



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
INTERNATIONAL 441348

Component
Diesel Engine

Fluid
MOBIL 15W40 (20 QTS)

RECOMMENDATION

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		IL0030497	IL0030450	IL0026657
Sample Date		Client Info		23 Oct 2023	28 Jul 2023	24 Feb 2023
Machine Age	mls	Client Info		338661	316358	292286
Oil Age	mls	Client Info		198566	200335	0
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>130	28	19	28
Chromium	ppm	ASTM D5185m	>10	1	1	1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	6	8	11
Lead	ppm	ASTM D5185m	>20	2	0	1
Copper	ppm	ASTM D5185m	>125	▲ 173	6	1
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

CONTAMINATION

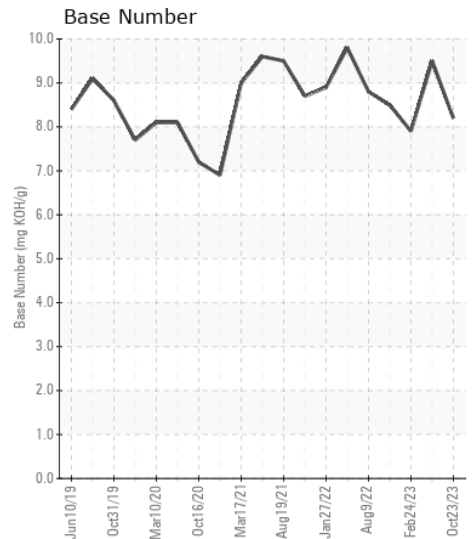
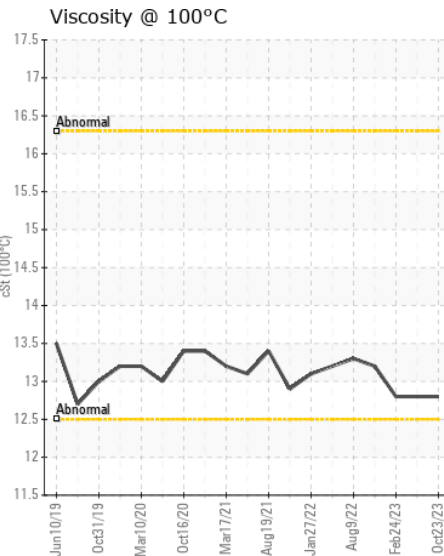
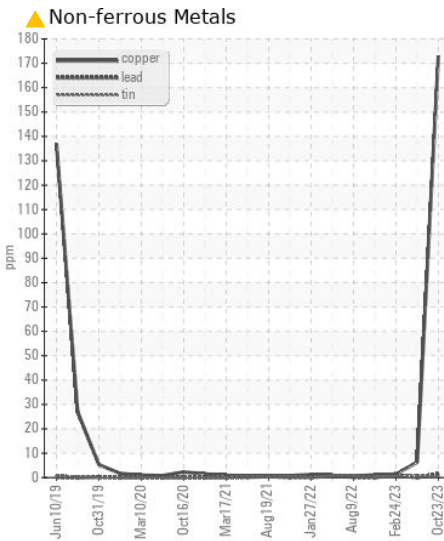
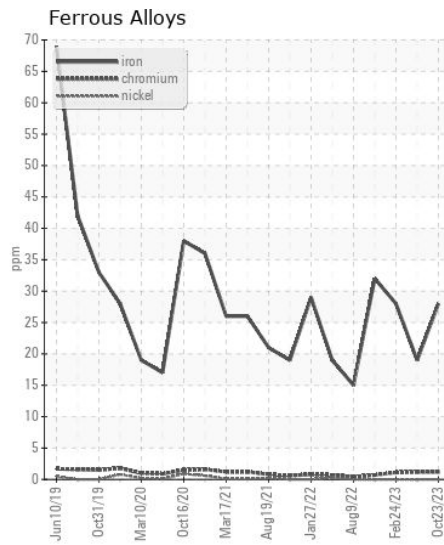
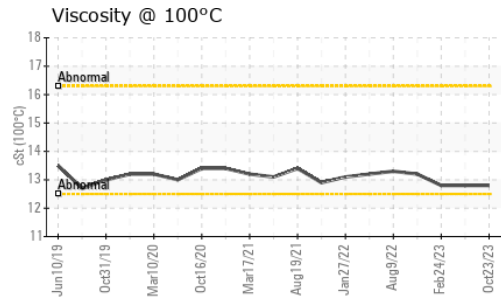
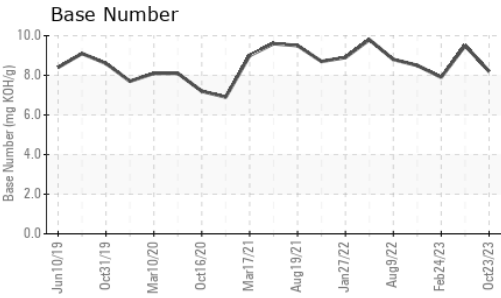
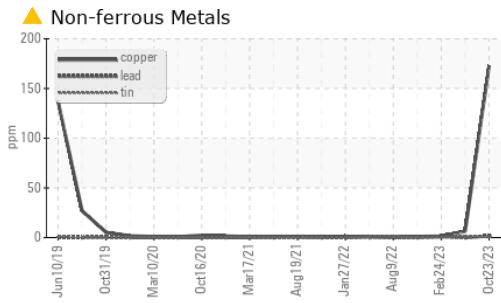
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	25	▲ 62	6
Potassium	ppm	ASTM D5185m	>20	4	3	3
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	0.6	0.3	0.9
Nitration	Abs/cm	*ASTM D7624	>20	9.6	6.7	12.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.9	21.5	23.8
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 suitable for further service.

Sodium	ppm	ASTM D5185m	>118	2	4	0
Boron	ppm	ASTM D5185m		5	49	5
Barium	ppm	ASTM D5185m		2	<1	0
Molybdenum	ppm	ASTM D5185m		62	41	67
Manganese	ppm	ASTM D5185m		1	3	1
Magnesium	ppm	ASTM D5185m		972	496	1080
Calcium	ppm	ASTM D5185m		1129	1697	1377
Phosphorus	ppm	ASTM D5185m		1039	732	1111
Zinc	ppm	ASTM D5185m		1273	941	1389
Sulfur	ppm	ASTM D5185m		2920	2883	3653
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.3	19.5	20.3
Base Number (BN)	mg KOH/g	ASTM D2896		8.2	9.5	7.9
Visc @ 100°C	cSt	ASTM D445		12.8	12.8	12.8



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : IL0030497 **Received** : 18 Jan 2024
Lab Number : 06064837 **Diagnosed** : 21 Jan 2024
Unique Number : 10836219 **Diagnostician** : Don Baldridge
Test Package : FLEET

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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)