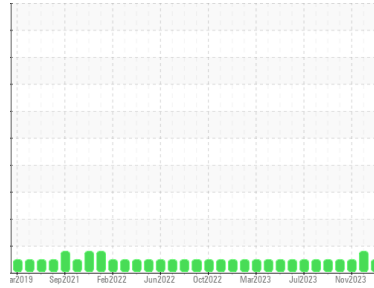




OIL ANALYSIS REPORT

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

There is no indication of any contamination in the fluid. The amount and size of particulates present in the system are acceptable.

Fluid Condition

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

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			HLC0003178	HLC0002847	HLC0002476
Sample Date	Client Info			07 Jan 2024	05 Dec 2023	09 Nov 2023
Machine Age	hrs	Client Info		177653	64952	176142
Oil Age	hrs	Client Info		0	0	0
Oil Changed	Client Info			N/A	N/A	N/A
Sample Status				NORMAL	ATTENTION	NORMAL

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

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	0	0	0
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum	ppm	ASTM D5185m	5	0	0	0
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m	5	0	0	0
Calcium	ppm	ASTM D5185m	12	0	<1	0
Phosphorus	ppm	ASTM D5185m	12	9	4	0
Zinc	ppm	ASTM D5185m	12	0	0	0
Sulfur	ppm	ASTM D5185m	1000	928	956	834

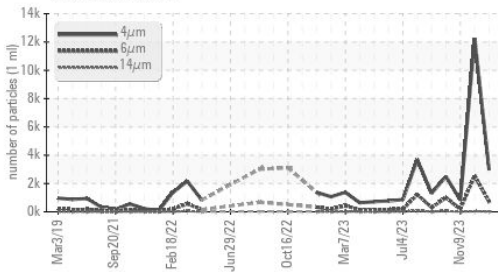
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	1	2	2
Sodium	ppm	ASTM D5185m		4	4	2
Potassium	ppm	ASTM D5185m	>20	0	1	0
Water	%	ASTM D6304	>0.1	NEG	NEG	NEG

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		2967	12251	834
Particles >6µm		ASTM D7647	>2500	713	▲ 2549	183
Particles >14µm		ASTM D7647	>320	20	40	16
Particles >21µm		ASTM D7647	>80	3	6	4
Particles >38µm		ASTM D7647	>20	0	1	0
Particles >71µm		ASTM D7647	>4	0	0	0
Oil Cleanliness		ISO 4406 (c)	>--/18/15	19/17/11	▲ 21/19/12	17/15/11

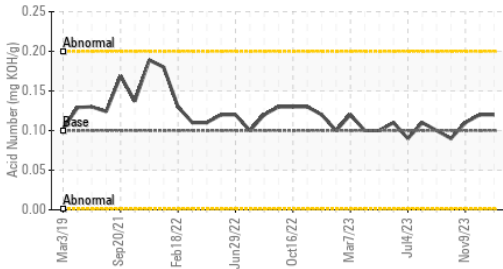
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.10	0.12	0.12	0.11

