



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id
4221343

Component
Diesel Engine

Fluid
DIESEL ENGINE OIL SAE 40 (--- GAL)

RECOMMENDATION

We advise that you check for faulty combustion, plugged air filters, or aftercoolers. We recommend you service the filters on this component. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

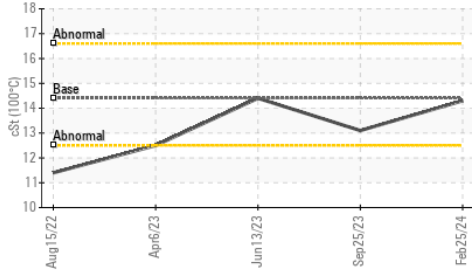
There is an abnormal amount of solids and carbon present in the oil.

FLUID CONDITION

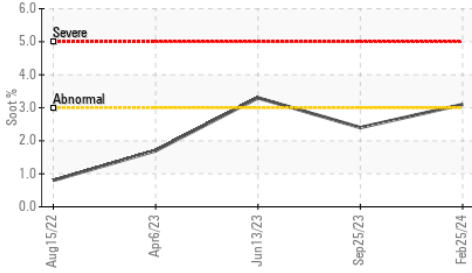
The oil viscosity is higher than normal. The BN result indicates that there is suitable alkalinity remaining in the oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		IL0034874	IL06019336	IL05887759
Sample Date		Client Info		25 Feb 2024	25 Sep 2023	13 Jun 2023
Machine Age	mls	Client Info		96699	68789	67432
Oil Age	mls	Client Info		0	8000	8000
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	NORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>100	65	57	68
Chromium	ppm	ASTM D5185m	>20	2	1	2
Nickel	ppm	ASTM D5185m	>4	<1	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	11	9	7
Lead	ppm	ASTM D5185m	>40	12	6	5
Copper	ppm	ASTM D5185m	>330	43	108	71
Tin	ppm	ASTM D5185m	>15	3	3	4
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	12	11	12
Potassium	ppm	ASTM D5185m	>20	6	7	2
Fuel	%	ASTM D3524	>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	▲ 3.1	2.4	▲ 3.3
Nitration	Abs/cm	*ASTM D7624	>20	18.5	17.0	19.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	31.5	28.9	32.2
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	>216	6	5	4
Boron	ppm	ASTM D5185m	250	23	14	21
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	57	51	59
Manganese	ppm	ASTM D5185m		1	1	2
Magnesium	ppm	ASTM D5185m	450	687	582	595
Calcium	ppm	ASTM D5185m	3000	2174	1936	2077
Phosphorus	ppm	ASTM D5185m	1150	941	860	849
Zinc	ppm	ASTM D5185m	1350	1210	1042	1125
Sulfur	ppm	ASTM D5185m	4250	2268	2161	2631
Oxidation	Abs/.1mm	*ASTM D7414	>25	31.5	28.2	33.6
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.3	10.1	9.1
Visc @ 100°C	cSt	ASTM D445	14.4	▲ 14.3	13.1	14.4

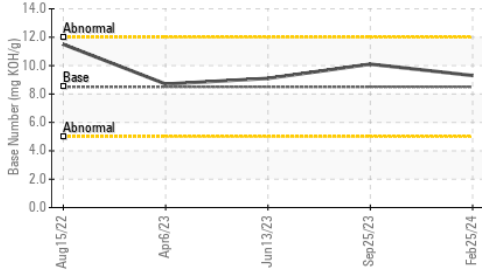
▲ Viscosity @ 100°C



▲ Soot %



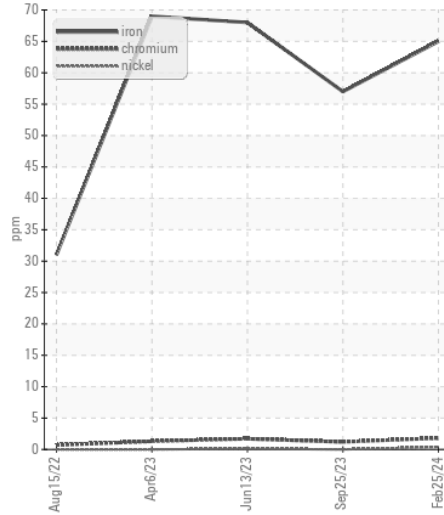
Base Number



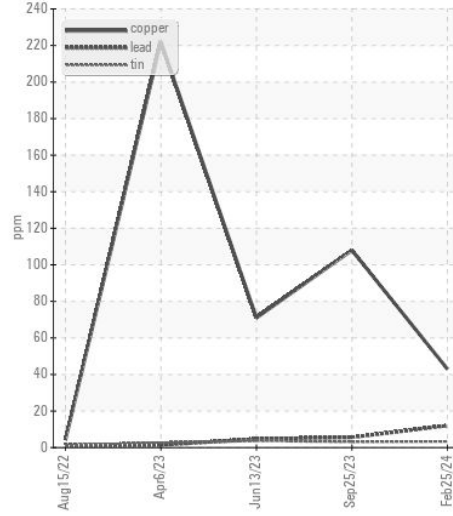
Fuel Dilution



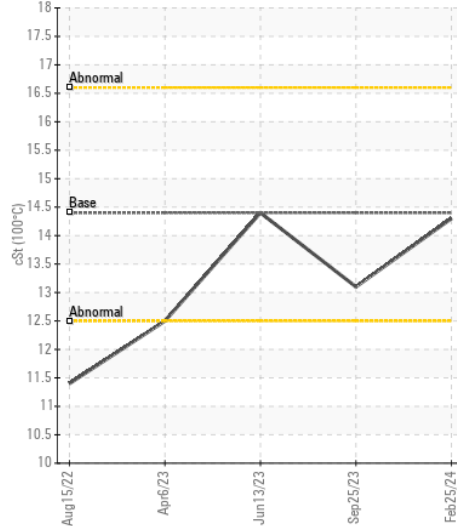
Ferrous Alloys



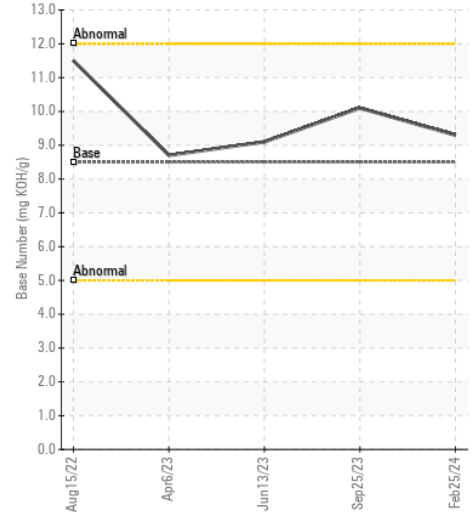
Non-ferrous Metals



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : IL0034874

Lab Number : 06100651

Unique Number : 10898881

Test Package : FLEET (Additional Tests: FuelDilution)

Received : 26 Feb 2024

Tested : 27 Feb 2024

Diagnosed : 27 Feb 2024 - Jonathan Hester

IDEALRELEASE OF ATLANTA - FULTON

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US 30331

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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)