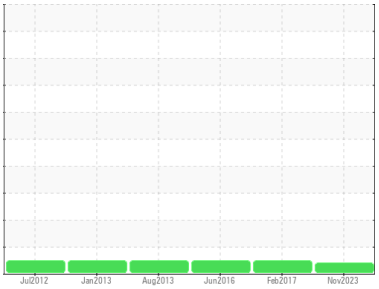
OIL ANALYSIS REPORT

Sample Rating Trend



INSOLUBLES

Machine Id
NEW CML 2
Component
Hydraulic System
Fluid
PHILLIPS 66 Powerflow NZ AW46 (1350 GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. We recommend an early resample to monitor this condition. RPVOT performed at subcontracted ISO 17025 laboratory. RPVOT measured at 390.

Wear

All component wear rates are normal.

Contamination

MPC (Membrane Patch Colorimetry) test indicates a moderate concentration of varnish present. The water content is negligible. The amount and size of particulates present in the system are acceptable.

Fluid Condition

Linear Sweep Voltammetry (RULER – ASTM D6971) testing indicates normal levels of anti-oxidants present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0837859**	WCi2302203	WCI2290679
Sample Date		Client Info		**29 Nov 2023**	16 Feb 2017	07 Jun 2016
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				**ABNORMAL**	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>40	**0**	1	<1
Chromium	ppm	ASTM D5185m	>4	**0**	<1	<1
Nickel	ppm	ASTM D5185m	>20	**0**	<1	<1
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>4	**0**	<1	0
Lead	ppm	ASTM D5185m	>10	**0**	<1	0
Copper	ppm	ASTM D5185m	>60	**4**	9	8
Tin	ppm	ASTM D5185m	>4	**0**	2	<1
Antimony	ppm	ASTM D5185m		**---**	0	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

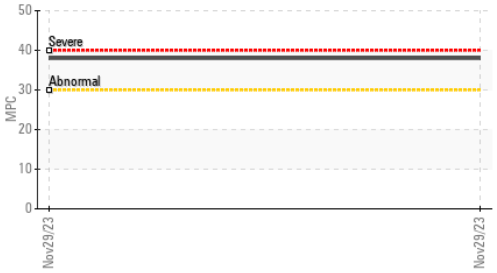
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	1	<1
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**0**	<1	<1
Manganese	ppm	ASTM D5185m		**<1**	<1	0
Magnesium	ppm	ASTM D5185m		**0**	2	2
Calcium	ppm	ASTM D5185m		**49**	53	56
Phosphorus	ppm	ASTM D5185m		**453**	291	317
Zinc	ppm	ASTM D5185m		**575**	362	368
Sulfur	ppm	ASTM D5185m		**1142**	782	776

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	**0**	1	<1
Sodium	ppm	ASTM D5185m		**1**	2	<1
Potassium	ppm	ASTM D5185m	>20	**0**	2	3
Water	%	ASTM D6304	>0.05	**0.003**	---	---
ppm Water	ppm	ASTM D6304	>500	**28**	---	---

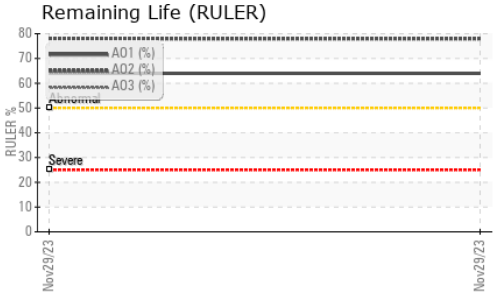
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	**320**	104	246
Particles >6µm		ASTM D7647	>1300	**99**	48	134
Particles >14µm		ASTM D7647	>160	**15**	11	22
Particles >21µm		ASTM D7647	>40	**5**	5	7
Particles >38µm		ASTM D7647	>10	**1**	0	1
Particles >71µm		ASTM D7647	>3	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**15/14/11**	14/13/11	15/14/12

OIL ANALYSIS REPORT

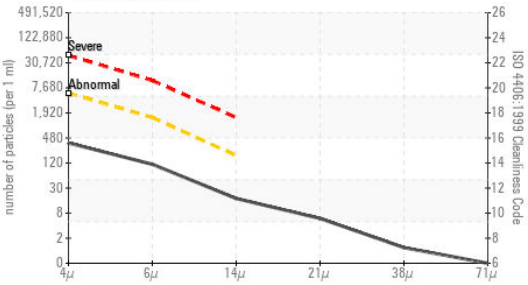
Varnish Potential



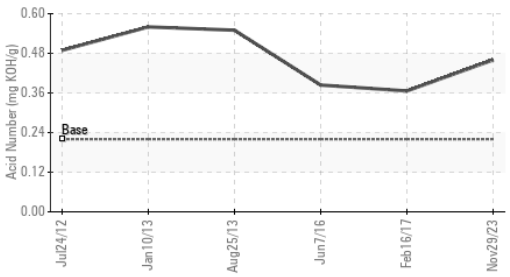
Remaining Life (RULER)



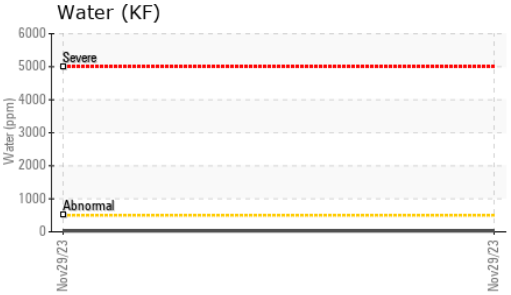
Particle Count



Acid Number



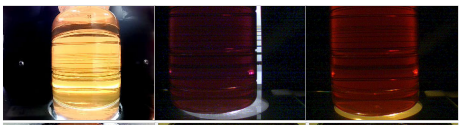
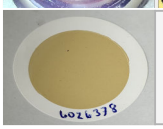
Water (KF)



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.22	**0.46**	0.366	0.384
Anti-Oxidant 1	%	ASTM D6971	<25	**64**	---	---
Anti-Oxidant 2	%	ASTM D6971	<25	**78**	---	---
MPC Varnish Potential	Scale	ASTM D7843	>15	▲ **38**	---	---

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	VLITE
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	>0.05	**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	**43.8**	45.08	45.29
Oxidation Test (RPVOT)	minutes	*ASTM D2272		**390**	---	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					
MPC				*no image*	*no image*

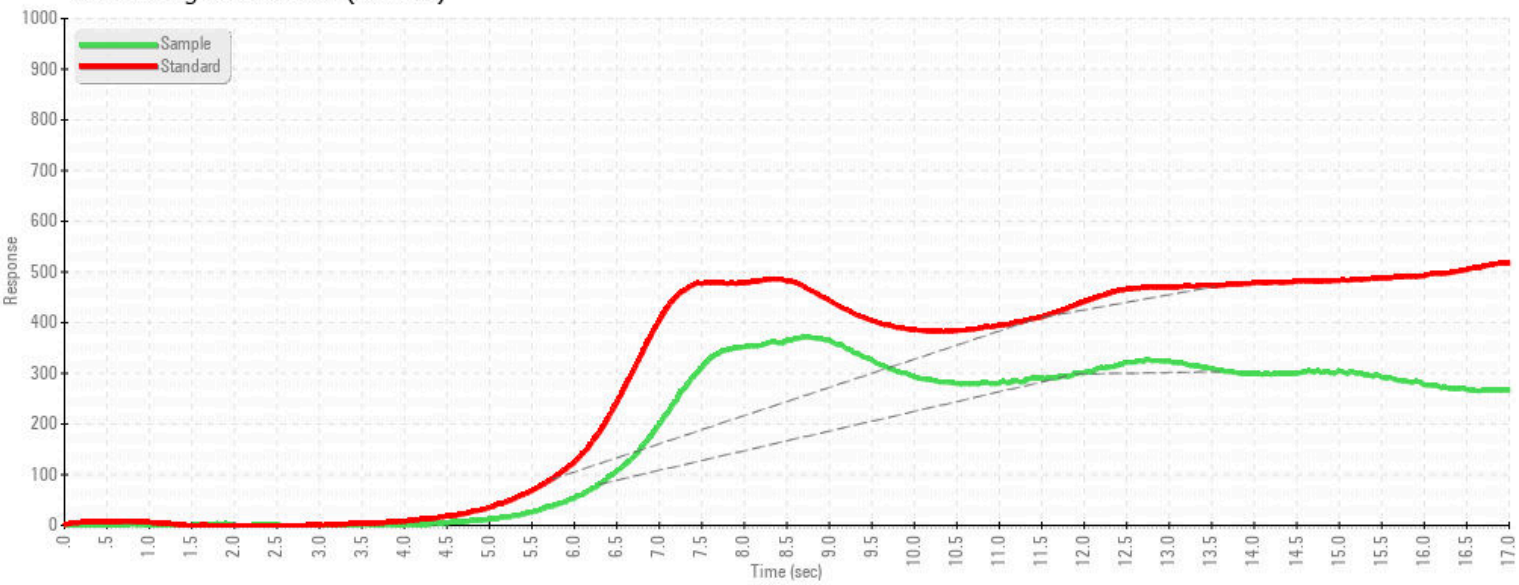
Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0837859 **Recieved** : 06 Dec 2023
Lab Number : 06026378 **Diagnosed** : 26 Dec 2023
Unique Number : 10776169 **Diagnostician** : Doug Bogart
Test Package : AOM 1 (Additional Tests: KF, RPVOT)

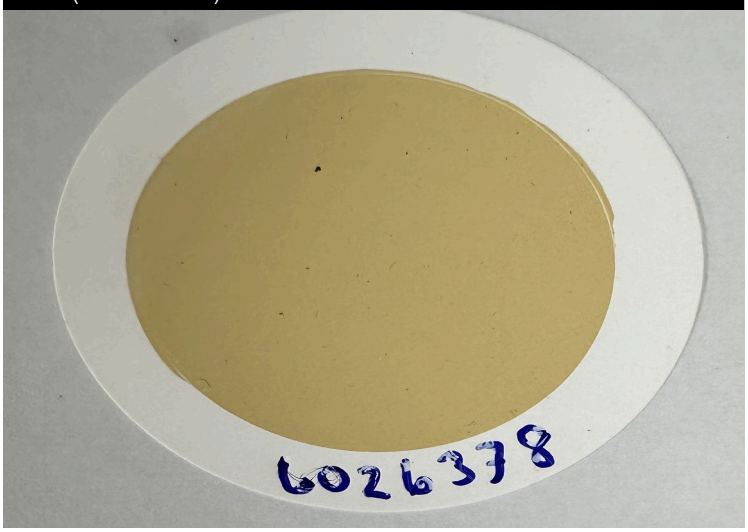
To discuss this sample report, contact Customer Service at 1-800-237-1369.
** - Denotes test methods that are outside of the ISO 17025 scope of accreditation.*
Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

BALDWIN FILTERS INC
4400 HIGHWAY 30 EAST
KEARNEY, NE
US 68847-0724
Contact: JAY FAHRENBRUCH
jay.fahrenbruch@parker.com
T:
F: (800)828-4453

Remaining Useful Life (RULER)



MPC (Varnish Test)



Sample Color & Clarity

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