

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.
Resample	---	---	?	Resample in 30-45 days to monitor this situation.
Alert	---	---	?	Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment.
Information Required	---	---	?	Please specify the brand, type, and viscosity of the oil on your next sample. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.
Check Breathers	---	---	?	The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather.
Check Dirt Access	---	---	?	We advise that you check all areas where contaminants can enter the system.
Filter Fluid	---	---	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.

HISTORICAL DIAGNOSIS

ISO



17 Oct 2023 Diag: Wes Davis

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. There is a high amount of particulates (2 to 100 microns in size) present in the oil. The system cleanliness code is much higher than the acceptable limit for the target ISO 4406 cleanliness code. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report



11 Feb 2019 Diag: Don Baldrige

VISUAL METAL



We recommend you service the filters on this component. We advise that you inspect for possible wear. We recommend an early resample to monitor this condition. Moderate concentration of visible metal present. All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



07 Jan 2019 Diag: Jonathan Hester

ISO



We recommend you service the filters on this component. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

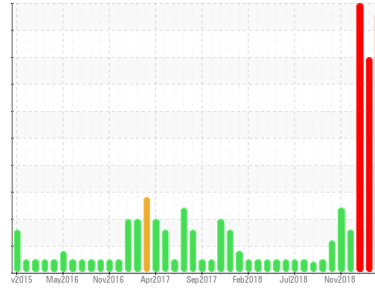
view report





OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
HIGH FIRMNESS

Component
Hydraulic System

Fluid
AW HYDRAULIC OIL ISO 46 (--- GAL)

DIAGNOSIS

Recommendation

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

All component wear rates are normal.

Contamination

There is a high amount of particulates (2 to 100 microns in size) present in the oil. The system cleanliness code is much higher than 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.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0859512	WC0859533	WCI2338196
Sample Date	Client Info		15 Nov 2023	17 Oct 2023	11 Feb 2019
Machine Age	wks	Client Info	0	0	0
Oil Age	wks	Client Info	0	0	0
Oil Changed	Client Info		N/A	Filtered	N/A
Sample Status			SEVERE	SEVERE	SEVERE

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >20	0	0	1
Chromium	ppm	ASTM D5185m >20	0	0	<1
Nickel	ppm	ASTM D5185m >20	0	<1	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >20	0	<1	0
Lead	ppm	ASTM D5185m >20	0	0	0
Copper	ppm	ASTM D5185m >20	2	3	11
Tin	ppm	ASTM D5185m >20	0	<1	0
Antimony	ppm	ASTM D5185m	---	---	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	<1	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 5	0	0	0
Barium	ppm	ASTM D5185m 5	0	1	0
Molybdenum	ppm	ASTM D5185m 5	0	0	0
Manganese	ppm	ASTM D5185m	0	0	0
Magnesium	ppm	ASTM D5185m 25	0	<1	0
Calcium	ppm	ASTM D5185m 200	32	34	34
Phosphorus	ppm	ASTM D5185m 300	342	323	323
Zinc	ppm	ASTM D5185m 370	411	446	377
Sulfur	ppm	ASTM D5185m 2500	850	899	988

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	2	2	2
Sodium	ppm	ASTM D5185m	0	<1	0
Potassium	ppm	ASTM D5185m >20	0	2	0

FLUID CLEANLINESS

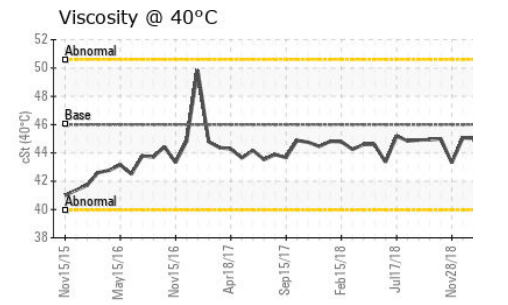
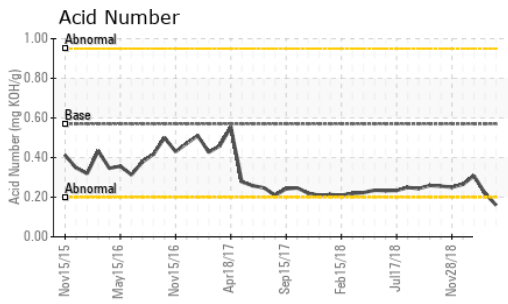
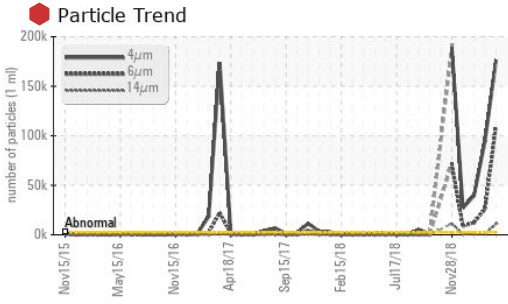
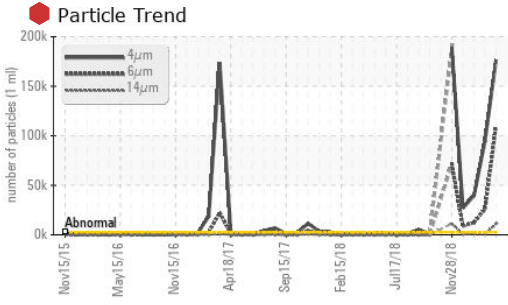
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>2500	176389	94547	39440
Particles >6µm	ASTM D7647	>640	109892	26110	12231
Particles >14µm	ASTM D7647	>80	10783	1162	1147
Particles >21µm	ASTM D7647	>20	2009	224	287
Particles >38µm	ASTM D7647	>4	50	8	9
Particles >71µm	ASTM D7647	>3	3	0	0
Oil Cleanliness	ISO 4406 (c)	>18/16/13	25/24/21	24/22/17	22/21/17

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.57	0.16	0.22	0.308



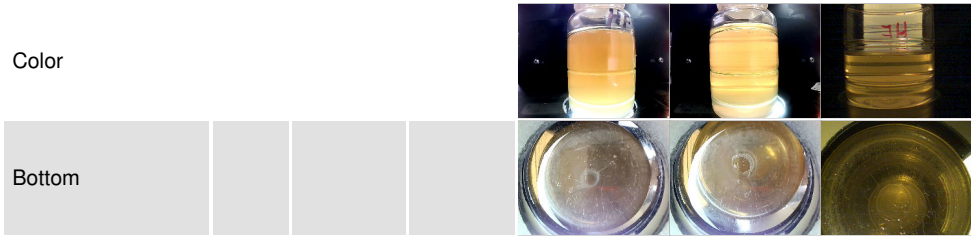
OIL ANALYSIS REPORT



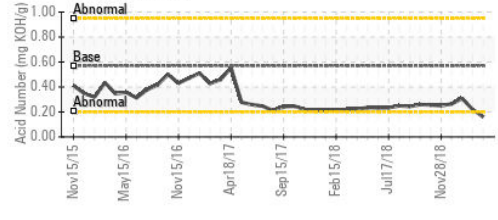
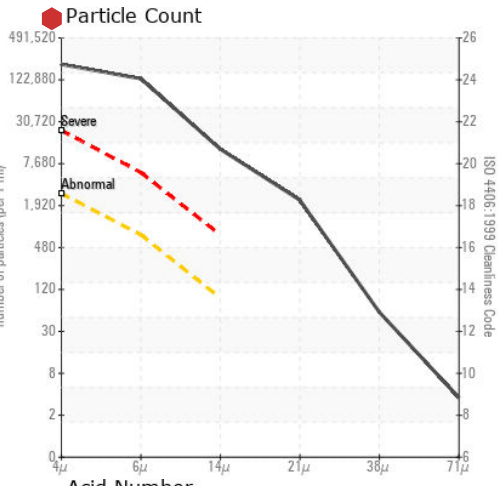
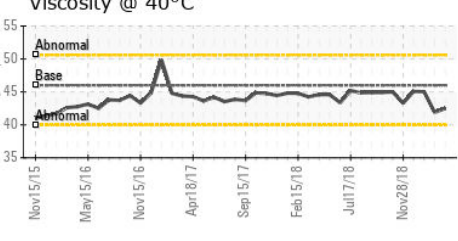
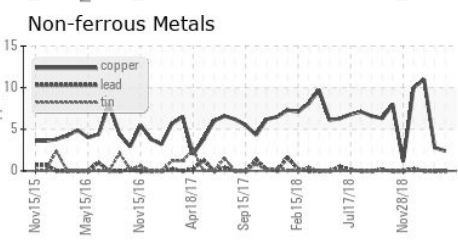
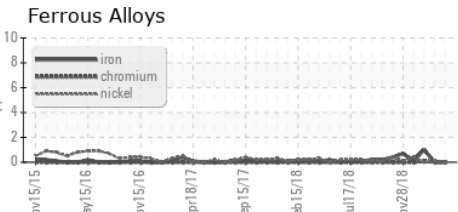
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	MODER
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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 46	42.5	41.9	45.02

SAMPLE IMAGES	method	limit/base	current	history1	history2
---------------	--------	------------	---------	----------	----------



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0859512 **Received** : 16 Nov 2023
Lab Number : 06010177 **Diagnosed** : 17 Nov 2023
Unique Number : 10749321 **Diagnostician** : Wes Davis
Test Package : IND 2

WOODBRIIDGE CORPORATION
 2399 SOUTH STONE MOUNTAIN
 LITHONIA, GA
 US 30058
 Contact: GEORGE WILEY
 george_wiley@woodbridgegroup.com
 T: (770)482-6810
 F: x:

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)