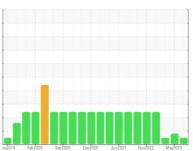


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL





CATERPILLAR D6 8175 (S/N GZ900317)

Hydraulic System

{not provided} (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

L)		ov2019 Fel	2020 Sep2020 De	c2020 Jun2021 Nov2022	May2023	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0913247	WC0816175	WC0775867
Sample Date		Client Info		11 Apr 2024	22 May 2023	26 Jan 2023
Machine Age	hrs	Client Info		10764	4178	9571
Oil Age	hrs	Client Info		10764	4178	9571
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	ATTENTION	NORMAL
CONTAMINATION	V	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	4	13	6
Chromium	ppm	ASTM D5185m	>10	<1	<1	<1
Nickel	ppm	ASTM D5185m	>10	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	3	0	5
Lead	ppm	ASTM D5185m	>10	<1	2	<1
Copper	ppm	ASTM D5185m	>75	4	7	4
Tin	ppm	ASTM D5185m	>10	0	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	<1	0
ADDITIVES		method	limit/base			history2
NODITIVEO					15(5.)	
Boron	ppm	ASTM D5185m		25	75	116
Boron Barium	ppm					116 0
Boron		ASTM D5185m		25 0 2	75	116
Boron Barium	ppm	ASTM D5185m ASTM D5185m		25 0	75 0	116 0 5 <1
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		25 0 2 0 15	75 0 6	116 0 5
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		25 0 2 0	75 0 6 <1	116 0 5 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		25 0 2 0 15	75 0 6 <1 47	116 0 5 <1 39
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		25 0 2 0 15 2290	75 0 6 <1 47 2860	116 0 5 <1 39 2886
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		25 0 2 0 15 2290 776	75 0 6 <1 47 2860 854	116 0 5 <1 39 2886 1034
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	25 0 2 0 15 2290 776 880	75 0 6 <1 47 2860 854 1097	116 0 5 <1 39 2886 1034 1291
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m		25 0 2 0 15 2290 776 880 4799 current	75 0 6 <1 47 2860 854 1097 3197 history1	116 0 5 <1 39 2886 1034 1291 2980
Boron 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 ASTM D5185m ASTM D5185m	limit/base	25 0 2 0 15 2290 776 880 4799	75 0 6 <1 47 2860 854 1097 3197 history1	116 0 5 <1 39 2886 1034 1291 2980 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >20	25 0 2 0 15 2290 776 880 4799 current	75 0 6 <1 47 2860 854 1097 3197 history1	116 0 5 <1 39 2886 1034 1291 2980 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >20	25 0 2 0 15 2290 776 880 4799 current 10	75 0 6 <1 47 2860 854 1097 3197 history1 12 6	116 0 5 <1 39 2886 1034 1291 2980 history2 18
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >20 >20	25 0 2 0 15 2290 776 880 4799 current 10 5 12 current	75 0 6 <1 47 2860 854 1097 3197 history1 12 6 3	116 0 5 <1 39 2886 1034 1291 2980 history2 18 0 2 history2 523
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >20 >20 limit/base	25 0 2 0 15 2290 776 880 4799 current 10 5 12	75 0 6 <1 47 2860 854 1097 3197 history1 12 6 3 history1	116 0 5 <1 39 2886 1034 1291 2980 history2 18 0 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	limit/base >20 >20 limit/base >5000 >1300 >160	25 0 2 0 15 2290 776 880 4799 current 10 5 12 current	75 0 6 <1 47 2860 854 1097 3197 history1 12 6 3 history1 9922 485 30	116 0 5 <1 39 2886 1034 1291 2980 history2 18 0 2 history2 523 119 7
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m METHOD ASTM D5185m	limit/base >20	25 0 2 0 15 2290 776 880 4799 current 10 5 12 current 1596 150	75 0 6 <1 47 2860 854 1097 3197 history1 12 6 3 history1 9922 485	116 0 5 <1 39 2886 1034 1291 2980 history2 18 0 2 history2 523 119
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	limit/base >20 >20 limit/base >5000 >1300 >160	25 0 2 0 15 2290 776 880 4799 current 10 5 12 current 1596 150 16	75 0 6 <1 47 2860 854 1097 3197 history1 12 6 3 history1 9922 485 30	116 0 5 <1 39 2886 1034 1291 2980 history2 18 0 2 history2 523 119 7
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >5µm Particles >21µm Particles >38µm Particles >71µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m MEthod ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	limit/base >20 >20 limit/base >5000 >1300 >160 >40 >10	25 0 2 0 15 2290 776 880 4799 current 10 5 12 current 1596 150 16 6	75 0 6 <1 47 2860 854 1097 3197 history1 12 6 3 history1 9922 485 30 8	116 0 5 <1 39 2886 1034 1291 2980 history2 18 0 2 history2 523 119 7
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	limit/base >20 >20 limit/base >5000 >1300 >160 >40 >10	25 0 2 0 15 2290 776 880 4799 current 10 5 12 current 1596 150 16 6 1	75 0 6 <1 47 2860 854 1097 3197 history1 12 6 3 history1 9922 485 30 8 1	116 0 5 <1 39 2886 1034 1291 2980 history2 18 0 2 history2 523 119 7 2 0

Acid Number (AN)

mg KOH/g ASTM D8045

c

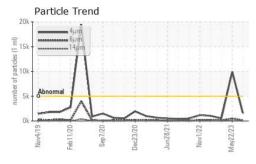
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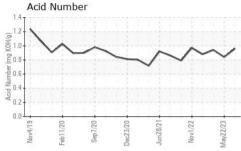
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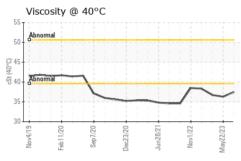
Contact/Location: MIKE WYATT - TRANEW

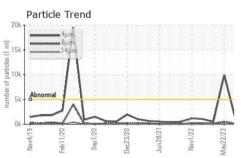


OIL ANALYSIS REPORT









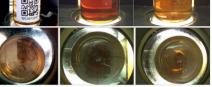
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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 PROPERTIES		method				history2

0.5					
Visc @ 40°C	cSt	ASTM D445	37.5	36.3	36.7

Bottom

Color





Ferrous Alloys Particle Count 491 520 122,880 30,72 1,920 Non-ferrous Metals 480 120 Viscosity @ 40°C Acid Number (mg KOH/g) 50 (3-04) ts 40 O.O Acid





Certificate 12367

Laboratory Sample No.

: WC0913247 Lab Number : 06151906 Unique Number : 10981984 Test Package : CONST

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 17 Apr 2024 **Tested**

Diagnosed

: 18 Apr 2024 : 18 Apr 2024 - Wes Davis

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)

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