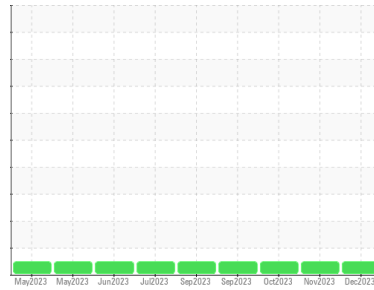




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
BD SHOP
 Machine Id
200292

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		WC0864701	WC0864691	WC0864676
Sample Date	Client Info		13 Dec 2023	23 Nov 2023	29 Oct 2023
Machine Age	kms	Client Info	215359	207446	191865
Oil Age	kms	Client Info	42130	34216	18635
Oil Changed	Client Info		N/A	Not Changd	Not Changd
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)	>200	20	16	13
Chromium	ppm	ASTM D5185(m)	>6	2	2	2
Nickel	ppm	ASTM D5185(m)	>3	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	<1	<1	<1
Aluminum	ppm	ASTM D5185(m)	>50	14	12	9
Lead	ppm	ASTM D5185(m)	>10	2	1	<1
Copper	ppm	ASTM D5185(m)	>50	67	55	36
Tin	ppm	ASTM D5185(m)	>6	<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	3
Barium	ppm	ASTM D5185(m)	0	<1	<1	<1
Molybdenum	ppm	ASTM D5185(m)	50	63	61	69
Manganese	ppm	ASTM D5185(m)	0	0	0	0
Magnesium	ppm	ASTM D5185(m)	950	1004	1000	1127
Calcium	ppm	ASTM D5185(m)	1050	1118	1116	1240
Phosphorus	ppm	ASTM D5185(m)	995	1000	989	1138
Zinc	ppm	ASTM D5185(m)	1180	1215	1213	1369
Sulfur	ppm	ASTM D5185(m)	2600	2196	2262	2790
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

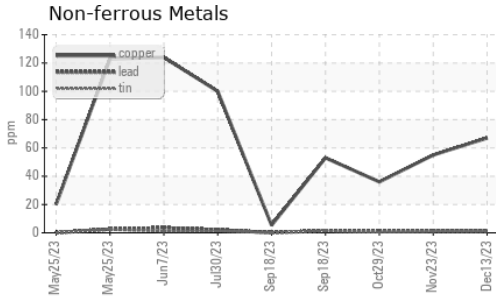
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>50	4	4	4
Sodium	ppm	ASTM D5185(m)		2	2	2
Potassium	ppm	ASTM D5185(m)	>20	32	25	20

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	0.4	0.3	0.2
Nitration	Abs/cm	ASTM D7624*	>20	8.6	7.7	6.4
Sulfation	Abs.1mm	ASTM D7415*	>30	20.4	20.2	19.4



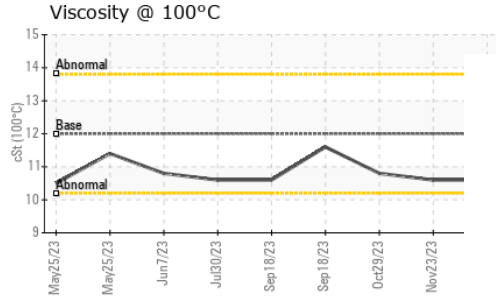
OIL ANALYSIS REPORT



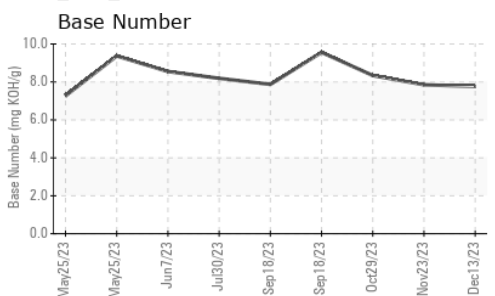
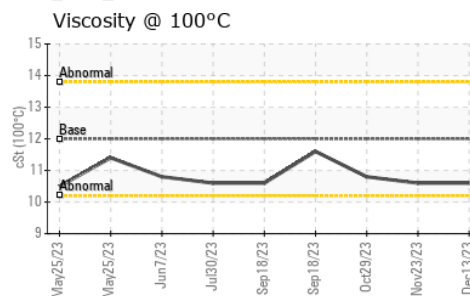
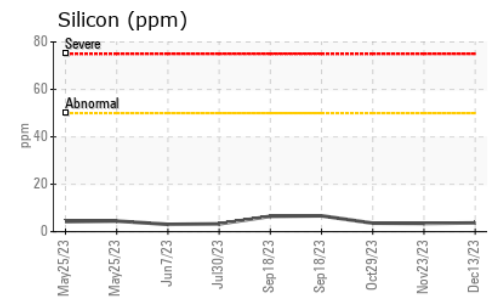
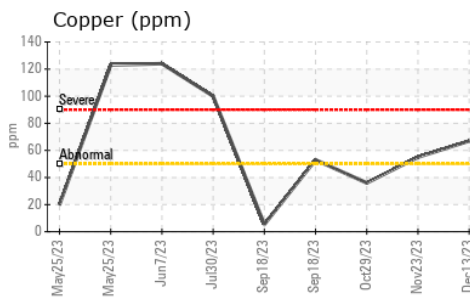
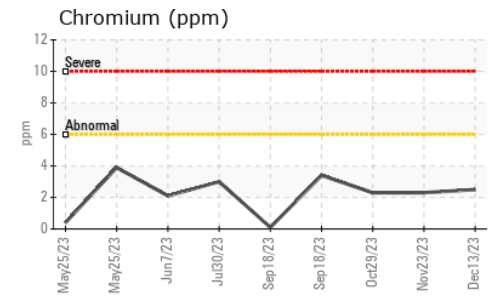
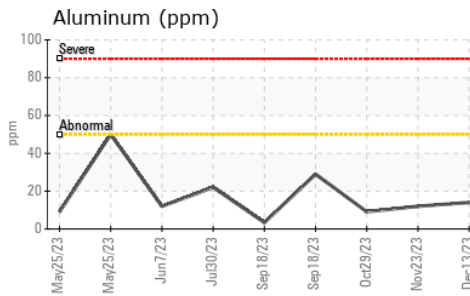
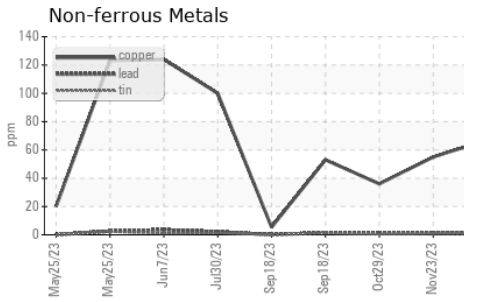
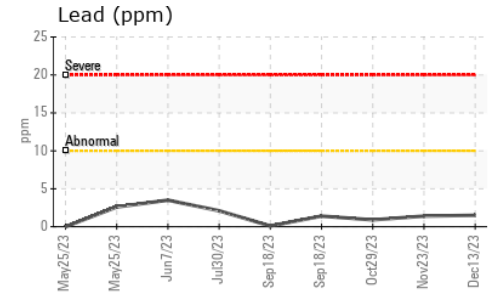
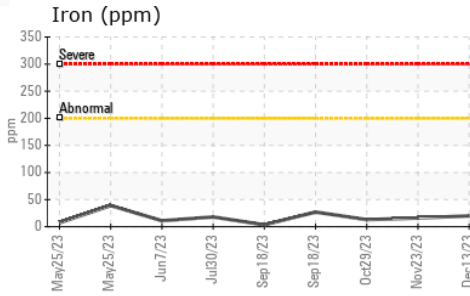
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	16.5	16.0	14.8
Base Number (BN)	mg KOH/g	ASTM D2896*		7.76	7.85	8.34

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	10.6	10.6	10.8



GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0864701 **Received** : 15 Dec 2023
Lab Number : **02603378** **Diagnosed** : 21 Dec 2023
Unique Number : 5696463 **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.