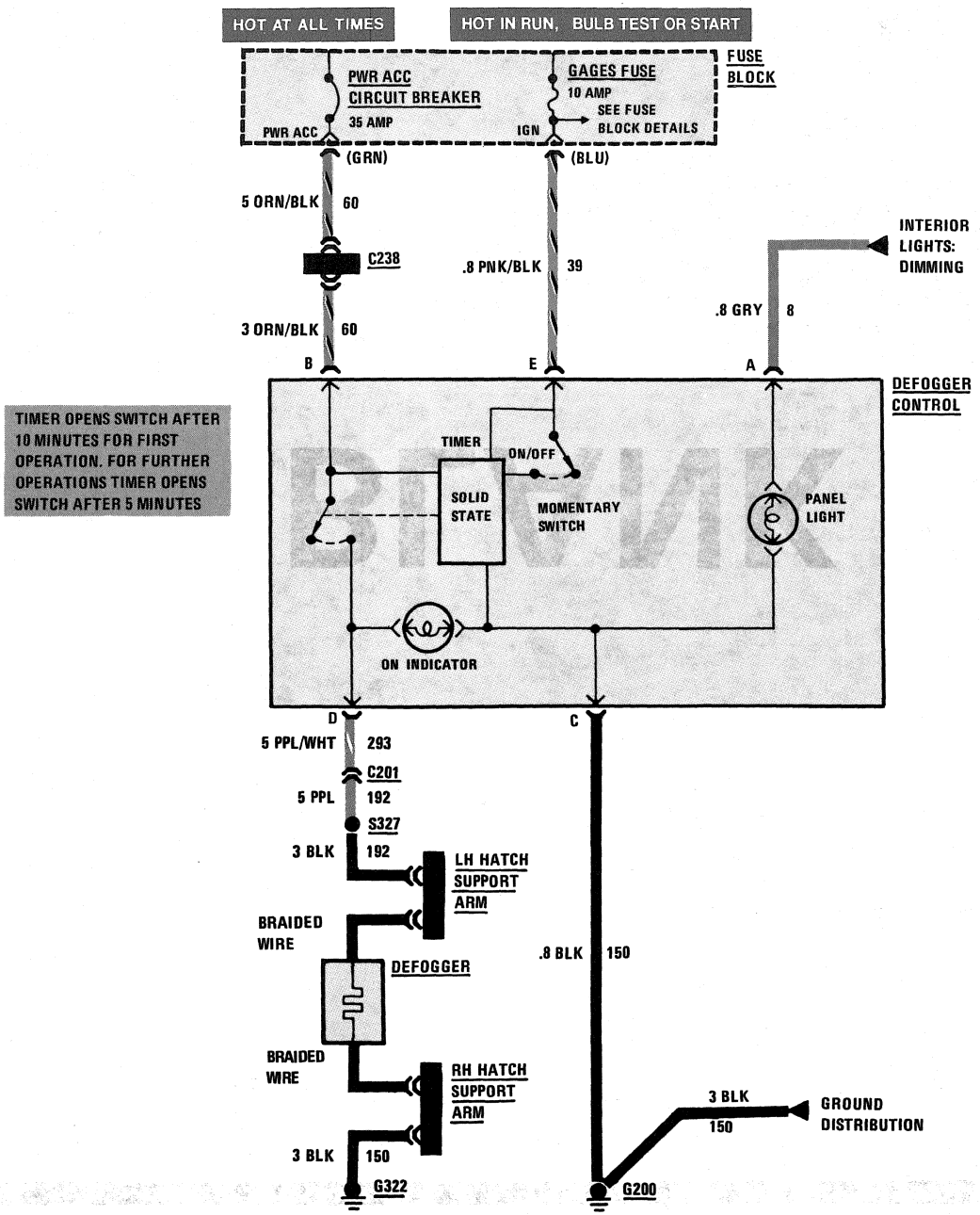
HOT AT ALL TIMES
HOT IN RUN, BULB TEST OR START
PWR ACC CIRCUIT BREAKER
35 AMP
PWR ACC
IGN
GAGES FUSE
10 AMP
SEE FUSE BLOCK DETAILS
FUSE BLOCK
(GRN)
(BLU)
5 ORN/BLK 60
C238
3 ORN/BLK 60
.8 PNK/BLK 39
INTERIOR LIGHTS: DIMMING
.8 GRY 8
B
E
A
DEFOGGER CONTROL
TIMER OPENS SWITCH AFTER 10 MINUTES FOR FIRST OPERATION. FOR FURTHER OPERATIONS TIMER OPENS SWITCH AFTER 5 MINUTES
TIMER
ON/OFF
SOLID STATE
MOMENTARY SWITCH
PANEL LIGHT
ON INDICATOR
D
C
5 PPL/WHT 293
C201
5 PPL 192
S327
3 BLK 192
LH HATCH SUPPORT ARM
BRAIDED WIRE
DEFOGGER
.8 BLK 150
BRAIDED WIRE
RH HATCH SUPPORT ARM
3 BLK 150
G322
3 BLK 150
GROUND DISTRIBUTION
G200

TROUBLESHOOTING HINTS

- **Try the following checks before doing the System Check.**

1. Check GAGES Fuse by observing the BRAKE Warning Indicator, with Ignition Switch in RUN, and the Park Brake applied.
2. Check PWR ACC Circuit Breaker by operating Power Seats (if equipped).
3. Check that the connections at both LH and RH Hatch Support Arms and grounds of G322 and G200 are clean and tight.
4. If one or more of the grid lines do not heat, refer to Body Service Manual (Section 10) for repair procedures.
5. If the symptom involves only the time interval that the Defogger operates, replace Defogger Control.

- **Go to System Check for a guide to normal operation.**
- **Go to System Diagnosis for diagnostic tests.**

SYSTEM CHECK

- **Use the System Check Table as a guide to normal operation. Refer to the diagnosis given if other results occur. (Table must be used in the order shown.)**
- **Tests follow in System Diagnosis.**

COMPONENT LOCATION

		Page-Figure
Fuse Block	Behind LH side of I/P	201-11-A
C201 (1 cavity)	LH shroud, near upper access hole	201- 9-B
C238 (12 cavities)	LH shroud, ahead of center access hole	201-12-A
G200	Behind I/P, on LH side of steering column bracket	201-11-C
G322	On body, near RH hatch support arm	
S327	Defogger harness, behind LH side of rear seat	201-14-D

SYSTEM CHECK TABLE

ACTION	NORMAL RESULT	FOR DIAGNOSIS
1. Turn the Ignition Switch to RUN and depress Rear Defogger Switch	The Switch button returns to the rest position and the ON Indicator, in the center of the Defogger Control, lights.	Do Test A: Defogger Control Input Voltage Test.
	Defogger grid warms to remove fog from the rear window.	Do Test B: Defogger Test.
	ON Indicator and Defogger turn off after approximately 10 minutes.	Replace Defogger Control.
2. Depress Rear Defogger Switch again	ON Indicator and Defogger turn on. After approximately 5 minutes, they turn off again.	Replace Defogger Control.
3. Depress Rear Defogger Switch and immediately press switch again	ON Indicator and Defogger turn on, and then turn off.	Do Test A: Defogger Control Input Voltage Test.
4. Put Light Switch in HEAD or PARK	Instrument Panel Light is on.	Do Test C: Defogger Control Panel Light Test.

- **If all the results are normal, the system is OK.**

SYSTEM DIAGNOSIS

- **Do the tests below when directed by the System Check.**

(Continued on next page)

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A: DEFOGGER CONTROL INPUT VOLTAGE TEST (TABLE 1)

Measure: VOLTAGE
At: DEFOGGER CONTROL CONNECTOR (Disconnected)
Condition:
- **Ignition Switch: RUN**

Measure Between	Correct Voltage	For Diagnosis
E (PNK/BLK) & Ground	Battery	See 1
E (PNK/BLK) & C (BLK)	Battery	See 2
B (ORN/BLK) & Ground	Battery	See 3

- If all voltages are correct, go to Table 2.

1. Check PNK/BLK (39) wire for an open. If wire is OK, check GAGES Fuse.
2. Check the BLK (150) wire for an open. Check that connections at ground G200 are clean and tight (see schematic).
3. Check ORN/BLK (60) wire for an open. If wire is OK, check PWR ACC Circuit Breaker.

A: DEFOGGER CONTROL INPUT VOLTAGE TEST (TABLE 2)

Measure: VOLTAGE
At: DEFOGGER CONTROL CONNECTOR (Connected)
Conditions:
- **Ignition Switch: RUN**
- **Defogger Switch: ON**

(Continued in next column)

(Continued from previous column)

Measure Between	Correct Voltage	For Diagnosis
D (PPL/WHT) & Ground	Battery	See 1

- If voltage is correct, check that the connections at LH and RH Hatch Support Arms and ground G322 are clean and tight (see schematic). Check BLK (150) wire for an open.

1. Replace Defogger Control.

B: DEFOGGER TEST

With the Ignition Switch in RUN and the Defogger Switch pressed ON, connect one lead of a test lamp to ground. From inside the car, lightly touch the other lead to each grid line, and slowly move it along the length of the grid. The brilliance of the test lamp bulb should increase as the test lamp is moved from left (passenger's side) to right (driver's side).

- If test lamp does not light along any one of the grid lines, check PPL/WHT (293) wire to Defogger Control for an open. If OK, do Test A.
- If test lamp bulb shows full brilliance at both ends of the grid, check BLK (150) wire for an open to ground (see schematic).
- If test lamp suddenly lights as it is moved along the grid, a break in the continuity of the grid line exists. Refer to the GM Body Service Manual for grid line repair procedures.

C: DEFOGGER CONTROL PANEL LIGHT TEST

Measure: VOLTAGE
At: DEFOGGER CONTROL CONNECTOR (Disconnected)
Conditions:
- **Ignition Switch: RUN**
- **Headlight Switch: PARK**

Measure Between	Correct Voltage	For Diagnosis
A (GRY) & Ground	Battery	See 1
A (GRY) & C (BLK)	Battery	See 2

- If all voltages are correct, repair/replace Panel Light in Defogger Control.

1. Check GRY (8) wire for an open (see schematic). If the wire is OK, check the INST Fuse.
2. Check BLK (150) wire for an open. If wire is OK, check that ground G200 is clean and tight (see schematic).

CIRCUIT OPERATION

The Defogger operates when voltage is applied to the rear window grid wires. The grid wires, which are baked into the inside surface during the glass formation process, become warm to remove excess fog from the glass.

With the Ignition Switch in RUN, voltage is applied to the Defogger Control. When the Defogger Control Switch is moved to the ON position, voltage is then applied to the Defogger Timer-Relay. The contact closes, which provides voltage to the ON Indicator and Defogger. The rear window will become warm to remove fog from the surface of the window.

The contact in the Defogger Control will stay closed until the Defogger Control Switch is turned off, or the timer cycle is completed.

The first time the Defogger Control Switch is pushed in, the Timer-Relay will allow the Defogger to operate 10 minutes. Each time after when the Defogger Control Switch is pushed in, the Timer-Relay will allow the Defogger to operate for a maximum of 5 minutes. The Timer-Relay will reset to 10 minutes when the Ignition Switch is turned OFF and then back to the RUN position, or when the Defogger Control is turned off manually.