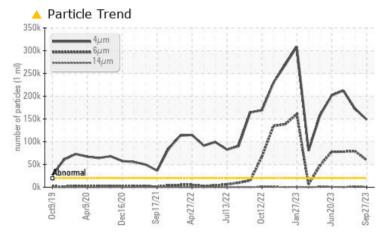


## **PROBLEM SUMMARY**

### Area Fermentation Machine Id Lightnin FHG51CB01 Main Fermentor, Agitator Component

Gearbox Fluid JAX FGG-AW ISO 220 (46 GAL)

## COMPONENT CONDITION SUMMARY



### RECOMMENDATION

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. (Customer Sample Comment: Oil is coming out the breather, Can you tell me why the oil is foaming?)

PROBLEMATIC TEST RESULTS							
Sample Status		ABNORMAL	ABNORMAL	ABNORMAL			
Particles >4µm	ASTM D7647 >20	000 🔺 148642	▲ 172368	<b>A</b> 212256			
Particles >6µm	ASTM D7647 >50	00 🔺 <b>59503</b>	<b>A</b> 79216	<b>A</b> 78115			
Oil Cleanliness	ISO 4406 (c) >21/	19/16 🔺 24/23/16	▲ 25/23/18	▲ 25/23/16			

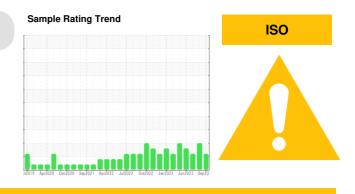
Customer Id: NOVFRANC Sample No.: WC0843010 Lab Number: 05966269 Test Package: IND 2



To manage this report scan the QR code

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

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



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

## HISTORICAL DIAGNOSIS



19 Sep 2023 Diag: Don Baldridge

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



view report

## 02 Aug 2023 Diag: Don Baldridge



We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

20 Jun 2023 Diag: Angela Borella

We recommend you service the filters on this component. Resample at the next service interval to monitor.All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.







## **OIL ANALYSIS REPORT**

#### Area Fermentation Machine Id Lightnin FHG51CB01 Main Fermentor, Agitator Component

**Gearbox** 

JAX FGG-AW ISO 220 (46 GAL)

## DIAGNOSIS

### Recommendation

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. ( Customer Sample Comment: Oil is coming out the breather, Can you tell me why the oil is foaming ? )

## Wear

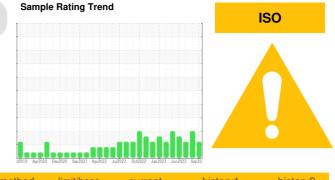
All component wear rates are normal.

#### Contamination

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

#### Fluid Condition

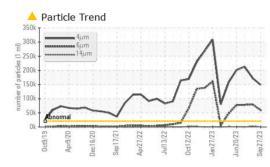
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

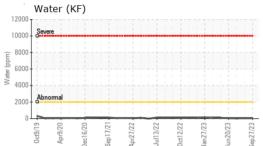


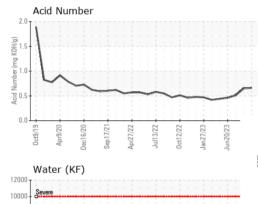
Sample NumberClient InfoWC0843010WC0842997WC083739Sample DateClient Info27 Sep 20219 Sep 202302 Aug 2023Machine AgehrsClient Info000Oil AgehrsClient InfoN/AN/AN/ASample StatusClient InfoN/AABNORMALABNORMALABNORMALWEAR METALSmethodImitesABNORMALABNORMALABNORMALABNORMALNickelppmASTM05185>2009496110ChromiumppmASTM05185>15<1<1<1NickelppmASTM05185>2094960SilverppmASTM05185>2094960SilverppmASTM05185>15<1<1<1LeadppmASTM05185>20000AuminumppmASTM05185>20<1<1<1InnppmASTM05185>20<100Astm05185>20<1<1<1<1<1InnppmASTM05185>20<11<1MaganeseppmASTM05185<100<1<1MaganeseppmASTM05185<1<11<1MaganeseppmASTM05185<1<11<1MaganeseppmASTM05185<1<11<1Maganese	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age         hrs         Client Info         0         0         0           Oil Age         hrs         Client Info         N/A         N/A           Sample Status         n         n         N/A         ABNORMAL         ABNORMAL         ABNORMAL           WEAR METALS         method         Imit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >15         <1         <1         <1           Nickel         ppm         ASTM D5185m         >15         <1         <1         <1           Nickel         ppm         ASTM D5185m         >15         <1         <1         <1           Nickel         ppm         ASTM D5185m         >25         0         0         0           Cadmium         ppm         ASTM D5185m         >200         <1         <1         <1           Tian         ppm         ASTM D5185m         >200         <0         0         0           Cadmium         ppm         ASTM D5185m         >25         0         0         0           Cadmium         ppm         ASTM D5185m         >200         0         0         0 <t< th=""><th>Sample Number</th><th></th><th>Client Info</th><th></th><th>WC0843010</th><th>WC0842997</th><th>WC0835739</th></t<>	Sample Number		Client Info		WC0843010	WC0842997	WC0835739
Oil Age         hrs         Client Info         N/A         N/A         N/A           Sample Status         I         Imit Distant         ABNORMAL         ABNORMAL         ABNORMAL           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM DS185m         >200         94         96         110           Chromium         ppm         ASTM DS185m         >15         <1         <1         <1           Nickel         ppm         ASTM DS185m         >15         <1         <1         <1           Itamium         ppm         ASTM DS185m         >200         <1         <1         <1           Aluminum         ppm         ASTM DS185m         >200         <1         <1         <1           Lead         ppm         ASTM DS185m         >200         <1         <1         <1           In         ppm         ASTM DS185m         >20         0         0         0           Cadmium         ppm         ASTM DS185m         0         0         <1         1           Maganese         ppm         ASTM DS185m         0         0         <1	Sample Date		Client Info		27 Sep 2023	19 Sep 2023	02 Aug 2023
Oil Changed Sample Status         Client Info         N/A         N/A         N/A         N/A           WEAR METALS         method         limil/base         current         history1         history2           Iron         ppm         ASTMD518m         >200         94         96         110           Chromium         ppm         ASTMD518m         >15         <1	Machine Age	hrs	Client Info		0	0	0
Oil Changed         Client Info         N/A         N/A         N/A         N/A           Sample Status         Image Status         Image Status         Image Status         ABNORMAL         ABNORMAL         ABNORMAL           WEAR METALS         method         Imil/base         current         history1         history2           Iron         ppm         ASTM D518s         >200         94         96         110           Chromium         ppm         ASTM D518s         >15         <1         <1         <1           Nickel         ppm         ASTM D518s         >15         <1         <1         <1           Muminum         ppm         ASTM D518s         >225         0         <1         <1         <1           Lead         ppm         ASTM D518s         >220         <1         <1         <1         <1           Vanadium         ppm         ASTM D518s         >220         0         0         0         0           Cadmium         ppm         ASTM D518s         >200         0         0         <1           Barium         ppm         ASTM D518s         <0         0         <1         1           Malybdenum         <	Oil Age	hrs	Client Info		0	0	0
Sample Status         Image of the status         ABNORMAL         ABNORMAL         ABNORMAL         ABNORMAL           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >200         94         96         110           Chromium         ppm         ASTM D5185m         >15         <1         <1         <1           Nickel         ppm         ASTM D5185m         >15         <1         <1         <1           Titanium         ppm         ASTM D5185m         >25         0         0         0           Aluminum         ppm         ASTM D5185m         >200         <1         <1         <1           Lead         ppm         ASTM D5185m         >200         <1         <1         <1           Copper         ppm         ASTM D5185m         >200         <1         <1         <1           Cadmium         ppm         ASTM D5185m         >200         <1         <1         <1           Boron         ppm         ASTM D5185m         0         0         <1         <1           Magnaese         ppm         ASTM D5185m         <1	Oil Changed		Client Info		N/A	N/A	N/A
Iron         ppm         ASTM D5185m         >200         94         96         110           Chromium         ppm         ASTM D5185m         >15         <1         <1         <1           Nickel         ppm         ASTM D5185m         >15         <1         <1         <1           Titanium         ppm         ASTM D5185m         0         0         0         0           Aluminum         ppm         ASTM D5185m         >25         0         <1         <1         <1           Lead         ppm         ASTM D5185m         >200         <1         <1         <1         <1           Lead         ppm         ASTM D5185m         >200         <1         <1         <1         <1           Copper         ppm         ASTM D5185m         >200         0         0         0         0           Cadmium         ppm         ASTM D5185m         >20         0         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Barium         ppm         ASTM D5185m         <1         1         1         1      Magnese         ppm <th>-</th> <th></th> <th></th> <th></th> <th>ABNORMAL</th> <th>ABNORMAL</th> <th>ABNORMAL</th>	-				ABNORMAL	ABNORMAL	ABNORMAL
Chromium         ppm         ASTM D5185m         >15         <1	WEAR METALS		method	limit/base	current	history1	history2
Chromium         ppm         ASTM D5185m         >15         <1	Iron	ppm	ASTM D5185m	>200	94	96	110
Nickel         ppm         ASTM D5185m         >15         <1	-				-		
Titanium         ppm         ASTM D5185m         0         0         0           Silver         ppm         ASTM D5185m         0         <1         <1           Lead         ppm         ASTM D5185m         >25         0         <1         <1           Lead         ppm         ASTM D5185m         >200         <1         <1         <1           Copper         ppm         ASTM D5185m         >200         <1         <1         <1           Tin         ppm         ASTM D5185m         >25         0         0         0           Vanadium         ppm         ASTM D5185m         200         <1         <1         1           Maddium         ppm         ASTM D5185m         0         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         0         1           Marganese         ppm         ASTM D5185m         630         638         470           Zinc         ppm         ASTM D5185m         630         638         470           Zinc         ppm							
Silver         ppm         ASTM D5185m         0         0         0           Aluminum         ppm         ASTM D5185m         >25         0         <1         <1           Lead         ppm         ASTM D5185m         >100         0         0         0           Copper         ppm         ASTM D5185m         >200         <1         <1         <1           Tin         ppm         ASTM D5185m         >200         <1         <1         <1           Vanadium         ppm         ASTM D5185m         0         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         0         1           Marganese         ppm         ASTM D5185m         <1         1         1         1           Marganese         ppm         ASTM D5185m         630         633         470         2           Phosphorus         ppm         ASTM D5185m         0         0         0         3347							
Aluminum         ppm         ASTM D5185m         >25         0         <1					-		
Lead         ppm         ASTM D5185m         >100         0         0         0           Copper         ppm         ASTM D5185m         >200         <1         <1         <1           Tin         ppm         ASTM D5185m         >25         0         0         0           Vanadium         ppm         ASTM D5185m         >25         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         <1         1           Boron         ppm         ASTM D5185m         0         0         0         <1           Manganese         ppm         ASTM D5185m         <1         1         1         1           Maganese         ppm         ASTM D5185m         <0         0         1         1           Galcium         ppm         ASTM D5185m         <0         0         0         1         1           Marganese         ppm         ASTM D5185m         <0         0         0         0         0           Sulfur         ppm         ASTM D5185m         <0         0 <th></th> <th></th> <th></th> <th>&gt;25</th> <th></th> <th></th> <th></th>				>25			
Copper         ppm         ASTM D5185m         >200         <1							
Tin         ppm         ASTM D5185m         >25         0         0         0           Vanadium         ppm         ASTM D5185m         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         0         0           Manganese         ppm         ASTM D5185m         <1							
Vanadium         ppm         ASTM D5185m         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         0         0           Barium         ppm         ASTM D5185m         0         0         0         0           Magaese         ppm         ASTM D5185m         <1         0         0         1           Magneseum         ppm         ASTM D5185m         <15         15         2           Phosphorus         ppm         ASTM D5185m         630         638         470           Zinc         ppm         ASTM D5185m         630         638         470           Sulfur         ppm         ASTM D5185m         0         0         0           Sulfur         ppm         ASTM D5185m         0         1         1           Sodium         ppm         ASTM D5185m         0         <1         1           Potassium         ppm         ASTM D5185m         0         <1 <td< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th></td<>							
Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         <1           Barium         ppm         ASTM D5185m         0         0         <1           Manganese         ppm         ASTM D5185m         <1         0         1           Magneses         ppm         ASTM D5185m         <1         1         1           Magnese         ppm         ASTM D5185m         0         0         1           Calcium         ppm         ASTM D5185m         630         638         470           Calcium         ppm         ASTM D5185m         630         638         470           Zinc         ppm         ASTM D5185m         630         638         470           Silicon         ppm         ASTM D5185m         0         0         0         0           Sodium         ppm         ASTM D5185m         >50         1         <1         1           Potassium         ppm         ASTM D5185m         20         <1         0				220			
ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         <1           Barium         ppm         ASTM D5185m         0         0         0           Molybdenum         ppm         ASTM D5185m         <1         0         <1           Manganese         ppm         ASTM D5185m         <1         1         1           Magnesium         ppm         ASTM D5185m         0         0         1         Concord           Calcium         ppm         ASTM D5185m         0         0         0         1           Calcium         ppm         ASTM D5185m         630         638         470           Zinc         ppm         ASTM D5185m         630         0         0         0           Sulfur         ppm         ASTM D5185m         20         1         1         1           Sodium         ppm         ASTM D5185m         >20         <1         0         <1           Vater         %         ASTM D6304         >0.2         0.003         0.004         0.002           pm Water         pm							
Boron         ppm         ASTM D5185m         0         0         <1	ADDITIVES		method	limit/base	current	history1	history2
Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         <1         0         <1           Maganese         ppm         ASTM D5185m         0         0         1           Magnesium         ppm         ASTM D5185m         0         0         1           Calcium         ppm         ASTM D5185m         0         0         1           Calcium         ppm         ASTM D5185m         630         638         470           Zinc         ppm         ASTM D5185m         630         638         470           Sulfur         ppm         ASTM D5185m         630         638         470           Sulfur         ppm         ASTM D5185m         810         819         1636           CONTAMINANTS         method         Imit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         <1         0         <11           Vater         %         ASTM D5185m         >20         <1         0         0.002           ppm Water         ppm         ASTM D6304         >0.2	Boron	ppm	ASTM D5185m		0		
Molybdenum         ppm         ASTM D5185m         <1							
Marganese         ppm         ASTM D5185m         <1							
Magnesium         ppm         ASTM D5185m         0         0         1           Calcium         ppm         ASTM D5185m         15         15         2           Phosphorus         ppm         ASTM D5185m         630         638         470           Zinc         ppm         ASTM D5185m         0         0         0           Sulfur         ppm         ASTM D5185m         810         819         1636           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         1         <1         1           Sodium         ppm         ASTM D5185m         >50         1         <1         1           Potassium         ppm         ASTM D5185m         >20         <1         0         <1         1           Vater         %         ASTM D5304         >0.2         0.003         0.004         0.002           ppm Water         pm         ASTM D7647         >20000         148642         172368         212256           Particles >4µm         ASTM D7647         >5000         59503         79216         78115							
Calcium         ppm         ASTM D5185m         15         15         2           Phosphorus         ppm         ASTM D5185m         630         638         470           Zinc         ppm         ASTM D5185m         0         0         0           Sulfur         ppm         ASTM D5185m         0         0         0           Sulfur         ppm         ASTM D5185m         810         819         1636           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         1         <1	-						
Phosphorus         ppm         ASTM D5185m         630         638         470           Zinc         ppm         ASTM D5185m         0         0         0           Sulfur         ppm         ASTM D5185m         S10         819         1636           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         1         <1	•						
Zinc         ppm         ASTM D5185m         0         0         0           Sulfur         ppm         ASTM D5185m         810         819         1636           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         1         <1         1           Sodium         ppm         ASTM D5185m         >50         1         <1         1           Potassium         ppm         ASTM D5185m         >20         <1         0         <1           Water         %         ASTM D6304         >0.2         0.003         0.004         0.002           ppm Water         ppm         ASTM D6304         >2000         27.4         47.3         17.0           FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4µm         ASTM D7647         >20000         148642         172368         212256           Particles >6µm         ASTM D7647         >640         634         1714         337           Particles >1µm         ASTM D7647         >640         24         0         0							
SulfurppmASTM D5185m8108191636CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>501<11SodiumppmASTM D5185m>20<10<11PotassiumppmASTM D6304>0.20.0030.0040.002ppm Water%ASTM D6304>200027.447.317.0FLUID CLEANLINESSmethodlimit/basecurrenthistory1history2Particles >4µmXSTM D7647>20000148642172368212256Particles >6µmASTM D7647>5000595037921678115Particles >14µmASTM D7647>6406341714337Particles >21µmASTM D7647>1609523539Particles >71µmASTM D7647>10100Oil CleanlinessIs0 4406 (c)>21/19/1624/23/1625/23/1825/23/16FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2							
CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>501<11SodiumppmASTM D5185m0<111PotassiumppmASTM D5185m>20<10<11Water%ASTM D6304>0.20.0030.0040.002ppm WaterppmASTM D6304>200027.447.317.0FLUID CLEANLINESSmethodlimit/basecurrenthistory1history2Particles >4µmASTM D7647>20000▲ 148642▲ 172368▲ 212256Particles >6µmASTM D7647>5000▲ 59503▲ 79216▲ 78115Particles >6µmASTM D7647>640634▲ 1714337Particles >14µmASTM D7647>16095▲ 23539Particles >38µmASTM D7647>10100Oil CleanlinessISO 4406 (c)>21/19/16▲ 24/23/16▲ 25/23/18▲ 25/23/16FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2					-		
Silicon       ppm       ASTM D5185m       >50       1       <1       1         Sodium       ppm       ASTM D5185m       0       <1       1         Potassium       ppm       ASTM D5185m       >20       <1       0       <1         Potassium       ppm       ASTM D5185m       >20       <1       0       <1       1         Water       %       ASTM D6304       >0.2       0.003       0.004       0.002         ppm Water       ppm       ASTM D6304       >2000       27.4       47.3       17.0         FLUID CLEANLINESS       method       limit/base       current       history1       history2         Particles >4µm       ASTM D7647       >20000       148642       172368       212256         Particles >6µm       ASTM D7647       >5000       59503       79216       78115         Particles >6µm       ASTM D7647       >640       634       1714       337         Particles >1µm       ASTM D7647       >160       95       235       39         Particles >38µm       ASTM D7647       >40       2       4       0         Particles >71µm       ASTM D7647       10       1       0 <th>CONTAMINANTS</th> <th></th> <th>method</th> <th>limit/base</th> <th>current</th> <th>historv1</th> <th>historv2</th>	CONTAMINANTS		method	limit/base	current	historv1	historv2
Sodium         ppm         ASTM D5185m         0         <1			ASTM D5185m	<u>⊳50</u>	1		
Potassium         ppm         ASTM D5185m         >20         <1				200			
Water         %         ASTM D6304         >0.2         0.003         0.004         0.002           ppm Water         ppm         ASTM D6304         >2000         27.4         47.3         17.0           FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4µm         ASTM D7647         >2000         ▲ 148642         ▲ 172368         ▲ 212256           Particles >6µm         ASTM D7647         >5000         ▲ 59503         ▲ 79216         ▲ 78115           Particles >6µm         ASTM D7647         >640         634         ▲ 1714         337           Particles >21µm         ASTM D7647         >160         95         ▲ 235         39           Particles >38µm         ASTM D7647         >10         1         0         0           Particles >71µm         ASTM D7647         >10         1         0         25/23/18         25/23/16           Gli Cleanliness         ISO 4406 (c)         >21/19/16         ▲ 24/23/16         ▲ 25/23/18         ▲ 25/23/16				>20	-		
ppm Water         ppm         ASTM D6304         >2000         27.4         47.3         17.0           FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4µm         ASTM D7647         >20000         148642         172368         212256           Particles >6µm         ASTM D7647         >5000         59503         79216         78115           Particles >14µm         ASTM D7647         >640         634         1714         337           Particles >21µm         ASTM D7647         >160         95         235         39           Particles >38µm         ASTM D7647         >10         1         0         0           Oli Cleanliness         ISO 4406 (c)         >21/19/16         24/23/16         25/23/18         25/23/16           FLUID DEGRADATION         method         limit/base         current         history1         history2							
Particles >4μm       ASTM D7647       >20000       ▲ 148642       ▲ 172368       ▲ 212256         Particles >6μm       ASTM D7647       >5000       ▲ 59503       ▲ 79216       ▲ 78115         Particles >14μm       ASTM D7647       >640       634       ▲ 1714       337         Particles >21μm       ASTM D7647       >160       95       ▲ 235       39         Particles >38μm       ASTM D7647       >40       2       4       0         Particles >71μm       ASTM D7647       >10       1       0       0         Oil Cleanliness       ISO 4406 (c)       >21/19/16       ▲ 24/23/16       ▲ 25/23/18       ▲ 25/23/16							
Particles >4μm       ASTM D7647       >20000       ▲ 148642       ▲ 172368       ▲ 212256         Particles >6μm       ASTM D7647       >5000       ▲ 59503       ▲ 79216       ▲ 78115         Particles >14μm       ASTM D7647       >640       634       ▲ 1714       337         Particles >21μm       ASTM D7647       >160       95       ▲ 235       39         Particles >38μm       ASTM D7647       >40       2       4       0         Particles >71μm       ASTM D7647       >10       1       0       0         Oil Cleanliness       ISO 4406 (c)       >21/19/16       ▲ 24/23/16       ▲ 25/23/18       ▲ 25/23/16	FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >6μm       ASTM D7647       >5000       59503       79216       78115         Particles >14μm       ASTM D7647       >640       634       1714       337         Particles >21μm       ASTM D7647       >160       95       235       39         Particles >38μm       ASTM D7647       >40       2       4       0         Particles >71μm       ASTM D7647       >10       1       0       0         Oil Cleanliness       ISO 4406 (c)       >21/19/16       24/23/16       25/23/18       25/23/16         FLUID DEGRADATION       method       limit/base       current       history1       history2					<b>148642</b>		
Particles >14μm       ASTM D7647       >640       634       ▲ 1714       337         Particles >21μm       ASTM D7647       >160       95       ▲ 235       39         Particles >38μm       ASTM D7647       >40       2       4       0         Particles >71μm       ASTM D7647       >10       1       0       0         Oil Cleanliness       ISO 4406 (c)       >21/19/16       ▲ 24/23/16       ▲ 25/23/18       ▲ 25/23/16         FLUID DEGRADATION       method       limit/base       current       history1       history2							
Particles >21μm         ASTM D7647         >160         95         ▲ 235         39           Particles >38μm         ASTM D7647         >40         2         4         0           Particles >37μm         ASTM D7647         >10         1         0         0           Oil Cleanliness         ISO 4406 (c)         >21/19/16         ▲ 24/23/16         ▲ 25/23/18         ▲ 25/23/16           FLUID DEGRADATION         method         limit/base         current         history1         history2							
Particles >38μm         ASTM D7647         >40         2         4         0           Particles >71μm         ASTM D7647         >10         1         0         0           Oil Cleanliness         ISO 4406 (c)         >21/19/16         24/23/16         25/23/18         25/23/16           FLUID DEGRADATION         method         limit/base         current         history1         history2							
Particles >71μm         ASTM D7647         >10         1         0         0           Oil Cleanliness         ISO 4406 (c)         >21/19/16         24/23/16         25/23/18         25/23/16           FLUID DEGRADATION         method         limit/base         current         history1         history2							
Oil Cleanliness       ISO 4406 (c) >21/19/16   24/23/16       25/23/18       25/23/16         FLUID DEGRADATION       method       limit/base       current       history1       history2							
	FLUID DEGRADA		( )	limit/base	current	history1	history2

