

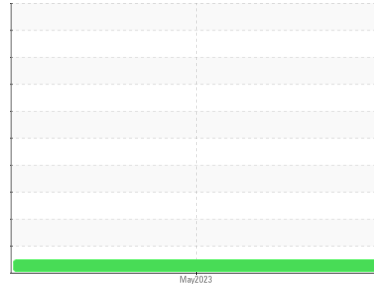
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
CATERPILLAR PIONEER 3508
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Metal levels are typical for a components first oil change.

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	history 1	history 2
Sample Number	Client Info		PC0074649	---	---
Sample Date	Client Info		05 May 2023	---	---
Machine Age	hrs	Client Info	159	---	---
Oil Age	hrs	Client Info	159	---	---
Oil Changed	Client Info		Changed	---	---
Sample Status			NORMAL	---	---

CONTAMINATION

	method	limit/base	current	history 1	history 2
Fuel	WC Method	>5	<1.0	---	---
Glycol	WC Method		NEG	---	---

WEAR METALS

	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185(m) >100	10	---	---
Chromium	ppm	ASTM D5185(m) >20	<1	---	---
Nickel	ppm	ASTM D5185(m) >2	0	---	---
Titanium	ppm	ASTM D5185(m) >2	0	---	---
Silver	ppm	ASTM D5185(m) >2	0	---	---
Aluminum	ppm	ASTM D5185(m) >25	1	---	---
Lead	ppm	ASTM D5185(m) >40	2	---	---
Copper	ppm	ASTM D5185(m) >330	10	---	---
Tin	ppm	ASTM D5185(m) >15	<1	---	---
Antimony	ppm	ASTM D5185(m)	0	---	---
Vanadium	ppm	ASTM D5185(m)	0	---	---
Beryllium	ppm	ASTM D5185(m)	0	---	---
Cadmium	ppm	ASTM D5185(m)	0	---	---

ADDITIVES

	method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185(m) 250	141	---	---
Barium	ppm	ASTM D5185(m) 10	<1	---	---
Molybdenum	ppm	ASTM D5185(m) 100	62	---	---
Manganese	ppm	ASTM D5185(m)	1	---	---
Magnesium	ppm	ASTM D5185(m) 450	378	---	---
Calcium	ppm	ASTM D5185(m) 3000	1840	---	---
Phosphorus	ppm	ASTM D5185(m) 1150	1058	---	---
Zinc	ppm	ASTM D5185(m) 1350	1164	---	---
Sulfur	ppm	ASTM D5185(m) 4250	2782	---	---
Lithium	ppm	ASTM D5185(m)	<1	---	---

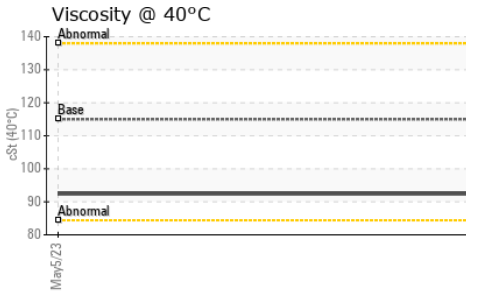
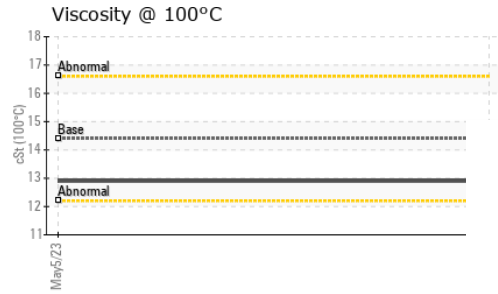
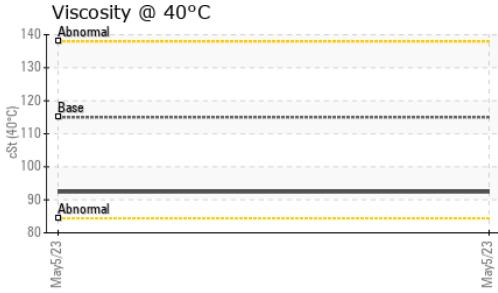
CONTAMINANTS

	method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185(m) >25	3	---	---
Sodium	ppm	ASTM D5185(m) >158	2	---	---
Potassium	ppm	ASTM D5185(m) >20	1	---	---

INFRA-RED

	method	limit/base	current	history 1	history 2
Soot %	%	ASTM D7844* >3	0	---	---
Nitration	Abs/cm	ASTM D7624* >20	5.8	---	---
Sulfation	Abs/.1mm	ASTM D7415* >30	16.5	---	---

OIL ANALYSIS REPORT

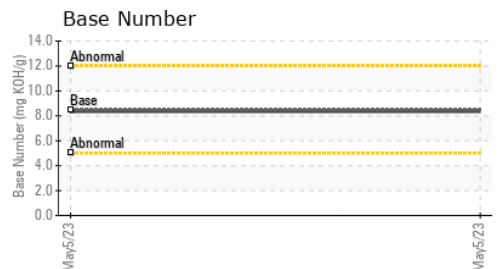
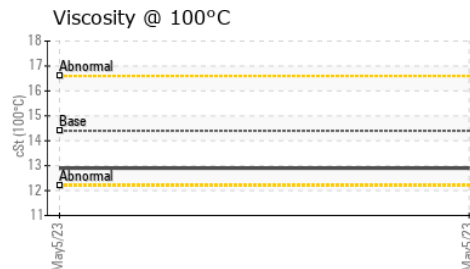
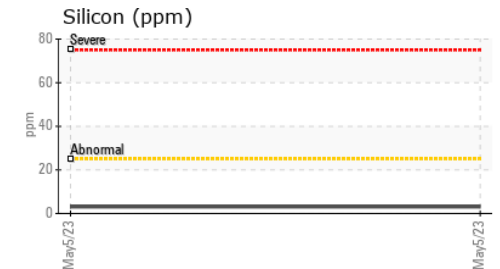
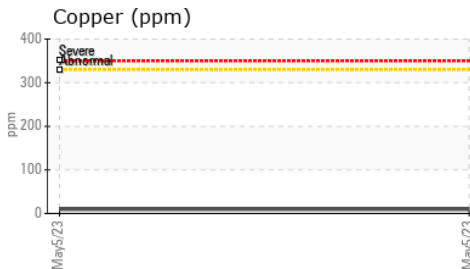
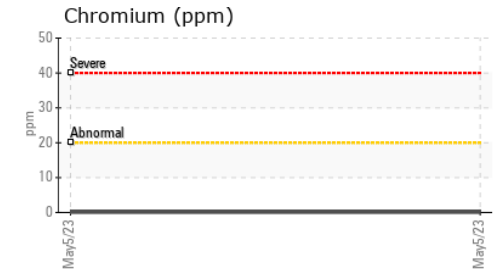
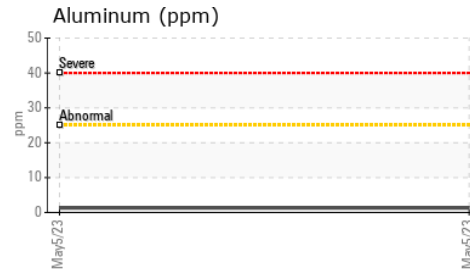
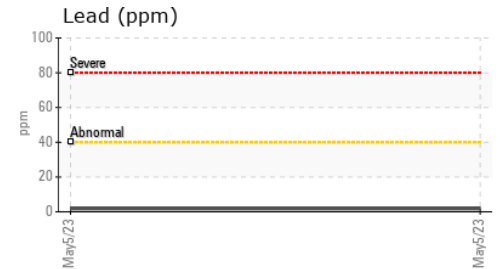
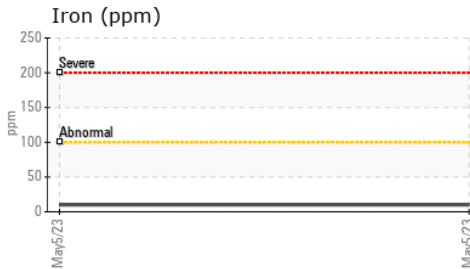


FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs./1mm	ASTM D7414*	>25	12.4	---	---
Base Number (BN)	mg KOH/g	ASTM D2896*	8.5	8.36	---	---

VISUAL		method	limit/base	current	history 1	history 2
Emulsified Water	scalar	Visual*	>0.2	NEG	---	---
Free Water	scalar	Visual*		NEG	---	---

FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 40°C	cSt	ASTM D7279(m)	115	92.4	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	12.9	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	126	137	---	---

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0074649 **Received** : 10 Jul 2023
Lab Number : **02568666** **Diagnosed** : 10 Jul 2023
Unique Number : 5605712 **Diagnostician** : Wes Davis
Test Package : MOB 2 (Additional Tests: KV40, VI)

Martin Energy Group Canada
 1050 Boyde Lane RR#1
 Linwood, ON
 CA N0B 2A0
 Contact: J Wagler
 jwagler@martinenergygroup.com

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.

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