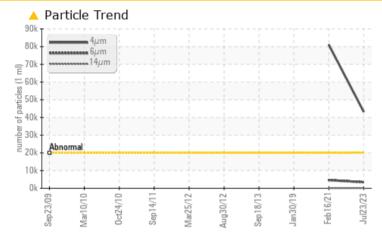


PROBLEM SUMMARY

Machine Id **TU-1** (S/N 1-25770-1)

Agitator Gearbox Fluid MOBIL MOBILGEAR 630 (2 GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS								
Sample Status			ABNORMAL	ABNORMAL	NORMAL			
Particles >4µm	ASTM D7647	>20000	<u> </u>	A 81026				
Oil Cleanliness	ISO 4406 (c)	>21/19/16	A 23/19/13	4 /19/13				

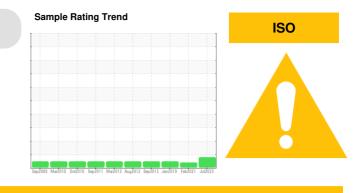
Customer Id: AVEMIL Sample No.: WC05905404 Lab Number: 05905404 Test Package: IND 2



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>



RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

16 Feb 2021 Diag: Wes Davis



We recommend you service the filters on this component. We recommend an early resample to monitor this condition.All component wear rates are normal. Particles >4µm are abnormally high. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



30 Jan 2019 Diag: Jonathan Hester

18 Sep 2013 Diag: Jonathan Hester





Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the component. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



view report



Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the component. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.





OIL ANALYSIS REPORT

Sample Rating Trend

109 Mar2010 Oct2010 Sep2011 Mar2012 Aug2012 Sep2013 Jan2019 Feb

ISO

TU-1 (S/N 1-25770-1) Component Agitator Gearbox

MOBIL MOBILGEAR 630 (2 GAL)

DIAGNOSIS

Machine Id

A Recommendation

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 high amount of silt (particulates < 14 microns in size) present in the oil.

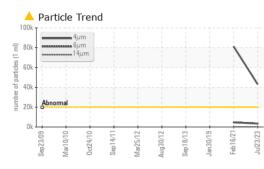
Fluid Condition

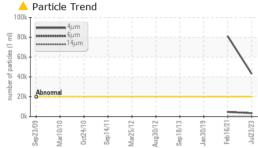
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

