

Keeping Your Car Rolling: Vehicle Preventive Maintenance

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How to Keep Your Car Rolling for a Long Time to Come. [Editor] Simple preventive maintenance will keep your car on the road virtually forever. If Irv Gordon can secure two million miles from his Volvo, then so can you. Follow the [instructions](#) in this FAQ section, along with additional tips in [Engine: Lubrication](#) and [Buying Used](#).

[Shannon DeWolfe] Because of the relative costs of maintenance and repairs compared to the value of the car, many people are trying to learn how their cars work and what it takes to keep them running. The time to learn how your car works is before it fails. Open the hood. Make sure you know what everything under there does for a living. Remove a wheel and identify everything you see. Put the car on jack stands and put your hand on everything you can reach from below. Learn what all those things do.

Get a shop manual and read it like a novel. When you've finished it cover-to-cover, go back and study the subsystems. If you spend the next six Saturday mornings studying your car by the end of that time you will be able to solve 90% of any faults on your own. That is not much effort considering the payback. And read the 700/900 FAQ.

Trip Tips: get an imaged [copy](#) of the OEM wiring diagram for your car and an html or pdf copy of this entire FAQ, download it into a USB chip, and keep it in your glovebox for reference on the road. You can always find a local library with computer facilities to help read it.

Mechanics Directories. For lists of mechanics specializing in Volvo repairs, try the following:

- <http://www.volvomechanics.com/>
-

Fuel Economy Improvements. How can I improve my 740/940 fuel economy?

Driving Styles. Rule One is slow down: these non-aerodynamic cars burn far more fuel at 75 mph than at 65. Avoid the jackrabbit starts as well.

Mechanical Improvements.

[Bob Wilson] For more MPG, try the standard stuff first: fresh spark plugs, air filter and properly inflated tires. Stock thermostat (92C non-turbo, 87C turbo). Get a wheel alignment. Synthetic lubricants can help. I use Mobil-1 5W30 in the engines, RedLine everywhere else. Their 75W90 synthetic gear lube works fine for the 940's ALD [rear axle](#). I've changed engines over to Mobil-1 at mileages ranging from 40,000 to 260,000, and immediately gone to extended oil change intervals depending on usage patterns. [Editor] Try Mobil 1 synthetic ATF in the [transmission](#) and [power steering](#) systems. Small improvements can also come from low-rolling-resistance tires, which are hard to find but do make a small difference. Keep them inflated to 34 pounds or so for better mileage. The recommended inflation pressures are usually determined more for comfort than economy.

Turbo vs. Non-Turbo. If you have a turbo, you likely have the non-lockup torque converter in your [automatic](#) transmission and a lower gear [ratio](#) in your rear differential, both installed for performance and not economy.

A US spec turbo has a 3.73:1 ratio without a locking torque converter. The last of the non-turbos came with 4.10:1 and locking torque converters. Is it worth changing over? Almost certainly not: your mileage improvement will be at most five to seven percent or so (up to 2 mpg). The cost will be the replacement transmission and differential and the labor to install them. Far better to focus on the simple improvements to fuel economy noted above.

"Service Engine" Light Reset in Various Models. See the [discussion](#) in [Electrical-Instruments](#) for information about re-setting the "service engine" lamp, which is an engine oil change timer.

Preventive Maintenance Supplies. Here is a short list of special supplies useful for keeping your car on the road forever.

Spray Lube. Forget WD-40 and cheap lubes. Use a quality spray lube on locks, hinges, pivots, sunroof mechanisms, cables and the like. Good lubes include:

- [Superlube Spray and Grease](#). PTFE-based, this is great for sliding parts. The grease comes in a small tube. Buy it from Superlube, at marine supply stores, or at Lowe's/Home Depot.
- Silicone Spray. Use a can of generic silicone spray for your power antenna lube: it does not attract dirt and does a good job lubricating the sliding surfaces. Use it as well to lubricate your door seals. But DON'T spray it near your intake system because silicone poisons oxygen sensors.

