

## **OIL ANALYSIS REPORT**

Sample Rating Trend



Area **87** Machine Id **[87] A87 FES** Component **Center Refrigeration Compressor** Fluid **BVA ALKYL 300 (83 GAL)** 

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

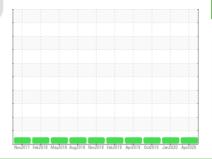
All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

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

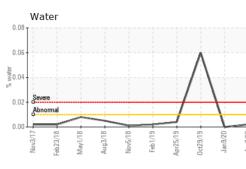


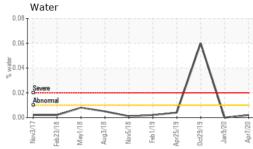


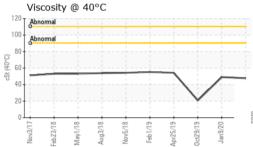
SAMPLE INFORM	IATION	method	limit/base	current	history 1	history 2
Sample Number		Client Info		HPL005628	HPL010870	HPL010876
Sample Date		Client Info		07 Apr 2020	09 Jan 2020	29 Oct 2019
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	6760	13296
Oil Changed		Client Info		N/A	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
WEAR METALS		method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>50	<1	<1	<1
Chromium	ppm	ASTM D5185m	>10	0	0	0
Nickel	ppm	ASTM D5185m		0	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	0	0	<1
Lead	ppm	ASTM D5185m	>10	<1	0	0
Copper	ppm	ASTM D5185m	>50	<1	<1	<1
Tin	ppm	ASTM D5185m	>10	<1	<1	2
Antimony	ppm	ASTM D5185m		0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history 1	history 2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current <1	history 1 0	history 2 0
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	<1	0	0
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	<1 0	0	0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	<1 0 0	0 0 0	0 0 0
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	<1 0 0 0	0 0 0 0	0 0 0 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	<1 0 0 0 0 <1 6	0 0 0 0 0	0 0 <1 0
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	<1 0 0 0 0 <1	0 0 0 0 0 0	0 0 <1 0 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	<1 0 0 0 0 <1 6	0 0 0 0 0 0 3	0 0 <1 0 0 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	<1 0 0 0 0 <1 6 0	0 0 0 0 0 0 3 0	0 0 <1 0 0 3 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		<1 0 0 0 0 <1 6 0 0 0	0 0 0 0 0 0 3 0 57 history 1 2	0 0 <1 0 0 3 0 38
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	<1 0 0 0 0 <1 6 0 0 0 0 0	0 0 0 0 0 0 3 0 57 57 history 1	0 0 <1 0 0 3 0 38 8 history 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	limit/base	<1 0 0 0 0 <1 6 0 0 0 0 <i>current</i> 0	0 0 0 0 0 0 3 0 57 <b>history 1</b> 2 0 0 0	0 0 0 <1 0 0 3 0 38 0 38 history 2 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m ASTM D5185m	limit/base >15 >20	<1 0 0 0 0 <1 6 0 0 0 0 <i>current</i> 0 0	0 0 0 0 0 0 3 0 57 57 history 1 2 0	0 0 0 <1 0 0 3 0 38 0 38 <b>history 2</b> 2 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >15 >20	<1 0 0 0 0 <1 6 0 0 0 0 0 0 0 0 1	0 0 0 0 0 0 3 0 57 <b>history 1</b> 2 0 0 0	0 0 0 <1 0 0 3 0 38 0 38 <b>history 2</b> 2 0 0 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >15 >20 >0.01	<1 0 0 0 3 4 1 6 0 0 0 0 0 0 0 0 2 1 0.002	0 0 0 0 0 0 3 0 57 history 1 2 0 0 0 0 0.00	0 0 0 <1 0 0 3 0 3 8 0 38 <b>history 2</b> 2 0 0 0 0 0 0.060



# **OIL ANALYSIS REPORT**







,	VISUAL		method	limit/base	current	history 1	history 2
	White Metal	scalar	*Visual	NONE	NONE	NONE	VLITE
1	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
	Debris	scalar	*Visual	NONE	NONE	LIGHT	LIGHT
L	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Jan 9/20	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Jan Api	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
	Emulsified Water	scalar	*Visual	>0.01	NEG	NEG	0.2%
	Free Water	scalar	*Visual		NEG	NEG	NEG
	FLUID PROPERT	IES	method	limit/base	current	history 1	history 2
\	Visc @ 40°C	cSt	ASTM D445		47.7	49.1	20.79
	SAMPLE IMAGES	5	method	limit/base	current	history 1	history 2
Jan9/20 Apr7/20	Color						no image
	Bottom					Ô	no image
	GRAPHS						
	Iron (ppm)				Lead (ppm)		
	300		1 1 1	60			
	200			<sup>40</sup> 20	İ		
Jan9/20				0			
~	Nov3/17 eb23/18 May1/18 Aug3/18	Nov5/18 - Feb1/19 -	Apr25/19 - Oct29/19 - Jan9/20 -		Nov3/17 - -eb23/18 - May1/18 -	Aug3/18 - Nov5/18 - Feb1/19 - Apr25/19 -	0ct29/19 - Jan9/20 -
	홈 관 호 국 Aluminum (ppm)	ZŰ	Ap Ji	4	≥ ± ≤ . Chromium (pp	4	. ŏ ., <
	60 Severe			60	Severe	· · · · · · · · · · · · · · · · · · ·	
	e <sup>40</sup> 20 Abnormal			트 <sup>40</sup> 20	+		
	Abnormal			<sup>2</sup> 20	Abnormal		
		Nov5/18	Apr25/19 Oct29/19 Jan9/20	Apr7/20	Nov3/17	Aug3/16 + Nov5/18 - Feb1/19 - Apr25/19 -	Oct29/19
	Nov3/17 Feb 23/18 May1/18 Aug3/18	Nov Feb	Apr2. Oct2!	Apr	Nov3/17 Feb23/18 May1/18	Aug Novi Febi Apr25	Oct2 Jan
	Copper (ppm)			60	Silicon (ppm)		
-	Severe	1 1			Ocvere		
	100 - Abnormal			<sup>40</sup> 20	Abnormal		
			+ 6 + 6	0		0 00 0	
	Nov3/17 Feb23/18 May1/18 Aug3/18	Nov5/18 Feb1/19	Apr25/19 Oct29/19 Jan9/20	Apr7/20	Nov3/17 Feb23/18 May1/18	Aug.3/18 Nov5/18 Feb.1/19 Apr25/19	0ct29/19 Jan9/20
	∠ _ ≥ ∢ Viscosity @ 40°C		A O L			As 1 As	0 7 7
Ē	150 Abnombl			Acid Number (mg KOH/g) 00.0			^
1J00171 10	5 100 - <b>Abitorma</b>			ຍັບ.10 ອັດກະ	I		/
C.	0			N.03			
	Nov3/17 Feb23/18 May1/18 Aug3/18	Nov5/18 Feb1/19	Apr25/19 0ct29/19 Jan9/20	Apr7/20 Acid	Nov3/17 Feb23/18 May1/18	Aug.3/18 Nov5/18 Feb.1/19 Apr25/19	Oct29/19 Jan9/20
ooratory mple No. o Number que Number st Package	: WearCheck USA - 5 : HPL005628 F : 04963522 E	01 Madis Received Diagnost Diagnost Tests: KF	son Ave., Ca 1 : 27 / ed : 28 / ician : Dor	ary, NC 27513 Apr 2020 Apr 2020 n Baldridge	ш —	2525 S KEN	KENSING SINGTON RI KANKAKEE, I US 6090 : TIM HUBER



Report Id: BASKAN [WUSCAR] 04963522 (Generated: 07/12/2023 14:47:54) Rev: 1

Contact/Location: TIM HUBERT - BASKAN