



WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
7465
 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		WC0827666	WC0827736	WC0691252
Sample Date		Client Info		18 Jun 2024	22 Nov 2023	20 May 2023
Machine Age	mls	Client Info		135072	121012	106330
Oil Age	mls	Client Info		13000	0	0
Filter Age	mls	Client Info		13000	0	0
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	27	28	31
Chromium	ppm	ASTM D5185m	>20	1	<1	2
Nickel	ppm	ASTM D5185m	>4	1	0	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	<1	0	<1
Aluminum	ppm	ASTM D5185m	>20	8	7	8
Lead	ppm	ASTM D5185m	>40	0	<1	<1
Copper	ppm	ASTM D5185m	>330	3	<1	5
Tin	ppm	ASTM D5185m	>15	0	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	<1
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.

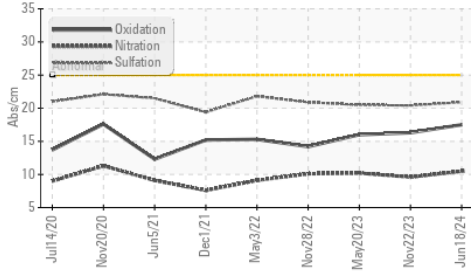
Silicon	ppm	ASTM D5185m	>25	9	6	6
Potassium	ppm	ASTM D5185m	>20	7	6	8
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1	0.9	0.8
Nitration	Abs/cm	*ASTM D7624	>20	10.5	9.6	10.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.9	20.4	20.5
Silt	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

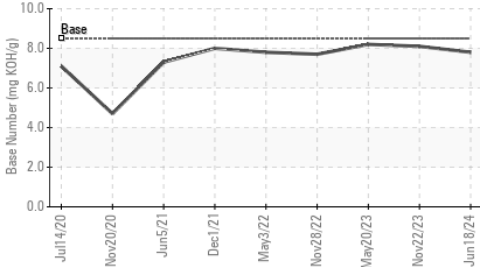
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	<1	2
Boron	ppm	ASTM D5185m	269	18	52	63
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m	0	62	64	58
Manganese	ppm	ASTM D5185m		1	0	<1
Magnesium	ppm	ASTM D5185m	20	820	432	408
Calcium	ppm	ASTM D5185m	1521	1394	1987	1848
Phosphorus	ppm	ASTM D5185m	948	1093	1158	1043
Zinc	ppm	ASTM D5185m	893	1360	1478	1290
Sulfur	ppm	ASTM D5185m		3968	3789	3842
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.5	16.3	16.0
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.8	8.1	8.2
Visc @ 100°C	cSt	ASTM D445	11.0	11.3	12.8	13.0

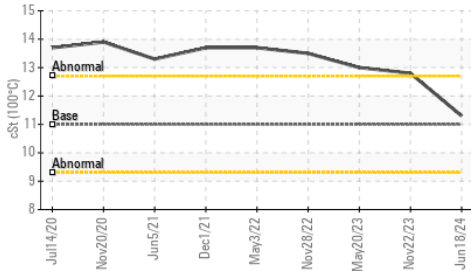
FT-IR (Direct Trend)



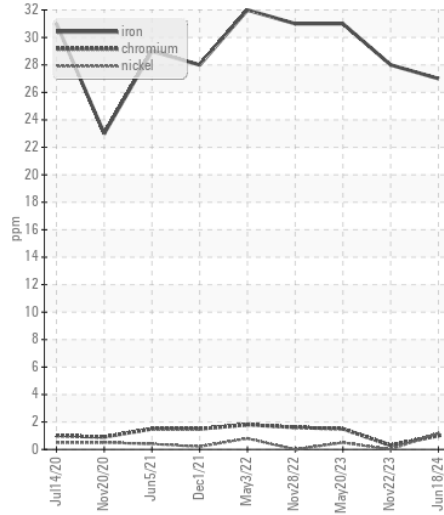
Base Number



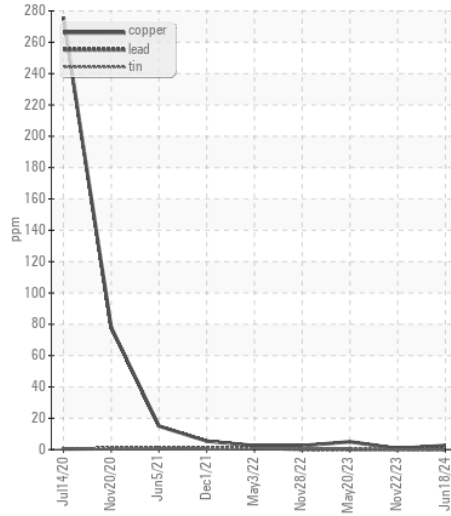
Viscosity @ 100°C



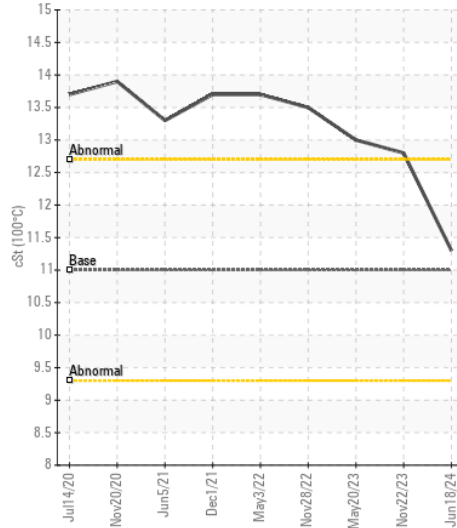
Ferrous Alloys



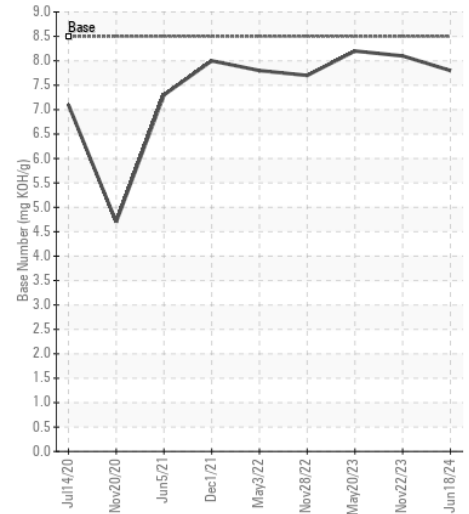
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0827666
Lab Number : 06223049
Unique Number : 11101246
Test Package : FLEET
Received : 27 Jun 2024
Tested : 28 Jun 2024
Diagnosed : 30 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)