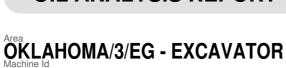


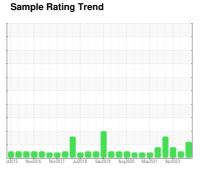
OIL ANALYSIS REPORT





Component
Hydraulic System

MOBIL MOBILTRANS AST 30 (--- 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 silt (particulates < 14 microns in size) present in the oil.

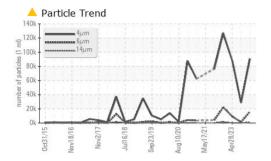
Fluid Condition

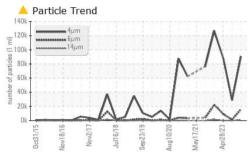
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

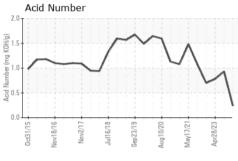
Sample Number Client Info WC0886946 WC0834146 WC0808045 Sample Date Client Info 31 Jan 2024 05 Aug 2023 28 Apr 2023 29	451 30 (GAL)	ct2015 Nov2	016 Nov2017 Jul2018	Sep2019 Aug2020 May2021	Apr2023	
Sample Date	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 12603 12061 11496 11082 1	Sample Number		Client Info		WC0886946	WC0834146	WC0808045
Oil Changed	Sample Date		Client Info		31 Jan 2024	05 Aug 2023	28 Apr 2023
Contained Client Info N/A ABNORMAL	Machine Age	hrs	Client Info		12603	12061	11496
Dil Changed Client Info N/A ABNORMAL ABNORMA	Oil Age	hrs	Client Info		11082	11082	11082
CONTAMINATION method limit/base current history1 history2 Water WC Method >0.1 NEG NEG NEG WEAR METALS method limit/base current history1 history2 fron ppm ASTM D5185m >20 13 6 8 Chromium ppm ASTM D5185m >10 <1			Client Info		N/A		N/A
Water WC Method >0.1 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 13 6 8 Chromium ppm ASTM D5185m >10 <1 <1 <1 Nickel ppm ASTM D5185m >10 <1 0 <1 Nickel ppm ASTM D5185m >10 <1 0 <1 Silver ppm ASTM D5185m >10 <1 <1 <1 Aluminum ppm ASTM D5185m >10 <1 <1 <1 <1 Lead ppm ASTM D5185m >10 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1					ABNORMAL	NORMAL	ABNORMAL
WEAR METALS	CONTAMINATIO	N	method	limit/base	current	history1	history2
Chromium	Water		WC Method	>0.1	NEG	NEG	NEG
Chromium	WEAR METALS		method	limit/base	current	history1	history2
Nicke	Iron	ppm	ASTM D5185m	>20	13	6	8
Nicke	Chromium	ppm	ASTM D5185m	>10	<1	<1	<1
Silver			ASTM D5185m	>10	<1	0	<1
Saliver	Titanium					<1	<1
Aluminum ppm ASTM D5185m >10 <1 3 <1 Lead ppm ASTM D5185m >10 <1 <1 <1 Copper ppm ASTM D5185m >75 2 Zerin ppm ASTM D5185m >10 <1 <1 Zerin ppm ASTM D5185m >10 Zerin ppm ASTM D5185m >10 <1 <1 Zerin ppm ASTM D5185m >10 Zerin ppm ASTM D5185m >10 Zerin ppm ASTM D5185m >10 Zerin ppm ASTM D5185m 97 106 82 Zerin ppm ASTM D5185m 5 1 0 Zerin ppm ASTM D5185m 2 1 2 Zerin Magnaese ppm ASTM D5185m 20 28 26 Zerin ppm ASTM D5185m 20 28 26 Zerin ppm ASTM D5185m 3266 3195 3305 Zerin ppm ASTM D5185m 1014 1022 1113 Zerin ppm ASTM D5185m 1290 1263 1414 Zerin ppm ASTM D5185m 1290 1263 1414 Zerin ppm ASTM D5185m 1290 1263 1414 Zerin ppm ASTM D5185m 20 2 2 Zerin ppm ASTM D5185m 20 2 2 Zerin ppm ASTM D5185m 20 3 4 Zeric Potassium ppm ASTM D5185m 0 3 4 Zeric Potassium ppm ASTM D5185m 0 3 4 Zeric Potassium ppm ASTM D5185m 20 2 <1 2 Zeric Perticles >4μm ASTM D5185m 20 2 <1 2 Zeric Perticles >4μm ASTM D7647 >2500 15979 1230 9350 Zeric Perticles >71μm ASTM D7647 >640 10 1 Zeric Perticles >71μm ASTM D7647 >640 10 1 Zeric Perticles >71μm ASTM D7647 >640 1 0 1 Zeric Perticles >71μm ASTM D7647 >640 1 0 1 Zeric Perticles >71μm ASTM D7647 >640 1 0 1 Zeric Perticles >71μm ASTM D7647 >640 1 0 1 Zeric Perticles >71μm ASTM D7647 >640 1 0 1 Zeric Perticles >71μm ASTM D7647 >640 1 0 1 Zeric Perticles >71μm ASTM D7647 >640 1 0 1 Zeric Perticles >71μm ASTM D7647 >640 1 0 1 Zeric Perticles >71μm ASTM D7647 >640 1 0 0 Zeric Perticles >71μm ASTM D7647 >64							
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Copper ppm ASTM D5185m >75 2 2 <1 Tin ppm ASTM D5185m >10 <1							
Tin							
Vanadium ppm ASTM D5185m 0 <1 <1 Cadmium ppm ASTM D5185m <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 97 106 82 Barium ppm ASTM D5185m 5 1 0 Molybdenum ppm ASTM D5185m 2 1 2 Manganese ppm ASTM D5185m 20 28 26 Calcium ppm ASTM D5185m 3266 3195 3305 Phosphorus ppm ASTM D5185m 1014 1022 1113 Zinc ppm ASTM D5185m 1290 1263 1414 Sulfur ppm ASTM D5185m 4989 4764 5664 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 17							
Cadmium ppm ASTM D5185m <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 97 106 82 Barium ppm ASTM D5185m 5 1 0 Molybdenum ppm ASTM D5185m 2 1 2 Manganese ppm ASTM D5185m 20 28 26 Calcium ppm ASTM D5185m 3266 3195 3305 Phosphorus ppm ASTM D5185m 1014 1022 1113 Zinc ppm ASTM D5185m 1290 1263 1414 Sulfur ppm ASTM D5185m 4989 4764 5664 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 17 12 10 Sodium ppm ASTM D5185m >20				>10			
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 97 1 06 82 Barium ppm ASTM D5185m 5 1 0 Molybdenum ppm ASTM D5185m 2 1 <1							
Boron ppm ASTM D5185m 97 106 82 Barium ppm ASTM D5185m 5 1 0 Molybdenum ppm ASTM D5185m 2 1 2 Manganese ppm ASTM D5185m 20 28 26 Calcium ppm ASTM D5185m 3266 3195 3305 Phosphorus ppm ASTM D5185m 1014 1022 1113 Zinc ppm ASTM D5185m 1290 1263 1414 Sulfur ppm ASTM D5185m 4989 4764 5664 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 17 12 10 Sodium ppm ASTM D5185m >20 17 12 10 Sodium ppm ASTM D5185m >20 2 <1 2 FLUID CLEANLINESS method limit/base<		ррпі					
Barium ppm ASTM D5185m 5 1 0 Molybdenum ppm ASTM D5185m 2 1 2 Manganese ppm ASTM D5185m 20 28 26 Calcium ppm ASTM D5185m 20 28 26 Calcium ppm ASTM D5185m 3266 3195 3305 Phosphorus ppm ASTM D5185m 1014 1022 1113 Zinc ppm ASTM D5185m 1290 1263 1414 Sulfur ppm ASTM D5185m 4989 4764 5664 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m 0 3 4 Potassium ppm ASTM D5185m >20 17 12 10 Sodium ppm ASTM D5185m 0 3 4 Potassium ppm ASTM D5185m >20 2 <1 2 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D5185m >20 2 <1 2 FLUID CLEANLINESS method limit/base current history1 history2 Particles >6μm ASTM D7647 90628 28704 88486 Particles >6μm ASTM D7647 >2500 15979 1230 9350 Particles >14μm ASTM D7647 >640 884 77 54 Particles >21μm ASTM D7647 >640 884 77 54 Particles >38μm ASTM D7647 >40 1 0 1 Particles >71μm ASTM D7647 >10 0 0 0 Oil Cleanliness ISO 4406 (c) >/18/16 24/21/17 22/17/13 24/20/13 FLUID DEGRADATION method limit/base current history1 history2 FLUID DEGRADATION method limit/base current history1 history2 FLUID DEGRADATION method limit/base current history1 history2 FLUID DEGRADATION method limit/base current history1 history2	ADDITIVES		method	limit/base			history2
