

PROBLEM SUMMARY

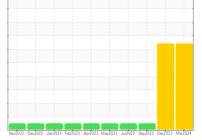
Sample Rating Trend

DIRT

CATERPILLAR D6 10033 (S/N KEW01101)

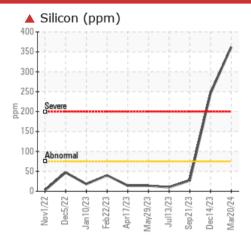
Left Final Drive

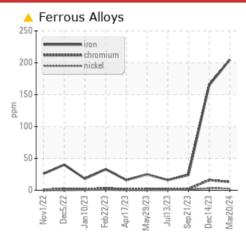
{not provided} (--- GAL)

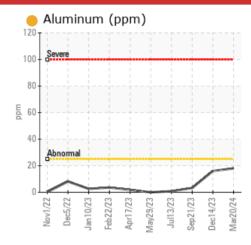




COMPONENT CONDITION SUMMARY







RECOMMENDATION

We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS									
Sample Status				SEVERE	SEVERE	NORMAL			
Chromium	ppm	ASTM D5185m	>10	1 3	<u> 16</u>	2			
Silicon	mag	ASTM D5185m	>75	362	246	27			

Customer Id: TRANEW Sample No.: WC0888217 Lab Number: 06131171 Test Package: CONST



To manage this report scan the QR code

To discuss the diagnosis or test data:

Don Baldridge +1 don.b505@comcast.net

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

RECOMMENDED ACTIONS Action Status Date Done By Description Resample -- -- ? We recommend an early resample to monitor this condition. Check Dirt Access -- -- ? We advise that you check all areas where dirt can enter the system.

HISTORICAL DIAGNOSIS

14 Dec 2023 Diag: Don Baldridge

DIRT



We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. The chromium level is abnormal. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The oil is no longer serviceable due to the presence of contaminants.



21 Sep 2023 Diag: Don Baldridge

NORMAL



Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

view report

13 Jul 2023 Diag: Sean Felton

NORMAL



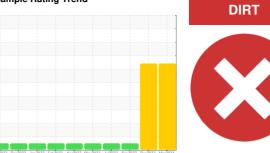
Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.





OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

CATERPILLAR D6 10033 (S/N KEW01101)

Component

Left Final Drive

{not provided} (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

The chromium level is abnormal.

▲ Contamination

Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Fluid Condition

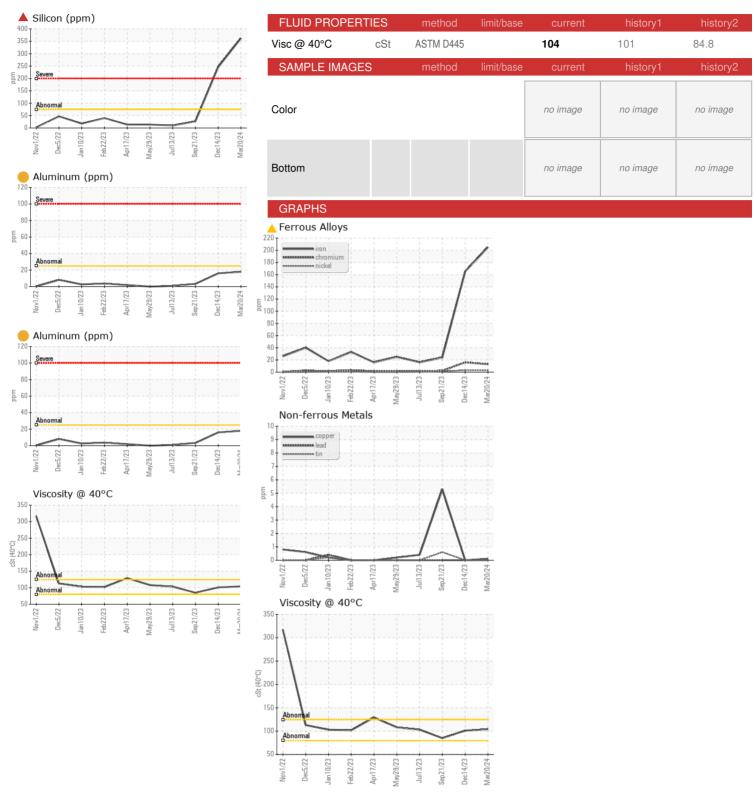
The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION method limit/base current history1 history2			Nov2022 Dec2	022 Jan 2023 Feb 2023 Apr2	023 May2023 Jui2023 Sep2023 Deci	2023 Mar2024		
Sample Date	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2	
Machine Age hrs Client Info 5480 4709 4241 Oil Age hrs Client Info 771 468 468 Oil Changed Coll Changed Sample Status Client Info Changed Changed Changed Changed SEVERE NORMAL CONTAMINATION method limit/bass current history1 history2 Water WC Method >0.2 NEG NEG NEG WEAR METALS method limit/bass current history1 history2 Iron ppm ASTM D5185m >500 205 165 24 Chromium ppm ASTM D5185m >10 3 3 1 Titanium ppm ASTM D5185m >10 3 3 1 Titanium ppm ASTM D5185m >25 0 0 0 Aluminum ppm ASTM D5185m >25 0 0 0 Copper ppm ASTM D5185m >10 0 0 <1	Sample Number		Client Info		WC0888217	WC0879267	WC0831354	
Machine Age hrs Client Info 5480 4709 4241 Oil Age hrs Client Info 771 468 468 Oil Changed Client Info Changed Changed Changed Changed Changed Changed NEG NE	·		Client Info		20 Mar 2024	14 Dec 2023	21 Sep 2023	
Oil Changed Sample Status Client Info Changed SEVERE Changed SEVERE Changed SEVERE Changed NORMAL CONTAMINATION method Ilmit/base current Instory1 history2 Water WC Method >0.2 NEG NEG NEG WEAR METALS method Ilmit/base current history1 history2 Iron ppm ASTM D5185m >500 205 165 24 Chromium ppm ASTM D5185m >10 3 3 1 Chromium ppm ASTM D5185m >10 3 3 1 Chromium ppm ASTM D5185m >10 0 0 0 Alluminum ppm ASTM D5185m 25 18 16 3 Lead ppm ASTM D5185m >25 18 16 3 Lead ppm ASTM D5185m >20 0 0 0 Copper ppm ASTM D5185m >10	Machine Age	hrs	Client Info		5480	4709		
Oil Changed Sample Status Client Info Changed SEVERE Changed SEVERE Changed NORMAL CONTAMINATION method Imitibase current history1 history2 Water WC Method >0.2 NEG NEG NEG WEAR METALS method Imitibase current history1 history2 Iron ppm ASTM D5185m >500 205 165 24 Chromium ppm ASTM D5185m >10 3 3 1 Nickel ppm ASTM D5185m >10 3 3 1 Nickel ppm ASTM D5185m >10 0 0 0 Aluminum ppm ASTM D5185m >25 18 16 3 Lead ppm ASTM D5185m >25 1 0 0 0 Copper ppm ASTM D5185m >50 -1 0 0 -1 Vanadium ppm ASTM D5185m 0	Oil Age	hrs	Client Info		771	468	468	
CONTAMINATION method limit/base current history1 history2 Water WC Method >0.2 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >500 205 165 24 Chromium ppm ASTM D5185m >10 3 3 1 Nickel ppm ASTM D5185m >10 3 3 1 Sliver ppm ASTM D5185m >25 0 0 0 Aluminum ppm ASTM D5185m >25 0 0 0 Aluminum ppm ASTM D5185m >25 0 0 0 Lead ppm ASTM D5185m >50 <1 0 0 Copper ppm ASTM D5185m >50 <1 0 0 Vanadium ppm ASTM D5185m 0 0 0 0	-		Client Info		Changed	Changed	Changed	
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WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >500 205 165 24 Chromium ppm ASTM D5185m >10 3 3 1 Nickel ppm ASTM D5185m >10 3 3 1 Silver ppm ASTM D5185m 0 0 0 0 Aluminum ppm ASTM D5185m >25 18 16 3 Lead ppm ASTM D5185m >25 0 0 0 0 Copper ppm ASTM D5185m >50 <1 0 5 1 Vanadium ppm ASTM D5185m 0 0 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 0 ADDITIVES method limit/base current history1 history1 history2 Boron <td< th=""><th>CONTAMINATION</th><th>V</th><th>method</th><th>limit/base</th><th>current</th><th>history1</th><th>history2</th></td<>	CONTAMINATION	V	method	limit/base	current	history1	history2	
Iron	Water		WC Method	>0.2	NEG	NEG	NEG	
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Nickel	Iron	ppm	ASTM D5185m	>500	205	165	24	
Titanium ppm ASTM D5185m 2 2 <1 Silver ppm ASTM D5185m 0 0 0 Aluminum ppm ASTM D5185m >25 18 16 3 Lead ppm ASTM D5185m >50 0 0 0 Copper ppm ASTM D5185m >50 <1	Chromium	ppm	ASTM D5185m	>10	<u> </u>	<u></u> 16	2	
Silver ppm ASTM D5185m 0 0 0 Aluminum ppm ASTM D5185m >25 18 16 3 Lead ppm ASTM D5185m >25 0 0 0 Copper ppm ASTM D5185m >50 <1	Nickel	ppm	ASTM D5185m	>10	3	3	1	
Aluminum ppm ASTM D5185m >25 18 16 3 Lead ppm ASTM D5185m >25 0 0 0 Copper ppm ASTM D5185m >50 <1	Titanium	ppm	ASTM D5185m		2	2	<1	
Lead ppm ASTM D5185m >25 0 0 0 Copper ppm ASTM D5185m >50 <1	Silver	ppm	ASTM D5185m		0	0	0	
Copper ppm ASTM D5185m >50 <1	Aluminum	ppm	ASTM D5185m	>25	<u> </u>	1 6	3	
Tin ppm ASTM D5185m >10 0 0 <1	Lead	ppm	ASTM D5185m	>25	0	0	0	
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 146 149 158 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 2 1 <1	Copper	ppm	ASTM D5185m	>50	<1	0	5	
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 146 149 158 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 2 1 <1 Manganese ppm ASTM D5185m 3 3 <1 Magnesium ppm ASTM D5185m 106 49 102 Phosphorus ppm ASTM D5185m 328 271 312 Zinc ppm ASTM D5185m 18 6 24 Sulfur ppm ASTM D5185m 2070 1914 2143 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >75 4 362 246 27 Sodium ppm ASTM D5185m 3	Tin	ppm	ASTM D5185m	>10	0	0	<1	
Boron ppm ASTM D5185m 146 149 158	Vanadium	ppm	ASTM D5185m		0	0	0	
Boron	Cadmium	ppm	ASTM D5185m		0	0	0	
Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 2 1 <1 Manganese ppm ASTM D5185m 3 3 <1 Magnesium ppm ASTM D5185m 0 <1 2 Calcium ppm ASTM D5185m 106 49 102 Phosphorus ppm ASTM D5185m 328 271 312 Zinc ppm ASTM D5185m 328 271 312 Zinc ppm ASTM D5185m 2070 1914 2143 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m 3 0 0 Sodium ppm ASTM D5185m 3 0 0 Potassium ppm ASTM D5185m 3 0 0 VISUAL method limit/base current history1 history2	ADDITIVES		method	limit/base	current	history1	history2	
Molybdenum ppm ASTM D5185m 2 1 <1	<th>Boron</th> <th>ppm</th> <th>ASTM D5185m</th> <th></th> <th>146</th> <th>149</th> <th>158</th>	Boron	ppm	ASTM D5185m		146	149	158
Manganese ppm ASTM D5185m 3 3 <1	Barium	ppm	ASTM D5185m		0	0	0	
Magnesium ppm ASTM D5185m 0 <1	Molybdenum	ppm	ASTM D5185m		2	1	<1	
Calcium ppm ASTM D5185m 106 49 102 Phosphorus ppm ASTM D5185m 328 271 312 Zinc ppm ASTM D5185m 18 6 24 Sulfur ppm ASTM D5185m 2070 1914 2143 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >75 ▲ 362 ▲ 246 27 Sodium ppm ASTM D5185m >20 4 6 2 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE VisUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE	Manganese	ppm	ASTM D5185m		3	3	<1	
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Zinc ppm ASTM D5185m 18 6 24 Sulfur ppm ASTM D5185m 2070 1914 2143 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >75 ▲ 362 ▲ 246 27 Sodium ppm ASTM D5185m >20 4 6 2 VISUAL method limit/base current history1 history2 VISUAL method limit/base current history1 history2 VISUAL method limit/base current history1 history2 VISUAL NONE NONE NONE NONE Velous scalar *Visual NONE NONE NONE Velow Metal scalar *Visual NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE	Calcium	ppm	ASTM D5185m		106	49	102	
