

8W-45 BODY CONTROL MODULE

INDEX

	page		page
DESCRIPTION AND OPERATION		KEY-IN IGNITION CHIME	2
A/C SELECT SWITCH	1	LIFTGATE COURTESY LAMP DISABLE	
AJAR CHIME	2	SWITCH	2
AMBIENT TEMPERATURE SENSOR	1	LOW FUEL WARNING LAMP ANNOUNCEMENT	
AUTO HEADLAMPS	2	CHIME	2
COURTESY LAMP SWITCH	1	LOW OIL PRESSURE WARNING CHIME	2
ENGINE TEMPERATURE CRITICAL CHIME	2	PARK LAMP SWITCH SENSE	2
IGNITION SWITCH SENSE	2	SEAT BELT SWITCH	2
INSTRUMENT PANEL DIMMING	2	SCHEMATICS AND DIAGRAMS	
INTRODUCTION	1	WIRING DIAGRAM INDEX	2

DESCRIPTION AND OPERATION

INTRODUCTION

The Body Control Module (BCM) used in this vehicle provides a communication interface with other controllers and modules. The BCM also controls various vehicle functions. Circuit operation of specific systems or components controlled by the BCM are found in wiring diagram section covering the component or system.

This section of the wiring diagrams provides an overview of the functions controlled or supported by the BCM. The BCM provides or supports the following features:

- A/C Select Switch Status
- Ambient Temperature
- Automatic Funeral Mode
- Automatic Headlamp Control
- Chime
- Courtesy Lamps with Time Out
- Door, Hood or Liftgate Ajar Status
- Door Lock Inhibit
- Electronic Odometer
- Electronic Vehicle Information Center
- Fog Lamp Control
- Headlamp Delay
- High Beam Indicator
- Illuminated Entry
- Instrument Panel Dimming
- Intermittent Wiper Control
- Liftgate Courtesy Lamp Disable
- Mechanical Instrument Cluster
- Rear Window Defogger Control
- Remote Radio Control
- Seat Belt Reminder
- Speed Sensitive Intermittent Wipe Control
- Vehicle Theft Security System

The BCM communicates with the following controllers and modules over the CCD bus:

- Automatic Temperature Control (ATC) Module
- Compass (Overhead Console)
- Driver Door Module (DDM)
- Mechanical Instrument Cluster
- Memory Seat Module
- Passenger Door Module (PDM)
- Powertrain Control Module
- Vehicle Information Center
- Radio

Circuit A250 from fuse 11 in the Power Distribution Center (PDC) powers circuit F75 through fuse 7 in the junction block. Circuit F75 supplies battery voltage to the BCM. Circuits Z1 and Z2 provide ground for the BCM.

A/C SELECT SWITCH

If the vehicle is equipped with Automatic Temperature Control (ATC), the Automatic Temperature Control Module sends the A/C select switch to the Body Control Module (BCM) on circuit C90. If the vehicle has manual A/C, the A/C-heater control switch sends the A/C select signal to the BCM on circuit C90.

AMBIENT TEMPERATURE SENSOR

The ambient air temperature sensor is a variable resistor. As ambient (outside) temperature varies, the resistance in the sensor changes. Circuit C8 from the Body Control Module (BCM) supplies power to the sensor. Circuit D41 provides the sensor signal to the BCM.

COURTESY LAMP SWITCH

When the courtesy lamp switch inside the headlamp switch closes, it completes a path to ground for circuit M11 from the Body Control Module (BCM).

DESCRIPTION AND OPERATION (Continued)

The BCM energizes the courtesy lamp relay in the junction block to power the courtesy lamps. Refer to section 8W-44.

LIFTGATE COURTESY LAMP DISABLE SWITCH

When the courtesy lamp disable switch closes, it provides battery voltage to the Body Control Module (BCM) on circuit M4.

AUTO HEADLAMPS

When the operator puts the headlamp switch in the AUTO position, the auto headlamp switch closes and connects circuit L24 from the Body Control Module to ground. This signals the BCM to operate the headlamps based on the ultralight sensor input. The BCM powers the ultralight sensor on circuit L110. Circuit L109 provides the signal from the sensor to the BCM.

PARK LAMP SWITCH SENSE

When the operator puts the headlamp switch in the park lamp position, the park lamp switch closes and circuit L90 powers the parking lamps. Circuit L90 also provides an input to the Body Control Module (BCM). The BCM monitors the L90 circuit and circuit 707 from the dimmer switch to determine instrument panel lamp intensity

INSTRUMENT PANEL DIMMING

On circuit 707 from the dimmer switch in the headlamp switch, the Body Control Module (BCM) determines selected intensity for the instrument panel lamps. The BCM also transmits a signal representing required lamp intensity over the CCD bus. After receiving the signal from the CCD bus, all other display modules update their brightness level.

IGNITION SWITCH SENSE

On circuit V23, the Body Control Module (BCM) senses when the ignition switch is in the ACCESSORY or RUN position. The BCM senses when the ignition switch is in the START or RUN position on circuit F99.

AJAR CHIME

On models equipped with a Vehicle Information Center (VIC), the Body Control Module (BCM) sounds an audible chime when the vehicle is moving

if one of the doors, the hood, or liftgate opens. The BCM also signals the VIC over the CCD bus. The VIC then displays which component is ajar.

KEY-IN IGNITION CHIME

When the key is inserted into the ignition switch, the key-in switch closes and connects circuit G26 from the Body Control Module to ground on circuit Z1. When the key-in switch closes, the BCM sounds an audible fast rate chime.

SEAT BELT SWITCH

The seat belt switch closes when the seat belt is not buckled. When closed, the switch connects circuit G10 from the Body Control Module (BCM) to ground on circuit Z1. If the switch is closed while the ignition switch is ON, the BCM sounds an audible warning chime.

LOW OIL PRESSURE WARNING CHIME

When oil pressure drops below a calibrated level, the Body Control Module (BCM) sounds an audible chime to alert the operator. The BCM receives the low oil pressure signal on the CCD bus.

ENGINE TEMPERATURE CRITICAL CHIME

When engine temperature exceeds a pre-determined temperature, the Body Control Module (BCM) sounds an audible chime. The Powertrain Control Module (PCM) broadcasts engine coolant temperature to the BCM on the CCD bus.

LOW FUEL WARNING LAMP ANNOUNCEMENT CHIME

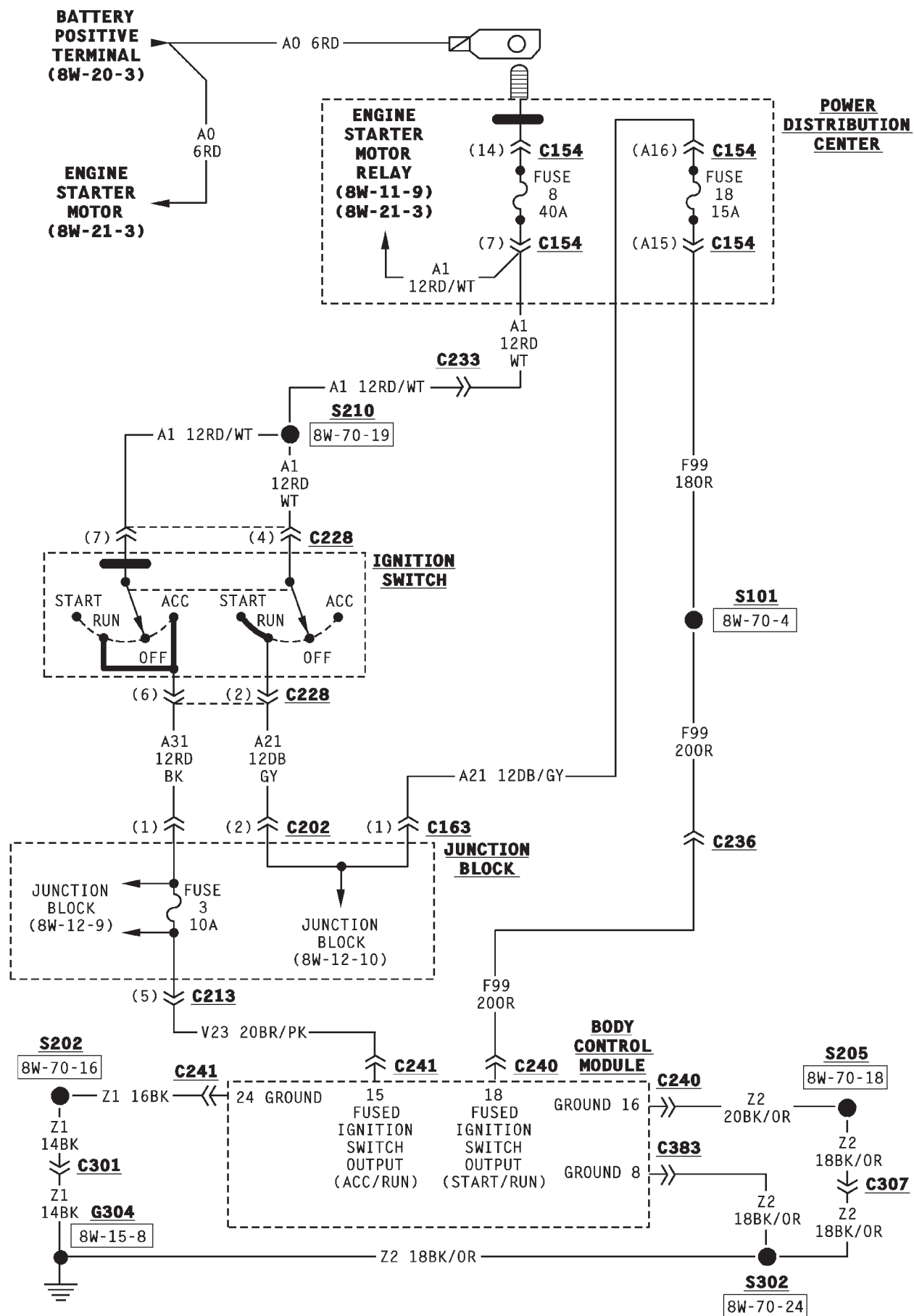
The Body Control Module (BCM) sounds an audible chime when the low fuel warning lamp illuminates.

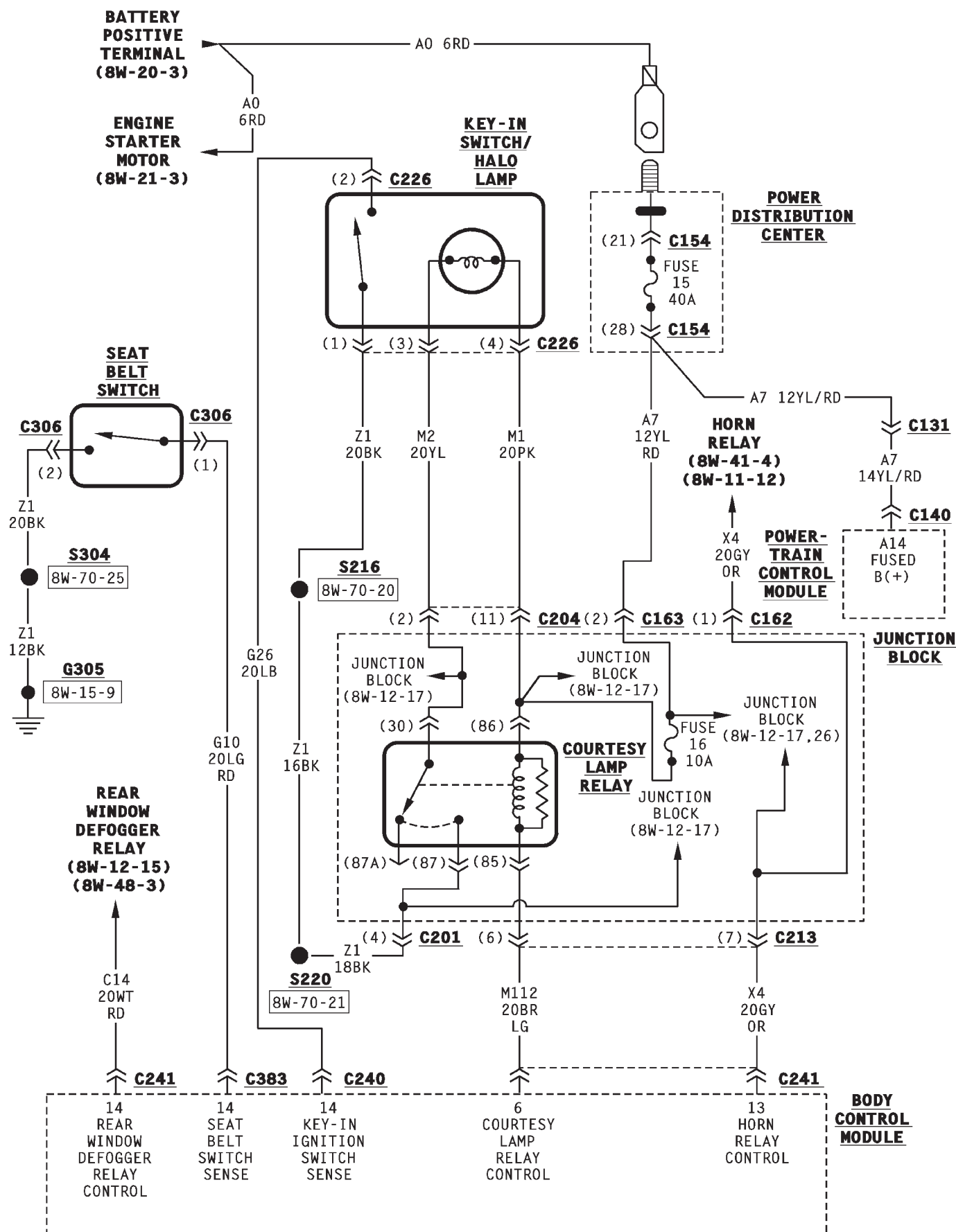
SCHEMATICS AND DIAGRAMS**WIRING DIAGRAM INDEX**

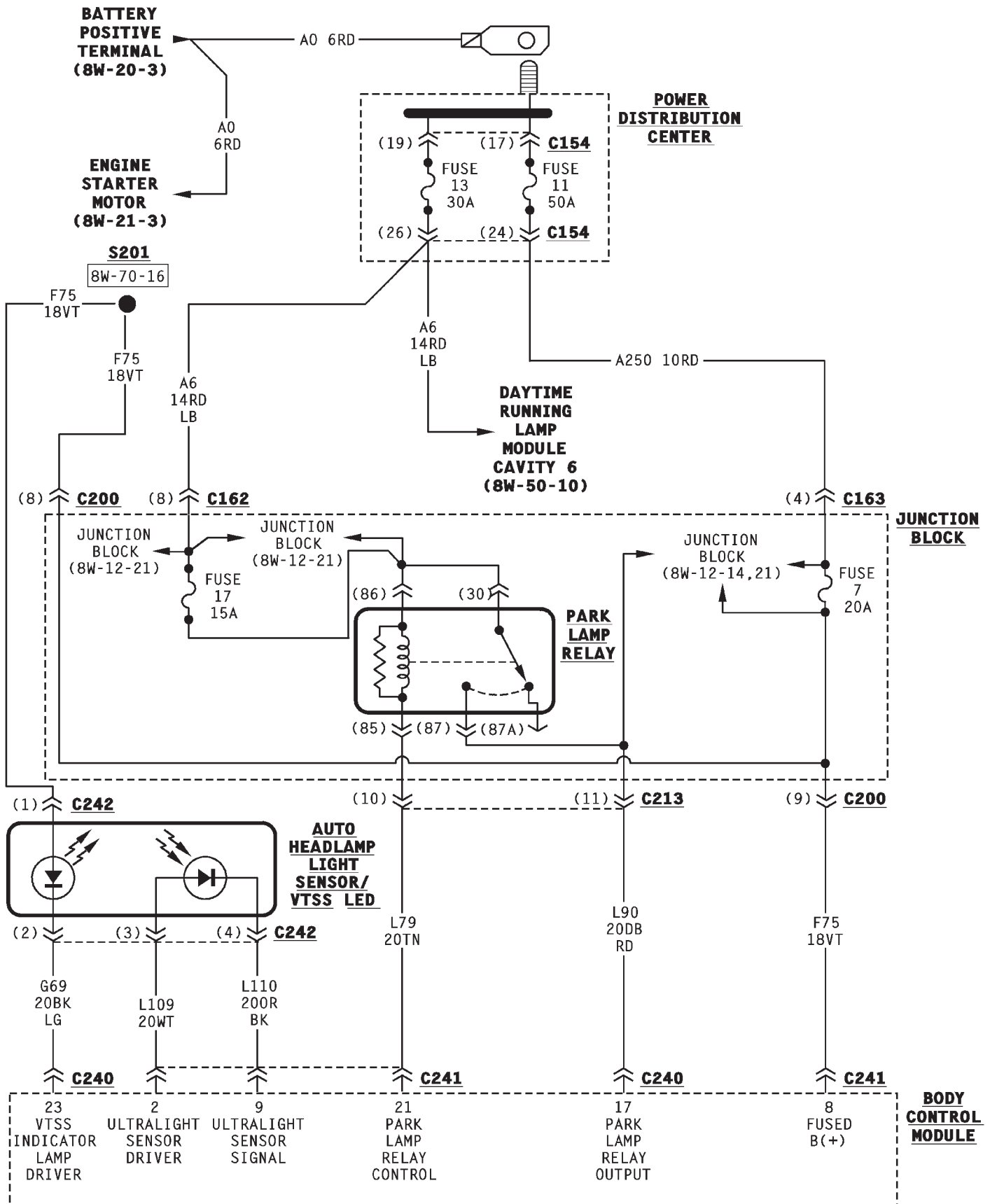
The following index covers all components found in this section of the wiring diagrams. If the component you are looking for is not found here, refer to section 8W-02 for a complete list of all components shown in the wiring diagrams.

