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2006 JEEP Commander OEM Service and Repair Workshop Manual

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4.	Horn Switch
5.	Horn (Low Note)

An electrically operated dual-note horn system is standard factory-installed equipment in this vehicle. The horn system features individual low-note and high-note horn units. The high note horn is located on and secured to the right side of the Front End Module (FEM) by a single fastener and the low note horn is located on and secured to the left side of the FEM by a single fastener. Each horn has its own locating tab to make certain of positioning on the FEM. The Power Distribution Center (PDC) contains the horn fuse and the horn relay. Pressing either side of the upper surface of the Driver Air Bag (DAB) trim cover in the center of the steering wheel actuates the horn switch contacts, which provides the vehicle operator with a convenient, audible signaling device that can be used to alert pedestrians or the operators of other vehicles in near proximity.

OPERATION

The horn operates on battery current received from a horn relay, soldered to the printed circuit board, located in the PDC that feeds a fuse also located in the PDC. The vehicle operator can control typical horn system signaling through the horn switch within the hub of the steering wheel. When the upper surface of the DAB trim cover is pressed, it provides a ground sense signal through the SCCM which is hardwired to the BCM. In response to that input, the BCM uses a Low Side Driver (LSD) to provide ground to the control coil of the horn relay. The relay is provided fused B(+) through a circuit connected to a fuse in the PDC. The horn system circuit is designed so that the system will remain operational, regardless of the status of the ignition switch.

The horns can also be activated by the BCM to support each of the following features:

- **Remote Keyless Entry System** - Remote Keyless Entry (RKE) system **Lock** request audible verification.
- **Remote Keyless Entry System** - RKE system **Panic** mode audible alert for North American markets only.
- **Remote Start System** - Remote Start System **Start** request audible verification for North American markets only.
- **Vehicle Theft Alarm** - Vehicle Theft Alarm (VTA) audible alarm except in vehicles manufactured for markets where an alarm siren is required.

The RKE system **Lock** request audible verification is a customer programmable feature, which allows the feature to be enabled or disabled to suit individual preferences. Refer to Uconnect® Settings in the Owners Manual for information on changing the programmable feature settings.

The hardwired circuits between components related to the horn system may be diagnosed using conventional diagnostic tools and procedures. Refer to the appropriate wiring information. The wiring information includes wiring diagrams, details of wire harness routing and retention, connector pin-out information and location

Sample

Horn

HORN

NOTE

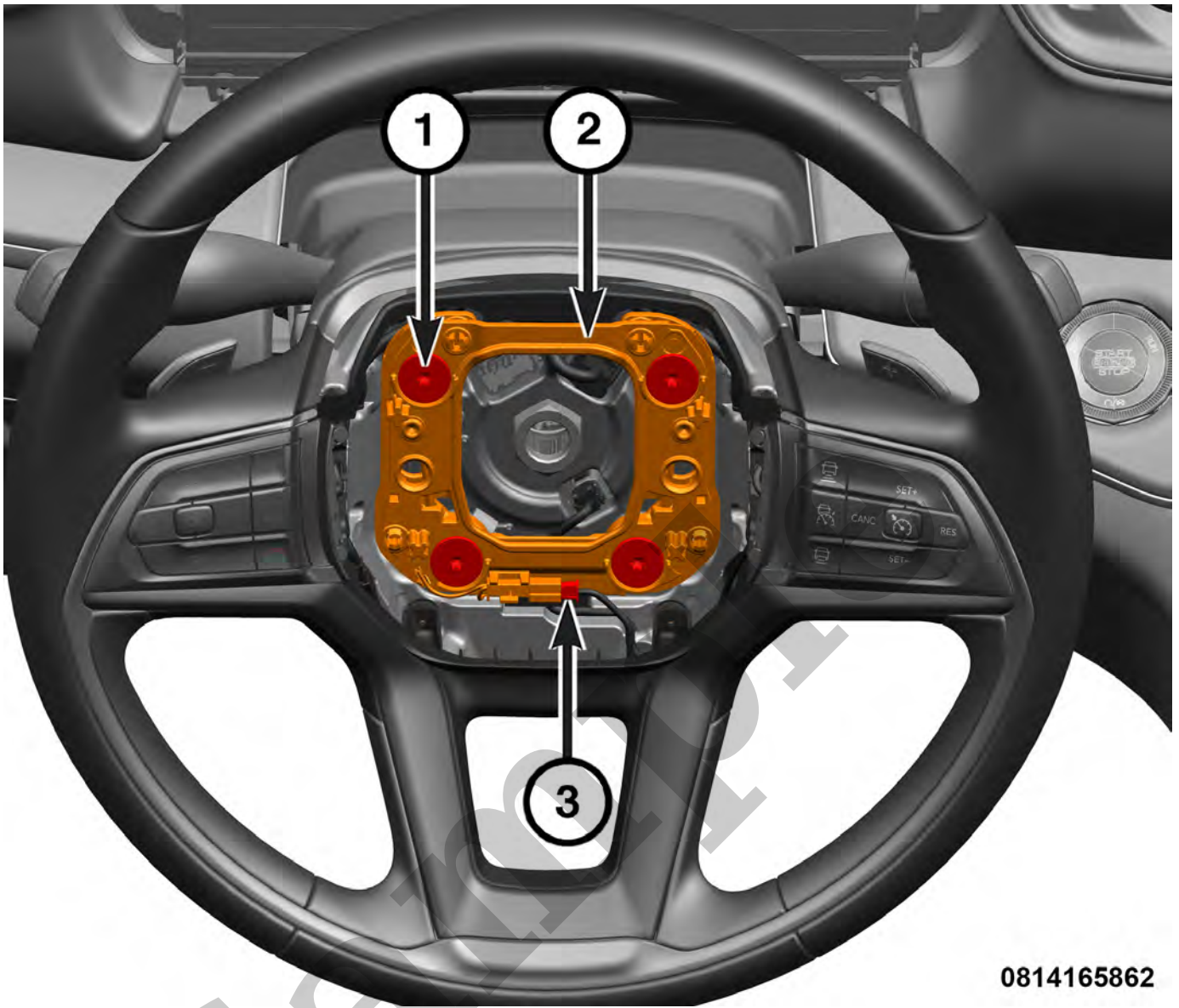
Left side shown, right side similar.