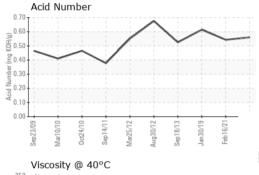
Sample Date Client Info 23 Jul 2023 16 Feb 2021 30 Jan 20 Machine Age mths Client Info 0 0 0 Oil Age mths Client Info 0 0 0 Oil Changed Client Info N/A N/A N/A N/A Sample Status Image Client Info N/A N/A N/A WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >150 13 14 15 Chromium ppm ASTM D5185m >10 0 0 0 Nickel ppm ASTM D5185m >10 0 0 0 Aluminum ppm ASTM D5185m >25 0 0 1 1 Lead ppm ASTM D5185m >10 0 0 1 1 Antmony ppm ASTM D5185m 0 0 0 0 1<	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age mths Client Info 0 0 0 Qil Age mths Client Info 0 0 0 Qil Changed Client Info N/A N/A N/A N/A Sample Status method limit/base current history1 history1 Iron ppm ASTM D5185m >150 13 14 15 Chromium ppm ASTM D5185m >10 0 0 0 Nickel ppm ASTM D5185m >10 0 0 0 Aluminum ppm ASTM D5185m >100 <1	Sample Number		Client Info		WC05905404	WC0507890	WCI2341322
Oil Age mths Client Info 0 0 0 Oil Changed Client Info N/A N/A N/A N/A Sample Status Image Current history1 history1 history1 WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >150 13 14 15 Chromium ppm ASTM D5185m >10 0 0 0 Nickel ppm ASTM D5185m >10 0 0 0 0 Silver ppm ASTM D5185m >50 2 2 2 2 Lead ppm ASTM D5185m >10 0 0 0 0 Cadmium ppm ASTM D5185m >10 0 0 0 0 Cadmium ppm ASTM D5185m 0 2 2 2 Tin ppm ASTM D5185m 0	Sample Date		Client Info		23 Jul 2023	16 Feb 2021	30 Jan 2019
Oil Changed Client Info N/A N/A N/A N/A Sample Status Client Info N/A ABNORMAL ABNORMAL NORMAL WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >150 13 14 15 Chromium ppm ASTM D5185m >10 0 0 0 Nickel ppm ASTM D5185m >10 0 0 0 Silver ppm ASTM D5185m >10 0 0 <1	Machine Age	mths	Client Info		0	0	0
Sample Status method Imit/base current history1 NORMAL WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >150 13 14 15 Chromium ppm ASTM D5185m >10 0 0 0 Nickel ppm ASTM D5185m >10 0 0 0 Silver ppm ASTM D5185m >25 0 0 0 Aluminum ppm ASTM D5185m >50 2 2 2 Aluminum ppm ASTM D5185m >50 2 2 2 Tin ppm ASTM D5185m >10 0 0 0 Vanadium ppm ASTM D5185m 10 0 0 0 Vanadium ppm ASTM D5185m 0 2 2 2 Barium ppm ASTM D5185m 41 <1	Oil Age	mths	Client Info		0	0	0
WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >150 13 14 15 Chromium ppm ASTM D5185m >10 0 0 0 Nickel ppm ASTM D5185m >10 0 0 0 0 Silver ppm ASTM D5185m >25 0 0 0 1 Lead ppm ASTM D5185m >250 0 0 <1	Oil Changed		Client Info		N/A	N/A	N/A
Iron ppm ASTM D5185m >150 13 14 15 Chromium ppm ASTM D5185m >10 0 0 0 Nickel ppm ASTM D5185m >10 0 0 0 Silver ppm ASTM D5185m <1	Sample Status				ABNORMAL	ABNORMAL	NORMAL
Chromium ppm ASTM D5185m >10 0 0 0 0 Nickel ppm ASTM D5185m >10 0 0 0 Silver ppm ASTM D5185m 0 0 0 Aluminum ppm ASTM D5185m >25 0 0 1 Lead ppm ASTM D5185m >50 2 2 2 Copper ppm ASTM D5185m >100 0 0 0 Antimony ppm ASTM D5185m >50 2 2 2 2 Antimony ppm ASTM D5185m >10 0 0 0 0 Cadmium ppm ASTM D5185m >10 0 0 2 2 Barium ppm ASTM D5185m 0 2 2 2 Barium ppm ASTM D5185m 4 3 3 3 Molybdenum ppm ASTM D5185m <td>WEAR METALS</td> <td></td> <td>method</td> <td>limit/base</td> <th>current</th> <td>history1</td> <td>history2</td>	WEAR METALS		method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m >10 0 0 <1 Titanium ppm ASTM D5185m <1	Iron	ppm	ASTM D5185m	>150	13	14	15
Nickel ppm ASTM D5185m >10 0 0 <11 Titanium ppm ASTM D5185m 1 <1	Chromium	ppm	ASTM D5185m	>10	0	0	0
Titanium ppm ASTM D5185m 0 0 0 Silver ppm ASTM D5185m <1	Nickel		ASTM D5185m	>10	0	0	<1
Silver ppm ASTM D5185m <1 <1 <1 0 Aluminum ppm ASTM D5185m >25 0 0 <1	Titanium		ASTM D5185m		0	0	0
Aluminum ppm ASTM D5185m >25 0 0 <1 Lead ppm ASTM D5185m >100 <1					<1	<1	0
Lead ppm ASTM D5185m >100 <1 <1 <1 Copper ppm ASTM D5185m >50 2 2 2 Tin ppm ASTM D5185m >10 0 0 <1	Aluminum		ASTM D5185m	>25		0	<1
Copper ppm ASTM D5185m >50 2 2 2 Tin ppm ASTM D5185m >10 0 0 <1					-		
Tin ppm ASTM D5185m >10 0 0 <11 Antimony ppm ASTM D5185m >5 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 0 Cadmium ppm ASTM D5185m 0 <1							
Antimony ppm ASTM D5185m >5 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 21 <1							
Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m <1					-		
Cadmium ppm ASTM D5185m <1 <1 <1 <1 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 0 2 2 Barium ppm ASTM D5185m 0 2 2 Barium ppm ASTM D5185m 0 2 2 Barium ppm ASTM D5185m 0 2 2 Mangaese ppm ASTM D5185m 4 3 3 Magnesium ppm ASTM D5185m <1 <1 <1 <1 Galcium ppm ASTM D5185m <5 4 5 Collaium ppm ASTM D5185m 198 216 201 Zinc ppm ASTM D5185m 20 14456 19615 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >20	•			, 0	0		
ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 0 2 2 Barium ppm ASTM D5185m 4 3 3 Molybdenum ppm ASTM D5185m <1					-	÷	
Boron ppm ASTM D5185m 0 2 2 Barium ppm ASTM D5185m 4 3 3 Molybdenum ppm ASTM D5185m <1		ppm		line it /le e e e			
Barium ppm ASTM D5185m 4 3 3 Molybdenum ppm ASTM D5185m <1				inniv base			
Molybdenum ppm ASTM D5185m <1 <1 <1 Manganese ppm ASTM D5185m <1							
Manganese ppm ASTM D5185m <1 <1 <1 Magnesium ppm ASTM D5185m <1					-		
Magnesium ppm ASTM D5185m <1	,						
Calcium ppm ASTM D5185m 5 4 5 Phosphorus ppm ASTM D5185m 198 216 201 Zinc ppm ASTM D5185m 29 15 25 Sulfur ppm ASTM D5185m 17520 14456 19615 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >50 2 2 2 Sodium ppm ASTM D5185m >50 2 2 2 Sodium ppm ASTM D5185m >20 1 <1	-						
Phosphorus ppm ASTM D5185m 198 216 201 Zinc ppm ASTM D5185m 29 15 25 Sulfur ppm ASTM D5185m 17520 14456 19615 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >50 2 2 2 2 Sodium ppm ASTM D5185m >50 2 2 2 2 Sodium ppm ASTM D5185m >20 1 <1	•						
Zinc ppm ASTM D5185m 29 15 25 Sulfur ppm ASTM D5185m 17520 14456 19615 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >50 2 2 2 Sodium ppm ASTM D5185m >50 2 2 2 Sodium ppm ASTM D5185m >50 2 2 2 Sodium ppm ASTM D5185m >20 1 <1					-		
Sulfur ppm ASTM D5185m 17520 14456 19615 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >50 2 2 2 Sodium ppm ASTM D5185m >50 2 2 2 Sodium ppm ASTM D5185m >20 1 <1 <1 FLUID CLEANLINESS method limit/base current history1 history1 Particles >4µm ASTM D7647 >20000 4 3199 ▲ 81026 Particles >6µm ASTM D7647 >5000 3402 4606 Particles >14µm ASTM D7647 >640 72 57 Particles >21µm ASTM D7647 >40 1 0 Particles >38µm ASTM D7647 >40 1 0 Particles >71µm ASTM D7647 >10 0							
CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >50 2 2 2 2 Sodium ppm ASTM D5185m >50 2 2 2 2 Sodium ppm ASTM D5185m >20 1 <1	-				-		
Silicon ppm ASTM D5185m >50 2 2 2 2 Sodium ppm ASTM D5185m >50 2 2 2 2 Sodium ppm ASTM D5185m >20 1 <1 <1 Potassium ppm ASTM D5185m >20 1 <1 <1 <1 FLUID CLEANLINESS method limit/base current history1 history1 Particles >4µm ASTM D7647 >20000 ▲ 43199 ▲ 81026 Particles >6µm ASTM D7647 >5000 3402 4606 Particles >14µm ASTM D7647 >640 72 57 Particles >21µm ASTM D7647 >160 14 10 Particles >38µm ASTM D7647 >40 1 0 Particles >71µm ASTM D7647 >10 0 0							
Sodium ppm ASTM D5185m 0 4 4 Potassium ppm ASTM D5185m<>20 1 <1		5					history2
Potassium ppm ASTM D5185m >20 1 <1 <1 FLUID CLEANLINESS method limit/base current history1 history1 Particles >4µm ASTM D7647 >20000 ▲ 43199 ▲ 81026 Particles >6µm ASTM D7647 >5000 3402 4606 Particles >14µm ASTM D7647 >640 72 57 Particles >21µm ASTM D7647 >160 14 10 Particles >38µm ASTM D7647 >40 1 0 Particles >71µm ASTM D7647 >10 0		ppm		>50			
FLUID CLEANLINESS method limit/base current history1 history1 Particles >4µm ASTM D7647 >20000 ▲ 43199 ▲ 81026 Particles >6µm ASTM D7647 >5000 3402 4606 Particles >14µm ASTM D7647 >640 72 57 Particles >14µm ASTM D7647 >160 14 10 Particles >21µm ASTM D7647 >40 1 0 Particles >38µm ASTM D7647 >40 1 0 Particles >71µm ASTM D7647 >10 0 0	Sodium	ppm	ASTM D5185m		0	4	4
Particles >4μm ASTM D7647 >20000 43199 81026 Particles >6μm ASTM D7647 >5000 3402 4606 Particles >14μm ASTM D7647 >640 72 57 Particles >14μm ASTM D7647 >160 14 10 Particles >21μm ASTM D7647 >40 1 0 Particles >38μm ASTM D7647 >40 1 0 Particles >71μm ASTM D7647 >10 0	Potassium	ppm	ASTM D5185m	>20	1	<1	<1
Particles >6µm ASTM D7647 >5000 3402 4606 Particles >14µm ASTM D7647 >640 72 57 Particles >21µm ASTM D7647 >160 14 10 Particles >38µm ASTM D7647 >40 1 0 Particles >71µm ASTM D7647 >10 0	FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >14μm ASTM D7647 >640 72 57 Particles >21μm ASTM D7647 >160 14 10 Particles >38μm ASTM D7647 >40 1 0 Particles >71μm ASTM D7647 >10 0	Particles >4µm		ASTM D7647	>20000	4 3199	<u> </u>	
Particles >21μm ASTM D7647 >160 14 10 Particles >38μm ASTM D7647 >40 1 0 Particles >71μm ASTM D7647 >10 0	Particles >6µm		ASTM D7647	>5000	3402	4606	
Particles >38μm ASTM D7647 >40 1 0 Particles >71μm ASTM D7647 >10 0 0	Particles >14µm		ASTM D7647	>640	72	57	
Particles >71μm ASTM D7647 >10 0	Particles >21µm		ASTM D7647	>160	14	10	
	Particles >38µm				1	0	
Oil Cleanliness ISO 4406 (c) >21/19/16 ▲ 23/19/13 ▲ 24/19/13	Particles >71µm		ASTM D7647	>10	0	0	
	Oil Cleanliness		ISO 4406 (c)	>21/19/16	A 23/19/13	4 /19/13	
FLUID DEGRADATION method limit/base current history1 history	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g ASTM D8045 0.56 0.543 0.614	Acid Number (AN)	mg KOH/g	ASTM D8045		0.56	0.543	0.614

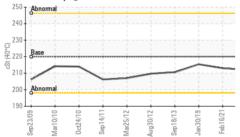


OIL ANALYSIS REPORT

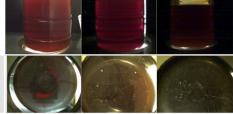




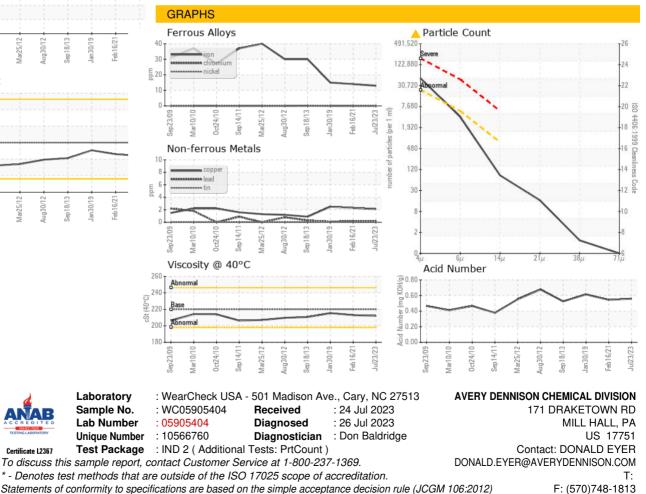




VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	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	220	212	213	215.4
SAMPLE IMAGES	S	method	limit/base	current	history1	history2
Color						



Bottom



Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Certificate L2367

Contact/Location: DONALD EYER - AVEMIL