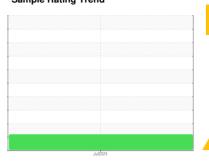


OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id
40018
Component
Hydraulic System

AW HYDRAULIC OIL ISO 32 (--- GAL)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) AW HYDRAULIC OIL ISO 32. Please confirm.

Wear

All component wear rates are normal.

Contamination

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

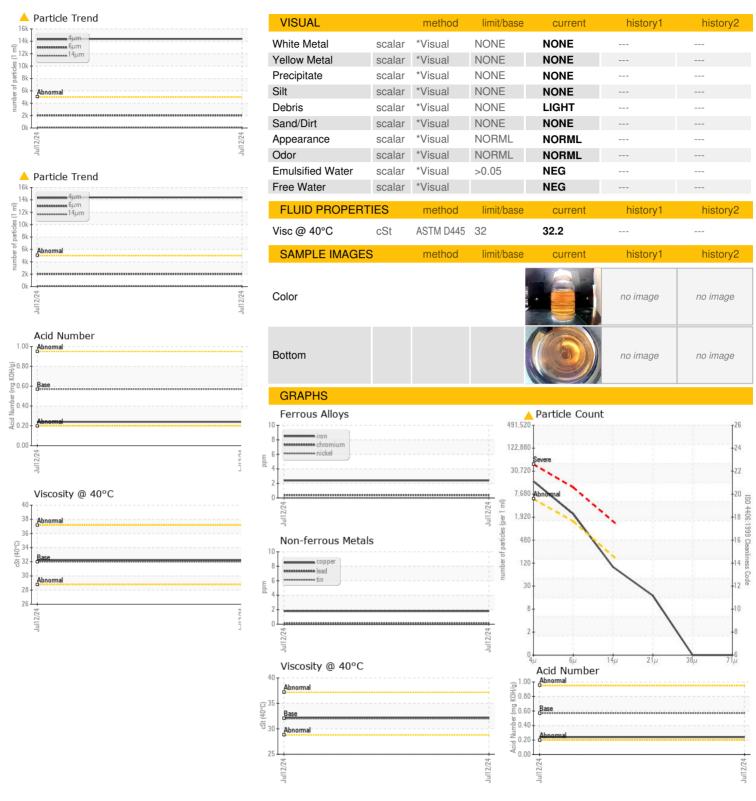
Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION method limit/base current history1 history2 Sample Date Client Info PTK0005167 Oil Age hrs Client Info 0 Oil Changed Client Info 0 Oil Changed Client Info Not Changd Sample Status ABNORMAL CONTAMINATION method limit/base current history1 history2 Water WC Method >0.05 NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 2 WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 2 Wickel ppm ASTM D5185m >20 4 Aluminum							
Sample Number Client Info PTK0005167 Sample Date Client Info 12 Jul 2024 Machine Age hrs Client Info 0 Oil Age hrs Client Info Not Changd Oil Changed Client Info Not Changd Sample Status method limit/base current history1 history2 Water WC Method >.0.05 NEG Water WC Method >.0.05 NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5165m >20 2 Iron ppm ASTM D5165m >20 2 Iron ppm ASTM D5165m >20 4 Silver ppm ASTM D5165m					Jul2024		
Sample Number Client Info PTK0005167 Sample Date Client Info 12 Jul 2024 Machine Age hrs Client Info 0 Oil Age hrs Client Info Not Changd Oil Changed Client Info Not Changd Sample Status method limit/base current history1 history2 Water WC Method >.0.05 NEG Water WC Method >.0.05 NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5165m >20 2 Iron ppm ASTM D5165m >20 2 Iron ppm ASTM D5165m >20 4 Silver ppm ASTM D5165m	CAMPLE INCORN	AATIONI	and the section of	111-7-7		la ta ka mad	la la tarre O
Sample Date Client Info 12 Jul 2024 Machine Age hrs Client Info 0 Oil Age hrs Client Info 0 Oil Changed Client Info Not Changd Sample Status Image: Client Info Not Changd CONTAMINATION method limit/base current history1 history2 Water WC Method >0.05 NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 2 Korkel ppm ASTM D5185m >20 0 Nickel ppm ASTM D5185m >20 0 Aluminum ppm ASTM D5185m >20 0 Lead ppm AS	SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 0	•		Client Info				
Oil Age hrs Client Info Not Changd	Sample Date		Client Info		12 Jul 2024		
Oil Changed Sample Status		hrs	Client Info				
CONTAMINATION method limit/base current history1 history2 Water WC Method >0.05 NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 2 Nickel ppm ASTM D5185m >20 0 Nickel ppm ASTM D5185m >20 0 Silver ppm ASTM D5185m >20 4 Aluminum ppm ASTM D5185m >20 4 Aluminum ppm ASTM D5185m >20 4 Lead ppm ASTM D5185m >20 2 Copper ppm ASTM D5185m >20 2 Vanadium ppm ASTM D5185m >20 2	-	hrs	Client Info		-		
CONTAMINATION method limit/base current history1 history2 Water WC Method > 0.05 NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 2 Chromium ppm ASTM D5185m >20 0 Nickel ppm ASTM D5185m >20 0 Silver ppm ASTM D5185m >20 4 Aluminum ppm ASTM D5185m >20 4 Aluminum ppm ASTM D5185m >20 0 Aluminum ppm ASTM D5185m >20 0 Copper ppm ASTM D5185m >20 0 Aluminum ppm ASTM D5185m >0 0			Client Info				
Water WC Method > 0.05 NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 2 Chromium ppm ASTM D5185m >20 0 Nickel ppm ASTM D5185m >20 0 Silver ppm ASTM D5185m >20 4 Aluminum ppm ASTM D5185m >20 4 Aluminum ppm ASTM D5185m >20 0 Lead ppm ASTM D5185m >20 2 Lead ppm ASTM D5185m >20 2 1 Capper ppm ASTM D5185m >20 2 Approximation ppm ASTM D5185m 5 0	Sample Status				ABNORMAL		
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 2 Nickel ppm ASTM D5185m >20 0 Nickel ppm ASTM D5185m >20 0 Silver ppm ASTM D5185m >20 4 Aluminum ppm ASTM D5185m >20 4 Lead ppm ASTM D5185m >20 2 Lead ppm ASTM D5185m >20 2 Copper ppm ASTM D5185m >20 2 Vanadium ppm ASTM D5185m >20 2 Cadmium ppm ASTM D5185m >1 Boron ppm ASTM D5185m 5 0 <	CONTAMINATION	١	method	limit/base	current	history1	history2
Iron	Water		WC Method	>0.05	NEG		
Chromium ppm ASTM D5185m >20 <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m >20 0	Iron	ppm	ASTM D5185m	>20	2		
Titanium	Chromium	ppm	ASTM D5185m	>20	<1		
Silver	Nickel	ppm	ASTM D5185m	>20	0		
Aluminum	Titanium	ppm	ASTM D5185m		<1		
Lead ppm ASTM D5185m >20 0 Copper ppm ASTM D5185m >20 2 Tin ppm ASTM D5185m >20 <1	Silver	ppm	ASTM D5185m		<1		
Copper ppm ASTM D5185m ≥20 2 Tin ppm ASTM D5185m >20 <1	Aluminum	ppm	ASTM D5185m	>20	4		
Tin ppm ASTM D5185m >20 <1 ··· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·	Lead	ppm	ASTM D5185m	>20	0		
Vanadium ppm ASTM D5185m <1 Cadmium ppm ASTM D5185m <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5 0 Barium ppm ASTM D5185m 5 0 Molybdenum ppm ASTM D5185m 5 <1 Manganese ppm ASTM D5185m 25 6 Magnesium ppm ASTM D5185m 25 6 Calcium ppm ASTM D5185m 200 57 Phosphorus ppm ASTM D5185m 200 303 Zinc ppm ASTM D5185m 370 385 Sulfur ppm ASTM D5185m 2500 3294 </td <td>Copper</td> <td>ppm</td> <td>ASTM D5185m</td> <td>>20</td> <td>2</td> <td></td> <td></td>	Copper	ppm	ASTM D5185m	>20	2		
Cadmium ppm ASTM D5185m <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5 0 Barium ppm ASTM D5185m 5 0 Molybdenum ppm ASTM D5185m 5 <1	Tin	ppm	ASTM D5185m	>20	<1		
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5 0 Barium ppm ASTM D5185m 5 0 Molybdenum ppm ASTM D5185m 5 <1	Vanadium	ppm	ASTM D5185m		<1		
Boron ppm ASTM D5185m 5 0 Barium ppm ASTM D5185m 5 0 Molybdenum ppm ASTM D5185m 5 <1	Cadmium	ppm	ASTM D5185m		<1		
Barium ppm ASTM D5185m 5 0 Molybdenum ppm ASTM D5185m 5 <1 Magnesium ppm ASTM D5185m 25 6 Calcium ppm ASTM D5185m 200 57 Phosphorus ppm ASTM D5185m 300 303 Zinc ppm ASTM D5185m 370 385 Sulfur ppm ASTM D5185m 2500 3294 CONTAMINANTS method limit/base current history2 history2 Silicon ppm ASTM D5185m >15 <1 Sodium ppm ASTM D5185m >20 1 Potassium ppm ASTM D5185m >20 1 FLUID CLEANLINESS method limit/base <th>ADDITIVES</th> <th></th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	ADDITIVES		method	limit/base	current	history1	history2
Barium ppm ASTM D5185m 5 0 Molybdenum ppm ASTM D5185m 5 <1	Boron	ppm	ASTM D5185m	5	0		
Molybdenum ppm ASTM D5185m 5 <1 Manganese ppm ASTM D5185m 25 6 Magnesium ppm ASTM D5185m 200 57 Phosphorus ppm ASTM D5185m 300 303 Zinc ppm ASTM D5185m 370 385 Sulfur ppm ASTM D5185m 2500 3294 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 <1	Barium		ASTM D5185m	5	0		
