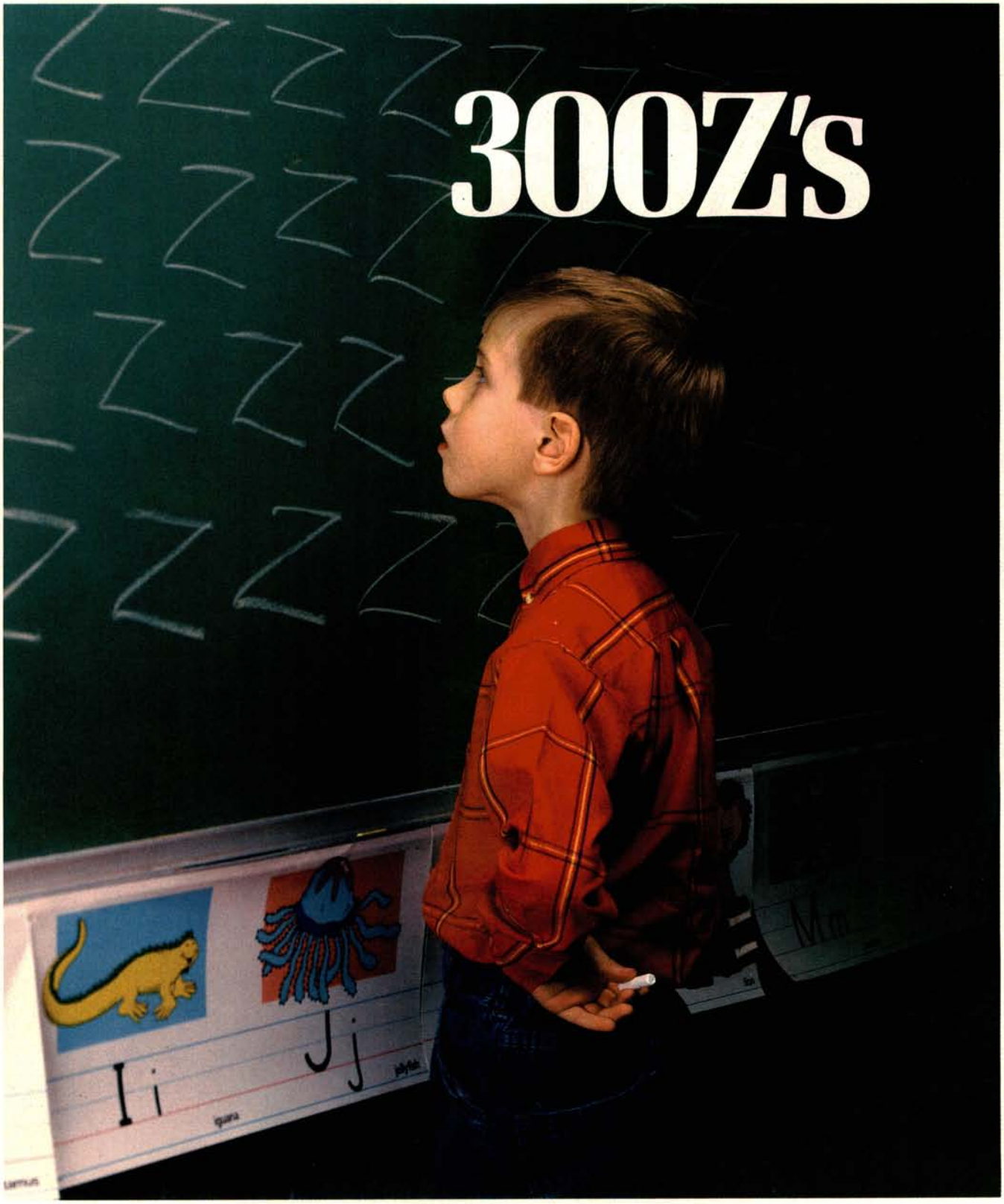


Did the teacher ever catch you drawing pictures of cars in your notebook when you were supposed to be studying your geography lesson? Maybe you were collared for a more serious offense. Whatever the reason, many of us have put in time after school, doing blackboard duty. Writing three hundred Z's on a blackboard gives you plenty of time to think about the power of letters.

Automakers have been using letters, numbers, and combinations of both to name their models for as long as anyone can remember. Somewhere along the line, it was discovered that certain letters have a stronger appeal when they're used to name an automobile. The letter Z would certainly make the Top Ten in that department.

Someone at Nissan recognized this appeal and chose the letter Z for its new sports car, the Datsun 240Z. The numbers that precede the Z have changed over the years, and an X has even been tacked on the end, but the Z has remained. If you say "Z Car" today, very few people will think you're talking about a Chevrolet. Nissan has made the letter Z its own.

Major Overhaul

Nobody changes the design of their cars more often than the Japanese automakers, and the Z Car has not been immune. The 240 became a 260, then a 280. The original design concept was stretched to the limit with the longer, wider, and heavier 280ZX. It was time for something completely different.

The all new 300ZX made its debut as a 1984 model and continued with a few minor sheet metal changes until 1989. This six year model run is the focus of this article. The completely revised model that was introduced in 1990 continues the 300ZX name, but has very little else in common with its predecessor.

In researching this article, we heard many comments regarding the 300's reliability. They just don't seem to break that often. This isn't a finicky exotic car that needs a riding mechanic just to make it across town. It's not unusual to see 300'-s with six figure mileage that are still running as strong as they did when new.

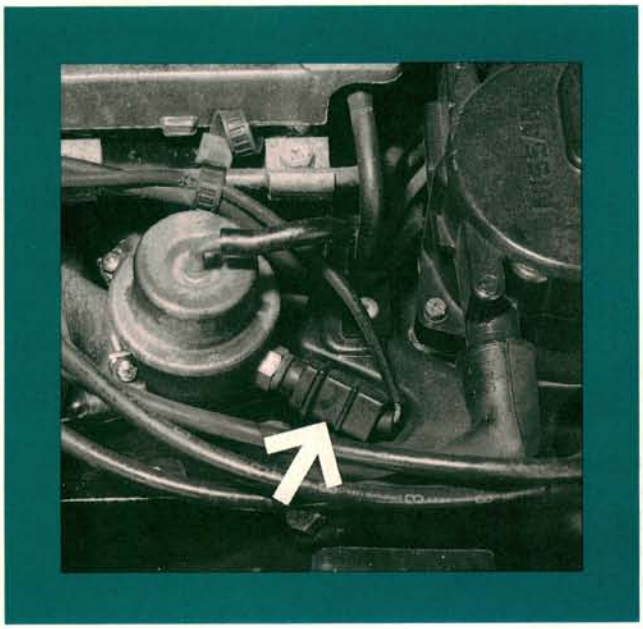
Proper maintenance procedures are the key to this longevity, however. Neglect the basics and the 300 can turn around and bite you in a big way. One obvious example of this is a broken timing belt, which can cause major valve train damage. There's no reason for this to happen if the belt is changed at the recommended intervals. Regular oil changes are also essential. Nothing seems to gum up faster than the 300's OHC V6 when someone decides to stretch the oil change intervals to the limit.

Early models had a few more teething problems than later models. In many cases, parts are available to correct these early problems. One example is a water cooled turbo kit to convert the original non-water cooled turbo used on 1984 models. Running changes were made to correct other problems. Nissan had gotten everything just about right when they stopped making this model in 1989.

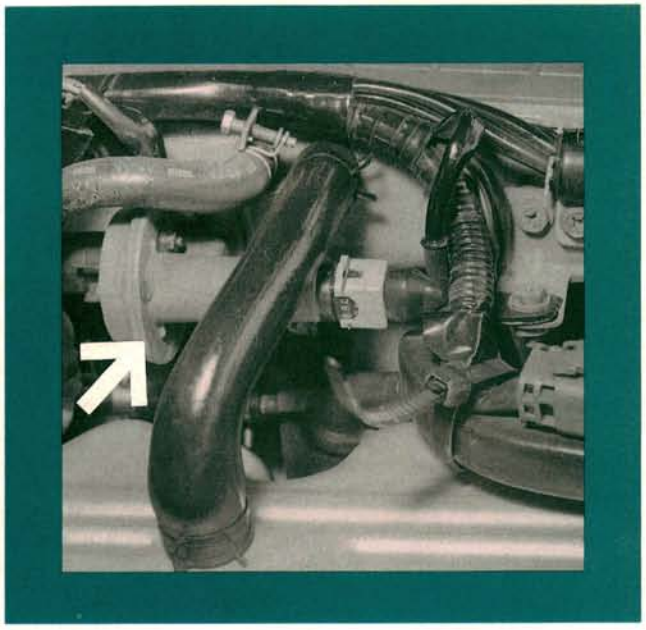
— By Karl Seyfert

1 It's plenty hot under the 300's low hood. Batteries can have a shorter than normal service life as a result. Battery shields on later models deflect some of the heat. Replacement batteries may be shorter than the original. Install the available spacer below the battery for proper mounting.

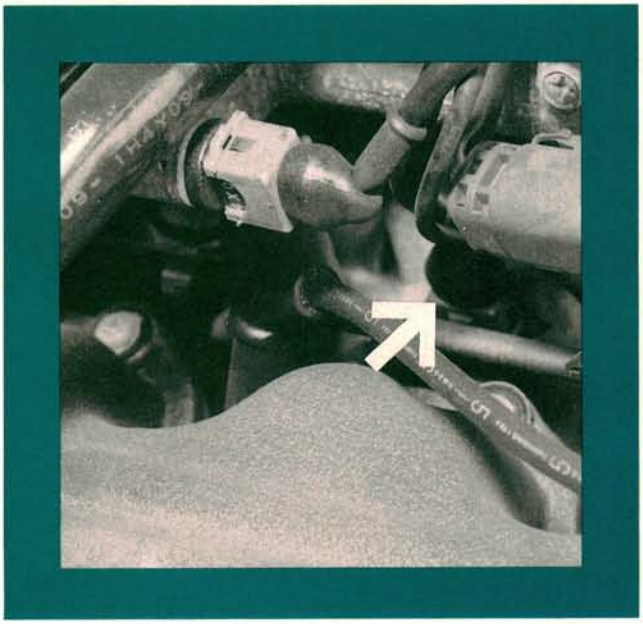
2 High underhood heat can also cause hot restart difficulty. Fuel containing alcohol seems to aggravate the restart problem. Later models use a bottom feed injector design to prevent vapor lock and fuel boiling. The injector cooling fan (arrow) on turbo models also helps.



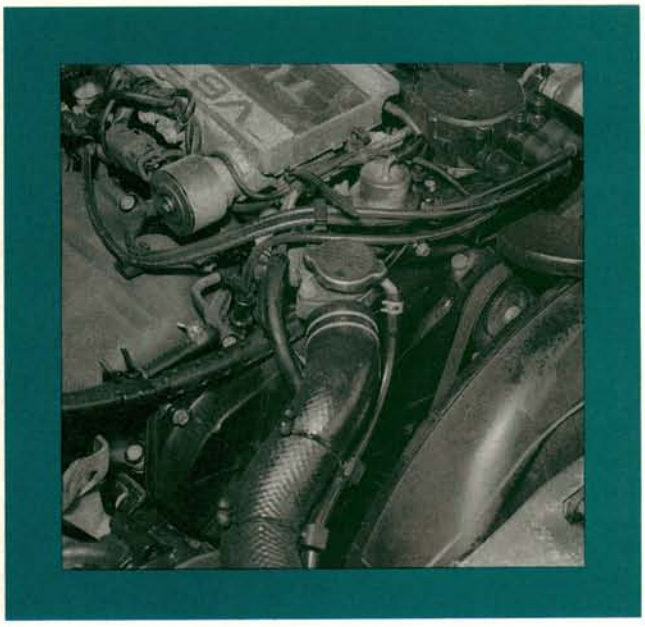
3 This sensor in the fuel pressure regulator monitors fuel temperature. During hot restarts, the ECU closes the pressure regulator control vacuum solenoid valve to raise the fuel pressure and prevent vapor lock. This system wasn't 100 percent effective on 1984 models and was modified on later models.



