



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id
22145

Component
Diesel Engine

Fluid
SHELL ROTELLA T 10W30 (--- QTS)

RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

Sodium and/or potassium levels are high.

FLUID CONDITION

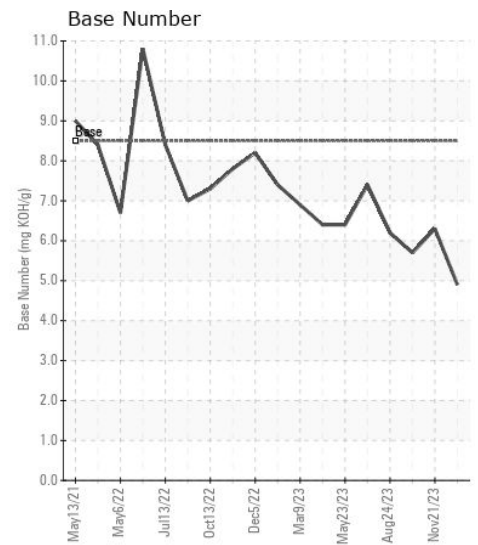
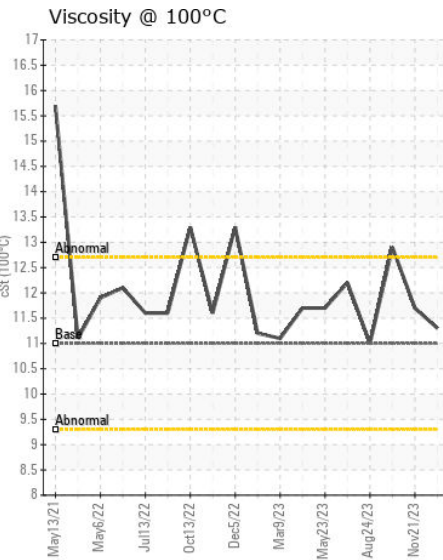
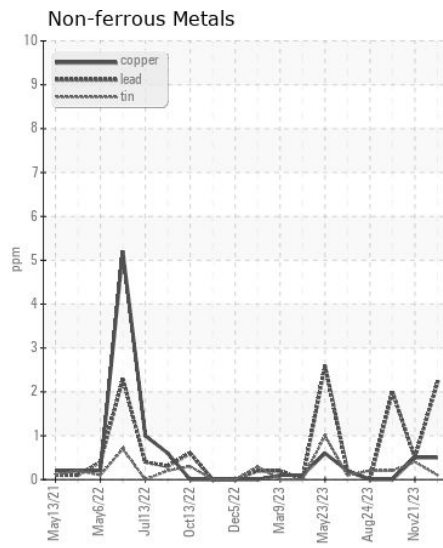
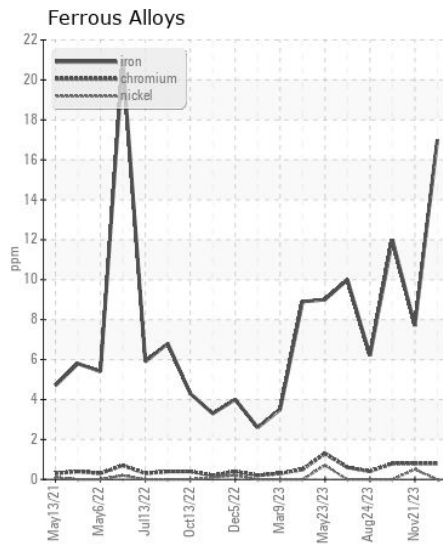
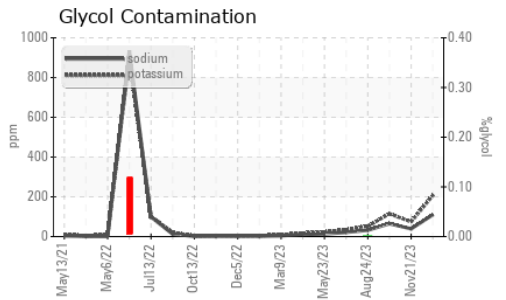
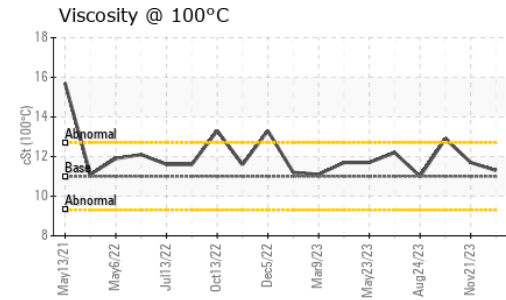
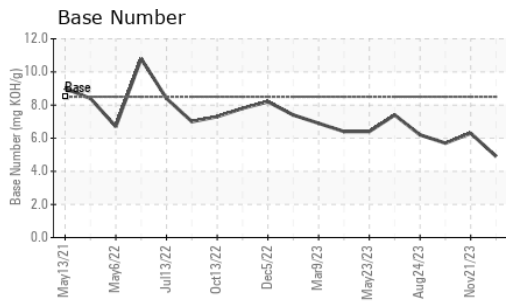
The BN result indicates that there is suitable alkalinity remaining in the oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0866885	WC0866890	WC0866899
Sample Date		Client Info		08 Jan 2024	21 Nov 2023	01 Nov 2023
Machine Age	mls	Client Info		179636	12286	164251
Oil Age	mls	Client Info		10177	315	10116
Filter Age	mls	Client Info		10177	315	10116
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ATTENTION	ABNORMAL

Iron	ppm	ASTM D5185m	>100	17	8	12
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	<1	2
Lead	ppm	ASTM D5185m	>40	2	<1	2
Copper	ppm	ASTM D5185m	>330	<1	<1	0
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

Silicon	ppm	ASTM D5185m	>25	5	5	5
Potassium	ppm	ASTM D5185m	>20	▲ 207	▲ 74	▲ 115
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.9	0.5	0.8
Nitration	Abs/cm	*ASTM D7624	>20	10.6	8.7	9.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.6	22.4	24.2
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

Sodium	ppm	ASTM D5185m		▲ 110	39	▲ 65
Boron	ppm	ASTM D5185m	269	65	127	138
Barium	ppm	ASTM D5185m		0	<1	0
Molybdenum	ppm	ASTM D5185m	0	27	17	52
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	20	50	55	220
Calcium	ppm	ASTM D5185m	1521	1999	2093	1858
Phosphorus	ppm	ASTM D5185m	948	876	922	1028
Zinc	ppm	ASTM D5185m	893	1114	1129	1312
Sulfur	ppm	ASTM D5185m		3233	3571	3424
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.5	19.0	18.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	4.9	6.3	5.7
Visc @ 100°C	cSt	ASTM D445	11.0	11.3	11.7	▲ 12.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0866885 **Received** : 17 Jan 2024
Lab Number : 06062424 **Diagnosed** : 18 Jan 2024
Unique Number : 10833806 **Diagnostician** : Jonathan Hester
Test Package : FLEET (Additional Tests: Glycol)

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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)