

Night Vision

What is Night Vision

What:

A system that utilizes thermal or InFraRed imaging to “See” beyond the headlights illumination to identify potential hazards.

Why:

To improve passenger safety by providing warnings to potentially tired or distracted drivers.

Benefits:

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

How:

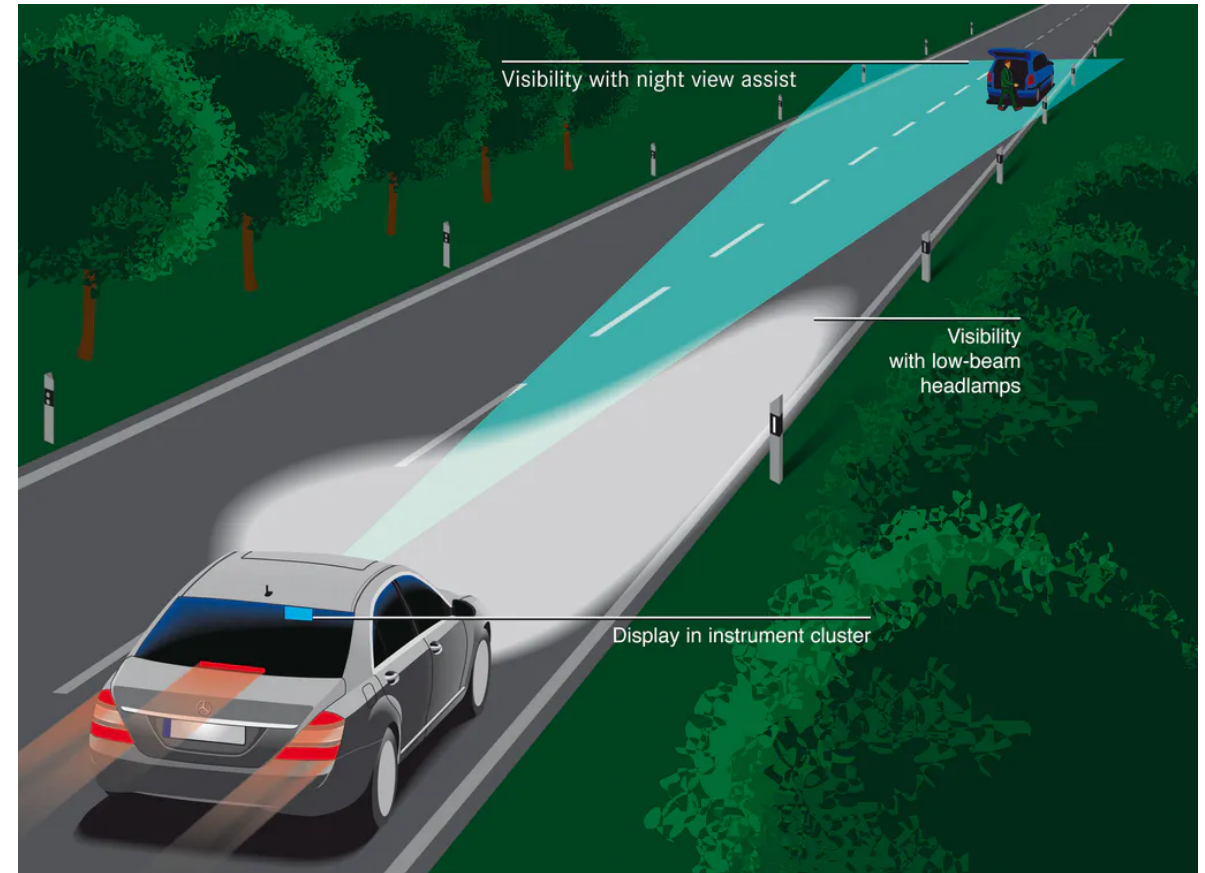
Utilization of cameras and electronically controlled systems can interpret and react to changing conditions faster than a human driver in many situations reacts. System is “Passive” (Provide audio, visual or haptic feedback) to notify driver of a pending situation.

Night Vision Operation

Thermal or InFraRed camera
detect obstructions
(vehicles,
pedestrians, animals)

Notify driver with visual
information

May utilize recognition
algorithms to
“Recognize” objects



Night Vision Components

Components

Night Vision Camera

Forward Looking InfraRed (FLIR)

Thermographic (Heat)

Module(s)

Control Switch

Visual Indicators

Display

Instrument Cluster

Heads up Display (HUD)



Night Vision Diagnosis

Visual inspection

- Damage grill / front of car
- Damage to camera

Fault codes

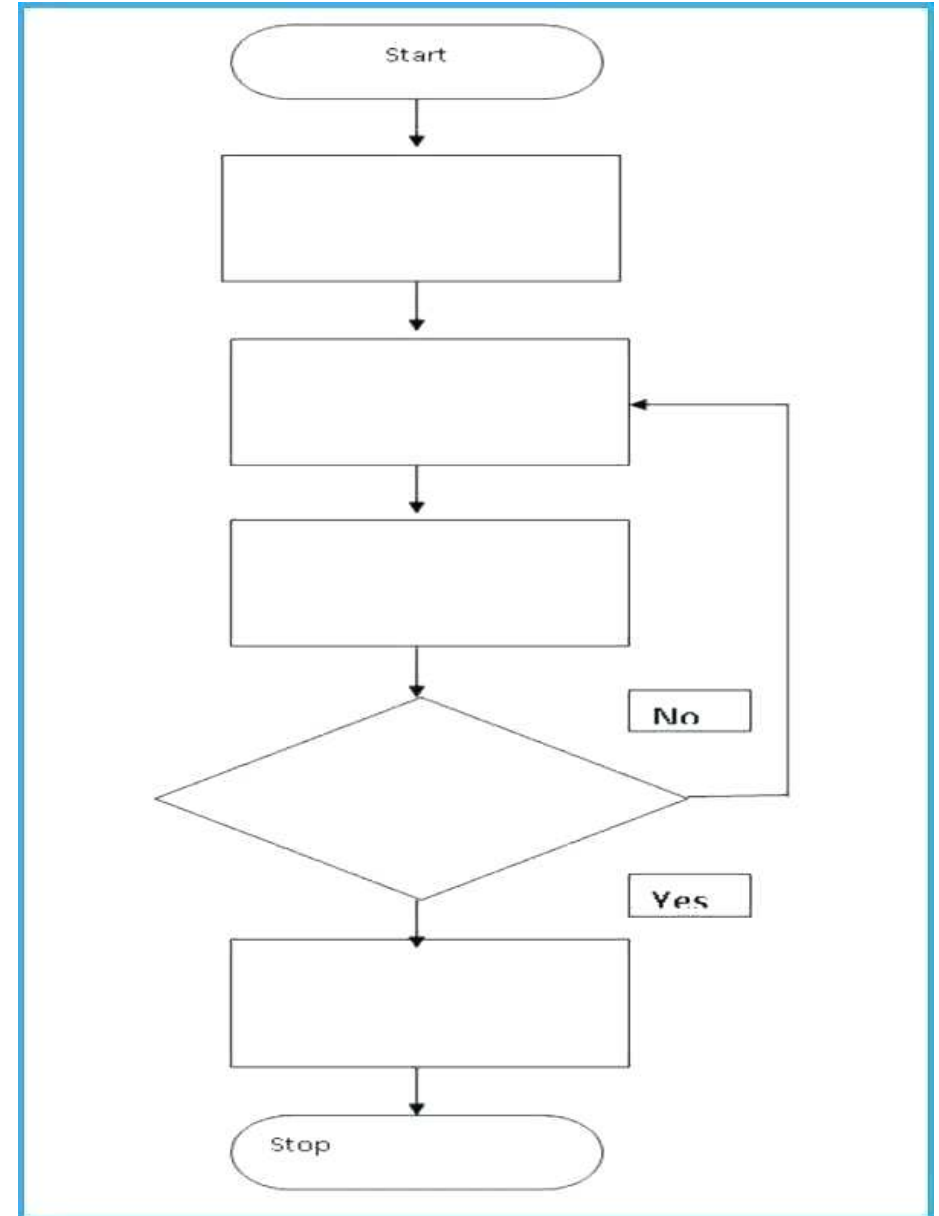
- OEM
- SAE

Electrical testing

- Power
- Ground
- Signals
- BUS Communications

External conditions

- Weather
 - Heavy rain
 - Snow / Sleet / Hail
 - Fog
 - Smoke / Dust
- Lens Clarity



Night Vision Service / Calibration

Mechanical

Targets

Some sensors hard mounted, some may be adjustable

Non-related repairs and services can require calibration

Alignment

Collision

Lens Cleaning Systems

Self / Auto

Driving