Penetrating Oils. Forget about WD-40 and Liquid Wrench. The only stuff to buy is [PBBlaster](#), available at [IPD](#), Walmart and other mass marketers. [Kroil](#) is another good brand. [Peter Milne] In the UK, try E.A.C.'s PlusGas Formula A, available from tool and engineers' supply shops.

Electronics Supplies. Try [Caig Labs](#) "DeOxIt", used by electronics techs to solve computer problems. Miracle stuff for connector cleaning and deoxidation. Spray both sides of the contacts then treat the connection (with the sole exception of the oxygen sensor connector) with silicone dielectric grease. Buy it at Radio Shack. Use OxGard conductive grease on chassis grounds.

Rubber and Vinyl Maintenance. Armorall and the like are suspect. Look for a marine-grade UV block for fabrics and vinyl. [303](#) is superb, available at marine stores.

Maintenance: Air Filter Replacement. [Various] To change your air filter, locate the air filter box under the hood, behind either the left or right headlamp. CAREFULLY unclip the metal spring clips holding the top to the box. These have a tendency to break their mounts. Because the plastic can fracture, don't do this in very cold weather. Look carefully for all the clips, some of which are in strange

places. Unscrew the air mass meter clamp from the boxtop. Lift the top off. If you have a turbo, you will find various parts of wiring harness and fender in the way and you may need to move the entire assembly to access the top. The filter fits in the box, with a gasket snug in a recess. Replace this. If your boxtop has silencing foam glued in it, remove the foam since this deteriorates and clogs your expensive air mass meter. Replace the box top snugly and CAREFULLY secure each spring clip. If you have any broken clips, you can repair them by following the instructions in the [FAQ file](#). Under no circumstances should you let a quick lube mechanic "inspect" your air filter, as they will most certainly break most of your box clips off in the process.

Preventive Maintenance After Purchase: When I buy a used 700-900 series car, these are the items to inspect or replace in order to improve reliability and longevity. See the recommended maintenance schedule in your owners' manual to know when routine items need to be replaced. The Volvo dealer 150-point check, which costs about \$85, is well worth the expense since you will receive an evaluation of Technical Service Bulletin and recall compliance. The list below is exhaustive and includes almost all items that wear or fail on the car.

- Change [oil and filter](#), using a Mann or Volvo OEM filter.
- Change air filter.
- [Flush coolant](#).
- [Flush](#) the auto transmission fluid.; [Change](#) the rear end/differential lube .
- Chassis lubrication: [radio antenna](#), [hood release mechanism](#), [door locks and hinges](#), [hood hinges](#), [sunroof](#) and other lube points according to the Volvo service charts. Use a good spray lube (Mobil 1 Spray, Superlube, etc.)
- [Brake fluid](#) - thoroughly flush
- [Fuel filter](#) - replace
- [Throttle body](#) - clean
- [Flame trap](#) - clean the breather system to prevent oil leaks
- [Plugs/wires/cap/rotor](#) - replace or check as required. Use Bougicord OEM wires.
- [Accessory Drive Belts](#) - all three, replace if needed
- [Timing belt](#) - replace with Volvo unit. When you do the timing belt replacement, it's relatively cheap to replace the cam, intermediate and crankshaft oil seals and the tensioner.

If this is a B6304 six-cylinder or B234 16-valve, changing the timing belt on schedule is **CRITICAL** (and see: [oil pump bolt](#) for the 16-valve).

- [Radiator/hoses/thermostat/water valve](#) - replace radiator if it is older than eight years. [Change](#) all hoses: radiator upper/lower, heater hoses, reservoir hoses, and turbo oil cooler coolant hoses (if a turbo), using [Volvo](#) brand hoses. Change the [heater control valve](#). Since this valve is made from the same plastic as the radiator, it will eventually fail, usually [catastrophically](#) . The same is true of the coolant reservoir. The maximum reliable lifetime of plastic radiators and heater valves is about eight years. I've added the plastic overflow tank to my list of replace/repair on 740's with >100K miles, and especially on the Turbo cars. The overflow tanks are cheap enough to include in the general cooling system maintenance program. [Editor's Tip:] See the [Loss of Coolant](#) discussion for information on components that age and break.

