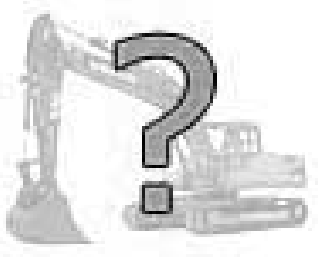
CONSTRUCTION EQUIPMENT

SPM686819 SENNEBOGEN 835ME 835.0.2350 - DIESEL ENGINE

Sample No: VCP443676
Oil Type: DIESEL ENGINE OIL SAE 15W40
Job No: SPM686819



SIMS METAL MANAGEMENT
2500 S. PAULINA
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US 60608
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SAMPLE INFORMATION

Sample Number		**VCP443676**	VCP420573	VCP404527	VCP379186
Sample Date		**15 Mar 2024**	10 Jul 2023	23 Mar 2023	29 Jun 2022
Machine Hours		**15766**	14273	13021	11355
Oil Hours		**0**	0	0	0
Oil Changed		**Changed**	Changed	Changed	Changed
Sample Status		**SEVERE**	NORMAL	ATTENTION	NORMAL

OIL CONDITION

Visc @ 100°C	cSt	▲ **9.9**	12.6	12.3	13.6
Base Number (BN)	mg KOH/g	**7.1**	6.8	8.2	10.2
Oxidation (PA)	%	**80**	83	63	63

CONTAMINATION

Water	%	**NEG**	NEG	NEG	NEG
Soot %	%	**0.4**	0.3	0.3	0.2
Nitration (PA)	%	**94**	94	89	68
Sulfation (PA)	%	**63**	65	55	53
Glycol	%	**NEG**	NEG	NEG	NEG
Fuel	%	▲ **9.2**	<1.0	▲ 2.6	0.3
Silicon	ppm	**12**	4	4	4
Sodium	ppm	**4**	3	1	<1
Potassium	ppm	**12**	1	0	0

WEAR METALS

Iron	ppm	**29**	19	14	8
Copper	ppm	**3**	<1	0	2
Lead	ppm	**4**	<1	0	<1
Tin	ppm	**2**	0	0	<1
Aluminum	ppm	**6**	1	<1	2
Chromium	ppm	**1**	<1	0	<1
Molybdenum	ppm	**34**	27	39	60
Nickel	ppm	**1**	0	0	0
Titanium	ppm	**<1**	<1	0	0
Silver	ppm	**<1**	0	0	<1
Manganese	ppm	**1**	<1	<1	<1
Vanadium	ppm	**<1**	<1	0	0

ADDITIVES

Calcium	ppm	**1250**	1463	1182	1142
Magnesium	ppm	**811**	970	833	996
Zinc	ppm	**1056**	1113	1041	1254
Phosphorus	ppm	**986**	918	845	1023
Barium	ppm	**2**	0	0	0
Boron	ppm	**31**	51	29	3

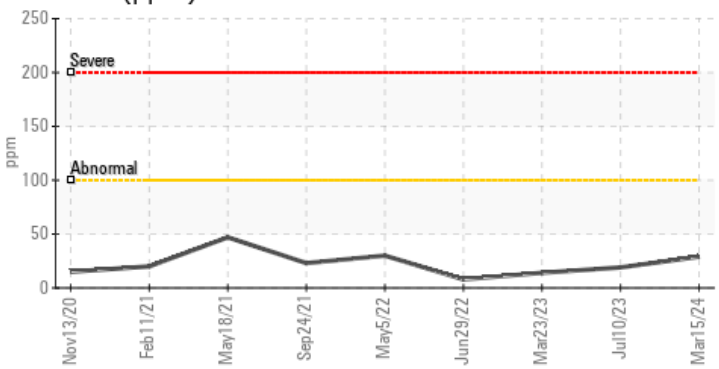
Diagnosis

We advise that you check the fuel injection system. 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. Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is a high 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.

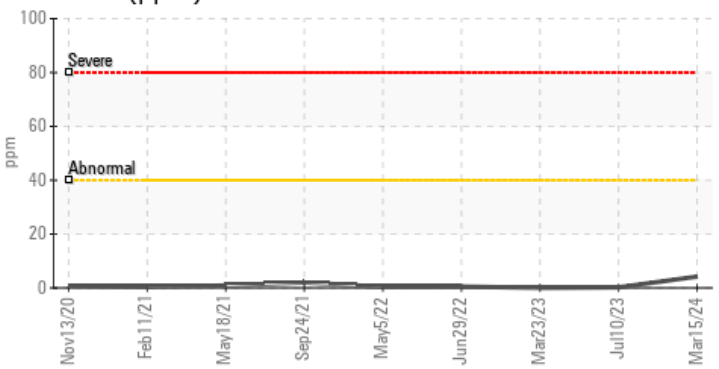
Depot: SIMCHIIL
Unique No: 10941006
Signed: Wes Davis
Report Date: 26 Mar 2024

GRAPHS

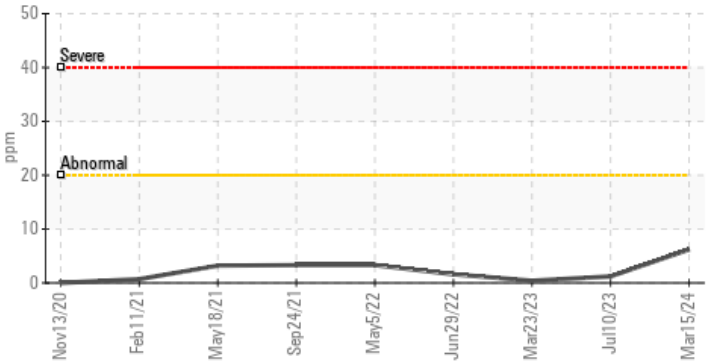
Iron (ppm)



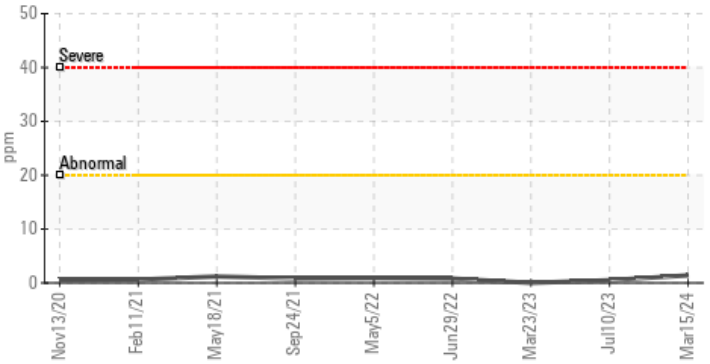
Lead (ppm)



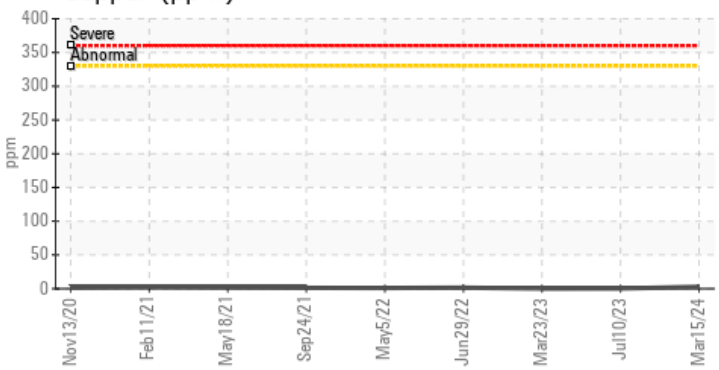
Aluminum (ppm)



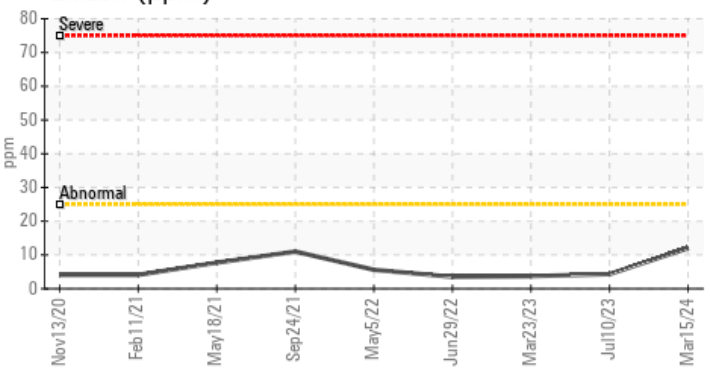
Chromium (ppm)



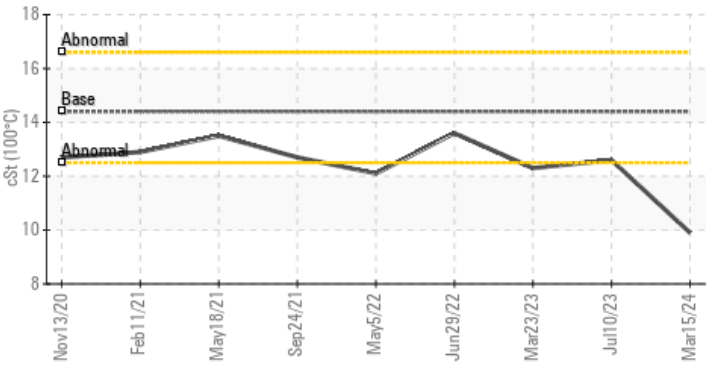
Copper (ppm)



Silicon (ppm)



▲ Viscosity @ 100°C



Base Number