

Cars

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Cars and trucks burn gasoline or diesel... oil, corpgovs favorite addictive drug. If you buy into their game and get a car you are part of the problem. That being said, sometimes the freedom of personal transportation can be worth the risks of easy identifiability and corporate buy-in a car represents. Times have changed, when Abbie wrote his book the price of a gallon of gasoline was 34 cents and Amerika was the world's largest oil producer! Look for a car that has useful parts that you can strip and use for other purposes or one you can use as a shelter even after fuel is no longer available to the masses.

Car Advantages:

- Can travel without getting wet, cold, sweaty or tired.
- Can carry heavy items or supplies long distances.
- Can carry passengers.
- For many Americans in less developed areas, there is little to no public transportation, which means if you want to work, or really do anything, you'll need a car.
- Can be a significant advantage in job hunts, social life, and free up time.
- Can be used as a last resort shelter, with significant drawbacks.
- Owning a car is considered a step towards being successful according to many in society. Acceptance.
- Being able to travel further and more quickly at any time.
- Can search further out for cash sources than one's own area.

Car Disadvantages:

- Must have insurance card, registration, valid driver license, current car tag, and no broken lights to avoid police oppression.
- Can be inconvenienced by folks dependent on you to give them rides without helping you if you are one of the few in their network with a car.
- Older vehicles can need many repairs that can be expensive without repair skills and tools.
- Expensive. Deals can be found, but even the least expensive working cars can be many, many month's wage slave salary. Borrowing is fairly easy if you have credit and want something new, but the lender will require you to get expensive comprehensive insurance on top of a car note and a big deposit/or valuable trade-in. You may pay much more in interest if credit is bad.
- Easy to become dependent on car to maintain wasteful practices like traveling far away to make cash. If car dies and there is no back-up, far away cash source can be lost.
- You NEED gas. The bigger the car and more it is driven, more gas. Otherwise, you had better park it. Encourages wasteful behavior and empowers resource exploiters. No gas is no AC or heat and walking.

Don't Drive

If you are working poor, a car can be a huge burden, even though society demands you have this to be accepted. Never mind there are those who are in complete slavery working to pay off massive car notes, repairs, gas, tickets, and insurance. Of course, if the wage slave stops working, car can be lost! Make your own smart choice!

The easiest solution to most car nightmares is to not freaking drive that money leach especially if it is ruining your life! Get a bicycle and find someplace to live near work or school. Here is a real life story.

We once met a 19 year old who managed to get his very own 454 road monster truck. As with all big trucks, it was quite the gas guzzler. Being a teenager, insurance to drive the truck was expensive. However, all was good. Visions of being at the top of the dating heap, not having to be reliant on folks to go out of the way to pick him up, and going mudding on the weekends filled him with satisfaction. After all, a man needs the utility of a truck. Going into college with his own vehicle would be a huge advantage and must be maintained at all costs!

That is when things started to go wrong. First, he felt obligated or pressured to give rides to all his friends and family members regardless of being tired or busy. In driving so much, and being an inexperienced driver, he ended up getting a speeding ticket and a wreck in short time. No longer accepted by legitimate insurance companies, he was forced to go to shady, high risk companies or be harassed by cops or have his prize taken away!

His second mistake was following by trusted advice that was not really good for him. His father, being a stern believer in privacy and work ethic, charged him \$200 a month rent and made a house rule forcing him to work 30 hours a week during college. He was very controlled by his parents and their outlook. The parents even had actually denied him the student loans and grants he was eligible! They refused to turn over their tax records to the student aid office. They felt it infringed on their financial privacy.

He ended up throwing away around \$1100 every month just to drive. Needless to say, the burden of having to come up with \$200 a month rent, extortion level car insurance and note, and low pay forced him to have to drop out of school and give up any dreams. He could not imagine dropping his rust bomb scares-dates-away gas hog for cycling for two hours a day nor even consider a thriftier small car or motorcycle. He felt he had no choice but to go full time minimum wage labor with no advancement opportunity just so he could continue to drive to work.

There are many lessons in this story, but the three biggest are ditch the car (or any other debt) if it becomes an anchor dragging you down. Second, is to move somewhere where you can live a sustainable life, preferably away parents who may mean well but just not get it. Third, is to be smart and do research.

The last we ever heard of this scholar turned car slave he was about 24, had never returned to university, was single, still living with his parents, still driving to his minimum wage job, and getting a discount on his bedroom rent for attending church.

Walkable and Bikeable Cities

Of course, we know cycling in Butte, Montana or Shreveport, LA probably is not going to work since many of those cities are all interstate travel except for very small downtown ares. However, it is

possible to move to a larger city that is very walkable and rideable. You will probably be happier and since riding is more socially accepted due to the extreme expense of parking vehicles, your social life will improve, too.

Cities like New Orleans, LA, Portland, OR, Atlanta, GA, and New York all have world class public transportation, avid biking scenes, and what ever subculture you want to get involved in. Do not be afraid to move to escape car slavery! After getting over the initial relocation shock, you will thank yourself and wonder why you did not do this sooner. Check out our Liberate section and popular city forums online for really good information.

Get a Motorcycle Instead

If Cycling just is not an option, a car is not the only way to go. Motorcycles can be a much lower impact way to commute and travel solo or in pairs than a car. Some bikes can get from 70 miles to the gallon to more than 120 when run right. Look for a street legal dirt bike type and put road tires and required lights on it. For even big guys more than 200cc is not needed as long as you plan to cruise at around 55mph. The bigger bikes can easily do highway speeds, but a modern sportbike is so powerful that it can be seriously dangerous for a less experienced rider. These motorcycles are capable of out-accelerating \$250,000 exotic cars, and will do wheelies if you so much as breathe too heavily on the throttle.

Therefore, for both utility and safety, nothing above a 400 or 500CC is really necessary. Older bikes are cheaper and less powerful, but also less reliable and less efficient.

Scooters are an alright idea, but their lack of speed and range means they are limited to trips a good bicycle can do. Many scooters are also not legal for highway driving if you live in a rural city that you have to use the highway to get anywhere. Scooters tend to be a big city sort of deal.

Motorcycles are not called a "donor-cycles" by medical staff without a reason! Cars sometimes will not notice you and can expect you to get out of the way. You have little protection in an accident. Always wear protective boots, pants, jacket, gloves, and especially a helmet so you can stay in the fight.

Pay particular attention to the condition of your chain, it needs the correct type of lubricant and to be adjusted occasionally. You must keep very close watch on the condition of your tires, a blowout could be deadly at 75 mph.

Some might forget that a motorcycle (especially an air cooled model - the kind with heat fins on the motor) still needs the oil and fluids changed regularly just like a car. Heat and high RPM's really burn up the oil and can cause a seize up when you can least afford a new motor.

In general, a motorcycle will be less reliable and require more maintenance than a car, but it makes up for it by being cheaper to buy and very simple to fix. If you are experienced at motorcycling and need to pack more gear look into a small trailer, this really affects handling and mileage so use it intelligently. Patching a tire on most motorcycles is very similar to fixing a bicycle tire, carry a patch kit and pump in addition to some simple tools.

Save Gas

Once you've filled up your gas tank, there are several ways to go further on that gas. This is both good for you and bad for the gas corps because you'll spend less money, and burning less gas is good for the environment too!

- Slow down! Vehicles are most efficient in the lowest RPMs in the highest gear - for most, this means between 45 and 55 mph on open highway. Even if going faster would allow you a higher gear and lower RPMs, aerodynamic drag hits harder the faster you go. You'll save a significant amount of fuel just slowing down to 70 on the highway, as opposed to 80.
- Clean out everything you don't need. The more weight you're carrying around, the more your car has to work and the more gas you use especially in hilly areas.
- Don't tailgate or draft. First of all, tailgating is illegal (you don't want to get pulled over) and dangerous. Secondly, it causes you to brake every time the car you're following brakes. In a perfect world tailgating trucks might work to save fuel but to get a noticeable effect you would nearly have to be touching bumpers.
- Keep your car properly maintained. Specifically, keep your tires inflated and keep your air filter clean. Together these can save you 15% or more on mileage. Keeping your tires properly inflated also reduces wear.
- Check out your check engine light. You can do this for free most anywhere - borrow an OBD scanner from a friend or see if a local mechanic/oil change place/car parts store will let you borrow one for 5 minutes. Your check engine light could be on for any number of stupid reasons - your gas cap is too loose, your engine got wet - or it could be something like your spark plugs that will affect your gas mileage.
- Drive softly. Fast starts take more gas. Also, as soon as you see a red light or stop sign that you will need to stop for, take your foot off the accelerator and coast.
- Limit your use of air conditioning around town since AC uses a LOT of gas. Try to save it for freeway driving, since wind resistance from open windows causes greater drag and effects your mileage more than the AC.
- Plan your route to use the freeway, drive during light traffic times, as opposed to traffic jams, where you can drive a steady, fuel efficient, thrifty speed.
- Drive to a parking lot close to the freeway and use a bicycle for the rest of your in town movement. A bicycle on a rack or folding bicycle in your trunk should do it. The bike can also save you in a breakdown (see Cycling).
- Excessive external cargo even bicycles on racks increase your aerodynamic drag especially when moving at highway speeds, if you have to transport your stuff try to disassemble it and somehow cram it into your vehicle(if you remove the rear wheel of your bicycle to stow it also disconnect the rear derailleur to prevent it from getting bent or snapped off).
- Make ethanol or biodiesel or join a co-op if it saves you gas money.

