OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Machine Id
DFGS 273183
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

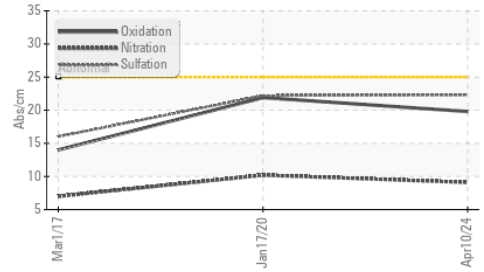
Sodium and/or potassium levels are high.

FLUID CONDITION

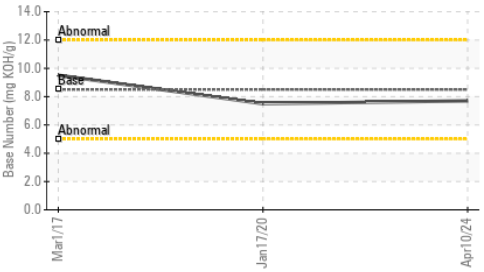
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0911062	WC0423028	WCMFB71253
Sample Date		Client Info		10 Apr 2024	17 Jan 2020	01 Mar 2017
Machine Age	hrs	Client Info		12573	8001	5387
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	N/A
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	51	21	11
Chromium	ppm	ASTM D5185m	>20	4	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	1	<1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	14	17	4
Lead	ppm	ASTM D5185m	>40	<1	<1	0
Copper	ppm	ASTM D5185m	>330	3	1	2
Tin	ppm	ASTM D5185m	>15	<1	0	9
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	8	5	5
Potassium	ppm	ASTM D5185m	>20	1	8	0
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	0.1	0.1	0
Nitration	Abs/cm	*ASTM D7624	>20	9.1	10.2	7.
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.3	22.2	16.
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	▲ 1622	38	73
Boron	ppm	ASTM D5185m	250	469	283	342
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	95	119	92
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	419	556	371
Calcium	ppm	ASTM D5185m	3000	1638	1517	1560
Phosphorus	ppm	ASTM D5185m	1150	1052	655	1004
Zinc	ppm	ASTM D5185m	1350	1317	813	1187
Sulfur	ppm	ASTM D5185m	4250	3826	2119	2874
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.8	21.9	14.
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.7	7.5	9.51
Visc @ 100°C	cSt	ASTM D445	14.4	12.9	12.9	14.33

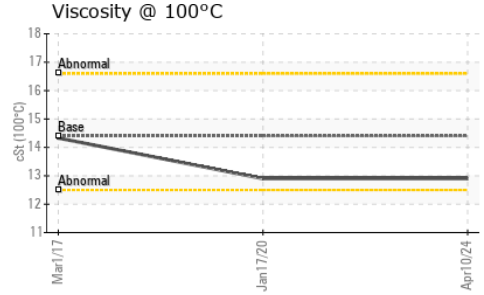
FT-IR (Direct Trend)



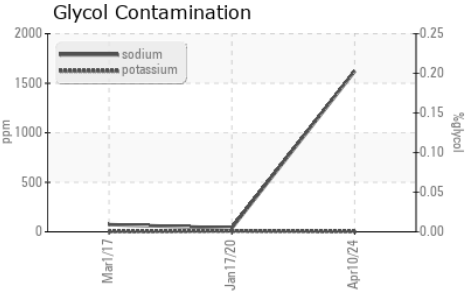
Base Number



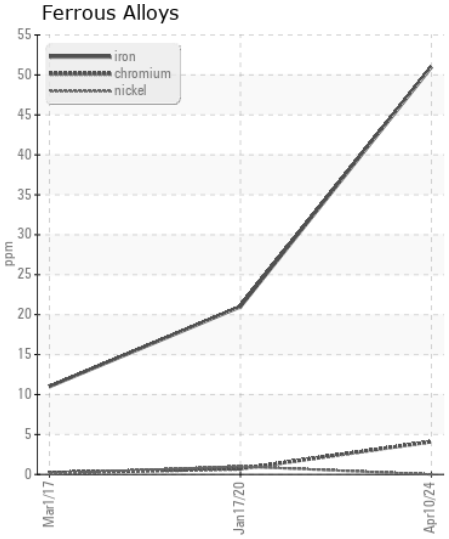
Viscosity @ 100°C



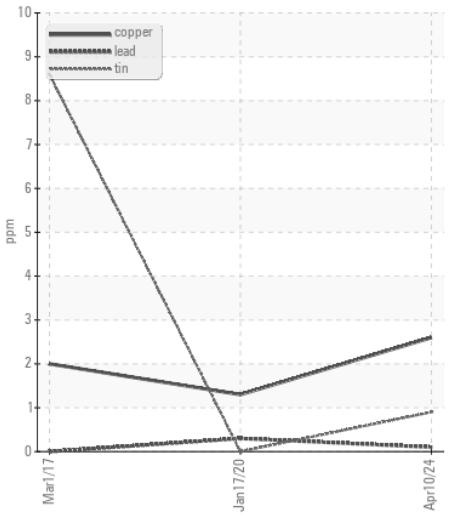
Glycol Contamination



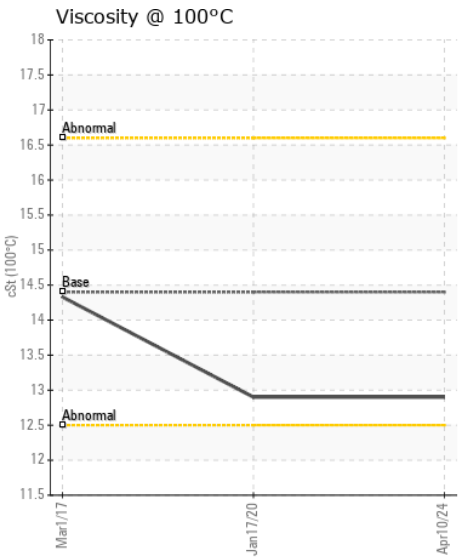
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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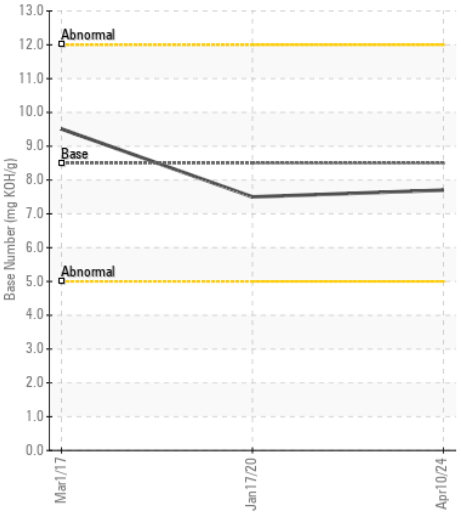

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0911062 **Received** : 22 May 2024
Lab Number : 06188410 **Tested** : 28 May 2024
Unique Number : 11045162 **Diagnosed** : 28 May 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: Glycol)

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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