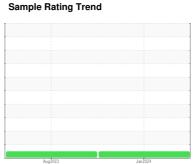


OIL ANALYSIS REPORT

∩DT



NORMAL



Area 2 Machine Id 832012

Component **Natural Gas Engine**

PETRO CANADA DURON GEO LD 15W40 (36 QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil

Fluid Condition

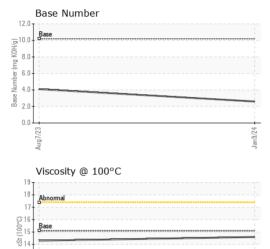
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Client Info Q9 Jan 2024 07 Aug 2023	36 QTS)			Aug2023	Jan2024		
Client Info Q9 Jan 2024 Q7 Aug 2023	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 1035 1203	Sample Number		Client Info		PCA0101774	PCA0101738	
Machine Age hrs Client Info 1035 1203	Sample Date		Client Info		09 Jan 2024	07 Aug 2023	
Contact Cont		hrs	Client Info		2238	1203	
NORMAL NORMAL CONTAMINATION method limit/base current history1 history2	Oil Age	hrs	Client Info		1035	1203	
Water WC Method Solution Solution WEAR METALS Method Solution Solution Med Med Solution Med M	Oil Changed		Client Info		Changed	Changed	
Water WC Method >0.1 NEG NEG WEAR METALS method limit/base current history1 history2 Iron Dpm ASTM D5185m >50 14 31 Chromium ppm ASTM D5185m >4 <1 1 Nickel ppm ASTM D5185m >2 1 <1 Silver ppm ASTM D5185m >3 0 <1 Aluminum ppm ASTM D5185m >9 4 2 Aluminum ppm ASTM D5185m >9 4 2 Lead ppm ASTM D5185m >9 4 2 Copper ppm ASTM D5185m >33 2 12 Copper ppm ASTM D5185m >35 2 12 Calcium ppm ASTM D5185m 50 1 7 <th< td=""><td>Sample Status</td><td></td><td></td><td></td><td>NORMAL</td><td>NORMAL</td><td></td></th<>	Sample Status				NORMAL	NORMAL	
WEAR METALS	CONTAMINAT	ION	method	limit/base	current	history1	history2
Chromium	Water		WC Method	>0.1	NEG	NEG	
Chromium	WEAR METAL	.S	method	limit/base	current	history1	history2
Sickel	ron	ppm	ASTM D5185m	>50	14	31	
Description	Chromium	ppm	ASTM D5185m	>4	<1	1	
Saliver	Nickel	ppm	ASTM D5185m	>2	1	<1	
Aluminum	Titanium	ppm	ASTM D5185m		0	<1	
December December	Silver	ppm	ASTM D5185m	>3	0	<1	
Copper	Aluminum	ppm	ASTM D5185m	>9	4	2	
Action	₋ead	ppm	ASTM D5185m	>30	2	0	
Anadium ppm ASTM D5185m <1 0 Cadmium ppm ASTM D5185m 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 50 1 7 Barium ppm ASTM D5185m 5 0 2 Molybdenum ppm ASTM D5185m 50 54 63 Manganese ppm ASTM D5185m 50 54 63 Manganesium ppm ASTM D5185m 560 625 823 Calcium ppm ASTM D5185m 780 783 769 Phosphorus ppm ASTM D5185m 870 1066 1029 Zinc ppm ASTM D5185m 870 1066 1029 Sulfur ppm ASTM D5185m >+100 6 20	Copper	ppm	ASTM D5185m	>35	2	12	
ADDITIVES	Γin	ppm	ASTM D5185m	>4	2	2	
ADDITIVES	/anadium	ppm	ASTM D5185m		<1	0	
Soron ppm ASTM D5185m 50 1 7	Cadmium	ppm	ASTM D5185m		0	0	
Description	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 50 54 63 Manganese ppm ASTM D5185m 0 2 9 Magnesium ppm ASTM D5185m 560 625 823 Calcium ppm ASTM D5185m 1510 1703 1537 Phosphorus ppm ASTM D5185m 780 783 769 Zinc ppm ASTM D5185m 870 1066 1029 Zinc ppm ASTM D5185m 2040 2482 2914 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 6 20 Sodium ppm ASTM D5185m >20 2 2 Potassium ppm ASTM D5185m >20 2 2 INFRA-RED method limit/bas	Boron	ppm	ASTM D5185m	50	1	7	
Manganese ppm ASTM D5185m 0 2 9 Magnesium ppm ASTM D5185m 560 625 823 Calcium ppm ASTM D5185m 1510 1703 1537 Phosphorus ppm ASTM D5185m 780 783 769 Zinc ppm ASTM D5185m 870 1066 1029 Sulfur ppm ASTM D5185m 2040 2482 2914 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 6 20 Godium ppm ASTM D5185m >20 2 2 Potassium ppm ASTM D5185m >20 2 2 Soot % *ASTM D5185m >20 2 2 Soot % *ASTM D544 0 0	Barium	ppm	ASTM D5185m	5	0	2	
Magnesium ppm ASTM D5185m 560 625 823 Calcium ppm ASTM D5185m 1510 1703 1537 Phosphorus ppm ASTM D5185m 780 783 769 Zinc ppm ASTM D5185m 870 1066 1029 Sulfur ppm ASTM D5185m 2040 2482 2914 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 6 20 Godium ppm ASTM D5185m 7 5 Potassium ppm ASTM D5185m >20 2 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 12.8 12.4 Gulfation Abs/cm *ASTM D7415 >30 27.4	Molybdenum	ppm	ASTM D5185m	50	54	63	
Description	Manganese	ppm	ASTM D5185m	0	2	9	
Phosphorus ppm ASTM D5185m 780 783 769 Zinc ppm ASTM D5185m 870 1066 1029 Sulfur ppm ASTM D5185m 2040 2482 2914 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 6 20 Sodium ppm ASTM D5185m 7 5 Potassium ppm ASTM D5185m >20 2 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 Sulfration Abs/cm *ASTM D7624 >20 12.8 12.4 FLUID DEGRADATION method limit/base current history1 history2 Dxidation Abs/.1mm *ASTM D7414 >25 23.2 21.5	Magnesium	ppm	ASTM D5185m	560	625	823	
Soulfur	Calcium	ppm	ASTM D5185m	1510	1703	1537	
Sulfur ppm ASTM D5185m 2040 2482 2914 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 6 20 Sodium ppm ASTM D5185m 7 5 Potassium ppm ASTM D5185m >20 2 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 Nitration Abs/cm *ASTM D7624 >20 12.8 12.4 Sulfation Abs/.1mm *ASTM D7415 >30 27.4 24.3 FLUID DEGRADATION method limit/base current history1 history2 Dxidation Abs/.1mm *ASTM D7414 >25 23.2 21.5	Phosphorus	ppm	ASTM D5185m	780	783	769	
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 6 20 Sodium ppm ASTM D5185m 7 5 Potassium ppm ASTM D5185m >20 2 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 Nitration Abs/cm *ASTM D7624 >20 12.8 12.4 Sulfation Abs/.1mm *ASTM D7415 >30 27.4 24.3 FLUID DEGRADATION method limit/base current history1 history2 Dxidation Abs/.1mm *ASTM D7414 >25 23.2 21.5	Zinc	ppm	ASTM D5185m	870	1066	1029	
Solition ppm ASTM D5185m >+100 6 20	Sulfur	ppm	ASTM D5185m	2040	2482	2914	
Potassium ppm ASTM D5185m 7 5 Potassium ppm ASTM D5185m >20 2 2 INFRA-RED method limit/base current history1 history2 Soot %	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 2 2 INFRA-RED method limit/base current history1 history2 Goot % % *ASTM D7844 0 0 Vitration Abs/cm *ASTM D7624 >20 12.8 12.4 Sulfation Abs/.1mm *ASTM D7415 >30 27.4 24.3 FLUID DEGRADATION method limit/base current history1 history2 Dxidation Abs/.1mm *ASTM D7414 >25 23.2 21.5	Silicon	ppm	ASTM D5185m	>+100	6	20	
INFRA-RED	Sodium	ppm	ASTM D5185m		7	5	
Soot % % *ASTM D7844 0 0 Nitration Abs/cm *ASTM D7624 >20 12.8 12.4 Sulfation Abs/.1mm *ASTM D7415 >30 27.4 24.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 23.2 21.5	Potassium	ppm	ASTM D5185m	>20	2	2	
Nitration Abs/cm *ASTM D7624 >20 12.8 12.4 Sulfation Abs/.1mm *ASTM D7415 >30 27.4 24.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 23.2 21.5	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 27.4 24.3 FLUID DEGRADATION method limit/base current history1 history2 Dxidation Abs/.1mm *ASTM D7414 >25 23.2 21.5	Soot %	%	*ASTM D7844		0	0	
FLUID DEGRADATION method limit/base current history1 history2 Dxidation Abs/.1mm *ASTM D7414 >25 23.2 21.5	Nitration	Abs/cm	*ASTM D7624	>20	12.8	12.4	
Dxidation	Sulfation	Abs/.1mm	*ASTM D7415	>30	27.4	24.3	
	FLUID DEGRA	DATION	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	23.2	21.5	
	Base Number (BN)	mg KOH/g	ASTM D2896	10.2	2.6	4.1	



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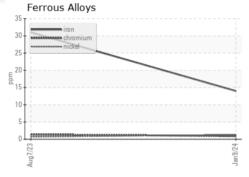
OIL ANALYSIS REPORT

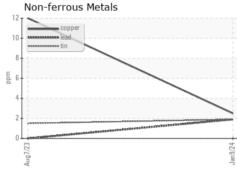


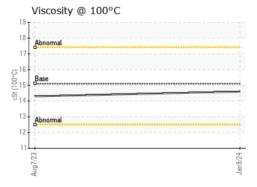
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Precipitate	scalar	*Visual	NONE	NONE	NONE	
Silt	scalar	*Visual	NONE	NONE	NONE	
Debris	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Appearance	scalar	*Visual	NORML	NORML	NORML	
Odor	scalar	*Visual	NORML	NORML	NORML	
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	
Free Water	scalar	*Visual		NEG	NEG	

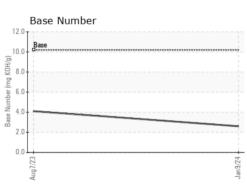
FLUID PROP	EKIIES	method	ilmivbase		nistory i	nistory2
Visc @ 100°C	cSt	ASTM D445	15.1	14.6	14.3	

GRAPHS













Certificate L2367

Laboratory

Sample No. Lab Number Unique Number : 10829275 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PCA0101774 : 06057893

To discuss this sample report, contact Customer Service at 1-800-237-1369.

Recieved Diagnosed

: 11 Jan 2024 : 12 Jan 2024 Diagnostician : Wes Davis

GFL Environmental - 002 - Vance-Granville

241 Vanco Mill Rd Henderson, NC US 27537 Contact: Cameron King

cameron.king@gflenv.com T: (252)438-5333

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

F: (252)431-1635