Exterior Lighting - Overview

Overview

Headlamps

The Halogen headlamp system is a quad-beam pattern system that consists of replaceable low beam and high beam halogen bulbs.

The LED headlamp system consists of a non-replaceable LED in each headlamp assembly and a non-replaceable electronic shutter to change the beam pattern.

For halogen headlamps, when the LH steering column multifunction switch is pulled briefly, the halogen headlamp high beam bulbs briefly illuminate for the flash-to-pass function. If the LH steering column multifunction switch is pushed into the high beam position and the healamp low beams are on, the halogen headlamp high beam bulbs illuminate until the LH steering column multifunction switch is returned to the center position.

For LED headlamps, when the LH steering column multifunction switch is pulled briefly, the headlamp electronic shutters open for approximately 1 second for the flash-to-pass function. If the LH steering column multifunction switch is pushed into the high beam position and the healamp low beams are on, the headlamp electronic shutters open until the LH steering column multifunction switch is returned to the center position.

DRL

For vehicles equipped with halogen headlamps, the DRL system illuminates low beam bulbs at a reduced intensity in the headlamp assemblies.

For vehicles equipped with LED headlamps, the DRL system illuminates the LED DRL/front parking lamps at full intensity in the headlamp assemblies.

Autolamps

The autolamp system provides light sensitive automatic on/off control of the exterior lamps. When the ambient lighting is low enough and the headlamp switch is in the AUTOLAMPS position, the exterior parking and low beam lamps illuminate. The autolamp system keeps the exterior lamps on for a preselected period of time after the ignition is turned OFF (20 seconds is the factory default setting). The preselected time is adjustable from 0 up to approximately 2 minutes by using the IPC message center controls.

Stoplamps

The stoplamp switch is located on the brake pedal assembly. The rear lamps and high mounted stoplamp are illuminated when the brake pedal is applied.

Turn Signal and Hazard Lamps

The LH steering column multifunction switch has 2 detents for the left turn position and 2 detents for the right turn position. When placed in the first detent and released, the corresponding turn signals flash 3 times and turn off. When the LH steering column multifunction switch is moved to the second detent, the turn signal

flashes until the steering wheel is turned in the opposite direction and the clockspring mechanically returns the LH steering column multifunction switch to the neutral position and cancels the turn signal.

When the hazard function is active, all the turn lamps flash on and off.

The timed on/off cycle for turn lamps is approximately 70 times per minute.

If a front or rear turn signal lamp is inoperative, the IPC turn lamp indicator fast flashes at approximately 150 times per minute to indicate a bulb outage to the driver (the exterior turn lamps will still flash at approximately 70 times per minute).

The timed on/off cycle for the hazard lamps is approximately 70 times per minute, regardless of bulb outage.

Turn lamps are located in the headlamp assemblies, rear lamp assemblies and the exterior mirrors.

Parking, Rear and License Plate Lamps

For vehicles equipped with halogen headlamps, the front parking bulb is in the headlamp assembly.

For vehicles equipped with LED headlamps, the LED DRL/front parking lamps in the headlamp assembly are used as parking lamps and illuminated at a reduced intensity when the parking lamps or headlamps are activated.

Parking lamps are located in the headlamp assemblies, rear lamp assemblies and also include the LH and RH license plate lamps.

Side marker lamps are located in the front wheel moulding and the rear lamp assemblies. The side marker lamps operate with the parking lamps.

Fog Lamps

The front fog lamps can be turned on when the ignition is in ON, by placing the headlamp switch in any position except OFF and pressing the front fog lamp switch.

Reversing Lamps

When the transmission is placed in REVERSE, the LH and RH reversing lamps are illuminated.

Trailer Lamps - Vehicles Not Equipped with a TRM

The BJB LH and RH trailer tow stop/turn relays supply voltage to the trailer tow stop/turn lamps when the vehicle stop or turn lamps are commanded on.

The BJB trailer tow park lamp relay supplies voltage to the trailer tow parking lamps when the vehicle parking are commanded on.

The BJB trailer tow reversing lamps relay supplies voltage to the trailer tow reversing lamps when the vehicle reversing are commanded on.

Trailer Lamps - Vehicles Equipped with a TRM

The TRM supplies voltage to the trailer tow stop/turn lamps when the vehicle stop or turn lamps are commanded on.

The BJB trailer tow park lamp relay supplies voltage to the trailer tow parking lamps when the vehicle parking are commanded on.

The BJB trailer tow reversing lamps relay supplies voltage to the trailer tow reversing lamps when the vehicle reversing are commanded on.

The TRM provides voltage to the trailer tow connector for trailer battery charging when all the following are true:

- the TRM detects that a trailer is connected
- the ignition is on and engine is running
- a brake pedal application has been detected in the present ignition cycle
- the BCM load shed strategy is not active (a message will be displayed in the instrument cluster, such as "Low Battery Features Temporarily Turned Off" or "Turn Power Off To Save Battery", to indicate that BCM load shed strategy is active)

The TRM directly (no relay) supplies fuse protected voltage for trailer battery charging.