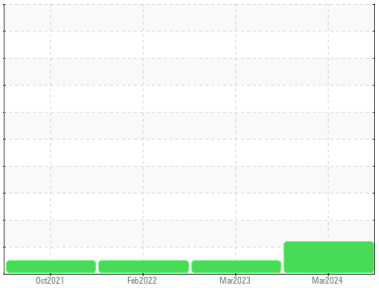
OIL ANALYSIS REPORT

Sample Rating Trend



DEGRADATION

Machine Id
INTERNATIONAL 441389
Component
Diesel Engine
Fluid
{not provided} (--- GAL)

DIAGNOSIS

Recommendation
The oil is near the end of it`s useful service life, recommend schedule an oil change. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
There is no indication of any contamination in the oil.

Fluid Condition
The BN level is low. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**IL0030399**	IL0026644	IL0024332
Sample Date		Client Info		**05 Mar 2024**	06 Mar 2023	02 Feb 2022
Machine Age	mls	Client Info		**151237**	104052	71057
Oil Age	mls	Client Info		**0**	32995	71057
Oil Changed		Client Info		**N/A**	Changed	Changed
Sample Status				**ABNORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>2.0	**<1.0**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**69**	42	12
Chromium	ppm	ASTM D5185m	>20	**2**	2	<1
Nickel	ppm	ASTM D5185m	>4	**<1**	0	0
Titanium	ppm	ASTM D5185m		**0**	<1	0
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**7**	6	3
Lead	ppm	ASTM D5185m	>40	**6**	6	1
Copper	ppm	ASTM D5185m	>330	**2**	1	<1
Tin	ppm	ASTM D5185m	>15	**2**	2	<1
Antimony	ppm	ASTM D5185m		**---**	---	0
Vanadium	ppm	ASTM D5185m		**0**	<1	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**4**	17	40
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**60**	40	42
Manganese	ppm	ASTM D5185m		**1**	2	<1
Magnesium	ppm	ASTM D5185m		**902**	497	534
Calcium	ppm	ASTM D5185m		**1217**	1719	1818
Phosphorus	ppm	ASTM D5185m		**985**	686	798
Zinc	ppm	ASTM D5185m		**1224**	854	1003
Sulfur	ppm	ASTM D5185m		**3183**	2077	2351

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**10**	11	7
Sodium	ppm	ASTM D5185m		**2**	0	2
Potassium	ppm	ASTM D5185m	>20	**15**	11	4

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**1.4**	0.9	0.4
Nitration	Abs/cm	*ASTM D7624	>20	**14.9**	13.3	8.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	**32.0**	25.6	23.9

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**33.4**	27.0	22.4
Base Number (BN)	mg KOH/g	ASTM D2896		▲ **3.5**	6.7	10.4

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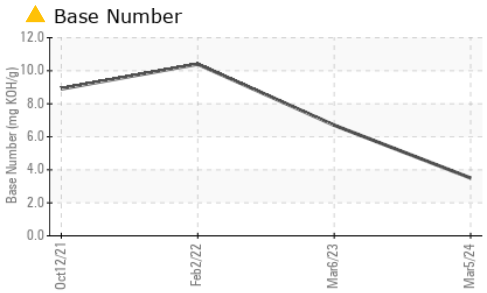
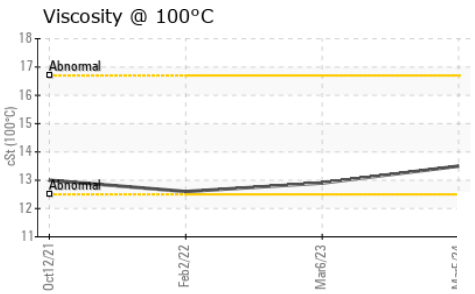
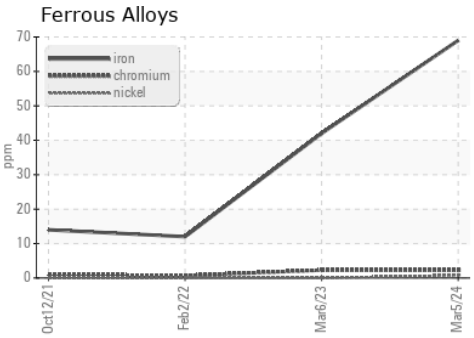


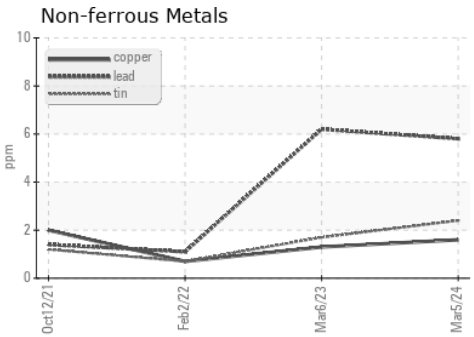


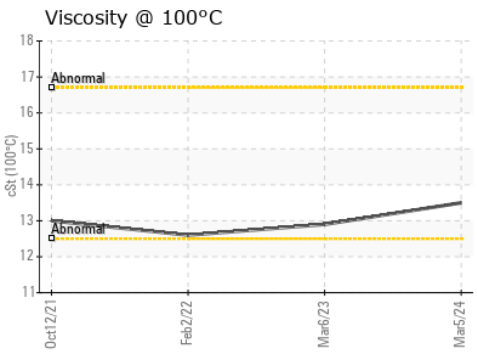
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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
Free Water	scalar	*Visual		**NEG**	NEG	NEG

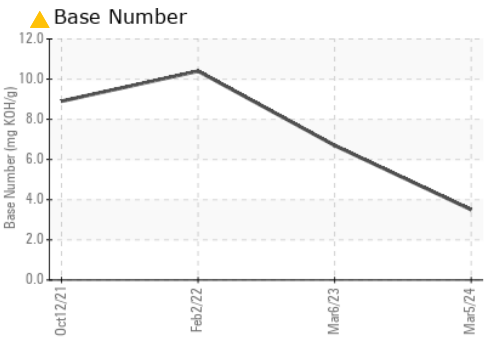
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		**13.5**	12.9	12.6

GRAPHS









Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : IL0030399
Lab Number : 06133089
Unique Number : 10952554
Test Package : FLEET

Received : 29 Mar 2024
Tested : 01 Apr 2024
Diagnosed : 02 Apr 2024 - Don Baldridge

Certificate L2367

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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