



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
15335
 Component
Diesel Engine
 Fluid
SHELL ROTELLA T 15W40 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0866997	WC0798066	WC0798043
Sample Date		Client Info		15 Apr 2024	29 Jun 2023	26 Apr 2023
Machine Age	mls	Client Info		171317	48978	24999
Oil Age	mls	Client Info		23131	23979	0
Filter Age	mls	Client Info		23131	23979	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	18	26	35
Chromium	ppm	ASTM D5185m	>20	1	<1	<1
Nickel	ppm	ASTM D5185m	>4	2	0	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	<1	<1	0
Aluminum	ppm	ASTM D5185m	>20	4	11	23
Lead	ppm	ASTM D5185m	>40	2	<1	3
Copper	ppm	ASTM D5185m	>330	8	208	▲ 440
Tin	ppm	ASTM D5185m	>15	2	3	5
Vanadium	ppm	ASTM D5185m		<1	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.

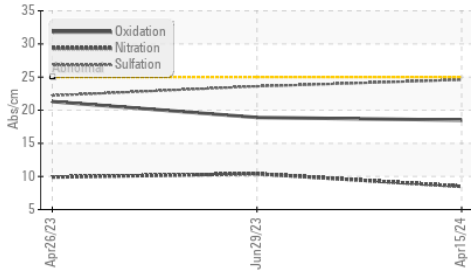
Silicon	ppm	ASTM D5185m	>25	6	10	▲ 46
Potassium	ppm	ASTM D5185m	>20	2	35	70
Fuel		WC Method	>5	<1.0	<1.0	0.5
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.6	0.7	0.5
Nitration	Abs/cm	*ASTM D7624	>20	8.5	10.4	9.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.6	23.6	22.2
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

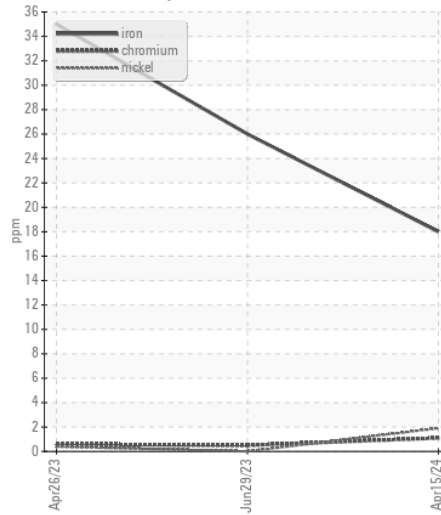
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	0	4
Boron	ppm	ASTM D5185m	316	184	5	116
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	1.2	89	78	112
Manganese	ppm	ASTM D5185m		1	2	4
Magnesium	ppm	ASTM D5185m	24	427	891	769
Calcium	ppm	ASTM D5185m	2292	1424	1205	1542
Phosphorus	ppm	ASTM D5185m	1064	1172	915	795
Zinc	ppm	ASTM D5185m	1160	1293	1166	926
Sulfur	ppm	ASTM D5185m	4996	3820	2491	2714
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.5	18.9	21.3
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	5.5	7.4	6.7
Visc @ 100°C	cSt	ASTM D445	15.7	13.2	12.5	● 10.2

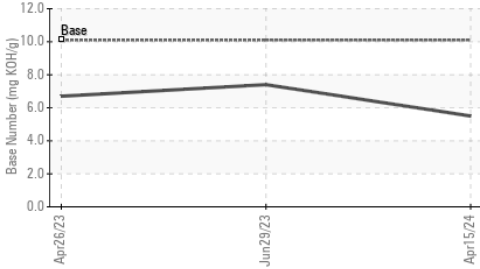
FT-IR (Direct Trend)



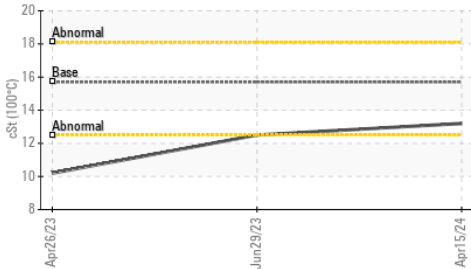
Ferrous Alloys



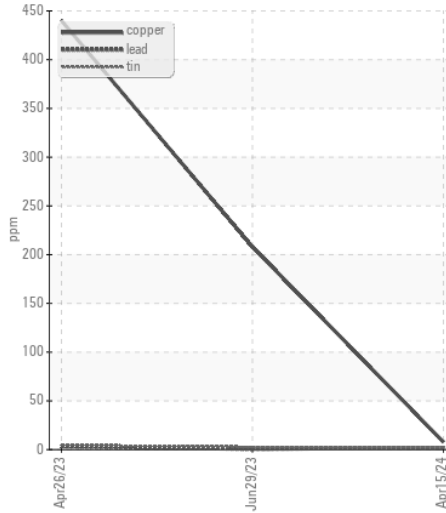
Base Number



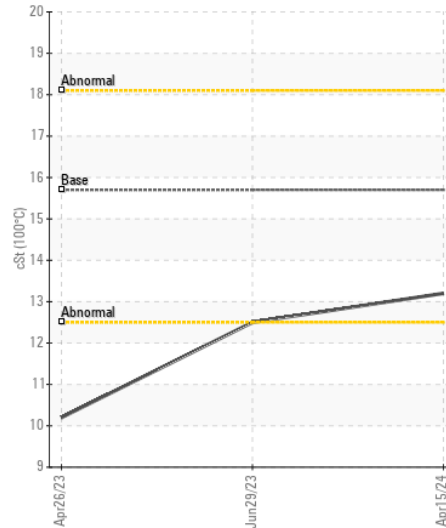
Viscosity @ 100°C



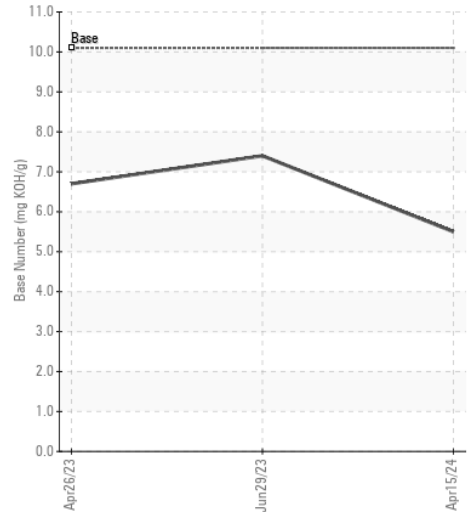
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0866997
Lab Number : 06152555
Unique Number : 10982633
Test Package : FLEET

Received : 17 Apr 2024
Tested : 18 Apr 2024
Diagnosed : 18 Apr 2024 - Wes Davis

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 WINSTON SALEM, NC
 US 27105
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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)