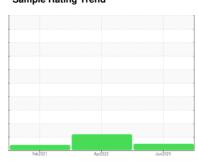


# **OIL ANALYSIS REPORT**

Sample Rating Trend



NORMAL



Machine Id 015-R014

Component **Auxiliary Hoist** 

SCHAEFFER SCHAEFFER 293 MOLY 75W90 (--- GAL)

## Recommendation

Resample at the next service interval to monitor. ( Customer Sample Comment: Auxiliary hoist sample @ 7393 hours.)

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 INFORMATION   method   fimit/base   current   history1   history2	0 ( GAL)		Fel	52021	AprŽ022 JunŽi	024	
Sample Date	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Date   Client Info   18 Jun 2024   14 Apr 2022   12 Feb 2021   Machine Age   hrs   Client Info   1197   0   0   0   O   O   O   O   O   O   O	Sample Number		Client Info		WC0868315	WC0548440	WC0548283
Machine Age	·		Client Info		18 Jun 2024	14 Apr 2022	12 Feb 2021
Oil Age         hrs         Client Info         1197         0         0           Oil Changed Satus         Client Info         Not Changed NorMAL         ABNORMAL         ATTENTION           Asample Status         method         Imitibase         current         history1         history2           Water         WC Method         >0.1         NEG         NEG         NEG           WEAR METALS         method         Imitibase         current         history1         history2           Iron         ppm         ASTM D5185m         >30.0         44         121         16           Chromium         ppm         ASTM D5185m         >5         0         <1         12           Nickel         ppm         ASTM D5185m         >4         0         0         <1         <1           Silver         ppm         ASTM D5185m         >10         <1         <1         <1           Silver         ppm         ASTM D5185m         >10         <1         <1         <1           Aluminum         ppm         ASTM D5185m         >10         <1         <1         <1           Copper         ppm         ASTM D5185m         >20         0         <1		hrs					17824
Cilic Changed   Cilic Changed   NORMAL   ABNORMAL   ATTENTION   NORMAL   ABNORMAL   ATTENTION   ATTENTION   MORMAL   ABNORMAL   ATTENTION   MORMAL   ATTENTION   MORMAL   ATTENTION   MORMAL   ATTENTION   MORMAL   ATTENTION   MORMAL   ATTENTION   ATTENTION   MORMAL   ATTENTION   MORMAL   ATTENTION   MORMAL   ATTENTION   MORMAL   ATTENTION   ATTENTION   MORMAL   ATTENTION   ATTENTION   MORMAL   ATTENTION   ATTENTION   MORMAL   MO		hrs	Client Info		1197	0	0
CONTAMINATION			Client Info			Changed	N/A
Water         WC Method         >0.1         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >300         44         121         16           Chromium         ppm         ASTM D5185m         >5         0         <1	-					Ü	ATTENTION
WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >300         44         121         16           Chromium         ppm         ASTM D5185m         >5         0         -1         12           Nickel         ppm         ASTM D5185m         >4         0         0         0           Titanium         ppm         ASTM D5185m         0         -1         -1         -1           Silver         ppm         ASTM D5185m         0         -1         -1         -1           Aluminum         ppm         ASTM D5185m         >120         0         -1         -1         -1           Lead         ppm         ASTM D5185m         >120         0         -1	CONTAMINATION	١	method	limit/base	current	history1	history2
Irron	Water		WC Method	>0.1	NEG	NEG	NEG
Chromium         ppm         ASTM D5185m         >5         0         <1         12           Nickel         ppm         ASTM D5185m         >4         0         0         0           Titanium         ppm         ASTM D5185m         0         <1         <1           Siliver         ppm         ASTM D5185m         0         <1         <1           Aluminum         ppm         ASTM D5185m         >10         <1         <1         <1           Aluminum         ppm         ASTM D5185m         >120         0         <1         <1            Lead         ppm         ASTM D5185m         >120         0         <1         <1            Lead         ppm         ASTM D5185m         >120         0         <1         <1            Lead         ppm         ASTM D5185m         >15         <1         <1         <1         <1           Antimony         ppm         ASTM D5185m         0         0         0         0         0           Vanadium         ppm         ASTM D5185m         0         0         0         0         0           ADDITIVES         method <t< td=""><td>WEAR METALS</td><td></td><td>method</td><td>limit/base</td><td>current</td><td>history1</td><td>history2</td></t<>	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>300	44	121	16
Description	Chromium	ppm	ASTM D5185m	>5	0	<1	12
Silver	Nickel	ppm	ASTM D5185m	>4	0	0	0
ASTM D5185m   >10	Titanium	ppm	ASTM D5185m		0	<1	<1
Lead         ppm         ASTM D5185m         >120         0         <1         <1           Copper         ppm         ASTM D5185m         >200         10         11         7           Tin         ppm         ASTM D5185m         >15         <1	Silver	ppm	ASTM D5185m		0	<1	<1
Lead         ppm         ASTM D5185m         >120         0         <1         <1           Copper         ppm         ASTM D5185m         >200         10         11         7           Tin         ppm         ASTM D5185m         >15         <1	Aluminum	ppm	ASTM D5185m	>10	<1	<1	2
Tin ppm ASTM D5185m >15 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	Lead		ASTM D5185m	>120	0	<1	<1
Tin ppm ASTM D5185m >1.5 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	Copper	ppm	ASTM D5185m	>200	10	11	7
