Instrument Cluster:

An electronic instrument cluster, digital instrument panel or dashboard for short, is a set of instrumentation which includes the various gauges and indicators that drivers depend on to learn important information on the current status of the automobile.

The instrument cluster includes the speedometer, fuel gauge, tachometer and odometer, it is located on the drivers side on the dashboard infront of the steering wheel.

Speedometer:

* The speedometer tells us how fast the vehicle is moving.

Fuel gauge:

* The fuel gauge tells us how much fuel is currently in gas tank is present.

Tachometer:

* The tachometer provides the driver with the rotation rate of the crankshaft in the engine.

Odometer:

* The odometer tells us how many miles/Km the vehicle is travelled.

Along with gauges, warning lights are provided on the car’s instrument panel which light up in case of a serious problem.

Oil Pressure Warning light:

* It tells us the oil pressure of a vehicle while driving a car. Here the light goes on when the engine temperature or the radiators coolant is too hot. In some vehicles, a gauge is used that would show the needle in the warning zone of HOT.

Temperature Warning Light:

* This light goes on when the engine oil is not circulating at the required pressure.

Battery Low Warning:

* When this light goes on or the battery gauge reads low, this means that the battery power is running out.

The cluster supports media features via

* Apple devices
* Bluetooth Audio
* Mass storage (MSC) device: USB
* Portable Media Device: An external media file device that may be connected to the IVI system through MTP
* Radio
* SDARS
* Phone projection

Cluster Warning Telltales:

Cluster warning telltales are visual indicators on a vehicles dashboard, usually represented by symbols or icons, designed to inform the driver about the status of the vehicle’s system.

These telltales can indicate normal operating conditions, warnings or malfunctions. They play a crucial role in vehicle safety and operation by alerting the driver to potential issues that may require immediate attention.

Types of Telltales:

* Indicator Lights
* Warning Lights
* Malfunction Indicator Lights

Common Telltales:

* Engine Warning Light
* Battery Charge Warning Light
* Oil Pressure Warning Light
* Brake Warning Light

Customization of Cluster Warning Telltales:

It involves tailoring the design, appearance and functionality of these indicators to meet specific requirements or preferences. This can include changing the color, shape, size or symbol used to represent a particular warning, as well as integrating additional information or features.