



THE SAAB CLUB

MARCH 1984, NEWSLETTER # 124

MINNESOTA SAAB CLUB--will feature Chuck and Don Andrews of Andrews Auto Rebuilding presenting "Total Performance Alignment" at the regular April meeting (April 5, 8 pm, Shakey's Pizza, Larpenteur and Snelling). This talk will be an updated version of the tech' session the Andrews presented at the national convention last August. There is also a fix-in March 31 at Gary Zaidenweber's house, starting at 9:30 am. Contact Gary, 644-7396 or Bob Swinehart, 774-4873, for details.

GREATER NEW YORK AREA SAAB CLUB--will have their next meeting April 15, Sunday, at 10:30 am, at Floyd Bennet Field, Building #272. The topic will be brakes--changing pads, adjusting parking brake etc. For more info, call Marc Frank, 212-438-2022.

SAAB SONETT CLUB OF SOUTHERN CALIFORNIA--meets regularly every second Thursday of the month at Antique & Classic, 18315 Mt. Baldy Cir., Fountain Valley, CA. Meetings begin at 8:00 pm.

CENTRAL ILLIANA SAAB CLUB--April meeting date had not been set by press time. Call Margrit Adler, 217-356-9244, for details.

TULSA, OK SAAB CLUB MEETING--will be March 25, Sunday, at Chandler Park, 1-5 pm. Bring your Saab, family and lunch. Anyone interested in Saabs is welcome. For more info on this or future meetings, call Jim Glavas 918-663-8087.

SAAB CLUB OF SOUTHERN CALIFORNIA--meets on the third Tuesday of each month at Antiques & Classics Restaurant, 1815 Mt. Baldy Cir., Fountain Valley. There are no dues for the local club at this time, and any visitors are welcome. For more info, call Paul Florance, 213-438-3257.

SAAB CLUB NATIONAL CAPITAL AREA--will hold annual elections at their April 11 meeting at the usual location, the Silver Spring Public Library, 8901 Colesville Rd, Silver Spring, MD. For more info, call Toby Turpin 301-384-6732.



SAAB TURBO NUMBER 100,000--The 100,000th Saab Turbo rolls off the assembly line in Trollhat-

tan, Sweden. It is shown with the team that did the final work on the car.

Saab Clubs of North America

Editor and publisher: Jeff Delahorne, 5805 Oneida St., Duluth, MN 55804
(218) 525-3253 9 a.m.-8 p.m. except Sunday

Consultants: Dick Grossman, Jack Ashcraft, Carolanne Curtis, Andy Buc, Ted Tucker

PETER McLAUGHLIN'S 96 MECHANICAL TIPS

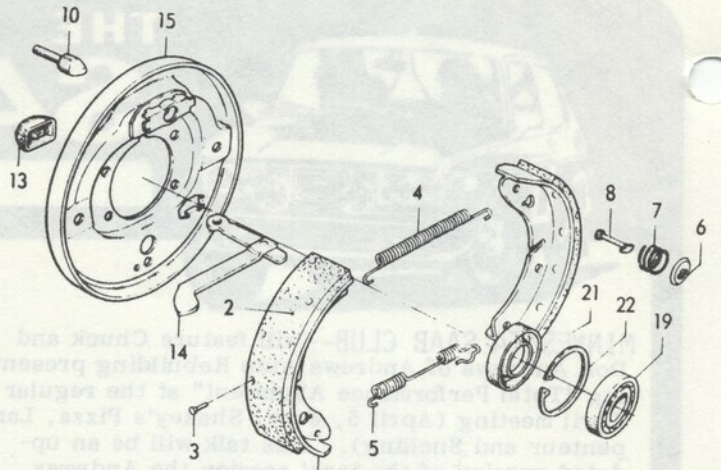
I would like to thank everyone who has sent in tips to the Newsletter. I think I've incorporated at least a score of tips into my current 96, from air filter modifications to a right-angle zerk fitting on my steering rack. No tip is too small to send in. For example, anyone who has been stranded (usually on a cold, rainy night, with no lights), due to those miserable old brass and porcelain Bosch fuses can appreciate the value of the tip about those pointy-ended stainless steel and glass fuses. Also, my rear passenger window no longer leaks thanks to the neat fix for shrinking window gaskets. And on and on. Here are a few of my own tips and observations from the last couple of years.

Brakes: I am of the opinion that if an internal rubber component in your hydraulic system goes, you should seriously consider overhauling the whole system. Let's face it, the newest of the 95's, 96', and 97's are ten years old, and their brake systems are best thought of as old inner tubes (i.e. at some point you give up patching them and you just replace it). You can replace a cylinder here or a hose there, but the number of times you'll find yourself on your back bleeding fluid from your latest repair just isn't worth it. In the recommended service interval section of Chilton's Saab V-4 book, it tells you to replace all rubber components in the brake system every 36,000 miles--no joke! Perhaps somebody out there with an official Saab shop manual could confirm this, but it's my bet that Chilton's got that piece of advice from Saab and didn't make it up on their own. (Ed. Note: *The Owner's Manual for the 96 specifies that the fluid should be changed every 36,000, but says nothing about the seals.*) It may be that they were familiar with the track record of English-made components.

With the rear cylinders, replace them, don't rebuild them. The good folks at Europa Motors in McHenry, IL warned me about this, but I ignored their advice, trying to save about \$20 per cylinder. Nine months later I was on my back replacing my rebuilt rear cylinder, and soon thereafter the one on the other side went too. Apparently the dirt and sludge in the system settles at the lowest point, right where the rear cylinders are. Once you do have the system right, bleed it once a year to keep that dirt out of those seals.

Parking brake link--That's the steel "L" shaped gizmo that connects directly to your hand brake cable right outside of the rear drum. The first time I took my rear brakes apart the thing was so rusted that I didn't realize it was supposed to pivot at the "crotch" of its L shape. After you free it up coat the entire pivot point in grease so it doesn't seize again. The reason it froze in the first place was probably because the nice little rubber boot that's supposed to keep it dry was either shot, missing or mismatched. This is the boot that covers the link right where it comes out the back of the backing plate. Soak your new boots for a day or two in Armorall to keep them living longer.

When those boots are shot, or if you live in salt country, often times you will find that the rear brake shoe retaining pins, springs and cups are rusty or shot too. I found a display in my local import parts emporium that had a set of these little gizmos that were almost exactly the same size



as the Saab versions. These are the pins, springs and cups that are referred to as "shoe steady" in the Haynes manual, page 132.

Suspension work in general--If you have the luxury of time, soak every nut and bolt in sight with penetrating oil for a few days in advance. Note that all your suspension nuts and bolts are standard inch sizes on the 96, including the castle nuts on the axles. You might find it cheaper and more worthwhile to purchase a great big adjustable crescent wrench than to get the individual 3/4" drive sockets and adaptors for the castle nuts. An ordinary pully puller of the correct size does the job of a wheel puller quite nicely.

If you have to pull a front axle for whatever reason grease-gun all the related zerk fittings (if your car has them) before you do the job. If any of the rubber ball joint boots are cracked, they'll let you know with a nice big leak of grease. Now is a good time to replace them.

When I installed my new Gabriel Red Ryder shocks on the front, I found that the rubber bushings they supplied were not long enough to compress properly by the retaining washer and nut, giving an almost loose fit. Use a large U.S. washer, size 5/8" I.D. by 1 1/2" O.D., as a shim to give a nice tight fit. Put your new "shim" on before putting on the bushing and shock. One was enough for each mounting post.

Peter McLaughlin, Evanston, IL

NEXT MONTH: Exhausts, manual chokes, balance shaft gears and more.

MEMBERSHIP/SUBSCRIPTION

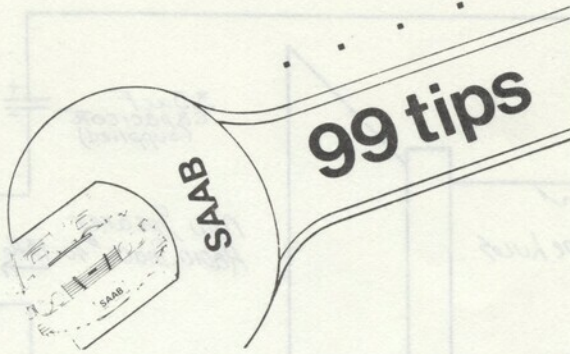
Dues for membership/subscription are as follows:

First year, third-class mail	\$11.00
First year, first-class	\$12.00
Renewal, third-class	\$ 8.00
Renewal, first-class	\$ 9.00

First-year membership includes two back-issue newsletters, Club tech sheets and emblem. Renewal notification will be stamped on the open rectangle at the top of this page. A treasurer's report will be made three times a year. This is a nonprofit organization.

A collection of 15+ back issues with Club tech sheets punched for your 3-ring binder is available for \$8.00 postpaid. Individual back issues: 75¢ each.

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



MISCELLANEOUS TIPS FOR 99's and 900's

My '81 900S had intermittent surging and severe loss of power at all engine speeds and a rough idle, but the car is still driveable. It happened only after warm up and would last five minutes maximum, then self correct and would be fine until it happened again. I first suspected the electrical system due to the intermittent nature, but after raising the hood and looking at the injector lines, I found that the #4 injector hose had bubbles. I replaced the injector and have had no more problems.

Another problem was intermittent complete halting of the engine at all engine speeds. This culminated with the inability to start the car in a very bad spot in town! Again, after much futile electrical wiggling and fuse rotating and relay disassembly, I had found nothing. While pondering the alternatives, I finally remembered the lack of a soft whirr from the fuel pump. Removing the rear floor deck revealed a very loose ground spade lug on the fuel pump and application of plier-amplified brute force solved the problem.

Question: Would a 12v spark (as in above) be sufficient to ignite any vapors leaking through the fuel tank lid? If so, why attach the wires with lugs? (Ed. Note: I suppose it could, but the vapor concentration would have to be pretty dense, and in order to get a spark you would have to have voltage at that connection. In the CIS system, there is only voltage at the pump if the engine is cranking, or running. So I doubt there is great potential for an explosion in such an instance.)

Tires: I have used TRX 200/60VR390 with incredible handling results. Tread life on the original 180's was none too good, and as mentioned in previous Newsletters, TRX's are excellent high performance dry and wet tires, but deadly in slush and snow.

Shocks: Be sure to set Koni gas oem replacement shocks on their lowest (i.e. softest) setting or new bushings on the rear locating rods will rapidly be required.

Seat bladder replacement is fairly easily accomplished by anyone with patience and reasonable mechanical knowhow. First, remove the seat (not so easy if you have the special spring bar locking the rear pivot point in place). Force the spring bar (if so equipped) up while the seat is fully down then lift the seat up and tilt forward sliding frame peice under spring bar and out. Both sides should be done simultaneously.

Cover the seat and back with clean rags while removing the metal clips and wire bars from the seat cover material. Take care not to rip the cov-

er or heater grid directly under the cover. I recommend modifying the two cross wires that hold the rubber bladder to the seat cover (not the wire bars holding the bladder to the seat frame) such that both ends require those large press-on washer-type clips which you will get in the new bladder package from Saab. When replacing the seat cover material make sure it is stretched tightly. Do not replace the front and rear clips in the exact same locations as they will tear out shortly; move them at least one clip's distance to either side and try to space them evenly. Patience is the trick throughout.

Al Bowers, Pittsburgh, PA

99 HEADLINER REPAIRS--ONE MORE TIME....

There have been several letters lately on headliners and I thought my experience might help a few. I too was very disappointed with the velour headliner on my 1977 99GL. After glue failed to stop the sag, I asked a few upholstery shops what they would charge to cover it with car seat material like naugahyde or vinyl. All said \$200-\$300, and more than 2/3 of this was the labor in getting the headliner in and out of the car.

I decided that I could handle this, and with the help of a friend, removed the headliner panel, paid \$75 to have it recovered, and reinstalled it. You have to feel your way, but it only took about an hour to get it out. Fortunately I have a hatchback, and one undone, it was slipped out through the tailgate. It would have been much more difficult on a two or four door.

The finished product was nicely done in black, perforated padded naugahyde similar to steering wheel lace-up covers. The upholstery shop used flat black upholstery buttons/pins to get the padded/tufted custom job described in one of the last letters. After two years, it still looks new, and best of all, Armorall keeps it that way.

Charles Pattison, Key West, FL

V-4 AIR FILTER AFFECTS GAS MILEAGE

I have a 96 V-4. Recently I noticed that the fuel economy had begun to drop off to about 30 on long trips. A tuneup had no significant effect, but replacing the air filter restored the usual 34 mpg. It is surprising that the air filter could decrease the air flow (because of clogging) that much in 12,000 miles. Presumably that wouldn't happen on the CIS 99 and 900 because they have an air flow sensor. Instead you would probably see a loss in power.

Theodore Ehlke, Cross Lanes, WV

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TWO-WAY FRONT SPEAKER SETUP FOR 900's

While leafing through my Saab Accessory book I came across a set of add-on front speakers which are a two-way system. Here is a way in which you can make such a system for your own Saab.

First, remove the front speakers from the dashboard of your 900. This is easily accomplished by taking out the two screws from each housing (pozi-drives), then by twisting and lifting up the housing it will come free of the dash. Remove the wires connected to the speaker, noting which is the red or positive terminal, and the defroster vent hose and the housing is free to be taken from the car.

After removal the new speakers must be mounted. I used Radio Shack .75" Hard Dome Tweeters (#40-1376) which are ferrofluid cooled with polycarbonate diaphragms rated at 40 watts. The speakers can be mounted in the blank directly in front of the defroster vent by drilling a hole large enough to accommodate the coping saw blade and then cutting out a circular hole about $\frac{1}{4}$ inch from the existing lines in the housing. Fasten the speakers into place by using four or five drops of cyanoacrylate adhesive (Super Glue, Elmer's Wonder Bond, etc.) to the back of the speaker and pressing it into contact with the housing for several minutes until the adhesive sets. The terminals on the speaker should be situated so that they are closest to the terminals on the existing speaker in the housing. For appearances I also painted the rim of the new speaker black, leaving the center silver so that it would blend with the existing housing.

Wiring--Your next problem is to wire the system. If your existing speakers are eight ohm, it should be marked on the back, all that must be done is to wire the new speaker in parallel with the existing speaker (see Fig. 1) and you're finished. In the event your speaker is not marked, its impedance may be tested using a volt-ohm meter by measuring the resistance between the terminals. If it is six ohms or above it can be treated as an eight ohm speaker. If it is under six, you will need a matching coil.

To make a matching coil you will need 80 feet of 30 AWG wire. This is wrapped by first twisting the two ends of the wire together, then, leaving about four inches of wire, wrap the wire on a core to form the coil. This may be anything from a dowel rod to a piece of rubber hose about $\frac{1}{2}$ inch in diameter. Begin to overlap the wire when the coil is about an inch long and wrap until all but four inches are on the form. Carefully slide off the coil and wrap with wire or tape so that it will hold its shape. The impedance of the finished coil is about four ohms. This is made of a double layer of wire to guard against burn out at moderate wattage levels. Both ends of the coil should be stripped and tinned (tinned means applying solder to the ends in preparation to attaching them to the speaker connections). Following this the coil should be wired in series with the four ohm speaker, with the new speaker being wired in parallel with this network (see Fig. 2). This is most easily done by desoldering the speaker cone lead from the positive spade terminal and soldering a piece of six-inch 18-gauge speaker wire, stripped

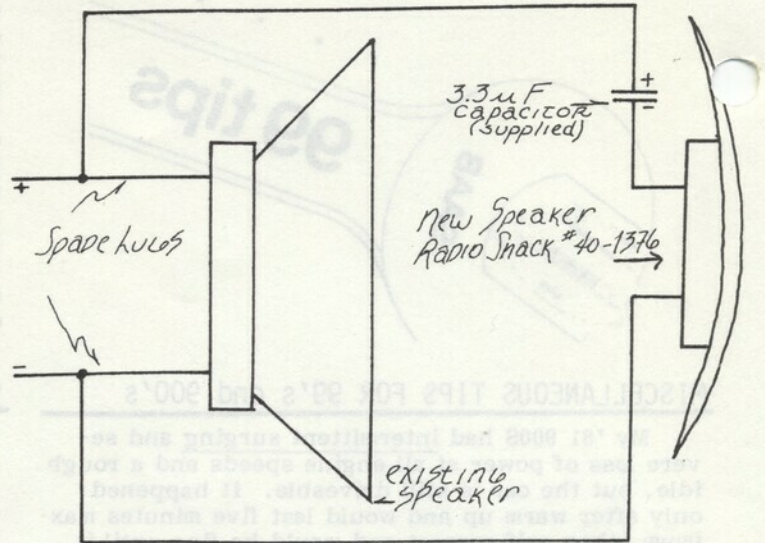


Fig. 1-- 8 ohm wiring diagram

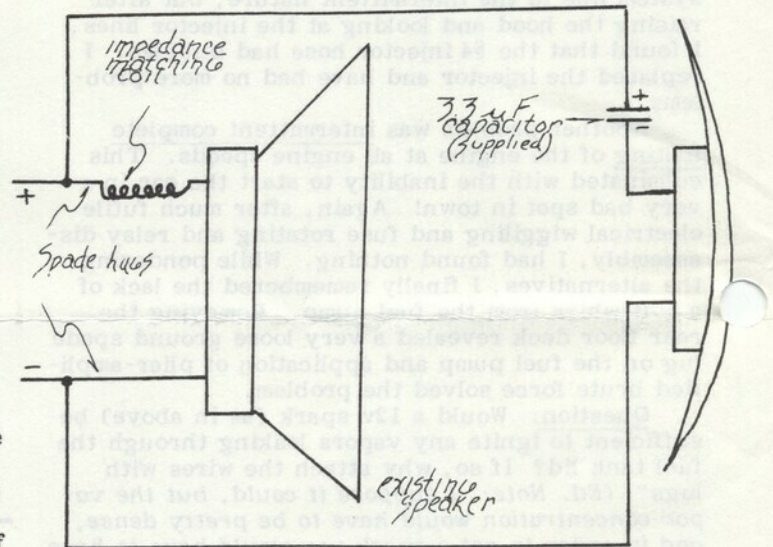


Fig. 2-- 4 ohm wiring diagram

and tinned $\frac{1}{4}$ inch on both ends, and one lead from the coil in its place. The other end of the coil wire is soldered to the recently removed speaker cone wire. The remaining end of the 18 gauge wire should be soldered to the lead of the crossover capacitor which is attached to the new speaker. Another six-inch 18-gauge speaker wire should be prepared like the first and soldered between the negative spade lug and the vacant terminal on the new speaker. Finally, all wires and the coil should be firmly fastened to the speaker housing so that they cannot rattle or short against one another or the chassis of the car, then the speaker housing may be reinstalled. The total cost of the project should be under \$20 and you will have only one afternoon or evening of time invested with removal and refitting.

The impedance matching coil is necessary to raise the impedance of the system up to four ohms or greater. Without it, the impedance of the four ohm speaker paralleled by an eight ohm speaker, would be around two ohms which is so low that it could cause damage to the power output transistors of your tape deck or radio.

Stephen Phillips, RR#1 Box 102,
Nappanee, IN 46550

HEATER VALVE FAILURE REPAIRED ON '81 900

A couple of months back, I started smelling antifreeze inside the car while driving to work. Later in the day, a puddle of antifreeze had formed on the driver's side floor mat. These symptoms pointed to a leaking heater valve. Crawling under the dash confirmed this.

After removing the heater core and valve assembly (more on this later) I found the leak to be an apparent pin-hole through the metal. The pin hole was at the forward end of the actual valve assembly, in the formed metal cap that attaches the valve to the tube. Probing with a tiny screw driver revealed that the pin hole was much larger-actually more of a crack. Because I needed the car before I could obtain a new heater valve (a new one is \$52), I decided to attempt a repair by soldering the hole closed, using acid-core solder and a propane torch. I'm happy to report it was a success. No problem with the repair has occurred.

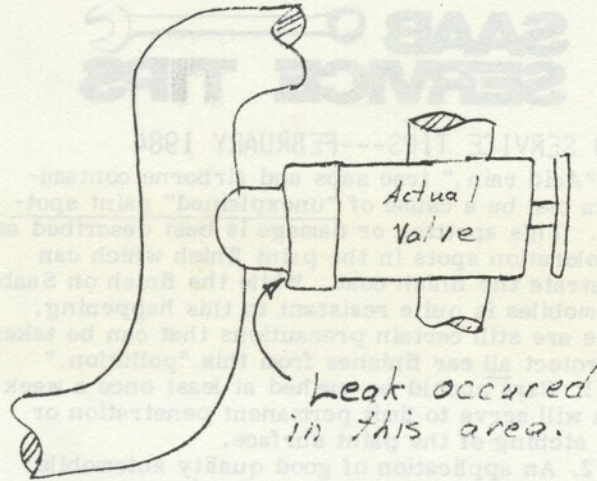
For those who might have the same problem and want to do the repair themselves, a few hints may be in order. First, you should have a Saab Service Manual (at least the Body section) for instructions on how to remove the core and valve assembly. It's not the easiest job in the world, you have to remove the lower dash panel for instance, although there are cars that are worse if that's any comfort. It will prove to be helpful to your back if you also remove the driver's seat.

The core and valve assembly "drop" out the bottom of the dash fairly easily, thanks in large measure to gravity. However, finding the right "angle of the dangle" to put the assembly back in place can be quite a chore; so try and observe what "angle" it assumes when it comes out.

When doing the soldering, the area to be soldered must be very clean. Cleaning with lacquer thinner or a similar agent helps, as does a little sandpaper. Also use some soldering paste/flux. Heat the spot slightly then apply the flux; this will help clean the area. Obviously you must use care with the torch. Heat the area only enough to melt the solder--the solder should flow onto the metal evenly, not in big globs. I soldered all around the offending part in case there were other weak areas.

I think the failure of my valve was due to a manufacturing defect. The piece that failed is a formed part and I feel the metal may have been drawn too thin, allowing it to crack due to the thermal stresses.

Steve Parsons, Washington, IL



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SAAB SERVICE TIPS

SAAB SERVICE TIPS---FEBRUARY 1984

"Acid rain," tree saps and airborne contaminants can be a cause of "unexplained" paint spotting. This spotting or damage is best described as discoloration spots in the paint finish which can penetrate the finish coat. While the finish on Saab automobiles is quite resistant to this happening, there are still certain precautions that can be taken to protect all car finishes from this "pollution."

1. Cars should be washed at least once a week. This will serve to limit permanent penetration or acid etching of the paint surface.

2. An application of good quality automobile wax should always protect the finish. However, cleaner-wax and polish actually remove an outer layer of paint when being applied and should not be used on new car finishes. A genuine "wax only" product will not remove any of the paint finish when applied and can be used on new car finishes to prevent spotting.

All areas of the country can be affected by airborne contaminants, not just heavily industrialized areas.

When making a check of the turbocharging pressure (1,000-Mile or major service, or after replacing a turbocharger), full braking force should not be applied for more than 3-5 seconds. After each test, drive the car for at least one mile to allow the brake pads to cool down and before completing the test. A sustained pressure test can overheat the brake pads and introduce an unwanted brake squealing problem. Full details of this test may be found on page 39 of the 1984 PDI & Break-In Service Manual.

Clarion radio warranty (1984 Turbos) is handled directly through the Clarion OEM Customer Service Department. When contacting Clarion, the Saab dealers will be asked to supply specific information about the vehicle and the customer. Do not remove the customer's radio before you have received an exchange unit directly from Clarion.

A Turbo that has been run for long periods of time with a bad turbocharger (worn oil seals) may have an oil laden exhaust system. When this happens the car may still smoke for a while even after installation of the new turbocharger unit. It may take up to an hour of hard driving before all the residual oil is cleaned out of the exhaust system and the exhaust burns clean.

A new style rear speaker grille is now being installed in 3-door Turbos at the port installation. Cosmetically the new grille is now a black wire mesh design and also allows for more clearance between the 5¼-inch speaker and the grille.

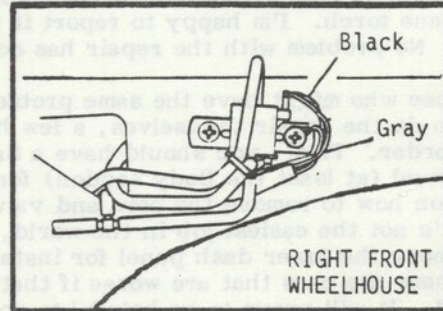
The Club thanks Mr. Daniel L. David, Manager of Technical Services at Saab-Scania of America, and Mr. Robert J. Sinclair, President of Saab-Scania of America, for continuing to provide Saab Service Information bulletins.

'84 SEAT BELT LIGHT ACTIVATED BY AC SWITCH

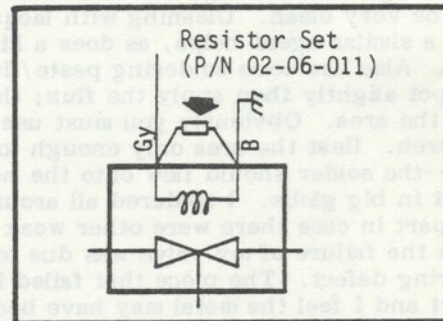
Saab Service Info 02/84-671: The seat belt reminder system can sometimes be activated on M84 cars by electrical interference from the AC recirculation door solenoid. If this occurs, the FASTEN SEAT BELTS lamps will glow for up to 8 seconds after the air distribution control in the dashboard has been switched from MAX AIR to any other position. The buzzer will also sound if the front seat belts are not in use. To eliminate this it is necessary to install a resistor set into the circuit of the solenoid. Saab has available a resistor set (p/n 02-06-011) to accomplish this.

Modification Procedure:

1. Remove the black wire and the gray wire from the recirculation solenoid, located on the inner plate above the right front wheelhouse.



2. Attach the resistor (p/n 02-06-011) to the two terminals of the solenoid and re-attach the black wire and the gray wire to the piggyback terminals of the resistor set. Gently bend the newly installed resistor set downward to prevent contact with the hood when the hood is closed.



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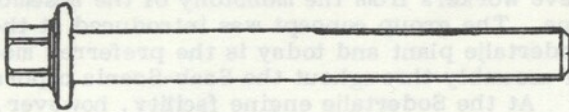
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NEW 'TORX' CYL. HEAD BOLT, MID-84 900's

Saab Service Info. 02/84-668: During 1984 900 model production and beginning with Engine Number E53614, a new cylinder head bolt was introduced. The new bolt requires that a special socket (Torx type, size #16 1/2 in. drive) be used when applying torque to the cylinder head bolt. The new bolt will also be found on cars batch produced from Engine number E42621 to E46906. The torquing procedure remains the same as before.

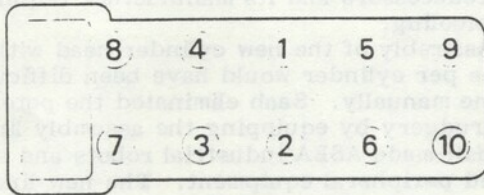


Torx E16

**Tightening Instructions:**

After replacing the cylinder head, changing head gaskets, or anytime the cylinder head has been removed:

1. Tightening the cylinder head bolts in two stages according to the numbers in the diagram.
Stage I: 43 ft. lbs (60 Nm)
Stage II: 65 ft. lbs (90 Nm)
2. Now proceed to the next step for further tightening instructions.



Tightening procedure at the 1000 Mile Break-In Service or the second step of torquing the cylinder head anytime the cylinder head has been removed:

1. The engine must be run until warm and then be allowed to cool for 30 minutes.
2. Back off and then retighten each bolt to a torque of 65 ft. lbs. in the order specified in the diagram.
3. Then tighten each bolt a further 1/4 turn (90°).



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99 DOOR LATCH FIXED--ALSO LOW BEAM FUSES

In 10° degree weather my '71 99 driver's side door popped open unexpectedly once per mile for a couple days, then failed to latch at all. Because the latch appeared to be working in both positions with the door open, I began adjusting the striker plate, but to no effect. The next step seemed to be to pull the latch mechanism and look for worn parts or gummy lubricant, but since it was pretty cold I tried a short cut. After removing the soft trim inside the door, I gave the mechanism a liberal dose of light spray oil. After that, it worked fine. With a final adjustment to the striker plate, the closing mechanism now works like new.

No low beam headlamps-- On my '71 99 with four round headlamps, one low beam went out, but would work when I hit a bump or tapped the headlamp relay (attached to the fuse block over the left front wheel well). When the second low beam failed similarly a few days later, I figured I had a bad headlamp relay. I changed the relay and found the same symptoms; four high beams worked, neither low beam worked.

Looking at the wiring diagram I discovered I had forgotten the first rule of electrical troubleshooting: Check the fuses! Each low beam has a separate fuse, and they looked fine, but turned out to be corroded enough to be making only intermittent electrical contact. To fix them, I polished the fuse ends and holder contacts. This is something to keep in mind when a fuel pump or other electrical device cuts out.

I'd be interested to know where the fuses for the high beams are. I couldn't find them on the diagram or the car. (Ed. Note: There aren't any on 99's).

David B. Garwood, Scotia, NY

CANADIAN MEMBER ALSO HAS 900 SHIFTING WOES

My '81 has the same problems shifting into first as Jeff Delahorne and Jay Vivian described in the February Newsletter (p. 5). I wonder whether, when pointing up-hill the engine moves backwards fractionally on the rubber in the mounts and alters the alignment of the shift mechanism. I also have another problem which also occurred on my '78 99, which is the gearlever "jumping" out of first gear, especially if the clutch is depressed quickly at high rpm on trailing throttle. I believe that this is definitely caused by the front engine bearer not being hard enough. I have not been able to locate a "competition" front bearer for the "H" engine.

I have had problems with oil filters leaking. During 1982 a new filter would start weeping after a week or so. In my case I finally removed the oil filter adaptor and found a helical scratch in the mating surface. I ground it smooth with 600 grit wet and dry paper on a flat plate with a central hole to clear the filter attachment screw and it has been fine since.

T.P. Locke, Toronto, Ont.

CONVENTION OWNERS SURVEY RESULTS AVAILABLE

Andy Federowski has compiled the data from the Owners Survey handed out at the National Convention last August. Since it is three pages long, I decided not to run it in the Newsletter, but instead I will send copies to everyone who attended the convention. For those who didn't attend the convention, I will be glad to send a copy if you request one from the Club.

SERVICE CAMPAIGN 504--SONY SOUND SYSTEMS

Saab Service Info 02/84-674: This service campaign addresses two possible problems related to original equipment Sony Sound Systems installed in certain Saab Turbo models by Saab-Scania:

A. Short rear speaker life--affects M81½-83 3 dr. Turbo models with Sony XR-70 and XR-75 systems and 4 inch diameter rear speakers mounted in the parcel shelf side supports.

B. Noise interference--affects M82½-83 APC Turbos (3 & 4 dr. models) with Sony XR-70 and XR-75 systems which have RCA phono-jack amplifier cables.

Purchasers of the affected vehicles will receive a service campaign notice to inform them that they are eligible to have the above problem(s) corrected at no charge according to the instructions and parts prescribed in this S.I. This S.I. is no way authorizes replacement of any parts or any modifications or repairs other than those prescribed herein.

Part A involves replacing the 4 inch diameter rear speakers which may experience short speaker life, with upgraded 5 inch diameter speakers relocated to the rear side panels.

Part B involves inspecting/improving radio grounds, amp cables and suppression.

Ed. Note: The entire Service Bulletin is too long to reproduce in the Newsletter, but those who are interested can obtain a copy from the Club by sending a SASE and \$1.00. Be sure to specify a copy of Service Campaign 504.

900 HAS BROKEN EXHAUST PIPE & BALL JOINT

My '80 900 has required attention on two accounts in the last month. The exhaust pipe fractured just below the flange that bolts onto the exhaust manifold. Apparently this is not a freak occurrence as the replacement from Saab has a reinforcing bracket welded over the section that failed.

Secondly, I had a lower ball joint go bad. I heard clunking and could feel a little strange handling, but I could not feel looseness by grabbing the tire. It finally took raising and lowering the car on a jack while watching the ball joints to see movement in the bad one.

Robert Swinehart, St. Paul, MN

NATIONAL CONVENTION SET FOR AUG. 11-12

The Saab Club National Convention Committee has chosen the weekend of August 11-12 for this year's meeting. Committee members Mark Lundquist, Andy Federowski and Margrit Adler chose a slightly earlier date than last year's event due to several requests that the meeting be held before schools begin their fall sessions.

The site has yet to be determined, and several locations are being discussed, including Turkey Run in Indiana. If you have any suggestions, please contact either Mark (814 Woodland Dr, Rockford, IL 61108) or Jeff Delahorne at the Club.

CHARLESTON, S.C. CLUB-- Any Saab Clubbers who would like to form a local chapter in the Charleston area contact Shawn J. Mulvey, 1056 Woodside Dr, Charleston, SC 29412, 803-795-0860.

SAAB ENGINE ASSEMBLY TURNS MORE TO ROBOTS

Saab Press Info: Technology is making group assembly obsolete at Saab-Scania's automobile engine plant in Sweden. The group assembly method was pioneered here by Saab in 1971 and it continues to be developed at other Saab plants. But at Sodertalje, robots are taking over.

The new industrial robots are part of a fundamental change in the way Saab assembles engines. Group assembly, in which a small team builds an entire engine, was created by Saab-Scania to relieve workers from the monotony of the assembly line. The group concept was introduced at the Sodertalje plant and today is the preferred mode of assembly throughout the Saab-Scania corporation.

At the Sodertalje engine facility, however, Saab-Scania will further improve work conditions by adding robots and individual assembly stations that use unmanned mobile assembly carriers. Saab-Scania expects that, aside from ergonomic considerations, the new system will simultaneously increase output capacity and production flexibility.

When automobile engine production began at Sodertalje twelve years ago, the plant was running at an annual rate of 50,000 engines and the number of versions was strictly limited. Today the production rate is 100,000 units and still climbing. Further complicating factory operations, Saab must produce some thirty different versions of the basic engine in order to comply with regulations in the many markets where Saab cars are sold.

The upcoming introduction of the third generation Turbo engine is another factor that determined Saab's decision to bring in the robots. The new powerplant's sixteen-valve cylinder head with twin overhead camshafts is radically different from its predecessors and its manufacture requires major retooling.

Assembly of the new cylinder head with four valves per cylinder would have been difficult work if done manually. Saab eliminated the potential for drudgery by equipping the assembly line with Swedish-made ASEA industrial robots and sophisticated peripheral equipment. The new line will produce both eight- and sixteen-valve cylinder heads.

NOKIA TIRES

Nokia Tires, makers of the famous Hakkapeliitta snow tires, have a new summer tire, the Rollster. The Rollster is a steel-belted radial with a low rolling resistance design that couples good performance in the rain with long wear. It is available in the hard-to-find 185/65SR15 size (\$89 ea) or in 165SR15 (\$63 ea.). Call Jeff Delahorne, 218-525-3253, for orders or more info.

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CLASSIFIED AD RATES

Ads offering parts or Saabs for sale or wanted at prices under \$200 are FREE to members and non-members. 25-word limit, plus name and address. Ads listing prices of \$201 to \$900, enclose \$2. Ads listing prices \$901 to \$2000, enclose \$5. \$2001 and up, enclose \$10. All ads without a price listed, enclose \$10.

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

CLASSIFIED AD DEADLINE

The Classified Ad deadline for the April Newsletter will be April 2nd, and the deadline for the May Newsletter will be May 1st.

SONETTS FOR SALE

1970 Sonett, Serial #88, no rust, 1700 engine, rblt trans., good interior: \$1300. Randy Cook, 1877 Oak Ridge Ln., Lawrenceville, GA 30245, 404-962-0528.

1973 Sonett, KYB shocks, XVS, Isky cam, big carb, MSS exh., sun roof, am/fm, new rear pan and rock panels, new trans, clutch & brakes, 95,000 mi.: \$2950 obo. Ivan Frantz, 172 Cottage St., Natick, MA, 617-655-3409 eves, 617-735-7305 days.

1974 Sonett III, 51,000 mi., good running and body cond., am-fm cass., foglights: \$3500 obo Brian Bailey, McKeesport, PA 412-751-9525 after 4 pm.

1974 Sonett III, AC, am-fm, new paint, new radials, exc. body, eng. rblt '82, trans. rblt '81, rally exh., new cloth uphol., exc. cond.: \$3900 Dr. Terry Bolen, PO Box 296, Hewitt, TX 76643 817-666-2292 (day) 817-859-5294 eve.

95's and 96's FOR SALE

1965 Monte Carlo oil-injected two-stroke, exceptional; all records: offers over \$900; possible trade. Robert Rosenberg, 1315 Cecelia Ct., San Luis Obispo, CA 93401, 805-541-1315

1967 96 V-4, runs good, needs body work--plus '65 parts car: \$475. Paul Vignone, 203 Maple Springs Dr., Birdsboro, PA 19508, 215-582-4611

1967 96, body rusty, needs some minor work: \$450. David Chale, 1327 Milvia St, Berkeley, CA 94709, 415-526-5822 any time.

95's and 96's FOR SALE, continued

1970 96 V-4, 80,000 mi., was in collision--undriveable, has new weber carb, AC, good tires, etc. No rust--other than damaged front & rt. ft. fender body & int. in exc. cond. Asking \$325, will sell carb & AC separately. Len Vidger, 2320 Whitman Way, San Bruno, CA 94066, 415-873-3495.

1971 96 V-4 station wagon, mech. good, sunroof needs only small cosmetic finish to be in exc. cond. Rust free So. Cal. car: \$1695 obo. Kustein, 22447 Dolorosa, Woodland Hills, CA 91367, 818-704-1482

1973 96, exceptional cond., rust free, strong eng/trans.: \$1800. Randy Cook, 1877 Oak Ridge Ln, Lawrenceville, GA 30245, 404-962-0528.

95, 96 and SONETT PARTS FOR SALE

Have four '64 and six '66-67 95's and 96's. Also have some parts for Sports model & one Monte Carlo. Will sell whole or part out. Lee Gillum, 1185 Swan Hwy, Bigfork, MT 59911, 406-837-4628 wk, 837-5327 home.

1971 96 runs & '70 parts car, extra engine, all must go: \$200. 612-429-1799 days, Dale, 2421 Mayfair Ave, White Bear Lake, MN 55110

1967 two-stroke 96, bad engine, trans. OK, new temp gauge, rebt brakes: \$150. C. Paisley, 616 Wheeler St, Santa Rosa, CA 95404, 707-528-4057.

'74 Sonett Mag Wheels w/lugs, exc. cond.: \$200 David vonGuntzen, 301-875-3349 after 6 pm EST.

'66 Stroker engine, runs, complete: \$75 + ship.; 2-stroke bulb-type temp gauge: \$25; V-4 tach: \$45 95 tail-ligh ass'ys & lenses: \$15; many other 95/96 parts, new & used. Quantum Mechanics, 45 Huntington Ave, S. Yarmouth, MA 02664, 617-394-5193

Have fine selection of Saab manuals covering 93, 95, 96, 97 & 99; some like new, some dealer worn: \$30-\$90--also many sales brochures \$5-\$15 and some '80 96 posters \$20 and 92-97 posters \$15. Bob Allen, 114 Kimberly Rd, Hamden, CT 06518, 203-248-8798.

1968 V-4 engine, very good (33 mpg) and fair trans (needs 1st gear dentent) \$180 with driveable but very rusty body. Tom Gillespie, Box 535, Cedar Rapids, IA 52406, 319-366-8016 or 362-0815.

Two rblt Sonett grills w/out headlight extensions; black w/ silver trim, better than new: \$40 ea. Mark Guido, 312-367-8058.

'71 96 web casing trans, exc.: \$300; many 95, 96 parts very reasonable. Nicholas B. Hayden, 216-281-9823, 3385 W. 86, Clev., OH 44103.

95, 96, and SONETT PARTS FOR SALE, cont'd

Sonett III parts: 10 mags (9 bl. ctr.): \$30 ea.; AC w/dash: \$125; frt hood clip, repairable: \$250; eng. cover: \$80; rear clip: \$250; rt. frt door repairable: \$60; seats, 1 exc.: \$85; 1 fair: \$20; misc. int. parts & gauges, Saab am/fm radio: \$20 Howard Davies, 1172 Co. Rd 2256, Perrysville, OH 44864, 419-368-7411.

Hood from '72 95: \$10; front fender: \$15 ea; new Ford fuel pump \$20 ppd; dash incl. inst's: \$35 ppd wheels: \$15 ppd, grille: \$15 ppd, radiator: \$20 ppd inside unit for '74 99 AC: \$15 ppd. R. Andrews, RR Box 143, Pennock, MN 56279, 612-599-4489

Paddy Hopkirk sound silencer kit for 96: \$45 plus UPS; New distributor '69-72 99 carb.: \$40 + UPS. SAH rally exhaust sys. for 96: \$65 + UPS. Bob Mitchell, 609-641-4460.

Sonett Parts--large inventory of used Sonett III body, mechanical and interior parts: \$5-\$650. Send SASE for list. Randy Cook, 1877 Oak Ridge Ln, Lawrenceville, GA 30245.

95, 96, and SONETT WANTEDS

Wanted: Saab owner's manual for '66 Model 96. Dr. Victor R. Durrance, 2014 Kayewood, Denton, TX 76201

Wanted: AC unit, complete, for '73 Sonett. 512-625-7133

Wanted: Early Sonett steering wheel w/3 hole design: \$100 or ? depending on cond. Howard Davies, 1172 Co Rd 2256, Perrysville, OH 44864, 419-368-7411.

Wanted: Sonett II owner's manual; 99 late edition parts book; '72 red 95/96 front seat cover; Sonett & 95/96 posters; Saab accessory heavy rubber floor mats for '72 95/96; winter radiator covers; early Saab sales literature. Bob Allen, 114 Kimberly Rd, Hamden, CT 06518, 203-248-8798.

99's and 900's FOR SALE

1975 99LE 2 dr., black w/ burnt orange int.; 4 spd am-fm stereo; exceptionally clean inside & out; rblt eng.-'82, paintwork '83: \$1995 firm. Mark Guido, 312-367-8058.

1977 99EMS sunroof, mags w/XVS's, red, 66,000, am-fm cass., very good mechanicals & int., new clutch, some rust: \$2700. Ted Apple, Phila., PA 215-836-5648, '6-9 pm or weekends

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99's and 900's FOR SALE, continued

1979 GLi 3 dr, 4 spd, reg. gas, Marble White, 50,000 mi., exc. cond., VDO tach & oil press., 1 yr. old p-8's, Pioneer stereo: \$5300 obo. Pete DeRoo, 627 Anthony Ave., Toms River, NJ 08753, 201-929-1394 5-9 pm or weekends.

1980 900 Turbo, 2 dr., 5 spd, Royal blue, Inca wheels w/ Pirelli tires; Blaup. 2001, garage kept, exc. body & mechanics, 40,000 mi.: \$8700. Mark Guido, 312-367-8058.

99 and 900 PARTS FOR SALE

'79 900 Turbo Cyl. Head w/ guides-seats, 46k mi., clean, surfaced, pressure tested; ceramic sealed: \$200 + shipping, can incl. valves, etc for added cost. Terry Parsons, 3411 Bathgate Ln, San Jose CA 95121, 408-274-0301.

