



WEAR CHECK

OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	SEVERE
FLUID CONDITION	NORMAL



Machine Id
CATERPILLAR 299D SKIDSTEER 040-0019 (S/N CAT0299DAFD204356)

Component
Left Final Drive

Fluid
SCHAEFFER SCHAEFFER 293 MOLY 75W90 (1 QTS)

RECOMMENDATION

We advise that you check all areas where dirt can enter the system. We advise that you check for the source of water entry. We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

WEAR

Gear wear is indicated.

CONTAMINATION

Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. There is a high concentration of water present in the oil.

FLUID CONDITION

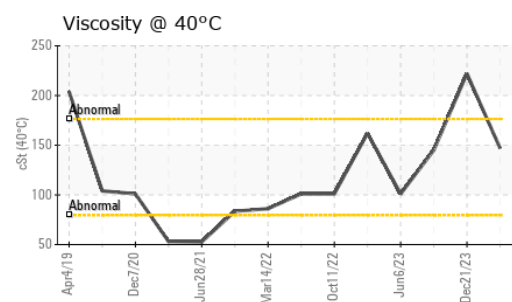
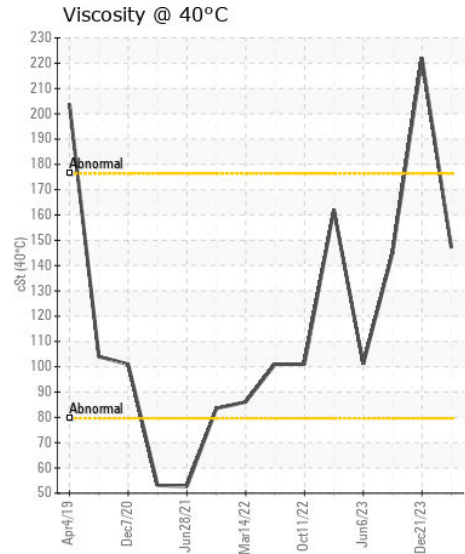
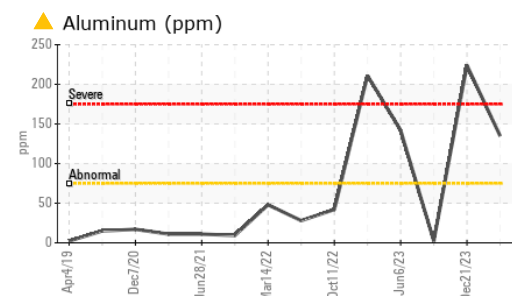
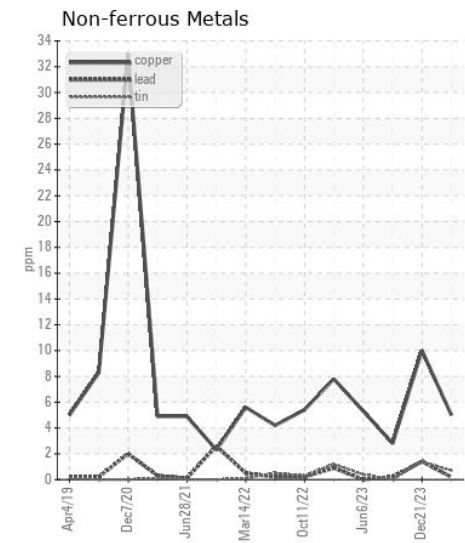
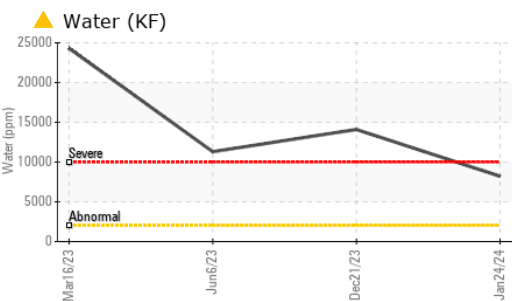
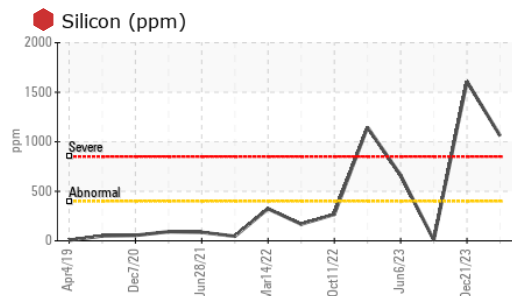
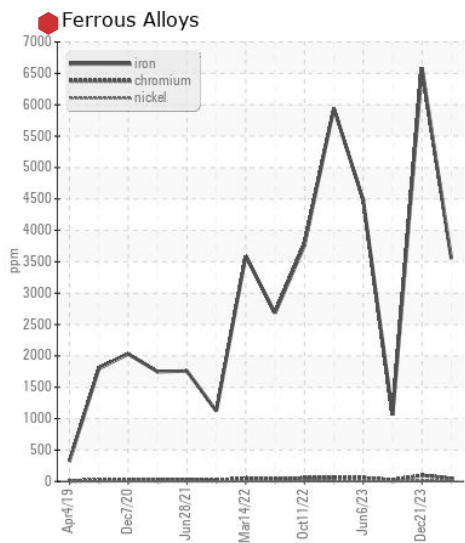
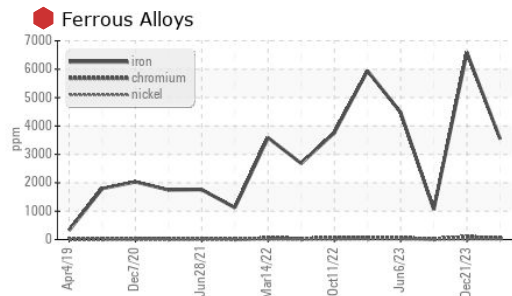
The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0868416	WC0868389	WC0815227
Sample Date		Client Info		24 Jan 2024	21 Dec 2023	03 Oct 2023
Machine Age	hrs	Client Info		11409	11252	10384
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Changed	Not Changd
Filter Changed		Client Info		N/A	Not Changd	Not Changd
Sample Status				SEVERE	SEVERE	ABNORMAL

