CONST

WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
NON FERROUS
Machine Id
HYSTER F415
Component
Diesel Engine
Fluid
SHELL 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

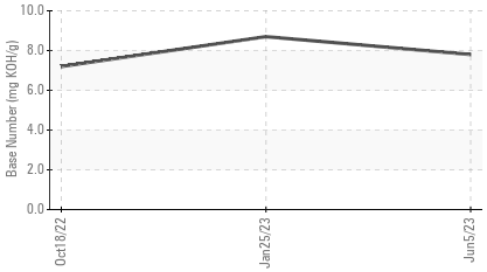
There is no indication of any contamination in the oil.

FLUID CONDITION

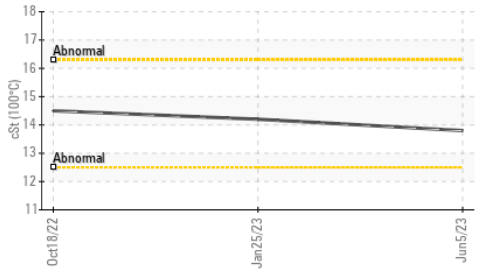
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**WC0810973**	WC0774351	WC0751744
Sample Date		Client Info		**05 Jun 2023**	25 Jan 2023	18 Oct 2022
Machine Age	hrs	Client Info		**10243**	10004	250
Oil Age	hrs	Client Info		**239**	243	250
Filter Age	hrs	Client Info		**239**	243	250
Oil Changed		Client Info		**Changed**	Changed	Changed
Filter Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**NORMAL**	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	**9**	11	9
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>4	**0**	0	0
Titanium	ppm	ASTM D5185m		**<1**	0	0
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**1**	2	2
Lead	ppm	ASTM D5185m	>40	**0**	<1	<1
Copper	ppm	ASTM D5185m	>330	**<1**	<1	1
Tin	ppm	ASTM D5185m	>15	**0**	<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
Silicon	ppm	ASTM D5185m	>25	**6**	5	4
Potassium	ppm	ASTM D5185m	>20	**<1**	0	0
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	**0.1**	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**9.1**	6.4	10
Sulfation	Abs/.1mm	*ASTM D7415	>30	**19.9**	20.1	21.5
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
Sodium	ppm	ASTM D5185m	>150	**2**	3	<1
Boron	ppm	ASTM D5185m		**13**	9	13
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**66**	69	63
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m		**1021**	949	874
Calcium	ppm	ASTM D5185m		**1168**	1271	1242
Phosphorus	ppm	ASTM D5185m		**1062**	976	954
Zinc	ppm	ASTM D5185m		**1297**	1371	1270
Sulfur	ppm	ASTM D5185m		**3735**	3940	3671
Oxidation	Abs/.1mm	*ASTM D7414	>25	**15.1**	16.0	16.8
Base Number (BN)	mg KOH/g	ASTM D2896		**7.8**	8.7	7.2
Visc @ 100°C	cSt	ASTM D445		**13.8**	14.2	14.5

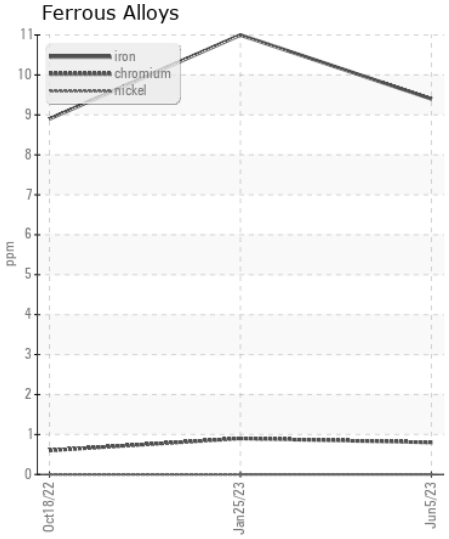
Base Number



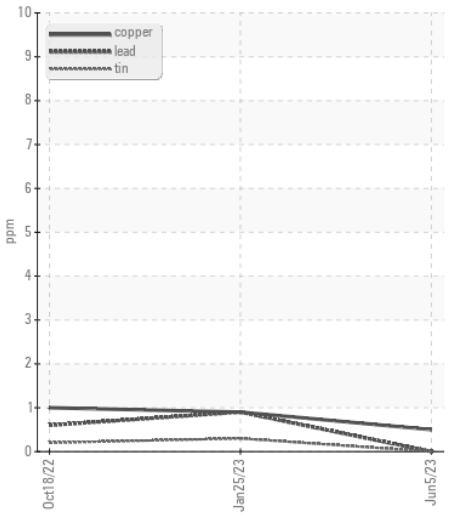
Viscosity @ 100°C



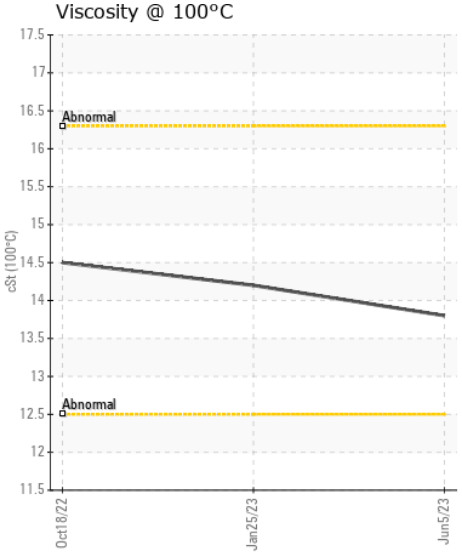
Ferrous Alloys



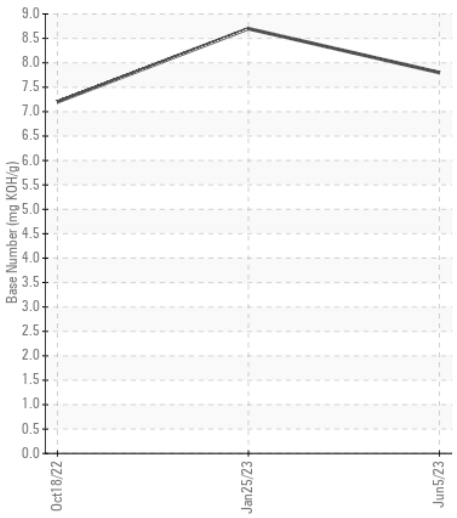
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0810973 **Received** : 23 Jun 2023
Lab Number : 05881803 **Tested** : 23 Jun 2023
Unique Number : 10532286 **Diagnosed** : 27 Jun 2023 - Wes Davis
Test Package : CONST (Additional Tests: TBN)

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: