

# **Conservation of Big Stuff at The Henry Ford: past, present and future**

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**The Henry Ford**

“Henry Ford never does things by halves.”  
H.B. Morton (1934)

Henry Ford was a Michigan farm boy who became one of the most successful industrialists of the 20th century. Most people know of the man who founded the Ford Motor Company and put America on wheels with his Model “T”. Those interested in the history of technology are still awed by the achievement of his immense industrial complex on the River Rouge that transformed raw materials into completed cars.

Born on a typical Michigan farm in 1863, Ford could not leave the farm fast enough as a youth. He eventually became a steam engineer at the Edison Illuminating Company in Detroit and began experimenting with the internal combustion engine and producing automobiles. Later in life he loved nothing better than to play with old farm machinery and steam engines.

With the great success of his Model “T” assembly line, Ford had the time and resources to indulge in a hobby that eventually grew to epic proportions. With some of his millions he acquired millions of artifacts. Dozens of men, collectors and restorers, were employed by Ford to support his obsession. He accumulated buildings and the furniture to outfit them, as well as all description of technological antiques from clocks to sewing machines. But nothing is a better measure of his collecting passion than the Big Stuff: not only hundreds of British and American steam engines, but also enough machine tools to outfit three working machine shops in Greenfield Village and then some. He also acquired about a dozen airplanes and a considerable number of railroad locomotives and rolling stock, not to mention fire engines and horse drawn vehicles. This required him to make a decision: where to keep it all? In the same year that his Ford Motor Company made the well-orchestrated production change of the old Tin Lizzy “T” for the brand new Model “A” automobile, he turned a low-lying area of his airfield into his own vision of a museum.

Stories of Henry Ford’s personal interaction with his historical collection offer an insight into his restoration philosophy and his idiosyncratic notions of history. He worked with agents who found wondrous relics and supervised their transformations to his own idea of beauty. All this effort eventually led to the idea of a new kind of museum: a twelve-acre museum building and an historic Village containing houses and businesses, but especially structures that could exhibit working machines showing his favorite industrial processes. It was a vast Illustration of Man's Great Technological Progress that he called The Edison Institute. (The complex eventually became known as Henry Ford Museum & Greenfield

Village but more recently adopted the name “The Henry Ford” to encompass the whole “history attraction” which now includes a recently revived Rouge factory tour.) Yet his ultimate vision for the collections themselves was so personal and eccentric that after Ford died it became difficult to sustain and especially to augment on the scale Ford must have envisioned.

The large technology objects at The Henry Ford today present unusual conservation challenges not simply due to the scale and complexity of the objects themselves but also because of the collector's own priorities and peculiar approach to exhibiting them in the first place. Our solutions to these challenges in a growing and ever evolving History Attraction must be as innovative and bold as our founder's vision yet must also be rooted in an ethical framework that sustains the objects themselves.

### **Founding of the Edison Institute (Now The Henry Ford)**

On October 21 1929, three days before the Black Thursday stock market crash, hundreds of visiting dignitaries including President Hoover and Thomas Alva Edison helped Henry Ford inaugurate his Edison Institute. Ford's guests rode in historical horse drawn vehicles in the pouring rain through the mud of a Greenfield Village, still very much under construction. A candle-lit banquet inside the museum was finally lit once Edison dramatically reenacted the lighting of his first carbon filament lamp on its fiftieth anniversary. Edison performed the ceremony in the reconstructed version of his own Menlo Park Laboratory. The complex was Ford's great tribute to his hero and it was remade complete with machine shop, steam engine and outbuildings that had been saved from destruction and shipped to Dearborn along with three traincar-loads of red New Jersey soil.

It was the official opening of Ford's dearest dream: his “Hall of Technology” and his Greenfield Village, the Museum that would “tell the story of man's technological and cultural progress through comprehensive displays of inventions and artifacts” and the Village that would illustrate “early American life and show how the artifacts were used” (Upward, 1979).

Work had begun in 1927 on what has been dubbed “America's first theme park” (Lacey). It was Henry Ford's grand retirement project, his work-in-progress throughout the 1920s and thirties and into the 1940s. This was the same year that the Ford Motor Company finally shut down Model “T” production and introduced the new Model “A” (Lacey). As many as 60,000 workers were laid off by the Ford Motor Company that year, awaiting the re-tooling for a re-design that was promoted with unprecedented fanfare. Henry Ford had given up the Presidency of the Ford Motor Company, already a worldwide conglomerate, to his son Edsel way back in 1918. Ford finally had the luxury of time and access to a talented pool of his own Ford Motor Company employees to assign work; he imagined himself a master. He had time to travel to Britain on frequent antique shopping

sprees where he collected almost everything his heart fancied, including some of the most ancient relics of the Industrial Revolution.

Ford's vision for the establishment of a whole institute had really been born out of his eventually unruly penchant for amassing old stuff. His antique collecting had begun many years before upon his initial success with Model T around 1905. Starting with farm machinery like threshers and implements, he eventually accumulated the quintessential collection of American portable and traction engines. In the early 1920s he used his old Port Huron traction engine to help in the construction of his own residence in Dearborn, which he called Fair Lane. He asked employees to demonstrate an "old-time" engine and thresher team at the Michigan State fair (Ford Motor Company Archives – Mr Roy Shumann).

Ford also amassed roomfuls of rather small stuff: "Edisoniana", phonographs, music boxes, firearms and fiddles. One of the objects he scoured the country for early on was the very agricultural traction engine he had operated as a young man (Lacey).

He filled up his office, and used an area behind his new engineering laboratory, called Building 13, to sort his objects and prioritize restoration projects (Upward 1979). By 1924 there were carloads of antiques arriving to tractor Building 13 near Ford Engineering lab -- freight-train carloads (Ford Motor Company Archives – Mr Roy Shumann). Many objects Ford did not want or that he considered duplicate were simply scrapped from Building 13 (Ford Motor Company Archives – Mr Peter York). We have no idea how many were scrapped, but we hope that the best was retained. Soon he developed an interest in restoring historic buildings, starting with a couple of Inns out east and his own childhood home. His interest in farm machinery, industrial production and electrical equipment soon outpaced the room he had to keep it in. The idea for the Institute grew out of his interest in the collections.

We can marvel at Henry Ford's enormous enterprise that restored these huge collections. Finding and refurbishing antiques occupied increasing amounts of his time after he gave up the helm of the Ford Motor Company to his son Edsel in 1918. Although no one before the 1970s thought it necessary to record the particulars of any restoration, we can piece together part of the story from the artifacts themselves and from the reminiscences of Ford's former employees.

Many anecdotes of his visits to restoration projects under way in the Village attest to the acute interest he had in works in progress. A born tinkerer according to his own favorite personal legend, he needed to be present as his men worked to fulfill his dream of elevating technological contrivances to their proper glory. So he supervised restorations personally. Evidence of Ford's own approach to restoration can be seen in the remainders of these gigantic collections still at The Henry Ford.

A series of oral histories conducted with former employees and acquaintances of Henry Ford in the mid -1950s reveal some of Ford's approach to the preservation of his collections.

Ford hired carpenters, cabinetmakers, machinists, die makers and steam-shovel operators to restore his collections. Much of the work on the wooden antiques, smaller domestic arts devices and machine tools was probably done in the Village after construction there began in 1927. There was also a team working on cars throughout the 1930s and 1940s who had only to “send to the Rouge” for parts, plating and bodywork whenever necessary. They restored about one or two cars per year. Dozens of steam traction engines, portable engine and stationary steam engines were restored in the Locomotive shop at the Rouge complex under a man named Bill Miller (Ford Motor Company Archives – Mr Ernest Foster). Any part they needed, no matter how large, could be designed, cast, machined and finished right on the premises. Eventually at least a dozen stationary steam engines operated in Greenfield Village.

Ford’s apparent mistrust of intellectuals affected how he ran things at his “private park” (Morton, 1934). In 1938 at about the height of Ford’s management a report to the labor board listed 81 janitors and 20 machinists, but very few office workers or administrators of any kind (Edison Institute Archives, 1938). Stories still circulated decades later that Ford’s son Edsel, who with Henry and his wife Clara represented the board of the Edison Institute and was also a benefactor to the Detroit Institute of Arts, tried to professionalize the place. As H.S. Ablewhite recalled, “...Edsel would get somebody out here whom he thought might become interested in the place and maybe become a curator or director. Mr. Ford would take him out, and if he couldn’t talk intelligently about a piece of machinery, he was out; that was his criterion.” (Ford Motor Company Archives – Mr Hayward Ablewhite).

### **Ford’s attention to detail but his lack of research, just a belief in “horse-sense”**

The craftsmen and machinists working Ford had fond memories of all the attention they received from the Great Man as he began spending more and more time directing their restorations. Said Peter York, a craftsman who worked on Ford’s antiques from the earliest days, “Mr. Ford took a lot of interest in what we were doing with these things. He was right with me every day” (Ford Motor Company Archives – Mr Peter York).

Henry Noppe was a Dutch die maker who came from the Highland Park plant to work on Ford’s antiques in Building 13. He hand-picked his crew of up to 25 men from the tool room at the plant and “set to” restoring anything Ford asked him to, starting with the guns. “When I first came over here in ’29, Mr. Ford ran the village himself. He was always in charge; nobody had anything to say. Mr. Ford would get there in the morning and be waiting for me when I showed up.” “He was very much interested in what went on here in the Village. That was his hobby, even though he didn’t do it himself; it was his hobby to see things done the way he wanted it” (Ford Motor Company Archives – Mr Henry Noppe).

Edward Cutler was Ford’s self-taught architect in charge of reconstructing buildings brought to Greenfield Village. Referring to the restoration in the early 1930s of the Sir

John Bennett jewelry shop that contains a tower clock, bells and bell-striking “Jaquemart” figures of Gog and Magog from London, England, Cutler said:

You know Ford was the kind of man, if he singled you out to go to Chicago to sell some cars, you would go and do it, whatever he told you to do you did. I would do things around here that I would have to cart home a bunch of books every night, and my wife would laugh at me, because they were so new to me, but I had to find out. You were told to do it and you did it, you never said you couldn't do it. You always went ahead and made a stab at it, and tried to do it and did it.  
(Ford Motor Company Archives – Mr Edward J. Cutler)

Ernest Foster also worked on the wooden figures of Gog and Magog. He worked on anything from guns, furniture to tractor parts. As far as he was concerned, “Mr. Ford run it himself. In other words, when Mr. Ford wanted anything done, that's what was done. He was the boss. I think Mr. Ford had plenty of people down at the Rouge to run the automobile end of the business. Mr. Ford was here in the Village every day when he was home. It was his hobby.” (Ford Motor Company Archives – Mr Ernest Foster)

Roy Shumann, a Ford employee from 1921 who started to work on Ford's collections early on, has some of the most interesting insights into Ford's way of getting things done. He tells of daily visits with Ford. “He'd check up and always follow through on a job he asked me to do ... If he was *really* interested, which he was on a lot of antiques, he'd drop back and look the job over maybe half a dozen times a day” (Ford Motor Company Archives – Mr Roy Shumann). Shumann became Ford's rigger in the museum. He arranged and re-arranged the machinery on skids until Ford was happy with the layout. Shumann's crowning achievement was the installation of an enormous gas/steam engine weighing 750 tons, one of nine used to power the Ford Highland Park plant. (Today, the door through the back of the museum where Mr. Shumann had all the biggest engines brought in is still named after him, though few people anymore know why.)

### **Ford's “better than new” restoration philosophy**

Although Ford was conscious of his role in preserving technological history, he did not have much patience for exhaustive research on authentic details. As for Ford's restoration philosophy, if it can be called that, “very shiny” might be the operative words. Many of his restorers saw nothing wrong with this approach. Foster mentions this specifically: “We didn't do any research on any antiques at all. We just reconstructed it according to the lines of the object itself” (Ford Motor Company Archives – Mr Ernest Foster).

Yet, more often, little restraint was shown to make “minimal interventions” while restoring Ford's treasures. So many machines and engines had their bright work nickel- or even chrome-plated and too many were painted with shiny black lacquer paint.

Sometimes he imposed his vision of beauty onto these artifacts, transforming too many into not-all-together accurate representations of a type. The stewards of the collections refer to artifacts having been “Fordized” when they exhibit plating where none would

have been originally, when inappropriately elaborate parts are added and when all the castings are rendered perfect by applications of thick, shiny black paint. It is clear that the restorers working in the Village and at the Rouge had free reign to show off their design and machining prowess. On the one hand we can lament liberties taken in the restoration of some of these relics. Yet at a time when few men had the means much less the will to acquire such significant collections of technological artifacts, Ford's liberties can also be interpreted as a mark of his intense respect for the engines and their makers. Who could appreciate the art in derelict machinery? Bright and shiny, just like a gleaming black model "T", the objects would get notice and esteem. The story of the Dotterer steam engine tells of a classic "Fordization" treatment to "one of the very earliest American steam engines in existence" (Bowditch, 1993).

Built in 1835, the engine was "badly compromised" by Ford once he acquired it. The most obvious change made during the Ford-era restoration was the replacement of the original wooden base frame. Instead of finding proper southern yellow pine to recreate the frame timbers clearly visible in photographs taken of the engine in-situ, Ford made massive steel members, carefully tapped and drilled to hold the cast iron bedplate of the engine.

The Dotterer engine is now destined for loan to a restored pre-civil-war iron foundry museum in Tannehill Ironworks State Historical Park near Birmingham, Alabama. Our current restoration scheme is being carried out by Robert Johnson who worked on numerous engines for the Smithsonian's big centennial exhibit in the castle on the Nation's mall in 1976 and has many years of familiarity with our collections. Johnson was eager to be a part of the resurrection of a significant American icon. And he knew where to acquire the massive southern yellow pine timbers required for the bed. So a decision was made to restore the engine to an era closer to its original use and undo the "Fordization" as far as possible. Now that he is deeply into the re-restoration, Johnson is discovering more interesting incongruities. Every bit of bright work on the engine was nickel-plated by Ford's men at the Rouge. Johnson is drawing the conclusion that virtually all parts except for the castings are replacements. He expected the link-rods and beams to be wrought iron, but they are all, in his view, homogenous modern steel. John Bowditch on the other hand thinks that perhaps the parts are original but simply machined down to a smooth finish and then plated. Perhaps metallurgical testing can improve our understanding of this conundrum. However the Dotterer was treated, Ford might have realized it would be rarely used once it was set up in the Rice Mill in the Village (now re-purposed). The same restoration problems that might have plagued Henry Ford plague us today. How to keep previously over-restored recently re-polished metal from corroding overnight in humid environments? Nickel-plating seemed a great solution at the time.

Another story of a steam engine relates a "Fordization" that may have resulted in a treatment more in keeping with current conservation practice.

Herbert Morton, the Engineer in Charge of Plant at the Ford Motor Company (England) was commissioned by Henry Ford in the late nineteen twenties and thirties to acquire old engines and more in Britain. Morton traveled far and wide gathering "suitable specimens" that could "only be found in Europe" (Morton 1934). He looked after their

restorations and shipped them to Dearborn. He collected many objects that struck Ford's fancy, whatever he could convince the owners to part with. He set them all in their places of honor in Ford's Edison Institute museum.

The earliest Newcomen and Watt engines that Ford so desired were icons of the Industrial Revolution and well known to British engineering societies. Morton warned Ford that the "cost of obtaining them, and their dismantling, shipping and re-erection in America might be enormous". Ford declared, "Well, I'll tell you – I'll spend Ten Million Dollars" (Morton 1934).

Morton acquired for Ford what John Bowditch, former Curator of Industry at The Henry Ford asserted is "quite possibly the oldest extant steam engine in the world" (Bowditch, 1993). Yet even this venerable acquisition barely escaped Ford's penchant for making things "better than new". Morton recounts the delightful story surrounding his attempts to reproduce authentic replacement parts for the great Newcomen engine (circa 1760), known as "Fairbottom Bobs."

After having actually jumped up on poor Morton's shoulders to peer into the vertical cylinder and tumbling down in a fit of laughter, Ford made up his mind that he had to have it. Great obstacles were overcome to dismantle the relic. The foundations and many parts were unearthed and the well shaft dredged in hopes of recovering the pump chain and bucket.

Back at the museum, Morton worked with Roy Shumann and his gang to reproduce the foundation pits and reassemble the carefully documented stone columns. At last, after the "old warrior" was completely reassembled, Morton found that he had disappointed Ford on one detail. He had replicated the badly rotted rocking beam with a massive oak timber that had been adzed to replicate what Morton was certain must have been the authentic finish. "Ford came along and said 'I don't like that, let's have it planed and made nice and straight'. Feeling certain that he would be criticized by aficionados for such a decision, Morton risked "decapitation, which everybody assured me would happen", but took a risky compromise and had it straightened but then covered it with thick tar. Ford's reaction was, "My, that looks fine". So Morton had his "rough appearance" and "Mr. Ford had his straight lines" (Ford Motor Company Archives – Mr Hayward Ablewhite).

This solution, which is actually well in keeping with current philosophies that call for replica parts to be distinguishable from originals, offers some insight into the approach Ford's agents took to make him happy.

It is clear that the intent of Ford's restorations was first to render the machines operable whenever possible and secondly to make them look attractive. Today the practice of conservation for large industrial artifacts employs a more systematic approach to rigorous methodological standards. Justification for decisions like replacing parts and finishes and even sometimes merely polishing surfaces must be duly recorded. Re-treatability – something so difficult to achieve with big stuff, especially if it has been left to deteriorate in aggressive environments – must also be considered. Treatment decisions and methods must be documented and photographed.

