OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	NORMAL

Machine Id
DFGS272488
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

Cylinder, crank, or cam shaft wear is indicated.

CONTAMINATION

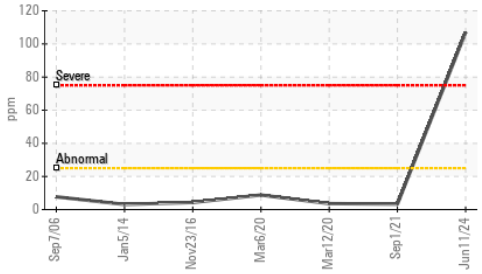
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

FLUID CONDITION

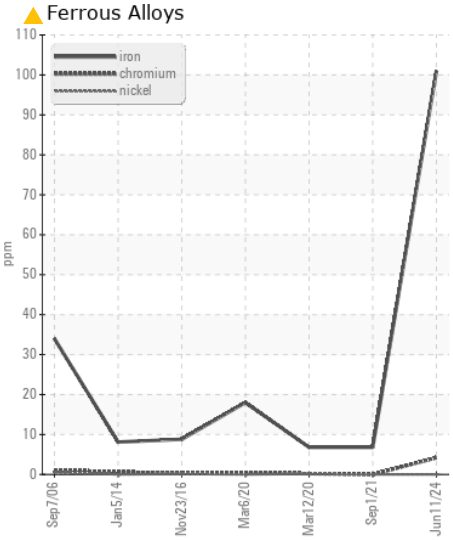
The BN result indicates that there is suitable alkalinity remaining in the oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0950025	WC0614794	WC0438713
Sample Date		Client Info		11 Jun 2024	01 Sep 2021	12 Mar 2020
Machine Age	hrs	Client Info		0	17569	0
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				SEVERE	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	▲ 101	7	7
Chromium	ppm	ASTM D5185m	>20	4	0	<1
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		2	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	● 46	2	4
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	10	0	<1
Tin	ppm	ASTM D5185m	>15	2	0	<1
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	▲ 107	3	4
Potassium	ppm	ASTM D5185m	>20	11	0	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	0.2	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	9.5	9.3	9.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.2	21.7	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	51	2	4
Boron	ppm	ASTM D5185m	250	280	269	240
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	85	126	102
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m	450	433	506	452
Calcium	ppm	ASTM D5185m	3000	1929	1454	1274
Phosphorus	ppm	ASTM D5185m	1150	1041	720	631
Zinc	ppm	ASTM D5185m	1350	1360	918	748
Sulfur	ppm	ASTM D5185m	4250	3769	2041	2937
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.9	20	21.1
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	8.3	7.5	7.6
Visc @ 100°C	cSt	ASTM D445	14.4	14.1	13.9	13.8

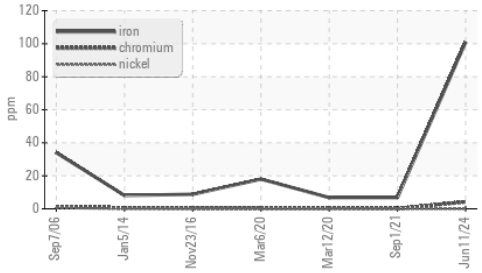
Silicon (ppm)



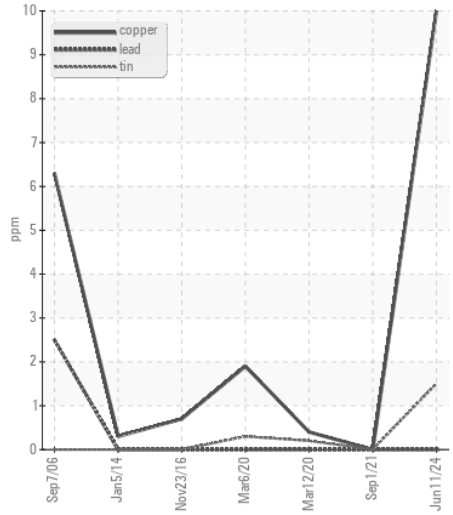
Ferrous Alloys



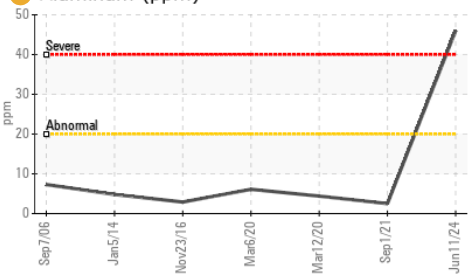
Ferrous Alloys



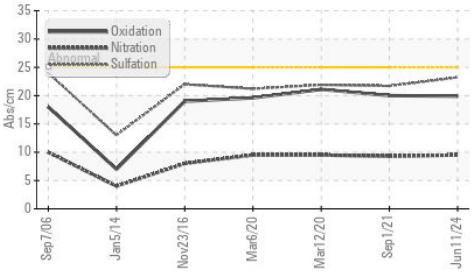
Non-ferrous Metals



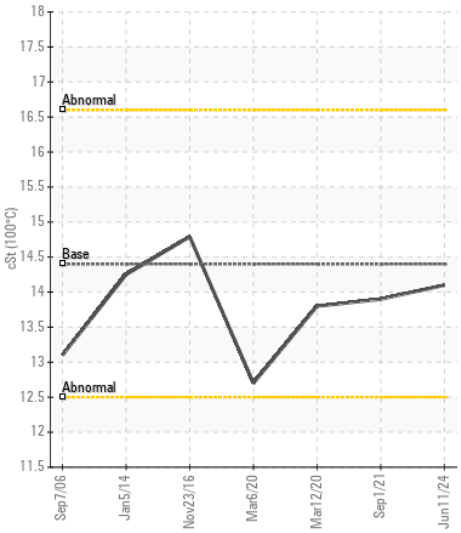
Aluminum (ppm)



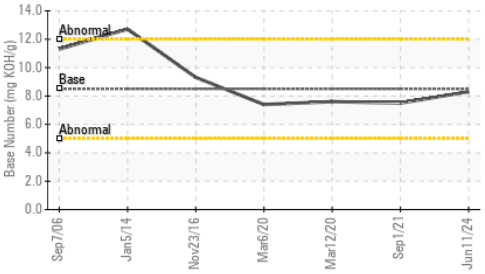
FT-IR (Direct Trend)



Viscosity @ 100°C



Base Number



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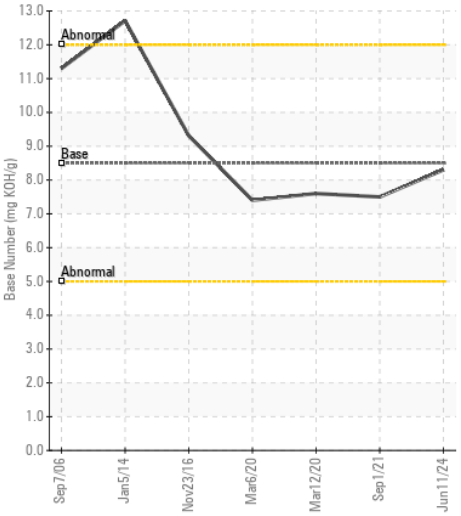

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0950025 **Received** : 17 Jul 2024
Lab Number : 06239794 **Tested** : 19 Jul 2024
Unique Number : 11128628 **Diagnosed** : 19 Jul 2024 - Sean Felton
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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