AUTO FAST FIXES

Every year, we surrender more and more of our car repairs to service technicians. While it may seem that the only thing left to do ourselves is put gas in the tank, we *can* take steps to increase our safety and prevent major repairs.

VACATION CHECKLIST

Fun and carefree vacations can turn sour at even the simplest auto breakdown. Follow the checklist on these two pages and you'll likely eliminate problems and nuisances that can arise from a neglected car or truck.

by **Bob Lacivita** and **David Radtke**

Check your oil and transmission fluid.

If your oil hasn't been changed in the last 3,000 miles, change it and the filter. Also check the transmission fluid and all other vital drive-train lubricants. See your owner's manual.

Check your tires.

Look for excessive wear, bulges or any other irregularities on the side walls and treads. Look in your owner's manual for the proper tire pressure for your vehicle. Check the air pressure when the tires are cool.

Check your coolant hoses.

Look for deteriorating surfaces on the hoses, especially around the clamp connections to the radiator, heater or water pump. If any hose feels brittle, replace it. If the hoses are in good condition, check the coolant level and fill the coolant reservoir according to the instructions in your owner's manual. Never remove the radiator cap if your engine is warm or hot.

Check your headlights,

taillights, turn signals (see "Turn Signal Savvy" at right) and brake lights. These items are safety equipment and should always be in working order.

Have your brakes

checked by a trained technician. Cross-country trips often involve extreme driving conditions. You should have your brakes checked annually.

Check the belts

that drive the water pump, alternator, air-conditioning pump and power steering. Look for loose belts or surface cracks. Replace them if they're more than three years old.

FUSES

Before you head to the repair shop to have your dome light, power windows, radio or any other electrical accessory repaired, check your fuse panel. Fuses are designed to be the weak link in your car's wiring system; they "blow" in case of a current surge or short circuit, thereby protecting expensive electrical parts from damage.

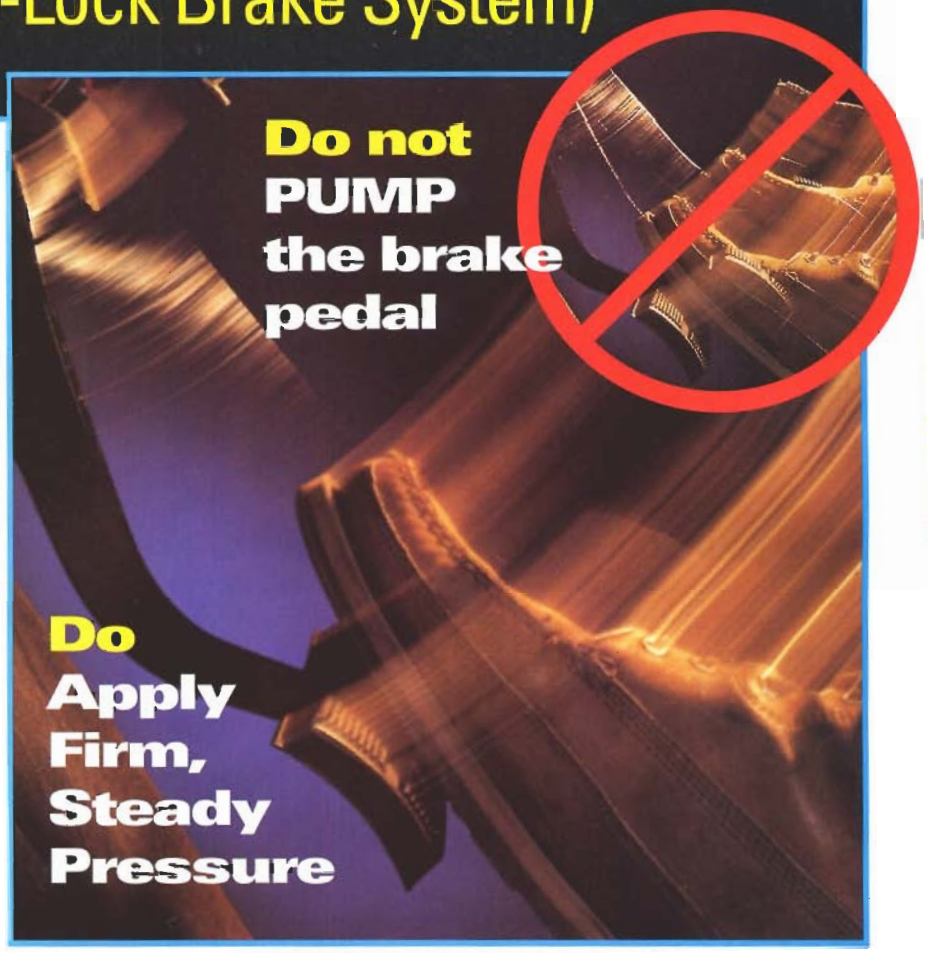
The fuse panel is usually found under the dash on the driver's side, but check your owner's manual for its exact location. Slots on the panel identify each accessory such as lights, turn signals, radio and fuel pump. Examine the fuse related to the problem you have. If the fuse is working, and your problem is with a lighted accessory, check to see if the bulb is burnt out. Replace fuses only with the exact replacement amperage, identified by color and sometimes number. If the new fuse burns out immediately, ask a service technician to inspect it.

TURN SIGNAL SAVVY

Getting tired of sticking your arm out the window to signal your next turn? Then follow this checklist to help you repair your turn signal problem.

- If your signal works on one side but not the other, check the bulbs on the bad side. If the bulb filaments are OK, check the socket for corrosion or a bad ground wire.
- If the signals don't work on either side, look for a blown fuse, then check all the bulbs, sockets and wires. If everything looks functional, install a new flasher (Photo above) located near your fuse panel.
- If you still can't find the problem, you may have a short or a bad switch. Have a trained service technician do the repair.

ABS (Anti-Lock Brake System)



Anti-lock brakes (or "ABS") have been in the news a lot lately. Designed to keep the wheels from locking up and skidding during braking, ABS is supposed to provide better vehicle control around corners and better steering on slippery roads. However, studies show that ABS hasn't reduced fatal accident rates as expected. Many researchers believe that's because drivers are not using them properly.

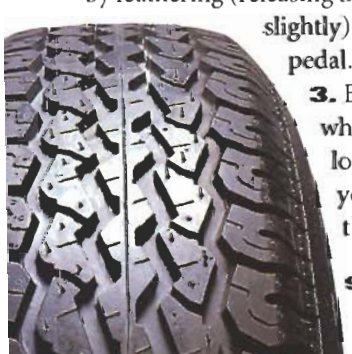
Unlike conventional brakes, which require the driver to pump them in slippery conditions, the ABS pumps the pedal for the driver, up to 20 times a second. Pumping the brake pedal manually compromises the effectiveness of ABS and may in fact cause an accident.

To get the most from ABS, you'll need to use them correctly. Take a few minutes to read through this even if you don't currently have a vehicle with ABS. More than 20 million cars on the road today have ABS, and you'll no doubt have it on a future vehicle.

Here's how to use anti-lock brakes:

1. Forget traditional braking habits. Step down hard on the brake pedal and apply steady, firm pressure. Never pump anti-lock brakes!

2. Don't let the pedal up. The pulsating, grinding or groaning you may feel or hear is an indication the ABS is working properly. Remember, ABS pumps the pedal for you. Don't confuse the ECU (electrical control unit) by feathering (releasing the pressure slightly) the brake pedal.

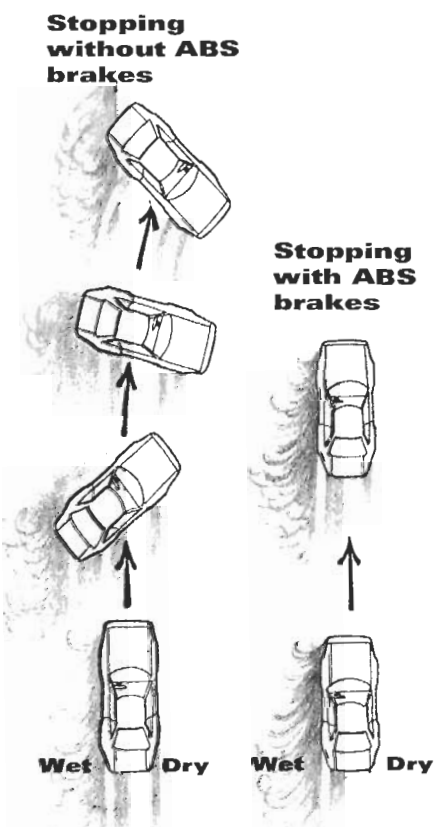


3. Because the wheels don't lock up when you step on the brake, you'll have greater steering control as you apply the brake pedal. Use the steering control you gain to your advantage. Steer around anything in your path. The steering may feel different while the ABS is working, but you'll have better control of your vehicle as you steer to avoid an accident.

4. *Practice* using ABS in an empty parking lot covered in rain, ice or snow. Keep slamming on the brakes to see how your vehicle reacts in slick conditions.

5. If you drive vehicles with and without ABS, make sure you hit the brake pedal appropriately for each vehicle.

6. Don't be lulled into a false sense of security by overestimating the stopping ability of ABS. Remember, ABS doesn't eliminate skids.



REPACKING Trailer Wheel Bearings

How many utility trailers did you see stranded along the roadside this summer? Most likely, they needed to have their wheel bearings cleaned and repacked with new grease long before their demise. You can do this simple maintenance task yourself or have it done every 20,000 miles. It's a messy job but only takes about an hour and can save up to $70 and a lot of grief.

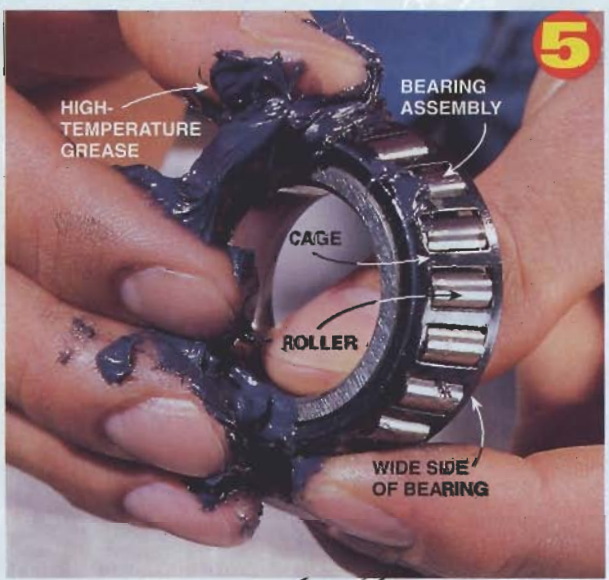
First, loosen the lug nuts a half turn and raise the vehicle with a jack. Support the vehicle or trailer with jack stands. Be careful! **TIP:** Spin the wheel and listen to the bearings. If the wheel is quiet and spins freely, you can proceed. If you hear a growling sound, you'll need to have a service center replace the bearings and races (bearing tacks) and check your spindle (**Fig. A**).

Along with the jack and jack stands, you'll need a screwdriver, hammer, large adjustable wrench, needle-nose pliers and some clean rags. **Photos 1 through 7** show how to repack the bearings.

Art Direction • BOB UNGAR
Photography • BILL ZUEHLKE

Remove the lug nuts and the wheel. Be sure the trailer is supported with jack stands.

Remove the grease cap carefully. You'll reuse it.



Clean off all the old grease from the bearings and from inside the hub. Inspect the bearings for damage such as pit marks and scoring. If the bearings show damage, get new ones from your dealer or trailer manufacturer. Use a degreasing solvent to wash all the old grease out of the bearings. Do not spin the bearings when they're dry! Using only high-temperature grease, partially fill the hub with new grease. Repack the bearings. Place a dollop of grease in the palm of your hand and work the grease into the wide side of the bearing cage. Just keep pushing and packing until the grease is thoroughly worked into the bearings. Be certain the rollers and cage are completely filled with grease.

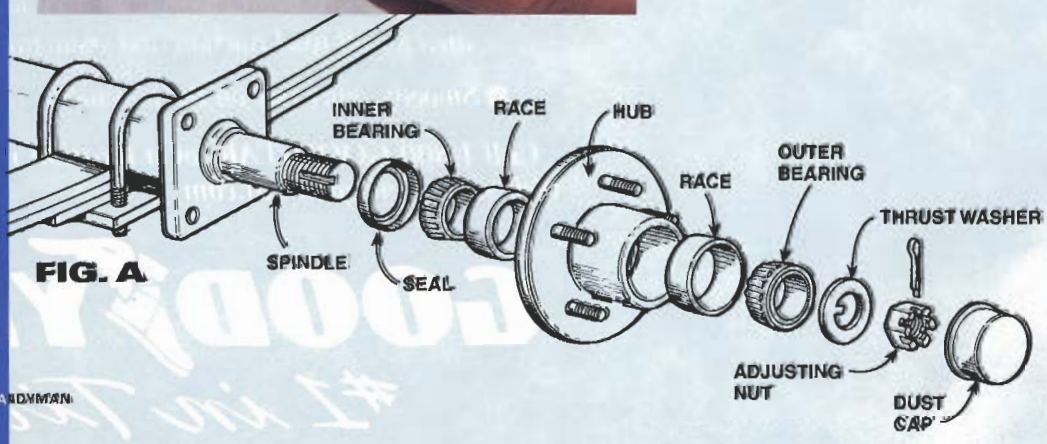
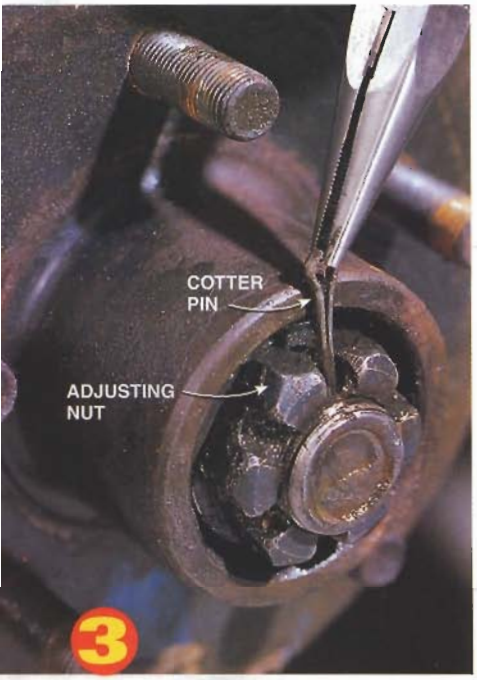
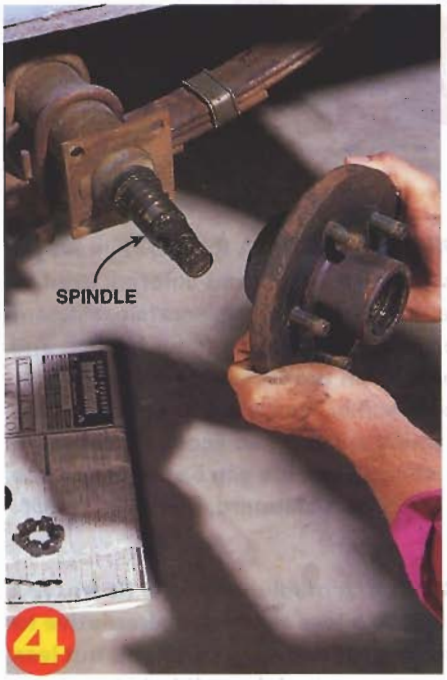


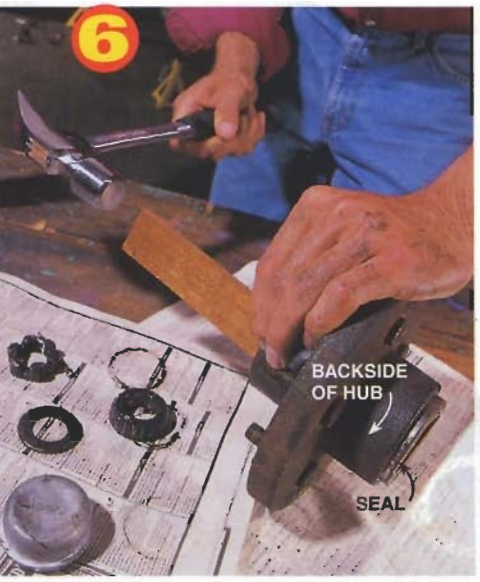
FIG. A



Remove the cotter pin with a needle nose pliers. Find a replacement cotter pin at a hardware or auto parts store.



Remove the retaining nut and washer, then pull out the bearings as you pull the hub toward you. Set the front bearings on clean newspaper.



Remove the rear bearing grease cap. You'll need to spray WD-40 or other penetrating oil around the edge of the cap to free it from the hub. Tap the cap out from the inside using a piece of wood as shown.

Slide the hub back on the spindle. As you're spinning the rotor or drum, tighten the nut. This preloads and seats the bearings. Back the nut off until it's loose about one-eighth of a turn. Retighten the nut until either of the holes of the spindle align with a slot in the nut. Install a new cotter pin and tap the dust cap on. Lightly coat the wheel studs with anti-seize compound. Replace the wheel. Snug the lug nuts, remove the jack stands and torque the lug nuts to manufacturer's specifications.