

OIL ANALYSIS REPORT

Sample Rating Trend

Jani223 Juni223 Augi223

NORMAL



Machine Id **820037-251**

Component

Diesel Engine

PETRO CANADA DURON SHP 15W40 (--- LTR)

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

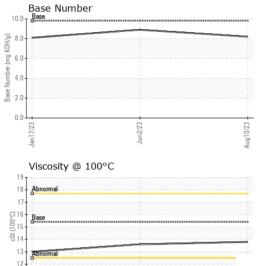
Fluid Condition

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

LTR) Junto23 Junto23 Augto23						
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0066130	GFL0060337	GFL0055739
Sample Date		Client Info		10 Aug 2023	02 Jun 2023	17 Jan 2023
Machine Age	hrs	Client Info		8741	8239	7155
Oil Age	hrs	Client Info		600	500	500
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>110	12	10	18
Chromium	ppm	ASTM D5185m	>4	. <u> </u>	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>25	4	2	2
Lead	ppm	ASTM D5185m	>45	0	<1	2
Copper	ppm	ASTM D5185m	>85	0	0	<1
Tin	ppm	ASTM D5185m	>4	0	<1	<1
Vanadium	ppm	ASTM D5185m	24	0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
	1-1-					
ADDITIVES		method	limit/base	current	historv1	historv2
ADDITIVES	nnm	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	11	13	17
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	11 0	13	17
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	11 0 77	13 0 64	17 0 59
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	11 0 77 0	13 0 64 <1	17 0 59 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	11 0 77 0 1175	13 0 64 <1 970	17 0 59 <1 814
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	11 0 77 0 1175 1346	13 0 64 <1 970 1134	17 0 59 <1 814 1402
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	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	11 0 77 0 1175 1346 1231	13 0 64 <1 970 1134 1037	17 0 59 <1 814 1402 972
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	11 0 77 0 1175 1346	13 0 64 <1 970 1134	17 0 59 <1 814 1402
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 ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	11 0 77 0 1175 1346 1231 1647 4816	13 0 64 <1 970 1134 1037 1313 3689	17 0 59 <1 814 1402 972 1224 3484
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	11 0 77 0 1175 1346 1231 1647 4816	13 0 64 <1 970 1134 1037 1313 3689 history1	17 0 59 <1 814 1402 972 1224 3484 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	11 0 77 0 1175 1346 1231 1647 4816 current	13 0 64 <1 970 1134 1037 1313 3689 history1	17 0 59 <1 814 1402 972 1224 3484 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base	11 0 77 0 1175 1346 1231 1647 4816 current 5	13 0 64 <1 970 1134 1037 1313 3689 history1 3	17 0 59 <1 814 1402 972 1224 3484 history2 5 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >30	11 0 77 0 1175 1346 1231 1647 4816 current 5 2	13 0 64 <1 970 1134 1037 1313 3689 history1 3 3	17 0 59 <1 814 1402 972 1224 3484 history2 5 4 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 1010 1070 1150 1270 2060 limit/base >30	11 0 77 0 1175 1346 1231 1647 4816 current 5 2 0	13 0 64 <1 970 1134 1037 1313 3689 history1 3 2	17 0 59 <1 814 1402 972 1224 3484 history2 5 4 3
Boron 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	0 0 60 0 1010 1150 1270 2060 limit/base >30 limit/base >3	11 0 77 0 1175 1346 1231 1647 4816 current 5 2 0 current 0.3	13 0 64 <1 970 1134 1037 1313 3689 history1 3 2 history1 0.3	17 0 59 <1 814 1402 972 1224 3484 history2 5 4 3 history2 0.5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1150 1270 2060 limit/base >30 >20 limit/base	11 0 77 0 1175 1346 1231 1647 4816 current 5 2 0 current 0.3 7.6	13 0 64 <1 970 1134 1037 1313 3689 history1 3 3 7.7	17 0 59 <1 814 1402 972 1224 3484 history2 5 4 3 history2 0.5 8.7
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	0 0 0 0 1010 1070 1150 1270 2060 limit/base >30 >20 limit/base >3 >20 >3	11 0 77 0 1175 1346 1231 1647 4816 current 5 2 0 current 0.3	13 0 64 <1 970 1134 1037 1313 3689 history1 3 2 history1 0.3 7.7 19.9	17 0 59 <1 814 1402 972 1224 3484 history2 5 4 3 history2 0.5 8.7 20.1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAI	ppm	ASTM D5185m METHOD *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m METHOD *ASTM D7844 *ASTM D7844 *ASTM D7844 *ASTM D7844 *ASTM D7844 *ASTM D7844	0 0 0 1010 1070 1150 1270 2060 limit/base >30 >20 limit/base >3 >20 limit/base	11 0 77 0 1175 1346 1231 1647 4816 current 5 2 0 current 0.3 7.6 19.7 current	13 0 64 <1 970 1134 1037 1313 3689 history1 3 3 7.7 19.9 history1	17 0 59 <1 814 1402 972 1224 3484 history2 5 4 3 history2 0.5 8.7 20.1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	0 0 60 0 1010 1070 1150 1270 2060 limit/base >30 >20 limit/base >3 >20 >3 	11 0 77 0 1175 1346 1231 1647 4816 current 5 2 0 current 0.3 7.6 19.7	13 0 64 <1 970 1134 1037 1313 3689 history1 3 2 history1 0.3 7.7 19.9	17 0 59 <1 814 1402 972 1224 3484 history2 5 4 3 history2 0.5 8.7 20.1



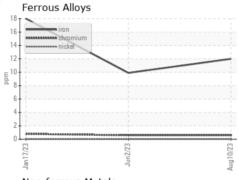
OIL ANALYSIS REPORT



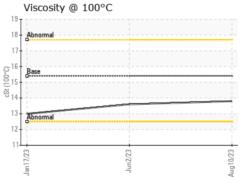
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

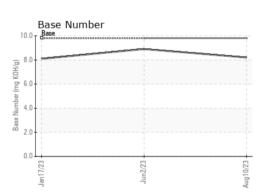
FLUID PROPE	RHES	method	ilmit/base		nistory i	nistory2
Visc @ 100°C	cSt	ASTM D445	15.4	13.8	13.6	13.0

GRAPHS



1	Non-ferrous Met	als	
	copper lead		
	6 -		
mdd	4		
	2 - межения под при		
	Jan17/23 +	Jun2/23	Aug10/23
	Viscosity @ 100°	C.	







Certificate L2367

Laboratory Sample No. Lab Number Unique Number : 10609258

: GFL0066130 : 05929311

Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 21 Aug 2023

Diagnosed : 21 Aug 2023

Diagnostician : Wes Davis

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.

GFL Environmental - 904A - Thorpe

N14985 Tieman Ave Thorp, WI US 54771 Contact: Andy Kane

akane@gflenv.com T: (715)202-3420

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