

# **OIL ANALYSIS REPORT**

#### Sample Rating Trend

## NORMAL

# GTRB-1802 Injection Pump

Component Tank Turbine

## PHILLIPS 66 Diamond Class® Turbine Oil AW 32 (--- GAL)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

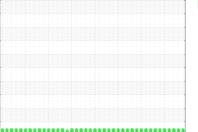
All component wear rates are normal.

#### 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.





### 2014 Maz2016 Dec2016 Dec2017 Dec2018 Maz2020 Aug2021 Dec2022

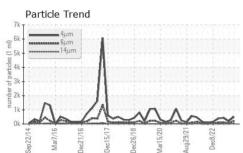
SAMPLE INFORM	<b>IATION</b>	method	limit/base	current	history1	history2
Sample Number		Client Info		HLC0003118	HLC0002308	HLC0002658
Sample Date		Client Info		03 Jan 2024	12 Oct 2023	12 Jun 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	N	method	limit/base	current	history1	history2
Water		WC Method	>0.03	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>15	0	0	0
Chromium	ppm	ASTM D5185m	>4	<1	<1	0
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		<1	0	0
Aluminum	ppm	ASTM D5185m	>10	2	<1	1
Lead	ppm	ASTM D5185m		<1	<1	0
Copper	ppm	ASTM D5185m	>5	<1	<1	0
Tin	ppm	ASTM D5185m	>5	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	5
Molybdenum	ppm	ASTM D5185m		<1	0	0
Manganese	ppm	ASTM D5185m		<1	0	0
Magnesium	ppm	ASTM D5185m		<1	0	<1
Calcium	ppm	ASTM D5185m		3	0	0
Phosphorus	ppm	ASTM D5185m		21	14	16
Zinc	ppm	ASTM D5185m		0	0	0
Sulfur	ppm	ASTM D5185m		878	1213	686
CONTAMINANTS						
Silicon		method	limit/base	current	history1	history2
0	ppm	method ASTM D5185m	limit/base >15	current 2	history1 <1	history2 0
Sodium						
	ppm	ASTM D5185m		2	<1	0
Sodium	ppm ppm ppm	ASTM D5185m ASTM D5185m	>15	2 0	<1 0	0 <1
Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D7647	>15 >20 limit/base	2 0 <1 current 504	<1 0 2	0 <1 0 history2 434
Sodium Potassium FLUID CLEANLIN	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method	>15 >20 limit/base	2 0 <1 current	<1 0 2 history1	0 <1 0 history2
Sodium Potassium FLUID CLEANLIN Particles >4μm Particles >6μm Particles >14μm	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D7647 ASTM D7647 ASTM D7647	>15 >20 limit/base >1300 >160	2 0 <1 <u>current</u> 504 217 31	<1 0 2 <u>history1</u> 199 49 6	0 <1 0 history2 434 110 10
Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>15 >20 limit/base >1300 >160 >40	2 0 <1 current 504 217	<1 0 2 <u>history1</u> 199 49	0 <1 0 history2 434 110
Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>15 >20 limit/base >1300 >160 >40 >10	2 0 <1 504 217 31 6 0	<1 0 2 <u>history1</u> 199 49 6	0 <1 0 history2 434 110 10 2 0
Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm Particles >71µm	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>15 >20 limit/base >1300 >160 >40 >10	2 0 <1 504 217 31 6	<1 0 2 history1 199 49 6 1 0 0	0 <1 0 history2 434 110 10 2 0 0 0
Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>15 >20 limit/base >1300 >160 >40 >10	2 0 <1 504 217 31 6 0	<1 0 2 history1 199 49 6 1 0	0 <1 0 history2 434 110 10 2 0
Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm Particles >71µm	ppm ppm IESS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>15 >20 limit/base >1300 >160 >40 >10 >3	2 0 <1 504 217 31 6 0 0	<1 0 2 history1 199 49 6 1 0 0	0 <1 0 history2 434 110 10 2 0 0 0

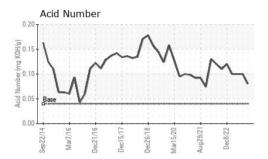
Report Id: BPEEND [WUSCAR] 06131394 (Generated: 04/01/2024 14:24:26) Rev: 1

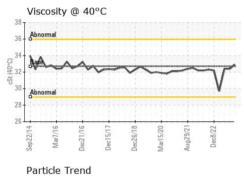
Contact/Location: SEAN LOWTHER - BPEEND

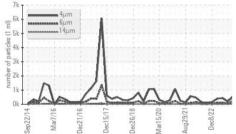


# **OIL ANALYSIS REPORT**



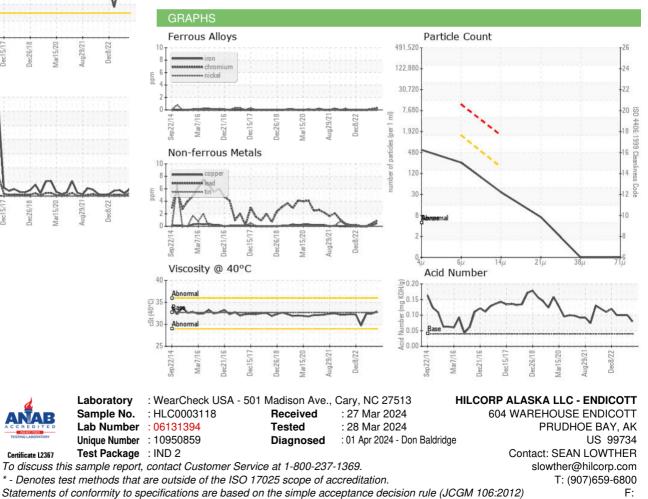






VISUAL		method				history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.03	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	32.7	32.9	32.4	32.4
SAMPLE IMAGES		method				history2
Color				•		
Bottom						

ottom



Report Id: BPEEND [WUSCAR] 06131394 (Generated: 04/01/2024 14:24:26) Rev: 1

Contact/Location: SEAN LOWTHER - BPEEND