



**Air filter:** A paper or synthetic baffle that blocks dust, dirt and debris as air enters the engine combustion chamber.

**Aftermarket:** Part not made by the original manufacturer.

**All-wheel drive (AWD):** Permanent, four-wheel drive system designed for improved traction on slippery surfaces and off-road use. The main difference between AWD and 4WD systems is that the driver cannot disengage AWD.

**Anti-freeze (coolant):** The liquid located in the cooling system and engine that dissipates heat. Engine coolant prevents freeze-up in winter, reduces the engine temperature in summer, and protects the cooling system from rust and corrosion year round.

**Anti-lock braking system (ABS):** System that prevents wheel lock-up by automatically regulating the brakes. ABS can decrease braking distances, prevent skidding and allow more control during sudden stops.

**Backfire:** Gunshot-like sound from the engine or tailpipe.

**Balancing:** By adding small amounts of lead weights to the wheel, it is possible to equal out any unevenly distributed weight, which may be present in the tire or wheel. Proper balance helps eliminate unwanted wheel and tire vibrations, and uneven wear caused by an out-of-balanced tire and wheel condition.

**Battery acid (electrolyte):** The fluid in most automotive batteries, which is a solution of sulfuric acid and water.

**Brake fluid:** The liquid in the brake system that acts as a hydraulic fluid. As you step on the brake pedal, the fluid is forced through the brake system and activates the braking components.

**Battery hold-down:** A fastening device used to secure the battery in place. The two most common types are the wedge (which fastens near the bottom of the battery), and a strap or bracket (which goes across the top of the battery to hold it firmly in place).

**Bottoming:** When your vehicle reaches the limits of the suspension travel (such as when going over bumps), and the vehicle's springs are completely compressed. The vehicle produces a transfer of noise/harshness, particularly through the steering, with possible contact of the undercarriage with the pavement.

**Brake drag:** Brakes that do not completely release.

**Brake fade:** Increased brake pedal effort is required to obtain braking action, particularly on hard stops.



**Brake master cylinder (master cylinder):** Master cylinders are used on braking systems to turn the mechanical power provided when you step on the brake pedal into the hydraulic power that is needed to apply the brakes and slow or stop the vehicle. The brake master cylinder is where the brake fluid reservoir is located on most vehicles. The reservoir stores the fluid until it is needed.

**Bucking:** Engine hesitates or transmission slips, kicks in, and the car lurches.

**Catalytic converter:** A component that isolates particles in the vehicle exhaust and incinerates them before they leave the tailpipe.

**Chassis:** Undercarriage of a vehicle that carries all suspension and power train components.

**Cold cranking amps (CCA):** A rating that indicates the amount of power a battery can provide for engine cranking in cold-start conditions.

**Coolant (anti-freeze):** The liquid located in the cooling system and engine used to dissipate heat. Engine coolant prevents freeze-up in winter, reduces the engine temperature in the summer, and protects the cooling system from rust and corrosion year round.

**Coolant recovery reservoir:** A tank that stores additional coolant. When the system needs to expel excess coolant, the coolant reservoir stores that coolant for future system requirements. When the cooling system needs coolant, it is sucked into the cooling systems radiator from the reservoir.

**Compression ratio:** The ratio between the largest and smallest possible volumes in the cylinder of an internal-combustion engine that contains a combination of fuel and air being compressed. For example, a compression ratio of 9:1 means the piston has compressed the air/fuel mixture into a space that is nine times smaller than it would normally use.

**Control arms:** Pivoting suspension components mounted between the frame (or uni-body) and the wheels.

**Crank:** If the car “cranks” it means the engine is spinning or “turning over.” If the car “will not crank” when you turn the ignition key, you hear either a clicking sound, or nothing at all.

**Crankcase:** The single largest section of engine containing the crankshaft in an oil-tight housing.

**Crankshaft:** The rod that transfers the power in the engine to the transmission.

**Curb weight:** The weight of a vehicle carrying a full tank of fuel but no passengers or cargo.

**Cuts out:** When an engine loses power or misfires and feels like the engine is shut off momentarily.

**Detonation (knocking):** Rapid, rattling combustion.



**Dieseling:** Fuel continues burning and the engine continues to run after you have turned off the car.

**Differential:** Gear system that allows one wheel to rotate faster than the other while providing equal power to each wheel. Differential is necessary when turning or cornering.

**Differential lube (gear oil):** A heavy-duty lubricant designed specifically to handle the requirements of the internal gear and mechanisms that are located within the differential case.

**Dipstick:** The device used to measure the level of a fluid (usually oil or transmission fluid). Commonly referred to as an “oil dipstick” or “transmission dipstick,” it also can be found in power steering reservoirs.

**Disc brake:** Brake design in which brake pads press against a disc (commonly known as a brake rotor) to slow or stop the vehicle.

**Drive shaft:** Shaft coupled to the transmission that supplies power to the drive wheels.

**Dual overhead camshafts (DOHC):** An engine with two camshafts located in the upper portion of the cylinder head.

**Electrolyte (battery acid):** A solution of sulfuric acid and water that is found in most batteries.

**Electronic fuel injection (EFI):** A fuel delivery system wherein nozzles (injectors) spray fuel into the intake manifold or cylinders allowing for precise fuel control and better fuel efficiency than a carburetor system.

**Engine block:** The lower portion of the engine in an enclosed casting that contains the cylinders, pistons, connecting rods and crankshaft.

**Fast idle:** Engine runs fast while vehicle is stopped.

**Flooding:** Excess fuel in the cylinders that makes starting difficult or impossible.

**Four-wheel-drive (4WD or 4X4):** Drive system that powers all four wheels providing better traction during adverse road conditions and off-road use.

**Front-wheel-drive (FWD):** Drive system that provides power to the front wheels of the vehicle. Front-wheel drive systems incorporate a differential into a transmission, creating a transaxle. A transaxle can be automatic or manual shift.

**Fuel injection (electronic fuel injection or EFI):** A fuel delivery system wherein nozzles (injectors) spray fuel into the intake manifold or cylinders allowing for precise fuel control and better fuel efficiency than a carburetor system.



**Gear oil (differential lube):** A heavy-duty lubricant designed specifically to handle the requirements of the internal gear and mechanisms that are located within the differential case.

**Grab:** Brakes “grab” when the car stops even when applying light pressure on the brake pedal.

**Group number:** A designated number identifying the battery height, terminal design, length, width and overall physical description of the battery.

**Hesitation:** Momentary loss of power on acceleration.

**Horsepower:** The measurement of the engine's ability to produce energy.

**Intermittent:** A problem that comes and goes with no obvious pattern.

**Knocking (detonation):** Rapid, rattling combustion.

**Master cylinder (brake master cylinder):** Master cylinders are used on braking systems to turn the mechanical power that is provided when you step on the brake pedal into the hydraulic power that is needed to apply the brakes and slow or stop the vehicle. The brake master cylinder is where the brake fluid reservoir is located on most vehicles. The reservoir stores the fluid until it is needed.

**Misfire (Miss):** The failure of the fuel charge in one or more engine cylinders to ignite at the proper time.

**Multi-point injection:** A fuel delivery system that utilizes a fuel injector for each cylinder.

**Play:** Degree of “looseness” in steering wheel, delay between turning the steering wheel and the wheels turning.

**Port fuel injection:** A fuel delivery system that utilizes a fuel injector for each cylinder.

**Positive crankcase ventilation (PCV):** If the PCV valve is clogged, your car will run rough or stall. It may also cause engine to use oil, smoke, and have high emissions.

**Power loss:** Engine runs at reduced speed or requires more throttle to maintain constant speed.

**Power train:** The combination of the engine and transmission that deliver power to the axles and wheels via the drive shaft.

**Pull:** Vehicle moves to one side when driving or braking.



**Radiator:** A reservoir of pipes and fins that allows hot coolant or antifreeze to be pumped from the engine and cooled as it passes through the component dissipating heat. This process is aided by a fan that blows air onto the radiator.

**Revolutions per minute (RPM):** The speed the engine crankshaft is turning.

**Ride:** The driver's comfort level while driving. Factors that determine a vehicle's ride include the suspension, steering and brakes.

**Rough idle:** When the engine vibrates or shakes while the vehicle is stationary.

**Rust proofing:** A protective coating is applied to vulnerable areas on your vehicle (usually the undercarriage and bottom of the vehicle).

**Shimmy:** Side-to-side motion that cause the tires and steering wheel to shake.

**Shock absorber:** A suspension component designed to dampen spring oscillation. It can be either gas- or oil-fed, depending on make and model of vehicle.

**Sidewall:** The most visible part of the tire when viewing the vehicle from either side. The sidewall contains information about the tire size, grade, and ratings as well as the manufacturer's name.

**Single overhead camshaft (SOHC):** An engine with one camshaft located in the upper portion of the cylinder head.

**Sluggish:** Vehicle does not accelerate smoothly or with authority.

**Specific gravity:** This term is usually used in connection with the testing of the battery's electrolyte. A specific gravity test is used to determine the battery's state of charge. On sealed "maintenance free" batteries there is usually an indicator on the top of the battery that serves the same function.

**Stall:** Engine quits running.

**Strut:** Also known as a "MacPherson strut." This suspension component incorporates the dampening ability of a shock absorber with the rebound of a coil spring. It is mounted to the outer portion of the assembly. If no spring is present, it is called a "modified strut."

**Stumble:** Engine begins to stall but then kicks in.

**Surge:** Engine speeds up and slows down with no acceleration or braking by the driver.

**Suspension:** The combination of springs, shock absorbers and related parts that dampen the motion of the vehicle over the road to create a smoother and more stable ride



**Technical service bulletin (TSB):** An advisory issued by manufacturers that describes performance problems or updated maintenance fixes for vehicles of a specific make, model and year.

**Thermostat:** A component that helps regulate engine temperature by controlling the speed with which coolant circulates through the engine as well as the fan.

**Torque:** Force produced by the engine.

**Transaxle:** Used in front-wheel drive and rear-engine, rear-wheel drive vehicles. Transaxles incorporate both a transmission and a differential into a single unit.

**Transverse mounted engine:** An engine that is mounted from side-to-side, in relation to the vehicle, typically found in front-wheel-drive vehicles..

**Tread:** The pattern that is designed into the area of the tire that comes into contact with the road (or other driving surface). These patterns or groves in the tire provide increased traction.

**Undercarriage:** Supporting structure and framework. Essentially, it is the under-side of the vehicle.

**Vacuum:** A suction force is created (similar to your vacuum cleaner) through the vacuum hoses to activate various components in the engine.

**Vacuum hose:** A hose (usually rubber or hard plastic) that transfers vacuum to various components in the engine.

**Water pump:** The pump that circulates coolant or antifreeze through the engine and radiator.

**Wander:** Vehicle drifts from side to side while driver steers straight.

**Wheel (rim):** This is what the tire is mounted on. Wheels can be made of steel or an alloy, such as aluminum.