IND II

ROYAL PURPLE PERFORMANCE UNDER PRESSURE

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
CATERPILLAR RIG 51-B GEN 1A (S/N 030955)
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL 10W40 (85 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

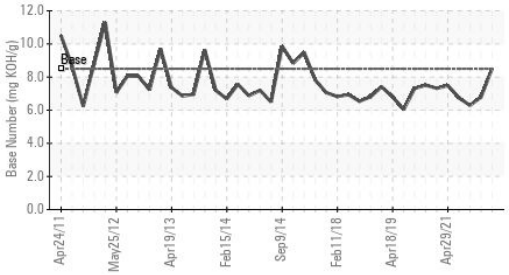
There is no indication of any contamination in the oil.

FLUID CONDITION

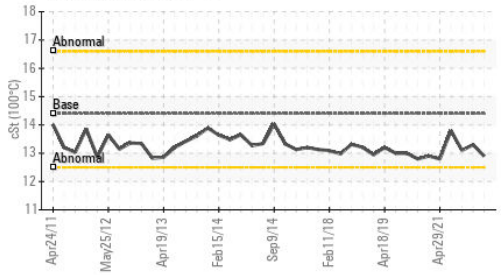
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		RP0031791	RP0022164	RP0022168
Sample Date		Client Info		12 Jan 2024	11 Sep 2022	08 Jun 2022
Machine Age	hrs	Client Info		44270	42594	41786
Oil Age	hrs	Client Info		800	811	817
Filter Age	hrs	Client Info		800	811	400
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	0	0	2
Chromium	ppm	ASTM D5185m	>20	<1	0	0
Nickel	ppm	ASTM D5185m	>2	0	<1	<1
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>25	2	<1	3
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	1	<1	<1
Tin	ppm	ASTM D5185m	>15	0	1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	2	4	3
Potassium	ppm	ASTM D5185m	>20	2	0	2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water	%	ASTM D6304	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	7.2	6.8	7.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.7	21.8	21.4
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		0	3	6
Boron	ppm	ASTM D5185m	250	176	453	340
Barium	ppm	ASTM D5185m	10	<1	<1	0
Molybdenum	ppm	ASTM D5185m	100	61	85	73
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m	450	431	350	311
Calcium	ppm	ASTM D5185m	3000	1496	1371	1488
Phosphorus	ppm	ASTM D5185m	1150	837	971	996
Zinc	ppm	ASTM D5185m	1350	1021	1185	1181
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.0	15.6	15.7
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	8.51	6.79	6.29
Visc @ 100°C	cSt	ASTM D445	14.4	12.9	13.3	13.1

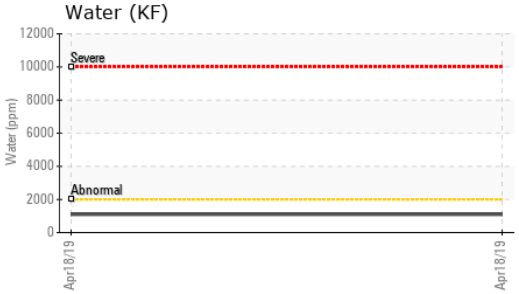
Base Number



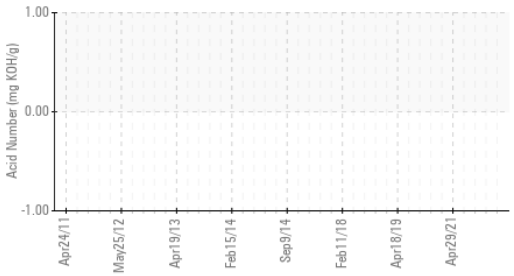
Viscosity @ 100°C



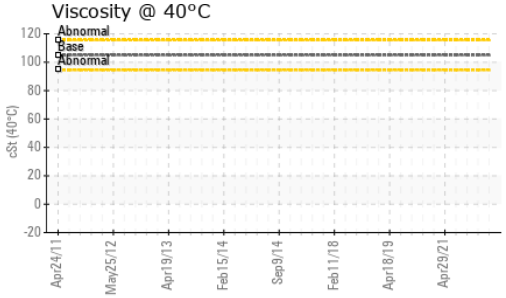
Water (KF)



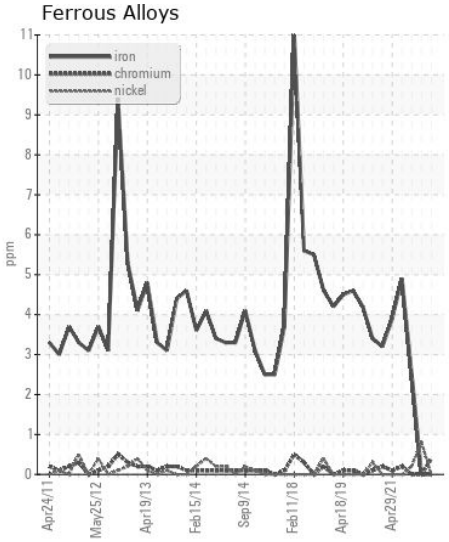
Acid Number



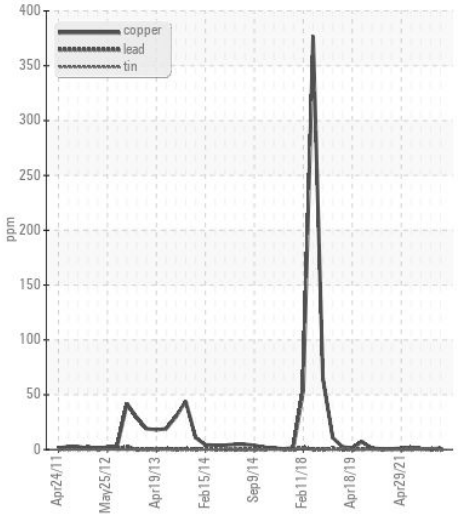
Viscosity @ 40°C



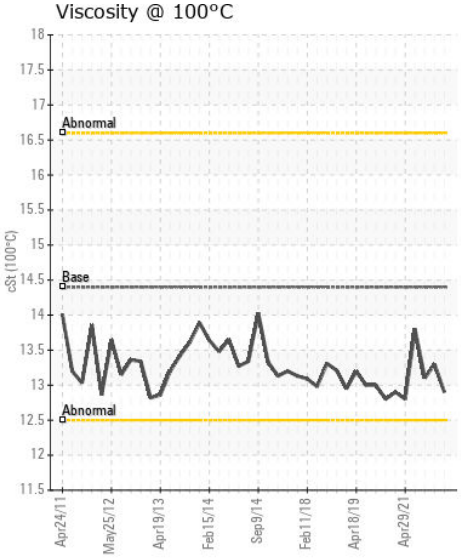
Ferrous Alloys



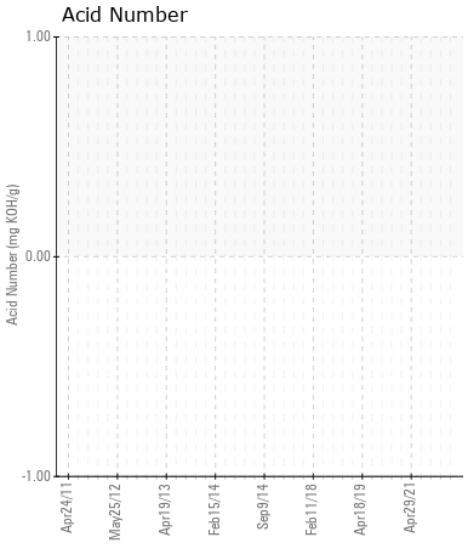
Non-ferrous Metals



Viscosity @ 100°C



Acid Number



Certificate L2367

Laboratory	: WearCheck USA - 501 Madison Ave., Cary, NC 27513		
Sample No.	: RP0031791	**Recieved**	: 01 Feb 2024
Lab Number	: 06077806	**Diagnosed**	: 05 Feb 2024
Unique Number	: 10859897	**Diagnostician**	: Sean Felton
Test Package	: IND 2 (Additional Tests: FT-IR, KV100, 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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