

#### Machine Id HAMM HC 200I C WGH0H256KHAA00116 Component Drum Gearbox Fluid Fluid

# GEAR OIL LS 80W90 (--- GAL)

## RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

### **WEAR**

Gear wear is indicated.

#### CONTAMINATION

There is no indication of any contamination in the oil.

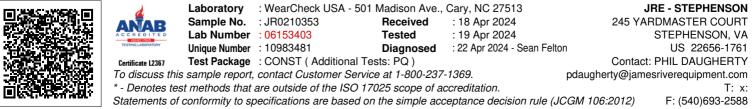
#### **FLUID CONDITION**

The condition of the oil is acceptable for the time in service.

TestUOMMethodLimitAbCurrentHistory1History2Sample NumberClient Info15 Apr 2024Machine AgehrsClient Info298Oil AgehrsClient Info0Filter AgehrsClient InfoNot ChangOil ChangedClient InfoNot ChangFilter AgehrsClient InfoNot ChangOil ChangedClient InfoNot ChangFilter ChangedQASTM D5185SP00ACTOFilter ChangedASTM D5185>200ADTOForomiumppmASTM D5185>101NickelppmASTM D51859SilverppmASTM D51859AduminumppmASTM D51859AduminumppmASTM D5185-1VandoumppmASTM D5185-1ValdoumppmASTM D5185-1ValdoumppmASTM D5185-3SiliconppmASTM D5185-3ValdoumppmASTM D5185-3								
Sample Date         Client Info         15 Apr 2024             Machine Age         hrs         Client Info         298             Oil Age         hrs         Client Info         0             Filter Age         hrs         Client Info         Not Changed             Filter Changed         Client Info         N/A             Sample Status         -         ASTM D5185m         SV         ABNORMAL            PQ         ASTM D5185m         >10         1             Nickel         ppm         ASTM D5185m         >10         1             Nickel         ppm         ASTM D5185m         >10         1             Aluminum         ppm         ASTM D5185m         9              Lead         ppm         ASTM D5185m         23             Vanadium         ppm         ASTM D5185m         <1             Vanadium         ppm         ASTM D5185m         <3	Test	UOM	Method	Limit/Abn	Current	History1	History2	
Machine AgehrsClient Info298Oil AgehrsClient Info0Filter AgehrsClient InfoNot ChangdOil ChangedClient InfoNt/AFilter ChangedClient InfoNt/AFilter ChangedClient InfoNt/ASample StatusABNORMALPQASTM D5185m>102IronppmASTM D5185m>101NickelppmASTM D5185m-101NickelppmASTM D5185m0AluminumppmASTM D5185m9AuminumppmASTM D5185m23VanadiumppmASTM D5185m23VanduiumppmASTM D5185m<1SiliconppmASTM D5185m>203SiliconppmASTM D5185m>203SiliconppmASTM D5185m>203SiliconppmASTM D5185m>203SiliconppmASTM D5185m>203Silitscalar'VisualNONENONESodiumppm<	Sample Number		Client Info		JR0210353			
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Filter Age         hrs         Client Info         0             Oil Changed         Client Info         N/A             Filter Changed         Client Info         N/A             Sample Status         ABNORMAL             PQ         ASTM D5185         >200         P7             Iron         ppm         ASTM D5185         >10         2             Nickel         ppm         ASTM D5185         >10         1             Nickel         ppm         ASTM D5185         9              Silver         ppm         ASTM D5185         0         1             Auminum         ppm         ASTM D5185         1         1             Vanadium         ppm         ASTM D5185         1              Yellow Metal         scalar         Yusual         NONE              Yellow Metal         scalar         Yusual         NONE	Machine Age	hrs	Client Info		298			
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Lead         ppm         ASTM D5185m         9            Copper         ppm         ASTM D5185m         23            Tin         ppm         ASTM D5185m         1            Vanadium         ppm         ASTM D5185m          1            White Metal         scalar         *Visual         NONE         NONE            White Metal         scalar         *Visual         NONE             Yellow Metal         scalar         *Visual         NONE             Silicon         ppm         ASTM D5185m         61             Water         WC Method         >0.2         NEG             Silit         scalar         *Visual         NONE             Debris         scalar         *Visual         NONE             Appearance         scalar         *Visual         NORM             Odor         scalar         *Visual         NORM         NORML            Boron         ppm		ppm						
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Boron         ppm         ASTM D5185m         150         205             Barium         ppm         ASTM D5185m         1         2             Molybdenum         ppm         ASTM D5185m         1         1             Manganese         ppm         ASTM D5185m         10         23             Magnesium         ppm         ASTM D5185m         10         23             Calcium         ppm         ASTM D5185m         10         23             Phosphorus         ppm         ASTM D5185m         70         42             Zinc         ppm         ASTM D5185m         2000         1960             Sulfur         ppm         ASTM D5185m         50         24	Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor	ppm ppm scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual	>20 >0.2 NONE NONE NORE NORML	61 3 NEG NONE NONE NONE NORML NORML	    		
Barium         ppm         ASTM D5185m         2            Molybdenum         ppm         ASTM D5185m         1            Manganese         ppm         ASTM D5185m         3            Magnesium         ppm         ASTM D5185m         10         23            Magnesium         ppm         ASTM D5185m         70         42            Phosphorus         ppm         ASTM D5185m         2000         1960            Zinc         ppm         ASTM D5185m         50         24            Sulfur         ppm         ASTM D5185m         2000         46875	Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor	ppm ppm scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual	>20 >0.2 NONE NONE NORE NORML	61 3 NEG NONE NONE NONE NORML NORML	    		
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Calcium         ppm         ASTM D5185m         70         42            Phosphorus         ppm         ASTM D5185m         2000         1960             Zinc         ppm         ASTM D5185m         50         24             Sulfur         ppm         ASTM D5185m         2000         46875	Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium	ppm ppm scalar scalar scalar scalar scalar scalar ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m	>20 >0.2 NONE NONE NORML NORML >0.2	61 3 NEG NONE NONE NORML NORML NEG 9 205 2			
Phosphorus         ppm         ASTM D5185m         2000         1960             Zinc         ppm         ASTM D5185m         50         24             Sulfur         ppm         ASTM D5185m         2000         46875	Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum	ppm ppm scalar scalar scalar scalar scalar scalar ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m	>20 >0.2 NONE NONE NORML NORML >0.2	61 3 NEG NONE NONE NORML NORML NEG 9 205 2 2			
Zinc         ppm         ASTM D5185m         50         24            Sulfur         ppm         ASTM D5185m         20000         46875	Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese	ppm ppm scalar scalar scalar scalar scalar gpm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >0.2 NONE NONE NORML >0.2	61 3 NEG NONE NONE NORML NORML NEG 9 205 2 2 1 3			
Sulfur         ppm         ASTM D5185m         20000         46875	Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium	ppm ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >0.2 NONE NONE NORML >0.2 150	61 3 NEG NONE NONE NORML NORML NEG 9 205 2 1 3 3 23			
	Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	<ul> <li>&gt;20</li> <li>&gt;0.2</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>&gt;0.2</li> <li>150</li> <li>10</li> <li>70</li> </ul>	61 3 NEG NONE NONE NORML NORML NEG 9 205 2 2 1 3 3 23 42			
Visc @ 40°C cSt ASTM D445 140 170	Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	<ul> <li>&gt;20</li> <li>&gt;0.2</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>&gt;0.2</li> <li>150</li> <li>150</li> <li>10</li> <li>70</li> <li>2000</li> </ul>	61 3 NEG NONE NONE NORML NORML NEG 9 205 2 205 2 1 3 205 2 1 3 205 2 1 3 205 2 2 1 3 205 2 2 1 3 2 2 3 1 3 2 3 2 3 42 1 960			
	Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	<ul> <li>&gt;20</li> <li>&gt;0.2</li> <li>NONE</li> <li>NORME</li> <li>NORML</li> <li>&gt;0.2</li> <li>150</li> <li>150</li> <li>10</li> <li>70</li> <li>2000</li> <li>50</li> </ul>	61 3 NEG NONE NONE NORML NORML NEG 9 205 2 1 3 205 2 1 3 2 2 1 3 2 2 1 3 2 2 1 1 3 2 2 1 1 3 2 2 1 1 3 2 2 1 1 3 2 2 1 2 1			

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