

# DID YOU KNOW..

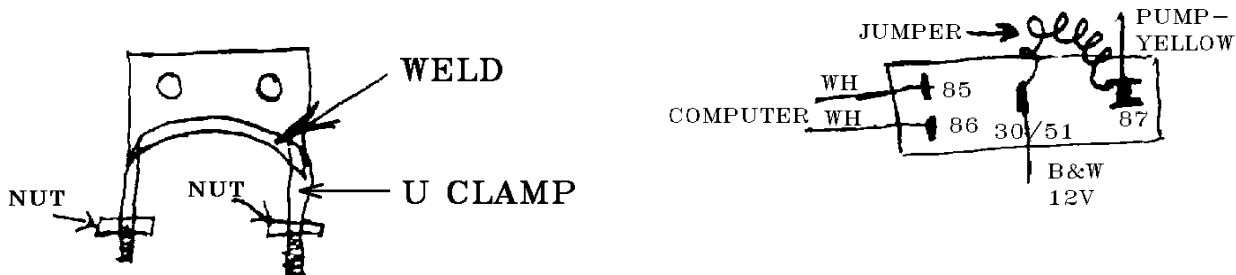
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May/June 1987

**HOOD HINGE REPAIR:** From rust and lack of use, hood hinges stiffen up and eventually freeze in the closed position. The strain causes the sheet metal to bend and eventually to tear. Repair as follows:

1. Remove hood from hinges. Remove grille and reach in and remove bolts thru hinges to hood.
2. Remove hinges. On some models the radiator will have to be moved to gain access to the bolts.
3. Oil and work hinges to free them. Clamp in vise and use a hammer or vise-grips. This is a good time to drill a hole in each hinge for future oiling. Check to make sure that the holes will be accessible when the hinges are installed.
4. Metal Repair. Weld metal tears as necessary and straighten. If the hinges have torn out the pieces they were fastened to, you can position the hinge, block it from below, and weld the hinge directly to the hood. A MIG welder works well, but a gas weld is OK too. If you're going to refinish the hood, consider welding supports between the hinge mounting and the main hood section if the lower metal has lost its stiffness, or harden the metal by hammering or tempering. MIG welds will do some stiffening.

**EXHAUST HANGARS.** When those "tin" mounts break off, like the one in front of the rear muffler on E & ES, weld a regular clamp to the broken bracket with the legs of the "U" facing down. This way the bracket will still mount normally.



**E-ES FUEL PUMP RELAY:** When these fail, the fuel pump won't run. This relay is 2nd from the firewall on the passenger side. In an emergency, it can be bypassed as follows: Run a jumper wire from the center terminal (#30/51- hot) to the yellow wire (#87). The pump will turn on with the ignition switch. You can probably drive this way indefinitely.

**WET PLUGS:** If your plugs get wet from a flooded condition of some sort, they MAY function if dried out, but my experience has ALWAYS been that they will never start and run well again, especially on FI cars. After the problem has been corrected **THROW THEM AWAY** and replace with new ones. You will avoid further headaches.

## **July/August 1987**

EMBLEM MOUNTING. Speed nuts are roughly equivalent to Volvo's mounting clips. Choose a snug fitting size and press on. They are available in most auto parts stores. DO NOT bend the mounting legs, glue, glob, etc. Do it right!

MAP POCKETS, '72, '73. These are identical to 140 map pockets and are mounted to the door panels with metal tabs. A simple replacement! Too bad you have to remove the door panel to do a neat job. I haven't checked, but I'll bet 122 pockets will work too.

BATTERY BOX CORROSION. Neutralize periodically with a solution of baking soda and water. Flush thoroughly. To retard future corrosion, use grease on terminals, corrosion rings under terminals, and/or a chemical inhibitor.

WATER IN GAS TANKS. I just heard of an extreme solution. One owner blanked off the gas cap door, removed the filler hose, and mounted a cap IN THE TRUNK. (Don't forget a vent.) The tank was then filled from INSIDE THE TRUNK! (I told you it was extreme). I advise removing the drain plug periodically to drain the water. The water is always at the bottom of the tank. You usually only have to let out a few quarts before you replace the plug.

DOUBLE NUTTING. To remove studs or to tighten, don't forget double nutting. Run two nuts snug against each other and use a wrench. It's a lot better than marring threads. This can also work where you ruin the head of a machine screw and need to use it.

PARTS BOXES. The new oil containers from Castrol and others make handy parts containers. Just cut out around the label. The neck makes a convenient handle. They even stack! Cut out only three sides if you want a flap. Leave the cap on.

## **September/October 1987**

### **CARBS:**

SU's will work with almost any type of oil to dampen the pistons. Transmission oil is commonly used. #30 or 40 will give snappier response.

### **CLUTCH SLAVE CYLINDERS:**

There are two sizes of Girling cylinders that will work, 1" and 3/4". The 1" is most common. Size is clearly marked on the cylinder. The 3/4" will make clutch response quicker, with less pedal travel, but will require a little more foot pressure. Generally nicer, I think.

### **OD CLUTCHING:**

I've changed my thinking a little on clutch use when shifting in and out of OD. While not a matter of life and death, I now use the clutch more of the time. The jar of the gear change does not do the rear suspension, trans. mount, U joints and rear end much good, especially at the harsher speeds.

### **REAR BUSHINGS:**

Once again I'd like to point out that these bushings often do not wear as expected. The rubber will look fine, but the inner metal sleeve will wear, and the bolts that go through them. You have to take them apart to check them positively. This metal wear (especially at the front upper rod) causes a lot of clank and sloppiness in the rear suspension.

### WINDSHIELDS:

The original E-ES windshields are gone. Volvo is now supplying a no-name glass with a Volvo decal stuck on. The new ones are thinner than original, probably better, but are outrageously priced.

### SIGNAL LIGHTS:

The mounting studs on these are not anchored very strongly. They will turn if the threads rust and you try to remove the nuts. It's a good idea to lubricate well and clean up the threads, and maybe undercoat to seal and protect the threads.

### PARTS NA:

While I no longer will list parts that are no longer available, you would be amazed at the number of parts that are gone at Volvo, and how many more are disappearing each year. I'm afraid there are rough times ahead, especially for those who want new parts. Even repair kits and repair parts are gone for some mechanical units. It will be more important for all of us to help each other with solutions, substitutions and repairs in the future. Please contribute if you can.

### November/December 1987

CALIPER REPAIR; Removing the pistons is sometimes very difficult. One sure-fire method in extreme cases is to substitute a grease fitting for the bleeder valve. Plug the fluid inlet and use a grease gun. It works!

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73ES BUMPER ENDS: These are no longer available, but they are identical to earlier ends except for the mounting brackets. The earlier brackets can be removed and a new one fabricated without too much difficulty. Fit the new bracket to the car to make sure of the fit, then weld to the bumper. A MIG welder will probably work best. A stick will generate more heat. In any case, it would be smart to set the bumper end in cold water or snow so as not to discolor the chrome.

### January/February 1988

#### STUCK CLUTCHES

Any time your car sits around, especially where it's damp, the clutch may stick fast to the flywheel or to the pressure plate. I've seen it happen in as little as two or three months. Apparently the disc absorbs moisture and sticks. The symptoms are that the transmission will not go into gear while the engine is running and the clutch won't release if put in gear and then the engine is started.

One preventive is to prop something that will keep the clutch pedal depressed or, more directly, wire the clutch release fork back so the clutch facing does not contact the flywheel. I don't think I'd recommend this for long periods, although I know of a Jeep that had it done for nine months a year for 20 years with no ill effect.

Another way to avoid the problem would be to depress the clutch pedal every month or two, preferably running the engine, and move the car a little. It wouldn't hurt to warm it up well to drive out moisture, nor would it be bad to slightly slip or burn the clutch.

I don't pull them apart unless absolutely necessary, so I can't be sure, but I suspect that the problem occurs most often with poor quality clutch facings.

## FREEING THE CLUTCH

1. John Adamchak suggests running the engine to warm up the flywheel and facing to drive the moisture out. Try this first.
2. Try putting the car in gear first, then try to start it. As it moves, work the clutch pedal up and down smartly, or..
3. Jack up the rear end. Put the transmission in first gear. Start the engine. Rev engine, clutch in. Tap the brakes sharply. Lightly at first, then harder. Working the clutch in and out may help. If you're impatient, not too bright, and have three feet, try..
4. Staring the car in first gear, clutch in. Give it gas and jab the brakes.
5. Push or roll the car downhill, ignition off, in gear. Start with 4th, clutch in. Tap the brakes, lightly at first, then harder, sharp jabs.

The transmission may get stuck in gear at some point. Rocking the car backwards will usually free it. Most times no damage will result, but be aware that you could break a damper spring in the disc. Burn the clutch a little once it is free.

If all else fails, you will have to remove the transmission and bell housing and pry the disc loose. Examine the pressure plate and you may as well replace the disc.

## REMOVING BROKEN BOLTS

Broken bolts and studs are a never-ending problem. My experience dictates the following order of methods to try.

1. Use a prick punch and hammer to try to rotate. This is almost ALWAYS the best method and FIRST CHOICE.
2. Drill a small hole, if accessible, and try a screw extractor (easy out). Try to use a square shank type. The screw type tend to expand the bolt and wedge it in tighter. Drive it in and lubricate well.
3. Next is to drill progressively larger holes so that you can collapse the remaining shell and pick it out with a punch or pliers. Be careful to center your first hole carefully otherwise you will be way off center later on and may damage the threads or ruin the hole.
4. Some success can be had with a left-hand drill, if you can find one. Of course you will need a reversing drill. Bear down and drill slowly. It is always a good idea to punch the center of the bolt with a good punch sharpened at a very shallow angle to center the drill.

## NEWS ON 67-68

I just got a 67S, #24487, which is mechanically a 68. This is odd because the 67 model year didn't end until #25449, a thousand cars later. It would be interesting to know if these next thousand cars were also really 68s. This car has all of the 68 trappings: dual brake system with Wagner rears and hump back manifold with secondary throttle plates. Cosmetically it is still a 67.

## March/April 1988

### PREVENTIVE CARE

As our cars get older (they range from 15-27 years now) there are quite a few items of maintenance that may have been neglected over the years. Probably very few are of any urgency, but I'll list them here to be put on your "someday I'll get around to that" list.

### LUBRICATION

SEAT TRACKS. These need cleaning up and some grease, maybe shimming in the middle if they've begun to sag.

PARKING BRAKE CABLES. Best to remove one end and oil thoroughly. They are a pain to replace.

THROTTLE, CLUTCH, SPEEDO CABLES.

THROTTLE LINKAGE. Lube and check bushings.

HOOD HINGES. Do it!

HATCH HINGES. Maybe these can be shimmed when the play gets excessive, or the pins replaced. While you're back there remove the hatch seal and check the flange it mounts to. These rust from water leakage. Open the drain holes if plugged.

WIPER POSTS AND TRANS. Check these out before they die. At least remove the wiper arms (CAREFULLY) and oil the posts from the top.

BUMPER BOLTS, BUMPER ARM BOLTS. Remove and grease or use Never Seize. These are a real pain if they get too frozen.

DOORS. Oil hinges, vent window pins, and locks. Grease window regulators. Check glass angle for good fit to windlace (this is adjustable). Silicone or wax window channels so window regulator will not be strained. The fuzz on the upper door cushion against the glass is usually quite weathered on the top edge. A little black dye will do wonders for the appearance. If the door sags badly, check the hinges for wear. The pins can be replaced. The door will close easier and it will save your lock plate.

CARBS. Clean up the pistons and oil.

TRANS. CHANGE THE OIL! Volvo says #30 oil. (I use #30 nondetergent, BUT Irv Gordon has ONE MILLION MILES PLUS and has always used gear oil--80-90)

REAR END. CHANGE THAT DIRTY OIL!

WHEEL NUTS. Remove, clean up threads if necessary, use grease or Never Seize, and tighten REASONABLY. A good rule is slightly less torque than you'll use to remove them if you're on the road. Many garages will use power and I've seen these nuts put on with OVER 200 lbs. of torque! I had to stand on a 3' length of pipe attached to a breaker bar! This is not too good if you get a flat on the road. I think Volvo calls for 90-100 lbs. At the risk of insulting 90% of the members, let me suggest how to mount a wheel. (Is Bob's clutch slipping ?) Snug up one nut fairly tight to center the wheel. Do the same for one nut opposite, a little tighter. The wheel will now be centered properly. Add other nuts opposite and check all for equal torque.

## ELECTRICAL

FUSE BLOCKS. Remove all fuses and clean the contacts. Replace with glass fuses. The ceramic fuses are the worst!

THROTTLE VALUE SWITCH. Clean

TRIGGERING CONTACTS. Clean. Elec. contact spray, maybe brown paper.

FUEL PUMP (ELECTRIC). Check that terminals are clean and that wires are in good shape at the pump. This is not a job you'll want to do on the road.

LIGHT SOCKETS. Remove bulbs and clean. Replacement sockets are available at auto stores, and insert kits with the base contacts and spring.

