

Wheels and Tires

[FAQ Home](#)

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

Ride Quality and Troubleshooting:

[Re-Torquing Wheel Lug Nuts](#)

[Wheel Alignment](#)

[Ride Complaints Diagnosis](#)

[Wheel and Tire Balancing](#)

[Wheelbearings](#)

[Alloy Wheel Stuck on Hub](#)

Wheel and Tire Specifications:

[Tire Size](#)

[Maximum Wheel Sizes](#)

[Torque Specs on Alloy & Steel Wheels](#)

[Wheel Lug Nut Size](#)

[Wheel Interchangeability](#)

Wheel Repair:

[Wheel Stud Repair](#)

[Alloy Wheels: Damage and Leaks](#)

[Refinishing Wheel Rims](#)

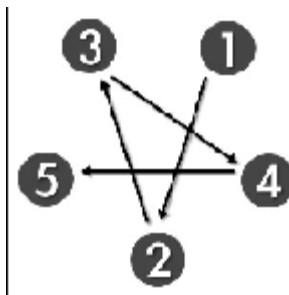
[Replacement Wheel Rims](#)

Tires:

[Snow Tire Sources](#)

Ride Quality and Troubleshooting:

Re-Torquing Wheel Lug Nuts. [Editor] To re-torque your wheel lug nuts, first loosen them in a star pattern. Place a 19mm socket on your torque wrench along with an extension long enough to allow the wrench handle to clear the fender. Set your torque wrench to 35 ft-lbs and torque the nuts in a star pattern.



Start the wrench at a spot so you can smoothly sweep through to the desired torque. Don't use jerky movements. Reset the wrench again to 66 ft-lbs and torque yet again to this final value, again using a star pattern with smooth movements of the wrench. **DO NOT use an impact wrench**, either with or without torque sticks: do this by hand with a hand torque wrench to avoid brake rotor warp.

For more notes on wheel torque, see [below](#).

Wheel Alignment. See [Wheel Alignment Adjustment](#) in the Front Suspension section.

Ride Complaints Diagnosis.

[Tips from Brake and Front End Magazine, Nov 2001, by Larry Carley] First, you need to inspect for the usual: tire pressure, ride height and suspension components for wear. Today's low profile tires can cause a pull with as little as 4 psi difference from side to side. Tires of the same size but of different manufacture may cause a pull due to rolling resistance or diameter differences. You can't align sagging springs, defective tires, sloppy ball joints or worn bushings. If you have a pull, it's a good idea to swap the front tires left to right to see if the tires are causing the pull. If after swapping the tires the pull is to the same side, the tires are not at fault.

Steering pull can also be caused by incorrect wheel alignment. A vehicle will pull to the side that has the most camber and/or the least caster. Brake pull is an area that can be easily misdiagnosed as a ride control problem. A stuck caliper is the obvious source of this malady. And in most cases, the obvious will need replacement. But sometimes a caliper is replaced and the problem still persists. Remember that a stuck caliper can cause a pull even when the brakes are not applied. An often misdiagnosed cause of pull is a collapsed brake hose. The hose will look OK on the outside, but the inner liner will cause a restriction on the inside. A brake hose problem like this can take two forms. One, it can act like a restriction in the line, and two, it can act like a check valve.

In the first case, the car will pull to the side with the good brake hose upon immediate application of the brakes, but after a second or two, the pull goes away. Because the caliper needs a relatively large volume of fluid to move the piston, the side with the collapsed hose will apply later than the one with the good hose. This is why the pull can be extreme on the initial pedal application, but goes away as the fluid slowly moves the piston. The customer may not relate the problem as a pull because the vehicle may simply feel unstable, as it initially veers to one side and then stops straight.

In the check valve situation, fluid will freely flow into the caliper, but will not return

to the master cylinder. This can mimic a stuck piston. Check this further by loosening the bleed screw while turning the wheel by hand. If the wheel turns freely after relieving the pressure in the caliper, the caliper is OK. If only one wheel is affected, it's probably the brake hose. To be sure it's not something upstream, reapply the brakes and release, then loosen the hose at the fitting on the body (not at the caliper). If the problem goes away now, the hose is OK. Look at the proportioning valve, master cylinder or ABS system.

