OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Area
Contracting
Machine Id
5205 5205
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (5 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

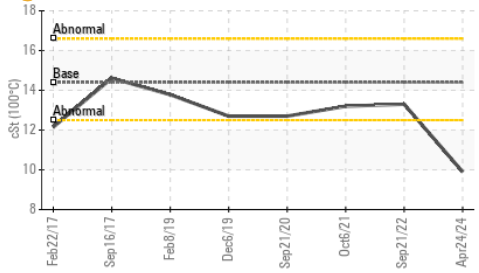
Fuel content negligible. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

FLUID CONDITION

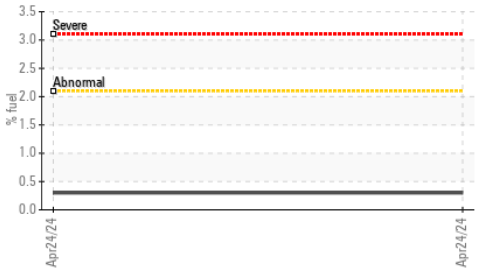
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**WC0919104**	WC0740762	WC0630629
Sample Date		Client Info		**24 Apr 2024**	21 Sep 2022	06 Oct 2021
Machine Age	hrs	Client Info		**5802**	4613	3952
Oil Age	hrs	Client Info		**582**	661	644
Filter Age	hrs	Client Info		**582**	661	644
Oil Changed		Client Info		**Changed**	Changed	Changed
Filter Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ATTENTION**	NORMAL	ATTENTION
Iron	ppm	ASTM D5185m	>51	**12**	26	28
Chromium	ppm	ASTM D5185m	>11	**<1**	1	<1
Nickel	ppm	ASTM D5185m	>5	**<1**	0	1
Titanium	ppm	ASTM D5185m		**<1**	<1	<1
Silver	ppm	ASTM D5185m	>3	**0**	<1	0
Aluminum	ppm	ASTM D5185m	>31	**6**	4	4
Lead	ppm	ASTM D5185m	>26	**3**	<1	<1
Copper	ppm	ASTM D5185m	>26	**17**	3	3
Tin	ppm	ASTM D5185m	>4	**3**	<1	<1
Vanadium	ppm	ASTM D5185m		**<1**	<1	<1
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silicon	ppm	ASTM D5185m	>22	**16**	4	3
Potassium	ppm	ASTM D5185m	>20	**17**	2	3
Fuel	%	ASTM D3524	>2.1	**0.3**	<1.0	<1.0
Water		WC Method	>0.21	**NEG**	NEG	NEG
Glycol	%	*ASTM D2982		**NEG**	NEG	NEG
Soot %	%	*ASTM D7844	>3	**0.1**	0.8	0.8
Nitration	Abs/cm	*ASTM D7624	>20	**5.9**	12.1	10.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	**19.6**	23.5	22.6
Particles >4µm		ASTM D7647	>20000	**1983**	5837	8445
Particles >6µm		ASTM D7647	>5000	**1080**	3180	4601
Particles >14µm		ASTM D7647	>640	**184**	541	783
Particles >21µm		ASTM D7647	>160	**62**	182	264
Particles >38µm		ASTM D7647	>40	**10**	28	41
Particles >71µm		ASTM D7647	>10	**1**	3	4
Oil Cleanliness		ISO 4406 (c)	>21/19/16	**18/17/15**	20/19/16	20/19/17
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	>0.21	**NEG**	NEG	NEG
Sodium	ppm	ASTM D5185m	>158	**15**	3	5
Boron	ppm	ASTM D5185m	250	**327**	27	29
Barium	ppm	ASTM D5185m	10	**3**	2	0
Molybdenum	ppm	ASTM D5185m	100	**247**	35	17
Manganese	ppm	ASTM D5185m		**4**	<1	<1
Magnesium	ppm	ASTM D5185m	450	**778**	511	667
Calcium	ppm	ASTM D5185m	3000	**1335**	1570	1407
Phosphorus	ppm	ASTM D5185m	1150	**898**	679	716
Zinc	ppm	ASTM D5185m	1350	**1025**	857	833
Sulfur	ppm	ASTM D5185m	4250	**3355**	2841	2397
Oxidation	Abs/.1mm	*ASTM D7414	>25	**14.4**	22.0	16.2
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	**9.7**	8.0	6.2
Visc @ 100°C	cSt	ASTM D445	14.4	**9.9**	13.3	13.2

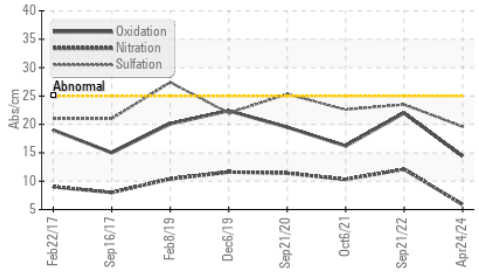
Viscosity @ 100°C



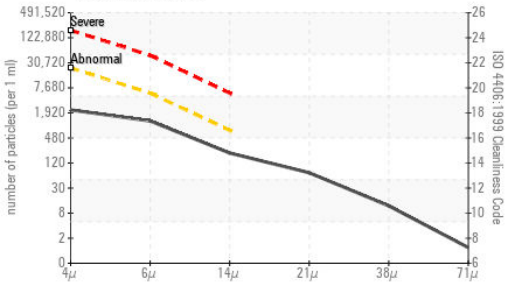
Fuel Dilution



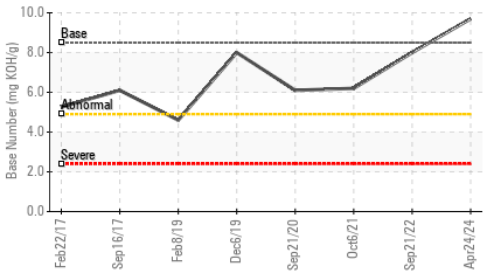
FT-IR (Direct Trend)



