



WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id
15294
Component
Diesel Engine
Fluid
EXXON 15W40 (--- GAL)

RECOMMENDATION

Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0933294	WC0903484	WC0885639
Sample Date		Client Info		30 May 2024	25 Mar 2024	12 Dec 2023
Machine Age	mls	Client Info		365546	341458	298644
Oil Age	mls	Client Info		24088	20434	23284
Filter Age	mls	Client Info		24088	20434	23284
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	21	15	11
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	2	4	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	7	4	4
Lead	ppm	ASTM D5185m	>40	2	2	<1
Copper	ppm	ASTM D5185m	>330	4	4	4
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

Sodium and/or potassium levels are high. Test for glycol is negative.

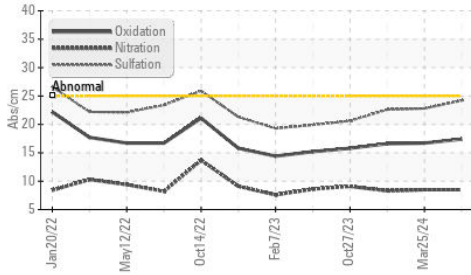
Silicon	ppm	ASTM D5185m	>25	8	6	4
Potassium	ppm	ASTM D5185m	>20	▲ 118	▲ 90	5
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.5	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	8.5	8.5	8.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.2	22.8	22.6
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

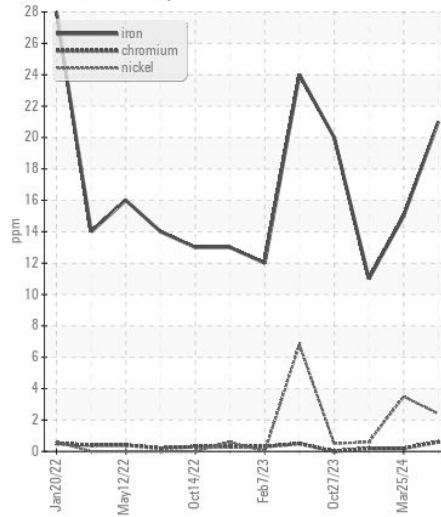
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		▲ 95	▲ 68	0
Boron	ppm	ASTM D5185m		130	187	182
Barium	ppm	ASTM D5185m		0	0	11
Molybdenum	ppm	ASTM D5185m		98	88	80
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m		423	392	459
Calcium	ppm	ASTM D5185m		1512	1475	1259
Phosphorus	ppm	ASTM D5185m		1076	965	1074
Zinc	ppm	ASTM D5185m		1304	1302	1159
Sulfur	ppm	ASTM D5185m		3695	3743	3412
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.4	16.7	16.6
Base Number (BN)	mg KOH/g	ASTM D2896		5.7	6.2	6.5
Visc @ 100°C	cSt	ASTM D445	14.4	13.4	13.2	13.4

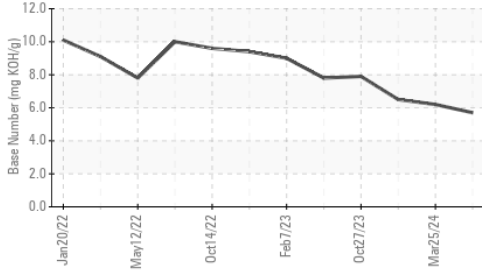
FT-IR (Direct Trend)



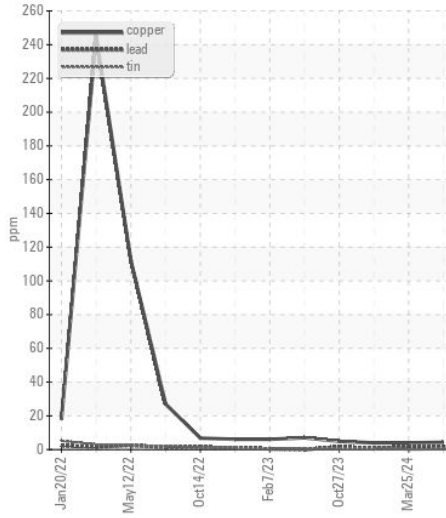
Ferrous Alloys



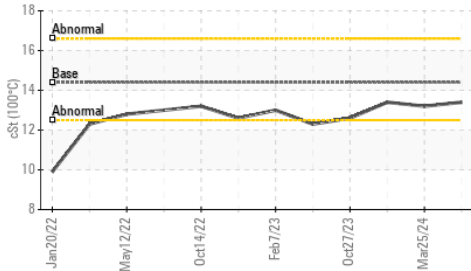
Base Number



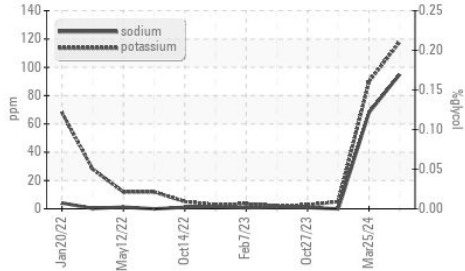
Non-ferrous Metals



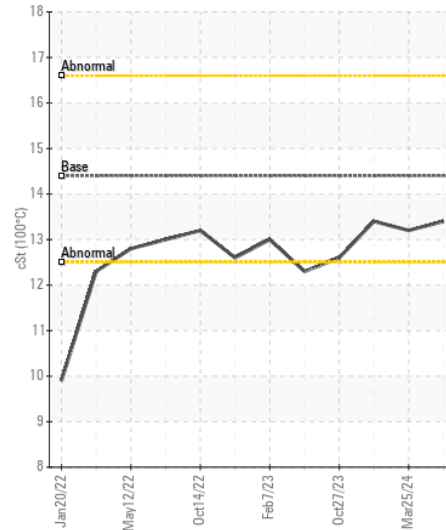
Viscosity @ 100°C



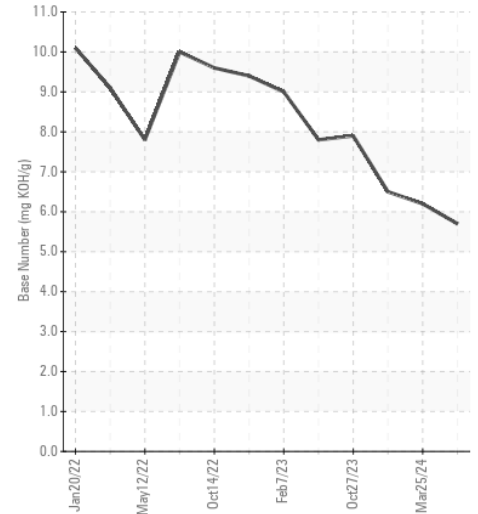
Glycol Contamination



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0933294 **Received** : 14 Jun 2024
Lab Number : 06211119 **Tested** : 19 Jun 2024
Unique Number : 11083983 **Diagnosed** : 19 Jun 2024 - Sean Felton
Test Package : FLEET (Additional Tests: Glycol)

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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)