



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
SMITH BERGER SIGNET WARHORSE III - TOW PIN

Component
Auxiliary Hydraulic System

Fluid
ISO 68 & 46 MIX (16 GAL)

RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0040425	MW0040452	MW0040430
Sample Date		Client Info		25 Sep 2023	01 May 2023	25 Jan 2023
Machine Age	mths	Client Info		0	6	0
Oil Age	mths	Client Info		0	0	0
Filter Age	mths	Client Info		0	2	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	3	3	3
Chromium	ppm	ASTM D5185m	>10	0	0	0
Nickel	ppm	ASTM D5185m	>10	0	<1	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	0	0	0
Lead	ppm	ASTM D5185m	>20	0	<1	0
Copper	ppm	ASTM D5185m	>20	<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

CONTAMINATION

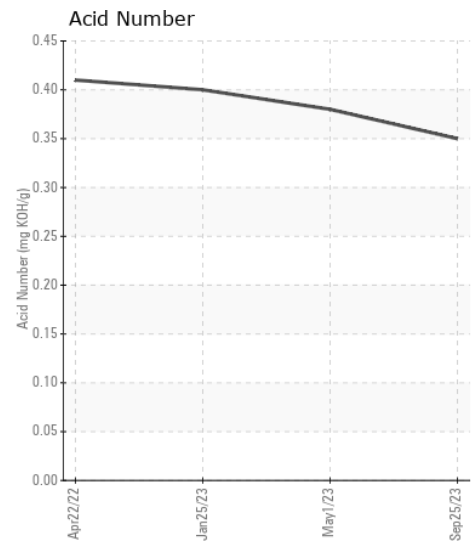
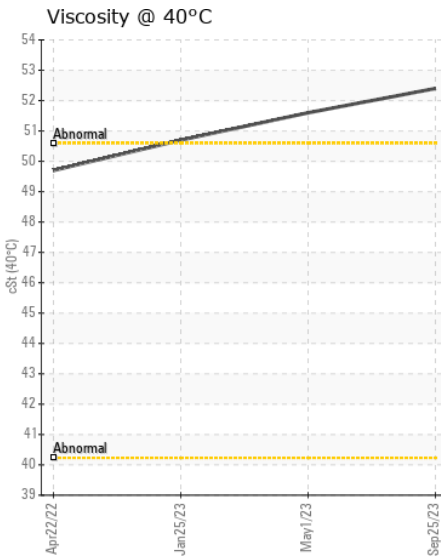
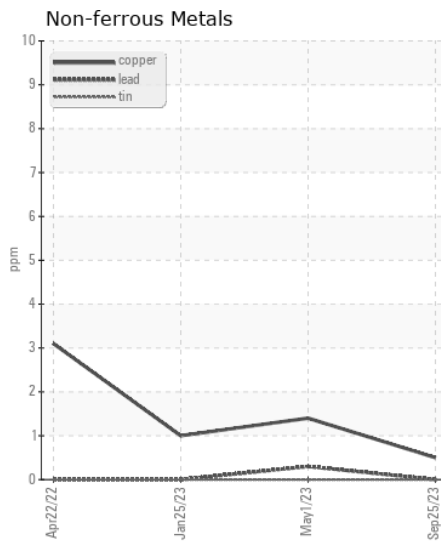
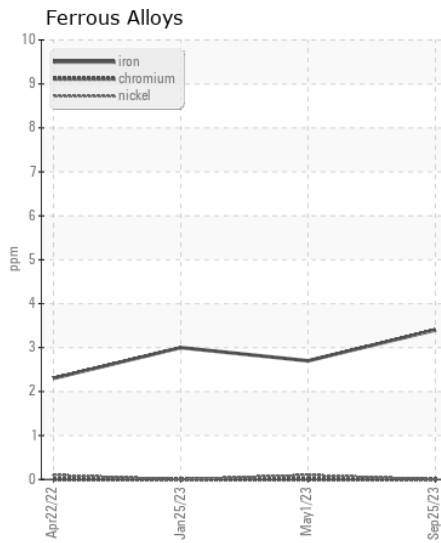
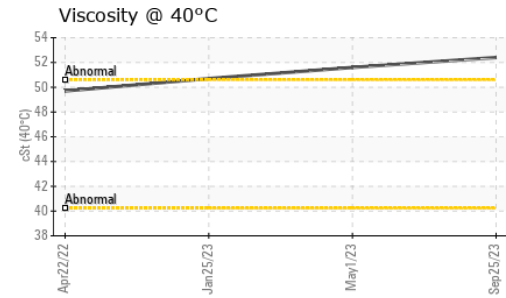
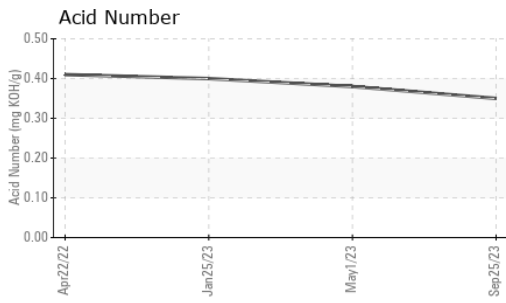
Moderate concentration of visible dirt/debris present in the oil.

Silicon	ppm	ASTM D5185m	>15	0	0	<1
Potassium	ppm	ASTM D5185m	>20	0	1	0
Water		WC Method	>0.05	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	---	▲ 33944	▲ 39509
Particles >6µm		ASTM D7647	>1300	---	▲ 4978	▲ 7607
Particles >14µm		ASTM D7647	>160	---	149	▲ 392
Particles >21µm		ASTM D7647	>40	---	18	▲ 66
Particles >38µm		ASTM D7647	>10	---	0	5
Particles >71µm		ASTM D7647	>3	---	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	---	▲ 22/19/14	▲ 22/20/16
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	▲ MODER	NONE	VLITE
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

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		5	2	6
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		0	0	<1
Magnesium	ppm	ASTM D5185m		1	2	2
Calcium	ppm	ASTM D5185m		27	33	34
Phosphorus	ppm	ASTM D5185m		329	312	319
Zinc	ppm	ASTM D5185m		377	401	402
Sulfur	ppm	ASTM D5185m		1072	1212	1345
Acid Number (AN)	mg KOH/g	ASTM D8045		0.35	0.38	0.40
Visc @ 40°C	cSt	ASTM D445		52.4	▲ 51.6	50.7



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0040425 **Received** : 12 Oct 2023
Lab Number : 05977030 **Diagnosed** : 14 Oct 2023
Unique Number : 10688980 **Diagnostician** : Don Baldrige
Test Package : MAR 2

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)

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