OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Area
[45046355]
Machine Id
INTERNATIONAL 9571915 TEI CONTRACT MAINTENANCE
Component
Diesel Engine
Fluid
MOBIL DELVAC MX 15W40 (40 QTS)

RECOMMENDATION

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

Aluminum ppm levels are severe. Piston wear is indicated.

CONTAMINATION

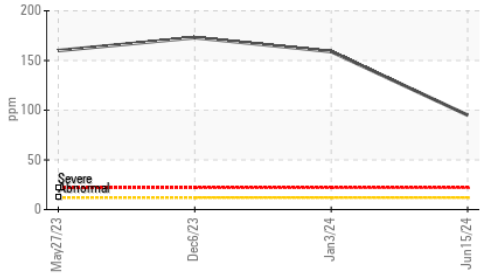
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

FLUID CONDITION

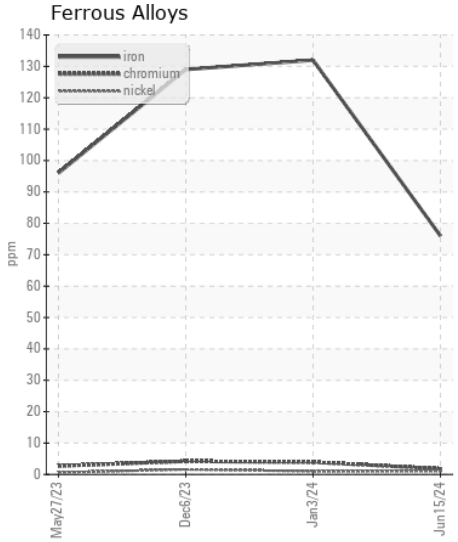
The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		RPL0016516	RPL0016409	RPL0013731
Sample Date		Client Info		15 Jun 2024	03 Jan 2024	06 Dec 2023
Machine Age	mls	Client Info		282310	274851	274851
Oil Age	mls	Client Info		19362	11903	11903
Filter Age	mls	Client Info		19362	11903	11903
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Not Changd	Not Changd
Sample Status				SEVERE	SEVERE	SEVERE
Iron	ppm	ASTM D5185m	>125	76	▲ 132	▲ 129
Chromium	ppm	ASTM D5185m	>4	2	4	▲ 4
Nickel	ppm	ASTM D5185m	>4	1	1	2
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>12	▲ 95	▲ 159	▲ 173
Lead	ppm	ASTM D5185m	>15	2	2	3
Copper	ppm	ASTM D5185m	>35	4	8	8
Tin	ppm	ASTM D5185m	>4	<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	12	22	22
Potassium	ppm	ASTM D5185m	>20	4	8	8
Fuel	%	ASTM D3524	>2.0	▲ 2.8	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1.7	▲ 3.2	▲ 3.1
Nitration	Abs/cm	*ASTM D7624	>20	10.6	13.0	12.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.1	27.5	27.7
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		6	9	8
Boron	ppm	ASTM D5185m		47	36	39
Barium	ppm	ASTM D5185m		1	0	12
Molybdenum	ppm	ASTM D5185m		75	44	47
Manganese	ppm	ASTM D5185m		2	2	2
Magnesium	ppm	ASTM D5185m		540	508	512
Calcium	ppm	ASTM D5185m		1491	1662	1645
Phosphorus	ppm	ASTM D5185m		751	730	741
Zinc	ppm	ASTM D5185m		892	884	910
Sulfur	ppm	ASTM D5185m		2727	2352	2596
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.8	22.8	22.8
Base Number (BN)	mg KOH/g	ASTM D2896	12	10.4	10.8	10.6
Visc @ 100°C	cSt	ASTM D445	14.4	▲ 12.3	12.9	12.8

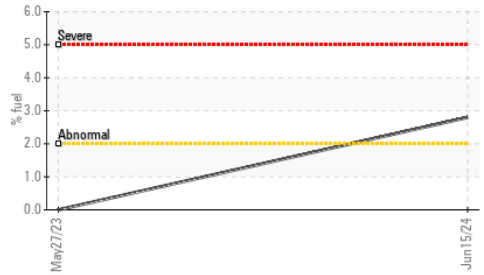
Aluminum (ppm)



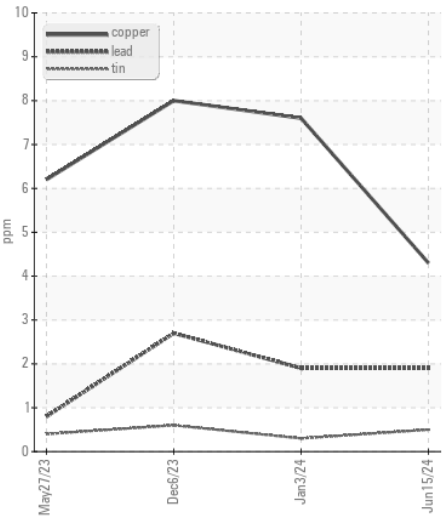
Ferrous Alloys



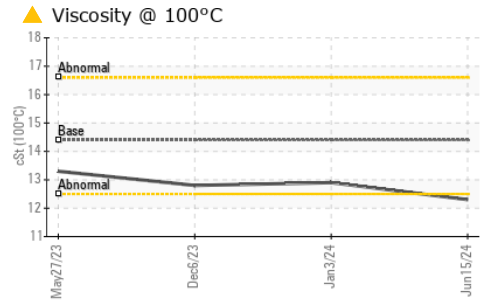
Fuel Dilution



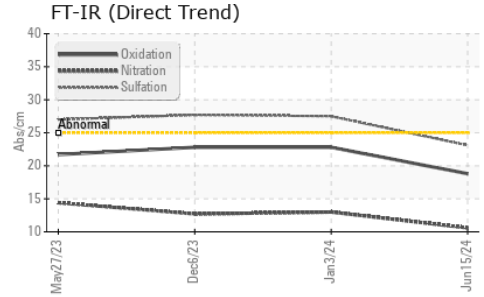
Non-ferrous Metals



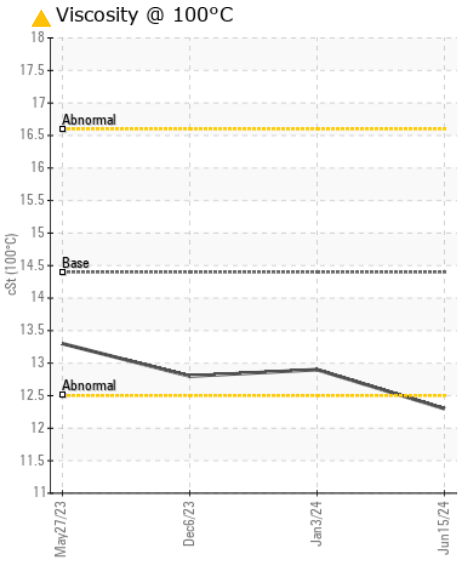
Viscosity @ 100°C



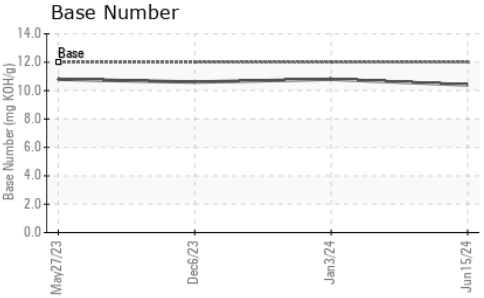
FT-IR (Direct Trend)



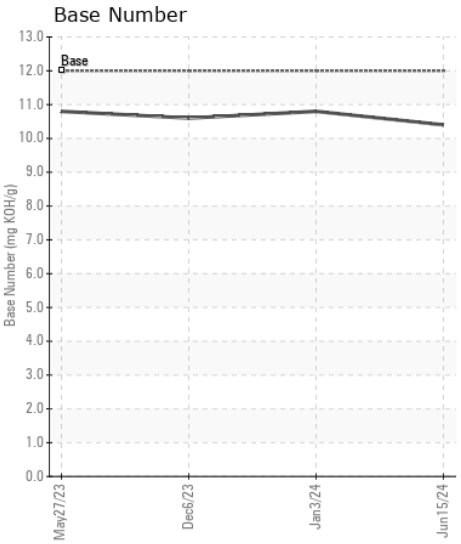
Viscosity @ 100°C



Base Number



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RPL0016516
Lab Number : 06219337
Unique Number : 11097534
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

Received : 25 Jun 2024
Tested : 27 Jun 2024
Diagnosed : 27 Jun 2024 - Wes Davis

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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