



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
WESTERN STAR R741
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON HP 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PC0081830	PC0082856	PC0060752
Sample Date		Client Info		22 Apr 2024	28 Sep 2023	18 Jul 2023
Machine Age	kms	Client Info		337129	270685	244085
Oil Age	kms	Client Info		21413	26600	34965
Filter Age	kms	Client Info		21413	26600	34965
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>200	16	13	15
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	1
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	<1	0	0
Silver	ppm	ASTM D5185(m)	>2	0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>30	5	7	7
Lead	ppm	ASTM D5185(m)	>30	0	0	<1
Copper	ppm	ASTM D5185(m)	>30	4	6	10
Tin	ppm	ASTM D5185(m)	>15	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	VLITE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

CONTAMINATION

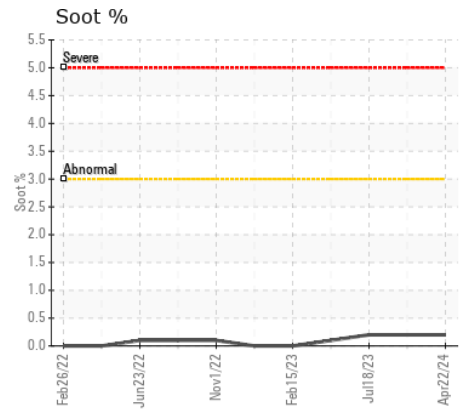
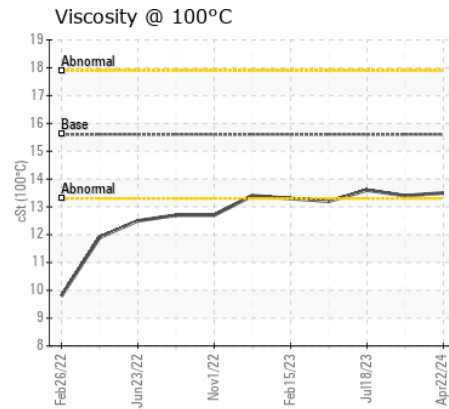
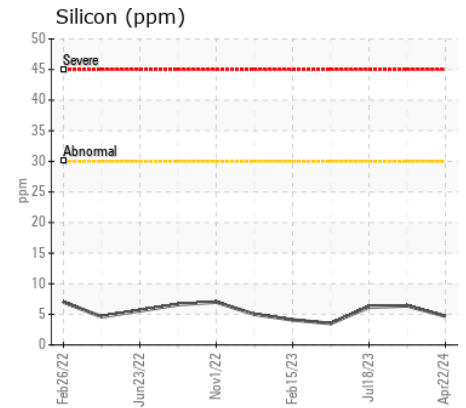
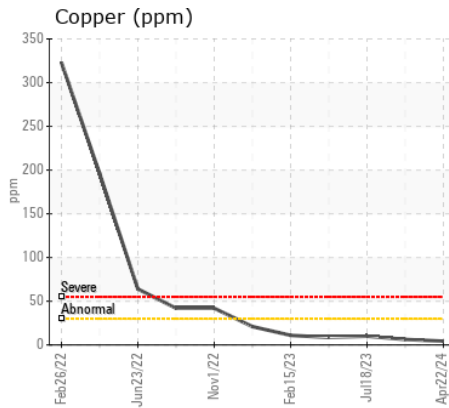
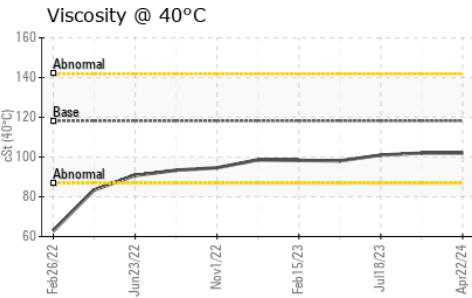
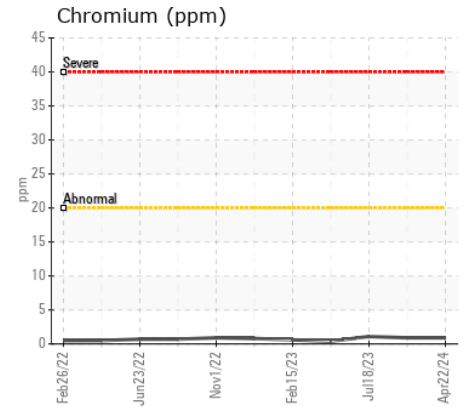
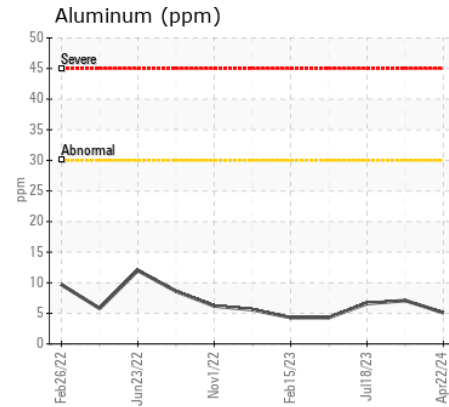
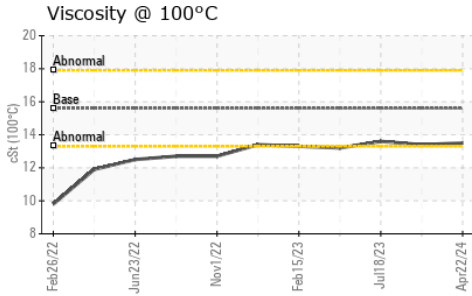
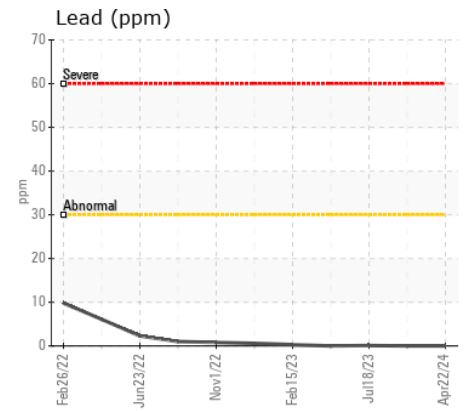
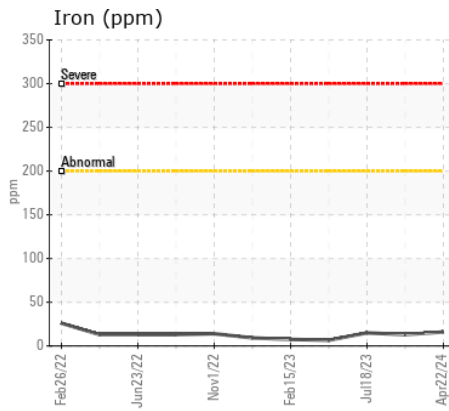
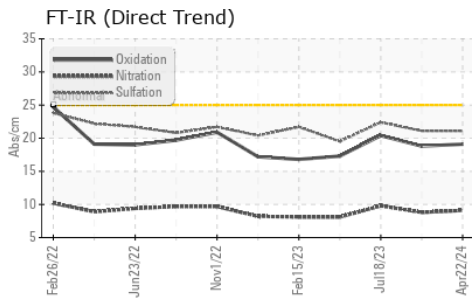
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>30	5	6	6
Potassium	ppm	ASTM D5185(m)	>20	5	8	7
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
Soot %	%	ASTM D7844*	>3	0.2	0.2	0.2
Nitration	Abs/cm	ASTM D7624*	>20	9.1	8.8	9.8
Sulfation	Abs/.1mm	ASTM D7415*	>30	21.1	21.1	22.4
Silt	scalar	Visual*	NONE	VLITE	VLITE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		2	2	2
Boron	ppm	ASTM D5185(m)	0	2	3	3
Barium	ppm	ASTM D5185(m)	0	0	<1	0
Molybdenum	ppm	ASTM D5185(m)	60	63	64	64
Manganese	ppm	ASTM D5185(m)	0	<1	0	<1
Magnesium	ppm	ASTM D5185(m)	1010	1015	1017	1044
Calcium	ppm	ASTM D5185(m)	1070	1122	1123	1107
Phosphorus	ppm	ASTM D5185(m)	1150	1005	1012	1022
Zinc	ppm	ASTM D5185(m)	1270	1246	1254	1233
Sulfur	ppm	ASTM D5185(m)	2060	2158	2158	1995
Oxidation	Abs/.1mm	ASTM D7414*	>25	19.1	18.8	20.4
Visc @ 40°C	cSt	ASTM D7279(m)	118.2	102	102	101
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	13.5	13.4	13.6
Viscosity Index (VI)	Scale	ASTM D2270*	139	131	130	134



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0081830
Lab Number : 02636282
Unique Number : 5785444
Test Package : MOB 1 (Additional Tests: KV40, VI, Visual)

RENEWABLE FOREST PRODUCTS
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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.