

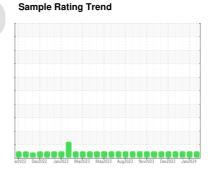
OIL ANALYSIS REPORT



MONTGOMERY **MACK 929110**

Component **Diesel Engine**

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





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

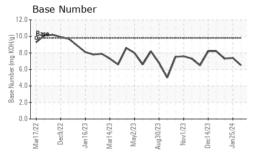
Fluid Condition

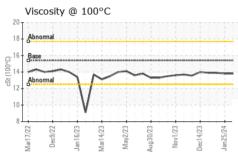
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0088664	GFL0081867	GFL0081872
Sample Date		Client Info		13 Feb 2024	25 Jan 2024	16 Jan 2024
Machine Age	hrs	Client Info		12459	12317	12228
Oil Age	hrs	Client Info		12459	12317	12228
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	>120	17	10	14
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	<1	0	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	2	2
Lead	ppm	ASTM D5185m	>40	<1	<1	0
Copper	ppm	ASTM D5185m	>330	2	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	3	2	4
Barium	nnm	ASTM D5185m	0	3	0	0
	ppm	ASTIVI DSTOSIII	Ü	J	O	U
Molybdenum	ppm	ASTM D5185m	60	86	59	60
Molybdenum Manganese		ASTM D5185m				
•	ppm	ASTM D5185m	60	86	59	60
Manganese	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	60	86 0	59 <1	60 <1
Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010	86 0 1317	59 <1 990	60 <1 999
Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010 1070	86 0 1317 1447	59 <1 990 1017	60 <1 999 1038
Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010 1070 1150	86 0 1317 1447 1481	59 <1 990 1017 1064	60 <1 999 1038 1077
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010 1070 1150 1270	86 0 1317 1447 1481 1715	59 <1 990 1017 1064 1305	60 <1 999 1038 1077 1297
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 ASTM D5185m	60 0 1010 1070 1150 1270 2060	86 0 1317 1447 1481 1715 4483	59 <1 990 1017 1064 1305 3021	60 <1 999 1038 1077 1297 3018
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	60 0 1010 1070 1150 1270 2060	86 0 1317 1447 1481 1715 4483	59 <1 990 1017 1064 1305 3021 history1	60 <1 999 1038 1077 1297 3018
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	60 0 1010 1070 1150 1270 2060	86 0 1317 1447 1481 1715 4483 current	59 <1 990 1017 1064 1305 3021 history1	60 <1 999 1038 1077 1297 3018 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	60 0 1010 1070 1150 1270 2060 limit/base	86 0 1317 1447 1481 1715 4483 current 9	59 <1 990 1017 1064 1305 3021 history1 7	60 <1 999 1038 1077 1297 3018 history2 7
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	60 0 1010 1070 1150 1270 2060 limit/base >25 >20	86 0 1317 1447 1481 1715 4483 current 9 9	59 <1 990 1017 1064 1305 3021 history1 7 7	60 <1 999 1038 1077 1297 3018 history2 7 7
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m	60 0 1010 1070 1150 1270 2060 limit/base >25 >20	86 0 1317 1447 1481 1715 4483 current 9 9 5	59 <1 990 1017 1064 1305 3021 history1 7 4 history1	60 <1 999 1038 1077 1297 3018 history2 7 7
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m	60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	86 0 1317 1447 1481 1715 4483 current 9 9 5 current	59 <1 990 1017 1064 1305 3021 history1 7 7 4 history1 0.3	60 <1 999 1038 1077 1297 3018 history2 7 7 2 history2
Manganese 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 ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7624 *ASTM D7624	60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	86 0 1317 1447 1481 1715 4483 current 9 9 5 current 0.3 8.5	59 <1 990 1017 1064 1305 3021 history1 7 7 4 history1 0.3 8.3	60 <1 999 1038 1077 1297 3018 history2 7 7 2 history2 0.2 7.6
Manganese 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 D5185m ASTM D5185m ASTM D7624 *ASTM D7624	60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >4 >20 >30	86 0 1317 1447 1481 1715 4483 current 9 9 5 current 0.3 8.5 19.8	59 <1 990 1017 1064 1305 3021 history1 7 7 4 history1 0.3 8.3 19.5	60 <1 999 1038 1077 1297 3018 history2 7 7 2 history2 0.2 7.6 18.9
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 *ASTM D7844 *ASTM D7624 *ASTM D7415 Method	60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >4 >20 >30 limit/base	86 0 1317 1447 1481 1715 4483 current 9 9 5 current 0.3 8.5 19.8 current	59 <1 990 1017 1064 1305 3021 history1 7 4 history1 0.3 8.3 19.5 history1	60 <1 999 1038 1077 1297 3018 history2 7 2 history2 0.2 7.6 18.9 history2



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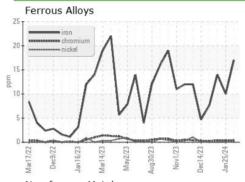


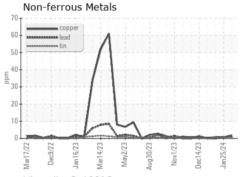


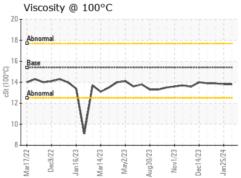
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

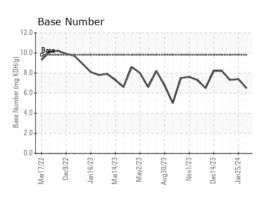
FLUID PROPERTIES		method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.8	13.8	13.9

GRAPHS













Certificate L2367

Laboratory Sample No.

Lab Number : 06094028 Unique Number : 10886881 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0088664 Received : 20 Feb 2024 **Tested**

Diagnosed

: 21 Feb 2024 : 21 Feb 2024 - Don Baldridge

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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