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Basic Car Safety Inspection

Introduction

A car operates using a variety of systems from the air conditioner to the power steering and everything in between. Some systems require little maintenance so a basic visual safety inspection is necessary. Other systems need a routine maintenance schedule where a particular service or replacement is required. A car safety check is included at all service intervals and is used to detect any malfunction due to outside forces such as road debris and failed system components. In between service intervals safety inspections are also necessary before a long journey to ensure safe passage. Start with the vehicle in park on level ground, in cool condition with the engine off. Next, release the hood latch and lift the hood, the hood will only open slightly because all hoods have been designed with a secondary safety latch that must be activated before the hood will open completely. Follow the checklist below:

- **Checking Fluid Levels** - Check the engine oil level (engine off) the engine oil level dip stick is usually indicated by a yellow handle. There are two level indicator marks, upper level and lower level. The distance in between these marks represent a quart, if the oil is in between the marks the level is ok. If the oil level is below the lower level mark or not on the dip stick at all engine oil must be added until between the indicator lines. Other Additional fluid level inspections can include: transmission fluid, either standard or automatic transmission fluid, power steering fluid, brake fluid, front and rear differential fluids on some models. All fluids must be maintained to a proper level, while some are easily checked others will require a lift. A standard list of fluid level checks would be: engine oil, engine coolant, windshield washer fluid, transmission fluid, brake system, power steering system (if equipped) and differentials.
- **Checking Tire Wear Condition** - Car tires are made out of flexible rubber which is incorporated with wire and fabric. The tires of an automobile support the braking, load, traction, and steering. Tires also absorb shock caused by bumps in the road and help provide a smooth ride to the passengers. Tires need to be maintained at a prescribed air pressure and rotated at scheduled intervals. Most vehicle tire pressure recommendations are located on a sticker in the driver's door jam or on the side wall of the tire. While tire and car manufacturers recommend a prescribed tire pressure, it has been shown that slightly more tire pressure is optimal for achieving higher fuel economy by reducing rolling resistance. Some hybrid cars are manufactured with tires that can hold up to 55 P.S.I. as compared with the usual 32 P.S.I. For safety and better gas mileage always keep your tires properly inflated. Tire rotation patterns are dependent on the vehicle driving conditions and inflation. Most vehicle rotation pattern is straight front [wheels](#) to rear wheels. Also check the air in your spare [tire](#) located in the trunk, you never know when you will need it.
- **Checking Multi Rib Belt** - A multi rib belt or [drive belt](#) is used to supply power to the many accessories such as the alternator or water pump. These belts are a normal service item and must be replaced when signs of wear are present. To inspect the multi rib belt release the hood latch and open the hood. The belt is connected to the drive pulley of the engine to supply power. If the belt fails it will almost always render your vehicle inoperable until the [drive belt](#) is replaced. Typically most people are able to replace a serpentine belt themselves with basic [automotive repair](#) knowledge. When replacing the belt draw a diagram of the belt routing before you start to avoid confusion. If you have removed the drive belt and need the belt routing you can look it up on a [belt routing diagram](#).
- **Checking Engine Coolant Hoses** - Engine coolant is used to transfer heat from the engine to the radiator, if a [coolant leak](#) is present the engine will eventually overheat. Inspect the [engine coolant](#) level in the coolant reservoir tank, coolant level should be between the hot and cold marks. Always check the coolant level when the engine is cold, preferably over night. If the coolant level is not between the reservoir marks the cooling system may have a leak.
- **Checking Safety Belt and Air Bag System** - The safety systems in your car are designed to help prevent injury in an event of an accident. There is no maintenance for these items just visual and operational inspections. To check test the air bag safety system start by sitting in the driver's seat with all doors closed. Turn the ignition key to start the engine and allow to idle, the air bag warning light should illuminate for about five seconds and then go out. If the air bag warning light stays illuminated the system has shut down. (note: if an air bag warning light is illuminated while driving the air bag safety system has been disabled and will not activate in case of an accident.) Next, inspect all seat safety belts, with the car engine off on level ground take each belt and pull it out completely. Inspect the belt material for defects, tears or burn marks. Next check the retraction action of the belt it should retract fully with no rough or weak spots. Replace any seat belt that is damaged or shows signs of wear.
- **Checking Horn, Headlight and External Lighting Systems** - The lights in and around your vehicle are not only a convenience they are a safety precaution. All lights on your vehicle should be working at all times, if fact it's against the law for any exterior lights on your car not to be working. If it was designed by the manufacturer to work on your vehicle it must work at all times. Make it a regular check for your vehicle to assure the proper operation for your lights.
- **Check Windshield Wipers** - In foul weather is essential to have new wiper blades to ensure proper windshield vision and control of the car. Replacing car wiper blades is relatively simple, first move the wiper arm to the upright position, next release the clip that attaches the wiper blade to the wiper arm. Check blades for cracking or tears in the wiper rubber. Then, match up the new wiper blade to the old blade, next snap the new wiper blade in place and lower the wiper arm, repeat this operation on the opposite side.