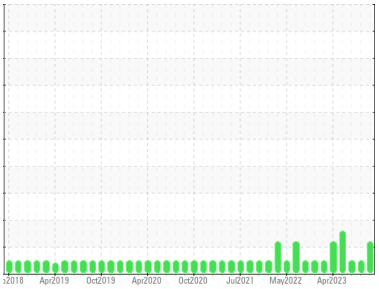
Hilcorp Alaska, LLC

PROBLEM SUMMARY

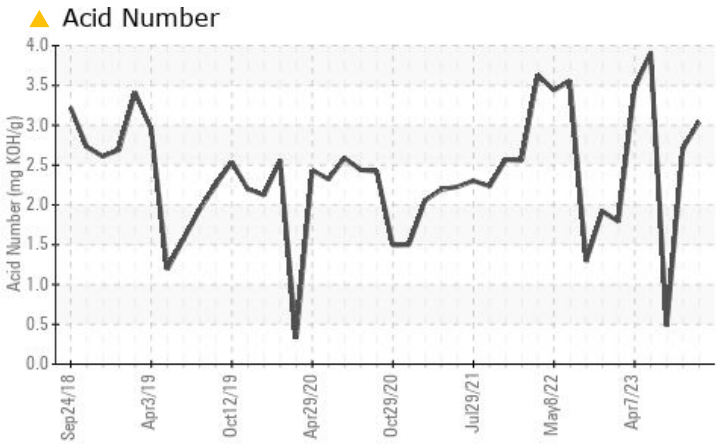
Sample Rating Trend



DEGRADATION

Machine Id
E 2610 E 2610
Component
Natural Gas Engine
Fluid
MOBIL PEGASUS 89 (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

The oil is near the end of it`s useful service life, recommend schedule an oil change. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	NORMAL	NORMAL
Acid Number (AN)	mg KOH/g	ASTM D8045		▲ **3.04**	2.71	0.48

Customer Id: BPEMPU
Sample No.: HLC0001494
Lab Number: 05979081
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Don Baldridge +1
don.b505@comcast.net

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Service/change Fluid	---	---	?	The oil is near the end of it's useful service life, recommend schedule an oil change.

HISTORICAL DIAGNOSIS

05 Sep 2023 Diag: Jonathan Hester

NORMAL

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

06 Aug 2023 Diag: Wes Davis

NORMAL

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

09 Jun 2023 Diag: Jonathan Hester

DEGRADATION

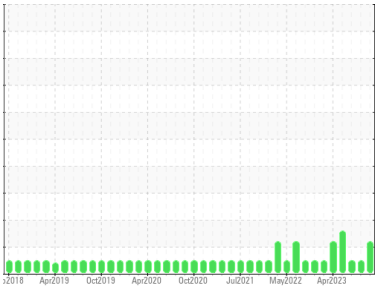
We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.All component wear rates are normal. There is no indication of any contamination in the oil. The oil viscosity is higher than normal. The AN level is at the top-end of the recommended limit.

view report

Hilcorp Alaska, LLC

OIL ANALYSIS REPORT

Sample Rating Trend



DEGRADATION

Machine Id
E 2610 E 2610
Component
Natural Gas Engine
Fluid
MOBIL PEGASUS 89 (--- GAL)

DIAGNOSIS

▲ Recommendation

The oil is near the end of it`s useful service life, recommend schedule an oil change. 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 AN level is above the recommended limit.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**HLC0001494**	HLC0002652	HLC0002618
Sample Date		Client Info		**03 Oct 2023**	05 Sep 2023	06 Aug 2023
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				**ABNORMAL**	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	**8**	8	2
Chromium	ppm	ASTM D5185m	>4	**<1**	0	0
Nickel	ppm	ASTM D5185m	>2	**<1**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>9	**1**	<1	1
Lead	ppm	ASTM D5185m	>30	**<1**	1	0
Copper	ppm	ASTM D5185m	>35	**1**	2	2
Tin	ppm	ASTM D5185m	>4	**<1**	<1	<1
Vanadium	ppm	ASTM D5185m		**0**	<1	0
Cadmium	ppm	ASTM D5185m		**<1**	<1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	0	0
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**<1**	<1	0
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m		**11**	10	9
Calcium	ppm	ASTM D5185m		**3251**	3521	2516
Phosphorus	ppm	ASTM D5185m		**279**	293	234
Zinc	ppm	ASTM D5185m		**357**	345	247
Sulfur	ppm	ASTM D5185m		**5824**	5556	4999

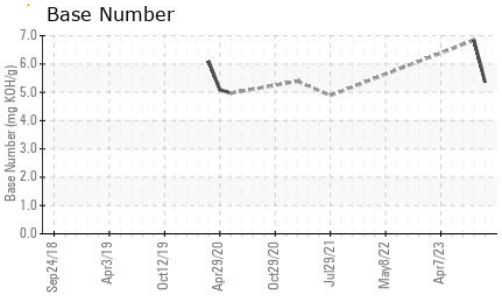
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>+100	**15**	8	8
Sodium	ppm	ASTM D5185m		**0**	<1	1
Potassium	ppm	ASTM D5185m	>20	**18**	15	0

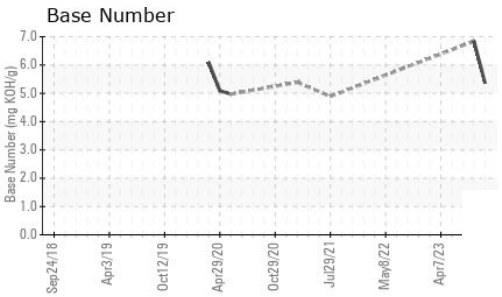
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		**0.1**	0.1	0
Nitration	Abs/cm	*ASTM D7624	>20	**22.1**	20.3	4.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	**29.6**	28.1	15.5

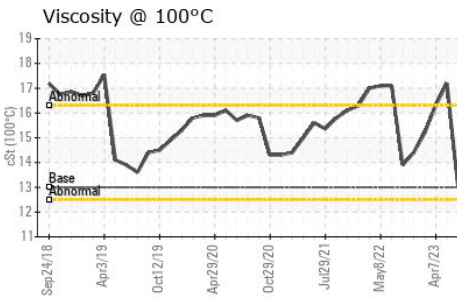
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**35.8**	32.5	6.3
Acid Number (AN)	mg KOH/g	ASTM D8045		**▲ 3.04**	2.71	0.48
Base Number (BN)	mg KOH/g	ASTM D2896		**5.36**	6.84	---

OIL ANALYSIS REPORT

Hilcorp Alaska, LLC



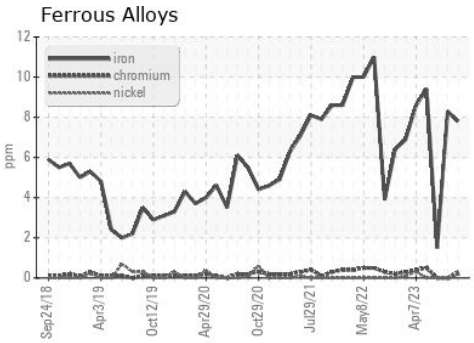


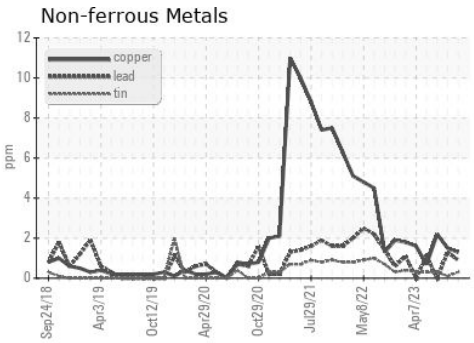


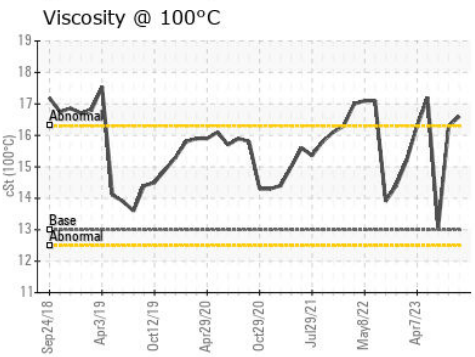
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

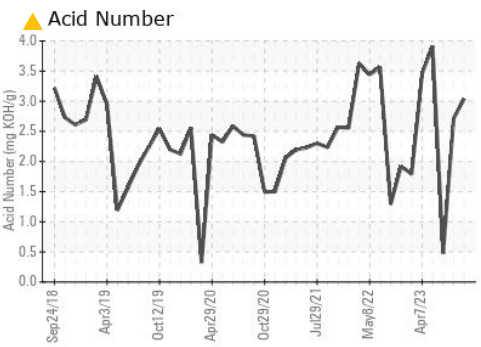
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	13.0	**16.6**	16.3	13.04

GRAPHS









Certificate L2367

Laboratory	: WearCheck USA - 501 Madison Ave., Cary, NC 27513		
Sample No.	: HLC0001494	**Received**	: 13 Oct 2023
Lab Number	: 05979081	**Diagnosed**	: 17 Oct 2023
Unique Number	: 10696376	**Diagnostician**	: Don Baldridge
Test Package	: IND 2 (Additional Tests: FT-IR)		

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)

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: