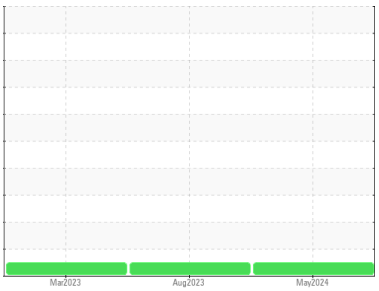
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
CR262
Component
Diesel Engine
Fluid
PETRO CANADA DURON UHP 5W40 (--- GAL)

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

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PC0088282**	PC0078516	PC0072903
Sample Date		Client Info		**18 May 2024**	14 Aug 2023	09 Mar 2023
Machine Age	hrs	Client Info		**2948**	1704	1175
Oil Age	hrs	Client Info		**0**	500	500
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
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)	>100	**13**	9	9
Chromium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	**0**	0	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	<1
Silver	ppm	ASTM D5185(m)	>3	**0**	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	**2**	2	2
Lead	ppm	ASTM D5185(m)	>40	**0**	0	0
Copper	ppm	ASTM D5185(m)	>330	**2**	10	1
Tin	ppm	ASTM D5185(m)	>15	**0**	0	<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

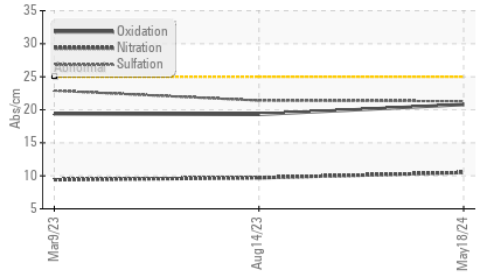
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	65	**36**	32	46
Barium	ppm	ASTM D5185(m)	0	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	65	**54**	59	59
Manganese	ppm	ASTM D5185(m)	0	**<1**	<1	<1
Magnesium	ppm	ASTM D5185(m)	1160	**1081**	1102	1103
Calcium	ppm	ASTM D5185(m)	820	**806**	827	856
Phosphorus	ppm	ASTM D5185(m)	1160	**985**	1030	1091
Zinc	ppm	ASTM D5185(m)	1260	**1176**	1172	1199
Sulfur	ppm	ASTM D5185(m)	3000	**2672**	2750	2893
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**3**	4	4
Sodium	ppm	ASTM D5185(m)		**7**	7	5
Potassium	ppm	ASTM D5185(m)	>20	**5**	6	5

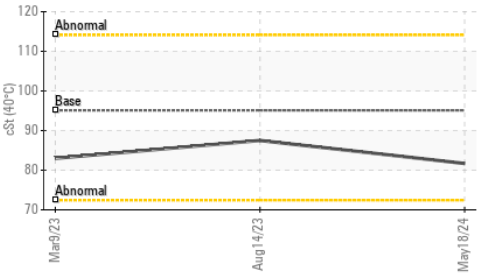
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**0.1**	0	0
Nitration	Abs/cm	ASTM D7624*	>20	**10.5**	9.7	9.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	**21.3**	21.4	22.9

OIL ANALYSIS REPORT

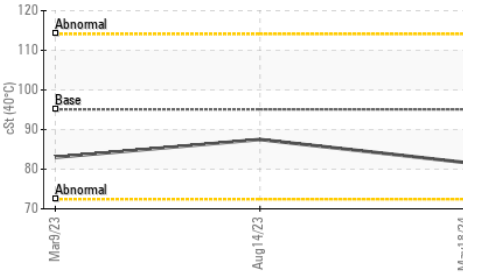
FT-IR (Direct Trend)



Viscosity @ 40°C



Viscosity @ 40°C



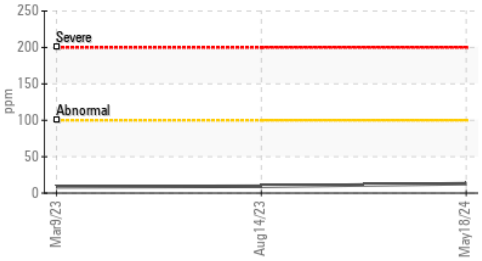
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**20.8**	19.3	19.4

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

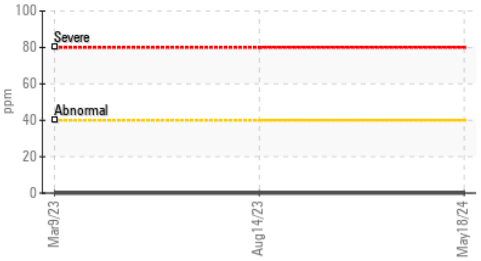
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	95.1	**81.7**	87.5	83.0
Visc @ 100°C	cSt	ASTM D7279(m)	14.3	**13.2**	14.2	13.4
Viscosity Index (VI)	Scale	ASTM D2270*	169	**163**	168	164

GRAPHS

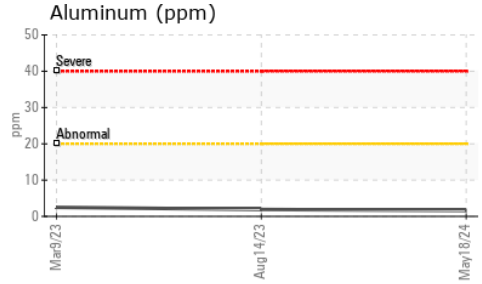
Iron (ppm)



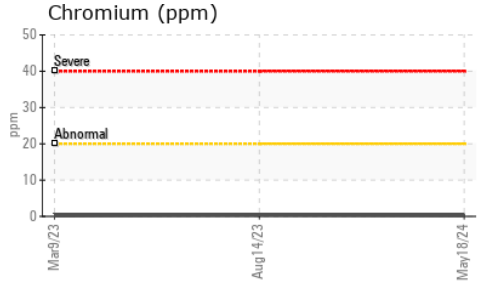
Lead (ppm)



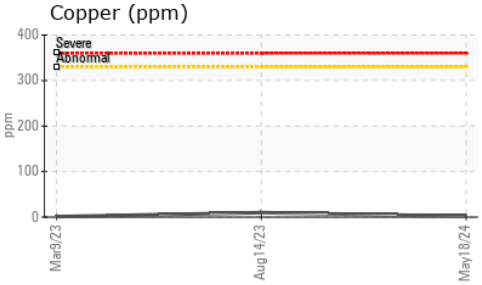
Aluminum (ppm)



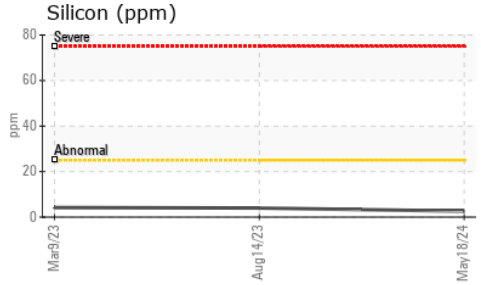
Chromium (ppm)



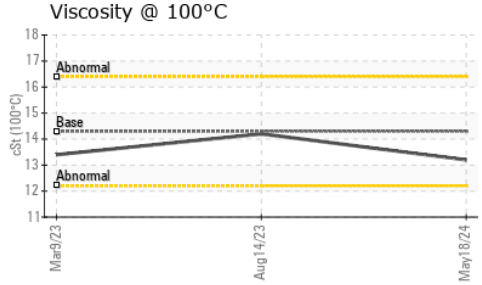
Copper (ppm)



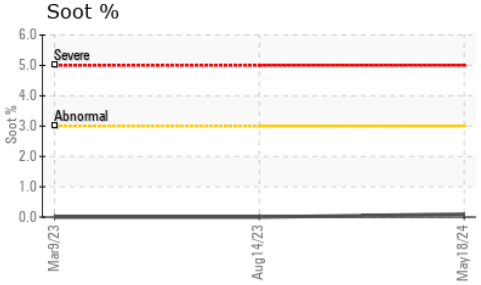
Silicon (ppm)



Viscosity @ 100°C



Soot %



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0088282
Lab Number : 02637904
Unique Number : 5787066
Test Package : MOB 1 (Additional Tests: KV40, VI)

Received : 28 May 2024
Tested : 28 May 2024
Diagnosed : 28 May 2024 - Wes Davis

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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