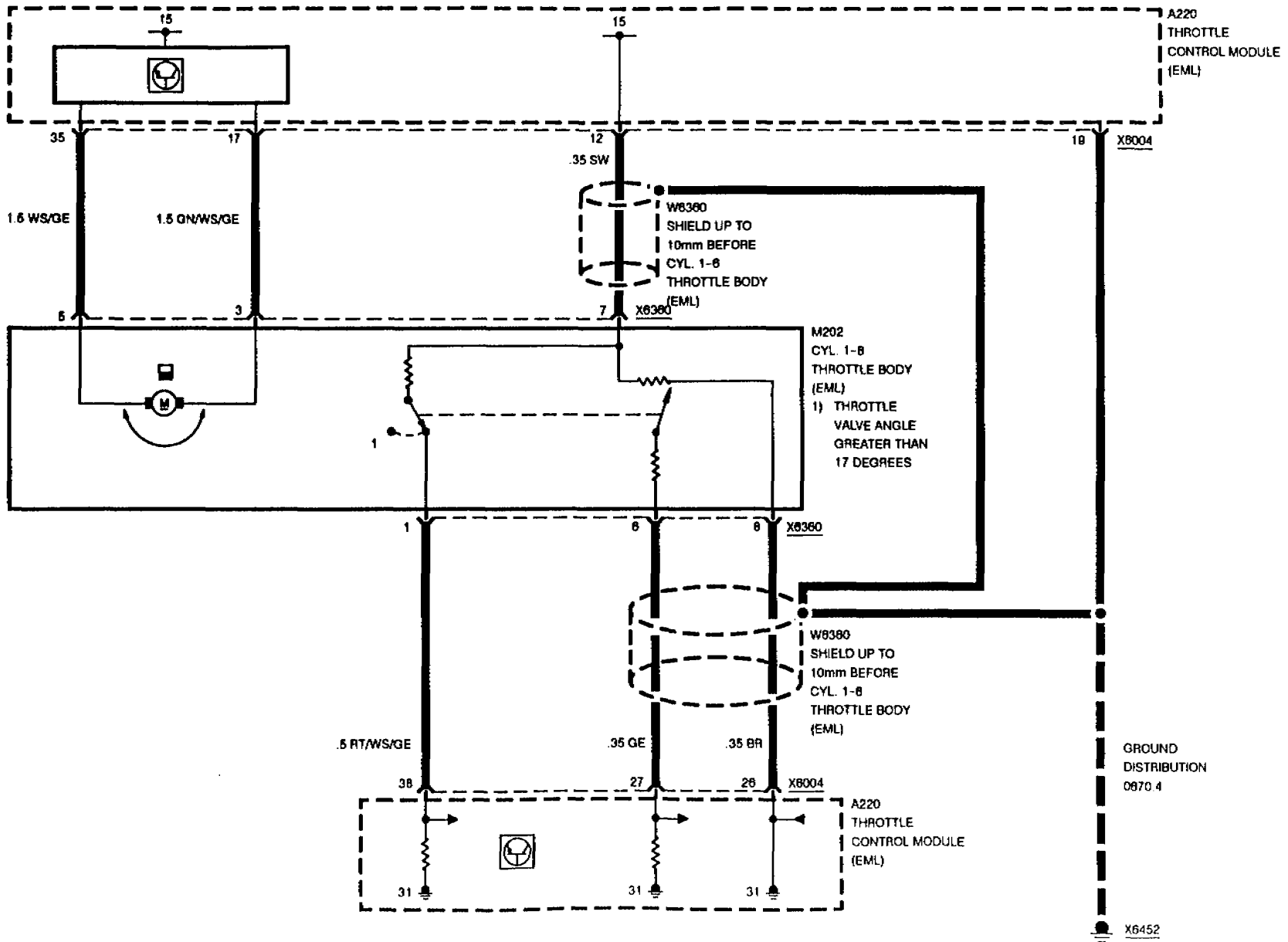
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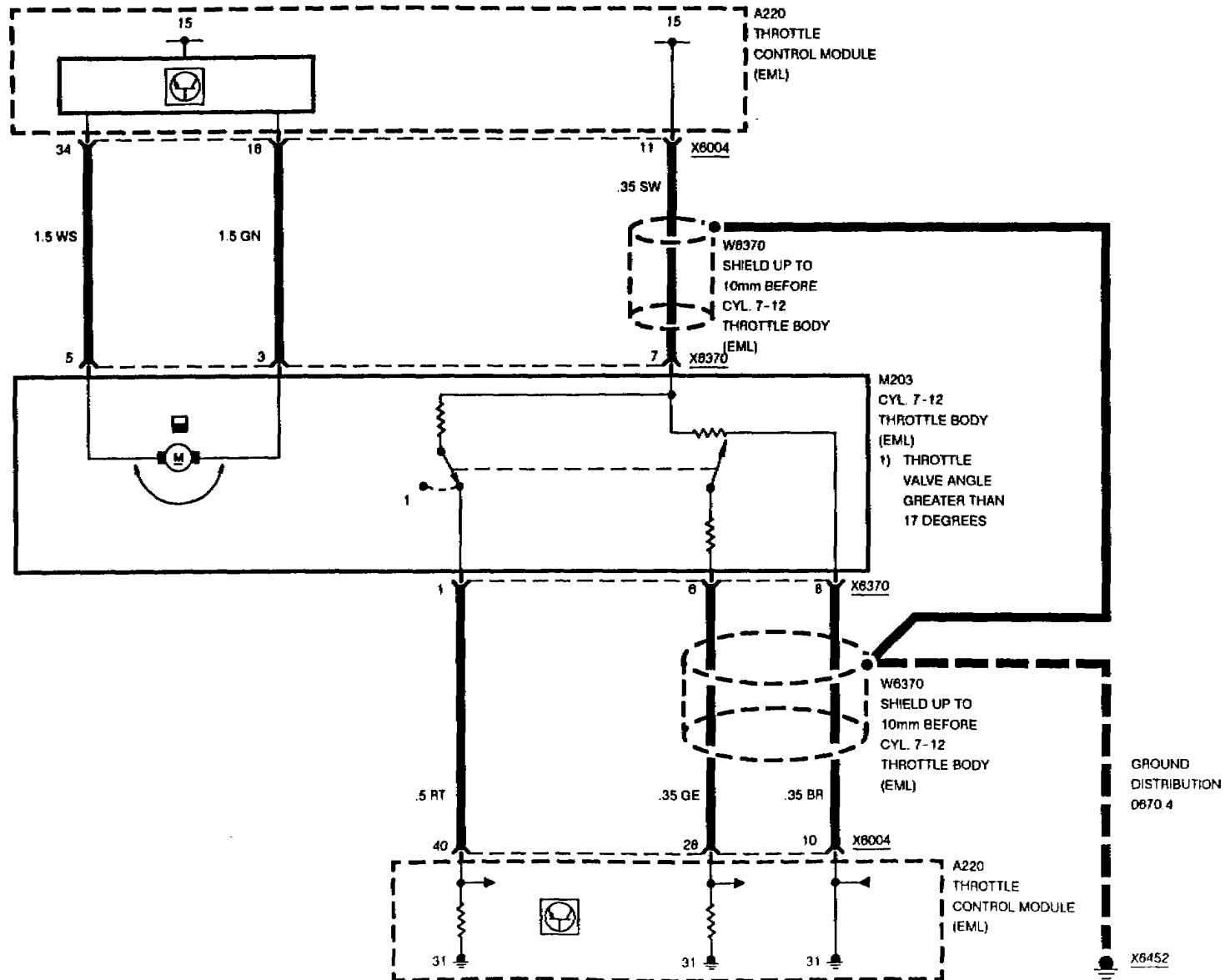


# ELECTRONIC THROTTLE CONTROL (EML 12-CYLINDER)



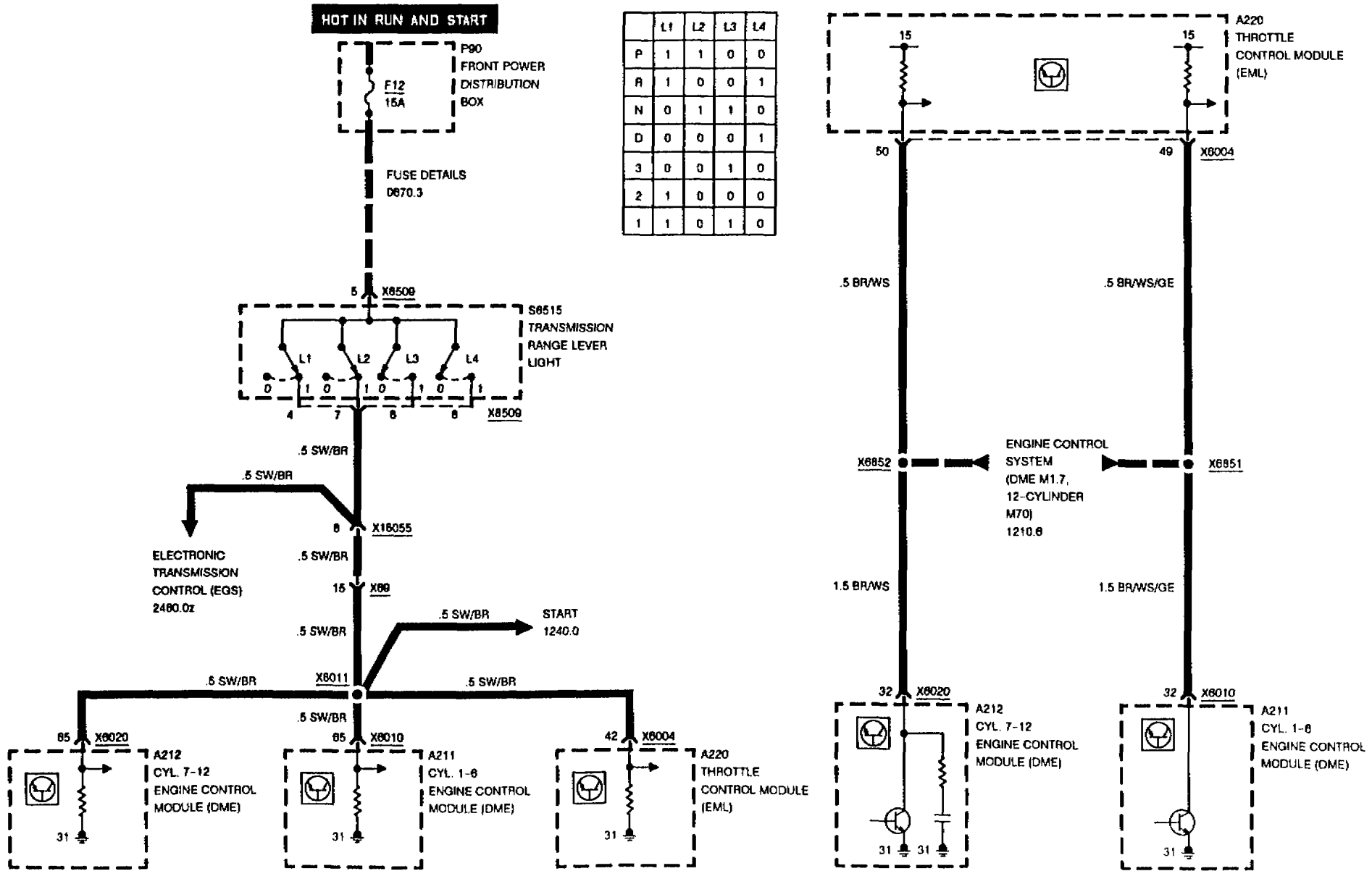


# ELECTRONIC THROTTLE CONTROL (EML 12-CYLINDER)



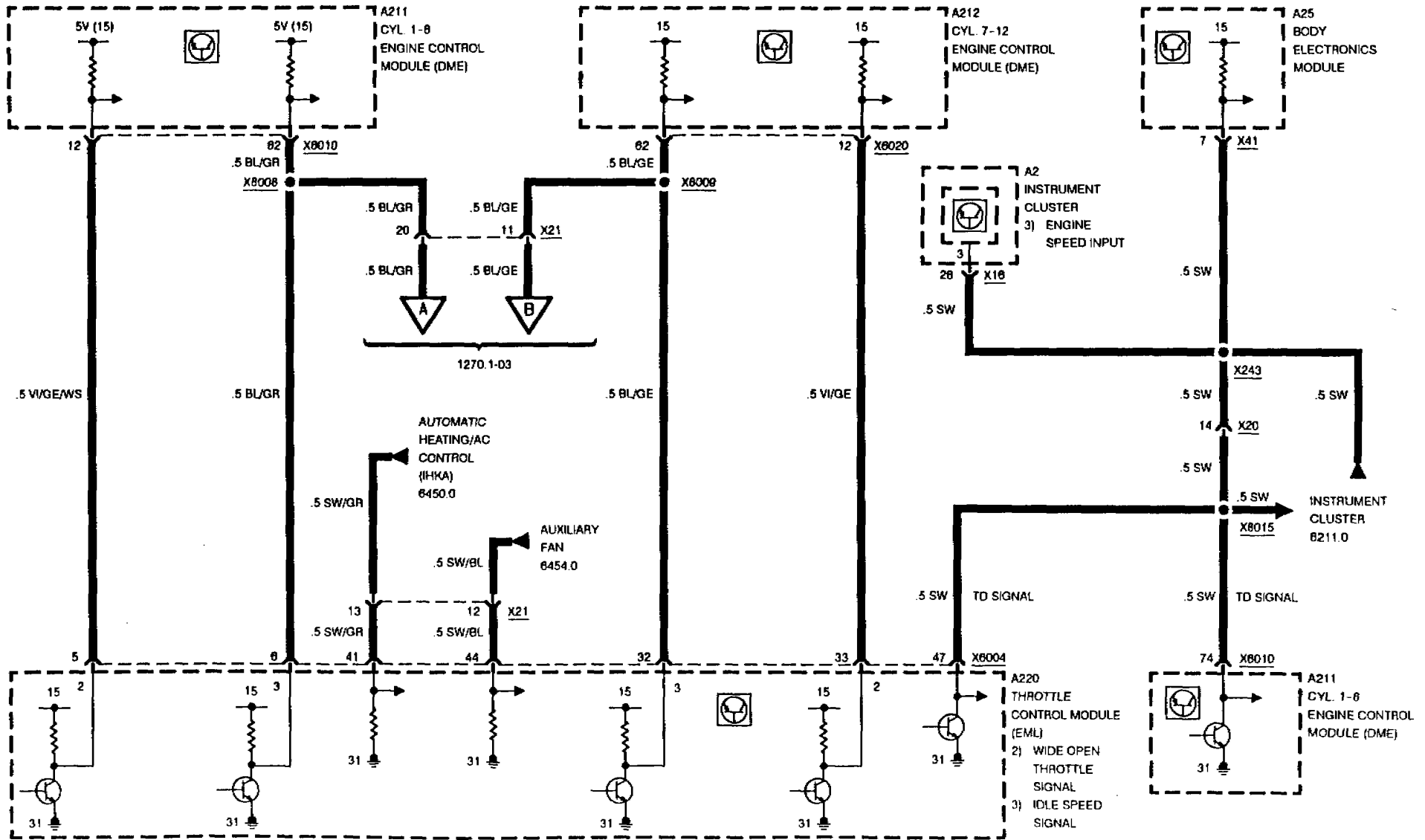


# ELECTRONIC THROTTLE CONTROL (EML 12-CYLINDER)



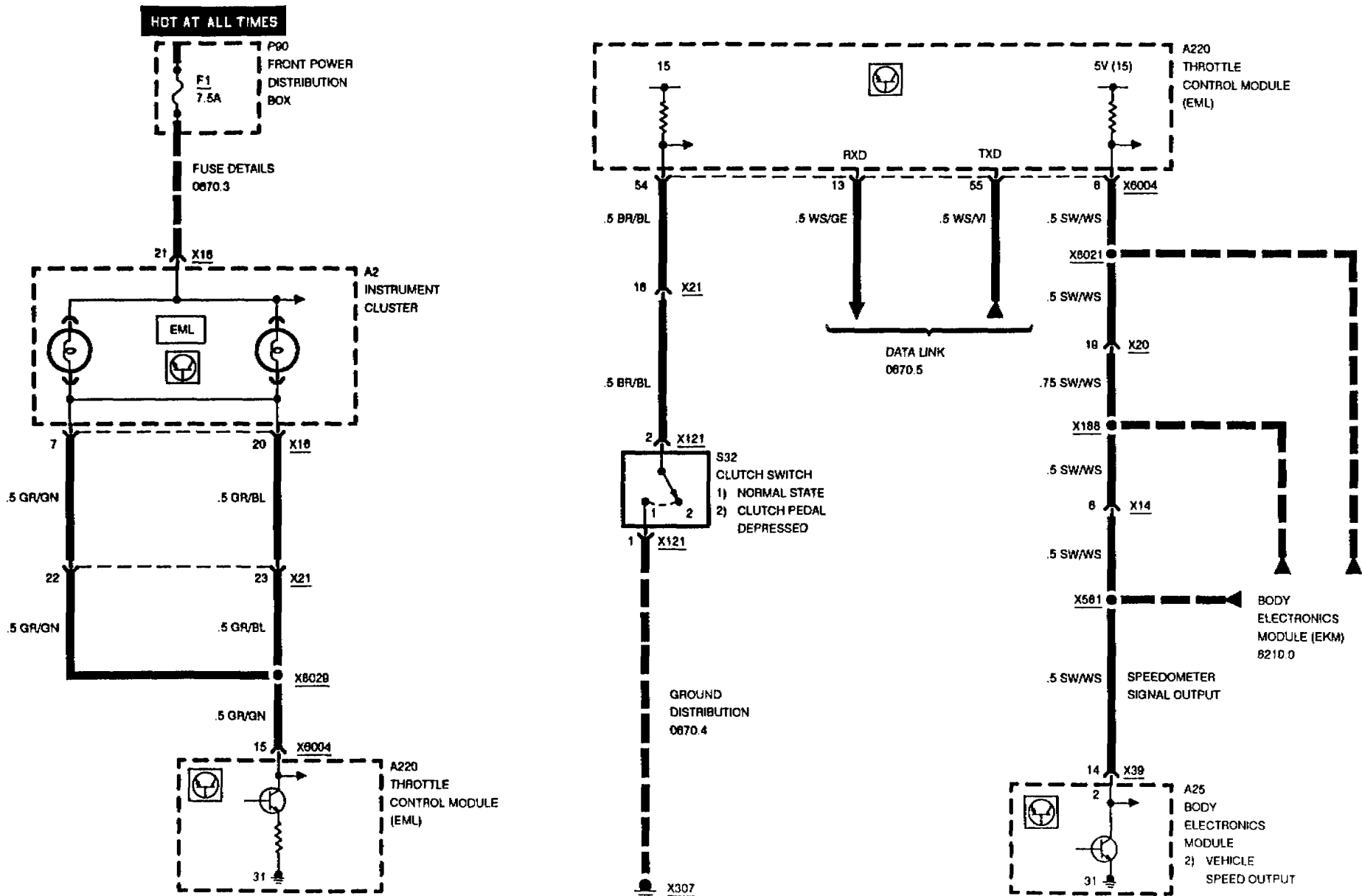


# ELECTRONIC THROTTLE CONTROL (EML 12-CYLINDER)





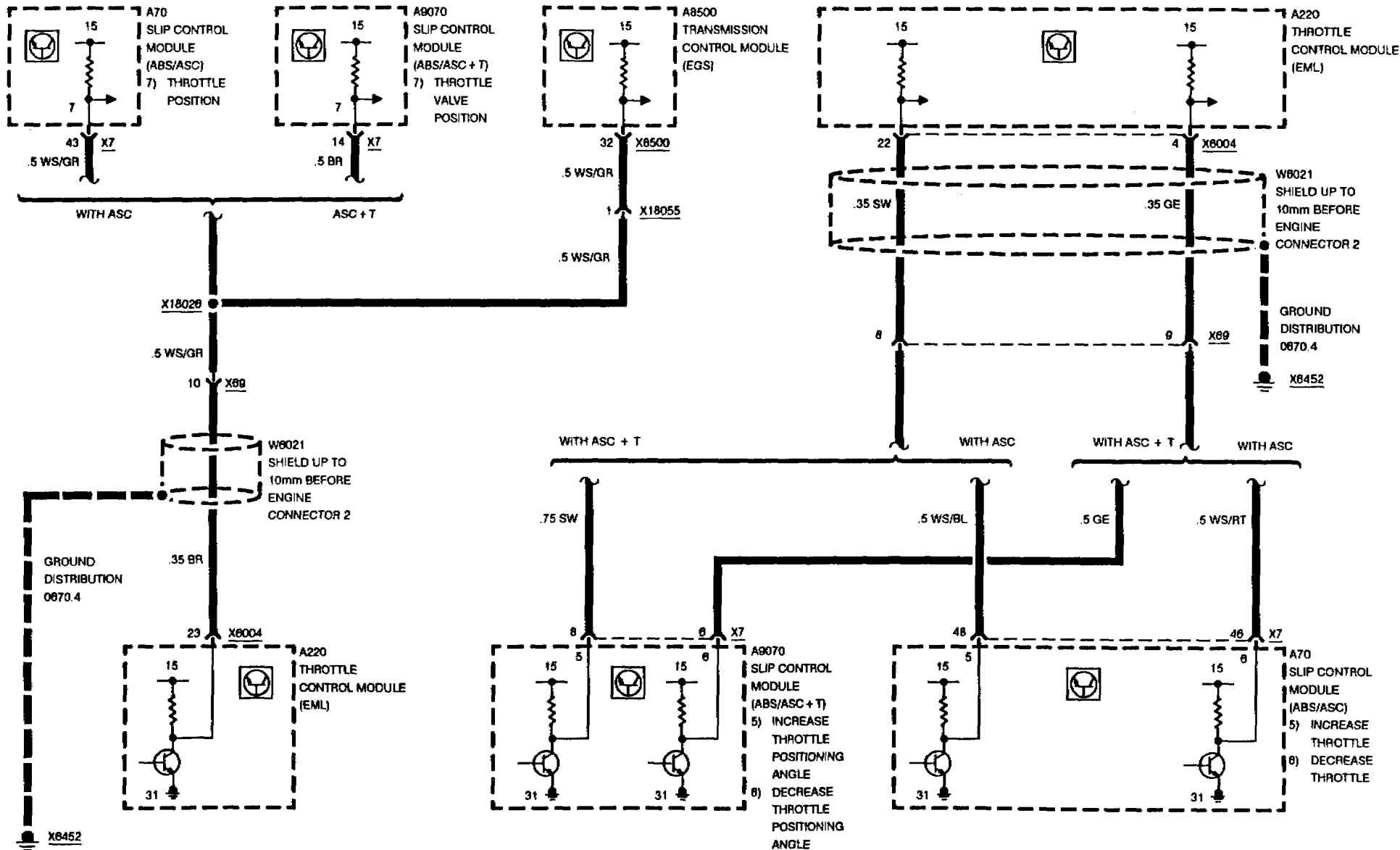
# ELECTRONIC THROTTLE CONTROL (EML 12-CYLINDER)





# ELECTRONIC THROTTLE CONTROL (EML 12-CYLINDER)

## SLIP CONTROL INTERFACE

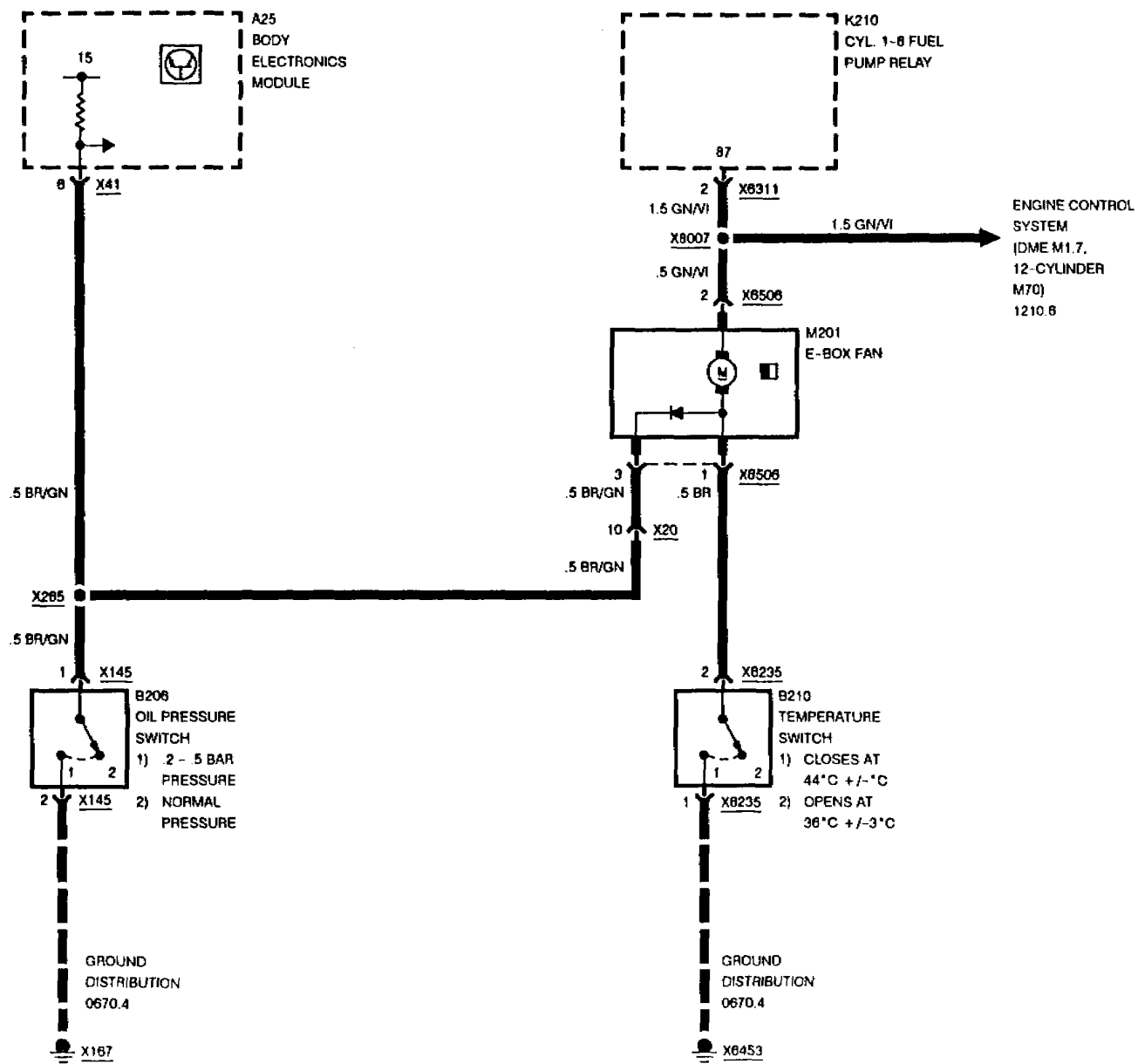


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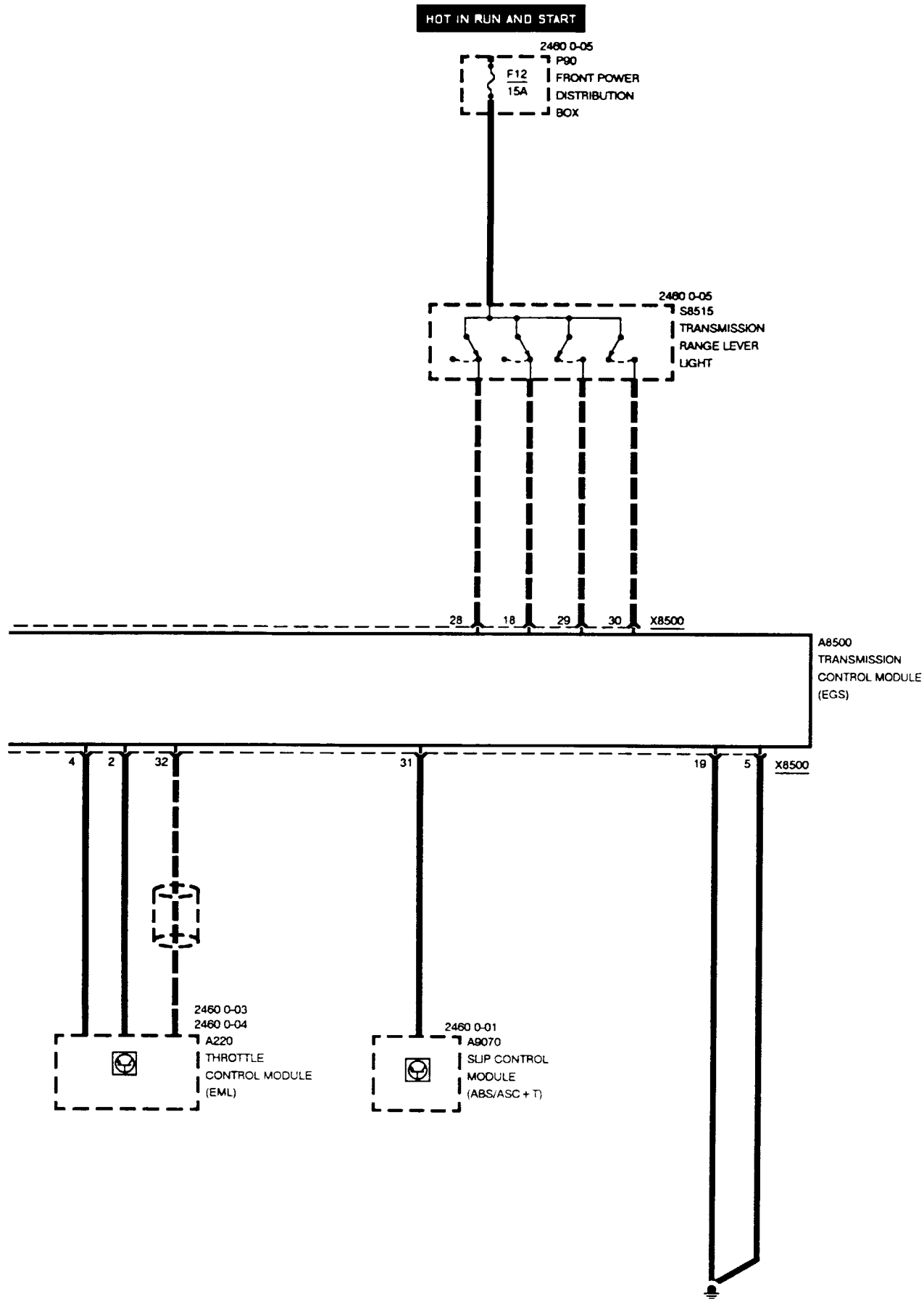
# E-BOX FAN

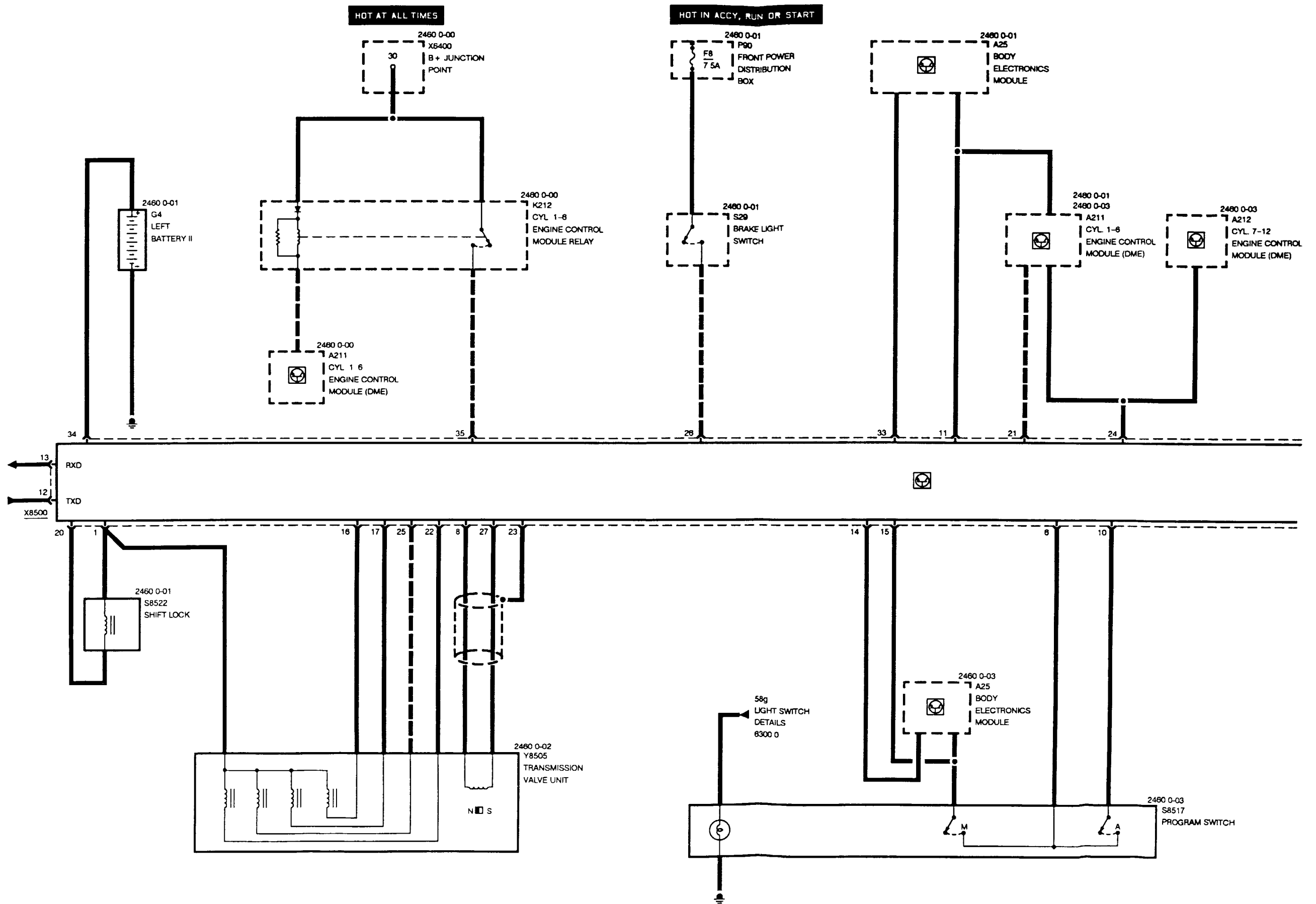




**ELECTRONIC TRANSMISSION CONTROL (EGS)  
BLOCK DIAGRAM**

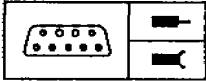








## ELECTRONIC TRANSMISSION CONTROL (EGS)



### Pin Assignments

#### X8500

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
1	A	Voltage supply, solenoid valves and pressure regulator	Gearshift 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	active low	Status display	
3		Not used				
4	E/A	S-program	EML control unit	active low	Status display	Only connection to EML in US version (GS 1.26, 1.27)
5	M	Ground, control unit				
6	M	Ground, program button	Program switch			
7		Not used				
8	E	Output speed n-ab (+)	Gearshift unit		Status display	
9		Not used				
10	E	A-program button	Program switch	active low	Status display	Only in GS 1.26, 1.27
11	E	ti signal	DME control unit 1, EKM		Status display	
12	E/A	TxD				
13	E	RxD				
14	E/A	E-program or A-program	EKM control unit			



## ELECTRONIC TRANSMISSION CONTROL (EGS)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
15	E/A	M-program	Program switch, instrument cluster	active low	Status display	
16	A	Solenoid valve 1	Gearshift unit	active low	Component activation	
17	A	Solenoid valve 2	Gearshift unit	active low	Component activation	
18	E	Position switch L1	Range switch	active high	Status display	
19	M	Terminal 31, ground pressure regulator and solenoid valves				
20	A	Unlock shift lever	Shift lock solenoid	active low	Component activation	Only in GS 1.22, 1.27
21	E	Engine speed n-mot (TR signal)			Status display	
22	A	Solenoid valve pressure regulator	Gearshift unit	Current control	Component activation	
23	M	Shield, speed sensor	Speed sensor shield	Ground		
24	A	Engine intervention	DME control units	active low	Component activation	
25	A	Solenoid valve, torque converter clutch	Gearshift unit	active low	Component activation	
26	E	Brake pedal position	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	Range switch	active high	Status display	
29	E	Position switch L3	Range switch	active high	Status display	
30	E	Position switch L4	Range switch	active high	Status display	
31	E	ASC active	ABS/ASC + T control unit	active low		Only in GS 1.27
32	E	Throttle position	EML control unit	Pulse width-modulated	Status display	Correspond to accelerator pedal position
33	A	Fault display	Instrument cluster EKM	active high		



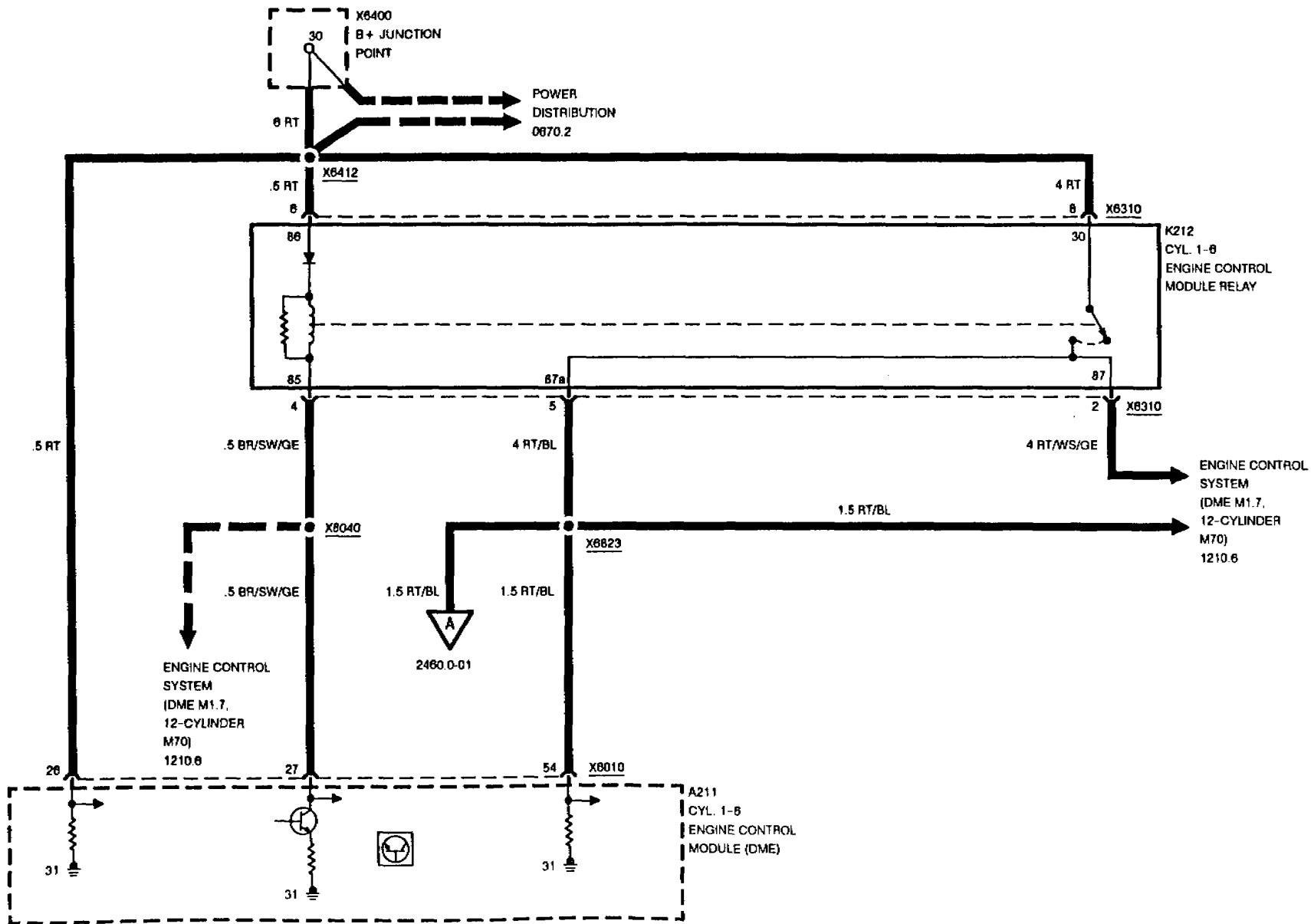
## ELECTRONIC TRANSMISSION CONTROL (EGS)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
34	E	Voltage supply	Battery (+)			Continuous supply
35	E	Voltage supply	Main relay I			Holding circuit DME

E = Input, A = Output, M = Ground



# ELECTRONIC TRANSMISSION CONTROL (EGS)

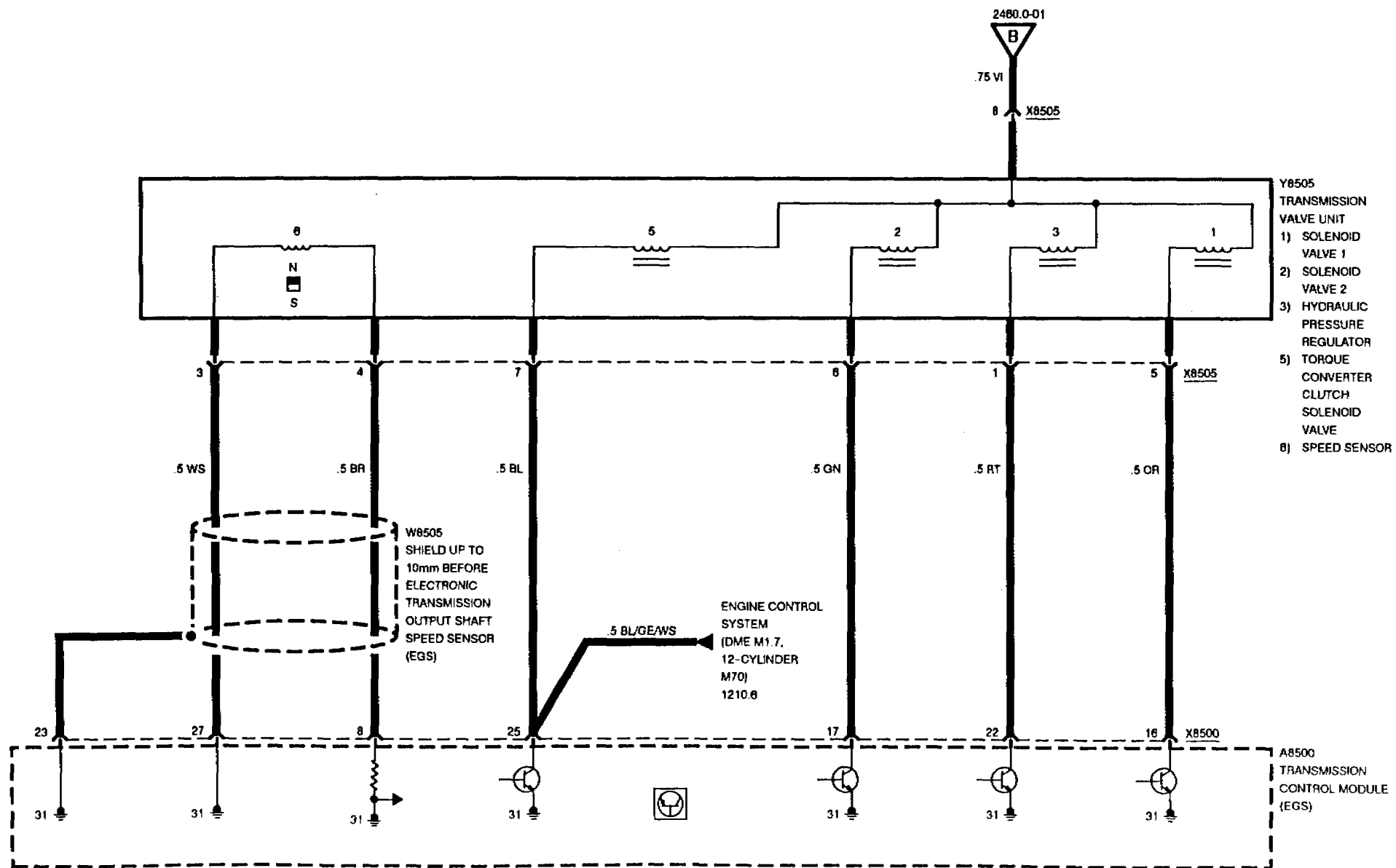






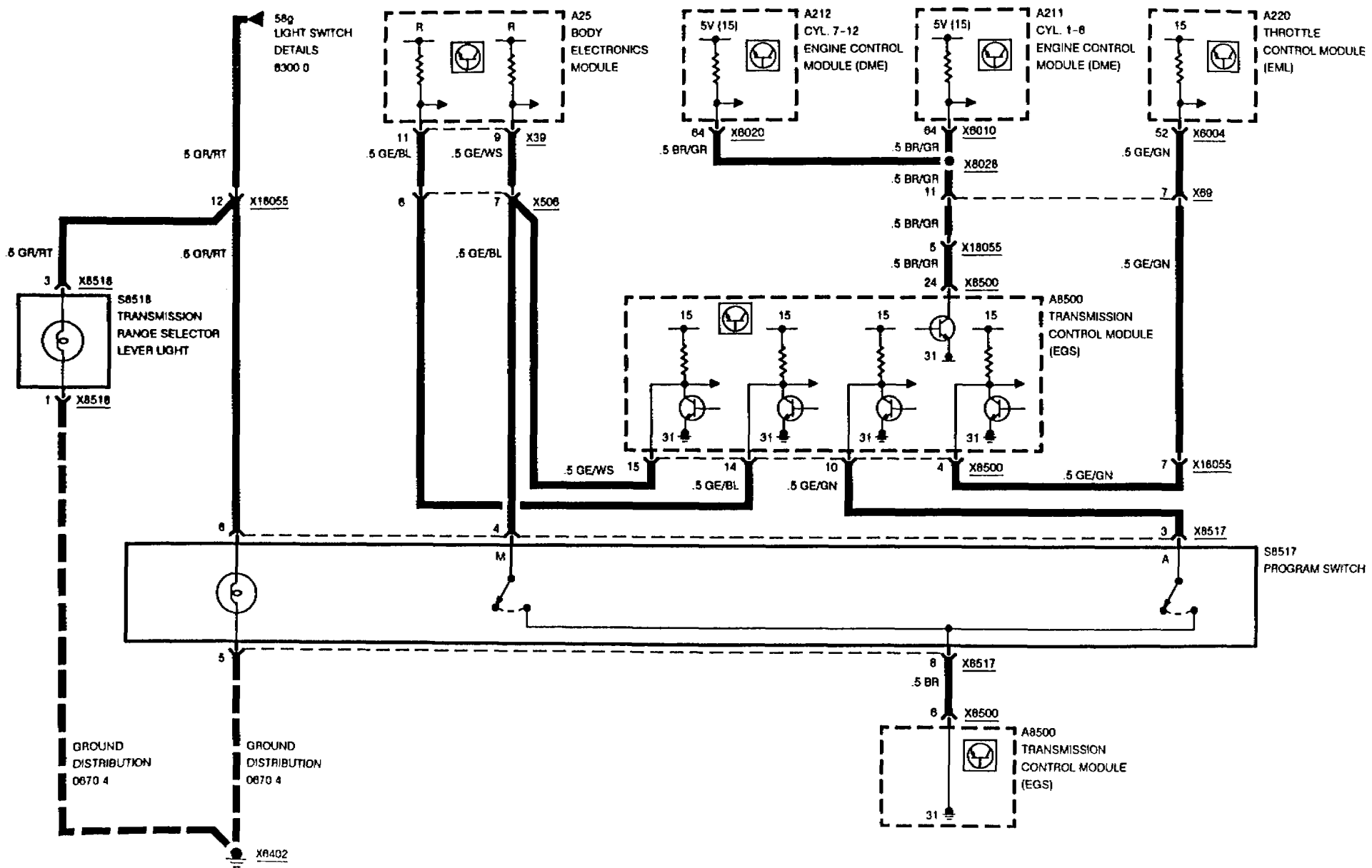


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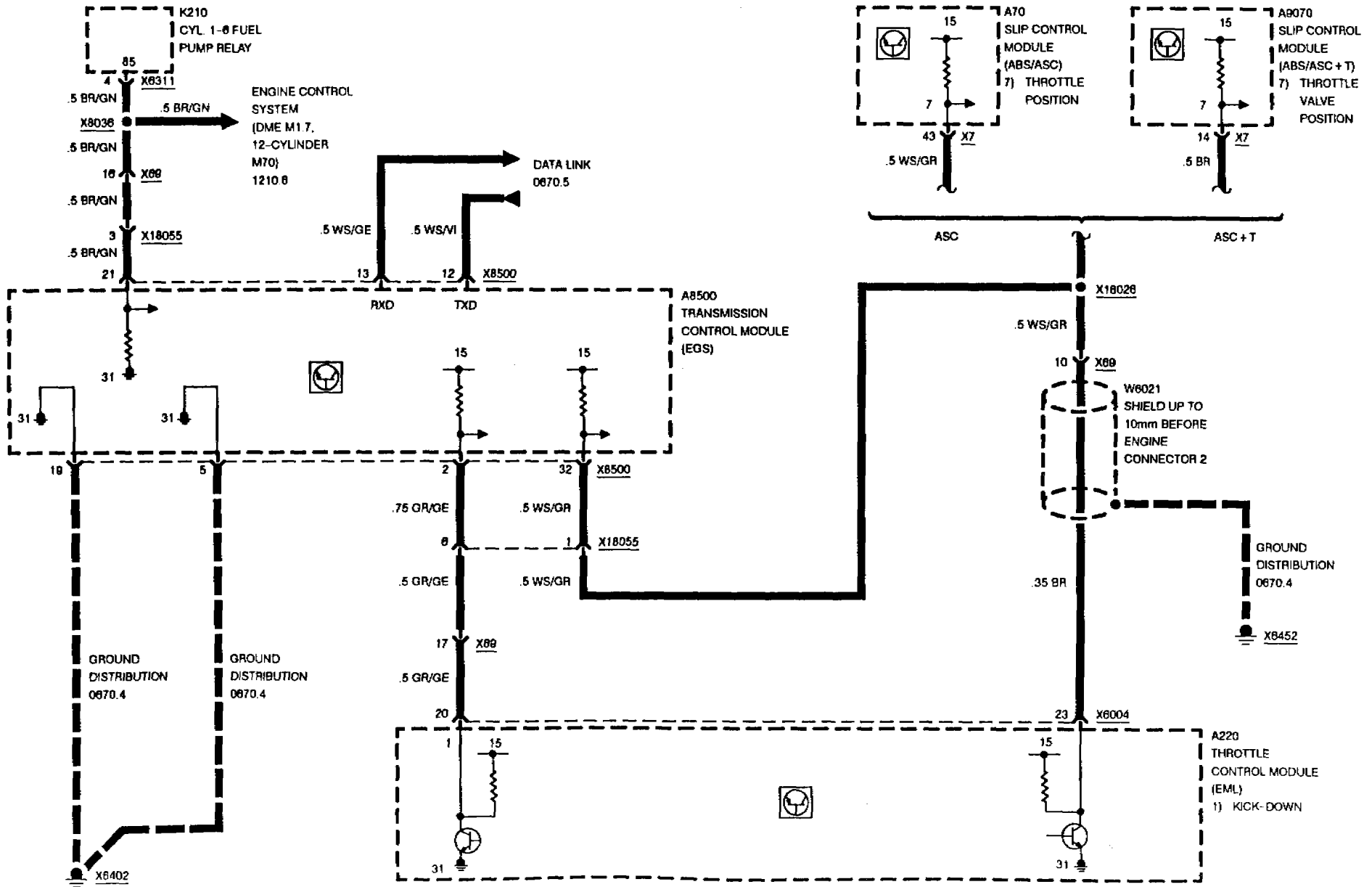




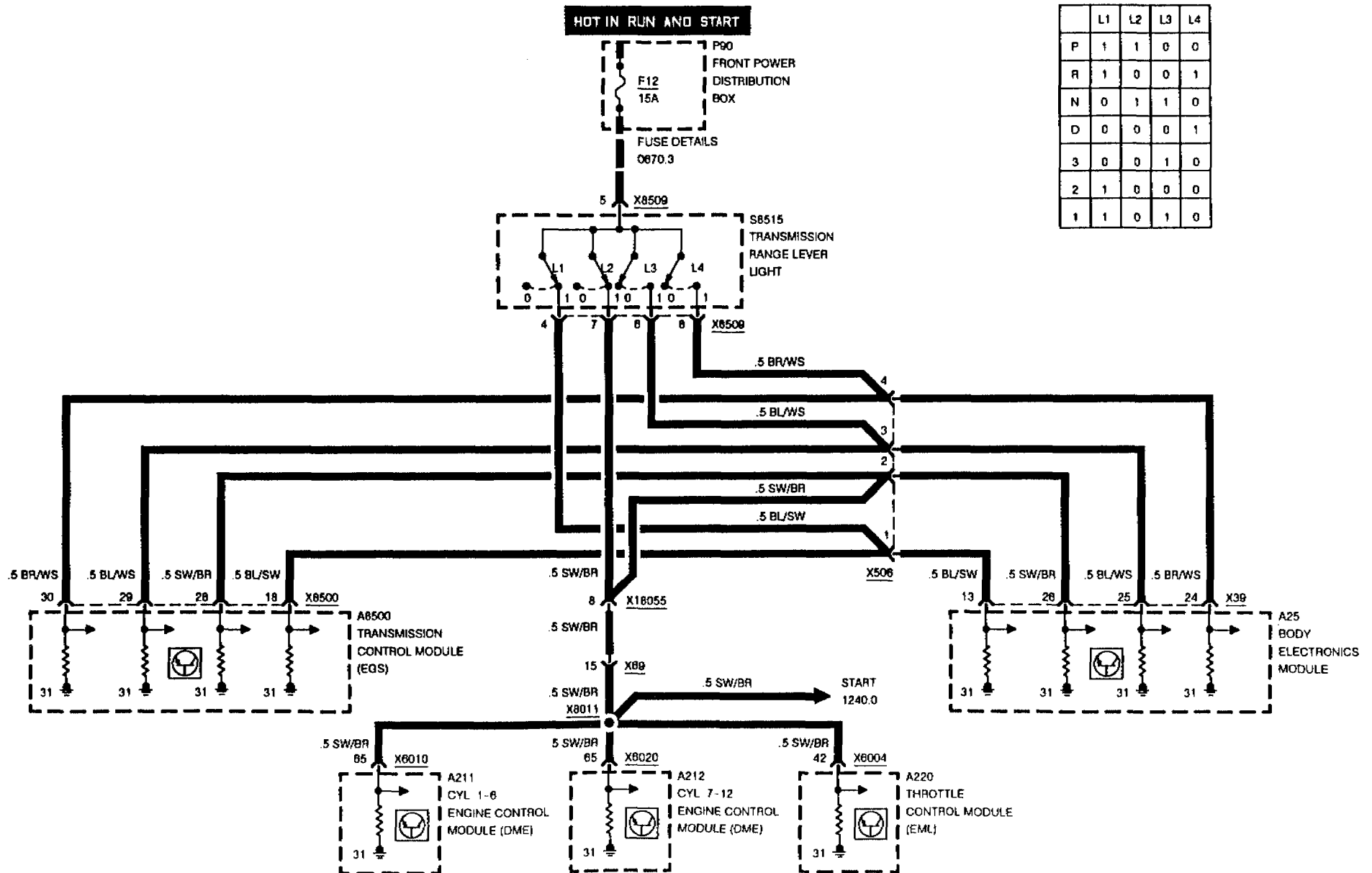
# ELECTRONIC TRANSMISSION CONTROL (EGS)



# ELECTRONIC TRANSMISSION CONTROL (EGS)

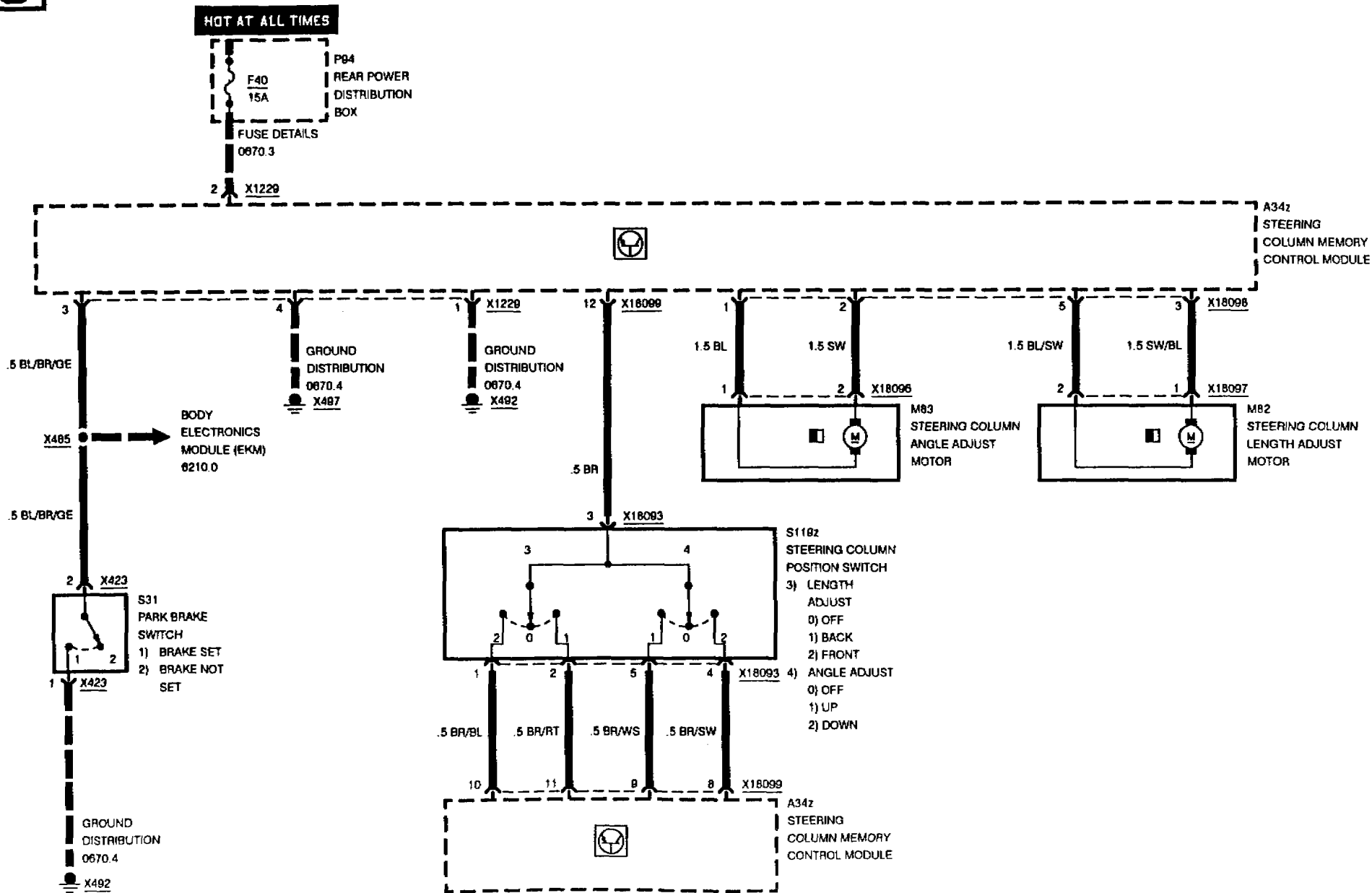


# ELECTRONIC TRANSMISSION CONTROL (EGS)



	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

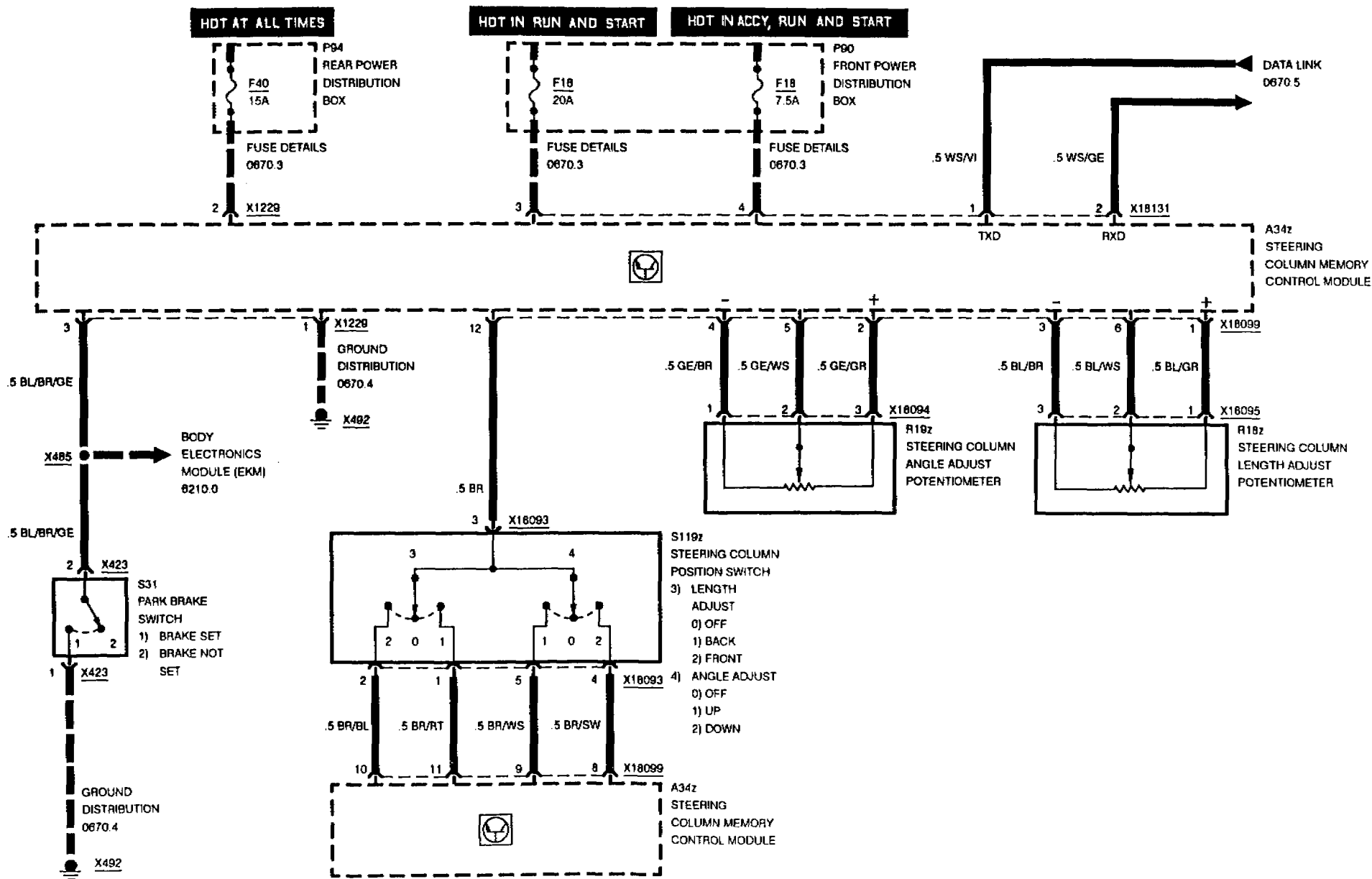
# ELECTRIC STEERING COLUMN ADJUSTMENT



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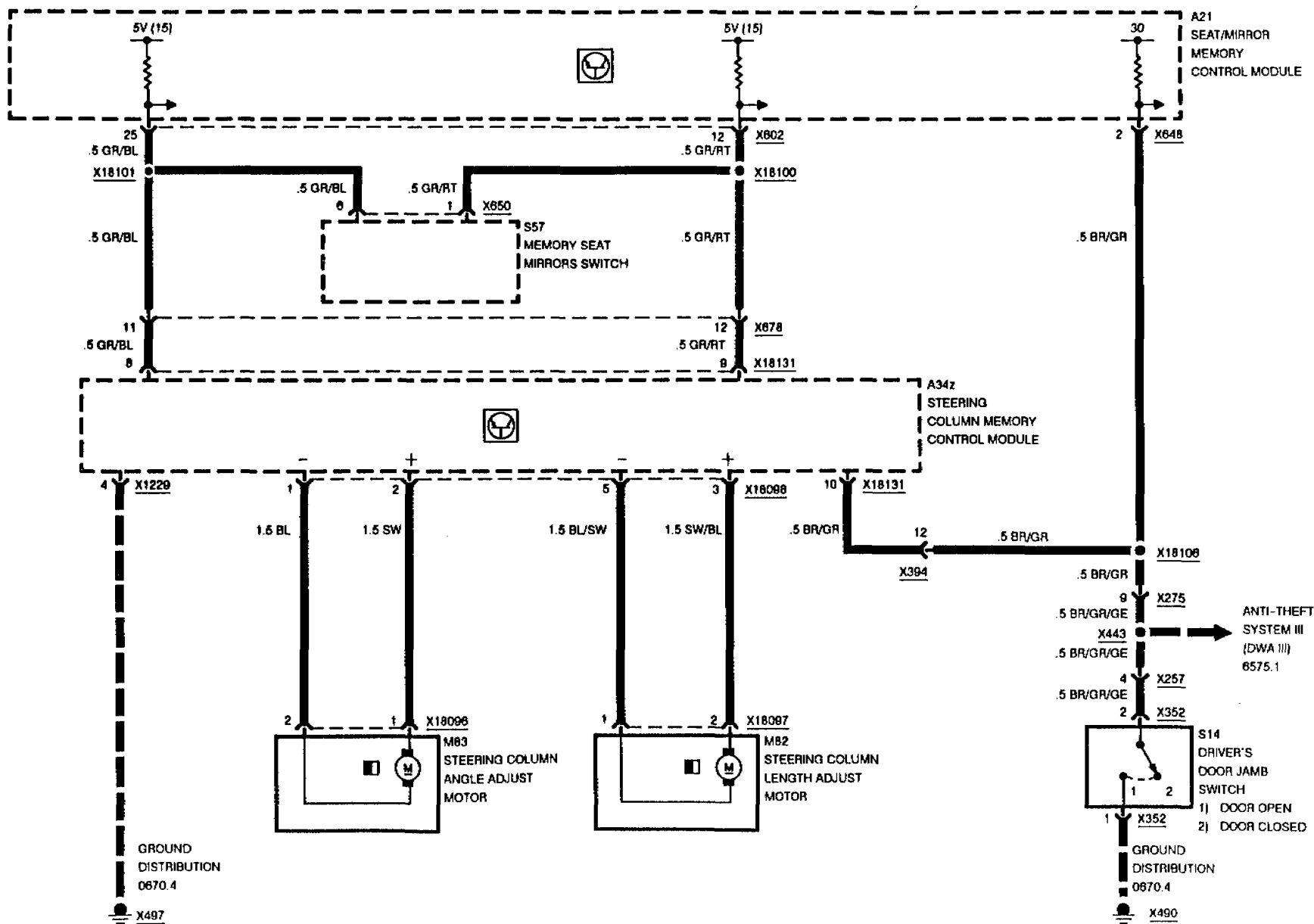


# STEERING COLUMN MEMORY (LSM)





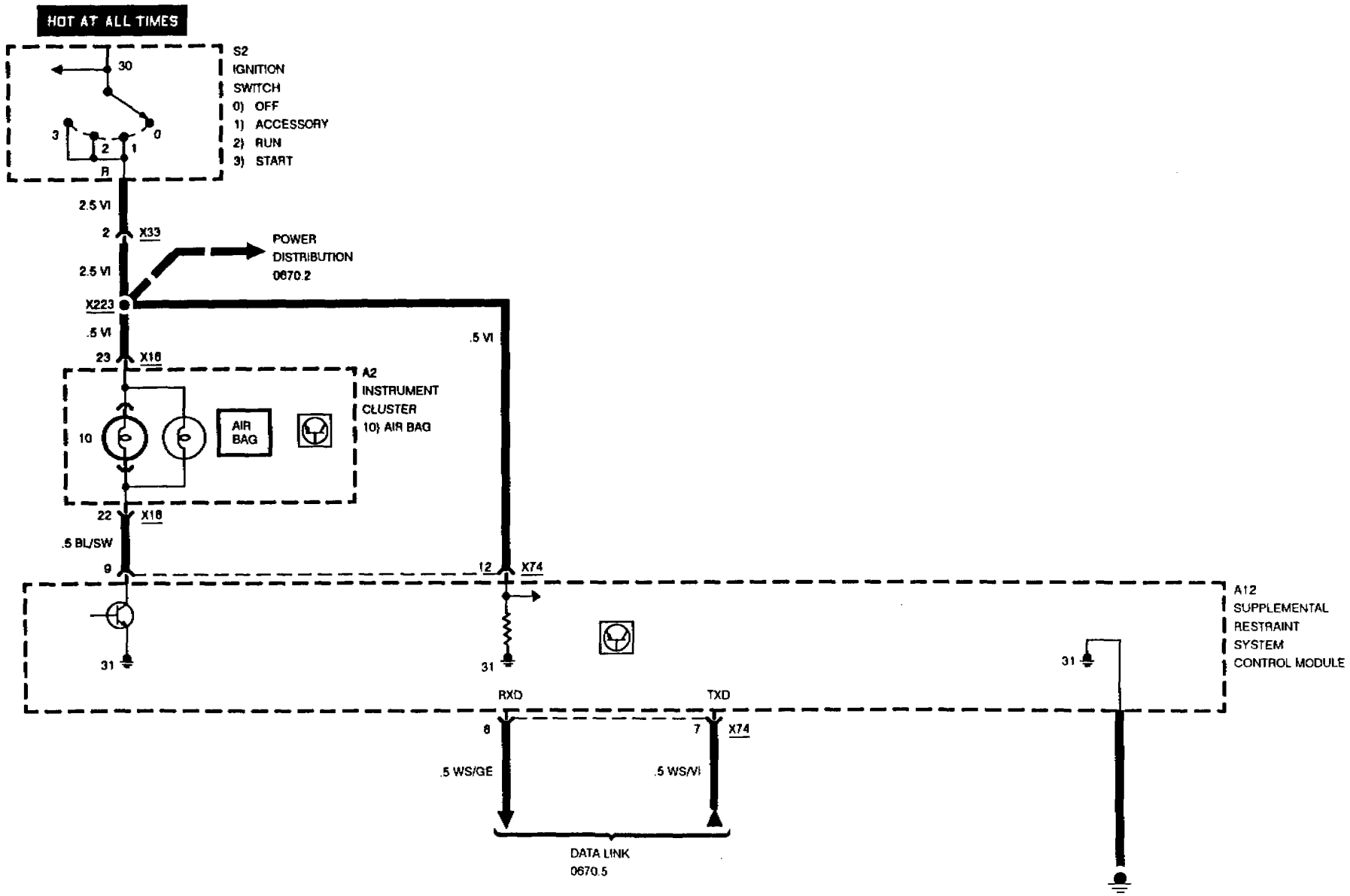
# STEERING COLUMN MEMORY (LSM)



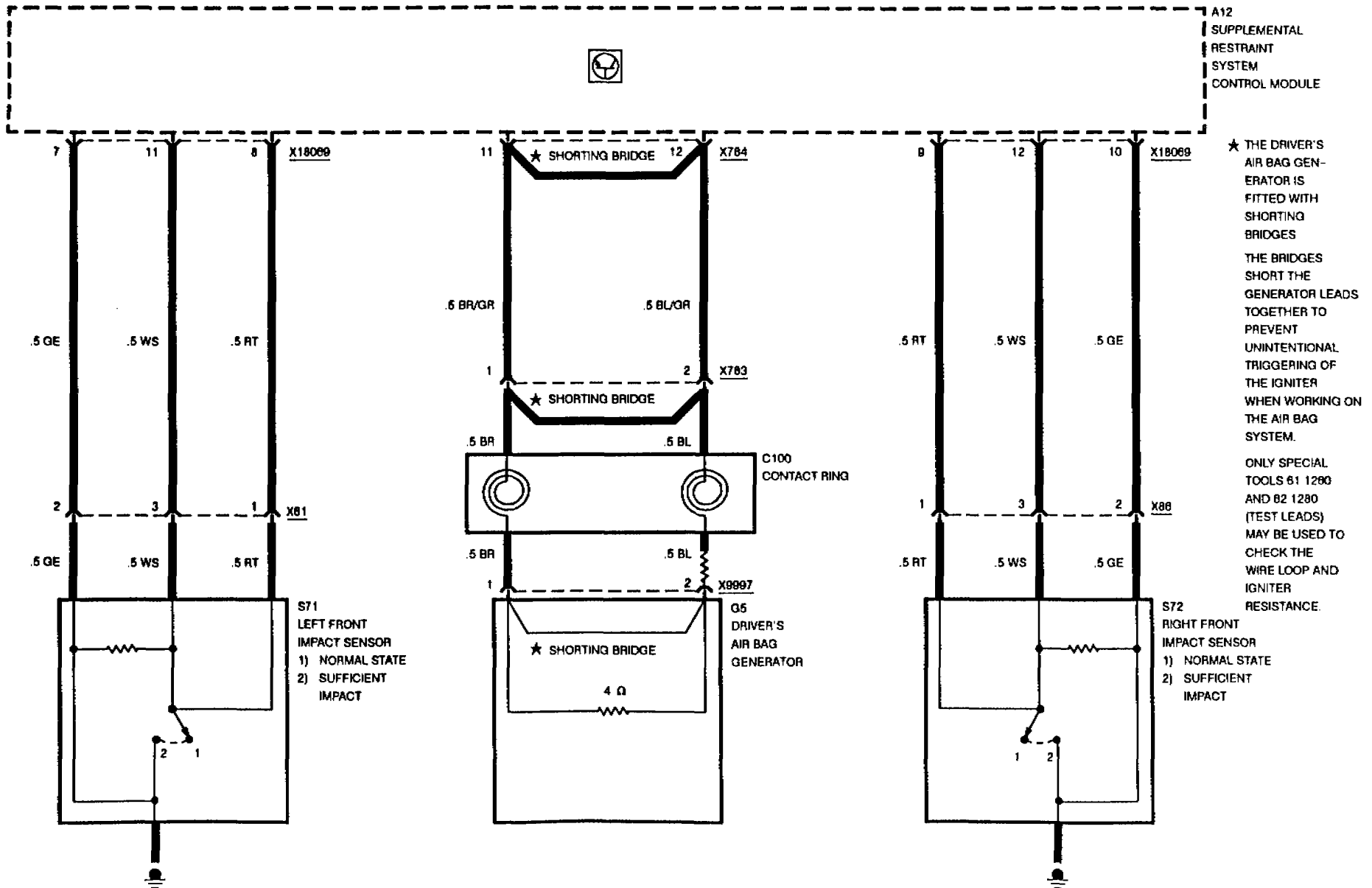




# SUPPLEMENTAL RESTRAINT SYSTEM (AIR BAG)



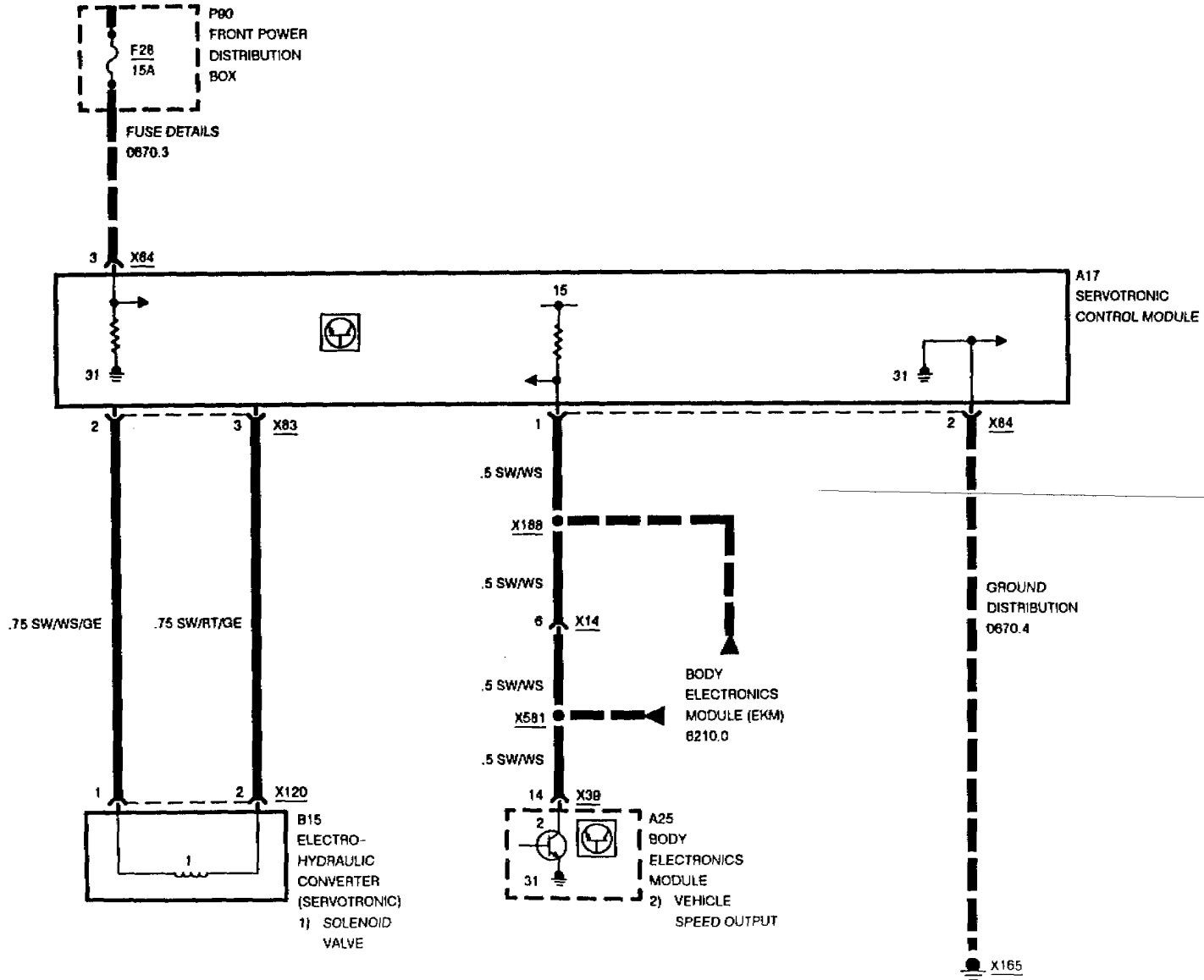
# SUPPLEMENTAL RESTRAINT SYSTEM (AIR BAG)



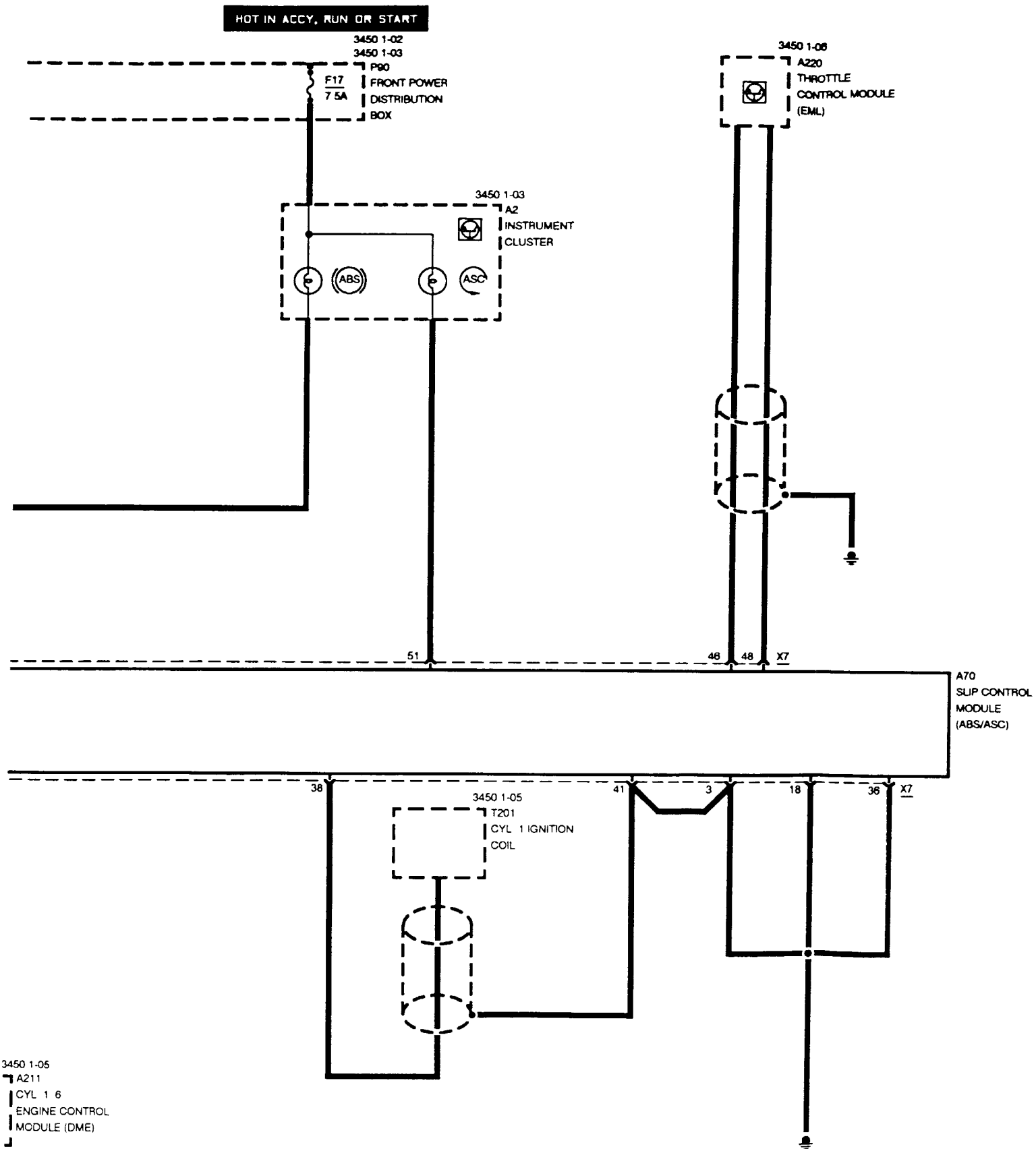
★ THE DRIVER'S AIR BAG GENERATOR IS FITTED WITH SHORTING BRIDGES THE BRIDGES SHORT THE GENERATOR LEADS TOGETHER TO PREVENT UNINTENTIONAL TRIGGERING OF THE IGNITER WHEN WORKING ON THE AIR BAG SYSTEM.

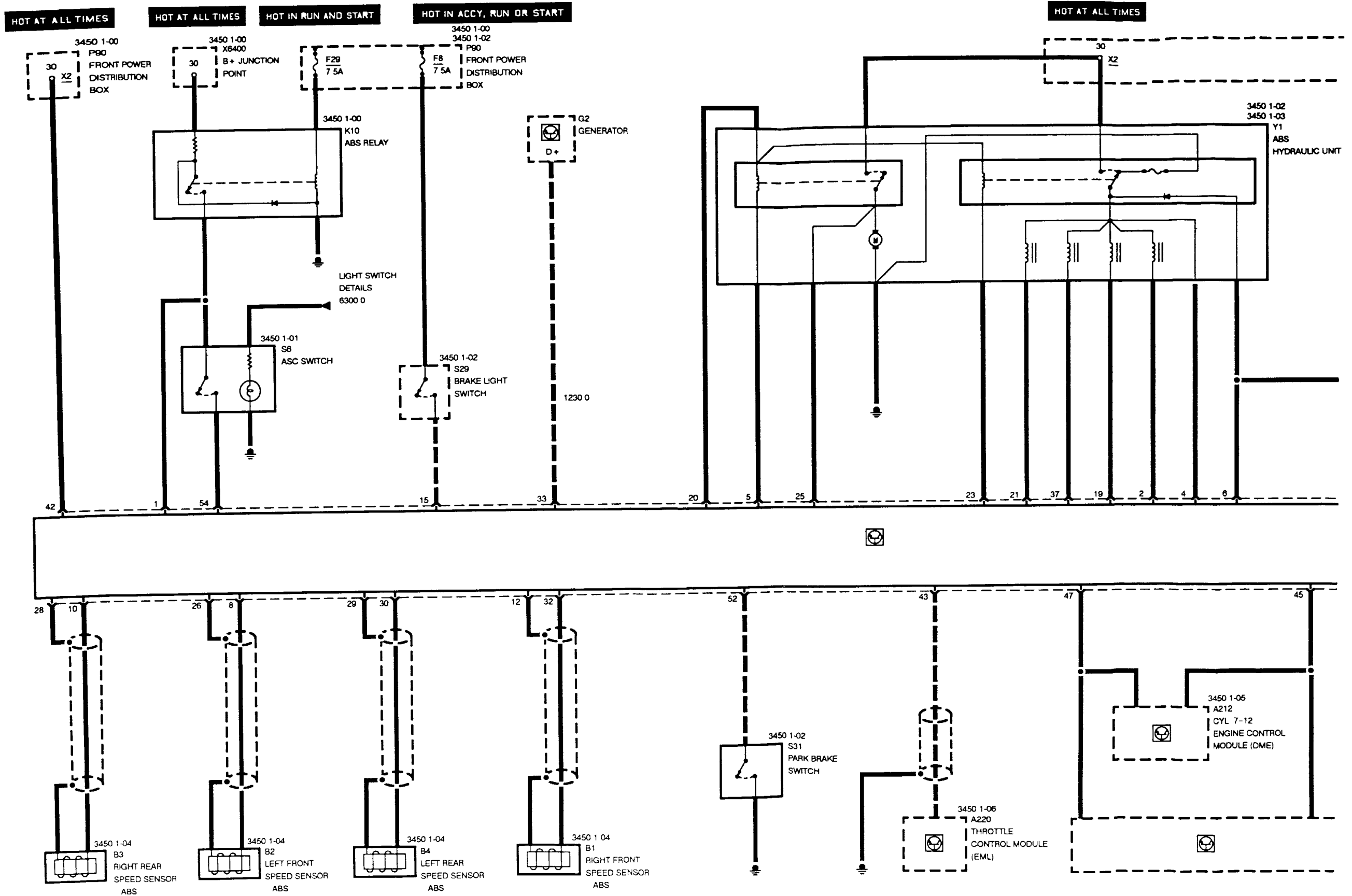
ONLY SPECIAL TOOLS 81 1280 AND 82 1280 (TEST LEADS) MAY BE USED TO CHECK THE WIRE LOOP AND IGNITER RESISTANCE.

HOT IN RUN AND START



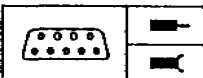








## SLIP CONTROL (ASC)



### Pin Assignments

X7

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
1	E	B+ (terminal 15)	Overvoltage protection relay	approx. 12 V		Ignition on
2	A	Rear right solenoid valve activation	ABS hydraulic unit	Ground		Cannot be measured statically
3	M	Control unit ground	Body ground	Ground		None
4	E	Voltage signal valve relay	Plunger/ABS hydraulic unit	approx. 12 V		Ignition on
5	A	Motor relay activation	ABS hydraulic unit	Ground		Cannot be measured statically
6	E	Voltage signal ABS warning lamp	Instrument cluster	0 V/approx. 12 V		Ignition on/engine on
7		Not used				
8	E	Front left speed signal	Speed sensor	AC voltage		Cannot be measured statically
9		Not used				
10	E	Rear right speed signal	Speed sensor	AC voltage		Cannot be measured statically
11		Not used				
12	A	Front right speed sensor ground	Speed sensor	Ground		None
13		Not used				
14		Not used				



## SLIP CONTROL (ASC)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
15	E	Brake light switch signal	Brake light switch	approx. 0 V/12 V		Ignition on, brake released/applied
16		Not used				
17		Not used				
18	M	Control unit ground	Body ground	Ground		None
19	A	Rear left solenoid valve activation	Plunger hydraulic unit	Ground		Cannot be measured statically
20	A	Voltage signal, pump relay	ABS hydraulic unit	approx. 12 V		None
21	A	Front left solenoid valve activation	Plunger hydraulic unit	Ground		Cannot be measured statically
22		Not used				
23	A	Activation, valve relay	ABS hydraulic unit	approx. 0 V		Ignition on
24		Not used				
25	E	Pump relay signal	ABS hydraulic unit	approx. 12 V		Cannot be measured statically
26	A	Front left speed sensor ground	Speed sensor	Ground		None
27		Not used				
28	A	Rear right speed sensor ground	Speed sensor	Ground		None
29	A	Rear left speed sensor ground	Speed sensor	Ground		None
30	E	Rear left speed signal	Speed sensor	AC voltage		Cannot be measured statically
31		Not used				
32	E	Front right speed signal	Speed sensor	AC voltage		Cannot be measured statically





## SLIP CONTROL (ASC)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
33	E	Terminal 61d D+	Alternator	> 12 V		Engine on
34		Not used				
35		Not used				
36	M	Control unit ground	Body ground	Ground		None
37	A	Front right solenoid valve activation	Plunger hydraulic unit	Ground		Cannot be measured statically
38	E	Terminal 1 – signal	DME control unit	approx. 12 V		Ignition on
39		Not used				
40		Not used				
41	E	Ground signal, terminal 1 – shielding	Shielded line terminal 1	Ground		None
42	E	B+ (terminal 30)	Battery	approx. 12 V		None
43	E	Throttle position signal	EML control unit	Pulse width–modulated square–wave signal		Cannot be measured statically
44		Not used				
45	A	Signal, ignition fade–out (ZA)	DME control units	9,6...15 V		Cannot be measured statically
46	A	Throttle increase signal	EML control unit	Pulse width–modulated square–wave signal		Cannot be measured statically
47	A	Ignition timing signal	DME control units	approx. 12 V		Cannot be measured statically
48	A	Throttle increase signal	EML control unit	Pulse width–modulated square–wave signal		Cannot be measured statically



## SLIP CONTROL (ASC)

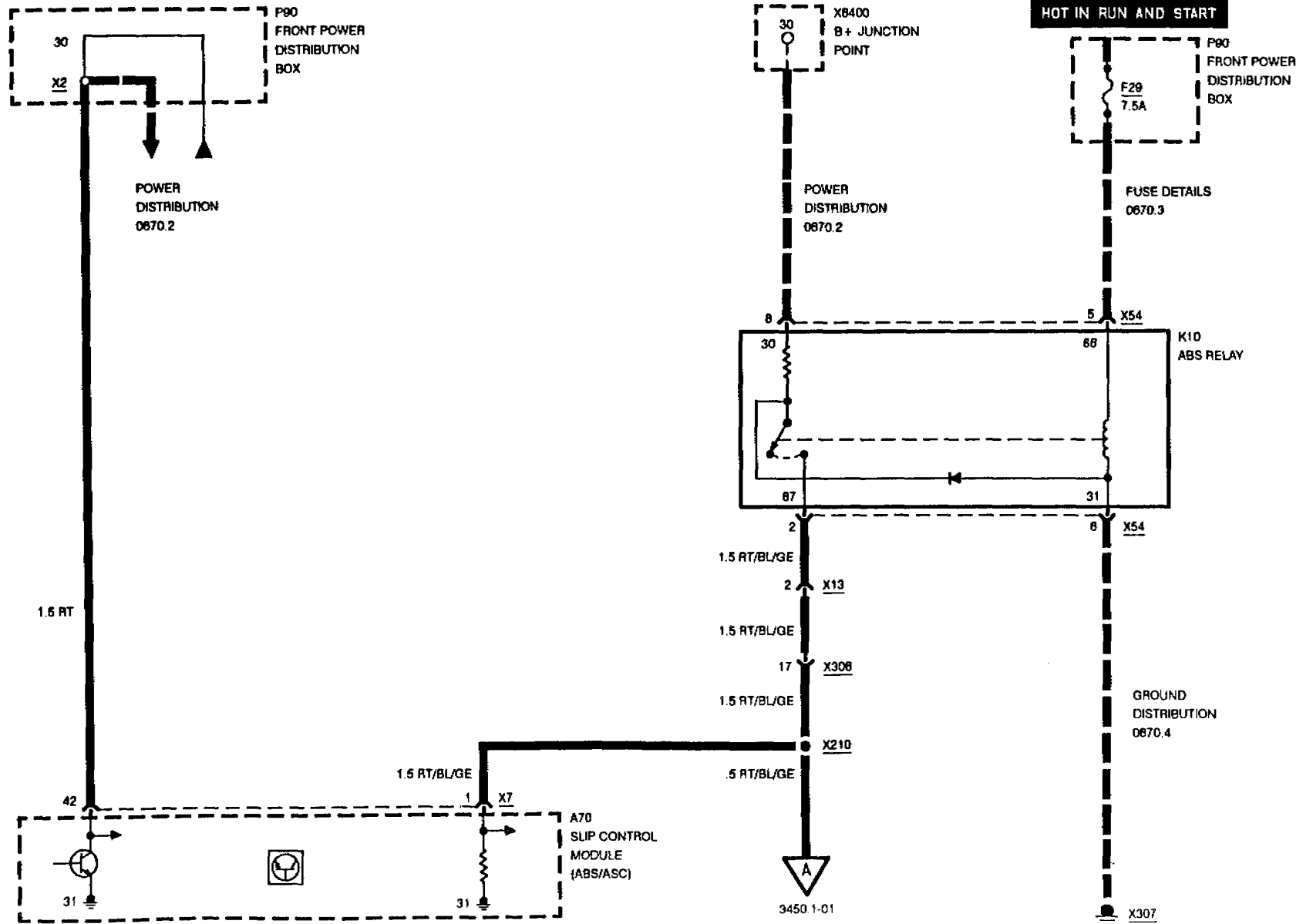
PIn	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
49		Not used				
50		Not used				
51	A	Activation, ASC multi-function lamp	Instrument cluster	0 V/approx. 12 V		Ignition on/engine and ASC on
52	E	Park brake switch signal	Park brake switch	> 7 V/approx. 0 V		Ignition on, handbrake released/applied
53		Not used				
54	E	ASC switch signal	ASC switch	approx. 0 V/ approx. 12 V		Ignition on/ ASC button depressed
55		Not used				

E = Input, A = Output, M = Ground

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# SLIP CONTROL (ABS/ASC)

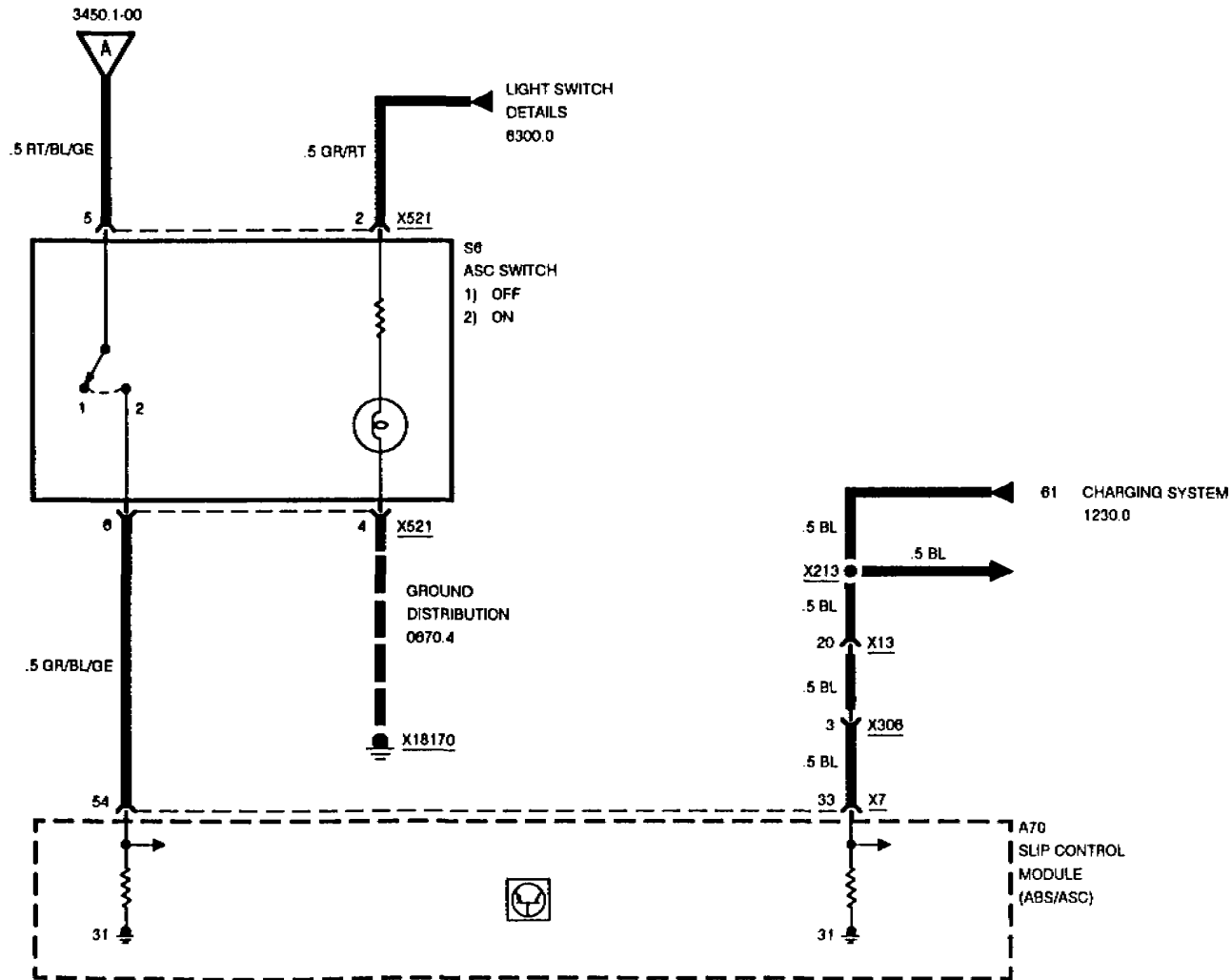
850iA





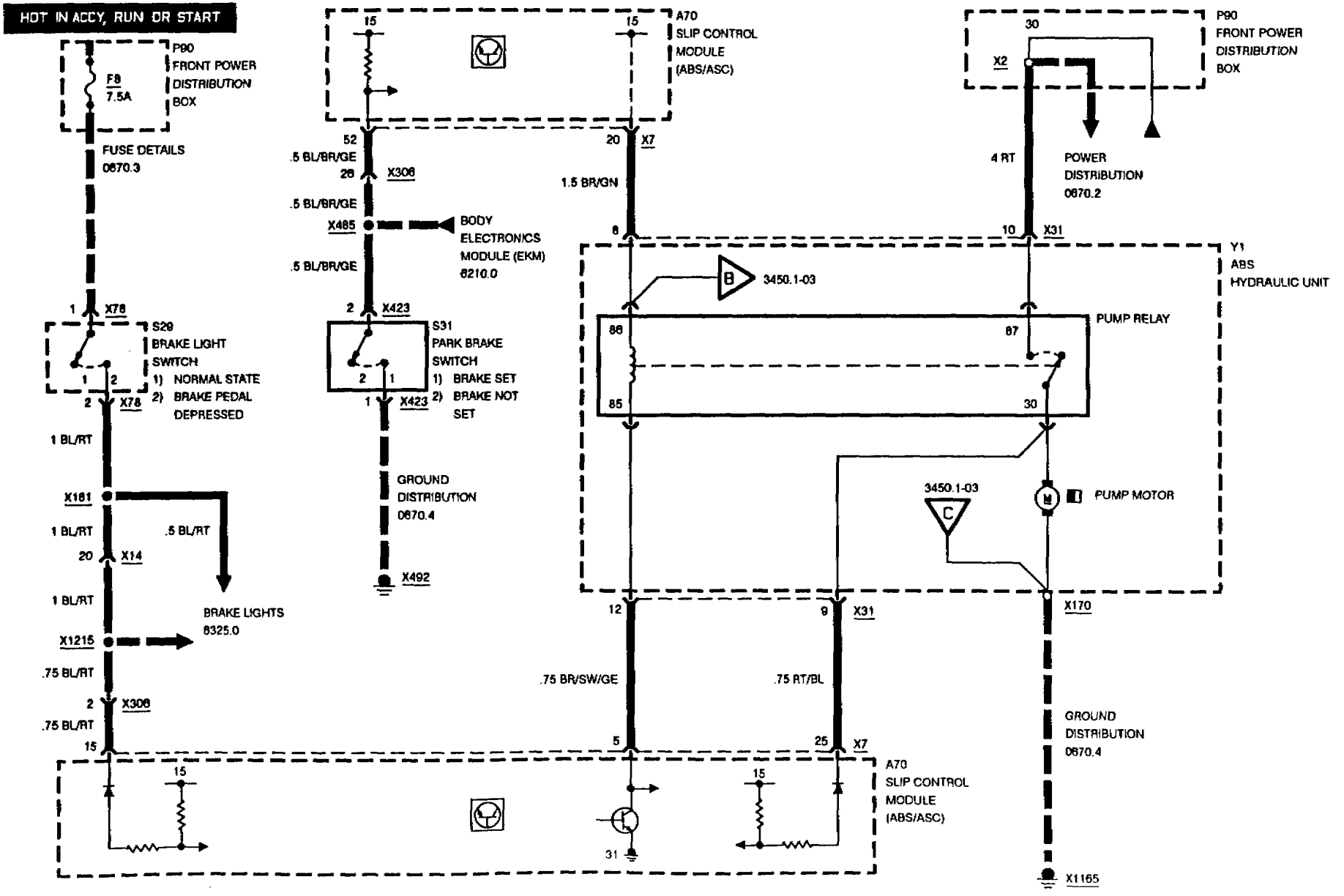
# SLIP CONTROL (ABS/ASC)

850iA

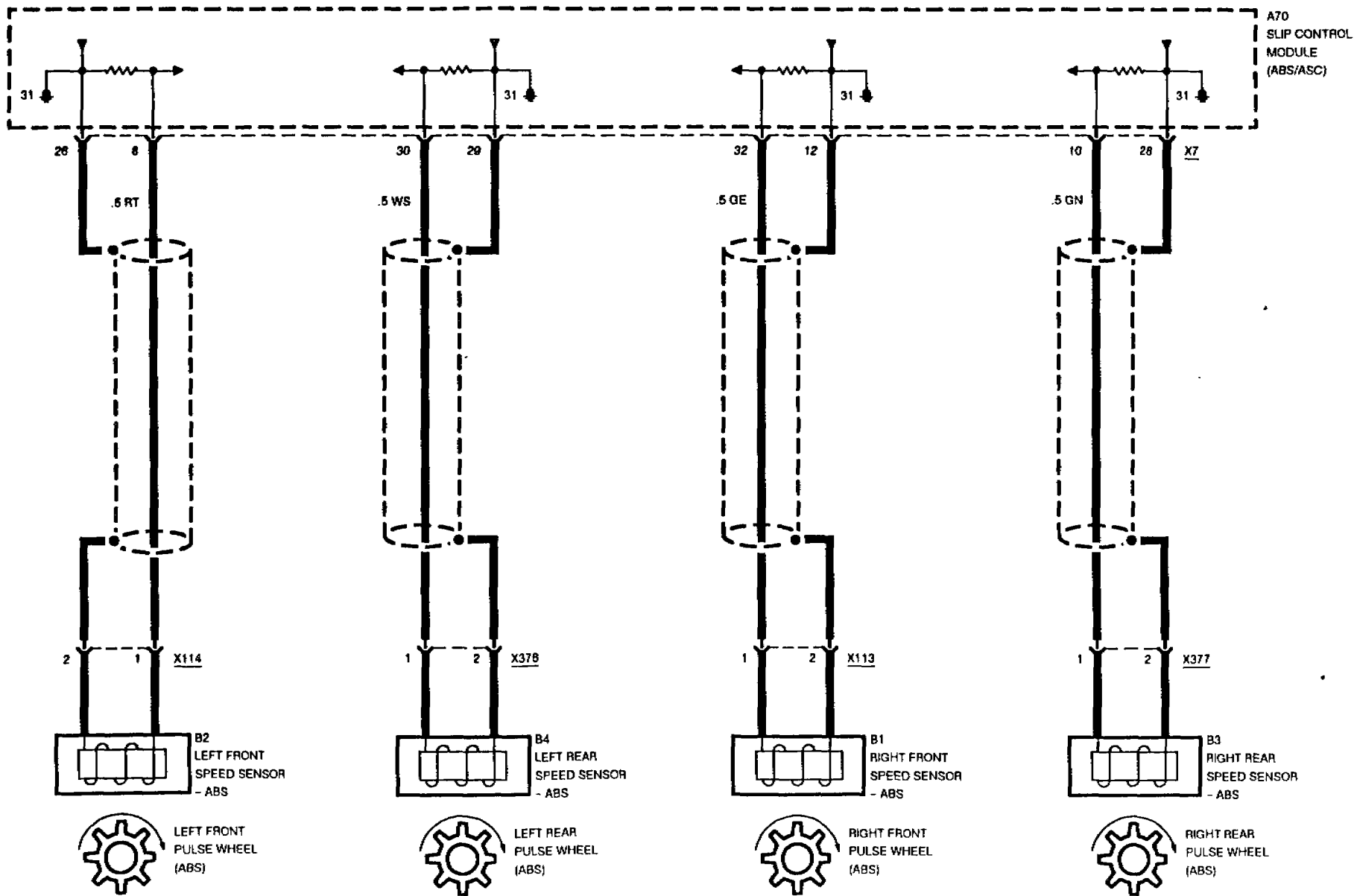


# SLIP CONTROL (ABS/ASC)

850iA





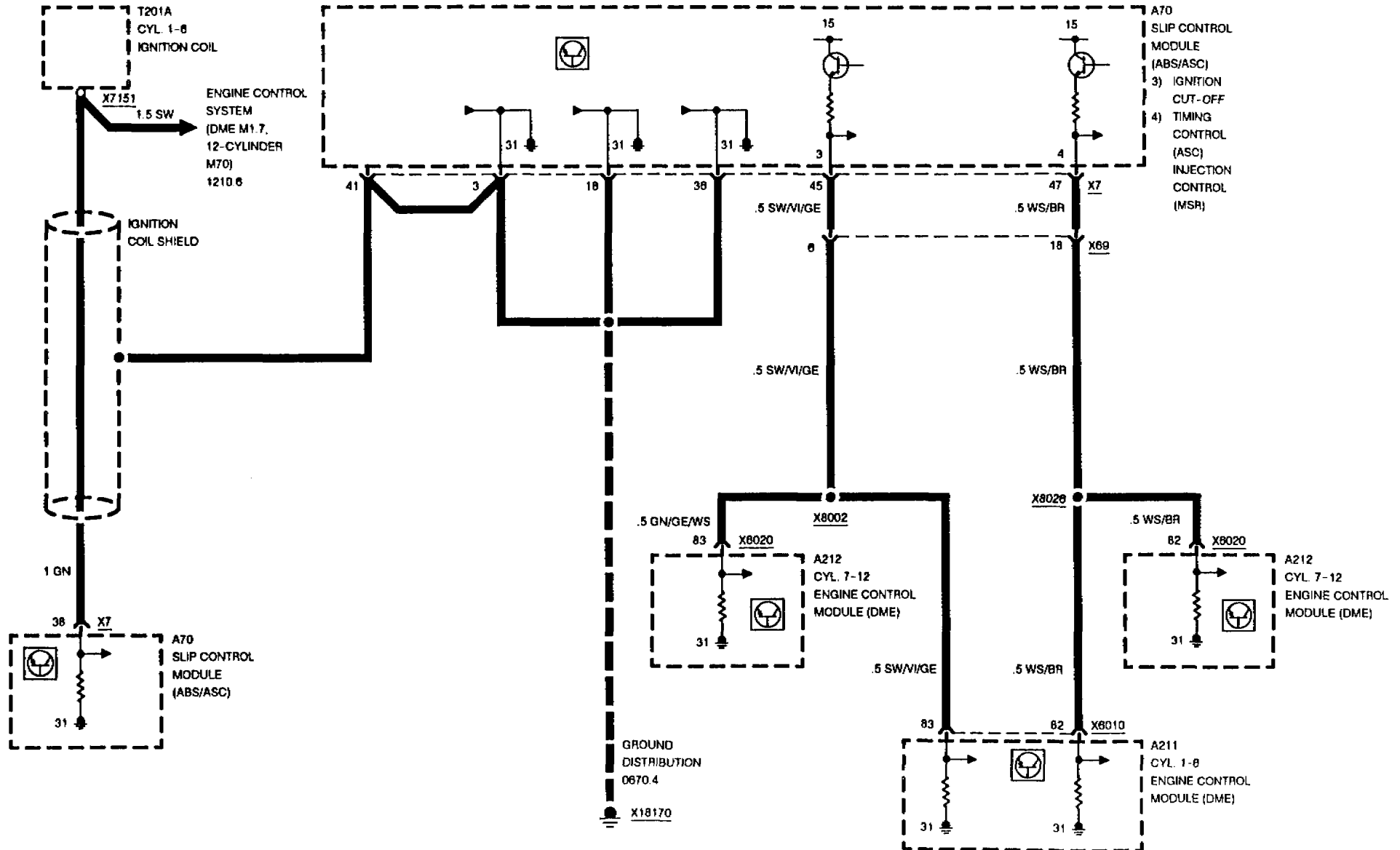






# SLIP CONTROL (ABS/ASC) ENGINE CONTROL (DME) INTERFACE

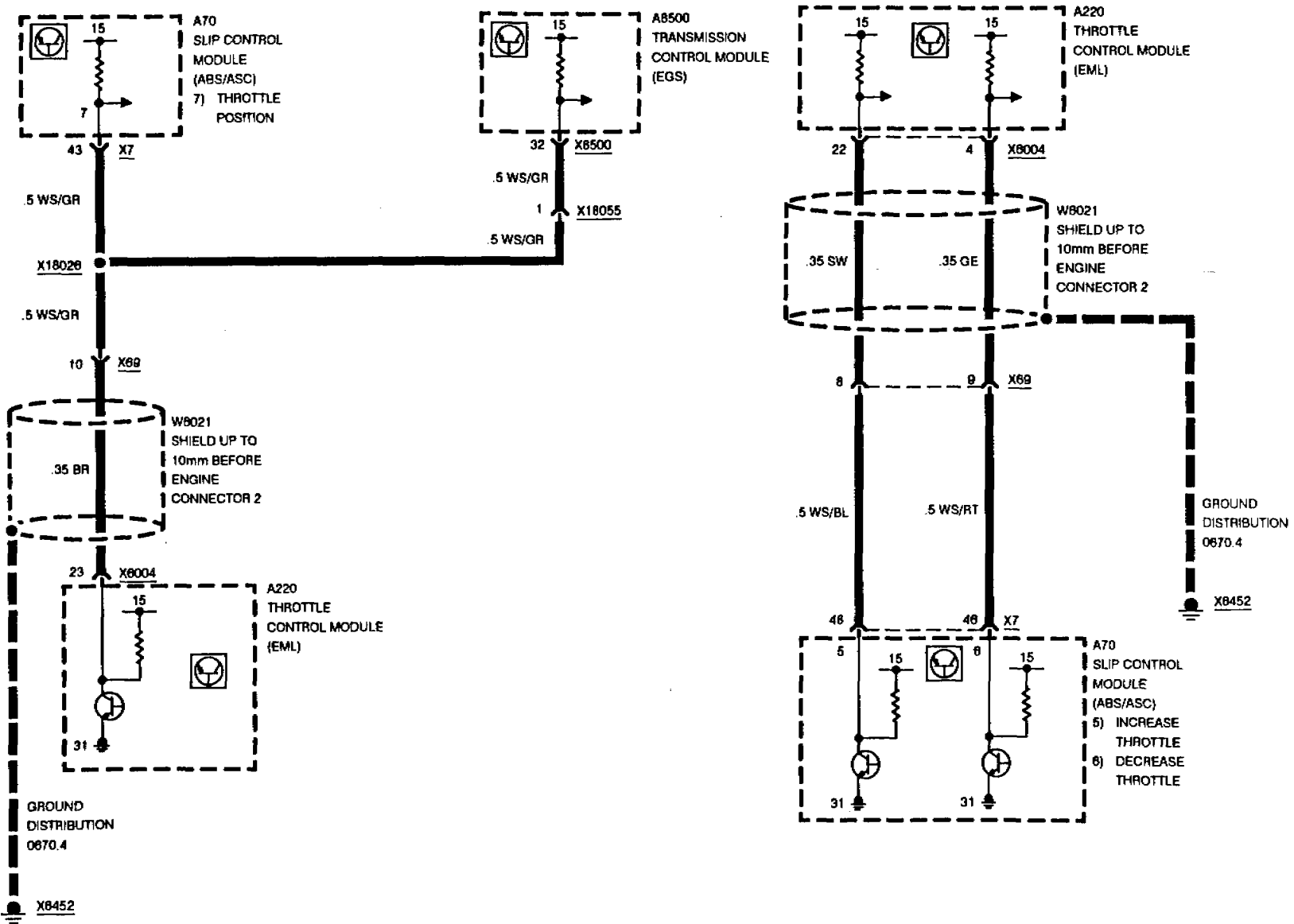
850iA





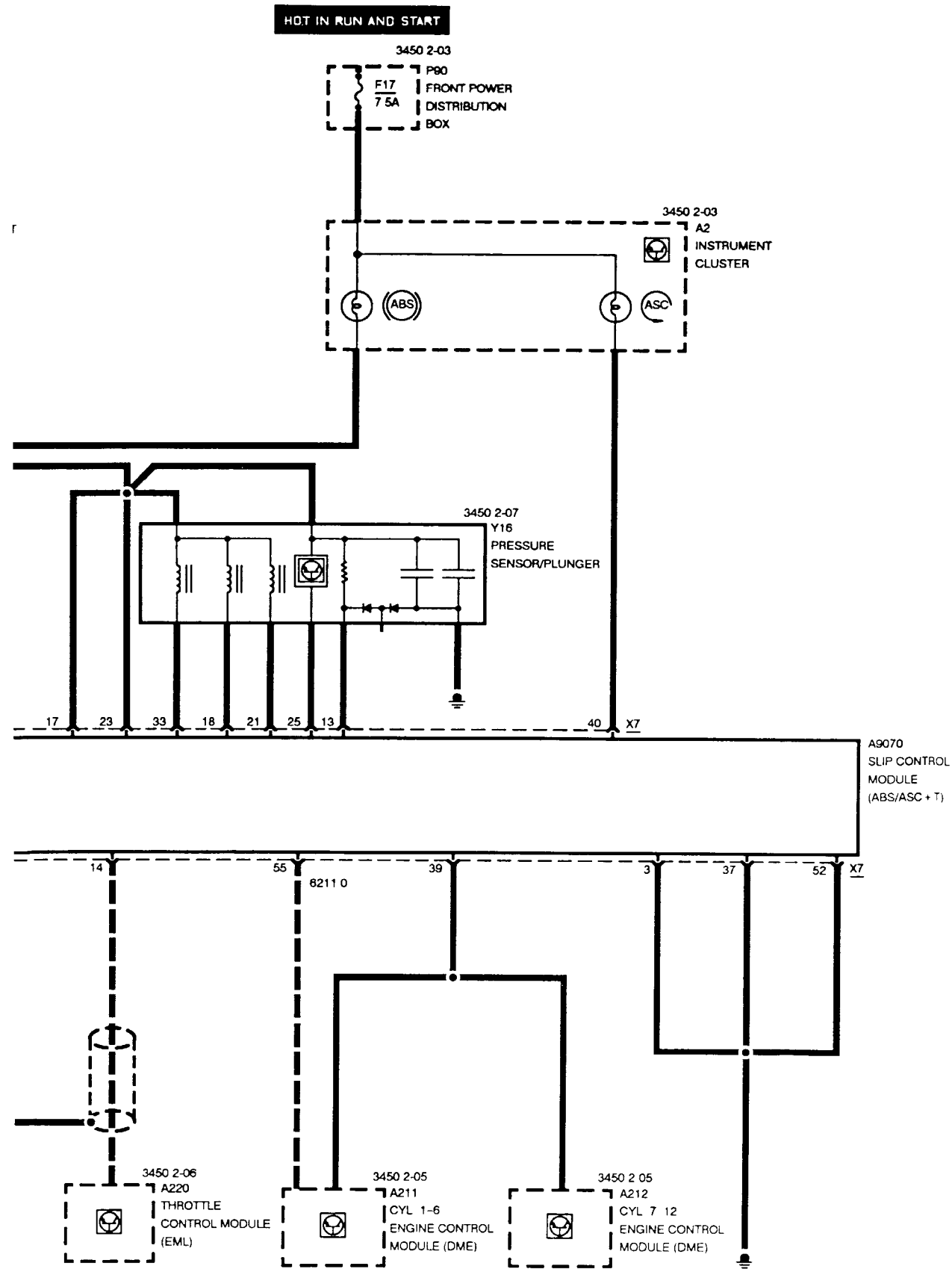
# SLIP CONTROL (ABS/ASC) EML INTERFACE

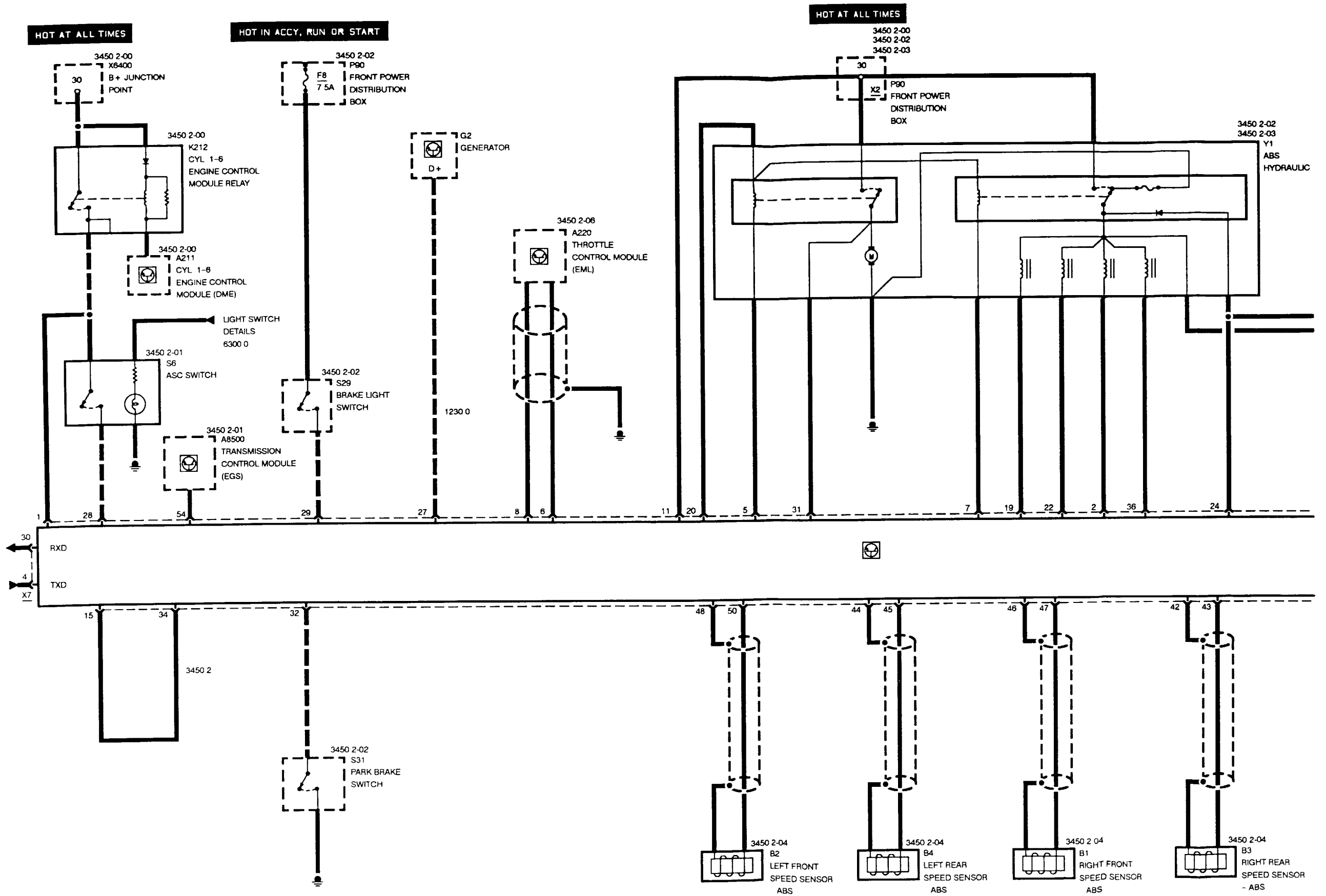
850iA



**SLIP CONTROL (ABS/ASC+T)  
BLOCK DIAGRAM**

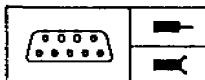








## SLIP CONTROL (ABS/ASC+T)



### Pin Assignments

#### X7

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
1	E	B+ (terminal 15)	DME main relay	approx. 12 V		Ignition on
2	A	Rear left solenoid valve activation	ABS hydraulic unit	Ground		Cannot be measured statically
3	M	Control unit ground	Body ground	Ground		None
4	E/A	Diagnostic link TxD	Diagnostic bus			
5	A	Pump relay activation	ABS hydraulic unit	Ground		Cannot be measured statically
6	A	Throttle reduction signal	EML control unit	Pulse width–mod–ulated square–wave signal		Cannot be measured statically
7	A	Valve relay activation	ABS hydraulic unit	approx. 0 V		Ignition on
8	A	Throttle increase signal	EML control unit	Pulse width–mod–ulated square–wave signal		Cannot be measured statically
9		Not used				
10		Not used				
11	E	B+ (terminal 30)	Battery	approx. 12 V		Only for control unit with the BMW No. 1 158 804 (red–violet adhesive label)



## SLIP CONTROL (ABS/ASC+T)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
12		Not used				
13	E	Operating pressure signal	Pressure sensor	< 1,5 V / > 3,5 V		Ignition on
14	E	Throttle position	EML control unit	Pulse width – mod – ulated square – wave signal		Cannot be measured statically
15	A	Coding jumper manual transmission	Pin 34 (stabilized voltage)	5 V		None
16		Not used				
17	E	Voltage signal valve relay	ABS hydraulic unit	approx. 12 V		Ignition on
18	A	Rear right solenoid valve activation	Pressure sensor	Ground		Cannot be measured statically
19	A	Front left solenoid valve activation	Plunger hydraulic unit	Ground		Cannot be measured statically
20	A	Voltage signal pump relay	ABS hydraulic unit	approx. 12 V		None
21	A	Rear left solenoid valve activation	Pressure sensor	Ground		Cannot be measured statically
22	A	Front right solenoid valve activation	Plunger hydraulic unit	Ground		Cannot be measured statically
23	E	Voltage signal, valve relay	ABS hydraulic unit	approx. 12 V		Ignition on
24	E	Voltage signal ABS warning lamp	Instrument cluster	approx. 0 V / approx. 12 V		Ignition on / engine on
25	E	Accumulator warning pressure threshold	Pressure sensor	< 1,5 V / > 3,5 V		Ignition on
26		Not used				
27	E	Terminal 61d D+	Alternator	> 12 V		Engine on



## SLIP CONTROL (ABS/ASC+T)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
28	E	ASC switch signal	ASC switch	approx. 0 V/ approx. 12 V		Ignition on/ ASC button depressed
29	E	Brake light signal	Brake light switch	approx. 12 V		Ignition on
30	E	Diagnostic link RxD	Diagnostic bus			
31	E	Pump relay signal	ABS hydraulic unit	approx. 12 V		Cannot be measured statically
32	E	Park brake switch signal	Park brake switch	approx. 12 V		Ignition on
33	A	Accumulator charging valve activation	Pressure sensor	Ground		Cannot be measured statically
34	E	Coding jumper manual transmission Pin 15				
35		Not used				
36	A	Rear right solenoid valve activation	ABS hydraulic unit	Ground		Cannot be measured statically
37	M	Control unit ground	Body ground	Ground		None
38		Not used				
39	A	Ignition angle adjustment	DME control units	approx. 12 V		Cannot be measured statically
40	A	ASC multi-function lamp	Instrument cluster	approx. 0 V/ approx. 12 V		Ignition on/ engine on
41		Not used				
42	A	Rear right wheel speed sensor ground	Speed sensor	Ground		None
43	E	Rear right wheel speed signal	Speed sensor	AC voltage		Cannot be measured statically
44	A	Rear left wheel speed sensor ground	Speed sensor	Ground		None





## SLIP CONTROL (ABS/ASC+T)

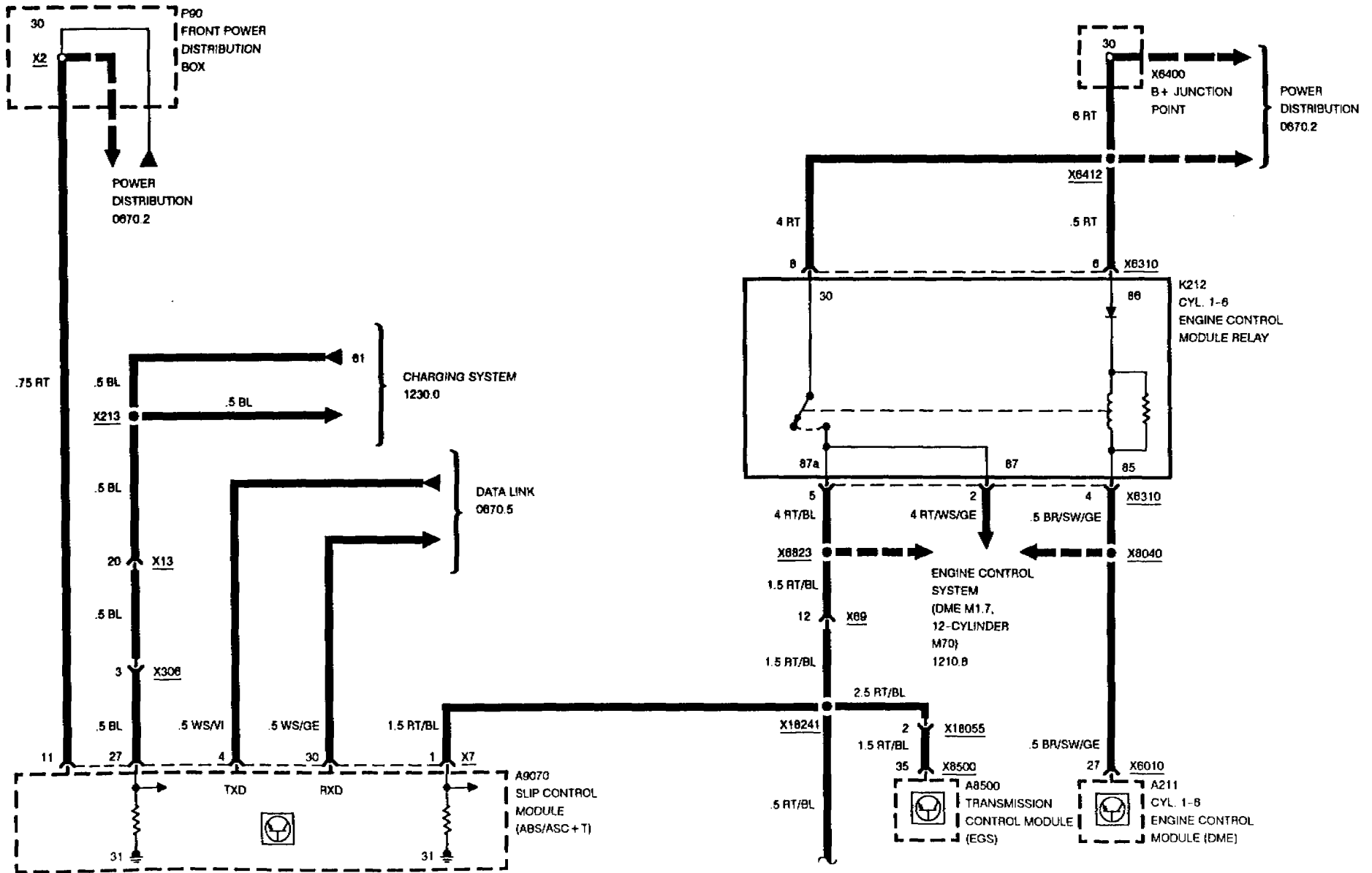
Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
45	E	Rear left wheel speed signal	Speed sensor	AC voltage		Cannot be measured statically
46	A	Front right wheel speed sensor ground	Speed sensor	Ground		None
47	E	Front right wheel speed signal	Speed sensor	AC voltage		Cannot be measured statically
48	A	Front left wheel speed sensor ground	Speed sensor	Ground		None
49		Not used				
50	E	Front left wheel speed signal	Speed sensor	AC voltage		Cannot be measured statically
51		Not used				
52	M	Control unit ground	Body ground	Ground		None
53		Not used				
54	A	Signal, transmission intervention	EGS control unit	approx. 12 V		Ignition on
55	E	Engine speed signal	DME control unit	Square-wave signal		Cannot be measured statically

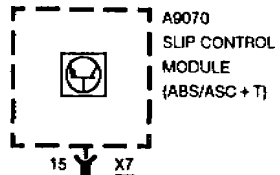
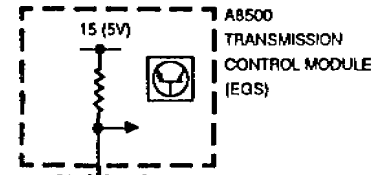
E = Input, A = Output, M = Ground

