

## Machine Id **5056** Component **Right Final Drive** Fluid **{not provided} (--- GAL)**

RECOMMENDATION

We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

## WEAR

All component wear rates are normal.

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## CONTAMINATION

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

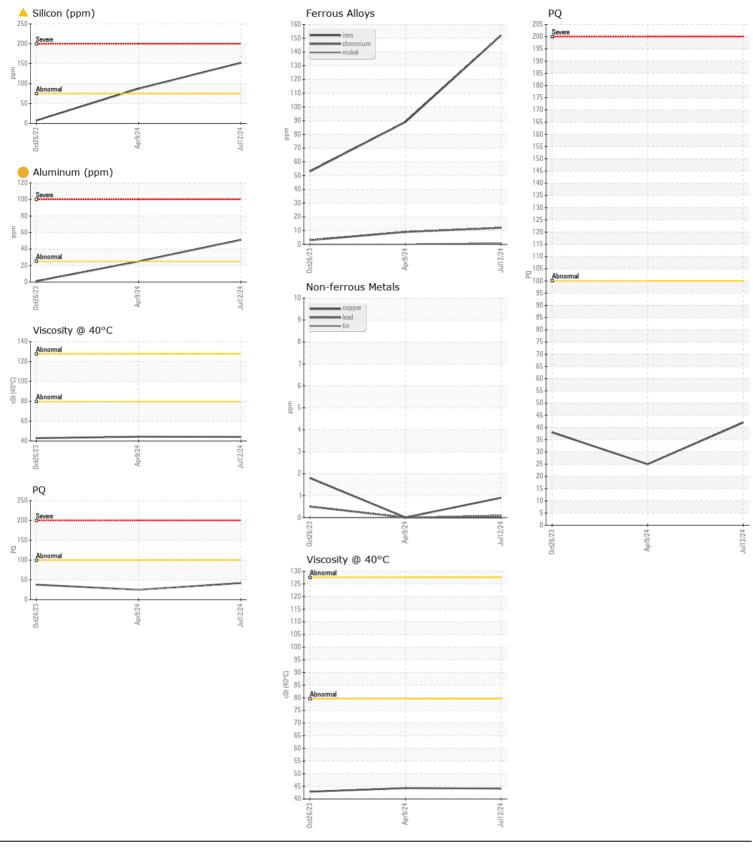
## **FLUID CONDITION**

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0221263	JR0210599	JR0184552
Sample Date		Client Info		12 Jul 2024	09 Apr 2024	26 Oct 2023
Machine Age	hrs	Client Info		1962	1406	635
Oil Age	hrs	Client Info		556	500	500
Filter Age	hrs	Client Info		556	500	500
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	NORMAL
PQ		ASTM D8184		42	25	38
Iron	ppm	ASTM D5185m	>500	152	89	53
Chromium	ppm	ASTM D5185m	>10	12	9	3
Nickel	ppm	ASTM D5185m	>10	<1	0	0
Titanium	ppm	ASTM D5185m		4	2	<1
Silver	ppm	ASTM D5185m		<1	0	0
Aluminum	ppm	ASTM D5185m	>25	51	25	<1
Lead	ppm	ASTM D5185m	>25	0	0	<1
Copper	ppm	ASTM D5185m	>50	<1	0	2
Tin	ppm	ASTM D5185m	>10	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>75	<b>1</b> 52	<b>A</b> 87	7
Silicon Potassium		ASTM D5185m ASTM D5185m	>75 >20	▲ 152 15	▲ 87 5	7 2
Silicon Potassium Water	ppm ppm	ASTM D5185m ASTM D5185m WC Method	>75 >20 >0.2	<ul> <li>152</li> <li>15</li> <li>NEG</li> </ul>	▲ 87 5 NEG	7 2 NEG
Silicon Potassium Water Silt	ppm ppm scalar	ASTM D5185m ASTM D5185m WC Method *Visual	>75 >20 >0.2 NONE	<ul> <li>152</li> <li>15</li> <li>NEG</li> <li>NONE</li> </ul>	<ul> <li>87</li> <li>5</li> <li>NEG</li> <li>NONE</li> </ul>	7 2 NEG NONE
Silicon Potassium Water Silt Debris	ppm ppm scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual	>75 >20 >0.2	<ul> <li>152</li> <li>15</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> </ul>	<ul> <li>87</li> <li>5</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> </ul>	7 2 NEG NONE NONE
Silicon Potassium Water Silt Debris Sand/Dirt	ppm ppm scalar	ASTM D5185m ASTM D5185m WC Method *Visual	>75 >20 >0.2 NONE NONE	<ul> <li>152</li> <li>15</li> <li>NEG</li> <li>NONE</li> </ul>	<ul> <li>87</li> <li>5</li> <li>NEG</li> <li>NONE</li> </ul>	7 2 NEG NONE
Silicon Potassium Water Silt Debris	ppm ppm scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual	>75 >20 >0.2 NONE NONE NONE	<ul> <li>152</li> <li>15</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> </ul>	<ul> <li>87</li> <li>5</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> </ul>	7 2 NEG NONE NONE NONE
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>152</li> <li>15</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> </ul>	<ul> <li>87</li> <li>5</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> <li>HAZY</li> </ul>	7 2 NEG NONE NONE NONE NORML
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 >0.2 NONE NONE NONE NORML	<ul> <li>152</li> <li>15</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORE</li> <li>NORML</li> <li>NEG</li> </ul>	<ul> <li>87</li> <li>5</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> <li>HAZY</li> <li>NORML</li> <li>NEG</li> </ul>	7 2 NEG NONE NONE NORM NORML NEG
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 NONE NORML	<ul> <li>152</li> <li>15</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>2</li> </ul>	<ul> <li>87</li> <li>5</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>HAZY</li> <li>NEG</li> <li>NEG</li> <li>5</li> </ul>	7 2 NEG NONE NONE NORML NORML NEG 9
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron	ppm ppm scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m	>75 >20 >0.2 NONE NONE NONE NORML	<ul> <li>152</li> <li>15</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>2</li> <li>0</li> </ul>	<ul> <li>87</li> <li>5</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> <li>NORE</li> <li>HAZY</li> <li>NORML</li> <li>NEG</li> <li>5</li> <li>0</li> </ul>	7 2 NEG NONE NONE NORML NORML NEG 9 0
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 NONE NONE NORML	<ul> <li>152</li> <li>15</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>2</li> <li>0</li> <li>0</li> </ul>	<ul> <li>87</li> <li>5</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NEG</li> <li>5</li> <li>0</li> <li>0</li> </ul>	7 2 NEG NONE NONE NORML NORML NEG 9 0 0
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	>75 >20 >0.2 NONE NONE NONE NORML	<ul> <li>152</li> <li>15</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>2</li> <li>0</li> <li>0</li> <li>2</li> </ul>	<ul> <li>87</li> <li>5</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>HAZY</li> <li>NORML</li> <li>NEG</li> <li>5</li> <li>0</li> <li>0</li> <li>&lt;1</li> </ul>	7 2 NEG NONE NONE NORML NORML NEG 9 0 0 0
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	>75 >20 >0.2 NONE NONE NONE NORML	<ul> <li>152</li> <li>15</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>2</li> <li>0</li> <li>0</li> <li>2</li> <li>3</li> </ul>	<ul> <li>87</li> <li>5</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>HAZY</li> <li>NORML</li> <li>NEG</li> <li>5</li> <li>0</li> <li>21</li> <li>4</li> </ul>	7 2 NEG NONE NONE NORML NORML NEG 9 0 0 0 0 0 4
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	>75 >20 >0.2 NONE NONE NONE NORML	<ul> <li>152</li> <li>15</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>2</li> <li>0</li> <li>2</li> <li>3</li> <li>12</li> </ul>	<ul> <li>87</li> <li>5</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> <li>HAZY</li> <li>NORML</li> <li>NEG</li> <li>5</li> <li>0</li> <li>0</li> <li>&lt;1</li> <li>4</li> <li>0</li> </ul>	7 2 NEG NONE NONE NORML NORML NEG 9 0 0 0 0 0 4 11
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	>75 >20 >0.2 NONE NONE NONE NORML	<ul> <li>152</li> <li>15</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>2</li> <li>0</li> <li>2</li> <li>3</li> <li>12</li> <li>100</li> </ul>	<ul> <li>87</li> <li>5</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>HAZY</li> <li>NORML</li> <li>NEG</li> <li>5</li> <li>0</li> <li>0</li> <li>&lt;1</li> <li>4</li> <li>0</li> <li>78</li> </ul>	7 2 NEG NONE NONE NORML NORML NEG 9 0 0 0 0 0 4 11 70
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 ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>75 >20 >0.2 NONE NONE NONE NORML	<ul> <li>152</li> <li>15</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>2</li> <li>0</li> <li>2</li> <li>3</li> <li>12</li> <li>100</li> <li>124</li> </ul>	<ul> <li>87</li> <li>5</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>HAZY</li> <li>NORML</li> <li>NEG</li> <li>5</li> <li>0</li> <li>&lt;1</li> <li>4</li> <li>0</li> <li>78</li> <li>81</li> </ul>	7 2 NEG NONE NONE NORML NORML NEG 9 0 0 0 0 0 4 11 70 253
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 ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>75 >20 >0.2 NONE NONE NONE NORML	<ul> <li>152</li> <li>15</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>2</li> <li>0</li> <li>2</li> <li>3</li> <li>12</li> <li>100</li> <li>124</li> <li>68</li> </ul>	<ul> <li>87</li> <li>5</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NONE</li> <li>NORM</li> <li>HAZY</li> <li>NORML</li> <li>NEG</li> <li>5</li> <li>0</li> <li>21</li> <li>4</li> <li>0</li> <li>78</li> <li>81</li> <li>74</li> </ul>	7 2 NEG NONE NONE NORML NORML NEG 9 0 0 0 0 0 0 0 4 11 70 253 447
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 ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>75 >20 >0.2 NONE NONE NONE NORML	<ul> <li>152</li> <li>15</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>NEG</li> <li>2</li> <li>0</li> <li>2</li> <li>3</li> <li>12</li> <li>100</li> <li>124</li> </ul>	<ul> <li>87</li> <li>5</li> <li>NEG</li> <li>NONE</li> <li>NONE</li> <li>HAZY</li> <li>NORML</li> <li>NEG</li> <li>5</li> <li>0</li> <li>&lt;1</li> <li>4</li> <li>0</li> <li>78</li> <li>81</li> </ul>	7 2 NEG NONE NONE NORML NORML NEG 9 0 0 0 0 0 4 11 70 253

Submitted By: BRANDON STEVENS



PATRIOT DEVELOPMENT CORP Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : JR0221263 Received 22721 LADBROOK DRIVE STE 120 : 18 Jul 2024 Lab Number : 06240595 Tested STERLING, VA : 19 Jul 2024 Unique Number : 11129429 : 20 Jul 2024 - Don Baldridge US 20166 Diagnosed Test Package : CONST (Additional Tests: PQ) Contact: ROBERT MOSS Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. robert.moss@patriotdev.net \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: F: Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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