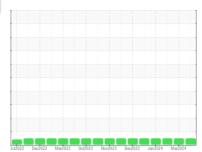


OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id
713015
Component
Diesel Engine
Fluid

PETRO CANADA DURON SHP 15W40 (8 GAL)

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

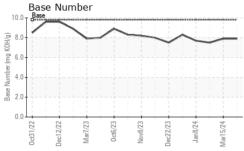
Fluid Condition

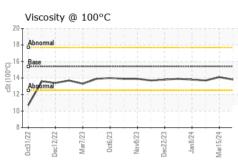
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0112188	GFL0112215	GFL0098683
Sample Date		Client Info		29 Mar 2024	15 Mar 2024	23 Feb 2024
Machine Age	hrs	Client Info		4222	4082	3426
Oil Age	hrs	Client Info		150	150	150
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATI	ON	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	7	5	22
Chromium	ppm	ASTM D5185m	>20	, <1	<1	1
Nickel	ppm	ASTM D5185m	>5	<1	1	6
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	۰ <1	2	3
Lead		ASTM D5185m	>40	0	<1	<1
Copper	ppm	ASTM D5185m	>330	0	<1	1
Tin	ppm	ASTM D5185m	>15	<1	<1	2
Vanadium	ppm	ASTM D5185m	>10	0	0	0
variaulum	ρριιι	AO HVI DO FOOIII				
Cadmium	nnm					
Cadmium	ppm	ASTM D5185m		0	0	<1
Cadmium ADDITIVES	ppm		limit/base		0 history1	<1 history2
	ppm	ASTM D5185m method ASTM D5185m	0	current	0 history1 1	<1 history2
ADDITIVES		ASTM D5185m method ASTM D5185m	0	o current	0 history1	<1 history2
ADDITIVES Boron	ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	0 current 2 0 58	0 history1 1 0 59	<1 history2 2 0 86
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m	0 0 60 0	0 current 2 0	0 history1 1 0	<1 history2 2 0
ADDITIVES Boron Barium Molybdenum	ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	0 current 2 0 58 <1 927	0 history1 1 0 59	<1 history2 2 0 86 1 1382
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	0 current 2 0 58 <1 927 1032	0 history1 1 0 59 <1 934 1066	<1 history2 2 0 86 1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	0 current 2 0 58 <1 927	0 history1 1 0 59 <1 934 1066 997	<1 history2 0 86 1 1382 1402 1355
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m	0 0 60 0 1010 1070 1150	0 current 2 0 58 <1 927 1032	0 history1 1 0 59 <1 934 1066	<1 history2 0 86 1 1382 1402 1355 1774
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m	0 0 60 0 1010 1070 1150	0 current 2 0 58 <1 927 1032 1012	0 history1 1 0 59 <1 934 1066 997 1231 3165	<1 history2 2 0 86 1 1382 1402 1355 1774 4249
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	0 current 2 0 58 <1 927 1032 1012 1213 3259 current	0 history1 1 0 59 <1 934 1066 997 1231 3165 history1	<1 history2 2 0 86 1 1382 1402 1355 1774 4249 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	0 current 2 0 58 <1 927 1032 1012 1213 3259 current 3	0 history1 1 0 59 <1 934 1066 997 1231 3165 history1 4	<1 history2 2 0 86 1 1382 1402 1355 1774 4249 history2 6
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base	0 current 2 0 58 <1 927 1032 1012 1213 3259 current 3 4	0 history1 1 0 59 <1 934 1066 997 1231 3165 history1 4 2	<1 history2 2 0 86 1 1382 1402 1355 1774 4249 history2 6 8
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	0 current 2 0 58 <1 927 1032 1012 1213 3259 current 3 4 1	0 history1 1 0 59 <1 934 1066 997 1231 3165 history1 4 2 2	<1 history2 2 0 86 1 1382 1402 1355 1774 4249 history2 6 8 2
ADDITIVES Boron 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 METHOD	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	0 current 2 0 58 <1 927 1032 1012 1213 3259 current 3 4 1 current	0 history1 1 0 59 <1 934 1066 997 1231 3165 history1 4 2 2	<1 history2 2 0 86 1 1382 1402 1355 1774 4249 history2 6 8 2 history2
ADDITIVES 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 method ASTM D5185m method *ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	0 current 2 0 58 <1 927 1032 1012 1213 3259 current 3 4 1 current 0.4	0 history1 1 0 59 <1 934 1066 997 1231 3165 history1 4 2 2 history1 0.2	<1 history2 0 86 1 1382 1402 1355 1774 4249 history2 6 8 2 history2 0.5
ADDITIVES 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 method ASTM D5185m method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	0 current 2 0 58 <1 927 1032 1012 1213 3259 current 3 4 1 current 0.4 7.0	0 history1 1 0 59 <1 934 1066 997 1231 3165 history1 4 2 2 history1 0.2 5.7	<1 history2 0 86 1 1382 1402 1355 1774 4249 history2 6 8 2 history2 0.5 8.4
ADDITIVES 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 method ASTM D5185m method *ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	0 current 2 0 58 <1 927 1032 1012 1213 3259 current 3 4 1 current 0.4	0 history1 1 0 59 <1 934 1066 997 1231 3165 history1 4 2 2 history1 0.2	<1 history2 0 86 1 1382 1402 1355 1774 4249 history2 6 8 2 history2 0.5
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm	ASTM D5185m method ASTM D5185m method ASTM D5185m	0 0 0 0 1010 1150 1270 2060 limit/base >25 >20 limit/base	0 current 2 0 58 <1 927 1032 1012 1213 3259 current 3 4 1 current 0.4 7.0	0 history1 1 0 59 <1 934 1066 997 1231 3165 history1 4 2 2 history1 0.2 5.7	<1 history2 0 86 1 1382 1402 1355 1774 4249 history2 6 8 2 history2 0.5 8.4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m method ASTM D5185m Method *ASTM D5185m *ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	0 0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >4 >20 >30	0 current 2 0 58 <1 927 1032 1012 1213 3259 current 3 4 1 current 0.4 7.0 19.2	0 history1 1 0 59 <1 934 1066 997 1231 3165 history1 4 2 2 history1 0.2 5.7 18.4	<1 history2 0 86 1 1382 1402 1355 1774 4249 history2 6 8 2 history2 0.5 8.4 19.6



OIL ANALYSIS REPORT

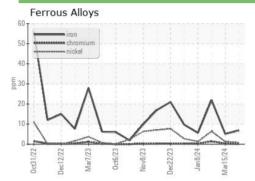


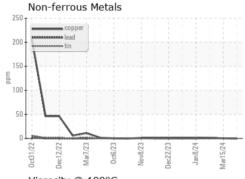


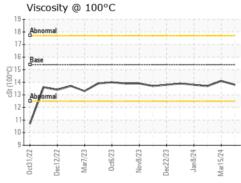
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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

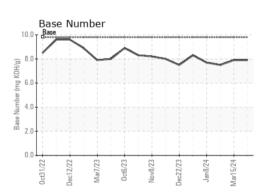
FLUID PROP	ERITES	method	ilmit/base		nistory i	nistoryz
Visc @ 100°C	cSt	ASTM D445	15.4	13.8	14.1	13.7

GRAPHS













Laboratory Sample No. Lab Number : 06136062

: GFL0112188

Unique Number: 10955527 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 02 Apr 2024 **Tested** : 03 Apr 2024

Diagnosed : 03 Apr 2024 - Wes Davis

GFL Environmental - 829 - Wilco Hauling

5054 Highway HH Hartville, MO US 65667

Contact: James Jones james.jones@gflenv.com T: (417)349-5006

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)