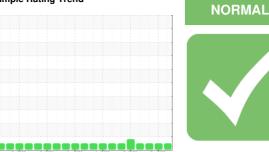


OIL ANALYSIS REPORT

Sample Rating Trend





Machine Id **428038-402363**Component

Diesel Engine

PETRO CANADA DURON SHP 15W40 (--- 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

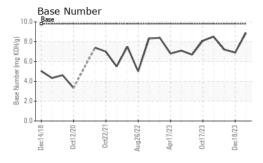
Fluid Condition

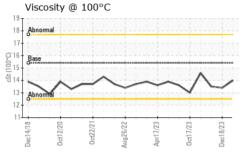
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0109200	GFL0079305	GFL0098284
Sample Date		Client Info		06 Feb 2024	18 Dec 2023	24 Nov 2023
Machine Age	hrs	Client Info		16821	16508	16372
Oil Age	hrs	Client Info		600	700	150
Oil Changed		Client Info		Changed	Changed	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	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 METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	0	3	4
Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	0	<1
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	<1	2	2
Lead	ppm	ASTM D5185m	>40	2	<1	0
Copper	ppm	ASTM D5185m	>330	<1	<1	<1
Tin	ppm	ASTM D5185m		<1	<1	<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	3	<1	<1
Barium	ppm	ASTM D5185m		0	0	2
Molybdenum	ppm	ASTM D5185m	60	50	56	55
Manganese	ppm	ASTM D5185m	0	<1	0	0
Manganese Magnesium	ppm	ASTM D5185m ASTM D5185m	1010	<1 810	905	0 855
Manganese Magnesium Calcium	ppm					
Magnesium Calcium	ppm ppm	ASTM D5185m	1010 1070	810 890	905 980	855 997
Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	1010 1070 1150	810 890 909	905	855
Magnesium Calcium Phosphorus	ppm ppm	ASTM D5185m ASTM D5185m	1010 1070	810 890	905 980 1033	855 997 903
Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1010 1070 1150 1270	810 890 909 1088	905 980 1033 1169	855 997 903 1127
Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	1010 1070 1150 1270 2060	810 890 909 1088 2681	905 980 1033 1169 2823	855 997 903 1127 4126
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	1010 1070 1150 1270 2060 limit/base	810 890 909 1088 2681 current	905 980 1033 1169 2823 history1	855 997 903 1127 4126 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	1010 1070 1150 1270 2060 limit/base	810 890 909 1088 2681 current	905 980 1033 1169 2823 history1	855 997 903 1127 4126 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m	1010 1070 1150 1270 2060 limit/base >25	810 890 909 1088 2681 current 0	905 980 1033 1169 2823 history1 3	855 997 903 1127 4126 history2 3 <1
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1010 1070 1150 1270 2060 limit/base >25 >20	810 890 909 1088 2681 current 0 <1 1	905 980 1033 1169 2823 history1 3 3 <1	855 997 903 1127 4126 history2 3 <1 2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm	ASTM D5185m *ASTM D5185m	1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	810 890 909 1088 2681 current 0 <1 1 current	905 980 1033 1169 2823 history1 3 <1 history1	855 997 903 1127 4126 history2 3 <1 2 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method *ASTM D7844 *ASTM D7624	1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	810 890 909 1088 2681 current 0 <1 1	905 980 1033 1169 2823 history1 3 <1 history1 0.3 8.3	855 997 903 1127 4126 history2 3 <1 2 history2 0.2 6.8
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method *ASTM D7844 *ASTM D7624 *ASTM D76145	1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	810 890 909 1088 2681 current 0 <1 1 current 0.9 5.1 18.4	905 980 1033 1169 2823 history1 3 <1 history1 0.3 8.3 19.2	855 997 903 1127 4126 history2 3 <1 2 history2 0.2 6.8 18.3
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAI	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m Method *ASTM D7844 *ASTM D7624 *ASTM D7415 Method	1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >4 >20 >30 limit/base	810 890 909 1088 2681 current 0 <1 1 current 0.9 5.1 18.4 current	905 980 1033 1169 2823 history1 3 <1 history1 0.3 8.3 19.2 history1	855 997 903 1127 4126 history2 3 <1 2 history2 0.2 6.8 18.3 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method *ASTM D7844 *ASTM D7624 *ASTM D76145	1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >4 >20 >30	810 890 909 1088 2681 current 0 <1 1 current 0.9 5.1 18.4	905 980 1033 1169 2823 history1 3 <1 history1 0.3 8.3 19.2	855 997 903 1127 4126 history2 3 <1 2 history2 0.2 6.8 18.3



OIL ANALYSIS REPORT

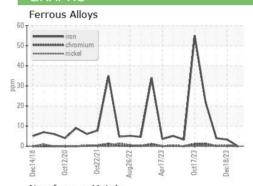


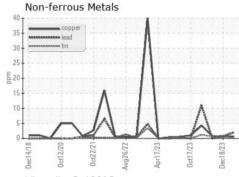


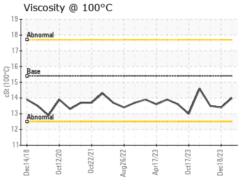
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

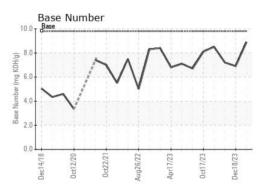
FLUID PROPE	RTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.0	13.4	13.5

GRAPHS













Certificate L2367

Laboratory Sample No.

: GFL0109200 Lab Number : 06084638

Unique Number : 10872083 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 09 Feb 2024

Tested : 12 Feb 2024 Diagnosed : 12 Feb 2024 - Wes Davis

GFL Environmental - 822 - Springfield Hauling

2120 West Bennett Street

Springfield, MO US 65807

T: (417)403-3641

Contact: Dennis Moore dennis.moore@gflenv.com

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)

Report Id: GFL822 [WUSCAR] 06084638 (Generated: 02/12/2024 07:02:20) Rev: 1

Submitted By: Dennis Moore