

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

RX-7 FUEL FILTERS

Mazda RX-7 carburetors have a tiny fuel filter inside the fuel rail, where the fuel line attaches to the carburetor. When this filter gets dirty, the engine will develop an intermittent stalling problem that will usually occur during highway driving.

An easy way to determine whether the filter is clogged is to drive the car at full throttle until the engine dies. Before you try to restart the engine, check the fuel window on the side of the carburetor. If there's no fuel showing in the carburetor window, the filter is clogged and has caused the carburetor to run out of fuel.

Steve Barton
Surfside Auto Service
Tulsa, Oklahoma

TWO CYLINDER SUBARU

If a four cylinder Subaru XT limps into your shop running on two cylinders and the ECS lamp on the dashboard is lit, don't fret. Retrieve the trouble codes (the ECS control unit is located in the trunk). If either a code 12 or 13 is stored, it means that two of the four injectors are losing their signal from the ECU.

The cause of this problem is a crimped connector located under the passenger seat. Excess moisture caused by wet carpeting may cause the connector to corrode.

Remove the seat and door sill trim panel, then

pull up the carpeting. The splice connection is located in the body harness that passes directly under the passenger seat. Resolder the connections as necessary, then protect the solder joint with shrink tubing.

Karl Reiser
K&R Motors
Baltimore, Maryland



MERCEDES-BENZ LOW COOLANT LIGHT

A leaking heater coil located in the windshield washer reservoir may trigger the low coolant warning light to come on in late model 400 and 500 series Mercedes-Benz models. This may result in the customer complaining that the light only comes on intermittently.

If normal diagnosis fails to turn up a coolant leak, and if the head gaskets test normal, check the heater coil in the windshield washer reservoir. Early style heater coils were prone to slight leakage.

The windshield washer reservoir is quite large, so the lost coolant mixes with the washer solvent. The reservoir may be able to hold the lost coolant for a few weeks before it becomes full and overflows. Replacement heater coils are available to correct this problem.

Robert Lemmo
Bobby Lemmo's Garage
Smithtown, New York

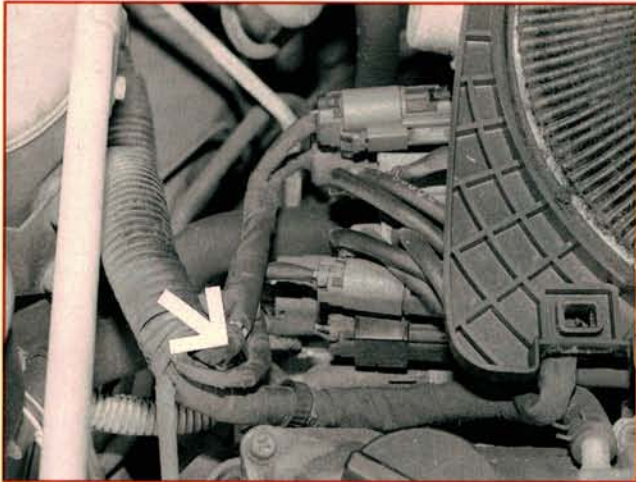
CRACKED HEADS

When diagnosing possible head gasket failures on 1985-88 Isuzu Troopers and Pickups, always have the head pressure tested for cracks. We have seen a large number of cracks on both 2.3 and 2.6 liter engines. The cracks are clearly visible between the lower half of the cam tower and the well under the camshaft. Proper repair requires purchasing a new cylinder head casting.

Robert Mullen
Opequon Auto
Kearneysville, West Virginia

NISSAN AIR FLOW METER WIRING

Engine movement may cause the air flow meter wiring harness to break on some 1991-92 Nissan Sentras. This can cause the engine to die or hesitate and buck during acceleration.



Check the ECU for stored trouble codes. If there are no codes, try pulling on the air flow meter wiring harness while the engine is running. If the engine dies while you're moving the wires, the orange wire in the air flow meter harness may be damaged. Open the wiring harness about three to four inches away from the connector and check for damaged wires. Repair the damaged wiring, then lengthen and re-route the harness to allow for normal engine movement.

SENTRA TRANSMISSION FAILURES

A defective high clutch drum assembly may cause 1991-92 Nissan Sentra models to lose third and over-drive gears when the transmission is fully warmed up. We are seeing this problem on cars that have 20,000-30,000 miles on them. The clutch drum must be replaced. Just changing the clutch drum seals will not fix the problem and will result in a comeback.

To check the clutch drum, remove the outer seal from the clutch piston. Now slide the clutch piston into the drum. If the piston slides in too easily, it's because there is too much clearance around the inner clutch piston seal. The clutch drum must be replaced to correct this problem.

Tom Wayman
Southlake Nissan
Crown Point, Indiana

COOLING SYSTEM PRESSURE TESTING

If you need to pressure test a cooling system and don't have the necessary cap adapter, it's still possible to improvise using the following method:

- Leave the radiator cap in place, then disconnect the overflow fitting (the recovery tank fitting at the neck of the radiator).
- Remove the standard connector from the pressure tester, then attach the hose from the tester to the radiator.
- Secure this temporary connection with a clamp.
- Pressurize the cooling system with the pressure tester hand pump. Pressure will pass through the vacuum valve in the radiator cap to pressurize the cooling system.

Bob Stockdale
Monty Tech
Dudley, Massachusetts

BACK SAVER

Use the following method to save your back when removing and installing large heavy wheels and tires on 4X4 pickups and sport/utility vehicles:

- Raise the vehicle just high enough to allow clearance for the wheel and tire. This will allow you to lift the wheel and tire only as high as is necessary.
- Position the wheel and tire so that the tread is facing you.
- Grab the wheel with both hands. Place one hand on the inside rim of the wheel, and the other on the outside rim.
- Pull the tire toward you while wedging one knee under the tire.
- Balance the wheel and tire on your knee, then continue lifting the wheel and tire with your hands and knee in a smooth motion. This distributes the weight and will keep you from bending over too far and damaging your back.
- Position the wheel and tire over the wheel studs.

MUFFIN PANS

When the baker in your household isn't looking, borrow a muffin baking pan to use during your next engine teardown. The muffin pan can be used to hold bolts, nuts, and other parts, with each cup in the pan holding a particular assembly's fasteners. This can be a big help during reassembly, because the fasteners are less likely to get misplaced and everything remains in the proper order for reassembly.

Keeping everything separated and organized can be especially important when an engine must remain disassembled for a week or more. It is surprising how much you can forget in a week. The muffin pan saves you from rummaging through an old coffee tin trying to find the right fastener. I've found that the Teflon coated muffin pans are the best because they are easier to clean up when you're finished with the job.

John Gurnig
Fel-Pro, Inc.
Skokie, Illinois