

Machine Id
FAIRBANKS FAIRBANKS
Component
Diesel Engine
Fluid
CASTROL MHP 154 (--- GAL)

RECOMMENDATION

We advise that you check the fuel injection system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

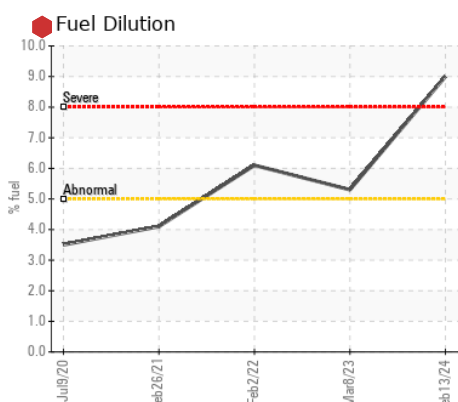
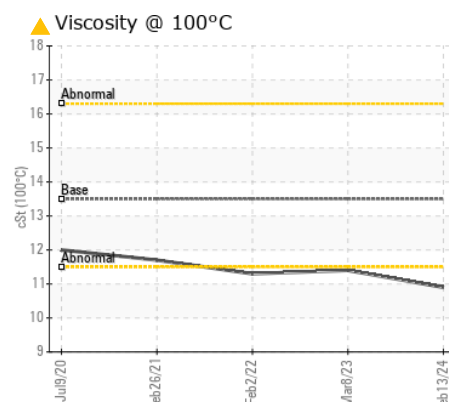
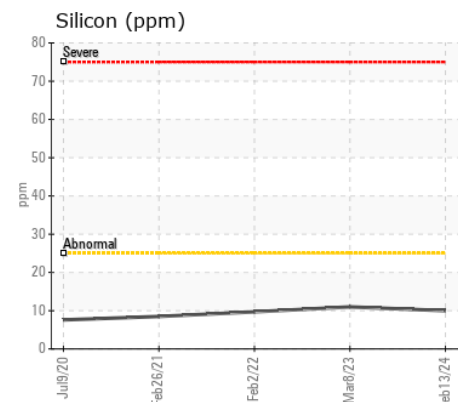
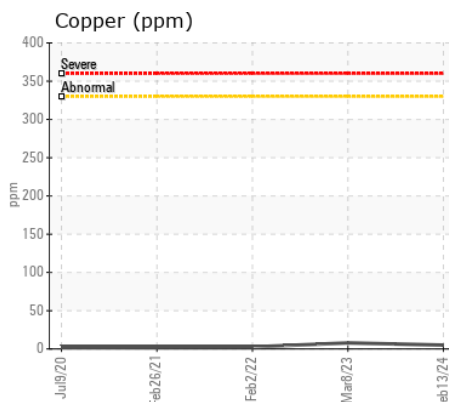
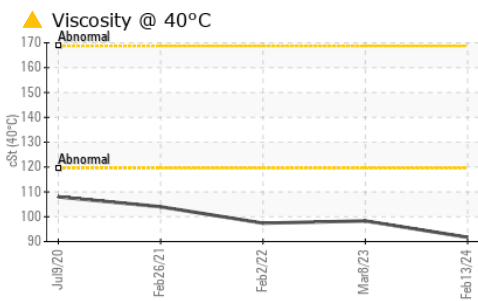
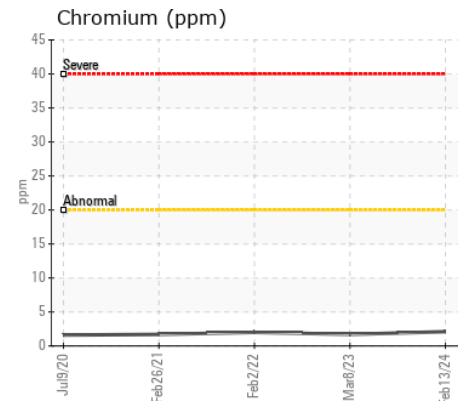
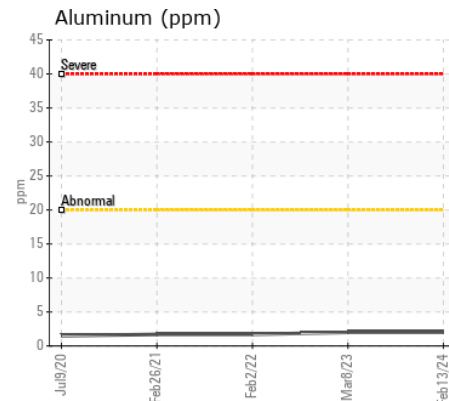
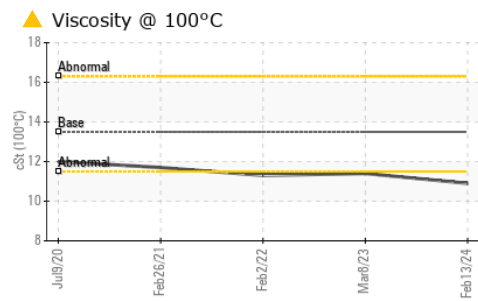
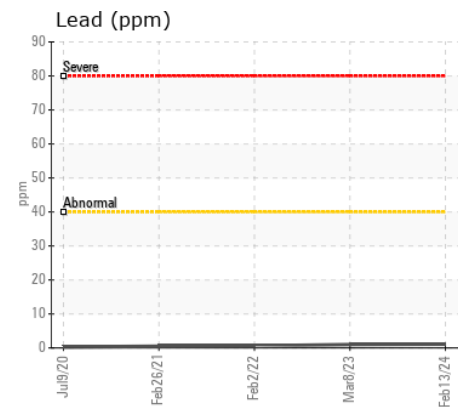
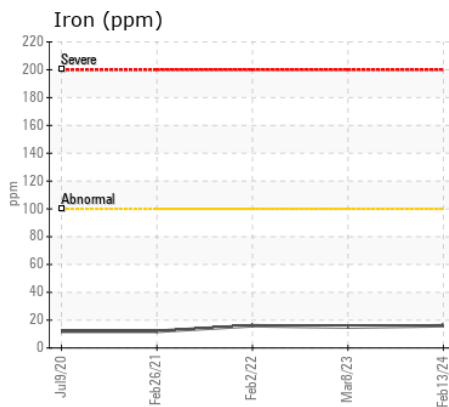
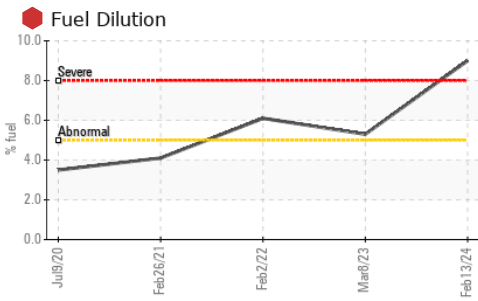
CONTAMINATION

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

FLUID CONDITION

Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PC0064939	PC0036762	PC0018039
Sample Date		Client Info		13 Feb 2024	08 Mar 2023	02 Feb 2022
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	2000	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				SEVERE	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185(m)	>100	16	15	16
Chromium	ppm	ASTM D5185(m)	>20	2	2	2
Nickel	ppm	ASTM D5185(m)	>4	0	<1	<1
Titanium	ppm	ASTM D5185(m)		0	4	<1
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	2	2	2
Lead	ppm	ASTM D5185(m)	>40	1	1	<1
Copper	ppm	ASTM D5185(m)	>330	5	8	3
Tin	ppm	ASTM D5185(m)	>15	<1	<1	1
Vanadium	ppm	ASTM D5185(m)		0	<1	0
White Metal	scalar	Visual*	NONE	NONE	VLITE	VLITE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185(m)	>25	10	11	10
Potassium	ppm	ASTM D5185(m)	>20	1	<1	1
Fuel	%	ASTM D7593*	>5	9	5.3	6.1
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	0.2	0.1	0.2
Nitration	Abs/cm	ASTM D7624*	>20	8.2	8.4	9.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	14.3	16.4	16.1
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	VLITE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Sodium	ppm	ASTM D5185(m)		13	6	3
Boron	ppm	ASTM D5185(m)		7	7	8
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		2	3	3
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)		46	52	48
Calcium	ppm	ASTM D5185(m)		4868	5108	4822
Phosphorus	ppm	ASTM D5185(m)		835	916	857
Zinc	ppm	ASTM D5185(m)		920	955	962
Sulfur	ppm	ASTM D5185(m)		9285	9023	9247
Oxidation	Abs/.1mm	ASTM D7414*	>25	6.9	7.2	7.9
Visc @ 40°C	cSt	ASTM D7279(m)		91.7	98.3	97.4
Visc @ 100°C	cSt	ASTM D7279(m)	13.5	10.9	11.4	11.3
Viscosity Index (VI)	Scale	ASTM D2270*		103	102	102



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0064939 **Received** : 20 Feb 2024
Lab Number : 02616623 **Tested** : 22 Feb 2024
Unique Number : 5733733 **Diagnosed** : 22 Feb 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: KV40, PercentFuel, VI, Visual)

THUNDER BAY TUG
 600-100 MAIN ST
 THUNDER BAY, ON
 CA P7B 6R9
 Contact: Service Manager
 nate.daws86@gmail.com

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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