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FRONTWHEEL  
DRIVE CLUB  
of AMERICA

Our records show that you are now  
due in club fees. We hope you find  
our Newsletters useful and improv-  
ed, and worthy of your support.

JUNE 1980

DEDICATED TO SMALL-  
ENGINEED SMALL CARS &  
ENERGY CONSERVATION

SAAB Clubs of North America • publisher & treas.: Dick Grossman - 1918 W. Hood- Chicago, Ill. 60660 • phone: 312-743-6742.

• Consultants: Rick Sanders, Ruth Grossman, John Fog, Jack Ashcraft, Merle Young. (mail Letters to: Box# 60272, Chicago, IL. 60660).

#### MEMBERSHIP/SUBSCRIPTION

Newsletter #83, our 166th multipaged monthly. Dues for membership/subscription are \$9.00 for the first year, including two back copies, 12+ tech' sheets and emblem. Renewal dues: \$6.00. Past dues notification will be rubber stamped on the open rectangle at the top of this page. A treasurer's report will be made three times a year. This is a non-profit organization.

Or: a three-ringed binder with a collection of back articles & tech' sheets is available for \$5.00 postpaid. Or, .30¢ one issue.

Always specify: 96, 97, 99, or 900 and year, for appropriate sheets.

**ROCKY MOUNTAIN SAAB CLUB** - The Denver Chapter is going strong with new members joining and an active program schedule. We've had well attended technical meetings on subjects ranging from brake maintenance to valve adjustment.

Our July activity will be a PICNIC at Morse Park, 20th Ave. & Carr, Lakewood, July 13, Sunday, 1 to 4 P.M. BBQ facilities and beer and pop provided. Bring your own lunch. Call: Stan Beitscher, 424-4876 (home) or 497-2680 (work) or Barry Nash, 755-1532 (home) or 398-4977 (work) for more information.

#### GOLDEN GATE CHAPTER - SAN FRANCISCO

Tech session on cooling systems, Sunday, June 29th, 1 P.M. Mike Ewell will conduct at T&F Motors, 1394 N. Fourth St., San Jose. From Hiway 17, take the 1st St. exit going south; from Hiway 101, take the 1st St. exit going north; drive to Gish and turn onto 4th st. For further info call: (408)374-7988 or (415)282-2161

**NEW ENGLAND SONETT CLUB** - Will have a joint meeting, cookout and scenic drive on June 29th at the Pearl Hill State Forest, located on Rt. 119 in West Townsend, Mass. (From Fitchburg, Mass., approx. 6 miles North on Rt. 31, then right on Rt. 119 approx. 3 miles).

Cookout at 11:00 A.M., Club meeting at 1:30 with scenic drive afterwards, non-members welcome. Membership applications will be available. For info: C. Rowlette, (603)888-0164 or Scott Prentice, (603) 432-9912 or Mike Raphael, (603)432-2418

#### MINNESOTA SAAB 96-99-900's CLUB -

At Perkins Restaurant, I-94 & 25th Ave., Riverside, 8:00 P.M., June 23rd. Join us for dessert during business meeting. For info: Gary Zaidenweber, 822-0213, Minneapolis, MN.

**MILWAUKEE SAAB CLUB - JUNE 23, Page 3.**

#### EDITOR & PUBLISHERS' REPORT

Last month we received only 363 club letters, and we were able to answer most all correspondence within two days. We also achieved about 3 additional days of free time and I was able to take on some free-lance work, (exploded views of a Gryos machine).

As reported before, among the 200 letters enclosing a check for renewals each month, some make no comments, most that do comment, say: "keep up the good work." A few renewals say: "I like and need the valuable newsletter, but, I disagree with some of your editorials." None hint in the slightest way which of my ideas are the ones they don't agree with. Naturally, no one can beat my notions down with a feather, throwing cream puffs at me cannot effectively change my mind.

For the new members, here is a list of most of my automotive dogmas: (1) My extreme hate for Detroit car executives for the crimes they have committed against our economy. (2) My contempt of the 70% of the public who believe in and accepted the trash that is sold to them, (22 foot- one passenger cars, whitewall tires, 8 track stereos, spoilers, polished chrome, etc.) (3) I'm against the stupid belief that the warrantee will fix the car. (4) And the crazy idea that this publisher should "lobby" for greater warrantee service, (for \$6. a year?) (5) The insane notion that this newsletter should be a racing-rally booster, or, a fan club. (6) It is imprudent to expect this publisher to provide hundreds of dollars worth of elaborate repair instructions, parts sources, a computer file of 12,000 Saab mechanics, maintain a \$100,000 Saab laboratory to advise each member, - all for the price of the yearly subscription.

What we can and do provide, in addition to 83 consecutive newsletters, (55 good ones) is a collection of 23 club printed tech' sheets, (some for 99s, some for V4s, 2 for Sonetts). Also, a 19 paged collection of V4 articles: \$1.50, and a 32 paged collection of 99 articles: \$3.00. The \$5. ring binder includes these article collections, (if you own or want both V4 and 99 articles just say so with order). We also have the reprint of 'Turbo-Manual Supplement' \$4.00 - And, sticker emblems: 25¢, embroidered emblems: .85¢ & \$1.15 each. Brass "cloisonne" emblem; \$3.00 - We can make Xerox copies of certain pages from our library of Saab manuals and part s manuals - up to 1975, .08¢ per page, 25 page maximum allowed.

Our Club treasury remains at about \$5,000, because

we are spending about \$2,000 per year on office equipment and we recently raised our, (Ruth & I combined) monthly pay to \$400. There are only 6 or 7 viable branch clubs in North America and two or three new groups emerging. There are about 2 independent Saab clubs, (like: the Washington, D.C. club). We will assist most any Saab clubs if they will keep us posted on what they are doing. We can't print from non-letters and we won't write blank checks to unknown groups. We are willing to exchange newsletters with other car clubs of F.W.D. compacts like; Citroen, Subaru, Honda, etc., but, NOT antique-classic car clubs or Detroit monster car clubs. We have no copyright claims.

#### WHERE ARE YOU?

In the past year we mailed about 500 ring binders to new and some experienced members. About 3 months ago we got ONE binder returned to us by the Post Office in a Post Office package wrapping. Apparently our wrapping was torn off in handling and they left us with no scrap of the address label. All I know is that it was sent to a Western state 99-owner on Feb. 26, '80 and that unknown member has yet to write us! If we make a mistake in labeling or wrapping or postage, (it happens once in a thousand addresses) there is NO WAY for us to know, unless you correct us.

#### ANOTHER PET PEEVE

Some of you who write us a technical question and know that it is unlikely that this editor knows the answer, but, expects us to print the problem-write a brief 10 word sentence. No details are given; what area of the car? Which model? V4, early 99, late 99? 900? Turbo? Strange noise-vibration? Describe it. What kind of a mechanic last "worked" on the problem? Saab mechanic or general car mechanic? Apprentice? Leaks; water? oil? What color of the fluid? Where? Is the engine & crankcase clean? If not, you should steam clean it or use coin-car-washer, so you and mechanic can see source of leak. Ignition: How old are the spark plugs, ignition wires? (age: we mean mileage). Unreasonably short sentences do not deserve a one paragraph reply, least of all, a one page reply.

Dick G.

#### USE A LITTLE GASOHOL EACH TANKFULL

A letter in the April newsletter discussed the use of methanol gasohol, and other readers commented on it in the May newsletter. One person mentioned the use of gas drier. Since reading these letters I have noticed that all the brands of gas drier that I have seen are methanol. I have used gas drier about 7 months of the year for the past 6 years in a 1973-99 with fuel injection. I started doing so at the recommendation of a Saab dealer, and have been rudely reminded to by stalling and bucking mornings if I forget to use it. I use one can to a tank of gas, which gives about a 1% mixture. I have not replaced the fuel pump, but did have a leaking hose on the injector manifold. I plan to continue to use the gas drier as the lesser of two evils, but will watch for leaks since I read the letters. Does anyone know of an ethanol based gas drier?

Norm Scarpulla, Mass.

#### A COUPLE OF QUESTIONS

(1) Is it all right to use gasoline dryers (dry-gas) and a gas-line conditioner (Gumout) in the fuel system of a Turbo 99? Although Andy Buc talked about it in the May issue, it was in relation to a V4.

(2) I recently talked with a Saab rep' who told me not to use a 20W-50W oil. I have been using Castrol (that weight) in the summer and 10W-40W in the winter, (GTX) He indicated that the thermo switch for the oil cooler may not open soon enough and the engine would possibly overheat. What does/do you other subscribers say about this weight oil?

Jeffrey C. Curnett, Warwick, R.I.

Editor's comment: Why buy "gas drier", or STPbaloney when all you need do is buy one gallon or more of gasohol which is made with ethanol-alcohol or a corn product. One gallon in a 9 or 10 gallon fillup of regular or no-lead gas' would give you 1% alcohol. Two gallons of gasohol makes 2% or so alcohol per tankfull. I am using 5% alcohol by purchasing every other fill-up with gasohol. The service station pump has a corn cob emblem on it and the local rating is: "90 octane" compared to 89 octane for no-lead. The cold start idle is without sputtering, or bucking, a slightly peppier motor then with regular gas. It is not just these benefits that I look for - it is the lessening of Arab oil imports that is most important! - D.G.

#### PARTS OF SHOP MANUAL AVAILABLE

The factory shop manual for the 1979-80 900 series is now available thru Saab dealers in sections instead of the \$100.+ for the complete manual.

Some typical prices for the individual sections are:

P/N	TITLE	
321240	Specs	\$ 5.95
321265	Engine	\$11.90
321273	Elect. System	\$11.90
321307	Brakes	\$ 5.95

Jerry Vanaskey, Rochester, Mich.

#### PRESS RELEASE

ORANGE, CT. - Charles L. (Chuck) Nemeth has been appointed Western Region Mgr. for Saab-Scania at Carson, California and is responsible for all Saab activities in ten western states.

A native of South Bend, Indiana, Mr. Nemeth, 52, has been active in both the retail and wholesale auto field since 1946, originally with local auto dealers in Indiana and Illinois, Lincoln-Mercury and Renault.

#### A REPEAT OF HYDRAULIC HOSE FIX

The clutch line on my '74 99 rotted away and the \$32. price on a new line prompted me into finding a simple repair. Found it in a flexible brake hose (NAPA #26960). Just had to cut the old tubing next to the crimped ends, insert flare nut. Flare ends with DOUBLE flare and screw together the flexible hose! Less than \$6. plus a heavier hose than original.

Paul Larsen, Interlaken, N.Y.

### 3 CYLINDER CRANKSHAFT WORKSHOP

On July 26, 1980 in Yakima, Washington, a one day clinic will be conducted on the disassembly and re-assembly of the crankshaft found in the Saab 850 & 750 engines. This seminar is aimed towards the advanced home mechanic and will teach techniques and methods to replace and repair crankshaft components saving time and money.

Taught by John Baird, a leading Northwest Saab crankshaft rebuilder, (in no manner linked to Saab of America or any of its dealers), each student will have "hands on" experience during the day and will be provided with crankshaft service manual, information on parts, and special tools.

The cost of the course is \$100., and includes not only a step-by-step book on how to repair the Saab cranks, but also, a special press jig tool used in the assembly of the Saab integral press-fitted crankshaft.

Write to John R. Baird, c/o Crankshaft Workshop, P.O. Box 83, Naches, Washington 98937

#### PETCOCK LOCATION

Engine block petcock for coolant drainage on my '75 99 is behind the exhaust manifold, towards the back of the block. Use same wrench as for radiator petcock. It must be done by feel. If you twist your head correctly, you can see it. Obviously exhaust manifold should be cold. J. Hunvald, Woodridge, Il.

Editors comment: We have been told that the late 1979 Saabs do not have engine drain petcock, instead it is a plug, (semi-permanent).

#### PIRANHA BREAKERLESS FAILS AT 45,000 MI.

When my 1976-99GL was new I installed a Piranha breakerless ignition - putting the black box on top of the radiator near the coil. Worked like a champ - never had to set timing in 45,000 miles.

In Dec. 1979, I - or at least my wife, started to experience unexplained engine stoppages. At first, only after a warm engine had began to cool. Seemed to be one of the several heat controlled sensors acting up. But always started before I could diagnose. Finally, I took to carrying an extra spark plug. Proof positive of an electrical problem - the black box was slowly cooking to death! Have acquired new black box, mounted behind left head light. Problem solved. Recommend the Piranha unit.

Editor comments: We've had too many reports of breakerless or booster boxes failing sooner than 45,000 to recommend such gadgets, at least, be forewarned, and don't blame the other Saab parts under the hood.

**MILWAUKEE SAAB CLUB** - For June we have scheduled a rep' from Pirelli Tires to come and talk to us. This will be at the usual time of 7:30 on June 23 at Shakey's Pizza, Hwy. 100 and Silver Spring.

### NOVICE REPLACES ALL BEARINGS 1970 99

Recently, my brother and I replaced the primary gear bearings on his 1970 99E. Except for the inner clutch shaft roller bearing and one of the two center primary gear bearings, we were able to purchase all of the bearings from Wisconsin Bearing, here in Milwaukee.

The cost for replacing all of these bearings came to approximately what the labor would have been for having the dealer do the job. Because we were doing it ourselves, we replaced all the bearings including the one on which the freewheel sleeve turns. We bored a hole in the front body panel below the bumper (1/2" bit) and used a long slide hammer to pull this bearing without removing the engine and transmission from the car. The top (clutch shaft gear bearing) and lowest (primary gear bearing) can be ordered with 11 instead of the usual 7 ball bearings. Whether or not this would improve the longevity of this early Saab gear box remains to be seen.

- Top gear bearing (primary case) SKF3nuO4N (Saab) \$30. +
- Top gear bearing (primary housing) NDH 3306 \_ \_ \_ \_ 8.
- Middle gear inner bearing " T M12649 \_ \_ \_ \_ 7.
- Middle gear outer bearing " T 15385 \_ \_ \_ \_ 4.
- Lower gear bearing (primary housing)
- SKF 248464 or 306 NRJ \_ \_ \_ \_ 7.50 & 15.
- Freewheel sleeve bearing (primary case) SKF NJ206M - \$27.
- Clutch seal (dealer) \_ \_ \_ \_ 7.
- Clutch shaft O-ring (dealer) \_ \_ \_ \_ .73¢
- Middle gear shaft O-ring (dealer) " "

Unless otherwise indicated as a Saab dealer purchase, the bearings purchased above were from a local bearing warehouse, Wisconsin Bearing. A local parts store pressed the upper and lower bearings on the top and lower gears. The top and lower primary gear bearings were installed in the primary housing after the housing was heated in the oven to 400 degrees. The bottom bearing has a ring which permits this bearing to be positioned properly. The top bearing should not be positioned so far into the bearing case so as to prevent the clutch shaft O-ring from seating against the clutch shaft or oil will flow along the clutch shaft and will ruin the clutch disc. William C. Hustedde, Wauwatosa, Wisc.

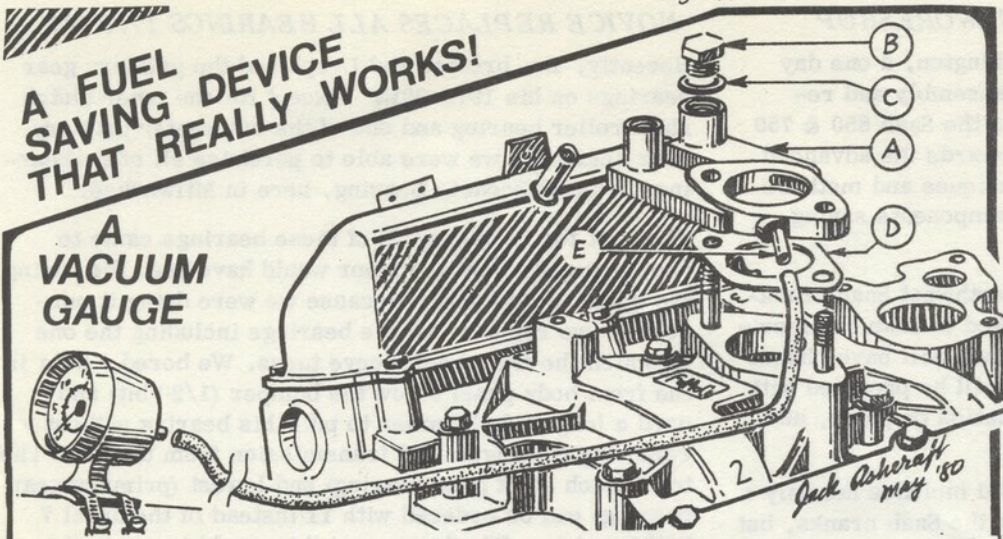
#### TEMP. GAUGE STUCK II

I came across a solution to a problem with my temperature gauge. After noticing the needle getting stuck in one position. After taking the gauge apart I noticed that the small plastic mounting plate had either shifted or shrunk. All that was needed to fix it was to pull off the needle and cut the plastic away from the tiny shaft coming out of the gauge. The gauge has worked fine ever since. John Nonenmacher, N.J.

*This edition closed, (brought to printer): 11:AM., Saturday, June 7<sup>th</sup>. We expect to mail out this issue between the 12<sup>th</sup> to 16<sup>th</sup> of June.*

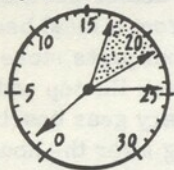
# A FUEL SAVING DEVICE THAT REALLY WORKS!

## A VACUUM GAUGE



Sketch shows the standard V4 with distributor, carburetor, thermostat housing, and attendant hardware removed for clarity. To make the vacuum gauge work correctly it must be attached BELOW the carburetor, not T-ed into the vacuum advance line! On pre-1971 cars, switch to intermediate housing (A) Saab #8849-473. If your car doesn't have power brakes, use plug (B) Saab #8811267 and washer (C) Saab #8814105 to block that hole off. Put on two new gaskets (D) Saab #8831315. On cars with two barrel manifolds, tap into the power booster hose between engine and the one-way valve (if car has power brakes) or into the cap (B) on the 2-bbl intermediate flange. Hook the vacuum gauge hose up to the nipple (E) and run it thru the firewall to the gauge. If your gauge has a dash top mount, just install it on the steering column with two large hose clamps painted flat black.

### VACUUM GAUGE USED FOR MILEAGE



KEEP NEEDLE AT AS HIGH A READING AS POSSIBLE (17-21 IS NORMAL). HIGH READING GIVES HIGH MILEAGE, HELPS YOU DRIVE SMOOTH. OPEN THROTTLE DROPS NEEDLE TO ZERO. CLOSED THROTTLE GIVES MAXIMUM MANIFOLD VACUUM (24-26).

TRY IT - IT WORKS!

### VACUUM GAUGE USED FOR TROUBLE-SHOOTING



WRONG VALVE TIMING - NEEDLE STEADY BETWEEN 8 AND 14.



POOR RINGS - NEEDLE STEADY BUT LOWER THAN NORMAL.



POOR CARB ADJ. - NEEDLE FLOATS SLOWLY BETWEEN 12 AND 16.



LEAKY CARB OR MANIFOLD GSKT. - A STEADY READING BELOW 5.



PLUGGED MUFFLER - NORMAL READING WHEN ENGINE STARTS, QUICKLY DROPS TO ZERO.



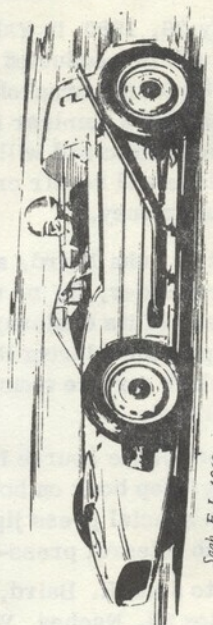
PLUG GAP TOO CLOSE - NEEDLE DRIFTS FROM 14 TO 16.



INTER-CYLINDER COMPRESSION LEAK - NEEDLE DRIFTS FROM 5 TO 19.



STICKY, BURNED OR LEAKY VALVE - NEEDLE DROPS EACH TIME BAD CYLINDER FIRES.



Saab F.J. 1960

## SAAB 95,96,97 EXHAUST SYSTEM MOUNT

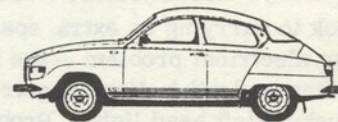


LOW COST REPLACEMENT FOR SAAB NO. 7085475.

USE G.M. AIR COND. CONDENSOR MOUNT NO. 331959.

IT COSTS HALF THE SAAB PRICE!

*Jack Ashcraft May '80*



### HE WANTS MORE 96 TECH' TIPS

BY: STEVE LAXTON, WAYNE, PA.

What is happening with the Newsletter? There seems to be more and more official service tips from Saab-Scania, and fewer and fewer articles from members. I realize this isn't your fault - if people don't write in their tips and service experiences, you have nothing to publish. The service bulletins from Saab are okay, but many of them require specialized tools or facilities that the average Saab owner doesn't have. I joined the Club because I was interested in how the average member was able to solve problems and save money with the limited resources at his command.

Let me add my voice to yours, and urge members to contribute to the newsletter. If you belong to the Club, it is unfair to just take from the newsletter and not contribute to it. Anyone who does any major mechanical work on his Saab should be able to provide several articles on what he has learned from his experience which will benefit other club members. And even those who let others do most of the work on their cars should be able to contribute at least one hint, tip, or lesson learned during the course of the year.

Let's all make a bigger effort to contribute to the newsletter, and thus to each other.

SONETT SPECS' ON 5 OR 4 BLADE FAN

**SWEN'S 2 TIPS**  
 STROKE Tech Boy  
**SENSIBLE PHRASES**  
 ET

THESE PARTS Will Correct 80% OF THE MOST Common 2-Stroke Problems. KEEP These IN YOUR CAR:

- 1 HEAD Gasket
- 1 SET PLUGS
- 1 SET POINTS
- 1 Distributor CAP Rotor

Plus tools to install each. The 2-Cycle CARS Were ENGINEERED WITH OWNER MAINTAINENCE IN MIND, SO LEARN TO "DO-IT-YOURSELF!"

**THE VERY BEST**

SOURCE OF PARTS IS A 'FRISBY RUSTY' PARTS CAR!!!!

TO CONVINCe YOUR WIFE IT'S A GOOD IDEA TO HAVE A DEAD AUTOMOBILE IN YOUR BACKYARD EXPLAIN THAT:

- ① "IT MAKES A GOOD STORAGE SHED."
- ② "CAN BE USED AS A GUEST BEDROOM FOR HER MOTHER."
- ③ "GIVES YOUR PROPERTY A DISTINCTIVE "LIVED IN" APPEARANCE."
- ④ USED PARTS ARE CHEAP AND ECOLOGICALLY SOUND.

I discovered an inconsistency in the Sonett parts book when I replaced the engine fan in my '74 Sonett. The book says 8848830 (five-blade) was used on all '71 & up Sonetts but also says that 8848432 (four-blade) was used on all cars '72 & up!

When I ordered the latter, I discovered to my chagrin that it turned out to be a five-blade, with each blade 3/4" too long to clear the headlight shaft above the radiator. I then ordered 8848830 which didn't look right in Saab's vague drawing but turned out to be the right thing. As far as other year Sonetts go, one should check with Saab to confirm the proper type. My friend's '72 Sonett has a four-blade fan but I have no idea how to get one. Perhaps the longer five-blade would fit his car; I don't know.

UNDER NO CIRCUMSTANCES trim or attempt balancing plastic or nylon fan blades! Cutting or sanding will weaken the material and it may go without warning. I personally have seen a small broken 3" blade from a model airplane propellor impale itself halfway through a 12" diameter tree, so even though your car engine turns a much lower rpm think how much damage your fan could do.

All of the fans I ran across had "Ford 69 TF 8600 AA" embossed in them and a sticker with number 1484131 on them, but don't waste your time at the local Ford car or industrial dealer (as I did) trying to get one. The fan(s) are from a German Ford (Taunus?) never imported into this country.

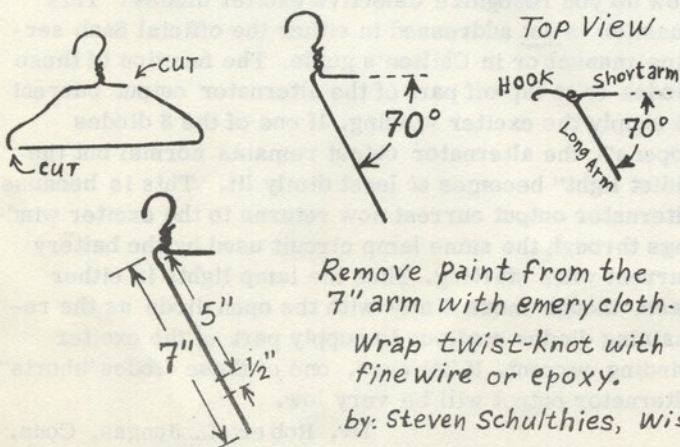
In addition, for those having difficulty finding Sonett wiper blades, the local K-mart has Roberk blades to fit at \$2.27 for each blade, or \$2.27 for a pair of inserts.

Perhaps someone can suggest a cure for the obnoxious rattle somewhere in my steering column... It seems to get worse with speed on the road, but not related to engine rpm. It disappears when the steering wheel is pushed or pulled gently up towards the roof. All the connections seem tight. A bad rear motor mount was suggested, but as far as I can tell this is O.K. As near as I can figure someone may have really yanked on the wheel getting into or out of the car and partially compressed or bent the collapsible steering column.

Any ideas on how to check this?

Steven A. Schultheis, Madison, Wisc.

96 HOME MADE TRANSMISSION DIPSTICK



LATE 99 ENGINE INTO EARLY 99's - TIM WARNER N. Carolina

In response to the questions of Kurt W. Rieke of Cincinnati, it is certainly possible to put a 2 liter into an earlier car. Possible, but not easy. My best advice is to check with a Saab dealer and study the parts lists. Early models (1969) had different inner drivers, two balls rather than three. Drive shafts then remained the same through 1974. Then in 1975 an additional set of bearings was added to the final drive section in the outer section, making the drivers (by my measure) 15/32" longer on the left and 1/8" longer on the right. The right side is no problem, but the left shaft must be shorten-

Continued on page 8-bottom.

## POSSIBLE RISKS TOWING F. W. D. WITH WHEELS ON ROAD

Two recent queries regarding towing and coasting with gears in neutral, has prompted the following:

Modern manual transmissions operate with permanently meshed gear sets, with gear selection by a splined sleeve sliding on the mainshaft which locks one gear or another to the shaft. In fourth gear the two parts of the shaft are locked together and the gears simply rotate without transmitting any power. The transmission consists of two shafts with gears.

(1) Mainshaft which is split in two. The front part with input gear takes power from the clutch. The aft end of the mainshaft transfers power to the differential and carries three gears, free to rotate on the shaft till locked to the shaft by the gear selector (one at a time), the join in the shaft is in the form of a roller bearing in the input gear. In fourth gear, the two parts of the shaft are locked together and the gears do nothing but rotate.

(2) Cluster or layshaft gear, which is a one-piece assembly comprising four toothed gears permanently meshed with the mainshaft gears. This gear is generally located beneath the mainshaft and is halfway immersed in oil when stationary.

Lubrication is achieved as the cluster gear rotates, picking up oil and transferring it to the mainshaft. The oil then runs back by gravity and runs into the bearings in doing so. There is no oil pump as such.

Consider a situation where the car is coasting with the gears in neutral and engine idling. The input shaft (clamped by the clutch to the engine) rotates at engine idle speed and rotates the cluster gear, thus circulating the oil. The output part of the mainshaft will rotate much faster - at road speed.

Consider the car being towed with all four wheels on the road (e.g. behind a motor home). With the engine stopped, none of the gears can turn so no oil can circulate. In the case of F.W.D. cars where the oil is common to gearbox and diff., some splash lubrication may occur, depending on the shape of the housing. Whether enough oil can get to the gears is therefore problematical.

Automatic transmissions are different. Most have two fluid pumps which generate hydraulic pressure to operate the complex of valves, brake bands and clutches used for shifting. The same fluid lubricates the gear sets. The rear pump operates as long as the car is moving, whether the engine is running or not. Sufficient fluid should circulate to lubricate those gear sets which are rotating.

A.J. Will, N. Burnaby, B.C., Canada

Editors Note: A.J. Will neglects to mention the co-axial gears, (gear & pinion), inner drive shafts. The V4, - 1970, 1975, & 1980 Saabs may differ from each other. Saab-Scania advises: Slow speed - 20 MPH for a short distance - 5 miles.

## 1978 ENGINE BLOCK DRAIN PLUG

At the risk of repeating the mystery of the missing engine block drain petcock, Jack Spiegel is correct, it is directly beneath and behind the exhaust manifold. I have seen it on my friend's 1975 GL.

My 1978 EMS, on the other hand, has a plug where the drain petcock used to be. This quirk has been verified by my dealer, Meteor Motors. He recommends not opening the plug and only doing the radiator. There is no way to drain the engine block!

Can anyone tell me how to completely drain the old junk, flush the system, and fill with the required 8.5 quart mix?

Jim Chin, Brooklyn, N.Y.

Ed's reply: Several months ago we printed a letter from a member recommending changing coolant twice a year. We suggest if you have problems, after flushing the radiator system, put new coolant in and change it again a few months later.

## HE MOUNTED CELLULAR BUMPER ON REAR OF 1970-99

I put a cellular bumper on the rear of my 1970 99E. I believe I bored 3 holes. It fit fine. There is some internal bracing for the bumper which was strengthened for the new bumper, but I've never had any trouble. I was discouraged from trying a front bumper because it looked more complicated, so I don't know about that one.

Dr. Robert M. Newhouse, California

## 1973 - 1975 SAAB 99

### ALTERNATOR DIODE REPLACEMENT

Replacement exciter diode sets for the SEV alternator used on '73-'75 model 99's were offered me for some \$45. at the local Saab dealer. Refusing this offer, I found suitable epoxy rectifiers at Radio Shack for 79 cents a pair (might as well splurge and replace the whole set of three). The part number is: #276-1141; they are rated 3 amps and withstand a maximum of 50 volts in the reverse direction. To achieve this \$40. plus saving, you will have to unsolder the old diodes, enlarge the lead holes in the support board with a 1/16" drill, and solder in the new units. Clearance below the board is limited, so trim the protruding diode lead very short after soldering - best to check the clearance and file leads off as necessary.

How do you recognize defective exciter diodes? This question is not addressed in either the official Saab service manual or in Chilton's guide. The function of these diodes is to tap off part of the alternator output current to supply the exciter winding. If one of the 3 diodes "opens", the alternator output remains normal but the "idiot light" becomes at least dimly lit. This is because alternator output current now returns to the exciter windings through the same lamp circuit used by the battery current when starting. Thus the lamp lights in either case, though more dimly with the open diode as the remaining diodes continue to supply part of the exciter winding current. If however, one of these diodes "shorts" alternator output will be very low.

Dr. Robert L. Jungas, Conn.

SA  
CL  
19  
JU  
6.

**DON'T INTERCHANGE TURBO REGULATORS WITH NON-TURBO**

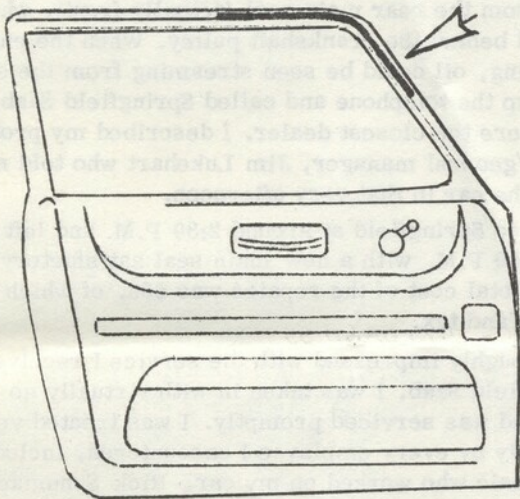
Do not attempt to interchange regulators between Turbo (0209296) and non-Turbo (0209437) alternators. The Turbo alternator has smaller diameter slip rings and the brushes (that are part of the regulator assembly) are considerably longer. Use of the non-Turbo regulator in the Turbo alternator will result in very short brush life.

Correct regulator assembly part numbers:

ALTERNATOR	REGULATOR
0209296 (Turbo) 65 AMP	8558306
0209437 (Non-Turbo) 55 AMP	8559577

**WIND NOISES**

If a door gasket cannot be made to seal tightly enough to eliminate wind noise by adjustment of the door latch and hinges it is possible to increase the pressure of the gasket against the body by shimming the gasket.

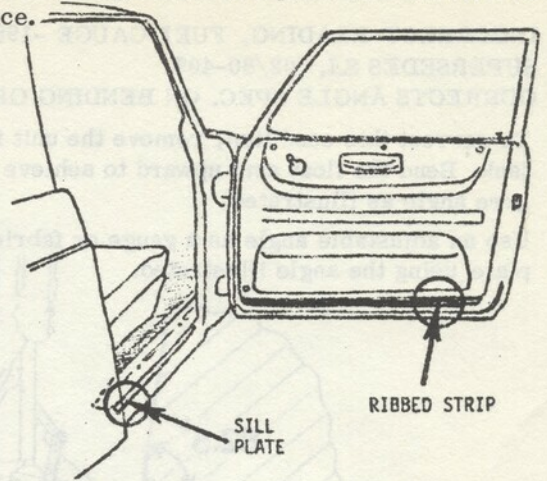


Most wind noises occur at the upper front corner of the door above the window. The shim should be placed as illustrated above and should extend approximately eight inches either side of the corner. Double sided sticky tape may be built up between the door frame and the gasket and increase gasket pressure against the body. Usually a final thickness of 3mm is sufficient. Such gasket shims were introduced in mid-1980 production.

A rear parcel shelf (on 3 & 5 dr. models) that vibrates and creates noise can be quieted by installing rubber buffers on the underside of the outboard ends (that rest in the support rails). These rubber buffers (installed on 1980 cars) are approximately 1/8" thick, and are available under P/N 8267395. They prevent chafing noises and vertical hopping of the shelf by increasing contact pressure with the bumpers on the underside of the rear hatch.

Trying to find a squeak in a 3 dr. car that sounds like it's coming from right front seat or door panel? Inspect the sill plate for contact with the black ribbed strip along the inner bottom of the door. The point of contact can be located by the polished spot it creates. Loosen the screws and reposition the sill plate inward to eliminate the contact and stop the noise. It may be necessary

to peen the rolled edge of the sill plate with a mallet to get clearance.



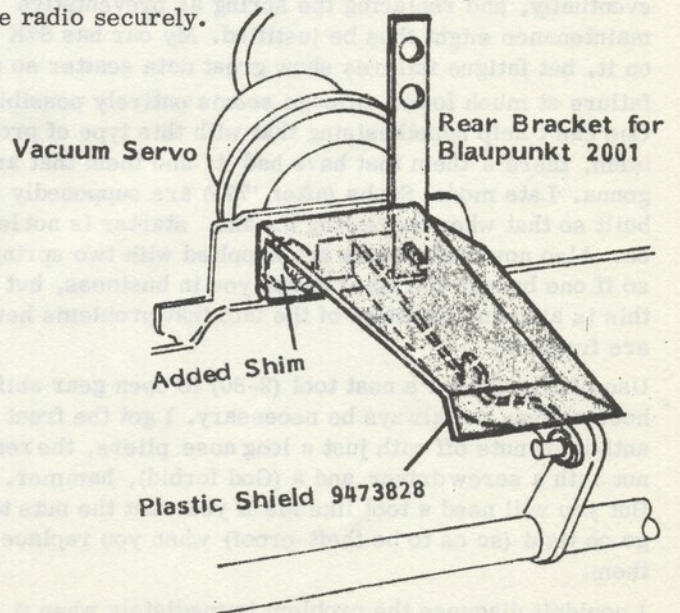
**GM POWER STEERING FLUID LIKE TEXACO 4634**  
In the Saab 900 Owner's Manual we've specified "GM power steering fluid 1050017." That is the GM part number. The specification number is GM 9985010 which also is the number that will be referenced on the cans of most other brand labels. GM 9985010 is the equivalent to Texaco 4634 which is specified in other markets and will be found on Texaco labels here in the U.S.

NOTE: Use of ATF in Saginaw power steering is NOT recommended.

**RADIO INSTALLATION CHANGE - Balupunkt 2001**

On 1980-900's that have a plastic shield above the defroster servo linkage, install the rear radio bracket for the Blaupunkt 2001 cassette radio as follows:

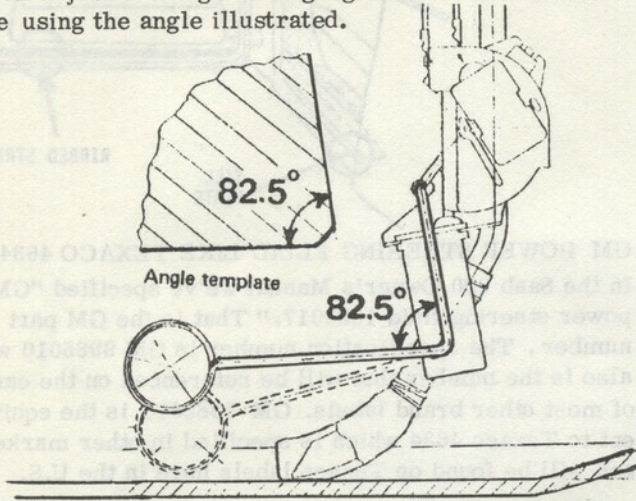
1. Remove the shield.
2. Install the radio rear bracket on the right shield mounting stud and an equal thickness shim on the left stud.
3. Reinstall the shield.
4. Mount the radio as before making sure the spring clips of the mounting bracket are holding the rear of the radio securely.



INCORRECT READING, FUEL GAUGE -1980 99 & 900  
SUPERSEDES S.I. 02/80-407  
CORRECTS ANGLE SPEC. ON BENDING OF FLOAT ARM

To correct this condition, remove the unit from the tank. Bend the float arm upward to achieve an 82.5 degree angle as illustrated.

Use an adjustable angle as a gauge or fabricate a template using the angle illustrated.



**STUCK IGNITION SWITCHES  
AND STARTER BURN-OUT**

I bought a used '73 99 and the problem bit me 4 days later. But I had had trouble with removing the ignition key right from the start, so to speak. I assume therefore that anyone having trouble getting the ignition key out should fix the problem immediately or he may waste a starter (\$168.)

I found, like Bernie Wassertzug, (8-79) a broken hair-spring, worth about a penny (but costing 49). Since any spring will flex a finite number of times before it will break, I believe all Saabs will suffer this type of failure eventually, and replacing the spring as preventative maintenance might thus be justified. My car has 87K on it, but fatigue failures show great data scatter so a failure at much lower mileage seems entirely possible. One can't help hypothesising that with this type of problem, there's them that have had it, and them that are gonna. Late model Saabs (after '77?) are supposedly built so that when the spring breaks, starter is not left on. Also nowadays Saabs are supplied with two springs, so if one breaks the other keeps you in business, but this is also an indication of the fact that problems here are frequent.

Use of Jim Tolson's neat tool (2-80) to open gear shift housing may not always be necessary. I got the front anti-theft nuts off with just a long nose pliers, the rear nut with a screwdriver and a (God forbid), hammer. But you will need a tool like his if you want the nuts to go on tight (so as to be theft-proof) when you replace them.

I couldn't diagnose the problem immediately when it happened. Symptoms are: grinding sounds as you drive, with low pitch not changing with engine speed, and gener-

ator light ON while instrument panel goes OFF. I was misled by the generator light, if you have these problems, act fast to cut motor and disconnect battery. I was able to repair my starter by resoldering the wires to the brushes (heat had melted the solder) and also replacing front bushing, and also pinion gear assembly, so starters can be saved, but it took a long time to make the fix.

K.J. Strack, Penn.

**RECOMMENDED NEW DEALER - SPRINGFIELD  
SAAB (3 1/2 YEARS) SPRINGFIELD, OHIO**

I am writing to tell you, and hopefully other Saab members, about a recent experience I had with a broken car and a small Saab garage in Springfield, Ohio.

Last week, while on a trip through central Ohio, my '76 99GL developed a severe oil leak. At first I suspected that the engine drain plug or the oil filter had become loose, but a quick check proved otherwise. The oil was coming from the rear main seal (actually front), which is located behind the crankshaft pulley. When the engine was running, oil could be seen streaming from the seal. I picked up the telephone and called Springfield Saab, as they were the closest dealer. I described my problem to owner/general manager, Jim Lukehart who told me to bring the car in that very afternoon.

I made it to Springfield at around 2:30 P.M. and left at around 4:00 P.M. with a new main seal satisfactory installed. Total cost of the repairs was \$33. of which \$13. was parts and tax.

I was thoroughly impressed with the service I received at Springfield Saab. I was taken in with virtually no notice, and was serviced promptly. I was treated very courteously by every employee I encountered, including the mechanic who worked on my car., Rick Schumacher.

Saab's are Jim Lukehart's only line of automobiles. Jim's attitude towards Saabs and his customers is not like that which I have experienced at any of the larger co-American dealerships. It appears that Jim Lukehart actually cares about the service he provides to his customers. Springfield Saab is a very small organization where every customer's patronage is important. I would highly recommend Springfield Saab to anyone located in the central Ohio area.

Capt. Edward Anderson Jr., Sawyer Air Force Base, Michigan

*Continued FROM Page 5...*

ed. Late model drive shafts have different outer ends. In summary, a 1975 or newer gearbox will require some pretty precise machine work on the left shaft. 1974 or earlier boxes should be OK.

There are other problems when it comes to engines. The heater assembly is different on the early cars, with bypass hoses that stick forward of the firewall and interfere with the alternator position for the 2 liter. The earlier alternator position may be used (with the old brackets and the old style alternator or a Delco 5.5 series, although that conversion requires some rewiring.) Putting the alternator in the position used in the early cars also causes problems for air-cond.



## CLASSIFIED ADS RATES

Ads offering parts or Saabs for sale or wanted, at prices under \$200., are FREE to members and non-members. 25 word limit, plus name and address.

Ads listing \$201. to \$900. enclose: \$2.00. Ads listing: \$901. to \$2,000. enclose: \$5.00. \$2,001 & up: \$10., per 25 words, no charge for name & address.

We will delete superlatives, abbreviate where possible. Do not count 2 letter words. All ads without a price must enclose: \$10. check.

(Each Newsletter page cost over \$100. to produce and mail).

FOR SALE: 1970 & 1973 Sonetts, excellent cond., new paint & mufflers. Call: Kathy Bicknell, Brent Cars, Berkeley, CA. 94704 (415)548-7170

FOR SALE: 1970 Sonett III, complete damage to rear, will sell whole or parts, engine good shape, \$125. Trans' has freewheel problem; \$100. Passenger door excl. cond.; \$200. Nose in excl. cond.; \$600. Many other parts. Whole car; \$800.  
Hal Leavell, 42 Arcadia Rd., Allendale, N.J. 07401

FOR SALE: 1972 Sonett parts. Complete headlight assy, glass popups, drivers side, damaged, but repairable; \$80. - 1969 96 windshield wiper motor: \$20.  
Days: 465-5211, X234, Ask for Joe Zip: 12110  
Joseph W. Spain, 537 Wvlt. Shaker Rd., Latham, N.Y.

FOR SALE: Hood from 1968 Sonett II V4, good cond: \$450./offer. Other parts also available.  
Karl Riedel, 11200 Mitscher St., Kensington, MD. 20795 - (301)942-3261

FOR SALE: 1970-96, one owner, 52Kmi., new brakes, exhaust. Mechanically good & interior good, body rusted. \$550. Joe Jacob, Washington, CT. 203-868-7789 or Frances Tracy 203-868-2123

FOR SALE: 1964-96 GT 850, 86,000 miles, wood wheel, rally seats, instruments-disc brakes. From Calif., no rust. 5,000 miles on both tri-carb', oil inj., eng. & 4 speed trans. "Grill shade". Never bent or abused, solid, fast: \$1800. ALSO: New 3 speed for ice-racers, with car or separately.  
Lawrence Burgess, Days & Mon./Wed. early eves. (401)861-9664, Providence, Rhode Island

FOR SALE: (2) Saab 95/96/97 A/C. - ARA working unit just removed, complete: \$150. Coolaire unit removed 2 yrs. ago, complete except for balance shaft pulley: \$120. Coolaire V4 Install' instructions included. You pay shipping, UPS. Zip: 97501  
Jack Ashcraft, 2425 Table Rock Rd., Medford, OR.

FOR SALE: Two stroke parts. (2) carb': \$10. ea. Manifold: \$5. ea. Early 850 heads; \$10. ea. (4) air cleaners; \$10. ea. Fenders; \$10. Write your needs.  
Larry Bean, 2873 Grosvenor Dr., Cincinnati, Ohio 45239

FOR SALE: Solex 1-barrel for 96; \$30. New float valve & float; \$12. & \$10. (509)448-9688  
Lee Butters, E. 2006 64th Ave., Spokane, WA. 99203

FOR SALE: 1966 GT 850 engine, less than 5,000 mi. on new crank. (Ran well til trans' exploded.) \$150.  
A.J. Will, 71 Holdom Ave., North Burnaby, B.C., Canada 604-291-8710

FOR SALE: Silver engine (for parts); \$75. Smooth case-96 trans' - in running condition: \$125. Eves: 206-643-0935  
Chuck Royalty, 4605 130th Ave. SE, Bellevue, WA. 98006

FOR SALE: Motorsport 1 bbl. carb' & intake manifold for 1969/later V4 w/vacuum brakes. Works good. \$75.  
Eric Killinger, 4309 Butler Cir., Boulder, Colo. 80303

FOR SALE: 1969-96, 40K on rebuilt engine, clutch & trans'. All mechanics good, body rough, no major rust, glass intact, runs good. \$550. (916)268-1596  
K. Ogren, 16251 Thornberry Way, Grass Valley, CA. 95945

FOR SALE: 1967 stroker 95 wagon, sound body, new tires and shocks. 68,000 miles/with history. Fresh factory crankshaft. PA. inspected: \$800.  
Rick Parr, 1463 Dridge Hill Rd., Lititz, PA. 17543  
Eves: (717)626-1773

FOR SALE: 1967-V4 95 - Good mechanics & body, 47,000 orig. miles. Could use front upholstery, otherwise hard to fault. \$1150. (203) 329-7124  
Carl Stewart, 415 Farms Rd., Greenwich, CT. 06830

FOR SALE: 1957-93, needs restoration, plus spare parts; \$395. - 1974 99, towable; \$495. - V4 engine, ported heads, comp' valve train & lower end 8000 rpm, streetable; \$495. - 1971 95, overhauled engine needs installation; \$795. ALSO: 99 body & parts, 2 dr. & 4 dr. 1971 automatic trans' w/bad ring gear; \$100. Two 96 gear boxes (ribbed) pair \$175. plus shipping.  
Dennis Sweeney, 207 E. Church St. Ligonier, PA. 15658 (412)238-4556

WANTED: Good cylinder head for 1963-850 cc, \$25.  
For 1968 V4, drivers side door lock, \$15. Rear window latch, \$10. (808)524-6260 evenings. Zip: 96822  
Bob Schmitt, 1702 Kewalo, #408, Honolulu, Hawaii

WANTED: Dash section from V4 Delx., speedometer, tack, water temp, & fuel gauges, all in order(working). \$50.-\$75. 1-713-497-8982  
Victor Shibley, Jr. 11755 Southlake Dr. #131, Houston, TX. 77077

WANTED: 1968 Sonett steering wheel; \$40. or? Front hood support bracket; \$10. Set of tools & jack.  
Howard Davies, 1172 Co. Rd. 2256, RD#1, Perrysville, Ohio 44864 (419)368-7411

WANTED: Sonett III hood, must be intact from head lights forward; up to \$1000. for undamaged one.  
Chuck Royalty, 4605 130th Ave. SE, Bellevue, WA. 98006 - Eves: (206)643-0935

WANTED: Any year 95 or 96 in good condition with reasonable price, within 750 mile range of Norfolk, VA.  
Daniel M. Jessup, 7 Amarest Trl. Pk., Elizabeth City, N.C. 27909 - After 4 P.M. (919)335-7077

WANTED: Windshield for 1972 Sonett III in good cond. Offering \$65. plus freight. (503)297-4112 Zip: 97221 Alec Drummond, 3324 SW 44th Ave., Portland, Or.

WANTED: Original jack for Sonett II (509)448-9688 Lee Butters, E. 2006 64th Ave., Spokane, WA. 99203

WANTED: New Pirelli CN36, 165/15 to match spare that came with 1979 Turbo, Offer: \$65. (314)635-6677 Jim Scrivner, 310 Ellis, Jefferson City, MO. 65101

WANTED: V4 Performance parts including cross-ram manifold for Weber DCOE's; high rev. valve train kit; Sonett mags.; & trans' case (cast iron) for 4 speed two cycle (circa 1962-'65) (416)844-3469 Don McEachern, 2907 Inlake Ct., Mississauga, Ont. Canada L5N 2A4

FOR SALE: Parts from 1970-99. Engine: \$150. Hood, trunk, w/cylinders: \$10. Doors: B/O. Radiator & fan: \$125. (?) Hubcaps: \$5. Windows, seats, fan mtr., etc. All parts plus shipping and negotiable. WANTED: Left rear side marker for '70 99E (large type). S.E.Heller, 10S. Owen Dr., Madison, WI. 53705 Days: (608)255-1551 Nites: 238-8136

FOR SALE: 1970-99 parts. Windows (except windshield), doors, trunk lid; \$5. each. Fuel injection parts, head, brake calipers; \$10. each, etc. Some 96 parts. Jesse Strack, Rt. 3, Box 486A, Loveland, Colo. 80537 (303) 667-8697

FOR SALE: New heater water valve & block tap for '74 99; \$50. - '74-99LE instrument cluster; \$40. Auxiliary air regulator, used; \$10. (714) 375-1041 Zip: 93555 Chris Peterson, 137 Rawhide Ln., Ridgecrest, CA.

FOR SALE: Body parts from rolled 1973-99 4 dr. Hood; \$200., drivers door \$75.-others. ALSO: Assorted parts 3 & 4 cyl', 95/96. Rebuilt 99 carb'r/engine & K'ong trans'; \$1,200 /with AC. (516) 242-4859 Peter Sabol, 270 Bayshore Rd., N. Babylon, N.Y. 11703

FOR SALE: Parts for pre-1974-99. Rubber bumpers; \$75. ea. '71 radiator, rotors, calipers, hubs & shafts, alternator, starter, exhaust manifold, injection boxes. Plus others. (312)234-2521 Zip: 60044 Fred Cappeller, 337 W. Sheridan Pl., Lake Bluff, Il.

FOR SALE: (2) new seat belts, new longer length, P/N #8479214; \$60. (317)926-4289 Fred Sollars, 3220 Highwoods Ct., Indpls., Ind. 46222

FOR SALE: 1976-99GL, 4 dr., standard, A/C, AM/FM, Stereo, headrests, manuals, 71K mi., new clutch, brakes, white, very good cond. \$3800. or B/O. Noel Coletti, P.D. Box 349, Pocasset, MA. 02559 (617)563-6308

FOR SALE: 1979-900EMS, metallic blue, sunroof, Bilstiens, Pirellis, AM/FM cass stereo, Cibie lamps, just broken in at 12,000 mi. with 3,000 mile internal Castrol GTX oil changes. Why pay 10 Grand for a new EMS/my 900 in showroom condition, is only \$8,295 or? (919)335-7077 Zip: 27909 Dan Jessup, 7 Amarest Trlr. Pk., Elizabeth City, N.C.

FOR SALE: 1974-99LE, recent red paint, 4 spd., A/C, AM/FM, new clutch & recent trans' swap, \$1900./firm. Ray King, 3853 Atlantic Bl., Vero Beach, FL. 32960 (305)569-0767

FOR SALE: 1975 EMS, 72,000 mi., recent paint/brown mtlc/gold stripe, MSS exhaust, Konis, Uniroyals, no rust, interior excl., runs good, \$3000. Delivery negotiable. (216)658-4446 Zip:44230 Jim Schaffer, 12334 Hollow Ridge Dr., Doylestown, OH.

FOR SALE: 1976-99GL, cream, 2 dr., 4 speed, Rotary A/C, Quartz Headlights & Foglights, Koni shocks, Blaupunkt 4 speaker AM/FM cassette, radar detector, front pillows, good cond.: \$3895. (201)761-7395

FOR SALE: 1972-4 dr. 99. Rebuilt motor & trans', AM/FM Stereo, good tires, body "rough". \$1200. Walter Karr, 5304 Florence, Downers Grove, Il. 60515 (312)852-1097

FOR SALE: 99 Brake piston retracting tool: \$6.00 USA, \$7.00 Canada. Zip: 55014 Jim Lowell, 886 Old Birch St., Lino Lakes, MN.

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#### CORRECTIONS/ DELETIONS/ ADDITIONS

##### CANADA . . .

DELETE: Centaur Imports, Calgary, Alberta  
ADD: Sports Tune, 408 36th Ave. S.E., Calgary, Alba.  
ADD DEALER: Eurocar Service, 647 Westmount Rd., Sydney, Nova Scotia, 902-564-9721, Geoff Tanner  
ADD MECHANIC: Sam Kapil, Central Texaco, Shuter and Jarvis, Toronto

##### ELSEWHERE

ADD MECHANIC: Mikes Imports, 2535 Warrenville, Downers Grove, Il. 60515, (312)852-5888 - Mike Papadopoulos  
ADD: Import Auto Supply & Malki Automotive, San Bernardino, Calif. Stock V4 & 3 Cyl. parts & service  
DELETE: Valley Imports, Phoenix, AZ.  
NEW LOCATION: Overseas Motors, 337 Pleasant St., Belmont, MA. 02178 (617)484-9771 - Mobile Serv. Station-Repairs, Towing, Welding, Diagnostic Serv. Dan Chernoble

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##### LATE ARRIVALS :

FOR SALE: 1964-96- New: engine & exhaust installed at 82,000 (now has 98,000), good mechanics, new; paint, brakes, radials, upholstery. No salt-rust, best offer. Duane Anderson, 515 Gay St., Erwin, TN. 37650 (615)282-5325 days, 743-5553 wknds. & eves.

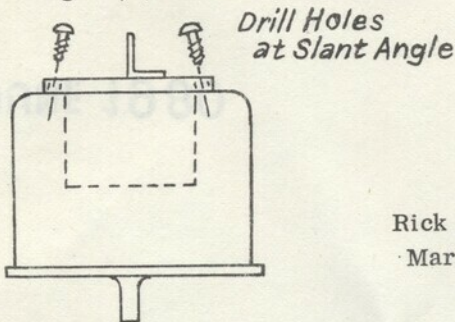
WANTED: 2 bbl. intake manifold for V4. Offer: \$50. ? Frederick Campbell, 590 Queen St. Fredericton, N.B. Canada, E3B 1C1 (506)454-9143

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FOR SALE: 165X15 radial tires (Aramid) year round tread; \$52. ea. plus shipping. ALSO: snow tires, 165X15 steel belted (617)484-9771 Dan Chernoble-Overseas Mtrs., 337 Pleasant St. Belmont, MA. 02178

### TURBO V. E. SWITCH FIX

I also had trouble with the vacuum enrichment switch coming unglued on my '78 Turbo. My solution was to drill two small holes at opposite ends of contact ring and into the main vacuum body. I then secured ring to body with self tapping screws. A liberal coating of silicone glue was used to seal switch.



Rick Finch,  
Marietta, GA.

### 1978 FLASHER CABLE WEARS, ABRADES

I have a '78 Turbo and have one tip concerning the flasher unit which is mounted just above the clutch pedal. The plastic casing may abrade through, shorting the inside circuitry to the chassis, as it vibrates against the chassis (i.e. ground). The fix: tape the flasher unit to the EGR cable which passes nearby. Note: The lights will function properly while in the garage, but will blow the fuse on the road due to vibration. (This is worth checking on any '78 99 because a new flasher is about \$27.)

Bill Dudek, N.Y.

### THROTTLE CABLE FIX - '78 TURBO

Please accept my check for dues renewal. I hope its not too late. The Newsletter has been a thousand times more helpful than the local Saab bum. Now that my warranty is expired (not that it was any help anyway!) they'll never get their hands on my car again! Please keep up the excellent job, as I do all my own work.

The throttle cable on my '78 Turbo was nearly cut through by the sharp edge of that moon-shaped guide it rides in. We filed the edge round and used the inside braided cable from a universal-fit motorcycle cable assembly. Cost; \$4.00 - Just cut it to length and silver solder the end on. It was something I'd never check off-hand and its not really noticeable at first glance. There is 35,000 miles on the car.

J. Siska, Penn.

### 99 FRENCH ALTERNATOR

Background on the French alternators: They differ from normal in that there is an "insulating diode" between the alternator and the rest of the car, except to the regulator, which is connected before the diode. This means that the regulator is set 0.7 volts "high" to account for the voltage drop of the insulating diode. When you find that the alternator has died, replace it with any old American design, but add a 100 amp' diode between the alternator output and the battery. I have done this on my Simca and it worked fine - no problem with regulator com-

patibility. Incidentally, Ramblers of the mid '60's had a Motorola system which worked the exact same way - the only problem with using one of those is the largest one they used was about 40 amp. I can furnish a diagram of my conversion, but anyone who can't figure out what to do from the information above probably will get into trouble if he tries himself. Maybe not, though; let me know if you want to publish a drawing.

### BELGIAN 99s' RUST REPAIR

On body rust: As the owner of a Belgian 99, I get lots of practice fixing rust spots. In my bag of tricks are : screwdriver, wire circular brush for drill, disc sand paper for portable drill, grind stone for portable drill, zinc rich cold galvanizing primer, "4-in-1 epoxy" zinc-chromate primer, Duro rust-proof spray, spray undercoating, Sherwin Williams acrylic enamel, to match, Spray Tool from Crown Chemicals, Hebron, Illinois.

The problem with the Belgian paint is that the bodies were not clean and dry when they went to put the primer on. As a result, the primer is not bonded to the bare metal, and the bad spots are more prevalent on the lower part of the body.

(1) Take old screwdriver to paint blisters and chip paint away until you see bright metal. A blister the size of your pinkie nail will reveal corrosion out to the size of a half-dollar.

(2) Wire brush the loose scale.

(3) Use sander or stone until the pits are all ground away. (This is where you'll be happy, Saab uses heavy gauge sheet.)

(4) Spray with zinc-dust primer.

(5) If the spot is "down-under", now use one coat of the "light weight for cavities" Duro Rustproof Spray, followed by a couple coats of spray undercoating for abrasion resistance. The zinc dust gives cathodic protection to the steel and theoretically will draw out any oxides you didn't sand away. The thin Duro spray seems to bubble and foam its way into any cracks or seams and provides a passive, moisture proof film. The black undercoat keeps everything in place. The "heavy coat" Duro does not seem to have quite the abrasion resistance of the black undercoat, but it does tend to stick better.

(6) For visible areas, follow the zinc dust with zinc chromate primer to seal the surface, and follow with paint. The "spray tool" is a cheap little sprayer using a can of propellant. It works pretty well for small areas, and the acrylic enamel gives a beautifully smooth and glossy finish. Sherwin Williams has color charts for matching Saabs, and most places will give you a little extra of the tint so you can match the color the factory really used.

Whenever I do any work on the car, I take out my little spray can and give a shot to anything I think could use it, such as:

..Any place that has a split rubber plug, gets a shot.  
..If I have to work inside a door, such as for a speaker repair or to fiddle with a lock, the seams where →

Please use knife/letter opener



JUNE 1980

# FIRST CLASS

RETURN POSTAGE GUARANTEED

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Chicago, Ill. 60660



FIRST-CLASS MAIL  
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Page 12

the panels join get a shot.

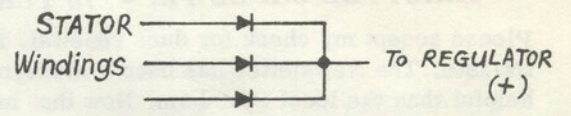
- .. Front suspension arms loose their coatings in about 6 months.
- .. Behind the headlights - the metal shields are made of galvanized, but they won't last forever.
- .. Brake lines on the firewall or rear axel.
- .. Front fender seams and support brackets. These places also get the hose in the spring.

Steve Goldberger, N. Canton, Ohio

## 1974 EMS-MARCHAL ALTERNATOR DIODE FIX

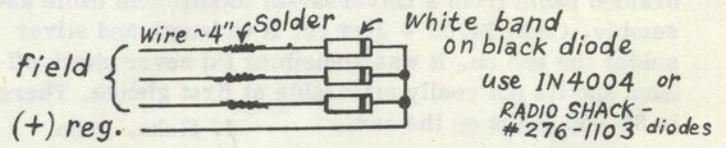
My car had always "evaporated" water from one cell in the battery. However, last winter when the car would get fully warmed-up, the alternator light would come on and stay on. A quick check with a volt meter in the cigarette lighter socket (the only good use for it) revealed 15 V +, not low voltage ! After tearing down the Marchal alternator, I found that one of the exciter diodes would open when hot, fooling the regulator into thinking the output was too low, and the regulator would kick up the field voltage and hence alternator output. The light would come on because the battery was finally old ( and low) enough to cause a current flow in reverse through the idiot light.

My fix for the exciter diodes. Referring to the Saab manual, Page 321-3



I made up an "exciter diode" with 3 IN4004 diodes that I had around, (equivalent to Radio Shack #276-1103, 2/59¢. This fix has worked for several months now with no problems whatsoever.

In building up a diode unit, the mechanical assembly is like:



Use spaghetti tube and heat shrink to insulate all leads from each other and from ground. This whole mess can be compressed to 3/8 diameter and fit in original holder clip in the alternator.

Rick Zordan, Indianapolis, Ind.

