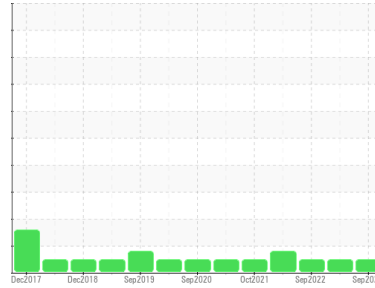




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
3000 Series
 Machine Id
Freightliner 3812T

Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 10W30 (26 LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0771285	WC0797595	WC0738258
Sample Date	Client Info		30 Sep 2023	26 Mar 2023	24 Sep 2022
Machine Age	mls	Client Info	212998	197384	179185
Oil Age	mls	Client Info	15614	18199	20986
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	<1.0	<1.0

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>75	58	64	61
Chromium	ppm	ASTM D5185(m)	>5	2	3	3
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	<1	<1
Silver	ppm	ASTM D5185(m)	>2	<1	0	0
Aluminum	ppm	ASTM D5185(m)	>15	17	29	36
Lead	ppm	ASTM D5185(m)	>25	<1	<1	<1
Copper	ppm	ASTM D5185(m)	>100	7	5	6
Tin	ppm	ASTM D5185(m)	>4	<1	<1	<1
Antimony	ppm	ASTM D5185(m)		0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
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)	2	2	1	<1
Barium	ppm	ASTM D5185(m)	0	<1	0	0
Molybdenum	ppm	ASTM D5185(m)	50	61	63	60
Manganese	ppm	ASTM D5185(m)	0	<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	950	958	998	970
Calcium	ppm	ASTM D5185(m)	1050	1060	1152	1097
Phosphorus	ppm	ASTM D5185(m)	995	916	1062	1033
Zinc	ppm	ASTM D5185(m)	1180	1200	1243	1211
Sulfur	ppm	ASTM D5185(m)	2600	2349	2487	2317
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	11	6	12
Sodium	ppm	ASTM D5185(m)		48	3	4
Potassium	ppm	ASTM D5185(m)	>20	18	42	60
Glycol	%	ASTM D7922*		0.0	NEG	NEG

INFRA-RED

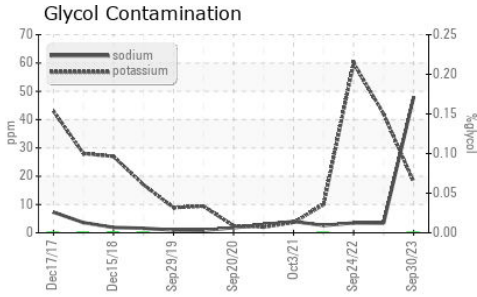
	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>6	1	1.4	1.3
Nitration	Abs/cm	ASTM D7624*	>20	12.8	14.3	13.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	27.2	29.4	27.7

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414*	>25	25.6	23.0	24.2



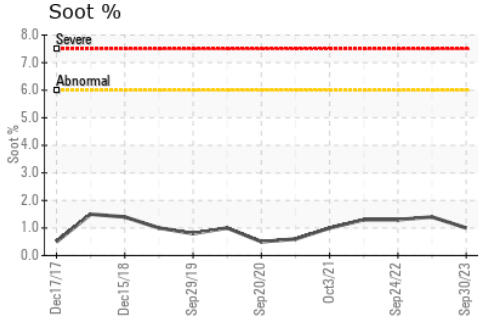
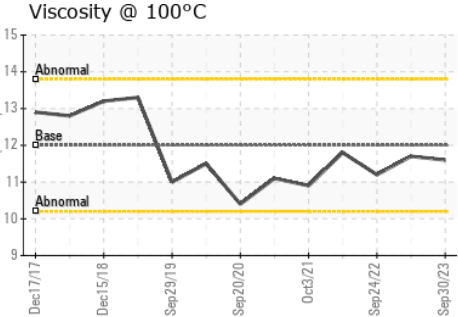
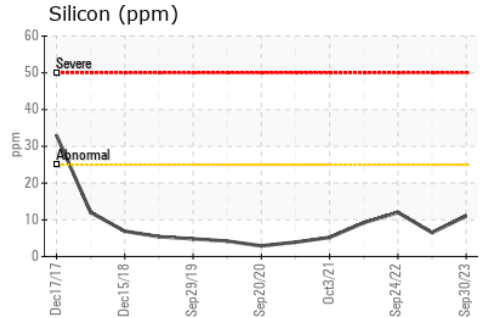
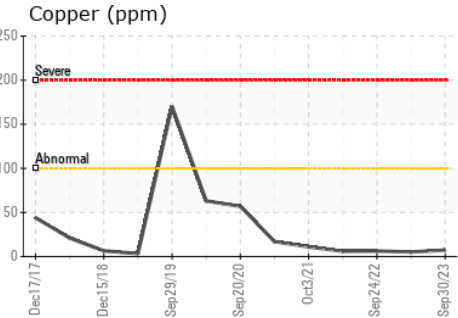
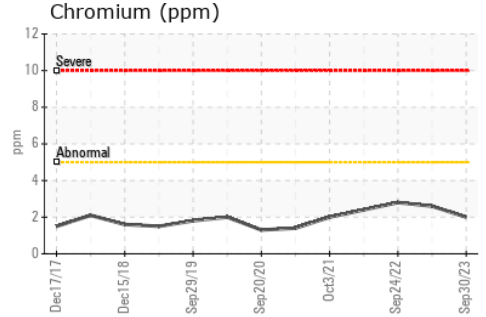
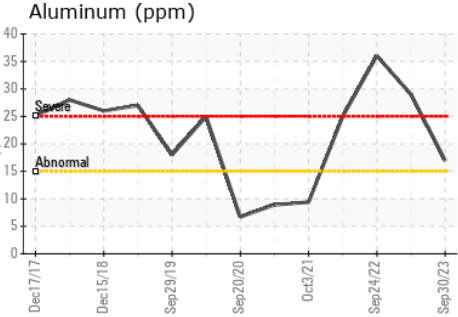
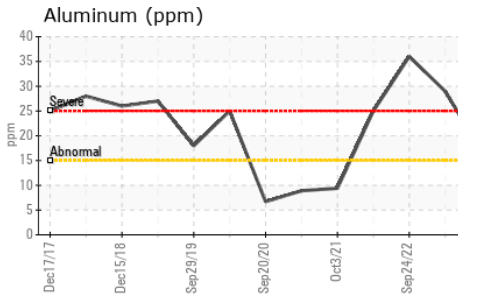
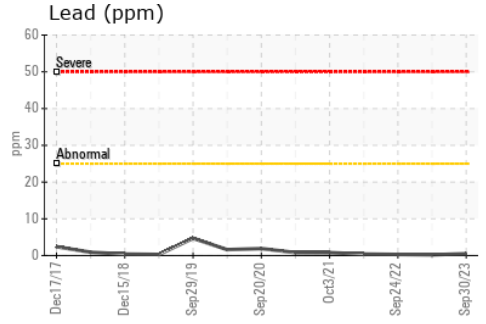
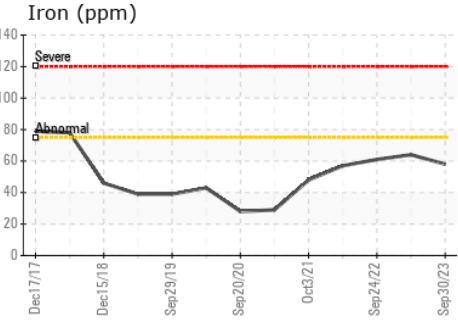
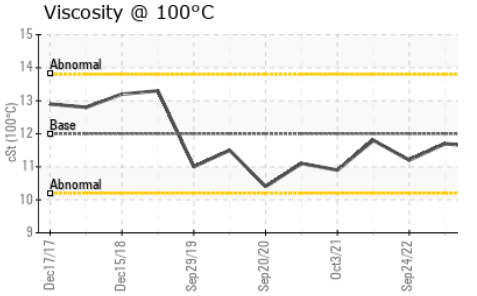
OIL ANALYSIS REPORT



PARAMETER	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)	12.00	11.6	11.7

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **MANITOU LIN TRANSPORT (GARAGE)**
Sample No. : WC0771285 **Received** : 03 Oct 2023 1335 SHAWSON DRIVE
Lab Number : 02586341 **Diagnosed** : 03 Oct 2023 MISSISSAUGA, ON
Unique Number : 5655407 **Diagnostician** : Kevin Marson CA L4W 1C4
Test Package : MOB 1 (Additional Tests: Glycol) Contact: Travis Spence

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.
 T: tspence@manitoulintransport.com
 F: (905)564-6361