



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
CATERPILLAR 5686-07
 Component
Rear Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 40 (12 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR02606886	TR02347668	---
Sample Date		Client Info		12 Sep 2023	26 Mar 2020	---
Machine Age	hrs	Client Info		365	86	---
Oil Age	hrs	Client Info		365	86	---
Filter Age	hrs	Client Info		365	86	---
Oil Changed		Client Info		Changed	Not Changd	---
Filter Changed		Client Info		Changed	Not Changd	---
Sample Status				NORMAL	NORMAL	---

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>100	62	68	---
Chromium	ppm	ASTM D5185(m)	>20	1	1	---
Nickel	ppm	ASTM D5185(m)	>2	2	2	---
Titanium	ppm	ASTM D5185(m)	>2	0	<1	---
Silver	ppm	ASTM D5185(m)	>2	0	0	---
Aluminum	ppm	ASTM D5185(m)	>25	4	3	---
Lead	ppm	ASTM D5185(m)	>40	4	4	---
Copper	ppm	ASTM D5185(m)	>330	125	75	---
Tin	ppm	ASTM D5185(m)	>15	<1	<1	---
Vanadium	ppm	ASTM D5185(m)		0	0	---

CONTAMINATION

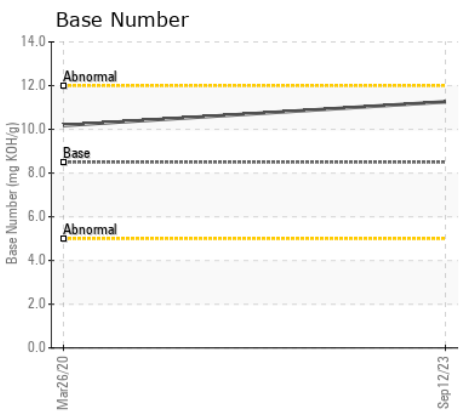
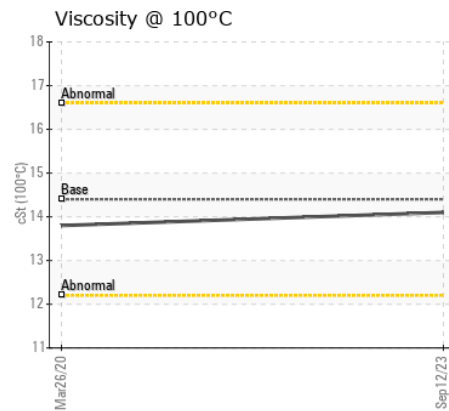
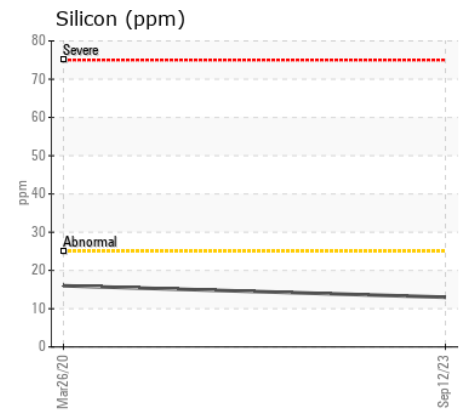
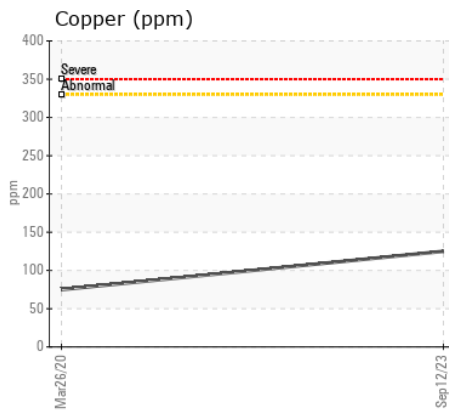
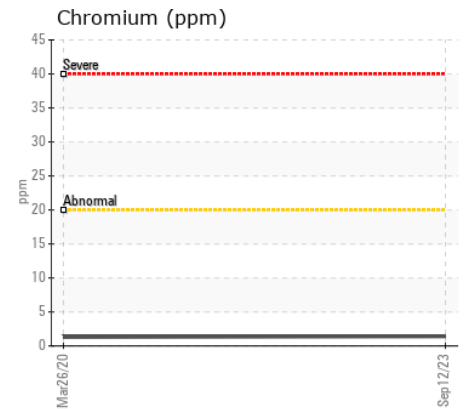
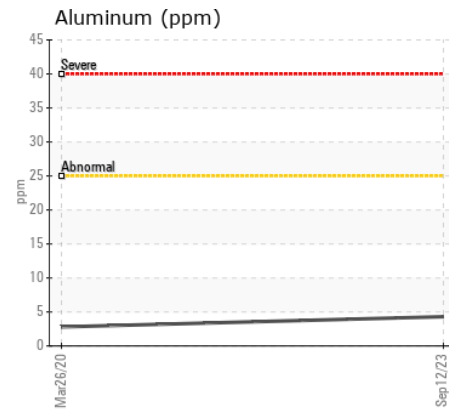
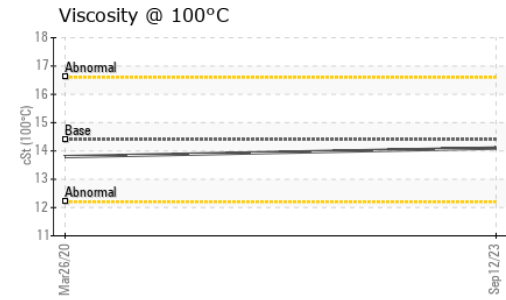
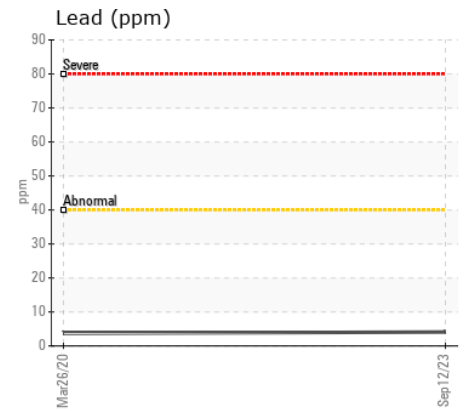
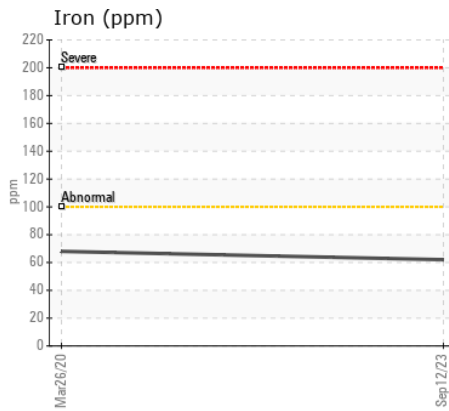
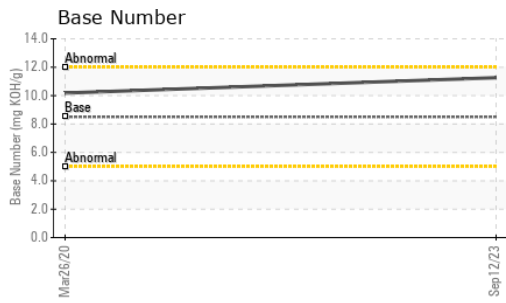
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	13	16	---
Potassium	ppm	ASTM D5185(m)	>20	2	2	---
Fuel		WC Method	>5	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	ASTM D7844*	>3	0.1	0	---
Nitration	Abs/cm	ASTM D7624*	>20	9.1	6.6	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	19.9	18.8	---
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	---

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.

Sodium	ppm	ASTM D5185(m)	>216	5	4	---
Boron	ppm	ASTM D5185(m)	250	11	2	---
Barium	ppm	ASTM D5185(m)	10	0	<1	---
Molybdenum	ppm	ASTM D5185(m)	100	36	3	---
Manganese	ppm	ASTM D5185(m)		2	2	---
Magnesium	ppm	ASTM D5185(m)	450	457	278	---
Calcium	ppm	ASTM D5185(m)	3000	2285	2471	---
Phosphorus	ppm	ASTM D5185(m)	1150	1158	1233	---
Zinc	ppm	ASTM D5185(m)	1350	1452	1407	---
Sulfur	ppm	ASTM D5185(m)	4250	3251	3530	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	15.2	9.5	---
Base Number (BN)	mg KOH/g	ASTM D2896*	8.5	11.26	10.18	---
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	14.1	13.8	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : TR02606886 **Received** : 08 Jan 2024
Lab Number : 02606886 **Diagnosed** : 09 Jan 2024
Unique Number : 5707972 **Diagnostician** : Wes Davis
Test Package : MOB 2

WILCO CONTRACTORS
 3031 ARTHUR ST
 ROSSLYN, ON
 CA P7K 0P2
 Contact: David Cramer

To discuss this sample report, contact Customer Service at 1-800-827-0711.

* - 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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