

OIL ANALYSIS REPORT

Sample Rating Trend



GUASCOR 340.105

Biogas Engine

PETRO CANADA RALUBE 40 CFS (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Fuel content negligible. There is no indication of any contamination in the oil.

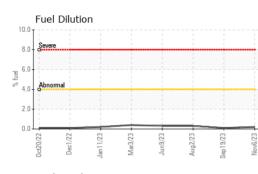
Fluid Condition

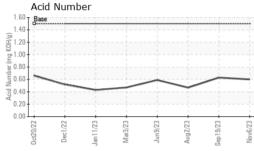
The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

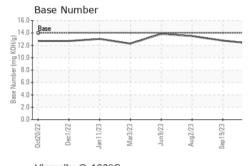
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2	
Sample Number		Client Info		PCA0076105	PCA0076104	PCA0076106	
Sample Date		Client Info		06 Nov 2023	19 Sep 2023	02 Aug 2023	
Machine Age	hrs	Client Info		115867	114723	113609	
Oil Age	hrs	Client Info		1144	1114	988	
Oil Changed		Client Info		Changed	Changed	N/A	
Sample Status				NORMAL	NORMAL	NORMAL	
CONTAMINAT	ION	method	limit/base	current	history1	history2	
Glycol		WC Method		NEG	NEG	NEG	
WEAR METAL	S	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>45	5	3	6	
Chromium	ppm	ASTM D5185m	>2	0	0	<1	
Nickel	ppm	ASTM D5185m	>2	0	0	<1	
Titanium	ppm	ASTM D5185m		0	0	<1	
Silver	ppm	ASTM D5185m	>5	0	0	0	
Aluminum	ppm	ASTM D5185m	>10	2	3	2	
Lead	ppm	ASTM D5185m	>5	0	0	2	
Copper	ppm	ASTM D5185m	>14	0	<1	4	
Tin	ppm	ASTM D5185m	>13	0	<1	<1	
Vanadium	ppm	ASTM D5185m		0	0	<1	
Cadmium	ppm	ASTM D5185m		0	0	0	
ADDITIVES		method	limit/base	current	history1	history2	
Boron	nnm	ASTM D5185m	0	0	0	0	
Barium	ppm ppm	ASTM D5185m		0	0	0	
Molybdenum		ASTM D5185m	0	0	0	2	
Manganese	ppm	ASTM D5185m		0	0	2	
-	ppm	ASTIVI DSTOSIII	0	U	0	2	
Magnaaium	nnm	ACTM DE10Em	25	20	4.4	10	
Magnesium	ppm	ASTM D5185m	25	20	11	19	
Calcium	ppm	ASTM D5185m	4300	4727	2981	4110	
Calcium Phosphorus	ppm ppm	ASTM D5185m ASTM D5185m	4300 1.6	4727 4	2981 4	4110 3	
Calcium Phosphorus Zinc	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	4300 1.6 2	4727 4 6	2981 4 0	4110 3 0	
Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	4300 1.6 2 1500	4727 4	2981 4 0 924	4110 3 0 1431	
Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	4300 1.6 2 1500 limit/base	4727 4 6 1750 current	2981 4 0 924 history1	4110 3 0 1431 history2	
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	4300 1.6 2 1500 limit/base	4727 4 6 1750	2981 4 0 924 history1 3	4110 3 0 1431 history2 6	
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	4300 1.6 2 1500 limit/base >200	4727 4 6 1750 current 4 6	2981 4 0 924 history1 3 6	4110 3 0 1431 history2 6 17	
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	4300 1.6 2 1500 limit/base >200	4727 4 6 1750 current 4 6 <1	2981 4 0 924 history1 3 6 0	4110 3 0 1431 history2 6 17 8	
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	4300 1.6 2 1500 limit/base >200	4727 4 6 1750 current 4 6	2981 4 0 924 history1 3 6	4110 3 0 1431 history2 6 17	
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	4300 1.6 2 1500 limit/base >200	4727 4 6 1750 current 4 6 <1	2981 4 0 924 history1 3 6 0	4110 3 0 1431 history2 6 17 8	
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel	ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524	4300 1.6 2 1500 limit/base >200 >20 >20	4727 4 6 1750 current 4 6 <1 0.2	2981 4 0 924 history1 3 6 0 0 0.1	4110 3 0 1431 history2 6 17 8 0.3	
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm TS ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	4300 1.6 2 1500 <i>limit/base</i> >200 >20 >4.0	4727 4 6 1750 current 4 6 <1 0.2 current	2981 4 0 924 history1 3 6 0 0 0.1 history1	4110 3 0 1431 history2 6 17 8 0.3 history2	
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm TS ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524 method *ASTM D7844	4300 1.6 2 1500 limit/base >200 >20 >4.0 limit/base >20	4727 4 6 1750 current 4 6 <1 0.2 current 0	2981 4 0 924 history1 3 6 0 0 0.1 history1 0	4110 3 0 1431 history2 6 17 8 0.3 history2 0	
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm ppm ppm TS ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524 *ASTM D7824 *ASTM D7624	4300 1.6 2 1500 limit/base >200 >20 >4.0 limit/base >20	4727 4 6 1750 current 4 6 <1 0.2 current 0 12.3	2981 4 0 924 history1 3 6 0 0.1 0.1 history1 0 13.1	4110 3 0 1431 history2 6 17 8 0.3 history2 0 12.2	
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm TS ppm ppm ppm % % Abs/cm Abs/cm Abs/1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524 *ASTM D7844 *ASTM D7824	4300 1.6 2 1500 limit/base >200 >20 >4.0 limit/base >20 >30	4727 4 6 1750 current 4 6 <1 0.2 current 0 12.3 16.7	2981 4 0 924 history1 3 6 0 0.1 history1 0 13.1 15.3	4110 3 0 1431 history2 6 17 8 0.3 history2 0 12.2 14.0	
Calcium Phosphorus Zinc Sulfur CONTAMINAN Solicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE Oxidation	ppm ppm ppm ppm TS ppm ppm % % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524 *ASTM D7844 *ASTM D7624 *ASTM D7415	4300 1.6 2 1500 limit/base >200 >4.0 limit/base >20 >30 limit/base	4727 4 6 1750 current 4 6 <1 0.2 current 0 12.3 16.7 current 9.9	2981 4 0 924 history1 3 6 0 0.1 0.1 history1 0 13.1 15.3 history1 10.6	4110 3 0 1431 history2 6 17 8 0.3 history2 0 12.2 14.0 history2 9.7	
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm ppm ppm ppm TS ppm ppm ppm % % Abs/cm Abs/cm Abs/1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5844 *ASTM D7844 *ASTM D7624 *ASTM D7624 *ASTM D7624	4300 1.6 2 1500 limit/base >200 >4.0 limit/base >20 >30 limit/base	4727 4 6 1750 current 4 6 <1 0.2 current 0 12.3 16.7 current	2981 4 0 924 history1 3 6 0 0.1 0 0.1 history1 0 13.1 15.3 history1	4110 3 0 1431 history2 6 17 8 0.3 history2 0 12.2 14.0 history2	

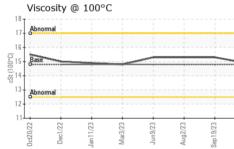


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US 98273 Contact: JASON MITCHELL



Laboratory

Sample No. Lab Number

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

Contact/Location: JASON MITCHELL - FARMOU