Issue #40

THE PLOWSHARE

History for John Deere Collectors

JOHN DEERE

INNOVATION AND ECONOMY:
THE MODEL "M"

The world of agriculture was ready for a new tractor.

Change is not always easy. Making *The Plowshare* transition to an all-digital format has been no exception. While change can be hard, we think this change will allow us to bring you more features than a print option can. We're talking about the Model "M" in this issue, and because it's digital, you can watch a new product video from 1952, a slideshow of photos of the "M," and register for Gathering of the Green, all from this issue of *The Plowshare*.

On another note, I am sure many of you have had ample time to start your winter projects, and maybe some of you have some type of equipment restoration going on. What's that you say? You don't have the space for a restoration? This may surprise some of you, but you don't always need a large space for these projects. As you'll read in our cover story, the Model "M" was the first tractor built at John Deere Dubuque Tractor Works, and like it's Waterloo-made cousins, it also had the two-cylinder engine, but in a vertical position.

The Model "M" is a very compact 22 HP tractor, 10 feet long and barely 4.5 feet wide, and tips the scales at around 2500 pounds. These little guys are small enough to get around tight yards, barn lots and smaller fields. They are also perfect to haul around behind a regular pickup truck with the right trailer, yet big enough to handle a belly mower, blade, and even a loader if needed.

We all know there are different kinds of restorations: mechanical, where you can repair anything that is mechanically of concern; and cosmetic, where you focus on the outer beauty. Often you do both, where every nut, bolt, and washer is removed, inspected, and reassembled. Then you finish with a coat of John Deere paint to seal and preserve all of your hard work. With some small space, elbow grease, and time, you can accomplish a lot on a tractor like this.

In my travels to tractor shows and events, I see some great restorations from very talented people who don't have a lot of space. Winters are my best time to spend with some green iron; here's hoping you can find some space of your own with your favorite projects.

Keep your hand on the throttle and your plow in the ground.

BRIAN HOLST
Historical Equipment Manager,
Deere & Company

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INNOVATION AND ECON

THE WORLD OF AGRICULTURE WAS READY FOR

In 1939, John Deere's small tractor lineup
and the larger, newly introduced Model "H
expensive, but it could plant and cultivate
These models faced a new competitor whe
business with the 9N. Boasting electric sta
followed its standard practice of mass mar
knew that developing a new, innovative sm

NOMY: THE MODEL "M"

A NEW TRACTOR

consisted of the Model 62, the Model "L," H." The "H" was heavier than the "L" and more two rows and was well received by customers. en Ford marked its re-entry into the tractor rt and an exclusive 3-point hitch, Ford keting at a cut-rate price. Deere leadership nall tractor was essential.

PRODUCTION HALTED FOR THE WAR

Before this new tractor could become a reality, there were some challenges to overcome. First, in the midst of World War II, the U.S. War Production Board disallowed new product production in lieu of military production. Soon after, in 1942, Charles Deere Wiman ***(READ BIOGRAPHY)*** left his post as president of Deere & Company to work with military equipment, eventually leading the farm machinery and equipment division of the War Production Board.

However, Wiman made it clear that research and development of the new tractor should continue in his absence.

The company followed his instructions and by the end of 1943, renowned industrial designer Henry Dreyfuss had drawn designs for an experimental Model 69 tractor, what would become the Model "M." By the next spring, Deere built a prototype and basic testing began in Moline. In March 1945, Deere approved an expenditure of $100,000 to build 20 Model 69 tractors.

A NEW FACTORY IN DUBUQUE, IOWA

The second question was where to build this new tractor. Both the Waterloo and Moline factories lacked the capacity to handle the new line. Instead of expanding the current factories, Deere & Company took a bigger leap. In early 1945, the company approved a plan to acquire 750 acres in Dubuque, Iowa, for a new factory. Wiman, who had returned to the company at the end of the war, set the cornerstone on the new building, and Dubuque Tractor Works opened in the fall of 1947. Production on the Model "M" began two years later.

OUT OF THE VAULT: WHAT'S NEW IN '52

The Model "M" tractor was fitted with John Deere's Touch-O-Matic hydraulics. Speedy and efficient, Touch-O-Matic offered standard self-start and power takeoff features, with belt pulley and light options available as extras. Deere offered more than 20 integral implements with its Quik-Tatch hitching system, which gave farmers maximum adaptability for their cultivating chores.

John Deere's Touch-O-Matic saved time and muscle for tractor owners in handling their many farming jobs. A touch of the operator's hand to the control lever hydraulically raised, lowered, or set Quik-Tatch tools to the exact working depth desired, automatically.

The Quik-Tatch made attaching and removing tools easy and fast, with the operator able to stay in the tractor seat, as shown in the "What's New for '52" product intro film.

WATCH HERE

MODEL "M" INNOVATIONS

Following the styling of its bigger tractor counterparts, the Model "M" was a complete system of farming. The new "Touch-O-Matic" hydraulic control system mounted in front of the seat enabled the operator to raise, lower, and adjust implement depth with one-touch control. The one-person "Quik-Tatch" implements system provided fast, efficient hitching that rivaled, and in many cases surpassed, the efficiencies of the 3-point hitch. Operators simply had to back up to their integral implements, insert one or two bolts, and drive away. A new adjustable air-cushion seat with backrest and adjustable steering wheel offered modern operator comforts. These features are highlighted in the John Deere Out of the Vault video, "What's New in '52."
(See story on left)

SERIAL NUMBER 10001

The first John Deere Model "M" tractor, serial number 10001, was shipped to the Arizona ranch of Charles Deere Wiman on April 1, 1947, at his request. By the end of production in 1952, nearly 88,000 "M" tractors — including variations such as the "MI," "MT" and "MC" — would find their way to farms, fields, orchards, and construction sites.

Where is that Model "M" today? Right where it should be, at the John Deere Dubuque Works. While it isn't currently viewable to the public, employees are able to enjoy the tractor in the factory.

ABOVE: *A John Deere Model "M" tractor with a 116 Baler, operated in the field by Mardi Brothers in Woodland, Calif., June 1950.*

CLICK HERE to view the full photo gallery

THE MODEL "M": PART OF SANTA'S FAVORITE SLEIGH?

"In 2002, I decided to do something that I'd been thinking about for a while. At the Mississippi Valley Fair in Davenport, Iowa, they have the big Belgian Horse tandem hitch with 8 or 10 horses hitched to a wagon. I decided if it worked with horses, it should work with tractors. I'm a member of the Deer Valley Collectors Club, located in the Quad Cities and celebrating its 25th anniversary this year. I had a 1950 John Deere Model 'M' and several of our Deer Valley Collectors Club members had 'M's, so we decided to try.

First, we needed a sleigh, so we used a big farm bobsled with four front rubber wheels from a garden tractor for the running gear. The sleigh was cut out of plywood to match the size of the bobsled. The hitch assembly was designed after a few sleepless nights. The tractors all have hitches in the front and back, and are all hooked together side-by-side with the lead tractor. After several experimental runs and few broken pieces while practicing turning the corners, we had the problems solved. The hitch has about 96 feet of 4'x4' and 60 drawbar pins.

Several years ago, I sold the hitch to the Deer Valley Collectors Club. Each year, we use the hitch in the Festival of Trees Parade in Davenport, and in some local parades as well. The Deer Valley Collectors Club has members who own and operate all of the tractors. We chose the 'M's because they are a small, durable compact tractor with a wide front end and easy to transport. Also, they were available from the club members. A couple of members bought an 'M' so they could be part of the hitch.

We have had fun and much enjoyment with our Deer 'M' Santas."

DICK BOCKWOLDT
Member, Deer Valley Collectors Club

GATHERING OF THE GREEN

Gathering of the Green, a semi-annual conference for John Deere enthusiasts, will take place at the River Center in downtown Davenport, Iowa, from March 16 to 19.

"The Gathering," as attendees like to call it, started in 2000 after members of four collectors clubs got together to organize an event that could bring John Deere equipment fans together to meet other fans, learn about equipment and restoration, and celebrate their love of green iron.

The last Gathering of the Green, held in 2014, had attendees from 35 U.S. states, Canada, Australia, and England. This year, enthusiasts will be able to enjoy over 60 technical and historical workshops, browse John Deere-related items from more than 75 vendors, and view displays mirroring the 2016 conference theme, "Forge to Farm."

Organizers have scheduled 12 tours of John Deere factories and other agricultural-related sites, in addition to a Friday night auction. Don McKinley, a collector, restorer, and co-creator of an acclaimed agriculture museum in Quincy, Illinois, will trace the evolution of farm equipment from the early settlers to present day at a Thursday evening event. At a Saturday evening banquet, Dr. Jerry Apps, a well-known Wisconsin author, historian, and PBS personality, will share his experiences growing up on a family farm in central Wisconsin.

For more information about Gathering of the Green, or to register for the event, ***VISIT THE WEBSITE.*** For more information call (563) 886-7383 or ***E-MAIL.***

JANET FASSETT: THE GIRL IN THE AD

Easton Frank loves going to the John Deere Pavilion.

The four-year old climbs on tractors, pretends to run the machines, and learns about agriculture with games in the Discovery Zone. He asks his mom to take him to the John Deere Pavilion ***(VISIT PAVILION SITE)*** whenever possible.

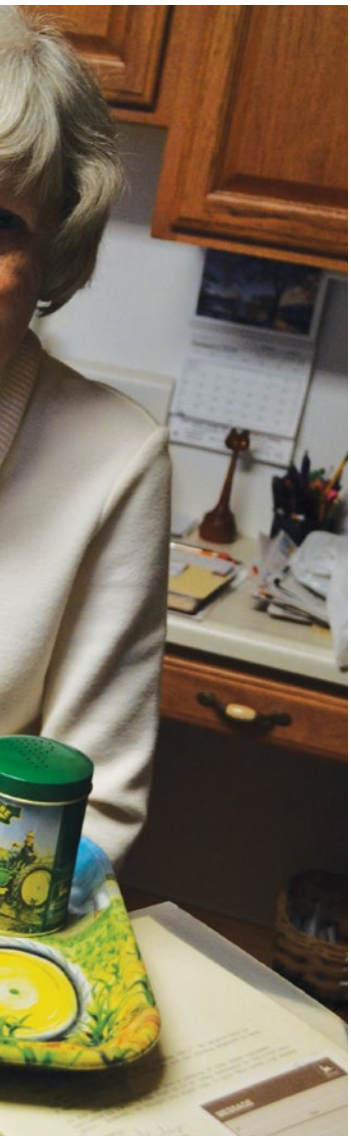
Late last fall, Easton was anxious to get to the tractors and ran around a corner toward one. When Angie Frank, his mom, turned the corner behind him, she was surprised to see a picture of her grandmother as a little girl on the wall.

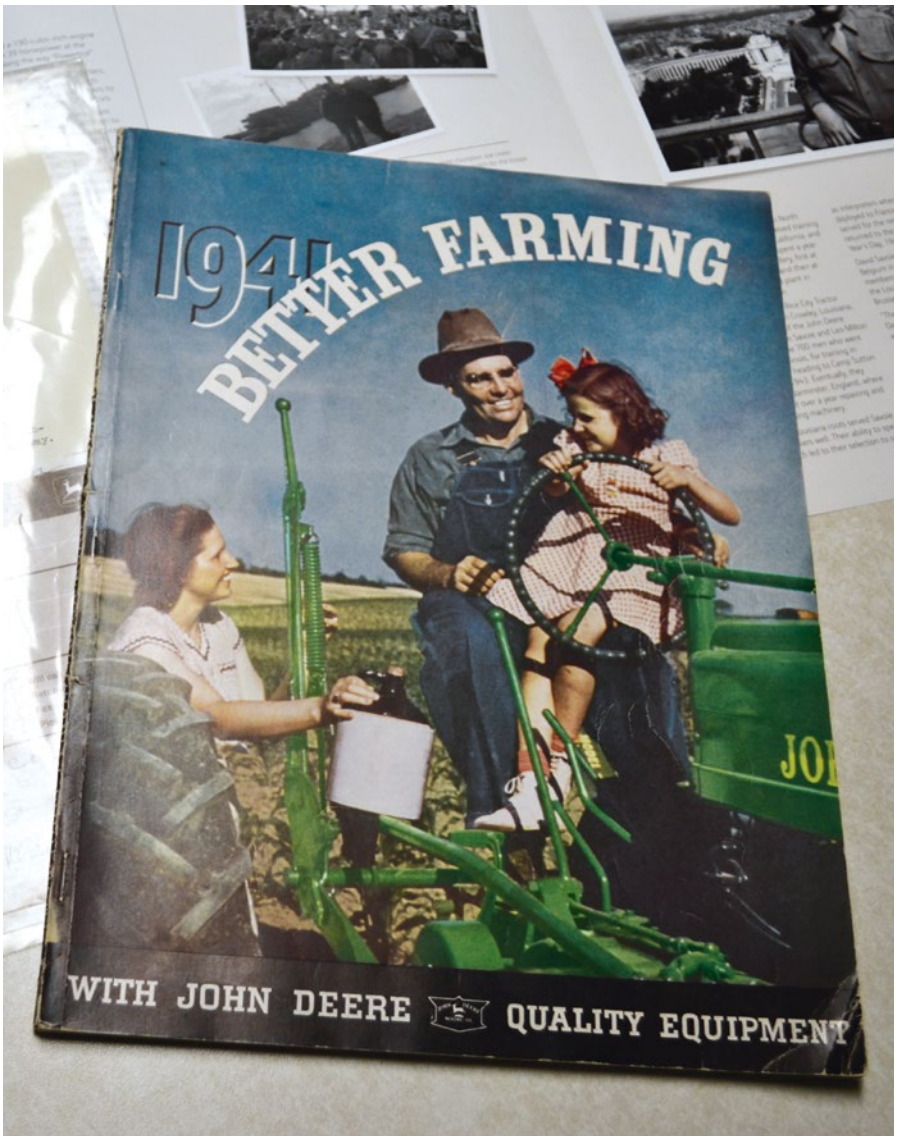
Angie and her sisters, including Stephanie Young, a materials engineer at the John Deere Product Engineering Center in Waterloo, Iowa, knew their grandmother was in a John Deere ad, but hadn't thought about it in years.

"Oh my gosh, that's a picture of my grandma!" Angie remembers saying. "I went back to the Information Desk to talk to the ladies there, and told them it was my grandma in the picture. They took a picture of me and [her daughter] Violet in front of it, and suggested I get in touch with Neil Dahlstrom at the John Deere Archives."

Dahlstrom was able to send a digitized image of what was an advertising brochure (A-456-41-4) for the John Deere General Purpose tractors, Models "A," "B," "G," and "H," featuring none other than Angie's grandma, then known as Janet Specht.

Mrs. Janet Fassett of Geneseo, Illinois, is the daughter of George and Genevieve





LEFT: *The cover of the John Deere General Purpose Tractors brochure, with an illustration of a young Janet.*

MIDDLE: *Mrs. Fassett poses with some products bearing the illustration image.*

RIGHT: *The cover of the 1941* Better Farming *magazine, featuring a young Janet and her mother, Genevieve Specht.*

Specht. She was six years old, playing outside of the Geneseo grocery store in 1940 while her mother shopped inside, and a man stopped and asked if he could take her picture.

Janet told him he would need to ask her mother when she came out of the store, so he waited. The man was a photographer with John Deere, and he wondered if Janet could be in an advertising photo shoot for the company. Her mother was familiar with Deere, as the Spechts farmed using some John Deere equipment, so her mother agreed, and they arranged to meet on another farm south of town. Mrs. Specht put Janet in a nice dress, "which I'm sure she made," and did her hair. The photographer took photos of Janet taking a water jug to a farmer sitting on a John Deere Model "A" tractor. Mrs. Specht also made it into a few photos.

