

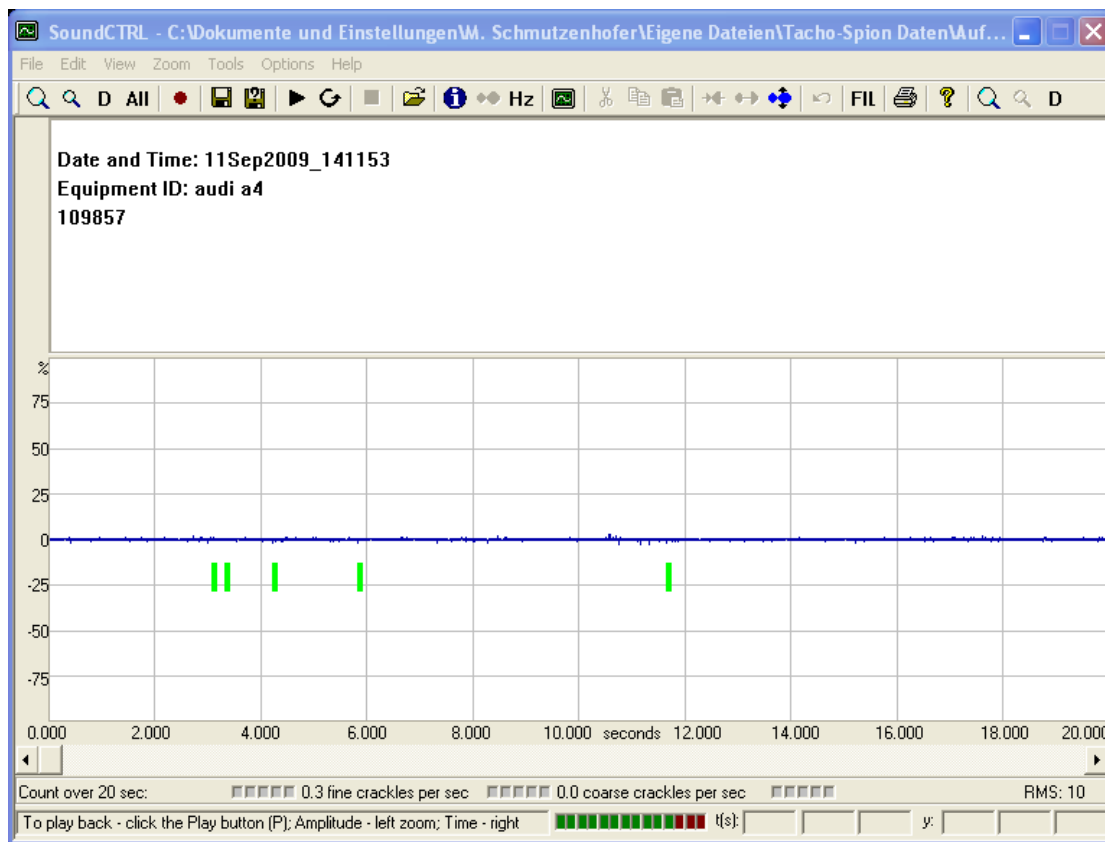
Technical Description of Ultrasound device

Picobello Ultrasound devices are used to check the wear and tear of all engines (petrol, diesel, electro)

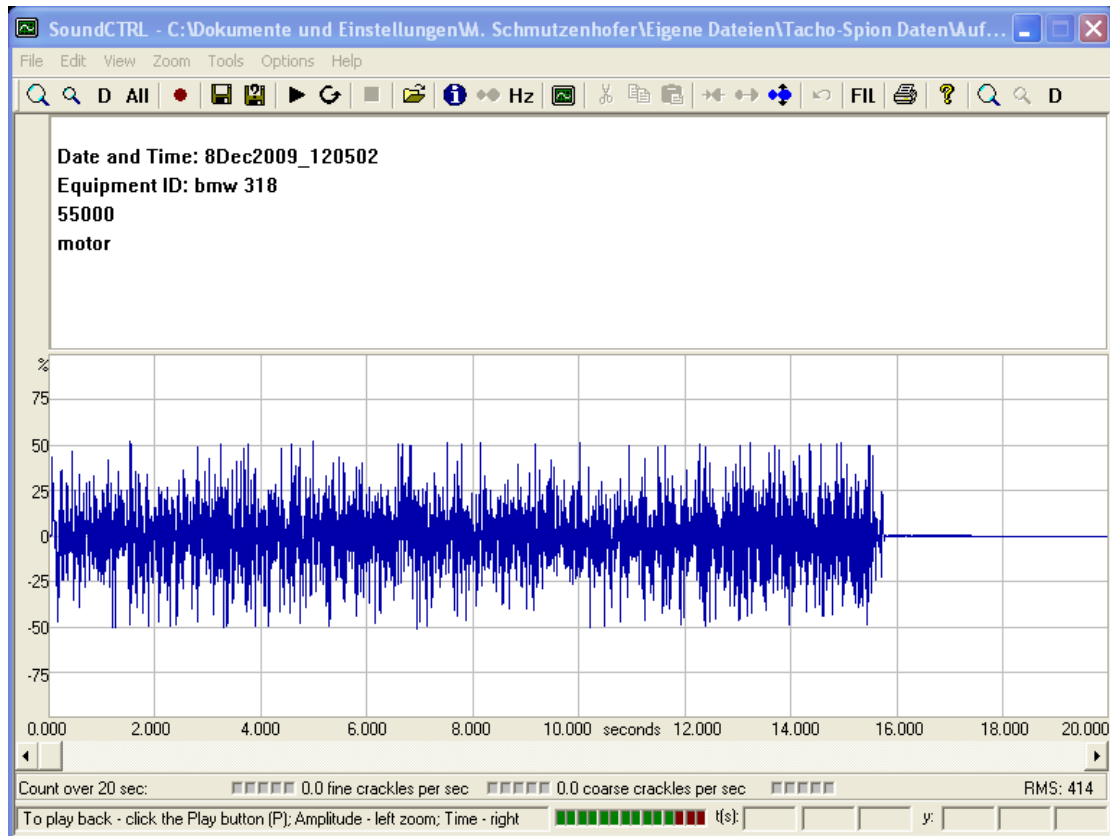
The device is using an absolute directional microphone (not to pick up surrounding noises) to record the emitted frequencies in the spectrum of 40kHz +/- 1kHz

The recorded frequencies will then be evaluated in our own specific software with algorithms according to the engines used.

The software compares the ideal condition with the measured condition and derives to a result of wear and tear of the tested motor.

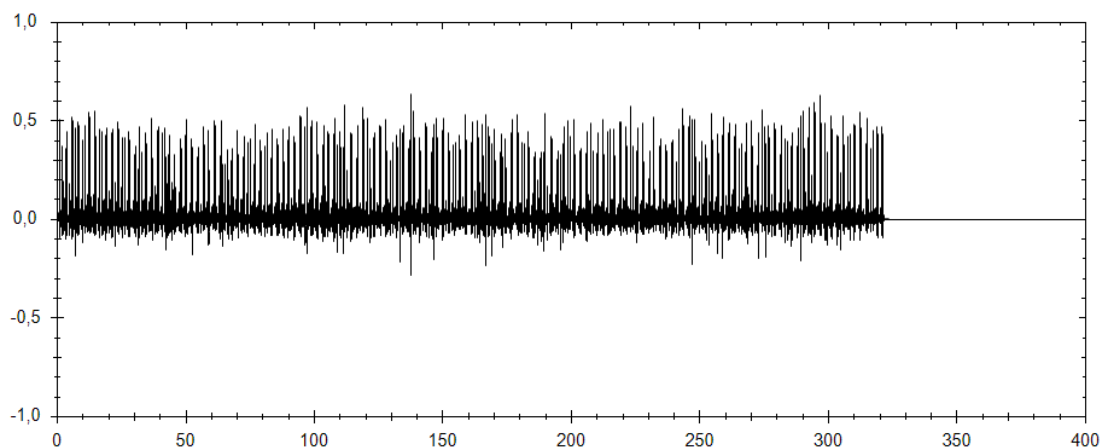


In this example one can see almost no change on the blue graph, the engine is in pristine condition



The difference of the condition in the two examples is obvious, but what does it translate to in the use of software?

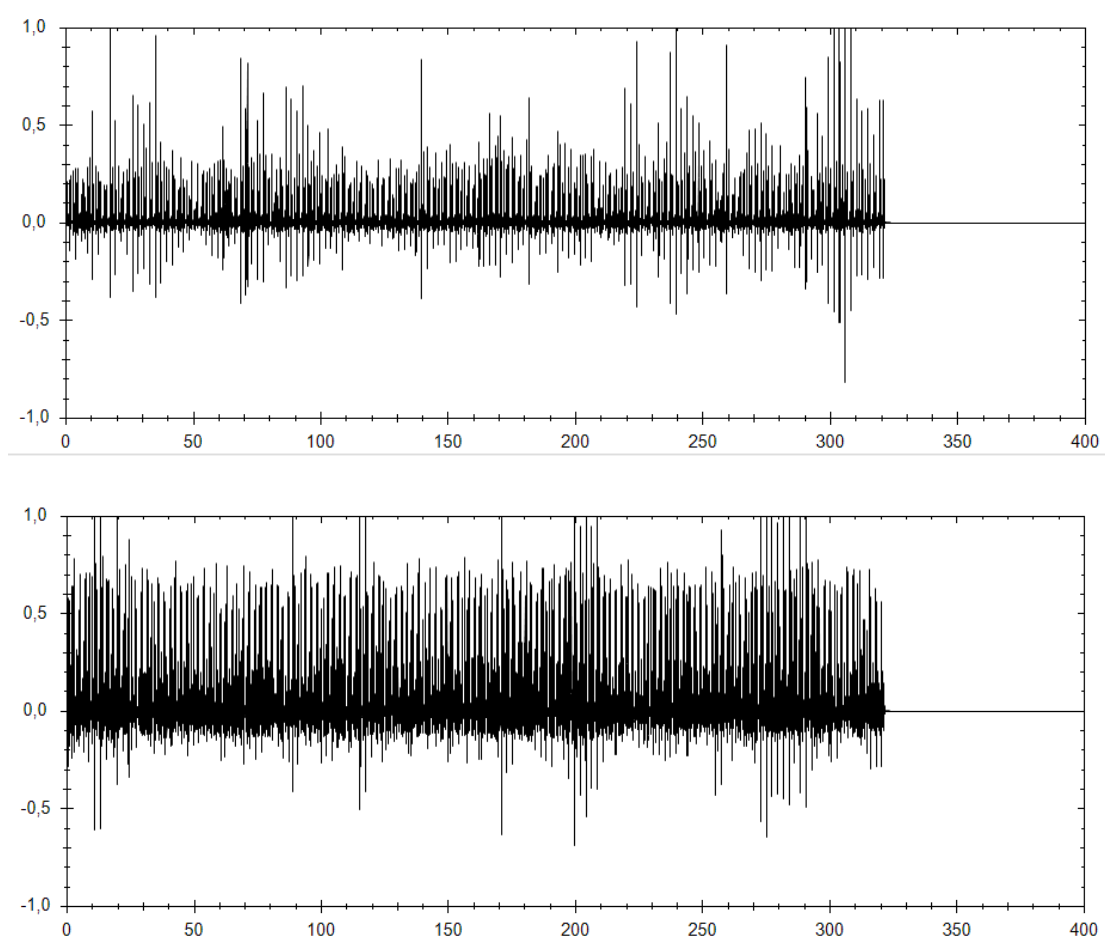
Example Measurement made on an Audi (supposedly with overhauled motor)



