OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Area
[62005761460]
Machine Id
13
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- QTS)

RECOMMENDATION

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value.

WEAR

All component wear rates are normal.

CONTAMINATION

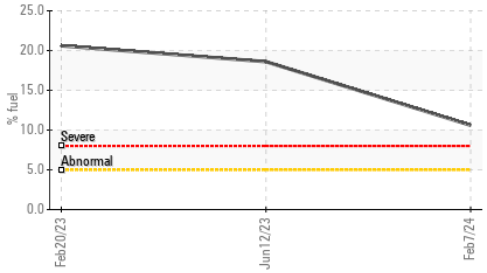
There is a high amount of fuel present in the oil. There is an abnormal amount of solids and carbon present in the oil.

FLUID CONDITION

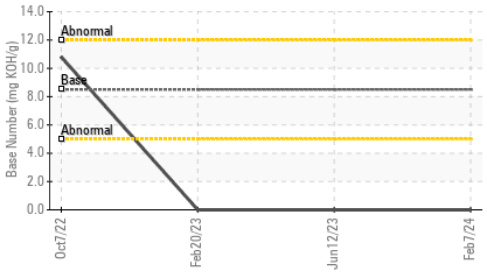
Fuel is present in the oil and is lowering the viscosity. The BN level is low.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0828074	WC0800008	WC0723356
Sample Date		Client Info		07 Feb 2024	12 Jun 2023	20 Feb 2023
Machine Age	mls	Client Info		124205	120022	114441
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	SEVERE	SEVERE
Iron	ppm	ASTM D5185m	>100	82	▲ 130	▲ 109
Chromium	ppm	ASTM D5185m	>20	2	4	3
Nickel	ppm	ASTM D5185m	>4	<1	2	<1
Titanium	ppm	ASTM D5185m		52	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	20	21	10
Lead	ppm	ASTM D5185m	>40	1	4	<1
Copper	ppm	ASTM D5185m	>330	<1	2	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	6	7	5
Potassium	ppm	ASTM D5185m	>20	4	5	3
Fuel	%	ASTM D3524	>5	⬢ 10.6	⬢ 18.6	⬢ 20.6
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	▲ 3.9	⬢ 7	⬢ 5.9
Nitration	Abs/cm	*ASTM D7624	>20	7.4	22.9	18.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.6	54.9	35.0
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	4	5	4
Boron	ppm	ASTM D5185m	250	56	36	38
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	7	10	11
Manganese	ppm	ASTM D5185m		1	1	1
Magnesium	ppm	ASTM D5185m	450	415	523	505
Calcium	ppm	ASTM D5185m	3000	1302	989	1047
Phosphorus	ppm	ASTM D5185m	1150	854	758	805
Zinc	ppm	ASTM D5185m	1350	987	913	922
Sulfur	ppm	ASTM D5185m	4250	3104	2629	3299
Oxidation	Abs/.1mm	*ASTM D7414	>25	9.4	49.6	24.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	▲ 0.0	▲ 0.0	▲ 0.0
Visc @ 100°C	cSt	ASTM D445	14.4	14.3	15.8	▲ 11.8

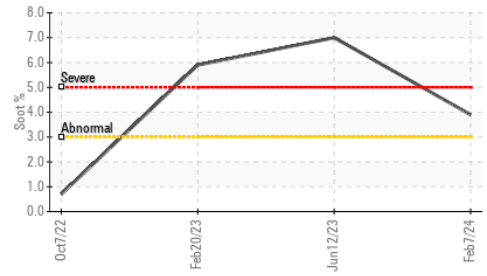
Fuel Dilution



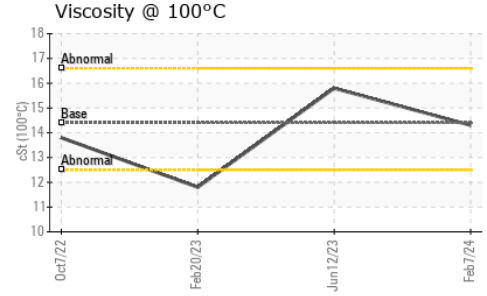
Base Number



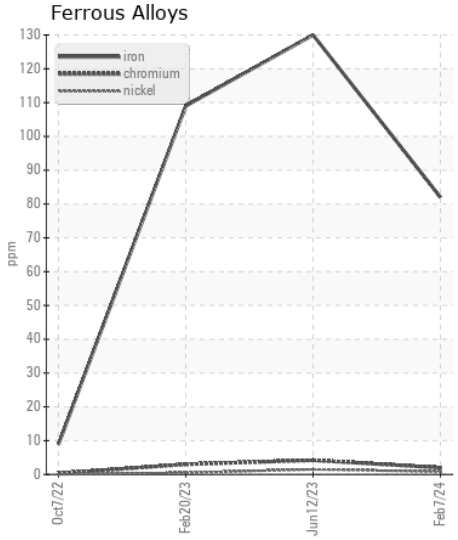
Soot %



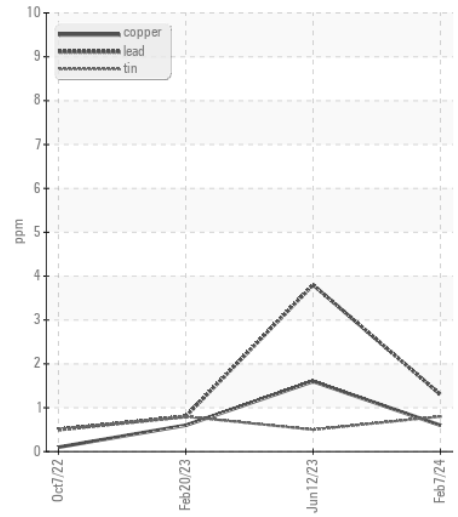
Viscosity @ 100°C



Ferrous Alloys



Non-ferrous Metals



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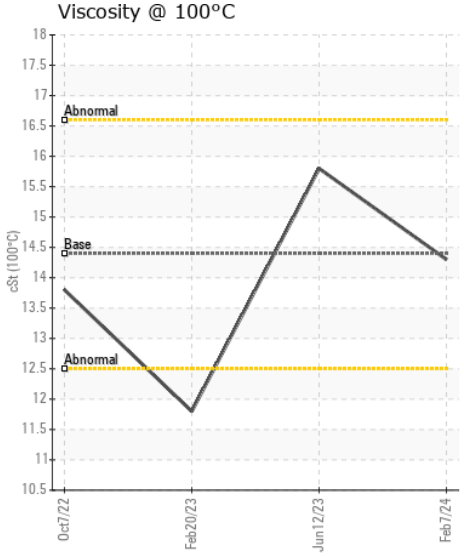

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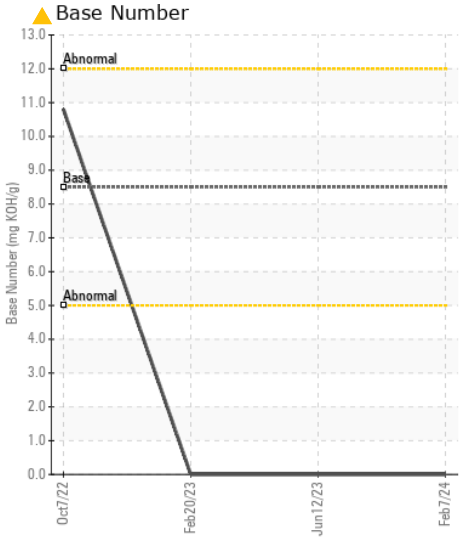

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0828074
Lab Number : 06089475
Unique Number : 10876920
Test Package : FLEET (Additional Tests: PercentFuel)

Received : 14 Feb 2024
Tested : 19 Feb 2024
Diagnosed : 19 Feb 2024 - Jonathan Hester

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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