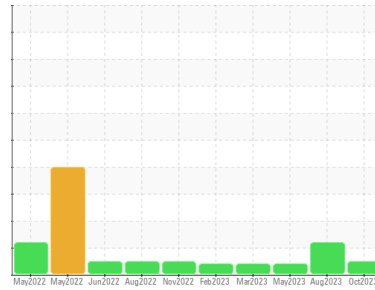




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
ASRI RIG DURST-001 ASRI RIG DURST-001

Component
Gearbox

Fluid
GEAR OIL SAE 75W90 (2 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 AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | HLC0002550 | HLC0002286 | HLC0001920 |
| Sample Date | Client Info | | 20 Oct 2023 | 16 Aug 2023 | 21 May 2023 |
| Machine Age | hrs | Client Info | 24030 | 22620 | 20773 |
| Oil Age | hrs | Client Info | 1400 | 350 | 1000 |
| Oil Changed | Client Info | | Changed | Not Changd | N/A |
| Sample Status | | | NORMAL | ABNORMAL | ATTENTION |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|--------|------------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m >200 | 25 | 12 | 35 |
| Chromium | ppm | ASTM D5185m >15 | 0 | <1 | <1 |
| Nickel | ppm | ASTM D5185m >15 | 0 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | 0 | 0 | <1 |
| Silver | ppm | ASTM D5185m | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >25 | 0 | 0 | <1 |
| Lead | ppm | ASTM D5185m >100 | 0 | <1 | 0 |
| Copper | ppm | ASTM D5185m >200 | <1 | <1 | 0 |
| Tin | ppm | ASTM D5185m >25 | 0 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | 0 | <1 | 0 |
| Cadmium | ppm | ASTM D5185m | 0 | <1 | 0 |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|-------------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m 400 | 209 | 298 | 247 |
| Barium | ppm | ASTM D5185m 200 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m 12 | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m 12 | 0 | 0 | <1 |
| Calcium | ppm | ASTM D5185m 150 | 5 | 6 | 15 |
| Phosphorus | ppm | ASTM D5185m 1650 | 1298 | 1438 | 1282 |
| Zinc | ppm | ASTM D5185m 125 | 2 | 5 | <1 |
| Sulfur | ppm | ASTM D5185m 22500 | 21104 | 26411 | 26084 |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|-----------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m >50 | 8 | 12 | 17 |
| Sodium | ppm | ASTM D5185m | 3 | 4 | 4 |
| Potassium | ppm | ASTM D5185m >20 | <1 | 0 | 2 |

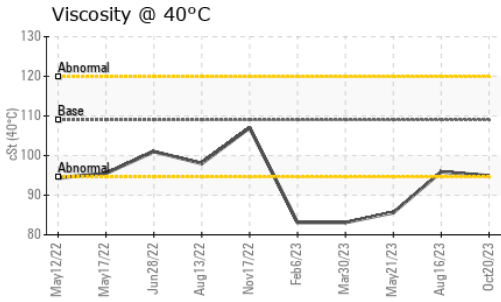
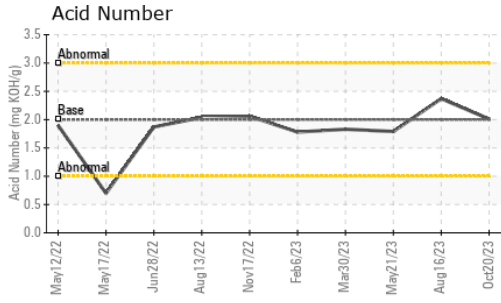
FLUID CLEANLINESS

| | method | limit/base | current | history1 | history2 |
|-----------------|--------------|------------|---------|------------|----------|
| Particles >4µm | ASTM D7647 | >20000 | --- | ▲ 72565 | --- |
| Particles >6µm | ASTM D7647 | >5000 | --- | ▲ 11759 | --- |
| Particles >14µm | ASTM D7647 | >640 | --- | 301 | --- |
| Particles >21µm | ASTM D7647 | >160 | --- | 69 | --- |
| Particles >38µm | ASTM D7647 | >40 | --- | 2 | --- |
| Particles >71µm | ASTM D7647 | >10 | --- | 0 | --- |
| Oil Cleanliness | ISO 4406 (c) | >21/19/16 | --- | ▲ 23/21/15 | --- |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|-----------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 2.00 | 2.01 | 2.37 | 1.79 |

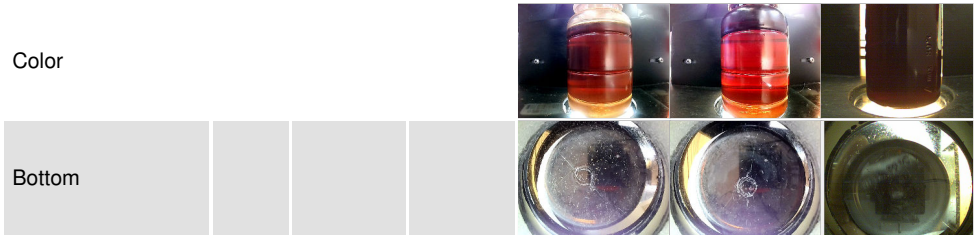
OIL ANALYSIS REPORT



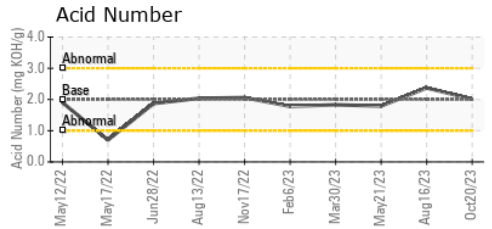
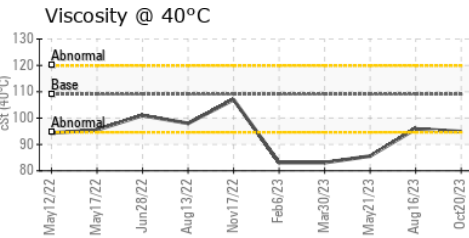
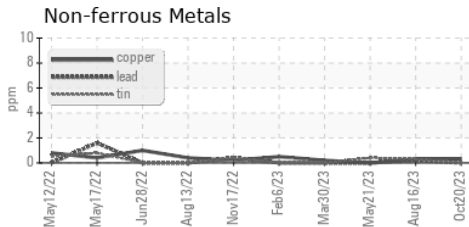
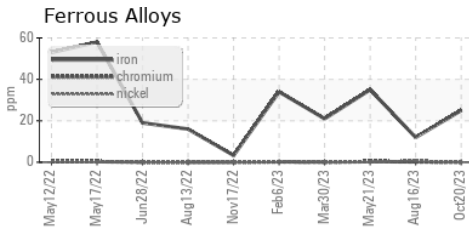
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | MODER |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | LIGHT |
| 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 @ 40°C | cSt | ASTM D445 109 | 94.9 | 95.9 | ▲ 85.6 |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
|---------------|--------|------------|---------|----------|----------|



GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : HLC0002550 **Received** : 30 Oct 2023
Lab Number : 05993744 **Diagnosed** : 03 Nov 2023
Unique Number : 10722104 **Diagnostician** : Jonathan Hester
Test Package : IND 2 (Additional Tests: PrtCount)

HILCORP EXPLORATION ALASKA - MILN POINT
 1000 MILN POINT RD
 PRUDOE BAY, AK
 US 99734
 Contact: Evan Reilly
 evan.reilly@hilcorp.com
 T: (907)670-3231
 F: x:

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)