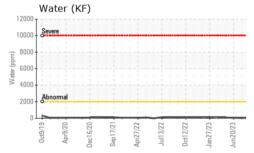


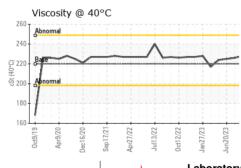
# **OIL ANALYSIS REPORT**





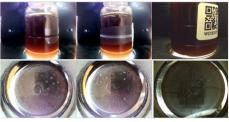




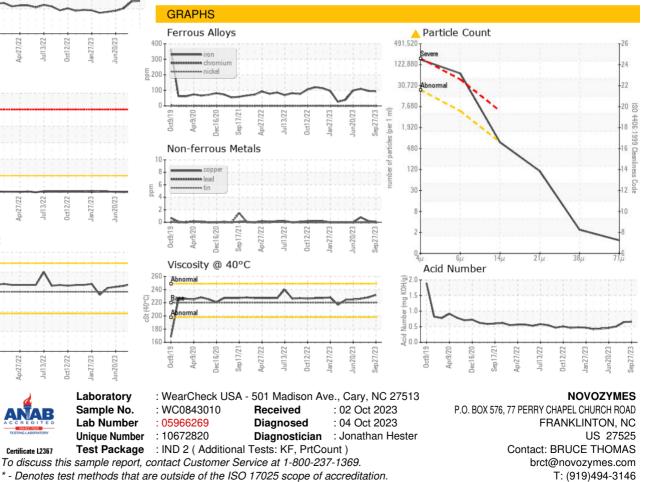


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	220	232	228	226
SAMPLE IMAGES	SAMPLE IMAGES		limit/base	current	history1	history2
				121-		

Color



Bottom



\* - 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 L2367

Submitted By: CHASE MCGEE

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F: (919)494-3456