



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. The oil change at the time of sampling has been noted. 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

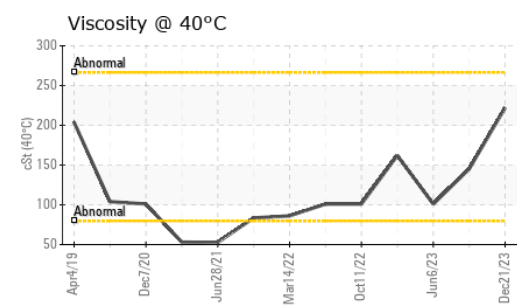
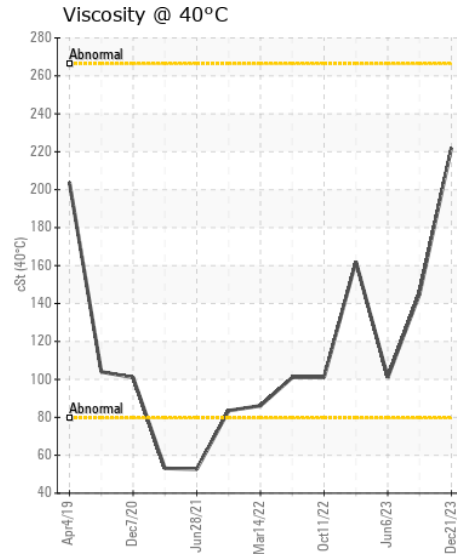
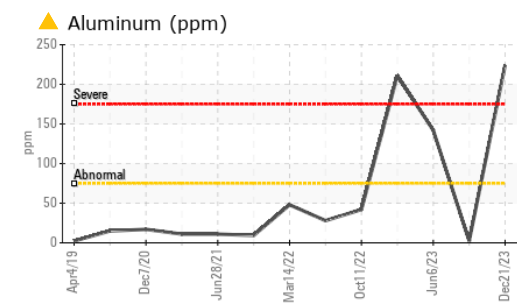
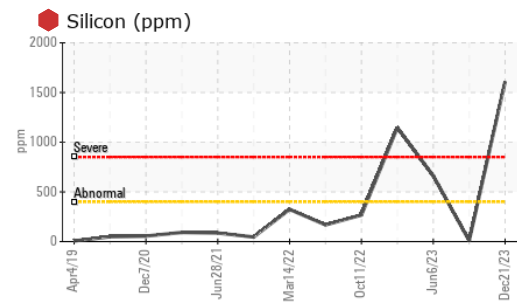
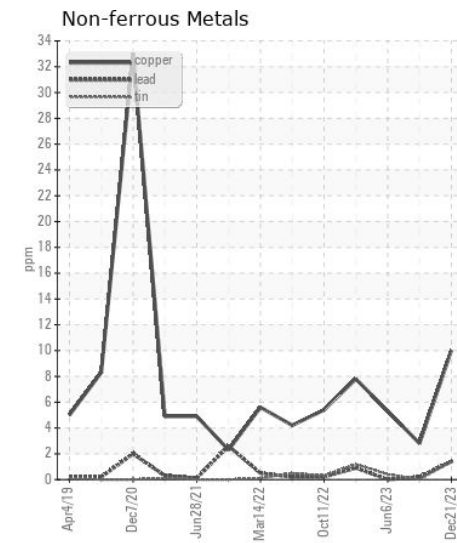
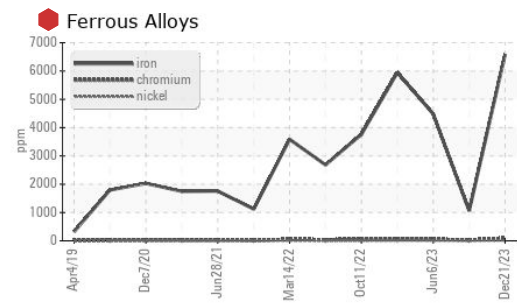
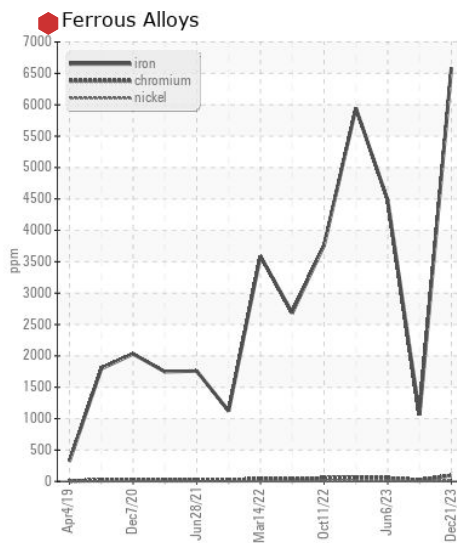
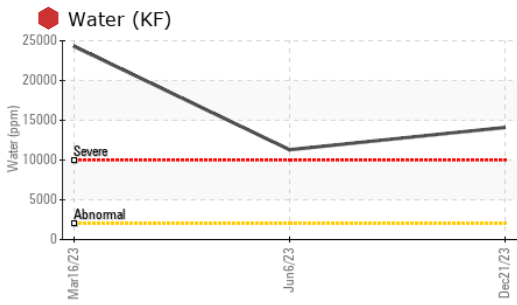
The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0868389	WC0815227	WC0815193
Sample Date		Client Info		21 Dec 2023	03 Oct 2023	06 Jun 2023
Machine Age	hrs	Client Info		11252	10384	9154
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Not Chngd	Changed
Filter Changed		Client Info		Not Chngd	Not Chngd	Changed
Sample Status				SEVERE	ABNORMAL	SEVERE

Iron	ppm	ASTM D5185m	>800	6586	1060	4480
Chromium	ppm	ASTM D5185m	>10	98	22	57
Nickel	ppm	ASTM D5185m	>5	8	2	7
Titanium	ppm	ASTM D5185m	>15	13	<1	7
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>75	224	2	142
Lead	ppm	ASTM D5185m	>10	1	<1	0
Copper	ppm	ASTM D5185m	>75	10	3	5
Tin	ppm	ASTM D5185m	>8	1	0	<1
Vanadium	ppm	ASTM D5185m		1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

Silicon	ppm	ASTM D5185m	>400	1608	9	662
Potassium	ppm	ASTM D5185m	>20	57	4	32
Water	%	ASTM D6304	>0.2	1.41	---	1.13
ppm Water	ppm	ASTM D6304	>2000	14100	---	11300
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	0.2%	NEG	0.2%

Sodium	ppm	ASTM D5185m		8	<1	4
Boron	ppm	ASTM D5185m		167	32	53
Barium	ppm	ASTM D5185m		3	0	0
Molybdenum	ppm	ASTM D5185m		124	80	272
Manganese	ppm	ASTM D5185m		60	11	37
Magnesium	ppm	ASTM D5185m		149	0	74
Calcium	ppm	ASTM D5185m		2088	41	1112
Phosphorus	ppm	ASTM D5185m		1160	1004	582
Zinc	ppm	ASTM D5185m		27	13	37
Sulfur	ppm	ASTM D5185m		28357	21028	14866
Visc @ 40°C	cSt	ASTM D445		222	145	101



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0868389 **Received** : 30 Jan 2024
Lab Number : 06074221 **Diagnosed** : 31 Jan 2024
Unique Number : 10856312 **Diagnostician** : Jonathan Hester
Test Package : CONST (Additional Tests: KF)

SHIMMICK CONSTRUCTION
 5535 TRAILHEAD DRIVE
 CHATTANOOGA, TN
 US 37415
 Contact: DANIEL LISELLA
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 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)