

TECH TIPS

Winning Tech Tips have been selected by the editors of *Import Service* and the CARQUEST technical staff. Winning entrants will receive \$100 and a special jacket from CARQUEST.

A cash prize of \$2,500 and three months of CARQUEST Tech-Net service will be awarded to the entrant submitting the best 1993 Tech Tip. The first runner up receives a CARQUEST store credit valued at \$1,000.

So tear out those Tech Tip cards and start mailing your Tech Tips. We'll print the best ones each month. Everyone will benefit from the shared information.

INVEST IN YOUR FUTURE

You invest thousands of dollars in your tools, isn't it time to invest a small amount in your future health? As a technician, you work in a very dangerous environment. The following are a few things you should think about doing now if you want to have the full use of your five senses when you are fifty:

- **Buy a set of safety glasses with lenses that meet safety standards.** Wear your safety glasses any time you are drilling, grinding, chiseling, or opening fuel lines. Use an approved safety shield when you're welding too. In short, wear the appropriate eye protection any time there is a remote chance of flying debris or chemicals getting in your eyes. Don't think for a minute that it might make you look "geeky."

- **Protect your lungs.** Asbestos is being phased out of gasket, brake, and clutch lining production, but we'll still be working around it for years to come. Don't use a motorized wire wheel to remove gaskets from things like thermostat housings unless you are wearing a dust mask to protect you from airborne dust. Avoid breathing gasoline, solvent, or cleaning fumes. Your lungs are very delicate and it may take more than 20 years for the damage to show up.

- **Protect your skin.** Just a few of the toxic chemicals that run over our skin every day include used oil, gasoline, diesel fuel, and cleaning solvents. These liquids can be absorbed by your skin and may even enter your bloodstream. Invest in three types of gloves to protect your hands and skin: thin latex (like your dentist uses) for light duty jobs, thicker rubber gloves (like dishwashing gloves) for medium duty

jobs, and a pair of chemical resistant gloves for the worst jobs.

- **Protect your hearing when working with air tools or other loud tools for any length of time.** Buy a set of quality ear protectors like the kind airport workers use for working around airplanes. The damage done to your hearing by loud noises is cumulative. That means it may take 10 years before you notice a hearing loss, and

by then it will be too late. Hearing loss is irreversible.

- **Never wear jewelry while you are working.** Rings, chains, and watches may snag on something and can be very dangerous.

- **Last of all, invest in a set of good quality work shoes.** Work shoes must be designed to give your feet and spine proper support and should insulate you from the concrete floors you stand on all day.

Your investment in tools and equipment won't do you much good if you get sick or are injured on the job. It may sound like a cliché, but nobody is going to watch out for you except you.

Ernst Kerschbaum
Austrian Motors
Roswell, Georgia



SUBARU AXLE INSTALLATION

Removing and installing Subaru front drive axles can be difficult due to the tight fit between the outer axle joint and the hub. The following method can be used to ease the installation of the outer front drive axle joint into the splined hub:

- Put the assembled drive axle in a cool place for at least 15 minutes. You can even stick the axle in the freezer if your freezer is big enough.

- Heat the splined hole in the hub with a hair dryer.

- Now install the axle joint. The cold causes the joint to contract and the heat causes the hub to expand, giving enough extra clearance to let the joint slide into the hub splines with very little effort. A few taps with a soft faced hammer should do the trick.

Les Robertson
Lyric Auto
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NISSAN VALVE ADJUSTMENTS

There are special tools available for loosening and tightening the 17 mm valve adjustment lock nut on Nissan L24 and L28 engines. These open ended specialty tools will round out the nut if the nut has become frozen. Use the following procedure to loosen a frozen nut before it becomes damaged:

- Rotate the engine until the affected valve is in the closed position.
- Pry down on the valve spring retainer with a large screwdriver.
- Use a magnet to remove the rocker shim, remove the rocker spring, then slide the rocker out from under the camshaft.
- Slide a 17 mm deep well socket over the valve adjuster assembly.
- After you've loosened the adjuster lock nut, completely disassemble the adjuster and clean the threads.
- Reassemble the adjuster, rocker arm, spring, and shim in the reverse order, then finish your valve adjustment.

Alfredo Asuzano
Redline Auto Service
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CANDLE WAX REMEDY

Bits and pieces of birthday or decorative candles can be very useful for taking apart rusty nuts and bolts. Anyone with any experience with heating a rusted or "frozen" nut or bolt knows what a slow process it can be. The whole tedious process can be almost completely eliminated.

Heat the nut or bolt, then let it cool slightly. Now push the end of the candle into the heated parts. The



wax will be drawn into the threads, cleaning and lubricating them as it goes. Then after a turn or two with the wrench, the nut or bolt can usually be removed by hand (don't burn your fingers). This method also works well for removing a stubborn bearing collar.

H. Dikkeboom
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SMOKE GETS IN YOUR EYES

Tobacco smoke can be used to find a vacuum leak in the Mercedes-Benz vacuum door lock system. Cigar smoke is thicker and works better than cigarette smoke. To find the leak:

- Lower the windows at all four doors.
- Disconnect the main vacuum hose leading to the doors.
- Blow smoke into the hose.
- The smoke will rise out of the door that has the leaking servo or vacuum hose.

Bruce Shuster
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Editors' Note:

We know we're risking the wrath of the Surgeon General with this one. If you're a nonsmoker and you're looking for a no-tobacco alternative, we've also heard of A/C vacuum pumps being used to locate Mercedes vacuum door lock leaks.

VOLVO DISTRIBUTOR SEALS

A worn distributor shaft seal may cause an engine oil leak on Volvo 700 and 900 series models. The distributor is mounted horizontally and driven off the rear of the camshaft on these engines.

Volvo dealers will supply you with the o-rings that go over the distributor housing and shaft, but not the internal distributor shaft seal. The internal seal is the one that most commonly leaks, causing a buildup of oil inside the distributor cap that eventually leaks out of the distributor.

To replace the shaft seal, press out the drive lock pin and remove the distributor shaft. Remove the old shaft seal (it's staked in place). The seal dimensions are 12 x 20 x 5. Any bearing supply company should be able to provide you with a new seal of the same size. Make sure you stake the new seal in position before reassembling the distributor.

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