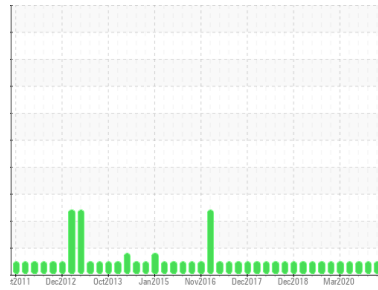




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**GTRB-1510A Main Gas Turbine**  
 Component  
**Tank Turbine**  
 Fluid  
**PHILLIPS 66 Diamond Class® Turbine Oil AW 32 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

The amount and size of particulates present in the system are acceptable. 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			<b>HLC0001413</b>	HLC0001347	HLC0000950
Sample Date	Client Info			<b>08 Dec 2021</b>	08 Dec 2021	06 Dec 2020
Machine Age	hrs	Client Info		<b>0</b>	0	0
Oil Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed	Client Info			<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method		>0.03	<b>NEG</b>	NEG	NEG

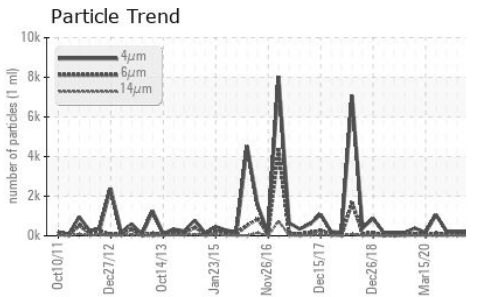
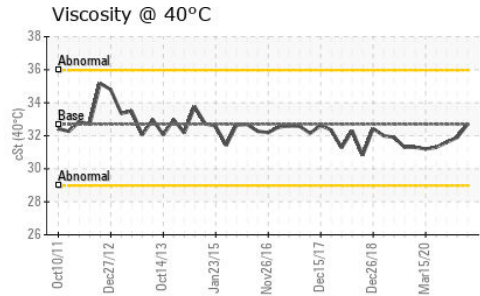
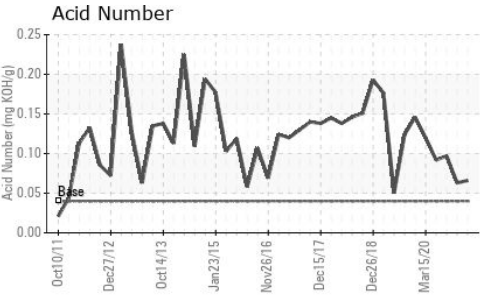
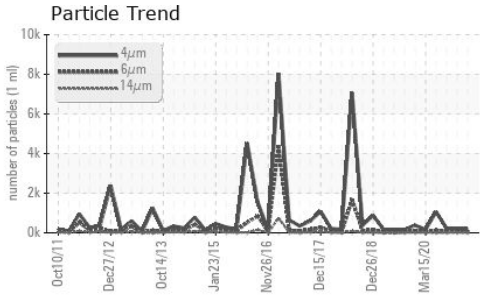
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>15	<b>6</b>	0	0
Chromium	ppm	ASTM D5185m	>4	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Lead	ppm	ASTM D5185m		<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Tin	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Antimony	ppm	ASTM D5185m		<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0	0
Manganese	ppm	ASTM D5185m		<b>0</b>	0	0
Magnesium	ppm	ASTM D5185m		<b>0</b>	0	0
Calcium	ppm	ASTM D5185m		<b>0</b>	0	0
Phosphorus	ppm	ASTM D5185m		<b>9</b>	33	32
Zinc	ppm	ASTM D5185m		<b>0</b>	0	0
Sulfur	ppm	ASTM D5185m		<b>29</b>	681	77

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	0
Sodium	ppm	ASTM D5185m		<b>0</b>	0	<1
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	0

