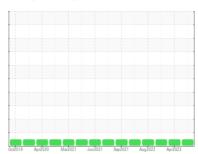


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id 3803C Component

Diesel Engine

PETRO CANADA DURON SHP 15W40 (8 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

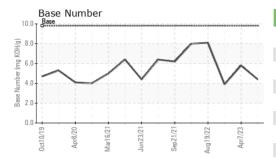
Fluid Condition

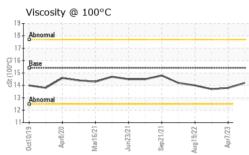
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

AL)		Oct2019 Ap	r2020 Mar2021 Jur	2021 Sep2021 Aug2022	Apr2023	
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number Sample Date		Client Info		GFL0080594 20 Jul 2023	GFL0074436 07 Apr 2023	GFL0055831 15 Nov 2022
Machine Age	hrs	Client Info		47607	47607	47607
Oil Age	hrs	Client Info		47607	47607	150
Oil Changed	1115	Client Info		Changed		Not Changd
Sample Status		Ciletit iiiio		NORMAL	Changed 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	>100	12	6	13
Chromium	ppm	ASTM D5185m	>20	1	0	2
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	<1	0	1
Aluminum	ppm	ASTM D5185m	>20	2	2	2
Lead	ppm	ASTM D5185m	>40	7	1	17
Copper	ppm	ASTM D5185m	>330	1	<1	2
Tin	ppm	ASTM D5185m	>15	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	8	12	8
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	59	47	55
Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m		59 <1	47 <1	55 <1
-						
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m	0 1010	<1 717	<1 494	<1 576
Manganese Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 1010 1070	<1 717 1729	<1 494 1421	<1 576 1656
Manganese Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 1010 1070 1150	<1 717 1729 891	<1 494 1421 647	<1 576 1656 762
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 1010 1070 1150 1270	<1 717 1729 891 1153	<1 494 1421 647 813	<1 576 1656 762 1010
Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 1010 1070 1150 1270 2060	<1 717 1729 891 1153 3330	<1 494 1421 647 813 2104	<1 576 1656 762 1010 2953
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 1010 1070 1150 1270 2060	<1 717 1729 891 1153 3330 current	<1 494 1421 647 813 2104 history1	<1 576 1656 762 1010 2953 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m	0 1010 1070 1150 1270 2060	<1 717 1729 891 1153 3330 current 7	<1 494 1421 647 813 2104 history1	<1 576 1656 762 1010 2953 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m	0 1010 1070 1150 1270 2060 limit/base >25	<1 717 1729 891 1153 3330 current 7 6	<1 494 1421 647 813 2104 history1 6 6	<1 576 1656 762 1010 2953 history2 19
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 1010 1070 1150 1270 2060 limit/base >25	<1 717 1729 891 1153 3330 current 7 6 <1	<1 494 1421 647 813 2104 history1 6 6 0	<1 576 1656 762 1010 2953 history2 19 9
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m	0 1010 1070 1150 1270 2060 limit/base >25 >20	<1 717 1729 891 1153 3330 current 7 6 <1	<1 494 1421 647 813 2104 history1 6 6 0	<1 576 1656 762 1010 2953 history2 19 9 2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m	0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	<1 717 1729 891 1153 3330 current 7 6 <1 current 0	<1 494 1421 647 813 2104 history1 6 0 history1 0.1	<1 576 1656 762 1010 2953 history2 19 9 2 history2 0.1
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	0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	<1 717 1729 891 1153 3330 current 7 6 <1 current 0 10.8	<1 494 1421 647 813 2104 history1 6 6 0 history1 0.1 10.0	<1 576 1656 762 1010 2953 history2 19 9 2 history2 0.1 13
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method *ASTM D7844 *ASTM D7624 *ASTM D7415	0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3 >20 >30 limit/base	<1 717 1729 891 1153 3330 current 7 6 <1 current 0 10.8 24.7 current	<1 494 1421 647 813 2104 history1 6 6 0 history1 0.1 10.0 21.1 history1	<1 576 1656 762 1010 2953 history2 19 9 2 history2 0.1 13 29.3
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method	0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3 >20 >30	<1 717 1729 891 1153 3330 current 7 6 <1 current 0 10.8 24.7	<1 494 1421 647 813 2104 history1 6 6 0 history1 0.1 10.0 21.1	<1 576 1656 762 1010 2953 history2 19 9 2 history2 0.1 13 29.3 history2



OIL ANALYSIS REPORT

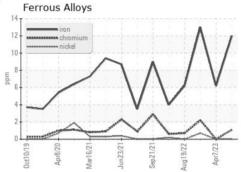


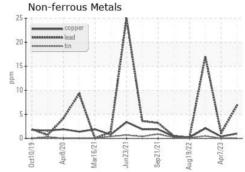


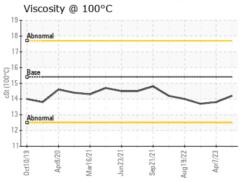
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

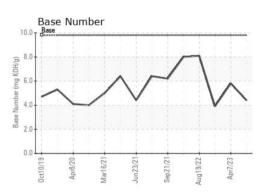
FLUID PROPE	RTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.2	13.8	13.7

GRAPHS













Certificate L2367

Laboratory Sample No. Lab Number Unique Number : 10565588 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0080594 : 05904232

Received Diagnosed

: 21 Jul 2023 : 21 Jul 2023 Diagnostician : Wes Davis

GFL Environmental - 018 - Fayetteville

4621 Marracco Drive Hope Mills, NC US 28348

Contact: Robert Carter robert.carter@gflenv.com T: (910)596-1170

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)