NOTE

The high note horn is on the right side of the vehicle and the low note horn is on the left side of the vehicle.

REMOVAL

1. Remove the appropriate front wheelhouse splash shield ([Refer to Body/Exterior/SHIELD, Splash/Removal and Installation](#)).



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1 - Fasteners

2 - Horn Switch

3 - Wire Harness Connector

2. Disconnect the wire harness connector from the horn switch.
3. Remove the fasteners securing the horn switch to the steering wheel.
4. Remove the horn switch from the steering wheel.

INSTALLATION

Follow the removal procedure in reverse for general reassembly of the components on the vehicle. The steps listed below are calling out specific procedures that should be followed during installation.

	<ul style="list-style-type: none"> • Switch Bank Pod (3) • Integrated Center Stack (ICS) (6)
4.	Body Control Module (BCM)
5.	Display Screen Module (DSM)
-	Electronic Vehicle Information Center (EVIC) Switch – Located on the left steering wheel spoke.
-	Dynamic Terrain (Off Road) Pages
-	Rear Seat Reminder Alert (RSMA)

The IPC for this vehicle is located in the instrument panel above the steering column opening. The IPC gauges and indicators are visible through an opening in the IPC bezel and are protected by a clear plastic IPC lens that is secured to the IPC housing by integral latch formations.

This vehicle is equipped with a 10.25" TFT color display IPC. The IPC and HUD accommodate all of the variations of optional equipment and regulatory requirements for the various markets in which the vehicle is offered. The IPC utilizes integrated circuitry and information carried on both the Controller Area Network (CAN).

Gauge illumination is provided by dimmer controlled Light Emitting Diode (LED) units soldered to the IPC circuit board. The gauge set and indicators shown above are an integrated part of the IPC, therefore are only serviced as a unit with the IPC. The IPC mask/lens is the only component of the IPC assembly that can be serviced separately.

For North American (NA) vehicles, the odometer cannot be reset by the plant or dealership. Odometer tampering is protected by only allowing the IPC supplier to reset the odometer.

OPERATION

Switch Bank Pod

[Component Index](#)

The switch bank pod and the ICS switches are allow customers to upfit the vehicle with aftermarket products and solutions.

The switches receives a configuration input from the BCM to determine how many programmable switches are on the vehicle. Up to six switch slots are available.

The following settings are available to the customer for programming:

- **Switch Type** - For each switch; latching or momentary press.

The EVIC system is comprised of several different components. Those components are:

- IPC.
- Steering wheel switches.
- CAN data bus.
- LIN slaved to the SCCM which then uses the BCM to gate bus signals.

Heads Up Display (HUD) Module

[Component Index](#)

The IPC has a dedicated space in the EVIC Main Menu for the HUD. The IPC stores and recalls the setting of the HUD over ignition cycles. The IPC HUD menu contains the following parameters:

- Display ON
- Brightness
- Content and Layout - Not available when the vehicle is moving 5 mph or greater.
- Display Height

The HUD can be accessed and controlled during all driving conditions.

When the driver selects the "HUD Display ON" option from the IPC, the IPC sets an internal signal to the HUD module to turn on the display. The IPC then drives the HUD graphics.

Speedometer - The IPC uses an internal signal to drive the correct speedometer information to the HUD module.

Road Speed Limit Sign - If equipped with the traffic sign system and it is enabled, the IPC uses several signals from the Central ADAS Decision Module (CADM) to display the road speed limit information. When the traffic sign information system is disabled or not equipped, the IPC uses a telematics signal from the DSM to display the speed limit information.

Turn by Turn Navigation and Road Shields - The IPC obtains signals from the DSM for both systems.

Phone Information - Phone information is received from DSM.

Gear Display - Gear display information is received from the Transmission Control Module (TCM).

The HUD also displays information relevant for the Adaptive Cruise Control (ACC) and Forward Collision Warning (FCW) received from the CADM.

The HUD will transmit the following LIN signals to the IPC as feedback values:

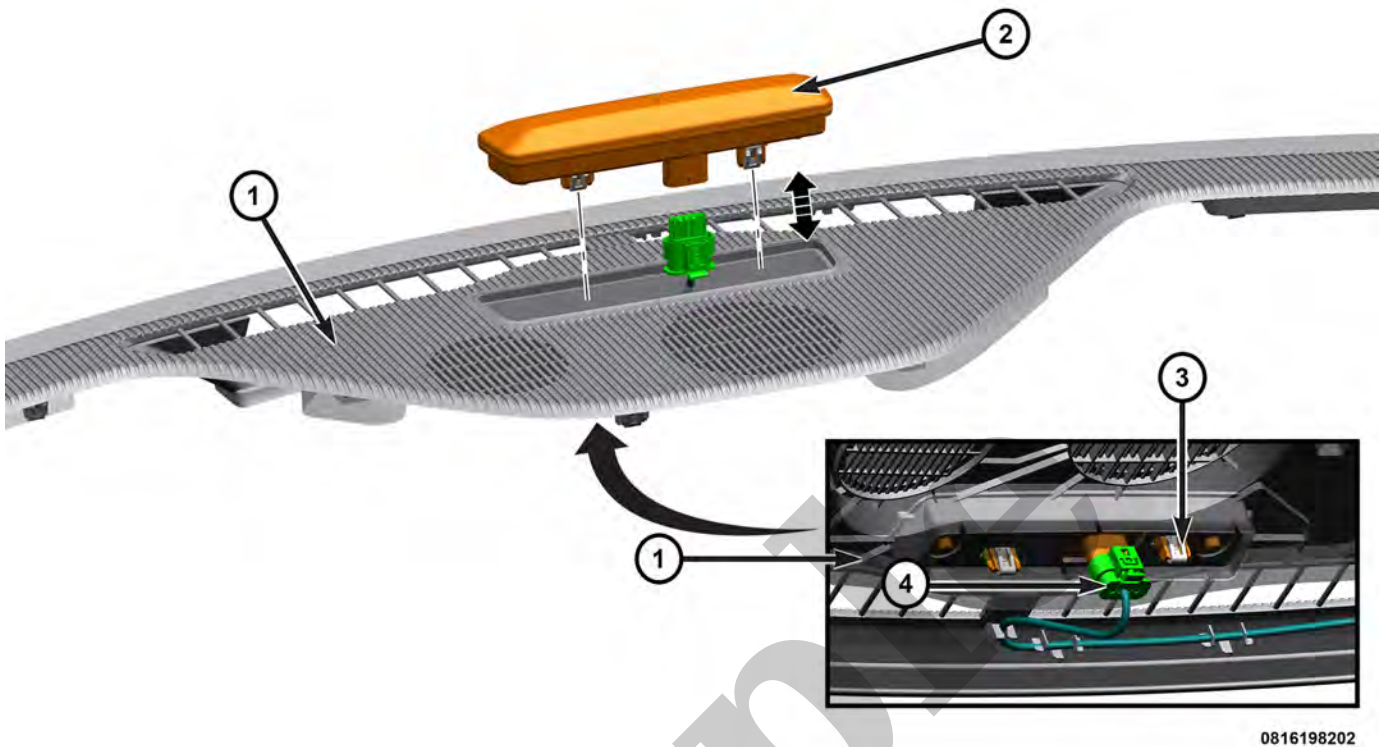
- HUD dimming value
- HUD light sensor value
- HUD mirror position
- HUD mirror movement status

Heads Up Display

HEADS UP DISPLAY

REMOVAL

1. Remove the Instrument Panel Pad ([Refer to Body/Instrument Panel/PAD, Instrument Panel/Removal and Installation](#)).
2. Remove the left front air duct ([Refer to Heating and Air Conditioning/Distribution/DUCT, Left Instrument Panel/Removal and Installation](#)).



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1 - Defroster Grille

2 - Battery Charge Indicator

3 - Retaining Clips

4 - Wire Harness Connector

3. Disconnect the wire harness connector from the Battery Charge Indicator (BCI).
4. Squeeze the retaining clips to release the BCI and remove it from the defroster grille.

NOTE

Do not pry the BCI from the topside of the defroster grille or the BCI may be damaged.

INSTALLATION

Follow the removal procedure in reverse for general reassembly of the components on the vehicle. The steps listed below are calling out specific procedures that should be followed during installation.

- DO NOT push on the lens portion of the BCI. Pressure should only be applied above the retainers.

YOUR CURRENT VEHICLE

Instrument Cluster

INSTRUMENT CLUSTER

For the removal and installation of the Instrument Panel Cluster (IPC) ([Refer to Electrical/8E - Electronic Control Modules/Cluster, Instrument Panel/Removal and Installation](#)).

Sample