

WEAR NORMAL CONTAMINATION SEVERE FLUID CONDITION NORMAL

Current

Limit/Abn

History1

History2

Machine Id 2008 NOVA 148 Component Rear Diesel Engine Fluid ESSO XD-3 EXTRA 15W40 (--- GAL)

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. Test

UOM

Method

WEAR	

All component wear rates are normal.

CONTAMINATION

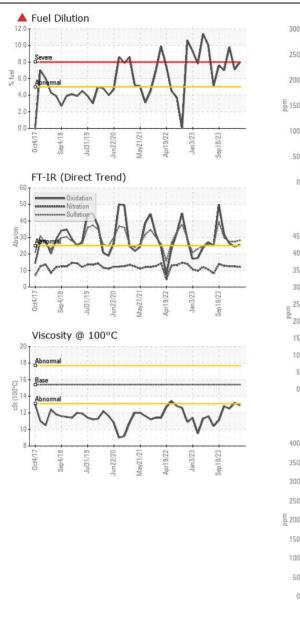
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

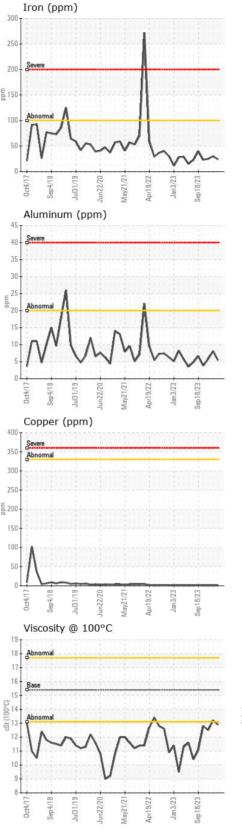
	Sample Number		Client Info		WC0888969	WC0889033	WC0889196
	Sample Date		Client Info		07 May 2024	22 Mar 2024	18 Jan 2024
	Machine Age	kms	Client Info		0	0	0
	Oil Age	kms	Client Info		9085	9271	9385
	Filter Age	kms	Client Info		9085	9271	9385
	Oil Changed		Client Info		Changed	Changed	Changed
	Filter Changed		Client Info		N/A	N/A	N/A
	Sample Status				SEVERE	ABNORMAL	SEVERE
	Iron	ppm	ASTM D5185(m)	>100	24	30	25
	Chromium	ppm	ASTM D5185(m)	>20	1	1	2
	Nickel	ppm	ASTM D5185(m)	>4	0	0	<1
	Titanium	ppm	ASTM D5185(m)		0	0	0
	Silver	ppm	ASTM D5185(m)	>3	0	0	0
	Aluminum	ppm	ASTM D5185(m)	>20	5	8	6
	Lead	ppm	ASTM D5185(m)	>40	<1	<1	<1
	Copper	ppm	ASTM D5185(m)	>330	<1	1	<1
	Tin	ppm	ASTM D5185(m)	>15	0	0	0
	Vanadium	ppm	ASTM D5185(m)		0	0	0
	Silicon	ppm	ASTM D5185(m)	>25	5	5	6
	Potassium	ppm	ASTM D5185(m)	>20	8	8	7
	Fuel	%	ASTM D3103(iii) ASTM D7593*	>5	o ▲ 8	0 ▲ 7.1	/ ▲ 9.8
	Water	70	WC Method	>0.2	NEG	NEG	NEG
	Glycol		WC Method	20.L	NEG	NEG	NEG
	Soot %	%	ASTM D7844*	>3	1	1	0.5
	Nitration	Abs/cm	ASTM D7624*	>20	12.2	12.4	12.6
	Sulfation	Abs/.1mm	ASTM D7415*	>30	28.2	27.4	27.4
	Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
	Sodium	ppm	ASTM D5185(m)	>192	3	3	3
	Boron	ppm	ASTM D5185(m)	ZIUL	77	80	87
	Barium	ppm	ASTM D5185(m)		0	0	0
	Molybdenum	ppm	ASTM D5185(m)		0	<1	<1
	Manganese	ppm	ASTM D5185(m)		<1	0	0
	Magnesium	ppm	ASTM D5185(m)		16	19	16
	Calcium	ppm	ASTM D5185(m)	3780	2286	2317	2244
	Phosphorus	ppm	ASTM D5185(m)	1370	985	970	957
	Zinc	ppm	ASTM D5185(m)	1500	1191	1179	1165
	Sulfur	ppm	ASTM D5185(m)	3800	2782	2769	2949
	Oxidation	Abs/.1mm	ASTM D7414*	>25	25.6	24.5	26.3
	Visc @ 100°C	cSt	ASTM D7279(m)	15.4	12.9	13.2	1 2.5

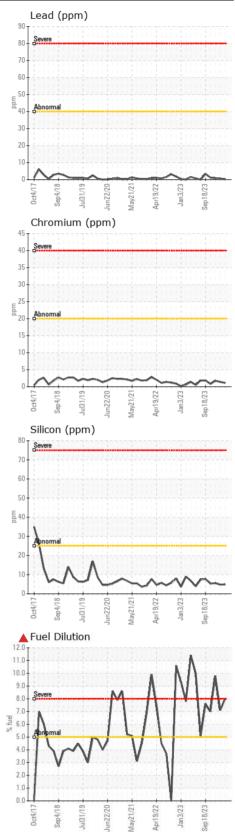
FLUID CONDITION

The oil is no longer serviceable due to the presence of contaminants.

Contact/Location: Sean Malcolm - CITTHU Page 1 of 2







CITY OF THUNDER BAY Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 CALA Sample No. : WC0888969 Received AUTO MAINTENANCE STORES, 570 FORT WILLIAM ROAD : 13 May 2024 В. Lab Number : 02634877 Tested : 14 May 2024 THUNDER BAY, ON ISO 17025:2017 Accredited Laboratory : 14 May 2024 - Kevin Marson CA P7B 2Z8 Unique Number : 5776030 Diagnosed Test Package : MOB 1 (Additional Tests: PercentFuel) Contact: Sean Malcolm sean.malcolm@thunderbay.ca To discuss this sample report, contact Customer Service at 1-800-268-2131. T: (807)684-2716 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. F: (807)344-0237 Validity of results and interpretation are based on the sample and information as supplied.

Contact/Location: Sean Malcolm - CITTHU Page 2 of 2