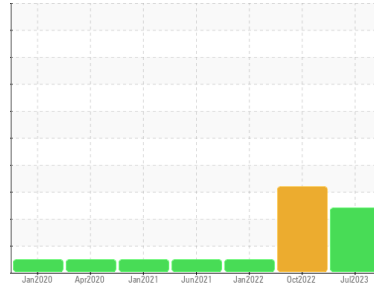




OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Area
4000 series
 Machine Id
Ford 4836

Component
Gasoline Engine
 Fluid

PETRO CANADA SUPREME 5W20 MOTOR OIL (7 LTR)

DIAGNOSIS

▲ Recommendation

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

▲ Wear

Aluminum ppm levels are noted. All other component wear rates are normal.

▲ Contamination

Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Fluid Condition

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

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0828182	WC0744917	WC0651258
Sample Date	Client Info		25 Jul 2023	29 Oct 2022	13 Jan 2022
Machine Age	mls	Client Info	92764	47960	47636
Oil Age	mls	Client Info	45074	54	11260
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			ABNORMAL	ABNORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>4.0	<1.0	▲ 2.8	<1.0
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>150	32	24	12
Chromium	ppm	ASTM D5185(m)	>20	2	2	<1
Nickel	ppm	ASTM D5185(m)	>5	1	<1	<1
Titanium	ppm	ASTM D5185(m)		<1	2	14
Silver	ppm	ASTM D5185(m)	>2	0	0	0
Aluminum	ppm	ASTM D5185(m)	>40	▲ 9	▲ 8	5
Lead	ppm	ASTM D5185(m)	>50	0	<1	0
Copper	ppm	ASTM D5185(m)	>155	2	2	2
Tin	ppm	ASTM D5185(m)	>10	<1	<1	<1
Antimony	ppm	ASTM D5185(m)		0	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	<1
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)	183	31	33	24
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	36	67	71	93
Manganese	ppm	ASTM D5185(m)	0	2	2	1
Magnesium	ppm	ASTM D5185(m)	417	495	510	635
Calcium	ppm	ASTM D5185(m)	1318	1162	1172	936
Phosphorus	ppm	ASTM D5185(m)	773	666	686	668
Zinc	ppm	ASTM D5185(m)	845	728	718	756
Sulfur	ppm	ASTM D5185(m)	2690	2287	2292	1817
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>30	▲ 38	▲ 33	21
Sodium	ppm	ASTM D5185(m)	>400	12	15	5
Potassium	ppm	ASTM D5185(m)	>20	2	4	2

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*		0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	18.3	17.8	14.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	36.0	33.3	24.8

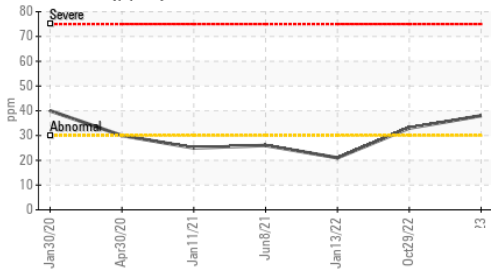
FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414*	>25	34.4	32.6	20.4

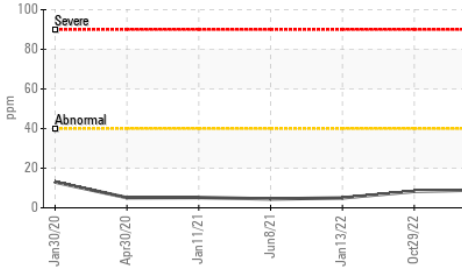


OIL ANALYSIS REPORT

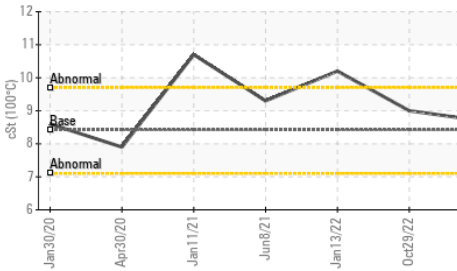
▲ Silicon (ppm)



▲ Aluminum (ppm)



Viscosity @ 100°C



VISUAL

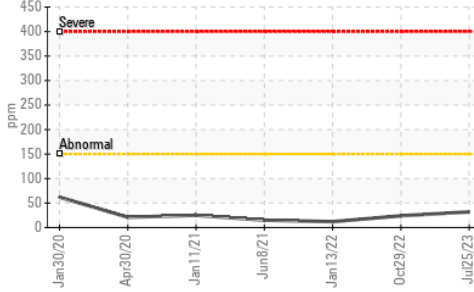
	method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES

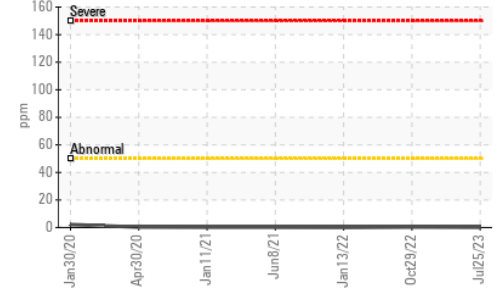
	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	8.42	8.7	9

GRAPHS

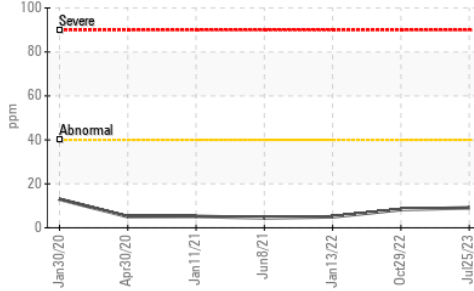
Iron (ppm)



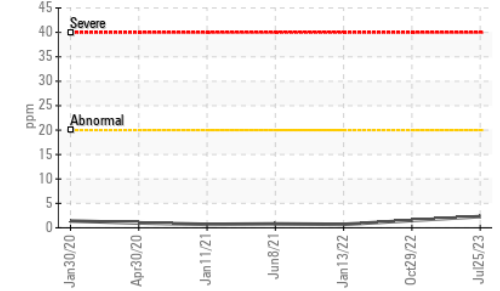
Lead (ppm)



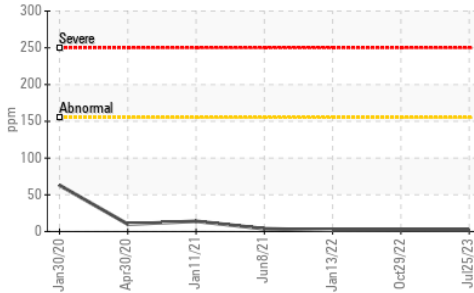
▲ Aluminum (ppm)



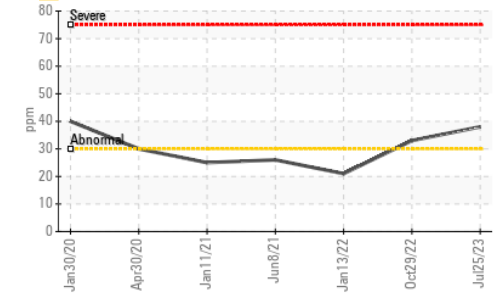
Chromium (ppm)



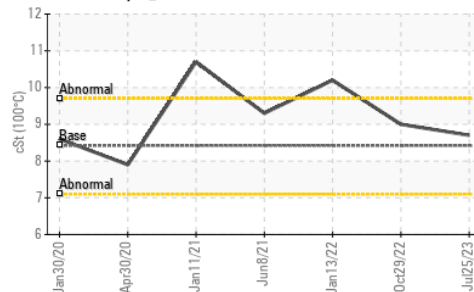
Copper (ppm)



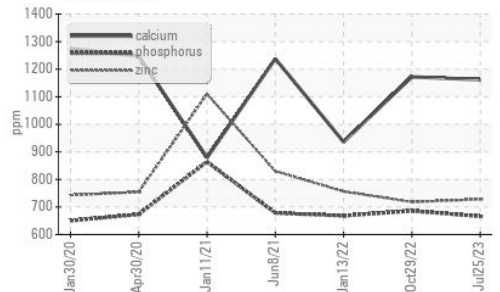
▲ Silicon (ppm)



Viscosity @ 100°C



Additives



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
 Sample No. : WC0828182
 Lab Number : 02576129
 Unique Number : 5629189
 Test Package : MOB 1

Received : 16 Aug 2023
 Diagnosed : 17 Aug 2023
 Diagnostician : Kevin Marson

MANITOU LIN TRANSPORT

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 LIVELY, ON
 CA P3Y 1L1
 Contact: Todd Smith
 tosmith@manitoulintransport.com
 T: (705)562-3302
 F: x:

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.