

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id **723033-303003**

Component **Diesel Engine**

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

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Light fuel dilution occurring. No other contaminants were detected in the oil.

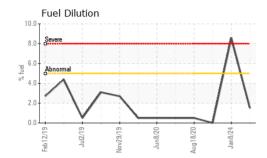
Fluid Condition

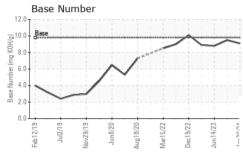
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

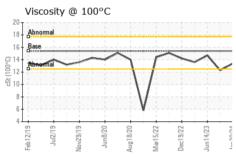
/14 3/11 13 W 1 0 (-		eb 2019 Jul 20		Aug 2020 Mar 2022 Dec 2022 Juni		
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0108107	GFL0102466	GFL0078562
Sample Date		Client Info		30 Jan 2024	08 Jan 2024	14 Jun 2023
Machine Age	hrs	Client Info		0	21063	20474
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Changed	Changed
Sample Status				NORMAL	ABNORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
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	>80	13	8	58
Chromium	ppm	ASTM D5185m	>5	<1	<1	2
Nickel	ppm	ASTM D5185m	>2	<1	0	2
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m		2	<1	5
Lead	ppm	ASTM D5185m	>30	1	2	<1
Copper	ppm	ASTM D5185m	>150	7	13	<1
Tin	ppm	ASTM D5185m	>5	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	12	4
Barium	ppm	ASTM D5185m	0	16	6	0
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	0 60	16 60	6 57	0 58
Molybdenum		ASTM D5185m				
	ppm	ASTM D5185m	60	60	57	58
Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m	60	60 2	57 4	58 <1
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010	60 2 878	57 4 907	58 <1 970
Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010 1070	60 2 878 1059	57 4 907 1128	58 <1 970 1041
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010 1070 1150	60 2 878 1059 955	57 4 907 1128 1059	58 <1 970 1041 993
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010 1070 1150 1270	60 2 878 1059 955 1178	57 4 907 1128 1059 1224	58 <1 970 1041 993 1209
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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	60 2 878 1059 955 1178 3356	57 4 907 1128 1059 1224 3158	58 <1 970 1041 993 1209 3438
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	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	60 2 878 1059 955 1178 3356	57 4 907 1128 1059 1224 3158 history1	58 <1 970 1041 993 1209 3438 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m	60 0 1010 1070 1150 1270 2060	60 2 878 1059 955 1178 3356 current	57 4 907 1128 1059 1224 3158 history1	58 <1 970 1041 993 1209 3438 history2 12
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	60 0 1010 1070 1150 1270 2060 limit/base >20	60 2 878 1059 955 1178 3356 current 10	57 4 907 1128 1059 1224 3158 history1 20 2	58 <1 970 1041 993 1209 3438 history2 12 21
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m	60 0 1010 1070 1150 1270 2060 limit/base >20	60 2 878 1059 955 1178 3356 current 10 0 3	57 4 907 1128 1059 1224 3158 history1 20 2 4	58 <1 970 1041 993 1209 3438 history2 12 21 2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel	ppm	ASTM D5185m	60 0 1010 1070 1150 1270 2060 limit/base >20 >5	60 2 878 1059 955 1178 3356 current 10 0 3 1.5	57 4 907 1128 1059 1224 3158 history1 20 2 4 ▲ 8.6	58 <1 970 1041 993 1209 3438 history2 12 21 2 <1.0
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED	ppm	ASTM D5185m	60 0 1010 1070 1150 1270 2060 limit/base >20 >5 limit/base >3	60 2 878 1059 955 1178 3356 current 10 0 3 1.5	57 4 907 1128 1059 1224 3158 history1 20 2 4 ▲ 8.6 history1	58 <1 970 1041 993 1209 3438 history2 12 21 2 <1.0 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm	ASTM D5185m	60 0 1010 1070 1150 1270 2060 limit/base >20 >5 limit/base >3	60 2 878 1059 955 1178 3356 current 10 0 3 1.5 current	57 4 907 1128 1059 1224 3158 history1 20 2 4 ▲ 8.6 history1 0.1	58 <1 970 1041 993 1209 3438 history2 12 21 2 <1.0 history2 1.9
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7624	60 0 1010 1070 1150 1270 2060 limit/base >20 >5 limit/base >3 >20	60 2 878 1059 955 1178 3356 current 10 0 3 1.5 current 0.2 5.6	57 4 907 1128 1059 1224 3158 history1 20 2 4 ▲ 8.6 history1 0.1 4.7	58 <1 970 1041 993 1209 3438 history2 12 21 2 <1.0 history2 1.9 11.2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7624	60 0 1010 1070 1150 1270 2060 limit/base >20 >5 limit/base >3 >20 >3	60 2 878 1059 955 1178 3356 current 10 0 3 1.5 current 0.2 5.6 18.1	57 4 907 1128 1059 1224 3158 history1 20 2 4 ▲ 8.6 history1 0.1 4.7 17.7	58 <1 970 1041 993 1209 3438 history2 12 21 2 <1.0 history2 1.9 11.2 24.1
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRA	ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844 *ASTM D7844	60 0 1010 1070 1150 1270 2060 limit/base >20 >5 limit/base >3 >20 >3 	60 2 878 1059 955 1178 3356 current 10 0 3 1.5 current 0.2 5.6 18.1 current	57 4 907 1128 1059 1224 3158 history1 20 2 4 ▲ 8.6 history1 0.1 4.7 17.7 history1	58 <1 970 1041 993 1209 3438 history2 12 21 2 <1.0 history2 1.9 11.2 24.1 history2



OIL ANALYSIS REPORT



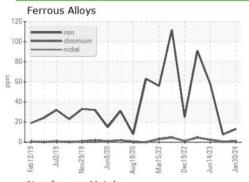


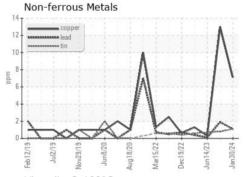


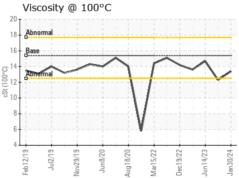
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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	EKIIES	method	ilmit/base		nistory i	nistory2
Visc @ 100°C	cSt	ASTM D445	15.4	13.4	△ 12.3	14.7

GRAPHS



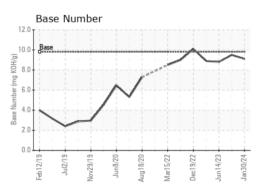




: 12 Feb 2024

: 14 Feb 2024

: 14 Feb 2024 - Wes Davis







Laboratory Sample No.

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

Lab Number : 06086533 Unique Number : 10873978

: GFL0108107

Received **Tested** Diagnosed

Test Package: FLEET (Additional Tests: PercentFuel)

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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T: F:

Report Id: GFL837 [WUSCAR] 06086533 (Generated: 02/14/2024 14:25:13) Rev: 1

Submitted By: ?