

OIL ANALYSIS REPORT

Sample Rating Trend







SAMPLE INFORM			12			
	IATION	method	limit/base	current	history1	history
Sample Number		Client Info		WC0802326	WC0721156	WC056977
Sample Date		Client Info		01 May 2023	19 Dec 2022	05 Aug 202
Machine Age	hrs	Client Info		40000	40000	40000
Oil Age	hrs	Client Info		500	500	500
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	J	method	limit/base	current	history1	history
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history
Iron	ppm	ASTM D5185m	>85	74	39	74
Chromium	ppm	ASTM D5185m	>4	2	1	2
Nickel	ppm	ASTM D5185m	>4	<1	<1	<1
Titanium	ppm	ASTM D5185m	>2	0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	2	<1	3
Lead	ppm	ASTM D5185m	>20	<1	<1	1
Copper	ppm	ASTM D5185m	>250	2	3	3
Tin	ppm	ASTM D5185m	>5	1	<1	2
Antimony	ppm	ASTM D5185m				
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history
Boron						
DOLOLI	ppm	ASTM D5185m	250	12	9	17
Barium	ppm ppm		250 10	12 0	9 12	17 0
Barium	ppm	ASTM D5185m	10	0	12	0
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	10	0 63	12 52	0 59
Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450	0 63 <1	12 52 <1	0 59 <1
Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450	0 63 <1 904	12 52 <1 763	0 59 <1 891
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450 3000	0 63 <1 904 1210	12 52 <1 763 962	0 59 <1 891 1003
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450 3000 1150	0 63 <1 904 1210 1080	12 52 <1 763 962 859	0 59 <1 891 1003 949
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350	0 63 <1 904 1210 1080 1397	12 52 <1 763 962 859 1043	0 59 <1 891 1003 949 1200
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	10 100 450 3000 1150 1350 4250	0 63 <1 904 1210 1080 1397 4330	12 52 <1 763 962 859 1043 2872	0 59 <1 891 1003 949 1200 2867
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350 4250	0 63 <1 904 1210 1080 1397 4330 current	12 52 <1 763 962 859 1043 2872 history1	0 59 <1 891 1003 949 1200 2867 history
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350 4250 limit/base >25	0 63 <1 904 1210 1080 1397 4330 current 4	12 52 <1 763 962 859 1043 2872 history1 3	0 59 <1 891 1003 949 1200 2867 history 3
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	10 100 450 3000 1150 1350 4250 imit/base >25 >158	0 63 <1 904 1210 1080 1397 4330 current 4 2	12 52 <1 763 962 859 1043 2872 history1 3 1	0 59 <1 891 1003 949 1200 2867 history 3 <1
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm	ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20	0 63 <1 904 1210 1080 1397 4330 <u>current</u> 4 2 1	12 52 <1 763 962 859 1043 2872 history1 3 1 0	0 59 <1 891 1003 949 1200 2867 history 3 <1 0
Barium Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350 4250 <i>limit/base</i> >25 >158 >20 <i>limit/base</i> >3	0 63 <1 904 1210 1080 1397 4330 current 4 2 1 1 current	12 52 <1 763 962 859 1043 2872 history1 3 1 0 history1	0 59 <1 891 1003 949 1200 2867 history 3 <1 0
Barium Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3 >20	0 63 <1 904 1210 1080 1397 4330 <u>current</u> 4 2 1 2 1 <i>current</i> 0.9	12 52 <1 763 962 859 1043 2872 history1 3 1 0 history1 0.3	0 59 <1 891 1003 949 1200 2867 history 3 <1 0 history 0.4
Barium Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3 >20	0 63 <1 904 1210 1080 1397 4330 <u>current</u> 4 2 1 1 <u>current</u> 0.9 8.3	12 52 <1 763 962 859 1043 2872 history1 3 1 0 history1 0.3 7.2	0 59 <1 891 1003 949 1200 2867 history 3 <1 0 history 0.4 8.7
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 D5185m	10 100 450 3000 1150 1350 4250 imit/base >25 >158 >20 imit/base >3 >20 >30	0 63 <1 904 1210 1080 1397 4330 <u>current</u> 4 2 1 2 1 0.9 8.3 19.7	12 52 <1 763 962 859 1043 2872 history1 3 1 0 history1 0.3 7.2 18.6	0 59 <1 891 1003 949 1200 2867 history 3 <1 0 history 0.4 8.7 20.7

ADVANCE MIXER 171 Component

Diesel Engine

DIESEL ENGINE OIL SAE 15W40 (10 GAL)

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

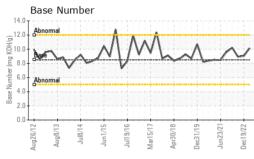
There is no indication of any contamination in the oil.

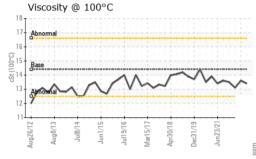
Fluid Condition

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
٨٨٨		White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
1/Wha	NN	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
V		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
Jul19/16 Mar15/17 Apr30/18	Dec31/19 Jun23/21 Dec19/22	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Jul19/16 Mar15/17 Apr30/18	Dec31/19 Jun23/21 Dec19/22	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
		Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
C	Free Water	scalar	*Visual		NEG	NEG	NEG	
		FLUID PROPERT		method	limit/base	current	history1	history2
a(a) b(a) b(a) b(a) b(a) b(a) a(a) b(a) b(a) b(a) b(a) b(a)	$\begin{array}{c} + \ \ a = \left \ \ b = \left \ \ a = \left \ \ a = \left \ \ \ a = \left \ \ \ a = \left \ \ a = \left \ \ \ a = \left \ \ \ a = \left \ \ \ a = \left \ \ \ a = \left \ \ \ a = \left \ \ \ a = \left \ \ \ a = \left \ \ \ a = \left \ \ \ a = \left \ \ \ a = \left \ \ \ a = \left \ \ \ a = \left \ \ \ a = \left \ \ \ a = \left \ \ \ a = \left \ \ \ a = \left \ \ \ \ a = \left \ \ \ \ \ a = \left \ \ \ \ \ a = \left \ \ \ \ a = \left \ \ \ \ \ \ a = \left \ \ \ \ a = \left \ \ \ \ \ a = \left \ \ \ \ \ a = \left \ \ \ \ \ a = \left \ \ \ \ \ \ a = \left \ \ \ \ \ \ a = \left \ \ \ \ \ \ a = \left \ \ \ \ \ \ a = \left \ \ \ \ \ \ a = \left \ \ \ \ \ \ a = \left \ \ \ \ \ \ a = \left \ \ \ \ \ \ \ a = \left \ \ \ \ \ \ a = \left \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	Visc @ 100°C	cSt	ASTM D445		13.4	13.6	13.1
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		Aug26/12 Aug8/13 Jul8/14 Jun1/15	Jul19/16 -	Apr30/18 Dec31/19 Jun23/21	Dec19/22	Aug26/12 Aug8/13 Jul8/14 Jun1/15	Jul19/16 Mar15/17 Apr30/18	Dec31/19 Jun23/21 Dec19/22
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	aboratory	: WearCheck USA - 5			•	TRESCA	BROS SAND 8	
- 1	Sample No.		Receive		May 2023			66 MAIN S
150/IEC (7025	Lab Number Jnique Number		Diagnos Diagnos		May 2023 s Davis			MILLIS, M US 0205
	Fest Package		Diagnosi	ucian . we	5 Davis		Contact	: FRAN ROS
	•	contact Customer Serv	ice at 1-8	800-237-1369	9.		frossi@tresc	

Submitted By: MARVIN IBARRA

Page 2 of 2