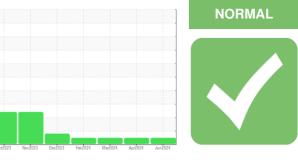


OIL ANALYSIS REPORT

Sample Rating Trend



728106-18 Component Diesel Engine Fluid 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.

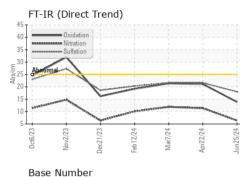
Fluid Condition

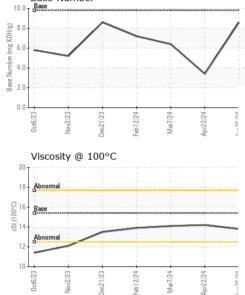
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI		method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0123204	GFL0104818	GFL0104886
Sample Date		Client Info		25 Jun 2024	22 Apr 2024	07 Mar 2024
Machine Age	mls	Client Info		145540	141192	139367
Oil Age	mls	Client Info		0	0	0
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	6	25	17
Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>30	2	2	2
Lead	ppm	ASTM D5185m	>30	<1	0	<1
Copper	ppm	ASTM D5185m	>150	<1	4	<1
Tin	ppm	ASTM D5185m	>5	<1	<1	2
Vanadium	ppm	ASTM D5185m		<1	0	<1
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 0	history1 1	history2 0
	ppm ppm					
Boron		ASTM D5185m	0	0	1	0
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	0 0	1 0	0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	0 0 54	1 0 58	0 0 55
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	0 0 54 <1	1 0 58 1	0 0 55 <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 54 <1 857	1 0 58 1 902	0 0 55 <1 903
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 54 <1 857 1002	1 0 58 1 902 1001	0 0 55 <1 903 1045
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 54 <1 857 1002 935	1 0 58 1 902 1001 909	0 0 55 <1 903 1045 874
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 54 <1 857 1002 935 1154	1 0 58 1 902 1001 909 1187	0 0 55 <1 903 1045 874 1168
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	0 0 60 0 1010 1070 1150 1270 2060	0 0 54 <1 857 1002 935 1154 2907	1 0 58 1 902 1001 909 1187 3177	0 0 55 <1 903 1045 874 1168 3323
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	0 0 60 0 1010 1070 1150 1270 2060	0 0 54 <1 857 1002 935 1154 2907 current	1 0 58 1 902 1001 909 1187 3177 history1	0 0 55 <1 903 1045 874 1168 3323 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 0 1010 1070 1150 1270 2060 limit/base	0 0 54 <1 857 1002 935 1154 2907 current 4	1 0 58 1 902 1001 909 1187 3177 history1 5	0 0 55 <1 903 1045 874 1168 3323 history2 4
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 0 1010 1070 1150 1270 2060 limit/base	0 0 54 <1 857 1002 935 1154 2907 current 4 5	1 0 58 1 902 1001 909 1187 3177 history1 5 9	0 0 55 <1 903 1045 874 1168 3323 history2 4 8
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm 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 54 <1 857 1002 935 1154 2907 current 4 5 2	1 0 58 1 902 1001 909 1187 3177 history1 5 9 <1	0 0 55 <1 903 1045 874 1168 3323 history2 4 8 3 3
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	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 220 220	0 0 54 <1 857 1002 935 1154 2907 current 4 5 2 2 current	1 0 58 1 902 1001 909 1187 3177 history1 5 9 <1 5	0 0 55 <1 903 1045 874 1168 3323 history2 4 8 3 3
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 limit/base	0 0 54 <1 857 1002 935 1154 2907 current 4 5 2 2 current 0.2	1 0 58 1 902 1001 909 1187 3177 history1 5 9 <1 history1 0.6	0 0 55 <1 903 1045 874 1168 3323 history2 4 8 3 3 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 ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 2060 200 200 200 200 200 200	0 0 54 <1 857 1002 935 1154 2907 <i>current</i> 4 5 2 2 <i>current</i> 0.2 6.4	1 0 58 1 902 1001 909 1187 3177 history1 5 9 <1 5 9 <1 history1 0.6 11.4	0 0 55 <1 903 1045 874 1168 3323 history2 4 8 3 3 history2 0.5 11.9
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 ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 220 20 20 320 320 33 220 330	0 0 54 <1 857 1002 935 1154 2907 <u>current</u> 4 5 2 2 <u>current</u> 0.2 6.4 18.0	1 0 58 1 902 1001 909 1187 3177 history1 5 9 <1 5 9 <1 history1 0.6 11.4 21.6	0 0 55 <1 903 1045 874 1168 3323 history2 4 8 3 S history2 0.5 11.9 21.6
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 TS ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	0 0 0 1010 1070 1150 1270 2060 2060 2060 220 220 220 33 220 330	0 0 54 <1 857 1002 935 1154 2907 current 4 5 2 2 current 0.2 6.4 18.0	1 0 58 1 902 1001 909 1187 3177 history1 5 9 <1 5 9 <1 history1 0.6 11.4 21.6 history1	0 0 55 <1 903 1045 874 1168 3323 history2 4 8 3 3 history2 0.5 11.9 21.6 history2

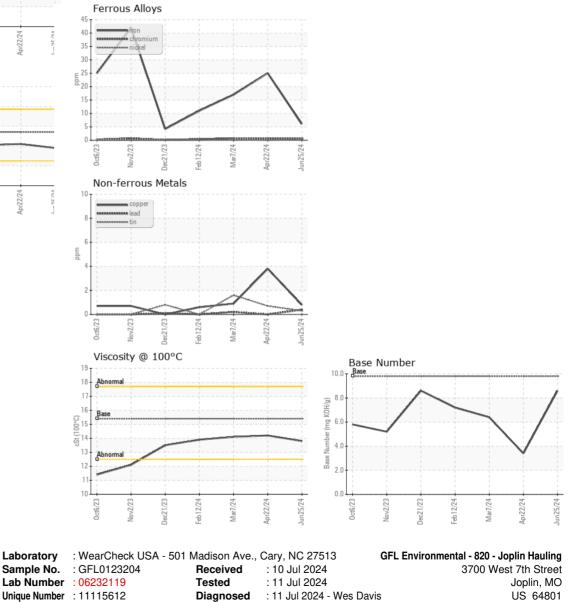


OIL ANALYSIS REPORT





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	13.8	14.2	14.1
GRAPHS						





 VETTOR LABORTION
 Unique Number
 : 11115612
 Diagnosed
 : 11 Jul 2024 - Wes Davis

 Certificate L2367
 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)

Environmental - 820 - Jopin Hauing 3700 West 7th Street Joplin, MO US 64801 Contact: James Jarrett jjarrett@gflenv.com T: (417)310-2802 106:2012) F:

Report Id: GFL820 [WUSCAR] 06232119 (Generated: 07/11/2024 10:44:01) Rev: 1

Submitted By: VINCE ASTI Page 2 of 2