

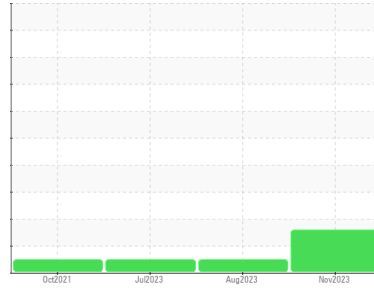


OIL ANALYSIS REPORT



Area
EXCAVATOR
 Machine Id
CATERPILLAR 325F 2448
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON HP 15W40 (--- GAL)

Sample Rating Trend



DIAGNOSIS

Recommendation
 Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear
 All component wear rates are normal.

Contamination
 Elemental level of silicon (Si) above normal.

Fluid Condition
 The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	PCA0064496	PCA0064445	PCA0064267
Sample Date	Client Info	20 Nov 2023	23 Aug 2023	26 Jul 2023
Machine Age	hrs	6275	5971	5679
Oil Age	hrs	6275	5971	5679
Oil Changed	Client Info	Changed	N/A	N/A
Sample Status		ABNORMAL	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	7	3	10
Chromium	ppm ASTM D5185m >20	<1	<1	<1
Nickel	ppm ASTM D5185m >2	0	<1	0
Titanium	ppm ASTM D5185m >2	0	0	0
Silver	ppm ASTM D5185m >2	0	0	0
Aluminum	ppm ASTM D5185m >25	2	<1	0
Lead	ppm ASTM D5185m >40	0	<1	2
Copper	ppm ASTM D5185m >330	0	<1	1
Tin	ppm ASTM D5185m >15	0	0	0
Antimony	ppm ASTM D5185m	---	---	---
Vanadium	ppm ASTM D5185m	0	0	<1
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m	3	10	3
Barium	ppm ASTM D5185m	0	2	0
Molybdenum	ppm ASTM D5185m	58	61	47
Manganese	ppm ASTM D5185m	0	0	<1
Magnesium	ppm ASTM D5185m	923	923	771
Calcium	ppm ASTM D5185m	1133	1125	1322
Phosphorus	ppm ASTM D5185m	986	1056	966
Zinc	ppm ASTM D5185m	1251	1220	1182
Sulfur	ppm ASTM D5185m	3192	3399	3445

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	▲ 28	4	2
Sodium	ppm ASTM D5185m	3	0	<1
Potassium	ppm ASTM D5185m >20	1	<1	<1

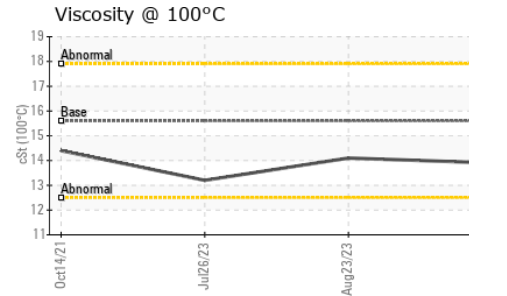
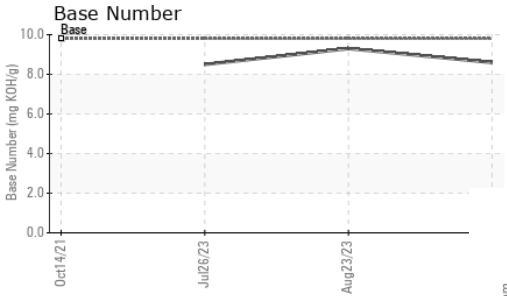
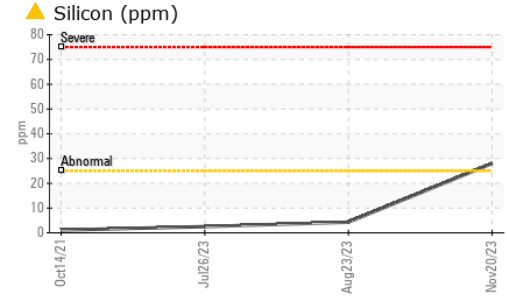
INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.5	0.2	0.6
Nitration	Abs/cm *ASTM D7624 >20	6.1	4.7	6.6
Sulfation	Abs/.1mm *ASTM D7415 >30	18.6	17.4	19.0

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	14.0	12.8	13.5
Base Number (BN)	mg KOH/g ASTM D2896 9.8	8.6	9.3	8.5

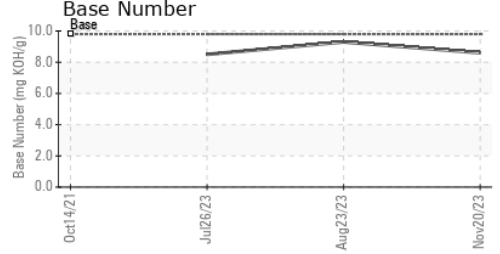
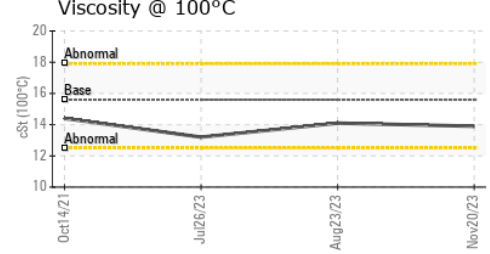
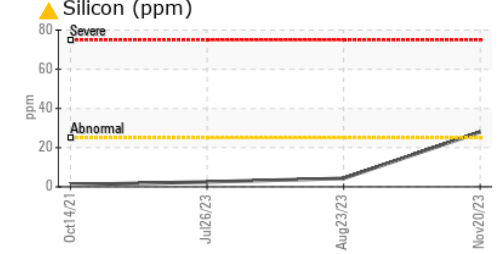
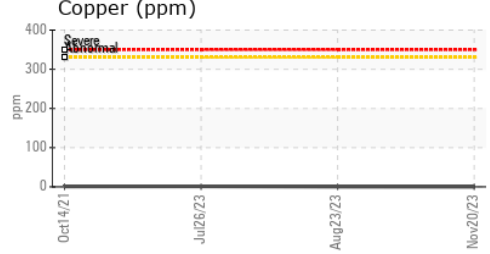
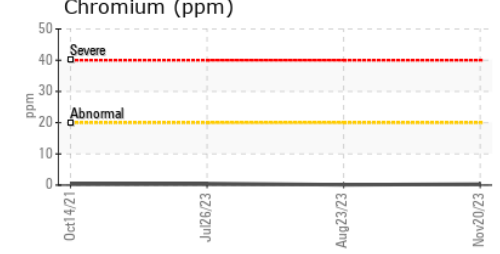
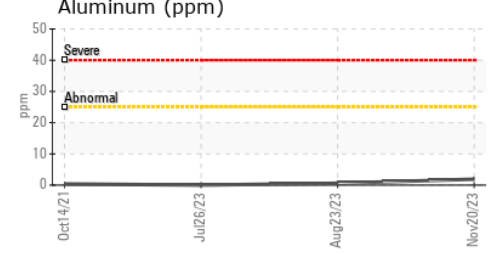
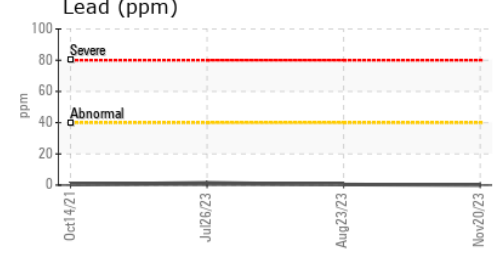
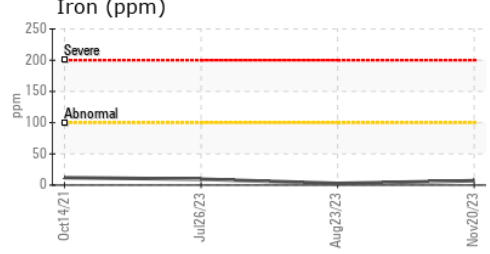
OIL ANALYSIS REPORT



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	15.6	13.9	14.1	13.2

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0064496 **Received** : 08 Dec 2023
Lab Number : 06029957 **Diagnosed** : 12 Dec 2023
Unique Number : 10779748 **Diagnostician** : Don Baldrige
Test Package : MOB 1 (Additional Tests: TBN)

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Certificate L2367
 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)