- Park and ride mass transit.

These are the simple steps anyone can take. There are also methods of driving that can get you 40, 50, or even 90 miles to the gallon, but these can be dangerous and are not for the faint of heart. For more information, see: <http://www.hypermiling.com/> .

Some people even mod their cars to make them more aerodynamic: See: <http://forum.ecomodder.com/showthread.php?t=290>

Steal Gas

As Abbie suggested in his original writings, you can oftentimes run your car at the expense of the rich! While siphoning gas has it's advantages, it's certainly not a proper sustainable supply. If you can find a private pump (check the area on foot, they aren't that rare) find out when the building is unoccupied, pull up and fill up your tank. Congratulations, some corporation just payed for your gas. (think, if they can afford a private pump...)

Be wary of cameras, and note than when they realize half their gas is gone, they'll start investigating.

During Hurricane Katrina, some hapless folks who were stuck in the city with an empty gas tank but had access to some tools siphoned gas from abandoned vehicles. Now some might say that you could just stick a garden hose down in the tank and suck with your mouth. However, this could make you very sick and it will take forever to get a decent amount of gas. Better is to have a cordless drill, a drill pump (available in most well stocked hardware stores), a container, some adapters and clamps, and two lengths of stiff hose. Set this up by sticking one end in the tank and the other hose in the readied container. The only thing that can possibly stop you are locked gas caps. Do not do this with junkyard cars that may have sat up for years, as tempting as that might be. Fuel degrades after time if it sits and may have lots of water, oil, or nasty gunk that will tear up your fuel system.

The best cars for this attack are older American models, most other cars have a strainer or baffles to prevent siphoning. If you have a diesel car the job can be much easier a gravity siphon using a length of hose nearly submerged into a trucks diesel tank, capped with your thumb, and then extended down to your car or truck, remove your thumb and hopefully a stream of fuel will gravity begin to feed into your tank, sometimes a removable strainer has to be pulled out of the source vehicle.

Buying

Something worth considering is buying a salvage/rebuilt vehicle. While most people have been brainwashed into thinking that rebuilt vehicles are junk, they can save you a good deal of money. Often times insurance companies will write off a vehicle involved in a low-speed crash with deployed airbags. While the first owner is left with a small check and no car, you could potentially buy a car for as little as half its blue book value.

In general a Japanese car from the 1980's, if in good condition, will get better mileage than something more recent, sometimes 50% or more. Cars like the Geo Metro and Ford Festiva can actually match modern hybrids for fuel economy, and are much cheaper to buy and own. However, these tiny cars have limited space, so carrying passengers and cargo can be tricky. Their small engines will slow you down when hauling anything heavy, especially when driving uphill. They're also very unsafe in an accident, so you need to weigh that in your purchasing decision. A good trick which can save you a lot of money is to buy "captive imports" or cars built elsewhere and rebadged as a domestic brand. The Chevrolet/Geo Prizm, for example, is identical in every way to a Toyota Corolla, but has much more depreciation, making used models cheaper to buy.

Don't be afraid of American cars, either. They earned a bad reputation in the 70s, but the newer models are much more reliable, and have the virtues of lower prices, cheaper, more common parts and usually easier repairs. Not only that, but every time you buy a UAW made American car, you're helping stick it to the union busters in Washington. American cars can be hit or miss, but in general, any car made by GM (Chevrolet, Pontiac, Oldsmobile and Buick) with the 3.8L (Or 3800, in GM nomenclature) is a good bet, as are Ford Panther bodies (Ford Crown Victoria, Mercury Grand Marquis and Lincoln Town Car) along with the Ford Focus and Ford Escort.

From a practicality standpoint, the ideal car is a station wagon. They might not be cool, but they have large cargo capacities, yet they still drive and handle like a car, without too much penalty on mileage or performance. The old Volvo wagons have massive cargo areas, and more space inside than most SUVs. You might not need the utility every day, but when you do, you'll be glad you got a wagon. For those of us in colder climates, the Subaru wagon is an excellent choice, although they don't quite have as much space as a Volvo, they make up for it in all-weather capabilities.

Trucks are great if you must do lots of hauling or move a lot. You can also hustle with a truck quite easily. Everybody needs a friend with a truck at some point. However, trucks tend to hold their value much longer making them more expensive than cars of the same age range. Some trucks also eat quite a bit of gas with the exception of some of the lighter ones.

Ask at several car repair shops before picking a used car. See what they suggest for specific years, since some may have upgrades that were left out of older models. If the owner won't let you take the car to a mechanic for a checkup or even have an on-site mechanic/inspector check it out, be suspicious and look elsewhere. The money spent on a pre-buy inspection is well worth its price.

Whatever you do, don't get caught up in the financing trap. Dealerships always want to finance, as they make a significant profit from doing it, and it greatly inflates the price of the car. The worst ones are the smaller "You work, You ride" places that can charge as much interest as a bad credit card and have repo crews coming if you are a day late! Buy something you can afford with cash. Not only do you save on financing, but the car cannot be taken away if you fall on hard times.

Car Co-op

A car co-op, which is available in many US cities, lets you pay a membership fee monthly for the option of reserving a company owned car at an hourly rate, most plans include several free hours and the rate is often cheaper than regular renting. Most of us don't need a car that often unless we use it as our home. This idea could be done on a small scale by pooling several junkers and letting friends sign up to use them everyone would pre-pay monthly maintenance and fuel bills.

<http://www.zipcar.com/> Zipcar is one such car co-op service. You usually have to be at least 21 and possess a valid driver's license to sign up for their service. It'll cost you about \$75 to sign up for their service, plus hourly fees for the vehicle, but gas and insurance is included in those fees. Could be a good deal if you only need a car once in awhile. A hint for saving money with zipcar is reserve for after 11pm or 12am to get 1/2 price rates.

<http://www.citycarshare.org> CityCarShare is a cheaper alternative for the San Francisco Bay Area.

<http://www.carsharing.net/where.html> Carsharing.net Has an extensive list of most co-ops.

Basic Maintenance and Emergencies

The reality is, many of us are forced to drive cars or trucks with less-than-perfect equipment. In many states the corpgov welfare for corporations solution to this is regular inspections. They want to make sure that what you're driving is safe for you. This means, for instance, that the blinker that 90% of drivers hardly use in the first place (and are rarely ticketed for) need to work. Thats a minor issue, but older cars also have problems with door locks, hinges, a broken mirror, etc., and these can be expensive to repair, especially on someone else's schedule.

Starting and Trouble Gear

Everyone that has a vehicle needs these things eventually. Make it a point to get these items sooner rather than later.

- Jumper Cables. If you accidentally leave on your lights or have an alternator going bad, you will wish you had this. Most folks never carry this around, either. Be the prepared person that has a pair. Not only will it save you an expensive call to roadside assistance, it can help others in a bind, too.

How to Use Jumper Cables

- Keep the car with the fresh battery running. First, -Connect the red cable to the positive terminals.
- Hook the black cable from the running car's negative terminal to an exposed piece of bare metal on the "dead" car (for a ground) or the negative pole of the battery.
- If you see a spark when you attach the second cable to the "dead" car, you've got a complete circuit.
- Stand back when starting just in case the dead battery blows its vent caps (Very rare, but it happens).
- If you find yourself with only one jumper cable and both cars have bare metal bumpers, connect the positive terminals, then slowly roll the cars together so the metal on the bumpers touch.
- If you get really big sparks as you connect check that your polarity is correct (+ to + and - to -) or you could damage both electrical systems.

Rolling Start with Manual Transmission

Cars with standard/manual transmissions (that is, cars with a stick shift) can generate a small amount of electricity by performing a "push start" or "rolling start", as long as the battery is not completely dead (check the owner's manual).

You'll need a lot of help from friends to push the car or be lucky enough to have the car atop a steep hill.

Put the key into the "On" position, push down the clutch and put the car in 2nd or 3rd gear, NOT 1st! Then get your friends together and push the car forward. When the car is rolling fast enough (between 5 to 25 MPH), release the clutch and tap the gas pedal. The car should start.

- Car Charger. This is bit more expensive, but can be useful. A wall socket powered car battery charger and extension cord are also a good idea, and many good battery chargers now even have a jump-start option.
- Rural Gear. A shovel and some sand bags might get you unstuck in muck or snow in rural areas. A come-along (hand powered ratchet winch) and tow chain can help get you back onto the road. Snow chains also work in the mud for amazing traction.
- Extra Key. Stash a key somewhere under the vehicle, some wire and tape should do the trick, maybe have a second key hidden under the sole of your shoe. If you're a member of AAA, go to your local office and get a "credit card key". This is a small plastic gizmo that has the dimensions of your key in a credit card shape. However, if you have a sophisticated security system on the car, you may be out of luck. Locksmiths are very expensive costing anywhere from 100 USD to 500 USD depending on type of key they need. Breaking a window is not any cheaper, either, and can attract police oppression.
- Carry an EMPTY fuel container with a good spout empty in your vehicle. Kept full it will go bad after a few months of summer heat and is a huge fire and stink-up-the-car hazard. If you run out of fuel, walk or bike to a gas station. When you get back pour the whole container into your tank and wash out with soap and hot water ASAP, allow to dry completely before closing. FYI only buy a fuel container marked "DOT Approved" otherwise the gas jockeys can get in trouble for filling your container.
- Small Toolbox. Even if you are not interested in being a mechanic, carrying basic screwdrivers, wrenches, socket sets, pliers, and a rag can be useful. This is especially true when dealing with older vehicles. This can help with things like loose battery terminals, venting hot radiator caps, and replacing burnt lights.
- Jack, Tire Tools, and Spare Tire. **If you are missing this, you will regret it!** Jacks can be picked up in junkyards or any place that sells auto stuff. Used tires can be picked up at used tire places if cash is an issue to get you by. Don't assume your car includes a spare especially if used, take the time to figure out how to get at the spare and make sure it is up to its rated pressure, sometimes they are in a tricky place underneath and require a special tool to remove, try taking the spare off and replacing it. If you have to use the spare be sure to repair the tire quickly and

then replace the spare. Most cars these days only have temporary (doughnut) spares, which are only good enough to let you limp to the nearest tire shop. If you have the cash and space in the car, it's never a bad idea to go get a fullsize spare. Just find the same model (or even the same make, depending on the car) of car in the junkyard and pull the wheel off it, then get it fitted with a cheap tire, as the junkyard one will almost certainly be shot.

