

OIL ANALYSIS REPORT

Sample Rating Trend





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

SAMPLE INFORMATION method

Recommendation

Resample at the next service interval to monitor.

Machine Id 4695M

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

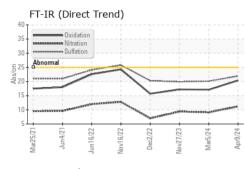
Fluid Condition

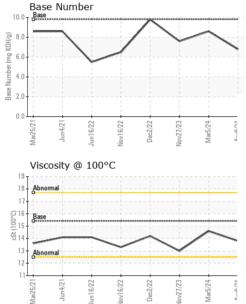
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

				current	nistory i	
Sample Number		Client Info		GFL0116887	GFL0107792	GFL0096546
Sample Date		Client Info		09 Apr 2024	05 Mar 2024	27 Nov 2023
Machine Age	hrs	Client Info		11774	11524	11165
Oil Age	hrs	Client Info		600	600	600
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
		ine ette e el			Internet	la i a ta muQ
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	21	22	17
Chromium	ppm	ASTM D5185m	>5	 <1	0	0
Nickel	ppm		>2	0	0	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>30	3	<1	2
Lead	ppm	ASTM D5185m	>30	ر 1	0	0
Copper	ppm	ASTM D5185m	>150	<1	<1	1
Tin			>5	<1	1	0
Vanadium	ppm ppm	ASTM D5185m	>0	<1	0	0
Cadmium		ASTM D5185m		0	0	0
	ppm			U	0	
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	<1	1
Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m	0	0 0	<1 0	1 0
Boron Barium Molybdenum		ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	0 0 61	<1 0 56	1 0 57
Boron Barium Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	0 0 61 <1	<1 0 56 0	1 0 57 0
Boron Barium Molybdenum Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	0 0 61 <1 963	<1 0 56 0 1035	1 0 57 0 812
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	0 0 61 <1	<1 0 56 0	1 0 57 0 812 1016
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	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 61 <1 963 1107 1014	<1 0 56 0 1035 1141 1026	1 0 57 0 812 1016 903
Boron Barium Molybdenum Manganese Magnesium Calcium	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	0 0 61 <1 963 1107	<1 0 56 0 1035 1141 1026 1316	1 0 57 0 812 1016 903 1114
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 61 <1 963 1107 1014	<1 0 56 0 1035 1141 1026	1 0 57 0 812 1016 903
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 61 <1 963 1107 1014 1277	<1 0 56 0 1035 1141 1026 1316	1 0 57 0 812 1016 903 1114
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	0 0 61 <1 963 1107 1014 1277 3385	<1 0 56 0 1035 1141 1026 1316 2999	1 0 57 0 812 1016 903 1114 2875
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 61 <1 963 1107 1014 1277 3385 current	<1 0 56 0 1035 1141 1026 1316 2999 history1	1 0 57 0 812 1016 903 1114 2875 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	0 0 61 <1 963 1107 1014 1277 3385 current 4	<1 0 56 0 1035 1141 1026 1316 2999 history1 2	1 0 57 0 812 1016 903 1114 2875 history2 2
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	0 0 60 0 1010 1070 1150 1270 2060 kimit/base >20	0 0 61 <1 963 1107 1014 1277 3385 current 4 8	<1 0 56 0 1035 1141 1026 1316 2999 history1 2 3	1 0 57 0 812 1016 903 1114 2875 history2 2 6
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 60 0 1010 1070 1150 1270 2060 limit/base >20	0 0 61 <1 963 1107 1014 1277 3385 current 4 8 17	<1 0 56 0 1035 1141 1026 1316 2999 history1 2 3 0	1 0 57 0 812 1016 903 1114 2875 history2 2 6 2
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 2060 220 220	0 0 61 <1 963 1107 1014 1277 3385 current 4 8 17 current	<1 0 56 0 1035 1141 1026 1316 2999 history1 2 3 0 history1 0.7	1 0 57 0 812 1016 903 1114 2875 history2 2 6 2 2 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 TS ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >20 20 20	0 0 61 <1 963 1107 1014 1277 3385 current 4 8 17 current 0.6	<1 0 56 0 1035 1141 1026 1316 2999 history1 2 3 0 0	1 0 57 0 812 1016 903 1114 2875 history2 2 6 2 2 6 2 2 history2 0.5
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	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >20 imit/base >3 >20 >3	0 0 61 <1 963 1107 1014 1277 3385 current 4 8 17 current 0.6 11.2 21.9	<1 0 56 0 1035 1141 1026 1316 2999 history1 2 3 0 history1 0.7 9.1 20.1	1 0 57 0 812 1016 903 1114 2875 history2 2 6 2 2 6 2 2 history2 0.5 9.4 19.9
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 D7624 *ASTM D7415	0 0 0 1010 1070 1150 1270 2060 2060 2060 200 200 200 200 200 200	0 0 61 <1 963 1107 1014 1277 3385 current 4 8 17 current 0.6 11.2 21.9 current	<1 0 56 0 1035 1141 1026 1316 2999 history1 2 3 0 history1 0.7 9.1 20.1 history1	1 0 57 0 812 1016 903 1114 2875 history2 2 6 2 2 6 2 2 history2 0.5 9.4 19.9 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	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >20 imit/base >3 >20 >3	0 0 61 <1 963 1107 1014 1277 3385 current 4 8 17 current 0.6 11.2 21.9	<1 0 56 0 1035 1141 1026 1316 2999 history1 2 3 0 history1 0.7 9.1 20.1	1 0 57 0 812 1016 903 1114 2875 history2 2 6 2 2 6 2 2 history2 0.5 9.4 19.9

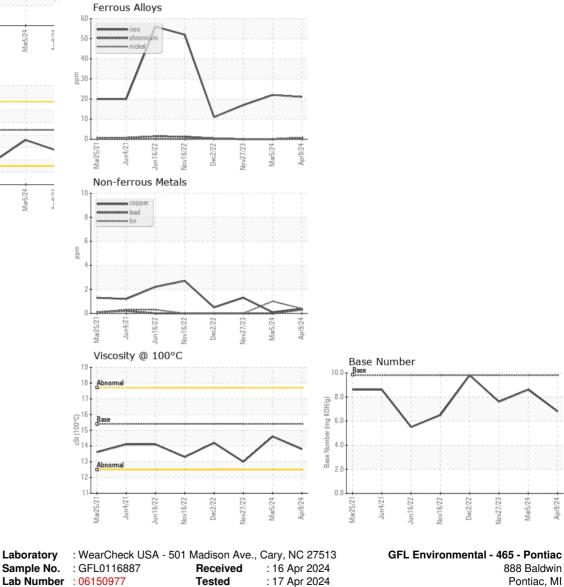


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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*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	13.8	14.6	13.0
GRAPHS						





Unique Number : 10981055 Diagnosed : 17 Apr 2024 - Wes Davis Test Package : FLEET Certificate 12367 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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Laboratory

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