Consider installing a [Loss of Coolant sensor](#).

- [Vacuum hoses](#) can split at the ends and cause unexplained driveability troubles. Older cars likely need new hoses. The small hose to the turbo wastegate is especially vulnerable and if it fails, will overboost the turbo.
- Check the [water pump](#) for leaks and replace if needed.
- Inspect front and rear [engine oil seals](#) for leaks
- Replace the [O-rings on the distributor](#) and the oil fill cap o-ring gasket, and inspect the valvecover gasket for leaks.
- Set [valve clearance](#) although the B23X engines tend not to lose their valve tappet clearance.
- [Oil filter mount O-rings](#): check for leaks. Only \$7 and can be done yourself
- Check the [rubber hose](#) that connects the tank prepump with metal fuel line; these tend to deteriorate with age.
- Vacuum hoses: mark ends with duct tape and replace if they are hardened or cracked.
- [Hydraulic engine mounts](#)...if the pan is less than 1/4" to the crossmember you're on borrowed time...if it touches...replace both of them.
- [Air box thermostat](#): check to see it operates. Remove or replace as needed.
- [Transmission output shaft bushing](#) - check/replace as required if over 130K [This is not a problem area, just a wear issue. There is a bushing on the output shaft of aw70 and aw71 trannys that wears over time. It costs about \$200 to replace at transmission shops.
- Turbos: Turbocharger [oil return pipe](#) to block O-ring...only \$4 or so but labor again...replace the paper turbo to pipe gasket. Check ALL, and I do mean ALL, of the vacuum or pressure hoses in the engine compartment, especially the little one that controls the turbocharger pressure to the wastegate...blow this one and the engine will grenade from overboost. Check condition of rubber in [harmonic balancer](#).
- Oxidized Engine Wiring Connectors. See the [narrative](#) to find out how to clean and protect your engine wiring harness connectors.
- [Battery cables](#): clean, deoxidize, and protect with battery terminal cleaner
- [Rotting engine harness wiring](#) (83-87 cars): Get busy with a roll of electricians tape or plan on rewiring a lot of stuff...many wires under the hood have had their insulation broken down over the last 10 years...not so bad if they're ground connections, but eventually even those wires/connectors will corrode to the point of not connecting. Evil things will befall thee. [Note: see prior notes above on Baked Wiring Harness problems, and connector cleaning.]
- Clean and preserve [chassis and engine grounds](#).
- Fuel Injection [relay](#): resolder
- [Ignition Power Stage amplifier](#): replace dried-out thermal paste between the amplifier and the fender heat sink
- Check to see if the [splash shield](#) under the engine is whole, or even still there!! That shield helps to keep the engine clean and air flow correct....it's relatively cheap from RPR or other suppliers.
- [Brakes](#): check pad and rotor thickness and lubricate the caliper guide pins.
- [Suspension bushings](#): check or replace the front conical strut bushings and the condition of all other front bushings. Rear bushings last a long, long time.
- Useful [manuals](#) from Volvo include the Wiring Diagram Book for your car, an indispensable book when tracing any electrical faults.

Flame Trap Preventive Maintenance. [From RPR:] On four-cylinder non-turbo engines, the flame trap (a replacement for the old PCV valve in the positive crankcase ventilation system) prevents engine backfires from igniting in the crankcase. However, airborne contaminants and oil residue will eventually clog this device and cause excessive crankcase pressure. Symptoms of this problem may include finding your oil dipstick lifted up from its entry tube and worse, leaking engine seals. The flame trap is buried under the intake manifold [between 2 and 3 cylinder intake manifold inlets.] Do not let this discourage you. Replace the flame trap every year for trouble-free engine performance. Also replace the hoses connected to it if they appear bloated or spongy from engine oil damage. Do not use clamps to hold flame trap hoses in place; if they are popping off, you may have excess crankcase pressure. Also check that the vacuum fitting on the induction (intake) manifold is open and providing vacuum for the PCV system. The fitting is connected by a small hose to the flame trap housing. See the extensive [Flame Trap](#) discussion in the [Seals, Belts and Vent](#) file. Note that using synthetic oil seems to eliminate flame trap clogging.