Tires

It goes without saying; Keep your tires properly inflated! Soft tires waste gas, and over-inflated tires wear out quicker. If you see uneven wear, you need wheel alignment. This can be done at a repair garage or tire shop (and they'll try to sell you a new set). Remember to rotate your tires every 3,000 miles to ensure even tire wear.

If you need tires, ask at an independent tire shop if they can sell you used tires. Some places that specialize in custom wheels will keep the stock tires and wheels that new car buyers bring in. Savvy car enthusiasts will order a high-performance car with all the trimmings, but have stock tires, since the dealer mark-up is so high. Then they'll drive from the dealer to the tire shop and swap the stock tires and wheels for a custom selection that's much cheaper than at the car dealership. Those stock tires are often kept by the tire dealer, but can't be sold as "new" even though they may have been driven as little as a few blocks. Many times, these tires are sold "as is" (no warranty, no returns), but the dealer may throw in free wheel balancing in the purchase.

For people in mild climates, any tire will do (However, you should still stay away from the third world made ones, due to exploitative labor), but for our comrades in colder climates, it's imperative that you get a good tire which can handle winter conditions. Snow tires are the best, however, you can't run them for long on dry pavement without burning away all the soft rubber, so you need another set of summer/spring tires. If you can't afford snows a good all season can work if you drive sensibly. Do some research and remember that those few extra bucks can be the difference between a horrific wreck and safe driving.

A word of warning about those anti-flat solutions like "Slime": They only work when the wheel is in motion. When stopped, the stuff settles in the bottom of the tire. Also, when it's in the tire, it makes it impossible to have it balanced or plugged/patched.

A trick used by 4x4 racers is to find a puncture by sound or using dilute dish soap and looking for bubbles, mark the leak so you can find it again with a white crayon, now unmount and jump on the deflated tire near the bead(seal) until it opens so the inside can be accessed, only open one side if possible. A inexpensive tire plug tool, contact cement and rubber plug is enough for most tire repairs. To reset the tire bead the valve stem core is removed to vent the excess pressure (there are many after market tire valve caps that have the little tool built in) some ether starting fluid is sprayed into the tire (DANGER) and a match is thrown in. The small explosion pops the tire up and the bead back into place about half the time so give it a few tries, then replace the valve core and inflate to proper pressure. Another trick is to wet the bead (make sure it stays clean) and using a rope around the tread of the tire for tension, begin pumping, if you cinch the rope tight and use water and a little soap for lube and seal this sometimes gets a good enough seal to pop the tire back into the wheel. If the bead on only one side is open flip the tire over so its weight will push against the open seal and try pumping it to pop the bead back in.

Free tires aren't very hard to find. They can be found at soccer fields, tracks, or other community and high school fields for sports. Just drop by at night to avoid hassle and take a few. Considering the work required to mount them a very close inspection is suggested.

Glass

It should be obvious that you need to keep the windows, especially the windshield, as clean as you can. Check your windshield wipers. If they streak, replace them. When it is raining, you NEED to see where you're going. Polishes like Rain-X will cause the rain water to drift off the windshield, but only when the vehicle is in motion (It uses the wind to brush the water away). Small dings and cracks may be fixed with glass repair kits available at better auto parts stores, or if your insurance covers it, you can have them done by an auto glass service. If there is a crack or fissure that radiates from a repair after you've fixed it, you may be SOL and need to have the windshield replaced. Depending on the model of car it is possible to replace the windshield if you exercise care and the frame is not bent too badly.

If you live in a cold climate, get real windshield wiper fluid that is formulated for the cold. The last thing you want is water you poured into the washer reservoir in June freezing on your windshield when you're driving in December or just freezing in the pump and cracking it.

Check your Fluids

The places to check your fluids can be located in the manual of your car, asking a knowledgeable friend or auto parts worker, or online. Checking your fluids can save you from expensive repairs! Basic fluid changes are an important maintenance job, and are very easy to do yourself. You'll also save money over the lube shops.

- **Oil.** Not having enough oil can seriously mess up your engine! While checking this, always notice the color. Check your owners manual for recommended oil weights, get a good drain pan, and go to town. Store brand oils are just re-bottled versions of the big names for a lot less. NAPA oil, for example, is Valvoline, and Exxon Superflo is Mobil. If you live in a colder climate, you should run a slightly lighter weight oil for better cold weather protection and easier starts. In terms of filters, stay away from the super cheap Frams, they have cardboard endcaps which can dissolve in hot oil, meaning bad news for your motor. WIX makes a decent filter for cheap, and again, store brands are just the big guys in a different box. Lots of people obsess over oil, but the fact is, a good filter and regular changes are all you need.
- **Antifreeze.** Not having water and antifreeze in your radiator can seriously mess up your engine! Use the recommended ratio. You may get by with mostly water to get by on the cheap if temperatures are not extreme. Put more antifreeze in before really cold or really hot weather comes, though. If you run straight water without antifreeze and it gets cold enough to freeze the water inside it will force out the engine freeze plugs or crack the engine block, freeze plugs on some cars require disassembly and removal of the engine to replace.
- **Brake Fluid.** This is self explanatory. If this gets low, you could have a brake failure.
- **Transmission Fluid.** If it helps save money in a pinch, most brake fluid and transmission fluid are nearly the same thing but look up the fluid your car uses first. Also, just because you have a manual transmission does not necessarily mean you do not have transmission fluid. Some standards have a fluid clutch cylinder to assist with shifting.

Advanced Repairs and Tips

Haynes and Chilton publish a wide line of owner-friendly repair manuals available at both book stores and auto parts stores. These books vary in quality. Oftentimes they cover too many models

and can be somewhat vague, but they are usually workable. However, you can get the factory service manuals for most cars free online in PDF format with a little googling, and these are always preferred, as they are incredibly detailed and specific.

If your headlights start to dim as you are driving this is usually caused by a dead or dying alternator. On older model cars these are easy to replace yourself most of the time. Don't stop the car as it will likely die. Your spark and fuel injection are running only on battery. Only think about killing the headlights.

If your car sputters after holding the gas down for a few seconds when passing it might be a clogged or old fuel filter. These can be super easy to replace inline filters or almost impossible to replace inside the fuel tank units.

Letting your battery die over 4-5 times will seriously weaken or destroy a car battery.

If the car overheats try changing or topping off the radiator, as it might be clogged with calcium or rust, try a flush or radiator cleaner compound from an auto parts shop. It could also be that the oil is low or the oil filter is clogged increasing the heat and wear. The radiator is easily damaged, note the location of leaks when the engine is hot. When you are in a safe place and the engine is cool you can try first adding a radiator stop leak, if this fails find the damaged tubes and brush clean then solder. if this fails bend the tubes over and add stop leak again hopefully plugging them for good. Keep several gallons of water in your trunk to refill the radiator if there is a boil over. If you use those tough bottles that antifreeze comes in to store water, *NEVER DRINK IT!* The coolant residue is toxic so carry extra drinking water in a separate container.

If you notice your car overheating and the oil and radiator fluid is a milky color and consistency, you have a busted head gasket! Stop driving the car now or you may have to scrap the car or buy a new engine!

If you see a car similar to yours at a junkyard or rusting away see if they will sell/give you the plates. At a U-pull-it junkyard buy a car seat or something like that and stuff the plates under the vinyl or at the bottom of a box of parts under a cardboard flap. These can be very handy in radical action. You would be surprised how many cases are solved by seeing a license plate on security cameras. Many highways have license plate scanners for tolling trucks but they likely also record passing cars.

If you intend to do even the most basic repairs, you'll need tools. Not only are the cheap Chinese made tools of poor quality, but they're also produced by exploited workers in terrible conditions. New tools made in the US/Europe can be very expensive, so your best bet is to hit up pawn shops and garage sales. You'll want a complete ratchet set with 1/4, 3/8th and maybe 1/2 inch ratchets, a full set of sockets both metric and SAE (If you can't afford both, just get whatever your car is), a good set of box end wrenches, screwdrivers, allen keys (Or star/torx, depending on your car), a torque wrench and a good set of locking pliers (Vice Grips are now made in China, so get Craftsman if new) Craftsman is a good brand, especially if buying used, as any broken tools can be returned to the local sears and will be replaced for free. Their quality has slipped, but the convenience and price still makes it the best choice for amateur mechanics. Snap-On, Klein, Matco, Mac, SK, Proto, Stanley and any other US made tool will be fine and carries the same warranty, although the price is higher and distributors are more difficult to find. Be sure to get a set of jack stands so you can work safely. These can be made, if you have welding skills, but don't try to rig something up, unless you fancy 2 tons of steel falling on you. Ramps can be used for oil changes, but they're not much good for anything else.

Storage

With the price of fuel ever increasing it will become more useful to know how to maintain a rarely driven petro-hog for when you might need it. Even if you dedicate yourself to cycling be sure to run the vehicle for about ten minutes every other week, you might as well use this to hit the grocery store for a big shop, highway miles are the best way to achieve this. If you can't do the regular drives you need to start thinking about adding gas stabilizers like Stabil to your fuel. For very long storage you will need to drain and clean the fuel system to prevent varnish deposits from evaporated and decomposed fuel. Remember that tires, hoses and belts all get old whether you use them or not. For a seldom used car, Seafoam is your best friend. It can stabilize fuel, clean out fuel systems and the built up gunk in a motor and create one hell of a smoke show. It's pretty expensive, but a can is good for about 3 uses. It's also a very good cleaner.

Road Trips

Cycling, Trains, Buses, or Hitchhiking or a combination are cheaper greener alternatives to long road trips in a car. If time is not an issue, all of these options are still less wallet damage than flying and dealing with the TSA goons. cost effective it is to fly. (Although the further the trip, a airline ticket may be only 40 USD to 100 USD more depending on season. A good deal, if you account for food costs en-route over a many day journey) Unfortunately, sometimes the destination is just not accessible any other way, you need to haul too much freight, or the departure and arrival times are not compatible with your schedule. One way to save is to load up with riders willing to split the fuel cost, carpooling can even end up cheaper than bus or passenger train tickets. Follow the our advice on saving fuel and carry the proper equipment and spares.

While keeping a maintained car is important, it becomes vital if you are heading to a place far away from help and support networks.

Roadtrip Checklist

- Have jumper cables and emergency water for radiator boil-overs. This can be real problem in hot summer, mountain driving, and traffic standstills. Make sure you have all emergency gear including jacks, tire tools, gas can, etc.
- Brake pads should be checked especially if you are planning mountain travel.
- Check lug nuts, tire pressures and tread wear before leaving including the spare tire! A pump manual or electric for the tires is not a bad idea. Inspect and test your jack, lug nut tool, and inflated spare tire.
- Your belts and hoses should be in good condition. If not, replace them or carry the spares and tools required to install them properly. Do not forget a work light if you go that way.
- Try to repair or get a different vehicle if you hear mechanical knocking noises from the motor or slippage in both automatic or manual transmissions.
- Verify all fluid levels oil, radiator, transmission, brake, steering, battery if you have an unsealed battery, and window washer fluid. If you have an oil burner engine buy enough oil for the duration of your trip and be sure to check the levels every time you stop.
- Verify that your lights are all intact and working. Make sure car tags, inspection stickers, etc. are up to date to avoid police oppression in a strange area! Keep your driving license, vehicle title, and insurance information all handy.

The cops know about radar scanners and plan their traps accordingly, a detector can help sometimes, but if the cops notice it you might get a bigger ticket. In some states, radar detectors are illegal and the squad cars have equipment to detect the detectors.

You can probably obtain all the food you need using your freegan skills but a 5kg sack of rice, a camp stove, and a few soft drink bottles of drinking water will cover you if the dumpster diving is no good. If you feel safe always try to help out hitchhikers. It can be fun to make a good travel music mix and have a way to play it through the car stereo, this is really nice if you will travel through areas without good radio coverage. Do not assume that your mobile phone will work in rural areas, especially in remote mountain areas. If convoying with other vehicles have a means of radio communication so you do not waste phone minutes. Plan to stop during the night, in most cases that is safer and more comfortable for everyone, just plan your departure to give you plenty of time to drive during the day and early evening, leave time to set up camp or other sleeping arrangements.

Stealth camping in your car is possible in many rural areas, just park on the side of a logging road or pull into a farm field driveway, many states have highway rest areas for drivers to take a nap. Car dwelling is covered in detail a bit later.

Ration your cash if you are traveling on limited funds. Split your trip money into a going and coming envelope. If you spend all of the cash in the first envelope you know it is probably time to go home.

Save alcohol and other stuff for the destination or home. Even if you stay legal traveling with a hangover or punchy is a drag.

Car Dwelling

Many people when they lose their job or apartment naturally move into the only shelter left, their vehicle. Unless you have an RV and a safe lot to park try to keep your car stay as short as possible due to the harassment and discomfort, use this time to find a new place or plan a move to somewhere where you can set up a safe residence. How well this will work depends most on how comfortable and secure the vehicle is and if you can safely park and maintain your vehicle. This lifestyle is for nearly all who live it far less than ideal since it is difficult to store and secure more than a small amount of your worldly possessions, not to mention it is just is not comfortable sleeping through a winter rainstorm inside a two seater soft top with seats that don't recline. Or worse, sweating ass off in a humid, hot climate.

Parking Tips

Where to put your car without it being towed or having to live in your car being discovered can be a huge pain. Here are some spots and tips that could be considered.

- Many retirees pull what is called the "Camp WalMart" trick with their monster homes with wheels. They "park" overnight in the parking lot and save the overnight fee spent at RV parks. Some mart stores even encourage this since it often discourages theft or vandalism of parked cars. If you try this with a camper or van, make certain this is legal, since some cities have passed laws against "overnight parking" and you'll be stuck with a parking ticket or midnight eviction.
- If you see signs reading "No Overnight Parking" or "No Camping" either in the lot or at the entrance, they probably mean it. Watch out for the Rent-A-Cop in the "Security Patrol" vehicle made to look like a police car or the golf cart with a yellow flashing light.
- Church parking lots are often unused except on Sundays and sometimes a few regular evenings a week. To avoid the early Sunday morning problem also look for a Jewish temple or a Seventh Day Adventist church, since both meet on Saturday mornings. Avoid parking where the clergy housing is on site. It might also be useful to ask, especially at religious institutions, for the owners to show pity and let you occupy an open parking spot if you promise to be good and not trash the area. Act shocked when they say no.
- In non-residential parking lots park as far out of the range of vision to the entrance as possible, working slaves tend to ignore stuff as they enter and exit work. Try to avoid places with security booths or patrols outside.
- Apartment complexes, the larger the better are great for camping with your car cover on, you can either use a spot assigned to a friend without a car or find a place with unassigned spaces, park late leave early and only use this for sleeping. As best as possible keep the car stationary once parked, meaning dig in your pack or wiggle around somewhere else before you stop and park for the night or day sleep cycle.

- When you wake it is difficult to avoid a car wiggle or two, immediately get to the drivers seat and drive away. Always sleep in acceptable but loose street clothes, shorts and a t-shirt or sweats, have your shoes or sandals handy even if you are wearing slippers.
- National and State parks:

In the western US mostly in rural areas there are large tracts of BLM, National Grassland, and National Forest, most of which are free to camp for up to two weeks, although some areas require buying a special use permit now. If you choose a park at either national, provincial, or state expect to be visited by a ranger in the morning asking for the camp fee, some lock the gate at night too. Campgrounds are either private or public and rarely free; they range from a primitive fire pit and outhouse to full water and electrical connections, flush toilets, hot showers, sometimes even a general store, and Wi-Fi Internet, typically you get what you pay for. It is worth looking into on site management, It is usually an easy job and you get a place to stay for the contract period and a paycheck.

- The Empire maintains many rest stops for sleepy truck drivers and long distance travelers. Some have restrooms and showers. This could be an option if you have an out of state tag. However, the rest areas are vigilantly watched by state pigs looking to bust people up. Most rest areas are out in the middle of nowhere. It can take quite a bit of gas money and time to drive to or from. Sadly, with many states facing budget cuts, a number of these rest stops are being shut down.

Car Cover

You can park overnight in many whitebread communities at the curb if you cover your junker car with a nice clean car cover, this works best in areas where car covers are more common. You might even be able to stay in one place between the huge lot lines for several nights before any homeowner notices. With the car cover on the rent-a-thug/ethnic cleanser has no idea you are camping out in a rust bucket or which McMansion you (don't) belong to.

When you get your cover walk right out to your car open the package and try it on. You need to be able to open a door (front and back door if possible) and enter with the cover on. If this doesn't work, walk back and return it for a cover that will work. A clean car cover or window tinting should be near the top of your eviction shopping list if you plan to keep your car.

Your car cover can:

- Hide the exact make and model as well as the plate numbers of your vehicle, you may want to stencil your number or another plate number onto the cover to fool lazy cops
- Keep your vehicle warmer by reducing drafts especially in older vehicles with rotten door seals
- Reduce or eliminate leaks during wet weather especially with waterproof covers
- Hide the tell-tale window condensation that gives away a camped-out car
- Hides the campout gear in your vehicle from thieves and cops especially if you go out and leave it parked
- Some colored or silvered car covers will help hide the glow from small lights or computer use, parking under a street light also washes out the light from inside your car.

Do not run your vehicle while the cover is on as it might trap deadly carbon monoxide from the exhaust.

