



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
113601
Component
Diesel Engine
Fluid
SHELL ROTELLA T 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		IL0033003	IL0032732	IL0027426
Sample Date		Client Info		09 Apr 2024	29 Sep 2023	03 Mar 2023
Machine Age	mls	Client Info		85192	67540	44913
Oil Age	mls	Client Info		17652	22627	22721
Filter Age	mls	Client Info		17652	22627	22721
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	29	44	53
Chromium	ppm	ASTM D5185m	>20	2	2	3
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	0	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	24	49	73
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	1	2	7
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

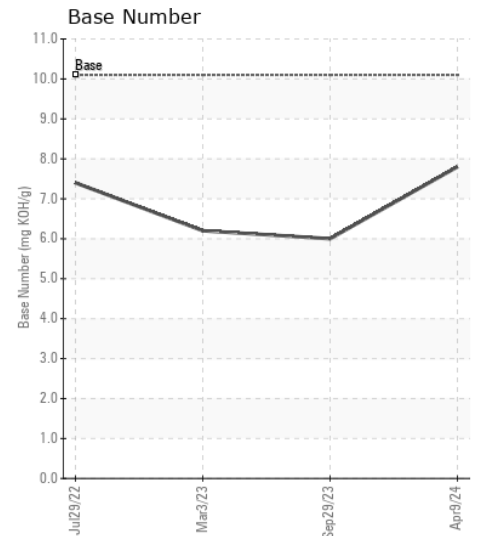
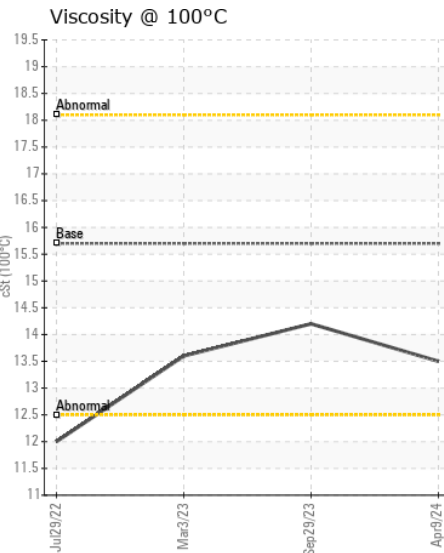
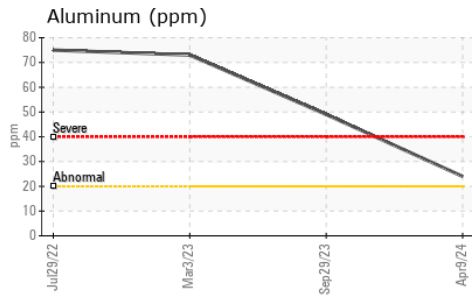
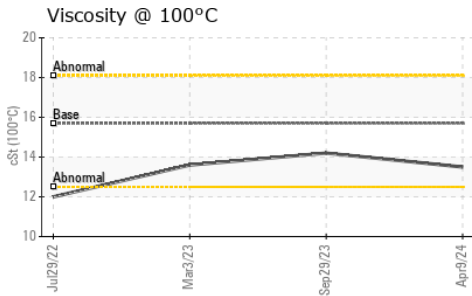
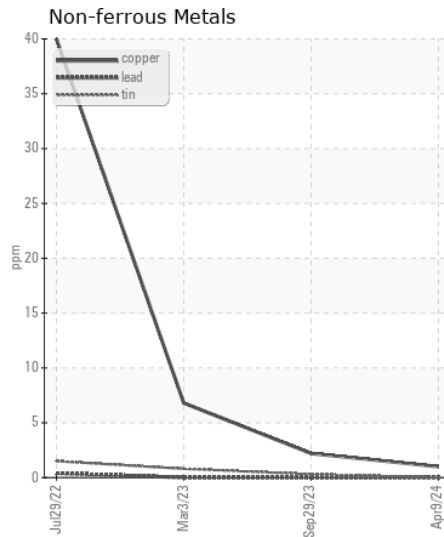
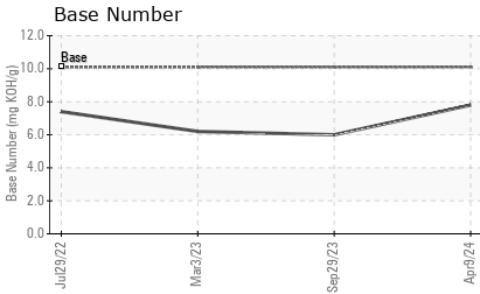
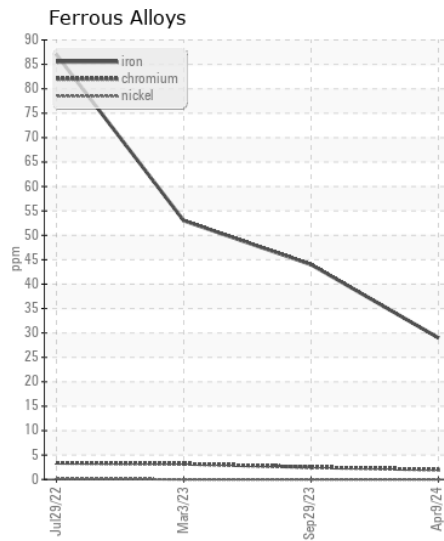
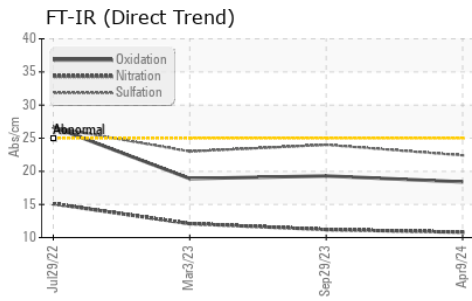
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	7	8	12
Potassium	ppm	ASTM D5185m	>20	43	124	166
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	0.9	1.1	1
Nitration	Abs/cm	*ASTM D7624	>20	10.8	11.2	12.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.4	24.0	23.0
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

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	2	3
Boron	ppm	ASTM D5185m	316	39	43	28
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	1.2	50	37	78
Manganese	ppm	ASTM D5185m		0	<1	2
Magnesium	ppm	ASTM D5185m	24	456	151	105
Calcium	ppm	ASTM D5185m	2292	1736	2046	2058
Phosphorus	ppm	ASTM D5185m	1064	1152	944	890
Zinc	ppm	ASTM D5185m	1160	1282	1219	1174
Sulfur	ppm	ASTM D5185m	4996	3217	3309	3475
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.4	19.3	18.9
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	7.8	6.0	6.2
Visc @ 100°C	cSt	ASTM D445	15.7	13.5	14.2	13.6



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : IL0033003

Lab Number : 06151804

Unique Number : 10981882

Test Package : FLEET

Received : 17 Apr 2024

Tested : 18 Apr 2024

Diagnosed : 18 Apr 2024 - Wes Davis

IDEALISE OF NORTHWEST WI

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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)