

Machine Id COPELAND FORT HEALTHCARE CH 2 CIRC 2 (S/N STNU0712000182)

Refrigeration Compressor

{not provided} (--- GAL)

RECOMMENDATION

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

WEAR

All component wear rates are normal.

CONTAMINATION

There is a trace of moisture present in the oil.

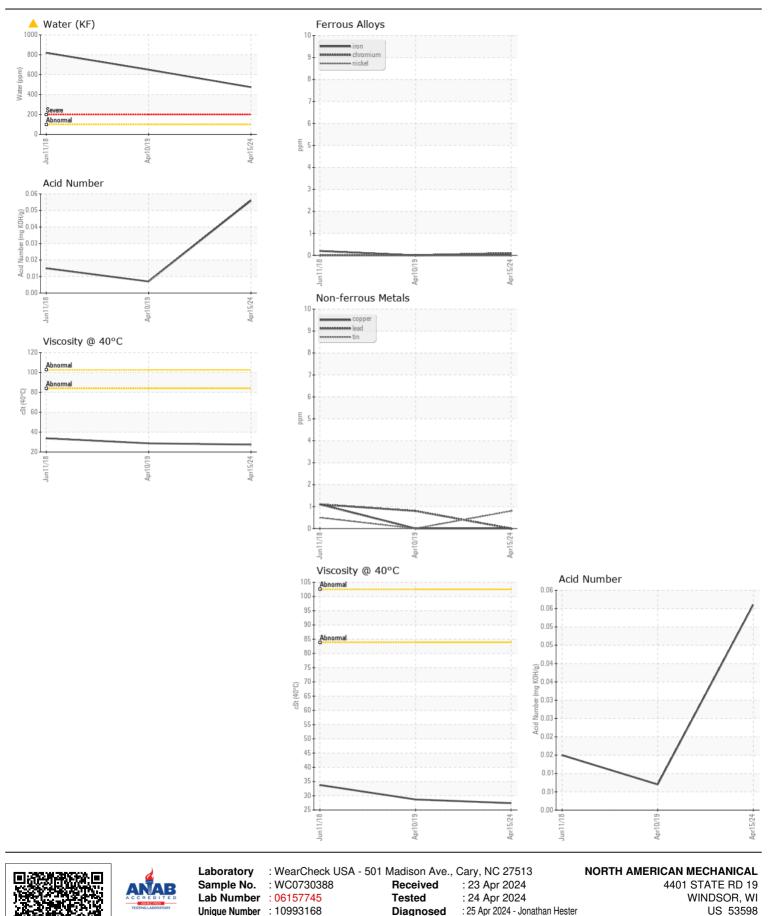
FLUID CONDITION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0730388	WCI2334299	WCI2315682
Sample Date		Client Info		15 Apr 2024	10 Apr 2019	11 Jun 2018
Machine Age	yrs	Client Info		0	8	7
Oil Age	yrs	Client Info		0	1	7
Filter Age	yrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	Not Changd	Not Changd
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				MARGINAL	ABNORMAL	ABNORMAL
Iron		ASTM D5185m	>8	0	0	<1
Chromium	ppm	ASTM D5185m	>0	0 <1	0	< 1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm ppm	ASTM D5185m	>2	0	0	0
Lead		ASTM D5185m	>2	0	<1	1
Copper	ppm ppm	ASTM D5185m	>8	0	0	1
Tin		ASTM D5185m	>4	۰ <1	0	<1
Vanadium	ppm ppm	ASTM D5185m	24	0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
		13001			NONE	NONE
Silicon	ppm	ASTM D5185m	>15	0	2	6
Silicon Potassium	ppm ppm	ASTM D5185m ASTM D5185m	>15 >20	0 <1	2 0	6 0
				-		
Potassium	ppm	ASTM D5185m	>20	<1	0	0
Potassium Water	ppm %	ASTM D5185m ASTM D6304	>20 >0.01	<1 ▲ 0.047	0	0
Potassium Water ppm Water	ppm % ppm	ASTM D5185m ASTM D6304 ASTM D6304	>20 >0.01 >100	<1	0 0.065 650	0 0.082 820
Potassium Water ppm Water Silt	ppm % ppm scalar	ASTM D5185m ASTM D6304 ASTM D6304 *Visual	>20 >0.01 >100 NONE	<1 0.047 474 NONE 	0 0.065 650 NONE	0 0.082 820 NONE
Potassium Water ppm Water Silt Debris	ppm % ppm scalar scalar	ASTM D5185m ASTM D6304 ASTM D6304 *Visual *Visual	>20 >0.01 >100 NONE NONE	<1 0.047 474 NONE NONE 	0 0.065 650 NONE NONE	0 0.082 820 NONE LIGHT
Potassium Water ppm Water Silt Debris Sand/Dirt	ppm % ppm scalar scalar scalar	ASTM D5185m ASTM D6304 ASTM D6304 *Visual *Visual *Visual	>20 >0.01 >100 NONE NONE	<1 0.047 474 NONE NONE NONE 	0 0.065 650 NONE NONE NONE	0 0.082 820 NONE LIGHT NONE
Potassium Water ppm Water Silt Debris Sand/Dirt Appearance	ppm % ppm scalar scalar scalar scalar scalar	ASTM D5185m ASTM D6304 ASTM D6304 *Visual *Visual *Visual *Visual	>20 >0.01 >100 NONE NONE NONE	<1 0.047 474 NONE NONE NONE NORML	0 0.065 650 NONE NONE NONE NORML	0 0.082 820 NONE LIGHT NONE NORML
Potassium Water ppm Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water	ppm % ppm scalar scalar scalar scalar scalar	ASTM D5185m ASTM D6304 ASTM D6304 *Visual *Visual *Visual *Visual *Visual *Visual	>20 >0.01 >100 NONE NONE NONE NORML	<1 0.047 474 NONE NONE NORML NORML NEG 	0 0.065 650 NONE NONE NONE NORML NORML NEG	0 0.082 820 NONE LIGHT NONE NORML NORML NEG
Potassium Water ppm Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium	ppm % ppm scalar scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D6304 ASTM D6304 *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m	>20 >0.01 >100 NONE NONE NONE NORML	<1 0.047 474 NONE NONE NORML NORML NEG 0	0 0.065 650 NONE NONE NORML NORML NEG 0	0 0.082 820 NONE LIGHT NORML NORML NEG 0
Potassium Water ppm Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water	ppm % ppm scalar scalar scalar scalar scalar scalar ppm	ASTM D5185m ASTM D6304 ASTM D6304 *Visual *Visual *Visual *Visual *Visual *Visual	>20 >0.01 >100 NONE NONE NONE NORML	<1 0.047 0.047 00NE NONE NONE NORML NORML NEG 0 0 0	0 0.065 650 NONE NONE NONE NORML NORML NEG	0 0.082 820 NONE LIGHT NONE NORML NORML NEG
Potassium Water ppm 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 D6304 ASTM D6304 *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m	>20 >0.01 >100 NONE NONE NONE NORML	<1 0.047 474 NONE NONE NORML NORML NEG 0	0 0.065 0.005 NONE NONE NORML NORML NEG 0 	0 0.082 820 NONE LIGHT NORML NORML NORML NEG
