



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
46453
 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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0829845	WC0634588	WC0634681
Sample Date		Client Info		30 Jan 2024	15 Apr 2022	28 Oct 2021
Machine Age	mls	Client Info		0	60549	29265
Oil Age	mls	Client Info		472	25000	25000
Filter Age	mls	Client Info		472	0	25000
Oil Changed		Client Info		Changed	N/A	N/A
Filter Changed		Client Info		Changed	N/A	N/A
Sample Status				ATTENTION	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	3	33	56
Chromium	ppm	ASTM D5185m	>20	0	2	6
Nickel	ppm	ASTM D5185m	>4	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	<1	<1
Aluminum	ppm	ASTM D5185m	>20	2	23	67
Lead	ppm	ASTM D5185m	>40	0	<1	<1
Copper	ppm	ASTM D5185m	>330	4	35	443
Tin	ppm	ASTM D5185m	>15	<1	2	4
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

Fuel content negligible. There is no indication of any contamination in the oil.

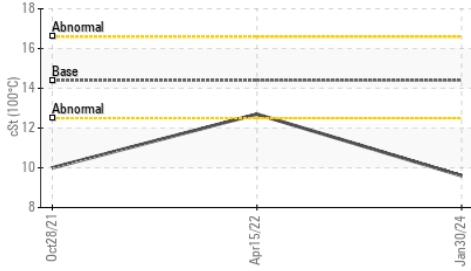
Silicon	ppm	ASTM D5185m	>25	8	4	6
Potassium	ppm	ASTM D5185m	>20	4	45	167
Fuel	%	ASTM D3524	>5	0.3	<1.0	0.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.4	0.7
Nitration	Abs/cm	*ASTM D7624	>20	4.7	7.4	11.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.4	19.6	22.6
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

FLUID CONDITION

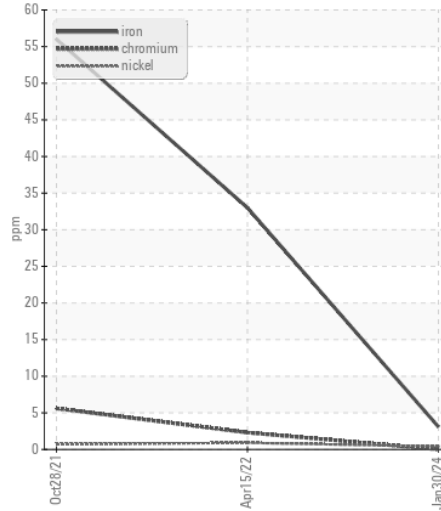
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m	>158	3	1	3
Boron	ppm	ASTM D5185m	250	71	11	33
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	39	59	3
Manganese	ppm	ASTM D5185m		<1	<1	4
Magnesium	ppm	ASTM D5185m	450	524	977	745
Calcium	ppm	ASTM D5185m	3000	1584	1203	1474
Phosphorus	ppm	ASTM D5185m	1150	806	1014	735
Zinc	ppm	ASTM D5185m	1350	959	1244	828
Sulfur	ppm	ASTM D5185m	4250	2530	2354	2433
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.6	15.0	19.2
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	10.2	8.4	6.9
Visc @ 100°C	cSt	ASTM D445	14.4	▲ 9.6	12.7	10.0

▲ Viscosity @ 100°C



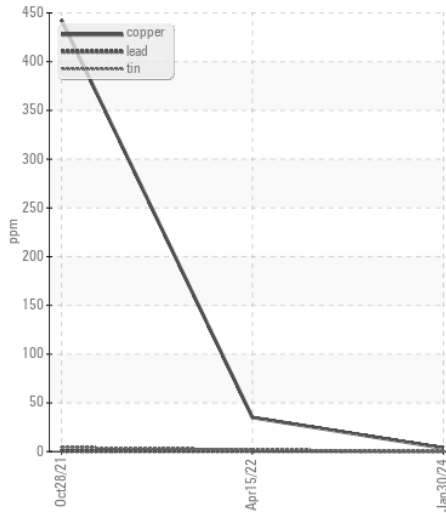
Ferrous Alloys



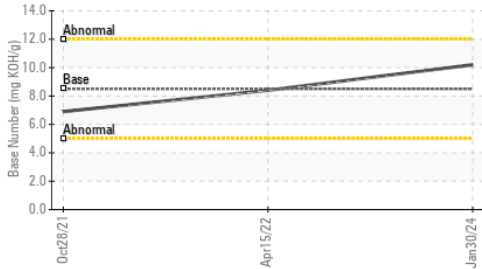
Fuel Dilution



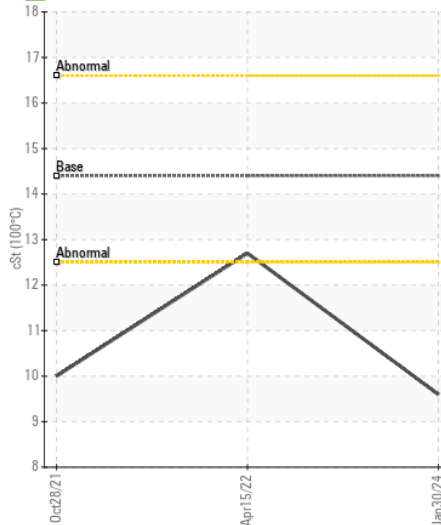
Non-ferrous Metals



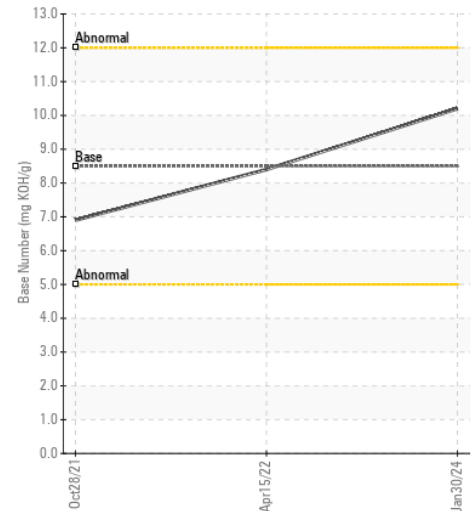
Base Number



▲ Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : WC0829845

Lab Number : 06088074

Unique Number : 10875519

Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

Received : 13 Feb 2024

Tested : 15 Feb 2024

Diagnosed : 15 Feb 2024 - Don Baldrige

SALEM NATIONALEASE CORPORATION

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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)