



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
INTERNATIONAL 108654
Component
Diesel Engine
Fluid
SHELL ROTELLA T 15W40 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		IL0033018	IL0032770	IL0027412
Sample Date		Client Info		16 Apr 2024	30 Oct 2023	07 Feb 2023
Machine Age	mls	Client Info		254080	235701	205126
Oil Age	mls	Client Info		18379	30575	21425
Filter Age	mls	Client Info		18379	30575	21425
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	33	▲ 93	33
Chromium	ppm	ASTM D5185m	>20	1	4	1
Nickel	ppm	ASTM D5185m	>2	0	<1	<1
Titanium	ppm	ASTM D5185m	>2	0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	5	4
Lead	ppm	ASTM D5185m	>40	4	8	5
Copper	ppm	ASTM D5185m	>330	4	4	2
Tin	ppm	ASTM D5185m	>15	0	2	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

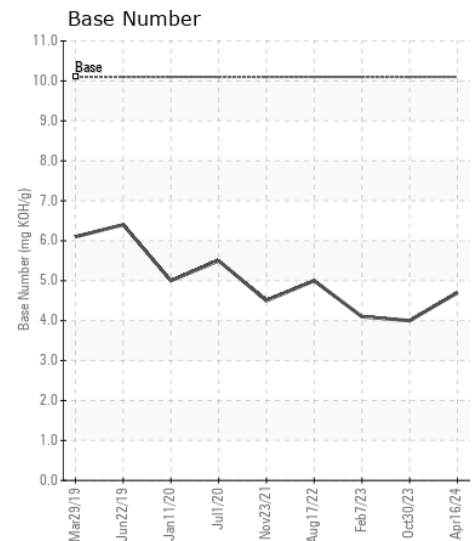
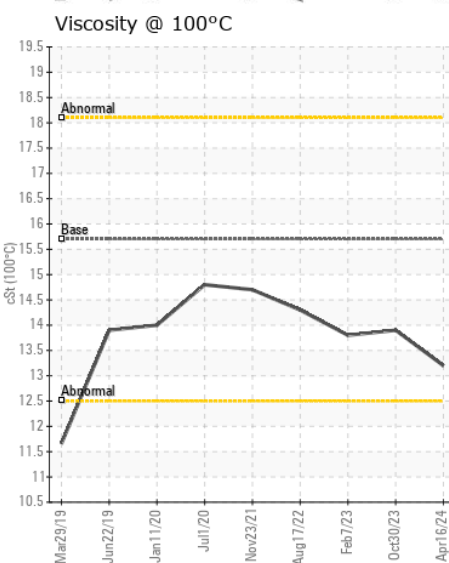
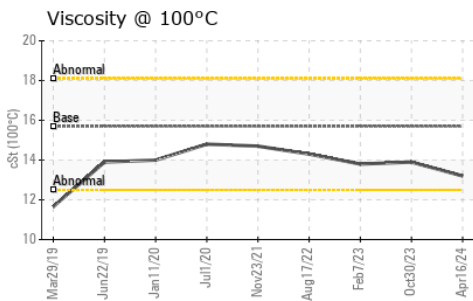
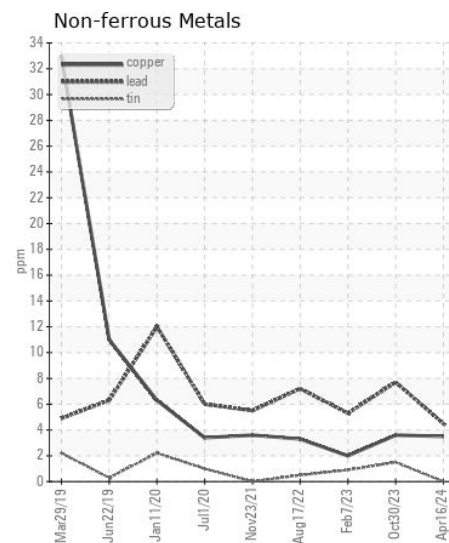
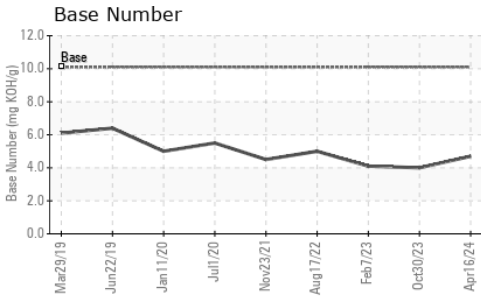
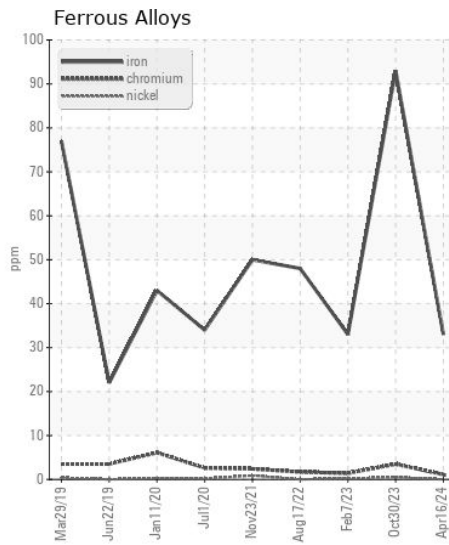
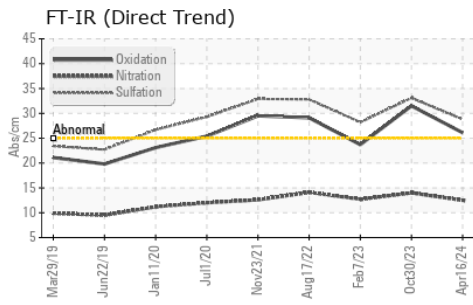
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	17	11	6
Potassium	ppm	ASTM D5185m	>20	8	14	4
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	1.2	1.7	0.8
Nitration	Abs/cm	*ASTM D7624	>20	12.5	14.0	12.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	28.8	33.1	28.2
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		3	<1	2
Boron	ppm	ASTM D5185m	316	44	43	21
Barium	ppm	ASTM D5185m	0.0	0	5	0
Molybdenum	ppm	ASTM D5185m	1.2	31	55	86
Manganese	ppm	ASTM D5185m		<1	1	<1
Magnesium	ppm	ASTM D5185m	24	293	207	52
Calcium	ppm	ASTM D5185m	2292	2019	2420	2186
Phosphorus	ppm	ASTM D5185m	1064	994	1147	942
Zinc	ppm	ASTM D5185m	1160	1249	1423	1249
Sulfur	ppm	ASTM D5185m	4996	3513	3749	3690
Oxidation	Abs/.1mm	*ASTM D7414	>25	26.1	31.5	23.7
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	4.7	4.0	4.1
Visc @ 100°C	cSt	ASTM D445	15.7	13.2	13.9	13.8



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : IL0033018
Lab Number : 06160049
Unique Number : 10995472
Test Package : FLEET

Received : 25 Apr 2024
Tested : 26 Apr 2024
Diagnosed : 26 Apr 2024 - Sean Felton

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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)