

SAAB Clubs of North America Publisher: Jeff Delahorne, 5805 Oneida Street, Duluth, MN 55804 (218) 525-3253
Consultants: Dick Grossman, Jack Ashcraft, Carolanne Curtis, Andy Buc, Ted Tucker

MEMBERSHIP/SUBSCRIPTION

Newsletter #98, our 81st multipaged monthly. Dues for membership/subscription are \$10 for the first year, including two back copies, 12+ tech sheets and emblem. Renewal dues: \$8.00. Renewal notification will be 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 and tech sheets is available for \$6.00 postpaid. Or, 40¢ one issue.

Always specify: 96, 97, or 99/900 for appropriate tech' sheets.

CLUB NEWS

MILWAUKEE SAAB CLUB--Our Sept. 28 meeting was attended by a dozen members. We traded tech' tips, learned all about the insides of various oil filters from a member who cut six of them apart (buy Saab or NAPA) and made final plans for our upcoming rally which will take the place of an October meeting. (The rally will be over by the time the Newsletter reaches you. ed.) Our next regular meeting is Nov. 23, 7:30 pm at Shakey's, Hwy 100 at Silver Spring Drive. For further details, directions or other information call Jim Hart at 352-0627.

ROCKY MOUNTAIN SAAB CLUB--will next meet on Thursday, Nov. 19, at 8 pm at Zang's Brewing Co., 23rd and I-25 in Denver. Bruce Harbison, parts manager at Boulder Valley VW/Saab, will share his many years of experience dealing with Saab parts. Zang's is just across the Interstate to the northeast of Mile-Hi Stadium. For more info, call Rick Tibbs at 978-1564. The club also has a number of extra copies of the national Newsletter from '76 through '81 which will be available to local members who are missing an issue or two. Send along a note detailing the issues you need to RMSC, 1217 Quebec St., Denver, CO 80220.

SOUTHERN CALIFORNIA SONETT CLUB--will have its annual Grand Tour to Harrah's Automobile Collection in Reno, Nevada on Oct. 23. Departure will be from Bob's Big Boy Restaurant at Roxford Rd. exit at I-5 (San Fernando) at 7:30 am. Make own accommodations at Holiday Inn, North Reno. For more info, contact Jay Arruda, SSCSC Activities Chairman, at 714-371-6028.

MINNESOTA SAAB CLUB--held a fix-in at Gary Zaidenweber's house on Oct. 3 with one 99 water pump, a 99 trans. swap, and a 99 auto. trans. seal repair undertaken. In the middle of these repairs, with four cars apart, and two engines on the ground, it started raining. Work continued under tarps and umbrellas, but final assembly was postponed until the 4th. The next meeting will be Monday, Oct. 26 8 pm, at the Shakey's at Snelling and Larpentuer.

CENTRAL ILLIANA SAAB CLUB--will hold its next meeting Sunday Oct. 25, 2 pm at Ray Heimberger's house in Tolono, IL. Getting ready for winter NOW will be the main topic. The November meeting will be on the 22nd, 2 pm at Randy Riggs house, Savoy, IL. Directions will be in the local newsletter. Films from Saab-Scania will be shown, rated "R" for "racing." For more information contact Margrit Adler, 218-356-9244. Any Saab Club members travelling through IL or IN and needing Saab help, should contact Margrit.

SAAB CLUB NATIONAL CAPITAL AREA--will hold their regular meeting the first Wednesday of each month, at the Silver Spring Public Library on Colesville Rd. For more information, contact Bruce Williams, 326 Lincoln Ave, Takoma Park, MD.

MINNESOTA SONETT CLUB V-4 GEARBOX CLINIC--
Jeff Delahorne brought his V-4 gearbox jig down to So. St. Paul where the MSC met on Sept. 27 at Jeff Schille's house. We tore down two dead V-4 trannies, both having bad ring and pinions, which means they are just spare parts since a new ring and pinion is \$500 or something like that. One trans. had only half a thread of the rear pinion shaft nut holding it on, and the loosening of this nut is likely what caused the failure. There is a newer style nut and lock ring for the pinion shaft available from Saab which will help keep the pinion shaft together. It is p/n 8710634 for the locking plate, and 8710626 for the nut. The pinion nut uses a left-hand thread in case you've had trouble getting it off. When tightening the pinion nut during reassembly, use about 100-125 ft. lbs of torque.

Other info that came out of the clinic: the Sonett has a higher final drive ratio than the 96, but you can use a 96 transmission in a Sonett, if you change the top cover and side bracket (if a Sonett III). Always change the clutch shaft seal when the engine is out unless you know you have done it recently. This will prevent oiling up the clutch from transmission oil seepage through the seal. A one inch section of one inch ID steel pipe will lock the freewheel slider into the cup on the input shaft and prevent the freewheel from coming out.

The next Minnesota Sonett Club meeting will be at the Forest Lake Minnesota ice race on January 30 and 31. There is usually an Ice-khana on Sat. morning for all comers and several MSC members will be racing Sat. afternoon and Sunday. For more information, contact Warren White, PO Box 547, St. Croix Falls, WI 54024, 715-483-3010.

MONTREAL SAAB CLUB--will have their next meeting at Lacordaire Motors in Montreal. There will be films, slides, tech' information on the '82s and a general clinic. For more info, call E. Peter McLoughlin, 514-451-5165.

DICK GROSSMAN RESPONDS TO SEPT. LETTER

Bob Mitchell's letter extolling the virtues of paying for genuine Saab parts should not have been printed without a rebuttal, or at least a caveat. Since this club's first year of publication it was devoted to the premise that the Saab is a very rare car in America. Saab dealers and Saab mechanics are also scarce, and so is their supply of parts. Some states have no Saab dealers. When a Saab or any other foreign car breaks down or fails to function--it always occurs 50 or 100 miles from the nearest Saab mechanic.

Most of the tech' tips in our newsletter are written by Saab owners and "shade tree" mechanics. What is a foreign car owner to do when he walks into an Auto Parts Supply Store and the clerk says: "We ain't got that"? If the Saab driver is resourceful he or she will keep in their car the club's list of alternate brand names and numbers. Then, the owner can get home without being towed or delayed further.

The Saab Club Newsletter was never a fan club nor a puff for Saab-Scania or its dealers and their parts departments. I have repeatedly editorialized that Saab dealers are not big profit makers. But, sometimes I, and now Jeff, neglect to delete certain derogatory remarks from some member's written tech' tip and this is where Mr. Mitchell finds fault.

Now, to get back to the correct air filter and oil filter. I printed our Oil filter/alternative brand listing (our third tech' sheet), after our best Illinois Saab dealer ran out of his supply of oil filters because Saab-Scania's warehouse was out of supply for several months. Car makers do not make filters, they order them from one of a half dozen filter manufacturers. The filters are NOT special, only the Saab name is lithographed on the can and box. One of Saab-Scania's parts buyers sits at his desk and orders 100,000 filters of a preferred size, painted and lithographed with Saab's name on it. About six manufacturers make up filters for about 50 brand names in about a dozen sizes. Thousands of manufacturers make a variety of sizes and shapes of parts for the 100 auto-assembly factories. Very few of the Saab parts are totally exclusive, but rather are parts of an obscure model made in Germany, England, France, or the U.S.A.

I hope that Jeff D. does not let any member, no matter how sincere, lead him from keeping the newsletter a technical-informational publication, helping to solve problems of the driver stuck in the hinterlands 100 miles from the nearest authorized dealer.

Richard M. Grossman

MORE COMMENTS ON "ALTERNATE PARTS" LETTER

I would like to comment upon the letter written by Bob Mitchell which appeared in the Sept. Newsletter (Sept. p. 2). After seeing so many "will fit" articles which explain how less expensive parts will work with modifications, it is refreshing to see someone else who believes that modifying in order to use cheaper, more common parts, does not (or seldom at least) really save money. Sure, I buy parts from other than Saab dealer sources, but only when the part is a direct replacement and I do not have to modify original equipment to "make the part fit."

I have seen too many cases of autos with modified original components which only led to more serious or time consuming problems.

M. Tarr, Catlin, IL

ONE MORE "REPLACEMENT PARTS" OPINION

In reply to Bob Mitchell's letter on "replacement parts" in the Sept. '81 Newsletter; original equipment "quality" is one of the oldest marketing scare tactics in the world. The fact of the matter is that "substitute" or "replacement" parts are often of higher quality than the original equipment parts they replace. The reason is simple: most auto manufacturers, especially smaller ones like Saab, simply cannot afford to produce all of the thousands of parts that go into a modern auto, so they buy them from volume producers. These same parts are often available on the aftermarket as "replacement" parts. In addition, the aftermarket parts are often updated or redesigned to take advantage of the latest technology, something that the auto makers simply cannot afford to do since their design staffs are busy with new models.

Aftermarket parts are often substantially cheaper than original equipment, and that reflects the realities of the market. Since the auto manufacturers have a "locked in" market for spare parts, they price them to return a handsome profit, usually far more as a percentage than the original car. And, of course, their costs are adversely affected by relatively low volume and an inefficient distribution channel, so the price does not necessarily mean a higher level of quality.

With regard to oil filters, smaller does not automatically mean "less filtration area." What counts is the effectiveness of the filter material, the amount of material loaded into the filter, and the internal design of the filter. The "genuine article" is probably a standard size produced by a volume filter manufacturer (Fram?), with the Saab name and number printed on the outside. I suspect that the Fram is just as good.

So I will continue to use aftermarket parts, where they are of good quality, fit properly, and are a good value. My last car went 240,000 miles on aftermarket parts, and my Saab will get the same treatment.

John Navas II, San Mateo, CA

EDITOR'S VIEW OF THE "REPLACEMENT" DEBATE

Despite the apparent controversy here, I do not think there is all that much disagreement here. Bob Mitchell said he would use alternate parts that were a direct replacement. What he objected to was parts that need some modification to fit.

Dick Grossman makes a good point in that if you know of an alternate replacement that will work, even with some modification, it might keep you from being stuck some where in "Saab wasteland." This is part of the reason for some of the articles I print that tell of an alternate part that will fit with some minor modification or other. The other major reason is that some parts for the older models are just no longer available. The Sonett high beam buckets are one example. You cannot get them from Saab and the high beams out of the early Capri is a direct fit.

Another point to consider is that some club members have more time than they do money. If you can spend an hour to save \$14 it's worth doing a little tinkering. Clearly some of the "will fit" articles are not for everybody and a little discretion on the part of the reader is necessary. A fix that makes sense for someone on a tight budget with an old tired 96

MORE FUEL FOR THE SYTHETIC OIL CONTROVERSY THIS TIME SOME SOLID RESULTS...PERHAPS

by Thomas B. Chin

After reading the pros and cons of sythetic oils, my curiosity got the best of me and I decided to give Amsoil sythetic 10W40 a try. If their claims of better lubrication under adverse (very cold and very hot) conditions, making for longer engine life, proved true, it would be worthwhile to me. As far as the "bother" of changing oil every 3000 miles, that did not enter into my consideration. To make the test fair, I began using Amsoil at 71,000 miles, but the first oil test sampling was made of the second Amsoil change. The third test was of a petroleum oil, Castrol 10W50. Again, this test was made on the second Castrol change, to prevent any interaction between the two types of oils.

The car was using a ½ quart of oil in 3000 miles, the change period the car has had since new. Oil use comparison was not conclusive, as I changed the front and rear oil seals in the engine. Oil consumption has been minimal.

A sample of each oil was tested at a lab run by NAPA (Gard Corp, PO Box 1892, Gastonia, NC 28052) and put through "atomic absorption spectrophotometric wear metal analysis." The results are below.

METAL	CASTROL	AMSOIL
Silver	1	0
Aluminum	1	10
Calcium	0	0
Chromium	1	12
Copper	6	22
Iron	5	59
Magnesium	30	75
Lead	977	891
Silicon	6	24
Tin	1	0
Zinc	122	2

ADDITIONAL OIL QUALITY TEST RESULTS

Solids	.01%	4.0%
Fuel	.40%	1.20%
Antifreeze	None	None
Viscosity	SAE 30	SAE 30
Water	None	None

The sythetic oil did allow for easier starts in winter. But what alarmed me the most was its high level of insoluble resins (solids). Advertising for Amsoil claims a high ability to tolerate high temperatures, yet here seemed evidence to the contrary.

It does not seem that the claims made by some that sythetic oil after 60,000 miles was as good as new could be duplicated in my car, which is well

might not be the best solution for a newer model Saab driven by a person with limited mechanical knowledge.

I try to weed out alternate parts fixes that I regard as unsound, but I will not treat the club members as a group of mechanical know-nothings who must only be told there is "one way" to make repairs. I do not have a fleet of Saabs (at least not yet) on which to test every possible alternate repair so in many cases you will have to decide what fits your situation and what does not. If you have a disagreement, by all means let me know.

Jeff Delahorne, editor

maintained and in good mechanical condition. I think the results of these tests speak for themselves, showing that the claims made for sythetics may not be as great as they sound.

Thomas B. Chin, Ortonville, MN

Ed. note: I have not printed every comment I have received about sythetic oil vs. petroleum oil in the past because it seemed to me the debate would consume the newsletter. But I am willing to publish attempts at hard data like this one, which might help inform the membership. Several members have sent me long articles from various journals on the subject, but they were too long to print, and there is the hassle with permission to use copyrighted materials. I do appreciate these members' kindness in helping to keep me informed. For the record, I will admit that I use Castrol GTX, but I have no stake in that company or any other oil refiner.

Jeff Delahorne, editor

ANDY BUC CHECKS IN FROM SEATTLE RE: TIRES

I've heard many good things about Metzeler Per-fects, but they may be hard to find now. By the same token, they'll be even harder to find if you need a replacement for a damaged one in 1983 or whenever.

Sever years ago *Car* magazine ran an article stating that tire tread compounds are formulated for the climate and roads of the country of manufacture; and tire manufacturers often have plants in several countries, never mind where their corporate headquarters are. So a German Michelin XZX, nominally identical to an Italian XZX, really isn't.

I am using Avon TS12's, which are inexpensive by mail order--see their ads in *Road & Track*. They are made in England, and if there is anything to *Car's* theory, they should take as well to the Northwest rain as to the English rain. I am pleased with them, but my driving style is not a severe test of a tire. Californians can stop laughing and start pondering which tire is best during an earthquake!

There is a tradeoff between adhesion (soft tread compound) and long wear (harder compound). Pay your money and take your choice. Does anyone have experience with Pirelli P-3's? L.J.K. Setright has written favorable of them in *Car*, but I would like to hear an independent opinion.

For V-4 owner, the lug wrench that comes with the car will fit the crankcase drain plug. I had thought everyone knew this, but it was news to a friend who watched me use it.

Andy Buc, Seattle, WA

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AUTOCROSSING A SONETT IN CHARLOTTE, N.C.

Ed. Note: I wrote Mike Tucker about autocrossing a Sonett here in Minnesota, and this is his response. I thought it might benefit not only those who autocross, but also those interested in squeezing a little more performance from their Sonett for the street.

Autocrossing in Minnesota sounds quite a bit different than here in Charlotte. I am a member of the autocross committee and try to set up tight "Sonett" courses. Most of the courses we run are very fast. We rent the Charlotte Motor Speedway three times a year and speeds approach 80+ mph (wide open in third most of the time, some in fourth). It took me a while to get used to the speeds we run, though some of our events are more typical, located in parking lots. Since the club is part of the SCCA, we get the rules too. Sonetts run in D-Stock or E-Prepared. I am classified in E-prepared. Most Prepared cars are equipped with race tires and are gutted. Some are old production race cars since all production race car mod's are allowed in prepared. Needless to say, prepared cars are fast.

So far I have probably a dozen second places and two first. I would recommend that anyone interested in autocrossing get a copy of the rule book first and build their car to the rules. Sonetts in other regions consistently win D-stock, but I have not heard of anyone running in E-prepared. Here is a chart of modifications tried and results.

<u>TIRES</u>	<u>RESULTS</u>
Michelin X, ZX (165x15)	lousy performance
Pirelli CN36 (175.15)	excellent, expensive
Continental 771 (165x15)	good
Kleber (165x15)	good, cheap

I would recommend buying the best tires available in 75/70x15 or 165x15. Do not be cheap, this is the most important modification.

<u>DISTRIBUTOR</u>	<u>RESULTS</u>
1967-68 early V-4 spec's--worth searching for--set timing on V-4 to 12-16 BTDC, use avgas or octane boost.	

<u>HEADS</u>	<u>RESULTS</u>
MSS Porting	good
Heavy duty valve springs	a must!
Ported exhaust	best modification
Milling head	not worth it

<u>BRAKES</u>	<u>RESULTS</u>
Ferodo	Better than stock \$15
Stock	not enough brakes

<u>SPRINGS</u>	<u>RESULTS</u>
9 $\frac{5}{8}$ V-4 springs	excessive wheel lift and erratic handling
stock	sacked--too soft
MSS springs	haven't got them yet

<u>CAMSHAFT</u>	<u>RESULTS</u>
Full Race	too much, no idle
3/4 Race	not in yet
Stock	good torque, best for most courses.

<u>SHOCKS</u>	<u>RESULTS</u>	<u>+, -</u>
Bilstein	best	lousy ride
Koni	good	good ride
Gabriel	good	good ride
Stock	lousy	lousy ride

Buy Bilsteins if you are serious about autocrossing. Even on full competition, Koni's are not stiff enough. Bilstein's from GMP, Charlotte, NC \$200

<u>SWAY BARS</u>	<u>RESULTS</u>	<u>+, -</u>
Front	fair	cheap
Rear	fair	?

I'm not sure if the rear bar is worth using; it does not reduce body roll much. Rear bar from Addco, \$88, adv. in R&T, C&D.

<u>CARBS</u>	<u>RESULTS</u>
Weber 28-36DCD	Reliable, fast, but a hassle to install, \$300
MSS 43mm	Fast, inexpensive, may be not as reliable as Weber (good cheater carb, looks stock) \$150

<u>TRANSMISSION</u>	<u>RESULTS</u>
Block freewheel hub, use moly with genuine 80EP (not 80-90) I use stock ring gear and find it good gearing on fast courses, too high on parking lot courses.	

<u>CLUTCH</u>	<u>RESULTS</u>
MSS clutch, best bargain around	

<u>EXHAUST</u>	<u>RESULTS</u>
MSS--what else is there?	

<u>ALIGNMENT</u>	<u>RESULTS</u>
Very important to get camber 1-1 $\frac{1}{2}$ ° negative--I have not figured out caster yet--use stock settings	

<u>TIRE PRESSURES</u>	<u>RESULTS</u>
Front at 6-8 psi higher than rear with matched tires. Lower rear to increase oversteer--I run 40-36 dry, 34-30 wet.	

MISC.--Usually if I find myself hitting cones and understeering I am driving too hard. Easing up often makes me faster (shouldn't be this way of course). Learn the course so you remember it when you close your eyes. Concentrate on going smoother and faster instead of finding your way around. The main point is don't crash! Sonetts are too rare. MGB's and Z's are a dime a dozen.

- Approximate Order of Recommended Modifications:
1. Engine--Check compression and rebuild if low.
 2. Alignment--even lousy tires can work better.
 3. Tires--your contact with mother nature--buy the best you can get.
 4. Shocks--Bilsteing or Koni
 5. Sway Bars-- Addco for rear, 96 for front.
 6. Springs--MSS
 7. Brakes--Ferodo
 8. Carb--Weber or MSS
 9. Distributor--Early model
 10. Heads--MSS
 11. Cam--at your own risk, MSS or Saab
 12. Pistons--If you go higher compression, better count on using av-gas. Saab or MSS.
 13. Frame Reinforcement--Good idea, Sonetts flex a lot.

Build to the rule book and don't end up against race cars unless you have lots of \$ and time.

Mike Tucker, Matthews, NC

RESPONSES TO ASHCRAFT'S "CAVEAT EMPTOR"

As a long time reader of the Saab Newsletter, the "Caveat Emptor" article by Jack Ashcraft (Sept. pp. 4-9) proved especially interesting to me since I have owned over a dozen Saabs and have worked on a great many more V-4s.

First of all, I agree with the assumptions at the beginning of the article. Only in Western Massachusetts the mileage categories would each be about 40,000 miles higher than Jack's, because people put a lot of miles on V-4s in this area and because they are still in very good demand, it is a "real find" to locate one with less than 80,000 miles.

Regarding the occurrences at medium mileage (40,000-80,000), I find sharp disagreement with Jack based on my extensive experience and surveys. First of all, V-4s here do not show a pattern of transmission overhaul after only 60,000 miles, unless they have been abused. With normal or even slightly hard use most last around 100,000 miles and some go up to 170,000. A properly maintained one driven without using freewheel will last 120,000. Second gear will be the first problem unless the shaft nuts come loose. This could happen earlier. But over 50% of V-4s here last more than 60,000. Of course if the clutch slave seals go then an uninformed driver could ruin the trans. by trying to grind it into gear.

Secondly and more startling was Jack's comments about V-4 water pumps. If one goes by the 7mm play in the fan belt, the water pump should not cause any problems until around 100,000 miles. Never have I run across V-4s where it was necessary to replace the pump every 24,000. I had always regarded it as a good pump and an inexpensive part once replacement became necessary.

I agree with Jack about the exhaust systems and clutch hydraulics. I disagree about the shocks. They should last to around 100,000 miles. The VDO clock usually "keeps on ticking." The fan bearing often goes around 100,000 as mentioned, but the alternator rarely goes before then if the fan belt has the proper tension. Starters have bushing problems over 100,000, but the speedo has rarely caused any problems in my experience with only one case of seizure. Many times the cable will break independently. Rear motor mounts should always be checked when the power train is out, especially on pre-1970 cars that have been aging.

Some failures that Jack did not mention are the rear hatch lock on 95 wagons, windshield washer motors, wiper shafts, and heater valve seizure.

In sum, I find the biggest differences in experience in the areas of transmission and water pumps. But of course, as Jack Ashcraft points out, Saabs, like all other mechanical devices, are subject to wear at different rates according to maintenance, driving habits, driving conditions, and original consistency of construction. Therefore it is necessary to carefully check over a V-4 before purchase. Once you get one, maintain it religiously. One 1969 95 V-4 in my area lasted until 350,000 miles until it had to be retired, and that was without the lower engine ever being rebuilt. With my '71 95 now at 154,000 miles, the future looks good.

Roger S. Harris, Ashfield, MA

MEMBER WANTS TO DO V-4 "USED CAR CLASSIC"

It is my intention to provide *Road & Track* with an in-depth report on owners' responses to the pro's and cons of owning V-4 powered 95 and 96 models. It is my hope that I can put together a detailed article and submit it to them in the hopes of possibly recognizing the 9//96 V-4 as a "Used Car Class," or if not, at least have an informative essay on what owners say about this car.

I would like owners of V-4 powered 95s and 96s to write me about their experiences, both good and bad and to list things they like and dislike about their cars, in numerical order, 1 through 5.

Please state model, year, carburetion, and give specifics like time owned, mileage, how the car is driven, and also if you would buy another, and why. Even if R&T doesn't print it, our newsletter will have an interesting report.

Dan Jessup
Rt. 4, Box 404A
Elizabeth City, NC 27909



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SAAB SERVICE TIPS

AUGUST SERVICE TIPS FROM SAAB-SCANIA

BATTERY DISCHARGE--If a battery is discharged and there is no apparent reason (i.e., charging system, short, or accessory left on) the fault may be a combination of short trip/slow speed driving along with the combined use of electrical consumers such as headlights, air conditioning, windshield wipers, radio, etc. during period of high ambient temperature. A completely discharged maintenance-free type battery should be slow charged at no more than six amps for at least 48 hours to restore it to a fully charged condition. If a charging system problem is suspected replace the discharged battery with one that is fully charged BEFORE testing the system.

BAD GROUNDS--Bad grounds (i.e. loose, broken, or corroded) can give symptoms of charging system failure. Also check the battery itself. Low electrolyte, corroded or broken battery terminals or other internal battery problems may prevent the charging system from performing properly.

H-ENGINE CYLINDER HEAD BOLTS--the new tightening procedure was published in the February 1981 Newsletter, p. 7. When retorquing and performing Stage II, i.e., turning the bolts an additional 90°, be careful of the bolt that turns too easily as it could be stretching and may break. When a particular bolt feels this way, do not take a chance--replace it.

LIFTING A 900--900 models have more weight forward and rearward of the lifting points than the earlier 99s. When the car is supported on a hoist that utilizes the lifting points between the wheels, and a heavy component (i.e., rear axle assembly or engine) is to be removed, place a support under the opposite end of the car to prevent the possibility of its tipping off of the lift.

TURBO REV. LIMITER--The fuel pump relay on Turbo models contains the rev. limiter. When the specified maximum RPM is reached the limiter shuts off the fuel pump momentarily until the engine speed drops below the cut out RPM. A faulty relay can cause the pump to shut off at a lower limit (even as low as idle speed). Another problem that sometimes arises due to a faulty relay is an intermittent cut out when driving at specific RPM's. The easiest way to check the relay is by temporary substitution of a relay from a car that does not have a problem.

FUEL PUMP CUT OUT--A fuel pump cut out problem on an '81 900 with the new float-type fuel level transmitter may be due to bad connections at the spade terminals atop the transmitter where the pump harness plugs attach. Lift the rubber transmitter access cover in the trunk floor and check that these connections are tight, including the fuel pump ground lead at the transmitter.

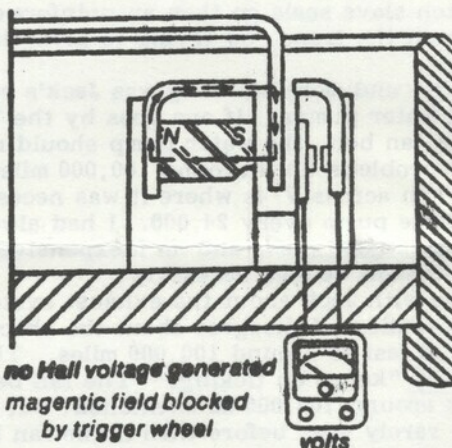
HAYNE'S MANUALS--still available for V-4's. The price is \$10.50 which includes shipping. We are temporarily out of 99 manuals and will announce when they are in stock again.

"HALL EFFECT" IGNITION FOR 1982 900s

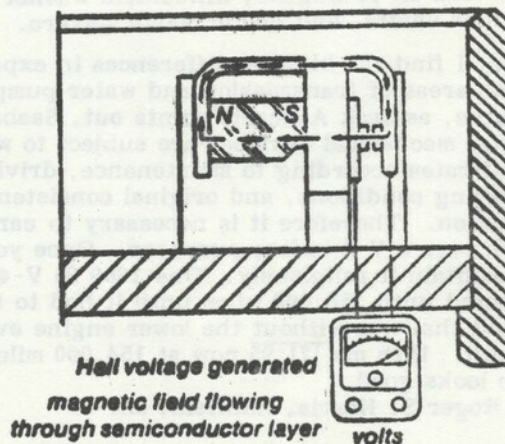
1982 Saabs are equipped with an advanced form of electronically controlled ignition know as "Hall effect." When compared with the induction coil type used on 1978 through 1981 models, the Hall system is capable of producing approximately 20% higher plug voltages and long spark duration.

The heart of the new system is a semiconductor layer capable of generating a voltage of varying strength when exposed to a constant current input and variable magnetic field. The signal produced by this unit triggers a solid state control module which in turn controls primary current.

Magnetic field strength is regulated by a trigger wheel driven by the distributor shaft. The trigger wheel rotates through an air gap between a permanent magnet and the semiconductor layer. When the solid or shutter portion of the trigger wheel enters the air gap, the semiconductor is shielded from the magnetic field and a relatively low signal voltage is produced. The control module then completes the coil primary circuit (equivalent to the points closed portion of the dwell cycle on a breaker point distributor).



When the shutter portion of the trigger wheel leaves the air gap, the semiconductor layer is exposed to a strong magnetic field and a strong signal voltage is produced. The control module breaks the coil primary circuit and triggers a spark (points open).

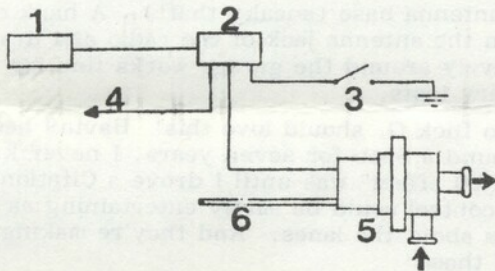


NEW DECELERATION FUEL SHUT OFF, '82 5 SPEED

Saab-Scania Service Info--1982 model Saabs with manual transmissions are equipped with a deceleration fuel shut off device instead of the familiar throttle linkage dashpot.

The deceleration fuel shut off system is essentially an air by-pass arrangement that minimizes air flow in the air flow sensor during high RPM deceleration thereby lowering the fuel distributor plunger and stopping fuel flow to the engine.

Control of this system is accomplished through an engine speed sensing relay, a throttle switch and a solenoid valve. Whenever the throttle is closed the throttle switch activates the speed (RPM) sensing relay. If engine RPM is above 1575 ± 75 RPM (*) the solenoid valve will open and remain open until the engine RPM drops below 1375 ± 75 RPM (*) or the throttle is re-opened. The relay will then deactivate and the solenoid will close restoring normal CIS operation. When the solenoid is activated, the pulse relation of the Lambda system switches to a fixed 60/40 ratio. The deceleration fuel shut off relay is also connected to the acceleration enrichment time relay in such a way that the solenoid does not function until coolant temperature reaches 113°F (after a cold start) or until 100 seconds of engine operation after a warm restart (engine switched off 30 minutes). The calibration of this system is fixed--no adjustments are necessary.



Schematic

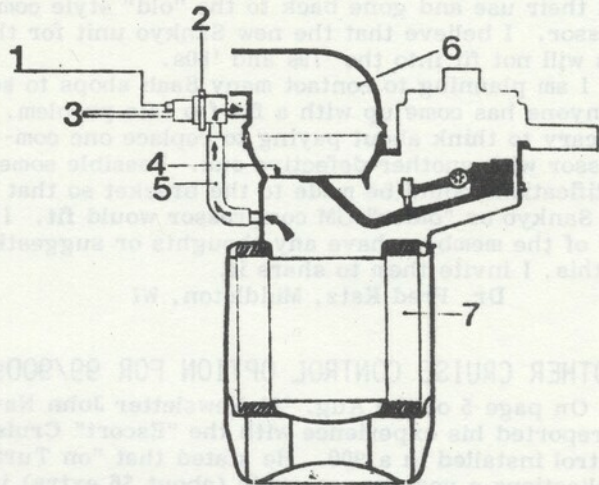
1. Accel. enrichment time relay
2. Decel system relay
3. Throttle switch
4. To Lambda Control Unit
5. Solenoid Valve
6. Hose from inlet manifold

"HALL EFFECT" IGNITION, continued

In order to prevent damage to the control module, the following points must be observed:

1. Rotor resistance should be 2K Ohm, not 5K Ohm used on previous cars.
2. Do not connect a radio suppression capacitor to the negative coil terminal.
3. Do not check for spark by arcing the coil wire to ground, there must be a 2K Ohm resistor in the circuit.
4. When cranking the engine for a compression test, disconnect the control module plug or ground the secondary coil output. Do not allow the ignition to arc to ground.
5. An antitheft system which grounds the negative side of the coil to disable the ignition will permanently damage the control module.

(*)NOTE: Calibration applies to relays marked with a yellow spot. Early M82 manual transmission vehicles will be delivered with a relay of 1450/1250 RPM calibration. On such vehicles equipped with A/C the idle speed should be set to 1000 ± 50 RPM at PDI. At the 1000-mile break-in service the idle should be re-adjusted to 875 ± 50 RPM.



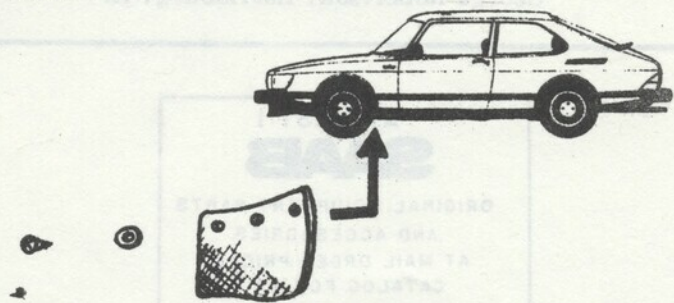
Cross section

1. Wire from throttle switch
2. Solenoid valve
3. Vacuum hose from inlet manifold
4. Air flow sensor plate
5. By-pass hose
6. Rubber bellows
7. Air filter

FRONT MUDFLAPS FOR EARLY 1981 MODEL 900s

Saab-Scania Service Info--Mudflaps behind the driving wheels were discontinued at the start of M81 production and reintroduced as of VIN serial No. -B1014506.

Effective immediately, Saab-Scania of American, Inc. will reimburse dealers for fitting of O.E. front mudflaps on an early M81 model at the owner's request. The fenderwells are predrilled. Parts required: Left Mudflap: 8261976 (flat) or 82-88151 (curved)*; right mudflap: 8261984 (flat) or 8288169 (curved*); flat washer (6): 7916497; and screws (6): 7922982. (*flat style is pre-M81 design but is compatible with M81 body).



Thanks to Mr. Daniel L. David, Manager Technical Services Dept., and Mr. Robert L. Sinclair, President, Saab-Scania of America, Inc. for making Service Information Bulletins available to the Saab Club.

ANY FIXES FOR '79-80 900 A/C COMPRESSOR?

I would like to establish some discussion among any of the members who have experienced A/C problems in their 1979-80 900s. It seems that compressor problems are quite prevalent and I found out recently that the Delco compressor which was used in these cars is basically defective. Even GM has discontinued their use and gone back to the "old" style compressor. I believe that the new Sankyo unit for the 81's will not fit into the '79s and '80s.

I am planning to contact many Saab shops to see if anyone has come up with a fix for this problem. It is scary to think about paying to replace one compressor with another defective one. Possible some modifications could be made to the bracket so that the Sankyo or "older" GM compressor would fit. If any of the members have any thoughts or suggestions on this, I invite them to share it.

Dr. Fred Katz, Middleton, WI

ANOTHER CRUISE CONTROL OPTION FOR 99/900s

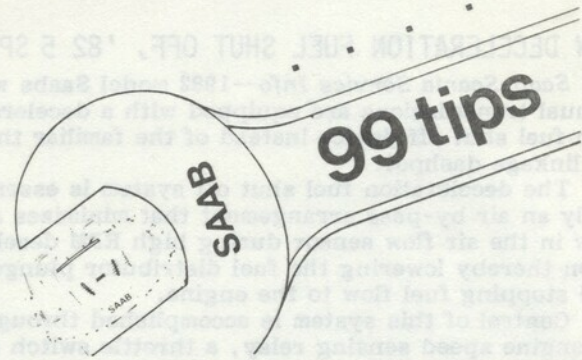
On page 5 of the Aug. '81 Newsletter John Navas reported his experience with the "Escort" Cruise control installed in a 900. He stated that "on Turbo applications a vacuum reservoir (about \$6 extra) is essential, and recommended on non-turbo cars." I agree except why add an extra reservoir for \$6 plus labor and additional clutter under the hood?

Here's my answer to the need for steady vacuum: For economy over the dealer-installed \$350 I had Freese Speedometer Service, Inc in St. Louis, MO, install a Speedostat Electronic Speed Control, manufactured by Dana Corp. The cost including tax was \$134 installed. Dana also furnishes Sears the exact equipment except it carries "Sears" nameplates.

The installer connected the control to the vacuum line going to the reservoir for damper operation. Using this source for vacuum, my speed would vary on hills or anytime my turbo gauge left the white (or vacuum) area and entered the boost area, losing indicated speed until out of the boost area.

The remedy (without adding a second reservoir): Cut the line leaving the reservoir already in the car. Place a tee there and use this vacuum for the source to actuate the cruise control. Do not worry about the small hole size leaving the reservoir--it will furnish all you need for both cruise control and the damper operations. It will furnish all the vacuum you need up long steep grades, headwinds, heavy loads, etc. My speed stays within 1½ mpg.

George Robertson, Harrisburg, IL



Regarding the "extra" switch for the fan circuit: it does the job, but check the connections on the fan relay now and then, even without the switch. If the plastic mount for the relay looks melted, you may be in for a surprise, as this usually signals a bad connection heating up. I had to solder the high current wires to the relay after the second failure. Other relays may do this too, so watch out.

Should your car have electronic fuel injection, it is a good idea to carefully solder a bypass capacitor across the switch; 0.1 mf, any voltage over 50; Radio Shack should have them. This is also good for most other switches which cause the engine to hiccup when they are flipped.

Two other notes: if your radio gets FM ok, but AM is dead, don't overlook the antenna (see Aug. NL, p. 7). FM can work well, even with a dead short in the antenna base (sneaky that!). A hank of wire stuck in the antenna jack of the radio and draped attractively around the garage works fine for stationary tests.

Also Dick G. should love this! Having been in and around a Saab for seven years, I never knew what "FWD effect" was until I drove a Citation. Cruise control could be mildly entertaining as the car wanders about the lanes. And they're making millions of them.

