

Machine Id  
**WESTERN STAR R742**  
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		<b>PC0081820</b>	PC0082826	PC0082854
Sample Date		Client Info		<b>26 Mar 2024</b>	30 Dec 2023	28 Sep 2023
Machine Age	kms	Client Info		<b>331142</b>	299252	273652
Oil Age	kms	Client Info		<b>31860</b>	25630	25233
Filter Age	kms	Client Info		<b>31860</b>	25630	25233
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>200	<b>20</b>	21	23
Chromium	ppm	ASTM D5185(m)	>20	<b>1</b>	2	1
Nickel	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185(m)	>30	<b>4</b>	4	4
Lead	ppm	ASTM D5185(m)	>30	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>30	<b>4</b>	4	6
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>VLITE</b>	NONE	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	---

**CONTAMINATION**

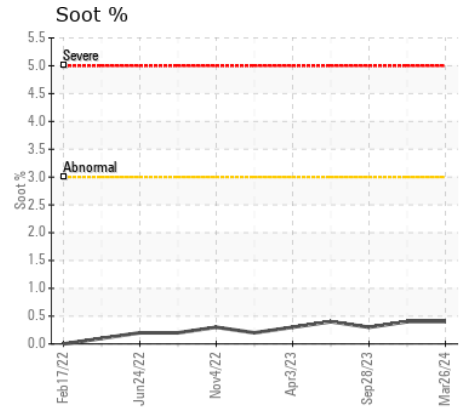
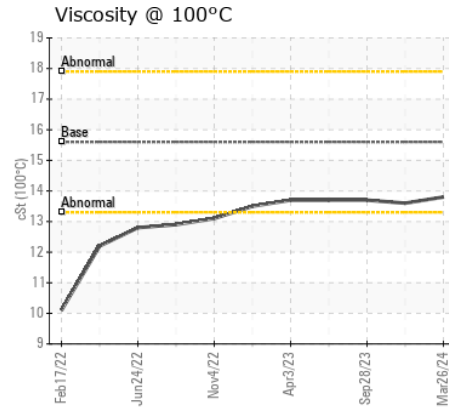
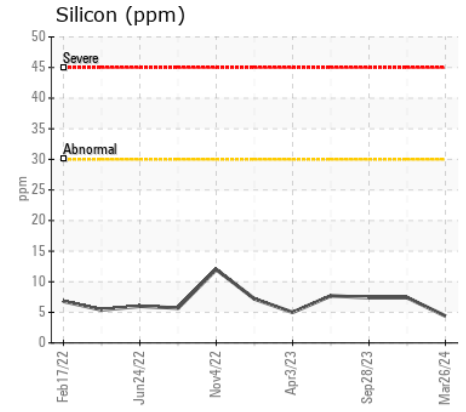
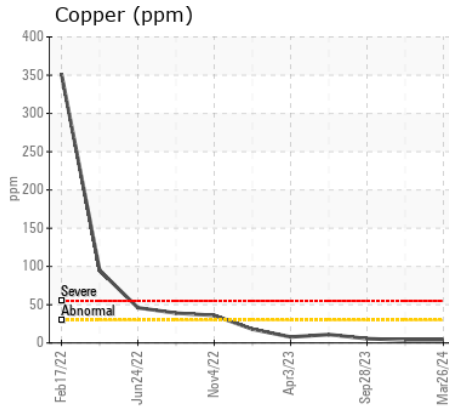
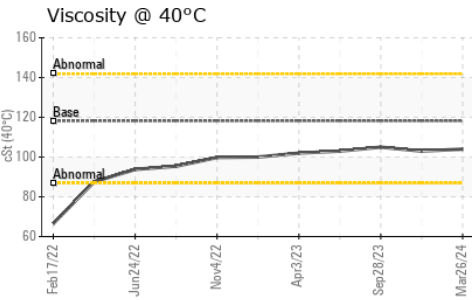
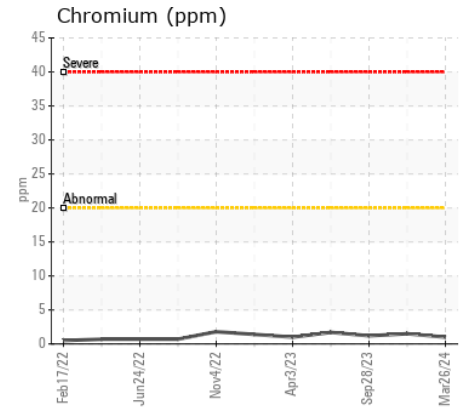
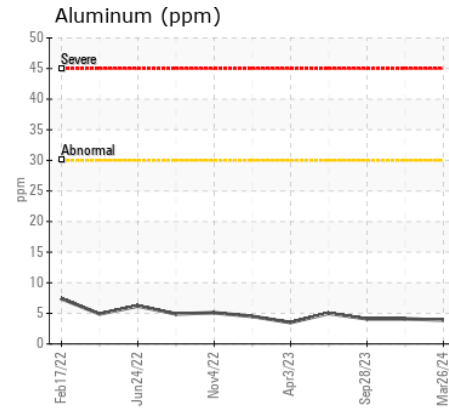
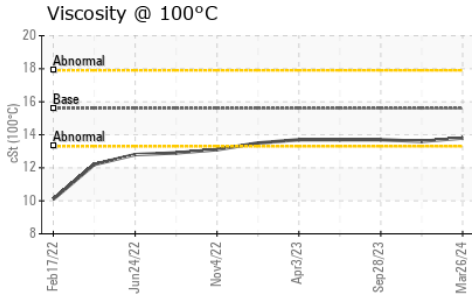
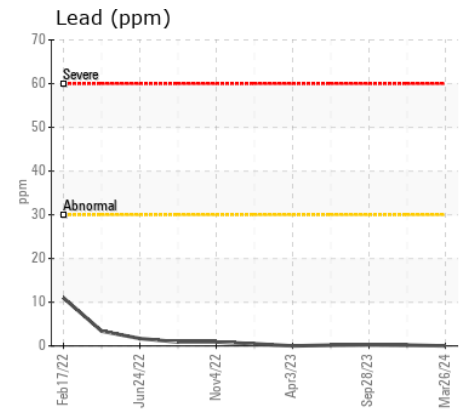
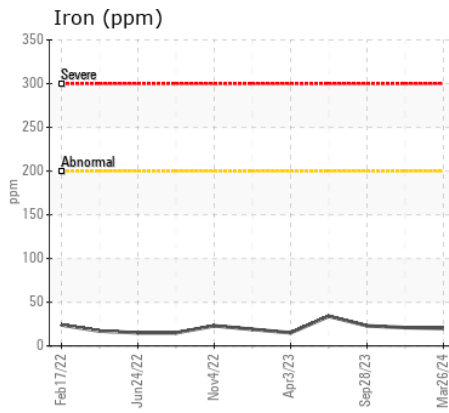
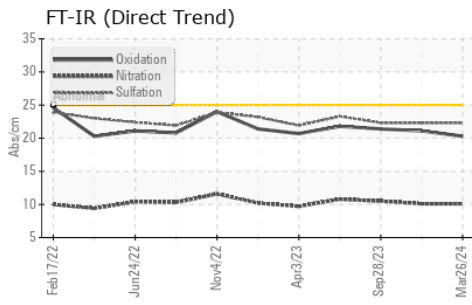
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>30	<b>4</b>	7	7
Potassium	ppm	ASTM D5185(m)	>20	<b>2</b>	2	21
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	0.0
Soot %	%	ASTM D7844*	>3	<b>0.4</b>	0.4	0.3
Nitration	Abs/cm	ASTM D7624*	>20	<b>10.1</b>	10.1	10.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>22.3</b>	22.3	22.3
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Debris	scalar	Visual*	NONE	<b>NONE</b>	VLITE	---
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	Visual*	NORML	<b>NORML</b>	NORML	---
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

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

Sodium	ppm	ASTM D5185(m)		<b>2</b>	2	2
Boron	ppm	ASTM D5185(m)	0	<b>1</b>	3	4
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185(m)	60	<b>66</b>	65	66
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185(m)	1010	<b>1056</b>	1018	1032
Calcium	ppm	ASTM D5185(m)	1070	<b>1156</b>	1155	1141
Phosphorus	ppm	ASTM D5185(m)	1150	<b>1034</b>	1023	1053
Zinc	ppm	ASTM D5185(m)	1270	<b>1284</b>	1300	1288
Sulfur	ppm	ASTM D5185(m)	2060	<b>2168</b>	2398	2266
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>20.3</b>	21.1	21.4
Visc @ 40°C	cSt	ASTM D7279(m)	118.2	<b>104</b>	103	105
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	<b>13.8</b>	13.6	13.7
Viscosity Index (VI)	Scale	ASTM D2270*	139	<b>133</b>	131	130



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0081820  
**Lab Number** : 02636287  
**Unique Number** : 5785449  
**Test Package** : MOB 1 ( Additional Tests: KV40, VI, Visual )

**RENEWABLE FOREST PRODUCTS**  
 59 TWIN CITY CROSS RD  
 ROSSLYN, ON  
 CA P7C 5M9  
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 purchasing@renewablefp.com  
 T: (807)939-1182  
 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.