



CONSTRUCTION EQUIPMENT

SPM553907 SENNEBOGEN 835ME 835.0.2500 - DIESEL ENGINE



Sample No: VCP423438
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: SPM553907



SAMPLE INFORMATION

Sample Number	VCP423438	VCP400220	VCP399736	VCP364786
Sample Date	10 Jul 2023	20 Mar 2023	05 Jan 2023	02 Sep 2022
Machine Hours	9151	8469	7934	7403
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ATTENTION	ABNORMAL	NORMAL	NORMAL

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	▲ 12.3	▲ 12.2	■ 12.9	■ 13.2
Base Number (BN)	mg KOH/g	■ 5.3	■ 7.1	■ 7.0	■ 7.8
Oxidation (PA)	%	99	78	82	88

Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.



CONTAMINATION

Soot %	%	■ 0.3	■ 0.4	■ 0.4	■ 0.6
Nitration (PA)	%	107	88	94	108
Sulfation (PA)	%	71	60	62	69
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	▲ 3.7	<1.0	<1.0
Silicon	ppm	■ 6	■ 5	■ 5	■ 7
Sodium	ppm	■ 4	■ 2	■ 0	■ 2
Potassium	ppm	■ 0	■ 2	■ 0	■ 8



WEAR METALS

Iron	ppm	■ 36	■ 24	■ 16	■ 24
Copper	ppm	■ 2	■ 2	■ 2	■ 2
Lead	ppm	■ 0	■ <1	■ 0	■ <1
Tin	ppm	■ 0	■ <1	■ 0	■ <1
Aluminum	ppm	■ 2	■ 4	■ 3	■ 10
Chromium	ppm	■ <1	■ <1	■ <1	■ <1
Molybdenum	ppm	■ 53	■ 53	■ 56	■ 66
Nickel	ppm	■ 0	■ 0	■ 0	■ 0
Titanium	ppm	5	3	3	2
Silver	ppm	■ 0	■ 0	■ 0	■ <1
Manganese	ppm	■ <1	■ <1	■ <1	■ <1
Vanadium	ppm	<1	<1	0	0



ADDITIVES

Calcium	ppm	■ 1255	■ 1168	■ 1152	■ 1172
Magnesium	ppm	■ 908	■ 829	■ 880	■ 891
Zinc	ppm	■ 1175	■ 1108	■ 1100	■ 1228
Phosphorus	ppm	■ 958	■ 913	■ 903	■ 967
Barium	ppm	■ 0	■ 2	■ 0	■ 0
Boron	ppm	■ 33	■ 17	■ 17	■ 19

Depot: SIMCHIL
Unique No: 10573977
Signed: Don Baldrige
Report Date: 27 Jul 2023

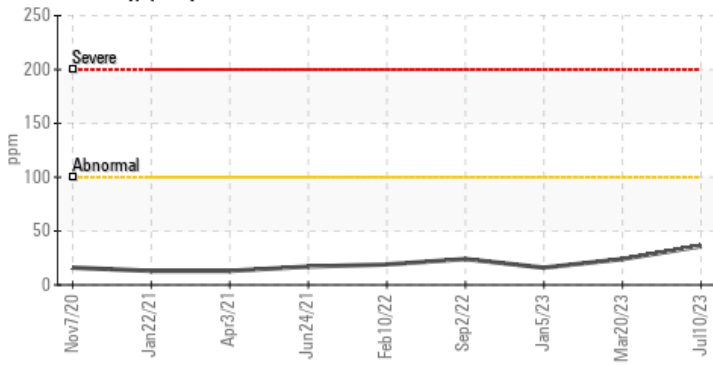


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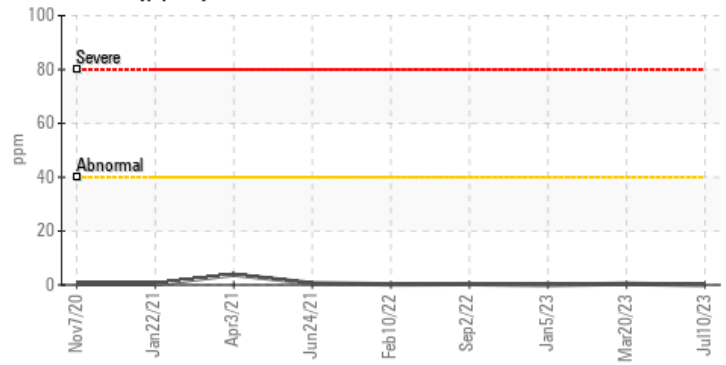


