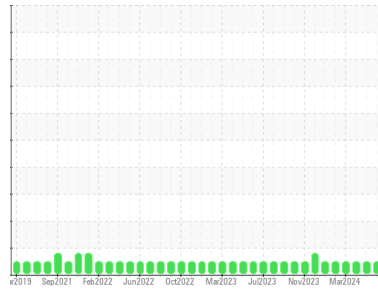




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**HP-B - K2330B**  
 Component  
**Compressor**  
 Fluid  
**REFRIG COMP OIL ISO 32 (--- GAL)**

## DIAGNOSIS

**Recommendation**  
 Resample at the next service interval to monitor.

**Wear**  
 All component wear rates are normal.

**Contamination**  
 The amount and size of particulates present in the system are acceptable. 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 INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>HLC0003286</b>	HLC0003325	HLC0003226
Sample Date	Client Info			<b>02 Jun 2024</b>	29 Apr 2024	31 Mar 2024
Machine Age	hrs Client Info			<b>0</b>	0	0
Oil Age	hrs Client Info			<b>0</b>	0	0
Oil Changed	Client Info			<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method		>0.1	<b>NEG</b>	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	<b>0</b>	0	<1
Chromium	ppm	ASTM D5185m	>10	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m		<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m		<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>25	<b>0</b>	0	1
Lead	ppm	ASTM D5185m	>25	<b>0</b>	<1	1
Copper	ppm	ASTM D5185m	>50	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	<b>16</b>	0	0
Barium	ppm	ASTM D5185m	5	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	5	<b>0</b>	0	<1
Manganese	ppm	ASTM D5185m		<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m	5	<b>0</b>	0	<1
Calcium	ppm	ASTM D5185m	12	<b>&lt;1</b>	0	4
Phosphorus	ppm	ASTM D5185m	12	<b>17</b>	11	54
Zinc	ppm	ASTM D5185m	12	<b>&lt;1</b>	0	<1
Sulfur	ppm	ASTM D5185m	1000	<b>900</b>	1120	930

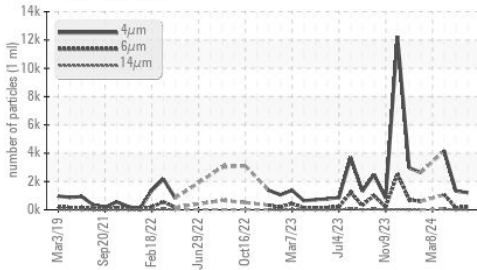
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>1</b>	2	2
Sodium	ppm	ASTM D5185m		<b>13</b>	5	2
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	<1	1

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		<b>1211</b>	1327	4164
Particles >6µm		ASTM D7647	>2500	<b>229</b>	143	1078
Particles >14µm		ASTM D7647	>320	<b>9</b>	7	51
Particles >21µm		ASTM D7647	>80	<b>2</b>	2	10
Particles >38µm		ASTM D7647	>20	<b>0</b>	0	1
Particles >71µm		ASTM D7647	>4	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>--/18/15	<b>17/15/10</b>	18/14/10	19/17/13

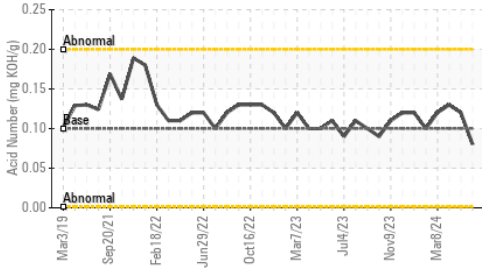
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.10	<b>0.08</b>	0.12	0.13

# OIL ANALYSIS REPORT

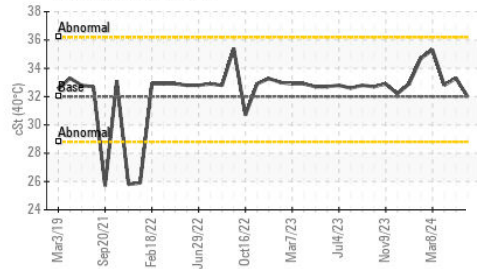
### Particle Trend



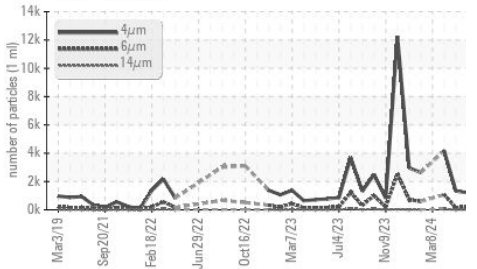
### Acid Number



### Viscosity @ 40°C



### Particle Trend

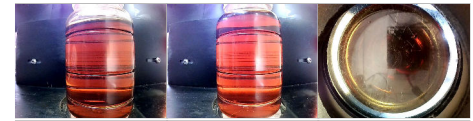


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

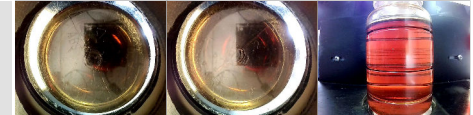
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 32	<b>32.0</b>	33.3	32.8

SAMPLE IMAGES	method	limit/base	current	history1	history2
---------------	--------	------------	---------	----------	----------

Color

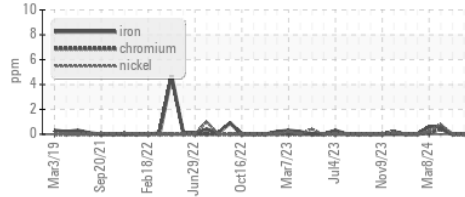


Bottom

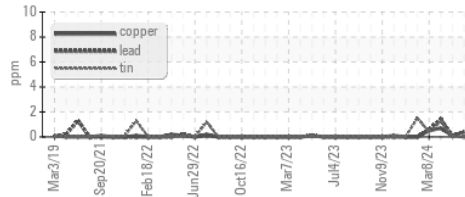


### GRAPHS

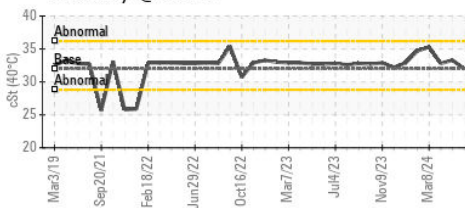
#### Ferrous Alloys



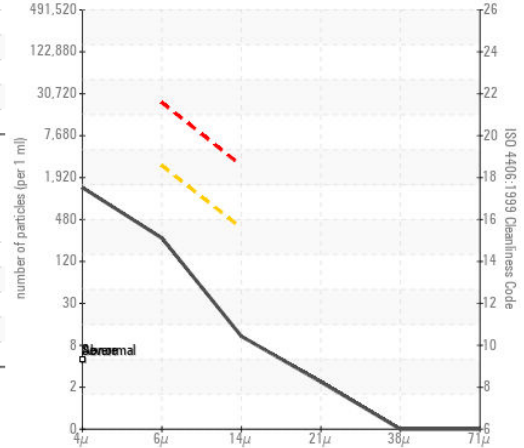
#### Non-ferrous Metals



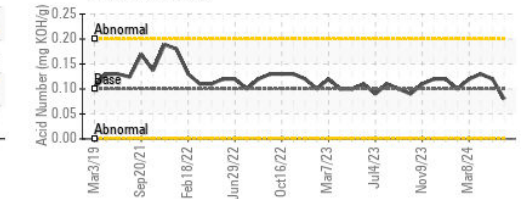
#### Viscosity @ 40°C



#### Particle Count



#### Acid Number



Certificate L2367

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

**Sample No.** : HLC0003286

**Lab Number** : 06205338

**Unique Number** : 11072799

**Test Package** : IND 2 ( Additional Tests: PrtCount )

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

\* - 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)

**Received** : 10 Jun 2024

**Tested** : 12 Jun 2024

**Diagnosed** : 12 Jun 2024 - Don Baldrige

**HILCORP NORTHSTAR FACILITY**

PRUDHOE BAY, AK

US 99734

Contact: PERRY NEEL

pneel@hilcorp.com

T: (907)670-3514

F: (907)659-5377