OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	ATTENTION

Machine Id
M32016
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- QTS)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

WEAR

Cylinder, crank, or cam shaft wear is indicated. All other component wear rates are normal.

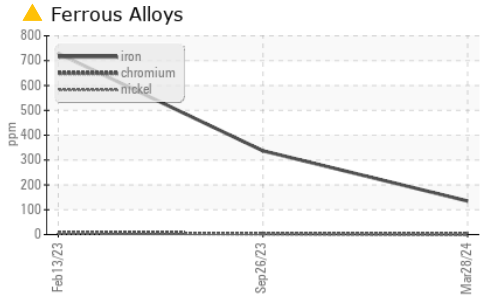
CONTAMINATION

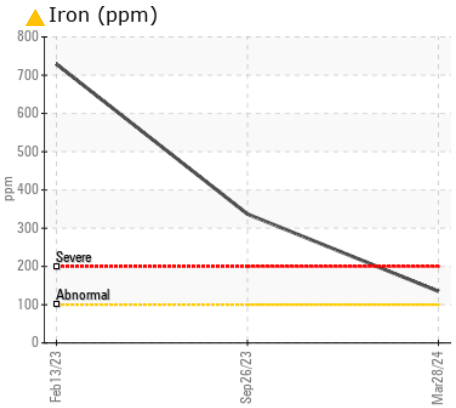
Light fuel dilution occurring. No other contaminants were detected in the oil.

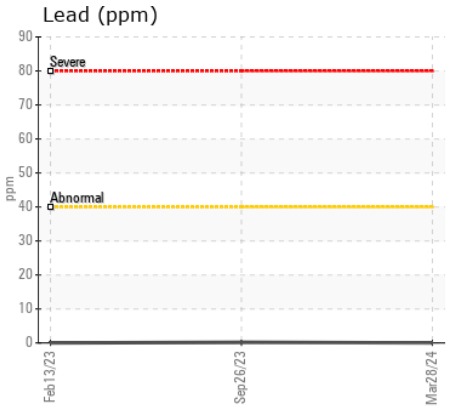
FLUID CONDITION

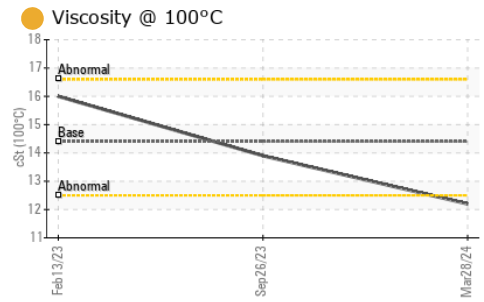
Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

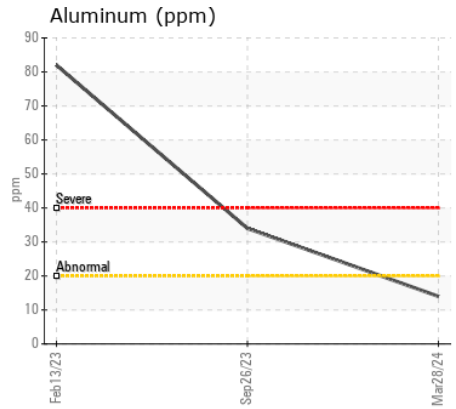
Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		DC0032251	DC0028274	DC0023074
Sample Date		Client Info		28 Mar 2024	26 Sep 2023	13 Feb 2023
Machine Age	mls	Client Info		77484	61665	42473
Oil Age	mls	Client Info		3946	3172	2198
Filter Age	mls	Client Info		3946	3172	2198
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>100	▲ 135	▲ 337	▲ 729
Chromium	ppm	ASTM D5185m	>20	1	4	6
Nickel	ppm	ASTM D5185m	>4	0	2	2
Titanium	ppm	ASTM D5185m		22	26	31
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	14	34	▲ 82
Lead	ppm	ASTM D5185m	>40	0	<1	0
Copper	ppm	ASTM D5185m	>330	8	30	174
Tin	ppm	ASTM D5185m	>15	<1	1	1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	8	12	27
Potassium	ppm	ASTM D5185m	>20	18	● 63	▲ 215
Fuel	%	ASTM D3524	>5	▲ 2.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1.2	1.9	2.2
Nitration	Abs/cm	*ASTM D7624	>20	13.0	15.8	19.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	29.1	32.2	35.7
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
Sodium	ppm	ASTM D5185m	>158	6	12	▲ 65
Boron	ppm	ASTM D5185m	250	78	52	24
Barium	ppm	ASTM D5185m	10	2	13	3
Molybdenum	ppm	ASTM D5185m	100	18	8	49
Manganese	ppm	ASTM D5185m		3	4	10
Magnesium	ppm	ASTM D5185m	450	59	220	798
Calcium	ppm	ASTM D5185m	3000	2507	2000	1391
Phosphorus	ppm	ASTM D5185m	1150	996	962	1019
Zinc	ppm	ASTM D5185m	1350	1222	1274	1303
Sulfur	ppm	ASTM D5185m	4250	3673	3233	3769
Oxidation	Abs/.1mm	*ASTM D7414	>25	27.7	32.4	41.7
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	5.9	5.8	6.9
Visc @ 100°C	cSt	ASTM D445	14.4	● 12.2	13.9	16.0

