



# CONSTRUCTION EQUIPMENT

647498 GERDAU SENNEBOGEN 850 3143 - DIESEL ENGINE



**Sample No:** VCP439602  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 647498 GERDAU



## SAMPLE INFORMATION

Sample Number	<b>VCP439602</b>	VCP431429	VCP415307	VCP414131
Sample Date	<b>17 Jan 2024</b>	27 Nov 2023	23 Aug 2023	28 Jun 2023
Machine Hours	<b>4697</b>	3954	3022	2398
Oil Hours	<b>500</b>	500	800	500
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>ABNORMAL</b>	NORMAL	NORMAL	NORMAL

**ALTA EQUIPMENT COMPANY - METRO WEST**  
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## OIL CONDITION

Visc @ 100°C	cSt	<b>▲ 11.6</b>	■ 12.9	■ 13.9	■ 13.5
Base Number (BN)	mg KOH/g	■ <b>8.0</b>	■ 6.1	■ 7.8	■ 9.3
Oxidation (PA)	%	<b>86</b>	92	73	82

## 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	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	■ <b>0.2</b>	■ 0.2	■ 0.1	■ 0.1
Nitration (PA)	%	<b>86</b>	87	78	66
Sulfation (PA)	%	<b>59</b>	65	58	62
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>▲ 6.9</b>	<1.0	<1.0	<1.0
Silicon	ppm	■ <b>2</b>	■ 2	■ 3	■ 3
Sodium	ppm	■ <b>2</b>	■ 2	■ 5	■ 3
Potassium	ppm	■ <b>&lt;1</b>	■ 5	■ 4	■ 2

## WEAR METALS

Iron	ppm	■ <b>14</b>	■ 22	■ 10	■ 8
Copper	ppm	■ <b>&lt;1</b>	■ 1	■ 2	■ <1
Lead	ppm	■ <b>0</b>	■ 0	■ 0	■ 0
Tin	ppm	■ <b>0</b>	■ 0	■ 0	■ 0
Aluminum	ppm	■ <b>&lt;1</b>	■ 1	■ 2	■ <1
Chromium	ppm	■ <b>&lt;1</b>	■ <1	■ <1	■ <1
Molybdenum	ppm	■ <b>55</b>	■ 67	■ 67	■ 61
Nickel	ppm	■ <b>0</b>	■ 0	■ 0	■ 0
Titanium	ppm	<b>0</b>	0	0	0
Silver	ppm	■ <b>0</b>	■ 0	■ 0	■ 0
Manganese	ppm	■ <b>&lt;1</b>	■ 0	■ <1	■ <1
Vanadium	ppm	<b>0</b>	0	0	0

## ADDITIVES

Calcium	ppm	<b>1078</b>	■ 1092	■ 1383	■ 1412
Magnesium	ppm	<b>913</b>	■ 965	902	972
Zinc	ppm	■ <b>1145</b>	■ 1277	■ 1381	■ 1409
Phosphorus	ppm	■ <b>924</b>	■ 1040	■ 1086	■ 1119
Barium	ppm	■ <b>0</b>	■ 3	■ 0	■ 0
Boron	ppm	■ <b>1</b>	■ 0	■ 8	■ 20

**Depot:** VOLVO2990  
**Unique No:** 10845928  
**Signed:** Wes Davis  
**Report Date:** 25 Jan 2024



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## GRAPHS

