CONST

WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
MILLER WELDER 001949
Component
Diesel Engine
Fluid
CASTROL VECTON 15W40 CK4 (1 GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

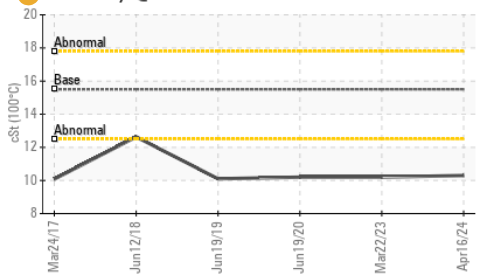
There is no indication of any contamination in the oil.

FLUID CONDITION

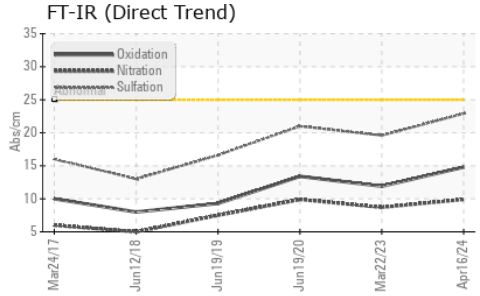
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0856141	WC0757998	WC0463736
Sample Date		Client Info		16 Apr 2024	22 Mar 2023	19 Jun 2020
Machine Age	hrs	Client Info		1238	893	636
Oil Age	hrs	Client Info		345	257	100
Filter Age	hrs	Client Info		345	257	100
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ATTENTION	ATTENTION	ATTENTION
Iron	ppm	ASTM D5185m	>100	13	9	13
Chromium	ppm	ASTM D5185m	>20	2	1	2
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	3	3
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	2	3	4
Tin	ppm	ASTM D5185m	>15	2	1	2
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	9	9	7
Potassium	ppm	ASTM D5185m	>20	2	1	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	0.1	0.1	0
Nitration	Abs/cm	*ASTM D7624	>20	9.9	8.7	9.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.9	19.6	21
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		3	5	14
Boron	ppm	ASTM D5185m		40	56	4
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		46	23	2
Manganese	ppm	ASTM D5185m		2	2	1
Magnesium	ppm	ASTM D5185m		783	758	851
Calcium	ppm	ASTM D5185m		908	898	1084
Phosphorus	ppm	ASTM D5185m		633	661	622
Zinc	ppm	ASTM D5185m		801	798	784
Sulfur	ppm	ASTM D5185m		2533	2325	1929
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.8	11.9	13.4
Base Number (BN)	mg KOH/g	ASTM D2896	10	6.0	6.6	6.5
Visc @ 100°C	cSt	ASTM D445	15.5	10.3	10.2	10.2

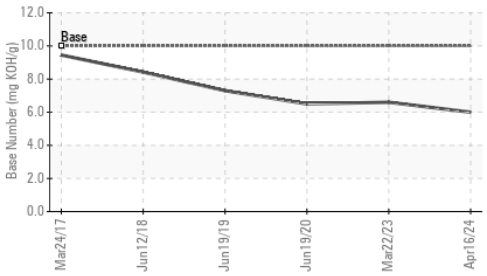
Viscosity @ 100°C



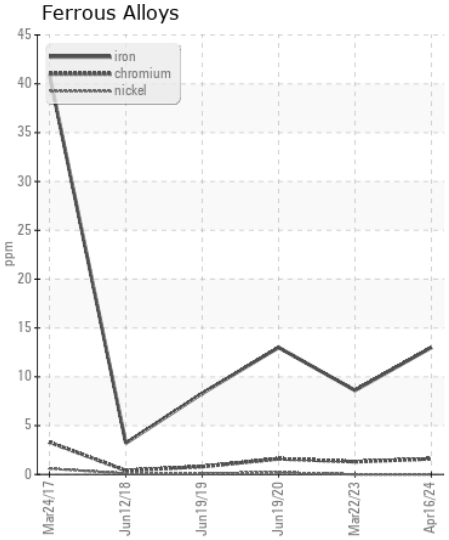
FT-IR (Direct Trend)



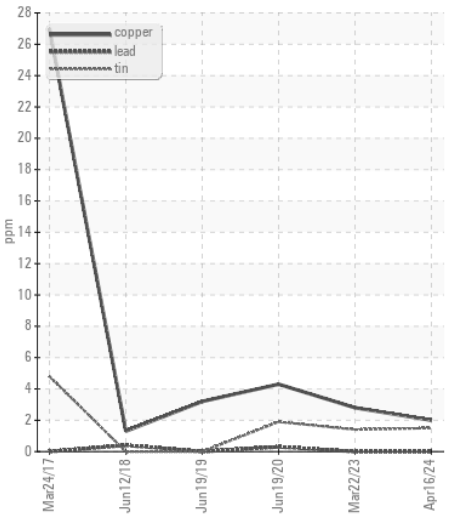
Base Number



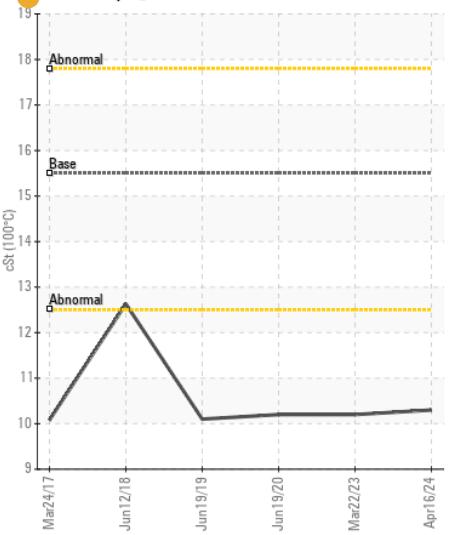
Ferrous Alloys



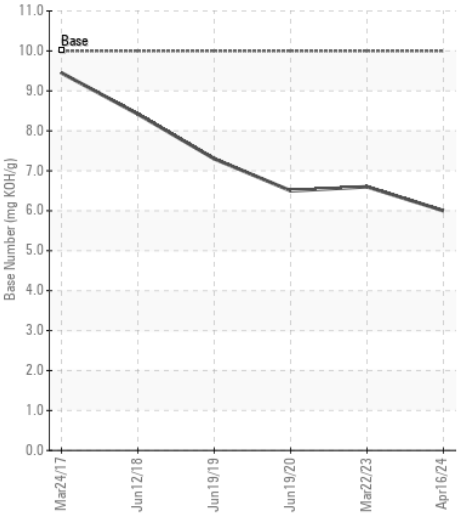
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0856141 **Received** : 23 Apr 2024
Lab Number : 06158281 **Tested** : 24 Apr 2024
Unique Number : 10993704 **Diagnosed** : 25 Apr 2024 - Sean Felton
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)

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