Picobello Technology And Solutions Sdn Bhd (1379089-H)
No. 8-01, Jalan Setia 3/6, Taman Setia Indah, 81100 Johor Bahru, Johor, Malaysia

Encik Saiful +60 19 7540400 Encik Razak +60 16 7554554 Encik Lothar +60 19 7597654

<http://picobello-technology.com> email: info@picobello-technology.com



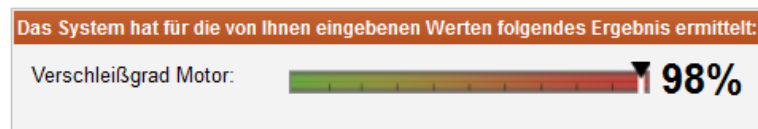
The RMS values were 74, 89, 143, RMS is Root Mean Square, the measuring units in Ultrasound spectrum.

The values will be added in the Tachospion software to evaluated

Laufzeitbestimmungen Motor

Testdaten			
Modell A4 1.8			
	1. Messung	2. Messung	3. Messung
RMS	89	74	143
Fine	0	0	0
Coarse	0	0	0
Einstellung			2
Bemerkung			

Testergebnis



The motor has a very high wear and tear and a very high risk of damage. An overhaul of the engine - as claimed by the mechanics - is very doubtful.

Further from the 3 measuring points, one is much higher than the others, therefore the area of the damaged part can be located, in the above case a worn camshaft was very likely.

The device allows to locate the origin of the noise for **qualitative analysis**.

The measurement result has been changed from percentage to a five star system to make the understanding of the results easier for the public.

☆☆☆☆☆ 5 Stars: Very minimal wear and tear. Parts are in excellent condition, almost new.

☆☆☆☆☆ 4 Stars: Wear and tear is in good and acceptable range. Parts are in good condition.

☆☆☆☆☆ 3 Stars: Acceptable average range of wear and tear. Parts need regular check-up.

☆☆☆☆☆ 2 Stars: Wear and tear is below average. Repairs and check-up needed.

☆☆☆☆☆ 1 Star: Bad wear and tear. Parts are faulty and pose danger. Vehicle is unsafe. Repairs or exchange of vehicle needed.

☆☆☆☆☆ 0 Stars: Excessive wear and tear. Vehicle unsafe to drive. Exchange or discard vehicle.

Therefore it is possible to create a measurement with a very transparent result for the owner of the vehicle.



ultrasonic measurement

car data:

manufacturer:	Mitsubishi
model:	Pajero Sport 2.4
chassis no.:	PAJERO12345678912
fuel type:	Benzin Super
mileage:	195000 KM
manufacturing date:	15.06.1999
cylinders:	4
cyl. capacity (ccm):	2351
HP:	101
gear type:	manual
gear count:	5

measuring result motor:

entry date: 03.10.2017
Degree of wear: ★★☆☆☆

measuring result alternator:

entry date: 03.10.2017
Alternator erosion: ★★★★★

measuring result servo pump:

entry date: 03.10.2017
Servo pump erosion: ★★☆☆☆



These specifications have been met by a comparison of the ascertained wear with the static calculated values in the database. They are however, the snapshots which could be influenced, perhaps, by factors beyond the knowledge of the service company. So you have to understand them, although investigated with care, without any guarantee and without liability. Copyright note: This document is protected in copyright and it is not allowed to multiply it on paper or electronically without a written licence of the company H.A.P.S. Technische Dienstleistungen. Every further use, in particular the storage in databases, publication, duplication and every form of the commercial use as well as the passing on to third parties - also in shares or in revised form - without consent is prohibited.

Motor and Servo pump are rated 2.5 and 2 stars respectively but alternator got 4.5 stars (almost new)?

Answer was simple: the alternator was changed recently