



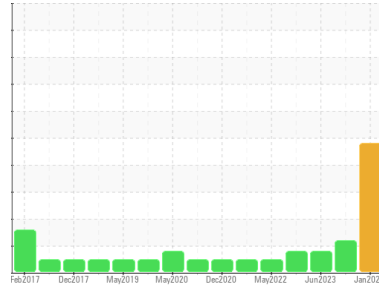
OIL ANALYSIS REPORT

Sample Rating Trend

GLYCOL

Area
3000 Series
Machine Id
Freightliner 3810T

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



DIAGNOSIS

Recommendation

We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

Test for glycol is positive. There is a moderate concentration of glycol present in the oil.

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		WC0886678	WC0805749	WC0837247
Sample Date	Client Info		06 Jan 2024	30 Aug 2023	25 Jun 2023
Machine Age	mls	Client Info	195923	187764	179850
Oil Age	mls	Client Info	17072	7913	14692
Oil Changed	Client Info		Changed	Not Changd	Changed
Sample Status			ABNORMAL	ABNORMAL	ABNORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>75	73	37	▲ 78
Chromium	ppm	ASTM D5185(m)	>5	2	1	3
Nickel	ppm	ASTM D5185(m)	>4	<1	0	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>15	7	3	7
Lead	ppm	ASTM D5185(m)	>25	1	1	2
Copper	ppm	ASTM D5185(m)	>100	6	2	5
Tin	ppm	ASTM D5185(m)	>4	0	0	<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	6	2	2
Barium	ppm	ASTM D5185(m)	0	0	<1	0
Molybdenum	ppm	ASTM D5185(m)	50	82	72	66
Manganese	ppm	ASTM D5185(m)	0	<1	0	<1
Magnesium	ppm	ASTM D5185(m)	950	948	977	1069
Calcium	ppm	ASTM D5185(m)	1050	1050	1082	1151
Phosphorus	ppm	ASTM D5185(m)	995	987	961	1123
Zinc	ppm	ASTM D5185(m)	1180	1185	1194	1291
Sulfur	ppm	ASTM D5185(m)	2600	2656	2482	2389
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	20	9	11
Sodium	ppm	ASTM D5185(m)		▲ 302	128	4
Potassium	ppm	ASTM D5185(m)	>20	▲ 291	▲ 207	7
Glycol	%	ASTM D7922*		▲ 0.06	0.0	NEG

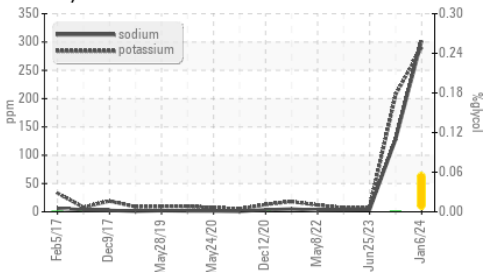
INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>6	0.7	0.6	1.2
Nitration	Abs/cm	ASTM D7624*	>20	13.8	12.5	17.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	25.5	23.8	30.8



OIL ANALYSIS REPORT

▲ Glycol Contamination



FLUID DEGRADATION

method	limit/base	current	history1	history2
Abs.:1mm	ASTM D7414*	>25	22.7	31.9

VISUAL

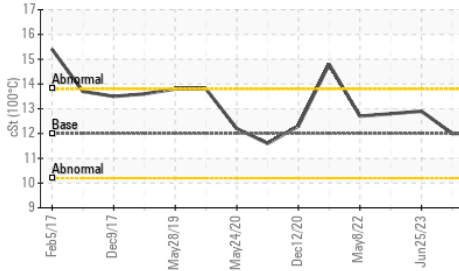
method	limit/base	current	history1	history2
scalar	Visual*	>0.2	NEG	NEG
scalar	Visual*	NEG	NEG	NEG

FLUID PROPERTIES

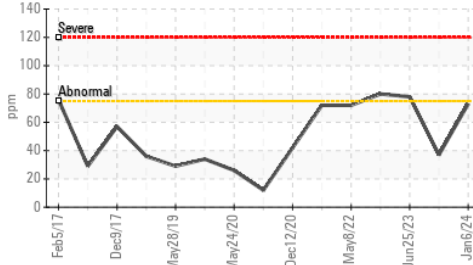
method	limit/base	current	history1	history2
cSt	ASTM D7279(m)	12.0	12.0	12.9

GRAPHS

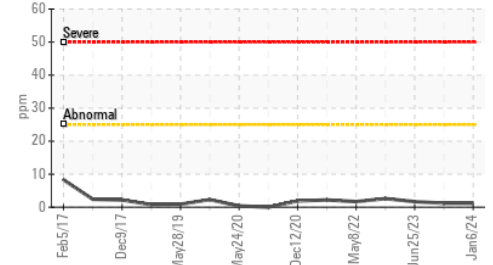
Viscosity @ 100°C



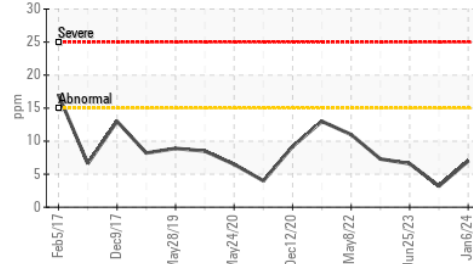
Iron (ppm)



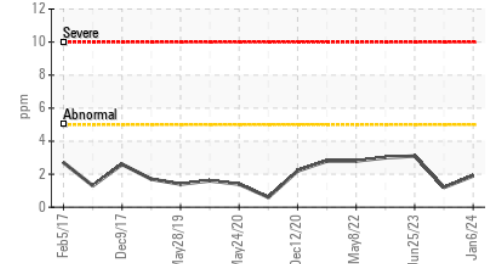
Lead (ppm)



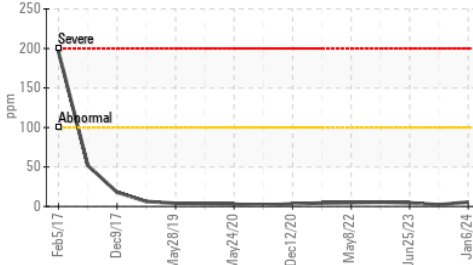
Aluminum (ppm)



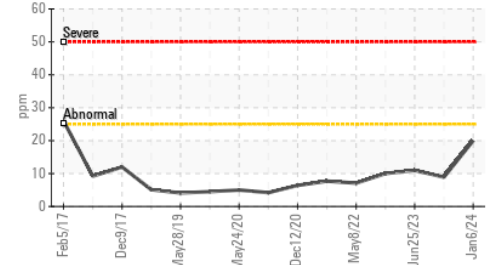
Chromium (ppm)



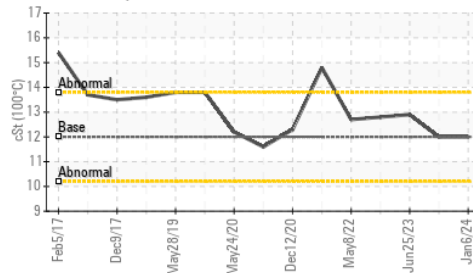
Copper (ppm)



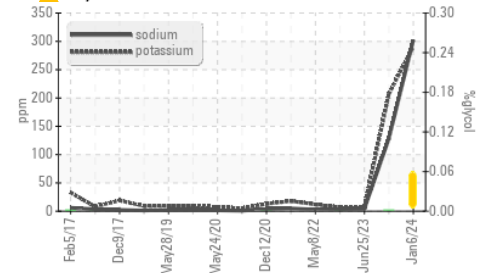
Silicon (ppm)



Viscosity @ 100°C



▲ Glycol Contamination



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **MANITOU LIN TRANSPORT (GARAGE)**
Sample No. : WC0886678 **Received** : 09 Jan 2024 1335 SHAWSON DRIVE
Lab Number : 02607442 **Diagnosed** : 09 Jan 2024 MISSISSAUGA, ON
Unique Number : 5708528 **Diagnostician** : Wes Davis 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.

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