

# NINES

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no. 218

The SAAB Club Magazine



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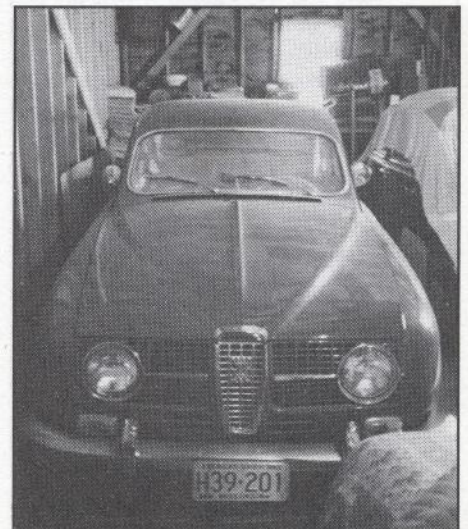
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## Regional Club News

### Green Mountain SAAB Club

June 4-6 - Organizational meeting for Vermont area SAAB Club and joint regional meet with the SAAB Club of Montreal.

Cathleen Pembroke  
RFD #5 Box 2758  
Montpelier VT 05602-8812  
802-223-0025

### Long Island Saab Club

Tom Neokleous  
45 Dorchester Rd.  
Smithtown NY 11787  
516/360-2872

### Milwaukee SAAB Club

May 24 - Regular Meeting.  
Pat Greer, 414-744-0996

### Southern California Saab Club

May 22 - Picnic at Railroad Museum in Campo near San Diego. Send SASE for map and further info.  
Paul Florance, 310/493-6707.

### Cover photo:

Saab has released this photo of the new 1994 Saab 900. The sleeker 900 combines traditional Saab features with new performance, safety, driving pleasure and environmental responsibility innovations.

Engine options include a variety of 16-valve four-cylinders, topped by a new 190 hp 2.0-liter turbocharged powerplant with double balance shafts. A 170 hp 24-valve V6 will be available as an option. The transverse mounted drivetrain will include a five-speed manual or four-speed automatic transmission.

Public debut of the new 900 will be at the IAA motor show in Frankfurt, Germany on September 9th of this year. It should be available in dealer showrooms by November.

## Update - 1993 Saab Owners Convention

As you have probably read in previous issues of NINES, the 1993 National Saab Owners' Convention, hosted by the Milwaukee Saab Club, will be held in Kenosha, WI, on August 6, 7, and 8. Our club, which has been in existence for 17 years, is dedicated to making this event one of the best ever.

Our site is the Carthage College campus, chosen because it offers us the convenience and intimacy of a self-contained facility, without the distractions we might find at other locations.

Invited guests include Ralph Millet, president of Saab Motors Inc. from 1956 to 1971; Lennart Lonnegren, head of public relations at Saab's U.S. office from 1963 to 1989; and Jon Davis, who drove a Saab 99 to SCCA National PRO Rally championships in 1980 and 1981.

We have developed a complete package that includes dorm lodging, meals and convention activities, all at a pre-event price of \$125. Meals included are Friday's welcome reception, Saturday's breakfast, lunch and banquet, and Sunday's breakfast. Lodging is double occupancy with bunk beds (unusual, but the rates and convenience make it worth it). For an extra \$10 you can have a single occupancy room. The rooms are not air-conditioned, although we really feel this will not be a problem. We are literally on the water's edge and the lake has a great cooling effect, especially at night.

A children's price, for those over 4 and under 18, of \$95 for the convention weekend is available if they need their own bed. For those who can camp in their parent's room (bring your own sleeping bag, air mattress or cot) there is only a meal charge of \$40. Children 4 or under are free.

If you prefer to make your own lodging arrangements, we have an off-site package of \$65 for adults and \$40 for children over 4. This includes Friday evening's party, Saturday's lunch and banquet and all convention activities. Please request a list of area hotels when you register.

Kenosha is located just off I-94, 9 miles north of the Wisconsin-Illinois state line. For those flying in, we are less than an hour from O'Hare Field in Chicago, and less than a half hour from Milwaukee's Mitchell International.

Ian Simpson 414/426-2873  
Pat Greer 414/744-0996  
Co-chairsaabers

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TBA

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**Editorial contributions** are welcome. All material submitted is assumed to be for publication unless clearly labeled otherwise. Double-spaced typewritten articles are preferred, but most anything is acceptable. We cannot answer every inquiry and reserve the right to edit materials submitted.

Those wishing to submit articles or letters on 5" or 3" IBM-formatted disks, please convert to ASCII text files (<filename>.TXT). Please include a printed hard copy, and a SASE if you want the disk returned.

**Photos:** Preferred format for photos is black-and-white, in 5"x7" or 8"x10". Good contrast color photos can usually be accommodated, no smaller than 3"x5", please. Photos used on the cover will be rewarded with a one year subscription to NINES.

**CHANGE OF ADDRESS:** Eight weeks notice is required for change of address. Please send new address and old address, including zip codes, to the SAAB Club at the address above.

**RETURNED CHECKS:** There will be a fee of \$10.00 charged for checks returned for any reason.

# Letters to NINES

## Oldest U.S. Saab Dealership?

In your nice piece commemorating Vic Hadji's 35th anniversary, you note that it may be the only SAAB deal nationwide to have remained under the same ownership and management for 35 years.

I am happy to inform you that while ownership share has varied over the years, there are at least two dealerships in the U.S. that predate Vic by at least one year. I joined Gaston Andrey, Inc. in 1956, we signed a SAAB franchise for both a Watertown and a Framingham store in February of 1957 and, while we separated in 1980, both Gaston and I have been SAAB dealers ever since; he has maintained his franchise as Gaston Andrey of Framingham, Inc., while mine has become Gaston Andrey Associates, d/b/a Charles River SAAB. I have been SAAB exclusive on and off through the '60s and have become permanently so in 1976.

Felix Bosshard  
Charles River SAAB  
Watertown MA

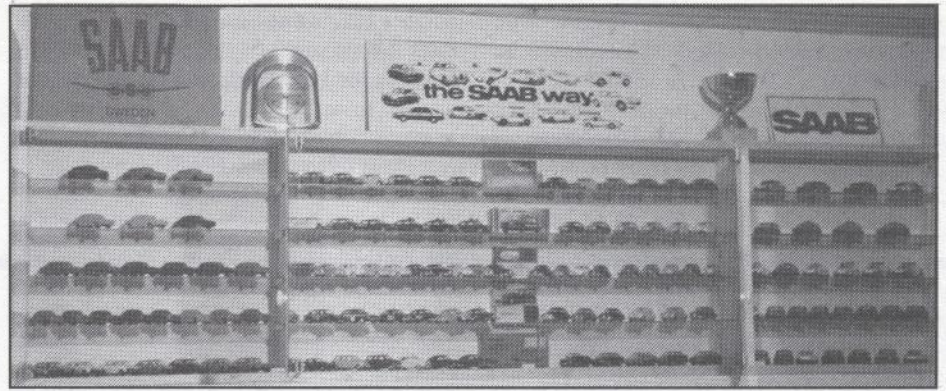
## Is Ordering a Failure?

I have owned three Saabs in about a half-dozen years and was about to buy (actually lease) what would have been my fourth. All have been 9000's.

I ordered the car in September of '92 after Saab offered a very price competitive lease rate/financing package. I was assured the car would be delivered in four-to-six weeks. No car in October, November, December...even January. Finally, on February 2, the car arrived at the dealership. On the initial call from the dealership, I was informed that, even though Saab has delivered the car nearly a quarter of a year later than they had told the dealership, they would no longer honor the finance/leasing package under which the car was ordered.

Three phone calls to Norcross and two letters to Saab President William Kelly were to no avail. (Kelly has yet to even acknowledge the problem, but has delegated the matter to one of his customer service representatives.)

I was told that all Saab will do is to honor the price point at which the car was ordered. This, from a manufacturer with an



apparent declining market share...and a product based, at least in part, on customer selectivity and loyalty? Kelly's lack of any response is disappointing.

Saab's lack of flexibility (the advantageous financing/leasing expired in January, two days before the car arrived on the lot) and obvious "go to hell" attitude are most curious. I had planned to explore the possibility of a '93 900 to replace the '87 9000, but this enlightening experience will probably change my mind about Saab for a long time to come.

Perhaps Saab is trying to now model itself after the General Motors of the 1970's.  
Jim Lauerman  
Lincoln NE

## European Members Write

I hope that you enjoyed your Austria trip and your journey back to the States was okay. On Sunday, we have to ride back home through the Alps in bad weather and road conditions, but this is no problem if you drive a SAAB. My old 96 and I have had great fun to run a longer distance this time.

As I told you at Mattsee my grandfather was Austrian importer for SAAB from 1954 to 1968 and my father drove very successful rallies during this time. Therefore I have some things which I can sell or barter, like prospects, photos, technical bulletins, etc. If some of the members might be interested in such things, they may contact me. I enclose a list for you.

I hope we'll meet each other maybe in Norway at this year's SAAB Meeting.

Gerald Gaberscik  
Kaiserwaldweg 6  
A-8010 Graz  
Österreich (Austria)

I'm thirty years old and I live down in the south of Germany. My first car I bought in 1981, a SaAAB 96 V4, 1967 model. At

the moment I drive a 96 GL from 1978. It's my sixth Saab.

Since about 15 years I'm collecting everything about SAAB (cars and aircraft), from the beginning until today. I think I have the biggest SAAB collection in the whole world. More than 3000 different catalogs and magazines, exactly archived and listed by my computer. More than 300 different models (you can see a part of them in the attached photo). In addition I have books, videos, posters, metal pins, press photos, road tests and much more.

My complete collection is to be seen at my home and every SAAB-fan can come and look at all. I'm happy with any visitor who has the same hobby as I. I would like to make contact with other SAAB collectors.

Wolfgang Schmel  
Ertlweg 3  
D-8175 Greiling  
West Germany

I'm an American who has lived in Sweden for almost two years. I'd like to bring a Swedish SAAB back to America when I return to the USA. Has anyone had any experience doing this? Is it quite difficult (or impossible) getting a foreign car into the USA? If the car in question is a 95/96 it is possible getting it in under "Classic" status? A late model 99 (say '83 or '84) would be attractive as well as a late model 900 5-door, but perhaps much modification is needed. Are there any SAAB employees who might offer some help? Please don't tell me to buy a 9000; perhaps it's a better car, but I'd just as soon give up ten years of loyalty to SAAB and buy a VW. I currently drive a '74 V4 which runs quite well (only paid 200 dollars for it).

If you're planning a trip to Sweden, a must see is a bar/restaurant in Gothenburg called "V-4 Kombi" which is what the Swedes call a SAAB 95. The menu looks just like the owners manual from a V4 and

there's a V4 nose over the bar. The prices are not as outrageous as in typical Swedish restaurants.

Kevin Rogers  
Erik Dahlbergsg. 12  
254 38 Helsingborg  
Sweden  
Tel. 46 42 18 75 69

*From everything I've read, shipping a car into the U.S. is virtually impossible. The only exceptions seem to be for museums or for racing purposes. Gray market cars, European models shipped to the U.S. and "federalized" for emissions and safety, have dried up due to tighter regulations. The only possibility might be a pre-1968 model, built before the U.S. regulations went into effect.*

### Fond of the Old Saabs

As usual my renewal is being sent late. I'm hoping there won't be an interruption in my subscription.

I've restored (not fixed up) a '68 96, a '69 Sonett V4, and a '71 95. Currently I'm restoring a '73 Triumph TR6. While this may seem like a contradiction in motoring preference, I try to remain open minded. The Saab Club is the only club I have ever joined and I look forward to our continuing together in our obsession with the older Saabs.

My wife drives a '88 9000 Turbo which I have begrudgingly learned to maintain. She's owned three new Saabs over the years and wouldn't own anything else.

Keep up the good work on the newsletter and if you're ever on Long Island, NY, stop in and say hello. Thanks!

Greg LaPierre  
Lake Ronkonkoma NY

### Sonett III on the cover?

I am writing to express my sorrow about the demise of Jack Ashcraft's "Shiftin' Gears" department from the newsletter. As a Sonett III owner, his section was always the first I turned to when the newsletter arrived. The \$40 subscription price of *The Saab Journal*, which Mr. Ashcraft has now seemingly devoted his time into producing, is a bit much for a college student like myself. I hope that the demise of the "Shiftin' Gears" department does not signal a drop in older Saab coverage, but rather a renewed effort to provide information about these unique and wonderful cars.

Finally, when was the last time a Sonett III appeared on the cover of the newsletter? (Not including convention photos!) My newsletter collection goes back to issue

number 182, but no Sonett III covers since then. I hope you'll fix this problem soon! Keep up the great work with the newsletter.

Kevin Baumgart  
Cottage Grove MN

*As is often stated, NINES depends on its readers for technical articles. Share what you've learned with other two-stroke and V4 and even 99 owners. While a majority of the membership owns current models, those with older cars need help more than ever since most of those cars are owner serviced and parts are becoming scarce. Look for reprints of old articles as well. And NINES will continue to be the best source for used parts via the SAAB SWAP.*

*You're right, it has been awhile since there has been a Sonett III on the cover, issue #181 is the last time. However, no one has sent any potential cover photos of Sonetts recently. Summer is here, wash your 97, take it to some scenic spot and photograph it from several angles (and beware of bright reflections and shadows). A photo on the cover gets you six issues of NINES free!*

### Tribute to Sven Aberg

I am writing you on a sad note. On Thanksgiving day my father Sven Aberg passed away due to a heart attack. Some of you knew my father and his long involvement with Saab. For those that did not I would like to give you a little history. This may surprise some of you who knew my father as well.

Sven Aberg was born on a farm in Norrkoping Sweden in 1933. In 1950, at the age of 17 he went to work for Philipssons in Norrkoping. This was not his first exposure to Saab, as an engineer from Saab lived close to the farm and he told me about seeing the prototype being driven to and from there. He told me many stories about his days at Philipssons. The first Saab 92 he worked on had Serial No. 39. He also helped prepare 92's for his boss to use in rallies. He even told me about a customer who had left a loaded shotgun standing up in the back seat of a 92 only to have it go off and blow a hole in the roof when he hit a big bump!

He became a master of the mechanicals of the early Saabs and by the time he left Philipssons in 1959 he was earning the same wages as mechanics that had been there for twenty years. When my father came to the United States he brought with him the knowledge he had gained as well as many factory parts books given to him by Philipssons which I still have today. After

working for six months in Santa Barbara my father went to work on Volvos for Kramer Motors in Santa Monica. This was at a time when Kramer Motors was a small shop and Mr. Kramer was occasionally washing cars. For those of you unfamiliar with Kramer Motors today, Santa Monica Blvd. might as well be renamed Kramer Blvd.

In 1968 my father went to work for Lindqvist Motors in Culver City. This is where he became involved with Saab's Baja 1000 effort. Again I have many stories of this time. One of my father's favorites was when he rescued Erik Carlsson and Torsten Aman on the practice in 1969. Erik and Torsten took off in the practice car and had not been heard from for some time. Saab asked my father to check on their progress. While flying low over the course he saw Erik waving his arms and the Saab up on three wheels. Upon landing he discovered the upper A-arm pivot shaft had snapped because of the stiff coil springs and a failed lower suspension stop. My father flew back, got the needed parts and they repaired the car. My father told me Erik gave the local mechanic \$100 for his help. He then flew the course with Torsten in the airplane while he took notes for the race. Torsten filled me in on the rest when I met him in 1991. It seems they came very close to running out of fuel in the airplane on the way back!

My father stayed at Lindqvist until 1981. We eventually moved to Buellton and opened Sven's Import Car Service with great success. My father's greatest asset was his ability to communicate with his customers. The trust and friendship he had built with them had many come in with tears in their eyes at the news of my fathers passing. He had an unbelievable skill at solving problems on cars using a combination of old and new methods. On our final trip to Sweden together I was able to meet many of the people my father grew up with. Many thanks are also in order to Erik Carlsson, Torsten Aman, and Ove Hasselberg for providing us with a Saab 9000CD for our stay in Sweden (a remarkable car).

I hope this has given you some insight as to who Sven Aberg is. We were both very happy to become part of the Saab Club and meet many wonderful people. I feel a great loss not only of a father but someone who was involved with Saab from the very start.

Eric Aberg  
Buellton, CA

# Doktor Nio's Saab Klinik

Submit your questions with as complete information on the problem as possible, also giving the year and model of SAAB. Problems of general interest will be answered here. No requests for personal replies please. Questions which would require modification of, or would defeat Federally required emissions systems will not be answered. For a proper diagnosis, it is recommended that you contact an authorized SAAB dealer or repair shop.

Send your questions to: SAAB KLINIK, 2416 London Road, Unit 900, Duluth, MN 55812-2221

I own a **1987 900 SPG** with the grey leather interior. I recently scratched the surface of the leather which removed the grey color.

I have been searching for a leather colorizer of the correct color ever since; to no avail. Neither the dealer nor several shoe repair stores could help me out.

Rick Lam  
Lafayette Hill PA

*Contact dealer detailing shops that prep cars for auction and resale. They will have the means to touch up your leather. There may be an independent mobile shop that specializes in upholstery repair. We have one such service in our area called "Carisma" and they heal burn holes, tears and even dash panel cracks.*

In Jan '92 I had the shims replaced on my '88 Saab 900S and they need to be replaced once again. The former dealer said that this problem was also in the '91 and '92 models. It seems like a design defect and it isn't covered under the warranty. Have you had this problem or do you know someone who has?

Mrs. Marilyn Anderson  
Roseland FL

*Hmmmm. Shims!? Perhaps you could be a little more explicit. The only shims I can think of would be the front end alignment shims. Properly done, a 900 should stay within the proper camber and castor specs for at least 30,000 miles unless the road surfaces you drive on are severely broken up. If the car does not handle as you would expect and you find it pulling in one direction or the other, don't blame the alignment. Have your service shop mount a different set of wheels and tires and see if the tracking ability is improved.*

I have owned my **1986 9000 Turbo 5** speed for about a year now and several minor problems have haunted me.

1) Starting at sunset and continuing through the night, the lamp and door indicator in the lower left corner of the instrument cluster comes on when I turn on

my right or left signal or when I apply the brake. The problem is intermittent but can usually be duplicated when turning on the signal indicator either left or right while holding the foot brake down. When this is done, the entire (yellow) outline of the car and both (red) back light indicators flash in tune with the indicator. All the external lights on the car function properly. This problem seems to indicate a bad ground that is backfeeding its way into the entire lamp fault detection system. Any solution?

2) I have a nagging bumping noise coming from the front of the car while going over small bumps in the road that sounds like a loose shock. Subsequent inspections of all bushings up front including stabilizer bar and shocks and pulling and pushing on almost anything that can be found reveals nothing. The car steers well and tire wear is normal.

3) Hard acceleration in either first or second gear yields an cat-like shriek from the engine compartment occurring only when the turbo pressure gauge is well in the yellow positive pressure zone. This problem comes and goes and is not repeatable.

