

## **OIL ANALYSIS REPORT**

Sample Rating Trend

## NORMAL



### Recommendation

Resample at the next service interval to monitor. ( Customer Sample Comment: Compressor Life 100 )

#### 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.

				1



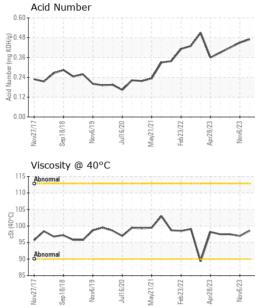
#### Sep2018 Nov2019 Jul2020 May2021 Feb2022 Apr2023 Nov2023

SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		HPL0002406	HPL0003007	HPL0002996
Sample Date		Client Info		29 Jan 2024	06 Nov 2023	11 Aug 2023
Machine Age	hrs	Client Info		9360	7414	5442
Oil Age	hrs	Client Info		7213	7239	3509
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	N	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	<1	0	<1
Chromium	ppm	ASTM D5185m	>5	0	0	0
Nickel	ppm	ASTM D5185m		0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>15	<1	<1	0
Lead	ppm	ASTM D5185m	>65	0	0	0
Copper	ppm	ASTM D5185m	>65	8	5	2
Tin	ppm	ASTM D5185m	>10	<1	0	0
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		<1	2	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m		1	3	2
Calcium	ppm	ASTM D5185m		10	12	21
Phosphorus	ppm	ASTM D5185m		124	107	117
Zinc	ppm	ASTM D5185m		15	32	0
Sulfur	ppm	ASTM D5185m		17042	16606	20861
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>35	0	0	<1
Sodium	ppm	ASTM D5185m		0	0	<1
Potassium	ppm	ASTM D5185m	>20	<1	<1	<1
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.47	0.45	0.42



# **OIL ANALYSIS REPORT**

VISUAL



	40 u 20 150 150 0 (3-0+) 200 0 0 0 0 0 0 0 0 0 0 0 0	Severe Abnorr Severe Abnorr LIVIZNON Visco	per (p	Nov6/19 Nov6/19	Juit6/20 Juit6/20	May21/21	Feb23/22 Feb23/22 Feb23/22 - Feb23/22 - Feb23/22	Apri28/23 Apri28/23 Apri28/23 Apri28/23	Nov6/23	15- mdd 5- 0- 100- mdd 50- 0-0-0-0-0- 0-0-0-0-0- 0-0-0-0-0- 0-0-0-0-0- 0-0-0-0-0-0- 0-0-0-0-0-0-0-0- 0-	Severe Abnorr Silicco Severe Abnorr	on (pp	61/9^0N m)		May21/21 May21/21 May21/21 May21/21 May21/21	Feb23/22 Feb23/22 Feb23/22 Feb23/22	Apr28/23 - Apr28/23 - Apr28/23 - Apr28/23 - Apr28/23	Nov6/23 Nov6/23 Nov6/23 Nov6/23
	토 20 0 150 도 100 도 0 200	Alum Severe Abnor LI/LZ/NON Copp	mal ger (p mal sosity (	(ppr 6L/9voN ppm)	m)	May21/21	Feb23/22	Apr28/23	Nov6/23	법 10 · 5 · 100 · 편 50 ·	Chro Severe Abnorr Silico	mium nal on (pp	(ppr 61/9^0N m)	n)	May21/21	Feb23/22	Apr28/23	Nov6/23
	토 20 0 150 도 100 도 50 0	Alum Severe Abnorr Copp: Severe Abnorr Copp: LI/LZ/voll Visco	mal 81/81 das per (p	(ppr 6L/9voN ppm)	m)	May21/21	Feb23/22	Apr28/23	Nov6/23	법 10 · 5 · 100 · 편 50 ·	Chro Severe Abnorr Silico	mium nal on (pp	(ppr 61/9^0N m)	n)	May21/21	Feb23/22	Apr28/23	Nov6/23
	E_20 0 150 E_ <sup>100</sup>	Alum Severe Abnorr LI//27/00 Copp: Severe Abnorr	mal 91/81/das per (p	o (ppr 6L/900W ppm)	m)	May21/21	Feb23/22	Apr28/23	Nov6/23	100- 100-	Chro Severe Abnorr Silico	mium nal on (pp	(ppr 6//9/0W m)	n)	May21/21	Feb23/22	Apr28/23	Nov6/23
	E_20 0 150 E_ <sup>100</sup>	Alum Severe Abnorr LI//27/00 Copp: Severe Abnorr	mal 91/81/das per (p	o (ppr 6L/900W ppm)	m)	May21/21	Feb23/22	Apr28/23	Nov6/23	100- 100-	Chro Severe Abnorr Silico	mium nal on (pp	(ppr 6//9/0W m)	n)	May21/21	Feb23/22	Apr28/23	Nov6/23
	E_20 0 150 E_ <sup>100</sup>	Alum Severe Abnom LI//ZNON Copp	mal 81/81/8 Der (p	(ppr	n)					100- 100-	Chro Severe Abnorr Silico	mal pon (pp	(ppr	n)				
	톱 20 0	Alum Severe Abnom LI//ZAON Copp	mal 81/81/82 ber (p	(ppr	n)					u 10. d 5. 0.	Chro Severe Abnorr	Sep 18/18	(ppr	n)				
		Alum Severe Abnom	ninum mal	) (ppr	n)					<sup>10 م</sup> ط 5.	Chro Severe Abnorr	mium	(ppr	n)				
		Alum Severe Abnom	ninum mal	) (ppr	n)					<sup>10 م</sup> ط 5.	Chro Severe Abnorr	mium	(ppr	n)				
		Alum	ninum			May21	Feb23/	Apr28/	Nov6/	E.10	Chro Severe	mium			May21/2	Feb23/2	Apr28/2	Nov6/2
	40	Alum	**			May21	Feb23/	Apr28/	Nov6/	15-	Chro				May21/2	Feb23/2	Apr28/2	Nov6/2
			**			May21	Feb23/	Apr28//	Nov6/						May21/2	Feb23/2	Apr28/2	Nav6/2
			200	100				2	100		2	5	5	22	12	2	22	5
	0	4	18	19			22	23	23	0.			6			2	5	5
	Md 50	Abnorr	mal							E 100 ·	Abnor	nal						
	100	Iron Severe	(ppm	1)						150	Lead	(ppm	1)			+		
			APHS								1	1						
	E	Botton									no	image					no im	age
Apr28/23	- (	Color									no	image		E ander			no im	age
1/			1PLE				mei	thod	limit/	base	С	urrent			story1			ory2
		Visc @				St		1 D445		Dase	98.			97.0			97.5	.01 y 2
			ID PF		_			thod	limit/	base		urrent			story1			ory2
		Emuls Free V		Vater		scalar scalar	*Visu *Visu		>0.1		NE NE			NEG			NEG NEG	
Aprà										ЛL							NOR	
28/23 -	_			;													NOR	
																	NON	
														NOM	١E		NON	
	`		/ Meta														NON	
