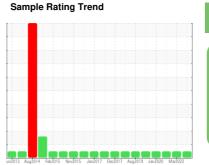


# **OIL ANALYSIS REPORT**





Machine Id **CATERPILLAR END DUMP 773B ED3** Component **Diesel Engine** 

Fluid DIESEL ENGINE OIL SAE 15W40 (6 GAL)

AE 15W40 (6 G	AL)	un2013 Aug20	114 Feb2015 Nov2015 Jan	2017 Dec2017 Aug2019 Jan2020	Mar2022	
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0802318	WC0570056	WC0542295
Sample Date		Client Info		09 May 2023	05 Mar 2022	05 May 202
Machine Age	hrs	Client Info		48446	46415	46415
Oil Age	hrs	Client Info		500	500	0
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATIC	N	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
ron	ppm	ASTM D5185m	>100	9	26	20
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m		<1	<1	<1
Titanium	ppm	ASTM D5185m	>2	0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	0	2	0
_ead	ppm	ASTM D5185m	>40	0	2	1
Copper	ppm	ASTM D5185m	>330	1	2	2
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Antimony	ppm	ASTM D5185m				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	250	31	12	12
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	69	63	63
Vanganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m	450	609	1014	926
Calcium	ppm	ASTM D5185m	3000	1442	1205	1128
Phosphorus	ppm	ASTM D5185m	1150	1029	1106	1051
Zinc	ppm	ASTM D5185m	1350	1215	1274	1175
Sulfur	ppm	ASTM D5185m	4250	3463	2934	2725
CONTAMINANT	S	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	6	3	2
Sodium	ppm	ASTM D5185m	>158	2	2	1
Potassium	ppm	ASTM D5185m	>20	0	0	0
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.1	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	7.4	10.5	9.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.6	21.0	21.7
FLUID DEGRAD	ATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.5	18.7	19.4

## Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

#### Contamination

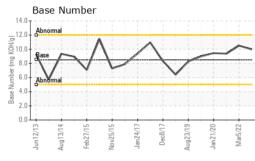
There is no indication of any contamination in the oil.

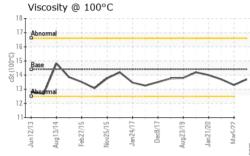
### Fluid Condition

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



# **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
	$\mathbf{\nabla}$	1			Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
1					Silt	scalar	*Visual	NONE	NONE	NONE	NONE
					Debris	scalar	*Visual	NONE	NONE	NONE	NONE
					Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
c1/c2vov	Dec8/17	Aug23/19	Jan21/20	Mar5/22	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Jan2	Dei	Aug2	Jan2	Ma	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
C					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	14.4	13.7	13.3	13.7
$\sim$		-		$\checkmark$	GRAPHS						
					Iron (ppm)				Lead (ppm)		
	17	19	20-	1 66	800-				80 Severe		
c1/c2vov Jan24/17	Dec8/17	Aug23/19	Jan21/20	Mar5/77					60		
- 7		A	7	_	400			- L	40 - Abnormal		-
					200 - Severe				20		
					0						
					Jun 12/13 Aug 13/14 Feb 27/15 Nov25/15	Jan 24/17 Dec8/17	Aug23/19 Jan21/20	Mar5/22	Jun 12/13 Aug 13/14 Feb 27/15	Vov25/15 Jan24/17 Dec8/17	Aug23/19 Jan21/20 Mar5/22
						Jar	Aug	M			Aug Jan Mi
					Aluminum (ppm)				Chromium (	ppm)	
					200				40 Severe		
					150- 100-			udd	20 Abnormal		
									10		
					0						
					Jun12/13 Aug13/14 Feb27/15 Nov25/15	Jan24/17 Dec8/17	Aug23/19 Jan21/20	Mar5/22	Jun 12/13 Aug 13/14 Feb 27/15	Nov25/15 Jan24/17 Dec8/17	Aug23/19 Jan21/20 Mar5/22
						Jan	Aug	Ma			Aug Jani Ma
					Copper (ppm)			8	Silicon (ppm	)	
					300 -			6	00		
					톱 200 -			4 d			
					100			2	00 Severe		
						17	6	22		15+ 17-	20
					Jun 12/13 Aug 13/14 Feb 27/15 Nov25/15	Jan24/17 Dec8/17	Aug23/19 Jan21/20	Mar5/22	Jun 12/13 Aug 13/14 Feb 27/15	Nov25/15 Jan24/17 Dec8/17	Aug23/19 Jan21/20 Mar5/22
					Viscosity @ 100°		4		Base Numbe	_	4
					Abnormal			(B/H0	Abnormal		
					Base			Bal(	.0 Base	$\wedge \land$	
					(Joon 1) Base Abnormal	$\sim$		mber	Abrivermal	~ \	
					12		+	Base Number (mg KOH(g)			
					10			(	0.0	2+	
					Jun12/13 Aug13/14 Feb27/15 Nov25/15	Jan 24/17 Dec 8/17	Aug23/19 Jan21/20	Mar5/22	Jun 12/13 Aug 13/14 Feb 27/15	Vov25/15 Jan24/17 Dec8/17	Aug23/19 Jan21/20 Mar5/22
		Sai Lai Uni	que N	No. mber lumber	: WearCheck USA - : WC0802318 : 05848236 r : 10472343	-,	son Ave., Ca d : 15 ed : 18			CA BROS SANI	<b>&amp; GRAVEL INC</b> 66 MAIN ST MILLIS, MA US 02054
Certificate L2				ckage				0			ct: FRAN ROSSI
					, contact Customer Ser					-	scaconcrete.com
					are outside of the ISO		,		(10014 100:001		F: (508)376-2957

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

F: (508)376-4333