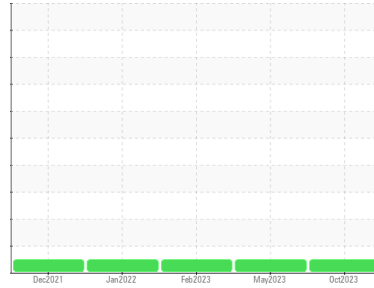




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
IRIG [6219516]
 Machine Id
IRIG-GENR-GN-1103 RIG POWER MODULE GENSET 3 IRIG-GENR-GN-1103 RIG POWER MODULE GENSET 3
 Component
Diesel Engine
 Fluid
CHEVRON DELO 400 MULTIGRADE 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		HLC0002817	HLC0002409	HLC0002437
Sample Date	Client Info		17 Oct 2023	07 May 2023	02 Feb 2023
Machine Age	hrs	Client Info	9000	8500	7524
Oil Age	hrs	Client Info	500	500	500
Oil Changed	Client Info		Changed	N/A	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	25	19	15
Chromium	ppm	ASTM D5185m >20	<1	<1	<1
Nickel	ppm	ASTM D5185m >4	<1	1	<1
Titanium	ppm	ASTM D5185m	0	<1	0
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >20	1	2	1
Lead	ppm	ASTM D5185m >40	0	0	2
Copper	ppm	ASTM D5185m >330	1	1	<1
Tin	ppm	ASTM D5185m >15	<1	<1	<1
Antimony	ppm	ASTM D5185m	---	---	---
Vanadium	ppm	ASTM D5185m	0	<1	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 151	56	62	78
Barium	ppm	ASTM D5185m 0.4	0	0	0
Molybdenum	ppm	ASTM D5185m 250	<1	<1	<1
Manganese	ppm	ASTM D5185m	<1	<1	<1
Magnesium	ppm	ASTM D5185m 0	736	798	733
Calcium	ppm	ASTM D5185m 2046	1367	1359	1364
Phosphorus	ppm	ASTM D5185m 1043	777	752	699
Zinc	ppm	ASTM D5185m 943	819	872	846
Sulfur	ppm	ASTM D5185m 5012	2937	3806	3623

CONTAMINANTS

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

INFRA-RED

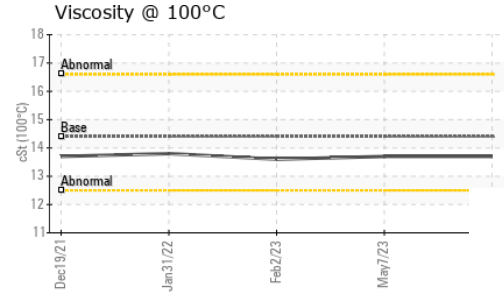
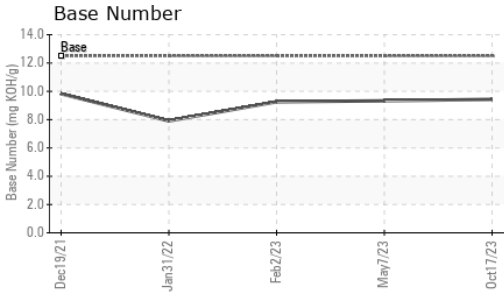
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.7	0.5	0.4
Nitration	Abs/cm	*ASTM D7624 >20	9.0	8.9	8.6
Sulfation	Abs/.1mm	*ASTM D7415 >30	19.7	19.6	18.8

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	13.9	13.9	13.2
Base Number (BN)	mg KOH/g	ASTM D2896 12.5	9.43	9.33	9.26



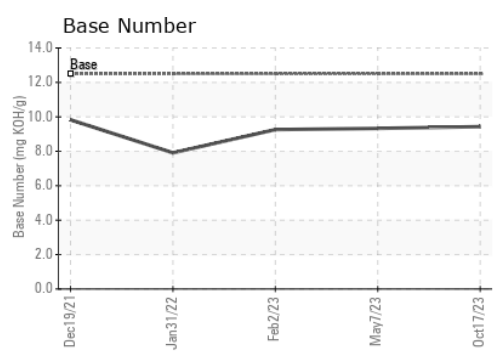
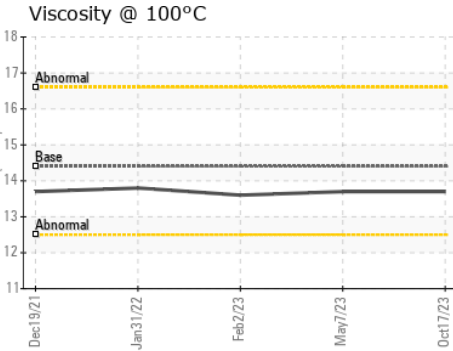
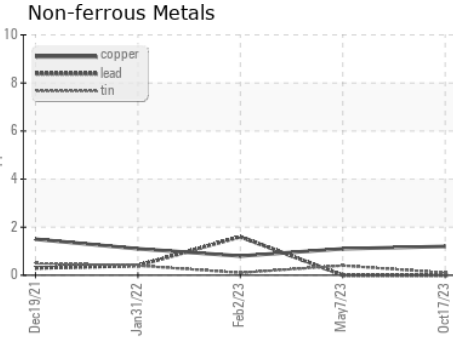
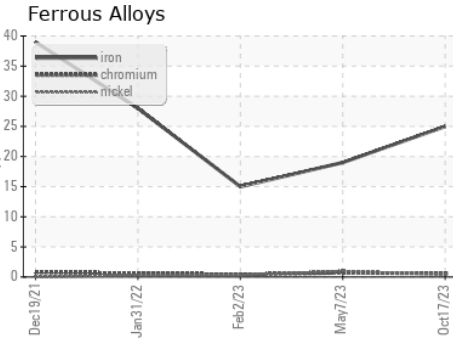
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	LIGHT
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	14.4	13.7	13.7

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : HLC0002817 **Received** : 30 Oct 2023
Lab Number : **05993788** **Diagnosed** : 01 Nov 2023
Unique Number : 10722148 **Diagnostician** : Sean Felton
Test Package : IND 2

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:

Certificate L2367
 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)