

OIL ANALYSIS REPORT

(EKA618) **KENWORTH 728005**

Component **Diesel Engine**

PETRO CANADA DURON SHP 15W40 (18 QTS)

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

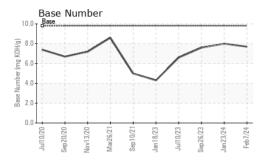
Fluid Condition

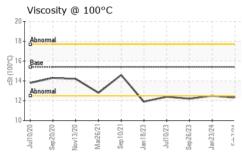
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

O/ WIT LE II VI OI II	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0109073	GFL0109109	GFL0086204
Sample Date		Client Info		07 Feb 2024	23 Jan 2024	26 Sep 2023
Machine Age	hrs	Client Info		13775	13690	13161
Oil Age	hrs	Client Info		13775	13690	13161
Oil Changed		Client Info		N/A	Not Changd	N/A
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	8	5	7
Chromium	ppm	ASTM D5185m	>20	0	0	0
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	2	<1
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	0	0	<1
Tin	ppm	ASTM D5185m	>15	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	19	19	26
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	62	58	64
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Manganese	ppm	ASTM D5185m	0	<1	0	0
Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m	0	-		
•			1010	<1	0	0
Magnesium	ppm	ASTM D5185m	1010	<1 815	0 812	0 870
Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m	1010 1070 1150	<1 815 1187	0 812 1179	0 870 1107
Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	1010 1070 1150	<1 815 1187 1009	0 812 1179 1002	0 870 1107 979
Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1010 1070 1150 1270	<1 815 1187 1009 1193	0 812 1179 1002 1203	0 870 1107 979 1224
Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1010 1070 1150 1270 2060 limit/base	<1 815 1187 1009 1193 3111	0 812 1179 1002 1203 3175	0 870 1107 979 1224 3149
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	1010 1070 1150 1270 2060 limit/base	<1 815 1187 1009 1193 3111	0 812 1179 1002 1203 3175 history1	0 870 1107 979 1224 3149 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	1010 1070 1150 1270 2060 limit/base	<1 815 1187 1009 1193 3111 current	0 812 1179 1002 1203 3175 history1	0 870 1107 979 1224 3149 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m	1010 1070 1150 1270 2060 limit/base >25	<1 815 1187 1009 1193 3111 current 3	0 812 1179 1002 1203 3175 history1 3 <1	0 870 1107 979 1224 3149 history2 4
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	1010 1070 1150 1270 2060 limit/base >25 >20	<1 815 1187 1009 1193 3111 current 3 2 <1	0 812 1179 1002 1203 3175 history1 3 <1	0 870 1107 979 1224 3149 history2 4 1
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm	ASTM D5185m	1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	<1 815 1187 1009 1193 3111 current 3 2 <1	0 812 1179 1002 1203 3175 history1 3 <1 <1	0 870 1107 979 1224 3149 history2 4 1
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method *ASTM D7844	1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	<1 815 1187 1009 1193 3111 current 3 2 <1 current 0.1	0 812 1179 1002 1203 3175 history1 3 <1 <1	0 870 1107 979 1224 3149 history2 4 1 1 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3 >20	<1 815 1187 1009 1193 3111 current 3 2 <1 current 0.1 5.9	0 812 1179 1002 1203 3175 history1 3 <1 <1 0.1 5.1	0 870 1107 979 1224 3149 history2 4 1 1 history2 0.1 5.9
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3 >20 >3	<1 815 1187 1009 1193 3111 current 3 2 <1 current 0.1 5.9 16.8	0 812 1179 1002 1203 3175 history1 3 <1 <1 <1 0.1 5.1 16.6	0 870 1107 979 1224 3149 history2 4 1 1 history2 0.1 5.9 16.8



OIL ANALYSIS REPORT

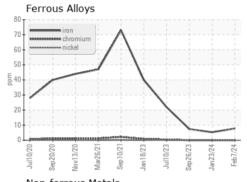


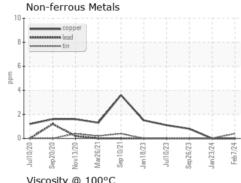


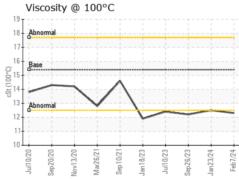
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

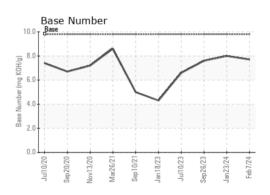
FLUID PROPI	ERTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	12.3	12.5	12.2

GRAPHS













Laboratory Sample No.

: GFL0109073 Lab Number : 06084492

Unique Number: 10871937

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 09 Feb 2024 **Tested** : 09 Feb 2024

Diagnosed : 09 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 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)