BMW  
**8**

3450.2

# SLIP CONTROL (ABS/ASC+T)





5 GE/M

5 WS

WITH EGS      WITHOUT EGS

1 X18738  
NOT USED

1 X18738

.5 GE/M

.5 WS

.5 RT/BL

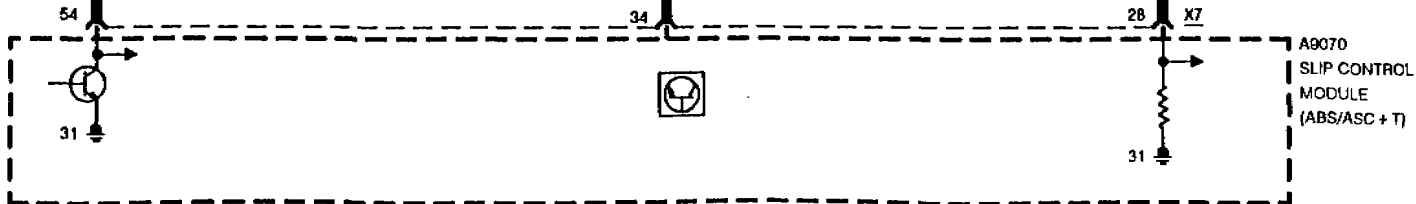
.5 GR/RT

LIGHT SWITCH  
DETAILS  
8300 0

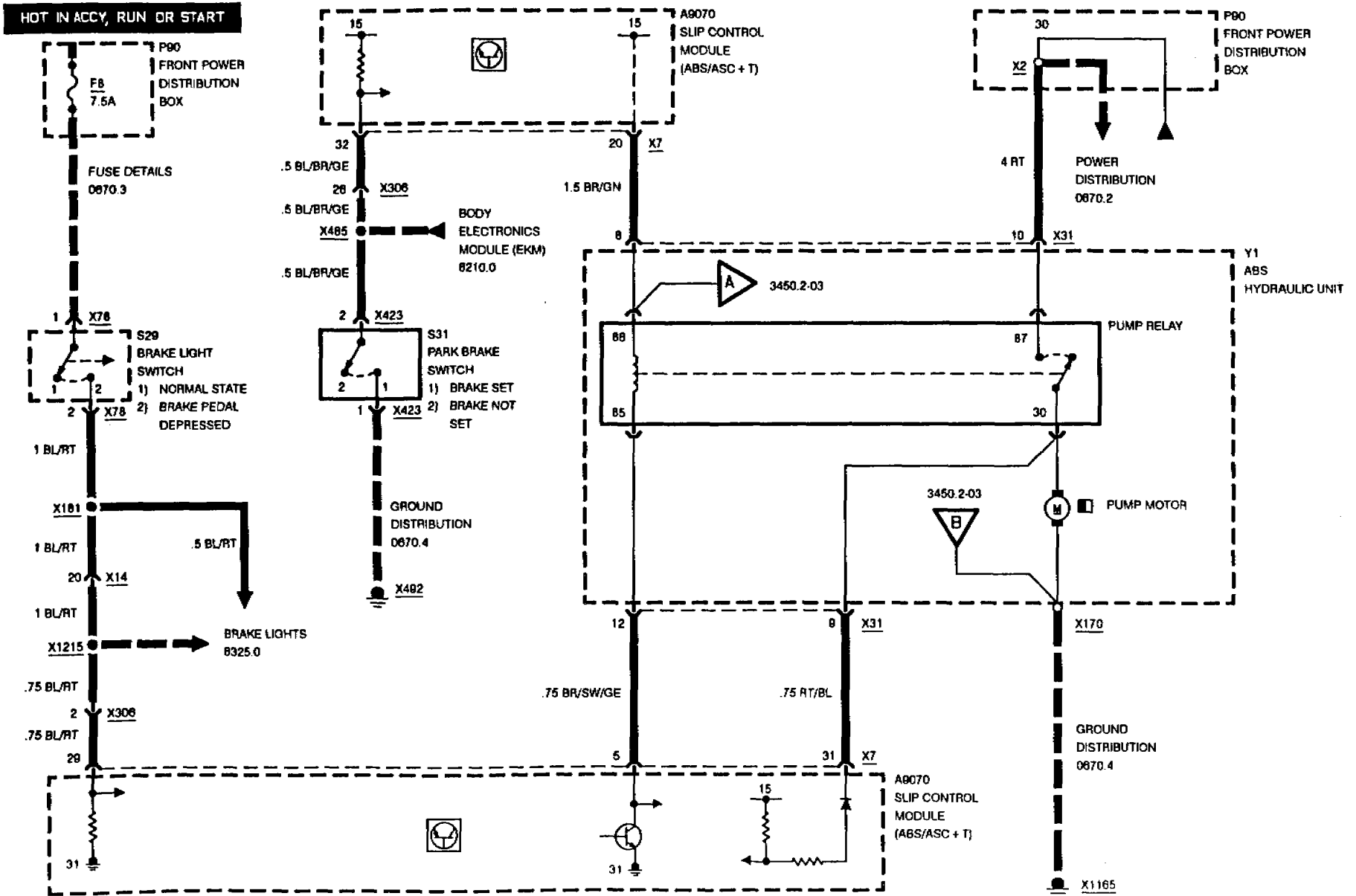
S6  
ASC SWITCH  
1) OFF  
2) ON

GROUND  
DISTRIBUTION  
0670.4

X18170

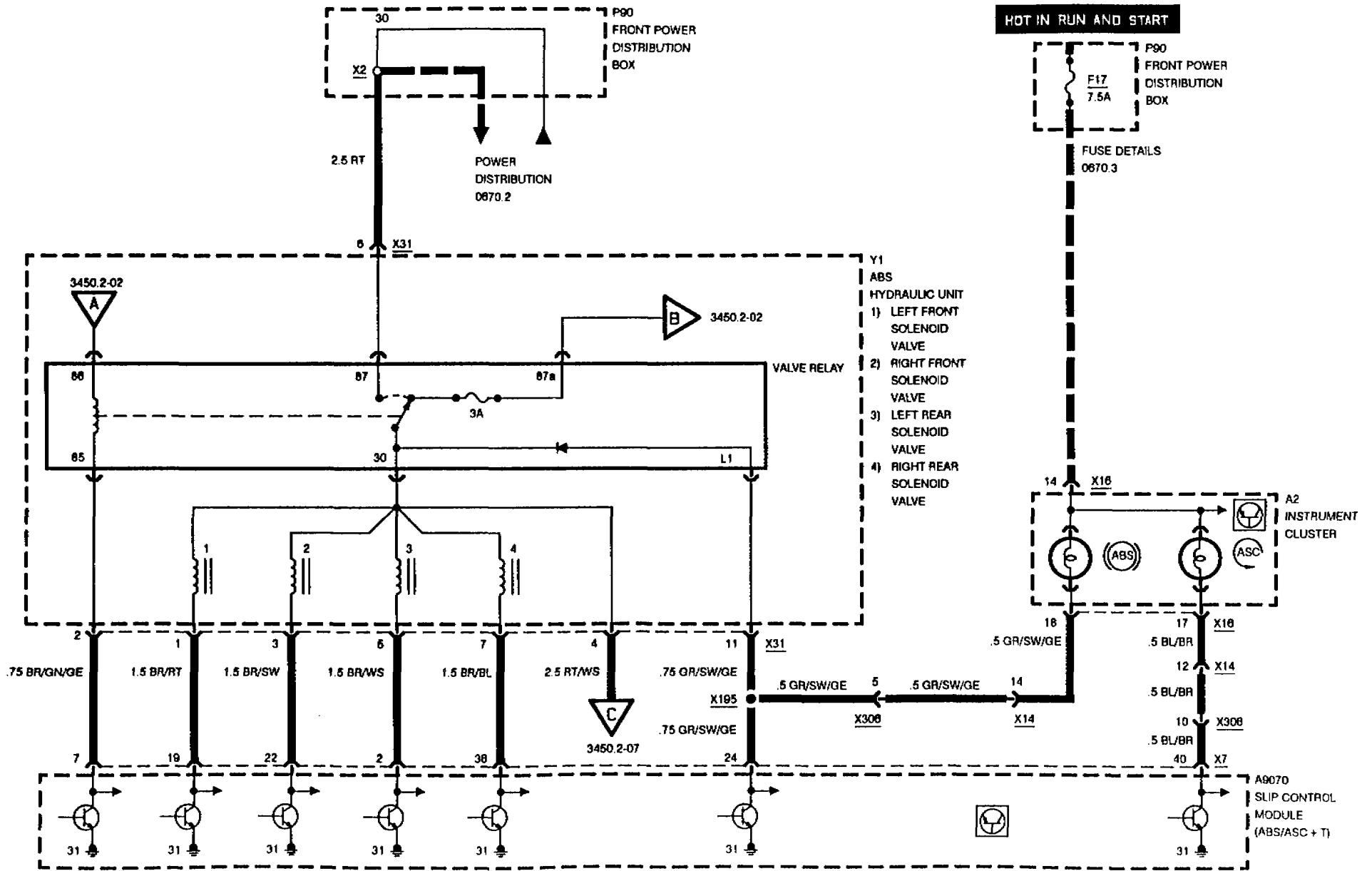


# SLIP CONTROL (ABS/ASC + T)

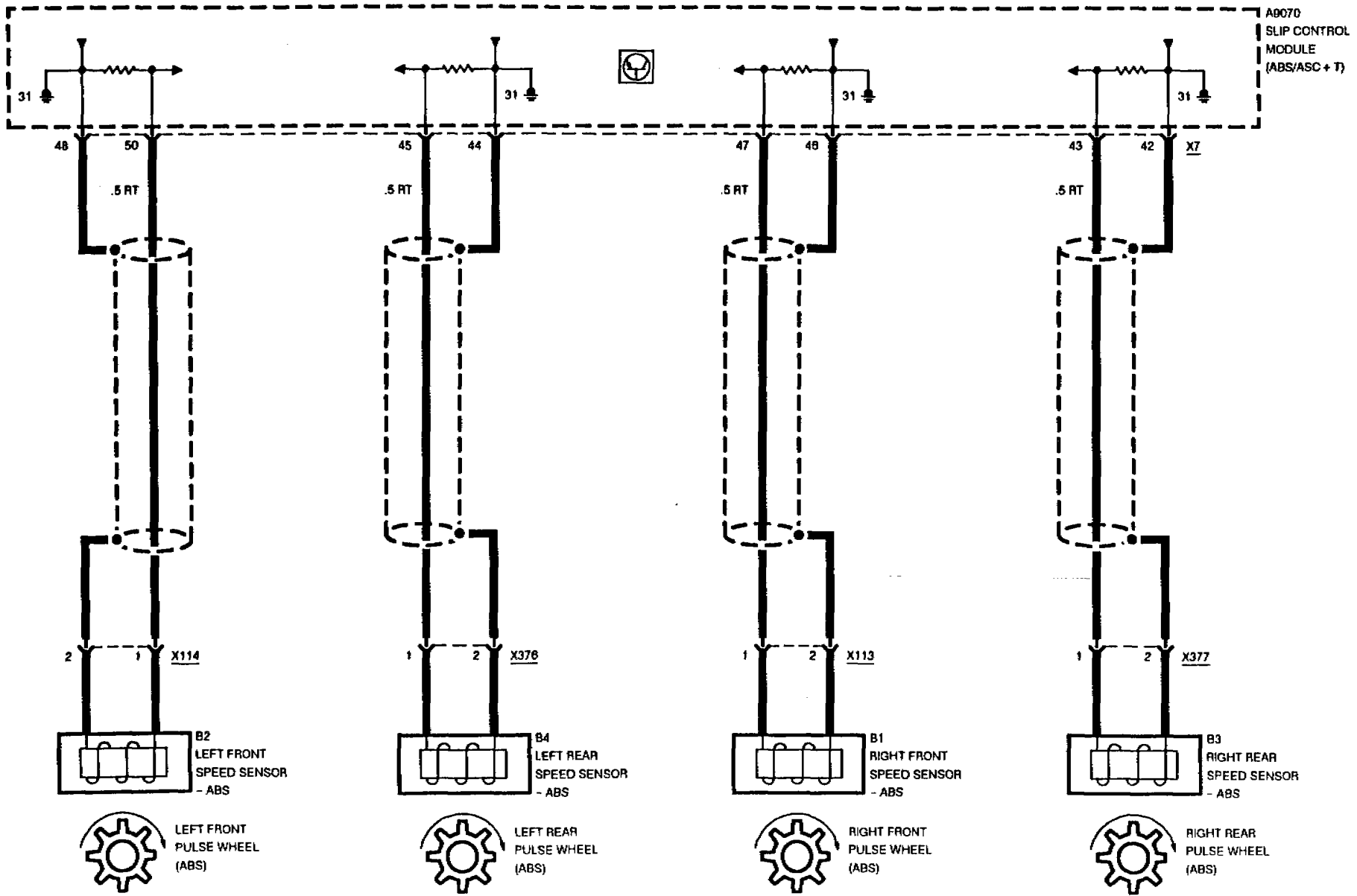




# SLIP CONTROL (ABS/ASC + T)

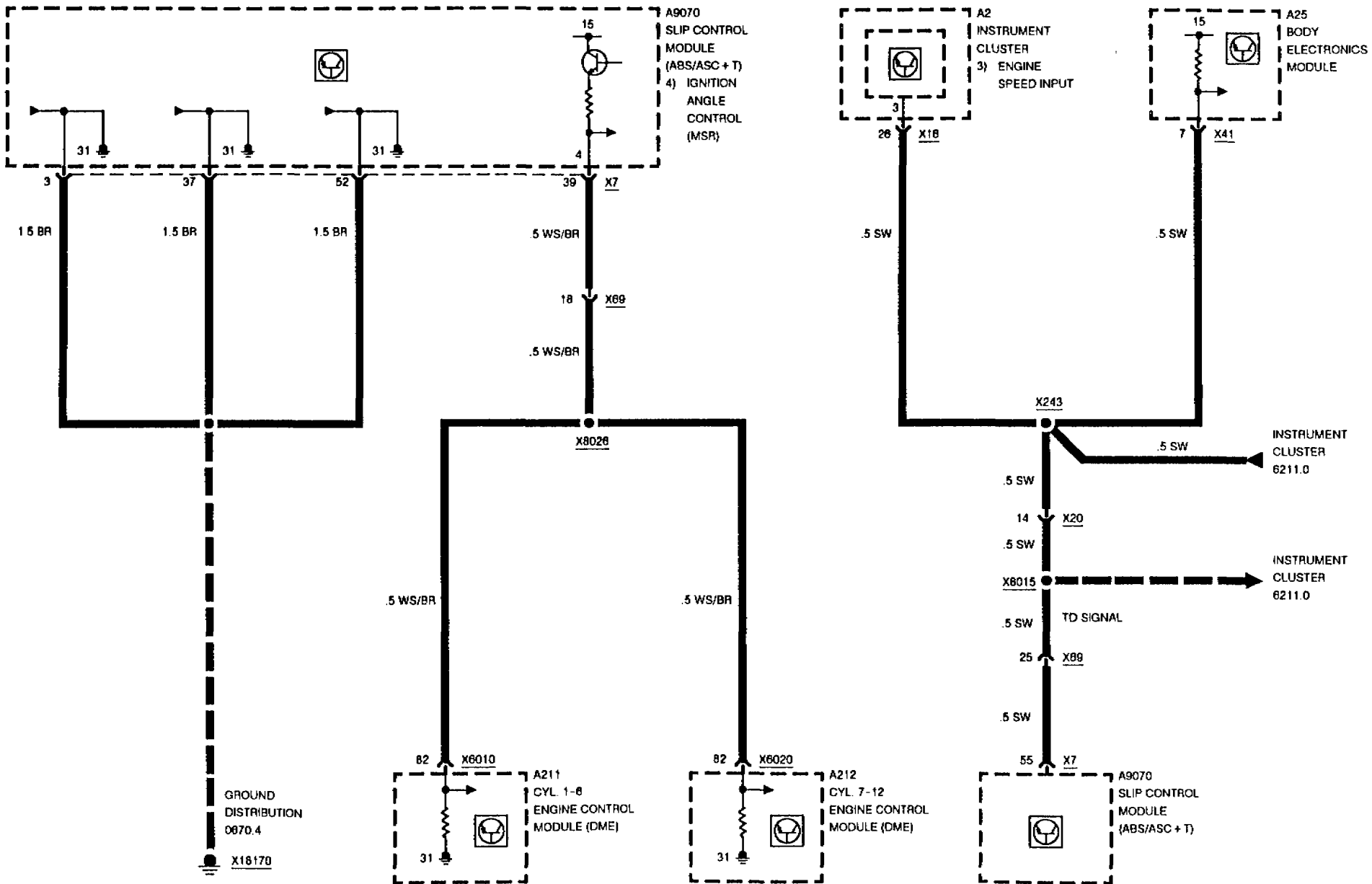


# SLIP CONTROL (ABS/ASC + T)





# SLIP CONTROL (ABS/ASC + T) ENGINE CONTROL (DME) INTERFACE

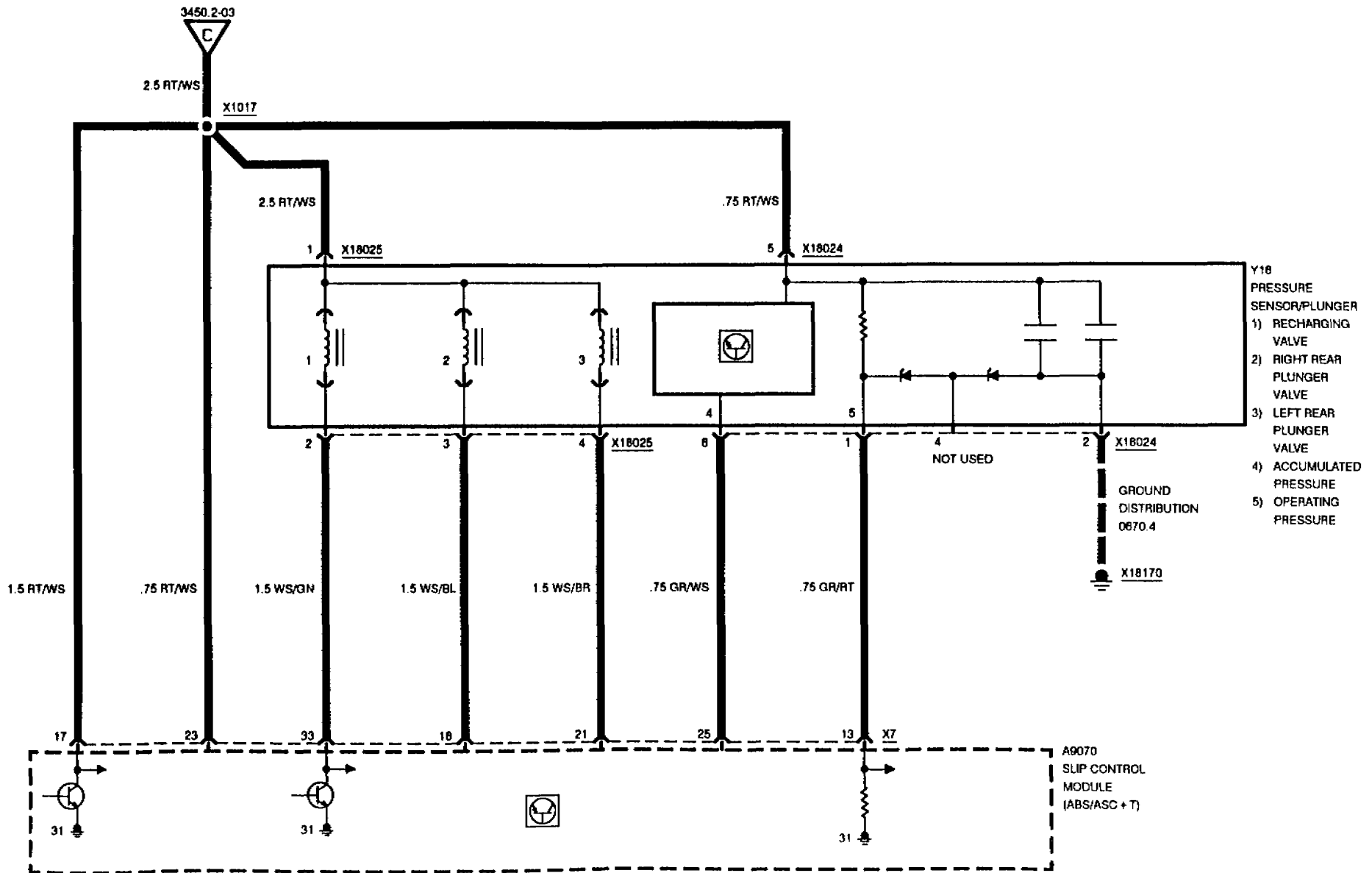




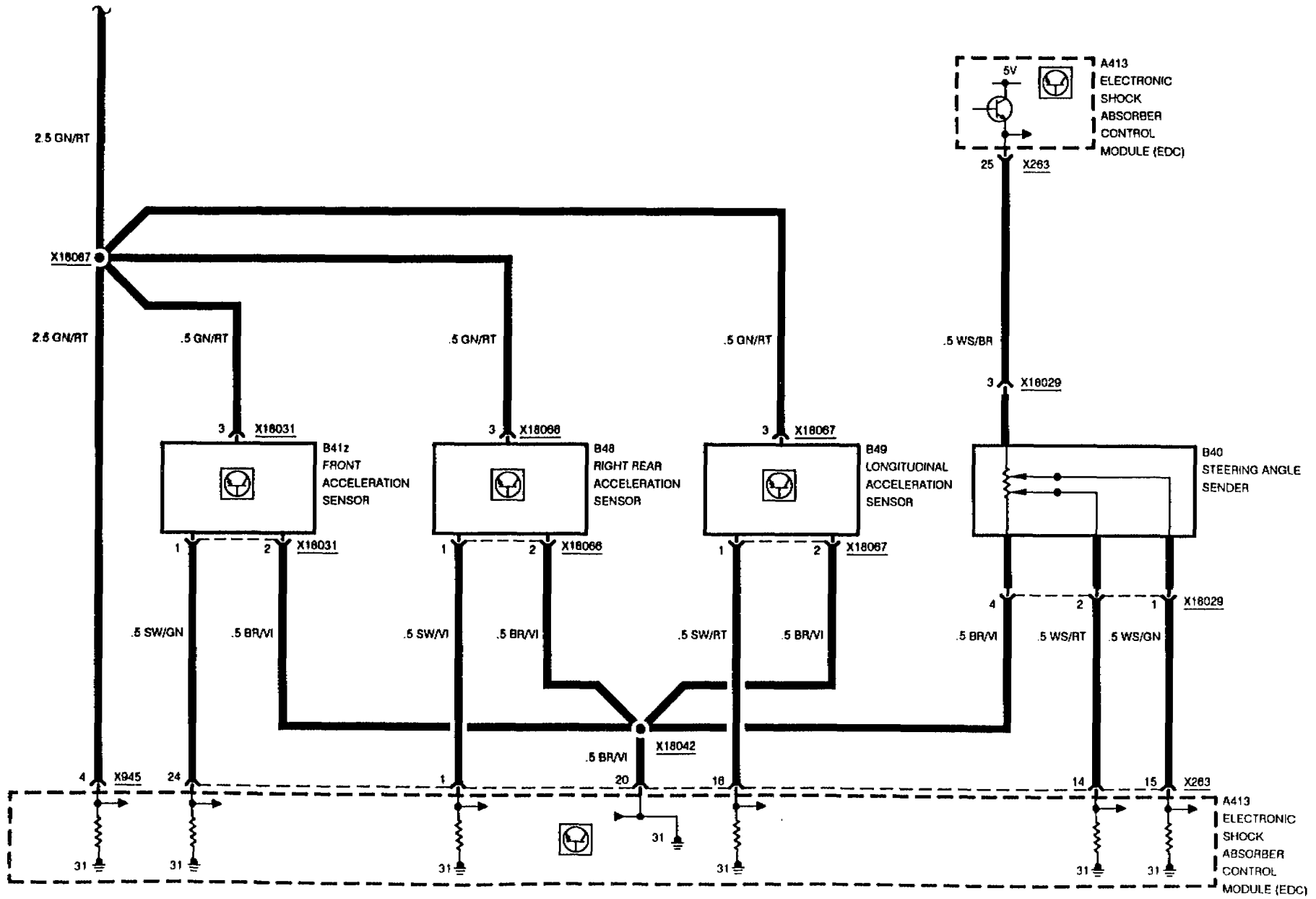




# SLIP CONTROL (ABS/ASC + T)

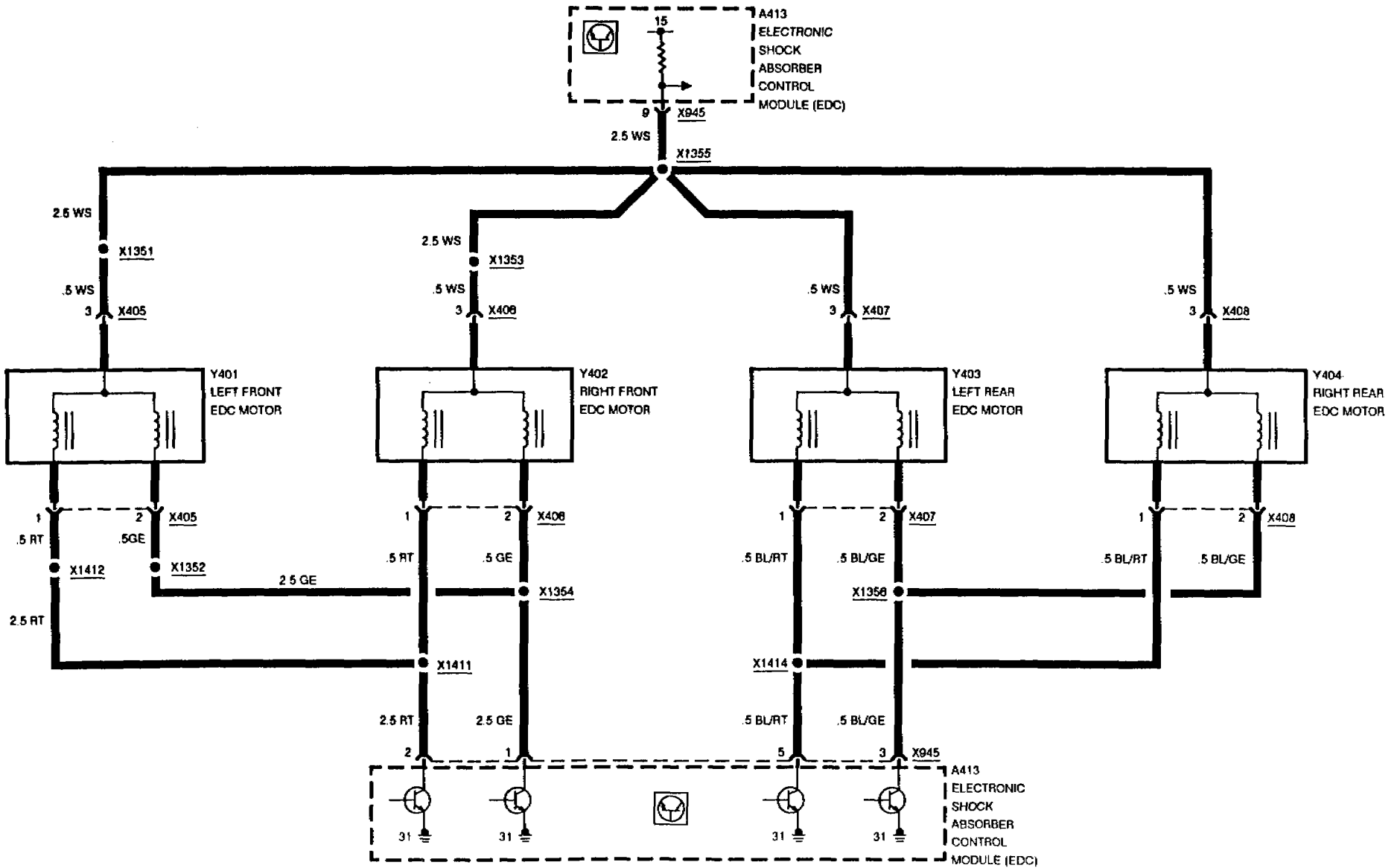








# ELECTRONIC SHOCK ABSORBER CONTROL III + (EDC III +)



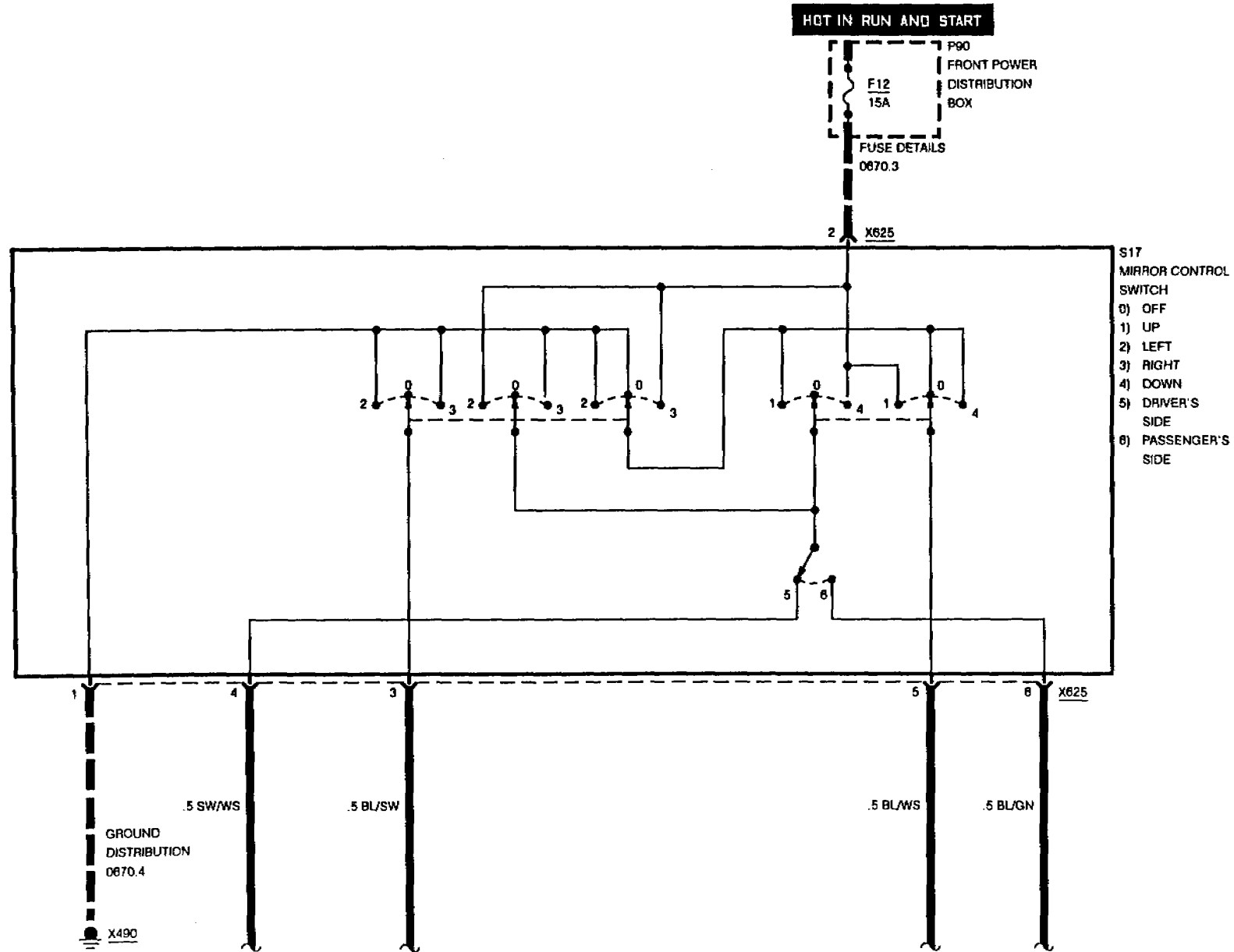
BMW  
8

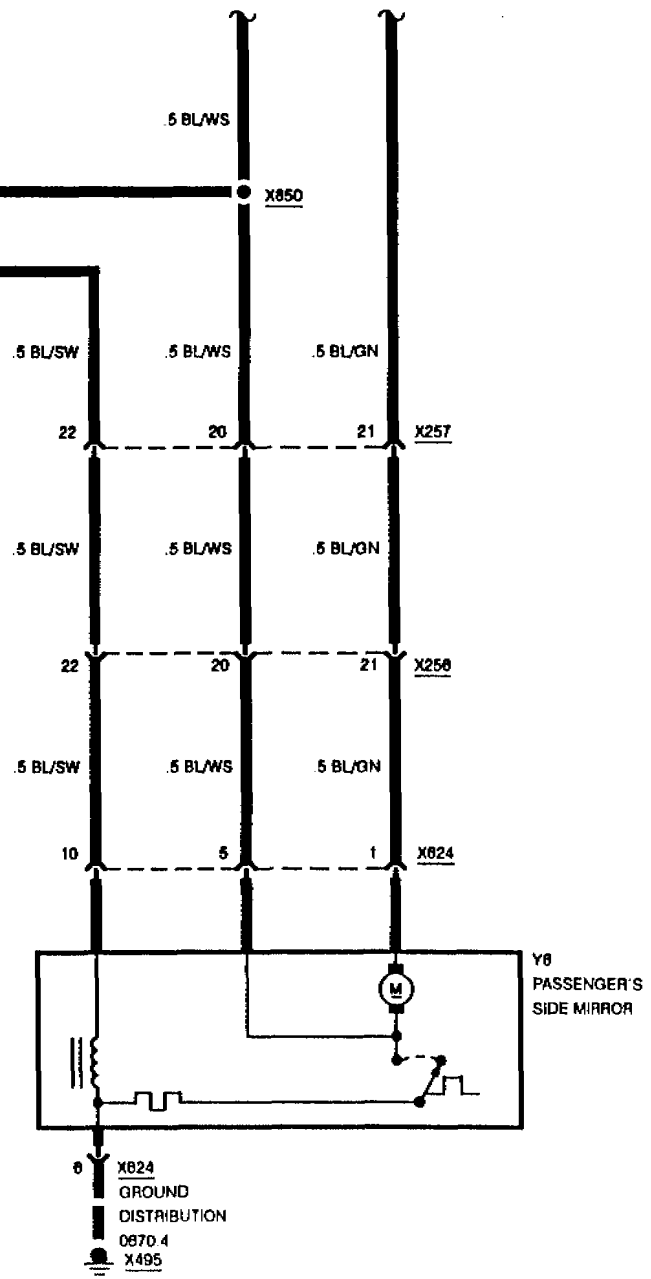
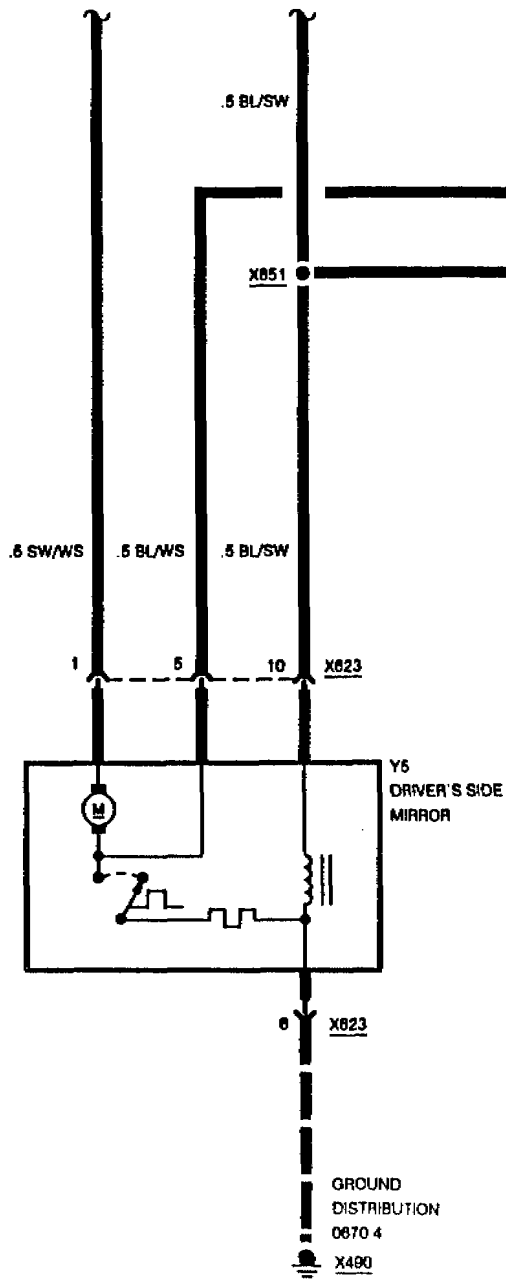
5116.0



# POWER MIRRORS

## OUTSIDE MIRRORS



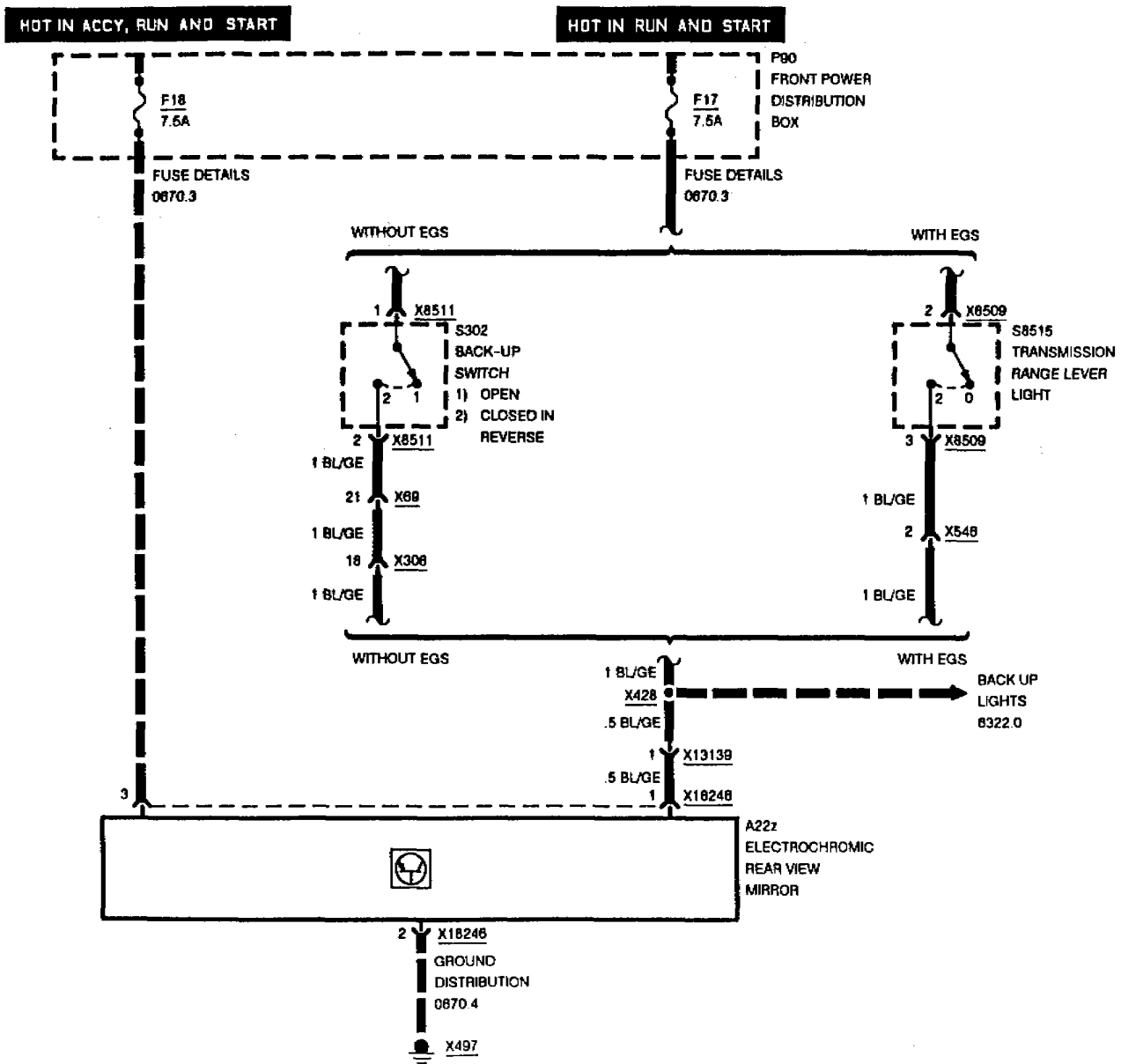






# POWER MIRRORS

## INSIDE MIRROR

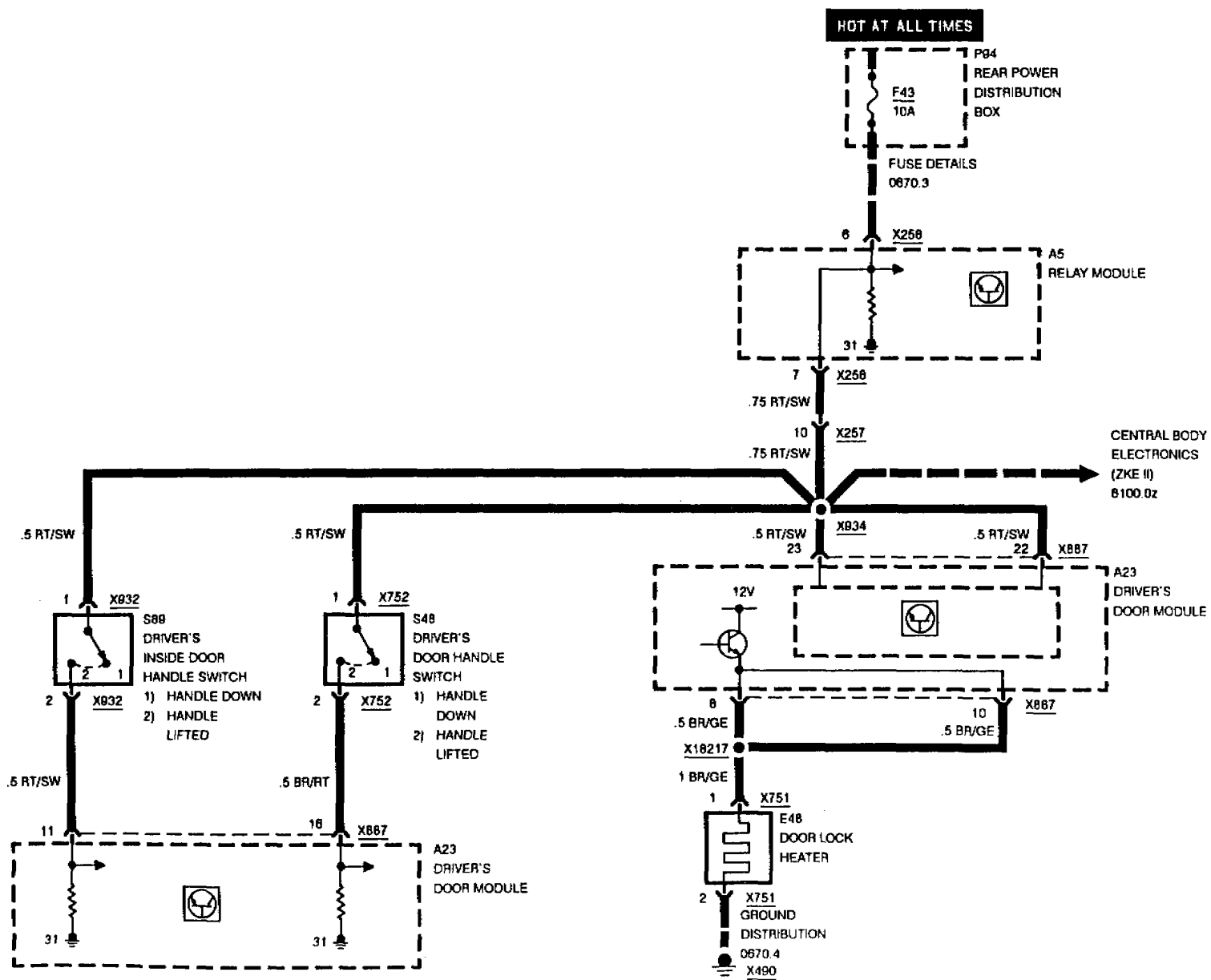


BMW  
8

5120.0



# ZKE DOOR LOCK HEATING (TSH)



BMW  
8

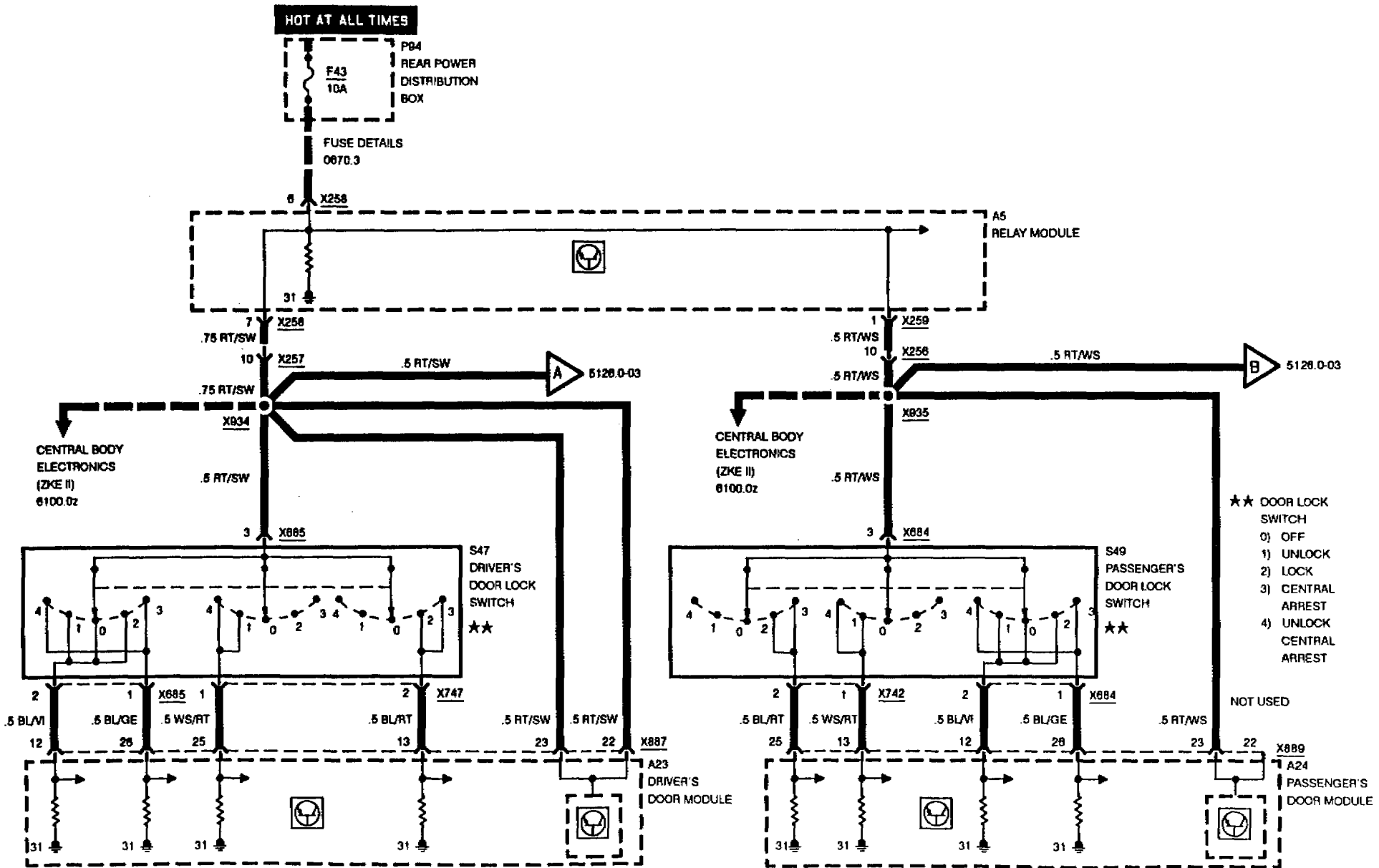
5126.0



# ZKE CENTRAL LOCKING (ZV)

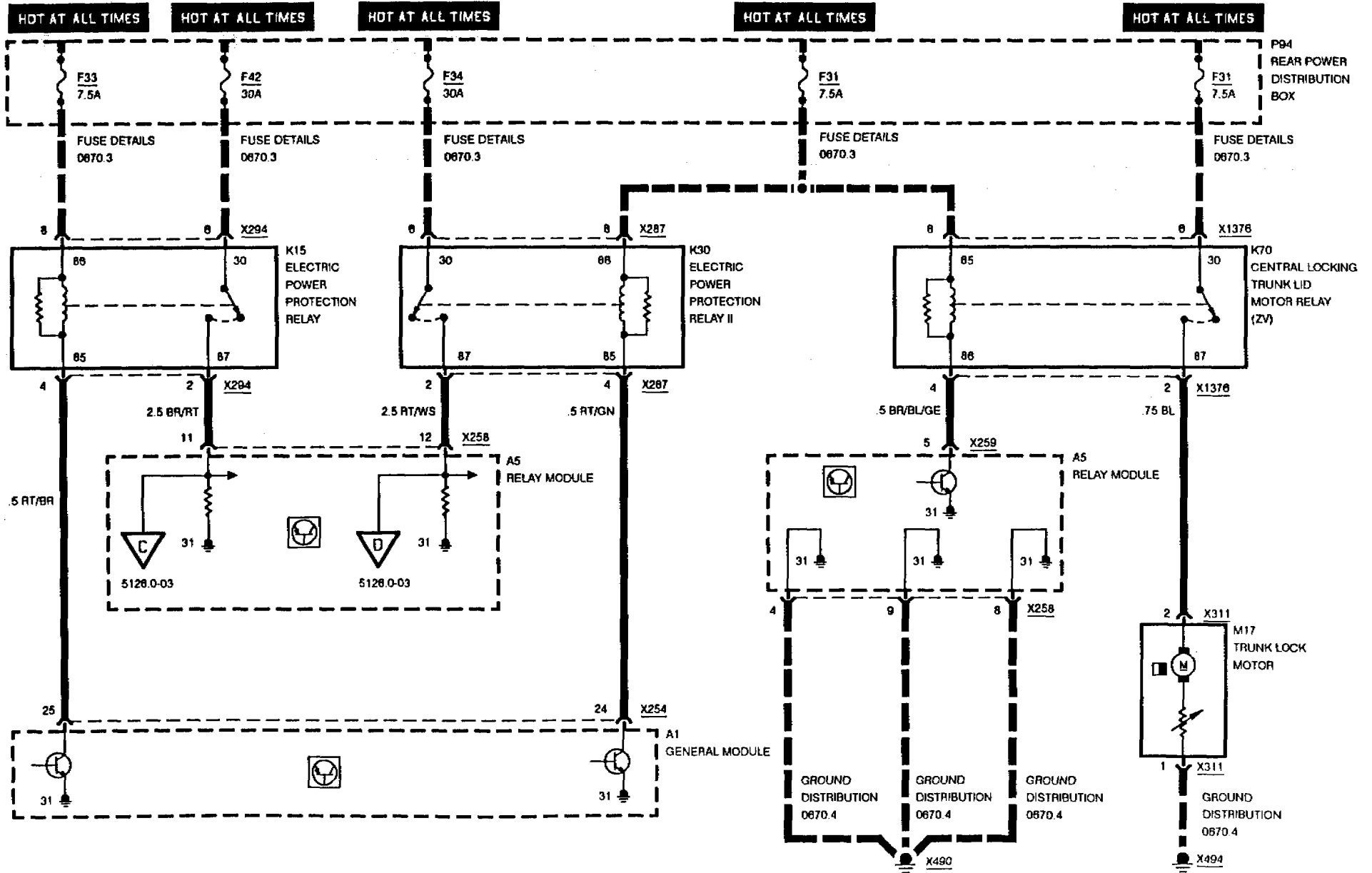
## (INPUTS)

**HOT AT ALL TIMES**





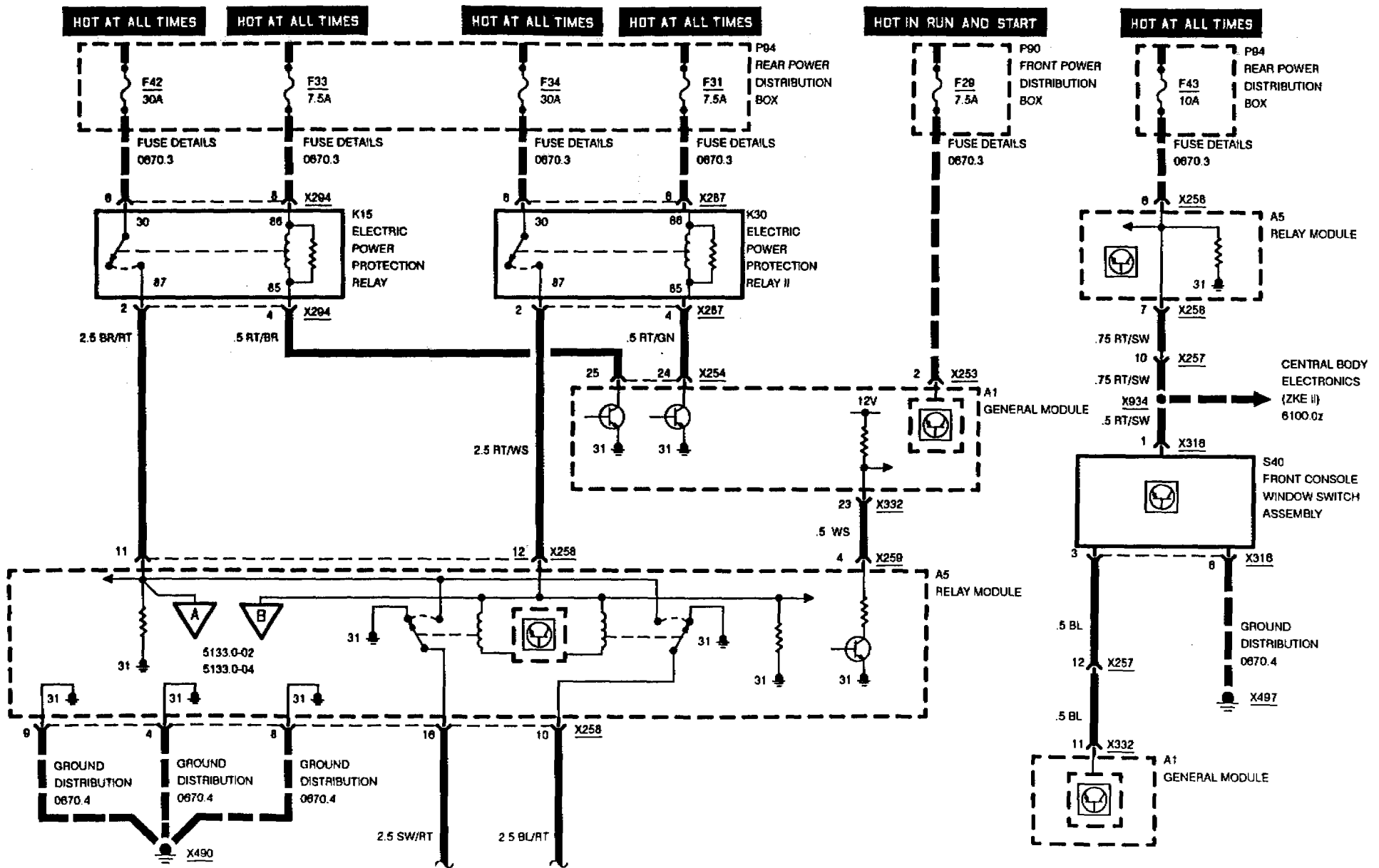
# ZKE CENTRAL LOCKING (ZV)

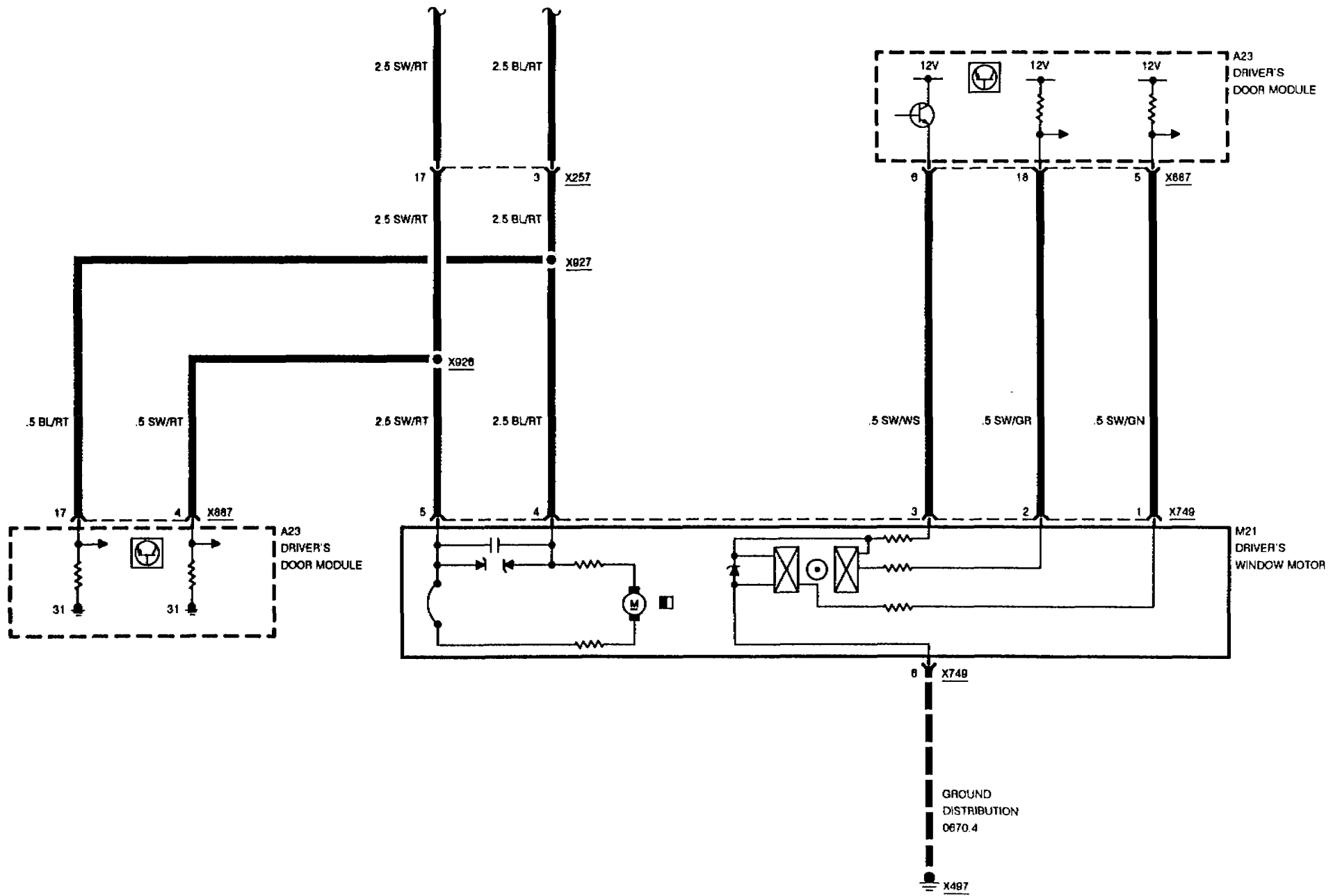






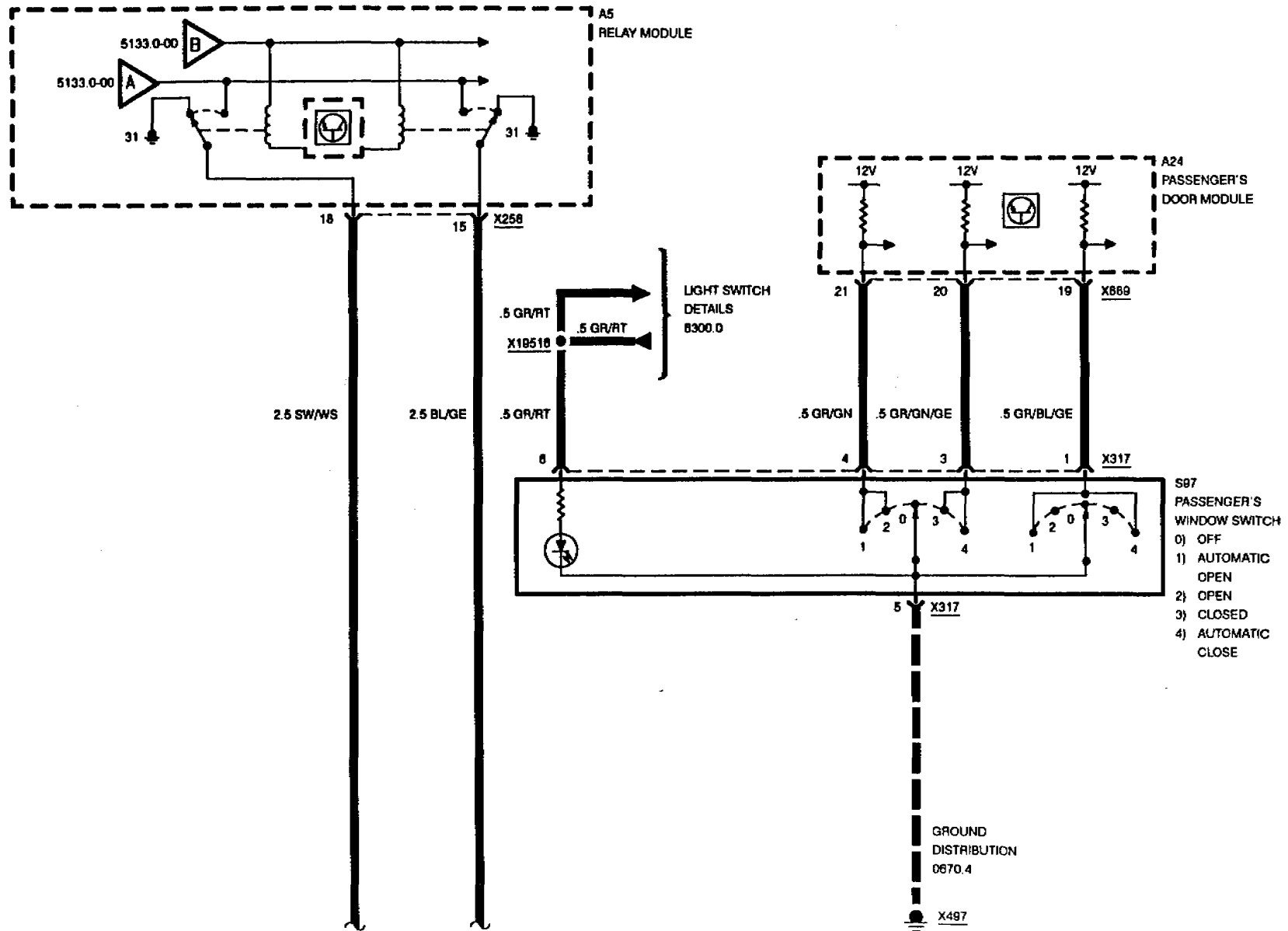
# ZKE POWER WINDOWS (FH)

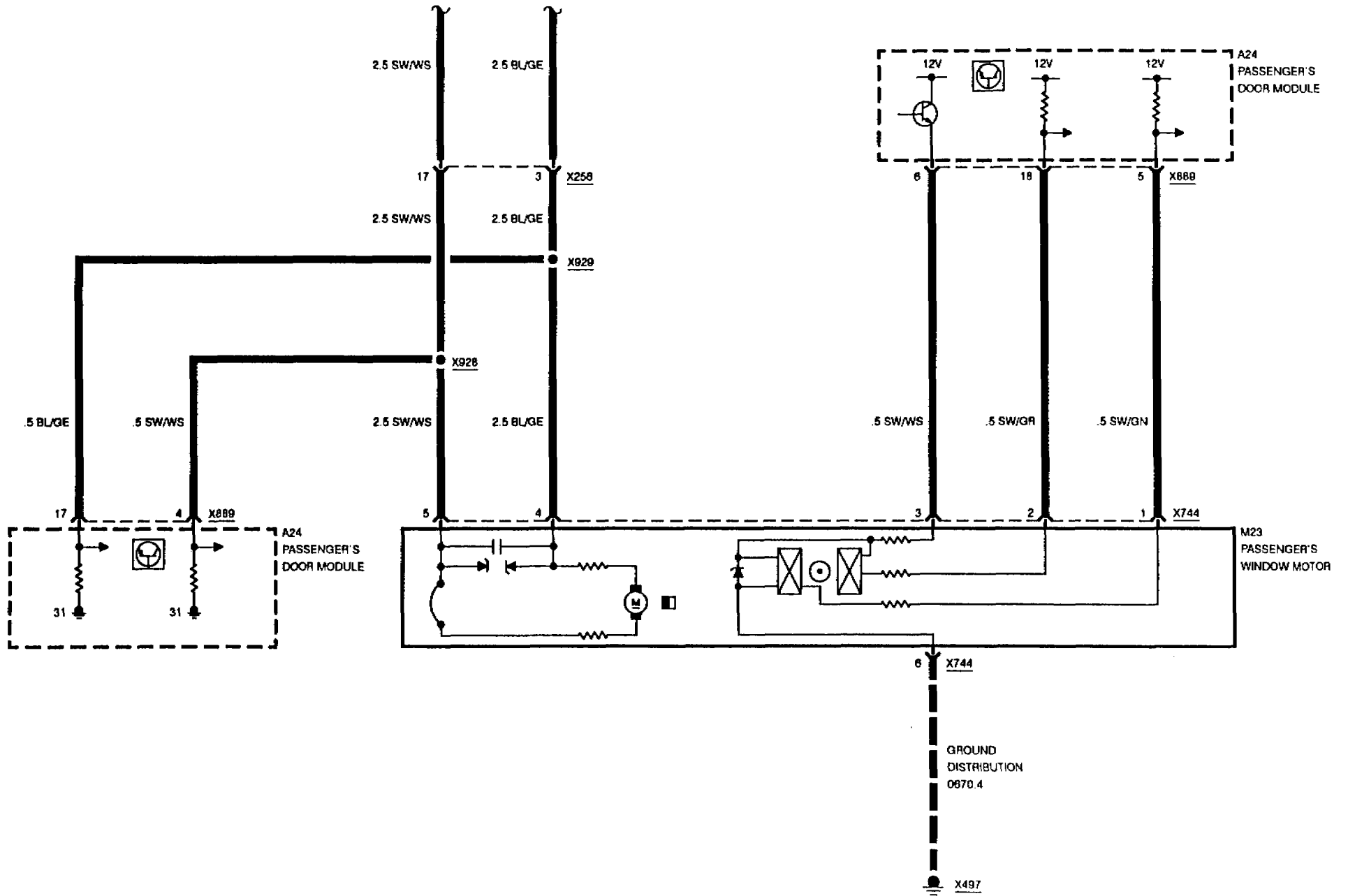






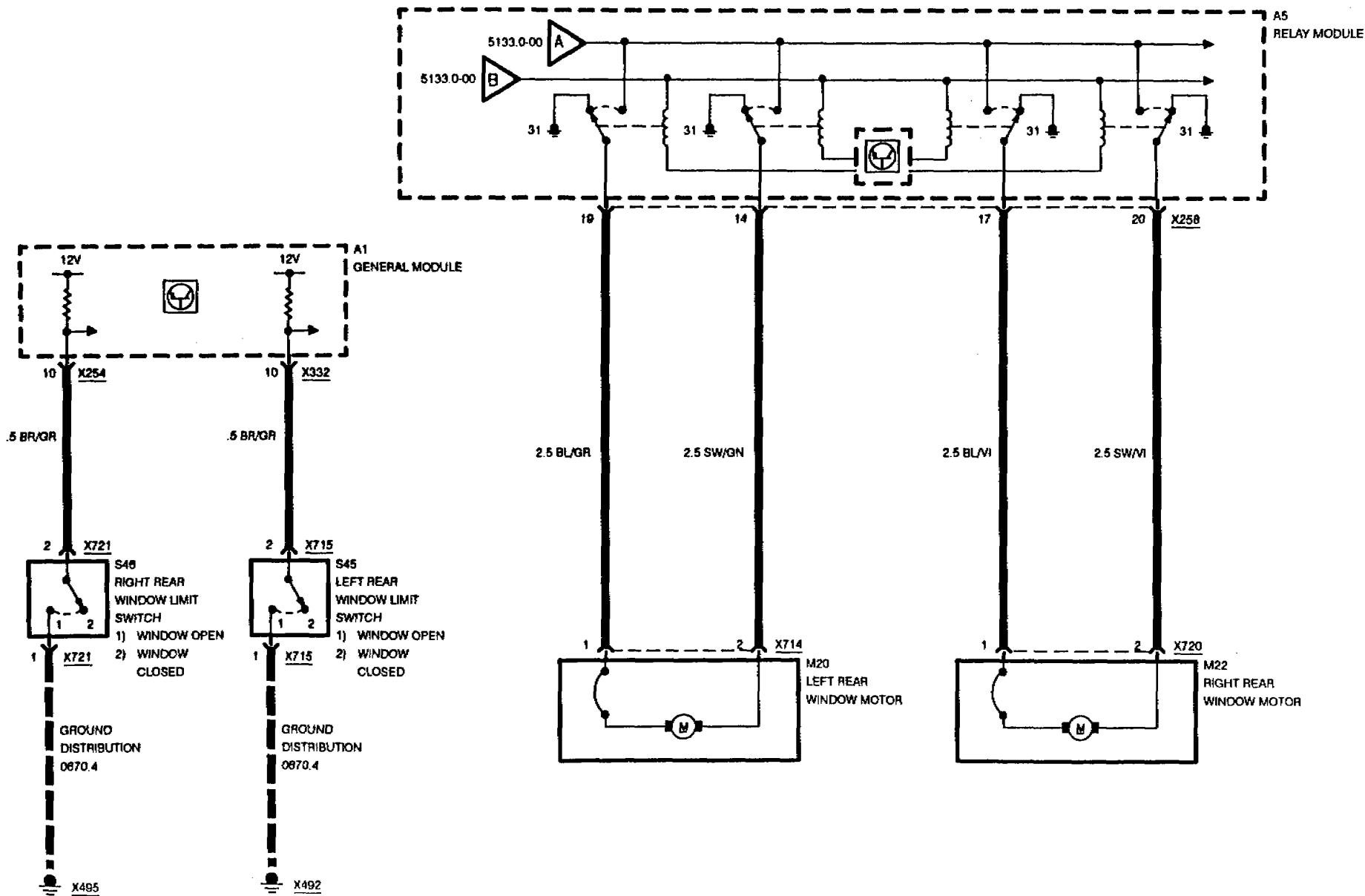
# ZKE POWER WINDOWS (FH)







# ZKE POWER WINDOWS (FH)



BMW  
8

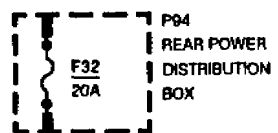
5146.0



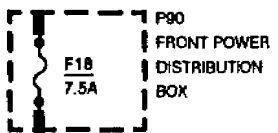
# POWER SUN SHADES

**HOT AT ALL TIMES**

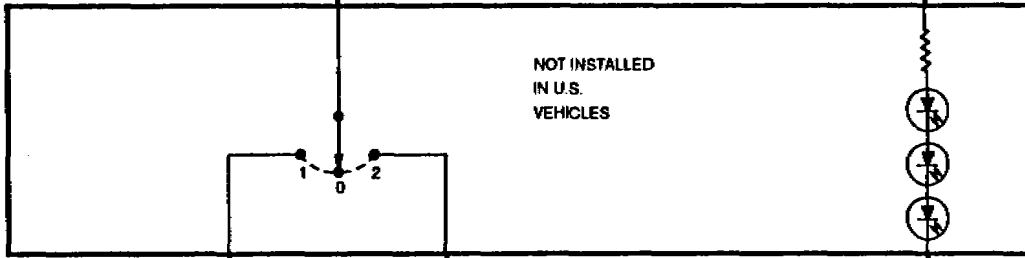
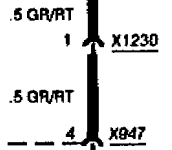
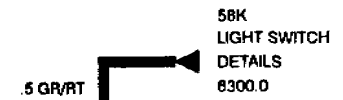
**HOT IN ACCY, RUN OR START**



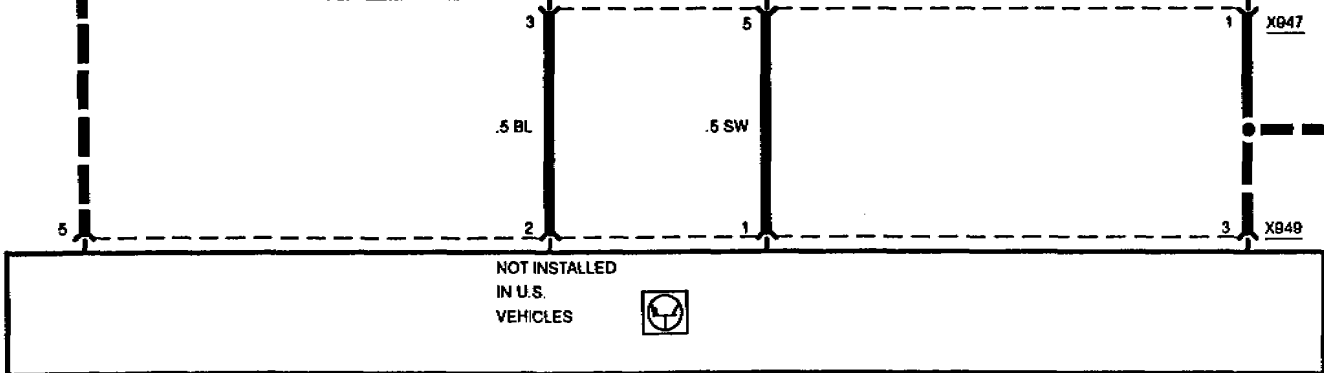
FUSE DETAILS  
0670.3



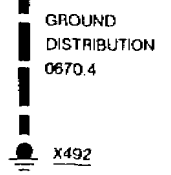
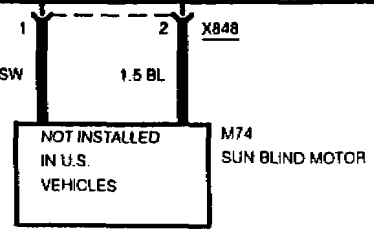
FUSE DETAILS  
0670.3



S110  
SUN BLIND  
SWITCH  
0) REST  
1) BLIND EXTEND  
2) BLIND  
RETRACT



A82  
SUN BLIND  
CONTROL MODULE

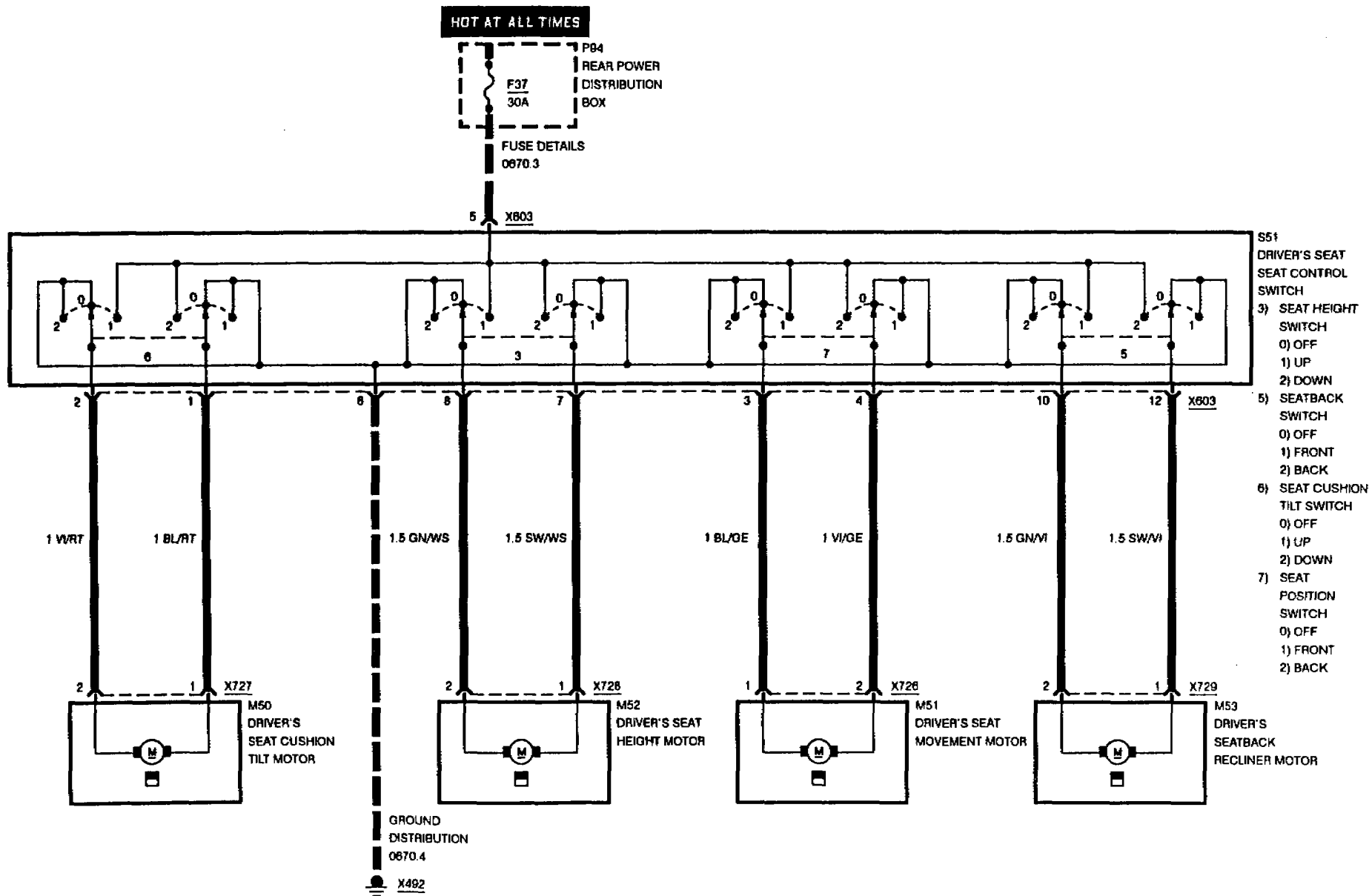


BMW  
8

5200.0



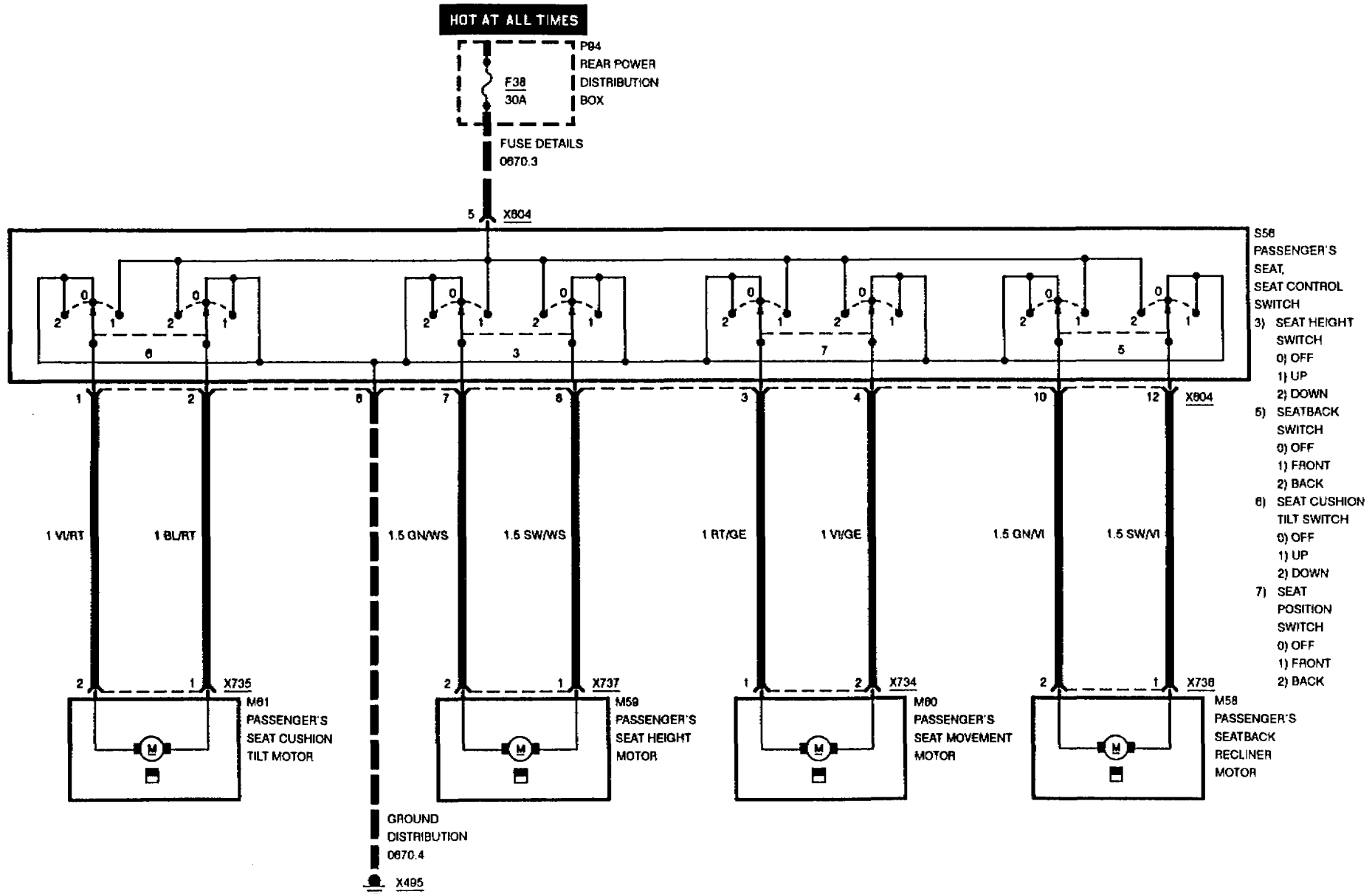
# POWER SEATS DRIVER'S SEAT



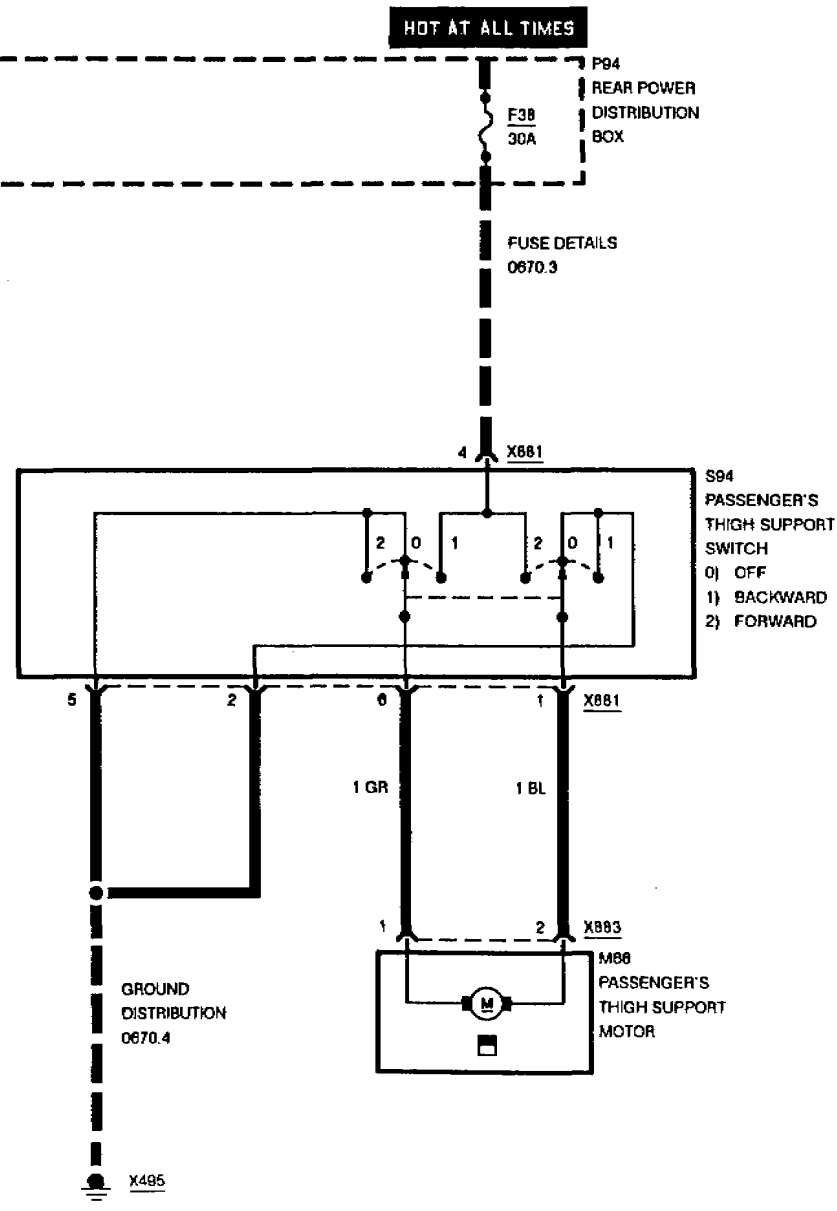
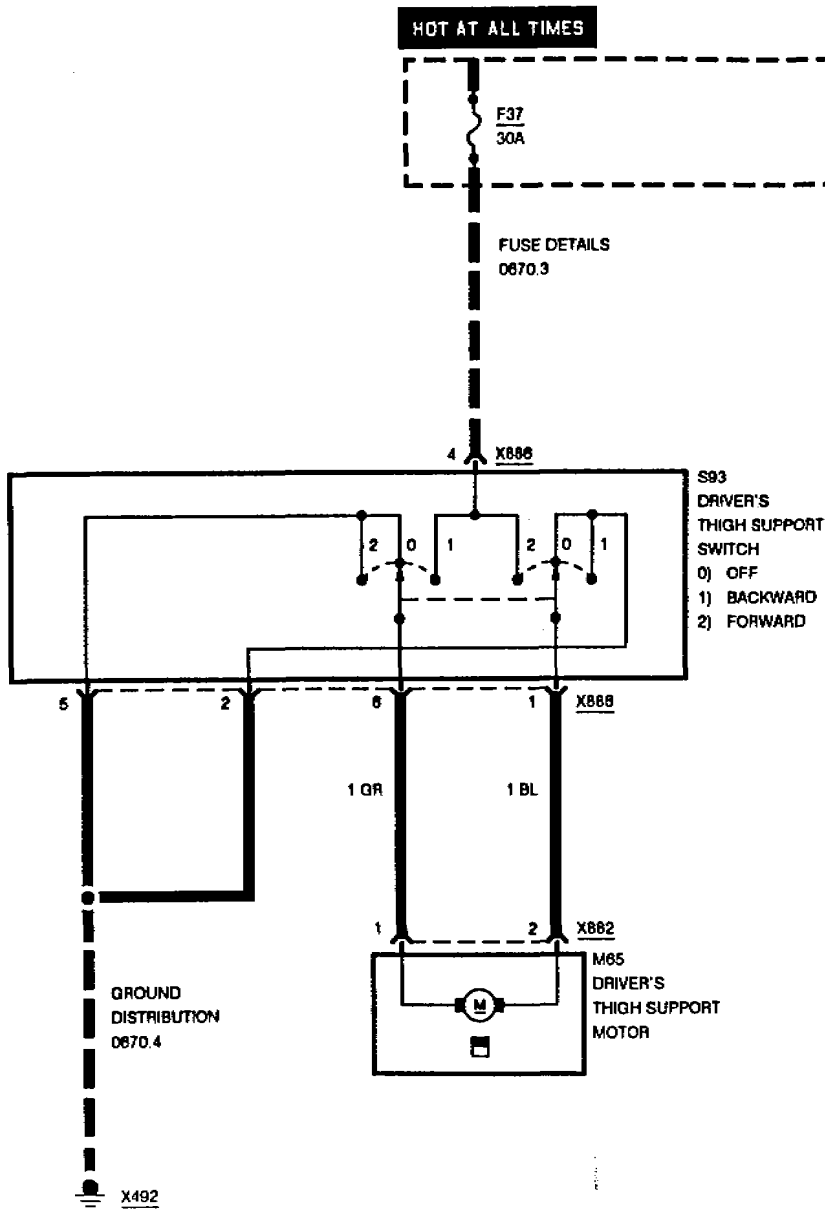


# POWER SEATS

## PASSENGER'S SEAT



**BMW** **POWER SEATS**  
**THIGH SUPPORT**





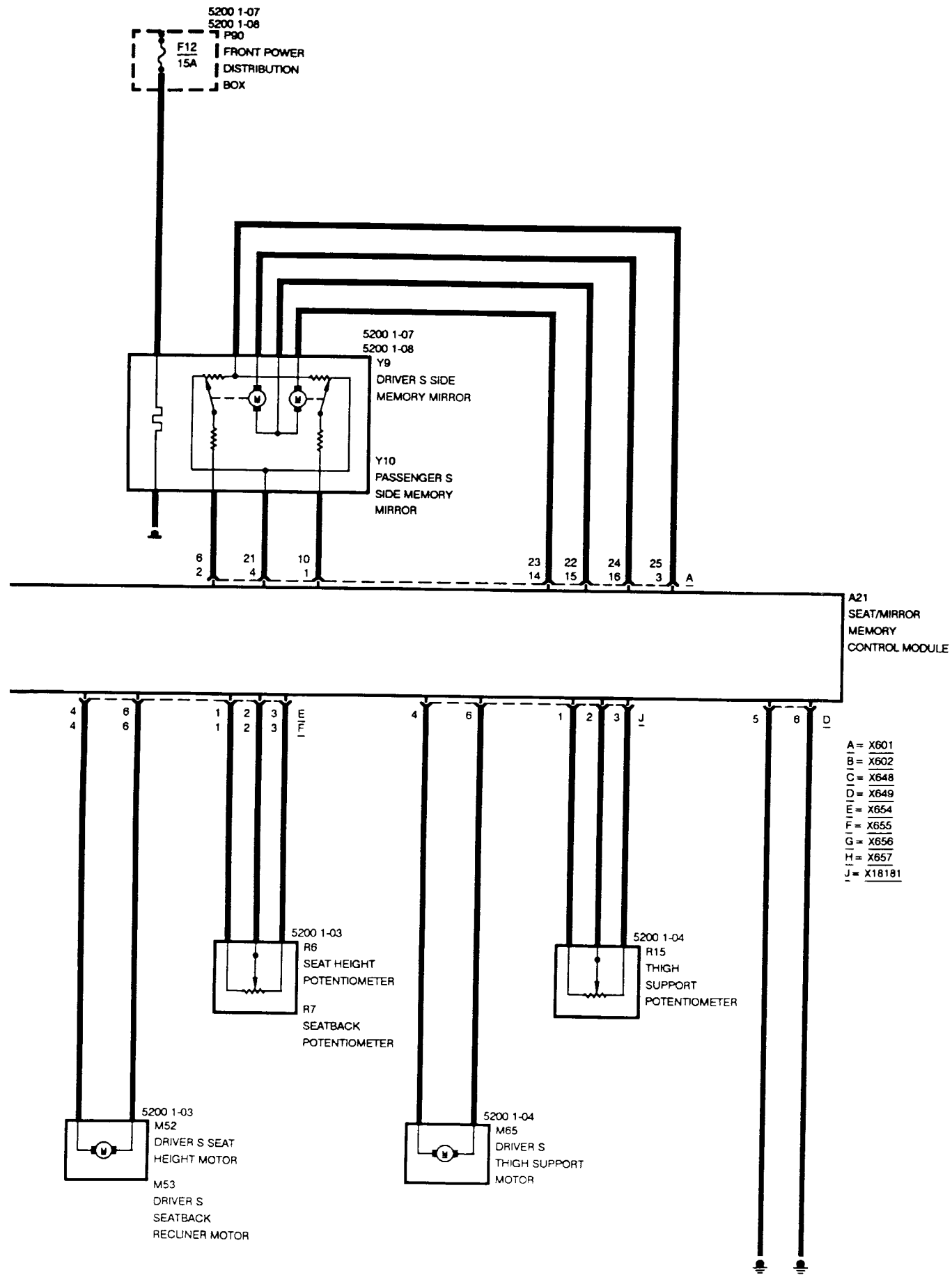


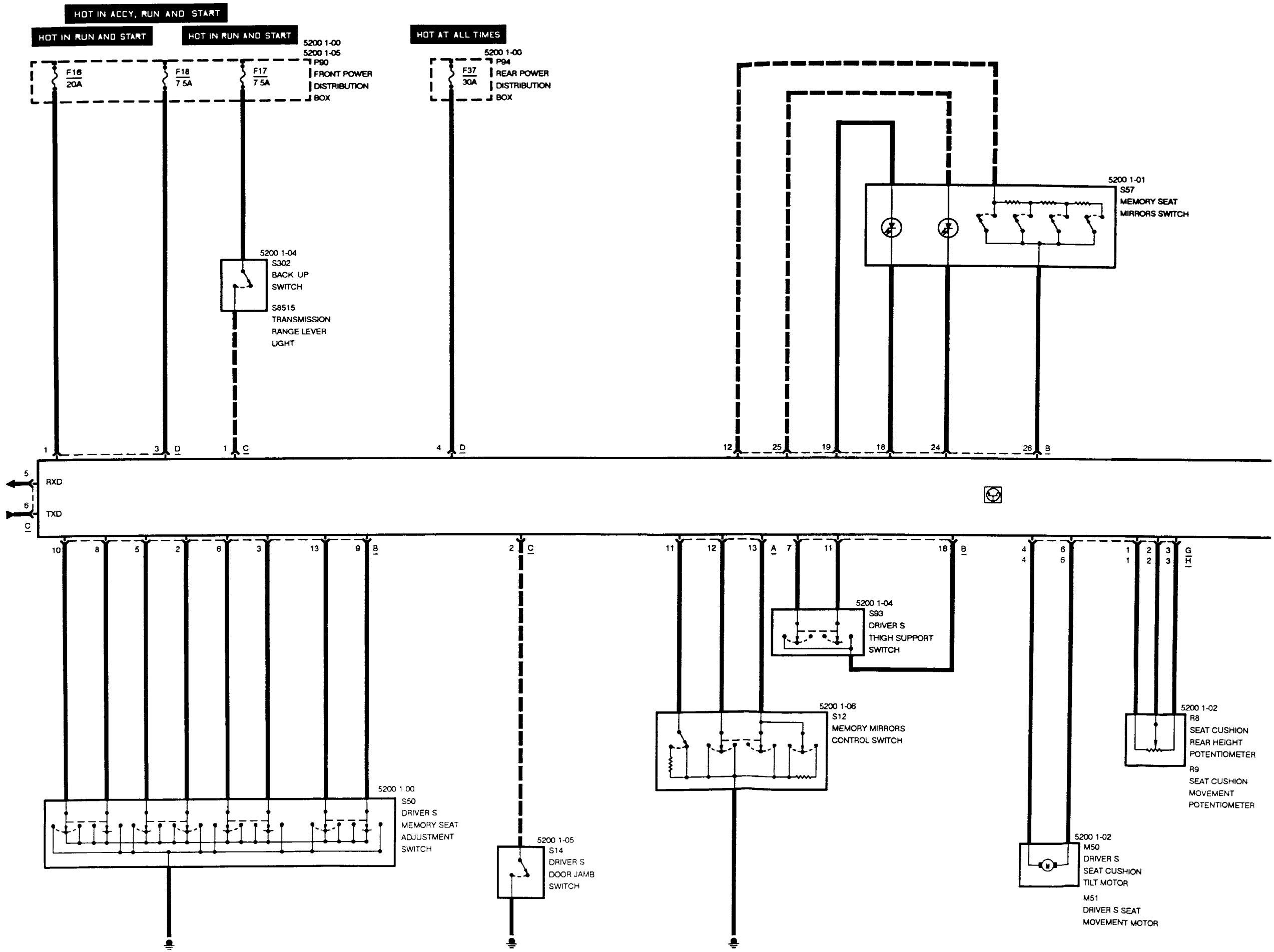
5200.0-04

**SEAT/MIRROR MEMORY SYSTEM (SM/SPM)  
BLOCK DIAGRAM**



HOT IN RUN AND START

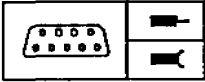








## SEAT/MIRROR MEMORY SYSTEM (SM/SPM)



### Pin Assignments

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

### X601

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
1	E	Potentiometer connection	Driver's mirror	0-4,5 Volt	Voltage value	
2	E	Potentiometer connection	Driver's mirror	0-4,5 Volt	Voltage value	
3	E	Potentiometer connection	Driver's mirror	0-4,5 Volt	Voltage value	
4	M	Ground	Driver's mirror			
5		Not used				
6	E	Potentiometer connection	Passenger's mirror	0-4,5 Volt	Voltage value	
7		Not used				
8		Not used				
9		Not used				



## SEAT/MIRROR MEMORY SYSTEM (SM/SPM)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
10	E	Potentiometer connection	Passenger's mirror	0-4,5 Volt	Voltage value	
11	E	Mirror adjustment	Mirror adjustment switch	Ground	Status display	
12	E	Mirror adjustment	Mirror adjustment switch	Ground	Status display	
13	E	Mirror adjustment	Mirror adjustment switch	Ground	Status display	
14	A	Connection, driver's mirror adjustment motor	Mirror adjustment motor	12 Volt	Voltage value	
15	A	Connection, driver's mirror adjustment motor	Mirror adjustment motor	12 Volt	Voltage value	
16	A	Connection, driver's mirror adjustment motor	Mirror adjustment motor	12 Volt	Voltage value	
17		Not used				
18		Not used				
19		Not used				
20		Not used				
21	E	Potentiometer connection	Passenger's mirror	0-4,5 Volt	Voltage value	
22	A	Connection, passenger's mirror adjustment motor	Passenger's mirror adjustment motor	12 Volt	Voltage value	
23	A	Connection, passenger's mirror adjustment motor	Passenger's mirror adjustment motor	12 Volt	Voltage value	
24	A	Connection, passenger's mirror adjustment motor	Passenger's mirror adjustment motor	12 Volt	Voltage value	
25	E	Potentiometer connection	Passenger's mirror	0-4,5 Volt	Voltage value	
26		Not used				



## SEAT/MIRROR MEMORY SYSTEM (SM/SPM)

X602

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
1		Not used				
2	E	Tilt down	Seat adjustment switch	Ground	Status display	
3	E	Height down	Seat adjustment switch	Ground	Status display	
4		Not used				
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	E	Memory switch Pin 1	Memory switch	Ground	Status display	
13	E	Backrest forward	Seat adjustment switch	Ground	Status display	
14		Not used				
15		Not used				
16	E	Ground	Thigh support switch			
17		Not used				
18	A	Lights	Memory switch	12 Volt		
19	A	Lights	Memory switch	12 Volt		
20		Not used				
21		Not used				



## SEAT/MIRROR MEMORY SYSTEM (SM/SPM)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
22		Not used				
23		Not used				
24	E	Memory switch connection	Memory switch	Ground		
25	E	Memory switch connection	Memory switch	Ground		
26	E	Memory switch connection	Memory switch	Ground		

### X648

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
1	E	Reverse gear signal	Back up switch			
2	E	Drivers door status	Drivers 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	E	Terminal 30 voltage	Fuse			



## SEAT/MIRROR MEMORY SYSTEM (SM/SPM)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
5	M	Ground	Ground point			
6	M	Ground	Ground point			

### X654

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

### X655

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
1	A	Potentiometer voltage	Drivers seatback pot.			
2	E	Seat back position signal	Drivers seatback pot.			
3	M	Ground	Drivers seatback pot.			
4	E/A	Motor voltage/ground	Drivers seatback recliner motor			
5		Not used				
6	E/A	Motor voltage/ground	Drivers seatback recliner motor			



## SEAT/MIRROR MEMORY SYSTEM (SM/SPM)

### X656

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

### X657

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



## SEAT/MIRROR MEMORY SYSTEM (SM/SPM)

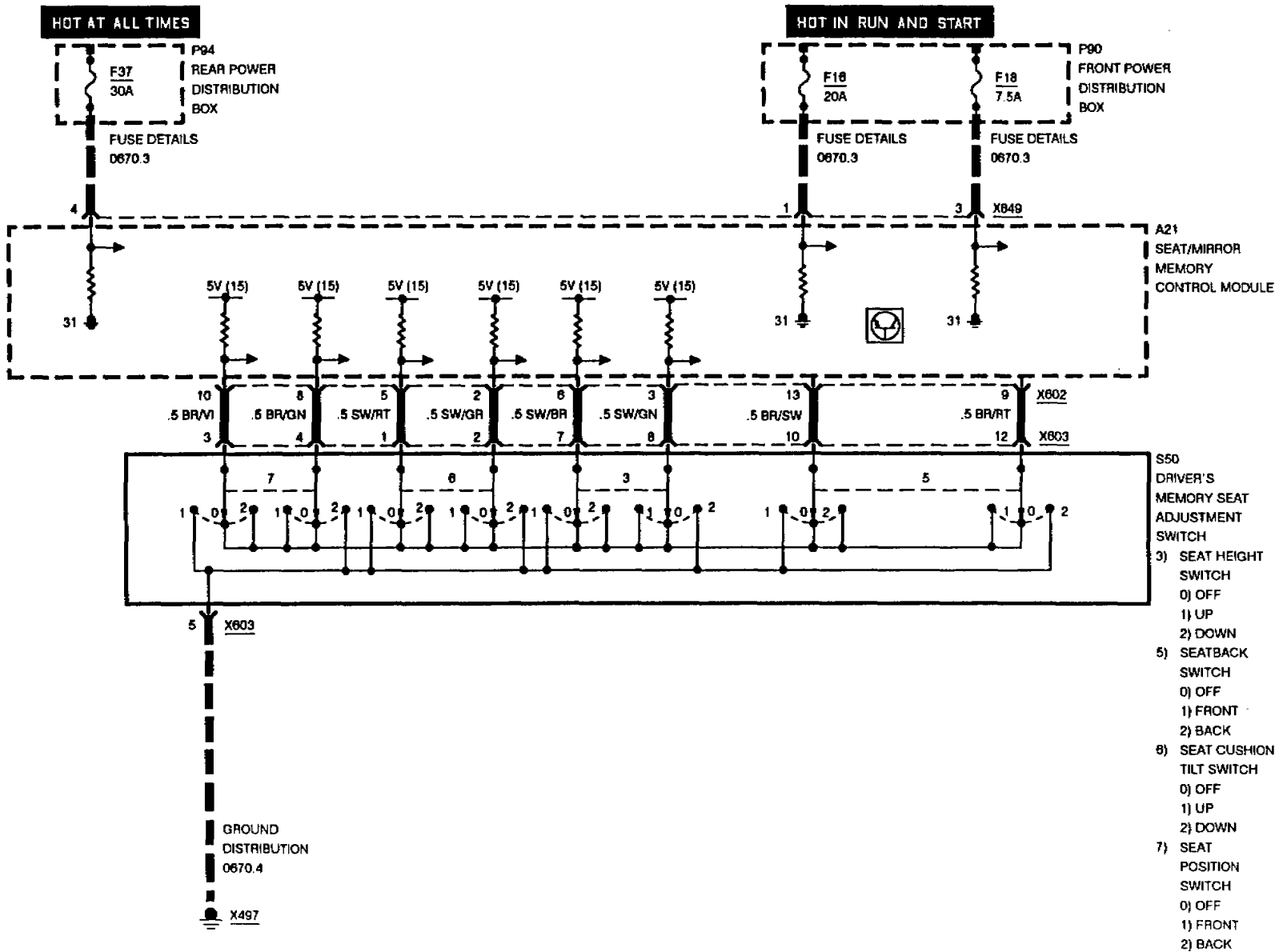
**X18181**

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

E = Input, A = Output, M = Ground



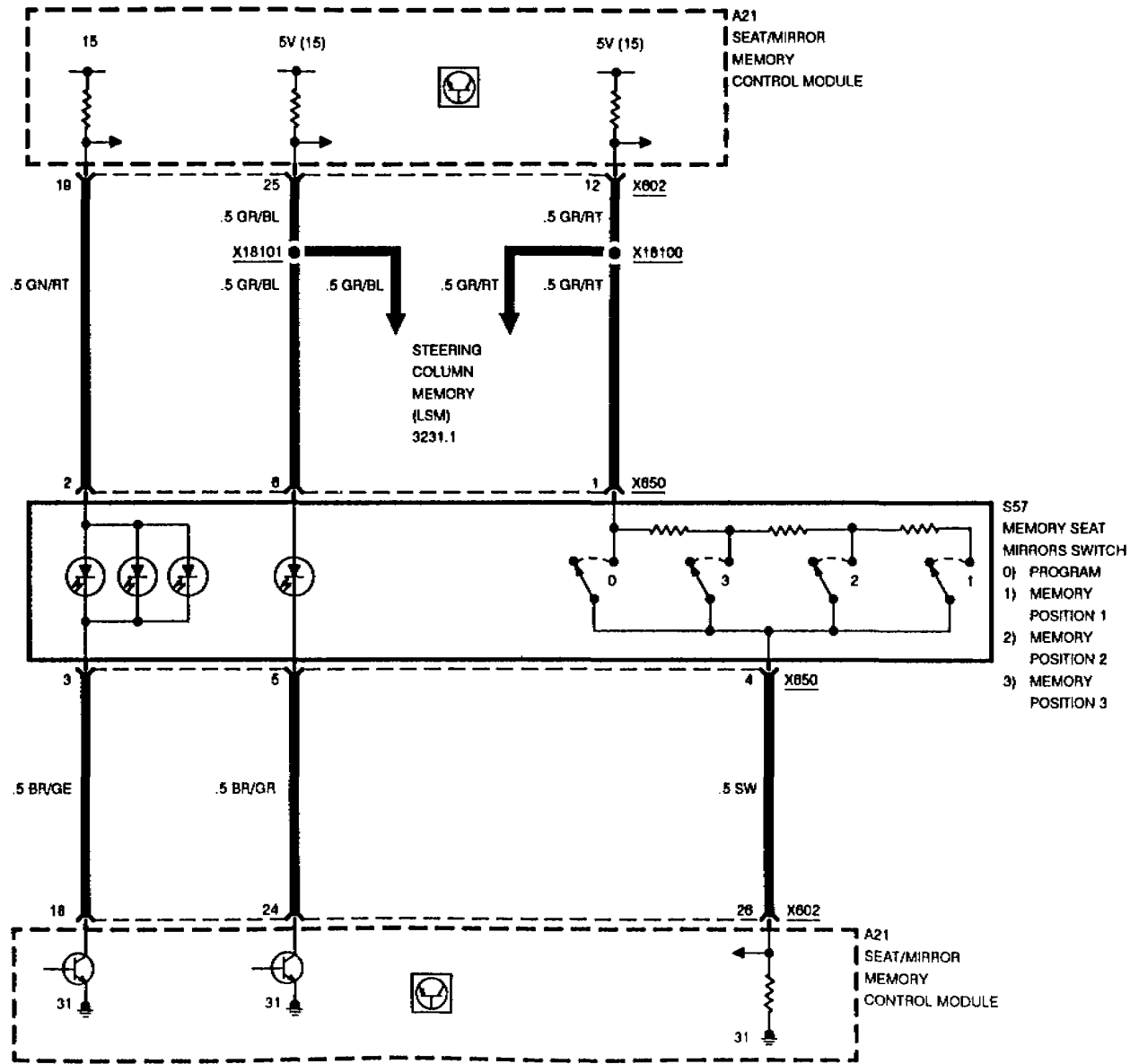
# SEAT/MIRROR MEMORY SYSTEM (SM/SPM)







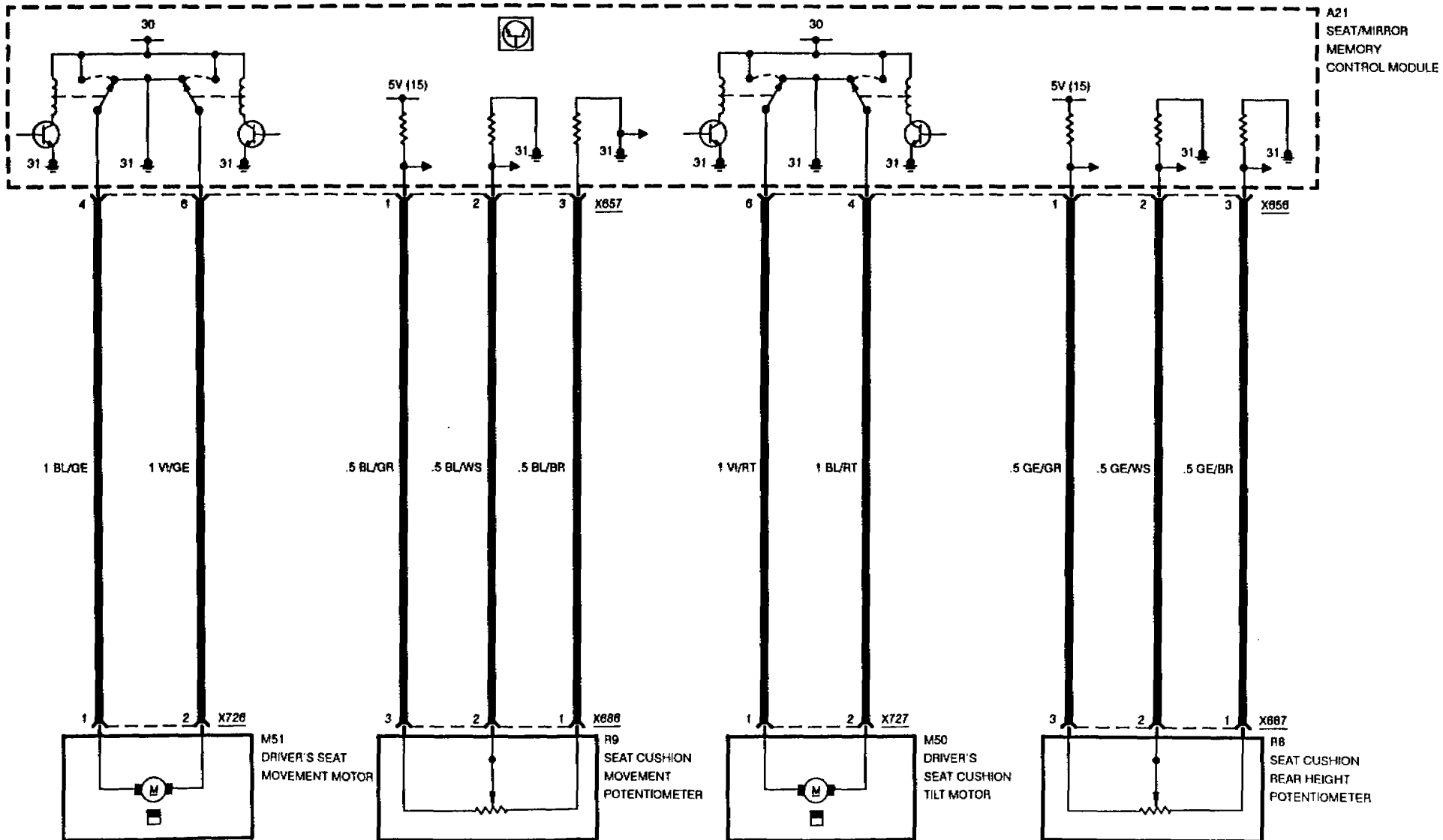
# SEAT/MIRROR MEMORY SYSTEM (SM/SPM)





# SEAT/MIRROR MEMORY SYSTEM (SM/SPM)

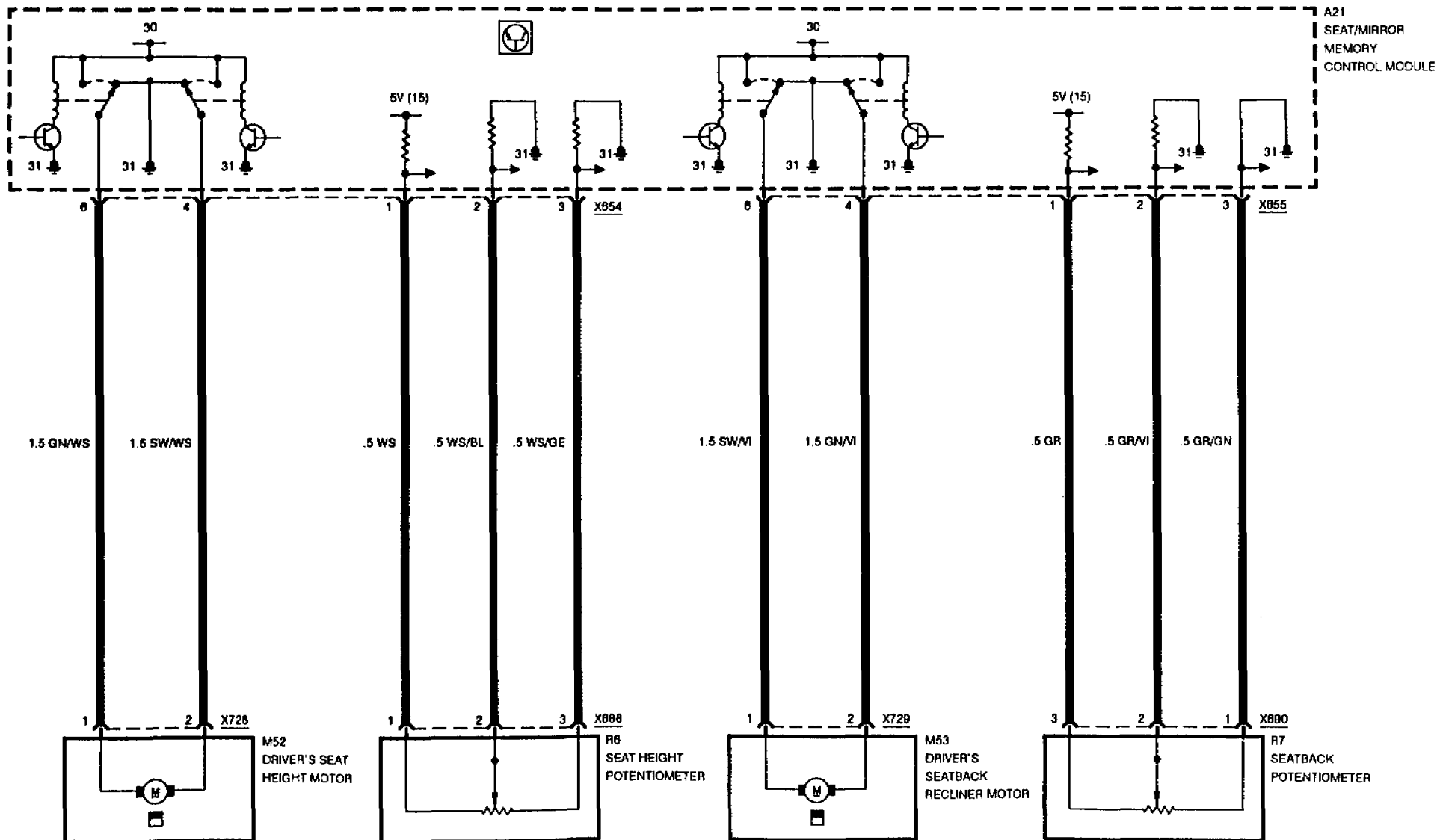
## SEAT





# SEAT/MIRROR MEMORY SYSTEM (SM/SPM)

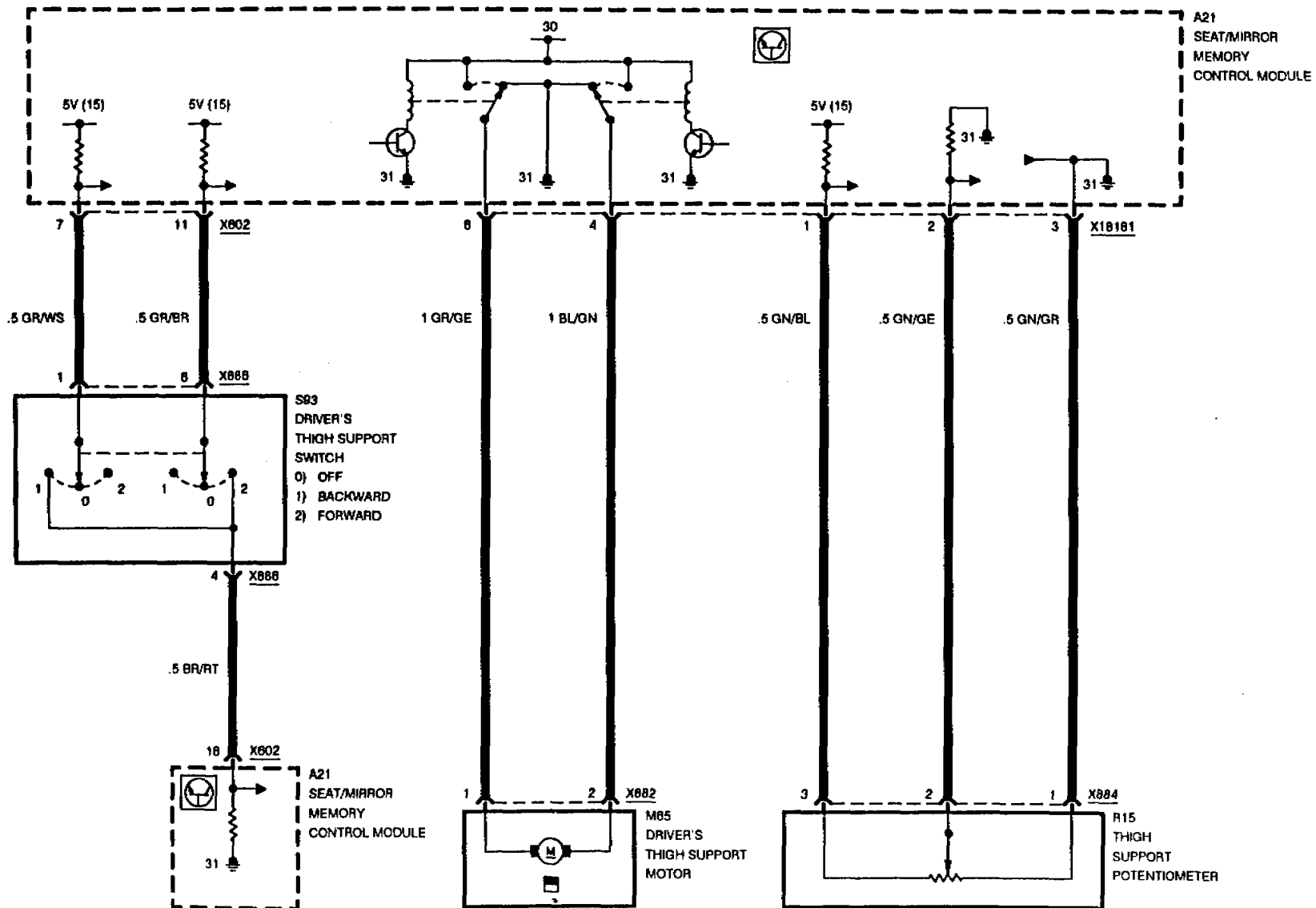
## SEAT





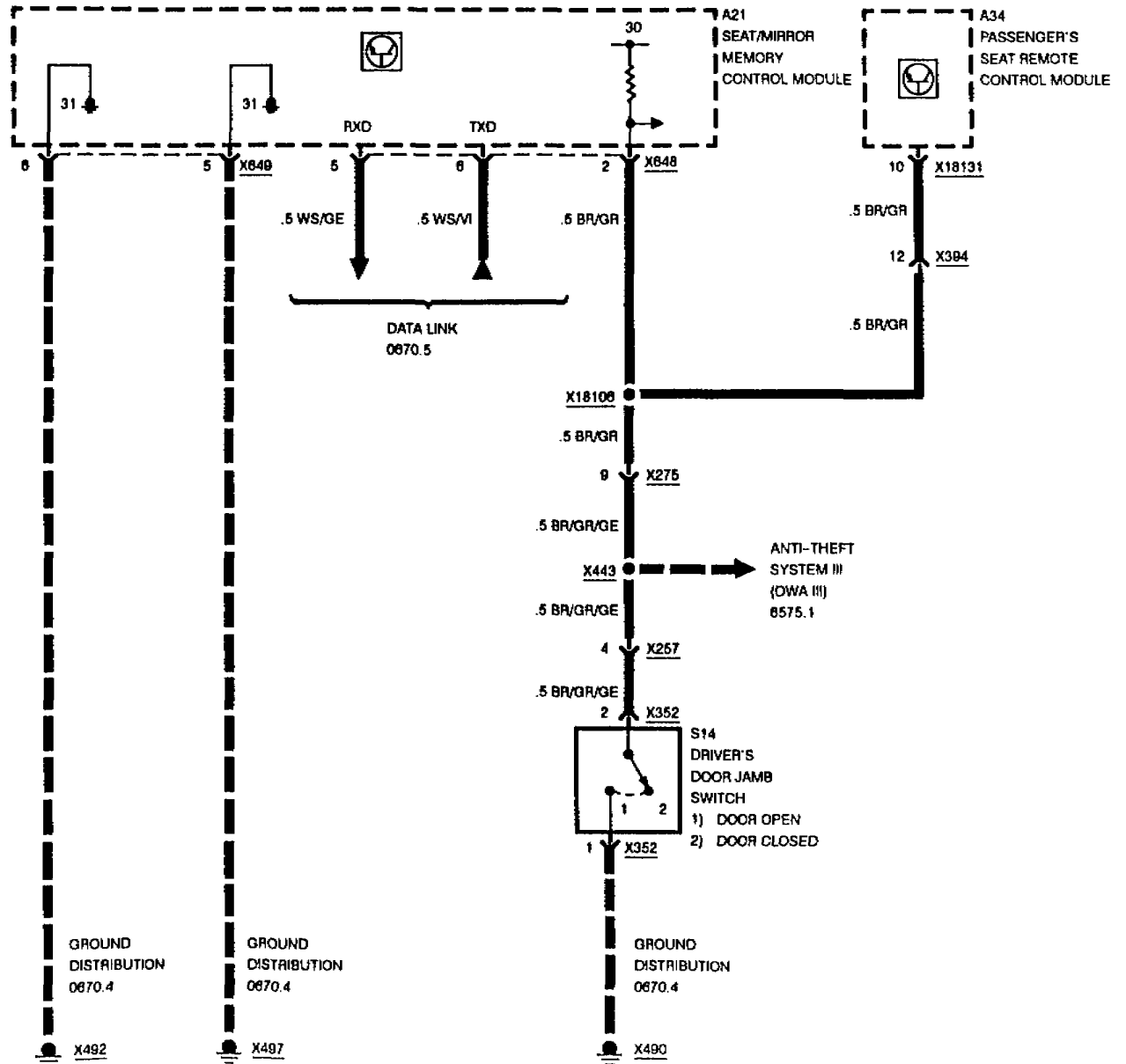
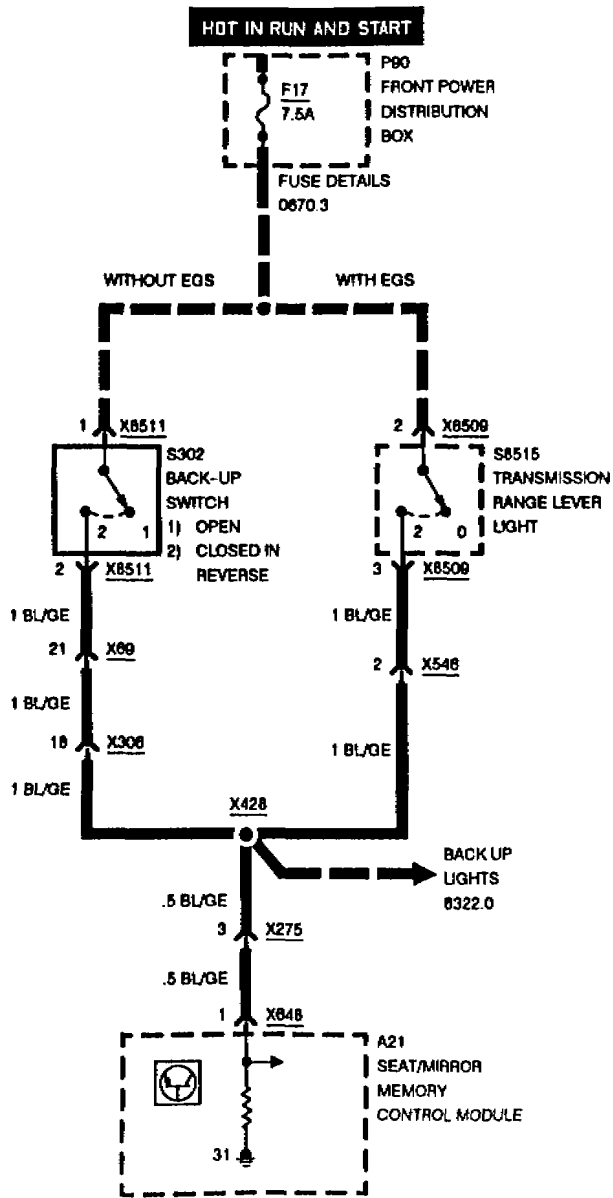
# SEAT/MIRROR MEMORY SYSTEM (SM/SPM)

## WITH SPORT SEAT





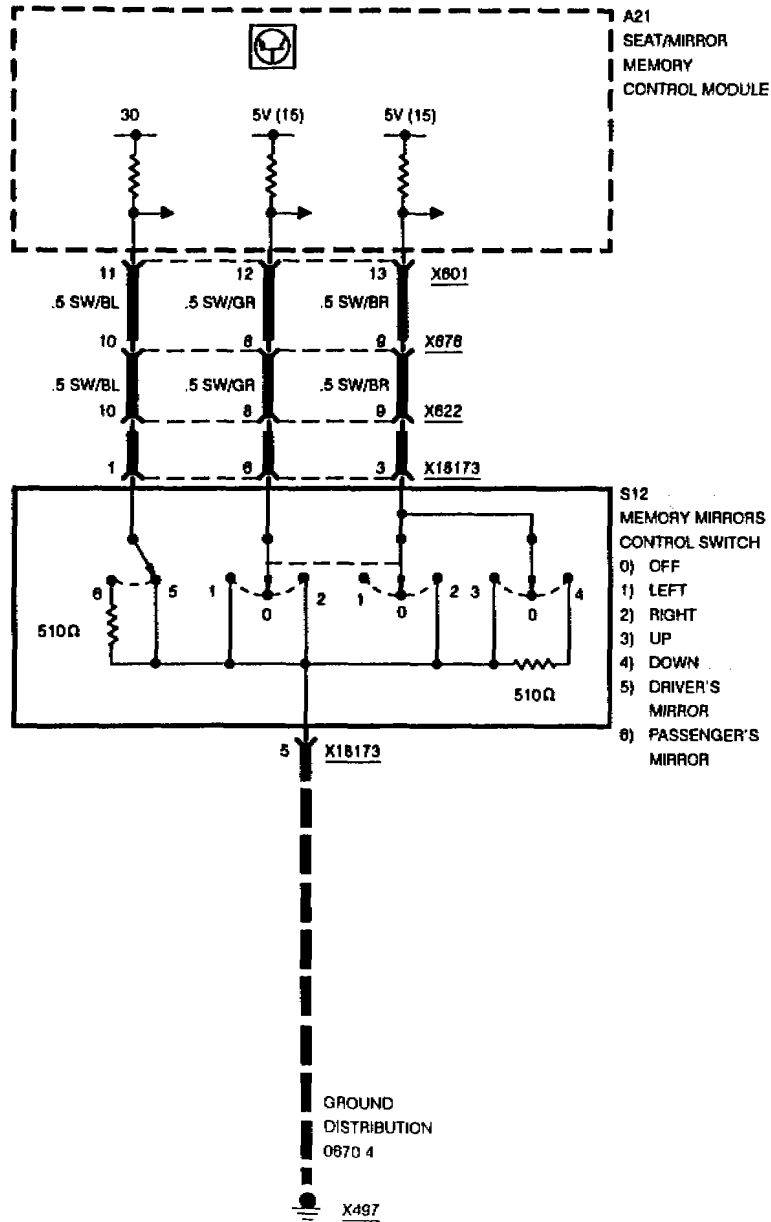
# SEAT/MIRROR MEMORY SYSTEM (SM/SPM)





