

Chapter 1 : Ford 8N Tractor Service Manual PDF Download

Ford 2N, 8N, 9N Tractor Service Manual - View it absolutely FREE online here! Pages.

Here, longtime contributor Dave Erb writes about his personal checklist for looking at a 9N, 2N or 8N to purchase. While all N models are fairly dependable, Dave says, as production continued into the fifties improvements to the tractor were undeniable. What follows are some pointers that will prove helpful for anyone pondering the purchase of one of these faithful tractors. Generally speaking, early N production represented a major breakthrough in tractor design. The 3-point hitch system for plowing and implement attachment was a major achievement invented by Harry Ferguson and adapted for production by Ford Motor Company. It remains, even now, the industry standard. This is why you could purchase a sixty-year-old Ford tractor and a brand new brush cutter and mate the two with little adaptation. In order for this material to make sense, a few basic things must be discussed first – like the important differences between the earlier 9N, 2N and later 8N models. Even from a distance, it is possible to spot the differences between these models by looking at the rear wheels. The 9N and 2Ns all have 3-speed transmissions plus reverse, while 8Ns have 4 speeds forward plus reverse. Compare the 2N and 8N for example: Note the large, flat rear hub with six bolts spread out. Also, the front hubs have a similar, wide set five-bolt pattern. AND, just to make it interesting, many parts are interchangeable. So, you could have a 4 speed transmission and rear end, but 9N-2N type hubs on the front. In their original form, most 2Ns had no distributor, but used a magneto instead. These units had no starter or battery and consequentially, no generator charging system. Since most of us like our creature comforts, most 2Ns now have starters, batteries and charging systems, just like other models. If they have running boards now, they were added later. In , following a protracted legal battle between Henry Ford and Harry Ferguson, 8N production began. These were the first Ford tractors originally painted red and gray. The pinnacle of N model achievement was represented by the late and models that displayed a star prefix and suffix to the unit serial number. Note that all the N models have minor differences as the productions lines continued to make improvements – but it is the 8N that had one major change in with a move from the front mounted distributor the placement on all the 9N, 2N and earlier 8N models to a more accessible side mounted distributor. More on that later. Loose rear hubs on 8N units. By grabbing the top of the rear tires and rocking back and forth you could assess if there is play in the rear hubs. This test only works for 8N rear ends, not 9N or 2N. This condition can be checked with no tools whatsoever, by simply grabbing each rear tire at the top and shaking the wheel in and out sideways. If you feel any play during this test, a hub is loose. Hubs are soft cast iron, and axles are hard steel so we all know which parts will wear first. Rear axle splines are tapered, so when a hub becomes loose, it will quickly wear out in the splined area. Loose hubs are almost always accompanied by leaking grease seals, which usually indicate the need for brake shoe replacement. Worn Steering Boxes in 9N and 2N units. The design of these gear boxes is such that the upper worm gear bearing receives little lubrication after initial assembly. Once this bearing dries out, it is prone to wear and can eventually come apart. If a strong operator tries to make the tractor steer when this happens, a perfectly normal reaction the box can actually break. These parts can be very expensive, and are usually available only from salvage yards. Worn steering boxes often exhibit a tendency to shimmy at road speeds. Worn Hydraulic Pumps – All Models. Ns employ a Scotch yoke design hydraulic pump that is pretty reliable, but over time these do eventually wear out. A faulty pump is most noticeable when lifting a load, and usually shows up as a pulsating lift as opposed to a smooth, even lift. Some pumps can be rebuilt, while others are too worn for this option. Worn piston seals will leak down in a few minutes. Good tight hydraulic cylinders will hold a 2-bottom plow off the ground for 5 to 7 days. Under this area is the hydraulic cylinder and piston. Unless you have experience with these components, this is one area you might consider hiring an expert to do repairs. The labor will likely cost more than the parts. Engine Wear – All Models It is nearly impossible to perform a compression check in an N with the hood and fuel tank in place, unless you have a degree elbow with plug threads to use with your gauge. While a compression test is the most reliable test for any motor, there are some other signs you can look for. Pull the breather cap off oil fill point and drive the tractor at low engine speeds in

