

LÊ THẢO LOAN



TIẾNG ANH CÔNG NGHỆ

ÔTÔ & CHẾ TẠO MÁY

English for Automobike and Machine Design Technology



NHÀ XUẤT BẢN THANH NIÊN

LÊ THẢO LOAN

**TIẾNG ANH CÔNG NGHỆ
Ô TÔ & CHẾ TẠO MÁY**

NHÀ XUẤT BẢN THANH NIÊN

NHÀ XUẤT BẢN THANH NIÊN

62 Bà Triệu - Hà Nội - ĐT: (04) 9434044 - FAX: (04) 9436024

Chi nhánh: 270 Nguyễn Đình Chiểu - Q3 - TP.HCM - ĐT: (08) 9305243- (08) 9303262

TIẾNG ANH QUẢN TRỊ KINH DOANH

Chịu trách nhiệm xuất bản:

MAI THỜI CHÍNH

Biên tập:

NGUYỄN SƠN

Trình bày bìa:

NGUYỄN HÙNG

Sửa bản in:

NGUYỄN GIANG

In 1.000 cuốn, khổ 14,5x20,5cm. Tại Công ty Cổ phần in Bến Tre. Giấy CNKHXB số 248/1528 CXB cấp ngày 9-9-2005. In xong và nộp lưu chiểu tháng 01 năm 2006.

Contents

Things Every Driver Should Know	7
The Way to Your Cars Heart Is through Your Toolbox .	36
Preventive Maintenance: A Monthly Under-the-Hood Check	68
The Inner Secrets of Your Car Revealed	102
The Electrical System: Your Car's Soark of Life.....	123
The Fuel System:	145
The Heart and Lungs of Your Car	145
The Cooling System Up Close.....	217
Take the Drive Train: Understanding Transmissions without Losing Your Mind	232
It's the Brakes!	249
Steering and Suspension Systems Smooth the Way .	267
Keeping Your Electrical	284
System in Tune	284
Keeping Your Fuel System in Tune	368
Changing Your Oil	458
SLubrication Extends the life of Your Vehicle	480
What to Do If Your Transmission Stops Running Smoothly	490

Being a Buddy to Your Brakes and Bearings	512
Checking Your Tires, Alignment, and Steering	580
Troubleshooting Leaks, Squeaks, Smells, and Strange Sensations	618
What to Do If Your Car Drops Dead or Won't Start	653
When All Else Fails: Finding and Dealing with a Good Mechanic	680
Keeping Your Car Clean and Beautiful	721
Getting Rid of Dings, Dents, and Other Hard Knocks	770
The Ten Most Important Preventive Maintenance Measures	801
Ten "Eco-Logical" Ways	812
to Save Fuel	812

Bài 1

Things Every Driver Should Know

Purpose and layout - Mục đích và bố cục:

- Knowing when to do it yourself: *khi nào thì bạn tự làm*
- Paying attention to safety: *chú ý đến an toàn*
- Filling 'er up yourself: *tự đồ xăng vào xe*
- Getting under the hood: *Cách mở capô xe*
- Jacking up the car: *Cách đội xe*
- Changing a tire: *Cách thay một vỏ xe*
- Getting into your car when you lock yourself out: *Cách vào xe khi bạn bị khóa ở bên ngoài*
- Taking things apart (and putting them back together again): *Cách tháo rời các bộ phận (và ráp chúng lại như cũ)*

If you're not particularly mechanically inclined, you may watch those who *are* with admiration and amazement - and exasperation because they have something you don't: an understanding of how things work and how things go together. When they take something apart, they can reassemble it back the way it was. When they say that they want to take a look under the hood, they can actually get the darn thing open. And when they need to change a flat, they don't spend ten minutes trying to figure out which end of the jack is up.

The good news is that you don't have to be born with a wrench in your hand to know how to fix things - even things as seemingly complicated as a car. I know; I've been there. The section in the Introduction called "How I Became Intimately Involved with My Car (and Why You'll Want to Do It, Too)" tells you all about my automotive epiphany.

Of course, the simplest things can sometimes be the biggest hurdles to overcome. After all, if you can't even figure out how to open the hood, how can you check the oil or the coolant level? That's why I begin this book with a chapter on the basics. I explain simple tasks that you use again and again as you work on your vehicle - like how to open the hood, jack up a car, and change a tire. I also include instructions for filling the tank with gas yourself (it's cheaper than full-service), a surefire method for taking *anything* apart and putting it back together again, and safety pointers that *every* mechanic experienced and beginner - should heed.

You can find a definition in the Practical Glossary of Automotive Terms at the end of the book for any word that's printed in this special type.

