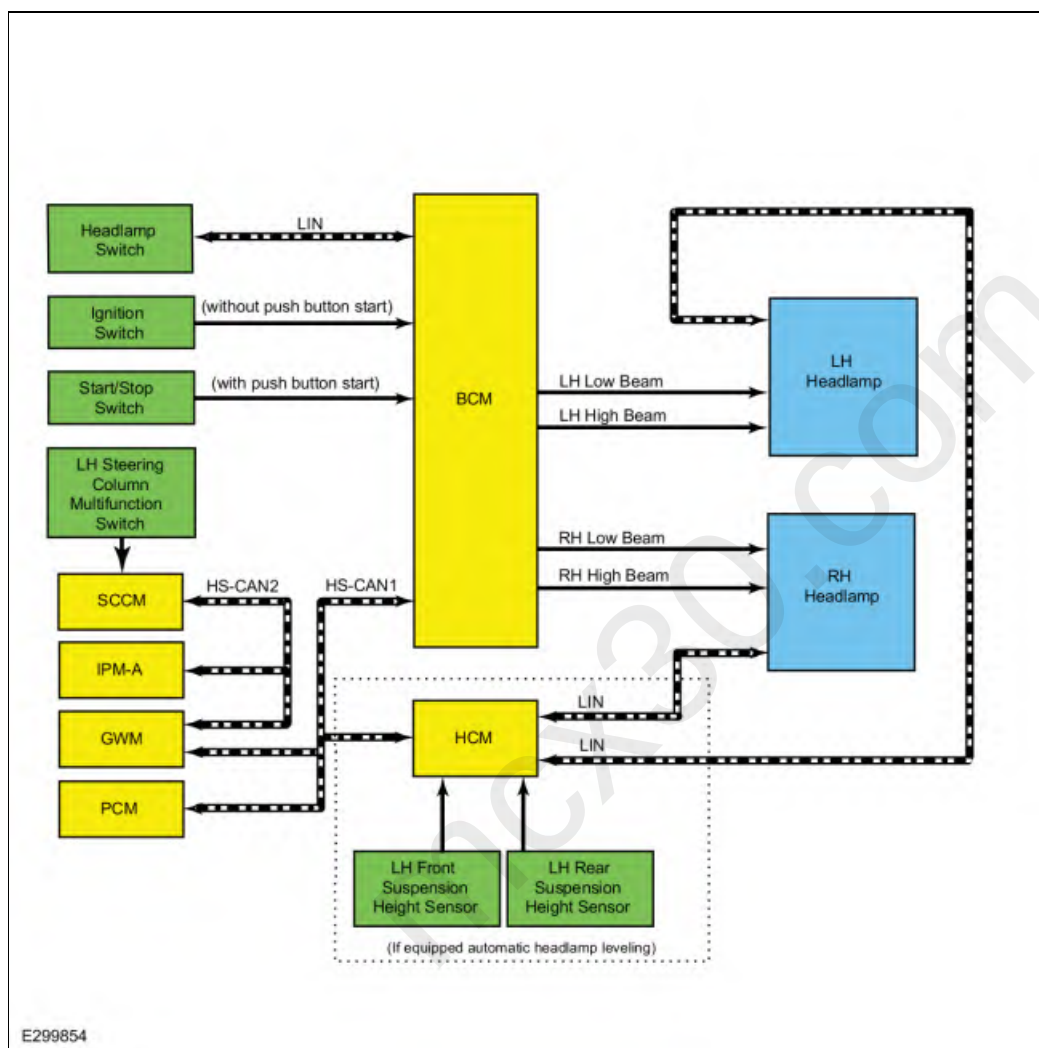


System Operation

Headlamps

System Diagram



Item	Description
1	HS-CAN2
2	BCM
3	LH low beam
4	LH high beam
5	RH low beam
6	RH high beam
7	SCCM
8	LH steering column multifunction switch
9	IPMA
10	GWM
11	HS-CAN1

12	Start/Stop switch
13	HCM
14	LIN
15	LIN
16	PCM
17	LH headlamp
18	RH headlamp
19	LH front suspension height sensor
20	LH rear suspension height sensor
21	Ignition switch
22	Headlamp switch
23	(If equipped automatic headlamp leveling)
24	(without push button start)
25	(with push button start)
26	LIN

Network Message Chart

BCM Network Input Messages

Broadcast Message	Originating Module	Message Purpose
Headlamp flash to pass status	SCCM	Indicates to the BCM a request for the high beams or flash-to-pass.

SCCM Network Input Messages

Broadcast Message	Originating Module	Message Purpose
Auto high beam request	IPMA	Indicates to the SCCM a request for the high beams based on the IPMA camera input.

Low Beams

The headlamp switch sends a status message over the LIN circuit to the BCM to indicate the headlamp switch status (position or a fault with the headlamp switch). The BCM turns the parking lamps and headlamps on when the ignition is in RUN and the BCM detects a fault from the headlamp switch or wiring. This is normal behavior of the BCM when a fault has been detected with the inputs from the headlamp switch.

When the BCM receives a message requesting the headlamps on, it supplies voltage to the LED control module mounted to the headlamp assembly. The LED control module sends voltage to the low beam Light Emitting Diodes (LEDs) in each headlamp assembly.

The BCM also provides Field Effect Transistor (FET) protection of the low beam output circuits. When an excessive current draw is detected, the BCM disables the affected circuit driver. For additional information on BCM Field Effect Transistor (FET) protection, Refer to: Module Controlled Functions - System Operation and Component Description (419-10 Multifunction Electronic Modules, Description and Operation).

High Beams

The SCCM monitors the LH steering column multifunction switch for a high beam request. When the LH steering column multifunction switch is in the HIGH BEAMS position, the SCCM sends a message over the HS-CAN2 to the GWM, then the GWM sends the message to the BCM over the HS-CAN1.

When the low beams are on and the BCM receives a request for high beams, the low beam Light Emitting Diodes (LEDs) remain powered on and the high beam Light Emitting Diodes (LEDs) are also activated. This changes the headlamp beam pattern to illuminate a greater distance.