Car

We have known car campers who install a black removable bar and curtain between front and back seats, tint the windows of the back seat and use a sun shield at night to block the front and rear window, nobody can see the sleeper in back even if you are not using a cover and it is difficult to see the interior divider curtain. Even a cheap stick-on tint is better than nothing, if applying a sticky film tint clean the interior windows spotless with Windex and let dry, try to go slow and use a squeegee to keep bubbles out of your work. Find out the local laws on rear window and driver and passenger door window tinting, even if legal it might lead to harassment by suspicious cops both when parked and while driving. Towels, cardboard, or improvised curtains in the windows and most obviously fogged windows are a dead give away to cops and neighbors that you are living in your car. Moving around inside your vehicle in a way that rocks or moves on the suspension is another give away when you are inside a supposedly unoccupied parked car.

A station wagon like a Volvo or Subaru gives you room to stretch out in back, even a sedan has a big back seat to sleep on, but a compact car often gets much better mileage.

If you have some tiny car it will work for camping too; just get the car cover or some sun shades to cover your window, opening a non-leaking sunroof kept open will keep the condensation down. It is very important that if you go with a compact you find a car where the passenger side seat fully reclines into a nearly flat position and adjusts far back so you can stretch your legs. If you are short enough piling a bag or gear covered with a blanket into the footwell can make this into an almost normal cot bed. Don't sleep on the driver side except in emergencies. We know someone who killed their battery by sleeping with a foot on the brakes. It also makes for driving related nightmares having the steering wheel right there. A convertible or soft top Jeep or coup might be fun, but the leak related headaches and difficulty keeping warmth in during the winter make them a less than ideal car camping option. A vehicle with a trunk means that you have a non-visible place to stash some stuff but the lock can still be popped by a thief. Some trunks can extend into the back seat area by folding down the rear seats. This is one option for a stealthy sleeping area.

A one bonus to hybrid cars aside from urban fuel savings is the massive storage batteries which you can tap for appliances. There are kits where you can charge the batteries from free or subsidized charging stations for electric vehicles. Another kit allows you to drive all electrical for urban and short highway drives. Combined with a folder bicycle in the trunk these can really save or eliminate fuel spending.

Van

Of course better than a cover is if you just buy a van or minivan, there are plenty of old vehicles which have been cast off after years of ferrying kids to soccer or having been used by some crusty old guy living in it down by the river, an added bonus is you don't have to contort to get into the back for sleeping. Big vans can really burn fuel fast but some minivans can come close to the thriftiness of a larger car. If you can score a custom camper van all the better but if not take out the rear seats if they don't fold down and do your own modifications. Installing a table of some sort and propane equipment are among the most important modifications, VW campers even have water and drain water tanks built in, just attach a garden hose. If you are going custom wire in some power jacks in a handy place and then you can roll out a dark colored extension cord. Tint the rear windows and you will have a safer place to sleep and the cops cant easily peek in, hang a dark curtain behind the front seats or use sun shades at night for more privacy.

Truck Canopy

Owning a pickup truck is usually an investment in bad fuel mileage, although this can be offset by using it as a home and walking or cycling and only driving for long trips, moving location, or camping expeditions. Unless you need it for winter or back country travel 4x4 is often just a gas waster on the highway as are wide off-road tires although you will miss it badly when it is needed. A smaller truck with a small engine especially a diesel can save fuel if you drive right and keep your speed down but it is still not as efficient as a small car. Getting a canopy and tinting or covering the side windows makes it a great place to camp out even in town, much better than a car interior for people of average height and it often increases fuel economy. It is not unexpected to see blankets or sleeping bags in the back of a truck so you might pass a quick night time police or security check if they don't expect house-less people. Since part of detecting an unwanted vehicle is that they don't move you might try to park on a hill and every night roll down a few houses without starting the motor saving a bit of gas, but turn your wheels toward the curb so if your parking brake fails in the night the curb will stop you. Since car covers are rare for trucks you will have to keep the exterior clean and the interior of the cab neat so the cops and neighbors won't have reason to be suspicious. Since you will be sleeping in the back get a good steering wheel lock so you don't get taken for an unwanted ride during a car theft. Try to keep your worldly possessions down to a bicycle and pack and keep these with you on trips out so even if the truck is broken into they will not get your stuff, most canopies are easily broken into. Keeping your bicycle inside the canopy with you at night will not only prevent it from being stolen it will also help hide you. Always enter and exit the rear of the truck early in the morning or after everyone is in bed, during other times consider using the sliding window between the cab and canopy to enter the cab or canopy hiding your activities and making them look more natural.

Toilet

The fastest way to get in trouble when parked overnight is to urinate or defecate right next to your vehicle. When the heat of the day comes it leaves a very nasty smell both for you and the neighbours even after you leave. This creates the impression that the homeless are filthy or disgusting, and is a good way to get car camping outlawed where you are staying. Don't screw over your brothers and sisters like this! Try to park next to a sewer grate where you can dump all of your toilet waste (unless it is marked as a untreated drain to a water body) and pour out your washing water (gray water) bucket at the same time to rinse it down. If a sewer grate is not possible at least have enough water to wash away urine from the gutter. Plan ahead and use a public restroom whenever possible but keep a bucket and trash sack for dire toilet emergencies. Be careful using bleach in your pee bottle we have heard of weird toxic chemical reactions, chlorine gas, and high temperatures associated with mixing urine into a bottle containing bleach.

Interior Decorating

Face it; Cars are not designed for camping in every night, even most vans are a bit uncomfortable. You should do some work to prepare it for long term camping. Get seat covers at least for the passenger seat or rear bench that you plan to sleep on. A very smart idea is to cover the factory seat with a carpet runner or heavy plastic and then a cotton bed sheet folded over several time or blanket to keep the funk out of the seat in something you can wash and then cover and hold everything in place with a seat cover from an auto parts store. Dryer sheets under the seat (on the floor not under the seat cover) or dash can help get the stank smell out of your car, especially in summer when you would normally shower more frequently. Many cars have hooks or handles above the front doors which can be used to suspend a bar on which you can hang laundry to dry. Plan for drippage or just air out during the day. Leave the sunroof or windows open a few centimetres open to allow moisture out. This bar is also where to hang a dark privacy curtain at night between front and rear seats.

Entertainment

It may seem like a great idea, and perhaps you have both the right electrical system and isolation to pull it off by attaching a FM transmitter to your laptop and blasting it through a nice car audio system. We have even heard of DIY outdoor theater types who add a video projector. For most of us the problem of staying hidden in our quasi legal car camp-outs makes a Walkman or MP3 player with earphones the better idea both for security and for the health of your car battery. Save the stereo system for the highway. In addition, have in mind that the glow from most video screens gives you away as a WiFi squatter or urban camper watching DVD's. Car sun shades or window tint might help hide the glow.

Communications

It gets lonely sleeping in your car, some people use an open WiFi hotspot to escape to virtual worlds on the Internet, but often this is not an available option. It helps to have friends both local and far away, with the right gear you can accomplish both for free after an initial investment. In the 70's CB was the undisputed way to communicate between vehicles, this is still often the case if you don't want to pay a mobile phone bill. For most people this means finding a used CB set and magnet mounting a good antenna to the roof of their car or truck. Gutter, mirror, and bumper antenna mounts are available as are permanent drilled installations. For the price of a new CB set you could pick up a used mobile ham radio set and depending on the frequency band increase you range by as much as a few thousand miles and add many cool free capabilities such as data transfer, telephone network interface autopatches, repeater networks to extend the range of small radios, and even international VOIP bridges. The only downside to ham gear is most licensed users are pretty straight and follow the rules, so if you are running pirate on their frequencies they have a sport called "bunny hunting" where they track down illegal operators with special gear and lead the cops to the offender. If you only have FRS or a CB walkie-talkie your range is limited to a mile or two. Nice communications gear is a lure to thieves so install it in a way where you can unplug it and hide it in the trunk or take it along with you.

Safe

We have seen small heavy duty steel safes installed in vehicles, mostly intended for locking up a firearm of some sort. At first this sounds like a good idea until we realized a thief need just steal the car and take it to a place where they could use a cutter to slice the thing open.

Electrical

If you need to, you can buy 12 volt DC powered appliances (hot pots, toasters, skillets, etc.) that plug into your car cigarette lighter, a warning many large freight trucks and military vehicles use a 24 volt power system but the cigar lighter plug looks the same as a 12v system. Just be careful using them, since they can quickly drain your battery if the motor is not running, and not using these appliances properly can start a fire. DC appliances can be had at most camping supply stores, RV shops, and truck stops. DC to AC power inverters (AC is a normal home wall plug power) are also available. Just make sure you get an inverter with enough watts. If you try to power something like a laptop or heater on a cheaper low watt inverter it will blow out the fuse. If you have yet to purchase a laptop remember that many inexpensive low-power netbook designs need only 12 volts and are hence easily powered by a cheap car adapter versus a normal laptop which requires an expensive 18-20 volt auto-air adapter. We know one homeless gamer who has a low power netbook for web surfing in the car and a nice fast gaming laptop that he uses for online role playing games in a coffee shop or at school since it needs so much power.

If you're technically inclined install a battery isolator and a second deep-cycle type battery and cigarette lighter jack and run the appliances off of that. A dash board solar panel is a good idea to trickle charge your system if you spend weeks cycling and only drive for long group trips. Some are available which will back flow power into the cigarette lighter jack (Just make sure your car's electrical system works this way). Another good idea is to remove the ground wire from the battery or install a knife switch so you can totally disconnect the battery avoiding normal power drainage to the radio, alarm, and car electronics. Don't use the dome light while parked you might fall asleep and wake with a dead battery. Think about wiring the dome light into that new second battery.

If you don't have the money to install a secondary deep cycle battery, or even if you do solder four or five 3volt white LED's in series (they will look like they are in a line holding hands, be sure that the flat on each LED bulb is in the same direction) and solder both ends into an old dome light bulb base, secure with hot glue, this will make a 12v LED light bulb. The power drain will be almost unnoticeable on your power system and you can leave it on for almost as long as you want. These low power drain LED dome lights are also available from some car parts stores and catalogs.

You might wire some 110 volt power jacks into your vehicle, then you can roll out a dark colored extension cord at night to get electricity for a heater or hot plate from a friends house or behind a store, this works best if you park right in front of the plug so nobody sees your cord. Spray paint the cord a color like dark gray (think pavement camouflage) and try to get it into a crack, along a curb, or wall so it will not throw a shadow if security or the cops do a late night roll by. If you plan to hard wire a 12v to 110v or 220v inverter into your system include a switch which isolates the inverter from your high voltage system when you are running from an external power source. If you have a battery charger and secondary deep cycle system wire it into your shore power system so that you are quick charging your onboard storage battery every time you plug in.

Have either an inverter or car chargers for your laptop, MP3, phone, game system, or movie player all ready to go when you are actually running the engine driving somewhere. Alternatively if you do not drive much, have all of the chargers set up on a power strip or multi-plug extension cord, then you can stuff everything in a backpack and plug in for charging at a coffee shop or library, just keep an eye on it so it is not stolen or called in as a bomb.

Electronics especially those using higher mains voltages are sensitive to moisture, if an inverter is sitting in the footwell when a cup of soft drink spills it will almost surely be ruined, keep electronics away from places where spills might collect.

There are trucker refrigerators that use a Peltier effect to cool your food and run on 12 volts, these are only practical for on long road trips, not long term parked camping. Consider how badly you need food that requires cooling, most likely you can adjust your purchases so you eat more fresh, just cooked, small quickly consumed servings (single quart of milk) or room temp foods and still not resort to impoverishment at the hands of expensive delis and fast food places.

Cooking and Heating

Engine Block Cooking

If you're on a road trip and want a hot meal when you stop, double wrap your meal in aluminum foil and/or a doubled oven roaster sack and use wire to secure it so it is in contact with the engine block, radiator, or exhaust manifold. Be careful to not overheat and burst sealed cans on the exhaust manifold. Our best successes are stews or meals that would also cook well in a slow-cooker or crock pot. Long drives can easily dry out some leftover type foods unless you stop and check every fifteen minutes or so. Practice will teach the warmest places under the hood and how to get the best results both with cooking and warming up leftovers. Be careful not to interfere with or drip food onto belts, linkages, electrical systems, or moving parts. Several wraps of foil is the wisest insulator as it is heat and fire resistant. If using a foil pouch or roaster bag it should be only half full to allow room to expand. Automotive cornbread or other cakes and pie crusts can be prepared with many stew like mixes even if they end up weirdly shaped due to sitting on a hot engine for several hours. As a rule of thumb, think of the exhaust manifold and tubes like a bed of hot coals, but the radiator top, bottom, and hoses as something that can heat but won't burn or brown foods. The engine block rarely will actually cook your foods but should warm up leftovers. For reheating leftovers, try warming up them with your passenger side windshield defroster while on the road. If you feel hot, open a window or sunroof while your food warms. Watch for leaks as they can make your ventilation system smell funky for a long time and are hard to clean out.

The popular cookbook "Manifold Destiny: The One! The Only! Guide to Cooking on Your Car Engine!" by Chris Maynard and Bill Scheller, goes into engine block cooking in depth Ask the librarian for help if there is not a local copy.

Tailgate Cooking

Engine top cooking is a great way to take advantage of waste engine heat on a long trip. If you are not moving it is much smarter to get out and use a camp stove or campfire and prevent massive fuel waste with the engine top cooking method or run your batteries dead using appliances powered off of the car electrical system. If you will be making a stop where you will have access to mains power run an extension cord out and plug in a rice cooker or crock pot in the footwell of the back seat, get your meal cooking for the hour or two that you are out, if you wrap the pot in a blanket it should stay warm for several hours until mealtime even once unplugged and back on the road, a belt or strap can help keep the lid on and sealed, also secure in case of an accident. You could also just bring the pot inside to cook in the kitchen. If you stop for a break and have your stove out and running already to cook lunch also boil some water to put into a large thermos so you can have tea or hot ramen later. If this hot water is not consumed by bedtime, pour it into a heavy duty leak-proof water bottle to help warm up your sleeping bag.

See also <http://www.instructables.com/id/E4JKUKQOF4EP287XU5/>

12 Volt Cooking

Don't try to plug your big kitchen cookers and hotplates into an automotive 12v to 120v or 240v inverter. You will either blow the breaker or pop the fuse, then no more power.

There are a number of electric cooking appliances designed for 12 volt use available at RV supply stores and truck stops. One item popular with long-haul truck drivers is the Max Burton Stove to Go (also called the "Burton Stove" or the "Little Black Lunch Box"). This is a small 12 volt slow cooker that plugs into your car's cigarette lighter. Essentially, it's a DC crock pot that is shaped like a lunch box, complete with a handle. The food is cooked in aluminum trays and oven bags (both available at truck stops). It is best used to cook your food while you're on a long drive, and much more practical to use than a ceramic crock pot in the car. There is also a cookbook for the unit; "Cookin' On the Go" by Virginia A. Harrington. Don't confuse this with the similarly named Max Burton OVEN to Go, which is little more than a toaster-oven.

(Some savvy truck drivers skip the aluminum trays and simply line the inside with aluminum foil. Also, there are knock-offs of the Burton Stove, such as the Koolatron 12V Lunchbox Stove and the RoadPro 12 Volt Portable Stove.)

Heating

Don't run your engine while parked just for the heater to keep yourself warm, this is a massive waste of fuel for the usable heat it produces in the car. Conversely it is a totally free way to warm up if you are already driving somewhere, your heater just diverts some of the waste heat headed from the engine to the radiator.

Look into getting a small portable propane catalytic heater that use either disposable canisters or a small refillable LP gas tank if you need to run it frequently while parked. Most gas heaters will get a compact car toasty warm in under five minutes even in the dead of a midwest winter and can also be used for cooking, as can a small propane camp stove. Never sleep with a gas heater running. An extension cord would let you plug into a nearby electrical outlet for heaters or hotplates. If you are worried about fire safety when you fall asleep consider a Japanese flameless catalytic pocket heater which burns Coleman fuel or lighter fluid without a flame. Other tricks are drinking hot water before bed, having a thermos of hot water should you wake up cold, a gulp of cooking oil before sleep to elevate your body temperature, or a hot water bottle on your lap, never discount the value of a good sleeping bag, large soft boot type slippers, and a wool hat and scarf.

For more ideas flip to Roadside Chow

Legal for Cars

To minimize police oppression and/or Empire theft of your car, you need these things.

- Valid Driver's License. This gotten by taking an eye exam, written road exams, and simple driving test with a pig in the car grading. It can be taken away by DUI convictions, serious traffic violations, old age/ change in health or ability, and (in some states) nonpayment of child support. Don't get conned into buying a useless "International Driver's License" which is not the least bit valid for driving. Read the entry for Identification Papers (<http://wiki.stealthiswiki.org/wiki/Identification-Papers#International-Driving>) for more information.

It is possible to drive suspended for many years. However, you run a cumulative risk of being stopped. Use caution. Most revolutionaries are busted on traffic stops. Avoid traveling on massive holidays. Use car sparingly. You risk anything from court and fine to theft for your vehicle and being caged depending on the cop and where you are. Be very careful if you live in a high crime area, as they stop folks more readily.

- Current Car Insurance Card. You need proof you paid CorpGov a bribe to drive. The newer the car and more coverage and more CorpGov detected accidents, the higher this is. Some states are even not letting you get a car tag or get your car out of impound if this is not had. Sometimes, the cop is okay if this is not had, sometimes not depending on state laws and the cop.
- Current Car Tag. Most cops can spot this for miles. It is possible to steal a tag, but if you are stopped for a traffic violation this can cause much trouble as the tag will not come up on the pig computer network under your name. No tag is worse than an expired one. The fines can be really stiff, as well. You may want to consider screwing down your plate with hex screws instead of regular flat head or phillips head screws. If you must park your car in low income and cop oppressed areas regularly. Hex screwdrivers are not as common to carry as normal screwdrivers. It can deter desperate folks from taking your tag and using it to drive without suspicion in a pinch or selling it for pocket change.
- Inspection sticker. Also called a "brake tag" in some areas, is a sticker on the driver's side windshield that verifies your vehicle is up to CorpGov approved working standards. They are color coded to year to make it easier for cops to spot expired ones. Sometimes it is possible to find mechanics to give you a sticker without a good inspection, if this concerns you. Check around.

If you have an inexpensive or beat up vehicle expect police attention! Drive the limit! Verify that your lights are all intact and working. Keep your driving license, vehicle title, and insurance information all handy. Dress straight as possible, and stay cool so you pass the attitude test.

