OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Machine Id
INTERNATIONAL 3306
Component
Diesel Engine
Fluid
PETRO CANADA DURON SAE 10W30 (--- GAL)

DIAGNOSIS

Recommendation
Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

Wear
Metal levels are typical for a components first oil change.

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
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		**WC0828264**	---	---
Sample Date		Client Info		**29 Nov 2023**	---	---
Machine Age	hrs	Client Info		**22623**	---	---
Oil Age	hrs	Client Info		**22623**	---	---
Oil Changed		Client Info		**Changed**	---	---
Sample Status				**NORMAL**	---	---

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>2.0	**<1.0**	---	---
Water		WC Method	>0.2	**NEG**	---	---
Glycol		WC Method		**NEG**	---	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	**33**	---	---
Chromium	ppm	ASTM D5185(m)	>20	**<1**	---	---
Nickel	ppm	ASTM D5185(m)	>4	**<1**	---	---
Titanium	ppm	ASTM D5185(m)		**0**	---	---
Silver	ppm	ASTM D5185(m)	>3	**<1**	---	---
Aluminum	ppm	ASTM D5185(m)	>20	**20**	---	---
Lead	ppm	ASTM D5185(m)	>40	**<1**	---	---
Copper	ppm	ASTM D5185(m)	>330	**15**	---	---
Tin	ppm	ASTM D5185(m)	>15	**<1**	---	---
Antimony	ppm	ASTM D5185(m)		**0**	---	---
Vanadium	ppm	ASTM D5185(m)		**0**	---	---
Beryllium	ppm	ASTM D5185(m)		**0**	---	---
Cadmium	ppm	ASTM D5185(m)		**0**	---	---

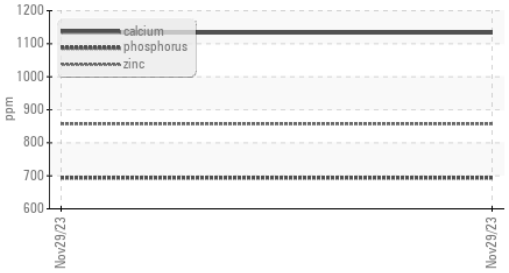
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	1	**28**	---	---
Barium	ppm	ASTM D5185(m)	1	**5**	---	---
Molybdenum	ppm	ASTM D5185(m)	1	**47**	---	---
Manganese	ppm	ASTM D5185(m)	1	**3**	---	---
Magnesium	ppm	ASTM D5185(m)	10	**795**	---	---
Calcium	ppm	ASTM D5185(m)	2942	**1133**	---	---
Phosphorus	ppm	ASTM D5185(m)	1102	**694**	---	---
Zinc	ppm	ASTM D5185(m)	1351	**857**	---	---
Sulfur	ppm	ASTM D5185(m)	3903	**1889**	---	---
Lithium	ppm	ASTM D5185(m)		**<1**	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**19**	---	---
Sodium	ppm	ASTM D5185(m)		**6**	---	---
Potassium	ppm	ASTM D5185(m)	>20	**47**	---	---

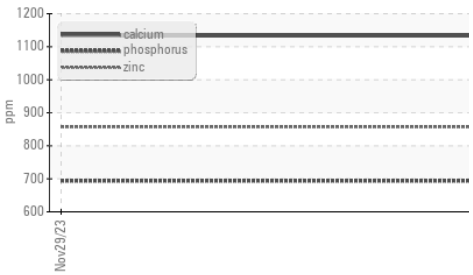
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**0.2**	---	---
Nitration	Abs/cm	ASTM D7624*	>20	**10.9**	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	**21.8**	---	---

OIL ANALYSIS REPORT

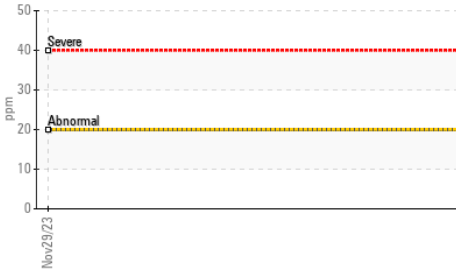
Additives



Additives



Aluminum (ppm)



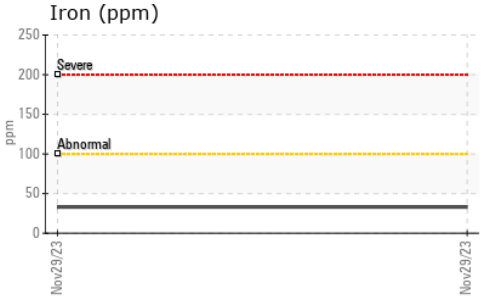
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**21.5**	---	---

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

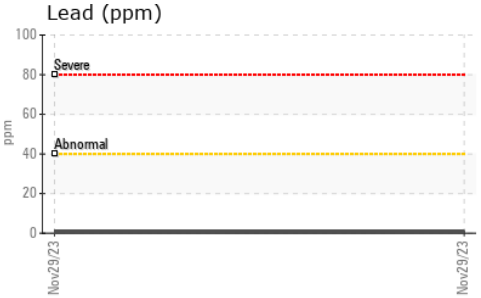
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	11.4	**11.5**	---	---

GRAPHS

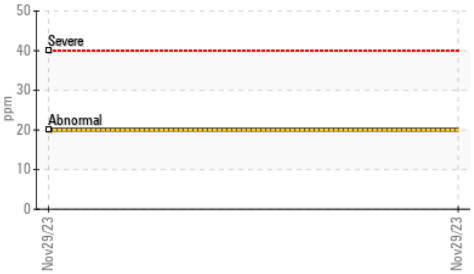
Iron (ppm)



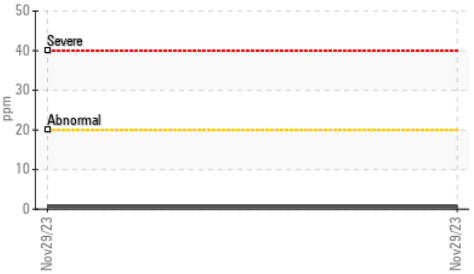
Lead (ppm)



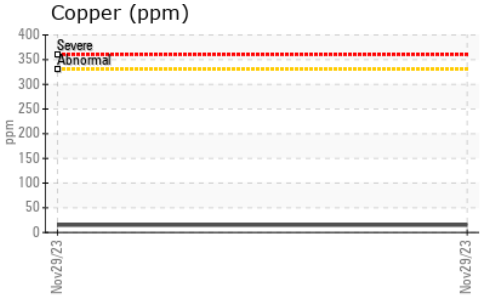
Aluminum (ppm)



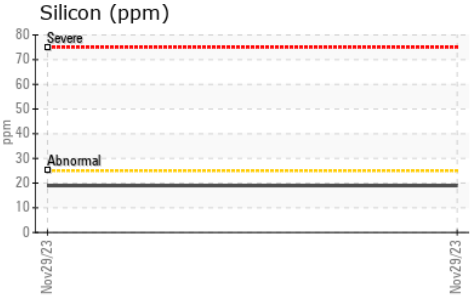
Chromium (ppm)



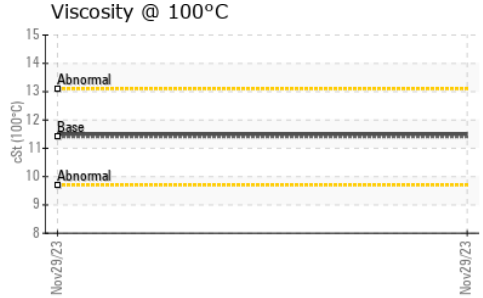
Copper (ppm)



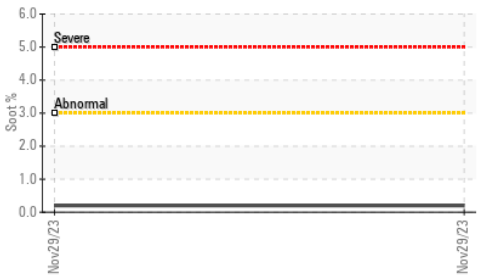
Silicon (ppm)



Viscosity @ 100°C



Soot %



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **MANITOULIN TRANSPORT (GARAGE)**
Sample No. : WC0828264 **Received** : 05 Dec 2023 1335 SHAWSON DRIVE
Lab Number : 02600859 **Diagnosed** : 06 Dec 2023 MISSISSAUGA, ON
Unique Number : 5693944 **Diagnostician** : Kevin Marson CA L4W 1C4
Test Package : MOB 1 Contact: Patrick Morin

To discuss this sample report, contact Customer Service at 1-800-268-2131. pmorin@manitoulintransport.com
Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. T:
Validity of results and interpretation are based on the sample and information as supplied. F: (905)564-6361