

OIL ANALYSIS REPORT

Sample Rating Trend NORMAL



CATERPILLAR 745D 13397 (S/N 3T605921) Component

Fluid

PETRO CANADA DURON XL SYN BLEND 15W40 (--- GAL)

SAMPLE INFORMATION method

Diesel Engine 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.

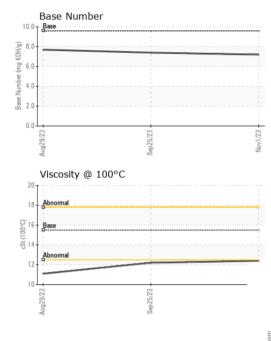
Fluid Condition

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

Sample Date Client Info 01 Nov 2023 25 Sep 2023 29 Aug 2023 Machine Age hrs Client Info 1575 1000 621 Dil Age hrs Client Info 575 379 621 Dil Changed Client Info Changed Changed ABNORMAL ABNORMAL Sample Status Imitibase current history1 history2 Fuel WC Method >5 <1.0 3.3 4.3 CONTAMINATION method limit/base current history1 history2 Fuel WC Method >5 <1.0 3.3 4.3 Chromium ppm ASTM 05185m >20 <1 1 1 Nickel ppm ASTM 05185m >20 0 0 0 0 Silver ppm ASTM 05185m >22 0 0 0 0 0 0 0 0 0 1 3 3 3 3 <		IATION	method	limit/base	current	nistory i	nistory2
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Nickel ppm ASTM D5185m >2 0 0 0 Titanium ppm ASTM D5185m >2 0 0 <1					-		
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Potassium ppm ASTM D5185m >20 1 1 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.3 0.4 Nitration Abs/cm *ASTM D7624 >20 8.9 8.3 9.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.6 19.9 23.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.6 16.3 21.6	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	1 60 1 1010 1070 1150 1270 2060	0 62 0 944 1101 952 1238 2916	0 60 <1 823 1111 964 1185 3058	0 46 2 ▲ 646 ▲ 1582 995 1213 3072
Potassium ppm ASTM D5185m >20 1 1 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.3 0.4 Nitration Abs/cm *ASTM D7624 >20 8.9 8.3 9.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.6 19.9 23.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.6 16.3 21.6	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	1 60 1 1010 1070 1150 1270 2060 Limit/base	0 62 0 944 1101 952 1238 2916 current	0 60 <1 823 1111 964 1185 3058 history1	0 46 2 ▲ 646 ▲ 1582 995 1213 3072 ► history2
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Nitration Abs/cm *ASTM D7624 >20 8.9 8.3 9.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.6 19.9 23.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.6 16.3 21.6	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	1 60 1 1010 1070 1150 1270 2060 limit/base >25	0 62 0 944 1101 952 1238 2916 current 4 0	0 60 <1 823 1111 964 1185 3058 history1 5 <1	0 46 2 ▲ 646 ▲ 1582 995 1213 3072 ► history2 15 4
Sulfation Abs/.1mm *ASTM D7415 >30 20.6 19.9 23.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.6 16.3 21.6	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	1 60 1 1010 1070 1150 1270 2060 limit/base >25 >20	0 62 0 944 1101 952 1238 2916 current 4 0 1	0 60 <1 823 1111 964 1185 3058 history1 5 <1 1	0 46 2 ▲ 646 ▲ 1582 995 1213 3072 ► history2 15 4 2
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.6 16.3 21.6	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	1 60 1 1010 1070 1150 1270 2060 <i>limit/base</i> >25 >20	0 62 0 944 1101 952 1238 2916 current 4 0 1	0 60 <1 823 1111 964 1185 3058 history1 5 <1 1 history1	0 46 2 ▲ 646 ▲ 1582 995 1213 3072 history2 15 4 2 2 history2
Dxidation Abs/.1mm *ASTM D7414 >25 16.6 16.3 21.6	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	1 60 1 1010 1070 1150 1270 2060 <i>limit/base</i> >25 >20 <i>limit/base</i> >3	0 62 0 944 1101 952 1238 2916 current 4 0 1 current 0.4	0 60 <1 823 1111 964 1185 3058 history1 5 <1 1 1 history1 0.3	0 46 2 646 ▲ 1582 995 1213 3072 history2 15 4 2 2 history2 0.4
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	1 60 1 1010 1070 1150 1270 2060 <i>limit/base</i> >25 >20 <i>limit/base</i> >3 >20	0 62 0 944 1101 952 1238 2916 current 4 0 1 1 current 0.4 8.9	0 60 <1 823 1111 964 1185 3058 history1 5 <1 1 1 history1 0.3 8.3	0 46 2 646 ▲ 1582 995 1213 3072 history2 15 4 2 2 history2 0.4 9.8
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	1 60 1 1010 1070 1150 2060 <i>limit/base</i> >25 20 <i>limit/base</i> >3 >20 >30	0 62 0 944 1101 952 1238 2916 current 4 0 1 1 current 0.4 8.9 20.6	0 60 <1 823 1111 964 1185 3058 history1 5 <1 1 1 0.3 8.3 19.9	0 46 2 646 ▲ 1582 995 1213 3072 history2 15 4 2 2 history2 0.4 9.8 23.5
Base Number (BN) mg KOH/g ASTM D2896 9.6 7.2 7.4 7.7	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	1 60 1 1010 1070 1150 1270 2060 limit/base >25 -20 limit/base >3 >20 >30	0 62 0 944 1101 952 1238 2916 current 4 0 1 1 current 0.4 8.9 20.6 current	0 60 <1 823 1111 964 1185 3058 history1 5 <1 1 5 <1 1 0.3 8.3 19.9 history1	0 46 2 646 ▲ 1582 995 1213 3072 history2 15 4 2 2 history2 0.4 9.8 23.5



OIL ANALYSIS REPORT



VISUAL						
White Metal		method	limit/base	current	history1	history2
- motu	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 PROPER	TIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.5	12.4	12.2	▲ 11.1
GRAPHS						
Ferrous Alloys						
0 - chromium						
30			-			
20						
1						
10-						
0						
0	25/23		w1/23			
Aug29/23	Sep25/23		Nov1/23			
Non-ferrous Meta			Nov1/23			
Non-ferrous Meta			Nov1/23			
Non-ferrous Meta			Nov1/23			
Non-ferrous Meta			Nov1/23			
Non-ferrous Meta			Nov1/23			

Base Number

10.0 Base

8 (mg KOH/g)

6 umber 4 Base

0.0

Aua29/23

Nov1/23 -

:08 Nov 2023

: 08 Nov 2023



Unique Number : 10729612 Diagnostician : Wes Davis Test Package : CONST (Additional Tests: TBN) Contact: MIKE WYATT Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. mwyatt@traderconstruction.com * - 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)

Sep25/23

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

Received

Diagnosed

Sen 25/23

Viscosity @ 100°C

19

18 17

16 cSt (100°C)

12

10

Laboratory

Sample No.

Lab Number

Aug29/23

: WC0862900

: 06001252

Contact/Location: MIKE WYATT - TRANEW

Sep25/23

TRADER CONSTRUCTION CO.

PO DRAWER 1578

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T: (252)633-1399

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