

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area Action Newark **CATERPILLAR 5659** Component

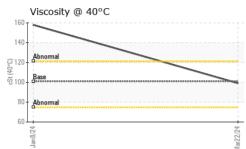
Front Differential Fluid

TDTO FLUID SAE 30 (--- GAL)

DIAGNOSIS	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Recommendation	Sample Number		Client Info		WC0889533	WC0889573	
Resample at the next service interval to monitor.	Sample Date		Client Info		22 Mar 2024	08 Jan 2024	
The fluid was not specified, however, a fluid match	Machine Age	hrs	Client Info		3847	10359	
indicates that this fluid is (GENERIC) TDTO FLUID	Oil Age	hrs	Client Info		0	0	
SAE 30. Please confirm.	Oil Changed		Client Info		N/A	N/A	
Wear	Sample Status				NORMAL	NORMAL	
All component wear rates are normal.							
Contamination	CONTAMINATIC	DN	method	limit/base	current	history1	history2
There is no indication of any contamination in the bil.	Water		WC Method		NEG	NEG	
Fluid Condition	WEAR METALS		method	limit/base	current	history1	history2
The condition of the oil is acceptable for the time in service.	Iron	ppm	ASTM D5185m	>500	12	41	
	Chromium	ppm	ASTM D5185m	>3	0	<1	
	Nickel	ppm	ASTM D5185m	>3	<1	0	
	Titanium	ppm	ASTM D5185m	>2	0	0	
	Silver	ppm	ASTM D5185m	>2	0	0	
	Aluminum	ppm	ASTM D5185m	>30	2	2	
	Lead	ppm	ASTM D5185m	>13	0	0	
	Copper	ppm	ASTM D5185m	>103	2	4	
	Tin	ppm	ASTM D5185m	>5	<1	0	
	Vanadium	ppm	ASTM D5185m		0	0	
	Cadmium	ppm	ASTM D5185m		0	0	
	ADDITIVES		method	limit/base	current	history1	history2
	Boron	ppm	ASTM D5185m	37	8	10	
		ppiii		07	0		
	Barium				0		
	Barium	ppm	ASTM D5185m ASTM D5185m	7	0	3	
	Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	7	0 8	3 2	
	Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	7 5	0 8 <1	3 2 0	
	Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	7 5 40	0 8 <1 34	3 2 0 25	
	Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	7 5 40 2650	0 8 <1 34 2990	3 2 0 25 2936	
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	7 5 40 2650 1050	0 8 <1 34 2990 1023	3 2 0 25 2936 1008	
	Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	7 5 40 2650 1050	0 8 <1 34 2990	3 2 0 25 2936	
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	7 5 40 2650 1050 1075 5750	0 8 <1 34 2990 1023 1224 7724	3 2 0 25 2936 1008 1291 10038	
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	7 5 40 2650 1050 1075 5750 Limit/base	0 8 <1 34 2990 1023 1224 7724 Current	3 2 0 25 2936 1008 1291 10038 history1	 history2
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon	ppm ppm ppm ppm ppm ppm ppm ppm S	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	7 5 40 2650 1050 1075 5750 Limit/base	0 8 <1 34 2990 1023 1224 7724 current 6	3 2 0 25 2936 1008 1291 10038 history1 4	 history2
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT	ppm ppm ppm ppm ppm ppm ppm ppm ppm s	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	7 5 40 2650 1050 1075 5750 limit/base >100	0 8 <1 34 2990 1023 1224 7724 Current	3 2 0 25 2936 1008 1291 10038 history1	 history2
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm S	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	7 5 40 2650 1050 1075 5750 limit/base >100	0 8 <1 34 2990 1023 1224 7724 <u>current</u> 6 2 2 <1	3 2 0 25 2936 1008 1291 10038 history1 4 0	 history2
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium VISUAL	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	7 5 40 2650 1050 1075 5750 limit/base >20 limit/base	0 8 <1 34 2990 1023 1224 7724 current 6 2 2 <1 current	3 2 0 25 2936 1008 1291 10038 history1 4 0 5 history1	 history2
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm s	ASTM D5185m ASTM D5185m	7 5 40 2650 1050 1075 5750 limit/base >20 limit/base NONE	0 8 <1 34 2990 1023 1224 7724 current 6 2 <1 current NONE	3 2 0 25 2936 1008 1291 10038 history1 4 0 5 5 history1 NONE	 history2 history2
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium VISUAL White Metal Yellow Metal	ppm ppm ppm ppm ppm ppm ppm ppm scalar scalar	ASTM D5185m ASTM D5185m XM D5185m ASTM D5185m ASTM D5185m	7 5 40 2650 1050 1075 5750 limit/base >100 Limit/base NONE NONE	0 8 <1 34 2990 1023 1224 7724 Current 6 2 <1 current NONE NONE NONE	3 2 0 25 2936 1008 1291 10038 history1 4 0 5 history1 NONE NONE	 history2 history2
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m Yisual *Visual	7 5 6 40 2650 1050 1075 5750 imit/base >100 imit/base NONE NONE NONE NONE	0 8 <1 34 2990 1023 1224 7724 <u>current</u> 6 2 <1 <u>current</u> NONE NONE NONE	3 2 0 25 2936 1008 1291 10038 history1 4 0 5 5 history1 NONE NONE NONE NONE	 history2 history2
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt	scalar	ASTM D5185m ASTM D5185m *Visual *Visual *Visual	7 5 6 6 7 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7	0 8 <1 34 2990 1023 1224 7724 current 6 2 <1 current NONE NONE NONE NONE NONE	3 2 0 25 2936 1008 1291 10038 history1 4 0 5 5 history1 NONE NONE NONE NONE NONE	 history2 history2
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris	scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m Yisual *Visual *Visual *Visual *Visual	7 5 40 2650 1050 1075 5750 imit/base >100 S20 NONE NONE NONE NONE NONE NONE NONE	0 8 <1 34 2990 1023 1224 7724 Current 6 2 <1 Current NONE NONE NONE NONE NONE NONE NONE	3 2 0 25 2936 1008 1291 10038 history1 4 0 5 <u>history1</u> 4 NONE NONE NONE NONE NONE NONE NONE	 history2
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt	scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual	7 5 40 2650 1050 1075 5750 imit/base >100 imit/base NONE NONE NONE NONE NONE NONE NONE NON	0 8 <1 34 2990 1023 1224 7724 current 6 2 <1 current NONE NONE NONE NONE NONE NONE NONE NON	3 2 0 25 2936 1008 1291 10038 history1 4 0 5 <u>history1</u> A NONE NONE NONE NONE NONE NONE NONE NO	 history2 history2 <li< td=""></li<>
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance	ppm scalar	ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual *Visual	7 5 40 2650 1050 1075 5750 imit/base >100 imit/base NONE NONE NONE NONE NONE NONE NONE NON	0 8 <1 34 2990 1023 1224 7724 current 6 2 <1 current NONE NONE NONE NONE NONE NONE NONE NON	3 2 0 25 2936 1008 1291 10038 history1 4 0 5 <u>history1</u> 4 0 5 <u>history1</u> NONE NONE NONE NONE NONE NONE NONE NON	 history2 history2
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance Odor	Ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	7 5 6 6 7 7 6 7 7 7 7 7 7 7 7 7 7 7 7 7	0 8 <1 34 2990 1023 1224 7724 Current 6 2 <1 Current NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE	3 2 0 25 2936 1008 1291 10038 history1 4 0 5 <u>history1</u> 4 0 5 <u>history1</u> NONE NONE NONE NONE NONE NONE NONE NON	 history2
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance	ppm scalar	ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	7 5 40 2650 1050 1075 5750 imit/base >100 imit/base NONE NONE NONE NONE NONE NONE NONE NON	0 8 <1 34 2990 1023 1224 7724 current 6 2 <1 current NONE NONE NONE NONE NONE NONE NONE NON	3 2 0 25 2936 1008 1291 10038 history1 4 0 5 <u>history1</u> 4 0 5 <u>history1</u> NONE NONE NONE NONE NONE NONE NONE NON	 <li< td=""></li<>



