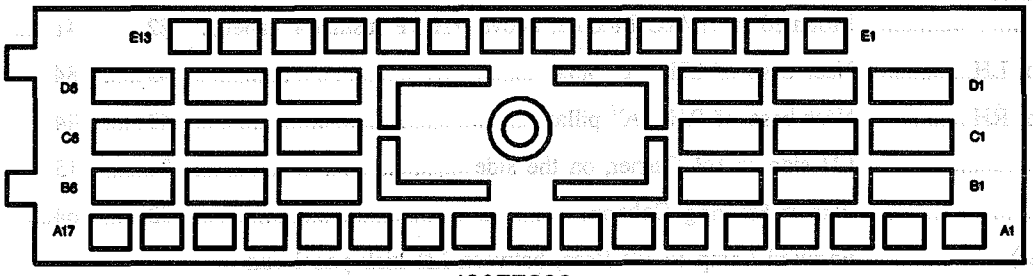
C200D

I/P HARNESS TO FORWARD LAMP/CROSS CAR HARNESS



12077822

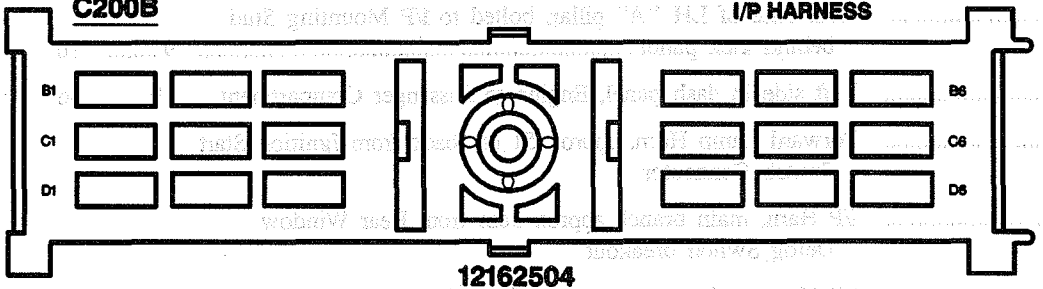
48 – WAY M METRI – PACK MIXED SERIES

BLK

M – CONNECTOR
F – TERMINAL

C200B

FORWARD LAMP HARNESS TO I/P HARNESS

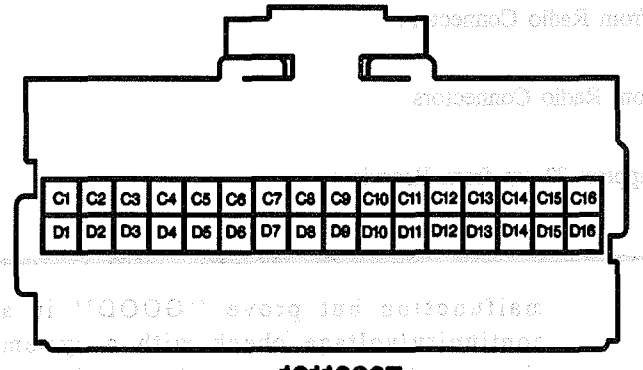


12162504

18 – WAY F METRI – PACK MIXED SERIES

BLK

05-08-95
FT0018A015

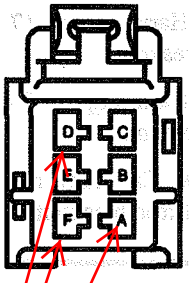


12110207

32 – WAY F MICRO – PACK 100 SERIES

BLU

BODY CONTROL MODULE (BCM) C3

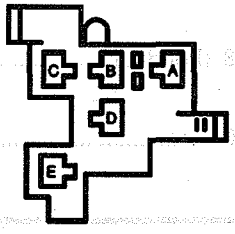


12064752

6 – WAY F METRI PACK 280 SERIES

BLK

BODY CONTROL MODULE (BCM) C2



12010966

5 – WAY F 56 SERIES

BLU

IGNITION SWITCH (C2)

05-08-95
FT0028A015

You should have 12 volts between both D or F and term A with ignition on, engine not running. Term A is the BCM ground and D and F are 12 volt power supplies.

FUSE BLOCK DETAILS

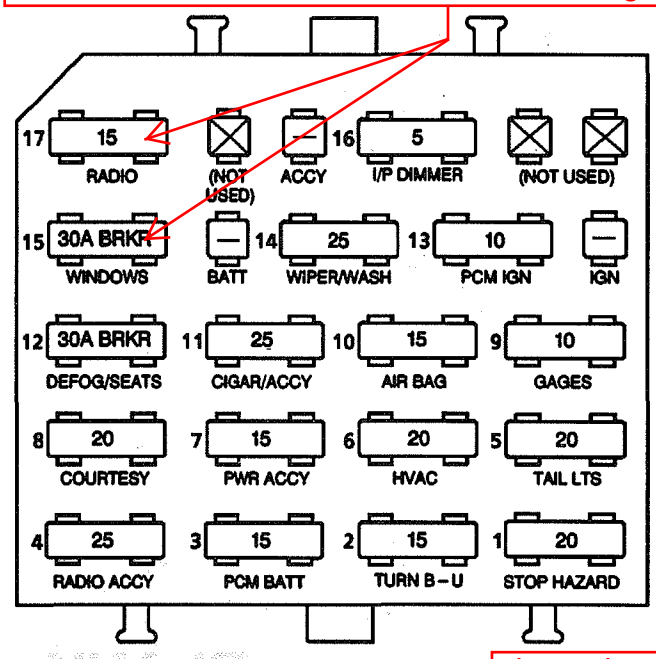
I/P FUSE BLOCK (CHEVROLET)

The right side of these fuse terminals should be hot with the ignition switch in the run or accessory position. If you don't have 12 volts here, start checking the wiring back towards the BCM in the clouded area of the next drawing.

12146075

BASE FUSE BLOCK PACK – CON III

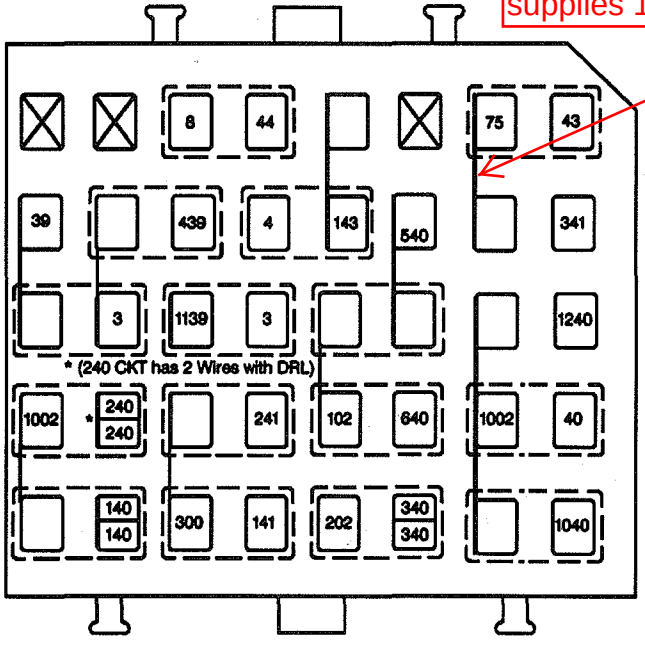
BLK



FRONT VIEW

FUSE COLOR/RATINGS	
COLOR	AMPS
PPL	3
BRN	5
RED	10
BLU	15
YEL	20
WHT	25

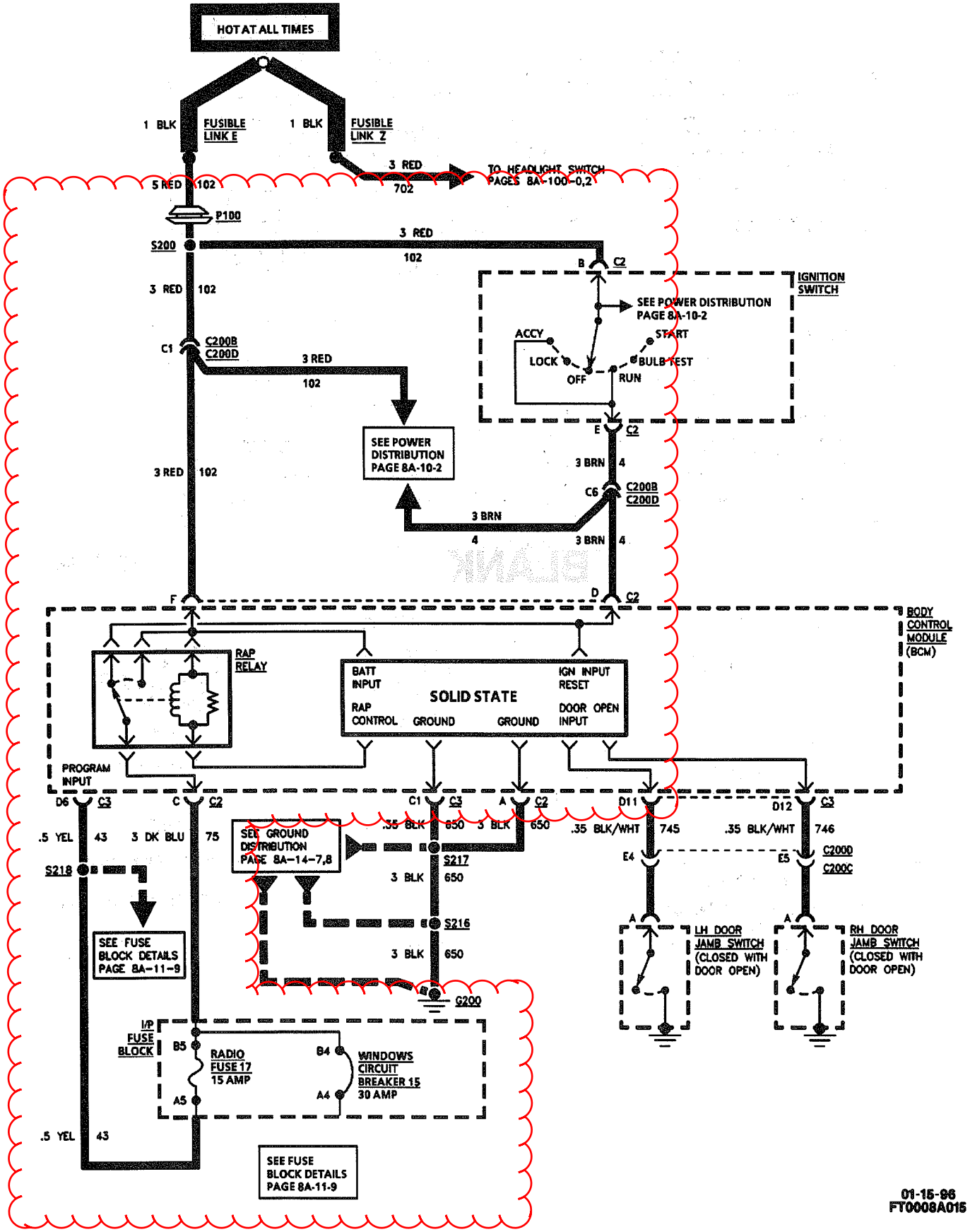
There should be a metal jumper between these two posts of the fuse block. A dark blue wire supplies 12 volts from the BCM



REAR VIEW

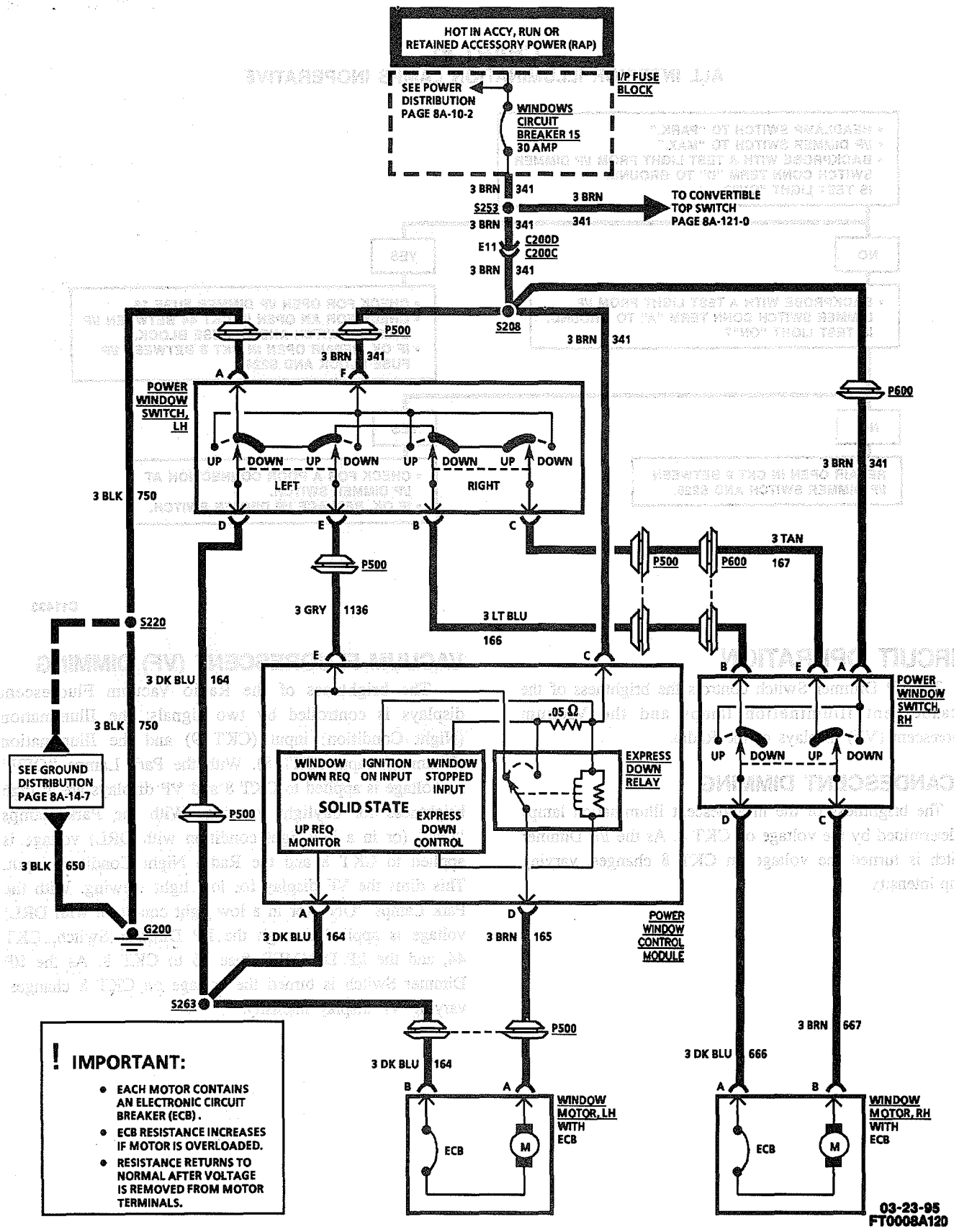
04-05-95
FT0008A011

RETAINED ACCESSORY POWER (RAP)



01-15-96
FT0008A015

POWER WINDOWS



COMPONENT	LOCATION	201-PG	FIG.	CONN
I/P Fuse Block	LH side of I/P Carrier, on the side	8	15	
Power Window Control Module	Mounted to center of dash mat, above floor tunnel	9	17	202-17
Power Window Switch, LH	Mounted in left door armrest	18	33, 34	202-17
Power Window Switch, RH	Mounted in right door armrest	18	33, 34	202-17
Window Motor, LH	Inside LH door	17	31	
Window Motor, RH	Inside RH door	17	31	
C200C (13 cavities)	Cross Car to I/P Harn, between LH kick panel and Steering Column	25	49	202-2
C200D (48 cavities)	Part of I/P Harn, between LH kick panel and Steering Column	25	49	202-2
G200	Near base of LH "A" pillar, bolted to I/P Mounting Stud behind kick panel	9	16	
P500	Cross Car, between LH door and "A" pillar	17	31	
P600	Cross Car, between RH door and "A" pillar	43	84	
S208	Cross Car Harn, main branch approx 5 cm from Power Window Control Module breakout			
S220	Cross Car Harn, main branch approx 22 cm from Rearview Mirror breakout			
S253 (Chevrolet Conv)	I/P Harn, main branch approx 7 cm from Instrument Cluster breakout			
S253 (Pontiac Conv)	I/P Harn, main branch approx 1 cm from Horn Relay breakout			
S263	Cross Car Harn, main branch approx 15 cm from Rearview Mirror breakout			

