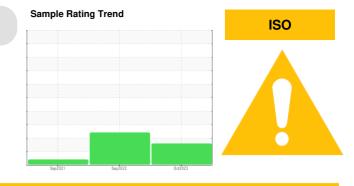


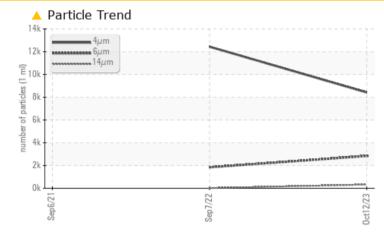
PROBLEM SUMMARY



Machine Id 7334401 (S/N 1476) Component

Compressor Fluid KAESER SIGMA (OEM) M-460 (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS Sample Status ABNORMAL ABNORMAL ABNORMAL Particles >6µm ASTM D7647 >1300 2841 **1838** -Particles >14µm ASTM D7647 >80 324 17 2 Particles >21µm ASTM D7647 >20 105 **Oil Cleanliness** ISO 4406 (c) >--/17/13 **A 20/19/16** 21/18/11

Customer Id: SILNEWCA Sample No.: KCPA006846 Lab Number: 05980423 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data: Don Baldridge +1 don.b505@comcast.net

To change component or sample information: Customer Service +1 1-800-237-1369 <u>customerservice@wearcheck.com</u> There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

07 Sep 2022 Diag: Don Baldridge



Oil and filter change at the time of sampling has been noted. We recommend an early resample in 500 hours to monitor this condition.All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. There is a light concentration of water present in the oil. The AN level is acceptable for this fluid.

06 Sep 2021 Diag: Don Baldridge



No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. 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.All component wear rates are normal. Moderate concentration of visible dirt/debris 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 INFORMATION method limit/base

Sample Rating Trend ISO ISO

current

history1

historv2

Machine Id 7334401 (S/N 1476) Component Compressor

KAESER SIGMA (OEM) M-460 (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a high amount of particulates present in the oil.

Fluid Condition

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

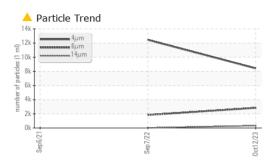
Sample Date Client Info 12 Oct 2023 07 Sep 2022 06 Sep 20 Machine Age hrs Client Info 16665 12148 3418 Oil Age hrs Client Info 0 14000 2000 Sample Status Client Info N/A ABNORMAL ABNORMAL ABNORMAL WEAR METALS method Imit/base current history1 history1 Iron ppm ASTM D5185m >50 0 0 <1 Nickel ppm ASTM D5185m >3 0 0 0 Silver ppm ASTM D5185m >10 0 0 0 Capper ppm ASTM D5185m >10 0 0 0 Aritimony ppm ASTM D5185m >10 1 0 0 Aritimony ppm ASTM D5185m 0 0 0 0 Aritimony ppm ASTM D5185m 0 0 0 0	SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 16665 12148 3418 Oil Age hrs Client Info 0 14000 2000 Oil Changed Client Info N/A Changed Changed Sample Status method imit/base current history1 history1 Iron ppm ASTM D5185m >50 0 0 0 Nickel ppm ASTM D5185m >3 <1	Sample Number		Client Info		KCPA006846	KCP30909	KCP41766
Oll Age Ins Client Info 0 14000 2000 Oil Changed Client Info N/A Changed Changed Sample Status method limit/base current history1 history1 Iron ppm ASTM D5185m >50 0 0 <1	Sample Date		Client Info		12 Oct 2023	07 Sep 2022	06 Sep 2021
Oil Changed Client Info N/A Changed Changed ABNORMAL ABNORMAL	Machine Age	hrs	Client Info		16665	12148	3418
Sample Status method limit/base current history1 ABNORMAL ABNORMAL ABNORMAL WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >50 0 0 0 Nickel ppm ASTM D5185m >3 <1	Oil Age	hrs	Client Info		0	14000	2000
WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >50 0 0 <1	Oil Changed		Client Info		N/A	Changed	Changed
Iron ppm ASTM D5185m >50 0 0 <1 Chromium ppm ASTM D5185m >3 <1	Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Chromium ppm ASTM D5185m >10 0 0 0 Nickel ppm ASTM D5185m >3 0 0 0 Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >10 <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m >3 <1 0 0 Titanium ppm ASTM D5185m >3 0 0 0 Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >10 <1	Iron	ppm	ASTM D5185m	>50	0	0	<1
Titanium ppm ASTM D5185m >3 0 0 0 Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >10 <1	Chromium	ppm	ASTM D5185m	>10	0	0	0
Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >10 <1	Nickel	ppm	ASTM D5185m	>3	<1	0	0
Atuminum ppm ASTM D5185m >10 <1 <1 <1 <1 Lead ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >50 7 12 24 Tin ppm ASTM D5185m >10 <1	Titanium	ppm	ASTM D5185m	>3	0	0	0
Lead ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >50 7 12 24 Tin ppm ASTM D5185m >10 <1	Silver	ppm	ASTM D5185m	>2	0	0	0
Copper ppm ASTM D5185m >50 7 12 24 Tin ppm ASTM D5185m >10 <1	Aluminum	ppm	ASTM D5185m	>10	<1	<1	<1
Tin ppm ASTM D5185m >10 <1 0 0 Antimony ppm ASTM D5185m 0 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 0 <1	Lead	ppm	ASTM D5185m	>10	0	0	0
Antimony ppm ASTM D5185m 0 Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Manganese ppm ASTM D5185m 0 2 0 7 Calcium ppm ASTM D5185m 0 <1	Copper	ppm	ASTM D5185m	>50	7	12	24
Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 0 0 0 Boron ppm ASTM D5185m 0 0 0 Boron ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 0 Marganese ppm ASTM D5185m 0 <.1 2 3 Zinc ppm ASTM D5185m 0 <.1 0 71 Sulfur ppm ASTM D5185m 23500 21708 15895 15888 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5	Tin	ppm	ASTM D5185m	>10	<1	0	0
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 0 0 0 -1 Barium ppm ASTM D5185m 90 0 1 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Magnese ppm ASTM D5185m 100 2 0 7 Calcium ppm ASTM D5185m 100 21 0 0 Calcium ppm ASTM D5185m 0 <11	Antimony	ppm	ASTM D5185m				0
ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 0 0 0 1 0 Barium ppm ASTM D5185m 90 0 1 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 100 2 0 7 Calcium ppm ASTM D5185m 0 <1	Vanadium	ppm	ASTM D5185m		0	0	0
