



WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
INTERNATIONAL 45649
Component
Diesel Engine
Fluid
MOBIL 15W40 (42 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0842053	WC0841995	WC0794537
Sample Date		Client Info		26 Mar 2024	31 Dec 2023	25 Apr 2023
Machine Age	mls	Client Info		468863	45649	432135
Oil Age	mls	Client Info		0	0	2925
Filter Age	mls	Client Info		0	0	2925
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>90	25	13	7
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	<1	<1
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	4	3	<1
Lead	ppm	ASTM D5185m	>40	12	3	<1
Copper	ppm	ASTM D5185m	>330	2	2	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	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.

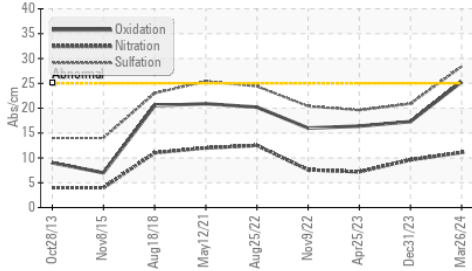
Silicon	ppm	ASTM D5185m	>25	10	11	13
Potassium	ppm	ASTM D5185m	>20	2	2	1
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.7	0.4	0.2
Nitration	Abs/cm	*ASTM D7624	>20	11.1	9.6	7.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	28.4	20.9	19.6
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

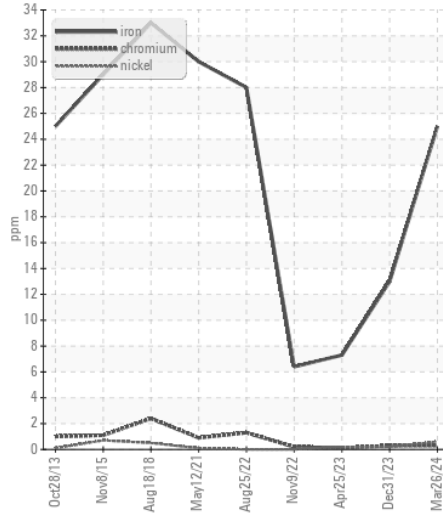
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>118	2	3	<1
Boron	ppm	ASTM D5185m		148	27	2
Barium	ppm	ASTM D5185m		0	0	2
Molybdenum	ppm	ASTM D5185m		93	67	64
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		607	969	908
Calcium	ppm	ASTM D5185m		1549	1146	1089
Phosphorus	ppm	ASTM D5185m		1138	1136	1038
Zinc	ppm	ASTM D5185m		1488	1334	1240
Sulfur	ppm	ASTM D5185m		3719	3431	3723
Oxidation	Abs/.1mm	*ASTM D7414	>25	25.3	17.3	16.4
Base Number (BN)	mg KOH/g	ASTM D2896		6.1	8.7	9.4
Visc @ 100°C	cSt	ASTM D445		14.4	13.3	13.2

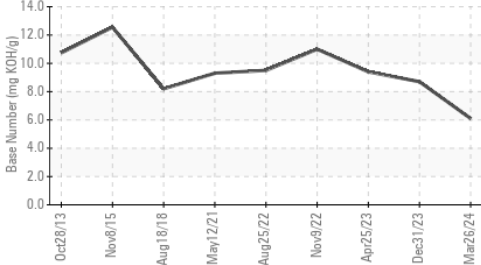
FT-IR (Direct Trend)



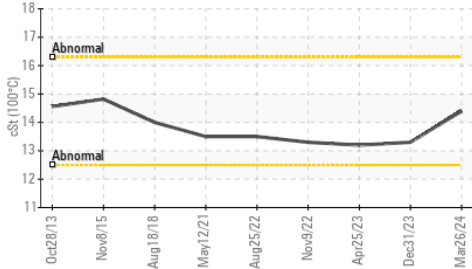
Ferrous Alloys



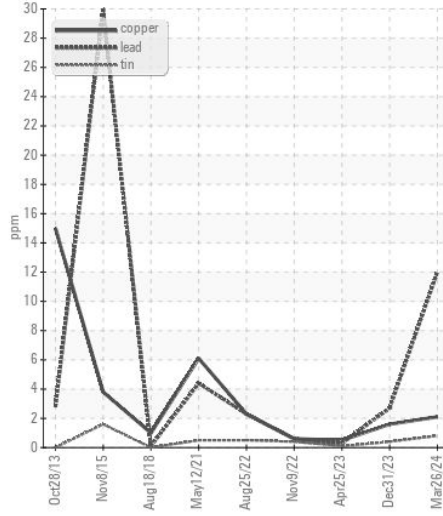
Base Number



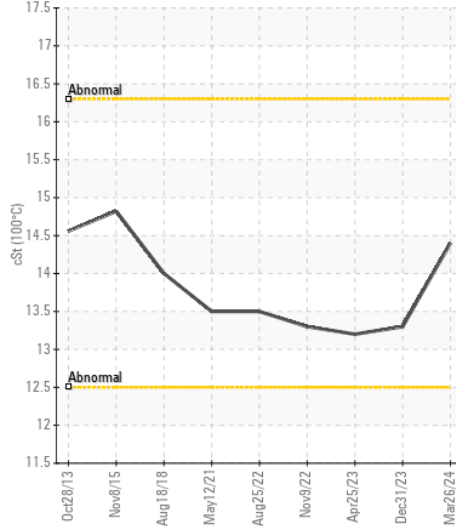
Viscosity @ 100°C



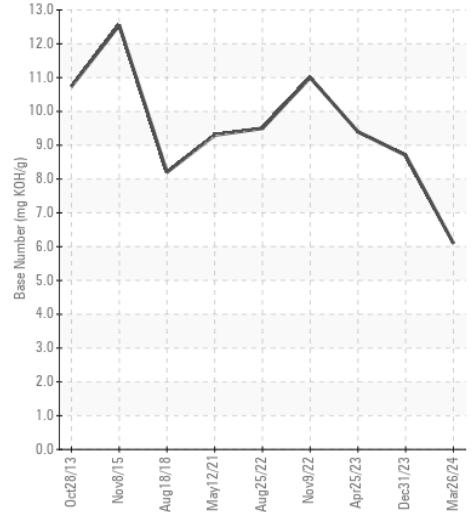
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0842053
Lab Number : 06190130
Unique Number : 11046882
Test Package : FLEET
Received : 23 May 2024
Tested : 29 May 2024
Diagnosed : 29 May 2024 - Angela Borella

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 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)