



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
WIRTGEN 001649
 Component
Diesel Engine
 Fluid
CASTROL VECTON 15W40 CK4 (4 GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. (Customer Sample Comment: Break In oil from new engine)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0856286	WC0757884	WC0557540
Sample Date		Client Info		17 Apr 2024	17 Feb 2023	27 Jan 2022
Machine Age	hrs	Client Info		7515	6802	6217
Oil Age	hrs	Client Info		250	585	350
Filter Age	hrs	Client Info		250	585	350
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	16	40	21
Chromium	ppm	ASTM D5185m	>20	<1	1	<1
Nickel	ppm	ASTM D5185m	>2	<1	1	0
Titanium	ppm	ASTM D5185m	>2	0	0	<1
Silver	ppm	ASTM D5185m	>2	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	4	6	4
Lead	ppm	ASTM D5185m	>40	1	36	2
Copper	ppm	ASTM D5185m	>330	14	19	2
Tin	ppm	ASTM D5185m	>15	1	4	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

Elemental level of silicon (Si) above normal indicating ingress of seal material.

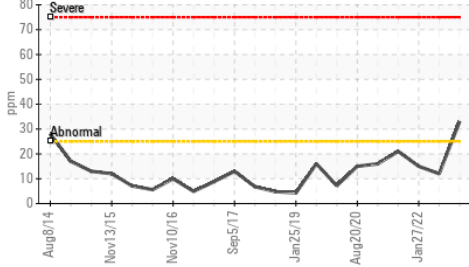
Silicon	ppm	ASTM D5185m	>25	▲ 33	12	15
Potassium	ppm	ASTM D5185m	>20	5	7	19
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.2	1.2	0.9
Nitration	Abs/cm	*ASTM D7624	>20	7.2	11.6	10.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.5	22.9	21.7
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

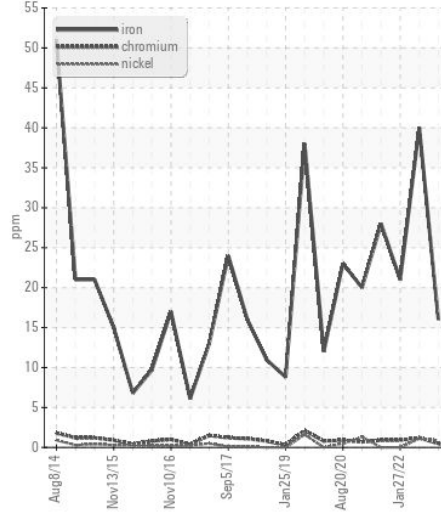
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		4	15	42
Boron	ppm	ASTM D5185m		59	24	42
Barium	ppm	ASTM D5185m		16	0	0
Molybdenum	ppm	ASTM D5185m		78	81	84
Manganese	ppm	ASTM D5185m		5	<1	<1
Magnesium	ppm	ASTM D5185m		203	102	171
Calcium	ppm	ASTM D5185m		1984	2101	2052
Phosphorus	ppm	ASTM D5185m		968	940	1030
Zinc	ppm	ASTM D5185m		1165	1132	1188
Sulfur	ppm	ASTM D5185m		4068	3763	3018
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.7	16.6	15.9
Base Number (BN)	mg KOH/g	ASTM D2896	10	7.1	6.4	8.3
Visc @ 100°C	cSt	ASTM D445	15.5	12.8	13.7	13.1

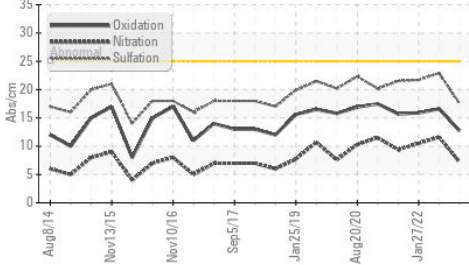
▲ Silicon (ppm)



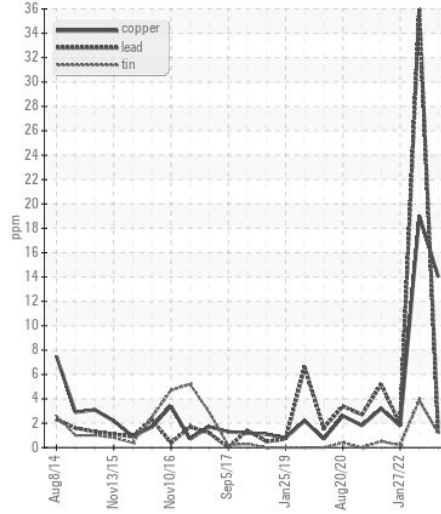
Ferrous Alloys



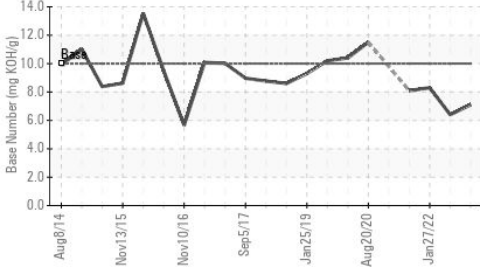
FT-IR (Direct Trend)



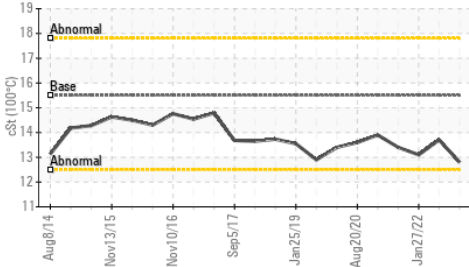
Non-ferrous Metals



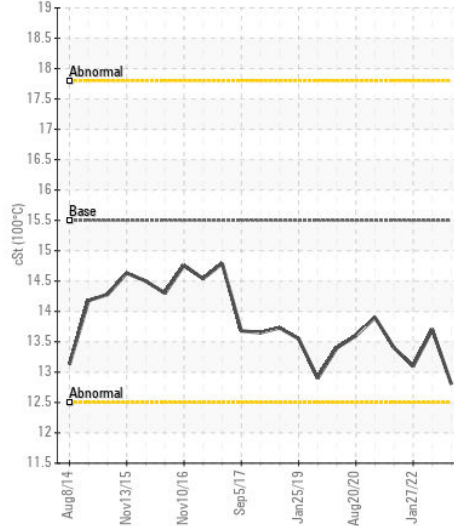
Base Number



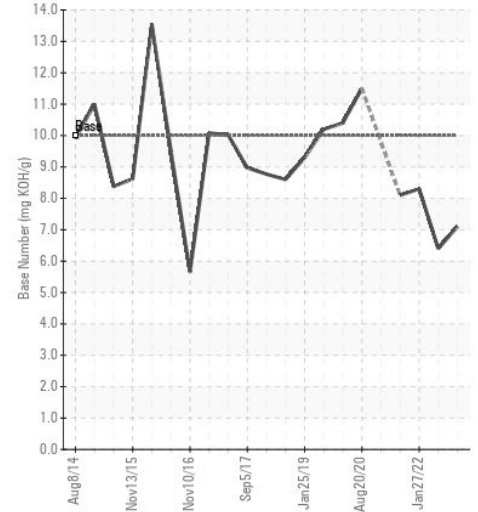
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0856286 **Received** : 23 Apr 2024
Lab Number : 06158278 **Tested** : 24 Apr 2024
Unique Number : 10993701 **Diagnosed** : 25 Apr 2024 - Sean Felton
Test Package : CONST (Additional Tests: TBN)

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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