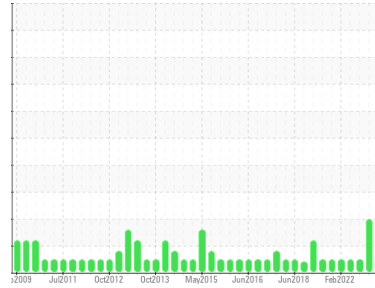




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
Hyd. Shack #1
 Machine Id
Twin Otter (S/N 7295)
 Component
Hydraulic System
 Fluid
ESSO NUTO H ISO 32 (100 GAL)

DIAGNOSIS

Recommendation
 Resample at the next service interval to monitor.

Wear
 All component wear rates are normal.

Contamination
 The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

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			WC0777388	WC0777380	WC0670681
Sample Date	Client Info			13 Dec 2023	20 May 2023	06 Jan 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	ATTENTION	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method		>0.05	NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	<1	<1	<1
Chromium	ppm	ASTM D5185(m)	>10	0	0	0
Nickel	ppm	ASTM D5185(m)	>10	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		<1	0	0
Aluminum	ppm	ASTM D5185(m)	>10	<1	<1	<1
Lead	ppm	ASTM D5185(m)	>20	1	<1	<1
Copper	ppm	ASTM D5185(m)	>20	11	▲ 20	10
Tin	ppm	ASTM D5185(m)	>10	0	0	0
Antimony	ppm	ASTM D5185(m)		0	0	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

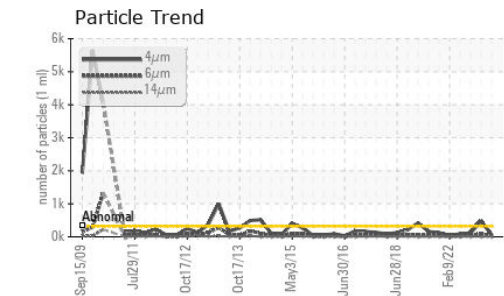
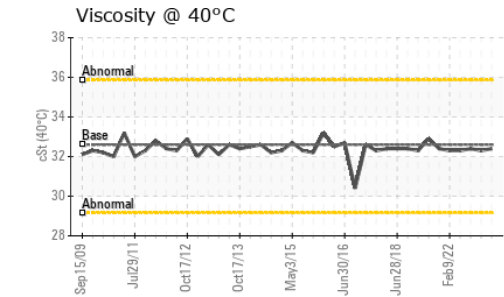
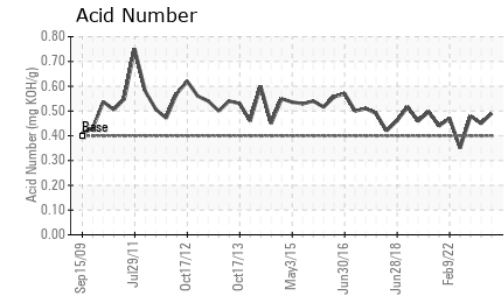
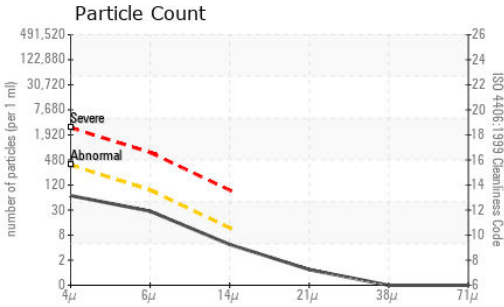
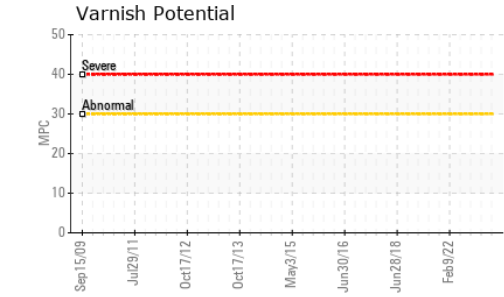
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	<1	0	<1
Barium	ppm	ASTM D5185(m)	0	<1	0	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0	0
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)	5	<1	<1	<1
Calcium	ppm	ASTM D5185(m)	50	33	39	33
Phosphorus	ppm	ASTM D5185(m)	330	387	376	424
Zinc	ppm	ASTM D5185(m)	420	431	396	435
Sulfur	ppm	ASTM D5185(m)	2700	2885	2916	3007
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	<1	<1	<1
Sodium	ppm	ASTM D5185(m)		<1	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	1

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>320	59	▲ 478	118
Particles >6µm		ASTM D7647	>80	25	▲ 90	46
Particles >14µm		ASTM D7647	>10	4	9	7
Particles >21µm		ASTM D7647	>3	1	2	3
Particles >38µm		ASTM D7647	>3	0	1	0
Particles >71µm		ASTM D7647	>3	0	1	0
Oil Cleanliness		ISO 4406 (c)	>15/13/10	13/12/9	▲ 16/14/10	14/13/10



OIL ANALYSIS REPORT



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0777388 **Received** : 19 Dec 2023
Lab Number : **02604127** **Tested** : 15 Feb 2024
Unique Number : 5697212 **Diagnosed** : 15 Feb 2024 - Wes Davis
Test Package : IND 2 (Additional Tests: MPC, TAN Man)







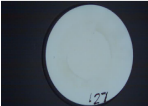
FLIGHTSAFETY CANADA LIMITED
 95 GARRATT BOULEVARD
 TORONTO, ON
 CA M3K 2A5
 Contact: Mark Gris
 mark.gris@flightsafety.com
 T: (416)638-9313
 F: (416)638-3348

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.

FLUID DEGRADATION	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D974*	.40	0.49	0.45	0.48
MPC Varnish Potential	Scale	ASTM D7843(m)*	>15	5	---	---

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*	>0.05	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D7279(m)	32.6	32.4	32.3	32.4

SAMPLE IMAGES	method	limit/base	current	history1	history2	
Color						
Bottom						
MPC					no image	no image

MPC (Varnish Test)



Sample Color & Clarity



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