

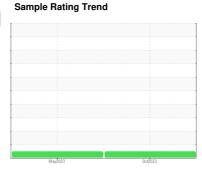
OIL ANALYSIS REPORT



(19803Z) S0916A-Suamico 920108

Component
Front Center Diesel Engine

PETRO CANADA DURON SHP 15W40 (42 QTS)





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

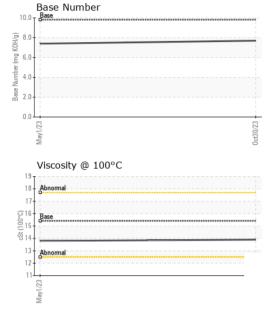
Fluid Condition

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

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
	VIATION		IIIIII/Dase		· · · · · · · · · · · · · · · · · · ·	,
Sample Number		Client Info		GFL0095976	GFL0074819	
Sample Date		Client Info		30 Oct 2023	01 May 2023	
Machine Age	hrs	Client Info		7075	6504	
Oil Age	hrs	Client Info		571	621	
Oil Changed		Client Info		Changed	Changed	
Sample Status				NORMAL	NORMAL	
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	
Glycol		WC Method		NEG	NEG	
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	14	13	
Chromium	ppm	ASTM D5185m	>20	<1	<1	
Nickel	ppm	ASTM D5185m	>5	<1	<1	
Titanium	ppm	ASTM D5185m	>2	<1	0	
Silver	ppm	ASTM D5185m	>2	<1	0	
Aluminum	ppm	ASTM D5185m	>20	2	3	
Lead	ppm	ASTM D5185m	>40	<1	<1	
Copper	ppm	ASTM D5185m	>330	7	<1	
Tin	ppm	ASTM D5185m	>15	<1	1	
Vanadium	ppm	ASTM D5185m		<1	0	
Cadmium	ppm	ASTM D5185m		<1	0	
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	3	13	
DOTOTT	ppiii					
Barium	ppm	ASTM D5185m	0	0	0	
Barium			0	0 60	0 61	
	ppm	ASTM D5185m		-		
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	60	60	61	
Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	60	60 <1	61 <1	
Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010	60 <1 895	61 <1 955	
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010 1070	60 <1 895 1133	61 <1 955 1191	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010 1070 1150	60 <1 895 1133 921	61 <1 955 1191 993	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010 1070 1150 1270	60 <1 895 1133 921 1172	61 <1 955 1191 993 1281	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010 1070 1150 1270 2060	60 <1 895 1133 921 1172 2671	61 <1 955 1191 993 1281 3476	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010 1070 1150 1270 2060	60 <1 895 1133 921 1172 2671 current	61 <1 955 1191 993 1281 3476 history1	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	60 0 1010 1070 1150 1270 2060 limit/base	60 <1 895 1133 921 1172 2671 current	61 <1 955 1191 993 1281 3476 history1	 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	60 0 1010 1070 1150 1270 2060 limit/base	60 <1 895 1133 921 1172 2671 current 4 1	61 <1 955 1191 993 1281 3476 history1 4	 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	60 0 1010 1070 1150 1270 2060 limit/base >25 >20	60 <1 895 1133 921 1172 2671 current 4 1 5	61 <1 955 1191 993 1281 3476 history1 4	history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m	60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	60 <1 895 1133 921 1172 2671 current 4 1 5 current 0.8	61 <1 955 1191 993 1281 3476 history1 4 3 history1 0.8	history2 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010 1070 1150 1270 2060 limit/base >25 >20	60 <1 895 1133 921 1172 2671 current 4 1 5	61 <1 955 1191 993 1281 3476 history1 4 3	history2 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m	60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	60 <1 895 1133 921 1172 2671 current 4 1 5 current 0.8 9.0	61 <1 955 1191 993 1281 3476 history1 4 4 3 history1 0.8 9.5	history2 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm	ASTM D5185m Method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method *ASTM D7844 *ASTM D7624 *ASTM D7415 Method	60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >4 >20 >30 limit/base	60 <1 895 1133 921 1172 2671 current 4 1 5 current 0.8 9.0 21.0 current	61 <1 955 1191 993 1281 3476 history1 4 4 3 history1 0.8 9.5 21.3 history1	history2 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >4 >20 >30 limit/base	60 <1 895 1133 921 1172 2671 current 4 1 5 current 0.8 9.0 21.0	61 <1 955 1191 993 1281 3476 history1 4 4 3 history1 0.8 9.5 21.3	history2 history2



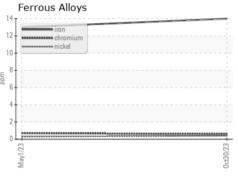
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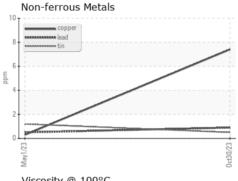


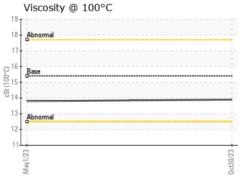
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Precipitate	scalar	*Visual	NONE	NONE	NONE	
Silt	scalar	*Visual	NONE	NONE	NONE	
Debris	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Appearance	scalar	*Visual	NORML	NORML	NORML	
Odor	scalar	*Visual	NORML	NORML	NORML	
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	
Free Water	scalar	*Visual		NEG	NEG	

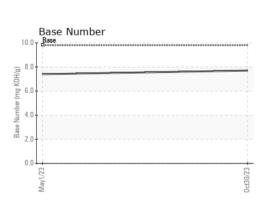
FLUID PROPE	ERITES	method			history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.9	13.8	

GRAPHS











Certificate L2367

Laboratory Sample No. Lab Number Unique Number : 10741781

: 06008019

: GFL0095976 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 15 Nov 2023 Diagnosed : 15 Nov 2023 Diagnostician : Wes Davis

GFL Environmental - 916A - Suamico 2300 Deerfield Ave E

Suamico, WI US 54313

Contact: NICHOLAS WEIDNER nweidner@gflenv.com

T:

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)

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