Brake pulls from the rear can be differentiated from front pulls by their characteristics. A pull caused by the front brakes is usually severe and tugs on the steering wheel. Rear brake pulls cause the car to drift into the next lane and make the car feel unstable, while having little effect on the steering wheel...

Hard steering (difficulty turning the steering wheel) caused by worn or seized parts is easily masked by power steering-equipped vehicles. A quick test is to turn the steering wheel lock to lock with the front wheels off the ground and the engine turned off while feeling for binding. Disconnecting both outer tie rod ends will allow you to ascertain if the binding is in the left side, right side or steering rack. Certainly power steering problems can cause hard steering also. Low fluid level, a worn pump, or steering rack or box should be investigated. .. Insufficient assist at the wrong time will generate a hard steering complaint from the driver.

Hard or harsh ride can often be caused by overinflated tires. Drivers inflating tires without an air pressure gauge can really go wild with inflation pressures. Check for original size tires. Dropping from a 70 series to a 60 or 50 series tire significantly reduces sidewall height, thereby reducing the ability of the tire to smoothly absorb impacts. Worn struts, shocks or springs can cause a harsh ride as the suspension bottoms out on bumps that it could otherwise handle with aplomb. Worn suspension components also can create a feeling of harshness, particularly upper strut mounting plates, bushings and extremely worn ball joints...

Don't overlook the possibility that worn upper strut mounts are causing a memory steer condition. This is a condition where excessive friction in the steering or suspension system causes the steering to not want to return to center. Typically, caster will cause the steering wheel to self-center after a turn. If there is too much resistance to the centering force that caster provides, the steering may not fully return to center. Worn strut mounts can cause this friction. If they are severely worn, the suspension spring can actually wind up. If this happens, the steering may want to return to the side that you last steered it, even if you manually bring the steering wheel back to center. Hence, the name memory steer.

Wandering or play in the steering is usually due to worn or loose parts. A bouncy, wallowing ride due to worn shocks or struts is not only nauseating, it can cause loss of steering control in a panic situation and even increase braking distance. While strut rod bushings are common sources of wear causing excessive steering play, don't overlook control arm bushings, tie rods ends, rack mounts, or steering couplings.... Check for worn or misadjusted wheel bearings or loose wheel lug nuts.

A car that feels unstable while driving but has no excessive free play in the steering may have rear suspension problems. An independent rear suspension has a lot more components to wear out than the good old live axle. Alignment angles that are extremely out of spec can cause instability, especially if the wheels are

toed out.

Parts that Affect Tire Wear. [Counterman Magazine, Nov 2002, by Larry Carley]. Uneven or rapid tire wear is often the result of worn steering or suspension parts. Toe wear is the most common type of wear seen on front tires. It produces rapid tread wear that typically leaves a sawtooth or feathered pattern across the tread. If you rub your hand across the tire one way it feels smooth, but it feels rough when you rub it in the opposite direction. Toe wear is caused by toe misalignment, which in turn is usually due to worn tie rod ends in the steering linkage. On vehicles with rack and pinion steering, it can also be caused by worn inner tie rod sockets. Other causes include bent ... bent tie rods. The outer tie rod ends typically experience a lot of wear because they twist and turn with every steering motion, as well as flex back and forth with every gyration of the suspension. The right tie rod end is often the first to wear out because right hand turns tend to be sharper than left hand turns. Their location near the wheels also subjects them to road splash. Over time, water and dirt can seep past the boot seal and contaminate the grease inside. ...

Another type of wear that is often seen on tires is camber wear. This typically produces heavy wear on only one shoulder of a tire (usually the inner shoulder). This is caused by camber misalignment, which in turn can be due to worn or collapsed control arm bushings, worn ball joints, weak sagging springs, a bent steering knuckle or spindle, strut misalignment or damage, or structural damage or misalignment in the engine cradle, subframe or strut tower. When rapid or unusual tire wear is discovered on a vehicle, the steering linkage and suspension should be carefully inspected to determine if any parts are worn or damaged. If everything checks out okay, realigning the wheels should eliminate the problem - unless the vehicle has structural problems in which case additional repairs would be needed.

Tie rod ends can be replaced individually or in pairs. Many technicians prefer to replace tie rods in matched pairs because they know if one has failed, the other is probably nearing the end of its service life, too. Left and right tie rod ends are usually threaded differently, so make sure your customer gets the correct side if only one is being replaced. ... Another often overlooked cause of front toe wear on vehicles is rear axle or wheel misalignment. If the rear wheels are misaligned, it creates a thrust angle that causes the vehicle to lead to one side. The driver has to counter this tendency by steering a little to the opposite side. Thus, an off-center steering wheel is a good clue the vehicle has a rear steer problem possibly due to worn parts. Rear wheel misalignment can be caused by worn suspension control arm bushings, weak springs, or damaged or mislocated suspension parts. On vehicles with independent rear suspensions, rear toe adjustments may be provided to correct rear wheel alignment. But if no factory adjustments are provided, your customer will need some type of aftermarket alignment kit to make the corrections. On front-wheel drive cars and minivans, rear axle shims are often needed to make such corrections.

DON'T FORGET THE SPRINGS Springs may not wear with age, but they do sag and occasionally break. After six or eight years of fighting the forces of gravity, it's not unusual to find springs that are at, or below, minimum ride height specifications. That's why technicians should always measure ride height prior to checking wheel alignment and when investigating steering and handling complaints. Ride height

affects wheel alignment, vehicle stability and the suspension's ability to handle normal loads and overloads.

Front End Shimmy Due to Faulty Tires. [David Samuels] Symptom: random shimmy while braking. After replacing rotors, brake components, control rod bushings, and other front end parts I eventually found that the shimmy and vibration problem was more likely to occur on certain types of road surfaces and began to suspect tires. Put it up on jacks and spun the tires, found one of my front rims slightly crooked. May have been from a recent impact. Put those two on the back. This also improved the problem some, but still not cured! Took the car in to a better tire shop, with better balancing equipment and had them high speed balance the tires. Again, a noticeable improvement, but not perfect. Finally, in desperation, went back to the tire shop and had the manager look at the tires. He put them on the machine and spun them with the top up. Both front tires could be seen to be out of round even though they were balanced. You could actually watch the surface of the tire moving off kilter. He checked the front rims, found them to be true. However in addition to being out of round, the right front tire was beginning to show some tread separation on the inside. I finally had to break down and buy tires. Now, new tires, properly balanced, tight bearings and new rotors, and my problem is completely gone. My recommendation is to take the car in to a good tire shop with an experienced tech and have your skins [really checked out](#).

Wheel and Tire Balancing. See the [FAQ file](#) for a complete description of diagnosis and cure of wheel/tire balance problems. Tire Rack, a major direct tire retailer in the US, has this useful [flow chart](#) to help diagnose tire and wheel vibrations. As noted [above](#), tire faults can cause difficult to diagnose vibrations, shimmy, and ride problems.

Wheelbearings.

Lifetime. [Inquiry:] Readyng my daughter's 740 for a long road trip. Bought the vehicle with 112k - it has 120k now. Shows no overt symptoms of bearing wear. No noise. Wheels are tight with little play. Should these bearings be greased/replaced prior to road trip?

[Response:] The 700 [wheel bearings](#) seem to last a bit longer than those on the 200 series. There are a couple of different types. The early ones were similar to the 200 series and could be expected to last 100K to 200K, perhaps with a cleaning and re-packing at some point. If the bearing still has grease in it and the grease is not burned, I would leave it alone. The later 700s use a slightly different bearing that is installed with preloading. These bearings seem to last even longer. Again, if still have grease and the grease is not burned or hardened, etc. leave them alone.

Wheel Bearing Failure [Eugene Miller]Whoomp...Whoomp....Whoomp....as the tire rotates, with noticeable increase and decrease in volume as the steering wheel is turned. Starting out not so loud, with increase in volume as the bearing heats up. [Ted Yaffo] wheel bearings in my experience once they "fail" are unmistakable. the friction from their disintegration so dramatically increases you will get grinding horrible sounds and if left alone for not much time will render the car un driveable and can even cause the hub to fail catastrophically. Look for to start:

- uneven tire wear
 - jack up the front end and hold the tire at 3 and 9 o'clock and feel for play
 - if there is any your bearing is loose
 - a humming can heard as they begin to fail
 - progressing to louder and louder sound
-

Alloy Wheel Stuck on Hub

[Inquiry:] In the process of doing a front brake job on my '86 745T, I find myself unable to get the driver's front wheel off....no amount of pulling seems to budge it, and I'm no wimp.

[Response:] Loosen the lugnuts some, raise the wheel off the ground and then loosen the lugnuts a bit more...enough to keep the wheel on the hub, but not enough to keep it from moving. (1/8" inch is plenty.) Then *gently* lower the wheel back onto the ground. The weight of the vehicle will break the bond between the wheel and the hub. Then just raise the car up again and remove the wheel as normal

Wheel and Tire Specifications:

Tire Size.

[What are the largest tires I can mount on stock 15" wheels on a 1992 740? The wheels are 15x6".] A very low profile option is 225/50-15. A moderate low profile option is 215/60-15. Both will mount and function with only minor interference (rubbing between the tire and the control arm with the steering turned to full left or full right lock).

Maximum Wheel Sizes.

Wheels:

[Inquiry:] I have a 740 Turbo Wagon with 195/60/R15 tires. I would like to know the maximum size of wheels/tires I can use safely on this car without making any modifications. Does Volvo have any guidelines for max sizes on the 740?

[Response:] On the 700 you should be able to go as high as a 17x8 wheel with a 225/35-18 or 225/40-18 tire. However, this will produce a pretty harsh ride and you will likely experience damage to tires and wheels from normal street driving anywhere there might be potholes or pavement damage. I have found that 16x7 or 16x7.5 rims with 225/50-16 are a very nice combination of ride, performance, appearance, and durability. Be sure that any wheels that you buy are the correct offset for the 700 Volvos. TSW makes several wheels that will fit, and there are even optional Volvo sport wheels for the 700 series in 16" and 17" sizes. (very expensive!).

[Response 2:] On my 89 745T with 16 x 7.5 wheels and 225/50ZR16 tires, the front rims come very close to touching the strut spring perches. There is a slight rub on the fender liner at full lock I think my wheels, MMIs, are only 20 mm

offset. 25 mm offset, the standard for 700/900s, would help a bit. Before I bought 17 x 8s, I would test fit them in the fronts. I don't think the rears would be a problem. There seems to be more room back there.

[Response 3:] Actually, 25mm offset (as opposed to 20mm) would bring the inside of your front rims even closer to the struts. The greater the offset, the farther inboard your rims go. I have the Volvo 16 x 6 wheels on my 740 (25mm offset) and they come fairly close to the strut as well. If these were 7.5 wide, I imagine there might be a clearance problem

[Response 4:] The only figures I have is for the S/V90, but it can take 18 x 8.5" as a max with 225/40R18 as a tire. Don't have the ET value at the moment. Ride comfort is probably gone, but this sort of wheel already needs a suspension kit for maximum effect (handling/cornering), which usually already destroys most of the 'comfort' factor. This sort of wheel/tire combination (anything \geq 17 inch) really needs to be used on nice smooth roads and highways. If you have bad pavement where you live, then you should not exceed 16 inch wheels to minimize the chances of damage to the tires and the rims.

Tires:

[Jon Espenschied] Using the stock alloy wheels (15x6), the largest (not widest) tire one can fit on a 700 is 215/70-15. This tire allows ~5mm clearance at rest to the tightest points on the front. However, this size tire will scrape slightly on the front if you hit a bump while turning sharply, and it's good to keep in mind that IRS allows slightly more consistent rear fender clearance to the tire sidewall than solid-axle cars. On non-IRS you may be limited to 205/70-15. The effect of this outsize tire was to (a) raise the height of the car considerably -- nice for my ailing knees, (b) noticeably smooth out the ride and reduce tire noise (c) raise the gas mileage slightly on the freeway while depressing it in the city, (d) produce a significant speedo error, and (e) increase driveline/center bearing vibration under heavy load (increased torque). I ran 215/70R15 Goodyear Intrepid tires on my IRS 760 for 45k miles, and they performed quite nicely. They were recently replaced with 205/65-15s due to worries about stress on the driveline.

Torque Specs on Alloy & Steel Wheels.

[Inquiry:] Is there any difference in wheel nut torque specs between steel and alloy wheels?

[Response:] There is no difference in the torque requirements for steel or alloy wheels in Volvos. The difference is the studs. The 240s and earlier should be torqued to 85 ft-lbs. The 700/900 should be torqued to 66 ft-lbs, the 850 should be torqued to 81 ft-lbs. [Editor's note: I use anti-seize on each stud to ease nut removal when changing to or from snow tires.]

Torque Values and Procedure:

[Tip from Counterman Magazine] Wheel lug bolts should be tightened by torquing to one-half specified value in a [star](#) or criss-cross pattern. The final torquing should be done in the same sequence to the specified value. The bolt threads

should be clean and free of rust. While it helps to lubricate the threads with light penetrating oil, never use a lubricant that leaves a heavy oil film or that contains a friction modifier. Friction modifiers reduce the friction between the lug nut and bolt and cause false torque readings.

[Inquiry] If I lubricate lug nut threads, does it make it more likely I may overtorque them?

[Tip from Bendix] Yes. Torque values listed in shop manuals are almost always meant to be used with clean, dry threads. At Bendix, we recommend against using lubricants on lug nut threads, as do many vehicle manufacturers. We have two reasons:

1. Each lubricant may have a different effect on torque values
2. Heat may cause all but special-purpose lubricants designed for brake applications to melt and run, possibly contaminating pads or shoes and/or rotors or drums.

If you insist on lubricating lug threads, please be sparing and make sure to compensate for the increased torque likely to result. For example, one lubricant manufacturer recommends torquing nuts to only 85 percent of the factory specification when using their nickel-based anti-seize compound on threads.

Anti-Corrosion Advice. [Motor Magazine, Feb 04] If you live in the Corrosion Belt, your wheel lug nuts and wheels may corrode to the hubs, making them virtually impossible to remove. When replacing wheels, apply a small dab of common antiseize paste to the threads and then torque the lugnuts to [spec](#). While you're at it, remember to very lightly lube the wheel contact area of a shouldered or tapered wheel fastener. Whatever you do, use a lube that won't run out onto the wheels. Finally, get in the habit of cleaning and lubricating the center opening of a wheel before you reinstall it on the vehicle. A light coat of antiseize paste or sturdy grease prevents corrosion from forming and bonding the wheel opening onto the rotor or axle hub. In snow-and-salt areas, aluminum-alloy wheels are prone to corroding themselves onto the hub. More than once I've watched a desperate technician try to dislodge a frozen aluminum wheel by beating on the inside of the wheel with a dead-blow hammer. The easiest way I know to loosen an aluminum wheel from the hub is to reinstall the wheel nuts or bolts finger-tight. Then lower the vehicle onto the floor, apply the brakes and start the engine. Gently rock the vehicle back and forth by shifting into Reverse and then back into a forward gear. Usually, this bit of fore-and-aft motion is enough to loosen the corroded wheels from the hubs without damaging anything.

Wheel Lug Nut Size.

[Inquiry] When I look for lugs there seems to be different thread sizes. There are some in a catalog that look nice. But what thread size do I order?

[Response: Steve Seekins] I believe that the 700/900 series all use a metric lug - 12mm x 1.50 thread. Although close in size to the earlier 200 series, the 200 series use an SAE or US thread. One thing to consider is that the lug wrenches that come with your car have a 19mm socket, and for those of you who use torque

sticks with your impact wrench, the proper torque stick has a 19mm socket as well. I have found that many of the aftermarket lugs with 12x1.50 thread require a larger socket. For that reason I usually spend the extra bucks and get the Volvo OEM chrome lugs - they are identical in appearance as the chrome lugs used on the 242GT and 240 turbo models, but with the metric threads, and the chrome seems to be of pretty good quality.

Wheel Interchangeability.

Smaller to Larger Size: [Inquiry] I am looking for a used set of 15 x 6, alloy wheels for my Volvo (91, 740 sedan). I was told by two Volvo dealers that all I need to find are 15" wheels off of any 700 series Volvo from 1982 thru 1992. But various sellers of used wheels have some reference manual called Hollander, and claim that it says I can only use certain years of the 700 series for the wheels to fit a 91, 740. Who is right?

[Response: Bob] You can use any Volvo 15" wheel from 81-95 excluding 95 960.

[Response: Jim Bowers] With the exceptions of the following, any 700/900 15" wheel will fit. Suspensions on '95 and later 960s and the S/V90 used an identical bolt pattern but a different offset. The 700 series had a 25 mm offset while the 850s and later 960s (95+) have a 43 mm offset. Therefore you will need a 43mm - 25mm = 18 mm spacer to get the offset perfect. Probably won't hurt to be 2 or 3 mm off. This is important for the front steering geometry but probably not critical for the back except for clearance. You will probably have to limit the tire size in order to avoid rubbing the fenders and liners. (Even with stock sizes, 205/55-16 on my 965 I have rubbed the front liners with hard cornering.)

[John] Wheels for '95 960 and later model years have a different offset. The offset difference may result in poorer rather than improved handling on your solid axle 940 - it may also adversely impact the wheel bearings.

Larger to Smaller Size: [Inquiry] Can I take the 14 inch alloy wheels from my 87 740 along with new tires and put them on my 1995 940? [John Sargent] While 700/900 chassis use the same wheel mounting bolts, lug nuts, and offset, your 14" wheels won't clear the front brakes on a 940. [Bryan Warfield] I suggest you let the 14s go: they are really too small for either car. When I upgraded to 15 inch wheels and larger tires, the difference in handling was nothing short of amazing. You can use 15 inch wheels from any 740, 760, 780, 940 or an early 960 to 1994. Later 960s use 850 style wheels, which have the wrong offset for older RWD cars.

Wheel Repair:

Wheel Stud Repair.

[Inquiry] I went to Walmart to have my tires rotated. In the course of taking the lugs of

[Responses: Rob Bareiss/Chip McGrew] Yes. Remove the wheel. Remove the old wheel stud by just giving it a good whack straight in with a hammer. If it doesn't extend far enough through the rotor then you will have to remove the caliper and

rotor. Then put the new stud in though the hole in the back. It should come through far enough to place a nut on; tighten until the new stud seats itself. You may need a spacer to get it fully seated. Remove nut and replace the wheel. If you have an abs sensor wheel (looks like a gear with flat cogs) on the front hub you will have to grind one side of the new stud's flange to get it in. You'll have to use a grinding wheel. This wheel is stamped steel and you would destroy it if you try to remove. Then put a nut on the stud and crank on it till the stud seats itself into the hub. You won't have the same problem with the rear since the abs sensor is in the differential.

Alloy Wheels: Damage and Leaks

Damage from Tire Mounting Equipment:

[Tip from L. K. Tucker] I am a former tire store manager. You may be referring to wire spoke or thin spoke wheels as Mags. They may or may not be magnesium, or aluminum. There are also composite types with steel in the center and cast or stamped faces on the outside surface. Mag wheels are made by two general methods: stamping and casting. Cast wheels are thicker because of the possibility of voids and cracks in the casting. Wheels made by the stamping method are usually thinner.

Mag wheels can be damaged by tire equipment. Usually they cannot be BENT. They are cracked. The tire store personel should know when wheels should not be put on machines to change tires. The problem with tire changing machines occurs when the machine pulls the center of the wheel down to hold it for the bead removal arm to sweep the edge of the wheel. If this machine holds too tightly the center is pulled out of position and is warped. All thin spoke or wire wheels must be changed by hand unless the machine is designed to work with those type wheels. Other damage can occur if a cast wheel is too thick at the outside edge, the bead. The sweep arm can damage the appearance by scratching or denting the surface if that area is too thick for the design of the changing machine.

Rather than using a machine, hand-dismount tires and use a radial runout gauge on the bead seat of the wheel. Measure both the radial and lateral runout. If the wheel can be bent (steel in the bead area) check the lateral runout on the front and back. The actual material will determine if the wheel can be bent. Cast wheel damage is usually discovered when the crack opens or the center-plate casting breaks.

Damage from Corrosion:

[Inquiry] The alloy rims in my '93 940 didn't leak when the car was new. Now, I top them off every week and sometimes pressure drops as low as 20 psi. I live in Michigan and road salt is everywhere. Does the wheel bead contact area corrode?

[Response: Jim Bowers] If you can see corrosion in the bead area and the clear/paint coating is peeling I think you have nailed the problem. This happened to me with the alloy wheels on my '85 745 after about 6 or 7 years of New England salt during the winter. Here in MA they use both Sodium Chloride and Calcium Chloride. When I removed the tires I could see that the corrosion had propagated all

the way under the tire bead. It looked like the corrosion was bad enough around the tire valve to leak there also. I had the rims sand blasted to bare metal using a fine abrasive and then had a body shop coat them with an epoxy primer followed by a silver grey paint and clear coat. After that, they never showed corrosion and never leaked air as long as I owned the car. Between the blasting and the paint I think I spent over \$40 per wheel. With hind sight I should have probably just bought some new steel rims for my winter tires.