OIL ANALYSIS REPORT

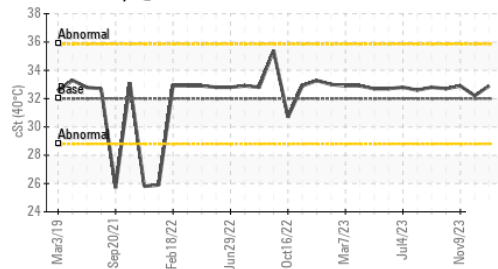
Particle Trend



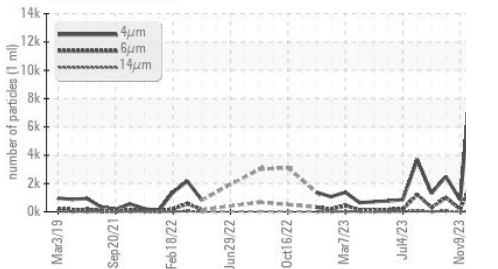
Acid Number



Viscosity @ 40°C



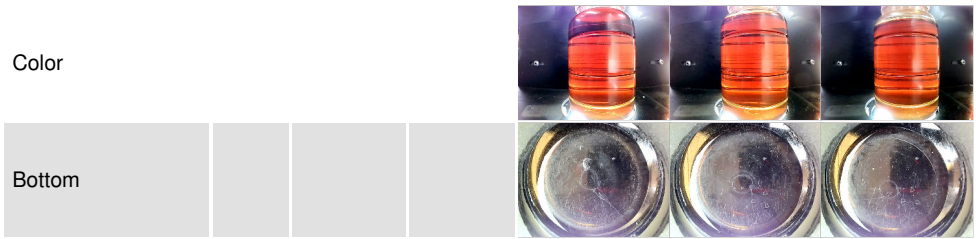
Particle Trend



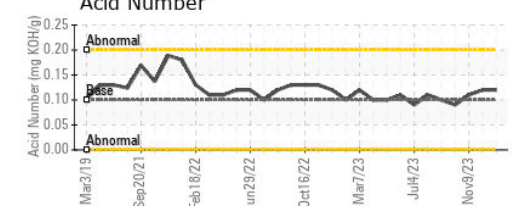
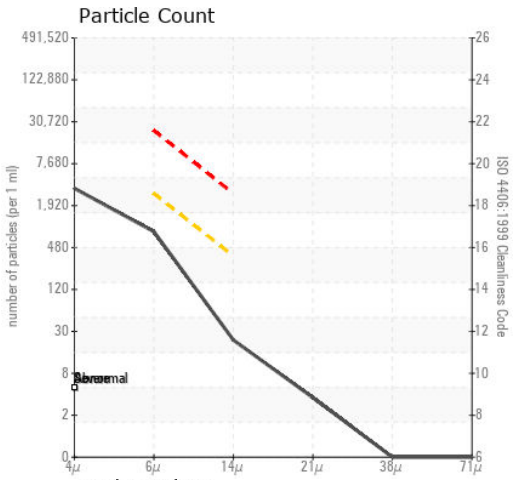
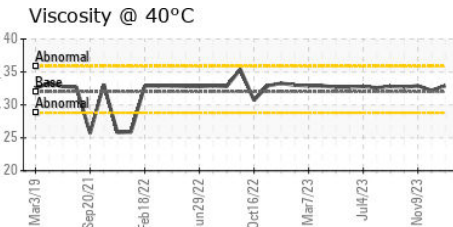
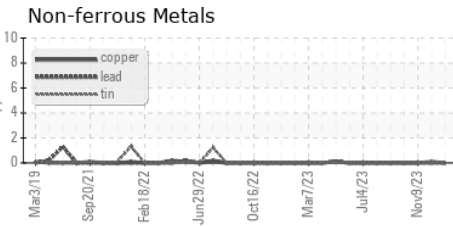
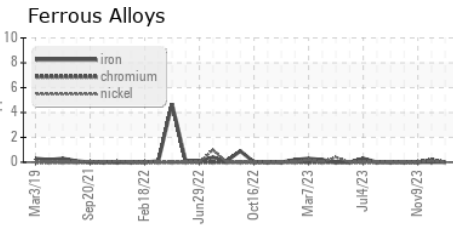
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	32.9	32.2	32.9

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



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : HLC0003178 **Received** : 16 Jan 2024
Lab Number : 06061024 **Diagnosed** : 17 Jan 2024
Unique Number : 10832406 **Diagnostician** : Don Baldrige
Test Package : IND 2 (Additional Tests: KF, PrtCount)

HILCORP NORTHSTAR FACILITY
 PRUDHOE BAY, AK
 US 99734
 Contact: PERRY NEEL
 pneel@hilcorp.com
 T: (907)670-3514
 F: (907)659-5377

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)