



WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
15295
Component
Diesel Engine
Fluid
EXXON 15W40 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0933288	WC0903526	WC0858285
Sample Date		Client Info		15 May 2024	08 Feb 2024	28 Nov 2023
Machine Age	mls	Client Info		259955	228247	209538
Oil Age	mls	Client Info		17963	18709	19850
Filter Age	mls	Client Info		17963	18709	19850
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	21	17	12
Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Nickel	ppm	ASTM D5185m	>4	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	4	2
Lead	ppm	ASTM D5185m	>40	<1	0	2
Copper	ppm	ASTM D5185m	>330	4	4	4
Tin	ppm	ASTM D5185m	>15	<1	1	<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.

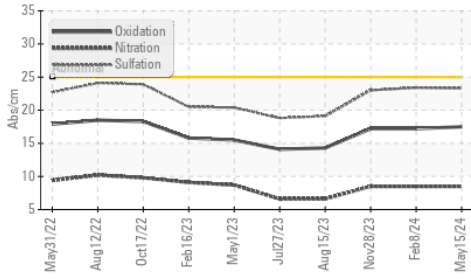
Silicon	ppm	ASTM D5185m	>25	6	5	6
Potassium	ppm	ASTM D5185m	>20	3	3	3
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.3	0.4
Nitration	Abs/cm	*ASTM D7624	>20	8.5	8.5	8.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.3	23.4	23.0
Silt	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

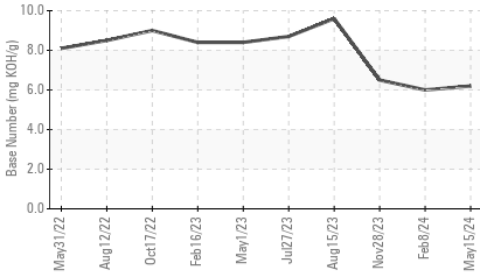
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	<1	<1
Boron	ppm	ASTM D5185m		189	175	180
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		96	75	81
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m		449	417	510
Calcium	ppm	ASTM D5185m		1577	1227	1283
Phosphorus	ppm	ASTM D5185m		1144	971	958
Zinc	ppm	ASTM D5185m		1412	1198	1291
Sulfur	ppm	ASTM D5185m		4019	2883	3223
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.5	17.2	17.2
Base Number (BN)	mg KOH/g	ASTM D2896		6.2	6.0	6.5
Visc @ 100°C	cSt	ASTM D445	14.4	13.6	13.3	13.3

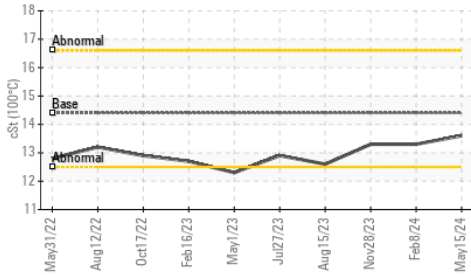
FT-IR (Direct Trend)



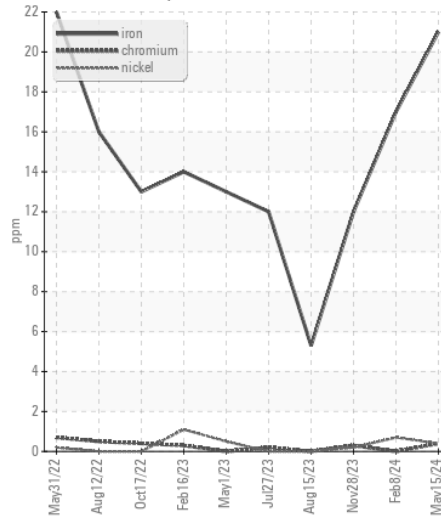
Base Number



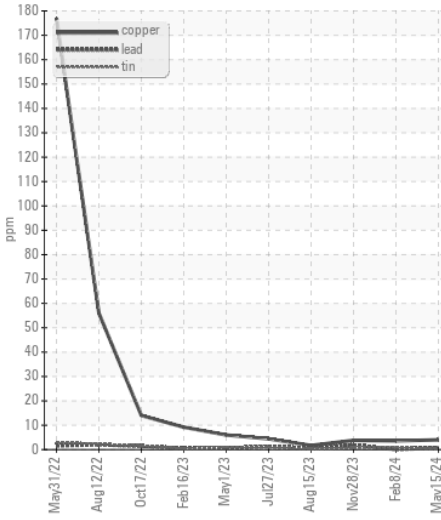
Viscosity @ 100°C



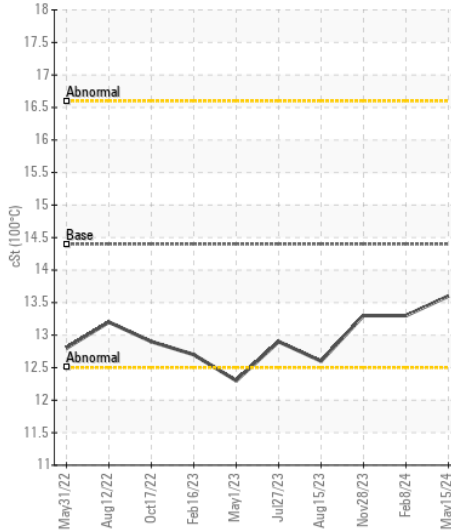
Ferrous Alloys



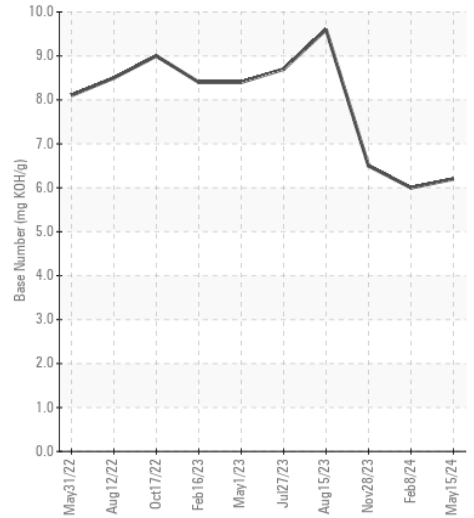
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0933288
Lab Number : 06211112
Unique Number : 11083976
Test Package : FLEET
Received : 14 Jun 2024
Tested : 18 Jun 2024
Diagnosed : 18 Jun 2024 - Angela Borella

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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)