

OIL ANALYSIS REPORT



11023 ISUZU BOX TRUCK Component

Diesel Engine

Fluic PETRO CANADA DURON SHP 15W40 (14 QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

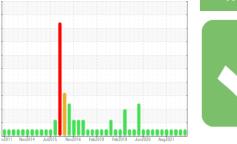
All component wear rates are normal.

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.





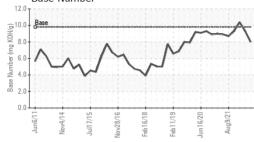
Sample Rating Trend

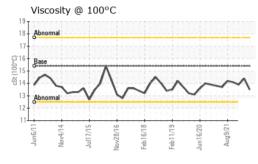
SAMPLE INFORI	MATION	method	limit/base	current	history 1	history 2
Sample Number		Client Info		GFL0087097	GFL0052495	GFL0046216
Sample Date		Client Info		21 Jun 2023	10 Jun 2022	08 Mar 2022
Machine Age	mls	Client Info		440581	430470	429918
Oil Age	mls	Client Info		10663	552	15071
Oil Changed		Client Info		Changed	Not Changd	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history 1	history 2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS method limit/base current history 1						
Iron	ppm	ASTM D5185m	>100	17	4	12
Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	6	2	2
Lead	ppm	ASTM D5185m	>40	4	<1	<1
Copper	ppm	ASTM D5185m	>330	5	2	2
Tin	ppm	ASTM D5185m	>15	2	<1	6
Antimony	ppm	ASTM D5185m				0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	<1	0
ADDITIVES		method	limit/base	current	history 1	history 2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 0	current 5	history 1 9	history 2 13
	ppm ppm					
Boron		ASTM D5185m	0	5	9	13
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	5 0	9 0	13 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	5 0 63	9 0 57	13 0 68
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	5 0 63 2	9 0 57 <1	13 0 68 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150	5 0 63 2 1020	9 0 57 <1 818 1084 953	13 0 68 <1 1021 1558 1235
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	5 0 63 2 1020 1229	9 0 57 <1 818 1084	13 0 68 <1 1021 1558 1235 1403
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	5 0 63 2 1020 1229 1050	9 0 57 <1 818 1084 953	13 0 68 <1 1021 1558 1235
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	5 0 63 2 1020 1229 1050 1316	9 0 57 <1 818 1084 953 1136	13 0 68 <1 1021 1558 1235 1403
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 1010 1070 1150 1270 2060	5 0 63 2 1020 1229 1050 1316 3580	9 0 57 <1 818 1084 953 1136 2715	13 0 68 <1 1021 1558 1235 1403 3155
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 1010 1070 1150 1270 2060	5 0 63 2 1020 1229 1050 1316 3580 current	9 0 57 <1 818 1084 953 1136 2715 history 1	13 0 68 <1 1021 1558 1235 1403 3155 history 2
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 ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	5 0 63 2 1020 1229 1050 1316 3580 current 5	9 0 57 <1 818 1084 953 1136 2715 history 1 3	13 0 68 <1 1021 1558 1235 1403 3155 history 2 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	0 0 0 1010 1070 1150 1270 2060 limit/base >25	5 0 63 2 1020 1229 1050 1316 3580 <u>current</u> 5 8	9 0 57 <1 818 1084 953 1136 2715 history 1 3 16	13 0 68 <1 1021 1558 1235 1403 3155 history 2 5 5 54
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 0 1010 1070 1150 1270 2060 limit/base >25	5 0 63 2 1020 1229 1050 1316 3580 <u>current</u> 5 8 1	9 0 57 <1 818 1084 953 1136 2715 history 1 3 16 1	13 0 68 <1 1021 1558 1235 1403 3155 history 2 5 5 54 0
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 limit/base >25 >20 limit/base	5 0 63 2 1020 1229 1050 1316 3580 current 5 8 1 1 current	9 0 57 <1 818 1084 953 1136 2715 history 1 3 16 1 1 history 1	13 0 68 <1 1021 1558 1235 1403 3155 history 2 5 54 0 history 2
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 >25 >20 limit/base	5 0 63 2 1020 1229 1050 1316 3580 current 5 8 1 1 current 0.3	9 0 57 <1 818 1084 953 1136 2715 history 1 3 16 1 1 history 1 0.1	13 0 68 <1 1021 1558 1235 1403 3155 history 2 5 54 0 history 2 0.2
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 ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >25 imit/base >20	5 0 63 2 1020 1229 1050 1316 3580 current 5 8 1 2 8 1 2 0.3 7.4	9 0 57 <1 818 1084 953 1136 2715 history 1 3 16 1 1 history 1 0.1 5.0	13 0 68 <1 1021 1558 1235 1403 3155 history 2 5 54 0 history 2 0.2 7.5
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 ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >25 imit/base >20 imit/base >3 >20	5 0 63 2 1020 1229 1050 1316 3580 <i>current</i> 5 8 1 1 <i>current</i> 0.3 7.4 19.9	9 0 57 <1 818 1084 953 1136 2715 history 1 3 16 1 1 history 1 0.1 5.0 17.9	13 0 68 <1 1021 1558 1235 1403 3155 history 2 5 54 0 history 2 0.2 7.5 20.7
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	0 0 0 1010 1070 1150 1270 2060 imit/base >25 imit/base >20 imit/base >3 >20	5 0 63 2 1020 1229 1050 1316 3580 current 5 8 1 current 0.3 7.4 19.9 current	9 0 57 <1 818 1084 953 1136 2715 history 1 3 16 1 3 16 1 0.1 5.0 17.9 history 1	13 0 68 <1 1021 1558 1235 1403 3155 history 2 5 54 0 history 2 0.2 7.5 20.7 history 2



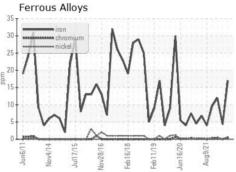
OIL ANALYSIS REPORT

Base Number





VISUAL		method	limit/base	current	history 1	history 2
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	history 1	history 2
Visc @ 100°C	cSt	ASTM D445	15.4	13.5	14.4	13.9
GRAPHS						



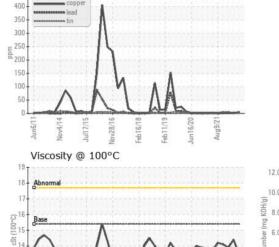
Non-ferrous Metals

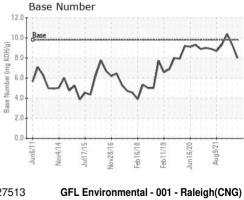
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Ab

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GFL Environmental - 001 - Raleigh(CNG) Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : GFL0087097 Received : 28 Jun 2023 3741 Conquest Drive Lab Number : 05885432 Diagnosed : 30 Jun 2023 Garner, NC : 10535915 Unique Number Diagnostician : Wes Davis US 27529 Test Package : FLEET Contact: Craig Johnson Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. craig.johnson@gflenv.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (919)662-7100

Feb11/19 Jun 16/20 Aug9/21.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Jul17/15

w28/16 ah16/18

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Submitted By: Craig Johnson

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