

WANKELE®

Journal

Issue 110 - 1 2024





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Editorial

by Heiko Rossnagel - "A little ADVENTURE every day" doesn't always have to mean something positive for classic car fans.

Especially not if you want to organise a classic car meeting in a place that advertises with this slogan. After two wonderful international NSU meetings organised by the club in Waging am See in 2014 and 2017, our second board member can now tell us about some of these ADVENTURES from the attempt to hold it there for the third time. After the first (almost) discouraging attempts to organise the event, Andreas Meyer's ABENTEUER mood was greatly dampened. There was a great desire to find an alternative location where everything would go smoothly and a meeting of this size would be welcomed with open arms. After intensive research into all the possibilities, he was even able to win over the "Home of LÄSSIG" (home of "cool", PJ) for us - Fieberbrunn in Tyrol.

Of course, there were also many ADVENTURES to overcome with the new municipality, but in the end, the Tyroleans are very LÄSSIG and helpful.

You are welcome to come and see for yourself from 6 to 9 June. All the necessary information can be found in this magazine. (page 10)

The victory of Dario Tommasini from Switzerland in what is probably the toughest classic car event in Switzerland, the "Penrite Alpenbrevet" was also LÄSSIG. Under a full moon over more than 20 of the toughest Alpine passes - some of them on unsurfaced roads. And when you also win gold against the superiority of British vehicles, then this is truly a LÄSSIG event. Read all about it on page 28.

However, the actor with Ro 80 experience, Ulrich Tukur, can also be said to have a particularly LÄSSIG posture (page 53). During his visit to the OBRIST Tech Centre in Lindau (formerly TES), he took a seat in Felix Wankel's former office and looked out through the large panoramic window onto the lake. Most people will probably recognise the original picture immediately...

How LÄSSIG the Swede Emil Hansson in front of 13,000 spectators in the Porsche Arena in Stuttgart went into the final is not known at this point. But he must definitely have been focussed and concentrated when he

took the runner-up title with his monstrous Wankel saw from the Black Forest at the Stihl Timbersports World Championships. (page 61)

A LÄSSIG statement made by Mazda President Masahiro Moro at a press conference at the Tokyo Auto Salon 2024 attracted international attention. He announced that the development team for rotary engines would be reunited at the Japanese car manufacturer. More information on this can be found on page 19.

Repairing a Ro 80 vacuum pump is certainly an ADVENTURE without help and/or previous knowledge. Our technical editor Thomas Günther has taken it on and created an easy-to-understand guide with his richly illustrated repair instructions. This makes the repair almost LÄSSIG (from page 33)

And we won't find out until the next issue if it is getting LÄSSIG when our Ro 80 travel group with desert experience go for their next (ultra) long-distance test drive, or whether the whole ADVENTURE was too much for them. But you can read all about the invitation and the lengthy preparations on page 64.

I hope you enjoy the first issue of 2024 and experience a little ADVENTURE every day - but hopefully a LÄSSIG one!

Your editor Heiko Rossnagel



News from the Executive Board



Dear members of the Ro 80 Club International,

Welcome to the 110th issue of the Wankel Journal!

The year 2024 is already almost three months old when this issue is published. The winter meeting in the Black Forest is already behind us. Our spring meeting in Lohr am Main will soon follow, which will once again include the Annual General Meeting. It is always nice to meet in person, exchange experiences and strengthen the community. We hope to be able to welcome many of you there.

It is very pleasing that our Ro 80 Club International e.V. continues to grow. We are proud to announce that we have recently welcomed new members from Japan and Portugal to our group. These two countries were previously missing from our map. We will report on the yellow Ro 80, which is moving from Geilenkirchen to Tokyo, in one of the next issues.

One topic that we have been discussing for a long time is the possibility of (re)joining the ACI (Audi Club International). After a promising discussion with the new ACI board members and our board of directors, we will present and discuss the topic openly at the next general meeting.

We hope that you enjoy this issue of the Wankel Journal and wish you an exciting year for our Wankel vehicles.

Gunter Olsowski, 1st Chairman

The minutes of our last general meeting are enclosed with this issue. It was kindly written by Sascha Scheben and translated by Pieter Jakobs.

New members of the Ro 80 Club International

Member statistics

Welcome to the Ro 80 Club!

Since the beginning of November 2023 until the end of January 2024 we could welcome 12 new members in the club (in the order of entry).

Mr Uwe Schöttker - 47929 Grefrath Mr

Jens Holwech - 1621 Gressvik (N)

Mr Takashi Ohbayashi - 191-0012 Tokyo (JP)

Mr Dietrich Bräuer - 57567 Daaden

De Heer Peter Malfliet - 3040 Ottenburg (B)

De Heer Gert Jan de Wit -
1436 BA Aalsmeerderbrug (NL)

Mr Hans-Peter Otto - 34119 Kassel Mr

Stefan Adams - 75181 Pforzheim






















Mr Lars-Olof Staffans - 00260 Helsinki (FIN)

Mr Matthias Beemelmann - 65468 Trebur Mr

Pedro Gonçalves - 2750-260 Cascais (P) Ms

Andrea Wolf - 60385 Frankfurt am Main

Current list of members (31st January 2024)

		Country	Members	Change
	1	D	799	plus 6
	2	A	44	
	3	NL	32	plus 1
	4	F	25	
	5	I	21	
	6	GB	15	
	7	B	12	plus 1
	8	CH	9	
	9	S	7	
	10	OFF	6	
	11	L	4	
	12	N	4	plus 1
	13	USA	4	
	14	DK	3	
	15	IRL	3	
	16	NZ	3	
	17	PL	3	
	18	FIN	2	plus 1
	19	H	2	
	20	ZA	2	
	21	CDN	1	
	22	GR	1	
	23	JP	1	plus 1
	24	P	1	plus 1
Total:			1004	plus 12

Invitation to the General Meeting on 27 April 2024

at the BIKE LODGE Spessart
Hofstettener Str. 14a
DE-97816 Lohr am Main Start
at 2.30 pm

§ 6 General Meeting

1. the general meeting, in which each member has one vote, must be convened at least once a year. The place and time shall be determined by the Executive Board.

In principle, the Annual General Meeting is reserved for the members.

If you would like to attend as a guest, please contact the Executive Board in advance.

The Executive Board

Agenda

TOP 1

- Welcome, determination of quorum, entry into the agenda

ITEM 2

- Election of a chairperson for agenda items 6-7

ITEM 3

- Approval of the minutes of the General Meeting of 30 September 2023 (*enclosure WJ ~~110~~*)

ITEM 4

- Reports from the Executive Board and the ~~presentations~~ presentations with discussion

TOP 5

- ~~Reports~~ Reports of the auditors

TOP 6

- ~~Discharge~~ Discharge of the Executive Board

TOP 7

- Board elections - The positions of position of the first chairman and the treasurer is to be filled
(Statutes §5, para. 3: *The Executive Board is elected by the General Meeting for a period of 2 years.*)

ITEM 8

- Election of the cash auditors (*Articles of Association §7, Para. 6: The cash auditors are responsible for auditing the association's financial transactions. They are elected by the General Meeting for a period of one year and must report to the General Meeting on the results of the audit.*)

TOP 9

- Approval of the 2024 to 2026 budget and setting of contributions

TOP 10

- Applications

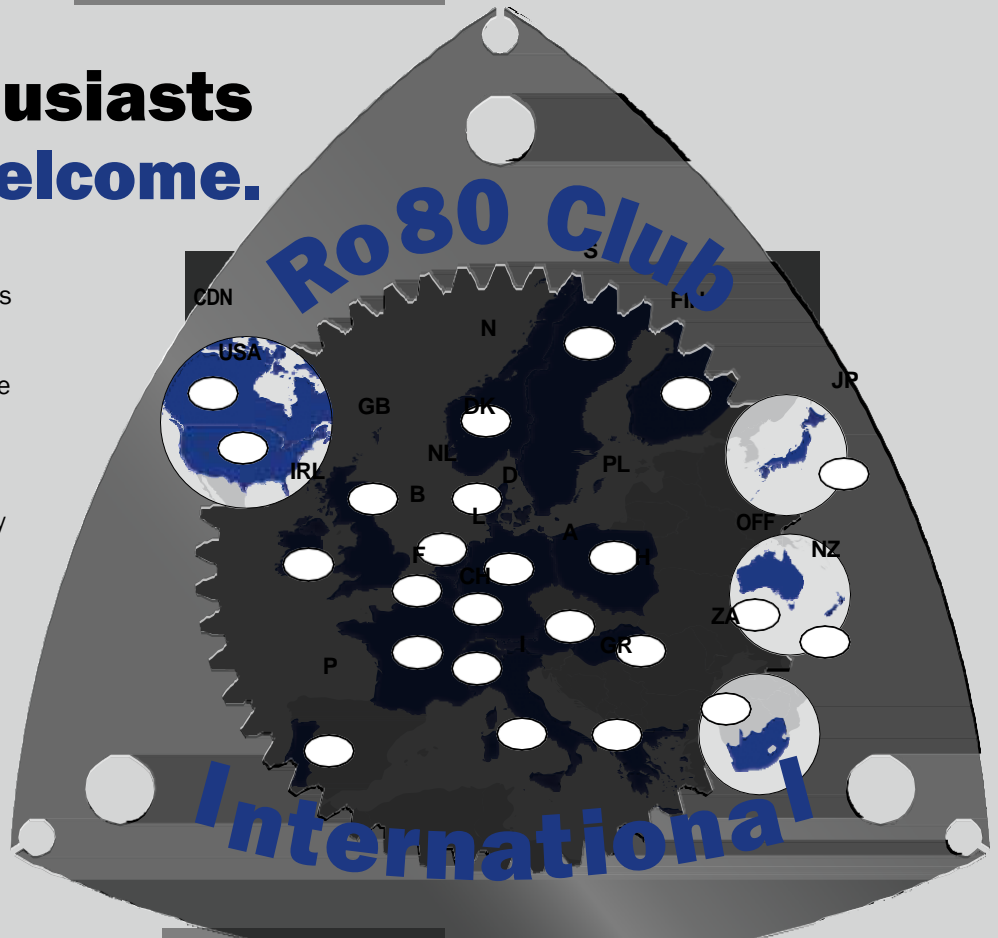
ITEM 11

- Miscellaneous

Wankel enthusiasts worldwide welcome.

- Largest association of Ro 80 drivers worldwide
- With about 1,000 members in more than 20 countries
- A club for rotary engine technology, open to friends of all kinds of rotary engines

**We are looking forward to
new friends and members**



Pieter Jakobs

Coordinator international contacts
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B, NL, L and S, N, FIN, DK



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


**The legend is alive.
Come on board!**

Membership overview in 2023

In 2023, we had a very pleasing increase in membership again with 79 new members. In addition to cancellations and deceases, we also had to suspend 18 members and remove them from the list, because they had not paid their membership fee despite repeated requests to do so.

Membership development 2023 by country / Membership development by country

Country country	New new	cancelled cancelled	deceased passed away	suspended suspended	Members at the end of '23 members end of '23	Members at the beginning of '24 members start '24
 A	6	2			46	44
 OFF	2				6	6
 B	2				12	12
 BG				1	1	0
 CDN	1				1	1
 CH				3	12	9
 D	48	10	10	8	823	795
 DK					3	3
 F	4			1	26	25
 FIN					1	1
 GB	5	1		1	18	16
 GR					1	1
 H					2	2
 HR				1	1	0
 I	3				21	21
 IRL	1				3	3
 JP	1				1	1
 L					4	4
 N	1				4	4
 NL	2		1		32	31
 NZ					3	3
 PL	1				3	3
 ROK				1	1	0
 S	1				7	7
 USA	1			2	6	4
 ZA					2	2
	79	13	11	18	1040	998

The countries Canada and Japan have been added, while Bulgaria, Croatia and South Korea have been removed. In 2023, the proportion of women was around 4% and the average age of entry was 60.2 years.

Payment of membership fees

by Gunter Olsowski - The annual contributions for the now over 1000 members are usually collected in February each year, of which approx. 87% are collected by direct debit without any major effort. With the invoice payment method (approx. 11%), many members pay punctually by standing order. Members from non-EU countries often pay via PayPal (approx. 2%).

This means that, in total, over 95% of invoices account for approx. 5% of the effort, but conversely, approx. 5% of the transactions account for 95% of the effort. In addition to sending invoices, often by post, there are also numerous reminders and reminders.

We therefore ask everyone who does not yet have a direct debit mandate to either issue one or set up a standing order.

You save us, especially me, a great deal of effort.

If you change your bank details, address or e-mail address, please let me know so that I can enter this in our membership database.

I would be delighted if this appeal is read and bears fruit.

Information on processing of replacement parts

by Andreas Meyer - **Please note! From now on, all replacement parts will only be issued AFTER a "usable" old part has been sent in.**

Unfortunately, there have been more and more problems with the deposit scheme and many old parts were simply not sent back to us for various reasons. In response to queries, we received the most curious answers, such as "I've kept the old part as a reserve" or "I haven't got round to fitting the replacement part yet and I won't get round to it in the next few months either". But unfortunately that's not how the system works - we absolutely need the old parts, otherwise the supply of replacement parts is no longer guaranteed. Unfortunately, increasing the old part deposit had no effect.

We have also increasingly received old parts that were completely destroyed after unsuccessful repair attempts. Such parts are of no use to us. Of course, it can happen that an old part cannot be restored. But we cannot accept parts that have been wilfully destroyed. For this reason, we have no other option but to claim the old part first.

For online orders that include other parts in addition to a replacement part, the entire order will only be dispatched once we have received the old part. If advance despatch of the other parts is required, this must be stated in the order. In this case, the shipment will be split up and the shipping fee will be charged twice.

What is a "usable" old part?

- The old part must be complete and must not be disassembled.
- The old part must not show any damage resulting from improper disassembly.
- The old part must be "untouched", i.e. it must not show any unsuccessful repair attempts.

Address for old part submissions:

Ro 80 Club International e.V.
Manfred Rother
Brunnenweg 7
84164 Moosthenning

42nd International
 NSU Meeting
 Fieberbrunn
 Kitzbühel Alps / Austria
 06. to 09.
 June 2024

**PRELIMINARY
 PROGRAMME
 > PROVISIONAL
 PROGRAMME
 > PROGRAMME PROVISOIRE**

08.06.2024 > SATURDAY / SATURDAY / SAMEDI

Breakfast in the marquee
 Exit and group photo
 Entertainment evening in the marquee

06.06.2024 > THURSDAY / THURSDAY / JEUDI

arrival at Tirol Camp
 registration
 social gathering

.....
 breakfast at the pavilion
 ride and group photo
 evening: entertainment at the pavilion

**07.06.2024 > FRIDAY / FRIDAY /
 VENDREDI**

Breakfast in the marquee

Various excursion suggestions
 Meeting of the club presidents
 Evening: official welcome in the
 marquee

09.06.2024 > SUNDAY / SUNDAY / DIMANCHE

breakfast at the pavilion
 departure

breakfast at the pavilion
 different excursion
 suggestions

TEILEMARKT / PARTS MARKET / PARTS MARKET

Parts market during the entire meeting

meeting of the club's presidents
 evening: official welcome at the
 pavilion

.....
 spare parts market throughout the meeting

ANMELDUNG / REGISTRATION / INSCRIPTION

Please use the enclosed form or www.ro80club.org

Please transfer the total amount to the following account:

Ro 80 Club International e.V.,
IBAN DE96 4016 4528 0405 4671 02, Volksbank Südmünsterland-Mitte eG, BIC GENODEM1LHN,
"42ND INT. NSU-TREFFEN 2024 / Name of participant".

Entries received by 01.04.2024 will be charged at €75, entries received after this date will be charged at €95. With the payment of the entry fee you are entitled to participation in all events according to the programme, a group photo and a commemorative badge. Food and drinks are not included in the entry fee.

.....
Please use the registration form or www.ro80club.org

Please send the fee by bank to account: Ro 80 Club International e.V., IBAN DE96 4016 4528 0405 4671 02 Volksbank Südmünsterland-Mitte eG, BIC GENODEM1LHN, "42. INT. NSU-TREFFEN 2024 / name participant".

The registration fee is 75 € till 01.04.2024. If you send it later the fee will be 95 €. Payment of the fee entitles you to participate in all events listed in the programme and to receive a group photo as well as the commemorative medal. Meals and drinks are not included in the registration fee.

WICHTIGE HINWEISE / IMPORTANT INDICATION / NOTES IMPORTANTES

Each participant will receive an entry confirmation, which must be brought to the meeting.

Liability: All participants drive at their own risk. The Organisers can in no way be liable against individuals (drivers, passengers, spectators and others) or other damages before, during or after the event.

.....
Each participant will receive a confirmation of registration which must be presented upon arrival at the meeting.

Civil liability: Each participant conducts at his or her own risk and responsibility. The organisation is not responsible for damage to persons (drivers, passers-by, spectators, etc.) and other damage before, during or after the event.

NENNGELD / REGISTRATION FEE / FRAIS D'INSCRIPTION

Bis zum 01.04.2024 = 75 €, nachher 95 € / Up to 01.04.2024 = 75 €, later 95 € / Jusqu'au 01.04.2024 = 75 €, après 95 €

ACCOMMODATION / ACCOMODATION / LOGEMENT

Camping: Camping auf dem Campingplatz / camping on the camping ground / camping sur terrain de camping

.....
The camping fee is not included in the entry fee and must be paid on site. Participants will receive a discount. Separate registration at the campsite is not necessary.

.....
Hotel / Bed & breakfast / lodge: you find a list on www.fieberbrunn.com

INFO

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RO80 Club International e. V.

Andreas
Meyer
Eichbergstr. 8
D-83355 Grabenstätt

Germany

E-mail: nsu-
treffen2024@ro80club.org
www.ro80club.org



1. Name / Surname / nom

2. Vorname / First Name / prénom

3. Straße / Street / rue

4. Nr. / No. / no

5. Ort / Place / domicile

6. PLZ / Postcode / code postal

7. Land / Country / pays

8. Tel.

9. Date of birth / Date de naissance

10. E-mail

11. Fahrzeug(e) / Vehicle(s) / véhicule(s) Baujahr / year of
manufacture / année de construction

12. Teilnehmerzahl / Number of participants / nombre de participants

Camping auf dem Festplatz / Camping on the camp ground / camping sur terrain

13. Zelt / tent / tente Wohnwagen / caravan / caravane
Trailer / trailer / remorque Wohnmobil / camper / camping-car

NENNGELD / REGISTRATION FEE / FRAIS D'INSCRIPTION

UNTIL 01.04.2024 = € 75, AFTER THAT € 95
UP TO 01.04.2024 = 75 €, LATER 95 €
JUSQU'AU 01.04.2024 = 75 €, APRÈS 95 €

Ro 80 Club International e.V., IBAN DE96 4016 4528 0405 4671 02
Volksbank Südmünsterland-Mitte eG, BIC GENODEM1LHN
"42nd NSU Meeting 2024"



.....DATUM, UNTERSCHRIFT / DATE, SIGNATURE / DATE, SIGNATURE



Urs Lumpert
Oberseeslr.19
CH-8640 Rapperswil

SHVFD
SWISS HISTORICAL VEHICLE FEDERATION

Phone: +41 (0)65 210 58 45
E-mail: praesi@nsro80.ch
Internet: www.nsu80.ch

Annual programme 2024 / 2025

**17 March
2024**
Sunday

44. Annual General Meeting Place:
Hurden, Gasthof Seefeld

6 April 2024
Saturday

Technical staff
Location: Kempthal, MADmolors GmbH

6 - 9 June 2024
Doonerstag Sunday

42nd international NSU meeting
Location: A-Fieberbrunn, Tirol Camp (Kitzbüchel Alps)

30 June 2024
Sunday

Oldtimer meeting
Schwägalp
Place Schwägalp - Säntis

7 July 2024
Sunday

Family brunch
Location: Rapperswil - Rietstrasse 90

10 August 2024
saturday

NSU Ro 80 Club "New Zealand Trunk and Beach Party"
Location: Rohrschach, in the Wankelhaus on Lake Constance

11 August 2024
Sunday

International Ro 80 Club Summer Party TES Lindau
Location: Lindau, former TES site

4 September 2024
Midweek

Wednesday outing
Location: Eastern
Switzerland

30. November 2024
Saturday

Father Christmas evening
Location: Rapperswil room

16 March 2025
Sunday

45. Annual General Meeting
Place: Hurden, Gasthof Seefeld



Club members receive a detailed programme for most events in good time by e-mail or post. Information on all events, programme and date changes can also be found on our club website; www.nsu80.ch, under the heading Annual programme.

You can also obtain information at any time via praesi@nsuro80.ch.

Please reserve these dates today. Join us, we look forward to your participation – W. Graf Dezember 2023

Spring meeting with AGM in Lohr am Main

26 to 28 April 2024

by Steffen Hofmann - The 2024 spring meeting was originally planned and announced to take place on the Moselle. Unfortunately there were coordination problems with the chosen hotel. Another hotel with the appropriate capacity and at the desired time could not be found in the wider area on the desired date. The visit to the Zylinderhaus Bernkastel-Kues could not have taken place as planned either, as a classic car rally was being organised there at the time.

However, a suitable alternative was found at short notice. In the Main-Spessart in Lower Franconia lies the town of Lohr am Main. Some of you may know the town from previous meetings.

First mentioned in a document 1200 years ago, Steinbach (a district of Lohr) is an original Lower Franconian village (directly on the Main, 2.5 kilometres upstream of the town centre of Lohr). As accommodation and venue for the Annual General Meeting, we have chosen the "Bike Lodge Spessart" hotel, which was newly opened in April 2023 and is expected to be exclusively available to us. A cosy and high-quality hostel, not just for cyclists and hikers. Sustainability and regionality are the hotel's motto and programme. The Bike Lodge is largely built from local wood. The modern rooms are available in different categories:

Family rooms/apartments

on the ground floor, 25-33 m², for max. 4 people, the children sleep in a comfortable bunk bed. With mini-kitchen, bathroom with walk-in shower, Flat screen TV, towel radiator, hairdryer, wardrobe.

Price per night and room incl. breakfast for double occupancy 120,- €, for 4 beds as family room 140,- €.

Premium double room

20-22 m² partly on the upper floor, Bathroom with walk-in shower, flat screen TV, towel radiator, hairdryer.

Price per night and room incl. breakfast 110,- €.

Stage room

15 m², bathroom with walk-in shower, flat-screen TV, towel radiator, hairdryer, recommended for single occupancy:

Single occupancy per night and room incl. breakfast 80,- €

Double occupancy also possible: price per night and room incl. breakfast € 100

Please book independently under the keyword "Ro 80" with:

Bike Lodge Spessart

Hofstettener Str. 4a

D-97816 Lohr am Main, OT Steinbach

Phone +49(0)9352-5009026

E-mail: anfrage@bikelodge.de

www.bikelodge.de

The room contingent is available until 12.04.2024.



1



2

1 Hotel Bike Lodge Spessart
2 Restaurant Bike Lodge Spessart

- 3 Steinbach Castle
- 4 Old town of Lohr
am Main
- 5 Neuendorf
vehicle and
technology
museum



3



4



5

Preliminary programme

Friday, 26.04.2024

Journey to Steinbach. Opportunity to visit the historic old town centre of Lohr. A tour of the Spessart Museum in the castle is highly recommended. (www.spessartmuseum.de) At 16:00 we meet at the Schlossplatz in Lohr for a costume tour through the old town centre.

The official welcome at the Bike Lodge in Steinbach will take place at 18:00 with a get-together and barbecue buffet.

Saturday, 27.04.2024

Breakfast together

9.30 a.m. Start of the ride through the Spessart and along the Main. Details had not yet been finalised at the time of going to press. Please check the current programme on the club website!

Afterwards, on the return journey, there will be an opportunity for an individual lunch. After arriving in Steinbach, some of the vehicles are lined up for presentation in the courtyard.

2.30 pm Start of the Annual General Meeting at the Bike Lodge Spessart

For non-participants/non-members there is coffee and cake available there.

At 19:00, the club invites all members and their partners to a buffet.

Sunday, 28.04.2024

Breakfast together

At 10.00 a.m., we drive together to the "new" baroque Steinbach Castle, which is located in the immediate vicinity. The landlord invites us to a photo opportunity. (www.schloss-steinbach.de) Finally, we take a short ride to Nantenbach, where we visit the motorbike and vehicle museum. (www.fahrzeugmuseum-neuendorf.de)

If you wish, you can finish off with lunch together in the neighbourhood.

PLEASE NOTE:

Participation in the meeting (including the buffet dinner on Saturday) is only possible if you have registered. Please note the details on the club's website!

Participation exclusively in the Annual General Meeting is of course possible for every member without registration!

Steffen Hofmann
veranstaltungen@ro80club.org

Southwest regulars' table in the German Two-Wheeler and NSU Museum

by Arne Maier - Almost forty participants of the Ro 80 regulars' table south-west met on Sunday, 26 November 2023, in Neckarsulm. However, only very few Ro 80s were present on this cold and wet day, as most of them had of course winterised.

The stations on this day were:

1. Tour of "150 years of NSU in Neckarsulm" at the German Two-Wheeler and NSU Museum in Neckarsulm. The tour was led by our member Thomas Sennert.
2. Lunch in the museum parlours at the two-wheeler museum.
3. Lecture by contemporary witness Martin Bauder on the development of the Wankel engine.

Our member Thomas Sennert, a recent retiree, had agreed to give a guided tour of the NSU section of the German Two-Wheeler and NSU Museum. He began by explaining that the aforementioned knitting machine manufacturer from Riedlingen only came to Neckarsulm because there was already electricity there, which was produced by a mill on the Neckar. Otherwise things might have turned out very differently with NSU!

Thomas Sennert also knew the rider and the story behind almost every motorbike on display. We also learnt that the fairings on the racing motorbikes posed a risk of the riders becoming trapped in an accident. In most of the accidents involving motorbikes without fairings, the riders were separated from their bike. If there were press reports that the driver had had an accident, it was his own fault. However, if he was trapped in the "moped" the motorbike manufacturer was to blame, which of course had a negative impact on the manufacturer's image. For this reason, the racing teams had their own names and the manufacturer was only named in the victories.

Of course, we also visited the museum section with the "Prinzen" and the Ro 80, after which we listened to a presentation by Armin Bauder. As a young engineer, he joined the NSU special development department "TX", where the Wankel engine was developed. As a contemporary witness, he recounted the entire Wankel engine development. He explained,





that the Wankel engine was light, vibration-free and mass-balanced. Furthermore, the rotary engine naturally required considerably fewer parts than a reciprocating engine. In terms of power density, however, it was similar to the reciprocating engine at the time. Armin Bauder also reported on the failures and improvements to the engine concept, which was a completely new development at the time. Among other things about the seal materials initially used, right through to those made of ferrotic. He also talked about the chatter marks in the trochoid.

At that time, many engines came to the factory as warranty cases, whereby only the carburettor or ignition had to be readjusted. Most engines could then be reinstalled. However, due to the exceptionally generous goodwill in warranty cases, there were also customers who deliberately over-revved the engine in order to demand a new engine. At the end of the Wankel development at NSU, the entire know-how was used for the 871 engine, but at the time of the petrol crisis, VW was of the opinion that engines with 180 hp (and even more) were no longer needed. Despite having fewer parts, the Wankel engine was ultimately too expensive to manufacture compared to the reciprocating piston engine, certainly also due to the lower production volumes. When VW decided to let the Wankel engine die in 1977, the engineers entrusted with this technology were practically out of work. Their experience from the Wankel engine development and the materials developed in the process benefited the new generations of diesel engines in passenger cars - and progress was faster than expected.

Unfortunately, the Ro 80 then had to make way for the Audi 100 ("Beamten-Mercedes"), ("Officers-Mercedes"), which ran on the same production line in Neckarsulm.

Pictures: Oliver Förster

Mazda reactivated Wankel development team

from rotarynews.com, automotive media response. - On the Facebook page "RotaryNews. com", an article from the Japanese page "Automotive media Response." appeared on 13 January 2024 with the following content: *(The text was translated from Japanese into English and published on the Internet. For a better understanding, the second part of the article contains a German version. Due to the translation errors may have crept in).*



"Reunion of rotary engine development team" - Mazda president Moro makes a surprise announcement at Tokyo Auto Salon 2024

On January 12, Mazda President Masahiro Moro made a surprise announcement at a press conference at the Tokyo Auto Salon 2024 that the rotary engine development team would be reunited for the first time in about six years.

President Moro said, "We received a lot of support and encouragement for the compact sports car concept Mazda Iconic SP, which was unveiled at the Japan Mobility Show last year. We are very happy and very moved. In order to get closer to this dream, we will launch a rotary engine development group on February 1st."

Furthermore, "In order to make a breakthrough in the challenges facing the carbon-neutral era, we have trained ourselves to use a wide range of technical



1 Masahiro Moro -
CEO Mazda
2 Moro at the
presentation of
the Iconic SP

resources that go beyond the boundaries of engine systems, cutting-edge internal combustion engine technology, and model-based development, which is Mazda's speciality. The engineers will come together again. The technical challenges to overcome are not easy, but I hope that we can take a step towards a new chapter for the insatiable challenges." He expressed his hopes.

President Moro also said, "The rotary engine development group was once disbanded in 2018, and when we were developing SkyActive, the rotary engine engineers also put a lot of effort into developing Skyactiv. Members who have thoroughly learned the highest level of combustion technology will focus on rotary engines and will be involved in the development of engine combustion and emissions. Engine development requires a variety of engineers, but the rotary engine is the core. Development of the core parts of the engine will be restarted with about 30 engineers." He also revealed the history of the rotary engine engineers and the composition of the new team.

By the way, regarding the reorganisation of the development team, he said, "We have not announced the appointment yet, and since I slipped my mouth and said it, there may be unrest within the company".

Images: Automotive Media Response.



motor1.com also reports on the Iconic SP and the reactivated Wankel development team. Simply scan the QR code with a mobile device and you will be taken directly to the article.

Mazda press release

Mazda accelerates the further development of rotary engines

by Mazda Press Service - *In addition to the previous article about the new development team at Mazda, the Mazda press department issued the following press release shortly before the Wankel Journal went to press: Mazda is continuing the history of rotary engines - and accelerating the further development of this unique drive concept for a new era. On 1 February, the "Rotary Piston Engine Development Group" was reinstated in the drive development department. The new development group will work on the further development of rotary engines for generator drive in serial hybrid drives and conduct research and development in areas such as compliance with regulations in key markets and the use of CO₂-neutral fuels.*

Mazda is thus driving forward the research and development of the new generation of rotary engines - with the aim of developing contemporary solutions on the road to a CO₂-neutral society that make driving a pleasure. "In Mazda's history, the rotary engine is a special symbol of our Challenger Spirit," said Ichiro Hirose, Director, Senior Managing Executive Officer and Chief Technology Officer (CTO) of Mazda Motors. "We are deeply grateful to all those who have supported the rotary engine to date and are pleased to announce the rebirth of the organisation that developed the rotary engine - the engine that was loved by customers around the world."

"Over the past six years, as part of engine development, the engineers have familiarised themselves with state-of-the-art combustion engines and with the ultimate improvement in efficiency," continues Ichiro Hirose. "They have broadened their perspective beyond the boundaries of engine systems and trained themselves to master 'model-based development' - one of Mazda's strengths. Now, 36 engineers are coming together as one group to achieve a breakthrough in rotary engine research and development. In the age of electrification and in a CO₂-neutral society we will continue to develop attractive cars that inspire

customers with our Challenger Spirit."

The rotary engine has a unique structure: energy is generated by the rotation of a triangular rotor. 1967 The company presented its first model with a rotary engine, the Mazda 110S Cosmo Sport, and has since worked for many years to improve performance in terms of power, emission control, fuel consumption and durability as the only car manufacturer to mass-produce rotary engines.

Around eleven years after the end of production of the Mazda RX-8 in 2012, the company resumed series production of vehicles with rotary engines again in June 2023. In Germany, the Mazda MX-30 e-Skyactiv R-EV (WLTP fuel consumption 1.0 l/100 km; WLTP CO₂ emissions 21 g/km; WLTP electricity consumption 17.5 kWh/100 km) is available - the twelfth model in Mazda's history with a rotary engine.



A twist for the future

Where the Wankel engine once promised the future
Research continues in the spirit of the
inventor: it is now about more than
just the drive for cars.

TEXT: TIMO VÖLKER FOTOS: JÜRGEN SKARWAN

The building is a listed building and, with its large, barely insulated windows, is a nuisance to heat; in summer it gets as hot as in the sauna. But in addition to the draught, a spirit wafts through these rooms, which are flooded with light and may help you to think beyond familiar spheres. It is definitely a historic place, just the room in which we are currently sitting: Here decades ago, a worldwide

management circle from the automotive industry gathered to negotiate patents.

The man around whom the bosses gathered: Felix Wankel, lateral thinker and inventor of an internal combustion engine that turns differently - namely really *turns* with rotating pistons instead of pistons stamping up and down. There is even still a telephone box in the room, into which Wankel disappeared in order to consult with his CFO - well insulated so that not a word could reach the conference table.

The Wankel engine made its creator rich and fuelled a whole industry with its compact design and low weight, smooth running and easy revving.

It ultimately came to nothing with the widespreading of the rotary engine, almost all licencees turned away disillusioned when known weaknesses were not and could not be eliminated and conventional technology seemed more promising.

A twist for the future

by Gunter Olsowski and Timo Völker - On 9 January 2024, we received a visit from the East in the former Felix Wankel Institute (now OTC) Editor and journalist Timo Völker and photographer Jürgen Skarwan travelled non-stop from Vienna to Lindau in the new Mazda MX-30 R-EV to test the new Wankel car on the long haul. At Lake Constance, the programme included a drive in the Tesla Y Hyper- Hybrid converted by OBRIST.

There was still enough time in the afternoon to drive and photograph my Ro 80.

The result of this visit is summarised in a successful report that we are kindly allowed to print. Timo Völker was very impressed by the Ro 80 and is planning another report on our club in the near future. His father Herbert Völker, also a journalist, interviewed Felix Wankel several times. We hope that we will soon be able to open his treasure chest.

Timo Völker, born in 1970, is in charge of the mobility department at the Viennese daily newspaper "Die Presse". This includes the supplement magazine "Driving style", which is entirely dedicated to the freestyle car themes. Viennese photographer Jürgen Skarwan sets the visual accents in "Fahrstil". The visit to Lindau was the fulfilment of the duo's heart's desire: "A mythical place in which a particularly fascinating chapter of automotive history lives on." (Timo Völker)

Pictures: Jürgen Skarwan

@ page 25:

The fans still mourn it today and like to ask: What if ...? What if, for example, Ferdinand Piëch, as Audi's head of development, had pushed ahead with the Wankel instead of the TDI, with all the power of the Group behind him? There has to be a villain in every heroic saga.

One man who should know is Frank Obrist, 61, from Vorarlberg. The engineer served under Felix Wankel during his apprenticeship, and as a 25-year-old he watched a Mercedes executive land a helicopter in front of the house. Obrist's assessment of the rotary engine was sober: "The surface/volume ratio is less favourable than that of the reciprocating piston engine, and the resulting consumption disadvantage cannot be eliminated." After Wankel's death in 1988, Obrist continued to run the business of the development centre in Lindau until he founded his own company in 1996. The engineering firm made headlines around the world when it equipped a Tesla with a self-developed combustion engine as a range extender - quite blasphemous among electric fans. But the joke is the global perspective, says Frank Obrist, who does not believe that we can change the fate of the planet "with a few wind turbines and Teslas". His alternative concept is called aFuel and represents an advanced version of e-fuels such as CO₂-free methanol: "Our technology envisages generating cheap electricity via large photovoltaic power plants in the Earth's sunbelt. We use electrolysis to split water into hydrogen and oxygen. We then extract the CO₂ from the air, combine it with the hydrogen and obtain a liquid energy source - E-methanol. The highlight: part of the carbon dioxide is converted into solid carbon and placed in a carbon sink in the ground. In this way, we create a CO₂-negative fuel that can be used with the existing infrastructure: What is still missing from the equation is a strong investor to give things the decisive push. According to Obrist, one thing is certain: "CO₂-neutral is no longer enough. We need to reverse the development that we have caused. And CO₂-negative fuel is the solution, he says.

@page 26:

The Obrist Group is based in Lustenau. A few years ago, it was given the opportunity to buy the Felix Wankel Development Centre on the shores of Lake Constance in Lindau, Germany. The last owner was Audi, the brand into which NSU was ultimately absorbed. No sensible use was found for the centre within the group. Obrist came into the picture.

The renovated building complex, which is over 50 years old and still looks completely undauntedly progressive, houses offices and an aFuel test facility, it also houses the international "Ro80 Club", the association for rotary technology. Felix Wankel himself was involved in its foundation.

The club has a good 1000 members in over 20 countries (the second largest country after Germany: Austria!) and attracts fresh blood through 60 to 80 new members who join every year, says chairman Gunter Olsowski. His red 1972 NSU Ro80 is parked in front of the door, ready for a ride.

Not all of the 30 or so manufacturers who held patents turned their backs on the rotary engine: Mazda stuck with it. Series production of the two-door Cosmo Sport began in 1967 - as the world's first vehicle with a twin-disc Wankel engine. Ten years later, the RX-7 was one of the world's best-selling sports cars for a long time, so wide the smooth drive was set to flourish. An artificial pause occurred when the successor RX-8 was discontinued in 2012. The slightly higher fuel consumption was the lesser problem for a sports car, at least ten years ago, but the engine was unable to cope with new emission limits.

There was therefore a great deal of excitement in the industry when the comeback was announced. Admittedly with the rotary engine in a supporting role: as a range extender for the electric Mazda MX-30.

We travelled from Vienna in this car - a 600-kilometre trip that does not necessarily emphasise the strengths of the concept.

@ page 27

As a plug-in hybrid, the car is dependent on regular charging, which is difficult on long journeys. The combustion engine on board helps to avoid range worries and makes a long journey like ours possible in one go. However, the diversions via the battery is naturally not particularly efficient: Depending on the driving speed, an average of nine to twelve litres can be expected if the combustion engine alone has to provide the energy. Admittedly, these figures can be reduced almost as much as you like in the PHEV-favourable bacon belt scenario, depending on how the plug-in is used. Now we change the cockpit and turn the ignition key in Gunter's Ro80. The pithy chatter from the exhaust fades as the driving noise increases; after all, the engine is so quiet that it's better for novices to keep a close eye on the rev counter. As you can read everywhere, the Ro80 has a well-balanced chassis, good cornering ability and many advantages on long journeys. Gunter, who is often in Vienna, prefers to take his Ro80. It was a very moving first drive for us, considering the drama of its history: This car outshone its contemporaries in 1967 like a comet, it was so artfully light and elegant in design and progressive in concept. The Ro80 still looks modern today. Well, manual gearbox, but no clutch pedal? No need, the gears are changed via a semi-automatic transmission. In the end, the Ro80 determined the fate of its manufacturer, which was financially bled dry and had to merge with Audi and was soon deleted from the name. Now the car that NSU left behind is one of the few that will probably be revered forever, and more and more. *end*

Gold for NSU - A Ro 80 at perhaps the toughest classic car Alpine drive in Switzerland

Text: Dario Tommasini (CH)

Pictures: Claudia Heim (CH)

The "Penrite Alpenbrevet" takes place every year on a full moon weekend. The riders usually meet at midday at a location in Switzerland and then drive over numerous Alpine passes to their destination. Sometimes very special places are chosen as the starting point, such as the Rütli meadow on Lake Lucerne or, as this year, the normally closed Kunkelsspass. The event is rounded off with a brunch together at the next morning. During this time, you can ride many kilometres and usually cover more than 20 Alpine passes. However, this gets a little tight in Switzerland and so you also ride on neighbouring countries.

The event is "Very British" in terms of the vehicle. Unfortunately, my stable no longer has a British horse available, so I had to switch to a German product. But what do you take for such a demanding ride? The vehicle should be reliable, have a decent engine and, of course, be equipped with decent brakes. Of course - the NSU Ro 80 is perfect!

This year's meeting point is actually car-free. However, the organiser has obtained a driving permit for all participants especially for the Alpenbrevet. From 13:00 there was an easy Meal time. Shortly after 14:00 there was drivers' briefing and then a Le Mans-style start took place. All the participants rushed to their cars and sped off.

Where the approach still took us along a well paved, single-lane road, it was much more adventurous on the other side of the pass. The Kunkel Pass (1357 metres above sea level) is unpaved on the south side and leads partly through narrow tunnels carved into the rock. This was the first time we were glad of the sensational handling of our Ro 80.

Most of the journey took place in our home canton of Graubünden - it is also the largest in Switzerland. So navigating was particularly easy. We didn't need a map or sat nav. First on the agenda were the Julier Pass (2284 metres above sea level), the Albula Pass (2315 metres above sea level), the Flüela Pass (2283 metres above sea level) and the Ofen Pass (2149 metres above sea level). The border with Italy was reached, albeit not by the shortest route. The tank was now half empty and



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- 1 Meeting place Kunkelsspass
- 2 Meeting place Kunkelsspass
- 3 On the way on the first stage

we wanted to refuel in Switzerland, as 98 octane petrol is not readily available in Italy. A quick look under the bonnet confirmed that everything was in perfect order. I only topped up the oil a little.



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Full of joy about the king of the Alpine passes, we travelled through South Tyrol at dusk. There it was: the "Stilsfer Joch", or in Italian Stelvio. With its 63 hairpin bends and an altitude of 2758 metres above sea level, this is truly a challenge. The power steering really proved its worth here. I thought a little ruefully of the other participants, who would certainly have had to work a lot harder without this nice extra. I didn't really go easy on the car and mostly drove at full throttle in first gear. It seemed to me that the Ro 80 enjoyed this ordeal. It purred merrily up the hairpin bends, albeit at a slightly higher operating temperature, but everything was within the permitted range! After Bormio, we headed into the Valle dei Forni, where a late dinner awaited us at the Rifugio Stella Alpina. By now it was night and we were at the back of the midfield. But we had also decided to take it easy on the journey.

On the second part of the Penrite Alpine Brevet, we first travelled over the Passo Gavia (2618 m.a.s.l.) and the Mortirolopass (1852 m.a.s.l.) before returning to Switzerland at Tirano.

After the Bernina Pass (2330 metres above sea level) we made our second refuelling stop. There was even 100 octane here. Under the bonnet, as expected, everything was fine. Past St. Moritz and over the Maloja Pass (1812 metres above sea level), we were already back in Italy. But only briefly, because the Splügen Pass (2114 metres above sea level) led to Switzerland again. This year there was even a super moon at the brevet, which has shone brightly for us. However, its light does not reach into every narrow valley at all times. Although I have replaced the Ro's light bulbs with slightly better bulbs, the car's lighting concept is very commendable. We did most of the journey in the dark. But even the best lighting doesn't help if a roebuck suddenly appears on the road after a bend in the road! Our hearts slipped into our trousers! With four wheels locked, we skidded towards the animal. Despite squealing and a massive amount of smoke, the cloven-hoofed animal didn't budge an inch.

The car came to a halt just a hair's breadth in front of the animal - what luck! The buck looked at us reproachfully, turned round and left.

- 4 Stelvio, the king of the Alpine passes
- 5 Car park at the midnight meal
- 6 On the road on the Stage 2
- 7 At 4 o'clock in the morning on the San Bernardino
- 8 Gold for NSU Ro 80
- 9 Rally stickers

Now only the San Bernardino Pass (2066 metres above sea level), the Lukmanier Pass (1920 m.a.s.l.), the Oberalp Pass (2046 m.a.s.l.) and the Furka Pass (2436 m.a.s.l.) separated us from our destination, which was the Grimsel Pass (2165 m.a.s.l.). A rare weather phenomenon occurred on the way. There were two flashes of red lightning. Once in front of and once behind our car. Apparently we were travelling a bit fast after all. It is (unfortunately?) true that the Ro becomes quieter at higher speeds. Well, let's see what the postman brings over the next few days.

Whilst we were still in midfield at dinner, we were now right at the front. We were the fourth car to arrive at the finish one and a half hours before the scheduled time slot.

The Grandhotel Grimsel Hospiz is worth a visit in itself. It sits enthroned on a rock at the edge of the reservoir. To the left and right surrounded by the dam wall, which keeps the water masses in check. The doors to the tower hall were opened punctually at 8.00 a.m. and we were able to enjoy a sumptuous brunch. Personally, I was in great need of a good cup of coffee. The three energy drinks I had consumed during the night did their job of keeping me fit, but enjoying caffeine in a coffee is something else!

Last but not least, it was time for the trophy ceremony. It was carefully checked whether the proof photo of each pass had been taken. The route is always designed so that shortcuts can be taken. However, this results in a deduction. Those who completed every pass and kept to the time limit were awarded gold, those who took shortcuts were awarded silver and those who took too many shortcuts were awarded bronze. Gold for the NSU Ro 80! When handing over the trophy, the organiser told me that he was very pleased that we had come with the Ro. Some of the other participants were gossiping that the car wouldn't make it to the finish anyway. Well, those cynics have been proved wrong!

As you know, the Ro 80 tends to lean relatively heavily in bends. My co-pilot can confirm: When we finally had "solid ground under our feet" again after the countless bends, she had the feeling that everything



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fluctuates. Similar to a long boat trip, the phenomenon continued until after the trophies were awarded.

So, Alpine brevet 2023 done, let's go home. Erm, wait a minute: there are already a few high mountains in the way! And so, as an epilogue, we drove down the Grimsel Pass (2165 m.a.s.l.) and over the Furka Pass (2436 m.a.s.l.) and the Oberalp Pass (2046 m.a.s.l.) back home. In the end, we drove a good 1000 kilometres in 24 hours in the NSU Ro 80. A truly marvellous car! I have taken part in this event several times but have never arrived at the finish so relaxed. The Penrite Alpinebrevet is like a drug - once you've driven it, you want to take part again and again. It could well be that we will take part again in 2024 with the NSU Ro 80.

On the death of Theo Drießen

Lo, I am with you always, even unto the end of the world.
Matthew 28:20



We bid farewell to

Theo Drießen

* 6 July 1941 † 12 February 2024

We let you go in love

Marlene Drießen
Jutta Drießen and Martin Koether
Kathrin and Andy with
Isabella, Wanda and Dora
Alexander and Jenna
Klara
Cornelius
Silke and Uwe Clemens
Cornelia
Conrad and Lara

52511 Geilenkirchen - Teveren
Address of condolence: Drießen c/o Bestattungen
Schaffrath,

To Fürthenrode 48.

The exequies will be held on Wednesday, the
21 February 2024, at 2.00 pm in the parish church of St.
Willibrord Teveren. The funeral will then take place from
the cemetery hall.

by Sascha Scheben - After the editorial deadline we received the sad news that our long-standing member, active comrade and Ro 80 veteran Theo Drießen had passed away. Due to the pressure of deadlines, we would only wish to inform our readers in this issue. We will publish an appropriate portrait of our Ro 80 original in his memory in the next issue of the Wankel Journal.
publish.

Advertisement: Driessen family



Reports from the workshop - Changing the vacuum pump diaphragm

by Thomas Günther - It can happen very quickly, suddenly blue clouds of oil come out of the exhaust and the gearstick no longer works as smoothly as usual, or not at all.

The coincidence of these two faults is almost always caused by a defective diaphragm in the vacuum pump. As can be clearly seen here (Fig. 1).

But it can also be somewhat different. The gearstick works perfectly, only the oil consumption increases almost imperceptibly. The litre of engine oil only lasts for 700 to 800 km and the Ro 80 friend following in the group says: "Your car stinks like a Trabbi." Here, too, a creeping defect in the diaphragm may be the cause. A reliable diagnostic option is to loosen the two screws on the cover of the two non-return valves (Fig. 2). If oil drips out, this is an unmistakable sign of a defective vacuum pump diaphragm.

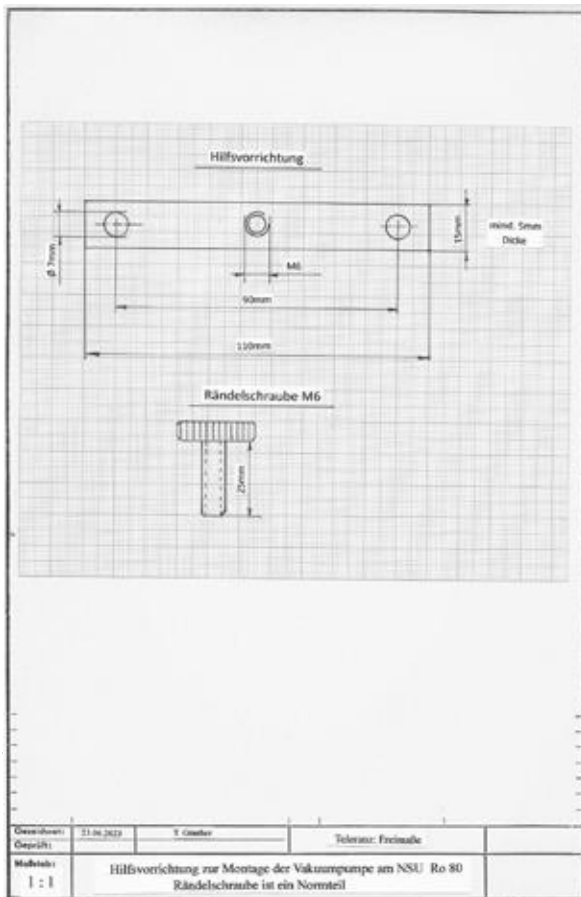
However, the defect will not usually be a total failure as in Fig. 1, but rather a porous area. (picture 3 and 4)

This diaphragm is available as a spare part in our Clubshop, as well as the O-ring seal that seals the vacuum pump housing to the motor. But how do I remove the pump? As described on page 50 of our repair manual, it doesn't actually work as the diaphragm is broken. Closing the exhaust air connection therefore has no effect.

This can be remedied by a small auxiliary device that experienced screwdrivers can make themselves (Fig. 5 and 6). You don't have to turn the knurled screw yourself, as it is available in all better DIY stores.

However, the upper part of the pump must now be removed when installed (Fig. 7). To remove the eight M6 slotted screws, a "normal", a short and an offset screwdriver are very helpful (Fig. 8). Once the upper part has been removed, the auxiliary device is screwed on (Fig. 9) and the two M8 fastening screws of the pump on the motor are removed. The diaphragm, spring and plunger can now be pressed to maximum stroke using the knurled screw (please do not use force).





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It is now relatively easy to unhook the pump linkage.

Of course, you can also push the defective diaphragm in by hand, but that's a bit fiddly, hence the idea with the small auxiliary device.

When fitting the new diaphragm, ensure that the piston rod's tappet is parallel to the pump housing (Fig. 10 incorrect / Fig. 11 correct). The eight screw holes in the diaphragm must also be aligned with those in the pump housing (Fig. 12 incorrect / Fig. 13 correct). If this alignment is not correct, the diaphragm will be under tension, resulting in a shorter service life.

Assembly is carried out as described in the repair manual on page 50. A leak test is important as this also checks the two non-return valves in the upper part of the pump. It can be useful to have a spare membrane with you in case of an emergency. With a well-equipped tool bag in the car, this can also be done in the car park if necessary (tested in the garage yard itself). Or if a garage offers help, then you have the right spare part to hand.

Pictures: Thomas Günther,
Ro80 repair manual, 1973 edition

The path described by the author of the article represents his personal approach. The editorial team would like to point this out, that there are also ways to remove the pump without the special tool described.



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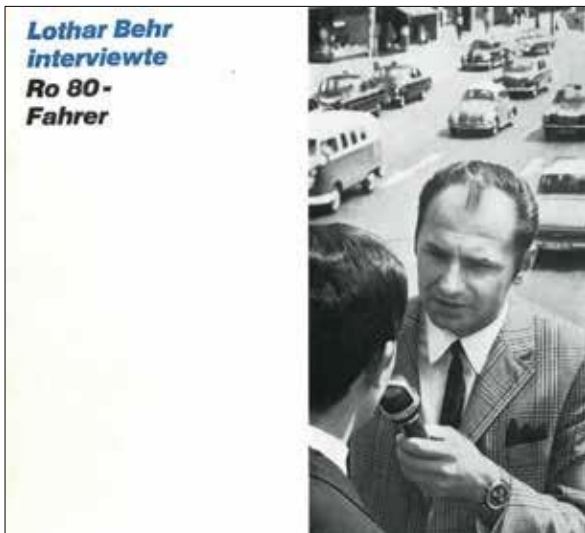
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Cover picture

Ro 80 driver interview

The series

by Heiko Rossnagel - In this issue of the now established series "Ro 80 riders interviewed", entrepreneur Richard Goldgrabe and fast-driving test pilot Dieter Wachtel from Hamburg tell their personal Ro 80 stories. Further interviews will follow in the next issues.

Images: Scans - Andreas Meyer

Richard Goldgrabe

Is the head of the Bremen-based company "Elektron", which is primarily involved in the production of electrical appliances

Bremen entrepreneur Richard Goldgrabe followed a strategic plan when purchasing his fifth vehicle. He tested all makes in the upper middle class, compared their performance and also thought about the resale value. Why did he decide in favour of the NSU Ro 80? The car emerged as the winner in the individual comparative tests. And these are the individual plus points, which Goldgrabe explains as follows:

- With an average fuel consumption of 15.5 litres, the Ro 80 is economical.
- It has road-holding like hardly any other car.
- The driving characteristics are simply outstanding.
- The customer service is everything you could wish for.

Goldgrabe, whose NSU Ro 80 has over 74,000 kilometres on the clock, has just returned from a holiday trip that took him to the French Alps. He has - and he says this in his sober, Hanseatic way - enjoyed the car.

"The vehicle has an appeal that I have never experienced before. In other words: I like the NSU Ro 80 all round. Although it is equipped with a semi-automatic transmission, it is quite sporty to drive. You just have to change gear."

As an experienced car driver - he has had his driving licence since 1950 --- and as an engineer by profession, he knows a lot about motor vehicles. He feels that the suspension is a little too hard and that a more favourable position for the brake and accelerator pedals could be found.

"However, as I said, these are minor details that are long outweighed by numerous advantages."

His circle of friends still had very different opinions about the car. But after a few months, he found out: "The sceptics are waning." The new driving experience alone, the skilful overview in the NSU Ro 80 cockpit and the excellent workmanship give entrepreneur Richard Goldgrabe the feeling that he has found a tailor-made passenger car. This is also the reason why he would buy a second example of this model.

"Unless an even better vehicle has come onto the market in the meantime"

Dieter Wachtel

Hamburg, is a test pilot with the Federal Ministry of Defence. Since 1956, he has completed over 3,500 test flight hours on the Transall, Noratlas and Hansa-Jet aircraft types.

The test pilot approached the matter with expert judgement: in his opinion, the piston engine has reached the limits of its performance capability. The future belongs to the turbine and the rotary engine. The twin-disc NSU Wankel engine under the bonnet of the NSU Ro 80 - incidentally, it was Wachtel's first vehicle from NSU - was the decisive factor. After five other car models of his own, he found "his" car.

Wachtel is - how could it be otherwise for a successful test pilot - a fast driver who demands the very best from himself and the vehicle. This is why his fuel consumption is somewhat higher - around 14.5 to 18.5 litres per 100 km. "That's - as they say - the D-train surcharge." At 21,000 kilometres, he had the opportunity to get to know the individual NSU service. Now the test pilot is enjoying the excellent road holding, the endurance speed and the high-quality workmanship, of which Dieter Wachtel literally says: "It's amazingly good; I was expecting more finish flaws." - "And how satisfied are you" - I ask - "with the acceleration?"

For me as a technician, it's amazing: especially in the upper touring ranges; basically, you can't compare it with that of conventional vehicles."

He is particularly satisfied with the brake system and especially with the brake force regulator, which prevents the vehicle from swerving out of its lane. "I am in favour of introducing a brake force regulator for the front wheels of vehicles with a top speed of over 150 km/h, as has long been the case with aircraft. We pilots call this a mini-stop system.

The fan is a little too loud for him when it comes to ventilation. The well-known quiet running of the rotary engine is more than just an advertising slogan for him. "Of course you can hear it even at high speeds. But I have found that the auxiliary units are louder than the engine!"

He has only experienced positive reactions to his car among his friends; there is no doubt in his mind that he would buy the NSU Ro 80 a second time, "It's the most modern car on the market at the moment."

Thanks to its roadholding and sophisticated braking system, the "most modern car" saved the test driver's life. On the motorway between Hamburg and Cologne, a truck had swerved about 50 metres in front of Wachtel, who was travelling at 180 kilometres per hour. The emergency braking was so intense that the front tyres were burnt through to the canvas, but the vehicle nevertheless remained "stubbornly" on the road.

The test pilot commented: "With any other vehicle in the same situation, I would have at least given blood!"

Finds from Wankel's treasure chest

by Gunter Olsowski and Dankwart Eiermann - The next "find" in the treasure chest is from 1977, the last year in which the Ro 80 was built. Joachim Schlechte, owner of the Schlechte car dealership and AUDI NSU direct dealer from Garbsen near Hanover, has sold numerous Ro 80s since 1968 and had over 200 satisfied Ro 80 customers on his books in 1977.

When production of the Ro 80 was discontinued in March 1977, it was deprived of a large part of its business basis.

How Dankwart Eiermann came into possession of the of the various exchanges of letters and the reasons behind them is best told by himself:

Article on the situation of Ro 80 dealers in the mid-70s (see Autohaus Schlechte)

After VW took over the Audi NSU company the NSU name was practically cancelled and there was only one NSU-GmbH with no function. All activities were carried out by Audi under the leadership of Wolfgang Habel and the later VW boss Ferdinand Piech, who was still head of development at Audi at the time. Despite all of Audi's positive development activities, the political decision had already been taken by the Group's Board of Management against the production of a new Wankel car, see also Mr Schlechte's memo. There was still a goodwill tour by Audi, but only to reassure the licence holders, because they didn't want to do without the ongoing licence income! So some vehicles were equipped with the new Wankel Type 871 engine to spread good vibes when the licence holders visited Japan and the USA. This also includes the following statement from Audi on the status of development:

KKM 871 Stand 1976 (AUDI-NSU-Bericht für Lizenznehmer)

Dauererprobung Mitte 1974 erfolgreich abgeschlossen. Im obligatorischen Dauerlaufprogramm (Düsseldorferprogramm) für alle neuen Fahrzeuge können mindst. 150.000 Km garantiert werden (über 4 mio Km Fahrzeuglebensdauer, 26000 Prüfstandstunden). 1976 internationale Vorstellung bei den Lizenznehmern mit gutem Erfolg.

Vergleichsfahrt 1976 Wankel-KKM 871 mit zwei gleichstarken 6-Zyl. Hubkolbenfahrzeugen (BMW 6-Zyl-3L/DB-6Zyl 2,8L), exakt gleiches Gewicht, permanenter Fahrerwechsel um alle äußeren Einflüsse auszuschalten.

Ergebnis Kraftstoffverbrauch in Liter pro 100 Km:

	BMW 6 Zyl (Super) DB-6Zyl (Super)	Wankel KKM 871 (Normal)	Leistungs- 170 PS/1600 U/min
Bundesstraße	10,33	10,13	9,81
Stadtverkehr	20,06	17,62	19,6
Autobahn	13,31	13,0	12,2
Gesamtverbr.	12,62	12,55	12,33

Nach der Konzernentscheidung gegen die Produktionsaufnahme des KKM 871 Wankelmotors wurde ein 5-Zyl. Hubkolbenmotor für den neuen AUDI 200 entwickelt und im Serienfahrzeug eingebaut.

AUTO-MOTOR & SPORT Testbericht (Nr. 8-1981):

AUDI 200 5T - 170 PS - 203,4 Km/St Höchstgeschwindigkeit.
Gesamtverbrauch (Super) = 17,4 L/100 Km
Minim. Verbrauch = 12,5 L/100 Km

Graphic 1

The status of the Wankel technology presented in comparison to the reciprocating piston engine was clearly positive, but the board of Management nevertheless decided against continuing production. Mr Schlechte's statement (see file note, call H. Schlechte) fits in with this. This means that the licensor is leaving the licensees hanging without any further support (as originally contractually agreed) and is still collecting licence fees for a development that he himself is no longer pursuing. Probably unique in the history of technology!

AUD-NSU press conference on 26 April 1979:

"The decision now taken by Audi NSU is essentially based on economic considerations. Although the development status of the KKM 871 is on a par with that of a comparable six-cylinder Otto reciprocating engine under today's conditions, Audi NSU has come to the conclusion, taking into account the manufacturing costs calculated today and the necessary investments, and based on detailed market analyses, that an Audi vehicle with the 871 rotary engine cannot currently be sold on a scale that economically justifies the start of series production."

"Audi NSU Auto Union AG, together with Wankel GmbH as licence holder, will, however, continue the further development of the rotary piston. The possibility that Audi will later decide to start production or to participate in a co-operation for the manufacture of rotary engines depends on market developments and future legal regulations."

*** This statement has created a strange situation that is unique in the history of technology. A licensor publicly rejects the licensed object, which a paying licensee presents in an improved form just as publicly and at the same time: Mazda RX-7***

Graphic 2

The visit by Audi CEO Dr Habel together with the then Head of Development, Ferdinand Piech, to Felix Wankel and his partner Ernst Hutzenlaub at TES-Lindau, which I witnessed, also fits in with this. This visit had been organised by Audi to inform Wankel personally about the Audi decision prior to the above press release.

The visit began with an attack by Piech against Hutzenlaub, accusing him of having led the licence holders to believe that development results were too good in order to keep them on board. Hutzenlaub replied: "My job is to sell licences and good contracts and your job, Mr Piech, is to make sure that the technology is right and up to date." Dr Habel broke off the argument by saying: "Gentlemen, we don't want to argue, we want to find a good solution for everyone!" He offered to pay Wankel the entire annual costs for the TES and the developments. Wankel would only have to be prepared to develop reciprocating pistons in addition to his own developments for Audi. Wankel's answer was: "No reciprocating pistons are coming to my institute!" That was the end of the matter.

Following Audi's decision to discontinue Ro 80 production "for cost reasons", Wankel's partner Hutzenlaub tried to find an alternative solution - and he found one! it! Thanks to his good contacts with the relevant people

the possibility of engine production in Austria (Judenburg, Styria) arose with the support of the Austrian government at the time (Chancellor Kreisky), whereby an existing building there was available for Wankel engine production of the KKM 871. A number of vehicle manufacturers (Fiat-Lancia, Mitsubishi etc.) were also interested in equipping new vehicle models with this new Wankel engine. This actually solved all the problems! Wankel-GmbH had already drawn up a complete production plan for series production. But a new low blow from Audi-VW dashed all hopes: the newly developed Wankel engine was not released by Audi! At the time, there were considerations to use a Japanese Wankel engine as a replacement, but such a solution was not desired by potential customers at the time!

We now start the correspondence with a letter to the AUDI NSU board member Dr Habel dated 15.02.1977, in which Mr Schlechte complained about the poor communication on the part of the central VW sales department in Wolfsburg. The reply of 28 February 1977 is rather vague and would today be classified as "alternative facts": "... that the coordination of production possibilities and market opportunities has shown that the targets for 1977 have almost been met."

AUTOHAUS JOACHIM SCHLECHTE
AUDI NSU direct dealer
3011 GARBSEN / HANN.

Registered mail
Firma
AUDI NSU Auto Union
Mr Dr. W.R. Habbel
Unionstr.
8070 Ingolstadt

JS/R 15.2.1977

NSU Ro 80
Dear Dr Habbel!

From 1968 onwards, I sold the Ro 80 developed and built by NSU with increasing success. The many advantages of the Wankel engine, the brilliant chassis and the stable and beautifully shaped bodywork inspired more and more customers. By 1973, I had already sold 115 new Ro 80s, and all customers are delighted with the Ro 80. Today I have 235 satisfied Ro 80 customers in my customer file.

Unfortunately, I have not been able to continue the successful sales since 1974, as customers have repeatedly expressed doubts as to whether the Ro 80 will continue to be built. Since 1974 I have not been able to find any advertising for the R0 80 from the manufacturer. The well-known advertising in trade journals and magazines suddenly failed to materialise.

The supply of spare parts from the distribution centre is so poor that minor repairs take an unreasonably long time. It is also incomprehensible to me why the prices of spare parts have suddenly risen so sharply.

This negative behaviour on the part of the manufacturer has prompted many Ro 80 customers to part with their vehicles. In addition, customers complain about the lack of service from VW workshops and dealers in Germany. These circumstances make new advertising particularly difficult.

On the 8th of May I sold a Ro 80 with various accessories. This order went via my dealer to the VW factory and I received a phone call from them:

"The Ro 80 is no longer being built," I was told to sell the customer another car or try to get a stock car from 1976 from a dealer in Germany.

-2-

We VW dealers are literally inundated with useful and useless literature, but I have not received any written notification that the Ro 80 is no longer being built.

I would like to ask you to tell me clearly whether this is a bad joke or whether the Ro 80 is actually no longer being built.

Yours sincerely

DR. Jun. WOLFGANG R HABBEL
FEBRUARY 1977
MEMBER OF THE BOARD OF DIRECTORS
0841/893300
THE AUDI NSU AUTO UNION
STOCK CORPORATION

8070 INGOLSTADT, 28

TEL.

Mr.
Joachim Schlechte
Autohaus Joachim Schlechte
Alte Ricklinger Straße 44

3008 Garbsen 1

Dear Mr Schlechte,

I have the honour of acknowledging receipt of your letter of 15 February 1977.
I share your annoyance about the way in which you were informed by telephone about the availability of the Ro 80 in the case indicated. I would like to make the following comments: As you know, all AUDI NSU products are sold by the Wolfsburg sales department, so that we have no direct influence on individual handling. I have taken your letter as an opportunity to point out to the sales management in Wolfsburg that such a response to dealer enquiries cannot, of course, be given.

You have been informed about the "Ro 80 sales opportunities" situation by the sales management in a standardised form, so that we have nothing to add from our side. I would like to point out, however, that the coordination of production possibilities and market opportunities has shown that the targets for 1977 have almost been reached. This has resulted in a limitation of the range for the Ro 80, particularly with regard to equipment requirements, whereby the price of the vehicle must be kept within an economically justifiable framework.

I regret that I cannot give you any other news at the moment.

With kind regards
Dr W.R. Habbel

On 21 April 1977, Mr Schlechte contacted Dieter Korp and also described his situation to him:

Mr
Dieter Korp
Droste-Hülshof-Weg 15
7588 Meersburg / Lake Constance

JS/R 21 APRIL 1977

Dear Mr Korp,

I have taken the liberty of sending you some films, newspaper cuttings and the trade magazine "P8". Here you can mainly see my Wankel development of the Hercules "W 2000" for off-road sports. I would like to tell you about my experience with the "Ro 80".

In 1965, as an NSU dealer, I bought a Wankel Spider to familiarise myself with the new drive unit. During customer service courses in Neckarsulm, I heard that this car was being tested as a forerunner for a large 2-disc Wankel.

The NSU Ro 80 was then introduced in 1967, and in 1968 I started selling this brilliant car. From August 1968 to December 1973, I sold 116 Ro 80s and from 1974 to 1976 I sold a further 116. In autumn 1976, I had around 240 NSU Ro 80s to look after.

None of my Ro 80 customers were tempted to buy this vehicle, for example by overpaying for a used car. All of my customers bought a Ro 80 because they were absolutely delighted with the driving characteristics, the smooth running of the engine and the shape of the bodywork. I simply carried out a larger test drive than usual and taught the customers how to drive a Ro 80 properly: correct seating position, correct gear changes and clutch, correct driving range at the right speed, city and country roads as well as motorway driving.

All this was so well received that I had a steadily increasing sales success. But the Ro 80 was sold in increasing numbers not only in Garbsen, but also at other NSU dealers.

Where did the difficulties arise and why were so many engines changed?

- 2-

Garbsen, 21.4.77
to Mr D. Korp, Meersburg/Lake Constance

1968

1) NSU was in a bad financial situation and there were rumours that the plant would be bought by VW and the new company would be called AUDI NSU Auto-Union. All VW dealers were faced with the question "what will happen to us"? "What does the future look like?"

VW dealers already had AUDI representation, NSU dealers were to get AUDI - but ask questions. Initially, sales of the Ro 80 suffered badly here.

2) The NSU dealers at the time had only been dealing with four-wheelers in their businesses for a short time. The operational handling and the technology required investments and changes. In between these events, a real car suddenly appears and needs to be serviced and repaired.

75% of the motors sent to the Neckarsulm factory were not defective. The following damage occurred:

Torque converter was too weak, expanded and broke. The resulting metal particles entered the oil circuit and destroyed the eccentric shaft. When the engine was replaced, the defective torque converter was reinstalled and the game started all over again.

Faulty distributor shafts, stuck or worn throttle valves led to engine changes, synchronisation of carburettor and ignition caused so many problems that engines were changed here too. Noises in the water pump were not recognised - the whole engine was changed straight away. It is even said to have happened that an engine was changed even though only the idle jet was dirty. An ADAC road patrol driver refused to change the spark plugs because he was of the opinion that the engine was broken anyway.

Of course, we also had engines with extremely high sealing wear, which also warranted an engine replacement.

But by 1970, the NSU works had already got these faults under control and the Ro 80 was running. It ran up to 28,000 kilometres and suddenly there was a drop in performance.

Did it happen so suddenly? The NSU works guaranteed all Wankel parts up to a mileage of 30,000 km. As the Ro 80 must consume 1 litre of engine oil per 1000 km, it is very important to maintain the correct oil level. Various Ro 80 drivers forgot to top up the engine oil at a mileage of 25,000 kilometres, which explained the subsequent drop in performance. It was not until 1972 that the oil circuit was changed so that no one could destroy the engine through carelessness, and mileages of 150,000 kilometres were not uncommon.

In 1973, it was not the AUDI NSU Auto-Union that got into financial difficulties, but the parent company VW in Wolfsburg. It was mainly the AUDI NSU dealers who suffered as a result, and this was the death knell for the RO 80.

From 14-16 June 1977, Mr Schlechte visited the TES in Lindau and was also received by Felix Wankel. Dankwart Eiermann has created a file note about this.

On 28 June 1977, he wrote to thank Felix Wankel for this and pointed out that he was planning to take over a MAZDA dealership. Perhaps he hoped that Felix Wankel would support him financially.

