OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
FSP132137
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

The aluminum level is abnormal. All other component wear rates are normal.

CONTAMINATION

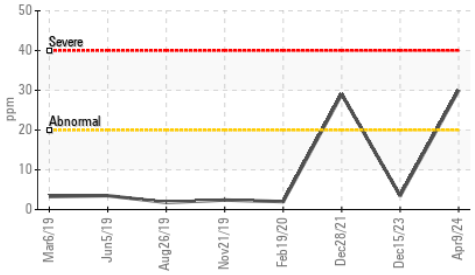
There is no indication of any contamination in the oil.

FLUID CONDITION

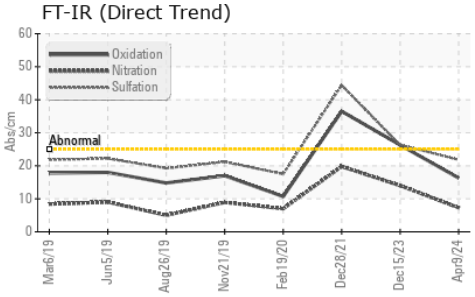
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0903102	WC0875666	WC0640625
Sample Date		Client Info		09 Apr 2024	15 Dec 2023	28 Dec 2021
Machine Age	mls	Client Info		330893	328207	275898
Oil Age	mls	Client Info		60000	0	0
Filter Age	mls	Client Info		60000	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>90	52	▲ 192	▲ 169
Chromium	ppm	ASTM D5185m	>20	2	3	4
Nickel	ppm	ASTM D5185m	>2	<1	14	2
Titanium	ppm	ASTM D5185m	>2	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	▲ 30	4	▲ 29
Lead	ppm	ASTM D5185m	>40	<1	<1	<1
Copper	ppm	ASTM D5185m	>330	2	98	12
Tin	ppm	ASTM D5185m	>15	<1	5	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	6	13	17
Potassium	ppm	ASTM D5185m	>20	6	<1	21
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.4	1.2	3.8
Nitration	Abs/cm	*ASTM D7624	>20	7.3	14.0	19.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.8	26.3	44.4
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	3	23	3
Boron	ppm	ASTM D5185m	250	413	99	12
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	77	<1	48
Manganese	ppm	ASTM D5185m		1	55	2
Magnesium	ppm	ASTM D5185m	450	424	25	590
Calcium	ppm	ASTM D5185m	3000	1383	3484	2834
Phosphorus	ppm	ASTM D5185m	1150	1043	1107	1523
Zinc	ppm	ASTM D5185m	1350	1199	1322	1636
Sulfur	ppm	ASTM D5185m	4250	3769	2833	3713
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.3	26.3	36.5
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	8.0	7.3	5.7
Visc @ 100°C	cSt	ASTM D445	14.4	13.4	14.1	16.1

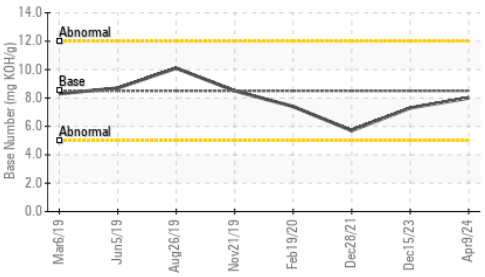
Aluminum (ppm)



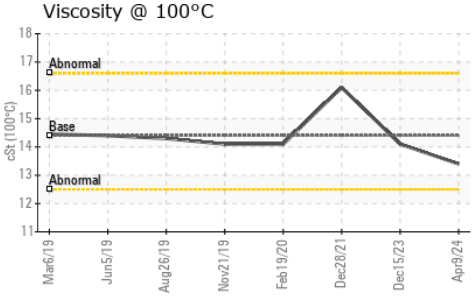
FT-IR (Direct Trend)



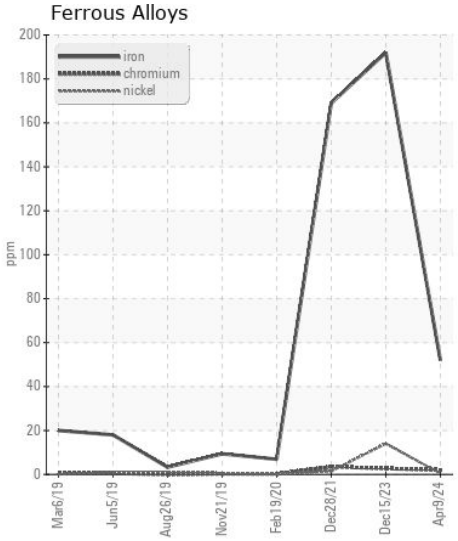
Base Number



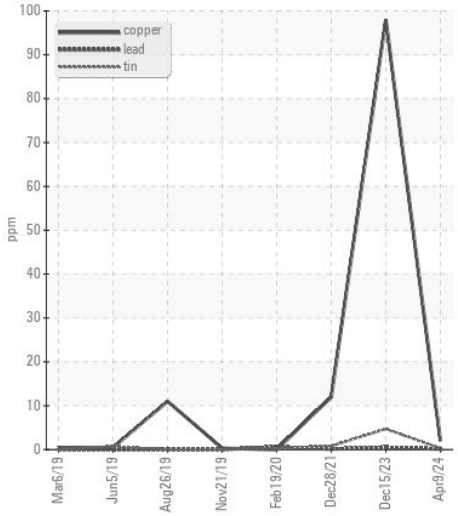
Viscosity @ 100°C



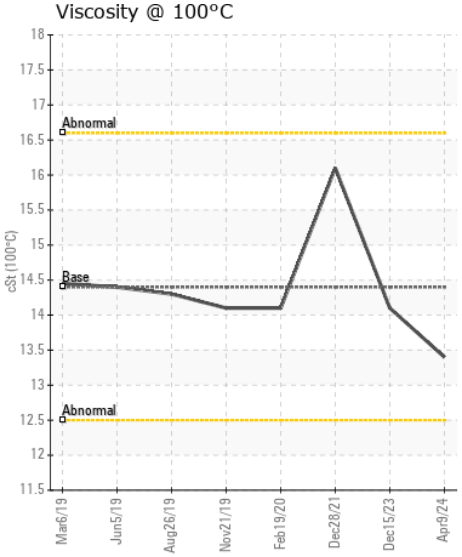
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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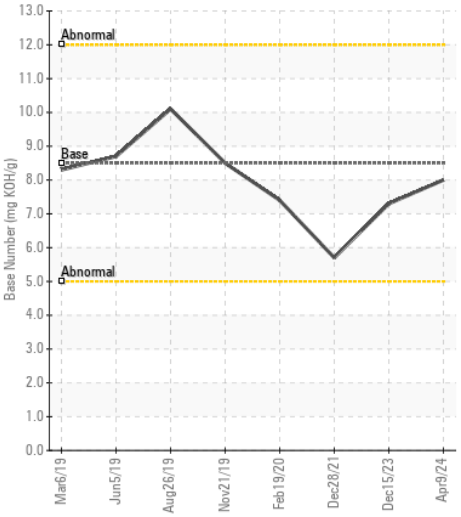

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0903102
Lab Number : 06153727
Unique Number : 10983805
Test Package : FLEET

Received : 18 Apr 2024
Tested : 19 Apr 2024
Diagnosed : 23 Apr 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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