

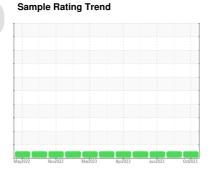
OIL ANALYSIS REPORT



MONTGOMERY Machine Id MACK 428089

Component **Diesel Engine**

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





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

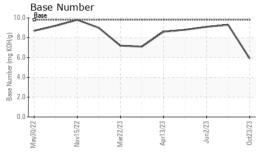
Fluid Condition

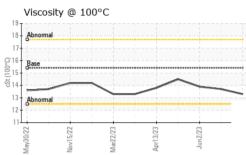
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0079703	GFL0078421	GFL0078416
Sample Date		Client Info		23 Oct 2023	03 Jul 2023	02 Jun 2023
Machine Age	hrs	Client Info		0	12294	12168
Oil Age	hrs	Client Info		0	259	12168
Oil Changed		Client Info		N/A	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
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	20	5	3
Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	2	<1	<1
Lead	ppm	ASTM D5185m	>40	2	<1	<1
Copper	ppm	ASTM D5185m	>330	4	2	<1
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
Gaarmani	ppiii	AO INI BOTOONI		U	U	•
ADDITIVES	ppiii	method	limit/base	current	history1	history2
	ppm		limit/base			
ADDITIVES		method		current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	0	current 5	history1	history2
ADDITIVES Boron Barium	ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	0	current 5 0	history1 33 0	history2 36 0
ADDITIVES Boron Barium Molybdenum	ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	current 5 0 66	history1 33 0 65	history2 36 0 60
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	current 5 0 66 0	history1 33 0 65 <1	history2 36 0 60 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	current 5 0 66 0 872	history1 33 0 65 <1 960	history2 36 0 60 <1 936
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 0 1010 1070	current 5 0 66 0 872 1126	history1 33 0 65 <1 960 1176	history2 36 0 60 <1 936 1122
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 0 1010 1070 1150	current 5 0 66 0 872 1126 912	history1 33 0 65 <1 960 1176 1040	history2 36 0 60 <1 936 1122 994
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 0 1010 1070 1150	current 5 0 66 0 872 1126 912 1160	history1 33 0 65 <1 960 1176 1040 1262	history2 36 0 60 <1 936 1122 994 1236
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	current 5 0 66 0 872 1126 912 1160 3266	history1 33 0 65 <1 960 1176 1040 1262 3871	history2 36 0 60 <1 936 1122 994 1236 3834
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	current 5 0 66 0 872 1126 912 1160 3266 current	history1 33 0 65 <1 960 1176 1040 1262 3871 history1	history2 36 0 60 <1 936 1122 994 1236 3834 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base	current 5 0 66 0 872 1126 912 1160 3266 current	history1 33 0 65 <1 960 1176 1040 1262 3871 history1 4	history2 36 0 60 <1 936 1122 994 1236 3834 history2 5
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base	current 5 0 66 0 872 1126 912 1160 3266 current 9 6	history1 33 0 65 <1 960 1176 1040 1262 3871 history1 4	history2 36 0 60 <1 936 1122 994 1236 3834 history2 5 1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	current 5 0 66 0 872 1126 912 1160 3266 current 9 6 3	history1 33 0 65 <1 960 1176 1040 1262 3871 history1 4	history2 36 0 60 <1 936 1122 994 1236 3834 history2 5 1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	current 5 0 66 0 872 1126 912 1160 3266 current 9 6 3	history1 33 0 65 <1 960 1176 1040 1262 3871 history1 4 1 4 history1	history2 36 0 60 <1 936 1122 994 1236 3834 history2 5 1 1 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	current 5 0 66 0 872 1126 912 1160 3266 current 9 6 3	history1 33 0 65 <1 960 1176 1040 1262 3871 history1 4 1 4 history1 0.4	history2 36 0 60 <1 936 1122 994 1236 3834 history2 5 1 1 history2 0.2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m method ASTM D5185m	0 0 60 0 1010 1150 1270 2060 limit/base >25 >20 limit/base	current 5 0 66 0 872 1126 912 1160 3266 current 9 6 3 current 1 10.3	history1 33 0 65 <1 960 1176 1040 1262 3871 history1 4 1 4 7.0	history2 36 0 60 <1 936 1122 994 1236 3834 history2 5 1 1 history2 0.2 5.7
ADDITIVES Boron Barium Molybdenum 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	method ASTM D5185m method *ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >4 >20 >30	current 5 0 66 0 872 1126 912 1160 3266 current 9 6 3 current 1 10.3 22.0	history1 33 0 65 <1 960 1176 1040 1262 3871 history1 4 1 4 1,0,4 7,0 18,9	history2 36 0 60 <1 936 1122 994 1236 3834 history2 5 1 1 history2 0.2 5.7 18.7



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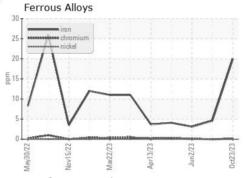


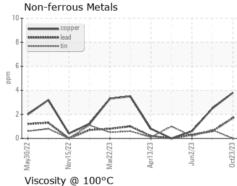


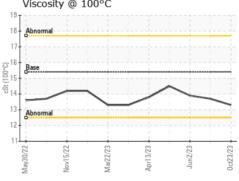
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

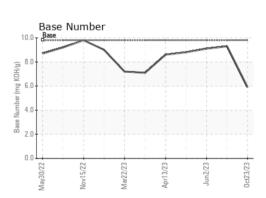
FLUID PROPE	RTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.3	13.7	13.9

GRAPHS













Certificate L2367

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

: GFL0079703 : 06000979 : 10729339

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 07 Nov 2023 Diagnosed : 08 Nov 2023 Diagnostician : 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: