

#### **PROBLEM SUMMARY**

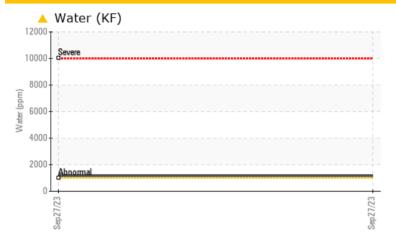
# Store 5 - Cross Lanes [143616] Machine Id ALLU DH31725 DH31717574

Component **Hydraulic System** 

**AW HYDRAULIC OIL ISO 46 (2 GAL)** 



#### COMPONENT CONDITION SUMMARY





#### RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS								
Sample Status				ABNORMAL				
Water	%	ASTM D6304	>0.1	<b>△</b> 0.116				
ppm Water	ppm	ASTM D6304	>1000	<b>1160</b>				
Particles >4µm		ASTM D7647	>5000	<u> </u>				
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>20/16/11</b>				

Customer Id: LESMAROH Sample No.: LEC0043112 Lab Number: 05966184 Test Package: CONST



To manage this report scan the QR code

To discuss the diagnosis or test data: Jonathan Hester +1 919-379-4092 x4092 jhester@wearcheckusa.com

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

RECOMMENDED ACTIONS						
Action	Status	Date	Done By	Description		
Change Filter			?	We recommend you service the filters on this component.		

### HISTORICAL DIAGNOSIS

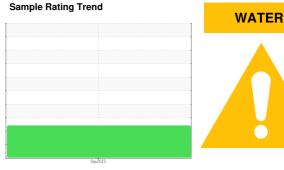


#### **OIL ANALYSIS REPORT**

## Store 5 - Cross Lanes [143616] **ALLU DH31725 DH31717574**

**Hydraulic System** 

**AW HYDRAULIC OIL ISO 46 (2 GAL)** 



#### **DIAGNOSIS**

#### Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

All component wear rates are normal.

#### Contamination

There is a moderate amount of silt (particulates < 6 microns in size) present in the oil. There is a light concentration of water present in the oil.

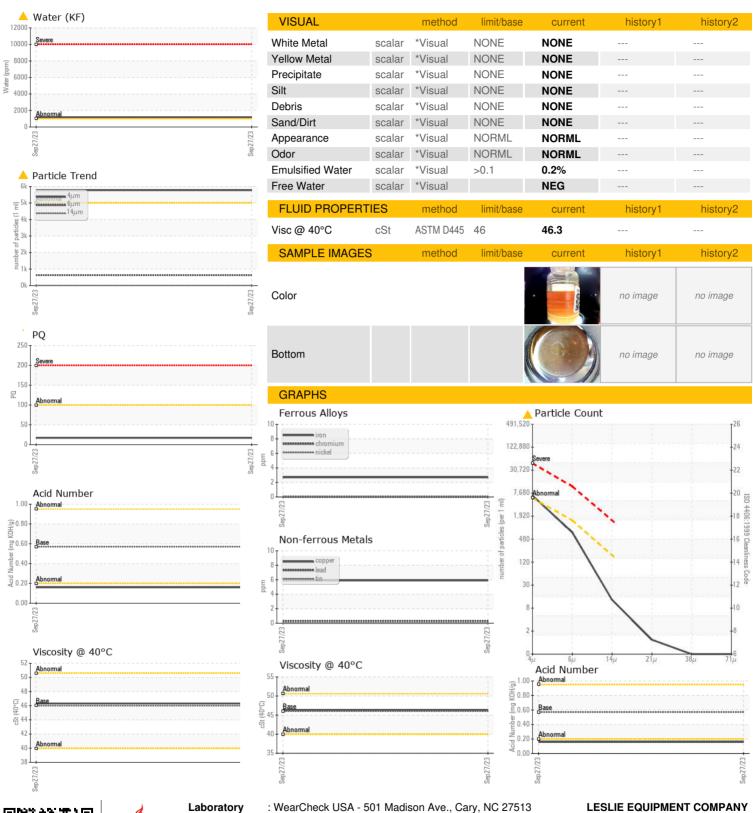
#### **Fluid Condition**

The AN level is acceptable for this fluid. The condition of the oils additive package is suitable for further service.