We, like Andy Visniewski (Aug. p. 3) have an Allison ignition system; same mileage, same everything; same recommendation.

Jim Tolson, Chicago, IL

MORE ON SILICONE BRAKE FLUID

I have been watching it closely since the first article appeared in the Society of Automotive Engineers (SAE) journal. For silicone to be a success, it must be 100% of the fluid in the system! The recommended way to use it is to rebuild all cylinders, washing out any minute residue with silicone, replace all hoses, in short, anything rubber. Flush the lines several times, and then fill with silicone. It takes a lot of fluid to clean and flush, and it hurts to throw away \$35 a gallon fluid, but this is the way it must be done.

Incidentally, Wagner Division of McGraw Edison has just issued a bulletin that suggests that silicone has several problems. To go down their list: lubricity--excessive wear; rubber compatibility--rubber seals do not swell with silicone, and some swell is desired; water tolerance--water still finds its way into the system, it does not mix, and can freeze in cold weather; and they indicate that silicone fluid could contribute to a reduction in hose burst strength by as much as 15%.

Bob Mitchell, Linwood, NJ

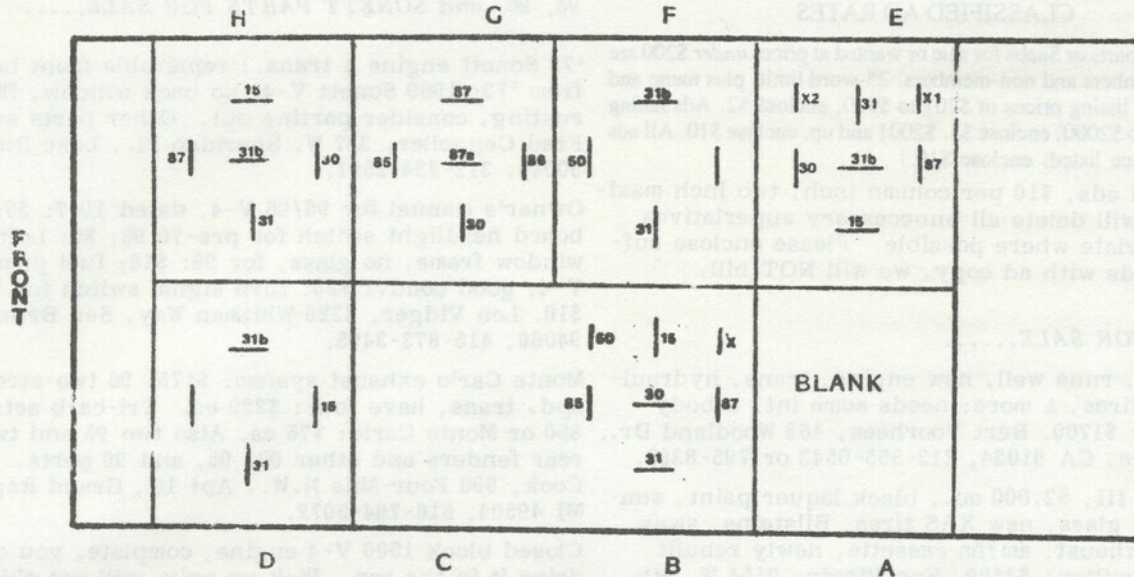
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EMISSION RELAY PANEL, 1982 900

Saab-Scania Service Information--The emission relay panel, located on the left front fender well has been rearranged slightly for 1982 and is diagrammed above.

The relays, their locations and part numbers are listed below along with an explanation of their individual functions.

A-Vacant

B-C Accel. enrichment time relay 8575151: the calibration of the EGR system can create driveability problems following a hot restart without some form of added enrichment when accelerating. The time relay allows the vacuum impulse switch to fire the cold start injector if the car has been shut down longer than 30 minutes and the coolant temperatures at the thermostat housing are at least 49°C (120°F). After 100 seconds the relay opens again and the ground circuit is broken.

D- Accel. enrichment pulse relay 8574618: the acceleration enrichment pulse relay limits the amount of enrichment that can take place following a hot restart. This relay which is placed in series between the cold/hot start ground relay and time relays, reduces the length of time the cold start injector can fire each time the throttle is opened rapidly.

E- Decel System relay 8574899 (Manual Trans. only): Emissions during deceleration are regulated by a fuel flow shut off system triggered by this relay. In order for the fuel shut off system to function, the following conditions must be met.

1. Engine speed above 1575 ± 75 RPM
 2. Throttle closed completely on decel.
 3. Engine temperatures above 120°F.
 4. Time relay NOT in the hot start enrichment mode.
- The relay will close for an instant until engine speed drops to 1375 RPM at which point fuel flow resumes and the engine speed stabilizes at a normal idle.

F- Hot Start Pulse Relay 8568271: Most "hot start" problems are a result of pockets of fuel vapor trapped in the lines. The car cannot be started until the vapor has been purged. The pulse relay allows the engine to fire on the cold start injector if the engine does not start after 1.4 seconds of cranking. The relay provides a pulsing ground: .1 sec. on; .3 sec. off.

G- Cold/Hot Start Ground Relay 8533176: 1982 cars have two ground circuits which can be used for the cold start injector--the thermostime switch on the intake manifold and a temperature sensitive switch mounted in the thermostat housing. This relay selects between the two ground--one for normal cold start, one for hot run enrichment.

H- Lambda Engine Speed Relay (Turbo only) 8578-346: The wide open throttle enrichment circuit used on Lambda cars in previous years has been modified by the addition of an RPM sensing relay which allows an "enriched" Lambda pulse ratio of 75/25 at engine speeds over 3800 RPM or with a throttle opening of more than 65°

SAAB PRICES TO REMAIN THE SAME FOR 1982

Saab-Scania Press Info: There will be no increase in the prices of Saab cars for 1982 according to Robert J. Sinclair, president of Saab-Scania of America, Inc.

Mr. Sinclair announced that prices will essentially remain the same for the 1982 models as they were for 1981. Pointing out that the US dollar had strengthened considerably against the Swedish Crown during the past year, Mr. Sinclair advised dealers that Saab would take this opportunity to both hold down prices to US buyers and substantially increase advertising during the 1982 model year.

The 1982 Saab prices start at \$10,400 for the three-door hatchback Saab 900 with manual transmission and range up to \$16,610 for the four-door 900 Turbo sedan with automatic transmission.

Almost all 1982 Saabs will be equipped with revolutionary Pirelli P-8 low rolling resistance tires. According to Pirelli, the P-8 is as much better than the conventional steel belted radial as the latter is than the old bias-ply tires. The rolling resistance of the P-8 is reported to be about 20% less than that of a regular steel belted radial.

The P-8 is a rather wide tire, like high performance tires, and uses the most elastic rubbers capable of quickly springing into shape after deformation and of gripping the road well enough on both dry and wet roads.

CLASSIFIED AD 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 prices of \$201 to \$900, enclose \$2. Ads listing prices \$901 to \$2000, enclose \$5. \$2001 and up, enclose \$10. All ads without a price listed, enclose \$10.

Commercial ads, \$10 per column inch, two inch maximum. We will delete all unnecessary superlatives and abbreviate where possible. Please enclose sufficient funds with ad copy, we will NOT bill.

SONETTS FOR SALE.....

1969 Sonett, runs well, new engine, trans, hydraulic system, tires, & more; needs some int. & body restoration: \$1700. Bert Voorhees, 468 Woodland Dr., Sierra Madre, CA 91024, 213-355-0543 or 795-8392.

1973 Sonett III, 52,000 mi., black laquer paint, sun-roof, tinted glass, new XAS tires, Bilsteins, sway bar, MSS exhaust, am/fm cassette, newly rebuilt trans. by Poulton: \$4500. Ken Virgin, 215½ W. 9th Ave., Huntington, WV 25701, 304-522-7603, 522-9335

1973 Sonett, 57,000 mi., excellent cond.; Also '69 Sonett for parts. Bob Holtom, 412-752-9583 after 5.

1974 Sonett #2198, original 33,000 with Pirellis, no rust, fresh paint, MSS exhaust, mechanically very good; about \$4350. 312-549-7115 eves.

95s, AND 96s FOR SALE.....

1967 two-stroke 96, 108,000 mi., completely rebuilt engine at 80,000; rebuilt trans. at 70,000; minor rust & rear quarter dent: \$881. Coleman Bynum, 9 Grand St., Cornwall, NY 12518, 914-534-7843.

1968 96, very good engine, rebuilt trans., good shocks, body very good with leatherette interior: \$1800 or best offer. Pamela Hull, 565 Hillcrest Way, Redwood City, CA 94062. 415-368-8802.

1969 96 V-4, green, completely restored bumper to bumper: \$2200 or trade. Jack Ashcraft, 2425 Table Rock Rd., Medfore, OR 97501, 503-772-5449.

1969 96, 76,000 mi., good red & gray vinyl upholstery, no shock, no instruments, bad clutch hydraulics: \$90. Leon P. Karlak, 12 Remick Parkway West, Lockport, NY 14094.

1970 96, 97,000 mi., MSS exh., Weber 24/36 carb, rebuilt heads w/ sodium ex. valves, rebt trans., Konis, Michelins, Cibies, Tach & extra gauges, exc. '71 interior, some rust, tho' not bad: \$1700. Bruce Williams, 326 Lincoln Ave., Takoma Park, MD 20912 301-891-2812 eves.

1973 96, very good cond., 74, 000; radials, new water pump, mechanicals exc., no rust: \$1850 firm. Dan Jessup, Rt. 4, Box 404A, Elizabeth City, NC 27909, 919-330-2257.

95, 96, AND SONETT PARTS FOR SALE.....

Two-Stroke parts: Monte Carlo oil-injected blocks: \$125; Rebuildable M/C cranks: \$50; Rebuilt M/C cranks: \$125; triple down-draft Solex carb sets with intake manifolds: \$50; other engine parts and other miscellaneous 96 & Sonett parts \$5 & up. Will consider offers and trades. Ken Cich, 2119 W. 5th St, Duluth, MN 55806. 218-727-1346.

95, 96, and SONETT PARTS FOR SALE.....

'72 Sonett engine & trans.; repairable front bonnet from '73; 1969 Sonett V-4, no back window, floor pan rusting, consider parting out. Other parts available Fred Cappeller, 337 W. Sheridan Pl., Lake Bluff, IL 60044, 312-234-2521.

Owner's manual for 95/96 V-4, dated 1967: \$5; Dashboard headlight switch for pre-70 96: \$5; Left rear window frame, no glass, for 96: \$10; fuel pump for V-4, good cond.: \$20; turn signal switch for '70 96: \$10. Len Vidger, 2320 Whitman Way, San Bruno, CA 94066, 415-873-3495.

Monte Carlo exhaust system: \$175; 96 two-stroke 4 spd. trans, have four: \$200 ea. Tri-carb sets for 850 or Monte Carlo: \$75 ea. Also two 95 and two 96 rear fenders and other 93, 95, and 96 parts. Bill Cook, 990 Four-Mile N.W., Apt 1C, Grand Rapids, MI 49504, 616-784-5072.

Closed block 1500 V-4 engine, complete, you can drive it in the car. Pick up only, will not ship: \$250 Also 96 wheels, used, round holes: \$8 plus UPS. Bob Mitchell, 136 E. Seaview, Linwood, NJ 08221, 609-927-4613.

A/C unit for V-4 95, 96, or 97, complete with double pulley and steel balance gear: \$125; Rebuilt V-4 distributor, new bushings in both ends, pre-emission specs: \$55 exch.; 1966 95 body only, very sound cond., new brakes front & rear: \$100. Ted Smith, Rt. 1, Box 80, Bent Mtn., VA 24059, 703-929-4328.

One completely rebuilt V-4 gearbox (rebuilt by Ted Tucker): \$600 firm. 96 A/C unit with double pulley: \$125; Rebuilt left front caliper unit for V-4: \$45; also other parts. Bruce Williams, 326 Lincoln Ave, Takoma Park, MD 20912, 301-891-2812 eves.

Saab V-4 and 99, have many parts: '73 V-4 seats, blue special edition, very good cond.: \$100; '74 Sonett carb: \$75. Also V-4 and 99 tires on rims: \$30. Alex Ciuca, 213-284-7180.

96 Spoiler: \$40; Weber setup: \$200; 3 spd iron gearbox, good ring & pinion: \$50. Wayne Sexton, 1320 Taft St., Escondido, CA 92026, 714-745-9935.

1973-74 Sonett air conditioning dashboard: \$250; call 213-456-3625 days, 213-889-9390 nights & wkends. Will not fit '70-'72 Sonetts, different instruments). Terry Waters, 33560 Mulholland Hwy, Malibu, CA 90265.

95, 96, AND SONETT WANTEDS.....

Want '74 Sonett Louvers for back window, and mags with tires mounted. Alex Ciuca, 213-284-7180.

Side-draft Sonett carbs with or without float bowl; Also stock 4½ or wider steel Sonett wheels, not mags. Ken Cich, 218-727-1346.

Two-barrell intake manifold for '74 Sonett III: \$50? R.A. Grieve, 1610 S. 2nd St., Marshalltown, IA 50158, 515-752-3391.

Wanted, good used transmission parts, 96 ring & pinions: \$75 ea; Sonett ring & pinions: \$100 ea; '74-80 99 ring & pinions" \$150 ea. 99 Cluster gears: \$75 ea. We pay the freight. Eriksson Industries, Inc., 4 New Rd, Madison, CT 06443.

95, 96, and SONETT WANTEDS.....

One gas strut for rear window/hatch of Sonett III. Charles Simcox, 262-5 Oakland Mills Rd., Freehold, NJ 07728, 201-431-2345.

Early Saab literature and sales brochures, both V-4 and Shrike, models, 92, 93, 95, 96, & 97. Also need V-4 and Sonett parts books; offer \$30 ea. Anyone have a die-cast toy model 96, or phantom view of Shrike engine on a poster? Bob Allen, 3035 NW 6 St. Gainesville, FL 32601.

Rocker panels for 1973 Sonett: \$35 ea. Also models of Sonett II & III, ?\$, Steve Bottorff, 3549 Lynnfield Rd, Shaker Hts, OH 44122, 216-752-0430.

Ring and Pinion in good shape for Sonett gearbox. S. Boenzli, RD#1, Newport, PA 17074, 717-567-6445.

Wanted for '73 95, driver's side section of rear bumper plus nearby chrome trim. Will take entire bumper: \$50? Also need radiator fan for V-4. John Roberts, 971 S. Sparks St., State College, PA 16801, 814-238-4102.

One fuel tank sending unit for a Sonett. Jim McMillan, 2521 SW Mission, Topeka, KS 66614 913-273-2015

99s AND 900s FOR SALE.....

1971 99 4dr., bad body, new exhaust system, rebuilt both engine & trans. ('73 model); car driveable, asking \$450. John Jan, 5503 Centre Ave, Pittsburgh PA 15232, 412-941-3150 day, 325-1343 eve.

1972 99 2dr., 1.85 w/carburetor, body & mechanics very good; with trailer hitch, 2 mounted snows, 2 extra snows: \$1500. Charles Reibel, 99 Mt. Airy Rd, Croton, NY 914-271-8940.

1974 99LE 2dr, auto, A/C, metallic brown, am/fm, new mufflers, tailpipe, headliner, shocks; steel radials, clock works: \$2400. Ian Watson, 9607 Marilla Dr., Lakeside, CA 714-561-5407.

1975 EMS, factory sunroof, original owner, new radials, brakes, battery, supersprint exhaust, BWA wheel, 55,000 mi., interior/exterior clean, runs perfect: \$3150 312-639-1405.

1981 900 Turbo 3dr., Hella H-4s, Blaupunkt digital stereo, cruise control, and other extras, four year warranty. Dr. Allen White, 408-252-7761, leave message.

99 and 900 PARTS FOR SALE....

One pair Cibie 99 rectangular headlights: \$50; One 99 Bosch alternator: \$40 and other parts. Wayne Sexton, 714-745-9935.

1972 Saab 99 body in mint cond., no engine or trans. \$150 takes it away. Alex Ciuca 213-284-7180.

1972 99 4 spd. transmission for sale. Fred Cappeller, see ad in 96 parts column for address.

1978 99 engine block with crank and 9.25:1 pistons and flywheel: \$250. 312-549-7115.

One Pirelli CN36 175/70HR15 used as spare, less than 200 mi: \$50. Chuck Baum, 1067 Dover Ct., Vernon Hills, IL60061, 312-367-6561.

Tach/clock for 99, brand new \$82; three-spoke leather steering wheel for 99, 125 mi.: \$55, both incl.

99 and 900 PARTS FOR SALE...continued....

shipping in cont. U.S. Rod Mackenzie, 241 Butler Dr Pittsford, NY 14534, 716-334-1299 eves & weekends, 716-422-8925 weekdays.

A/C from '73 99LE, 99% complete: \$200. New head (never used) for 2.0l: \$500; other 2.0l engine parts, misc '71 body parts. Brian Harris, PO Box 85, Saltville, VA 24370, 703-496-4383 eve, 703-466-2242 day.

Rear rubber bumper, cover only, for 99 hatchback, very good cond.: \$35 US, \$40 Canadian. Richard Bradner, 185 N. Stratford, North Burnaby, BC V5B 1L1, 604-294-0868.

Two Trelleborg Snow tires, 165x15, approx. 7/32" tread left; fabric radials: \$40 pair incl. shipping. David Andrews, PO Box 38, Newmanstown, PA 17073 215-589-5479 eves & weekends.

Two Michelin XZxs on 99 rims, balanced and used only two months: \$235; Fram PH 16 oil filters: \$5 ea; points & condenser ('76 99): \$10; Haynes Manual '76 99: \$10. Alex Ceslauskas, 78 Oxford St, Woodstock, Ont, Canada N4S 6A5.

1978 99 Turbo voltage regulator, unused: \$15; '74 99 speedometer: \$20; '78 99 Turbo (Aztec) wheel, one slight crack, but might be heliarc welded: \$35 "as is" Greg Kurtz, 4700 Lyndale Ave So, Minneapolis, MN 55409, 612-823-0780.

Four chrome center hub caps for '79-80 900 GLE & Turbo spoked wheels: \$8 each. Rich Bohn, 34 Alsun Dr., RFD #4, Milford, NH 03055, 603-465-2108 or 800-258-1700 ext. 5140 days.

Four Continental TS 771 165SR15 tires from a 99; less than 10,000 mi.: \$25 ea. Greg Latimer, 816-254-6569.

Complete 99 A/C system: \$250; new speedo cable for 99: \$28; 99 Shop manual: \$25; New brake pads, rear: \$12; new Bosch voltage regulator: \$20; moe 99 parts. David Katzakian, 26313 Whitman St. #133, Hayward, CA 94544, 415-886-6447.

Automatic trans. for 1.7 or 1.85 engines: \$100. Tom Brown, 1831 S. 5th Pl., St. Charles, IL 60174, 312-741-3101 days.

Haynes workshop manual for 99, '69 to '79: \$6 post-paid. Herbert Olander, 10210 Moody Park Dr., Overland Park, KS 66212.

Blaupunkt am-fm 8 track stereo, enclosed in black Saab housing for under dash mounting, from 99GLE, used little, very good cond.: Best offer over \$250. J.E. Drifmeyer, 1420A Washington Blvd., Presidio of San Francisco, CA 94129, 415-561-4609.

99 and 900 WANTEDS.....

Need Speedometer/odometer unit for '78 EMS. John J. Maringo, 1106 Portsmouth Dr, McKeesport, PA 15133 412-672-7375.

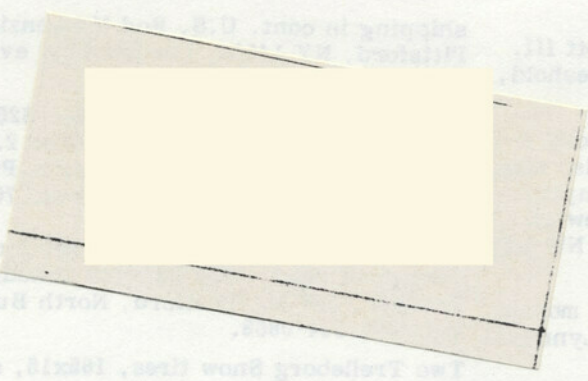
One right rear mudflap for '73 99. K.J. Strack, 1976 Berkwood Dr., Pittsburgh, PA 15243, 412-221-3252 around dinner time or weekends.

Need good engine for '71 or '72 99E, or good short block for 1.85 engine. Ronald Meyers, 201-763-9182

Want white, silver, or beige low mileage 99. Peter Guckenheimer, 4886 Roundtree Dr., Campbell, CA 95008, 408-379-3968.

Please use knife/letter opener

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99 and 900 WANTEDS continued.....

Two front headrest inserts for '78 99, possibly with red covers, up to \$25; trailer hitch for '78 99, offer \$45; plastic insert for rear bumper, offer \$10. John Trzaskus, 355 1st Ct, Crystal Lake, IL 60014, 815-459-9097 after 5 pm

Want late model 99 sedan or hatchback with CIS injection; radio and A/C not needed. W. Allen, 314 W. Nelson St., Midland, MI 48640, 517-835-9288 home 517-636-6285 bus.

Wanted 99, '78 or '79 ingood condition. Chris Robbins, RD2, Box 187, Linden, PA 17744, 717-494-1363

Need tachometer and mag wheels for '74 99LE. Dave Fichter, 312-887-0692.

Radio console complete with ashtray for '74 99LE with air cond. R. Silvera, 20 Pond View Dr., Syosset, NY 11791, 516-364-0974.

Owner's manual for '72 99, also air cleaner assembly complete with warm air intake connections. Tom Brown, 1831 S. 5th Pl., St. Charles, IL 60174, 312-741-3101 days.

MISC. CLASSIFIED ADS.....

Wanted: 1979 Newsletters and Jan. '80 Newsletter for photocopying. I will pay postage both ways and will return immediately. No damage will be done to your newsletters, honest; please help. Josie Maymon, 251 Summit Ridge Dr., Nashville, TN 37215, 615-297-3864.

For Sale: Larsen mobile communications antennas; CB, Ham, professional; mounts for every Saab; permanent, magnetic, trunk lid, hatch, etc. Steve Friedman, 333 E. 46th St., New York, NY 10017, 212-490-3919 after 9 pm EST.