# SEAT/MIRROR MEMORY SYSTEM (SM/SPM)

## MIRROR

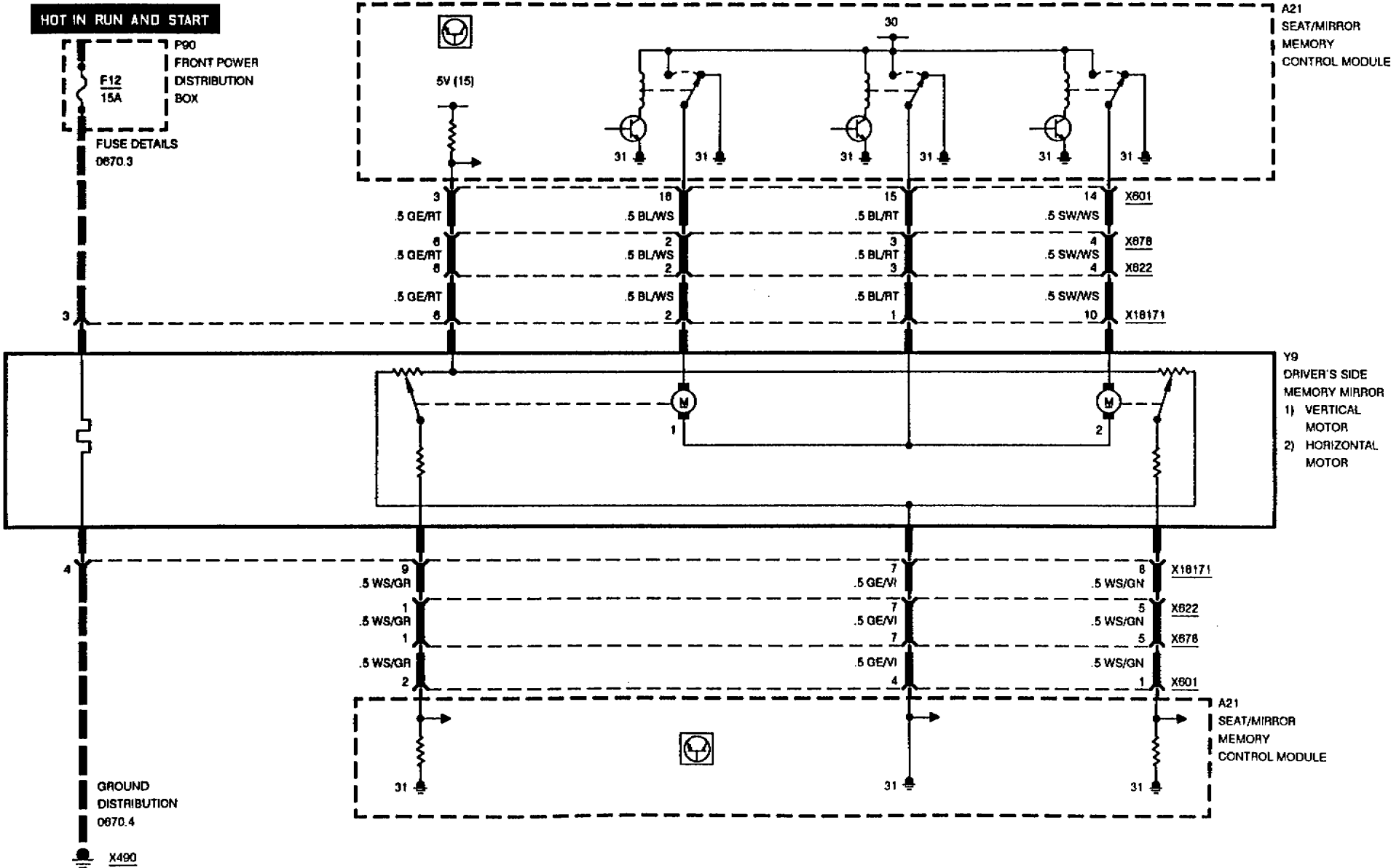




# SEAT/MIRROR MEMORY SYSTEM (SM/SPM)

## MIRROR

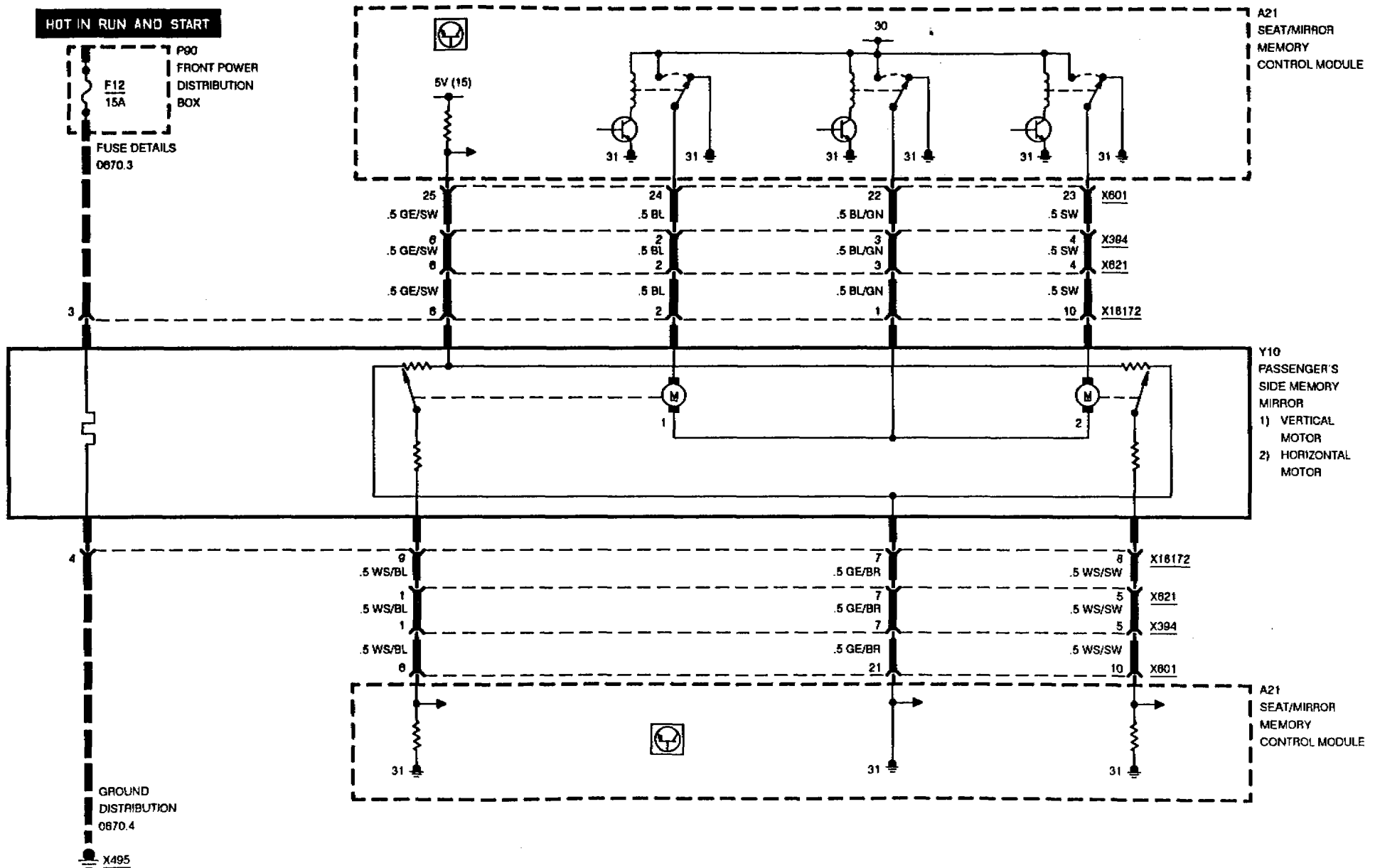
HOT IN RUN AND START



# SEAT/MIRROR MEMORY SYSTEM (SM/SPM)

## MIRROR

**HOT IN RUN AND START**





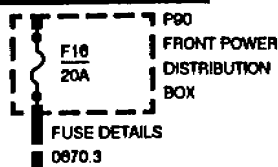
BMW  
**8**

5203.0



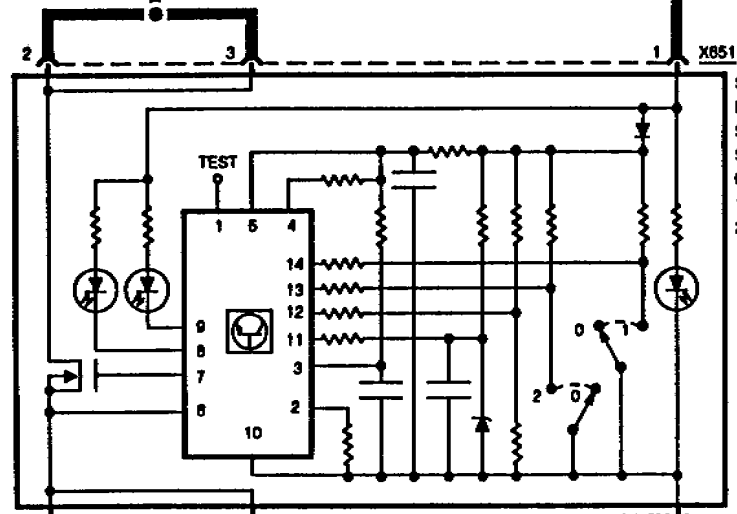
# HEATED SEATS

HOT IN RUN AND START



58g LIGHT SWITCH DETAILS 6300.0

.5 GR/RT

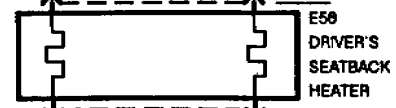


X851

S53 DRIVER'S SEAT SEAT HEATER SWITCH  
0) OFF  
1) MINIMUM  
2) MAXIMUM

.5 WS/GE 6  
.5 WS/BL 5

.5 WS/GE 1  
.5 WS/BL 2

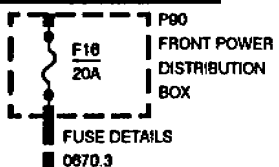


X851

GROUND DISTRIBUTION 0670.4

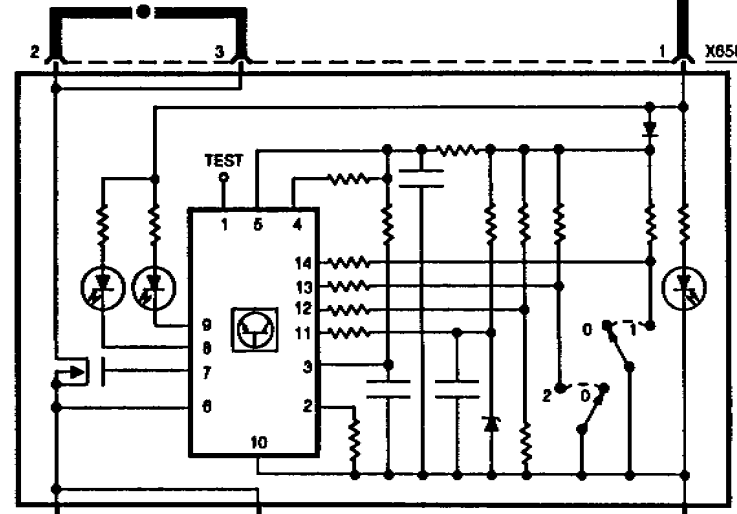
X492

HOT IN RUN AND START



58g LIGHT SWITCH DETAILS 6300.0

.5 GR/RT



X858

S54 PASSENGER'S SEAT SEAT HEATER SWITCH  
0) OFF  
1) MINIMUM  
2) MAXIMUM

.5 WS/GE 6  
.5 WS/BL 5

.5 WS/GE 1  
.5 WS/BL 2



X858

GROUND DISTRIBUTION 0670.4

X495

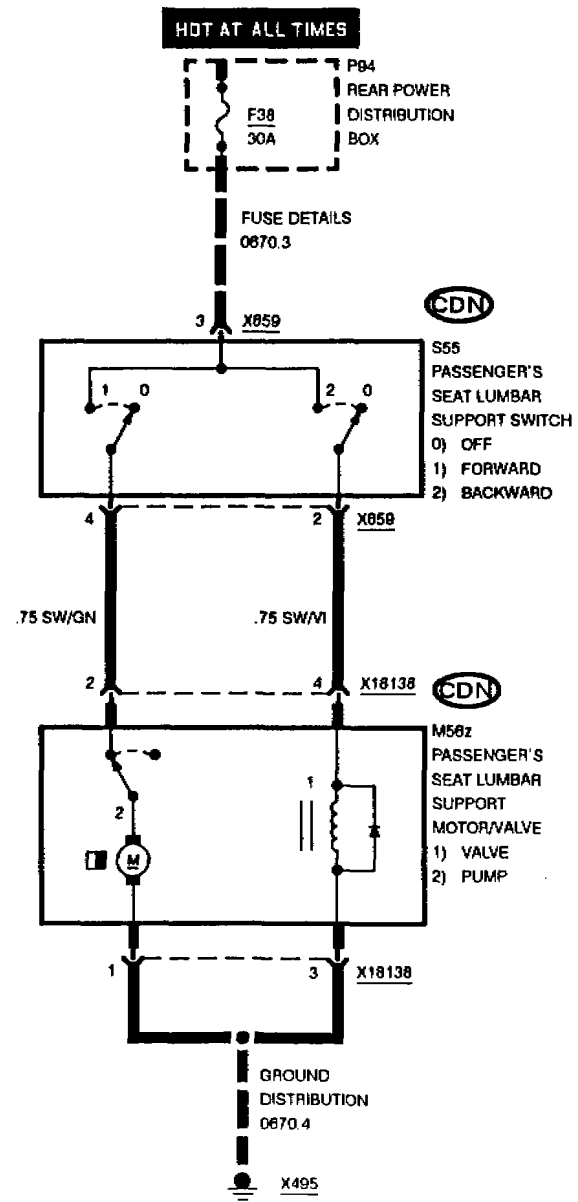
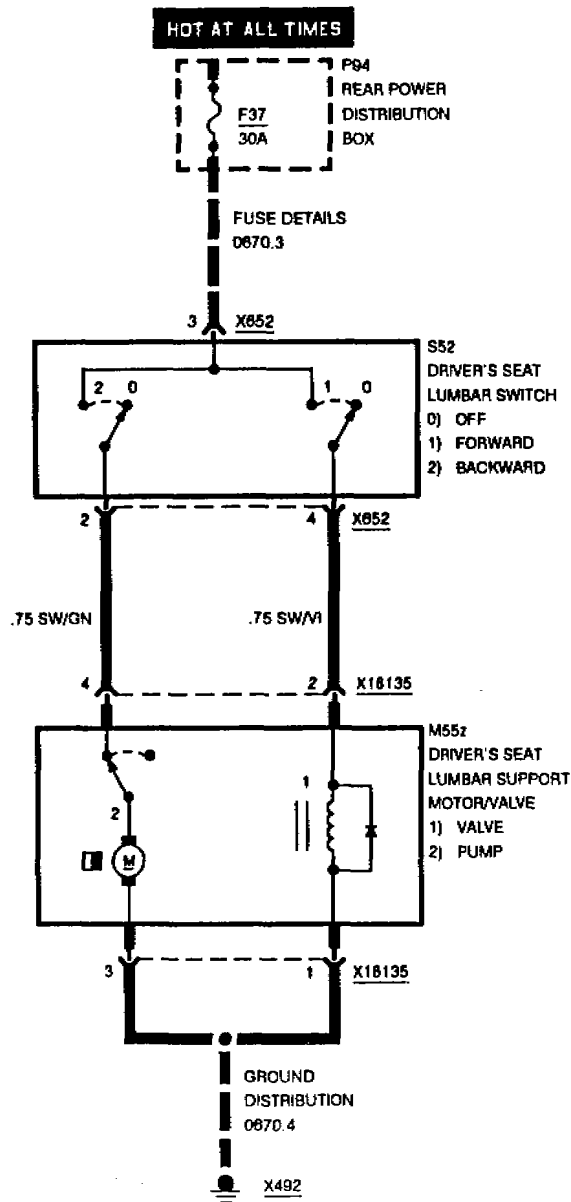
GROUND DISTRIBUTION 0670.4

X492

BMW  
**8**

5212.0

# LUMBAR SUPPORT

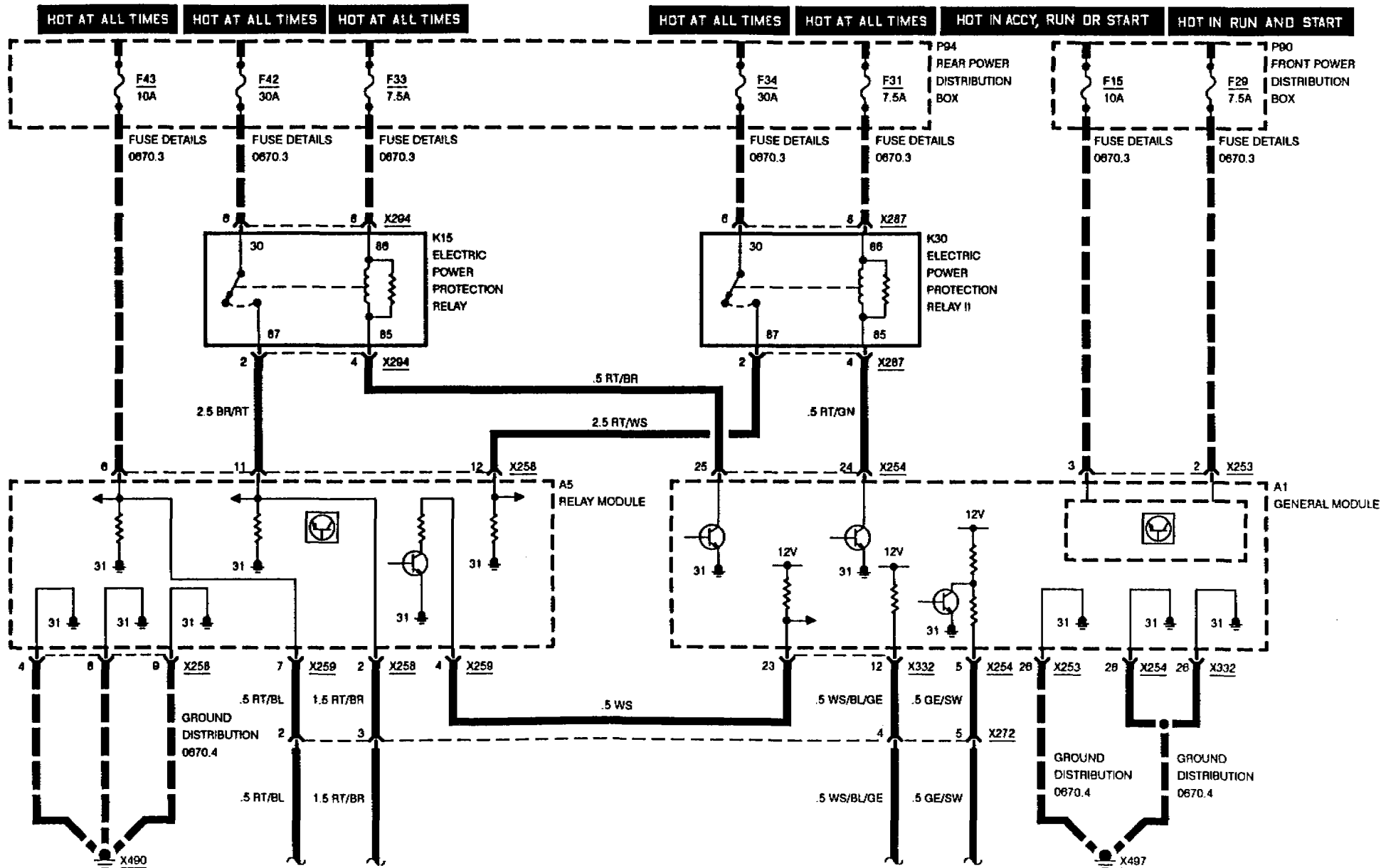


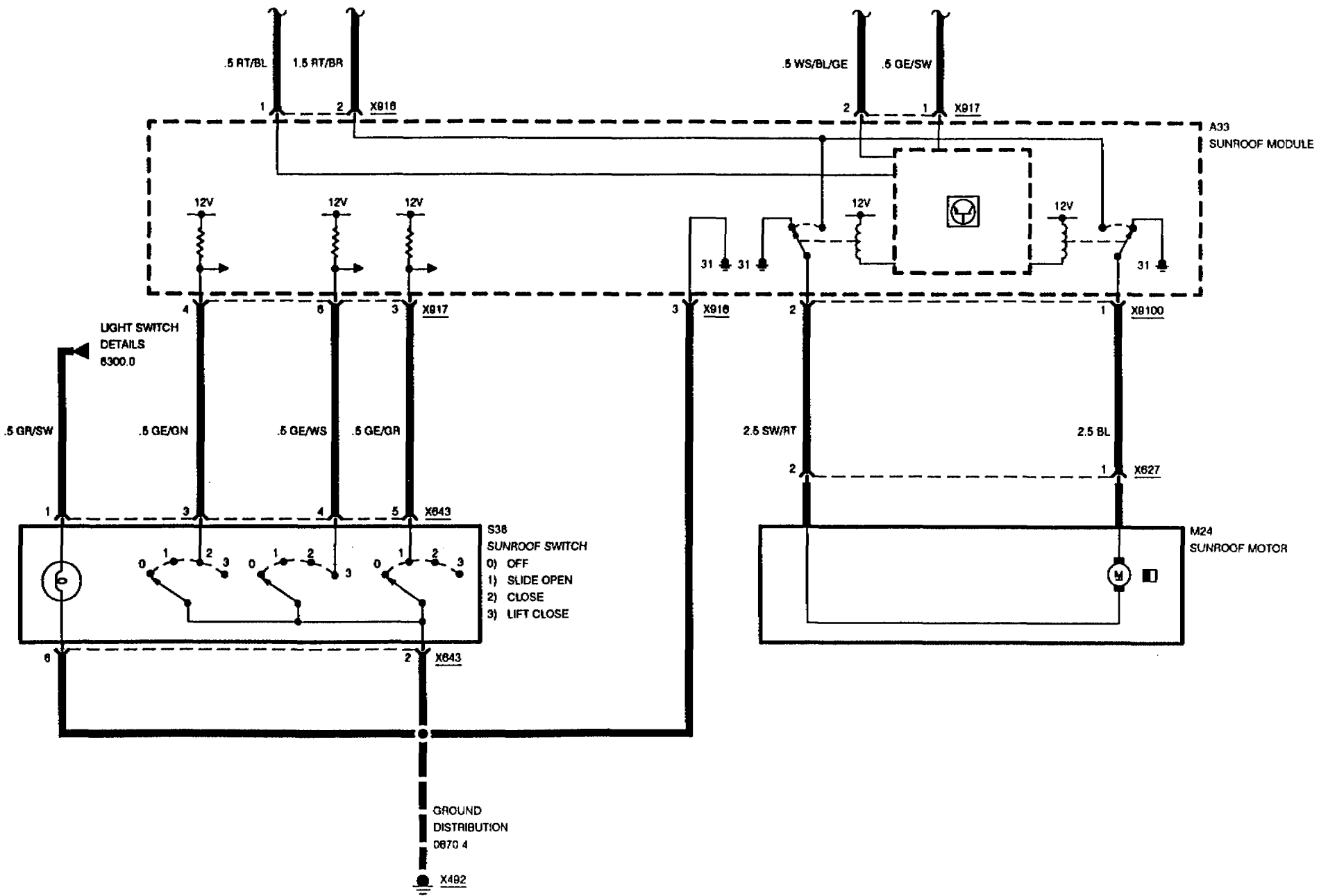
BMW  
**8**

5410.0



# ZKE SUNROOF (SHD)





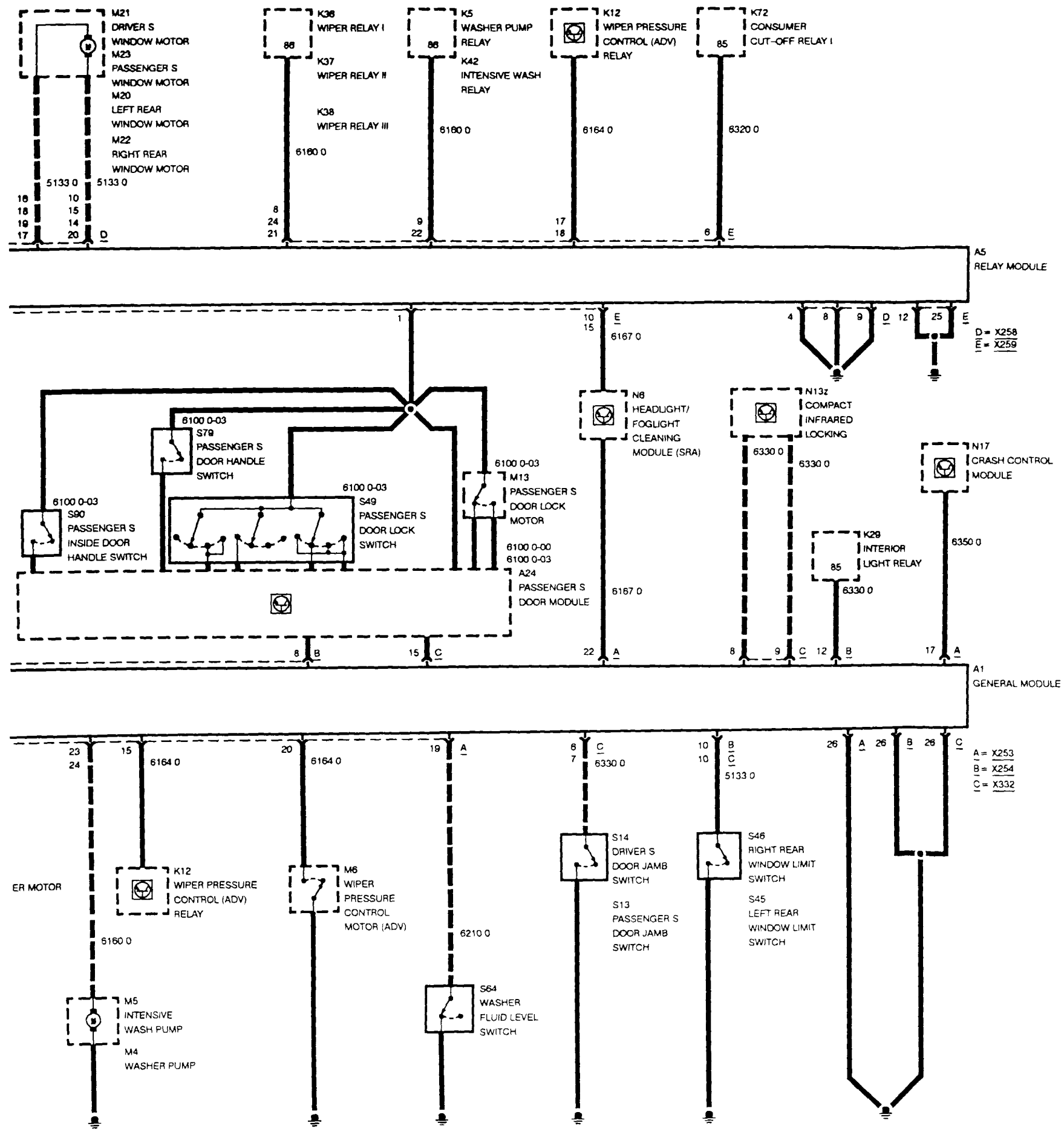
BMW  
8

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**CENTRAL BODY ELECTRONICS (ZKE II)  
BLOCK DIAGRAM**

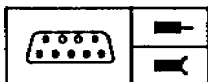








## CENTRAL BODY ELECTRONICS (ZKE II)



### Pin Assignments

- A=X253 26 pins, black
- B=X254 26 pins, yellow
- C=X332 26 pins, white
- D=X258 20 pins, black
- E=X259 26 pins, black

#### X253

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
1	E	U-Batt for electronics	Terminal 30	approx. 12 V		
2	E	Ignition voltage	Terminal 15	approx. 12 V		
3	E	Voltage	Terminal R	approx. 12 V		
4	E	Starter signal	Terminal 50	approx. 12 V		
5		Not used				
6	E	Wiper reset contact	Wiper motor	approx. 12 V; 0-2 V	Defect is stored with defect code No. 21	Wiper in parked position Wiper not in parked position
7	E	Wash	Wiper/washer switch	0-2 V		Switch operated
8	E	Intermittent wipe	Wiper/washer switch	0-2 V		Switch operated
9	E	Wipe stage 1	Wiper/washer switch	0-2 V		Switch operated
10	E	Intensive wash	Wiper/washer switch	0-2 V		Switch operated
11	E	Headlamp on	Terminal 58	approx. 12 V		



## CENTRAL BODY ELECTRONICS (ZKE II)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
12		Not used				
13	E	Diagnosis, wiper relay stage 1/2	Wiper relay 3 to wiper motor		Defect is stored with defect code No. 24, 25	
14	E	Diagnosis, wiper park relay	Wiper relay 3 to wiper motor		Defect is stored with defect code No. 23	
15	E	Diagnosis, ADV module	ADV module		Defect is stored with defect code No. 28	
16	E	Wipe stage 2	Wiper/washer switch	0-2 V		Switch operated
17	A	Interface to hazard warning lights	Crash control unit	0-2 V		Ground pulse during crash
18		Not used				
19	E	Low washer fluid warning	Washer fluid level switch	0-2 V; approx. 12 V		Level OK.: Level too low
20	E	ADV cam switch	Wiper pressure control motor	0-2 V; approx. 12 V	Defect is stored with defect code No. 22	Cam not reached; Cam reached (parked position)
21		Not used				
22	E	Diagnosis, SRA module	SRA module		Defect is stored with defect code No. 29	
23	E	Diagnosis, SIR relay	SIR relay to SIR pump		Defect is stored with defect code No. 27	
24	E	Diagnosis, wash pump relay	Washer pump to washer pump relay		Defect is stored with defect code No. 26	
25	E	Diagnosis, wiper relay stage 1/2	Wiper relay 3 to wiper motor		Defect is stored with defect code No. 24, 25	
26	M	Ground for electronics	Terminal 31	0-2 V		



## CENTRAL BODY ELECTRONICS (ZKE II)

X254

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
1		Not used				
2	A	Relay module interface	RM-B 26	dynamic		
3	A	Relay module interface	RM-B 11	dynamic		
4	A	Relay module interface	RM-B 13	dynamic		
5	A	Interface to SHD module	Sunroof module	dynamic	Defect ist stored with defect code No. 6	
6		Not used				
7		Not used				
8	A	Interface to passenger's door module	TMBT	dynamic	Defect is stored with defect code No. 3	
9	A	Interface to driver's door module	TMFT	dynamic	Defect is stored with defect code No. 2	
10	E	Rear window contact passenger's side	Window limit switch	0-2 V		With window open
11		Not used				
12	A	Interior light relay activation	Interior light relay	0-2 V		During activation
13		Not used				
14		Not used				
15		Not used				
16		Not used				
17		Not used				
18		Not used				



## CENTRAL BODY ELECTRONICS (ZKE II)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
19	A	Interface to DWA	DWA control unit	approx. 12 V		
20	A	Interface to DWA	DWA control unit	approx. 12 V		
21		Not used				
22		Not used				
23		Not used				
24	A	Electronic power fuse: Activation for ES relay passenger's side	ES relay passenger's side	0-2 V		ES relay is only activated during window operation on passenger's side
25	A	Electronic power fuse: Activation for ES relay driver's side	ES relay driver's side	0-2 V		ES relay is only activated during operation of FH, ZV or SHD
26	M	Ground for electronics	Terminal 31	0-2 V		

### X332

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
1	E	U-Batt for electronics	Relay module	approx. 12 V		
2		Not used				
3		Not used				
4		Not used				
5		Not used				
6	E	Passenger's door contact	Passenger's door jamb switch	0-2 V		With door open
7	E	Driver's door contact	Driver's door jamb switch	0-2 V		With door open
8	E	Interface IRF-B	IR locking control unit	0-2 V approx. 12 V		For logic, see functional description ZV



## CENTRAL BODY ELECTRONICS (ZKE II)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
9	E	Interface IRF-A	IR locking control unit	0-2 V approx. 12 V		For logic, see functional description ZV
10	E	Rear window contact, driver's side	Window limit switch	0-2 V		With window open
11	E	Interface from FH switch block	Power window switch block	dynamic	Defect is stored with defect code No. 14	
12	E	Interface from SHD module	SHDM-C Pin 2	dynamic	Defect is stored with defect code No. 6	
13		Not used				
14		Not used				
15	E	Interface from passenger's door module	TMBT-A Pin 9	dynamic	Defect is stored with defect code No. 3	
16	E	Interface from driver's door module	TMFT-A Pin 9	dynamic	Defect is stored with defect code No. 2	
17	E/A	I-bus interface	EKM control module	dynamic		
18		Not used				
19	E	Lock rear lid signal	Glove box lock switch	0-2 V		With glove compartment locked
20		Not used				
21	E	Interface from relay module; diagnostic feedback RM functions	RM-B Pin 3	dynamic		
22	E	Vehicle speed signal	EKM control module	dynamic		
23	E	Interface from relay module; power measurement RM functions	RM-B Pin 4	dynamic		





## CENTRAL BODY ELECTRONICS (ZKE II)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
24	E	Crash sensor	Inertia switch	approx. 12 V at rest; 0-2 V in the case of crash	Defect is stored with defect code No. 48	Sensor has no continuity when at rest; continuity for approx. 2 msec during crash
25	E	Command, unlock rear lid	Trunk lid switch	0-2 V		Button pressed
26	M	Ground for electronics	Ground	0-2 V		

### X258

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
1	A	Activation of ZV motors: Unlock	ZV motors	approx. 12 V	Defect is stored with defect code No. 47	During activation, electronic power fuse
2	A	U-Batt for power circuit on driver's side from electronic fuse	SHDM-B Pin 2	approx. 12 V		Only during operation of FH, ZV or SHD
3	A	Activation of ZV motors: Lock	ZV motors	approx. 12 V	Defect is stored with defect code No. 46	During activation, electronic power fuse
4	M	Ground for electronics	Terminal 31	0-2 V		
5		Not used				
6	E	U-Batt for electronics for all ZKE modules	Terminal 30	approx. 12 V		
7	A	U-Batt for driver's door module electronics	TMFT-A Pin 22, 23	approx. 12 V		
8	M	Ground for ZV and FH motors	Terminal 31	0-2 V		
9	M	Ground for ZV and FH motors	Terminal 31	0-2 V		
10	A	FH motor activation: driver's door open	FH motor driver's door	approx. 12 V	Defect is stored with defect code No. 58	During activation, electronic power fuse



## CENTRAL BODY ELECTRONICS (ZKE II)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
11	E	U-Batt for power circuit on driver's side from electronic power fuse	ES relay driver's side	approx. 12 V		Only during operation of FH, ZV or SHD
12	E	U-Batt for power circuit on passenger's side from electronic power fuse	ES relay passenger's side	approx. 12 V		Only during power window operation on passenger's side
13	A	Activation ZV motors: Central arrest	ZV motors	approx. 12 V	Defect is stored with defect code No. 45	During activation, electronic power fuse
14	A	Activation FH motor: Rear driver's side, close	FH motor rear driver's side	approx. 12 V	Defect is stored with defect code No. 64	During activation, electronic power fuse
15	A	Activation FH motor: Passenger's door, open	FH motor passenger's door	approx. 12 V	Defect is stored with defect code No. 59	During activation, electronic power fuse
16	A	Activation FH motor: Driver's door, close	FH motor driver's door	approx. 12 V	Defect is stored with defect code No. 62	During activation, electronic power fuse
17	A	Activation FH motor: Rear passenger's side, open	FH motor rear passenger's side	approx. 12 V	Defect is stored with defect code No. 61	During activation, electronic power fuse
18	A	Activation FH motor: Passenger's door, close	FH motor passenger's door	approx. 12 V	Defect is stored with defect code No. 63	During activation, electronic power fuse
19	A	Activation FH motor: Rear driver's side, open	FH motor rear driver's side	approx. 12 V	Defect is stored with defect code No. 60	During activation, electronic power fuse
20	A	Activation FH motor: Rear passenger's side, close	FH motor rear passenger's side	approx. 12 V	Defect is stored with defect code No. 65	During activation, electronic power fuse



## CENTRAL BODY ELECTRONICS (ZKE II)

X259

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
1	A	U-Batt for passenger's door module electronics	TMBT-A Pin 23	approx. 12 V		
2		Not used				
3	A	Interface to general module, diagnostic feedback RM function	GM-A Pin 21	dynamic		
4	A	Interface to general module, power measurement RM	GM-A Pin 23	dynamic		
5	A	Relay activation, unlock rear lid	Trunk lid motor relay	0-2 V		During activation
6	A	Relay activation, load cut-out	Consumer cut-off relay 1	0-2 V		During activation
7	A	U-Batt for sunroof module electronics	SHDM-B Pin 1	approx. 12 V		
8	A	Relay activation, wiper park position	Wiper relay 1	0-2 V	Defect is stored with defect code No. 23	During activation
9	A	Relay activation, wash pump	Washer pump relay	0-2 V	Defect is stored with defect code No. 26	During activation
10	A	SRA module activation: Headlamp washer	SRA module	0-2 V	Defect is stored with defect code No. 29	During activation
11	A	General module interface	GM-C Pin 3	dynamic		
12	M	Ground for electronics	Terminal 31	0-2 V		
13	A	General module interface	GM-C Pin 4	dynamic		
14		Not used				



## CENTRAL BODY ELECTRONICS (ZKE II)

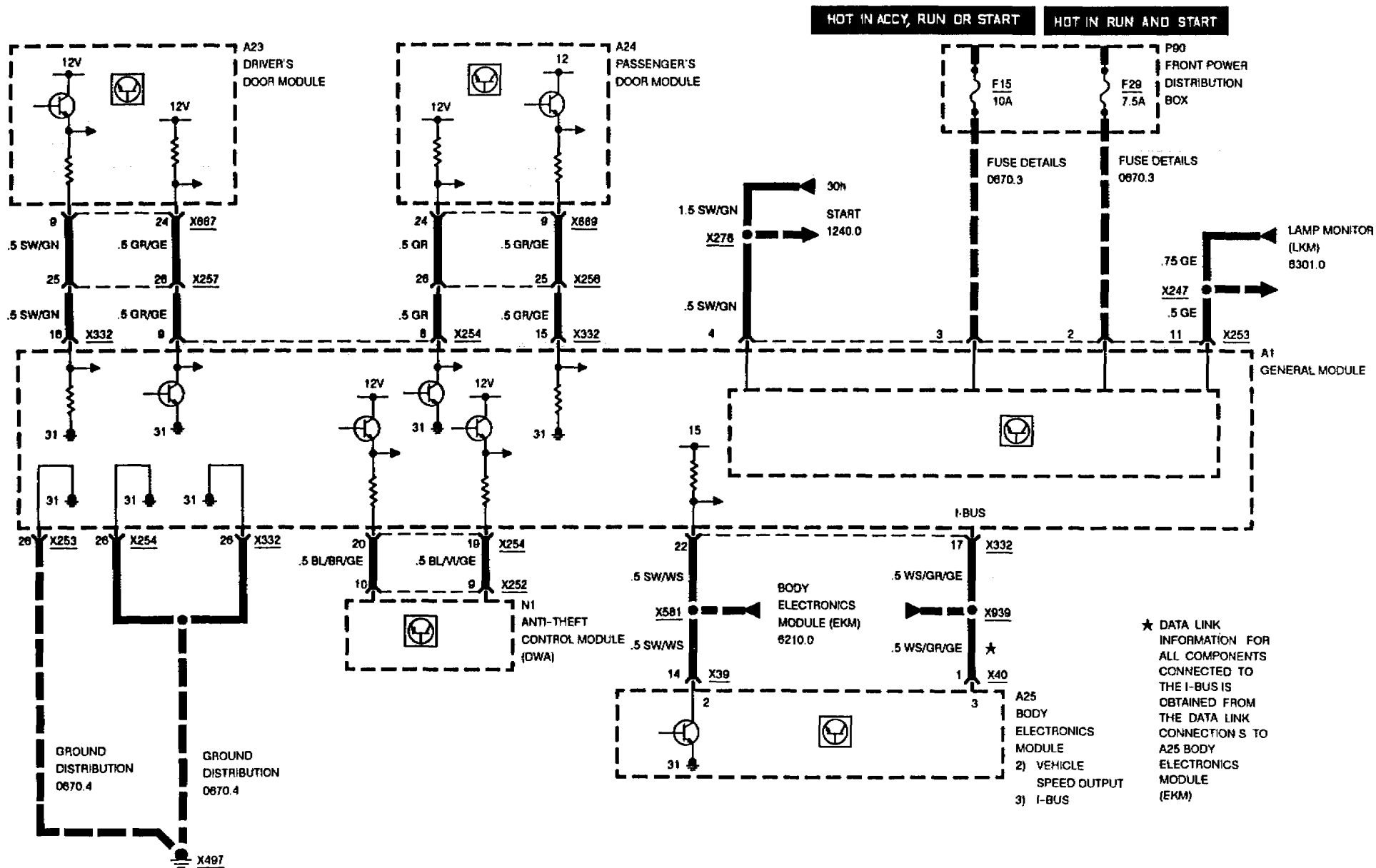
Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
15	A	SRA module activation: Wash pump luggage compartment	SRA module	0-2 V	Defect is stored with defect code No. 29	During activation
16		Not used				
17	A	ADV module activation: Reduce pressure	Wiper pressure control relay	0-2 V	Defect is stored with defect code No. 28	During activation
18	A	ADV module activation: Increase pressure	Wiper pressure control relay	0-2 V	Defect is stored with defect code No. 28	During activation
19	A	U-Batt for general module electronics	GM-B Pin 1, GM-A Pin 1	approx. 12 V		
20	A	U-Batt for general module electronics	GM-B Pin 1, GM-A Pin 1	approx. 12 V		
21	A	Relay activation, wiper stage 2	Wiper relay 3	0-2 V	Defect is stored with defect code No. 24, 25	During activation
22	A	Relay activation, Intensive wash (SIR)	Intensive wash relay	0-2 V	Defect is stored with defect code No. 27	During activation
23	M,	Not used				
24	A	Relay activation, wiper stage 1	Wiper relay 2	0-2 V	Defect is stored with defect code No. 24, 25	During activation
25	M,	Ground for electronics	Terminal 31	0-2 V		
26	A	General module interface	GM-C Pin 2	dynamic		

E = Input, A = Output, M = Ground

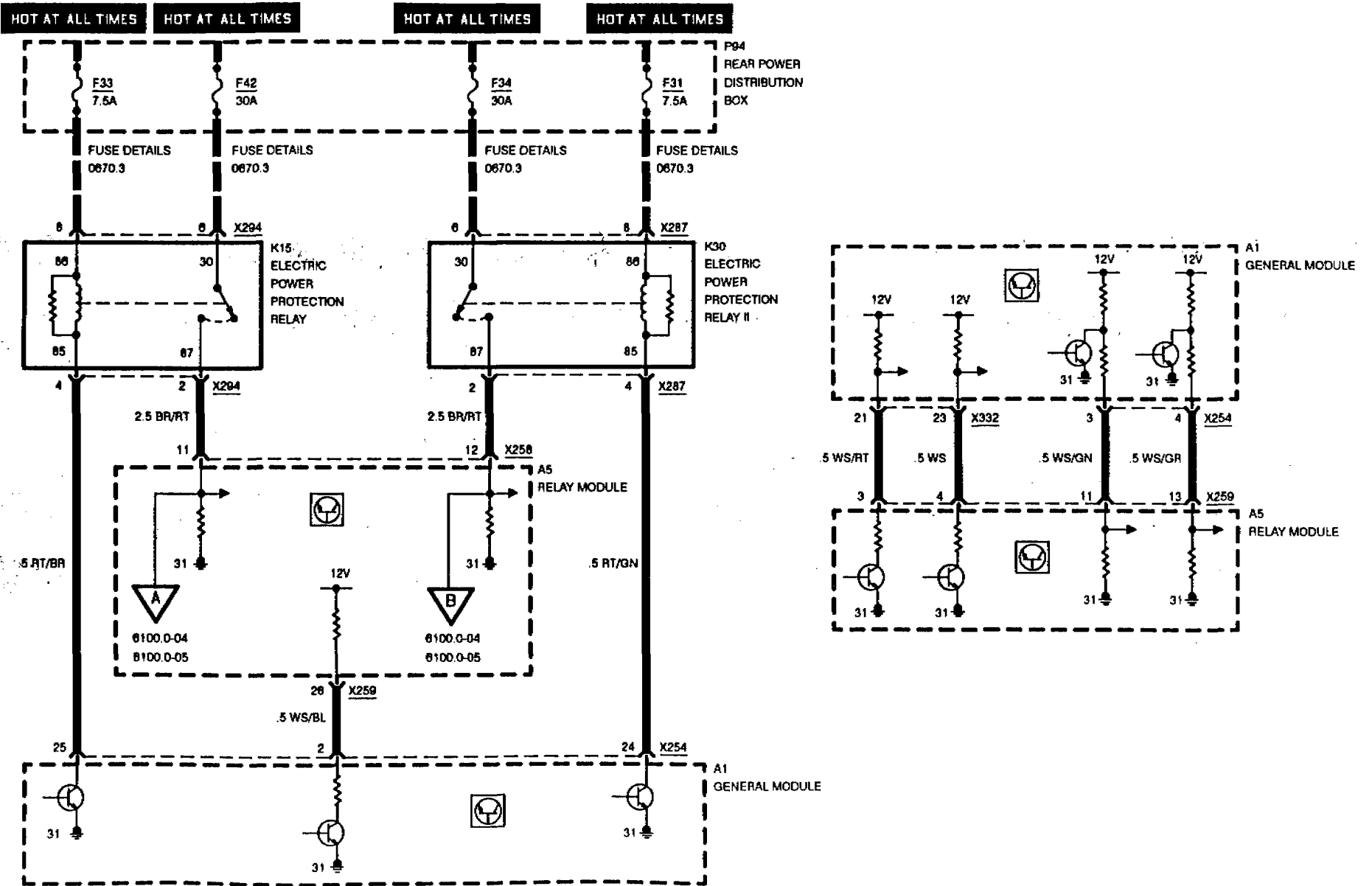


# CENTRAL BODY ELECTRONICS (ZKE II)

## GENERAL MODULE



# CENTRAL BODY ELECTRONICS (ZKE II)

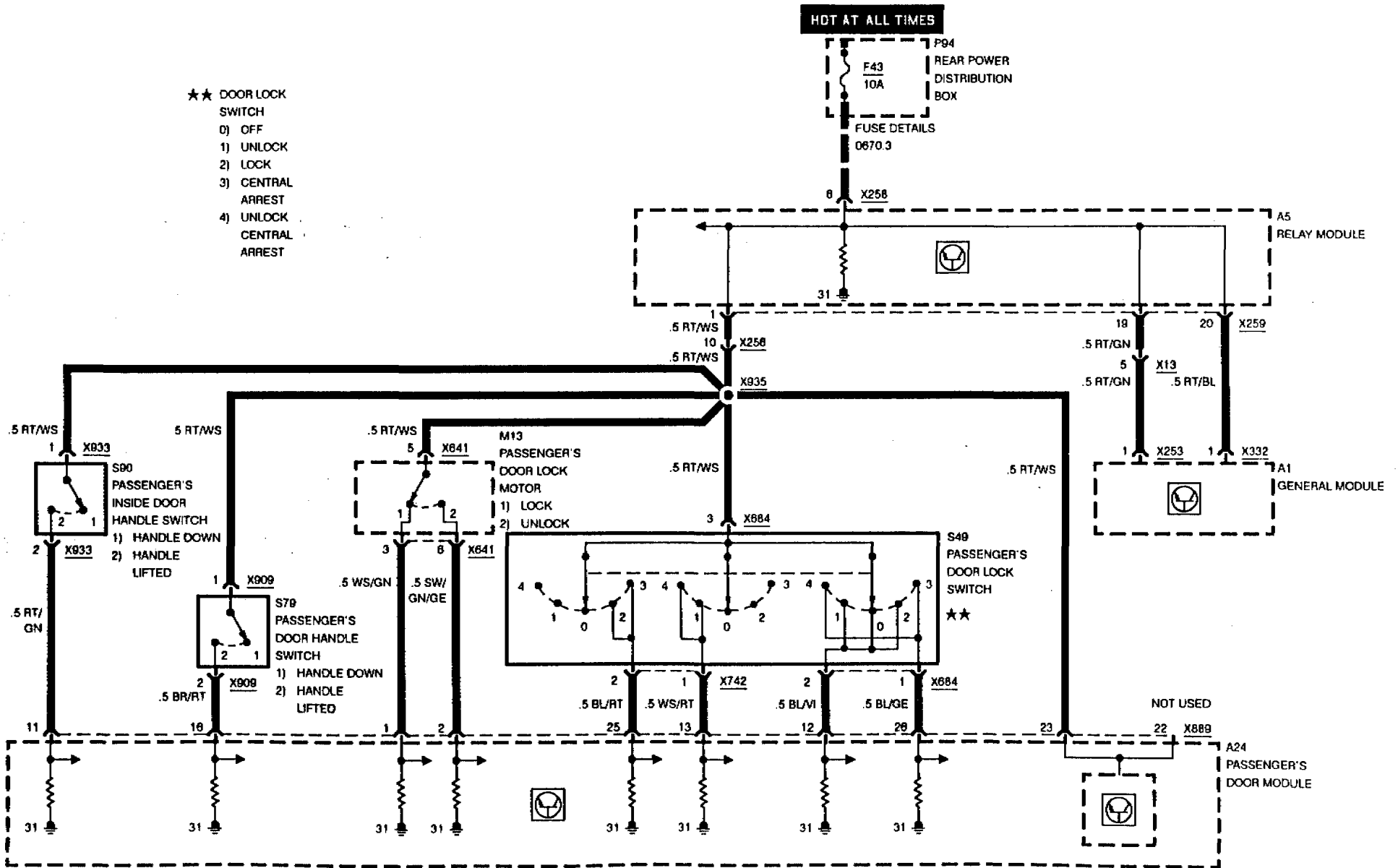






# CENTRAL BODY ELECTRONICS (ZKE II)

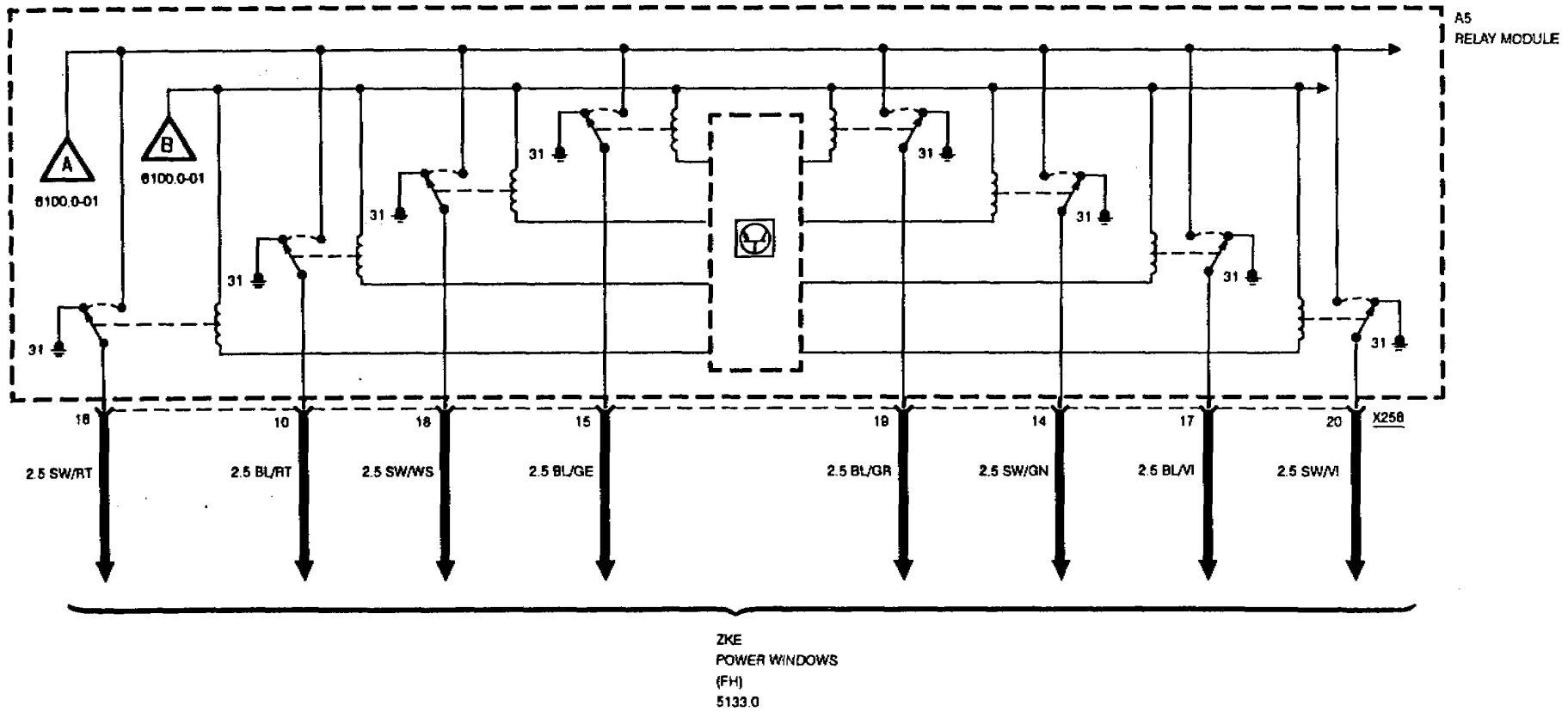
- ★★ DOOR LOCK SWITCH
- 0) OFF
- 1) UNLOCK
- 2) LOCK
- 3) CENTRAL ARREST
- 4) UNLOCK CENTRAL ARREST







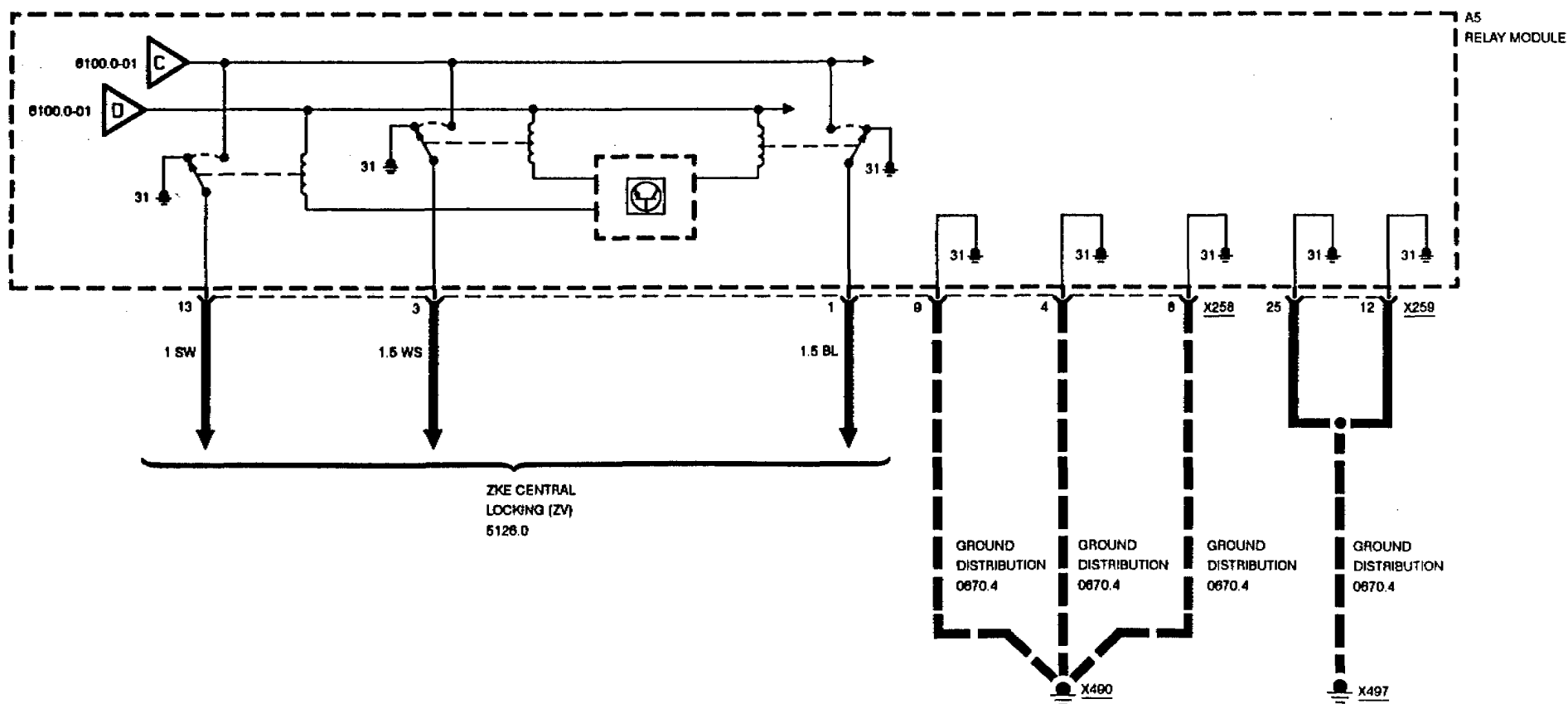
# CENTRAL BODY ELECTRONICS (ZKE II) RELAY MODULE





# CENTRAL BODY ELECTRONICS (ZKE II)

## RELAY MODULE





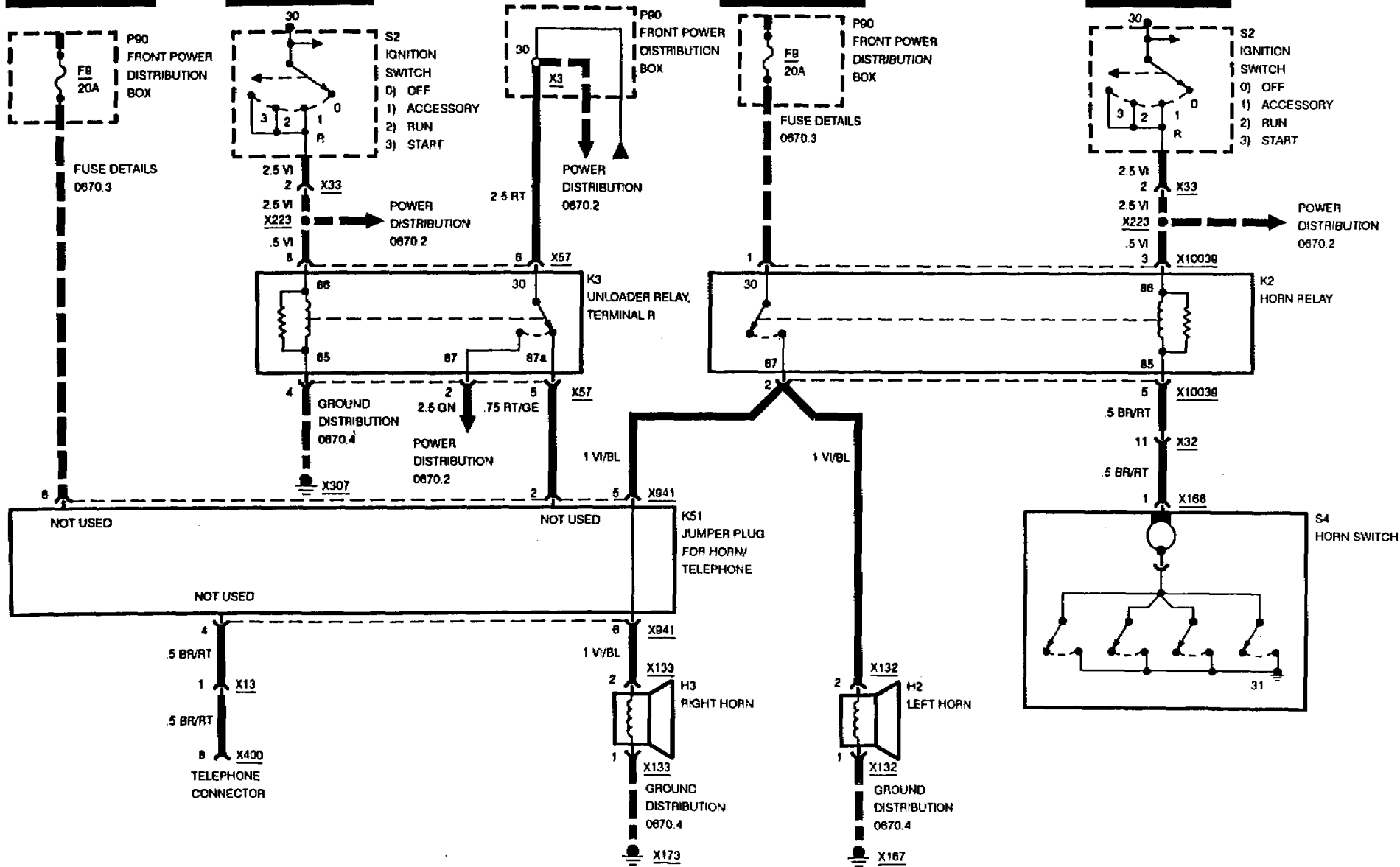
# HORN

HOT AT ALL TIMES

HOT AT ALL TIMES

HOT AT ALL TIMES

HOT AT ALL TIMES



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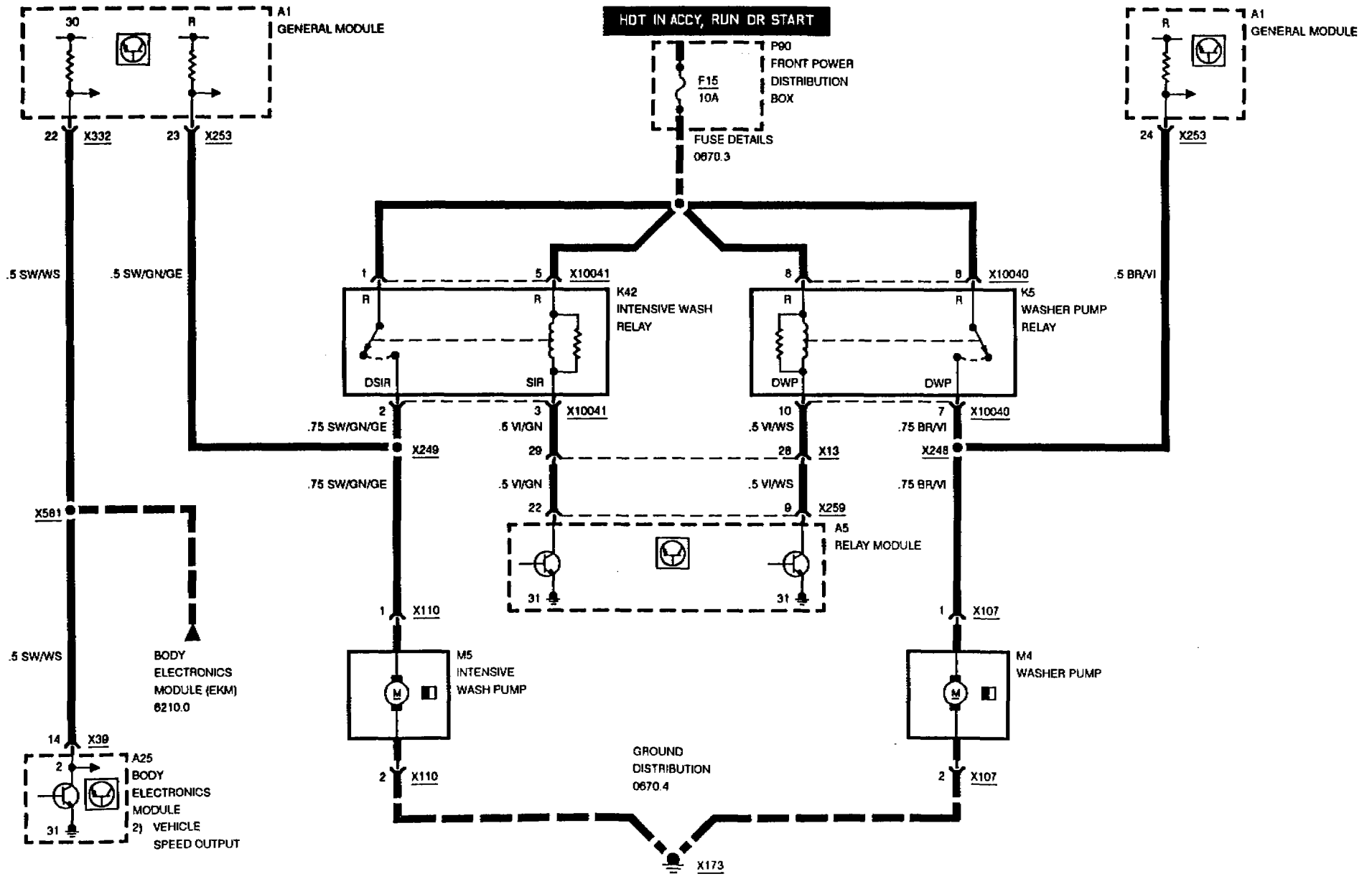
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# ZKE WIPER/WASHER CONTROL



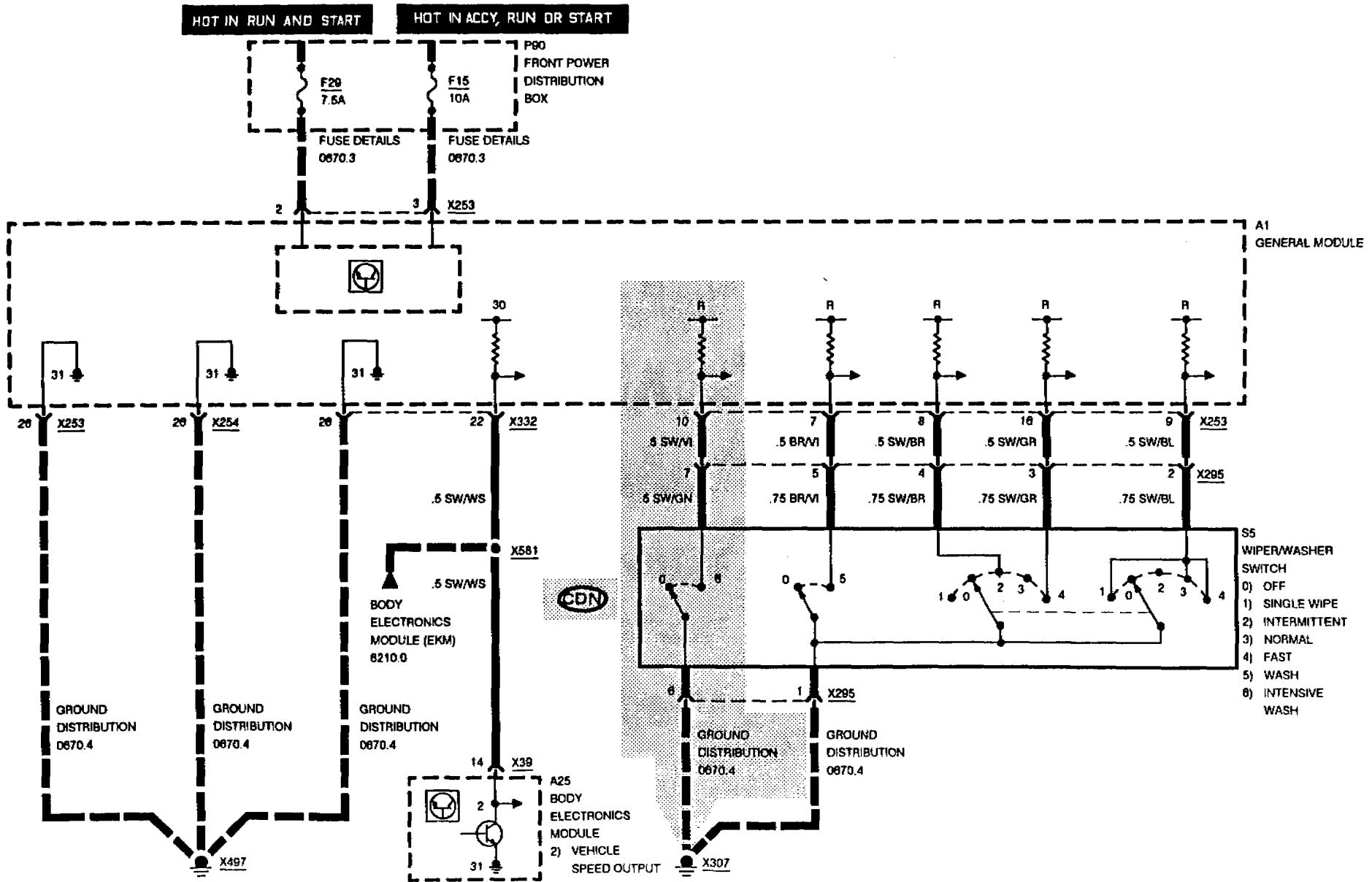
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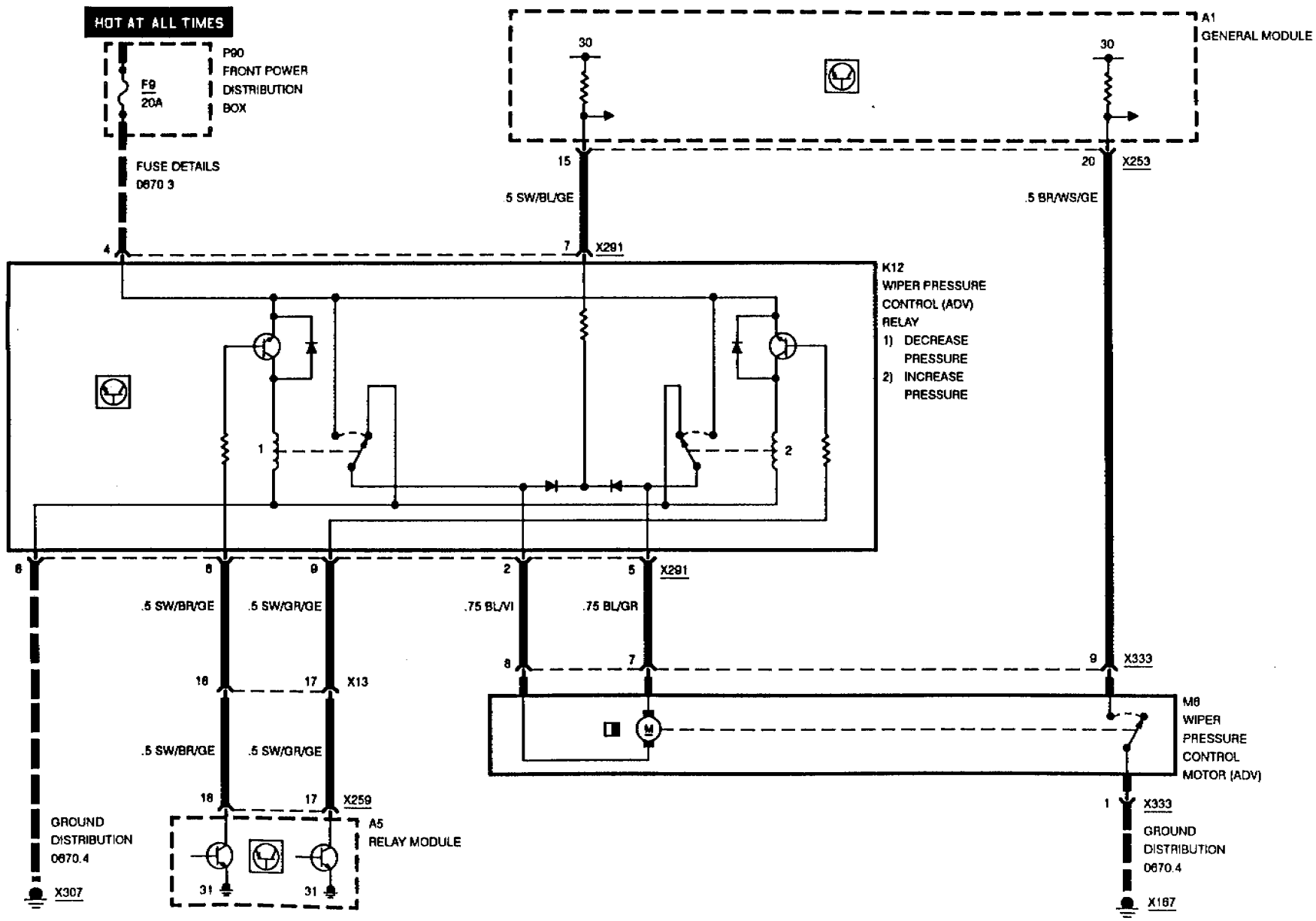




# ZKE WINDSHIELD WIPER PRESSURE CONTROL (ADV)

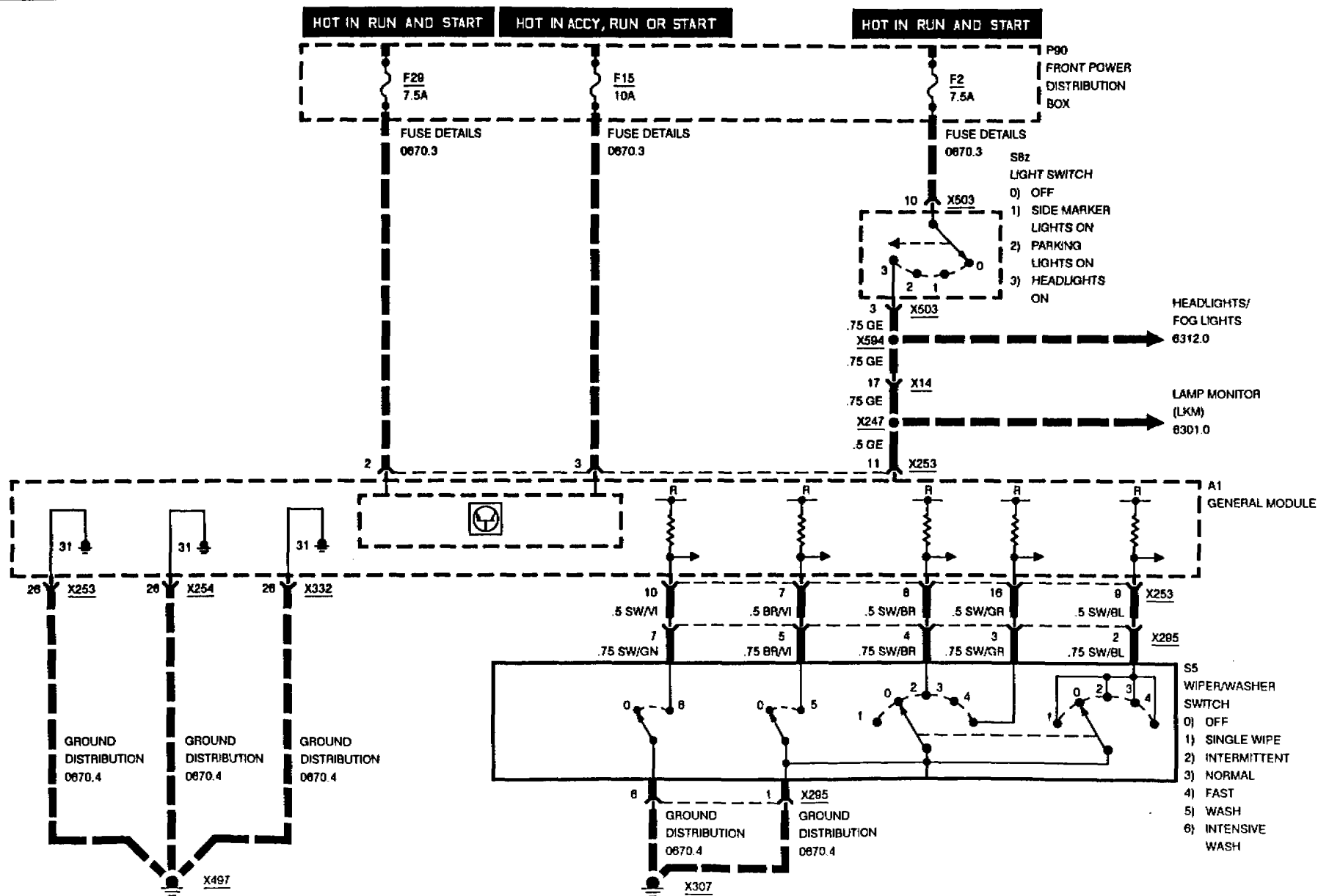


# ZKE WINDSHIELD WIPER PRESSURE CONTROL (ADV)



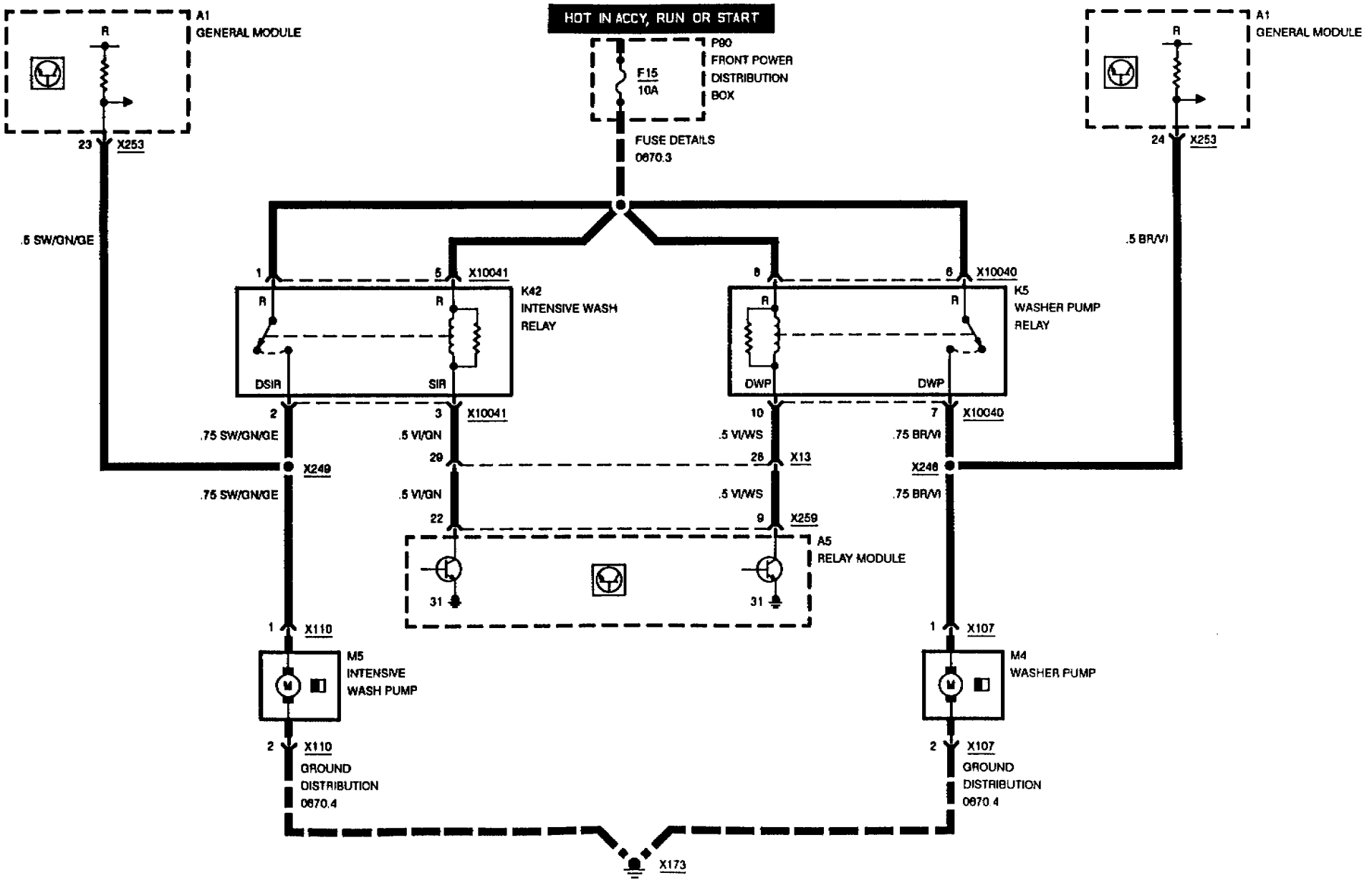


# ZKE HEADLIGHT WASHER (SRA)





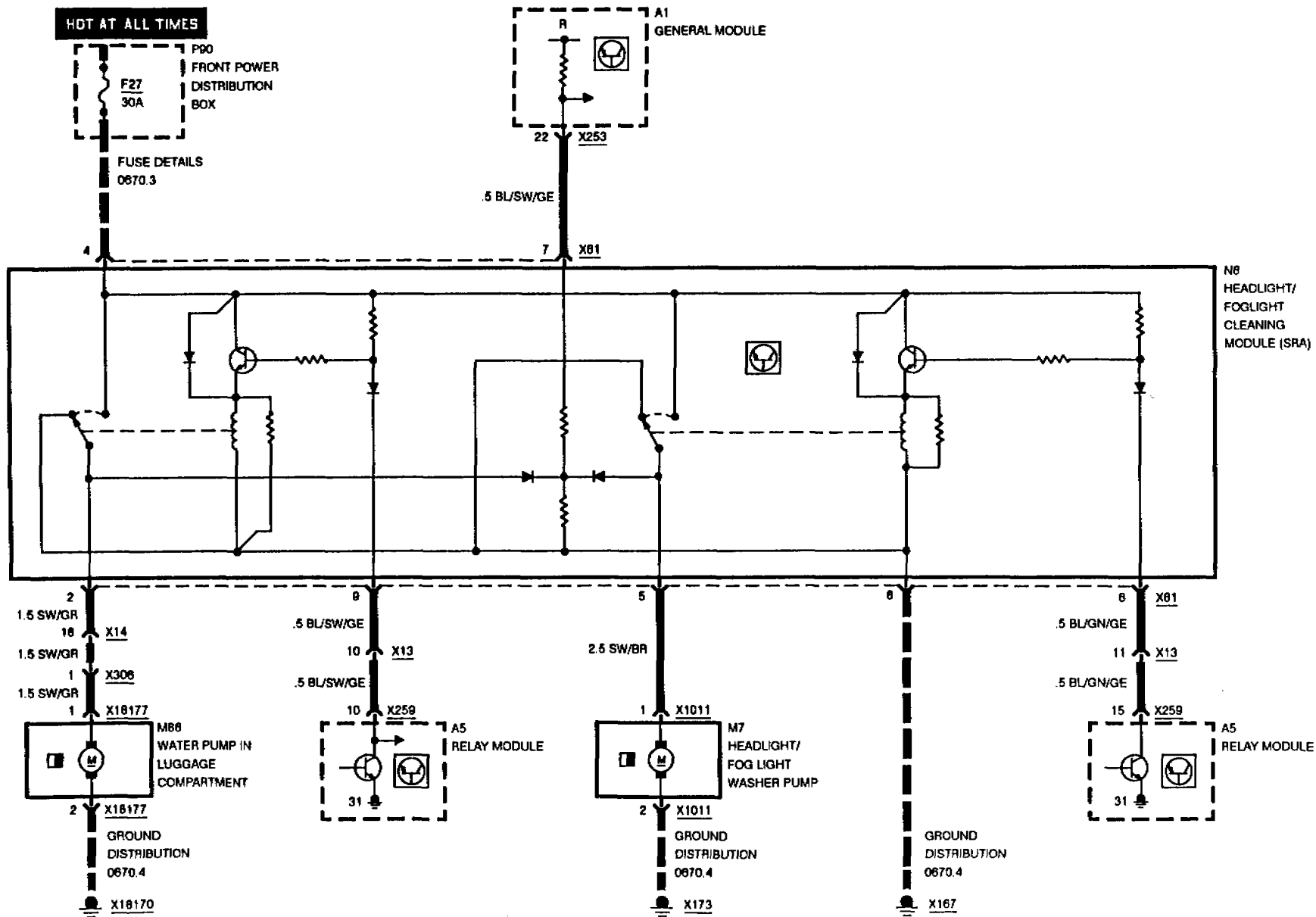
# ZKE HEADLIGHT WASHER (SRA)





# ZKE HEADLIGHT WASHER (SRA)

## OUTPUT DETAILS

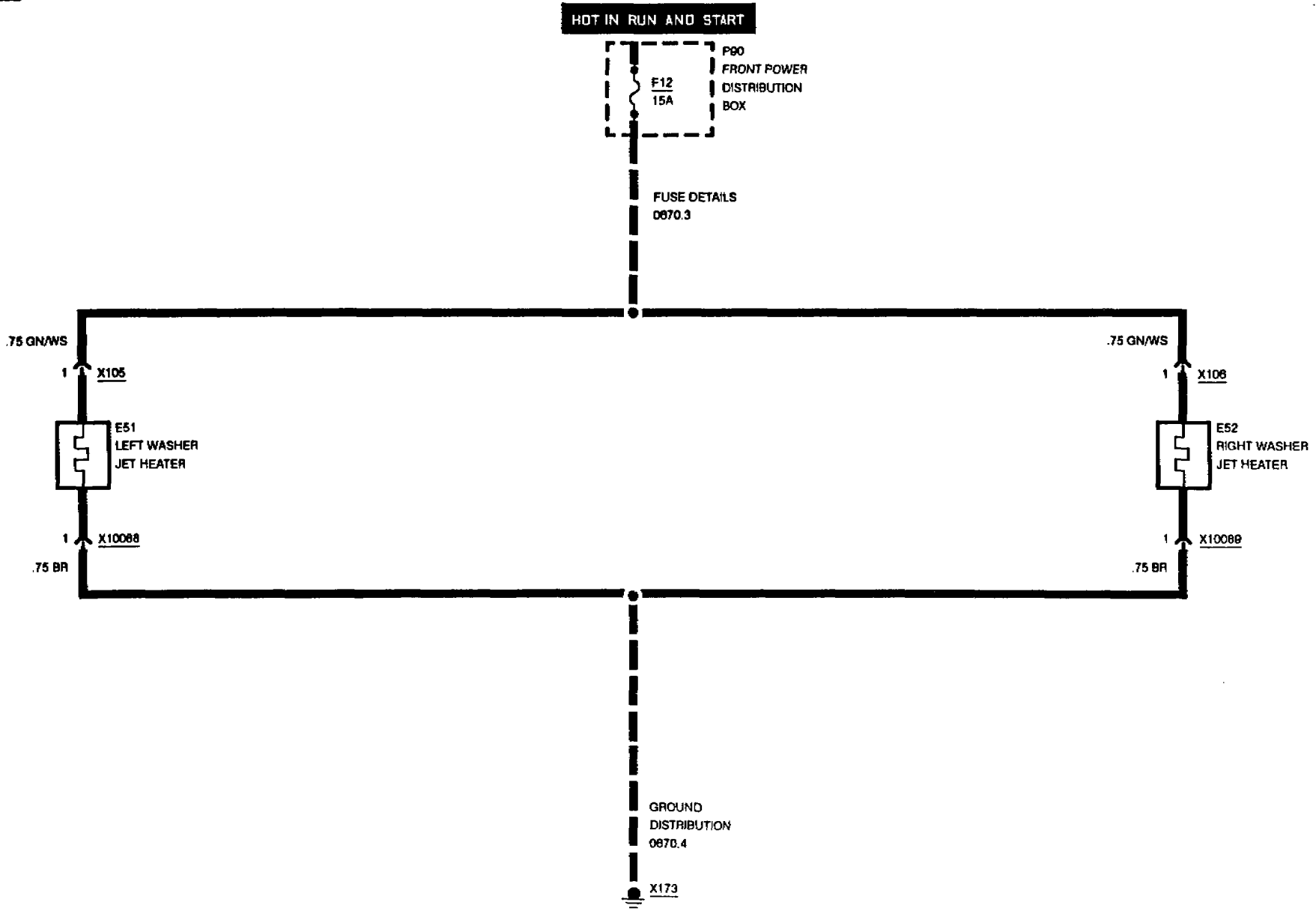


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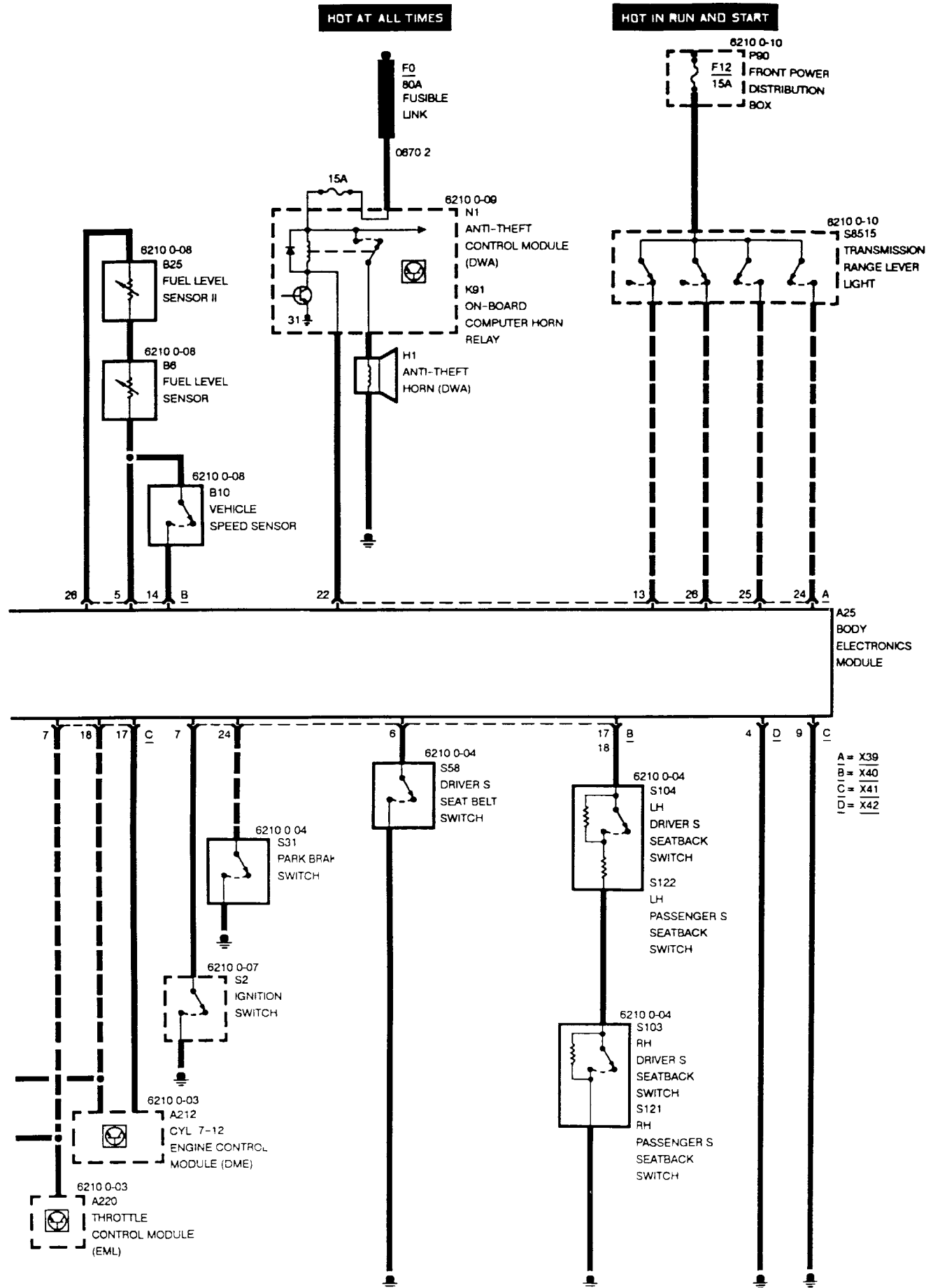


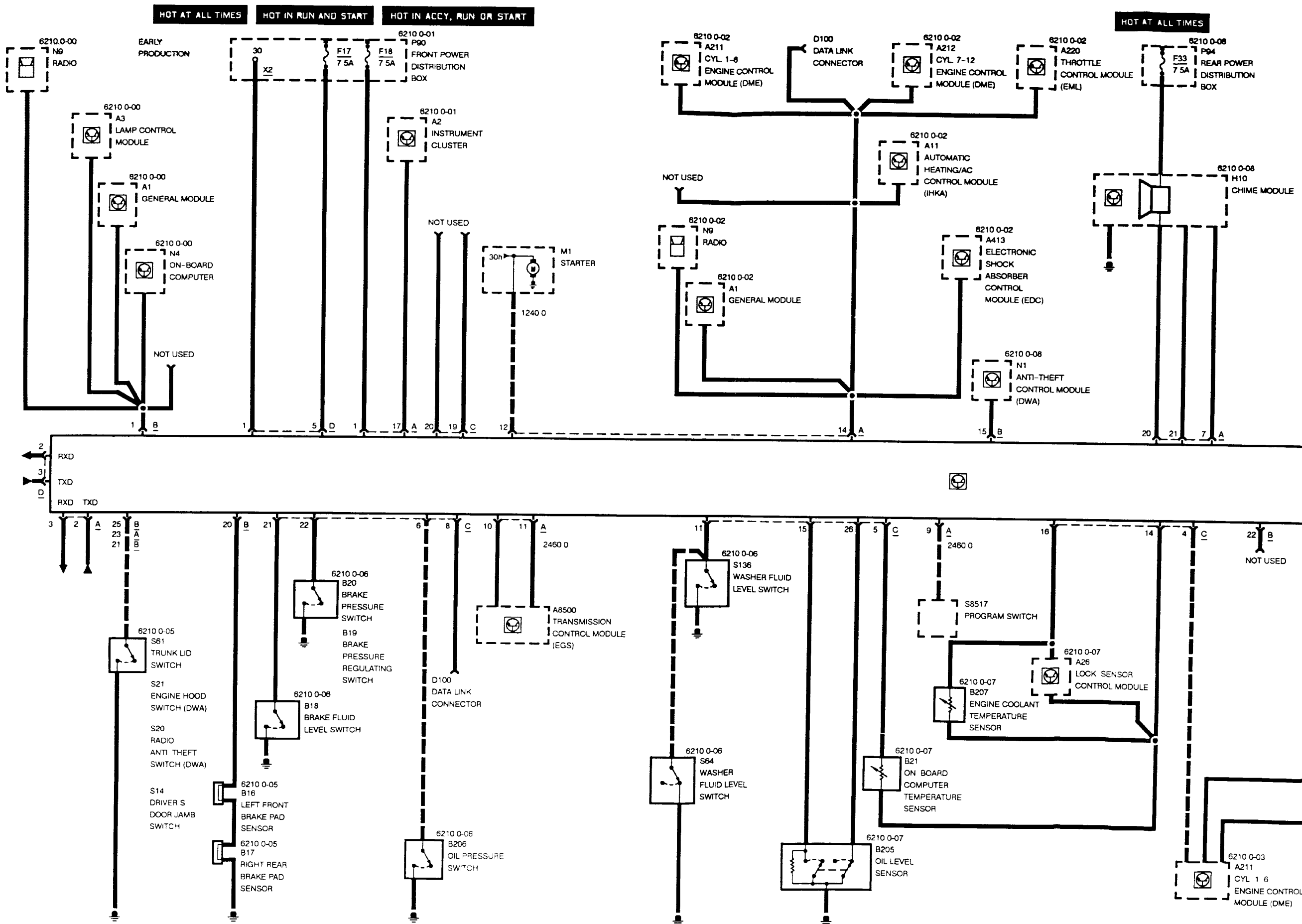
# WINDSHIELD WASHER JET HEATERS



 BODY ELECTRONICS MODULE (EKM)  
BLOCK DIAGRAM

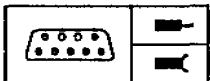








# BODY ELECTRONICS MODULE (EKM)



## Pin Assignments

- A=X39 26 pins, green
- B=X40 26 pins, brown
- C=X41 26 pins, blue
- D=X42 5 pins, black

### X39

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
1	E	Terminal R	Fuse	12 V	ON	
2	E/A	Diagnostic link (TxD)	TxD connection of various control units	Square-wave signal	None	
3	E/A	Diagnostic link (RxD)	RxD connection of various control units	Square-wave signal	None	
4		Not used				
5		Not used				
6		Not used				
7	A	Acoustic output 1 (hour reminder signal)	Acoustic device	B- (active status)	Defect code is stored in the case of a short circuit	Check by ♦ D ♦ activate components
8		Not used				
9	E	EGS program	Program selector switch	0 V 12 V	0 1	



## BODY ELECTRONICS MODULE (EKM)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
10	E	EGS defects	EGS control unit	0 V 12 V	OK Not OK	Valid when engine running
11	E	EGS program	EGS control unit	0 V 12 V	0 1	
12	E	Start position, terminal 30 h	Starter, terminal 30 h	12 V	ON	When ignition switch in start position
13	E	Drive range	Transmission selector lever switch	0 V 12 V	0 1	12 V is switched by selector lever switch
14	A	Vehicle speed signal	Various control units	Square-wave signal	Defect code is stored in the case of a short circuit	Check by ♦ D ♦ activate components
15		Not used				
16		Not used				
17	E/A	Instrument cluster interface/data transfer to instrument cluster	Instrument cluster	Square-wave signal	Defect code is stored	
18		Not used				
19		Not used				
20	A	Acoustic output 2 (outside temperature warning)	Acoustic device	B- (active status)	Defect code is stored in the case of a short circuit	Check by ♦ D ♦ activate components
21	A	Acoustic output 3 (check control message)	Acoustic device	B- (active status)	Defect code is stored in the case of a short circuit	Check by ♦ D ♦ activate components
22	A	Trigger alarm at DWA/horn with drive-away protection active	DWA control unit	B- (active status)	Defect code is stored in the case of a short circuit	Check by ♦ D ♦ activate components



## BODY ELECTRONICS MODULE (EKM)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
23	E	Radio/engine hood status	Radio antitheft switch/ engine hood switch	0 V 12 V	Radio removed/hood open Radio installed/hood closed	
24	E	Drive range	Transmission selector lever switch	0 V 12 V	0 1	12 V is switched by selector lever switch
25	E	Drive range	Transmission selector lever switch	0 V 12 V	0 1	12 V is switched by selector lever switch
26	E	Drive range	Transmission selector lever switch	0 V 12 V	0 1	12 V is switched by selector lever switch

### X40

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
1	E/A	I-bus (instrument bus)	I-bus user	Square-wave signal	Defect code is stored	
2		Not used				
3		Not used				
4		Not used				
5	A	Sensor ground	Fuel supply sensor and tachogenerator	Ground	Defect code is stored	No resistance measure- ment with respect to ve- hicle ground! Check by voltage measurement with respect to U-Batt
6	E	Seat belt buckle signal	Driver's seat belt switch	0 V 12 V	In buckle switch Not in buckle switch	Only installed in US version
7	E	Ignition key status	Ignition switch	0 V 12 V	Key in Key removed	Only installed in US version



## BODY ELECTRONICS MODULE (EKM)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
8		Not used				
9		Not used				
10		Not used				
11		Not used				
12		Not used				
13		Not used				
14	E	Vehicle speed signal	Vehicle speed sensor	Square-wave signal	None	
15	A	Speed signal for DWA	DWA control unit	0 V 12 V	None	Signal change when vehicle is pushed
16		Not used				
17	E	Left backrest locked signal	Driver's seatback switches	0 V to 12 V	Interruption in measuring range short circuit	Nominal values of switches: - Switch L = 1180 $\Omega$ - Switch R = 620 $\Omega$ Switch not pressed: - Switch L = 560 $\Omega$ - Switch R = 0 $\Omega$ (+/- 10 $\Omega$ )
18	E	Right backrest locked signal	Passenger's seatback switches	0 V to 12 V	See pin 17	See pin 17
19		Not used				
20	E	Brake pad wear indicator	Brake pad sensors	0 V 12 V	OK Not OK	
21	E	Driver's door status	Driver's door jamb switch	0 V 12 V	OPEN CLOSED	



## BODY ELECTRONICS MODULE (EKM)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
22		Not used				
23		Not used				
24	E	Park brake status	Park brake switch	0 V 12 V	ON OFF	
25	E	Trunk lid status	Trunk lid switch	0 V 12 V	OPEN CLOSED	
26	E	Tank contents	Fuel level sensors	0 V to 12 V	Interruption in measuring range short-circuit	Nominal value of tank sensor 10 $\Omega$ to 250 $\Omega$

### X41

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
1		Not used				
2		Not used				
3		Not used				
4	E	ti signal 1/Injection signal	DME I control unit	Square-wave signal	Defect code is stored	
5	E	Outside temperature	Temperature sensor	0 V to 4 V	Interruption in measuring range short circuit	
6	E	Engine oil pressure	Oil pressure switch	0 V 12 V	Not OK OK	Oil pressure switch switches ground when oil pressure too low
7	E	tD signal/Engine speed	DME I control unit	Square-wave signal	Speed values in rpm	



# BODY ELECTRONICS MODULE (EKM)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
8	E	SIA reset	Diagnostic Pin 7	0 V 12 V	None	0 V when ground signal applied at Pin 7 – for reset
9	M	Ground	Ground			
10		Not used				
11	E	Wash water level	Washer fluid level switch	0 V 12 V	OK Not OK	Level switch switches ground when water level OK
12		Not used				
13		Not used				
14	A	Sensor ground	Temperature sensor for coolant and outside temperature	Ground	Defect code is stored	No resistance measured with respect to vehicle ground! Check by voltage measurement with respect to U–Batt
15	E	Dynamic engine oil level	Oil level sensor	0 V 3,4 V	Defect and defect information in ♦ D ♦ test procedure	Internal resistance in level switch 1 kΩ when dynamic oil level too low
16	E	Coolant temperature	Coolant temperature sensor	0 V to 4 V	Interruption in measuring range short circuit	
17	E	ti signal 2/Injection signal	DME II control unit	Square–wave signal	Defect code is stored	
18	A	Starter blocking	DME I and DME II control units	0 V 12 V (active status)	Defect code is stored in the case of a short circuit	Check by ♦ D ♦ activate components
19		Not used				





## BODY ELECTRONICS MODULE (EKM)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
20		Not used				
21	E	Brake fluid level	Brake fluid level switch	0 V 12 V	Not OK OK	Level switch switches ground when brake fluid too low
22	E	Brake pressure	Brake pressure switches	0 V 12 V	Not OK OK	Switch switches ground when brake pressure too low
23		Not used				
24		Not used				
25		Not used				
26	E	Static engine oil level	Oil level sensor	0 V 12 V	Defect and test information in ♦ D ♦ test procedure	Level switch switches ground when static oil level OK

### X42

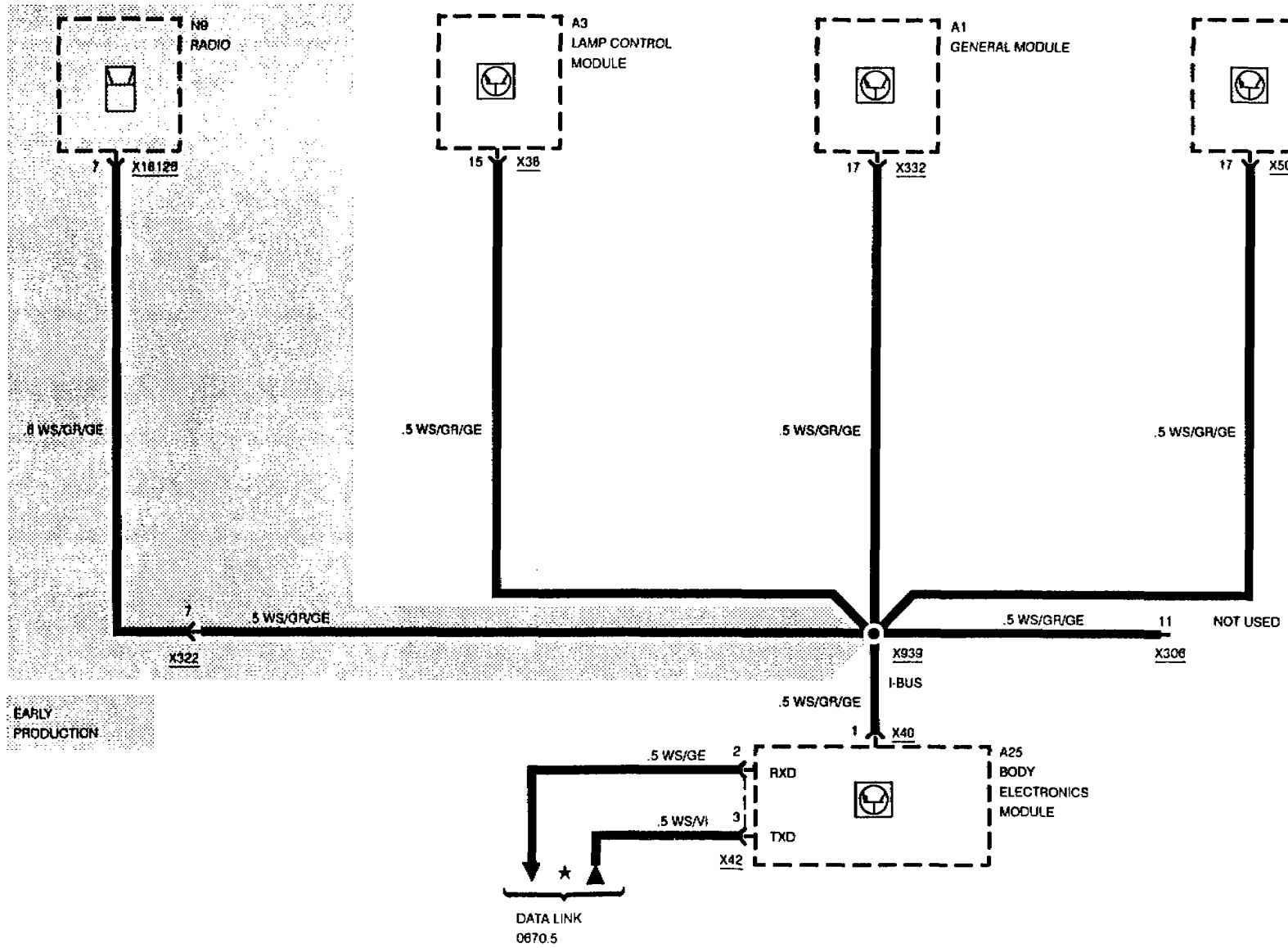
Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
1	E	Voltage supply terminal 30	Fuse	12 V	None	
2	E/A	Diagnostic link RxD	Diagnostic socket Pin 15	Square-wave signal	None	
3	E/A	Diagnostic link TxD	Diagnostic socket Pin 20	Square-wave signal	None	
4	E	Ground terminal 31	Ground connection	B-	None	
5	E	Terminal 15	Fuse	12 V	ON	

E = Input, A = Output, M = Ground



# BODY ELECTRONICS MODULE (EKM)

## INSTRUMENTATION BUS (I-BUS)



EARLY PRODUCTION

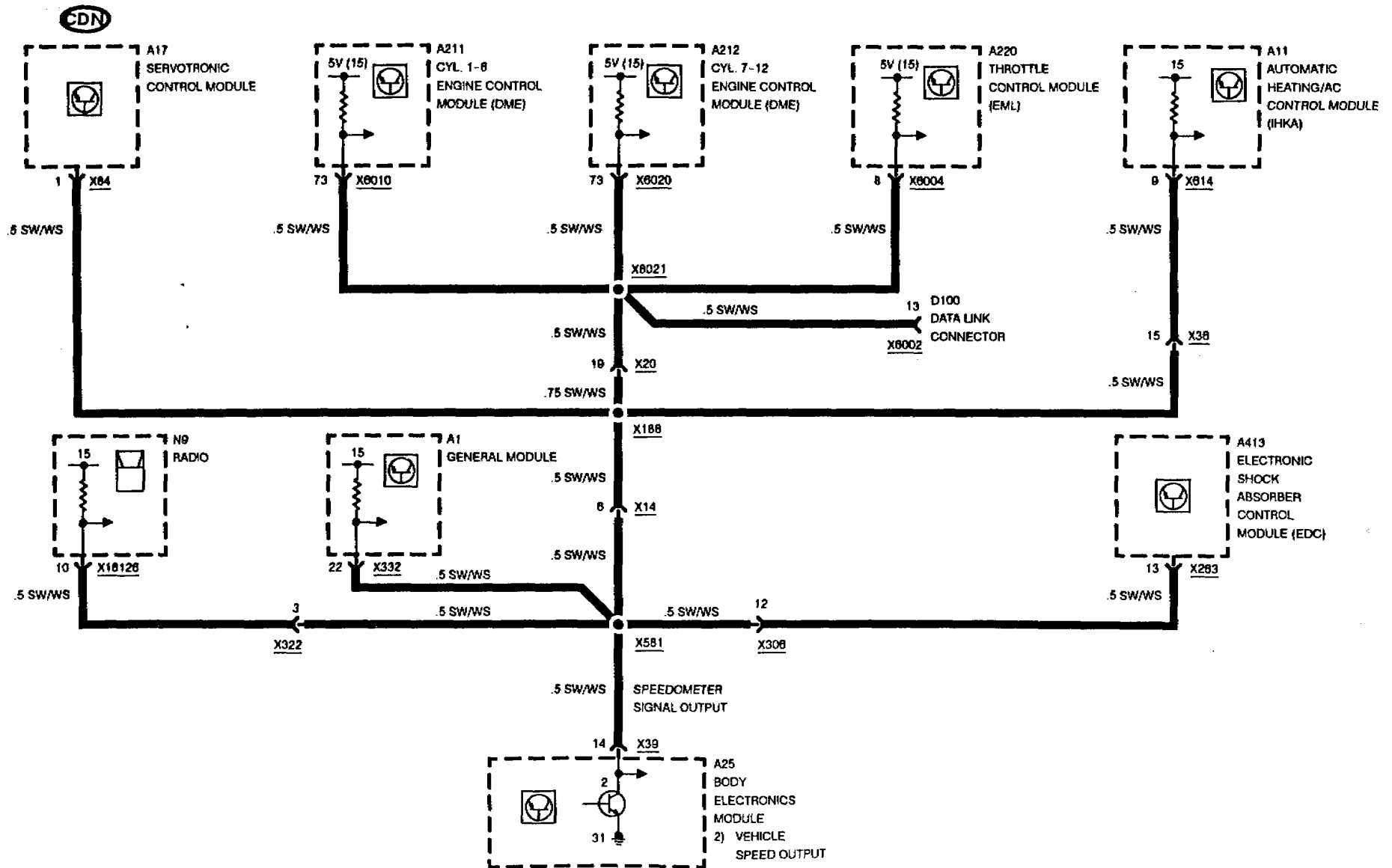
★ DATA LINK INFORMATION FOR ALL COMPONENTS CONNECTED TO THE I-BUS IS OBTAINED FROM THE DATA LINK CONNECTIONS TO A25 BODY ELECTRONICS MODULE (EKM)





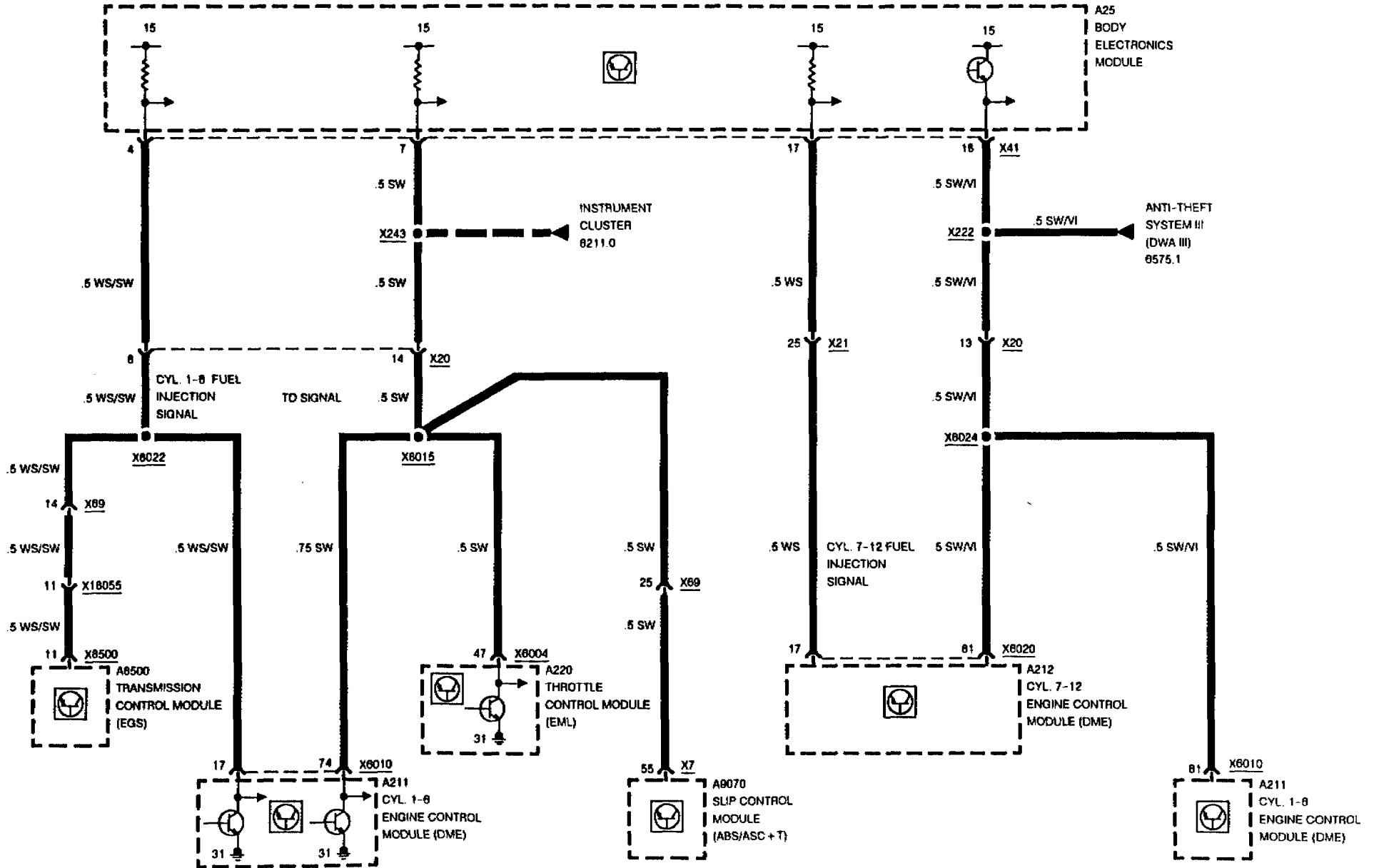
# BODY ELECTRONICS MODULE (EKM)

## SIGNAL-OUTPUT SPEEDOMETER

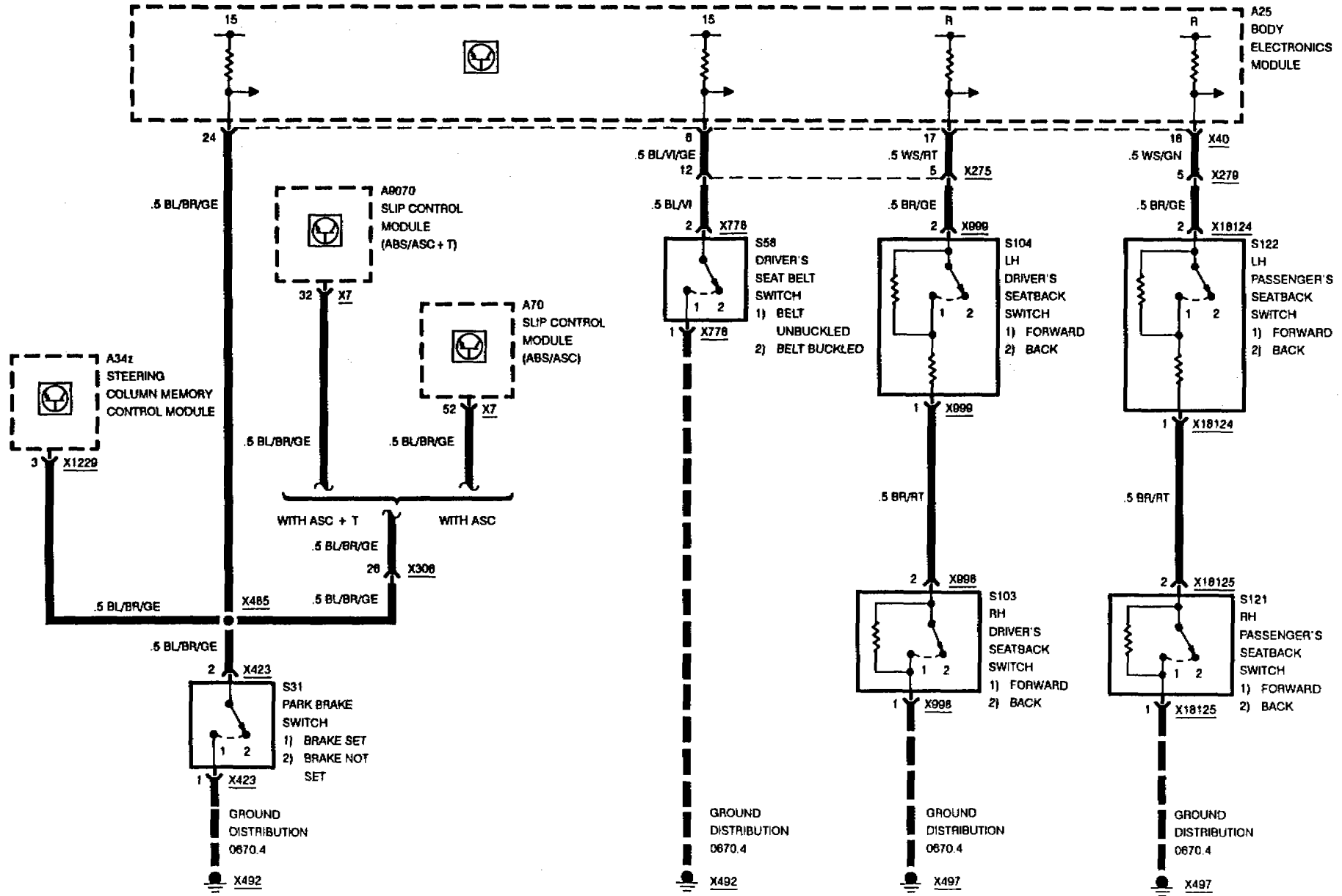




# BODY ELECTRONICS MODULE (EKM)

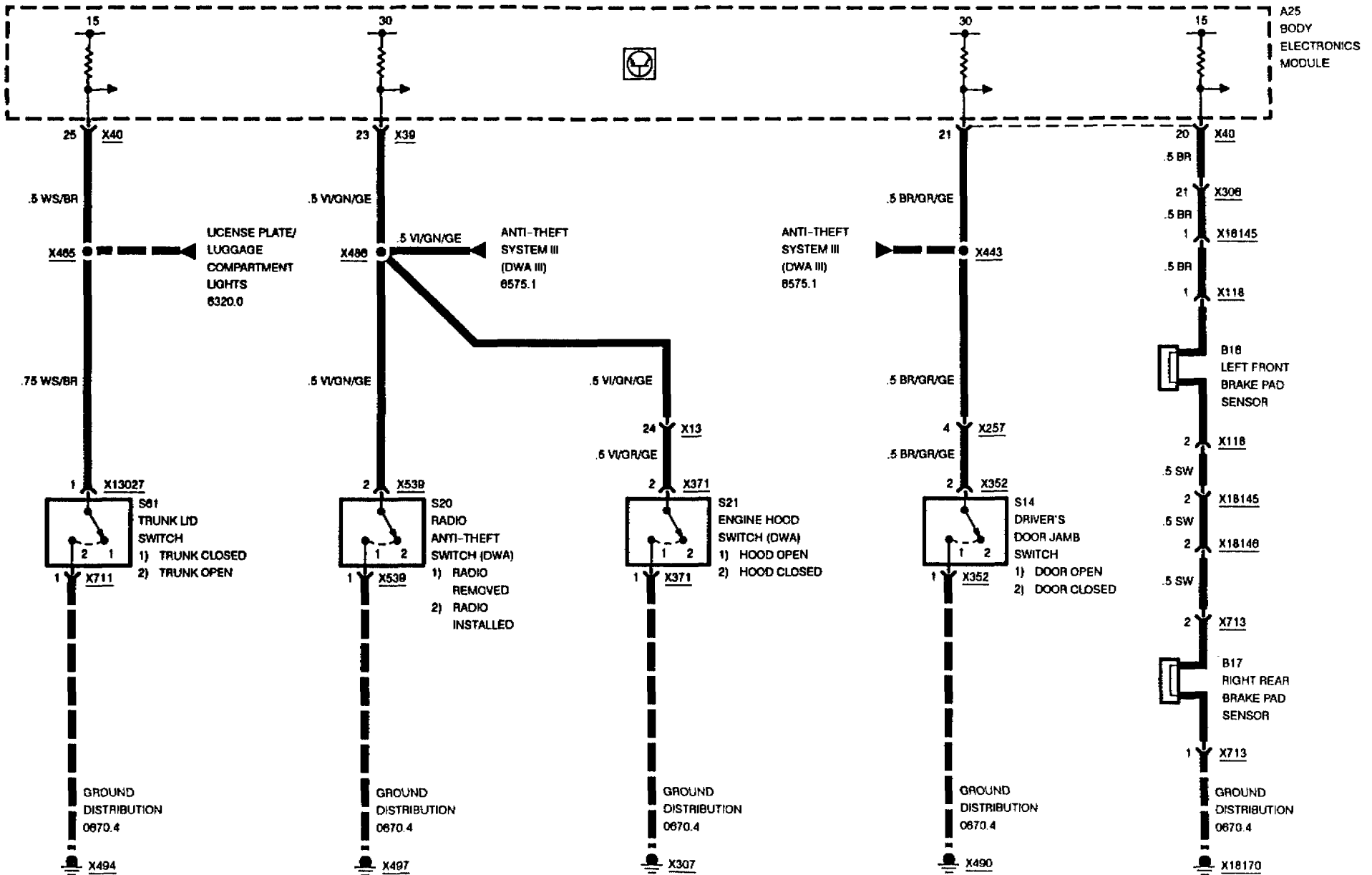


# BODY ELECTRONICS MODULE (EKM)



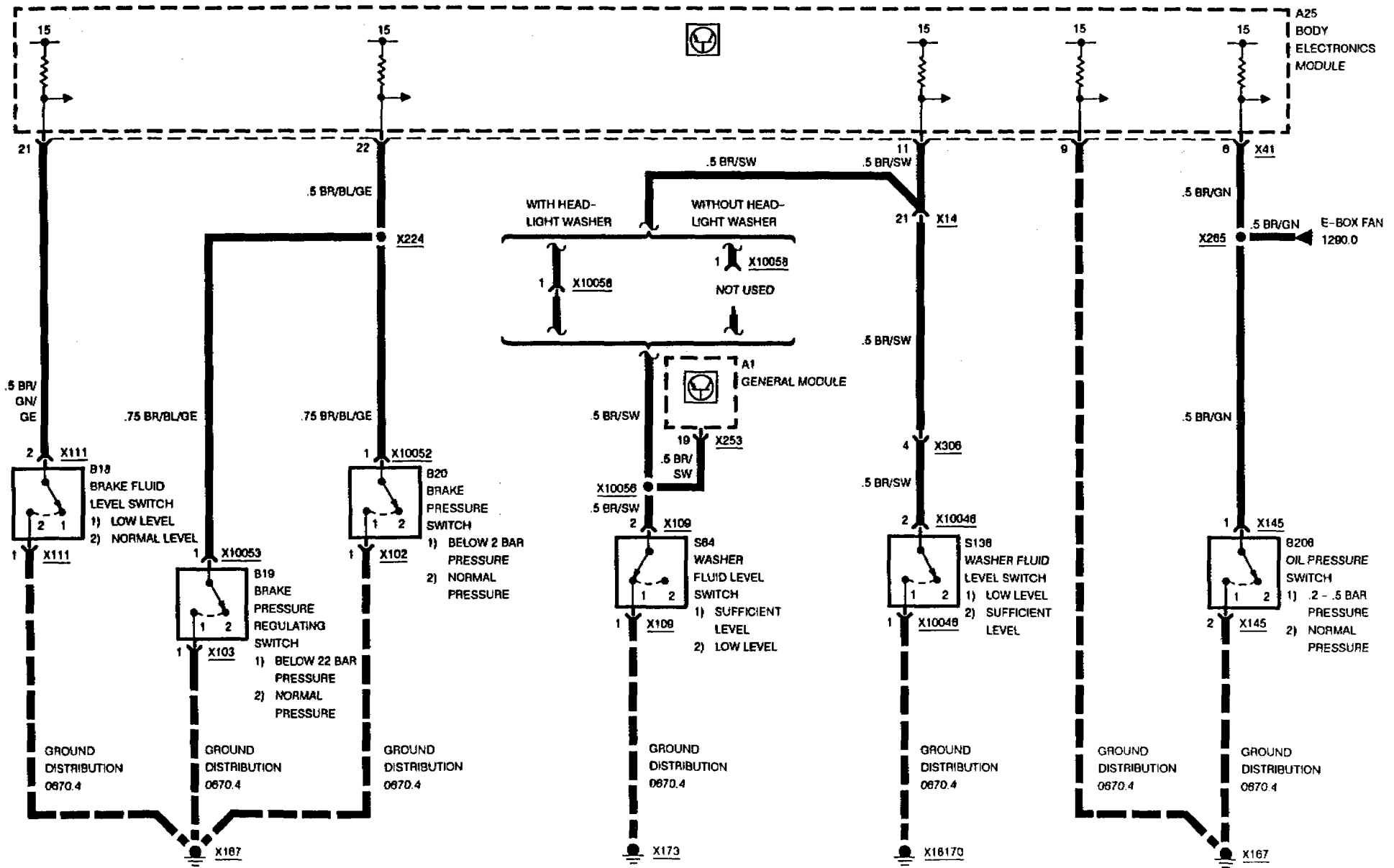


# BODY ELECTRONICS MODULE (EKM)





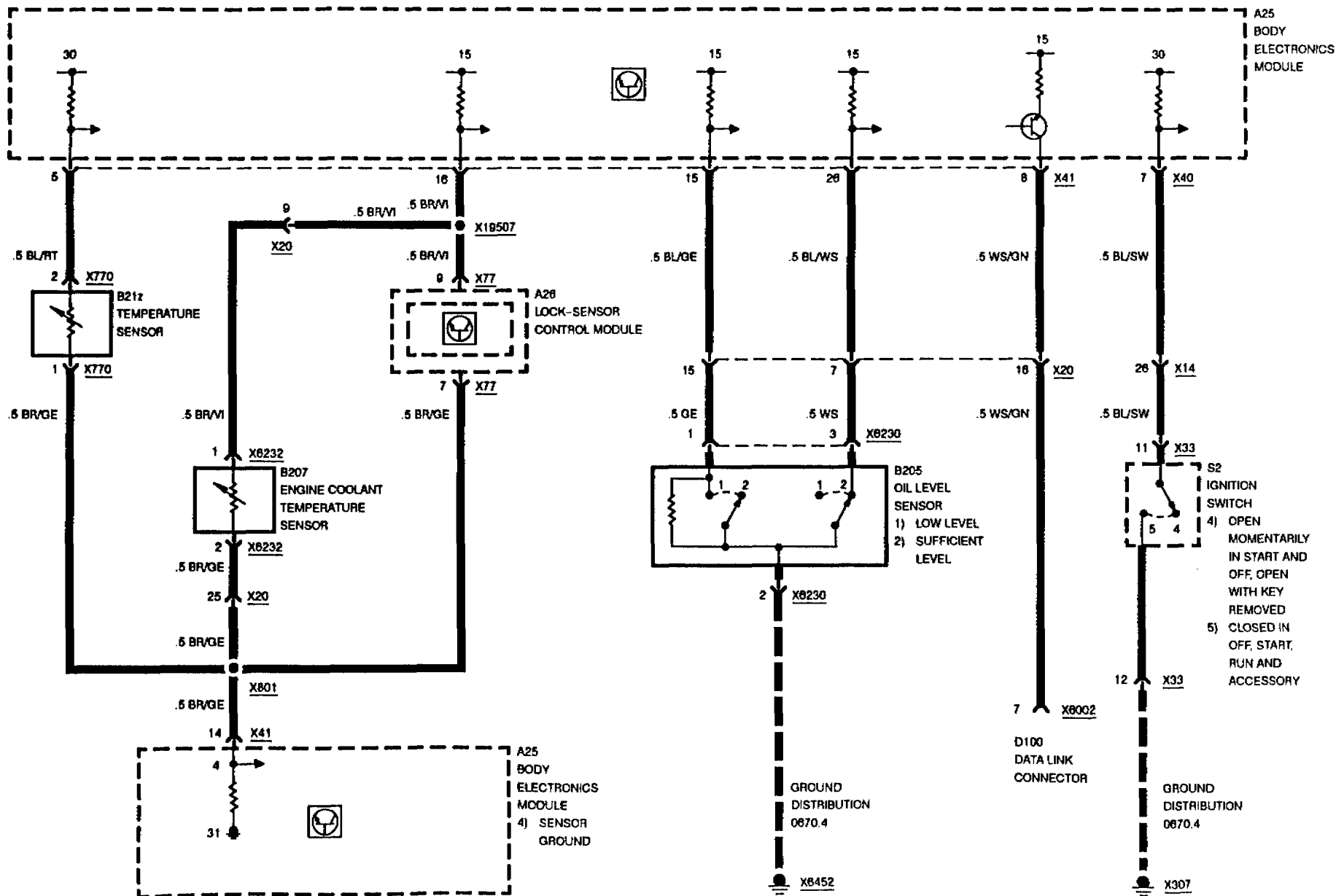
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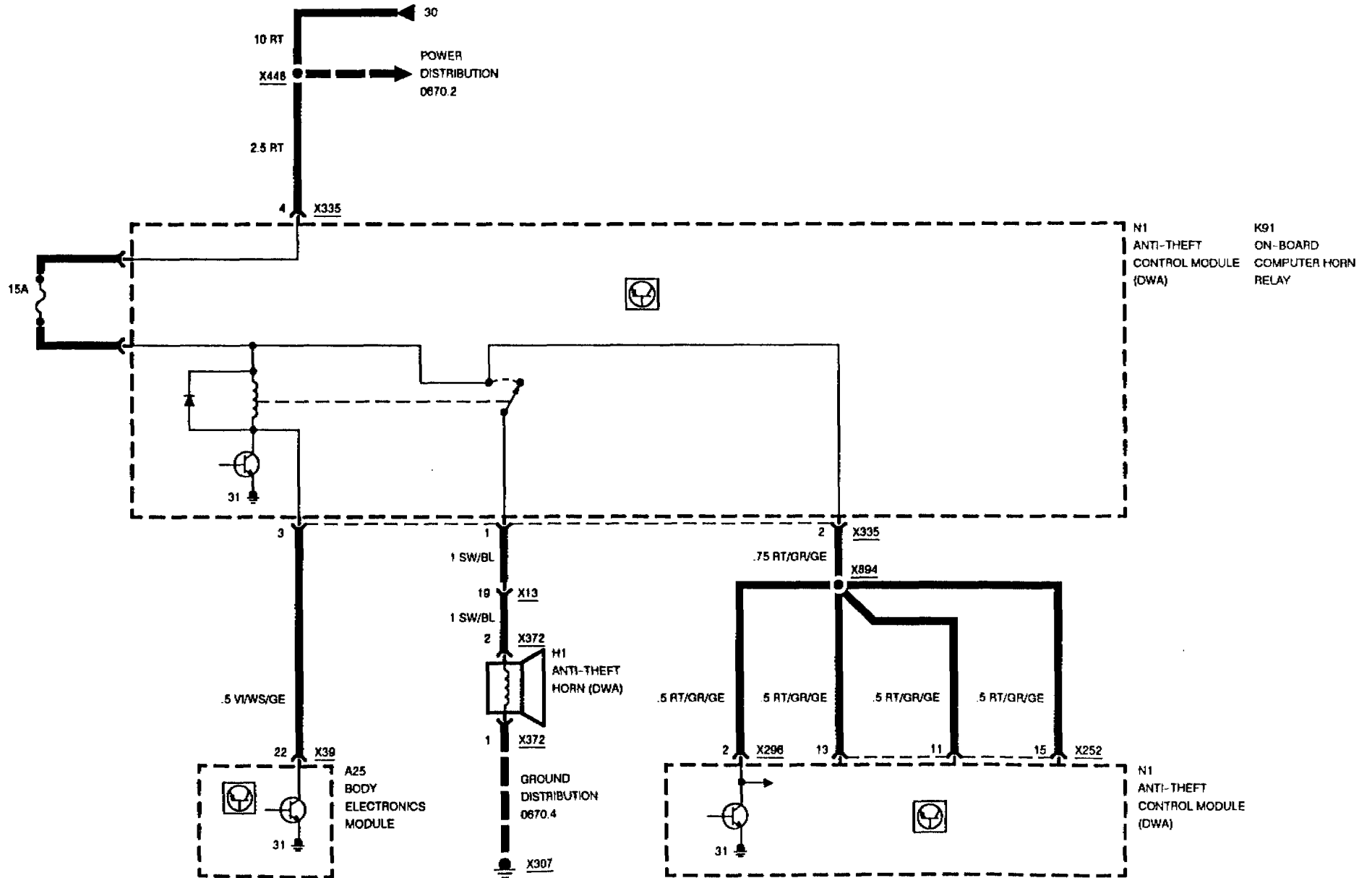
# BODY ELECTRONICS MODULE (EKM)







# BODY ELECTRONICS MODULE (EKM)

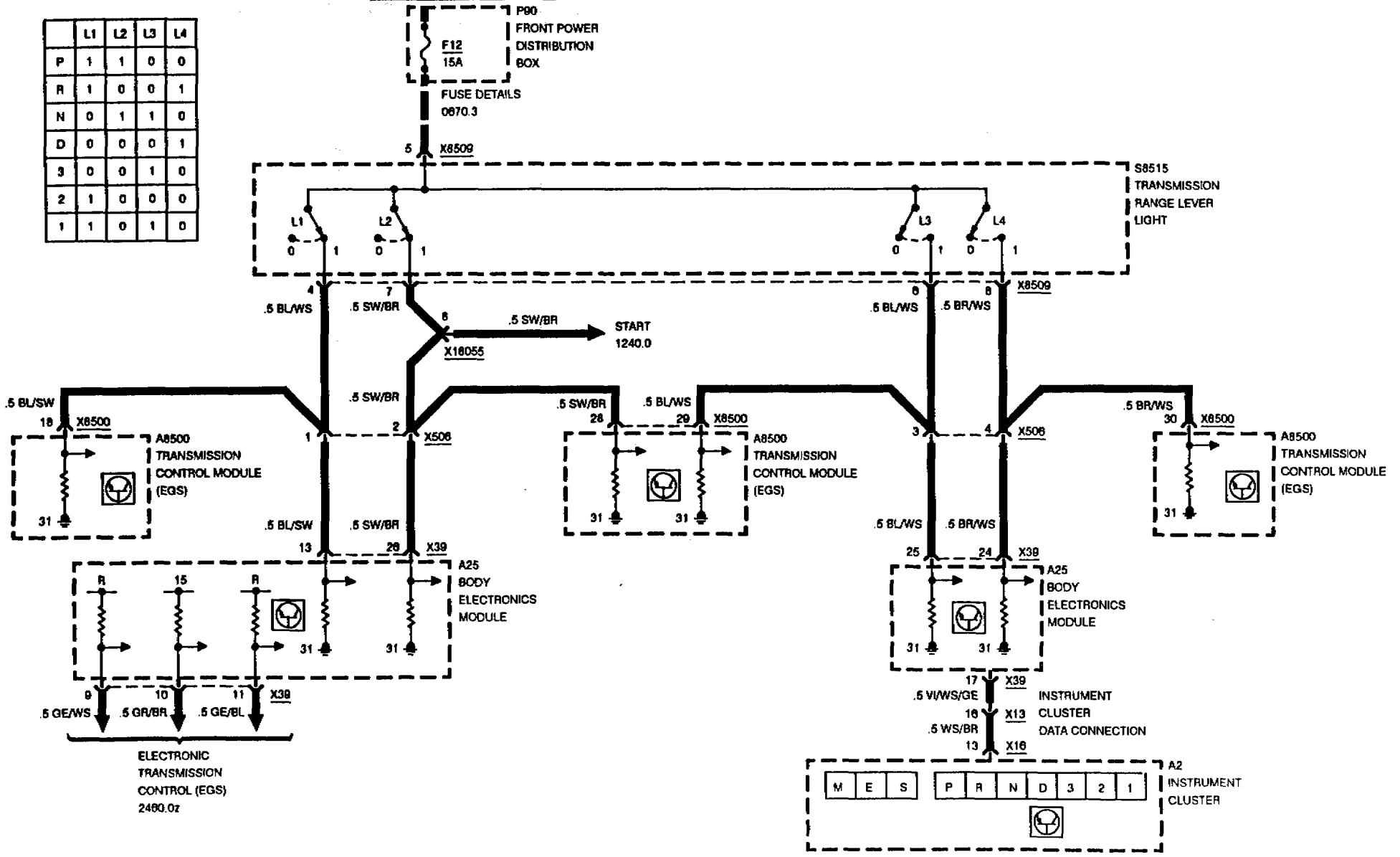




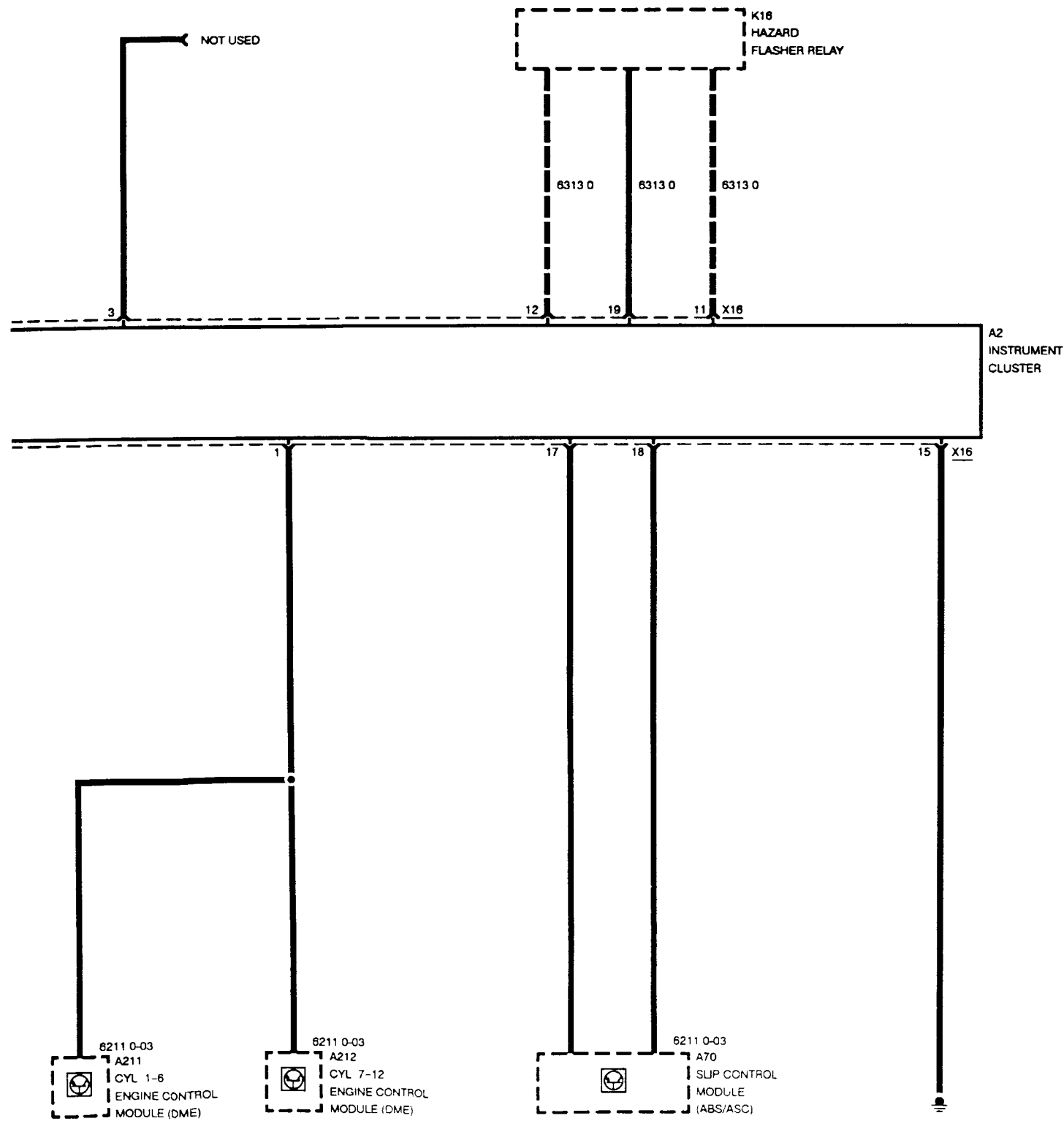
# BODY ELECTRONICS MODULE (EKM)

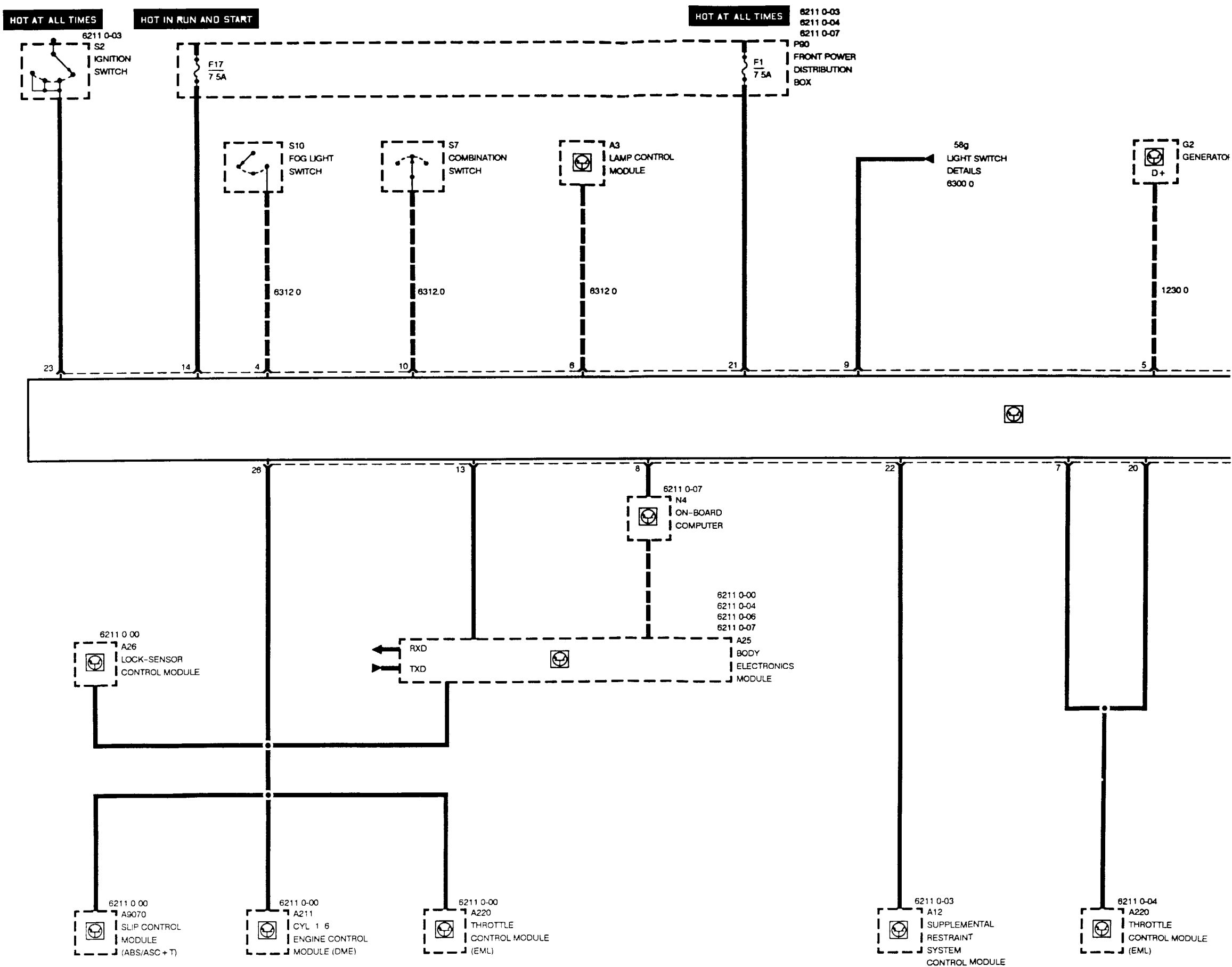
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P	1	1	0	0
R	1	0	0	1
N	0	1	1	0
D	0	0	0	1
3	0	0	1	0
2	1	0	0	0
1	1	0	1	0

HOT IN RUN AND START











# INSTRUMENT CLUSTER



## Pin Assignments

### X16

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
1	E	Check engine (USA only)	DME I/II control units	B-		Lamp on at B-
2	E	Indicator lamp (not connected at present)	active rear axle kinematics (AHK)	B-		Lamp on at B-
3		Battery charge indicator lamp 1	Alternator			
4	E	Rear fog light indicator lamp	Switch	12 V		Lamp on at B+
5		Battery charge indicator lamp 2	Alternator 2	12 V		Lamp on at B+
6	E	Fog light indicator light	LKM control unit	12 V		
7	E	EML warning light	EML control unit	B-		Lamp on at B-, also see Pin 20
8	A	Display lighting electronically dimmed	MID control unit	Low pulses	Display bars	A check can be performed as to whether the display dimming in the instrument cluster is OK
9	E	Terminal 58g, switch and instrument lighting	Dimmer	High pulses	Display bars	See screen display
10	E	High beam indicator	Combination switch	12 V		
11	E	Right turn signal indicator	Turn signal indicator relay	12 V		
12	E	Left turn signal indicator	Turn signal indicator relay	12 V		





## INSTRUMENT CLUSTER

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
13	E/A	Serial interface – instrument cluster data link	EKM control unit	Square-wave signal	Defect code stored in instrument cluster and EKM	Check wire in case of defect
14	E	Terminal 15	Fuses	12 V 0 V	ON OFF	On when ignition switch in position 2
15	M	Ground, terminal 31	Ground	Ground		
16		Not used				
17	E	ASC indicator lamp	ASC control unit	B-		Lamp on at B-
18	E	ABS indicator lamp	ABS control unit	B-		Lamp on at B-
19	E	Trailer turn signal indicator	Turn signal indicator relay	12 V		
20	E	EML warning lamp	EML control unit	B-		Lamp on at B-, also see Pin 7
21	E	Terminal 30	Fuses	12 V		
22	E	Airbag warning lamp	Airbag control unit	B-		
23	E	Terminal R, not protected	Ignition switch	12 V		For airbag indicator lamp
24	A	Provisions, sensor ground	Provisions for engine oil temperature sensor			Resistance measurement with respect to vehicle ground not possible
25	E	Engine oil temperature	Provisions for engine oil temperature sensor	0 – 5 V		
26	E	ID signal (engine speed)	DME I control unit	Square-wave signal		

E = Input, A = Output, M = Ground

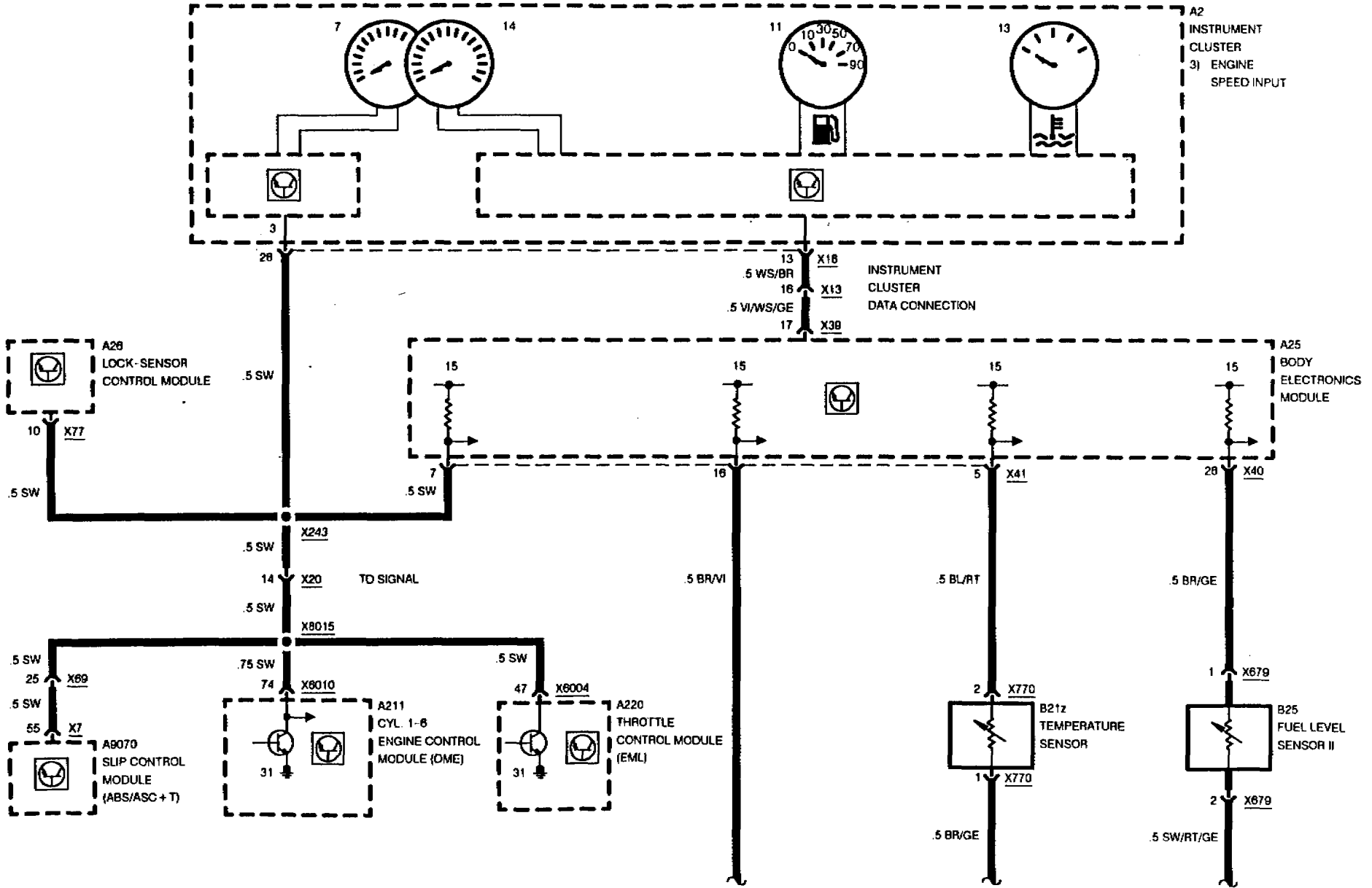
BMW  
**8**

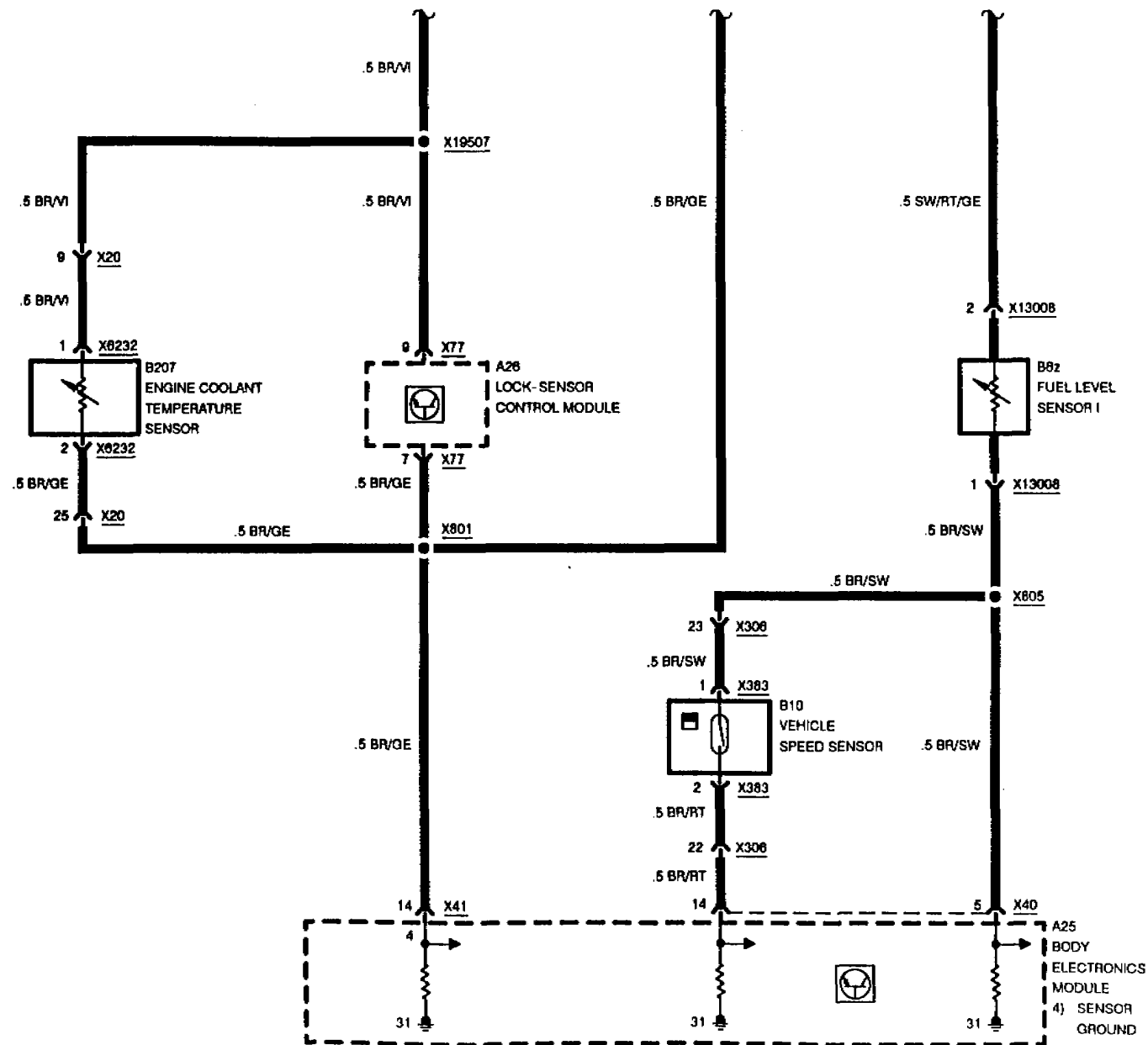
6211.0



# INSTRUMENT CLUSTER

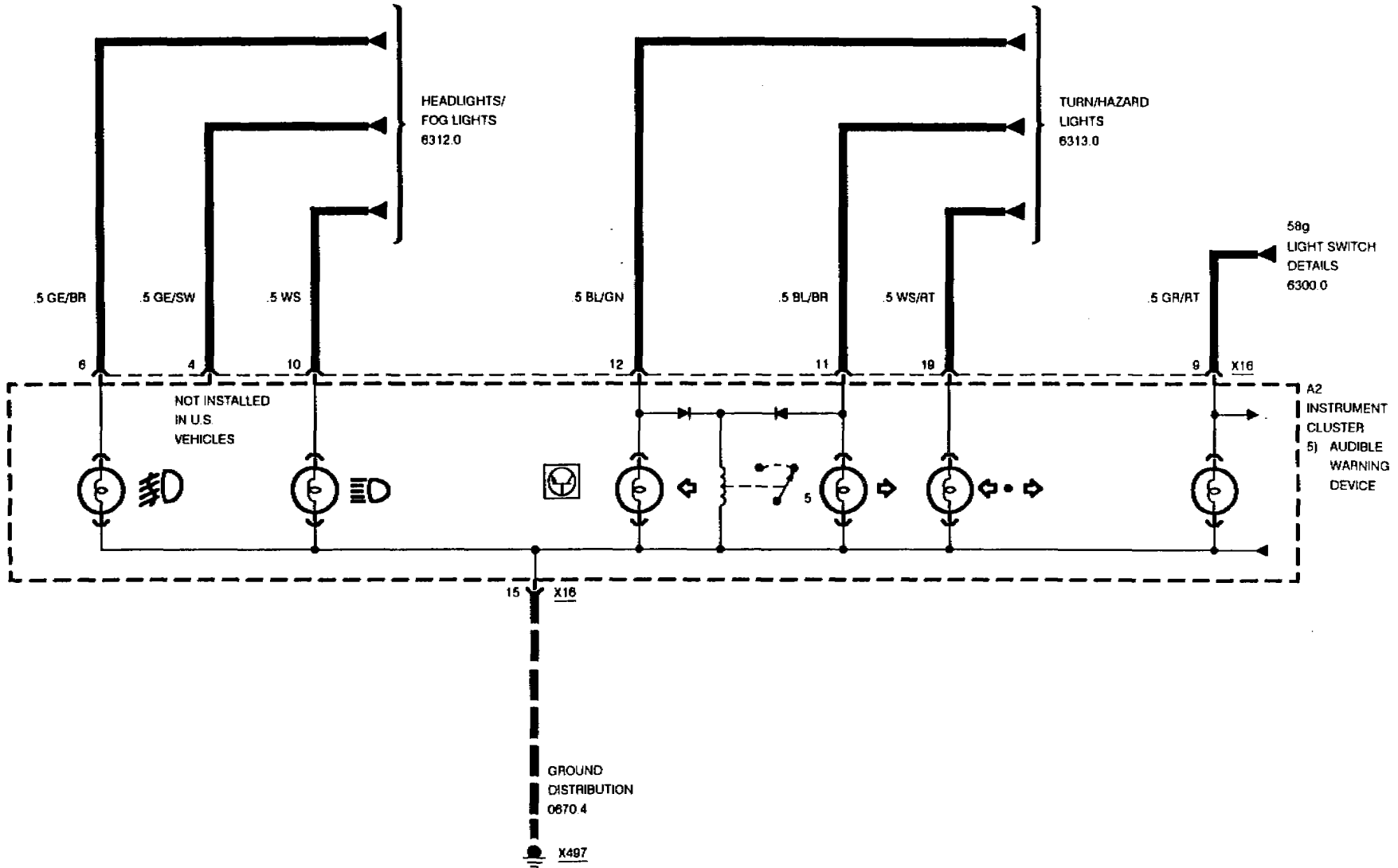
## INDICATORS







# INSTRUMENT CLUSTER INDICATORS

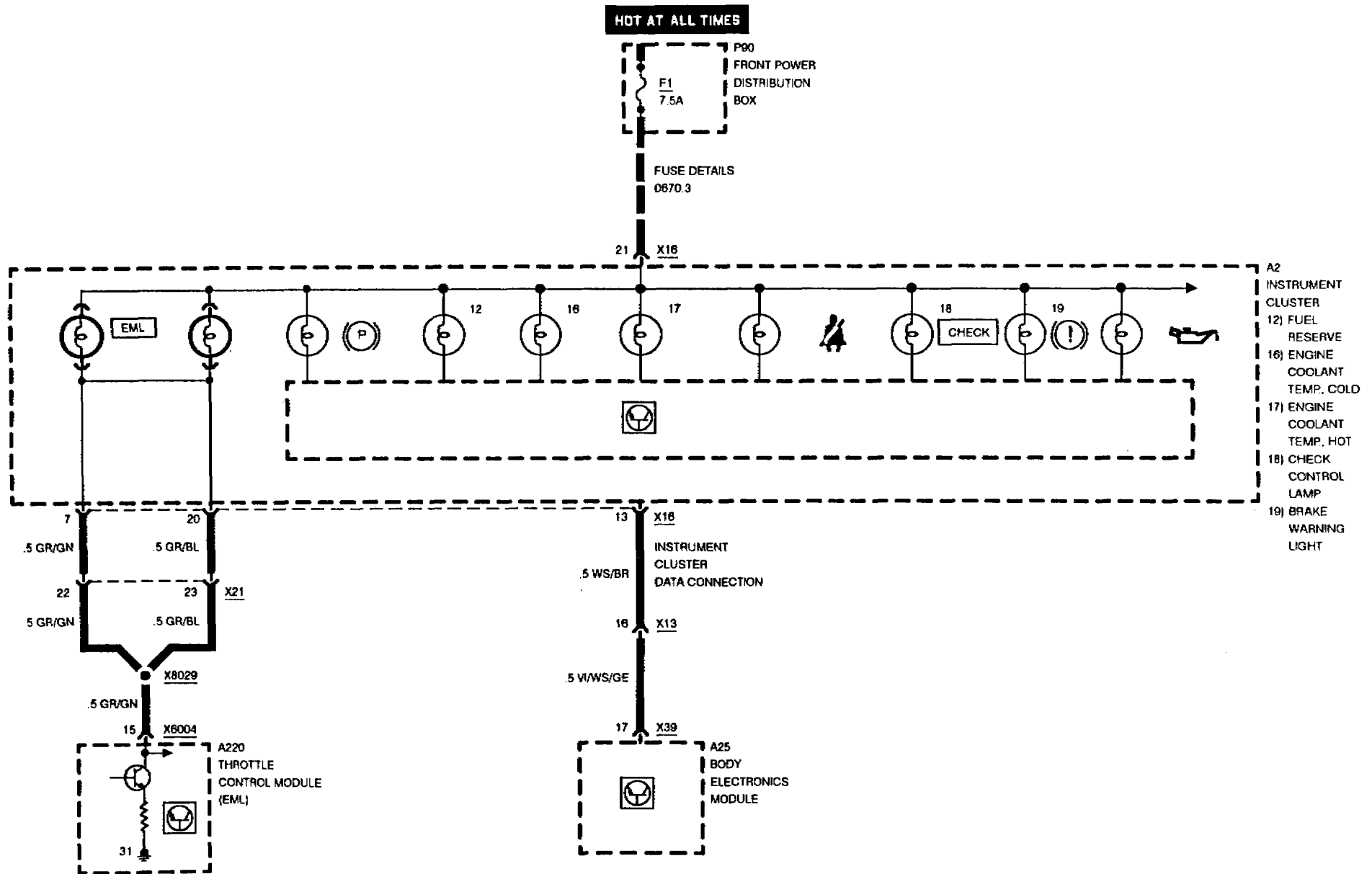






# INSTRUMENT CLUSTER

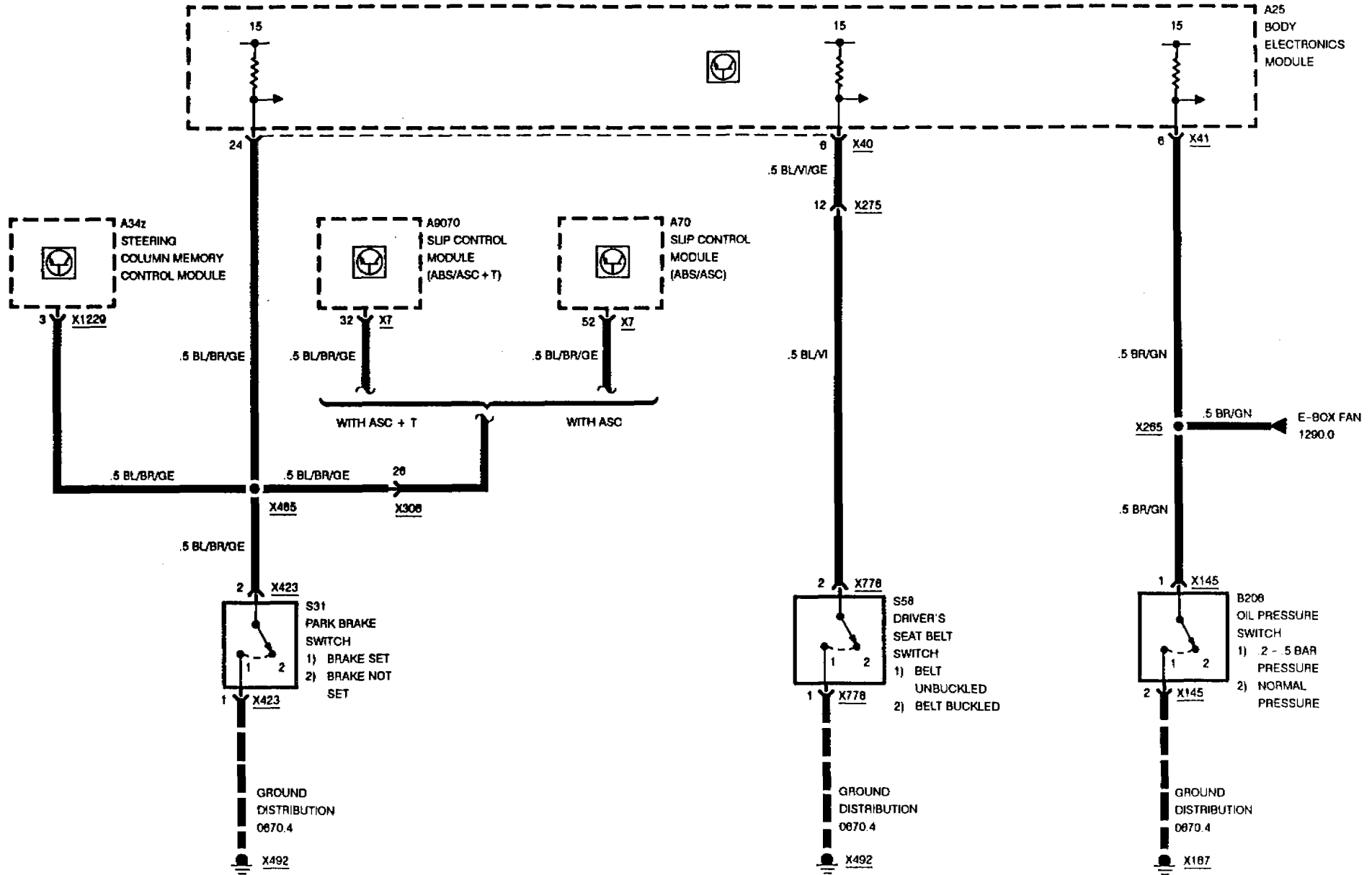
## INDICATORS





# INSTRUMENT CLUSTER

## INDICATOR LIGHTS, INPUTS



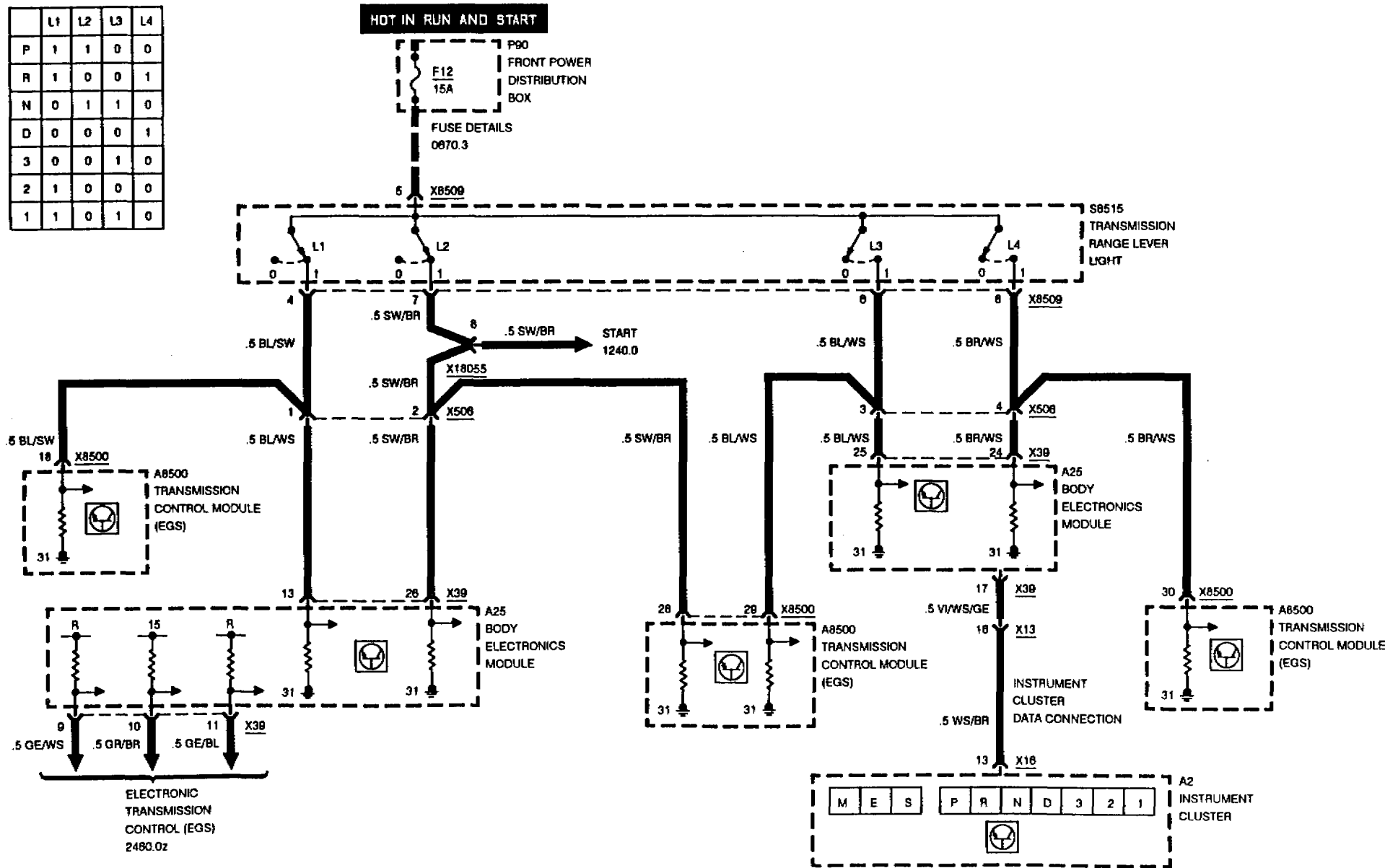




# INSTRUMENT CLUSTER

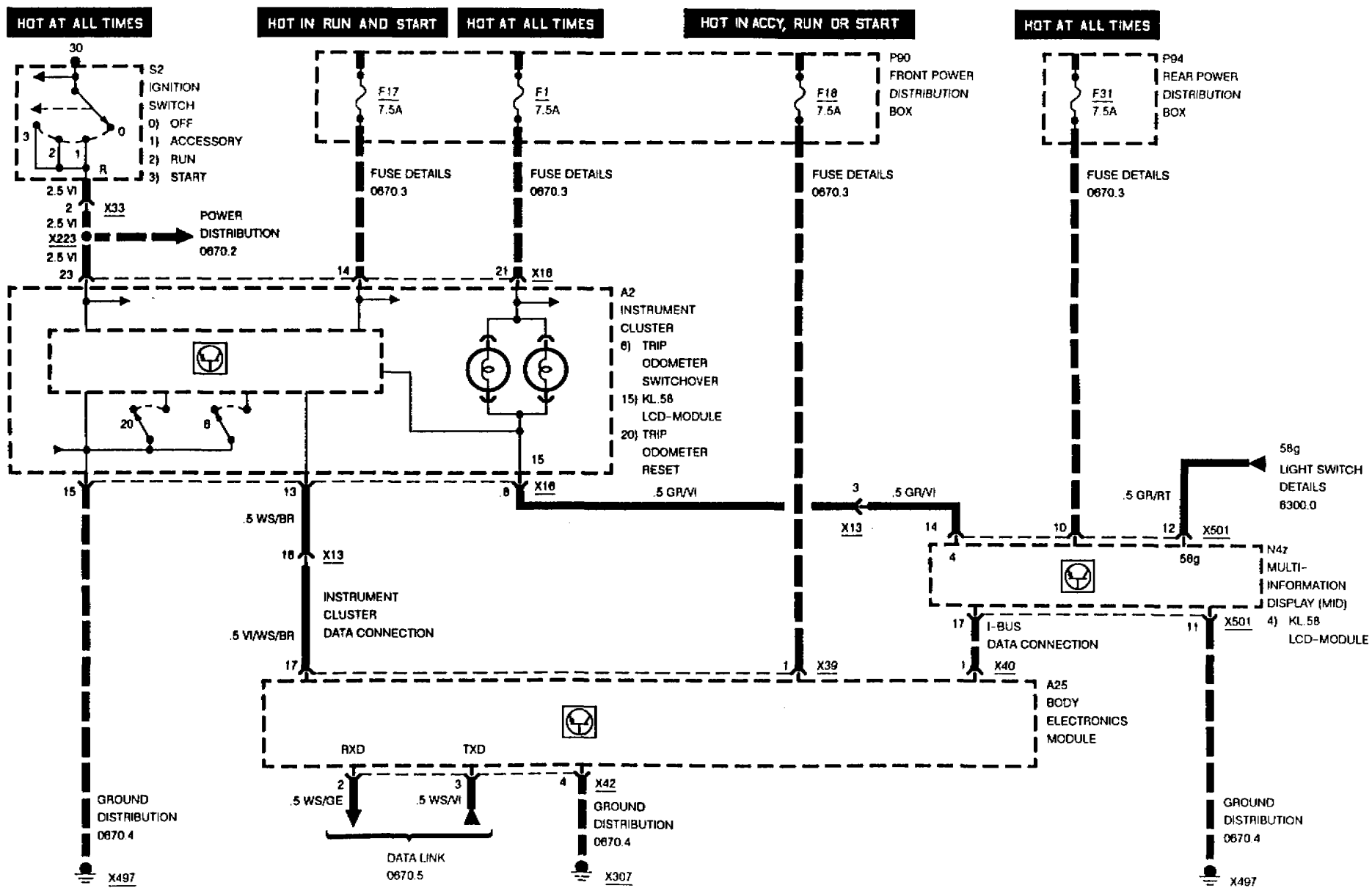
## GEAR SELECTOR

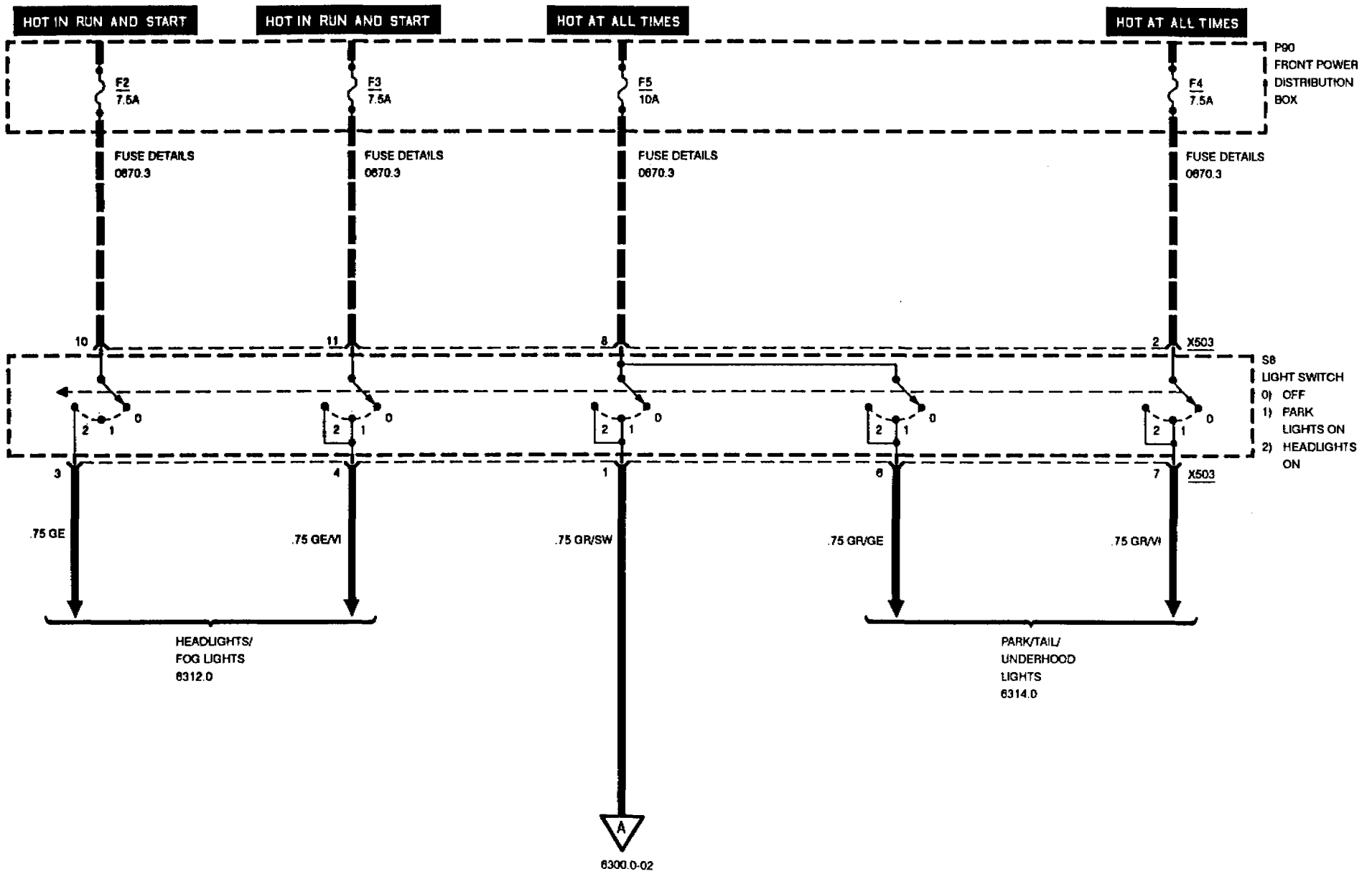
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P	1	1	0	0
R	1	0	0	1
N	0	1	1	0
D	0	0	0	1
3	0	0	1	0
2	1	0	0	0
1	1	0	1	0



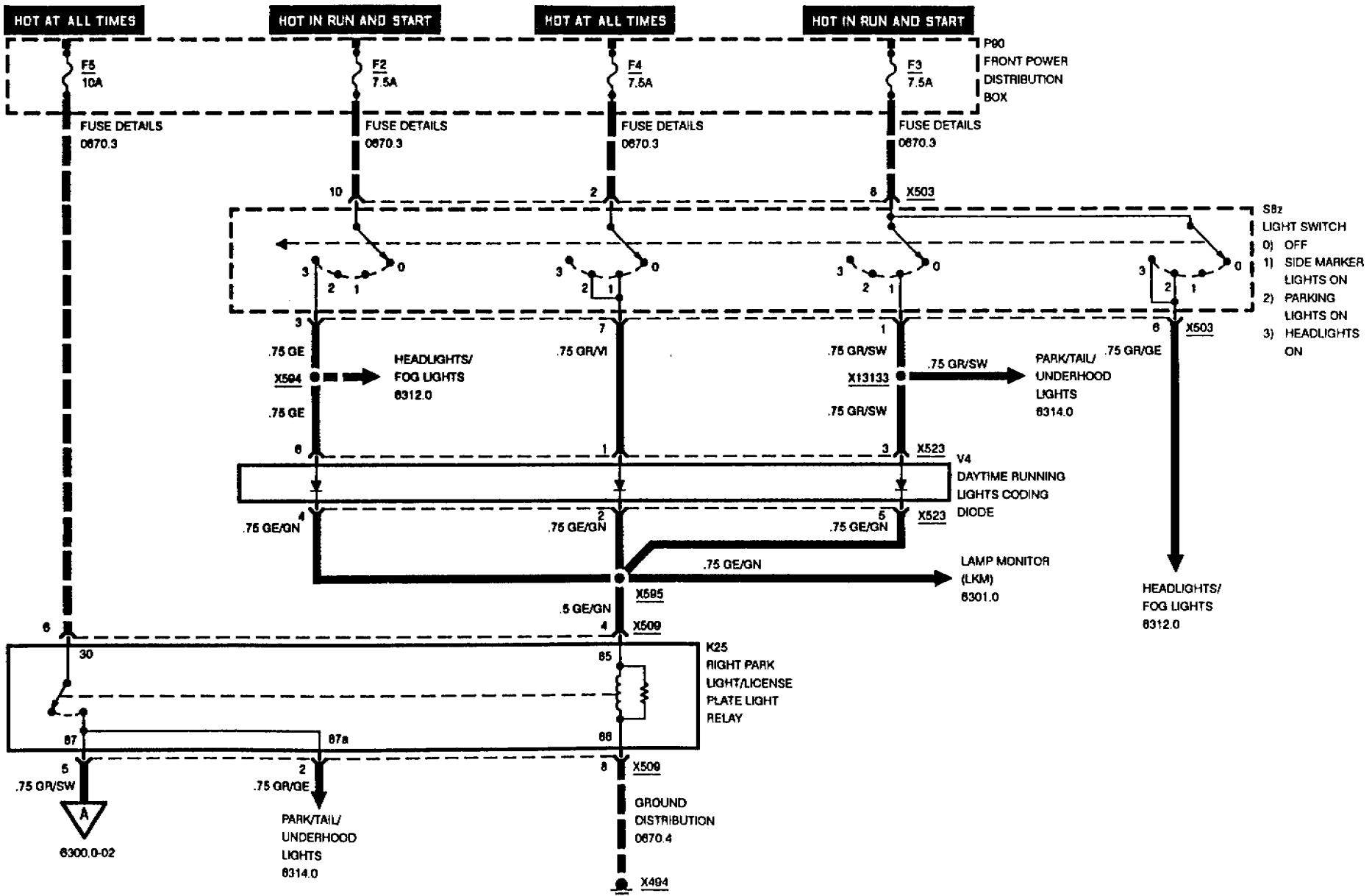


# INSTRUMENT CLUSTER



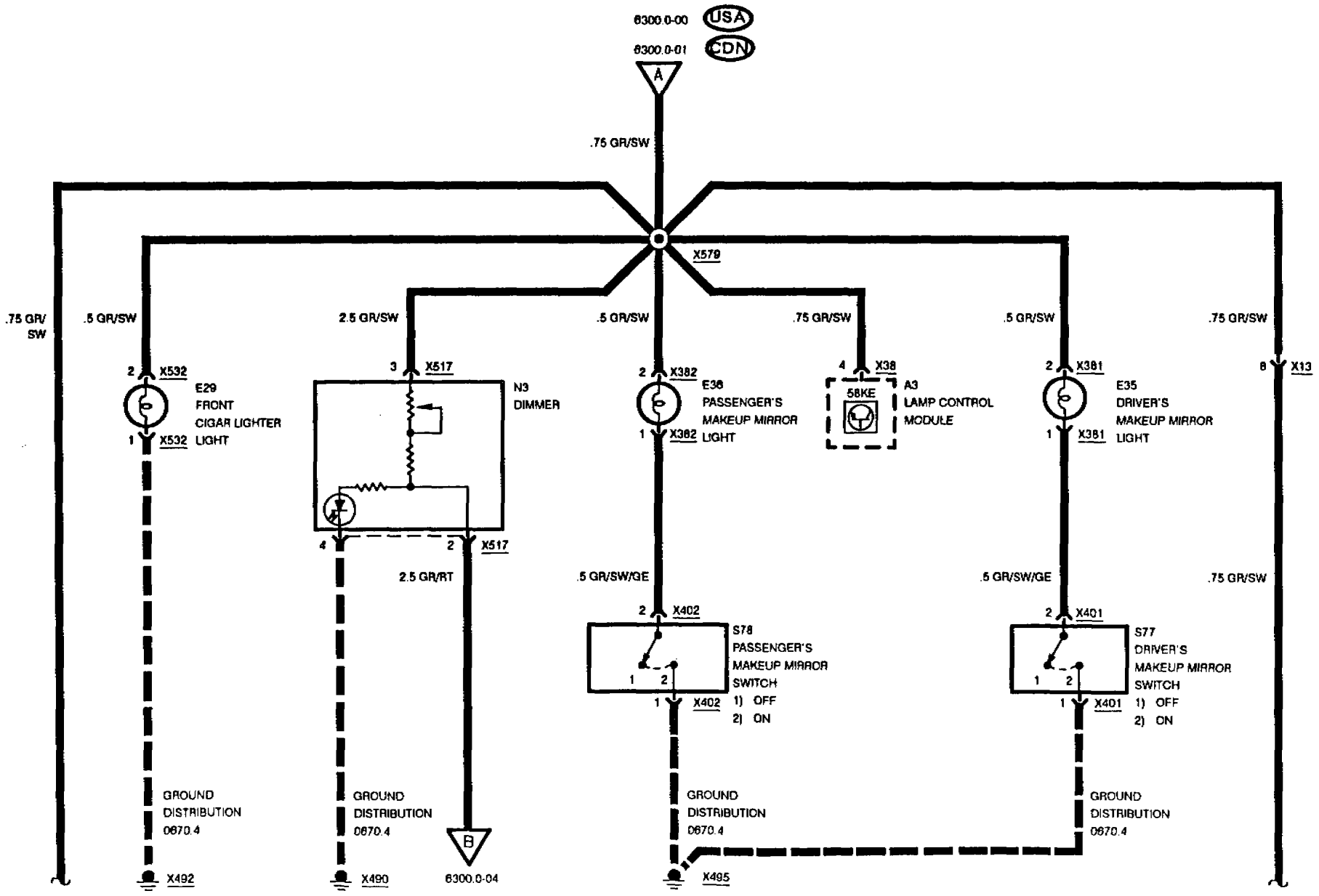


# LIGHT SWITCH DETAILS





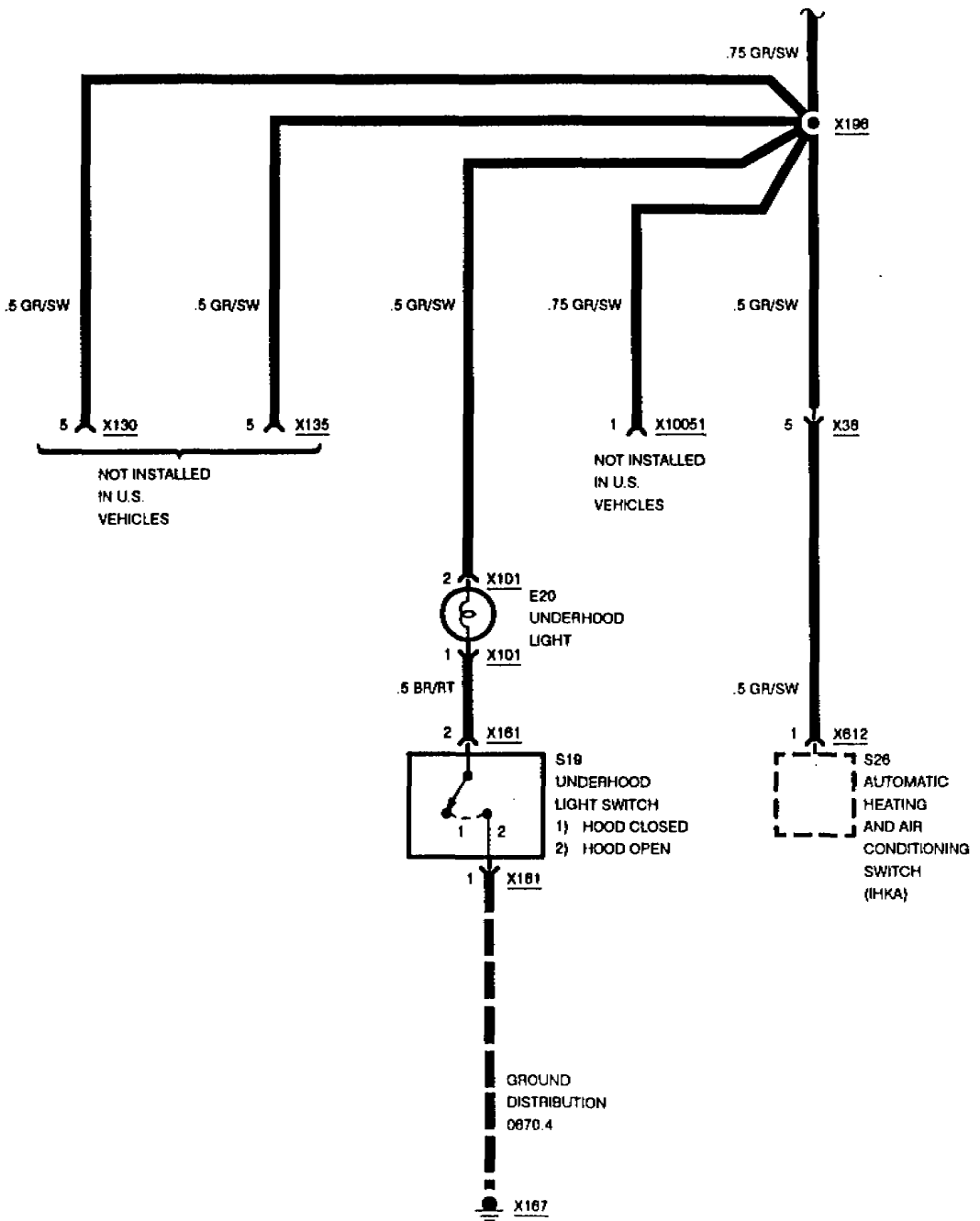
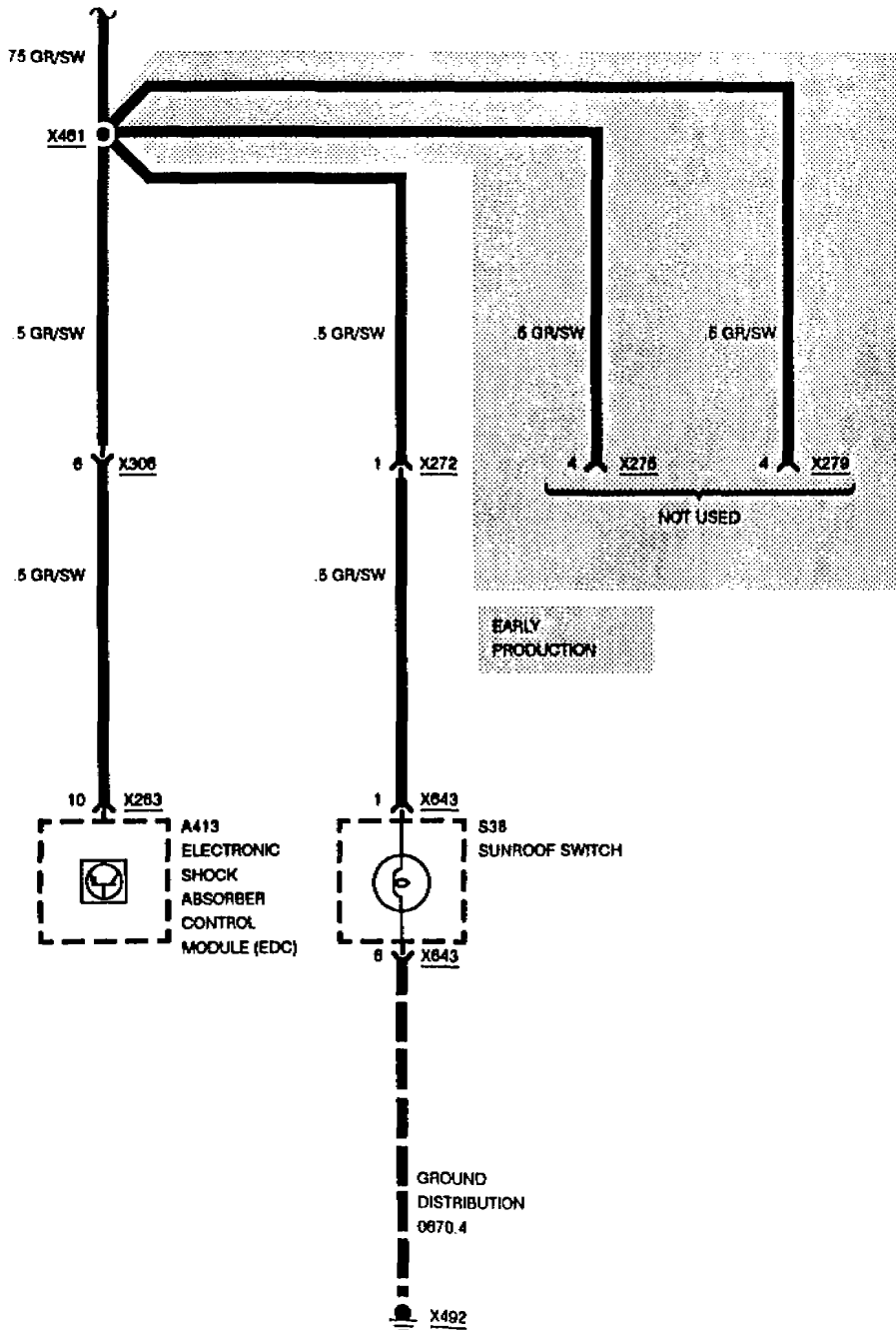
# LIGHT SWITCH DETAILS



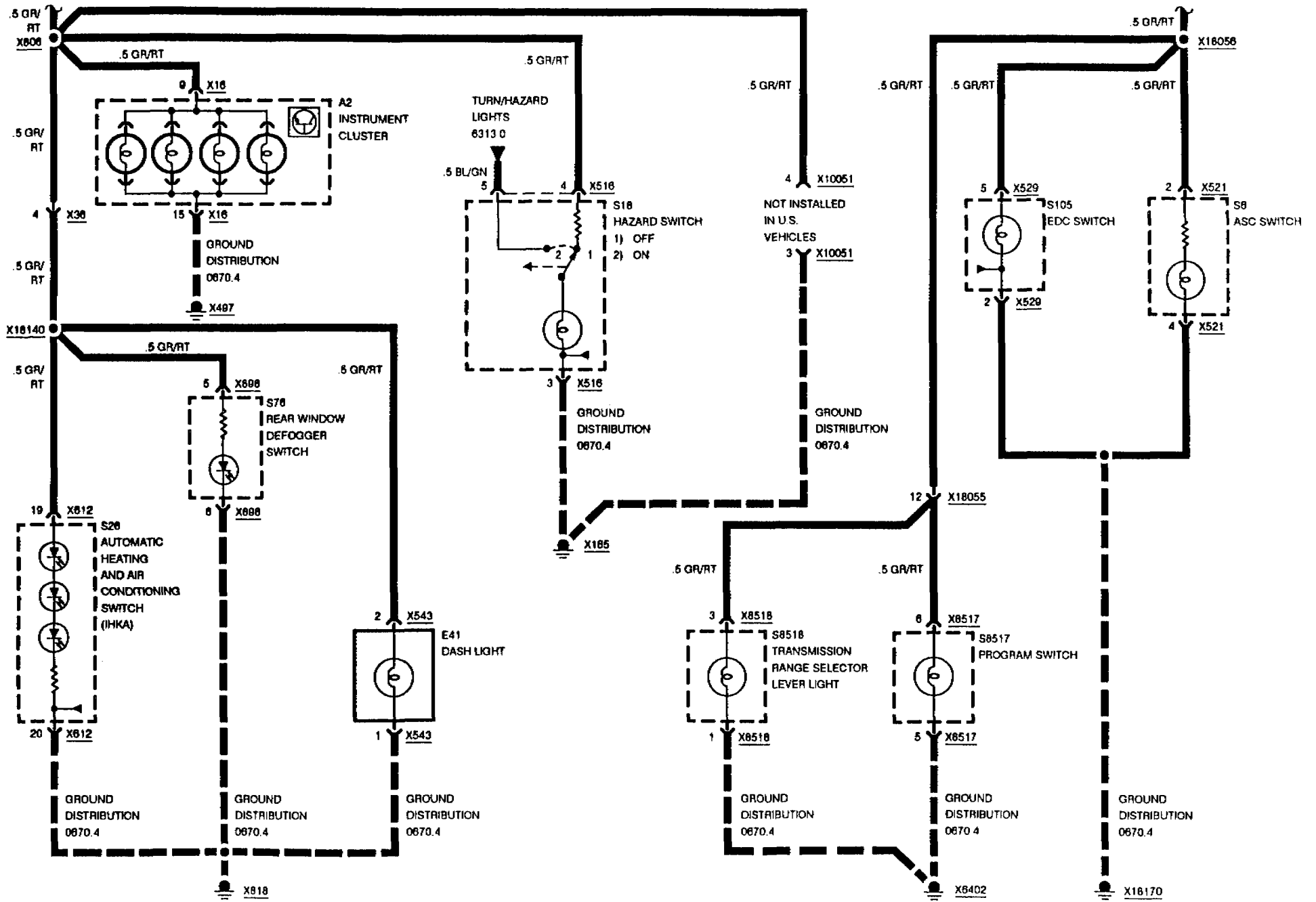
11/92

6300.0-02

1992







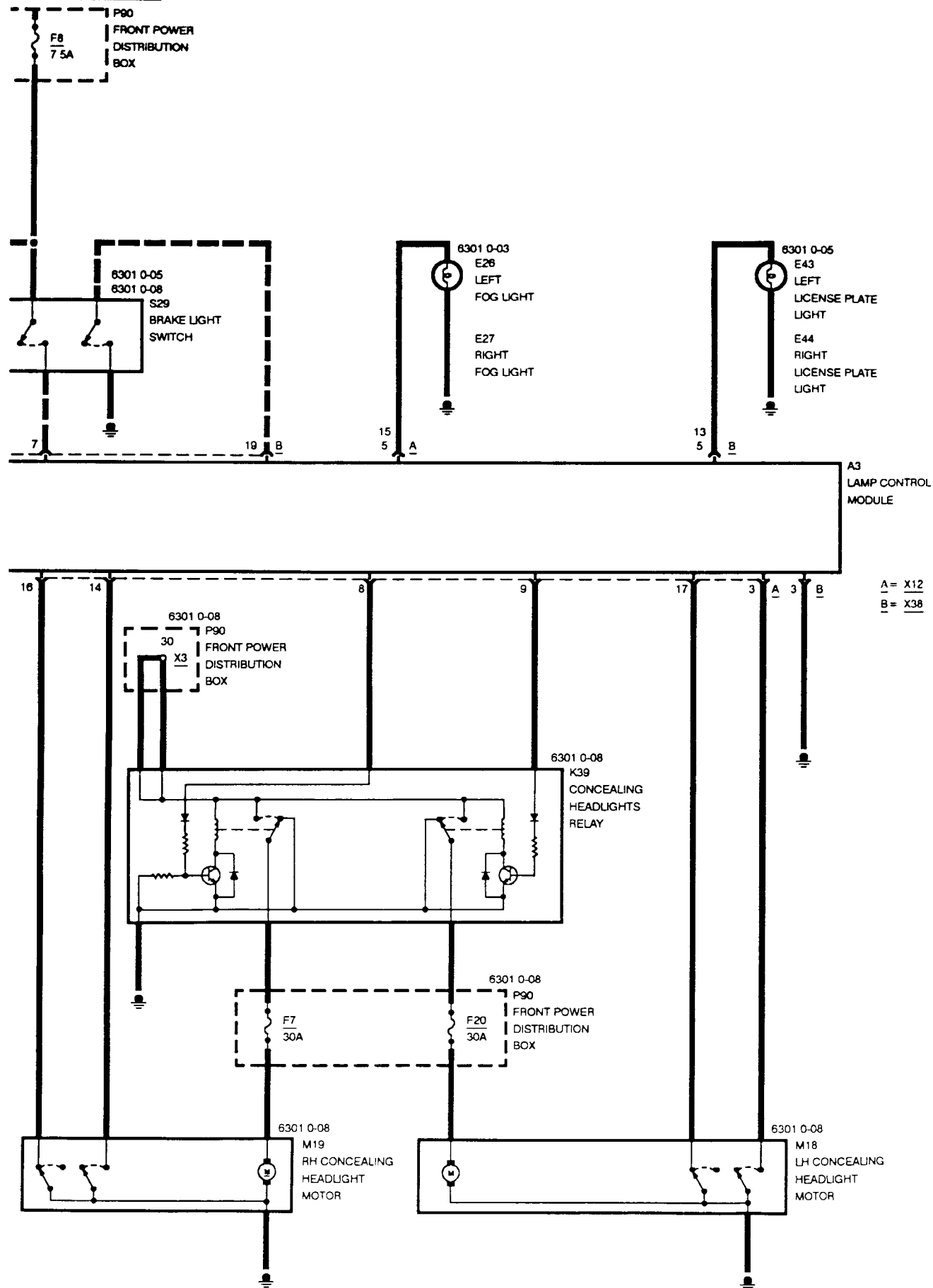


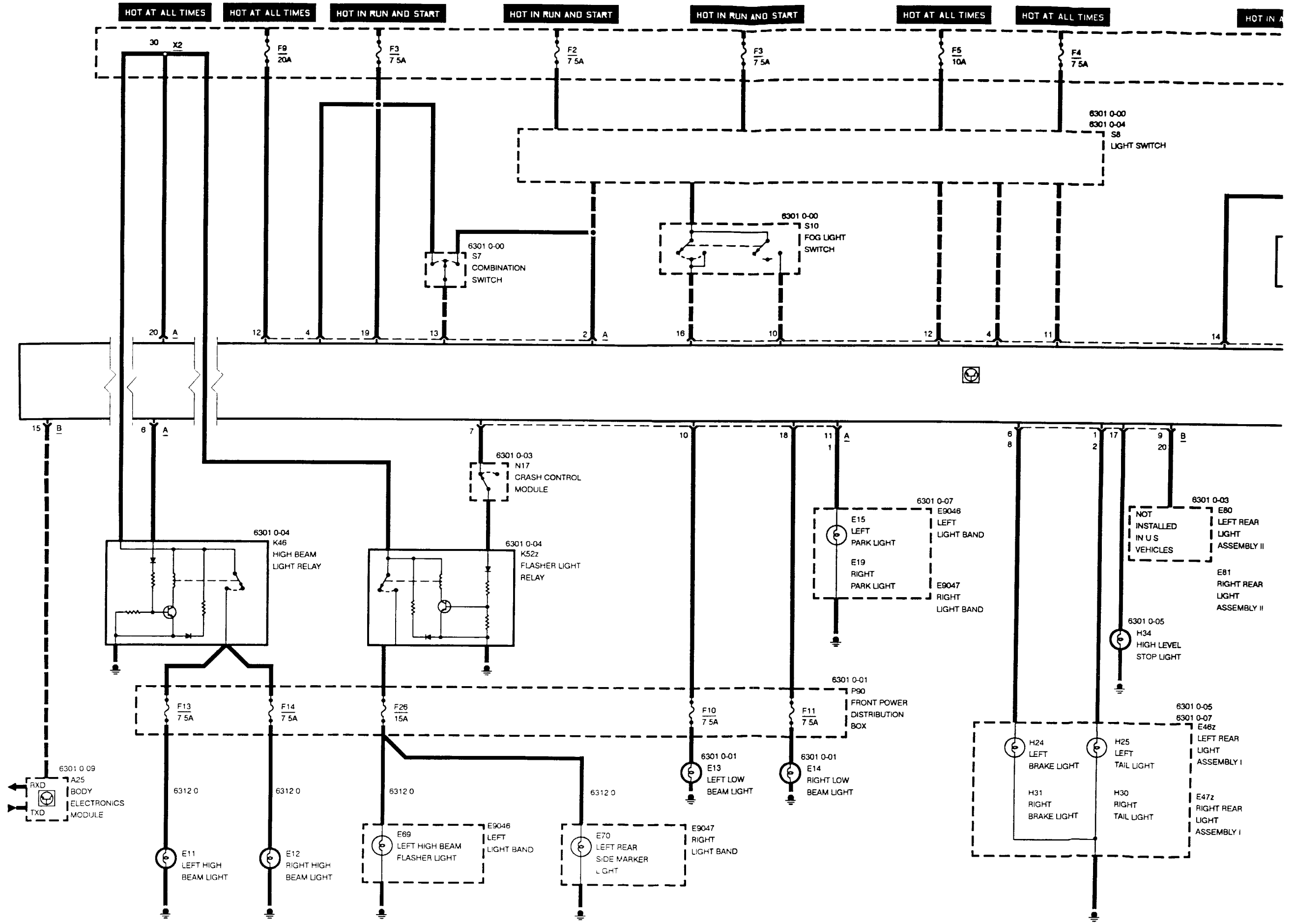
BMW  
8

6300.0-06



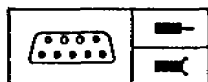
**CY, RUN AND START**







# LAMP MONITOR (LKM)



## Pin Assignments

A=X12 20 pins, white

B=X38 20 pins, black

### X12

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
1	A	Right front parking light	Right light assembly	approx. 12 V approx. 0 V	ON OFF	
2	E	Light switch/low beam	Light switch	approx. 12 V approx. 0 V	ON OFF	In ignition switch position "2", terminal 15 "ON"
3	E	Left KSW position signal (KSW position OPEN reached)	Left concealing headlight motor	approx. 12 V approx. 0 V	OFF ON	
4	E	Fuse for all fog lights/ power circuit for rear fog light, control circuit for fog lights, low beam, high beam/headlight flasher	Fuse	approx. 12 V	Stored as defect code and can be displayed	In ignition switch position "2", terminal 15 "ON"
5	A	Right fog light	Right concealing headlight	approx. 12 V ca. 0 V	ON OFF	
6	A	High beam relay (double relay high beam/ headlight flasher)	High beam light relay	approx. 3,5–5 V approx. 0 V	ON OFF	
7	A	Headlight flasher relay (double relay high beam/ headlight flasher)	Crash control unit	approx. 3,5–5 V approx. 0 V	ON OFF	



## LAMP MONITOR (LKM)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
8	A	Right concealing headlight motor signal	Concealing headlight relay	approx. 7–12 V approx. 0 V		KSW motor running KSW motor stopped
9	A	Left concealing headlight motor signal	Concealing headlight relay	approx. 7–12 V approx. 0 V		KSW motor running KSW motor stopped
10	A	Left low beam	Left concealing headlight	approx. 12 V approx. 0 V	ON OFF	
11	A	Left front parking light	Left light assembly	approx. 12 V approx. 0 V	ON OFF	
12	E	Fuse for both fog lights/power circuit for fog lights	Fuse	approx. 12 V		Stored as defect code and can be displayed
13	E	High beam–headlight flasher switch/high beam	High beam–headlight flasher switch	approx. 12 V approx. 0 V	ON OFF	
14	E	Right KSW position signal (KSW position OPEN reached)	Right concealing headlight motor	approx. 12 V approx. 0 V	OFF OFF	
15	A	Left fog light	Left concealing headlight	approx. 12 V approx. 0 V	ON OFF	
16	E	Right KSW position signal (KSW position CLOSED reached)	Right concealing headlight motor	approx. 12 V approx. 0 V	OFF ON	
17	E	Left KSW position signal (KSW position CLOSED reached)	Left concealing headlight motor	approx. 12 V approx. 0 V	OFF ON	
18	A	Right low beam	Right concealing headlight	approx. 12 V approx. 0 V	ON OFF	
19	E	LKM voltage supply Terminal 15/control circuit	Fuse	approx. 12 V	None	
20	E	LKM voltage supply Terminal 30/power circuit	Power distribution box	approx. 12 V	None	Power supply for low beam



## LAMP MONITOR (LKM)

X38

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
1	A	Left tail light	Outside left tail light	approx. 12 V approx. 0 V	ON OFF	
2	A	Right tail light	Outside right tail light	approx. 12 V approx. 0 V	ON OFF	
3	M	Ground terminal 31	Body ground	approx. 0 V	None	
4	E	License plate light signal	Light switch	approx. 12 V approx. 0 V	ON OFF	
5	A	Right license plate light	Right license plate light	approx. 12 V approx. 0 V	ON OFF	
6	A	Left brake light	Outside left brake light	approx. 12 V approx. 0 V	ON OFF	
7	E	Brake light signal	Brake light switch	approx. 12 V approx. 0 V		Defect code is stored
8	A	Right brake light	Outside right brake light	approx. 12 V approx. 0 V	ON OFF	
9	A	Left rear fog light	Tail light left of rear lid	approx. 12 V approx. 0 V	ON OFF	Note country variant
10	E	Rear fog light voltage	Fog light switch	approx. 12 V approx. 0 V	None	Note country variant
11	E	Left parking light voltage	Light switch/Left park lamp relay	approx. 12 V approx. 0 V	None	Note country variant
12	E	Right parking light voltage	Light switch/Right park lamp relay	approx. 12 V approx. 0 V	None	Note country variant



## LAMP MONITOR (LKM)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
13	A	Left license plate light	Left license plate light	approx. 12 V approx. 0 V	ON OFF	
14	E	Brake lights voltage	Fuse	approx. 12 V	Defect code is stored	
15	E/A	E/A I-bus/data link	All control units with I-bus	Square-wave signal	None	When I-bus active/see EKM diagnostic program
16	E	Fog light voltage	Fog light relay/fog light switch	approx. 12 V approx. 0 V	ON OFF	Note country variant
17	A	High level stop light	High level stop light	approx. 12 V approx. 0 V	ON OFF	Note country variant
18		Not used				
19	E	Brake pedal status	Brake light switch	approx. 0 V approx. 12 V	ON OFF	
20	A	Right fog light	Tail light right of rear lid	approx. 12 V approx. 0 V	ON OFF	Note country variant

E = Input, A = Output, M = Ground

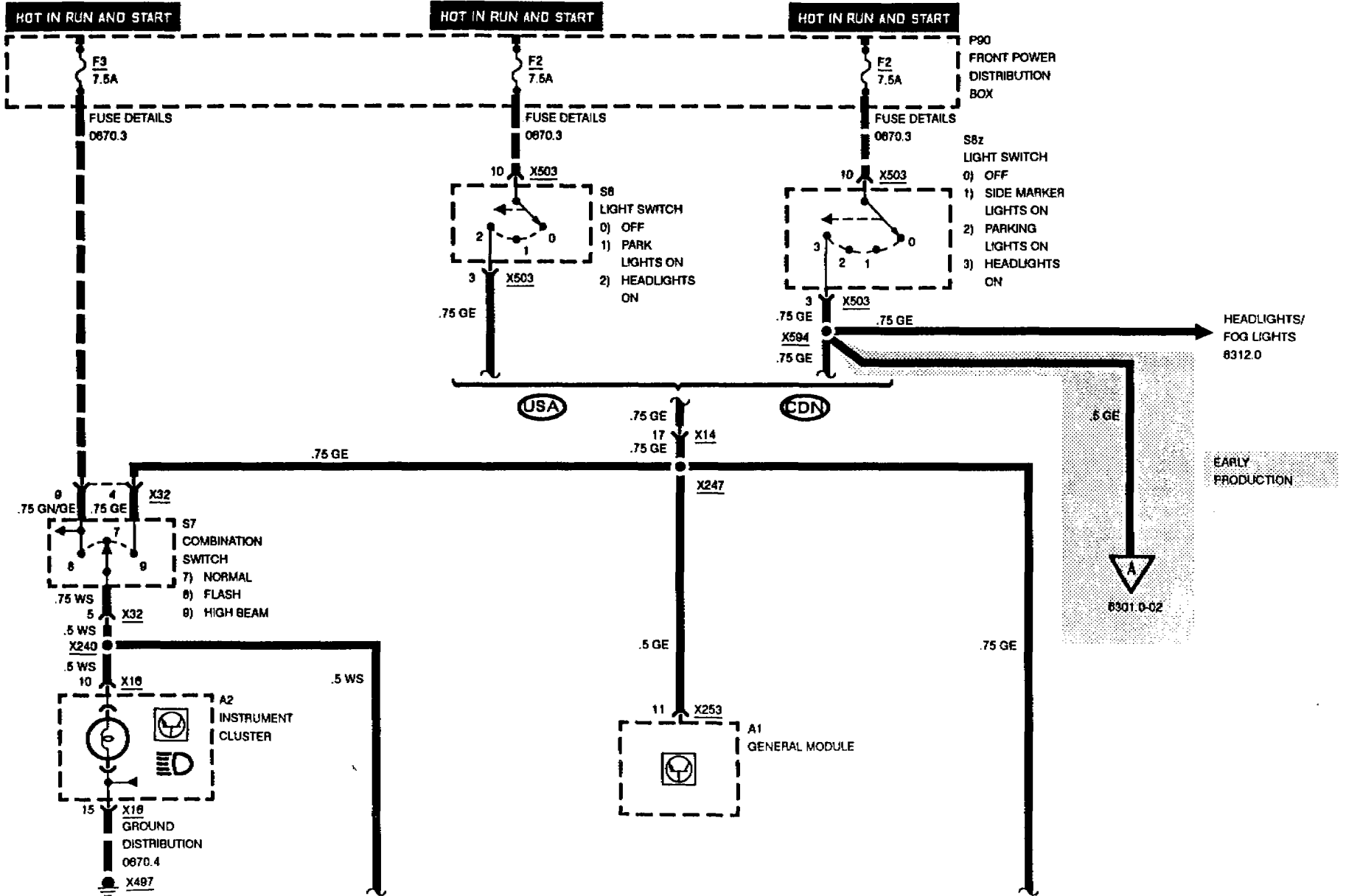


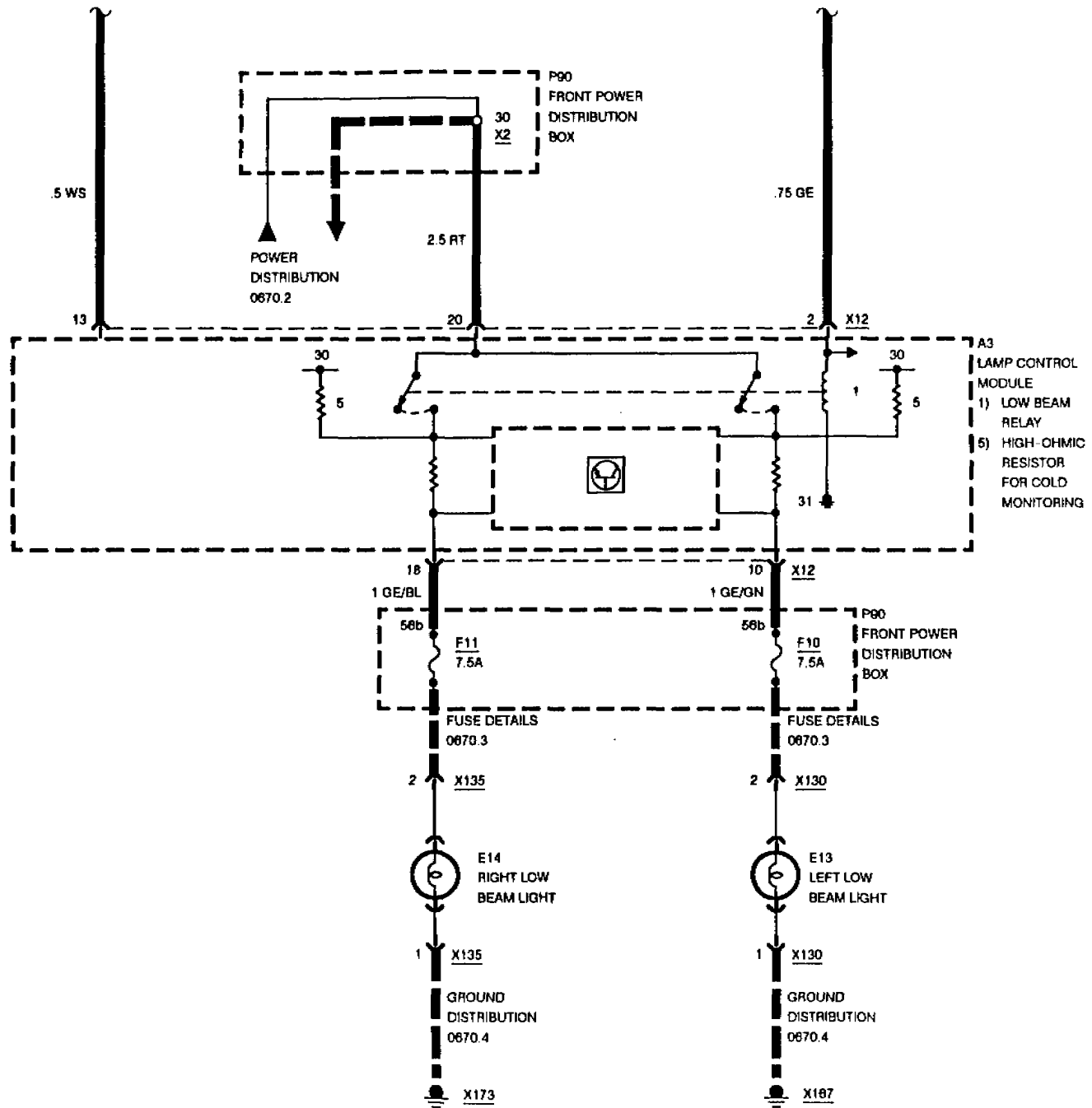
BMW  
8

6301.0



# LAMP MONITOR (LKM) HEADLIGHTS

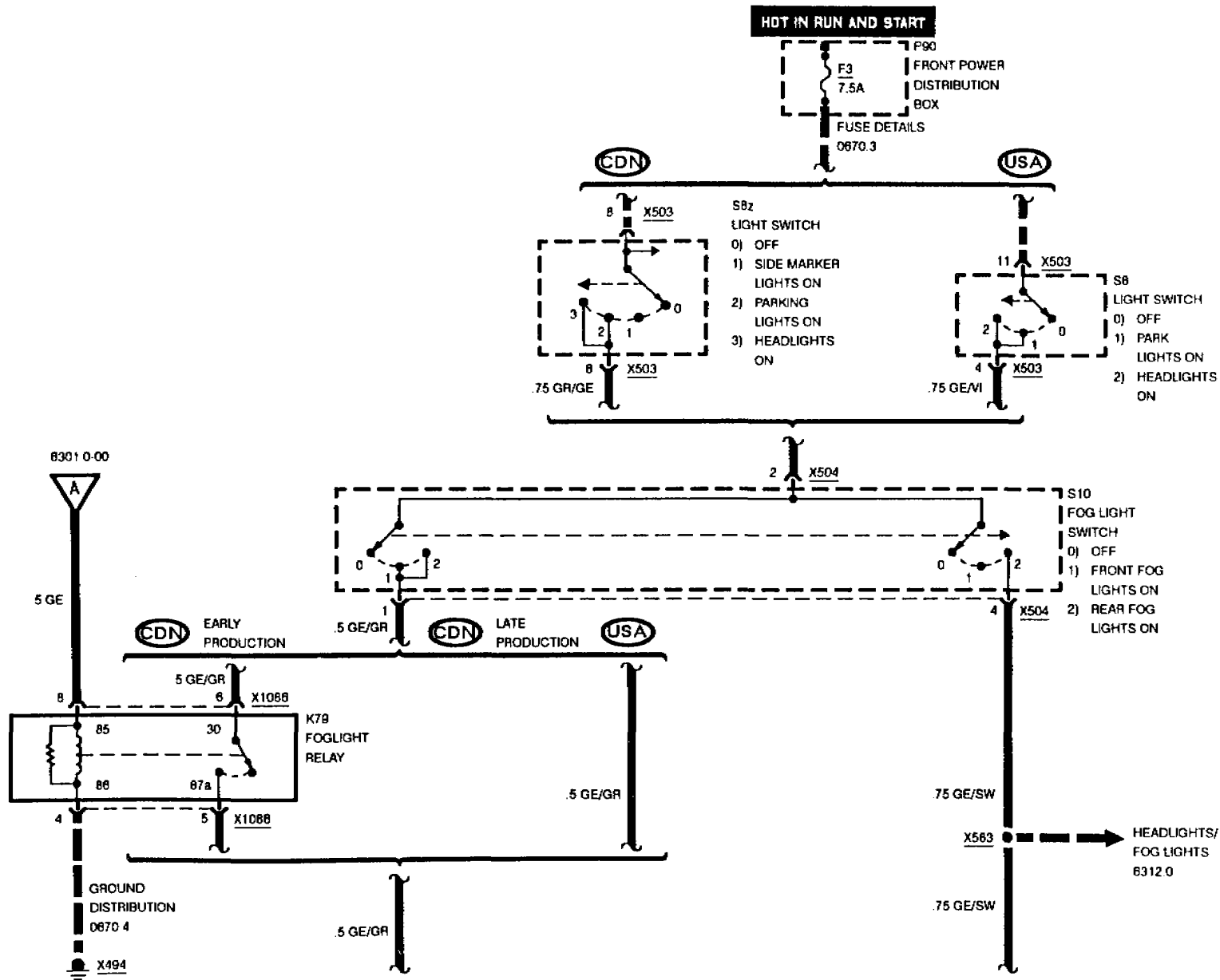


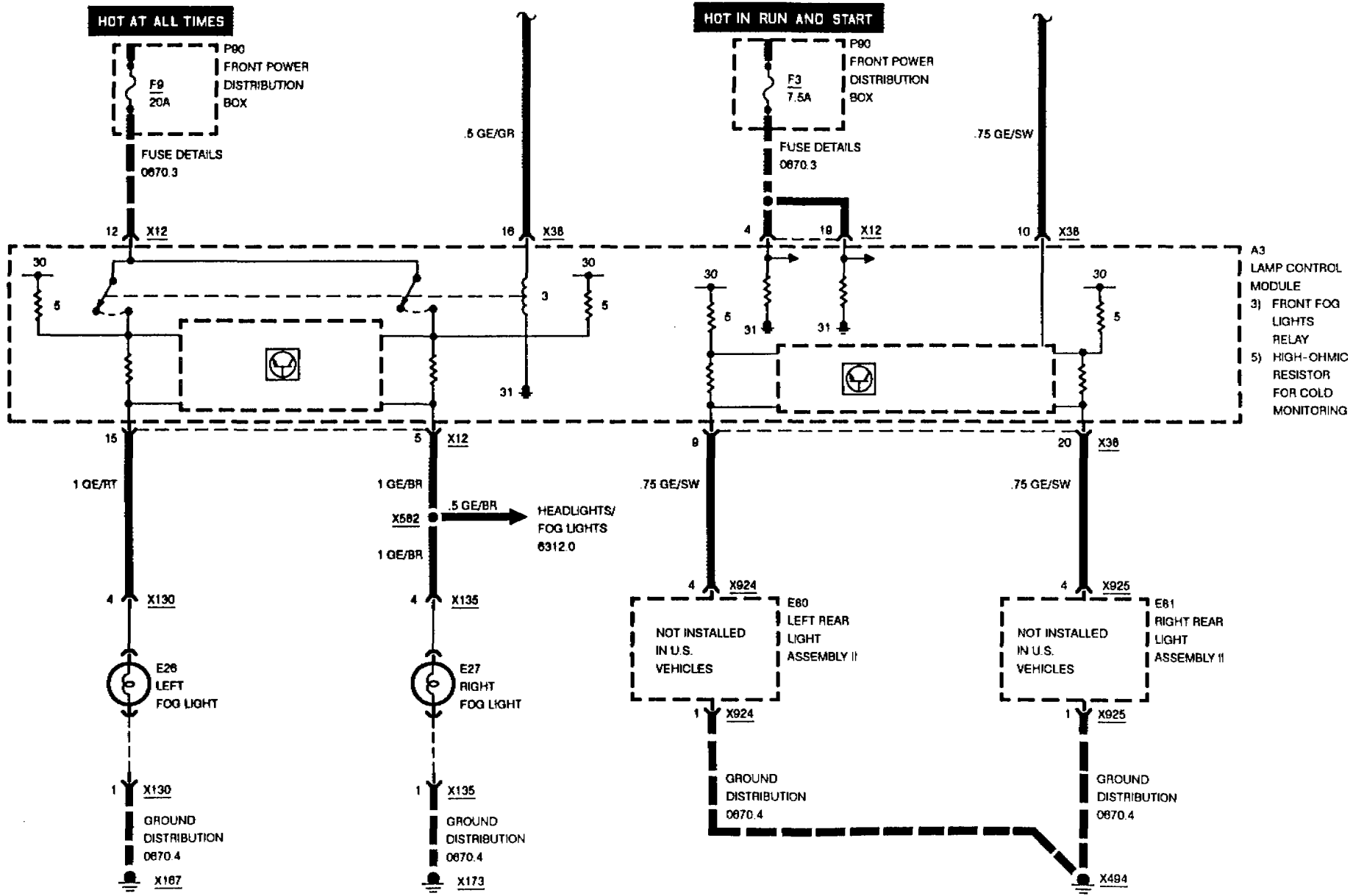




# LAMP MONITOR (LKM)

## FRONT FOG LIGHTS





**HOT AT ALL TIMES**

**HOT IN RUN AND START**

P90  
FRONT POWER  
DISTRIBUTION  
BOX

P90  
FRONT POWER  
DISTRIBUTION  
BOX

FUSE DETAILS  
0870.3

FUSE DETAILS  
0870.3

A3  
LAMP CONTROL  
MODULE  
3) FRONT FOG  
LIGHTS  
RELAY  
5) HIGH-OHMIC  
RESISTOR  
FOR COLD  
MONITORING

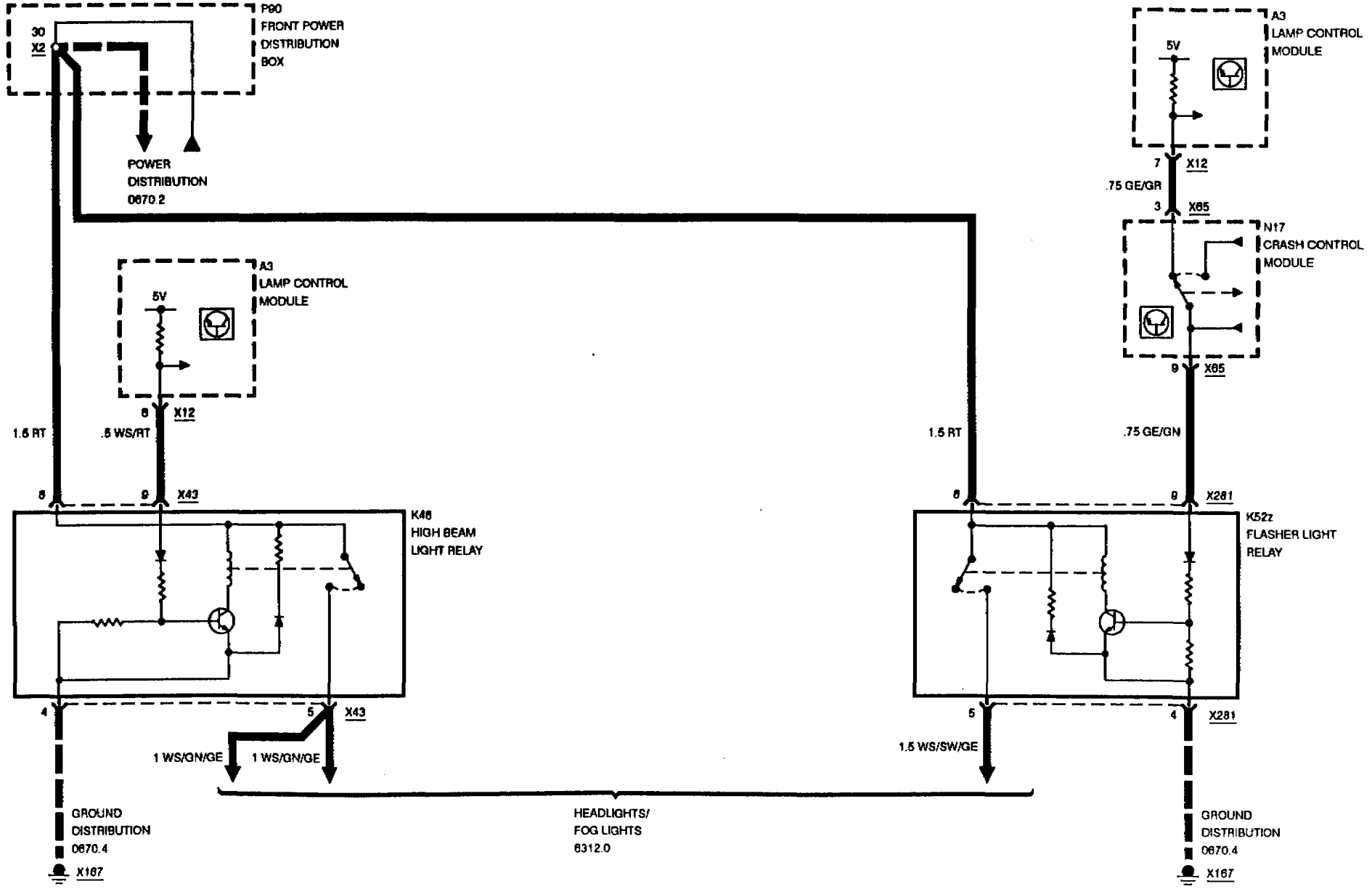
NOT INSTALLED  
IN U.S.  
VEHICLES

NOT INSTALLED  
IN U.S.  
VEHICLES

GROUND  
DISTRIBUTION  
0870.4

GROUND  
DISTRIBUTION  
0870.4

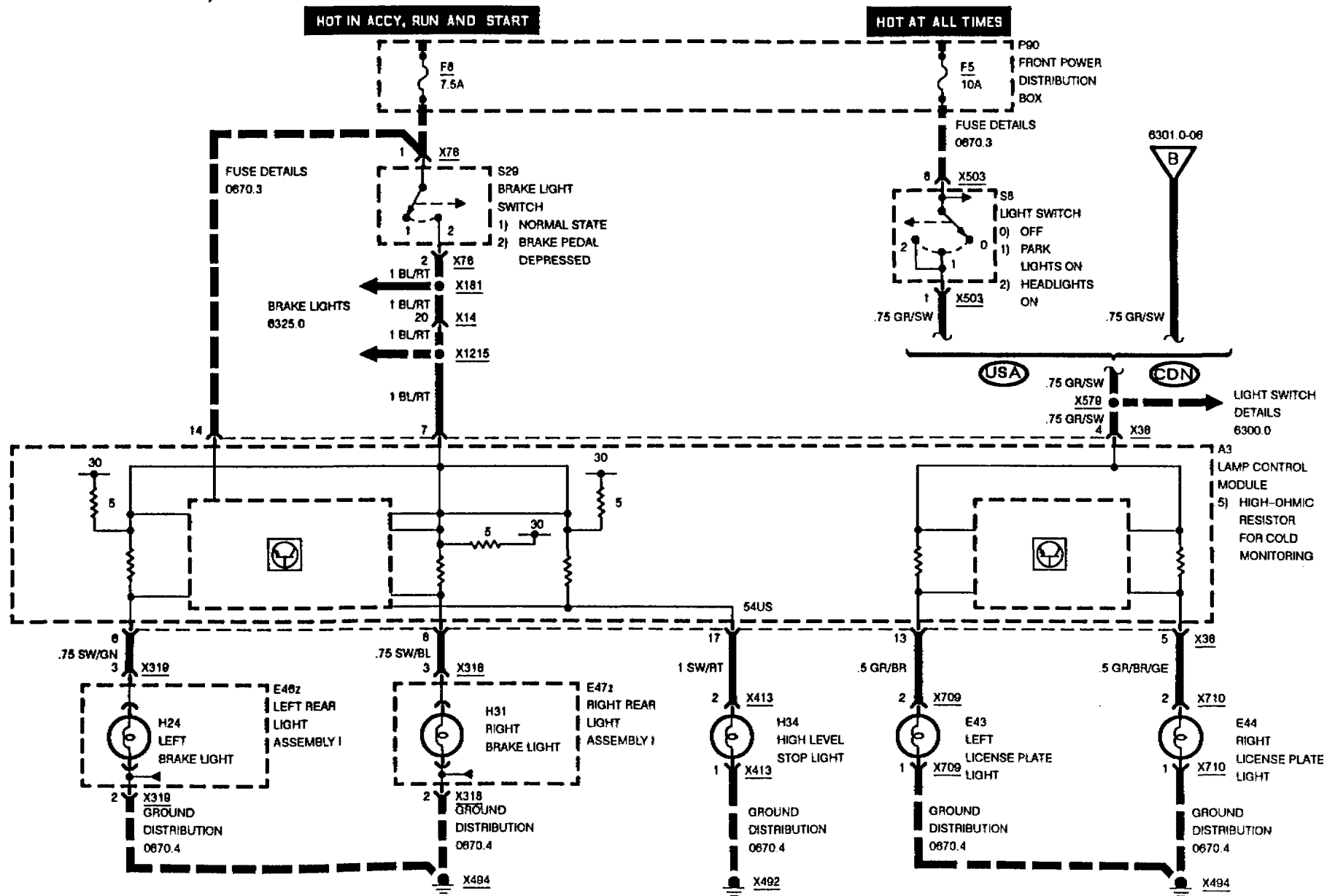
# LAMP MONITOR (LKM)





# LAMP MONITOR (LKM)

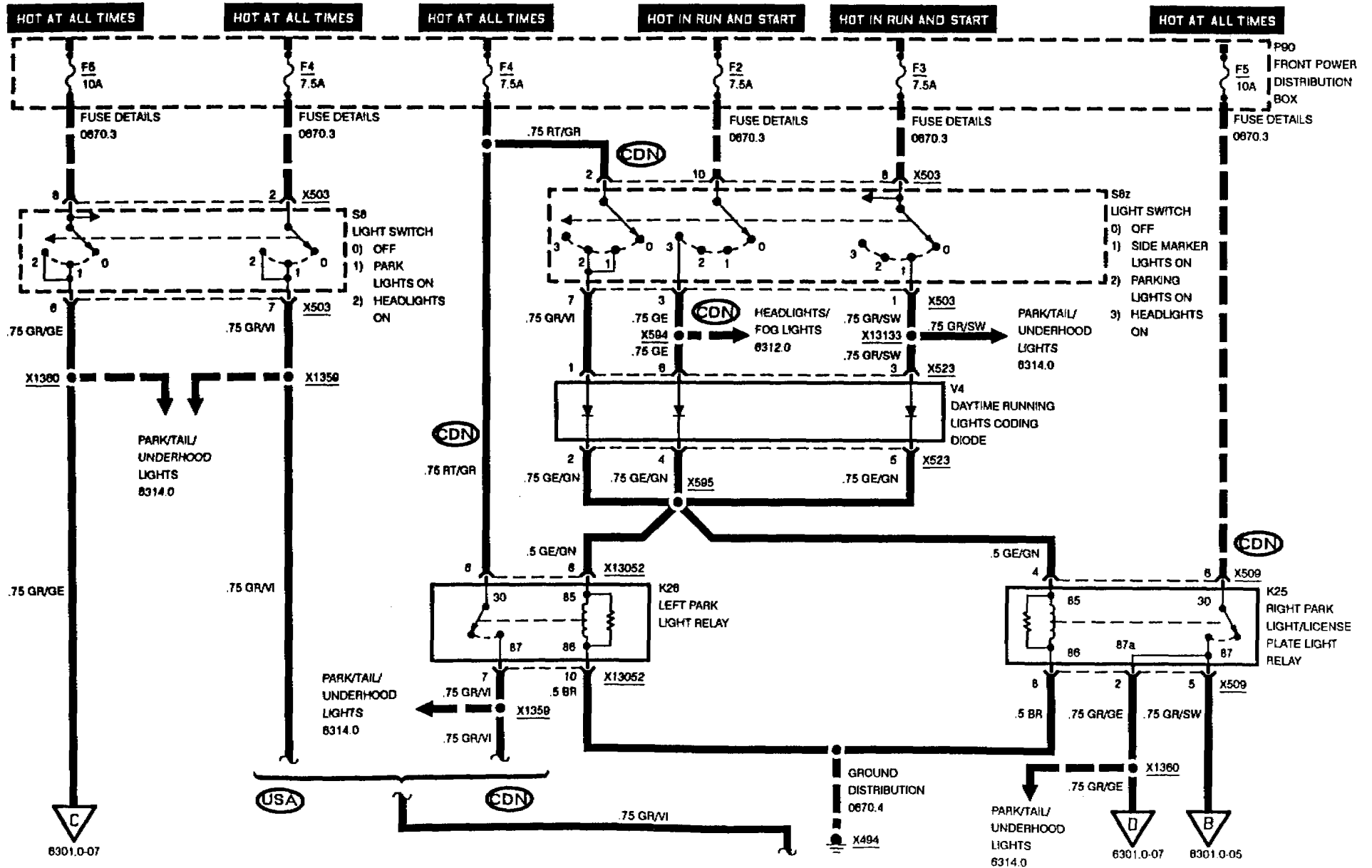
## BRAKE LIGHTS, LICENSE PLATE LIGHTS





# LAMP MONITOR (LKM)

## PARKING LIGHTS

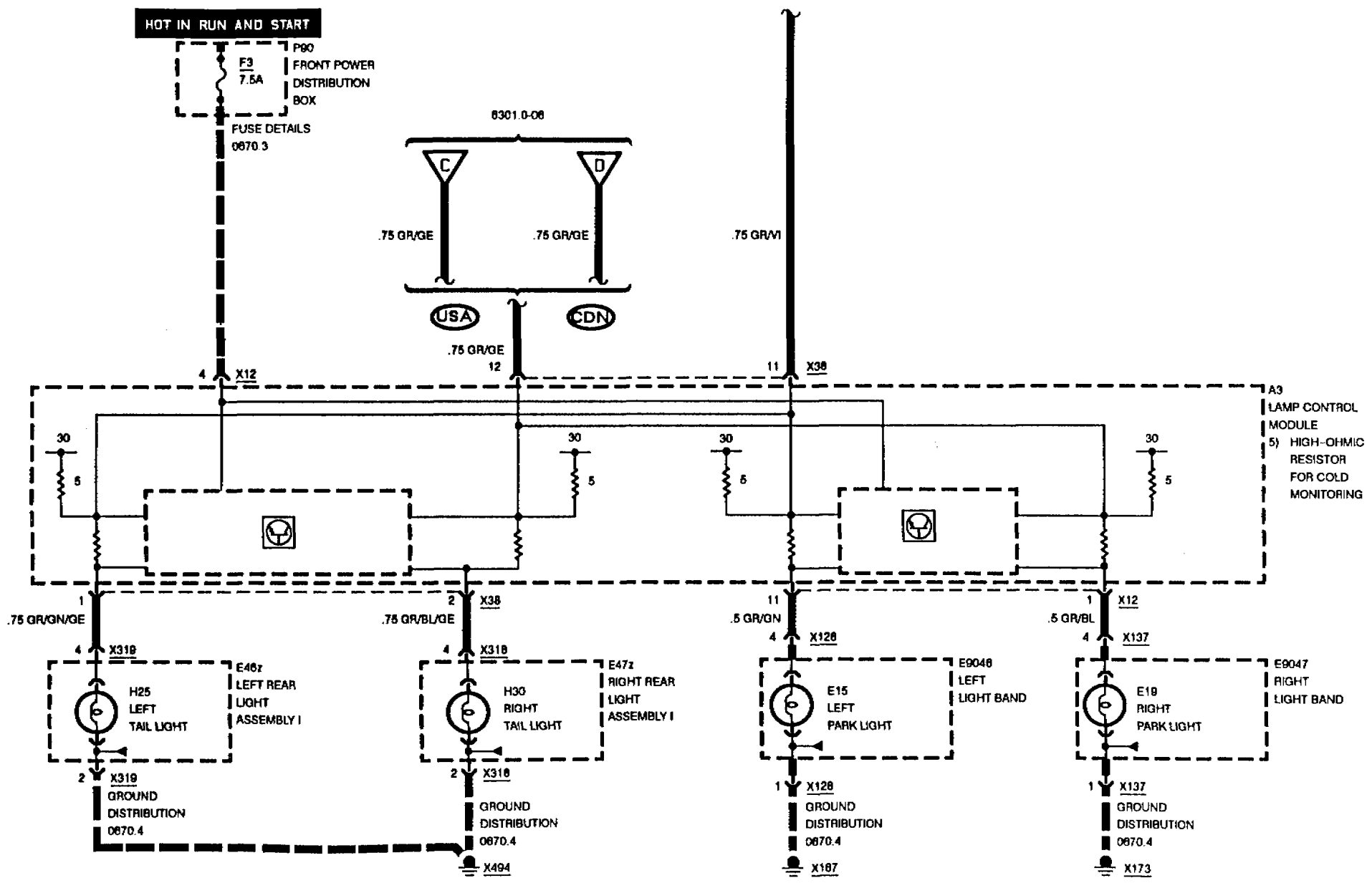


8301.0-07

6301.0-07

8301.0-05



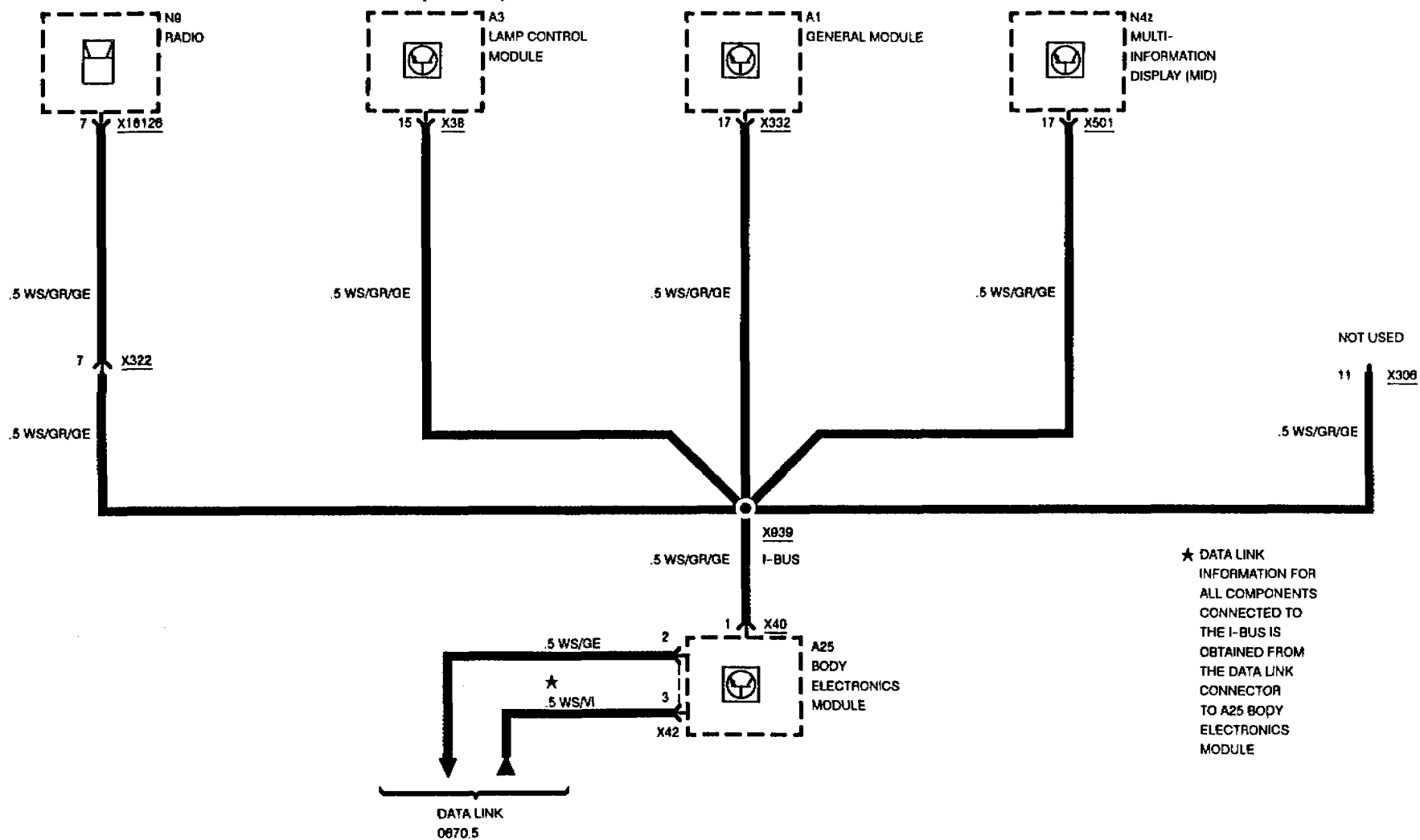






# LAMP MONITOR (LKM)

## INSTRUMENTATION BUS (I-BUS)



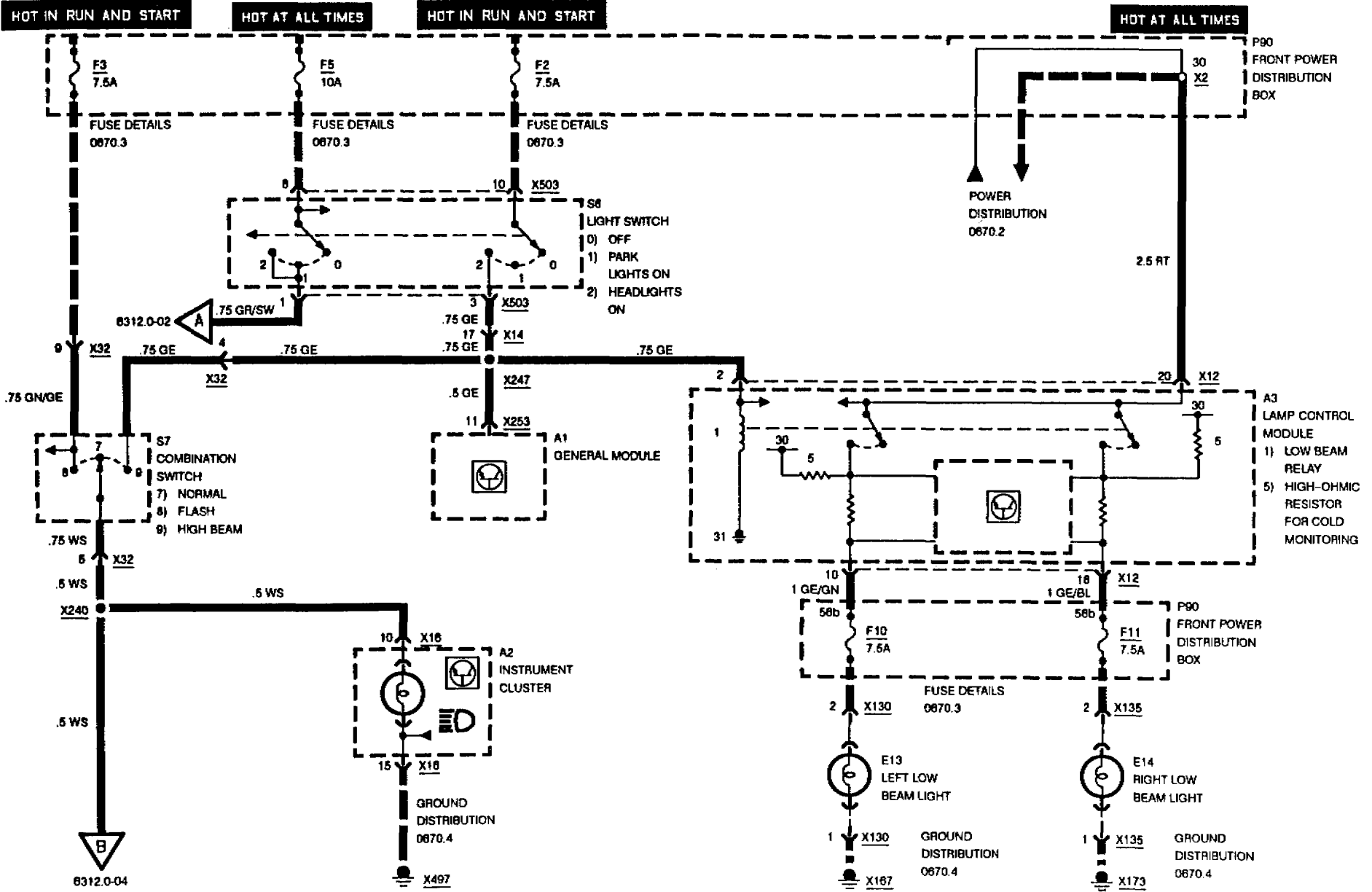
★ DATA LINK INFORMATION FOR ALL COMPONENTS CONNECTED TO THE I-BUS IS OBTAINED FROM THE DATA LINK CONNECTOR TO A25 BODY ELECTRONICS MODULE



# HEADLIGHTS/ FOG LIGHTS



## HEADLIGHTS

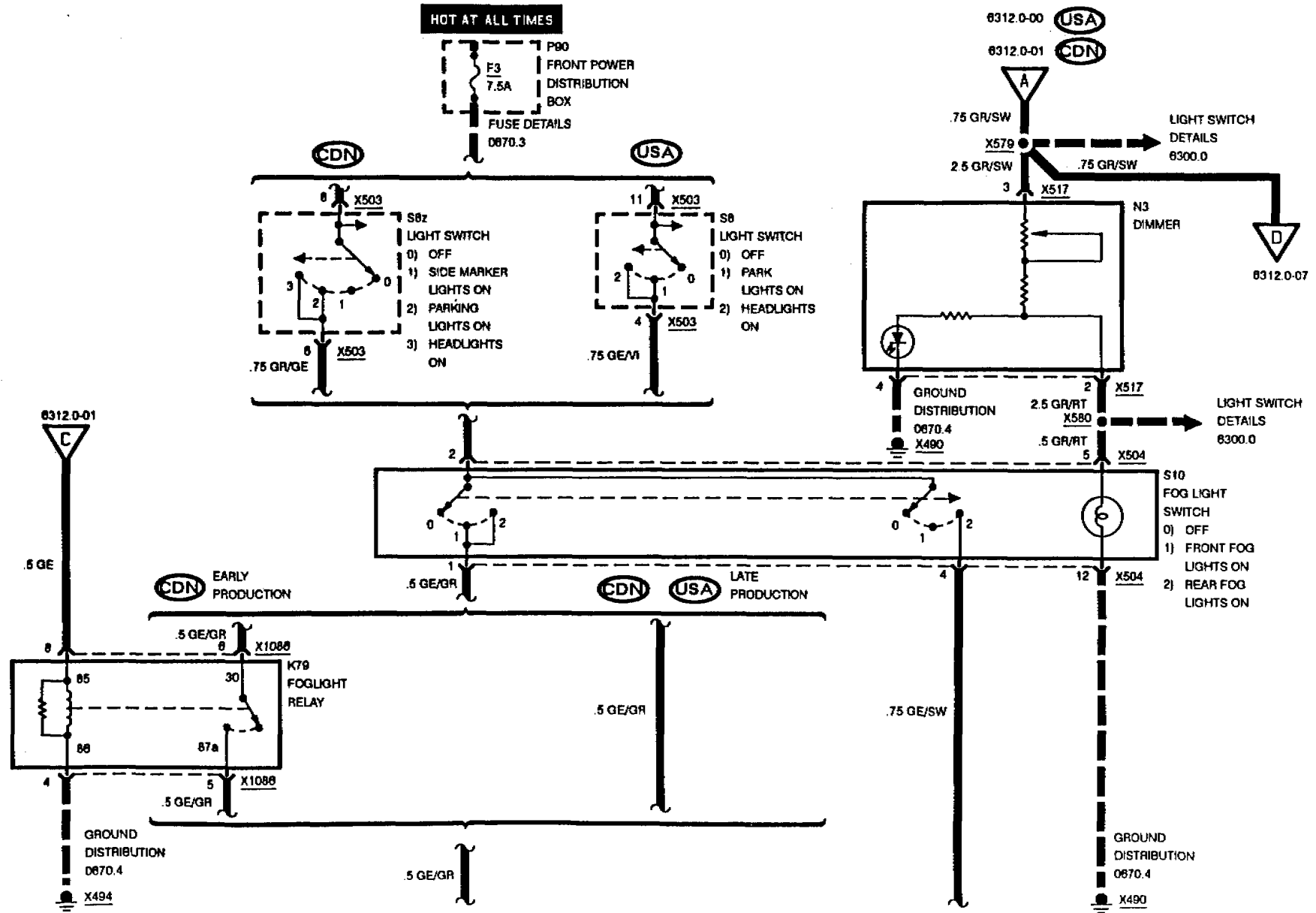


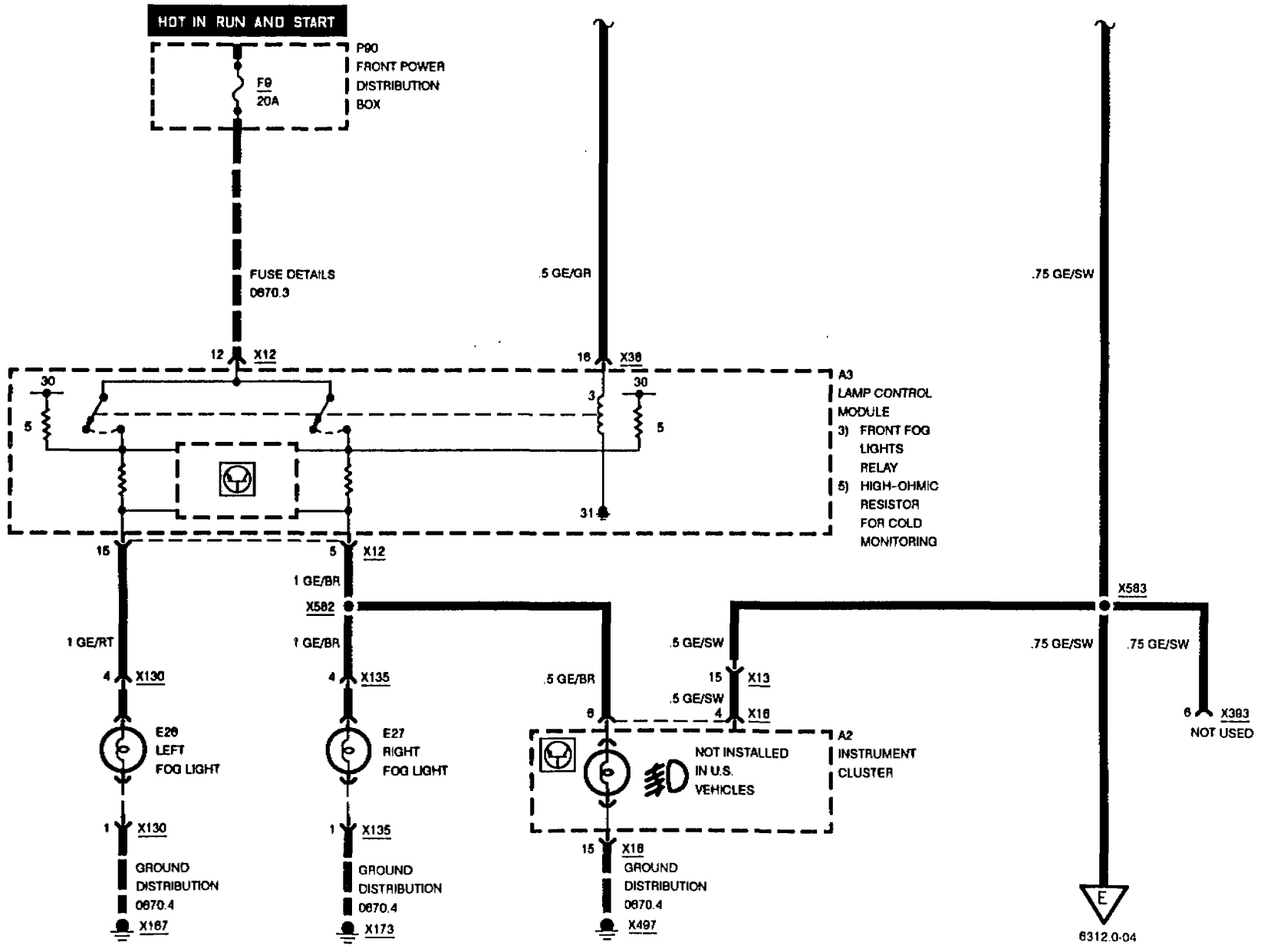




# HEADLIGHTS/ FOG LIGHTS

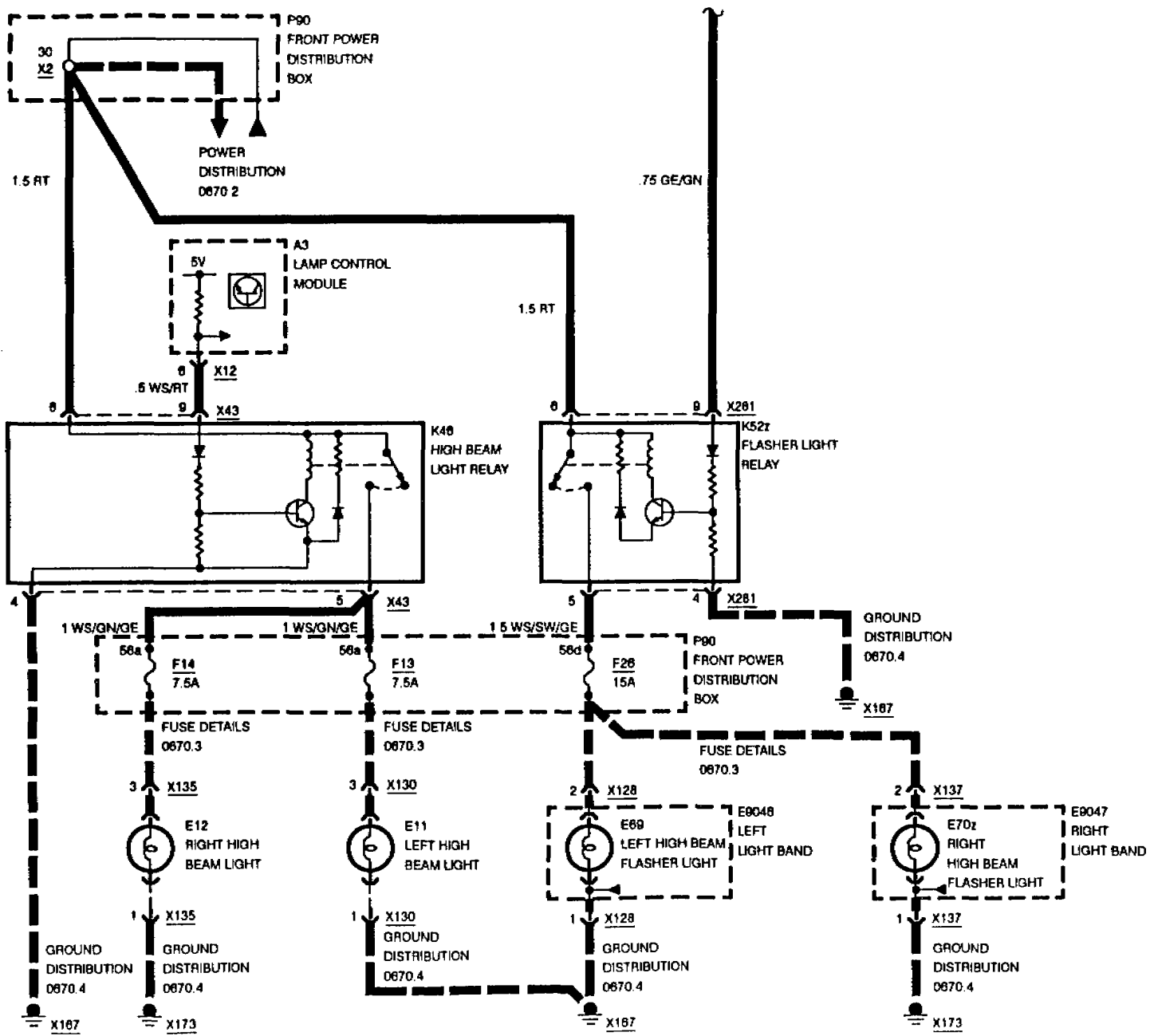
## FRONT FOG LIGHTS





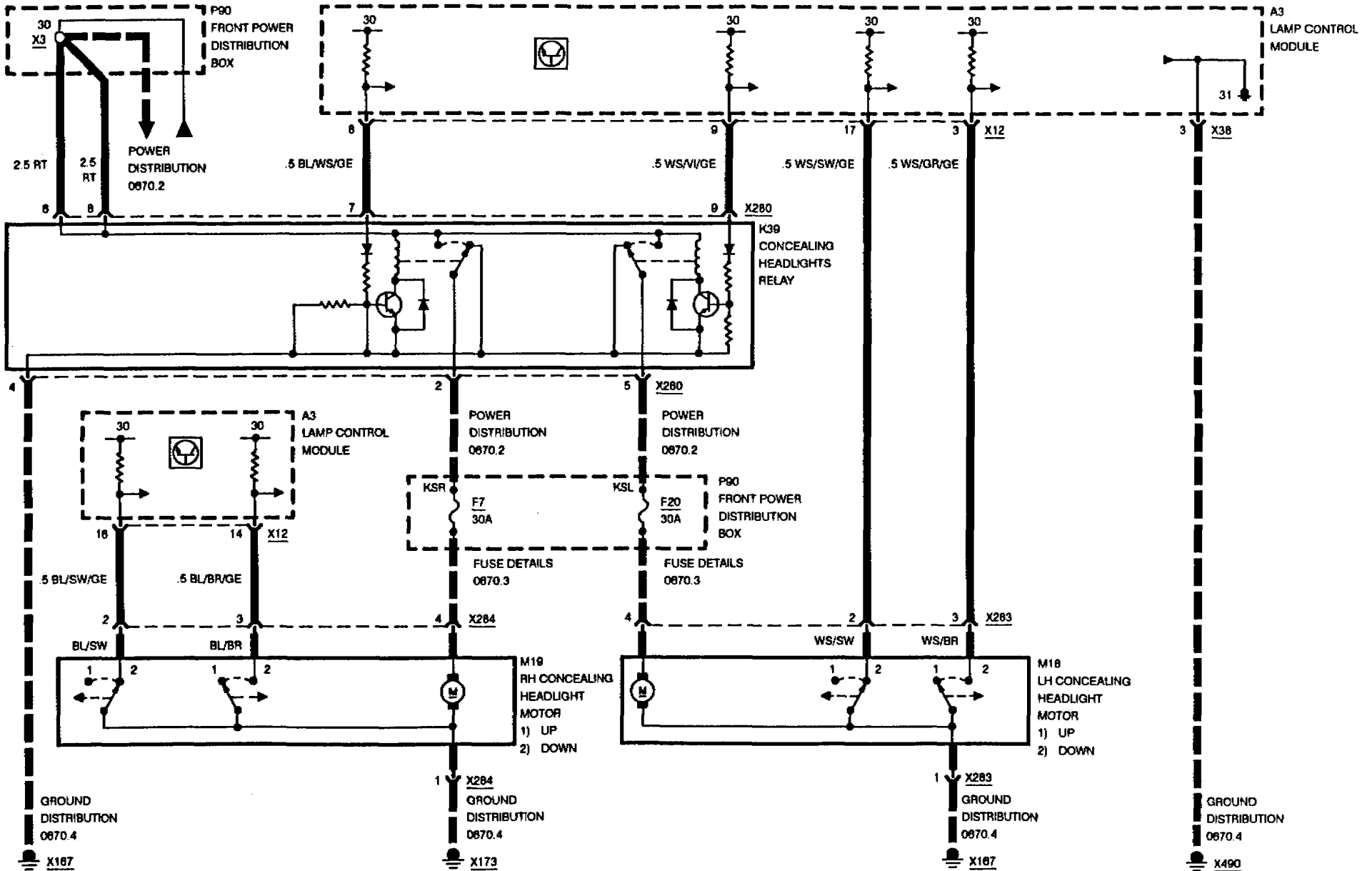








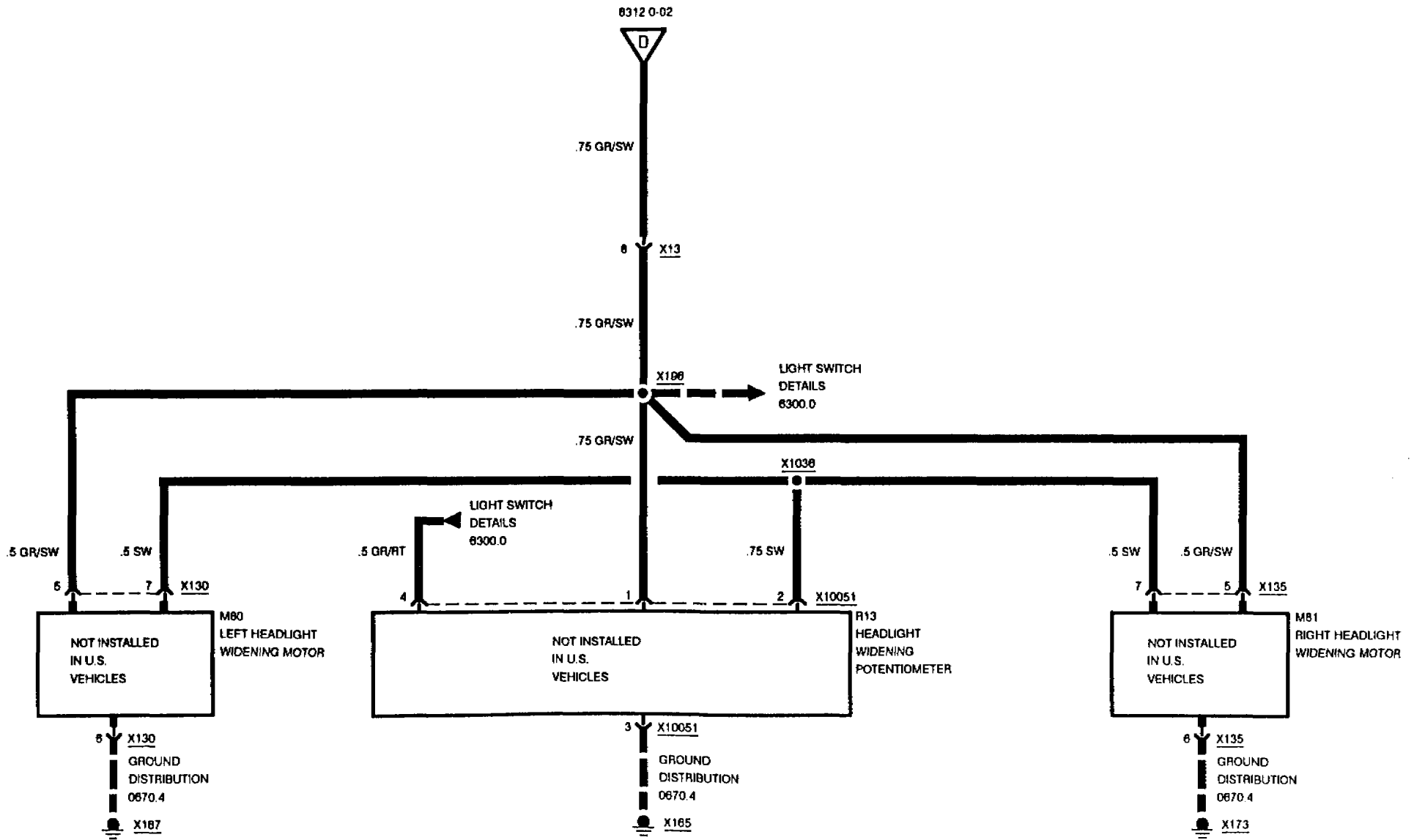
# HEADLIGHTS/ FOG LIGHTS CONCEALING HEADLIGHTS





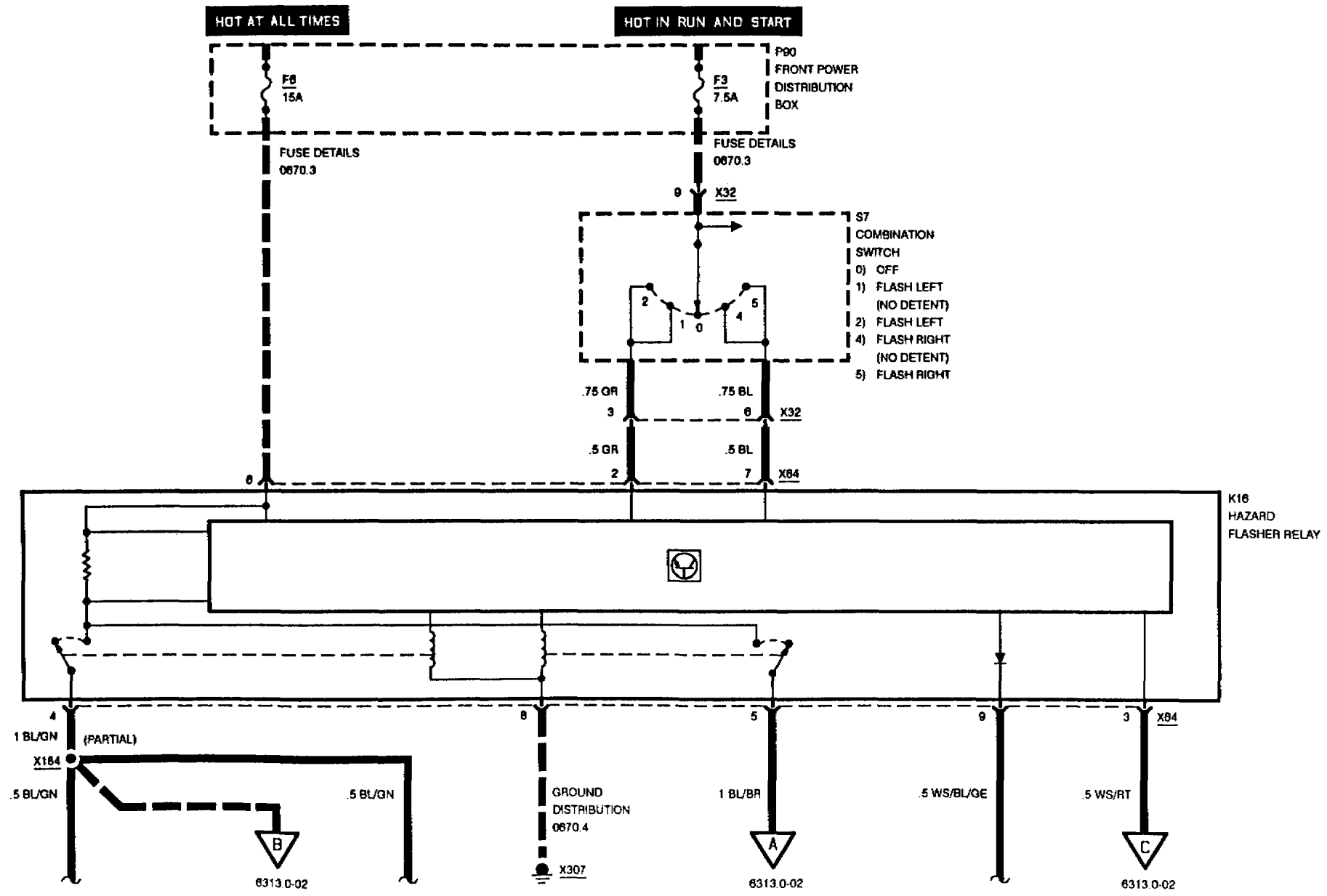
# HEADLIGHTS/ FOG LIGHTS

## HEADLIGHT BEAM ANGLE ADJUST





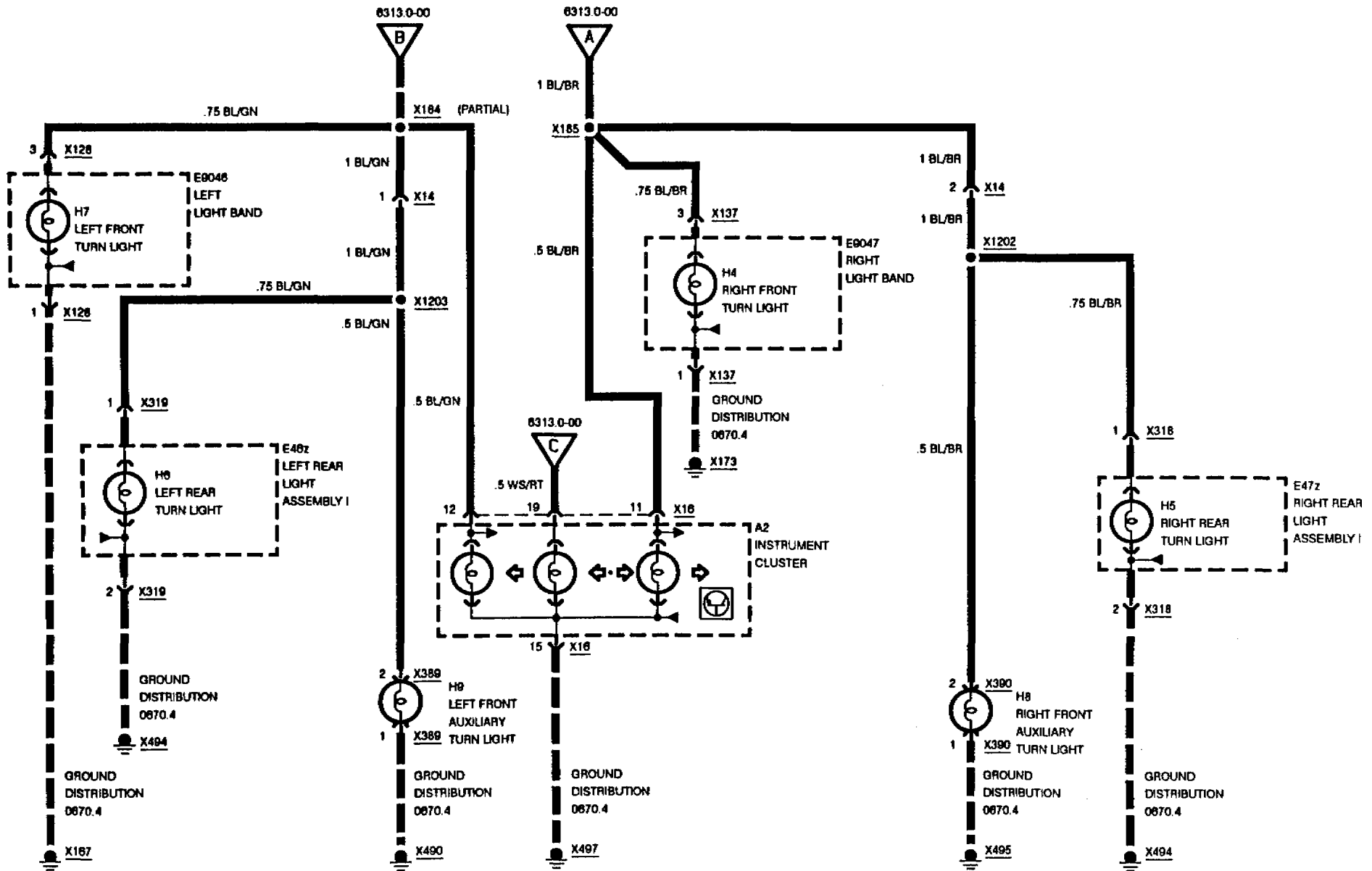
# TURN/HAZARD LIGHTS







# TURN/HAZARD LIGHTS

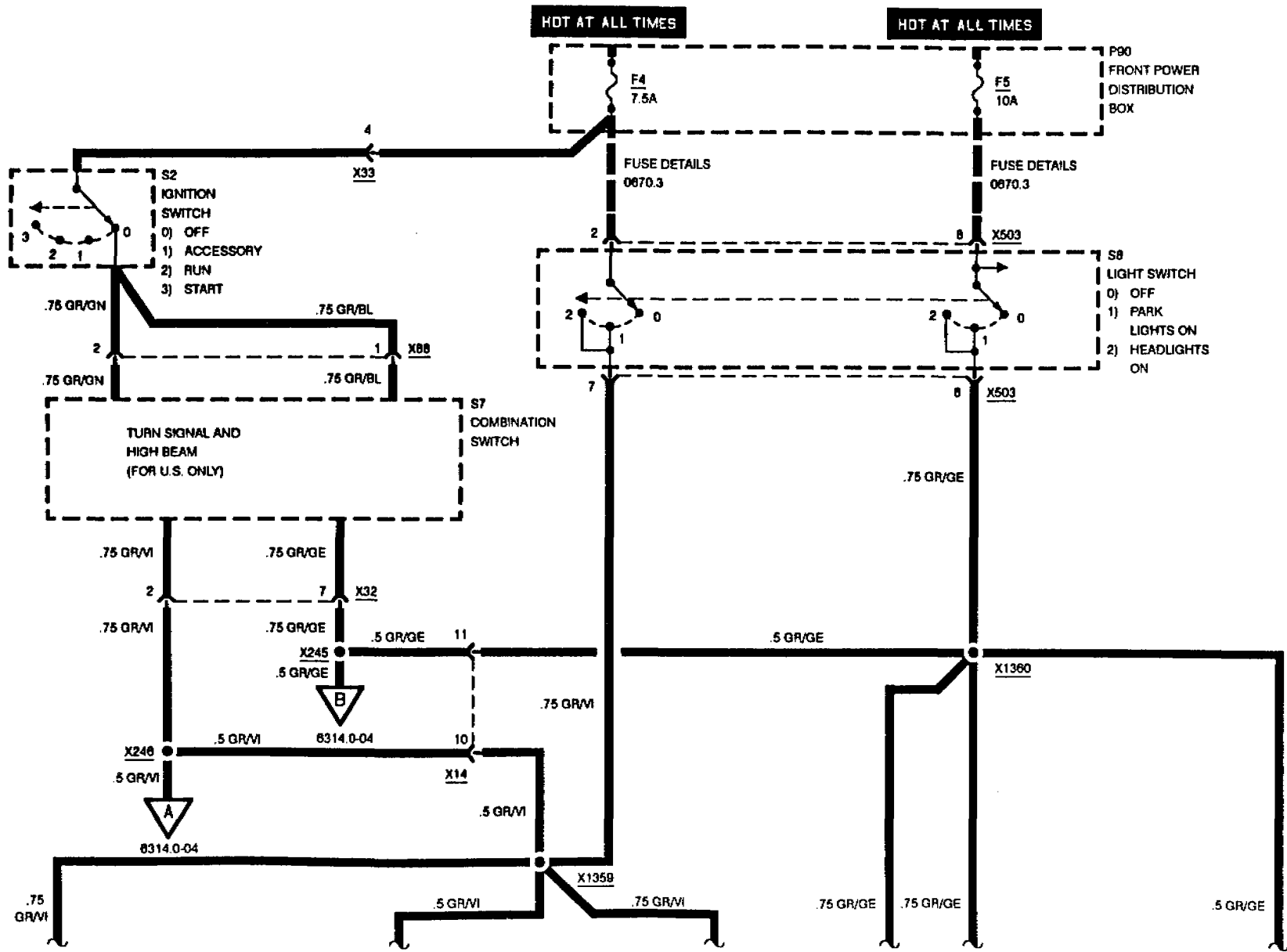


BMW  
**8**

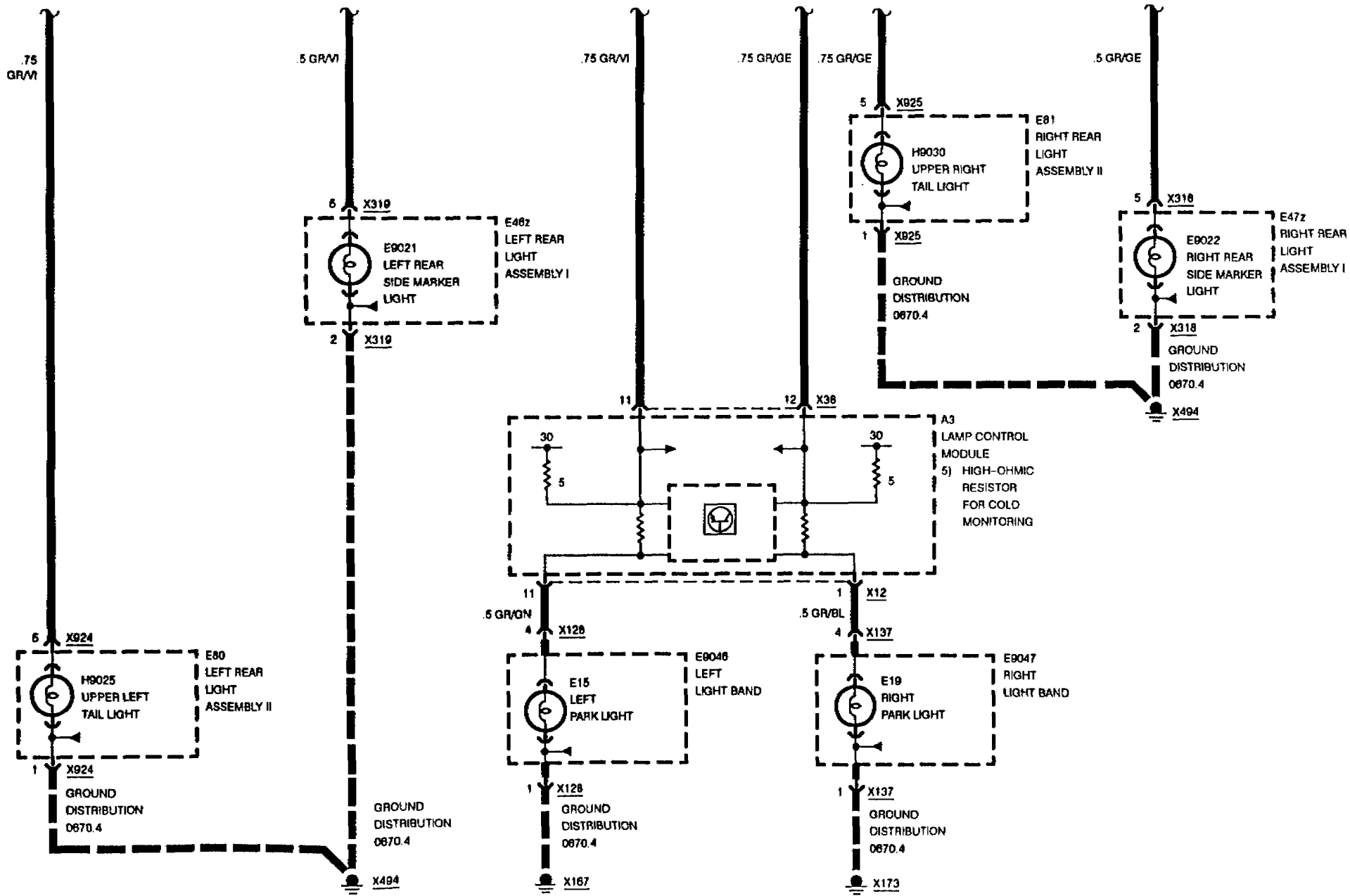
6314.0

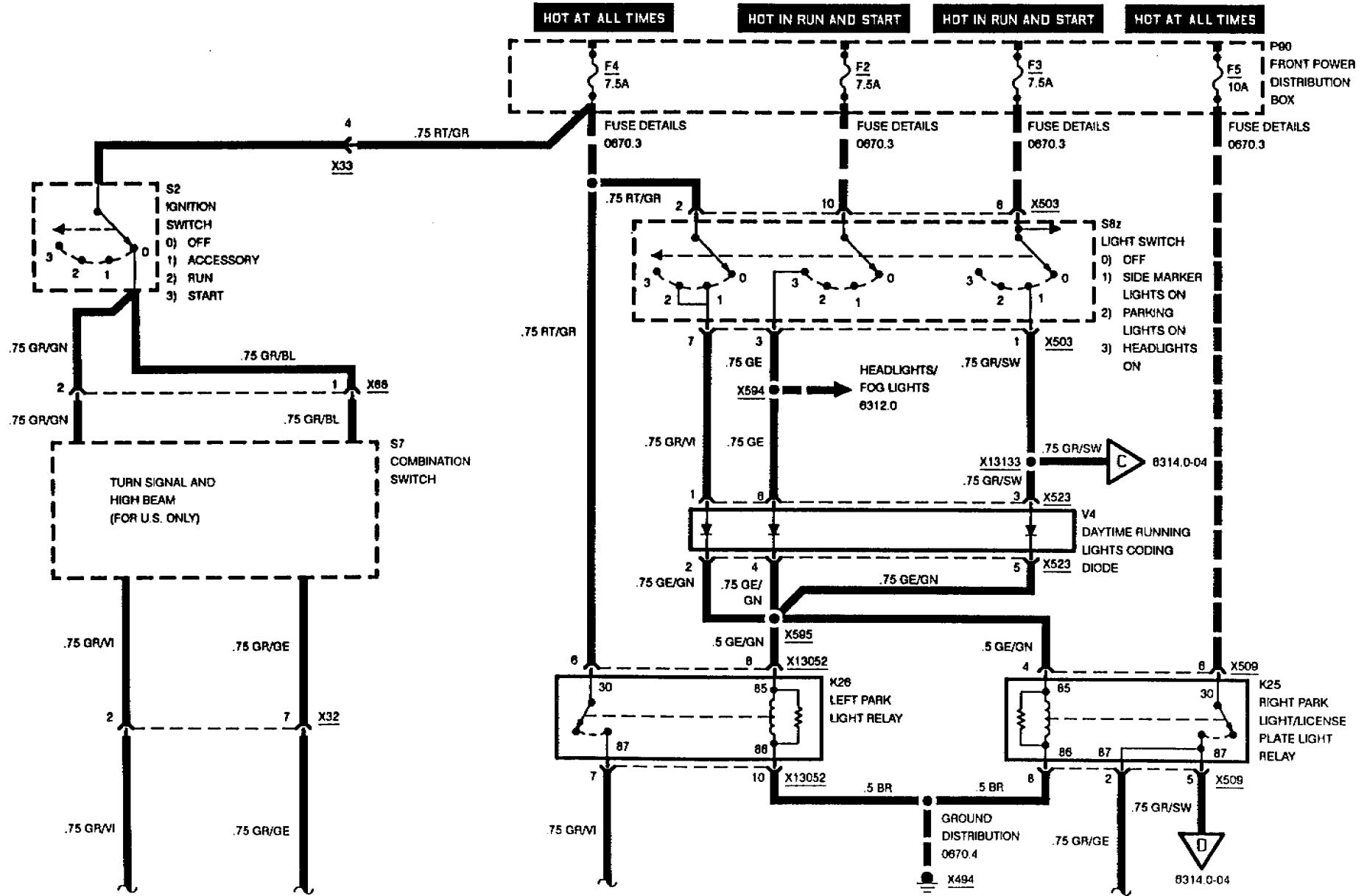


# PARK/TAIL/ UNDERHOOD LIGHTS













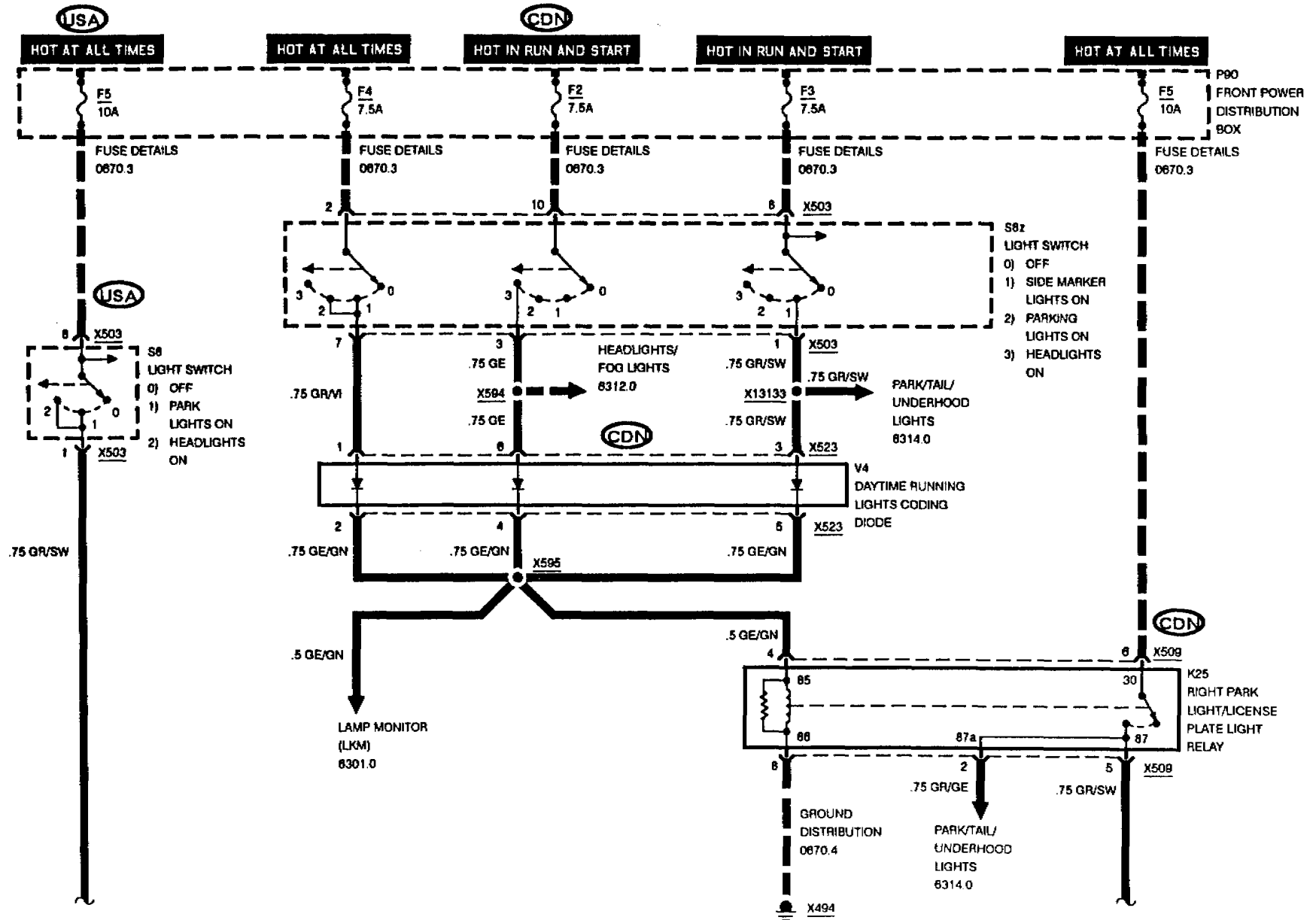
BMW  
8

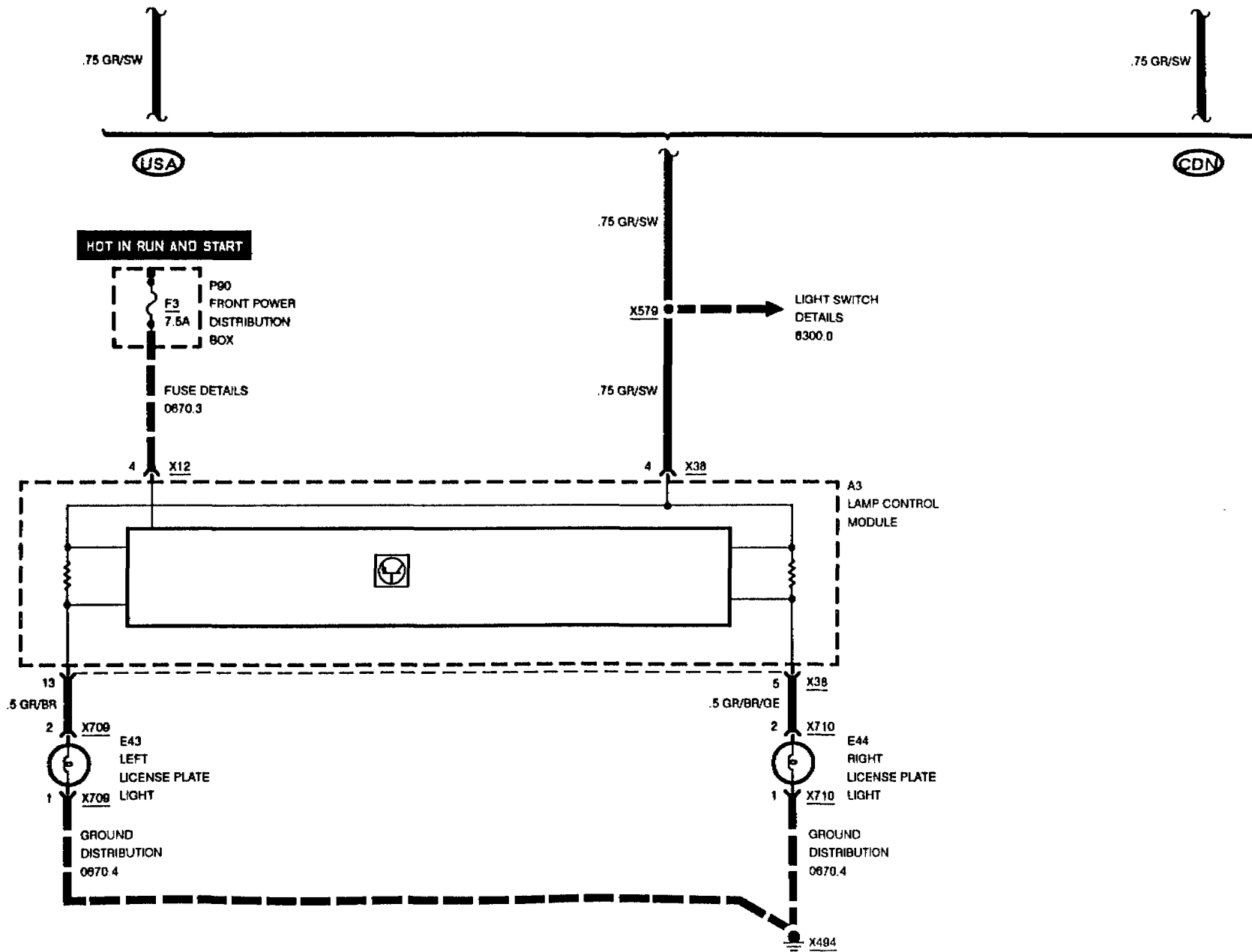
6320.0



# LICENSE PLATE/ LUGGAGE COMPARTMENT LIGHTS

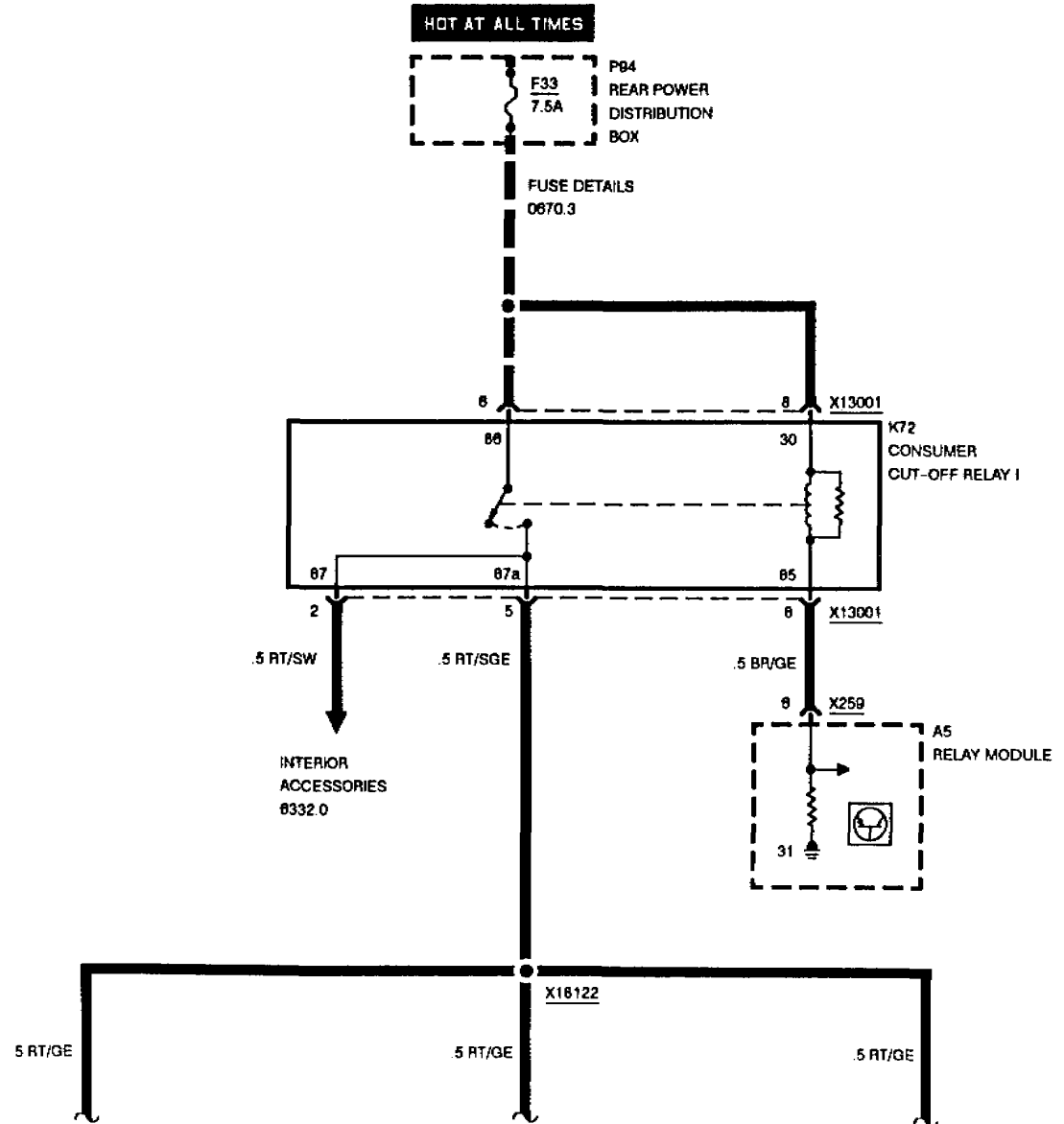
## LICENSE PLATE LIGHTS



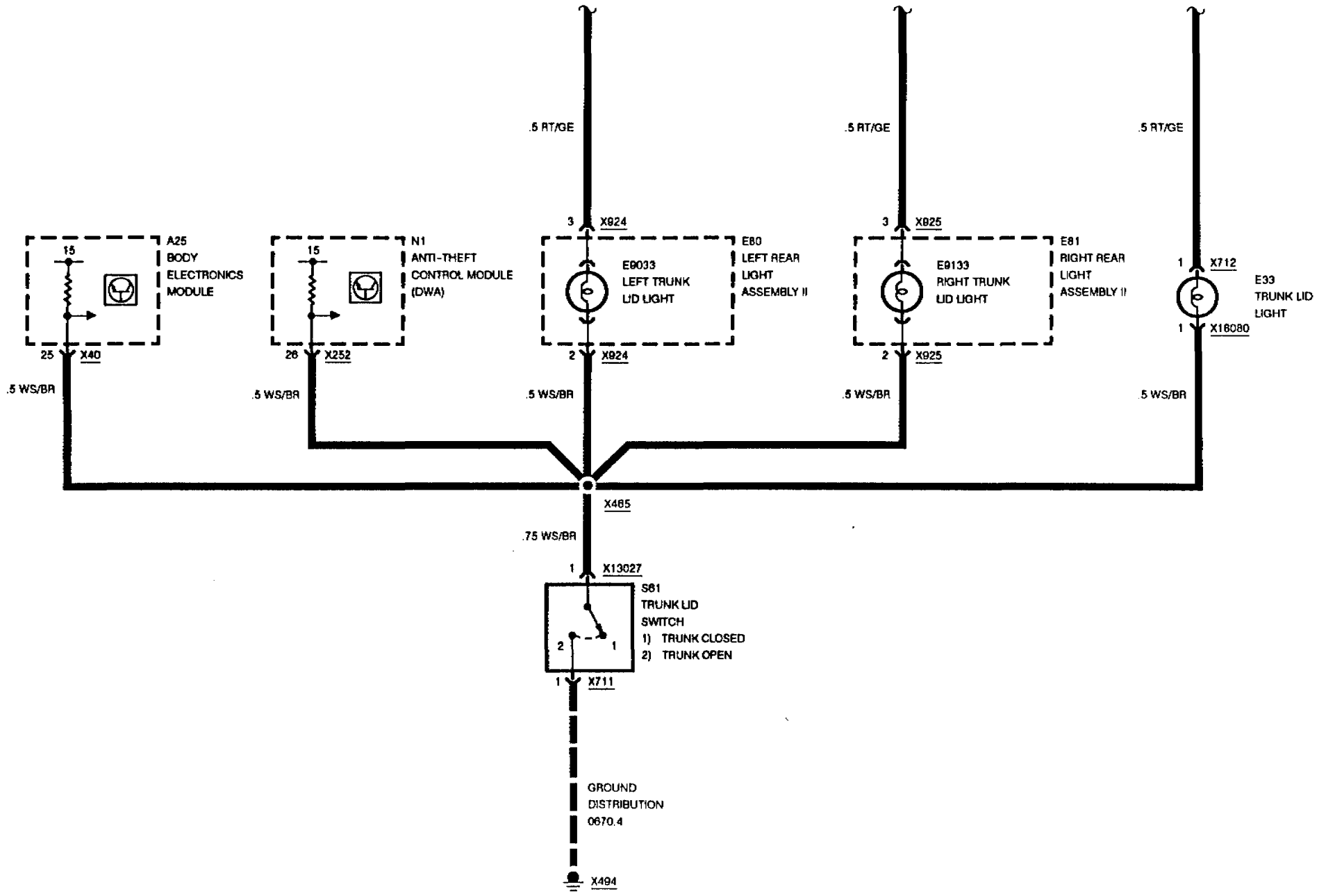




# LICENSE PLATE/ LUGGAGE COMPARTMENT LIGHTS



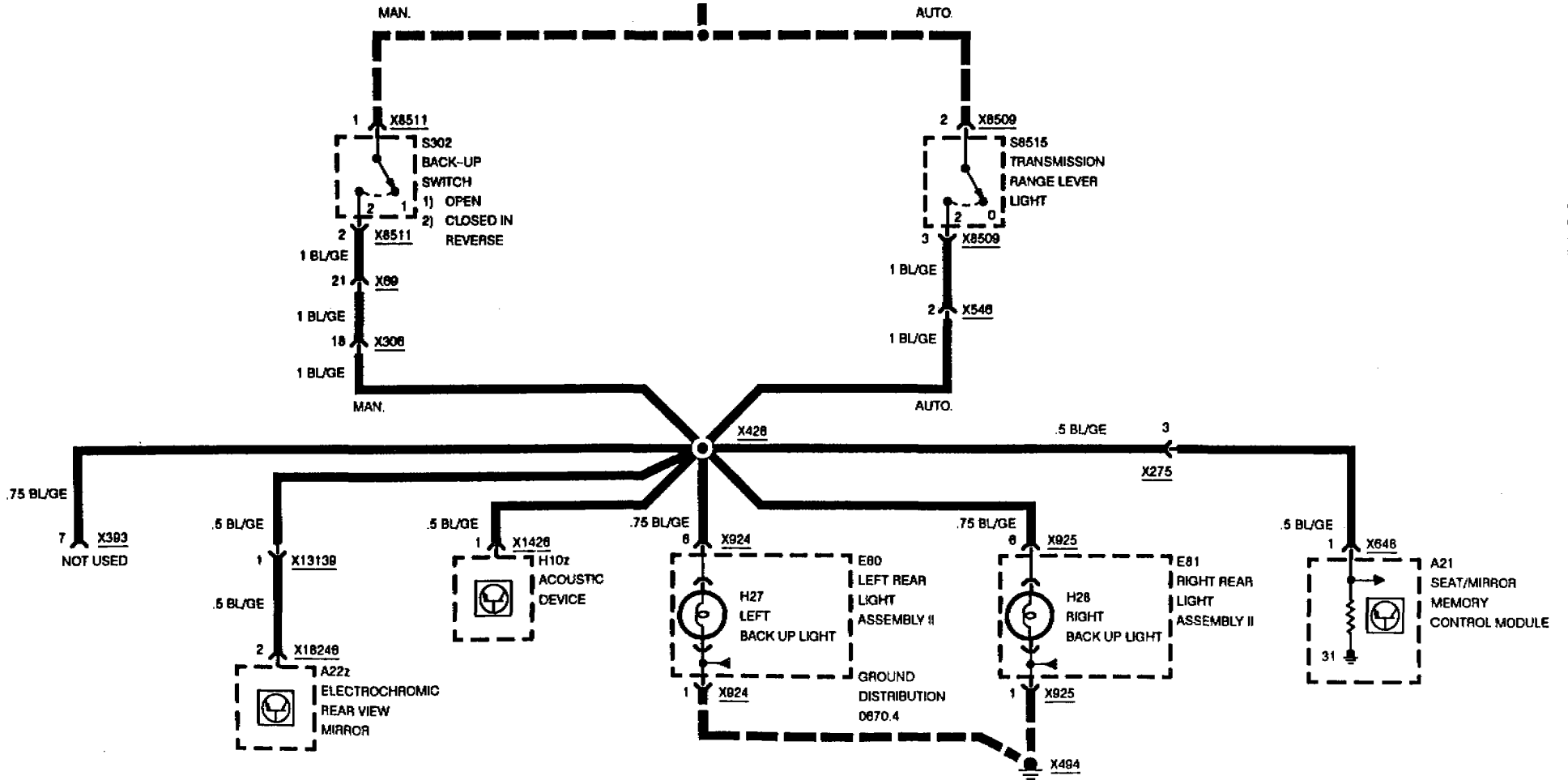
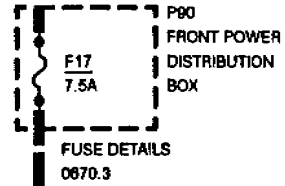






# BACK UP LIGHTS

HOT IN RUN AND START



BMW  
**8**

6325.0



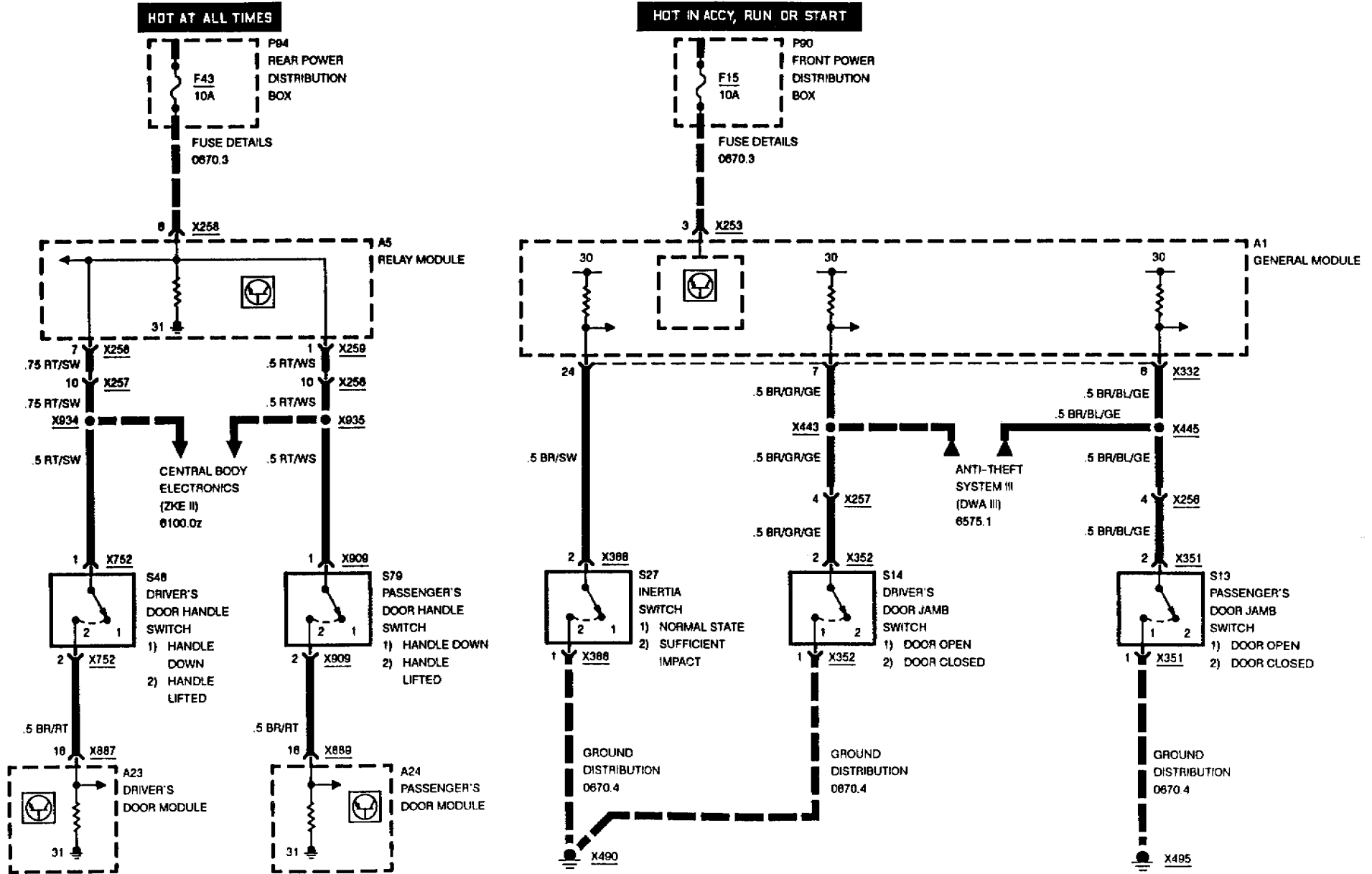
BMW  
8

6330.0



# ZKE INTERIOR LIGHTS (IB)

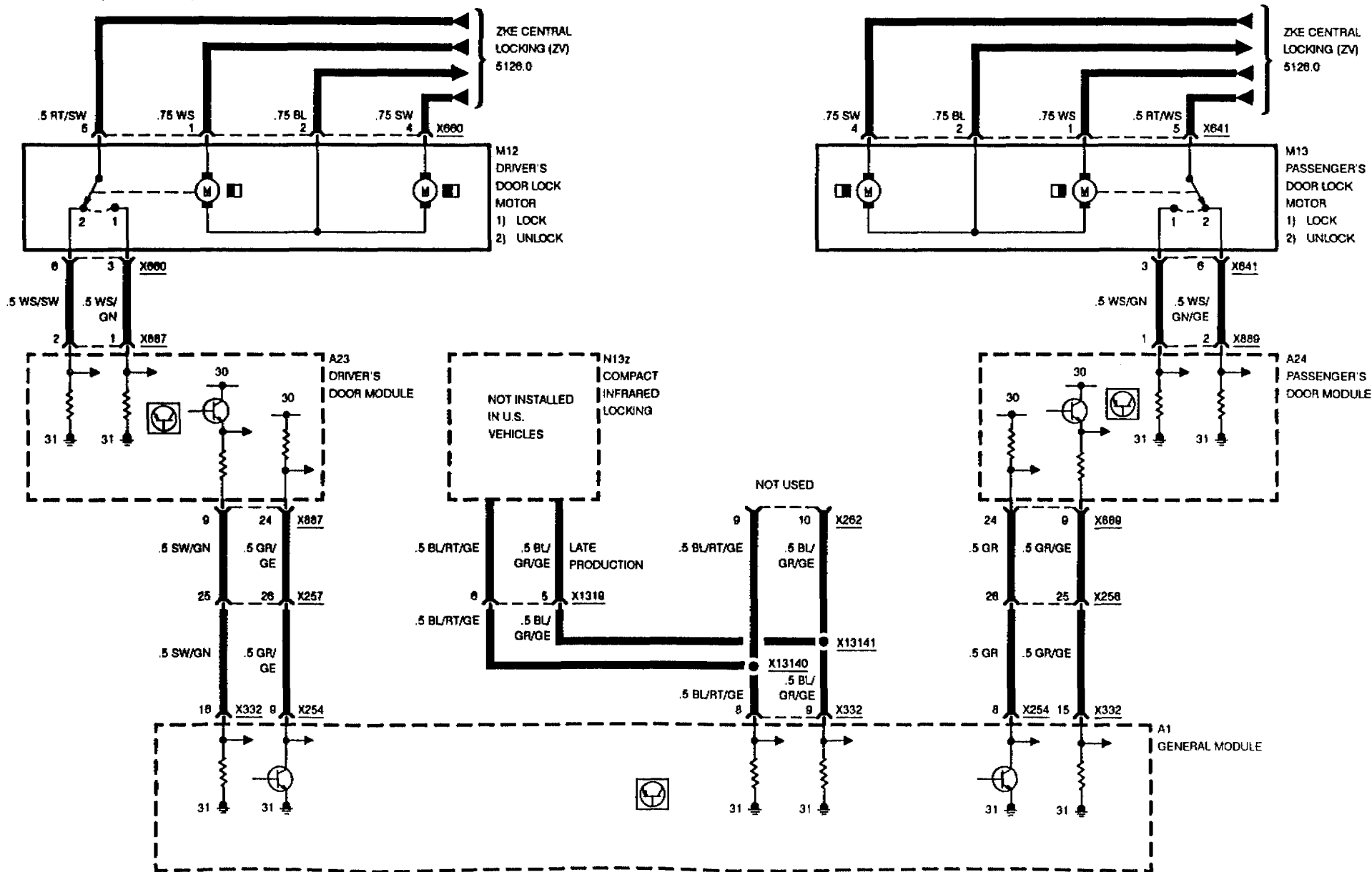
## (INPUTS)





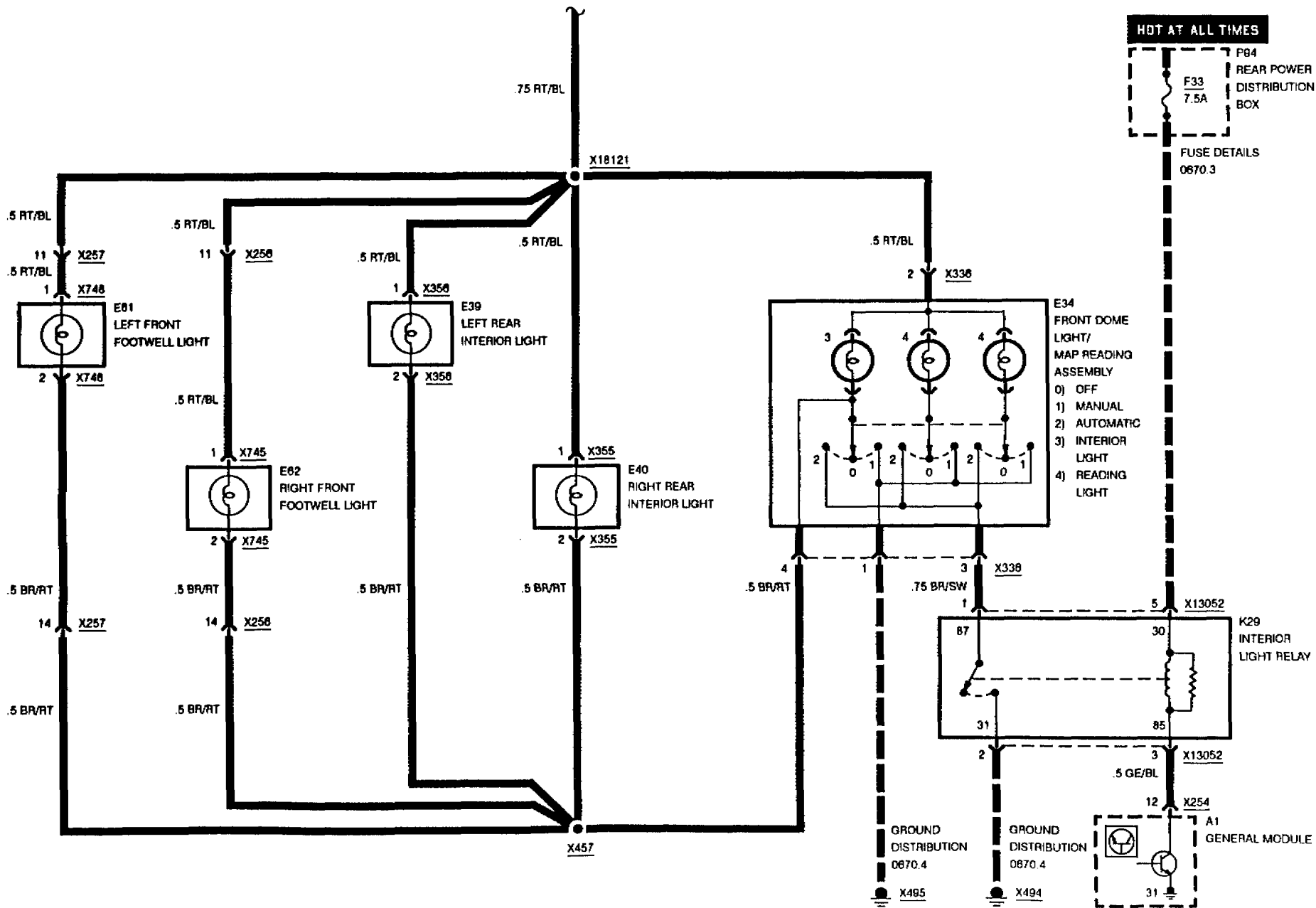
# ZKE INTERIOR LIGHTS (IB)

## (INPUTS)



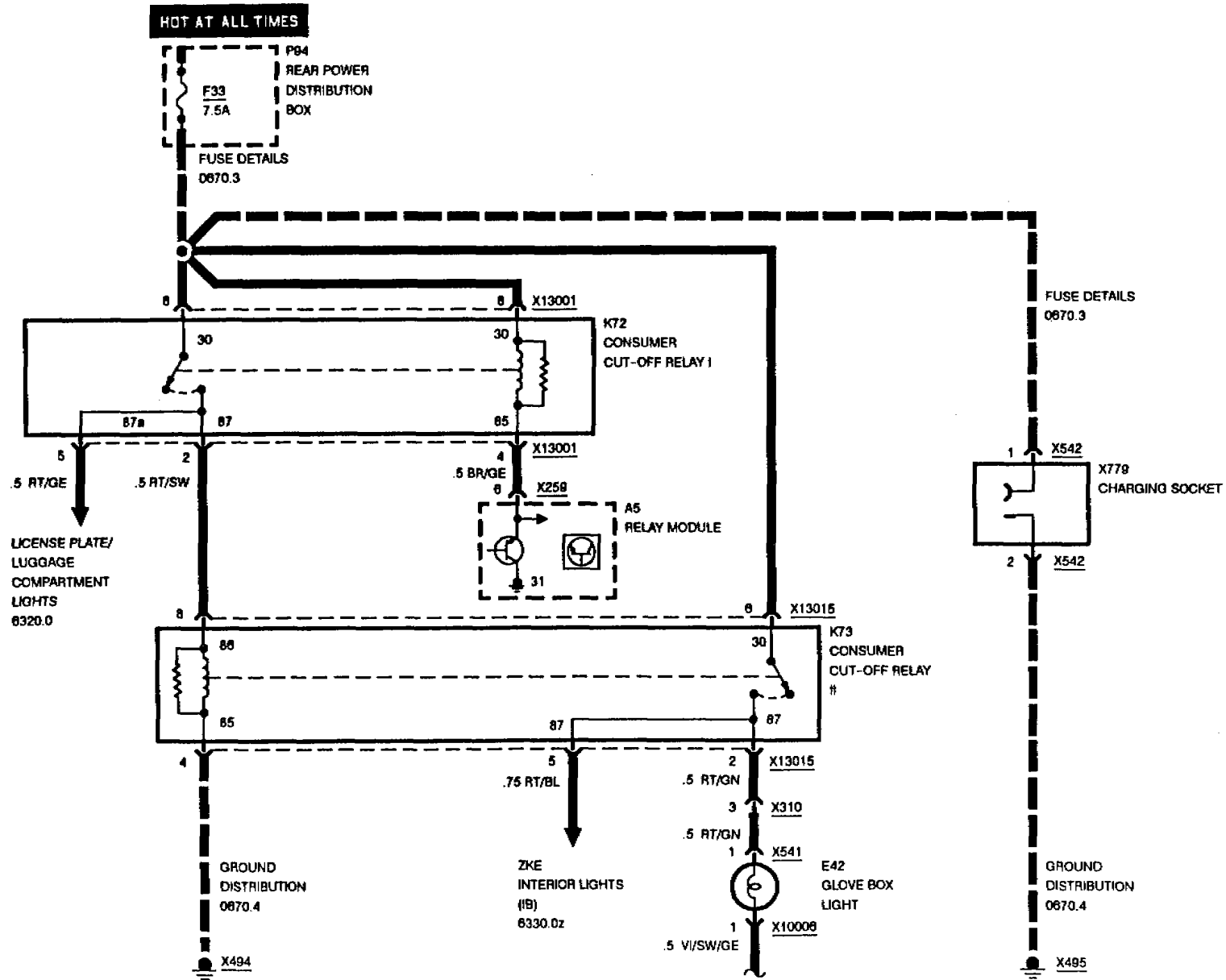


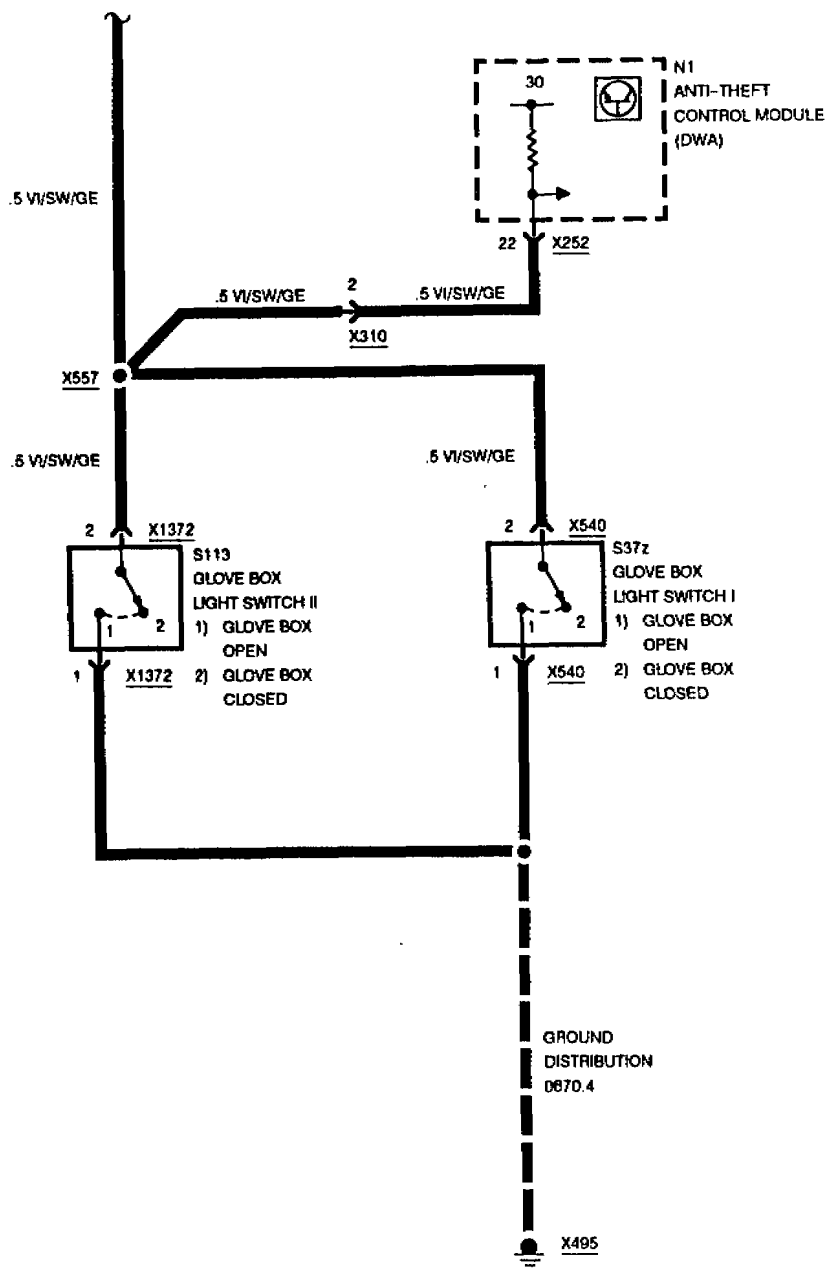






# INTERIOR ACCESSORIES

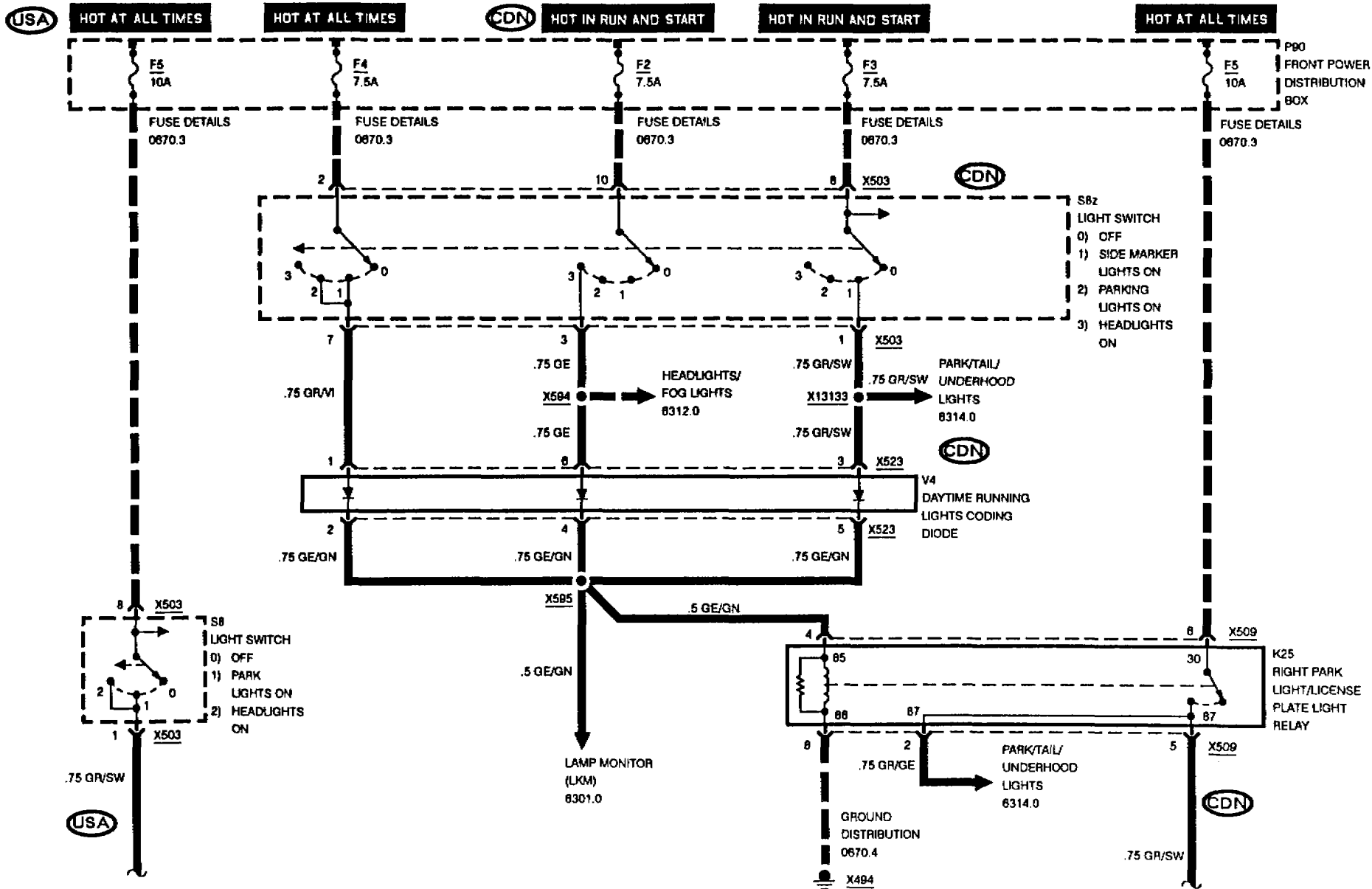


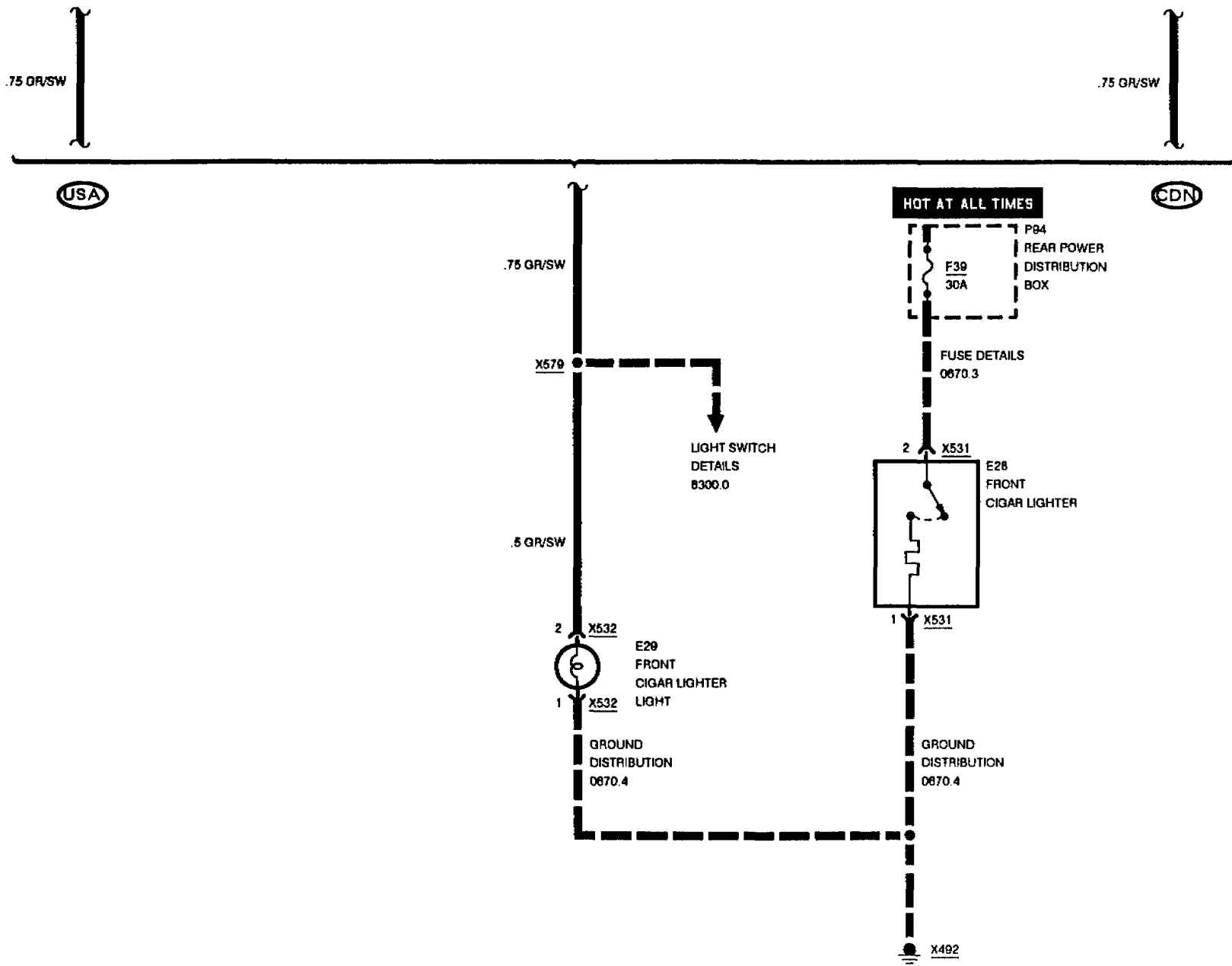




# INTERIOR ACCESSORIES

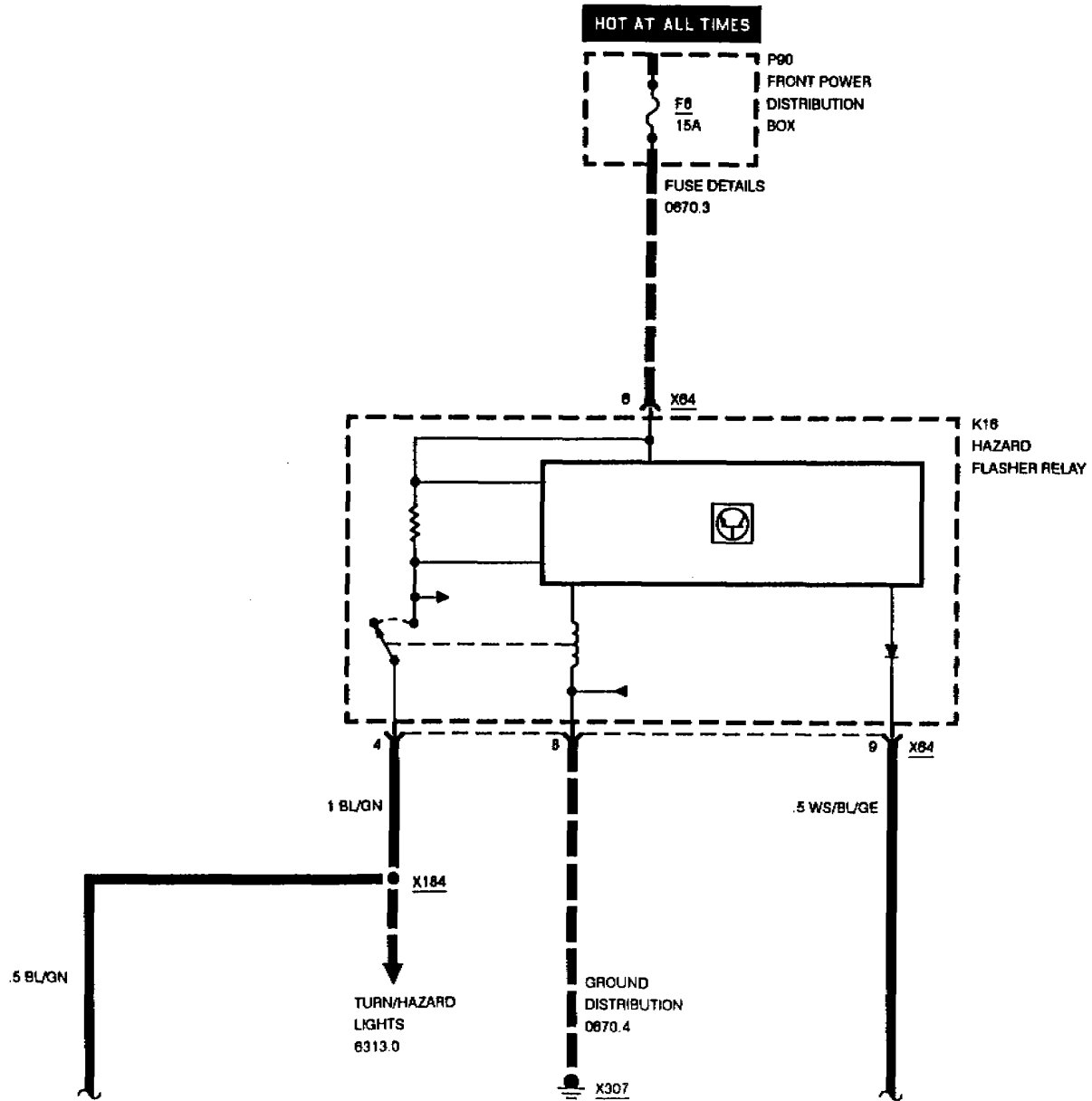
## CIGARETTE LIGHTER

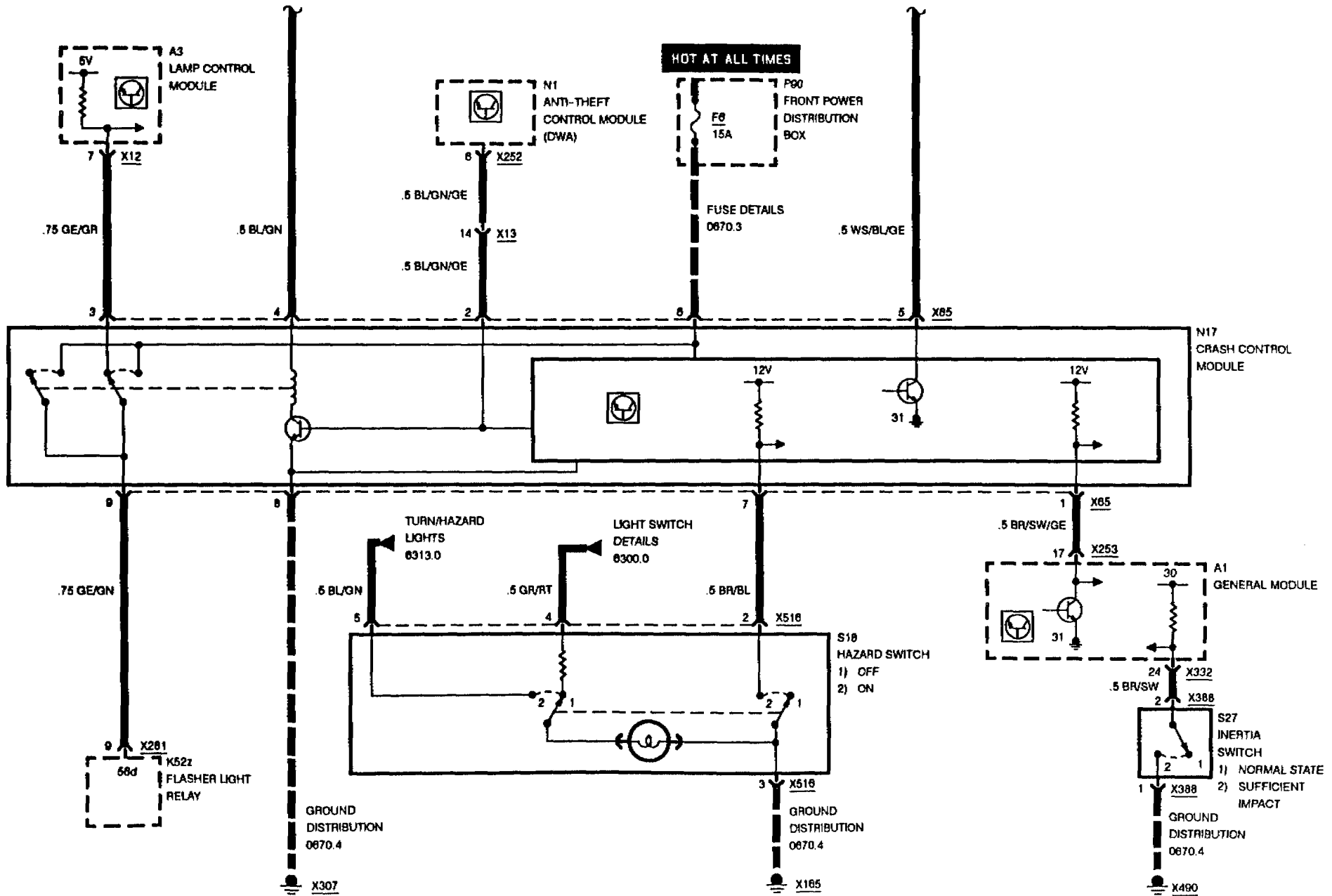






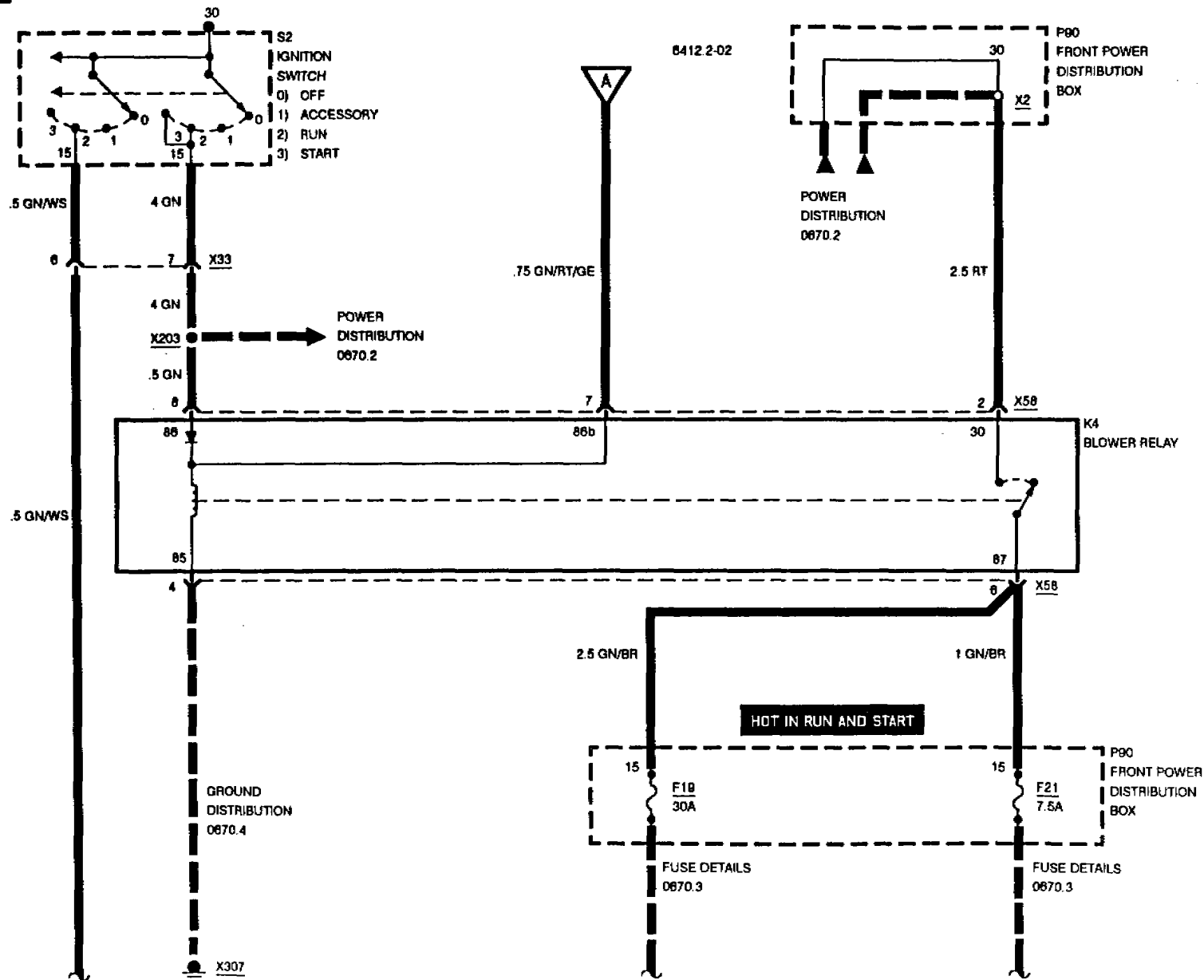
# CRASH CONTROL MODULE



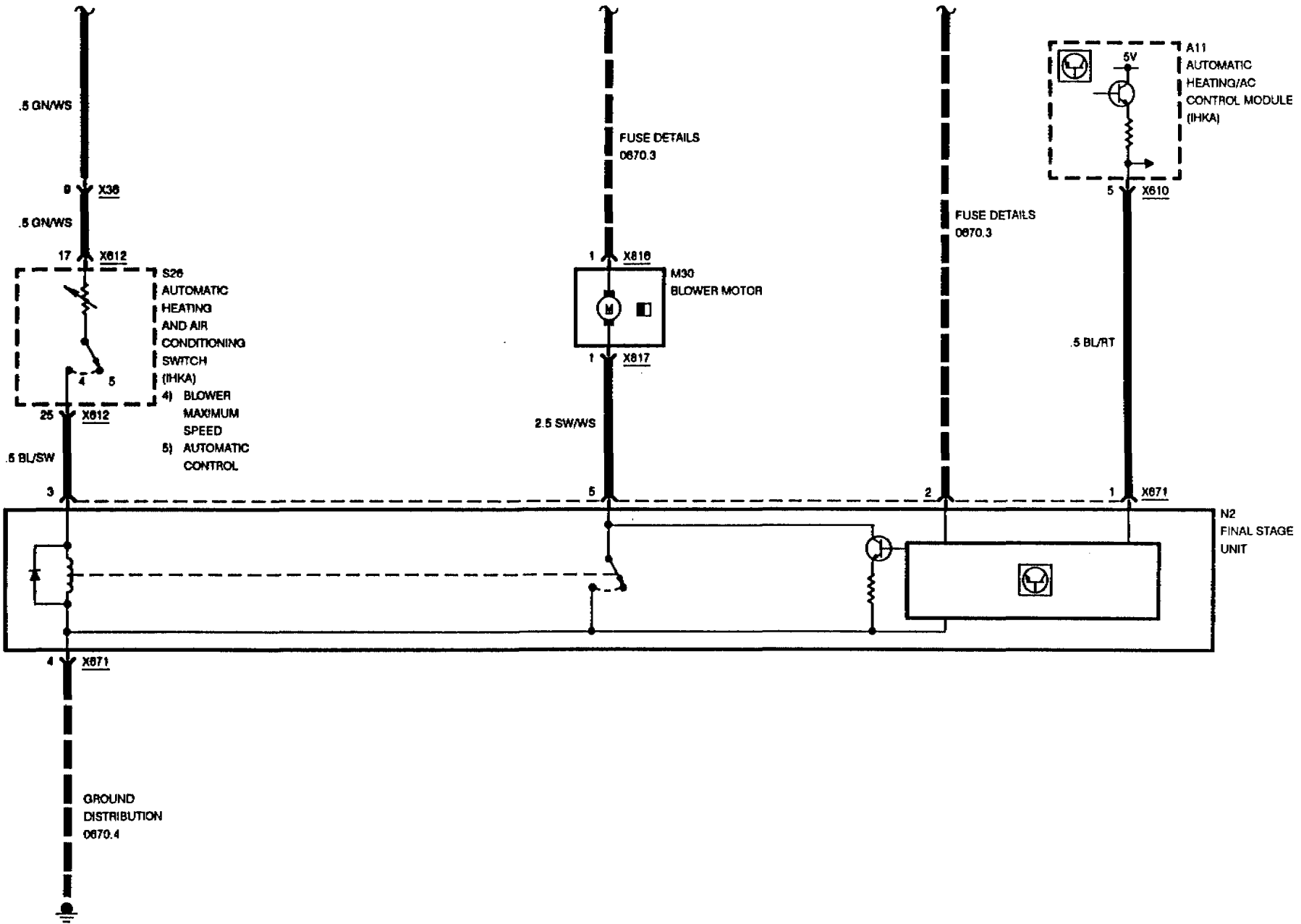




# PARK VENTILATION WITH IHKA

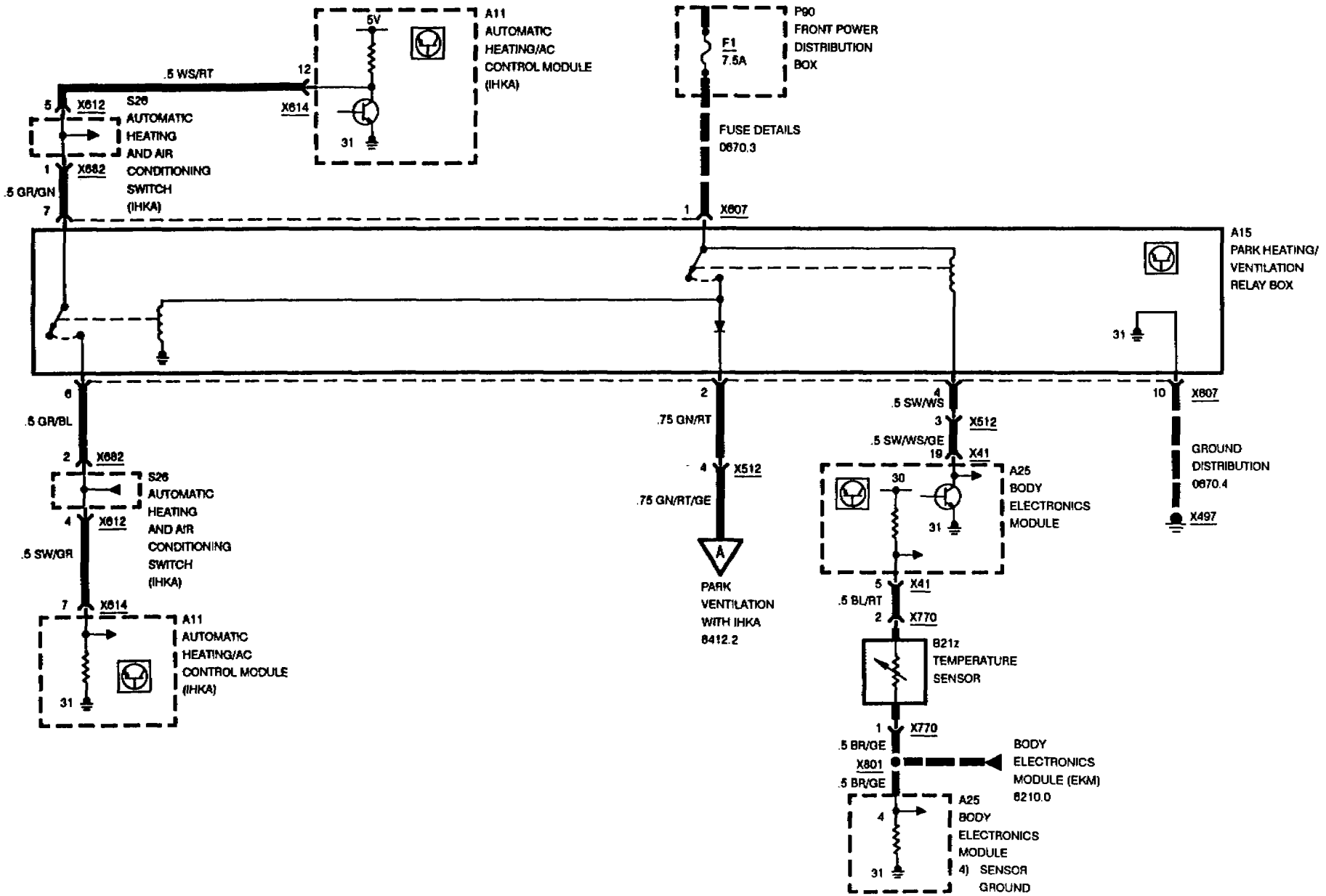






# PARK VENTILATION WITH IHKA

HDT AT ALL TIMES

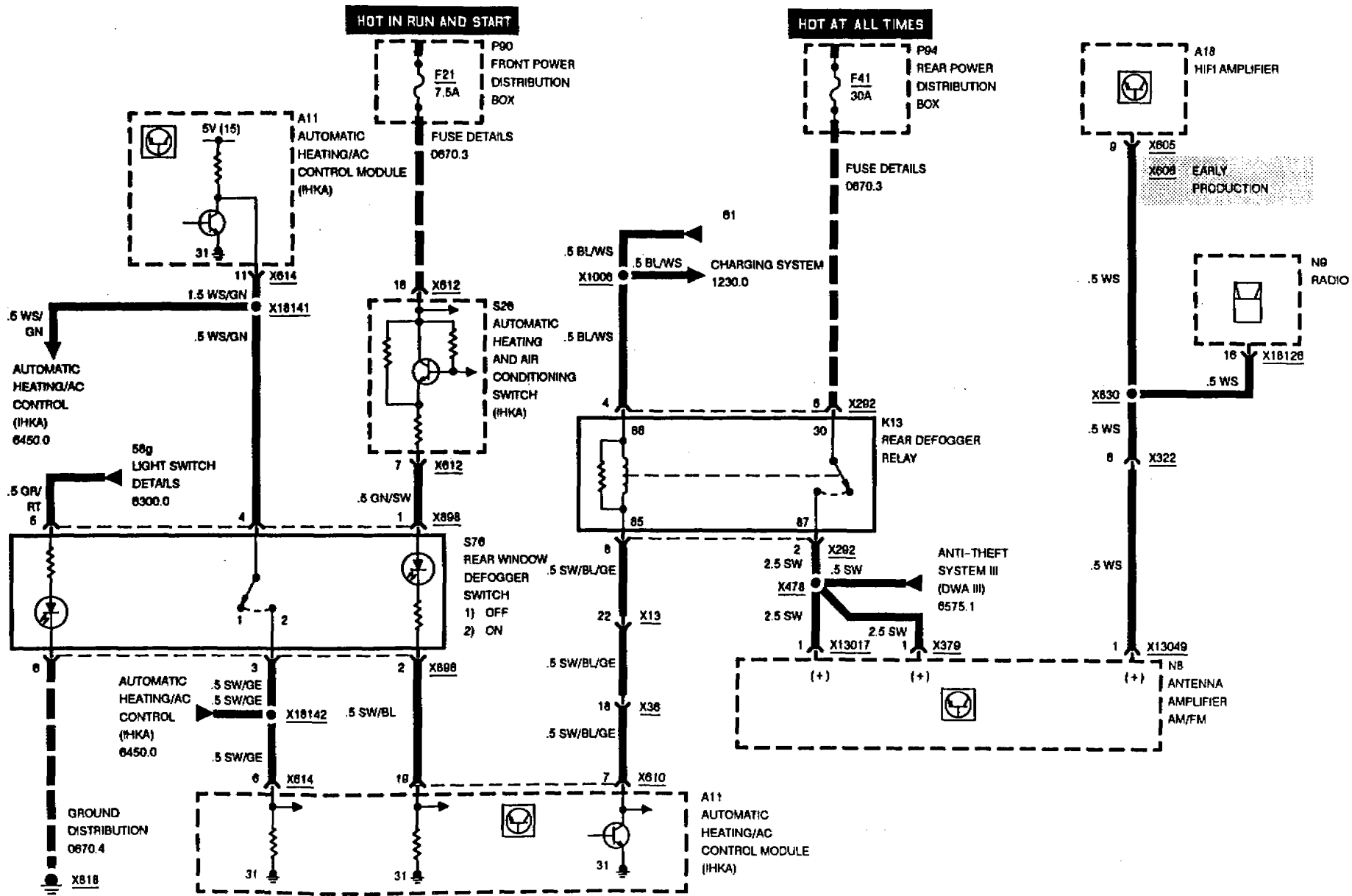


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8

6424.0



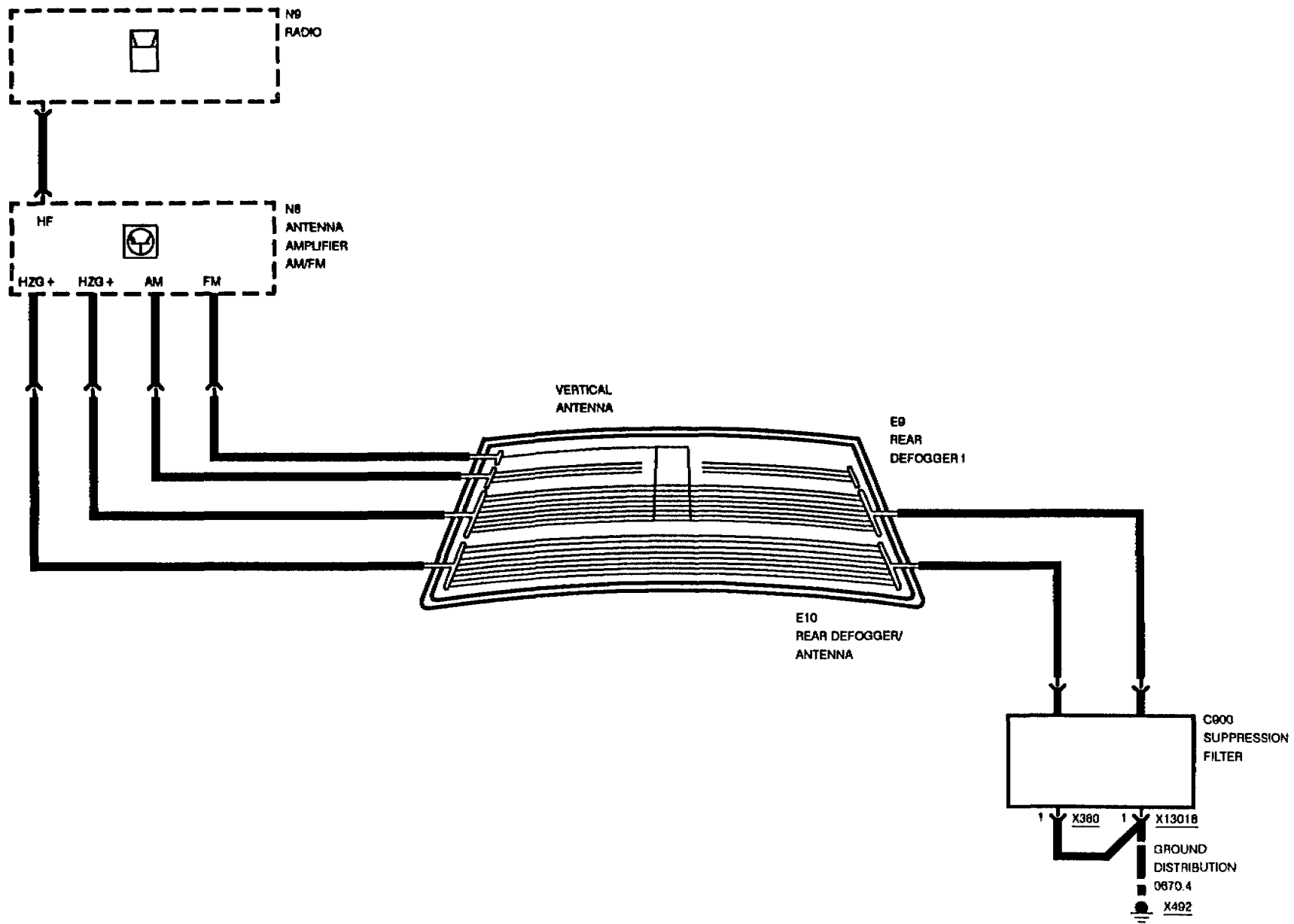
# REAR WINDOW DEFOGGER/ ANTENNA





# REAR WINDOW DEFOGGER/ ANTENNA

## REAR WINDOW ANTENNA

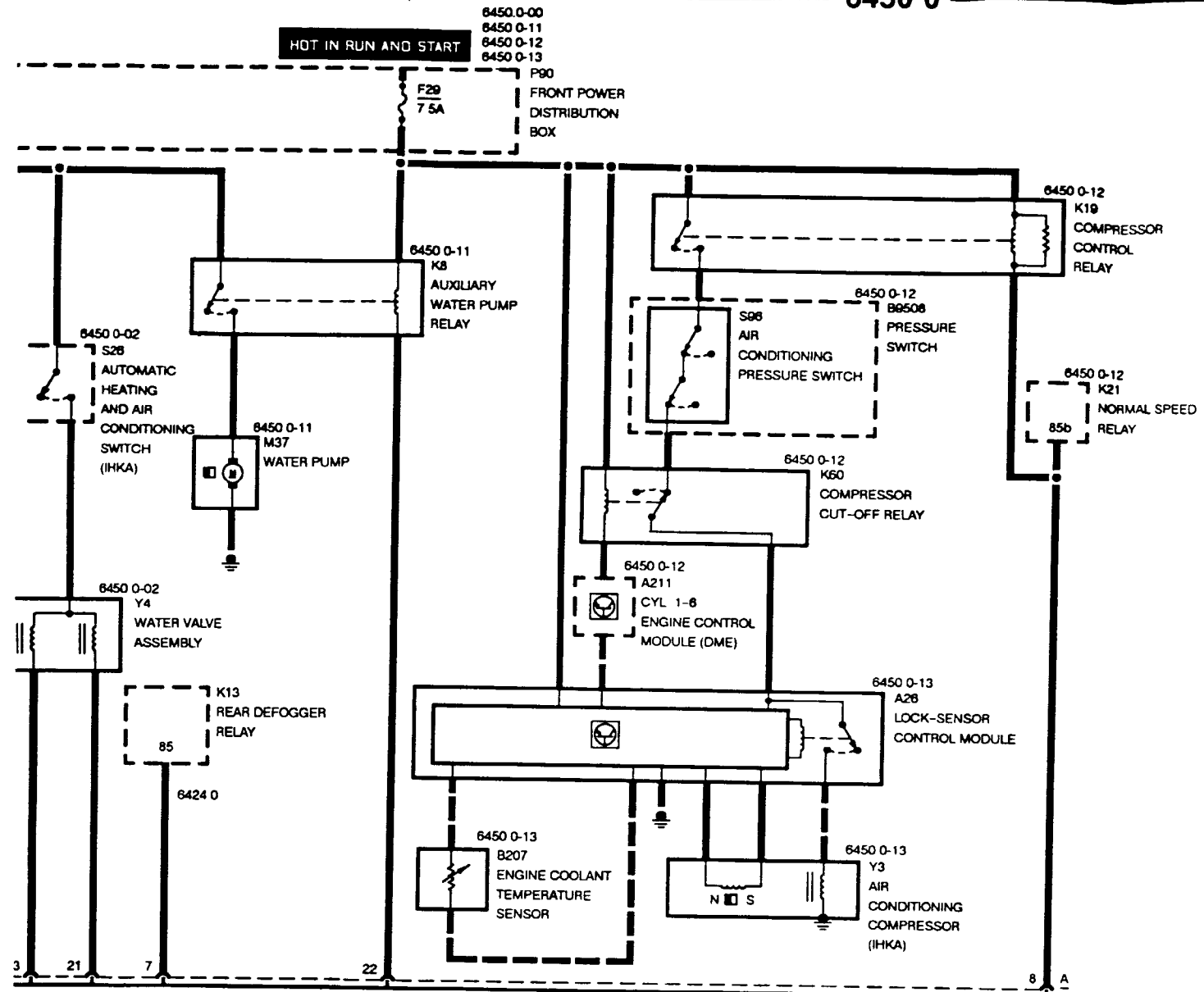


BMW  
**8**

6424.0-02

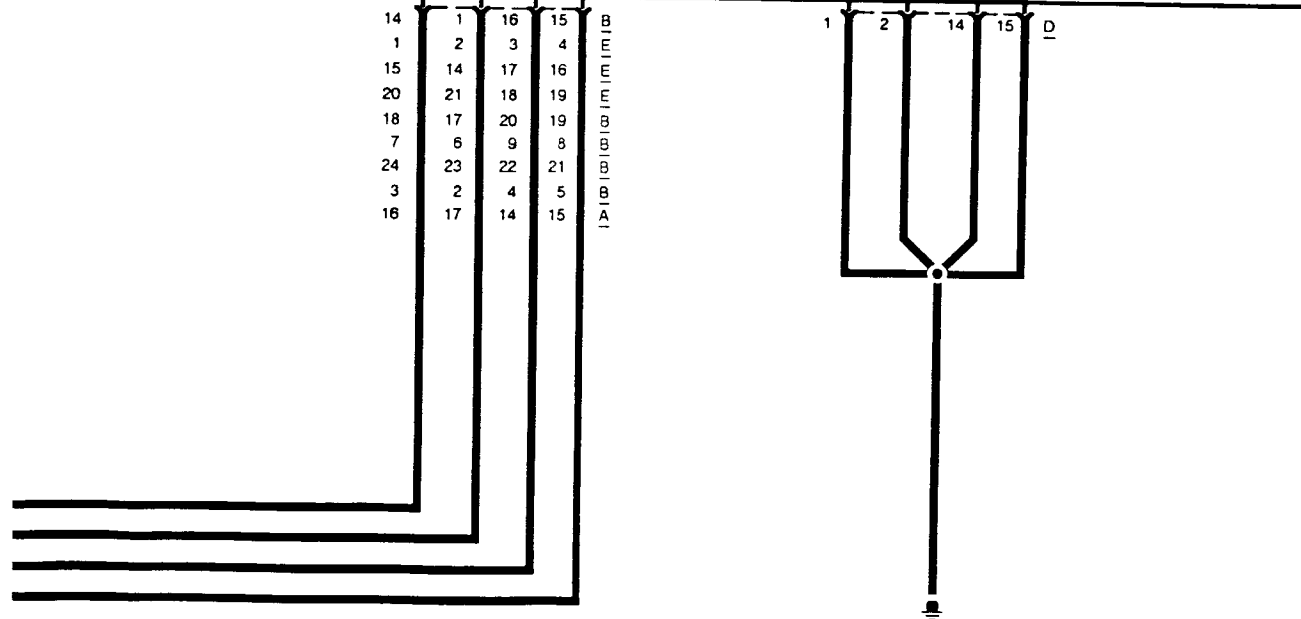
**AUTOMATIC HEATING/AC CONTROL (IHKA)**  
**BLOCK DIAGRAM**





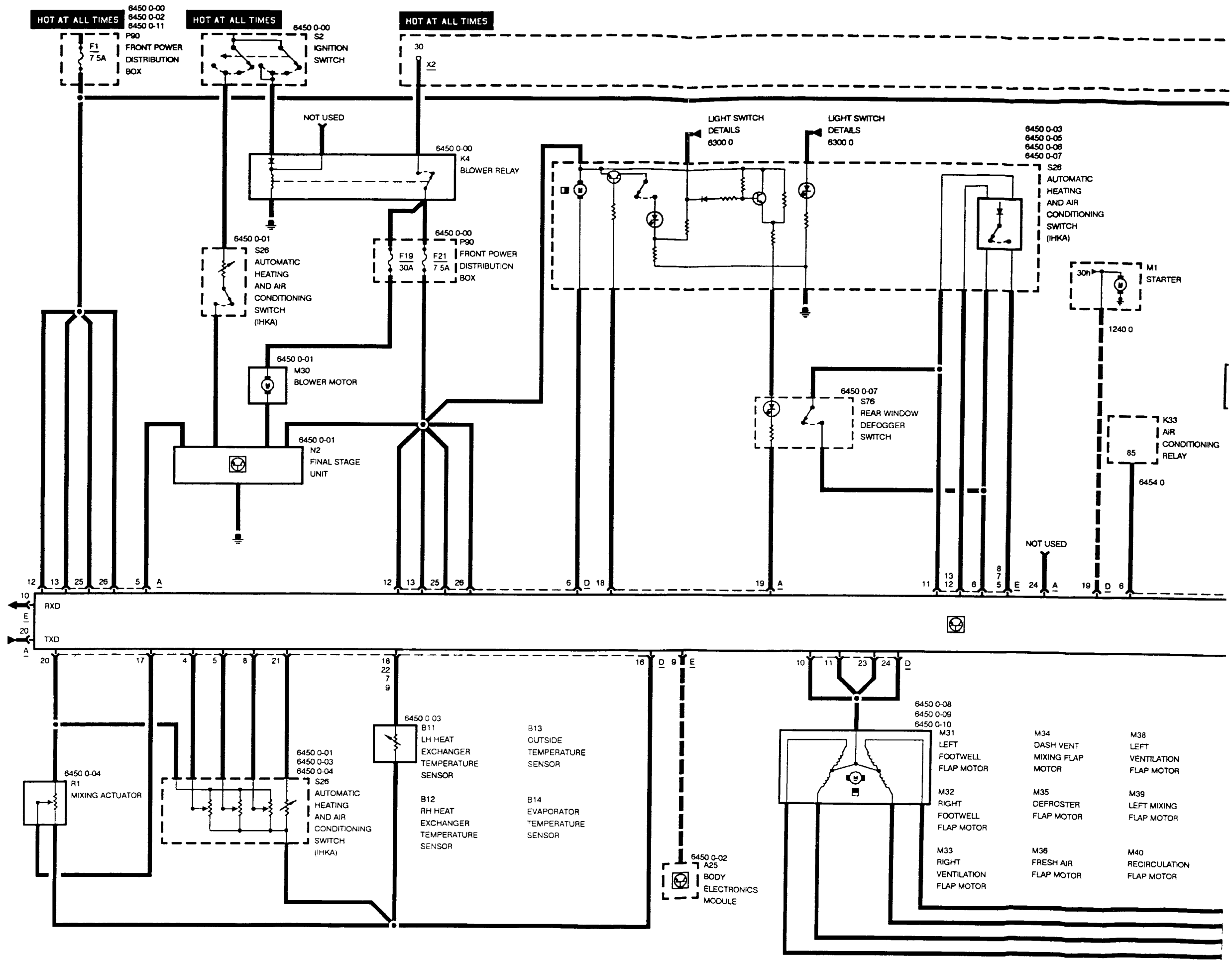
A11  
AUTOMATIC  
HEATING/AC  
CONTROL MODULE  
(IHKA)

- A = X610
- B = X611
- C = X612
- D = X613
- E = X614



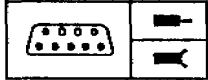
14	1	16	15	B
1	2	3	4	E
15	14	17	16	E
20	21	18	19	E
18	17	20	19	B
7	6	9	8	B
24	23	22	21	B
3	2	4	5	B
16	17	14	15	A







# AUTOMATIC HEATING/AC CONTROL (IHKA)



## Pin Assignments

- A=X610 26 pins, white
- B=X611 26 pins, green
- C=X612 26 pins, blue
- D=X613 26 pins, blue
- E=X614 26 pins, yellow

### X610

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
1		Not used				
2		Not used				
3		Not used				
4		Not used				
5	A	Blower output stage activation	Final stage unit	approx. 0 V – 4,3 V	0–12 V at blower	
6	A	Air conditioning	Air conditioning relay	approx. 0,8 V approx. 12 V	ON OFF	
7	A	Rear window defogger relay activation	Rear window defogger relay	approx. 0,4 V approx. 12 V	ON OFF	approx. 12 V only with engine running
8	A	A/C relay/auxiliary fan relay stage 1 activation	A/C relay/auxiliary fan relay	approx. 0,8 V approx. 12 V	ON OFF	
9		Not used				
10		Not used				



## AUTOMATIC HEATING/AC CONTROL (IHKA)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
11		Not used				
12	E	Plus terminal 30	Front power distribution box	approx. 12 V		
13	E	Plus terminal 30	Front power distribution box	approx. 12 V		
14	A	Circulating air flap motor activation	Footwell flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 $\Omega$ /winding with flap motor disconnected
15	A	Circulating air flap motor activation	Footwell flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 $\Omega$ /winding with flap motor disconnected
16	A	Circulating air flap motor activation	Footwell flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 $\Omega$ /winding with flap motor disconnected
17	A	Circulating air flap motor activation	Footwell flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 $\Omega$ /winding with flap motor disconnected
18	A	Function light activation	IHKA switch	approx. 12 V approx. 0,7 V		Air flow control wheel OFF Air flow control wheel ON
19	A	Rear window defogger switch light activation	Rear window defogger switch	approx. 12 V approx. 0,7 V		Rear window defogger OFF Rear window defogger ON
20	A	Diagnosis	Diagnostic socket TxD			
21	A	Left water valve activation	Water valve assembly	Frequency (square-wave voltage)	0 %–100 %	at 0 % approx. 0 V = at 100 % approx. 12 V =
22	A	Auxiliary water pump relay activation	Auxiliary water pump relay	approx. 0,3 V approx. 12 V	ON OFF	



## AUTOMATIC HEATING/AC CONTROL (IHKA)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
23	A	Right water valve activation	Water valve assembly	Frequency (square-wave voltage)	0 %–100 %	at 0 % approx. 0 V = at 100 % approx. 12 V =
24		Not used				
25	E	Plus terminal 30	Front power distribution box		approx. 12 V	
26	E	Plus terminal 30	Front power distribution box		approx. 12 V	

### X611

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
1	A	Left footwell flap motor activation	Left footwell flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 Ω/winding with flap motor disconnected
2	A	Left mixing flap motor activation	Left mixing flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 Ω/winding with flap motor disconnected
3	A	Left mixing flap motor activation	Left mixing flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 Ω/winding with flap motor disconnected
4	A	Left mixing flap motor activation	Left mixing flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 Ω/winding with flap motor disconnected
5	A	Left mixing flap motor activation	Left mixing flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 Ω/winding with flap motor disconnected



## AUTOMATIC HEATING/AC CONTROL (IHKA)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
6	A	Fresh air flap motor activation	Fresh air flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 $\Omega$ /winding with flap motor disconnected
7	A	Fresh air flap motor activation	Fresh air flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 $\Omega$ /winding with flap motor disconnected
8	A	Fresh air flap motor activation	Fresh air flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 $\Omega$ /winding with flap motor disconnected
9	A	Fresh air flap motor activation	Fresh air flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 $\Omega$ /winding with flap motor disconnected
10		Not used				
11		Not used				
12		Not used				
13		Not used				
14	A	Left footwell flap motor activation	Left footwell flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 $\Omega$ /winding with flap motor disconnected
15	A	Left footwell flap motor activation	Left footwell flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 $\Omega$ /winding with flap motor disconnected
16	A	Left footwell flap motor activation	Left footwell flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 $\Omega$ /winding with flap motor disconnected



## AUTOMATIC HEATING/AC CONTROL (IHKA)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
17	A	Defroster flap motor activation	Defroster flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 $\Omega$ /winding with flap motor disconnected
18	A	Defroster flap motor activation	Defroster flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 $\Omega$ /winding with flap motor disconnected
19	A	Defroster flap motor activation	Defroster flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 $\Omega$ /winding with flap motor disconnected
20	A	Defroster flap motor activation	Defroster flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 $\Omega$ /winding with flap motor disconnected
21	A	Left ventilation flap motor activation	Left ventilation flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 $\Omega$ /winding with flap motor disconnected
22	A	Left ventilation flap motor activation	Left ventilation flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 $\Omega$ /winding with flap motor disconnected
23	A	Left ventilation flap motor activation	Left ventilation flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 $\Omega$ /winding with flap motor disconnected
24	A	Left ventilation flap motor activation	Left ventilation flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 $\Omega$ /winding with flap motor disconnected
25		Not used				
26		Not used				



# AUTOMATIC HEATING/AC CONTROL (IHKA)

## X612

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
1	E	Function light, night circuit	Light switch	approx. 12 V		With light ON
2	A	Switch for max left, bottom left	Control unit connector X614 Pin 6	Frequency (square-wave voltage)	ON/OFF	
3	E	Switch independent heating, right-hand drive coding diode	Control unit connector X614 Pin 11	Frequency (square-wave voltage)	ON/OFF right-hand drive/left-hand drive	
4	A	Switch for defrost, independent heating, independent ventilation	Control unit connector X614 Pin 7	Frequency (square-wave voltage)	ON/OFF	
5	E	Switch for circulating air, max left, max right, independent ventilation	Control unit connector X614 Pin 12	Frequency (square-wave voltage)	ON/OFF	
6	A	Switch for circulating air, air conditioning	Control unit connector X614 Pin 5	Frequency (square-wave voltage)	ON/OFF	
7	A	Function light, night circuit, rear window defogger switch	Rear window defogger switch	approx. 12 V  approx. 2,7 V  approx. 2,6 V		Rear window defogger OFF light OFF Rear window defogger ON light OFF Rear window defogger ON light ON
8	A	Switch for max right, bottom right, right-hand drive coding diode	Control unit connector X614 Pin 8	Frequency (square-wave voltage)	ON/OFF right-hand drive/left-hand drive	



## AUTOMATIC HEATING/AC CONTROL (IHKA)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
9	E	AUC switch	AUC control unit Pin 6	Frequency (square-wave voltage)		
10	E	AUC switch	AUC control unit Pin 5	Frequency (square-wave voltage)		
11	E	Terminal 30 for water valves	Fuse	approx. 12 V		
12	A	Voltage for water valves	Left and right water valves	approx. 12 V		
13	A/E	Interior temperature sensor	Control unit connector X613 Pin 21	approx. 5 V	-250 C to +1000 C	With sensor disconnected
14	E	Plus for control wheels	Control unit connector X613 Pin 20	approx. 5 V		
15	E	Ground for interior temperature sensor and control wheels	Control unit connector X613 Pin 16	approx. 0 V		
16	E	Function light activation	Control unit connector X610 Pin 18	approx. 12 V approx. 0,7 V		Air flow control wheel OFF Air flow control wheel ON
17	E	Switch, air flow control wheel, max	Ignition switch terminal 15	approx. 12 V		
18	E	Terminal 15 for electronics	Fuse	approx. 12 V		
19	E	IHKA switch lighting	Dimmer for instrument lighting	approx. 2,5 – 12 V		With light ON
20	M	Ground for function and operating unit lighting	Ground point	0 V		
21	A	Nominal temperature value, right	Control unit connector X613 Pin 8	approx. 0,7 V – 4,4 V	140 C – 340 C	
22	A	Nominal temperature value, left	Control unit connector X613 Pin 4	approx. 0,7 V – 4,4 V	140 C – 340 C	





## AUTOMATIC HEATING/AC CONTROL (IHKA)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
23	A	Nominal air flow value	Control unit connector X613 Pin 5	approx. 0,7 V – 4,4 V	OFF – 100 %	
24	E	Switch for air conditioning, bottom left, defrost, bottom right	Control unit connector X614 Pin 13	Frequency (square-wave voltage)	ON/OFF	
25	A	Switch, air flow control wheel, max	Final stage unit X671 Pin 3	approx. 12 V		
26	E	Interior sensor blower (ground)	Control unit connector X613 Pin 6	approx. 0 V		

### X613

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
1	M	Ground	Ground point	0 V		
2	M	Ground	Ground point	0 V		
3		Not used				
4	E	Nominal temperature value, left (potentiometer)	IHKA switch	approx. 0,7 V – 4,4 V	140 C – 340 C	
5	E	Nominal air flow value (potentiometer)	IHKA switch	approx. 0,7 V – 4,4 V	OFF – 100 %	
6	M	Interior sensor blower (ground)	IHKA switch	approx. 0 V		
7	A/E	Outside temperature	Outside temperature sensor	approx. 0,5 V – 4,5 V	–500 C – +600 C	approx. 5 V with tempera- ture sensor disconnected
8	E	Nominal temperature value, right (potentiometer)	IHKA switch	approx. 0,7 V – 4,4 V	140 C – 340 C	



## AUTOMATIC HEATING/AC CONTROL (IHKA)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
9	A/E	Evaporator temperature	Evaporator temp. sensor	approx. 0,5 V – 4,5 V	–400 C – +900 C	approx. 5 V with temperature sensor disconnected
10	A	Plus for stepping motors	Plus connector for stepping	approx. 12 V		
11	A	Plus for stepping motors	Plus connector for stepping	approx. 12 V		
12	E	Ignition terminal 15	Blower relay	approx. 12 V		
13	E	Ignition terminal 15	Blower relay	approx. 12 V		
14	M	Ground	Ground point	0 V		
15	M	Ground	Ground point	0 V		
16	A	Ground for sensor and control wheels	Sensor and control wheels	approx. 0 V		
17	E	Nominal mixing air value	Temperature distribution potentiometer	approx. 0,7 V – 4,4 V	0 %–100 %	
18	A/E	Left heater temperature	Left heat exchanger temperature sensor	approx. 1,5 V – 3,5 V	–300 C – +1100 C	approx. 5 V with temperature sensor disconnected
19	E	Starter terminal 50	Solenoid switch	approx. 12 V		
20	A	Plus for control wheels	Control wheels	approx. 5 V		
21	A/E	Inside air temperature	Inside air temperature sensor	approx. 0,5 V – 4,5 V	–250 C – +1000 C	approx. 5 V with temperature sensor disconnected
22	A/E	Right heater temperature	Right heat exchanger temperature sensor	approx. 1,5 V – 3,5 V	–300 C – +1100 C	approx. 5 V with temperature sensor disconnected
23	A	Plus for stepping motors	Plus connector for stepping motors	approx. 12 V		
24	A	Plus for stepping motors	Plus connector for stepping motors	approx. 12 V		



## AUTOMATIC HEATING/AC CONTROL (IHKA)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
25	E	Ignition terminal 15	Blower relay	approx. 12 V		
26	E	Ignition terminal 15	Blower relay	approx. 12 V		

### X614

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
1	A	Right footwell flap motor activation	Right footwell flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 $\Omega$ /winding with flap motor disconnected
2	A	Right footwell flap motor activation	Right footwell flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 $\Omega$ /winding with flap motor disconnected
3	A	Right footwell flap motor activation	Right footwell flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 $\Omega$ /winding with flap motor disconnected
4	A	Right footwell flap motor activation	Right footwell flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 $\Omega$ /winding with flap motor disconnected
5	E	Switch for circulating air and air conditioning	IHKA switch	Frequency (square-wave voltage)	ON/OFF	
6	E	Switch for rear window, max left, bottom left	IHKA switch/rear window switch	Frequency (square-wave voltage)	ON/OFF	
7	E	Switch for defrost, independent heating, independent ventilation	IHKA switch, relay box independent heating/independent ventilation	Frequency (square-wave voltage)	ON/OFF	



## AUTOMATIC HEATING/AC CONTROL (IHKA)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
8	E	Switch for max right, bottom right, right-hand drive coding diode	IHKA switch	Frequency (square-wave voltage)	ON/OFF right-hand drive/left-hand drive	
9	E	Vehicle speed signal	Electronic body module	Frequency (square-wave voltage)	0 – 250 km/h	
10	E	Diagnosis	Diagnostic connector RxD			
11	A	Switch for rear window, independent heating, right-hand drive coding diode	IHKA switch/rear window defogger switch	Frequency (square-wave voltage)	ON/OFF right-hand drive/left-hand drive	
12	A	Switch for circulating air, max left, max right, independent ventilation	IHKA switch	Frequency (square-wave voltage)	ON/OFF	
13	A	Switch for air conditioning, bottom left, defrost, bottom right	IHKA switch	Frequency (square-wave voltage)	ON/OFF	
14	A	Right ventilation flap motor activation	Right ventilation flap motor	Frequency (square-wave voltage)	0 % – 100 %	approx. 84 $\Omega$ /winding with flap motor disconnected
15	A	Right ventilation flap motor activation	Right ventilation flap motor	Frequency (square-wave voltage)	0 % – 100 %	approx. 84 $\Omega$ /winding with flap motor disconnected
16	A	Right ventilation flap motor activation	Right ventilation flap motor	Frequency (square-wave voltage)	0 % – 100 %	approx. 84 $\Omega$ /winding with flap motor disconnected
17	A	Right ventilation flap motor activation	Right ventilation flap motor	Frequency (square-wave voltage)	0 % – 100 %	approx. 84 $\Omega$ /winding with flap motor disconnected



## AUTOMATIC HEATING/AC CONTROL (IHKA)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
18	A	Dash vent mixing flap motor activation	Dash vent mixing flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 Ω/winding with flap motor disconnected
19	A	Dash vent mixing flap motor activation	Dash vent mixing flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 Ω/winding with flap motor disconnected
20	A	Dash vent mixing flap motor activation	Dash vent mixing flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 Ω/winding with flap motor disconnected
21	A	Dash vent mixing flap motor activation	Dash vent mixing flap motor	Frequency (square-wave voltage)	0 %–100 %	approx. 84 Ω/winding with flap motor disconnected
22		Not used				
23		Not used				
24		Not used				
25		Not used				
26		Not used				

E = Input, A = Output, M = Ground

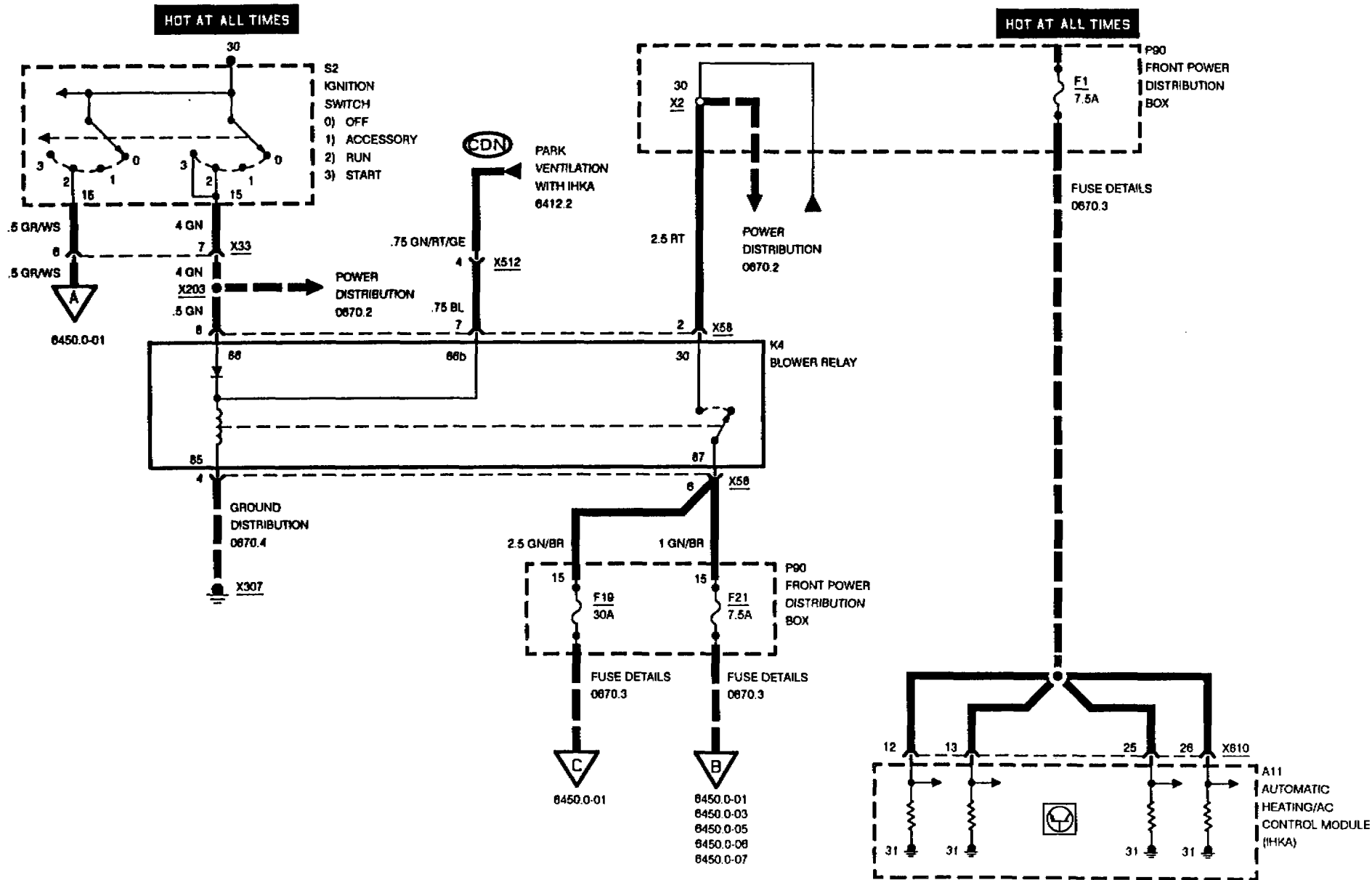
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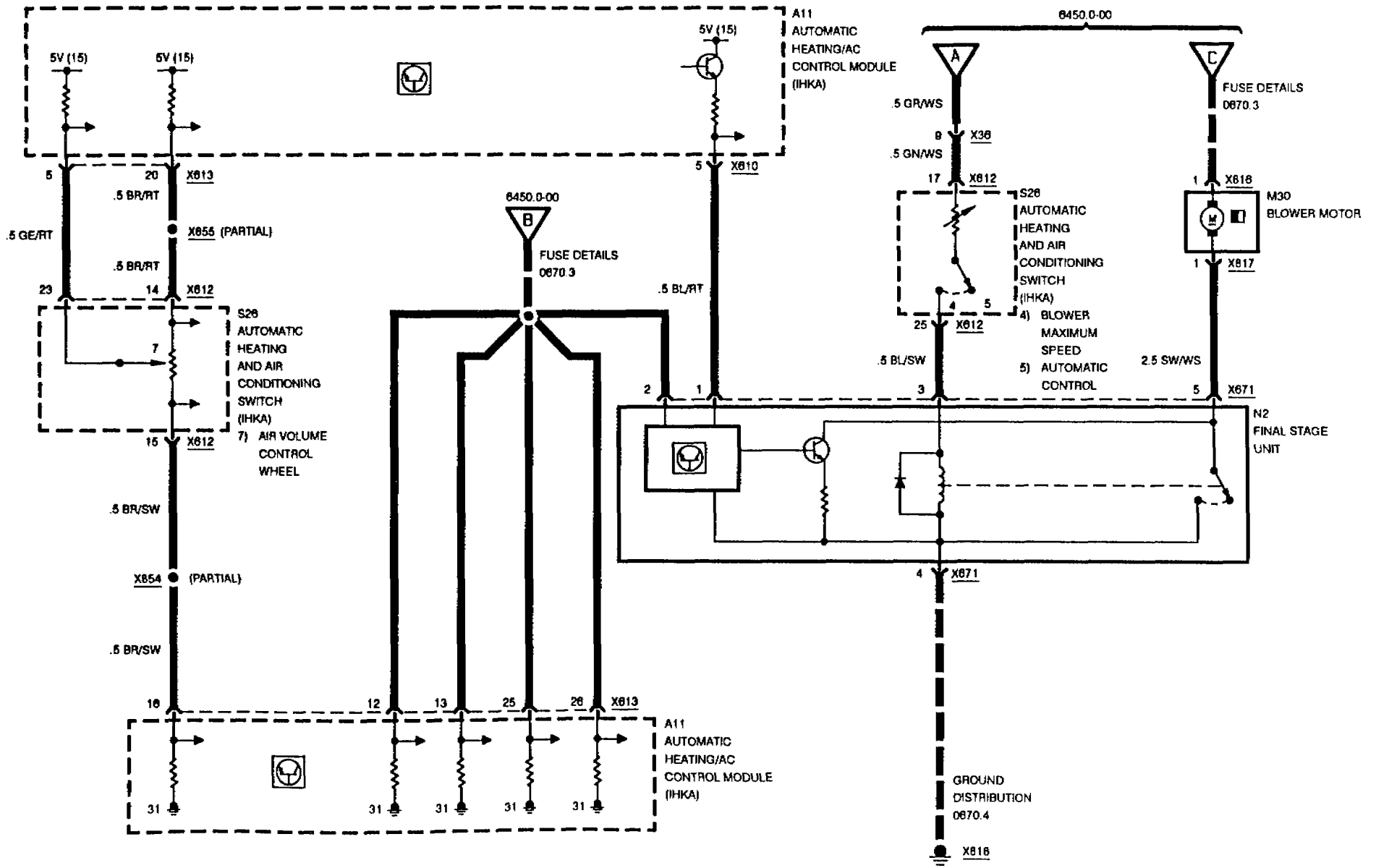
# AUTOMATIC HEATING/AC CONTROL (IHKA)

## POWER





# AUTOMATIC HEATING/AC CONTROL (IHKA) BLOWER CONTROLS

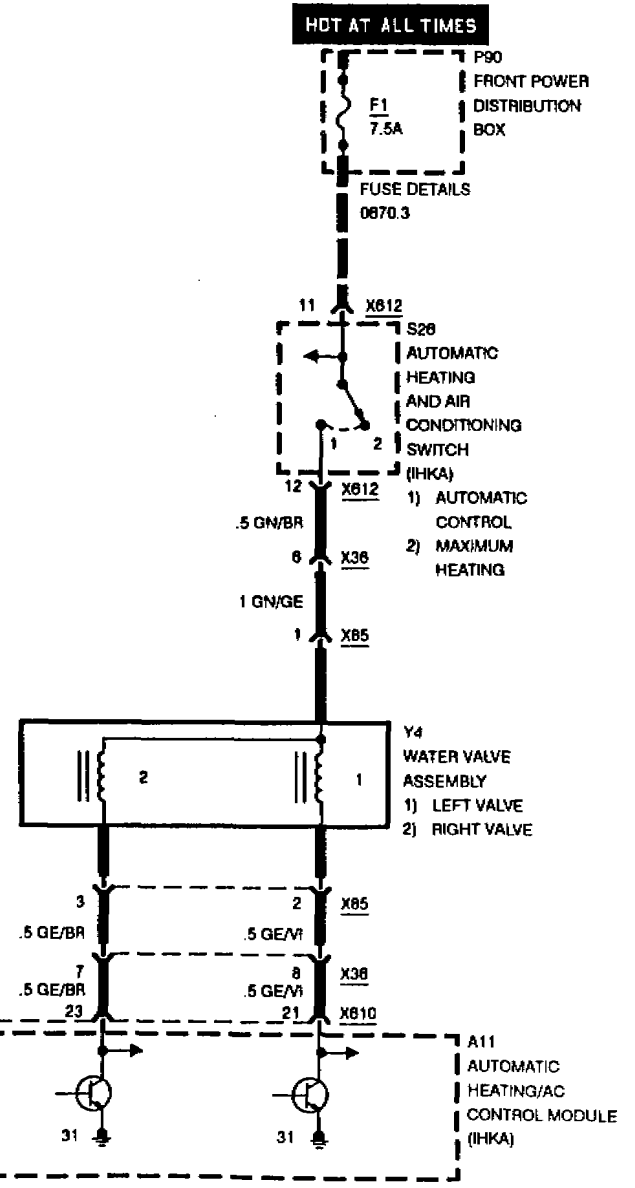
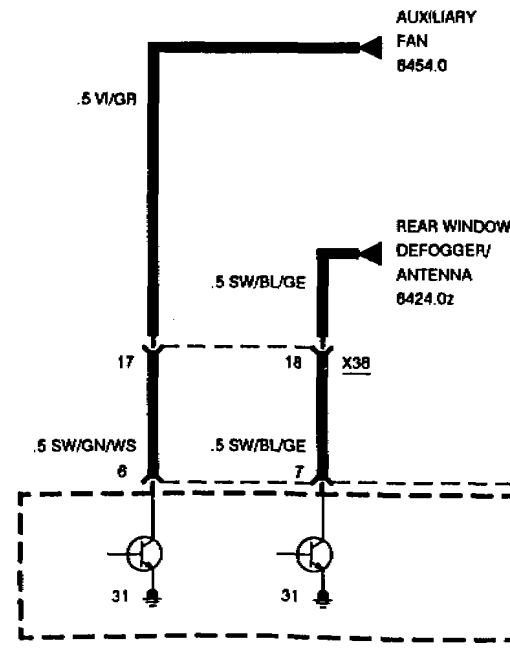
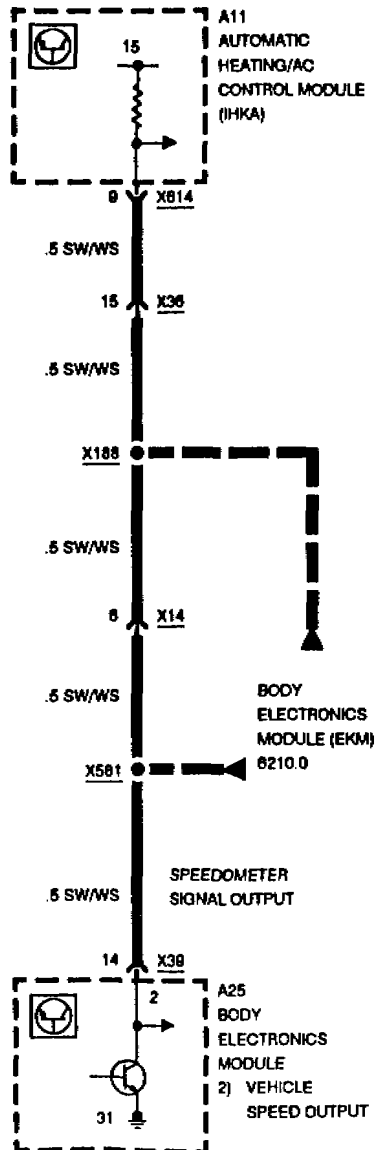






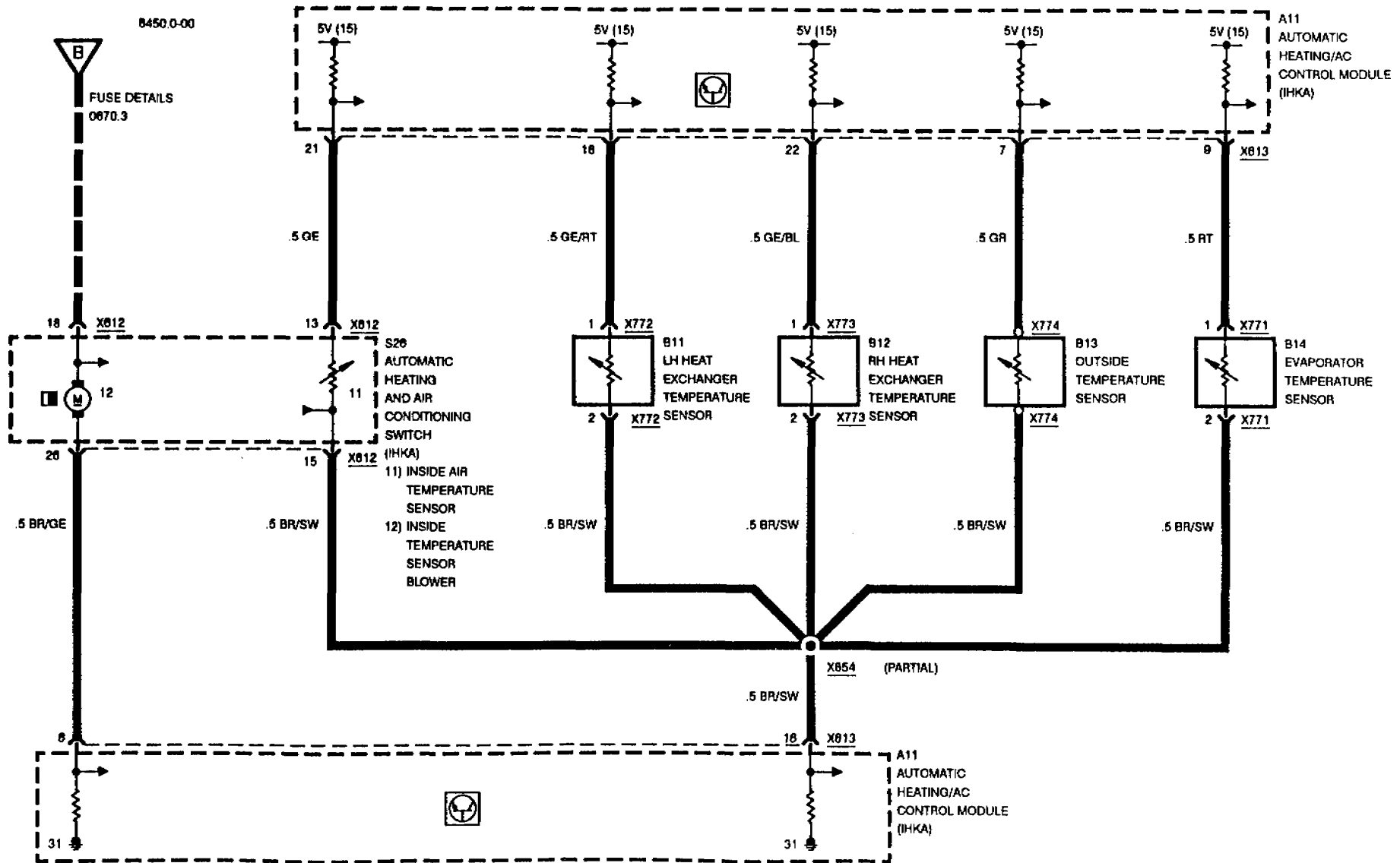
# AUTOMATIC HEATING/AC CONTROL (IHKA) BLOWER CONTROLS

# WATER VALVES





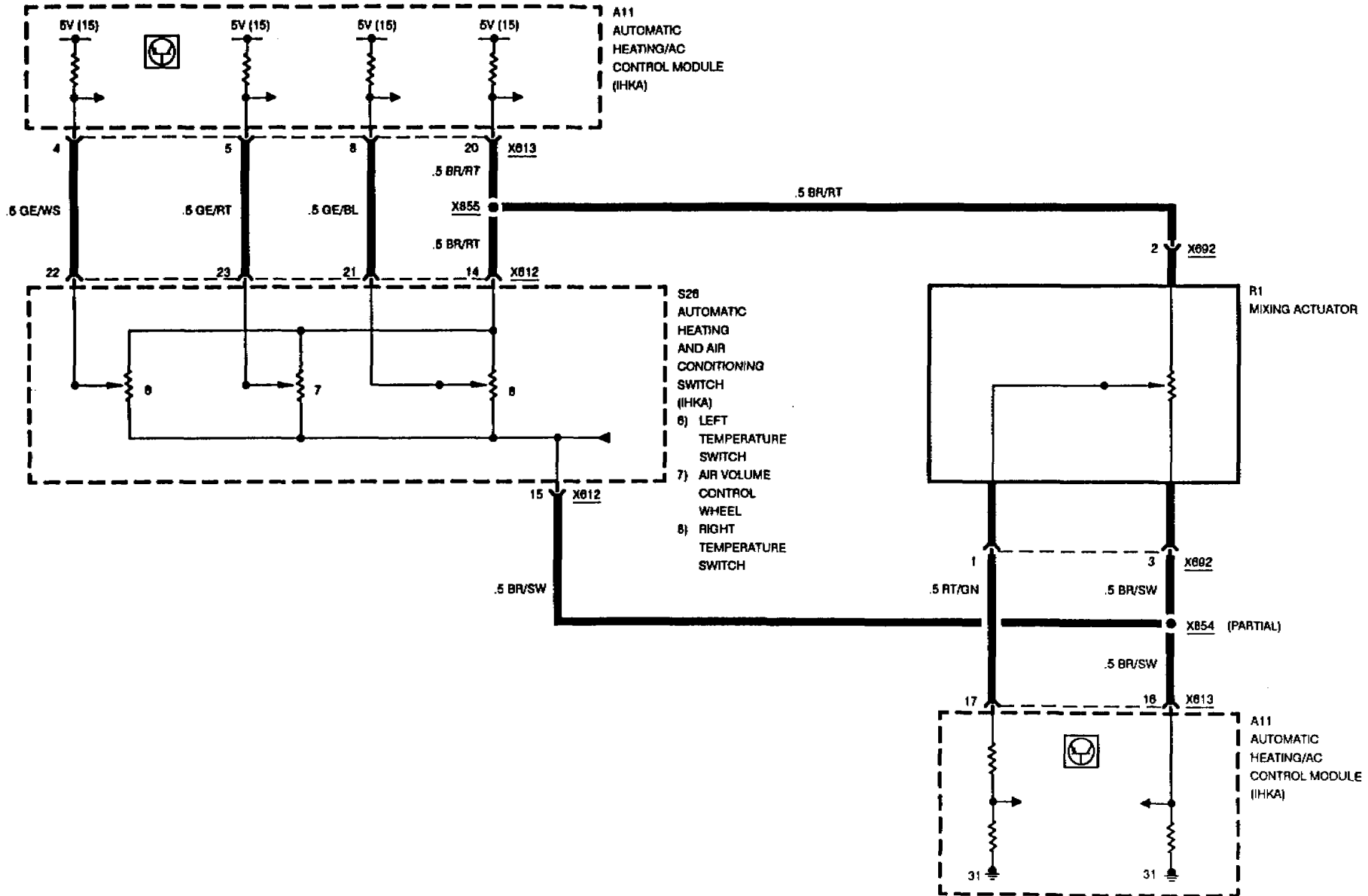
# AUTOMATIC HEATING/AC CONTROL (IHKA) TEMPERATURE CONTROLS





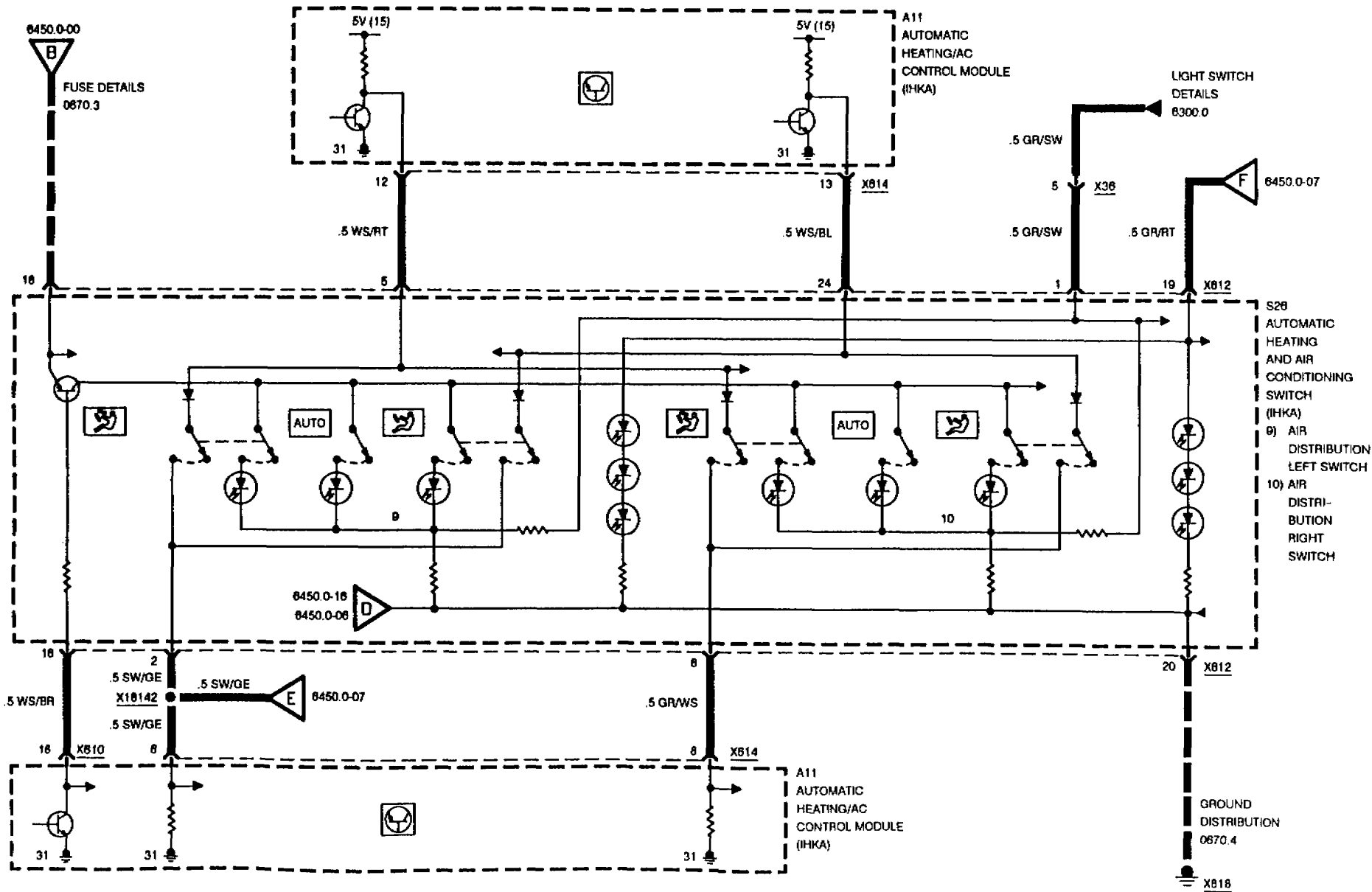
# AUTOMATIC HEATING/AC CONTROL (IHKA)

## TEMPERATURE CONTROLS





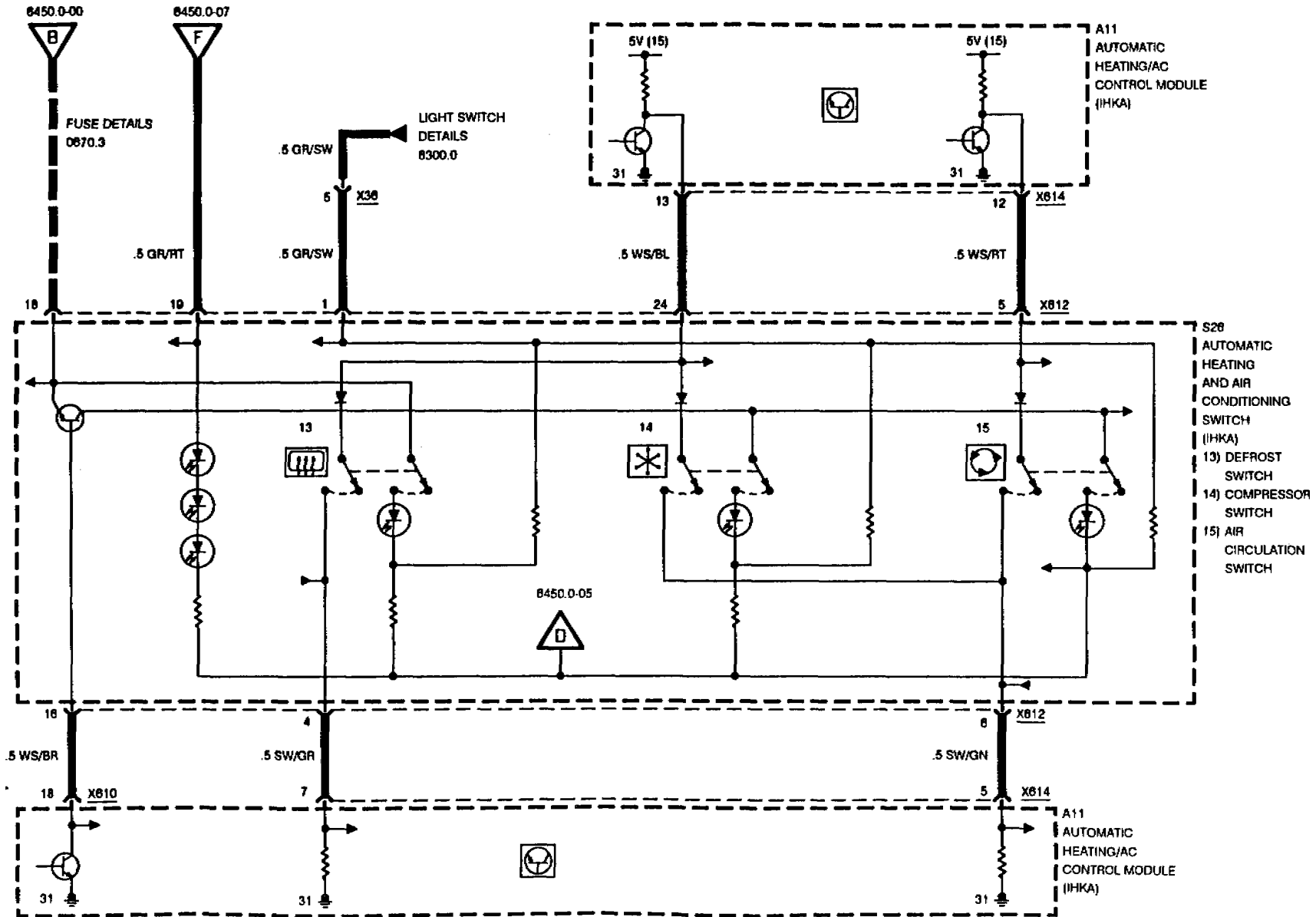
# AUTOMATIC HEATING/AC CONTROL (IHKA) AIR DELIVERY





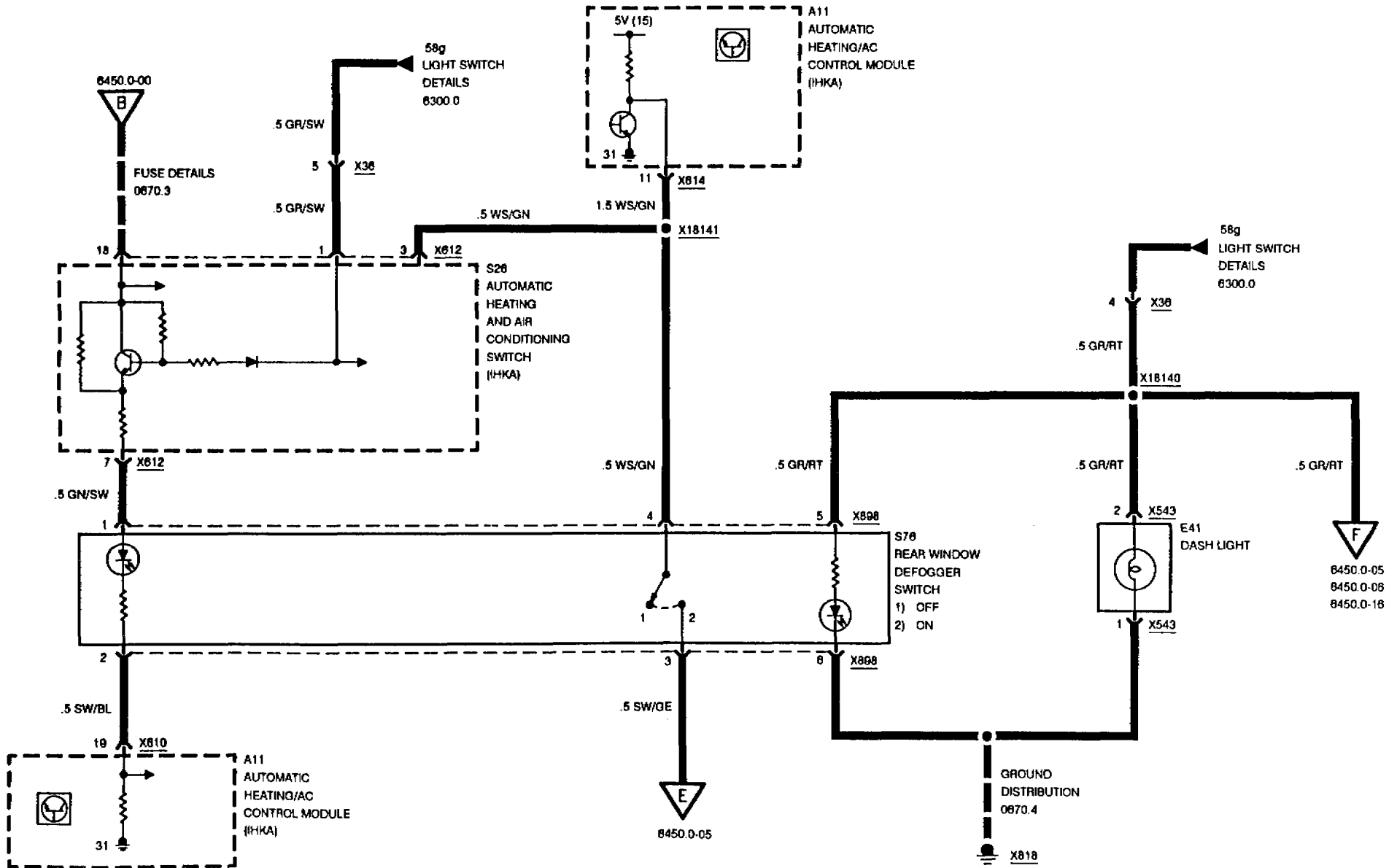
# AUTOMATIC HEATING/AC CONTROL (IHKA)

## AIR DELIVERY



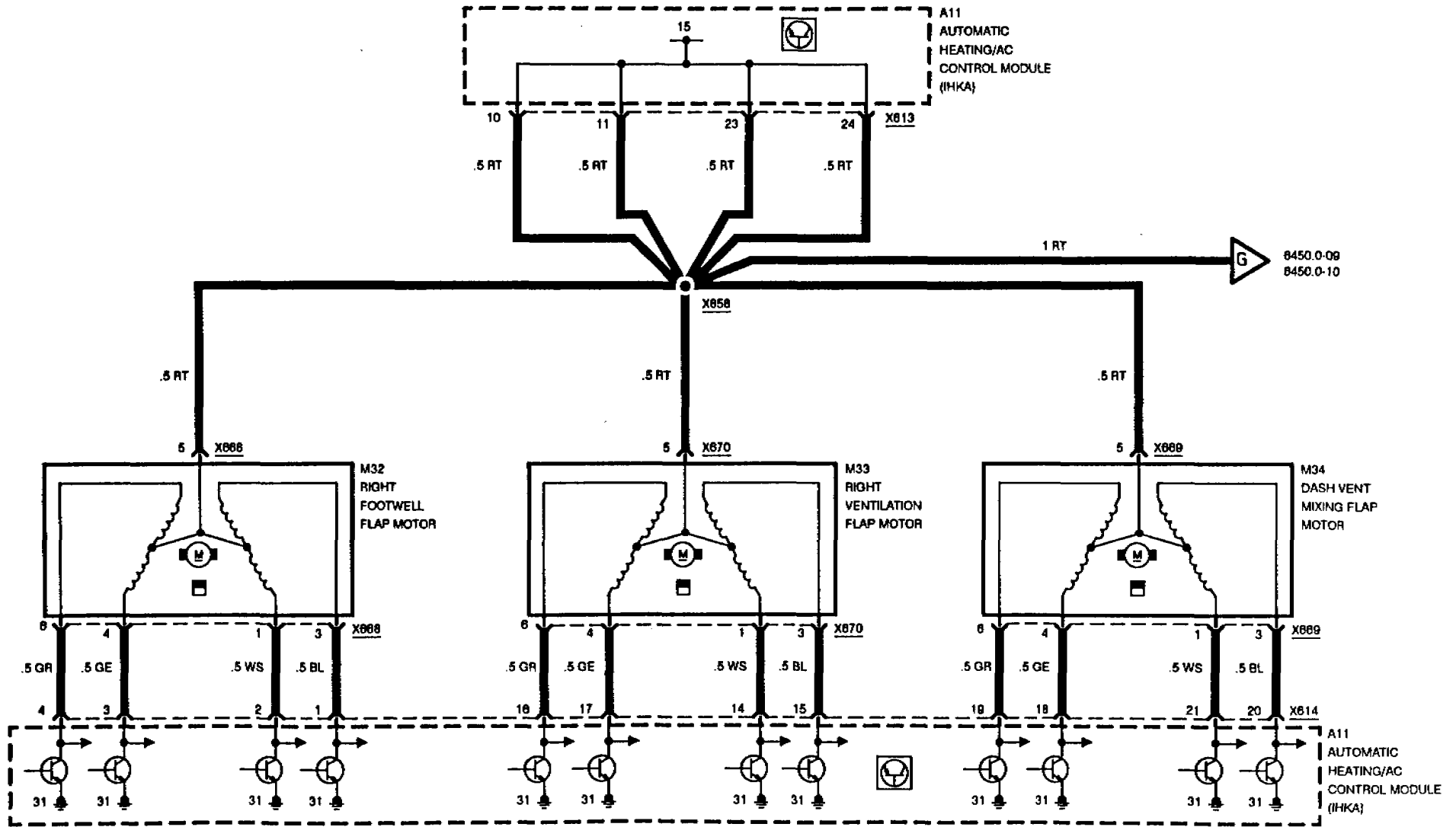


# AUTOMATIC HEATING/AC CONTROL (IHKA) AIR DELIVERY



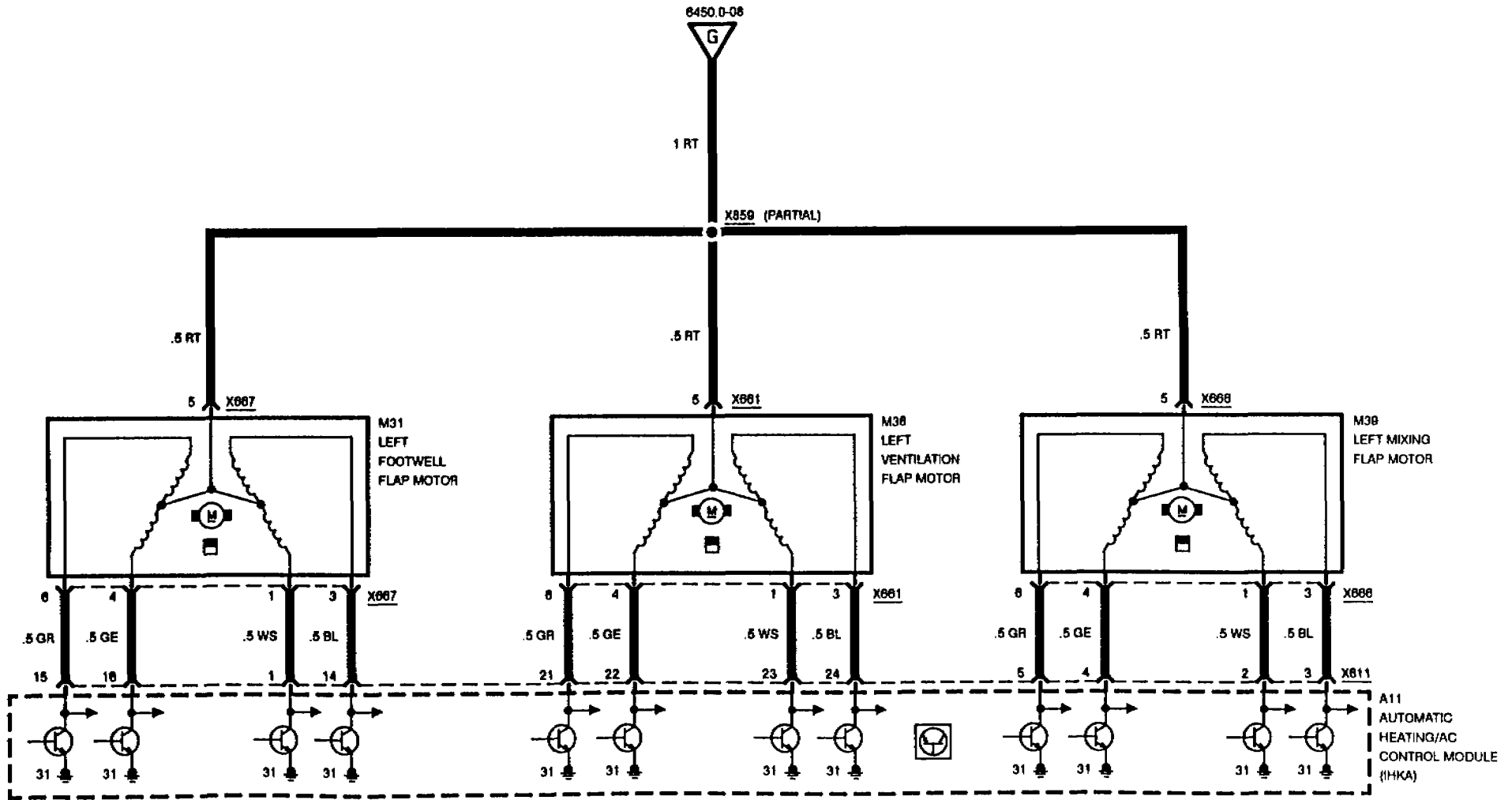


# AUTOMATIC HEATING/AC CONTROL (IHKA) AIR DELIVERY





# AUTOMATIC HEATING/AC CONTROL (IHKA) AIR DELIVERY

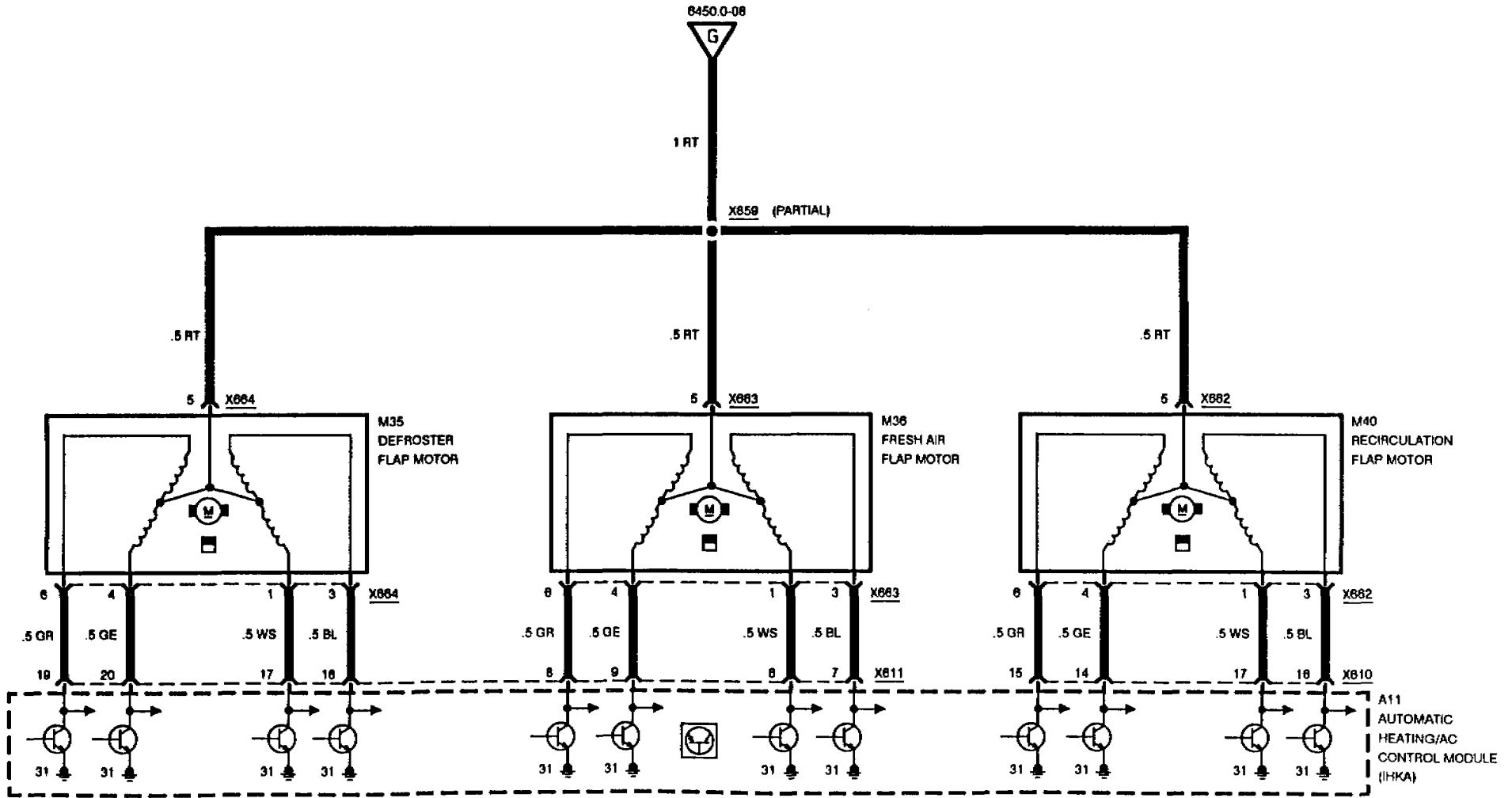






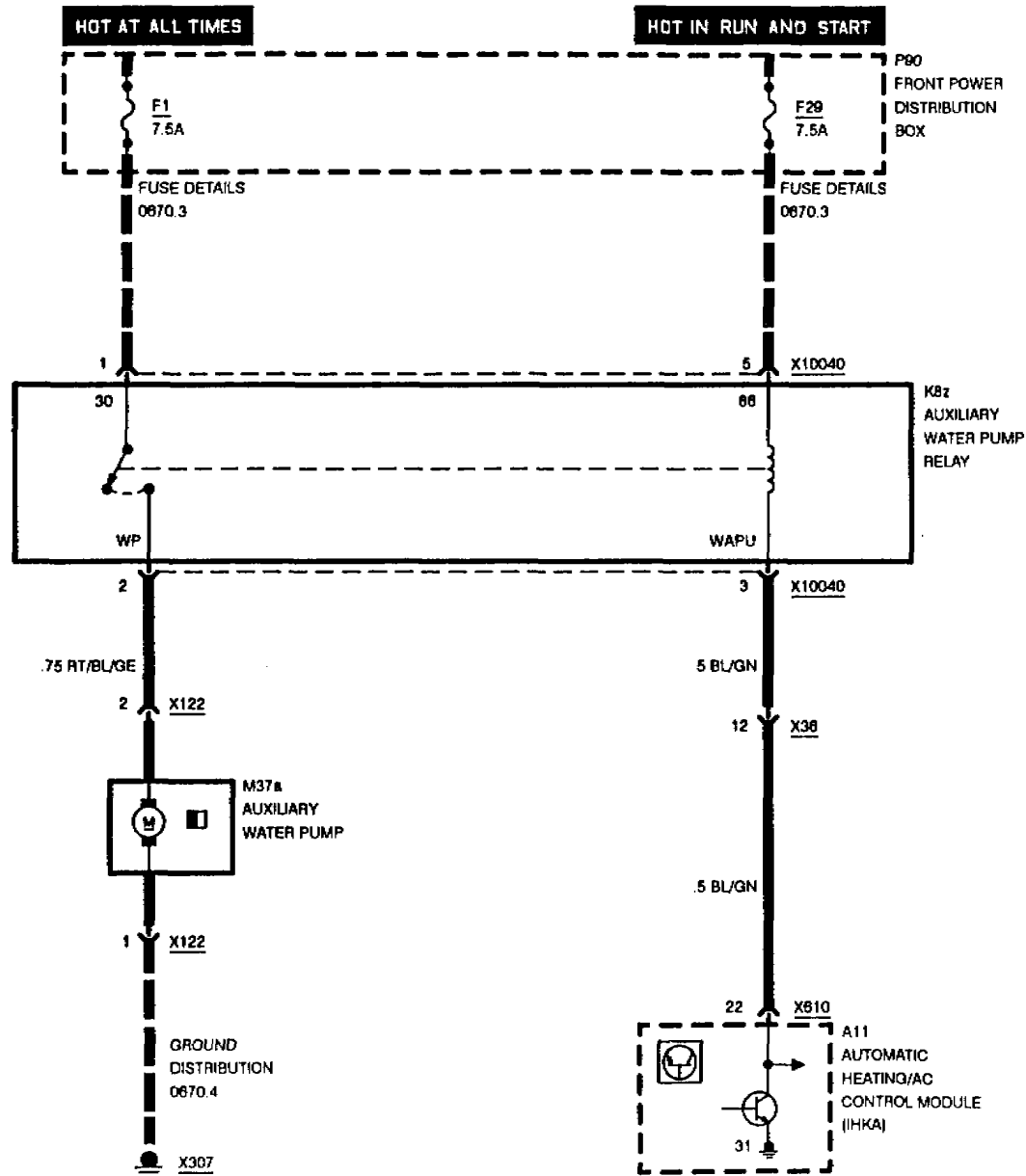
# AUTOMATIC HEATING/AC CONTROL (IHKA)

## AIR DELIVERY





# AUTOMATIC HEATING/AC CONTROL (IHKA)

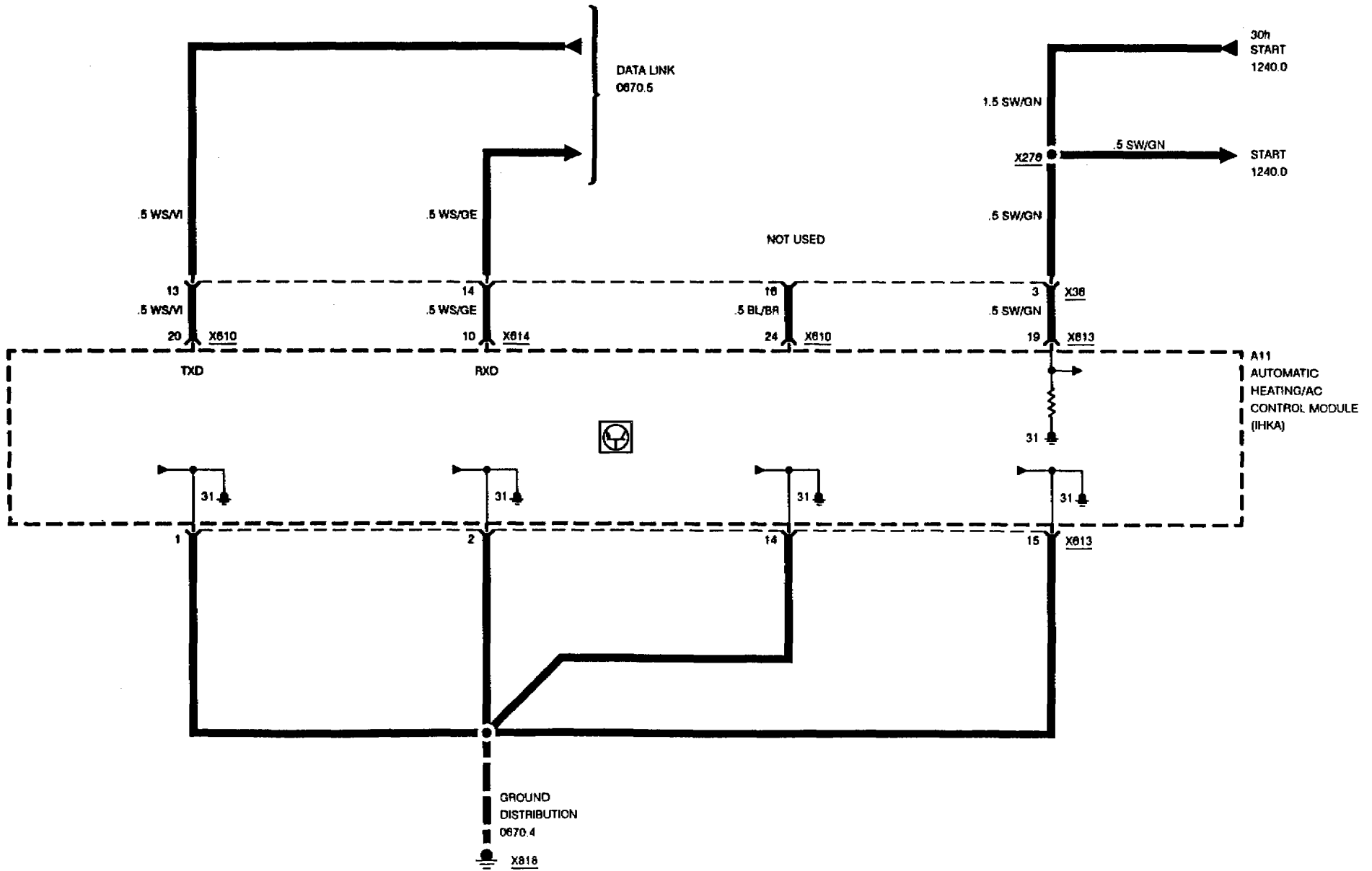








# AUTOMATIC HEATING/AC CONTROL (IHKA) DATA LINK AND STARTER INPUT



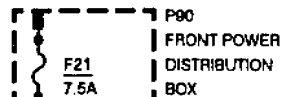


# AUTOMATIC HEATING/AC CONTROL (IHKA)

## AUC

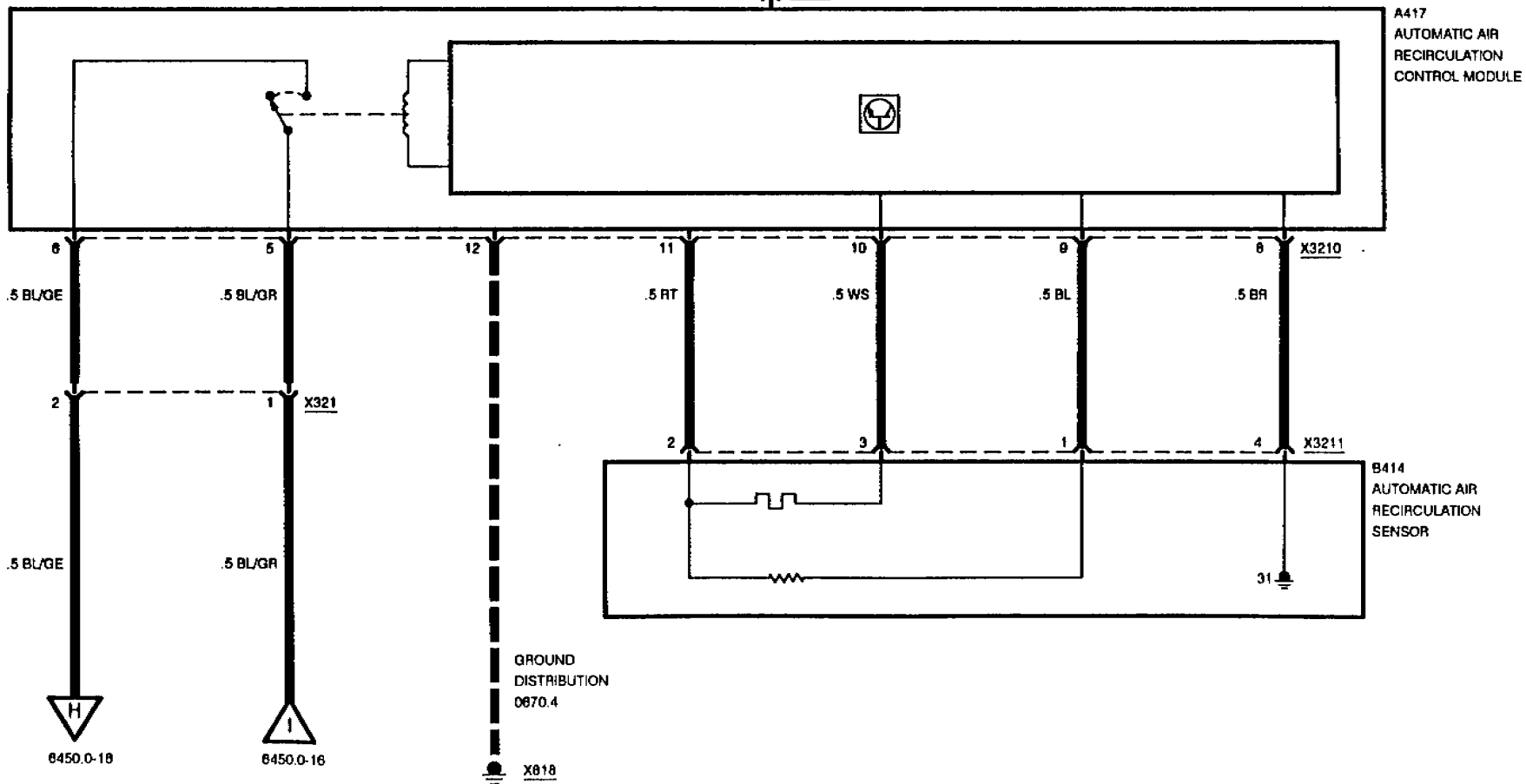


HOT IN RUN AND START



FUSE DETAILS  
0670.3

13 X3210





BMW  
**8**

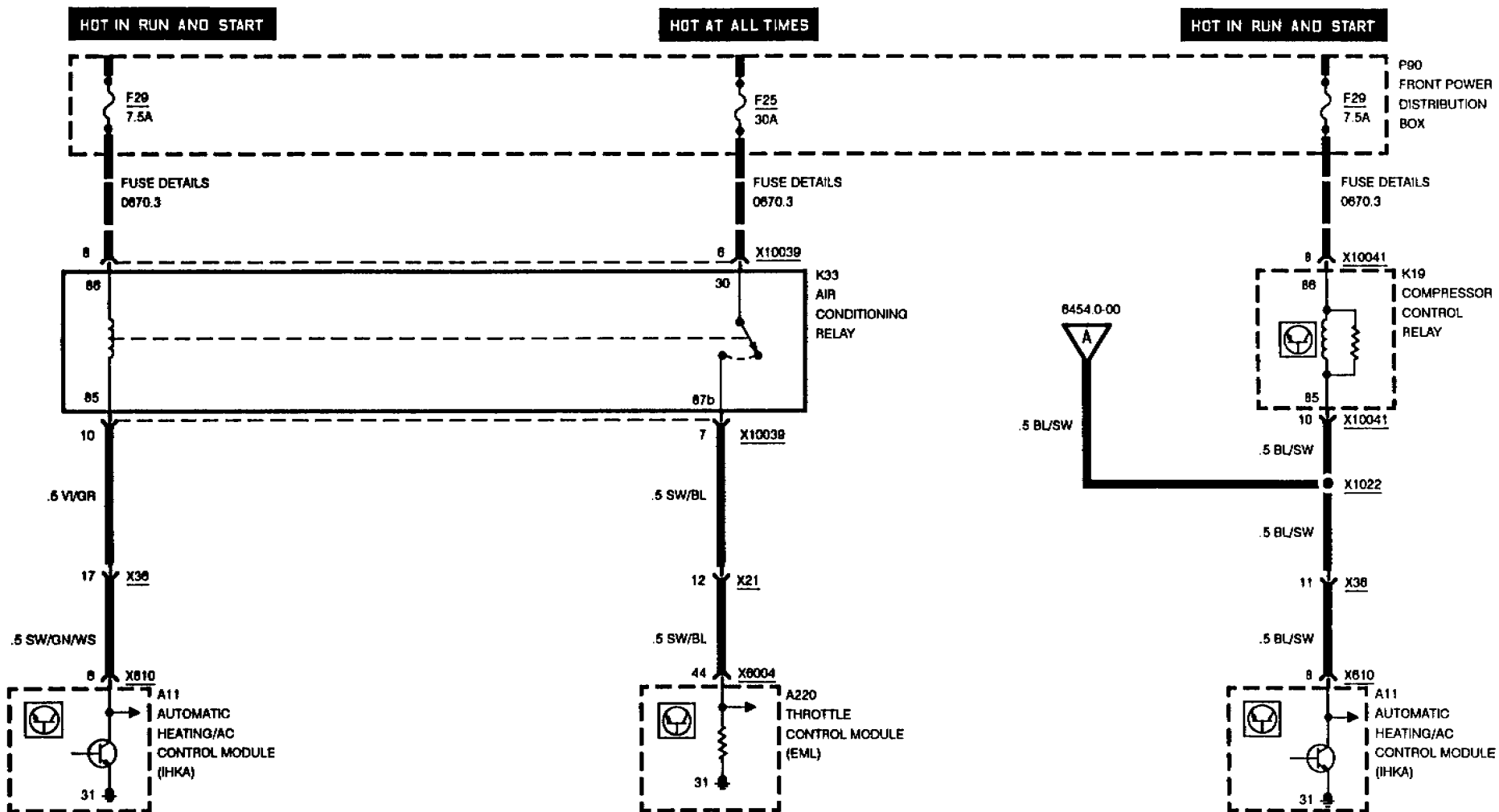
6454.0







# AUXILIARY FAN

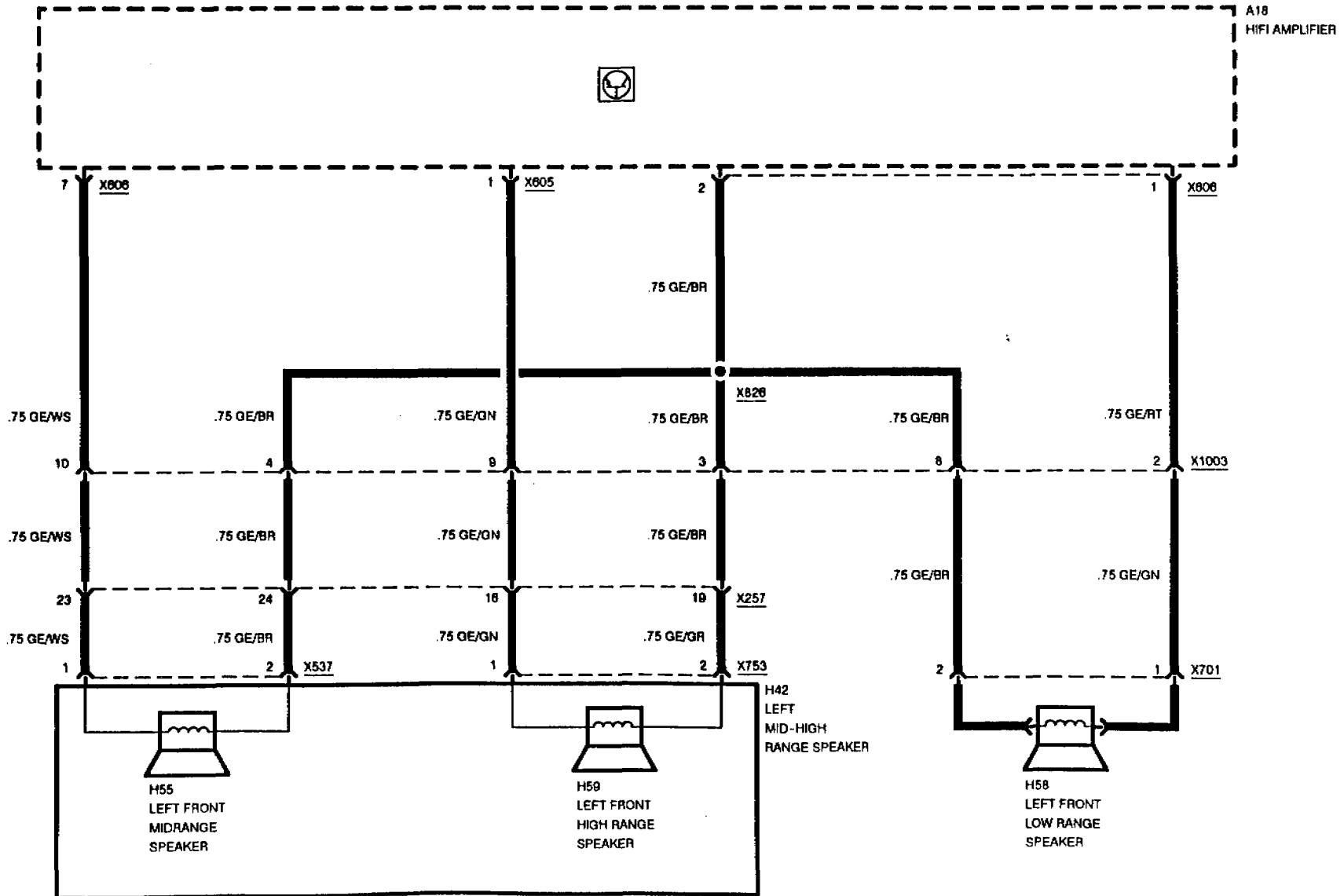






# RADIO/HIFI

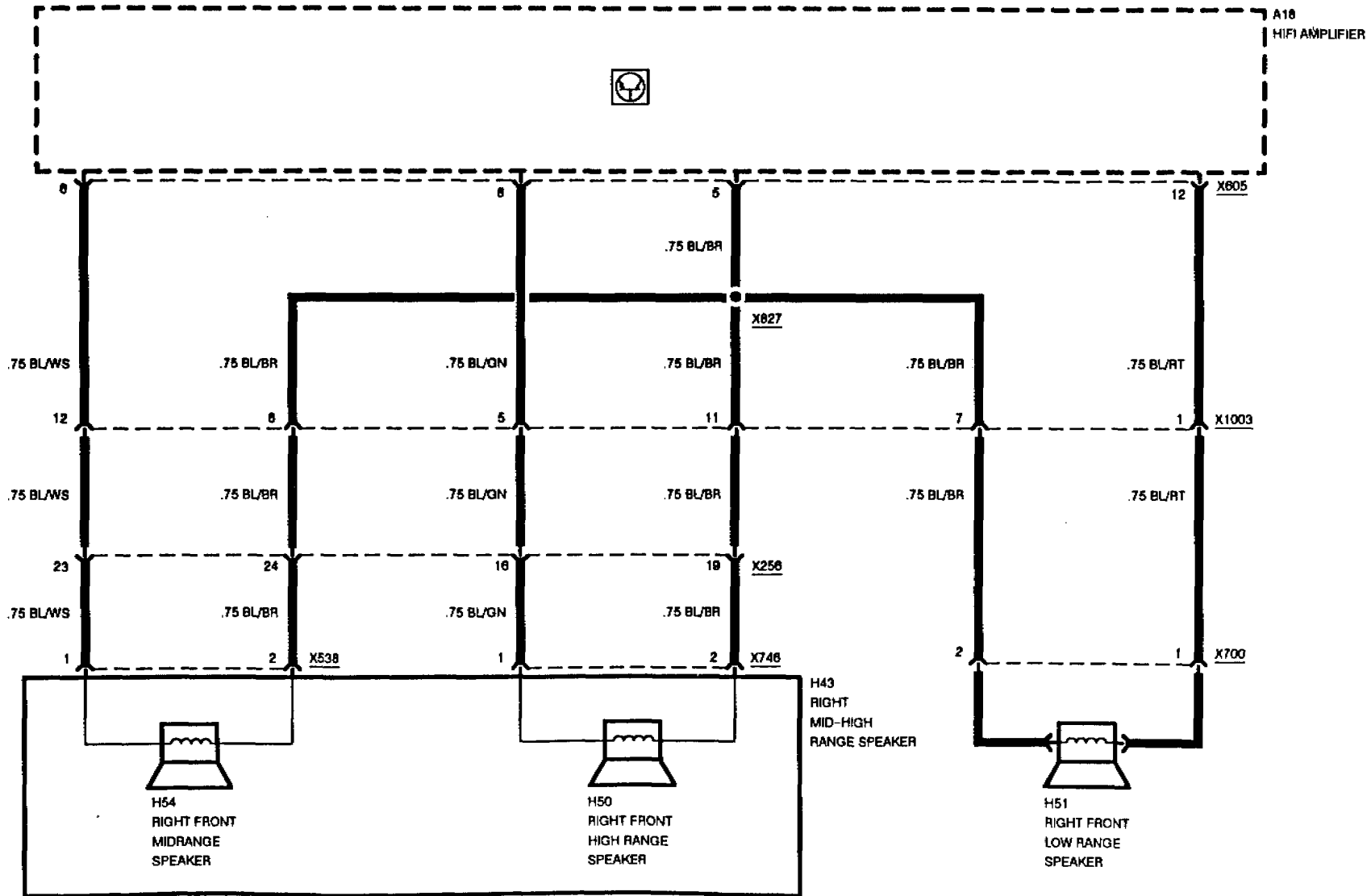
## HIFI, 10-SPEAKER-SYSTEM, FRONT





# RADIO/HIFI

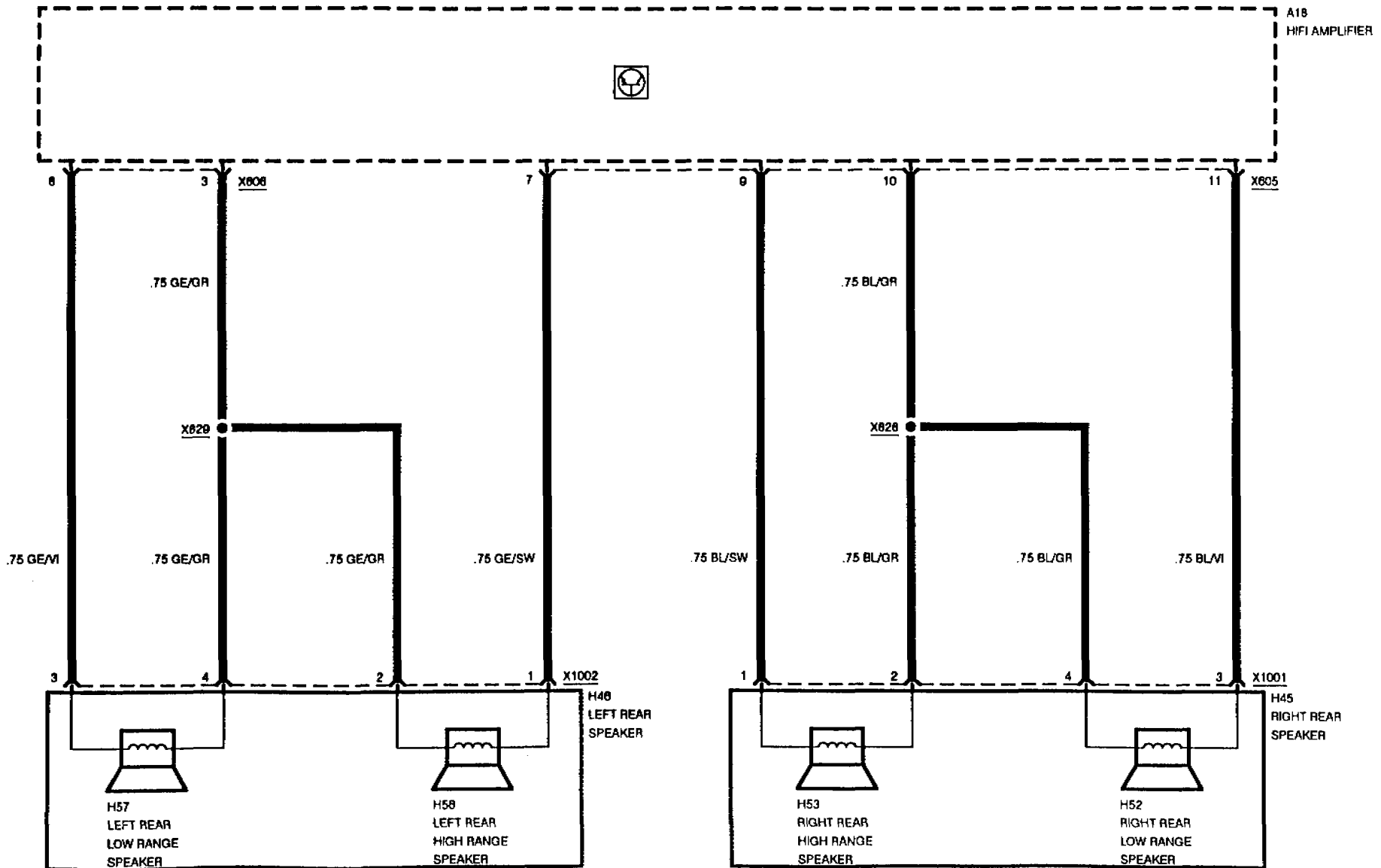
## HIFI, 10-SPEAKER-SYSTEM, FRONT





# RADIO/HIFI

## HIFI, 10-SPEAKER-SYSTEM, REAR

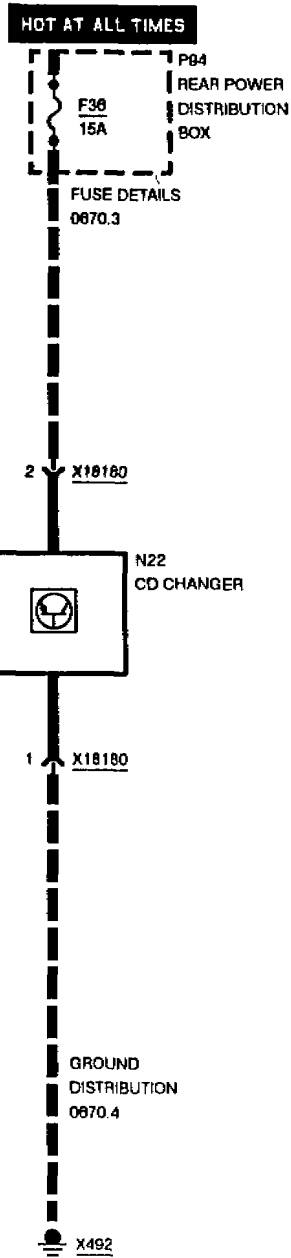
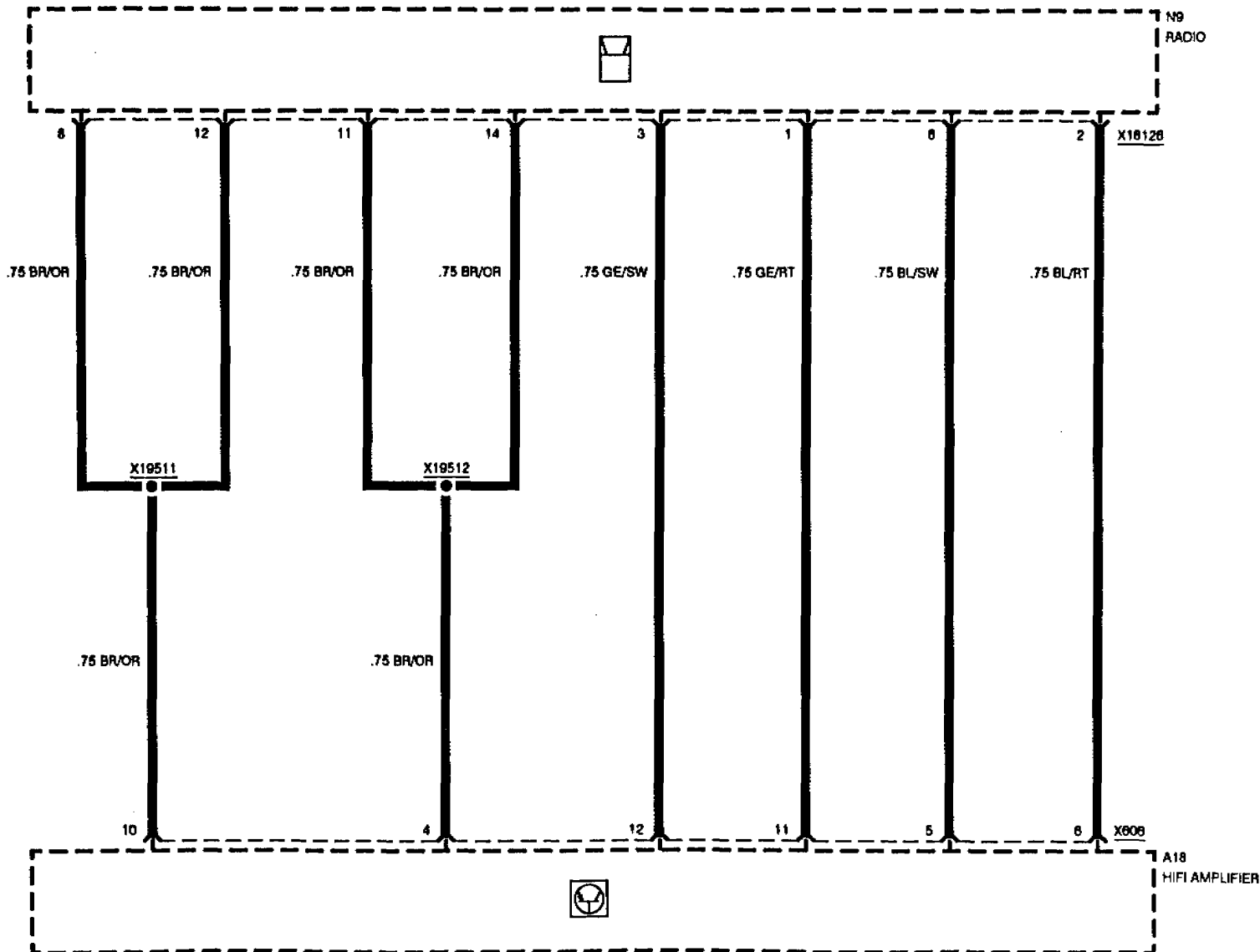




# RADIO/HIFI

## HIFI, 10-SPEAKER SYSTEM (ONE COMPONENT)

EARLY PRODUCTION

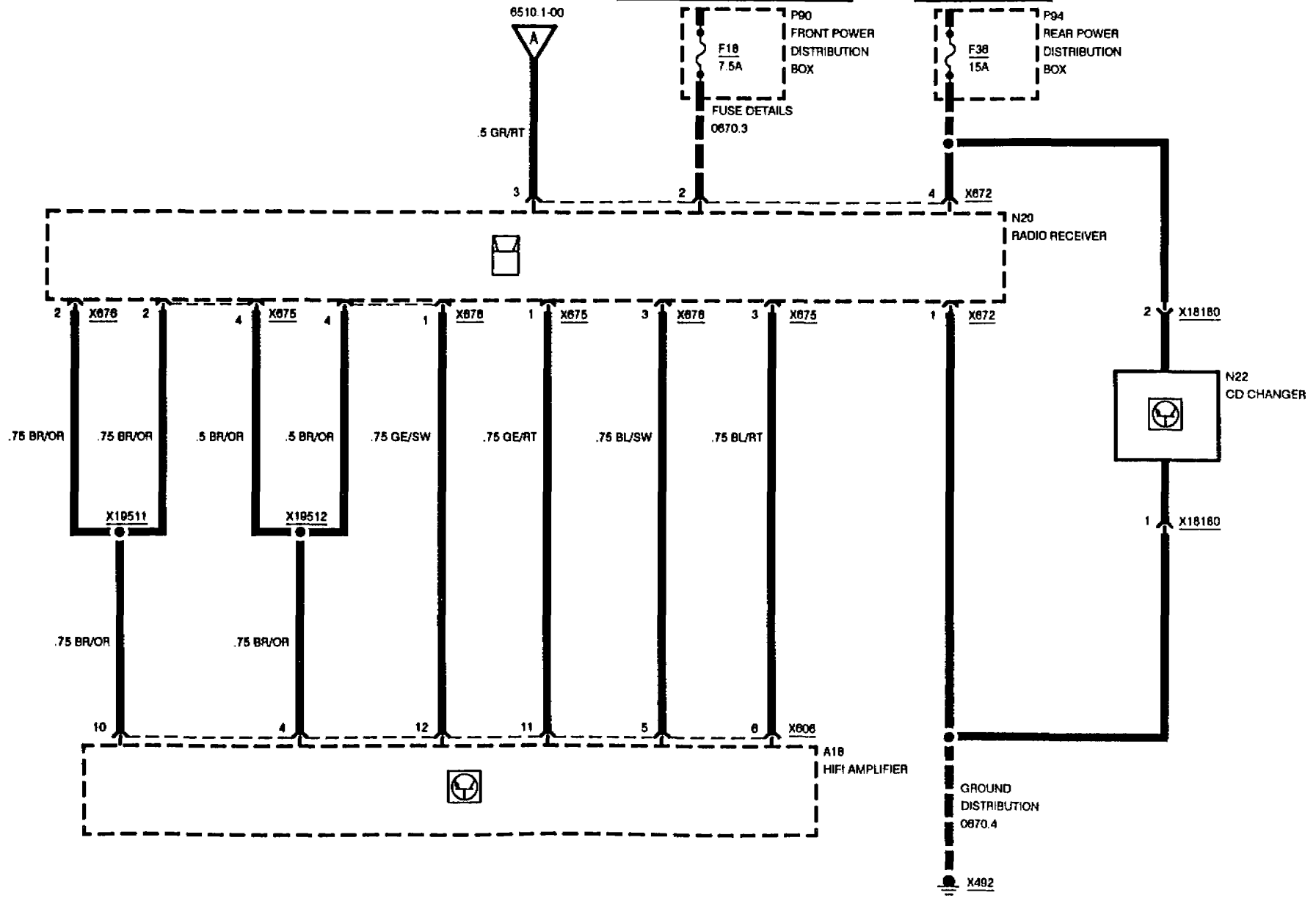




# RADIO/HIFI

## HIFI, 10-SPEAKER SYSTEM (TWO COMPONENTS)

EARLY PRODUCTION



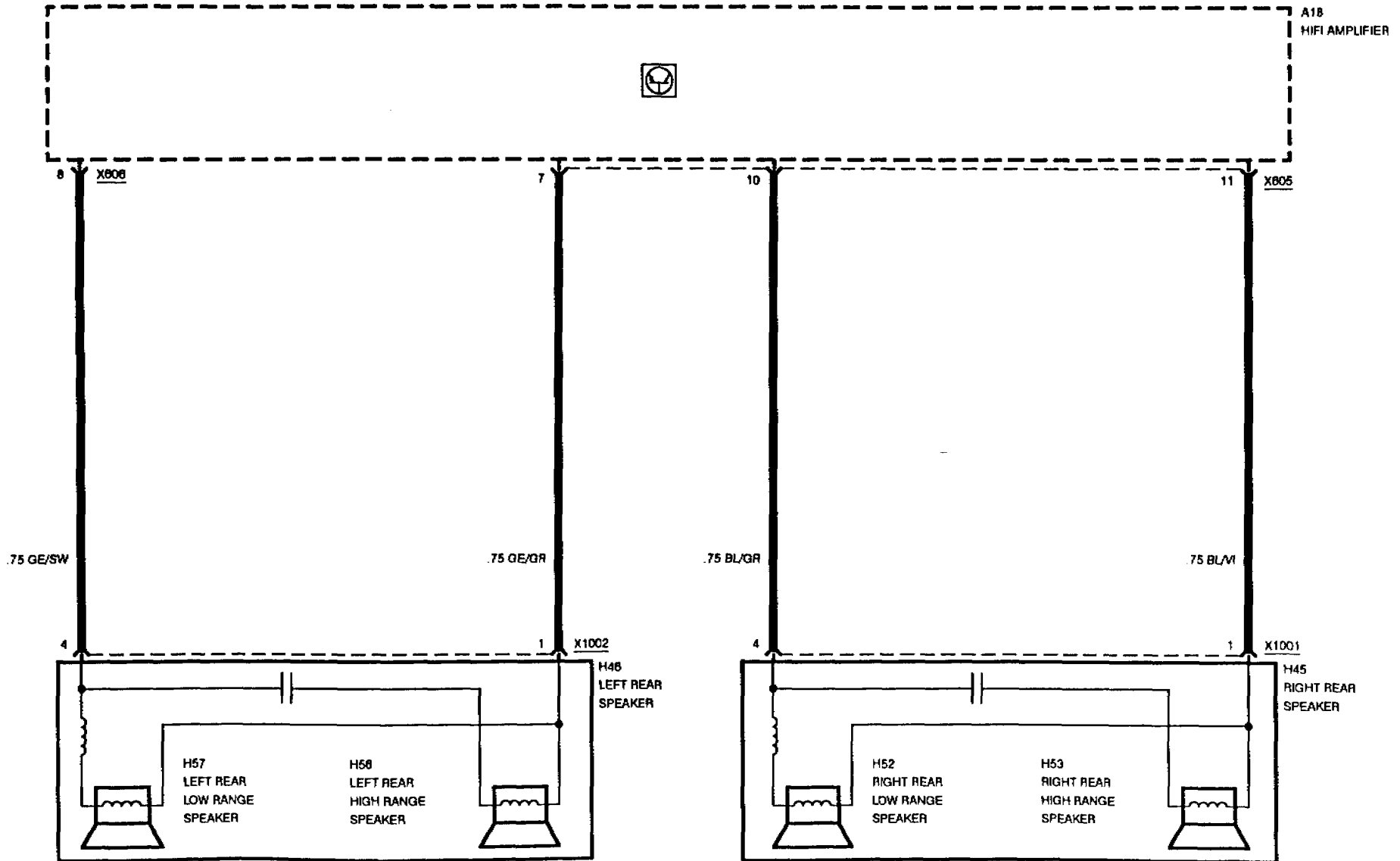




# RADIO/HIFI

## HIFI, 10-SPEAKER-SYSTEM, REAR

EARLY PRODUCTION

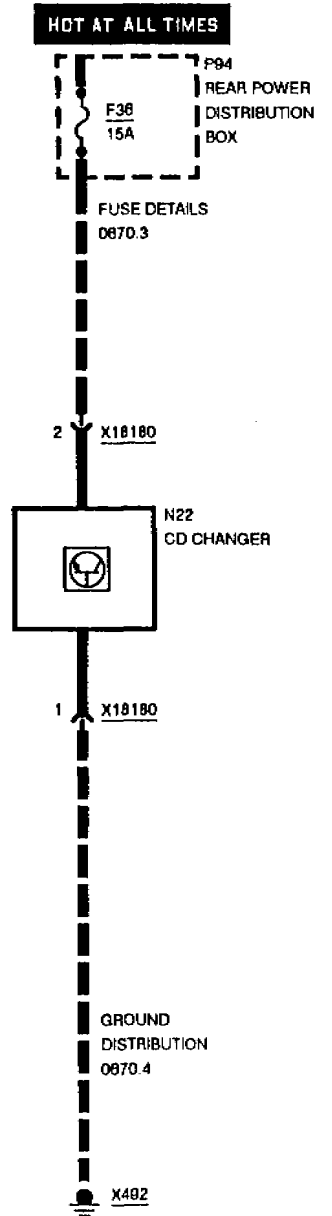
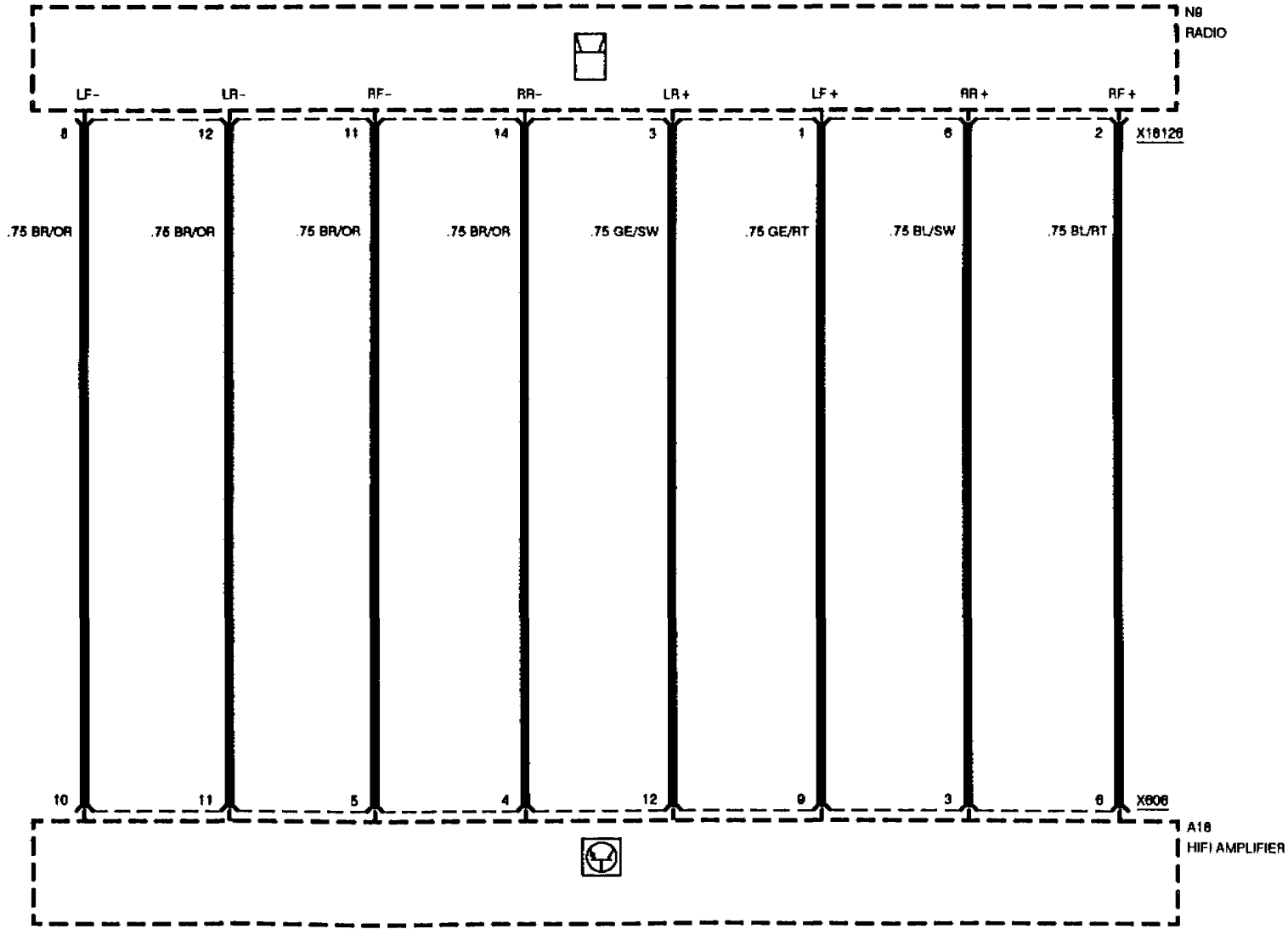




# RADIO/HIFI

## HIFI, 10-SPEAKER SYSTEM (ONE COMPONENT)

EARLY PRODUCTION

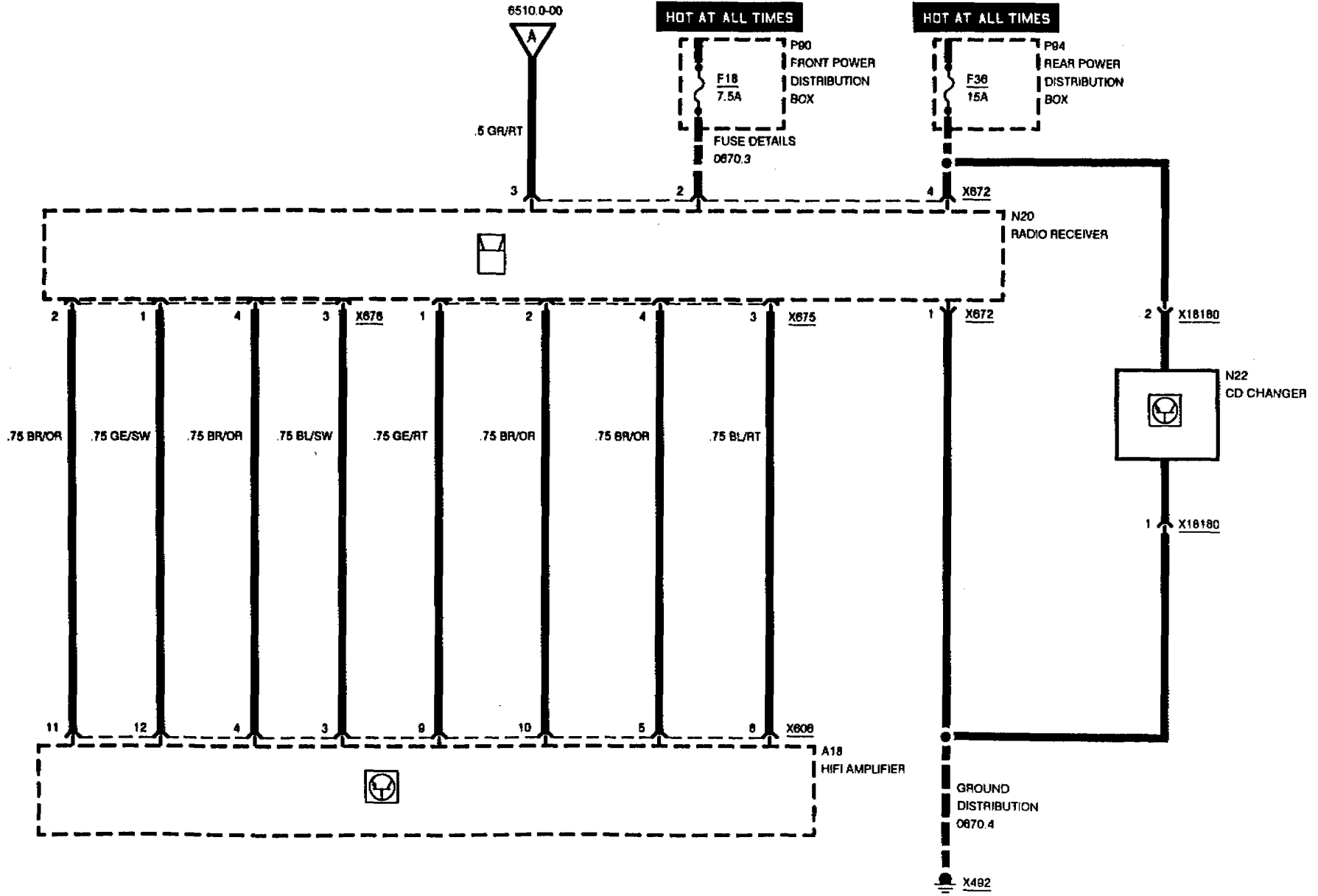




# RADIO/HIFI

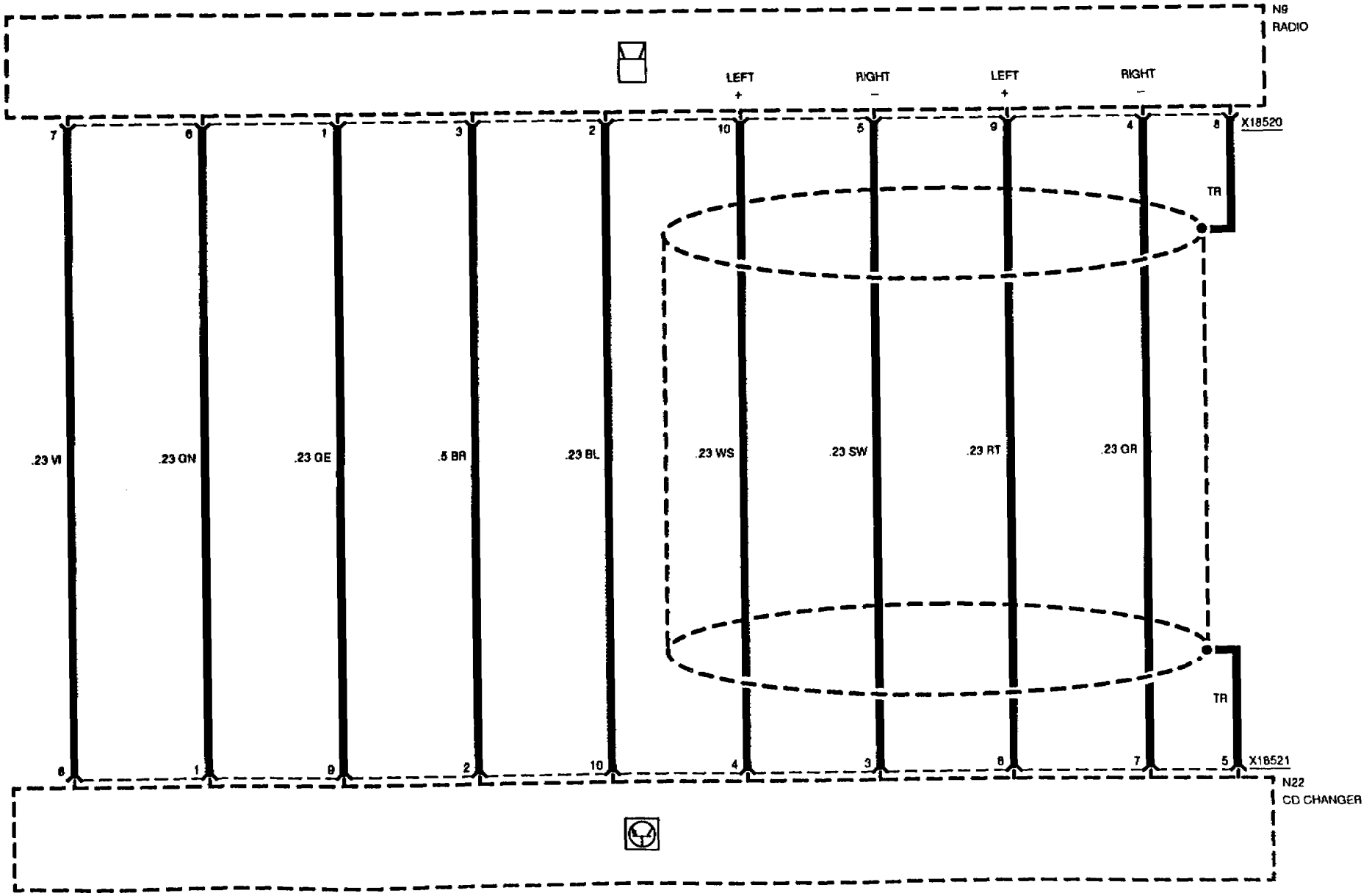
## HIFI, 10-SPEAKER SYSTEM (TWO COMPONENTS)

EARLY PRODUCTION





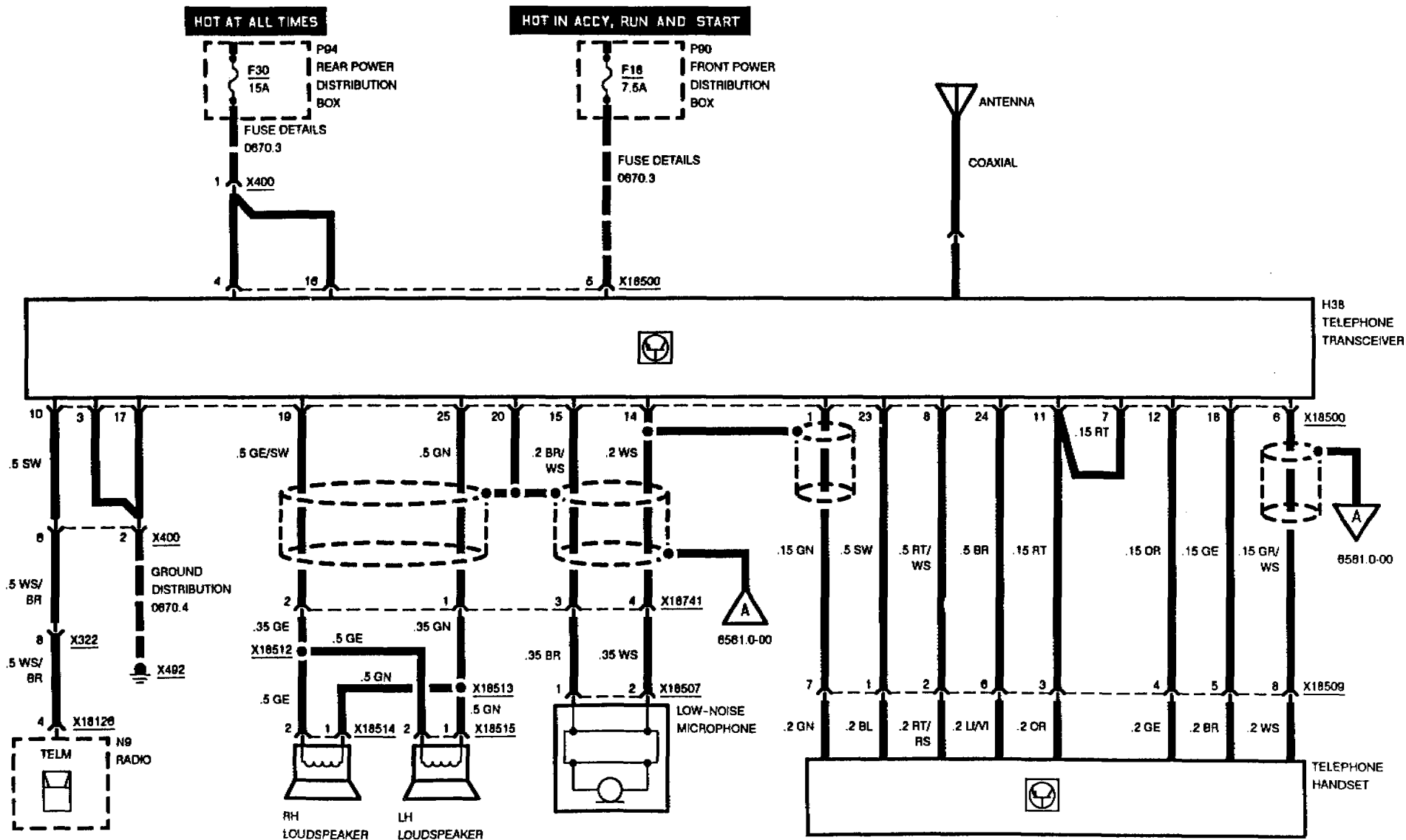
**RADIO/HIFI**  
**HIFI, 10-SPEAKER SYSTEM**





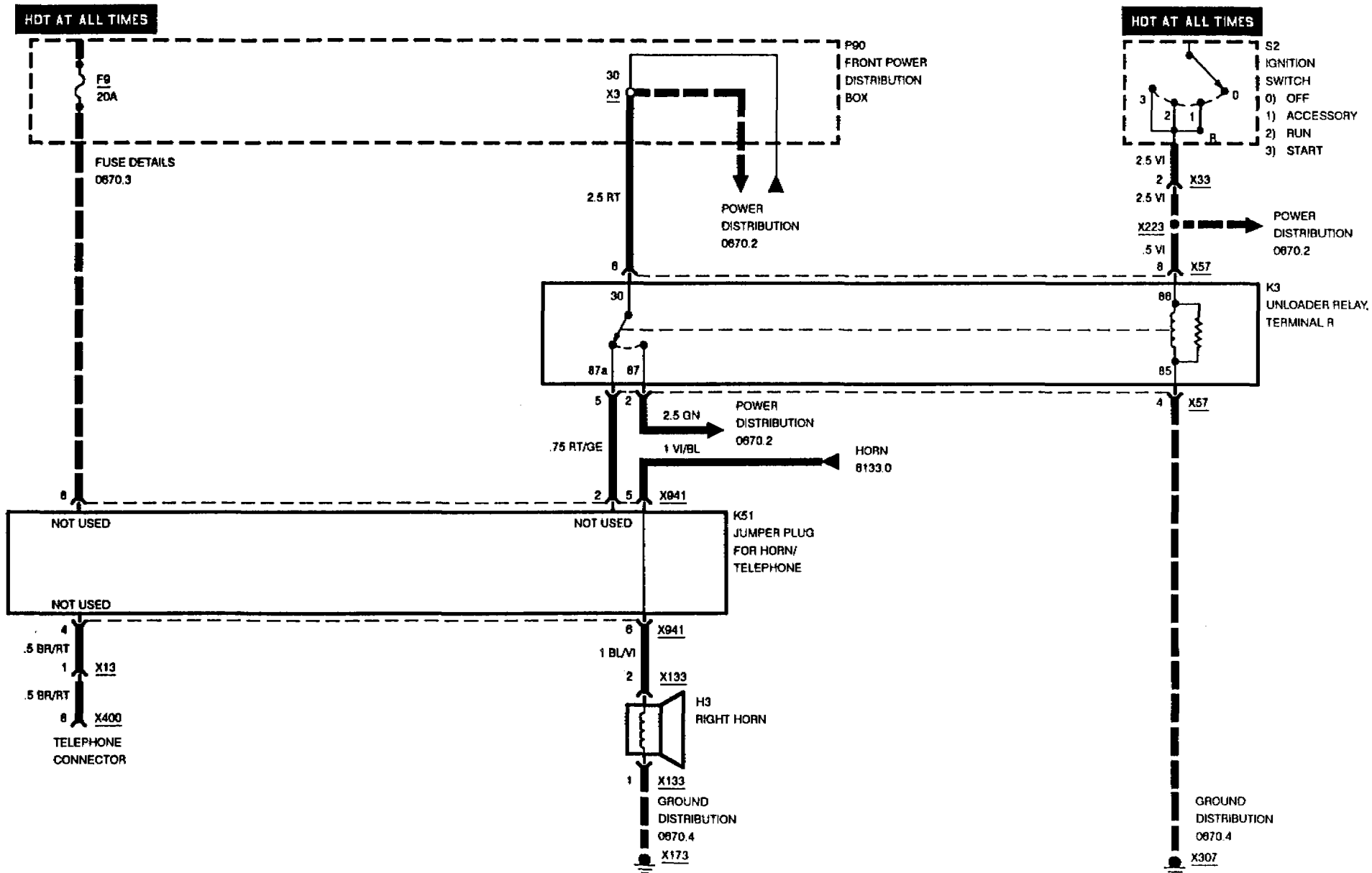
# CELLULAR TELEPHONE (PROVISIONS)

## AMPS SYSTEM





# CELLULAR TELEPHONE (PROVISIONS)



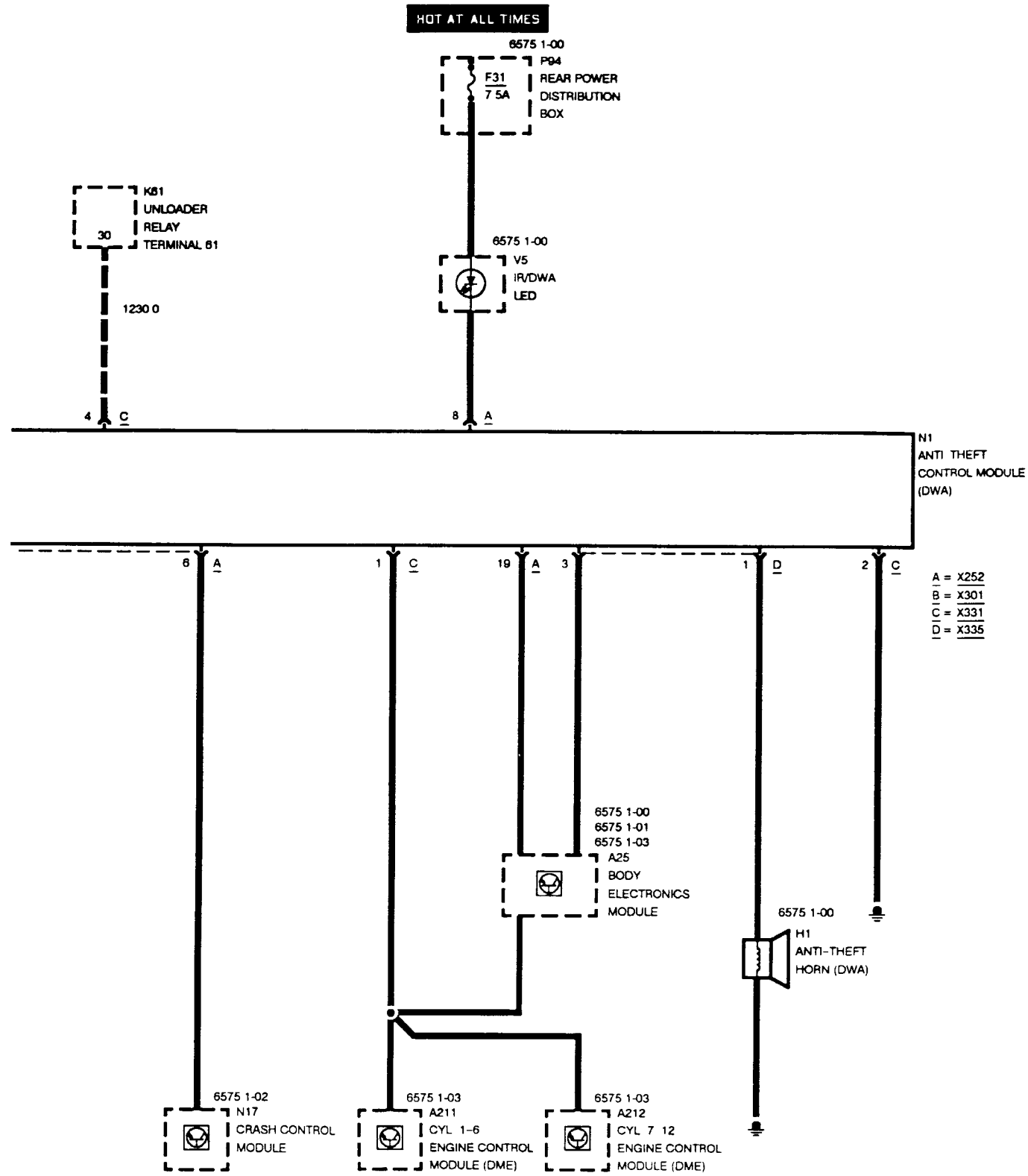
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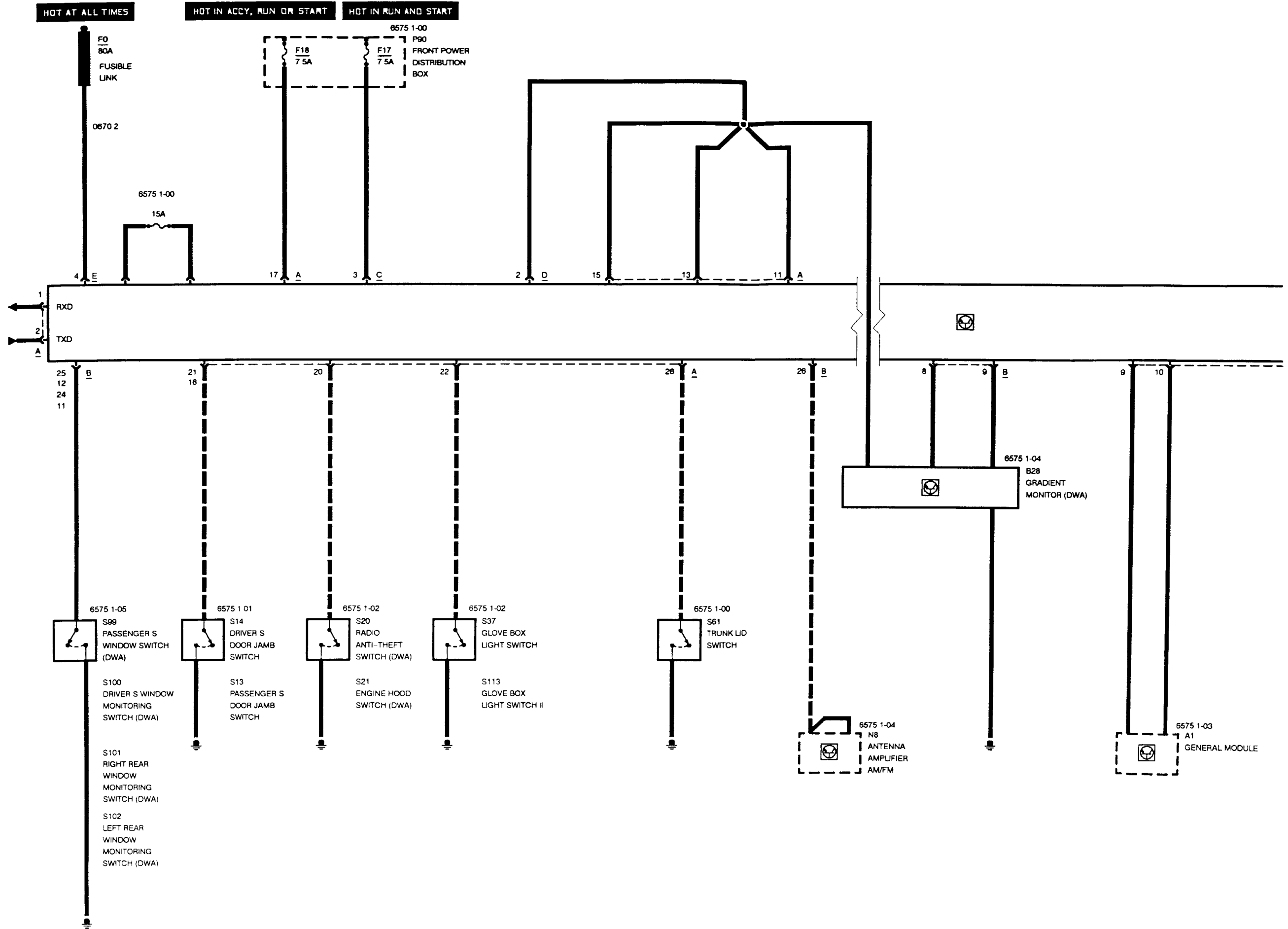
6561.0-02

**ANTI-THEFT SYSTEM III (DWA III)  
BLOCK DIAGRAM**



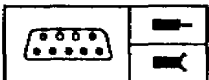








# ANTITHEFT SYSTEM III (DWA III)



## Pin Assignments

- A=X252 26 pins, black
- B=X301 26 pins, white
- C=X331 5 pins, black
- D=X335 4 pins

### X252

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
1	E	Diagnostic link RxD	Diagnostic connector			
2	A	Diagnostic link TxD	Diagnostic connector			
3		Not used				
4		Not used				
5		Not used				
6	A	Flash exterior lamps signal	Crash control unit			
7		Not used				
8	A	Status-LED	IR/DWA LED	Ground		
9	E	Lock signal ZS1N	General module	12 V	Status display	
10	E	Lock signal ZS1	General module	12 V	Status display	
11	E	Lock signal ZS21 simulation		12 V		
12		Not used				
13	E	Lock signal ZS22 simulation		12 V		
14		Not used				



## ANTITHEFT SYSTEM III (DWA III)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
15	E	Lock signal HKS simulation		12 V		
16	E	Passenger's door contact input	Passenger's door jamb switch	Ground	Status display	
17	E	Connection terminal R	Fuse	12 V	Status display	
18		Not used				
19	E	Position pulse	EKM control unit	Square-wave signal	0-12 V	
20	E	Engine hood/radio status	Engine hood/radio switches	Ground	Status display	
21	E	Driver's door contact input	Driver's door jamb switch	Ground	Status display	
22	E	Glove box door status	Glove box door switches	Ground	Status display	
23		Not used				
24		Not used				
25		Not used				
26	E	Trunk lid status signal	Trunk lid switch			

### X301

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
1		Not used				
2		Not used				
3		Not used				
4		Not used				
5		Not used				
6		Not used				
7		Not used				



# ANTITHEFT SYSTEM III (DWA III)

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
8	E	Tilt signal	Gradient monitor			
9	E	Tilt signal	Gradient monitor			
10		Not used				
11	E	Left rear window status	Left rear window switch			
12	E	Driver's window status	Driver's window switch			
13		Not used				
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	E	Right rear window status	Right rear window switch			
25	E	Passenger's window status	Passenger's window status			
26	E	Rear window status	Antenna amplifier AM/FM			



## ANTITHEFT SYSTEM III (DWA III)

### X331

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
1	A	Drive-away protection	DME control unit	12 V		
2	E	Ground	Body ground			
3	E	Terminal 15	Fuse 17	12 V	Status display	
4	E	Terminal 61E	Battery charge indicator	12 V		
5		Not used				

### X335

Pin	Type	Description/Function	Connection	Type of Signal	Tester Display	Measurement Notes
1	A	Alarm horn connection	Alarm horn	12 V	Tester display	
2	A	Terminal 30 for tilt sensor/ auxiliary module	Connector NG/ZM	12 V		
3	E	EKM connection	EKM control unit	Ground		
4	E	Terminal 30 voltage	Fusible link	12 V		

E = Input, A = Output, M = Ground

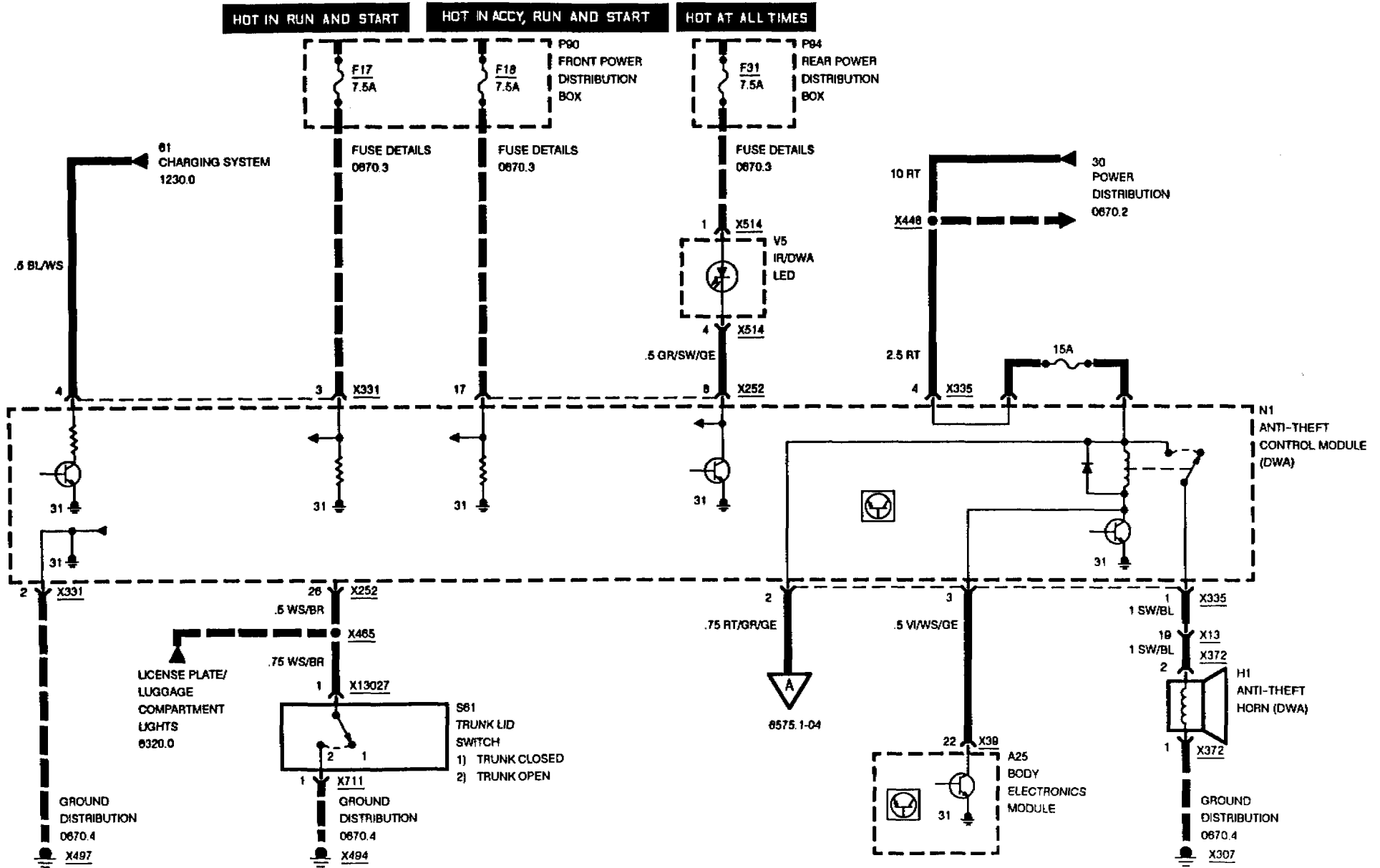
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# ANTI-THEFT SYSTEM III (DWA III)

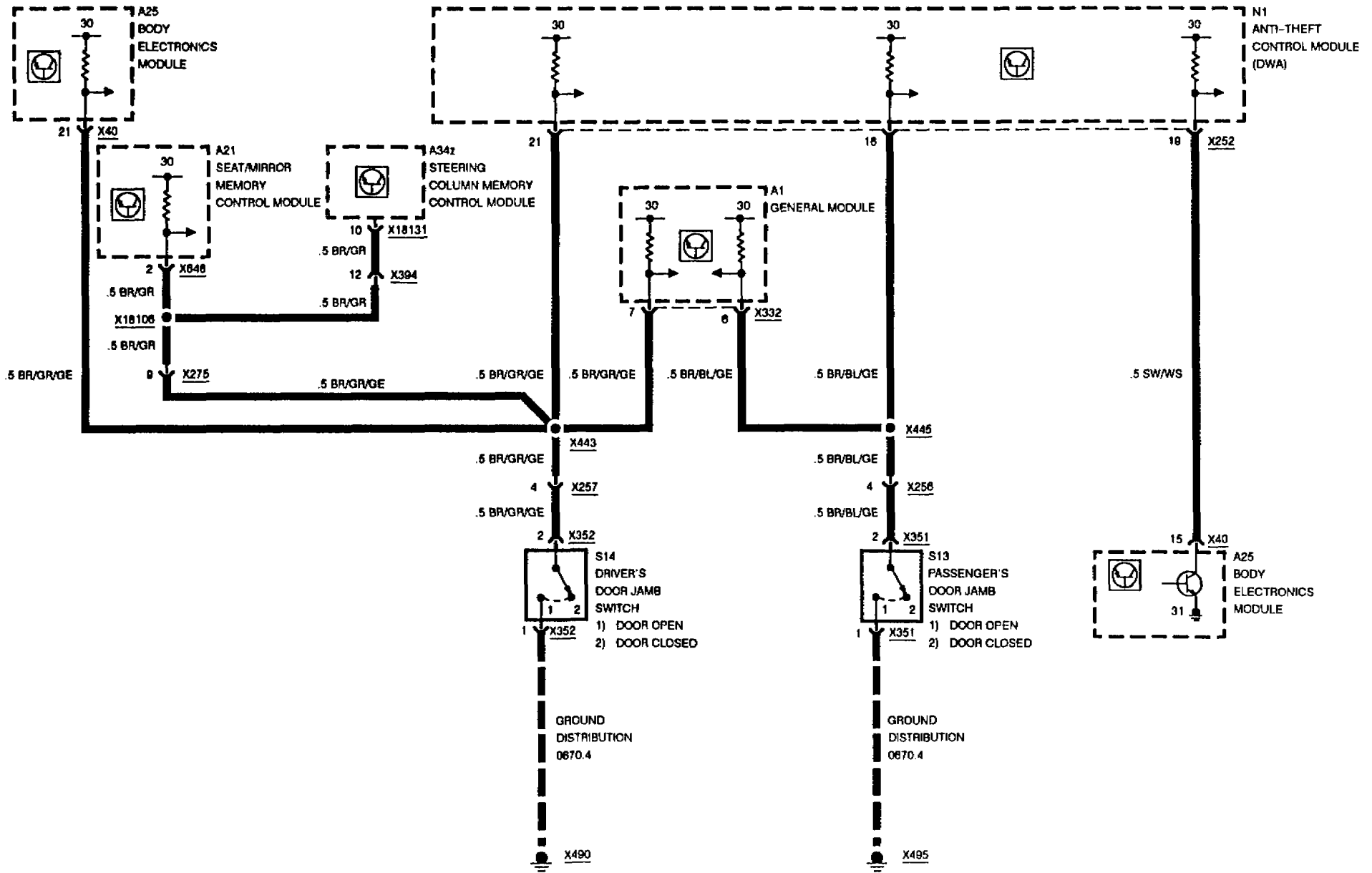
## POWER, ENGINE RUNNING INPUT, TRUNK INPUT, ANTI-THEFT HORN (DWA)







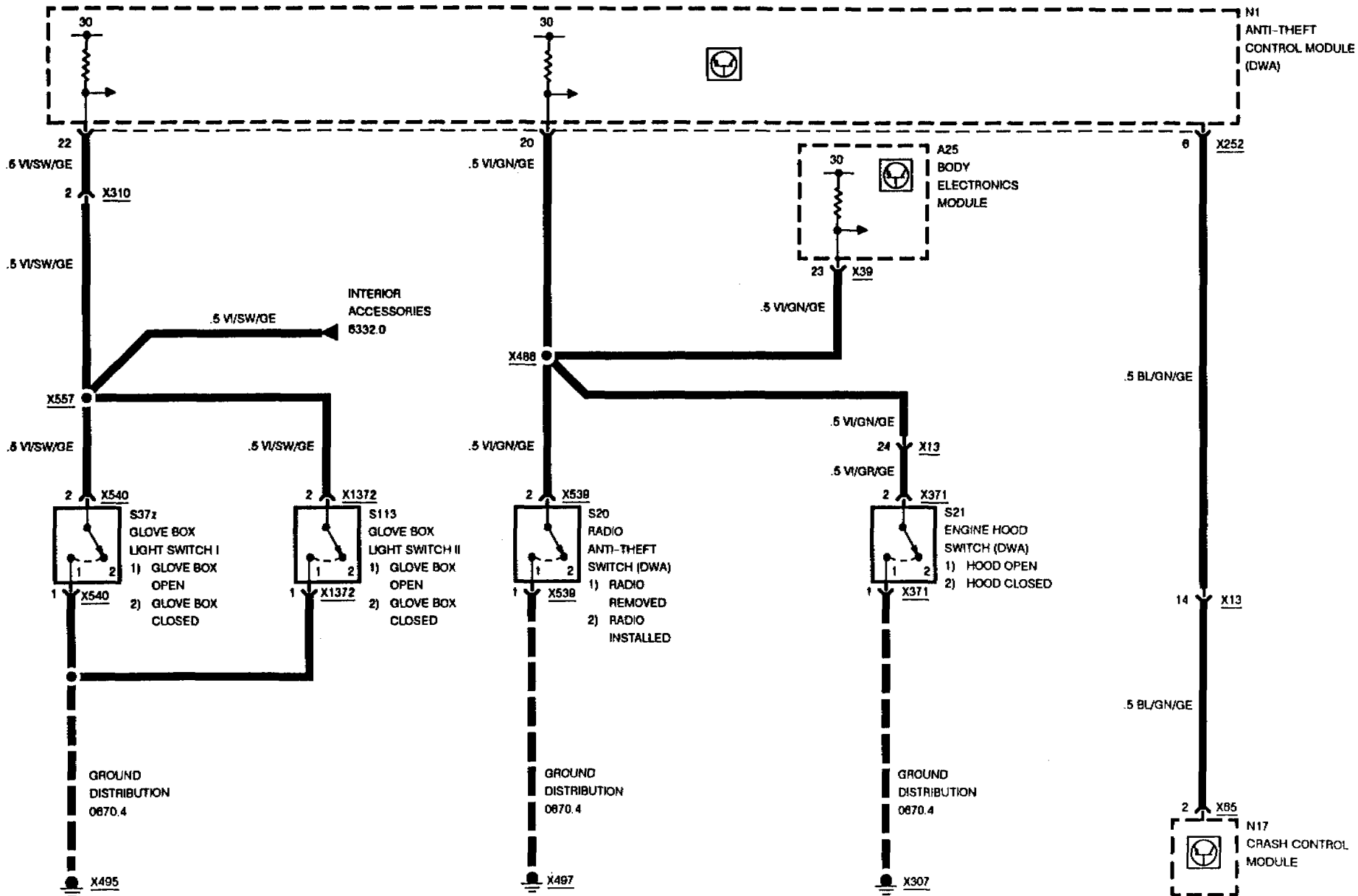
# ANTI-THEFT SYSTEM III (DWA III) FRONT DOOR CONTACTS, CODING PLUG





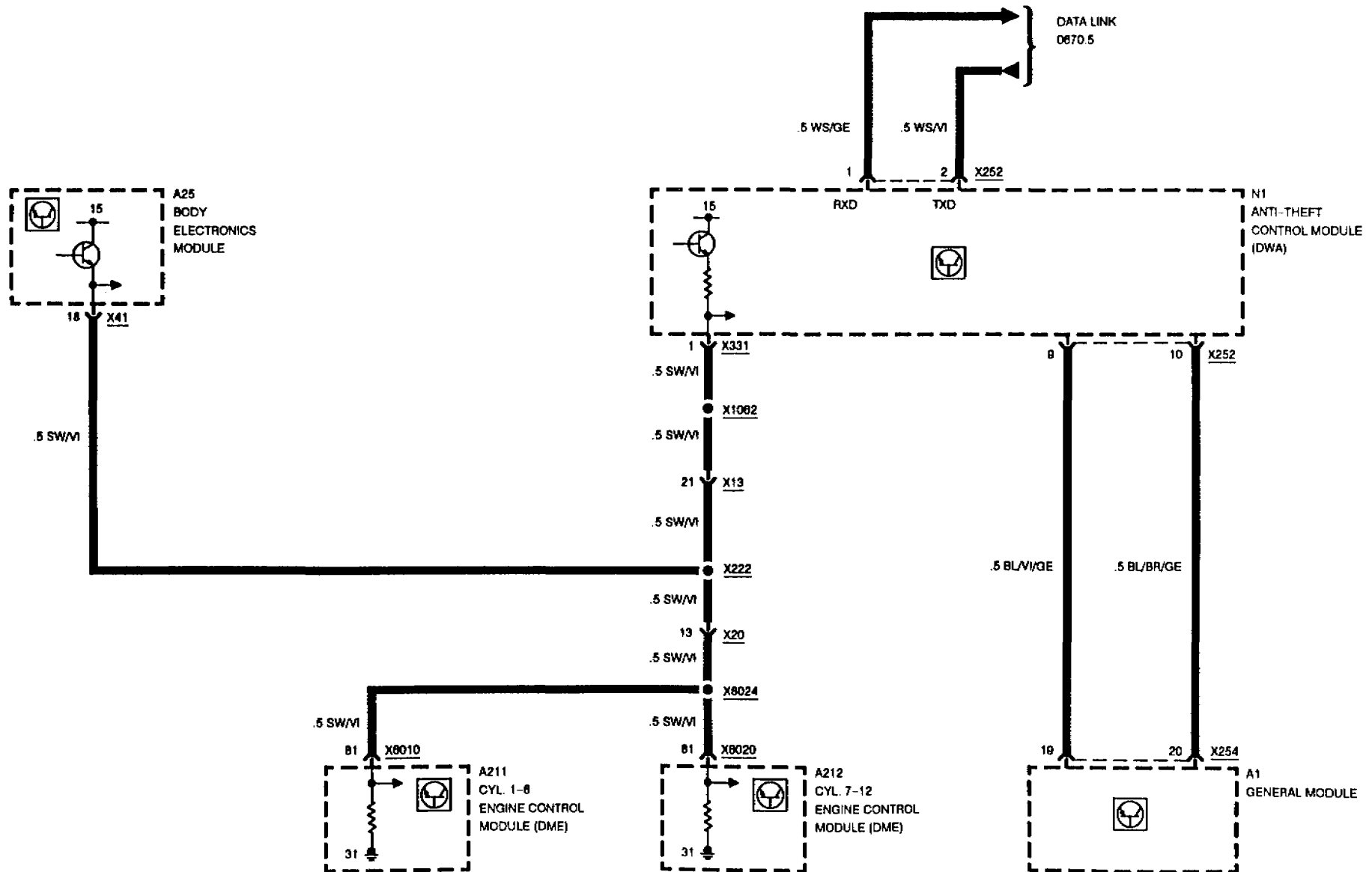
# ANTI-THEFT SYSTEM III (DWA III)

## GLOVE BOX, RADIO, ENGINE HOOD INPUTS AND VISUAL ALARM



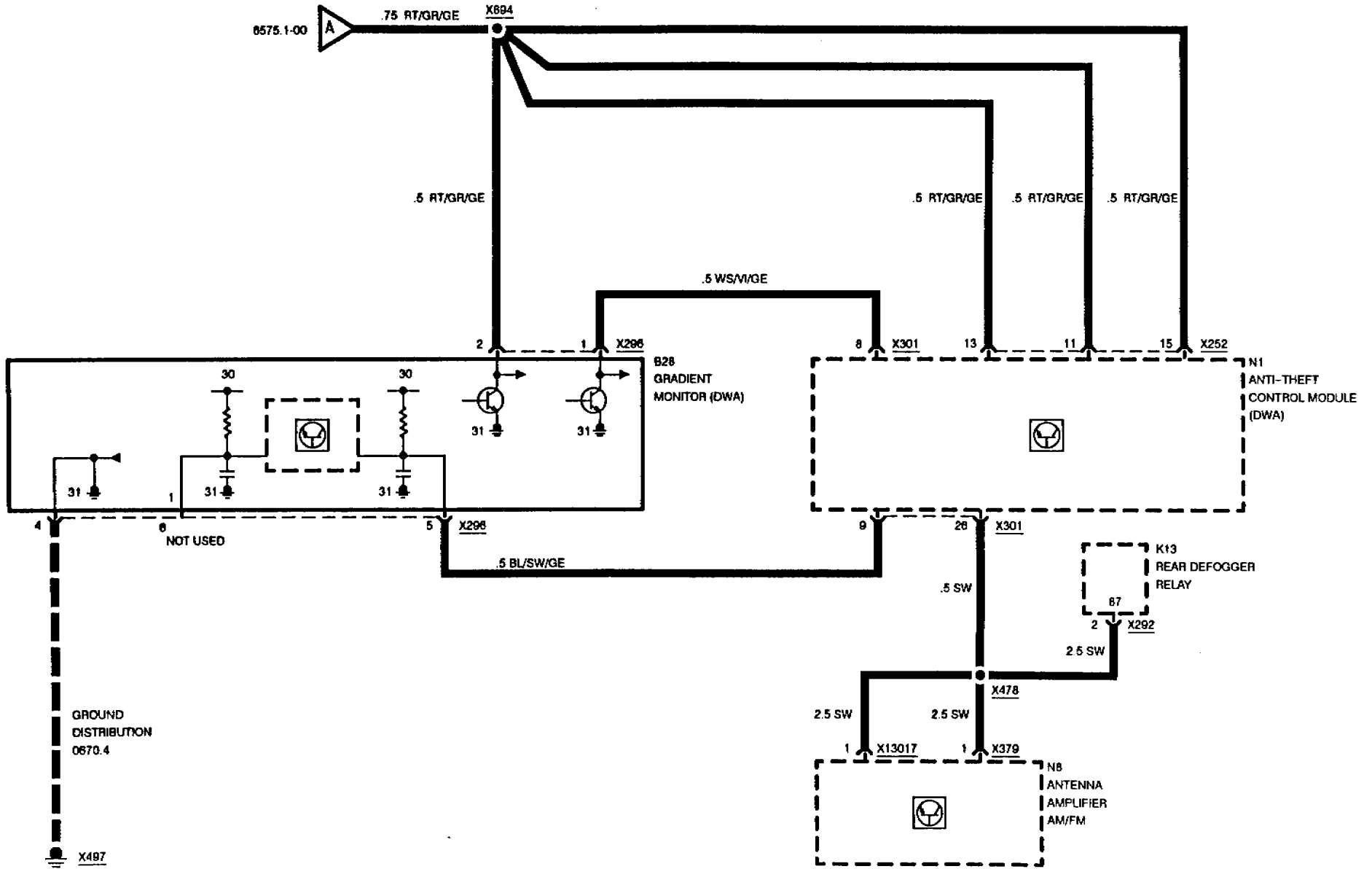


# ANTI-THEFT SYSTEM III (DWA III) DATA LINK, DRIVE AWAY PROTECTION, QZV



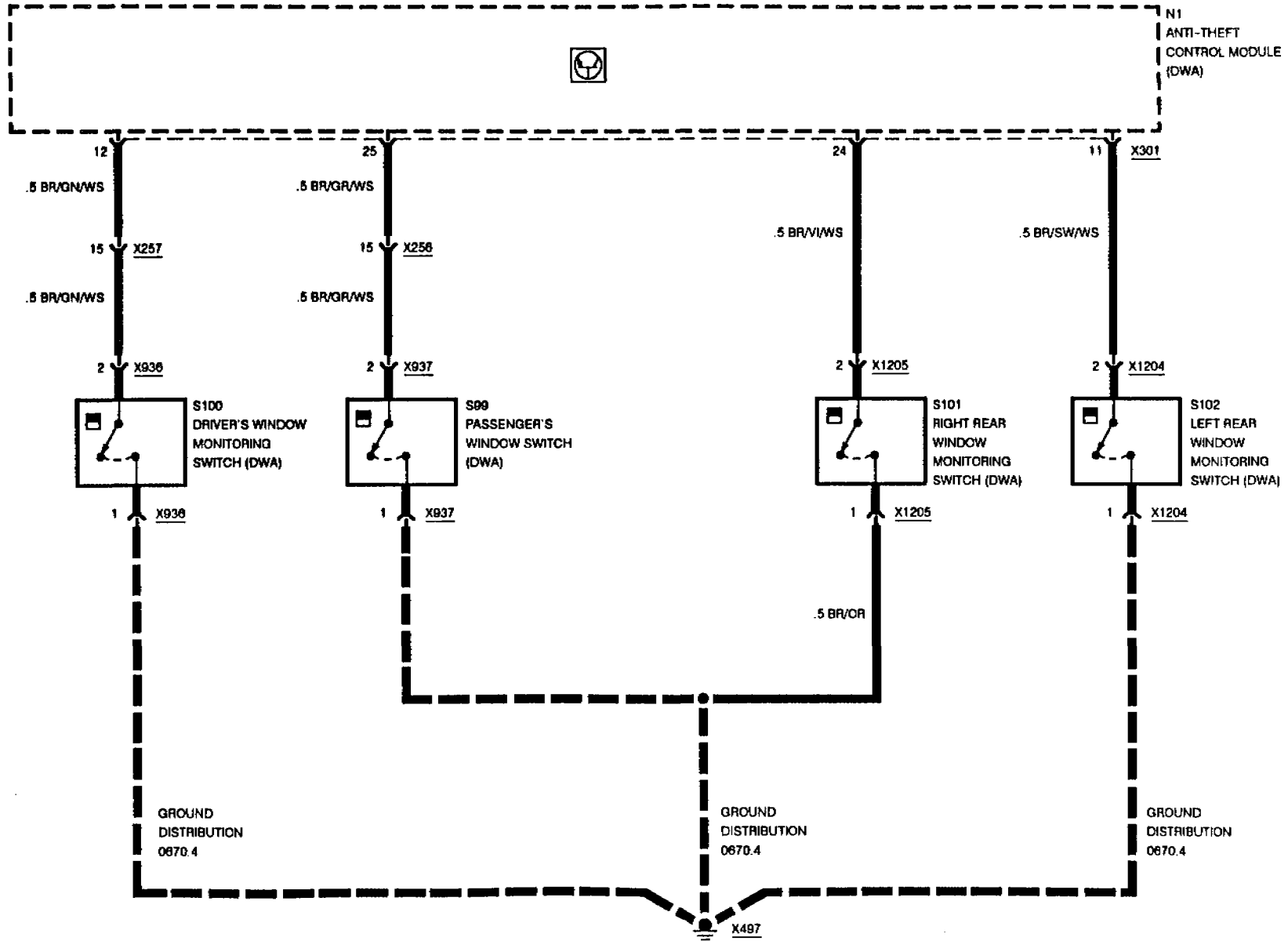


# ANTI-THEFT SYSTEM III (DWA III) GRADIENT MONITOR AND DATA LINK



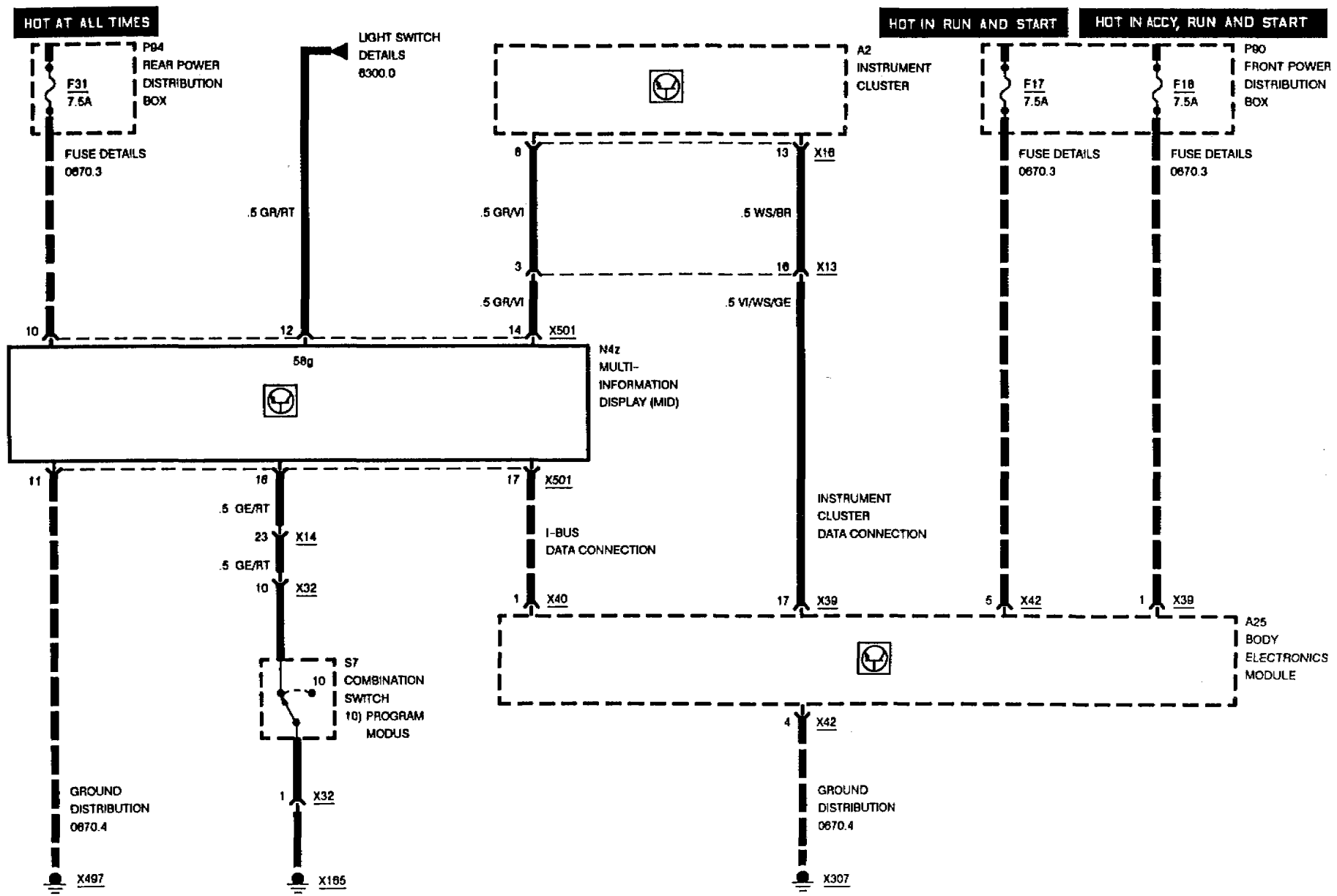


# ANTI-THEFT SYSTEM III (DWA III) FRONT AND REAR WINDOW SWITCHES





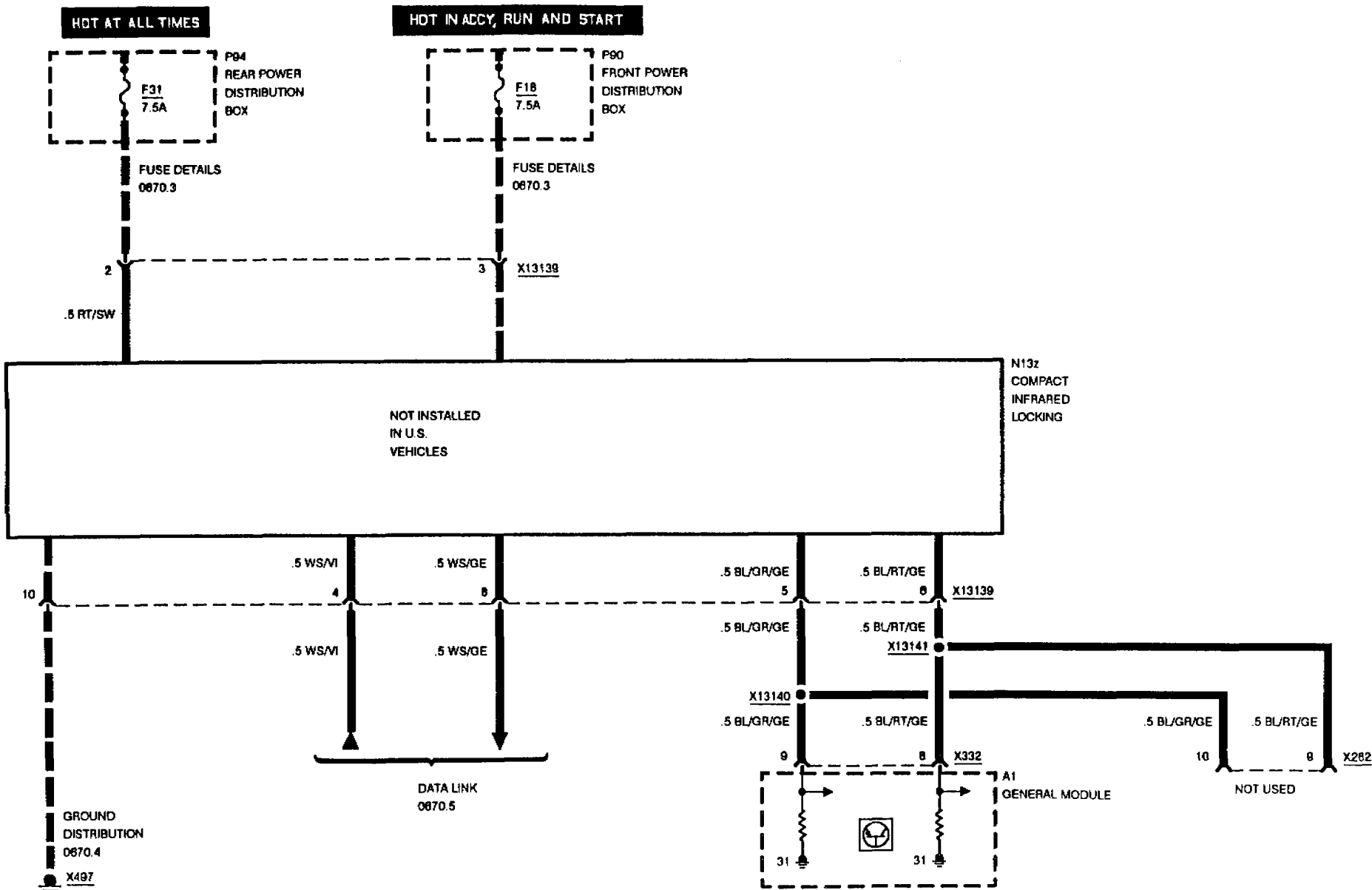
# MULTI- INFORMATION DISPLAY (MID)



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# INFRARED LOCKING (IRS)





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8

7000.0



# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

A1	...	GENERAL MODULE	.....	Below LH side of dash	.....	01-2
A1	...	GENERAL MODULE	.....	Below LH side of dash	.....	29-1
A2	...	INSTRUMENT CLUSTER	.....	LH side of dash		
A3	...	LAMP CONTROL MODULE	.....	Below LH side of dash	.....	00-3
A3	...	LAMP CONTROL MODULE	.....	Below LH side of dash	.....	30-3
A5	...	RELAY MODULE	.....	inside box on interior side of LH door sill	.....	03-2
A5	...	RELAY MODULE	.....	Inside box on interior side of LH door sill	.....	25-1
A11	...	AUTOMATIC HEATING/AC CONTROL MODULE (IHKA)	.....	Between front footwells		
A12	...	SUPPLEMENTAL RESTRAINT SYSTEM CONTROL MODULE	.....	Below RH side of dash	.....	00-2
A12	...	SUPPLEMENTAL RESTRAINT SYSTEM CONTROL MODULE	.....	Below RH side of dash	.....	31-1
A15	...	PARK HEATING/VENTILATION RELAY BOX	...	Below RH side of dash	.....	00-2
A15	...	PARK HEATING/VENTILATION RELAY BOX	...	Below RH side of dash	.....	31-1
A17	...	SERVOTRONIC CONTROL MODULE	.....	LH side of LH footwell	.....	01-3
A17	...	SERVOTRONIC CONTROL MODULE	.....	LH side of LH footwell	.....	27-2
A18	...	HIFI AMPLIFIER	.....	In LH forward side of luggage compartment	.....	39-1
A21	...	SEAT/MIRROR MEMORY CONTROL MODULE	.....	Underside of LH front seat	.....	22-1
A23	...	DRIVER'S DOOR MODULE	.....	In lower LH front door	.....	32-3



# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

A24 ... PASSENGER'S DOOR MODULE	In upper RH front door	32-3
A25 ... BODY ELECTRONICS MODULE	Below LH side of dash	01-2
A25 ... BODY ELECTRONICS MODULE	Below LH side of dash	29-1
A26 ... LOCK-SENSOR CONTROL MODULE	LH side of LH footwell	01-3
A26 ... LOCK-SENSOR CONTROL MODULE	LH side of LH footwell	27-2
A33 ... SUNROOF MODULE	Center of windshield header	28-3
A70 ... SLIP CONTROL MODULE (ABS/ASC)	Inside box on interior side of LH door sill	03-1
A70 ... SLIP CONTROL MODULE (ABS/ASC)	Inside box on interior side of LH door sill	26-1
A82 ... SUN BLIND CONTROL MODULE	At back of rear window shelf	23-1
A211 .. CYL. 1-6 ENGINE CONTROL MODULE (DME)	Rear RH side of engine compartment in E-Box	00-1
A211 .. CYL. 1-6 ENGINE CONTROL MODULE (DME)	Rear RH side of engine compartment in E-Box	21-1
A212 .. CYL. 7-12 ENGINE CONTROL MODULE (DME)	Rear RH side of engine compartment in E-Box	00-1
A212 .. CYL. 7-12 ENGINE CONTROL MODULE (DME)	Rear RH side of engine compartment in E-Box	21-1
A220 .. THROTTLE CONTROL MODULE (EML)	Rear RH side of engine compartment in E-Box	00-1
A220 .. THROTTLE CONTROL MODULE (EML)	Rear RH side of engine compartment in E-Box	21-1
A22z .. ELECTROCHROMIC REAR VIEW MIRROR	Center of windshield header	
A34z .. STEERING COLUMN MEMORY CONTROL MODULE	Center of dash behind radio	
A413 .. ELECTRONIC SHOCK ABSORBER CONTROL MODULE (EDC)	In RH side of luggage compartment	02-2



# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

A413 ..	ELECTRONIC SHOCK ABSORBER CONTROL MODULE (EDC) .....	In RH side of luggage compartment .....	37-2
A417 ..	AUTOMATIC AIR RECIRCULATION CONTROL MODULE .....	Behind RH footwell speaker grille .....	01-1
A417 ..	AUTOMATIC AIR RECIRCULATION CONTROL MODULE .....	Behind RH footwell speaker grille .....	26-2
A8500 ..	TRANSMISSION CONTROL MODULE (EGS) ..	In RH rear side of luggage compartment .....	02-3
A8500 ..	TRANSMISSION CONTROL MODULE (EGS) ..	In RH rear side of luggage compartment .....	37-1
A9070 ..	SLIP CONTROL MODULE (ABS/ASC + T) ....	Inside box on interior side of LH door sill .....	03-1
A9070 ..	SLIP CONTROL MODULE (ABS/ASC + T) ....	Inside box on interior side of LH door sill .....	26-1
B1 ....	RIGHT FRONT SPEED SENSOR - ABS .....	Behind RH front wheel	
B2 ....	LEFT FRONT SPEED SENSOR - ABS .....	Behind LH front wheel	
B3 ....	RIGHT REAR SPEED SENSOR - ABS .....	Behind RH rear wheel	
B4 ....	LEFT REAR SPEED SENSOR - ABS .....	Behind LH rear wheel .....	11-1
B6 ....	FUEL LEVEL SENSOR .....	Under RH rear seat .....	23-3
B10 ...	VEHICLE SPEED SENSOR .....	Lower front side of engine compartment	
B11 ...	LH HEAT EXCHANGER TEMPERATURE SENSOR .....	Center console left behind radio .....	30-2
B12 ...	RH HEAT EXCHANGER TEMPERATURE SENSOR .....	Center console right behind radio	
B13 ...	OUTSIDE TEMPERATURE SENSOR .....	Behind center of cowl under RH side of windshield	
B14 ...	EVAPORATOR TEMPERATURE SENSOR ....	RH side of LH footwell	



# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

B15 ...	ELECTRO- HYDRAULIC CONVERTER (SERVOTRONIC) .....	Under LH front of car	
B16 ...	LEFT FRONT BRAKE PAD SENSOR .....	Behind LH front wheel .....	10-2
B17 ...	RIGHT REAR BRAKE PAD SENSOR .....	Behind RH rear wheel	
B18 ...	BRAKE FLUID LEVEL SWITCH .....	Rear LH side of engine compartment .....	15-2
B19 ...	BRAKE PRESSURE REGULATING SWITCH ...	Rear LH side of engine compartment .....	15-2
B20 ...	BRAKE PRESSURE SWITCH .....	Rear LH side of engine compartment .....	15-2
B21 ...	ON-BOARD COMPUTER TEMPERATURE SENSOR .....	Front LH side of engine compartment near LH headlight assembly .....	16-3
B25 ...	FUEL LEVEL SENSOR II .....	Under LH rear seat .....	23-2
B28 ...	GRADIENT MONITOR (DWA) .....	In LH rear side of luggage compartment	
B40 ...	STEERING ANGLE SENDER .....	LH footwell	
B41 ...	RIGHT FRONT ACCELERATION SENSOR ....	RH front of wheel well above	
B48 ...	RIGHT REAR ACCELERATION SENSOR .....	In RH rear side of luggage compartment .....	36-3
B49 ...	LONGITUDINAL ACCELERATION SENSOR ...	In LH forward side of luggage compartment .....	35-3
B205 ..	OIL LEVEL SENSOR .....	Under LH front of car	
B206 ..	OIL PRESSURE SWITCH .....	LH side of engine compartment .....	14-2
B207 ..	ENGINE COOLANT TEMPERATURE SENSOR	On coolant inlet	
B209 ..	ENGINE COOLANT TEMPERATURE SENSOR (EML) .....	On coolant inlet	
B210 ..	TEMPERATURE SWITCH .....	Rear RH side of engine compartment	
B220 ..	CYL. 1-6 CYLINDER IDENTIFICATION SENSOR	Front of engine left	



# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

B221 ..	CYL. 7-12 CYLINDER IDENTIFICATION SENSOR .....	Front of engine right	
B222 ..	CYL. 1-6 CRANKSHAFT POSITION/RPM SENSOR .....	Front of engine compartment	
B223 ..	CYL. 7-12 CRANKSHAFT POSITION/RPM SENSOR .....	Front of engine compartment	
B224 ..	CYL. 1-6 AIR TEMPERATURE SENSOR .....	On coolant Inlet	
B225 ..	CYL. 7-12 AIR TEMPERATURE SENSOR .....	Rear of engine	
B226 ..	CYL. 1-6 MASS AIR FLOW SENSOR .....	LH side of engine compartment .....	15-3
B227 ..	CYL. 7-12 MASS AIR FLOW SENSOR .....	RH side of engine compartment .....	19-1
B228 ..	ENGINE COOLANT TEMPERATURE SENSOR (DME) .....	On coolant Inlet	
B301 ..	CYL. 1-6 HEATED OXYGEN SENSOR .....	On catalytic converter .....	12-1
B302 ..	CYL. 7-12 HEATED OXYGEN SENSOR .....	On catalytic converter .....	12-1
B400 ..	MICROPHONE .....	Center console	
B414 ..	AUTOMATIC AIR RECIRCULATION SENSOR ..	Front LH side of engine compartment	
B900 ..	JUMPER PLUG .....	Rear LH side of engine compartment in Front Power Distribution Box	
B9508 ..	PRESSURE SWITCH .....	RH side of engine compartment under concealing headlight	
C100 ..	CONTACT RING .....	On steering wheel behind DRIVER'S AIR BAG GENERATOR, G5	
C900 ..	SUPPRESSION FILTER .....	In upper RH C-pillar .....	28-1
D100 ..	DATA LINK CONNECTOR .....	RH side of engine compartment .....	19-1
E20 ...	UNDERHOOD LIGHT .....	On underside of engine hood left .....	14-3
E41 ...	DASH LIGHT .....	Center of dash	
E42 ...	GLOVE BOX LIGHT .....	RH side of glove box above	



