

OIL ANALYSIS REPORT

(ECU365) 2869

Component **Diesel Engine**

PETRO CANADA DURON SHP 15W40 (7 GAL)

Sample Rating Trend



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

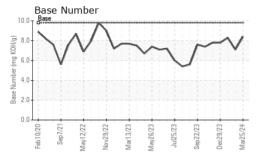
Fluid Condition

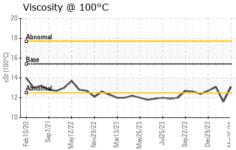
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0115764	GFL0112348	GFL0109877
Sample Date		Client Info		25 Mar 2024	29 Feb 2024	18 Jan 2024
Machine Age	hrs	Client Info		3319	3187	3003
Oil Age	hrs	Client Info		132	456	272
Oil Changed		Client Info		Not Changd	Changed	Not Changd
Sample Status				NORMAL	ATTENTION	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	0.4	<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	>165	8	20	13
Chromium	ppm	ASTM D5185m	>5	<1	1	<1
Nickel	ppm	ASTM D5185m	>4	<1	<1	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	6	2
Lead	ppm	ASTM D5185m	>150	<1	<1	0
Copper	ppm	ASTM D5185m	>90	1	4	1
Tin	ppm	ASTM D5185m	>5	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	<1	<1
Cadmium	ppm	ASTM D5185m		<1	<1	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current	history1	history2
	ppm	ASTM D5185m				
Boron		ASTM D5185m	0	10	6	8
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0 0 60	10 0	6 0	8
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	10 0 62	6 0 59	8 0 63
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	10 0 62 <1	6 0 59 <1	8 0 63 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	10 0 62 <1 893	6 0 59 <1 827	8 0 63 <1 932
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	10 0 62 <1 893 1093	6 0 59 <1 827 976	8 0 63 <1 932 1085
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150	10 0 62 <1 893 1093 991	6 0 59 <1 827 976 988	8 0 63 <1 932 1085 1018
Boron Barium 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	0 0 60 0 1010 1070 1150 1270	10 0 62 <1 893 1093 991 1170	6 0 59 <1 827 976 988 1149	8 0 63 <1 932 1085 1018
Boron Barium 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 ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	10 0 62 <1 893 1093 991 1170 3199	6 0 59 <1 827 976 988 1149 2993	8 0 63 <1 932 1085 1018 1254 3170
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	10 0 62 <1 893 1093 991 1170 3199	6 0 59 <1 827 976 988 1149 2993	8 0 63 <1 932 1085 1018 1254 3170 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	10 0 62 <1 893 1093 991 1170 3199 current	6 0 59 <1 827 976 988 1149 2993 history1	8 0 63 <1 932 1085 1018 1254 3170 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base	10 0 62 <1 893 1093 991 1170 3199 current 4	6 0 59 <1 827 976 988 1149 2993 history1	8 0 63 <1 932 1085 1018 1254 3170 history2 6 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >35	10 0 62 <1 893 1093 991 1170 3199 current 4 1	6 0 59 <1 827 976 988 1149 2993 history1 5 2	8 0 63 <1 932 1085 1018 1254 3170 history2 6 5 <1
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	ASTM D5185m	0 0 0 0 1010 1070 1150 1270 2060 limit/base >35	10 0 62 <1 893 1093 991 1170 3199 current 4 1 5	6 0 59 <1 827 976 988 1149 2993 history1 5 2 9	8 0 63 <1 932 1085 1018 1254 3170 history2 6 5 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1150 1270 2060 limit/base >35 >20 limit/base	10 0 62 <1 893 1093 991 1170 3199 current 4 1 5 current 0.2	6 0 59 <1 827 976 988 1149 2993 history1 5 2 9 history1 0.3	8 0 63 <1 932 1085 1018 1254 3170 history2 6 5 <1 history2 0.5
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	ASTM D5185m method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7415	0 0 60 0 1010 1150 1270 2060 limit/base >35 >20 limit/base	10 0 62 <1 893 1093 991 1170 3199 current 4 1 5 current 0.2 5.7	6 0 59 <1 827 976 988 1149 2993 history1 5 2 9 history1 0.3 7.4	8 0 63 <1 932 1085 1018 1254 3170 history2 6 5 <1 history2 0.5 6.1
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	ASTM D5185m method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7415	0 0 0 0 1010 1070 1150 1270 2060 limit/base >35 >20 limit/base >7.5 >20 >30	10 0 62 <1 893 1093 991 1170 3199 current 4 1 5 current 0.2 5.7 17.4	6 0 59 <1 827 976 988 1149 2993 history1 5 2 9 history1 0.3 7.4 18.1	8 0 63 <1 932 1085 1018 1254 3170 history2 6 5 <1 history2 0.5 6.1 17.6
Boron Barium 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 *ASTM D7844 *ASTM D7624 *ASTM D7415 Method	0 0 0 1010 1070 1150 1270 2060 limit/base >35 >20 limit/base >7.5 >20 >30	10 0 62 <1 893 1093 991 1170 3199 current 4 1 5 current 0.2 5.7 17.4 current	6 0 59 <1 827 976 988 1149 2993 history1 5 2 9 history1 0.3 7.4 18.1 history1	8 0 63 <1 932 1085 1018 1254 3170 history2 6 5 <1 history2 0.5 6.1 17.6 history2



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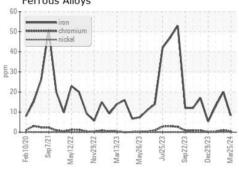


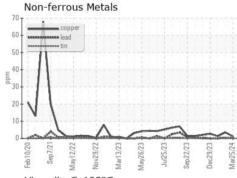
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

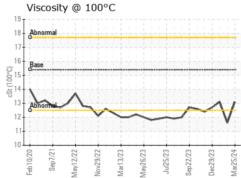
FLUID PROPE	RTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.1	11.6	13.1

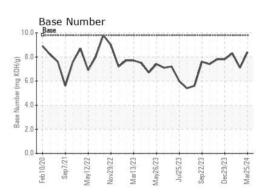
GRAPHS

Ferrous Alloys













Certificate L2367

Laboratory Sample No.

Lab Number : 06129156 Unique Number: 10943307

: GFL0115764 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 26 Mar 2024

Tested : 01 Apr 2024 Diagnosed : 01 Apr 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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