4) My final and most recent problem is emissions related. During start-up whenever the engine is cold or already warm from previous driving lots of smoke is emitted from the tailpipe. At first I thought this was oil but the smoke lacks the typical blue hue and (2 cycle engine) smell. During normal driving on city or highway conditions the problem is not there approximately 95% of the time, but the other 5% of the time, I can fill up an entire intersection with smoke when accelerating from a red light. Is this injector related? Can it be from too rich a mixture if the oxygen sensor is malfunctioning intermittently?

Edward Belte  
Vienna VA

*1) There is indeed a ground problem that can be rectified by following the factory service advice and installing a new ground directly to the body where the lamp assembly studs are tightened. Clean all the bulbs with a contact cleaner while you're at it.*

*Sometimes even mismatched brands of bulbs will throw the failure lamp on.*

*2) Please see question and response number two.*

*3) There must be a tiny leak from one of the many vacuum or intake hoses at the manifold, turbo or the intercooler. Check to be sure there are no soft swollen vacuum hoses. They tend to make strange whistling and chattering noise when going from negative to positive pressure.*

*4) I think the turbo-charger seals are allowing oil to leak past into the exhaust stream. The turbo must be able to drain oil back into the sump by gravity. If there is positive pressure in the sump due to a defective vacuum hose or check valve, the oil may not drain properly and overwhelm the seals and blow smoke out the tailpipe.*

Recently, somebody broke into my '85 900S and evidently tried to force the shift lever out of the locked position. They were not able to steal the car, but I noticed that 1st gear isn't "straight ahead" as it should be. It is now "straight ahead and a little to the right." The other gears in the box select OK. What parts got bent, and how difficult is this to fix?

Bob Thomas  
Ho-Ho-Kus NJ

*The shifter may be the only thing bent. Undo the boot and the three screws that hold the shifter in its socket, clamp the shifter in a vise and simply bend it straight.*

We own a secondhand **900 Turbo**, an automatic that I use on a rural route for the U.S. Postal Service. The problem is, the key will not turn off all the way to the off position, and the key cannot be removed. I have heard that this problem had been addressed in a past issue of Nines. There is not a Saab dealer nor is there a Saab mechanic here in Chillicothe, so any time I have a question about a problem it costs me a long distance phone call. A small price to pay to have my Saab running properly, however, the answers I get are sometimes vague. Concerning this problem a mechanic

said, "Once you get the console cover off, the driver seat out, and the carpet pulled back, it will be obvious." Well, it's not!

Jack Robertson  
Chillicothe OH

*The shift selector lock is not functioning properly, either due to the selector cable improperly adjusted or the position of the console should be adjusted. Please consult a shop manual to make these critical adjustments. An improperly adjusted automatic trans selector cable can result in a fried trans in short order!*

I bought a **1976 99** with 4 speed trans. The car had been hit on the left front, and the trans was stuck in third gear. With a lot of manipulation I got it out of third, but now it is stuck in reverse. Is there a way to line up the shifting forks outside of removing the engine/trans from the body?

Reed Robinson  
Chino Valley AZ

*If the impact was severe enough to displace the engine, it will be difficult to get things lined up properly again. You may adjust fore and aft movement of the shift rod by loosening the three point nuts that hold*

*the shift console to the floor and sliding the whole assembly back and forth 'til you feel you have a happy medium.*

I own a **1991 9000**, and have been plagued by leaking roof seals. The dealer has treated the seals with Gleitmo 1665-V as directed by PSI bulletin 07/90-0014, which appeared in NINES under Service Subjects. My problem is that the squeaking reoccurs after several months, and I would rather not have to schedule service appointments with the dealer to retreat the seals. I have tried to purchase Gleitmo 1665-V from the dealer, but they tell me I can only buy a one liter can for \$82.00! Is there any other suitable lubricant I can use to control this problem and apply to the seals myself periodically?

K. E. Neumann  
Middletown CT

*Try using one of the "Armor-All" type dressings. I can't imagine it would do any harm.*

I'm about to buy a '93 900S convertible. Since this is the last year of the current 900 series, I'm interested in doing whatever I can to make this potential "classic" last 20

years. Short of putting it up on blocks or not driving it in the winter, any suggestions on how to give it the TLC necessary to let it see the year 2013?

Steve Stenstrom  
Summit NJ

*Keep all the fluids changed on a timely basis. Have it detailed by a reputable shop regularly, treating the leather and other soft parts to guard against wear & tear and UV damage. Have the latches and suspension hardware tightened annually and simply keep ahead of minor glitches before they become major problems.*

I have a **1985 base 900** 5-speed with 117k miles. I'm going to need new front rotors at the next pad change. Can I replace them with vented rotors from a Turbo?

My AC compressor is leaking and growling. After replacement, can the old one be rebuilt (like brake calipers)? Are specs in a service manual?

Will the wheels from later cars ('88 and later with lug bolts) fit an earlier car (pre '88 - lug nuts)? The accessory catalog says the 9000 Aero wheel (p/n 0244764) is "not intended for use on 900 models," yet the 1990 sales literature shows the SPG fitted with them. Do they fit or not?

Robert DiGregorio  
Bayside NY

*You cannot fit the thicker vented rotors without changing over to the applicable brake caliper.*

*Why not consider a used compressor from Dennis Sweeney or Goldwing among the used Saab parts sources here in NINES. A specialty air conditioning shop could conceivably overhaul the Sankyo compressor but I think a used one would be cheaper.*

*The later wheels will not fit up to the earlier 900 hubs. The reason Saab did not offer the 16" Aero wheel on the late SPGs is because of clearance problems with the suspension loaded. The SPG in the photo you saw probably has 15" wheels.*

## The Swedish Solution RECESSION BUSTERS

MANN Oil Filters .....	\$4.50
16-valve Timing Chain Tensioners, O.E. ....	\$29.95
99/900 Upper & Lower Ball Joints, TRW .....	\$24.50
99/900/9000 Inner & Outer C.V. Boot Kits .....	\$7.50
(Kits include clamps & grease)	
Bougicord O.E. Ignition wires for:	
8-valve "H" engine .....	\$31.95
16-valve 900 .....	\$44.50
All 9000 .....	\$49.75
9004 Headlight Bulbs .....	\$4.95
Front Brake Hardware Kit: 99/900 with solid rotors .....	\$11.95
(Kit contains 2 U-pins, rattle clips, springs & retention clips)	
Brake Master Cylinder, '87-on 900 .....	\$145.00
900 16-valve Drive Belt Kit .....	\$19.95
900 Drive Belt Kit, '84-on .....	\$19.95
9000 Drive Belt Kit (Serpentine & A/C belts) .....	\$29.95
Bosch Wiper Blades, 16", 900 .....	\$5.25 ea
20", 9000 .....	\$5.95 ea
9000CD Rear Decor Panels .....	\$89.95

**The Swedish Solution, 27999 Miles Road, Orange Village, Ohio 44022**  
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# Professional Perspective

## Buying Time

When you have your Saab repaired, how are you charged for labor? This column will explain the most common practices and the questions you can ask to know what you are paying for.

Shops charge either *Straight* (clock) time or *Flat Rate* time. Straight time, or hourly, means that you pay for the amount of hours expended on your car at the hourly rate posted. If the shop rate is \$50 per hour, you pay \$50 for each hour or part thereof that the mechanic works on your car. Seems pretty simple, right? At first glance you would think everyone should charge this way and you would be happy to pay on this basis. Follow along and see if you might change your mind.

Flat Rate is the suggested amount of time for a particular operation. There are several nationally known and recognized companies that publish books or computer CD ROM diskettes which have labor times for each operation on the car. We use the Chilton Flat Rate Manual. The Chilton manual describes how these times are arrived at:

"The time for each operation indicated in this manual is based on the independent judgement of Chilton automotive editors who have extensive automotive service experience." Among the factors they consider in determining Chilton Time are:

- 1) Timing the performance of operations.
- 2) Surveys of professional mechanics and automotive repair shops with respect to the time required to perform the operation.
- 3) The time allowed by Saab for its authorized dealers to perform specific operations on cars under warranty.
- 4) The consideration that the operations will be performed upon a car in used condition and in a shop with standard equipment.

The manual is published in an attempt to provide meaningful data to the auto service profession and its customers. The time is not intended for use as an indication of the actual time required to perform any of the operations indicated in any particular instance. Actual times to perform an operation will, of course, vary according to

such factors as the skill and motivation of the mechanic, working conditions and tools available, and the condition of the vehicle.

Now I have to warn you that many shops that use flat rate times modify them. Aha! There's the scam. Well, it works both ways. Shops that work only on Saabs soon realize that the editors of these books have more experience and more time input on the Chevrolet or Honda sections. Consequently we sometimes find mistakes that work in favor of the reputable businesses, and correct these in order to insure fairness to everyone. We could inflate all the times to insure higher income for the shop. There are no laws governing these things. It's between business and consumer. Now that we know how flat rate times are established, we will introduce another wrinkle.

*Menu, posted, or scheduled* are some of the terms that flat rate shops call the services they perform for which they don't use flat rate times. Let's say this flat rate shop charges \$50 per hour. The flat rate time for an oil change is 0.3 = \$15.00. Because there are service stations, Jiffy Lubes, Rapid Oil Changes, K-Mart, etc., competing for this service, a flat rate shop may post a price of \$15.95, including the oil and filter, even though the flat rate for the labor alone was \$15.00. This makes them competitive, even with those charging lower hourly rates. Flat rate shops could have none of these operations, or may have a menu with 20 or 30 such service operations listed. Most of these services will be low skill level services that require basic or no specialized tools or equipment. It should also be pointed out that many shops have a minimum labor charge, usually a half hour (0.5 hr).

According to the Chilton manual under Disc Brake Pad Renew, flat rate time to replace front pads on a 900 is 1.2 hours. But Saab changed the brakes on 900s beginning with 1988 models, so we have modified the time for the front of a 1988 and newer 900 to 0.8 hours. Would a non-Saab repair shop know the difference? You could end up paying more due to their lack of knowledge.

A \$50 flat rate shop at 0.8 hours would charge \$40 labor to install new pads on a later 900. It wouldn't matter if the technician was very quick and did it in 0.4 hours or had a headache and took 1.2 hours, the customer would still pay \$40. On the other hand, if the technician with a headache worked in a by-the-hour shop, the labor would be \$60. The question then is why wouldn't you pay 0.4 in the hourly shop or \$20. You might. The real answer is that the motivated, well

educated mechanic has spent his time and money on special tools and training. To recoup that, he must be rewarded by either very high hourly pay or by some type of commission for working faster than the clock. If the technician has no incentive to work more efficiently, he probably won't. Consequently you may pay the same or more using the hourly rate method.

In the flat rate situation where each employee (if trained and motivated properly) does more labor than clock time every day, his employer can then afford new and better equipment and the necessary training and technology to make the better repairs.

As a "service purchaser" you need to ask these questions when you contact a potential service shop:

- 1) Do you charge flat rate or hourly?
- 2) What is the rate per hour, flat or hourly?
- 3) Do you have menu items? What are they?
- 4) What is the flat rate for the job I need done and what does it include? In our brake pad installation example, does it include adjusting emergency brake? (No, because cables on later 900s go to the rear wheels, not to the front!)
- 5) Do you have a minimum labor charge? What is it?

If you have any questions or want to verify the cost, call another shop with the same questions. Here's what you may find.

	Shop A	Shop B
Flat rate/hr	\$50	\$35
Install brake pads	0.8 hr	1.2 hr
Labor	\$40	\$42

So which shop is *really* cheaper? You now have to make a choice as to who will do the work. We hope you will do business with people you trust and when a question arises, that you will ask about any facet of the billing. The better equipped and better trained technician should be your first choice. If he can properly perform the operation, and beat the flat rate times you have found a first rate technician. This should be your goal when purchasing service for your beloved Saab.

Chuck Andrews  
Andrews, Inc.  
Princeton MN

Next issue: EPA fines, exhaust, and if space permits, a new service development for power steering racks.

# Service Subjects from Saab

## Electrically-Heated Seats with Rheostat-Controlled Driver's Seat

Application: M91-92 900 Models  
PSI 01/93-0297, Sec. 3/Pg. 37

In cars with seats having velour upholstery the rheostat for the driver's seat heating pad may be damaged due to a discharge of static electricity.

This damage and the build-up of an electrostatic charge may be prevented by connecting the heating pad to ground. The following repair should be performed anytime a rheostat is being replaced.

### Cars affected:

900 model Saabs with velour upholstery and electrically-heated front seats with rheostat-controlled driver's seat.

### Parts:

Connector Sleeve 71 55 203  
Cable Tie 79 71 880  
Rheostat (if necessary) 95 18 820

### Action:

Connect the heating pad to ground as follows:

1. Locate the 3-pole connector of the seat switch for the heating pad, which is located under the passenger's seat. The seat switch is to be bypassed. (Some cars also have a 3-pole connector for the seat switch which operates the seat-belt warning.)

### NOTE

To be sure of locating the right connector, use an ohmmeter or a buzzer to check that an electrical connection exists between pin 5 of the 8-pole connector under the passenger's seat and the 3-pole connector in question. When measuring with an ohmmeter, the 8-pole connector must be unplugged.

### NOTE

Once you have bypassed the seat switch, the seat heater will function as if someone is always sitting in the seat. When you turn the key on, the passenger seat heater will power up for less than a minute and then the thermistor will shut it off.

2. Unplug the 3-pole connector and cut off both leads before the connector.

3. Crimp the two ends together, using a connector sleeve (P/N 71 55 203) to bypass the seat switch. Secure the wiring using a cable tie (P/N 79 71 880).

## Window Motor Fuses

Application: 1992-93 9000 Models  
PSI 01/93-0299, Sec. 8/Pg. 57

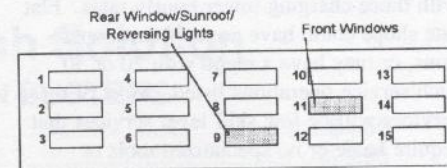
It is possible under certain operating conditions (i.e. when using the "one-touch" feature on both front windows at the same time or when operating both rear windows with the vehicle in reverse) for the 25 amp window motor fuses to blow. Therefore, on all 1992 and 1993 9000 models these fuses (positions 9 and 11) must be replaced with 30 amp fuses.

### Parts:

30 amp fuse 79 74 678

### Action:

Replace both 25 amp window motor fuses (positions 9 and 11 on the fuse panel) with 30 amp fuses.



Window Fuse Location

### NOTE

The circuit is capable of carrying this higher current without any negative effects.

## 900 Hood Seal

Application: 1990-900 Models  
PSI 02/93-0304, Sec. 8/Pg. 58

A new design seal between the hood and the bulkhead was introduced on all 900 models effective model year 1990. However, it is possible that this new style seal could result in squeaking noises from this area. The seal may be replaced with the older design, P/N 92 82 104, to eliminate the noises.

### Cars Affected:

900, 1990-

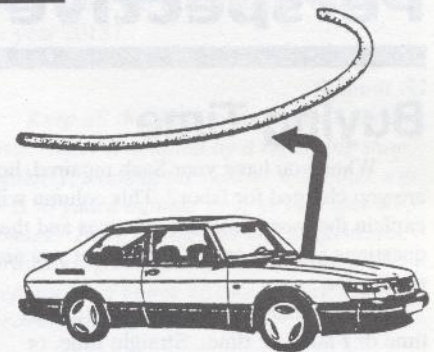


Figure 1. Seal at hood and bulkhead

### Parts:

Seal 92 82 104

### Action:

If squeaking or rubbing noises are being generated in the hood/bulkhead area, replace the seal.

## Radiator Fan Time-Delay Relay

Application: 1989-900 and 9000 Models  
PSI 02/93-0305, Sec. 3/Pg. 38  
Supersedes 06/92-0218 (NINES, #215)

On certain 900 and 9000 cars, the fan may not shut off after the 10 minute cool down period and in some cases causes the battery to go dead. Therefore, production of the time-delay relay, P/N 95 63 339, for the radiator fan has been discontinued. It is superseded by the standard relay, P/N 85 22 310. On 1990- models, these relays are fully interchangeable and the standard relay, P/N 85 22 310, should be installed as a replacement part, when needed.

### NOTE

Some 1989 9000 models do not have the jumper connection which supplies the relay coil with operating current on terminal 86. It is easy to check whether or not a car has this jumper connection by following the procedure described below. If a standard relay is fitted to a car without this jumper, the fan will not function and the engine will overheat.

Saab Parts and Service Information updates are provided to NINES as a courtesy to Saab owners by Daniel L. David, General Manager, Service and Parts, Saab Cars USA, Inc.



**Cars Affected:**

900 Models, VIN M2500000-  
VIN M5010548  
VIN M7019457-

9000 Models, VIN M1020229-

**Parts:**

Standard relay 85 22 310

The following parts are for the 9000 Only

- Cable, yellow, 0.5mm, 50-60mm long
- Cable lug, 2.5-4.0mm 91 20 791
- Cable lug, 0.5-1.0mm 91 20 775
- Disassembly tool, 85 80 094 (or similar)
- Crimping pliers, 30 14 222 (or similar)

**Action:**

900 Models

For location of the time delay relay, refer to Figure 1.

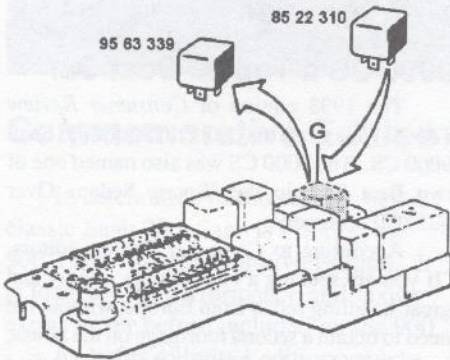


Figure 1. Time-Delay Relay - 900

Replace old time-delay relay with new standard relay, as needed. No modifications are required.

9000 Models

Check for Jumper, Figure 2.

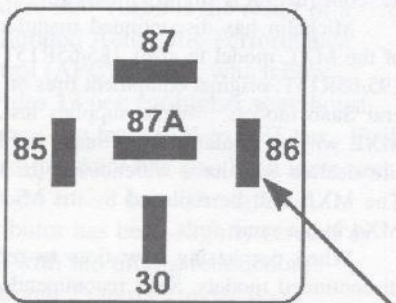


Figure 2. Check for Jumper (9000)

Check whether a cable lug is fitted at relay position E for the radiator fan (low speed), terminal 86. If so, fit a new standard relay. If no cable lug is fitted, a jumper connection must be arranged between terminals 30 and 86 as described below.

**Installation Procedures - 9000**

1. Disconnect the positive battery cable from the battery.
2. Remove the front relay and fuse board from the protective box.
3. Withdraw the wiring harness by a sufficient amount to allow access to the underside of the relay board, Figure 3.

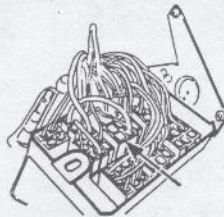


Figure 3. Underside of Relay Board (9000)

4. Disconnect the yellow 4.0mm cable at relay position E, terminal 30.
5. Cut the cable as close as possible to the cable lug and strip off 4-5mm of the insulation.
6. Crimp the thick yellow 4.0mm cable and a new section of thin yellow 0.5mm cable together in the same cable lug, P/N 91 20 791, Figure 4.
7. Crimp the other end of the thin yellow 0.5mm cable in the cable lug P/N 91 20 775, Figure 4.

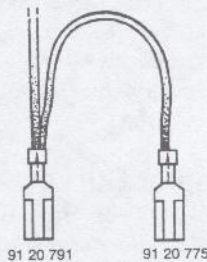


Figure 4. Fit the Cable Lugs (9000)

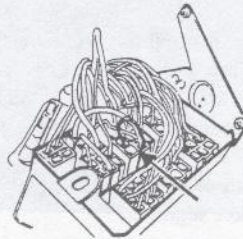
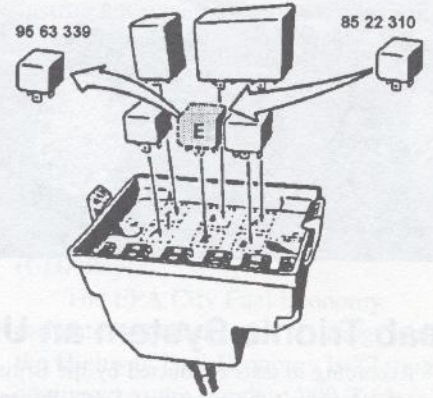


Figure 5. Fit Jumper to Underside of Relay Board (9000)

8. Fit the cable lug with the two cables to terminal 30 and the cable lug with the thin cable to terminal 86 on relay board position E, Figure 5.
9. Make sure that the cable lugs snap securely into position on the relay board.



10. Refit the fuse and relay board in the protective box and install relay, P/N 85 22 310, at position E, Figure 6.
11. Check that the cooling system fan works properly.

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## SAAB NEWS



### Saab Trionic System an Urban Air Purifier?

According to tests conducted by the British Government's Warren Spring environmental research laboratory, the answer is "Yes!" Recent tests conducted while driving in London traffic concluded that hydrocarbon and nitrogen oxide levels in the 9000 CS's exhaust were lower than in the surrounding ambient air. Ivan Farrow, head of the vehicle emissions group at the lab stated: "The Saab is almost certainly the cleanest production car we have ever tested."

In the first sample, the hydrocarbon emission was measured at 17 parts per million (ppm) compared with 17.3 ppm in the atmosphere. Nitrogen oxide was measured at 2.8 ppm in the ambient air, while the Saab measured zero.

In the second test, the hydrocarbon output was eight ppm compared with 8.14 ppm in the air, while nitrogen oxide levels fell from 1.14 ppm in the atmosphere to 0.70 ppm in the car's exhaust. Though carbon monoxide emissions in both tests were higher than in the ambient air, Mr. Farrow thought that if the test were taken on a smoggy day, the Saab could have produced better readings than in the atmosphere.

Saab has also produced a short video that graphically illustrates the exhaust purifying capabilities of the Trionic Engine Management system. The two-and-a-half minute video compares the emissions of a 1950 SAAB 92—powered by a 2-stroke engine with no emission controls—with the clean burning Trionic system on a 1993 Saab 9000 CS Turbo. A hose is then run directly from the exhaust pipe of the 92 into the intake of the 9000. In about 20 seconds, the Trionic system analyzes the heavily polluted inlet charge and adjusts the fuel mixture and ignition so that the emission levels on the 9000 are soon back to their standard low levels.

A 32-bit microprocessor in the Trionic system monitors and controls the ignition timing, fuel metering and turbo boost at a rate of two million calculations per second.

### Saab Leads All European Marques in Dealer Survey

Saab outscored and led all European automakers—including Mercedes-Benz, BMW, Volvo and Audi—in the Dealer Satisfaction Index (DSI), and ranked sixth overall among 37 manufacturers indexed in the 1992 J.D. Power Dealer Attitude Survey. Saab dealer satisfaction levels also exceeded the norm, culminating in a 107-point rating compared to the industry average of 99 points. Dealers expressed their satisfaction with a variety of business categories, including perceived financial investment excellence, current and future profitability, manufacturer-dealer relationship, gross profit per vehicle, service and sales support and vehicle supply.

Jan Jonsson, vice president, sales and operations, Saab Cars USA, Inc., commended dealers for reaffirming Saab's product strength and appeal. "A proactive relationship with our U.S. dealer body has always been one of our highest priorities," he stressed, "because a high level of dealer satisfaction ultimately creates an even higher level of customer satisfaction—a non-negotiable objective in our tremendously competitive market segment."

### Fleming Replaces Halbach as VP Sales/Marketing

John M. Fleming, 62, has been appointed vice president, sales and marketing for Saab Automobile AB, replacing Hans Halbach who has been appointed to a position with General Motors. Fleming will also serve as Chairman of Saab Cars USA, Inc.

Fleming was born in the United States and has over 25 years experience in the international automotive industry. Eleven of those years were spent in Europe, where he served as Director of Sales for Adam Opel AG, Chairman and Managing Director of Vauxhall Motors Limited, and Vice President of Sales, Service and Parts for General Motors-Europe AG. He has also been responsible for worldwide marketing and product planning for Cadillac.

Halbach has been appointed General Director of Future Strategies for North American Export Sales and Vice President, General Motors Overseas Corporation in Detroit.

### 9000 CS a Top 40 Best Car

The 1993 edition of *Consumer Review Top 40 New Cars* magazine includes the Saab 9000 CS. The 9000 CS was also named one of two Best Cars in the "Sports Sedans Over \$25,000" category.

According to *Consumer Review* editors, "If you are seeking a comfortable, roomy and great-handling sedan from Europe, without the need to obtain a second mortgage on the house, look no further. You'd be hard pressed to find a car as enjoyable as the Saab 9000 for the money."

### Saab OE tires discontinued, replacements listed

Pirelli has discontinued the P700 in the size used by the Saab 9000 Turbo, 205/50ZR16. The recommended replacement tire is the Pirelli P700Z in the same size. The P700Z has the same physical dimensions as the P700, but the construction is slightly different.

Michelin has discontinued manufacture of the MXL model in sizes 185/65R15T and 195/65R15T, original equipment tires on several Saab models. While supplies last, the MXL will be available from Saab, and from tire dealers who have warehoused the tires. The MXL will be replaced by the Michelin MX4 in the same sizes.

When purchasing new tires to replace discontinued models, Saab recommends that tires should be replaced in pairs on the same axle.



## Commemorative Edition 900 Turbo is also Limited

In celebration of the success of the classic Saab 900, Saab is offering the 900 Turbo Commemorative Edition. It is loaded with performance and luxury extras never before included on the 900.

As befits a limited edition vehicle--only 325 will be available--there are no options on the Commemorative Edition, and it doesn't need any. With its exclusive black paint and tan leather upholstery, the Commemorative Edition is the quintessential Saab.

At 185 horsepower, the 900 Turbo Commemorative Edition is the highest output engine ever offered in the Saab 900. The 25 horsepower gain over the standard 900 Turbo is the result of a recalibrated Automatic Performance Control (APC) system, which now provides 13 percent higher peak boost pressure--up from 0.75 to 0.85 bar. Fuel control pressure has also been increased from 2.5 to 2.8 bar. The ignition distributor has been slightly revised as well, with the timing retarded an additional 2 degrees under boost conditions.

The suspension has also been tuned for more performance with shorter and stiffer (80% front, 20% rear) springs and firmer shocks (35% front, 25% rear). As a result, ride height is reduced (16mm front, 10mm rear).



*The luxurious interior of the Commemorative Edition 900 features tan leather seating and an exclusive wooden dash facia.*

To make best use of the added performance, this special 900 Turbo is only available with a manual 5-speed transmission.

Aesthetic benefits include special alloy wheels with polished outer rims and gray asymmetric centers. The instrument panel facia is made of wood, the first time ever in a Saab 900. Front door panels feature leather caps and arm rests.

Each of the Commemorative Edition 900s will be numbered with a special plaque on the center console, beneath the standard Compact Disc (CD) player.

The EPA City Fuel Economy estimate is unchanged at 21 mpg, while the Highway Fuel Economy is 27 mpg, compared to the standard 900 Turbo's 20 mpg.

The Saab 900 Turbo Commemorative Edition carries a suggested retail price of \$32,605. Like every 1993 Saab, the 900 Turbo Commemorative Edition features a standard driver side airbag and anti-lock brakes, and is backed by a 6-year/80,000 mile Major Systems warranty, including bumper-to-bumper no-deductible coverage and Saab Roadside Assistance for 3-years/40,000 miles.

## Cracked A-arms prompt 900 recall in Australia

"The recall of virtually all Saab 900 models from 1979 to mid-1992 by Saab Automobile Australia Pty. Limited for the replacement of both lower control arms (wishbones) in the front suspension, has many Saab owners wondering as to the cause of this problem.

"This problem is only evident in Australia and Japan, and is not known in Saab's biggest markets, the United States of America and the United Kingdom.

"Saab engineers who visited Australia discovered that the camber on our roads tended to get steeper closer to the edge of the road, while in other countries the camber was more even and this along with steeper gutters in driveways and the multi-level car park accesses have all put strain on the front suspension and lower wishbones, particularly causing small cracks to appear in the lower control arm over a period of time.

"All cases of fractured lower control arms which have been reported to Saab have broken while the car was reversing on a lock, and although this has caused front suspension to collapse, there have been no accidents or injuries reported.

"There is no need for Saab owners to panic; if the cases of broken control arms was taken as a percentage of total number of cars sold, it would be rather insignificant."

taken from *Saab Torque*,  
The Saab Club of NSW Inc. Newsletter  
Jan-Feb 1993

Failure of the lower control arms, also called A-arms or wishbones, on Saab 900s in the U.S. market is very rare, but it has happened. A survey of independent Saab repair shops indicates very few incidents of a lower control arm breaking, and those seem to be only in certain areas of the country. Most shops indicated they had *never* seen a failure of the lower arm, while some indicated they had seen fewer than five over the past ten years and then only on early 900s with very high mileage (100,000+ miles). Most shops that had seen more than a few cracked A-arms were on the West Coast, in California and Washington. This small number is certainly not enough to institute a Recall nor a Service Campaign.

Regulations for recall of vehicles are different in Australia and Japan than they are in the United States. As stated above, the way roads are built down under may be a contributing factor. It should also be noted that Saabs

marketed in the Australian and Japanese markets are different from those sold here as they are right-hand drive.

The fracture makes itself known while the car is backing and turning at the same time, causing the suspension to collapse. The crack or fracture occurs at the joint where the rear leg of the arm connects to the pivot at the body. When the lower suspension drops out of place, the tripod at the transmission may also be damaged. Since the car is traveling at very low speed, collision with another object or injury to the occupants has not occurred.

Saab Club member Paul Florance relates this experience on an '86 900 with over 100,000 miles: While backing up at slow speed, the left A-frame broke near the base of the cross on the A by the bolt closest to the driver. It also tore the inner boot and broke the tripod. A friend had the same thing happen to his '80 900 at 80,000.

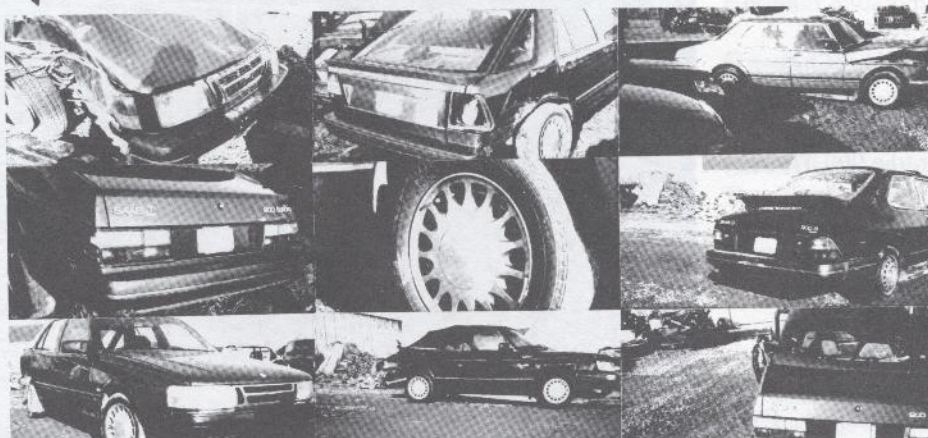
Though the phenomenon is little known, it would not hurt to have an inspection of the rear leg of both lower control arms by a mechanic familiar with Saabs, particularly on older, high mileage 900s.

Tim Winker



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## Saved by the Belt

*We've all heard tales of how a Saab saved the lives of its occupants while giving up its own. The first letter hits very close to home for your editor. TW*

### Birth and Death of a Saab

This story begins in August 1987 in Gothenburg, Sweden. It ends in August 1992 in the median of I-90 in Southwest Minnesota. The first date has significance; the second, none in particular.

If you remember, in 1987 Saab held a Jubilee Day in Trollhättan on their 50th Anniversary. I had other business in Europe that year, so I decided to double the pleasure. With the help of Paul Florance, the staff at Saab headquarters, and your erstwhile editor (yes, we are related) I made arrangements to attend the Jubilee. It also seemed appropriate that I have a suitable vehicle for my foreign odyssey. And what could be more suitable than a Saab? A couple of days before the Jubilee I picked up a Rose Quartz 900 Turbo at European Delivery in Gothenburg and we were on our way.

The itinerary included Stockholm, Trollhättan, Copenhagen, Berlin, Munich and on to our other primary destination, Stubenberg am See in Eastern Austria. After side trips to Graz, Vienna and Northern Yugoslavia, we beat a path back to Frankfurt for our separate conveyances back to the States. This was my second experience with European Delivery (third, if you count VWs) and, while not perfect, they were highly satisfactory.

The middle five years of the story are of no special consequence. Just the same old day-to-day joy of commanding a precision piece of technological equipment over the roadways that is already familiar to you (actually, my wife, Marlene, got most of those years; except for long trips, I was relegated to the Jeep or my 10-speed bicycle). The story now jumps to last August. Our beautiful 900 is no more! It gave its life to save ours.

August 16th. It was a normal sunny summer Sunday afternoon. Marlene and I were returning home after a visit with our kids in Minneapolis. Westbound on Interstate 90 and with only 40 miles remaining to Sioux Falls, we encountered the familiar warning signs alerting us to the umpteenth construction zone of the day: "Right lane closed, merge left." Actual construction was still about a mile ahead, but two cars, clumped together in front of us,



had already slowed down.

With ample time available, we maintained highway speed (65 to 70) and moved to the left lane to pass. We had just cleared the rear car when Front Guy decided he wanted the left lane. Overtaking at a speed differential of at least 10 MPH, I had less than a second and a half to avoid a collision (instinct told me what to do; post accident calculations told me why). The plan wasn't too complicated. Just touch the brakes a tad, get on to the shoulder and go around him. In a very similar situation this maneuver had worked for me a couple of decades earlier.

It wasn't to be this time. Perhaps it was too much pressure on the brake; perhaps too much gravel on the shoulder. Whatever, the car lost its footing immediately and started an uncontrollable skid into the shallow median. The ensuing period of time until we came to rest seemed interminable, but a calculation puts it at about 6 to 7 seconds. What went on during those few seconds? What does one think about? Answer: A lot!

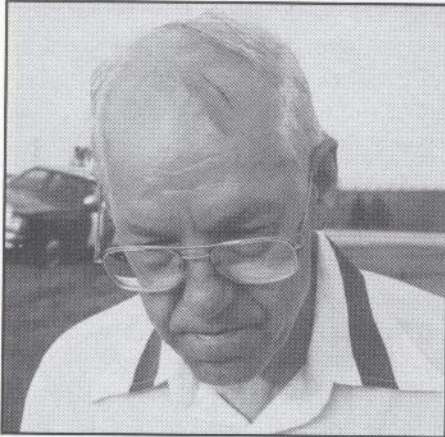
My very first thought, while the skid was still developing, was "Damn, there is likely to be damage. Now I'll have to worry about accident reports and insurance claims." By the time we were at the lowest point in the median, we were still upright, leading to a ray of hope. But as soon as we started on the upslope the wheels dug in and flipped us, even though we had slowed greatly. Fleeting thought as we went over the first time: "No cracks in any of the glass. Maybe this won't be too bad after all."

What happened after the first full roll I

can't explain. There was another half roll, and at the same time a full end-for-end maneuver (I think I have seen that done in Olympic diving). When everything stopped moving, we were upside-down, crosswise to the highway, with the tail on the eastbound shoulder. The first thing on both of our minds was "Turn off the engine." I think it was still running. Can't be sure. Next: "OK, we don't seem to be broken up, how do we get out of here." "Doors are undoubtedly jammed, have to open the windows and crawl out." "Can't open the windows with the ignition off. Turn the key back on." I really believe the engine started again. Can't be sure.

By this time an eastbound traveller had stopped to (1) see if anyone was alive, and (2) offer assistance if called for. The first thing she did was - surprise - open a door. I think she was equally surprised; no blood, no screams. Marlene carefully unlatched herself and eased out onto the grass. In due time I followed and began to survey the situation. As for Marlene, there were no visible marks. Bruises would show up later. I had mild abrasions on the forehead, but no bleeding.

As for the other victim, it certainly didn't look as bad as it might have. Both doors opened, side glass was unblemished, the windshield had a very small shatter in one corner, but it was still structural. The hatch had sprung open and was torn almost off, and the rear glass was laying separately on the grass, at least a million pieces worth. The impressive thing about the body was that nowhere was it crushed. The passenger



Bruises were the only injuries.

cavity was totally intact. Sure, all the sheetmetal was wrinkled or warped, the wheel mounts were distorted, and the bumpers dislodged. And indeed, the insurance company totalled it. But it did what it was supposed to do: Save the occupants.

After some time for reflection, there is one thing that puzzles me. At no time during the event do I remember any feeling of fear or terror. Maybe there wasn't time. Maybe Saab's reputation for safety is so strong it eclipsed the fear. Maybe this sort of thing is so common and so benign in movies and TV that we become immune to the tragic possibilities (now that *does* scare me). In any case we owe our well-being, and maybe our lives to Saabs and seat belts. Only a few drivers have that first benefit. Everyone has the second option and I can't emphasize strongly enough to make use of it.

*Postscript 1:* When the salvage truck came to claim the carcass a couple of weeks later, the driver put the key in the ignition, started the engine and drove it onto the hauler, tires against sheetmetal notwithstanding.

*Postscript 2:* Naturally, we could only replace one Saab with another. We were lucky to quickly find a nearly identical model, two vintages younger than the dear, departed one.

*Postscript 3:* I had one prejudice reinforced in this accident. I am basically against air bags. They give a false sense of security which can lead to ignoring seat belts. In this accident air bags would have been useless at best and hazardous at worst. Relying on air bags alone would very possibly have been fatal.

Uncle Jim Winker  
Sioux Falls, SD

## The Buck Stops Here... at the windshield

Although living in Minnesota offers a Saab owner the opportunity to experience the truly incredible winter performance and handling characteristics of one's vehicle in a snowy climate, it does have its drawbacks. I recently had the unfortunate experience of a deer deciding that he needed to occupy the same spatial area as my '86 900 Turbo. Needless to say, at 65 MPH and weighing in at 3500 lbs., the 200 lb. creature didn't stand a chance of coming out of this better than my 900, but the beast certainly tried to inflict as much damage to me, my dog and my car as possible. The Turbo sustained substantial injury, but more importantly, both canine and homosapien were undamaged with the exception of some frayed nerves.

Both officers on the scene indicated that I was fortunate to have been driving a Saab. Specifically pointing to the fact that had I been driving most any other automobile, "Buck" probably would have ended up as a passenger in my car. You hear about the safety features of Saabs, but seeing my car and hearing those comments from some individuals who have seen this type of incident before, proved it to me first hand.

The insurance company didn't total it, so off to Andrews Inc. of Princeton my car went. I had purchased the car there over two years ago and have had no one other than myself or Andrews touch my Swedish Wonder since. It is over a 75-mile drive for me to get there, but when you find the perfect shop, even a four hour drive wouldn't seem too long.

Their body work is artfully accomplished. Chuck Andrews is a virtual Michelangelo of the Saab body and shell. Don and the others in the service department are thorough and experienced, and have always diagnosed and corrected any problems efficiently. During this most recent deer repair episode, Dave, who works in the parts area, offered advice concerning how to deal with the insurance company, and has always been a pleasure to talk with.

In a nutshell, the guys at Andrews' are some of the most personable, honest, and knowledgeable individuals I have ever done business with. You can bet I will continue to make the journey to see them.

Todd A. Gates  
Apple Valley MN

P.S. It's truly amazing how well a deer fits in the back of a 3-door 900. Would anybody like some venison?

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Author John Gardner poses with the real life result of his imagination, James Bond's Saab 900 Turbo.

## Shaken, not stirred

Nope, I'm not talking about a drive through the potholes of Chicago. Those illustrious words could only be those of one man. Field agent for the British SIS, Special double O prefix, Number 7. Or to the pedestrian person — "Bond, James Bond". What do James Bond and Saab have in common you might ask — well, would you believe John Gardner, author.

Mr. Gardner picks up the legend of James Bond where the creator Ian Fleming left off (with the blessing of the holders of the James Bond copyright), except with a pleasant twist that is sure to hearten reading fans of 007 and Saab, all in one. That can't be said of arch rival SPECTRE or its mastermind, Blofeld. For them Bond is only bad news.

In the early 80's, Bond was resurrected by Mr. Gardner in License Renewed, with a trusty new steed of Swedish extraction, a Saab 900 Turbo. It seems that Mr. Bond has been spurred by time and events to move forward, cutting back on his consumption of alcohol, switching to low tar cigarettes and leaving the Bentley behind, along

with his collection of Fleetwood Mac on 8 track. Heck, his new mount, the 900, even runs on gasohol if required.

Of course, Bond's 900 is not exactly factory, especially after Q-branch is done with it. From a remote starter (to check for bombs) to tear gas at all four wheels, plus the required gun ports, armour plating, bullet-proof glass and hidden compartments for miscellaneous weaponry. Gone is Bond's PPK, replaced by a Ruger Super Redhawk .44 Magnum that is not prone to jamming. But Bond's Saab is. Jamming, that is, in the sense of flying... chewing tarmac... hauling a—. You get the idea.

In License Renewed (1981), Commander Bond puts his 900 to the test in more ways than one. From an attempted escape of a Scottish castle in the dead of night; driving with the aid of Nitevision Goggles, to being chased by a BMW M1 and assaulted by a helicopter. Atlas, the Saab, though a mighty steed — Naw. You gotta read the book. I hate people that give away the ending.

The 900 is restored to its former self and then some in For Special Services, and christened "the Silver Beast."

Added to the Beast are: increased fuel line pressure, a kick up in the boost, a rally conversion kit, water injection, plus a fire detection/suppression system making this 900 a 180 mph *autobahn* screamer. This time the Saab itself is in for a treat. The Beast journeys to the U.S. (still with right-hand drive) traversing a cross country trail leading to an estate in Texas that requires a car-carrying monorail to gain entrance. There the stage is set for a "local" Texas-style Grand Prix. The turbo power of the Saab against the 60's muscle of a 350cid Ford Mustang Shelby-American GT (not exactly stock to say the least — *et tu turbo?*), with a cool million or nada resting on the outcome. Bond, of course, has the pleasure of air conditioning during the warm-up laps. This course is tough, from a flat-out straight, to a Z-bend, to a chicane with a wicked hump at the end that puts the vehicles airborne in a heartbeat. Sound interesting? Oh yeah.

One feature on Bond's 900 I found of personal appeal—an aircraft landing light hidden behind the license plate. Now wouldn't that be handy for tailgaters or those drivers with cockeyed or constant high beams?

The Silver Beast returns in Ice-breaker (1983), rigged with advanced Bondian devices from Q creating a unique (except N.Y. or L.A. perhaps) Saab. Rigged with Anti-Intruder & Tamper Alarm Switches and equipped with the Heads-Up-Display (HUD) from a Saab 37 Viggen jet, plus tiny radar sensors for detecting snow banks at speed, this Saab is meant to fly. On the ground — and it does. From playing a deadly, high-speed chess game with three formidable snowplows, to racing between walls of ice at excessive speed, this is still a Saab as us common people know it. Bond is in good hands from Saab's icy winter driving course near the Finnish ski resort of Rovaniemi, to the comfortable retreats of Saab's winter driving HQ at Ounasvaara Polar Hotel.

Who would provide Mr. Bond with the techniques to drive the Silver Beast? None other than your friend and mine, a





In response to John Gardner's made-up though plausible modifications to a Saab 900 Turbo, Saab converted a real 900 Turbo to feature the options that a fictional secret agent in the British SIS would require. This 900 Turbo was also supposed to have been used in a film version of *License Renewed*, which was scheduled for 1982 but apparently never made. The James Bond 900 Turbo now resides in the Saab Car Museum in Trollhattan, Sweden.

The modifications made to the 007 Saab 900 Turbo:

1. Tear gas ports
2. Remote control electrical system and starter
3. Gun ports
4. Front and rear ramming bumpers
5. Portable oxygen system
6. Hidden compartments
7. Built-in "debugging" system with light indicator
8. Bullet proof driver's side window (hit by machine gun bullets)
9. "Security blanket"
10. Dummy night vision goggles



Tear gas dispensing system, demonstrated in downtown Stockholm, Sweden.

certain Mr. Erik Carlsson, a man of no small standing in the world of Saab and auto rallying to say the very least.

What of the creature comforts? Though Mr. Bond does enjoy the "adjustable seating" over the long miles, it's what's inside that really counts to someone licensed to kill and not wanting to be killed (isn't that why James drives a Saab?) Shall we examine the secret compartments? Why not? No agent should be without his or her hide-away .44, nor should they work in the field without six stun grenades, plus L2A2 hand-bombs cleverly hidden at hand. The hatch is not wasted either. It contains; "the spade; two boxes of field rations; extra flares; and a large Schermuly Pains-Wessex Speedline line-throwing pack..." And still with room for a sofa.

However, the main comfort to Mr. Bond must be this note found in the 900: "Good Luck Whatever You're Doing — Remember what I've taught you about the left foot!!! Erik" And to think that all these years the main trouble I have is with my right one. That and the hard working CHP. I just wish my insurance company wasn't so interested in my anatomy and how I use it.

So pick up a book on a cold winter afternoon and enjoy... Mr. Bond in action behind the wheel of his Saab.

*Paul Florance*

#### **007 books by John Gardner**

License Renewed\*  
 For Special Services\*  
 Icebreaker\*  
 Role of Honor  
 Nobody Lives Forever  
 No Deals, Mr. Bond  
 Licence To Kill  
 Win, Lose or Die  
 Scorpius

\* features the 007 Saab

## New Books on Saab

Two new books featuring Saab cars have recently been published. Rolf Bleeker's **The Spirit of Saab** has been translated from the original German and is now available in the United States, and **Road & Track on Saab** has been updated to include articles published from 1972-1992.

**The Spirit of Saab** is less of a history and more a collection of vignettes to illustrate how Saab is not just another automobile, but an extension of a way of life. As Bleeker states in the introduction: "...take a seat in a mass production car and afterwards in a Saab, and you will know exactly what I am talking about." Much of the book is interviews with the people who have worked for and with Saab over the past forty-odd years; the little stories shared among people with a common interest, the type usually told at a party or over drinks, but these stories are from the likes of Erik Carlsson, Bob Sinclair, Ralph Millet or Len Lonnegren.

The latest version of **Road & Track on Saab** has dropped the published tests on the 2-stroke and V4 models in favor of later 900 and 9000 impressions. The new book begins

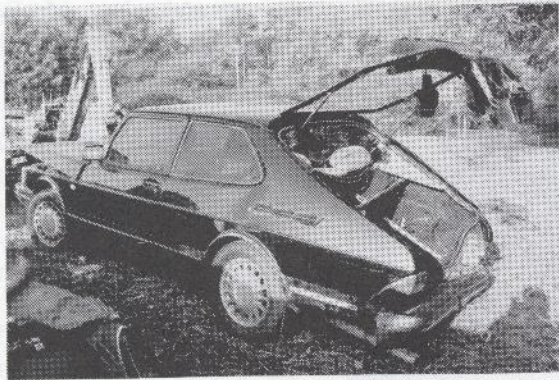


Saab Friction Tester shares the spotlight with a Saab 340 at an air show in Kentucky. Photo by David Yee.

with 1972 road tests of the 1.85-liter Saab 99 and the Sonett III, and adds the magazine's stories on the Saab EV-1 Experimental Vehicle, the Long Run record-breaking endurance challenge, and a retrospective on the Saab 96 that Erik Carlsson drove to victory in the 1963 Monte Carlo Rally. Over

a third of the new book is pieces that were not in the earlier version of **Road & Track on Saab**, which covered 1955-1985. The latest publication essentially covers the era of the 16-valve engine. Also included are road tests and impressions of the 9000 which were not in the earlier book.

## 900 - 9000



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# 1992 Index

This index covers articles published in NINES, issues 210-217 (Jan - Dec 92). It does not include news items or editorial comments.

Since the 99 and 900 models used many of the same systems and components, articles that pertain to the 99 model are found under **99 and 900**. Those that relate only to the 900 are listed under **900 only**. Articles on the 99 Turbo will be found under **900 only**.

The issue number and page number are given after the subject of the article.

(Klinik) = Doktor Nio's Saab Klinik  
(Serv) = Service Subjects from Saab

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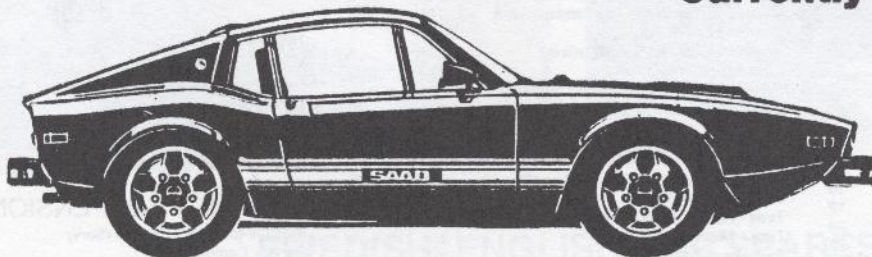
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# SAAB 93

## Registration Form

Please fill out the form below and total up the registration fees.

We are asking for this information to make it easier to create name tags for all attendees, plan parking, coordinate activities, and allocate space.

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Address \_\_\_\_\_

City \_\_\_\_\_ State/Province \_\_\_\_\_ Zip/Post Code \_\_\_\_\_

Evening Phone (incl area code) \_\_\_\_\_

Other adults in your party \_\_\_\_\_

Children's names (if attending) \_\_\_\_\_ Ages \_\_\_\_\_

Total Number of adults \_\_\_\_\_ @ \$125.00\* = \_\_\_\_\_

**\*Pre-registrations must be in by July 17, 1993 (\$140 at the door!)**

Total number of children \_\_\_\_\_ @ \$95.00 each (separate bed) = \_\_\_\_\_

\_\_\_\_\_ @ \$40 over age 4 in your room = \_\_\_\_\_

Total Number of adults for Convention only \_\_\_\_\_ @ \$65 each = \_\_\_\_\_

(Check here for hotel list) \_\_\_\_\_

Single Occupancy \_\_\_\_\_ @ \$10 each = \_\_\_\_\_

(Rooms are double occupancy. If you wish to share with someone specific, please indicate on the back.)

Total Registration fees. \_\_\_\_\_

We are planning several activities during the convention, please check off those that you think you would probably participate in:

Autocross \_\_\_\_\_ \$5 extra fee.

Rally \_\_\_\_\_ No extra charge

Concours \_\_\_\_\_ No extra charge

Swap meet space \_\_\_\_\_ \$20 extra fee

<p>What type of Saab do you think you will be driving to the convention? _____</p> <p>(We won't hold you to it!) Other drivers should list their cars above, next to their names.</p>
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Check here if you would like information on the EAA convention Fly-in. \_\_\_\_\_

Please make checks out to: Milwaukee Saab Club.

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## Notes in the Margin

Editor's Note: *Stephen Goldberger has often written letters to NINES, offering technical tips, dealings with repair shops or his opinions on Saab and the auto industry in general. He has agreed to continue this practice in a regular column for NINES.*

People who study and save my letters to you know that I am on an eternal quest for **the ultimate unspill oil change**. The latest weapon in the battle against kitty litter on the garage floor is the "Oil Recovery Drain Pan & Storage Container", distributed by Chilton (the repair manual people!). This pearl of a device is about two feet in diameter having a dished top surface with a plugged hole in the middle. The hole has an integral strainer to keep the oil plug and washer out. It is large enough to catch the oil stream from a 9000 on ramps all the way from full warm engine flow to dribble without moving it. It also has a little hump built in to hold the oil filter up so that it drains, a pouring tube spout with its own cap and a handle. It holds almost 4 gallons, making it useful for coolant changes as well as oil changes.

The 1993 9000CS/CSE is said to have a modified differential for reduced torque steer. To have been implemented two years after the 2.3 engine is an example of what *lean production* is supposed to prevent. (Unless it is being done for the benefit of the 225 hp 9000 Aero).

Another example of non-lean engineering is GM Europe's odd angle V-6. The only possible reason for a 54 degree included angle is that a 60 degree angle engine will not fit into an existing chassis! A 60 degree V-6 is inherently balanced in both the first and second harmonic of engine speed, it has an even firing interval without using an offset crankshaft (i.e., the front two connecting rods attach to the same crank pin, etc.), and is a relatively narrow engine. In a perfect world, all V-6s would be 60 degree. Historically, the 90 degree V-6 has been quite popular in America, mainly because it could be made using the same machine tools as were used for the 90 degree V-8's which preceded them. While the first (early '60s) GM V-6 models exhibited poor balance and an uneven firing interval, the balance shaft,

offset crank, and staggered cylinder bores of today's version has made the sow's ear into a nearly silk purse. It is interesting to note that GM's 90 degree V-6, in 3.3 liter and 3.8 liter versions, has higher specific power output than the pushrod versions of their (newer design) 60 degree V-6 (of 2.8, 3.1, and 3.4 liter versions, with rumors of even higher output coming. Ford, on the other hand, seems to have a more efficient (newer design) 60 degree (Taurus) engine than their 3.8 90 degree engine.

BMW has chosen to meet the Lexus/Infiniti challenge, putting a 4.0 liter V-8 into their flagship 7-series body and pricing it (at \$53,000) within reasonable reach of the near \$50,000 Lexus. (Recall my earlier letter regarding the Japanese marketing to "low ball" on introduction of new automotive designs. At that time, the Lexus was base priced at \$35,000). Mercedes has chosen to rise above the competition, with their 4.0 liter V-8 "E" compact sedan priced at \$61,000, and the top-line "S" V-8 sedans being priced beyond belief. Coincidentally, BMW has outsold Mercedes (in units, at least) for the first time, and Mercedes has announced the intention to institute a "Benz version" of lean production, and market driven design.

Meanwhile, Saab has de-equipped the 9000 Turbo and priced it so aggressively that it is well out of that price class, good news for those who desire its higher performance, larger cabin, greater safety, better economy, and practicality, and find \$7000 in the bank more comforting than leather upholstery.

Recall my experience comparing Mercedes and Saab models side-by-side on the showroom floor, and the subsequent bankruptcy of the dealer. The franchise has just been awarded to the long-time BMW-VW Akron dealer. He also used to carry Peugeot. Therefore, I will soon be able to give first-hand comparisons among BMW, Saab, and VW. As soon as I need some warranty service.

In discussing of Stephen Hendrick's experience with 225/50x15 tires on stock Saab 9000 rims (Issue #211, Feb 92), how do we separate the advantages derived from the wider aspect ratio from the advantages derived from the change in design (tread composition, internal construction)? To be specific, I have been running a set of Dunlop D40-M2, 205/55 x15, for about 4,000 miles. I find that wheelspin is reduced, braking feel is better, steering feel and turn-in are better, all with respect to P-600's of the same size.

With a wear rating of 180, I have extrapolated a life of about 25,000 miles for the set (rotating front-to-back). Comparatively, the P-600's, with a wear rating of 200, seem like they would last well over 40,000 miles per set. I use SAAB's recommended pressures and find wear (so far) to be quite uniform.

While Saab has no tire pressure recommendations for 225/50x15's, 195/65 x15 and 205/60x15 tires have the same load rating as 225/50x15, and those are recommended at 28 psi for light load, and 32 psi for full load at speeds under 100 mph. This neatly matches Mr. Hendrick's experience. (Saab recommends 38 psi for speeds over 100.) A widely available, less expensive tire in the 225/50x15 size is a Kelly Springfield HR (Goodyear discount), available from K-Mart at around \$100 when on sale. Who wants to volunteer?

As for using 205/50x16 (or worse, 205/45x16), my concern is the likelihood for tire or wheel damage caused by rough (or lack of) pavement. Douglas Morse (Issue #215, Aug 92) lives in California, where freeze-caused pavement damage is non-existent. Mr. Hendrick, living in Massachusetts, and I should be rightly concerned about the distance the tire can compress (when up against a crater lip) before damage occurs. If we keep the same outside diameter to the tire, a 16 inch wheel results in a half-inch (or 13%) decrease in that distance, the difference between a healthy jolt and a half-inch dimple in the wheel. Note also that *Car and Driver's* recent test of a 9000 with 205/60x15's pretty well matched their 1991 test of a 9000 with 205/50x16's in terms of skidpad numbers and descriptive handling. The higher performance Aero version has 205/55ZR 16's, (with the bodywork presumably modified to prevent the rubbing which the editor experienced during his most recent Lap of America) giving about six percent more "crush" space than our 205/55 (or 225/50).

As an interesting side note, the speedometer is calibrated for 205/60 or 195/65 in 1988 Turbos and 1990 "S" models. The 1991 Turbo is calibrated for 185/65, 195/60, 205/55, 225/50 15's. In the newer models the speedometer is driven by the ECU based on a pulse rate from the transmission, suggesting that the speedometer calibration can be adjusted by either the ISAT or a ROM chip.

Prolific as always  
Steve Goldberger  
North Canton, OH

## Hidden Treasure

We've all heard plenty of tales about a low mileage car hidden away in a barn or garage somewhere. Often the stories are Urban Legends, friend-of-a-friend stories that can't be substantiated. But now and then, there is an original, low mileage car at the end of the trail. This is one such tale.

Lester Burmeister of Marshfield, Wisconsin is a car fanatic. He has owned many interesting cars during his eighty-some years, beginning with a 1920s vintage Kissel sport roadster, chosen because Kissel's were manufactured in Hartford, Wisconsin, just south of Burmeister's home town of Fond du Lac. It was traded a few years later for an L-29 Cord convertible. Along the way, Burmeister has also owned a 1940 Lincoln Continental V-12, and an aluminum bodied Lincoln funeral limousine that held seven passengers and had a telephone to speak with the driver; a 1401 series Packard Eight, a Citroen DS-21, and a three-cylinder Saab Monte Carlo.

In 1967, Burmeister bought a new Saab 96-V4 from the Saab dealership in Menasha, about 110 miles east of Marshfield. The specific 96 he wanted, a Deluxe model in Red, was available



*Parked for 25 years, an unused 1967 Saab 96 V4 Deluxe.*

only at the dealership in Milwaukee. It was driven the 120 miles to Mehasha, and from there to Burmeister's garage. The odometer still reads 236 miles.

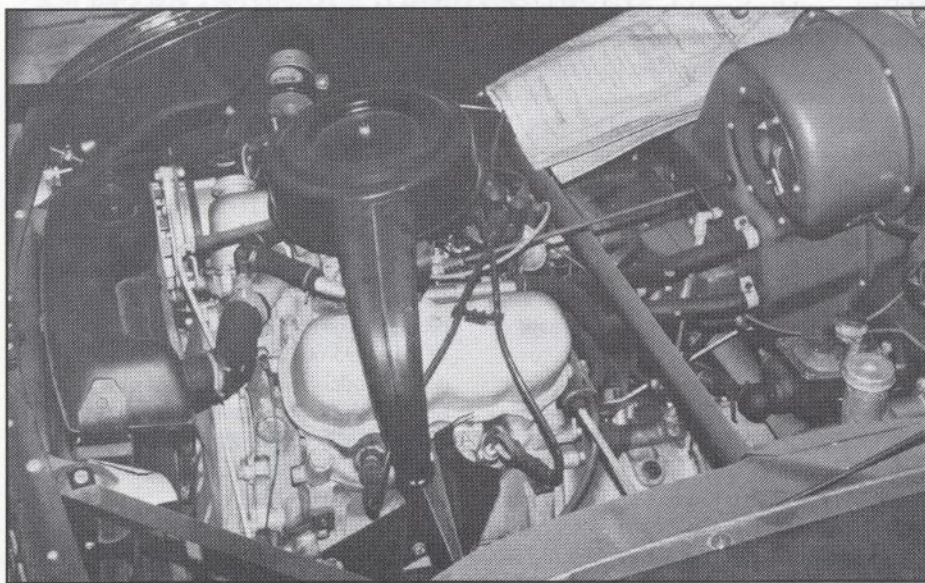
Since that time it has been at the back of Burmeister's garage, covered with quilts and drop cloths. The battery was removed and the connections wrapped in newspaper, and cardboard was placed against the tires to keep the whitewall tires from cracking due to exposure to light. The brake reservoir is

now empty and has some rust. The engine appears to be frozen, but some light oil in the cylinders and gentle prodding might free it again. The fuel system is also questionable, as gasoline has a tendency to turn to jelly as the solvents evaporate out. There is a little bit of corrosion on the chrome bumpers, but a good chrome polish could very well remove that. The body has a light covering of dust, so the blankets are removed and reinstalled very carefully to avoid scratches in the paint.

And the paint is still shiny! The engine compartment and engine are very clean. There have been no oil leaks, so there has been no place for dust to collect under the hood. The interior and trunk are likewise immaculate. The knobs on the dashboard don't have any dirt in the recesses. This is an unused car!

Parked next to the 96 is a black 1969 VW Beetle, a sport model with an aluminum spoke, wood rim steering wheel, and extractor exhaust. Burmeister's daily driver, a 1974 Subaru station wagon, shares the garage. At one time, nine cars were sardined into the garage.

A newspaperman at the Marshfield News Herald for much of his life,



*The engine compartment is very clean, other than a light covering of dust.*



Burmeister also has collected gems and precious stones, and interesting guns and knives. Like the Saab and VW, many of the weapons are unused, acquired for their engineering and workmanship.

Like all good collections, there are stories to go along with the collected objects, and Les Burmeister can fill an afternoon with tales of how he came to acquire or finally released favored items.

The 1967 Saab is one of those items that Burmeister has decided to release. It is for sale, listed in the most recent issue of the Saab Club Classified Report. There has also been discussion about holding onto the 96 awhile longer and exhibiting it at the 1993 National Saab Owners Convention in Kenosha, Wisconsin, about 300 miles from its current abode.

*Tim Winker*



## Altitude Adjustment

Dick Ewart is a ranger for the National Park Service, assigned to Yosemite National Park in California. His assignment is the rustic campground at Badger Pass, overlooking the famed Half Dome. His business card reads "Ranger Naturalist" and "Sierra Nevada Guide." It seems out of character that someone who lives and works so close to nature is also a car collector, but he is.

Much of his involvement is with cars built by American Motors Corporation--better known as AMC--the earliest example a 1951 Nash Ambassador, remembered for its fold down seats. He also has a 1967 AMX, a 1967 Javelin, a 1975 Pacer, a 1966 Chevrolet Super Sport Convertible, and a 1976 Honda 400 motorcycle, one of the early Japanese four cylinder bikes. His everyday car has been a Saab 95, though a 1990 Eagle Talon is seeing more use these days.

Ewart became acquainted with Saabs while growing up in New Hampshire. His

first Saab was a 1967 96 V4, bought used when he was in college. That car lasted until 118,000 miles, when it was totaled in an accident. The museum curator at Yosemite was also a Saab owner, but his was a 1967 95 V4, the station wagon version of the 96. He had purchased the car new, and the engine had been replaced with a 1700cc unit after the original engine was driven without oil. Ewart pestered the 95's owner to sell him the car for months, until the owner finally gave in. Ironically, the 95 had 118,000 on the odometer when Ewart took possession.

Since that time, Ewart has used the 95 as his everyday driver, and the total mileage is now up to 325,000. The 1700 engine has been rebuilt once since then, at about 210,000 miles, when the balance shaft bearings gave up. He took advantage of the need for service to rebuild the entire engine, though it didn't need anything more than bearings and piston rings. The pistons, rods and other internal parts are still original.

Also original are the ball joints and all body panels. The 95 has the O.E. Solex carburetor, which seems to do just fine despite the altitudes at which Ewart lives.

Ewart talks about wanting to rebuild the engine again, though it still runs strong and doesn't use any oil.

After spending nearly half his life working at Yosemite, Ewart recently decided to build a house in nearby Mariposa. To accommodate his hobby, it has a ten car garage. "I still have a couple of spaces to fill," says Ewart.

*Tim Winker*

Summary of values for older Saabs based on listings from *Old Cars Price Guide*, published by Krause Publications, Inc., Iola, WI.

Years	Model	Engine	1	2	3	4	5	6
1956-57	93	3-cyl, 748cc	150	400	750	1550	3050	4300
1958-60	93B/F	3-cyl, 748cc	150	300	700	1250	2650	3800
1958-62	GT750	3-cyl, 748cc	150	400	750	1550	3050	4300
1959-64	95	3-cyl, 841cc	125	250	700	1150	2500	3600
1960-64	96	3-cyl, 841cc	125	200	600	1100	2300	3300
1963-67	GT/MC850	3-cyl, 841cc	150	300	700	1250	2650	3800
1965-68	95	3-cyl, 841cc	125	250	700	1150	2500	3600
1965-68	96	3-cyl, 841cc	125	200	600	1100	2300	3300
1966-67	Sonett II	3-cyl, 841cc	200	650	1000	2200	4100	5800
1967-69	Sonett V4	V4, 1498cc	200	650	1000	2200	4100	5800
1967-70	95 V4	V4, 1498cc	125	250	700	1150	2500	3600
1967-70	96 V4	V4, 1498cc	125	200	600	1100	2300	3300
1970-74	Sonett III	V4, 1.5L/1.7L	200	650	1050	2250	4200	6000
1971-73	95 V4	V4, 1709cc	125	250	700	1150	2500	3600
1971-73	96 V4	V4, 1709cc	125	200	600	1100	2300	3300

# Technical Talk

## 9000 Suspension Re-Re-Visited

In response to Stephen Hendrick's article (issue #211) on improving the handling of 9000s by single-handedly spending his local economy out of the recession, please wait!

Enough with tuning the handling on the 9000 exclusively with tires and wheels. Wider tires and wheels are not the only answer to handling and certainly not the best. I almost cringe every time I hear of someone dropping \$1000 to \$2000 on wheel and tire combinations. I only wish that I owned your local tire and wheel franchise.

Good handling is defined by suspension geometry, mass and other properties which merely include the wheels and tires. Tuning the entire suspension and handling characteristics with rubber and aluminum is expensive and marginally effective. You must have a good suspension to gain full use of your tires or you are wasting time and money. If you purchase an expensive wheel and tire combination for a vehicle with undesirable handling characteristics, you only end up with a poor handling car with expensive shoes.

You could choose your tires on an all-around basis and spend less money. Estimate your needs and choose an appropriate tire that is capable of meeting a range of needs including wear, wet and dry characteristics, speed rating and even (shudder) cost. Few handling tuners choose tires simply on the basis of grip and feel, not because it is not practical, but rather because it is not necessary.

This is not to say that ultimate handling does not require very good performance tires, but rather that handling will not be its best without the suspension to properly control the rubber on the ground.

If you are really interested in tuning

your suspension, then you should follow a few basic steps. First choose a wheel and tire combination that meets your needs. Not to be overly obvious, but the wheel has to fit the car. It is fairly important to keep offset distances close to stock if you want to keep original steering characteristics.

Second, make sure that the tire fits the wheel. S. Hendrick is correct in noting that his tires seem too wide for the wheels. The maximum tire widths allowable for stock wheels without causing significant crowning of the tire are:

Rim width	Tire section
5"	195
5.5"	205
6"	215
6.5"	225

If you go to a larger size tire than the wheel will accommodate, and maintain proper inflation, then the tread will crown, killing the handling of your expensive tires and causing premature wear.

The obvious and poor solution is to run the oversized tire at a lower pressure to alter the tread contact to normal. This defeats part of the speed rating of the tire, may allow a harder shock to be transmitted to, and damage the wheel, and reduces the grip of tire. Grip reduces from its maximum quickly as tire pressure is reduced. A small increase in pressure will have a minimal effect compared to underinflation. Why buy an expensive, stiff and sticky tire if you are just going to underinflate it into submission?

Lowering the profile of the tire is the general direction to follow to prevent tread distortion, and sidewall deflection during cornering, but don't forget the tire also acts as a spring on each wheel. Changing the aspect ratio is, in effect, changing your spring rates at the same time. Lowering the profile is not a problem on 195 and 205 widths, but 215/50 tires are very hard to find in just about any speed rating. I believe that Bridgestone RE93's are one of the few choices, but what a great choice they are!

The answer is to choose your wheel and tire combination intelligently, and then tune your suspension to the tires. This is done with changes in suspension geometry, spring

rates, bushing materials, and sway bar stiffness. In other words, if you really want your car to handle well, you're gonna hafta do some experimentation and thinkin'. This is a heckuva lot more fun and effective than just throwing money at the problem/solution.

We will be offering a front suspension tuning kit which will allow the geometry of the 9000 front suspension to be adjusted to tune proper handling. We will also offer tuning suggestions to point you in the right direction and upgraded sway bars to further dial in high G's.

For those of you who still think that money is the solution, consider a '78 99 that we helped to set-up on 205/50VR street radials (M+S rated to boot) mounted on 5.5" Inca wheels, with a rear sway bar only, that will maintain a 160 foot radius at 51.5 m.p.h. (that's 1.1 g's to you and the kids). And this is on a car which won't cause grandma to chip her dentures on the way to church or rupture her kidneys on the way back. Unless she does the driving.

Dean Dirian  
Griffin MotorSports  
Mt. Gretna PA

## Cracked Factory Weld

I recently removed the door panels on my 3-door 900 (in preparation to install an airflow kit), to find the factory weld at the base of the window frame cracked. This cracking appears at the 'B' pillar, on the inside of the door, where the frame meets the door. It was the source of an annoying rattle. Having checked the window regulator & weather-stripping for security of attachment, over & over again, it was really rewarding to finally locate the source. I have since looked at about ten 900s, '83 on, all suffer the same fate. The crack causes movement between the window frame and the glass.

I had Nelson's Autobody repair mine by first re-welding the crack and then installing a doubler over the area. The doors now close very nicely, no rattle and very positive feel. The door panel fits beautifully over the doubler and so it is totally concealed.

Terry Rock  
San Leandro, CA

Technical articles written by subscribers may recommend procedures or parts not approved by Saab Cars USA, Inc. The SAAB Club and NINES cannot stand behind the correctness of information in these articles, but offers them based solely on the experiences of the writers.

## Turbo Oil Return Pipe

A recent conversation reminded me that most people wrestle needlessly with the oil return line when replacing a turbocharger on a 99 or 900. I've seen some folks that are accomplished mechanics swear until blue at this particular job. If you have ever tried to remove the oil return pipe from under the turbocharger without removing the turbo from the exhaust manifold, you know how frustrating this can be. The easy, no-stress method of removal and installation follows.

After the battery and all of the turbo plumbing is removed, disconnect the head pipe from the turbocharger. Remove the upper, oil supply line from the turbo and the block (oil pump housing in B engine cars). Clean this pipe thoroughly by soaking in parts cleaner or filling with carb cleaner and allowing to soak for as long as possible. Flush and clean this pipe completely to insure proper oil supply.

This is all the usual procedure, but here's the trick. Completely, unbolt the turbo from the exhaust manifold first. The return pipe is actually made from three separate pieces. The center, steel braided section is slipped over the two elbow pipes. The connection is just a slip fitting. Simply swivel the entire turbo unit so that the exhaust housing is pointing down and the intake side is pointing straight up.

There are two bolts which secure the return line to the bottom of the turbocharger's center cartridge. These should now be easily accessible with just a 13mm wrench. Remove the lower bolt, which is now closest to the transmission. The upper bolt, which is usually a stud and nut, should only be loosened several turns. The entire return line should now slip away from the center cartridge. Installation is reverse of removal. Be sure to pre-lubricate the turbo after the return line is fitted and the turbo is bolted to the exhaust manifold.

This trick should save you time and loss of patience.

Dean Dirian  
Griffin MotorSports  
Mt. Gretna PA

## Parting with a 96

Several months ago I parted out my '68 96. The experience left me with some thoughts, which I'd like to share, on parting out a car. At first I tried to sell the car whole, first getting opinions from other local Saabers as to what it might sell for. I'd heard that the price of a used car is mainly determined by its appearance, and my experience bore this out. The car was in good mechanical shape but only fair cosmetic shape, and the best offer I got for it was roughly 55% of my asking price. Therefore, I decided that parting the car out would best play to its strengths. When I began advertising that I was parting the car out, a few people expressed regret that a 96 was going down, but no one wanted to give me a lot of money for the car out of altruism. If I'd been in their place, I wouldn't have either!

My first parting-out ad in Nines stated only that I was parting out a '68 96, and I got almost no response. When I ran a second ad giving specific prices for the more desirable parts, the phone began ringing off the hook. While I didn't keep a precise count of money received, there's no doubt that the total comfortably exceeded the best offer I got for the whole car.

Since the engine went to an out-of-state buyer, I hired a friend to build a shipping crate of the kind described by Jack Ashcraft a while back. I also had my friend put casters on the bottom of the crate, at a cost of about \$10 additional. Although I probably moved the crate a total of less than 200 feet on the casters, they were worth it! When I called trucking lines regarding shipping the engine, I found price variations of up to 2:1, so it paid to shop around.

As for a classic 96 biting the dust, not to worry. Glen Edinger, Redmond, WA, hauled away what was left of the car, restored it, and sold it.

Andy Buc  
Seattle WA

## 96 Brakes: Drum to Disc Conversion

Recently I found the front brakes on my '67 stroker in need of rebuilding. Since they were drum units with quite a few miles on them, I decided to make the relatively simple conversion to the disc brake system which is common to most 96's and 95's. The whole operation involves maybe a half hour of time once the calipers have been rebuilt and the rotors in proper shape. There are two bolts located at the steering knuckle and two more on the lower control arm, which once removed, allow the entire wheel assembly to come out easily. One should be careful not to lose any of the needle bearings found in the small caps on the end of the driveshaft. With the old drum assembly out, your rebuilt disc brake assembly can be installed, driveshaft and all. It's also not a bad idea to have the front end aligned after performing this operation.

A cheap VW gas filter (for a carbureted car) can be placed in the gas line before the pump and not impede the flow of fuel. I had been having a problem with rust in the carburetor and fuel pump and this seems a good stop-gap measure until I can have the tank cleaned.

Peter Cunningham  
Newton, MA  
(reprinted from April 1976 issue)

## Saab Power Windows

300 miles from home, in the rain, leaving a toll booth with the window down, I found I couldn't get the window to go up. My wife then said, "Oh, we've been having trouble with that lately."

Well, the good news is that my 14 year old daughter knew that by clicking the switch several times it might work and the window went up. It did!

The bad news: a new switch is \$40.00!

More good news: the switch can be disassembled and fixed for \$0!! The problem was slightly burned contacts (why, I don't know) and I cleaned them with fine emery cloth (a pencil eraser may work) and a light swabbing with denatured alcohol to get any grit off. If you do this, be careful not to lose any of the pieces from inside the switch (there are 2 loose contact strips inside). I've found that many switches in Saabs can be disassembled and "fixed".

Steve Parsons  
Washington IL

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## 9000 Accessories

I thought you and the other club members might be interested in two products that I am using on my wife's '89 9000CD Turbo.

### HUSCO ARMREST

I happened to be at my dealer (Wigglesworth Saab, West Chicago, IL) for a routine service on the 9000, and the question came up about Husco Armrests. They were ordering the 900 version for stock so while they had Husco on the line I had them inquire about availability for the 9000. Much to my surprise, Husco did manufacture one to fit. I ordered one and installed it when it came in. It seems that it is a specialty item and not really advertised. It is of good quality and is well made.

But does it work? The aftermarket armrest by Saab is a beautiful addition with its matching leather, but limited in use. It would accommodate my arm, but because my wife is shorter (and sleeker) than me, with the driver's seat moved forward it is of limited value. The Husco product slides on tracks just like the 900 version and I was able to mount it so that it works for both her and I, plus still flip it over to use it as a tray for the rear seat passengers. It is more oriented towards the driver than being centered on the console. I only used three screws though so that the drink holder is still usable. The positioning for installation to be able to do this is close. I also used cap nuts on the bottom side after trimming the screws supplied. The color match is close enough to the Bokhara Red interior but would be nicer in leather. The only complaint is about the unfinished look of the mounting bracket (black crinkle paint) instead of vinyl or velour to match the other trim. I have thought of doing something on that line myself, but the '74 99 needs a headliner, tires, etc. before the next convention.

The armrest is comfortable and only interferes slightly with latching the seatbelt on the drivers side. The big test was the all day drive to the convention in Columbus. It performed very well making the drive much more enjoyable.

### NOKIA NRW TIRES

With the original Michelin MXV 2's having sufficient tread for warm weather but figuring that this year we will finally have typical winter weather, I was in the market for tires. The Nokia NRW Snow Tire is a new item this year according to Greg at

G&G Service. It is an H-rated tire that was developed for countries that don't allow studding but have high speed roads. It was a bit more expensive than Nokia's Hakkape-liitta 10, but because Illinois doesn't allow studding I thought, why not.

I had them mounted on Saab 9000 steel rims which are six inches wide instead of five and one-half inches wide as provided by Saab with their offering. I purchased the set of four tires in the OEM size of 195/65-15. I have not noticed any variation in the speedometer/odometer and they look a lot better than 185/65-15's on the 9000. They are relatively quiet with only a slight amount of noticeable noise on concrete surfaces. There is a very slight amount of wander on dry pavement but that could be this particular vehicle.

How do they perform in the intended conditions? I was out of town when my area got its first sufficient snow fall of six inches. Of course I was anxious to find out what my wife's opinion was so I asked her. Her reply was "I don't notice a difference." What she was telling me without realizing it was that it felt like dry pavement! I have since been allowed to try it in the snow (it is her car, remember?) and can honestly notice the difference compared to the Michelin's and my '85 900S with fresh Dunlop D60-M2's. I know that these are warm weather tires but they have only 4,000 miles on them. We have also noticed that the Nokia's are also good on ice and slush with the Anti-lock System kicking in less. If winter comes back next year, (I heard from a higher authority that it will) the 900 will certainly need a set.

John A. Matthews  
Woodridge, IL

## Trunk Lights Can Make You Crazy!

When working on my '89 900 3 door the other day I noticed that the trunk light was on before I opened the trunk. Uh oh! So I checked the switch at the light, the switch at the door latch and the wires between.

Just before I was going to remove the door switch I remembered way in the back of my mind somewhere, that if a Saab Guard alarm is installed and the hood is open the trunk light remains on. Oops! I think they use the same hot wire circuit.

Don't let trunk lights make you crazy!

Stewart H. Bloom  
San Francisco CA

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## Stuck Parking Brake, 99/900

*Note: The following information was retrieved from CompuServe, the on-line international computer bulletin board.*

*Computer users will find forums for virtually every interest in CompuServe. Special interest groups range from sports to food and wine, to pets, to computers. The latest news, stock market quotes and weather (local or around the world) are available with a few keystrokes.*

*There are several forums strictly related to the automobile including the Automobile Forum (GO CARS), New Car Forum (GO NEWCARS), the Worldwide Car Network (GO WWCAR), and Motor Sports Forum (GO RACING). For an additional fee, you can order a pricing report on new or used vehicles from Autoquot-R (GO AQ).*

*You may have noticed the SAAB Club's CompuServe address on page 2 of recent issues. I and many other Saab Club members log on regularly, including a couple of mechanics who are willing to answer questions regarding repair in the "What Ails It?" section of the Automobile Forum.*

*For details on joining CompuServe, call 1-800-848-8990 (or 614-457-8650 outside the United States). - TW*

*[By the way (or BTW in computerspeak), :- ) is a sideways grin.]*

Date: 26-Apr-93 14:18 EDT

From: MHS:SAAB@NETWORK

Subj: Parking Brakes

===== Message from decartwr@mailbox.syr.edu =====

Regarding sticking parking brake on an 85 900 (Rick Noyes):

If you have this happen (you put the parking brake lever down, but the brakes don't disengage), try pulling the other end of the cable. If you turn the front wheels all the way to one side, then look on the side you turned them towards, you'll be looking at the front of the brake caliper assembly...right near the top you'll see the end of the parking brake cable where it goes into a small lever...reach in and grab the level and pull...towards you (towards the front of the car, in other words). Then do the same on the other side (after swinging the wheel all the way to the other side). Now your parking brake should be fully off.

This can happen "suddenly" because the parking brake cable slowly accumulates crud in it, and the oil/grease in it dries out, until the return spring in the caliper can't tug the cable back to rest position. Or, the caliper can get hung up from corrosion. Or, both things can happen!

The above remedy is a "limp home" one, but not a fix in any real sense of the word. You need someone to at least lubricate the cable and the caliper, the latter having to be done carefully (you want to lubricate the spring, not the pads, for example!). But I suspect you're really looking at new calipers.

===== Message from pformell@wv.MENTORG.COM =====

A few things to look for;

1. Brake cable is frozen (I don't know what the weather is like in Maine this time of the year). Get the car into a garage overnight and don't apply the emergency brake when it is cold outside.
2. Brake cable is stuck in general - check for rust, breaks in the cable, whatever.
3. Caliper is stuck. Take the wheel off, pull out the brake pads and rotate the caliper pistons back. You should notice very quickly if any of the calipers are stuck. Note, you will need a special tool to do that. As you correctly stated, the 900s have front parking brakes, so you will only have to check the front calipers.

Unless you have worked on your SAAB before, I'd go to a brake shop that have, at least some, SAAB experience. Take care of the problem ASAP, or you'll ruin not only your brakes but you'll put extra stress on the engine, clutch, etc, as well.

If it's still cold in Maine, try parking it in a [preferably heated] garage overnight first. Or, at least, apply the brake fairly hard and let go with a quick motion. This may free it up.  
Good luck, Peter

===== Message from kvr@beta.lanl.gov =====

You most likely need to rebuild the front calipers. The mechanism which actuates the parking brake can lose lubrication and corrode. SAAB sells a rebuild kit, but you may need some more pieces depending on how badly corroded things are. I did this on my front calipers last fall. It was not a big deal—just follow the book. I was fortunate enough to have some spare OK parts around from a barely used caliper. I needed three hours for the first one, and an hour for the second one once I knew what I was doing.

Ken Van Riper, kvr@lanl.gov

===== Message from wombat@outback.chi.il.us":MAIL Subject: 85 900 Brakes =====

I have an '85 900T and last year I needed to replace the rotors and in the process I did a basic "clean everything in sight" job. :-) The parking brakes on the 900 are controlled by a cable that runs to the front brakes. The cable pulls on a level that is attached to the caliper. When the brake is released, a spring on the caliper is supposed to return the level back to its original position, thus releasing the parking brake. On my brakes, everything was so rusted and covered in oil/dirt/muck that the spring wasn't able to properly return the level to the correct position. As part of the maintenance that I performed, I took off the caliper (there are two big bolts that hold the caliper/brake assembly on), cleaned everything off including the spring and the 'guides' that the floating half of the brake rides in. Basically, clean everything that looks dirty. Be careful around the pistons on the caliper — you don't want to puncture the rubber seals that are around the piston.

Once I cleaned everything off, I used some "Anti-Seize Lubricant" (it's made by Permatex and it comes in a gray bottle or tube) in the trough/guide, on the spring, and on the bolts that hold the caliper assembly on — the bolts had rusted on and I had to have a service shop loosen the bolts. The anti-seize stuff keeps the bolts from rusting, but let the bolts stay in tight so they won't come out (the anti-seize stuff was made for bolts, tire nuts, etc). The anti-seize stuff is great! :-)

One last thing — when you take the caliper assembly off, you'll have to disconnect the parking brake cable (that's a piece of cake). There should be a small rubber 'cover' that slides on over the end of the cable and also slides onto the caliper assembly. When I put the cable back on, I put a bunch of 'moly grease' (molybdenum) on the cable. I then grabbed the cable and moved it in-and-out so that the grease would work it's way down into the cable a bit. Note that suddenly the cable may not want to move the complete distance. This is because the cable has dislodged at the hand brake, but that's extremely easy to get to (a 30 second job). Go inside the car, and at the base of the hand/parking brake, there's a cover that pops off. This allows you to get to where the cables attach to the hand brake. You can get to it by sliding the drivers seat forward as far as it goes, going into the back seat and popping the cover off. Now, once that is off, you'll be able to reach in and move the cable so it's connected back to the hand brake.

I repeated this above procedure many times to make sure the grease got down into the cable. Once I was ready to put the cable back on the caliper assembly, I filled the rubber cover with tons of moly grease before I slipped the cover back into place.

I hope these instructions don't sound too frightening. The worse part I had was getting the stupid bolts out because they had rusted in over the years. I took the car to my mechanic, and he loosened then retightened the bolts in about 20 seconds — you don't have to jack the car up or anything, just turn the wheels and you can get to the bolts. The bolts face the inside of the car, which means as you sit facing the car, you will put a wrench on it such that the open end of the socket faces you (I hope this makes sense).

Once you get the bolts off, you can easily clean off everything and put it all back together in an afternoon (probably within a couple hours if you're really handy :-). My whole experience took a lot longer because I had to replace the rotors, and one of the U-pins that hold the brake pads in was rusted in place, etc., etc...

Oh yeah, put some of the anti-seize stuff on the U-pins and on the top/bottom ends of the pads. On my car, the pads on the back wheels had rusted so much that only one pad on each wheel was moving, hence only one pad was pushing up against the back rotors! After I freed the pads, I cleaned off the ends of the pads and also cleaned off the trough that the pads sit in. Then I put some anti-seize stuff in the trough and on the ends of the pads (I made sure that I didn't get the anti-seize stuff on the pads themselves).

I put everything back together and took it for a test drive. I immediately noticed that the brakes seemed more sensitive — I didn't have to press down nearly as hard as before to get the car to stop.

I checked the entire brake system a month later and all the pads were working perfectly, sliding properly, etc. The back pads were even sliding properly in the troughs, etc.

One final suggestion: If you catch the sticking parking brake problem early, you won't have to replace the front calipers. Even rebuilt, front calipers for the 99/900 run \$135 apiece. This fix will cost the DIY mechanic less than \$20 per side.

A much easier and cheaper solution is to replace the parking brake lever seals. The lever is attached to a shaft that operates the caliper mechanically instead of hydraulically. If the seals to that shaft fail, the shaft can corrode due to exposure to the elements. If pitting has occurred on the shaft, the parking brake lever will have to be replaced. If the problem is not corrected, the shaft will seize in the caliper and the entire caliper will have to be replaced. A replacement seal kit, P/N 89 94 535, is available from Saab dealers for about \$12. This operation can be performed without removing the caliper from the car.

Tim Winker

# Secrets of APC Revealed

## More Power!!!

Many of the letter writers and phone callers to Saab Club HQ want to know how they can get more horsepower or more boost out of their turbo Saabs. "What do I have to replace or add? Who do I call?" Real horsepower costs money. The more you want, the more it will cost. There are ways to get better performance out of a Saab. The easiest and cheapest is to optimize what is available.

In a turbocharged Saab, the simplest solution is to use the best grade of gasoline you can find. The Saab APC (Automatic Performance Control) system is based on a *knock sensor*. The knock sensor is essentially a microphone, bolted directly to the engine block between the number two and three cylinders, which detects engine knock, sometimes called pre-ignition or pinging. The reason why the turbocharged Saabs can run on lower octane fuel is because when the knock sensor hears pre-ignition it sends a signal to the APC processing unit. It responds by signaling the *charging pressure regulator*, commonly known as the wastegate valve, to open thereby releasing some of the pressure. The higher the octane rating, the less chance of knock, and the longer the wastegate stays closed. Hence, the boost stays up longer. Bob Howlett at Swedish Solution in Orange Village, Ohio, says he will only use Sunoco Ultra 94 in his Saab Turbo and recommends a similar high octane fuel for optimum performance.

Carbon deposits in the combustion chamber can cause pre-ignition. These are usually caused by the use of a cheap grade of fuel, or by the use of a non-detergent fuel. While this was a pretty serious problem a few years ago, it is not as prevalent today as most refineries now add detergents to the gasoline to avoid deposit buildup.

Deposits would form on the tips of the injectors causing a poor spray pattern, and would also build up as

carbon on the back of intake valves and on the combustion chamber in the head. Jack Baxter, owner of S&J Automotive in Atlanta, recommends a good fuel system cleaner that can be added to the gas tank. His preference is 44K, which is marketed by a company called BG. Chevron's Techron and Red Line's SI-1 are other well known and effective fuel system detergents. During regular maintenance service on customer cars at S&J, the car's fuel system is flushed with the help of a special machine. Since it uses stronger chemicals than can be run through a tankful of gas, it does a better job of dissolving deposits than an additive. That, according to Baxter, results in more efficient fuel system and engine operation.

It is important to make sure the knock sensor itself is operating properly, says Tim Brown, service manager at Parrformance in Lititz, Pennsylvania. The ignition switch needs to be on for this test, but the engine does not need to be running. Brown says to rap lightly on the knock sensor with the handle of a screwdriver. The APC solenoid valve (located on the radiator crossmember) should click in response. (The Official 900 Service Manual also gives a procedure to test the APC knock sensor in Section 291.)

Make certain that the knock sensor

has not been overtorqued. You can do this by removing the knock sensor and cleaning it, then torquing it to the factory specification, 10 ft-lb/14 Nm (Note: 1982 900 only: 72 in-lb. or 6 ft-lb./8 Nm). If the knock sensor is overtorqued, it may be too sensitive to internal engine noises and can indicate a knock condition when none exists.

The knock sensor is sensitive enough to pick up noises other than engine knock. One such noise, according to Jack Baxter, is caused by a loose timing chain. This applies only to the 8-valve engines and early 16-valve engines. Later 16-valve engines have an updated timing chain tensioner and should not have a problem with noise from the timing chain.

It is also important that the car be properly tuned up. The engine timing is a delicate balance. If the timing is advanced a few degrees the engine will produce better low end torque, but will begin to knock at higher rpms. The sooner the knock begins, the sooner the APC takes over and tries to protect the engine. The vacuum advance/pressure retard dashpot on the side of the distributor must also be functioning properly. If the dashpot is not retarding the spark as it should, the engine will begin to knock.

We can now see that the basic APC

### Maximum boost pressure according to Saab specs:

#### 900 - 8-valve

1982 only	8.7±0.7 psi (0.65±0.05 bar)
1983-84	12.3±0.7 psi (0.85±0.05 bar)

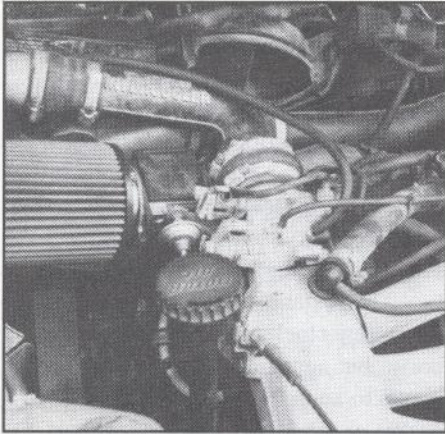
#### 900 - 16-valve

1985-on (exc. '87- SPG)	10.9±0.7 psi (0.75±0.05 bar)
1987-on SPG	12.3±0.7 psi (0.85±0.05 bar)

#### 9000

1986-90 2.0L	12.3±0.7 psi (0.85±0.05 bar)
1991-on 2.3L, automatic	11.0±0.7 psi (0.77±0.05 bar)
1991-on 2.3L, 5-speed	14.5±0.7 psi (1.00±0.05 bar)





*K&N Air Filter on 16-valve 900 Turbo*

systems must all be in working order for the entire system to function properly. While this may improve the straight line acceleration some, and in some cases quite a bit, there are a few other tweaks that can be done.

### **Smoother Air Flow**

There are more air flow restrictions on the exhaust side of a Saab engine than on the intake side. The exhaust system should be replaced with a sport exhaust — something with larger diameter tubing and a less restrictive muffler — to allow better air flow after the turbocharger. An aftermarket catalytic converter with larger diameter inlet and outlet pipes should be considered. Make sure the replacement cat is a three-way catalyst, not a two-way.

Do not remove the catalytic converter as it is a violation of Federal law, and most states require that all emissions related equipment including the catalyst be in place to pass inspection. Removal of the converter can also cause a slight drop in power (I've seen it on a dynamometer).

To improve the air flow on the intake side of the engine, a low restriction air filter, such as the K&N air filter from Group 6 Performance, will also help.

There are smaller restrictions at the step where the manifolds are bolted to the head. These low pressure areas can be removed by matching the ports on the

head to the intake and exhaust manifolds. Polishing the ports will improve air flow even further.

### **Aftermarket Performance**

The "power chip" has become a popular idea as computers have taken over engine management. Since the Saab APC is a little more complicated than enriching the fuel mixture, the entire APC box is usually replaced on Saabs. Several companies offer an improved version of the APC box. Saab has offered replacement APC electronic control units, known as "the Red Box", for the 900 and 9000 Turbos. Group 6 Performance (602-290-2442) and Swedish Auto Specialties (503-287-5204) also offer aftermarket APC modules (SAS has APC boxes for 900s thru 1985 only). A replacement APC control unit is the safest way to go. The box may cost a few hundred dollars, but an aftermarket unit will deliver a reliable boost in power without the concern of whether the engine may be suffering internal damage from unmonitored adjustments.

Group 6 modifies factory APC boxes by replacing components on the circuit board. The modifications change the shape of the curve that the APC tries to follow. The boost begins at a lower engine rpm, boost is brought up to a higher pressure, and boost is held on until 500 rpm before redline. A stock APC box begins to taper off at 4,800 rpm. The advantage of using a modified box is that knock sensitivity is not decreased nor are other safety related items in the APC defeated.

Group 6 offers several other components for additional horsepower, including high performance electronic ignition and fuel management systems.

A big advantage to buying an APC

box modified by a performance company is that you also have a source to assist you if you have questions after the installation.