If you ever are stopped, be compliant with the officers demands for license and papers, but do the minimum and produce your papers through a slit in your closed window. It will look suspicious and arouse the officers attention, but if there is nothing illegal in plain sight/smell/sound the pig can't really do anything. It is important to know, for example, that film containers are considered prima facia evidence of pot in most parts of the country unless there is a camera present. It is also evidence for a stop that a person of the wrong race is out of place i.e. black in a white neighborhood or old car in rich neighborhood. If the officer wants to search the vehicle politely refuse, continuing to say that you

do not give permission in a normal voice. Doing this will likely result in the whole force showing up, including K-9, trying to find a legal reason to open up your car. Claim your car is your home, this will have more weight if you are driving a registered camping vehicle, this mostly affects alcohol and driving charges by removing intent to drive in a parked vehicle. The officer can ask anyone in the car (or on the street) out for a weapons search, comply and as you exit, if you are able, lock the car denying him an easy illegal search. The officer can also demand to pat the driver accessible area (if you are still in the car) for weapons.

Remember drinking or even coming home to your vehicle drunk may win you a DUI citation and a towed vehicle, the same is true for doing drugs, the law doesn't need to make sense for the pigs to easily take your mobile home and its contents away sometimes forever, dont give them an easy excuse to do so.

Never admit to any infraction, the officer will ask how fast you were going, politely respond to his question by asking how fast he thought you were going or remain silent. Lying and saying "I don't know" means he can cite you for ANY speed and you have little defense later in court when they roll the tape of your conversation, that's right in many places they tape every bust with a microphone on the cop and video from the cop car. If he returns and tries to get you to talk more or asks again to search your vehicle politely ask for your papers and whatever citation he has written, after you get your papers, ask politely if you can leave, this should be your answer to any further questions. If by force he tries to search politely continue to refuse even as he begins to break and enter do not physically restrain him or fight him, you will be charged with assault and may even be murdered right there by the pig if you do interfere. Do your best to alert passers-by in a non-aggressive voice and get contact information from witnesses for later court testimony. Carrying drugs is just asking for a search, a drug dog can usually sniff out pot easily (it is quite stinky), once the dog indicates (even a fake indication) the cop can legally open up the car without your permission, using destructive methods. The best time to refuse a search on principle is when you really have nothing to hide.

If you are being followed by a cop who wants to bust you just get off the highway or road, park in a parking lot, quickly lock the vehicle, and go shopping, when driving you will eventually break some traffic law. Once out and away from the locked car refuse all offers to search the vehicle. Driving in front of a cop is like talking to a cop there is no safe way to do it.

Candid Camera

Cameras are an ever present danger, we can easily be tracked for nearly the whole time we are on a highway or in an urban area now that there is a tight network of CCTV traffic management cameras which are nearly all connected to a computer network which reads the license plates on cars. This information is easily available to the police and is often archived in a long term computer database which can easily be searched.

If there is a plan to commit a direct action where you need temporary immunity from those ever present red light traffic and on-site security cameras (but lots of trouble if caught by real live cops but hey, you are already doing an action right) you can use this trick. Find a vehicle that is generally similar to your own especially color and model, photograph the license plate and print it on glossy paper at full size, now stick over your plate, a plastic license plate cover might help preserve your work. Of course you would want to use the plate of an enemy, or someone with a really good alibi like a police chief or something, they will hopefully get off after throwing the cops off the trail giving you some time to get away. Of course burn the fakes if you ever use this after any action, this would be a big clue for the piggies.

For revenge you can use this trick to set off red light cameras, the city will mail out tickets to your enemies, use with caution, we don't want the heat to figure this one out. This also works to discredit the traffic camera system before elections, spoof the vehicles of prominent citizens but again watch out for the real live cops or face big trouble.

The best solution is to perform a civic service for the whole community. It is known that traffic and red light cameras are money making devices, shortened yellow lights and low speeds and traps distract drivers and kill people every year. Burn the fucking things down, if there is a shortened yellow light burn it too, they will have to post a real cop to direct traffic and will loose revenue instead of killing drivers in order to pick many pockets. This is actually an effective tactic used by people in the UK <http://www.speedcam.co.uk/gatso2.htm>

A Few Words About Biodiesel

Free biodiesel is an amazing deal while it lasts. As the dollar falls apart and the world oil production slides further down the supply curve prices will surge and it will become more common that factory fields that once supplied food to billions will be burned out the tailpipes of SUV's not from recycled fryer oil but grown and processed as primary fuel. Waste oil will be much more carefully guarded as the value rises, and will be changed with much less frequency. Serfs in North America will work the ethanol and oil bearing crops much as the indigenous people are forced to heavy physical labor for pittance in the Brazilian sugar cane fields to support the driving habits of the elite upper class. The truth is when you do the math it turns out you actually save more total energy blasting petro-fuels out your tailpipe than the massive amount of petro and natural gas products required to grow, process, and transport biodiesel and ethanol fuel crops in North American factory farms, at the same time there is even less inexpensive food available for the poor family to purchase.

Biodiesel fuel is not the same as straight veggie oil from behind a store. Salts, water, and solids must be removed and the thickness needs to be changed to be a full substitute for diesel fuel. Once a diesel engine is warmed up straight cleaned vegetable oil may be able to be used, a dual tank setup allowing on the fly blending would be required. Regular diesel or fully converted biodiesel must be used at startup and a few minutes before shutdown to flush the system of the thicker straight veggie oil.

The following paragraph from Wikipedia and is released under the same license as Steal-This-Wiki:

Chemically, transesterified biodiesel comprises a mix of mono-alkyl esters of long chain fatty acids. The most common form uses methanol to produce methyl esters as it is the cheapest alcohol available, though ethanol can be used to produce an ethyl ester biodiesel and higher alcohols such as isopropanol and butanol have also been used. Using alcohols of higher molecular weights improves the coldflow properties of the resulting ester, at the cost of a less efficient transesterification reaction. A lipid transesterification production process is used to convert the base oil to the desired esters. Any Free fatty acids (FFAs) in the base oil are either converted to soap and removed from the process, or they are esterified (yielding more biodiesel) using an acidic catalyst. After this processing, unlike straight vegetable oil, biodiesel has combustion properties very similar to those of petroleum diesel, and can replace it in most current uses.

In other words either mix the straight (cleaned and dried) veggie oil with an alcohol thinning it or chemically convert it with a strong alkaline like lye leaving a soap byproduct. Most often methanol is a natural gas derivative.

A guide to the production of diesel can be found at:

http://journeytoforever.org/biodiesel_make.html

Perhaps an easy way to get free veggie oil is literally from fast food joints and donut shops...no shit! Mickey D's and other places have vats of fryer oil used to drench their ultra-processed meat and potato products. After a few days, the fryer oil gets chucked. If you have a diesel car, you can use the filtered oil in the vehicle in combination or independent of diesel with a few often inexpensive modifications.

If somebody hasn't already beat you to it, you can check with restaurants/cafeterias and see about carting it away for them. Some will actually appreciate the offer, since in some areas, they have to pay to have the oil taken away. If the manager gives you a hard time or says that he sells it to an oil recycling service, don't despair. Most of these places keep the old oil outside as a fire safety issue. Find where it is and late one night grab as much fryer grease as your car can carry.

If you run your car on Biodiesel all the time, it's best to keep it to yourself. Some jurisdictions have actually been sending officers from the tax boards and fining people for using Biodiesel! Why, you ask?

For evading motor fuel taxes that pay for the public roads, or operating as an "unlicensed secondary fuel distiller"! I shit you not!

Blends with regular petrol and regular diesel fuel will also work but will expose you to gas tax.

Smoke Screen

A smoke screen for a car can be made with fairly minimal knowledge of what everything is.

You'll need to drill a hole in the exhaust manifold and add a spray nozzle into it; Epoxy would break down here, remember the temperatures are pretty high, instead either weld or drill and tap. Attach steel tubing for the first 12 inches and then whatever tubing is convenient and can handle under hood temperatures. Then, add any system you can come up with for injecting castor oil. Even a few drops will do the trick so why not get a syringe-like turkey baster and fill it up. The burning castor oil should be enough to obscure a quarter mile of highway.

On older vehicles especially those with large motors you can add a blocked hose to your vacuum system, when time to escape comes unkink the hose and stick it into a bottle of GM type automatic transmission fluid. It will clean your valves and blow off your tail in one go. Again use caution this has been tested with a V8 engine on rural highways and will leave a trail blotting out the whole road for about a mile on a calm day. Best results are running high RPM's in a lower gear.

<http://wiki.stealthiswiki.org/wiki/Cars> 18/21

Free fuel - The wood gas generator

During and after WWII there were severe fuel shortages, especially in Europe and Asia, during this time gasifiers were commonly used to power cars and trucks. These devices allow a vehicle to be powered by almost any combustible material such as wood, hay, dry pine needles, or dried leaves. In layman's terms they half-burn the wood in a closed container with a small air intake. This incomplete burning cooks the remaining fuel and releases combustible fumes and smoke that can be used to fuel an internal combustion engine. Often a canvas gas bag is used as a smoke reservoir.

The following links describe the construction and operation of gasifiers:

- <http://www.bioenergylists.org/files/Paint%20Can%20Gasifier%20Wood%20Stove.pdf>
- <http://www.allpowerlabs.org/gasification/gek/>
- http://www.windward.org/notes/notes63/wal63_b.htm
- <http://www.gengas.nu/byggbes/index.shtml>
- <http://www.build-a-gasifier.com/>
- <http://wood-gas.com/>

During World War 2, a number of works on wood gas generators were published since motor fuels were being rationed for the war effort. Many of these books have lapsed into public domain. A search on <http://books.google.com/> under "producer gas", "gas manufacture and works", "wood gas" or "gas generators" will give you valuable (if dated) information.