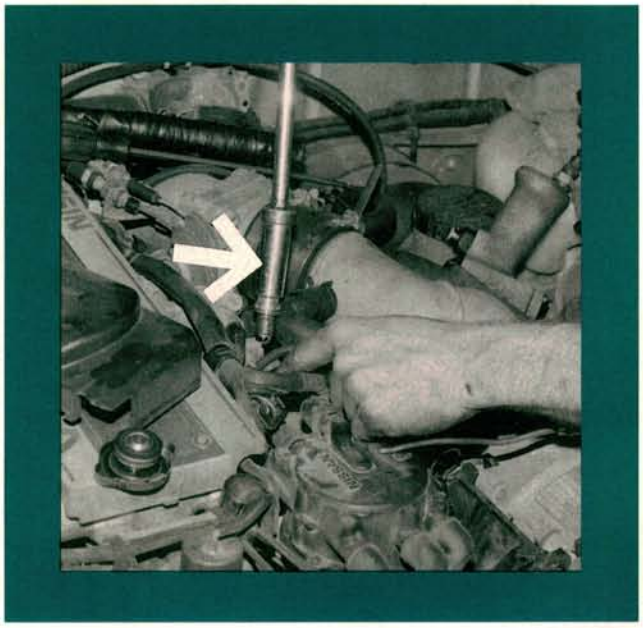
4 A sluggish cold air regulator will cause a low idle speed when cold. The engine may also load up and stall due to the extra cold enrichment. The regulator must open so air can bypass the closed throttle plate. Cleaning the valve seldom helps. A weak bimetal spring is usually to blame.



5 The injectors are buried under the intake plenum. Injector harness connector corrosion can be a problem, especially in humid climates. The connectors may look fine, but even a small voltage drop can cause an intermittent miss. Solder all connections and use shrink wrap when replacing connectors.

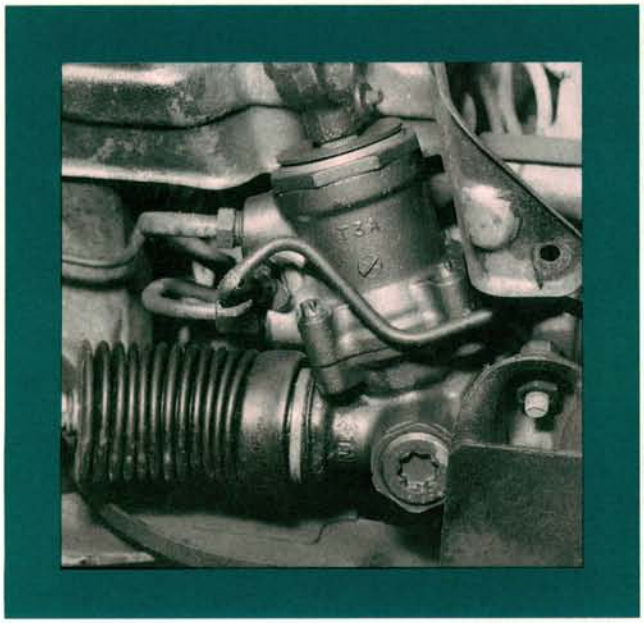


6 Timing belt replacement is an important preventive maintenance service at 60,000 miles or sooner. This engine can bend internal moving parts in an expensive fashion if the belt breaks. We've also heard reports of head bolts breaking, then jamming the camshaft and stripping the timing belt.

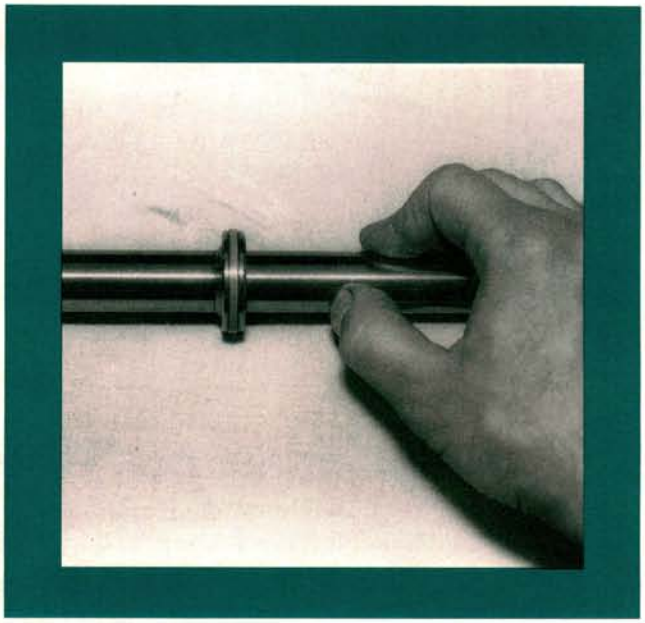


7 Changing the spark plugs can be a challenge. This swivel socket with attached extension helps a lot. Road dirt and other unfriendly debris may settle in the recessed areas around the spark plugs. To avoid internal engine damage, clean these areas with compressed air before removing the plugs.

8 Replacing the oil filter below the right exhaust manifold also takes patience, especially when the engine is hot. A cap socket that grabs the end of the filter works best because there's not enough room for a strap wrench. Removing the filter from below using a flex ratchet is less messy than from above.

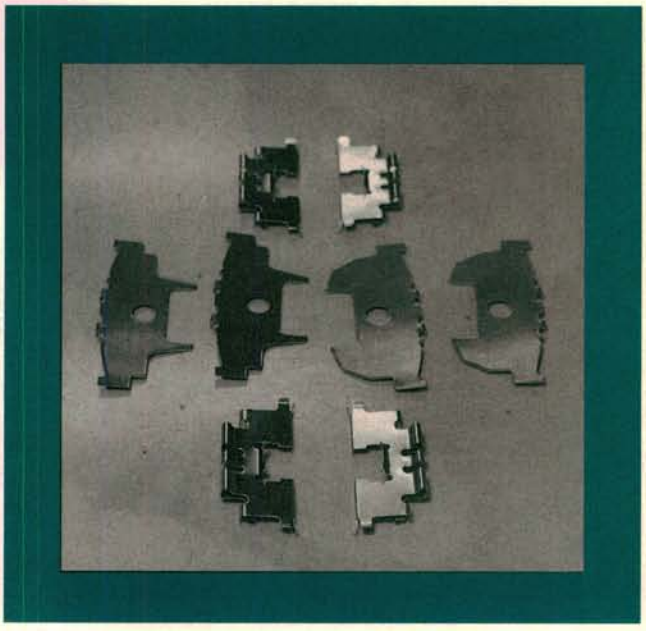


9 Power steering rack leaks have been a common occurrence on 300's. If the rack shaft seals are leaking, the boots will be filled with fluid. Visually inspect the rest of the rack for leakage. Use care when installing the hose fittings, the aluminum housings will crack or cross thread very easily.



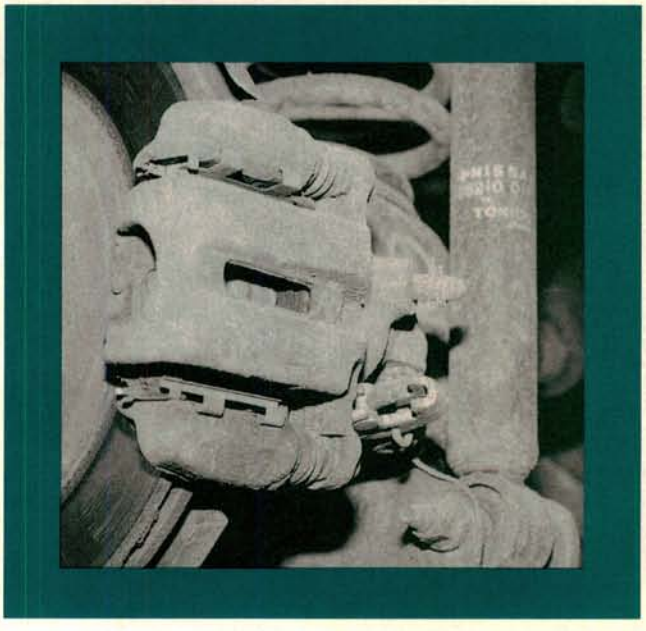
10 Rack repair or replacement is a judgement call. Replacement parts are available if you go the repair route. Installing new seals with worn rack parts will guarantee a comeback. Run your finger nail over the rack shaft. Even a small amount of rack shaft wear will cause seal leakage later.

11 Rotor thickness variations caused brake pulsation problems on some 300's. Factory "countermeasure" rotors that are machined to closer production tolerances (0.0005 mm) are available to correct this problem. These rotors should not be turned before installation. Most brake lathes can't match this accuracy.

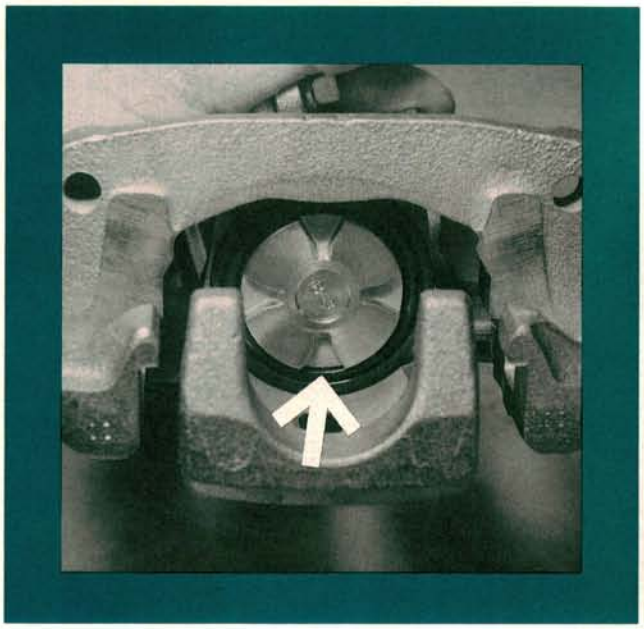


12 The condition of front and rear brake hardware can have a big effect on brake noise. Brake shims get rusty and disappear in cold weather states. Worn rear brake slide pins will cause a rattling noise over bumps. The noise goes away if you apply the brakes slightly. Slide pins are not available separately.

13 Make sure the parking brake mechanism operates smoothly. Binding parking brake cables accelerate rear brake pad wear. There should be 0-3 mm clearance between the rear caliper parking brake lever and the stopper pin when the parking brake is released. Rusted cables are common.

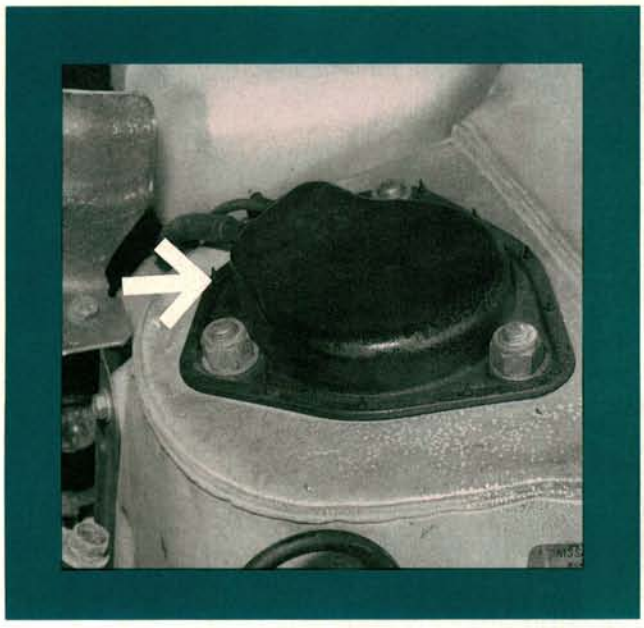


14 Dragging brakes may also be caused by a caliper parking brake mechanism that is binding internally. Disconnect the parking brake cable. If the caliper lever now moves freely, the cable is to blame. If the lever still doesn't release completely, the problem is inside the caliper.

