

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

833013 Component

Natural Gas Engine

PETRO CANADA DURON SHP 15W40 (32 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.

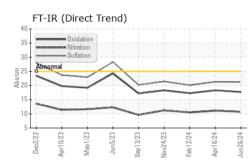
Fluid Condition

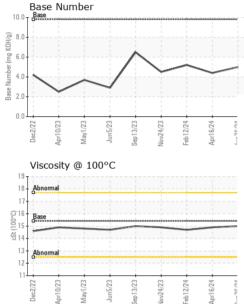
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0121743	GFL0106901	GFL0106847
Sample Date		Client Info		26 Jun 2024	16 Apr 2024	12 Feb 2024
Machine Age	hrs	Client Info		6074	5438	4853
Oil Age	hrs	Client Info		600	600	0
Oil Changed		Client Info		Changed	Changed	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	5	8	10
Chromium	ppm	ASTM D5185m	>4	0	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	2	1	1
Lead	ppm	ASTM D5185m	>30	0	<1	<1
Copper	ppm	ASTM D5185m	>35	1	<1	1
Tin	ppm	ASTM D5185m	>4	<1	1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 0	current 10	history1 2	10
	ppm ppm					
Boron		ASTM D5185m	0	10	2	10
Boron Barium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0	10 0	2 0	10 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	10 0 54	2 0 52	10 0 52
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	10 0 54 <1	2 0 52 <1	10 0 52 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	10 0 54 <1 592	2 0 52 <1 539	10 0 52 <1 547
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	10 0 54 <1 592 1622 718 961	2 0 52 <1 539 1745	10 0 52 <1 547 1559
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150	10 0 54 <1 592 1622 718	2 0 52 <1 539 1745 714	10 0 52 <1 547 1559 733
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270	10 0 54 <1 592 1622 718 961	2 0 52 <1 539 1745 714 949	10 0 52 <1 547 1559 733 950
Boron 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	0 0 60 0 1010 1070 1150 1270 2060	10 0 54 <1 592 1622 718 961 2863	2 0 52 <1 539 1745 714 949 2884	10 0 52 <1 547 1559 733 950 2496
Boron 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	0 00 00 1010 1070 1150 1270 2060	10 0 54 <1 592 1622 718 961 2863 current	2 0 52 <1 539 1745 714 949 2884 history1	10 0 52 <1 547 1559 733 950 2496 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	0 0 60 1010 1070 1150 1270 2060 kimit/base >+100	10 0 54 <1 592 1622 718 961 2863 current 4	2 0 52 <1 539 1745 714 949 2884 history1 3	10 0 52 <1 547 1559 733 950 2496 history2 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 1010 1070 1150 1270 2060 kimit/base >+100	10 0 54 <1 592 1622 718 961 2863 current 4 6	2 0 52 <1 539 1745 714 949 2884 history1 3 6	10 0 52 <1 547 1559 733 950 2496 history2 4 7
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >+100	10 0 54 <1 592 1622 718 961 2863 current 4 6 1	2 0 52 <1 539 1745 714 949 2884 history1 3 6 0	10 0 52 <1 547 1559 733 950 2496 history2 4 7 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 >timit/base >+100 >20	10 0 54 <1 592 1622 718 961 2863 current 4 6 1	2 0 52 <1 539 1745 714 949 2884 history1 3 6 0 0	10 0 52 <1 547 1559 733 950 2496 history2 4 7 0 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 >timit/base >+100 >20	10 0 54 <1 592 1622 718 961 2863 <u>current</u> 4 6 1 1 <u>current</u> 0	2 0 52 <1 539 1745 714 949 2884 history1 3 6 0 0 history1 0	10 0 52 <1 547 1559 733 950 2496 history2 4 7 0 history2 0
Boron 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 ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 <i>limit/base</i> >+100 <i>limit/base</i>	10 0 54 <1 592 1622 718 961 2863 <i>current</i> 4 6 1 <i>current</i> 0 10.7	2 0 52 <1 539 1745 714 949 2884 history1 3 6 0 0 history1 0 11.1	10 0 52 <1 547 1559 733 950 2496 history2 4 7 0 history2 0 history2
Boron 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 ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >20 imit/base >20	10 0 54 <1 592 1622 718 961 2863 <i>current</i> 4 6 1 1 <i>current</i> 0 10.7 21.2	2 0 52 <1 539 1745 714 949 2884 history1 3 6 0 0 history1 0 11.1 21.3	10 0 52 <1 547 1559 733 950 2496 history2 4 7 0 history2 0 history2 0 10.5 20.1



OIL ANALYSIS REPORT





VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	15.0	14.9	14.7
GRAPHS						

Ferrous Alloys 50 40 30 20 10 n Dec2/22 Sep13/23 Apr10/23 Mav1/23 10124/23 Feb 12/24 Non-ferrous Metals 16 14 e lead 12 10 ppm ß Δ 2 0 Dec2/22 pr10/23 /Int//25 eh12/7 080 Viscosity @ 100°C Base Number 19 10.0 18 17 8. (mg KOH/g) ()-16 ()-001 6 (umber ぢ 14 4 (Base 13 Abno 12 11-0.0 un26/24 -Dec2/22 Mav1/23 Apr10/23 May1/23 16/24 16/24 Apr10/23 Feb 12/24 Dec2/77 ep 13/23 in26/24 Vov74/73 Feb 12/24 Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 GFL Environmental - 856 - Houston South Sample No. : GFL0121743 Received : 03 Jul 2024 8515 Highway 6 South Lab Number : 06227200 Tested : 05 Jul 2024 Houston, TX Unique Number : 11110693 Diagnosed : 05 Jul 2024 - Angela Borella US 77083



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.

Test Package : FLEET

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Report Id: GFL856 [WUSCAR] 06227200 (Generated: 07/09/2024 14:38:26) Rev: 1

Submitted By: Apolinar Zacarias Page 2 of 2

Contact: Apolinar Zacarias

pzacariascano@gflenv.com

T:

F: