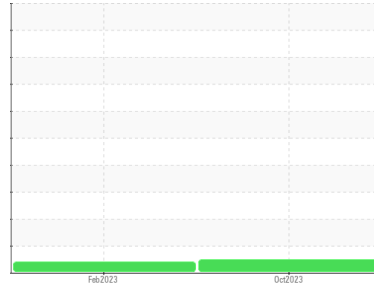




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
ASRI-TRL-HTR-0007 ASRI-TRL-HTR-0007
 Component
Circulating System
 Fluid
SAE 0W30 (12 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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			HLC0002554	HLC0002203	---
Sample Date	Client Info			20 Oct 2023	26 Feb 2023	---
Machine Age	hrs	Client Info		71309	67989	---
Oil Age	hrs	Client Info		3320	3000	---
Oil Changed	Client Info			Changed	Changed	---
Sample Status				NORMAL	ATTENTION	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m		5	4	---
Chromium	ppm	ASTM D5185m		0	<1	---
Nickel	ppm	ASTM D5185m		0	0	---
Titanium	ppm	ASTM D5185m		2	<1	---
Silver	ppm	ASTM D5185m		0	0	---
Aluminum	ppm	ASTM D5185m		<1	1	---
Lead	ppm	ASTM D5185m		0	<1	---
Copper	ppm	ASTM D5185m		0	<1	---
Tin	ppm	ASTM D5185m		0	<1	---
Vanadium	ppm	ASTM D5185m		0	0	---
Cadmium	ppm	ASTM D5185m		0	0	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		88	97	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		3	6	---
Manganese	ppm	ASTM D5185m		0	1	---
Magnesium	ppm	ASTM D5185m		675	666	---
Calcium	ppm	ASTM D5185m		1336	1371	---
Phosphorus	ppm	ASTM D5185m		775	689	---
Zinc	ppm	ASTM D5185m		808	891	---
Sulfur	ppm	ASTM D5185m		2834	3357	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m		16	14	---
Sodium	ppm	ASTM D5185m	>12	4	4	---
Potassium	ppm	ASTM D5185m	>20	5	4	---

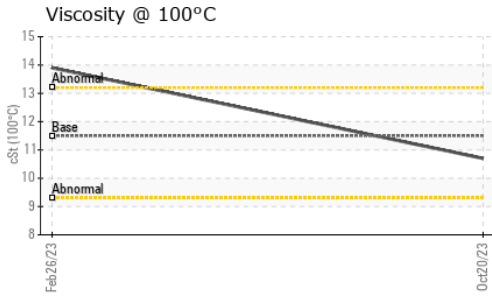
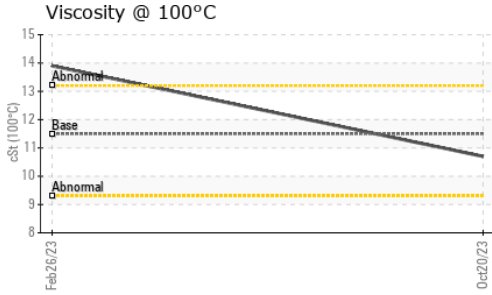
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		0.2	0.1	---
Nitration	Abs/cm	*ASTM D7624		8.1	7.6	---
Sulfation	Abs/.1mm	*ASTM D7415		16.8	17.6	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414		12.9	11.7	---
Base Number (BN)	mg KOH/g	ASTM D2896		9.16	10.44	---



Hilcorp Alaska, LLC

OIL ANALYSIS REPORT



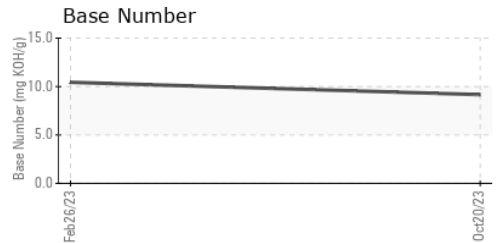
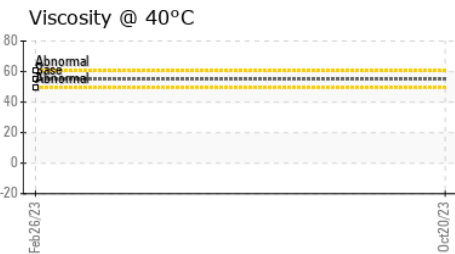
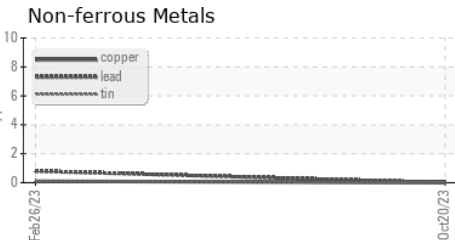
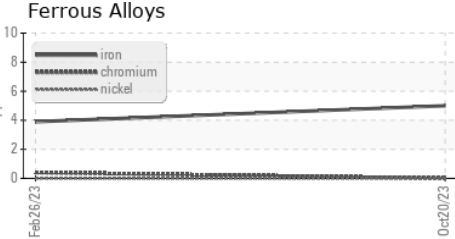
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445 11.5	10.7	▲ 13.9	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color				no image	no image	no image
Bottom				no image	no image	no image

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : HLC0002554 **Received** : 30 Oct 2023
Lab Number : 05993786 **Diagnosed** : 01 Nov 2023
Unique Number : 10722146 **Diagnostician** : Sean Felton
Test Package : IND 2 (Additional Tests: FT-IR, KV100, PrtCount, TBN)

HILCORP EXPLORATION ALASKA - MILNE POINT
 1000 MILNE POINT RD
 PRUDOE BAY, AK
 US 99734
 Contact: Evan Reilly
 evan.reilly@hilcorp.com
 T: (907)670-3231
 F: x:

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)