

Exterior Lighting - Overview

Overview

Headlamps

The halogen headlamp system consists of 2 replaceable low/high beam bulbs in each headlamp assembly. The side marker lamp is integrated into the headlamp assembly and is an individually replaceable bulb. The front turn/parking lamp is integrated into the headlamp assembly and is an individually replaceable bulb.

The LED headlamp system consists of non-replaceable low and high beam Light Emitting Diodes (LEDs) in each headlamp assembly. The front turn lamp and LED DRL/front parking lamps are non-replaceable Light Emitting Diodes (LEDs) mounted in the headlamp assembly.

When the LH steering column multifunction switch is pulled briefly, the high beam Light Emitting Diodes (LEDs) briefly illuminate for the flash-to-pass function. If the LH steering column multifunction switch is pushed into the high beam position, the high beam Light Emitting Diodes (LEDs) illuminate until the LH steering column multifunction switch is returned to the center position.

DRL

For halogen headlamps, the DRL system illuminates the low beam bulb filaments at a reduced intensity.

For LED headlamps, the DRL system illuminates the LED DRL/front parking lamps at full intensity in the headlamp assembly when the ignition is on, the headlamp switch is in the OFF or AUTOLAMPS position and the headlamps have not been turned on by the autolamp system.

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 (vehicles without adaptive steering) or SCCM (vehicles with adaptive steering) mechanically returns the LH steering column multifunction switch to the neutral position and cancels the turn signal.

For halogen headlamps, the front turn/parking lamp are integrated into the headlamp assembly and is an individually replaceable bulb.

For the LED headlamps, the front turn lamp is non-replaceable Light Emitting Diodes (LEDs) mounted in the headlamp assembly.

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 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.

Parking, Rear and License Plate Lamps

For halogen headlamps, the front turn/parking lamp is integrated into the headlamp assembly and is an individually replaceable bulb.

For 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. The LED DRL/front parking lamps are non-replaceable Light Emitting Diodes (LEDs) mounted in the headlamp assembly.

Parking lamps are located in the headlamp assemblies, rear lamp assemblies and license plate lamps. If equipped, parking lamps are also located on the cab roof, under the tailgate and at the front and rear of the rear wheels.

Front 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.

Spot Lamps

The spotlamp Light Emitting Diodes (LEDs) are integrated into the exterior mirror turn lamps.

The spot lamps are enabled for use when the vehicle speed is less than 6 mph (10 km/h) and the parking lamps are on.

Trailer Lamps

The BJB trailer tow parking lamps relay (non-serviceable) supplies voltage to the trailer parking lamps.

The BJB trailer tow reversing lamps relay (non-serviceable) supplies voltage to the trailer tow reversing lamps when the vehicle reversing lamps are commanded on.

If not equipped with a TRM and TBM, the BJB supplies voltage to the trailer stop/turn lamps and trailer battery charging.

If equipped with a TRM and TBM, the TRM supplies voltage to the trailer stop/turn lamps and trailer battery charging.

The TRM provides voltage to the trailer tow connector for trailer battery charging when all of 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 for at least 2 seconds in the present ignition cycle.
 - The BCM load shed strategy is not active (a message is 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).
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