OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
C197
Component
Diesel Engine
Fluid
SHELL 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

WEAR

All component wear rates are normal.

CONTAMINATION

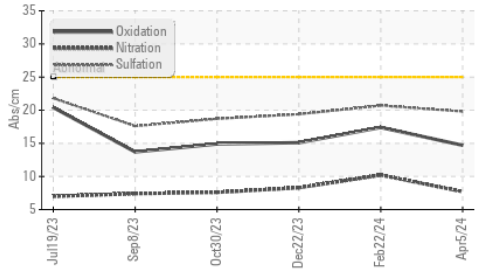
There is no indication of any contamination in the oil.

FLUID CONDITION

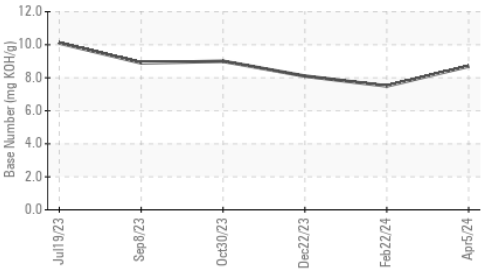
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0916565	WC0902272	WC0870234
Sample Date		Client Info		05 Apr 2024	22 Feb 2024	22 Dec 2023
Machine Age	hrs	Client Info		6648	6408	6073
Oil Age	hrs	Client Info		240	335	219
Filter Age	hrs	Client Info		240	335	219
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	8	28	3
Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		76	59	59
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	2	2	2
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	2	22	<1
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	4	6	4
Potassium	ppm	ASTM D5185m	>20	4	▲ 48	17
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	0.6	0.4	0.2
Nitration	Abs/cm	*ASTM D7624	>20	7.7	10.2	8.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.8	20.7	19.4
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
Sodium	ppm	ASTM D5185m	>150	3	19	6
Boron	ppm	ASTM D5185m		119	63	83
Barium	ppm	ASTM D5185m		1	0	0
Molybdenum	ppm	ASTM D5185m		13	25	19
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m		529	573	577
Calcium	ppm	ASTM D5185m		1667	1529	1453
Phosphorus	ppm	ASTM D5185m		1049	999	1051
Zinc	ppm	ASTM D5185m		1218	1204	1243
Sulfur	ppm	ASTM D5185m		4241	3586	3725
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.7	17.4	15.1
Base Number (BN)	mg KOH/g	ASTM D2896		8.7	7.5	8.1
Visc @ 100°C	cSt	ASTM D445		13.9	13.5	13.4

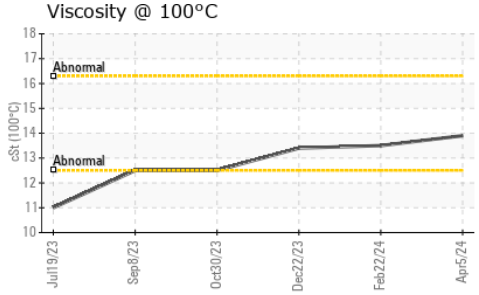
FT-IR (Direct Trend)



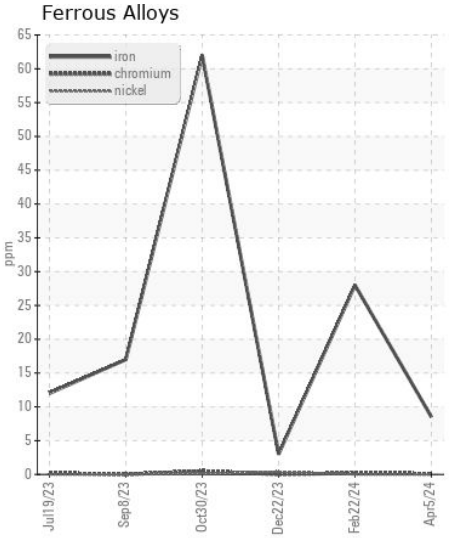
Base Number



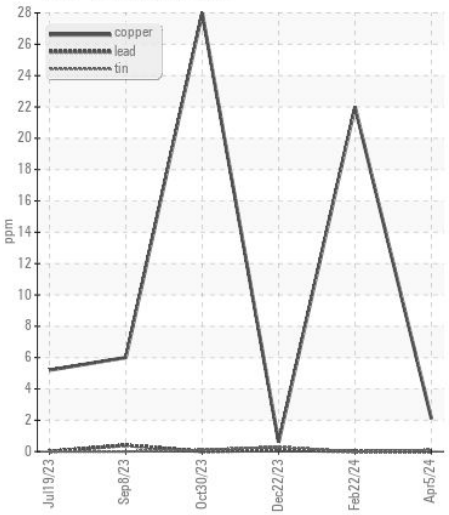
Viscosity @ 100°C



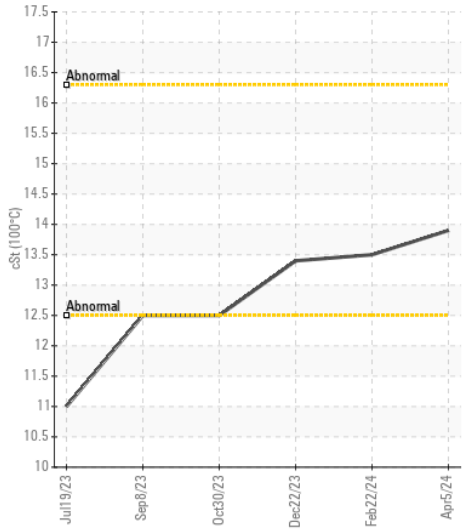
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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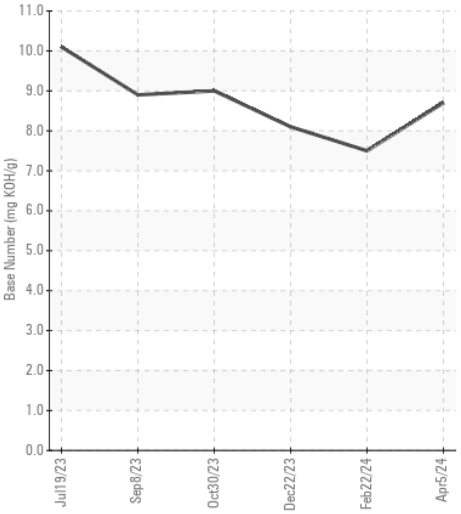

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0916565
Lab Number : 06155766
Unique Number : 10991189
Test Package : CONST (Additional Tests: TBN)

Received : 22 Apr 2024
Tested : 23 Apr 2024
Diagnosed : 23 Apr 2024 - Wes Davis

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)

METRO METALS NORTHWEST INC
2202 EAST RIVER ST
TACOMA, WA
US 98421
Contact: MICHELE MARTINEZ
mmartinez@metrometalswa.com
T: (800)562-8464
F: