



H177-56115-0211 No Action Required

C147 ASE02482 - CAT 14H

Tandem Drive Left 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	08/08/2022
Sample ID	H177-56115-0211	H177-54270-0622	E480-52228-2013
Lab Date	04/27/2026	09/26/2024	08/16/2022
Submitted Date	04/27/2026	09/26/2024	08/31/2024
Service Meter	18,000.0 h	17,491.0 h	16,476.0 h
Comp. Meter	-	-	-
Meter on Fluid	1,524.0 h	1,015.0 h	2,550.0 h
Fluid Brand	CHEVRON	CHEVRON	CHEVRON
Fluid Type	-	-	-
Fluid Grade	30	30	30
Fluid Change	Yes	No	Yes
Filter Change	No	No	-

Elemental Analysis by ICP

Sample Date	04/22/2026	09/20/2024	08/08/2022
Aluminum (PPM)	1	1	3
Barium (PPM)	0	0	0
Boron (PPM)	4	5	9
Cadmium (PPM)	0	-	0
Calcium (PPM)	3,211	3,289	2,962
Chromium (PPM)	1	1	0
Copper (PPM)	5	2	28
Iron (PPM)	50	29	120
Lead (PPM)	3	3	17
Magnesium (PPM)	30	37	30
Manganese (PPM)	0	0	1
Molybdenum (PPM)	5	5	2
Nickel (PPM)	0	0	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	▲ 08/08/2022
Phosphorus (PPM)	1,215	1,143	827
Potassium (PPM)	0	1	0
Silicon (PPM)	12	11	35
Silver (PPM)	0	0	0
Sodium (PPM)	8	3	3
Tin (PPM)	0	1	0
Titanium (PPM)	1	1	0
Vanadium (PPM)	0	0	0
Zinc (PPM)	1,431	1,350	930

Infrared

Sample Date	✓ 04/22/2026	✓ 09/20/2024	▲ 08/08/2022
Oxidation	3	3	6
Sulfur Products	22	15	13
Nitration	0	4	4
Soot	0	2	0
Antiwear	15	10	15

Viscosity at 100 °C

Sample Date	✓ 04/22/2026	✓ 09/20/2024	▲ 08/08/2022
Viscosity at 100 C (CST)	17.30	17.00	13

Particle Count

Sample Date	✓ 04/22/2026	✓ 09/20/2024	▲ 08/08/2022
4μ	72,545	38,847	-
6μ	48,004	10,561	-
10μ	16,876	1,158	-
14μ	6,353	279	-
18μ	3,163	-	-
21μ	1,956	62	-
38μ	203	1	-

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Particle Count

Sample Date	✓ 04/22/2026	✓ 09/20/2024	▲ 08/08/2022
70μ	41	0	-
ISO	23/23/20	22/21/15	-
25μ	-	27	-

Water

Sample Date	✓ 04/22/2026	✓ 09/20/2024	▲ 08/08/2022
Water	N	N	N

Particle Volume Indicator

Sample Date	✓ 04/22/2026	✓ 09/20/2024	▲ 08/08/2022
PVI	36.90	2.67	-

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

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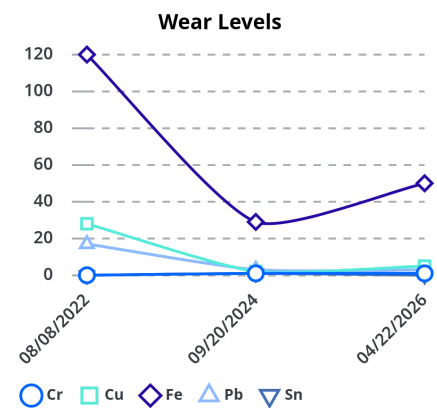
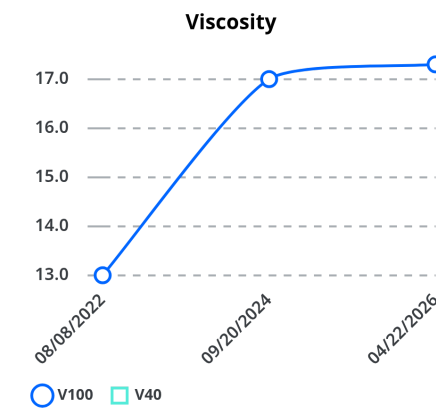
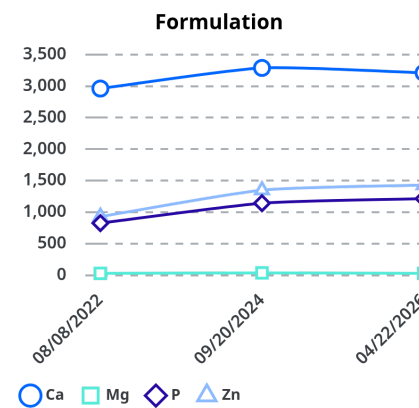
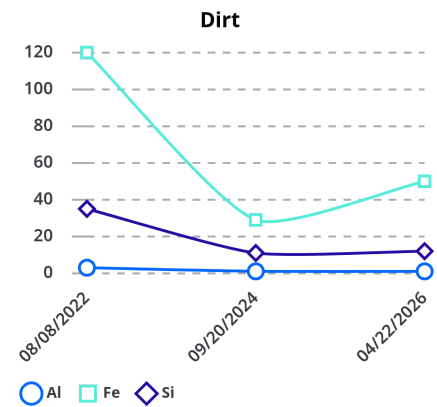
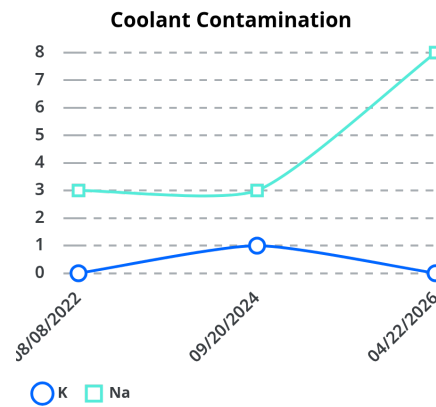
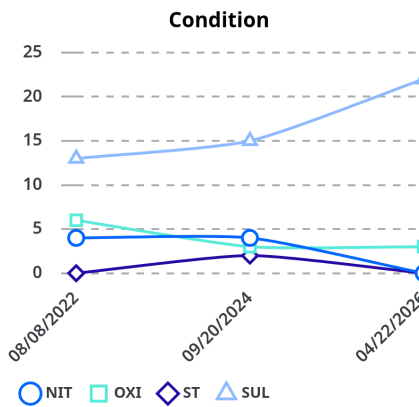
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