## COMPONENT LOCATION CHART

### COMPONENT

PAGE - FIGURE  
7100.0 8500.0

E48 ...	DOOR LOCK HEATER	In upper LH front door	
E51 ...	LEFT WASHER JET HEATER	On underside of engine hood left	14-3
E52 ...	RIGHT WASHER JET HEATER	On underside of engine hood	
E56 ...	DRIVER'S SEATBACK HEATER	In lower LH front seatback	
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	
E61 ...	LEFT FRONT FOOTWELL LIGHT	LH front door	34-3
E62 ...	RIGHT FRONT FOOTWELL LIGHT	RH front door	
E80 ...	LEFT REAR LIGHT ASSEMBLY II	Underside of trunk lid left	39-3
E81 ...	RIGHT REAR LIGHT ASSEMBLY II	Underside of trunk lid right	39-3
E46z ..	LEFT REAR LIGHT ASSEMBLY I	In LH rear side of luggage compartment	
E47z ..	RIGHT REAR LIGHT ASSEMBLY I	In RH rear side of luggage compartment	
F0 ....	FUSIBLE LINK	In RH side of luggage compartment	37-1
F99 ...	FUSIBLE LINK (50A)	In RH side of luggage compartment	37-1
G1 ....	BATTERY	In RH side of luggage compartment	37-1
G2 ....	GENERATOR	LH side of engine compartment under air filter	
G4 ....	LEFT BATTERY II	In LH rear side of luggage compartment behind trim panel	36-1
G5 ....	DRIVER'S AIR BAG GENERATOR	On steering wheel	
G6 ....	PASSENGER'S AIR BAG GAS GENERATOR I	Below RH side of dash	



# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

G7	.... PASSENGER'S AIR BAG GAS GENERATOR II	Below RH side of dash	
H38	... TELEPHONE TRANSCEIVER	In LH forward side of luggage compartment	
H10z	.. ACOUSTIC DEVICE	Below RH side of dash	31-2
K1	.... STARTER RELAY	Rear LH side of engine compartment in Front Power Distribution Box	19-2
K2	.... HORN RELAY	Rear LH side of engine compartment in Front Power Distribution Box	18-3
K3	.... UNLOADER RELAY, TERMINAL R	Rear LH side of engine compartment in Front Power Distribution Box	19-2
K4	.... BLOWER RELAY	Rear LH side of engine compartment in Front Power Distribution Box	19-2
K5	.... WASHER PUMP RELAY	Rear LH side of engine compartment in Front Power Distribution Box	18-3
K8	.... AUXILIARY WATER PUMP RELAY	Rear LH side of engine compartment in Front Power Distribution Box	18-3
K9	.... UNLOADER RELAY, TERMINAL 15	Rear LH side of engine compartment in Front Power Distribution Box	18-1
K10	... ABS RELAY	Rear LH side of engine compartment in Front Power Distribution Box	19-3
K12	... WIPER PRESSURE CONTROL (ADV) RELAY	Rear LH side of engine compartment in Front Power Distribution Box	19-3
K13	... REAR DEFOGGER RELAY	In LH side of luggage compartment Power Distribution Box	35-1
K15	... ELECTRIC POWER PROTECTION RELAY	Rear Power Distribution Box in LH side of luggage compartment	35-2
K16	... HAZARD FLASHER RELAY	Rear LH side of engine compartment in Front Power Distribution Box	18-1
K19	... COMPRESSOR CONTROL RELAY	Rear LH side of engine compartment in Front Power Distribution Box	18-3
K21	... NORMAL SPEED RELAY	Rear LH side of engine compartment in Front Power Distribution Box	18-1
K22	... HIGH SPEED RELAY	Rear LH side of engine compartment in Front Power Distribution Box	19-3
K25	... RIGHT PARK LIGHT/LICENSE PLATE LIGHT RELAY	Below LH side of dash near hood release lever	





# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

K26	... LEFT PARK LIGHT RELAY	.....	Below LH side of dash near hood release lever	
K29	... INTERIOR LIGHT RELAY	.....	LH side of LH footwell	27-2
K30	... ELECTRIC POWER PROTECTION RELAY II	...	In LH side of luggage compartment	35-1
K31	... CIGAR LIGHTER RELAY	.....	In LH side of luggage compartment	35-1
K33	... AIR CONDITIONING RELAY	.....	Rear LH side of engine compartment in Front Power Distribution Box	18-2
K36	... WIPER RELAY I	.....	Rear LH side of engine compartment in Front Power Distribution Box	19-2
K37	... WIPER RELAY II	.....	Rear LH side of engine compartment in Front Power Distribution Box	19-2
K38	... WIPER RELAY III	.....	Rear LH side of engine compartment in Front Power Distribution Box	19-2
K39	... CONCEALING HEADLIGHTS RELAY	.....	Rear LH side of engine compartment in Front Power Distribution Box	18-1
K42	... INTENSIVE WASH RELAY	.....	Rear LH side of engine compartment in Front Power Distribution Box	18-2
K46	... HIGH BEAM LIGHT RELAY	.....	Rear LH side of engine compartment in Front Power Distribution Box	19-3
K51	... JUMPER PLUG FOR HORN/TELEPHONE	....	Rear LH side of engine compartment in Front Power Distribution Box	19-3
K60	... COMPRESSOR CUT-OFF RELAY	.....	Rear LH side of engine compartment in Front Power Distribution Box	18-3
K61	... UNLOADER RELAY, TERMINAL 61	.....	Rear LH side of engine compartment in Front Power Distribution Box	18-2
K67	... EDC RELAY	.....	In RH side of luggage compartment	37-2
K70	... CENTRAL LOCKING TRUNK LID MOTOR RELAY (ZV)	.....	Rear Power Distribution Box	35-2
K72	... CONSUMER CUT-OFF RELAY I	.....	Rear Power Distribution Box	35-2
K73	... CONSUMER CUT-OFF RELAY II	.....	In LH side of luggage compartment	35-1
K79	... FOGLIGHT RELAY	.....	In LH side of luggage compartment	35-1



# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

K91 ...	ON-BOARD COMPUTER HORN RELAY	.....	Inside box on interior side of RH door sill	
K210 ..	CYL. 1-6 FUEL PUMP RELAY	.....	Rear RH side of engine compartment in E-Box	21-2
K211 ..	CYL. 7-12 FUEL PUMP RELAY	.....	Rear RH side of engine compartment in E-Box	21-2
K212 ..	CYL. 1-6 ENGINE CONTROL MODULE RELAY		Rear RH side of engine compartment in E-Box	21-2
K213 ..	CYL. 7-12 ENGINE CONTROL MODULE RELAY	.....	Rear RH side of engine compartment in E-Box	21-2
K214 ..	OXYGEN SENSOR RELAY	.....	Rear RH side of engine compartment in E-Box	21-2
K52z ..	FLASHER LIGHT RELAY	.....	Rear LH side of engine compartment in Front Power Distribution Box	18-1
M1 ....	STARTER	.....	LH side of engine compartment	
M2 ....	FUEL PUMP	.....	In RH side of luggage compartment	
M3 ....	WIPER MOTOR	.....	Behind LH fresh air cowl	
M4 ....	WASHER PUMP	.....	RH side of engine compartment on washer fluid reservoir	20-1
M5 ....	INTENSIVE WASH PUMP	.....	Front RH side of engine compartment near windshield washer reservoir	
M6 ....	WIPER PRESSURE CONTROL MOTOR (ADV)		Behind LH fresh air cowl	
M7 ....	HEADLIGHT/FOG LIGHT WASHER PUMP	....	Front RH side of engine compartment near windshield washer reservoir	20-2
M9 ....	AUXILIARY FAN MOTOR	.....	Behind front grille	
M11 ...	CYL. 7-12 FUEL PUMP	.....	In RH side of luggage compartment	
M12 ...	DRIVER'S DOOR LOCK MOTOR	.....	In lower LH front door	33-3
M13 ...	PASSENGER'S DOOR LOCK MOTOR	.....	In lower RH side of front door	33-3
M16 ...	GAS FILLER LOCK MOTOR	.....	In RH rear side of luggage compartment	38-2
M17 ...	TRUNK LOCK MOTOR	.....	Rear of car rear side of luggage compartment	



# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

M18 ...	LH CONCEALING HEADLIGHT MOTOR	.....	Front LH side of engine compartment	
M19 ...	RH CONCEALING HEADLIGHT MOTOR	.....	Front RH side of engine compartment	
M20 ...	LEFT REAR WINDOW MOTOR	.....	Left from LH rear seat behind trim panel	
M21 ...	DRIVER'S WINDOW MOTOR	.....	In lower LH front door	33-1
M22 ...	RIGHT REAR WINDOW MOTOR	.....	RH side of RH rear seat behind trim panel	
M23 ...	PASSENGER'S WINDOW MOTOR	.....	In lower RH side of front door	
M24 ...	SUNROOF MOTOR	.....	Center of windshield header	28-2
M30 ...	BLOWER MOTOR	.....	Behind center of cowl	
M31 ...	LEFT FOOTWELL FLAP MOTOR	.....	Below LH side of dash	
M32 ...	RIGHT FOOTWELL FLAP MOTOR	.....	LH side of RH footwell	
M33 ...	RIGHT VENTILATION FLAP MOTOR	.....	LH side of RH footwell	
M34 ...	DASH VENT MIXING FLAP MOTOR	.....	RH side of dash behind glove box RH side of IHKA Plenum	
M35 ...	DEFROSTER FLAP MOTOR	.....	LH side of IHKA Plenum	
M36 ...	FRESH AIR FLAP MOTOR	.....	LH side of IHKA Plenum	
M37 ...	WATER PUMP	.....	Rear LH side of engine compartment	
M38 ...	LEFT VENTILATION FLAP MOTOR	.....	Behind LH fresh air cowl	
M39 ...	LEFT MIXING FLAP MOTOR	.....	Center of dash left of radio	
M40 ...	RECIRCULATION FLAP MOTOR	.....	Below LH side of dash	
M50 ...	DRIVER'S SEAT CUSHION TILT MOTOR	.....	Under LH front seat	
M51 ...	DRIVER'S SEAT MOVEMENT MOTOR	.....	Under LH front seat	



# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

M52 ...	DRIVER'S SEAT HEIGHT MOTOR	Under LH front seat	
M53 ...	DRIVER'S SEATBACK RECLINER MOTOR	In lower LH front seatback	
M55 ...	DRIVER'S SEAT LUMBAR SUPPORT MOTOR	In upper LH front seatback	
M56 ...	PASSENGER'S SEAT LUMBAR SUPPORT MOTOR	In upper RH front seatback	
M58 ...	PASSENGER'S SEATBACK RECLINER MOTOR	In lower RH front seatback	
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	Under LH front seat	
M66 ...	PASSENGER'S THIGH SUPPORT MOTOR	Under LH front seat	
M74 ...	SUN BLIND MOTOR	At back of rear window shelf	23-1
M80 ...	LEFT HEADLIGHT WIDENING MOTOR	Front LH side of engine compartment	
M81 ...	RIGHT HEADLIGHT WIDENING MOTOR	Front RH side of engine compartment	
M82 ...	STEERING COLUMN LENGTH ADJUST MOTOR	Bottom of steering column	
M83 ...	STEERING COLUMN ANGLE ADJUST MOTOR	Bottom of steering column	
M86 ...	WATER PUMP IN LUGGAGE COMPARTMENT	In spare tire compartment	
M201 ..	E-BOX FAN	Rear RH side of engine compartment in E-Box	
M202 ..	CYL. 1-6 THROTTLE BODY (EML)	Front of engine left	13-3
M203 ..	CYL. 7-12 THROTTLE BODY (EML)	Front of engine right	13-3
N1 ....	ANTI-THEFT CONTROL MODULE (DWA)	Inside box on interior side of RH door sill	02-1



# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

N1	ANTI-THEFT CONTROL MODULE (DWA)	Inside box on interior side of RH door sill	25-2
N2	FINAL STAGE UNIT	LH side of RH footwell	
N3	DIMMER	LH side of dash	
N4	ON-BOARD COMPUTER	Center console above	
N6	HEADLIGHT/FOGLIGHT CLEANING MODULE (SRA)	Rear LH side of engine compartment in Front Power Distribution Box	19-3
N8	ANTENNA AMPLIFIER AM/FM	In upper LH C-pillar	27-3
N9	RADIO	Center console	
N17	CRASH CONTROL MODULE	Rear LH side of engine compartment in Front Power Distribution Box	18-1
N20	RADIO RECEIVER	In luggage compartment	
N22	CD CHANGER	In luggage compartment	
N13z	COMPACT INFRARED LOCKING	Behind RH footwell speaker grille	01-1
N13z	COMPACT INFRARED LOCKING	Behind RH footwell speaker grille	26-2
N404	DIVERSITY	Center of dash	
N444	FM AMPLIFIER HLO	In upper LH C-pillar	
P90	FRONT POWER DISTRIBUTION BOX	Rear LH side of engine compartment	15-2
P93	E-BOX	Rear RH side of engine compartment	21-3
P94	REAR POWER DISTRIBUTION BOX	In LH forward side of luggage compartment	35-3
P95	AUXILIARY FUSE BOX	LH side of engine compartment	17-2
R1	MIXING ACTUATOR	Center of dash	
R7	SEATBACK POTENTIOMETER	In lower LH front seatback	



# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

R9	SEAT CUSHION MOVEMENT POTENTIOMETER	Under LH front seat	
R10	PEDAL POSITION SENSOR	Below LH side of dash	29-3
R13	HEADLIGHT WIDENING POTENTIOMETER	Center console	32-1
R15	THIGH SUPPORT POTENTIOMETER	Under LH front seat	
R18	STEERING COLUMN ADJUST POTENTIOMETER	Bottom of steering column	
R19	RIGHT REAR QUARTER WINDOW SWITCH (DWA)	Bottom of steering column	
S2	IGNITION SWITCH	On steering column above right	
S4	HORN SWITCH	On steering wheel behind DRIVER'S AIR BAG GENERATOR, G5	
S5	WIPER/WASHER SWITCH	On steering column above	
S6	ASC SWITCH	Center console	32-1
S7	COMBINATION SWITCH	On steering column above left	
S8	LIGHT SWITCH	LH side of dash	
S10	FOG LIGHT SWITCH	LH side of dash	
S11	CRUISE CONTROL SWITCH (EML)	On steering column	
S12	MEMORY MIRRORS CONTROL SWITCH	In upper LH front door	
S13	PASSENGER'S DOOR JAMB SWITCH	In upper RH front door	
S14	DRIVER'S DOOR JAMB SWITCH	In upper LH front door	
S17	MIRROR CONTROL SWITCH	In upper LH front door	
S18	HAZARD SWITCH	Center console	
S19	UNDERHOOD LIGHT SWITCH	Near LH headlight assembly	



# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

S20 ...	RADIO ANTI-THEFT SWITCH (DWA) .....	Behind radio	
S21 ...	ENGINE HOOD SWITCH (DWA) .....	Near RH headlight assembly	
S26 ...	AUTOMATIC HEATING AND AIR CONDITIONING SWITCH (IHKA) .....	Center of dash	
S27 ...	INERTIA SWITCH .....	Below LH side of dash	
S29 ...	BRAKE LIGHT SWITCH .....	Below LH side of dash .....	29-2
S31 ...	PARK BRAKE SWITCH .....	Below front of console	
S32 ...	CLUTCH SWITCH .....	Behind LH footwell trim on clutch pedal support bracket	
S36 ...	TEMPERATURE SWITCH .....	Front RH side of engine compartment .....	16-2
S37 ...	GLOVE BOX LIGHT SWITCH .....	LH side of glove box	
S38 ...	SUNROOF SWITCH .....	Center of windshield header	
S40 ...	FRONT CONSOLE WINDOW SWITCH ASSEMBLY .....	LH front door behind door panel .....	34-2
S45 ...	LEFT REAR WINDOW LIMIT SWITCH .....	Left from LH rear seat behind trim panel	
S46 ...	RIGHT REAR WINDOW LIMIT SWITCH .....	RH side of RH rear seat behind trim panel	
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	
S50 ...	DRIVER'S MEMORY SEAT ADJUSTMENT SWITCH .....	LH front seat	
S51 ...	DRIVER'S SEAT, SEAT CONTROL SWITCH ...	LH front seat	
S52 ...	DRIVER'S SEAT LUMBAR SWITCH .....	LH front seat	



# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

- 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 ..... RH front seat
- S56 ... PASSENGER'S SEAT, SEAT CONTROL  
SWITCH ..... RH front seat
- S57 ... MEMORY SEAT MIRRORS SWITCH ..... LH front seat
- S58 ... DRIVER'S SEAT BELT SWITCH ..... LH front seat
- S64 ... WASHER FLUID LEVEL SWITCH ..... RH side of engine compartment on washer fluid reservoir ..... 20-1
- S71 ... LEFT FRONT IMPACT SENSOR ..... LH side of engine compartment ..... 17-1
- S72 ... RIGHT FRONT IMPACT SENSOR ..... RH side of engine compartment near windshield washer reservoir
- S76 ... REAR WINDOW DEFOGGER SWITCH ..... LH side of dash
- S77 ... DRIVER'S MAKEUP MIRROR SWITCH ..... Above LH sun visor
- S78 ... PASSENGER'S MAKEUP MIRROR SWITCH .. Above RH sun visor
- S79 ... PASSENGER'S DOOR HANDLE SWITCH .... RH front door
- S89 ... DRIVER'S INSIDE DOOR HANDLE SWITCH .. In lower LH front door
- S90 ... PASSENGER'S INSIDE DOOR HANDLE  
SWITCH ..... In upper RH front door
- S93 ... DRIVER'S THIGH SUPPORT SWITCH ..... LH front seat
- S94 ... PASSENGER'S THIGH SUPPORT SWITCH ... RH front seat
- S96 ... AIR CONDITIONING PRESSURE SWITCH .... RH side of engine compartment under concealing headlight
- S97 ... PASSENGER'S WINDOW SWITCH ..... RH front door
- S99 ... PASSENGER'S WINDOW SWITCH (DWA) .... In upper RH front door





# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

- S100 .. DRIVER'S WINDOW MONITORING SWITCH (DWA) ..... In lower LH front door
- S101 .. RIGHT REAR WINDOW MONITORING SWITCH (DWA) ..... In upper RH rear door
- S102 .. LEFT REAR WINDOW MONITORING SWITCH (DWA) ..... In upper LH rear door
- S105 .. EDC SWITCH ..... Center console
- S110 .. SUN BLIND SWITCH ..... Center console
- S113 .. GLOVE BOX LIGHT SWITCH II ..... LH side of glove box
- S117 .. TRUNK LID LOCKING SWITCH ..... Underside of trunk lid ..... 39-2
- S118 .. GLOVE BOX CENTRAL LOCKING SWITCH ... LH side of glove box
- S119 .. ACCESSORY TABLE MICROSWITCH ..... On steering column above left
- S136 .. WASHER FLUID LEVEL SWITCH ..... In luggage compartment in spare tire compartment
- S302 .. BACK-UP SWITCH ..... On RH side of transmission
- S8515 . TRANSMISSION RANGE LEVER LIGHT ..... Center console
- S8517 . PROGRAM SWITCH ..... Center console near gearshift lever
- S8518 . TRANSMISSION RANGE SELECTOR LEVER LIGHT ..... Center console near gearshift lever
- S8522 . SHIFT LOCK ..... Center console near gearshift lever
- T201A . CYL. 1-6 IGNITION COIL ..... RH side of engine compartment ..... 19-1
- T202A . CYL. 7-12 IGNITION COIL ..... LH side of engine compartment ..... 17-2
- U4 .... TELEPHONE HANDSET ..... Center console
- V1 .... ANTI-THEFT LED INDICATOR (DWA) ..... Center console



# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

V4	.... DAYTIME RUNNING LIGHTS CODING DIODE	Inside box on interior side of LH door sill		
V5	.... IR/DWA LED	Center of dash		
X2	.... BATTERY B+ START POINT	LH side of engine compartment under Power Distribution Box		
X3	.... B+ JUNCTION POINT	LH side of engine compartment under Power Distribution Box		
X7	.... CONNECTOR (55-PINS, NATURAL)	Inside box on interior side of LH door sill	25-1	00-2
X12	... CONNECTOR (20-PINS, WHITE)	Below LH side of dash	30-3	02-1
X13	... CONNECTOR (30-PINS, BLACK)	LH footwell	26-1	01-1
X14	... CONNECTOR (30-PINS, WHITE)	LH footwell	26-1	01-1
X16	... CONNECTOR (26-PINS, BLACK)	LH side of dash		01-2
X20	... CONNECTOR (25-PINS, GRAY)	Rear RH side of engine compartment	21-3	01-5
X21	... CONNECTOR (25-PINS, BLUE)	Rear RH side of engine compartment	21-3	01-5
X25	... CONNECTOR (4-PINS, BLACK)	RH side of engine compartment	20-1	10-1
X31	... CONNECTOR (12-PINS, BLACK)	LH side of engine compartment under concealing headlight		03-4
X32	... CONNECTOR (12-PINS, WHITE)	Below LH side of dash	30-1	04-3
X33	... CONNECTOR (12-PINS, BLACK)	Below LH side of dash		04-3
X36	... CONNECTOR (21-PINS, BLACK)	Below center console	31-3	01-6
X38	... CONNECTOR (20-PINS, BLACK)	Below LH side of dash	30-3	02-1
X39	... CONNECTOR (26-PINS, GREEN)	Below LH side of dash	29-1	01-2
X40	... CONNECTOR (26-PINS, BROWN)	Below LH side of dash	29-1	01-2
X41	... CONNECTOR (26-PINS, BLUE)	Below LH side of dash	29-1	01-2



# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

X42	CONNECTOR (26-PINS, BLACK)	Below LH side of dash	29-1	01-2
X43	CONNECTOR (9-PINS, BLACK)	Rear LH side of engine compartment in Front Power Distribution Box		05-4
X52	CONNECTOR (9-PINS, BLACK)	Rear LH side of engine compartment in Front Power Distribution Box		05-4
X53	CONNECTOR (9-PINS, BLACK)	Rear LH side of engine compartment in Front Power Distribution Box		05-4
X54	CONNECTOR (9-PINS, BLACK)	Rear LH side of engine compartment in Front Power Distribution Box		05-4
X55	CONNECTOR (9-PINS, BLACK)	Rear LH side of engine compartment in Front Power Distribution Box		05-4
X57	CONNECTOR (9-PINS, BLACK)	Rear LH side of engine compartment in Front Power Distribution Box		05-4
X58	CONNECTOR (9-PINS, BLACK)	Rear LH side of engine compartment in Front Power Distribution Box		05-4
X61	CONNECTOR (9-PINS, BLACK)	Rear LH side of engine compartment in Front Power Distribution Box		05-4
X63	CONNECTOR (9-PINS, BLACK)	Rear LH side of engine compartment in Front Power Distribution Box		05-4
X64	CONNECTOR (9-PINS, BLACK)	Rear LH side of engine compartment in Front Power Distribution Box		05-4
X65	CONNECTOR (9-PINS, BROWN)	Rear LH side of engine compartment in Front Power Distribution Box		05-4
X69	CONNECTOR (25-PINS, BLACK)	Rear RH side of engine compartment	21-3	01-5
X72	CONNECTOR (8-PINS, WHITE)	Below LH side of dash	30-1	06-3
X73	CONNECTOR (8-PINS, WHITE)	Below LH side of dash	29-3	06-4
X74	CONNECTOR (12-PINS, BLUE)	Below RH side of dash	31-1	03-5
X77	CONNECTOR (10-PINS, BLACK)	LH side of LH footwell		04-6
X78	CONNECTOR (4-PINS, BLACK)	Below LH side of dash	29-2	09-2
X81	CONNECTOR (3-PINS, ORANGE)	LH side of engine compartment	17-1	11-6
X82	CONNECTOR (3-PINS, BLACK)	Front of engine compartment on auxiliary fan	16-1	11-4



# COMPONENT LOCATION CHART

## COMPONENT

		PAGE - FIGURE	
		7100.0	8500.0
X83	CONNECTOR (3-PINS, YELLOW)	LH side of LH footwell	11-5
X84	CONNECTOR (3-PINS, YELLOW)	LH side of LH footwell	11-3
X85	CONNECTOR (3-PINS, BLACK)	Rear LH side of engine compartment	15-1 11-4
X86	CONNECTOR (3-PINS, ORANGE)	RH side of engine compartment	11-6
X87	CONNECTOR (3-PINS, BLACK)	Front RH side of engine compartment	16-2 11-4
X95	CONNECTOR (3-PINS, BLACK)	Front RH side of engine compartment under air filter	16-2 11-4
X101	CONNECTOR (2-PINS, BLACK)	On underside of engine hood left	
X102	CONNECTOR (1-PINS, BLACK)	Rear LH side of engine compartment	
X103	CONNECTOR (1-PINS, BLACK)	Rear LH side of engine compartment	
X105	CONNECTOR (2-PINS, BLACK)	On underside of engine hood left	14-3
X106	CONNECTOR (1-PINS, (---))	On underside of engine hood	
X107	CONNECTOR (2-PINS, GRAY)	RH side of engine compartment on washer fluid reservoir	20-1
X109	CONNECTOR (2-PINS, BLACK)	RH side of engine compartment on washer fluid reservoir	20-1
X110	CONNECTOR (2-PINS, GRAY)	RH side of engine compartment on washer fluid reservoir	20-2
X111	CONNECTOR (2-PINS, BLACK)	Rear LH side of engine compartment	
X113	CONNECTOR (2-PINS, WHITE)	RH front of wheel well	
X114	CONNECTOR (3-PINS, GRAY)	Behind LH front wheel	11-1
X118	CONNECTOR (2-PINS, BLACK)	Behind LH front wheel	10-2
X119	CONNECTOR (2-PINS, BLACK)	Rear LH side of engine compartment near brake fluid reservoir	15-2
X120	CONNECTOR (2-PINS, BLACK)	Under LH front of car	



# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

X121	.. CONNECTOR (2-PINS, WHITE)	..... Below LH side of dash	..... 29-2	
X122	.. CONNECTOR (2-PINS, BLACK)	..... Rear LH side of engine compartment	..... 15-1	
X126	.. CONNECTOR (2-PINS, WHITE)	..... RH side of engine compartment under concealing headlight		
X128	.. CONNECTOR (7-PINS, BLACK)	..... Near LH headlight assembly front of vehicle	..... 09-1	06-6
X130	.. CONNECTOR (7-PINS, BLACK)	..... LH side of engine compartment	..... 17-3	06-6
X132	.. CONNECTOR (2-PINS, BLACK)	..... Front of car		
X133	.. CONNECTOR (2-PINS, BLACK)	..... Front of car		
X135	.. CONNECTOR (7-PINS, BLACK)	..... Front RH side of engine compartment	..... 20-2	06-6
X137	.. CONNECTOR (7-PINS, BLACK)	..... Near RH headlight assembly front of vehicle	..... 09-2	06-6
X145	.. CONNECTOR (2-PINS, BLACK)	..... LH side of engine compartment	..... 14-2	
X161	.. CONNECTOR (2-PINS, BLACK)	..... Near LH headlight assembly	..... 10-1	
X164	.. CONNECTOR (1-PINS, (---))	..... RH side of engine compartment under air filter		
X165	.. GROUND	..... On steering column		
X167	.. GROUND	..... LH side of engine compartment	..... 07-1	
X167	.. GROUND	..... LH side of engine compartment	..... 17-3	
X168	.. CONNECTOR (1-PINS, BLACK)	..... On steering column		
X170	.. CONNECTOR (1-PINS, (---))	..... Front LH side of engine compartment under concealing headlight		
X173	.. GROUND	..... Front RH side of engine compartment (headlights removed)	..... 05-1	
X173	.. GROUND	..... Front RH side of engine compartment (headlights removed)	..... 20-3	
X252	.. CONNECTOR (26-PINS, BLACK)	..... Inside box on interior side of RH door sill	..... 25-3	01-2



# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

X253 ..	CONNECTOR (26-PINS, BLACK) .....	Below LH side of dash .....	30-3	01-2
X254 ..	CONNECTOR (26-PINS, YELLOW) .....	Below LH side of dash .....	30-3	01-2
X256 ..	CONNECTOR (26-PINS, BLACK) .....	Ahead of RH front door .....		01-3
X257 ..	CONNECTOR (26-PINS, BLACK) .....	Ahead of LH front door .....		01-3
X258 ..	CONNECTOR (20-PINS, BLACK) .....	Inside box on interior side of LH door sill .....	25-1	02-1
X259 ..	CONNECTOR (26-PINS, BLACK) .....	Inside box on interior side of LH door sill .....	25-1	01-2
X262 ..	CONNECTOR (26-PINS, YELLOW) .....	Behind RH footwell speaker grille .....	26-2	01-2
X263 ..	CONNECTOR (26-PINS, WHITE) .....	In RH side of luggage compartment .....	37-2	01-2
X272 ..	CONNECTOR (6-PINS, BLACK) .....	Left from LH rear seat behind trim panel .....	24-1	07-6
X275 ..	CONNECTOR (12-PINS, WHITE) .....	Underside of LH front seat .....	22-3	04-1
X275 ..	CONNECTOR (12-PINS, WHITE) .....	Under LH front seat .....	24-3	04-1
X279 ..	CONNECTOR (12-PINS, WHITE) .....	Under RH front seat .....		04-1
X280 ..	CONNECTOR (9-PINS, BLACK) .....	Rear LH side of engine compartment In Front Power Distribution Box .....		05-4
X281 ..	CONNECTOR (9-PINS, BLACK) .....	Rear LH side of engine compartment In Front Power Distribution Box .....		05-4
X283 ..	CONNECTOR (4-PINS, BLACK) .....	LH side of engine compartment .....	17-3	09-4
X284 ..	CONNECTOR (4-PINS, BLACK) .....	Front RH side of engine compartment .....	20-2	09-4
X287 ..	CONNECTOR (9-PINS, BLACK) .....	In LH side of luggage compartment .....		05-4
X291 ..	CONNECTOR (9-PINS, BLACK) .....	Rear LH side of engine compartment In Front Power Distribution Box .....		05-4
X292 ..	CONNECTOR (9-PINS, BLACK) .....	In LH side of luggage compartment Power Distribution Box .....		05-4
X294 ..	CONNECTOR (9-PINS, BLACK) .....	Rear Power Distribution Box In LH side of luggage compartment .....		05-4



# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

X295	CONNECTOR (8-PINS, BLACK)	Below LH side of dash	30-1	06-3
X296	CONNECTOR (6-PINS, WHITE)	In LH rear side of luggage compartment behind trim panel		07-6
X301	CONNECTOR (26-PINS, WHITE)	Inside box on interior side of RH door sill	25-2	01-2
X306	CONNECTOR (30-PINS, BLUE)	LH footwell	26-1	01-1
X307	GROUND	LH side of LH footwell	06-2	
X307	GROUND	LH side of LH footwell	27-2	
X310	CONNECTOR (6-PINS, BLACK)	Behind glove box right		07-6
X311	CONNECTOR (2-PINS, BLACK)	Rear of car		
X312	CONNECTOR (6-PINS, BLACK)	In RH rear side of luggage compartment	38-2	08-2
X316	CONNECTOR (6-PINS, WHITE)	LH front door behind door panel	34-2	07-2
X317	CONNECTOR (6-PINS, BLACK)	RH front door		07-2
X318	CONNECTOR (6-PINS, BLACK)	In RH rear side of luggage compartment	38-1	07-6
X319	CONNECTOR (6-PINS, BLACK)	In LH rear side of luggage compartment behind trim panel		07-6
X321	CONNECTOR (4-PINS, BLACK)	Below center console	31-3	09-6
X322	CONNECTOR (8-PINS, BLACK)	Below center console	31-3	06-3
X323	CONNECTOR (6-PINS, WHITE)	Center of windshield header	28-2	07-1
X331	CONNECTOR (5-PINS, BLACK)	Inside box on interior side of RH door sill	25-3	08-4
X332	CONNECTOR (26-PINS, WHITE)	Below LH side of dash	30-3	01-2
X333	CONNECTOR (12-PINS, BLACK)	Rear LH side of engine compartment	15-2	03-3
X335	CONNECTOR (4-PINS, BLACK)	Inside box on interior side of RH door sill	25-3	10-3



# COMPONENT LOCATION CHART

## COMPONENT

		PAGE - FIGURE	
		7100.0	8500.0
X336	CONNECTOR (4-PINS, WHITE) . . . . .	Center of windshield header . . . . .	28-2 09-3
X351	CONNECTOR (2-PINS, BLACK) . . . . .	In lower RH side of front door . . . . .	33-3
X352	CONNECTOR (2-PINS, BLACK) . . . . .	In lower LH front door . . . . .	33-3
X355	CONNECTOR (2-PINS, BLACK) . . . . .	In upper RH C-pillar	
X356	CONNECTOR (2-PINS, BLACK) . . . . .	In upper LH C-pillar . . . . .	27-3
X371	CONNECTOR (2-PINS, BLACK) . . . . .	Near RH headlight assembly . . . . .	09-3
X372	CONNECTOR (2-PINS, WHITE) . . . . .	Behind RH fresh air cowl on ANTI-THEFT HORN (DWA), H1	
X376	CONNECTOR (2-PINS, GRAY) . . . . .	Behind LH rear wheel	
X377	CONNECTOR (2-PINS, WHITE) . . . . .	Under rear of car . . . . .	12-2
X379	CONNECTOR (1-PINS, BLACK) . . . . .	In upper LH C-pillar . . . . .	27-3
X380	CONNECTOR (1-PINS, BLACK) . . . . .	In upper RH C-pillar . . . . .	28-1
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, BLACK) . . . . .	Under rear of car . . . . .	12-2
X388	CONNECTOR (2-PINS, BLACK) . . . . .	Below LH side of dash	
X389	CONNECTOR (2-PINS, BLACK) . . . . .	LEFT FRONT AUXILIARY TURN LIGHT, H9	
X390	CONNECTOR (1-PINS, BLACK) . . . . .	RIGHT FRONT AUXILIARY TURN LIGHT, H8	
X392	CONNECTOR (1-PINS, BLUE) . . . . .	Inside box on interior side of RH door sill . . . . .	25-2
X393	CONNECTOR (8-PINS, BLACK) . . . . .	In LH rear side of luggage compartment behind trim panel . . . . .	36-1 06-4
X394	CONNECTOR (12-PINS, BLACK) . . . . .	Underside of LH front seat . . . . .	22-3 04-3





# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

X394	.. CONNECTOR (12-PINS, BLACK)	..... Under LH front seat	..... 24-3	04-3
X395	.. CONNECTOR (1-PINS, YELLOW)	..... Inside box on interior side of RH door sill	..... 25-2	
X400	.. CONNECTOR (8-PINS, BLACK)	..... In LH forward side of luggage compartment	..... 35-3	06-3
X401	.. CONNECTOR (1-PINS, BLACK)	..... Above LH sun visor DRIVER'S MAKEUP MIRROR SWITCH, S77		
X402	.. CONNECTOR (1-PINS, BLACK)	..... Above RH sun visor PASSENGER'S MAKEUP MIRROR SWITCH, S78		
X405	.. CONNECTOR (3-PINS, BLUE)	..... Behind LH front wheel		11-1
X406	.. CONNECTOR (3-PINS, BLUE)	..... RH front of wheel well		11-1
X407	.. CONNECTOR (3-PINS, BLUE)	..... Behind LH rear wheel		11-1
X408	.. CONNECTOR (3-PINS, BLUE)	..... Under rear of car	..... 12-2	11-1
X413	.. CONNECTOR (2-PINS, BLACK)	..... Below LH side of dash		
X423	.. CONNECTOR (2-PINS, BLACK)	..... Below front of console		
X490	.. GROUND	..... Inside box on interior side of LH door sill	..... 06-3	
X490	.. GROUND	..... Inside box on interior side of LH door sill	..... 25-1	
X492	.. GROUND	..... LH side of LH footwell	..... 06-2	
X492	.. GROUND	..... LH side of LH footwell	..... 27-2	
X494	.. GROUND	..... In RH side of luggage compartment	..... 07-2	
X494	.. GROUND	..... In RH side of luggage compartment	..... 38-1	
X497	.. GROUND	..... In LH rear side of luggage compartment	..... 05-2	
X501	.. CONNECTOR (18-PINS, BLACK)	..... Center console		02-3
X503	.. CONNECTOR (12-PINS, BLACK)	..... LH side of dash LIGHT SWITCH, S8		04-2



# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

X504 .. CONNECTOR (12-PINS, BLACK) .....	LH side of dash FOG LIGHT SWITCH, S10 .....		04-2
X508 .. CONNECTOR (12-PINS, WHITE) .....	Below center console .....	32-2	04-3
X509 .. CONNECTOR (9-PINS, WHITE) .....	Below LH side of dash RIGHT PARK LIGHT/LICENSE PLATE LIGHT RELAY, K25 .....		05-4
X512 .. CONNECTOR (12-PINS, BLACK) .....	Behind glove box .....		04-1
X514 .. CONNECTOR (4-PINS, BLACK) .....	Center of dash .....		09-2
X516 .. CONNECTOR (5-PINS, BLACK) .....	Center console .....		08-5
X517 .. CONNECTOR (4-PINS, BLACK) .....	LH side of dash DIMMER, N3 .....		09-2
X518 .. CONNECTOR (4-PINS, BLACK) .....	Below RH side of dash under glove box .....	31-2	09-2
X521 .. CONNECTOR (6-PINS, BLUE) .....	Center console on .....	32-1	07-2
X522 .. CONNECTOR (3-PINS, WHITE) .....	Below RH side of dash under glove box .....	31-2	10-6
X523 .. CONNECTOR (6-PINS, BLACK) .....	Inside box on interior side of LH door sill .....		08-3
X529 .. CONNECTOR (6-PINS, BLACK) .....	Center console .....		08-3
X531 .. CONNECTOR (2-PINS, WHITE) .....	FRONT CIGAR LIGHTER, E28		
X532 .. CONNECTOR (2-PINS, BLACK) .....	FRONT CIGAR LIGHTER LIGHT, E29		
X537 .. CONNECTOR (2-PINS, BLACK) .....	LH front door behind door panel LEFT FRONT MIDRANGE SPEAKER, H55 .....	34-3	
X538 .. CONNECTOR (2-PINS, BLACK) .....	RIGHT FRONT MIDRANGE SPEAKER, H54		
X539 .. CONNECTOR (2-PINS, WHITE) .....	Below center console .....	32-2	
X540 .. CONNECTOR (2-PINS, BLACK) .....	RH side of dash behind glove box RH side of IHKA Plenum		
X541 .. CONNECTOR (1-PINS, BLACK) .....	RH side of glove box		
X542 .. CONNECTOR (2-PINS, BLACK) .....	RH side of dash behind glove box RH side of IHKA Plenum		



# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

X543	.. CONNECTOR (2-PINS, BLACK) .....	DASH LIGHT, E41		
X548	.. CONNECTOR (2-PINS, WHITE) .....	Below center console .....	32-2	
X548	.. CONNECTOR (2-PINS, ORANGE) .....	Below RH side of dash		
X549	.. CONNECTOR (2-PINS, ORANGE) .....	Below RH side of dash		
X601	.. CONNECTOR (26-PINS, YELLOW) .....	Underside of LH front seat .....	22-3	01-4
X602	.. CONNECTOR (26-PINS, WHITE) .....	Underside of LH front seat .....	22-1	01-4
X603	.. CONNECTOR (12-PINS, BLACK) .....	LH front seat .....		04-4
X604	.. CONNECTOR (12-PINS, BLACK) .....	RH front seat .....		04-4
X605	.. CONNECTOR (12-PINS, BLACK) .....	In LH forward side of luggage compartment .....	39-1	04-1
X606	.. CONNECTOR (12-PINS, WHITE) .....	In LH forward side of luggage compartment .....	39-1	04-1
X607	.. CONNECTOR (12-PINS, WHITE) .....	Behind dashboard behind glove box .....		03-6
X610	.. CONNECTOR (26-PINS, WHITE) .....	Between front footwells .....		01-2
X611	.. CONNECTOR (26-PINS, BLACK) .....	Between front footwells .....		01-2
X612	.. CONNECTOR (26-PINS, BLUE) .....	Center of dash .....		01-2
X613	.. CONNECTOR (26-PINS, BLUE) .....	Between front footwells .....		01-2
X614	.. CONNECTOR (26-PINS, YELLOW) .....	Between front footwells .....		01-2
X621	.. CONNECTOR (10-PINS, BLACK) .....	Ahead of RH front door .....		05-3
X622	.. CONNECTOR (10-PINS, BLACK) .....	Ahead of LH front door .....		05-2
X623	.. CONNECTOR (10-PINS, BLACK) .....	In upper LH front door .....	33-2	05-1
X624	.. CONNECTOR (10-PINS, BLACK) .....	In upper LH front door .....	33-2	05-1



# COMPONENT LOCATION CHART

## COMPONENT

		PAGE - FIGURE	
		7100.0	8500.0
X625	CONNECTOR (6-PINS, WHITE) . . . . . LH front door behind door panel . . . . .	34-2	08-2
X627	CONNECTOR (2-PINS, BLACK) . . . . . Center of windshield header		
X638	CONNECTOR (3-PINS, BLACK) . . . . . Under RH rear seat . . . . .	23-3	11-4
X641	CONNECTOR (6-PINS, BLACK) . . . . . In lower RH side of front door . . . . .		07-5
X643	CONNECTOR (6-PINS, BLUE) . . . . . Near SUNROOF SWITCH, S38 . . . . .	28-2	08-2
X648	CONNECTOR (6-PINS, BLACK) . . . . . Underside of LH front seat . . . . .	24-2	08-2
X649	CONNECTOR (6-PINS, WHITE) . . . . . Underside of LH front seat . . . . .	24-2	08-2
X650	CONNECTOR (6-PINS, BLACK) . . . . . MEMORY SEAT MIRRORS SWITCH, S57 . . . . .		07-2
X651	CONNECTOR (6-PINS, YELLOW) . . . . . DRIVER'S SEAT, SEAT HEATER SWITCH, S53 . . . . .		07-2
X652	CONNECTOR (4-PINS, BLACK) . . . . . DRIVER'S SEAT LUMBAR SWITCH, S52 . . . . .		09-2
X654	CONNECTOR (6-PINS, BLACK) . . . . . Underside of LH front seat . . . . .	22-1	08-2
X655	CONNECTOR (6-PINS, BLUE) . . . . . Underside of LH front seat . . . . .	22-2	08-2
X656	CONNECTOR (6-PINS, GREEN) . . . . . Underside of LH front seat . . . . .	22-1	08-2
X657	CONNECTOR (6-PINS, BLUE) . . . . . Underside of LH front seat . . . . .	22-2	08-2
X658	CONNECTOR (6-PINS, YELLOW) . . . . . PASSENGER'S SEAT, SEAT HEATER SWITCH, S54 . . . . .		07-2
X659	CONNECTOR (4-PINS, BLACK) . . . . . PASSENGER'S SEAT LUMBAR SUPPORT SWITCH, S55 . . . . .		09-2
X660	CONNECTOR (6-PINS, BLACK) . . . . . In lower LH front door . . . . .		07-5
X661	CONNECTOR (6-PINS, GRAY) . . . . . Behind center of dashboard left . . . . .		08-1
X662	CONNECTOR (6-PINS, GRAY) . . . . . Below LH side of dash . . . . .		08-1
X663	CONNECTOR (6-PINS, GRAY) . . . . . LH side of IHKA Plenum . . . . .		08-1



## COMPONENT LOCATION CHART

### COMPONENT

	PAGE - FIGURE	
	7100.0	8500.0
X664 .. CONNECTOR (6-PINS, GRAY) .....	LH side of IHKA Plenum .....	08-1
X666 .. CONNECTOR (6-PINS, GRAY) .....	Center of dash left of radio .....	08-1
X667 .. CONNECTOR (6-PINS, GRAY) .....	Below LH side of dash .....	08-1
X668 .. CONNECTOR (6-PINS, GRAY) .....	LH side of RH footwell .....	08-1
X669 .. CONNECTOR (6-PINS, GRAY) .....	RH side of dash behind glove box .....	08-1
X670 .. CONNECTOR (6-PINS, GRAY) .....	Behind center of dashboard right .....	08-1
X671 .. CONNECTOR (5-PINS, BLACK) .....	LH side of RH footwell .....	08-4
X672 .. CONNECTOR (4-PINS, BLACK) .....	In luggage compartment .....	09-5
X675 .. CONNECTOR (4-PINS, WHITE) .....	In luggage compartment .....	08-6
X676 .. CONNECTOR (4-PINS, BLACK) .....	In luggage compartment .....	08-6
X678 .. CONNECTOR (12-PINS, WHITE) .....	Underside of LH front seat .....	22-3 04-3
X678 .. CONNECTOR (12-PINS, WHITE) .....	Under LH front seat .....	24-3 04-3
X679 .. CONNECTOR (2-PINS, WHITE) .....	Under LH rear seat .....	23-2
X682 .. CONNECTOR (3-PINS, BLACK) .....	Center of dash .....	10-5
X684 .. CONNECTOR (3-PINS, BLACK) .....	RH front door right .....	11-4
X685 .. CONNECTOR (3-PINS, BLACK) .....	In upper LH front door left .....	34-1 11-4
X686 .. CONNECTOR (3-PINS, BLUE) .....	Underside of LH front seat .....	22-3 10-4
X690 .. CONNECTOR (3-PINS, BLUE) .....	Underside of LH front seat .....	24-2 10-4
X692 .. CONNECTOR (3-PINS, BLACK) .....	Center of dash .....	12-2
X695 .. CONNECTOR (3-PINS, BLACK) .....	In LH rear side of luggage compartment .....	38-3 11-6



# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

X701	CONNECTOR (2-PINS, BLACK)	Behind LH footwell speaker grille	27-2	
X706	CONNECTOR (2-PINS, BLACK)	CASSETTE TAPE PLAYER LIGHT, E45		
X709	CONNECTOR (2-PINS, BLACK)	LEFT LICENSE PLATE LIGHT, E43		
X710	CONNECTOR (2-PINS, BLACK)	RIGHT LICENSE PLATE LIGHT, E44		
X711	CONNECTOR (1-PINS, BLACK)	TRUNK LID SWITCH, S61		
X712	CONNECTOR (1-PINS, BLACK)	TRUNK LID LIGHT, E33		
X713	CONNECTOR (2-PINS, BLACK)	Behind RH rear wheel		
X714	CONNECTOR (4-PINS, BLACK)	RH side of RH rear seat behind trim panel	24-1	09-2
X715	CONNECTOR (2-PINS, BLACK)	Left from LH rear seat behind trim panel	24-1	
X720	CONNECTOR (4-PINS, BLACK)	Left from LH rear seat behind trim panel		09-2
X721	CONNECTOR (2-PINS, BLACK)	RH side of RH rear seat behind trim panel		
X726	CONNECTOR (2-PINS, BLACK)	Under LH front seat		
X727	CONNECTOR (2-PINS, WHITE)	Under LH front seat		
X728	CONNECTOR (2-PINS, WHITE)	Under LH front seat		
X729	CONNECTOR (2-PINS, BLACK)	In lower LH front seatback		
X734	CONNECTOR (2-PINS, BLACK)	Under RH front seat		
X735	CONNECTOR (2-PINS, WHITE)	Under RH front seat		
X736	CONNECTOR (2-PINS, BLACK)	In lower RH front seatback		
X737	CONNECTOR (2-PINS, WHITE)	Under RH front seat		
X742	CONNECTOR (2-PINS, YELLOW)	RH front door		



## COMPONENT LOCATION CHART

### COMPONENT

		PAGE - FIGURE	
		7100.0	8500.0
X744	CONNECTOR (6-PINS, BLACK) . . . . .	In lower RH side of front door . . . . .	07-5
X745	CONNECTOR (2-PINS, BLACK) . . . . .	In upper RH C-pillar . . . . .	28-1
X747	CONNECTOR (2-PINS, YELLOW) . . . . .	In upper LH front door left . . . . .	34-1
X748	CONNECTOR (2-PINS, WHITE) . . . . .	In lower LH front door behind door panel . . . . .	34-3
X749	CONNECTOR (6-PINS, BLACK) . . . . .	In lower LH front door . . . . .	33-1 07-5
X751	CONNECTOR (2-PINS, WHITE) . . . . .	In upper LH front door left . . . . .	34-1
X752	CONNECTOR (2-PINS, GRAY) . . . . .	In upper LH front door left . . . . .	34-1
X753	CONNECTOR (2-PINS, BLACK) . . . . .	In lower LH front door behind door panel . . . . .	34-3
X765	CONNECTOR (2-PINS, NATURAL) . . . . .	Below RH side of dash behind glove box	
X770	CONNECTOR (2-PINS, YELLOW) . . . . .	Front LH side of engine compartment . . . . .	16-3
X771	CONNECTOR (2-PINS, BLACK) . . . . .	RH side of LH footwell	
X772	CONNECTOR (2-PINS, WHITE) . . . . .	Center console left behind radio	
X773	CONNECTOR (2-PINS, WHITE) . . . . .	Center console right behind radio	
X774	CONNECTOR (2-PINS, GRAY) . . . . .	Behind center of cowl under RH side of windshield	
X778	CONNECTOR (2-PINS, BLACK) . . . . .	Underside of LH front seat . . . . .	22-2
X779	CHARGING SOCKET . . . . .	LH side of glove box	
X781	CONNECTOR (2-PINS, ORANGE) . . . . .	Below RH side of dash	
X782	CONNECTOR (2-PINS, ORANGE) . . . . .	Below RH side of dash	
X783	CONNECTOR (2-PINS, ORANGE) . . . . .	Bottom of steering column	
X784	CONNECTOR (12-PINS, BLACK) . . . . .	Below RH side of dash . . . . .	31-1 03-5



# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

X811 .. GROUND .....	RH side of LH footwell		
X816 .. CONNECTOR (1-PINS, BLACK) .....	Behind center of cowl		
X817 .. CONNECTOR (1-PINS, BLACK) .....	Behind center of cowl		
X818 .. GROUND .....	Below LH side of dash .....	08-2	
X818 .. GROUND .....	Below LH side of dash .....	29-3	
X820 .. GROUND .....	In LH rear side of luggage compartment behind trim panel .....	05-3	
X820 .. GROUND .....	In LH rear side of luggage compartment behind trim panel .....	36-1	
X848 .. CONNECTOR (4-PINS, GREEN) .....	At back of rear window shelf .....	23-1	10-3
X881 .. CONNECTOR (6-PINS, WHITE) .....	PASSENGER'S THIGH SUPPORT SWITCH, S94 .....		08-2
X882 .. CONNECTOR (2-PINS, BLACK) .....	Under LH front seat		
X883 .. CONNECTOR (2-PINS, BLACK) .....	Under RH front seat		
X884 .. CONNECTOR (3-PINS, BLUE) .....	Under LH front seat .....		10-4
X886 .. CONNECTOR (6-PINS, WHITE) .....	DRIVER'S THIGH SUPPORT SWITCH, S93 .....		08-2
X887 .. CONNECTOR (26-PINS, BLACK) .....	In lower LH front door .....	32-3	01-2
X889 .. CONNECTOR (26-PINS, WHITE) .....	In upper RH front door .....	32-3	01-2
X898 .. CONNECTOR (6-PINS, BLACK) .....	REAR WINDOW DEFOGGER SWITCH, S76 .....		07-2
X909 .. CONNECTOR (2-PINS, GRAY) .....	RH front door right		
X910 .. B + JUNCTION POINT .....	Rear LH side of engine compartment .....	15-1	
X911 .. STARTER JUNCTION POINT .....	Rear RH side of engine compartment near shock tower .....	04-1	
X911 .. STARTER JUNCTION POINT .....	Rear RH side of engine compartment near shock tower .....	12-3	





# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

X916	.. CONNECTOR (5-PINS, BLACK)	Center of windshield header	28-3	08-4
X917	.. CONNECTOR (6-PINS, BLACK)	Center of windshield header	28-3	07-2
X924	.. CONNECTOR (6-PINS, BLACK)	Underside of trunk lid left	39-3	07-6
X925	.. CONNECTOR (6-PINS, BLACK)	Underside of trunk lid right	39-3	07-6
X932	.. CONNECTOR (2-PINS, WHITE)	In lower LH front door	33-3	
X933	.. CONNECTOR (2-PINS, GRAY)	In lower RH side of front door	33-3	
X936	.. CONNECTOR (2-PINS, WHITE)	In lower LH front door	32-3	
X938	.. CONNECTOR (2-PINS, WHITE)	In lower LH front door	34-3	
X937	.. CONNECTOR (2-PINS, WHITE)	RH front door	32-3	
X941	.. CONNECTOR (9-PINS, BLACK)	Rear LH side of engine compartment in Front Power Distribution Box		05-4
X945	.. CONNECTOR (10-PINS, WHITE)	In RH side of luggage compartment	37-2	04-6
X947	.. CONNECTOR (6-PINS, BLACK)	Center console		07-2
X949	.. CONNECTOR (5-PINS, BLACK)	At back of rear window shelf	23-1	08-4
X955	.. GROUND	In LH rear side of luggage compartment behind trim panel	05-3	
X955	.. GROUND	In LH rear side of luggage compartment behind trim panel	36-1	
X980	.. SPLICE	RH side of LH footwell	26-3	
X998	.. CONNECTOR (2-PINS, WHITE)	RH DRIVER'S SEATBACK SWITCH, S103		
X999	.. CONNECTOR (2-PINS, WHITE)	LH DRIVER'S SEATBACK SWITCH, S104		
X1001	.. CONNECTOR (4-PINS, BLACK)	In RH rear side of luggage compartment	37-3	09-2
X1002	.. CONNECTOR (4-PINS, BLACK)	In LH rear side of luggage compartment	36-2	09-2



# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

X1003	CONNECTOR (12-PINS, BLACK)	Below center console	31-3	04-3
X1010	CONNECTOR (2-PINS, BLACK)	RH side of engine compartment under concealing headlight		
X1011	CONNECTOR (2-PINS, GRAY)	RH side of engine compartment on washer fluid reservoir	20-2	
X1021	CONNECTOR (9-PINS, BLACK)	Rear LH side of engine compartment in Front Power Distribution Box		05-4
X1086	CONNECTOR (9-PINS, BLACK)	In LH side of luggage compartment		05-4
X1165	GROUND	Front LH side of engine compartment		
X1204	CONNECTOR (2-PINS, WHITE)	Left from LH rear seat behind trim panel	24-1	
X1205	CONNECTOR (2-PINS, WHITE)	RH side of RH rear seat behind trim panel		
X1229	CONNECTOR (4-PINS, BLACK)	Center of dash behind radio		10-3
X1230	CONNECTOR (4-PINS, WHITE)	Left from LH rear seat behind trim panel	24-1	09-3
X1372	CONNECTOR (2-PINS, BLACK)	LH side of glove box		
X1375	CONNECTOR (2-PINS, BLACK)	LH side of glove box		
X1376	CONNECTOR (9-PINS, BLACK)	Rear Power Distribution Box		05-4
X1377	CONNECTOR (2-PINS, BLACK)	Underside of trunk lid	39-2	
X1426	CONNECTOR (1-PINS, BROWN)	Below RH side of dash		
X3210	CONNECTOR (26-PINS, BLUE)	Behind RH footwell speaker grille	26-2	01-4
X3211	CONNECTOR (4-PINS, BLACK)	Front LH side of engine compartment	16-1	10-2
X6002	CONNECTOR (20-PINS, BLACK)	RH side of engine compartment	19-1	02-2
X6004	CONNECTOR (55-PINS, BLACK)	Rear RH side of engine compartment in E-Box		00-2
X6010	CONNECTOR (88-PINS, BLACK)	Rear RH side of engine compartment in E-Box		00-1



# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

X6020 . CONNECTOR (88-PINS, BLACK) . . . . .	Rear RH side of engine compartment in E-Box . . . . .		00-1
X6099 . CONNECTOR (1-PINS, BLACK) . . . . .	Front of engine left		
X6101 . CONNECTOR (2-PINS, BLACK) . . . . .	LH side of engine		
X6102 . CONNECTOR (2-PINS, BLACK) . . . . .	LH side of engine		
X6103 . CONNECTOR (2-PINS, BLACK) . . . . .	LH side of engine		
X6104 . CONNECTOR (2-PINS, BLACK) . . . . .	LH side of engine		
X6105 . CONNECTOR (2-PINS, BLACK) . . . . .	LH side of engine		
X6106 . CONNECTOR (2-PINS, BLACK) . . . . .	LH side of engine		
X6107 . CONNECTOR (2-PINS, BLACK) . . . . .	RH side of engine		
X6108 . CONNECTOR (2-PINS, BLACK) . . . . .	RH side of engine		
X6109 . CONNECTOR (2-PINS, BLACK) . . . . .	RH side of engine		
X6110 . CONNECTOR (2-PINS, BLACK) . . . . .	RH side of engine		
X6111 . CONNECTOR (2-PINS, BLACK) . . . . .	RH side of engine		
X6112 . CONNECTOR (2-PINS, BLACK) . . . . .	RH side of engine		
X6121 . CONNECTOR (2-PINS, BLACK) . . . . .	RH side of engine compartment under air filter . . . . .	19-1	
X6122 . CONNECTOR (2-PINS, WHITE) . . . . .	RH side of engine compartment under air filter . . . . .	19-1	
X6210 . CONNECTOR (4-PINS, GRAY) . . . . .	On catalytic converter under center of car . . . . .	12-1	10-1
X6211 . CONNECTOR (3-PINS, BLACK) . . . . .	Front of engine left . . . . .	14-1	12-1
X6212 . CONNECTOR (3-PINS, BLACK) . . . . .	Front of engine compartment . . . . .	14-1	12-1
X6215 . CONNECTOR (2-PINS, BLACK) . . . . .	On coolant inlet		



# COMPONENT LOCATION CHART

## COMPONENT

		PAGE - FIGURE	
		7100.0	8500.0
X6216	CONNECTOR (7-PINS, BLACK) . . . . . LH side of engine compartment . . . . .	15-3	06-5
X6220	CONNECTOR (4-PINS, GRAY) . . . . . On catalytic converter under center of car . . . . .	12-1	10-1
X6221	CONNECTOR (3-PINS, BLACK) . . . . . Front of engine . . . . .	14-1	12-1
X6222	CONNECTOR (3-PINS, BLACK) . . . . . Front of engine . . . . .	14-1	12-1
X6225	CONNECTOR (2-PINS, BLACK) . . . . . Rear of engine . . . . .		
X6226	CONNECTOR (7-PINS, BLACK) . . . . . RH side of engine compartment . . . . .		06-5
X6230	CONNECTOR (3-PINS, BLACK) . . . . . Under LH front of car . . . . .	11-2	12-1
X6232	CONNECTOR (2-PINS, BLACK) . . . . . On coolant Inlet . . . . .		
X6234	CONNECTOR (2-PINS, WHITE) . . . . . On coolant Inlet . . . . .		
X6235	CONNECTOR (2-PINS, BLACK) . . . . . Rear RH side of engine compartment in E-Box . . . . .	21-1	
X6236	CONNECTOR (3-PINS, BLACK) . . . . . On coolant inlet . . . . .		12-1
X6310	CONNECTOR (9-PINS, WHITE) . . . . . Rear RH side of engine compartment in E-Box . . . . .		05-4
X6311	CONNECTOR (9-PINS, YELLOW) . . . . . Rear RH side of engine compartment in E-Box . . . . .		05-4
X6320	CONNECTOR (9-PINS, WHITE) . . . . . Rear RH side of engine compartment in E-Box . . . . .		05-4
X6321	CONNECTOR (9-PINS, YELLOW) . . . . . Rear RH side of engine compartment in E-Box . . . . .		05-4
X6360	CONNECTOR (8-PINS, BLACK) . . . . . Front of engine left . . . . .	13-3	05-5
X6370	CONNECTOR (8-PINS, BLACK) . . . . . Front of engine right . . . . .	13-3	05-5
X6400	B+ JUNCTION POINT . . . . . Rear RH side of engine compartment in E-Box . . . . .	04-2	
X6400	B+ JUNCTION POINT . . . . . Rear RH side of engine compartment in E-Box . . . . .	21-2	
X6402	GROUND . . . . . In RH side of luggage compartment . . . . .	08-1	



# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

X6402 . GROUND	In RH side of luggage compartment	37-1	
X6452 . GROUND	Rear RH side of engine compartment near shock tower	06-1	
X6452 . GROUND	Rear RH side of engine compartment near shock tower	21-3	
X6453 . GROUND	Rear RH side of engine compartment near shock tower	06-1	
X6453 . GROUND	Rear RH side of engine compartment near shock tower	21-3	
X8506 . CONNECTOR (4-PINS, BLACK)	Rear RH side of engine compartment in E-Box	21-1	09-2
X7151 . CONNECTOR (1-PINS, (---))	RH side of engine compartment (air filter removed)		
X7152 . CONNECTOR (1-PINS, (---))	LH side of engine compartment		
X7519 . CONNECTOR (1-PINS, BLACK)	LH side of engine compartment below intake manifold		
X8151 . CONNECTOR (1-PINS, (---))	RH side of engine compartment (air filter removed)		
X8152 . CONNECTOR (1-PINS, (---))	LH side of engine compartment		
X8500 . CONNECTOR (35-PINS, NATURAL)	In RH rear side of luggage compartment		00-3
X8505 . CONNECTOR (8-PINS, BLACK)	Under center of car		06-1
X8509 . CONNECTOR (8-PINS, BLACK)	Center console near gearshift lever	32-1	06-4
X8511 . CONNECTOR (2-PINS, WHITE)	On RH side of transmission		
X8515 . CONNECTOR (8-PINS, BLACK)	Center console near gearshift lever	32-1	06-4
X8517 . CONNECTOR (10-PINS, BLACK)	Center console near gearshift lever	32-2	05-3
X8518 . CONNECTOR (3-PINS, BLACK)	Center console near gearshift lever		10-5
X8522 . CONNECTOR (2-PINS, BLACK)	Center console near gearshift lever		
X9100 . CONNECTOR (2-PINS, WHITE)	Center of windshield header		



# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

X9997	CONNECTOR (2-PINS, ORANGE)	On steering wheel behind DRIVER'S AIR BAG GENERATOR, G5	
X10006	CONNECTOR (1-PINS, BLACK)	RH side of glove box above	
X10039	CONNECTOR (10-PINS, BLACK)	Rear LH side of engine compartment in Front Power Distribution Box	04-5
X10040	CONNECTOR (10-PINS, BLACK)	Rear LH side of engine compartment in Front Power Distribution Box	04-5
X10041	CONNECTOR (10-PINS, BLACK)	Rear LH side of engine compartment in Front Power Distribution Box	04-5
X10042	CONNECTOR (10-PINS, BLACK)	Rear LH side of engine compartment in Front Power Distribution Box	04-5
X10044	CONNECTOR (9-PINS, BLACK)	Rear LH side of engine compartment in Front Power Distribution Box	05-4
X10045	CONNECTOR (9-PINS, BLACK)	Rear LH side of engine compartment in Front Power Distribution Box	05-4
X10046	CONNECTOR (2-PINS, BLACK)	Water pump in luggage compartment	
X10047	CONNECTOR (9-PINS, BLACK)	Rear LH side of engine compartment in Front Power Distribution Box	05-4
X10051	CONNECTOR (4-PINS, BLACK)	Center console	32-1 09-2
X10052	CONNECTOR (1-PINS, BLACK)	Rear LH side of engine compartment	
X10053	CONNECTOR (1-PINS, BLACK)	Rear LH side of engine compartment	
X10058	CONNECTOR (1-PINS, YELLOW)	LH footwell under footrest	27-1
X10088	CONNECTOR (1-PINS, (---))	On underside of engine hood left	
X10089	CONNECTOR (1-PINS, (---))	On underside of engine hood	
X13001	CONNECTOR (9-PINS, BLACK)	Rear Power Distribution Box CONSUMER CUT-OFF RELAY I, K72	05-4
X13008	CONNECTOR (2-PINS, WHITE)	Under RH rear seat	23-3
X13015	CONNECTOR (9-PINS, BLACK)	In LH side of luggage compartment CONSUMER CUT-OFF RELAY II, K73	05-4
X13017	CONNECTOR (1-PINS, (---))	In upper LH C-pillar	27-3



# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

X13018	CONNECTOR (1-PINS, BLACK)	In upper RH C-pillar	28-1	
X13027	CONNECTOR (1-PINS, BLACK)	TRUNK LID SWITCH, S81		
X13049	CONNECTOR (1-PINS, BLACK)	In upper LH C-pillar		
X13052	CONNECTOR (10-PINS, BLACK)	Below LH side of dash LEFT PARK LIGHT RELAY, K26		04-5
X13110	CONNECTOR (2-PINS, BLACK)	Under RH front seat		
X13139	CONNECTOR (10-PINS, BLACK)			05-1
X18024	CONNECTOR (6-PINS, BLACK)	LH side of engine compartment		07-5
X18025	CONNECTOR (4-PINS, BLACK)	LH side of engine compartment		10-2
X18029	CONNECTOR (4-PINS, BLACK)	LH footwell		09-1
X18031	CONNECTOR (3-PINS, BLACK)	RH front of wheel well above	11-3	10-6
X18055	CONNECTOR (12-PINS, BLACK)	Below center console	32-2	04-3
X18066	CONNECTOR (3-PINS, WHITE)	In RH rear side of luggage compartment	36-3	11-2
X18067	CONNECTOR (3-PINS, WHITE)	In LH forward side of luggage compartment behind trim panel	35-3	11-2
X18068	CONNECTOR (9-PINS, BLACK)	In RH side of luggage compartment		05-4
X18069	CONNECTOR (12-PINS, WHITE)	Below RH side of dash	31-1	03-5
X18080	CONNECTOR (1-PINS, BLACK)	TRUNK LID LIGHT, E33		
X18093	CONNECTOR (6-PINS, BLACK)	On steering column		07-3
X18094	CONNECTOR (3-PINS, BLUE)	Bottom of steering column		10-4
X18095	CONNECTOR (3-PINS, BLUE)	Bottom of steering column		10-4
X18096	CONNECTOR (2-PINS, BLACK)	Bottom of steering column		



# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

X18097	CONNECTOR (2-PINS, BLACK)	Bottom of steering column		
X18098	CONNECTOR (5-PINS, BLACK)	Behind dashboard behind radio		08-4
X18099	CONNECTOR (12-PINS, BLACK)	Behind dashboard behind radio		03-5
X18124	CONNECTOR (2-PINS, WHITE)	Under RH front seat		
X18125	CONNECTOR (2-PINS, WHITE)	Under RH front seat		
X18131	CONNECTOR (12-PINS, WHITE)	Center of dash behind radio		03-5
X18135	CONNECTOR (4-PINS, WHITE)	In upper LH front seatback		09-3
X18138	CONNECTOR (4-PINS, WHITE)	In upper RH front seatback		09-3
X18145	CONNECTOR (2-PINS, BLACK)	Under rear of car	12-2	
X18146	CONNECTOR (2-PINS, BLACK)	Under rear of car	12-2	
X18165	CONNECTOR (2-PINS, BLACK)	Underside of RH front seat		
X18166	CONNECTOR (2-PINS, BLACK)	DRIVER'S DOOR PANEL LIGHT, E78		
X18167	CONNECTOR (2-PINS, BLACK)	PASSENGER'S DOOR PANEL LIGHT, E79		
X18170	GROUND	Inside box on interior side of LH door sill	06-3	
X18170	GROUND	Inside box on interior side of LH door sill	25-1	
X18171	CONNECTOR (10-PINS, BLACK)	In upper LH front door DRIVER'S SIDE MEMORY MIRROR, Y9	33-2	05-1
X18172	CONNECTOR (10-PINS, BLACK)	In upper LH front door	33-2	05-1
X18173	CONNECTOR (6-PINS, BLACK)	In upper LH front door		07-2
X18177	CONNECTOR (2-PINS, GRAY)	Water pump in luggage compartment in spare tire compartment		
X18178	CONNECTOR (4-PINS, BLACK)	Underside of LH front seat		09-6





# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

X18179	CONNECTOR (4-PINS, BLACK)	Underside of RH front seat	09-6
X18180	CONNECTOR (3-PINS, WHITE)	In luggage compartment	12-2
X18246	CONNECTOR (3-PINS, YELLOW)	Center of windshield header	12-4
X18500	CONNECTOR (25-PINS, BLACK)	TELEPHONE TRANSCEIVER, H38	12-5
X18507	CONNECTOR (4-PINS, (---))	Center console	
X18508	CONNECTOR (3-PINS, (---))	In LH forward side of luggage compartment	
X18509	CONNECTOR (8-PINS, (---))	Center console	
X18514	CONNECTOR (2-PINS, (---))	Behind RH footwell speaker grille	
X18515	CONNECTOR (2-PINS, (---))	Behind LH footwell speaker grille	
X18736	CONNECTOR (1-PINS, BLUE)	Inside box on interior side of LH door sill	
X18741	CONNECTOR (4-PINS, (---))	In LH forward side of luggage compartment	
X18757	CONNECTOR (3-PINS, WHITE)	In lower RH rear door behind trim panel	10-6
Y1	ABS HYDRAULIC UNIT	Front LH side of engine compartment under concealing headlight	16-3
Y3	AIR CONDITIONING COMPRESSOR (IHKA)	Front RH side of engine compartment	16-2
Y4	WATER VALVE ASSEMBLY	Rear LH side of engine compartment	15-1
Y5	DRIVER'S SIDE MIRROR	In upper LH front door	
Y6	PASSENGER'S SIDE MIRROR	In upper RH front door	
Y9	DRIVER'S SIDE MEMORY MIRROR	In upper LH front door	
Y10	PASSENGER'S SIDE MEMORY MIRROR	In upper RH front door	
Y16	PRESSURE SENSOR/PLUNGER	LH side of engine compartment	



# COMPONENT LOCATION CHART

## COMPONENT

PAGE - FIGURE  
7100.0 8500.0

Y201	..	CYL. 1 FUEL INJECTION VALVE .....	LH side of engine .....	13-2
Y202	..	CYL. 2 FUEL INJECTION VALVE .....	LH side of engine .....	13-2
Y203	..	CYL. 3 FUEL INJECTION VALVE .....	LH side of engine .....	13-2
Y204	..	CYL. 4 FUEL INJECTION VALVE .....	LH side of engine .....	13-2
Y205	..	CYL. 5 FUEL INJECTION VALVE .....	LH side of engine .....	13-2
Y206	..	CYL. 6 FUEL INJECTION VALVE .....	LH side of engine .....	13-2
Y207	..	CYL. 7 FUEL INJECTION VALVE .....	RH side of engine .....	13-1
Y208	..	CYL. 8 FUEL INJECTION VALVE .....	RH side of engine .....	13-1
Y209	..	CYL. 9 FUEL INJECTION VALVE .....	RH side of engine .....	13-1
Y210	..	CYL. 10 FUEL INJECTION VALVE .....	RH side of engine .....	13-1
Y211	..	CYL. 11 FUEL INJECTION VALVE .....	RH side of engine .....	13-1
Y212	..	CYL. 12 FUEL INJECTION VALVE .....	RH side of engine .....	13-1
Y221	..	CYL. 1-6 EVAPORATIVE EMISSION VALVE ...	Front RH side of engine compartment	
Y222	..	CYL. 7-12 EVAPORATIVE EMISSION VALVE ..	Front RH side of engine compartment	
Y401z	..	LEFT FRONT EDC VALVES .....	Behind LH front wheel	
Y402z	..	RIGHT FRONT EDC VALVES .....	Behind RH front wheel .....	10-3
Y403z	..	LEFT REAR EDC VALVES .....	Behind LH rear wheel .....	11-1
Y404z	..	RIGHT REAR EDC VALVES .....	Behind RH rear wheel	
Y8505	..	TRANSMISSION VALVE UNIT .....	Under center of car	

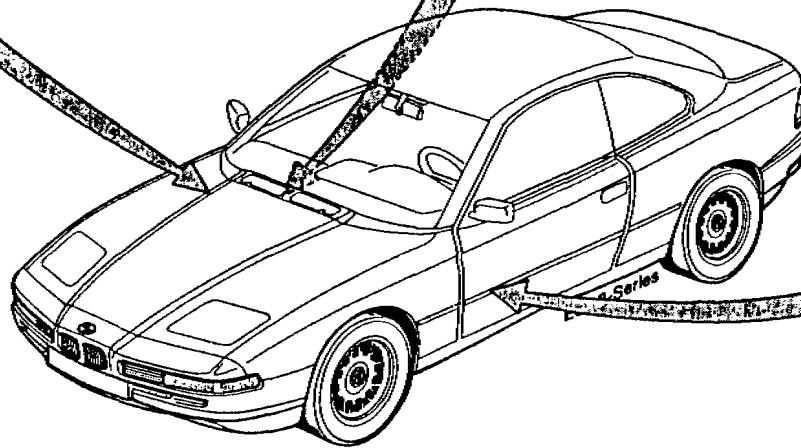
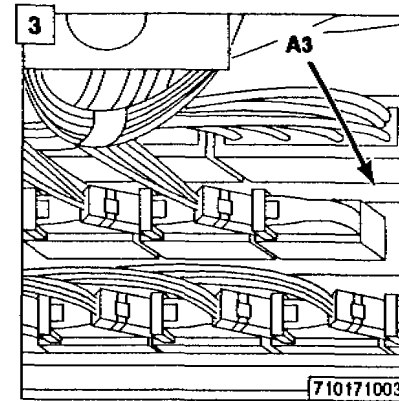
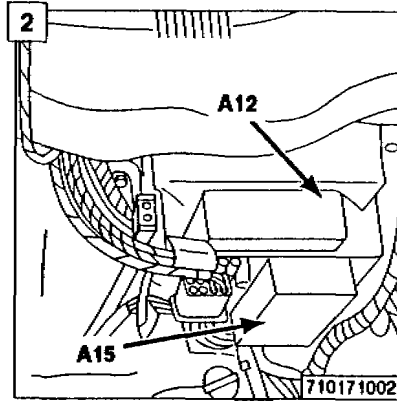
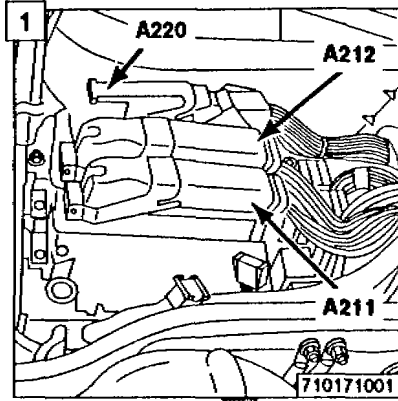
BMW  
8

7100.0



# COMPONENT LOCATION VIEWS

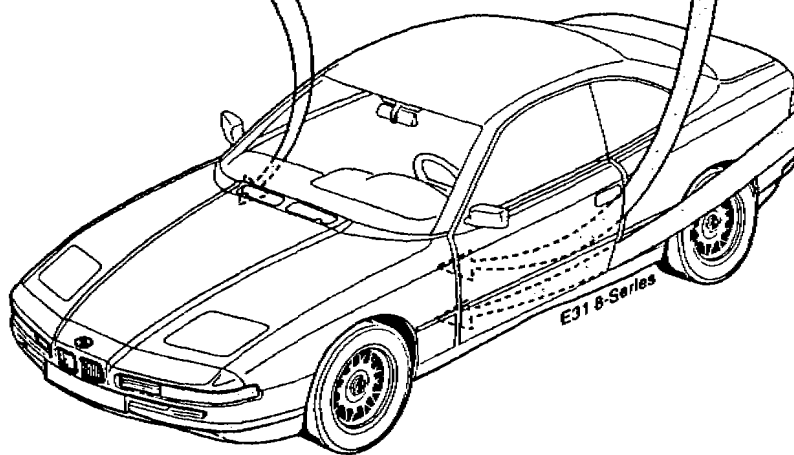
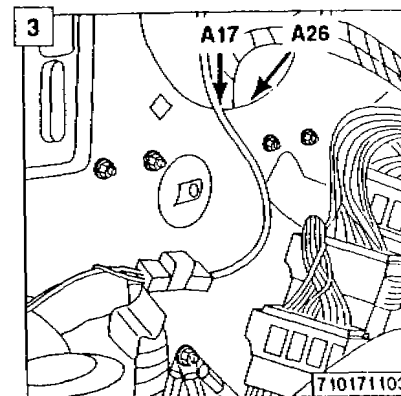
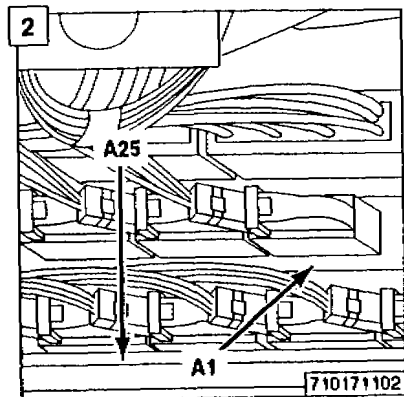
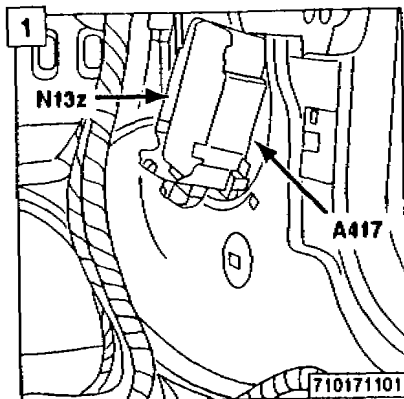
## ELECTRICAL CONTROL MODULE LOCATIONS





# COMPONENT LOCATION VIEWS

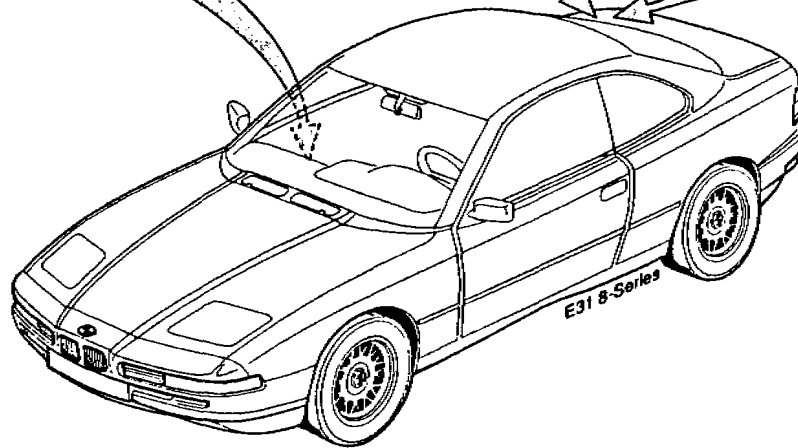
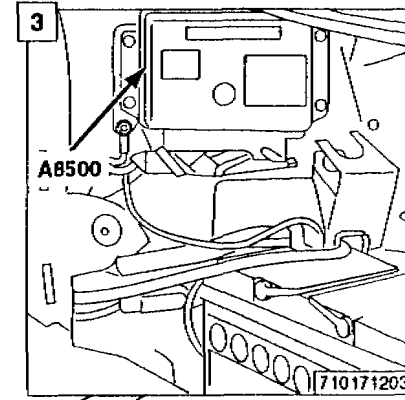
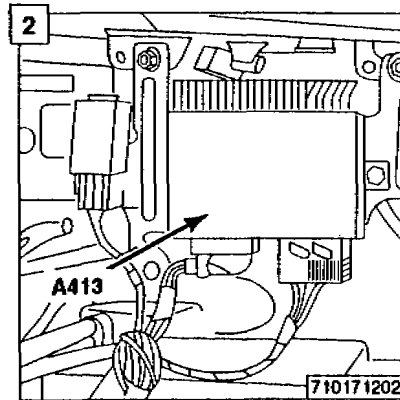
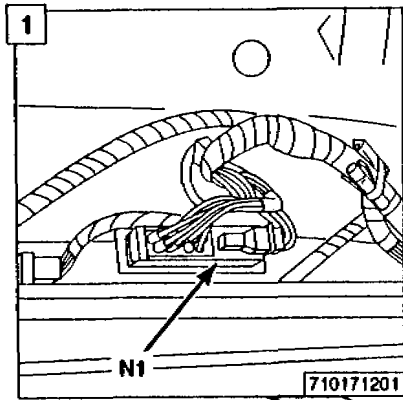
## ELECTRICAL CONTROL MODULE LOCATIONS





# COMPONENT LOCATION VIEWS

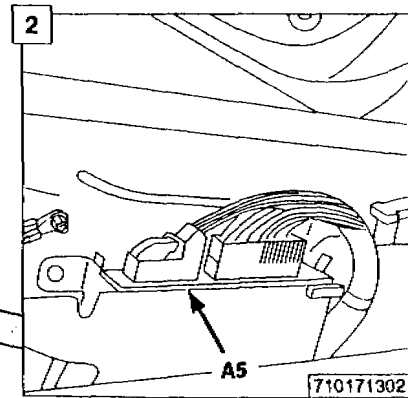
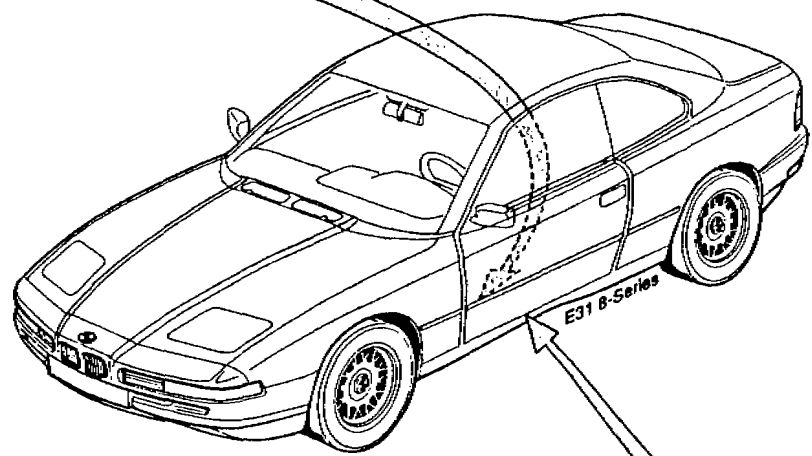
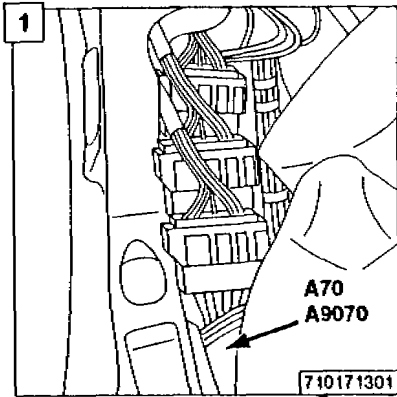
## ELECTRICAL CONTROL MODULE LOCATIONS





# COMPONENT LOCATION VIEWS

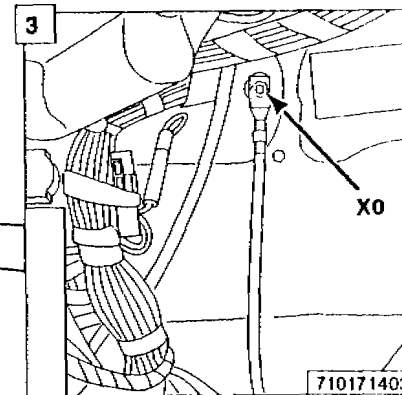
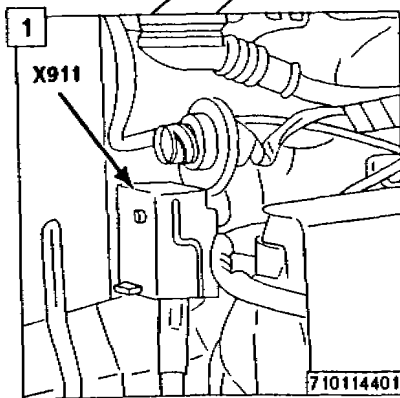
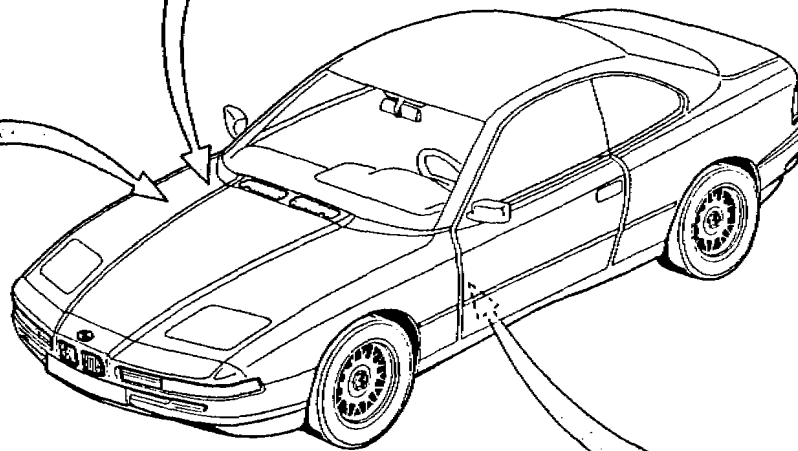
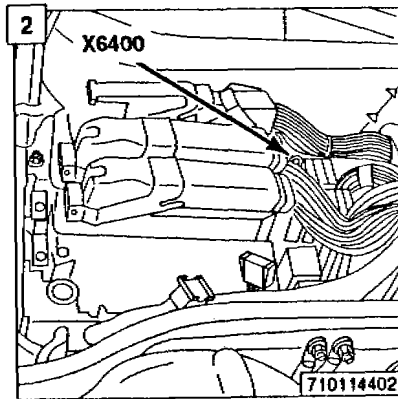
## ELECTRICAL CONTROL MODULE LOCATIONS



# COMPONENT LOCATION VIEWS

**B(+)**

X0
X911
X6400



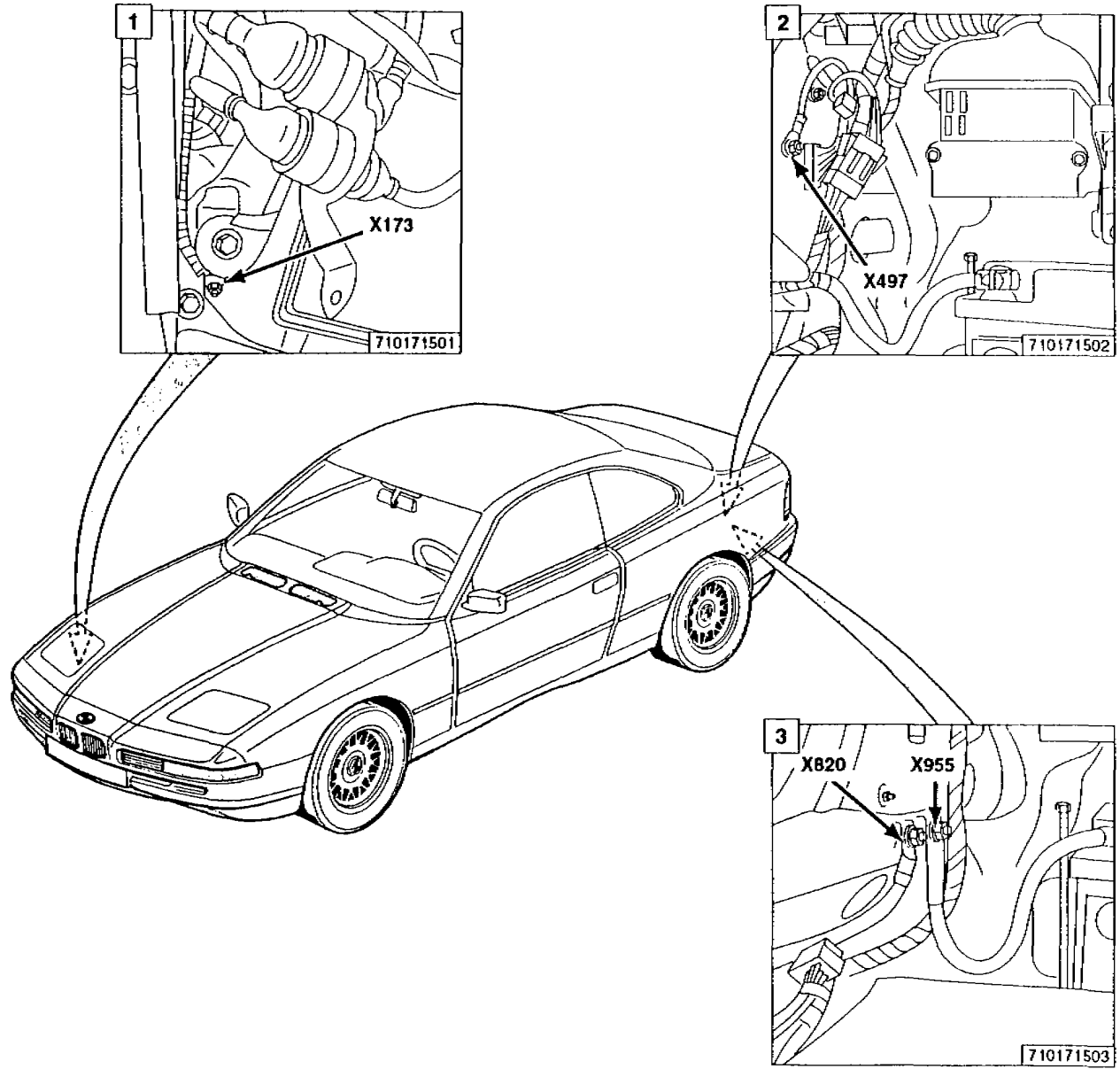




# COMPONENT LOCATION VIEWS

**B(-)**

X173
X497
X820
X955

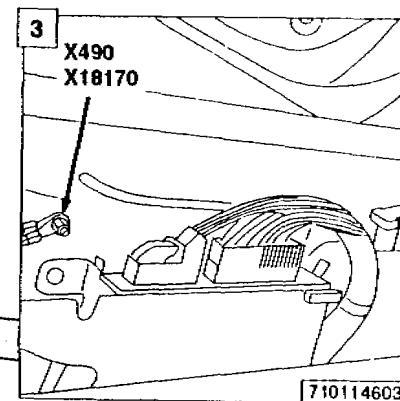
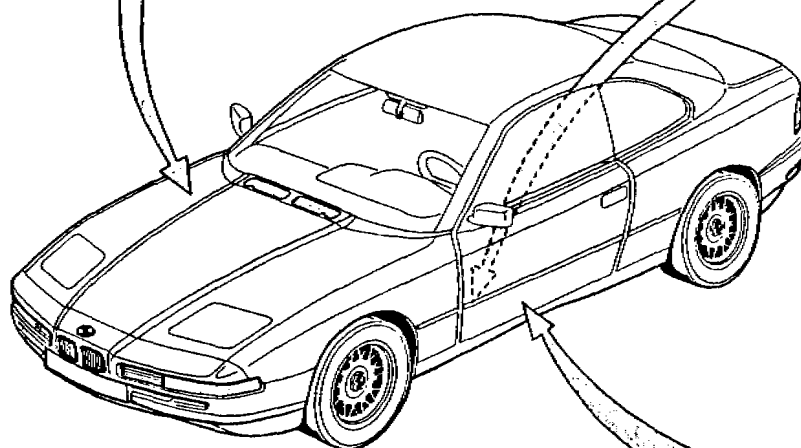
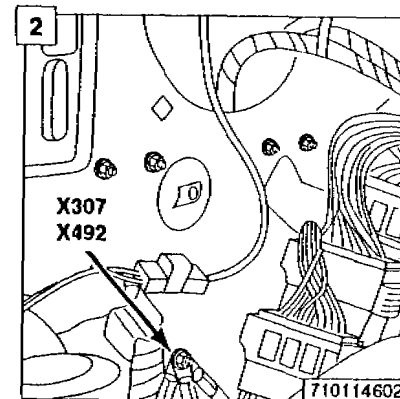
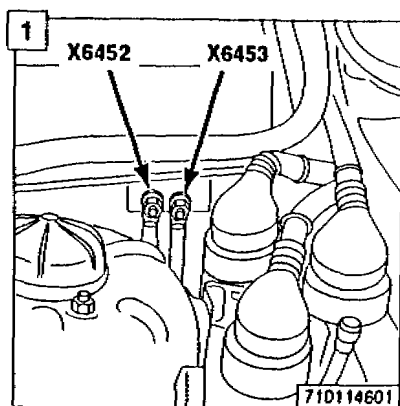




# COMPONENT LOCATION VIEWS

**B(-)**

X307
X490
X492
X6452
X6453
X18170

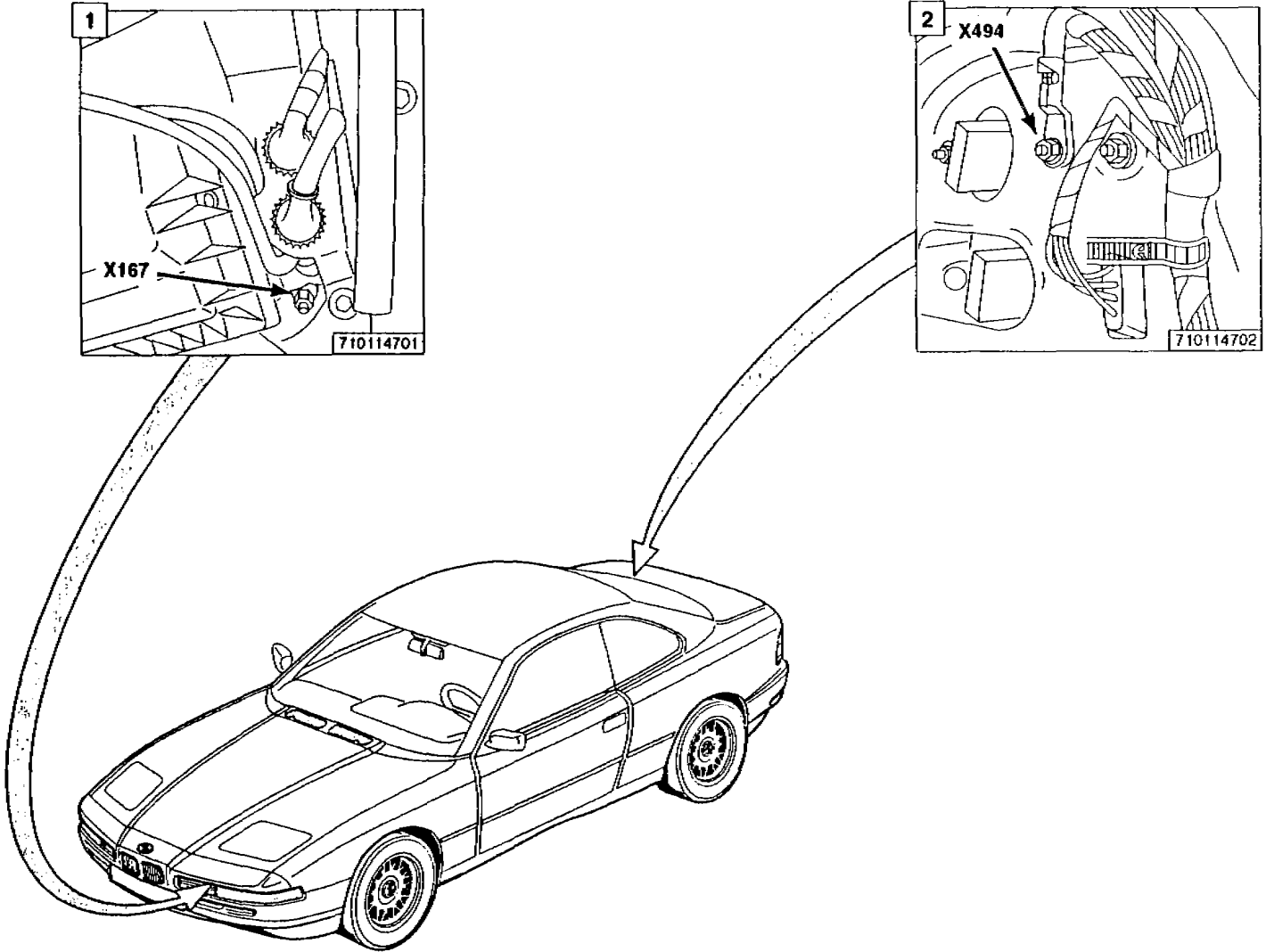




# COMPONENT LOCATION VIEWS

**B(-)**

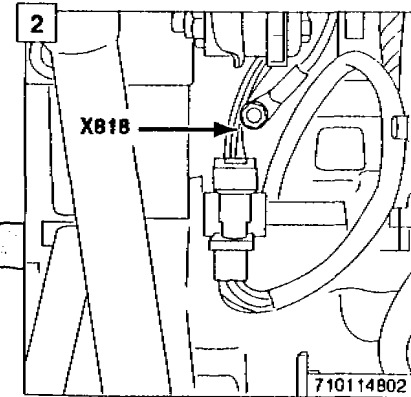
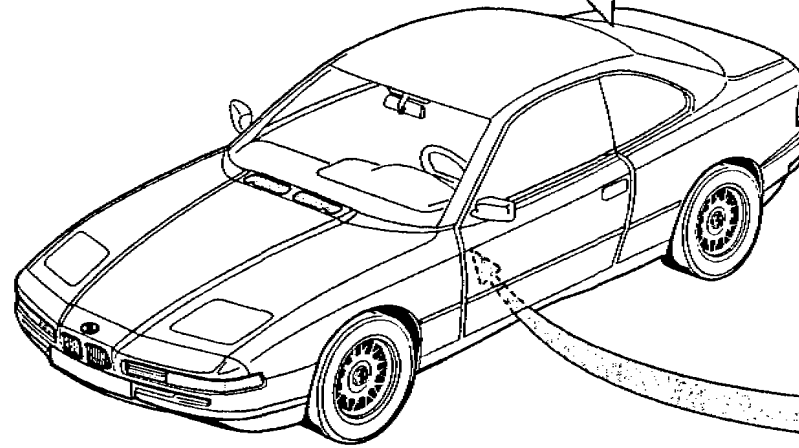
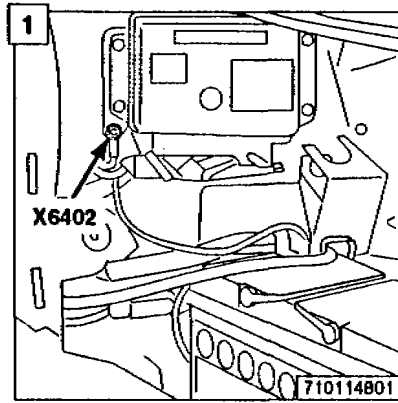
X167
X494



# COMPONENT LOCATION VIEWS

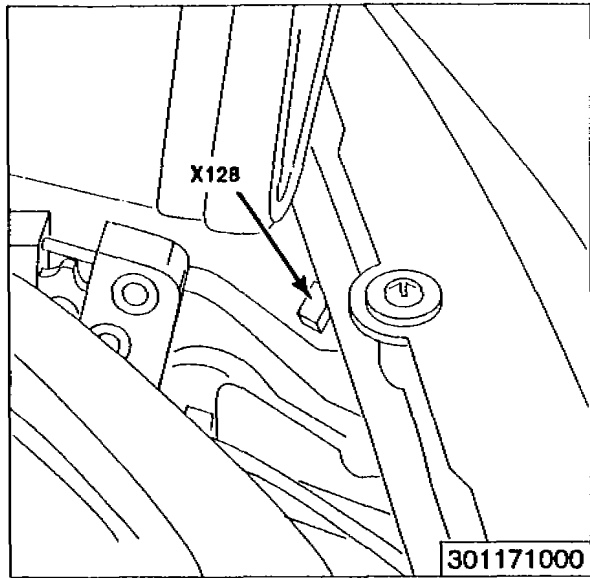
**B(-)**

X818
X6402

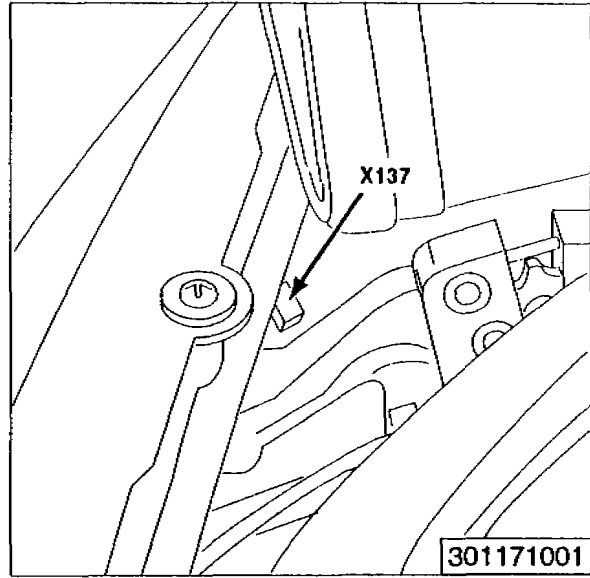




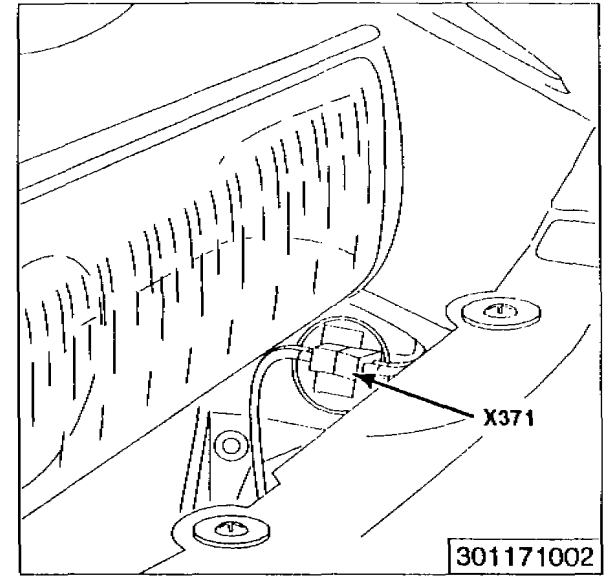
# COMPONENT LOCATION VIEWS



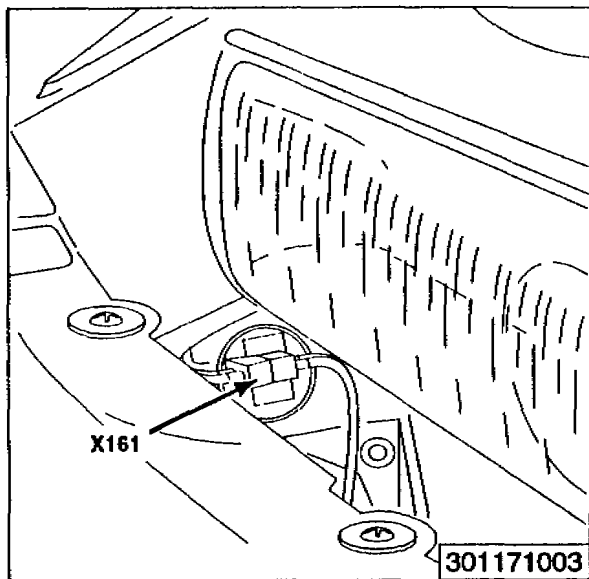
**FIG. 1 - Near LH headlight assembly**  
**X128 CONNECTOR (7-PINS, BLACK)**



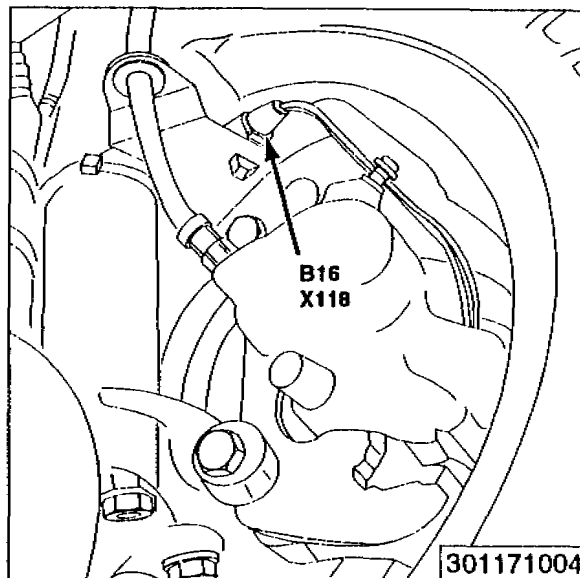
**FIG. 2 - Near RH headlight assembly**  
**X137 CONNECTOR (7-PINS, BLACK)**



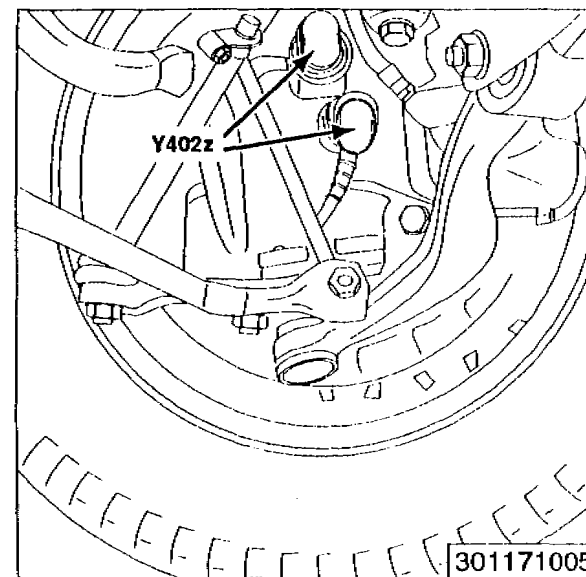
**FIG. 3 - Near RH headlight assembly**  
**X371 CONNECTOR (2-PINS, BLACK)**



**FIG. 1 - Near LH headlight assembly**  
**X161 CONNECTOR (2-PINS, BLACK)**



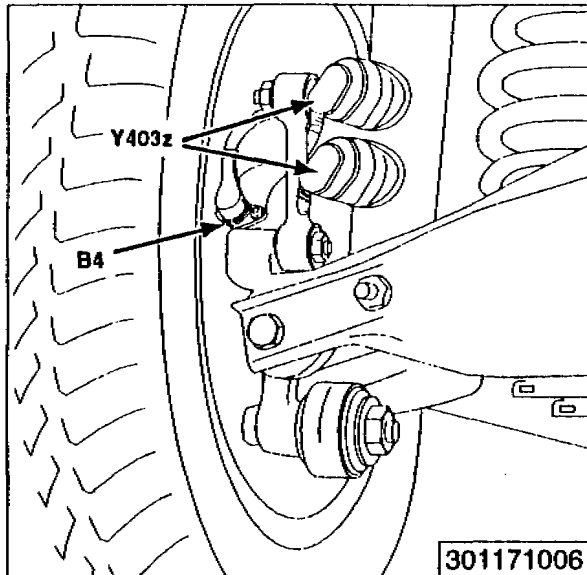
**FIG. 2 - Behind LH front wheel RH rear wheel similar**  
**B16 LEFT FRONT BRAKE PAD SENSOR**  
**X118 CONNECTOR (2-PINS, BLACK)**



**FIG. 3 - Behind LH front wheel (RH similar)**  
**Y402z RIGHT FRONT EDC VALVES**

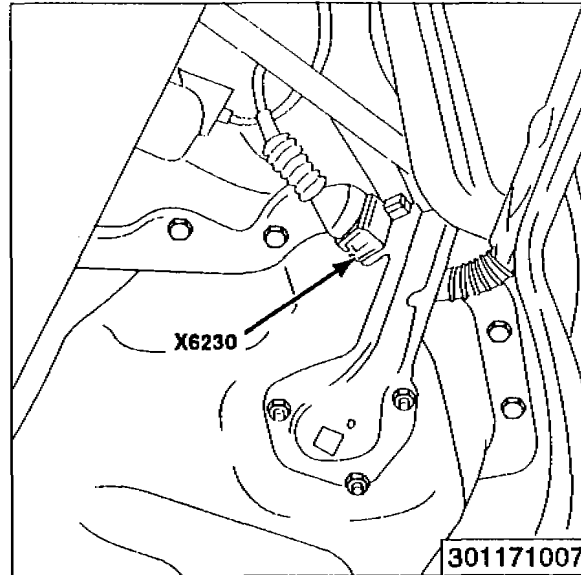


# COMPONENT LOCATION VIEWS



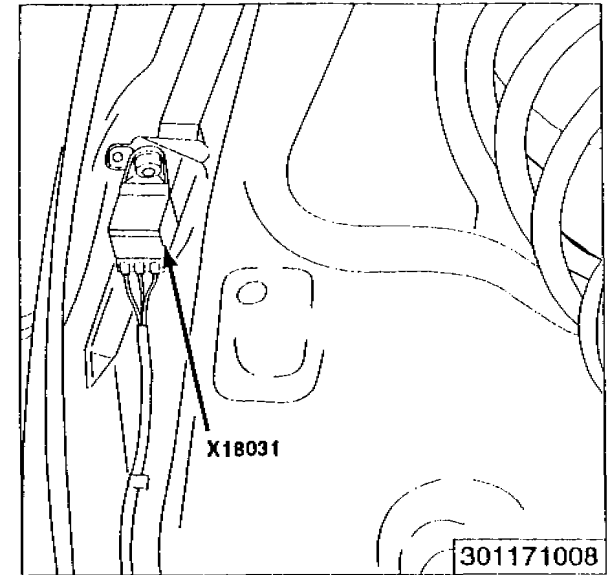
**FIG. 1 - Behind LH rear wheel (RH similar)**

- B4 LEFT REAR SPEED SENSOR - ABS**
- Y403z LEFT REAR EDC VALVES**



**FIG. 2 - Under LH front of car**

- X6230 CONNECTOR (3-PINS, BLACK)**



**FIG. 3 - RH front of wheel well above under trim panel**

- X18031 CONNECTOR (3-PINS, BLACK)**



## COMPONENT LOCATION VIEWS

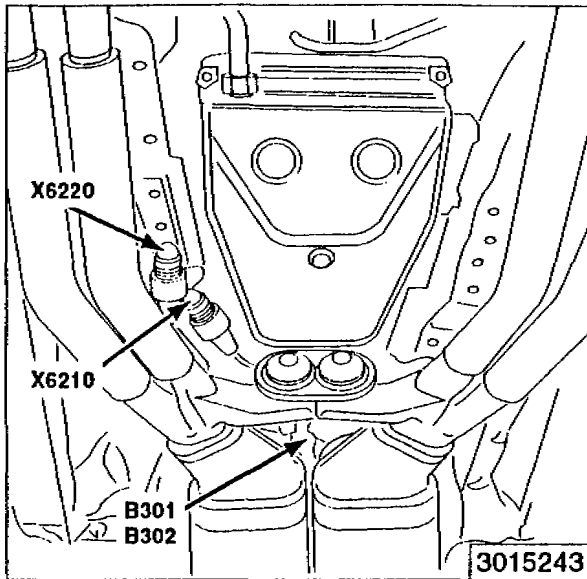


FIG. 1 - On catalytic converter

- X6210 CONNECTOR (4-PINS, GRAY)
- X6220 CONNECTOR (4-PINS, GRAY)
- B301 CYL. 1-6 HEATED OXYGEN SENSOR
- B302 CYL. 7-12 HEATED OXYGEN SENSOR

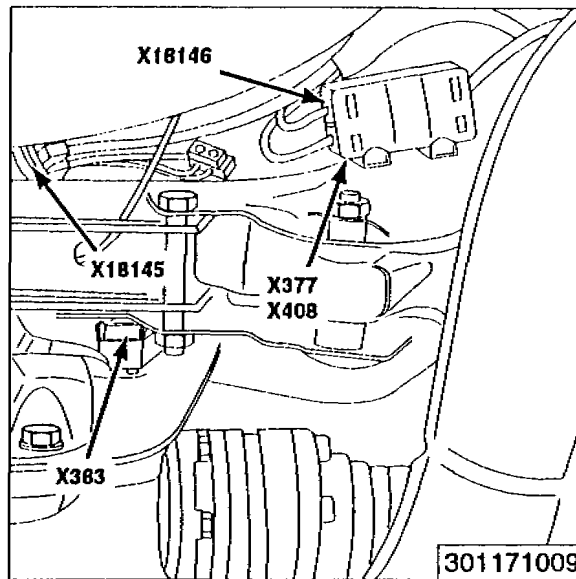


FIG. 2 - Under rear of car

- X377 CONNECTOR (2-PINS, WHITE)
- X383 CONNECTOR (2-PINS, BLACK)
- X408 CONNECTOR (3-PINS, BLUE)
- X18145 CONNECTOR (2-PINS, BLACK)
- X18146 CONNECTOR (2-PINS, BLACK)

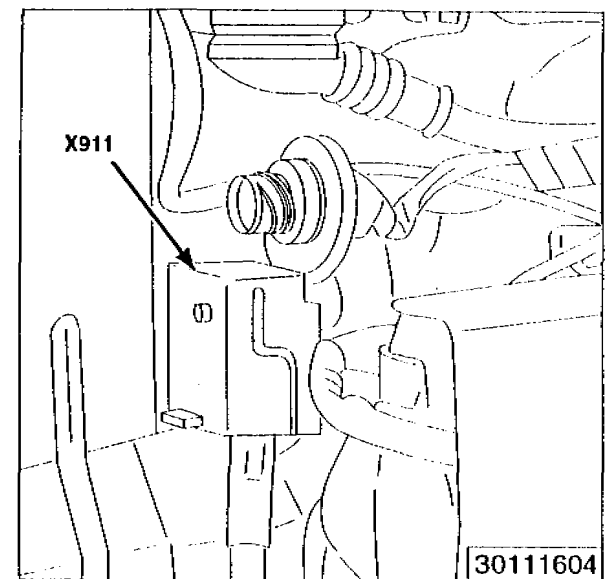


FIG. 3 - Rear RH side of engine compartment near shock tower

- X911 STARTER JUNCTION POINT





## COMPONENT LOCATION VIEWS

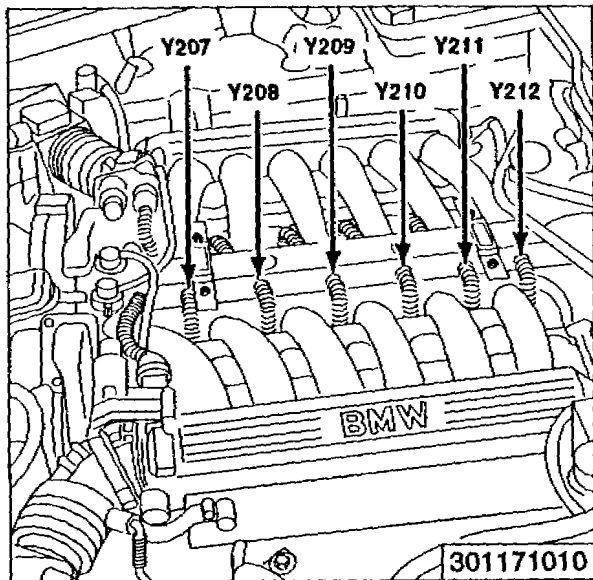


FIG 1 - Top center of engine

Y207	CYL 7 FUEL INJECTION VALVE
Y208	CYL 8 FUEL INJECTION VALVE
Y209	CYL 9 FUEL INJECTION VALVE
Y210	CYL 10 FUEL INJECTION VALVE
Y211	CYL 11 FUEL INJECTION VALVE
Y212	CYL 12 FUEL INJECTION VALVE

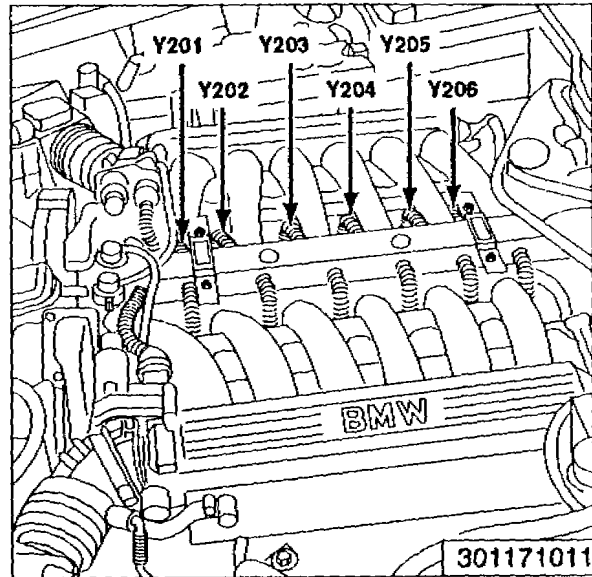


FIG 2 - Top center of engine

Y201	CYL 1 FUEL INJECTION VALVE
Y202	CYL 2 FUEL INJECTION VALVE
Y203	CYL 3 FUEL INJECTION VALVE
Y204	CYL 4 FUEL INJECTION VALVE
Y205	CYL 5 FUEL INJECTION VALVE
Y206	CYL 6 FUEL INJECTION VALVE

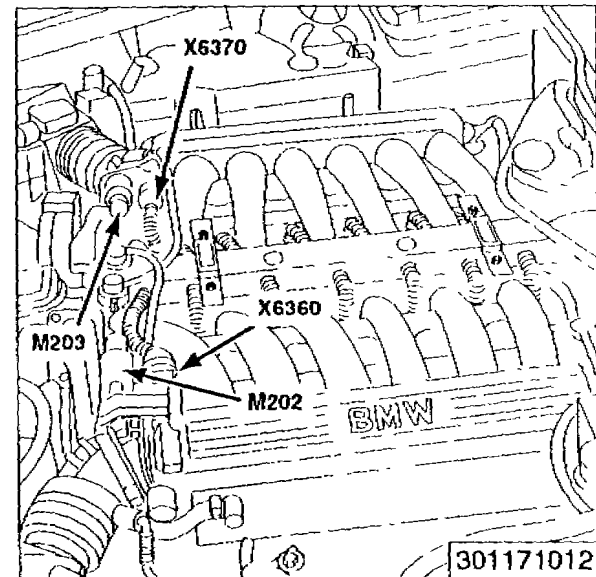
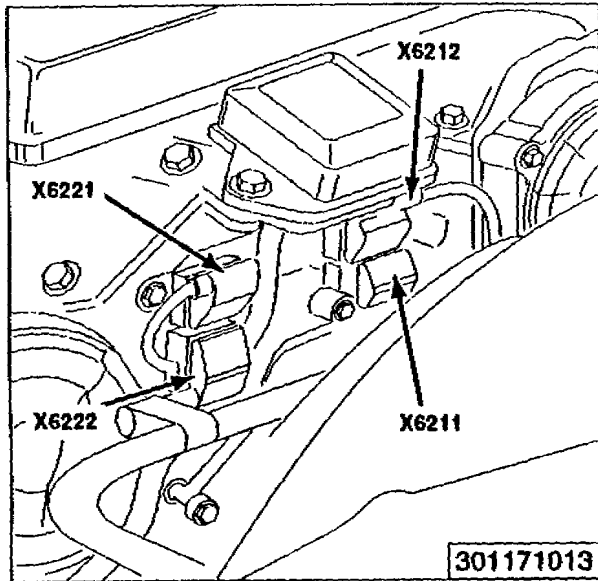


FIG 3 - Top front of engine

M202	CYL 1-6 THROTTLE BODY (EML)
M203	CYL 7-12 THROTTLE BODY (EML)
X6360	CONNECTOR (8-PINS, BLACK)
X6370	CONNECTOR (8-PINS, BLACK)

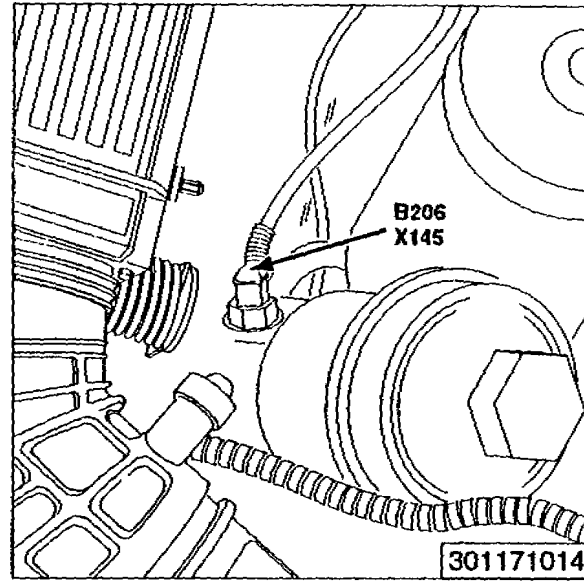


## COMPONENT LOCATION VIEWS



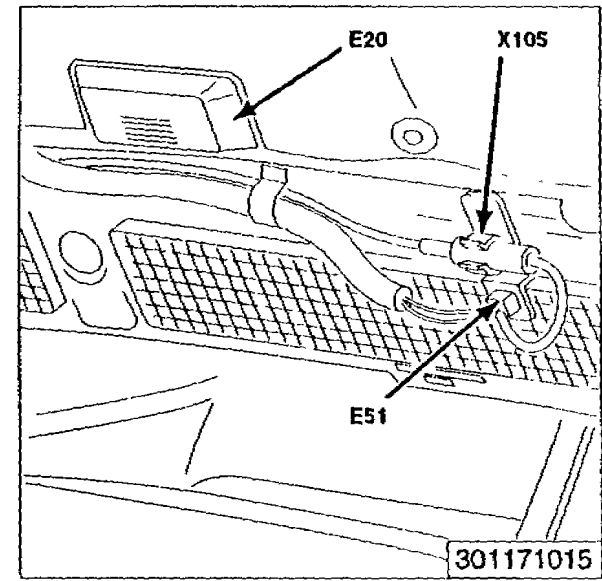
**FIG 1 - Front of engine compartment**

- X6211 CONNECTOR (3-PINS, BLACK)
- X6212 CONNECTOR (3-PINS, BLACK)
- X6221 CONNECTOR (3-PINS, BLACK)
- X6222 CONNECTOR (3-PINS, BLACK)



**FIG 2 - LH side of engine compartment**

- B206 OIL PRESSURE SWITCH
- X145 CONNECTOR (2-PINS, BLACK)

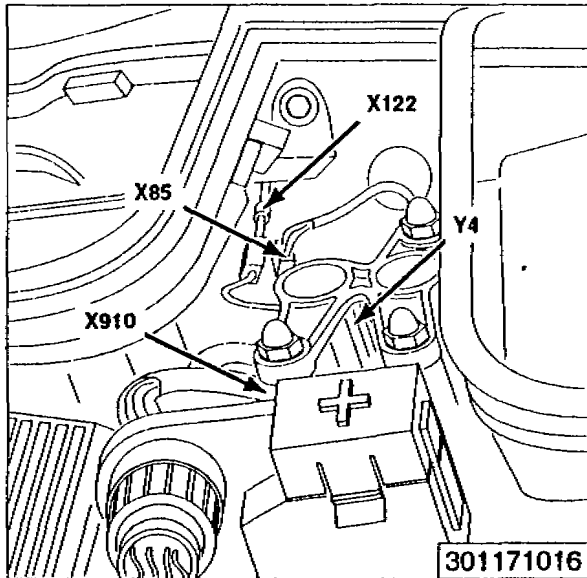


**FIG 3 - On underside of engine hood left (RH similar)**

- E20 UNDERHOOD LIGHT
- E51 LEFT WASHER JET HEATER
- X105 CONNECTOR (2-PINS, BLACK)

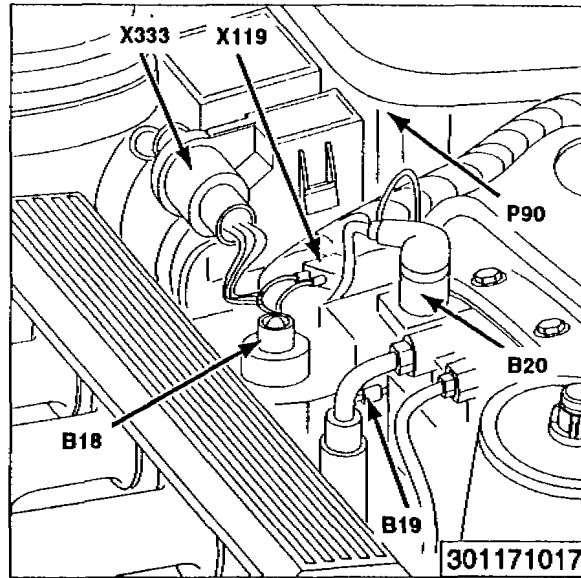


## COMPONENT LOCATION VIEWS



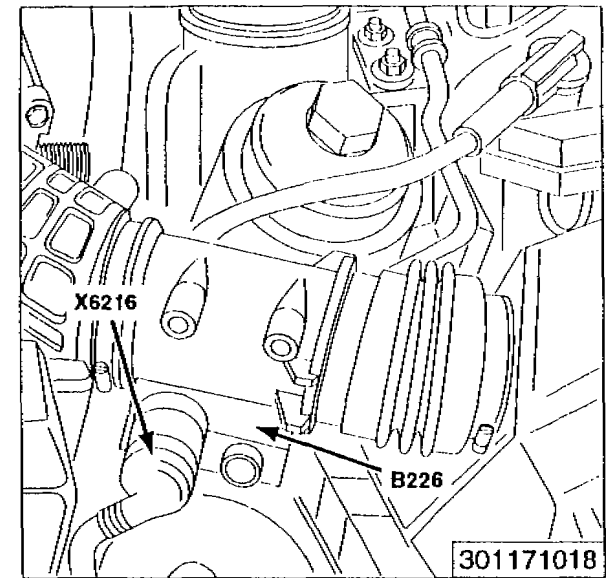
**FIG. 1 - Rear LH side of engine compartment**

- X85 CONNECTOR (3-PINS, BLACK)**
- X122 CONNECTOR (2-PINS, BLACK)**
- X910 B+ JUNCTION POINT**
- Y4 WATER VALVE ASSEMBLY**



**FIG. 2 - Rear LH side of engine compartment**

- B18 BRAKE FLUID LEVEL SWITCH**
- B19 BRAKE PRESSURE REGULATING SWITCH**
- B20 BRAKE PRESSURE SWITCH**
- P90 FRONT POWER DISTRIBUTION BOX**
- X119 CONNECTOR (2-PINS, BLACK)**
- X333 CONNECTOR (12-PINS, BLACK)**

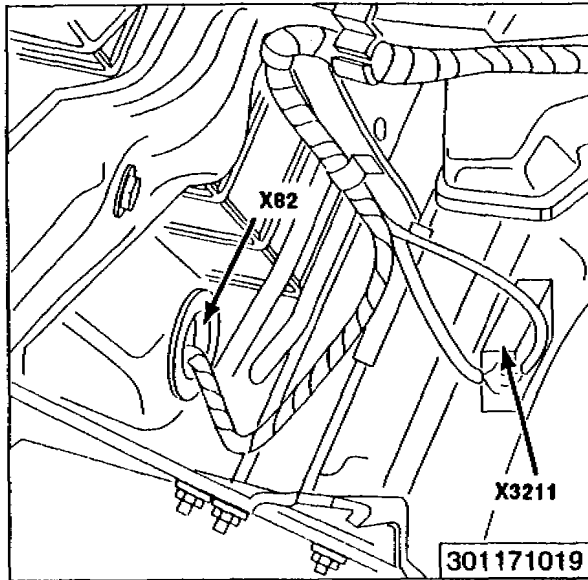


**FIG. 3 - Front LH side of engine compartment**

- B226 CYL. 1-6 MASS AIR FLOW SENSOR**
- X6216 CONNECTOR (7-PINS, BLACK)**

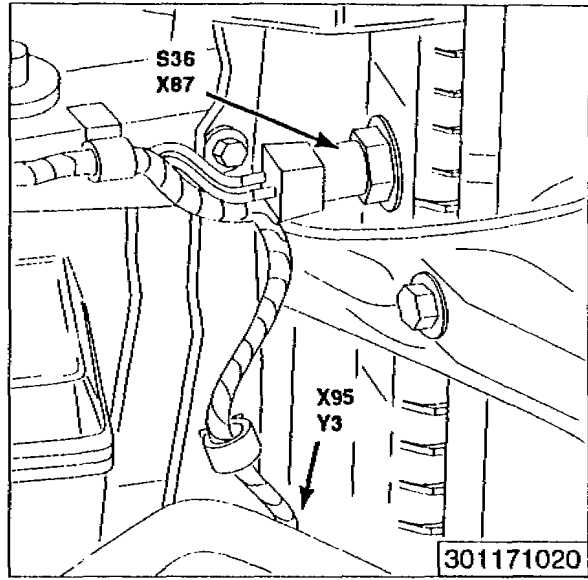


## COMPONENT LOCATION VIEWS



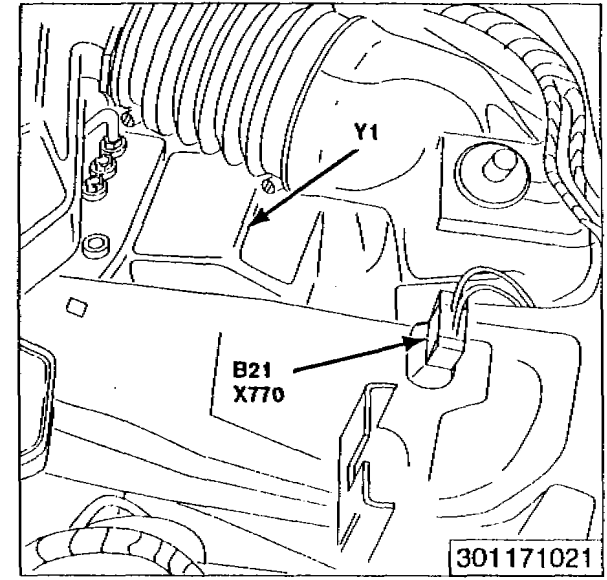
**FIG. 1 - Front LH side of engine compartment (headlights removed)**

**X82** CONNECTOR (3-PINS, BLACK)  
**X3211** CONNECTOR (4-PINS, BLACK)



**FIG. 2 - Front RH side of engine compartment (headlights removed)**

**S36** TEMPERATURE SWITCH  
**X87** CONNECTOR (3-PINS, BLACK)  
**X95** CONNECTOR (3-PINS, BLACK)  
**Y3** AIR CONDITIONING COMPRESSOR (IHKA)

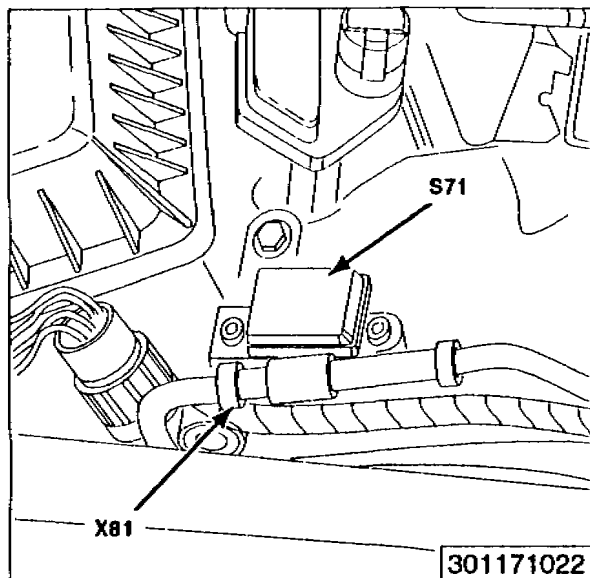


**FIG. 3 - Front LH side of engine compartment (headlights removed)**

**B21** ON-BOARD COMPUTER TEMPERATURE SENSOR  
**X770** CONNECTOR (2-PINS, YELLOW)  
**Y1** ABS HYDRAULIC UNIT

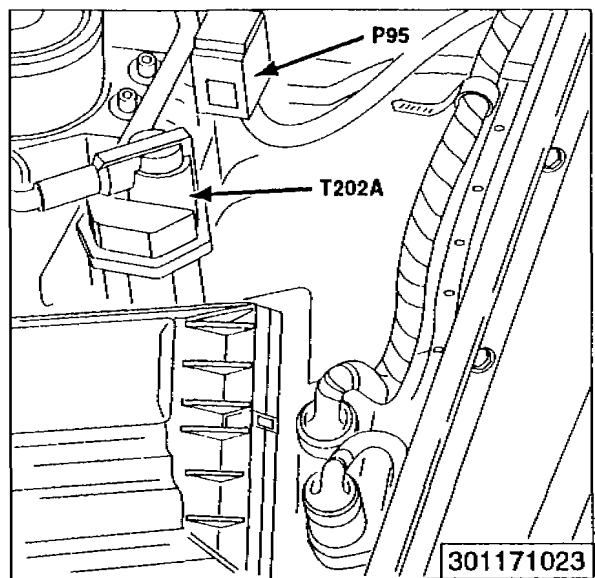


## COMPONENT LOCATION VIEWS



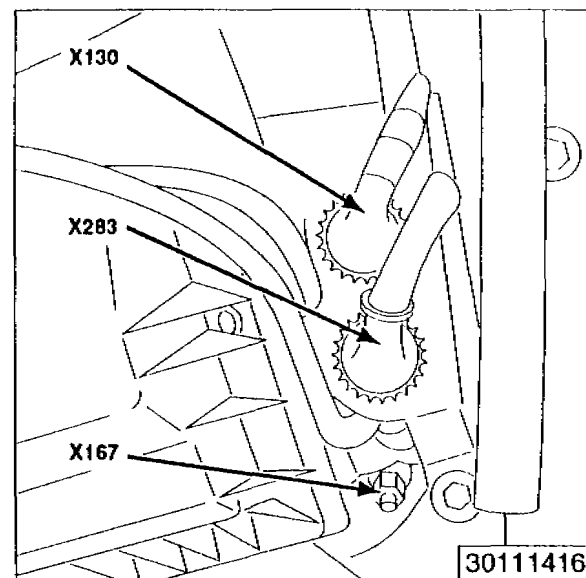
**FIG 1 - LH side of engine compartment**

- S71 LEFT FRONT IMPACT SENSOR**
- X81 CONNECTOR (3-PINS, ORANGE)**



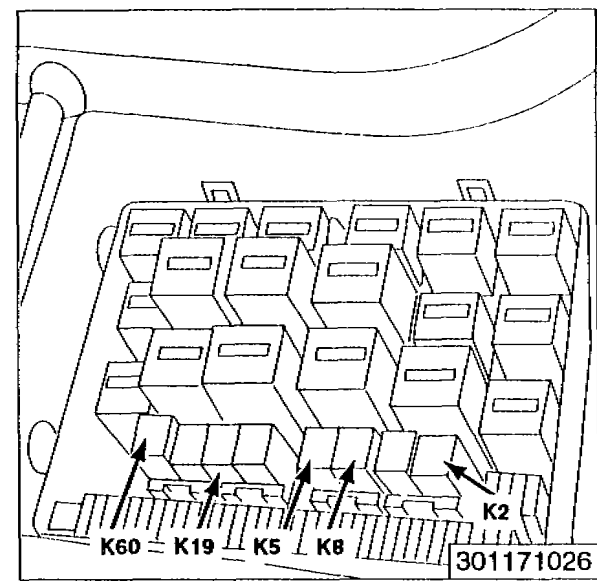
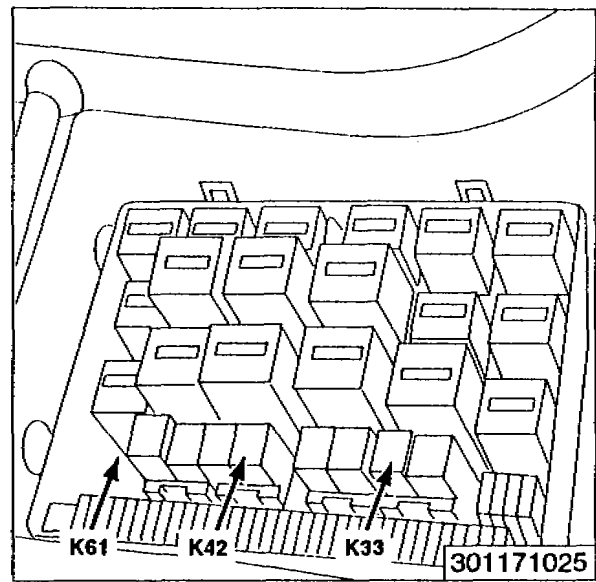
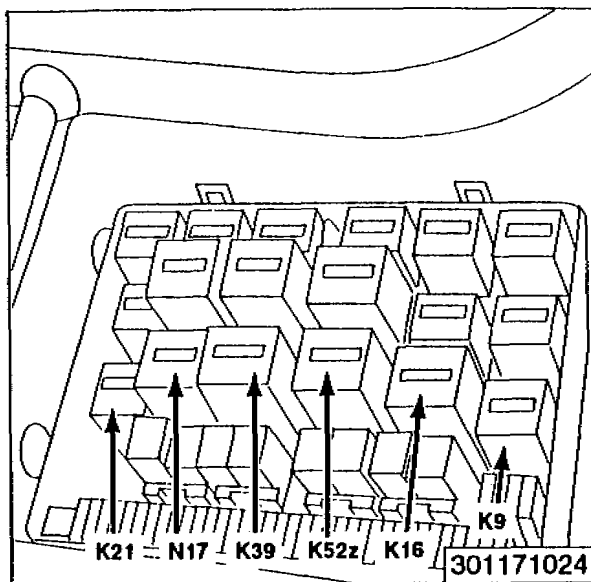
**FIG 2 - LH side of engine compartment  
ahead of LH side shock tower**

- P95 AUXILIARY FUSE BOX**
- T202A CYL 7-12 IGNITION COIL**



**FIG 3 - LH side of engine compartment  
ahead of LH side shock tower**

- X130 CONNECTOR (7-PINS, BLACK)**
- X167 GROUND**
- X283 CONNECTOR (4-PINS, BLACK)**



**FIG. 1 - Rear LH side of engine compartment**

- K9 UNLOADER RELAY, TERMINAL 15**
- K16 HAZARD FLASHER RELAY**
- K21 NORMAL SPEED RELAY**
- K39 CONCEALING HEADLIGHTS RELAY**
- K52z FLASHER LIGHT RELAY**
- N17 CRASH CONTROL MODULE**

**FIG. 2 - Rear LH side of engine compartment**

- K33 AIR CONDITIONING RELAY**
- K42 INTENSIVE WASH RELAY**
- K61 UNLOADER RELAY, TERMINAL 61**

**FIG. 3 - Rear LH side of engine compartment**

- K2 HORN RELAY**
- K5 WASHER PUMP RELAY**
- K8 AUXILIARY WATER PUMP RELAY**
- K19 COMPRESSOR CONTROL RELAY**
- K60 COMPRESSOR CUT-OFF RELAY**

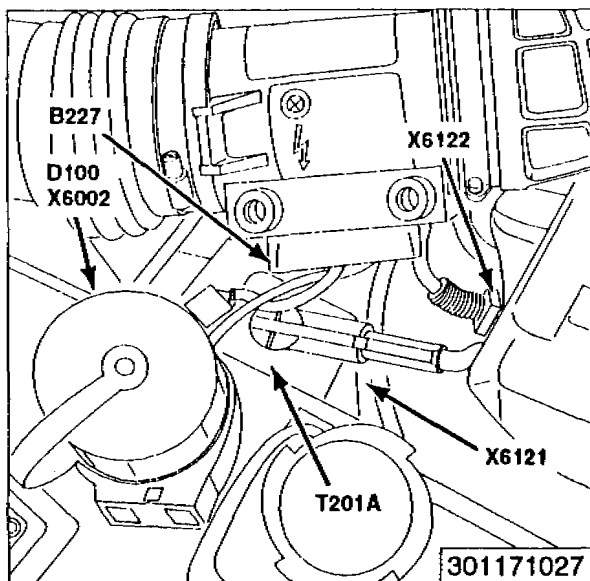


FIG. 1 - RH side of engine compartment

- B227 CYL. 7-12 MASS AIR FLOW SENSOR
- D100 DATA LINK CONNECTOR
- T201A CYL. 1-6 IGNITION COIL
- X6002 CONNECTOR (20-PINS, BLACK)
- X6121 CONNECTOR (2-PINS, BLACK)
- X6122 CONNECTOR (2-PINS, WHITE)

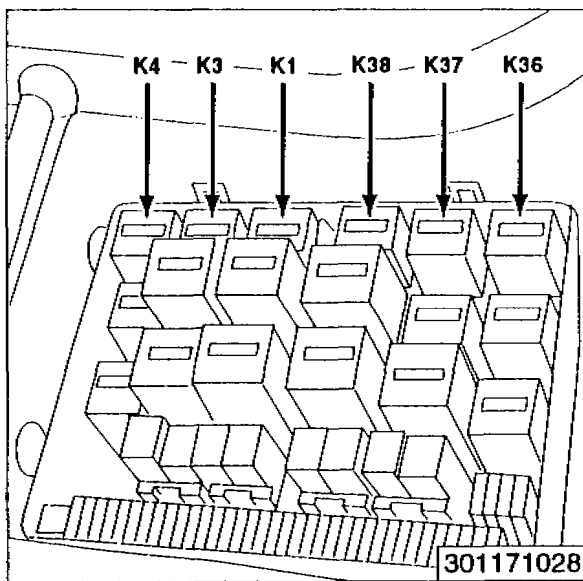


FIG. 2 - Rear LH side of engine compartment

- K1 STARTER RELAY
- K3 UNLOADER RELAY, TERMINAL R
- K4 BLOWER RELAY
- K36 WIPER RELAY I
- K37 WIPER RELAY II
- K38 WIPER RELAY III

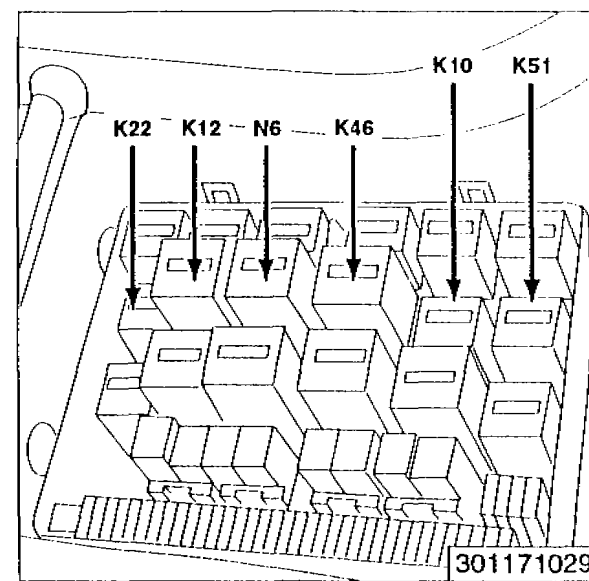


FIG. 3 - Rear LH side of engine compartment

- K10 ABS RELAY
- K12 WIPER PRESSURE CONTROL (ADV) RELAY
- K22 HIGH SPEED RELAY
- K46 HIGH BEAM LIGHT RELAY
- K51 JUMPER PLUG FOR HORN/TELEPHONE
- N6 HEADLIGHT/FOGLIGHT CLEANING MODULE (SRA)



## COMPONENT LOCATION VIEWS

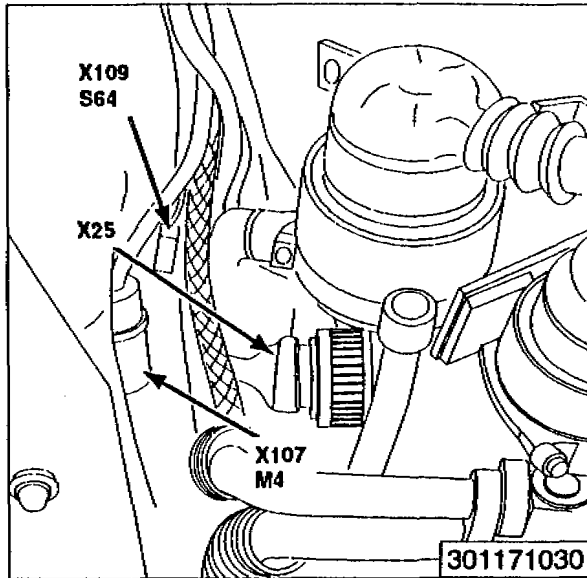


FIG. 1 - RH side of engine compartment

- M4 WASHER PUMP
- S64 WASHER FLUID LEVEL SWITCH
- X25 CONNECTOR (4-PINS, BLACK)
- X107 CONNECTOR (2-PINS, GRAY)
- X109 CONNECTOR (2-PINS, BLACK)

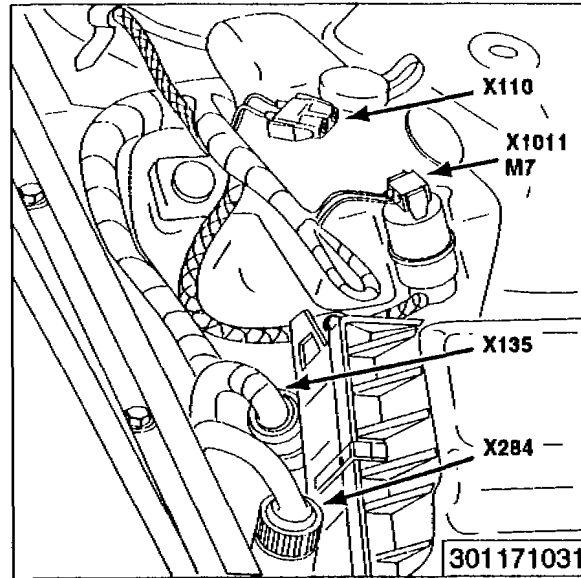


FIG. 2 - RH side of engine compartment

- M7 HEADLIGHT/FOG LIGHT WASHER PUMP
- X135 CONNECTOR (7-PINS, BLACK)
- X110 CONNECTOR (2-PINS, GRAY)
- X284 CONNECTOR (4-PINS, BLACK)
- X1011 CONNECTOR (2-PINS, GRAY)

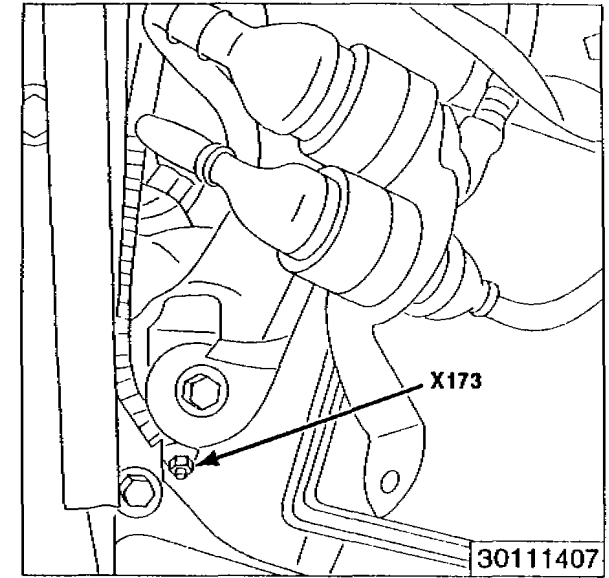


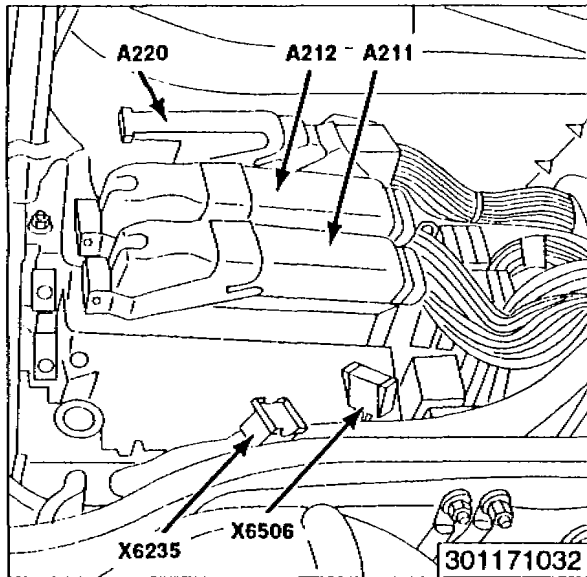
FIG. 3 - Front RH side of engine compartment (headlights removed)

- X173 GROUND



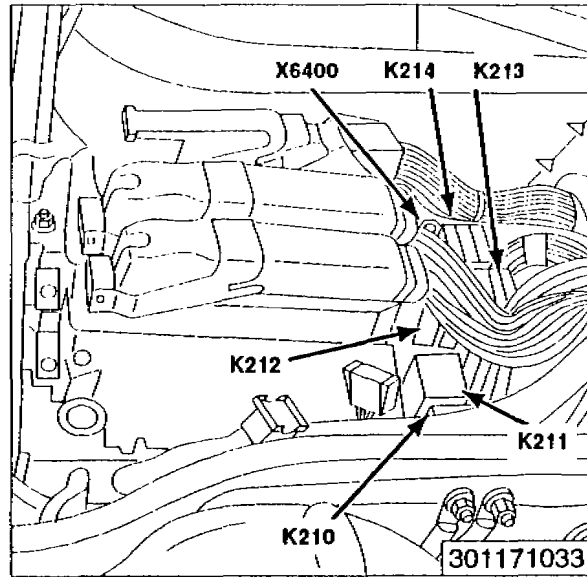


# COMPONENT LOCATION VIEWS



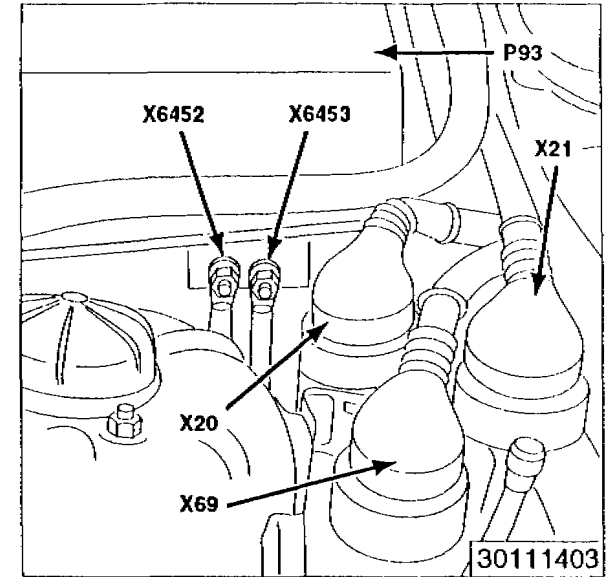
**FIG. 1 - Rear RH side of engine compartment in E-Box**

- A211** CYL. 1-6 ENGINE CONTROL MODULE (DME)
- A212** CYL. 7-12 ENGINE CONTROL MODULE (DME)
- A220** THROTTLE CONTROL MODULE (EML)
- X6235** CONNECTOR (2-PINS, BLACK)
- X6506** CONNECTOR (4-PINS, BLACK)



**FIG. 2 - Rear RH side of engine compartment in E-Box**

- K210** CYL. 1-6 FUEL PUMP RELAY
- K211** CYL. 7-12 FUEL PUMP RELAY
- K212** CYL. 1-6 ENGINE CONTROL MODULE RELAY
- K213** CYL. 7-12 ENGINE CONTROL MODULE RELAY
- K214** OXYGEN SENSOR RELAY
- X6400** B+ JUNCTION POINT

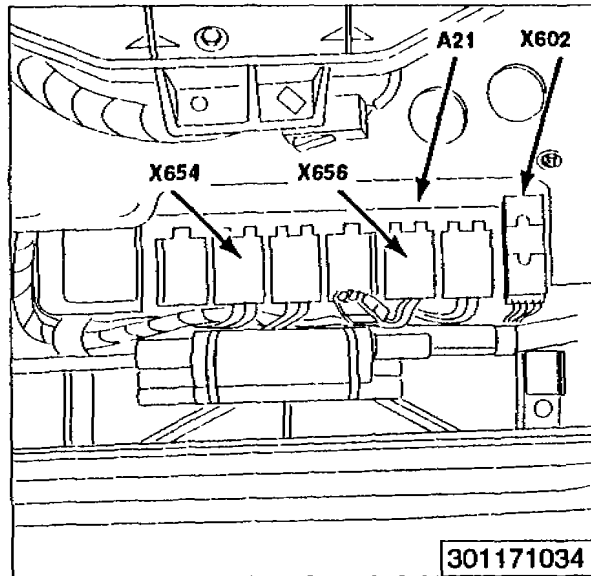


**FIG. 3 - Rear RH side of engine compartment ahead of RH side shock tower**

- P93** E-BOX
- X20** CONNECTOR (25-PINS, GRAY)
- X21** CONNECTOR (25-PINS, BLUE)
- X69** CONNECTOR (25-PINS, BLACK)
- X6452** GROUND
- X6453** GROUND

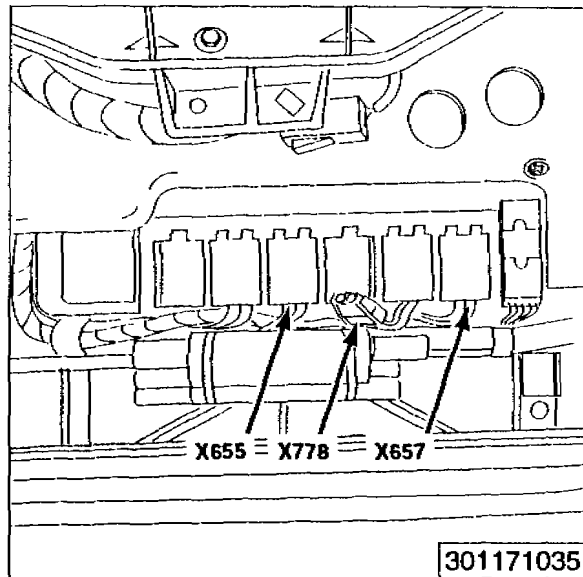


# COMPONENT LOCATION VIEWS



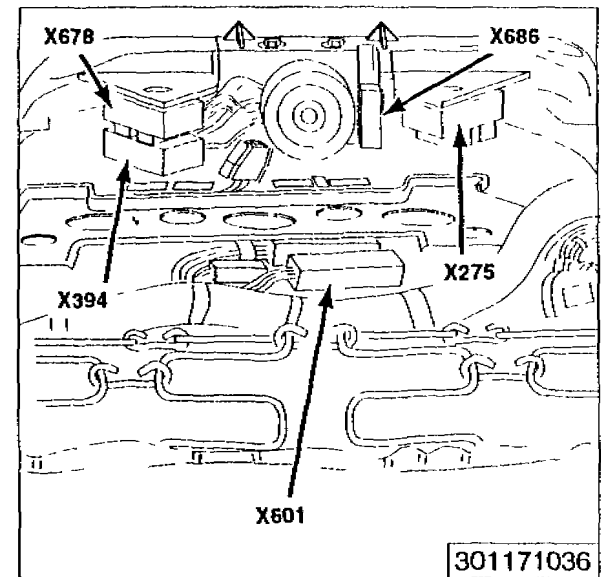
**FIG 1 - Underside of LH front seat**

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



**FIG 2 - Underside of LH front seat**

- X655 CONNECTOR (6-PINS, BLUE)**
- X657 CONNECTOR (6-PINS, BLUE)**
- X778 CONNECTOR (2-PINS, BLACK)**

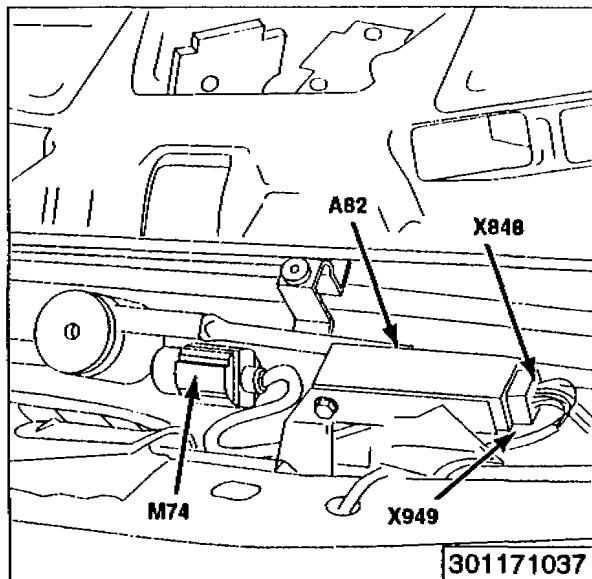


**FIG 3 - Underside of LH front seat**

- X275 CONNECTOR (12-PINS, WHITE)**
- X394 CONNECTOR (12-PINS, BLACK)**
- X601 CONNECTOR (26-PINS, YELLOW)**
- X678 CONNECTOR (12-PINS, WHITE)**
- X686 CONNECTOR (3-PINS, BLUE)**

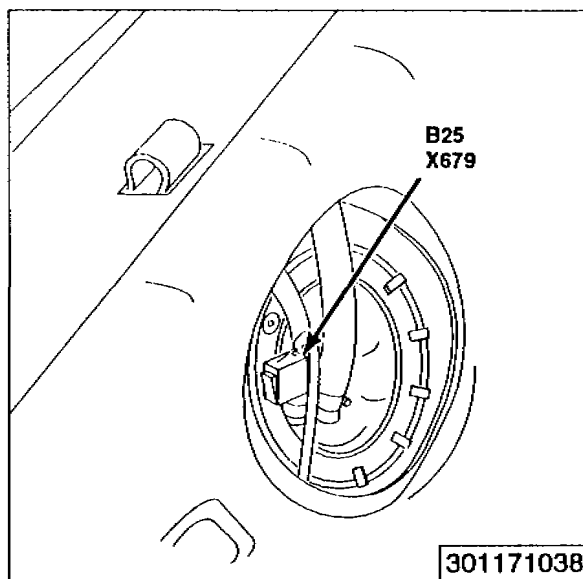


## COMPONENT LOCATION VIEWS



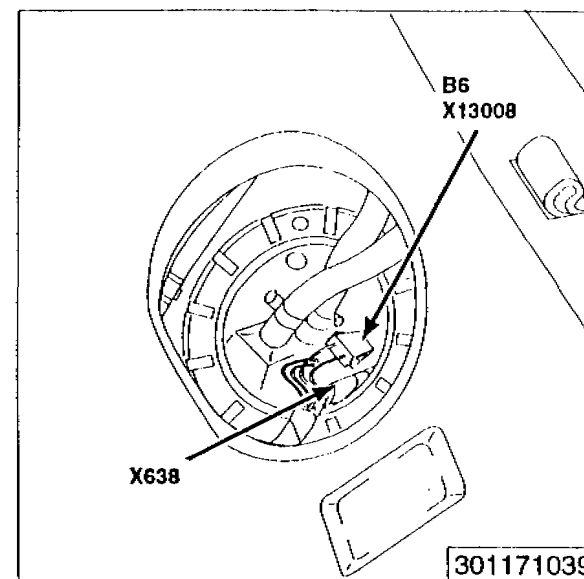
**FIG. 1 - Underside of LH rear seat under trim panel**

- A82** SUN BLIND CONTROL MODULE
- M74** SUN BLIND MOTOR
- X848** CONNECTOR (4-PINS, GREEN)
- X949** CONNECTOR (5-PINS, BLACK)



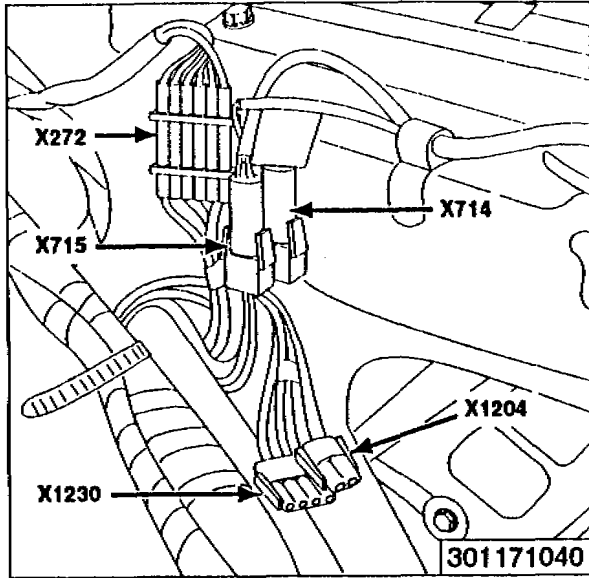
**FIG. 2 - Under LH rear seat**

- B25** FUEL LEVEL SENSOR II
- X679** CONNECTOR (2-PINS, WHITE)



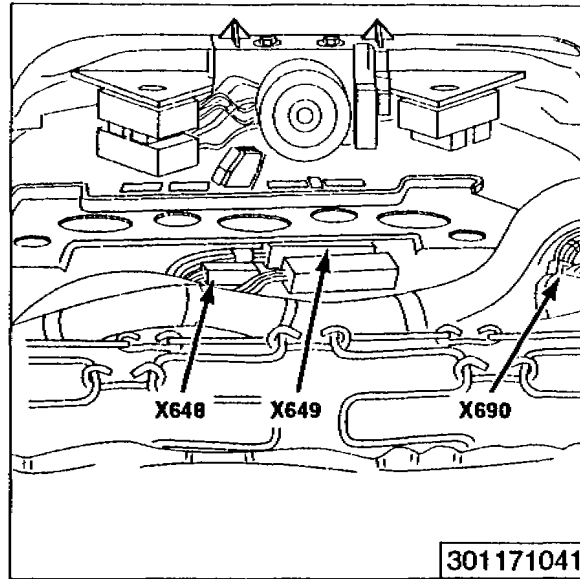
**FIG. 3 - Under RH rear seat**

- B6** FUEL LEVEL SENSOR
- X638** CONNECTOR (3-PINS, BLACK)
- X13008** CONNECTOR (2-PINS, WHITE)



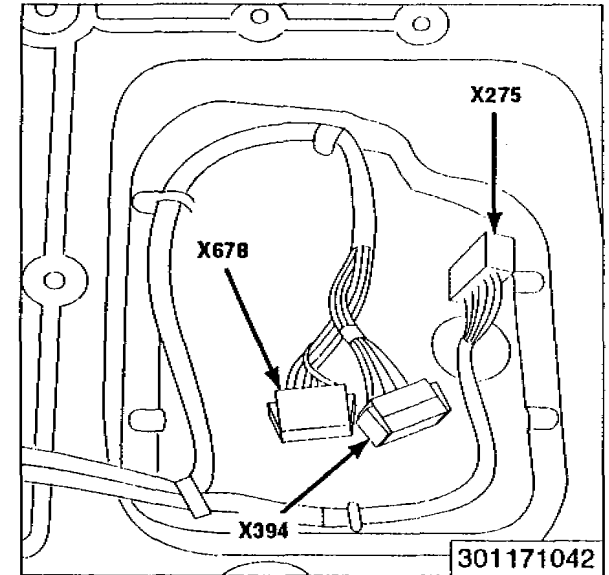
**FIG. 1 - Left from LH rear seat behind trim panel**

- X272** CONNECTOR (6-PINS, BLACK)
- X714** CONNECTOR (4-PINS, BLACK)
- X715** CONNECTOR (2-PINS, BLACK)
- X1204** CONNECTOR (2-PINS, WHITE)
- X1230** CONNECTOR (4-PINS, WHITE)



**FIG. 2 - Underside of LH front seat**

- X648** CONNECTOR (6-PINS, BLACK)
- X649** CONNECTOR (6-PINS, WHITE)
- X690** CONNECTOR (3-PINS, BLUE)

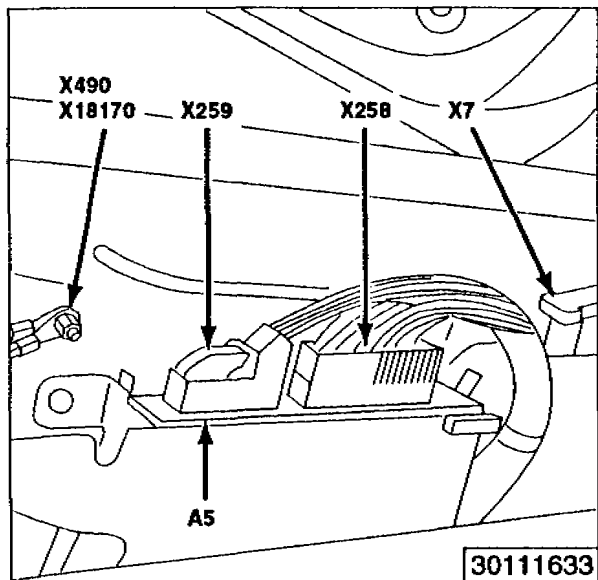


**FIG. 3 - Under LH front seat under carpet**

- X275** CONNECTOR (12-PINS, WHITE)
- X394** CONNECTOR (12-PINS, BLACK)
- X678** CONNECTOR (12-PINS, WHITE)

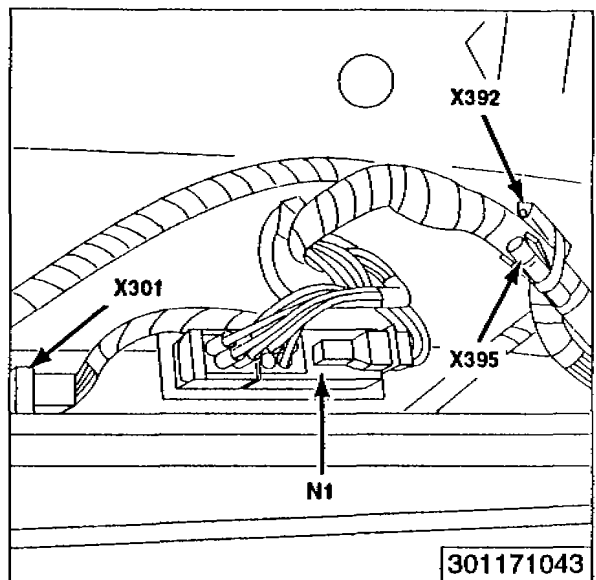


## COMPONENT LOCATION VIEWS



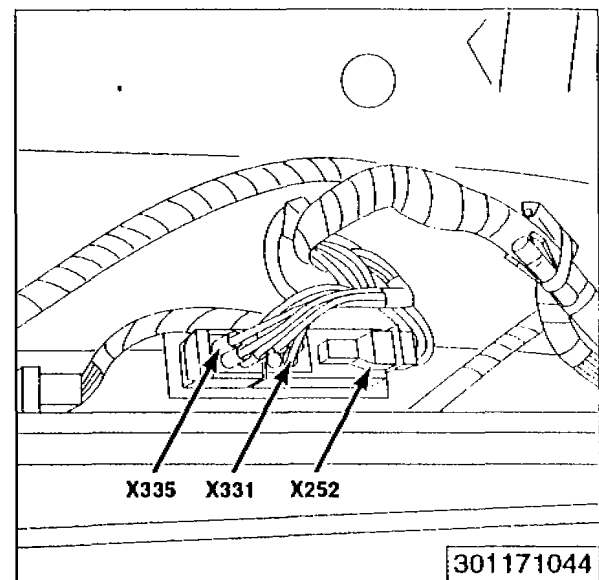
**FIG. 1 - Inside box on interior side of LH door sill**

- A5 RELAY MODULE**
- X7 CONNECTOR (55-PINS, NATURAL)**
- X258 CONNECTOR (20-PINS, BLACK)**
- X259 CONNECTOR (26-PINS, BLACK)**
- X490 GROUND**
- X18170 GROUND**



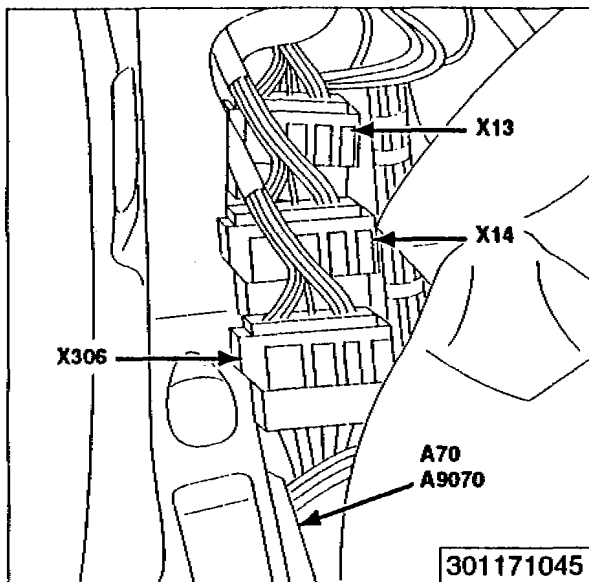
**FIG. 2 - Interior side of RH door sill**

- N1 ANTI-THEFT CONTROL MODULE (DWA)**
- X301 CONNECTOR (26-PINS, WHITE)**
- X392 CONNECTOR (1-PINS, BLUE)**
- X395 CONNECTOR (1-PINS, YELLOW)**



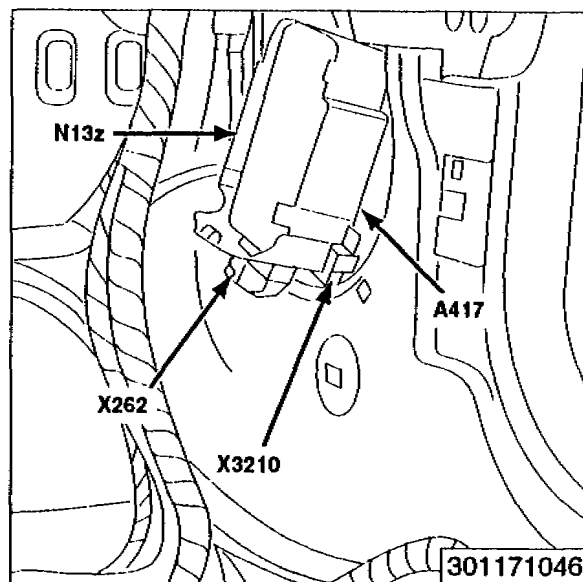
**FIG. 3 - Interior side of RH door sill**

- X252 CONNECTOR (26-PINS, BLACK)**
- X331 CONNECTOR (5-PINS, BLACK)**
- X335 CONNECTOR (4-PINS, BLACK)**



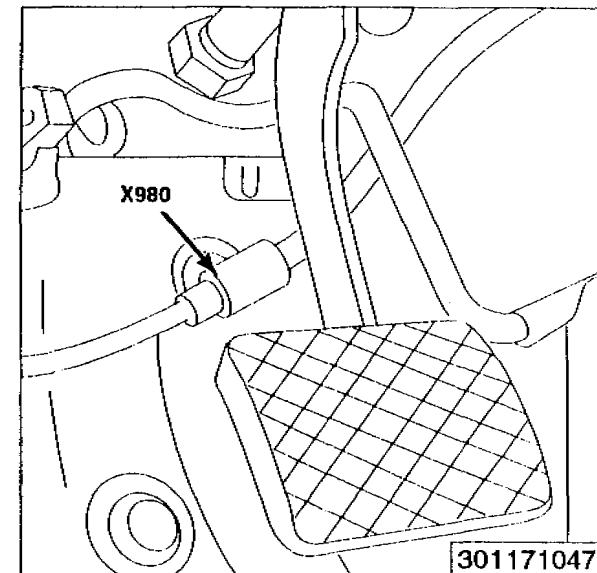
**FIG. 1 - LH footwell under footrest**

- A70** SLIP CONTROL MODULE (ABS/ASC)
- A9070** SLIP CONTROL MODULE (ABS/ASC+T)
- X13** CONNECTOR (30-PINS, BLACK)
- X14** CONNECTOR (30-PINS, WHITE)
- X306** CONNECTOR (30-PINS, BLUE)



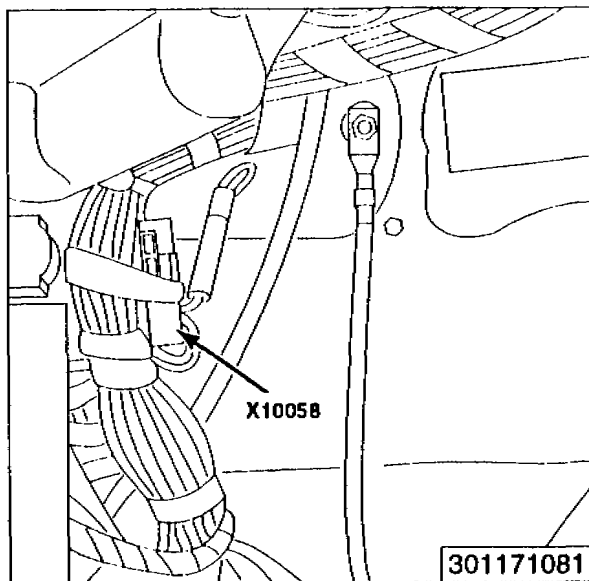
**FIG. 2 - Behind RH footwell kickpanel**

- A417** AUTOMATIC AIR RECIRCULATION CONTROL MODULE
- N13z** COMPACT INFRARED LOCKING
- X262** CONNECTOR (26-PINS, YELLOW)
- X3210** CONNECTOR (26-PINS, BLUE)



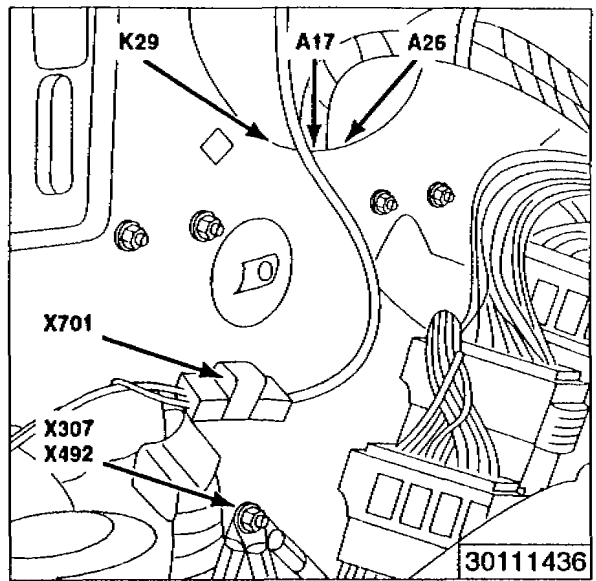
**FIG. 3 - RH side of LH footwell under carpet**

- X980** SPLICE



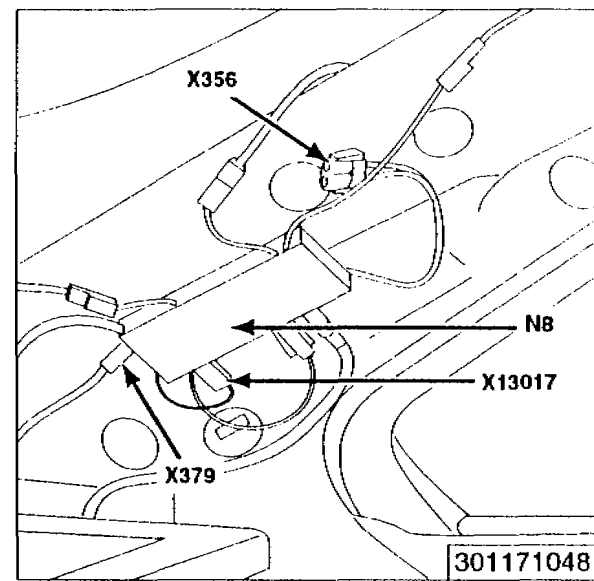
**FIG. 1 - LH footwell under footrest**

**X10058 CONNECTOR (1-PINS, YELLOW)**



**FIG. 2 - LH side of LH footwell**

- A17 SERVOTRONIC CONTROL MODULE**
- A26 LOCK-SENSOR CONTROL MODULE**
- K29 INTERIOR LIGHT RELAY**
- X307 GROUND**
- X492 GROUND**
- X701 CONNECTOR (2-PINS, BLACK)**



**FIG. 3 - In upper LH C-pillar**

- N8 ANTENNA AMPLIFIER AM/FM**
- X356 CONNECTOR (2-PINS, BLACK)**
- X379 CONNECTOR (1-PINS, BLACK)**
- X13017 CONNECTOR (1-PINS, (---))**



# COMPONENT LOCATION VIEWS

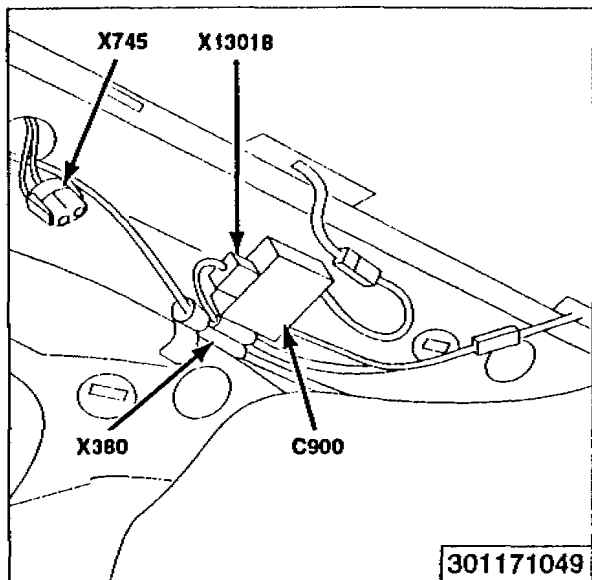


FIG. 1 - In upper RH C-pillar

- C900 SUPPRESSION FILTER
- X380 CONNECTOR (1-PINS, BLACK)
- X745 CONNECTOR (2-PINS, BLACK)
- X13018 CONNECTOR (1-PINS, BLACK)

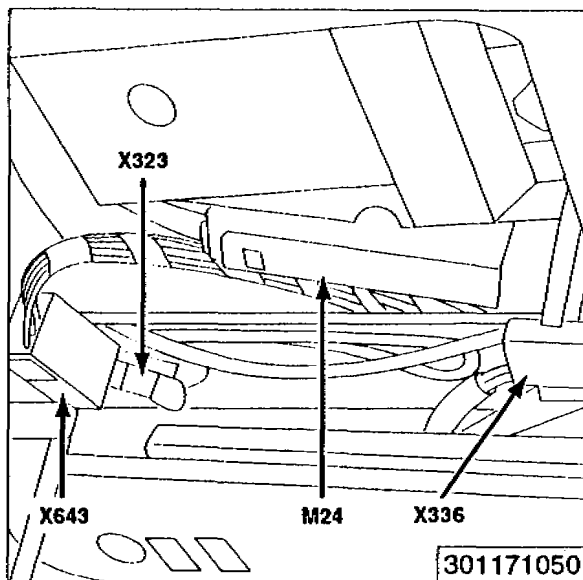


FIG. 2 - Center of windshield header

- M24 SUNROOF MOTOR
- X323 CONNECTOR (6-PINS, WHITE)
- X336 CONNECTOR (4-PINS, WHITE)
- X643 CONNECTOR (6-PINS, BLUE)

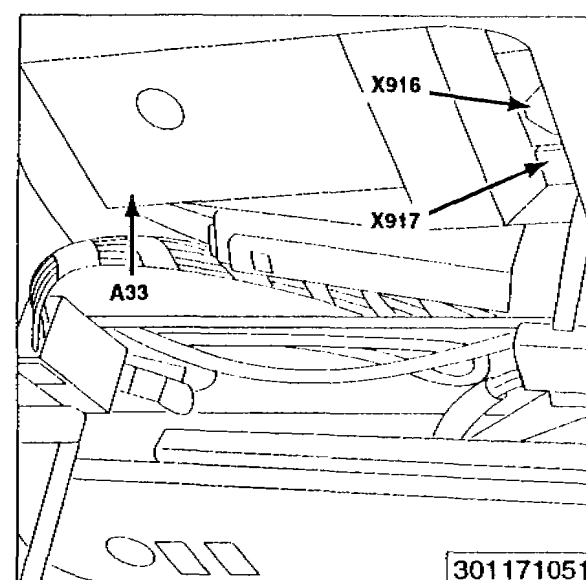


FIG. 3 - Center of windshield header

- A33 SUNROOF MODULE
- X916 CONNECTOR (5-PINS, BLACK)
- X917 CONNECTOR (6-PINS, BLACK)





## COMPONENT LOCATION VIEWS

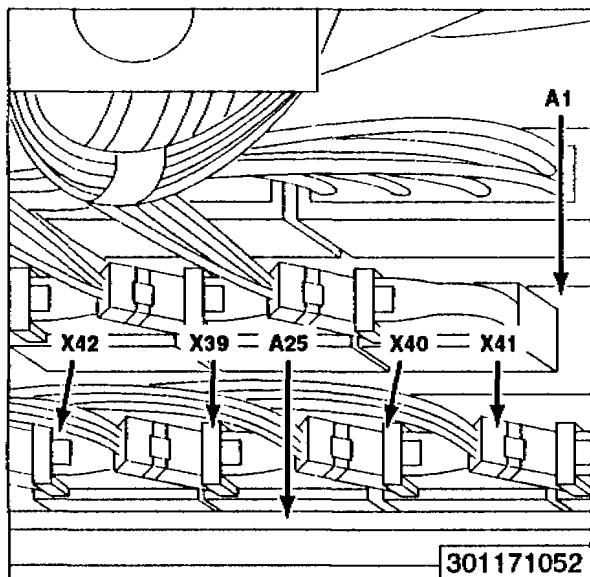


FIG. 1 - Below LH side of dash

- A1 GENERAL MODULE
- A25 BODY ELECTRONICS MODULE
- X39 CONNECTOR (26-PINS, GREEN)
- X40 CONNECTOR (26-PINS, BROWN)
- X41 CONNECTOR (26-PINS, BLUE)
- X42 CONNECTOR (26-PINS, BLACK)

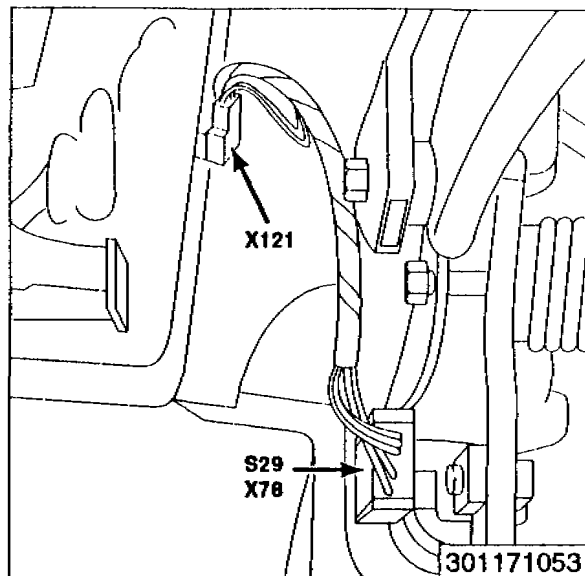


FIG. 2 - Below LH side of dash

- S29 BRAKE LIGHT SWITCH
- X78 CONNECTOR (4-PINS, BLACK)
- X121 CONNECTOR (2-PINS, WHITE)

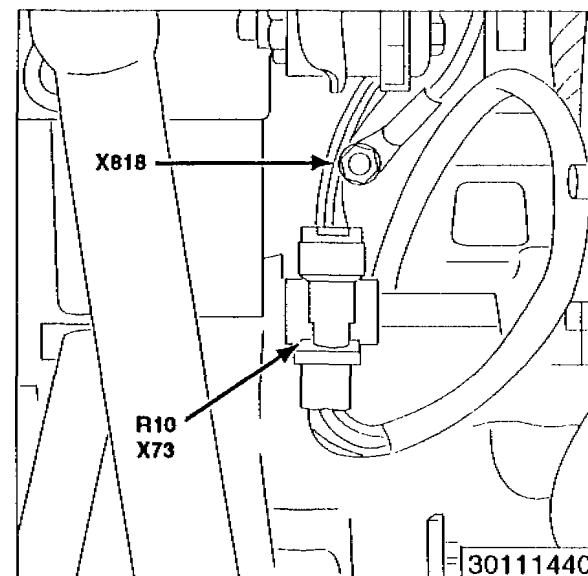


FIG. 3 - Below LH side of dash

- R10 PEDAL POSITION SENSOR
- X73 CONNECTOR (8-PINS, WHITE)
- X818 GROUND



## COMPONENT LOCATION VIEWS

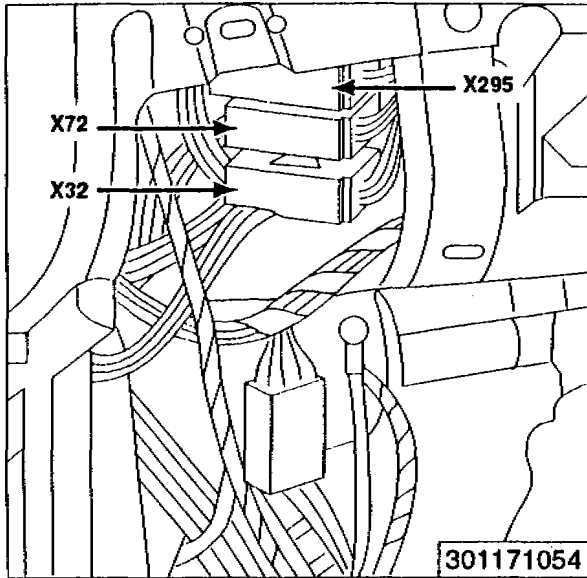


FIG. 1 - Below LH side of dash

- X32 CONNECTOR (12-PINS, WHITE)
- X72 CONNECTOR (8-PINS, WHITE)
- X295 CONNECTOR (8-PINS, BLACK)

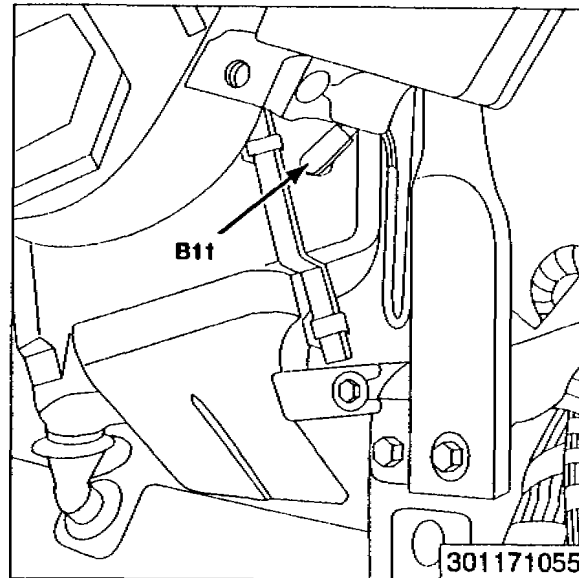


FIG. 2 - Below LH side of dash on LH side of IHKA Plenum

- B11 LH HEAT EXCHANGER TEMPERATURE SENSOR

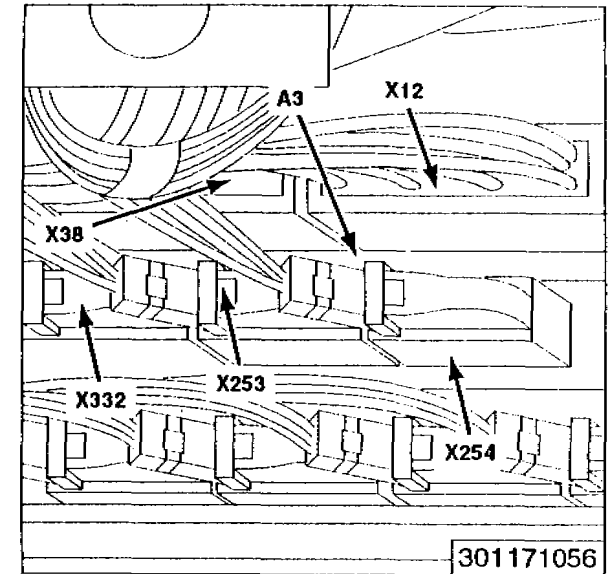
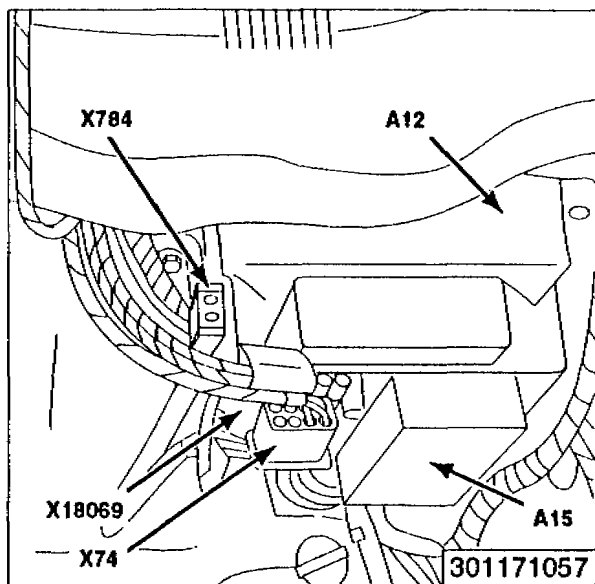


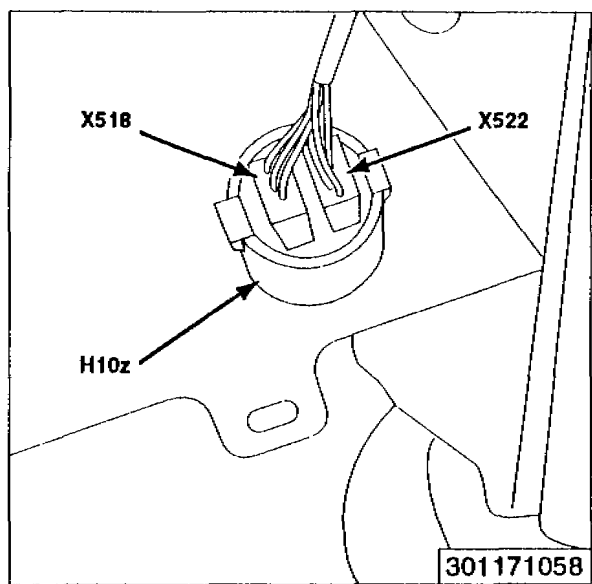
FIG. 3 - Below LH side of dash

- A3 LAMP CONTROL MODULE
- X12 CONNECTOR (20-PINS, WHITE)
- X38 CONNECTOR (20-PINS, BLACK)
- X253 CONNECTOR (26-PINS, BLACK)
- X254 CONNECTOR (26-PINS, YELLOW)
- X332 CONNECTOR (26-PINS, WHITE)



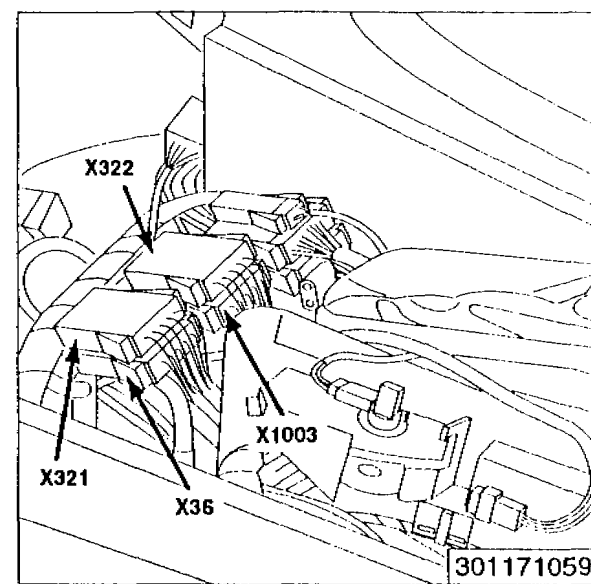
**FIG. 1 - Below RH side of dash (glove box removed)**

- A12 SUPPLEMENTAL RESTRAINT SYSTEM CONTROL MODULE**
- A15 PARK HEATING/VENTILATION RELAY BOX**
- X74 CONNECTOR (12-PINS, BLUE)**
- X18069 CONNECTOR (12-PINS, WHITE)**
- X784 CONNECTOR (12-PINS, BLACK)**



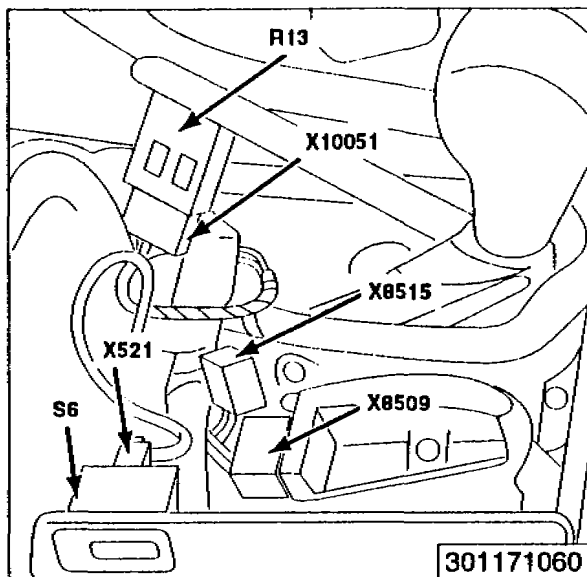
**FIG. 2 - Below RH side of dash**

- H10z ACOUSTIC DEVICE**
- X518 CONNECTOR (4-PINS, BLACK)**
- X522 CONNECTOR (3-PINS, WHITE)**



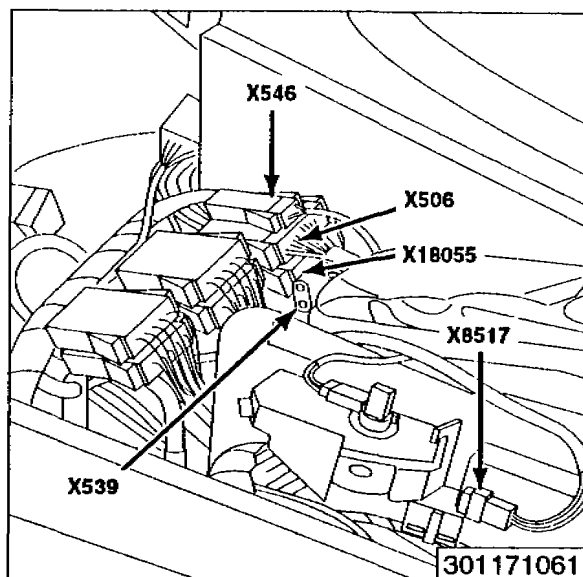
**FIG. 3 - Center console**

- X36 CONNECTOR (21-PINS, BLACK)**
- X321 CONNECTOR (4-PINS, BLACK)**
- X322 CONNECTOR (8-PINS, BLACK)**
- X1003 CONNECTOR (12-PINS, BLACK)**



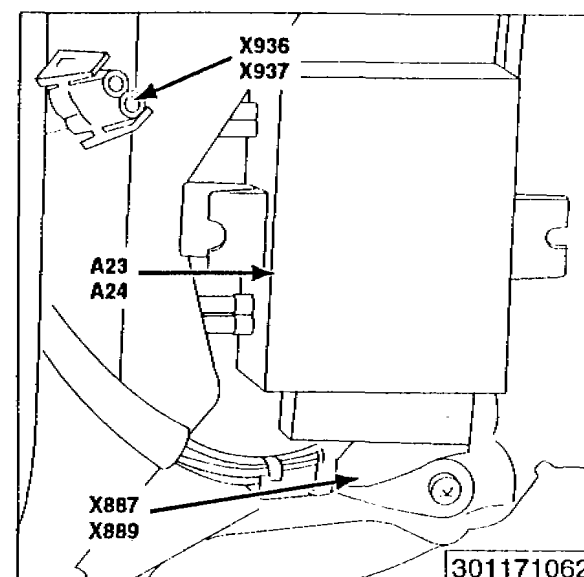
**FIG. 1 - Center console**

- R13 HEADLIGHT WIDENING POTENTIOMETER**
- S6 ASC SWITCH**
- X521 CONNECTOR (6-PINS, BLUE)**
- X8509 CONNECTOR (8-PINS, BLACK)**
- X8515 CONNECTOR (8-PINS, BLACK)**
- X10051 CONNECTOR (4-PINS, BLACK)**



**FIG. 2 - Center console**

- X506 CONNECTOR (12-PINS, WHITE)**
- X539 CONNECTOR (2-PINS, WHITE)**
- X546 CONNECTOR (2-PINS, WHITE)**
- X8517 CONNECTOR (10-PINS, BLACK)**
- X18055 CONNECTOR (12-PINS, BLACK)**

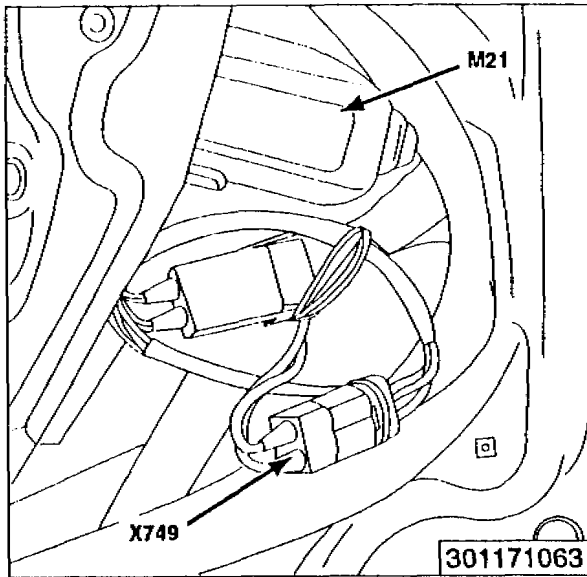


**FIG. 3 - In lower LH front door right (RH similar)**

- A23 DRIVER'S DOOR MODULE**
- A24 PASSENGER'S DOOR MODULE**
- X887 CONNECTOR (26-PINS, BLACK)**
- X889 CONNECTOR (26-PINS, WHITE)**
- X936 CONNECTOR (2-PINS, WHITE)**
- X937 CONNECTOR (2-PINS, WHITE)**

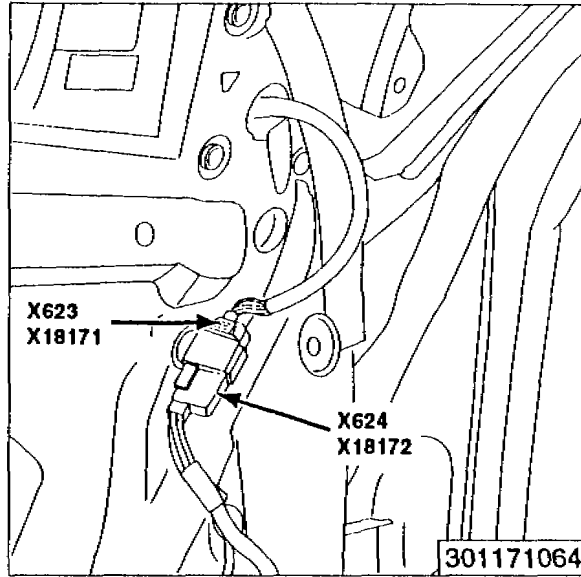


## COMPONENT LOCATION VIEWS



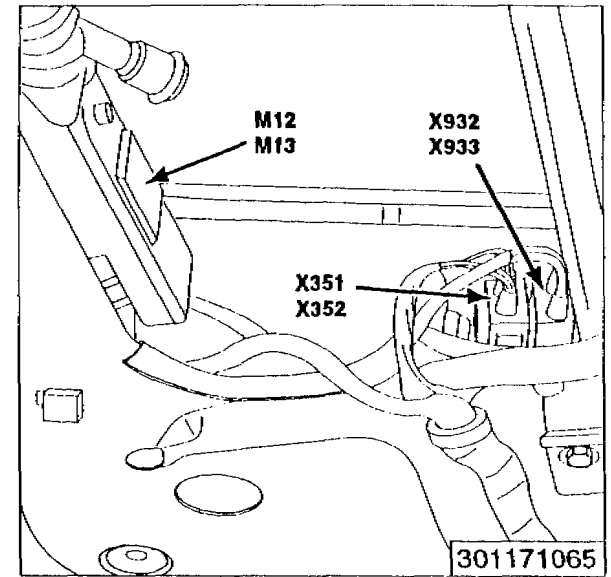
**FIG. 1 - In lower LH front door right (RH similar)**

**M21 DRIVER'S WINDOW MOTOR**  
**X749 CONNECTOR (6-PINS, BLACK)**



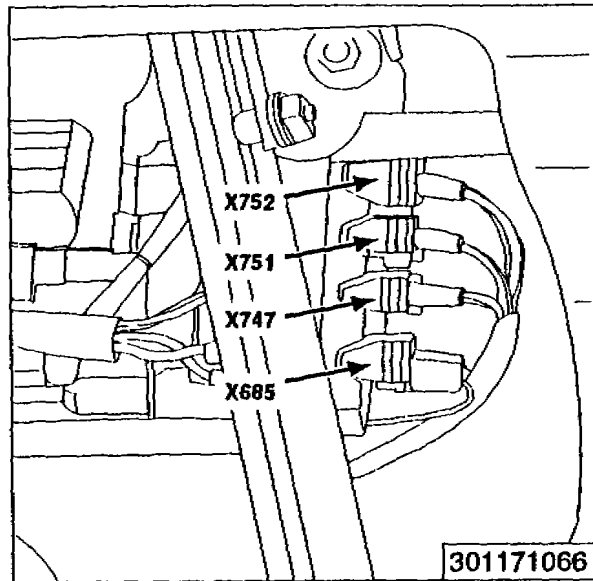
**FIG. 2 - In upper LH front door right (RH similar)**

**X623 CONNECTOR (10-PINS, BLACK)**  
**X624 CONNECTOR (10-PINS, BLACK)**  
**X18171 CONNECTOR (10-PINS, BLACK)**  
**X18172 CONNECTOR (10-PINS, BLACK)**



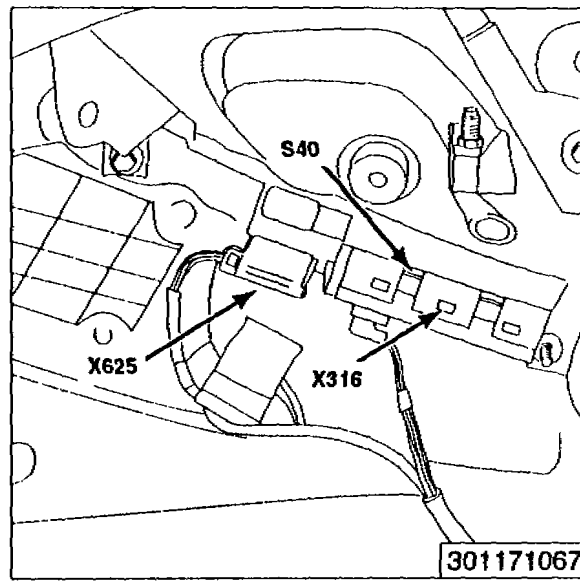
**FIG. 3 - In lower LH front door left (RH similar)**

**M12 DRIVER'S DOOR LOCK MOTOR**  
**M13 PASSENGER'S DOOR LOCK MOTOR**  
**X351 CONNECTOR (2-PINS, BLACK)**  
**X352 CONNECTOR (2-PINS, BLACK)**  
**X932 CONNECTOR (2-PINS, WHITE)**  
**X933 CONNECTOR (2-PINS, GRAY)**



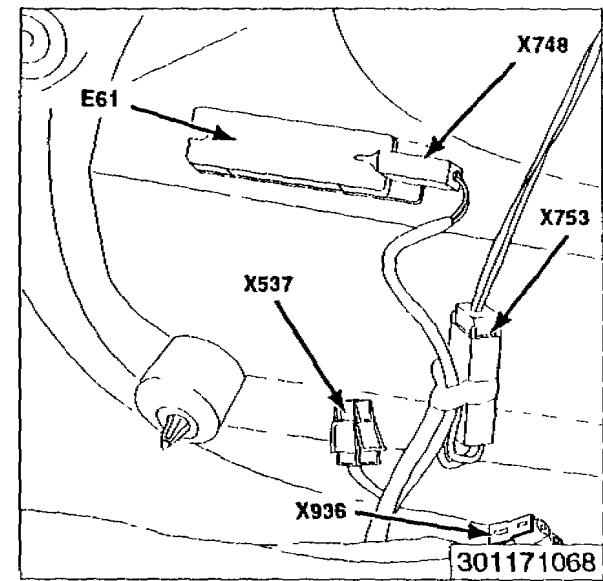
**FIG 1 - In upper LH front door left**

- X685** CONNECTOR (3-PINS, BLACK)
- X747** CONNECTOR (2-PINS, YELLOW)
- X751** CONNECTOR (2-PINS, WHITE)
- X752** CONNECTOR (2-PINS, GRAY)



**FIG 2 - LH front door behind door panel**

- S40** FRONT CONSOLE WINDOW SWITCH ASSEMBLY
- X316** CONNECTOR (6-PINS, WHITE)
- X625** CONNECTOR (6-PINS, WHITE)



**FIG 3 - LH front door behind door panel (RH similar)**

- E61** LEFT FRONT FOOTWELL LIGHT
- X537** CONNECTOR (2-PINS, BLACK)
- X748** CONNECTOR (2-PINS, WHITE)
- X753** CONNECTOR (2-PINS, BLACK)
- X936** CONNECTOR (2-PINS, WHITE)



## COMPONENT LOCATION VIEWS

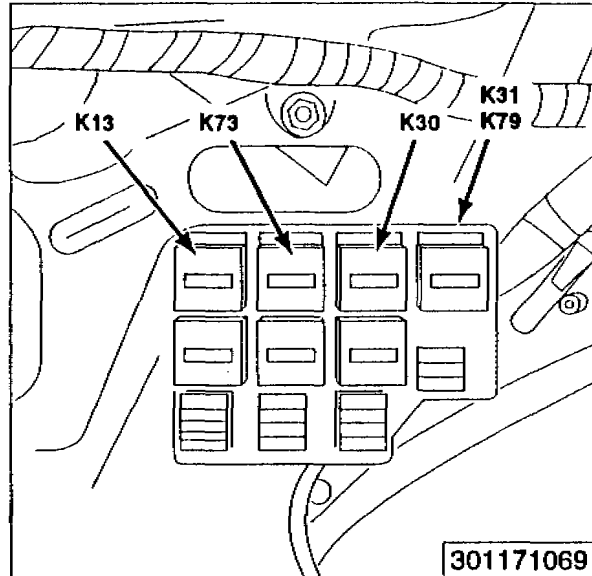


FIG. 1 - In LH side of luggage compartment behind trim panel

- K13 REAR DEFOGGER RELAY
- K30 ELECTRIC POWER PROTECTION RELAY II
- K31 CIGAR LIGHTER RELAY
- K73 CONSUMER CUT-OFF RELAY II
- K79 FOGLIGHT RELAY

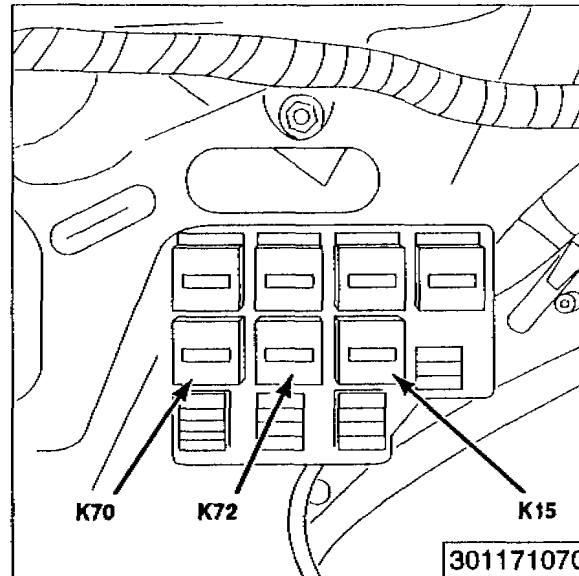


FIG. 2 - In LH side of luggage compartment behind trim panel

- K15 ELECTRIC POWER PROTECTION RELAY
- K70 CENTRAL LOCKING TRUNK LID MOTOR RELAY (ZV)
- K72 CONSUMER CUT-OFF RELAY I

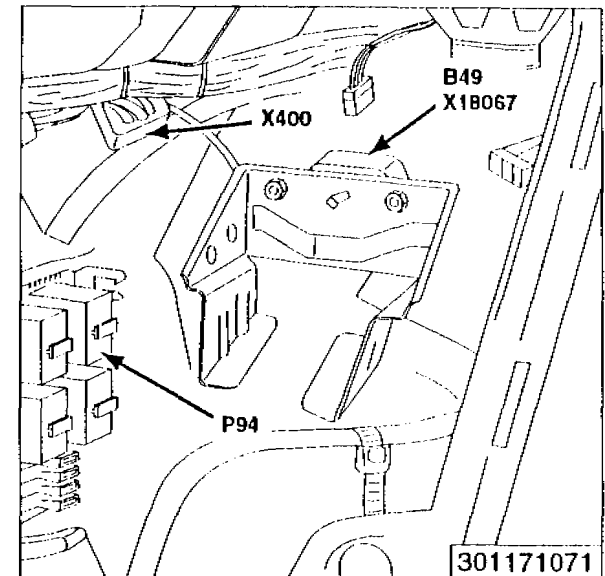
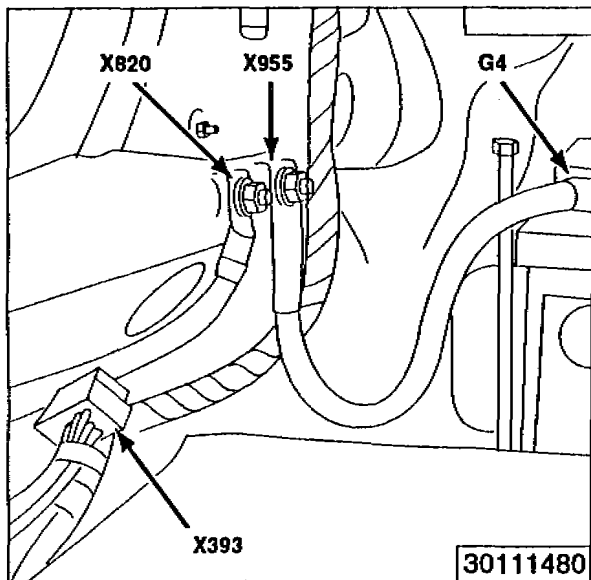


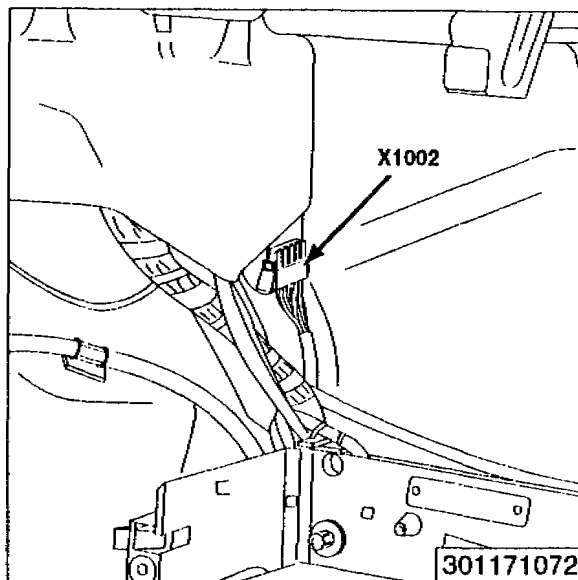
FIG. 3 - In LH forward side of luggage compartment behind trim panel

- B49 LONGITUDINAL ACCELERATION SENSOR
- P94 REAR POWER DISTRIBUTION BOX
- X400 CONNECTOR (8-PINS, BLACK)
- X18067 CONNECTOR (3-PINS, WHITE)



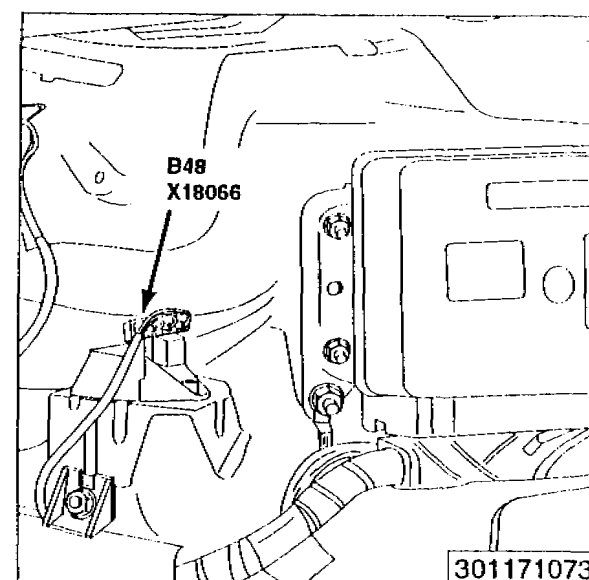
**FIG. 1 - In LH rear side of luggage compartment**

- G4 LEFT BATTERY II**
- X393 CONNECTOR (8-PINS, BLACK)**
- X820 GROUND**
- X955 GROUND**



**FIG. 2 - In LH rear side of luggage compartment**

- X1002 CONNECTOR (4-PINS, BLACK)**



**FIG. 3 - In RH rear side of luggage compartment**

- B48 RIGHT REAR ACCELERATION SENSOR**
- X18066 CONNECTOR (3-PINS, WHITE)**





## COMPONENT LOCATION VIEWS

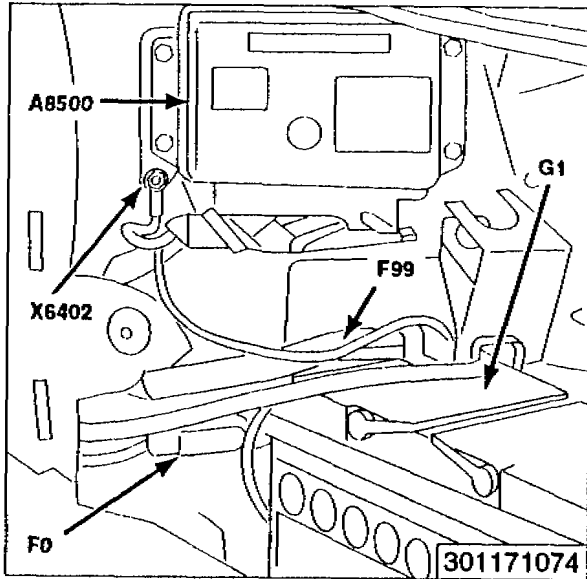


FIG. 1 - In RH side of luggage compartment

- A8500 TRANSMISSION CONTROL MODULE (EGS)
- F0 FUSIBLE LINK
- F99 FUSIBLE LINK (50A)
- G1 BATTERY
- X6402 GROUND

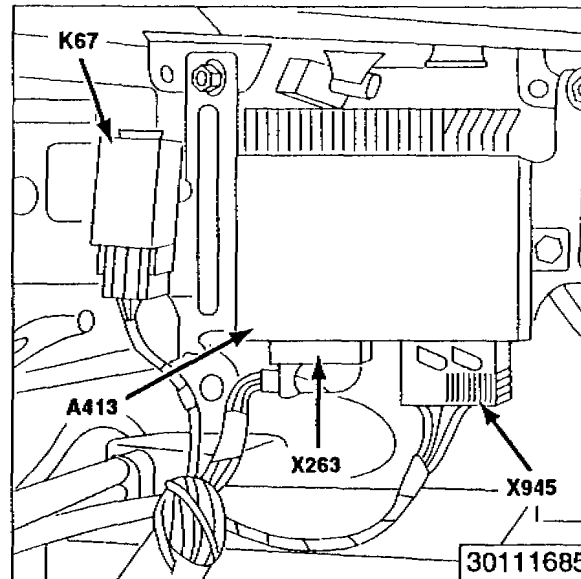


FIG. 2 - In RH side of luggage compartment

- A413 ELECTRONIC SHOCK ABSORBER CONTROL MODULE (EDC)
- K67 EDC RELAY
- X263 CONNECTOR (26-PINS, WHITE)
- X945 CONNECTOR (10-PINS, WHITE)

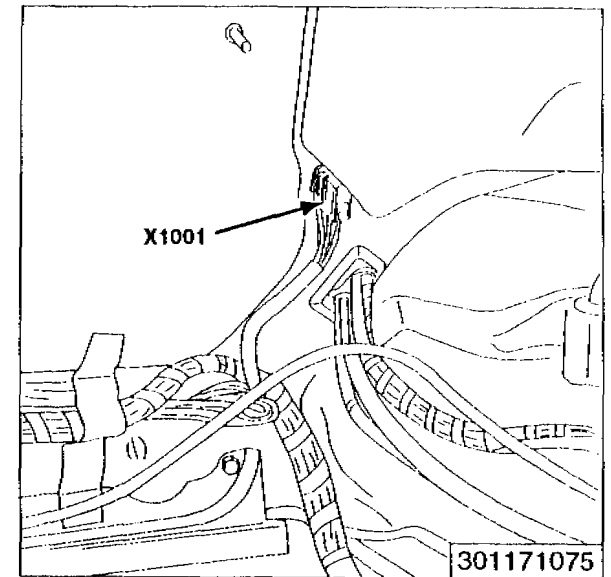
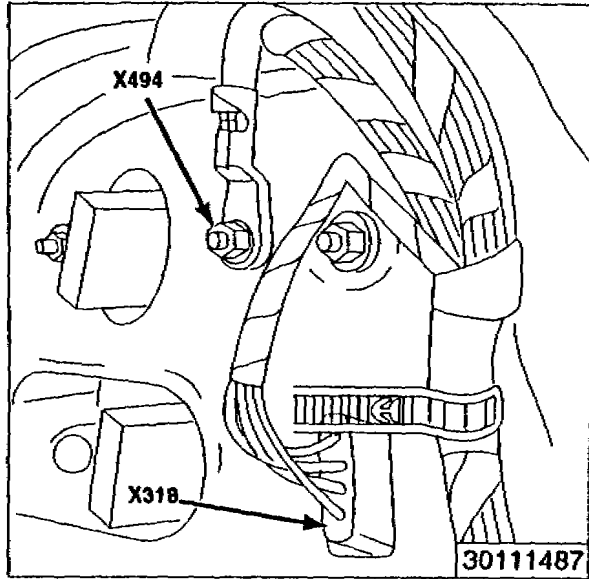


FIG. 3 - In RH rear side of luggage compartment

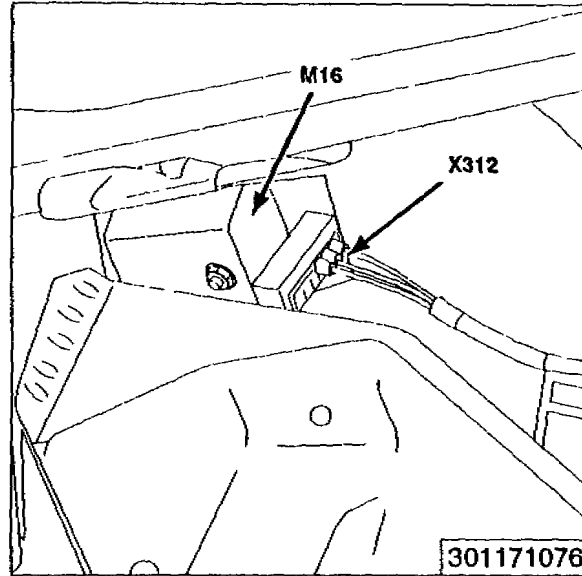
- X1001 CONNECTOR (4-PINS, BLACK)

**COMPONENT LOCATION VIEWS**



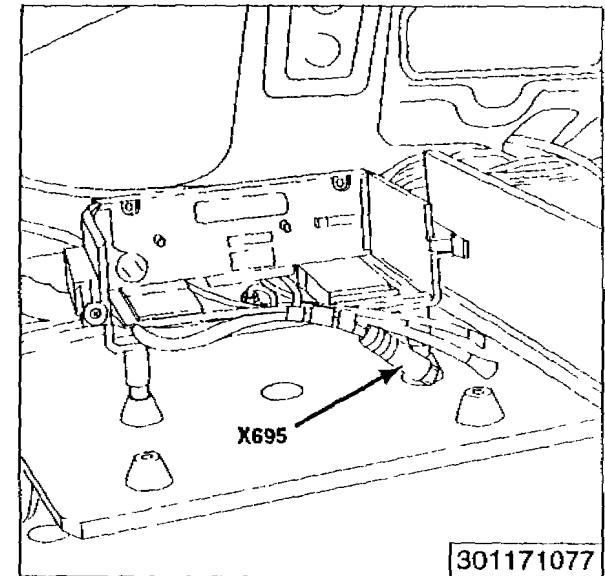
**FIG 1 - In RH rear side of luggage compartment**

- X494 GROUND**
- X318 CONNECTOR (6-PINS, BLACK)**



**FIG 2 - In RH side of luggage compartment**

- M16 GAS FILLER LOCK MOTOR**
- X312 CONNECTOR (6-PINS, BLACK)**

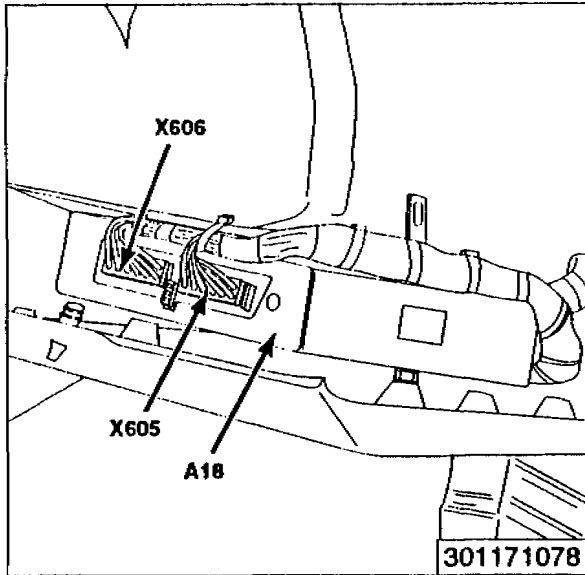


**FIG 3 - In LH rear side of luggage compartment**

- X695 CONNECTOR (3-PINS, BLACK)**

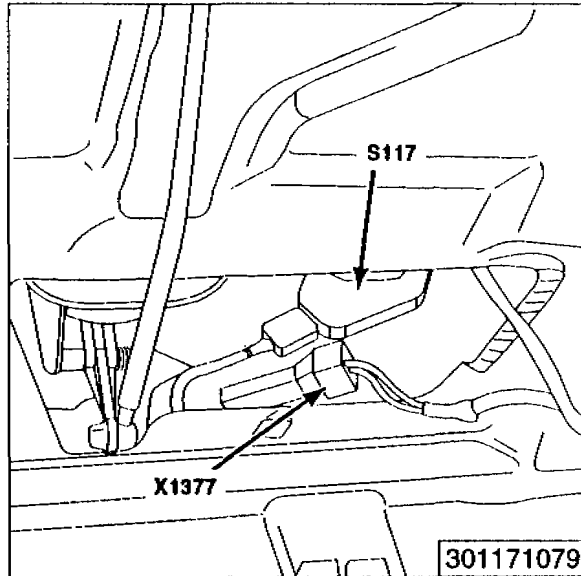


## COMPONENT LOCATION VIEWS



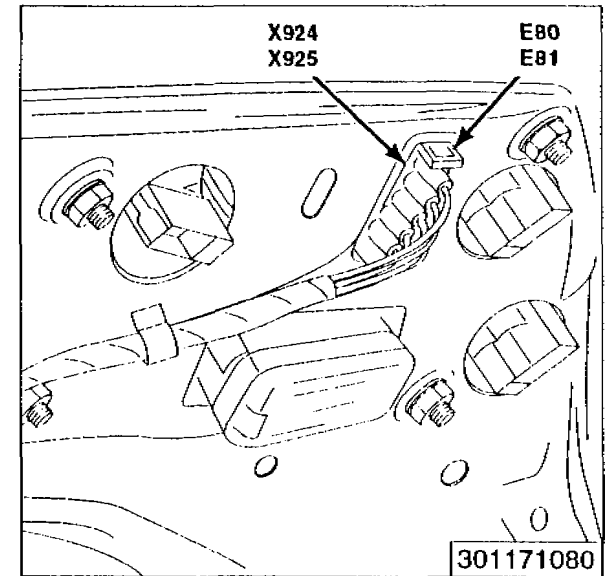
**FIG. 1 - In LH rear side of luggage compartment**

- A18** HIFI AMPLIFIER
- X605** CONNECTOR (12-PINS, BLACK)
- X606** CONNECTOR (12-PINS, WHITE)



**FIG. 2 - Underside of trunk lid**

- S117** TRUNK LID LOCKING SWITCH
- X1377** CONNECTOR (2-PINS, BLACK)



**FIG. 3 - Underside of trunk lid right (LH similar)**

- E80** LEFT REAR LIGHT ASSEMBLY II
- E81** RIGHT REAR LIGHT ASSEMBLY II
- X924** CONNECTOR (6-PINS, BLACK)
- X925** CONNECTOR (6-PINS, BLACK)



# SPLICE LOCATION VIEWS

## SPLICE LOCATION INDEX

SPLICE	HARNESSES	PAGE NUMBER	SPLICE	HARNESSES	PAGE NUMBER
X181-X190	FRONT	8000.0-02	X935	PASSENGER'S DOOR	NOT SHOWN
X195	CHASSIS	8000.0-03	X939	REAR	8000.0-04
X196-X208	FRONT	8000.0-02	X943	SUNSHADE	NOT SHOWN
X210	CHASSIS	8000.0-03	X960-X980	BATTERY	NOT SHOWN
X212-X265	FRONT	8000.0-02	X1006	REAR	8000.0-04
X267	REAR	8000.0-04	X1017-X1018	CHASSIS	8000.0-03
X276	FRONT	8000.0-02	X1022-X1036	FRONT	8000.0-02
X427-X486	REAR	8000.0-04	X1183-X1200	FRONT	8000.0-02
X557	GLOVE BOX LIGHTS	NOT SHOWN	X1202-X1215	REAR	8000.0-04
X558-X565	REAR	8000.0-04	X1351-X1356	CHASSIS	8000.0-03
X566-X567	CHASSIS	NOT SHOWN	X1359-X1378	REAR	8000.0-04
X568-X704	REAR	8000.0-04	X1411-X1414	CHASSIS	8000.0-03
X801	FRONT	8000.0-02	X6411-X8047	ENGINE	NOT SHOWN
X805	REAR	8000.0-04	X10014-X10056	FRONT	8000.0-02
X806	FRONT	8000.0-02	X10064	CHASSIS	8000.0-03
X823	TRAILER ADAPTER	NOT SHOWN	X10090	REAR	8000.0-04
X824-X830	RADIO	NOT SHOWN	X13000	REAR	8000.0-04
X833	REAR	8000.0-04	X13133-X13141	REAR	8000.0-04
X840	DRIVER'S SEAT	NOT SHOWN	X18026-X18046	CHASSIS	8000.0-03
X844	PASSENGER'S SEAT	NOT SHOWN	X18048	REAR	8000.0-04
X848-X851	DRIVER'S DOOR	NOT SHOWN	X18056-X18087	CHASSIS	8000.0-03
X852-X859	IHKA	NOT SHOWN	X18091	DRIVER'S SEAT	NOT SHOWN
X878	RADIO	NOT SHOWN	X18092	PASSENGER'S SEAT	NOT SHOWN
X891-X892	PASSENGER'S DOOR	NOT SHOWN	X18100-X18106	DRIVER'S SEAT	NOT SHOWN
X894	REAR	8000.0-04	X18108	PARK HEATING/VENTILATION	NOT SHOWN
X926-X927	DRIVER'S DOOR	NOT SHOWN	X18121-X18122	REAR	8000.0-04
X928-X929	PASSENGER'S DOOR	NOT SHOWN	X18123	DRIVER'S DOOR	NOT SHOWN
X934	DRIVER'S DOOR	NOT SHOWN	X18140-X18142	IHKA	NOT SHOWN



# SPLICE LOCATION VIEWS

## SPLICE LOCATION INDEX

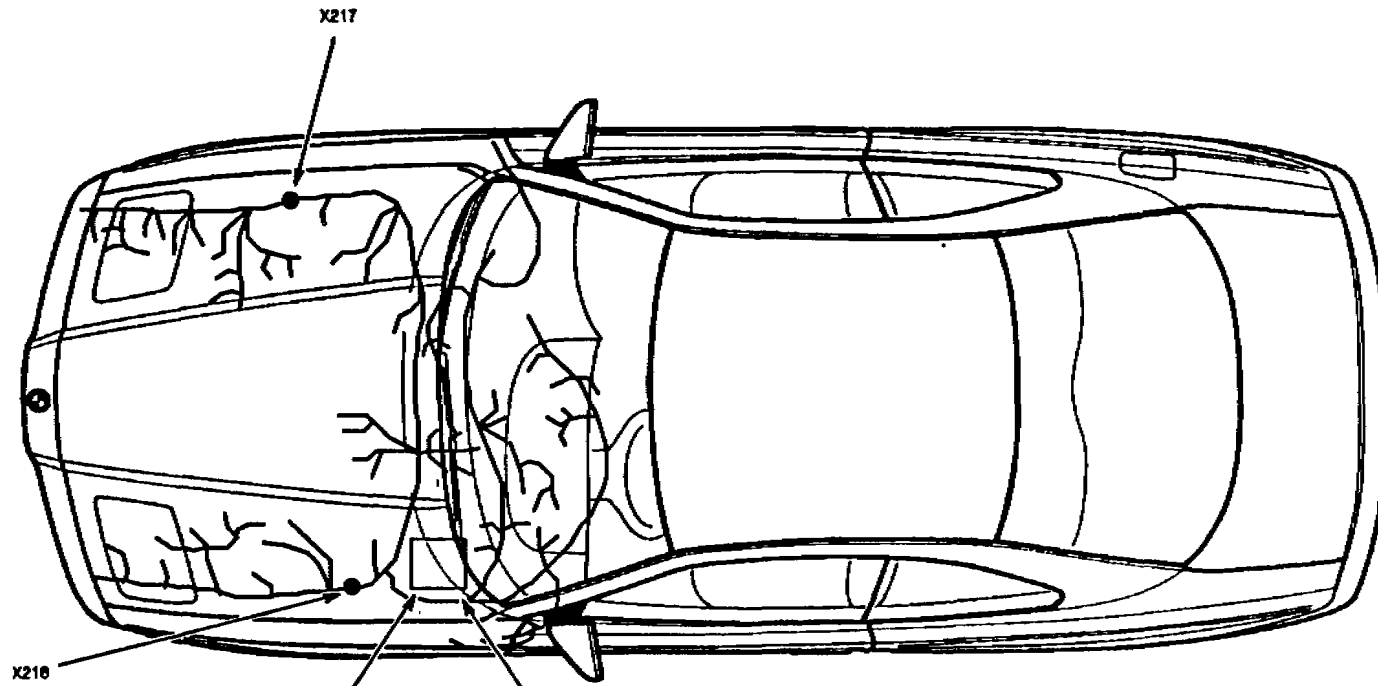
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SPLICE	HARNESS	PAGE NUMBER
X18174	RADIO	NOT SHOWN
X18175	DRIVER'S SEAT	NOT SHOWN
X18176	PASSENGER'S SEAT	NOT SHOWN
X18182	RADIO	NOT SHOWN
X18217	DRIVER'S DOOR	NOT SHOWN
X18226-X18241	CHASSIS	8000.0-03
X18247-X18511	DRIVER'S SEAT	NOT SHOWN
X18512-X18513	TELEPHONE	NOT SHOWN
X18514-X18737	DRIVER'S SEAT	NOT SHOWN
X18738	PASSENGER'S SEAT	NOT SHOWN
X18740	GLOVE BOX LIGHTS	NOT SHOWN
X19507	FRONT	8000.0-02
X19511-X19512	RADIO	NOT SHOWN
X19515	DRIVER'S DOOR	NOT SHOWN
X19516	PASSENGER'S DOOR	NOT SHOWN



# SPLICE LOCATION VIEWS

## FRONT HARNESS



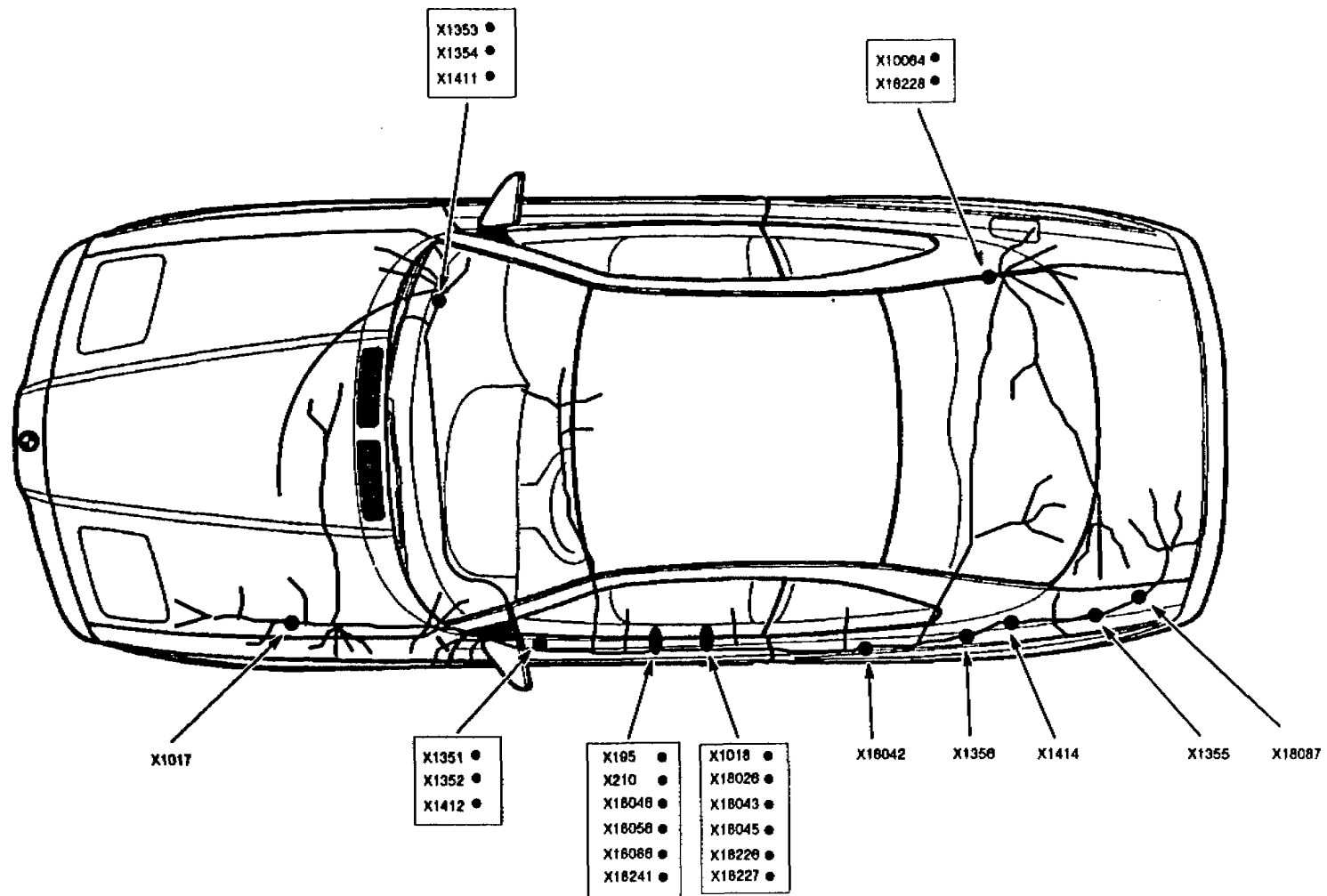
X184 ●	X245 ●	X265 ●
X185 ●	X240 ●	X500 ●
X186 ●	X248 ●	X801 ●
X201 ●	X247 ●	X814 ●
X203 ●	X246 ●	X1022 ●
X205 ●	X248 ●	X1200 ●
X208 ●	X250 ●	X10014 ●
X212 ●	X261 ●	
X224 ●	X264 ●	

X181 ●	X213 ●	X808 ●
X182 ●	X215 ●	X1023 ●
X183 ●	X222 ●	X1036 ●
X190 ●	X223 ●	X1183 ●
X186 ●	X226 ●	X10043 ●
X188 ●	X243 ●	X10056 ●
X189 ●	X241 ●	X18044 ●
X200 ●	X276 ●	X18507 ●
X204 ●	X582 ●	



# SPLICE LOCATION VIEWS

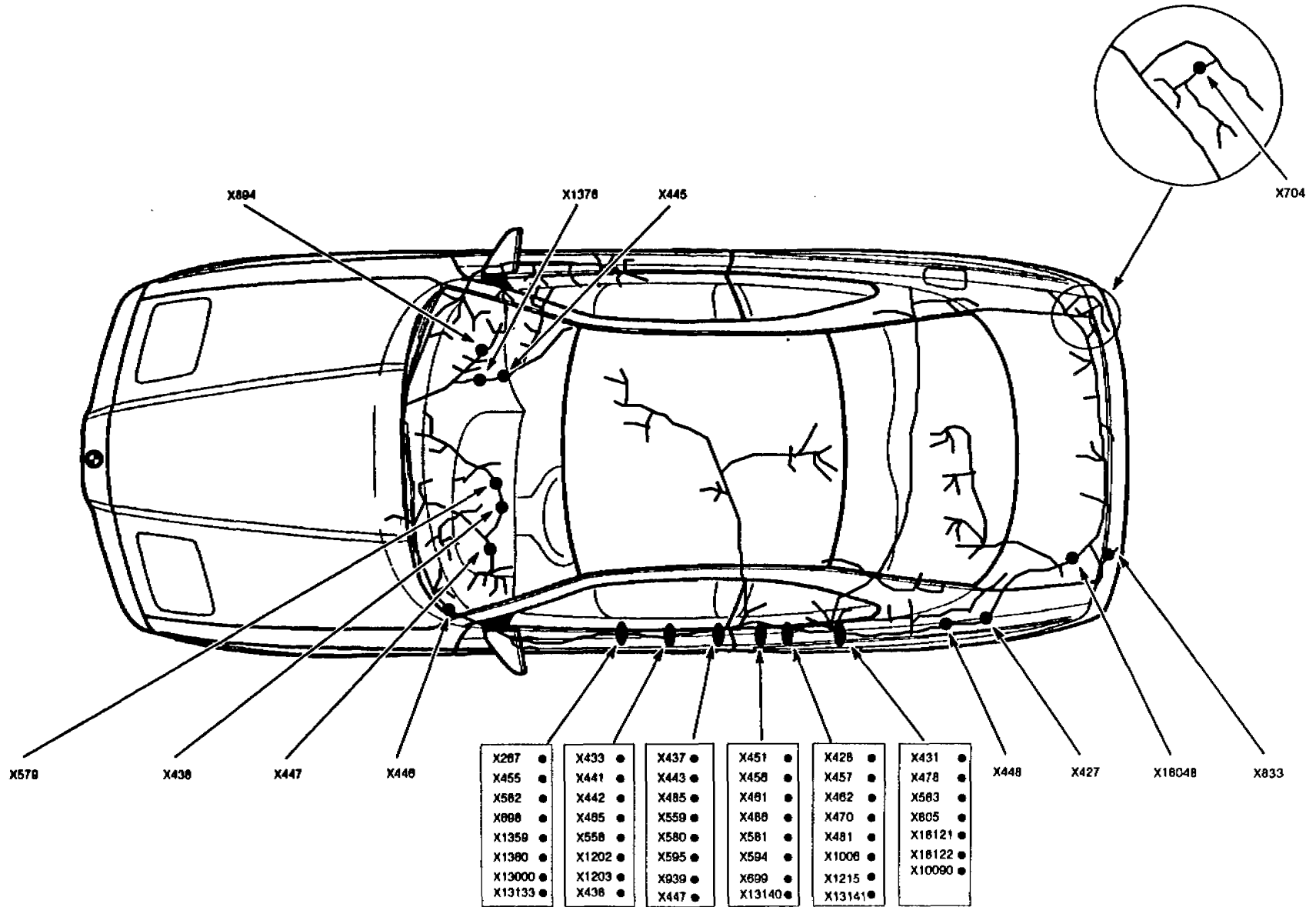
## CHASSIS HARNESS





# SPLICE LOCATION VIEWS

## REAR HARNESS





BMW  
8

8500.0



# CONNECTOR VIEWS

FIG. 1

B880001.00

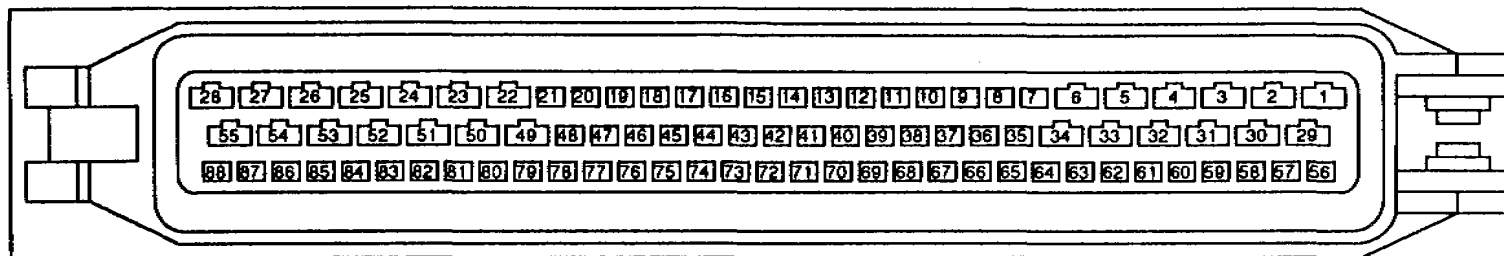


FIG. 2

B550001.00

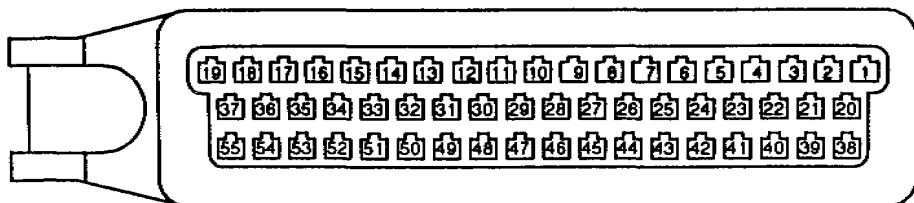
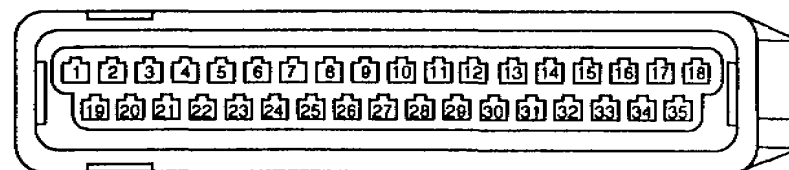


FIG. 3

B350002.05





# CONNECTOR VIEWS

FIG. 1

B300001.01

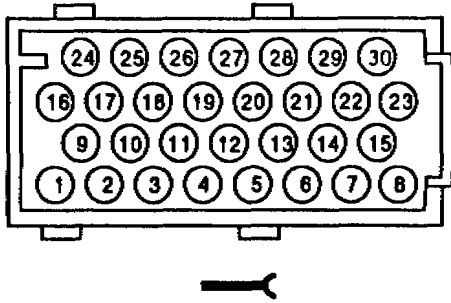


FIG. 2

B260005.00

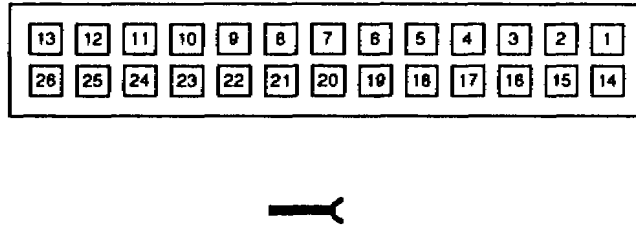


FIG. 3

B260002.00

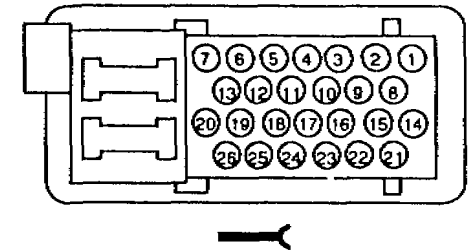


FIG. 4

B260002.00

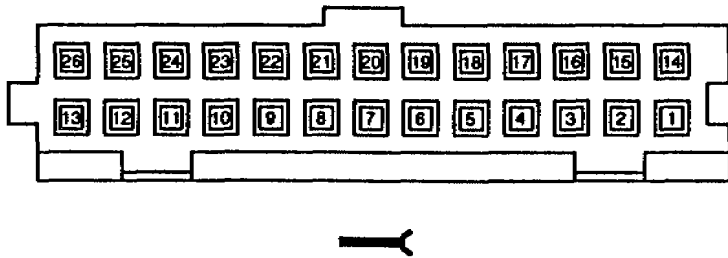


FIG. 5

B250001.00

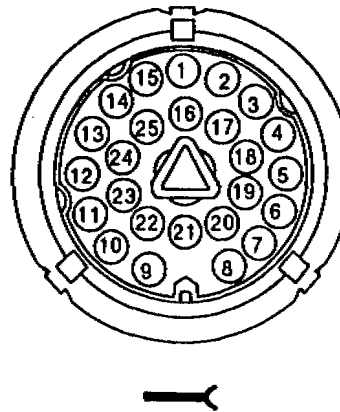
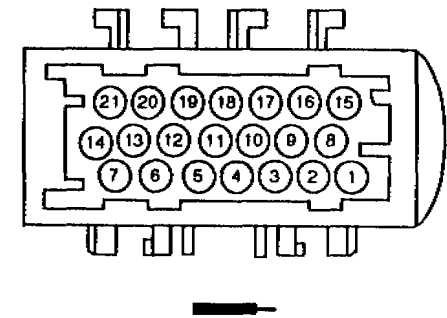


FIG. 6

B210001.00





# CONNECTOR VIEWS

FIG. 1

B200007.00

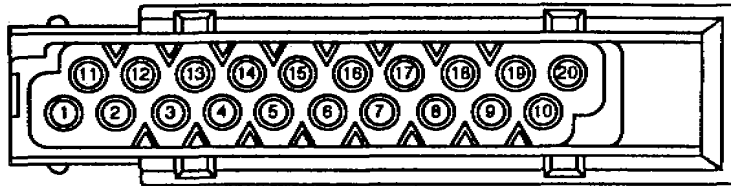


FIG. 2

B200003.00

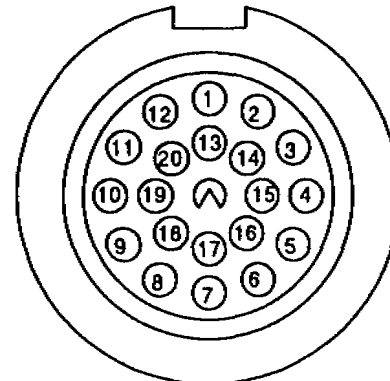


FIG. 3

B180000.00

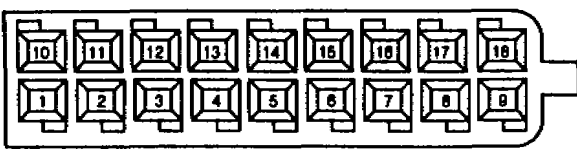


FIG. 4

B170001.00

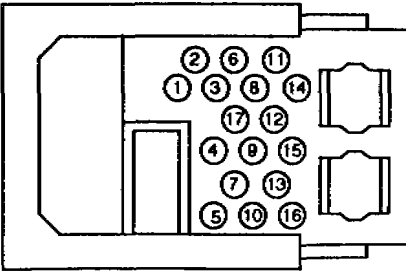
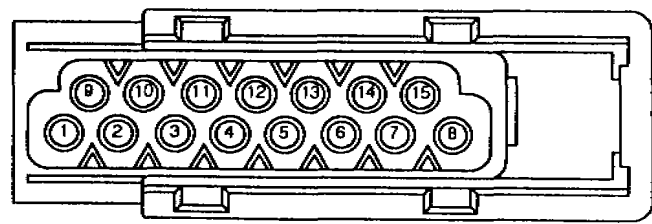


FIG. 5

B150002.00





# CONNECTOR VIEWS

FIG. 1

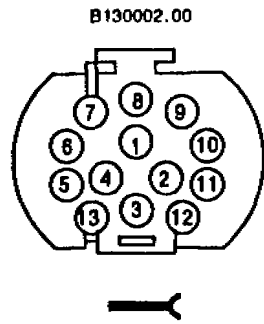


FIG. 2

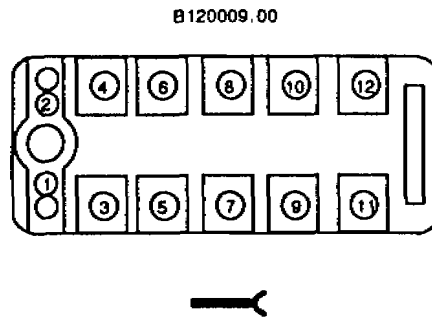


FIG. 3

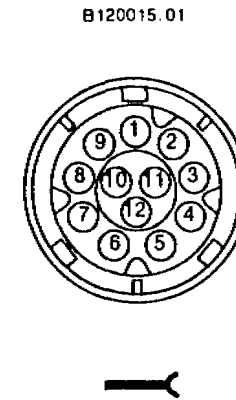


FIG. 4

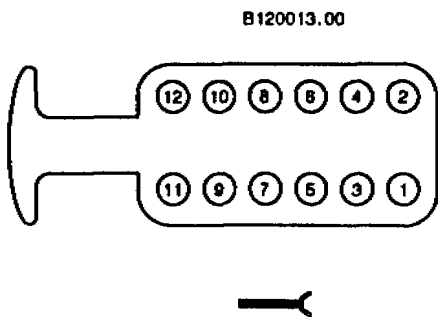


FIG. 5

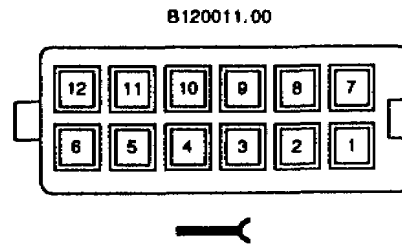


FIG. 6

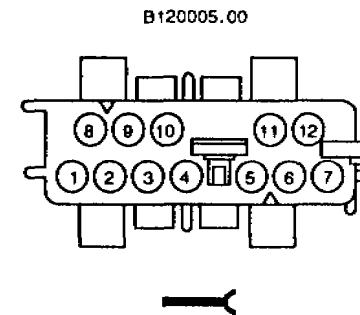


FIG. 1

B120002.02

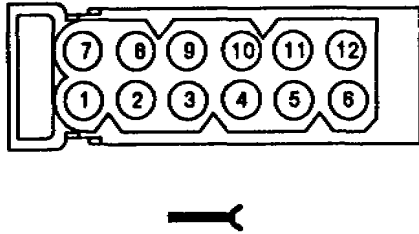


FIG. 2

B120006.00

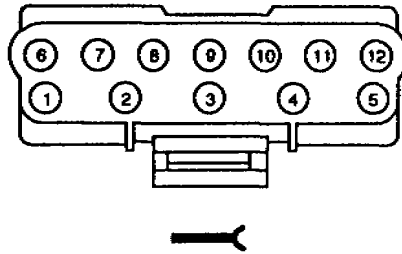


FIG. 3

B120004.01

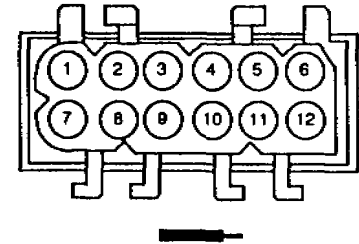


FIG. 4

B120008.00

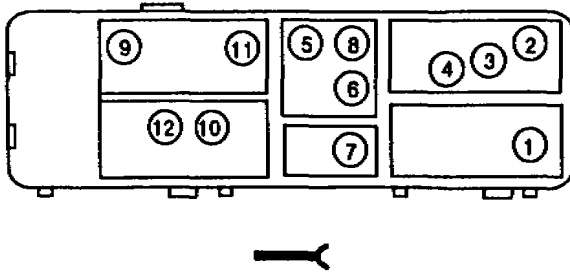


FIG. 5

B100004.01

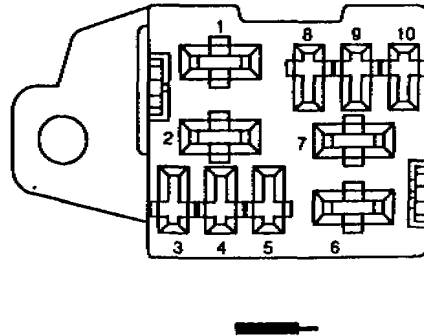
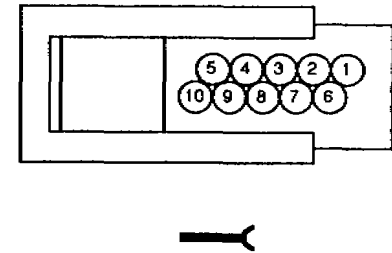


FIG. 6

B100007.00





# CONNECTOR VIEWS

FIG. 1

B100009.00

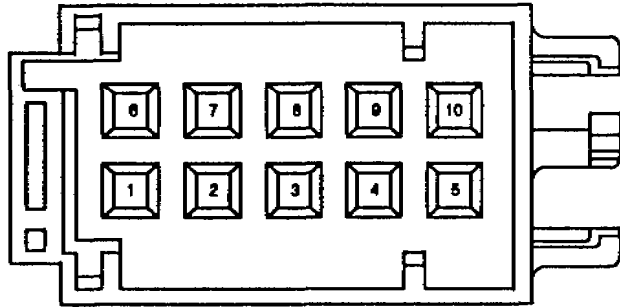


FIG. 2

B100010.00

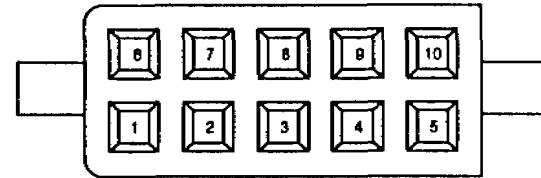


FIG. 3

B100008.00

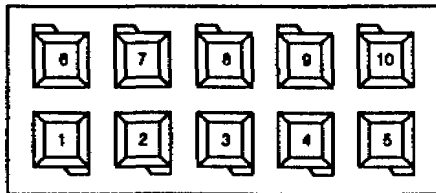


FIG. 4

B090001.00

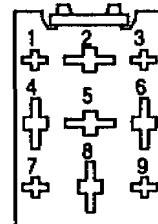
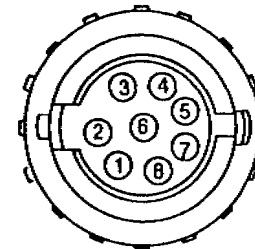


FIG. 5

B080003.00





# CONNECTOR VIEWS

FIG. 1

B080005.00

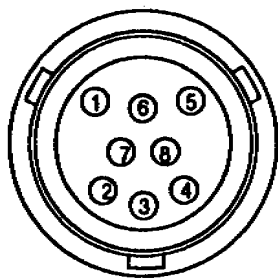


FIG. 2

B080006.00

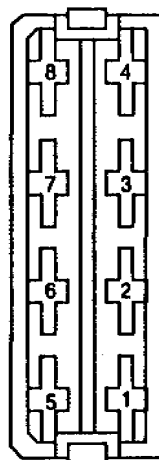


FIG. 3

B080001.00

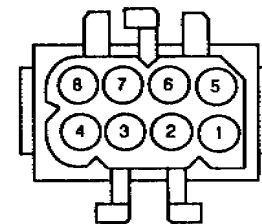


FIG. 4

B080002.00

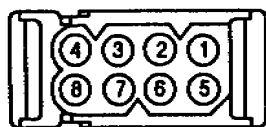


FIG. 5

B070005.00

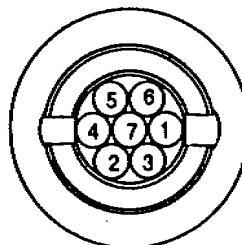
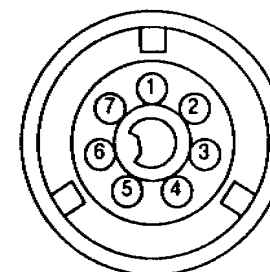


FIG. 6

B070007.00







# CONNECTOR VIEWS

FIG. 1

B060008.00

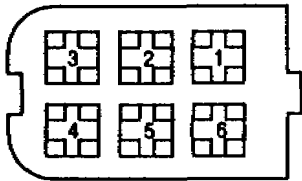


FIG. 2

B060035.00

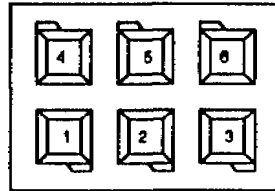


FIG. 3

B060038.00

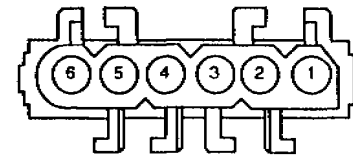


FIG. 4

B060016.00

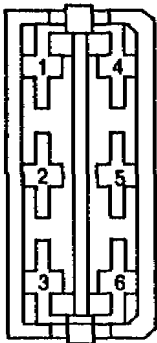


FIG. 5

B060009.00

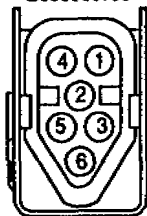


FIG. 6

B060017.00

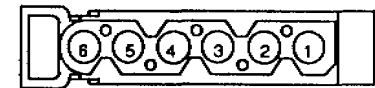


FIG. 1

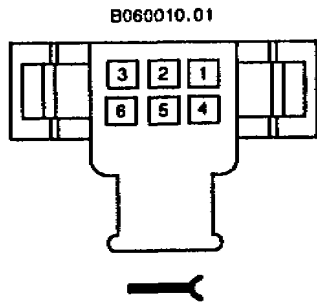


FIG. 2

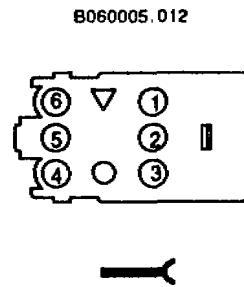


FIG. 3

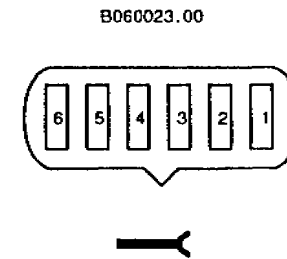


FIG. 4

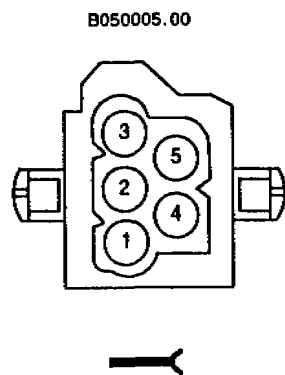


FIG. 5

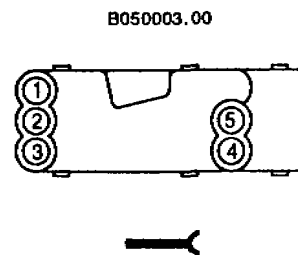
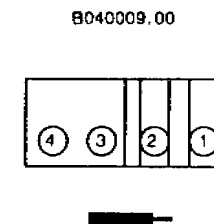


FIG. 6





# CONNECTOR VIEWS

FIG. 1

B040021

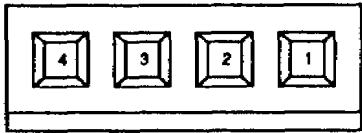


FIG. 2

B040004.00

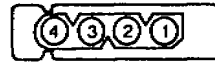


FIG. 3

B040002.00

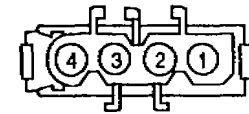


FIG. 4

B040017.01

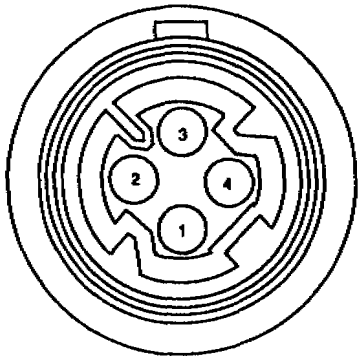


FIG. 5

B040013

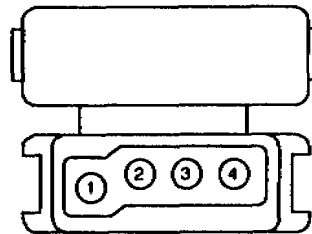
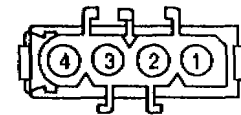


FIG. 6

B040002.04





# CONNECTOR VIEWS

FIG. 1

B040018.01

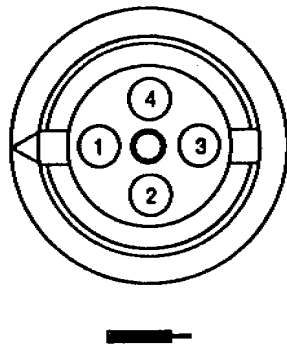


FIG. 2  
B040015.00

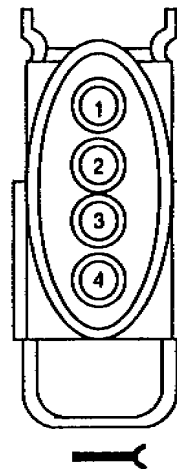


FIG. 3

B040003.00

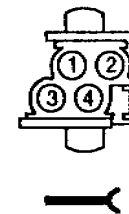


FIG. 4

B030016.00

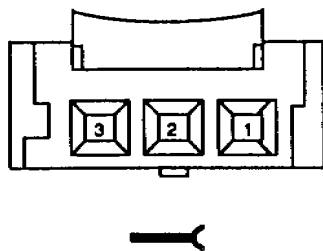


FIG. 5

B030024

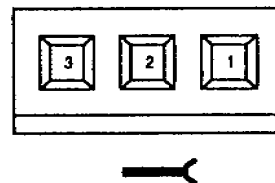
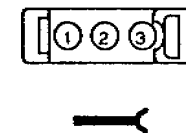


FIG. 6

B030003.04





# CONNECTOR VIEWS

FIG. 1

B030028.00

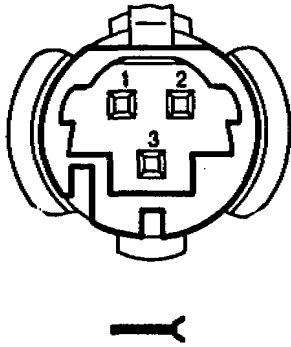


FIG. 2

B030009.00

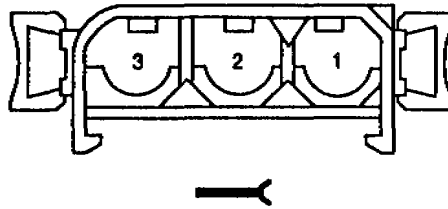


FIG. 3

B030013.00

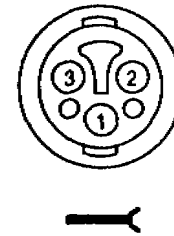


FIG. 4

B030004.00



FIG. 5

B030012.00

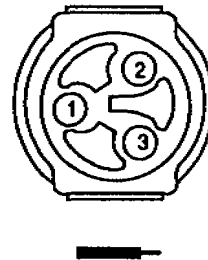
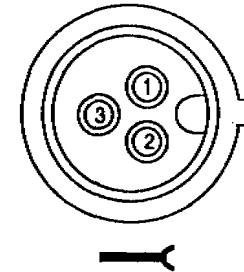


FIG. 6

B030005.00





# CONNECTOR VIEWS

FIG. 1

B030015.00

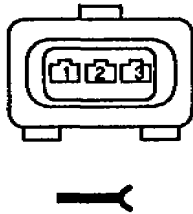


FIG. 2

B030001.00

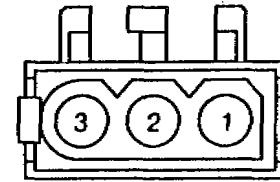


FIG. 3

B030027.00

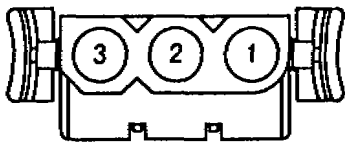


FIG. 4

B030022.00

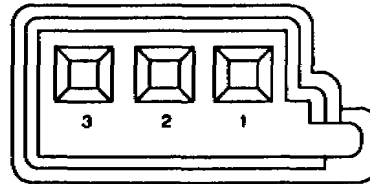


FIG. 5

B250003.00