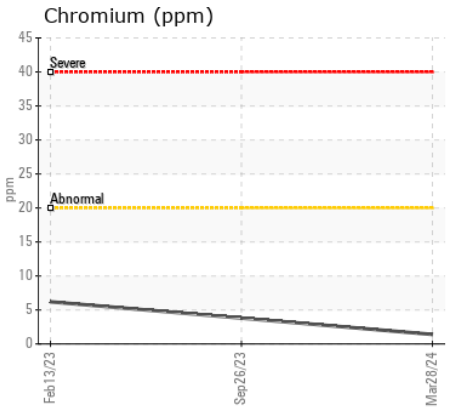


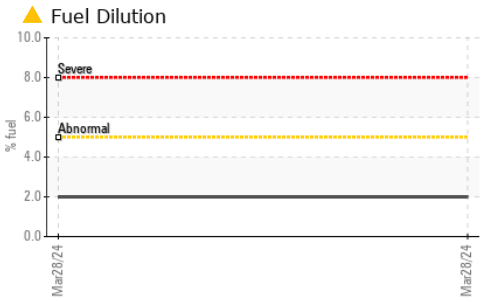


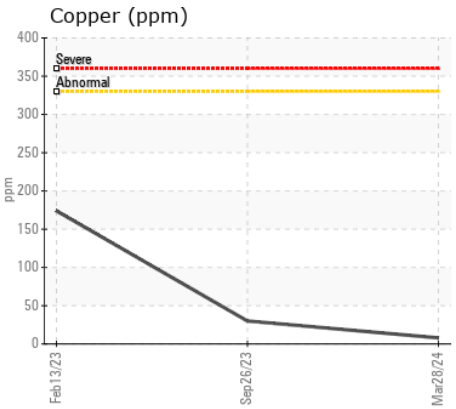


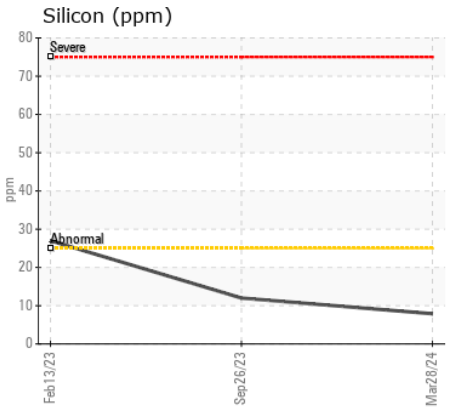


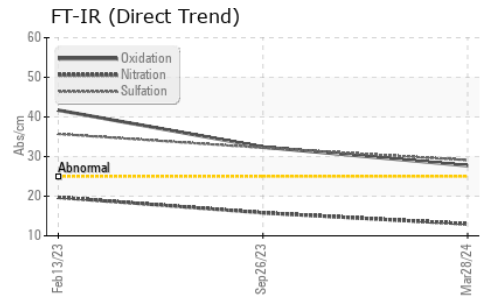


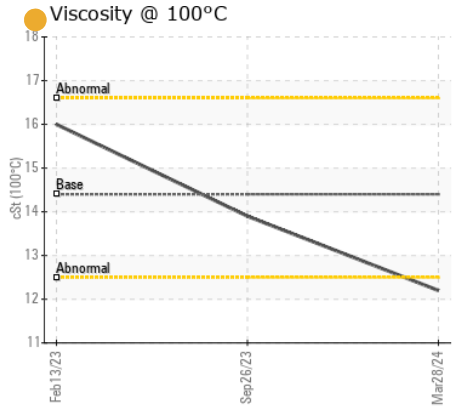


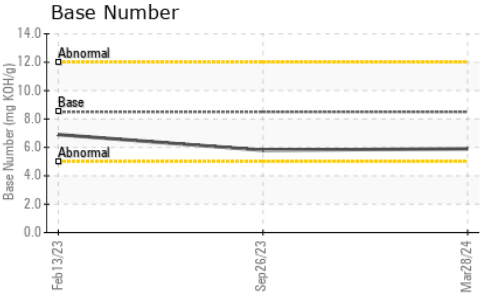


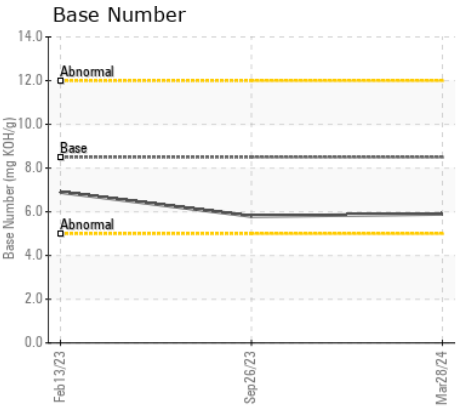












Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DC0032251 **Received** : 22 Apr 2024
Lab Number : 06155719 **Tested** : 25 Apr 2024
Unique Number : 10991142 **Diagnosed** : 25 Apr 2024 - Don Baldridge
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel, 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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