

Machine Id
DR140

Component
Diesel Engine

Fluid
PETRO CANADA DURON UHP 5W40 (36 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			PC0077035	PC0071440	PC0072025
Sample Date	Client Info			28 Jul 2023	03 Apr 2023	25 Feb 2023
Machine Age	hrs	Client Info		15545	15287	15090
Oil Age	hrs	Client Info		250	190	250
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<1.0	<1.0	<1.0
Glycol	WC Method			NEG	NEG	NEG

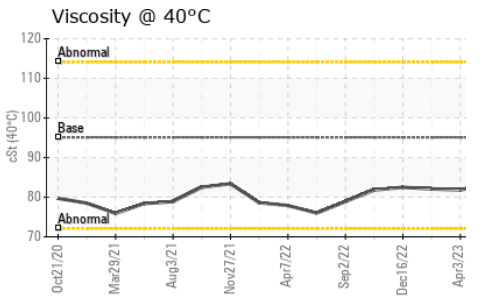
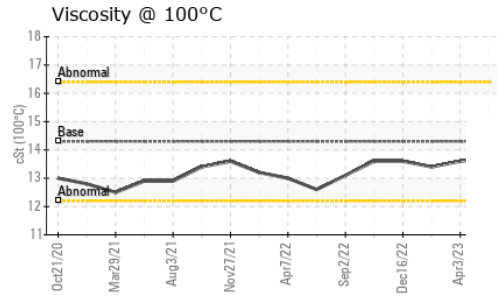
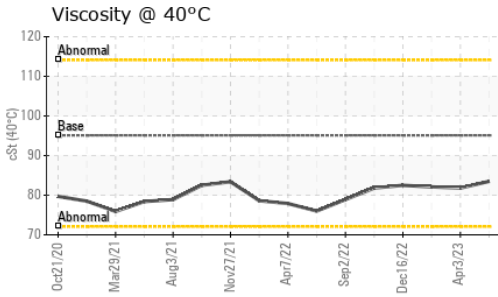
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	22	6	8
Chromium	ppm	ASTM D5185(m)	>20	<1	0	0
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	<1	<1
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	3	2	2
Lead	ppm	ASTM D5185(m)	>40	<1	<1	<1
Copper	ppm	ASTM D5185(m)	>330	4	1	2
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)	65	38	49	50
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	65	57	61	60
Manganese	ppm	ASTM D5185(m)	0	<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	1160	1085	1079	1090
Calcium	ppm	ASTM D5185(m)	820	811	836	844
Phosphorus	ppm	ASTM D5185(m)	1160	1003	1039	1064
Zinc	ppm	ASTM D5185(m)	1260	1142	1122	1154
Sulfur	ppm	ASTM D5185(m)	3000	2677	2805	2848
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	5	3	3
Sodium	ppm	ASTM D5185(m)		4	4	4
Potassium	ppm	ASTM D5185(m)	>20	8	2	1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0.5	0	0
Nitration	Abs/cm	ASTM D7624*	>20	9.2	8.3	8.6
Sulfation	Abs./1mm	ASTM D7415*	>30	21.8	22.6	22.5

OIL ANALYSIS REPORT

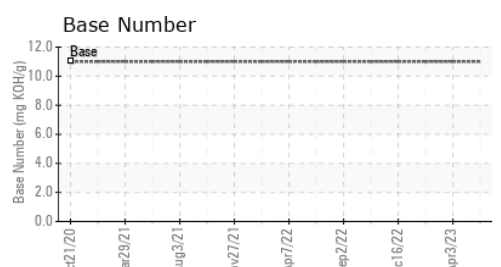
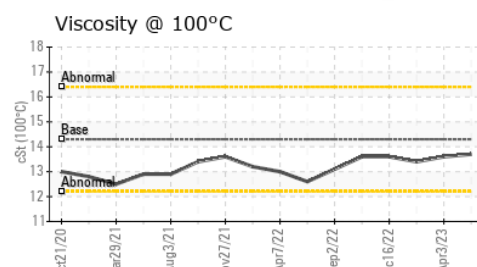
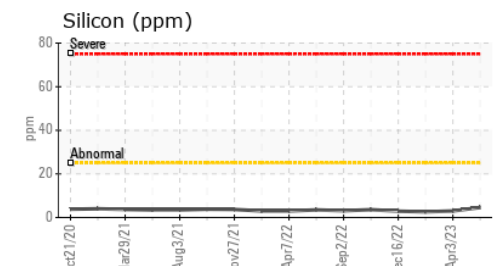
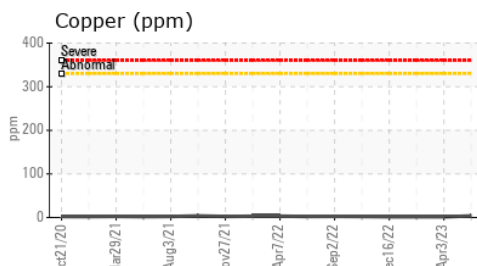
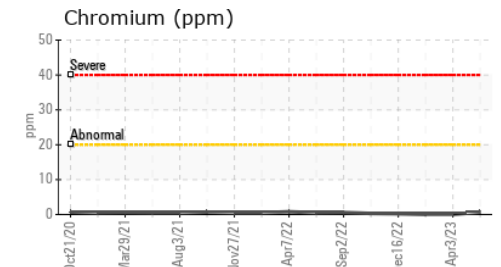
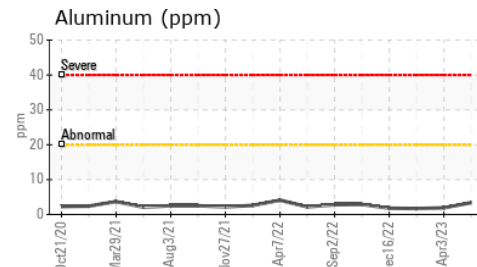
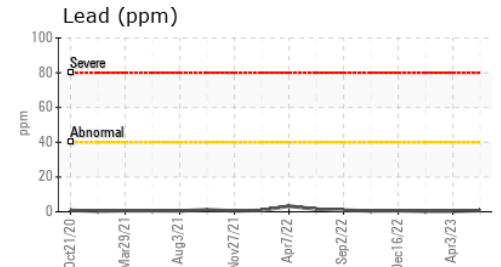
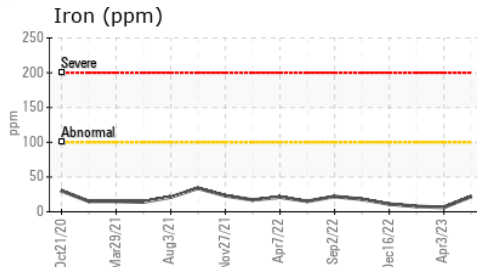


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	17.9	17.8	17.7
Base Number (BN)	mg KOH/g	ASTM D2896*	11.0	9.52	---	---

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 @ 40°C	cSt	ASTM D7279(m)	95.1	83.5	81.8	82.1
Visc @ 100°C	cSt	ASTM D7279(m)	14.3	13.7	13.6	13.4
Viscosity Index (VI)	Scale	ASTM D2270*	169	168	170	166

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Green Infrastructure and Partners Inc (GIPI) - 286 - Shoring & Foundations
Sample No. : PC0077035 **Received** : 28 Aug 2023
Lab Number : 02578729 **Diagnosed** : 29 Aug 2023
Unique Number : 5631789 **Diagnostician** : Wes Davis
Test Package : MOB 2 (Additional Tests: KV40, VI)

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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