



WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
15297
Component
Diesel Engine
Fluid
EXXON 15W40 (--- QTS)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0815959	WC0815964	WC0885652
Sample Date		Client Info		13 Feb 2024	05 Jan 2024	28 Nov 2023
Machine Age	mls	Client Info		400642	378888	356887
Oil Age	mls	Client Info		0	0	21269
Filter Age	mls	Client Info		0	0	21269
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ATTENTION	ABNORMAL	MARGINAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	51	30	24
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	3	2
Lead	ppm	ASTM D5185m	>40	<1	<1	2
Copper	ppm	ASTM D5185m	>330	6	4	4
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

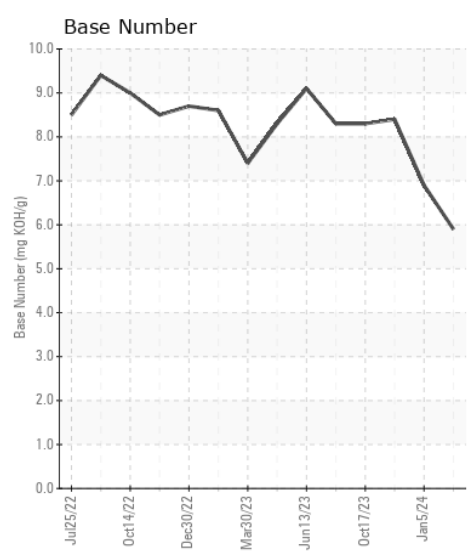
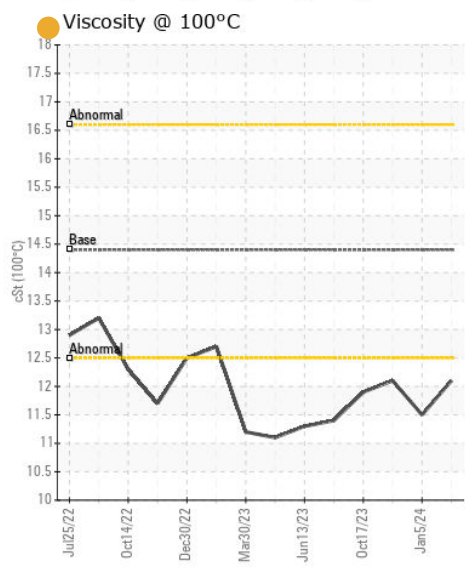
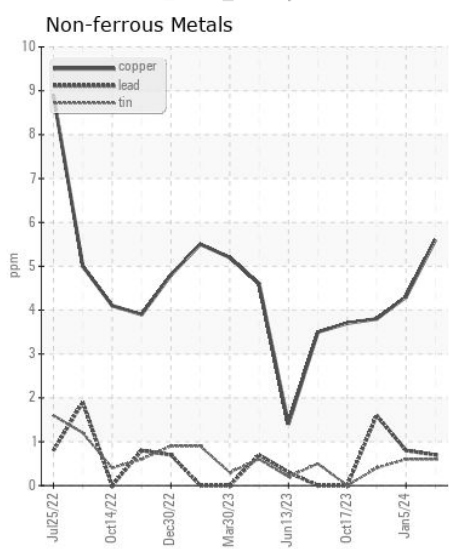
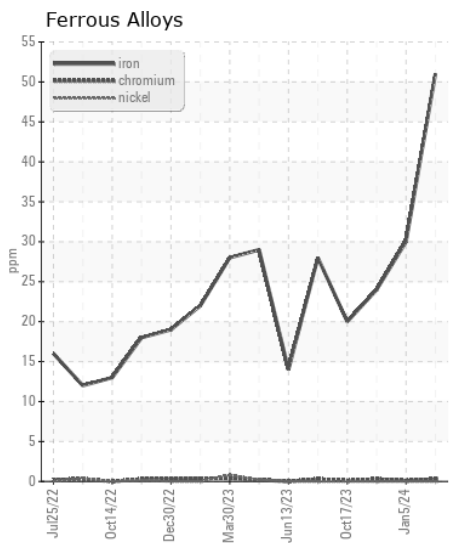
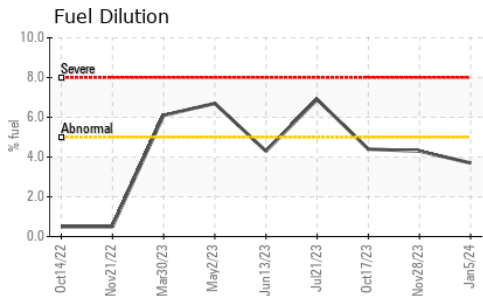
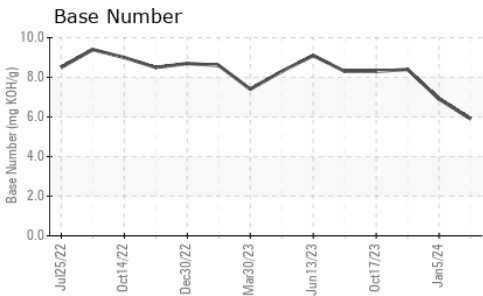
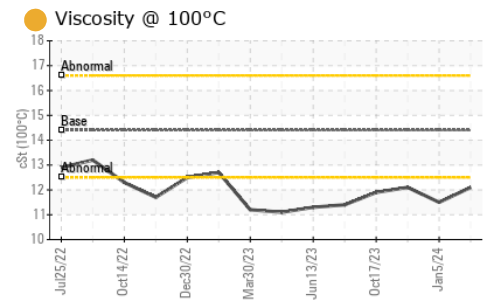
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	7	7	8
Potassium	ppm	ASTM D5185m	>20	1	1	1
Fuel	%	ASTM D3524	>5	<1.0	▲ 3.7	▲ 4.3
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	7.9	7.9	8.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.1	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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		3	2	2
Boron	ppm	ASTM D5185m		235	113	1
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		100	89	60
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		472	734	934
Calcium	ppm	ASTM D5185m		1443	1306	1057
Phosphorus	ppm	ASTM D5185m		1135	1070	921
Zinc	ppm	ASTM D5185m		1328	1267	1223
Sulfur	ppm	ASTM D5185m		3290	3204	3083
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.1	15.4	16.9
Base Number (BN)	mg KOH/g	ASTM D2896		5.9	6.9	8.4
Visc @ 100°C	cSt	ASTM D445	14.4	● 12.1	▲ 11.5	12.1



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0815959 **Received** : 28 Feb 2024
Lab Number : 06103548 **Tested** : 04 Mar 2024
Unique Number : 10901778 **Diagnosed** : 04 Mar 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

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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)