Refinishing Wheel Rims.

[Inquiry] I recently bought a set of four alloys on Ebay for \$100. The wheels are in good working condition, but cosmetically, they leave something to be desired. They have some corrosion on the faces of the wheels and the center caps. I was wondering if anyone had any tips on home refinishing of these wheels. I'm not interested in refinishing them to factory condition, I just want to make them more presentable.

[Response: Chris Herbst] If those rims are straight, then you still got a good deal. A lot of idiots market those rims, which are almost NEVER in perfect shape, for a small fortune, believing that they are somehow rare! The center caps are worth just as much as the rims if they are in nice condition, because THOSE really degrade over time. Now, how to fix a set of GL rims for \$20:

1. Strip all of the LOOSE factory coating off of the rims and sand the edges just enough so the finish isn't still peeling off of the rim at that point. You don't have to be an artist to do this, just do a rough job. Make sure you level any areas where the paint might start to peel like where the clear is chipping, or where there is curb rash (smooth it out a little).
2. Rough up the rest of the rims slightly.
3. Clean all the dirt and debris off of the face of the rim. Make sure you wipe the whole thing (including inside the fins of the wheel) with prep solvent to make sure you start with a VERY clean finish.
4. Buy a few cans of gray primer and silver paint (or aluminum paint looks really nice--a bit brighter). If you can get silver epoxy paint, better still, but I haven't found it, nor have I looked very hard. By the way, the primer makes all the difference in terms of longevity. You can have paint mixed up using the center caps as a match if you need to--easy to take to the paint shop.
5. Prime the rims, then spray the color. Make sure (duh) that you get inside all of the fins. You obviously have to spray from the left and the right to coat them evenly.
6. Clearcoat if you really want to. I have done it but the clearcoat has never made much of a difference.
7. Mount your tires. You're done. The rims look really nice and you'd never know that they are painted unless you get down and really look at them.

I got 175k miles out of ONE paint job on one set I did. I never needed to even touch it up or anything. [Tip from Robert Haire] I've done a bunch of 240 and 700 alloys. I fill interior dings with aluminum filler from an auto paint or auto body store and sand the edges a bit to take out mild curb rash. If the paint is not cracked and really really bad, I just spot prime with two part epoxy (BASF product) and spray with two part acrylic, made up to match by the auto paint store. Avoid stripping

the wheels with methylene chloride! Too dangerous. Spray thin coats, avoid sags and you have a nearly new looking wheel. I was told not to clear coat. To spray, I use the pressurized Preval cannisters. A couple for \$10 will do a few sets of wheels. The paints, reducer and hardener are rather expensive so it really starts to pay if you have 3-5 sets of alloys to do.

[Response: Don Foster] Yep, I agree 1000% - that's how I did mine, except I glass bead-blasted the rims. But also do a thorough and careful cleaning 'n painting job in the tire bead area and where the stem seats. Those rims develop corrosion and pitting, and sometimes this leads to slow leaks. Fill the pits with paint 'n clear coat, and seal the aluminum to stop further corrosion under the bead.

[Georege Downs] I'd strip the wheels using a bead blaster, with just enough bead blast to get it clean and uniform. Reason: bead blasting (like shot peening) imparts a residual compressive stress in the surface, which as long as undamaged, gives protection against both fatigue and stress corrosion cracking, since both processes depend on tension in the surface to initiate a crack. Have them use as big a bead as they can consistent with desired appearance and getting into the crevices.

[Response: Julio Manalo] I don't know how accessible/ costly it is in your area, but here at home, we have a lot of steel furniture shops that do powder coating for a very reasonable price. This is how OEMs finish aluminum wheels at the factory so you get a factory type finish and your wheels look brand new. Much more durable and shiny than spray paint.

Replacement Wheel Rims.

[Tip from Joe Fernandes] Try <http://www.aaarims.com/> for a source of Volvo used and refurbished wheel rims. For straightening bent rims, try Saab/Volvo specialist Rim Pro; 1-978-851-6080 See as well <http://www.wheels-and-rims.com> for new rims at reasonable prices

Tires:

Snow Tire Sources

[Tip from Lee Levitt] See Pat Greer at <http://www.dias.net/~greerent/> for Hakkapellita and Nokian snow tires.

See also <http://www.tirerack.com> for Tire Rack information and Internet order site.

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