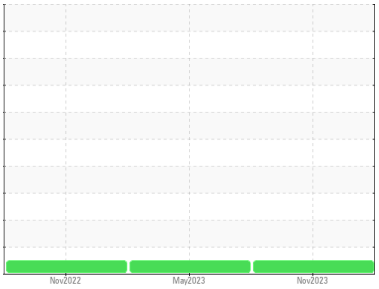
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Area
Blending
Machine Id
Smartwax Thermal Oil Skid (S/N BL015U20U)
Component
Heat Transfer Fluid
Fluid
HEAT TRANSFER FLUID ISO 46 (--- 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 fluid. The amount and size of particulates present in the system are acceptable.

Fluid Condition
The AN level is acceptable for this fluid. The condition of the fluid is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0834707**	WC0782898	WC0734609
Sample Date		Client Info		**14 Nov 2023**	17 May 2023	16 Nov 2022
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 D5185m	>200	**<1**	2	1
Chromium	ppm	ASTM D5185m	>21	**0**	0	0
Nickel	ppm	ASTM D5185m	>21	**0**	0	0
Titanium	ppm	ASTM D5185m	>21	**0**	0	0
Silver	ppm	ASTM D5185m	>21	**0**	0	0
Aluminum	ppm	ASTM D5185m	>21	**0**	0	<1
Lead	ppm	ASTM D5185m	>21	**0**	0	<1
Copper	ppm	ASTM D5185m	>21	**0**	<1	<1
Tin	ppm	ASTM D5185m	>21	**0**	0	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

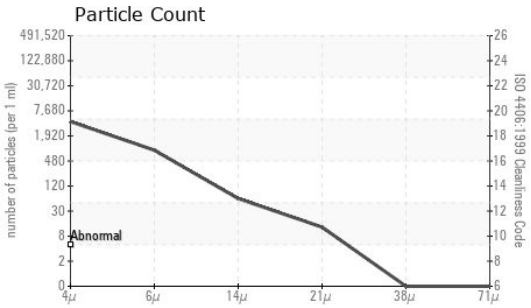
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	**0**	0	<1
Barium	ppm	ASTM D5185m	5	**0**	0	0
Molybdenum	ppm	ASTM D5185m	5	**0**	0	<1
Manganese	ppm	ASTM D5185m		**0**	0	<1
Magnesium	ppm	ASTM D5185m	5	**0**	<1	<1
Calcium	ppm	ASTM D5185m	5	**155**	216	204
Phosphorus	ppm	ASTM D5185m	250	**0**	4	9
Zinc	ppm	ASTM D5185m	5	**0**	<1	0
Sulfur	ppm	ASTM D5185m	3000	**256**	438	286

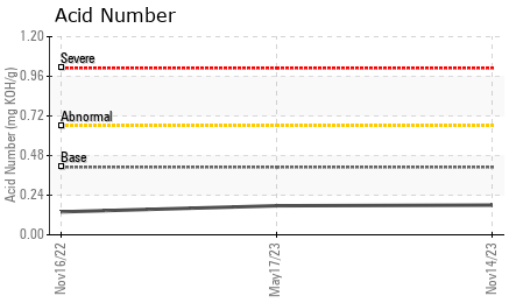
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**<1**	<1	<1
Sodium	ppm	ASTM D5185m	>21	**1**	<1	2
Potassium	ppm	ASTM D5185m	>20	**0**	<1	1

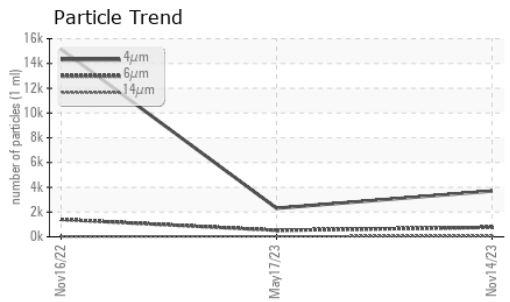
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		**3698**	2310	15150
Particles >6µm		ASTM D7647	>10240000	**766**	524	1399
Particles >14µm		ASTM D7647	>10240000	**53**	44	24
Particles >21µm		ASTM D7647	>2560000	**11**	15	5
Particles >38µm		ASTM D7647	>640000	**0**	2	0
Particles >71µm		ASTM D7647	>160000	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>--/30/30	**19/17/13**	18/16/13	21/18/12

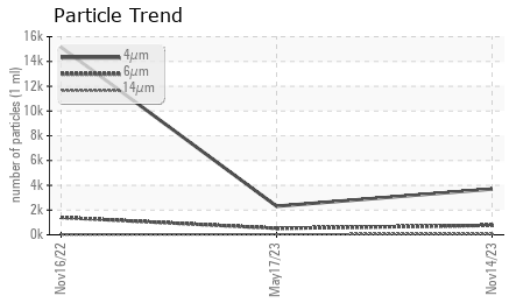
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.41	**0.18**	0.176	0.139

OIL ANALYSIS REPORT



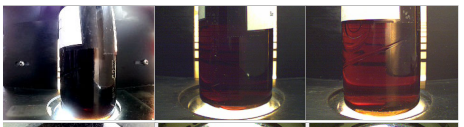
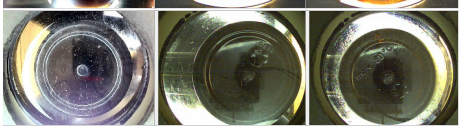




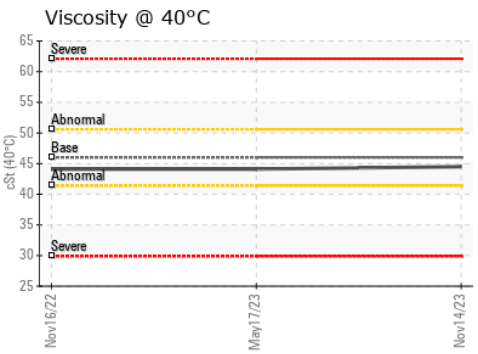


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46	**44.5**	44.1	44.1

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0834707 **Received** : 17 Nov 2023
Lab Number : 06011457 **Diagnosed** : 21 Nov 2023
Unique Number : 10750601 **Diagnostician** : Don Baldridge
Test Package : IND 2 (Additional Tests: PrtCount)

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)

J.M. Huber Corporation
PO BOX 38
CRYSTAL HILL, VA
US 24539
Contact: Ted Hudson
ted.hudson@huber.com
T: (434)476-6628
F: (434)476-8133