

LAB REPORT

Unit id
INJECTION MOLDING MACHINE
Component
Hydraulics



Lab number: 1704441

Machine type
SGM EX 7050/650K

Manufacturer
Engel

Oil brand name
Mobil DTE 25

Sample report
Scope of analysis: Biokit 4

Oil quantity in system
1600 l

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 analyses (not shown: 1) →				
Lab number			1704441	1704442	1704443	1704444	1704445	1704446
SAMPLE RATING								
Date of examination			05.05.2025	06.05.2024	24.04.2023	30.03.2022	25.02.2021	25.05.2020
Date of sample taken			25.04.2025	27.04.2024	16.04.2023	20.03.2022	18.02.2021	15.05.2020
Date of last oil change			-	-	-	-	-	-
Top-up since change			100 l	100 l	-	160 l	-	-
Operating time since change			83983 h	79283 h	74506 h	68812 h	61121 h	61121 h
Total operating time			83983 h	79283 h	74506 h	68812 h	61121 h	61121 h
Oil changed			-	no	-	no	-	no
WEAR								
Iron	Fe	mg/kg	9	8	7	7	8	8
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	5	5	4	4	4	4
Lead	Pb	mg/kg	0	1	0	1	0	1
Molybdenum	Mo	mg/kg	0	1	0	0	0	0
Manganese	Mn	mg/kg	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	0	0	0	0	1
Sodium	Na	mg/kg	2	1	1	2	1	3
Tungsten	W	mg/kg	-	-	-	1	1	1
Water K. F.		ppm	134	121	111	95	88	126
OIL CONDITION								
Viscosity at 40 °C		mm ² /s	46.78	46.94	47.61	48.23	47.08	46.62
Viscosity at 100 °C		mm ² /s	6.92	6.97	7.00	7.02	7.04	6.84
Viscosity index		-	104	104	103	102	107	101
Oxidation		A/cm	1	1	1	1	1	1
IR index		-	99.46	99.19	99.71	-	-	-

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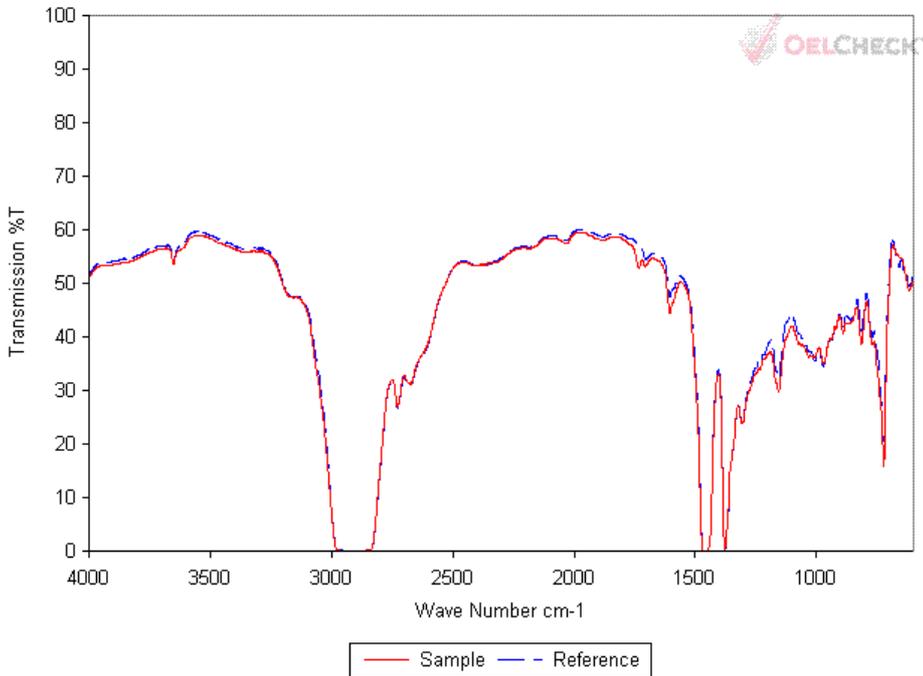
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ADDITIVES								
Calcium	Ca	mg/kg	139	138	139	145	160	165
Magnesium	Mg	mg/kg	0	1	0	2	4	4
Boron	B	mg/kg	0	0	0	0	0	0
Zinc	Zn	mg/kg	723	726	704	701	747	754
Phosphorus	P	mg/kg	475	473	455	462	498	527
Barium	Ba	mg/kg	0	0	0	0	0	0
Sulphur	S	mg/kg	4723	4694	4335	4775	4682	5006
ADDITIONAL TESTS								
AN / NN		mgKOH/g	1.14	1.03	1.03	1.02	0.91	1.01
Cleanliness class		ISO 4406	18/15/10	18/17/13	19/18/14	17/16/12	18/16/14	18/17/16
A: >4µm = ISO >4µm		Anzahl/100ml	138577	205107	490212	110882	154848	174690
B: >6µm = ISO >6µm		Anzahl/100ml	29937	65964	134899	32495	55954	109530
C: >14µm = ISO >14µm		Anzahl/100ml	856	7785	8156	3298	8115	34830
D: >21µm		Anzahl/100ml	266	2099	1800	636	2648	25620
E: >38µm		Anzahl/100ml	48	80	105	15	152	5210
F: >70µm		Anzahl/100ml	24	0	0	0	51	480
Cleanliness class		SAE AS 4059	8A	9A	10A	8A	9D	12D



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SAMPLE IMAGES (LABORATORY NUMBER: 1704441)



INFRARED SPECTRUM



BOTTLE AND CAP



Any questions?

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LAB.REPORT



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