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		<b>194</b>	180	227
Particles >6µm		ASTM D7647	>1300	<b>66</b>	49	69
Particles >14µm		ASTM D7647	>160	<b>10</b>	7	8
Particles >21µm		ASTM D7647	>40	<b>3</b>	1	4
Particles >38µm		ASTM D7647	>10	<b>0</b>	0	2
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	2
Oil Cleanliness		ISO 4406 (c)	>--/17/14	<b>15/13/10</b>	15/13/10	15/13/10

# OIL ANALYSIS REPORT

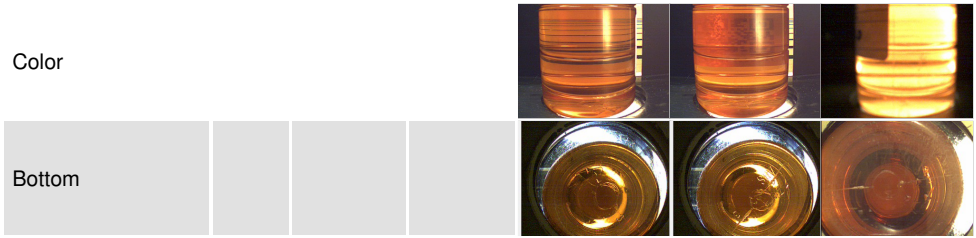


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.04	<b>0.066</b>	0.063	0.097

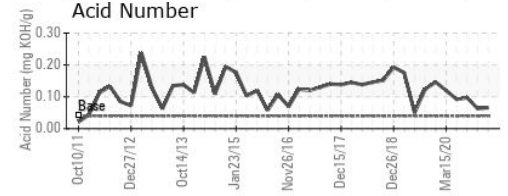
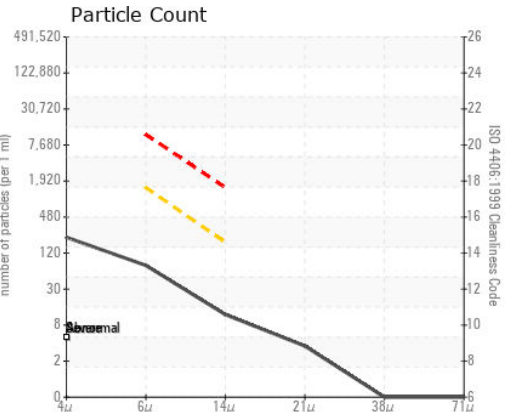
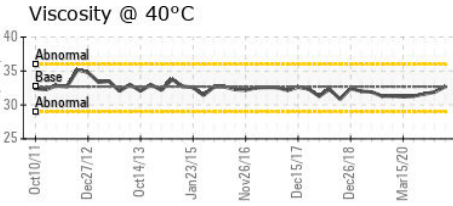
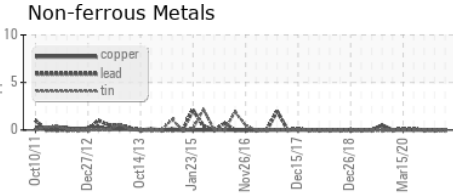
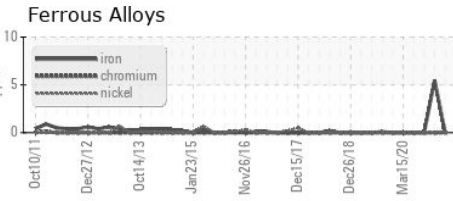
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.03	<b>NEG</b>	NEG	NEG
Free Water	scalar	*Visual		<b>NEG</b>	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	32.7	<b>32.7</b>	31.9	31.6

**SAMPLE IMAGES**



**GRAPHS**



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : HLC0001413  
**Lab Number** : 05426259  
**Unique Number** : 9785451  
**Test Package** : IND 2

**Received** : 20 Dec 2021  
**Tested** : 20 Dec 2021  
**Diagnosed** : 20 Dec 2021 - Doug Bogart

**HILCORP ALASKA LLC - ENDICOTT**  
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 PRUDHOE BAY, AK  
 US 99734

Contact: SEAN LOWTHER  
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 T: (907)659-6800  
 F:

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)