



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Machine Id
CATERPILLAR DOOLIN LIFT
 Component
Left Genset
 Fluid
TRC PRO-SPEC IV HD 5W40 (8 QTS)

RECOMMENDATION

We recommend that you drain the oil and perform a filter service on this component if not already done. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06148914	---	---
Sample Date		Client Info		04 Apr 2024	---	---
Machine Age	hrs	Client Info		509	---	---
Oil Age	hrs	Client Info		33	---	---
Filter Age	hrs	Client Info		33	---	---
Oil Changed		Client Info		Not Changd	---	---
Filter Changed		Client Info		Not Changd	---	---
Sample Status				ABNORMAL	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	2	---	---
Chromium	ppm	ASTM D5185m	>4	0	---	---
Nickel	ppm	ASTM D5185m	>2	0	---	---
Titanium	ppm	ASTM D5185m		0	---	---
Silver	ppm	ASTM D5185m	>5	0	---	---
Aluminum	ppm	ASTM D5185m	>12	<1	---	---
Lead	ppm	ASTM D5185m	>17	0	---	---
Copper	ppm	ASTM D5185m	>70	<1	---	---
Tin	ppm	ASTM D5185m	>15	0	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

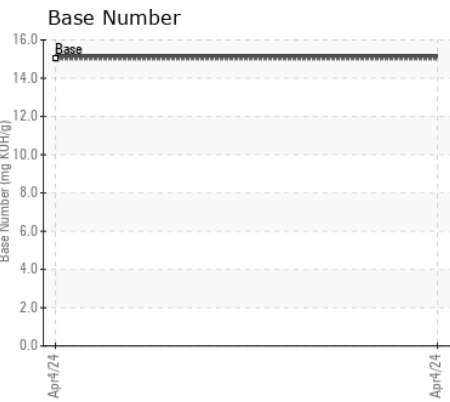
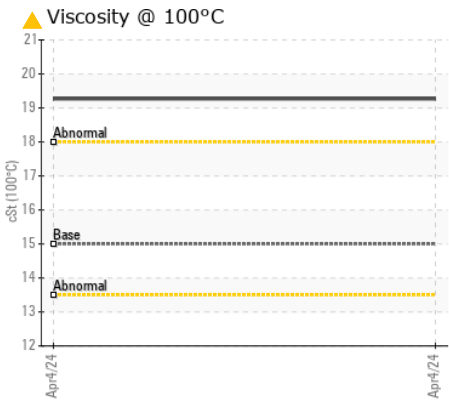
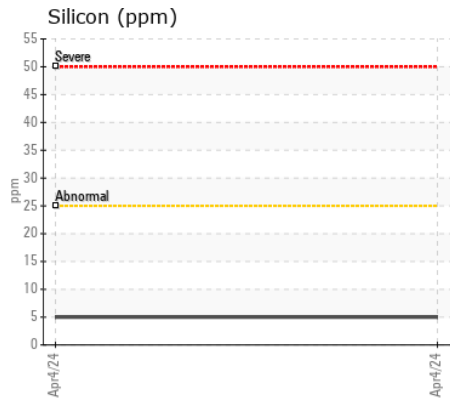
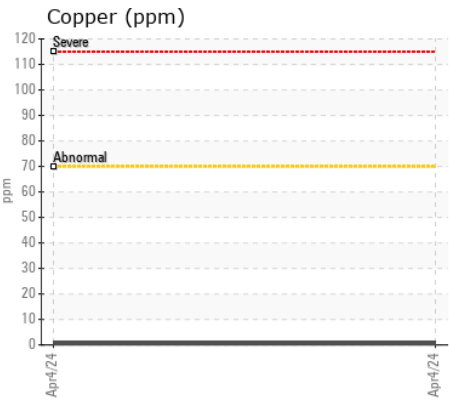
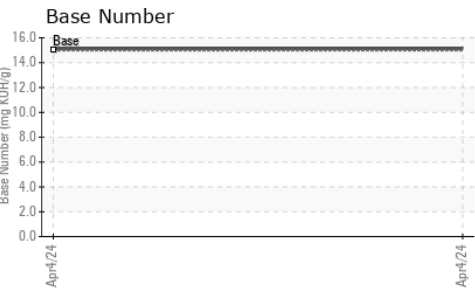
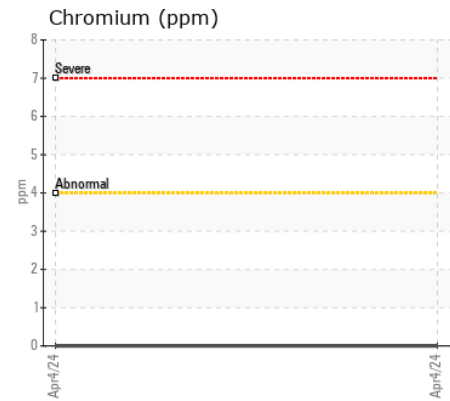
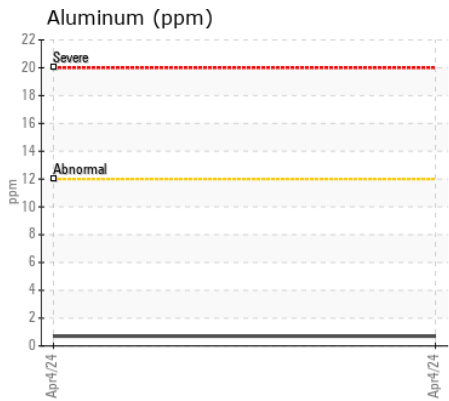
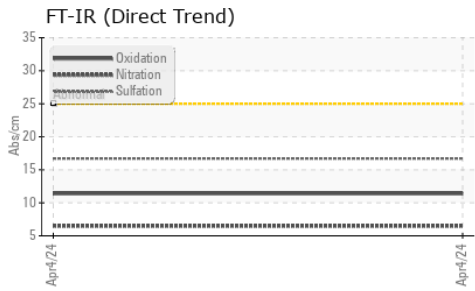
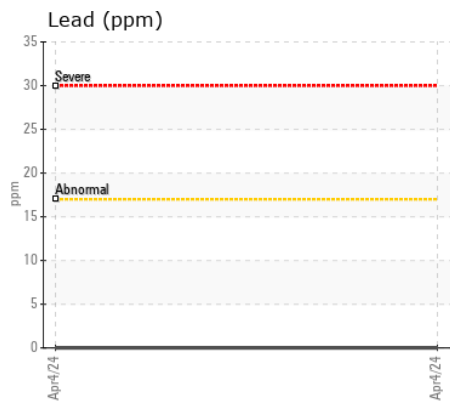
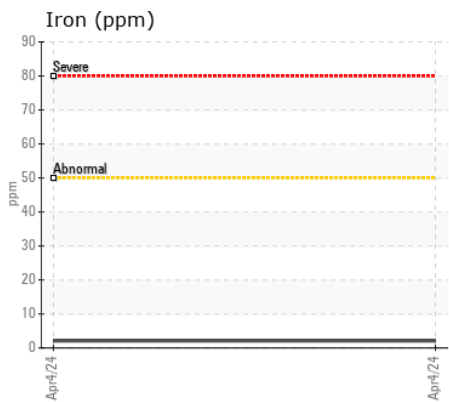
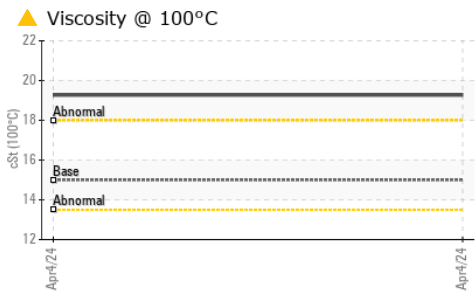
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	5	---	---
Potassium	ppm	ASTM D5185m	>20	3	---	---
Fuel		WC Method	>4.0	<1.0	---	---
Water		WC Method	>0.1	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844		0	---	---
Nitration	Abs/cm	*ASTM D7624	>20	6.5	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	16.7	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.1	NEG	---	---

FLUID CONDITION

The oil viscosity is higher than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable.

Sodium	ppm	ASTM D5185m		4	---	---
Boron	ppm	ASTM D5185m		2	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		13	---	---
Manganese	ppm	ASTM D5185m		<1	---	---
Magnesium	ppm	ASTM D5185m		242	---	---
Calcium	ppm	ASTM D5185m	4500	3903	---	---
Phosphorus	ppm	ASTM D5185m		789	---	---
Zinc	ppm	ASTM D5185m	1200	1124	---	---
Sulfur	ppm	ASTM D5185m		4710	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	11.4	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	15	15.15	---	---
Visc @ 100°C	cSt	ASTM D445	15	▲ 19.27	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06148914
Lab Number : 06148914
Unique Number : 10978992
Test Package : MOB 2
Received : 15 Apr 2024
Tested : 18 Apr 2024
Diagnosed : 18 Apr 2024 - Doug Bogart

CITY OF MCHENRY - KEVIN BEGGS
 1415 INDUSTRIAL DR
 MCHENRY, IL
 US 60050
 Contact: JERRY MORTON

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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F: