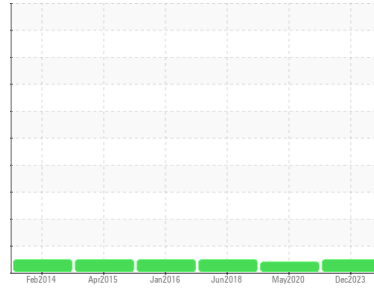




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
Heater Local
 Machine Id
Carrier 81550H
 Component
Trailer Diesel Engine
 Fluid
PETRO CANADA DURON SHP 10W30 (5 LTR)

DIAGNOSIS

Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. 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

Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WC0864529	WC0458615	WC0295834
Sample Date	Client Info			09 Dec 2023	06 May 2020	03 Jun 2018
Machine Age	hrs	Client Info		0	0	1188
Oil Age	hrs	Client Info		0	0	1188
Oil Changed	Client Info			Changed	Changed	N/A
Sample Status				NORMAL	ABNORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method		>4.0	<1.0	1	<1.0
Water	WC Method		>0.1	NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>120	2	5	2
Chromium	ppm	ASTM D5185(m)	>10	0	<1	0
Nickel	ppm	ASTM D5185(m)	>5	0	0	0
Titanium	ppm	ASTM D5185(m)		0	<1	0
Silver	ppm	ASTM D5185(m)	>5	<1	0	0
Aluminum	ppm	ASTM D5185(m)	>20	1	2	2
Lead	ppm	ASTM D5185(m)	>40	<1	0	0
Copper	ppm	ASTM D5185(m)	>300	<1	<1	<1
Tin	ppm	ASTM D5185(m)	>10	<1	1	<1
Antimony	ppm	ASTM D5185(m)		0	<1	0
Vanadium	ppm	ASTM D5185(m)		0	<1	<1
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0

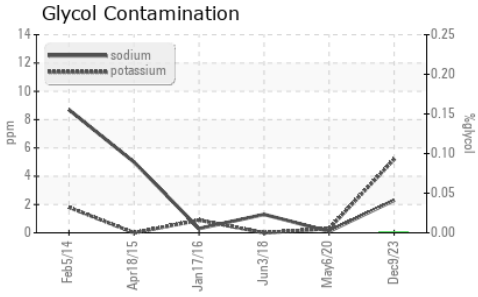
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	2	157	176	213
Barium	ppm	ASTM D5185(m)	0	<1	0	0
Molybdenum	ppm	ASTM D5185(m)	50	7	43	72
Manganese	ppm	ASTM D5185(m)	0	0	<1	<1
Magnesium	ppm	ASTM D5185(m)	950	101	409	11
Calcium	ppm	ASTM D5185(m)	1050	1992	1381	1997
Phosphorus	ppm	ASTM D5185(m)	995	924	726	660
Zinc	ppm	ASTM D5185(m)	1180	1083	816	736
Sulfur	ppm	ASTM D5185(m)	2600	2821	2650	2494
Lithium	ppm	ASTM D5185(m)		<1	<1	0

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	2	2	2
Sodium	ppm	ASTM D5185(m)		2	<1	1
Potassium	ppm	ASTM D5185(m)	>20	5	<1	0
Glycol	%	ASTM D7922*		0.0	NEG	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	5.4	5.8	4.8
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.0	19.1	15.9



