

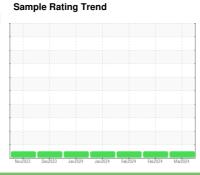
OIL ANALYSIS REPORT

(DQS409) MONTGOMERY

Component

Diesel Engine

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





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

AUTOCAR 3846

Contamination

There is no indication of any contamination in the

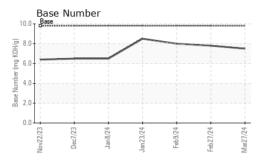
Fluid Condition

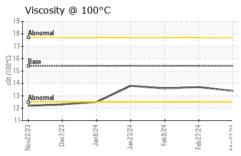
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0115599	GFL0088650	GFL0088636
Sample Date		Client Info		27 Mar 2024	27 Feb 2024	09 Feb 2024
Machine Age	hrs	Client Info		26629	26491	16272
Oil Age	hrs	Client Info		561	423	0
Oil Changed		Client Info		Not Changd	Not Changd	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	>165	6	10	8
Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	<1	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	2	2
Lead	ppm	ASTM D5185m	>150	3	2	2
Copper	ppm	ASTM D5185m	>90	0	<1	1
Tin	ppm	ASTM D5185m	>5	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES	PPIII	method	limit/base	current	history1	history2
Boron		ASTM D5185m	0		4	3
Barium	ppm		0	4 0	0	12
	ppm	ASTM D5185m ASTM D5185m	60	58	67	64
Molybdenum	ppm	IIICOT CU IVIT CA	00	30	0/	04
Manganese	nnm	ACTM DE10Em	\cap	^	-4	0
•	ppm	ASTM D5185m		0	<1	0
Magnesium	ppm	ASTM D5185m	1010	935	1017	940
Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m	1010 1070	935 1041	1017 1112	940 1050
Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	1010 1070 1150	935 1041 1033	1017 1112 1034	940 1050 1053
Magnesium Calcium Phosphorus Zinc	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1010 1070 1150 1270	935 1041 1033 1254	1017 1112 1034 1318	940 1050 1053 1222
Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1010 1070 1150 1270 2060	935 1041 1033 1254 3312	1017 1112 1034 1318 3197	940 1050 1053 1222 3455
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	1010 1070 1150 1270 2060 limit/base	935 1041 1033 1254 3312 current	1017 1112 1034 1318 3197 history1	940 1050 1053 1222 3455 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	1010 1070 1150 1270 2060	935 1041 1033 1254 3312 current	1017 1112 1034 1318 3197 history1	940 1050 1053 1222 3455 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	1010 1070 1150 1270 2060 limit/base >35	935 1041 1033 1254 3312 current 5	1017 1112 1034 1318 3197 history1 8	940 1050 1053 1222 3455 history2 8
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	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 >35 >20	935 1041 1033 1254 3312 current	1017 1112 1034 1318 3197 history1	940 1050 1053 1222 3455 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm	ASTM D5185m	1010 1070 1150 1270 2060 limit/base >35 >20	935 1041 1033 1254 3312 current 5 2 1	1017 1112 1034 1318 3197 history1 8 2 2	940 1050 1053 1222 3455 history2 8 0 2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method *ASTM D7844	1010 1070 1150 1270 2060 limit/base >35 >20 limit/base	935 1041 1033 1254 3312 current 5 2 1 current	1017 1112 1034 1318 3197 history1 8 2 2 history1 0.2	940 1050 1053 1222 3455 history2 8 0 2 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	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 ASTM D5185m	1010 1070 1150 1270 2060 limit/base >35 >20 limit/base >7.5 >20	935 1041 1033 1254 3312 current 5 2 1 current 0.3 7.7	1017 1112 1034 1318 3197 history1 8 2 2 history1 0.2 6.7	940 1050 1053 1222 3455 history2 8 0 2 history2 0.2 6.3
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method *ASTM D7844	1010 1070 1150 1270 2060 limit/base >35 >20 limit/base	935 1041 1033 1254 3312 current 5 2 1 current	1017 1112 1034 1318 3197 history1 8 2 2 history1 0.2	940 1050 1053 1222 3455 history2 8 0 2 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm Abs/.1mm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	1010 1070 1150 1270 2060 limit/base >35 >20 limit/base >7.5 >20	935 1041 1033 1254 3312 current 5 2 1 current 0.3 7.7	1017 1112 1034 1318 3197 history1 8 2 2 history1 0.2 6.7	940 1050 1053 1222 3455 history2 8 0 2 history2 0.2 6.3
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm Abs/.1mm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	1010 1070 1150 1270 2060 limit/base >35 >20 limit/base >7.5 >20 >30	935 1041 1033 1254 3312 current 5 2 1 current 0.3 7.7 19.5	1017 1112 1034 1318 3197 history1 8 2 2 history1 0.2 6.7 18.8	940 1050 1053 1222 3455 history2 8 0 2 history2 0.2 6.3 18.5



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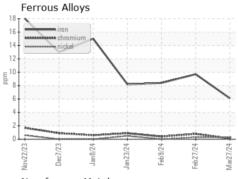


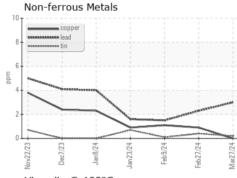


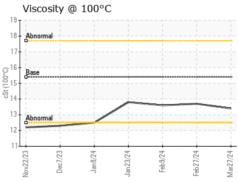
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

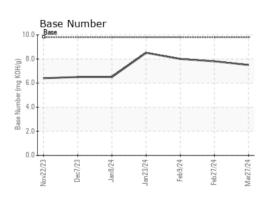
FLUID PROPI	ERTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.4	13.7	13.6

GRAPHS













Certificate L2367

Laboratory Sample No.

Lab Number : 06133115 Unique Number : 10952580

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0115599

Received **Tested** Test Package : FLEET

: 29 Mar 2024 : 31 Mar 2024 Diagnosed : 31 Mar 2024 - Wes Davis

GFL Environmental - 955 - Montgomery

1121 Wilbanks St Montgomery, AL US 36108

Contact: LISA REEVES

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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F: