



WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
70078
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		WC0936249	WC0717520	WC0628355
Sample Date		Client Info		03 Jul 2024	25 Jul 2022	01 Oct 2021
Machine Age	mls	Client Info		463098	366437	266372
Oil Age	mls	Client Info		25000	0	0
Filter Age	mls	Client Info		25000	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	21	▲ 191	▲ 166
Chromium	ppm	ASTM D5185m	>20	<1	4	3
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	<1	<1
Aluminum	ppm	ASTM D5185m	>20	3	4	3
Lead	ppm	ASTM D5185m	>40	1	23	3
Copper	ppm	ASTM D5185m	>330	<1	2	1
Tin	ppm	ASTM D5185m	>15	0	1	0
Vanadium	ppm	ASTM D5185m		0	0	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.

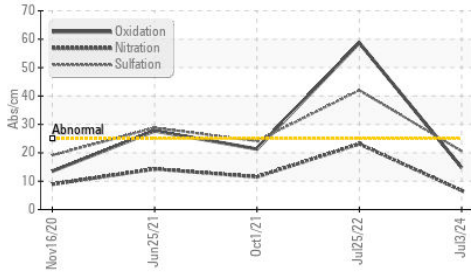
Silicon	ppm	ASTM D5185m	>25	11	8	6
Potassium	ppm	ASTM D5185m	>20	2	6	3
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.5	0.3
Nitration	Abs/cm	*ASTM D7624	>20	6.7	23.1	11.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.6	42.0	24.1
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

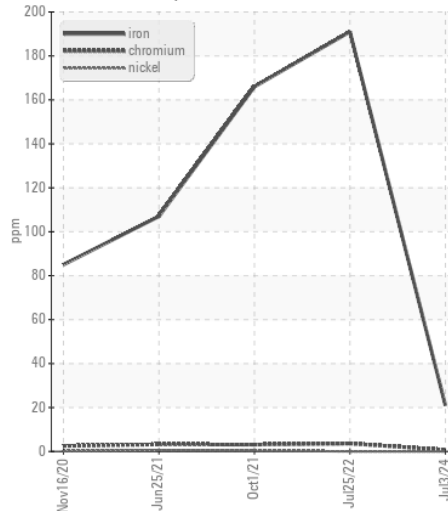
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	4	2
Boron	ppm	ASTM D5185m		289	27	6
Barium	ppm	ASTM D5185m		0	1	0
Molybdenum	ppm	ASTM D5185m		85	61	85
Manganese	ppm	ASTM D5185m		<1	2	2
Magnesium	ppm	ASTM D5185m		439	794	1095
Calcium	ppm	ASTM D5185m		1519	1422	1262
Phosphorus	ppm	ASTM D5185m		1067	1100	1039
Zinc	ppm	ASTM D5185m		1305	1382	1232
Sulfur	ppm	ASTM D5185m		3888	2732	4354
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.8	58.7	21.3
Base Number (BN)	mg KOH/g	ASTM D2896		7.0	1	6.7
Visc @ 100°C	cSt	ASTM D445	14.4	12.9	16.1	13.5

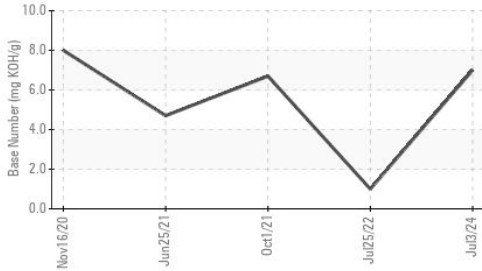
FT-IR (Direct Trend)



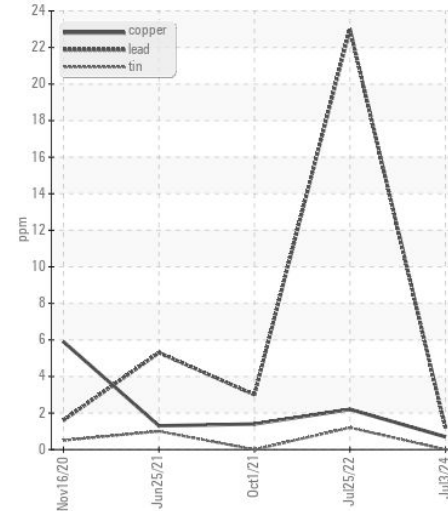
Ferrous Alloys



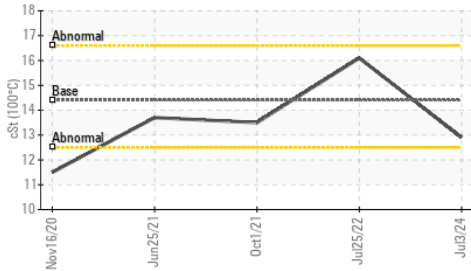
Base Number



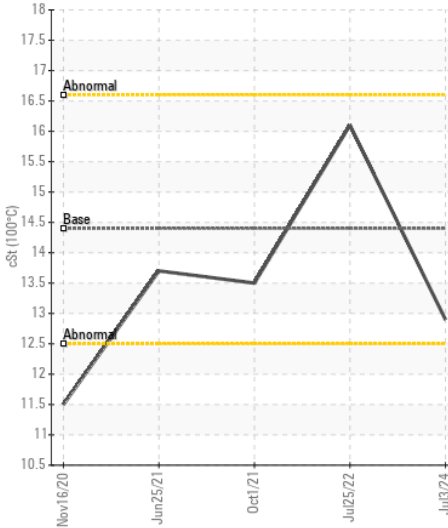
Non-ferrous Metals



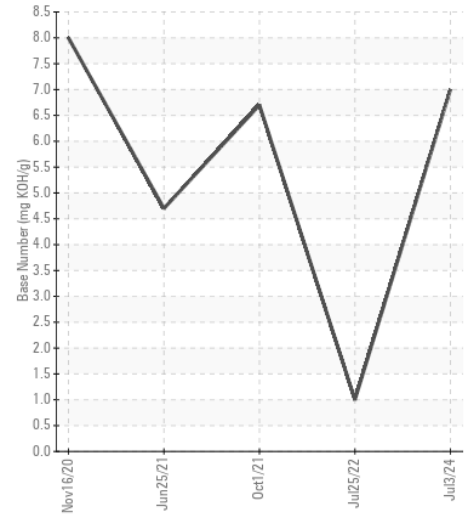
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0936249
Lab Number : 06231063
Unique Number : 11114556
Test Package : FLEET
Received : 08 Jul 2024
Tested : 10 Jul 2024
Diagnosed : 10 Jul 2024 - Don Baldridge

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 WINSTON SALEM, NC
 US 27105
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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)