Sulfur ppm ASTM D5185m 2070 1914 2143 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >75 ▲ 362 ▲ 246 27 Sodium ppm ASTM D5185m >3 0 0 0 Potassium ppm ASTM D5185m >20 4 6 2 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE NONE Precipitate scalar *Visual NONE	Phosphorus	ppm	ASTM D5185m		328	271	312	
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >75 ▲ 362 ▲ 246 27 Sodium ppm ASTM D5185m 3 0 0 Potassium ppm ASTM D5185m >20 4 6 2 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE NONE Silt scalar *Visual NONE	Zinc	ppm	ASTM D5185m		18	6	24	
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PotassiumppmASTM D5185m>20462VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONENONENONEYellow Metalscalar*VisualNONENONENONENONEPrecipitatescalar*VisualNONENONENONENONESiltscalar*VisualNONEMODERMODERNONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEG0.2%NEGFree Waterscalar*VisualNEGNEGNEG	Silicon	ppm	ASTM D5185m	>75	362	2 46	27	
White Metal scalar *Visual NONE NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE Silt scalar *Visual NONE MODER NONE NONE Debris scalar *Visual NONE MODER MODER NONE Sand/Dirt scalar *Visual NONE NONE NONE NONE Appearance 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 0.2% NEG Free Water scalar *Visual NEG NEG	Sodium	ppm	ASTM D5185m		3	0	0	
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Precipitate scalar *Visual NONE NONE NONE NONE Silt scalar *Visual NONE MODER MODER 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 0.2% NEG Free Water scalar *Visual NEG NEG	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE	
Silt scalar *Visual NONE MODER MODER 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 0.2% NEG Free Water scalar *Visual NEG NEG NEG	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE	
Debrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEG0.2%NEGFree Waterscalar*VisualNEGNEGNEG	Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE	
Sand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEG0.2%NEGFree Waterscalar*VisualNEGNEGNEG	Silt	scalar	*Visual	NONE	MODER	MODER	NONE	
Appearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEG0.2%NEGFree Waterscalar*VisualNEGNEGNEG	Debris	scalar	*Visual	NONE	NONE	NONE	NONE	
Odorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEG0.2%NEGFree Waterscalar*VisualNEGNEGNEG	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE	
Emulsified Waterscalar*Visual>0.2NEG0.2%NEGFree Waterscalar*VisualNEGNEGNEG	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML	
Free Water scalar *Visual NEG NEG NEG	Odor	scalar	*Visual	NORML	NORML	NORML	NORML	
	Emulsified Water	scalar	*Visual	>0.2	NEG	0.2%	NEG	
	Free Water	scalar	*Visual		NEG	NEG		

Contact/Location: MIKE WYATT - TRANEW



OIL ANALYSIS REPORT







Certificate L2367

Laboratory Sample No.

: WC0888217 Lab Number : 06131171 Unique Number: 10950636 Test Package : CONST

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 27 Mar 2024 **Tested** : 28 Mar 2024

> : 01 Apr 2024 - Don Baldridge Diagnosed

TRADER CONSTRUCTION CO. PO DRAWER 1578 NEW BERN, NC US 28563

Contact: MIKE WYATT mwyatt@traderconstruction.com

T: (252)633-1399 F: (252)638-4871

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)