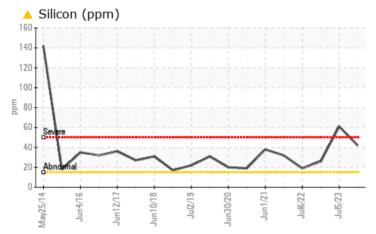
PROBLEM SUMMARY

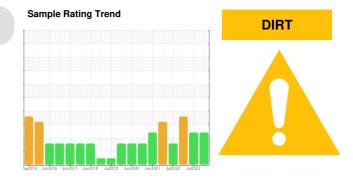


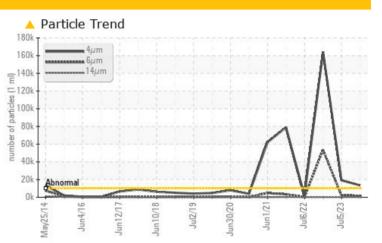
Area 412 Machine Id 621 AIRVAYOR

Outboard Bearing Fluid MOBIL SHC 630 (10 GAL)

COMPONENT CONDITION SUMMARY







RECOMMENDATION

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

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Silicon	ppm	ASTM D5185m	>15	<u> </u>	6 1	A 26
Particles >4µm		ASTM D7647	>10000	🔺 13544	🔺 19113	🔺 164236
Oil Cleanliness		ISO 4406 (c)	>20/18/14	<u> </u>	🔺 21/18/12	<u> </u>

Customer Id: BRIDES Sample No.: WC0838897 Lab Number: 06009531 Test Package: IND 2



To manage this report scan the QR code

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

To change component or sample information: Customer Service +1 1-800-237-1369 <u>customerservice@wearcheck.com</u>

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

05 Jul 2023 Diag: Angela Borella



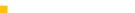
No corrective action is recommended at this time. Resample at the next service interval to monitor.All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. Elemental level of silicon (Si) above normal indicating ingress of seal material. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

30 Dec 2022 Diag: Angela Borella



The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. The iron level is abnormal. All other component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

06 Jul 2022 Diag: Doug Bogart



No corrective action is recommended at this time. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.All component wear rates are normal. Elemental level of silicon (Si) above normal indicating ingress of seal material. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.





view report



OIL ANALYSIS REPORT



DIRT



Fluid MOBIL SHC 630 (10 GAL)

DIAGNOSIS

Recommendation

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

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. Elemental level of silicon (Si) above normal indicating ingress of seal material.

Fluid Condition

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

Sample Number Client Info WC0838897 WC0640513 Oli Changed Client Info Client Info D O			lay2014 Jun20	16 Jun2017 Jun2018 Ju	12019 Jun2020 Jun2021 Jul2022	Jul2023	
Sample Date Client Info 10 Nov 2023 05 Jul 2023 30 Dec 2022 Machine Age mths Client Info 6 6 6 Oil Age mths Client Info 0 0 0 Sample Status Client Info Changed N/A Changed ABNORMAL ABNORMAL	SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Machine Age mths Client Info 6 6 6 6 Oil Age mths Client Info 0 0 0 0 Sample Status Client Info Changed N/A Changed ABNORMAL ABNORMAL ABNORMAL WEAR METALS method limit/base current history1 history2 PQ ASTM D8184 14 14 27 7 Iron ppm ASTM D5185m >20 0 -1 -1 Nickel ppm ASTM D5185m >20 0 0 0 Silver ppm ASTM D5185m >20 0 -1 -1 Lead ppm ASTM D5185m >20 0 -1 0 Cadmium ppm ASTM D5185m >20 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 -1 </td <td>Sample Number</td> <td></td> <td>Client Info</td> <td></td> <th>WC0838897</th> <td>WC0640613</td> <td>WC0640580</td>	Sample Number		Client Info		WC0838897	WC0640613	WC0640580
Oil Age mths Client Info 0 0 0 0 Oil Changed Client Info Changed N/A Changed Sample Status method limit/base current history1 history2 PQ ASTM D5185 >20 2 3 A 84 Chromium ppm ASTM D5185 >20 0 - - 1 - 1 Nickel ppm ASTM D5185 >20 0 0 0 0 0 Silver ppm ASTM D5185 >20 0	Sample Date		Client Info		10 Nov 2023	05 Jul 2023	30 Dec 2022
Dil Changed Sample Status Client Info Changed ABNORMAL N/A ABNORMAL Changed ABNORMAL WEAR METALS method Imit/base current history1 history2 PQ ASTM D8184 14 14 27 3 & 84 Chromium ppm ASTM D8185 >20 0 <1	Machine Age	mths	Client Info		6	6	6
Sample Status method Imit/base current history1 ABNORMAL VEAR METALS method limit/base current history1 history2 PQ ASTM D5185m >20 2 3 & 84 Chromium ppm ASTM D5185m >20 0 0 0 Nickel ppm ASTM D5185m >20 0 0 0 Silver ppm ASTM D5185m >20 0 0 0 ABMORMAL ASTM D5185m >20 0 0 0 0 ABUTM D5185m >20 0 0 0 0 0 Copper ppm ASTM D5185m >20 0 0 0 0 Cadmium ppm ASTM D5185m >20 0 0 0 0 ADDITIVES method Imit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0<	Oil Age	mths	Client Info		0	0	0
WEAR METALS method limit/base current history1 history2 PQ ASTM D8184 14 14 27 Iron ppm ASTM D8185 >20 2 3 A 84 Chromium ppm ASTM D5185 >20 0 <1	Oil Changed		Client Info		Changed	N/A	Changed
PQ ASTM D8184 14	Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Iron ppm ASTM D5185m >20 2 3 ▲ 84 Chromium ppm ASTM D5185m >20 0 <1	WEAR METALS		method	limit/base	current	history1	history2
Chromium ppm ASTM 05/88m >20 0 <1 <1 Nickel ppm ASTM 05/88m >20 0 0 0 Nickel ppm ASTM 05/88m 0 0 0 0 Silver ppm ASTM 05/88m >20 0 0 0 Auminum ppm ASTM 05/88m >20 0 <1	PQ		ASTM D8184		14	14	27
Nickel ppm ASTM D5185m >20 0 0 0 Titanium ppm ASTM D5185m 0 0 0 0 Silver ppm ASTM D5185m 20 <1	Iron	ppm	ASTM D5185m	>20	2	3	A 84
Titanium ppm ASTM D5185m 0 0 0 Silver ppm ASTM D5185m >20 <1	Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Silver ppm ASTM D5185m 0 0 0 Aluminum ppm ASTM D5185m >20 <1	Nickel	ppm	ASTM D5185m	>20	0	0	0
Aluminum ppm ASTM D5185m >20 <1	Titanium	ppm	ASTM D5185m		0	0	0
Lead ppm ASTM D5185m >20 0 <1 0 Copper ppm ASTM D5185m >20 0 0 3 Vanadium ppm ASTM D5185m >20 0 0 3 Vanadium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 0 -1 0 1 Molydenum ppm ASTM D5185m 0 -1 0 1 Magnesium ppm ASTM D5185m 0 -1 0 -1 Calcium ppm ASTM D5185m 41 0 -1 0 Slifur ppm ASTM D5185m 0 0 2 0 1 0 -1 Phosphorus ppm ASTM D5185m 0	Silver	ppm	ASTM D5185m		0	0	0
Copper ppm ASTM D5185m >20 0 0 <1 Tin ppm ASTM D5185m >20 0 0 3 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 Magnese ppm ASTM D5185m 0 <1	Aluminum	ppm	ASTM D5185m	>20	<1	<1	<1
Copper ppm ASTM D5185m >20 0 0 <1 Tin ppm ASTM D5185m >20 0 0 3 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 <1	Lead	ppm	ASTM D5185m	>20	0	<1	0
Tin ppm ASTM D5185m >20 0 0 3 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 0 <1	Copper	• •	ASTM D5185m	>20	0	0	<1
Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 0 <1 0 1 Molybdenum ppm ASTM D5185m 0 <1 0 <1 Magnese ppm ASTM D5185m 0 <1 0 <1 0 Calcium ppm ASTM D5185m 0 0 <1 0 <1 Phosphorus ppm ASTM D5185m 450 480 468 2 Sulfur ppm ASTM D5185m 0 0 0 0 0 Solicon ppm ASTM D5185m >15 42 61 42 61 42 Sodium ppm </td <td>Tin</td> <td></td> <td>ASTM D5185m</td> <td>>20</td> <th>0</th> <td>0</td> <td>3</td>	Tin		ASTM D5185m	>20	0	0	3
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 0 0 1 0 Molybdenum ppm ASTM D5185m 0 <1 0 1 Manganese ppm ASTM D5185m 0 <1 0 <1 Calcium ppm ASTM D5185m <1 0 <1 0 <1 Claicium ppm ASTM D5185m 450 480 468 Zinc ppm ASTM D5185m 0 0 0 2 Sulfur ppm ASTM D5185m 0 0 0 0 0 Sodium ppm ASTM D5185m >15 42 61 42 61 42 Sodium ppm ASTM D5185m >20 <	Vanadium	ppm	ASTM D5185m		0	0	0
Boron ppm ASTM D5185m 0 0 0 Barium ppm ASTM D5185m 7 0 1 Molybdenum ppm ASTM D5185m 0 <1	Cadmium		ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 7 0 1 Molybdenum ppm ASTM D5185m 0 <1 0 Manganese ppm ASTM D5185m 0 <1 0 Magnesium ppm ASTM D5185m <1 0 <1 Calcium ppm ASTM D5185m <1 0 <1 Phosphorus ppm ASTM D5185m <1 0 <1 Phosphorus ppm ASTM D5185m <450 480 468 Zinc ppm ASTM D5185m 0 0 2 2 Sulfur ppm ASTM D5185m 0 0 0 4 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 42 611 ▲ 26 Sodium ppm ASTM D5185m >20 <1 <1 <1 FLUID CLEANLINESS method	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 0 <1 0 Manganese ppm ASTM D5185m 0 <1	Boron	ppm	ASTM D5185m		0	0	0
Maganese ppm ASTM D5185m 0 <1 <1 Magnesium ppm ASTM D5185m <1	Barium	ppm	ASTM D5185m		7	0	1
Manganese ppm ASTM D5185m 0 <1 <1 Magnesium ppm ASTM D5185m <1	Molybdenum	ppm	ASTM D5185m		0	<1	0
Calcium ppm ASTM D5185m 1 0 <1 Phosphorus ppm ASTM D5185m 450 480 468 Zinc ppm ASTM D5185m 0 0 2 Sulfur ppm ASTM D5185m 0 0 4 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 42 611 26 Sodium ppm ASTM D5185m >15 42 611 26 Sodium ppm ASTM D5185m >20 <1	Manganese	ppm	ASTM D5185m		0	<1	<1
Phosphorus ppm ASTM D5185m 450 480 468 Zinc ppm ASTM D5185m 0 0 2 Sulfur ppm ASTM D5185m 0 0 4 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 42 61 26 Sodium ppm ASTM D5185m >15 422 611 26 Sodium ppm ASTM D5185m >15 422 611 26 Sodium ppm ASTM D5185m >20 <11 <11 <11 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >10000 13544 19113 164236 Particles >6µm ASTM D7647 >2500 1482 2236 53568 Particles >14µm ASTM D7647 >40 6 5 36 <t< td=""><td>Magnesium</td><td>ppm</td><td>ASTM D5185m</td><td></td><th><1</th><td>0</td><td><1</td></t<>	Magnesium	ppm	ASTM D5185m		<1	0	<1
Zinc ppm ASTM D5185m 0 0 2 Sulfur ppm ASTM D5185m 0 0 4 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 42 61 26 Sodium ppm ASTM D5185m >15 42 61 26 Sodium ppm ASTM D5185m 0 0 0 0 Potassium ppm ASTM D5185m >20 <1	Calcium	ppm	ASTM D5185m		1	0	<1
Zinc ppm ASTM D5185m 0 0 2 Sulfur ppm ASTM D5185m 0 0 4 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 42 61 26 Sodium ppm ASTM D5185m 0 0 0 0 Potassium ppm ASTM D5185m >20 <1	Phosphorus	ppm	ASTM D5185m		450	480	468
SulfurppmASTM D5185m004CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>15▲ 42▲ 611▲ 26SodiumppmASTM D5185m>20<1	Zinc		ASTM D5185m		0	0	2
Silicon ppm ASTM D5185m >15 42 61 26 Sodium ppm ASTM D5185m 0 0 0 0 Potassium ppm ASTM D5185m >20 <1 <1 <1 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >10000 13544 19113 164236 Particles >6µm ASTM D7647 >2500 1482 2236 53568 Particles >6µm ASTM D7647 >160 22 30 134 Particles >14µm ASTM D7647 >40 6 5 36 Particles >21µm ASTM D7647 >10 3 2 0 Oil Cleanliness ISO 4406 (c) >20/18/14 21/18/12 21/18/12 21/18/12 25/23/14 FLUID DEGRADATION method limit/base current history1 history2	Sulfur		ASTM D5185m		0	0	4
Sodium ppm ASTM D5185m 0 0 0 Potassium ppm ASTM D5185m >20 <1	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 <1 <1 <1 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >10000 13544 19113 164236 Particles >6µm ASTM D7647 >2500 1482 2236 53568 Particles >6µm ASTM D7647 >160 22 30 134 Particles >14µm ASTM D7647 >160 22 30 134 Particles >21µm ASTM D7647 >40 6 5 36 Particles >38µm ASTM D7647 >10 3 2 0 Oil Cleanliness ISO 4406 (c) >20/18/14 21/18/12 21/18/12 25/23/14 FLUID DEGRADATION method limit/base current history1 history2	Silicon	ppm	ASTM D5185m	>15	4 2	6 1	2 6
FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >10000 13544 19113 164236 Particles >6µm ASTM D7647 >2500 1482 2236 53568 Particles >14µm ASTM D7647 >160 22 30 134 Particles >14µm ASTM D7647 >160 22 30 134 Particles >21µm ASTM D7647 >40 6 5 36 Particles >38µm ASTM D7647 >10 3 2 4 Particles >71µm ASTM D7647 >3 3 2 0 Oil Cleanliness ISO 4406 (c) >20/18/14 21/18/12 21/18/12 25/23/14	Sodium	ppm	ASTM D5185m		0	0	0
Particles >4µm ASTM D7647 >10000 ▲ 13544 ▲ 19113 ▲ 164236 Particles >6µm ASTM D7647 >2500 1482 2236 ▲ 53568 Particles >14µm ASTM D7647 >160 22 30 134 Particles >14µm ASTM D7647 >160 22 30 134 Particles >21µm ASTM D7647 >40 6 5 36 Particles >21µm ASTM D7647 >10 3 2 4 Particles >38µm ASTM D7647 >10 3 2 0 Oil Cleanliness ISO 4406 (c) >20/18/14 21/18/12 21/18/12 25/23/14 FLUID DEGRADATION method limit/base current history1 history2	Potassium	ppm	ASTM D5185m	>20	<1	<1	<1
Particles >6μm ASTM D7647 >2500 1482 2236 ▲ 53568 Particles >14μm ASTM D7647 >160 22 30 134 Particles >21μm ASTM D7647 >40 6 5 36 Particles >21μm ASTM D7647 >40 6 5 36 Particles >38μm ASTM D7647 >10 3 2 4 Particles >71μm ASTM D7647 >3 3 2 0 Oil Cleanliness ISO 4406 (c) >20/18/14 21/18/12 ≥25/23/14 FLUID DEGRADATION method limit/base current history1 history2	FLUID CLEANLINE	ESS	method	limit/base	current	history1	history2
Particles >14µm ASTM D7647 >160 22 30 134 Particles >21µm ASTM D7647 >40 6 5 36 Particles >38µm ASTM D7647 >10 3 2 4 Particles >38µm ASTM D7647 >3 3 2 0 Particles >71µm ASTM D7647 >3 3 2 0 Oil Cleanliness ISO 4406 (c) >20/18/14 21/18/12 ≥1/18/12 ≥25/23/14 FLUID DEGRADATION method limit/base current history1 history2	Particles >4µm		ASTM D7647	>10000	A 13544	▲ 19113	164236
Particles >21μm ASTM D7647 >40 6 5 36 Particles >38μm ASTM D7647 >10 3 2 4 Particles >38μm ASTM D7647 >3 3 2 0 Particles >71μm ASTM D7647 >3 3 2 0 Oil Cleanliness ISO 4406 (c) >20/18/14 21/18/12 21/18/12 25/23/14 FLUID DEGRADATION method limit/base current history1 history2	Particles >6µm		ASTM D7647	>2500	1482	2236	▲ 53568
Particles >38μm ASTM D7647 >10 3 2 4 Particles >71μm ASTM D7647 >3 3 2 0 Oil Cleanliness ISO 4406 (c) >20/18/14 21/18/12 21/18/12 25/23/14 FLUID DEGRADATION method limit/base current history1 history2	Particles >14µm		ASTM D7647	>160	22	30	134
Particles >71μm ASTM D7647 >3 3 2 0 Oil Cleanliness ISO 4406 (c) >20/18/14 ▲ 21/18/12 ▲ 21/18/12 ▲ 25/23/14 FLUID DEGRADATION method limit/base current history1 history2	Particles >21µm		ASTM D7647	>40	6	5	36
Oil Cleanliness ISO 4406 (c) >20/18/14 21/18/12 21/18/12 25/23/14 FLUID DEGRADATION method limit/base current history1 history2	Particles >38µm		ASTM D7647	>10	3	2	4
Oil Cleanliness ISO 4406 (c) >20/18/14 21/18/12 21/18/12 25/23/14 FLUID DEGRADATION method limit/base current history1 history2	Particles >71µm		ASTM D7647	>3	3	2	0
	Oil Cleanliness		ISO 4406 (c)	>20/18/14	A 21/18/12	▲ 21/18/12	▲ 25/23/14
Acid Number (AN) mg KOH/g ASTM D8045 0.57 0.58 0.58	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
	Acid Number (AN)	mg KOH/a	ASTM D8045		0.57		



of particles

50 0

Nav25/

PQ 250

0

(B/HOX

B 0.

Number 0.5

Poid 0.2

0.0

250

240

210

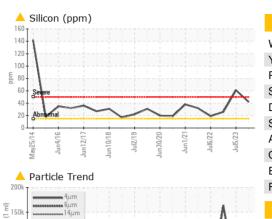
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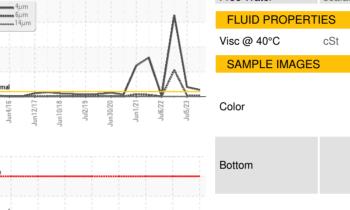
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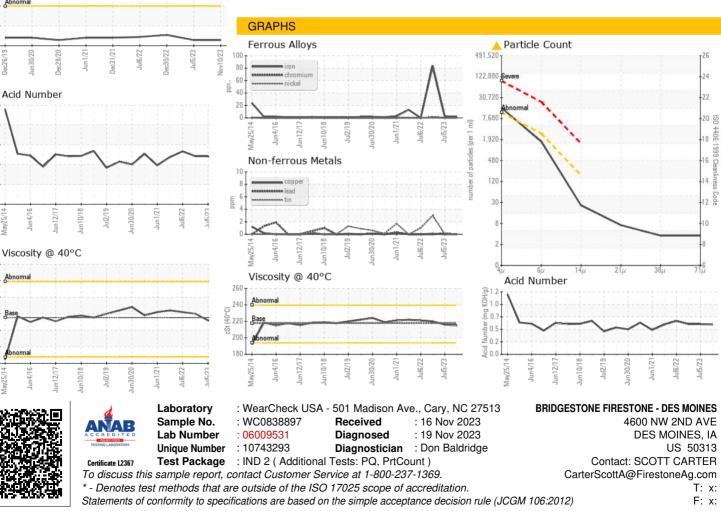
Jec26/19

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	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	>2	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	217.7	215	216	220
SAMPLE IMAGES	6	method	limit/base	current	history1	history2
					The se	70



Contact/Location: SCOTT CARTER - BRIDES