Gasifiers can be scaled for use on any sized engine, provided that appropriate measures are taken to prevent fuel jamming in the hopper (such as cutting the fuel into smaller pieces)

The drawbacks to using a gasifier are:

The gases they produce are highly toxic (a major component is carbon monoxide); a leak into the cabin can turn your car into a mobile gas chamber. For this reason you should never route pipelines through the cabin.

A vehicle using a gasifier will require more frequent servicing than usual, due to a tendency for carbon buildup in the cylinders. Preheating the combustion air to the gasifier seems to reduce the amount of carbon buildup, in addition to making the entire device more fuel-efficient.

Having a giant can hanging off the side of your vehicle is going to attract a lot of unwanted attention from police, and transport department / DMV type people. Pickup trucks and vans have the advantage of being able to site the gasifier in the tray or back of the van (with appropriate isolation from the cabin) respectively, making it look like a piece of equipment being transported (Example: You could disguise it as a hot water heater). Another consideration is to construct the generator on a small trailer and tow it behind your car. The trailer could be disguised any number of ways.

One of our writers had the opportunity to ride in a wood smoke powered VW bug, it worked well around the farm but would really bog down on hills once the gas reservoir was empty since it had a undersized experimental gasifier. The point is that even if petroleum or alternative fuel is unavailable to you for whatever reason this is a way to get a vehicle working even if it is not moving at 85 mph for ten hours non stop with a substance available almost everywhere.

Steam Powered Cars

Here's an old technology that could with some work by a few gearheads be resurrected to be a viable non Corp-Gov mode of transportation. Until the late 1920's and early 1930's many cars were powered by steam engines which have over a 300 year history as a workable technology. Many of the cars of the 1910's and 1920's were steam powered with water being used to make the steam and kerosene being used to fire the boilers to convert the water to steam. Some of the most famous were the Stanley, White, and Doble motor cars. Some of the Stanleys are still on the road today and about 11,000 were built between 1900 and 1927 when the company went out of business. Rumor has it that Jay Leno of Tonight Show fame has 5 of these in working order. Also the Stanley steam motor car set a world speed record of 127 mph in 1906 at Ormond Beach, FL. Looking at it from the fact that anything that can burn could be used as fuel to power a steam engine this might be the most environmentally friendly form of transportation available. There is the Steam Car Club of America and Britain which has a few guys who are into the restoration of some of these old antiques that a revolutionary might be able to get in touch with to provide some help on converting a current day car to steam or building one from scratch to run on steam. The technology has been used before it's just a matter of getting it off the ground again. It didn't work before because Ford and Corp-Gov back then were enamoured with oil and Rockefeller and his big oil gang shut down the idea. But now as of the time of this writing with \$4 U.S. per gallon for gas and calls for \$6 U.S. per gallon for gas we're desperately needing to look for modes of viable transportation for our fellow brothers and sisters in the revolution. If anyone is interested in putting together a revolutionary council to get this idea working contact El Almirante at wtk1861@gmail.com.

Produce Your Own Ethanol

With about \$600 you can convert your current car if it is a post 2000 model to a flex fuel car that can run the CorpGov drug of Gas or can run ethanol. You can easily produce your own ethanol for about \$2 per gallon. It's simple to use by building a small still. Also if you want to do it legal the ATF gives a free permit to allow you to produce up to 10,000 gallons a year if mixed with a denaturant (so you can't drink it). The fees may vary from state to state but most require you to get a background check and get a wholesaler's license and this costs about \$160. or if you don't want to go to all that trouble you could just turn moonshiner and make it without paying the \$.28/gallon tax. The converter that I know of on the market right now is the Flex Tek converter which costs about \$500 and it costs about \$100 to have installed. This will make any car a flex fuel car and you can run gas or ethanol in it. Also if you're interested in this look at the *Mother Earth News* website ("Green Transportation" link at <http://www.motherearthnews.com>). They have a whole section on how to build ethanol stills and how to make sugar washes that are eaten by yeast to produce your ethanol. Ethanol (just drinking alcohol, at about 80-90%) is usually mixed in different percentages with normal gasoline/petrol, but can be run pure in cars that can take it.

One of our test engineers built such a setup from a large plastic barrel for the fermenter and a modified gas hot water heater and a used car radiator setup to distill the alcohol (not safe to drink), he was surprised the amount for fuel he was able to make by digesting a wet yeasted dumpster-bread soup. He mentioned that summer was the only time of year it worked quickly in the pacific northwest since it ran too slow in colder days, he is thinking of adding a small sun heated shed or greenhouse and painting the digester black in the future. He is working on a better way to wet mix the bread mash, currently he has a large egg-beater attachment for an electrical drill, he has trash pumps to move the goop between the mash tub, digester, and distiller.

Running Your Current Car on Store Bought Ethanol

Just a quick note from one of our field testers that needed to be put into writing here. Our field tester using a post 2000 model car, a 2004 Pontiac Sunfire to be exact, has successfully discovered that you can run up to 50% E-85 in your car to save on gas. To do this he filled up with half a tank of Arabian imported terrorist sponsor state gas and then filled the other half of the tank up with U.S. made E-85 ethanol fuel. He then ran the car the distance of 150 miles so far with no problems to report at all. As a matter of fact it appears that his overall gas mileage has improved and his car is running cooler than on straight CorpGov gas. Just a little trick some of you might consider using if you don't want to make your own ethanol and have E-85 offered in your area at gas stations.

Recycling a Car

Like most indigenous peoples we must also learn to make good use of every last part of our fallen steeds.

- The alternator and battery can be connected into a water wheel, wind turbine or other system for generating electricity. You can also bypass the regulator to make a very high quality arc welder.
- The starter motor is a high torque motor that with the right gear reduction could power anything from a electrical winch or crane to a small cart.
- An automobile transmission can be used to convert the speed or torque of a human, wind or water powered machine.
- An automobile engine can be converted to burn natural gas, propane, or even concentrated wood smoke by removing the carburetor or fuel injector system and installing a simple venturi gas/air mixing system. In a worse-case scenario, oil from castor beans can be used as motor oil and toilet paper can be used for oil filters (Google "Frantz Oil Filter").
- Auto windows can be recycled but safety glass is almost impossible to cut as it is designed to shatter into tiny crystals. Auto glass has already been successfully used for greenhouses, but custom frames must be built for each piece while smaller panels can be fastened together with epoxy. (Note: Most auto glass is tinted and may block needed sunlight for your plants.)
- An engine block is a good boat or buoy anchor. It is also the basis for building a Multimachine DIY precision machine shop. (See Means of Production.)
- Seats can be removed, modified, and used as furniture.
- Seatbelts can be used for belts, suspenders or other strapping uses.
- Interior lining (on the doors or roof) can be used for fabric patches.
- Air conditioning systems can be used to build a refrigerator or freezer.
- Rear view mirrors can be salvaged for household use.
- Radiator and heater cores are great for building fuel alcohol distillation systems, but the metals will often poison the alcohol so don't drink it.
- Body panels can be cut for general fabrication supplies.
- HID lighting systems can be converted to use in bicycle motorcycle or portable lighting systems.
- Spark coils and be used to energize an electric fence for your veggie garden.
- Axles and springs can be repurposed for large horse or donkey carts.
- Power steering systems can often be used to power hydraulic pistons or other tools.

- Many non-steel parts are medium to very high quality aluminum or other metals which are easily melted and cast.
- Audio equipment can be used for entertainment and communication (provided you have a steady source of 12 volt DC electricity), or salvaged for electrical parts.
- Unusable tires can be cut up for sandals.
- Hydraulic lifts for hatchbacks can be used for self-closing doors.
- Hinges, knobs and handles can be used on doors and cabinets.
- Reflectors can be used on outdoor markers.
- Horns can become part of a home-made alarm system.
- Brake drums can serve as an anchor for a small boat or raft, or the basis for a small blacksmith forge.
- The assorted electric motors (like those used for power windows) can be used in a number of ways.
- Brake shoes have a rough, abrasive finish that can be used for grinding metals or stone.
- Hub caps can be a mini barbeque. Turn them upside down, set them on metal legs, and put a grill on top. Wash out the hubcap so you don't get brake dust in your smoke.
- Windshield wipers make great squeegees.
- The exhaust pipe can be a chimney for a wood stove or bent into a "U" shape and used as a heat exchanger in a fire place.
- If the car has a turbocharger it can be rebuilt into a real jet engine. With some machining skill you could even build on an output shaft to power a vehicle, generator, or even a very small aircraft propeller.

All these parts can also be sold, which can net you a tidy profit depending on how rare or desirable the car is.

External Links

- BBC h2g2: How to Sleep In Your Car - <http://www.bbc.co.uk/dna/h2g2/A29176365>
- "How to Live In Your Van... Ongoing And Added To From Time to Time" - <http://wendyusuallywanders.wordpress.com/ongoing-added-to-description-of-how-to-live-in-your-van/>
- Motive: The Other Mobile Home - http://www.motivemag.com/pub/feature/drivers_ed/Motive_Culture_How_to_Live_In_Your_Car.shtml
- VanDwellers.org - <http://www.vandwellers.org>
- WikiHow: How to Live In Your Car - <http://www.wikihow.com/Live-in-Your-Car>



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