



WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
46533
 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		WC0933368	WC0903537	WC0885619
Sample Date		Client Info		10 May 2024	12 Mar 2024	09 Jan 2024
Machine Age	mls	Client Info		140011	107902	95299
Oil Age	mls	Client Info		17162	12603	9776
Filter Age	mls	Client Info		17162	12603	9776
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ATTENTION	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	16	14	10
Chromium	ppm	ASTM D5185m	>20	1	1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	0	2
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	9	13	8
Lead	ppm	ASTM D5185m	>40	<1	<1	0
Copper	ppm	ASTM D5185m	>330	0	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	0	<1
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.

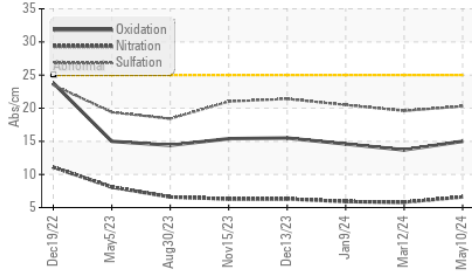
Silicon	ppm	ASTM D5185m	>25	8	5	6
Potassium	ppm	ASTM D5185m	>20	7	11	10
Fuel	%	ASTM D3524	>5	<1.0	1.7	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	6.6	5.8	5.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.3	19.6	20.5
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

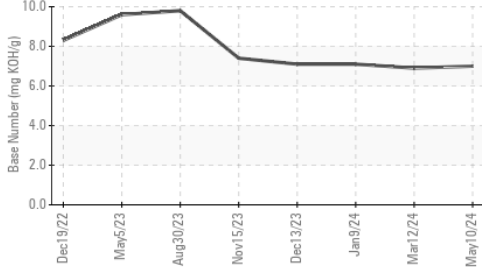
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<1	<1	2
Boron	ppm	ASTM D5185m		377	318	361
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		96	68	73
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		404	358	409
Calcium	ppm	ASTM D5185m		1356	1249	1346
Phosphorus	ppm	ASTM D5185m		1024	866	975
Zinc	ppm	ASTM D5185m		1202	1170	1123
Sulfur	ppm	ASTM D5185m		3522	3569	2992
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.0	13.7	14.6
Base Number (BN)	mg KOH/g	ASTM D2896		7.0	6.9	7.1
Visc @ 100°C	cSt	ASTM D445	14.4	12.4	12.0	12.8

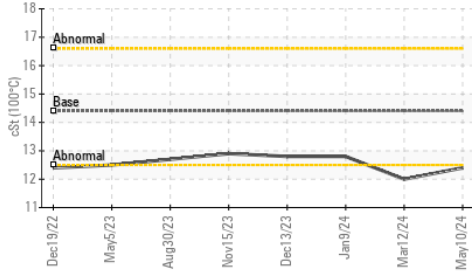
FT-IR (Direct Trend)



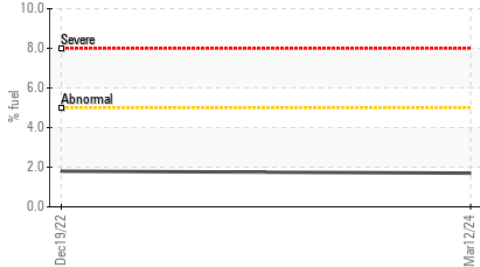
Base Number



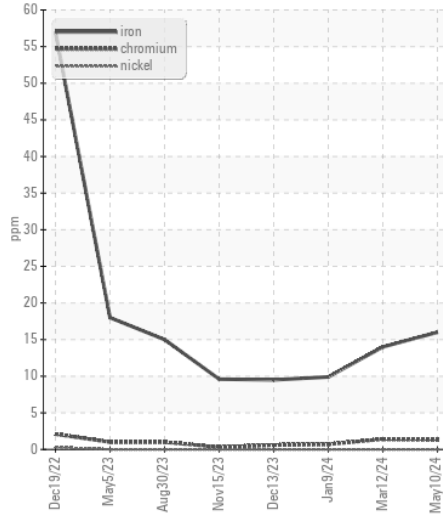
Viscosity @ 100°C



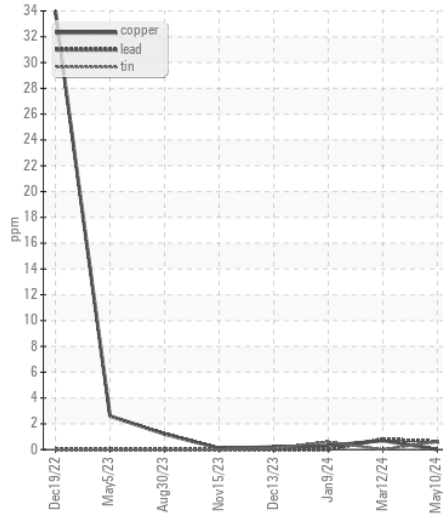
Fuel Dilution



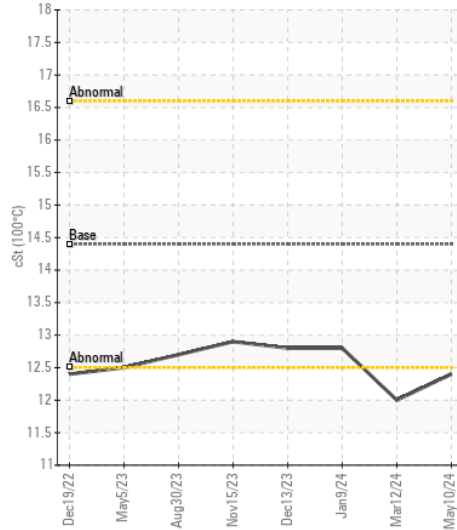
Ferrous Alloys



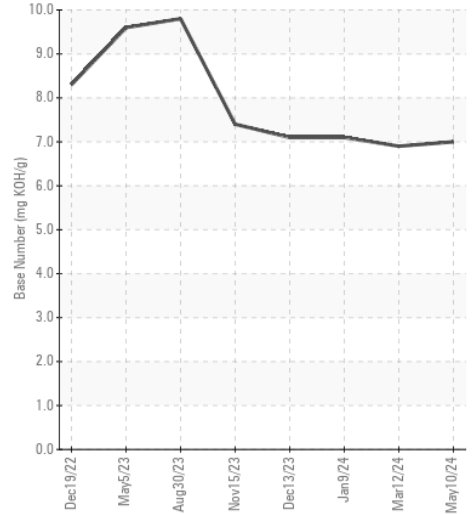
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0933368
Lab Number : 06187105
Unique Number : 11043857
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)