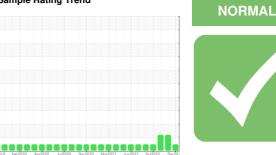


## **OIL ANALYSIS REPORT**

#### **Sample Rating Trend**





# CATERPILLAR 773E DUMP D-18

Component

Diesel Engine

PETRO CANADA DURON HP 15W40 (--- LTR)

### 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

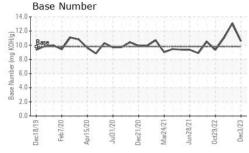
#### **Fluid Condition**

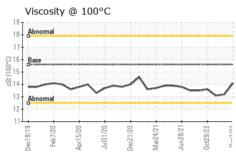
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

M ПР 15VV4U (-	,	sc2019 Feb20	20 Apr2020 Jul2020	Deczuzu Marzuzi Junzuzi Uci	2022 000201			
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2		
Sample Number		Client Info		PCA0094331	PCA0083703	PCA0083683		
Sample Date		Client Info		03 Dec 2023	02 Mar 2023	10 Dec 2022		
Machine Age	Client Info		44365	41430	40064			
Oil Age	Client Info		250	500	500			
Oil Changed		Client Info		Not Changd	Changed	Changed		
Sample Status				NORMAL	ATTENTION	ATTENTION		
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		
ron	ppm	ASTM D5185m	>100	40	29	21		
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1		
Nickel	ppm	ASTM D5185m	>2	<1	0	0		
Titanium	ppm	ASTM D5185m	>2	0	0	<1		
Silver	ppm	ASTM D5185m	>2	0	0	0		
Aluminum	ppm	ASTM D5185m	>25	3	1	1		
Lead	ppm	ASTM D5185m	>40	3	<1	2		
Copper	ppm	ASTM D5185m	>330	4	2	2		
Tin	ppm	ASTM D5185m	>15	<1	0	<1		
Vanadium	ppm	ASTM D5185m		0	0	0		
Cadmium	ppm	ASTM D5185m		0	0	0		
ADDITIVES		method	limit/base	current	history1	history2		
Boron	ppm	ASTM D5185m		7	11	14		
Barium	ppm	ASTM D5185m		0	<1	0		
Molybdenum	ppm	ASTM D5185m		63	72	69		
Manganese	ppm	ASTM D5185m		<1	<1	<1		
Magnesium	ppm	ASTM D5185m		1054	1076	1000		
Calcium	ppm	ASTM D5185m		1113	1173	1179		
Phosphorus	ppm	ASTM D5185m		1072	1153	1060		
Zinc	ppm	ASTM D5185m		1362	1416	1309		
Sulfur	ppm	ASTM D5185m		3028	3937	3684		
CONTAMINAN	ITS	method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>25	5	6	5		
Sodium	ppm	ASTM D5185m		15	<b>1</b> 48	<b>165</b>		
Potassium	ppm	ASTM D5185m	>20	2	4	7		
INFRA-RED		method	limit/base	current	history1	history2		
Soot %	%	*ASTM D7844	>3	0.7	0.6	0.6		
Nitration	Abs/cm	*ASTM D7624	>20	8.7	8.9	9.2		
Cultation	Abs/.1mm	*ASTM D7415	>30	21.3	20.8	21		
Sulfation								
FLUID DEGRAI	DATION	method	limit/base	current	history1	history2		
	DATION Abs/.1mm	method *ASTM D7414	limit/base	current	history1	history2		



## **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
<b>Emulsified Water</b>	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

FLUID PROPI	ERIIES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.6	14.1	13.2	13.1

	GR	API	-IS															
250	Iron	(pp	m)								ad (p	pm)						
250 - 200 -	Severe							11		100 Se	vere						1111	
	Į									00								
目 100-	Abnon	mal	-						-	40 A	onormal						-	-
50 -								~		20								
0 -	- GL/	720	Z0 +	02/	02/	12/1	12/	722	73	0 1	/20	720	/20	/20	12/	121	722	73
	Dec18/19	Feb7/20	Apr15/20	Jul31/20	Dec21/20	Mar24/21	Jun28/21	Oct29/22	Dec3/23	Dec18/19	Feb7/20	Apr15/20	Jul31/20	Dec21/20	Mar24/21	Jun28/21	Oct29/22	Dec3/23
	Alun	ninuı	m (p	pm)						Chromium (ppm)								
50 - 40 -	Source										vere							П
20	Abnor	n al								20							Щ	Ш
E 20-	Abnon	IIai	+							20 A	onormal							_
10										10								
0 -	EL/	02/	Z0 H	720	720	1/2/1	1/2/1	722	73	0	/20	720	/20	/20	12/	12/	722	/23
	Dec18/19	Feb7/20	Apr15/20	Jul31/20	Dec21/20	Mar24/21	Jun28/21	Oct29/22	Dec3/23	Dec18/19	Feb7/20	Apr15/20	Jul31/20	Dec21/20	Mar24/21	Jun28/21	Oct29/22	Dec3/23
	Copper (ppm) Silicon (ppm)																	
400 -	Severe	mal									vere							
300-										60								
E 200 -										E 40	onormal							
100-										20								
0 -	61	720	720	120	720	12/	12/	722	73	01	-02/	20 +	Z0 +	Z0 Z	12/	12/	727	13
	Dec18/19	Feb7/20	Apr15/20	Jul31/20	Dec21/20	Mar24/21	Jun28/21	Oct29/22	Dec3/23	Dec18/19	Feb7/20	Apr15/20	Jul31/20	Dec21/20	Mar24/2	Jun28/21	Oct29/22	Dec3/23
		sity	@ 1	.00°C							ase Nu	ımber						
20 <del>-</del> 18 -	Abnon	mal	П							15.0 T								^
	Base									g 10.0-	ise /	1	~	_	2		~	_
CSt (100°C)		_				\				Tanper 5.0								
12	Abnon	mai								Base Number (mg KOH/g)								
10-	-61/	- 02/	/20	/20	/20	1/2/1	3/21	/22	/23	0.0	/20	/20	/20	/20	1/21	3/21	/22	/23
	Dec18/19	Feb7/20	Apr15/20	Jul31/20	Dec21/20	Mar24/21	Jun28/21	Oct29/22	Dec3/23	Dec18/19	Feb7/20	Apr15/20	Jul31/20	Dec21/20	Mar24/21	Jun28/21	Oct29/22	Dec3/23





Certificate L2367

Laboratory Sample No.

: PCA0094331 Lab Number : 06098647 Unique Number: 10896877 Test Package : MOB 2

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 23 Feb 2024

**Tested** : 26 Feb 2024 Diagnosed : 26 Feb 2024 - Wes Davis

SCRAP METAL SERVICES (SMS Mill Services LLC)

250 WEST U.S. HWY 12 CHESTERTON, IN US 46304

Contact: DOMINIC WHITE dwhite@scrapmetalservices.com

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)

T:

F: