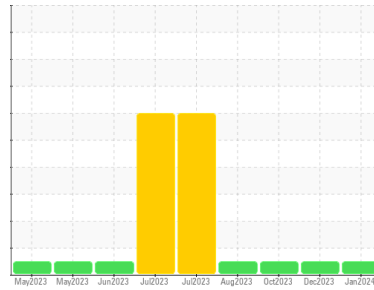




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
BD SHOP
 Machine Id
200301
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 10W30 (40 LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0888888	WC0864703	WC0864662
Sample Date	Client Info		21 Jan 2024	13 Dec 2023	01 Oct 2023
Machine Age	kms	Client Info	187901	174044	155375
Oil Age	kms	Client Info	44585	30729	12059
Oil Changed	Client Info		Not Chngd	Not Chngd	Not Chngd
Sample Status			NORMAL	NORMAL	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
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>120	46	37	15
Chromium	ppm	ASTM D5185(m)	>20	2	1	<1
Nickel	ppm	ASTM D5185(m)	>15	16	10	3
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>3	<1	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	28	24	15
Lead	ppm	ASTM D5185(m)	>40	2	2	1
Copper	ppm	ASTM D5185(m)	>330	39	31	20
Tin	ppm	ASTM D5185(m)	>15	<1	<1	<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	<1	<1
Molybdenum	ppm	ASTM D5185(m)	50	60	60	60
Manganese	ppm	ASTM D5185(m)	0	1	<1	0
Magnesium	ppm	ASTM D5185(m)	950	928	961	979
Calcium	ppm	ASTM D5185(m)	1050	1064	1047	1053
Phosphorus	ppm	ASTM D5185(m)	995	896	986	1021
Zinc	ppm	ASTM D5185(m)	1180	1134	1159	1188
Sulfur	ppm	ASTM D5185(m)	2600	2536	2492	2620
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

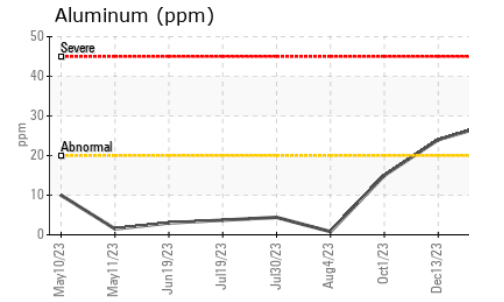
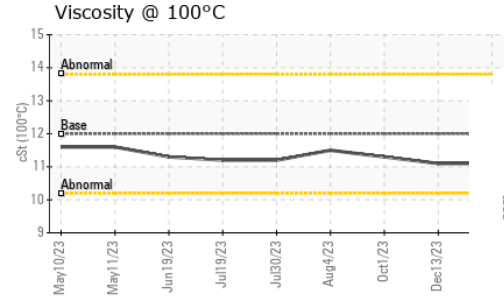
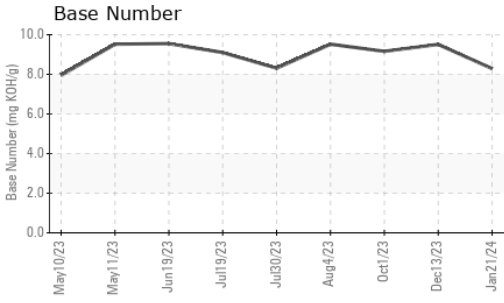
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	6	5	4
Sodium	ppm	ASTM D5185(m)		2	2	2
Potassium	ppm	ASTM D5185(m)	>20	75	65	41

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>4	0.4	0.3	0
Nitration	Abs/cm	ASTM D7624*	>20	9.9	8.6	5.8
Nitration(Diff)	Abs/cm	ASTM D7624*		1.8	---	---
Sulfation	Abs./1mm	ASTM D7415*	>30	21.5	20.2	19.0
Sulfation(Diff)	Abs/cm	ASTM D7415*		5.1	---	---