Boron ppm ASTM D5185m 0 0 0 1 0 Barium ppm ASTM D5185m 90 0 1 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Manganese ppm ASTM D5185m 100 2 0 7 Calcium ppm ASTM D5185m 100 2 0 7 Calcium ppm ASTM D5185m 0 <1	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 90 0 1 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Manganese ppm ASTM D5185m 100 2 0 7 Calcium ppm ASTM D5185m 0 <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 0 0 0 0 0 Manganese ppm ASTM D5185m 100 2 0 7 Calcium ppm ASTM D5185m 100 2 0 7 Calcium ppm ASTM D5185m 0 <1	Boron	ppm	ASTM D5185m	0	0	0	<1
Marganese ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 100 2 0 7 Calcium ppm ASTM D5185m 0 <1	Barium	ppm	ASTM D5185m	90	0	1	0
Magnesium ppm ASTM D5185m 100 2 0 7 Calcium ppm ASTM D5185m 0 <1	Molybdenum	ppm	ASTM D5185m	0	0	0	0
Calcium ppm ASTM D5185m 0 <1 0 0 Phosphorus ppm ASTM D5185m 0 <1	Manganese	ppm	ASTM D5185m		0	0	0
Phosphorus ppm ASTM D5185m 0 <1 2 3 Zinc ppm ASTM D5185m 0 <1 0 71 Sulfur ppm ASTM D5185m 23500 21708 15895 15888 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >25 <1 0 1 Sodium ppm ASTM D5185m >25 <1 0 1 Sodium ppm ASTM D5185m >20 1 0 0 Potassium ppm ASTM D6304 >0.05 0.007 △ 0.147 0.006 pm Water pm ASTM D6304 >500 72.2 △ 1474.7 67.4 FLUID CLEANLINESS method limit/base current history1 history1 Particles >4µm ASTM D7647 >1300 28411 △ 1838 Particles >21µm<	Magnesium	ppm	ASTM D5185m	100	2	0	7
Zinc ppm ASTM D5185m 0 <1 0 71 Sulfur ppm ASTM D5185m 23500 21708 15895 15888 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >25 <1 0 1 Sodium ppm ASTM D5185m >25 <1 0 1 Sodium ppm ASTM D5185m >20 1 0 0 Potassium ppm ASTM D5185m >20 1 0 0 Water % ASTM D6304 >0.05 0.007 △ 0.147 0.006 ppm Water ppm ASTM D6304 >500 72.2 △ 1474.7 67.4 FLUID CLEANLINESS method limit/base current history1 history1 Particles >4µm ASTM D7647 8419 12441 Particles >6µm ASTM D7647 >1300 28411 1838 Particles >14µm ASTM D7647	Calcium	ppm	ASTM D5185m	0	<1	0	0
Sulfur ppm ASTM D5185m 23500 21708 15895 15888 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >25 <1 0 1 Sodium ppm ASTM D5185m >20 1 0 1 Potassium ppm ASTM D5185m >20 1 0 0 Vater % ASTM D50304 >0.05 0.0007 △ 0.147 0.006 ppm Water ppm ASTM D6304 >500 72.2 △ 1474.7 67.4 FLUID CLEANLINESS method limit/base current history1 history1 Particles >4µm ASTM D7647 8419 12441 Particles >6µm ASTM D7647 >1300 2841 △ 1838 Particles >14µm ASTM D7647 >80 △ 324 17 Particles >21µm ASTM D7647 >4 4 0 Particles >21µm<	Phosphorus	ppm	ASTM D5185m	0	<1	2	3
CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >25 <1	Zinc	ppm	ASTM D5185m	0	<1	0	71
Silicon ppm ASTM D5185m >25 <1 0 1 Sodium ppm ASTM D5185m >20 0 <1 0 0 Potassium ppm ASTM D5185m >20 1 0 0 0 Water % ASTM D6304 >0.05 0.007 ▲ 0.147 0.006 ppm Water ppm ASTM D6304 >500 72.2 ▲ 1474.7 67.4 FLUID CLEANLINESS method limit/base current history1 history1 Particles >4µm ASTM D7647 >1300 ▲ 2841 ▲ 1838 Particles >6µm ASTM D7647 >80 ▲ 324 17 Particles >1µm ASTM D7647 >20 ▲ 105 2 Particles >21µm ASTM D7647 >4 4 0 Particles >38µm ASTM D7647 >3 0 0 Particles >71µm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) /17/13 <	Sulfur	ppm	ASTM D5185m	23500	21708	15895	15888
Sodium ppm ASTM D5185m 0 <1 0 Potassium ppm ASTM D5185m >20 1 0 0 Water % ASTM D6304 >0.05 0.007 ▲ 0.147 0.006 ppm Water ppm ASTM D6304 >500 72.2 ▲ 1474.7 67.4 FLUID CLEANLINESS method limit/base current history1 history1 Particles >4µm ASTM D7647 8419 12441 Particles >6µm ASTM D7647 >1300 2841 1838 Particles >14µm ASTM D7647 >80 324 17 Particles >21µm ASTM D7647 >20 105 2 Particles >38µm ASTM D7647 >3 0 0 Particles >71µm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 20/19/16 21/18/11	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 1 0 0 Water % ASTM D6304 >0.05 0.007 ▲ 0.147 0.006 ppm Water ppm ASTM D6304 >500 72.2 ▲ 1474.7 67.4 FLUID CLEANLINESS method limit/base current history1 history1 Particles >4µm ASTM D7647 8419 12441 Particles >6µm ASTM D7647 >1300 2841 ▲ 1838 Particles >14µm ASTM D7647 >80 ▲ 324 17 Particles >21µm ASTM D7647 >20 ▲ 105 2 Particles >21µm ASTM D7647 >4 0 Particles >38µm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 20/19/16 21/18/11	Silicon	ppm	ASTM D5185m	>25	<1	0	1
Water % ASTM D6304 >0.05 0.007 0.147 0.006 ppm Water ppm ASTM D6304 >500 72.2 1474.7 67.4 FLUID CLEANLINESS method limit/base current history1 history1 Particles >4µm ASTM D7647 8419 12441 Particles >6µm ASTM D7647 >1300 2841 1838 Particles >6µm ASTM D7647 >80 324 17 Particles >21µm ASTM D7647 >20 105 2 Particles >38µm ASTM D7647 >4 0 Particles >71µm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 20/19/16 21/18/11 FLUID DEGRADATION method limit/base current history1 history1	Sodium	ppm	ASTM D5185m		0	<1	0
ppm Water ppm ASTM D6304 >500 72.2 ▲ 1474.7 67.4 FLUID CLEANLINESS method limit/base current history1 history1 Particles >4µm ASTM D7647 8419 12441 Particles >6µm ASTM D7647 >1300 ▲ 2841 ▲ 1838 Particles >14µm ASTM D7647 >80 ▲ 324 17 Particles >21µm ASTM D7647 >20 ▲ 105 2 Particles >38µm ASTM D7647 >4 0 Particles >71µm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) /17/13 20/19/16 21/18/11 FLUID DEGRADATION method limit/base current history1 history1	Potassium	ppm	ASTM D5185m	>20	1	0	0
FLUID CLEANLINESS method limit/base current history1 history1 Particles >4µm ASTM D7647 8419 12441 Particles >6µm ASTM D7647 >1300 2841 1838 Particles >14µm ASTM D7647 >80 324 17 Particles >21µm ASTM D7647 >20 105 2 Particles >38µm ASTM D7647 >4 4 0 Particles >71µm ASTM D7647 >3 0 0 Particles >71µm ASTM D7647 3 0 0 Particles >71µm ASTM D7647 >3 0 0 Particles >71µm ASTM D7647 >3 0 0 Particles >71µm ASTM D7647 >3 20/19/16 21/18/11	Water	%	ASTM D6304	>0.05	0.007	0 .147	0.006
Particles >4μm ASTM D7647 8419 12441 Particles >6μm ASTM D7647 >1300 2841 1838 Particles >14μm ASTM D7647 >80 324 17 Particles >14μm ASTM D7647 >20 105 2 Particles >21μm ASTM D7647 >20 105 2 Particles >38μm ASTM D7647 >4 4 0 Particles >71μm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 20/19/16 21/18/11 FLUID DEGRADATION method limit/base current history1 history1	ppm Water	ppm	ASTM D6304	>500	72.2	▲ 1474.7	67.4
Particles >6µm ASTM D7647 >1300 ▲ 2841 ▲ 1838 Particles >14µm ASTM D7647 >80 ▲ 324 17 Particles >21µm ASTM D7647 >20 ▲ 105 2 Particles >38µm ASTM D7647 >4 4 0 Particles >71µm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 ▲ 20/19/16 ▲ 21/18/11 FLUID DEGRADATION method limit/base current history1 history1	FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
Particles >14µm ASTM D7647 >80 ▲ 324 17 Particles >21µm ASTM D7647 >20 ▲ 105 2 Particles >38µm ASTM D7647 >4 4 0 Particles >71µm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 ▲ 20/19/16 ▲ 21/18/11 FLUID DEGRADATION method limit/base current history1 history1	Particles >4µm		ASTM D7647		8419	12441	
Particles >21μm ASTM D7647 >20 ▲ 105 2 Particles >38μm ASTM D7647 >4 4 0 Particles >38μm ASTM D7647 >4 4 0 Particles >71μm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 ▲ 20/19/16 ▲ 21/18/11 FLUID DEGRADATION method limit/base current history1 history1	Particles >6µm		ASTM D7647	>1300	<u> </u>	<u> </u>	
Particles >38μm ASTM D7647 >4 4 0 Particles >71μm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 ▲ 20/19/16 ▲ 21/18/11 FLUID DEGRADATION method limit/base current history1 history1	Particles >14µm		ASTM D7647	>80	A 324	17	
Particles >71μm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 ▲ 20/19/16 ▲ 21/18/11 FLUID DEGRADATION method limit/base current history1 history1	Particles >21µm		ASTM D7647	>20	🔺 105	2	
Oil Cleanliness ISO 4406 (c) >/17/13 20/19/16 21/18/11 FLUID DEGRADATION method limit/base current history1 history1	Particles >38µm		ASTM D7647	>4	4	0	
FLUID DEGRADATION method limit/base current history1 history	Particles >71µm		ASTM D7647	>3	0	0	
· · · · ·	Oil Cleanliness		ISO 4406 (c)	>/17/13	A 20/19/16	▲ 21/18/11	
Acid Number (AN) mg KOH/g ASTM D8045 1.0 0.39 0.42 0.410	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
1:14:36) Rev: 1 Contact/Location: CAITLIN N SILNEV	Acid Number (AN)	mg KOH/g	ASTM D8045	1.0			

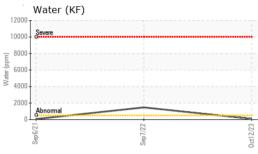
Report Id: SILNEWCA [WUSCAR] 05980423 (Generated: 10/19/2023 08:14:36) Rev: 1

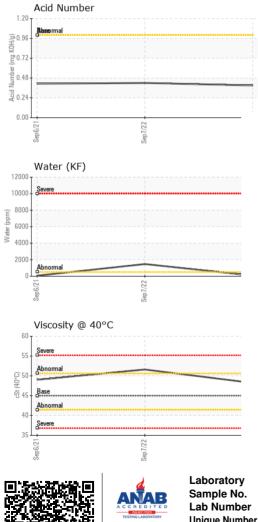
Deee

KAESER COMPRESSORS Built for a lifetime."

OIL ANALYSIS REPORT



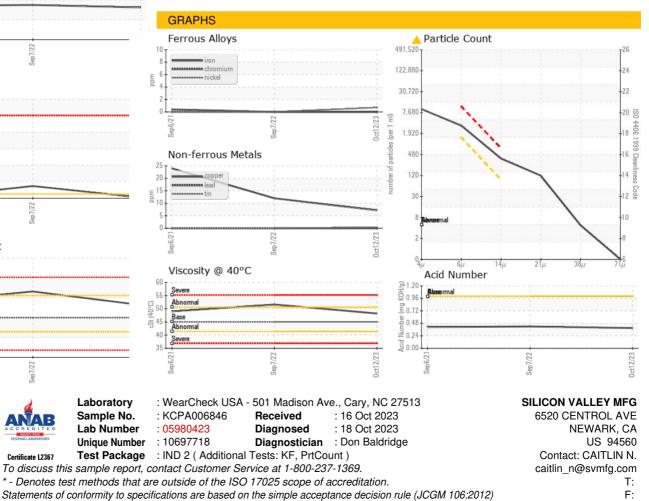




VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	🔺 MODER
Sand/Dirt	scalar	*Visual	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 PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	45	48.2	51.6	49.0
SAMPLE IMAGES	S	method	limit/base	current	history1	history2
Color						



Bottom



Contact/Location: CAITLIN N. - SILNEWCA