

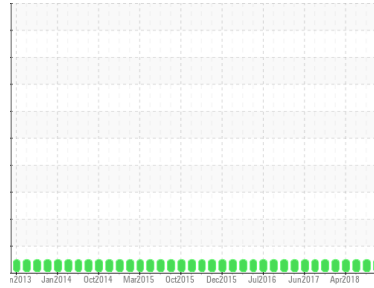
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
[450242720]
 Machine Id
WH-167804 SWIVEL HPU (TB-16601) DRAIN 527-2 RES TK (S/N SAMPLE TAG WH-167804)
 Component
Heat Transfer Fluid
 Fluid
SHELL THERMIA B (--- GAL)



DIAGNOSIS

Recommendation
 Resample at the next service interval to monitor. LUBE360 Oil Diagnostics recommends using HTTFL sample kits for heat transfer fluids. Please contact us at 1-800-268-2131 and provide a purchase order for \$245 + HST in order to conduct additional testing (boiling points @ 10%, 50%, and 90%, percent boiling < 335°C, and solids) to determine the suitability for continued use. Please contact your representative for information regarding the proper sampling kits for your service.

Wear
 All component wear rates are normal.

Contamination
 There is no indication of any contamination in the component(unconfirmed).

Fluid Condition
 Viscosity of sample indicates oil is within ISO 46 range, advise investigate. The AN level is acceptable for this fluid. The condition of the fluid is acceptable for the time in service (unconfirmed).

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		PC	PC	PC
Sample Date	Client Info		07 Jan 2024	18 Dec 2019	23 Jun 2018
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

	method	limit/base	current	history1	history2
Water	WC Method	>0.0601	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm ASTM D5185(m)	>200	0	0	0
Chromium	ppm ASTM D5185(m)	>21	0	0	0
Nickel	ppm ASTM D5185(m)	>21	0	0	0
Titanium	ppm ASTM D5185(m)	>21	0	0	0
Silver	ppm ASTM D5185(m)	>21	0	0	0
Aluminum	ppm ASTM D5185(m)	>21	<1	0	0
Lead	ppm ASTM D5185(m)	>21	0	0	<1
Copper	ppm ASTM D5185(m)	>21	0	<1	<1
Tin	ppm ASTM D5185(m)	>21	0	0	0
Antimony	ppm ASTM D5185(m)	>21	0	<1	0
Vanadium	ppm ASTM D5185(m)		0	0	0
Beryllium	ppm ASTM D5185(m)		0	0	0
Cadmium	ppm ASTM D5185(m)		0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm ASTM D5185(m)		0	<1	0
Barium	ppm ASTM D5185(m)		0	0	0
Molybdenum	ppm ASTM D5185(m)		0	0	0
Manganese	ppm ASTM D5185(m)		0	0	0
Magnesium	ppm ASTM D5185(m)		0	0	<1
Calcium	ppm ASTM D5185(m)		0	<1	<1
Phosphorus	ppm ASTM D5185(m)		274	248	241
Zinc	ppm ASTM D5185(m)		<1	2	2
Sulfur	ppm ASTM D5185(m)		743	624	662
Lithium	ppm ASTM D5185(m)		<1	<1	0

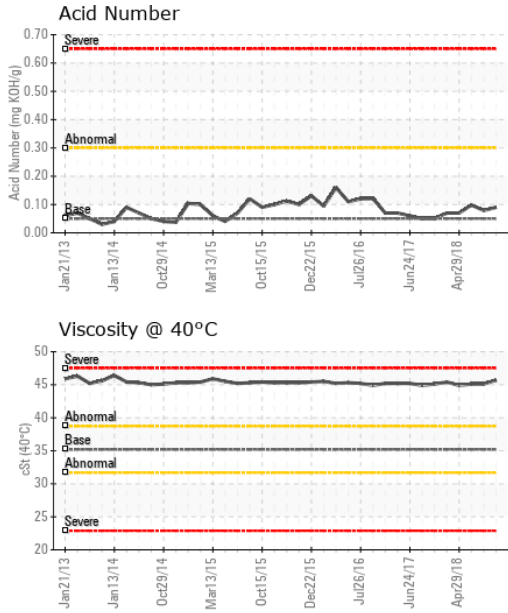
CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m)	>25	0	0	<1
Sodium	ppm ASTM D5185(m)	>21	<1	0	<1
Potassium	ppm ASTM D5185(m)	>20	1	<1	0

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D974*	0.05	0.09	0.079	0.098

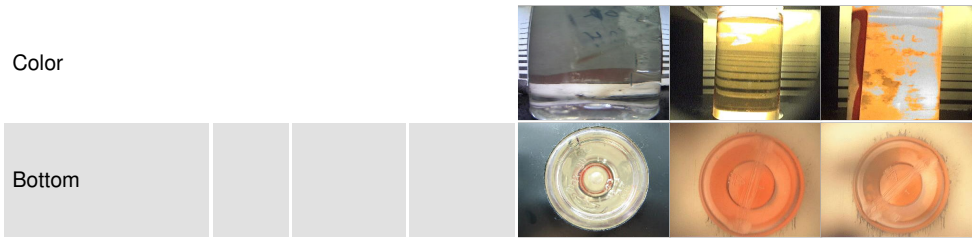
OIL ANALYSIS REPORT



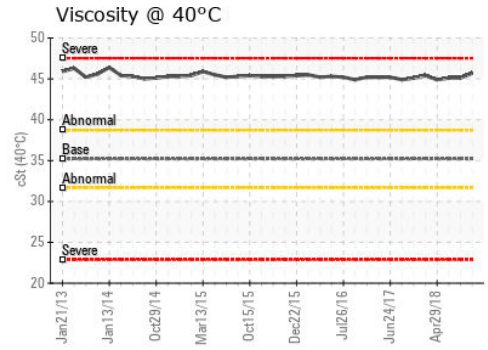
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.0601	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D7279(m)	35.2	45.7	45.1	45.1

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC **Recieved** : 25 Jan 2024
Lab Number : **02611108** **Diagnosed** : 26 Jan 2024
Unique Number : 5720203 **Diagnostician** : Kevin Marson
Test Package : MAR 2 (Additional Tests: TAN Man)

Suncor - Terra Nova Projects
 Scotia Centre, 235 Water Strret
 St. John's, NL
 CA A1C 1B6
 Contact: Josh Hynes
 joshynes@suncor.com
 T: (709)778-3575
 F: (709)724-2835

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.