But for Ford these notions would likely have been met with impatience if not disdain. In rare cases restraint was shown in the replacement of only missing elements or badly worn parts. Many agricultural wagons and processing equipment exhibit their original finishes as do some machine tools and a few engines. More often machines were “improved upon” by the restorers under Ford’s direct supervision, with some highly questionable results. For instance, if one were to study the history of steam engines solely from the collections of the Henry Ford, one might draw wildly inaccurate conclusions about the prevalence of nickel plating on machined engine parts.

An example of an artifact that was not Fordized is the beautiful horizontal steam engine made by Franklin Machine Works in 1848. Considered to be “emblematic of its type”, the engine has gracefully curved spokes on its flywheel/belt wheel, and two pairs of fluted columns to hold the valve motion transfer shafts. Clearly, it was never left to rot outdoors. As a contract conservator of large objects on the Made in America exhibit project in 1991, I was asked to conserve the original paint surfaces on this remarkable survivor. Under dozens of layers of over-paint, we laboriously uncovered one of the earliest layers – a deep rich green. The flywheel spokes were red, the original paint still in remarkable condition. Due to time constraints, but also as a form of visual documentation, an area of original paint was left on the cast frame and one side of the flywheel was left as found.

### **Loss of focus on “Big Stuff” after Ford’s death**

After Henry Ford’s death in 1947, some restoration projects were left unfinished, and the institute’s resources shifted away from the industrial collections. Things were left pretty much untouched in the museum where he had left them, but in the Village his handpicked restorers eventually left or retired. Rather than build on this particularly expensive aspect of Ford’s legacy, most of the industrial collections were kept fairly stagnant. Slowly the engines stopped whirring. Rather than maintain everything in working condition, many of the big machines and engines in the Village were allowed to lie fallow. The machine shops closed. Very little “Big Stuff” was collected or restored in the period of the 1950s and 1960s.

Clara Ford was left with the daunting task of running the Edison Institute after Ford died (three years after his son Edsel had passed away). She hired H.B. Ablewhite, a former Episcopal Bishop and Supervisor, Ford Motor Company Sociological Department. Ablewhite knew he was walking into a hornet’s nest. In 1949 he found “the files in deplorable condition” and no one who could actually be said to be running the place.<sup>26</sup> He knew this was because Ford had “guarded the place so carefully and refused to let anybody come in who would interfere with him” (Ford Motor Company Archives – Mr Hayward Ablewhite).

The exhibits remained more-or-less stagnant for years thereafter. Visitors in the mid 1970s could still climb to the mezzanine of the Highland Park engine and look out over a “forest “of machines. The tractors and agricultural engines held a place of prominence in the central axis aisle of the great hall of the museum.

Very little mass collecting of industrial collections took place throughout these years, but few significant large pieces did get acquired. One of these was the 600-ton Allegheny locomotive that was squeezed into the museum in 1956. Professional curators hired during the 1970s saw the collections’ potential to fulfill the newly refined educational goals of the institute. Progress began in an effort to save some of the huge relics that had been left outside in the Village once Ford’s 12-acre Hall of Technology had filled up. Two huge steam engines, the beautiful circa 1855 Gothic beam engine and the 1895 Triple-expansion steam engine and generator set, were brought in from the Village. Due to the extensive deterioration sustained by these behemoths after decades of exposure, a conscious decision was made by then curator John Bowditch to restore rather than conserve both engines. Bowditch also re-instated tours of some of the engines in the museum that could be run at very slow speeds on compressed air. He revived the Armington and Sons machine shop in the village, cleared out decades of accumulated junk and installed a re-made boiler so the steam engine could work again.

### **The coming of the professionals**

After a devastating fire in the museum in 1970, curators began to make formal requests for a full conservation department (Upward 1979). This step was taken and a new laboratory wing was built onto the museum in 1972. It took some years for conservation staff to turn their attention from the fascinating decorative arts collections to the industrial collections. When work began on the Made in America project in 1989, the transition was truly under way.

Today a new generation of conservators and curators embraces the challenges of caring for the industrial and transportation collections of The Henry Ford. Conservation of “Big Stuff” at The Henry Ford now endeavors to adhere to the basic tenets of professional standards. We engage in all aspects of collections management from new acquisitions to exhibit planning. We emphasize the need for comprehensive maintenance plans, not only for collections in use or on static exhibit, but also in storage. In terms of the actual work entailed with preparing “Big Stuff” for exhibit I think we deal with many of the very same kinds of issues that Henry Ford’s men did. Like the guys at the Rouge Locomotive shop and Mr. Shumann’s “bull gang” who rigged it all into place, we too must consider: How is the huge stuff best moved without hurting it or us? How can it be used and operated responsibly? Where can it be stored safely? Where is there space to restore and reassemble it? Is there good evidence for the treatment choices we make?

Another useful tool in this endeavor is our recently adopted ranking policy. Ours is a fast-moving organization with collections so vast we are still cataloging items acquired decades ago. The millions of “3D” collections still pose huge management challenges.

Storage of “Big Stuff” that is measured by the ton can be a particularly daunting task. The ranking policy tiers collections based on the historical rarity of each artifact and its relative importance to our collections. It is used as a guideline to help set preservation priorities for individual collection items. It also serves as a framework to assist in the critical decision whether to operate a collection artifact.

I agree with the proposition that operation and conservation are mutually exclusive concepts. Yet making a costly decision to maintain an artifact in operating condition can be justified after rigorously considering a range of issues. After considering each artifact’s restoration history, its past use, the detrimental potential of wear at reduced loads and the artifact’s potential for creating memorable learning experiences, running it in controlled circumstances can sometimes be justified. Today, we have a whole department of skilled professionals dedicated to the maintenance of the Greenfield Village Railroad. We also have teams of staff, members of the Historic Operating Machinery and Antique Vehicles department, whose primary job is the inspection and maintenance of every working artifact in the museum and Village. Conservators supervise this group.

## **Conclusion**

Henry Ford put a great deal of time, effort and money into finding and restoring antiques. He amassed a huge number of collections, some of them artifacts of mammoth proportions: hundreds of steam engines, agricultural machinery, electrical production, machine tools and Edison's entire Menlo Park complex were dismantled, transported by ship and train car-load to Dearborn Michigan for re-erection. Although he “Fordized” many things, his collecting vision was impressive. But after his death, the institute he founded had serious challenges maintaining his collections without his millions. Slowly, inexorably, the machinery he fired up (some of which had been running up until it was acquired for him) went dormant.

Today, teams of curators, conservators and living history professionals recognize the great advantage that access to this great collection grants them to tell powerful history. We have been working to extol the value of the “ Big Stuff and advocate its responsible use. Since the 1970s curators have been ever refining plans to “grow and shape” the collections. Real strides have been made since the 1970s to bring machines that were left outdoors into the museum. Conservators, registrars and collections managers meanwhile have been struggling to establish preservation priorities in a rapidly expanding, dynamic institution. Ongoing efforts continue to document, survey and care for these collections. Preservation plans and strategies that align themselves with the greater institutional vision contribute to an ever more responsible approach to the utilization of the collections.

In Ford’s day it seems that no expense was ever spared for restorations. The fact that we are now a “not for profit” institution means that we no longer have carte blanche when it comes to funding any initiative, conservation work included.

I am of the opinion that conservators today would have been able to talk a lot of great shop with Ford's restoration gangs. The men were skilled workers but they were not guided nor governed by anyone else's scholarship. Yet many of the actual techniques of treatment for large industrial artifacts we employ today would not be unfamiliar to Ford's men. The real difference lies in basic methodology. Ford's faith in the good old horse sense of his guys probably stood him in good stead when it came to the machine tools, motors and engines that he himself knew so much about. Unfortunately, Ford's way of learning by doing allowed some collections to lose their original finishes. Ford expected virtually every piece in his collections to operate and his taste for the aesthetics of shiny surfaces sometimes outweighed historical veracity. Yet Ford's unique vision saved many significant artifacts from destruction in the first place. The technological and industrial artifacts that he retained from the truck- and train-car-loads-full that arrived for years at his property were in some cases better cared for than the decorative arts antiques like furniture. Ford employed all the men necessary to polish up old lathes, motors and massive steam engines almost as fast as he could collect them. Treatment decisions need to be based on diligent research and careful artifact analysis. Documentation, especially recording the justification for major compromises, is a crucial legacy this generation of caretakers can give to the future stewards of the "Big Stuff".

We have no intention of undoing every "Fordization" in our collections. But we can study them, record them and marvel at the trouble and expense Ford took in doing them, to his great pleasure.

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