



WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
1779
Component
Diesel Engine
Fluid
SHELL ROTELLA T 10W30 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0827669	WC0827826	WC0827737
Sample Date		Client Info		12 Jun 2024	04 Mar 2024	24 Nov 2023
Machine Age	mls	Client Info		480728	0	425089
Oil Age	mls	Client Info		0	24013	26300
Filter Age	mls	Client Info		0	24013	26300
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	>100	28	20	20
Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	4	3	2
Lead	ppm	ASTM D5185m	>40	2	4	2
Copper	ppm	ASTM D5185m	>330	<1	<1	0
Tin	ppm	ASTM D5185m	>15	<1	1	0
Vanadium	ppm	ASTM D5185m		0	<1	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.

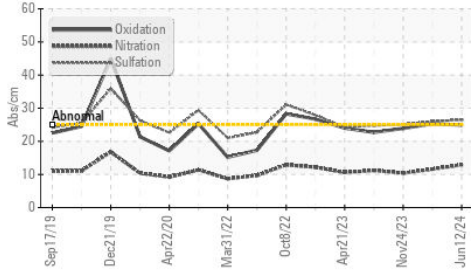
Silicon	ppm	ASTM D5185m	>25	5	4	5
Potassium	ppm	ASTM D5185m	>20	4	3	2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.6	0.5	0.4
Nitration	Abs/cm	*ASTM D7624	>20	12.9	11.6	10.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.5	26.0	25.1
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

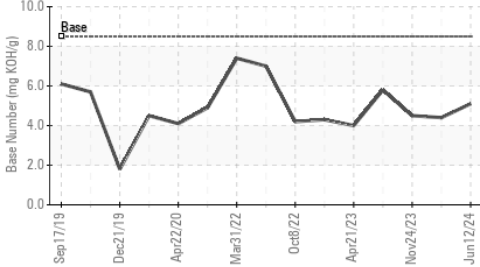
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	2	<1
Boron	ppm	ASTM D5185m	269	6	9	19
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m	0	63	57	64
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m	20	969	777	449
Calcium	ppm	ASTM D5185m	1521	1237	1399	2021
Phosphorus	ppm	ASTM D5185m	948	1136	1010	1155
Zinc	ppm	ASTM D5185m	893	1381	1283	1488
Sulfur	ppm	ASTM D5185m		3643	3685	3600
Oxidation	Abs/.1mm	*ASTM D7414	>25	24.9	25.3	23.9
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	5.1	4.4	4.5
Visc @ 100°C	cSt	ASTM D445	11.0	11.6	11.8	12.9

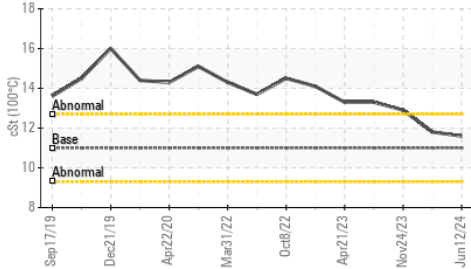
FT-IR (Direct Trend)



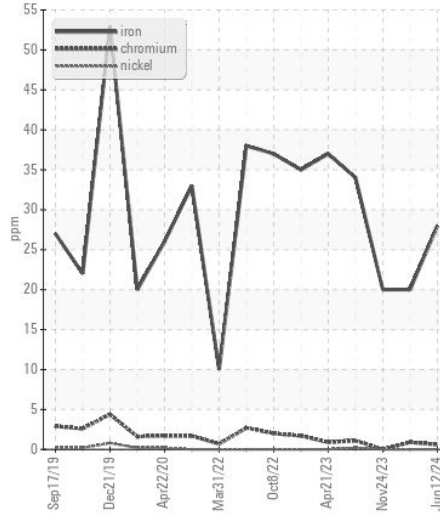
Base Number



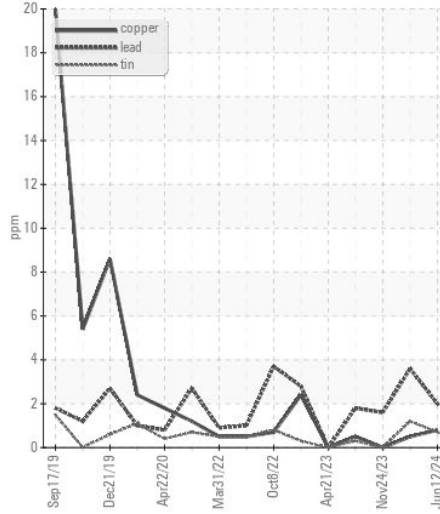
Viscosity @ 100°C



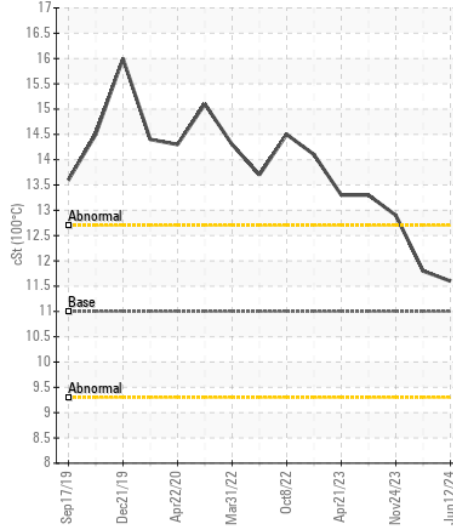
Ferrous Alloys



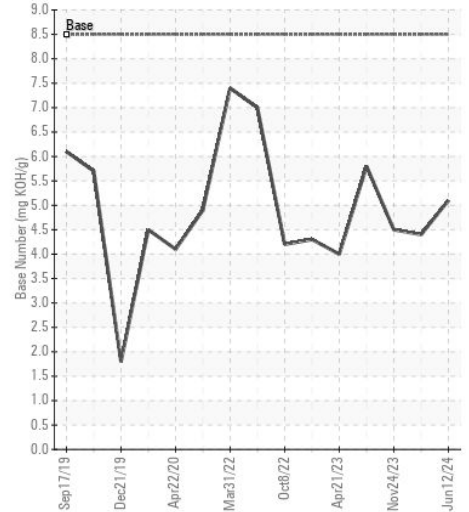
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0827669
Lab Number : 06217597
Unique Number : 11090461
Test Package : FLEET

Received : 21 Jun 2024
Tested : 25 Jun 2024
Diagnosed : 25 Jun 2024 - Don Baldrige

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 415 S WESTERN AVENUE
 OKLAHOMA CITY, OK
 US 73109
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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)