

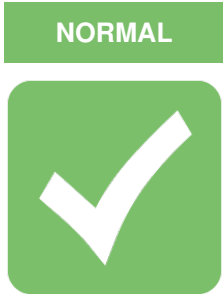
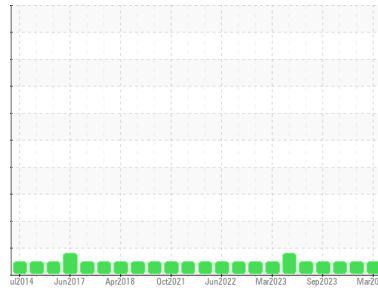


OIL ANALYSIS REPORT



Machine Id
CATERPILLAR RIG 55-B GENERATOR 3 059022
 Component
Diesel Engine
 Fluid
PROTECK ELITE 15W40 (85 GAL)

Sample Rating Trend



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All 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 suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		RP0037476	RP0031798	RP0031794
Sample Date	Client Info		16 Mar 2024	31 Jan 2024	26 Jan 2024
Machine Age	hrs	Client Info	16969	16137	16032
Oil Age	hrs	Client Info	832	800	0
Oil Changed	Client Info		Changed	N/A	N/A
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	5	9	7
Chromium	ppm	ASTM D5185m >20	<1	<1	<1
Nickel	ppm	ASTM D5185m >2	<1	0	0
Titanium	ppm	ASTM D5185m >2	0	0	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >25	1	<1	1
Lead	ppm	ASTM D5185m >40	0	1	2
Copper	ppm	ASTM D5185m >330	<1	4	4
Tin	ppm	ASTM D5185m >15	<1	<1	<1
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	57	4	4
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	61	60	60
Manganese	ppm	ASTM D5185m	<1	<1	<1
Magnesium	ppm	ASTM D5185m	823	875	878
Calcium	ppm	ASTM D5185m	1117	998	1003
Phosphorus	ppm	ASTM D5185m	1033	946	941
Zinc	ppm	ASTM D5185m	1213	1176	1177

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	3	4	3
Sodium	ppm	ASTM D5185m	2	1	<1
Potassium	ppm	ASTM D5185m >20	3	1	1
Water	%	ASTM D6304 >0.2	NEG	NEG	NEG

INFRA-RED

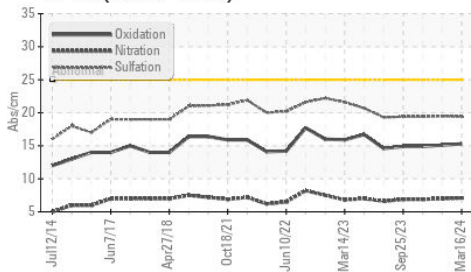
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.2	0.2	0.2
Nitration	Abs/cm	*ASTM D7624 >20	7.1	7.0	6.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	19.4	19.5	19.4

FLUID DEGRADATION

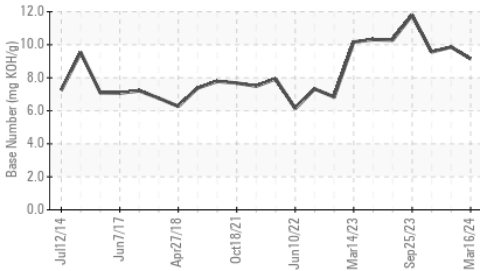
	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	15.3	15.1	14.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.15	9.86	9.56

OIL ANALYSIS REPORT

FT-IR (Direct Trend)



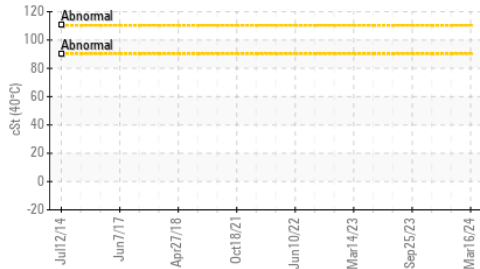
Base Number



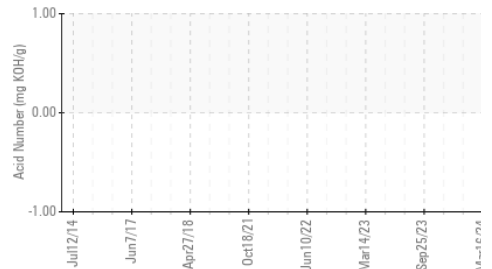
Water (KF)



Viscosity @ 40°C



Acid Number

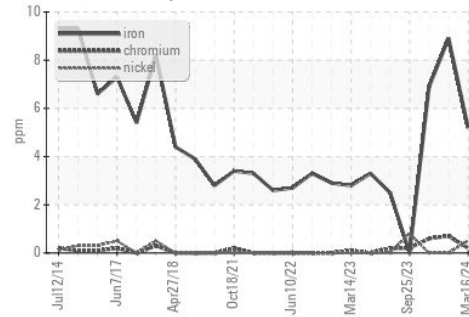


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

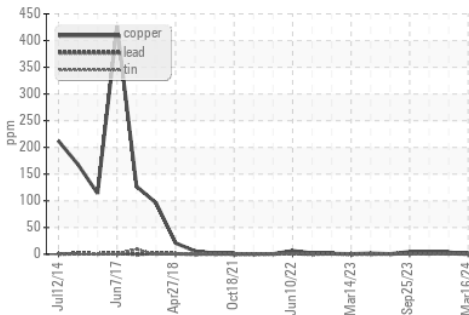
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.73	12.0	12.2

GRAPHS

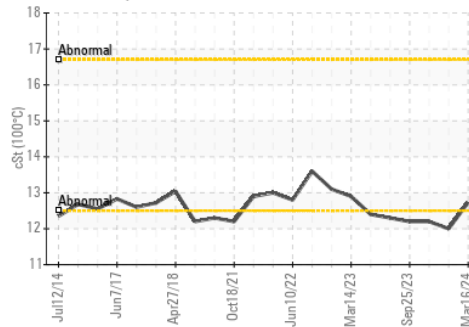
Ferrous Alloys



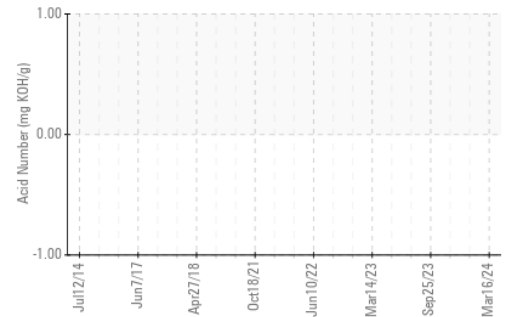
Non-ferrous Metals



Viscosity @ 100°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RP0037476 **Received** : 01 Apr 2024
Lab Number : 06135146 **Tested** : 08 Apr 2024
Unique Number : 10954611 **Diagnosed** : 08 Apr 2024 - Jonathan Hester
Test Package : IND 2 (Additional Tests: FT-IR, KV100, PQ, TBN)

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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