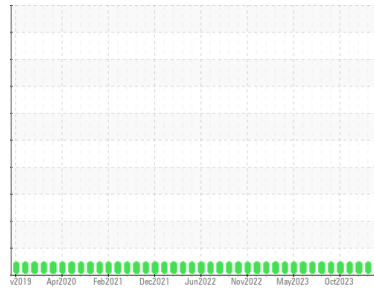




OIL ANALYSIS REPORT

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			HLC0003203	HLC0003172	HLC0002771
Sample Date	Client Info			08 Mar 2024	07 Jan 2024	05 Dec 2023
Machine Age	hrs	Client Info		0	1348	1348
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	<1	0	2
Chromium	ppm	ASTM D5185m	>3	0	0	0
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>6	0	2	<1
Lead	ppm	ASTM D5185m	>13	0	0	0
Copper	ppm	ASTM D5185m	>65	0	1	0
Tin	ppm	ASTM D5185m	>2	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		129	112	124
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		14	14	15
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		728	672	660
Calcium	ppm	ASTM D5185m		1718	1421	1542
Phosphorus	ppm	ASTM D5185m	1200	858	732	714
Zinc	ppm	ASTM D5185m	1300	973	870	896
Sulfur	ppm	ASTM D5185m	3200	4198	3031	3364

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	2	2	3
Sodium	ppm	ASTM D5185m		1	0	<1
Potassium	ppm	ASTM D5185m	>20	1	1	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	6.7	6.5	6.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.8	18.4	18.7

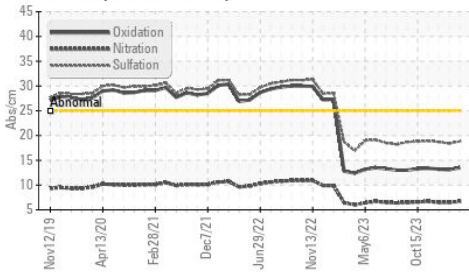
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.5	13.1	13.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	10.31	10.90	11.05



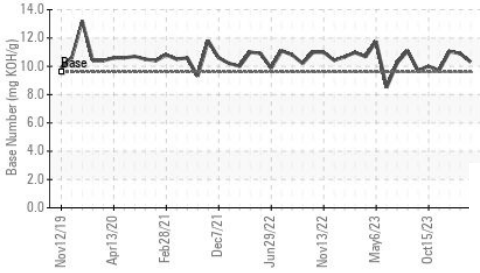
Hilcorp Alaska, LLC

OIL ANALYSIS REPORT

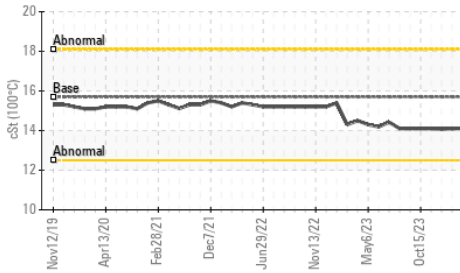
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

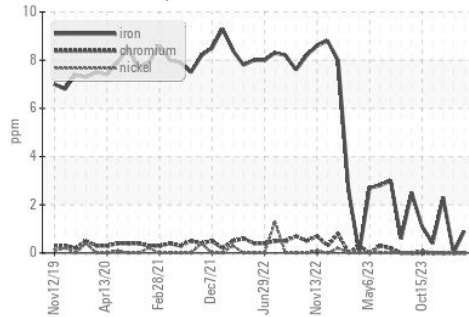


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

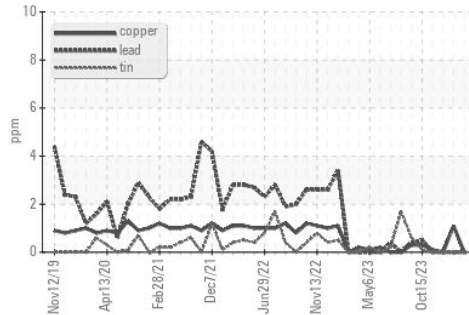
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.7	14.1	14.07

GRAPHS

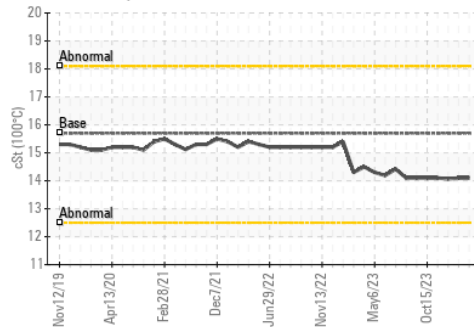
Ferrous Alloys



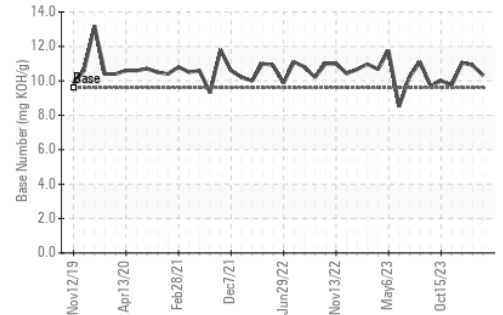
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : HLC0003203
Lab Number : 06146754
Unique Number : 10976832
Test Package : IND 2

Received : 11 Apr 2024
Tested : 12 Apr 2024
Diagnosed : 12 Apr 2024 - Wes Davis

HILCORP NORTHSTAR FACILITY

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 US 99734
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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)