

LAB REPORT

Unit id
WIND TURBINE 1
Component
Main Gear



Lab number: 1704304

Machine type FL1000	Manufacturer Zollern PZ3WF112	Sample from Wind turbine - main gear
Oil brand name Mobil Mobilgear SHC XMP 320	Oil quantity in system 260 l	Serial number 25107

Sample Report
Scope of Analysis: Wind Power Kit

The wear metals have hardly changed since the last analysis. The cleanliness class of the oil meets the requirements. The water content is within the normal range. If no oil change has been carried out yet, continued use of the oil would be possible under similar operating conditions while maintaining routine maintenance work. I advise you: Send us the next sample at your next maintenance or during the regular inspection to monitor the trend behavior.



NORMAL

Dipl.-Ing. Andy Böhme (CLS)

ANALYSIS RESULTS			Current sample	Previous samples →				
Lab number			1704304	1704305	1704306	1704307	1704308	1704309
SAMPLE RATING			✓	✓	✓	✓	✓	✓
Date of examination			10.06.2025	23.12.2024	01.07.2024	27.12.2023	28.06.2023	16.12.2022
Date of sample taken			29.05.2025	14.12.2024	21.06.2024	08.12.2023	15.06.2023	09.12.2022
Date of last oil change			-	-	-	-	-	-
Top-up since change			-	-	10 l	0 l	-	10 l
Operating time since change			-	-	-	-	-	-
Total operating time			138011 h	134075 h	129920 h	125235 h	121632 h	117242 h
Oil changed			no	no	no	no	no	no
WEAR								
Iron	Fe	mg/kg	54	55	53	48	45	37
Chrome	Cr	mg/kg	1	1	1	1	1	0
Tin	Sn	mg/kg	0	0	0	0	0	0
Aluminum	Al	mg/kg	0	0	0	0	0	0
Nickel	Ni	mg/kg	0	0	0	0	0	0
Copper	Cu	mg/kg	3	0	3	3	2	2
Lead	Pb	mg/kg	0	0	0	0	0	0
Manganese	Mn	mg/kg	1	1	1	0	0	0
PQ index	-	-	< 25	< 25	< 25	< 25	< 25	< 25
CONTAMINATION								
Silicon	Si	mg/kg	1	1	1	1	1	1
Potassium	K	mg/kg	0	2	0	0	2	1
Sodium	Na	mg/kg	0	0	0	0	0	0
Water K. F.		ppm	97	68	133	-	-	-
Water		%	-	-	-	< 0.10	< 0.10	< 0.10
OIL CONDITION								
Viscosity at 40 °C		mm ² /s	321.11	320.22	318.66	317.57	317.88	318.07
Viscosity at 100 °C		mm ² /s	36.56	36.13	36.58	36.35	35.82	35.76
Viscosity index		-	162	160	163	162	159	159
Oxidation		A/cm	-	-	-	-	-	-
IR index		-	99.79	99.78	99.83	99.67	99.69	-

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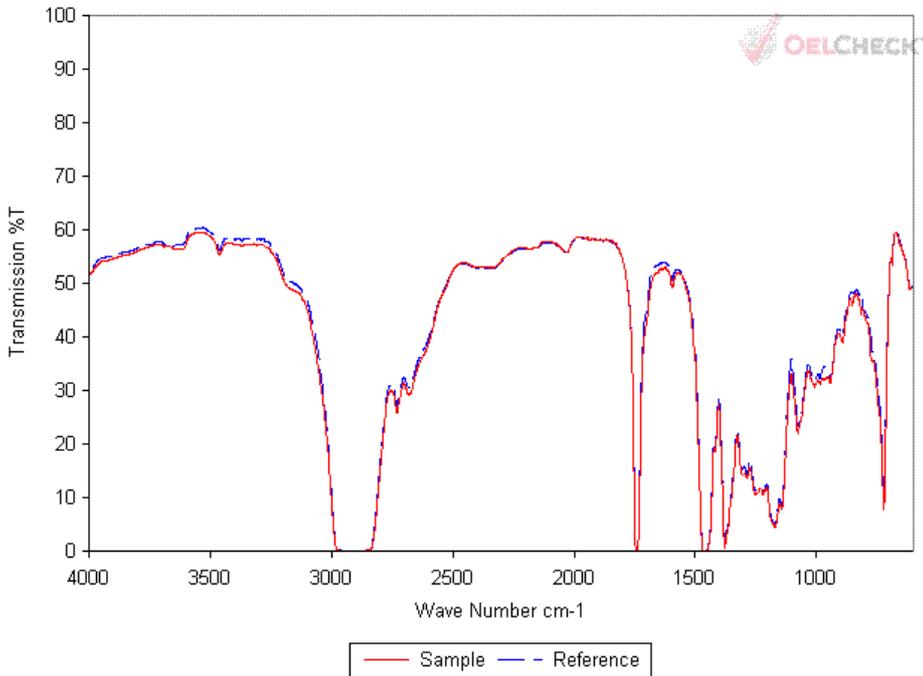
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ADDITIVES								
Calcium	Ca	mg/kg	0	0	0	1	0	0
Magnesium	Mg	mg/kg	0	0	0	0	0	0
Boron	B	mg/kg	1	1	1	1	1	1
Zinc	Zn	mg/kg	10	9	11	10	8	6
Phosphorus	P	mg/kg	412	445	429	420	414	400
Barium	Ba	mg/kg	0	0	0	0	0	0
Molybdenum	Mo	mg/kg	2	2	2	2	0	0
Sulphur	S	mg/kg	3247	3495	3189	3211	3126	3170
ADDITIONAL TESTS								
AN / NN		mgKOH/g	1.18	1.12	1.02	0.97	0.90	0.99
Cleanliness class		ISO 4406	17/16/12	17/15/12	16/14/8	18/16/12	17/15/10	17/16/13
A: >4µm = ISO >4µm		Anzahl/100ml	84766	96494	38537	219604	96696	126137
B: >6µm = ISO >6µm		Anzahl/100ml	34851	23920	11327	54132	26321	44277
C: >14µm = ISO >14µm		Anzahl/100ml	3603	2873	200	2251	601	6911
D: >21µm		Anzahl/100ml	701	718	0	450	300	1653
E: >38µm		Anzahl/100ml	100	308	0	0	0	0
F: >70µm		Anzahl/100ml	0	0	0	0	0	0
Cleanliness class		SAE AS 4059	7A	8E	6A	9A	7A	8A



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SAMPLE IMAGES (LABORATORY NUMBER: 1704304)



INFRARED SPECTRUM



BOTTLE AND CAP



Any questions?

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LAB.REPORT



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