



In Arizona, the  
average battery  
life expectancy is  
**28 months.**

Don't get  
stranded.

AAA Membership features Battery Service with 36 month free replacement and on site installation

MEMBERSHIP • FINANCIAL SERVICES  
TRAVEL • INSURANCE • AUTOMOTIVE

visit  
AAA offices

click  
AAA.com

call  
800-352-5382



## MAINTENANCE : ANNUAL VEHICLE CHECKLIST

# Preventing an unwanted adventure

By Mark Ferner  
ASE Master Automobile Technician  
Shell Global Solutions (US) Inc.



Just about everyone is familiar with Steppenwolf's 1969 hit song in which the band urges you to get your motor running, head out on the highway, and look for adventure. But the last adventure anyone wants to experience is a major breakdown on the side of the road. To start the new year off right and reduce the need for costly car repairs, plan ahead and give your vehicle an annual check-up. Answer the following 10 questions before hitting the highway, and learn how to help keep major repairs and expenses at bay.

### **When was the last oil change?**

If you drive in stop-and-go traffic, your engine may require more frequent oil changes. Other common conditions possibly requiring more frequent oil changes include driving in extreme temperatures, hauling heavy loads, or driving in muddy or mountainous terrain. To protect your vehicle's engine, be sure to read your owner's manual and change the oil based on the manufacturer's recommendations.

### **Are there oil spots in the garage?**

To check if your car is leaking fluids—whether it's brake, transmission or power steering fluid—leave a newspaper on the ground overnight where you park the car. If you find spots or stains on the paper, you should have a certified automotive technician inspect the car immediately for fluid leaks. Even if you don't notice a leak, check engine fluid levels on a regular basis.

### **What kind of gas do I fill up with?**

Most people don't realize that all gasolines are not the same. Look for a high-quality fuel with added cleaning power—like those identified as TOP TIER Detergent Gasoline. For example, all Shell gasolines are certified

as TOP TIER and have more cleaning power than required by government standards. Added cleaning power can help keep your car's engine free of carbon deposit build-up known to negatively affect an engine's performance.

### **Is there light knocking when accelerating?**

It's probably "engine knock," which is uncontrolled combustion associated with using gasoline with too little octane. Occasional, light knocking is acceptable, but heavy or persistent knocking could damage the engine. If you hear these sounds, try switching to mid-grade or premium gasoline. If knocking persists, ask a professional technician to check your car.

### **When was the last brake inspection?**

If the brake pedal feels spongy, or you hear a grinding noise, or the car pulls to either side when braking, it could signal a problem with the brake system. If you think you have a problem, have the brakes checked by a technician. Brakes are a key safety feature and should be inspected at least once a year.

### **Have I checked the tires recently?**

Tire inflation should be checked and adjusted on a monthly basis when the tires are cold. The recommended tire pressure will be listed in your vehicle's owner's manual or on a placard in the glove box, door jamb or trunk lid. Rotating tires regularly, typically every 5,000 to 7,500 miles, is essential to help them wear evenly and last longer.

### **How do belts and hoses under the hood look?**

With the engine off and cool, inspect the belts and hoses for cracks, swelling or brittleness, which could indicate that it's time for a change. Even if they look good, replace belts and hoses based on the schedule recommended in your vehicle's owner's manual.

### **Does the car's battery appear corroded?**

The battery is the primary power supply for starting your car and helps power most of the car's electronic components. The battery cable terminals should be tight and relatively free of corrosion. If the battery appears to be corroded, an automotive technician can service it easily. It's best to have the battery and starting system inspected by a technician annually.

### **Does the tailpipe blow excessive smoke?**

White smoke could indicate that your vehicle may be burning antifreeze or water. Blue or black smoke means the vehicle may be burning oil or excessive fuel, which may lead to major repairs unless diagnosed quickly. It's best to consult an automotive technician as soon as possible.

### **Is the "CHECK ENGINE" light on?**

The cause may be as simple as a loose gas cap, or it may mean the car needs urgent attention. Take your vehicle to a repair facility where they can read the codes from the engine's onboard computer. If the CHECK ENGINE light flashes on and off while you drive, it's even more important that you seek professional attention immediately.

So, whether you're born to be wild or like to play it safe, keep in mind that a little preventive maintenance may help avoid major car repairs and an unwanted adventure in the coming year. ■

**MARK FERNER** is certified as an ASE master automobile technician by the National Institute for Automotive Service Excellence. Ferner currently leads an automotive and transport lubricants team at Shell Global Solutions (US) Inc. Shell Global Solutions is a network of independent technology companies in the Shell Group.