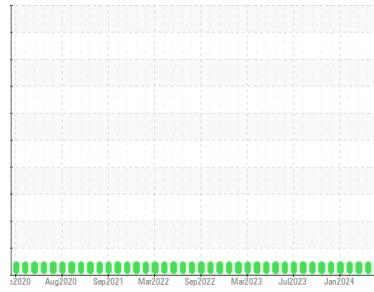




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area

UTILITIES

Machine Id

GN-8001A (S/N EMERGENCY GENERATOR)

Component

Diesel Engine

Fluid

CHEVRON DELO 400 LE 15W40 (--- 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			HLC0003331	HLC0003143	HLC0003203
Sample Date	Client Info			06 May 2024	05 Apr 2024	08 Mar 2024
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed	Client Info			N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>3.0		<1.0	<1.0	<1.0
Water	WC Method	>0.2		NEG	NEG	NEG
Glycol	WC Method			NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>65	4	2	<1
Chromium	ppm	ASTM D5185m	>3	<1	<1	0
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>2	0	<1	0
Aluminum	ppm	ASTM D5185m	>6	2	1	0
Lead	ppm	ASTM D5185m	>13	0	1	0
Copper	ppm	ASTM D5185m	>65	<1	<1	0
Tin	ppm	ASTM D5185m	>2	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		141	140	129
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		17	15	14
Manganese	ppm	ASTM D5185m		0	<1	0
Magnesium	ppm	ASTM D5185m		635	750	728
Calcium	ppm	ASTM D5185m		1442	1743	1718
Phosphorus	ppm	ASTM D5185m	1200	759	855	858
Zinc	ppm	ASTM D5185m	1300	841	967	973
Sulfur	ppm	ASTM D5185m	3200	3033	4308	4198

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	4	4	2
Sodium	ppm	ASTM D5185m		3	2	1
Potassium	ppm	ASTM D5185m	>20	3	4	1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>6	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	6.6	6.5	6.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.4	18.3	18.8

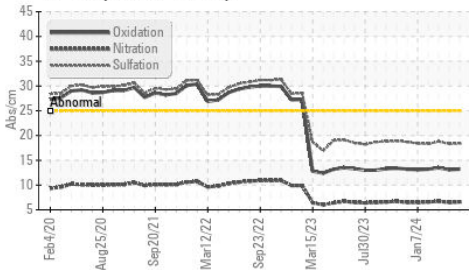
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.2	13.1	13.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	10.38	10.76	10.31



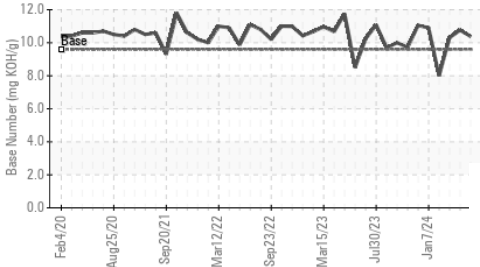
Hilcorp Alaska, LLC

OIL ANALYSIS REPORT

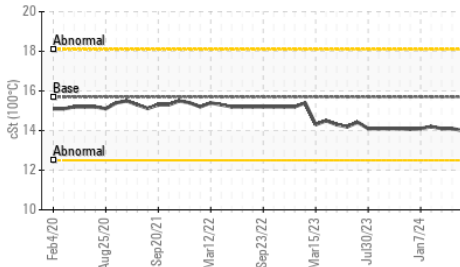
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

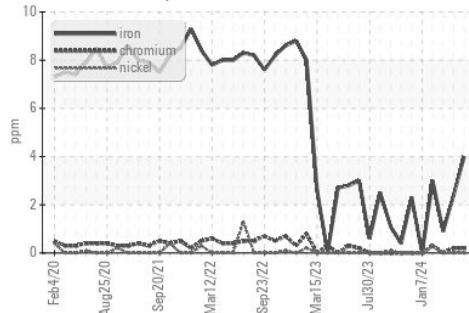


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

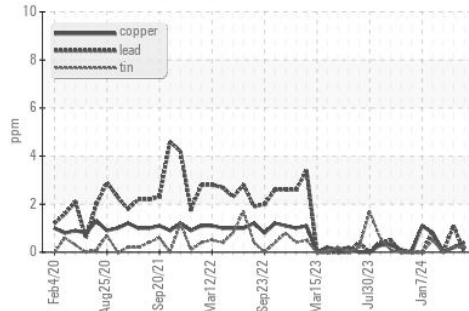
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.7	14.0	14.1

GRAPHS

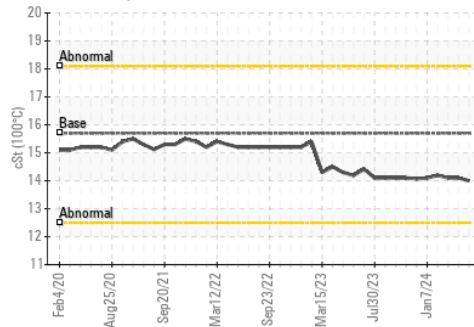
Ferrous Alloys



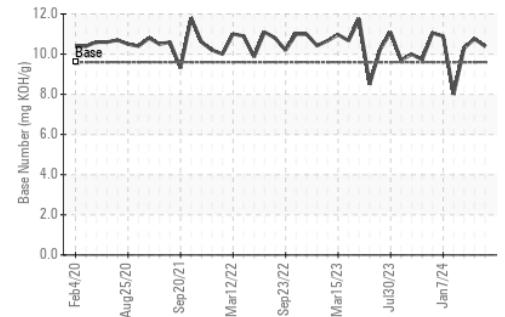
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : HLC0003331

Lab Number : 06205729

Unique Number : 11073190

Test Package : IND 2

Received : 10 Jun 2024

Tested : 12 Jun 2024

Diagnosed : 12 Jun 2024 - Wes Davis

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)