Potassium Water ppm Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron	ppm % ppm scalar scalar scalar scalar scalar scalar ppm	ASTM D5185m ASTM D6304 ASTM D6304 *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m	>20 >0.01 >100 NONE NONE NONE NORML	<1 0.047 474 NONE NONE NORML NORML NEG 0 0 0 0	0 0.065 650 NONE NONE NORML NORML NEG 0 <1 0	0 0.082 820 NONE LIGHT NORML NORML NEG 0 <1 0
Potassium Water ppm 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 D6304 ASTM D6304 *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m	>20 >0.01 >100 NONE NONE NONE NORML	<1 0.047 474 NONE NONE NORML NORML NEG 0 0 0 0 0 0 0	0 0.065 0.065 NONE NONE NONE NORML NORML NEG 0 <1 0 0 0	0 0.082 820 NONE LIGHT NORML NORML NEG 0 <1 0 <1
Potassium Water ppm Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum	ppm % ppm scalar scalar scalar scalar scalar ppm ppm ppm	ASTM D5185m ASTM D6304 ASTM D6304 *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >0.01 >100 NONE NONE NONE NORML	<1 0.047 0.047 00000 0000 0000 0000 0000 0000 0000 0000 00000	0 0.065 0.065 NONE NONE NORML NORML NEG 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0.082 820 NONE LIGHT NORML NORML NEG 0 <1 0 <1 0 <1 <1
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	ASTM D5185m ASTM D6304 ASTM D6304 *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >0.01 >100 NONE NONE NONE NORML	<1 0.047 0.047 000E 000E 000 000 000 000 000	0 0.065 0.065 NONE NONE NORML NORML NEG 0 0 0 0 0 0 0 1	0 0.082 820 NONE LIGHT NORML NORML NEG 0 <1 0 <1 0 <1 0 <1 0 0
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	ASTM D5185m ASTM D6304 ASTM D6304 *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >0.01 >100 NONE NONE NONE NORML	<1 0.047 0.047 0.010 0.0000 0.000 0.000 0.00000 0.0000 0.0000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.000000 0.000000 0.00000000	0 0.065 0.065 NONE NONE NORML NORML NEG 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0.082 820 NONE LIGHT NORML NORML NEG 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1
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 ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304 ASTM D6304 *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >0.01 >100 NONE NONE NONE NORML	<1 0.047 474 NONE NONE NORML NORML NEG 0 0 0 0 0 0 0 0 0 0 0 0 0	0 ▲ 0.065 ▲ 650 NONE NONE NORML NORML NEG 0 <1 0 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0.082 820 NONE LIGHT NORML NORML NEG 0 <1 0 <1 0 <1 0 <1 1 1
Potassium Water ppm 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 ppm 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 ASTM D5185m	>20 >0.01 >100 NONE NONE NONE NORML	<1 0.047 0.047 0000 000 000 000 000 000 000	0 ▲ 0.065 ▲ 650 NONE NONE NORML NORML NEG 0 <1 0 0 <1 0 <1 0 <1 0 0 <1 0 0 <1 0 0 0 <1 0 0 0 <1 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0.082 820 NONE LIGHT NORML NORML NEG 0 <1 0 <1 0 <1 0 <1 1 <1 <1
Potassium Water ppm 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 ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304 ASTM D6304 *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >0.01 >100 NONE NONE NONE NORML	<1 . 0.047 . 474 . NONE . NONE . NORML . NORML . NORML . 0 . 0 . 0 . 0 . 0 . 0 . 0 . 0	0 0.065 0.065 NONE NONE NORML NORML NEG 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0.082 820 NONE LIGHT NORML NORML NEG 0 <1 0 <1 <1 0 <1 1 <1 1 4

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Contact/Location: STACEY QUAM - NORDEF



 Unique Number
 : 10993168
 Diagnosed
 : 25 Apr 2024 - Jonathan Hester
 US 53598

 Certificate L2367
 Test Package
 : IND 2
 Contact: STACEY QUAM

 To discuss this sample report, contact Customer Service at 1-800-237-1369.
 squam@naminc.com

 * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.
 T: (608)240-8906

 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)
 F: (608)240-8965

Contact/Location: STACEY QUAM - NORDEF Page 2 of 2