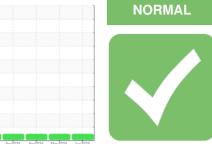


OIL ANALYSIS REPORT

SAMPLE INFORMATION method

Sample Rating Trend



Machine Id

720074

Component Diesel Engine Fluid

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

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.

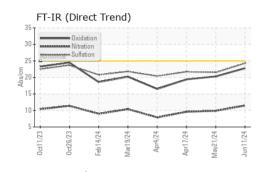
Fluid Condition

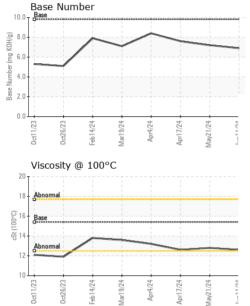
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI		method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0104877	GFL0104875	GFL0104821
Sample Date		Client Info		11 Jun 2024	21 May 2024	17 Apr 2024
Machine Age	mls	Client Info		252280	254531	251682
Oil Age	mls	Client Info		0	0	0
Oil Changed		Client Info		- Not Changd	Changed	Changed
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	>100	27	23	22
Chromium	ppm	ASTM D5185m	>20	2	1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	3	1
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	<1	0	0
Tin	ppm	ASTM D5185m	>15	0	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method		current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 0	history1 0	history2 0
	ppm ppm					
Boron Barium		ASTM D5185m	0	0	0	0
Boron	ppm	ASTM D5185m ASTM D5185m	0 0 60	0 0	0	0
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	0 0 52	0 0 55	0 0 58
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	0 0 52 <1	0 0 55 <1	0 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 52 <1 769	0 0 55 <1 909	0 0 58 0 923
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 52 <1 769 1125	0 0 55 <1 909 1019	0 0 58 0 923 1130
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 52 <1 769 1125 934	0 0 55 <1 909 1019 971	0 0 58 0 923 1130 1050
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 52 <1 769 1125 934 1059	0 0 55 <1 909 1019 971 1245	0 0 58 0 923 1130 1050 1291
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 52 <1 769 1125 934 1059 2978	0 0 55 <1 909 1019 971 1245 3397	0 0 58 0 923 1130 1050 1291 3519
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	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	0 0 60 0 1010 1070 1150 1270 2060	0 0 52 <1 769 1125 934 1059 2978 2978 current 4	0 0 55 <1 909 1019 971 1245 3397 history1	0 0 58 0 923 1130 1050 1291 3519 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 0 1010 1070 1150 1270 2060 limit/base	0 0 52 <1 769 1125 934 1059 2978 current	0 0 55 <1 909 1019 971 1245 3397 history1 4	0 0 58 0 923 1130 1050 1291 3519 history2 3
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	0 0 60 0 1010 1070 1150 1270 2060 limit/base	0 0 52 <1 769 1125 934 1059 2978 current 4 8	0 0 55 <1 909 1019 971 1245 3397 history1 4 4	0 0 58 0 923 1130 1050 1291 3519 history2 3 10
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 >25 >20	0 0 52 <1 769 1125 934 1059 2978 current 4 8 2 2 current	0 0 55 <1 909 1019 971 1245 3397 history1 4 4 4	0 0 58 0 923 1130 1050 1291 3519 history2 3 10 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 225 >25 >20 <u>limit/base</u> >3	0 0 52 <1 769 1125 934 1059 2978 <u>current</u> 4 8 2 2 <u>current</u> 1.3	0 0 55 <1 909 1019 971 1245 3397 history1 4 4 4 4 4 4	0 0 58 0 923 1130 1050 1291 3519 history2 3 10 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 2060 225 >25 >20 <u>limit/base</u> >3	0 0 52 <1 769 1125 934 1059 2978 current 4 8 2 2 current	0 0 55 <1 909 1019 971 1245 3397 history1 4 4 4 4 4 4 4 0.9	0 0 58 0 923 1130 1050 1291 3519 history2 3 10 2 history2 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 ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 225 20 225 20 20 3 20 3 20 3 20 20 20 20 20 20 20 20 20 20 20 20 20	0 0 52 <1 769 1125 934 1059 2978 <u>current</u> 4 8 2 2 <u>current</u> 1.3 11.5 24.3	0 0 55 <1 909 1019 971 1245 3397 history1 4 4 4 4 4 4 0.9 9.9	0 0 58 0 923 1130 1050 1291 3519 history2 3 10 2 <u>history2</u> 1 9.6 21.7
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 D7844 *ASTM D7844 *ASTM D7844	0 0 0 1010 1070 1150 1270 2060 2060 225 20 220 220 20 3 20 20 3 3 20 20 3 3 20 20 20 20 20 20 20 20 20 20 20 20 20	0 0 52 <1 769 1125 934 1059 2978 Current 4 8 2 2 Current 1.3 11.5 24.3 Current	0 0 55 <1 909 1019 971 1245 3397 history1 4 4 4 4 4 0.9 9.9 21.5 history1	0 0 58 0 923 1130 1050 1291 3519 history2 3 10 2 <u>history2</u> 1 9.6 21.7 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 ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 225 20 225 20 20 20 20 20 20 20 20 20 20 20 20 20	0 0 52 <1 769 1125 934 1059 2978 <u>current</u> 4 8 2 2 <u>current</u> 1.3 11.5 24.3	0 0 55 <1 909 1019 971 1245 3397 history1 4 4 4 4 4 4 4 5 0.9 9.9 21.5	0 0 58 0 923 1130 1050 1291 3519 history2 3 10 2 history2 1 9.6 21.7

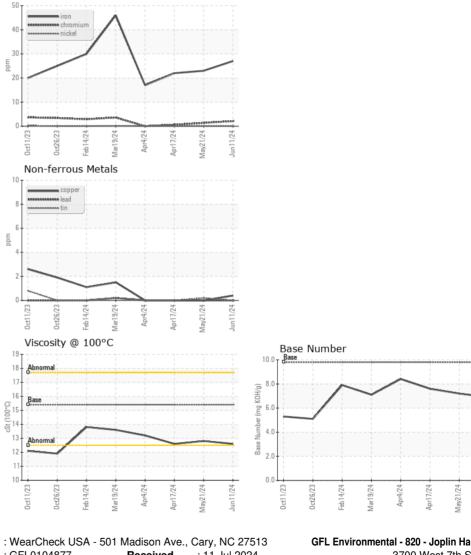


OIL ANALYSIS REPORT





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	12.6	12.8	12.6
GRAPHS						
Ferrous Alloys						



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 GFL Environmental - 820 - Joplin Hauling Sample No. : GFL0104877 Received : 11 Jul 2024 3700 West 7th Street Lab Number : 06234218 Tested : 12 Jul 2024 Joplin, MO US 64801 Unique Number : 11123052 Diagnosed : 12 Jul 2024 - Wes Davis Test Package : FLEET Contact: James Jarrett Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. jjarrett@gflenv.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (417)310-2802 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F:

Submitted By: VINCE ASTI Page 2 of 2

Jun11/24