

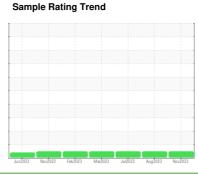
OIL ANALYSIS REPORT

MONTGOMERY Area HINO 229059

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

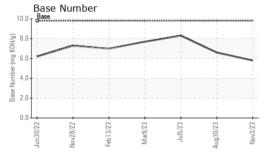
Fluid Condition

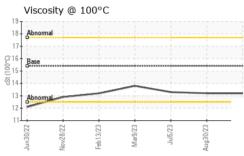
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

0.4401-5-14-5-0-5						
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0087977	GFL0089877	GFL0083522
Sample Date		Client Info		03 Nov 2023	30 Aug 2023	05 Jul 2023
Machine Age	hrs	Client Info		2280	5888	8983
Oil Age	hrs	Client Info		2280	5888	380
Oil Changed		Client Info		Changed	Not Changd	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<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	>100	21	17	12
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	<1	<1	<1
Aluminum	ppm	ASTM D5185m	>20	9	11	6
Lead	ppm	ASTM D5185m	>40	3	1	1
Copper	ppm	ASTM D5185m	>330	10	7	7
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	2	2	3
	PP				0	0
Barium	ppm	ASTM D5185m	0	5	0	0
Barium Molybdenum	• •	ASTM D5185m ASTM D5185m	60	5 68	63	64
	ppm			-		
Molybdenum	ppm	ASTM D5185m	60	68	63	64
Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m	60	68 1	63 1	64
Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010	68 1 913	63 1 938	64 1 960
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010 1070	68 1 913 1118	63 1 938 1071	64 1 960 1089
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010 1070 1150	68 1 913 1118 925	63 1 938 1071 932	64 1 960 1089 1066
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	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	68 1 913 1118 925 1227 2816	63 1 938 1071 932 1212	64 1 960 1089 1066 1301
Molybdenum 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	60 0 1010 1070 1150 1270 2060	68 1 913 1118 925 1227 2816	63 1 938 1071 932 1212 3439	64 1 960 1089 1066 1301 3778
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	60 0 1010 1070 1150 1270 2060 limit/base	68 1 913 1118 925 1227 2816	63 1 938 1071 932 1212 3439 history1	64 1 960 1089 1066 1301 3778
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	60 0 1010 1070 1150 1270 2060 limit/base	68 1 913 1118 925 1227 2816 current	63 1 938 1071 932 1212 3439 history1	64 1 960 1089 1066 1301 3778 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	ASTM D5185m	60 0 1010 1070 1150 1270 2060 limit/base	68 1 913 1118 925 1227 2816 current 12	63 1 938 1071 932 1212 3439 history1 12	64 1 960 1089 1066 1301 3778 history2 7
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m	60 0 1010 1070 1150 1270 2060 limit/base >25 >20	68 1 913 1118 925 1227 2816 current 12 5	63 1 938 1071 932 1212 3439 history1 12 9	64 1 960 1089 1066 1301 3778 history2 7 6
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	68 1 913 1118 925 1227 2816 current 12 5 12 current	63 1 938 1071 932 1212 3439 history1	64 1 960 1089 1066 1301 3778 history2 7 6 8
Molybdenum 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	68 1 913 1118 925 1227 2816 current 12 5 12 current 1.4	63 1 938 1071 932 1212 3439 history1 12 9 8 history1 0.9	64 1 960 1089 1066 1301 3778 history2 7 6 8 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm	ASTM D5185m method ASTM D5185m	60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	68 1 913 1118 925 1227 2816 current 12 5 12 current 1.4 14.5	63 1 938 1071 932 1212 3439 history1 12 9 8 history1 0.9 12.1	64 1 960 1089 1066 1301 3778 history2 7 6 8 history2 0.7 11.1
Molybdenum 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 ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3 >20 >30	68 1 913 1118 925 1227 2816 current 12 5 12 current 1.4 14.5 24.8	63 1 938 1071 932 1212 3439 history1 12 9 8 history1 0.9 12.1 20.0	64 1 960 1089 1066 1301 3778 history2 7 6 8 history2 0.7 11.1 20.2
Molybdenum 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	60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3 >20 >30 limit/base	68 1 913 1118 925 1227 2816 current 12 5 12 current 1.4 14.5 24.8 current	63 1 938 1071 932 1212 3439 history1 12 9 8 history1 0.9 12.1 20.0 history1	64 1 960 1089 1066 1301 3778 history2 7 6 8 history2 0.7 11.1 20.2 history2



OIL ANALYSIS REPORT

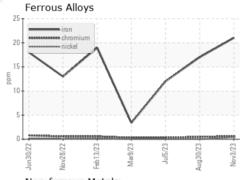


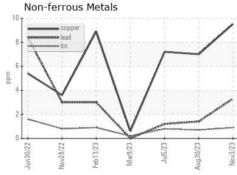


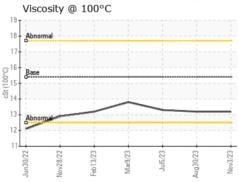
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

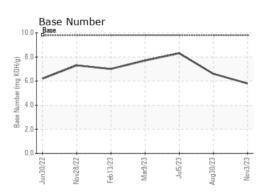
FLUID PROPE	KIIES	metnoa	ilmit/base	current	nistory i	nistory2
Visc @ 100°C	cSt	ASTM D445	15.4	13.2	13.2	13.3

GRAPHS













Certificate L2367

Laboratory Sample No. Lab Number

Unique Number : 10728723

: GFL0087977 : 06000363

Test Package : FLEET

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