IDEALEASE FLEET

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Machine Id
INTERNATIONAL 109111
Component
Diesel Engine
Fluid
SHELL ROTELLA T 15W40 (--- QTS)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

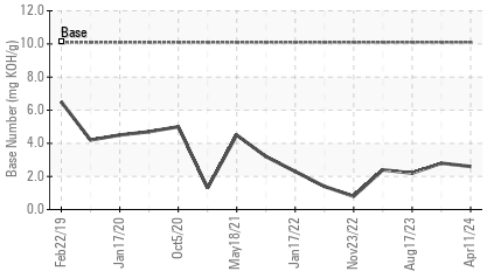
There is no indication of any contamination in the oil.

FLUID CONDITION

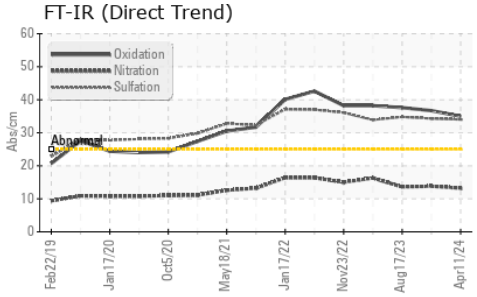
The BN level is low.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**IL0033006**	IL0033076	IL0027470
Sample Date		Client Info		**11 Apr 2024**	15 Jan 2024	17 Aug 2023
Machine Age	mls	Client Info		**683813**	646426	601480
Oil Age	mls	Client Info		**37387**	44946	43451
Filter Age	mls	Client Info		**37387**	44946	43451
Oil Changed		Client Info		**Changed**	Changed	Changed
Filter Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>90	**38**	76	58
Chromium	ppm	ASTM D5185m	>20	**1**	2	2
Nickel	ppm	ASTM D5185m	>2	**0**	0	0
Titanium	ppm	ASTM D5185m	>2	**0**	<1	<1
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**6**	10	7
Lead	ppm	ASTM D5185m	>40	**6**	9	6
Copper	ppm	ASTM D5185m	>330	**<1**	2	2
Tin	ppm	ASTM D5185m	>15	**<1**	0	<1
Vanadium	ppm	ASTM D5185m		**0**	<1	<1
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	**5**	6	7
Potassium	ppm	ASTM D5185m	>20	**13**	19	18
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	**0.7**	0.7	0.5
Nitration	Abs/cm	*ASTM D7624	>20	**13.2**	13.8	13.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	**34.0**	34.3	34.8
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
Sodium	ppm	ASTM D5185m		**3**	5	7
Boron	ppm	ASTM D5185m	316	**30**	21	21
Barium	ppm	ASTM D5185m	0.0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	1.2	**24**	35	36
Manganese	ppm	ASTM D5185m		**0**	<1	<1
Magnesium	ppm	ASTM D5185m	24	**236**	399	271
Calcium	ppm	ASTM D5185m	2292	**2229**	1971	2064
Phosphorus	ppm	ASTM D5185m	1064	**1154**	1071	1001
Zinc	ppm	ASTM D5185m	1160	**1361**	1377	1274
Sulfur	ppm	ASTM D5185m	4996	**3358**	3203	3740
Oxidation	Abs/.1mm	*ASTM D7414	>25	**35.0**	36.7	37.6
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	▲ **2.6**	▲ 2.8	▲ 2.2
Visc @ 100°C	cSt	ASTM D445	15.7	**15.1**	15.2	15.1

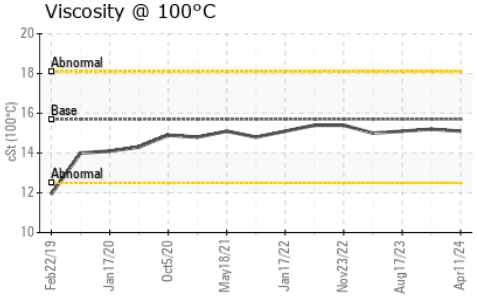
Base Number



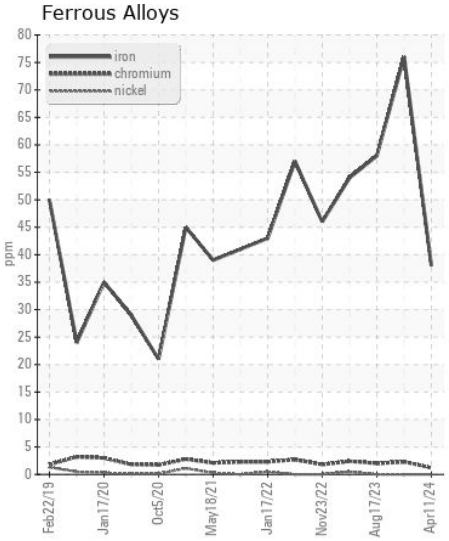
FT-IR (Direct Trend)



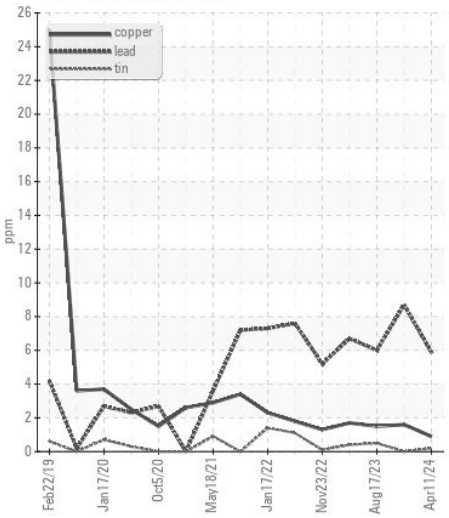
Viscosity @ 100°C



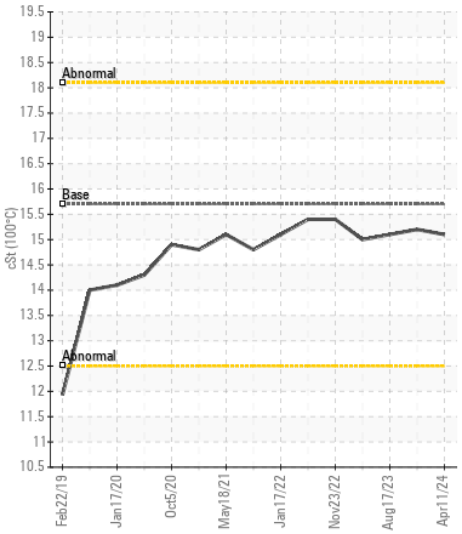
Ferrous Alloys



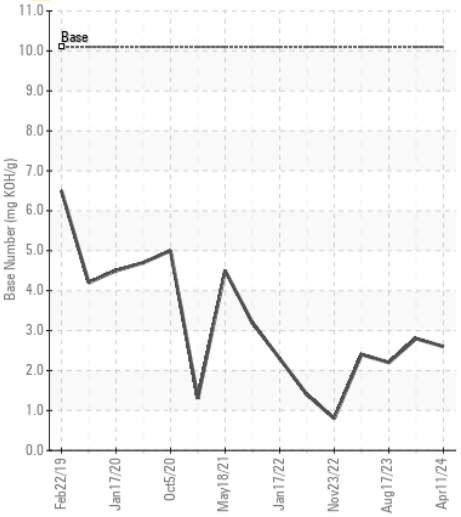
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : IL0033006
Lab Number : 06151807
Unique Number : 10981885
Test Package : FLEET

Received : 17 Apr 2024
Tested : 18 Apr 2024
Diagnosed : 19 Apr 2024 - Don Baldridge

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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