Molybdenum ppm ASTM D5185m 2 1 2 Manganese ppm ASTM D5185m <1 <1 <1 <1 Magnesium ppm ASTM D5185m 20 28 26 Calcium ppm ASTM D5185m 3266 3195 3305 Phosphorus ppm ASTM D5185m 1014 1022 1113 Zinc ppm ASTM D5185m 1290 1263 1414 Sulfur ppm ASTM D5185m 4989 4764 5664 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 17 12 10 Sodium ppm ASTM D5185m >20 17 12 10 Sodium ppm ASTM D5185m >20 2 1 2 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm<	Boron	ppm	ASTM D5185m			106	
Manganese ppm ASTM D5185m <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 </td <td>Barium</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <td>5</td> <td>1</td> <td>0</td>	Barium	ppm	ASTM D5185m		5	1	0
Magnesium ppm ASTM D5185m 20 28 26 Calcium ppm ASTM D5185m 3266 3195 3305 Phosphorus ppm ASTM D5185m 1014 1022 1113 Zinc ppm ASTM D5185m 1290 1263 1414 Sulfur ppm ASTM D5185m 4989 4764 5664 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 17 12 10 Sodium ppm ASTM D5185m >20 2 <1 2 Potassium ppm ASTM D5185m >20 2 <1 2 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >2500 15979 1230 9350 Particles >21µm ASTM D7647 >640 884 77 54 Particles >	Molybdenum	ppm	ASTM D5185m		2	1	2
Calcium ppm ASTM D5185m 3266 3195 3305 Phosphorus ppm ASTM D5185m 1014 1022 1113 Zinc ppm ASTM D5185m 1290 1263 1414 Sulfur ppm ASTM D5185m 4989 4764 5664 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 17 12 10 Sodium ppm ASTM D5185m >20 2 <1	Manganese	ppm	ASTM D5185m		<1	<1	<1
Phosphorus ppm ASTM D5185m 1014 1022 1113 Zinc ppm ASTM D5185m 1290 1263 1414 Sulfur ppm ASTM D5185m 4989 4764 5664 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 17 12 10 Sodium ppm ASTM D5185m >20 2 <1 2 Potassium ppm ASTM D5185m >20 2 <1 2 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >2500 ▲ 15979 1230 ▲ 9350 Particles >21μm ASTM D7647 >640 ▲ 884 77 54 Particles >21μm ASTM D7647 >40 1 0 1 Particles >71μm ASTM D7647 >10 0 0 0 Oil C	Magnesium	ppm	ASTM D5185m		20	28	26
Zinc ppm ASTM D5185m 1290 1263 1414 Sulfur ppm ASTM D5185m 4989 4764 5664 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 17 12 10 Sodium ppm ASTM D5185m >20 3 4 Potassium ppm ASTM D5185m >20 2 <1	Calcium	ppm	ASTM D5185m		3266	3195	3305
Sulfur ppm ASTM D5185m 4989 4764 5664 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 17 12 10 Sodium ppm ASTM D5185m >20 3 4 Potassium ppm ASTM D5185m >20 2 <1	Phosphorus	ppm	ASTM D5185m		1014	1022	1113
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 17 12 10 Sodium ppm ASTM D5185m 0 3 4 Potassium ppm ASTM D5185m >20 2 <1	Zinc	ppm	ASTM D5185m		1290	1263	1414
Silicon ppm ASTM D5185m >20 17 12 10 Sodium ppm ASTM D5185m 0 3 4 Potassium ppm ASTM D5185m >20 2 <1 2 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 90628 28704 88486 Particles >6μm ASTM D7647 >2500 15979 1230 19350 Particles >14μm ASTM D7647 >640 1884 77 54 Particles >21μm ASTM D7647 >160 128 18 10 Particles >38μm ASTM D7647 >40 1 0 1 Particles >71μm ASTM D7647 >10 0 0 Oil Cleanliness ISO 4406 (c) >/18/16 1936 24/21/17 22/17/13 124/20/13 FLUID DEGRADATION method limit/base current history1 history2	Sulfur	ppm	ASTM D5185m		4989	4764	5664
Sodium ppm ASTM D5185m 0 3 4 Potassium ppm ASTM D5185m >20 2 <1	CONTAMINANTS	3	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 2 <1 2 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 90628 28704 88486 Particles >6μm ASTM D7647 >2500 15979 1230 9350 Particles >14μm ASTM D7647 >640 884 77 54 Particles >21μm ASTM D7647 >160 128 18 10 Particles >38μm ASTM D7647 >40 1 0 1 Particles >71μm ASTM D7647 >10 0 0 Oil Cleanliness ISO 4406 (c) >/18/16 24/21/17 22/17/13 24/20/13 FLUID DEGRADATION method limit/base current history1 history2	Silicon	ppm	ASTM D5185m	>20	17	12	10
FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 90628 28704 88486 Particles >6μm ASTM D7647 >2500 15979 1230 9350 Particles >14μm ASTM D7647 >640 884 77 54 Particles >21μm ASTM D7647 >160 128 18 10 Particles >38μm ASTM D7647 >40 1 0 1 Particles >71μm ASTM D7647 >10 0 0 0 Oil Cleanliness ISO 4406 (c) >/18/16 24/21/17 22/17/13 24/20/13 FLUID DEGRADATION method limit/base current history1 history2	Sodium	ppm	ASTM D5185m		0	3	4
Particles >4μm ASTM D7647 90628 28704 88486 Particles >6μm ASTM D7647 >2500 15979 1230 9350 Particles >14μm ASTM D7647 >640 884 77 54 Particles >21μm ASTM D7647 >160 128 18 10 Particles >38μm ASTM D7647 >40 1 0 1 Particles >71μm ASTM D7647 >10 0 0 Oil Cleanliness ISO 4406 (c) >/18/16 24/21/17 22/17/13 24/20/13 FLUID DEGRADATION method limit/base current history1 history2	Potassium	ppm	ASTM D5185m	>20	2	<1	2
Particles >6μm ASTM D7647 >2500 15979 1230 9350 Particles >14μm ASTM D7647 >640 884 77 54 Particles >21μm ASTM D7647 >160 128 18 10 Particles >38μm ASTM D7647 >40 1 0 1 Particles >71μm ASTM D7647 >10 0 0 0 Oil Cleanliness ISO 4406 (c) >/18/16 24/21/17 22/17/13 24/20/13 FLUID DEGRADATION method limit/base current history1 history2	FLUID CLEANLIN	NESS	method	limit/base	current	history1	history2
Particles >14μm ASTM D7647 >640 ▲ 884 77 54 Particles >21μm ASTM D7647 >160 128 18 10 Particles >38μm ASTM D7647 >40 1 0 1 Particles >71μm ASTM D7647 >10 0 0 0 Oil Cleanliness ISO 4406 (c) >/18/16 ▲ 24/21/17 22/17/13 ▲ 24/20/13 FLUID DEGRADATION method limit/base current history1 history2	Particles >4μm				90628	28704	88486
Particles >21μm ASTM D7647 >160 128 18 10 Particles >38μm ASTM D7647 >40 1 0 1 Particles >71μm ASTM D7647 >10 0 0 0 Oil Cleanliness ISO 4406 (c) >/18/16 24/21/17 22/17/13 24/20/13 FLUID DEGRADATION method limit/base current history1 history2	Particles >6µm		ASTM D7647	>2500	15979	1230	9350
Particles >38μm ASTM D7647 >40 1 0 1 Particles >71μm ASTM D7647 >10 0 0 0 Oil Cleanliness ISO 4406 (c) >/18/16 Δ 24/21/17 22/17/13 Δ 24/20/13 FLUID DEGRADATION method limit/base current history1 history2	Particles >14µm		ASTM D7647	>640	884	77	54
Particles >71μm ASTM D7647 >10 0 0 0 Oil Cleanliness ISO 4406 (c) >/18/16 ▲ 24/21/17 22/17/13 ▲ 24/20/13 FLUID DEGRADATION method limit/base current history1 history2	Particles >21µm		ASTM D7647	>160	128	18	10
Particles >71μm ASTM D7647 >10 0 0 0 Oil Cleanliness ISO 4406 (c) >/18/16 ▲ 24/21/17 22/17/13 ▲ 24/20/13 FLUID DEGRADATION method limit/base current history1 history2	Particles >38µm		ASTM D7647	>40	1	0	1
Oil Cleanliness ISO 4406 (c) >/18/16 ▲ 24/21/17 22/17/13 ▲ 24/20/13 FLUID DEGRADATION method limit/base current history1 history2	•		ASTM D7647	>10	0	0	0
	·				24/21/17	22/17/13	2 4/20/13
Acid Number (AN) mg KOH/g ASTM D8045 0.24 0.93 0.78	FLUID DEGRADA	ATION	method	limit/base	current	history1	history2
	Acid Number (AN)	mg KOH/g	ASTM D8045		0.24	0.93	0.78

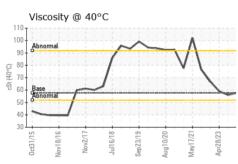


OIL ANALYSIS REPORT





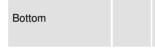




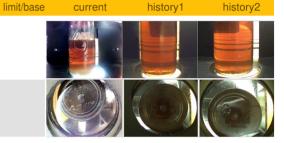
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	LIGHT	NONE
Sand/Dirt	scalar	*Visual	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	57.6	57.8	56.0	59.1

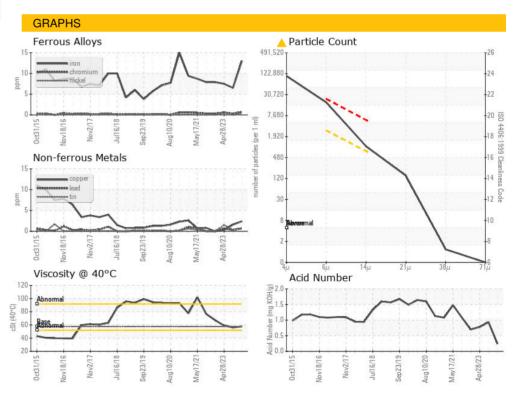
method

Color



SAMPLE IMAGES









Certificate L2367

Laboratory Sample No.

Lab Number : 06098317 Unique Number : 10896547

Test Package : CONST

: WC0886946

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received **Tested**

Diagnosed

: 23 Feb 2024 : 26 Feb 2024

: 26 Feb 2024 - Don Baldridge

SHERWOOD CONSTRUCTION CO INC 3219 WEST MAY ST

WICHITA, KS US 67213

Contact: DOUG KING doug.king@sherwood.net T: (316)617-3161

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)

Submitted By: GARRETT ADAMS

F: x: