

# WEAR ABNORMAL CONTAMINATION ABNORMAL FLUID CONDITION NORMAL

#### Machine Id **1004** Component **Differential** Fluid **GEAR OIL SAE 80W140 (--- GAL)**

## RECOMMENDATION

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

### **WEAR**

Gear wear is indicated.

## CONTAMINATION

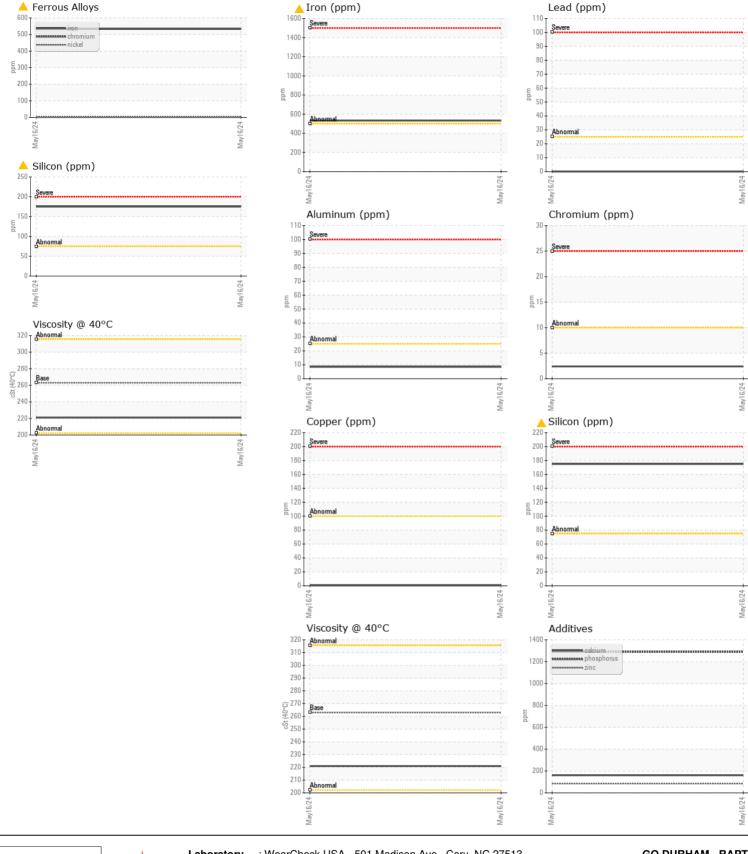
Elemental level of silicon (Si) above normal indicating ingress of seal material.

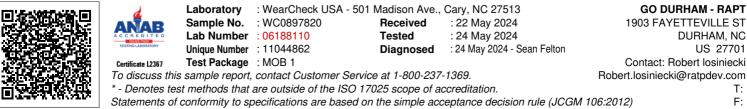
## FLUID CONDITION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0897820		
Sample Date		Client Info		16 May 2024		
Machine Age	mls	Client Info		0		
Oil Age	mls	Client Info		0		
Filter Age	mls	Client Info		0		
Oil Changed		Client Info		Changed		
Filter Changed		Client Info		Changed		
Sample Status				ABNORMAL		
			500	 ۲۰۰۰		
Iron	ppm	ASTM D5185m	>500	▲ 533 0		
Chromium	ppm	ASTM D5185m	>10	2		
Nickel	ppm	ASTM D5185m	>10	2		
Titanium	ppm	ASTM D5185m		<1		
Silver	ppm	ASTM D5185m	05	0		
Aluminum	ppm	ASTM D5185m	>25	8		
Lead	ppm	ASTM D5185m	>25	0		
Copper	ppm	ASTM D5185m	>100	<1		
Tin	ppm	ASTM D5185m	>10	<1		
Vanadium	ppm	ASTM D5185m	NONE	0		
White Metal	scalar	*Visual	NONE	NONE		
Yellow Metal	scalar	*Visual	NONE	NONE		
Yellow Metal Silicon	scalar ppm	*Visual ASTM D5185m	NONE	NONE		
Silicon	ppm	ASTM D5185m	>75	<b>1</b> 75		
Silicon Potassium	ppm	ASTM D5185m ASTM D5185m	>75 >20	▲ 175 <1		
Silicon Potassium Water	ppm ppm	ASTM D5185m ASTM D5185m WC Method	>75 >20 >.2	▲ 175 <1 NEG		
Silicon Potassium Water Silt	ppm ppm scalar	ASTM D5185m ASTM D5185m WC Method *Visual	>75 >20 >.2 NONE	▲ 175 <1 NEG NONE		
Silicon Potassium Water Silt Debris	ppm ppm scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual	>75 >20 >.2 NONE NONE	175 <1 NEG NONE NONE		   
Silicon Potassium Water Silt Debris Sand/Dirt	ppm ppm scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual	>75 >20 >.2 NONE NONE NONE	<ul> <li>175</li> <li>&lt;1</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> </ul>	  	
Silicon Potassium Water Silt Debris Sand/Dirt Appearance	ppm ppm scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual	>75 >20 >.2 NONE NONE NONE NORML	<ul> <li>175</li> <li>&lt;1</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> </ul>	  	
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water	ppm ppm scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual	>75 >20 >.2 NONE NONE NONE NORML NORML	<ul> <li>175</li> <li>&lt;1</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> </ul>		
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium	ppm ppm scalar scalar scalar scalar scalar scalar ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m	>75 >20 >.2 NONE NONE NORML NORML >.2	<ul> <li>175</li> <li>&lt;1</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>8</li> </ul>		
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron	ppm ppm scalar scalar scalar scalar scalar scalar gppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m	>75 >20 >.2 NONE NONE NORML >.2	<ul> <li>175</li> <li>&lt;1</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>8</li> <li>215</li> </ul>		
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	>75 >20 >.2 NONE NONE NORML NORML >.2	<ul> <li>175</li> <li>&lt;1</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>8</li> <li>215</li> <li>0</li> </ul>		
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 *Visual ASTM D5185m ASTM D5185m ASTM D5185m	>75 >20 >.2 NONE NONE NORML >.2	<ul> <li>175</li> <li>&lt;1</li> <li>NEG</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>8</li> <li>215</li> <li>0</li> <li>&lt;1</li> </ul>		
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 *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>75 >20 >.2 NONE NORE NORML >.2 NORML >.2	<ul> <li>175</li> <li>&lt;1</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>8</li> <li>215</li> <li>0</li> <li>&lt;1</li> <li>17</li> </ul>		
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 *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	<ul> <li>&gt;75</li> <li>&gt;20</li> <li>&gt;.2</li> <li>NONE</li> <li>NORME</li> <li>NORML</li> <li>&gt;.2</li> <li>400</li> <li>200</li> <li>12</li> <li>12</li> </ul>	<ul> <li>175</li> <li>&lt;1</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>8</li> <li>215</li> <li>0</li> <li>&lt;1</li> <li>17</li> <li>11</li> </ul>		
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 gpm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>75 >20 >.2 NONE NORM NORML NORML >.2 400 200 12 12	<ul> <li>175</li> <li>&lt;1</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>8</li> <li>215</li> <li>0</li> <li>&lt;1</li> <li>17</li> <li>11</li> <li>161</li> </ul>		
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 *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	<ul> <li>&gt;75</li> <li>&gt;20</li> <li>&gt;2</li> <li>NONE</li> <li>NORME</li> <li>NORML</li> <li>&gt;2</li> <li>400</li> <li>200</li> <li>12</li> <li>12</li> <li>150</li> <li>1650</li> </ul>	<ul> <li>175</li> <li>&lt;1</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>8</li> <li>215</li> <li>0</li> <li>&lt;1</li> <li>17</li> <li>11</li> <li>161</li> <li>1289</li> </ul>		
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 ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	<ul> <li>&gt;75</li> <li>&gt;20</li> <li>&gt;.2</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>&gt;.2</li> <li>400</li> <li>200</li> <li>12</li> <li>150</li> <li>125</li> </ul>	<ul> <li>175</li> <li>&lt;1</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>8</li> <li>215</li> <li>0</li> <li>&lt;1</li> <li>17</li> <li>11</li> <li>161</li> <li>1289</li> <li>85</li> </ul>		
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 *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	<ul> <li>&gt;75</li> <li>&gt;20</li> <li>&gt;2</li> <li>NONE</li> <li>NORME</li> <li>NORML</li> <li>&gt;2</li> <li>400</li> <li>200</li> <li>12</li> <li>12</li> <li>150</li> <li>1650</li> </ul>	<ul> <li>175</li> <li>&lt;1</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>8</li> <li>215</li> <li>0</li> <li>&lt;1</li> <li>17</li> <li>11</li> <li>161</li> <li>1289</li> </ul>		

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