Tell-Tale Lights

ALTERNATOR & GENERATOR

DESCRIPTION

Consists of an indicator light bulb mounted in instrument panel cluster and connected to the ignition switch and grounded through the generator or alternator. Light goes on when ignition switch turned on and should go out when generator begins to charge.

TROUBLE SHOOTING & DIAGNOSIS

LIGHT OFF, IGNITION ON, ENGINE STOPPED

Indicator bulb burned out. Open circuit or loose connections in light circuit. Blow indicator light circuit fuse (if equipped).

LIGHT ON, ENGINE RUNNING

Low idle speed. Low generator or alternator output. Improperly adjusted regulator. Generator or alternator field improperly grounded.

LIGHTS ON, IGNITION OFF (CARS WITH ALTERNATOR)

Shorted positive diode in alternator with continuous drain on battery.

TESTING CAUTION — On cars with double contact voltage regulator, do not ground regulator FLD terminal when making tests.

OIL PRESSURE & 1-BULB TEMPERATURE

DESCRIPTION

Consists of an indicator light bulb mounted in instrument cluster which is connected to the ignition switch and grounded through an oil pressure or temperature switch mounted on engine. Light goes on when ignition switch is turned on (or during engine cranking on temperature indicators), and should go out when oil pressure against switch reaches predetermined pressure.

TROUBLE SHOOTING & DIAGNOSIS

LIGHT OFF, IGNITION ON, ENGINE STOPPED

Indicator bulb burned out. Open circuit between ignition switch and light, or between light and pressure or temperature switch. Engine sending switch not grounded (check for sealing compound on switch threads). Switch faulty.

LIGHT ON, ENGINE RUNNING

Circuit grounded between light and sending switch. Sending switch shorted. Switch improperly calibrated (increase engine speed to see if light goes out). Low oil pressure or high coolant temperature.

2-BULB TEMPERATURE

DESCRIPTION

The unit consists of one red and one green (or blue) indicator light in instrument cluster and a thermal unit at rear of engine (usually the left hand cylinder head). The thermal unit contains a bi-metal strip which is actuated between two terminals within the unit. The thermal unit has three basic positions: Cold, Normal, Hot.

OPERATION

When the ignition switch is turned to the start position, a test circuit is closed to determine if red light is functioning properly. When a cold engine is started, the bi-metal strip closes the circuit to the green (or blue) light, causing the green (or blue) light to burn indicating that the engine is not up to operating temperature and this light remains on until the engine reaches operating temperature. If the engine reaches an abnormally high temperature, the bi-metal strip closes the circuit to the red light, causing the red light to burn indicating that the engine temperature is abnormally high.

LOW BRAKE INDICATOR SWITCH

DESCRIPTION

Mechanical switch mounted on brake pedal bracket. Used on all Cadillac models with drum brakes. Switch turns parking brake warning light on if brake pedal travel exceeds 2¾". Switch turns off when pressure is removed from pedal.

ADJUSTMENT

Switch is a combination Cruise Control and Low Brake Indicator Switch, even on cars that are not equipped with Cruise Control. If Cruise Control portion of switch is adjusted, then Low Brake Indicator portion of switch will automatically be adjusted. Remove connector from switch and connect a self-powered test light across the two bare terminals. Test light should be ON when brake pedal is released, and should go OFF when brake pedal is depressed approximately one half inch. Loosen switch mounting screw to adjust.

BRAKE FAILURE WARNING LIGHT SWITCH

DESCRIPTION

Switch is mounted near master cylinder (part of proportioning valve on some models) and is connected to both front and rear hydraulic brake lines. If a hydraulic pressure difference between front and rear brakes exists, switch will turn on brake warning light when brake pedal is depressed.

OPERATION

Switch consists of a single piston activated on one end by hydraulic pressure from front brake system and on other end by pressure from rear brake system. If pressure is equal on both ends, piston will not move. If pressure drops on one end, higher pressure of opposite end will force piston to low pressure side. Piston movement will actuate switch causing brake warning indicator to light. Switch can be tested for proper operation by loosening a bleeder screw while pressure is being applied to brake pedal and observing light. *NOTE - Turn ignition key on and release parking brake when testing.* Test both front and rear systems, then reset switch if necessary.