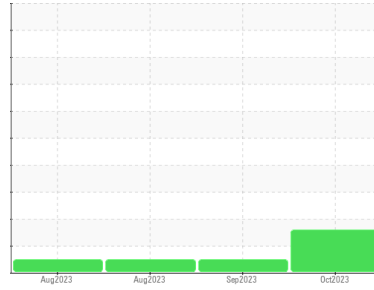




OIL ANALYSIS REPORT

Sample Rating Trend



WATER



Area
KDAC
 Machine Id
200206
 Component
Diesel Engine
 Fluid

PETRO CANADA DURON SHP 10W30 (40 LTR)

DIAGNOSIS

Recommendation

We advise that you check for the source of water entry. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a moderate concentration of water present in the oil. Free water present. Test for glycol is negative.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0864668	WC0852031	WC0852032
Sample Date	Client Info		15 Oct 2023	15 Sep 2023	16 Aug 2023
Machine Age	hrs	Client Info	211410	200520	183905
Oil Age	hrs	Client Info	30204	16614	0
Oil Changed	Client Info		Not Chngd	Not Chngd	Not Chngd
Sample Status			ABNORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	<1.0	<1.0

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>90	10	8	2
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	0
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	0
Titanium	ppm	ASTM D5185(m)	>2	0	<1	0
Silver	ppm	ASTM D5185(m)	>2	<1	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	7	5	1
Lead	ppm	ASTM D5185(m)	>40	1	<1	0
Copper	ppm	ASTM D5185(m)	>330	1	<1	<1
Tin	ppm	ASTM D5185(m)	>15	<1	<1	0
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	4	4	6
Barium	ppm	ASTM D5185(m)	0	<1	0	0
Molybdenum	ppm	ASTM D5185(m)	50	60	59	57
Manganese	ppm	ASTM D5185(m)	0	0	<1	0
Magnesium	ppm	ASTM D5185(m)	950	976	974	944
Calcium	ppm	ASTM D5185(m)	1050	1068	1035	1013
Phosphorus	ppm	ASTM D5185(m)	995	976	1068	1033
Zinc	ppm	ASTM D5185(m)	1180	1195	1163	1149
Sulfur	ppm	ASTM D5185(m)	2600	2493	2579	2587
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

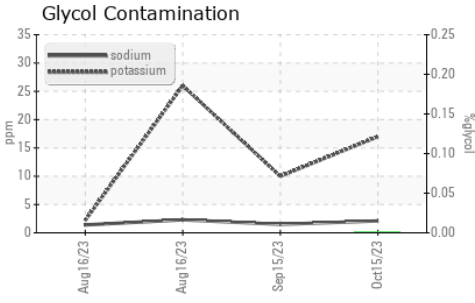
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Silicon	ppm	ASTM D5185(m)	>25	5	4	4
Sodium	ppm	ASTM D5185(m)		2	2	1
Potassium	ppm	ASTM D5185(m)	>20	17	10	2
Glycol	%	ASTM D7922*		0.0	NEG	NEG

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>6	0.1	0	0
Nitration	Abs/cm	ASTM D7624*	>20	6.9	6.0	4.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	19.0	18.6	18.7



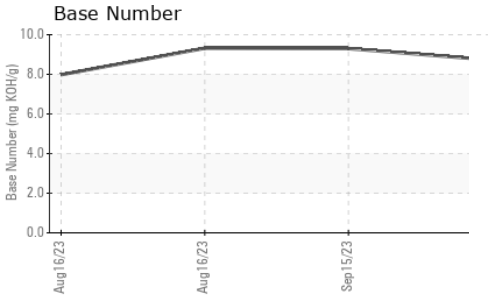
OIL ANALYSIS REPORT



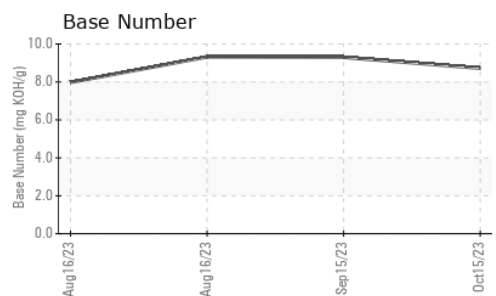
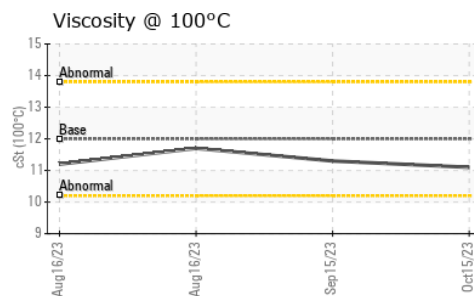
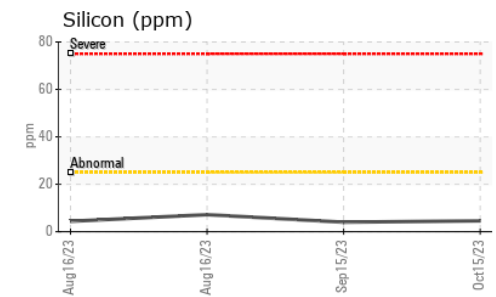
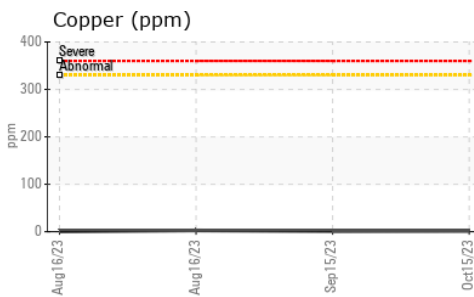
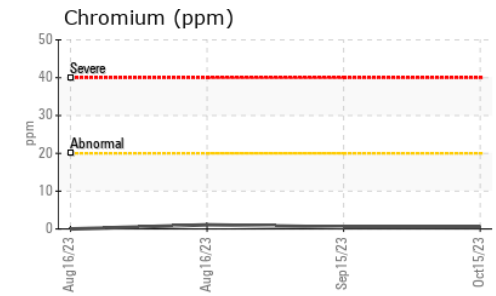
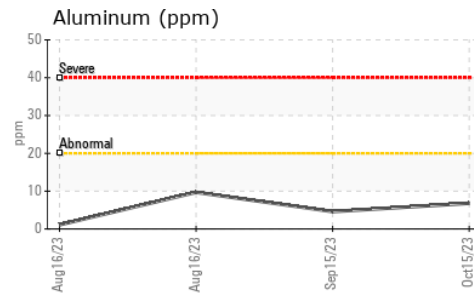
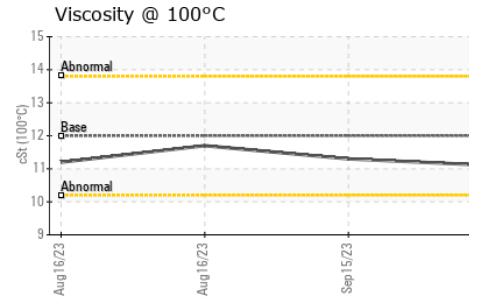
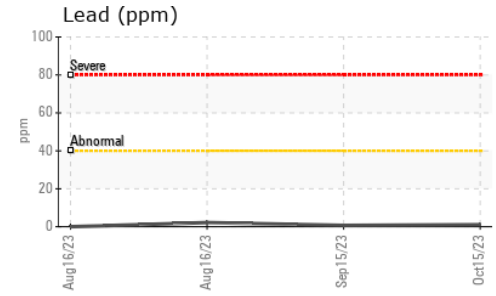
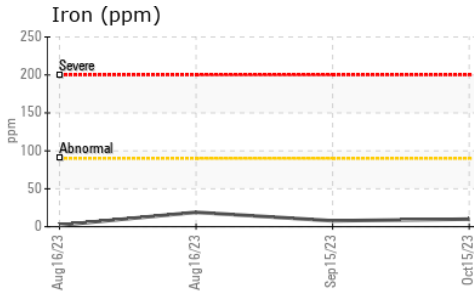
FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	14.1	12.9
Base Number (BN)	mg KOH/g	ASTM D2896*	8.72	9.30	9.32

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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	11.3	11.7



GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0864668 **Received** : 17 Oct 2023
Lab Number : 02589471 **Diagnosed** : 18 Oct 2023
Unique Number : 5658537 **Diagnostician** : Kevin Marson
Test Package : MOB 2 (Additional Tests: Glycol)

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.