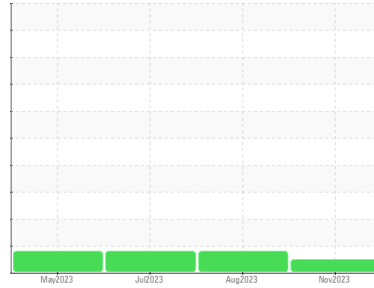




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
101-LYO-904

Component
Hydraulic System

Fluid
NAVI-GUARD PREMIUM AW-32 HYDRAULIC (--- LTR)

DIAGNOSIS

Recommendation

This is a baseline read-out on the submitted sample.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WC0846276	WC0789084	WC0789091
Sample Date	Client Info			03 Nov 2023	09 Aug 2023	24 Jul 2023
Machine Age	yrs	Client Info		0	0	0
Oil Age	yrs	Client Info		0	0	0
Oil Changed	Client Info			N/A	N/A	N/A
Sample Status				NORMAL	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	0	<1	<1
Chromium	ppm	ASTM D5185m	>20	0	0	0
Nickel	ppm	ASTM D5185m	>20	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>20	0	0	0
Lead	ppm	ASTM D5185m	>20	0	0	0
Copper	ppm	ASTM D5185m	>20	0	2	2
Tin	ppm	ASTM D5185m	>20	0	0	0
Vanadium	ppm	ASTM D5185m		0	<1	<1
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<1	32	33
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	13	13
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m		5	110	110
Calcium	ppm	ASTM D5185m		73	1101	1118
Phosphorus	ppm	ASTM D5185m		313	291	288
Zinc	ppm	ASTM D5185m		440	285	284
Sulfur	ppm	ASTM D5185m		2420	2875	2866

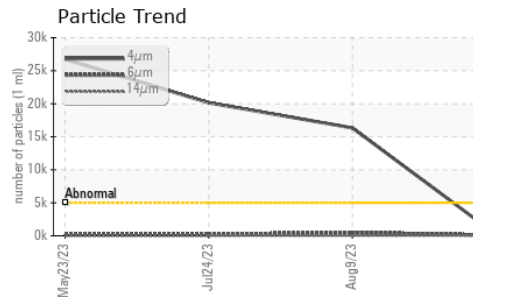
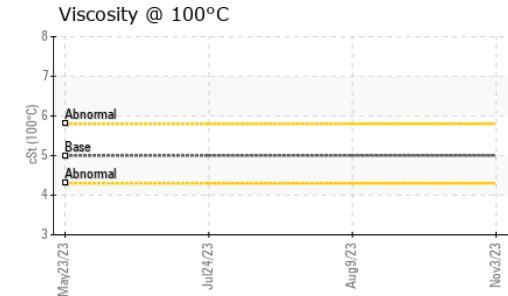
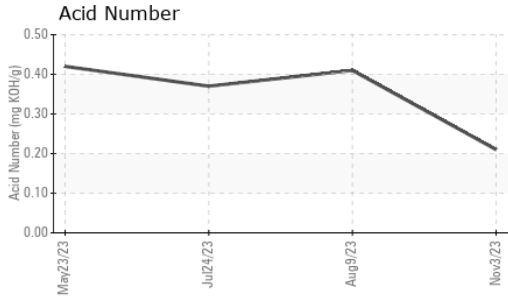
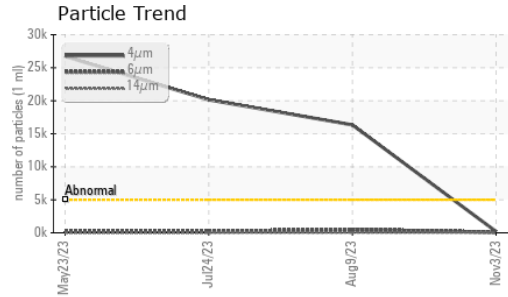
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	0	2	2
Sodium	ppm	ASTM D5185m		1	2	2
Potassium	ppm	ASTM D5185m	>20	0	<1	<1
Water	%	ASTM D6304	>0.05	NEG	NEG	NEG

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	195	▲ 16338	▲ 20149
Particles >6µm		ASTM D7647	>1300	85	512	233
Particles >14µm		ASTM D7647	>160	8	30	10
Particles >21µm		ASTM D7647	>40	1	5	3
Particles >38µm		ASTM D7647	>10	0	0	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	15/14/10	▲ 21/16/12	▲ 22/15/10

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.21	0.41	0.37



OIL ANALYSIS REPORT

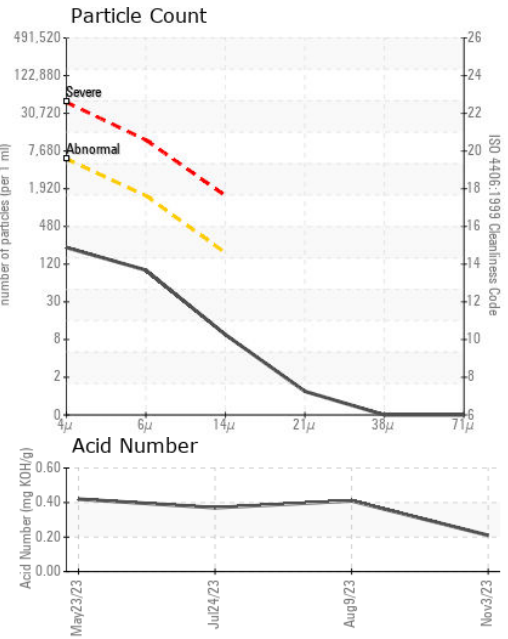
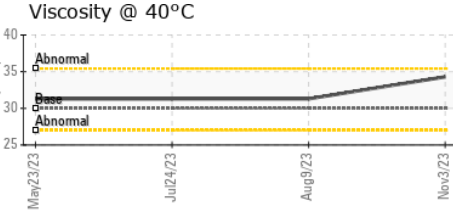
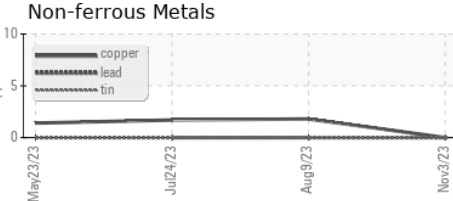
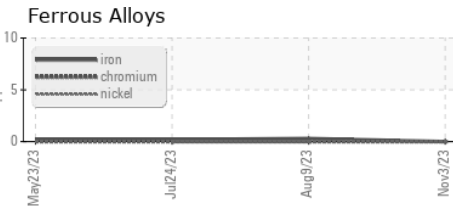


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	30	34.3	31.3
Visc @ 100°C	cSt	ASTM D445	5	6.1	---
Viscosity Index (VI)	Scale	ASTM D2270	87	125	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0846276 **Received** : 16 Nov 2023
Lab Number : 06009954 **Diagnosed** : 05 Dec 2023
Unique Number : 10749098 **Diagnostician** : Doug Bogart
Test Package : IND 2 (Additional Tests: KF, KV100, VI)

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)

MERCK & COMPANY
 5325 OLD OXFORD RD
 DURHAM, NC
 US 27712
 Contact: Mark Montalvo
 mark_montalvo@merck.com
 T: (919)884-4103
 F: