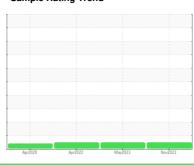


OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id **015-0068**

Component **5 Swing Drive**Fluid

SCHAEFFER 267 80W90 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil

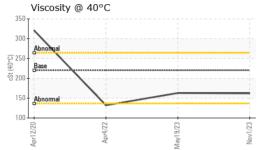
Fluid Condition

The condition of the oil is acceptable for the time in service.

Sample Date Client Info 01 Nov 2023 19 May 2023 04 Apr 2022 Machine Age mths Client Info 0 0 0 Oil Age mths Client Info 0 0 0 Oil Changed Client Info Not Changd Not Changd Not Changd			Apr202	0 Apr2022	May2023 N	ov2023	
Client Info	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age mths Client Info 0 0 0 0 Oil Age mths Client Info 0 0 0 0 Oil Changed Client Info Not Changd	Sample Number		Client Info		WC0868428	WC0815157	WC0548336
Oil Age mths Client Info Not Changd Not Changd	Sample Date		Client Info		01 Nov 2023	19 May 2023	04 Apr 2022
Oil Changed Client Info Not Changd NoRMAL NORMAL NORMAL	Machine Age	mths	Client Info		0	0	0
NORMAL NORMAL NORMAL NORMAL WEAR METALS method limit/base current history1 history2	Oil Age	mths	Client Info		0	0	0
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >400 127 110 99 Chromium ppm ASTM D5185m >10 1 1 1 Nickel ppm ASTM D5185m >10 0 <1 0 Titanium ppm ASTM D5185m >0 0 <1 <1 Aluminum ppm ASTM D5185m >50 0 2 <1 Aluminum ppm ASTM D5185m >50 0 2 <1 Lead ppm ASTM D5185m >50 0 2 <1 Lead ppm ASTM D5185m >50 0 2 <1 Lead ppm ASTM D5185m >10 0 0 0 Appear and ppm ASTM D5185m >50 0 2 1 1 1 1 1 1 1 1 1 <th>Oil Changed</th> <th></th> <th>Client Info</th> <th></th> <th>Not Changd</th> <th>Not Changd</th> <th>Not Changd</th>	Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
	Sample Status				NORMAL	NORMAL	NORMAL
Chromium ppm ASTM D5185m >10 1 0 2 4 1 1 1 1 1 1 1 1 2 1 0 0 4 1	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>400	127	110	99
Titanium	Chromium	ppm	ASTM D5185m	>10	1	1	1
Silver	Nickel	ppm	ASTM D5185m	>10	0	<1	0
Aluminum	Titanium	ppm	ASTM D5185m		0	<1	<1
Aluminum	Silver	ppm	ASTM D5185m		0	0	<1
Lead ppm ASTM D5185m >50 0 2 <1 Copper ppm ASTM D5185m >200 <1	Aluminum		ASTM D5185m	>25	1	0	<1
Copper ppm ASTM D5185m >200 <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>Lead</td> <td></td> <td>ASTM D5185m</td> <td>>50</td> <th>0</th> <td>2</td> <td><1</td>	Lead		ASTM D5185m	>50	0	2	<1
Tin ppm ASTM D5185m >10 0 0 0 Antimony ppm ASTM D5185m >5 Vanadium ppm ASTM D5185m 0 <1 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 38 49 101 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 372 398 371 Manganese ppm ASTM D5185m <1 1 <1 <1 Manganesium ppm ASTM D5185m <1 3 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <	Copper			>200	<1	<1	<1
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Vanadium ppm ASTM D5185m 0 <1 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 38 49 101 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 372 398 371 Manganese ppm ASTM D5185m <1 1 <1 Magnesium ppm ASTM D5185m <1 3 <1 Calcium ppm ASTM D5185m 26 55 30 Phosphorus ppm ASTM D5185m 42 39 36 Sulfur ppm ASTM D5185m 42 39 36 Sulfur ppm ASTM D5185m 15684 21057 17967 CONTAMINANTS method limit/base current history1 history2 <td>Antimony</td> <td></td> <td>ASTM D5185m</td> <td>>5</td> <th></th> <td></td> <td></td>	Antimony		ASTM D5185m	>5			
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 38 49 101 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 372 398 371 Manganese ppm ASTM D5185m <1	Vanadium				0	<1	0
Boron	Cadmium		ASTM D5185m		0	0	0
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 372 398 371 Manganese ppm ASTM D5185m <1	Boron	ppm	ASTM D5185m		38	49	101
Manganese ppm ASTM D5185m <1 1 <1 Magnesium ppm ASTM D5185m <1	Barium	ppm	ASTM D5185m		0	0	0
Magnesium ppm ASTM D5185m <1 3 <1 Calcium ppm ASTM D5185m 26 55 30 Phosphorus ppm ASTM D5185m 675 781 1162 Zinc ppm ASTM D5185m 42 39 36 Sulfur ppm ASTM D5185m 15684 21057 17967 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 9 11 5 Sodium ppm ASTM D5185m >20 2 3 0 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE MODER LIGHT Yellow Metal scalar *Visual NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE	Molybdenum	ppm	ASTM D5185m		372	398	371
Calcium ppm ASTM D5185m 26 55 30 Phosphorus ppm ASTM D5185m 675 781 1162 Zinc ppm ASTM D5185m 42 39 36 Sulfur ppm ASTM D5185m 15684 21057 17967 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 9 11 5 Sodium ppm ASTM D5185m 2 1 1 Potassium ppm ASTM D5185m >20 2 3 0 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE NONE Visual NONE NONE NONE NONE NONE NONE Visual NONE NONE NONE NO	Manganese	ppm	ASTM D5185m		<1	1	<1
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Zinc ppm ASTM D5185m 42 39 36 Sulfur ppm ASTM D5185m 15684 21057 17967 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 9 11 5 Sodium ppm ASTM D5185m 2 1 1 1 Potassium ppm ASTM D5185m >20 2 3 0 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE MODER LIGHT 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	Calcium	ppm	ASTM D5185m		26	55	30
Sulfur ppm ASTM D5185m 15684 21057 17967 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 9 11 5 Sodium ppm ASTM D5185m 2 1 1 Potassium ppm ASTM D5185m >20 2 3 0 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE MODER LIGHT 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 NORML <td< td=""><td>Phosphorus</td><td>ppm</td><td>ASTM D5185m</td><td></td><th>675</th><td>781</td><td>1162</td></td<>	Phosphorus	ppm	ASTM D5185m		675	781	1162
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 9 11 5 Sodium ppm ASTM D5185m 2 1 1 1 Potassium ppm ASTM D5185m >20 2 3 0 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE MODER LIGHT 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 NORML NORML NORML NORML Appearance scalar *V	Zinc	ppm	ASTM D5185m		42	39	36
Silicon ppm ASTM D5185m >50 9 11 5 Sodium ppm ASTM D5185m 2 1 1 Potassium ppm ASTM D5185m >20 2 3 0 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE MODER LIGHT 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 NORML NORML Odor <th< th=""><th>Sulfur</th><th>ppm</th><th>ASTM D5185m</th><th></th><th>15684</th><th>21057</th><th>17967</th></th<>	Sulfur	ppm	ASTM D5185m		15684	21057	17967
Sodium ppm ASTM D5185m 2 1 1 Potassium ppm ASTM D5185m >20 2 3 0 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE MODER LIGHT 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 NORML Odor scalar *Visual NORML NORML NORML NORML NORML Emulsified	CONTAMINANTS	;	method	limit/base	current	history1	history2
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Sand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEG							
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Odor scalar *Visual NORML NORML NORML NORML NORML Emulsified Water scalar *Visual >0.2 NEG NEG NEG	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Emulsified Water scalar *Visual >0.2 NEG NEG NEG	Appearance	scalar				NORML	NORML
	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Free Water scalar *Visual NEG NEG NEG	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
	Free Water	scalar	*Visual		NEG	NEG	NEG

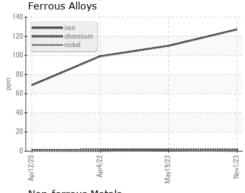


OIL ANALYSIS REPORT

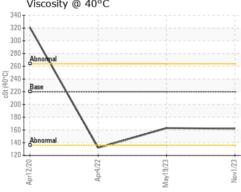




GRAPHS



Non-ferrous Metals Viscosity @ 40°C







Certificate L2367

Laboratory Sample No. Lab Number

Unique Number : 10728502 Test Package : CONST

: WC0868428 : 06000142

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 06 Nov 2023 Diagnosed Diagnostician : Doug Bogart

: 15 Nov 2023

SHIMMICK CONSTRUCTION 5535 TRAILHEAD DRIVE

CHATTANOOGA, TN US 37415

Contact: DANIEL LISELLA daniel.lisella@shimmick.com

T: F:

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)

Report Id: AECCHATN [WUSCAR] 06000142 (Generated: 11/15/2023 23:24:19) Rev: 1

Contact/Location: DANIEL LISELLA - AECCHATN