



H177-56115-0207 No Action Required

C147 ASE02482 - CAT 14H

Transmission & Differential Unit Group :-

Customer : GUTIERREZ CANALES ENGINEERING PC

SOS SERVICES

Interpretation

Interpreted by: Brandon Hepler; 04/27/2026

NO PROBLEMS PRESENTLY ASSOCIATED WITH THIS SAMPLE. CONTINUE SAMPLING AT THE NORMAL INTERVAL.

For additional sample history go to vl.cat.com

Sample Information

Action Required Monitor No Action No Comment

Sample Date	04/22/2026	09/20/2024	10/13/2023
Sample ID	H177-56115-0207	H177-54270-0620	H160-53291-0147
Lab Date	04/27/2026	09/26/2024	10/18/2023
Submitted Date	04/27/2026	09/26/2024	08/31/2024
Service Meter	18,000.0 h	17,491.0 h	17,173.0 h
Comp. Meter	-	-	17,173.0 h
Meter on Fluid	18,000.0 h	17,491.0 h	17,173.0 h
Fluid Brand	-	-	-
Fluid Type	-	-	-
Fluid Grade	-	-	-
Fluid Change	Yes	No	No
Filter Change	Yes	Yes	No

Elemental Analysis by ICP

Sample Date	04/22/2026	09/20/2024	10/13/2023
Aluminum (PPM)	0	1	0
Barium (PPM)	0	0	0
Boron (PPM)	5	6	6
Cadmium (PPM)	0	-	-
Calcium (PPM)	2,934	3,282	3,768
Chromium (PPM)	1	0	1
Copper (PPM)	10	6	14
Iron (PPM)	16	16	60
Lead (PPM)	5	8	11
Magnesium (PPM)	29	46	36
Manganese (PPM)	0	0	1
Molybdenum (PPM)	4	5	3
Nickel (PPM)	0	1	0

Notice: This analysis is intended only as an aid in predicting mechanical wear. It does not replace or negate the need for usual maintenance. No guarantee, express or implied, is made against failure, deterioration, or damage of the equipment or its components.



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Elemental Analysis by ICP

Sample Date	✓ 04/22/2026	▲ 09/20/2024	◆ 10/13/2023
Phosphorus (PPM)	1,116	1,140	855
Potassium (PPM)	0	1	1
Silicon (PPM)	9	8	15
Silver (PPM)	0	0	0
Sodium (PPM)	7	4	8
Tin (PPM)	2	2	3
Titanium (PPM)	0	0	0
Vanadium (PPM)	0	0	0
Zinc (PPM)	1,304	1,350	1,190

Infrared

Sample Date	✓ 04/22/2026	▲ 09/20/2024	◆ 10/13/2023
Oxidation	3	3	5
Sulfur Products	22	15	12
Nitration	0	4	3
Soot	0	1	1
Antiwear	15	11	15

Viscosity at 100 °C

Sample Date	✓ 04/22/2026	▲ 09/20/2024	◆ 10/13/2023
Viscosity at 100 C (CST)	17.10	16.70	11.10

Particle Count

Sample Date	✓ 04/22/2026	▲ 09/20/2024	◆ 10/13/2023
4μ	22,010	9,956	77,534
6μ	1,390	616	22,373
10μ	57	78	1,026
14μ	14	28	93
21μ	3	9	10
25μ	1	5	4
38μ	0	2	1

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Particle Count

Sample Date	04/22/2026	09/20/2024	10/13/2023
70μ	0	0	1
ISO	22/18/11	20/16/12	23/22/14

Water

Sample Date	04/22/2026	09/20/2024	10/13/2023
Water	N	N	N

Antifreeze

Sample Date	04/22/2026	09/20/2024	10/13/2023
Antifreeze	N	N	N

Debris

Sample Date	04/22/2026	09/20/2024	10/13/2023
Debris	N	N	N

Particle Volume Indicator

Sample Date	04/22/2026	09/20/2024	10/13/2023
PVI	0.84	0.47	4.75

EMPIRE SOUTHWEST
1725 S Country Club Dr Mesa
85210-6003 USA

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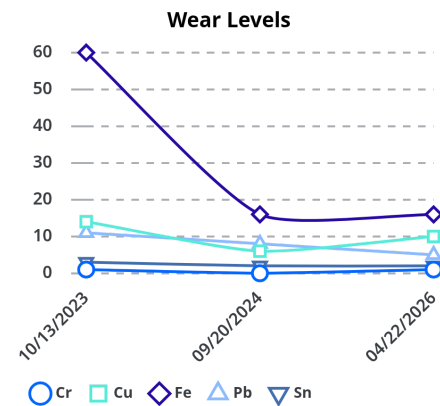
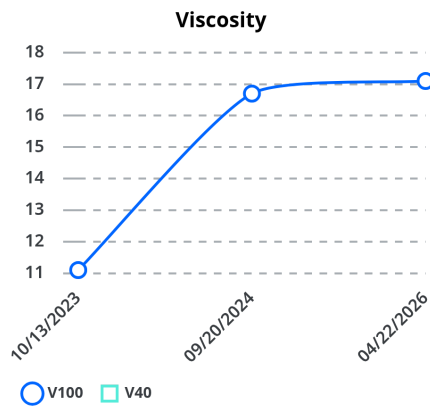
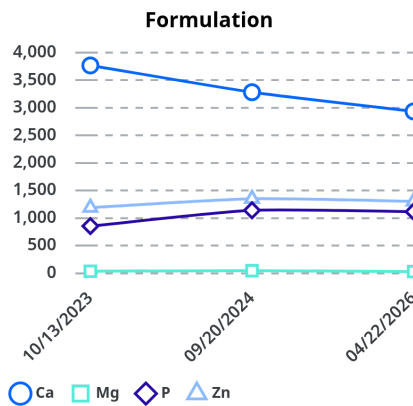
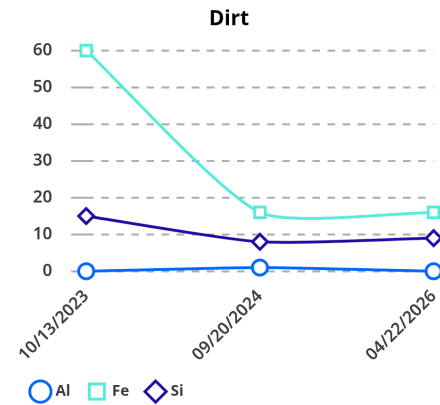
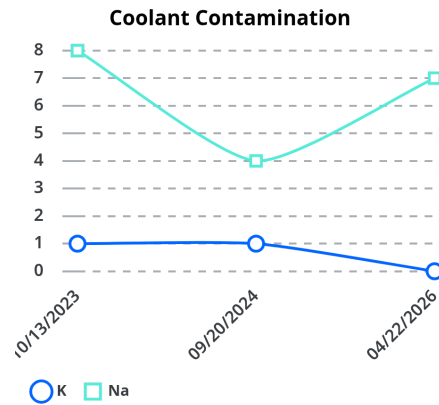
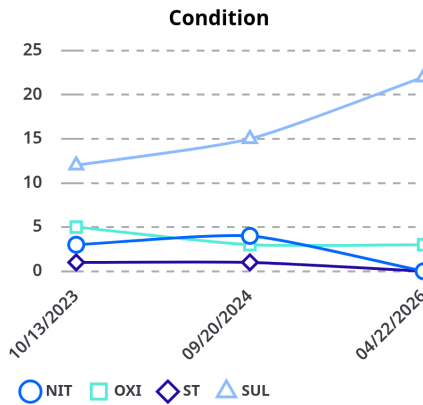
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