



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	NORMAL

Area

Contracting

Machine Id

4406 4406

Component

Diesel Engine

Fluid

DIESEL ENGINE OIL SAE 15W40 (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		WC0861836	WC0867122	WC0784671
Sample Date		Client Info		16 Jan 2024	14 Nov 2023	18 Aug 2023
Machine Age	hrs	Client Info		5237	4974	4397
Oil Age	hrs	Client Info		400	577	452
Filter Age	hrs	Client Info		400	577	452
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ATTENTION	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	14	50	43
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	5	8
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	<1	1	1
Tin	ppm	ASTM D5185m	>15	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

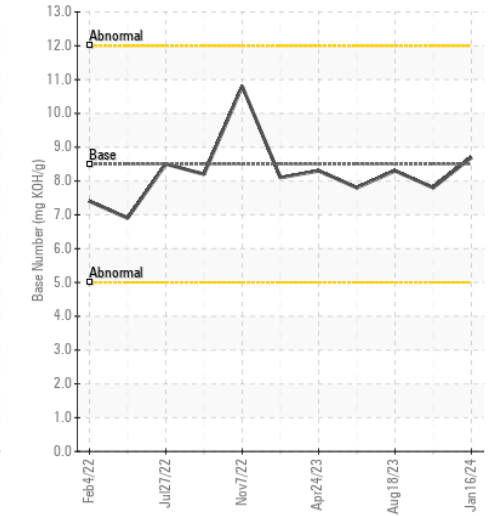
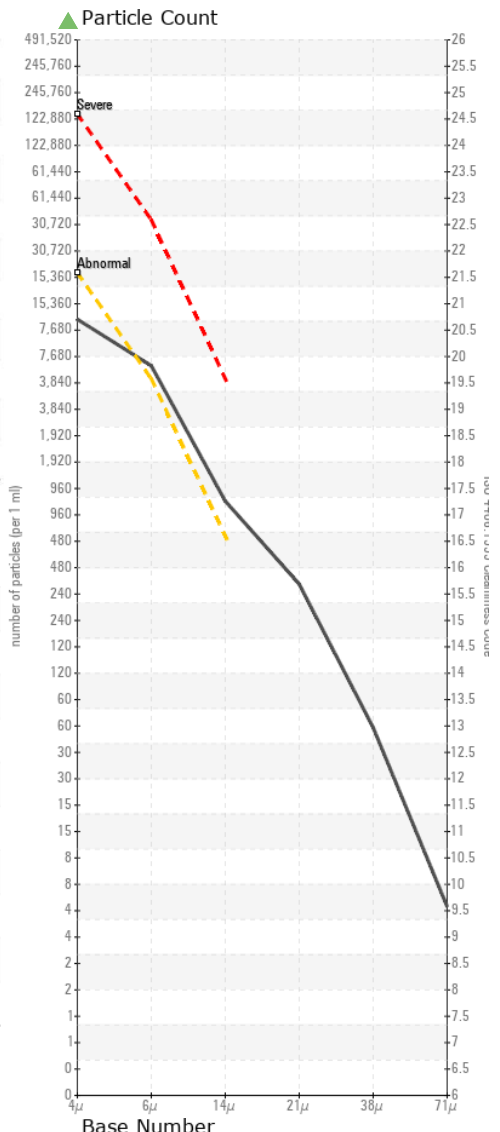
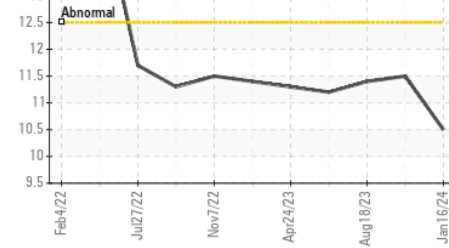
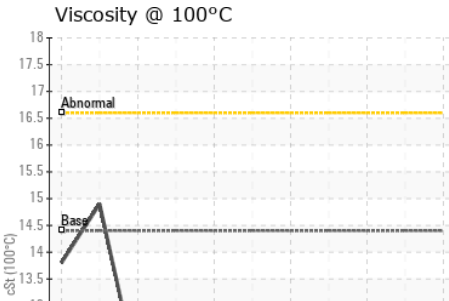
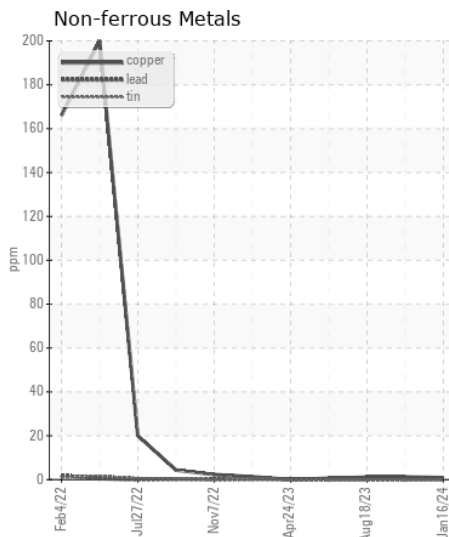
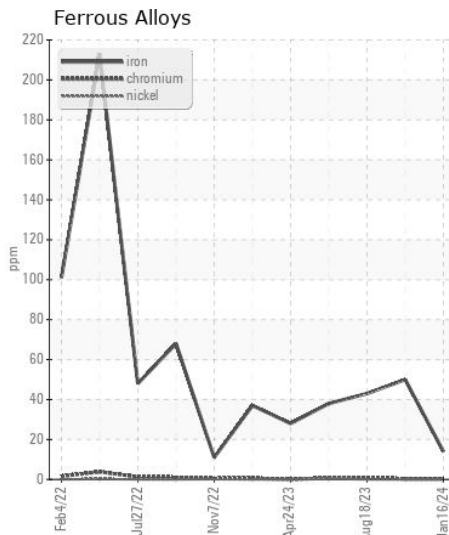
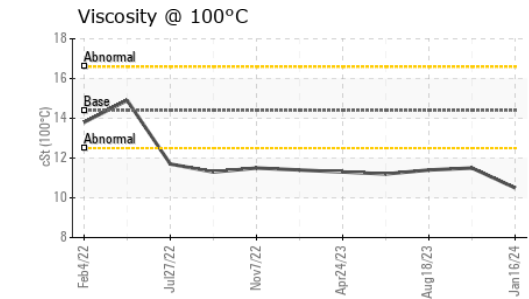
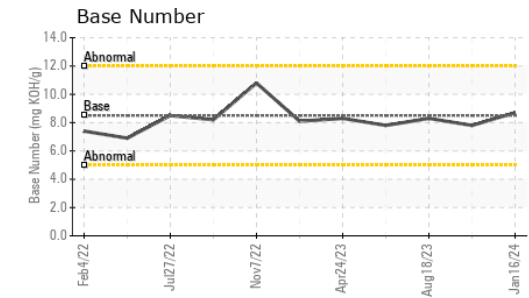
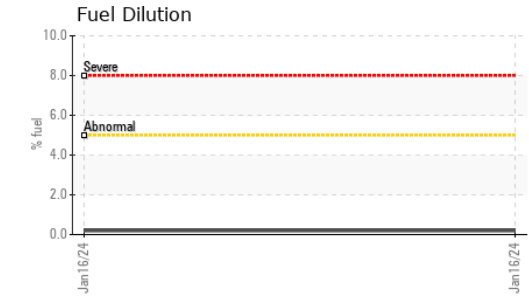
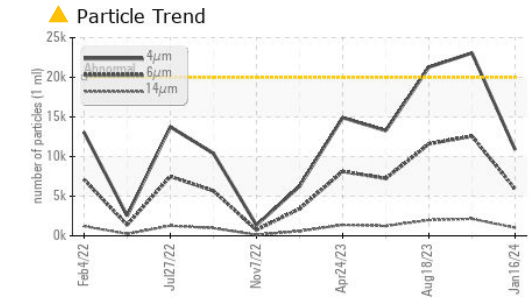
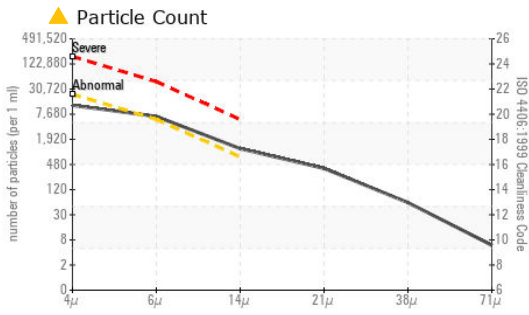
There is a moderate amount of particulates present in the oil. Fuel content negligible.

Silicon	ppm	ASTM D5185m	>25	6	8	9
Potassium	ppm	ASTM D5185m	>20	2	10	31
Fuel	%	ASTM D3524	>5	0.2	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.4	0.8	0.7
Nitration	Abs/cm	*ASTM D7624	>20	8.5	12.2	10.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.7	22.7	21.5
Particles >4µm		ASTM D7647	>20000	10875	▲ 23072	▲ 21288
Particles >6µm		ASTM D7647	>5000	▲ 5924	▲ 12568	▲ 11597
Particles >14µm		ASTM D7647	>640	▲ 1008	▲ 2139	▲ 1974
Particles >21µm		ASTM D7647	>160	▲ 340	▲ 720	▲ 665
Particles >38µm		ASTM D7647	>40	▲ 52	▲ 111	▲ 103
Particles >71µm		ASTM D7647	>10	5	▲ 11	10
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ 21/20/17	▲ 22/21/18	▲ 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 acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>158	2	4	1
Boron	ppm	ASTM D5185m	250	52	41	28
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	48	41	48
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	505	451	503
Calcium	ppm	ASTM D5185m	3000	1630	1747	1678
Phosphorus	ppm	ASTM D5185m	1150	771	747	777
Zinc	ppm	ASTM D5185m	1350	924	972	941
Sulfur	ppm	ASTM D5185m	4250	2509	2535	2704
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.9	24.4	22.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	8.7	7.8	8.3
Visc @ 100°C	cSt	ASTM D445	14.4	10.5	11.5	11.4



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0861836 **Received** : 19 Jan 2024
Lab Number : 06065478 **Diagnosed** : 24 Jan 2024
Unique Number : 10836860 **Diagnostician** : Doug Bogart
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, PrtCount, TBN)

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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)