Manganese ppm ASTM D5185m 0 Magnesium ppm ASTM D5185m 25 6 Calcium ppm ASTM D5185m 200 57 Phosphorus ppm ASTM D5185m 300 303 Zinc ppm ASTM D5185m 370 385 Sulfur ppm ASTM D5185m 2500 3294 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 <1	Molybdenum		ASTM D5185m	5	<1		
Magnesium ppm ASTM D5185m 25 6 Calcium ppm ASTM D5185m 200 57 Phosphorus ppm ASTM D5185m 300 303 Zinc ppm ASTM D5185m 370 385 Sulfur ppm ASTM D5185m 2500 3294 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 <1	•		ASTM D5185m		0		
Calcium ppm ASTM D5185m 200 57 Phosphorus ppm ASTM D5185m 300 303 Zinc ppm ASTM D5185m 370 385 Sulfur ppm ASTM D5185m 2500 3294 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 <1	•		ASTM D5185m	25	6		
Phosphorus ppm ASTM D5185m 300 303 Zinc ppm ASTM D5185m 370 385 Sulfur ppm ASTM D5185m 2500 3294 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m 0 Sodium ppm ASTM D5185m 0 Potassium ppm ASTM D5185m >20 1 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >5000 14388 Particles >6μm ASTM D7647 >1300 2030 Particles >14μm ASTM D7647 >40 15 Particles >38μm ASTM D7647 >10 0	-						
Zinc ppm ASTM D5185m 370 385 Sulfur ppm ASTM D5185m 2500 3294 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 <1 Sodium ppm ASTM D5185m 0 Potassium ppm ASTM D5185m ≥20 1 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >5000 14388 Particles >6μm ASTM D7647 >1300 2030 Particles >14μm ASTM D7647 >160 84 Particles >21μm ASTM D7647 >40 15 Particles >71μm ASTM D7647 >3 0 <		mag	ASTM D5185m	200	57		
Sulfur ppm ASTM D5185m 2500 3294 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 <1	Phosphorus						
Silicon ppm ASTM D5185m >15 <1 Sodium ppm ASTM D5185m 0 Potassium ppm ASTM D5185m >20 1 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >5000 ▲ 14388 Particles >6μm ASTM D7647 >1300 2030 Particles >14μm ASTM D7647 >160 84 Particles >21μm ASTM D7647 >40 15 Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >19/17/14 21/18/14		ppm	ASTM D5185m	300	303		
Silicon ppm ASTM D5185m >15 <1	Zinc	ppm	ASTM D5185m ASTM D5185m	300 370	303 385		
Sodium ppm ASTM D5185m 0 Potassium ppm ASTM D5185m >20 1 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >5000 ▲ 14388 Particles >6μm ASTM D7647 >1300 2030 Particles >14μm ASTM D7647 >160 84 Particles >21μm ASTM D7647 >40 15 Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >19/17/14 21/18/14	Zinc Sulfur	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	300 370 2500	303 385 3294		
Potassium ppm ASTM D5185m >20 1 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >5000 ▲ 14388 Particles >6μm ASTM D7647 >1300 2030 Particles >14μm ASTM D7647 >160 84 Particles >21μm ASTM D7647 >40 15 Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >19/17/14 21/18/14	Zinc Sulfur CONTAMINANTS	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method	300 370 2500 limit/base	303 385 3294 current	 history1	 history2
FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >5000 ▲ 14388 Particles >6μm ASTM D7647 >1300 2030 Particles >14μm ASTM D7647 >160 84 Particles >21μm ASTM D7647 >40 15 Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >19/17/14 21/18/14	Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	300 370 2500 limit/base	303 385 3294 current <1	 history1	 history2