1. Before you tackle any job

It's wonderful to do things yourself. It costs you less, it gives you a sense of power to know that you did it on your own, and you know that the job's been done right. Nevertheless, to avoid getting in over my head, I always ask myself the following questions before undertaking any job:

- Do I really want to do this? Will it be fun - or horrendous? (I try never to do anything that doesn't *feel* good anymore (unless it's absolutely necessary).
- Do I know how to do it? If not, where do I go to learn?
- Does it require such expensive tools that it would cost less to have someone do it for me than to buy those tools? Can I borrow the tools I need?

- If I goof, can something be seriously damaged? Can I?
- How long will it take, and what is my time worth? How much money will I save by doing it myself?

You'll be happy to know that almost every job in this book should pass these tests. If you find one that doesn't, don't hesitate to turn it over to a Professional - *after you* read enough to know that the job is definitely necessary, what it entails, whether the work has been done properly, and how to get satisfaction if it isn't. With that in mind, let's get on to the very first thing you need to know in order to work on your vehicle.

2. Safety Rules

The first time I tuned my car, I was sure that if I made the smallest mistake, the car would explode when I started it. This seems to be a common delusion, but it just isn't so. All you'll get is silence (which can be just as disconcerting, but not lethal after all). This isn't to say that working on cars is free from danger, though. Before you do any work on a vehicle, be sure to observe the following safety rules:

- Don't smoke while you're working on your car - for obvious reasons!
- Never work on your car unless the parking brake is on, the gearshift is in Park or Neutral, and the engine is shut off. If you have to run the engine to adjust something, turn it on and off yourself to avoid the risk that a friendly helper may misunderstand and turn the engine on while your hands are in the way.
- Be sure that the parts of the engine you're working on are nice and cool so that you don't get burned. If you're doing a job that calls for a warm engine, be very careful.
- Never jack a car up unless the wheels are properly blocked. I go into more detail about this later in this chapter in the "The Safe Way to Use a Jack" and "How to Change a Tire" sections.

- Use insulated tools for electrical work.
- Before using a wrench or ratchet on a part that's "stuck", make sure that, if it suddenly comes loose, your hand won't hit anything. To avoid the possibility of being injured because your hand slams into something, pull on wrenches whenever possible rather than pushing on them.
- Take off your rings, long necklaces, or other jewelry. If they get caught on parts, they - and you - can be damaged.
- Tie back long hair. If your hair accidentally gets into a moving fan or belt, you can literally be scalped.
- If you're working with toxic chemicals, such as antifreeze, cleaners, and the like keep them away from your mouth and eyes, wash your hands thoroughly after using them, and either store them safely away from pets and children or dispose of them in a way that's good for the environment. (For examples, see the next paragraph and the sidebar "How to dispose of empty gasoline cans safely", later in this chapter.)
- Know that gasoline is extremely dangerous to have around. Not only is it toxic and flammable, but the vapor in an empty can is explosive enough to take out a city block. If you must keep a small amount of gasoline on hand for a lawn mower or chain saw, always store it in a ventilated gasoline can designed specifically for that purpose. Unless you're going far into the wilds, never carry a can of gasoline in or on your vehicle.
- Work in a well-ventilated area to avoid breathing in carbon monoxide if you have to run the engine, or breathing in toxic fumes from chemicals and gasoline. If possible, work outdoors in your driveway, your backyard, or a parking lot. If you must work in your garage, be sure to keep the garage door open and move the vehicle as close to the door as possible.
- Keep a fire extinguisher handy. You can find reasons for

this that may surprise you in Chapter 2.

So much for the scary stuff. It's all a matter of common sense, really. And remember: Making a car blow up is almost impossible unless you drop a match into the fuel tank. If you do something incorrectly, the worst thing that will probably happen is that the car won't start until you get it right.

3. How to fill 'er up yourself

More and more gas stations are shifting toward self-Service. If you've been reluctant to abandon the luxury of the full-service lane, chances are that it's going to get more and more difficult to find one. Knowing how to fill 'er up yourself not only prevents you from being stranded with an empty tank when there's no one available to fill it for you, but it also saves you money on every gallon, every time.

Always extinguish your cigarette before you start to pump gasoline. If the flame comes in contact with gasoline fumes, it can cause an explosion.

Here's how to pump your own gas:

1. Look at the price window on the pump.
If a price is registered there, have the attendant clear the machine so that the price window reads "\$0.00."
2. Move the lever on the pump to ON.
3. Unscrew the cap from your fuel tank.
4. Unhook the pump nozzle and hose from the pump and place the nozzle into the fuel tank opening.
5. Squeeze the trigger on the pump nozzle to allow gasoline to flow out of the hose and into your fuel tank.

There's usually a little latch near the trigger that keeps the trigger open so that you don't have to stand there holding onto it. Don't worry about overflows; gas pumps shut off automatically when your tank is almost full.