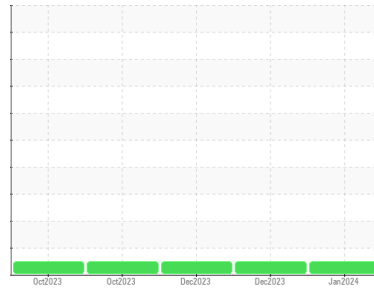


OIL ANALYSIS REPORT



Area
RES COAL
 Machine Id
CATERPILLAR D11R 2097 (S/N 7PZ01511)
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- QTS)

Sample Rating Trend



NORMAL



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please note that this is a corrected copy for data entry updates of time on oil and oil type.

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			PCA0099887	PCA0099885	PCA0099884
Sample Date	Client Info			15 Jan 2024	19 Dec 2023	07 Dec 2023
Machine Age	hrs	Client Info		34166	34087	34031
Oil Age	hrs	Client Info		412	333	277
Oil Changed	Client Info			N/A	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<1.0	<1.0	<1.0
Water	WC Method	>0.2		NEG	NEG	NEG
Glycol	WC Method			NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	36	40	28
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	1	2	1
Lead	ppm	ASTM D5185m	>40	4	3	2
Copper	ppm	ASTM D5185m	>330	121	92	28
Tin	ppm	ASTM D5185m	>15	2	4	3
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	<1

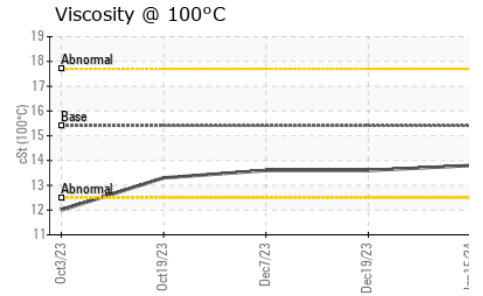
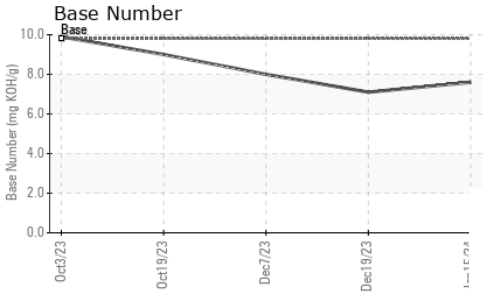
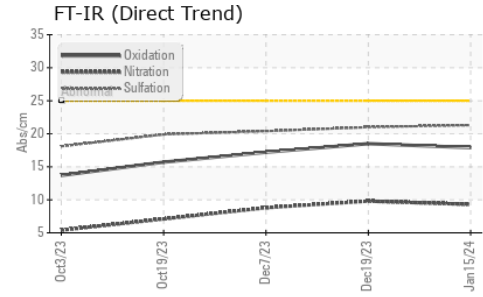
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	1	2	<1
Barium	ppm	ASTM D5185m	0	0	0	11
Molybdenum	ppm	ASTM D5185m	60	57	64	61
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	993	1114	943
Calcium	ppm	ASTM D5185m	1070	1090	1229	1073
Phosphorus	ppm	ASTM D5185m	1150	1057	1201	987
Zinc	ppm	ASTM D5185m	1270	1298	1386	1243
Sulfur	ppm	ASTM D5185m	2060	3000	3384	3234

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	3	4	4
Sodium	ppm	ASTM D5185m		4	4	2
Potassium	ppm	ASTM D5185m	>20	2	<1	3

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.6	0.6	0.5
Nitration	Abs/cm	*ASTM D7624	>20	9.3	9.8	8.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.3	21.0	20.4

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.9	18.5	17.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.6	7.1	8.0

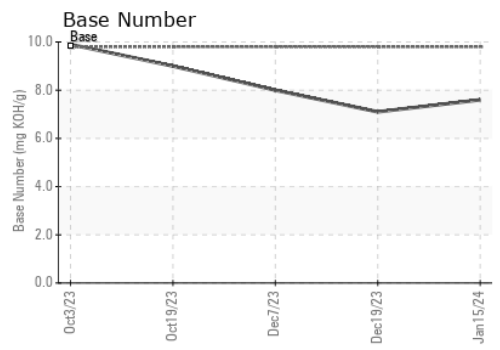
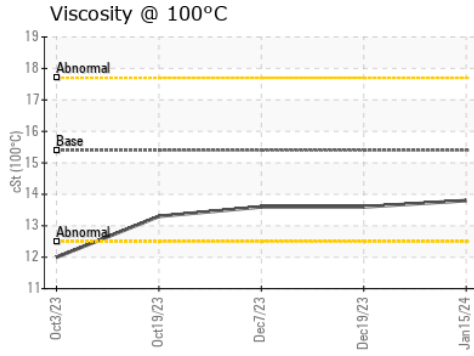
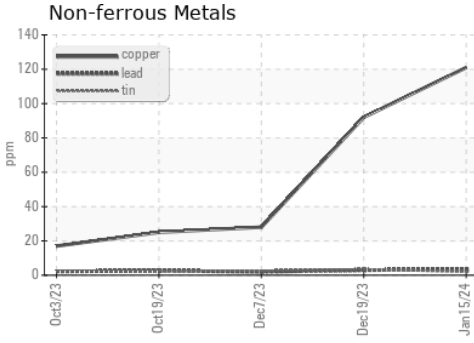
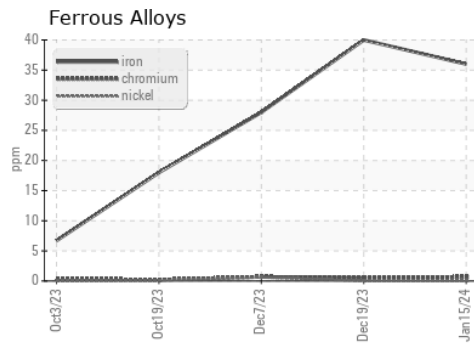
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	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	15.4	13.8	13.6	13.6

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0099887
Lab Number : 06066669
Unique Number : 10843346
Test Package : FLEET
Received : 22 Jan 2024
Tested : 25 Jan 2024
Diagnosed : 25 Jan 2024 - Doug Bogart

AMERICAN NATURAL SUPPLY
 12475 RTE 119 HWY N
 ROCHESTER MILLS, PA
 US 15771
 Contact: SCOTT KINTER
 skinter@americannatural.com

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)