Particles >4μm ASTM D7647 >5000 ▲ 14388 Particles >6μm ASTM D7647 >1300 ● 2030 Particles >14μm ASTM D7647 >160 84 Particles >21μm ASTM D7647 >40 15 Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >19/17/14 21/18/14	Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	300 370 2500 limit/base >15	303 385 3294 current <1 0	 history1	 history2
Particles >6μm ASTM D7647 >1300 2030 Particles >14μm ASTM D7647 >160 84 Particles >21μm ASTM D7647 >40 15 Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >19/17/14 21/18/14	Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	300 370 2500 limit/base >15 >20	303 385 3294 current <1 0	 history1 	 history2
Particles >14μm ASTM D7647 >160 84 Particles >21μm ASTM D7647 >40 15 Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >19/17/14 21/18/14	Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	300 370 2500 limit/base >15 >20	303 385 3294 current <1 0 1	 history1 	 history2
Particles >21μm ASTM D7647 >40 15 Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >19/17/14 Δ 21/18/14	Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	300 370 2500 limit/base >15 >20 limit/base >5000	303 385 3294 current <1 0 1 current ▲ 14388	 history1 history1	history2 history2
Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >19/17/14 Δ 21/18/14	Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D7647	300 370 2500 limit/base >15 >20 limit/base >5000 >1300	303 385 3294 current <1 0 1 current ▲ 14388 ● 2030	history1 history1	history2 history2
Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >19/17/14 ▲ 21/18/14	Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	300 370 2500 limit/base >15 >20 limit/base >5000 >1300 >160	303 385 3294	history1 history1	history2 history2
Oil Cleanliness ISO 4406 (c) >19/17/14 21/18/14	Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	300 370 2500 limit/base >15 >20 limit/base >5000 >1300 >160 >40	303 385 3294	history1 history1 history1	history2 history2
	Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	300 370 2500 limit/base >15 >20 limit/base >5000 >1300 >160 >40 >10	303 385 3294 current <1 0 1 current 14388 2030 84 15 0	history1 history1	history2 history2
FLUID DEGRADATION method limit/base current history1 history2	Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >21µm Particles >38µm Particles >71µm	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647	300 370 2500 limit/base >15 >20 limit/base >5000 >1300 >160 >40 >10	303 385 3294 current <1 0 1 current ▲ 14388 ● 2030 84 15 0 0	history1 history1	history2 history2
	Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >21µm Particles >38µm Particles >71µm	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647	300 370 2500 limit/base >15 >20 limit/base >5000 >1300 >160 >40 >10	303 385 3294 current <1 0 1 current ▲ 14388 ● 2030 84 15 0 0	history1 history1	history2 history2



OIL ANALYSIS REPORT





Sample No.

Lab Number : 06240273 Unique Number : 11129107

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PTK0005167 Received : 18 Jul 2024 **Tested** : 19 Jul 2024

Diagnosed : 19 Jul 2024 - Wes Davis

Test Package : MOB 2 Certificate 12367 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)

CAPITAL INDUSTRIES

5801 3RD AVE S SEATTLE, WA US 98108

Contact: F. DEJONGE fdejonge@capitalind.com

T: (425)577-8345