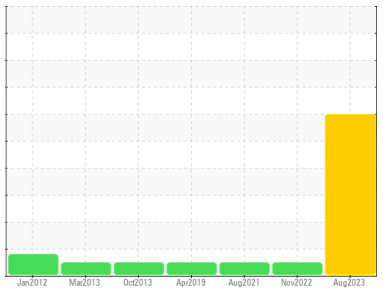
OIL ANALYSIS REPORT

Sample Rating Trend



DIRT

Machine Id
06D0308342
Component
Diesel Engine
Fluid
TOTAL FINA RUBIA TIR 7900 15W40 (--- GAL)

DIAGNOSIS

Recommendation
We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

Wear
All component wear rates are normal.

Contamination
There is a moderate amount of fuel present in the oil. High concentration of dirt present in the oil. Tests confirm the presence of fuel in the oil.

Fluid Condition
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		**WC877360**	WC877095	WC
Sample Date		Client Info		**22 Aug 2023**	02 Nov 2022	17 Aug 2021
Machine Age	hrs	Client Info		**0**	0	0
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**SEVERE**	NORMAL	NORMAL

CONTAMINATION	method	limit/base	current	history1	history2
Glycol	WC Method		**NEG**	NEG	0.0

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>101	**43**	27	18
Chromium	ppm	ASTM D5185(m)	>16	**2**	2	1
Nickel	ppm	ASTM D5185(m)	>6	**0**	<1	0
Titanium	ppm	ASTM D5185(m)	>2	**<1**	<1	0
Silver	ppm	ASTM D5185(m)	>2	**<1**	0	<1
Aluminum	ppm	ASTM D5185(m)	>21	**2**	2	2
Lead	ppm	ASTM D5185(m)	>41	**4**	4	2
Copper	ppm	ASTM D5185(m)	>21	**17**	22	26
Tin	ppm	ASTM D5185(m)	>13	**6**	4	3
Antimony	ppm	ASTM D5185(m)		**0**	0	<1
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**1**	<1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		**11**	1	2
Barium	ppm	ASTM D5185(m)		**0**	0	<1
Molybdenum	ppm	ASTM D5185(m)		**12**	7	8
Manganese	ppm	ASTM D5185(m)		**<1**	<1	<1
Magnesium	ppm	ASTM D5185(m)		**180**	126	135
Calcium	ppm	ASTM D5185(m)	3290	**1848**	1902	1876
Phosphorus	ppm	ASTM D5185(m)	1200	**775**	787	744
Zinc	ppm	ASTM D5185(m)	1400	**856**	857	882
Sulfur	ppm	ASTM D5185(m)	4000	**2488**	2738	2738
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>16	**34**	32	21
Sodium	ppm	ASTM D5185(m)		**9**	10	9
Potassium	ppm	ASTM D5185(m)	>20	**1**	1	1
Fuel	%	ASTM D7593*	>3.0	**3.3**	<1.0	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>0.8	**0.3**	0.1	0
Nitration	Abs/cm	ASTM D7624*	>20	**4.7**	4.4	4.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	**17.4**	16.8	16.0

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**10.6**	10.5	10.5

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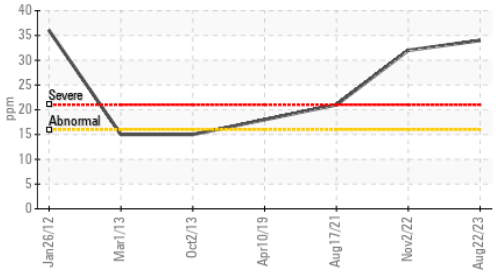
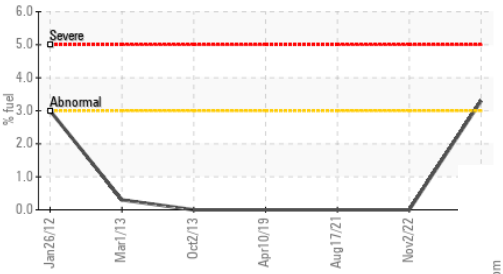
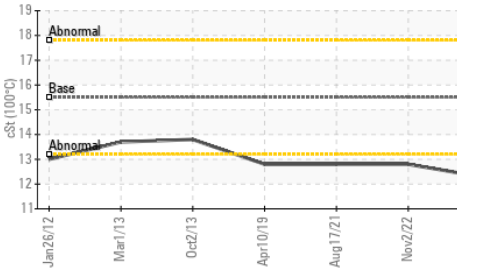
Silicon (ppm)



Fuel Dilution



Viscosity @ 100°C

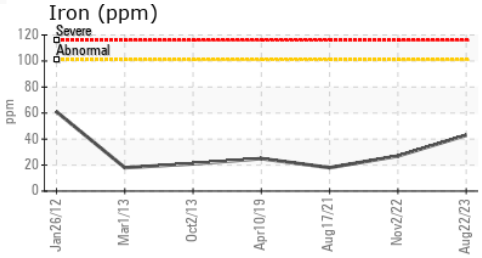


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**VLITE**	---	VLITE
Yellow Metal	scalar	Visual*	NONE	**NONE**	---	NONE
Precipitate	scalar	Visual*	NONE	**NONE**	---	NONE
Silt	scalar	Visual*	NONE	**NONE**	---	NONE
Debris	scalar	Visual*	NONE	**NONE**	---	VLITE
Sand/Dirt	scalar	Visual*	NONE	**NONE**	---	NONE
Appearance	scalar	Visual*	NORML	**NORML**	---	NORML
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

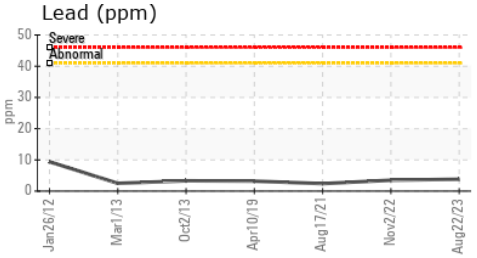
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.5	▲ **12.3**	12.8	12.8

GRAPHS

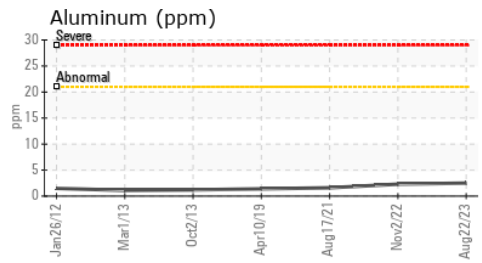
Iron (ppm)



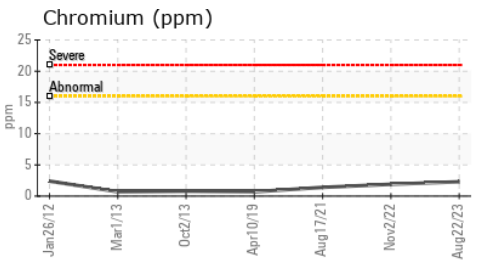
Lead (ppm)



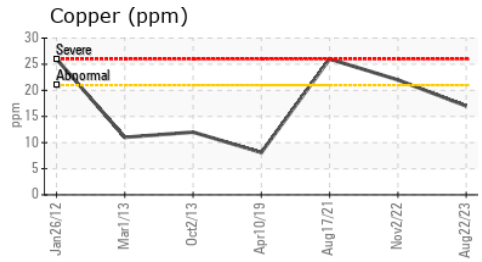
Aluminum (ppm)



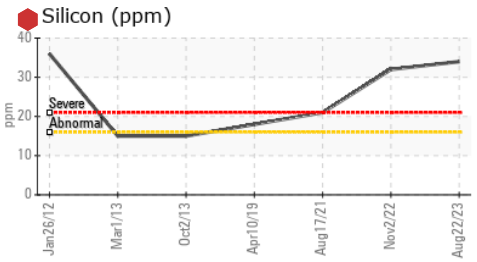
Chromium (ppm)



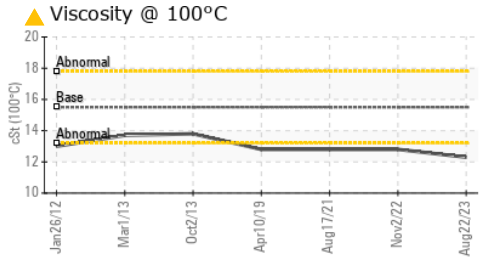
Copper (ppm)



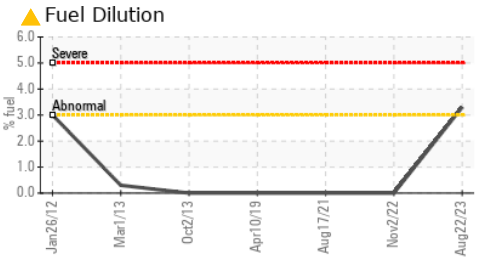
Silicon (ppm)



Viscosity @ 100°C



Fuel Dilution



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC877360
Lab Number : 02578058
Unique Number : 5631118
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel, Visual)

Received : 24 Aug 2023
Diagnosed : 25 Aug 2023
Diagnostician : Kevin Marson

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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