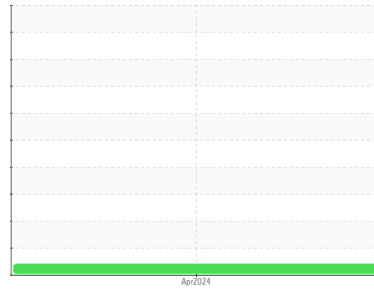




OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Machine Id

ASRI-TRL-HTR-0010 ASRI-TRL-HTR-0010

Component

Circulating System

Fluid

SAE 0W30 (12 GAL)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. 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 oil viscosity is higher than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		HLC0002972	---	---
Sample Date	Client Info		11 Apr 2024	---	---
Machine Age	hrs	Client Info	46431	---	---
Oil Age	hrs	Client Info	3036	---	---
Oil Changed	Client Info		Changed	---	---
Sample Status			ATTENTION	---	---

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method		NEG	---	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	5	---	---
Chromium	ppm	ASTM D5185m	<1	---	---
Nickel	ppm	ASTM D5185m	<1	---	---
Titanium	ppm	ASTM D5185m	3	---	---
Silver	ppm	ASTM D5185m	0	---	---
Aluminum	ppm	ASTM D5185m	2	---	---
Lead	ppm	ASTM D5185m	1	---	---
Copper	ppm	ASTM D5185m	2	---	---
Tin	ppm	ASTM D5185m	<1	---	---
Vanadium	ppm	ASTM D5185m	<1	---	---
Cadmium	ppm	ASTM D5185m	<1	---	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	136	---	---
Barium	ppm	ASTM D5185m	1	---	---
Molybdenum	ppm	ASTM D5185m	12	---	---
Manganese	ppm	ASTM D5185m	<1	---	---
Magnesium	ppm	ASTM D5185m	685	---	---
Calcium	ppm	ASTM D5185m	1389	---	---
Phosphorus	ppm	ASTM D5185m	799	---	---
Zinc	ppm	ASTM D5185m	928	---	---
Sulfur	ppm	ASTM D5185m	3468	---	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	8	---	---
Sodium	ppm	ASTM D5185m	>12	---	---
Potassium	ppm	ASTM D5185m	>20	---	---

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0.1	---	---
Nitration	Abs/cm	*ASTM D7624	7.6	---	---
Sulfation	Abs/.1mm	*ASTM D7415	18.2	---	---

FLUID DEGRADATION

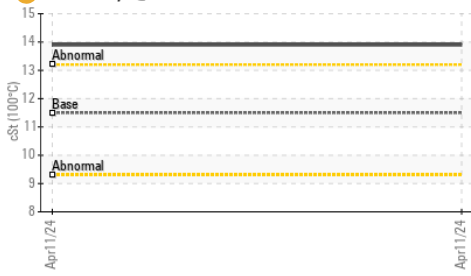
	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	12.9	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	9.80	---	---



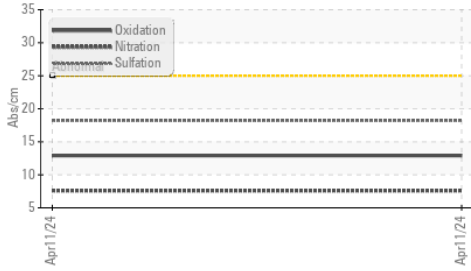
Hilcorp Alaska, LLC

OIL ANALYSIS REPORT

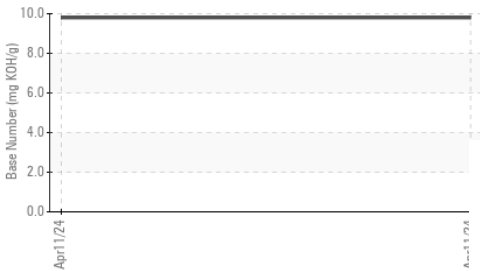
● Viscosity @ 100°C



FT-IR (Direct Trend)



Base Number



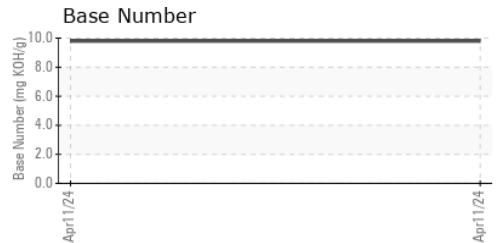
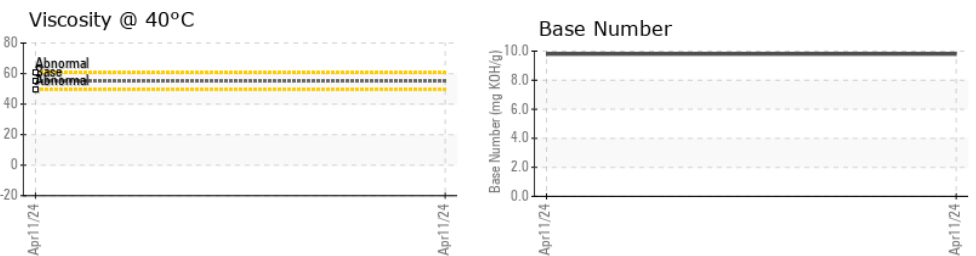
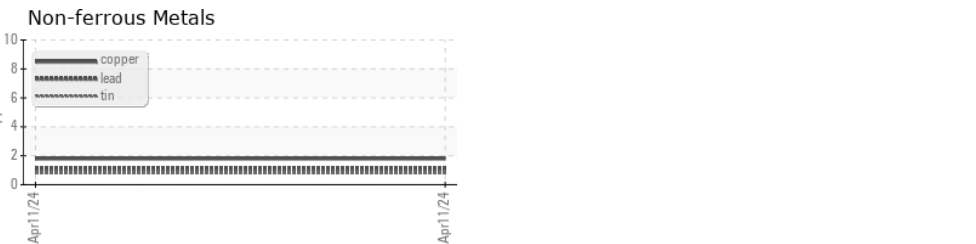
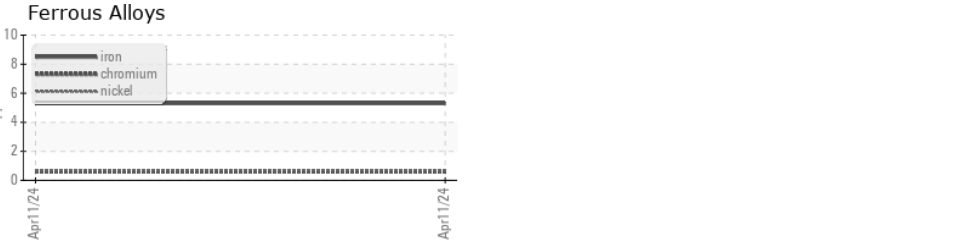
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	11.5 ● 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. : HLC0002972

Lab Number : 06153828

Unique Number : 10989251

Test Package : IND 2 (Additional Tests: FT-IR, KV100, PrtCount, TBN)

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 : 18 Apr 2024

Tested : 24 Apr 2024

Diagnosed : 24 Apr 2024 - Jonathan Hester

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