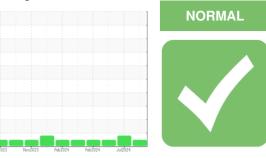


OIL ANALYSIS REPORT

Sample Rating Trend



412008 Component Diesel Engine

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

SAMPLE INFORMATION method

DIAGNOSIS	
Recommendation	

Resample at the next service interval to monitor.

Machine Id

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

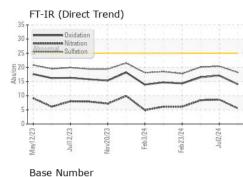
Fluid Condition

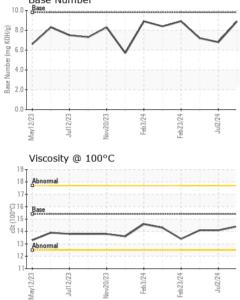
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

		method	iiiiii/base	current	mistory	-
Sample Number		Client Info		GFL0091913	GFL0091881	GFL0112775
Sample Date		Client Info		09 Jul 2024	02 Jul 2024	02 Apr 2024
Machine Age	hrs	Client Info		4038	4016	3483
Oil Age	hrs	Client Info		3505	3483	2981
Oil Changed		Client Info		Not Changd	N/A	Changed
Sample Status				NORMAL	ABNORMAL	NORMAL
		and the set	Press In Users and		In the tax work	history O
CONTAMINATI	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 METALS	2	method	limit/base	current	history1	history2
Iron	ppm		>120	4	11	8
Chromium	ppm	ASTM D5185m	>20	<1	<1	1
Nickel	ppm	ASTM D5185m	>5	1	1 1	3
Titanium	ppm	ASTM D5185m	>2	<1	0	<1
Silver	ppm	ASTM D5185m	>2	<1	0	<1
Aluminum	ppm	ASTM D5185m	>20	2	1	2
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	<1	2	2
Tin	ppm	ASTM D5185m	>15	<1	0	1
Vanadium	ppm	ASTM D5185m		<1	0	<1
Cadmium	ppm	ASTM D5185m		<1	0	<1
ADDITIVES		ام م مالد معر			1 C	biotom/0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	current 1	history1 2	<1
	ppm ppm					
Boron		ASTM D5185m	0	1	2	<1
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	1 0	2 0	<1 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	1 0 57	2 0 57	<1 0 59
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	1 0 57 <1	2 0 57 <1	<1 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	1 0 57 <1 935	2 0 57 <1 965	<1 0 59 <1 973
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	1 0 57 <1 935 1046	2 0 57 <1 965 1136	<1 0 59 <1 973 1061
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	1 0 57 <1 935 1046 1062	2 0 57 <1 965 1136 1007	<1 0 59 <1 973 1061 1064
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	1 0 57 <1 935 1046 1062 1231	2 0 57 <1 965 1136 1007 1238	<1 0 59 <1 973 1061 1064 1248
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	1 0 57 <1 935 1046 1062 1231 3093	2 0 57 <1 965 1136 1007 1238 3310	<1 0 59 <1 973 1061 1064 1248 3043
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	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	1 0 57 <1 935 1046 1062 1231 3093 current 4	2 0 57 <1 965 1136 1007 1238 3310 history1	<1 0 59 <1 973 1061 1064 1248 3043 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	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	1 0 57 <1 935 1046 1062 1231 3093 current	2 0 57 <1 965 1136 1007 1238 3310 history1 6	<1 0 59 <1 973 1061 1064 1248 3043 history2 6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	ASTM D5185m 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 limit/base	1 0 57 <1 935 1046 1062 1231 3093 current 4 2	2 0 57 <1 965 1136 1007 1238 3310 history1 6 4	<1 0 59 <1 973 1061 1064 1248 3043 history2 6 5
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 ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 225 >25	1 0 57 <1 935 1046 1062 1231 3093 current 4 2 2 2	2 0 57 <1 965 1136 1007 1238 3310 history1 6 4 1 1 history1	<1 0 59 <1 973 1061 1064 1248 3043 history2 6 5 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 ppm ppm	ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >20	1 0 57 <1 935 1046 1062 1231 3093 current 4 2 2 2 current 0.1	2 0 57 <1 965 1136 1007 1238 3310 history1 6 4 1 history1 0.3	<1 0 59 <1 973 1061 1064 1248 3043 history2 6 5 2 2 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 ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 225 >25 >20 imit/base >20	1 0 57 <1 935 1046 1062 1231 3093 <i>current</i> 4 2 2 2 <i>current</i> 0.1 5.5	2 0 57 <1 965 1136 1007 1238 3310 history1 6 4 1 1 history1 0.3 8.6	<1 0 59 <1 973 1061 1064 1248 3043 history2 6 5 2 2 history2 0.3 8.4
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 ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 225 25 20 225 20 20 20 20 20 20 20 20 20 20 20 20 20	1 0 57 <1 935 1046 1062 1231 3093 current 4 2 2 2 current 0.1 5.5 18.2	2 0 57 <1 965 1136 1007 1238 3310 history1 6 4 1 1 history1 0.3 8.6 20.4	<1 0 59 <1 973 1061 1064 1248 3043 history2 6 5 2 bistory2 0.3 8.4 20.1
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	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	0 0 0 1010 1070 1150 1270 2060 2060 225 20 225 20 220 20 20 20 20 20 20 20 20 20 20 20	1 0 57 <1 935 1046 1062 1231 3093 <i>current</i> 4 2 2 2 <i>current</i> 0.1 5.5 18.2	2 0 57 <1 965 1136 1007 1238 3310 history1 6 4 1 1 history1 0.3 8.6 20.4 history1	<1 0 59 <1 973 1061 1064 1248 3043 history2 6 5 2 0.3 8.4 20.1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAC	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7414	0 0 0 1010 1070 1150 1270 2060 imit/base >25 imit/base >4 >20 30 imit/base	1 0 57 <1 935 1046 1062 1231 3093 <u>current</u> 4 2 2 2 <u>current</u> 0.1 5.5 18.2 <u>current</u> 14.0	2 0 57 <1 965 1136 1007 1238 3310 history1 6 4 1 1 0.3 8.6 20.4 history1 17.1	<1 0 59 <1 973 1061 1064 1248 3043 history2 6 5 2 history2 0.3 8.4 20.1 history2 16.5
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 ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	0 0 0 1010 1070 1150 1270 2060 2060 225 20 225 20 220 20 20 20 20 20 20 20 20 20 20 20	1 0 57 <1 935 1046 1062 1231 3093 <i>current</i> 4 2 2 2 <i>current</i> 0.1 5.5 18.2	2 0 57 <1 965 1136 1007 1238 3310 history1 6 4 1 1 history1 0.3 8.6 20.4 history1	<1 0 59 <1 973 1061 1064 1248 3043 history2 6 5 2 0.3 8.4 20.1 history2

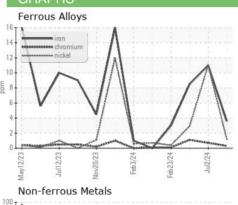


OIL ANALYSIS REPORT



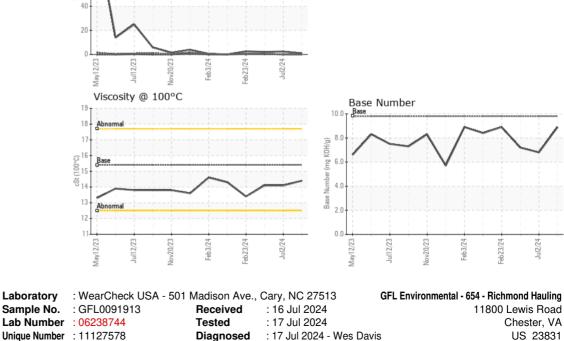


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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 PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.4	14.1	14.1
GRAPHS						



lead

80 60 ppm





Unique Number : 11127578 Diagnosed : 17 Jul 2024 - Wes Davis Test Package : FLEET Contact: Jimmy Mayes 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)

Report Id: GFL654 [WUSCAR] 06238744 (Generated: 07/17/2024 13:43:08) Rev: 1

Submitted By: TECHNICIAN ACCOUNT

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