

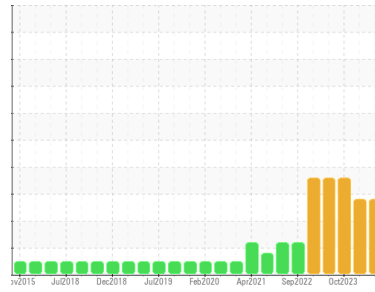


PROBLEM SUMMARY



Machine Id
CATERPILLAR 140H 8201 (S/N N9M00225)
 Component
Diesel Engine
 Fluid
PETRO CANADA 15W40 (--- GAL)

Sample Rating Trend

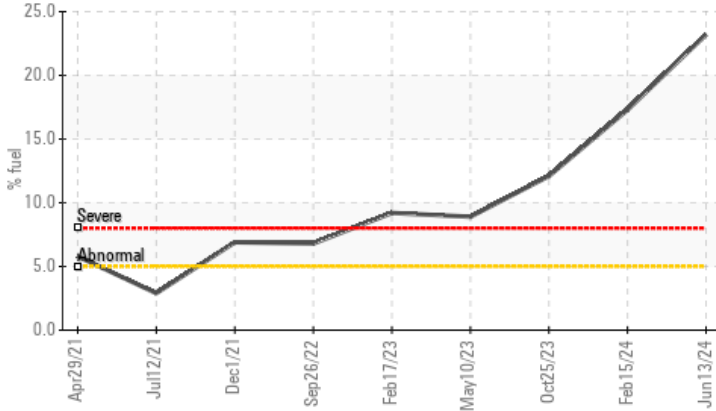


FUEL

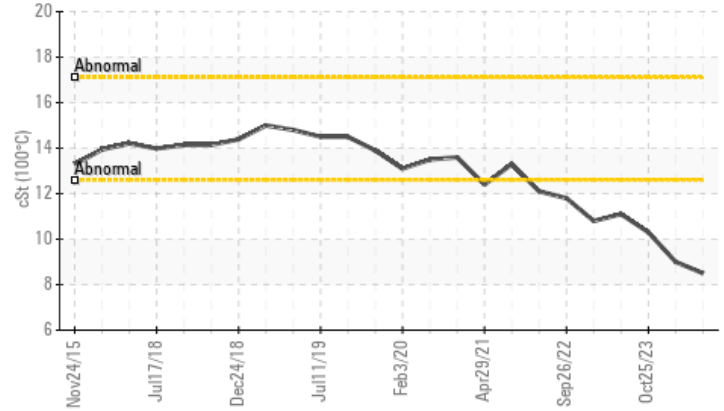


COMPONENT CONDITION SUMMARY

▲ Fuel Dilution



▲ Viscosity @ 100°C



RECOMMENDATION

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status			SEVERE	SEVERE	SEVERE
Fuel	%	ASTM D3524 >5	▲ 23.2	▲ 17.3	▲ 12.1
Visc @ 100°C	cSt	ASTM D445	▲ 8.5	▲ 9	▲ 10.3

Customer Id: TRANEW
 Sample No.: WC0888062
 Lab Number: 06217950
 Test Package: CONST



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

To change component or sample information:
 Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Fuel/injector System	---	---	?	We advise that you check the fuel injection system.

HISTORICAL DIAGNOSIS

FUEL



15 Feb 2024 Diag: Wes Davis

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

view report



FUEL



25 Oct 2023 Diag: Jonathan Hester

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a high amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. The BN level is low.

view report



FUEL



10 May 2023 Diag: Doug Bogart

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a high amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. The BN level is low.

view report



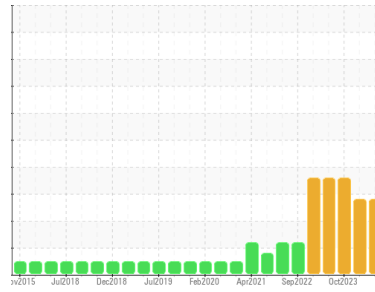


OIL ANALYSIS REPORT



Machine Id
CATERPILLAR 140H 8201 (S/N N9M00225)
 Component
Diesel Engine
 Fluid
PETRO CANADA 15W40 (--- GAL)

Sample Rating Trend



FUEL



DIAGNOSIS

Recommendation
 We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear
 All component wear rates are normal.

Contamination
 There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Fluid Condition
 The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0888062	WC0888178	WC0862914
Sample Date	Client Info		13 Jun 2024	15 Feb 2024	25 Oct 2023
Machine Age	hrs	Client Info	13597	13039	12537
Oil Age	hrs	Client Info	559	502	568
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			SEVERE	SEVERE	SEVERE

CONTAMINATION

	method	limit/base	current	history1	history2
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	41	36	40
Chromium	ppm	ASTM D5185m >20	<1	<1	<1
Nickel	ppm	ASTM D5185m >2	0	0	0
Titanium	ppm	ASTM D5185m >2	<1	<1	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >25	2	3	4
Lead	ppm	ASTM D5185m >40	1	2	5
Copper	ppm	ASTM D5185m >330	3	6	7
Tin	ppm	ASTM D5185m >15	0	<1	<1
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	3	3
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	36	42	45
Manganese	ppm	ASTM D5185m	<1	0	<1
Magnesium	ppm	ASTM D5185m	576	675	736
Calcium	ppm	ASTM D5185m	1604	1317	1354
Phosphorus	ppm	ASTM D5185m	899	869	947
Zinc	ppm	ASTM D5185m	1063	1036	1162
Sulfur	ppm	ASTM D5185m	2776	2419	2672

