AMCOL Corporation

Helping industry meet ecological criteria since 1902

How One Aluminum Extrusion Plant Cut Lubrication Downtime by 59% with the AMCOL 3063-HMA2 Billet Lubrication System and 46 ILX Ejecteze

In aluminum extrusion, even small interruptions can have a major impact on productivity, tooling life, and maintenance costs. For one extrusion operation, recurring failures of billet lubrication were creating excessive downtime, frequent maintenance, and shortened dummy block life.

After installing the new AMCOL 3063-HMA2 billet lubrication system, the plant conducted a performance evaluation comparing operational data before and after the upgrade.

The results showed a dramatic improvement in reliability, reduced downtime, and longer uninterrupted production runs.

Why Billet Lubrication Matters in Aluminum Extrusion

In the aluminum extrusion process, the interaction between the hot billet and the press tooling is critical to maintaining operational efficiency.

One of the most heavily stressed components is the dummy block sealing ring, which is continuously exposed to extreme heat, friction, and pressure.

Without proper lubrication, hot aluminum adheres to the dummy block surface, leading to premature wear, increased maintenance, and press down time

The purpose of billet lubrication is to create a protective release barrier between the billet and tooling surfaces. When lubrication coverage is inconsistent, downtime and tooling failures quickly increase.

The AMCOL 3063-HMA2 spray system uses rotating nozzles that generate a controlled circular spray pattern. This creates a consistent, light film of 46 ILX Ejecteze across the billet face — including the outer edges where sticking problems often begin.

Project Scope

System Upgrade

- Legacy billet lubrication system replaced with the AMCOL 3063-HMA2 lubrication system with 46 ILX Ejecteze Billet Release Agent.
- Installation date: October 2, 2025

Evaluation Period

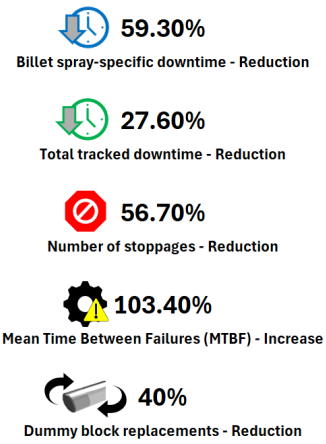
- 6 months before installation
- 6 months after installation

The Results: Major Reliability Improvements

The six-month comparison revealed significant operational gains after installation of the AMCOL system.

Key Performance Improvements

KPI	Improvement
Billet spray-specific downtime	59.3% reduction
Total tracked downtime	27.6% reduction
Number of stoppages	56.7% reduction
Mean Time Between Failures (MTBF)	103.4% increase
Dummy block replacements	40% reduction



One of the most important reliability metrics — Mean Time Between Failures (MTBF) — more than doubled after installation. The press was able to run for over 201 hours between stoppages compared to just 99 hours previously.

That improvement translated directly into:

- Fewer operator interventions
- Reduced maintenance demands
- More stable production scheduling
- Lower tooling consumption

The Problem with the Legacy Lubrication System

Before the upgrade, billet spray failures were the dominant cause of downtime.

Key Issues Included:

- Frequent sprayer malfunctions
- Spray leaks
- Inconsistent lubrication coverage
- Repeated maintenance repairs
- Pipe failures requiring emergency intervention

Billet spray issues alone accounted for 83% of all tracked downtime during the pre-installation evaluation period.

The system experienced 30 separate stoppage events in just six months, creating constant operational interruptions for both operators and maintenance teams.

One maintenance event alone required 1.3 hours to repair the existing sprayer system.

What Changed After Installing the AMCOL System

Following installation, spray-related downtime dropped dramatically.

The new rotating nozzle design delivered:

- More consistent lubricant application
- Improved edge coverage
- Reduced sticking events
- Greater process stability

The plant also observed a noticeable increase in component life. Dummy block replacements dropped from five events to only three during the evaluation period.

A New Operational Focus: Material Handling

The customer reported that the improvement in billet lubrication due to the upgrade to AMCOL 3063-HMA2 allowed them to focus on other operational challenges, rather than lubrication downtime.

They consider this a positive sign in continuous improvement projects: once a major reliability issue is resolved, secondary process inefficiencies become easier to identify and address.

Conclusion

The AMCOL billet lubrication project delivered measurable operational improvements across every major reliability metric.

By:

- Reducing targeted spray downtime by nearly 60%
- Lowering total downtime by over 27%
- Cutting stoppage frequency by more than half
- Doubling Mean Time Between Failures (MTBF)
- Extending fixpad life

...the system proved itself to be a highly stable and valuable upgrade for the extrusion operation.

Most importantly, the press now runs significantly longer between interruptions, requiring far less operator and maintenance intervention than the legacy lubrication system.

For extrusion plants focused on improving uptime, tooling life, and process stability, modern billet lubrication technology can deliver substantial operational value.