77/77	Apr28/23 -	Api28/23	Precip Silt Debris Sand/I EZZ 82900 Appea Odor	Yellow Meta Precipitate Silt Debris Sand/Dirt Appearance Odor	Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance Odor	Yellow Metal s   Precipitate s   Silt s   Debris s   Sand/Dirt s   Appearance s   Odor s	Yellow Metal scalar Precipitate scalar Silt scalar Debris scalar Sand/Dirt scalar Appearance scalar Odor scalar	Yellow Metal scalar *Visu Precipitate scalar *Visu Silt scalar *Visu Debris scalar *Visu Sand/Dirt scalar *Visu Appearance scalar *Visu Odor scalar *Visu	Yellow Metalscalar*VisualPrecipitatescalar*VisualSiltscalar*VisualDebrisscalar*VisualSand/Dirtscalar*VisualAppearancescalar*VisualOdorscalar*Visual	Yellow Metal   scalar   *Visual   NONE     Precipitate   scalar   *Visual   NONE     Silt   scalar   *Visual   NONE     Debris   scalar   *Visual   NONE     Sand/Dirt   scalar   *Visual   NONE     Appearance   scalar   *Visual   NONE     Odor   scalar   *Visual   NORE	Precipitate   scalar   *Visual   NONE     Silt   scalar   *Visual   NONE     Debris   scalar   *Visual   NONE     Sand/Dirt   scalar   *Visual   NONE     Appearance   scalar   *Visual   NORML     Odor   scalar   *Visual   NORML	Yellow Metal   scalar   *Visual   NONE   NO     Precipitate   scalar   *Visual   NONE   NO     Silt   scalar   *Visual   NONE   NO     Debris   scalar   *Visual   NONE   NO     Sand/Dirt   scalar   *Visual   NONE   NO     Appearance   scalar   *Visual   NORML   NO     Odor   scalar   *Visual   NORML   NO	Yellow Metal   scalar   *Visual   NONE   NONE     Precipitate   scalar   *Visual   NONE   NONE     Silt   scalar   *Visual   NONE   NONE     Debris   scalar   *Visual   NONE   NONE     Sand/Dirt   scalar   *Visual   NONE   NONE     Appearance   scalar   *Visual   NORML   NORML     Odor   scalar   *Visual   NORML   NORML	Yellow Metal   scalar   *Visual   NONE   NONE     Precipitate   scalar   *Visual   NONE   NONE     Silt   scalar   *Visual   NONE   NONE     Debris   scalar   *Visual   NONE   NONE     Sand/Dirt   scalar   *Visual   NONE   NONE     Appearance   scalar   *Visual   NORML   NORML     Odor   scalar   *Visual   NORML   NORML	Yellow Metal   scalar   *Visual   NONE   NONE   NONE     Precipitate   scalar   *Visual   NONE   NONE   NONE     Silt   scalar   *Visual   NONE   NONE   NONE     Debris   scalar   *Visual   NONE   NONE   NONE     Sand/Dirt   scalar   *Visual   NONE   NONE   NONE     Appearance   scalar   *Visual   NORML   NORML   NOR     Odor   scalar   *Visual   NORML   NORML   NOR	Yellow Metal   scalar   *Visual   NONE   NONE   NONE     Precipitate   scalar   *Visual   NONE   NONE   NONE     Silt   scalar   *Visual   NONE   NONE   NONE     Debris   scalar   *Visual   NONE   NONE   NONE     Sand/Dirt   scalar   *Visual   NONE   NONE   NONE     Appearance   scalar   *Visual   NORML   NORML   NORML     Odor   scalar   *Visual   NORML   NORML   NORML	Yellow Metal   scalar   *Visual   NONE   NONE   NONE     Precipitate   scalar   *Visual   NONE   NONE   NONE   NONE     Silt   scalar   *Visual   NONE   NONE   NONE   NONE     Debris   scalar   *Visual   NONE   NONE   NONE     Sand/Dirt   scalar   *Visual   NONE   NONE   NONE     Appearance   scalar   *Visual   NORML   NORML   NORML     Odor   scalar   *Visual   NORML   NORML   NORML	Yellow Metal   scalar   *Visual   NONE   NONE   NONE   NONE     Precipitate   scalar   *Visual   NONE   NONE   NONE   NONE   NONE     Silt   scalar   *Visual   NONE   NONE   NONE   NONE   NONE     Debris   scalar   *Visual   NONE   NONE   NONE   NONE     Sand/Dirt   scalar   *Visual   NONE   NONE   NONE   NONE     Appearance   scalar   *Visual   NORML   NORML   NORML   NORML     Odor   scalar   *Visual   NORML   NORML   NORML   NOR

Submitted By: TIM HUBERT

Page 2 of 2