Lubricant Preventive Maintenance. See the fluid filter under [Steering](#) and the notes on fluid change/filters in [Transmission](#) for tips.

Alternator Preventive Maintenance. It would be wise to inspect the voltage regulator/brush unit (VR/BU) for wear while the alternator is removed from the engine bay. The small slot screws which retain the VR/BU can be quite difficult to remove, especially if your car is driven in the rust belt. The VR/BU sells for around \$70.00 and can be obtained at any Bosch supplier. I apologize for not being able to give you a part number, but the VR/BUs are selected to match particular alternators and, if my memory serves, later model 240s were fitted with one of three Bosch models (depending on trim & accessories). One tip I can provide is to avoid cheaper, third world units as these can fail prematurely! When re-assembling the VR/BU with the alternator body, place a small dab of anti-seize compound on the retaining screws. This will make it easier to remove the VR/BU in the future. The rubber bushings used in mounting the alternator, power steering pump, and a/c compressor tend to require replacement after about 7 years.

[Tip: Editor] Remove your alternator and take it to an automotive electric shop, where they can rebuild it for around US\$70 including new bearings, brushes, voltage regulator and a complete electrical test.

High-Mileage 1990 740/760 Problems. [Inquiry: Any special problems I should look for in a 760 of this vintage?] [Reply:] I bought my 89 740 (non-turbo) at approx. the same mileage. Some items since then have been the [radiator](#) (replaced with an all-metal unit as opposed to the factory plastic tank version), the [heater water control valve](#), the FI ECM, [motor mounts](#) and now at 175k miles the steering rack needs to be replaced. None of the above parts alone are insanely expensive, except the FI unit, so if you do your own work, it's not too bad. A recurring problem on my car is that the [power window switches](#) keep flaking out and I'm too cheap to get a new set and too tired of opening them up and cleaning them. [Editor's Note: see the section on [engine wiring harness problems](#) with 83-87 7xx cars.]

Regina Fuel Pumps. [Tip] If your car does have a Regina system and you have over 150k miles then replace the fuel pump (f you haven't already) I've taken a couple apart to see why they failed; the commutator & brushes show excessive wear. Both wore the brass out and one had the brushes wear so thin it popped out & the wire broke.

V-6 B280F Preventive Maintenance. See the [Buying Used](#) section for more information on V-6 maintenance.

960/90 Preventive Maintenance. See the [960/90 Section](#) for specific tips on preventive maintenance to these six-cylinder cars. Pay particular attention to [timing belt](#) , [sticking valves](#) and [wiring harness](#), and make certain you change your [engine coolant](#).

[Tip from Rafael Riverol] If you have a 960, I please take off the plastic cover atop the engine and examine the female connectors at each of the six coils. I suspect you will likely find crumbling insulation, brittle barrels and poor connections. I can tell you these can fail you anytime. You will also likely find crumbling wire sleeves that will allow wire chaffing against the engine head. [Tom Irwin] To inspect the FI wiring harness, open up the Volvo 24 valve black spark plug cover and check the wire pairs going to each coil pack. The REAL hazard, the one that will stop you cold with 1-1-3 or 1-1-4 errors is fixable only by taking out the manifold and cutting and splicing. Your choice: to repair on failure or pre-emptive strike.

How to Clean Interior Trim. [Tip from Darell] To clean the Interior including the vinyl seats, headliner door panels, carpet and the rear cargo deck of my 89 Wagon, I bought some Murphy's Oil Soap. Mixed it with some warm water approx. 30-70% water solution. Used a brush and a dish sponge. Worked great. Almost good as new. It removed some stubborn stains I couldn't even get with Simple green.

How to Remove Tobacco Smell

From Newly-Purchased Brick? I had the same problem and used a product sold by Sam's Club called Odor Ban. Sprayed it on the seats and carpets before I used a regular upholstery cleaner. worked very well for me.

[Numerous] Also try "Febreze" spray.

[Tip from Skip] My local Volvo mechanic also sells late model used Volvos. He uses a commercial ion generating deodorizer on the smokers. He uses a new filter on each application. Put the unit in the closed car and run it for several hours. Not cheap (he charges about \$100 per job) but it works wonders.

[Tip from Bret] A trick I learned from a chemical tank cleaning place I used to work...Vanilla...Any time they had a hard time getting the smell out of a chemical tanker they would soak a roll of paper towels in vanilla extract and hang it inside the tank overnight. For a car I'd stuff a big coffee can or such with paper towels and soak it down...then leave it uncovered overnight. (Variations on this include a

tin of coffee grounds or sliced apples, left until they rot. Or volcanic rock odor eliminator, found in the cleaning supplies section at Home Depot (if you are in the U.S.) for US\$6 that is very effective.)

Maintenance Records. [Tip: Steve Ringlee] Zee's recent post on Computerized Maintenance was very insightful. I've tried to keep two sets of maintenance records for each car: one on my computer and one in the engine compartment. The computer records in an Excel file show date, mileage, who did the work, and a detailed description of not only the major work done but things to watch for in the future. This is backed up by a file of all receipts (remember the lifetime warranty on shocks? you'll need the receipt!) and warranties, etc. This goes beyond the stamps in the Volvo maintenance book: things are described in more detail and include work never done at the Volvo dealer, who is seldom visited. The other set is in the engine compartment. My father's mechanic taught me this: use permanent marker and white duct tape on selected flat, cool surfaces to record routine things like:

- the complete record of all fluid and filter changes: oil, trans, diff, brake, coolant, brake fluid, power steering
tire rotations, wheel alignments
- changes of plugs, plug wires, cap & rotor
- seals and belts
- air, fuel filters
- replacement of relays, sensors, battery, etc

When you are maintaining five cars for self, wife, kids, in-laws, etc. it is impossible to remember what is going on. Every time I bring one of them in for service, the mechanics at either the dealer or Sears, etc. are unbelievably grateful that someone has made life easier for them by posting the obvious in the engine compartment. It also makes diagnosis a whole lot easier and keeps me from doing things twice because I forgot that I had done the work last year. I just open the hood and instantly know when something is due for work. Even better than duct tape (which tends to shrink over time) is a Brother or Casio label maker and white label tape.

[Tip from Zee] I am trying [Automotive Wolf](#) software, which seems very good for input about services, parts, PM schedules, reminders, etc. Very easy interface. Program opens up to an Alarm Notice and a What's Due window. Very handy. The diagnostics and technical info areas are rather superficial, though.

High Mileage Badges. [Editor's Note] Volvo has responded to U.S. customer requests and opened a Heritage Club from which you can obtain high mileage badges, newsletters, product news, and invitations to events:
<http://www.volvocars.com/us/top/community/clubs/heritage-club/Pages/default.aspx>

In other countries, obtain high mileage badges for your Volvo (each 100k up to 500k, then in larger increments) by contacting Volvo through the appropriate country website. To mount the metal versions on your grill, see Brian Murphy's techniques in the [FAQ file](#).

Towing Your RWD Volvo. [Inquiry] My car is disabled and needs to be towed. Is there an approved technique? [Responses: George Downs/Robert Ludwick/Randie Starkie/John Sargent] Towing the car with the rear wheels on the ground can cause lubrication problems in the transmission. There is no internal oil circulation because the only oil pump is run by the input shaft. Therefore no lube. Comments:

- When I had to call my auto club for a tow, they had it on their computers that any volvo was an automatic flatbed call. They won't even send out a regular hook.
 - The last time I required a tow the company used a truck that lowered a platform with indentations for the REAR wheels. They slid it under the car/wheels and then lifted the rear off the ground. The steering locked in a straight forward position (don't know what they would do if it hadn't). This prevented any worry over the transmission being damaged and from what I've read automatics can suffer damage as the distance of the tow increases.
 - Most tow operators have a dolly; when they tow a RWD, they will put the rear tires on the dolly while hoisting the front tires. If I was hauling the car with a tow dolly (which I have done), all I would do is mark and disconnect the drive shaft at the rear axle.
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Car Storage Tips. [Inquiry:] I will be leaving the country in another month and have to put my Volvo in storage. What type of preparation should I do to the car before I leave and what should I do on my return? I plan on disconnecting the battery and I may even have a friend start the car once a week...the storage will be outside with a car cover and will be sitting for the majority of a Phoenix summer.

Shorter-Term Storage Hints:

[Response 1: Paul Seminara] Shouldn't be a huge ordeal to store a car in Phoenix through the summer. Just keep it in the shade!! (car cover 'll work) Make sure the tires are out of the sun, too. I don't think it's too good to just start the car once a week, unless you do a full warm up cycle with some good driving. I think you'd be better off just dumping some fuel stabilizer in, filling the tank all the way, changing all the fluids, squirting some oil in the cylinders, turning it over, put new plugs in and remove the battery (you may do the battery monitor thing, but I'd be wary if I couldn't eyeball it once in awhile) and let her sit.

[Response 2: John Erickson] All the things Paul mentioned are good things to do, but you can get away with little or nothing. If you can get someone to drive the car once a month, you don't need to do anything else. If no one is going to touch it for six months, then you should put it on blocks (tires get flat spots that won't run out - especially in the heat), top off the gas tank and disconnect the battery. The battery will be dead when you get back, but it will recover after a jump start.

[Response: Peter Penguin] Mice can enter the car through the vents at the bottom of the trunk/boot side compartments. Place metal mesh hardware cloth in these rubber vents to keep mice out.

Long-Term Storage Hints. [Inquiry:] I am going to put my brick ('91 940gle) on

the block (storage) for approx 12 - 18 months in the garage. Anything else I need to do other than the suggestions from the board. The existing timing belt has 47000 miles on it and the manual recommends timing belt replacment at 50000, should I go ahead replace the belt now and then put it in storage, or can I replace the belt after I put the brick back on the road 18 months from now. if I leave the existing belt in the car, will the existing belt break when I attempt to re-start the engine 18 months later (the 940gle is an interference engine - major repair if the timing belt breaks). Any particular areas require extra attention before I put the car in storage?

[Response: JohnB] Store the car and replace the belt after a few hours of running after you take the car out of storage. Reason is that the belt is supposed to be replaced at x miles (50k in your case, my 90 B230FT is supposedly 45k in the chilton book but I still figure 50K) or if the car has been stored for 'any length of time,' whatever that means. Apparently the idler pulley puts a dent or fix in the belt, a reverse dent or set, and the belt reliability suffers. As you already know, the engine (non-DOHC 4 cyl) is non-interference, even if the belt snaps when you start the car or after a few hours, no damage to the engine will result.

You might consider using amsoil marine synthetic lubricant for storage...the marine oil has a hefty anti-corrosion package that is ideal for long term storage. One should probably change the engine oil before storage, as well as the engine coolant.

I like to 'fog' the cylinder walls with marine storage lube, i.e., pop the plugs, squirt lube in the holes, put the plugs back in, disconnect and ground the ignition coil secondary, pull the fuel relay, and spin the engine a few seconds while blowing lube in the throttle body.

You can either drain the fuel tank and drop a dessicant bag (onna string...you will need to remove it!) into the fuel filler neck...it should be pretty well sealed unless the cap is defective, or you can use a quart of gas stabilizer mixed in with a full tank of gas. 18 months is a long time for gasoline, however, and you'll probably find yourself dumping the gas so it's better to have less gas than more to dump. If you have a non-steel gas tank, I'd run the tank as low as practicable, add the fuel stabilizer, run the engine a few minutes to distribute the stabilizer, and then pull the fuel relay at the storage site when you fog the engine.

