

Parking Assist

# What is Parking Assist

## **What:**

A system that assists drivers with vehicle parking. May include partial or complete parking capability, and may be able to perform various types of parking: Parallel, angled, straight. \*Self parking is available on some vehicles.

## **Why:**

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

## **Benefits:**

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

Pathway to autonomous vehicles

Increased traffic flow

## **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 can be “Passive” (Provide audio, visual or haptic feedback) to notify driver of a pending situation or can be “Active” (Intervention with steering, engine control, or brakes) as the situation dictates.

# Parking Assist Operation

Park vehicle with little to no driver interaction

Parallel

Angle

Straight

Some new systems can park via remote control

Utilizing ultrasonic sensors, radar, and cameras when applicable

Vehicle measures parking “Space”

Directs driver for pre-conditioning

Completes parking maneuver using steering, brakes, throttle.



# Parking Assist Components

Ultra-sonic sensors

Module(s)

Control Switch

Steering

Engine Management

Throttle

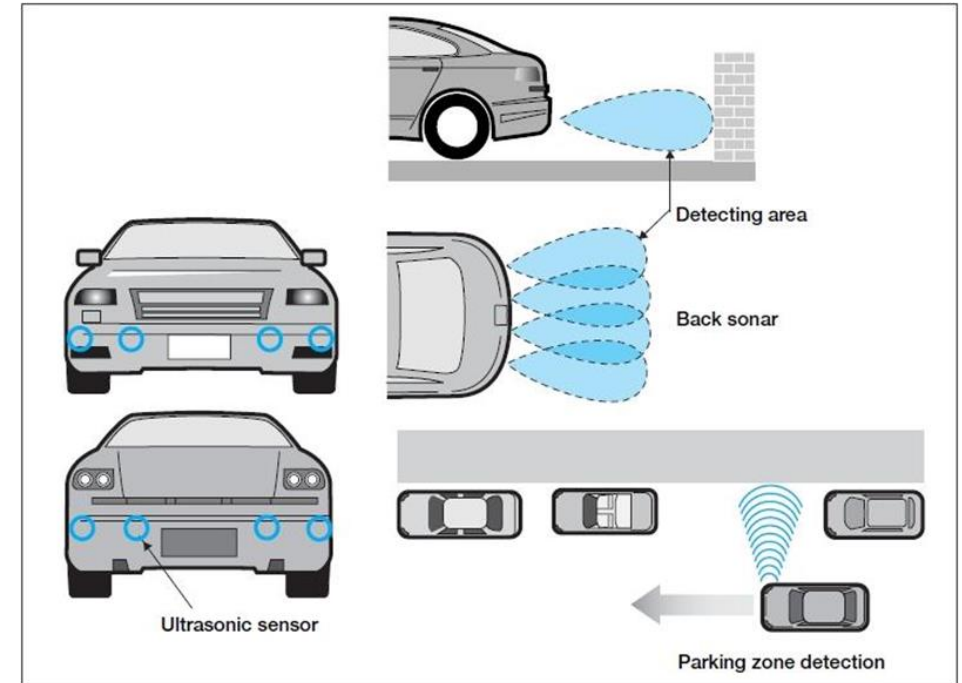
Transmission

Brake System

ABS

Visual Indicators

Audio



# Parking Assist Diagnosis

## Visual inspection

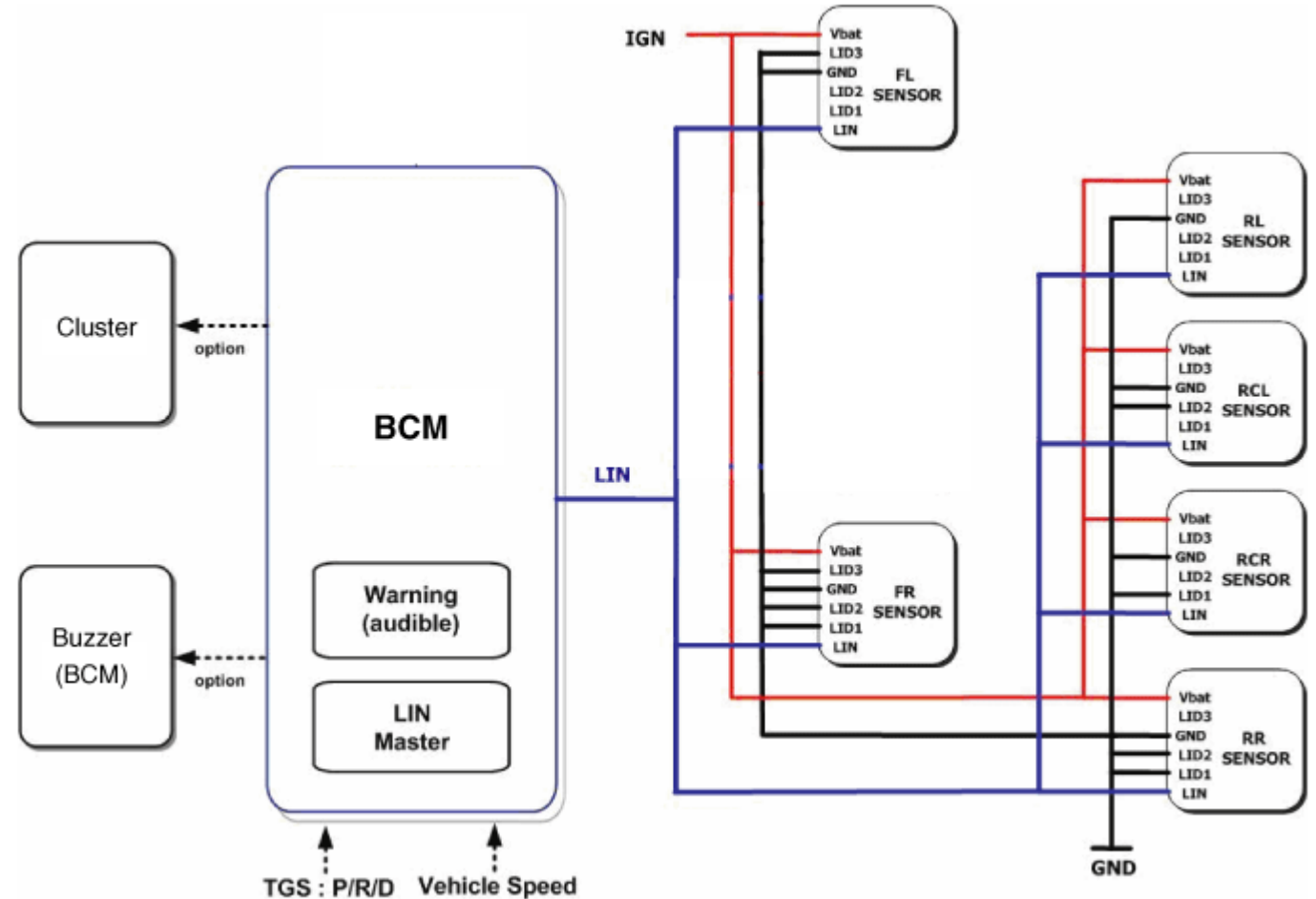
- Damage to bumper
- Damage to sensor

## Fault codes

- OEM
- SAE

## Electrical testing

- Power
- Ground
- Signals
- BUS Communications



# Parking Assist Service / Calibration

## Mechanical

### Targets

Some sensors hard mounted, some may be adjustable

Non-related repairs and services can require calibration

Alignment

Collision

## Self / Auto

### Driving

