



CASE STUDY:

Henniges Automotive



EasyWater Series C Closed Loop Treatment System installed at Henniges Automotive

SERIES C - CLOSED LOOP CHILLED WATER TREATMENT

Project:	Henniges Automotive
Location:	New Haven, MO
Scope of Work:	Closed Loop Chilled Water Treatment
EasyWater Equipment:	(1) CLC-1000-S - Series C Closed Loop Treatment System

≈ PROBLEM

Henniges Automotive is a leading global supplier of highly engineered automotive sealing and anti-vibration solutions. Their New Haven, MO, facility has 8 closed loop chilled water systems with vented tanks used for process cooling. The vented tanks cause high levels of dissolved oxygen, creating major corrosion to equipment, piping and other components.

Steve Cronin, Finishing Engineer at Henniges, said the dissolved oxygen caused:

- ▶ “sludge, sediment and corrosion problems”
- ▶ “clogging of thermal control units and heat exchangers”
- ▶ “piping [to be] lined with deposits”
- ▶ “the water will turn to a brown sludge if not flushed often”

Despite chemically treating the loops and salt softening the makeup water, the maintenance team had to drain and flush their most troublesome loops weekly. **On their worst loop, the thermal control units were clogging every three days.**

Deposits and dissolved oxygen in the water were tested at a certified third party lab. The EDS analysis of the deposit was found to be “composed primarily of zinc and iron [from the Closed Loop System].” Dissolved oxygen was 9.13Mg/L. **The lab results confirmed the problem to be corrosion caused by dissolved oxygen.**

REPORT OF ANALYSIS			
SAMPLE ID: Water Sample			
UNITS: Milligrams Per Liter (Mg/L)			
ANALYTE	RESULTS	TEST METHOD	DATE OF ANALYSIS
Dissolved Oxygen	9.13	D.O. Probe	08/25/2020

Laboratory results of dissolved oxygen level in closed loop before Series C installation

“ Thank you for a great product and we look forward to adding more EasyWater treatment units to our other chiller systems. ”

— Steve Cronin, Finishing Engineer at Henniges



Front and side views of the EasyWater Series C Closed Loop Treatment System at Henniges Automotive

≈ SOLUTION

EasyWater Series C Model CLC-1000-S (Closed Loop Chilled - Skid-Mounted). This automatic backwashing, skid-mounted system provides cost effective, low maintenance, non-chemical treatment for closed loops. This unique, three-part solution contains:

- ▶ Proprietary filtration media that continuously removes dissolved oxygen
- ▶ Sub-micron, self-backwashing filter for the removal of sediment, debris, and bacteria
- ▶ EasyWater No-Salt Conditioners to prevent and remove insulating deposits, as well as biofilm and bacteria

≈ RESULTS

An EasyWater CLC-1000-S arrived on November 11, 2020 to treat Henniges Automotive's "worst loop" that required flushing every three days. According to Steve Cronin, the system took less than two hours to install. Before the installation, Steve tested the dissolved oxygen level and it was 11 ppm.

Three weeks later, the dissolved oxygen was dramatically lower, and there wasn't a single clogged thermal control unit despite the loop never having been flushed.

Since installation of the Series C System:

- ▶ The dissolved oxygen level has been extremely low
- ▶ Henniges hasn't had a single thermal control unit clog
- ▶ They haven't had to flush the system

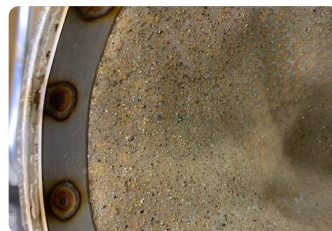
Henniges is so pleased with the results, they installed a second CLC-1000-S for another closed loop at their New Haven facility. They are also obtaining quotations for treating additional closed loops with Series C, as well as cooling towers with EasyWater's CTF System.



BEFORE - Exterior view of clogged prefilter for thermal control unit



AFTER - Clean prefilter for thermal control unit after one month of EasyWater Series C installation



BEFORE - Interior view of clogged prefilter for thermal control unit



AFTER - One month after adding EasyWater Series C Closed Loop Treatment System