Find a couple bags of dessicant and put them in the car...clean the car real good before you close it up! If you have someone to air out the car every 3-6 months (no start!) and reactivate or replace the dessicant bags, so much the better.

Best case is if you can find a giant plastic bag to put the entire car in, suck the air out of the bag (wet/dry vac works good, and then bleed dry nitrogen into the bag. There are storage bags available, obviously you have to drive the car into the bag, look in the back pages of Autoweek or Motor Trend or whatever. Or check out <http://www.carbag.com>

The Army learned a good lesson from the Israelis on bagging entire tanks/armored battalions...The tanks start up every six/12 months with nothing more than new battery packs (not a small deal....a modern tank takes 4-6 BIG batteries, like the size of those on semi trailer rigs.)

Take the battery out and sell it....you'll need a new one in 18 months almost no matter what you do with it.

Rodents and Squirrels. Plug every orifice on the car you can....squirrels or whatever will find them if you don't. Rodent repellants include:

- Sprinkle red pepper everywhere
- "Fresh Cab" from Ace Hardware; they carry it or order online. It is supposed to be non-toxic and comes in little bags that you set around - you could stick one under the hood somewhere. They emit a VERY STRONG pine scent that they claim rats and mice don't like.
- Moth balls, although they sublimate and must be replaced regularly
- Dryer sheets throughout the car, replaced on a regular basis. Rodents don't like them. Put them everywhere inside, trunk, engine compartment
- Appropriately sized traps: mouse trap for mice / rat trap for rats. GLUE the bait to the trap. We used almonds as I recall. They can't take the bait without tripping it.

Fuel Quality Concerns and Engine Deposits: [Tips from Chris Herbst] Be careful when storing cars. Make sure you use a quality gas storage stabilizer in the fuel tank before placing the car in storage. We have found that rotten, stale reformulated (ethanol) gasoline glued the valves into the valve guides on a 740T we had in the shop. This was the fifth time this shop has had the problem with stale gas reacting in such a way that it turns into glue. Apparently the common denominator is plastic or lined fuel tanks. You can literally reach into the tank and scrape this molasses-like sludge from the sides of the tank. The same, I believe, as with this particular 740. The results are the same--total intake valve seizure leading to timing belt stripping. There are no deposits on the cylinder walls or the pistons themselves, which pretty much rules out byproducts of combustion causing the problem. While carburetor cleaner removes the gluelike stuff from the valves, it also re-deposits the sludge when it evaporates. Therefore it's necessary to wash the head out with carb cleaner, not just spray the stuff off.

High-Performance Tires and Flat-Spotting. [Mercedes] Storing vehicles for long periods can cause flat-spotting of high-performance tires. These tires typically are made with a nylon overlay that enables them to achieve their designated speed rating and enhanced handling capabilities. Problem is, the nylon material also has memory-retention tendencies. With this in mind, the following steps should be taken to avoid flat-spotting when vehicles equipped with high-performance tires are not used for extended periods: Vehicles should be stored with 44 psi of pressure in the tires. When a vehicle will be driven, the air pressure should be reduced to the recommended running pressure. The pressure should be increased once again to 44 psi before placing the vehicle back into storage for periods longer than 30 days.

Useful Mealtime Tips. [Inquiry: After driving my Volvo, I am hungry. What to do?] You can heat canned food (small cans) on the engine block of many 4 cylinder Volvo engines by removing the paper label and placing it on the engine just under the intake manifold. The car's cooling system regulates the block temperature, and this should keep the can at around 130 degrees fahrenheit for

whenever you'd like to stop for lunch. In WWII, soldiers actually cooked roasts and potatoes, etc. on those flat jeep engines on trips between posts (I got this idea from one of these old vets) and I believe there's actually a book out called Manifold Cookery or something like that. Just keep your motor clean and don't try to stuff cans tight into the wiring. B230's are great for this...turbo's too, but forget the frogmotors and 16v's (no room).P. S. This works year round!

[Volvo Maintenance FAQ for 7xx/9xx/90 Cars](#)
