

CLASSIC OUTSOLE STITCHERS

A PRACTICAL GUIDE TO
VINTAGE, MODERN, AND
HAND-OPERATED
SOLE STITCHING
MACHINES

HISTORY
MACHINES
MODELS & VARIATIONS
PARTS & TOOLS
SUPPLIERS
RESTORATION
RESOURCES



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Classic Outsole Stitchers

A Practical Guide to Vintage, Modern, and Hand-Operated Sole Stitching Machines

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Table of Contents

1. Introduction

- Purpose of This Guide
- The Changing Footwear Industry
- How to Choose a Machine
- A Note on Stewardship

2. The Landis Machine Company

- History of the Landis Machine Company
- Leasing, Stitch Counters, and Early Sales Practices
- Landis and the Growth of the Shoe Repair Industry
- The “Own Your Own” Campaign
- The Legacy of Landis

3. The Landis No. 12 Family

- Evolution of the No. 12
- Production Changes
- St. Louis and Maine Production
- Serial Numbers and Factory Rebuilds
- Original Pedestals and Custom Mounting

4. Other Vintage Powered Outsole Stitchers

- Rapid E
- American Outsole Stitcher
- Champion Outsole Stitcher
- Goodyear / United Shoe Machinery Corporation (USMC)

5. Needles, Awls, Needle Guides, Thread, and Consumables

- The Needle Guide System
- Understanding Needle Guide Sizes
- Scope of This Reference
- Standard Landis Needle Guide Combinations
- Availability of Needles and Awls
- Thread, Wax, and Modern Lubrication
- Practical Advice for Buyers

6. Hand-Operated Sole Stitchers

- Hand-Stitching the Outsole
- A Different Philosophy
- Frobana
- Junker & Ruh
- Learning Curve
- Parts, Tooling, and Consumables
- A Specialist Rather Than a General Solution
- Practical Recommendations

7. Modern Production Machines

- Modern Outsole Stitchers Today
- GreatRich GR-368 and GR-368-2
- Fioretto
- Other Modern Manufacturers
- Vintage or Modern?
- Practical Recommendations

8. Restoration, Rebuilding, Parts, and Technical Support

- Gateway Shoe Machine
- Landis International
- Manuals and Technical Literature
- Europe
- United States
- Mexico
- Consumables

- Final Thoughts

9. Buying a Used Outsole Stitcher

- Evaluating the Stitching Head
- Identifying the Installed Needle Guide
- Buying Accessories
- Original Wrench Sets
- Original Stand or Custom Bench
- Parts and Support
- Questions to Ask the Seller

10. Machine Comparison and Practical Recommendations

- Machine Comparison Summary
- Notes on Each Machine
- Routine Operation, Maintenance, and Storage
- The Changing Trade: Choosing Machines Responsibly
- Which Machine Is Right for You?
- Final Recommendation

11. Closing Remarks

- Preserving Knowledge
- Future Revisions
- Invitation for Comments and Contributions
- Final Thoughts

Section 1. Introduction

Purpose of This Guide

Outsole stitchers are among the most important—and most misunderstood—machines used in traditional shoemaking and shoe repair. For more than a century they have attached outsoles to welted footwear, producing the durable stitch that has become the hallmark of quality boots and shoes.

Because the outsole stitch is both highly visible and structurally important, its quality affects not only the durability of the footwear but also the appearance of the finished shoe.

Although many of these machines are now decades old, they continue to earn their place in workshops around the world. Well-maintained examples remain in daily use by

shoemakers, orthopedic workshops, bootmakers, and professional shoe repair businesses. Their longevity is a testament not only to their engineering but also to the generations of mechanics, rebuilders, suppliers, and craftsmen who have preserved them.

Unfortunately, reliable information about these machines is surprisingly difficult to find. Much of the practical knowledge surrounding their operation, maintenance, tooling, and identification has traditionally been passed from one mechanic or shoemaker to another rather than published in books or manuals. As experienced craftsmen retire, there is a genuine risk that this knowledge will disappear.

The purpose of this guide is to collect that information into a single practical reference. It is intended for collectors, shoe repair professionals, bespoke shoemakers, bootmakers, students, and anyone considering the purchase or restoration of an outsole stitcher.

This is not a rebuilding manual, nor is it intended to be a complete history of every manufacturer. Instead, it is a practical guide to understanding the principal machines, identifying their differences, evaluating their strengths and weaknesses, and making informed purchasing decisions.

The Changing Footwear Industry

The market for outsole stitchers has changed dramatically over the past several decades.

Traditional shoe repair has declined throughout much of North America and Europe as inexpensive imported footwear has increasingly been treated as disposable rather than repairable. Many neighborhood repair shops have closed, and the large factory infrastructure that once supported these machines has largely disappeared.

At the same time, another trend has begun to emerge.

Interest in handmade footwear, bespoke shoemaking, heritage boot making, and high-quality recrafting has grown steadily. Consumers are increasingly seeking well-made footwear that can be maintained and rebuilt rather than discarded. This renewed appreciation for craftsmanship has created demand for both traditional skills and the machines that support them.

As a result, outsole stitchers are finding new life in workshops very different from those for which many were originally designed.

A Landis No. 12 that once operated in a large shoe factory may now be found in the workshop of an independent artisan. A Rapid E may spend its days rebuilding heavy-duty wildland fire boots rather than producing military footwear. Modern production machines

continue to serve commercial factories, while many bespoke makers choose to stitch their outsoles entirely by hand.

Understanding these different applications is essential when selecting a machine.

How to Choose a Machine

One of the most common questions asked by prospective buyers is:

“Which outsole stitcher is the best?”

There is no universal answer.

The best machine for a commercial boot repair shop may not be the best machine for a bespoke shoemaker. Likewise, the rarest or most expensive machine is not necessarily the most practical. A properly rebuilt Landis may outperform a neglected collector’s machine, while a modern production machine may be the right choice for a factory producing hundreds of pairs each week.

Throughout this guide, one principle will appear repeatedly:

Buy the machine that fits the work.

When evaluating any outsole stitcher, consider:

- Mechanical condition
- Completeness of the machine
- Tooling and consumables
- Availability of replacement parts
- Technical support
- The type of work you intend to perform

The machine itself is only part of the investment. The ability to maintain it, obtain parts, and operate it correctly is often far more important than the name cast into the frame.

These machines are durable, but they are not simple plug-and-play appliances. Their usefulness depends upon correct setup, compatible tooling, proper adjustment, and access to knowledgeable technical support.

A Note on Stewardship

Many of the machines discussed in this guide are now approaching—or have exceeded—one hundred years of age.

That so many remain in service today is remarkable.

Each surviving machine represents the work of generations of machinists, operators, mechanics, rebuilders, and shoemakers who chose to repair and preserve it rather than discard it. Today's owners inherit that responsibility.

This guide is written in the spirit of stewardship. Its purpose is not simply to help readers buy an outsole stitcher, but to preserve the practical knowledge that allows these machines to remain productive for future generations.

The best outsole stitcher is not necessarily the rarest machine, the newest machine, or the most expensive machine.

It is the machine that allows its owner to perform quality work reliably, safely, and for many years to come.

Before examining the individual machines, it is helpful to understand the company that shaped much of the modern shoe repair industry. Few manufacturers influenced the development of outsole stitching more than the Landis Machine Company, whose machines became the benchmark against which nearly every other vintage outsole stitcher would later be judged.

Section 2. The Landis Machine Company

Few companies have had a greater influence on the shoe repair and shoemaking trades than the Landis Machine Company of St. Louis, Missouri. During the late nineteenth and much of the twentieth century, Landis manufactured an extensive line of machinery for nearly every stage of footwear production and repair, becoming one of the dominant suppliers of shoe machinery throughout North America and many international markets.

The Landis name became synonymous with durability, reliability, and practical engineering. Its machines were designed for continuous commercial service, and many remain in operation decades after they were manufactured. Their longevity reflects not only the quality of their construction, but also the generations of mechanics, rebuilders, parts suppliers, and craftsmen who have maintained, restored, and preserved them.

Landis produced machinery for virtually every stage of shoemaking and shoe repair. Although this guide focuses specifically on the outsole stitcher, the company's product line included cutters, finishing equipment, sole presses, rough-rounders, burnishing machines, and numerous specialty machines that helped define twentieth-century footwear

production. For many decades, a complete shoe factory or repair shop could be equipped almost entirely with Landis machinery.

One particularly interesting aspect of Landis history involves the manner in which professional shoe machinery was marketed during the first half of the twentieth century. Professional equipment was not always purchased outright. Various leasing arrangements and company-controlled business models existed, and many machines were equipped with stitch counters that reflected the accounting practices of the period. The precise evolution of these arrangements deserves additional historical research, but they illustrate that ownership of professional shoe machinery was not always as straightforward as purchasing equipment outright.

Following the Second World War, the United States entered a period of remarkable economic expansion. Millions of returning servicemen sought careers, learned skilled trades, and established small businesses throughout the country. During this same period, quality footwear was routinely repaired rather than discarded, creating tremendous demand for independent shoe repair shops in cities and small towns alike.

It was during this era that Landis promoted machine ownership through its well-known “Own Your Own” advertising campaign. The campaign reflected the growing opportunity for independent craftsmen to acquire professional equipment and establish businesses of their own. Whether opening a first repair shop or expanding an existing operation, many craftsmen entered the trade with Landis machinery.

While additional historical research is needed to document the complete evolution of Landis’s sales practices, many long-time members of the shoe machinery trade believe the company’s postwar emphasis on private ownership represented an important shift in its business model. Regardless of exactly when that transition occurred, the result was unmistakable. Thousands of independently owned repair shops appeared throughout North America, and Landis machines became the backbone of the postwar shoe repair industry.

Those postwar decades represented the golden age of American shoe repair. Shoe repair shops became fixtures on Main Streets throughout the nation, and Landis outsole stitchers became indispensable tools for repairing quality footwear. The widespread adoption of these machines helps explain why so many survive today and why the Landis name remains closely associated with traditional shoe repair and shoemaking.

Although the footwear industry has changed dramatically since that period, the legacy of the Landis Machine Company continues through the thousands of machines still operating around the world. Their continued service reflects not only exceptional engineering, but

also the enduring value of machinery designed to be maintained, rebuilt, and passed from one generation of craftsmen to the next.

Today, the Landis name remains one of the most recognized names in vintage shoe machinery. Whether found in a commercial repair shop, a bespoke shoemaking workshop, a heritage boot factory, or a private collection, these machines continue to demonstrate that well-designed industrial equipment can remain productive for generations when properly maintained.

The story of Landis is therefore not simply the story of a machine manufacturer. It is also the story of the craftsmen who depended upon those machines, the mechanics who kept them operating, and the continuing effort to preserve an important chapter in the history of the footwear trades.

The success of the company is perhaps best illustrated by its flagship machine—the Landis No. 12 outsole stitcher. Through continuous refinement over many decades, the No. 12 evolved into one of the most successful and widely used outsole stitchers ever produced. Its development, together with the various models that followed, is examined in the next section.

Section 3. The Landis No. 12 Family

The success of the Landis Machine Company was built in large part upon the continual refinement of its flagship outsole stitcher—the No. 12.

Over many decades of production, Landis introduced a number of model variations beginning with the original No. 12 and continuing through the better-known No. 12 Models F, G, K, and L. Rather than introducing an entirely new machine with each designation, the company generally refined an already successful design through a series of mechanical improvements intended to increase reliability, simplify adjustments, improve operator convenience, and enhance production efficiency.

Original factory literature and the United States Army Technical Manual document several of these model variations, particularly the No. 12 Model F and No. 12 Model K. The Army manual notes that the Landis No. 12 Models F and K, together with the American Models B, C, and CA, are “fundamentally alike” and uses the Model K as its principal reference because it had become the Army’s standard outsole stitcher during the Second World War. Today, that manual remains one of the most valuable technical references available for understanding the operation, adjustment, maintenance, and repair of the Landis family of outsole stitchers.

Collectors, mechanics, rebuilders, and long-time shoe machinery dealers also recognize additional No. 12 variants, including the G and L models, as part of the continuing evolution of the machine. While differences certainly exist between the various models, many components remained interchangeable, and the basic operating principles changed very little throughout production. Landis improved the machine through steady refinement rather than complete redesign. Although the precise engineering differences between every model have yet to be fully documented, the progression from the original No. 12 through the F, G, K, and L models clearly reflects Landis's philosophy of continuous mechanical improvement.

Production Changes

Factory literature provides a clearer distinction between the later Model K and Model L machines.

The Model K was presented as a versatile, general-purpose outsole stitcher for professional shoe repair work. Landis emphasized its smooth and precise clutch control, roller-bearing construction, reinforced frame, and bobbin-lock arrangement, which provided additional room for sewing deep-shanked shoes. It was intended to combine dependable operation with the flexibility required for a wide range of ordinary repair work.

The Model L was developed for heavier-duty stitching. It provided greater working clearance and was intended to accommodate thicker outsole constructions and more demanding commercial work. Factory literature described it as the company's most capable and efficient machine for heavy stitching.

Both machines incorporated refinements intended to improve stitch consistency, operator control, and durability. These included improved feed-slide bearings, a traveling edge guide, a presser-foot locking mechanism, an automatic thread lock, and increased clearance around the work area.

The differences should not be overstated. Both machines operate on the same fundamental curved-needle and awl stitching principle and are capable of producing first-class work. The Model K was positioned as the more versatile general-purpose machine, while the Model L was intended primarily for heavier outsole construction and demanding commercial use.

For today's buyer, the condition of the individual machine remains more important than the model designation. A properly rebuilt Model K may be a far better working machine than a worn or incomplete Model L. Nevertheless, the factory descriptions help explain the intended role of each model and the continued refinement of the Landis No. 12 family.

St. Louis and Maine Production

The Landis machines most familiar to collectors and working shoemakers were originally manufactured in St. Louis, Missouri. These machines established the company's reputation for heavy castings, precise machining, durability, and exceptionally long service life.

The company later changed ownership, and Landis machinery was produced under the Landis name by a company located in Maine. According to long-time members of the shoe machinery trade, the Maine operation initially possessed a supply of original St. Louis parts and components. Machines assembled while those parts remained available may therefore contain a mixture of earlier St. Louis components and later production.

Experienced mechanics and rebuilders have often expressed a preference for the earlier St. Louis machines. Some believe that once the remaining St. Louis inventory was exhausted, the materials, machining, fit, and overall quality of newly manufactured components did not consistently equal the earlier production.

These observations are based largely upon the firsthand experience of mechanics and dealers who have worked on machines from both production periods. Additional factory documentation would be valuable in establishing the precise dates of the ownership changes, the movement of production, and the differences between individual machines.

The distinction should also be kept in perspective.

A machine's place of manufacture does not, by itself, determine its present condition or usefulness. A carefully maintained or professionally rebuilt Maine-production machine may be a far better working machine than a heavily worn or poorly repaired St. Louis example. As with model designation, production location should be considered one factor among many rather than the sole basis for evaluating a machine.

Serial Numbers and Factory Rebuilds

As interest in vintage outsole stitchers has grown, buyers have increasingly attempted to identify machines by their serial numbers.

Among long-time Landis mechanics and collectors, it is commonly understood that many Landis serial numbers begin with the last two digits of the year of manufacture, making the serial number a useful starting point for estimating production dates. Likewise, many factory-rebuilt Landis heads are recognized by an "R" prefix preceding the serial number.

These conventions are widely accepted within the shoe machinery trade and have proven useful when identifying many surviving machines. Nevertheless, additional factory

documentation would be valuable in fully confirming every production period and serial-number sequence. Prospective buyers should therefore view serial numbers as one piece of evidence rather than the sole determinant of a machine's age or history.

Factory-rebuilt heads deserve particular attention.

Landis factory rebuilds were professionally reconditioned using factory procedures and replacement parts, allowing heavily used commercial machines to return to service. Machines bearing an "R" prefix are generally understood within the trade to represent these factory rebuilds. Many continue to provide excellent service decades after rebuilding, a testament to both the quality of the original machine and the rebuild program itself.

Original Pedestals and Custom Mounting

Prospective buyers occasionally encounter Landis stitching heads mounted on custom workbenches rather than the familiar cast-iron factory pedestal.

This should not automatically be viewed as a disadvantage.

Many commercial repair shops modified their equipment over the years to better suit their workflow, available floor space, or production requirements. Heavy wooden benches, fabricated steel stands, and custom-built tables were all common shop modifications. Provided the mounting is rigid, properly aligned, and mechanically sound, a bench-mounted Landis head is every bit as legitimate as one installed on its original pedestal.

Collectors may naturally prefer complete original machines because of their historical value. Working shoemakers, however, should place far greater emphasis on the condition of the stitching head than on the originality of the stand supporting it.

Ultimately, the Landis No. 12 family should be viewed not as a series of entirely different machines, but as the gradual evolution of one of the most successful industrial outsole stitchers ever produced. That philosophy of continuous refinement, combined with an unmatched support network and abundant surviving machines, remains one of the principal reasons the Landis continues to be the benchmark against which all other vintage outsole stitchers are measured.

Section 4. Other Vintage Powered Outsole Stitchers

The twentieth century produced some of the finest industrial shoemaking machinery ever built. Among these machines, the powered outsole stitcher occupies a unique position. Designed to stitch the outsole securely to the welt or prepared inseam, these machines

became indispensable throughout shoe factories, military production facilities, orthopedic workshops, custom boot shops, and commercial shoe repair businesses around the world.

Although numerous manufacturers entered the marketplace over the years, only a handful achieved widespread commercial success. Today, the machines most commonly encountered by collectors, rebuilders, and working shoemakers include those manufactured by Sutton, American, Champion, and United Shoe Machinery Corporation (USMC).

Each machine has developed a loyal following.

Some owners prefer the smooth operation and additional clearance provided by the Rapid E, particularly for heavy-duty boot repair. Others admire the exceptional machining and castings found on the American outsole stitcher. Champion and Goodyear/USMC machines remain historically significant, although surviving examples are encountered less frequently and generally present greater challenges in obtaining parts and technical support.

Despite their differences, all of these machines were designed to accomplish the same objective: producing a strong, durable outsole stitch capable of withstanding years of wear.

Choosing between them is rarely as simple as selecting the rarest machine or the newest design.

The machine itself is only one part of the decision.

Throughout this guide, five factors will be emphasized repeatedly:

- Mechanical condition
- Completeness of the machine
- Tooling and consumables
- Availability of replacement parts
- Availability of knowledgeable technical support

A properly rebuilt machine from one manufacturer will almost always prove to be a better investment than a neglected example of another.

The following sections examine each of the principal vintage outsole stitchers individually, discussing their history, strengths, limitations, and suitability for modern shoemaking and shoe repair.

Rapid E

Among experienced shoemakers and machine mechanics, few outsole stitchers receive as much admiration as the Rapid E.

The machine was developed by Roy Sutton, a former employee of the Landis Machine Company who later founded the Sutton Shoe Machinery Company. Drawing upon his experience with the successful Landis design, Sutton developed a machine that retained the proven curved-needle and awl stitching system while incorporating a number of significant engineering refinements of his own.

Rather than simply copying the Landis, Sutton sought to improve it. The result was a machine that many experienced operators consider one of the finest powered outsole stitchers ever manufactured. The Rapid E earned its reputation through smooth operation, thoughtful engineering, exceptional stitch quality, and features specifically suited to heavy-duty footwear.

Although the Rapid E follows the same fundamental operating principles as the Landis family of machines, it incorporates a number of refinements that distinguish it from its predecessor. These improvements do not necessarily produce a better stitch, but they do improve operator convenience, handling characteristics, and the machine's ability to accommodate demanding applications.

One of the defining characteristics of the Rapid E is its generous working clearance. According to the factory operator's manual, the machine is capable of stitching outsole constructions up to approximately 5/8 inch thick without adjustment or changing parts. By fitting alternate sewing tables and presser feet, the machine can accommodate sole constructions approaching 3/4 inch in thickness. This versatility made the Rapid E exceptionally well suited to heavy-duty footwear and specialized bottoming operations.

Another feature frequently praised by experienced operators is the machine's wide working mouth, together with its hydraulic presser-foot lifting system. These features make it considerably easier to position and manipulate heavy footwear beneath the machine. For this reason, the Rapid E developed an especially strong following among makers and repairers of heavy-duty stitched boots, including logging boots, wildland fire boots, lineman boots, engineer boots, and other heritage work boots commonly associated with the Pacific Northwest.

For many commercial boot repair shops, these features represented meaningful production advantages. The additional clearance often made difficult repair jobs easier to perform and expanded the range of footwear that could be comfortably sewn on the machine.

Like many opinions within the shoemaking trade, preferences are often shaped by years of personal experience. Some craftsmen who have spent their careers operating Rapid E machines consider them superior to comparable Landis models. Others remain loyal to the Landis because of its extensive parts network, abundant tooling, and the large number of mechanics familiar with its repair and adjustment.

Neither viewpoint is necessarily wrong.

From a practical standpoint, both machines are capable of producing exceptional work. The choice frequently comes down to the type of footwear being produced, the availability of replacement parts, access to qualified technical support, and the operator's personal preference.

Today's marketplace presents another consideration.

The Rapid E is considerably less common than the Landis family of machines, making complete machines and certain replacement parts more difficult to locate. While consumable items such as needles, awls, thread, lubricants, and other standard supplies remain available through specialty suppliers, some machine-specific components require considerably more effort to obtain.

Fortunately, companies such as Gateway Shoe Machine continue to rebuild, restore, and support Rapid E machines, providing owners with one of the principal sources of parts, rebuilding services, and technical assistance in North America. Their continued support has played an important role in preserving these remarkable machines.

A properly maintained Rapid E remains one of the finest outsole stitchers ever built. For the shoemaker or repairman who regularly works on heavy boots or thick outsole constructions, its additional clearance, generous working area, and hydraulic presser-foot lifting system represent genuine advantages rather than simply interesting engineering features.

At the same time, prospective buyers should carefully consider whether those additional capabilities are necessary for their own work. Many bespoke shoemakers, custom shoemakers, and general shoe repair shops may never utilize the Rapid E's full capacity. In those situations, the broader parts network, greater machine availability, and stronger long-term support associated with the Landis No. 12 family may outweigh the Rapid E's additional capabilities.

As with every machine discussed in this guide, the condition of the individual machine is ultimately more important than its reputation. A properly rebuilt Rapid E or Landis will almost always outperform a neglected example of either model.

American Outsole Stitcher

Among vintage powered outsole stitchers, few machines enjoy the reputation of the American Outsole Stitcher. Although produced in far smaller numbers than the Landis family of machines, many experienced bootmakers and shoe machinery mechanics regard the American as one of the finest outsole stitchers ever manufactured.

The American Outsole Stitcher should not be confused with the American Straight Needle Machine. They are entirely different machines designed for different operations. The machine discussed here is the curved-needle outsole stitcher used for attaching outsoles to welted footwear.

The United States Army Technical Manual identifies several American outsole stitcher models, including the Models B, C, and CA, and notes that these machines, together with the Landis No. 12 Models F and K, are “fundamentally alike.” While each manufacturer employed its own engineering details and refinements, the basic curved-needle and awl stitching principle remained common to all of these machines.

One of the characteristics most frequently praised by experienced operators is the overall quality of the American’s construction. Long-time bootmakers often describe the machine as possessing exceptionally high-quality machining, precise fit, and outstanding castings. Many believe these manufacturing qualities contribute to the smooth operation, durability, and solid feel for which the American has become known.

Unlike the Landis, which was produced in very large numbers, relatively few American machines survive today. Many remain in the hands of long-established bootmakers, repair shops and private collections and seldom appear on the open market. As a result, finding a complete American in good mechanical condition can require both patience and good fortune.

Like the Landis and Rapid E, the American is capable of producing first-class outsole stitches suitable for the finest handmade footwear. From a stitching standpoint, there is little to separate these classic machines when they are properly adjusted, properly tooled, and operated by an experienced craftsman.

The greatest limitation of the American today is not its mechanical performance but its rarity.

Compared with the Landis family, replacement parts are considerably more difficult to obtain. While consumable items such as needles, awls, thread, lubricants, and other standard stitching supplies remain available through specialty suppliers, many machine-

specific components are no longer manufactured and may require donor machines, custom fabrication, or skilled machining.

For this reason, prospective buyers should carefully inspect the completeness and mechanical condition of any American machine before purchase. Missing or damaged components may require significant time and expense to replace, and relatively few mechanics today possess extensive experience rebuilding these machines.

Fortunately, many of the consumable items used by the American remain obtainable through traditional shoe machinery suppliers and shoe repair suppliers. This means that routine operation is generally not the problem. Rather, it is the replacement of major machine components that requires careful consideration before purchase.

For those fortunate enough to own a complete and properly adjusted American, however, the rewards can be substantial. Many experienced bootmakers continue to regard the American as one of the finest vintage outsole stitchers ever built. Its reputation for precision, smooth operation, exceptional machining, and outstanding workmanship has endured for generations.

Ultimately, selecting an American is less a question of stitching capability than of long-term ownership. A well-maintained American is capable of producing work equal to any of its contemporaries, but prospective owners should recognize that they are investing in a comparatively rare machine whose continued operation may require greater patience, ingenuity, and mechanical self-sufficiency than the more common Landis family.

For the craftsman willing to accept those challenges, the American Outsole Stitcher represents one of the finest examples of twentieth-century shoe machinery engineering and remains a highly respected choice among experienced bootmakers and collectors alike.

Champion Outsole Stitcher

The Champion Outsole Stitcher occupies a unique place among vintage powered outsole stitching machines. While often discussed alongside the Landis, Rapid E, American, and Goodyear machines, the Champion represents a distinctly different engineering philosophy and should not simply be regarded as another variation of the Landis design.

Unlike the Landis family of machines, which utilize a curved needle working in conjunction with an awl, the Champion employs an awl that descends from above while a hook needle rises from below to complete the stitch. Although the finished product is the same—a strong, durable outsole stitch—the mechanical approach is fundamentally different.

Champion Shoe Machinery Company produced several outsole stitcher models over the years, including the well-known Champion Models 55 and 77, both of which continue to appear occasionally in private workshops, repair shops, and collections. Although produced in considerably smaller numbers than comparable Landis machines, the Champion earned a well-deserved reputation as a dependable industrial outsole stitcher capable of producing first-class work.

Because the Champion utilizes a unique stitching mechanism, operators already familiar with the Landis family may discover that setup, timing, adjustment, and troubleshooting require a different approach. Likewise, mechanics experienced with Landis machines do not necessarily possess the same familiarity with Champion machines, making experienced technical support somewhat more difficult to locate.

The Champion's greatest limitation today is not its stitching capability but its support network.

Compared with the Landis family, relatively few Champion machines remain in regular operation, and replacement parts can be difficult to locate. Owners frequently rely upon donor machines, custom fabrication, or the expertise of experienced shoe machinery mechanics to keep these machines operating.

Fortunately, many routine consumable items—including thread, lubricants, and general stitching supplies—remain available through traditional shoe machinery suppliers. However, machine-specific components, specialized tooling, and certain consumable items can be considerably more difficult to obtain than comparable Landis components.

For this reason, prospective buyers should carefully evaluate the completeness and mechanical condition of any Champion before making a purchase. Missing machine-specific components may require significant time, patience, and expense to replace, and rebuilding options are considerably more limited than those available for the Landis family.

These practical realities should not be interpreted as criticism of the machine itself.

Properly adjusted, a Champion is fully capable of producing outsole stitches equal in quality to the finest vintage machines. Its continued use many decades after production ceased is a testament to the quality of its engineering, manufacturing, and original design.

For most first-time buyers, however, the broader parts network, greater machine availability, and larger community of experienced mechanics make the Landis family the more practical choice.

The Champion is often best suited to experienced mechanics, collectors, or craftsmen who appreciate its unique engineering and are prepared to assume greater responsibility for maintaining a comparatively uncommon machine.

Perhaps the Champion's greatest contribution is historical.

It serves as an important reminder that the evolution of outsole stitching machines was not limited to a single engineering philosophy. While the curved-needle system popularized by Landis ultimately became the dominant design in North America, Champion demonstrated that an entirely different mechanical approach could achieve equally outstanding results. That independent engineering tradition makes the Champion an important part of the history of industrial shoemaking machinery.