Sample Number         Client Info         LEC0043112             Sample Date         Client Info         27 Sep 2023             Machine Age         hrs         Client Info         50             Oil Age         hrs         Client Info         N/A             Oil Changed         Client Info         N/A             Sample Status         ABNORMAL             WEAR METALS         method         limit/base         current         history1         history2           PQ         ASTM D8184         17             Iron         ppm         ASTM D5185m         >20         3             Chromium         ppm         ASTM D5185m         >10         0             Nickel         ppm         ASTM D5185m         >10         <1             Silver         ppm         ASTM D5185m         >10         0             Aluminum         ppm         ASTM D5185m         >10         0 <th>SAMPLE INFORM</th> <th>IATION</th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Date         Client Info         27 Sep 2023	Sample Number		Client Info		LEC0043112	, in the second	
Machine Age         hrs         Client Info         50							
Oil Age         hrs         Client Info         50             Oil Changed         Client Info         N/A             Sample Status         method         limit/base         current         history1            WEAR METALS         method         limit/base         current         history1         history2           PQ         ASTM D5185m         17             Iron         ppm         ASTM D5185m         >20         3            Chromium         ppm         ASTM D5185m         >10         0            Nickel         ppm         ASTM D5185m         0             Sliver         ppm         ASTM D5185m         0             Aluminum         ppm         ASTM D5185m         10         0            Copper         ppm         ASTM D5185m         >10         0            Tin         ppm         ASTM D5185m         >10         0            Cadmium         ppm         ASTM D5185m         0             Cadmium		hrs			•		
Oil Changed Sample Status							
ABNORMAL            WEAR METALS         method         limit/base         current         history1         history2           PQ         ASTM D8184         17             Iron         ppm         ASTM D5185m         >20         3             Nickel         ppm         ASTM D5185m         >10         0             Riker         ppm         ASTM D5185m         >10         0             Silver         ppm         ASTM D5185m         >10         0             Aluminum         ppm         ASTM D5185m         >10         0             Lead         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >10         0             Vanadium         ppm         ASTM D5185m         0              ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5	-	1110					
WEAR METALS         method         limit/base         current         history1         history2           PQ         ASTM D8184         17             Iron         ppm         ASTM D8185m         >20         3             Chromium         ppm         ASTM D8185m         >10         0             Titanium         ppm         ASTM D8185m         0              Siliver         ppm         ASTM D8185m         0              Aluminum         ppm         ASTM D8185m         10         0              Aluminum         ppm         ASTM D8185m         10         0              Aluminum         ppm         ASTM D8185m         >10         0              Aluminum         ppm         ASTM D8185m         >10         0             Tin         ppm         ASTM D8185m         >10         0             Cadmium         ppm         <							
PQ	·		method	limit/base	current	history1	history2
Chromium         ppm         ASTM D5185m         >10         0             Nickel         ppm         ASTM D5185m         >10         <1             Titanium         ppm         ASTM D5185m         0              Silver         ppm         ASTM D5185m         >10         0             Aluminum         ppm         ASTM D5185m         >10         0             Aluminum         ppm         ASTM D5185m         >10         0             Lead         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >10         0             Tin         ppm         ASTM D5185m         5         0             Vanadium         ppm         ASTM D5185m         5         0             ADDITIVES         method         limit/base         current         history1         history2           Barium         ppm         ASTM D5185m         5         0	PQ		ASTM D8184		17		
Chromium         ppm         ASTM D5185m         >10         0             Nickel         ppm         ASTM D5185m         >10         <1             Titanium         ppm         ASTM D5185m         0              Silver         ppm         ASTM D5185m         >10         0             Aluminum         ppm         ASTM D5185m         >10         0             Aluminum         ppm         ASTM D5185m         >10         0             Lead         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >10         0             Tin         ppm         ASTM D5185m         5         0             Vanadium         ppm         ASTM D5185m         5         0             ADDITIVES         method         limit/base         current         history1         history2           Barium         ppm         ASTM D5185m         5         0	Iron	ppm	ASTM D5185m	>20	3		
Nickel   ppm	Chromium		ASTM D5185m	>10			
Titanium         ppm         ASTM D5185m         0             Silver         ppm         ASTM D5185m         0             Aluminum         ppm         ASTM D5185m         >10         0             Lead         ppm         ASTM D5185m         >10         <1	Nickel		ASTM D5185m	>10	<1		
Silver	Titanium				0		
Aluminum         ppm         ASTM D5185m         >10         0             Lead         ppm         ASTM D5185m         >10         <1	Silver		ASTM D5185m		0		
Lead         ppm         ASTM D5185m         >10         <1             Copper         ppm         ASTM D5185m         >75         6             Tin         ppm         ASTM D5185m         10         0             Vanadium         ppm         ASTM D5185m         0             Cadmium         ppm         ASTM D5185m         5         0             Boron         ppm         ASTM D5185m         5         0             Barium         ppm         ASTM D5185m         5         0             Manganese         ppm         ASTM D5185m         5         <1	Aluminum		ASTM D5185m	>10	0		
Copper         ppm         ASTM D5185m         >75         6             Tin         ppm         ASTM D5185m         >10         0             Vanadium         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             Manganese         ppm         ASTM D5185m         25         5             Magnesium         ppm         ASTM D5185m         200         25             Phosphorus         ppm         ASTM D5185m         200         25             Sulfur         ppm         ASTM D5185m         370         126             Sulfur         ppm         ASTM D5185m         20         370	Lead		ASTM D5185m	>10	<1		
Tin							
Vanadium         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             Manganese         ppm         ASTM D5185m         5         <1			ASTM D5185m	>10			
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         <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							
Boron ppm ASTM D5185m 5 0	ADDITIVES		method	limit/base	current	history1	history2
Barium         ppm         ASTM D5185m         5         0             Molybdenum         ppm         ASTM D5185m         5         <1	Boron	nnm	ASTM D5185m				
Molybdenum         ppm         ASTM D5185m         5         <1		• •					
Manganese         ppm         ASTM D5185m         0             Magnesium         ppm         ASTM D5185m         25         5             Calcium         ppm         ASTM D5185m         200         25             Phosphorus         ppm         ASTM D5185m         300         368             Zinc         ppm         ASTM D5185m         370         126             Sulfur         ppm         ASTM D5185m         2500         370             Sulfur         ppm         ASTM D5185m         2500         370             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         1             Sodium         ppm         ASTM D5185m         >20         1             Potassium         ppm         ASTM D5185m         >20         1             Water         %         ASTM D6304         >0.1 <td< td=""><td></td><td></td><td></td><td></td><td>_</td><td></td><td></td></td<>					_		
Magnesium         ppm         ASTM D5185m         25         5             Calcium         ppm         ASTM D5185m         200         25             Phosphorus         ppm         ASTM D5185m         300         368             Zinc         ppm         ASTM D5185m         370         126             Sulfur         ppm         ASTM D5185m         2500         370             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         20         1             Sodium         ppm         ASTM D5185m         20         1             Potassium         ppm         ASTM D5185m         20         1             Water         %         ASTM D6185m         >20         1             Water         %         ASTM D6304         >0.1         0.116             Water         %         ASTM D6304         >1000	-	• •					
Calcium         ppm         ASTM D5185m         200         25             Phosphorus         ppm         ASTM D5185m         300         368             Zinc         ppm         ASTM D5185m         370         126             Sulfur         ppm         ASTM D5185m         2500         370             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         1             Sodium         ppm         ASTM D5185m         >20         1             Potassium         ppm         ASTM D5185m         >20         1             Water         %         ASTM D5185m         >20         1             Water         %         ASTM D5185m         >20         1             Water         %         ASTM D6304         >0.1         0.116             Particles >4µm         ASTM D7647         >5000	-			25	-		
Phosphorus         ppm         ASTM D5185m         300         368             Zinc         ppm         ASTM D5185m         370         126             Sulfur         ppm         ASTM D5185m         2500         370             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         1             Sodium         ppm         ASTM D5185m         >20         1             Potassium         ppm         ASTM D5185m         >20         1             Water         %         ASTM D6304         >0.1         0.116             Water         %         ASTM D6304         >0.1         0.1160             FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4µm         ASTM D7647         >5000         5775             Particles >21µm         ASTM D7647         >40					_		
Zinc         ppm         ASTM D5185m         370         126             Sulfur         ppm         ASTM D5185m         2500         370             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         1             Sodium         ppm         ASTM D5185m         >20         1             Potassium         ppm         ASTM D5185m         >20         1             Water         %         ASTM D5185m         >20         1             Water         %         ASTM D5185m         >20         1             Water         %         ASTM D6304         >0.1         0.116             Ppm Water         ppm         ASTM D6304         >1000         1600             FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4µm         ASTM D7647         >130					_		
Sulfur         ppm         ASTM D5185m         2500         370             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         1             Sodium         ppm         ASTM D5185m         0             Potassium         ppm         ASTM D5185m         >20         1             Water         %         ASTM D6304         >0.1         0.116             Ppm Water         ppm         ASTM D6304         >1000         1160             FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4µm         ASTM D7647         >1300         634         <							
Silicon       ppm       ASTM D5185m       >20       1           Sodium       ppm       ASTM D5185m       0            Potassium       ppm       ASTM D5185m       >20       1            Water       %       ASTM D6304       >0.1       0.116            ppm Water       ppm       ASTM D6304       >1000       1160            FLUID CLEANLINESS       method       limit/base       current       history1       history2         Particles >4µm       ASTM D7647       >5000       5775           Particles >6µm       ASTM D7647       >1300       634           Particles >14µm       ASTM D7647       >160       11           Particles >21µm       ASTM D7647       >40       1           Particles >71µm       ASTM D7647       >3       0           Oil Cleanliness       ISO 4406 (c)       >19/17/14       20/16/11					-		
Silicon       ppm       ASTM D5185m       >20       1           Sodium       ppm       ASTM D5185m       0            Potassium       ppm       ASTM D5185m       >20       1            Water       %       ASTM D6304       >0.1       0.116            ppm Water       ppm       ASTM D6304       >1000       1160            FLUID CLEANLINESS       method       limit/base       current       history1       history2         Particles >4µm       ASTM D7647       >5000       5775           Particles >6µm       ASTM D7647       >1300       634           Particles >14µm       ASTM D7647       >160       11           Particles >21µm       ASTM D7647       >40       1           Particles >71µm       ASTM D7647       >3       0           Oil Cleanliness       ISO 4406 (c)       >19/17/14       20/16/11	CONTAMINANTS		method	limit/base	current	history1	history2
Sodium         ppm         ASTM D5185m         0             Potassium         ppm         ASTM D5185m         >20         1             Water         %         ASTM D6304         >0.1         0.116             ppm Water         ppm         ASTM D6304         >1000         1160             FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >5000         57775             Particles >6μm         ASTM D7647         >1300         634             Particles >14μm         ASTM D7647         >160         11             Particles >21μm         ASTM D7647         >40         1             Particles >71μm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         >19/17/14         20/16/11		nnm					
Potassium         ppm         ASTM D5185m         >20         1             Water         %         ASTM D6304         >0.1         ▲ 0.116             ppm Water         ppm         ASTM D6304         >1000         ▲ 1160             FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >5000         ▲ 5775             Particles >6μm         ASTM D7647         >1300         634             Particles >14μm         ASTM D7647         >160         11             Particles >21μm         ASTM D7647         >40         1             Particles >38μm         ASTM D7647         >10         0             Particles >71μm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         >19/17/14         20/16/11				>20	-		
Water         %         ASTM D6304         >0.1         ▲ 0.116             ppm Water         ppm         ASTM D6304         >1000         ▲ 1160             FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >5000         ▲ 57775             Particles >6μm         ASTM D7647         >1300         634             Particles >14μm         ASTM D7647         >160         11             Particles >21μm         ASTM D7647         >40         1             Particles >38μm         ASTM D7647         >10         0             Particles >71μm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         >19/17/14         20/16/11				. 20	-		
ppm Water         ppm         ASTM D6304         >1000         ▲ 1160             FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >5000         ▲ 5775             Particles >6μm         ASTM D7647         >1300         634             Particles >14μm         ASTM D7647         >160         11             Particles >21μm         ASTM D7647         >40         1             Particles >38μm         ASTM D7647         >10         0             Particles >71μm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         >19/17/14         20/16/11					=		
FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >5000         ▲ 5775             Particles >6μm         ASTM D7647         >1300         634             Particles >14μm         ASTM D7647         >160         11             Particles >21μm         ASTM D7647         >40         1             Particles >38μm         ASTM D7647         >10         0             Particles >71μm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         >19/17/14         20/16/11							
Particles >4μm       ASTM D7647       >5000       ▲ 5775           Particles >6μm       ASTM D7647       >1300       634           Particles >14μm       ASTM D7647       >160       11           Particles >21μm       ASTM D7647       >40       1           Particles >38μm       ASTM D7647       >10       0           Particles >71μm       ASTM D7647       >3       0           Oil Cleanliness       ISO 4406 (c)       >19/17/14       ▲ 20/16/11	•					historv1	history2
Particles >6μm       ASTM D7647       >1300       634           Particles >14μm       ASTM D7647       >160       11           Particles >21μm       ASTM D7647       >40       1           Particles >38μm       ASTM D7647       >10       0           Particles >71μm       ASTM D7647       >3       0           Oil Cleanliness       ISO 4406 (c)       >19/17/14       20/16/11							
Particles >14μm       ASTM D7647       >160       11           Particles >21μm       ASTM D7647       >40       1           Particles >38μm       ASTM D7647       >10       0           Particles >71μm       ASTM D7647       >3       0           Oil Cleanliness       ISO 4406 (c)       >19/17/14       20/16/11	·						
Particles >21μm       ASTM D7647       >40       1           Particles >38μm       ASTM D7647       >10       0           Particles >71μm       ASTM D7647       >3       0           Oil Cleanliness       ISO 4406 (c)       >19/17/14       20/16/11							
Particles >38μm       ASTM D7647       >10       0           Particles >71μm       ASTM D7647       >3       0           Oil Cleanliness       ISO 4406 (c)       >19/17/14       20/16/11	·						
Particles >71μm       ASTM D7647       >3       0           Oil Cleanliness       ISO 4406 (c)       >19/17/14       ▲ 20/16/11							
Oil Cleanliness ISO 4406 (c) >19/17/14 🛕 20/16/11	·						
FLUID DEGRADATION method limit/base current history1 history2					-		
	FLUID DEGRADA	TION	method	limit/base	current	history1	history2



#### **OIL ANALYSIS REPORT**







Certificate L2367

Laboratory Sample No. Lab Number **Unique Number** 

: 05966184

: 10672735

: LEC0043112

Received : 02 Oct 2023 Diagnosed : 06 Oct 2023 Diagnostician

: Jonathan Hester

Test Package : CONST ( Additional Tests: KF, PQ ) 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)

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Contact: LEANNE KENDALL

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