Iron	ppm	ASTM D5185m	>800	3548	6586	1060
Chromium	ppm	ASTM D5185m	>10	47	98	22
Nickel	ppm	ASTM D5185m	>5	4	8	2
Titanium	ppm	ASTM D5185m	>15	8	13	<1
Silver	ppm	ASTM D5185m	>2	<1	<1	0
Aluminum	ppm	ASTM D5185m	>75	135	224	2
Lead	ppm	ASTM D5185m	>10	<1	1	<1
Copper	ppm	ASTM D5185m	>75	5	10	3
Tin	ppm	ASTM D5185m	>8	<1	1	0
Vanadium	ppm	ASTM D5185m		<1	1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

Silicon	ppm	ASTM D5185m	>400	1061	1608	9
Potassium	ppm	ASTM D5185m	>20	36	57	4
Water	%	ASTM D6304	>0.2	0.822	1.41	---
ppm Water	ppm	ASTM D6304	>2000	8215	14100	---
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	>0.2	NEG	0.2%	NEG

Sodium	ppm	ASTM D5185m		6	8	<1
Boron	ppm	ASTM D5185m		65	167	32
Barium	ppm	ASTM D5185m		2	3	0
Molybdenum	ppm	ASTM D5185m		242	124	80
Manganese	ppm	ASTM D5185m		32	60	11
Magnesium	ppm	ASTM D5185m		97	149	0
Calcium	ppm	ASTM D5185m		1368	2088	41
Phosphorus	ppm	ASTM D5185m		733	1160	1004
Zinc	ppm	ASTM D5185m		37	27	13
Sulfur	ppm	ASTM D5185m		16218	28357	21028
Visc @ 40°C	cSt	ASTM D445		147	222	145



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0868416 **Received** : 30 Jan 2024
Lab Number : 06074223 **Diagnosed** : 31 Jan 2024
Unique Number : 10856314 **Diagnostician** : Jonathan Hester
Test Package : CONST (Additional Tests: KF)

SHIMMICK CONSTRUCTION
 5535 TRAILHEAD DRIVE
 CHATTANOOGA, TN
 US 37415
 Contact: DANIEL LISELLA
 daniel.lisella@shimmick.com
 T:
 F:

Certificate L2367
 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)