Today, a well-preserved Champion remains both a highly capable working machine and an important piece of footwear manufacturing history. For the craftsman willing to accept the challenges of ownership, it continues to reward careful maintenance with exceptional stitching performance.

Goodyear / United Shoe Machinery Corporation (USMC)

The Goodyear / United Shoe Machinery Corporation outsole stitchers occupy an important but often misunderstood place in the history of industrial shoe machinery.

One point should be made immediately.

The machines discussed in this section should not be confused with Goodyear welting machines. Although both are used in the manufacture of welted footwear, they perform entirely different operations. A Goodyear welting machine attaches the welt to the upper and insole during the welting process, whereas an outsole stitcher attaches the outsole to the completed welt after the shoe has been lasted and welted.

The history of these machines is closely connected to the development of the United Shoe Machinery Corporation. Following the formation of USMC at the turn of the twentieth century, the Goodyear outsole stitching line became part of the larger United Shoe Machinery organization. As a result, many surviving machines encountered today bear the United Shoe Machinery name rather than the original Goodyear branding. Throughout the shoe machinery trade, collectors and mechanics commonly refer to these machines simply as "Goodyear" outsole stitchers, even though the machine itself may be marked USMC.

One important distinction between the Landis Machine Company and United Shoe Machinery involved the manner in which their equipment reached customers.

Unlike many independent machinery manufacturers, the Goodyear Shoe Machinery Company—and later United Shoe Machinery Corporation—built much of its business around a long-established leasing system rather than outright sales. For many years, shoe factories leased machinery directly from USMC under contracts that frequently included maintenance, service, replacement, and other operating provisions. As a result, many machines remained under company ownership throughout their working lives and were returned to the company when leases expired or equipment was replaced.

This leasing system became one of the defining characteristics of United Shoe Machinery and helped establish the company as the dominant supplier of shoe machinery throughout much of the twentieth century. At its peak, USMC supplied machinery to a substantial portion of the American footwear industry and exercised enormous influence over footwear manufacturing throughout the United States and abroad.

That success, however, also attracted government scrutiny.

United Shoe Machinery became the subject of one of the most significant and long-running antitrust cases in American industrial history. The United States government argued that the company's leasing practices and dominant market position substantially limited competition within the shoe machinery industry. After decades of litigation, USMC was ultimately required to modify many of its business practices, including making machinery available for purchase rather than relying primarily upon long-term leasing arrangements.

From the standpoint of today's collector, these historical practices may also help explain why comparatively fewer Goodyear/USMC outsole stitchers entered private ownership than comparable Landis machines. Whereas Landis equipment became common in independently owned shoe repair shops and later entered the used machinery market in significant numbers, many USMC machines remained under company ownership for much of their working lives before eventually being retired from service.

Compared with the Landis family, relatively little technical documentation survives concerning these machines, and comparatively few remain in regular commercial operation today. Consequently, much of the practical knowledge surrounding them survives through experienced mechanics, collectors, and long-time operators rather than published factory literature.

Like the Landis, American, and Rapid E machines, the Goodyear/USMC outsole stitchers employ the traditional curved-needle and awl principle to produce a strong, durable outsole stitch. Properly adjusted and maintained, they are fully capable of producing work equal to the finest vintage outsole stitchers.

Their greatest challenge today is not stitching performance.

Rather, it is the practical realities of ownership.

Replacement machine components are scarce. Few mechanics specialize in rebuilding or adjusting these machines, and technical documentation is considerably more limited than for the Landis family. Prospective buyers should therefore understand that acquiring one of these machines often requires greater mechanical self-sufficiency than purchasing a more common Landis.

Particular attention should also be given to the machine's tooling.

Experienced mechanics have long noted that the needle and awl system differs from that used by the Landis family, meaning that owners cannot simply assume Landis tooling will interchange. Before purchasing a Goodyear/USMC machine, buyers should carefully verify exactly which needles, awls, guides, and related tooling accompany the machine and whether replacement consumables remain available from current suppliers.

Fortunately, routine consumables such as thread, lubricants, and general sewing supplies remain obtainable. The greater challenge lies in locating machine-specific components and specialized tooling.

For this reason, prospective buyers should carefully inspect any Goodyear/USMC machine before purchase. A complete machine retaining its original tooling is considerably more valuable than an incomplete example missing critical components that may prove extremely difficult to replace.

Although relatively uncommon today, these machines remain an important part of the evolution of industrial shoe machinery. They demonstrate that several manufacturers—and later the United Shoe Machinery Corporation—developed commercial outsole stitchers capable of producing outstanding work while contributing their own engineering ideas to the footwear industry.

Because surviving examples are comparatively rare, many Goodyear/USMC outsole stitchers have become highly desirable collector's pieces. Their historical importance is unquestioned, and preserving them helps document one of the most influential companies in the history of industrial shoemaking.

For the average first-time buyer, however, the Goodyear/USMC family is generally not the most practical choice. The scarcity of replacement parts, specialized tooling, technical support, and surviving machines makes ownership considerably more challenging than with a comparable Landis.

For the experienced collector, historian, or machinery enthusiast, however, a complete and properly adjusted Goodyear/USMC outsole stitcher represents both an exceptionally

capable working machine and an important piece of industrial history. Preserving these machines helps ensure that another significant chapter in the evolution of footwear manufacturing is not lost.

Section 5. Needles, Awls, Needle Guides, Thread, and Consumables

For many first-time buyers, the greatest concern when purchasing a vintage outsole stitcher is the machine itself. Experienced operators often look at something entirely different.

They look at the needle guide.

The needle guide largely determines what size needle and awl the machine can use, which in turn determines the thread size and the range of work the machine is capable of performing. Consequently, two outwardly identical machines may have very different capabilities simply because they are equipped with different needle guides.

Understanding this relationship is one of the most important aspects of purchasing and operating a vintage outsole stitcher.

The Needle Guide System

Traditional Landis-style outsole stitchers utilize four primary components to produce the stitch:

- Needle guide
- Curved needle
- Awl
- Thread

These components function as a matched system. Changing one component often requires corresponding changes to the others in order to produce a balanced, properly formed stitch.

The needle guide establishes the size of curved needle that can be used in the machine. The needle must then be matched with the appropriate awl, and both must be compatible with the intended thread size. Attempting to mix incompatible components frequently results in poor stitch formation, broken needles, damaged awls, or unnecessary wear on the machine.

For this reason, experienced mechanics usually identify a machine first by its installed needle guide before considering any other tooling.

Understanding Needle Guide Sizes

One point frequently confuses new operators.

With the Landis No. 12 family of outsole stitchers, lower-numbered needle guides accommodate heavier tooling, while higher-numbered guides accommodate finer tooling.

In practical terms:

- Lower guide numbers use larger needles and awls.
- Larger needles accommodate heavier thread.
- Heavier thread is generally preferred for work boots, heavy footwear, and rugged outsole construction.

Conversely:

- Higher guide numbers use finer needles and awls.
- Finer needles accommodate smaller thread.
- Smaller thread is generally used for lighter footwear and dress shoes.

Selecting the proper guide is therefore one of the most important decisions affecting the capability of the machine.

Scope of This Reference

The tooling information presented in this section applies specifically to the Landis No. 12 family of outsole stitchers.

Other vintage outsole stitchers—including the Rapid E, American, Champion, and Goodyear—utilize their own tooling systems. While the underlying principles are similar, the needle, awl, guide, and thread combinations may differ considerably from those used by Landis machines.

Technical information for these other machines does exist, but it is generally more difficult to locate and is often scattered among factory manuals, parts books, dealer literature, and the accumulated knowledge of experienced mechanics and rebuilders.

Accordingly, the chart that follows should be understood as a Landis reference only.

Owners of other makes should consult the appropriate factory literature or an experienced supplier before purchasing needles, awls, guides, or other consumable tooling.

Standard Landis Needle Guide Combinations

The following chart is reproduced from the United States Army Technical Manual for the Landis No. 12 Models F and K. It provides the standard relationship between the needle guide, needle, awl, and recommended thread sizes.

Needle Guide Needle Size Awl Size Top Thread (Cord) Bobbin Thread (Cord)

10	45 or 24	43 or 24	9	8
9	47 or 23	45 or 23	8	7
8	50 or 22	47 or 22	7	6
7	52 or 21	50 or 21	6	5
6	54 or 20	52 or 20	5	4

This chart illustrates the close relationship between all four components. Changing the needle guide generally requires changing the needle, the awl, and often the thread size as well. These components should always be considered a matched system rather than individual parts.

Availability of Needles and Awls

One of the most common misconceptions surrounding vintage outsole stitchers is that replacement needles and awls are no longer available.

Fortunately, this is not the case.

Many of the commonly used Landis needle and awl sizes remain in production and are readily available through established shoe machinery suppliers. Standard tooling suitable for most shoe repair, bespoke shoemaking, and many heritage boot applications can still be purchased without great difficulty.

Certain obsolete sizes may still be found as unused old stock, but availability is unpredictable and should not be assumed when evaluating a machine.

Prospective buyers should nevertheless determine which needle guide is installed before purchasing a machine. The installed guide determines the tooling that can be used and, ultimately, the type of work the machine is best suited to perform.

Thread, Wax, and Modern Lubrication

Traditional outsole stitchers were designed during an era when linen thread was the industry standard. To improve stitch formation and reduce friction, the thread was typically passed through a heated wax pot containing specially formulated stitching wax before entering the machine. This process coated the thread with wax, helped seal the stitch, improved abrasion resistance, and helped lubricate the sewing operation.

For decades, wax pots were standard equipment in shoe factories and repair shops. While highly effective with traditional linen thread, they also required regular cleaning and maintenance. Excess wax gradually accumulated in thread guides, tension assemblies, and other machine components, creating a messy working environment and increasing maintenance requirements.

Today, many operators have moved away from traditional thread wax in favor of modern thread lubricants.

One of the most widely used products is Sellari's Thread Lubricant, which provides smooth thread delivery without many of the maintenance issues associated with traditional wax. For most modern operators, a quality thread lubricant offers a cleaner, simpler, and more convenient alternative while still providing excellent machine performance.

For this reason, the author generally recommends using Sellari's Thread Lubricant in place of traditional wax unless there is a specific historical or production reason for maintaining an original wax-pot system. Modern thread lubricants produce less residue, keep the thread path cleaner, and significantly reduce buildup throughout the machine's thread path.

Another important development has been the widespread use of braided synthetic threads. Although these machines were originally designed around waxed linen thread, many operators successfully use modern braided thread with relatively minor modifications to the thread-feeding system and proper machine adjustment. The exact modifications vary from machine to machine and are beyond the scope of this guide, but experienced mechanics have demonstrated that excellent results can be achieved with modern synthetic threads.

Whether using traditional linen thread or modern synthetics, the best results are obtained when the thread, needle, awl, and needle guide are treated as a complete, properly matched system.

Practical Advice for Buyers

Before purchasing any vintage outsole stitcher, determine:

- Which needle guide is installed

- What size needles it accepts
- What size awls it requires
- What thread sizes are recommended
- Whether those components remain commercially available

These questions are often more important than the model designation cast into the frame.

A beautifully restored machine equipped with tooling that does not meet your needs may be considerably less useful than a cosmetically worn machine equipped with the proper needle guide for the work you intend to perform.

Likewise, buyers should not assume that an older machine must continue to be operated exactly as it was decades ago. Modern thread lubricants and synthetic threads have made these machines cleaner, easier to maintain, and, in many cases, more practical for everyday use.

As with every aspect of vintage shoe machinery, understanding the tooling system before making a purchase can save considerable time, expense, and frustration. In many cases, the installed needle guide is every bit as important as the machine itself.

Section 6. Hand-Operated Sole Stitchers

Although powered outsole stitchers such as the Landis, Rapid E, American, Champion, and Goodyear dominate discussions of vintage shoe machinery, they are not the only means of attaching an outsole.

For many decades, European manufacturers produced compact hand-operated outsole stitchers intended for bespoke shoemakers, orthopedic workshops, military repair facilities, traveling craftsmen, and small repair shops where the cost, space, or production volume did not justify a full-sized powered machine.

These machines occupy an entirely different niche than the classic industrial outsole stitchers.

They should not be viewed as smaller versions of a Landis or Rapid E, nor should they be evaluated by the same standards. They were designed to solve a different problem: producing professional outsole stitching without requiring electric power, compressed air, or a large industrial workshop.

Before considering one of these machines, however, it is worth asking a more fundamental question:

Do you need an outsole stitcher at all?

Hand-Stitching the Outsole

Before purchasing any outsole stitcher—powered or hand-operated—the small bespoke workshop or hobbyist should seriously consider whether a machine is necessary at all.

Outsoles can be stitched entirely by hand.

For low-volume work, hand stitching may be the most economical and educational place to begin. It requires no large machine, no motor, and no ongoing dependency upon increasingly scarce machinery or replacement parts. More importantly, it teaches the shoemaker to understand the construction of the shoe directly: the placement of the stitch, the relationship between the welt and outsole, the angle of the awl, the tension of the thread, and the behavior of the sole during construction.

Throughout the world, particularly in countries with strong bespoke shoemaking traditions—including Italy, England, France, Germany, Austria, Hungary, Serbia, and Japan—many of the finest bespoke and made-to-measure shoemakers continue to hand stitch their outsoles. It is remarkable how much can be accomplished with a relatively modest collection of tools: a shoe knife, hammer, lasting pliers, awl, needles, thread, and a well-developed set of skills. These craftsmen demonstrate that exceptional footwear is ultimately the product of knowledge and craftsmanship rather than the quantity of machinery in the workshop.

For the hobbyist or bespoke shoemaker producing only a few pairs each year, hand stitching may therefore be a better first step than purchasing an outsole stitcher. It allows the craftsman to develop technique, understand construction, and determine whether production volume truly justifies a machine.

Hand stitching is slower and requires patience, but it should never be viewed as an inferior method of construction. In the hands of a skilled shoemaker, it remains one of the highest expressions of traditional craftsmanship and continues to be practiced by many of the world's most respected makers.

A machine should be purchased because the work requires it—not simply because the machine is available or desirable.

A Different Philosophy

The powered outsole stitchers discussed in previous sections were designed primarily for commercial production. They were expected to operate continuously throughout the working day in factories, repair shops, and bootmaking businesses.

Hand-operated machines were designed with different priorities.

They emphasize portability, compact size, and independence from electric power while providing a mechanical method of stitching the outsole. They were intended for craftsmen whose production requirements differed from those of commercial repair shops or factories.

It is important, however, not to mistake a hand-operated machine for a simplified powered machine.

In many respects, these machines are simply different, not easier.

Frobana

Among hand-operated outsole stitchers, the Frobana is probably the best known.

Manufactured in Germany, the Frobana has earned a reputation for solid engineering and the ability to produce high-quality outsole stitches in a compact package. For generations, it has been used by bespoke shoemakers, orthopedic workshops, educational programs, and small repair shops throughout Europe.

Unlike a powered Landis or Rapid E, the Frobana relies entirely upon manual operation. The operator advances the machine by hand while simultaneously controlling stitch placement and work positioning. Productivity is naturally lower than with a powered industrial machine, but excellent work can be produced by an experienced operator.

Junker & Ruh

Another important manufacturer of hand-operated outsole stitchers is Junker & Ruh, a German company whose machines have become highly respected among traditional shoemakers.

Junker & Ruh produced several models over the years, the best known being the SD-28, although additional variations also exist.

Because comparatively fewer were produced—and because many remained in Europe—Junker & Ruh machines are encountered less frequently in North America than Landis or Rapid E machines. Nevertheless, they continue to enjoy a loyal following among craftsmen who appreciate their engineering and compact design.

Learning Curve

One misconception deserves particular attention.

Many buyers assume that a hand-operated machine must automatically be easier to use than a powered machine.

In practice, the opposite is often true.

Although mechanically simpler, hand-operated outsole stitchers require the operator to coordinate the movement of the machine, the positioning of the shoe, stitch placement, and thread control through a manual operating cycle that differs significantly from either hand stitching or operating a powered Landis-style machine.

These machines possess their own learning curve.

Mastering a Frobana or Junker & Ruh requires patience, repetition, and practice. Useful instruction is relatively limited, and much practical knowledge survives only among experienced operators.

Parts, Tooling, and Consumables

Because these machines were produced in smaller numbers than the major powered outsole stitchers, replacement parts can sometimes be difficult to obtain.

Fortunately, the situation has improved considerably in recent years.

Specialist suppliers in Europe have continued to support these machines by manufacturing replacement components, supplying consumables, and preserving technical knowledge that might otherwise have disappeared.

One notable example is Julian of Shoemakercraft in Berlin, Germany. Through Shoemakercraft, Julian manufactures new shoemaking tools, restores vintage German shoemaking equipment, and supplies parts, consumables, and technical assistance for traditional shoemaking. His work has made specialized tools and support for these machines considerably more accessible than they were only a few years ago.

Even so, prospective buyers should carefully determine the availability of replacement needles, awls, guides, and other specialized tooling before purchasing any hand-operated machine.

A Specialist Rather Than a General Solution

Hand-operated outsole stitchers such as the Frobana and Junker & Ruh are sometimes presented as convenient alternatives to a full-sized powered outsole stitcher. That description can be misleading.

Although these machines are compact and require no motor, they are not necessarily easy to acquire, operate, adjust, or maintain. Surviving machines are often scattered across Europe, may be incomplete, and can require specialized needles, awls, parts, or consumables that are not readily available through ordinary shoe repair suppliers.

Their operation is also highly specialized.

A hand-operated stitcher requires the user to coordinate the movement of the machine, the feeding and positioning of the shoe, stitch placement, and thread control through a manual cycle that differs significantly from either hand stitching or operating a powered outsole stitcher.

These machines are therefore best understood as specialist tools, not as an obvious intermediate step between hand stitching and a powered outsole stitcher.

For a hobbyist or beginning bespoke shoemaker, learning to stitch the outsole entirely by hand may be more practical than purchasing a Frobana or Junker & Ruh. Hand tools and materials are easier to obtain, instruction is more widely available, and the skills learned through hand stitching apply directly to every aspect of shoemaking.

A hand-operated stitcher may still be an excellent choice for an experienced maker who understands the machine, has access to the necessary tooling and support, and deliberately wants that particular method of working. It should not, however, be recommended simply because it is smaller or manually powered.

Compact does not necessarily mean simple.

Practical Recommendations

For many bespoke shoemakers, the best first investment is not another machine but additional experience.

Learn to stitch an outsole by hand.

Develop an understanding of the construction.

Build the skills that every shoemaker should possess regardless of the machinery eventually acquired.

When production volume, commercial repair work, or efficiency demands it, invest in a well-supported powered outsole stitcher such as a Landis or Rapid E.

Consider a Frobana or Junker & Ruh only if you specifically understand their unique operating characteristics and have decided that they fit your style of work.

The purpose of this guide is not to convince every reader to purchase an outsole stitcher. Quite the opposite. Many outstanding shoemakers have built remarkable careers with little more than hand tools, while others have relied upon powered machinery throughout their professional lives. Both approaches deserve equal respect.

The objective is simply to help the reader choose the method that best fits their work, their workshop, and their long-term goals.

Machinery should support craftsmanship—not define it.

Section 7. Modern Production Machines

The continued popularity of vintage outsole stitchers sometimes creates the impression that outsole stitching technology ended with the Landis No. 12 or Rapid E.

That is not the case.

Modern outsole stitchers continue to be manufactured today, particularly for commercial footwear factories, orthopedic manufacturers, military contractors, and high-volume repair operations. While the number of manufacturers has declined considerably since the twentieth century, several companies continue to produce new machines capable of commercial production.

These modern machines differ significantly from their vintage predecessors.

Rather than emphasizing heavy cast-iron construction and mechanical simplicity, contemporary machines generally focus on production efficiency, operator ergonomics, easier adjustment, and compatibility with modern manufacturing environments. Many incorporate improved bearings, precision-machined components, hydraulic lifting mechanisms, modern electrical controls, and other refinements intended to increase productivity while reducing operator fatigue.

For a commercial factory producing hundreds or thousands of pairs of shoes each week, these improvements can represent significant economic advantages.

For the individual shoemaker or small repair shop, however, the decision is often less obvious.

A properly rebuilt Landis or Rapid E remains fully capable of producing first-class work at a fraction of the purchase price of many new production machines. Consequently, the decision between a vintage and a modern outsole stitcher is usually one of economics, production volume, and long-term support rather than stitch quality alone.

A modern machine does not necessarily produce a better outsole stitch.

Instead, it generally offers advantages in productivity, consistency, ease of adjustment, manufacturer support, and reduced downtime. Whether those advantages justify the substantially higher purchase price depends entirely upon the type of work being performed.

For many artisan shoemakers, orthopedic workshops, and independent repair shops, a rebuilt vintage machine remains the most economical and practical solution. For larger manufacturers operating multiple shifts or producing high volumes of footwear, a modern production machine may offer significant long-term advantages.

The modern marketplace has also changed dramatically over the past several decades.

While Europe once dominated the manufacture of industrial shoemaking machinery, modern outsole stitchers are now produced in several countries. Italy continues to manufacture premium production equipment, while China has become a major supplier of new industrial footwear machinery at a wide range of price points. As a result, buyers today have considerably more choices than previous generations.

Choosing between a vintage and a modern machine is therefore not simply a question of old versus new.

It is a question of selecting the machine that best matches the intended work, available budget, production volume, mechanical ability, and access to technical support.

The following sections examine several of the principal modern outsole stitchers available today, discuss their strengths and limitations, and compare them with the classic vintage machines discussed earlier in this guide.

GreatRich GR-368 and GR-368-2

Among modern outsole stitchers, the GreatRich GR-368 and its successor, the GR-368-2, have become some of the most widely recognized Chinese-built production machines available on the international market. Both are manufactured by the Changshu GreatRich Machinery Company.

Mechanically, these machines follow the general principles established by earlier industrial outsole stitchers while incorporating modern manufacturing techniques, updated components, and production-oriented features. They are designed primarily for factories, commercial repair facilities, orthopedic manufacturers, and other users requiring dependable daily production.

Compared with a vintage Landis or Rapid E, the GreatRich machines offer the advantages of new manufacture. Replacement parts are available directly from the manufacturer and distributors, bearings and wear components are new rather than rebuilt, and buyers avoid many of the uncertainties associated with purchasing eighty- or one-hundred-year-old machinery.

Many models also incorporate modern conveniences such as hydraulic foot lifting, improved operator ergonomics, updated electrical systems, and simplified adjustments intended to reduce operator fatigue and increase production efficiency.

These advantages, however, come at a cost.

A new production machine represents a substantially greater financial investment than a vintage machine, and for many small workshops the additional production capacity may never be fully utilized.

For this reason, GreatRich machines are generally best suited to professional shops where the machine will be used regularly rather than occasionally.

Fioretto

Italy has long occupied a respected position in the manufacture of shoemaking machinery, and Fioretto continues that tradition with modern production equipment intended for professional footwear manufacturers.

Like many contemporary Italian machines, Fioretto places emphasis upon precision manufacturing, reliability, and continuous production. These machines are designed for commercial environments where consistent daily output is essential and where manufacturer support and replacement parts remain important considerations.

Although considerably more expensive than most vintage machines, they offer the advantages expected of new industrial equipment, including current factory support, readily available replacement parts, and modern engineering.

For manufacturers already operating modern production lines, these benefits often outweigh the higher purchase price.

Other Modern Manufacturers

Modern outsole stitchers are also produced by other manufacturers, particularly in Italy and China.

The marketplace continues to evolve as new companies enter the industry and established manufacturers introduce updated models. Buyers should therefore evaluate not only the

machine itself but also the long-term availability of replacement parts, consumables, technical support, and local service.

Unlike vintage machines, where the manufacturer's original support network has largely disappeared, purchasing a modern machine often includes access to factory documentation, warranty support, and ongoing parts availability.

These factors can represent a significant advantage for businesses that cannot afford extended downtime.

Vintage or Modern?

One of the most common questions asked by prospective buyers is whether they should purchase a rebuilt vintage outsole stitcher or invest in a modern production machine.

There is no universal answer.

For many independent shoemakers and repair shops, a rebuilt Landis or Rapid E offers exceptional value. The machines have proven themselves over many decades, a substantial knowledge base exists for their operation and repair, and replacement parts remain available through several experienced suppliers.

Modern machines, however, offer advantages that may be critical in commercial production environments. New components, manufacturer support, modern ergonomics, and predictable parts availability reduce the uncertainty that sometimes accompanies vintage equipment.

Ultimately, the decision should be based upon the work to be performed rather than the age of the machine.

Practical Recommendations

For the majority of individual shoemakers, artisan workshops, and independent repair businesses, a properly rebuilt vintage machine will continue to provide outstanding performance at a significantly lower cost than purchasing new equipment.

For larger factories, orthopedic manufacturers, commercial boot repair operations, and businesses where production downtime carries significant financial consequences, a modern production machine may represent the wiser long-term investment.

Neither approach is inherently superior.

Modern machines benefit from current engineering, factory support, and new manufacture.

Vintage machines benefit from decades of proven performance, lower acquisition costs, and an established community of experienced mechanics and rebuilders.

As with every machine discussed throughout this guide, the best choice is the one that matches the work, the budget, and the long-term needs of the craftsman or business—not simply the newest machine or the oldest one.

Section 8. Restoration, Rebuilding, Parts, and Technical Support

One of the greatest advantages of vintage outsole stitchers is that they remain serviceable long after many modern industrial machines have been discarded. Unlike equipment designed to be replaced every few decades, these machines were engineered to be maintained, repaired, and rebuilt throughout their working lives.

That longevity, however, depends upon one critical factor: knowledgeable people.

Today, much of the expertise surrounding vintage outsole stitchers resides not in manufacturers, but in a relatively small community of rebuilders, mechanics, collectors, and long-time suppliers. Their knowledge has become every bit as valuable as the machines themselves.

Gateway Shoe Machine

For many shoemakers in North America, Gateway Shoe Machine has become the primary source for vintage outsole stitchers, replacement parts, rebuilding services, and technical support.

Gateway's inventory includes rebuilt Landis machines, Rapid E machines, parts, consumables, and many of the accessories necessary to keep vintage equipment operating. The company also maintains a head-exchange program, allowing customers to replace worn stitching heads with professionally rebuilt units rather than rebuilding their existing head from scratch.

Perhaps more important than the inventory itself is the experience accumulated over multiple generations of the family business. Steve and his family have spent their lives working with shoe machinery, preserving practical knowledge that is increasingly difficult to find. Their willingness to answer questions, diagnose problems, and assist customers has made Gateway one of the most respected names in the industry.

Professional rebuilding is not inexpensive, but quality workmanship rarely is. A properly rebuilt stitching head can provide decades of dependable service and often represents a better investment than purchasing an inexpensive machine requiring extensive repairs.

Landis International

Although today's Landis International is not the original St. Louis Landis Machine Company, it continues the Landis name and remains an important resource for the industry. Following its merger with Shoe Systems Plus, the company continues to supply parts, consumables, rebuilt machines, and technical assistance for many traditional shoe repair machines.

Patrice and his staff are widely regarded as knowledgeable, responsive, and generous with their time when helping customers diagnose problems or locate the correct parts. Their continued support provides an invaluable link between today's owners and a machinery tradition that might otherwise be increasingly difficult to maintain. They remain one of the principal sources for professionally rebuilt Landis machines and dependable long-term support.

Manuals and Technical Literature

For readers who wish to study these machines in greater depth, Lisa Sorrell maintains a collection of original shoe machinery manuals, instruction books, parts lists, and historical catalogs on the Sorrell Notions and Findings website.

The available material includes references for several Landis No. 12 models, American outsole stitchers, and other traditional shoe machinery. The manuals are available as free downloads and can be useful for understanding machine operation, adjustment, maintenance, parts identification, and historical configurations.

Because original technical literature can be difficult to locate, this online collection provides a useful starting point for owners, mechanics, collectors, and researchers seeking more detailed information.

Europe

Europe continues to support a vibrant community of vintage shoe machinery specialists.

Among rebuilders, Tulen Machines and Service in the Netherlands has developed an outstanding reputation for the restoration of classic shoe machinery and is widely regarded as one of Europe's premier rebuilders of vintage outsole stitchers.

Owners of hand-operated machines such as the Junker & Ruh and Frobana also benefit from increasing support from suppliers such as Julian at Shoemakercraft in Germany, who has helped improve access to parts, consumables, and technical knowledge for these specialized machines.

United States

For owners located on the West Coast of the United States, Gevorg Parsamyan, based in the Los Angeles area, has earned an excellent reputation as one of the few mechanics specializing in the repair and adjustment of vintage shoe machinery.

Experienced machine mechanics are becoming increasingly rare, making relationships with knowledgeable technicians an important consideration when purchasing any vintage machine.

Mexico

Several workshops in León and Guadalajara, Mexico, continue to rebuild and restore vintage shoe machinery.

Because of the region's long association with footwear manufacturing, skilled craftsmen and fabrication capabilities remain available. However, international buyers should carefully consider shipping costs, customs procedures, communication challenges, and the quality of fabricated replacement parts before importing machinery.

In the author's experience, the overall cost of purchasing and importing a rebuilt Landis outsole stitcher from Mexico is often comparable to acquiring one domestically. For common machines such as the Landis, domestic purchase frequently proves to be the simpler and more economical option. Rare or unusual machines, however, may justify the additional effort.

Consumables

Fortunately, the situation is considerably better when it comes to consumable items.

Needles, awls, needle guides, thread, lubricants, and many other routine supplies remain available through a variety of established shoe machinery suppliers. While certain obsolete tooling sizes have become increasingly scarce, most commonly used consumables for the Landis family continue to be manufactured and distributed.

Final Thoughts

Vintage outsole stitchers have survived for generations because they were built to be repaired rather than replaced.

Today, their continued survival depends not only upon cast iron and steel, but upon the mechanics, rebuilders, suppliers, and craftsmen who continue to preserve the knowledge required to keep them operating.

In many respects, these individuals are as important to the future of the trade as the machines themselves.

Section 9. Buying a Used Outsole Stitcher

For many prospective buyers, purchasing a vintage outsole stitcher can be intimidating. Machines often appear similar at first glance, yet their condition, tooling, completeness, and long-term usefulness can vary dramatically.

The most important advice in this guide is simple:

Buy the condition—not the name.

A properly rebuilt, mechanically sound machine will almost always outperform a more prestigious model that has suffered decades of heavy production without proper maintenance.

Evaluating the Stitching Head

The stitching head is the heart of every outsole stitcher.

Cosmetic appearance is of relatively little importance compared with the mechanical condition of the head. Fresh paint, polished castings, and decorative restoration work should never be confused with a professional mechanical rebuild.

Years of commercial production inevitably produce wear. While many worn components can be repaired or replaced, buyers should remember that the internal condition of the machine is ultimately far more important than its exterior appearance.

Certain internal cams, bearings, shafts, and wear surfaces deserve careful inspection. A complete discussion of these components is beyond the scope of this guide. Prospective buyers should simply recognize that not all wear is immediately visible and that the condition of the stitching head is often the single most important factor affecting the value of the machine.

Identifying the Installed Needle Guide

Before purchasing a machine, determine which needle guide is installed.

The needle guide determines the needle size, awl size, recommended thread, and ultimately the type of work the machine is best suited to perform.

Many buyers spend hours comparing machine models while never asking about the installed tooling. In practice, the needle guide often has a greater influence on the machine's usefulness than the letter cast into the frame.

Always ask the seller:

- Which needle guide is installed?
- What needles and awls are included?
- What thread size is currently being used?

Buying Accessories

Whenever possible, purchase every accessory that accompanies the machine.

Items worth obtaining include:

- Needles
- Awls
- Needle guides
- Bobbins
- Thread stands
- Presser feet
- Sewing tables
- Edge guides
- Original manuals
- Spare parts
- Wrenches and adjustment tools

Many of these items are considerably more difficult to locate than buyers realize.

Original Wrench Sets

Many vintage Landis machines no longer retain their original factory wrench sets.

Because Landis used square adjustment nuts throughout much of the machine, some collectors assume that missing wrenches significantly reduce a machine's value.

In practice, this concern is often overstated.

Modern interchangeable screwdriver-bit systems equipped with square-drive bits, available from manufacturers such as Kobalt and others, perform the majority of routine adjustments without difficulty. While original wrench sets remain desirable from a

collector's standpoint, their absence should not discourage the purchase of an otherwise sound machine.

Original Stand or Custom Bench

Prospective buyers occasionally encounter stitching heads mounted on custom workbenches rather than the original cast-iron Landis pedestal.

This should not automatically be viewed as a negative.

Many commercial shops modified their equipment over the years to better suit their workflow or available floor space. It is also common to encounter Landis heads mounted on heavy tabletop benches. Provided the mounting is rigid and properly aligned, these machines are every bit as legitimate and capable as those mounted on their original factory pedestals.

Collectors may prefer an original pedestal for historical authenticity, but working shoemakers should place far greater emphasis on the mechanical condition of the machine.

Parts and Support

Before purchasing any vintage machine, determine where replacement parts and technical assistance will come from.

Even the finest machine becomes far less attractive if parts, tooling, or knowledgeable mechanics are unavailable.

For many first-time buyers, the extensive support network surrounding the Landis No. 12 family makes it the safest long-term investment.

Questions to Ask the Seller

Before purchasing a machine, ask:

- Is the machine currently sewing?
- Has the stitching head been rebuilt?
- Which needle guide is installed?
- What needles and awls are included?
- Are spare parts included?
- Are the original manuals available?

- Has the machine been modified?
- Are there any broken or missing components?
- Does the machine include its bobbins, thread stand, and accessories?

The answers to these questions frequently reveal more about the machine than photographs alone.

Section 10. Machine Comparison and Practical Recommendations

Machine Comparison Summary

The following ratings represent the author's assessment of each machine based on today's marketplace, including parts availability, technical support, tooling, ease of ownership, and long-term practicality. They are intended as a practical buying guide rather than a historical evaluation.

Category	Landis No. 12 (All Models)	Rapid E	American Champion	Goodyear
Stitch Quality	★★★★★	★★★★★	★★★★★	★★★★★
Mechanical Engineering	★★★★☆	★★★★★	★★★★☆	★★★★☆
Build Quality / Castings	★★★★☆	★★★★★	★★★★☆	★★★★☆
Parts Availability	★★★★★	★★★☆☆	★★★☆☆	★★★☆☆
Needles & Consumables	★★★★★	★★★★☆	★★★☆☆	★★★☆☆
Availability of Technical Support	★★★★★	★★★★☆	★★★☆☆	★★★☆☆
Ease of Repair	★★★★★	★★★★☆	★★★☆☆	★★★☆☆
Machine Availability	★★★★★	★★★☆☆	★★★☆☆	★★★☆☆
Collector Interest	★★★★★	★★★★★	★★★★☆	★★★★★
Overall Recommendation	★★★★★	★★★★★	★★★★☆	★★★☆☆

Notes on Each Machine

Landis No. 12 — All Models

The benchmark against which all other vintage outsole stitchers are measured. Whether an original No. 12, Model F, G, K, or L, the Landis family offers the strongest combination of parts availability, technical support, consumable tooling, and long-term serviceability. For most buyers, it remains the safest and most practical investment.

Rapid E

Perhaps the finest engineered of the vintage outsole stitchers. Its generous working clearance, wide working mouth, and hydraulic presser-foot lifting system have made it especially popular among many makers and repairers of heavy-duty boots. Machines are relatively scarce, but parts and support remain available through specialized suppliers.

American

A beautifully engineered machine with exceptional machining and castings. Highly regarded by many experienced bootmakers, but rarity and limited parts availability make ownership more challenging.

Champion

A unique engineering design utilizing a different stitching mechanism than the Landis family. An excellent machine in capable hands, but limited parts availability, scarce consumables, and a shrinking support network make it better suited to experienced owners.

Goodyear

A historically important machine that should not be confused with a Goodyear welting machine. Capable of excellent work, but specialized tooling, very limited parts availability, scarce technical support, and the rarity of surviving machines make it the most challenging machine in this comparison for the average owner.

Final Thoughts

No vintage outsole stitcher is perfect, and each reflects the engineering priorities of its manufacturer and its era.

For most buyers, the safest investment will be a well-maintained Landis No. 12 because of its unmatched support network and readily available tooling. Others may choose a Rapid E for its engineering refinements or an American for its exceptional build quality. Collectors and experienced mechanics may be drawn to the Champion or Goodyear because of their rarity and historical significance.

Ultimately, the best machine is not necessarily the rarest or the most expensive—it is the machine that is mechanically sound, properly tooled, well supported, and appropriate for the type of work you intend to perform.

Routine Operation, Maintenance, and Storage

Vintage outsole stitchers were designed to operate every day in commercial shops. Many spent decades in continuous production before eventually finding their way into private workshops. Their continued reliability is a testament to their engineering, but like any precision machine, they require routine maintenance and thoughtful operation.

Fortunately, daily maintenance is relatively simple and can dramatically extend the life of the machine.

Keep the Machine Clean

Leather dust, thread fibers, old lubricant, and accumulated dirt are the enemies of any sewing machine.

After each period of use, remove loose debris from the stitching head, shuttle area, thread path, and work table. Avoid allowing leather dust to accumulate around moving parts, as it eventually combines with oil and forms an abrasive paste that accelerates wear.

A clean machine is easier to inspect, easier to lubricate, and far more pleasant to operate.

Proper Lubrication

These machines were designed to be lubricated regularly.

Follow the lubrication schedule recommended by the manufacturer whenever possible, using a quality sewing-machine oil at all designated oiling points. A machine that sits unused for an extended period should be lubricated before being returned to service.

Avoid excessive oil. More lubricant is not necessarily better, and over-oiling can attract dust and contaminate leather and thread.

Use Sharp Tooling

Never attempt to compensate for dull needles or worn awls by forcing the machine.

Sharp, properly matched tooling reduces stress on the machine, produces cleaner stitches, and improves overall sewing performance. If stitch quality begins to deteriorate, inspect the needle and awl before assuming a major mechanical problem exists.

Avoid Forcing the Machine

Vintage outsole stitchers are powerful machines, but they are not indestructible.

If unusual resistance is encountered, stop immediately and determine the cause. Continuing to force the machine may result in broken needles, damaged awls, bent components, or unnecessary wear.

Most problems can be corrected quickly if identified early.

Protect Against Rust

Machines that remain unused for extended periods should be lightly oiled and protected from moisture.

A dry shop environment is ideal. If long-term storage is anticipated, cover the machine to prevent dust accumulation while still allowing air circulation. Avoid trapping moisture beneath plastic coverings.

Surface rust can often be prevented with simple routine care.

Respect the Machine

Most of these machines are now many decades old.

Replacement parts for certain components are becoming increasingly scarce, and experienced mechanics are fewer every year. Operating the machine thoughtfully, performing routine maintenance, and correcting small problems before they become major failures will help ensure that these remarkable machines remain in service for future generations.

A Practical Philosophy

One lesson becomes apparent after spending time around vintage shoe machinery: these machines generally give back the level of care they receive.

A clean, lubricated, properly adjusted machine with sharp tooling is usually a pleasure to operate. A neglected machine often develops problems that are mistakenly attributed to age rather than lack of maintenance.

Treat the machine as a precision instrument rather than simply an old piece of cast iron. With reasonable care, a vintage outsole stitcher can continue producing first-class work long after many modern machines have reached the end of their service lives.

The Changing Trade: Choosing Machines Responsibly

The market for vintage outsole stitchers is changing, and understanding that change is important for anyone considering the purchase of one of these remarkable machines.

For much of the twentieth century, these machines were purchased primarily by commercial shoe repair shops. At a time when quality footwear was routinely repaired rather than discarded, virtually every community supported one or more repair businesses. These machines were working tools, expected to operate every day in a commercial environment.

That landscape has changed dramatically.

The widespread availability of inexpensive imported footwear has reduced the economic viability of repairing many low-cost shoes. As a result, the traditional neighborhood shoe repair shop has declined in number. Those shops that continue to thrive have largely evolved into recrafting businesses, specializing in premium footwear, heritage boots, orthopedic work, luxury repairs, and customers who value restoration over replacement.

At the same time, a renewed interest in traditional shoemaking has emerged. Around the world, increasing numbers of artisans are learning bespoke shoemaking, bootmaking, and traditional leatherworking. While still a relatively small community, today's shoemakers represent a growing source of demand for vintage outsole stitchers.

Historically, these two trades were distinct. The cordwainer made new shoes, while the cobbler repaired existing footwear. Their roles, priorities, and even their guild traditions often differed, and they did not always see eye to eye. Although those historical divisions have largely disappeared, the practical needs of modern shoemakers and shoe repair professionals are still not always the same.

A professional repair shop servicing heavy work boots, logging boots, or wildland fire boots may benefit greatly from a machine such as the Rapid E, with its increased working clearance and features that accommodate heavier constructions. By contrast, many bespoke shoemakers producing dress shoes or standard welted footwear may never utilize those additional capabilities. For them, a well-equipped Landis No. 12 may perform every operation they require while offering greater parts availability and a stronger long-term support network.

This distinction is worth considering because vintage outsole stitchers have become increasingly collectible. As machines become scarcer, there is a natural tendency toward acquisition and accumulation. While collecting is an important part of preserving industrial history, prospective buyers should also consider whether a particular machine genuinely matches their intended work.

A rare machine sitting unused in a private collection contributes differently to the trade than a machine actively producing footwear or restoring boots for customers. Neither role

is inherently wrong, but thoughtful ownership helps ensure that these machines continue to serve the craft for which they were designed.

The purpose of this guide is not to discourage collecting. Collectors have preserved countless machines that would otherwise have been lost. Rather, it is to encourage informed and responsible ownership. Choose the machine that best fits your work, support the mechanics and suppliers who keep these machines alive, and recognize that preserving the future of the trade involves more than simply acquiring rare equipment.

In the years ahead, the continued survival of vintage outsole stitchers will depend upon both communities—the craftsmen who use them every day and the collectors who preserve their history. Together, they share a common responsibility: ensuring that the knowledge, skills, and machinery of the traditional footwear trades are passed to the next generation.

Which Machine Is Right for You?

One of the most common questions asked by prospective buyers is not which machine is the best, but which machine is best for their particular circumstances.

There is no single correct answer.

The ideal machine depends upon the type of work you intend to perform, your budget, your mechanical ability, the availability of parts and technical support, and your long-term goals.

The following recommendations reflect the author's experience and are intended only as practical guidance.

If You Are Buying Your First Outsole Stitcher

Recommendation: Landis No. 12 — Any Model

For most first-time buyers, the Landis No. 12 family represents the safest investment.

The reasons are straightforward:

- Excellent parts availability
- Excellent consumable tooling availability
- Outstanding technical support
- Numerous rebuilt machines available
- Large community of knowledgeable owners

- Excellent resale value

For the overwhelming majority of new owners, it is difficult to make a better first purchase.

If You Primarily Repair Heavy Boots

Recommendation: Rapid E

If your work consists largely of rebuilding heavy work boots, logging boots, wildland fire boots, lineman boots, or similar footwear, the Rapid E deserves serious consideration.

Its generous working clearance, wide working mouth, and hydraulic presser-foot lifting system make it particularly well suited to heavy outsole construction.

Machines are more difficult to locate than Landis models, but many experienced repairmen consider the additional capability worthwhile.

If You Appreciate Mechanical Excellence

Recommendation: American Outsole Stitcher

For buyers who appreciate exceptional machining, beautifully fitted components, and outstanding castings, the American remains one of the most admired vintage outsole stitchers.

Ownership requires greater patience because of limited parts availability, but many experienced craftsmen consider the machine well worth the effort.

If You Enjoy Rare Machinery

Recommendation: Champion or Goodyear

Collectors and experienced mechanics often enjoy owning Champion or Goodyear machines because of their historical significance and rarity.

These machines are capable of excellent work, but prospective buyers should understand that ownership may involve greater difficulty locating parts, consumables, documentation, and qualified mechanics.

For this reason, they are generally not recommended as a first outsole stitcher.

If You Plan to Own Only One Machine

Recommendation: Landis No. 12

If you expect to own a single powered outsole stitcher for the remainder of your career, the Landis No. 12 family remains the author's recommendation.

No other machine combines proven performance, readily available parts, consumables, technical support, resale value, and worldwide familiarity to the same degree.

For most shoemakers and shoe repair professionals, it remains the best all-around choice.

Final Recommendation

Every machine discussed in this guide is capable of producing exceptional work.

Choosing the “wrong” make or model is not the greatest mistake. The greatest mistake is purchasing a machine that does not fit your work, your budget, or your ability to maintain it.

Choose thoughtfully.

Learn the machine thoroughly.

Support the suppliers and mechanics who continue to preserve these remarkable tools.

Then put the machine to work.

That is the best way to honor the craftsmen who built them and the generations who depended upon them.

Section 11. Closing Remarks

Preserving Knowledge

The history of vintage outsole stitchers is far richer than any single guide can fully capture. Much of the knowledge surrounding these remarkable machines has never been formally documented. Instead, it has been passed from one generation of shoemakers, shoe repair professionals, mechanics, collectors, rebuilders, and machinery dealers to the next.

This guide was written to preserve a portion of that knowledge while it is still available.

It is not intended to be the final authority on Landis, Rapid E, American, Champion, Goodyear, or any other outsole stitcher. Rather, it is intended to serve as a practical reference for today’s craftsmen and as a foundation for future research.

Future Revisions

This guide should be regarded as a living document.

Additional information undoubtedly remains to be discovered. Original factory literature continues to surface, private collections contain valuable documentation, and many experienced mechanics and operators possess knowledge that has never been published.

As those resources become available, it is the author's intention to expand, revise, and improve this guide so that it becomes an increasingly useful and accurate reference for the footwear community.

Invitation for Comments and Contributions

Constructive comments, corrections, historical documentation, photographs, serial-number information, original manuals, parts books, engineering drawings, and firsthand experience are all welcomed and encouraged.

Every contribution—whether large or small—helps preserve the history of these machines and the trades they continue to serve.

Final Thoughts

Ultimately, this guide is about more than machinery.

It is about preserving knowledge, supporting the craftsmen and mechanics who continue to use and maintain these tools, and ensuring that future generations have access to the history, engineering, and practical experience that might otherwise be lost.

These machines were designed to work. Their continued survival depends not only upon those who collect and restore them, but also upon those who learn to operate them, document their use, and pass that knowledge forward.

It is my sincere hope that this guide encourages others to restore these machines, use them, document them, and share what they learn with the next generation.

The machines have survived because generations before us chose to preserve them.

The knowledge will survive only if we do the same.