Reed College Occupational Health and Safety Committee Presents

Your Health
Your Safety
Our Concern

Brake Down:

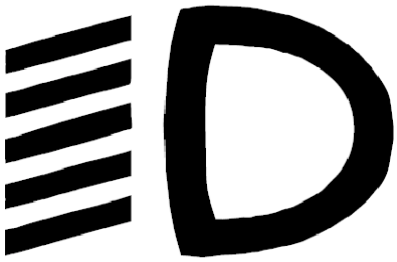
A primer for the modern Motorist

Driving...everybody's doing it. But are we doing a good job of it? Do we know the basics for keeping our cars running safely? The following is an overview of the practical driving wisdom that may have been forgotten or repressed along with those days of permit driving with Mom or Dad.

Night Life

Most drivers know that the road is more dangerous at night—what they don't know is that it's three times more dangerous. Here are some easy tips to get you through the night.

Headlight Protocol: Turn on your headlights an hour before dusk. In fog, use low beams or fog lights. Make sure your headlights are aligned to shine on the road rather than the adjacent scenery. Also, keep those headlights clean!



Stay In Sight: Periodically check your external lights (blinkers, brakes) to make sure they work. If you need to pull over while driving, turn on your hazards and then pull over—as far off the road as possible. Road flares or cones are surefire ways to make your presence known.

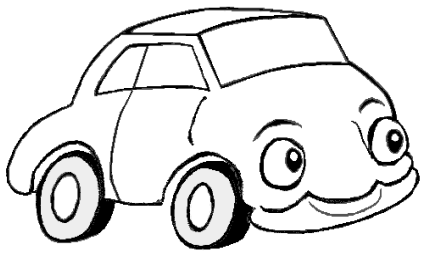
Blinded by the Light: Although tempting, refrain from watching the headlights of oncoming traffic. Focus on the white line marking the right edge of the traffic lane. If the lights from vehicles behind you shine into your rearview mirror, flip your mirror to its night time setting. Having clean windows is also an easy way to control glare, so keep some window cleaner on hand. If you have a glare problem because of eyeglasses, consider getting anti-reflective (AR) coating. AR-coated glasses also transmit more light, improving night vision.

Slippery When Wet

Portland is a rainy place, and driving in wet conditions is a bit different than when it's dry. Here is some advice to help you and your wheels get through the winter in one piece.

In the Rain: Keep your headlights on. Drive in the center lane as water tends to pool in the outside lanes, making it easy to hydroplane there. Take it slow—stopping distance increases significantly on slick roads. Plus, hydroplaning is more likely the faster you go. If you do start to hydroplane, stay calm and don't hit the brakes. Just steer in the direction that you are hydroplaning until you regain control. Drive slowly through puddles or streams of uncertain depth—it's better to back out than to be swept away.

On Ice: Be warned—even if it is only near freezing, there may be icy spots on overpasses, bridges, and in shady areas. Go slow and allow at least three times more following space than usual. Drive in a low gear to keep traction, especially on hills. Brake gently to avoid skidding. If you start sliding, stay calm, ease off the gas and steer in the direction you want to go. If you car has anti-lock brakes, brake firmly as you steer into the skid. If your car does not have anti-lock brakes, avoid using the brakes. When sliding, do not oversteer or you could spin out of control. If you get stuck, don't spin your tires. Throw down some gritty material (i.e. sand, kitty litter, salt) and try to ease out of the spot.



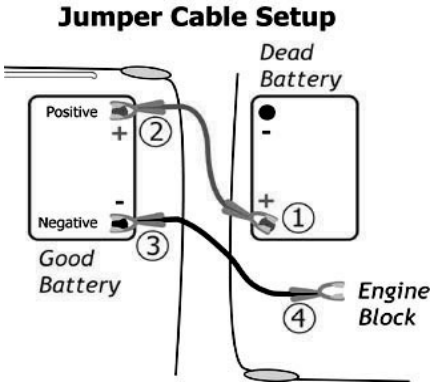
DIY Mechanics

These are easy ways to keep your car on the road,
and off the side of the road.

Tip-Top Tires: All you need to maintain your tires is an accurate pressure gauge and a penny. With your gauge, periodically check tire pressure. Tires can be 10psi under-inflated before appearing so. Low tires force the engine to work harder; for instance a tire under-inflated by as little as 2psi can reduce fuel efficiency by 10%. In addition, low tires wear out much faster.

Use your penny to test the tire tread. Tires should have at least 1/16in tread. Insert the penny into the tread groove with Lincoln's face showing upside-down. If you can see all of Honest Abe's head, you need a new tire.

Smooth Ride: It used to be the case that oil changes were thought to be needed every three months, or 3,000 miles. However, most vehicle manufacturers now recommend only once a year, or every 7,500 miles. If you do a lot of driving in very poor conditions, or have a diesel or turbocharged gasoline engine, stick to the old 3,000 mile recommendation.



Jumpstarts Made Easy: Line the two cars up with the batteries as close as they can be without touching. Turn off everything in both cars, unplug all accessories, and put the vehicles in park. Find the positive (+) and negative (-) battery terminals. Clean off the terminals for good contact. Do NOT jumpstart if the battery is cracked or leaking.

The (+) cable is usually red or orange and the (-) cable is black. Connect one (+) alligator clip to the (+) terminal of the dead battery. Then, connect the other (+) end to the (+) terminal of the good battery. Now connect the (-) end of the cable to the (-) terminal of the good battery. Attach the other (-) alligator clip to a big, clean nut in the dead car's engine. Don't connect it to the dead battery, as this increases the risk of an explosion. Remember: never let the metal alligator clips touch while electricity is flowing!

Start the working car and let it run for a few minutes before starting the dead car. Sometimes it helps to rev the good car a little while trying to start the dead car. When you're done, take off the cables in the reverse order that you connected them.

Staying Connected

Cell phones are ubiquitous, and so convenient to use in the car! As tempting as it is, driving while talking on your cell phone is likely to increase your chance of an accident more than you might think.

Currently, the leading cause of motor vehicle crashes, as well as the number one distraction, is cell phones. If you talk on your phone in the car, you're not alone. Approximately 81% of the public admitted to talking on a cell phone while driving in a Nationwide Insurance public opinion poll. The National Highway Traffic Safety Administration estimates that 12% of drivers at any point during the day are talking on cell phones while driving.

Drivers who do use cell phones while driving are four times more likely to be involved in a crash. The law has changed such that in Oregon and California, it is illegal to drive with a handheld cell phone. You are permitted to talk with a headset. However, if you think that a hands free device is safer than just holding your phone to your ear, think again. No difference exists in the cognitive distraction between handheld and hands free devices. With both devices, a Carnegie Mellon study found that drivers listening to sentences had a 37% reduction in spatial awareness, which directly contributes to cognitive distraction.

In Oregon, there are laws restricting cell phone use in cars. In order to use a cell phone while driving in Oregon, you MUST use a hands free device. You can be ticketed for driving and talking without a hands free device, even if you haven't committed another traffic offense. If you're under 18, though, you have to ditch the phone altogether. Minors are not allowed to use cell phones in the car if they are driving, even if they have a hands free device. Finally, all drivers are prohibited from texting in the car.

Is there a better solution to communication in the car? Bring someone with you. Talking to a passenger while driving is signifiantly safer than talking on a cell phone. Passengers, unlike cell phones, can make the driver aware of changing road conditions they might not see and can stop the conversation if traffic conditions warrant. Plus, carpooling is more fun, it saves gas and reduces road wear, and decreases traffic congestion.

Trivia

Twice the speed = *Four times* the breaking distance

The average car uses 1.6 ounces of gasoline idling for 1 minute, whereas it only takes a 1/2 ounce of gas to restart your engine.

At 50mph a car uses half its fuel to overcome wind resistance.

Sources:
http://www.nsc.org/library/facts/.htm#road
http://auto.indiamart.com/auto-maintenance/car-maintenance.html
http://www.ghsa.org/