

# **OIL ANALYSIS REPORT**

(DUW947) 10629

Component **Diesel Engine** 

PETRO CANADA DURON SHP 15W40 (7 GAL)

Sample Rating Trend



## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

Metal levels are typical for a new component breaking in.

### Contamination

There is no indication of any contamination in the

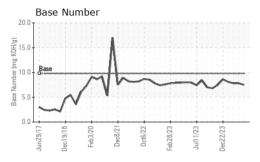
### **Fluid Condition**

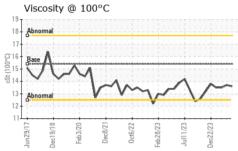
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORT	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0112372	GFL0109943	GFL0109904
Sample Date		Client Info		22 Feb 2024	05 Feb 2024	22 Jan 2024
Machine Age	hrs	Client Info		1015	883	782
Oil Age	hrs	Client Info		493	361	260
Oil Changed		Client Info		Changed	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	>75	16	13	11
Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>15	3	2	2
Lead	ppm		>25	0	0	0
Copper	ppm	ASTM D5185m	>100	<1	<1	<1
Tin	ppm		>4	0	<1	0
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	10	9	7
Desidence			0	0	0	0
Barium	ppm	ASTM D5185m	O	U	U	U
Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	60	61	60	56
		ASTM D5185m				
Molybdenum	ppm	ASTM D5185m	60	61	60	56
Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	60	61 <1	60 <1	56 <1
Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010	61 <1 852	60 <1 894	56 <1 871
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010 1070	61 <1 852 1084	60 <1 894 1146	56 <1 871 1066
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	60 0 1010 1070 1150	61 <1 852 1084 991	60 <1 894 1146 1040	56 <1 871 1066 859
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	60 0 1010 1070 1150 1270	61 <1 852 1084 991 1153	60 <1 894 1146 1040 1270	56 <1 871 1066 859 1100
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 ASTM D5185m	60 0 1010 1070 1150 1270 2060	61 <1 852 1084 991 1153 2790	60 <1 894 1146 1040 1270 3110	56 <1 871 1066 859 1100 2737
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 ASTM D5185m	60 0 1010 1070 1150 1270 2060	61 <1 852 1084 991 1153 2790	60 <1 894 1146 1040 1270 3110 history1	56 <1 871 1066 859 1100 2737 history2
Molybdenum 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	61 <1 852 1084 991 1153 2790 current	60 <1 894 1146 1040 1270 3110 history1	56 <1 871 1066 859 1100 2737 history2
Molybdenum 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	61 <1 852 1084 991 1153 2790 current 4	60 <1 894 1146 1040 1270 3110 history1 4	56 <1 871 1066 859 1100 2737 history2 3 4
Molybdenum 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	61 <1 852 1084 991 1153 2790 current 4 6 0	60 <1 894 1146 1040 1270 3110 history1 4	56 <1 871 1066 859 1100 2737 history2 3 4 0
Molybdenum 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	61 <1 852 1084 991 1153 2790 current 4 6 0 current	60 <1 894 1146 1040 1270 3110 history1 4	56 <1 871 1066 859 1100 2737 history2 3 4 0 history2
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	61 <1 852 1084 991 1153 2790 current 4 6 0 current 0.3	60 <1 894 1146 1040 1270 3110 history1 4 0 history1 0.3	56 <1 871 1066 859 1100 2737 history2 3 4 0 history2 0.2
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	ASTM D5185m  method ASTM D5185m ASTM D7624 *ASTM D7624	60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	61 <1 852 1084 991 1153 2790 current 4 6 0 current 0.3 8.3	60 <1 894 1146 1040 1270 3110 history1 4 4 0 history1 0.3 7.6	56 <1 871 1066 859 1100 2737 history2 3 4 0 history2 0.2 7.2
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	ASTM D5185m  method ASTM D5185m ASTM D7624 *ASTM D7624	60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >6 >20 >30	61 <1 852 1084 991 1153 2790 current 4 6 0 current 0.3 8.3 19.4	60 <1 894 1146 1040 1270 3110 history1 4 0 history1 0.3 7.6 18.8	56 <1 871 1066 859 1100 2737 history2 3 4 0 history2 0.2 7.2 18.1
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  Method  *ASTM D7844  *ASTM D7624  *ASTM D7415  Method	60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >6 >20 >30 limit/base	61 <1 852 1084 991 1153 2790 current 4 6 0 current 0.3 8.3 19.4 current	60 <1 894 1146 1040 1270 3110 history1 4 0 history1 0.3 7.6 18.8 history1	56 <1 871 1066 859 1100 2737 history2 3 4 0 history2 0.2 7.2 18.1 history2



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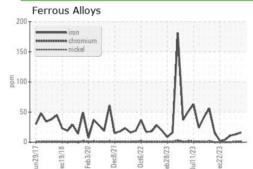


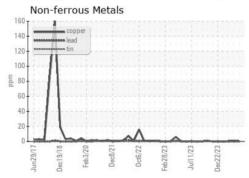


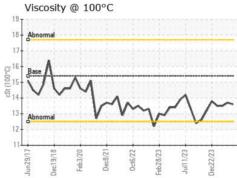
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

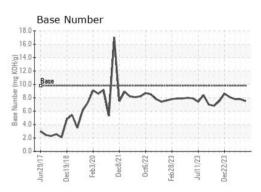
FLUID PROPE	ERTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.6	13.7	13.5

## **GRAPHS**













Certificate L2367

Laboratory Sample No.

: GFL0112372 Lab Number : 06099790 Unique Number : 10898020 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received **Tested** Diagnosed

: 26 Feb 2024 : 27 Feb 2024

: 27 Feb 2024 - Wes Davis

GFL Environmental - 010 - Stockbridge

1280 Rum Creek Parkway Stockbridge, GA US 30281

Contact: JOSHUA TINKER

joshuatinker@gflenv.com T:

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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