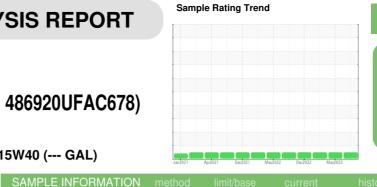


OIL ANALYSIS REPORT





NORMAL

DOOSAN LCV6WKUB LP 920 (S/N 486920UFAC678) Component

Diesel Engine Fluid

PETRO CANADA DURON XL SYN BLEND 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.

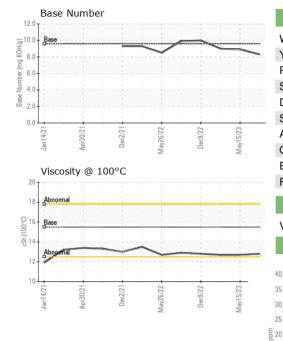
Fluid Condition

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

SAMPLE INFORM		method	limit/base	current	history1	history2
Sample Number		Client Info		WC0837066	WC0790965	WC0775983
Sample Date		Client Info		09 Aug 2023	15 May 2023	17 Feb 2023
Machine Age	hrs	Client Info		7220	6511	5733
Oil Age	hrs	Client Info		709	778	557
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	J	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	nom	ASTM D5185m	>50	7	6	6
Chromium	ppm	ASTM D5185m	>20	4	<1	<1
Nickel	ppm	ASTM D5185m	>20	4	0	0
	ppm		>0	0	0	0
Titanium Silver	ppm	ASTM D5185m ASTM D5185m	>3	0	0	0
Aluminum	ppm ppm	ASTM D5185m	>20	0	1	<1
Lead		ASTM D5185m	>20	0	0	0
	ppm ppm	ASTM D5185m		0	<1	<1
Copper Tin		ASTM D5185m	>15	0	<1	<1
Vanadium	ppm ppm	ASTM D5185m	>10	0	0	0
Cadmium		ASTM D5185m		0	0	0
	ppm		1	-	-	-
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	1	3	9	9
Barium	ppm		1	0	0	0
Molybdenum	ppm	ASTM D5185m	60	59	66	57
Manganese	ppm		1	0	0	0
Magnesium						839
-	ppm	ASTM D5185m	1010	1012	940	
Calcium	ppm	ASTM D5185m	1070	1141	1112	1126
Calcium Phosphorus	ppm ppm	ASTM D5185m ASTM D5185m	1070 1150	1141 1093	1112 1043	1126 957
Calcium Phosphorus Zinc	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	1070 1150 1270	1141 1093 1416	1112 1043 1273	1126 957 1146
Calcium Phosphorus Zinc Sulfur	ppm ppm	ASTM D5185m ASTM D5185m	1070 1150	1141 1093	1112 1043	1126 957 1146 3017
Calcium Phosphorus Zinc	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	1070 1150 1270	1141 1093 1416 4287 current	1112 1043 1273 3825 history1	1126 957 1146 3017 history2
Calcium Phosphorus Zinc Sulfur	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1070 1150 1270 2060 limit/base	1141 1093 1416 4287	1112 1043 1273 3825	1126 957 1146 3017
Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	1070 1150 1270 2060 limit/base	1141 1093 1416 4287 current	1112 1043 1273 3825 history1	1126 957 1146 3017 history2
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	1070 1150 1270 2060 limit/base >15	1141 1093 1416 4287 current 2	1112 1043 1273 3825 history1 3	1126 957 1146 3017 history2 3
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1070 1150 1270 2060 limit/base >15	1141 1093 1416 4287 current 2 0	1112 1043 1273 3825 history1 3 0	1126 957 1146 3017 history2 3 0
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1070 1150 1270 2060 limit/base >15 >20 limit/base	1141 1093 1416 4287 current 2 0 0	1112 1043 1273 3825 history1 3 0 1	1126 957 1146 3017 history2 3 0 2
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1070 1150 1270 2060 limit/base >15 >20 limit/base >3	1141 1093 1416 4287 current 2 0 0 0 0	1112 1043 1273 3825 history1 3 0 1 1 history1	1126 957 1146 3017 history2 3 0 2 history2
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1070 1150 1270 2060 limit/base >15 >20 limit/base >3	1141 1093 1416 4287 current 2 0 0 0 current 0.2	1112 1043 1273 3825 history1 3 0 1 1 history1 0.1	1126 957 1146 3017 history2 3 0 2 history2 0.1
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm pm spm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7844	1070 1150 1270 2060 imit/base >15 >20 imit/base >3 >20	1141 1093 1416 4287 current 2 0 0 0 current 0.2 5.2	1112 1043 1273 3825 history1 3 0 1 history1 0.1 5.5	1126 957 1146 3017 history2 3 0 2 history2 0.1 5.3
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm pm spm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	1070 1150 1270 2060 Imit/base >15 >20 Imit/base >3 >20 >30	1141 1093 1416 4287 current 2 0 0 0 current 0.2 5.2 16.8	1112 1043 1273 3825 history1 3 0 1 1 history1 0.1 5.5 18.0	1126 957 1146 3017 history2 3 0 2 history2 0.1 5.3 17.4



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	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPER	TIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.5	12.8	12.7	12.7
GRAPHS						

Ferrous Alloys 4/21 or30/71 Mav26/22 Dec9/22 May15/23 Dec2/2 lan l Non-ferrous Metals lead

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