Tractor serial number registers from Waterloo and Dubuque.
While Brian Holst was in Ontario, Canada, celebrating the 40th anniversary of John Deere’s office in Grimsby, I had the opportunity to write the introduction to this issue of *The Plowshare*.

One of our main goals of *The Plowshare* is to lift the curtain on how John Deere collects and manages history. Our team is asked many times about what goes on behind the scenes at the Archives and in this issue, we hope to deepen your understanding of what a day in the life of the Archives is like.

One topic of interest is our tractor serial number research. Access to these records, which is critical to our understanding of tractor production, is a complicated and constant challenge. On the surface, access appears simple — a collector makes a request, someone looks up a number, and results are provided.

But as archivists, we manage each request with a different perspective. Our greatest responsibility is to protect and preserve the records. That means that every time we pull a book, photo, or manual, we assess the item’s condition and must discern the handling to best maintain the integrity of the artifact. It may sound simple, but being an archivist is never as easy as it sounds, especially when thousands of requests and repeated use over decades causes fading, torn pages, missing information due to page smudges, and other physical deterioration to the materials.

We appreciate and understand that without access, there would be no reason to maintain these records. That’s why this issue will walk you through the evolution of the tractor serial number records and how we are addressing a number of key issues to ensure the records are accessible today, tomorrow, and for generations of collectors to come.

Speaking of accessibility, since featuring the Power Train ’66 in our last issue, we’ve found exciting film footage of the Power Train in action. Over the last three months we have successfully conserved and digitized full-color footage of the Power Train ’66 chugging down the track. I hope you enjoy!

**NEIL DAHLSTROM**
Manager, Corporate History and Archives

[Check out the video here](#)

PRESERVING TRACTOR SERIAL NUMBERS

If you own a vintage John Deere tractor, it’s only natural that you would want to learn more about its origins. We hope to provide answers to the many questions you may have around the preservation and access of serial number records in the Deere & Company Archives. But first, a little history.

The Deere & Company Archives holds a variety of production-related records. Like all records, they lack uniformity or consistency in form and content, which you’ll see in the photos in this issue. The Waterloo-built production registers for tractors from 1918–1972 consist of 92 ledger books, ranging from 82 pages to over 1,100 pages. If you were interested in build information on any product that was manufactured at Des Moines Works — as far as we know, that information does not exist. What can be even more frustrating are the records in our possession that cannot be read, such as combine product data. These small books include numbers with no column headers to decode the information. Both staff and Harvester Works employees been unable to decipher the data for years.

Tractor records are, of course, of critical importance. This also means that they continue to be in high demand, which poses a series of challenges from an archival perspective.

The primary objective of any archive is to ensure the longevity of its collections. Ideally, that means storage in an underground facility, such as the salt mines used by the National Archives and Records Administration. This sometimes equates to limited public access and of course, does not work for serial number records. Fundamentally, Archives must work amidst the two opposing forces of preservation and access. In the case of the tractor serial number records, the Deere & Company Archives has focused on this since the department was formed in 1976. Since then, a variety of strategies have been implemented to facilitate and accelerate access while also preserving the original records. Some of this is driven by archival standards, some by new technologies, and some by factors altogether outside of our control.

TRANSCRIPTION

In the 1990s, the Archives and the Two-Cylinder Club collaborated on an eight-year project to transcribe the Waterloo-built tractor production registers into a series of databases. This project required manual transcription of the stamped and handwritten entries, as well as work to identify and translate codes that represented model configurations, equipment and other options, destinations, and more. Despite their efforts, many of these codes are still unidentified.
This page from the Models “BR,” “BO,” and “BI” register shows many of the preservation challenges with the records, including fading, tearing, smudges and soiling.

We do not know what this red notation means, but it’s on many pages.

This column includes equipment codes on some machines and additional notes. Many codes are known, but some are still a mystery. Also missing are engine and magneto numbers.

Destination notations include branches, the city and state of intended destination, but no information on dealerships or customers. These records would have been held by individual dealerships. In some cases, there are codes — these have not been deciphered yet.

Pencil notations smudge with overuse and in some cases are no longer legible.
Over those eight years, approximately 1.15 million records were transcribed, amounting to about two-thirds of the existing two-cylinder era serial number records. (This excluded models for which the Archives holds no records, such as the model “M”. This work was accomplished by ten different employees, with data then validated by Archives and Two-Cylinder Club staff.

This project had a tremendous impact and is the primary reason collectors have enjoyed access to these records for so many years. First, it provided more efficient access to serial number data and in many cases, eliminated the need to handle the original ledgers. Second, the databases dynamically translated the known codes, so generating results was easier — in most cases. Of course, a database solves some issues, but creates other challenges. In this case, some of the registers mixed model numbers, which causes database conflicts, which drives a manual review of all of the conflicting models and overlapping entries. There is also the challenge of illegible handwriting and as one might expect with manual data entry, an occasional transposed number or typing error. These are all issues that must be verified on the original ledgers and by someone with deep knowledge of the records.

MODERN DIGITAL PRESERVATION

Of course, technology has come a long way and today, we are faced with adolescence. The original database is nearing the end of its useful life, and attempts to migrate the data have been unsuccessful to date.

Today, we no longer manually transcribe the records, although there could be some advantages to that approach. Instead, the Archives has developed a digital preservation plan which seeks to both provide a digital capture of each page to preserve its current condition and the information contained on each page. Over a period of two years, several of our team members completed the training offered by the Society of American Archivists, worked with several suppliers, and conducted a series of pilot projects. This initial research and development allowed us to make key decisions on standards, processes, and long-term management solutions.

The Archives adopted the Open Archival Information System (OAIS) Reference Model, a standard of the International Organization for Standardization (ISO), as a guide to manage the long-term digital assets being created. This system helps us manage the digitization, storage, management of metadata, administration, future migration, and access of the files. To date, our work equates to nearly 100,000 digital files, and like the original eight-year transcription project, we are not yet through the two-cylinder era.

Not to oversimplify the challenges, but providing serial number research is growing more complicated every year due to the increasing complexity related to digital records management. Roughly translated, the digital versions will cost more, require more people, more time, take up a growing amount of permanent server space, and require regular digital file audits and software migrations.

AS PART OF OUR STRATEGY, WE HAVE RENEWED OUR PARTNERSHIP WITH THE TWO-CYLINDER CLUB, BOTH TO ENSURE ACCESS AND PRESERVATION. HERE’S WHY:

1. **Access equals damage.** Imagine reading your favorite book or magazine. Now imagine reading it and flipping through the pages 500 times a year, for 30 years. Chances are that you would have replaced the book many times due to damaged pages. Unfortunately, we can’t replace one-of-a-kind records. In addition to that, some of these records are nearly 100 years old and can’t tolerate the additional stress to their fragile pages. Plus, many of these records were stored in a factory environment for years before arriving to the temperate and humidity-controlled Archives facility. So many of the records were fragile to begin with.

2. **The Two-Cylinder Club staff are experts in interpreting the records.** For example, take the recent discovery of 4020 serial number registers that had been marked as duplicate records. Upon discovering the registers and reviewing them, it was clear they could hold some importance and value. Fortunately, the Two-Cylinder Club staff had the capabilities to make comparisons to existing 4020 registers and were able to decipher the records. This new information included LP tank numbers, and notations for Power Front Wheel Drive (PFWD), or “hydro” as they are referred to in the records in many cases.

3. **Serial number registers are not self-contained records.** What this means is that entries include listings of codes for equipment, destinations, etc. So to complete a request, staff may have to pull dozens of other paper records (specifications, decisions, etc) to determine what the codes mean. The Two-Cylinder Club staff has an impressive collection of many of these records and are able to conduct the necessary cross-referencing to provide a full interpretation of records in a timely manner.

So happy serial number hunting! Together we can ensure that these important records are still accessible 100 years from now. To request research, call the Two-Cylinder Club at 1-888-782-2582.
If you recently visited the John Deere Pavilion, you may have noticed a new addition to the exhibition floor. A few weeks ago, Historical Equipment Manager Brian Holst carefully placed a 1935 Model “DI” tractor into position.

Though much smaller than contemporary industrial equipment, few machines have left a greater mark on John Deere than this model. Originally manufactured in the summer of 1935, the “DI” tractor was the second official industrial tractor built and the first sold to the public from John Deere. John Deere tractors are utilized in many industries outside of the agricultural market and for years, customers requested specialized options to fit their unique needs.

Prior to 1935, John Deere provided specialty options, making agricultural tractors better suited for the construction industry. After years of increased demand for these specialized products, John Deere created the Industrial Equipment Division in 1956. This decision eventually led to what is known today as John Deere’s Construction and Forestry Division.

Visitors can come see this and many other pieces of John Deere equipment from across the company’s history at the John Deere Pavilion.
A farmer and his Model “DI” tractor pulling rotary scraper, 1936.
To celebrate the 50-year anniversary of this historic event, the John Deere Tractor & Engine Museum will open a new exhibit to the public on September 6, 2016. The exhibit, “A Leader in Safety: John Deere and the Rollover Protective Structure,” will explore the years of development behind Roll Gard. The display will also show how

ROLLOVER PROTECTIVE STRUCTURE (ROPS) EXHIBIT

In June of 1966, John Deere officially announced the release of Roll Gard. This equipment, known to the wider industry as rollover protective structure (ROPS), marked a giant step forward in John Deere’s commitment to the safety of their customers.

This popular piece of advertising literature for ROPS showcased the new safety frame features that would keep the driver’s station off of the ground.
John Deere shared this information with the industry, ensuring that safety was a priority for future generations.

More information about this and other exhibits at the John Deere Tractor & Engine Museum can be found on their website.

View the website here.

Following each rollover test, engineers took dozens of pictures to ensure that the welds and bolts could stand the stress. This photo was taken in September of 1963.
In June, John Deere Grimsby in Ontario, Canada, commemorated the 40th anniversary of Canadian operations with hundreds of employees, customers, and Deere devotees. “It was hugely successful because of all of the hard work by collectors, exhibitors, and John Deere Grimsby teams,” says Frank Tousaw, Canada training manager and event organizer.

GRIMSBY 40TH ANNIVERSARY DISPLAYS PASSION, PRIDE, AND PURPOSE

How could you possibly recognize decades of unsurpassed dedication, determination, and distinction?

You celebrate with an unprecedented event.
“We had more than 250 employees and their families, nearly 200 exhibitors, and we estimated more than 3,000 people attended the community event.”

Weekend festivities included a massive historical tractor display and vintage equipment exhibition highlighted by a newly restored 1918 Waterloo Boy. Three John Deere collector clubs showcased their passion for all things Deere. The John Deere blacksmith, music groups, a children’s tractor pull, and brand-new machines were featured as well.

“One word can best describe the event: fantastic!” Brian Holst, historical equipment manager, says. “The exhibitors enjoyed being able to talk with devoted employees. And speaking of employees, you really could tell they took so much pride in this anniversary, and you could sense the appreciation they have for customers. Experiences like this help build powerful relationships with our brand.”
UPCOMING EVENTS

HERITAGE TRACTOR PARADE AND SHOW
Saturday, September 10, 2016
10:00 a.m.—4:00 p.m.
John Deere Pavilion in Moline, Illinois

ART FAIR
Sunday, September 11, 2016
9:00 a.m.—4:00 p.m.
Historic Site in Grand Detour, Illinois

FROM THE ARCHIVES
An original 1935 Model “D1” Tractor out for a drive on a rugged, dusty road. This is the same model that is currently featured at the John Deere Pavilion.