

OIL ANALYSIS REPORT

Sample Rating Trend

PALFINGER 100277680 - UNITED RENTALS

Component Hydraulic System

AW HYDRAULIC OIL ISO 32 (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

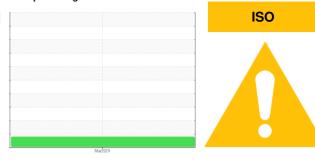
All component wear rates are normal.

Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition

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



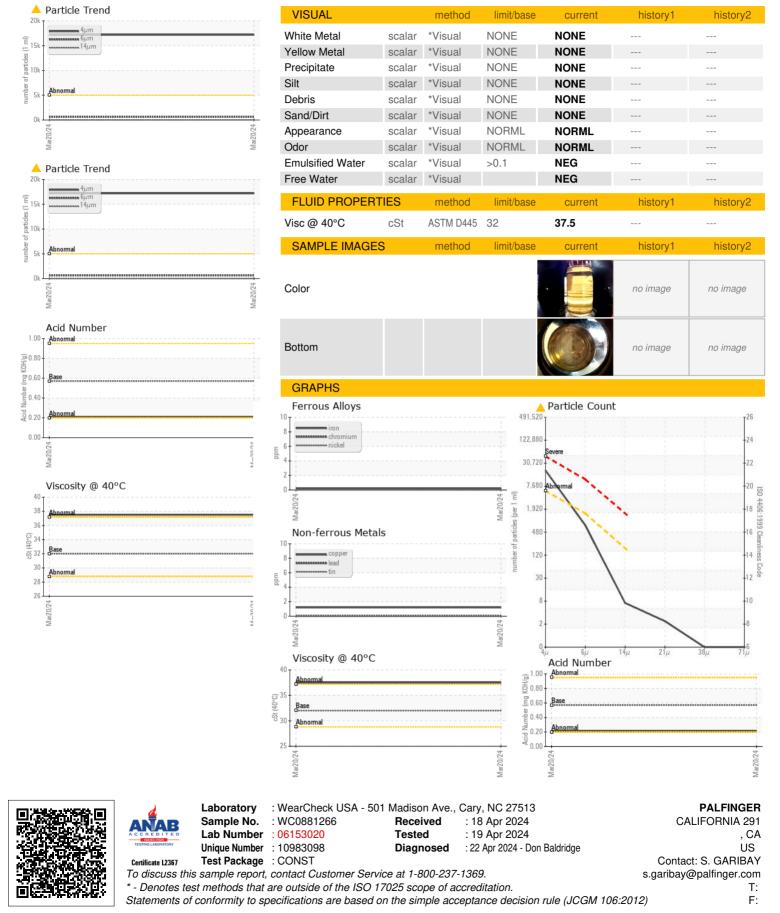
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0881266		
Sample Date		Client Info		20 Mar 2024		
Machine Age	mls	Client Info		204613		
Oil Age	mls	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				ABNORMAL		
	N	method	limit/base			
Water	IN	WC Method		current NEG	history1	history2
				-		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m		<1		
Chromium	ppm	ASTM D5185m		<1		
Nickel	ppm	ASTM D5185m	>10	0		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m		0		
Aluminum	ppm	ASTM D5185m	>10	0		
Lead	ppm	ASTM D5185m	>10	0		
Copper	ppm	ASTM D5185m	>75	1		
Tin	ppm	ASTM D5185m	>10	0		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	0		
Barium	ppm	ASTM D5185m	5	0		
				•		
Molybdenum	ppm	ASTM D5185m	5	0		
•	ppm ppm	ASTM D5185m ASTM D5185m	5	0 <1		
Manganese	ppm		5 25	-		
Manganese Magnesium	ppm ppm	ASTM D5185m		<1 2		
Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m	25	<1		
Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	25 200 300	<1 2 63 240		
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	25 200	<1 2 63	 	
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	25 200 300 370	<1 2 63 240 290	 	
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	25 200 300 370 2500 limit/base	<1 2 63 240 290 1175	 	
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	25 200 300 370 2500	<1 2 63 240 290 1175 current 1	 	
Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	25 200 300 370 2500 limit/base	<1 2 63 240 290 1175 current	 history1	 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	25 200 300 370 2500 limit/base >20	<1 2 63 240 290 1175 current 1 2	 history1 	 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m	25 200 300 370 2500 limit/base >20	<1 2 63 240 290 1175 current 1 2 1	 history1 	 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	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	25 200 300 370 2500 Iimit/base >20 Iimit/base >5000	<1 2 63 240 290 1175 current 1 2 1 2 1 current	 history1 history1	 history2 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	25 200 300 2500 limit/base >20 	<1 2 63 240 290 1175 current 1 2 1 current 1 1 2 1 1 2 1 1 6 634	 history1 history1 history1	 history2 history2
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	ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	25 200 300 2500 limit/base >20 >20 limit/base >5000 >1300 >160	<1 2 63 240 290 1175 current 1 2 1 1 2 1 1 2 1 1 634 634 6	 history1 history1 history1	 history2 history2 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm	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 D7647 ASTM D7647 ASTM D7647 ASTM D7647	25 200 300 2500 imit/base >20 >20 imit/base >5000 >1300 >160 >40	<1 2 63 240 290 1175 current 1 2 1 2 1 current 1 2 1 2 1 2 1 2 1 2 2 1 2 2 2 1 2	 history1 history1	 history2 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm	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 D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	25 200 300 2500 2500 2500 >20 20 20 1imit/base >5000 >1300 >160 >40 >10	<1 2 63 240 290 1175 current 1 2 1 2 1 current 1 2 1 2 1 current 6 634 6 2 0	 history1 history1 history1	 history2 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	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 D7647 ASTM D7647 ASTM D7647 ASTM D7647	25 200 300 2500 imit/base >20 imit/base >20 imit/base >5000 >1300 >160 >40 >10 >3	<1 2 63 240 290 1175 current 1 2 1 2 1 current 1 2 1 2 1 2 1 2 1 2 2 1 2 2 2 1 2	history1 history1 history1	 history2 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm Particles >71µm Oil Cleanliness	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 ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	25 200 300 2500 2500 >20 >20 >20 20 >20 >20 >100 >1300 >160 >160 >160 >10 >10 >10 >3 >3 >19/17/14	<1 2 63 240 290 1175 current 1 2 1 2 1 current 1 2 1 2 1 current 0 0 0 21/16/10	 history1 history1 	 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >4µm Particles >4µm Particles >21µm Particles >38µm Particles >71µm	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 ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	25 200 300 2500 imit/base >20 imit/base >20 imit/base >5000 >1300 >160 >40 >10 >3	<1 2 63 240 290 1175 current 1 2 1 2 1 current 1 2 1 2 1 2 1 2 0 0 0 0	 history1 history1 	 history2 history2

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