WEAR CONTAMINATION **FLUID CONDITION**

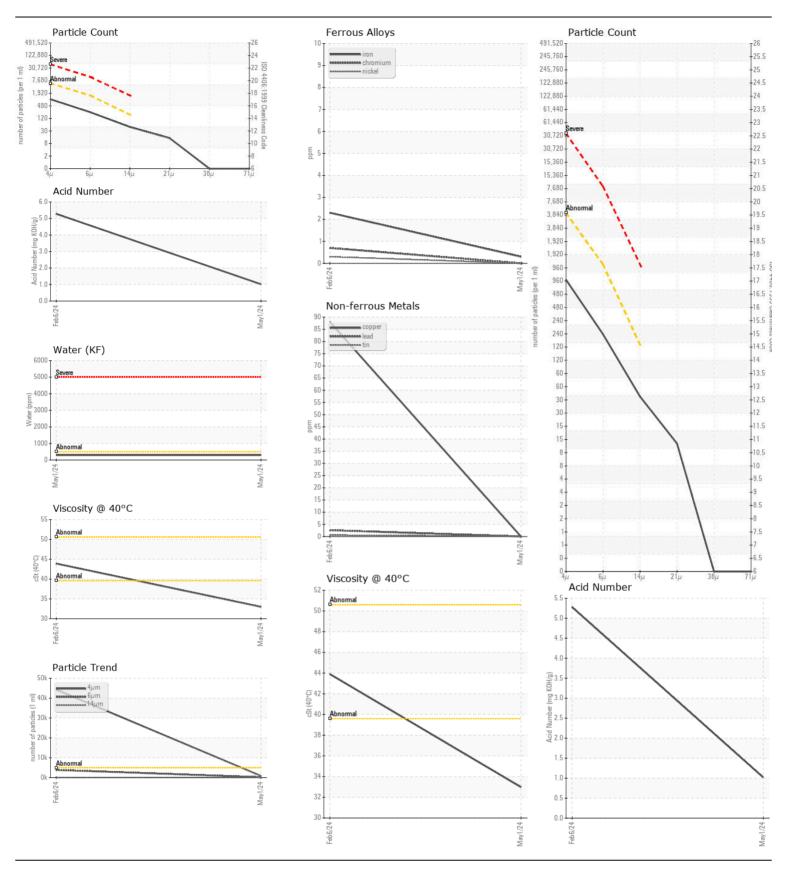
NORMAL NORMAL NORMAL

Machine Id

TIPPER (S/N 85045)

Hydraulic System

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
	Sample Number		Client Info		WC0768854	WC0789354	
Resample at the next service interval to monitor.	Sample Date		Client Info		01 May 2024	06 Feb 2024	
	Machine Age	mths	Client Info		0	0	
	Oil Age	mths	Client Info		0	0	
	Filter Age	mths	Client Info		0	12	
	Oil Changed		Client Info		Changed	N/A	
	Filter Changed		Client Info		Changed	Changed	
	Sample Status				NORMAL	ABNORMAL	
VEAR	Iron	ppm	ASTM D5185m	~20	<1	2	
VLAIT	Chromium	ppm	ASTM D5185m		0	<1	
All component wear rates are normal.	Nickel		ASTM D5185m		0	<1	
	Titanium	ppm	ASTM D5185m	>20	0	71	
	Silver	ppm	ASTM D5185m		0	0	
	Aluminum	ppm	ASTM D5185m	> 20	0	<1	
	Lead	ppm			0	3	
	Copper	ppm	ASTM D5185m ASTM D5185m		0	∆ 88	
	Tin	ppm	ASTM D5185m		0	<1	
	Vanadium	ppm	ASTM D5185m	>20	0	<1	
	White Metal	ppm scalar	*Visual	NONE	NONE	NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
<u></u>	Tellow Metal	Scalai	Visuai	NONL	INONE	INOINL	
ONTAMINATION	Silicon	ppm	ASTM D5185m	>15	1	4	
ONTAMINATION	Potassium	ppm	ASTM D5185m		<1	<1	
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.	Water	%	ASTM D6304		0.029		
	ppm Water	ppm	ASTM D6304		294		
	Particles >4µm	ррш	ASTM D7647		871	<u>44231</u>	
	Particles >6µm		ASTM D7647		209	<u>▲</u> 3867	
	Particles >14µm		ASTM D7647		41	33	
	Particles >21µm		ASTM D7647		12	3	
	Particles >38µm		ASTM D7647		0	0	
	Particles >71µm		ASTM D7647		0	0	
	Oil Cleanliness		ISO 4406 (c)		17/15/13	<u>^</u> 23/19/12	
	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			>0.05	NEG	NEG	
LUID CONDITION	0 "		40TM DE405				
LUID CONDITION	Sodium	ppm	ASTM D5185m		0	2	
he AN level is acceptable for this fluid. The condition of the oil is	Boron	ppm	ASTM D5185m		107	0	
suitable for further service.	Barium	ppm	ASTM D5185m		0	0	
	Molybdenum	ppm	ASTM D5185m		0	0	
	Manganese	ppm	ASTM D5185m		0	2	
	Magnesium	ppm	ASTM D5185m		1	3	
	Calcium	ppm	ASTM D5185m		107	18	
	Phosphorus	ppm	ASTM D5185m		297	18910	
	Zinc	ppm	ASTM D5185m		10	55	
	Sulfur	ppm	ASTM D5185m		1259	481	
	Acid Number (AN)	mg KOH/g	ASTM D8045		1.02	5.28	
	Visc @ 40°C	cSt	ASTM D445		32.98	43.9	





Certificate L2367

Laboratory Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : WC0768854 Lab Number : 06175460

Unique Number: 11021513

Received **Tested** Diagnosed

: 10 May 2024 : 20 May 2024

: 22 May 2024 - Jonathan Hester

Contact: JIM ALLEN JALLEN@NWHYDINC.COM T:

NORTHLAND-WILLETTE INC

Test Package : IND 2 (Additional Tests: KF) 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)

12 HIGH ST

US 02762

PLAINVILLE, MA

F: (508)699-4017