



WEAR	ATTENTION
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Machine Id
CATERPILLAR 299 E187
Component
Left Final Drive
Fluid
GEAR OIL SAE 80W90 (--- GAL)

RECOMMENDATION

We advise that you check all areas where dirt can enter the system. Oil and 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

Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

FLUID CONDITION

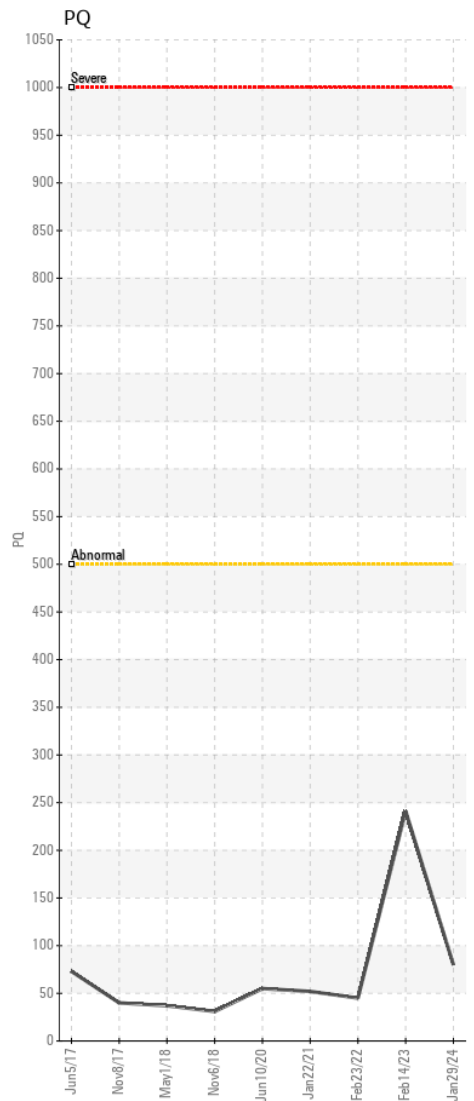
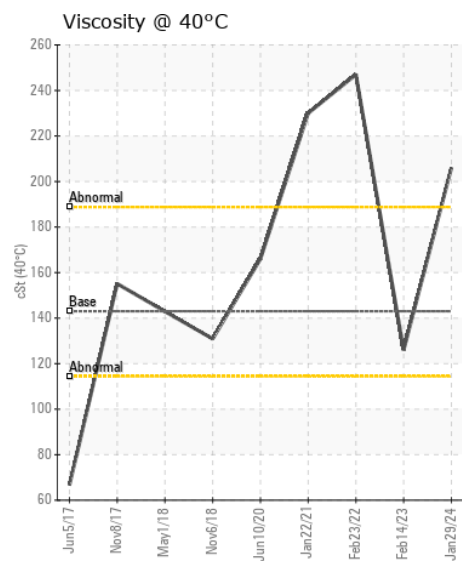
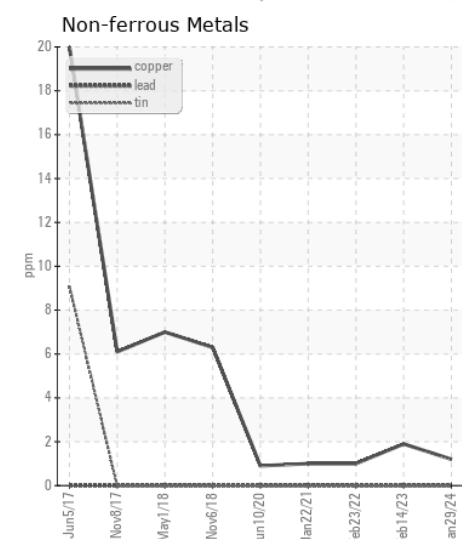
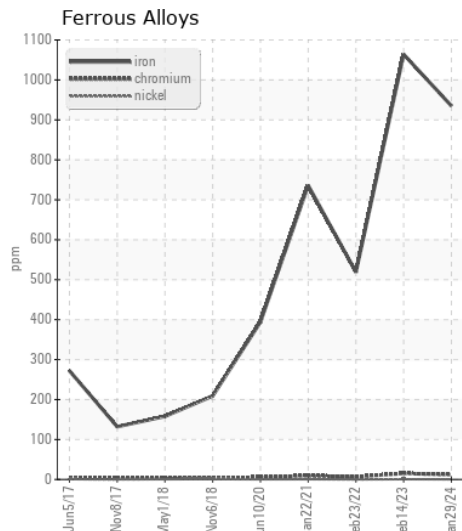
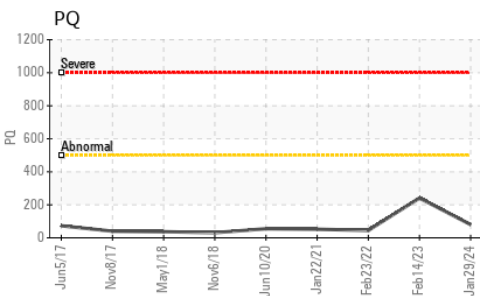
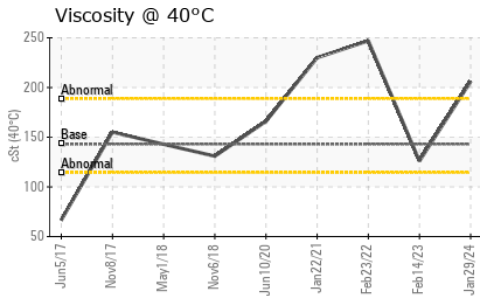
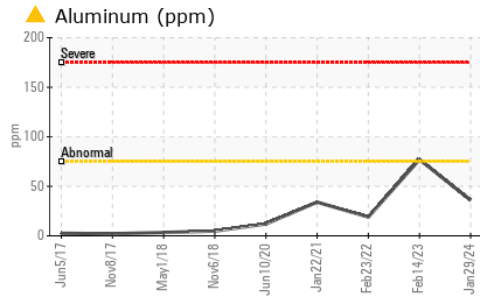
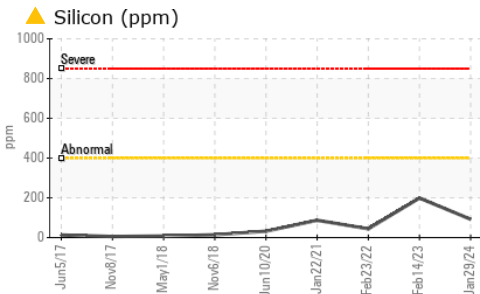
The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0198036	JR0144389	JR0119344
Sample Date		Client Info		29 Jan 2024	14 Feb 2023	23 Feb 2022
Machine Age	hrs	Client Info		6301	5780	5255
Oil Age	hrs	Client Info		521	525	556
Filter Age	hrs	Client Info		521	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	NORMAL

PQ		ASTM D8184	>500	80	241	45
Iron	ppm	ASTM D5185m	>800	935	▲ 1064	519
Chromium	ppm	ASTM D5185m	>10	12	▲ 15	7
Nickel	ppm	ASTM D5185m	>5	<1	<1	0
Titanium	ppm	ASTM D5185m	>15	2	6	1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>75	▲ 36	▲ 77	19
Lead	ppm	ASTM D5185m	>10	0	0	0
Copper	ppm	ASTM D5185m	>75	1	2	1
Tin	ppm	ASTM D5185m	>8	0	0	0
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

Silicon	ppm	ASTM D5185m	>400	▲ 92	▲ 199	44
Potassium	ppm	ASTM D5185m	>20	4	7	2
Water		WC Method	>0.2	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	VLITE
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	NEG	NEG

Sodium	ppm	ASTM D5185m	>170	3	9	3
Boron	ppm	ASTM D5185m	400	214	278	247
Barium	ppm	ASTM D5185m	200	1	<1	0
Molybdenum	ppm	ASTM D5185m	12	0	<1	<1
Manganese	ppm	ASTM D5185m		6	10	4
Magnesium	ppm	ASTM D5185m	12	6	7	5
Calcium	ppm	ASTM D5185m	150	37	24	6
Phosphorus	ppm	ASTM D5185m	1650	956	1061	936
Zinc	ppm	ASTM D5185m	125	0	7	3
Sulfur	ppm	ASTM D5185m	22500	18754	21202	15613
Visc @ 40°C	cSt	ASTM D445	143	206	126	247



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0198036 **Received** : 07 Feb 2024
Lab Number : 06082788 **Tested** : 08 Feb 2024
Unique Number : 10870233 **Diagnosed** : 09 Feb 2024 - Sean Felton
Test Package : CONST (Additional Tests: PQ)

MATTHEWS CONSTRUCTION
 127 GRAYSON RD
 ROCK HILL, SC
 US 29732
 Contact: Tad Clinton
 tclinton@matthewsconstructionco.com
 T: (803)207-5607
 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)