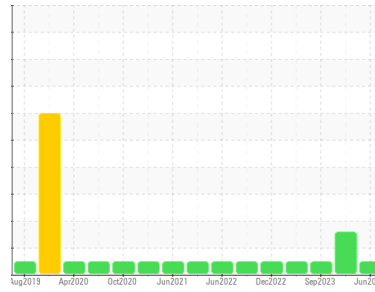




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area

56000 series

Machine Id

Toronto Freightliner 56151

Component

Diesel Engine

Fluid

PETRO CANADA DURON SHP 10W30 (40 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		WC0948270	WC0863968	WC0863999
Sample Date	Client Info		20 Jun 2024	15 Mar 2024	29 Sep 2023
Machine Age	kms	Client Info	577709	874899	504086
Oil Age	kms	Client Info	33565	0	37198
Oil Changed	Client Info		Changed	N/A	Changed
Sample Status			NORMAL	ABNORMAL	NORMAL

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)	>65	29	59	36
Chromium	ppm	ASTM D5185(m)	>5	2	▲ 5	4
Nickel	ppm	ASTM D5185(m)	>3	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	>5	0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>35	15	▲ 39	21
Lead	ppm	ASTM D5185(m)	>10	0	0	<1
Copper	ppm	ASTM D5185(m)	>180	4	8	6
Tin	ppm	ASTM D5185(m)	>8	<1	<1	<1
Antimony	ppm	ASTM D5185(m)	>35	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	19	3	2
Barium	ppm	ASTM D5185(m)	0	0	0	<1
Molybdenum	ppm	ASTM D5185(m)	50	14	63	64
Manganese	ppm	ASTM D5185(m)	0	<1	0	<1
Magnesium	ppm	ASTM D5185(m)	950	230	1020	1007
Calcium	ppm	ASTM D5185(m)	1050	1981	1122	1122
Phosphorus	ppm	ASTM D5185(m)	995	932	975	996
Zinc	ppm	ASTM D5185(m)	1180	1152	1238	1226
Sulfur	ppm	ASTM D5185(m)	2600	2534	2132	2130
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>15	4	5	6
Sodium	ppm	ASTM D5185(m)		3	5	4
Potassium	ppm	ASTM D5185(m)	>20	7	5	2
Glycol	%	ASTM D7922*		0.0	0.0	NEG

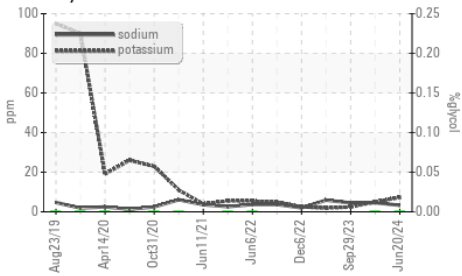
INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	0.5	0.5	0.6
Nitration	Abs/cm	ASTM D7624*	>20	9.7	9.6	9.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	24.6	21.5	22.4

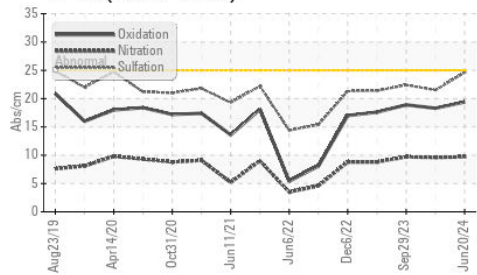


OIL ANALYSIS REPORT

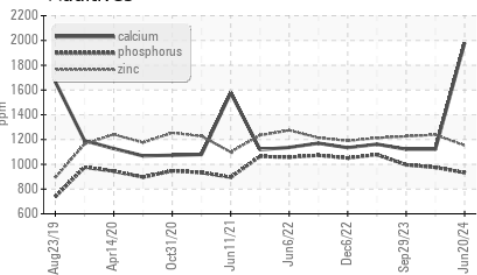
Glycol Contamination



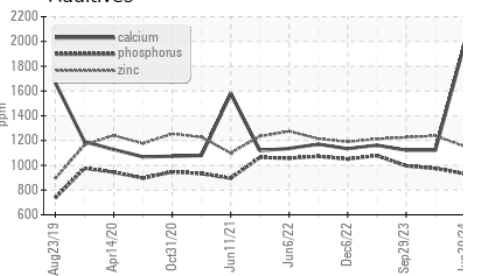
FT-IR (Direct Trend)



Additives



Additives



FLUID DEGRADATION

method	limit/base	current	history1	history2
Abs./1mm	ASTM D7414*	>25	18.3	18.9

VISUAL

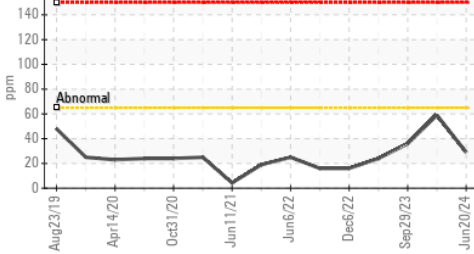
method	limit/base	current	history1	history2
scalar	Visual*	>0.2	NEG	NEG
scalar	Visual*	NEG	NEG	NEG

FLUID PROPERTIES

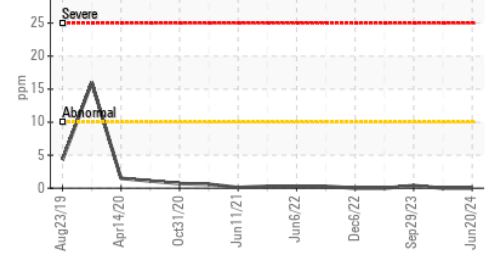
method	limit/base	current	history1	history2
cSt	ASTM D7279(m)	12.00	11.6	11.7

GRAPHS

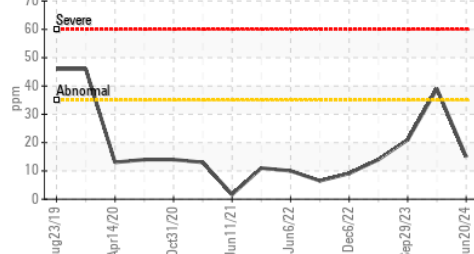
Iron (ppm)



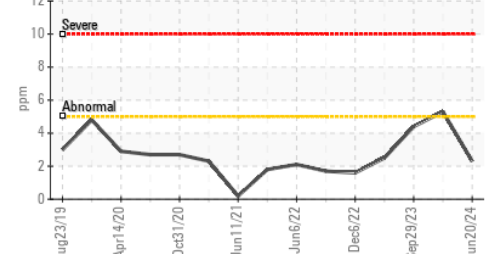
Lead (ppm)



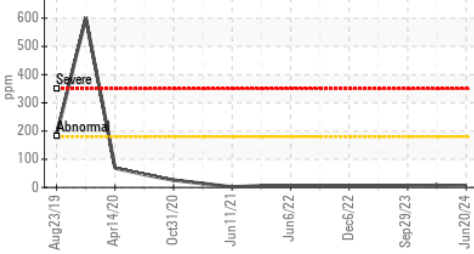
Aluminum (ppm)



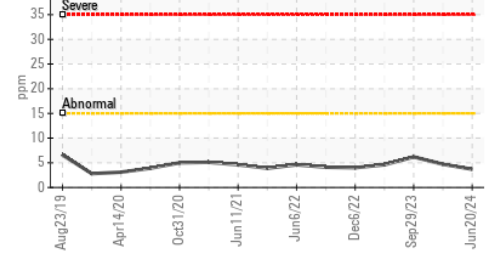
Chromium (ppm)



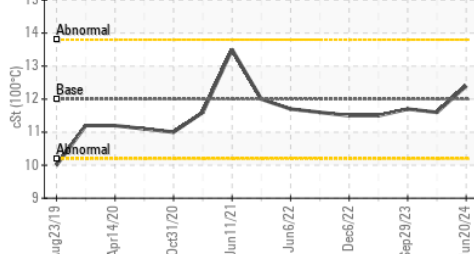
Copper (ppm)



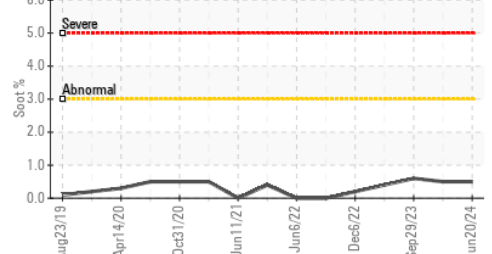
Silicon (ppm)



Viscosity @ 100°C



Soot %



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0948270
Lab Number : 02646530
Unique Number : 5812082
Test Package : MOB 1 (Additional Tests: Glycol)
Received : 09 Jul 2024
Tested : 09 Jul 2024
Diagnosed : 09 Jul 2024 - Wes Davis

MANITOU LIN TRANSPORT (GARAGE)
 1335 SHAWSON DRIVE
 MISSISSAUGA, ON
 CA L4W 1C4
 Contact: Travis Spence
 tspence@manitoulintransport.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.

F: (905)564-6361