

OIL ANALYSIS REPORT



Machine Id **600.5** Component **Vacuum Pump** Fluid **BUSCH VSC 100 (--- GAL)**

DIAGNOSIS

A Recommendation

No corrective action is recommended at this time. We recommend an early resample to monitor this condition.

🔺 Wear

The iron level is abnormal.

Contamination

Elemental level of silicon (Si) above normal. There is a light concentration of water present in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORM	ATION	method	limit/base	current	nistory i	nistory2
Sample Number		Client Info		WC0881053		
Sample Date		Client Info		27 Mar 2024		
Machine Age	hrs	Client Info		5680		
Oil Age	hrs	Client Info		5680		
Oil Changed		Client Info		Not Changd		
Sample Status				ABNORMAL		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	6 0		
Chromium	ppm	ASTM D5185m	>20	0		
Nickel	ppm	ASTM D5185m	>20	0		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m		0		
Aluminum	ppm	ASTM D5185m	>20	0		
Lead	ppm	ASTM D5185m	>20	0		
Copper	ppm	ASTM D5185m	>20	6		
Tin	ppm	ASTM D5185m	>20	0		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 0	history1	history2
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	limit/base	current 0 0	history1 	history2
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	Current 0 0 0	history1 	history2
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 0 0 0 0	history1 	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	methodASTM D5185mASTM D5185mASTM D5185mASTM D5185mASTM D5185m	limit/base	current 0 0 0 0 0 0	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	Current 0 0 0 0 0 0 0 0	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 0 0 0 0 0 0 0 0 5	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	Current 0 0 0 0 0 0 0 0 0 0 5 0 0 0 0 0 0 0 0	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	Current 0 0 0 0 0 0 0 0 0 5 0 379	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 0 0 0 0 0 0 0 0 0 0 0 0 379 current	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	methodASTM D5185mASTM D5185m	limit/base	current 0 0 0 0 0 0 0 0 0 0 0 0 0 379 current ▲ 178	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base limit/base >15	current 0 0 0 0 0 0 0 0 379 current 178 3	history1 history1	history2 history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base	current 0 0 0 0 0 0 0 0 379 current ▲ 178 3 0	history1	history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base limit/base >15 >20 >.1	current 0 0 0 0 0 0 0 0 0 5 0 379 current ▲ 178 3 0 ▲ 0.168	history1 history1 <	history2 history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water ppm Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D6304 ASTM D6304	limit/base	current 0 0 0 0 0 0 0 0 0 0 379 current ▲ 178 3 0 ▲ 178 3 0 ▲ 1680	history1 history1	history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water ppm Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m	limit/base	current 0 0 0 0 0 0 5 0 379 current ▲ 178 3 0 ▲ 178 3 0 ▲ 1680	history1 history1 <td>history2 </td>	history2



OIL ANALYSIS REPORT

limit/base

NONE

NONE

NONE

NONE

NONE

NONE NORML

NORML

current

NONE

NONE

NONE

NONE

NONE

NONE

NORML

NORML

history1

history2



>.1 0.2% NEG method limit/base current history historv2 ASTM D445 92.9 limit/base history1 method current history2 no image no image no imade no image no image no image Lead (ppm) Severe Mar27/24 Chromium (ppm) 60 Seve Mar27/24 Silicon (ppm) 20 Ē 100 Mar27/24 (ac) g KOH/g) Base Number Вш Base Nur Mar27/24 Mar27/74 **TERREVA RENEWABLES - COUNTRYSIDE** : 03 Apr 2024 31725 ROUTE 83 : 08 Apr 2024 GRAYSLAKE, IL : 08 Apr 2024 - Jonathan Hester US 60030 Contact: ERIC BOEHMER

Report Id: TERGRAIL [WUSCAR] 06137595 (Generated: 04/08/2024 09:48:43) Rev: 1

* - 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)

Contact/Location: ERIC BOEHMER - TERGRAIL

T:

F:

eboehmer@esisolutions.com