OIL ANALYSIS REPORT

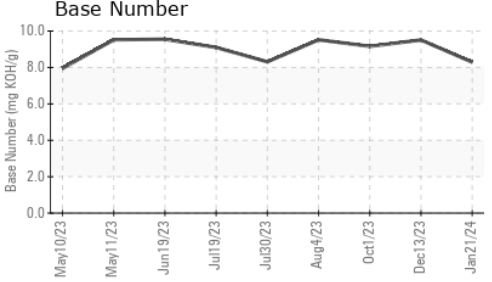
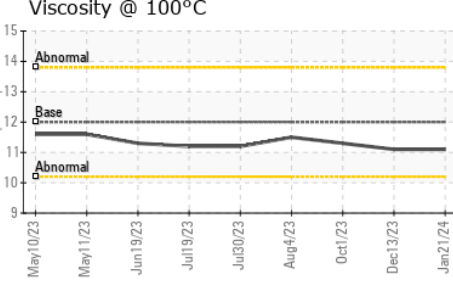
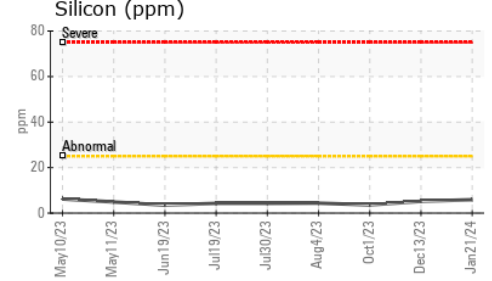
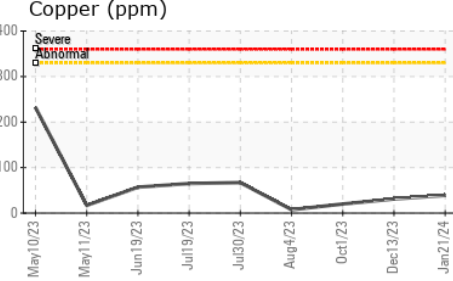
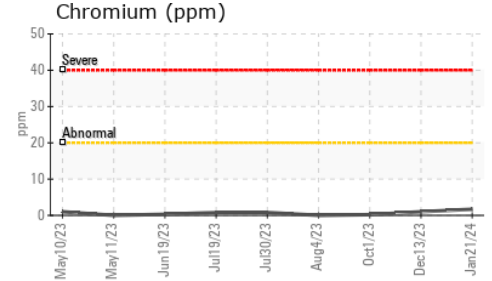
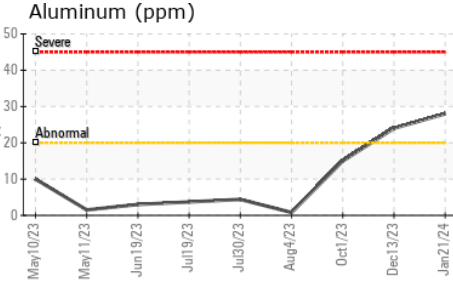
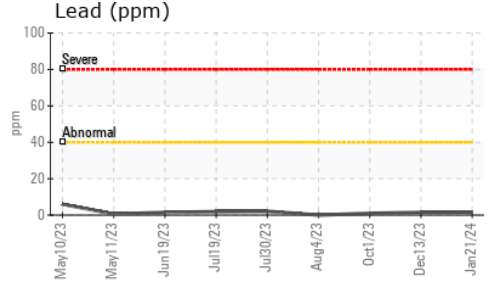
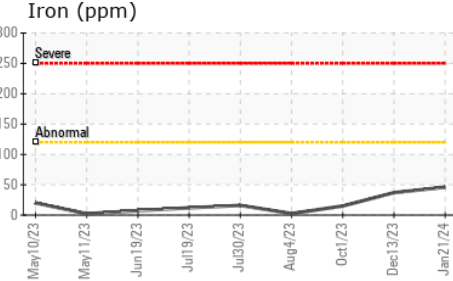


FLUID DEGRADATION	method	limit/base	current	history1	history2	
Oxidation	Abs./1mm	ASTM D7414*	>25	16.9	16.4	14.6
Oxidation(Diff)	Abs/cm	ASTM D7414*		10.5	---	---
Base Number (BN)	mg KOH/g	ASTM D2896*		8.29	9.51	9.16

VISUAL	method	limit/base	current	history1	history2	
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 @ 100°C	cSt	ASTM D7279(m)	12.00	11.1	11.1	11.3

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0888888 **Received** : 22 Jan 2024
Lab Number : **02610194** **Diagnosed** : 23 Jan 2024
Unique Number : 5711280 **Diagnostician** : Kevin Marson
Test Package : MOB 2 (Additional Tests: FT-IR(Diff))

WFR Technical Services
 5389 Riverside Drive
 Burlington, ON
 CA L7L 3Y1
 Contact: William Ridley
 wfr.technical.services@gmail.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.

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