TROUBLESHOOTING HINTS

(Perform before beginning System Diagnosis)

1. If both windows are inoperative:
   - Check windows Circuit Breaker 15 for open. If open, check for short to ground through CKT 341.
   - Check for poor connection at C200 terminal "E11".
2. If windows move slowly, check that:
   - Windows free of mechanical binding and pivot joints and tracks are properly lubed.
   - Battery is fully charged.
   - Ground G200 is clean and tight.
3. If the Express Down Feature does not work, but window moves down with each switch depression, check for poor connection at Power Window Control Module terminal "A" or open in CKT 164 from Power Window Control Module to S263.
   - Check for a broken (or partially broken) wire inside of the insulation which could cause system malfunction but prove "GOOD" in a continuity/voltage check with a system disconnected. These circuits may be intermittent or resistive when loaded, and if possible, should be checked by monitoring for a voltage drop with the system operational (under load).
   - Check for proper installation of aftermarket electronic equipment which may affect the integrity of other systems (refer to "Troubleshooting Procedures," page 8A-4-0).
   - Refer to System Diagnosis.

SYSTEM DIAGNOSIS

- Perform the System Check and refer to the Symptom Table for the appropriate diagnostic procedure(s).

Important:

- Prior to performing System Diagnosis, check Body Control Module (BCM) for stored Diagnostic Trouble Codes (DTCs). Refer to Section 8D.

POWER WINDOWS

SYSTEM CHECK

ACTION	NORMAL RESULTS
[1] • Operate each window "UP" and "DOWN" from the Master Power Window Switch Assembly.	Each window operates quietly and smoothly, with no sticking. LH Front Window rolls down all the way without the switch being held (Express Down Feature).
[2] • Operate each window from its individual Window Switch.	Each window operates quietly and smoothly, with no sticking.

Important:

- For a better understanding of the Retained Accessory Power (RAP) operation, refer to "Circuit Operation" at the end of this section.

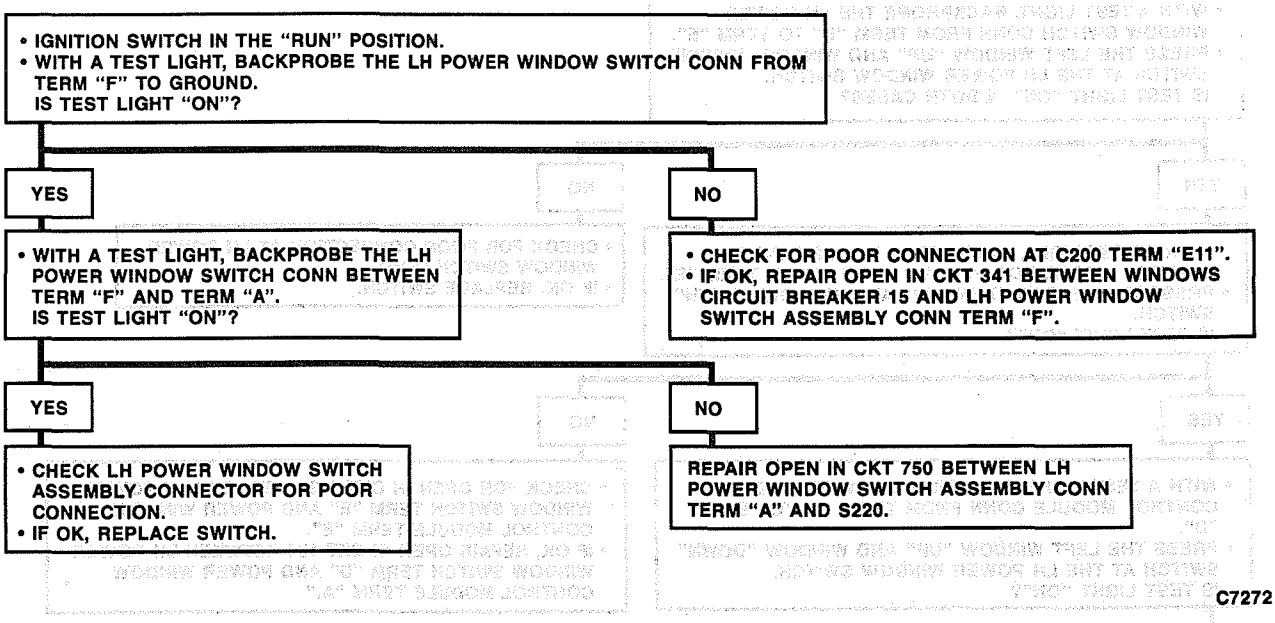
SYMPTOM TABLE

SYMPTOM	PROCEDURE	PAGE NUMBER
Both Power Windows inoperative from both switches.	Chart #1	8A-120-3
LH Power Window inoperative, RH Power Window operates normally.	Chart #2	8A-120-4
Both Power Windows inoperative from the LH Switch, RH Switch operates RH Window normally.	Check CKT 341 for an open between LH Power Window Switch and S208. Check CKT 341 for a poor connection at LH Power Window Switch. If OK, replace LH Power Window Switch.	
RH Power Window inoperative from both switches, LH Power Window operates normally.	Chart #3	8A-120-5
RH Power Window inoperative from LH Power Window Switch with normal operation from RH Power Window switch.	Check for poor connection at LH Power Window Switch. If OK, replace LH Power Window Switch.	
Express Down Feature inoperative. Window does operate up and down while switch is held in the desired position. Express Down Feature is for the LH Window only.	Check for poor connections at Power Window Control Module terminal "A" and terminal "C". Check for open in CKT 164 from S263 to terminal "A" of Power Window Control Module and in CKT 341 from S208 to terminal "C" of Power Window Control Module. If OK, replace Power Window Control Module.	
RH Power Window Switch inoperative, LH Power Window Switch operates normally.	Check for poor connection or open in CKT 341 from RH Power Window Switch terminal "A" to S208.	
Both Power Windows and Radio inoperative.	Check CKT 75 for an open or poor connection. If OK, service Body Control Module (BCM). Refer to Section 8D.	

CHART #1
BOTH POWER WINDOWS INOPERATIVE FROM BOTH SWITCHES

IMPORTANT:

- TO AVOID MISDIAGNOSIS, CHECK FOR DIAGNOSTIC TROUBLE CODES. SEE SECTION 8D.



POWER WINDOWS

CHART #2
LH POWER WINDOW INOPERATIVE, RH POWER WINDOW OPERATES NORMALLY

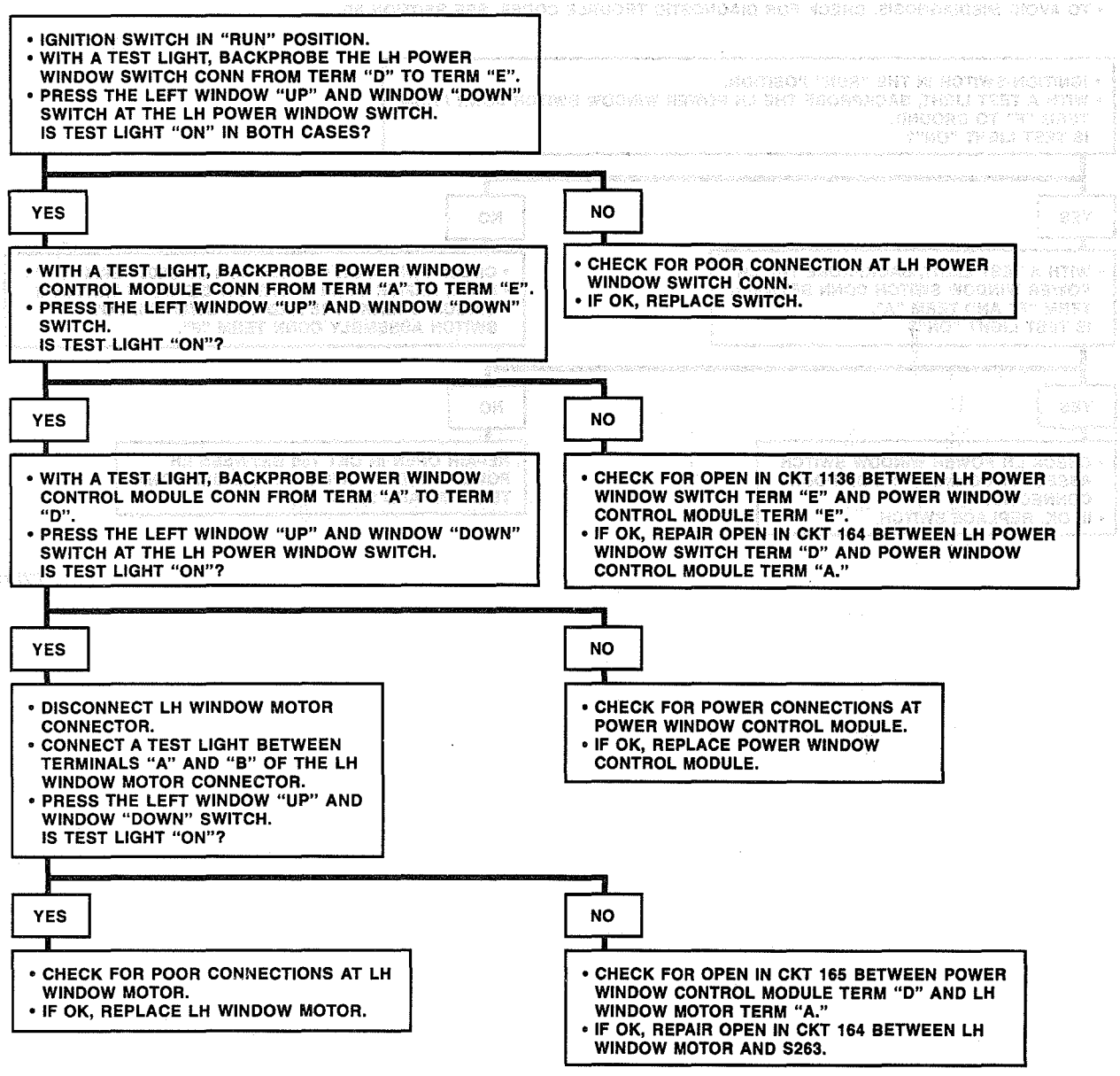


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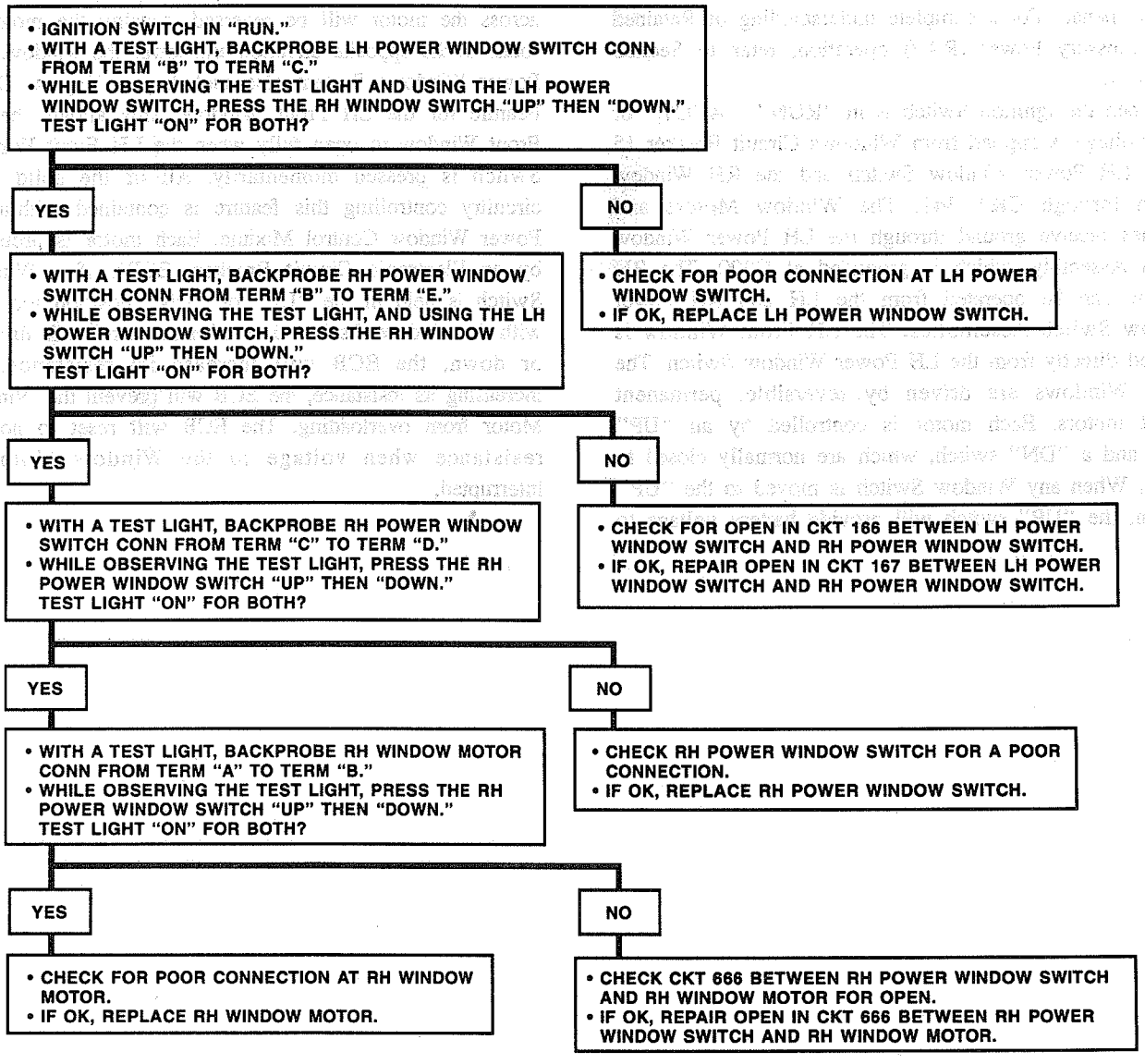
CHART #3
RH POWER WINDOW INOPERATIVE FROM BOTH SWITCHES, LH POWER WINDOW OPERATES NORMALLY



C11268

POWER WINDOWS

CIRCUIT OPERATION

Important:

- The Power Windows System has voltage applied from the Windows Circuit Breaker 15 which is controlled by the Retained Accessory Power (RAP) Module. Voltage is applied to the PWR ACCY Fuse for up to 10 minutes after Ignition is turned off or until a door is opened. For a complete understanding of Retained Accessory Power (RAP) operation, refer to Section 8A-15.

When the Ignition Switch is in "RUN," "ACCY," or RAP, voltage is applied from Windows Circuit Breaker 15 to the LH Power Window Switch and the RH Window Switch through CKT 341. The Window Motors and Switches receive ground through the LH Power Window Switch Assembly, which is grounded at G200. The RH Window can be operated from the LH and RH Power Window Switch Assemblies. The LH Front Window is operated directly from the LH Power Window Switch. The Power Windows are driven by reversible, permanent magnet motors. Each motor is controlled by an "UP" switch and a "DN" switch, which are normally closed to ground. When any Window Switch is moved to the "UP" position, the "UP" switch will provide battery voltage to the Window Motor through the DK BLU wire. The Window Motor will receive ground through the BRN wire, the "DN" switch, and the LH Power Window Switch Assembly and drive the window up. When the switch is released, the switch contacts return to the normal grounded position. To lower the window, the "DN" switch will connect the BRN wire to battery voltage. Ground will be provided to the DK BLU wire through the "UP" switch and the LH Power Window Switch Assembly. The polarity across the motor will be reversed, causing the motor to rotate in the opposite direction and lower the window. The Power Windows System also includes an Express Down Feature for the LH Front Window. This allows the LH Front Window to open fully when the LH Front Window Switch is pressed momentarily. All of the solid state circuitry controlling this feature is contained within the Power Window Control Module. Each motor is protected by an Electronic Circuit Breaker (ECB). If a Window Switch is held in the "UP" or "DN" position too long with the window obstructed, or after the window is fully up or down, the ECB will increase its resistance. By increasing its resistance, the ECB will prevent the Window Motor from overloading. The ECB will reset to normal resistance when voltage to the Window Motor is interrupted.