



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area

Contracting

Machine Id

4406 4406

Component

Diesel Engine

Fluid

DIESEL ENGINE OIL SAE 10W30 (5 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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0919094	WC0861836	WC0867122
Sample Date		Client Info		11 Apr 2024	16 Jan 2024	14 Nov 2023
Machine Age	hrs	Client Info		5731	5237	4974
Oil Age	hrs	Client Info		573	400	577
Filter Age	hrs	Client Info		573	400	577
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ATTENTION	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	34	14	50
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	6	2	5
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	1	<1	1
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

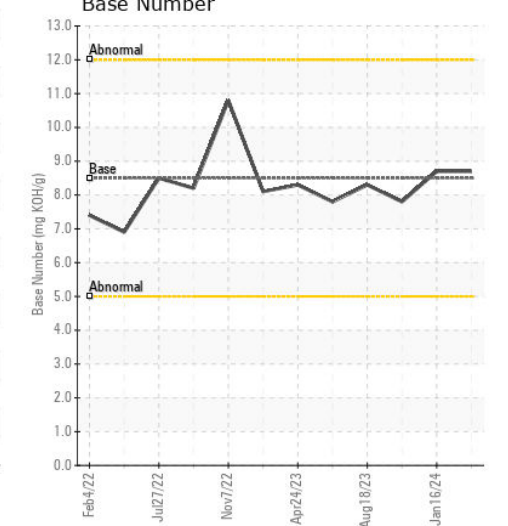
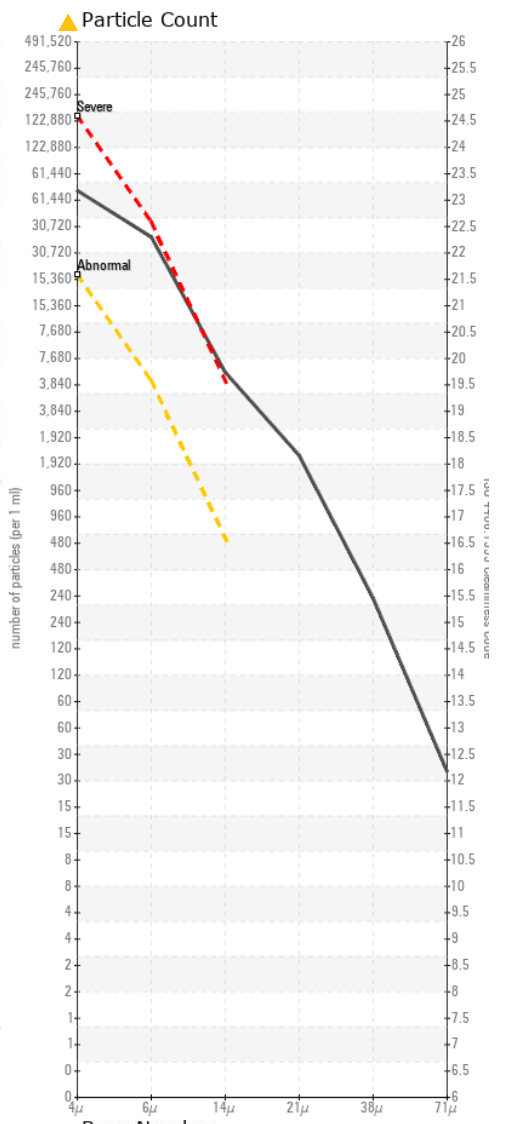
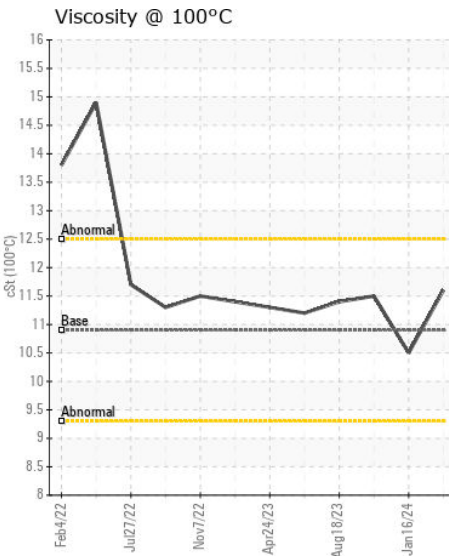
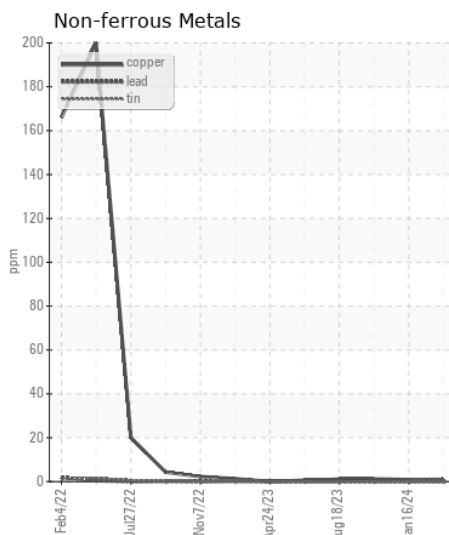
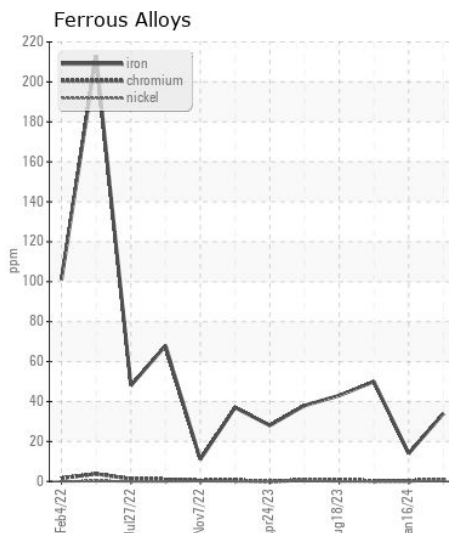
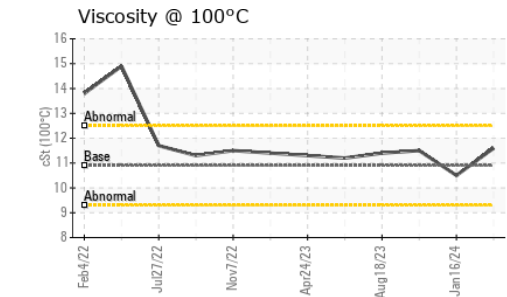
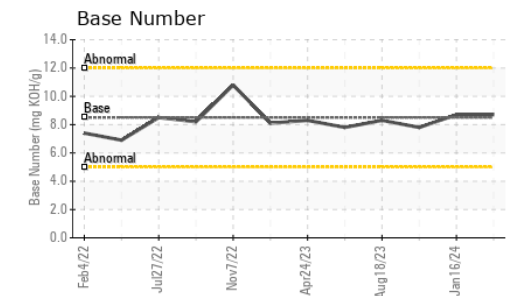
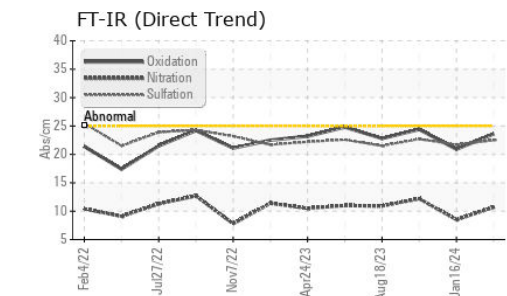
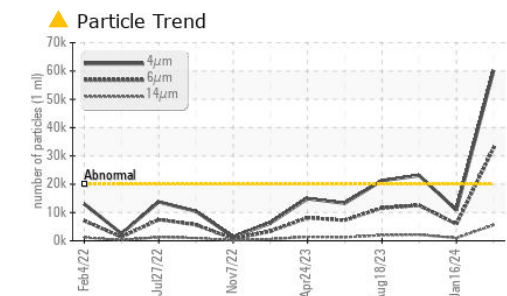
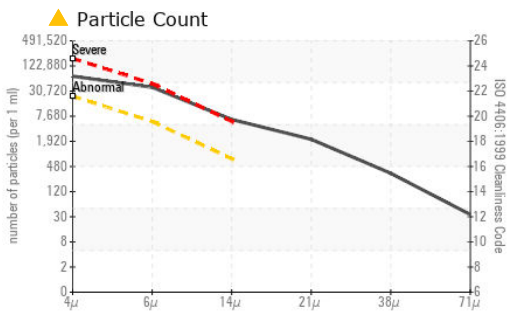
There is a high amount of particulates present in the oil.

Silicon	ppm	ASTM D5185m	>25	10	6	8
Potassium	ppm	ASTM D5185m	>20	9	2	10
Fuel		WC Method	>5	<1.0	0.2	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.7	0.4	0.8
Nitration	Abs/cm	*ASTM D7624	>20	10.7	8.5	12.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.5	21.7	22.7
Particles >4µm		ASTM D7647	>20000	▲ 60193	10875	▲ 23072
Particles >6µm		ASTM D7647	>5000	▲ 32790	● 5924	▲ 12568
Particles >14µm		ASTM D7647	>640	▲ 5581	● 1008	▲ 2139
Particles >21µm		ASTM D7647	>160	▲ 1880	● 340	▲ 720
Particles >38µm		ASTM D7647	>40	▲ 290	● 52	▲ 111
Particles >71µm		ASTM D7647	>10	▲ 30	5	▲ 11
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ 23/22/20	● 21/20/17	▲ 22/21/18
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	2	4
Boron	ppm	ASTM D5185m	250	60	52	41
Barium	ppm	ASTM D5185m	10	<1	0	0
Molybdenum	ppm	ASTM D5185m	100	63	48	41
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	689	505	451
Calcium	ppm	ASTM D5185m	3000	2316	1630	1747
Phosphorus	ppm	ASTM D5185m	1150	1143	771	747
Zinc	ppm	ASTM D5185m	1350	1265	924	972
Sulfur	ppm	ASTM D5185m	4250	3608	2509	2535
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.6	20.9	24.4
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	8.7	8.7	7.8
Visc @ 100°C	cSt	ASTM D445	10.9	11.6	10.5	11.5



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0919094 **Received** : 15 Apr 2024
Lab Number : 06148538 **Tested** : 16 Apr 2024
Unique Number : 10978616 **Diagnosed** : 17 Apr 2024 - Don Baldrige
Test Package : CONST (Additional Tests: PrtCount, 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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