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	5	6	6
Sodium	ppm	ASTM D5185m	1	1	4
Potassium	ppm	ASTM D5185m >20	0	0	<1
Fuel	%	ASTM D3524 >5	▲ 23.2	▲ 17.3	▲ 12.1

INFRA-RED

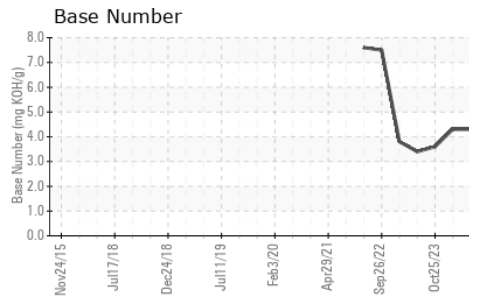
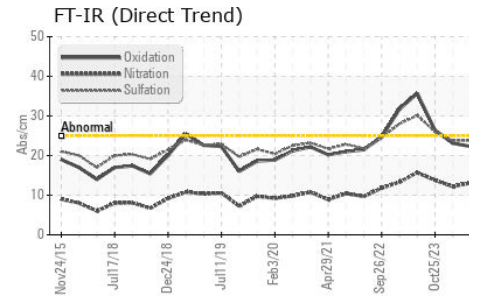
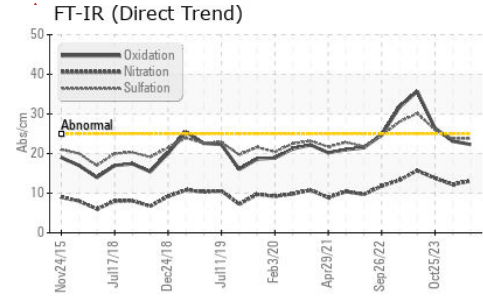
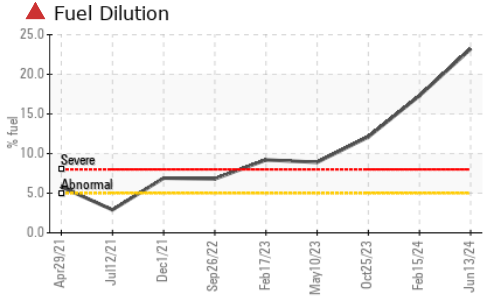
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.6	0.5	0.7
Nitration	Abs/cm	*ASTM D7624 >20	13.1	12.2	13.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	23.8	23.8	26.0

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	22.3	23.1	26.4
Base Number (BN)	mg KOH/g	ASTM D2896	4.3	4.3	▲ 3.6



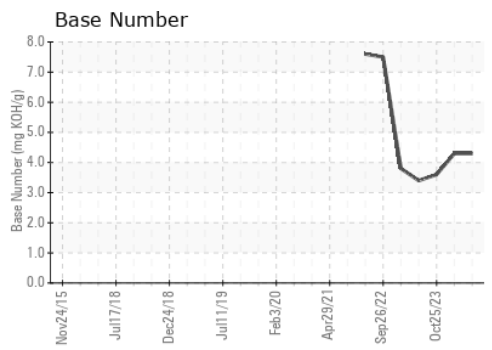
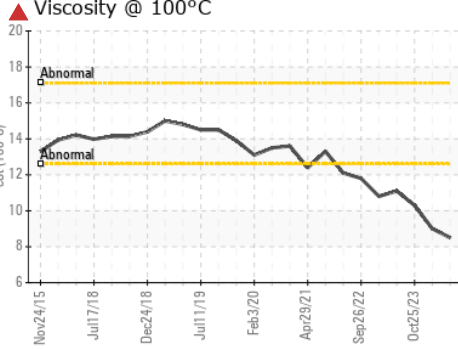
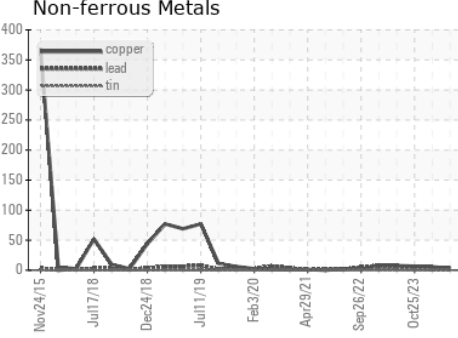
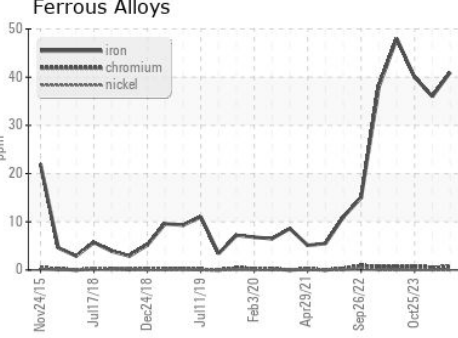
OIL ANALYSIS REPORT



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	▲ 8.5	▲ 9	▲ 10.3

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0888062 **Received** : 24 Jun 2024
Lab Number : 06217950 **Tested** : 26 Jun 2024
Unique Number : 11096147 **Diagnosed** : 26 Jun 2024 - Wes Davis
Test Package : CONST (Additional Tests: PercentFuel, TBN)

TRADER CONSTRUCTION CO.
 PO DRAWER 1578
 NEW BERN, NC
 US 28563
 Contact: MIKE WYATT
 mw Wyatt@traderconstruction.com
 T: (252)633-1399
 F: (252)638-4871

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)