OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
72229
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

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

WEAR

The aluminum level is abnormal. All other component wear rates are normal.

CONTAMINATION

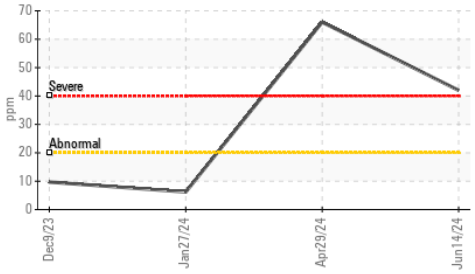
There is no indication of any contamination in the oil.

FLUID CONDITION

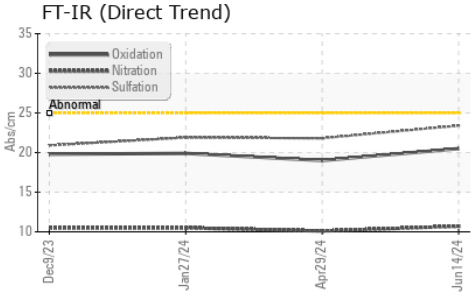
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0921159	WC0920973	WC0681116
Sample Date		Client Info		14 Jun 2024	29 Apr 2024	27 Jan 2024
Machine Age	hrs	Client Info		5072	4277	2493
Oil Age	hrs	Client Info		795	1033	899
Filter Age	hrs	Client Info		795	1033	899
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	33	27	17
Chromium	ppm	ASTM D5185m	>20	3	1	1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		22	18	17
Silver	ppm	ASTM D5185m	>3	<1	0	<1
Aluminum	ppm	ASTM D5185m	>20	▲ 42	▲ 66	6
Lead	ppm	ASTM D5185m	>40	<1	0	<1
Copper	ppm	ASTM D5185m	>330	14	12	23
Tin	ppm	ASTM D5185m	>15	<1	<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	>25	12	13	5
Potassium	ppm	ASTM D5185m	>20	34	13	8
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.4	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	10.7	10.1	10.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.4	21.8	21.9
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	2	2
Boron	ppm	ASTM D5185m	250	37	42	30
Barium	ppm	ASTM D5185m	10	<1	0	0
Molybdenum	ppm	ASTM D5185m	100	41	31	33
Manganese	ppm	ASTM D5185m		1	1	<1
Magnesium	ppm	ASTM D5185m	450	1011	815	820
Calcium	ppm	ASTM D5185m	3000	2133	1704	1620
Phosphorus	ppm	ASTM D5185m	1150	1036	792	764
Zinc	ppm	ASTM D5185m	1350	1153	912	894
Sulfur	ppm	ASTM D5185m	4250	3798	3360	2837
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.5	19.0	19.9
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.7	6.5	6.5
Visc @ 100°C	cSt	ASTM D445	14.4	14.4	14.0	13.8

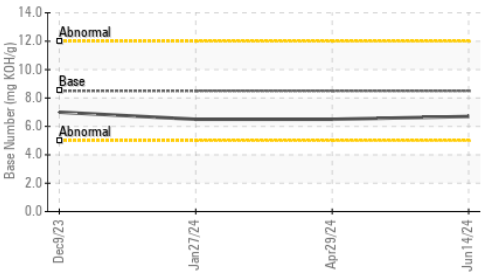
Aluminum (ppm)



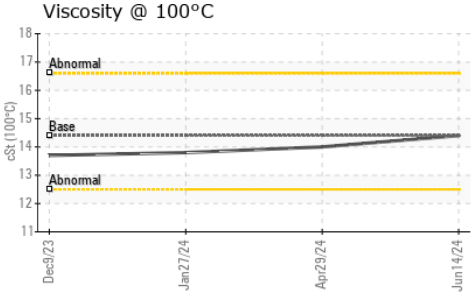
FT-IR (Direct Trend)



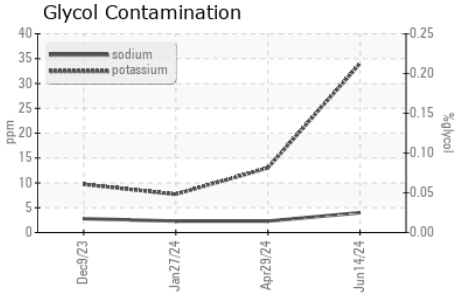
Base Number



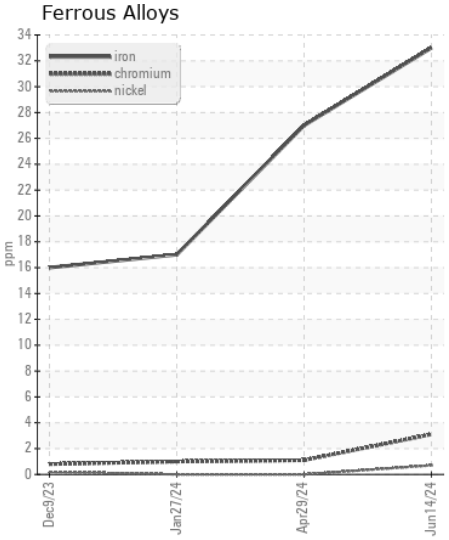
Viscosity @ 100°C



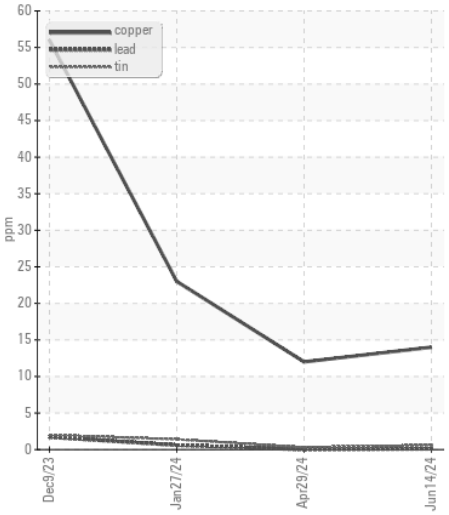
Glycol Contamination



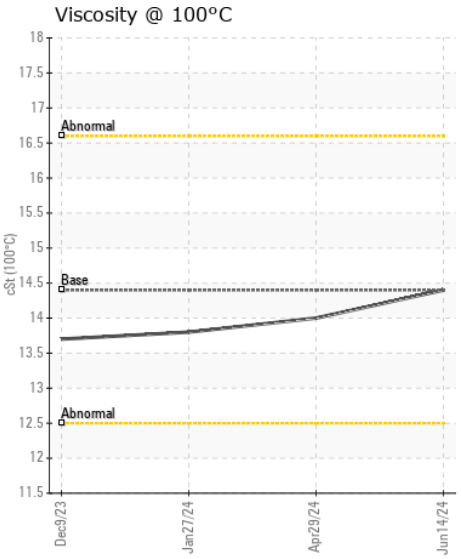
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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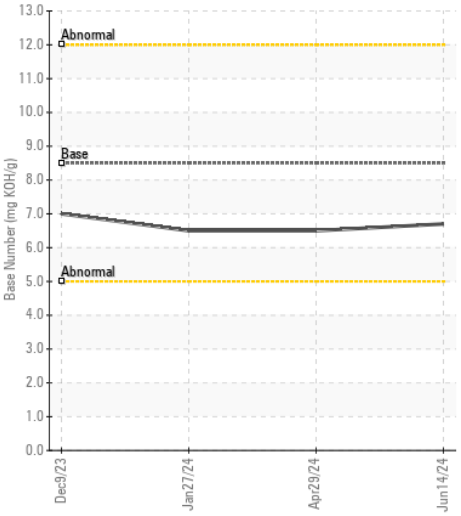

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0921159
Lab Number : 06224167
Unique Number : 11102364
Test Package : FLEET (Additional Tests: Glycol, KV40)

Received : 28 Jun 2024
Tested : 02 Jul 2024
Diagnosed : 02 Jul 2024 - Jonathan Hester

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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