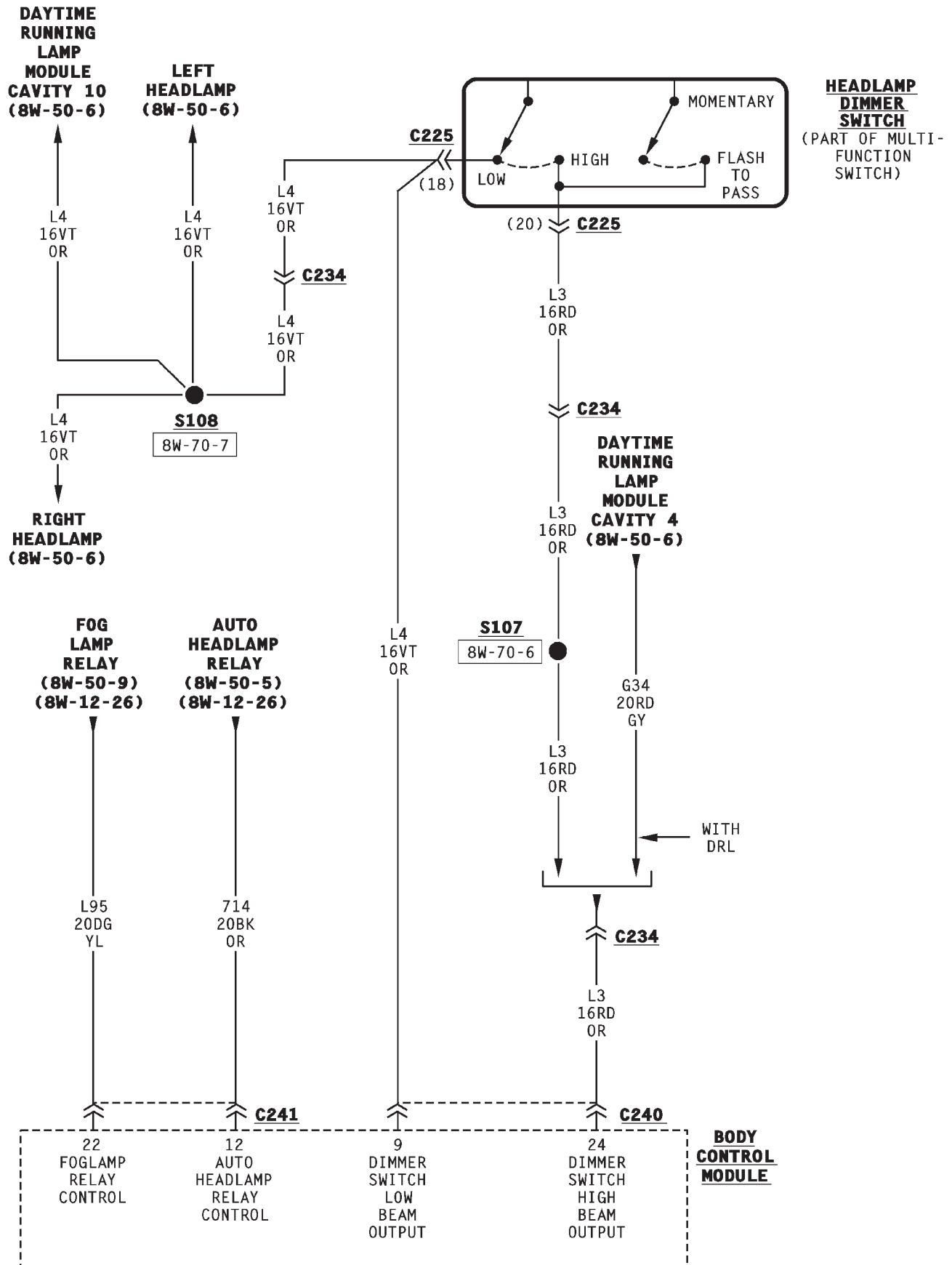
DIAGRAM INDEX

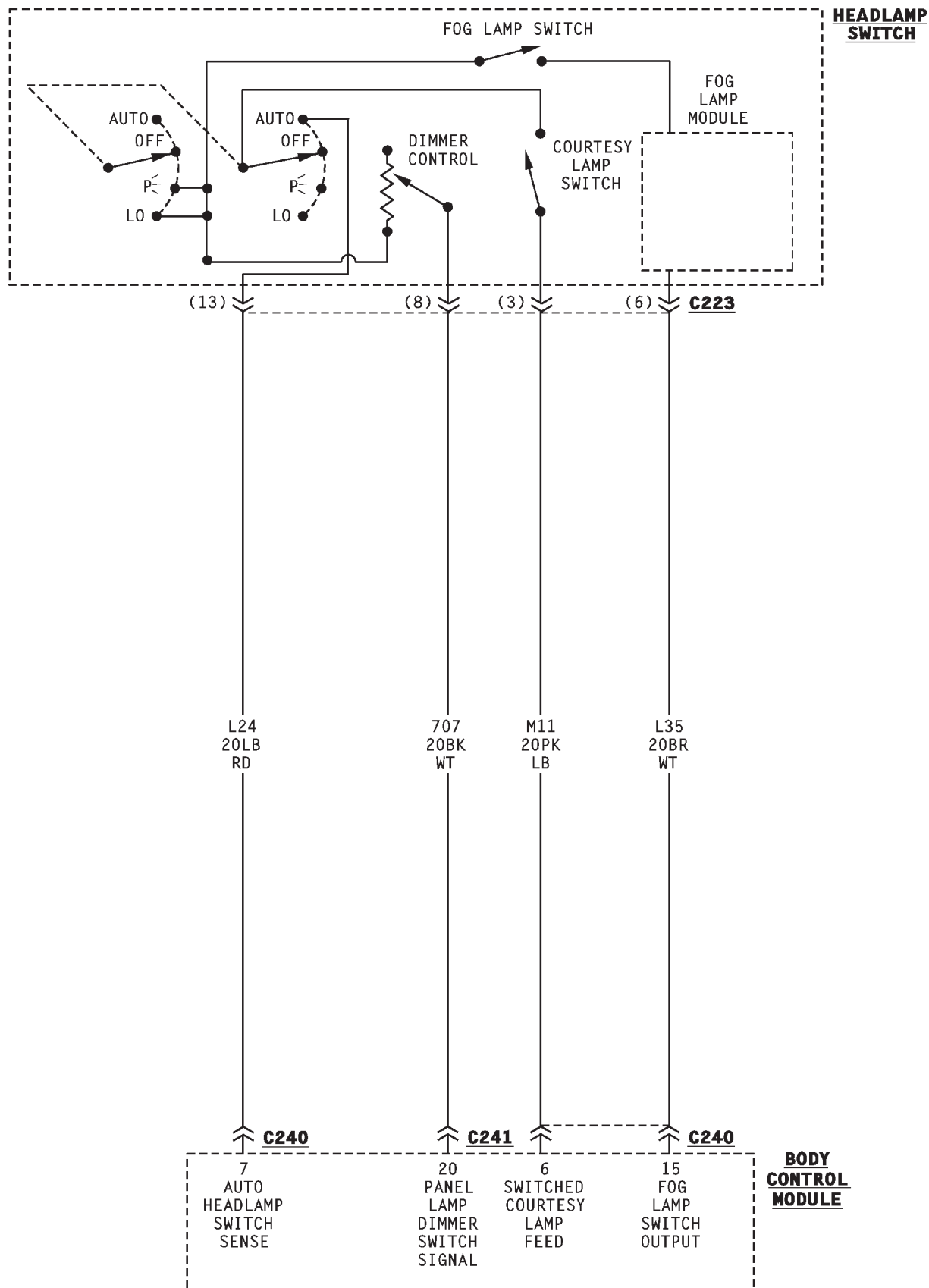
Component	Page	Component	Page
A/C-Heater Control	8W-45-12	Left Front Cylinder Lock Switch	8W-45-13
Ambient Temperature Sensor	8W-45-12	Left Front Door Ajar Switch	8W-45-13
Auto Headlamp Light Sensor/VTSS Lamp	8W-45-6	Left Rear Door Ajar Switch	8W-45-13
Automatic Temperature Control Module	8W-45-10,12	Liftgate Ajar Switch	8W-45-14
Body Control Module	8W-45-4 thru 14	Liftgate Cylinder Lock Switch	8W-45-13
Courtesy Lamp Relay	8W-45-5	Liftglass Ajar Switch	8W-45-14
Driver Door Module	8W-45-11	Memory Seat Module	8W-45-11
Fuse 3	8W-45-4	Mini Overhead Console	8W-45-10
Fuse 7	8W-45-6	Overhead Console	8W-45-10
Fuse 8 (PDC)	8W-45-4	Park Brake Switch	8W-45-12
Fuse 11 (PDC)	8W-45-6	Park Lamp Relay	8W-45-6
Fuse 13 (PDC)	8W-45-6	Passenger Door Module	8W-45-11
Fuse 15 (PDC)	8W-45-5	Powertrain Control Module	8W-45-5,11
Fuse 16	8W-45-5	Radio	8W-45-10
Fuse 17	8W-45-6	Rear Window Defogger Switch	8W-45-12
Fuse 18 (PDC)	8W-45-4	Right Front Cylinder Lock Switch	8W-45-13
Headlamp Dimmer Switch	8W-45-7	Right Front Door Ajar Switch	8W-45-13
Headlamp Switch	8W-45-8	Right Rear Door Ajar Switch	8W-45-13
Hood Switch	8W-45-14	Seat Belt Switch	8W-45-5
Ignition Switch	8W-45-4	Vehicle Information Center	8W-45-10
Intermittent Wiper Relay	8W-45-9	Vehicle Speed Control/Horn Switch	8W-45-9
Intermittent Wiper Switch	8W-45-9	Windshield Wiper Motor	8W-45-9
Key-In Switch/Halo Lamp	8W-45-5		

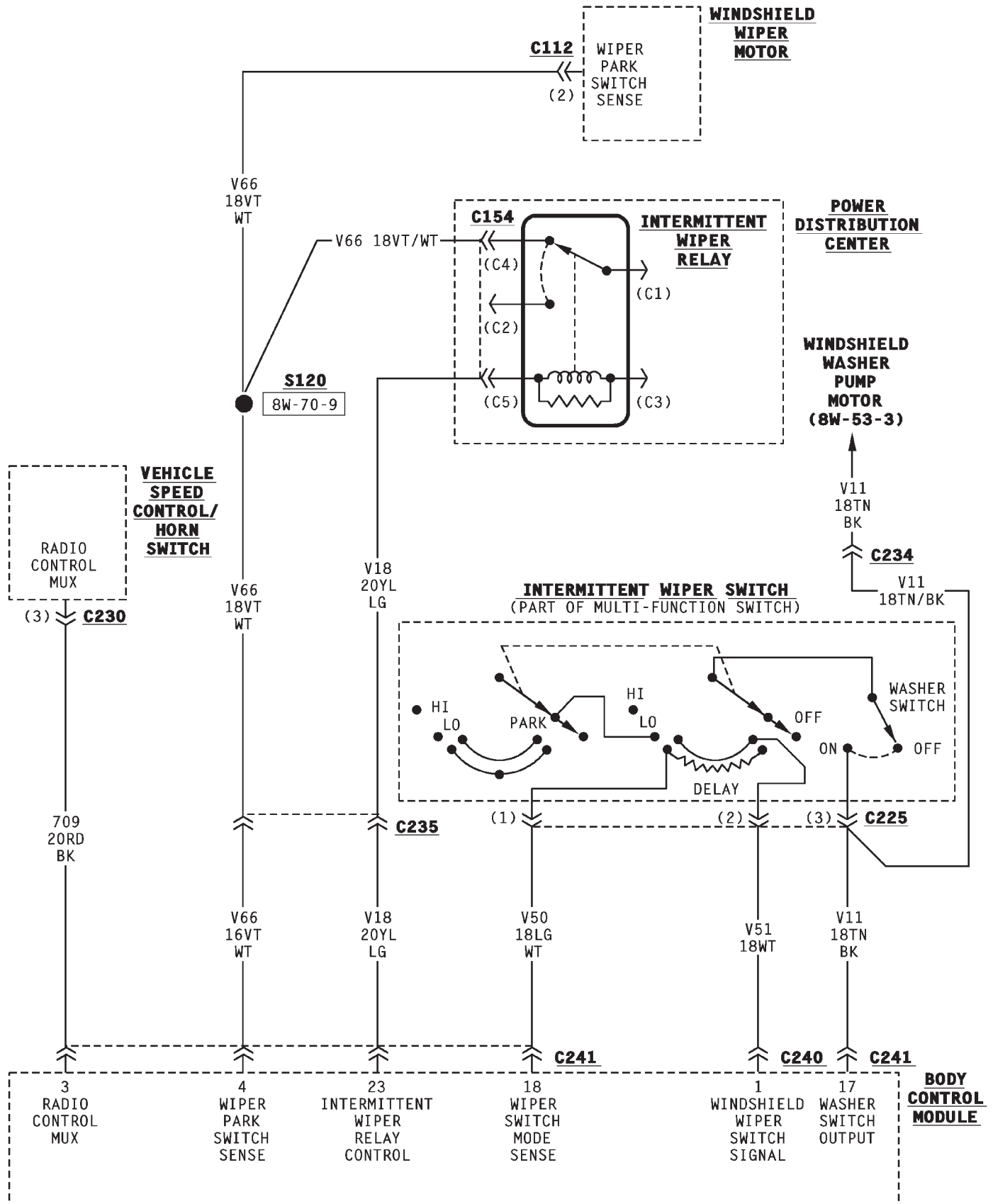


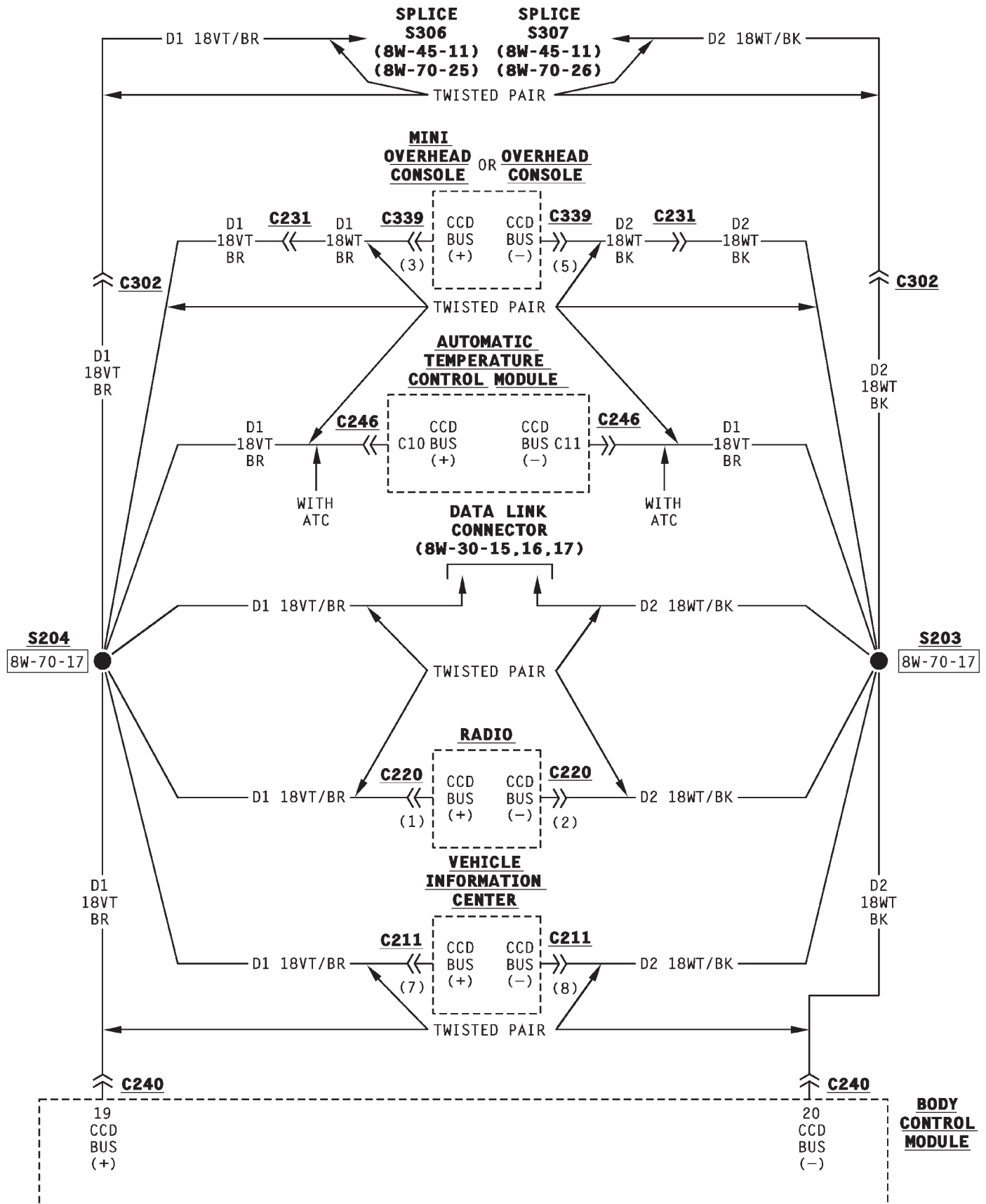


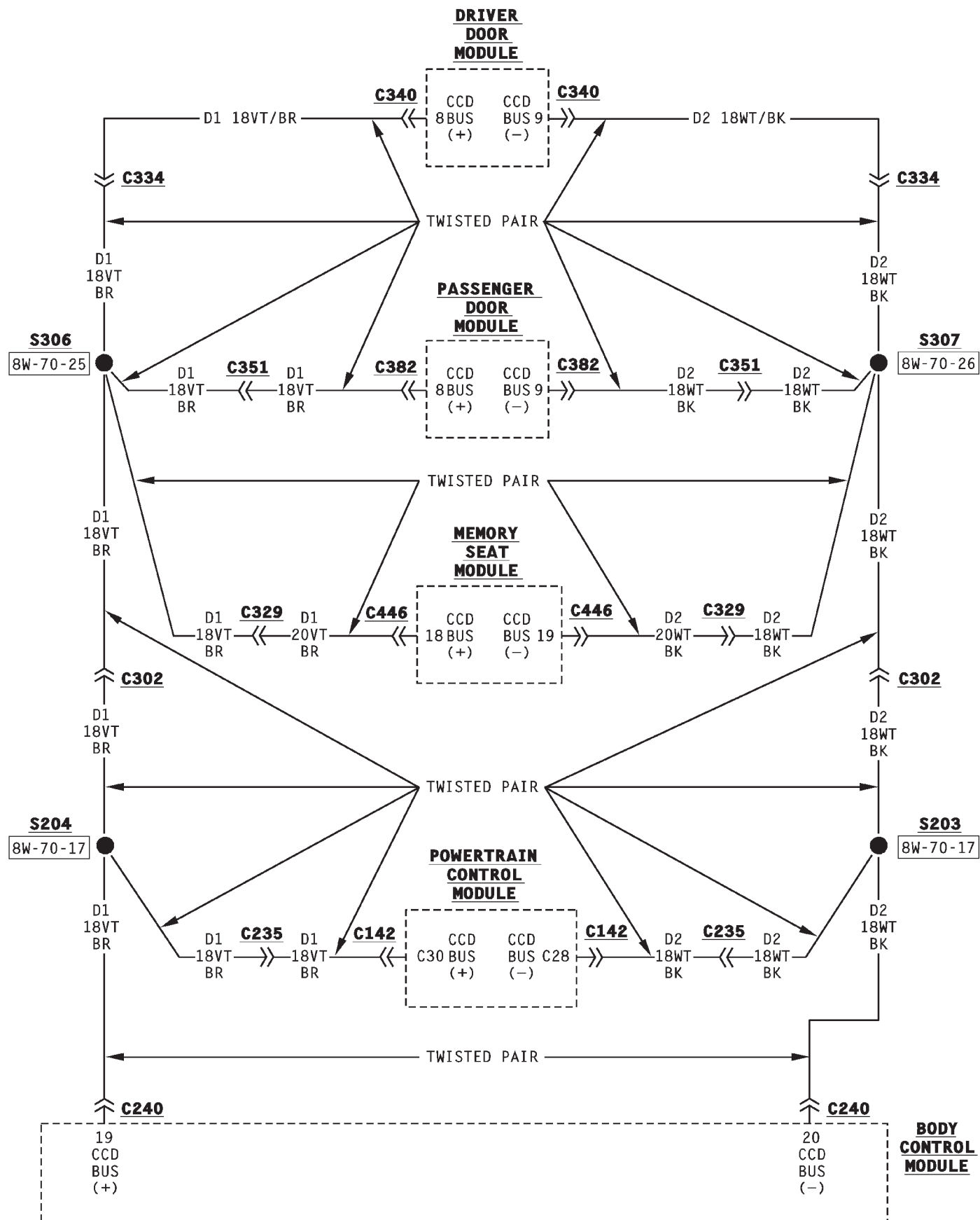


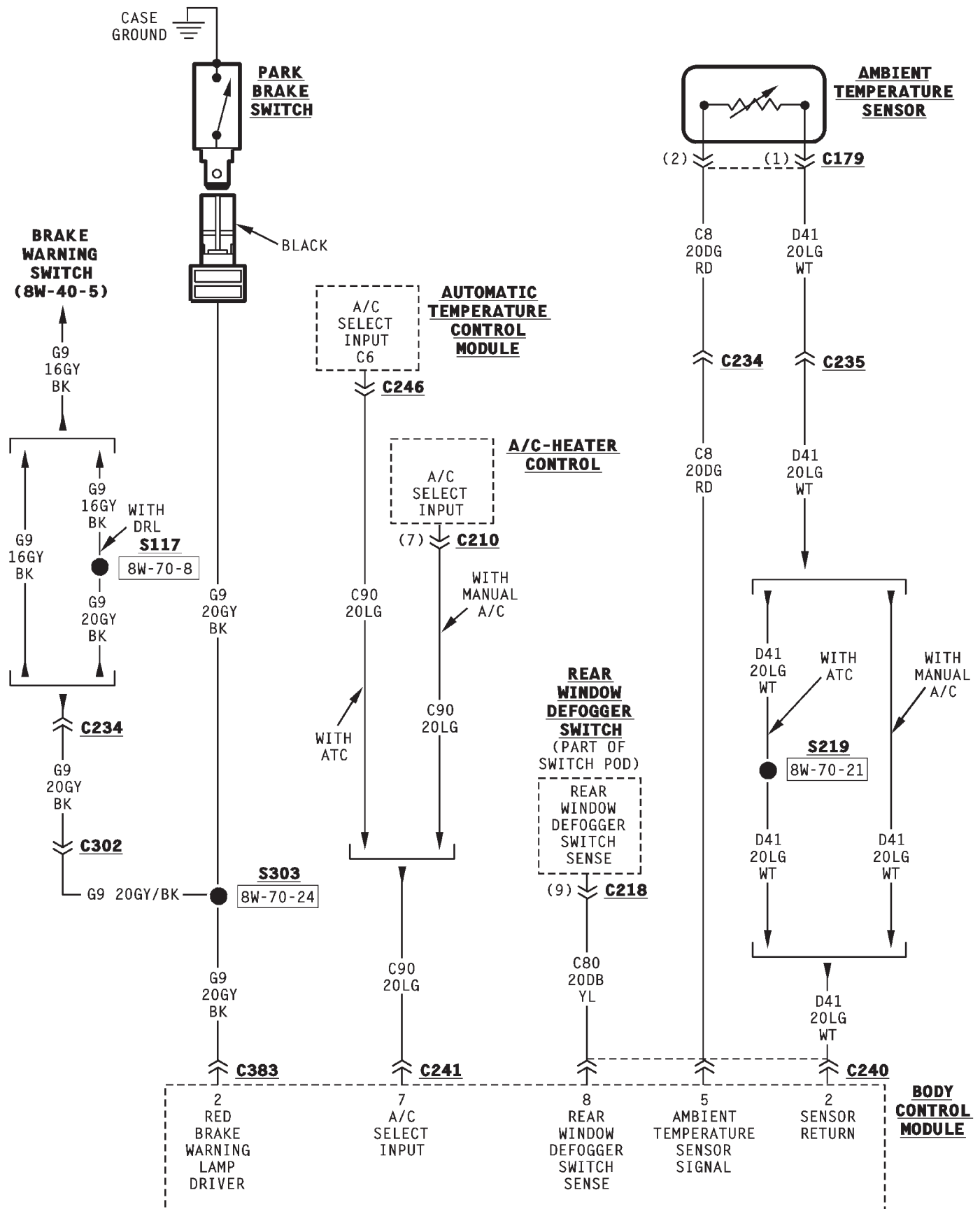


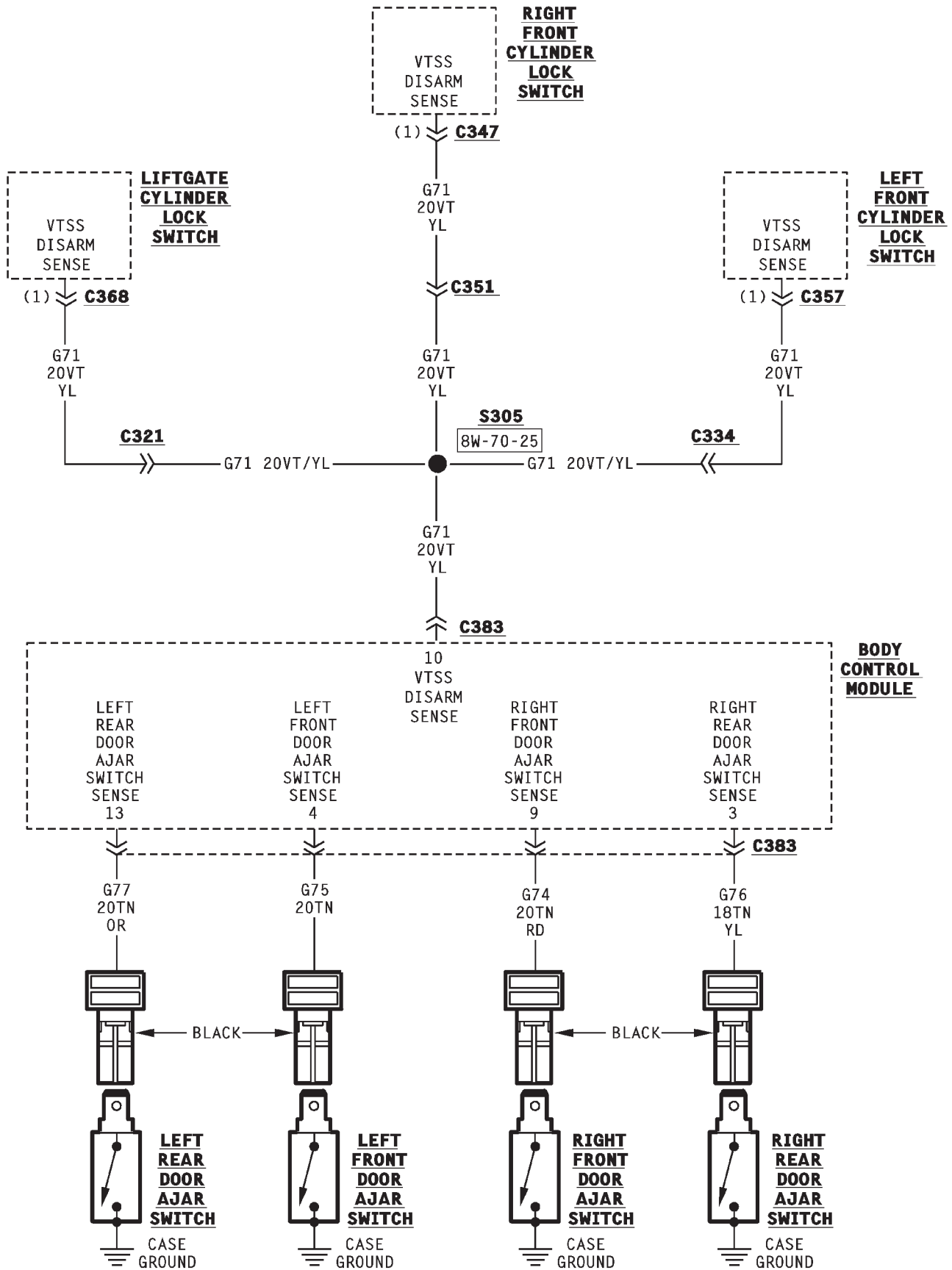


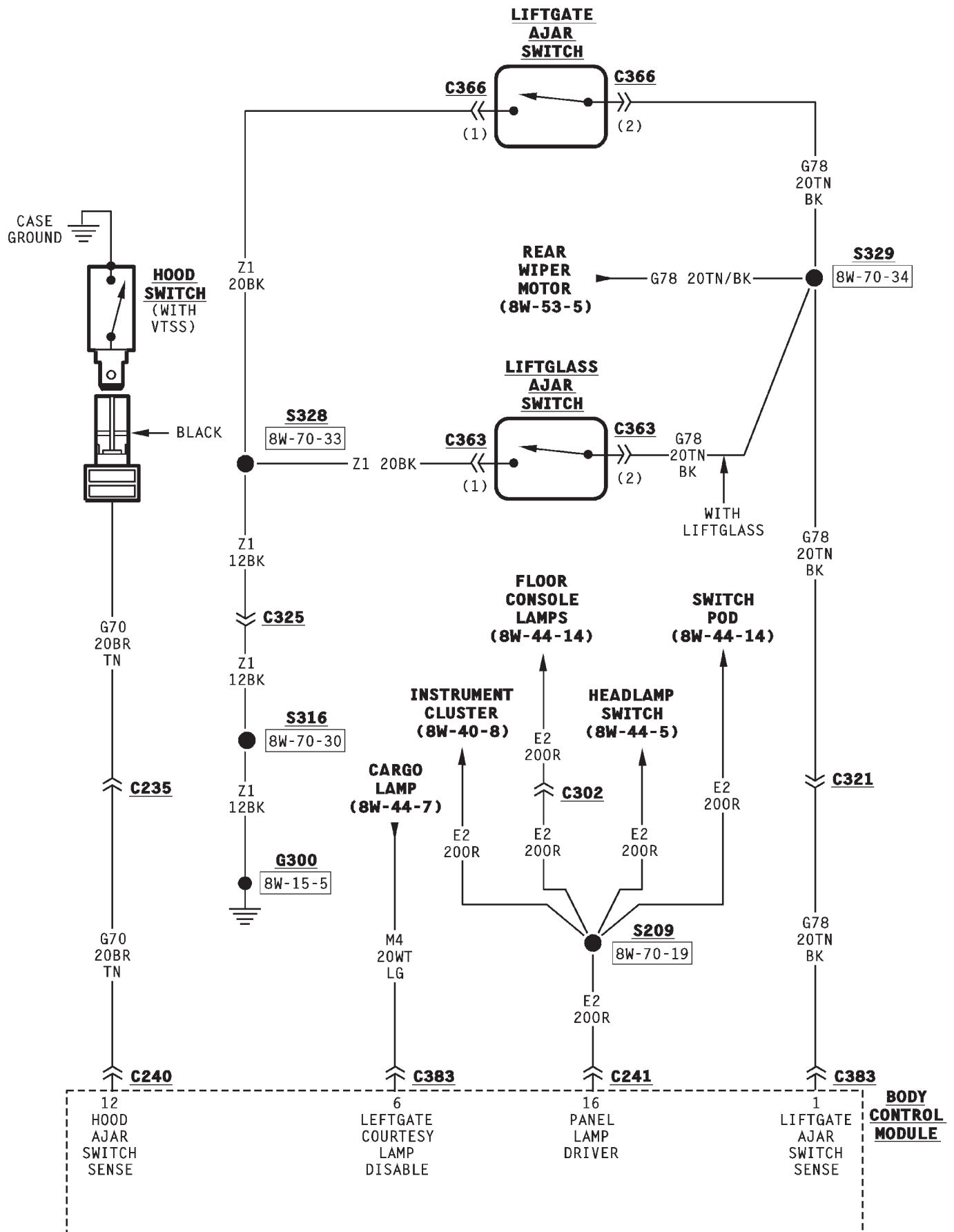












8W-46 MESSAGE CENTER

INDEX

	page		page
GENERAL INFORMATION		VEHICLE INFORMATION CENTER	1
INTRODUCTION	1	SCHEMATICS AND DIAGRAMS	
DESCRIPTION AND OPERATION		WIRING DIAGRAM INDEX	2
GRAPHIC DISPLAY MODULE	1		

GENERAL INFORMATION

INTRODUCTION

Each four-wheel drive equipped Grand Cherokee is equipped with a four-wheel drive Graphic Display Module (GDM). The GDM is located at the bottom of the instrument panel center stack. The GDM displays transfer case mode selection.

Some vehicle are equipped with an optional Vehicle Information Center (VIC). The VIC has several functions:

- Display current time and date.
- Monitor specific vehicle operating systems and alert the drive if a malfunction occurs.
- Display service reminder or indicate distance to service.
- Display 2WD/4WD transfer case modes of operation.

DESCRIPTION AND OPERATION

GRAPHIC DISPLAY MODULE

Several fuses supply power to the Graphic Display Module (GDM). When the ignition switch is in the RUN position it connects circuit A1 from fuse 8 in the PDC to circuit A22. Circuit A22 feeds circuit F83 through fuse 6 in the junction block. Circuit F83 supplies voltage to the GDM.

Circuit A7 from fuse 15 in the PDC powers circuit F60 through fuse 20 in the junction block. Circuits A7 and F60 are HOT at all times. Circuit F60 feeds the GDM. Circuits Z1 and Z2 provide ground for the GDM.

TRANSFER CASE RANGE DISPLAY

When the transfer case is in either 4WD Low, Part Time 4WD, or Full Time it connects circuit G28 from the Graphic Display Module (GDM) to ground on circuit Z1. In response, the GDM illuminates the 4WD display.

When the transfer case switch is in 4WD Low, it connects circuit G28 from the GDM to ground on circuit Z1. In addition to illuminating the 4WD display,

the GDM also illuminates the LOW display.

When the transfer case switch is in Part Time 4WD position, it connects circuit T107 from the GDM to ground on circuit Z1. In addition to illuminating the 4WD display, the GDM also illuminates the PART TIME display.

When the transfer case switch is in Full Time 4WD position, it connects circuit T106 from the GDM to ground on circuit Z1. In addition to illuminating the 4WD display, the GDM also illuminates the FULL TIME display.

VEHICLE INFORMATION CENTER

Several fuses supply power to the Vehicle Information Center (VIC). When the ignition switch is in the RUN position it connects circuit A1 from fuse 8 in the PDC to circuit A22. Circuit A22 feeds circuit F83 through fuse 6 in the junction block. Circuit F83 supplies voltage to the VIC.

Circuit A7 from fuse 15 in the PDC powers circuit F60 through fuse 20 in the junction block. Circuits A7 and F60 are HOT at all times. Circuit F60 feeds the VIC.

Circuit A6 from fuse 13 in the PDC powers circuit 366 through fuse 17 in the junction block. Circuit 366 connects to the headlamp switch. When the headlamp switch is in the PARK or LOW position, it connects circuit 366 to circuit L90. Circuit L90 connects to the VIC. Circuit E2 from the Body Control Module (BCM) powers the illumination lamps in the VIC.

Circuits Z1 and Z2 provide ground for the VIC.

TRANSFER CASE RANGE DISPLAY

When the transfer case is in either 4WD Low, Part Time 4WD, or Full Time it connects circuit G28 from the Vehicle Information Center (VIC) to ground on circuit Z1. In response, the VIC illuminates the 4WD display.

When the transfer case switch is in 4WD Low, it connects circuit G28 from the VIC to ground on circuit Z1. In addition to illuminating the 4WD display, the VIC also illuminates the LOW display.

DESCRIPTION AND OPERATION (Continued)

When the transfer case switch is in Part Time 4WD position, it connects circuit T107 from the VIC to ground on circuit Z1. In addition to illuminating the 4WD display, the VIC also illuminates the PART TIME display.

When the transfer case switch is in Full Time 4WD position, it connects circuit T106 from the VIC to ground on circuit Z1. In addition to illuminating the 4WD display, the VIC also illuminates the FULL TIME display.

LAMP OUTAGE

Circuit G46 connects from the Lamp Outage Module (LOM) to the Vehicle Information Center (VIC). Circuit G46 supplies the rear lamp out signal to the VIC.

LOW WASHER FLUID WARNING

When the low washer fluid switch closes, it connects circuit G29 from the VIC to ground on circuit Z1. The VIC displays the Low Washer Fluid warning when the switch closes.

LOW ENGINE COOLANT WARNING

When the engine coolant level switch closes, it connects circuit G18 from the VIC to ground on circuit

Z1. The VIC displays the Low Coolant Level warning when the switch closes.

DOOR AJAR AND LIFTGATE AJAR DISPLAYS

Each door and the liftgate have an ajar switch that connects to the Body Control Module (BCM). The BCM senses when the liftgate or a door opens, and sends the a signal to the VIC on the CCD bus. In response, the VIC displays which door is open. The VIC communicates with the BCM over the CCD bus on circuits D1 and D2.

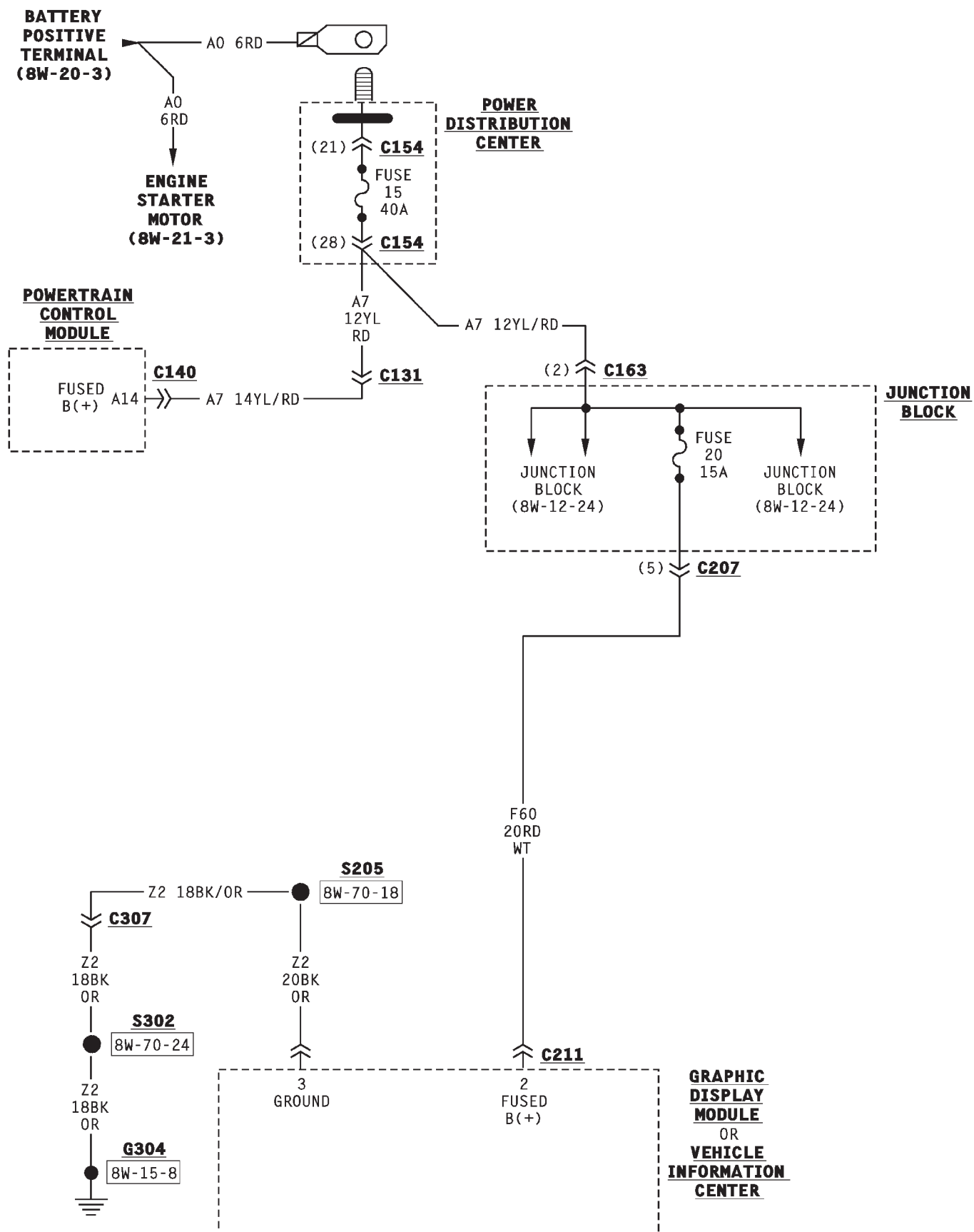
SCHEMATICS AND DIAGRAMS

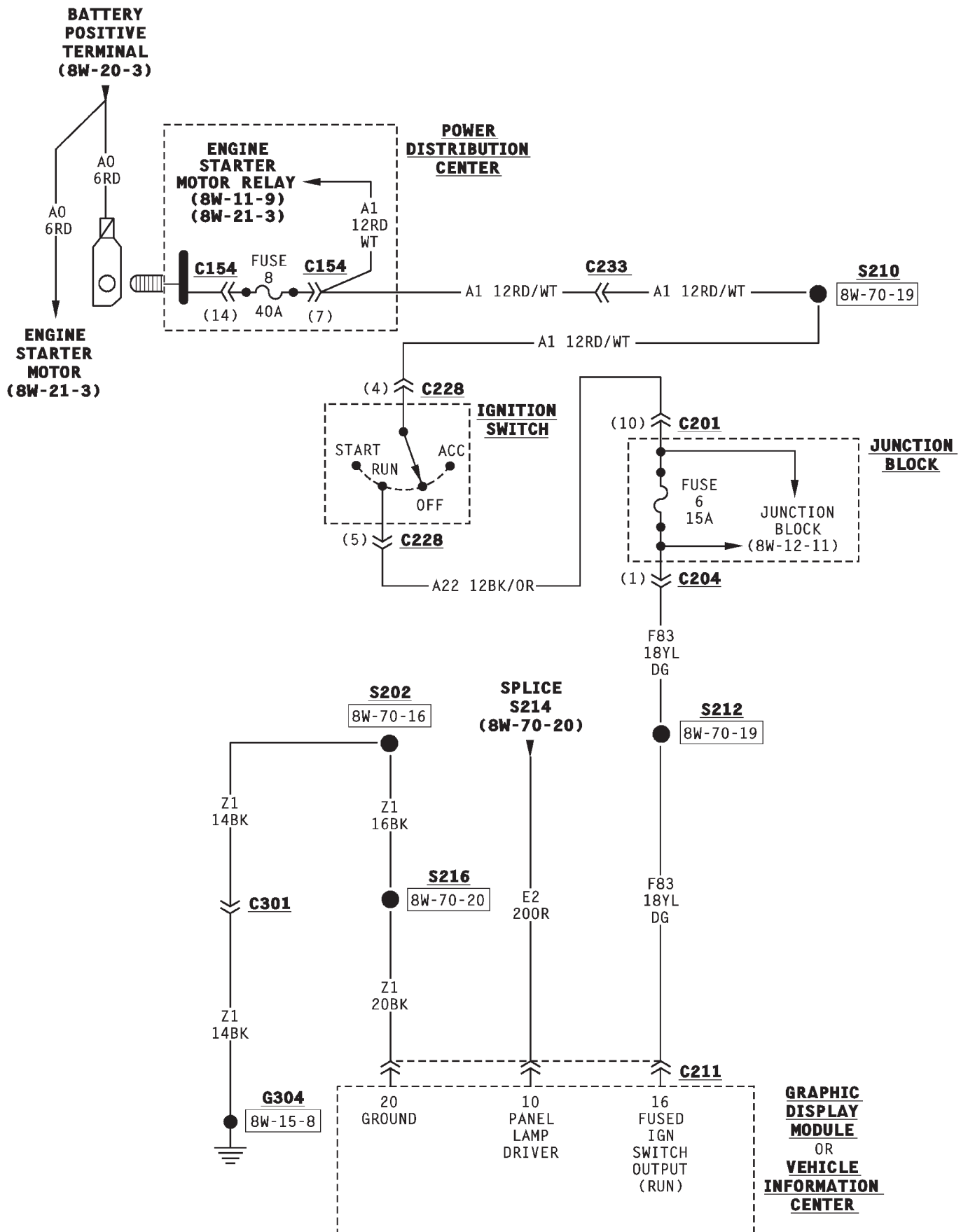
WIRING DIAGRAM INDEX

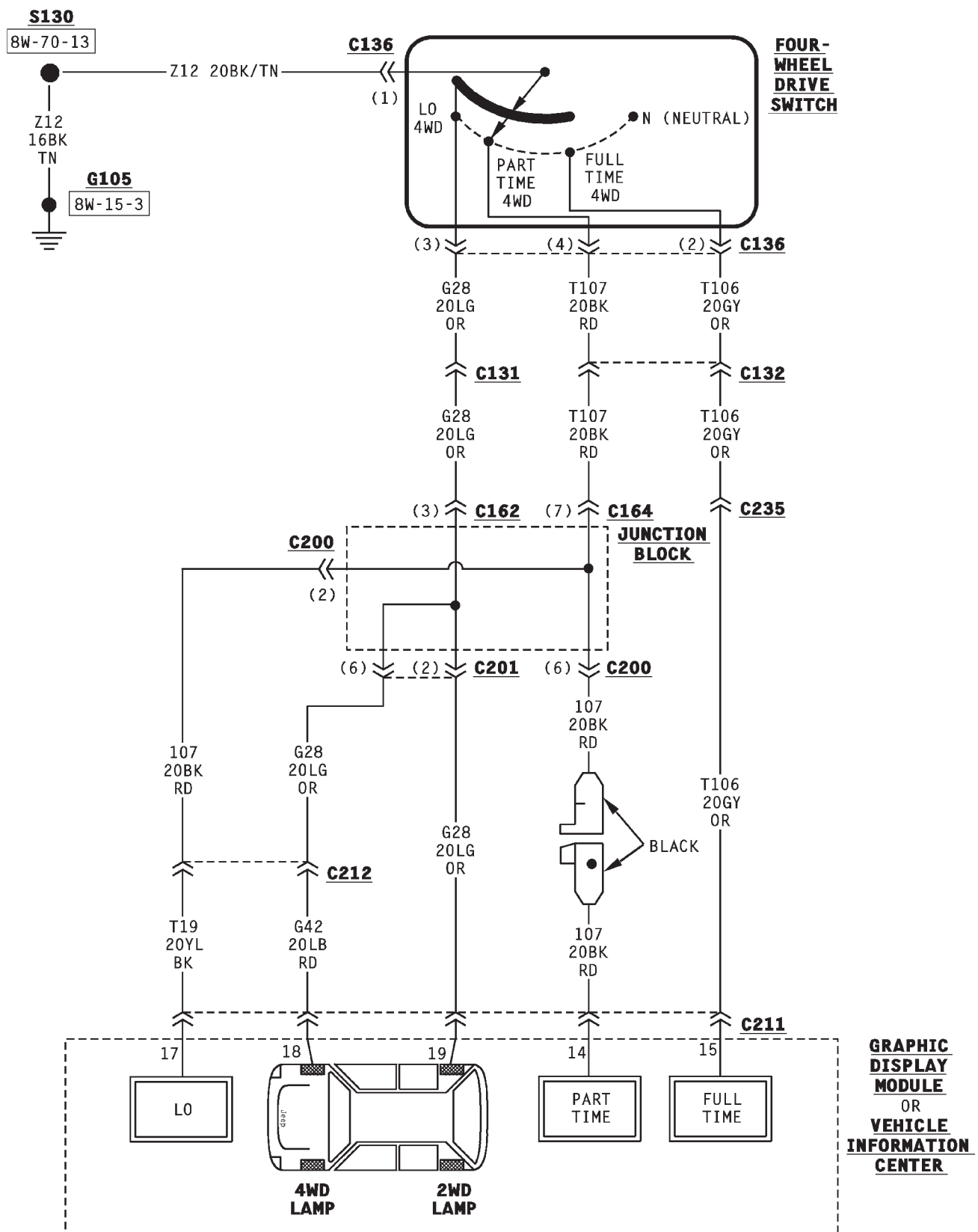
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DIAGRAM INDEX

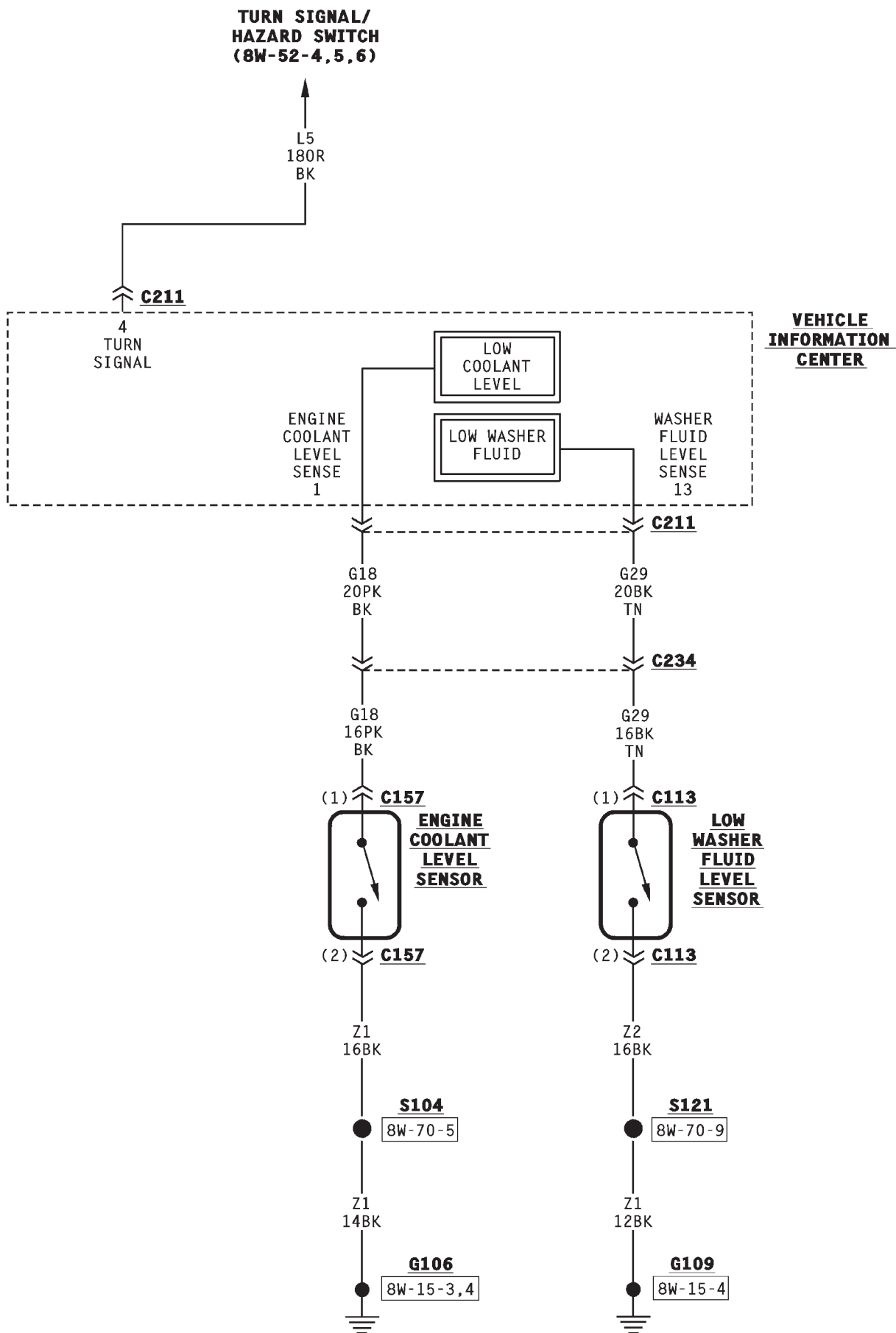
Component	Page	Component	Page
Body Control Module	8W-46-9	Fuse 20	8W-46-4
Engine Coolant Level Sensor	8W-46-8	Graphic Display Module	8W-46-4, 5, 6
Four-Wheel Drive Switch	8W-46-6	Headlamp Switch	8W-46-7
Fuse 6	8W-46-5	Ignition Switch	8W-46-5
Fuse 8 (PDC)	8W-46-5	Lamp Outage Module	8W-46-7
Fuse 13 (PDC)	8W-46-7	Low Washer Fluid Level Sensor	8W-46-8
Fuse 15 (PDC)	8W-46-4	Powertrain Control Module	8W-46-4, 9
Fuse 17	8W-46-7	Vehicle Information Center	8W-46-4, 5, 6, 7, 8, 9

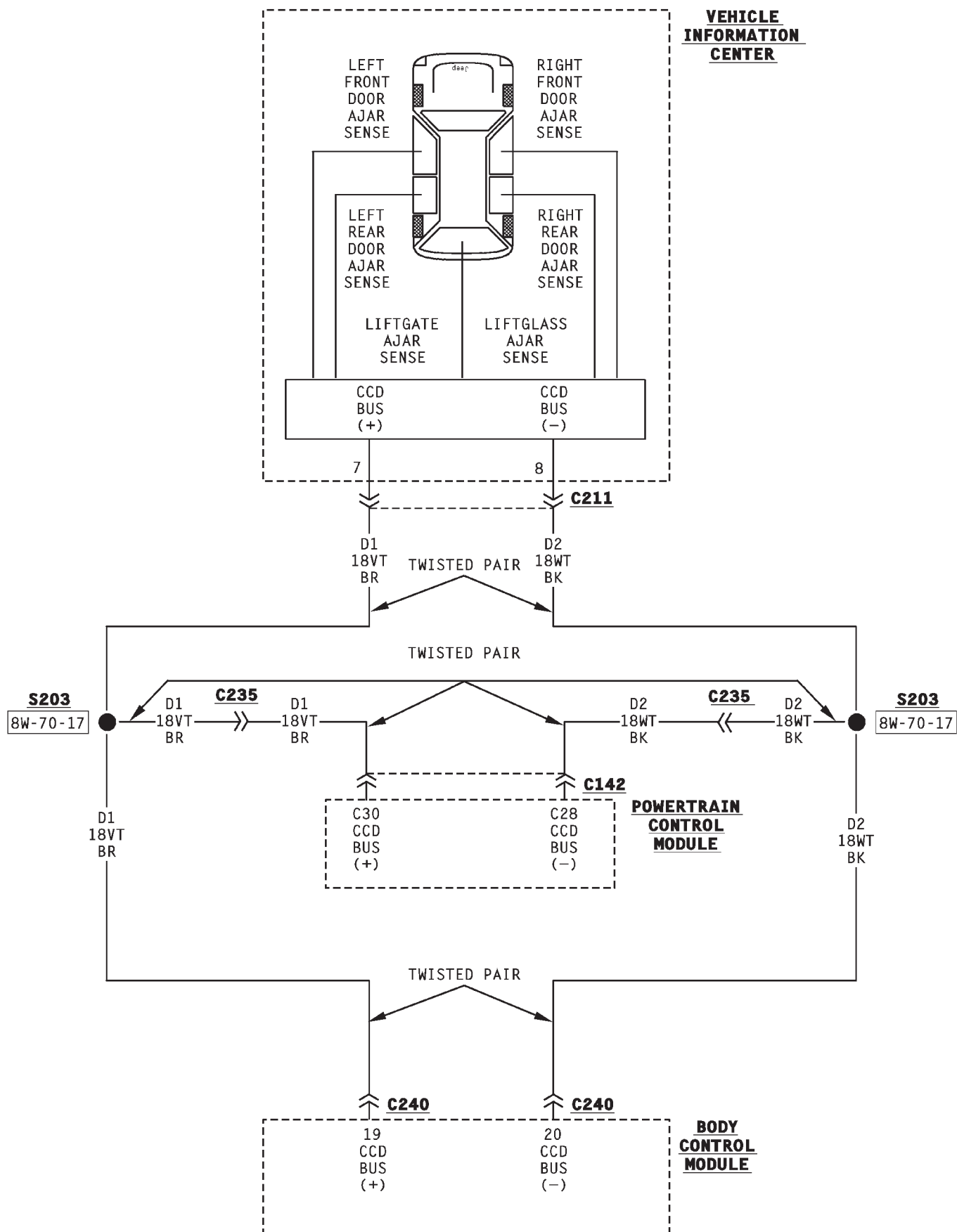












8W-47 AUDIO SYSTEM

INDEX

	page		page
GENERAL INFORMATION		RADIO MEMORY	1
INTRODUCTION	1	RADIO REMOTE SWITCHES	2
DESCRIPTION AND OPERATION		SPEAKERS—STANDARD RADIO	1
POWER AMPLIFIER AND SPEAKERS	1	SCHEMATICS AND DIAGRAMS	
POWER ANTENNA—EXPORT ONLY	2	WIRING DIAGRAM INDEX	2
RADIO ILLUMINATION	1		

GENERAL INFORMATION

INTRODUCTION

There are two audio systems offered on this vehicle. The standard system uses four speakers and a standard antenna. The optional system has six speakers, a power amplifier, standard antenna and remote operating switches on the steering wheel.

Both systems are powered by circuit X12 from fuse 1 in the junction block. When the ignition switch is in the ACCESSORY or RUN position, it connects circuit A1 from fuse 8 in the Power Distribution Center (PDC) to circuit A31. Circuit A31 powers circuit X12 through junction block fuse 1.

Circuit Z5 provides ground for both radios.

Both radios connect to the CCD bus on circuits D1 and D2.

DESCRIPTION AND OPERATION

RADIO MEMORY

On the standard and optional radios, circuit F60 from fuse 20 in the junction block powers the radio memory. Circuit A7 from fuse 15 in the Power Distribution Center (PDC) powers junction block fuse 20 and circuit F60.

RADIO ILLUMINATION

When the parking lamps or the headlamps are ON, circuits E2 and L90 are used to power the radio illumination lamps. Circuit E2 is used for the dimmable lamps. Circuit L90 is the parking lamps feed.

SPEAKERS—STANDARD RADIO

The standard radio uses four speakers. Circuit X53 feeds the speaker in the left front door. Circuit X55 is the return from the speaker to the radio.

Circuit X54 feeds the right front door speaker. Circuit X56 is the return from the speaker to the radio.

From the radio, circuit X51 connects to circuit X52 at the jumper harness for the left rear door speaker.

Circuit X51 and X52 feed the speaker. Circuit X58 from the speaker jumper harness connects to circuit X57. Circuit X57 is the return from the speaker to the radio.

Circuit X52 feeds the right rear door speaker. Circuit X58 is the return from the speaker to the radio. Circuits X52 and X58 continue through the jumper harness to the right rear door speaker.

POWER AMPLIFIER AND SPEAKERS

The power amplifier is used on optional premium systems only. The amplifier is connected between the radio and the speakers.

Circuit A250 from fuse 11 in the Power Distribution Center (PDC) powers circuit F75 through fuse 7 in the junction block. Circuit F75 feeds the radio amplifier. Circuit Z5 provides ground for the amplifier. Circuit X60 from the radio supplies power to the amplifier.

From the radio, circuits X54 and X56 for the right front speaker and the speaker in the right side of the instrument panel, connect to the power amplifier. Circuit X54 is the feed from the radio to the amplifier. Circuit X82 is the feed from the amplifier to the right instrument panel speaker and right front door speaker. Circuit X80 is the return from the speakers to the amplifier and circuit X56 is the return from the amplifier to the radio. Circuits X80 and X82 from the amplifier connect to circuits X56 and X54 at the jumper harness for the right front door speaker.

For the left front door speaker and the speaker in the left side of the instrument panel, circuits X53 and X55 from the radio connect to the power amplifier. Circuit X53 is the feed from the radio to the amplifier. Circuit X87 is the feed from the amplifier to the left instrument panel speaker and left front door speaker. Circuit X85 is the return from speakers to the amplifier and circuit X55 is the return from the amplifier to the radio. Circuits X87 and X85 from the amplifier connect to circuits X55 and X53 at the jumper harness for the left front door speaker.

DESCRIPTION AND OPERATION (Continued)

Circuit X51, the feed for the left rear door speaker and circuit X57, the return for the speaker, connect from the radio to the power amplifier. At the jumper harness for the left rear door speaker, circuit X93 from the amplifier connects to circuit X52 and circuit X91 connects to circuit X58. Circuits X93 and X52 feed the speaker. The speaker return is on circuit X58 and circuit X91.

Circuit X52, the feed for the right rear door speaker and circuit X58, the return for the speaker, connect from the radio to the power amplifier. At the jumper harness for the right rear door speaker, circuit X94 from the amplifier connects to circuit X52 and circuit X92 connects to circuit X58. Circuits X94 and X52 feed the speaker. The speaker return is on circuits X58 and X92.

RADIO REMOTE SWITCHES

Premium radios have remote volume, seek, and preset switches on the steering wheel. The remote switches connect to the Body Control Module (BCM) on circuit 709 and ground on circuit Z2. Each switch is wired in parallel. A resistor in series between each switch and ground circuit Z2 determines the signal sensed by the BCM on circuit 709.

After sensing a request from the radio remote switches, the BCM signals the radio over the CCD bus to make the requested selection.

POWER ANTENNA—EXPORT ONLY

The power antenna is only used on vehicles built for export markets.

The power antenna relay supplies voltage to the power antenna motor. The relay supplies voltage to

the antenna motor to either raise or lower the antenna.

Circuit A7 from fuse 15 in the Power Distribution Center (PDC) feeds the relay switch through fuse 13 in the junction block.

When the radio is OFF, the switch in the power antenna relay is in the DOWN position. In DOWN position, the relay switch powers circuit X14. Circuit X14 supplies voltage to power antenna motor to lower the antenna. The ground path is from the motor to the relay on circuit X16, through the switch in the relay to ground on circuit Z1.

Circuit Z1 also provides ground for the coil side of the power antenna relay. When the radio is turned ON, circuit X60 from the radio supplies power to the coil side of antenna relay and the relay switches to the UP position. In the UP position, the switch powers circuit X16. Circuit X16 supplies voltage to power the antenna motor to raise the antenna. The ground path is from the motor to the relay on circuit X17, through the switch in the relay to ground on circuit Z1.

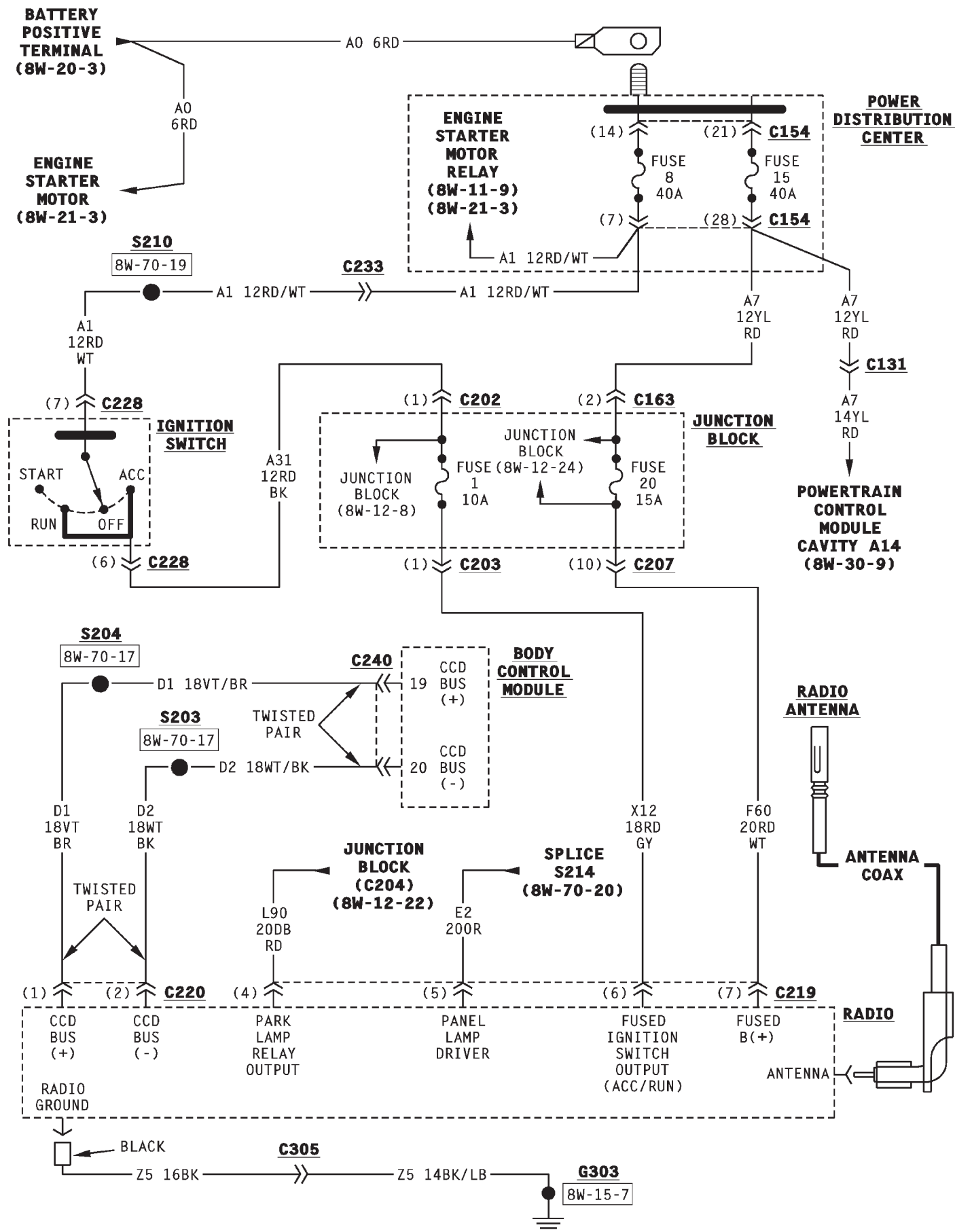
SCHEMATICS AND DIAGRAMS**WIRING DIAGRAM INDEX**

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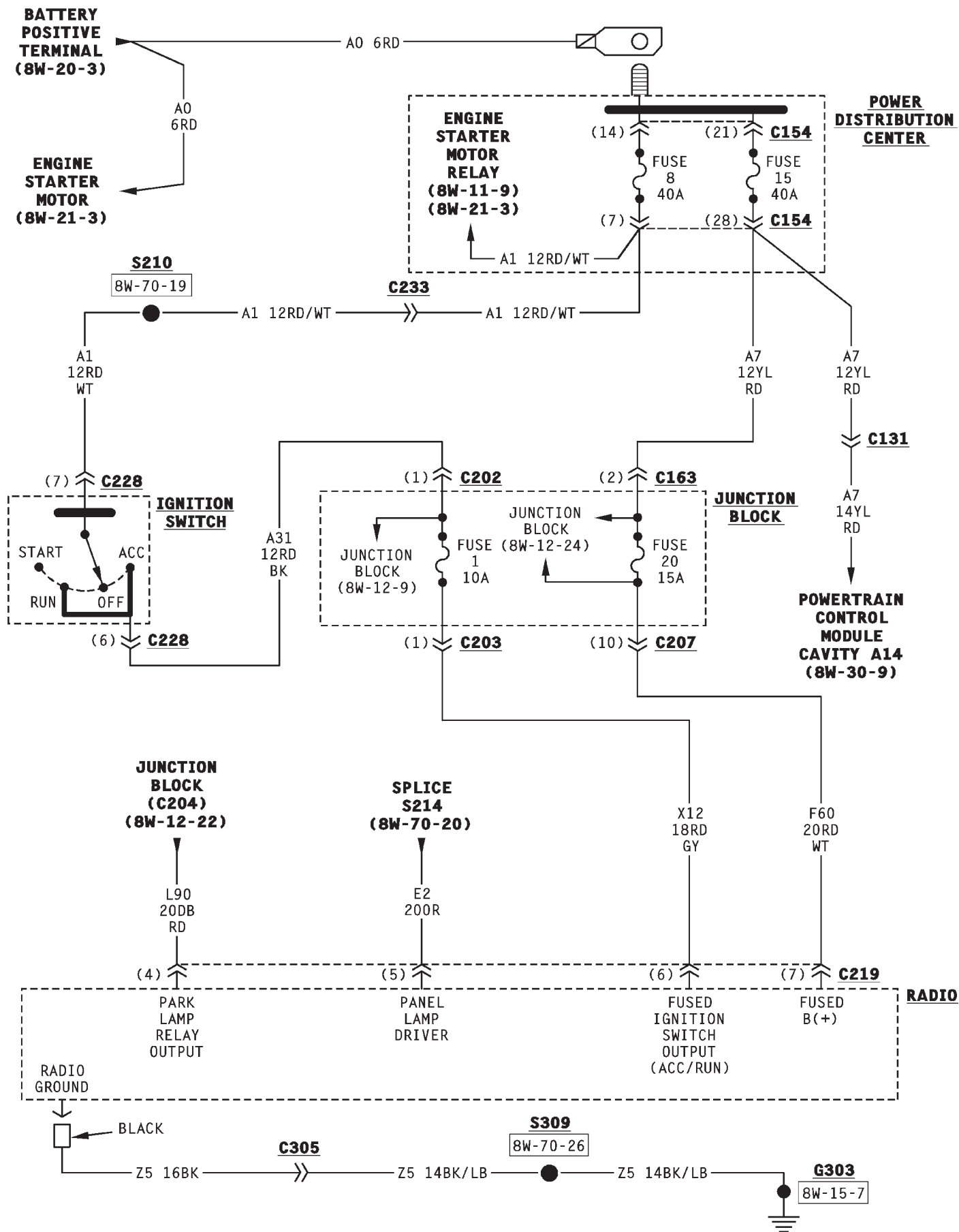
DIAGRAM INDEX

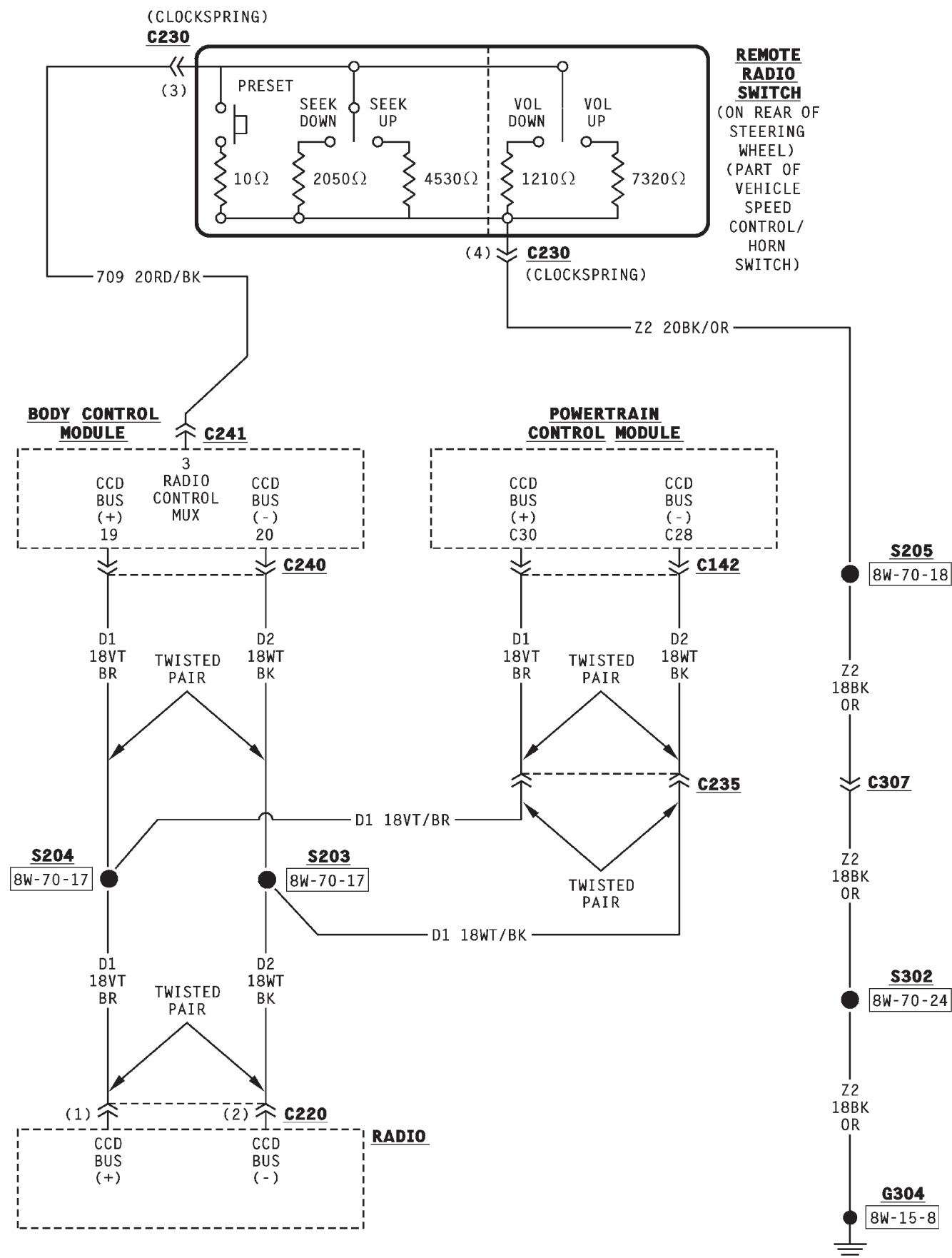
Component	Page
Body Control Module	8W-47-4, 7
Fuse 1	8W-47-4, 6
Fuse 7	8W-47-9
Fuse 8 (PDC).	8W-47-4, 6
Fuse 11 (PDC)	8W-47-9
Fuse 13	8W-47-8
Fuse 15 (PDC)	8W-47-4, 6, 8
Fuse 20	8W-47-4, 6
Ignition Switch	8W-47-4, 6
Left Front Door Speaker	8W-47-5, 10
Left Instrument Panel Speaker	8W-47-10

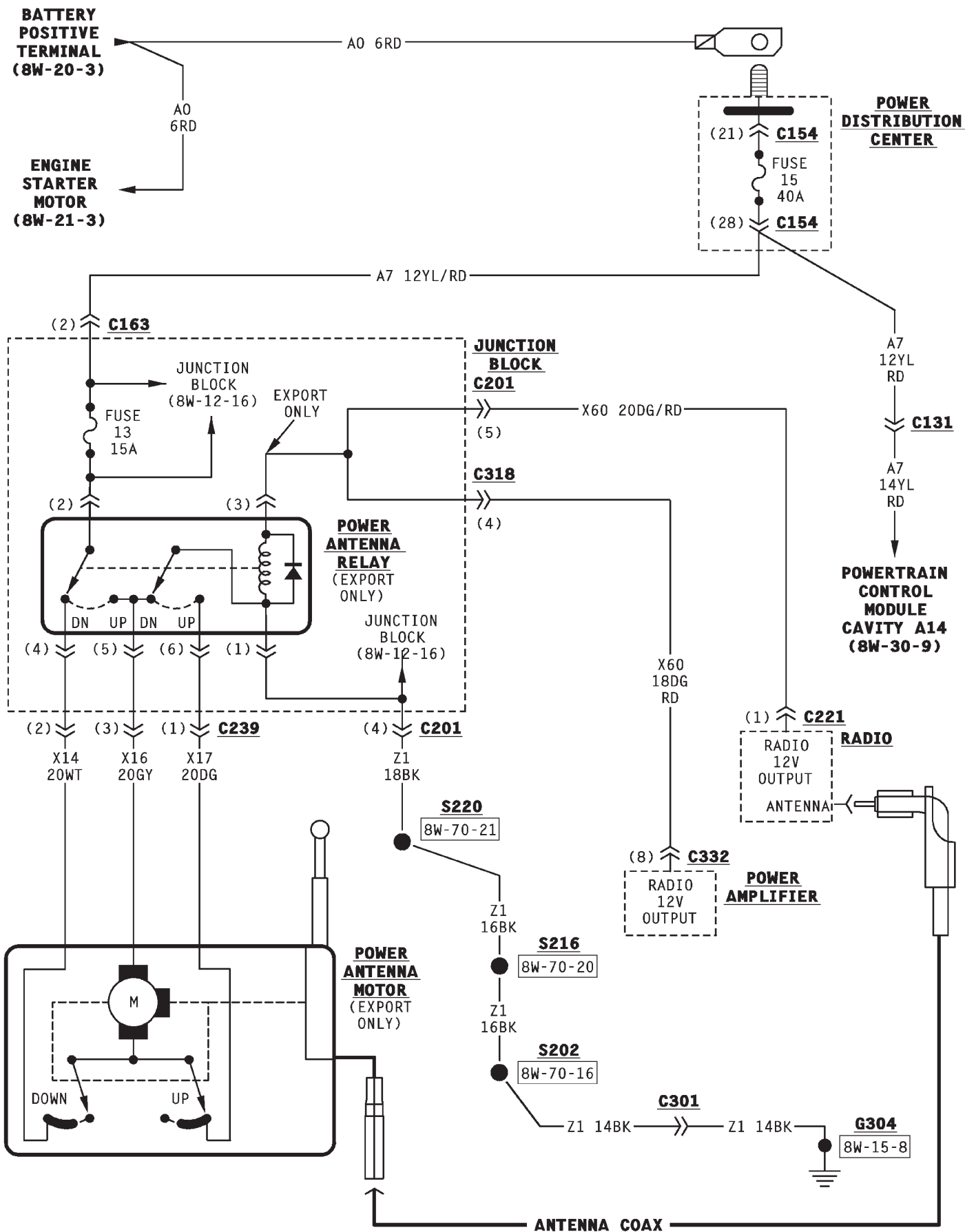
Component	Page
Left Rear Door Speaker	8W-47-5, 11
Power Amplifier	8W-47-8 thru 11
Power Antenna Motor (Export Only)	8W-47-8
Power Antenna Relay (Export Only)	8W-47-8
Powertrain Control Module	8W-47-7
Radio	8W-47-4 thru 9
Radio Antenna	8W-47-4,9
Remote Radio Switch	8W-47-7
Right Front Door Speaker	8W-47-5, 10
Right Instrument Panel Speaker	8W-47-10
Right Rear Door Speaker	8W-47-5, 11

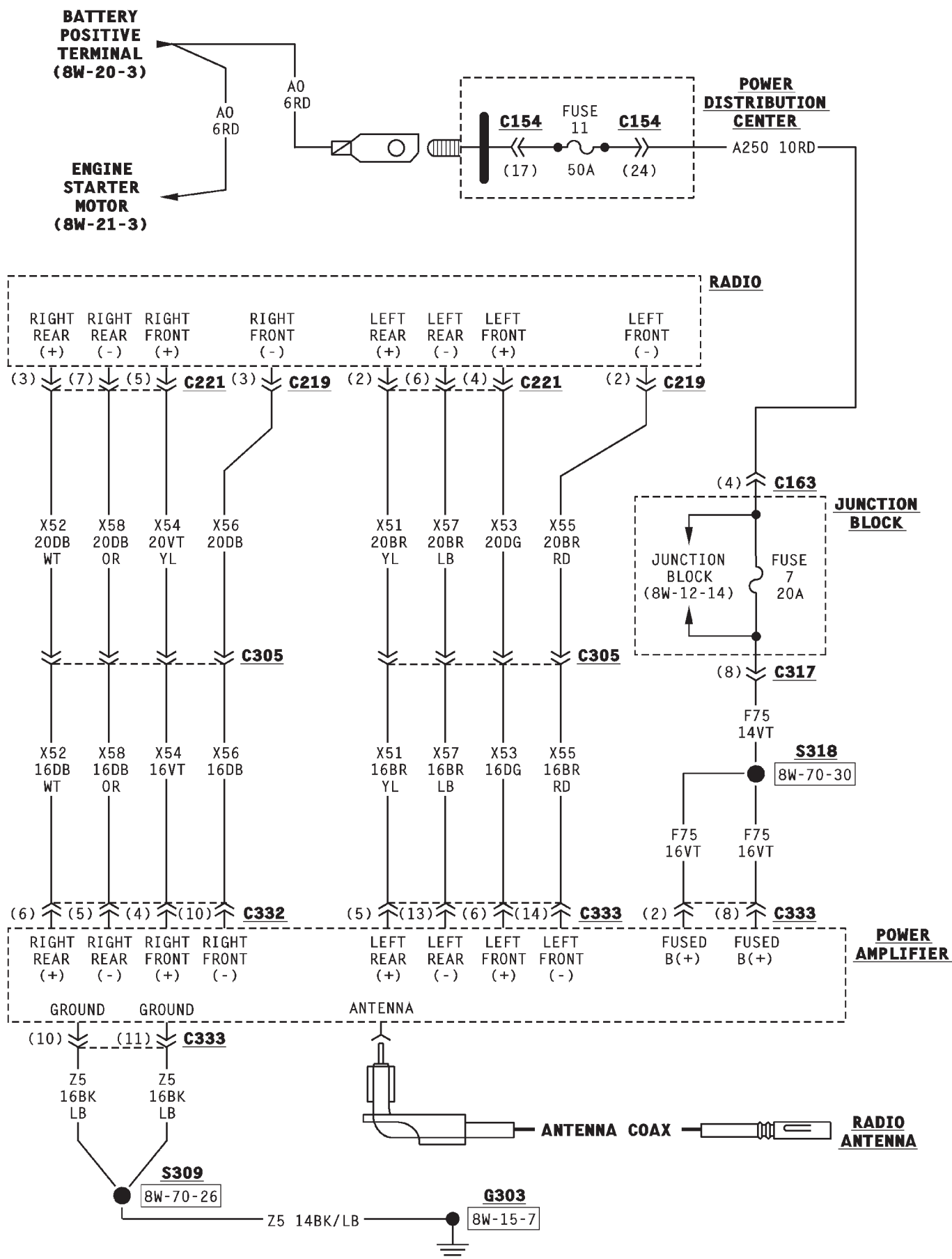


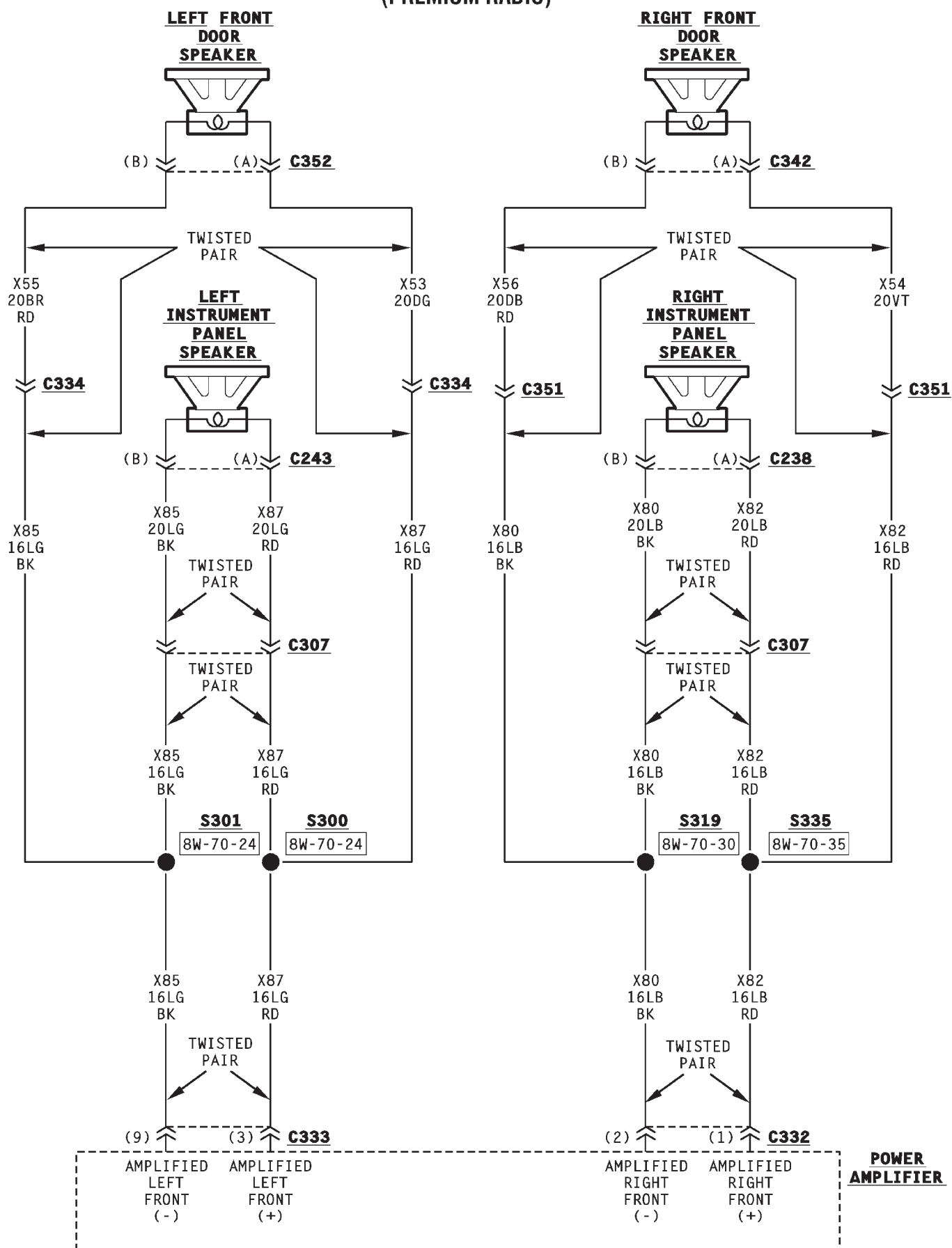


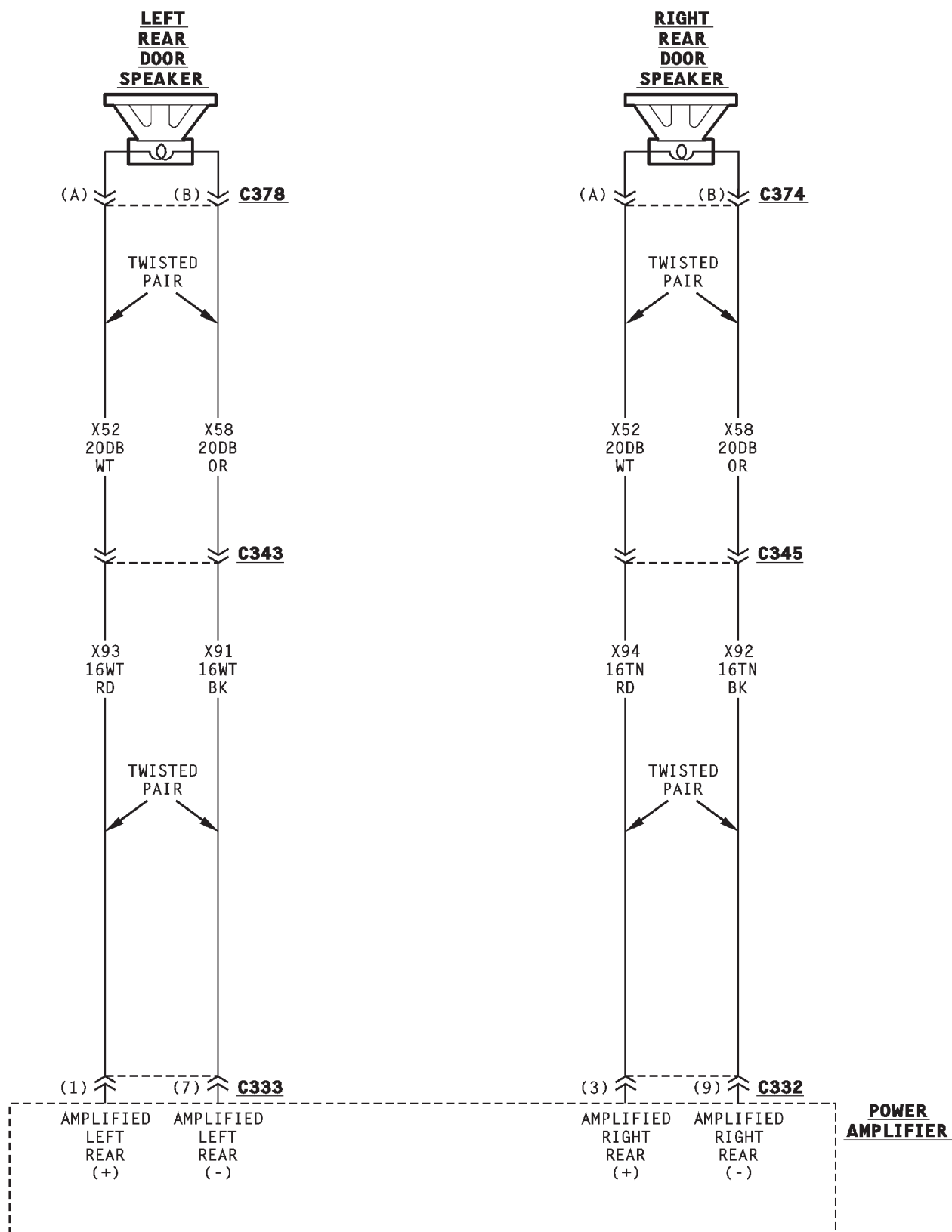












8W-48 REAR WINDOW DEFOGGER

DESCRIPTION AND OPERATION

REAR WINDOW DEFOGGER

The Body Control Module (BCM) operates the rear window defogger system through a relay located in the junction block. When the operator presses the rear window defogger switch, the switch connects circuit C80 from the BCM to ground circuit Z1. In response, the BCM grounds the coil side of the rear window defogger relay on circuit C14.

When the BCM grounds the rear window defogger relay coil, the contacts close and connect circuit A900 from fuse 3 in the Power Distribution Center (PDC) to circuit C15. Circuit C15 supplies power to the rear window defogger grid. Circuit A900 also powers the coil side of the relay. Circuit Z1 grounds the rear window defogger grid.

Internal to the junction block, circuit C15 splices to feed circuit C16 through fuse 10. Circuit C16 feeds the Light Emitting Diode (LED) in the rear window defogger switch.

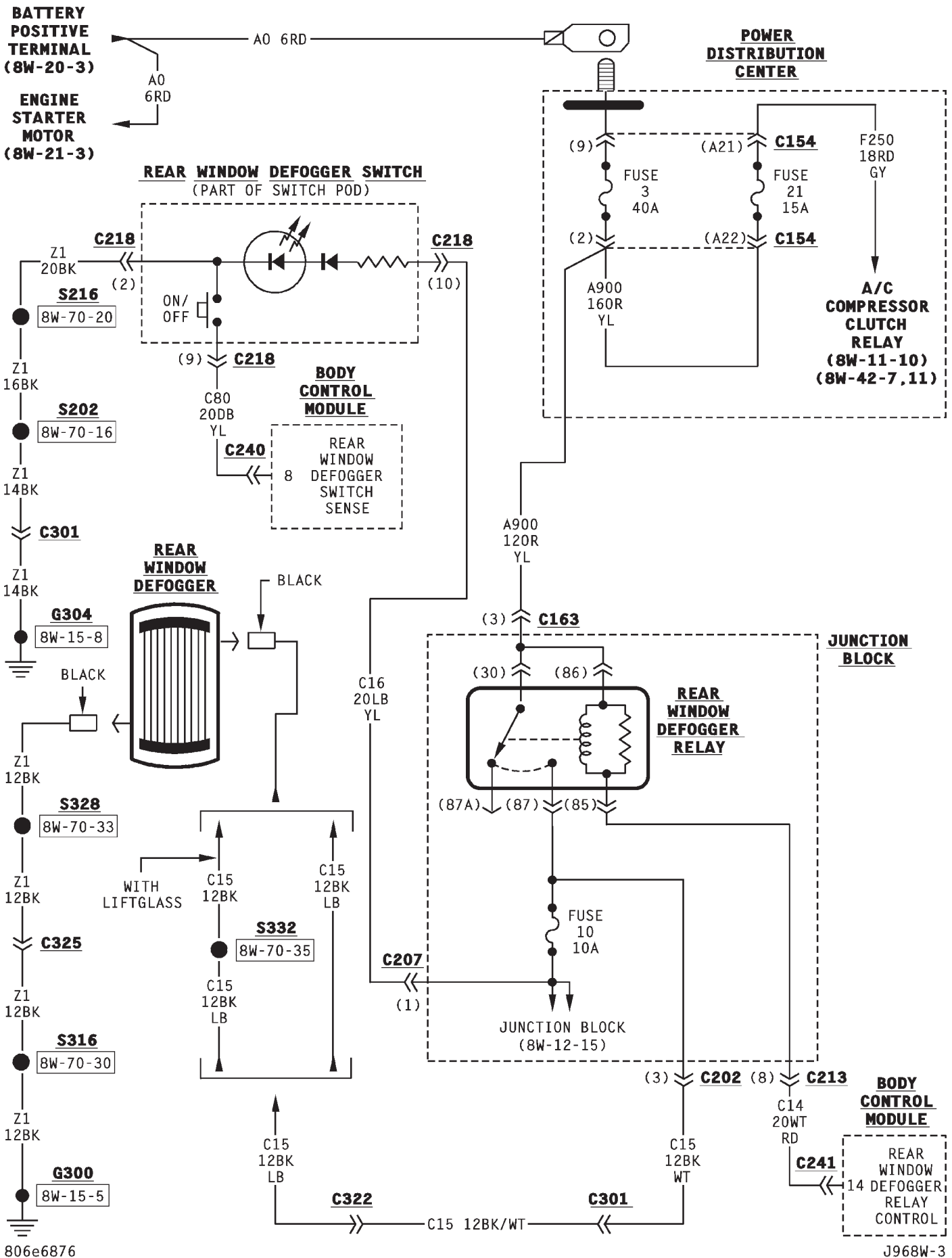
SCHEMATICS AND DIAGRAMS

WIRING DIAGRAM INDEX

The following index covers all components found in this section of the wiring diagrams. If the component you are looking for is not found here, refer to section 8W-02 for a complete list of all components shown in the wiring diagrams.

DIAGRAM INDEX

Component	Page	Component	Page
Body Control Module	8W-48-3	Rear Window Defogger	8W-48-3
Fuse 3 (PDC)	8W-48-3	Rear Window Defogger Relay	8W-48-3
Fuse 10	8W-48-3	Rear Window Defogger Switch	8W-48-3
Fuse 21 (PDC)	8W-48-3		



8W-49 OVERHEAD CONSOLE

DESCRIPTION AND OPERATION

OVERHEAD CONSOLE

When the ignition switch is in the RUN position, it connects circuit A1 from fuse 8 in the Power Distribution Center (PDC) to circuit A22. Circuit A22 powers circuit F83 through fuse 6 in the junction block. Circuit F83 supplies power to the overhead console.

The Body Control Module (BCM) broadcasts the park lamp signal and instrument panel illumination lamp intensity signal on the CCD bus. The overhead console receives the signals over the CCD bus and calculates display illumination intensity.

The overhead console receives the fuel percentage and distance information on the CCD bus from the Powertrain Control Module (PCM).

The overhead console contains a US/Metric switch. The switch selects which units to show on the display. The overhead console broadcasts the US/Metric selection on the CCD bus.

OVERHEAD CONSOLE LAMPS

Circuit A7 from fuse 15 in the Power Distribution Center (PDC) powers circuit M1 through fuse 16 in the junction block. Circuit M1 feeds the overhead console lamps.

Each overhead console lamp has a switch that connects the lamps to ground on circuit Z1. The lamps are also grounded when the Body Control Module (BCM) energizes the courtesy lamp relay to connect circuit M2 to ground on circuit Z1.

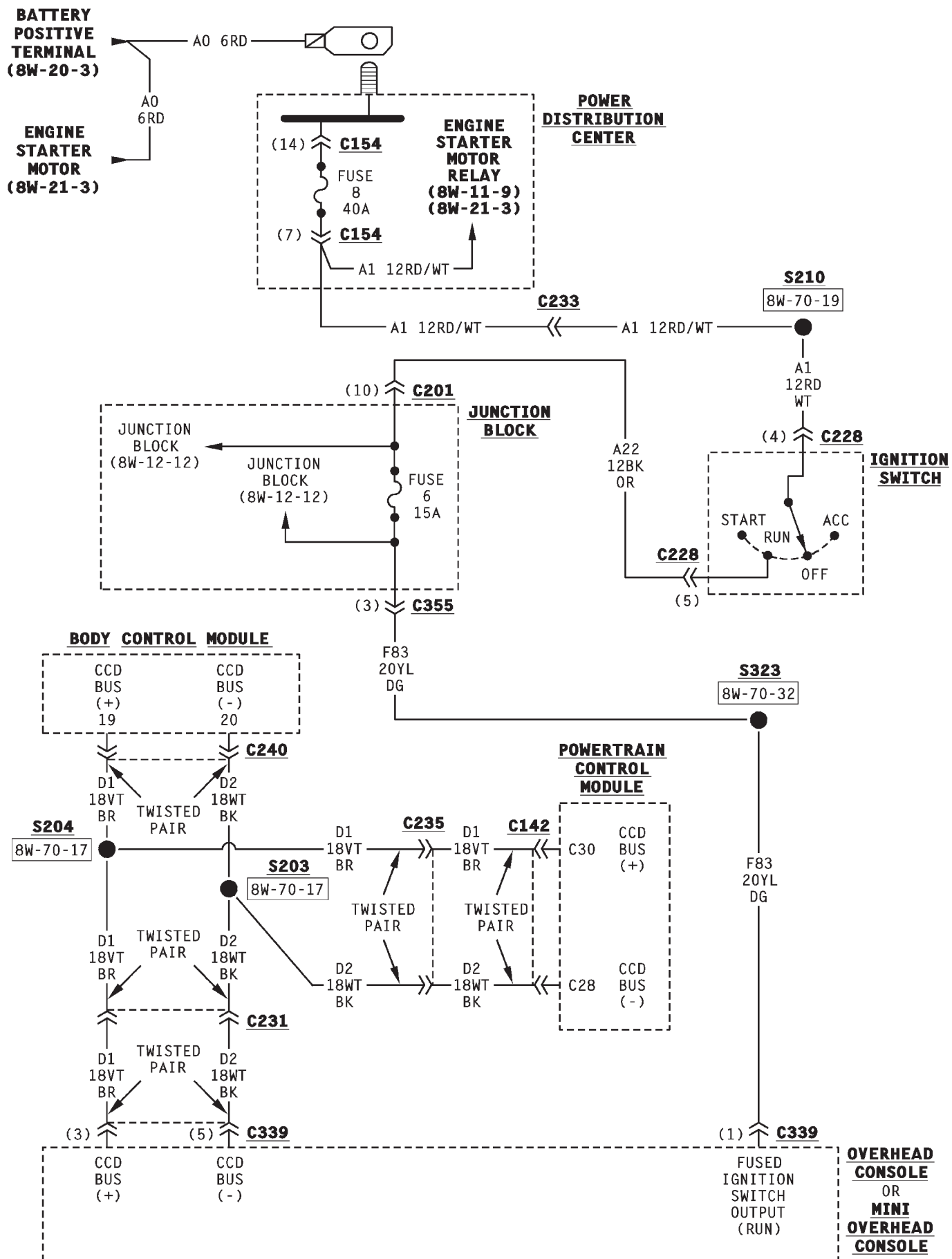
SCHEMATICS AND DIAGRAMS

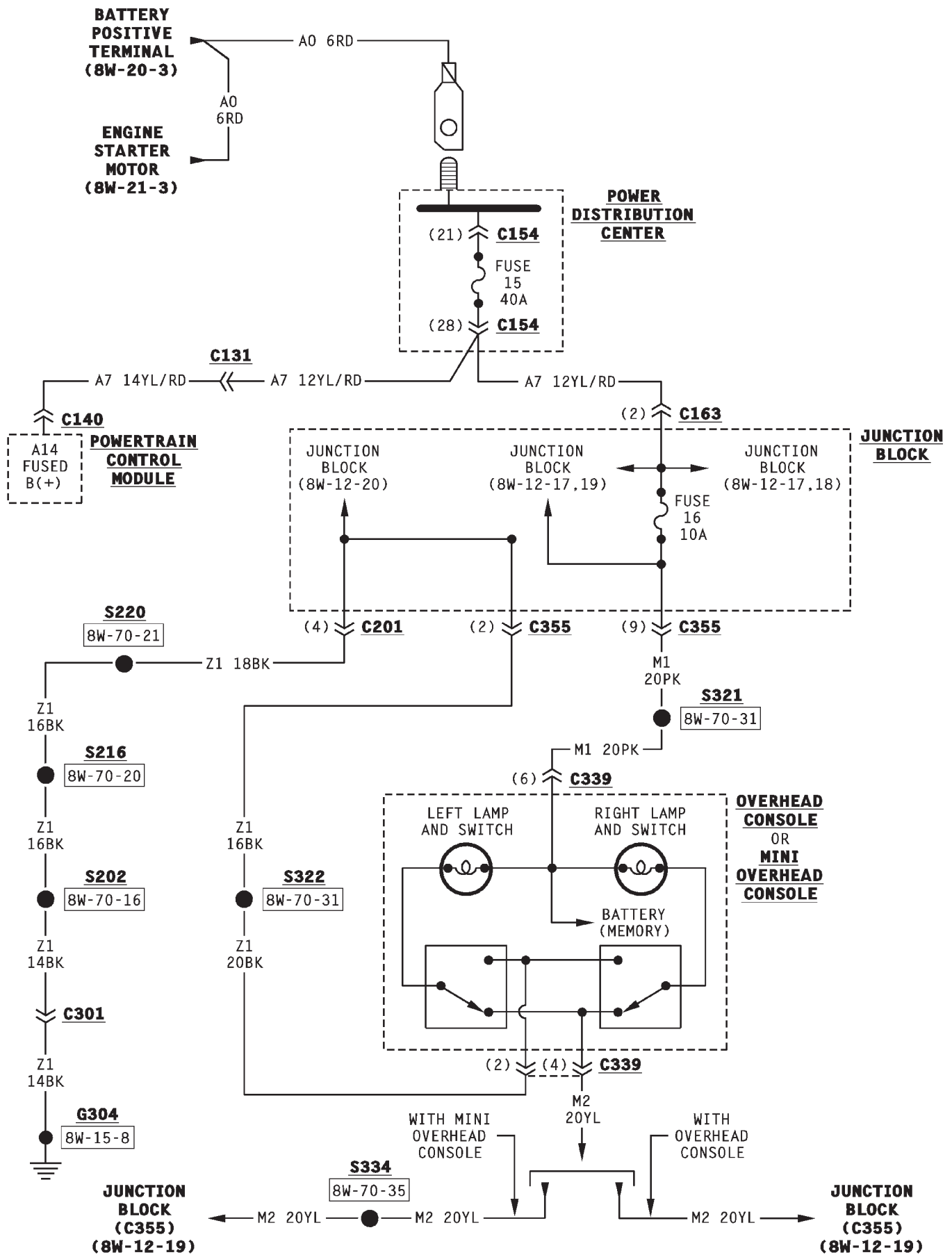
WIRING DIAGRAM INDEX

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DIAGRAM INDEX

Component	Page	Component	Page
Body Control Module	8W-49-3	Ignition Switch	8W-49-3
Fuse 6	8W-49-3	Mini Overhead Console	8W-49-3, 4
Fuse 8 (PDC)	8W-49-3	Overhead Console	8W-49-3, 4
Fuse 15 (PDC)	8W-49-4	Powertrain Control Module	8W-49-3,4
Fuse 16	8W-49-4		





8W-50 FRONT LIGHTING

INDEX

	page		page
DESCRIPTION AND OPERATION		INTRODUCTION	1
AUTO HEADLAMPS	1	PARKING LAMPS	1
DAYTIME RUNNING LAMPS MODULE	2	SCHEMATICS AND DIAGRAMS	
FOG LAMPS	1	WIRING DIAGRAM INDEX	2
HEADLAMPS	1		

DESCRIPTION AND OPERATION

INTRODUCTION

The vehicle is equipped with a Body Control Module (BCM). The BCM controls the auto headlamp feature through the auto headlamp relay.

The park lamps operate when the headlamp switch is in the ON or PARK position. Also, if the vehicle is equipped with the Vehicle Theft Security System (VTSS), the BCM powers the park lamps through the park lamp relay if it senses unauthorized vehicle operation.

Circuit A6 from fuse 13 in Power Distribution Center (PDC), powers the headlamp switch through the circuit breaker in the switch.

PARKING LAMPS

Circuit A6 from fuse 13 in the Power Distribution Center (PDC) powers circuit 366 through fuse 17 in the junction block. When the headlamp switch is in the PARK lamp position, it connects circuit 366 to circuit L90. Circuit L90 powers the parking lamps, side marker lamps. Circuit L90 also connects to the Body Control Module (BCM).

The BCM operates the park lamps when it senses unauthorized entry to the vehicle while the Vehicle Theft Security System is armed. When it sense unauthorized entry, the BCM energizes the park lamp relay by providing ground for the relay coil on circuit L79. Circuit 366 powers the relay coil and contacts. When the relay energizes, it connects circuit 366 to circuit L90.

HEADLAMPS

When the headlamp switch is in the LOW position, it connects circuit A6 from fuse 13 in the Power Distribution Center (PDC) to circuit F34. Circuit F34 connects to the dimmer switch portion of the multi-function switch and feeds circuit L4. Circuit L4 powers the low beam of the headlamps.

When the operator selects high beam operation or flash-to-pass with the turn signal stalk of the multi-function switch, circuit L11 from fuse 19 in the junction

block connects to circuit L3. Circuit L3 powers headlamp high beams. Circuit L3 also connects to the Body Control Module (BCM).

If the vehicle was built for sale in the Country of Canada, the Daytime Running Lamps (DRL) module powers the headlamp high beams on circuit L3 when the headlamp switch is off and the ignition switch is in the RUN position.

AUTO HEADLAMPS

The Body Control Module (BCM) operates the Auto Headlamp feature. The BCM monitors outside light intensity through the auto headlamp light sensor. Circuit L109 from the BCM provides 5 volts to the sensor. Circuit L110 from the sensor sends the light intensity signal to the BCM.

In the AUTO position, the headlamp switch provides a signal to the BCM by connecting circuit L24 to ground on circuit Z1. If outside light intensity is low enough when the BCM senses the AUTO headlamp request, it energizes the auto headlamp relay by grounding the relay coil on circuit 714. Circuit A6 from fuse 13 in the Power Distribution Center (PDC) powers the relay coil and contacts.

When the relay energizes, it connects circuit A6 to circuit F34. Circuit F34 powers circuit L4 through the headlamp dimmer switch circuitry in the multi-function switch. Circuit L4 powers the headlamps.

FOG LAMPS

The fog lamps only operate when the headlamp high beams are off and the park lamps are on. The fog lamp switch contains a light emitting diode (LED) that illuminates during fog lamp operation.

When the fog lamp switch closes, it signals the Body Control Module (BCM) on circuit L35. If the park lamps are on and the BCM does not sense headlamp high beam operation on circuit L3, it energizes the fog lamp relay. The BCM energizes the relay by grounding the relay coil on circuit L95. Circuit F62 from fuse 19 in the Power Distribution Center (PDC) powers the relay coil and contacts.

DESCRIPTION AND OPERATION (Continued)

When the fog lamp relay energizes, it connects circuit F62 from fuse 19 in the Power Distribution Center (PDC) to circuit L39. Circuit L39 powers the fog lamps and the fog lamp switch LED. Circuit Z1 provides ground for the lamps and the LED.

DAYTIME RUNNING LAMPS MODULE

Canadian vehicles are equipped with a Daytime Running Lamps (DRL) module. If the headlamp switch is in the OFF position, the DRL module operates the high beams of the headlamps at 50 percent intensity when the ignition is in the RUN position and the park brake is off. Circuit A6 from fuse 13 in Power Distribution Center (PDC) powers the DRL module. Circuit G9 provides the park brake signal to the DRL module.

In the RUN position, the ignition switch connects circuit A1 from fuse 8 in the PDC to circuit A22. Circuit A22 supplies power to circuit F83 through fuse 6 in the junction block. Circuit F83 splices to the DRL module.

Circuit L3 powers the high beams of the left and right headlamps. When the headlamp switch is OFF,

the DRL module powers the high beams on circuit L3. When the headlamps are ON, the dimmer switch in the multi-function switch powers the low beams on circuit L4.

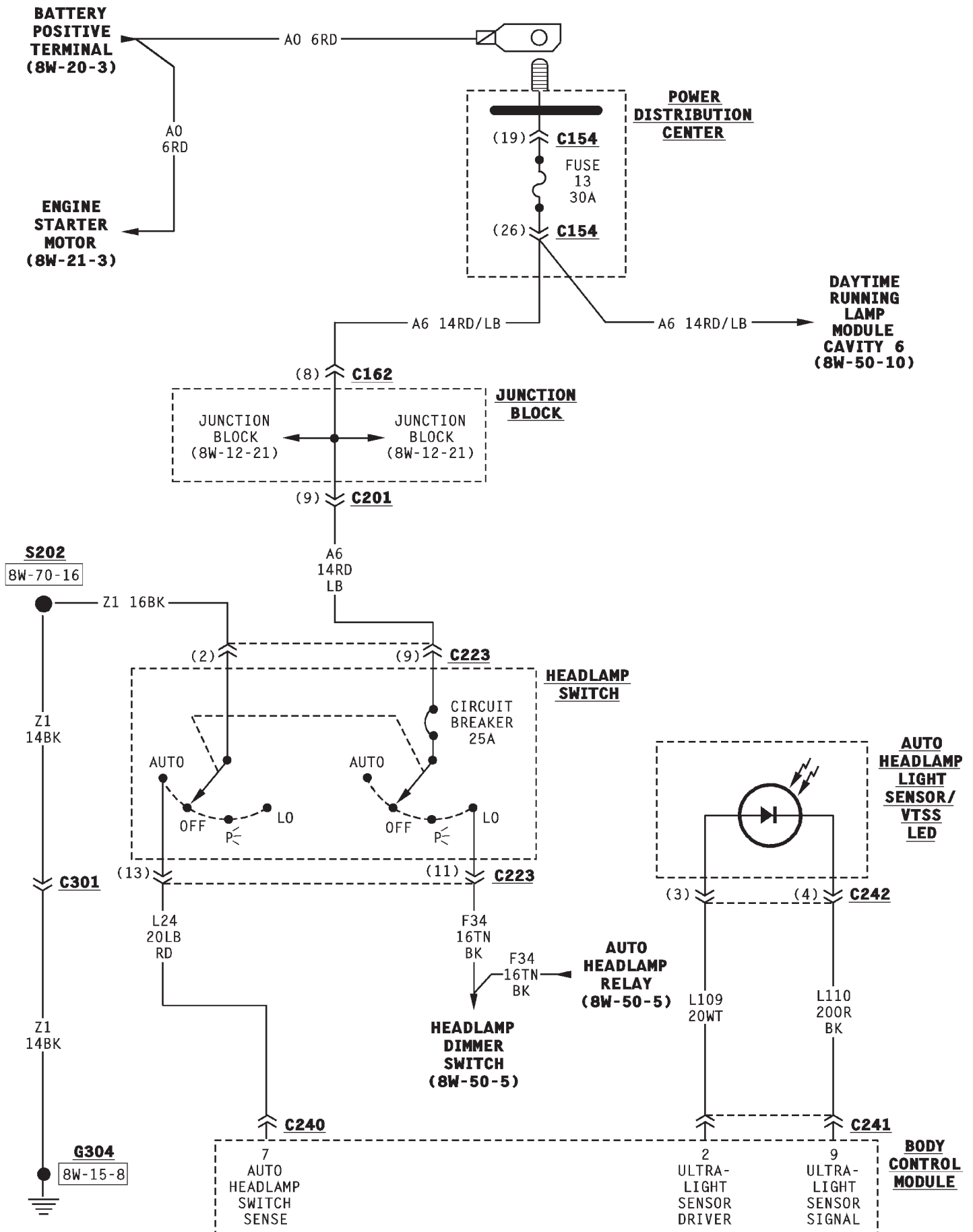
Circuit L3 feeds the high beams of the headlamps. When the operator flashes the headlamps with the stalk of the multi-function switch, the DRL module senses voltage on circuit L3. When it senses voltage on circuit L3, the DRL module signals the Body Control Module (BCM) on circuit G34. In response, the BCM turns on the high beam indicator lamp in the instrument cluster.

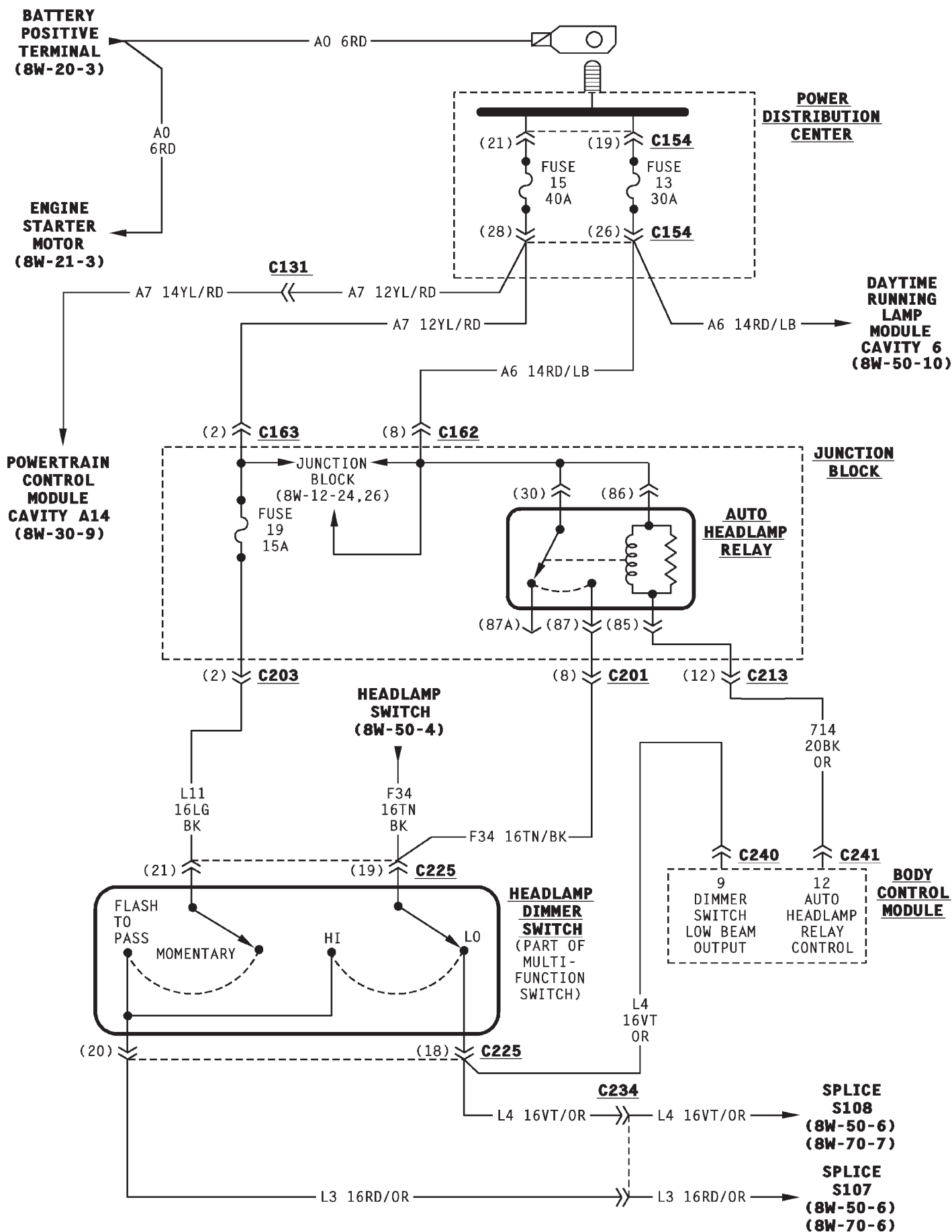
SCHEMATICS AND DIAGRAMS**WIRING DIAGRAM INDEX**

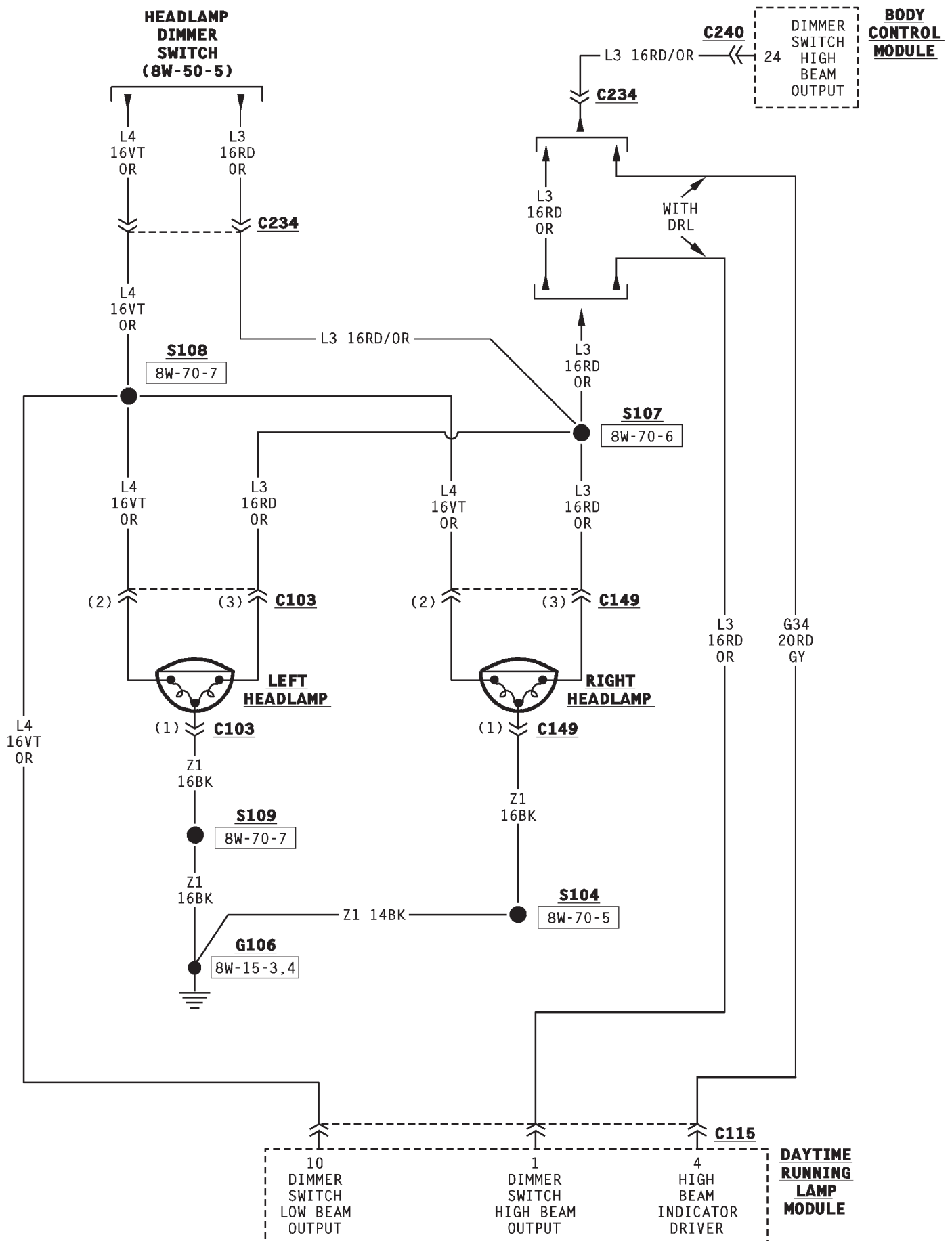
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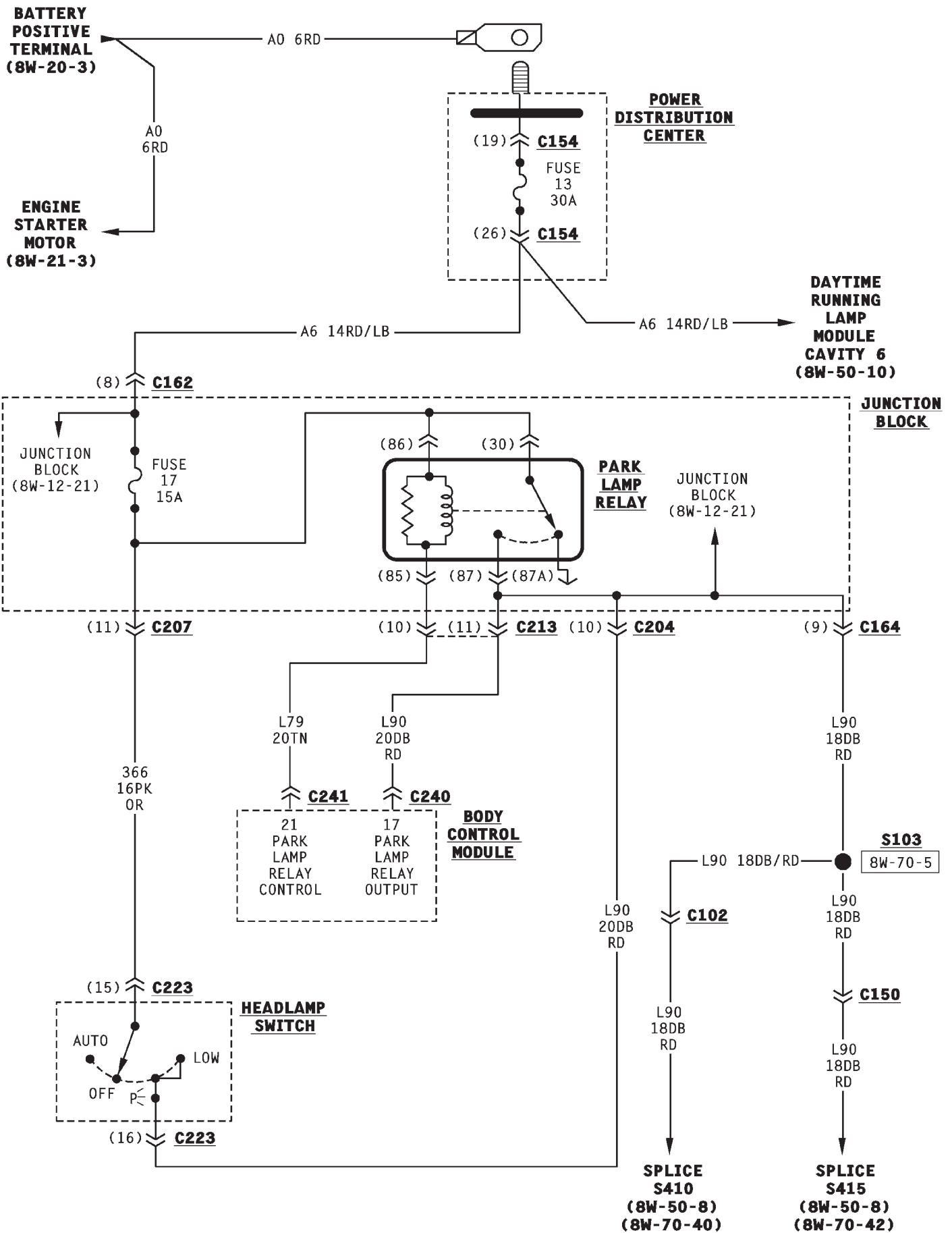
DIAGRAM INDEX

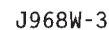
Component	Page	Component	Page
Auto Headlamp Light Sensor/VTSS LED	8W-50-4	Ignition Switch	8W-50-10
Auto Headlamp Relay	8W-50-5	Left Fog Lamp	8W-50-9
Body Control Module	8W-50-4, 5, 6, 7, 9, 10	Left Front Park Lamp	8W-50-8
Daytime Running Lamp Module	8W-50-6, 10	Left Front Side Marker Lamp	8W-50-8
Fog Lamp Relay	8W-50-9	Left Front Turn Signal Lamp	8W-50-8
Fuse 6	8W-50-10	Left Headlamp	8W-50-6
Fuse 8 (PDC)	8W-50-10	Park Brake Switch	8W-50-10
Fuse 13 (PDC)	8W-50-4, 5, 7, 10	Park Lamp Relay	8W-50-7
Fuse 15 (PDC)	8W-50-5	Right Fog Lamp	8W-50-9
Fuse 17	8W-50-7	Right Front Park Lamp	8W-50-8
Fuse 19	8W-50-5	Right Front Side Marker Lamp	8W-50-8
Fuse 19 (PDC)	8W-50-9	Right Front Turn Signal Lamp	8W-50-8
Headlamp Dimmer Switch	8W-50-5	Right Headlamp	8W-50-6
Headlamp Switch	8W-50-4, 7, 9		

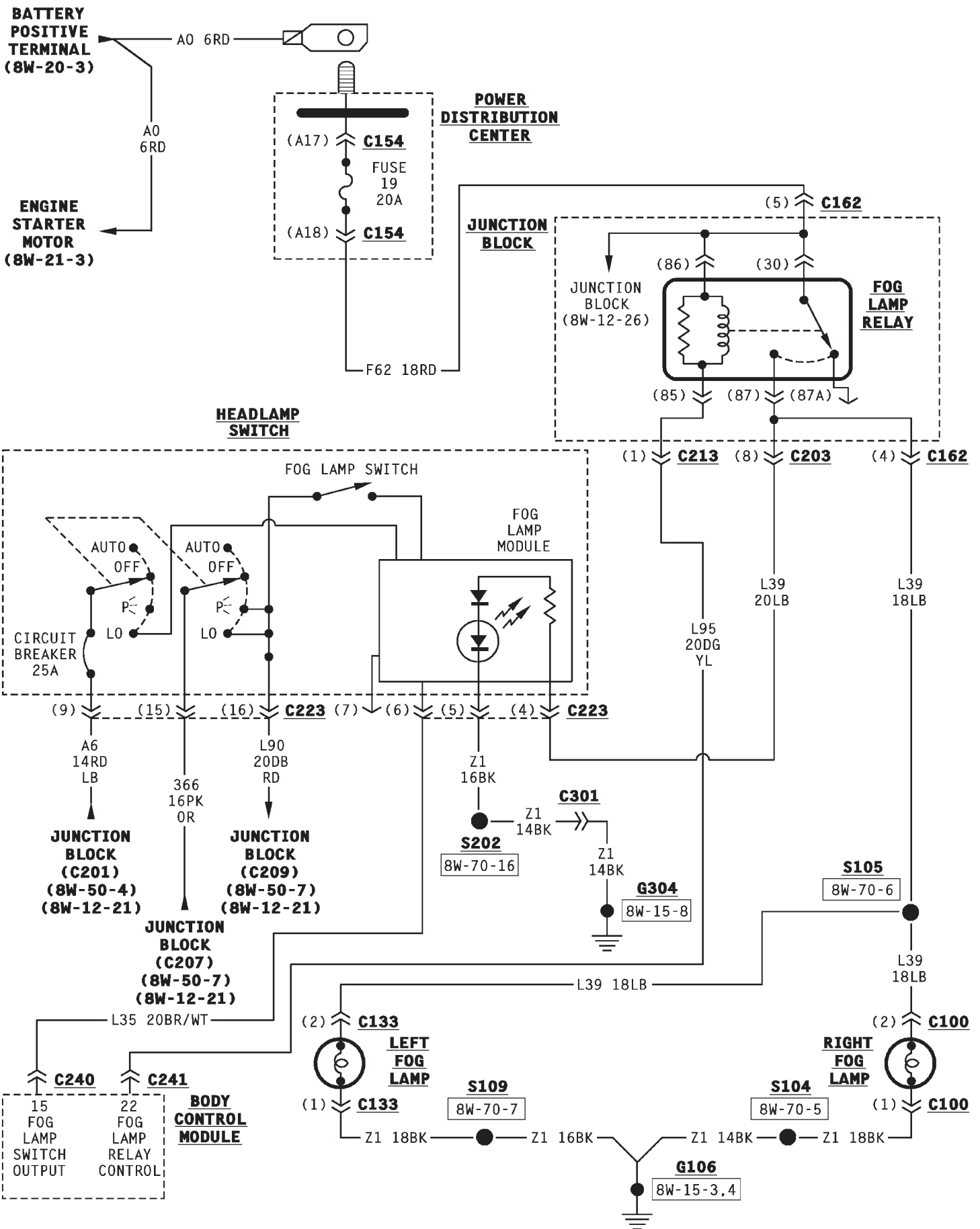


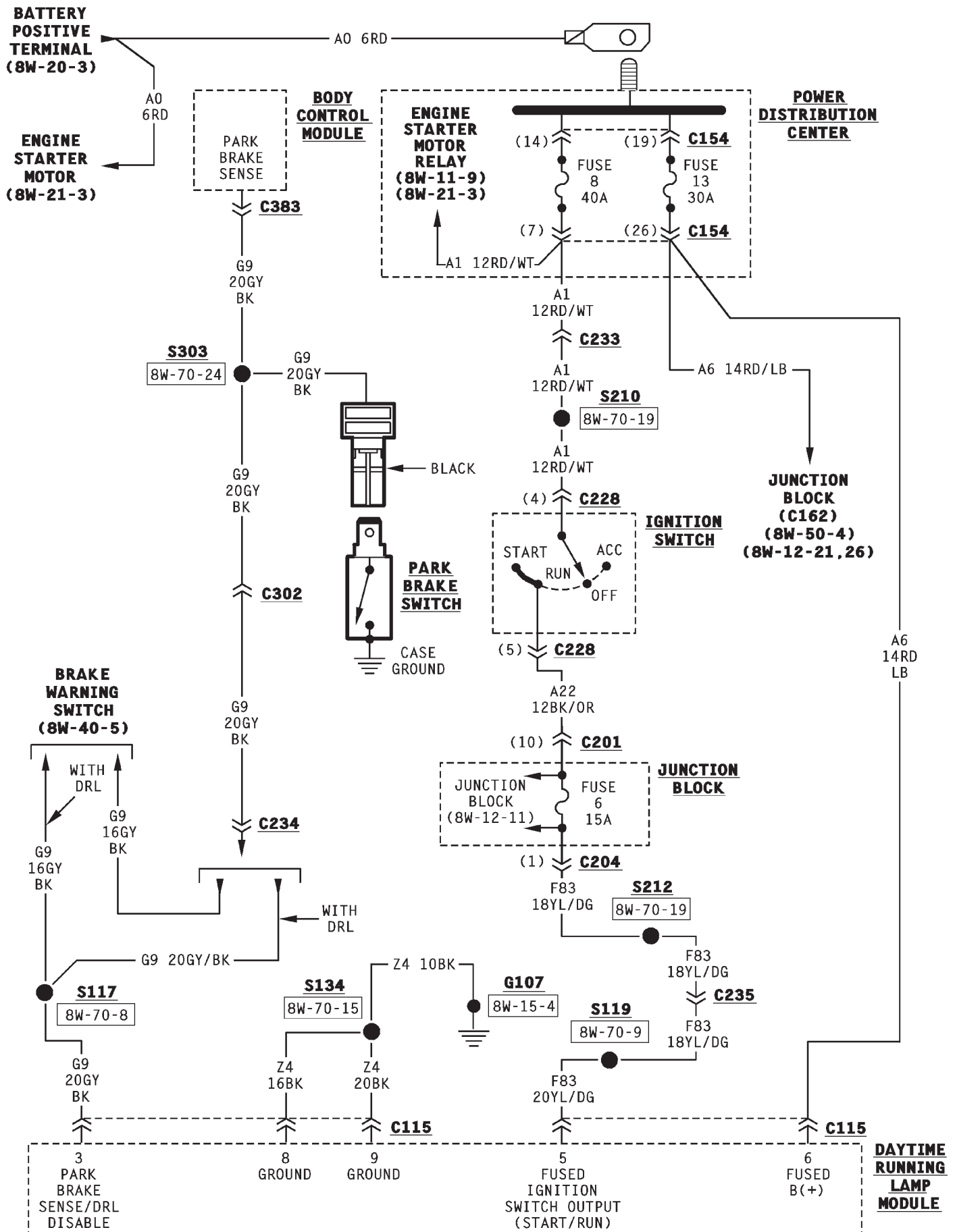












8W-51 REAR LIGHTING

DESCRIPTION AND OPERATION

TAIL LAMPS, REAR LICENSE PLATE LAMPS AND SIDE MARKER LAMPS

Circuit A6 from fuse 13 in the Power Distribution Center (PDC) feeds circuit 366 through fuse 17 in the junction block. Circuit 366 connects to the headlamp switch.

When the headlamp switch is in the PARK or LOW position, the switch connects circuit 366 to circuit L90. From the headlamp switch, circuit L90 branches to power the front parking lamps and rear license plate lamps. Circuit L90 connects to circuits L21 and L22. Circuits L21 and L22 feed the tail lamps and side marker lamps. If the vehicle is equipped with a lamp outage module, circuit L90 feeds the module and the module powers the rear tail, license plate and side marker lamps.

The Body Control Module (BCM) operates the park lamps when it senses unauthorized entry to the vehicle while the Vehicle Theft Security System is armed. When it sense unauthorized entry, the BCM energizes the park lamp relay by providing ground for the relay coil on circuit L79. Circuit 366 powers the relay coil and contacts. When the relay energizes, it connects circuit 366 to circuit L90.

Circuit Z1 provides a ground for the parking lamps, tail lamps, and rear license plate lamps.

HELPFUL INFORMATION

- If the vehicle is equipped with factory installed trailer tow, circuit L90 connects to the trailer tow harness.
- Check fuse 13 in PDC.
- Check fuse 17 in the junction block.

STOP LAMPS AND CHMSL LAMPS

Circuit A250 from fuse 11 in the Power Distribution Center (PDC) supplies voltage to circuit L16 through fuse 9 in the junction block. Circuit L16 connects to the stop lamp switch.

When the operator presses the brake pedal, the stop lamp switch closes and connects circuit L16 to circuit L50. Circuit L50 connects to circuits L73, L74 and L87. Circuit L73 and L74 feed the stop lamps. Circuit L87 powers the Center High Mounted Stop Lamps (CHMSL). Circuit Z1 provides a ground for the stop lamps and CHMSL lamps.

If the vehicle is equipped with a lamp outage module, circuit L50 connects to the module. The lamp outage module powers circuit L73, L74 and L87.

BACK-UP LAMPS

In the RUN position, the ignition switch connects circuit A1 from fuse 8 in the Power Distribution Center (PDC) to circuit A22. Circuit A22 powers circuit F83 through fuse 6 in the junction block.

Circuit F83 supplies power to the PARK/NEUTRAL position switch. When the operator puts the transmission in REVERSE, the switch connects circuit F83 to circuit L10. Circuit L10 feeds the back-up lamps. Circuit Z1 provides ground for the back-up lamps.

HELPFUL INFORMATION

- Check fuse 8 in the PDC and fuse 6 in the junction block.
- Check for continuity across the back-up lamp switch when it is closed.

LAMP OUTAGE MODULE (LOM)

The Lamp Outage Module (LOM) determines if a rear lighting lamp is not operating. When the ignition switch is in the START or RUN position, circuit A1 from fuse 8 in the Power Distribution Center (PDC) connects to circuit A21. Circuit A21 feeds circuit F87 through fuse 5 in the junction block. Circuit F87 feeds the LOM.

Circuit G46 from the LOM connects to the Vehicle Information Center (VIC). When the LOM senses an inoperative lamp, the VIC displays the data to the vehicle operator.

Circuit L90 which feeds the tail lamps and side marker lamps, connects to the LOM. From the LOM, circuit L90 continues to the license plate lamps. Circuits L21 and L22 from the LOM power the tail lamps and side marker lamps.

Circuit L50 from the stop lamp switch connects to the LOM. From the LOM, circuits L73 and L74 power the stop lamps and circuit L87 powers the Center High Mounted Stop Lamps (CHMSL).

Circuit Z1 grounds the LOM.

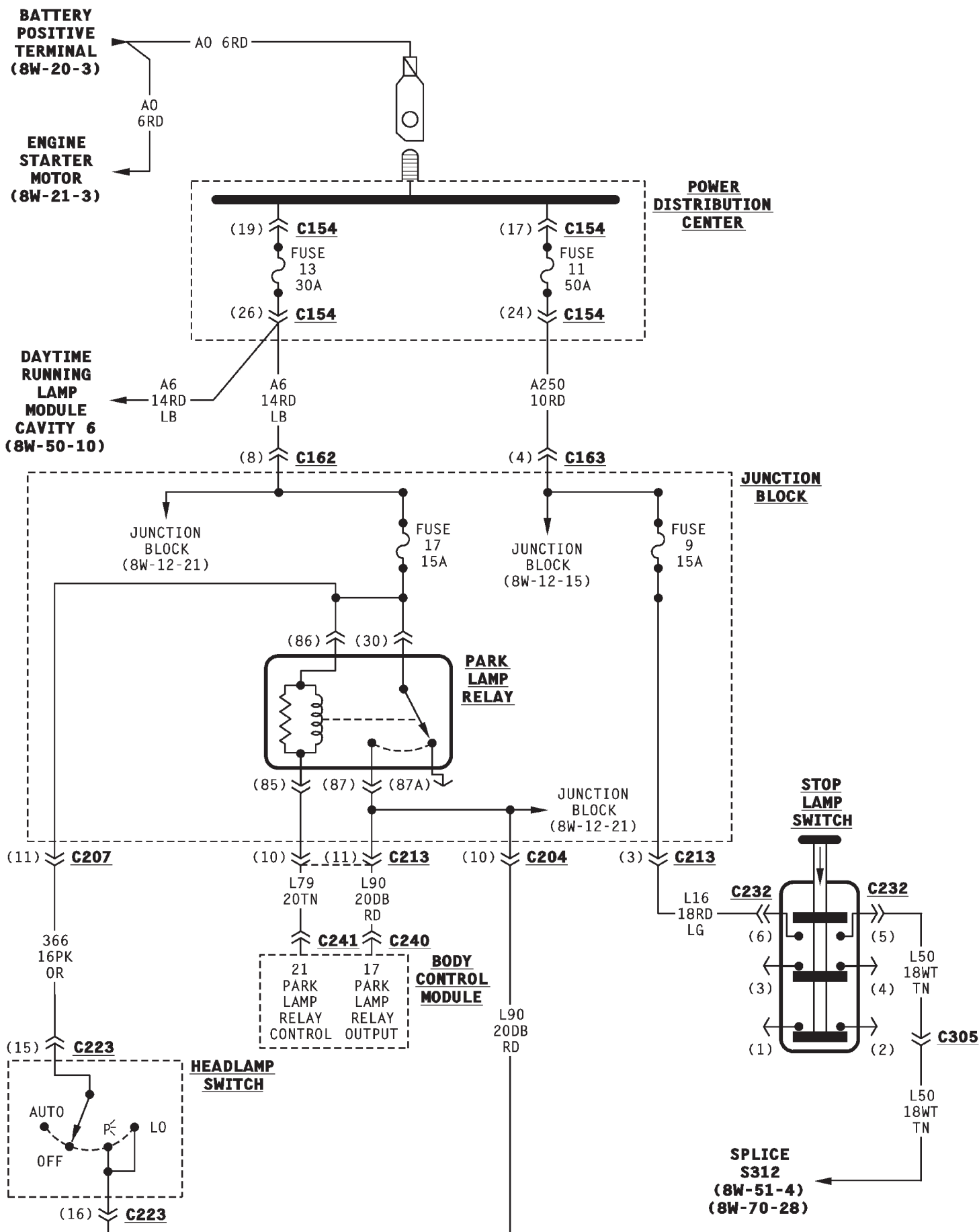
SCHEMATICS AND DIAGRAMS

WIRING DIAGRAM INDEX

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DIAGRAM INDEX

Component	Page	Component	Page
Body Control Module	8W-51-3	Left Back-Up Lamp	8W-51-5
Center High Mounted Stop Lamp	8W-51-4	Left License Lamp	8W-51-7
Fuse 5	8W-51-8	Left Rear Side Marker Lamp	8W-51-6
Fuse 6	8W-51-5	Left Tail/Stop Lamp	8W-51-4
Fuse 8 (PDC)	8W-51-5, 8	Park Lamp Relay	8W-51-3
Fuse 9	8W-51-3	Park/Neutral Position Switch	8W-51-5
Fuse 11 (PDC)	8W-51-3	Right Back-Up Lamp	8W-51-5
Fuse 13 (PDC)	8W-51-3	Right License Lamp	8W-51-7
Fuse 17	8W-51-3	Right Rear Side Marker Lamp	8W-51-6
Graphic Display Module	8W-51-8	Right Tail/Stop Lamp	8W-51-4
Headlamp Switch	8W-51-3	Stop Lamp Switch	8W-51-3
Ignition Switch	8W-51-5, 8	Vehicle Information Center	8W-51-8
Lamp Outage Module	8W-51-4, 6, 7, 8		



**STOP LAMP
SWITCH
(8W-51-3)**
**JUNCTION
BLOCK**
