

Lighting Systems Components (cont'd)

Name	Location	Locator View	Connector End View
Hazard Lamp Flasher	Left of the steering column, mounted to the IP carrier	Data Link Communications Component Views in Data Link Communications	—
Headlamp (Pontiac)	On the front of the vehicle	—	—
Headlamp Dimmer Switch	Part of the steering column, activated by the multi-function lever	Lighting Systems Component Views	—
Headlamp Door Motor	On the front of the vehicle, near each headlamp door	—	—
Headlamp, High Beam (Chevrolet)	On the front of the vehicle	—	—
Headlamp Leveling Jumper Resistor	In the IP harness, approximately 12 cm (4 in) from G202 breakout, in inflatable restraint sensing and diagnostic module (SDM) breakout	—	—
Headlamp Leveling Switch (Export)	On the left side of the upper console	Power Roof Systems Component Views in Roof	—
Headlamp, Low beam (Chevrolet)	On the front of the vehicle	—	—
Headlamp Opening Door Actuator Control Module	On the front right side of the engine compartment, beside the underhood electrical center 2	—	Lighting Systems Connector End Views
Headlamp Opening Door Module	On the front right side of the engine compartment, beside the underhood electrical center 2	—	—
Headlamp Switch	On the left side of the IP	Lighting Systems Component Views	Lighting Systems Connector End Views
HVAC Control	In the center of the IP, above the radio	HVAC Component Views in HVAC with AC Manual	—
Inflatable Restraint Steering Wheel Module Coil	On the top of the steering column	SIR Component Views in Supplemental Inflatable Restraints	—
Inside Rearview Mirror	Mounted to the inside center of the windshield	—	—
Instrument Cluster	On the left side of the IP	Instrument Cluster Component Views in Instrument Panel, Guages, and Console	Instrument Cluster Connector End Views in Instrument Panel, Guages, and Console
IP Compartment Lamp	Inside the top center of the IP compartment	Instrument Cluster Component Views in Instrument Panel, Guages, and Console	—
IP Dimmer Switch	Left of the steering wheel, part of the headlamp switch	Instrument Cluster Component Views in Instrument Panel, Guages, and Console	Lighting Systems Connector End Views
IP Fuse Block	On the left end of the IP carrier	Instrument Cluster Component Views in Instrument Panel, Guages, and Console	—
LH Headlamp Leveling Actuator	Forward lamp harness to the left headlamp leveling motor harness	—	—
License Lamp	In the center of the rear fascia, above the license plate	Lighting Systems Component Views	—
Park Brake Switch	Below the center console, at the base of the park brake lever	Hydraulic Brakes Component Views in Hydraulic Brakes	—

Europe

With the headlamp switch in the HEAD position voltage is applied to the fog lamp relay circuit 10. When the foglamp switch is turned on a ground is inputted to the BCM through circuit 187. When the BCM receives this ground from circuit 187, it then sends an output ground signal to the fog lamp relay through circuit 1977. At this point the relay in the fog lamp relay is energized closing the internal switch. Voltage is supplied through circuit 9, the fog lamp relay and then circuit 122 to both fog lamps. The fog lamps turn on when a ground voltage is applied through circuit 122 and ground is provided through circuit 1250.

Headlight Doors Circuit Description

When the headlamp switch is turned to the HEAD position, battery voltage is applied to the headlamp opening door actuator control module through circuit 10. The LH head lamp door opens when battery voltage is applied to the LH headlamp opening door assembly through circuit 576 and ground is applied to circuit 577. The RH headlamp door opens when battery voltage is applied to the RH headlamp opening door assembly through circuit 578 and ground is applied to circuit 579. When the headlamp switch is moved to the OFF position battery voltage is no longer applied to the headlamp opening door actuator module through circuit 10. The LH headlamp door closes when battery voltage is applied to the LH headlamp opening door assembly through circuit 577 and ground is applied to circuit 576. The RH headlamp door closes when battery voltage is applied to the RH headlamp opening door assembly through circuit 579 and ground is applied to circuit 578. Battery voltage is constantly applied to the headlamp opening door actuator control module from the LH HDLP DOOR MiniFuse® (circuit 840) and from the RH HDLP DOOR, MiniFuse (circuit 740). The headlamp opening door actuator control module is grounded by circuit 150 to G106.

Headlight Leveling Circuit Description

Voltage is supplied to the headlamp leveling switch with the headlamp switch in the HEAD position. Circuit 150/250 provides ground under the same conditions.

The headlamp leveling switch provides 4 headlamp leveling positions. When a position is selected a different resistance value is provided to the headlamp leveling actuators. The actuators have a motor logic internally driving a motor to move the headlamps based on the resistance it receives. Ground is provided through circuit 150 (LH) and 250 (RH) to the actuators. Power is also supplied to the actuators through circuit 10 when the headlamp switch is in the HEAD position.

The driver controls both headlamp beams with the headlamp leveling actuators which are mounted under the headlamp assembly. This feature is especially useful when the vehicle carries load changes drastically because the use of a switch helps maintain a focused and level headlamp beam.

Exterior Lights Circuit Description

Daytime Running Lamps

The Daytime Running Lamps (DRL) module is designed to automatically operate the exterior lights, depending on the outside light conditions. The DRL control module operates in 2 modes:

- The day mode allows the two front turn signal lamps to be on and non-flashing.
- The night mode allows the following components to be on:
 - Low beam headlamps
 - Front side marker
 - Park/turn lamps
 - Tail lamps

The DRL module operates in the night mode when the DRL ambient light sensor senses darkness. When this happens, the night mode contacts close and voltage is applied to the headlamps and other exterior lights through the same circuit path as when the headlamp switch is in the HEAD position.

The DRL module turns off the headlamps when the engine stalls with the DRL in the night mode. The side marker, park/turn and tail lamps are on while the engine is being cranked. The headlamp switch operates as usual.

Daytime Running Lamps (DRL) Ambient Light Sensor Input

The DRL ambient light sensor is a light sensitive variable resistor. The DRL ambient light sensor decreases in resistance as outside light intensity increases. The DRL module measures the voltage drop across the DRL ambient light sensor. The DRL module then determines whether the day mode or the night mode should be in operation.

Park Brake Input

The DRL module will not operate any headlamps or exterior lamps if the park brake is applied before the ignition switch is turned to RUN. This allows the operator to start the vehicle and keep the headlamps off as long as the park brake is applied. The DRL module will activate the headlamps when the park brake is released with the ignition switch in RUN.

The park brake input feature will only function when the park brake is applied before the ignition switch is turned to RUN. The headlamps will not turn off if the park brake is applied after the ignition switch is turned to RUN.

Front Park/Turn and Front Side Marker

Whenever the park lamps are on, voltage is applied from the TAIL LPS fuse through the headlamp switch through circuit 9 to both the front side marker lamps and the front park/turn lamps.

Headlight Doors Schematics (Pontiac Cell 104)

