TECH TIPS

Winning Tech Tip entries have been selected by the editors of *Import Service* as well as the technical staff at NAPA Echlin. Winning entrants will each receive $100.00 from NAPA Echlin and a special NAPA Echlin jacket.

A cash prize of $2500.00 will be awarded at the end of the year to the entrant who submits the best 1992 Tech Tip. The first runner-up will receive $1000.00 worth of NAPA Echlin products.

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

FOUR VOLVO QUICK TIPS

High underhood temperatures may cause higher or lower than normal alternator charging rates on Volvo 200 and 700 series turbo models. Check for a heat damaged voltage regulator or alternator. An updated heat-resistant voltage regulator is available to correct this problem.

A chafed wiring harness may cause intermittent fuel injection malfunctions or dashboard warning light actuation on mid-80s Volvo 200 series models. The sharp edge of the lifting eye at the rear of the engine can wear through the wiring harness where it's difficult to see. Repair the damaged wiring, then relocate the wiring harness away from the lifting eye.

Ignition system malfunctions on 1976 and later 200 series Volvos with B21 and B23 engines may be traced to damaged wiring harness insulation between the distributor and the ECU, near the alternator. The wiring may short to ground, causing intermittent ignition problems and possible ECU damage. A flashing oil pressure warning light may also be caused by damaged wiring in the same area.

An ignition timing light equipped with an advance mechanism can be used to check the valve timing on Volvo 200 series B21 and B23 engines. Advance the timing light the same number of degrees as the distributor's base timing setting, attach the timing light pickup to the number one ignition wire, then start the engine. Shine the light at the notch on the rear of the camshaft drive sprocket. The notch should be visible without removing the timing belt cover, and should line up with the notch on the valve cover. If the timing marks don't line up, the timing belt was either incorrectly installed, or has jumped a tooth.

Thomas Hilsendeger
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MIKUNI CARBURETOR SERVICE

Problems with the coasting air valve system may cause a rough idle or stalling on Mitsubishi vehicles equipped with Mikuni carburetors. This carburetor is equipped with a coasting air valve and air switching valve to lower HC emissions during deceleration. A coasting valve that is always activated will cause a very lean fuel mixture and a hissing noise from the carburetor. We've seen a few of these carburetors "repaired" by sealing the coasting valve with RTV.

To diagnose and repair the coasting air valve system:

- Locate the engine speed sensor in the ignition coil area.
- Trace the wiring from the speed sensor to the two solenoids that activate the coasting valves. These solenoids are usually in the right fender well area.
- Run the engine faster than 1600 RPM. The solenoids should click.
- If only one solenoid clicks, check the wiring harness. Operation of either solenoid means the speed sensor is working properly.
- To test the valves in the carburetor body, run the engine at 2500 RPM, then release the throttle. Air should rush through the coasting valve as the engine drops back to idle.

• If the coasting valve didn't work in the previous step, check the vacuum lines and the coasting valve diaphragm.
• To check the air switching valve, pinch off the source vacuum line. The valve should open and the engine should idle roughly or stall.
• If the vacuum lines are correctly routed and not leaking, replace the air switching valve.

The whole coasting air valve system can be diagnosed and repaired in a few minutes. Remember, sealing or disabling the system will cause higher HC emissions and would be considered tampering under the Clean Air Act.

Bill Stewart
Wilson's Automotive
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AUDI AUTOMATIC CLIMATE CONTROL

Stripped gears in the automatic climate control programmer may cause a clicking noise from the dashboard and a loss of temperature control on Audi 5000 models equipped with automatic climate control. No rebuilt or replacement parts are available from Audi to repair the A/C programmer. Only new, complete programmers are available for about $600.00.

The Audi automatic climate control system is based on a similar GM system. Some of the parts used in the automatic climate control system on mid-80s Cadillacs will work with the Audi system, providing a less expensive alternative to a complete A/C programmer replacement.

Rebuilt exchange programmers as well as motor and gear assemblies for the Cadillac climate control system are available through Cadillac parts departments. Cadillac and Audi programmers aren't identical, so you can't drop a Cadillac programmer into an Audi. The motor and gear assemblies can be interchanged, however.

Remove the damaged motor and gear assembly from the Audi programmer. Take the parts to a Cadillac parts department so they can match them up with their parts. The Cadillac motor and gear assembly is available for about $70.00.

Skip Burroughs
Mastercraft
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HONDA DISTRIBUTORS

A sticking centrifugal advance mechanism may cause a hesitation or flat spot when accelerating from idle to 2500 RPM on 1987-89 Honda Accord LXi models. This problem seems to occur at about 65,000 miles.

To repair the distributor advance mechanism:
• Remove the distributor, then remove the reluctor, pickup coil, ignitor, distributor cap seal, vacuum advance, breaker plate, and distributor shaft.
• Clean and lube all moving parts with molybdenum disulfide grease.
• Reassemble the distributor, adding a dab of silicone grease to the underside of the ignitor to dissipate heat.
• Road test the car to make sure the hesitation is gone.

Ron Leonhardt
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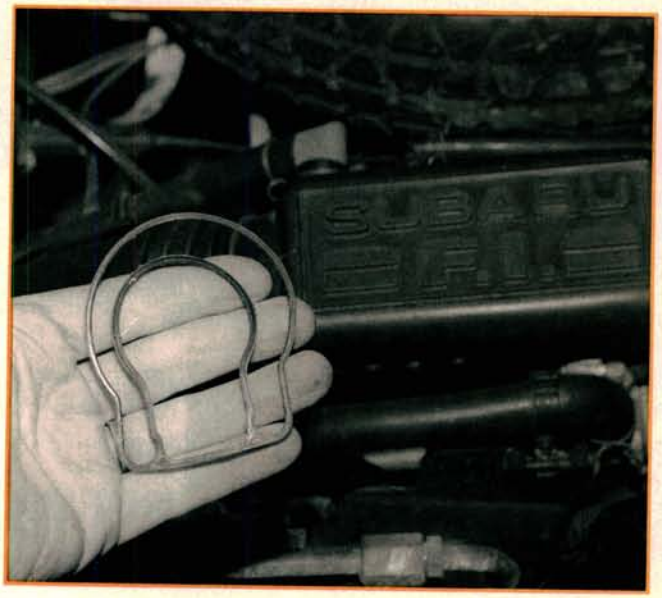
SUBARU THROTTLE BODY GASKET

A leaking seal at the base of the throttle body may cause a rough idle and hesitation on "L" series Subarus equipped with single point fuel injection. If the formed rubber seal is leaking, engine coolant may be drawn into the intake manifold and burned, or the coolant may leak onto the hot engine and evaporate. Either way, there may be no obvious signs of coolant leakage.



If you are trying to locate the cause of a mysterious loss of coolant, check the condition of the throttle body seal before condemning the head gaskets. Drain the cooling system, then remove the hoses and wiring connectors that are attached to the throttle body. Remove the four throttle body mounting nuts, then lift the throttle body to replace the rubber seal. The seal fits into grooves that are machined into the underside of the throttle body.

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