OIL ANALYSIS REPORT



	FLUID PROPER Visc @ 40°C		ethod FM D445	limit/base	current 99.1	history1 158	history2
	SAMPLE IMAGE		ethod	limit/base	current	history1	history2
4		.0 11		inniv base	Current		mistoryz
	Color				no image	no image	no image
Mar2/24							
	Bottom				no image	no image	no image
	GRAPHS						
100	Iron (ppm)			, - 30	Lead (ppm)		
80	Severe			25	Sminn		
und 60	Abnormal			20 톮 15			
40				10	T		
20	00						
	Jan 8/24			Mar22/24	Jan 8/24		
	¬ Aluminum (ppm)			Ma	¬ Chromium ((mag	2
	Severe				Severe		
4	10			5			
mdd	30 - Abnormal			udd 3	Abnormal		
	10-			2	! -		
	Jan 8/24			2/24	Jan 8/24		20
				Mar22/24			
20	Copper (ppm)			200	Silicon (ppm)	
15	50			150)		
톱 10	Abnormal			툍 100	Abnormal		
Ę	50			50)-		
	0			24	24		e C
	Jan8/24			Mar22/24	Jan 8/24		
16	Viscosity @ 40°C				Additives		
14				3000		rus	
12 12 140°C)	20 Abnormal Base			2500 E 2000)	
	00 - Abnormal			2000			
	50 L			1000			
	Jan 8/24			Mar22/24	Jan 8/24		
ple No. : V Number : C Je Number : 1 Package : N	0951965	Received Tested Diagnose	: 28 M : 01 A d : 01 A	NC 27513 Mar 2024 Apr 2024 Apr 2024 - W	'es Davis	ITERSTATE WA 110 EVERGREE Contact: I RWitynski@inters	EN AVE, BAY NEWARK, N US 0711 Robert Wityns

回校主题