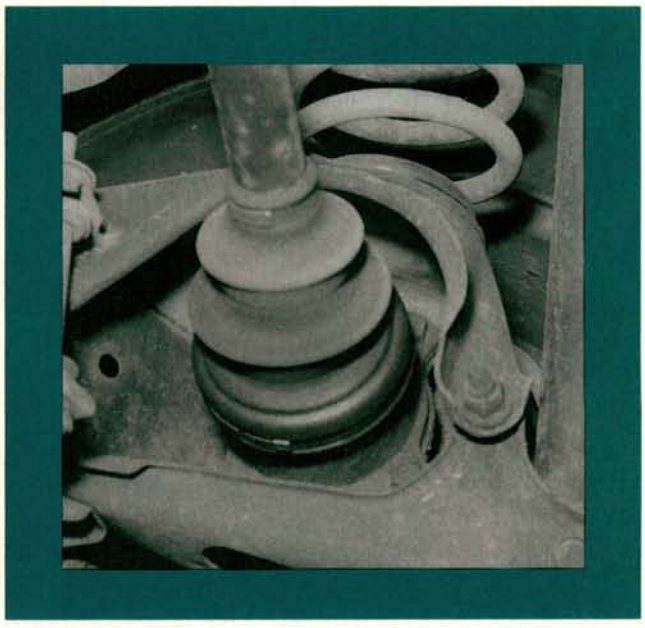


15 Before new rear pads can be installed, the caliper pistons must be turned clockwise to retract the pistons into the calipers. Check behind the dust shield before turning the piston. Rear calipers may begin to leak after piston retraction if the seals are weak or the pistons are rusted.

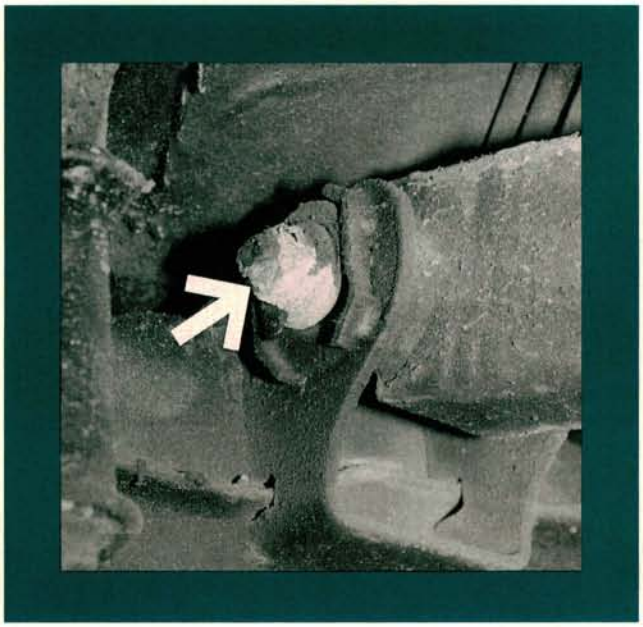
16 Start the lug nuts by hand, then tighten in a diagonal pattern to avoid cross threading, wheel damage, and rotor warpage. The alloy wheels are centered by the lug nuts, not the hub flange, so the lug nuts must be tightened alternately and evenly to center the wheel. Finish the job with a torque wrench.



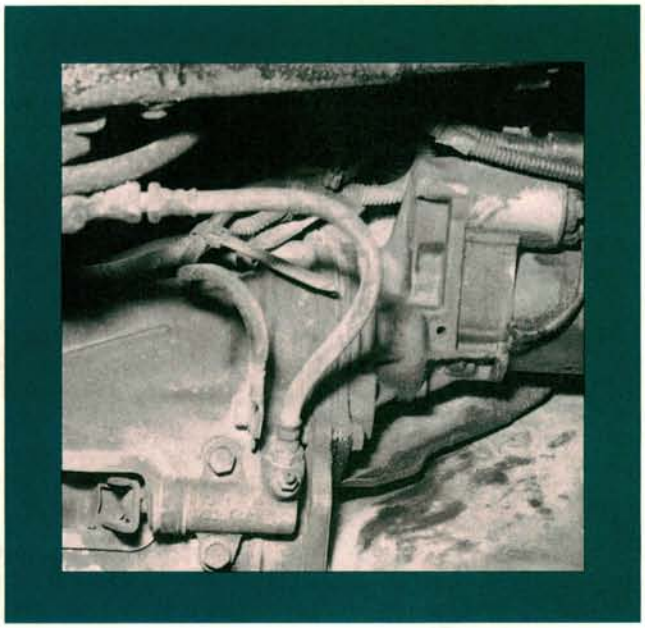
17 Rear shocks seem to wear out and leak more quickly than the front struts. The rear suspension may bottom over large bumps after the fluid leaks out. The electrically adjustable struts and shocks (arrow) on turbo models can be very expensive to replace. Always support the rear suspension before removing a rear shock.



18 A clicking noise from the rear during acceleration and deceleration may have two different causes. Worn rear CV joints are responsible in some cases. The spacer between the inner and outer wheel bearings may also shift and click. An updated axle flange and revised torque specifications were introduced to correct this problem.



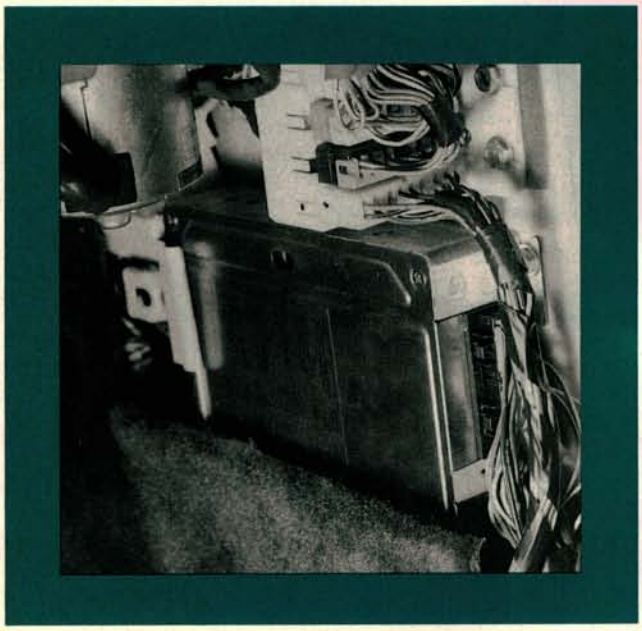
19 Front and rear toe are the only adjustable alignment specifications. Rear toe is adjusted by turning this eccentric bolt at the inner pivot point of the lower control arm. Weak rear springs can affect ride height and will cause camber and toe changes and accelerated rear tire wear.



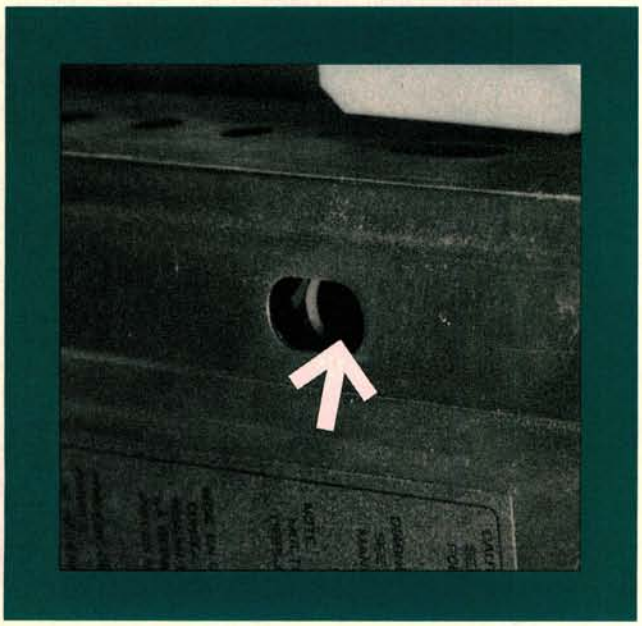
20 Transmission removal and clutch replacement doesn't get much easier than this rear drive setup. To avoid hard shifting complaints, always use the correct lube in manual transmissions. Many complaints (especially in cold weather) are caused by using the wrong gear lube instead if the specified 75W-90 or 80W-90.

21 Electrical problems aren't as common as you might expect for a car with so many accessories crammed into such a small area. An important ECCS grounding terminal is located at the corner of the intake manifold (arrow). A loose or dirty connection here can cause rough running and stalling at idle.

22 The diagnostic pages for the digital dash board are long enough to make a nice small town phone book. Display problems may be caused by poor solder connections inside the control unit (arrow). Check the control unit circuit board for opens if you're feeling brave and want to save the customer some money.



23 The ECCS control unit is hidden behind the right kick panel trim. The diagnostic LEDs can be seen through a small hole in the trim, but you'll need to remove the trim if you want to access trouble codes or change to any of the five diagnostic modes without the aid of a scan tool.



24 The ECU's green diagnostic LED can be used to monitor oxygen sensor activity. Warm up the engine, then maintain 2000 RPM for about two minutes. A good oxygen sensor should flash the green LED at least 10 times in 10 seconds. Fewer than 10 flashes indicate a lazy oxygen sensor that should be replaced.