

### **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id

# 25823 - ABC SUPPLY

Hydraulic System AW HYDRAULIC OIL ISO 32 (--- GAL)

#### DIAGNOSIS

#### A 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

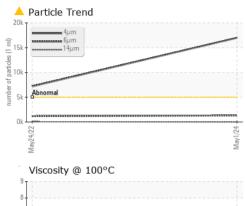
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

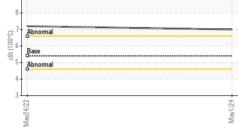
SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0891954	WC0640463	
Sample Date		Client Info		01 May 2024	24 May 2022	
Machine Age	yrs	Client Info		0	1	
Oil Age	yrs	Client Info		0	1	
Oil Changed	yıo	Client Info		Not Changd	Not Changd	
Sample Status				ABNORMAL	ATTENTION	
-		method	limit/base			
	N	WC Method			history1	history2
Water				NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	<1	<1	
Chromium	ppm	ASTM D5185m	>10	0	0	
Nickel	ppm	ASTM D5185m	>10	0	0	
Titanium	ppm	ASTM D5185m		0	0	
Silver	ppm	ASTM D5185m		0	<1	
Aluminum	ppm	ASTM D5185m	>10	<1	<1	
Lead	ppm	ASTM D5185m	>10	0	0	
Copper	ppm	ASTM D5185m	>75	3	1	
Tin	ppm	ASTM D5185m	>10	<1	<1	
Vanadium	ppm	ASTM D5185m		0	0	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	0	<1	
				-		
Barium	ppm	ASTM D5185m	5	0	0	
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	5 5	0	0 <1	
				-		
Molybdenum	ppm	ASTM D5185m		0	<1	
Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m	5	0 <1	<1 <1	
Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	5 25	0 <1 0	<1 <1 <1	
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 25 200	0 <1 0 48	<1 <1 <1 49	 
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 25 200 300	0 <1 0 48 353	<1 <1 <1 49 352	
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 25 200 300 370	0 <1 0 48 353 457	<1 <1 <1 49 352 461	  
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 25 200 300 370 2500 limit/base	0 <1 0 48 353 457 4374	<1 <1 <1 49 352 461 4208	   
Molybdenum 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 ASTM D5185m <b>method</b>	5 25 200 300 370 2500 limit/base	0 <1 0 48 353 457 4374 current	<1 <1 <1 49 352 461 4208 history1	   
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	5 25 200 300 370 2500 limit/base >20	0 <1 0 48 353 457 4374 current <1	<1 <1 <1 49 352 461 4208 history1 <1	   
Molybdenum 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 ASTM D5185m <b>method</b> ASTM D5185m ASTM D5185m	5 25 200 300 370 2500 limit/base >20	0 <1 0 48 353 457 4374 current <1 2	<1 <1 <1 49 352 461 4208 history1 <1 0	    history2
Molybdenum 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 D5185m	5 25 200 300 370 2500 limit/base >20	0 <1 0 48 353 457 4374 current <1 2 <1	<1 <1 <1 <1 49 352 461 4208 history1 <1 0 2	    history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	5 25 200 300 370 2500 limit/base >20 limit/base >5000	0 <1 0 48 353 457 4374 current <1 2 <1 2 <1 current	<1 <1 <1 49 352 461 4208 history1 <1 0 2 history1	   history2   history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	5 25 200 300 370 2500 limit/base >20 limit/base >5000	0 <1 0 48 353 457 4374 current <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2 <1	<1 <1 <1 49 352 461 4208 history1 <1 0 2 history1 0 7189	    history2   history2
Molybdenum 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	5 25 200 300 2500 limit/base >20 limit/base >20 limit/base >5000 >1300 >160	0 <1 0 48 353 457 4374 current <1 2 <1 2 <1 2 <1 2 <1 2 <1 1 0 0 0 0 1 0 989 ● 1311	<1 <1 <1 <1 <49 352 461 4208 history1 <1 0 2 history1 7189 1174	    history2  history2  history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >6μm Particles >14μm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	5 25 200 300 2500 limit/base >20 limit/base >20 limit/base >5000 >1300 >160	0 <1 0 48 353 457 4374 2<1	<1 <1 <1 49 352 461 4208 history1 <1 0 2 history1 0 2 history1 0 1 174 61	    history2   history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4μm Particles >14μm Particles >21μm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	5 25 200 300 2500 2500 2500 >20 20 20 20 20 20 20 20 20 20 20 20 20 2	0 <1 0 48 353 457 4374 current <1 2 <1 2 <1 16989 ● 1311 4 1	<1 <1 <1 49 352 461 4208 history1 <1 0 2 history1 2 history1 0 2 1174 61 12	    history2   history2
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	ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	5 25 200 300 2500 2500 2500 >20 20 20 20 20 20 20 20 20 20 20 20 20 2	0 <1 0 48 353 457 4374 current <1 2 <1 2 <1 current 16989 ● 1311 4 1 0	<1 <1 <1 49 352 461 4208 history1 <1 0 2 history1 0 2 history1 0 1174 61 12 1	  history2  history2  history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >21µm Particles >38µm Particles >71µm	ppm ppm ppm ppm ppm ppm ppm ppm ESS	ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	5 25 200 300 370 2500 imit/base >20 imit/base >20 imit/base >5000 >1300 >160 >40 >10 >3	0 <1 0 48 353 457 4374 <urrent &lt;1 2 &lt;1 2 &lt;1 0 16989 ● 1311 4 1 0 0 0</urrent 	<1 <1 <1 49 352 461 4208 history1 <1 0 2 history1 0 2 history1 0 1174 61 12 1 1 0 0	    history2  history2  history2  
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4μm Particles >4μm Particles >21μm Particles >38μm Particles >38μm Particles >71μm	ppm ppm ppm ppm ppm ppm ppm ppm ESS	ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	5 25 200 300 2500 2500 limit/base >20 20 20 limit/base >20 >100 >1300 >160 >160 >160 >10 >10 >10 >3 >3 >19/17/14	0 <1 0 48 353 457 4374 current <1 2 <1 2 <1 16989 ■ 1311 4 1 0 0 0 21/18/9	<1 <li>&lt;1 </li> <li>&lt;1 </li> <li>49 </li> <li>352 </li> <li>461 </li> <li>4208 </li> <li>history1 </li> <li>&lt;1 </li> <li>0 </li> <li>2 </li> <li>history1 </li> <li>1174 </li> <li>61 </li> <li>12 </li> <li>1 </li> <li>0 </li> <li>20/17/13 </li>	     history2  history2  history2  

