

OIL ANALYSIS REPORT

Sample Rating Trend



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

SAMPLE INFORMATION meth

DIAGNOSIS Recommendation

Resample at the next service interval to monitor.

Machine Id 4519M

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

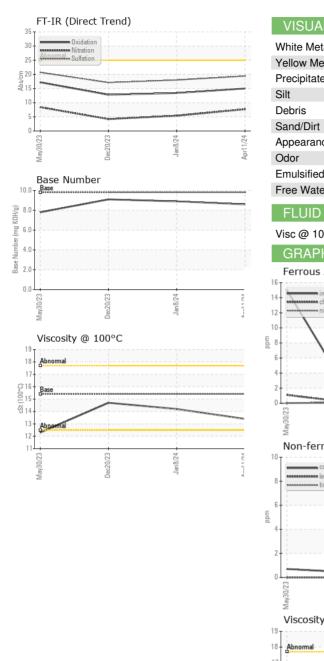
Fluid Condition

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

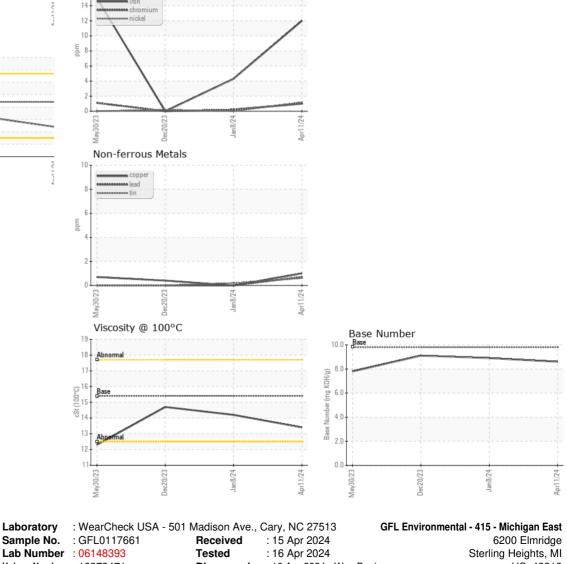
		method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0117661	GFL0108837	GFL0105874
Sample Date		Client Info		11 Apr 2024	08 Jan 2024	20 Dec 2023
Machine Age	hrs	Client Info		27384	0	26560
Oil Age	hrs	Client Info		23016	0	26560
Oil Changed		Client Info		Not Changd	Changed	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<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	>80	12	4	0
Chromium	ppm	ASTM D5185m	>5	1	<1	0
Nickel		ASTM D5185m	>2	1	0	<1
Titanium	ppm	ASTM D5185m	>_	۱ <1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m		3	1	<1
	ppm	ASTM D5185m			0	0
Lead	ppm		>30	<1		
Copper	ppm	ASTM D5185m		1	0	<1
Tin	ppm	ASTM D5185m	>5	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 0	current 0	history1 3	history2 4
	ppm ppm					
Boron		ASTM D5185m	0	0	3	4
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0 0 60	0 0	3 0	4
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	0 0 59	3 0 57	4 0 59
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	0 0 59 <1	3 0 57 <1	4 0 59 <1
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 59 <1 929	3 0 57 <1 938	4 0 59 <1 950
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 59 <1 929 1090	3 0 57 <1 938 1014	4 0 59 <1 950 1033
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 59 <1 929 1090 1074	3 0 57 <1 938 1014 1090	4 0 59 <1 950 1033 1122
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 59 <1 929 1090 1074 1202	3 0 57 <1 938 1014 1090 1281	4 0 59 <1 950 1033 1122 1284
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm 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 2060	0 0 59 <1 929 1090 1074 1202 3243	3 0 57 <1 938 1014 1090 1281 3173	4 0 59 <1 950 1033 1122 1284 3257
Boron Barium 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	0 0 60 0 1010 1070 1150 1270 2060	0 0 59 <1 929 1090 1074 1202 3243 current	3 0 57 <1 938 1014 1090 1281 3173 history1	4 0 59 <1 950 1033 1122 1284 3257 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	0 0 60 1010 1070 1150 1270 2060 kimit/base >20	0 0 59 <1 929 1090 1074 1202 3243 current 6	3 0 57 <1 938 1014 1090 1281 3173 history1 3	4 0 59 <1 950 1033 1122 1284 3257 history2 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	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 ASTM D5185m ASTM D5185m	0 0 60 1010 1070 1150 1270 2060 kimit/base >20	0 0 59 <1 929 1090 1074 1202 3243 current 6 6	3 0 57 <1 938 1014 1090 1281 3173 history1 3 12	4 0 59 <1 950 1033 1122 1284 3257 history2 5 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 200 200 200	0 0 59 <1 929 1090 1074 1202 3243 current 6 6 6 6 6	3 0 57 <1 938 1014 1090 1281 3173 history1 3 12 1 1 history1	4 0 59 <1 950 1033 1122 1284 3257 history2 5 2 <1 ×1
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 2060 2060 220 20 20 20 20 20	0 0 59 <1 929 1090 1074 1202 3243 <i>current</i> 6 6 6 6 6 <i>current</i> 0.5	3 0 57 <1 938 1014 1090 1281 3173 history1 3 12 1 1 history1 0.3	4 0 59 <1 950 1033 1122 1284 3257 history2 5 2 <1 <1 history2 0
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 TS ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 <i>limit/base</i> >20 <i>limit/base</i> >20	0 0 59 <1 929 1090 1074 1202 3243 <i>current</i> 6 6 6 6 6 <i>current</i> 0.5 7.7	3 0 57 <1 938 1014 1090 1281 3173 history1 3 12 1 3 12 1 history1 0.3 5.4	4 0 59 <1 950 1033 1122 1284 3257 history2 5 2 2 <1 history2 0 4.2
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 D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >20 imit/base >3 >20 >3	0 0 59 <1 929 1090 1074 1202 3243 current 6 6 6 6 6 6 6 current 0.5 7.7 19.4	3 0 57 <1 938 1014 1090 1281 3173 history1 3 12 1 1 history1 0.3 5.4 18.0	4 0 59 <1 950 1033 1122 1284 3257 history2 5 2 <1 bistory2 0 4.2 17.1
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 D7844 *ASTM D7844	0 0 0 1010 1070 1150 1270 2060 <i>limit/base</i> >20 <i>limit/base</i> >20	0 0 59 <1 929 1090 1074 1202 3243 <i>current</i> 6 6 6 6 6 <i>current</i> 0.5 7.7	3 0 57 <1 938 1014 1090 1281 3173 history1 3 12 1 3 12 1 history1 0.3 5.4	4 0 59 <1 950 1033 1122 1284 3257 history2 5 2 2 <1 history2 0 4.2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE Oxidation	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 imit/base >20 imit/base >3 >20 >3	0 0 59 <1 929 1090 1074 1202 3243 current 6 6 6 6 6 6 6 current 0.5 7.7 19.4	3 0 57 <1 938 1014 1090 1281 3173 history1 3 12 1 1 history1 0.3 5.4 18.0	4 0 59 <1 950 1033 1122 1284 3257 history2 5 2 <1 bistory2 0 4.2 17.1
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 TS ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844	0 0 0 1010 1070 1150 1270 2060 2060 2060 200 200 200 200 200 200	0 0 59 <1 929 1090 1074 1202 3243 <i>current</i> 6 6 6 6 6 6 <i>current</i> 0.5 7.7 19.4	3 0 57 <1 938 1014 1090 1281 3173 history1 3 12 1 3 12 1 0.3 5.4 18.0 history1	4 0 59 <1 950 1033 1122 1284 3257 history2 5 2 2 <1 history2 0 4.2 17.1 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 PROPER	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.4	14.2	14.7
GRAPHS						
Ferrous Alloys						
4 iron 2 mice						





 Unique Number
 : 10978471
 Diagnosed
 : 16 Apr 2024 - Wes Davis

 Certificate 12367
 Test Package
 : FLEET

 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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