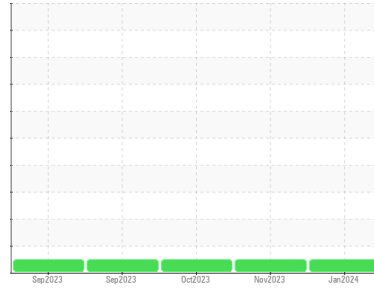




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
BD SHOP
 Machine Id
200295
 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		WC0888935	WC0864692	WC0864685
Sample Date	Client Info		05 Jan 2024	23 Nov 2023	22 Oct 2023
Machine Age	kms	Client Info	163043	153331	143002
Oil Age	kms	Client Info	40740	31028	20679
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	20	17	11
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	0
Nickel	ppm	ASTM D5185(m)	>15	8	7	2
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>3	1	1	<1
Aluminum	ppm	ASTM D5185(m)	>20	5	4	3
Lead	ppm	ASTM D5185(m)	>40	2	2	1
Copper	ppm	ASTM D5185(m)	>330	51	43	26
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	2	2
Barium	ppm	ASTM D5185(m)	0	0	<1	<1
Molybdenum	ppm	ASTM D5185(m)	50	60	61	60
Manganese	ppm	ASTM D5185(m)	0	<1	<1	0
Magnesium	ppm	ASTM D5185(m)	950	957	989	977
Calcium	ppm	ASTM D5185(m)	1050	1090	1102	1072
Phosphorus	ppm	ASTM D5185(m)	995	987	996	1001
Zinc	ppm	ASTM D5185(m)	1180	1184	1201	1179
Sulfur	ppm	ASTM D5185(m)	2600	2585	2488	2509
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

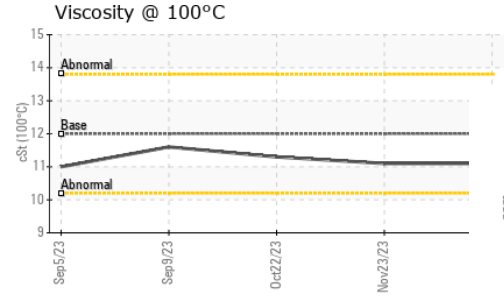
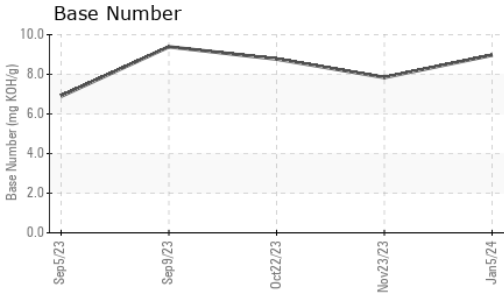
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	6	5	4
Sodium	ppm	ASTM D5185(m)		2	2	2
Potassium	ppm	ASTM D5185(m)	>20	10	7	5

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>4	0.3	0.2	0.1
Nitration	Abs/cm	ASTM D7624*	>20	9.9	8.8	7.1
Nitration(Diff)	Abs/cm	ASTM D7624*		1.4	---	---
Sulfation	Abs./1mm	ASTM D7415*	>30	21.1	20.4	19.3
Sulfation(Diff)	Abs/cm	ASTM D7415*		4.9	---	---



OIL ANALYSIS REPORT

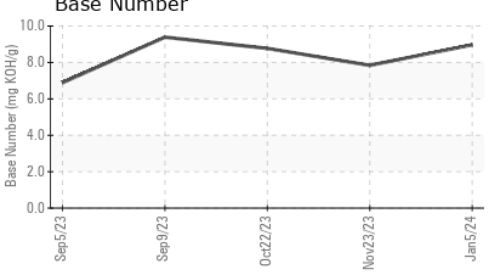
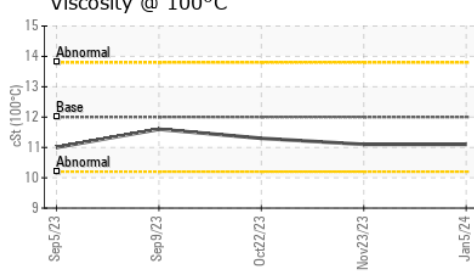
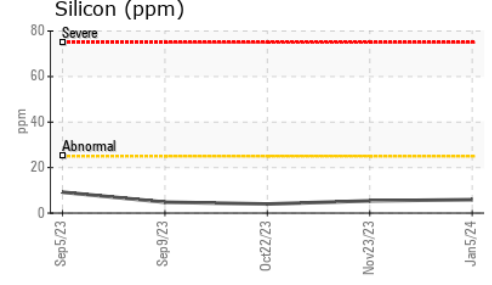
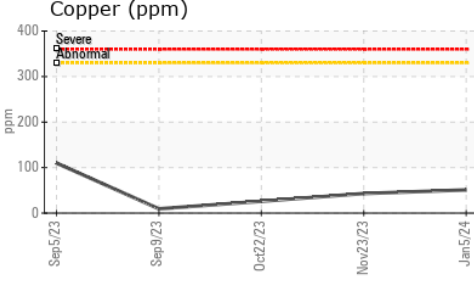
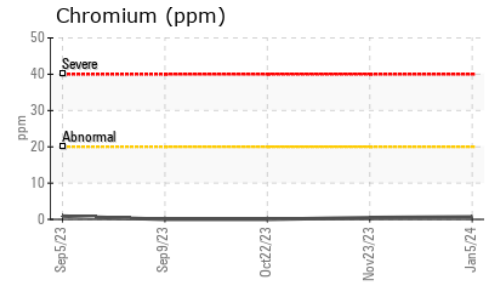
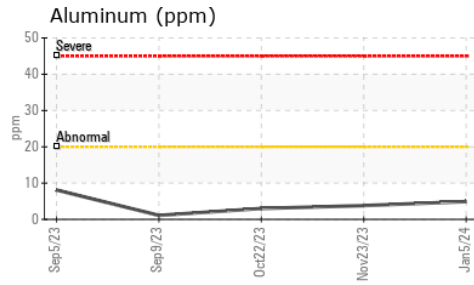
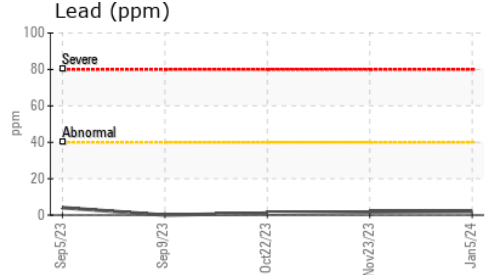
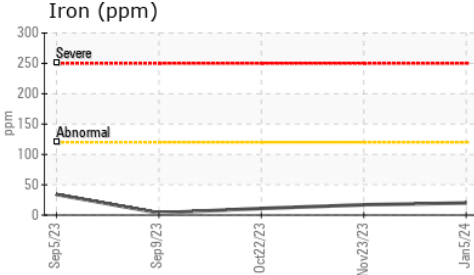


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/1mm	ASTM D7414*	>25	17.1	16.2	14.9
Oxidation(Diff)	Abs/cm	ASTM D7414*		10.6	---	---
Base Number (BN)	mg KOH/g	ASTM D2896*		8.97	7.84	8.77

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. : WC0888935 **Received** : 08 Jan 2024
Lab Number : **02606896** **Diagnosed** : 09 Jan 2024
Unique Number : 5707982 **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
 T:
 F:

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.