Antimony         ppm         ASTM D5185m           0           Vanadium         ppm         ASTM D5185m         0         0         0           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         0         0           Molybdenum         ppm         ASTM D5185m         0         5         26         68           Manganese         ppm         ASTM D5185m         2         3         <1         2           Magnesium         ppm         ASTM D5185m         2         8         23           Calcium         ppm         ASTM D5185m         38         71         2577           Phosphorus         ppm         ASTM D5185m         75         69         1075           Sulfur         ppm         ASTM D5185m         75         7         3         9           Contamination         ppm         ASTM D5185m<		ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium         ppm         ASTM D5185m         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         <1           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         46         72         68           Barium         ppm         ASTM D5185m         0         0         0           Molybdenum         ppm         ASTM D5185m         0         5         26           Manganese         ppm         ASTM D5185m         2         3         <1           Magnesium         ppm         ASTM D5185m         2         8         23           Calcium         ppm         ASTM D5185m         38         71         2577           Phosphorus         ppm         ASTM D5185m         510         1194         958           Zinc         ppm         ASTM D5185m         75         69         1075           Sulfur         ppm         ASTM D5185m         75         7         3         9           Sodium         ppm         ASTM D5185m         >75         7         3         9 <td>Antimony</td> <td></td> <td>ASTM D5185m</td> <td></td> <td></td> <td></td> <td>0</td>	Antimony		ASTM D5185m				0
Cadmium         ppm         ASTM D5185m         0         0         <1           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         46         72         68           Barium         ppm         ASTM D5185m         0         0         0           Molybdenum         ppm         ASTM D5185m         0         5         26           Manganese         ppm         ASTM D5185m         2         3         <1           Magnesium         ppm         ASTM D5185m         2         8         23           Calcium         ppm         ASTM D5185m         38         71         2577           Phosphorus         ppm         ASTM D5185m         75         69         1075           Sulfur         ppm         ASTM D5185m         75         69         1075           Sulfur         ppm         ASTM D5185m         >75         7         3         9           Sodium         ppm         ASTM D5185m         >75         7         3         9           Sodium         ppm         ASTM D5185m         >20         3         1 <td>•</td> <td></td> <td></td> <td></td> <td>0</td> <td>0</td> <td></td>	•				0	0	
Boron	Cadmium		ASTM D5185m				<1
Barium         ppm         ASTM D5185m         0         0         0           Molybdenum         ppm         ASTM D5185m         0         5         26           Manganese         ppm         ASTM D5185m         2         3         <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         0         5         26           Manganese         ppm         ASTM D5185m         2         3         <1	Boron	ppm	ASTM D5185m		46	72	68
Manganese         ppm         ASTM D5185m         2         3         <1           Magnesium         ppm         ASTM D5185m         2         8         23           Calcium         ppm         ASTM D5185m         38         71         2577           Phosphorus         ppm         ASTM D5185m         510         1194         958           Zinc         ppm         ASTM D5185m         75         69         1075           Sulfur         ppm         ASTM D5185m         11357         18423         5419           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >75         7         3         9           Sodium         ppm         ASTM D5185m         >20         3         1         0           VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE         NONE           Yellow Metal         scalar         *Visual         NONE         NONE         NONE           Yellow Metal         scalar         *Visual </td <td>Barium</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <td>0</td> <td>0</td> <td>0</td>	Barium	ppm	ASTM D5185m		0	0	0
Magnesium         ppm         ASTM D5185m         2         8         23           Calcium         ppm         ASTM D5185m         38         71         2577           Phosphorus         ppm         ASTM D5185m         510         1194         958           Zinc         ppm         ASTM D5185m         75         69         1075           Sulfur         ppm         ASTM D5185m         11357         18423         5419           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >75         7         3         9           Sodium         ppm         ASTM D5185m         >3         4         4           Potassium         ppm         ASTM D5185m         >20         3         1         0           VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE         NONE           Yellow Metal         scalar         *Visual         NONE         NONE         NONE         NONE	Molybdenum	ppm	ASTM D5185m		0	5	26
Calcium         ppm         ASTM D5185m         38         71         2577           Phosphorus         ppm         ASTM D5185m         510         1194         958           Zinc         ppm         ASTM D5185m         75         69         1075           Sulfur         ppm         ASTM D5185m         11357         18423         5419           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >75         7         3         9           Sodium         ppm         ASTM D5185m         >20         3         1         0           VISUAL         method         limit/base         current         history1         history2           VISUAL         method         limit/base         current         history1         history2           VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE         NONE           Yellow Metal         scalar         *Visual         NONE         NONE </td <td>Manganese</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <td>2</td> <td>3</td> <td>&lt;1</td>	Manganese	ppm	ASTM D5185m		2	3	<1
Calcium         ppm         ASTM D5185m         38         71         2577           Phosphorus         ppm         ASTM D5185m         510         1194         958           Zinc         ppm         ASTM D5185m         75         69         1075           Sulfur         ppm         ASTM D5185m         11357         18423         5419           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >75         7         3         9           Sodium         ppm         ASTM D5185m         >20         3         1         0           VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE         NONE           Yellow Metal         scalar         *Visual         NONE         NONE         NONE         NONE           Yellow Metal         scalar         *Visual         NONE         NONE         NONE         NONE           Yellow Metal         scalar         *Visual         NONE         NO	-	ppm	ASTM D5185m		2	8	23
Phosphorus         ppm         ASTM D5185m         510         1194         958           Zinc         ppm         ASTM D5185m         75         69         1075           Sulfur         ppm         ASTM D5185m         11357         18423         5419           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >75         7         3         9           Sodium         ppm         ASTM D5185m         >75         7         3         9           Sodium         ppm         ASTM D5185m         >20         3         1         0           VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE         NONE           Yellow Metal         scalar         *Visual         NONE         NONE         NONE           Precipitate         scalar         *Visual         NONE         NONE         NONE           Silt         scalar         *Visual         NONE         NONE         NONE           Debris         s	-		ASTM D5185m		38	71	2577
Zinc         ppm         ASTM D5185m         75         69         1075           Sulfur         ppm         ASTM D5185m         11357         18423         5419           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >75         7         3         9           Sodium         ppm         ASTM D5185m         3         4         4           Potassium         ppm         ASTM D5185m         >20         3         1         0           VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         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 <td< td=""><td>Phosphorus</td><td></td><td>ASTM D5185m</td><td></td><td></td><td>1194</td><td>958</td></td<>	Phosphorus		ASTM D5185m			1194	958
Sulfur         ppm         ASTM D5185m         11357         18423         5419           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >75         7         3         9           Sodium         ppm         ASTM D5185m         >3         4         4           Potassium         ppm         ASTM D5185m         >20         3         1         0           VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE         MODER         NONE           Yellow Metal         scalar         *Visual         NONE         NONE         NONE         NONE         NONE           Precipitate         scalar         *Visual         NONE         NONE         NONE         NONE         NONE           Silt         scalar         *Visual         NONE         NONE         NONE         NONE         NONE           Debris         scalar         *Visual         NONE         NONE         NONE         NONE         NONE           Sand/Dirt </td <td></td> <td></td> <td>ASTM D5185m</td> <td></td> <td>75</td> <td>69</td> <td>1075</td>			ASTM D5185m		75	69	1075
Silicon					11357		
Sodium         ppm         ASTM D5185m         3         4         4           Potassium         ppm         ASTM D5185m         >20         3         1         0           VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         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         NONE           Sand/Dirt         scalar         *Visual         NORML         NORML         NORML         NORML           Odor         scalar         *Visual         NORML         NORML         NORML         NORML	CONTAMINANTS		method	limit/base	current	history1	history2
Sodium         ppm         ASTM D5185m         3         4         4           Potassium         ppm         ASTM D5185m         >20         3         1         0           VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         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         NONE           Sand/Dirt         scalar         *Visual         NORML         NORML         NORML         NORML         NORML           Odor         scalar         *Visual         NORML         NORML         NORML         NORML         NORML	Silicon	maa	ASTM D5185m	>75	7	3	9
Potassium ppm ASTM D5185m >20 <b>3</b> 1 0  VISUAL method limit/base current history1 history2  White Metal scalar *Visual NONE NONE NONE NONE NONE  Yellow Metal scalar *Visual NONE NONE NONE NONE NONE  Precipitate scalar *Visual NONE NONE NONE NONE NONE  Silt scalar *Visual NONE NONE NONE NONE NONE  Debris scalar *Visual NONE NONE NONE NONE NONE  Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE  Appearance scalar *Visual NORML NORML NORML NORML  Odor scalar *Visual NORML NORML NORML NORML  NORML NORML							
White Metal scalar *Visual NONE NONE MODER 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				>20			
Yellow Metalscalar*VisualNONENONENONENONEPrecipitatescalar*VisualNONENONENONENONESiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORML	VISUAL		method	limit/base	current	history1	history2
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	White Metal	scalar	*Visual	NONE	NONE	▲ MODER	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	Yellow Metal	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	Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORML	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORML	Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Appearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORML	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Odor scalar *Visual NORML NORML NORML NORML	_						
	Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG

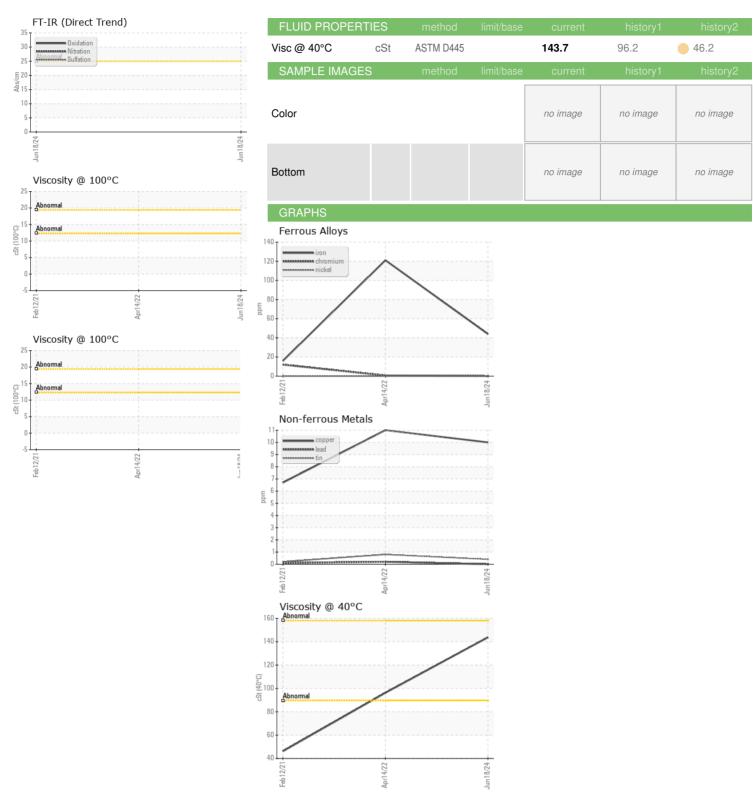
mitter By: TECH TEGHNICIAN

NEG

scalar \*Visual



# **OIL ANALYSIS REPORT**







Certificate 12367

Sample No.

: WC0868315 Lab Number : 06216684 Unique Number : 11089548

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 21 Jun 2024 Tested : 26 Jun 2024 Diagnosed

: 26 Jun 2024 - Jonathan Hester

Test Package : CONST (Additional Tests: FT-IR, KV100) 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)

SHIMMICK CONSTRUCTION

5535 TRAILHEAD DRIVE CHATTANOOGA, TN US 37415

Contact: DANIEL LISELLA

daniel.lisella@shimmick.com T:

F: