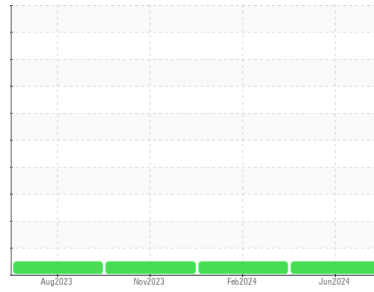




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

56169

Component

Diesel Engine

Fluid

PETRO CANADA DURON SHP 10W30 (--- LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. 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			WC0948257	WC0899664	WC0828274
Sample Date	Client Info			11 Jun 2024	29 Feb 2024	28 Nov 2023
Machine Age	mls	Client Info		151988	114165	77434
Oil Age	mls	Client Info		37823	36731	39083
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<1.0	<1.0	<1.0
Water	WC Method	>0.2		NEG	NEG	NEG
Glycol	WC Method			NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	22	29	48
Chromium	ppm	ASTM D5185(m)	>20	2	3	6
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	<1	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	8	13	30
Lead	ppm	ASTM D5185(m)	>40	<1	1	2
Copper	ppm	ASTM D5185(m)	>330	22	47	94
Tin	ppm	ASTM D5185(m)	>15	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

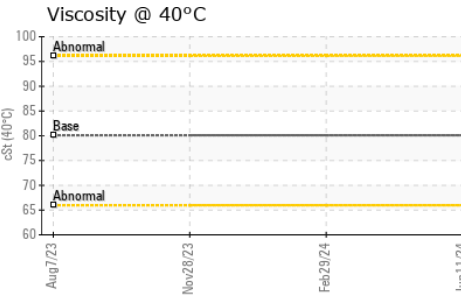
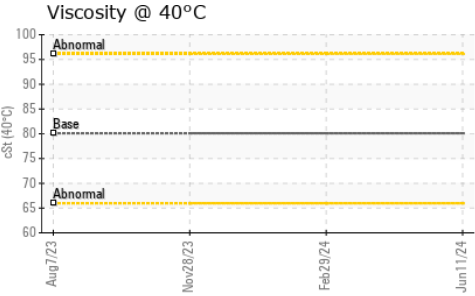
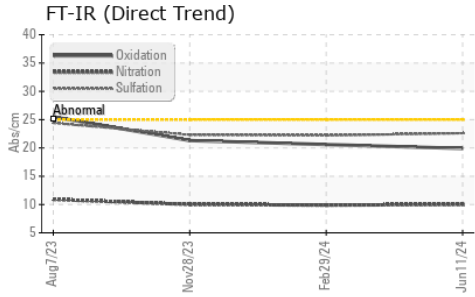
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	2	2	3	3
Barium	ppm	ASTM D5185(m)	0	0	0	<1
Molybdenum	ppm	ASTM D5185(m)	50	64	63	59
Manganese	ppm	ASTM D5185(m)	0	<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	950	1039	1008	928
Calcium	ppm	ASTM D5185(m)	1050	1154	1146	1156
Phosphorus	ppm	ASTM D5185(m)	995	1019	971	889
Zinc	ppm	ASTM D5185(m)	1180	1298	1218	1154
Sulfur	ppm	ASTM D5185(m)	2600	2026	1921	1660
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	5	5	6
Sodium	ppm	ASTM D5185(m)		5	2	3
Potassium	ppm	ASTM D5185(m)	>20	17	22	59

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0.5	0.5	0.6
Nitration	Abs/cm	ASTM D7624*	>20	10.0	9.9	10.0
Sulfation	Abs/.1mm	ASTM D7415*	>30	22.6	22.2	22.3



OIL ANALYSIS REPORT

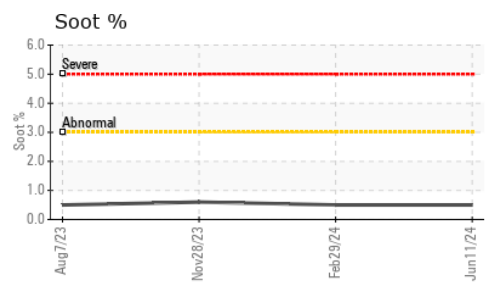
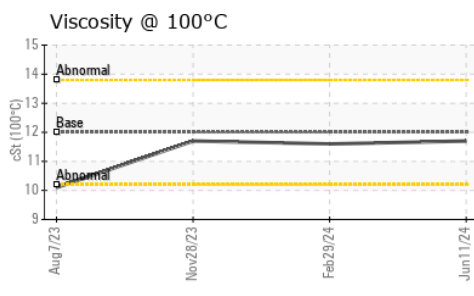
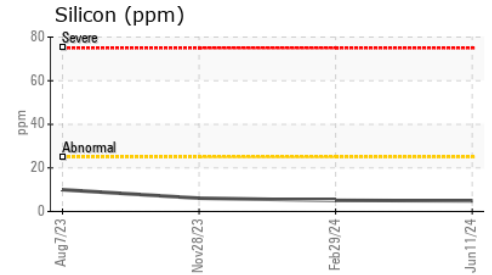
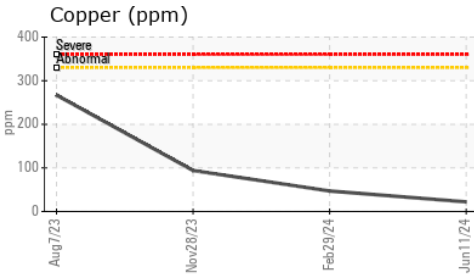
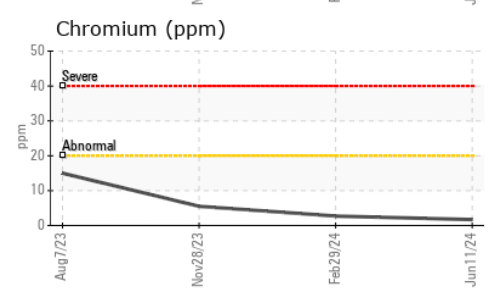
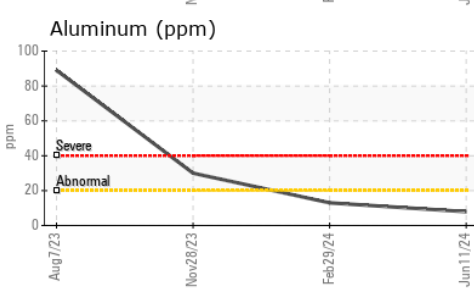
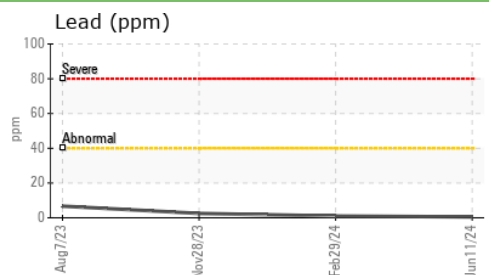
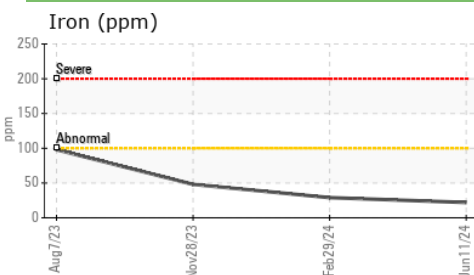


FLUID DEGRADATION	method	limit/base	current	history1	history2	
Oxidation	Abs./1mm	ASTM D7414*	>25	19.9	20.6	21.3

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

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D7279(m)	80.1	79.8	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	11.7	11.6	11.7
Viscosity Index (VI)	Scale	ASTM D2270*	144	139	---	---

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0948257
Lab Number : 02642472
Unique Number : 5800011
Test Package : MOB 1 (Additional Tests: KV40, VI, Visual)
Received : 18 Jun 2024
Tested : 18 Jun 2024
Diagnosed : 18 Jun 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.

T:
 F: (905)564-6361