

OIL ANALYSIS REPORT

(WXQ193) **ISUZU 10880**

Component **Diesel Engine**

PETRO CANADA DURON SHP 15W40 (4 GAL)

Sample Rating Trend



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

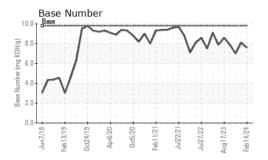
Fluid Condition

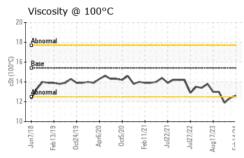
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0109057	GFL0109113	GFL0109105
Sample Date		Client Info		14 Feb 2024	25 Jan 2024	15 Jan 2024
Machine Age	hrs	Client Info		16478	16343	16263
Oil Age	hrs	Client Info		6843	6708	16263
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	0.8
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	5	14	8
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	3	2
Lead	ppm	ASTM D5185m	>40	0	<1	0
Copper	ppm	ASTM D5185m	>330	2	<1	1
Tin	ppm	ASTM D5185m	>15	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	16	15	27
Barium	ppm	ASTM D5185m	0	<1	0	0
Molybdenum	ppm	ASTM D5185m	60	61	66	67
Manganese	ppm	ASTM D5185m	0	0	<1	<1
Magnesium	ppm	ASTM D5185m	1010	740	745	769
Calcium	ppm	AOTH DE LOS			7 -10	703
		ASTM D5185m	1070	1035	1197	1129
Phosphorus		ASTM D5185m ASTM D5185m	1070 1150			
Phosphorus Zinc	ppm		1150	1035	1197	1129
		ASTM D5185m	1150	1035 848	1197 1015	1129 952
Zinc	ppm ppm	ASTM D5185m ASTM D5185m	1150 1270	1035 848 1076	1197 1015 1140	1129 952 1173
Zinc Sulfur	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	1150 1270 2060 limit/base	1035 848 1076 2784	1197 1015 1140 2866	1129 952 1173 2995
Zinc Sulfur CONTAMINAN	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method	1150 1270 2060 limit/base	1035 848 1076 2784 current	1197 1015 1140 2866 history1	1129 952 1173 2995 history2
Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	1150 1270 2060 limit/base	1035 848 1076 2784 current	1197 1015 1140 2866 history1	1129 952 1173 2995 history2
Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm TS ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	1150 1270 2060 limit/base >25	1035 848 1076 2784 current 4	1197 1015 1140 2866 history1 4	1129 952 1173 2995 history2 4 3
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm TS ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	1150 1270 2060 limit/base >25 >20	1035 848 1076 2784 current 4 0	1197 1015 1140 2866 history1 4 3	1129 952 1173 2995 history2 4 3
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	1150 1270 2060 limit/base >25 >20 limit/base >3	1035 848 1076 2784 current 4 0 4	1197 1015 1140 2866 history1 4 3 0	1129 952 1173 2995 history2 4 3 2
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D5185m	1150 1270 2060 limit/base >25 >20 limit/base >3	1035 848 1076 2784 current 4 0 4 current	1197 1015 1140 2866 history1 4 3 0 history1 1.8	1129 952 1173 2995 history2 4 3 2 history2
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm TS ppm ppm ppm ppm Abs/cm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7415	1150 1270 2060 limit/base >25 >20 limit/base >3 >20	1035 848 1076 2784 current 4 0 4 current 0.1 6.0	1197 1015 1140 2866 history1 4 3 0 history1 1.8 8.8	1129 952 1173 2995 history2 4 3 2 history2 0.4 7.8
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm TS ppm ppm ppm ppm Abs/cm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7415	1150 1270 2060 limit/base >25 >20 limit/base >3 >20 >30	1035 848 1076 2784 current 4 0 4 current 0.1 6.0 17.2	1197 1015 1140 2866 history1 4 3 0 history1 1.8 8.8 20.4	1129 952 1173 2995 history2 4 3 2 history2 0.4 7.8 18.0



OIL ANALYSIS REPORT

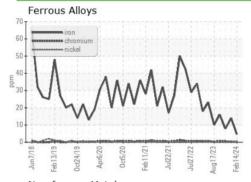


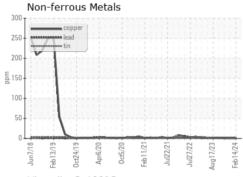


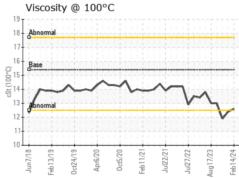
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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

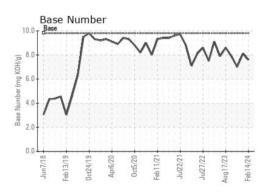
FLUID PROPE	ERTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	12.6	12.4	11.9

GRAPHS













Laboratory Sample No.

Lab Number : 06095319 Unique Number : 10888172

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0109057

Received : 21 Feb 2024 **Tested** Diagnosed

: 22 Feb 2024 : 22 Feb 2024 - Wes Davis

GFL Environmental - 009 - Fairburn 6905 Roosevelt Hwy Fairburn, GA US 30213

Contact: Eric Jones erjones@gflenv.com T: (678)630-9927

Test Package : FLEET Certificate L2367 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)