CONST

WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
Contracting
Machine Id
5109 5109
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (2 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

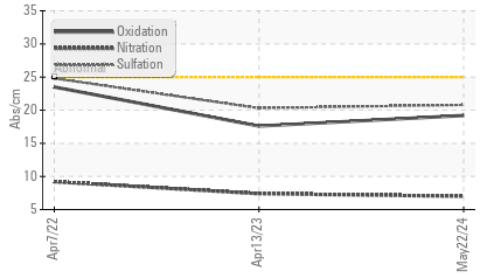
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

FLUID CONDITION

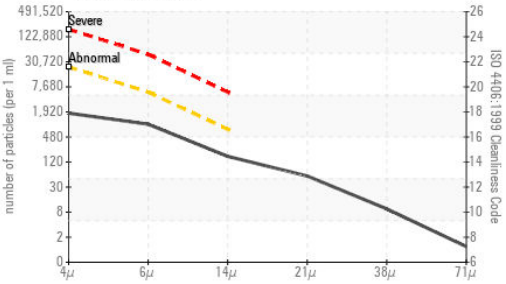
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**WC0939292**	WC0808879	WC0688150
Sample Date		Client Info		**22 May 2024**	13 Apr 2023	07 Apr 2022
Machine Age	hrs	Client Info		**3278**	2760	2256
Oil Age	hrs	Client Info		**518**	504	783
Filter Age	hrs	Client Info		**518**	504	783
Oil Changed		Client Info		**Changed**	Changed	Changed
Filter Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**NORMAL**	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	**22**	22	37
Chromium	ppm	ASTM D5185m	>20	**0**	<1	1
Nickel	ppm	ASTM D5185m	>4	**0**	<1	<1
Titanium	ppm	ASTM D5185m		**0**	<1	2
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**2**	1	3
Lead	ppm	ASTM D5185m	>40	**<1**	<1	3
Copper	ppm	ASTM D5185m	>330	**1**	2	6
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
Silicon	ppm	ASTM D5185m	>25	**7**	6	7
Potassium	ppm	ASTM D5185m	>20	**2**	2	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	**7.0**	7.4	9.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	**20.8**	20.3	24.8
Particles >4µm		ASTM D7647	>20000	**1566**	2062	3445
Particles >6µm		ASTM D7647	>5000	**853**	1123	1877
Particles >14µm		ASTM D7647	>640	**145**	191	319
Particles >21µm		ASTM D7647	>160	**49**	64	108
Particles >38µm		ASTM D7647	>40	**8**	10	17
Particles >71µm		ASTM D7647	>10	**1**	1	2
Oil Cleanliness		ISO 4406 (c)	>21/19/16	**18/17/14**	18/17/15	19/18/15
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	>158	**4**	3	3
Boron	ppm	ASTM D5185m	250	**73**	68	53
Barium	ppm	ASTM D5185m	10	**0**	0	0
Molybdenum	ppm	ASTM D5185m	100	**45**	35	38
Manganese	ppm	ASTM D5185m		**<1**	<1	1
Magnesium	ppm	ASTM D5185m	450	**534**	545	523
Calcium	ppm	ASTM D5185m	3000	**1674**	1504	1829
Phosphorus	ppm	ASTM D5185m	1150	**798**	751	958
Zinc	ppm	ASTM D5185m	1350	**921**	893	1057
Sulfur	ppm	ASTM D5185m	4250	**2942**	2475	2539
Oxidation	Abs/.1mm	*ASTM D7414	>25	**19.2**	17.6	23.5
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	**8.9**	9.0	10.3
Visc @ 100°C	cSt	ASTM D445	14.4	**12.5**	12.7	12.8

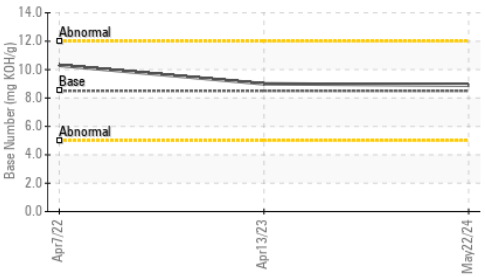
FT-IR (Direct Trend)



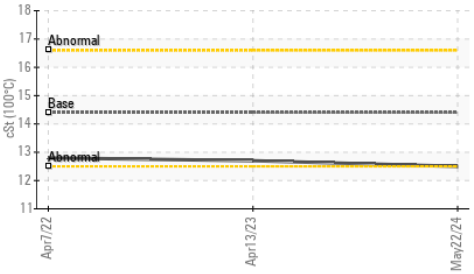
Particle Count



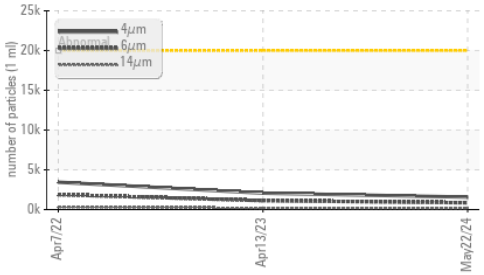
Base Number



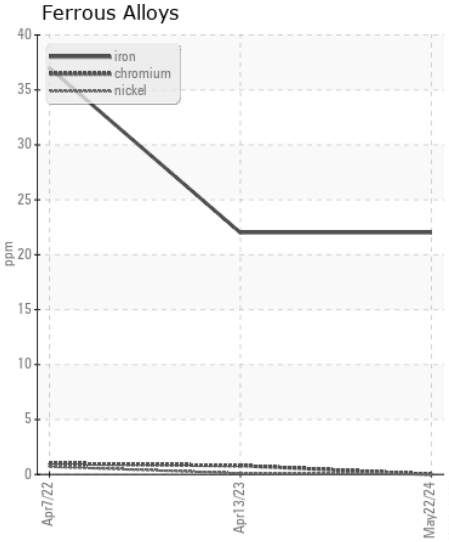
Viscosity @ 100°C



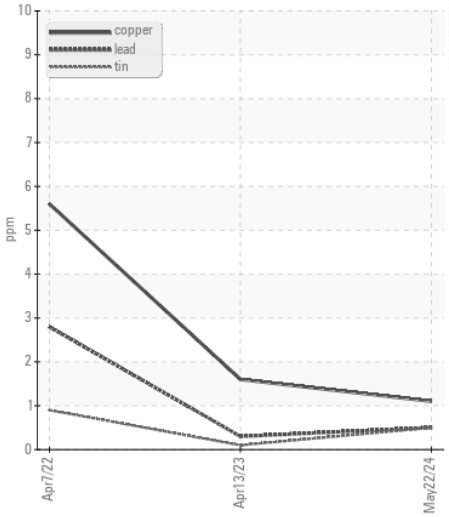
Particle Trend



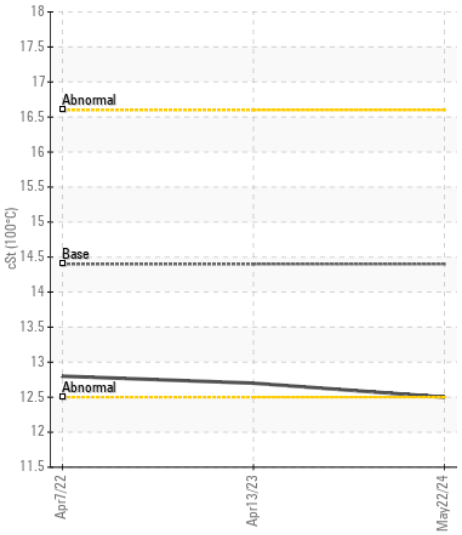
Ferrous Alloys



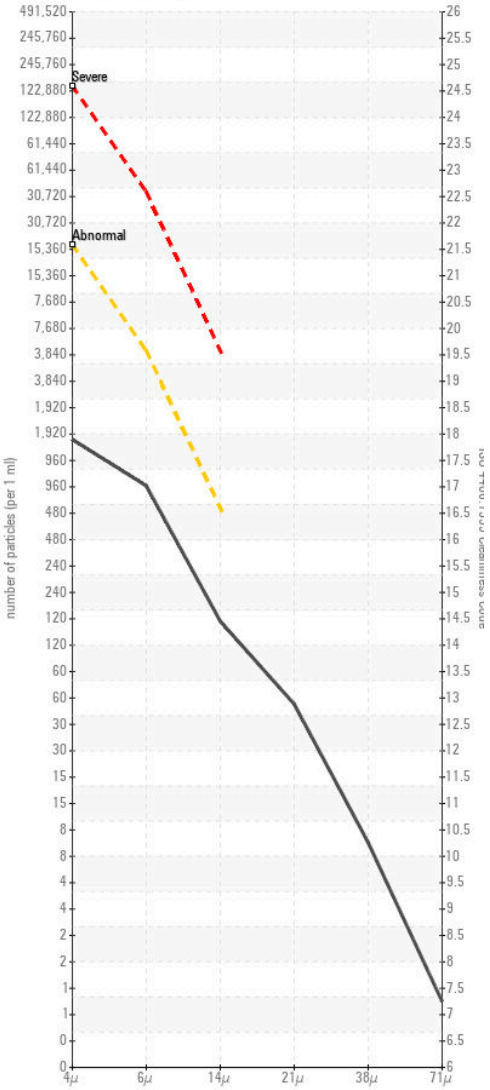
Non-ferrous Metals



Viscosity @ 100°C



Particle Count



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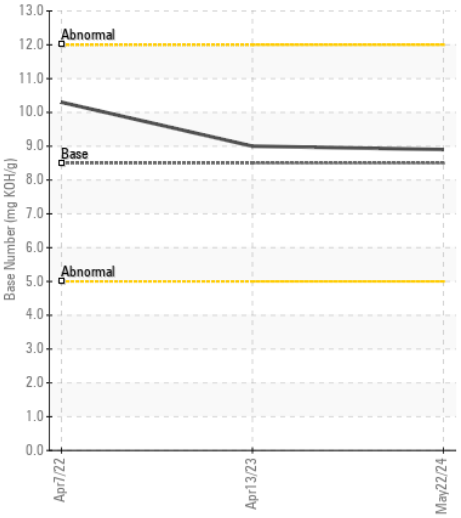

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0939292 **Received** : 28 May 2024
Lab Number : 06193447 **Tested** : 31 May 2024
Unique Number : 11050199 **Diagnosed** : 31 May 2024 - Don Baldridge
Test Package : CONST (Additional Tests: PrtCount, 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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