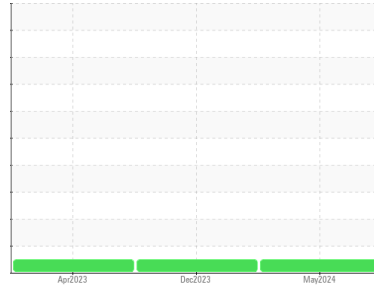




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**ASRI-TRL-HTR-0008 ASRI-TRL-HTR-0008**  
 Component  
**Circulating System**  
 Fluid  
**CHEVRON DELO 400 SYNTHETIC 0W30 (10 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			<b>HLC0002931</b>	HLC0002596	HLC0001918
Sample Date	Client Info			<b>22 May 2024</b>	03 Dec 2023	10 Apr 2023
Machine Age	hrs	Client Info		<b>83440</b>	80424	77387
Oil Age	hrs	Client Info		<b>3000</b>	3037	3200
Oil Changed	Client Info			<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m		<b>8</b>	5	6
Chromium	ppm	ASTM D5185m		<b>2</b>	<1	<1
Nickel	ppm	ASTM D5185m		<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m		<b>1</b>	2	0
Lead	ppm	ASTM D5185m		<b>0</b>	<1	0
Copper	ppm	ASTM D5185m		<b>0</b>	<1	<1
Tin	ppm	ASTM D5185m		<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>94</b>	107	89
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>1</b>	4	13
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>728</b>	711	725
Calcium	ppm	ASTM D5185m		<b>1419</b>	1395	1296
Phosphorus	ppm	ASTM D5185m	1140	<b>743</b>	736	730
Zinc	ppm	ASTM D5185m	1130	<b>854</b>	863	870
Sulfur	ppm	ASTM D5185m		<b>3398</b>	2850	2946

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m		<b>9</b>	6	4
Sodium	ppm	ASTM D5185m		<b>3</b>	0	2
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	5	3

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		<b>0.2</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624		<b>8.3</b>	7.7	7.8
Sulfation	Abs/.1mm	*ASTM D7415		<b>16.7</b>	16.5	18.2

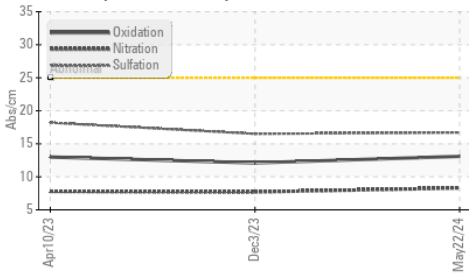
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414		<b>13.1</b>	12.1	13.0
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>---</b>	0.77	---
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>9.61</b>	9.65	10.45



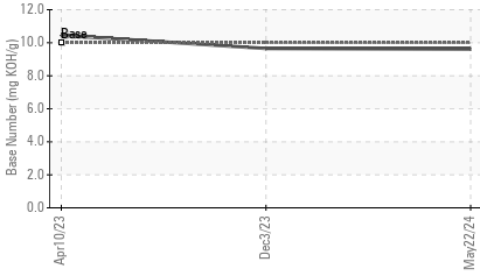
Hilcorp Alaska, LLC

# OIL ANALYSIS REPORT

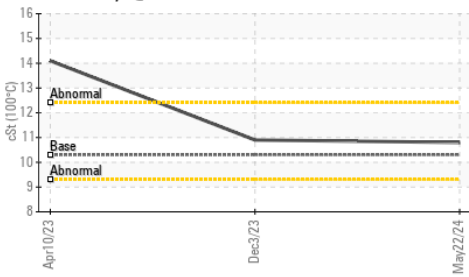
FT-IR (Direct Trend)



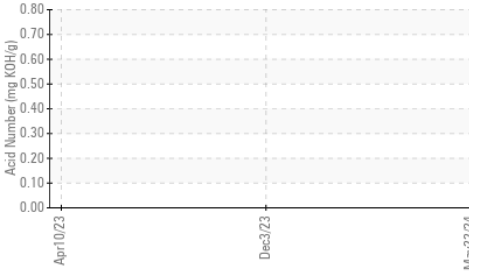
Base Number



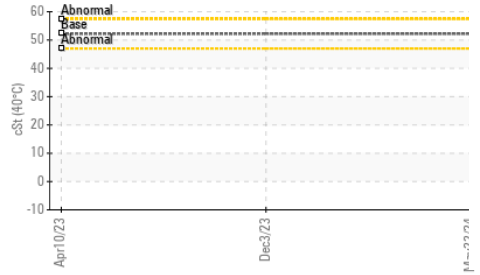
Viscosity @ 100°C



Acid Number



Viscosity @ 40°C



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	NEG	NEG	NEG
Free Water	scalar	*Visual	NEG	NEG	NEG

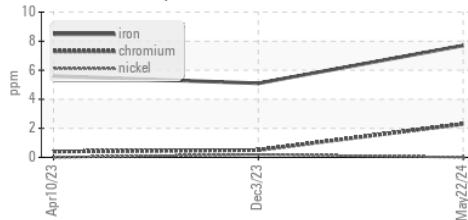
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445 10.3	10.8	10.9	14.1

SAMPLE IMAGES

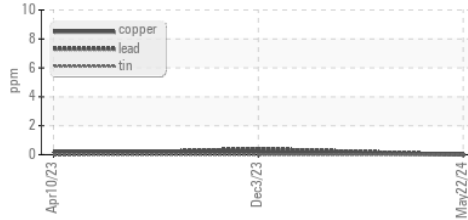
method	limit/base	current	history1	history2
Color			no image	no image
Bottom			no image	no image

## GRAPHS

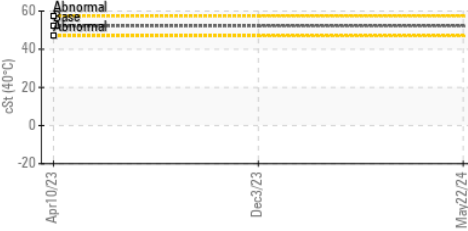
Ferrous Alloys



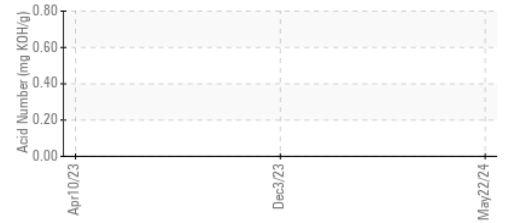
Non-ferrous Metals



Viscosity @ 40°C



Acid Number



Certificate L2367

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

Sample No. : HLC0002931

Lab Number : 06202144

Unique Number : 11069605

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 : 06 Jun 2024

Tested : 11 Jun 2024

Diagnosed : 11 Jun 2024 - Jonathan Hester

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US 99734

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