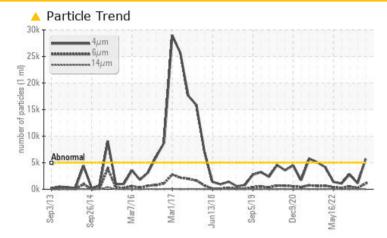


PROBLEM SUMMARY

Area CURING/PRESS EFGH Machine Id 101817 Main Component

Hydraulic System Fluid ESSO TERESSO ISO 68 (5000 LTR)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS							
Sample Status			ATTENTION	NORMAL	NORMAL		
Particles >4µm	ASTM D7647	>5000	6700	1102	2803		
Oil Cleanliness	ISO 4406 (c)	>19/17/14	A 20/17/12	17/15/12	19/16/12		

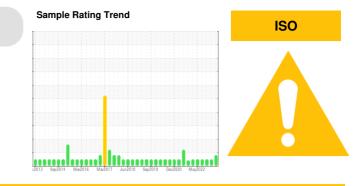
Customer Id: MITWAT Sample No.: WC0799517 Lab Number: 02576731 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data: Wes Davis +1 905-569-8600 x223 wesd@wearcheck.ca

To change component or sample information: Gloria Gonzalez +1 (289)291-4643 x4643 <u>gloria.gonzalez@wearcheck.com</u>



RECOMMENDED AC	TIONS			
Action	Status	Date	Done By	Description
Change Filter			?	We recommend you service the filters on this component.

HISTORICAL DIAGNOSIS

NORMAL



Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. Additive levels indicate the addition of a different brand, or type of oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



view report

06 Dec 2022 Diag: Wes Davis

28 Feb 2023 Diag: Kevin Marson

NORMAL



Resample at the next service interval to monitor.All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

NORMAL

20 Aug 2022 Diag: Kevin Marson

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. Additive levels indicate the addition of a different brand, or type of oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.







OIL ANALYSIS REPORT

CURING/PRESS EFGH 101817 Main Component

Hydraulic System ESSO TERESSO ISO 68 (5000 LTR)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

Wear

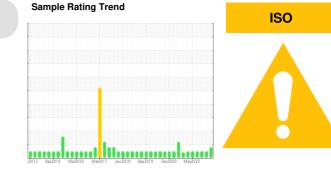
All component wear rates are normal.

Contamination

There is a light amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition

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



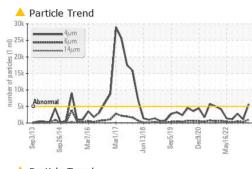
Sample Date Client Info 15 Aug 2023 28 Feb 2023 06 Dec 20 Machine Age hrs Client Info 0 0 0 Oil Age hrs Client Info 0 0 0 Oil Changed Client Info N/A N/A N/A Sample Status Imit/base current history1 history1 VeCAR METALS method Imit/base current history1 history1 Iron ppm ASTM D5185(m) >20 0 0 0 Nickel ppm ASTM D5185(m) >20 0 0 0 Silver ppm ASTM D5185(m) >20 0 0 0 Capper ppm ASTM D5185(m) >20 c1 <1 <1 Vanadium ppm ASTM D5185(m) >20 0 0 0 Vanadium ppm ASTM D5185(m) >20 0 0 0 Vanadium ppm	SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 0 0 0 Oil Age hrs Client Info N/A N/A N/A Sample Status Imat/Distance Current history1 history1 WEAR METALS method Imit/base current history1 history1 Iron ppm ASTM D5155(m) >20 <1	Sample Number		Client Info		WC0799517	WC0763682	WC0718918
Oil Age hrs Client Info 0 0 0 0 Oil Changed Client Info N/A N/A N/A N/A Sample Status n nethod limit/base current history1 NIAM DS185(m) >20 <1	Sample Date		Client Info		15 Aug 2023	28 Feb 2023	06 Dec 2022
Oil Changed Client Info N/A N/A N/A N/A Sample Status Image Status Image Status Image Status Normal ATTENTION NORMAL NORMAL WEAR METALS method limit/base current history1 history1 Iron ppm ASTM 05185(m) >20 <1	Machine Age	hrs	Client Info		0	0	0
Sample Status Image: method ATTENTION NORMAL NORMAL WEAR METALS method limit/base current history1 history1 Iron ppm ASTM 05185(m) >20 <1	Oil Age	hrs	Client Info		0	0	0
WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185(m) >20 <1	Oil Changed		Client Info		N/A	N/A	N/A
Iron ppm ASTM D5185(m) >20 <1 <1 <1 Chromium ppm ASTM D5185(m) >20 0 0 0 0 Nickel ppm ASTM D5185(m) >20 0 0 0 0 Silver ppm ASTM D5185(m) >20 0 0 0 0 Auminum ppm ASTM D5185(m) >20 <1	Sample Status				ATTENTION	NORMAL	NORMAL
Chromium ppm ASTM D5185(m) >20 0 0 0 Nickel ppm ASTM D5185(m) >20 0 0 0 Silver ppm ASTM D5185(m) >20 0 0 0 Aluminum ppm ASTM D5185(m) >20 0 0 0 Lead ppm ASTM D5185(m) >20 <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel ppm ASTM D5185(m) >20 0 0 0 Titanium ppm ASTM D5185(m) 0 0 0 0 Silver ppm ASTM D5185(m) >20 0 0 0 Aluminum ppm ASTM D5185(m) >20 <1	Iron	ppm	ASTM D5185(m)	>20	<1	<1	<1
Titanium ppm ASTM D5185(m) 0 0 0 Silver ppm ASTM D5185(m) 0 0 0 Aluminum ppm ASTM D5185(m) >20 0 0 0 Lead ppm ASTM D5185(m) >20 <1	Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Silver ppm ASTM D5185(m) 0 0 0 Aluminum ppm ASTM D5185(m) >20 0 0 0 Lead ppm ASTM D5185(m) >20 <1	Nickel	ppm	ASTM D5185(m)	>20	0	0	0
Aluminum ppm ASTM D5185(m) >20 0 0 0 Lead ppm ASTM D5185(m) >20 <1	Titanium	ppm	ASTM D5185(m)		0	0	0
Lead ppm ASTM D5185(m) >20 <1	Silver	ppm	ASTM D5185(m)		0	0	0
Copper Tin ppm ASTM D5185(m) >20 <1 <1 <1 Tin ppm ASTM D5185(m) >20 0 0 0 Antimony ppm ASTM D5185(m) 0 0 0 0 Vanadium ppm ASTM D5185(m) 0 0 0 0 Beryllium ppm ASTM D5185(m) 0 0 0 0 ADDITIVES method limit/base current history1 histor Boron ppm ASTM D5185(m) 0.4 0 0 0 Molybdenum ppm ASTM D5185(m) 0.4 0 0 0 Maganese ppm ASTM D5185(m) 0.4 0 0 0 Calcium ppm ASTM D5185(m) 0.7 2 29 3 Zinc ppm ASTM D5185(m) 0.7 2 29 3 Silicon ppm ASTM D5185(m) 0.7 2	Aluminum	ppm	ASTM D5185(m)	>20	0	0	0
Tin ppm ASTM D5185(m) >20 0 0 0 Antimony ppm ASTM D5185(m) 0 0 0 0 Vanadium ppm ASTM D5185(m) 0 0 0 0 Beryllium ppm ASTM D5185(m) 0 0 0 0 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185(m) 0.4 0 0 0 Magnese ppm ASTM D5185(m) 0.4 0 0 0 Magnesium ppm ASTM D5185(m) 0 <1	Lead	ppm	ASTM D5185(m)	>20	<1	<1	<1
Antimony ppm ASTM D5188(m) 0 0 <1 Vanadium ppm ASTM D5188(m) 0 0 0 0 Beryllium ppm ASTM D5188(m) 0 0 0 0 Cadmium ppm ASTM D5188(m) 4.5 0 <1	Copper	ppm	ASTM D5185(m)	>20	<1	<1	<1
Vanadium ppm ASTM D5185(m) 0 0 0 Beryllium ppm ASTM D5185(m) 0 0 0 Cadmium ppm ASTM D5185(m) 0 0 0 0 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185(m) 0.4 0 0 0 Barium ppm ASTM D5185(m) 0.4 0 0 0 Molybdenum ppm ASTM D5185(m) 0 0 0 0 0 Magnesium ppm ASTM D5185(m) 0 0 0 0 0 Calcium ppm ASTM D5185(m) 0.7 2 29 3 Zinc ppm ASTM D5185(m) 0.7 2 29 3 Sulfur ppm ASTM D5185(m) 0.7 2 29 3 Sulfur ppm ASTM D5185(m) 0.7 2 <	Tin	ppm	ASTM D5185(m)	>20	0	0	0
Beryllium ppm ASTM D5185(m) 0 0 0 Cadmium ppm ASTM D5185(m) 0 0 0 0 ADDITIVES method limit/base current history1 histor Boron ppm ASTM D5185(m) 4.5 0 <1 <1 Barium ppm ASTM D5185(m) 0.4 0 0 0 Molybdenum ppm ASTM D5185(m) 0 0 0 0 0 Manganese ppm ASTM D5185(m) 0 0 0 0 0 Calcium ppm ASTM D5185(m) 0 <1 2 0 Phosphorus ppm ASTM D5185(m) 0.7 2 29 3 Sulfur ppm ASTM D5185(m) 0.7 2 29 3 Sulfur ppm ASTM D5185(m) 0.7 2 29 3 Sulfur ppm ASTM D5185(m) 1315	Antimony	ppm	ASTM D5185(m)		0	0	<1
Cadmium ppm ASTM D5185(m) 0 0 0 ADDITIVES method limit/base current history1 histor Boron ppm ASTM D5185(m) 4.5 0 <1	Vanadium	ppm	ASTM D5185(m)		0	0	0
ADDITIVES method limit/base current history1 histor Boron ppm ASTM D5185(m) 4.5 0 <1	Beryllium	ppm	ASTM D5185(m)		0	0	0
Boron ppm ASTM D5185(m) 4.5 0 <1 <1 Barium ppm ASTM D5185(m) 0.4 0 0 0 Molybdenum ppm ASTM D5185(m) 0 0 0 0 Manganese ppm ASTM D5185(m) 0 0 0 0 Magnesium ppm ASTM D5185(m) 0 -1 2 0 Phosphorus ppm ASTM D5185(m) 0 -1 2 0 Phosphorus ppm ASTM D5185(m) 0.7 2 29 3 Zinc ppm ASTM D5185(m) 0.7 2 29 3 Sulfur ppm ASTM D5185(m) 0.7 2 29 3 Sulfur ppm ASTM D5185(m) 0.7 2 29 3 Sulfur ppm ASTM D5185(m) 0.7 2 0 0 Sulfur ppm ASTM D5185(m) >10 0	Cadmium		ASTM D5185(m)		0	0	0
Barium ppm ASTM D5185(m) 0.4 0 0 0 0 Molybdenum ppm ASTM D5185(m) 0 0 0 0 0 Manganese ppm ASTM D5185(m) 0 0 0 0 0 Magnesium ppm ASTM D5185(m) 0 <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185(m) 0 0 0 0 0 Manganese ppm ASTM D5185(m) 0 0 0 0 0 Magnesium ppm ASTM D5185(m) 0 0 0 0 0 0 Calcium ppm ASTM D5185(m) 0 <1 2 0 Phosphorus ppm ASTM D5185(m) 0.7 2 29 3 Zinc ppm ASTM D5185(m) 0.7 2 29 3 Sulfur ppm ASTM D5185(m) 0.7 2 29 3 Sulfur ppm ASTM D5185(m) 0.7 2 29 3 Sulfur ppm ASTM D5185(m) 1315 64666 6805 6867 Lithium ppm ASTM D5185(m) >15 0 0 0 Solicon ppm ASTM D5185(m) >20 <1 0 0 Potassium	Boron	ppm	ASTM D5185(m)	4.5	0	<1	<1
Manganese ppm ASTM D5185(m) 0 1 2 0 0 2 1 2 0 0 2 1 2 0 0 2 1 2 0 0 2 1 2 0 0 3 3 1 4 0 0 3 3 1 4 0 0 0 1 <td>Barium</td> <td>ppm</td> <td>ASTM D5185(m)</td> <td>0.4</td> <th>0</th> <td>0</td> <td>0</td>	Barium	ppm	ASTM D5185(m)	0.4	0	0	0
Magnesium ppm ASTM D5185(m) 0 0 0 <1 Calcium ppm ASTM D5185(m) 0 <1	Molybdenum	ppm	ASTM D5185(m)	0	0	0	0
Calcium ppm ASTM D5185(m) 0 <1	Manganese	ppm	ASTM D5185(m)		0	0	0
Phosphorus ppm ASTM D5185(m) 0.7 2 29 3 Zinc ppm ASTM D5185(m) 0 3 31 4 Sulfur ppm ASTM D5185(m) 1315 6466 6805 6867 Lithium ppm ASTM D5185(m) 1315 6466 6805 6867 CONTAMINANTS method limit/base current history1 histor Silicon ppm ASTM D5185(m) >15 0 0 0 Sodium ppm ASTM D5185(m) >20 <1	Magnesium	ppm	ASTM D5185(m)	0	0	0	<1
Zinc ppm ASTM D5185(m) 0 3 31 4 Sulfur ppm ASTM D5185(m) 1315 6466 6805 6867 Lithium ppm ASTM D5185(m) 1315 6466 6805 6867 CONTAMINANTS method limit/base current history1 histor Silicon ppm ASTM D5185(m) >15 0 0 0 Sodium ppm ASTM D5185(m) >15 0 0 0 Sodium ppm ASTM D5185(m) >20 <1 0 0 Potassium ppm ASTM D5185(m) >20 <1 0 0 FLUID CLEANLINESS method limit/base current history1 histor Particles >4µm ASTM D7647 >5000 5700 1102 2803 Particles >6µm ASTM D7647 >1300 1055 256 528 Particles >21µm ASTM D7647 >40 10	Calcium	ppm	ASTM D5185(m)	0	<1	2	0
Sulfur ppm ASTM D5185(m) 1315 6466 6805 6867 Lithium ppm ASTM D5185(m) 1315 6466 6805 6867 CONTAMINANTS method limit/base current history1 histor Silicon ppm ASTM D5185(m) >15 0 0 0 Sodium ppm ASTM D5185(m) >15 0 0 0 Sodium ppm ASTM D5185(m) >15 0 0 0 Potassium ppm ASTM D5185(m) >20 <1 0 0 FLUID CLEANLINESS method limit/base current history1 histor Particles >4µm ASTM D7647 >5000 5700 1102 2803 Particles >6µm ASTM D7647 >1300 1055 256 528 Particles >1µm ASTM D7647 >40 10 9 11 Particles >38µm ASTM D7647 >3 0 0	Phosphorus	ppm	ASTM D5185(m)	0.7	2	29	3
Lithium ppm ASTM D5185(m) <1 <1 <1 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185(m) >15 0 0 0 Sodium ppm ASTM D5185(m) >15 0 0 0 Potassium ppm ASTM D5185(m) >20 <1	Zinc	ppm	ASTM D5185(m)	0	3	31	4
CONTAMINANTS method limit/base current history1 histor Silicon ppm ASTM D5185(m) >15 0 0 0 Sodium ppm ASTM D5185(m) >15 0 0 0 Potassium ppm ASTM D5185(m) >20 <1	Sulfur	ppm	ASTM D5185(m)	1315	6466	6805	6867
Silicon ppm ASTM D5185(m) >15 0 0 0 Sodium ppm ASTM D5185(m) <1	Lithium	ppm	ASTM D5185(m)		<1	<1	<1
Sodium ppm ASTM D5185(m) <1	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium ppm ASTM D5185(m) >20 <1 0 0 FLUID CLEANLINESS method limit/base current history1 history1 history1 Particles >4µm ASTM D7647 >5000 ▲ 5700 1102 2803 Particles >6µm ASTM D7647 >1300 1055 256 528 Particles >14µm ASTM D7647 >160 34 30 33 Particles >21µm ASTM D7647 >40 10 9 11 Particles >38µm ASTM D7647 >10 1 1 1 Particles >71µm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 20/17/12 17/15/12 19/16/1 FLUID DEGRADATION method limit/base current history1 history1	Silicon	ppm	ASTM D5185(m)	>15	0	0	0
Potassium ppm ASTM D5185(m) >20 <1 0 0 FLUID CLEANLINESS method limit/base current history1 history1 history1 Particles >4µm ASTM D7647 >5000 5700 1102 2803 Particles >6µm ASTM D7647 >1300 1055 256 528 Particles >14µm ASTM D7647 >160 34 30 33 Particles >21µm ASTM D7647 >40 10 9 11 Particles >38µm ASTM D7647 >10 1 1 1 Particles >71µm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 20/17/12 17/15/12 19/16/1 FLUID DEGRADATION method limit/base current history1 history1	Sodium		ASTM D5185(m)		<1	0	0
Particles >4μm ASTM D7647 >5000 5700 1102 2803 Particles >6μm ASTM D7647 >1300 1055 256 528 Particles >14μm ASTM D7647 >160 34 30 33 Particles >21μm ASTM D7647 >40 10 9 11 Particles >21μm ASTM D7647 >40 10 9 11 Particles >38μm ASTM D7647 >10 1 1 1 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 20/17/12 17/15/12 19/16/1 FLUID DEGRADATION method limit/base current history1 history1	Potassium		ASTM D5185(m)	>20	<1	0	0
Particles >6µm ASTM D7647 >1300 1055 256 528 Particles >14µm ASTM D7647 >160 34 30 33 Particles >21µm ASTM D7647 >40 10 9 11 Particles >21µm ASTM D7647 >40 10 9 11 Particles >38µm ASTM D7647 >10 1 1 1 Particles >38µm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 20/17/12 17/15/12 19/16/1 FLUID DEGRADATION method limit/base current history1 history1	FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
Particles >6μm ASTM D7647 >1300 1055 256 528 Particles >14μm ASTM D7647 >160 34 30 33 Particles >21μm ASTM D7647 >40 10 9 11 Particles >21μm ASTM D7647 >40 10 9 11 Particles >38μm ASTM D7647 >10 1 1 1 Particles >38μm ASTM D7647 >3 0 0 0 Oli Cleanliness ISO 4406 (c) >19/17/14 20/17/12 17/15/12 19/16/1 FLUID DEGRADATION method limit/base current history1 history1	Particles >4µm		ASTM D7647	>5000	5700	1102	2803
Particles >14µm ASTM D7647 >160 34 30 33 Particles >21µm ASTM D7647 >40 10 9 11 Particles >38µm ASTM D7647 >10 1 1 1 Particles >38µm ASTM D7647 >10 1 1 1 Particles >71µm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 20/17/12 17/15/12 19/16/1 FLUID DEGRADATION method limit/base current history1 history1	Particles >6µm		ASTM D7647	>1300		256	528
Particles >21μm ASTM D7647 >40 10 9 11 Particles >38μm ASTM D7647 >10 1 1 1 Particles >38μm ASTM D7647 >10 1 1 1 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 20/17/12 17/15/12 19/16/1 FLUID DEGRADATION method limit/base current history1 history1							
Particles >38μm ASTM D7647 >10 1 1 1 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 20/17/12 17/15/12 19/16/1 FLUID DEGRADATION method limit/base current history1 history1			ASTM D7647	>40	10	9	11
Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 20/17/12 17/15/12 19/16/1 FLUID DEGRADATION method limit/base current history1 history1							1
Oil Cleanliness ISO 4406 (c) >19/17/14 20/17/12 17/15/12 19/16/1 FLUID DEGRADATION method limit/base current history1 history1			ASTM D7647	>3	0	0	0
	Oil Cleanliness				A 20/17/12	17/15/12	19/16/12
Acid Number (AN) ma KOH/a ASTM D974* 0.02 0.04 0.10 0.10	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
	Acid Number (ANI)	ma KOH/a	ASTM D974*	0.02	0.04	0.10	0.10

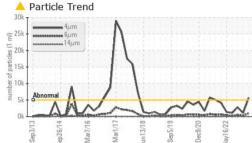
Report Id: MITWAT [WCAMIS] 02576731 (Generated: 08/21/2023 08:27:41) Rev: 1

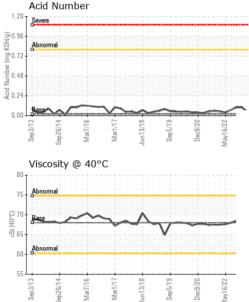
Contact/Location: Alan Davies - MITWAT



OIL ANALYSIS REPORT

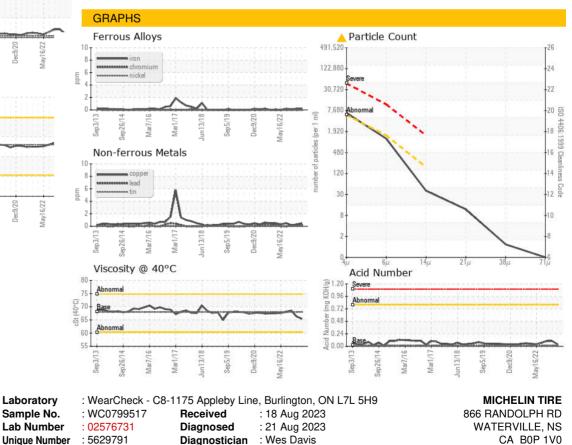






VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal		Visual*	NONE	NONE	NONE	NONE
	scalar					
Precipitate	scalar	Visual*	NONE	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	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 PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	68	65.4	66.3	68.5
SAMPLE IMAGES	S	method	limit/base	current	history1	history2
Color						
Bottom						





Accredited Laboratory Unique Number Test Package : IND 2 (Additional Tests: TAN Man) To discuss this sample report, contact Customer Service at 1-800-268-2131. Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.

CA B0P 1V0 Contact: Alan Davies alan.davies@michelin.com T: (902)534-3590 F: x:

CALA

ISO 17025:2017