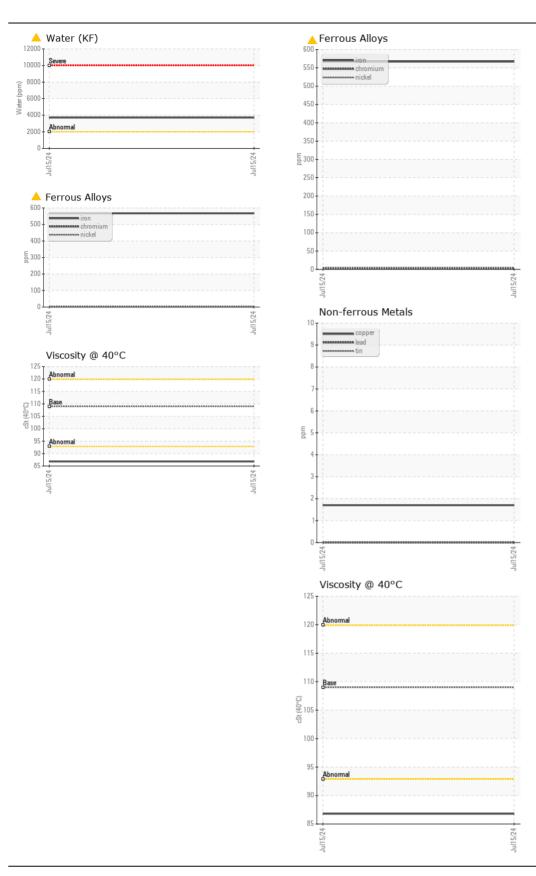
**WEAR** CONTAMINATION **FLUID CONDITION** 

**ABNORMAL ABNORMAL NORMAL** 

Machine Id

GM 13434 Component Gearbox

GEAR OIL SAE 75W90 ( QTS)							
RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
The oil change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.	Sample Number		Client Info		WC0950564		
	Sample Date		Client Info		15 Jul 2024		
	Machine Age	mls	Client Info		234025		
	Oil Age	mls	Client Info		234025		
	Filter Age	mls	Client Info		0		
	Oil Changed		Client Info		Changed		
	Filter Changed		Client Info		Changed		
	Sample Status				ABNORMAL		
WEAR	Iron	ppm	ASTM D5185m	>200	<u>▲</u> 567		
Gear wear is indicated. All other component wear rates are normal for time on oil.	Chromium	ppm	ASTM D5185m	>10	2		
	Nickel	ppm	ASTM D5185m	>10	5		
	Titanium	ppm	ASTM D5185m		<1		
	Silver	ppm	ASTM D5185m		0		
	Aluminum	ppm	ASTM D5185m	>25	2		
	Lead	ppm	ASTM D5185m	>50	0		
	Copper	ppm	ASTM D5185m	>200	2		
	Tin	ppm	ASTM D5185m	>10	0		
	Vanadium	ppm	ASTM D5185m		0		
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal		43.77	11011	NONE		
	reliow Metal	scalar	*Visual	NONE	NONE		
CONTAMINATION	Silicon	ppm	*Visual ASTM D5185m		19	 	
				>50			
CONTAMINATION  There is a light concentration of water present in the oil.	Silicon	ppm	ASTM D5185m	>50	19		
	Silicon Potassium	ppm ppm	ASTM D5185m ASTM D5185m	>50 >20 >0.2	19 4		
	Silicon Potassium Water	ppm ppm %	ASTM D5185m ASTM D5185m ASTM D6304	>50 >20 >0.2	19 4 ▲ 0.371		
	Silicon Potassium Water ppm Water	ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304	>50 >20 >0.2 >2000	19 4 • 0.371 • 3710	  	
	Silicon Potassium Water ppm Water Silt	ppm ppm % ppm scalar	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 *Visual	>50 >20 >0.2 >2000 NONE	19 4 ▲ 0.371 ▲ 3710 NONE	  	
	Silicon Potassium Water ppm Water Silt Debris	ppm ppm % ppm scalar scalar	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 *Visual	>50 >20 >0.2 >2000 NONE NONE	19 4 0.371 3710 NONE	  	
	Silicon Potassium Water ppm Water Silt Debris Sand/Dirt	ppm ppm % ppm scalar scalar scalar	ASTM D5185m ASTM D6304 ASTM D6304 *Visual *Visual	>50 >20 >0.2 >2000 NONE NONE	19 4 ▲ 0.371 ▲ 3710 NONE NONE	   	   
	Silicon Potassium Water ppm Water Silt Debris Sand/Dirt Appearance	ppm ppm % ppm scalar scalar scalar scalar	ASTM D5185m ASTM D6304 ASTM D6304 *Visual *Visual *Visual *Visual	>50 >20 >0.2 >2000 NONE NONE NONE NORML	19 4 ▲ 0.371 ▲ 3710 NONE NONE NONE NORML	    	
	Silicon Potassium Water ppm Water Silt Debris Sand/Dirt Appearance Odor	ppm ppm % ppm scalar scalar scalar scalar	ASTM D5185m ASTM D6304 ASTM D6304 *Visual *Visual *Visual *Visual *Visual *Visual	>50 >20 >0.2 >2000 NONE NONE NONE NONE NORML	19 4 0.371 3710 NONE NONE NONE NORML NORML	    	
There is a light concentration of water present in the oil.  FLUID CONDITION	Silicon Potassium Water ppm Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water	ppm ppm % ppm scalar scalar scalar scalar scalar	ASTM D5185m ASTM D6304 ASTM D6304 *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	>50 >20 >0.2 >2000 NONE NONE NONE NORML NORML >0.2	19 4 0.371 3710 NONE NONE NONE NORML NORML 0.2%		
There is a light concentration of water present in the oil.	Silicon Potassium Water ppm Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium	ppm ppm % ppm scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D6304 ASTM D6304 *Visual *Visual *Visual *Visual *Visual *Visual *ASTM D6304	>50 >20 >0.2 >2000 NONE NONE NORML NORML >0.2	19 4 ▲ 0.371 ▲ 3710 NONE NONE NONE NORML NORML 0.2%	     	
There is a light concentration of water present in the oil.  FLUID CONDITION	Silicon Potassium Water ppm Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron	ppm ppm % ppm scalar scalar scalar scalar scalar ppm	ASTM D5185m ASTM D6304 ASTM D6304 *Visual *Visual *Visual *Visual *Visual *Visual *ASTM D5185m ASTM D5185m ASTM D5185m	>50 >20 >0.2 >2000 NONE NONE NONE NORML NORML >0.2	19 4 ▲ 0.371 ▲ 3710 NONE NONE NONE NORML NORML 0.2%  1 63		
There is a light concentration of water present in the oil.  FLUID CONDITION	Silicon Potassium Water ppm Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium	ppm ppm % ppm scalar scalar scalar scalar scalar ppm ppm	ASTM D5185m ASTM D6304 ASTM D6304 *Visual *Visual *Visual *Visual *Visual *Visual *ASTM D5185m ASTM D5185m ASTM D5185m	>50 >20 >0.2 >2000 NONE NONE NONE NORML NORML >0.2	19 4 0.371 3710 NONE NONE NORML NORML 0.2% 1 63 0		
There is a light concentration of water present in the oil.  FLUID CONDITION	Silicon Potassium Water ppm Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water  Sodium Boron Barium Molybdenum	ppm ppm scalar scalar scalar scalar scalar scalar ppm ppm ppm ppm	ASTM D5185m ASTM D6304 ASTM D6304 *Visual *Visual *Visual *Visual *Visual *Visual *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>50 >20 >0.2 >2000 NONE NONE NONE NORML NORML >0.2  400 200 12	19 4 0.371 3710 NONE NONE NORML NORML 0.2% 1 63 0 1		
There is a light concentration of water present in the oil.  FLUID CONDITION	Silicon Potassium Water ppm Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water  Sodium Boron Barium Molybdenum Manganese	ppm ppm % ppm scalar scalar scalar scalar scalar ppm ppm ppm	ASTM D5185m ASTM D6304 ASTM D6304 *Visual *Visual *Visual *Visual *Visual *Visual *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>50 >20 >0.2 >2000 NONE NONE NONE NORML NORML >0.2  400 200 12	19 4 0.371 3710 NONE NONE NONE NORML NORML 0.2%  1 63 0 1 9		
There is a light concentration of water present in the oil.  FLUID CONDITION	Silicon Potassium Water ppm 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 ppm	ASTM D5185m ASTM D6304 ASTM D6304 *Visual *Visual *Visual *Visual *Visual *Visual *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>50 >20 >0.2 >2000 NONE NONE NONE NORML NORML >0.2  400 200 12	19 4 0.371 3710 NONE NONE NORML NORML 0.2%  1 63 0 1 9 3		
There is a light concentration of water present in the oil.  FLUID CONDITION	Silicon Potassium Water ppm 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 ppm ppm ppm ppm	ASTM D5185m ASTM D6304 ASTM D6304 *Visual *Visual *Visual *Visual *Visual *Visual *ASTM D5185m ASTM D5185m	>50 >20 >0.2 >2000 NONE NONE NONE NORML NORML >0.2  400 200 12  12  150 1650	19 4 0.371 3710 NONE NONE NORML NORML 0.2%  1 63 0 1 9 3 0		
There is a light concentration of water present in the oil.  FLUID CONDITION	Silicon Potassium Water ppm Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm % ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304 ASTM D6304 *Visual *Visual *Visual *Visual *Visual *Visual *ASTM D5185m ASTM D5185m	>50 >20 >0.2 >2000 NONE NONE NONE NORML NORML >0.2  400 200 12  12 150 1650 125	19 4 0.371 3710 NONE NONE NONE NORML NORML 0.2%  1 63 0 1 9 3 0 591		







Certificate L2367

Report Id: MSCDUR [WUSCAR] 06240740 (Generated: 07/21/2024 15:04:21) Rev: 1

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : WC0950564 Lab Number : 06240740

Unique Number : 11129574

**Tested** Diagnosed

Test Package : CONST ( Additional Tests: KF ) To discuss this sample report, contact Customer Service at 1-800-237-1369.

Received

: 18 Jul 2024

: 19 Jul 2024

: 20 Jul 2024 - Don Baldridge

\* - 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)

**SULLIVAN EASTERN INC** 

2860 C SLATER RD MORRISVILLE, NC US 27560

Contact: SCOTT SULLIVAN

ssullivan@sullivaneastern.com T: (919)484-8993 F: (919)484-2136