LAB REPORT

OELCHECK since 1991

Unit ID **Biogas engine**

Component Gas engine

Current sample number 1704289

+49 8034-9047-210

OELCHECK GmbH · Kerschelweg 28 · 83098 Brannenburg

Example report
Analysis scope: Gas engine set

Machine type:	**SEV-MA 365 BG**
Manufacturer:	**MAN SEVA**
Sample from:	**Biogas engine**
Oil brand name:	**Addinol GMO MG 40 Extra PLUS**
Oil quantity in system:	**200 l**

Serial number: 12345-98765

Diagnosis for the current laboratory values

The wear values are in the normal range. Nitration (NOx) has increased. Possible cause: Increased amount of through vent gases, usually caused by bad incineration, lack of seal between the piston and cylinder wall or valve problems. Effects of fuel or a non-optimal engine setting might have played a role. The Base number BN, which is an indicator for the alkaline reserve, decreased slightly in comparison to the fresh oil. AN (neutralization number) higher than expected but not yet critical. Possible reason: oxidation or oil aging. All the other data detected are within the permissible or expected value range. I recommend: send another oil sample to the lab for trend monitoring after another 200 operating hours or change the oil after this time.

Dipl.-Ing. Andy Böhme (CLS)

Sample Rating

Caution

ANALYSIS RESULTS			Current sample	Previous samples		
LAB NUMBER			**1704289**	1704290	1704291	1704292
SAMPLE RATING						
Date tested			**20.07.2023**	16.05.2023	09.03.2023	09.01.2023
Date of sample taken			**17.07.2023**	09.05.2023	06.03.2023	03.01.2023
Date of last oil change			**19.05.2023**	-	12.01.2023	-
Top-up since change			**-**	-	-	0
Operating time since change		h	**1420**	1300	1270	1300
Total operating time		h	**48848**	47204	45673	44180
Oil changed			**no**	no	no	no
WEAR						
Iron	Fe	mg/kg	**3**	2	2	2
Chrome	Cr	mg/kg	**0**	0	0	0
Tin	Sn	mg/kg	**0**	0	0	0
Aluminum	Al	mg/kg	**1**	1	0	1
Nickel	Ni	mg/kg	**0**	0	0	0
Copper	Cu	mg/kg	**0**	1	1	1
Lead	Pb	mg/kg	**3**	1	1	0
Molybdenum	Mo	mg/kg	**0**	0	0	0
Manganese	Mn	mg/kg	**0**	0	0	0
PQ index	-		**< 25**	< 25	< 25	< 25
CONTAMINATION						
Silicon	Si	mg/kg	**1**	1	1	1
Potassium	K	mg/kg	**2**	2	2	2
Sodium	Na	mg/kg	**1**	1	1	2
Chlorine	Cl	mg/kg	**31**	37	59	52
Silver	Ag	mg/kg	**-**	-	-	1
Water	%		**< 0.10**	< 0.10	< 0.10	< 0.10
IR Glycol	-		**negative**	negative	negative	negative
OIL CONDITION						
Viscosity at 40°C	mm²/s		**129.04**	128.28	126.31	126.02
Viscosity at 100°C	mm²/s		**14.80**	14.78	14.85	14.79
Viscosity index	-		**116**	117	120	119
Oxidation	A/cm		**8**	7	7	8
Nitration	A/cm		**11**	9	9	9
Sulfation	A/cm		**0**	0	0	0
IR index	-		**96.07**	96.80	97.06	96.25
ADDITIVES						
Calcium	Ca	mg/kg	**2736**	2777	2598	2694
Magnesium	Mg	mg/kg	**14**	14	12	12
Boron	B	mg/kg	**54**	59	58	60
Zinc	Zn	mg/kg	**371**	366	353	364
Phosphorus	P	mg/kg	**286**	270	273	277
Barium	Ba	mg/kg	**0**	0	0	0
Sulphur	S	mg/kg	**901**	813	761	788

Bottle and cap

Infrared Spectrum

Scan QR code
Send new sample

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Operating time since change	h	**1420**	1300	1270	1300
Total operating time	h	**48848**	47204	45673	44180
Oil changed		**no**	no	no	no
ADDITIONAL TESTS					
BN	mgKOH/g	**8.01**	8.07	7.96	7.99
AN / NN	mgKOH/g	**4.30**	4.10	4.05	3.90
i pH value	-	**5.89**	5.86	5.73	5.84