

OIL ANALYSIS REPORT

Sample Rating Trend



DE1025

Component Diesel Engine

PETRO CANADA DURON UHP 5W40 (--- GAL)

DIAGNOSIS

Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

Wear

Elui

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

AL)		Ja	2021	Mar2022 Feb20	124	
SAMPLE INFOR	RMATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PC0082220	PC0058977	PC0042238
Sample Date		Client Info		23 Feb 2024	24 Mar 2022	13 Jan 2021
Machine Age	hrs	Client Info		1506	1211	715
Oil Age	hrs	Client Info		0	500	0
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINA	TION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	1.1	0.4
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	0.0
WEAR META	LS	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	4	6	15
Chromium	ppm	ASTM D5185(m)	>20	0	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	3	3	5
Lead	ppm	ASTM D5185(m)	>40	0	0	<1
Copper	ppm	ASTM D5185(m)	>330	<1	<1	4
Tin	ppm	ASTM D5185(m)	>15	0	<1	<1
Antimony	ppm	ASTM D5185(m)		0	<1	0
Vanadium	ppm	ASTM D5185(m)		0	0	<1
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	373	305	43
Barium	ppm	ASTM D5185(m)	0	0	0	<1
Molybdenum	ppm	ASTM D5185(m)	65	83	105	75
Manganese	ppm	ASTM D5185(m)	0	0	<1	<1
Magnesium	ppm	ASTM D5185(m)	1160	406	606	104
Calcium	ppm	ASTM D5185(m)	820	1322	1357	1985
Phosphorus	ppm	ASTM D5185(m)	1160	1039	894	973
Zinc	ppm	ASTM D5185(m)	1260	1149	1009	1157
Sulfur	ppm	ASTM D5185(m)	3000	2938	2560	3290
Lithium	ppm	ASTM D5185(m)		<1	<1	<1
CONTAMINA	NTS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	8	8	7
Sodium	ppm	ASTM D5185(m)		1	2	4
Potassium	ppm	ASTM D5185(m)	>20	1	2	8
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	5.0	7.4	9.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	19.3	22.3	18.8



120 Abnormal

110

cSt (40°C) 80 70 60 Jan 13/21

Viscosity @ 40°C

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Oxidation Abs/.tmm ASTM D7414* >25 VISUAL method limit/base White Metal scalar Visual* NONE Yellow Metal scalar Visual* NONE Precipitate scalar Visual* NONE Silt scalar Visual* NONE Debris scalar Visual* NONE Sand/Dirt scalar Visual* NONE Appearance scalar Visual* NORML Odor cSt AstmD7279(m) 95.1 <	13.7 current VLITE NONE NONE NONE NORML NORML NORML NEG 0 0 0 0 0 0 0 0 0 0 0 0 0	16.6 history1 NORML NEG NEG history1 74.0 11.5 148	14.6 history2 NEG NEG NEG history2 70.7 10.5 135
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GRAPHS Iron (ppm) ³⁰⁰ ⁴⁰⁰ ⁴⁰⁰ ²⁰⁰ ⁴⁰⁰ ²⁰⁰ ⁴⁰⁰ ²⁰⁰ ⁴⁰⁰ ²⁰⁰ ⁴⁰⁰ ²⁰⁰ ⁴⁰⁰ ⁴⁰⁰ ²⁰⁰ ⁴⁰	Abnormal		
Iron (ppm) 100 2000 Severe 100 4 Abnormal 450 100 100 100	Abnormal		
300 Severe 100 200 Abnormal 60 100 100 100 100 100 100 100 Abnormal 100 100 100 1	Abnormal		
Aluminum (ppm)	Abnormal		
Aluminum (ppm)			
Aluminum (ppm)			
00 00 00 00 00 00 00 00 00 00 00 00 00			
Aluminum (ppm)	3/2	/22	40.1
Service 1	Jan 13/2 1	Mar24/22	E-h 22/24
Service 1	Chromium (p		
AD Severe AD			
	Severe		
E ₂₀ - Abnormal	Abnormal		
Jan 13/21	13/21	Mar24/22	Eeh 22/24
Jan	Jan1	Mar	
Copper (ppm)	Silicon (ppm)		
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ق 200 - ق ق 200 - ق			
100 - 20	Abnormal	1	
o o	l 		
Jan13/21/2	13/21	Mar24/22	Eath 23.72.4
	Jan1	Mar	
Viscosity @ 100°C	Soot %		
20 6.0	Severe		
G 15 Base Abnormal 3 10	Abnormal		
8 10 8 2.0			
5	l ,		
Jan 13/21/2	Jan 13/21	Mar24/22	Eeh 23.74
Leb Jar	Jai	Mar	
CALA Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L	549 Green Infrastr	ucture and Partners Inc (GIPI)	. 286 . Shoring & Foundation
Sample No. : PC0082220 Received : 01 Mar 2024			Ram Forest Rd
7025:2017 Lab Number : 02619151 Tested : 01 Mar 2024			Stouffville, Of
credited Unique Number : 5736261 Diagnosed : 01 Mar 2024 - W	es Davis	-	CA L4A 2G
lest Package : MOB 1 (Additional Tests: KV40, VI, Visual)			ntact: Bill Actor
liscuss this sample report, contact Customer Service at 1-800-268-2131. t denoted (*) outside scope of accreditation, (m) method modified, (e) tested at extern		Da	acton@gipi.con T

Report Id: GFL286 [WCAMIS] 02619151 (Generated: 03/01/2024 13:36:49) Rev: 1

Validity of results and interpretation are based on the sample and information as supplied.

Contact/Location: Bill Acton - GFL286

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