GRAPHS

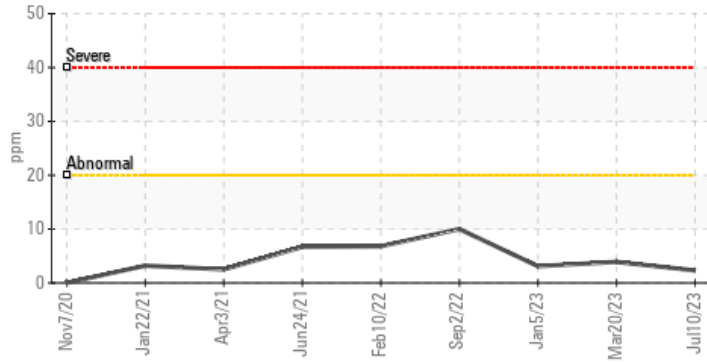
Iron (ppm)



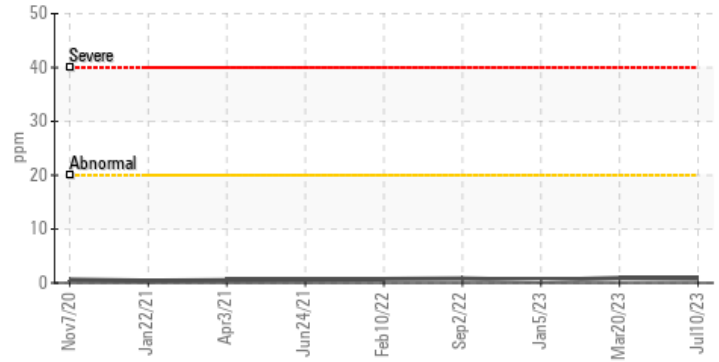
Lead (ppm)



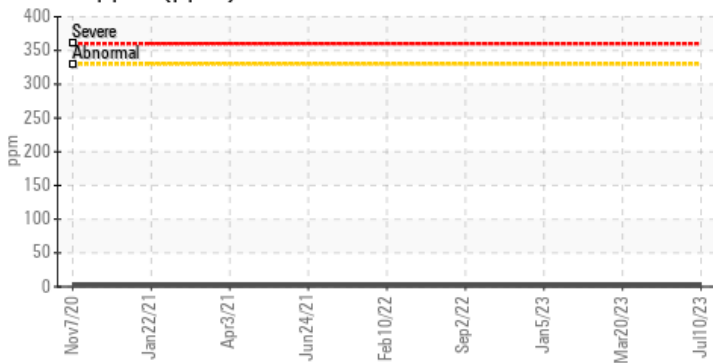
Aluminum (ppm)



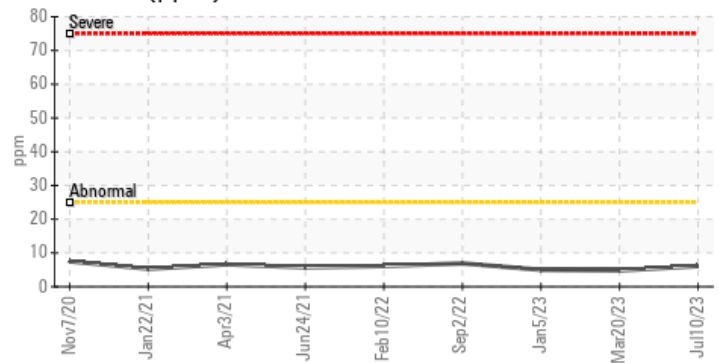
Chromium (ppm)



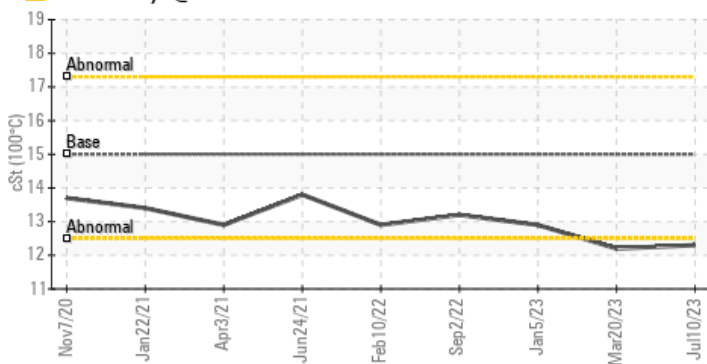
Copper (ppm)



Silicon (ppm)



▲ Viscosity @ 100°C



Base Number