Visit by Mr J. Schlechte to Lindau from 14 to 16 June 1977:

Meetings on 14 June with Dr Wankel

Mr Eiermann TES

On 16.6. with Mr Kirihara (Mazda Service)

Mr Dr Wankel TES

Mr Eiermann TES

Autohaus Schlechte, Garbsen

Existence of the parental business as NSU agency in Dresden since 1933.
After the war NSU and DKW agency in Garbsen near Hanover - 1948.
Takeover of the parental business in 1962 - NSU four-wheelers.

First contact with the rotary engine in 1965, on the occasion of the release of the "Spider", followed by a rotary engine training course.

Sale of Ro 80 vehicles from 1968 to 1973 = 116 cars.

January 1974 to autumn 1976, reduced to 9 vehicles after the takeover by VW.

Customer base: 240 Ro 80 customers (see enclosed list).

From 1974 onwards, there was a lack of support from the VW plant in terms of advertising, customer service and spare parts supply. In addition, the prices of spare parts were suddenly greatly inflated. (E.g. gearbox parts, gear set 2nd gear with synchroniser ring, old price DM 85, now replacement gearbox for DM 1,100. Response from the VW factory to complaint: "Own fault, because too many R0 80 were sold! Customer just has to wait.")

Replacement engine from the factory: DM 2,800, from 1974 DM 3,400 and today 1977 DM 4,100. Repair price at Schlechte: DM 2,200.- with trochoid, without trochoid: DM 1,100.- (Rep. without approval of the factory to satisfy the customers.) Warranty is not taken over by VW, but by Autohaus Schlechte!

Further price increases since the end of 1974, e.g. trochoid, sealings, etc. by 50%. Trochoid from old price DM 210.- to new price DM 620.-

After the AUDI NSU merger in 1970, good Ro 80 business. Advertising available until 1974. All activity ended after takeover by VW in 1974. Decline in sales at KKM. New customers could no longer be approached as there was no longer any advertising for the vehicle. The Ro 80 is no longer bought and even satisfied customers switch to BMW and Mercedes. No more Ro 80 available from 1977.

Sheet 2

Sales centre does not provide any written information to the dealer.
(Telephone information: "You must get out of the habit of selling Ro 80,
the car is no longer being built!")

All Ro 80 customers were completely satisfied with the vehicle and the
service, but not with VW's factory policy, and are therefore switching to
other makes.

The attempt to sell the newly released Audi 100 5E to Ro drivers as an
alternative fails completely. Out of 20 people interested in the Ro 80,
not a single one buys an Audi.

A written enquiry to AUDI NSU, Dr Habbel, about the situation of the
rotary engined cars is answered evasively (see letter dated 28.2.77).

A promise of a personal meeting with VW or AUDI NSU on 28.2.77 was not
kept until today, 14.6.77.

14.6.77

Egg/Bo

Autohaus Joachim Schlechte

Mr.
Dr Felix Wankel
Frauenhofer Str.
8990 Lindau / Lake Constance

Dear Dr. Wankel!

From 14 to 16 June, I had the pleasure of visiting the "Technical Development" in Lindau. I would like to thank you once again for this invitation.

I was delighted to learn that several engines are being tested, for example diesel and petrol injection or turbocharging. I would have loved to take one of your boats with the Ro 80 engine out on Lake Constance, but the bad weather made this impossible. Perhaps there will be another opportunity for a quick boat trip later.

I hope that I have contributed to finding the truth with my explanation of my "Wankel" sales and repair experience. The business policy of the Volkswagen factory and of Hercules as a two-wheeler manufacturer is so vile and mean when it comes to modern combustion engines (Wankel) that I doubt any progress can be made.

I was delighted to be given the opportunity to take over a Mazda dealership. I discussed the changeover of our business to "Mazda" in detail with my wife. From a moral and technical point of view, we have no reservations, but for financial reasons we are not in a position to make the switch at the moment.

Letter to Dr Wankel, Lindau/Lake Constance 28.06.77

The investment in the Ro 80 and the Hercules W 2000 - especially the successful Wankel all-terrain model - cost me a lot of money. Unfortunately, I can't continue the initially good to very good sales success, as both manufacturers have discontinued their models. Now I'm on my own, unworthy of credit and untrustworthy, with a fully equipped Wankel special workshop. In 1976, the Ro 80 still accounted for 1/3 of my workshop runs, but today it is no longer the 20th part.

To take over the Mazda dealership, I needed a loan of DM 350,000. If I have to take out this loan from a bank, it will cost me DM 10,600 per quarter at 7% interest and 4% amortisation. There is no way I can afford this burden in the first 3 years, assuming the federal government pursues a normal economic policy. In addition, the Mazda programme includes a car with a Wankel engine. It is known that I am particularly committed to this car again and therefore cannot get any further loans.

Should you, Dr Wankel, find another solution, I would be happy to have a further discussion.

Yours sincerely,

On 09.07.1994 there was another telephone conversation between Dankwart Eiermann and Mr Schlechte, who had emigrated to Australia in the meantime and was running a car repair shop together with his son.



Boachim Schlechte
Dr. Felix Wankel Drive
Tamborine Village QLD 4270
Australia

Memo

Call from Mr Schlechte from Australia on 09.07.94 approx. 10:00 a.m.

Preliminary remark:

Mr J. Schlechte had one of the most successful NSU-RO 80 service centres in Garbsen/Lower Saxony (see attachments).

At the end of the 1970s, he intended to file a lawsuit against VW for business damage, as he was severely affected as a WANKEL specialist by the discontinuation of RO 80 production, but on the advice of his lawyer he did not take legal action but emigrated to Australia. There, together with his son and family, he runs a service and repair business for vehicles of all kinds, especially rotaries.

Playback of the telephone call:

Among other things, Mr Schlechte looked after (over 240 RO 80 customers) 4 RO 80 vehicles of the Lower Saxony Ministry. The Minister of Economic Affairs of Lower Saxony (Helmut Greulich), who joined the VW Supervisory Board through his work in the Works Council trade union and in his capacity as Minister of Economic Affairs and who knew Mr Schlechte, talked to him at the Garbsen Schützenfest (1973/74) and told him some VW and government insider stories:

After the resignation of Willi Brandt (Guillaume Affair 1974), Helmut Schmid became Federal Chancellor. He provided the impetus for the VW reorganisation, as VW was practically bankrupt at the time and had only one vehicle in its range, the VW Beetle, with no prospects for the future. At this time, the takeover of the Audi-NSU companies took place and with it access to the water-cooled engines and the vehicle models of these companies (Audi 50 etc.), which were developed into new VW products. According to Mr Schlechte, it was decided at the time (Helmut Schmid!) that the Wankel engine would no longer be produced, as such production "would have cost too many jobs"! (Schmid, SPD together with the trade union!), and only limited contact was maintained with the licence holders in order to keep up appearances. An anti-Wankel mood was also noticeably built up with the scandal at the last joint Wankel licence holder conference in Cannes in 1981.

There, the licensor Audi NSU explained to the licensees (with MAZDA in the lead and approx. 1.5 million Wankel vehicles sold) that Audi would not produce and develop Wankel engine vehicles, as the future requirements would be easier to fulfil with reciprocating piston engines, in complete contrast to the statements of the previous years (and the corresponding licence income).

Additional information: Mr Schlechte Jr. (married to a Japanese woman) returned from a trip to Japan, including a tour of the MAZDA plant. On the test track he noticed a fleet of approx. 10 - 20 old vehicles with a special noise. It was explained to him that these were the hydrogen test vehicles for endurance tests, all with Wankel engines because of the great advantages. Unfortunately, the bonnets were not opened.

Attachments.

This was concluded by a letter dated 19 July 1994, in which Mr Schlechte once again wrote down some subjective views on the death of the Wankel engine.

Dear Mr Eiermann,

I am sending you the "Road and track" magazine with the split-cycle story by the same post. I'll come back to our telephone conversation on Saturday 9 July.

Did you not receive my letter and the photos from October 93? In my report for an Australian motorbike magazine, I wrote at the time that the Volkswagen factory had got into financial difficulties in 1973. The truth, however, is that the VW plant was bankrupt in 1973. I'll repeat that again, properly "bankrupt." The German government reorganised VW with the condition: "Stop Wankel development and production as quickly and inconspicuously as possible!" The big shot Schmidt said at the time: "The simplicity of the Wankel engine jeopardises millions of jobs in the car industry." This was all treated as top secret. Do you know the story between Mr Hutzenlaub and 'Auto-Motor und Sport'?

I have heard the following claims from Japan and America: "The NSU Ro80 launched by VW in 1969-1970 got the VW factory into very serious financial difficulties and production was very quickly discontinued. "NSU Ro80" means NOT SAFE UNIT ROTATION 80 PS." I haven't found the name 'NSU Wankel' in trade journals for years. It's always 'Mazda Rotary'.

I have a lot of Japanese customers. They even claim that the rotary engine was invented in Japan and that the Germans are too stupid to build cars with it. Are they really? Or are they envious, spiteful and jealous?

Mr Benzinger was only stalling Mr Wankel at the time, because the answers I received from Mr Morawitz, KTM Research, for example, in 1979 to the question of a Wankel engine in a motorbike were easily sufficient for a lawsuit. It was the same with all other car and motorbike manufacturers. NSU Wankel no longer exists. I am trying to find everything about NSU and NSU Wankel and exhibit it in my future NSU Wankel Museum.

Today I spoke to our doctor, he owns 12 aeroplanes in Australia and an Ultralight with the Norton Wankel engine in New Zealand. He is very interested in the new Wankel aircraft engine. Can you please send me some documentation about it? Doctor Broadbent told me that there are about 600 Ultra Lights here in Australia

With kind regards,

Ulrich Tukur a guest in Lindau

by Gunter Olsowski, Harald Küng - The Tatort commissioner Ulrich Tukur made a guest appearance on 14.12.2023 with his "Rhythmus Boys" at the sold-out Lindau municipal theatre. In the morning, he and his band colleague Dr Ulrich Mayer still had time to visit the Felix Wankel Institute.

Harald Küng from the OBRIST Group conducted an interview, which he kindly made available to us and which we have reproduced here.

"Didn't want a normal car, but rather something special"

In his private life, actor Ulrich Tukur prefers bicycle and "public transport", but as a crime scene detective he has been behind the wheel of a marathon blue NSU Ro 80 since 2010 - and this, as he reveals the Wankel Journal - for a long time without a driving licence. Read on to find out what fascinates him about his "fickle" car and why he shouldn't have been allowed to drive it for a long time.

WJ: Mr Tukur, we are conducting this interview in the former Felix Wankel Institute. What impressions did you gain during your visit?

UT: It's really impressive here. And very beautiful. I only knew the building from photos so far and am visiting here for the first time today. I can see the Bauhaus here, a very unique idea, but I can also see the style of the 1960s.

This building could also be American. After all, that's how they built them in California back then.

WJ: One floor below is a long-time companion of yours in the hall: the blue NSU Ro 80.

UT: Yes, that's great. It was our idea back then to implement a car in the crime scene that isn't actually a normal car, but rather something strange. I always called it a charming engineering idea.

WJ: The quote in Die Welt goes a little further.

You are quoted as saying the following:

"Actually, the car is not a car, but a charming engineering idea that never really worked." Do you still see it that way?

UT: (laughs) No no, that's rubbish of course. But the Ro 80 certainly had its



1



2

Interview with
Harald Küng, Ulrich Tukur and Dr Ulrich
Mayer

1 He's back!



3

labour pains. That's also the tragic thing about the Ro 80 phenomenon. When it came onto the market back then, it wasn't yet fully developed and lost a bit of its reputation as a result. But from the late 60s and 70s onwards, the thing worked marvellously. I can still remember: at the end of the 60s, my father, an engineer himself, really wanted to buy a Ro 80. He had all the NSU material at home and kept leafing through it. But my mum was against it. She wanted a Mercedes. It was something more prestigious. Unfortunately, my father didn't get his way back then. The character I play in Tatort is also on the edge of life, on the edge of things. But I also didn't want to drive an ancient vintage car. I wanted it to be a timeless car.

WJ: A fickle vehicle for a fickle person?

UT: (laughs) Yes, that's a nice way to describe it. It fits somehow. I said at the time:

"We need a car that is different." And that's what the first scriptwriter wrote down. A Ro 80 was then discovered in Berlin and we said to ourselves: That could be it! And I have to honour the truth here!

I always loved driving this vehicle. A few episodes without a driving licence though (laughs).

WJ: But that's not very exemplary for a commissioner. How did it come about?

UT: I never got a driving licence. It was too expensive for me in the 70s. And when I got the money for it, I didn't have the time. It takes time to get a licence like that. But I did it a year and a half ago.

I have a small driving school round the corner in Berlin Schöneberg. I went there and asked if I could have an archaeological driving licence. The owner said:

"Yes, that's fine. Then I'll free you from these stupid lessons straight away. You're an actor, you can learn it by heart." (laughs) Of course, the people at Hessischer Rundfunk didn't know that I didn't have a driving licence. When they asked about it, I always replied: "Oh, I don't have it with me at the moment, I don't know where it is..." I then had to sign that I had one. I then I have always driven very carefully and have never had an accident.

WJ: Where did you learn to drive then? Learning by doing? Get in and stall?

UT: No, I've always been able to drive. I spent a long time in the USA and went to school there. I also drove there. I actually took a driving test there, but I drove through a red light and failed. I also drove in the mountains in Tuscany. We had a big farm there between Florence and Bologna for 20 years and there were no more carabinieri above a certain altitude... I drove around there too. (laughs)

WJ: You just said that you always enjoyed driving the Ro 80. Why is that?

UT: It drives so elegantly. The only adjective I can think of is "buttery". It glides so smoothly. And it gets quieter and quieter the faster you drive it. But we never drove it that fast when we were filming. I always made sure that nothing broke.

WJ: Is there one shoot in particular that sticks in your mind?

UT: Yes, the film where everything was shot up was really bad. They blew up the whole car with small explosive charges on the doors.

WJ: You've been the proud owner of a driving licence for a year and a half now. What do you drive privately? On the underground?

UT: (laughs) I actually like taking public transport. And I'm a passionate cyclist. I have an old sage-coloured men's bike. And because we also have a farm in the mountains, we still have a four-wheel drive pick-up. My wife and I were also in Ticino for a while and got bored there. She then wanted a sports car and bought a Porsche Boxster. But I have to confess: I'm not a big motoring fan.

WJ: Keyword engine-related: the Wankel engine was once invented here in this building, today it serves the company OBRIST as a research centre for future technologies in the energy and mobility sector.

Company founder Frank Obrist has given you some

insights into the company's work: The fight against global warming with methanol as a global energy source, direct air capture to take carbon dioxide out of the air, carbon sink, HyperHybrid... all extremely exciting things that are being developed here at Lake Constance.

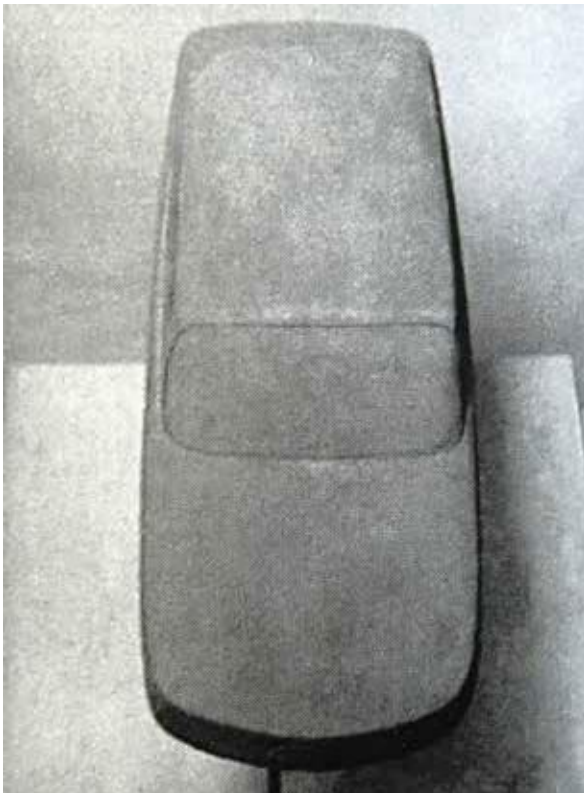
UT: Absolutely. I am extremely impressed and find it really incredible. I also think I've understood it. It sounds so attractive that I don't understand why the whole world isn't saying: this is the solution. Then that would be a sensational solution for the next 100, 200 years, until humans finally become robots.

Pictures: Gunter Olsowski



2 At the crime scene
3 Driver and owner

The Chemnitz designer Karl Clauss Dietel and the design of the NSU Ro 80



by Thomas Günther (and see source information) - The Chemnitz designer Karl Clauss Dietel claimed: "The front design of the NSU Ro 80 resembles my diploma thesis from 1960". This article is an attempt to take an objective view.

The diploma designs by Karl Clauss Dietel (born 10.10.1934 - died 03.01.2022) show car bodies with a hatchback in their first version from 1960. They were influenced by the calculations of Wunibald Kamm, a pioneer of aerodynamics in vehicle construction (pictures 1, 2 and 3).

The body designs on the pictures are clay models, i.e. pure design studies. These designs show a rounded front that merges in an arc into the body flank. The next diploma design from 1961/62 is also a notchback or estate variant. At the beginning of the 1960s, the time was not yet ripe for the hatchback body, not even among Dietel's mentors. This notchback variant also stands out due to its clearly rounded front end (Figures 4, 5 and 6). Although equipped with round individual headlights, a similarity between this Dietel draft with the first NSU drafts on the type 80 (created in 1963) cannot be dismissed out of hand. This is particularly evident in the top view (pictures 7 and 8).

Both the designs from Karl Clauss Dietel's diploma thesis and Claus Luther's design studies for the future Ro 80 represented a paradigm shift in the design of cars. If you look at the standard passenger cars in the East and West from the early 1960s, this is clearly noticeable. The pontoon shape of the first post-war designs still dominated vehicle design everywhere.

Dietel's diploma thesis was presented in detail in 1962 in the scientifically orientated and internationally accessible GDR journal "Kraftfahrzeugtechnik" (source: Kraftfahrzeugtechnik Berlin - issue 6/1962 - page 226). This was one year before Claus Luthé began his work on the Type 80. Claus Dietel's assumption that Luthé was inspired by his designs for the Type 80 can neither be proven nor completely ruled out.



Wartburg 353 Coupé, VEB
Karoerwerk Halle, Dietel/
Rudolph 1965/66.

4

In the GDR there was no such thing as intellectual property. Theses, dissertations, patents and the like were public property. The state authorities therefore decided on their use. The assumption that Dietel's thesis was sold to the "West" for foreign currency is also a possibility, but there is just as little evidence to support it. I know from a personal conversation with Mr Dietel that he and Claus Luthe never met. There was therefore no exchange of ideas between these two well-known German designers. The theory that Mr Dietel's diploma thesis led to the successful design of the NSU Ro 80 cannot be proven.

A very similar claim emerged some time later. Between 1964 and 1968, intensive work was carried out on a successor car to the Trabant 601. This vehicle, known as the "P 603", had a hatchback body right from the start. The designer duo Karl Clauss Dietel and Lutz Rudolph played a key role in its design (Fig. 9 - Dietel on the left, Rudolph on the right). Several roadworthy functional models of this vehicle were built, manufactured and tested (Figures 10, 11 and 12). These test vehicles featured different drive systems, such as two-stroke, four-stroke or Wankel engines, as well as different concepts for the interior design. When the VW Golf I



Wartburg 313, Entwurf-
zeichnung, VEB Automobil-
werk Eisenach, Dietel 1961



Stufenheckvariante des
Diplomentwurf von Karl
Clauss Dietel, 1960.

6



7



8

entered the market, the similarities in body design to the P 603 could not be overlooked. Today, it is often claimed that the later VW Golf was a copy of these designs.

Dr Werner Lang, chief designer of the P 603 at VEB Sachsenring Zwickau, researched the whereabouts of the technical documentation for this vehicle after German reunification. He

realised that both functional models and all files had disappeared. This once again fuelled suspicions that the GDR leadership had sold design documents, this time to VW, in exchange for urgently needed foreign currency. But this too is unproven! On the contrary! The long-standing Chairman of the VW Board of Management Carl H. Hahn vehemently relegates this allegation to the realm of conspiracy theories (source: Jens Kassner - "Ostform, the designer Karl Claus Dietel" - pages 24 to 26). Moreover, it is by no means the case that VW invented the hatchback shape with the Golf I or produced it in series for the first time. If you look back to the "pre-Golf era", i.e. before 1974, you will find a number of hatchbacks from other well-known manufacturers, for example:

- Austin Mini, 1959 (the archetype of all compact car)
- Renault R 4, 1961
- Renault R 16, 1965
- Glas 1004 CL/1304 CL, 1966
- Renault R 5, 1972
- Alfa Romeo Alfasud, 1972
- BMW Touring (02 series), 1973



9



10

So if the designer of the Golf I, Giorgetto Giugiaro, was influenced by other body designs, the choice was certainly there. There was no need to buy(!) designs from the GDR.

Pictures: Thomas Günther (and see sources)



Sources:

Picture 1: Saxon Industrial Museum -

Industrial Archaeology Booklet 6 - Page 139

Pictures 2 to 6: Jens Kassner - "Ostform, the designer Karl Claus Dietel" - pages 10/11/13

Pictures 7 and 8: Dieter Korp - "NSU Ro 80, the history of the Wankel engine" - pages 22-25

Picture 9: Jens Kassner - "Ostform, the designer Karl Claus Dietel" - page 31

Picture 10 to 12: "79 OKTAN" the magazine for Ostoldtimer - Issue 3/2020 - Pages 36 to 47



12

Late satisfaction - Ro 80 vs. Mercedes

- 1 The bridal couple
- 2 The bridal couple with their chauffeur in the Ro 80
- 3 Ro 80 in front of the church
- 4 Decorated rear



1



2

by Walter Till - First an astonished look, then a happy smile and - after a short delay - the question: "Would you also rent this out?" This is how my tax consultant surprised me when I handed her my financial documents at the front door. She pointed to my reseda green Ro 80, which I had taken for a little drive on this beautiful spring day. "What's it all about?" I wanted to know. I then found out that her younger sister had planned her wedding for 11 November 2023 and that the bride and groom Veronika



3

and Josef G. wanted a suitable vehicle for this. I made it clear that I would not hire the Ro, but would make it available free of charge for the day.

At the agreed viewing appointment I not only presented the reseda green 1977 model, but also the phoenix red "Desert Ro," (participant of the Morocco tour in spring 2023) built in 1975, in the driveway. Without further ado, the wedding couple decided to go for the more colourful phoenix red Ro 80 instead of the elegant reseda green. They also revealed that they had already flirted with another saloon - namely the one with the star. When they saw the Ro 80, however, this option was quickly discarded. In this case, the Wankel engine had the edge over the piston engine. A kind of belated satisfaction, because after all, Mercedes had also looked into rotary engine technology, but then banished it to the sidelines without a sound (the style icon C111 sends its regards).

Due to a long-planned holiday trip, I was unable to drive myself. A suitable chauffeur was therefore instructed in the peculiarities of the Wankel saloon. After all, everything had to run smoothly on this special day, both for the bride and groom and for the more than 200 invited guests. The driver and the vehicle confidently fulfilled the expectations placed on them. In addition to the two main characters, the bride and groom, the Ro 80 also attracted the attention it deserved from numerous participants.

Pictures: Andreas Hibler

4



Vice world champion with Wankel-Hot Saw STIHL TIMBERSPORTS® World Championship 2023 Stuttgart

from Press release Wankelspeed - Jörg Bläsi's Schurwälder HotSaw forge achieved top results at the STIHL Timbersports World Championships. A record crowd of 13,000 spectators witnessed the STIHL TIMBERSPORTS® World Championship in Stuttgart on the first weekend of November in the Porsche Arena. On Friday, Australia secured the title of Team World Champion. On Saturday, Jamie Head completed the Australians' double success and was crowned the best sports lumberjack in the world.

The Swede Emil Hansson caused a big surprise. However, the decision was not made until the grand finale on the powerful Hot Saw racing chainsaw. Here Emil Hansson relies on the Schurwald HotSaw forge "WankelSpeed" by Jörg Bläsi. Emil Hansson clocked a time of 5.77 seconds to clinch the runner-up title. "It feels unbelievably good. Simply indescribable!" said Emil Hansson after the competition.

The great result was rounded off by Wankel speed athlete Michael Dubicki from Poland with the third-best time of 6.42 seconds on the HotSaw and an excellent sixth place overall. Local hero Danny Martin completed the podium with the bronze medal.

The HotSaw from Schurwald is the only one in the world to be powered by a Wankel engine. Together with his sons Felix and Lukas, Jörg Bläsi has been building the HotSaw for many years. The powerful machines, which, with an output of up to 80 hp, are similar to that of a small car.

"It makes us very proud to see what Emil and Michael have achieved with their HotSaws from our company," says Jörg Bläsi afterwards. This is a huge success for the small WankelSpeed team. The story of HotSaw development from the Schurwald continues.



Emil Hansson with his Wankel saw in the final

Pictures: Wankelspeed

Find from 1967

NSU Ro 80

Is more than just a mysterious-sounding name. There is something behind it: a car that not only attracts attention with its unconventional bodywork, but also has a special technical feature. In front of the front wheels is a two-disc Wankel rotary engine - an invention by Felix Wankel, who only recently celebrated his 65th birthday. In his honour, the new NSU creation was given the name RO 80 - an abbreviation of "Rotation System", according to how the pistons work. The good-natured four-stroke engine develops an output of 115 P5 at 5000 revolutions per minute. This gives the Ro 80 a top speed of 180 kilometres per hour. I think that's just great! You too, friends? It wants to be a car for the discerning. And it is. Because what it brings to the table in terms of external balance of form and internal comfort corresponds to its reliability in technical matters: Ride and suspension characteristics are good, the braking system deserves special praise. The four disc brakes are divided into two circuits in such a way that if one circuit fails, both front wheels remain capable of braking under all circumstances. A brake force regulator on the rear wheels prevents premature locking.

In short, it is a car that will take many hearts by storm. (It made enough of a splash at the Frankfurt Motor Show!).

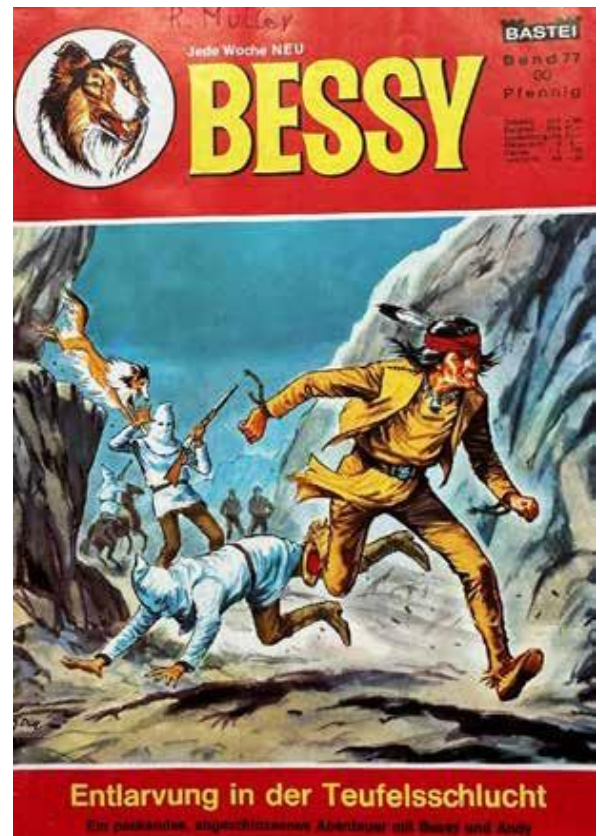
Hopefully, heart and wallet can always be reconciled. After all, the Ro 80 costs around DM 14,000!

Photos: NSU Neckarsulm

by Heiko Rossnagel - An Internet fan site for the comic series "BESSY" explains that the first "BESSY booklet" was published on 15 February 1965, after the Bessy stories had already been published as sequels in the "PONY and FELIX booklets". The independent booklets were then published by Bastei-Verlag from 1965 to 1985. The main protagonist of the series was the collie dog Bessy and her human owner Andy. The adventure stories were set in the milieu of the "Wild West". In the "BESSY booklets", there was also an editorial. Volume 77 (from 1967) is about...no wonder(!?)...the NSU Ro 80!

We owe this find to our member Michael Welsch, who unearthed this treasure.

Pictures: Michael Welsch



New edition of the book "NSU Ro 80" by Dieter Korp

by Heiko Rossnagel, Motorbuch Verlag - The year was 1993 and Dieter Korp, a respected motoring journalist and club colleague, published the standard work on the Ro 80, which is still valid today, with Motorbuch Verlag. It remained in only one edition throughout its life, which caused the price of antiquarian copies to skyrocket to astronomical heights due to the high demand. For some time now, the Wankel fan community has been wondering why this book has not been published in a new edition. Now the time has come! The new edition is expected to be available from specialist dealers from March. Times see what that does to the prices of the first issue...

Official text of the publisher:

Dieter Korp
NSU Ro 80 - The history of the Wankel engine

ISBN: 978-3-613-04648-1

Title no.: 04648 Cover:

hardback

Number of pages: 264

Illustrations: 300 pictures

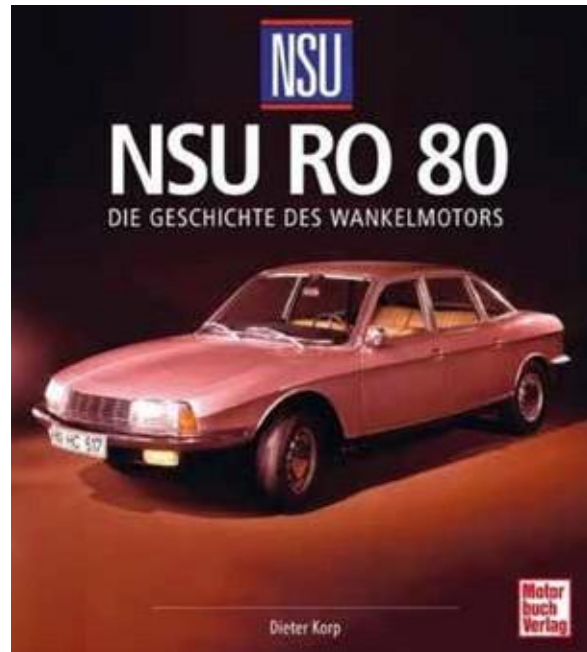
Format: 230mm x 265mm

Publication: expected 03/2024 Price:

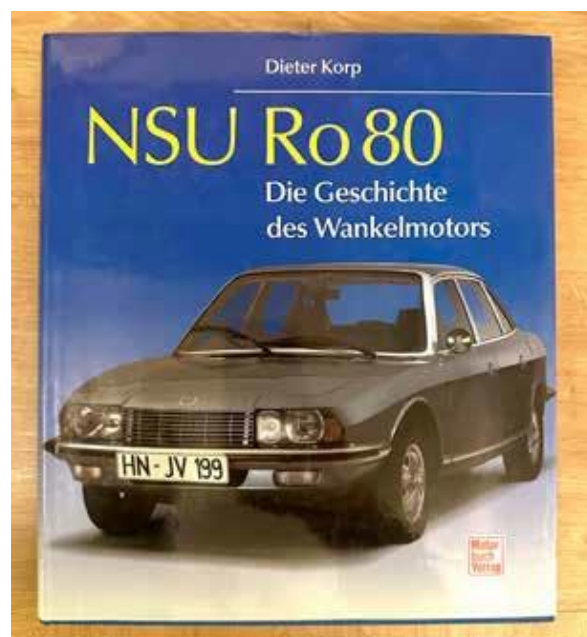
49.90 €

The Ro 80, a vehicle that symbolises the utopia of the sixties like no other. And whose praise quickly wilted. The revolutionary engine, in whose prototype a piston rotated for the first time on 13 April 1954, failed due to the ignorance of customers, the resistance of the established automotive industry, the crises of the time and ultimately the fact that the new NSU owners had no interest in the concept. Author and contemporary witness Dieter Korp, with his detailed documentation of precursors and prototypes, design studies and rotary piston technology and with previously unpublished photographic material, has created an unrivalled, definitive NSU Wankel chronicle.

Pictures: Heiko Rossnagel,
Motorbuch publishing house



1



2

- 1 Cover picture of the new edition
- 2 Antiquarian edition

Invitation to the smallest desert in the world

Our globetrotters are in demand



1



2



3

by Heiko Rossnagel - Carcross is a village with around 300 inhabitants on the Klondike Highway in the Canadian territory of Yukon. It is located about 100 kilometres from Skagway in the lake area north of the White Pass, the US-Canadian border. A destination that is not even "just around the corner". The manager of the Carcross Visitor Information Centre, Ms. April Hoax, is well aware of this fact.

After reading about our globetrotters with African desert experience due to the worldwide reporting (most recently on the website of the US car insurer "Hagerty"), she had the "idea" to bring new tourism to the sleepy village.

Is the only attraction of Carcross but the chequered history of the gold rush in the Yukon Territory.

The only attraction? Not quite! Carcross is also home to the smallest desert in the world - Carcross Desert.

"And after the sheer endless desert of Morocco," says April Hoax, "the smallest desert of the world would be an adequate next destination for the experienced Ro 80-Guys." Admittedly, travelling through this (still) relatively unknown mini-desert is not the challenge, but the journey is! Because from the port in Québec (east coast of Canada) to the Carcross Desert (west coast of Canada) is a whopping 5,800 kilometres (see map)! And before this monster route can be tackled,

the cars first have to be shipped to Canada. What seems almost impossible for the "average" Ro 80 rider is met with a tired smile from our club tour group. After the Moroccan desert tour went smoothly and confidently like Sunday stroll, this sounds like the next logical step for her.

As not all participants in the tour can already enjoy the benefits of their retirement but have to use their employer-provided holidays to do so, the mode of travel is different this year. The vehicles will not be accompanied by their owners on the journey to Canada, but will be sent on their own. The vehicles boarded in the port of Hamburg in mid-January

To land in Québec at the beginning of February. Due to new stricter import and entry permits for European goods, they have to spend around 7 weeks in a quarantine container fumigated with insect repellent to prevent the spread of the so-called "European prank bug" in Canada. The Ro 80 are not allowed to leave the container and start their journey again until the first of April.

We are excited to see what our club troupe will encounter on this tour. If everything goes according to plan, we can look forward to a detailed story in the June issue. Let's keep our fingers crossed for the "Kanada test drive" to the smallest desert in the world.



4



5

- 1 Carcross Desert
- 2 Carcross Desert in the direction of Lake Bennett
- 3 Carcross Visitor Information Centre
- 4 Ro 80 embarking in the port of Hamburg
- 5 Planned route

Historical Wankel engine find

by Heiko Rossnagel -

A regular contributor of interesting and entertaining articles about the Wankel engine is the editor-in-chief of the German motor1.com website, Roland Hildebrandt.

This time, he bought an antiquarian automobile book from Heel Verlag, in which historical "automobile articles" from the history of the Frankfurter Allgemeine were collected.

Of course, it also contains an article about the Wankel engine. In this case from the early rotary days (1960) at NSU.

Pictures: Scans Roland Hildebrandt

The Wankel engine in front of critical eyes

The short-term goal is initially stationary use

The public had only known about the NSU Wankel engine for just under two months, and since then the technical term "rotary and rotary piston engines" had experienced a real renaissance. The "egg of Columbus" in the field of internal combustion engines was apparently not found until the end of 1959: The NSU Wankel engine completed its first 100-hour run on the test bench, showing power - remarkable even with a sensationally low dead weight - that was generated without any parts of the engine moving back and forth. In other words, an engine was working on this test bench that directly converted the energy supplied as fuel into rotary motion. There are no unevenly moving parts such as pistons, nor are there any complicated valves with their usually technically complex control mechanisms. It runs "smoothly" like an electric motor, for example, almost without vibration, but of course with a muffled exhaust noise, because it is an internal combustion engine with a rotating piston (to put it somewhat "untechnically") and the familiar four-stroke working cycle of intake, compression. Expanding and expelling the burnt fuel-air mixture.

The Association of German Engineers (VDI) acted commendably and skilfully when it invited engine and vehicle construction experts to a conference at the Deutsches Museum in Munich on Tuesday of last week. At a time of "hot publicity" surrounding the NSU Wankel engine, the experts felt that the time had come to present the state of development, the limits and possibilities of this technology in the sober, objective language of engineers, to be able to interpret and judge the new creation dispassionately. It was precisely this reduction, this clarification that was needed now. And the speakers - competent scientists - spoke at the beginning of the event in an atmosphere of tension that could not have been more "dense" at the time of Rudolf Diesel demonstrating his engine. After the scientific and technical interpretations of Prof. Dr. Schmidt, TH Munich, Prof. Dr. Baier, TH Stuttgart and the private lecturer Dr. Huber, Munich, the inventor and practitioner, engineer Felix Wankel, had his say, supplemented by the man responsible for the industrial use of the new engine, Dr W. Froede, the development manager at NSU-Werke.

What has remained is the "yes" to this engine of the present conception. And when Mr Wankel reported that the most difficult problem in his rotary piston engine, the seal, had already been tackled in 1929, this fact alone says enough about the long road to the purring demonstration engine, which worked outdoors during the conference.

Will this NSU Wankel engine really have such a profound effect on the motorisation of our vehicles? -It is certain that at least one test vehicle with this engine is in operation. It is also known that an engine with a displacement of 125 cubic centimetres produced around 30 hp at 5000 rpm - and for a long time.

However, this does not necessarily make it suitable for automotive operation with its changing conditions. Changing speeds, fluctuating temperatures and vibrations are additional aggravating conditions. Therefore, the obvious way forward is to find areas of application for an engine of this hitherto unusual design where the requirements are more constant. It was also openly stated that the immediate goal is stationary use, for example as a drive for portable power sprayers, where the low weight of the motor is particularly important. In any case, there are still a few design hurdles to overcome before it can be used in motor vehicles, such as finding a suitable gearbox. Technicians will be interested to know that the fuel consumption of the Wankel-Motor is 230 to 250 g/hp and that a version with a 250 cc chamber capacity delivered 44 hp at 9000 rpm. 44 bhp at 9000 rpm. These values show that something is "on the way" here, which should be given a good time to mature. It will then also be possible to cope with the still quite high oil consumption. However, it seems that these are not defects in the sense of the word.

Honest to himself, Dr Froede is also reluctant to answer the question of when large-scale production of this engine can be expected. For us as future beneficiaries, the fact that there are practically no more production problems in the industrial manufacture of complicated parts should be more important. In any case, building large series requires precision across the board that would not have been possible just a few years ago. Or would you say that the sealing problems between the piston and cylinder of a standard engine were completely solved 30 years ago? Engineers don't like predictions. In the field of combustion engines, there have often been developments that seemed to herald a new era. They were forgotten or put in the drawing cabinet. Perhaps because the production technology was not up to the demands of the product, but perhaps also because the inventor was a loner and could not find a partner close to production. In the inventor Wankel, we got to know a practitioner who only believes what he sees and has experienced himself under operating conditions.

How much energy, patience and money he invested in his numerous experimental units alone! In the private lecturer Dr. Huber, he found the analysing scientist and finally even businessmen and technicians in Neckarsulm who knew how to realise and rationalise. Not only that: they also bore the commercial risk for a long time and still have the patience to bear the industrial risk today.

We already said that a Wankel engine was purring outside. Meanwhile, in the congress hall of the Deutsches Museum, version no. 3 was discussed and demonstrated in measurement results. It remains to be added that development stage no. 5 has already been sent to our partner Curtiss-Wright in America, is there any need for a forecast?

Horst Horlitz

AUTOPRESS

Current
information
from AUDI NSU

Are you in the **picture**?

fol|ge 16

This is a new story for keen observers. Draughtsman Russel Brockbank has captured scenes from everyday middle-class life and smuggled 13 mistakes into the second version of his drawing that need to be exposed. Whoever finds the 13 mistakes in less than 6 minutes can claim to be clever. Anyone who takes longer than a quarter of an hour has an average intellectual capacity. If you can't find any mistakes at all, you should see an ophthalmologist.

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Your NSU RO 80 specialist

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gearbox, bodywork,
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of vehicles

(usually approx. 20 vehicles in stock)

from parts

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Here you will find our latest reproductions and an excerpt from our spare parts programme

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Polo shirt dark blue "Ro 80 Club International"	35,00 €
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Baseball cap dark blue "Ro 80 Club International"	12,00 €
DVD Clubfilm "Ro 80 - The legend lives"	5,00 €
Anniversary magazine "Ro 80 Homage"	15,00 €
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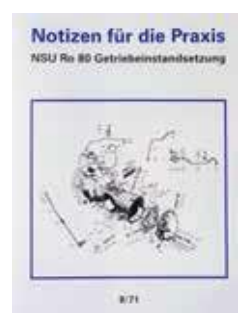


3

SOFTSHELL-JACKET
dark blue
"Ro 80 Club International"
50,00 €



5



6

Events & Dates

~~06.-09.06.2024~~
26.-28.04.2024

- Spring meeting with Annual General Meeting Lohr am Main

~~06.-09.06.2024~~

- 42nd International NSU Meeting in Fieberbrunn (A) *Registration for the meeting via the website of the Ro 80 Club International e.V.*

11.08.2024

- Summer party in Lindau at the OTC (formerly TES)

27.-29.09.2024

- Autumn meeting Spreewald/Cottbus

This is just a selection of all the dates. A complete overview, detailed information and registration forms for all club events can be found at:

www.ro80club.org
www.nsu80.ch

Please remember to make your reservations for all meetings!



Cover & back cover

Cover picture: The banana-coloured Ro 80 is from 1976 and belongs to Oliver Forster, who has also staged his vehicle photographically. The building in the background is Stocksberg Castle near Stockheim. It is owned by part of the Layher family (known for the scaffolding from Eibensbach). Eberhard Layher was the initiator and founder of the museums in Sinsheim and Speyer.



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by the authors of the respective articles, unless otherwise noted

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The Wankel Journal is the magazine for all friends of the Ro 80, other rotary piston vehicles and all Wankel technology.

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