OIL ANALYSIS REPORT

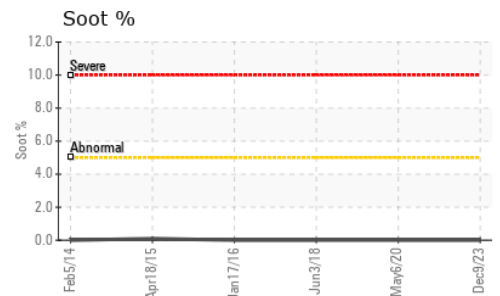
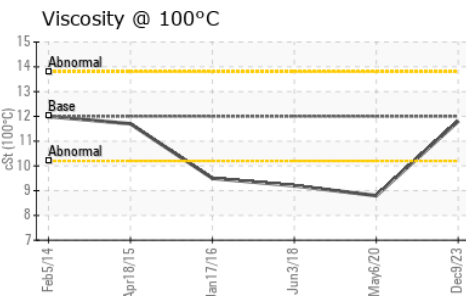
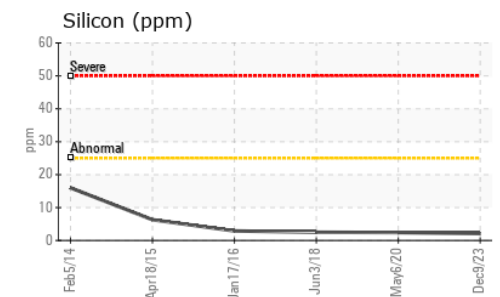
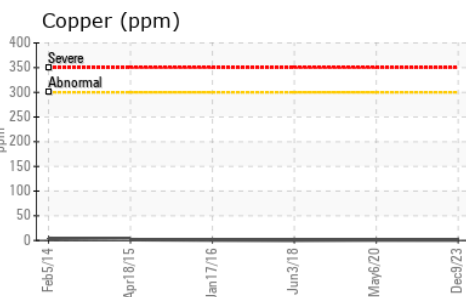
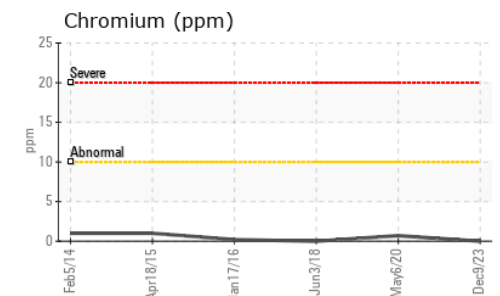
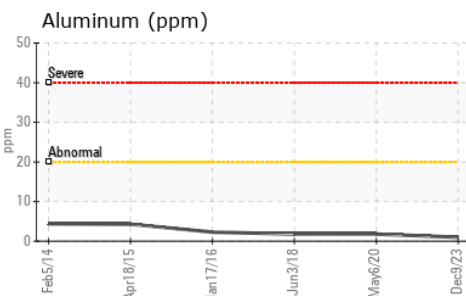
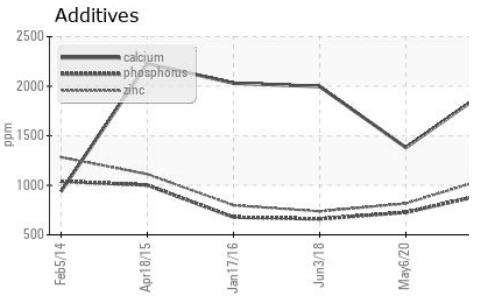
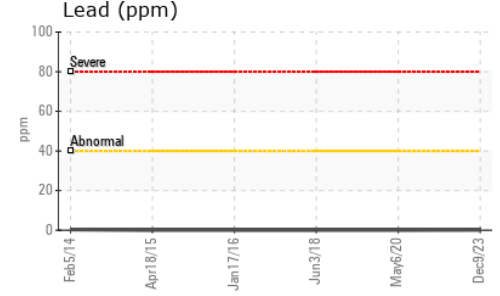
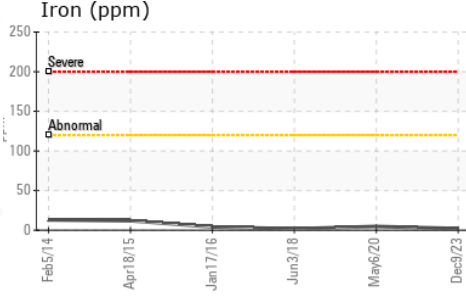
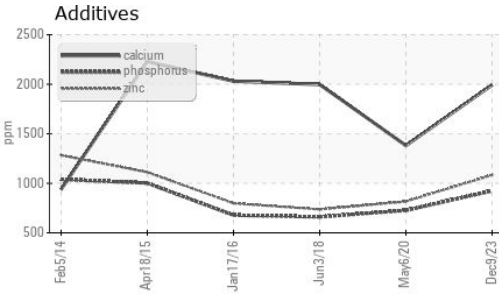


FLUID DEGRADATION	method	limit/base	current	history1	history2	
Oxidation	Abs./1mm	ASTM D7414*	>25	16.3	8.1	9.2

VISUAL	method	limit/base	current	history1	history2	
Emulsified Water	scalar	Visual*	>0.1	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)	12.00	11.8	▲ 8.8	9.2

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **MANITOU LIN TRANSPORT (GARAGE)**
Sample No. : WC0864529 **Received** : 12 Dec 2023 1335 SHAWSON DRIVE
Lab Number : **02602485** **Diagnosed** : 12 Dec 2023 MISSISSAUGA, ON
Unique Number : 5695570 **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