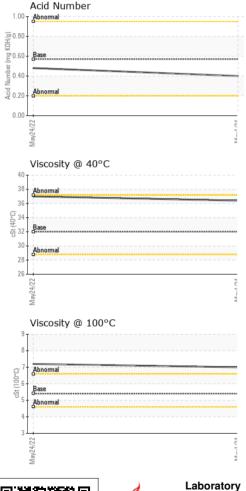
Report Id: CARBLOMN [WUSCAR] 06184963 (Generated: 05/22/2024 15:02:04) Rev



## **OIL ANALYSIS REPORT**







E.

	VISUAL		method	limit/base	current	history1	history2
	White Metal	scalar	*Visual	NONE	NONE	NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
	Precipitate	scalar	*Visual	NONE	NONE	NONE	
	Silt	scalar	*Visual	NONE	NONE	NONE	
	Debris	scalar	*Visual	NONE	NONE	NONE	
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
May1/24	Appearance	scalar	*Visual	NORML	NORML	NORML	
Ma	Odor	scalar	*Visual	NORML	NORML	NORML	
	Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	
	Free Water	scalar	*Visual		NEG	NEG	
	FLUID PROPERT	IES	method	limit/base	current	history1	history2
	Visc @ 40°C	cSt	ASTM D445	32	36.4	37.0	
	Visc @ 100°C	cSt	ASTM D445	5.4	7.0	7.2	
	Viscosity Index (VI)	Scale	ASTM D2270	102	156	162	
4	SAMPLE IMAGES	6	method	limit/base	current	history1	history2
May1/24	Color						no image
	Bottom						no image
	GRAPHS						
~	Ferrous Alloys				🔺 Particle Coun	t	
				491,5	<sup>20</sup>		T <sup>26</sup>
4	chromium			122,8	180 -		-24
	E 4 4			30,7	20 -		-22
	2			7.0	80 Abnormal		20 75
				(per 1 ml)			+20 [SO 4406:1999 Cleanliness Code +18 -16 -14 -14 -14 -14 -14 -14 -14 -12 -14 -12 -14 -12 -14 -12 -14 -14 -12 -14 -14 -14 -14 -14 -14 -14 -14 -14 -14
	May24/22			s (ber Way	120		-18 6:19
	Non-ferrous Metal	s		May1/24 1/24 6'1 ml)	80		-16 Ce
	10 copper			d jo la 1	20	`	-14 an
	ennessee lead			qunu			ss Coo
۲ ۲	a 4				30-		-12 6
1 m	2				8-	1	-10
	4/22		******************	1/24	2-		-8
	May24/22			May1/24	0		6
	Viscosity @ 40°C				<sup>4μ</sup> 6μ Acid Number	14μ 21μ	38µ 71µ
	40 Abnormal			(B)1			
				90. 20.	80 60 Base		
	(⊃ 35 - ⊕ Base ∛ 30 - Abnormal			0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	40		
	30 - Abnormal			N p	20 - Abnormal		-
	25						24
ACC LOOK	May24,22			May1/24	May24,22		May1/24
Unique Number Test Package	: WearCheck USA - 50 : WC0891954 : 06184963 : 11036289 : MOB 2 ( Additional Te contact Customer Servi	Rece Teste Diagr sts: KV1 ce at 1-8	ived : 20 ed : 22 nosed : 22 00, VI ) 800-237-1369	9 May 2024 2 May 2024 May 2024 - Do 9.		INVER GROVE H	74 CLARK RD HEIGHTS, MN US 55077 MAT ENGLER

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)

Certificate 12367

Contact/Location: MAT ENGLER - CARBLOMN

Т:

F: