

OIL ANALYSIS REPORT

Sample Rating Trend









Machine Id
413038
Component
Diesel Engine
Fluid

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

DIAGNOSIS Recommendation

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

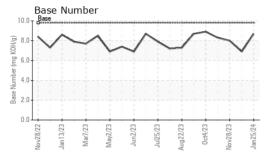
Fluid Condition

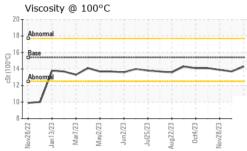
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

CAMPLE INCOR		no other ele	lipoit/le e a	Ol mine and	biology	bioto
SAMPLE INFORM	/IATION		limit/base	current	history1	history2
Sample Number		Client Info		GFL0110904	GFL0090931	GFL0103033
Sample Date		Client Info		25 Jan 2024	21 Dec 2023	28 Nov 2023
Machine Age	hrs	Client Info		2992	2852	2686
Oil Age	hrs	Client Info		140	166	0
Oil Changed		Client Info		Changed	Changed	Changed
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	<1	10	4
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	2	4	1
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>2	0	<1	<1
Aluminum	ppm	ASTM D5185m	>20	2	3	4
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	4	6	3
Tin	ppm	ASTM D5185m	>15	<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	9	2	2
Barium	ppm		0	<1	9	0
Molybdenum			•		-	-
	nnm	ASTM D5185m	60	64	66	62
Manganese	ppm	ASTM D5185m	60 0	64 0	66 <1	62 <1
Manganese Magnesium	ppm	ASTM D5185m	0	0	<1	<1
Magnesium	ppm	ASTM D5185m ASTM D5185m	0 1010	0 933	<1 983	<1 983
Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 1010 1070	0 933 1093	<1 983 1095	<1 983 1034
Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 1010 1070 1150	0 933 1093 1020	<1 983 1095 1085	<1 983 1034 1119
Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 1010 1070	0 933 1093	<1 983 1095	<1 983 1034
Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 1010 1070 1150 1270	0 933 1093 1020 1214	<1 983 1095 1085 1268	<1 983 1034 1119 1351
Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 1010 1070 1150 1270 2060	0 933 1093 1020 1214 3264	<1 983 1095 1085 1268 3261	<1 983 1034 1119 1351 3220
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	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	0 933 1093 1020 1214 3264 current	<1 983 1095 1085 1268 3261 history1	<1 983 1034 1119 1351 3220 history2
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 limit/base >25	0 933 1093 1020 1214 3264	<1 983 1095 1085 1268 3261 history1 7	<1 983 1034 1119 1351 3220 history2
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	0 933 1093 1020 1214 3264 current 3	<1 983 1095 1085 1268 3261 history1 7 0	<1 983 1034 1119 1351 3220 history2 4
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 1010 1070 1150 1270 2060 limit/base >25 >20	0 933 1093 1020 1214 3264 current 3 0 5	<1 983 1095 1085 1268 3261 history1 7 0 11 history1	<1 983 1034 1119 1351 3220 history2 4 2 7
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 D7844	0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	0 933 1093 1020 1214 3264 current 3 0 5	<1 983 1095 1085 1268 3261 history1 7 0 11 history1 0.3	<1 983 1034 1119 1351 3220 history2 4 2 7 history2 0.2
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	0 933 1093 1020 1214 3264 current 3 0 5	<1 983 1095 1085 1268 3261 history1 7 0 11 history1 0.3 8.9	<1 983 1034 1119 1351 3220 history2 4 2 7 history2 0.2 7.5
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	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 ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	0 933 1093 1020 1214 3264 current 3 0 5 current 0.1 6.1	<1 983 1095 1085 1268 3261 history1 7 0 11 history1 0.3	<1 983 1034 1119 1351 3220 history2 4 2 7 history2 0.2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D78185m Method	0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >4 >20 >30 limit/base	0 933 1093 1020 1214 3264 current 3 0 5 current 0.1 6.1 18.3 current	<1 983 1095 1085 1268 3261 history1 7 0 11 history1 0.3 8.9 19.7 history1	<pre><1 983 1034 1119 1351 3220 history2 4 2 7 history2 0.2 7.5 18.9 history2</pre>
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	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 ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >4 >20 >30 limit/base	0 933 1093 1020 1214 3264 current 3 0 5 current 0.1 6.1 18.3	<1 983 1095 1085 1268 3261 history1 7 0 11 history1 0.3 8.9 19.7	<pre><1 983 1034 1119 1351 3220 history2 4 2 7 history2 0.2 7.5 18.9</pre>



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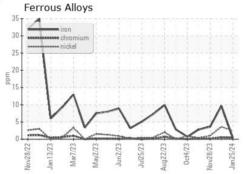


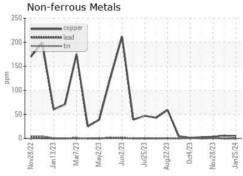


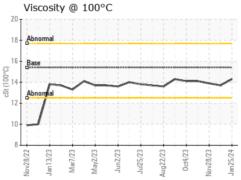
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

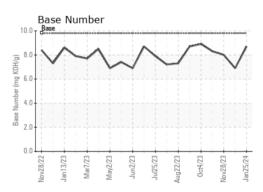
FLUID PROPE	RTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.3	13.7	13.9

GRAPHS













Certificate L2367

Laboratory Sample No. Test Package : FLEET

Lab Number **Unique Number**

: GFL0110904 : 06077536 : 10859627

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Recieved Diagnosed

: 01 Feb 2024 : 02 Feb 2024 Diagnostician : Wes Davis

GFL Environmental - 814 - Little Rock Hauling

4005 Hwy 161 N. Little Rock, AR US 72117

Contact: Brad Koenig bkoenig@gflenv.com T:

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)

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