"I mostly forgot about it after that," Mrs. Fassett said. "Back then you didn't boast about those things. We just got on with our business."

Janet married Dean Fassett in February of 1954, and they started out in the Geneseo area, where they farmed for over 40 years. Dean Fassett was a John Deere enthusiast, and farmed with some John Deere equipment, including a John Deere 4020 tractor. "Just give me the 4020, I always liked that one. You could go through muddy places in the field and you could always get out," Mrs. Fassett said.

About twenty years ago, she mentioned to her husband that she was in some John Deere advertising materials, and he wanted to learn more. They contacted Deere & Company, and were put in touch with the advertising department. The Fassetts found out that the photographs

"OH MY GOSH, THAT'S A PICTURE OF MY GRANDMA!" ANGIE FRANK REMEMBERS SAYING.

were used in the 1941 issue of "Better Farming" magazine, and Deere & Company sent them a copy. They also learned the original photographs were illustrated and used in promotional brochures for John Deere "GP" tractors.

Around 2000, the Fassets were shopping in the John Deere Store and bought some licensed products with the illustrations, including a tray, some coasters, and salt and pepper shakers. When she saw the products in the store, "I was kind of surprised. I didn't know they'd still be going today."

Almost as surprised as Angie Frank was in the John Deere Pavilion that fall day. She knew it was her grandmother in the illustration because it was similar to the framed magazine cover hanging in her grandmother's house today.

Easton Frank isn't old enough to understand that his great-grandmother is a part of John Deere history, but he does understand tractors. Easton got a toy 4020 tractor for Christmas last year; and loves it as much as his great-grandmother loved the full-size model she used on the farm.

CLICK HERE to view the full photo gallery

JOHN DEERE'S GPS: **THE "STEEL PLOW OF THE 20TH CENTURY"**

Global Positioning Systems have revolutionized farming. They've gone from an expense that couldn't always be justified to a crucial part of many farming operations.

In 1992, Global Positioning Systems (GPS) were accurate to within a few feet, good enough to create crop yield maps, which helped farmers make decisions about drainage, weed control, fertilizer, and seeding. However, the technology was costly.

John Deere saw the potential in these systems. In 1994, the company created the Precision Farming Group to look for evolving technologies that could make GPS more accurate and cost effective for providing location information to create yield maps. At that time, no one had proven that GPS could be used for vehicle guidance.

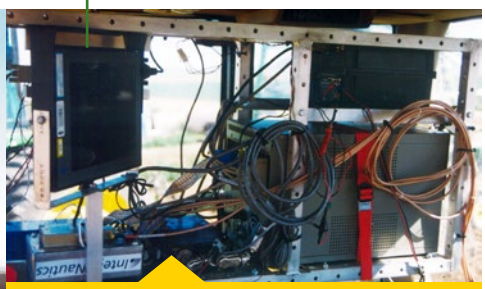
Soon after, a research effort by the John Deere Product Engineering Center (PEC) and the Precision Farming group initiated a project with Stanford University, which targeted an end goal of developing an autonomous tractor controlled by a very sophisticated GPS system. Deere provided Stanford with a 7800 tractor modified with electronic valves to control the steering, brakes, and transmission. Stanford outfitted the tractor with the GPS system, an onboard computer, sensors to detect obstacles, and a telemetry system to communicate with a remote base station.

In early 1997, in a demonstration for Deere management, the tractor was able to make perfectly straight beds with an accuracy of one inch, raise and lower an implement, and turn, all with no operator on board.

Another test proved the tractor's ability to till a field without damaging buried irrigation tape. After this demonstration, the team knew the technology would significantly reduce costs and labor requirements.

The autonomous John Deere 7800 tractor.

An original GPS prototype.



DURING THE LAST 30 YEARS, THE APPLICATION OF GPS TO FARM EQUIPMENT ***LED A REVOLUTION IN AGRICULTURAL SYSTEMS***

— **TERRY PICKETT,** *manager, Advanced Engineering, John Deere Intelligent Solutions group*

At the same time, Precision Farming teamed with the PEC's Advanced Tractor Engineering Group to create a plan for automating steering for not only tractors, but all platforms as well. They recognized that while it was possible to program a tractor to perform tasks, the tractor still needed an operator.

A late-1997 prototype demonstrated how a tractor could automatically steer on a straight line entered by an operator. Known today as AutoTrac™, this system is used on many self-propelled Deere products. A key finding of this early work was that Deere would need to develop a new GPS receiver capable of supporting the accuracy that a vehicle guidance system needed to satisfy a global customer base from both a cost and performance basis.

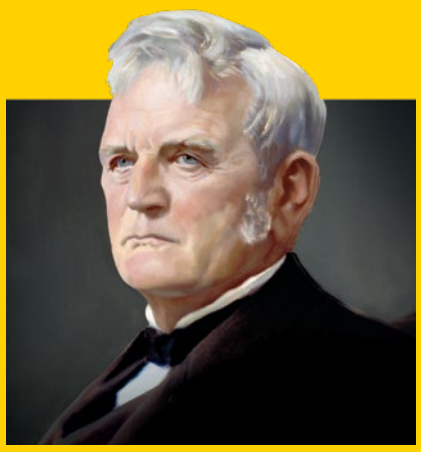
In 1999, the Stanford-developed system was refined to be more compact and user-friendly. To calm engineers concerns about the system's ability to plant and later cultivate the same ground, an Iowa cooperator used the system to plant 250 acres of corn and drill 250 acres of soybeans. Weeks later, when he drove the tractor into his fields to cultivate the standing crops, he engaged the automated steering. The tractor precisely followed the same rows planted weeks earlier.

"During the last 30 years, the application of GPS to farm equipment led a revolution in agricultural systems," said Terry Pickett, manager of advanced engineering at John Deere Intelligent Solutions group and one of the original members of the Precision Farming Group. "It has enabled products such as yield mapping; variable rate application of fertilizer, chemicals, and seeds; automated record keeping; and automated steering. These systems could ultimately enable completely autonomous operation of vehicles."

WATCH VIDEO

John Deere put the AutoTrac™ system into production in 2002. The system has become so popular that today 60–70% of the crop acreage in North America is farmed using AutoTrac™ or competitive systems. In Australia, that number is over 90%.

The Smithsonian Institution in Washington, D.C., recently showed interest in learning more about the original GPS receivers. Peter Liebhold, curator of the Smithsonian Institution's Division of Work and Industry, called the original Deere GPS receiver the "steel plow of the 20th Century."



JOHN DEERE'S BIRTHDAY

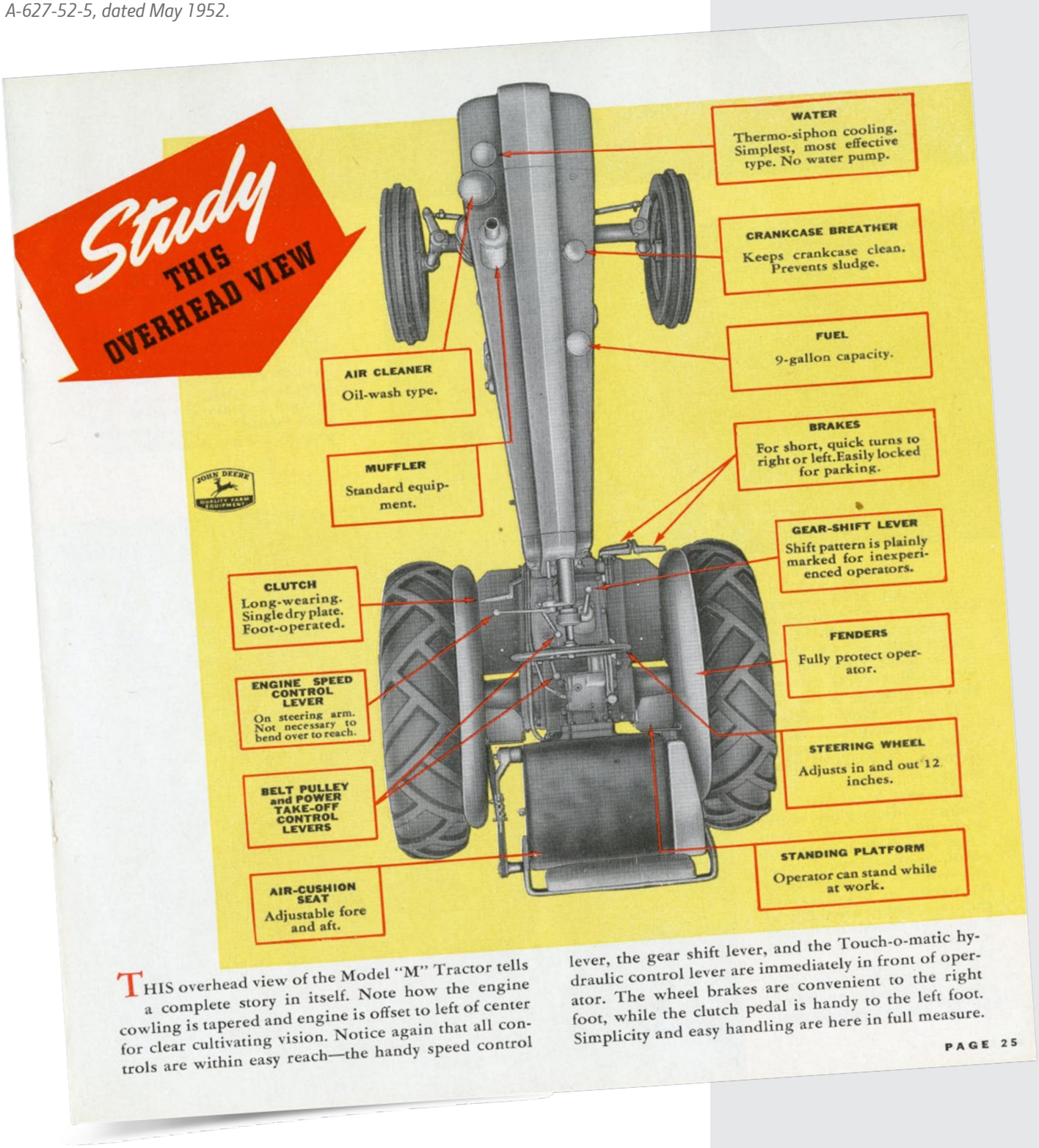
John Deere would have observed his 212th birthday on February 7. Born in 1804 in Rutland, Vermont, Deere moved west in 1836, seeking a better life in Grand Detour, Illinois. One year later, he perfected the first commercially successful self-scouring steel plow. John Deere died on May 17, 1886, in Moline, Illinois, at the age of 82. Thousands of mourners paid their respects at Red Cliff, his home in Moline.

It would appear that John Deere had a sweet tooth. In one of his account books, dated 1848-1855, the John Deere Archives team found a collection of handwritten recipes, including a lemon cake and a coconut cake. The Archives team had the original recipes, which called for items such as "4 flours," converted into modern measurements.

We invite you to celebrate John Deere's birthday this month by trying these recipes, or baking one of your own. To share a photo of your cake, please submit it ***HERE.*** To see other cakes submitted, go to JohnDeereJournal.com.

FROM THE ARCHIVES

The model "M" tractor was built from 1947-1952. This overhead view comes from brochure A627-51-3, dated March 1951. A final literature update was available in A-627-52-5, dated May 1952.



THIS overhead view of the Model "M" Tractor tells a complete story in itself. Note how the engine cowling is tapered and engine is offset to left of center for clear cultivating vision. Notice again that all controls are within easy reach—the handy speed control lever, the gear shift lever, and the Touch-o-matic hydraulic control lever are immediately in front of operator. The wheel brakes are convenient to the right foot, while the clutch pedal is handy to the left foot. Simplicity and easy handling are here in full measure.

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