

Professional Perspective



Silver Rapper

I decided at the last moment before writing this column to reiterate the dangers that oil sludging is creating. Many of you Saab owners have deluded yourselves into believing that it won't happen to you. I agree with Saab that only a small percentage (nobody knows how small or large) of the cars are affected, but it is nasty when you turn out to be in that minority.

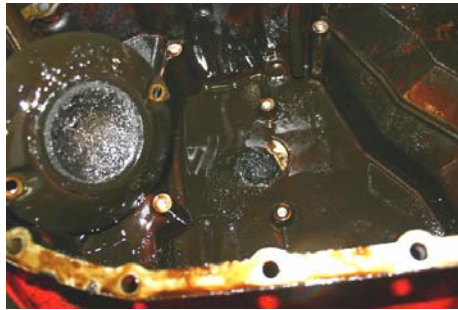
The silver 1999 9-5 (see picture) that I took in trade on October 1st with 120,000 miles on it was one of these



cars. The owner drove it for four years and loved the car! He intended to drive it for a long, long time. He had just purchased new front tires and recently replaced the turbo charger. Out of the blue, it started rapping. However, I have to believe it must have rattled from the loose balance/timing chains for some time. It was the scored #4 piston that caused the noise. The results are conclusive that the engine is sludged and absolutely worn out from lack of lubrication. Both the timing chain and balance shaft chain should have broken some time ago because they were so badly worn. The shop that had been servicing this 9-5 did the owner "no favors" by not recognizing the symptoms before the demise of the engine.

We're going to back up a little and

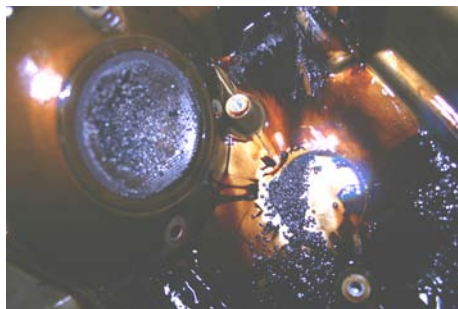
relate what H.C. Thing (from Denmark) went through with the 9-5 Aero he purchased with 114,953 miles on it. I introduced H.C. Thing's problem in my article in NINES issue #276. I have included pictures of the oil pan sludge from the silver rapper, H.C.'s car, and my own 2001-9-5 Aero wagon for comparison. There is little discernible difference at first glance between H.C.



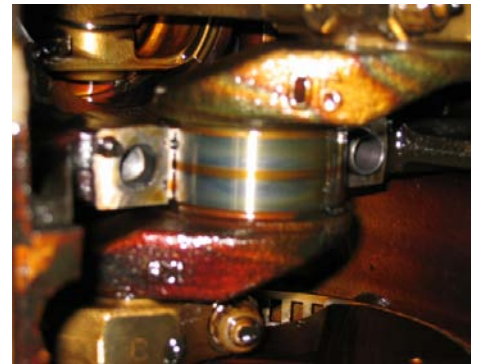
Rapper oil pan and pickup screen. All photographs by the author.



Oil pan showing debris in H.C. Thing's Aero. It is bad but not nearly as bad as the silver rapper!



Oil pan showing sludge in author's Aero. Notice that it has much less than the others but would become a big problem if left unchecked.



Main bearing journal with Plasti-Gage used to determine the bearing clearance from H.C. Thing's 9-5 Aero.

and the rapper. The records on H.C.'s Aero show service had been done from day one to a "T" by an authorized dealer. Since **H.C. had all the records**, Saab of Denmark agreed to repair his sludged engine. They replaced the oil pump, cover, oil pressure relief valve, a pipe and hose to the last update (this is a quote from H.C.). They checked the bearings with Plasti-Gage (included picture) that were okay. Saab put their full synthetic, 0W-30 oil in the engine after which H.C. did some testing. I'll have more on these tests later as I'm able to compare his Aero and mine.

It is quite evident to me that if Saab changed the oil pump with no evidence of engine wear, they have to know how weak and vulnerable it really is. The oil pump is not cheap or easy to change. H.C.'s Aero was destined for an early demise had he not caught the sludge problem. I didn't even try to verify the service on our silver rapper. I know the owner had treated the car like any other Saab.

Saabs have been able to be used and abused for generations without eminent failures. Saab has a reputation for durability and longevity! I think these 2.3 engines could be good also if we can get to the bottom of the lubrication/oxidation issues. I have not forgotten that we have also fought through some issues with the older Saabs:

- the Triumph-engine 99s had timing chain and head problems,
- the B-engines with their cracked heads,
- the H-engines with head gasket

problems,

- the early 1990s 2.3's with their timing and balance shaft chain failures.

Not even the Saabs in our memories were perfect.

One of the ways to preserve your engine is to verify its condition and your oil change intervals with an oil analysis. As I wrote in NINES issue #276, www.oilmedic.com is doing a Saab specific test and will be accumulating data. With a large number of samples from across the country, all owners that participate will be able to determine how their engine is wearing. It would be great if all of you sent a sample in and participated in this program. A Saab discount is being offered for the test. Just go to www.oilmedic.com.

I have sent two samples and was going to include information in this article about them with an explanation on how to read the analysis but I am running out of column space today. I will try to get Mark Sakino at Oilmedic to put an explanation on his Web site. We are offering oil analysis to our customers now.

As a further point of information, I did get my gauges installed in my 9-5 and they are slick! I have to warn any of you thinking about these units that it takes some doing to get them installed. I am working out issues about some of the inaccurate readings. We have not been able to get the speedometer or the tachometer to work in the new unit but hope to be successful in the near future. I will have more on the gauge installation in future columns.

Now, I get to confess that I am as guilty as many others thinking I wouldn't have a sludge issue with my car. As part of the gauge installation, we removed the oil pan to install the oil temperature sender. Guess what we found? My pampered Aero had what I see as a significant layer of sludge in the pan. My 4,000 mile-oil changes with Mobil 1 10-30 synthetic oil had not corrected any problems that the engine may have had. I had completed five oil changes up to that point with no indication of sludge. I had experienced no turbo smoke or timing/balance chain noise that is sometimes a precursor to

finding a sludged engine. At just under 79,000 miles, and with two oil samples, one at 4,000 miles and the other at 5,000 miles, we are now beginning to establish a wear pattern and an oil change interval. The results of the oil pressure, oil temperature, and turbo temps will enable us to supply very interesting and challenging information. I am currently experimenting with different oil cooler thermostats, turbo cool-down times, and water temps. Heat causes oxidation that I believe is the root cause of the problems with a less-than robust oil pump deteriorating prematurely. I think the evidence I present will show how easy it could be to prevent sludging and save these sludged engines if caught early. I think my Aero is going to be just fine and I think H.C.'s Aero will be okay too. However, the silver rapper will get a different engine and with a little TLC, it will serve someone for many, many years.

For 31 years Chuck has owned and operated a sales, service, autobody and parts facility specializing in Saabs.



Gauge unit is set to the left of center over the defroster opening, showing the oil pressure reading at the time of the picture. It will be centered on the dash. The number is reflected to a green transparent screen/target that is movable. The numbers are very easy to read in any light and the intensity adjusts automatically as the outside light varies.