

OIL ANALYSIS REPORT

Sample Rating Trend

SAMPLE INFORMATION method limit/base





Machine Id **420053-485** Component

Diesel Engine

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

b2022	Sep2022	Dec2022	Jan 2023	Mar2023	Jul2023	Nov2023	Jan2024	Mar202
					-	-		



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.

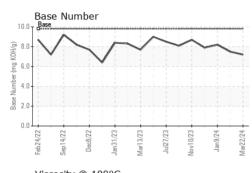
Fluid Condition

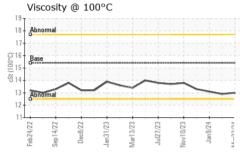
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sample Number		Client Info		GFL0110574	GFL0110597	GFL0100193
Sample Date		Client Info		22 Mar 2024	22 Feb 2024	09 Jan 2024
Machine Age	hrs	Client Info		0	6767	111909
Oil Age	hrs	Client Info		600	6767	78010
Oil Changed		Client Info		Changed	Not Changd	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>6.0	<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	>100	18	15	12
Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Nickel	ppm	ASTM D5185m	>2	3	2	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	5	4	2
Lead	ppm	ASTM D5185m	>40	<1	0	0
Copper	ppm	ASTM D5185m	>330	6	6	4
Tin	ppm	ASTM D5185m	>15	2	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES			l'and to find a second			la la tana 0
ADDITIVE5		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	history1 1	<1
	ppm ppm	ASTM D5185m				
Boron		ASTM D5185m	0	0	1	<1
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	0 0	1 0	<1 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	0 0 57	1 0 58	<1 0 58
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	0 0 57 <1	1 0 58 <1	<1 0 58 0
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	0 0 57 <1 983	1 0 58 <1 972	<1 0 58 0 999
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	0 0 57 <1 983 1094	1 0 58 <1 972 1153	<1 0 58 0 999 1112
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150	0 0 57 <1 983 1094 935	1 0 58 <1 972 1153 1040	<1 0 58 0 999 1112 1074
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	0 0 60 0 1010 1070 1150 1270	0 0 57 <1 983 1094 935 1232	1 0 58 <1 972 1153 1040 1231	<1 0 58 0 999 1112 1074 1307
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 1010 1070 1150 1270 2060	0 0 57 <1 983 1094 935 1232 3269	1 0 58 <1 972 1153 1040 1231 2981	<1 0 58 0 999 1112 1074 1307 3211
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm 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 1010 1070 1150 1270 2060	0 0 57 <1 983 1094 935 1232 3269 current	1 0 58 <1 972 1153 1040 1231 2981 history1	<1 0 58 0 999 1112 1074 1307 3211 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	0 0 57 <1 983 1094 935 1232 3269 current 4	1 0 58 <1 972 1153 1040 1231 2981 history1 5	<1 0 58 0 999 1112 1074 1307 3211 history2 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	0 0 60 1010 1070 1150 1270 2060 limit/base	0 0 57 <1 983 1094 935 1232 3269 current 4	1 0 58 <1 972 1153 1040 1231 2981 history1 5 3	<1 0 58 0 999 1112 1074 1307 3211 history2 4 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 Jimit/base >25	0 0 57 <1 983 1094 935 1232 3269 current 4 4 7	1 0 58 <1 972 1153 1040 1231 2981 history1 5 3 5 3	<1 0 58 0 999 1112 1074 1307 3211 history2 4 2 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 Imit/base >25	0 0 57 <1 983 1094 935 1232 3269 current 4 4 7 2	1 0 58 <1 972 1153 1040 1231 2981 history1 5 3 5 5 history1	<1 0 58 0 999 1112 1074 1307 3211 history2 4 2 3 3 history2
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	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3	0 0 57 <1 983 1094 935 1232 3269 current 4 4 7 current 0.4	1 0 58 <1 972 1153 1040 1231 2981 history1 5 3 5 5 3 5 5 history1 0.3	<1 0 58 0 999 1112 1074 1307 3211 history2 4 2 3 3 history2 0.3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 <i>limit/base</i> >25 >20 <i>limit/base</i> >3 >20	0 0 57 <1 983 1094 935 1232 3269 current 4 4 7 current 0.4 8.8	1 0 58 <1 972 1153 1040 1231 2981 history1 5 3 5 3 5 history1 0.3 8.2	<1 0 58 0 999 1112 1074 1307 3211 history2 4 2 3 <i>history2</i> 0.3 7.4
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 TS ppm ppm ppm ppm ppm % Abs/tmm	ASTM D5185m ASTM D7844 *ASTM D7844	0 0 0 1010 1070 1150 2260 225 220 220 imit/base >3 >20 >30 3 imit/base	0 0 57 <1 983 1094 935 1232 3269 current 4 4 4 7 current 0.4 8.8 19.7 current	1 0 58 <1 972 1153 1040 1231 2981 history1 5 3 5 history1 0.3 8.2 19.6 history1	<1 0 58 0 999 1112 1074 1307 3211 history2 4 2 3 history2 0.3 7.4 19.1 history2
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 TS ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	0 0 0 1010 1070 1150 1270 2060 imit/base >25 imit/base >3 >20 >3	0 0 57 <1 983 1094 935 1232 3269 <u>current</u> 4 4 7 <u>current</u> 0.4 8.8 19.7	1 0 58 <1 972 1153 1040 1231 2981 history1 5 3 5 5 history1 0.3 8.2 19.6	<1 0 58 0 999 1112 1074 1307 3211 history2 4 2 3 history2 0.3 7.4 19.1

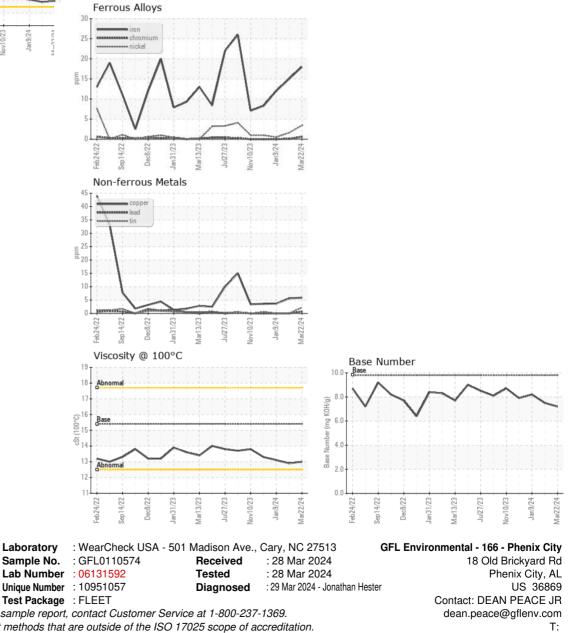


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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*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	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.0	12.9	13.1
GRAPHS						





Certificate L2367 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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