

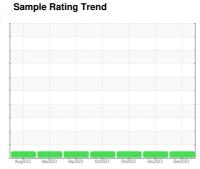
OIL ANALYSIS REPORT



Area (UNASSIGNED) 834020

Component **Natural Gas Engine**

PETRO CANADA DURON SHP 15W40 (8 GAL)





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Metal levels are typical for a new component breaking in.

Contamination

There is no indication of any contamination in the

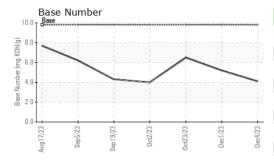
Fluid Condition

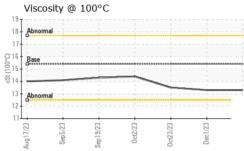
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

,		Aug2U23	Sep2023 Sep2023	Oct2023 Oct2023 Dec2023	Dec2023	
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0101271	GFL0101250	GFL0097958
Sample Date		Client Info		04 Dec 2023	01 Dec 2023	23 Oct 2023
Machine Age	hrs	Client Info		1110	995	742
Oil Age	hrs	Client Info		511	995	143
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METAL	.S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	20	19	13
Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	2	2	2
Lead	ppm	ASTM D5185m	>30	0	0	<1
Copper	ppm	ASTM D5185m	>35	5	4	3
Tin	ppm	ASTM D5185m	>4	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	<1
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	<1	<1	5
Barium	ppm	ASTM D5185m	0	2	2	3
Manual and a second						65
Molybdenum	ppm	ASTM D5185m	60	64	61	
Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m		64 1	61 1	2
-						2 870
Manganese	ppm	ASTM D5185m	0	1	1	_
Manganese Magnesium	ppm	ASTM D5185m ASTM D5185m	0 1010	1 855	1 836	870
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 1010 1070	1 855 1116	1 836 1098	870 1116
Manganese Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 1010 1070 1150	1 855 1116 828	1 836 1098 822	870 1116 1010
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	1 855 1116 828 1113	1 836 1098 822 1089	870 1116 1010 1181
Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 1010 1070 1150 1270 2060	1 855 1116 828 1113 2826	1 836 1098 822 1089 2926	870 1116 1010 1181 3500
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 limit/base >+100	1 855 1116 828 1113 2826	1 836 1098 822 1089 2926 history1	870 1116 1010 1181 3500 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m	0 1010 1070 1150 1270 2060 limit/base >+100	1 855 1116 828 1113 2826 current	1 836 1098 822 1089 2926 history1	870 1116 1010 1181 3500 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 1010 1070 1150 1270 2060 limit/base >+100	1 855 1116 828 1113 2826 current 8	1 836 1098 822 1089 2926 history1 8	870 11116 1010 1181 3500 history2 8 16
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 1010 1070 1150 1270 2060 limit/base >+100 >20	1 855 1116 828 1113 2826 current 8 5 2	1 836 1098 822 1089 2926 history1 8 4	870 1116 1010 1181 3500 history2 8 16
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm	ASTM D5185m	0 1010 1070 1150 1270 2060 limit/base >+100 >20	1 855 1116 828 1113 2826 current 8 5 2	1 836 1098 822 1089 2926 history1 8 4 2	870 11116 1010 1181 3500 history2 8 16 2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m	0 1010 1070 1150 1270 2060 limit/base >+100 >20	1 855 1116 828 1113 2826 current 8 5 2	1 836 1098 822 1089 2926 history1 8 4 2 history1	870 11116 1010 1181 3500 history2 8 16 2 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm	ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7624	0 1010 1070 1150 1270 2060 limit/base >+100 >20 limit/base	1 855 1116 828 1113 2826 current 8 5 2 current 0 9.7	1 836 1098 822 1089 2926 history1 8 4 2 history1 0 9.3	870 1116 1010 1181 3500 history2 8 16 2 history2 0 6.6
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 Method *ASTM D7844 *ASTM D7624 *ASTM D7415	0 1010 1070 1150 1270 2060 limit/base >+100 >20 limit/base	1 855 1116 828 1113 2826 current 8 5 2 current 0 9.7 19.3	1 836 1098 822 1089 2926 history1 8 4 2 history1 0 9.3 18.3	870 11116 1010 1181 3500 history2 8 16 2 history2 0 6.6 17.3
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRA	ppm	ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415 Method	0 1010 1070 1150 1270 2060 limit/base >+100 >20 limit/base >20 >30 limit/base	1 855 1116 828 1113 2826 current 8 5 2 current 0 9.7 19.3	1 836 1098 822 1089 2926 history1 8 4 2 history1 0 9.3 18.3	870 1116 1010 1181 3500 history2 8 16 2 history2 0 6.6 17.3



OIL ANALYSIS REPORT

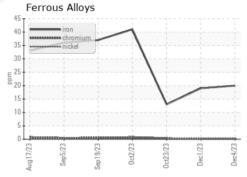


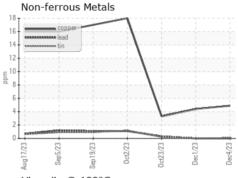


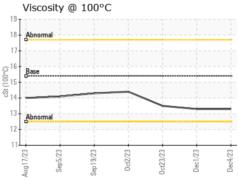
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

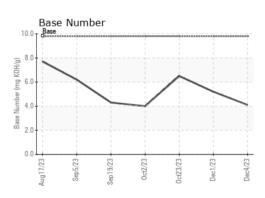
FLUID PROPE	ERTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.3	13.3	13.5

GRAPHS













Certificate L2367

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

: GFL0101271 : 06026158 : 10775949

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

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 06 Dec 2023 Diagnosed : 07 Dec 2023 Diagnostician : Wes Davis

GFL Environmental - 010 - Stockbridge

1280 Rum Creek Parkway Stockbridge, GA US 30281

Contact: JOSHUA TINKER joshuatinker@gflenv.com

* - 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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