81/82 900S parts: all have less than 10,000 mi: Auto trans., axles, engine, 3 dr. rear body sect., blue Turbo seats, Sanyo AC compressor, fuel injection, 70 amp alt., starter etc. Also 99GL, eng. rblt 50 amp alternator, hood eng., 4 spd trans, bumpers, etc. Larry Wilson, 416-444-9868, TH18 390 Woodsworth Rd, Willowdale, Ont, M2L 2T9

'77 2.0 eng., 53K miles, fair to good cond.: \$200 obo; '73 4spd, drive shafts, hubs, disks, etc, 130K, good cond.: \$275. Also parting out '73 4dr body, body rusty, glass good, mechanicals OK, make off. Ben Millard, 415 Templeton, Ft. Worth TX 76107, 817-322-2097 (leave message)

'74 99 LE for parts: Swedish body, hood \$175; doors \$90 ea; bumpers \$25 ea.; rad. \$45; AC w/ rad. \$160; dash \$50; stripped eng.: \$300; seats \$50 ea., windshield \$90 ea, plus all misc parts. All plus shipping. Dave Middlebrook, Province-line Rd RD#5, Princeton, NJ 08540, 609-466-9437

Trailer hitch for 99 sedans: \$45 delivered UPS. Gary Thomas 607-277-0501.

For sale: 2.0L MSS-prepped cyl. head, big valves, stiff springs, ported & polished w/dual Weber intake manifold--never used, \$900 in cyl. head work alone: \$1000 obo; Also one set of +.040 Turbo pistons, new \$200. Mark Strohm, 1131 E. Superior St., Duluth, MN 55805, 218-728-5334.

99 Lower control arms re-inforced: \$55 ea; early 99 EFI pumps: \$15 ea; late 99 2-piece exh. manifold: \$75; used 99 trans (73-74): \$200; '74 7 '76 grille: \$45 ea; 900 dashboard: \$150; 900 front bumper cover: \$35. Quantum Mechanics, 45 Huntington Ave., S. Yarmouth, MA 02664 617-394-5193

99 and 900 WANTEDS

Wanted: for late model 99 w/ AC, ashtray which fits in radio box, will pay \$10 + post. Mike Poskus 90 Day St., Granby, CT 06035, 203-653-4756.

Wanted: all rubber spoiler to fit '78 99 Turbo; Also Left seat adjustment assembly for 2 dr. 99 (drivers side) call days 513-293-2844, Don Prizler

Wanted: 4 steel wheels for 99, must be round & true; Also one Inca alloy wheel for 900 Turbo. Mark Guido, 231 Coventry Cir., Vernon Hills, IL 60061, 312-367-8058 eve's.

99 and 900 WANTEDS, continued

Wanted: '81 900 standard trans, 4 dr or 3 dr. Call collect, Nicholas B. Hayden, 216-281-9823, 3385 W. 86, Cleveland, OH 44103.

Wanted: Good cond. '73 or '74 99 with or without eng. & trans. Tom Gillespie, Box 535, Cedar Rapids, IA 52406, 319-366-8016 or 362-0815.

Wanted: Turbo engine, any year w/ fuel distrib. etc. Have '79 2.0L completely rebuilt as partial trade? Jeff Delahorne, 218-525-3253.

MISCELLANEOUS ADS

For Sale: Blaupunkt am/fm with separate 8 track unit; all hook ups, radio speaker jack circuitry needs repair; tape fits under seat, from '74 99: \$60. Steve Buckles, 1238 E. Cambridge, Phoenix, AZ 85006.

UPDATED BRAKE PAD RECOMMENDATIONS '75-83

Saab Service Info. 02/84-670: This is an update of the Service Bulletin which appeared in last year's March Newsletter (p. 6-7) and contains part number changes for brake pads.

The following tables indicate the combinations of brake pads now available for the service of Saab 99 and 900 models from 1975 through the present.

FRONT BRAKE PADS			REVISED 02/84
APPLICATION	TYPE OF LINING	PART NO.	REMARKS
1983- All Models	Semi-metallic (Asbestos-free)	89-93-263	Original equipment 4 pad set.
1975-82 Turbo, Non-Turbo (hard usage)	Semi-metallic (Asbestos-free)	89-93-263	Brake system must be updated with dust boot kit (89-93-255) and DOT 4 brake fluid (see page 3). 4 pad set.
1975-82 Non-Turbo only (moderate usage)	Organic (Asbestos-free)	89-93-297	No changes necessary to brake system. 4 pad set. Use on both sides of disc.

REAR BRAKE PADS (ATE CALIPERS)			
APPLICATION	TYPE OF LINING	PART NO.	REMARKS
1976½ - Turbo, Non-Turbo (hard usage)	Organic (Asbestos-free)	89-93-230	4 pad set, no caliper update required. Use together with front pad set 89-93-263.
1976½- Non-Turbo only moderate usage	Organic (Asbestos-free)	78-74-217	4 pad set, no caliper update required. Use together with front pad set 89-93-297.

REAR BRAKE PADS (GIRLING CALIPERS)			
APPLICATION	TYPE OF LINING	PART NO.	REMARKS
1975-1976½ All usage	Organic (Asbestos-free)	78-73-755	4 pad set. Use together with front pad set 89-93-297.



Randy Cook's FP Sonett at Rockingham, NC last June.

The Sonett Store FP Sonett ran six SCCA regionals (plus two driver's schools) last year, finishing every race including a third and fourth at Road Atlanta and a fourth at Charlotte. The only problems encountered involved wheels and tires and a minor clutch problem.

Please use knife/letter opener

MARCH 1984

Address Correction Requested

c/o Jeff Delahorne
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MILWAUKEE SAAB CLUB--will meet on Monday, Mar. 26 at Shakey's Pizza, Hwy 100 and Silver Spring, 7:30 pm. Rick Kiblawi of Audio Electronics will discuss in-car entertainment systems and other electronic devices. On Monday April 23, Jim Jurantich, an engineer at Waukesha Engine, will give a presentation on tuning the CIS fuel injections system. This will include "tuning for power" and a discussion of Milwaukee's new vehicle emission testing program.

A tech clinic has tentatively been scheduled for Saturday, April 28. A Saab Turbo will be tuned using portable testing equipment. For more information on the April 1 rally school, or the first GMACS Rally on April 29, call Pat Greer, 414-964-7463.

NO. WISCONSIN RALLY IN MAY-- The second annual Rally of the Short Pines will be run May 12th out of Ashland, WI. This year it will be one of the SCCA's new Coefficient One Divisional PRO Rallies. This format will allow both PRO Rallyists and TSD rallyists to compete in the same rally and should be a good introduction to performance rallying. Workers are also needed for the time controls, marshals at the special stages, etc. For more information, contact Jeff Delahorne, 218-525-3253 or Bob Hansen, 218-721-4830.

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