



CONSTRUCTION EQUIPMENT

SPM646118 SENNEBOGEN 840M 840.0.2024 - DIESEL ENGINE



Sample No: VCP388567
Oil Type: DIESEL ENGINE OIL SAE 15W40
Job No: SPM646118



SAMPLE INFORMATION

Sample Number	VCP388567	VCP382779	VCP383264	VCP366817
Sample Date	17 Oct 2023	20 Apr 2023	23 Jan 2023	11 Oct 2022
Machine Hours	20758	19606	19606	19054
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	ABNORMAL	SEVERE	ABNORMAL

SIMS METAL MANAGEMENT

2500 S. PAULINA
 CHICAGO, IL
 US 60608
 Contact: RYAN WISE
 ryan.wise@simsmm.com
 T:
 F:



OIL CONDITION

Visc @ 100°C	cSt	▲ 9.9	▲ 11.4	▲ 10.0	▲ 12.3
Base Number (BN)	mg KOH/g	■ 5.0	■ 5.1	■ 5.2	■ 8.1
Oxidation (PA)	%	80	92	100	108

Diagnosis

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	■ 0.8	■ 0.8	■ 0.9	■ 1.1
Nitration (PA)	%	97	104	115	123
Sulfation (PA)	%	61	60	67	74
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	▲ 5.1	▲ 6.9	■ 11.5	▲ 4.7
Silicon	ppm	■ 10	■ 5	■ 6	■ 7
Sodium	ppm	■ 5	■ 1	■ 0	■ 0
Potassium	ppm	■ 3	■ 1	■ 2	■ 0



WEAR METALS

Iron	ppm	■ 69	■ 50	■ 55	■ 46
Copper	ppm	■ 3	■ <1	■ 2	■ 2
Lead	ppm	■ 2	■ 0	■ 2	■ 4
Tin	ppm	■ 0	■ 0	■ <1	■ <1
Aluminum	ppm	■ 4	■ 4	■ 4	■ 2
Chromium	ppm	■ 9	■ 3	■ 4	■ 3
Molybdenum	ppm	■ 48	■ 42	■ 47	■ 59
Nickel	ppm	■ <1	■ 0	■ <1	■ <1
Titanium	ppm	■ 1	■ <1	■ 0	■ <1
Silver	ppm	■ 0	■ 0	■ 0	■ 0
Manganese	ppm	■ <1	■ <1	■ <1	■ <1
Vanadium	ppm	■ <1	■ 0	■ 0	■ 0



ADDITIVES

Calcium	ppm	■ 903	▲ 846	■ 817	■ 1009
Magnesium	ppm	■ 767	■ 746	■ 645	■ 851
Zinc	ppm	■ 1276	■ 1064	■ 1016	■ 1155
Phosphorus	ppm	■ 891	■ 821	■ 806	■ 921
Barium	ppm	■ 11	■ 0	■ <1	■ 0
Boron	ppm	■ 4	■ 4	■ 0	■ 16

Depot: SIMCHIL
Unique No: 10882795
Signed: Wes Davis
Report Date: 19 Feb 2024

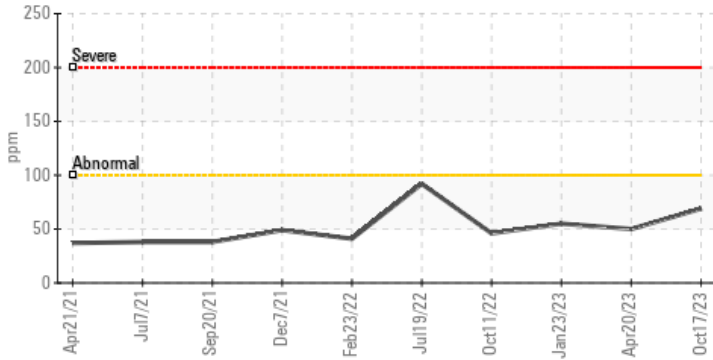


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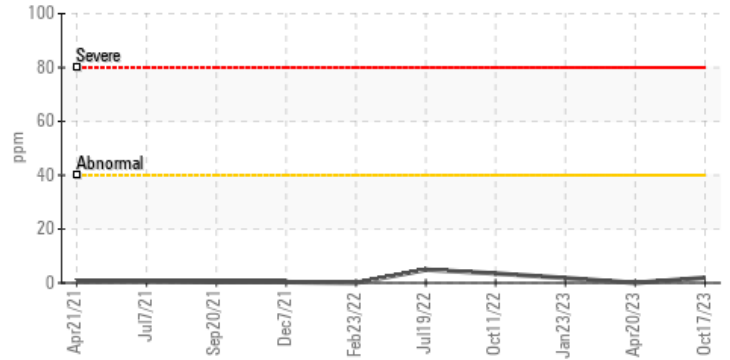


GRAPHS

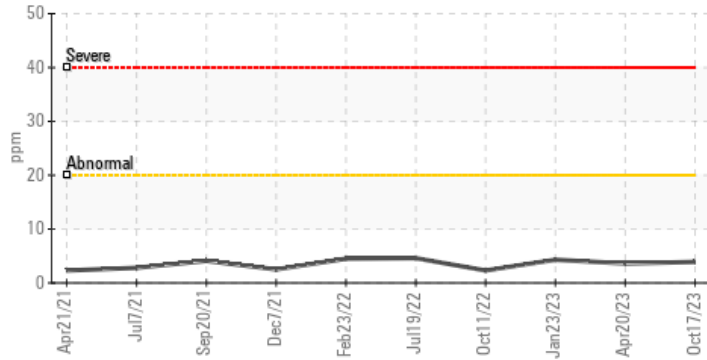
Iron (ppm)



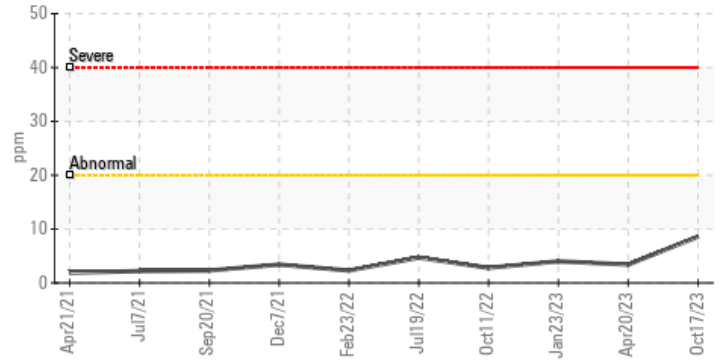
Lead (ppm)



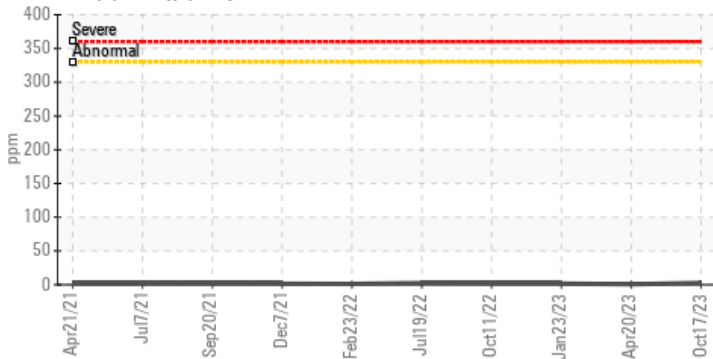
Aluminum (ppm)



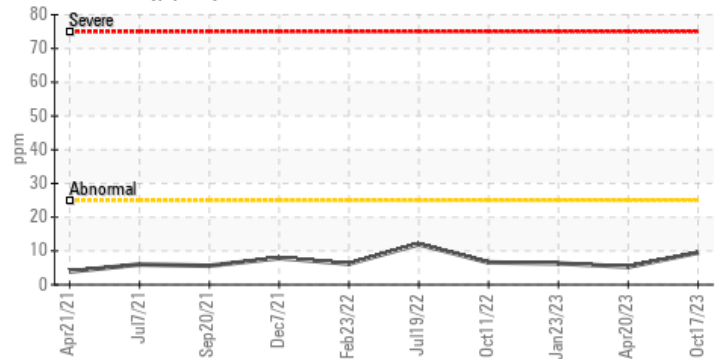
Chromium (ppm)



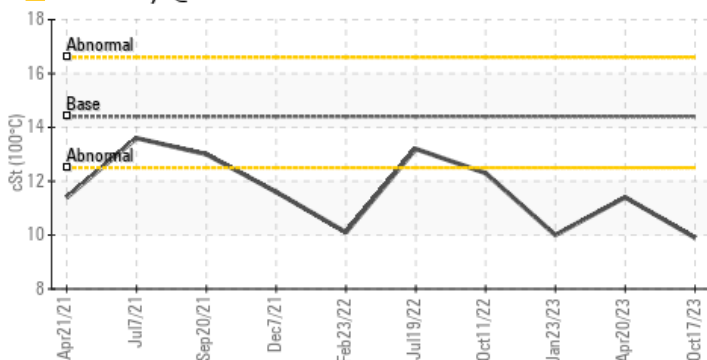
Copper (ppm)



Silicon (ppm)



▲ Viscosity @ 100°C



Base Number

