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