



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
WOODWARD JOGGER
 Component
Hydraulic System
 Fluid
AW HYDRAULIC OIL ISO 32 (--- GAL)

RECOMMENDATION

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample.

WEAR

All component wear rates are normal.

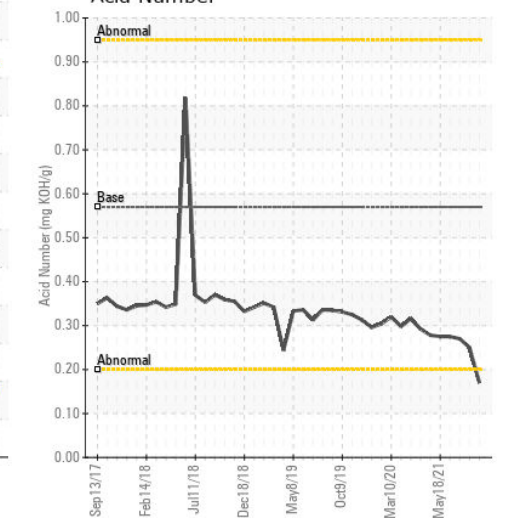
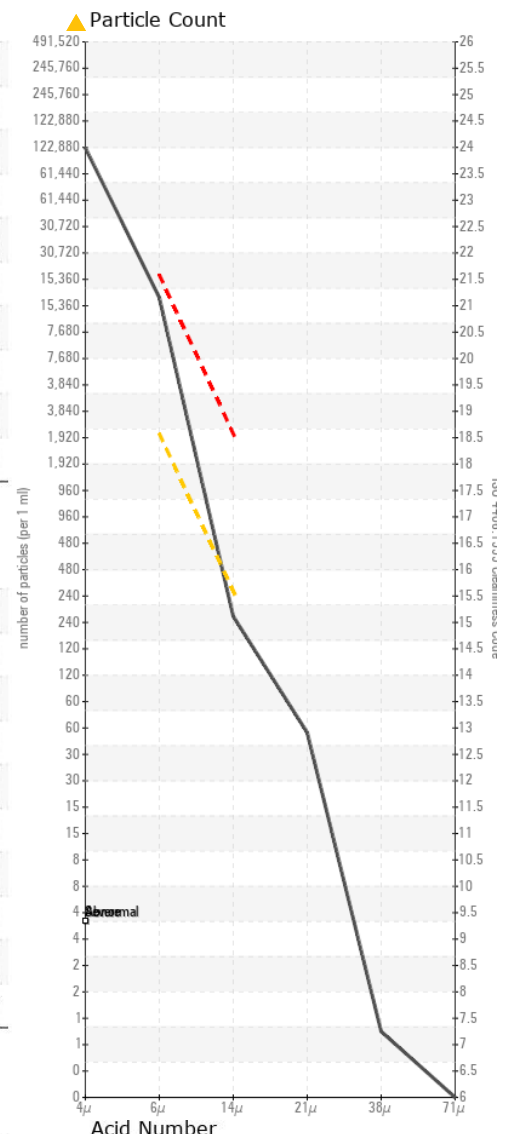
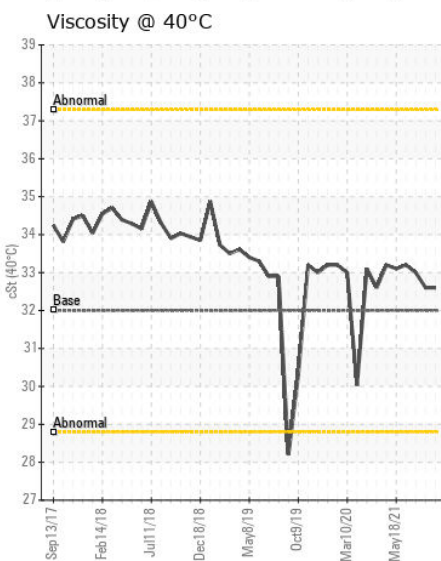
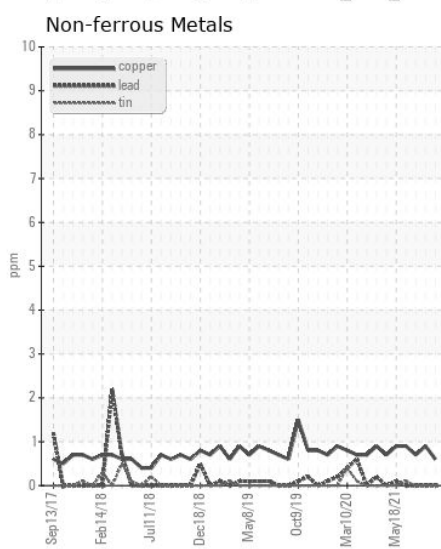
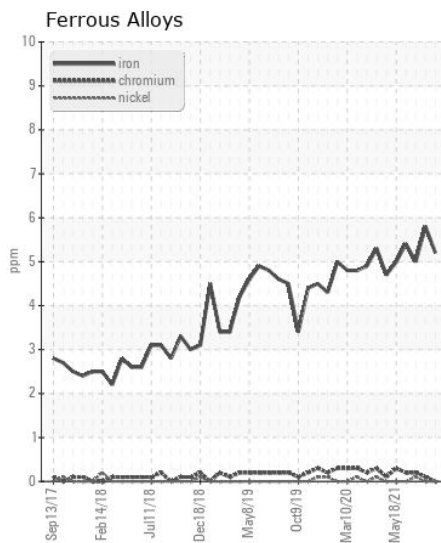
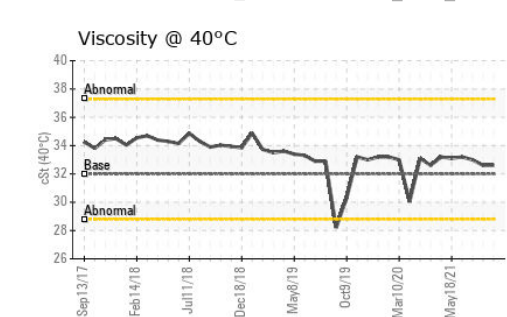
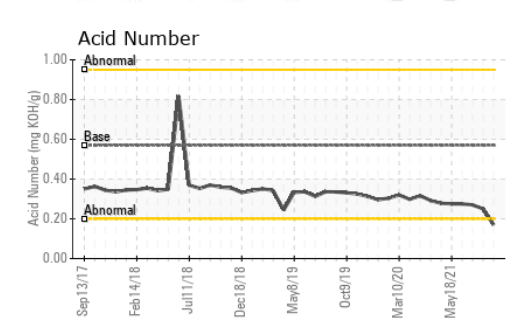
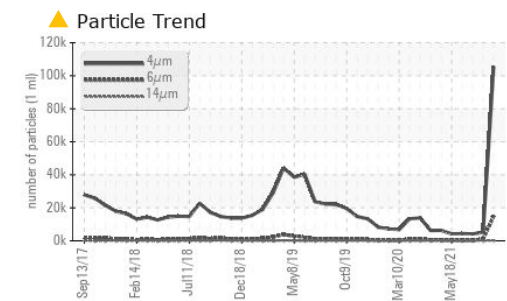
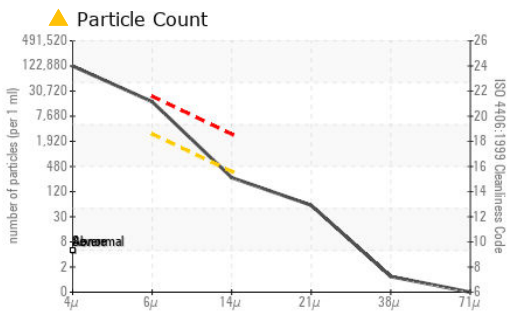
CONTAMINATION

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code.

FLUID CONDITION

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PTK0000293	PTK0000300	PTK0001177
Sample Date		Client Info		09 Nov 2023	13 Jun 2023	23 Nov 2022
Machine Age	wks	Client Info		0	0	0
Oil Age	wks	Client Info		0	0	0
Filter Age	wks	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>20	5	6	5
Chromium	ppm	ASTM D5185m	>10	0	<1	<1
Nickel	ppm	ASTM D5185m	>10	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	0	0	<1
Lead	ppm	ASTM D5185m	>10	0	0	0
Copper	ppm	ASTM D5185m	>75	<1	<1	<1
Tin	ppm	ASTM D5185m	>10	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	<1	<1	1
Potassium	ppm	ASTM D5185m	>20	0	1	0
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647		105351	5063	4214
Particles >6µm		ASTM D7647	>2500	▲ 14839	1072	401
Particles >14µm		ASTM D7647	>320	229	144	32
Particles >21µm		ASTM D7647	>80	50	42	9
Particles >38µm		ASTM D7647	>20	1	2	0
Particles >71µm		ASTM D7647	>4	0	0	0
Oil Cleanliness		ISO 4406 (c)	>18/15	▲ 21/15	17/14	16/12
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	>0.1	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m		1	0	<1
Boron	ppm	ASTM D5185m	5	0	0	0
Barium	ppm	ASTM D5185m	5	0	2	0
Molybdenum	ppm	ASTM D5185m	5	0	<1	<1
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m	25	1	3	3
Calcium	ppm	ASTM D5185m	200	110	118	118
Phosphorus	ppm	ASTM D5185m	300	345	350	372
Zinc	ppm	ASTM D5185m	370	468	460	446
Sulfur	ppm	ASTM D5185m	2500	2142	2338	2557
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	0.17	0.25	0.27
Visc @ 40°C	cSt	ASTM D445	32	32.6	32.6	33.0



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PTK0000293
Lab Number : 06017312
Unique Number : 10756456
Test Package : MOB 2
Received : 24 Nov 2023
Tested : 28 Nov 2023
Diagnosed : 28 Nov 2023 - Wes Davis

GRAPHIC PACKAGING
 1500 NICHOLAS BLVD
 ELK GROVE, IL
 US 60017
 Contact: TONY HILDY
 anthonyhildy@graphicpkg.com
 T: (847)437-1700
 F:

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)