



H1 Quinplex® Penetrating Oil & Lubricant (4058)

Claxton Poultry Farms – Claxton, Ga.

Process Chains

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Customer Profile

Claxton Poultry Farms is one of the largest family owned broiler production companies in the United States. In business since 1949, they produce over 300,000,000 lbs of chicken per year with worldwide sales.

Application

Claxton Poultry Farms operates approximately 8,000 ft of process chain on overhead rails in their poultry plant. They run 16 hours a day, five days a week. The automatic re-hangers, which move the chicken from one line to another, require constant monitoring of the chain's stretch so that birds are not missed or dropped.

Tac-lube and Green Line series 348 chain is used primarily, but there are also several thousand feet of flex line link type log chain in use.

Live chickens are loaded on the process chains at one end of the plant, and packaged chilled or frozen poultry leaves the other end of the plant. These process chains run in an environment of constant water spray, constant air movement, high humidity and high heat followed by extreme cold.

Challenge

Steve Sammons, maintenance manager, was looking for a way to improve cleanliness and reliability of the overhead conveyor chain and rails in their plant. The problem was the traditional methods of cleaning and lubricating the chain and track were ineffective and contaminant buildup was becoming a problem. The contamination settles on the rails and builds up to the extent that the wheels squeeze it off while running and cause a condition the USDA calls flecking,

on the birds. This requires recleaning or loss of birds, neither one of which they desire.

Solution

Steve had been discussing, with the local LE lubrication consultant, a lubrication reliability program to clean and lengthen the life of the chains and rails used in the plant. A two pronged approach was agreed on following the pro forma suggested by the local LE consultant in his original proposal (see excerpt below).

"Process Chain Cleanup and Conversion to Lubrication Engineers Enhanced Lubricants"

We have one goal: A clean, lubricated, fleck/contaminate free chain to start running birds on Monday morning.

The general timeline for completion of the changeover would be: Conversion begins on a Friday night after sanitation cleanup.

I will be onsite to help the maintenance crew.

I will assist in hand spray down of the entire chain wheel track with H1 Quinplex® Penetrating Oil & Lubricant (4058) on both sides.

Quinplex 4058 will be hand applied with a pump up sprayer along the wheel track, both sides (as much as practical), to clean the track.

The purpose of this is to clean/dissolve "crud" in the track and wheels which will be considerable. This will make a mess (putting it mildly)! Preferably we will leave this on until Sunday night, to promote as much cleanup as possible. It will also dissolve the rust you currently see on your chain.



There will need to be at least two men assigned to this cleanup job Sunday night. Sunday night I will come in again with the maintenance crew. They will perform their normal sanitize clean down of this resultant mess.

Once cleanup is completed we will make a judgment call on whether or not to start lubricating your chain at that time with Quinplex® White Oil (4030). If sufficient Quinplex 4058 still remains on the chain, we may elect to wait until the following Friday after cleanup to apply Quinplex 4030 for three revolutions of the chain to ensure lubricant penetration. As Quinplex 4030 contains Quinplex and does not wash out, your weekly lubrication of the chain should only require one revolution of the chain to relubricate following the initial application.

From that point on, chain lubrication will occur once per week after the weekly shutdown and your normal heavy caustic cleanup.

Deviations from the original timeline occurred because they elected to commence spray down Saturday morning after the chains/rails had dried from Friday night's sanitization cleanup.

Several versions of pump-up sprayers, manual and electric, supplied by the local LE consultant, were experimented with, but by far the most effective was an ARO air pump with a five gallon bucket of Quinplex 4058 pumped through a polyethylene hose to a ten foot piece of pvc pipe used to make an extension wand with a 16-micron spray nozzle. This allowed them to reach out and spray down the elevated and difficult to reach rails and chains in awkward locations. This prevented losing excessive penetrating oil to airborne contamination by applying it to the working surfaces. Total usage was less than five gallons per 1,000 feet of chain/rail

applied. They also fabricated a spray head which they tied to a bracket on the rail to hold the six,16-micron nozzles, which rinses down the chain and wheels through three revolutions of the chain. Once they got the sprayer invention worked out, actual application time was less than one hour per 800 foot chain section.

Considerable time was spent covering the chiller vats with plastic. The reason for this is that "everything gets wet" while spraying off the rails. Washing down the rails on Sunday afternoon with high pressure water hoses and guns gets contamination everywhere, so a "soup to nuts" cleanup was required.

Secondly, they elected to wait until the following weekend to apply the Quinplex 4030 as the final coating of chain lube oil since so much of the Quinplex 4058 remained after the sanitization cleanup Sunday night.

Results

Steve Sammons said, "No additional labor was brought in to do either the product application or cleanup. Nobody believed it would work, but they gave us permission to try; now everyone is floored at how the rails look new again. LE was right, it started dripping immediately and kept dripping overnight, the longer you could let it soak the better. We will be doing the rest of our rails at the first opportunity. This product costs approximately one half of what our previous product costs, and the performance is no comparison."

Thank you to Steve Sammons, maintenance manager, and to Kendrick Pierce, LE lubrication consultant (pictured), for providing the information used in this report.



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Based on actual user experience. Individual results may vary. Not intended to supersede manufacturer specifications.