



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
YARD FERROUS
Machine Id
FUCHS C107
Component
Diesel Engine
Fluid
SHELL 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0803502	WC0785215	WC0774344
Sample Date		Client Info		26 Apr 2023	28 Feb 2023	12 Jan 2023
Machine Age	hrs	Client Info		22272	21991	21752
Oil Age	hrs	Client Info		281	239	219
Filter Age	hrs	Client Info		281	239	219
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	34	23	16
Chromium	ppm	ASTM D5185m	>20	2	1	<1
Nickel	ppm	ASTM D5185m	>4	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	4	2
Lead	ppm	ASTM D5185m	>40	<1	<1	0
Copper	ppm	ASTM D5185m	>330	2	1	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	<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

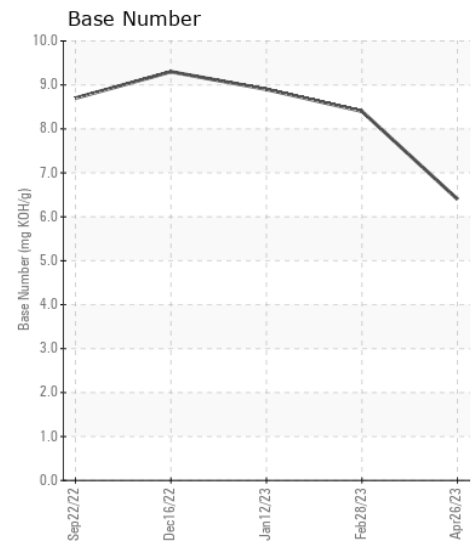
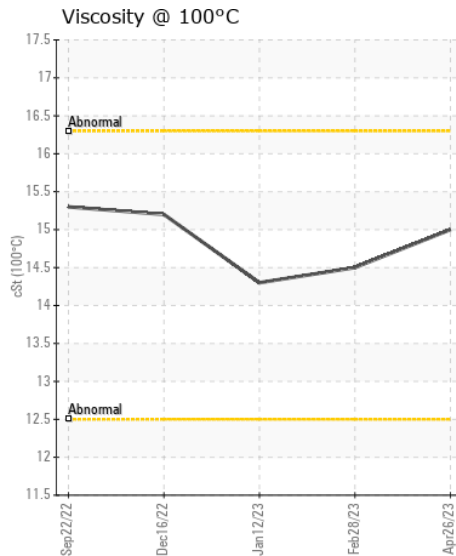
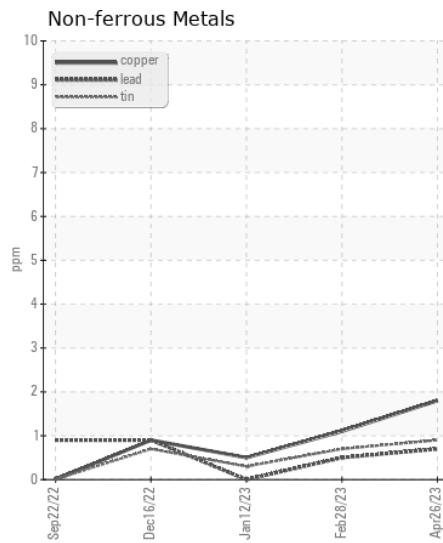
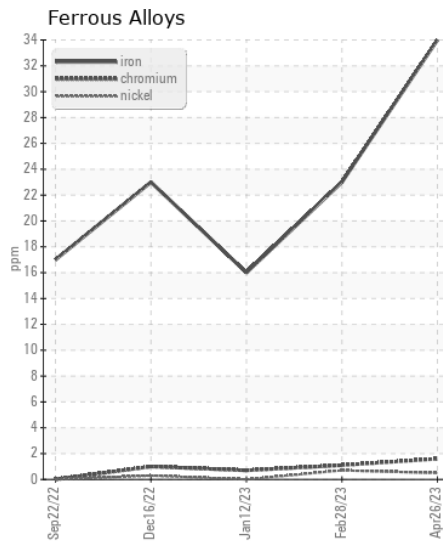
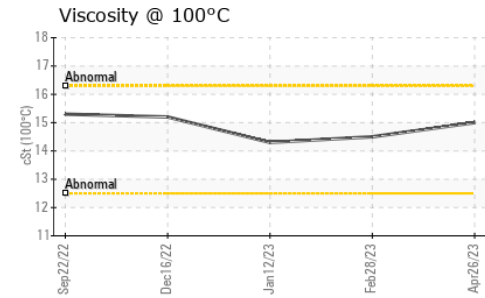
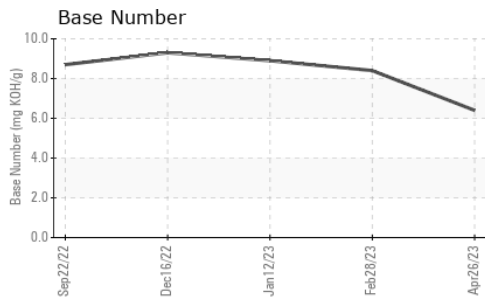
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	3	4
Potassium	ppm	ASTM D5185m	>20	3	2	2
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	1.1	0.9	0.6
Nitration	Abs/cm	*ASTM D7624	>20	12.8	13.0	11.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.2	26.0	23.3
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	>150	<1	1	<1
Boron	ppm	ASTM D5185m		41	31	32
Barium	ppm	ASTM D5185m		0	2	0
Molybdenum	ppm	ASTM D5185m		45	66	84
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		937	1001	962
Calcium	ppm	ASTM D5185m		1474	1331	1259
Phosphorus	ppm	ASTM D5185m		1119	1094	1074
Zinc	ppm	ASTM D5185m		1460	1380	1332
Sulfur	ppm	ASTM D5185m		3620	2873	2983
Oxidation	Abs/.1mm	*ASTM D7414	>25	26.1	25.6	22.1
Base Number (BN)	mg KOH/g	ASTM D2896		6.4	8.4	8.9
Visc @ 100°C	cSt	ASTM D445		15.0	14.5	14.3



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0803502 **Received** : 09 May 2023
Lab Number : 05841999 **Tested** : 10 May 2023
Unique Number : 10466106 **Diagnosed** : 11 May 2023 - Don Baldrige
Test Package : CONST (Additional Tests: TBN)

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

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)