

# Adaptive Lighting

# What is Adaptive Lighting

## **What:**

The ability for the headlights to move laterally, and in some cases to alter the beam, to improve visibility for the driver.

Video: <https://youtu.be/jlkS-tPqFPU>

## **Why:**

To improve passenger safety by providing improved lighting during low light conditions.

## **Benefits:**

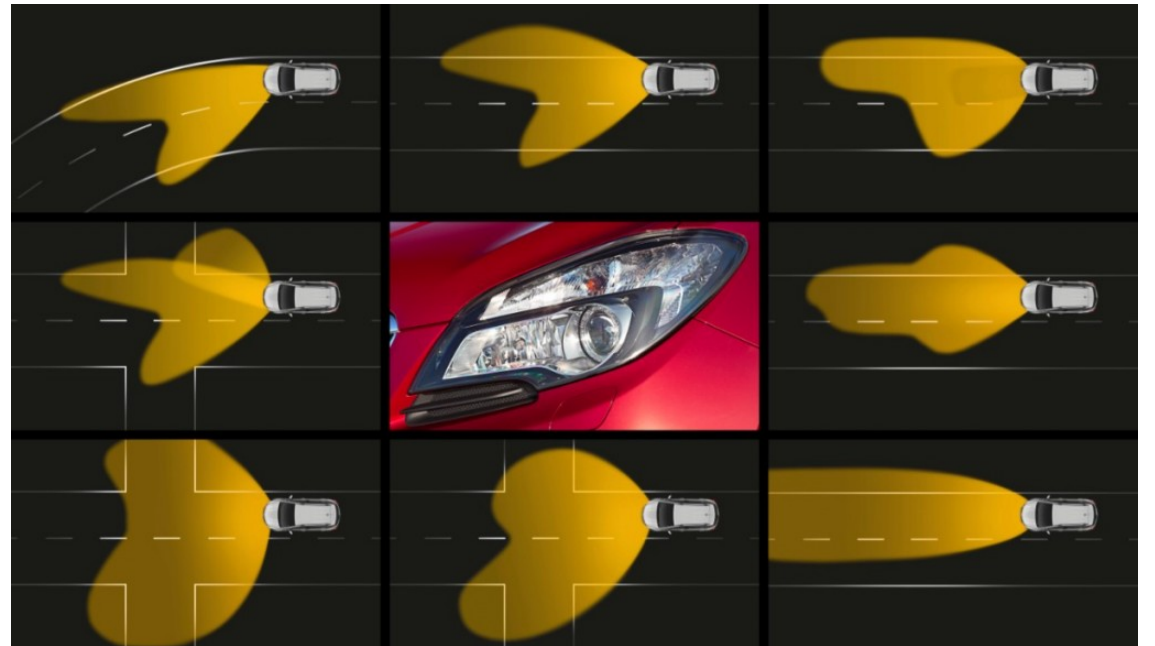
Decrease in accidents / injuries / deaths caused by tired or distracted drivers

## **How:**

Utilization of sensors, cameras, and electronically controlled systems can interpret and react to changing conditions faster than a human driver in many situations reacts. System is “Active” (Provide movement of light projected beam) to provide improved low-light visibility.

# Adaptive Lighting Operation

The system utilizes sensors and cameras to detect steering / road changes, and other vehicles. The headlights can then be “Moved” via motors to change the beam location and in some cases change the beam pattern.



# Adaptive Lighting Components

Camera(s)

Sensors

Module(s)

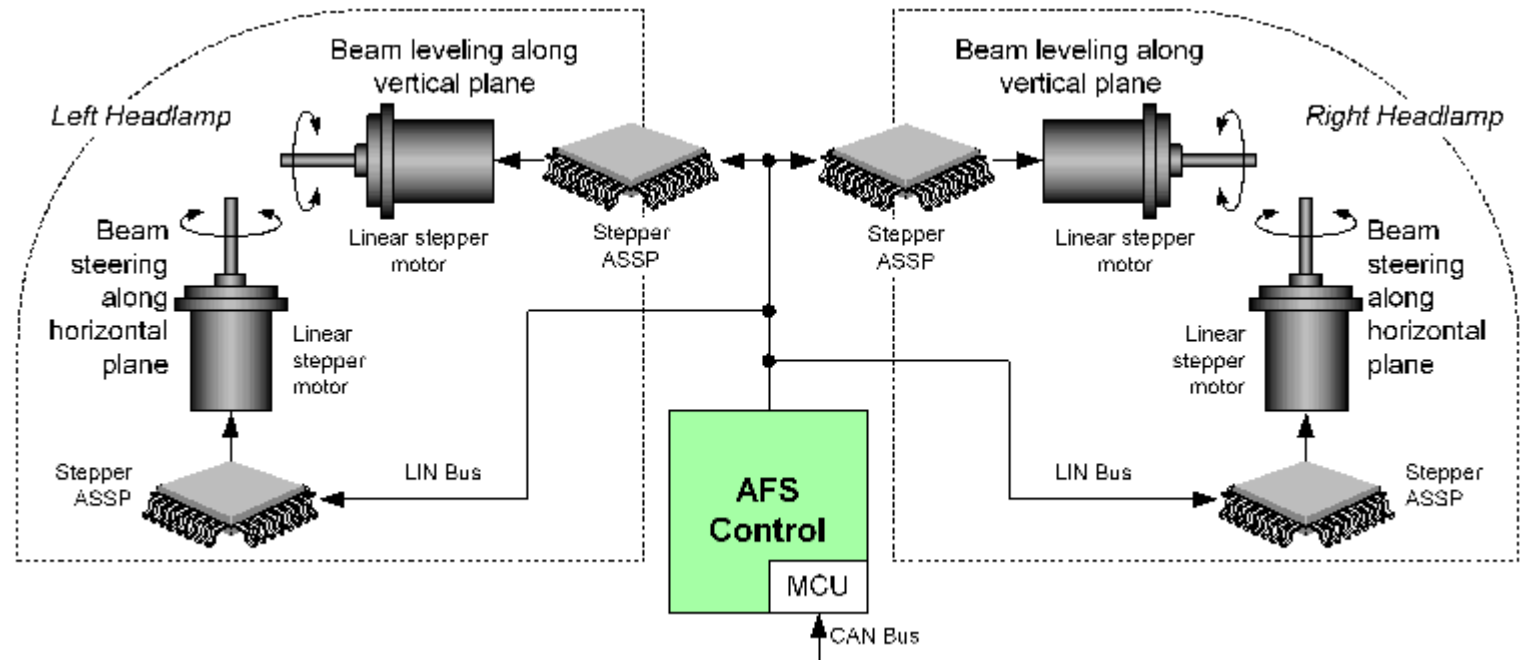
Steering System

Brake System

Stability Control

Control Switch

Visual Indicators



# Adaptive Lighting Diagnosis

## Visual inspection

- Windshield

- Damage to camera(s)

- Damage to headlight assemblies

## Fault codes

- OEM

- SAE

## Electrical testing

- Power

- Ground

- Signals

- BUS Communications

# Adaptive Lighting Service / Calibration

Mechanical

Targets

Aiming devices