FUEL PUMP (MECHANICAL). Clean the sediment trap. You won't believe what's in there if it has been neglected for awhile.

GAS TANK. Drain this once in awhile, especially on injected cars. 20 years of dirt from different gas pumps, water and rust do not contribute to a good running car.

AIR AND FUEL FILTERS. Inspect and change, if dirty.

I'm sure I've left out a few things, but if you do all of these, it will probably take till Christmas of '88. I was tempted to suggest that you check the frame and rubber seals, but didn't want to be accused of promoting the stuff I sell. Have fun!

## **May/June 1988**

Little aggravations and cob fixes.

Signal Light Lenses. When one of those little mounting ears breaks:

1. Decent Fix. Repair cracks, if any, and build up with epoxy (PC-7 or other paste type).
2. Cob job. Drill through bezel and lens into the outer edge of one or two of the mounting flanges. Fasten with small sheet metal screws. If it's going to be a temporary fix, remove the chrome bezel if you can. Carefully press the lens out and drill only through the plastic lens and the metal mounting tab. leave the bezel off until you get a new lens. The hole in the mounting tab won't hurt anything and will be hidden by the lens and bezel.

Signal Light Mounting Studs. If these break off or turn loose in their mounting to the light:

1. Remove the studs, turn loose or drive out.
2. Run screws from behind the fender and use nuts and washers on the face of the light base. The bolts need to be about 5/8" long so as not to bend the reflector, or you can shim back with washers under the screw head, or --
3. Riv nuts can be mounted on the light base with screws from behind the fender. Headlight Rings.

When the tab that receives the screw at the bottom of the headlight breaks:

1. Wedge a piece of rubber at the lower edge of the ring between the headlight and the ring, if necessary, so that the top tab will grip firmly. Aim a long, thin sheet metal screw behind the headlight retaining ring. You can rotate the ring so that the hole is at 4 or 8 o'clock before you drive the screw, if you like. This is a crude fix, but it works.

(No apologies for the above. All of us don't have creampuffs, just nice transportation we need to keep legal as reasonably as possible, and we all need a quick, temporary fix now and then.)

Bent Bumper Brackets. Are our front bumper ends dangerously close to your signal lights? (65-72 only)

1. Loosen the mounting bolts at the frame. (They may already be too loose.) Draw the bumper forward and down. Stepping on it helps.
2. Tighten bracket mounting bolts.
3. A. (Cob) Remove bumper ends and add washers between the bracket and the bumper ends on outside holes only. Use longer bolts if necessary.  
B. (Good fix) Remove bumper ends. Use pipe wrench to straighten end of bracket. Angle it away from the car. Use heat, if necessary, but these bend fairly easily. The bumper should be below the signal light and about 2" out from it.

## **July/August 1988**

### **E-ES IGNITION SWITCHES**

These come connected to the steering wheel lock and are great fun to replace. Volvo, in it infinite wisdom and paranoia about theft, has used a break-away bolt to fasten the assembly to the steering column. This bolt (now headless) sits in a little tower at 180 degrees to the key and about 2" in towards the column. If you can maneuver a prick punch and hammer to loosen it. OK; otherwise you'll have to try a LH drill or drill and screw extractor. The bolt only needs to be backed out about one turn to release the assembly, but everything is so cramped under there that you might wish you had sold the car "as is" before you started the job. The lock can then be worked free. It must come straight out at 90 degrees to the column. If you replace it with a used unit, you will have to find a bolt to replace the headless one. This job is best done by small people with the seat and seat tracks removed.

### **VENT WINDOWS**

These little buggers have to be removed to replace the rubber (some of which is NA).

1. Remove the door panel (inside)
2. Loosen the bolt that clamps the mounting stem.
3. Pry and spread the outer frame to release the upper mounting pin from its seat. This is not too easy. Replacing it is a little harder.

## E-ES THROTTLE CABLES

I recently came across an old service bulletin, which I have now misplaced, that called for the RECALL of a GREEN throttle cable because it might fray and cause a dangerous condition. Volvo dealers were to replace them with the later BLACK cables. You should check your car, and if you have the old style green cable, go to your dealer and make him find the bulletin and replace your cable. I was amazed to realize that I had seen at least three cars with the green cables, even after all these years.

In digging through my rather large collection of dealer literature, I've come across several odd bits of information which I'll write about in future issues. These occur in Service Bulletins, Parts Bulletins, and in Service Manager Bulletins. Some of these internal memos are quite interesting.