


24

Dash Warning Lights and Driver Information Systems

PEARSON Introduction to Automotive Service James Halderman, Darrell Duster © 2013 Pearson Higher Education, Inc. Pearson Prentice Hall - Upper Saddle River, NJ 07458

24 Dash Warning Lights and Driver Information Systems


FIGURE 24.1 Engine coolant temperature is too high.



PEARSON Introduction to Automotive Service James Halderman, Darrell Duster © 2013 Pearson Higher Education, Inc. Pearson Prentice Hall - Upper Saddle River, NJ 07458

24 Dash Warning Lights and Driver Information Systems


FIGURE 24.2 Engine oil pressure is too low.



PEARSON Introduction to Automotive Service James Halderman, Darrell Duster © 2013 Pearson Higher Education, Inc. Pearson Prentice Hall - Upper Saddle River, NJ 07458

24 Dash Warning Lights and Driver Information Systems


FIGURE 24.3 Water detected in fuel. Note the draining of water from the fuel filter assembly on a vehicle equipped with a diesel engine.



PEARSON Introduction to Automotive Service James Halderman, Darrell Dastler © 2013 Pearson Higher Education, Inc. Pearson Practice Hall - Upper Saddle River, NJ 07458

24 Dash Warning Lights and Driver Information Systems


FIGURE 24.4 Maintenance required. This usually means that the engine oil is scheduled to be changed or other routine service items need to be replaced or checked.



PEARSON Introduction to Automotive Service James Halderman, Darrell Dastler © 2013 Pearson Higher Education, Inc. Pearson Practice Hall - Upper Saddle River, NJ 07458

24 Dash Warning Lights and Driver Information Systems


FIGURE 24.5 Malfunction indicator lamp (MIL), also called a check engine light. The light means the engine control computer has detected a fault.



PEARSON Introduction to Automotive Service James Halderman, Darrell Dastler © 2013 Pearson Higher Education, Inc. Pearson Practice Hall - Upper Saddle River, NJ 07458

24 Dash Warning Lights and Driver Information Systems

FIGURE 24.6 Charging system fault detected.



PEARSON Introduction to Automotive Service James Halderman, Darrell Duster © 2013 Pearson Higher Education, Inc. Pearson Prentice Hall - Upper Saddle River, NJ 07458

24 Dash Warning Lights and Driver Information Systems


FIGURE 24.7 Fasten safety belt warning light.



PEARSON Introduction to Automotive Service James Halderman, Darrell Duster © 2013 Pearson Higher Education, Inc. Pearson Prentice Hall - Upper Saddle River, NJ 07458

24 Dash Warning Lights and Driver Information Systems


FIGURE 24.8 Fault detected in the supplemental restraint system.



PEARSON Introduction to Automotive Service James Halderman, Darrell Duster © 2013 Pearson Higher Education, Inc. Pearson Prentice Hall - Upper Saddle River, NJ 07458

24 Dash Warning Lights and Driver Information Systems


FIGURE 24.9 Fault detected in base brake system.



PEARSON Introduction to Automotive Service James Halderman, Darrel Dester © 2013 Pearson Higher Education, Inc. Pearson Prentice Hall - Upper Saddle River, NJ 07458

24 Dash Warning Lights and Driver Information Systems


FIGURE 24.10 Brake light bulb failure detected.



PEARSON Introduction to Automotive Service James Halderman, Darrel Dester © 2013 Pearson Higher Education, Inc. Pearson Prentice Hall - Upper Saddle River, NJ 07458

24 Dash Warning Lights and Driver Information Systems

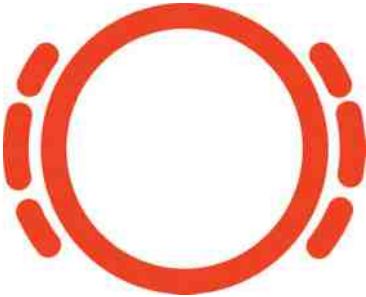
FIGURE 24.11 Exterior light bulb failure detected.



PEARSON Introduction to Automotive Service James Halderman, Darrel Dester © 2013 Pearson Higher Education, Inc. Pearson Prentice Hall - Upper Saddle River, NJ 07458

24 Dash Warning Lights and Driver Information Systems


FIGURE 24.12 Worn brake pads or linings detected.



PEARSON Introduction to Automotive Service James Halderman, David Duster © 2013 Pearson Higher Education, Inc. Pearson Prentice Hall - Upper Saddle River, NJ 07458

24 Dash Warning Lights and Driver Information Systems


FIGURE 24.13 Fault detected in antilock brake system.



PEARSON Introduction to Automotive Service James Halderman, David Duster © 2013 Pearson Higher Education, Inc. Pearson Prentice Hall - Upper Saddle River, NJ 07458

24 Dash Warning Lights and Driver Information Systems

FIGURE 24.14 Low tire pressure detected.



PEARSON Introduction to Automotive Service James Halderman, David Duster © 2013 Pearson Higher Education, Inc. Pearson Prentice Hall - Upper Saddle River, NJ 07458

24 Dash Warning Lights and Driver Information Systems

FIGURE 24.15 Door open or ajar.

PEARSON Introduction to Automotive Service James Halderman, David Duster © 2013 Pearson Higher Education, Inc. Pearson Practice Hall - Upper Saddle River, NJ 07458

24 Dash Warning Lights and Driver Information Systems

FIGURE 24.16 Windshield washer fluid low.

PEARSON Introduction to Automotive Service James Halderman, David Duster © 2013 Pearson Higher Education, Inc. Pearson Practice Hall - Upper Saddle River, NJ 07458

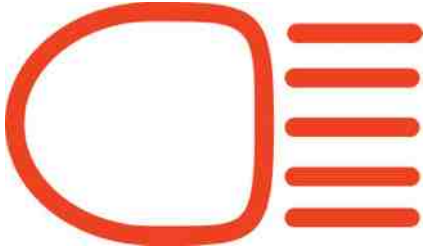
24 Dash Warning Lights and Driver Information Systems

FIGURE 24.17 Low fuel level.

PEARSON Introduction to Automotive Service James Halderman, David Duster © 2013 Pearson Higher Education, Inc. Pearson Practice Hall - Upper Saddle River, NJ 07458

24 Dash Warning Lights and Driver Information Systems


FIGURE 24.18 Headlights on.



PEARSON Introduction to Automotive Service James Halderman, Darrell Dastler © 2013 Pearson Higher Education, Inc. Pearson Prentice Hall - Upper Saddle River, NJ 07458

24 Dash Warning Lights and Driver Information Systems


FIGURE 24.19 Low traction detected. Traction control system is functioning to restore traction (usually flashes when actively working to restore traction).



PEARSON Introduction to Automotive Service James Halderman, Darrell Dastler © 2013 Pearson Higher Education, Inc. Pearson Prentice Hall - Upper Saddle River, NJ 07458

24 Dash Warning Lights and Driver Information Systems


FIGURE 24.20 Vehicle stability control system either off or working if flashing.



PEARSON Introduction to Automotive Service James Halderman, Darrell Dastler © 2013 Pearson Higher Education, Inc. Pearson Prentice Hall - Upper Saddle River, NJ 07458

24 Dash Warning Lights and Driver Information Systems


FIGURE 24.21 Traction control system has been turned off.



PEARSON Introduction to Automotive Service James Halderman, David Duster © 2013 Pearson Higher Education, Inc. Pearson Prentice Hall, Upper Saddle River, NJ 07458

24 Dash Warning Lights and Driver Information Systems

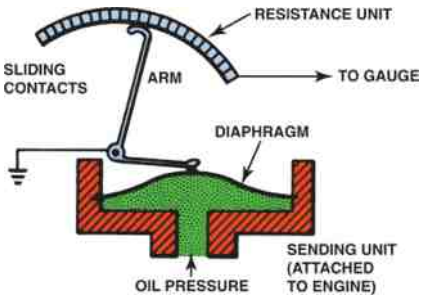
FIGURE 24.22 Indicates that the cruise control is on and able to maintain vehicle speed if set. Sometimes a symbol that looks like a small speedometer is used to indicate that the cruise control is on.



PEARSON Introduction to Automotive Service James Halderman, David Duster © 2013 Pearson Higher Education, Inc. Pearson Prentice Hall, Upper Saddle River, NJ 07458

24 Dash Warning Lights and Driver Information Systems


FIGURE 24.23 A typical oil pressure sending unit provides a varying amount of resistance as engine oil pressure changes. The output from the sensor is a variable voltage.



PEARSON Introduction to Automotive Service James Halderman, David Duster © 2013 Pearson Higher Education, Inc. Pearson Prentice Hall, Upper Saddle River, NJ 07458

24 Dash Warning Lights and Driver Information Systems

FIGURE 24.24 A temperature gauge showing normal operating temperature between 180°F and 215°F, depending on the specific vehicle and engine.



PEARSON Introduction to Automotive Service James Halderman, Darrel Dester © 2013 Pearson Higher Education, Inc. Pearson Practice Hall - Upper Saddle River, NJ 07458

24 Dash Warning Lights and Driver Information Systems

FIGURE 24.25 A typical head-up display showing zero miles per hour, which is actually projected on the windshield from the head-up display in the dash.



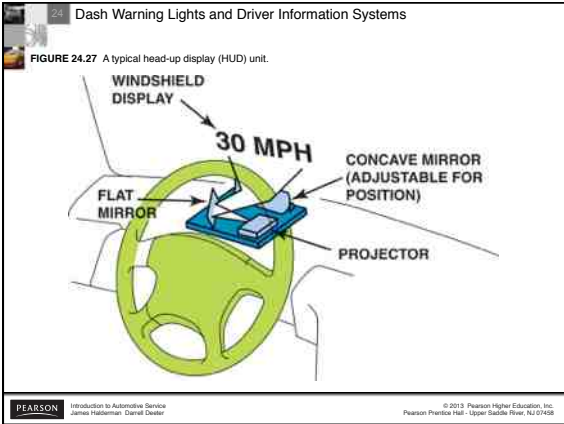
PEARSON Introduction to Automotive Service James Halderman, Darrel Dester © 2013 Pearson Higher Education, Inc. Pearson Practice Hall - Upper Saddle River, NJ 07458

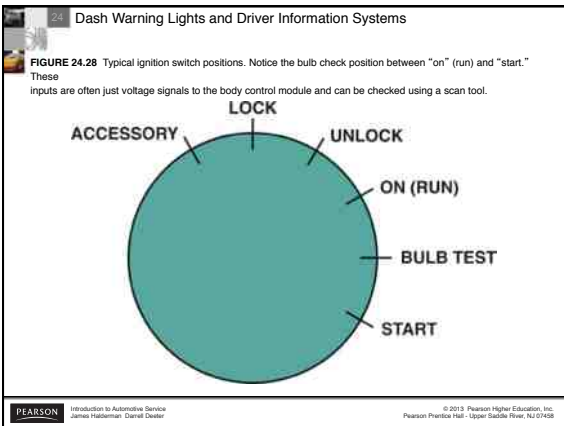
24 Dash Warning Lights and Driver Information Systems

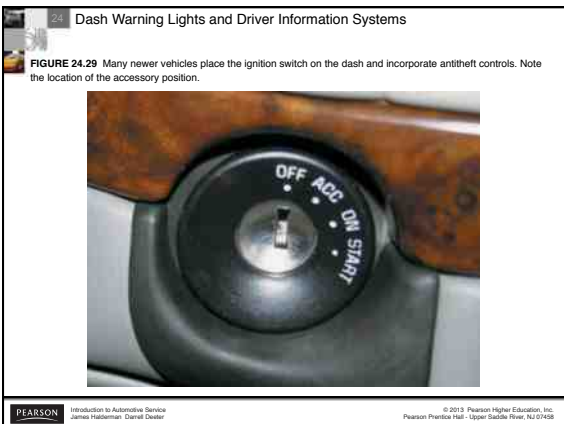
FIGURE 24.26 The dash-mounted control for the head-up display on this Cadillac allows the driver to move the image up and down on the windshield for best viewing.



PEARSON Introduction to Automotive Service James Halderman, Darrel Dester © 2013 Pearson Higher Education, Inc. Pearson Practice Hall - Upper Saddle River, NJ 07458








24 Dash Warning Lights and Driver Information Systems

FIGURE 24.30 A night vision camera behind the grille of a Cadillac.



PEARSON Introduction to Automotive Service James Halderman, David Dwyer © 2013 Pearson Higher Education, Inc. Pearson Practice Hall - Upper Saddle River, NJ 07458

24 Dash Warning Lights and Driver Information Systems

FIGURE 24.31 A vehicle speed sensor located in the extension housing of the transmission. Some vehicles use the wheel speed sensors for vehicle speed information.


VEHICLE SPEED (VS) SENSOR



PEARSON Introduction to Automotive Service James Halderman, David Dwyer © 2013 Pearson Higher Education, Inc. Pearson Practice Hall - Upper Saddle River, NJ 07458

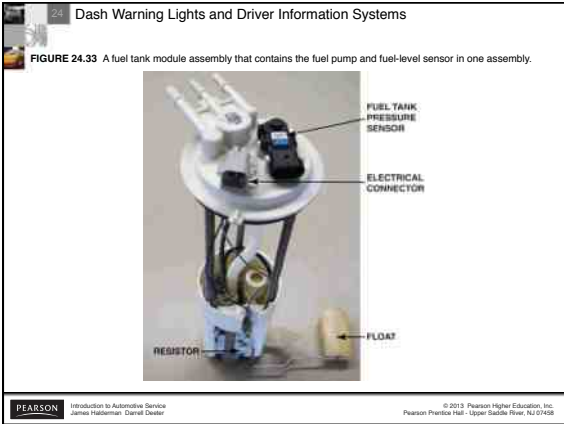
24 Dash Warning Lights and Driver Information Systems

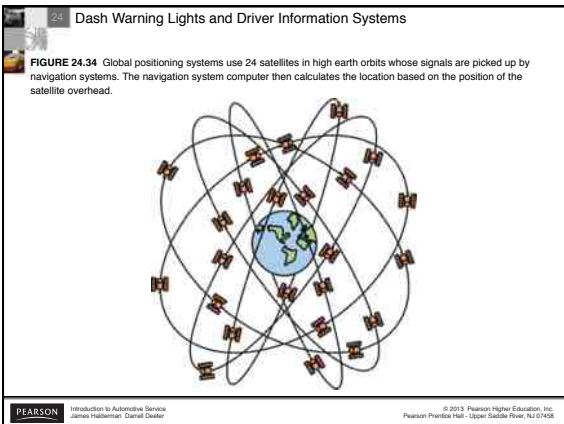
FIGURE 24.32 (a) Some odometers are mechanical and are operated by an electric stepper motor. (b) Many vehicles are equipped with an electronic odometer.

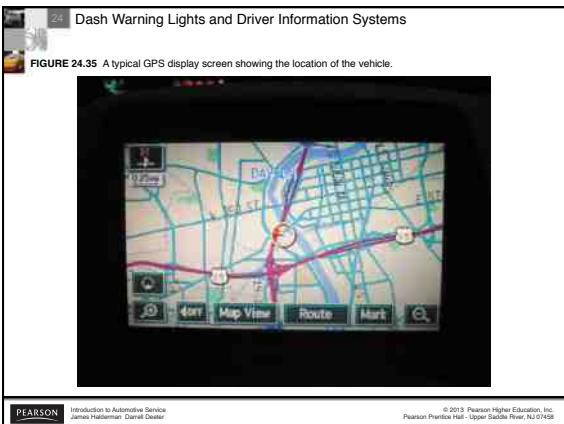


(a) (b)

PEARSON Introduction to Automotive Service James Halderman, David Dwyer © 2013 Pearson Higher Education, Inc. Pearson Practice Hall - Upper Saddle River, NJ 07458







24 Dash Warning Lights and Driver Information Systems

FIGURE 24.36 A typical navigation display showing various options. Some systems do not allow access to these functions if the vehicle is in gear and/or moving.

The image shows a navigation system interface. On the left, there are three main menu items: 'Search Condition', 'Detour', and 'Route Preference'. On the right, there are two columns of buttons: 'Destination' and 'Preferred road'. Under 'Destination' are 'Add', 'Delete', and 'Reorder' buttons. Under 'Preferred road' are 'Add' and 'Delete' buttons. A 'Back' button is in the top right corner. At the bottom, there are icons for 'Route', 'Route', 'Drive', and a search icon.

PEARSON Introduction to Automotive Service James Halderman, David Dostal © 2013 Pearson Higher Education, Inc. Pearson Practice Hall - Upper Saddle River, NJ 07458

24 Dash Warning Lights and Driver Information Systems

FIGURE 24.37 The three-button OnStar control is located on the inside rearview mirror. The left button (telephone handset icon) is pushed if a hands-free cellular call is to be made. The center button is depressed to contact an OnStar advisor and the right emergency button is used to request that help be sent to the vehicle's location.

The image is a close-up of the OnStar control located on the inside rearview mirror. It consists of three buttons: a left button with a telephone handset icon, a center button with a person icon, and a right button with a red star icon.

PEARSON Introduction to Automotive Service James Halderman, David Dostal © 2013 Pearson Higher Education, Inc. Pearson Practice Hall - Upper Saddle River, NJ 07458

24 Dash Warning Lights and Driver Information Systems


FIGURE 24.38 A typical view displayed on the navigation screen from the backup camera.

The image shows a view from a backup camera displayed on a navigation screen. The view is a wide-angle shot of a paved area, possibly a parking lot or a driveway, with a building in the background. The text 'Check Surrounding Area' is visible at the top of the screen.

PEARSON Introduction to Automotive Service James Halderman, David Dostal © 2013 Pearson Higher Education, Inc. Pearson Practice Hall - Upper Saddle River, NJ 07458

24 Dash Warning Lights and Driver Information Systems


FIGURE 24.39 A typical fisheye-type backup camera usually located near the center on the rear of the vehicle near the license plate.



PEARSON Introduction to Automotive Service James Halderman, Darrell Dastler © 2013 Pearson Higher Education, Inc. Pearson Practice Hall - Upper Saddle River, NJ 07438

24 Dash Warning Lights and Driver Information Systems


FIGURE 24.40 A typical backup sensor display located above the rear window inside the vehicle. The warning lights are visible in the inside rearview mirror.



PEARSON Introduction to Automotive Service James Halderman, Darrell Dastler © 2013 Pearson Higher Education, Inc. Pearson Practice Hall - Upper Saddle River, NJ 07438

24 Dash Warning Lights and Driver Information Systems

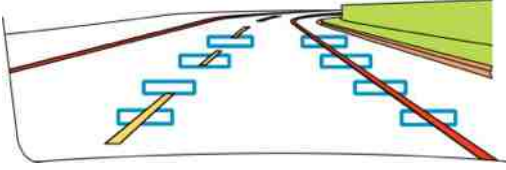
FIGURE 24.41 The small round buttons in the rear bumper are ultrasonic sensors used to sense distance to an object.



PEARSON Introduction to Automotive Service James Halderman, Darrell Dastler © 2013 Pearson Higher Education, Inc. Pearson Practice Hall - Upper Saddle River, NJ 07438

24 Dash Warning Lights and Driver Information Systems

FIGURE 24.42 A lane departure warning system often uses cameras to sense the road lines and warns the driver if the vehicle is not staying within the lane, unless the turn signal is on.



PEARSON Introduction to Automotive Service
James Halderman, General Editor

© 2013 Pearson Higher Education, Inc.
Pearson Prentice Hall, Upper Saddle River, NJ 07458
