## LEAHY·WOLF Lubricating specialists since 1946

OIL ANALYSIS REPORT

## Area **TA Machines** Machine Id **Sany SY335 TA964 (S/N 13SY033A36508)** Component Left Final Drive Fluid CITGO PREMIUM GEAR 80W90 (--- GAL)

## RECOMMENDATION

We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

**WEAR** 

Gear wear is indicated.

## CONTAMINATION

Elemental levels of silicon (Si) and aluminum (Al) indicate aluminasilicate (coarse dirt) ingress.

<b>FI UID</b>	CONDITION	

The oil viscosity is lower than normal. Confirm oil type. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	l imit/Abn	Current	History1	History2
Sample Number		Client Info		I W0008292	I W0006750	I W0006301
Sample Date		Client Info		05 Feb 2024	07 Mar 2023	19 Dec 2022
Machine Age	hrs	Client Info		4865	4141	0
Oil Age	hrs	Client Info		4865	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Change	Not Change	Not Change
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				SEVERE	SEVERE	ABNORMAL
Iron	ppm	ASTM D5185m	>500	<b>A</b> 1062	🔺 1064	<b>9</b> 04
Chromium	ppm	ASTM D5185m	>10	🔺 15	🔺 17	<b>2</b> 1
Nickel	ppm	ASTM D5185m	>10	0	3	0
Titanium	ppm	ASTM D5185m		5	9	4
Silver	ppm	ASTM D5185m		0	14	0
Aluminum	ppm	ASTM D5185m	>25	<b>A</b> 89	<b>1</b> 77	▲ 79
Lead	ppm	ASTM D5185m	>25	0	0	0
Copper	ppm	ASTM D5185m	>50	1	2	2
Tin	ppm	ASTM D5185m	>10	0	0	0
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	MODER	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
		viouui				
Silicon	ppm	ASTM D5185m	>75	• 477	621	▲ 246
Silicon Potassium	ppm ppm	ASTM D5185m ASTM D5185m	>75 >20	<ul> <li>477</li> <li>31</li> </ul>	<ul> <li>621</li> <li>59</li> </ul>	▲ 246 18
Silicon Potassium Water	ppm ppm	ASTM D5185m ASTM D5185m WC Method	>75 >20 >0.2	<ul> <li>477</li> <li>31</li> <li>NEG</li> </ul>	<ul> <li>621</li> <li>59</li> <li>NEG</li> </ul>	▲ 246 18 NEG
Silicon Potassium Water Silt	ppm ppm scalar	ASTM D5185m ASTM D5185m WC Method *Visual	>75 >20 >0.2 NONE	<ul> <li>477</li> <li>31</li> <li>NEG</li> <li>NONE</li> </ul>	<ul> <li>621</li> <li>59</li> <li>NEG</li> <li>NONE</li> </ul>	<ul> <li>246</li> <li>18</li> <li>NEG</li> <li>NONE</li> </ul>
Silicon Potassium Water Silt Debris	ppm ppm scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual	>75 >20 >0.2 NONE NONE	<ul> <li>477</li> <li>31</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> </ul>	<ul> <li>621</li> <li>59</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> </ul>	<ul> <li>246</li> <li>18</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> </ul>
Silicon Potassium Water Silt Debris Sand/Dirt	ppm ppm scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual	>75 >20 >0.2 NONE NONE NONE	<ul> <li>477</li> <li>31</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> </ul>	<ul> <li>621</li> <li>59</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> </ul>	<ul> <li>246</li> <li>18</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 >0.2 NONE NONE NONE NORML	<ul> <li>477</li> <li>31</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> </ul>	<ul> <li>621</li> <li>59</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> </ul>	<ul> <li>246</li> <li>18</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> <li>NORE</li> </ul>
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	>75 >20 >0.2 NONE NONE NORME NORML	<ul> <li>477</li> <li>31</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> </ul>	<ul> <li>621</li> <li>59</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> </ul>	<ul> <li>246</li> <li>18</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> </ul>
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water	ppm ppm scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual	>75 >20 >0.2 NONE NONE NONE NORML NORML >0.2	<ul> <li>477</li> <li>31</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> </ul>	<ul> <li>621</li> <li>59</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>0.2%</li> </ul>	<ul> <li>246</li> <li>18</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 scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m	>75 >20 >0.2 NONE NONE NORML NORML >0.2	<ul> <li>477</li> <li>31</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>10</li> </ul>	<ul> <li>621</li> <li>59</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>0.2%</li> <li>12</li> </ul>	<ul> <li>246</li> <li>18</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>5</li> </ul>
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron	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 >0.2 NONE NONE NONE NORML >0.2	<ul> <li>477</li> <li>31</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>10</li> <li>6</li> </ul>	<ul> <li>621</li> <li>59</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>0.2%</li> <li>12</li> <li>14</li> </ul>	<ul> <li>246</li> <li>18</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>5</li> <li>16</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 >0.2 NONE NORME NORML NORML >0.2	<ul> <li>477</li> <li>31</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>10</li> <li>6</li> <li>5</li> </ul>	<ul> <li>621</li> <li>59</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>0.2%</li> <li>12</li> <li>14</li> <li>0</li> </ul>	<ul> <li>246</li> <li>18</li> <li>NEG</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>5</li> <li>16</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 gpm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m	>75 >20 >0.2 NONE NONE NORML NORML >0.2	<ul> <li>477</li> <li>31</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>10</li> <li>6</li> <li>5</li> <li>0</li> </ul>	<ul> <li>621</li> <li>59</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>0.2%</li> <li>12</li> <li>14</li> <li>0</li> <li>2</li> </ul>	<ul> <li>246</li> <li>18</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>5</li> <li>16</li> <li>0</li> <li>2</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 scalar ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>75 >20 >0.2 NONE NONE NORML NORML >0.2	<ul> <li>477</li> <li>31</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>10</li> <li>6</li> <li>5</li> <li>0</li> <li>11</li> </ul>	<ul> <li>621</li> <li>59</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>0.2%</li> <li>12</li> <li>14</li> <li>0</li> <li>2</li> <li>12</li> </ul>	<ul> <li>246</li> <li>18</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>5</li> <li>16</li> <li>0</li> <li>2</li> <li>11</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 scalar 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	>75 >20 >0.2 NONE NORME NORML >0.2	<ul> <li>477</li> <li>31</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>10</li> <li>6</li> <li>5</li> <li>0</li> <li>11</li> <li>42</li> </ul>	<ul> <li>621</li> <li>59</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>0.2%</li> <li>12</li> <li>14</li> <li>0</li> <li>2</li> <li>12</li> <li>12</li> <li>77</li> </ul>	<ul> <li>246         <ul> <li>18</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> </ul> </li> <li>5         <ul> <li>16</li> <li>0</li> <li>2</li> <li>11</li> <li>32</li> </ul> </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 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	>75 >20 >0.2 NONE NORME NORML >0.2	<ul> <li>477</li> <li>31</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>10</li> <li>6</li> <li>5</li> <li>0</li> <li>11</li> <li>42</li> <li>170</li> </ul>	<ul> <li>621</li> <li>59</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>0.2%</li> <li>12</li> <li>14</li> <li>0</li> <li>2</li> <li>12</li> <li>12</li> <li>77</li> <li>257</li> </ul>	<ul> <li>246</li> <li>18</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>5</li> <li>16</li> <li>0</li> <li>2</li> <li>11</li> <li>32</li> <li>90</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 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 ASTM D5185m	>75 >20 >0.2 NONE NONE NORML NORML >0.2	<ul> <li>477</li> <li>31</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NORML</li> <li>NORML</li> <li>10</li> <li>6</li> <li>5</li> <li>0</li> <li>11</li> <li>42</li> <li>170</li> <li>275</li> </ul>	<ul> <li>621</li> <li>59</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>0.2%</li> <li>12</li> <li>14</li> <li>0</li> <li>2</li> <li>12</li> <li>77</li> <li>257</li> <li>369</li> </ul>	<ul> <li>246         <ul> <li>18</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>5</li> <li>16</li> <li>0</li> <li>2</li> <li>11</li> <li>32</li> <li>90</li> <li>408</li> </ul> </li> </ul>
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 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 ASTM D5185m	>75 >20 >0.2 NONE NORML NORML >0.2	<ul> <li>477</li> <li>31</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>10</li> <li>6</li> <li>5</li> <li>0</li> <li>11</li> <li>42</li> <li>170</li> <li>275</li> <li>94</li> </ul>	<ul> <li>621</li> <li>59</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>0.2%</li> <li>12</li> <li>14</li> <li>0</li> <li>2</li> <li>12</li> <li>77</li> <li>257</li> <li>369</li> <li>80</li> </ul>	<ul> <li>246</li> <li>18</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>5</li> <li>16</li> <li>0</li> <li>2</li> <li>11</li> <li>32</li> <li>90</li> <li>408</li> <li>36</li> </ul>
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm scalar 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 ASTM D5185m ASTM D5185m	>75 >20 >0.2 NONE NORME NORML >0.2	<ul> <li>477</li> <li>31</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>10</li> <li>6</li> <li>5</li> <li>0</li> <li>11</li> <li>42</li> <li>170</li> <li>275</li> <li>94</li> <li>18361</li> </ul>	<ul> <li>621</li> <li>59</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>0.2%</li> <li>12</li> <li>14</li> <li>0</li> <li>2</li> <li>12</li> <li>77</li> <li>257</li> <li>369</li> <li>80</li> <li>17656</li> </ul>	<ul> <li>246</li> <li>18</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>5</li> <li>16</li> <li>0</li> <li>2</li> <li>11</li> <li>32</li> <li>90</li> <li>408</li> <li>36</li> <li>19290</li> </ul>

Submitted By: Mike Korbelik

WEAR ABNORMAL CONTAMINATION SEVERE FLUID CONDITION ATTENTION



Test Package : MOB 1 Contact: Mike Korbelik Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. mike@chicagomachineryinc.com \* - 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)

F:

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