

Component Procedures: Heads Up Display Unit

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Component Procedures: Heads Up Display Unit

Head Up Display (Article 11009)

General Description

The head up display is a secondary display system that reflects vehicle information onto the windshield. The head up display system consists of the following:

- The vehicle speed display
- The engine speed display
- The outside air temperature display
- The audio information display
- The transmission gear display (automatic transmission only)
- The compass heading display
- The turn-by-turn display if the vehicle is equipped with a navigation radio
- The indicator displays
- The control switches
- Arbitrary messages

Indicator Displays

The head up display displays the following:

- Turn signal indicators
- High beam indicator
- Km/h (MPH) indicator
- Fuel level low message
- Traction control active message
- Stabilitrak active message
- Check tire pressure message
- Cruise set to message
- Speed limited to message

For further information, refer to Indicator/Warning Message Description and Operation .

Vehicle Speed Display

The head up display displays the vehicle speed based on the information from the ECM. The ECM sends the vehicle speed information via a High Speed CAN-Bus signal to the instrument cluster . The instrument cluster then sends the vehicle speed information via a Low Speed CAN-Bus signal to the head up display in order to display the vehicle speed, either in kilometers or miles, based on the vehicle requirements

Engine Speed Display

The head up display displays the engine speed based on the information from the ECM. The ECM converts the data from the engine speed sensor to an engine revolution signal. The ECM sends the engine speed information via a High Speed CAN-Bus signal to the instrument cluster. The instrument cluster then sends the information via a Low Speed CAN-Bus signal to the head up display to display the engine speed.

Audio Information Display

The head up display displays the following audio information:

- The audio source or band and station or track information
- The CD disc (for multiple changer) and the CD track
- The turn-by-turn messages if the vehicle is equipped with a navigation radio

The head up display receives serial data messages from the radio indicating the display mode, the frequency, the band, and the CD track.

Control Switches

The head up display switch is located to the left (part of near headlamp switch) of the steering wheel. The head up display switch consists of the following controls:

- Off
- Dimming
- Up/Down
- Page

Off

To turn off the head up display, rotate the dimming knob fully counterclockwise until the head up display turns off.

Dimming

Turn the dimming knob clockwise or counterclockwise to brighten or dim the head up display.

Up/Down

Press the Up or Down switch to center the head up display image in your view. The head up display image can only be adjusted up and down, not side to side.

Page

There are three different formats which can be selected. Each press of the page switch will cycle to the next page. Holding down the button does not cycle through pages.

Display formats

There are three different formats with different displays.

Format 1 shows:

- Vehicle speed display
- Transmission gear display (automatic transmission only)
- Outside air temperature display
- Compass heading display

Format 2 shows:

- Transmission gear display (only for Tap up/down mode)

Format 3 shows:

- Engine speed display

Format 4 (ZL1 only) shows:

- Lateral Acceleration (G) display
- Shift Timing Light Position display

Head-Up Display Switch Replacement (Article 11046)

Callout Component Name

1 Instrument Cluster Heads Up Display Dimmer Switch Assembly Procedures Use a flat bladed plastic trim tool to aid in the removal of the switch from the instrument panel assembly . Disconnect the electrical connections.

Procedures

- Use a flat bladed plastic trim tool to aid in the removal of the switch from the instrument panel assembly .
- Disconnect the electrical connections.

Head-Up Display Replacement (Article 11045)

Callout Component Name

Preliminary Procedures Remove the instrument panel trim pad. Refer to Instrument Panel Trim Pad Replacement .

Remove the air distributor duct. Refer to Air Distributor Duct Replacement

Preliminary Procedures

- Remove the instrument panel trim pad. Refer to Instrument Panel Trim Pad Replacement .
- Remove the air distributor duct. Refer to Air Distributor Duct Replacement

1 Instrument Cluster Heads Up Display Fasteners (Qty: 5) Caution: Refer to Fastener Caution . Tighten 2.5 Nm (22 lb in)

2.5 Nm (22 lb in)

2 Instrument Cluster Heads Up Display Procedure Disconnect the electrical connections.

Procedure

Disconnect the electrical connections.

All Technical Service Bulletins (itype_100)

Tsbs

- HUD - Head Up Display Information - Multiple Conditions or Questions (PIC3379D, 2012/11/27)

Head-Up Display Programming and Setup (Article 10739)

The Head-Up Display (without ZL1) requires no programming or setup.

The Head-Up Display (with ZL1) must be programmed with the proper calibration software. The module stores and utilizes this information however if it is not properly configured with the correct calibration software, the Head-Up Display will not function properly.

Ensure that the following conditions exist in order to prepare for Head-Up Display programming:

- The battery is fully charged.
- The MDI data link connectors are secure.
- The scan tool is loaded with the most current software version.
- All disconnected modules and devices are reconnected securely.
- This entire procedure has been reviewed before proceeding.

Do not reprogram the Head-Up Display unless directed by a service procedure or a service bulletin.

Head-Up Display Programming (ZL1 only)

To program and setup an existing or new replacement Head-Up Display, perform the following procedure:

- With a scan tool, access the Service Programming System (SPS) and follow the on-screen instructions. Refer

to Service Programming System (SPS) .

- On the SPS Supported Controllers screen, select Head-Up Display - Programming and follow the on-screen instructions.

If the Head-Up Display fails to accept the program, verify all scan tool and Head-Up Display connections are secure.

- Turn the ignition OFF for 10 seconds.

- Open and close the door.

- Connect the scan tool to the data link connector.

- Ignition ON, engine OFF.

- With a scan tool, clear all DTC's from all modules.