### **Tweaky Peaky**

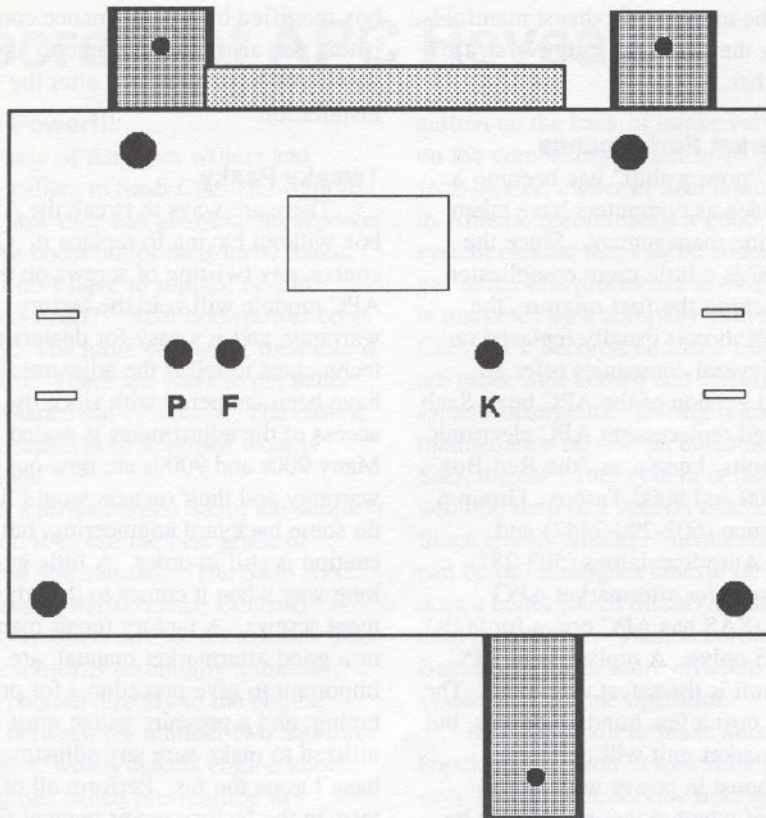
There are ways to tweak the APC box without having to replace it. Of course, any twisting of screws on the APC module will void the factory warranty, and it's easy for dealership technicians to tell if the adjustments have been tampered with since the access to the adjustments is sealed. Many 900s and 9000s are now out of warranty and their owners would like to do some backyard engineering, but a caution is still in order. A little goes a long way when it comes to the adjustment screws. A factory repair manual, or a good aftermarket manual, are important to give precedures for proper tuning, and a pressure gauge must be utilized to make sure any adjustment hasn't gone too far. Perform all of the tests in the factory repair manual first to verify that all systems are fully functioning.

If the Saab Turbo model was purchased used, it is also important to make certain the APC module has not already been tampered with. That's why a proper tuneup should be performed first and why a pressure gauge should be used to do any recalibration.

Be wary of making changes to a high mileage engine. More boost means more torque on already hard working and possibly worn parts. While Saab engines, particularly the 16-valves, are known for longevity, everything has a breaking point.

If you plan to do some work on the APC box, there are a couple of other systems that need to be adjusted to compensate for the extra power. On

**NOTICE:** Information pertaining to adjustment of the APC Electronic Control Unit, the charging pressure regulator, and the turbo over-pressure switch is intended solely for the education of the Saab owner. The SAAB Club, the author, and any of the persons who contributed to this article will not be responsible for any damage that may result from adjustments that are beyond factory recommended specifications.



An early (1982-85) APC box with the anti-tamper strap removed.

eight valve engines, the valve clearance should be adjusted toward the loose end of the factory specs. 16-valve engines have hydraulic lifters so valve clearance is adjusted automatically.

On 900s with CIS fuel injection, Brown recommends the fuel mixture be set on the rich end of the modulating scale. Also, ensure that the micro switch for full throttle enrichment is functioning by closing the switch and monitor the mixture going full rich.

Brown also suggests spark plugs with a colder heat range. Parrformance has had the best luck with the NGK BCP7EV.

Now let's look at the magic APC box.

### The Mystery Module

On 1982 through 1985 900 Turbos, the APC electronic control unit is bolted to the floor of the car under the rear seat on the left side. This makes it easy for one person to do the tuning while

another is driving the car. This method should only be done a freeway where there is little or no other traffic.

Look for the APC control unit in the left front fender on 1986 and later 900 Turbo models. The APC ECU is under the instrument panel on the left side of 9000 Turbos. One mechanic who contributed to this article and who tunes APC boxes has devised a cable to bring the APC module into the passenger compartment so he can monitor the test equipment and make the adjustments while someone else is driving.

The APC control box has three adjustments, labeled P, F and K. They are covered by a strap that has a metal seal on it. The adjustment screws are recessed and are accessible when the seal is broken and the strap is removed.

The **K** stands for *Knock Sensor* adjustment. Since the heart of the APC system is the knock sensor, it is the logical place to start. Turning the potentiometer screw clockwise lessens

the sensitivity, but it should be noted that a little goes a long way. No more than a quarter turn, and less is better. Conversely, if the knock sensor does not seem to be functioning properly, or if the owner prefers an added margin of safety in the APC system, turning the K screw counter-clockwise will increase the sensitivity of the knock sensor system.

The **P** stands for *Pressure*. Turning this screw clockwise will increase the boost, but again, only in small increments to keep from blowing out a head gasket or the top of a piston. This is where it is important to have a pressure gauge to measure boost. An eighth of a turn will make a big difference in boost pressure. One mechanic says he begins by noting where the screw is, turning it clockwise as far as it will go, then backing it off halfway. If you do change to factory settings, make sure you put a mark for the original setting next to the screw.

The **F** stands for *Frequency*, so the wastegate doesn't bleed off as much as the engine rpm's increase. There should be no reason to change this adjustment.

### Other adjustments

There are a couple of other adjustments which will increase the boost, but few mechanics will recommend them as they put added strain on the engine. Some Saab Club members have tried one or more of the following and have not had any problems.

The wastegate shaft (the end, or outer, piece) can be adjusted as described in the repair manual. It is important to hold a pliers on the threaded actuator rod that the shaft turns onto as the rod is attached to the wastegate diaphragm. Twisting the rod could tear the diaphragm and render the system non-functional. Hold the rod as near to the threaded part as possible and adjust only the end piece. One complete turn of the end piece is roughly equal to 0.6 psi (0.04 bar). Turning the shaft in, or shortening the overall length, will increase boost.

900s through 1988 model year have a *turbo over-pressure switch* mounted

under the dashboard on the left side. It is a backup electrical safety device that cuts power to the fuel pump in the event the mechanical turbocharger wastegate malfunctions. The over-pressure switch activates when pressure reaches 1 bar (14.5 psi). Turning the large screw in the center of the switch clockwise will increase the amount of allowable boost before the switch interrupts power to the fuel pump. (See also *Testing Turbo Over-Pressure Switch*, Section 234 in the official 900 service manual.)

One way to avoid knock is to retard the distributor timing a few degrees. Saab recommends 16 degrees before top-dead-center (16° BTDC) at 850 rpm, but some improvement can be found by bumping the timing to 14 degrees BTDC. Of course, this will have a negative effect on low end torque and may cause the engine to run hotter, but it will decrease knock at the upper end.

### Put the power to the road

Of course, none of the adjustments suggested are much good unless improvements are made to the chassis to handle the increased power. To get the most effective use out of the added boost, the suspension should have higher performance shock absorbers such as Konis or Bilsteins, anti-roll bars (commonly called sway bars), and high performance tires. The best use of the increased engine power is in coming out of a corner, so the handling should be up to the task.

There you have it, lots of ways to raise the horsepower and torque of a turbocharged Saab with APC. There was some concern by mechanics interviewed for this article that, while the information on certain adjustments is basically correct, there would be wholesale playing with APC systems

around the country followed immediately by increased demand for used Saab turbo engines and transmissions. There has been some trepidation on my part to put all of this into an article for NINES, but I figure it's better to give all the information with warnings than to allow owners to apply bad information which might result in a blown engine.

A complete tune-up, performed by a mechanic who is well versed in the Saab APC system, is the proper way to getting the best performance from a Saab Turbo. The Saab Automatic Performance Control is a system, and alteration of one part affects how the other parts of the system function, sometimes adversely. That's why proper tools and monitoring equipment are important when making any adjustments. The computerized systems on today's cars do not lend themselves to tinkering by backyard mechanics.

*Tim Winker*

## GROUP 6 PERFORMANCE IS ON THE MOVE!

Group 6 Performance is moving. As of 1 April, we will be in our new facility at **1634 S. Research Loop, Suite 150, Tucson, AZ 85710.. Our new phone number will be (602) 290-2442.** We hope that our new facility will make it even easier to supply the SAAB enthusiast with the best in high performance equipment. For the sake of continuity, we will keep our "800" number the same for the next few months, and then it will be dropped.

We also have several exciting new products in the works. For example, how about a quick shot of laughing gas for your SAAB? We are working with NOS, the premier supplier of nitrous oxide systems to develop a bolt on kit for the SAAB. This kit will initially be available for the 2 liter 16 valve turbo, followed quickly by the 9000 turbo. Then we'll do the 2.3 litres and the non-turbo 2 litres. It will be a 50 horsepower system, and will be a full bolt-on kit. All the machine work will be done for you. All you have to do is bolt it in, push the button and hold on! We will be able to offer a similar kit for other models of the SAAB if enough interest is expressed, so let us know if you are interested. Mileage and driveability are not affected, because the system only fires when you really want it to. Think of it as a horsepower switch. **Call or write for more information on how Nitrous Oxide systems work.**

As for pricing, we still have some details to be worked out, but the complete kit with a 15 gallon bottle should run about \$650. We will be able to do quite a bit of customizing of the system, including a key lock switch to keep the kids from using it, so call with your requirements. Bottle refills are easy to get all over the country.

We have just finished our Sport Exhaust systems for the 2.3 liter cars, both turbo and normally aspirated. This system is an easy bolt-on installation, and will improve the appearance of your car, as well as its performance. With the single chrome oval tailpipe, it will really make your 9000 stand out from the crowd. The price for this instant horsepower is only \$190. Don't forget, we also have a chip set for the 1991-92 2.3litre turbos. **Slip in the chips and get a nice 35 horsepower boost! Then add the exhaust for another 9 horsepower.**

Finally, we will shortly begin shipping our modified strut package for the 9000. Agian, this kit is an absolute bolt-on package and uses externally adjustable **KONI** front struts and rear shocks. The front struts are ready to install and have been powder coated for appearance. No modifications are required for installation - all that has been handled by us, and the struts are ready to use. In this way you can be sure that all the modifications have been done properly and fully tested. The package is fully adjustable and guaranteed for life! The cost for this **complete transformation of handling ability is just \$650.** Experience the superb handling you get from "the King" of all shock absorbers. You'll wonder why you waited so long.

See you soon at the national convention in Milwaukee. We'll have some very nice exhibits and demos. Be there or be square!

**Group 6 Performance**  
Our new number: (602) 290-2442

# SAAB SWAP

## Sonetts For Sale

'74 Sonett III, Blue, 74K miles, new rocker panels, floor pan rpd., new exhaust. Interior VGC, exterior VGC. Engine strong. \$3,750. B. W. Cunningham, 5520 Lafayette, Kansas City KS 66104. 913/287-6137.

'73 Sonett III Green, 44K original miles, no rust, needs nothing. \$3,500. Bob, Chicago, IL. 312/777-9778.

'72 Sonett III Rust free, needs battery box, some rear f/g repair. Tapped in rear, but not hard enough to break lights. Runs and drives great, small bumpers are also good. Orange, but will need paint. From J&B Imports in CA., comes with rear clip incl/ windshield. Lots of parts cars to supply anything you might need. \$2,400. Mark School, 313 E Greenfield St, Appleton WI. 414/731-5289.

'69 Sonett V4 #1740. Excellent condition, bright blue, needs minor cosmetics. Runs very well. \$2,750. Ben Bundy, 1431 Charnelton, Et gene OR 97401-3906. 503/687-8410.

Two '68 Sonett V4's. One is running, both need repair. 1 spare engine & trans. \$4,000 OBO, will sell separate, consider trade. Robert Garber, 41841 Lawrence Ct, Elyria OH 44035. 216/324-5507 or 216/322-6226.

'68 Sonett V4, orig rust/collision-free CA car, new 185/65-15's on soccer balls, valve seals, clutch, rblt trans, plus boxes of parts. Drive it home for \$3,000/obo. Dave Shaw, 2300 John Matich Dr, Colton CA 92324. 909/825-5761.

## 93s, 95s, & 96s For Sale

'69 96 Blue, complete overhaul, Isky cam, ported heads, tuned exhaust, 2-barrel Weber, rebuilt trans - screamer, new tires, brakes & upholstery. \$6,000 invested, asking \$4,000. Hopkins Guy, 550 Piazza Dr, Mountain View CA 94043. 415/969-4101.

'69 95 V4, average condition, many spares, extra wheels with Hakkepeliiitta snow tires. \$1,500 takes all. J. Wortham, PO Box 284, Montgomery Creek CA 96065. 916/337-6868.

'67 96 3cyl, 4spd. Orig, exc shape, \$3500. Parts cars: '67 96 3cyl, 4spd, eng good, \$500. '67 96 3cyl, 4spd, good seats, \$300. '68 96 V4, 4spd, \$200. '69 95, some parts, \$50. '60 93F, restorable, good engine, \$500. Cyril Hansen, 316 Mill St, PO Box 483, Stanton MI 48888. 517/831-5593.

'61 96. Restorable. Body in good cond. \$250 or will consider parting out. Bill Matz, PO Box 663, Boerne, TX 78006. 210/537-4896 eves.

'58 93B No rust, good mech cond, always garaged. \$2,500. Gabriel Boenzli, 35221 Riverside Dr, Albany OR 97321. 503/967-7276.

## 2-Stroke & V4 Parts

95, 96, & 99 Parts, too much to catalog. Some Sonett & 96 paint kits. Make offer! David L. Adams Jr. 17107 Invermere Rd., Cleveland, OH 44128. 216/751-8109.

Rear fenders from '69 96. Two rust-free CA fenders, professionally stripped, straightened, and primed with Yellow Death. Beautiful, complete w/ chrome trim! Offers? John Marks, 401/782-6298 (RI)

'73 Sonett parts, good doors, rear clip w/glass. Straight, rust free, S. California pan. Will sell parts or \$400 takes everything. Mark Rheude, 781 E Swanee Ln, Covina CA. 909/394-6272.

Sonett parts: 1700cc engines \$400. Sonett transmissions \$475. Sonett III front clips, \$600. Steering wheels, \$60. Doors, \$100. soccerball wheels \$75. Mark School, 313 E Greenfield St, Appleton, WI 54911. 414/731-5289.

## 99s For Sale

'74 99 PRO Rally car. Strong, reliable, new trans & high compression engine. Limited slip, competition seats, countless spares. \$3,500. Tom Gillespie, Box 2819, Cedar Rapids, IA 52406. 319/366-8016 or 362-0815.

## 9000s For Sale

'86 9000 Turbo, Carmosine red w/tan leather, 96K miles, very good condition inside and out. Well maintained, new clutch and battery. Very fast, tuned by Griffin MS. \$6,800. Lynn Hershey, Mt. Gretna, PA. 717/964-3660.

## 99, 900 and 9000

### Parts & Accessories

BBS Wheels (4) for 9000. Gold w/polished lip. Mounted w/Pirelli P6 w/10K left. \$400. Steve Fields, 7944 Clover Hill Ln, Fair Oaks, CA 95628. 916/863-5513.

BBS RA wheels w/wheel locks. Absolutely mint, fit '87 900, used 4Kmi. \$650 +shpg/set. '86 900 Euro H4 headlights, fair cond. \$195. Euro headlamp wipers/motor, '86 900 very cool, easy install, many extra parts \$375. '91 900T radio & EQ, all parts/manuals. \$350 +shpg. Prices negotiable. Art Levy, 55 Knights Bridge, Guilderland, NY 12084. 518/452-3873.

Parting out: Forty 99's and fifty 900's. '73-'88. One '86 9000. VISA/MC. UPS daily. Rod Beckner, 604 E. First St, Albany OR 97321. 503/928-6351.

Turbocharger, 900 '81-'82, Non-APC, \$200. Extra lights brackets, '89 5dr 9000 above bumper, \$10. Fog light brackets, '87 900 below bumper, \$10. All new. Peter Simcik, 67 Chamberlain Hwy, Kensington CT 06037. 203/828-1186.

'78 Turbo "B" motor short block + cyl head, \$250. '81 900 8V motor, \$100. Dan Gallatin, CA. 619/964-4047.

99/900 parts, all kinds. OEM and recycled. Low prices to keep your older Saab running. We ship UPS. High Peaks, 351 Lindley Av, Asheboro, NC 27203-5704. 919/626-7117.

Radio + EQ from '89 9000, \$300. Peter Williams, 1220 Oakland Blvd. Su 200, Walnut Creek CA 94596. 510/937-4950.

Four OE Saab Turbo 15 spoke wheels w/center caps. Fit '87 900 and older. Exc. condition. \$300/set +shpg. Robert Blank, 5717 E Makati Cir, San Jose CA 95123. 408/946-5287.

## CLASSIFIED AD RATES

Ads offering parts or SAABs for sale or wanted are available to members and non-members. Ads are limited to 25 words, plus name address and phone number. Ad copy will be abbreviated and excess words deleted where possible. Enclose sufficient funds with your ad, we do not bill. No ads will be taken by phone. The Classified Ad rate is as follows:

	Members	Non-members
CARS FOR SALE	\$10.00	\$15.00
PARTS FOR SALE	\$5.00	\$7.50
WANTED ADS.	\$2.00	\$3.00
COMMERCIAL ADS (Parts & Services)		
	\$10.00	\$15.00
EVERY 5 EXTRA WORDS	\$1.00	\$1.50

DEADLINE: The 15th of each month for the following month's issue, e.g. January 15th for the February issue. Newsletters are mailed the first week of the cover month.

COMMERCIAL DISPLAY ADS: Contact the editor for rates and info. Deadline, the 10th of each month for the following month's issue.

**GO FAST STUFF:** 99/900 Budget Turbo Sport Exhausts, \$99. APC boxes, \$149 exch. 900/9000 16V Turbo Performance Kit. \$249/279. 16V Tuning Kit with our own "UnInjector", \$149. Anti-roll bars and 900 suspension braces - call. Special on 9000 hood edge guard, \$19. Version 1.0.4 99/900/9000 GoFast tips and techniques, \$30. **Griffin MotorSports**, Box 303, Mount Gretna PA 17064. 717/964-1866.

**99/900 headliner kit.** Comes with glue, 3 yds & complete instructions, \$87.50. Other parts available. **Trollhattan Motors, Inc.** 1015A Old Eastern Ave, Second Floor, Baltimore, MD 21221. 410/682-4688 or 1-800-32 TROLL.

**Three BBS** one piece gold alloys trimmed in silver, fit 900 models to '88. 6x15. Exc cond. \$300 +shpg. Steve Grayer, 2235 Glenwood Rd, Brooklyn NY 11210. 718/434-8880.

**Wheels, instruments, radiators, condensers, motors, mufflers, elect window lifts, struts, ignition cassettes, rear decor panels, misc. interior parts, dashboard switches and more.** Call with needs. Lewis Eig, 36 Fawn Hill Dr, Monsey, NY 10952. 914/352-6124.

**Parting out:** Various 900S & Turbo models. All parts avail. Brad Whitfield, 1227 Lebanon Rd, Nashville TN 37210. 615/248-6466.

**Parting out:** '78 99 3dr. Glass, interior, electrical, drivetrain, engine, bumpers, trim, badges, heater core, steering wheel, compl wiring harness, headlights and trim, front cross member & more. John Ball, 21101 Lennon, Harper Woods MI 48225. 313/882-0129.

**Two steel wheels w/ Metzeler 165-15 M+S** tires over 60% tread, \$50 +shpg. Lewis A. Bowen, 401 Floyd St, Blacksburg, VA 24060. 703/552-2131.

**Thule 1060 roof rack,** custom for 900. Includes opt locking knobs, new condition, \$65. Ben Martorana, 15 Kime Av, Wayne NJ 07470. 201/226-2300.

**Headpipe, '80 900T,** new. LF signal housing, free, pay shpg. 195/65-15 MXL, 7/32" tread, \$38. 4 - P600 205/55VR15 avg. 5/32", \$125. Saab EQ w/ box, \$125. Steve Goldberger, 2389 Chestnut Hill St NW, N Canton OH 44720. 216/497-0346.

**900 front brake rotors,** new, \$50/pr. Thule rack, \$30. '80 99 fuel injection, complete, \$40. Grille, \$10. Starter, \$15. Cooling fan, \$20. Fuel pump, \$25. Roy Derevyaniuk, 24101 SE 37th Pl, Issaquah, WA 98027. 206/392-4316.

**Car cover, 900 3dr,** \$50. Pre-'80 head restraint cushion inserts, red, \$10. Factory manual set, plastic binders, early 900, \$25. Dick Peterson, 212 N 5th St W, Mt Vernon IA 52314-1338. 319/895-8962.

**OEM Ronal 24 spoke wheels (4)** from '86 900S. Clean and true w/caps. \$350 +shpg, OBO. Eric McCormick, 904 Lyford Dr, San Dimas CA 91773. 909/592-8540.

**'88 & up SPG wheels,** \$600 set. '81-'87 SPG wheels, \$150 ea. New 900 steering rack, \$240. Rebuilt Turbo cartridge, '81-'84, \$240. John Schreiber, 1634 SW 10 Av, Ft Lauderdale FL 33315. 305/763-8856 or fax 305/763-8197.

**Four BBS rims;** fit 900s thru '87, \$580/set, brand new condition. Craig Whitehead, 72 Charles St, Stamford CT 06902. 203/975-0050 after 7:30PM EDT.

**2 Yokohama A008R 185/70 HR15** used racing tires, good tread left, \$30 ea obo. Steel wheels from '76 99, \$25 ea obo. Keith Beckstead, 300 Danalda Dr, Los Angeles CA 90064. 310/838-5633.

**Hakka 10s on EMS wheels,** only 2K on tires, \$270. Repco pads, 99/900 front, \$15. Trailer hitch for 900, \$35. A/C compr from '83 900, \$65. Front sway bar w/all mtg hdwe, \$65. All +shpg. Mark Moe, 9533 Dakota Rd, Bloomington MN 55438. 612/897-3711.

**4 Yokohama studded snow tires,** 195/65-15 @ \$60 obo. 10,000 miles left. Kelly Charger 195/65-15 tires w/ life, \$90. Paul Paar, 601 N Tracy, Bozeman MT 59715. 406/586-6549.

**Trailer hitch (OEM)** for 900 to '86, barely used, \$90 OBO +shpg. Jon Cole, 1319 N Wakefield St, Arlington VA 22207. 703/525-8123.

**'80 turbo engine + trans,** 60K mi. \$600 obo. John Kelly, 13 River Oaks Dr, Calumet City IL 60409. 708/895-1066.

**Springs for 900,** 2 front, 2 rear. \$40 +shpg. Fred Auch, 912 Thoreau Dr, Burnsville MN. 612/894-8213.

**900 radiator \$40.** Radiator support, \$60. Five 24 spoke alloys, \$50 ea. A/C compressor, \$65. Complete '84 turbo eng, trans, wiring harness, 69K, best offer. Pedro Tai, 6343 Trout Creek Ridge, Parkdale OR 97041. 503/352-6611.

**99 parts:** '77 99 Eng, trans, 77K mi, \$125 ea. '74 4spd, \$100. Radiator, \$35. Soccerball whls, 2 sets, \$90 ea. B cyl head, \$100. EMS 2dr int, brown. Lamps, lenses '69-'80. 315/469-4228.

**'79 900 EMS** alloys, good condition. Three w/ good Michelins, 175/70R15. Thomas J. Thomas, 196 Crown St, Brooklyn NY 11225. 718/771-4723.

**Parting out** the Vyking '83 900T 3 dr. Black, front end damaged, factory sway bars, Bilsteins, engine, trans! Doors, hatch, turbo, wheels. Exh sold. David L. Adams Jr., 17107 Invermere Rd, Cleveland OH 44128. 216/751-8109.

**900, 9000 parts:** Turbo, non-turbo, '91 and older engines, trans, doors, nose parts, clips, wheels, suspension, accessories, electrical, glass, radios, seats, dash, headliner, carpets, door panels. New parts also.

**European Car Parts,** 57 N Plains Indust Rd, Wallingford CT 06492. 203/284-8989.

**Two 1980 900 3dr doors,** blue, \$100 ea. 4 TRX rims, \$100/set. Center console from '80, \$45. VDO gauges, \$40. And more. Sean Pollitt, 5 Gardner Rd, PO Box 339, E Templeton MA 01438. 508/632-7443.

**4 SPG wheels,** '87, \$500. Clarion cassette w/ amp, EO, spkrs & harness, \$350. OE whale tail, damaged, \$75. Console cassette holder, \$10. Scott Bradley, 5611 Leavenworth, Omaha NE 68106. 402-558-9378.

**Two mounted snows & hub caps,** early 900, no rust, excellent rubber. Mounted temp spare, scissor jack, both new. \$100 +shpg for lot. Walter Kinal, 665 Old Colony Terr, Riverton RI 02878. 401-624-8196.

## Wanted, All Models

**1983 or newer 900S/900T** body/frame. Interior and exterior must be in good/excellent condition. Will consider complete car if reasonably priced. Patrick Lambie, 900 E Marquette St, Menasha WI 54952. 414/722-4390.

**99 4dr, prefer '76 or '77.** Must have rust free or very clean body & manual steering rack. Mechanical condition not important. Could be brought to National Convention. Pat Greer, Milwaukee WI. 414/744-0996.

**For V4:** Good used or new Weber 34-ICH. G-Force oil pan (Ashcraft, discontinued). Steel V4 balance shaft gear. Robert Wagner, 212-971-2462 days, 718-645-3433 eves.

**One or two Ronal Mini 8 spoke wheels,** P/N 24380. Quick Ref. Parts Manual P/N 0213843. H. Danner Hryharow, 3356 Mathieson Dr, Atlanta GA 30305. 404/237-7074.

**'79-'89 900 Quick Reference parts guide,** to buy or trade for '67 96 factory service manual covering both two-stroke and V4 motors. David Kipp, Brookhaven Nat'l Laboratory, Bldg 911A, Upton NY 11973. 516/282-2795 (weekdays).

**TRX tires.** Need two for early 900T. David Bortoff, 3301 Bella Vista Dr, Lafayette NY 13084. 315/469-4228.

**Body for '71 95,** prefer red. Geno Beniek, 8905 Sanbur Tr, Rice MN 56367. 612/393-2960.

**Rear decor panel (02 71 148)** for 900 3 dr, ski goggles (02 02 283). Scott Bradley, 5611 Leavenworth, Omaha NE 68106 402/558-9378.

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Front and rear seat covers are available for all SAAB 900 and 9000 series. The covers are manufactured from heavy duty polyester/cotton material and are easy to install. Available in twelve popular colors. Prices start at \$79.95 plus \$6.00 freight. All VISA, Master Card, and American Express orders are shipped in 48 hours.



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## Swede leads Zerex Saab Racing Series

The 1992 Zerex Saab Racing Series championship went to Robert Amren of Sweden. Another Swede, Kenny Bräck, is the points leader after three races in the 1993 season. Bräck (pronounced *Breck*) won the first two races this year--on the street course in Miami and the airport course at Sebring--and placed fifth on the road course at Atlanta Motor Speedway.

Another driver to watch this year is Jerry Nadeau, a rookie in the Zerex Saab series. Nadeau, from Danbury, Connecticut, won his ride as a scholarship award for excellence in the 1992 Skip Barber Formula Ford series. Nadeau qualified fastest for the Sebring and Atlanta races and is currently third in the point standings, with 8th, 2nd and 3rd place finishes in the first three events. Brandon Sperling is second in points with a 2nd, 5th and 4th on the season.

### Remaining '93 Zerex Saab races:

- May 31 Lime Rock Park, CT
- June 13 Detroit, MI\*
- June 27 Watkins Glen, NY
- July 11 Road America, WI
- July 25 Laguna Seca, CA
- Aug 8 New Hampshire Oval, NH
- Aug 22 Road America, WI
- Sept 12 Mid-Ohio, OH
- Oct 10 Phoenix, AZ

\* = tentative

## ESPN Zerex Saab Broadcast Schedule

Every year since the Zerex Saab Pro Series' inception (1986), ESPN has broadcast most or all of each season's races. In 1992, there were 21 separate telecasts of all 12 Zerex Saab races.

In 1993, again all 12 Zerex Saab races will be televised. Below is the TV schedule for 1993. As with any long-lead broadcast schedule, airdates are subject to change. All times given are for the Eastern Time Zone.

Atlanta Motor Speedway	Sat., May 8, 6:00pm
Replay	Tue., May 11, 1:00am
Lime Rock	Sat., June 12, 2:00pm
Detroit G.P.	Sun., June 20, 4:00pm
Watkins Glen	Sat., July 10, 1:00pm
Road America #1	Sat., July 24, 1:00pm
Laguna Seca	Sat., Aug. 7, 12:00pm
New Hampshire	Sat., Aug. 14, 5:30pm
Road America #2	Thur., Sep. 23, Midnight
Mid-Ohio	Sun., Oct. 10, 8:00pm
Phoenix	Tue., Nov. 23, 7:30pm

## 9000 Aero and 99 to Contest Longest Day

Plans are underway to build a 1993 Saab 9000CS Aero for the Longest Day of Nelson Ledges, a 24-hour race for SCCA Showroom Stock and Improved Touring class cars. The Aero is to be built and raced by Reinertsen Motors of Denville, New Jersey, who have campaigned Saabs in several forms of racing, including Showroom Stock, for many years.

Several top drivers have been lined up to drive the 9000 Aero at Nelson Ledges, a track in eastern Ohio. Kristian Skavnes drove for the factory-sponsored Saturn team in last year's IMSA Firestone Firehawk series and finished the season second in points. His father, Kjell Skavnes, is a partner in Reinertsen Motors, and has successfully competed in Saab 900 Turbos and 9000 Turbos in SCCA Showroom Stock and IMSA Firehawk races. The third scheduled driver is Robbie Buhl, 1989 Barber Saab Racing Series Champion and 1992 Indy Lights Champ. Buhl was one of the team drivers that took a Jack Roush Mustang Cobra to a GTS class win and second place overall at this year's Daytona 24 Hour race, and is driving for Dale Coyne's team in the Indycar World Series.

Jack Baxter of S&J Automotive in Atlanta is again entered in this year's Longest Day. Baxter drives a Saab 99 in the Improved Touring category. His co-drivers this year will be Pete Ferrara, Martin Holland and Christine Shaw with Joe Garrison as an alternate. This will be the sixth time that Baxter and Holland have competed in the Longest Day race. The best finish for the 99 was second in ITB in 1988.

A Saab 900 Turbo won the first Longest Day of Nelson Ledges in 1980. It was driven by Don Knowles, Bill Fishburne, Joe Rusz and John Dinkel. The Saab's longest pit stop in that race was 2 minutes, 46 seconds for four tires, brake pads all round, fuel and driver change.

## MEMBERSHIP/SUBSCRIPTION

(Use also for Change of Address)

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY/STATE/ZIP \_\_\_\_\_

HOME PHONE \_\_\_\_\_ WORK PHONE \_\_\_\_\_

SAABS CURRENTLY OWNED \_\_\_\_\_

(i.e. '84 900 S 4dr. automatic / '78 99 GLE 5dr. 4-spd / '72 Sonett III / '68 96-V4 Deluxe)

Address change only - old Zip Code \_\_\_\_\_

Annual Membership fees for the SAAB Club of North America/NINES are as follows:

First Year \$29.00  
 Renewal \$25.00

Canadian add \$4.00US  
 International add \$8.00US

Please check appropriate box(es)  
(Canadian and International -- Money order or check payable on a U.S. bank only. Cash OK.)

First year members receive two recent back issues of NINES and two SAAB Club stickers.

MAKE CHECKS PAYABLE TO "THE SAAB CLUB"

Mail to: The Saab Club of North America  
2416 London Road, Unit 900  
Duluth, Minnesota 55812

## Rear View

You may have noticed a few changes to this issue of NINES. I had hoped to implement more, but the artwork was not ready for this issue and will have to wait. NINES really hasn't been a newsletter for some time, but should correctly be called a magazine, and for several years I have wanted to make some simple changes to the layout to reflect that. Unfortunately, it has been nearly impossible to find someone in Northern Minnesota to execute my ideas, nor has there been much time to spend searching for that person or firm. There are now several people working on ideas, though a couple of them aren't familiar with the Saab soul and that concerns me. At any rate, look for a new layout soon.

The basic format now in use for NINES began in 1986 and has continued to evolve as computer software for layout has improved. I have never been particularly happy with the look, but it seemed to work. For many years I have wanted to find someone with graphics experience to make the publication easier to read. (My experience is limited to what I've learned sitting at the computer. No journalism, no graphics, just gut feeling.) There have been several changes in desktop publishing recently—primarily lower prices on both hardware and software—and there are more in the near future, so NINES is gearing up to take advantage of it.

Another change at the office is that I have resumed trying to handle most of the work myself. The search for an assistant who has office, editorial and Saab experience continues. The biggest problem is that, despite the low cost of living in Duluth, few people with that kind of experience are willing to accept work at less than what I earn as editor-in-chief. It's a quandary, too

much work for one but not enough income to pay two.

Since the "cover date" has been running two months behind for over a year and there seems to be no end in sight, and that fact has confused several members, the cover date is being eliminated. The *issue number* is the real determining factor for consecutive issues, so the issue number will be the reference henceforth (unless the U.S. Postal Service has regulations in that regard).

Satch Carlson has been after me to run the next edition of the Alcan Rally beginning the weekend before Labor Day. This year's event will actually be two rallies. The first runs from Seattle to Anchorage in the traditional format of the Alcan 5000 with scored time-speed-distance sections of 30 to 100 miles, and lo-o-o-o-ong transits in between. The overnight hotel stops are included as part of the entry fee.

The second rally is a vintage event that runs from Anchorage to Seattle. Rallymaster Jerry Hines defines vintage as anything twenty or more years old.

Carlson's ideal plan is to run a three Saab team—a new 9000CSE provided by Saab, his 1985 900 SPG a.k.a. the Blackbird, and his 96-V4 a.k.a. the Hawg of Steel. The CSE would be crewed by Tom Grimshaw, Satch and yours truly; Wonder Warthog would be home to a couple of V-4 crazies, someone like Brian Davitt who ran the Alcan a couple of winters ago in his Eagle Talon; while the Blackbird would contain—as Satch so chauvinistically puts it—"The All Girl team". Those he has in mind all passed out of girlhood long ago and turned into terrific women, with some excellent rally navigators and drivers among the nominees, and are fully capable of winning the event overall. (Have I ever mentioned the women rallyists I once knew who rallied under the banner Total Woman Autosports Team? Really!)

Saab's P.R. department is pleading poverty so the CSE doesn't look good. The Blackbird should be very able to handle the trip, as Satch threw lots of parts and money at it after the car broke down in Dawson Creek last autumn (Issue #216). The Hawg needs a little work—like a hot-zoot engine—before it is ready to rally.

Unfortunately, few if any of the hand-picked team members have made the commitment to run the Summer Alcan or the Alcan Vintage rallies, so Carlson has been fishing for potential rallyists among the *BMW Club* membership. (The BMWCCA has about six times the membership of the Saab Club and they can afford to actually pay him to write for their publication, the *Roundel*.) Much as I would like to be a part of the madness again this year, early September is already filled on my dance card. It is also not a cheap vacation; the budget runs around a couple grand per person. While sponsorship would be marvelous, especially since it cuts individual costs to nil if worked out properly, that sugar-daddy sponsor has not been located.

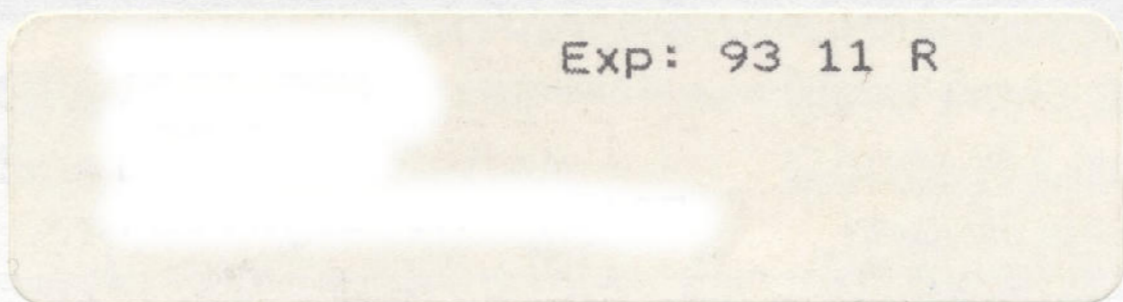
I may not be able to make the autumn version of the Alcan, but the Alcan Winter Rally still has my interest. Virtually all competitors on the Winter event run four-wheel drive vehicles. Satch and I agree that a 9000 Turbo with Traction Control should theoretically be able to give the 4WD crowd a run for the trophies. All that is needed is someone—Saab Cars USA, a Saab dealer, an independent shop, anyone—to put up the car.

For more details on the Alcan rallies, write to Jerry Hines at 15 Central Way, No. 300, Kirkland, WA 98033. If you think you have the *cojones* and the coinage to be a part of the Saab team, send your resume to the Saab Club and it will be forwarded to *Monsieur Carlsson*. Remember, it's not just a rally, it's an adventure!

Tim Winker

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