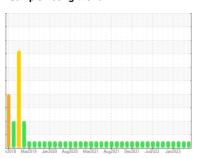


OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id
2704
Component
Diesel Engine
Fluid

PETRO CANADA DURON SHP 15W40 (40 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

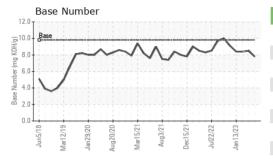
Fluid Condition

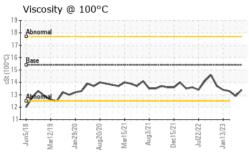
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0071602	GFL0071546	GFL0053157
Sample Date		Client Info		15 Sep 2023	21 Jun 2023	17 Mar 2023
Machine Age	hrs	Client Info		7083	7083	7083
Oil Age	hrs	Client Info		600	600	600
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	>100	14	9	7
Chromium	ppm	ASTM D5185m	>20	<1	2	0
Nickel	ppm	ASTM D5185m	>4	0	1	0
Titanium	ppm	ASTM D5185m		0	2	0
Silver	ppm	ASTM D5185m	>3	0	1	0
Aluminum	ppm	ASTM D5185m	>20	4	4	2
Lead	ppm	ASTM D5185m	>40	2	5	0
Copper	ppm	ASTM D5185m	>330	<1	2	0
Tin	ppm	ASTM D5185m	>15	<1	2	0
Vanadium	ppm	ASTM D5185m		0	1	0
Cadmium	ppm	ASTM D5185m		0	2	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	2	1	9
Barium	ppm	ASTM D5185m	0	0	18	0
	ppiii	7101111 20100111				
Molybdenum	ppm	ASTM D5185m	60	65	47	58
			60	65 <1	47	58 <1
Molybdenum	ppm	ASTM D5185m				
Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m	0	<1	2	<1
Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 1010	<1 933	2 712	<1 886
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 1010 1070	<1 933 1117	2 712 789	<1 886 1161
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 1010 1070 1150	<1 933 1117 1067	2 712 789 755	<1 886 1161 987
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 1010 1070 1150 1270	<1 933 1117 1067 1285	2 712 789 755 933	<1 886 1161 987 1269
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	0 1010 1070 1150 1270 2060	<1 933 1117 1067 1285 3367	2 712 789 755 933 2622	<1 886 1161 987 1269 3374
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 1010 1070 1150 1270 2060	<1 933 1117 1067 1285 3367 current	2 712 789 755 933 2622 history1	<1 886 1161 987 1269 3374 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 1010 1070 1150 1270 2060 limit/base >25	<1 933 1117 1067 1285 3367 current 7	2 712 789 755 933 2622 history1	<1 886 1161 987 1269 3374 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 1010 1070 1150 1270 2060 limit/base >25	<1 933 1117 1067 1285 3367 current 7	2 712 789 755 933 2622 history1 6 5	<1 886 1161 987 1269 3374 history2 6
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 1010 1070 1150 1270 2060 limit/base >25	<1 933 1117 1067 1285 3367 current 7 3 4	2 712 789 755 933 2622 history1 6 5	<1 886 1161 987 1269 3374 history2 6 2
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 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	<1 933 1117 1067 1285 3367 current 7 3 4 current	2 712 789 755 933 2622 history1 6 5 7	<1 886 1161 987 1269 3374 history2 6 2 2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	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	<1 933 1117 1067 1285 3367 current 7 3 4 current 0.4	2 712 789 755 933 2622 history1 6 5 7 history1 0.4	<1 886 1161 987 1269 3374 history2 6 2 2 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm	ASTM D5185m method ASTM D5185m	0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3 >20	<1 933 1117 1067 1285 3367 current 7 3 4 current 0.4 8.7	2 712 789 755 933 2622 history1 6 5 7 history1 0.4 9.1	<1 886 1161 987 1269 3374 history2 6 2 2 history2 0.3 7.8
Molybdenum 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 ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3 >20 >30	<1 933 1117 1067 1285 3367 current 7 3 4 current 0.4 8.7 19.7	2 712 789 755 933 2622 history1 6 5 7 history1 0.4 9.1 20.3	<pre><1 886 1161 987 1269 3374 history2 6 2 2 history2 0.3 7.8 19.3</pre>
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm	ASTM D5185m Method ASTM D5185m 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 limit/base >25	<1 933 1117 1067 1285 3367 current 7 3 4 current 0.4 8.7 19.7 current	2 712 789 755 933 2622 history1 6 5 7 history1 0.4 9.1 20.3 history1	<1 886 1161 987 1269 3374 history2 6 2 2 history2 0.3 7.8 19.3 history2



OIL ANALYSIS REPORT





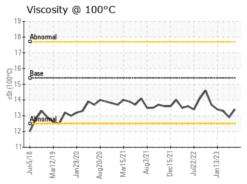
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

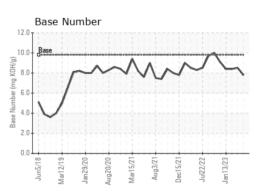
FLUID PROPERTIES		method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.4	12.9	13.3

GRAPHS

Ferrous Alloys

Non-ferrous Metals 140 120 돌¹⁰⁰ 60 40 20









Certificate L2367

Laboratory

Sample No. Lab Number Unique Number : 10657503 Test Package : FLEET

: GFL0071602 : 05956290

To discuss this sample report, contact Customer Service at 1-800-237-1369.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 20 Sep 2023 Diagnosed : 21 Sep 2023

Diagnostician : Wes Davis

GFL Environmental - 035 - Greensboro

1236 Elon Place High Point, NC US 27263

Contact: JORGE COSTA jorge.costa@gflenv.com T: (336)668-3712

* - 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)

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