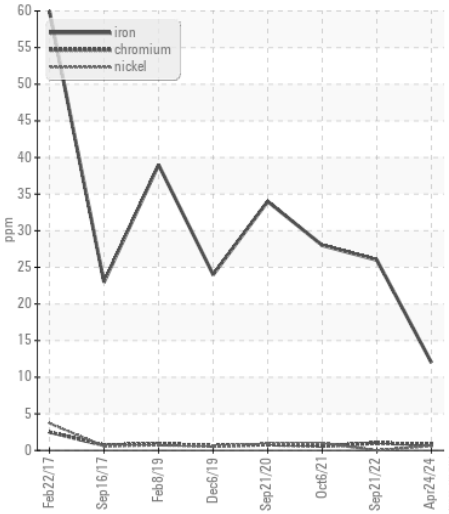
Particle Count



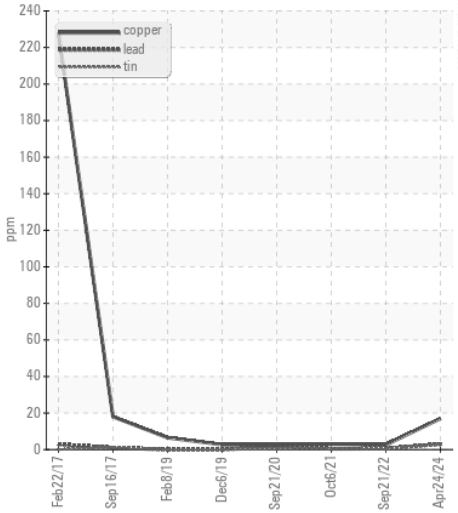
Base Number



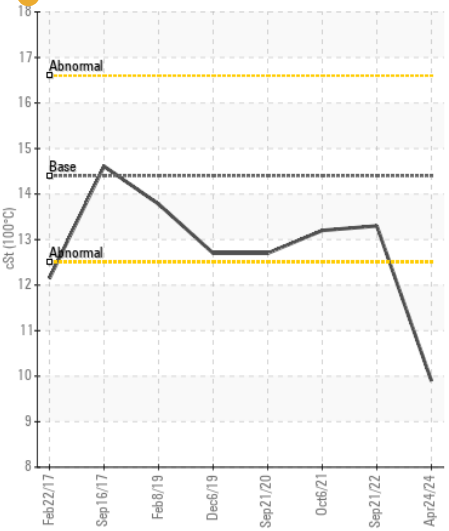
Ferrous Alloys



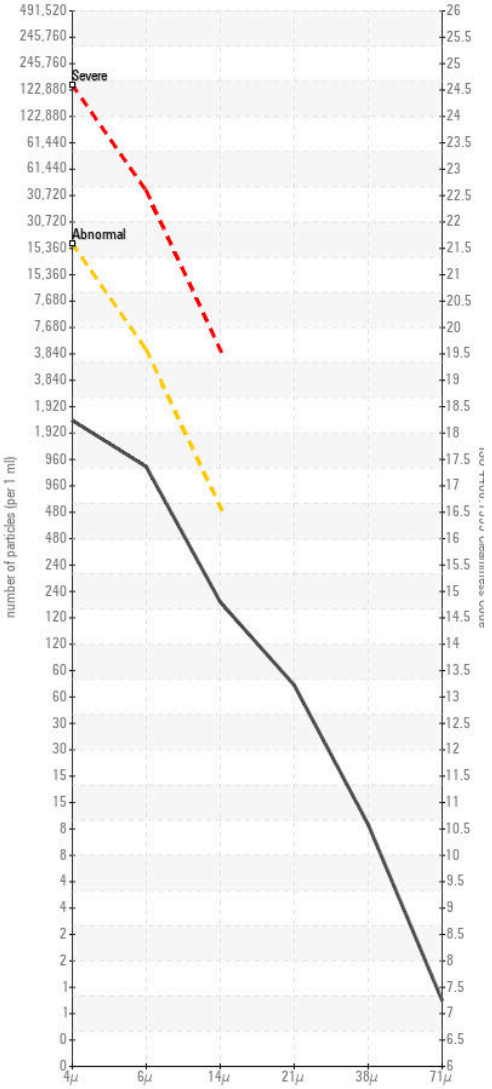
Non-ferrous Metals



Viscosity @ 100°C



Particle Count



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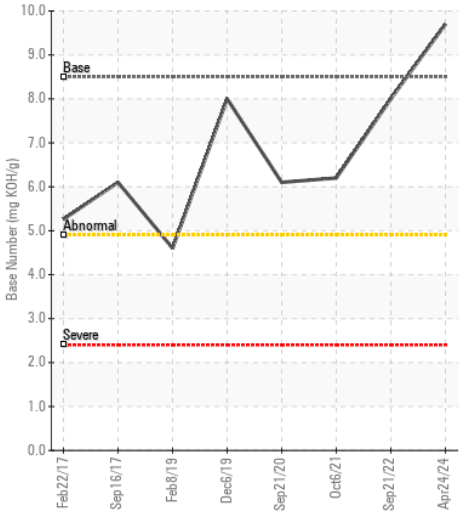

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0919104 **Received** : 26 Apr 2024
Lab Number : 06161329 **Tested** : 02 May 2024
Unique Number : 10996752 **Diagnosed** : 02 May 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: FuelDilution, Glycol, PercentFuel, PrtCount, TBN)

Certificate L2367

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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