high gear, after the engine is up to operating temperature. Any sign of blow-by means compression escaping past piston rings. And, while the engine is warming up, pay close attention to the oil pressure gauge at idle. It should show a minimum of 20 psi, hot idle with normal weight oil. Other General Considerations Many tractors were subjected to calcium chloride in the rear tires to add ballast for better traction. This solution is highly corrosive and can play havoc with rear wheel rims in a few years time. While no longer common, original hat-style rims are very desirable and increasingly rare. Tire tread is always important. Rear tires wear rapidly when driven on paved roads. American-made tractor rubber costs even more than this if you can find it. The last three years of 8N production used a side-mounted distributor that replaced the original monkey-face unit above the crankshaft used in earlier production. This improved design makes these later units more valuable, since they are infinitely easier to service. Always check all fluids for appearance and the possible presence of water in gear or engine oil, and oil in radiator coolant. Any of these signs usually carry steep associated costs. The only exception to this is water present in the gear oil of tractors that sit out in the weather, a fairly common problem that can be remedied with 5 gallons of fresh oil. Finally, cosmetic items like sheet metal quality, head and tail lights, exhaust systems and the like rank way down the ladder of importance, since they can be remedied without too much expense incurred. Except for the last two years of production, N models were not equipped with hour meters. I wish they were, for it would amaze most of us to see just how many hours some of these tractors have been in operation. I knew one small Pennsylvania farmer who used his 8N for 25 years of light service, and never did any major repair work. A neighbor of ours used an N to power his silo filler and did a major overhaul nearly every season. Here then, are the major places to look for wear on N tractors: Throttle quadrant when the notches are all polished off Clutch pedal 8Ns the diamond tread is polished off from use Lower draft lift arms the ball sockets on each end show lots of slop or play Steering arm, tie rod and box wear indicated by excessive play at steering wheel Bottom Line Perusing the two main N web discussion sites, here is the real skinny on N dollar value today by reader consensus. Note the extra shifter sticking out the side of the transmission housing. Extra points should go to any N with original style hat rims or an original style front bumper. The real bottom line is this: That said, many of us will do it again and again. But, for this reason, it may be prudent to pay a little more for a field-ready unit, especially if you are new to the restoration business.

Chapter 2 : Ford 2N , 8N and 9N Series - Shop Service Manual | Farm Manuals Fast

Ford 8N Tractor Operator's Manual. Most up-to-date Operator's Manual for the 8N available. Large page manual includes the usual owners info but Ford also put a great amount of Service Manual info.

Rather than duplicate all that information, what I will do here is provide a few tips that may not be covered in the other manuals. Compression checks should be done prior to deciding an engine rebuild is necessary. Some engine problems may appear terminal, but are easy to fix. My procedure for getting and interpreting compression numbers is here: However, it is very meticulous work. Each step must be painstakingly completed, and re-done, as many times as it takes to complete properly. Every single step must be completed properly before moving to the next. Start cutting corners, and rapid engine failure is guaranteed. The point is that engine rebuilding requires patience! This is not meant as an insult. Any money saved doing engine work yourself instantly turns into a huge unnecessary waste of time and money, if all the work must be re-done. It is often possible to do an in-frame rebuild, but a tractor engine rebuild usually starts with removing the hood, battery, radiator, front axle, steering, dash, and other accessories. Get the engine on a stand to do a proper rebuild. Take plenty of photos! It will be some time before this all goes back together. Why trust anything to memory when digital photos are FREE! The more photos you take, the more important it is to carefully organize photos so you can find them later. Most cameras create generic names like IMAG, 2, You might trust the file date, but those change any time a file is edited. I rename all my photos with the complete date, time, and retain the original sequence numbering. My file name date code is yyyy-mmdd-HrMnSe. Obviously, yyyy is the year, mmdd is two digit month and day. The last six digits are the 24 hour time the photo was taken. You do not have to remember the exact time with digital photos. There are several decent freeware utilities for quickly renaming large batches of files, and "Date Taken" can usually be used to rename the files. Use flare nut type wrenches to remove steel fuel and oil line fittings without damage. Completely drain the fuel from the tank, remove the fuel valve assembly, and twist a properly sized pipe plug in the hole to keep things out of the tank. Leave the fuel valve on the tank and it will surely get broken. Take "before" pictures of everything. These photos need to provide details like which way the assembled fuel valve is supposed to point when reinstalled. While the engine is in pieces, send the radiator out to be cleaned, tested, and re-cored if necessary. Repairing an original radiator is far better than trying to fit most of the new replacement radiators. Buy new radiator mounting hardware, and rubber pads. Do you need a new radiator cap? If so, buy that, a new set of hoses, hose clamps, and a thermostat. Replace All Rotten Hardware - Remember those rotten little nuts and bolts that held the dog legs to either side of the hood? Now is a good time to match those up with new zinc plated hardware. Put the new bolts through the holes in the dog legs, or tape them in plastic bags to the inside of each part. Stuck Fasteners - Dealing with frozen or stripped nuts and bolts is not covered in any manual. I love it when the manual simply says "remove left whatsit" and one stuck or stripped bolt takes 3. None of the other products, or home-made rust dissolvers worked as well as PB Blaster in any of the actual side-by-side comparison tests I have been able to find. A little heat from a torch often helps PB Blaster work. Remember heat causes metal to expand. Heating a nut will expand it away from the bolt and may help break it loose. On the other hand, heating a bolt expands it into the threaded hole or nut, and just locks it even harder. If you use heat on a bolt, wait until it cools completely before trying to turn it. I often start spraying rusty fasteners with PB Blaster a day or so before, and spray them 2 or 3 times, before making the first attempt to loosen them. The chemicals work better when given more time to work. Rusty Slotted and Phillips machine screws suck. Most of those screws are not coming out with regular screwdrivers. Before you start drilling them out, get an impact driver. Not an air gun, get the old-school, whack-it-with-a-hammer, manual impact driver. You are working on a Ford, so I usually assume you already have a full set of various hammers. My impact driver is a Sears Craftsman from my motorcycle days. Sears still has them with the automotive specialty tools. An impact driver is a miracle cure for stuck and stripped machine screws. The tool and bits are hardened steel, and the tool has an internal taper that works in both directions. Some screws break loose easier if the first attempt is to tighten them slightly. Do it again, and again. Hit the tool, not your hand! By the third whack, you should see

the screw start to turn. Keep going for a couple whacks turning the tool a little more before each whack. Now, switch to a standard screwdriver and back the screw out. You just saved the threads from a lot of abuse caused by drilling and re-tapping. The combination of impact, vibration, and a little nudge in the right direction will loosen most stuck screws, even if they have been pre-stripped and look hopeless. Get in the habit of using the manual impact tool to loosen all flat or philips machine screws. Damaged screw slots will soon become a thing of the past. An assortment of nut splitters, saws, chisels, grinders, and a cutting torch may come in handy when rotten hardware will be replaced anyway. It is especially aggravating when a previous owner used extra long bolts rather than buying or making them the correct length. Sometimes the easy way is to intentionally over-tighten stuck fasteners till they snap. There will be bolts or studs that snap-off flush with a casting surface. If you try them, use the largest drill bit and Easy Out that will fit in the snapped bolt. Do not snap an Easy Out off trying to break the stuck bolt loose. That just makes a bad problem worse. The hardened steel Easy Out is nearly impossible to drill. Any snapped hardware that is bottomed in the threads or otherwise completely stuck, will have to be drilled out. Center punch the bolt. Start with a small bit. If the bit goes off-center, angle the drill, then straighten out, so the hole ends up in the center of the snapped bolt. It is very important to drill as close to the center as possible. Use larger and larger bits until most of the bolt material is gone. Use a pick to clean the bolt threads out of the threaded hole. Finally, run the correct size tap through the threads with light pressure to completely clean the threads. Machine Shops - Major engine machine work should be done by a specialized engine machine shop. Machine shop time and equipment is expensive, but worth every nickle for engine work. Any disassembly and assembly work you can do will save money. The line between major and minor machine work varies widely. This is definitely a specialty that requires special knowledge and tools. Talk to Greg, either one. Some tools can be borrowed from an auto parts store. The usual deal is they charge you full price for the tool. When you bring it back you get most of your money back. If you keep or destroy the tool, they have already been paid the full price to buy it. This is my shop press. It might be possible to do without one. This was purchased from Harbor Freight many, many years ago. With heavy use, the hydraulic bottle jack lasts about three years. It looks very little like the one I bought. Some hardware for attaching the cylinder head may use nuts and studs.

Chapter 3 : Ford 8N Service, Repair & Owners Operators Manual Shop

8N Ford tractors are highly collectible. Restore your Ford 8N model using quality parts from Steiner! We are here to help with videos and technical information about your Ford model 8N tractor parts.

The factory reprint manual has an original part number of M. This guide is the original manual that came with the tractors when they were originally sold. The manual includes a colorful cover with an image of a Ford tractor to make it easy to distinguish from other manuals. Repair and maintenance sections are minimal, with instructions for only the most basic tasks. Maintenance schedules are included for the tractors. The Ford 8N Operator Manual ships for free to the continuous 48 states. The 8N manual is priced low and comes with our easy return guarantee. Order your manual today and learn all about using and caring for your favorite Ford tractor. Study and follow lubrication recommendations so that your tractor will operate with a film of oil or grease in all bearings. Metal-to-metal bearing contact without a protecting film of lubricant soon ruins high velocity bearing surfaces. Transmission oils are produced to meet many different requirements. No one oil is satisfactory for all uses. Compounds sometimes are added to oils which form a gum deposit. Such deposits on the hydraulic system control valves may cause operational failure. It is, therefore, important to follow the recommendations as shown in the lubrication chart. The lubrication chart fig. For convenience in reading, points to be lubricated at the various frequencies are indented different amounts. The suggested frequency of application and specifications of the lubricants are given for average operating conditions. Extremes of temperature and dust must be considered when following the suggested lubricating schedules. Extremely low temperatures may increase the transmission oil viscosity to a point where the hydraulic control cannot operate properly. When the tractor is running in thick dust, the air cleaner and beather cap should be serviced more frequently. If the tractor is to be stored during the winter months, the engine should be tuned when the tractor is removed from storage. This manual is perfect for the restorer or anyone working on one of these vehicles. Clear illustrations show exploded views as well as component details and more.

Chapter 4 : FORD 8N-8NAN SHOP MANUAL Pdf Download.

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Dec 23, Used to have a Wagner front end loader on my 8N. Fun it was not. You hoist the loader up in the air, and drive the tractor under it. The fenders have to be removed, and the loader attaches to the rear axles at the fender mount positions. Usually you can attach the fenders to the loader frame. The front requires a mounting plate that usually hangs down from the center pin and the engine mount. You have to remove a fair amount of the front of the tractor in order to mount this plate. Hydraulic power comes from a pump mounted on the loader at the front. It connects to the crankshaft of the engine, right where the hand crank would go. It requires a special crankshaft pulley. This is the most difficult part of mounting and unmounting the loader. Some use a splined shaft, others use a threaded shaft. You need to remove the shaft from the flange that goes into the crankshaft pulley, and walk the tractor straight back to get the shaft out, or straight forward to get the shaft in. Once I got good and experienced, I could usually get the loader on or off in under an hour. And that is downright terrible. First is the loss of rear traction. You have none with a loader. The rear tires come off the ground with the slightest load in the bucket. I used a 1, lb counter weight on the 3 point hitch just for the empty loader. Another 1, lb weight was stacked on that if I was going to use the loader. The loader so badly overloads the front end that you cannot turn the wheels. Instead, you turn with the rear wheel brakes and try to turn the front wheels along to follow. You will also be breating the front axle regularly, and wearing out the front axle pivot pin and wheel bearings. Then there is the tremendous wallowing the tractor will do as a result of having the loader on it. What was once a nimble light weight tractor is now a lumbering, swaying wallowing pig. Getting in and out becomes a messy job. The only way is straight up from the back. It will become very important to have the cap on the pto shaft. I got to where I would mount my loader and use it when absolutely necessary, and kept it off at all other times.

Chapter 5 : Ford Tractor Service Manuals - Ford Tractor Manuals

View and Download Ford 8N-8NAN shop manual online. 8N-8NAN Tractor pdf manual download. Also for: 2n-2nan, 9n-9nan.

The hitch is shown as an aftermarket attachment mounted on a Fordson tractor. It is a fully mechanical version with a depth wheel small wheel that sets the plow depth. The Fordson was a tremendous success in North America and Europe from to Ford of the U. Ford Ltd of Britain continued to thrive with the Fordson from onward. Some British Fordsons were imported to the U. But Henry Ford waited to reenter the market, planning to have the right new tractor at the right time to achieve a market-changing success. In Ireland, businessman Harry Ferguson had been developing and selling various improved hitches, implements, and tractors since the s. His first tractors were adapted from Model T cars. In and he gave demonstrations at Cork and Dearborn of his hitches and implements as aftermarket attachments to Fordson tractors. The hitches were mechanical at the time. By , he and a team of longtime colleagues including Willie Sands and Archie Greer had developed a good hydraulic three-point hitch. Ferguson put such hitches on Fordsons throughout the s and early s. In the mids, he had David Brown Ltd build Ferguson-brand tractors with his hitches and implements. It was light in weight relative to its power, which impressed Ford. An innovative system of tire mounts for the rear wheels and versatile axle mounts for the fronts enabled farmers to accommodate any width row-crop work they needed. Ford once said "Our competition is the horse. The 9N was first demonstrated in Dearborn, Michigan on June 29, Its model name reflected a model-naming system using the last digit of the year of introduction and a letter for product type, with "N" for tractors hence 9N. Like the Farmall , it was designed to be a general-purpose row-crop tractor for use on smaller farms. An extremely simple tractor, the 9N was fitted with the Ferguson system three-point hitch, a three-speed transmission, and featured footpegs instead of running boards. The 9N had variable front track , a valuable feature for row-crop cultivation , via front half-axes that could be slid in and out and pinned in place. Uniquely, the exhaust was routed underneath the tractor, much like an automobile. All 9N tractors were painted dark grey. This tractor has a rear PTO, which could be used to drive three-point or towed implements. The Ferguson hitch was designed to solve some of the problems found in the earlier Fordson tractors, such as flipping over if the plow hit an obstruction. The upper link also would adjust the hydraulic lift to use the drag of the plow to improve traction. This was known as draft control. The original 9N engine was a four-cylinder engine and was designed to be powered by distillate fuels. The engine shares the same bore and stroke sizes as one bank of the Ford V8 automobile engines. A few standard Ford auto and truck parts, such as timing gears and valve tappets, were used in this engine. The ford 9N engine was a side-valve, four-cylinder engine, with a 3. The transmission was the standard three-speed. This was an advantage, as tractors from other manufacturers cost almost twice as much. The 2N still came in dark grey, but now had added improvements, including a larger cooling fan and a pressurized radiator. However, the 2N, like the 9N, still had only a 3-speed transmission, a disadvantage compared to many tractors at the time, such as the Farmall A and M. By this time, wartime regulations had imposed manufacturing economies, and some 2Ns can be seen with all- steel wheels. Batteries were reserved for the war effort, so the all-steel wheel tractors came with a magneto ignition system instead of a battery and had to be started with a hand-crank. Introducing a new model name also allowed Ford to raise the price of the tractor. Wartime price controls prevented the raising of prices on existing models, but they could not determine the price of a "new" model. Despite the model name change, the serial numbers continued to be prefixed with "9N". After the war the steel wheels and magneto system were replaced with rubber tires and batteries, respectively. Ferguson was furious and sued Ford Motor Company. A few years later his Ferguson interests were merged with Massey Harris, a Canadian company, to become Massey Ferguson. Equipped with a 4-speed transmission, this model was destined to become the top-selling individual tractor of all time in North America. The most noticeable differences between the 8N and its predecessors was the inclusion of a 4-speed transmission instead of a 3-speed in the 9N and 2N, and an increase in both PTO and drawbar horsepower. The original automatic draft control on the Ferguson system would allow the depth of the implement to vary based on soil conditions,

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which did not work well for some implements. The new Position Control setting bypassed the draft control and allowed the implement to remain at a consistent position relative to the position of the Touch Control lever. A continued drawback to this series of tractor, was the lack of a "live" PTO. Without a live PTO certain implements such as brush cutters which store inertial energy could send that back into the transmission. This would cause the tractor to surge forward if the clutch were disengaged. This was addressed with the advent of the PTO overrunning coupler. The 8N was equipped with running boards and was painted lighter gray on the sheetmetal and red on the body. It was the first Ford tractor to feature a clutch on the left side and independent brakes on the right. The wide-spaced front wheel design of the 9N and 2N was retained. In the 8N design changed to feature a side-mounted distributor, as well a Proofmeter combined speedometer, tachometer, hour meter located on the lower right portion of the dash. The new tractor was four inches longer, four inches higher and pounds heavier at 2, pounds than the N series. The following series and later numbered model tractors were derived from the NAA. The tractor was produced for three years through The tractor had no parts in common with the original Ford 8N. New Holland Boomer 8N.

Chapter 6 : How To Buy: A Ford N-Series Tractor | N-News

The complete service manual was carefully reproduced from the original dealer manual and is a must for mechanics repairing or rebuilding their Ford 2N, 8N, 9N Tractor to the manufacturer's standards.

Chapter 7 : FORD 9N SERVICE MANUAL Pdf Download.

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Chapter 8 : Ford 8N 9N 2N N Series Tractor Manual Set CD or Download

Restoration requires knowledge of your Redbelly tractor. Browse our Manuals for info on different parts, basic implementation, accessories, operation and more!

Chapter 9 : Tractor Manuals

ford 8n tractor manuals, parts and decals In July of , the manufacturing of the iconic Ford 8N began. Over half a million of these tractors were built, making them one of the best selling tractors of its time, and with an original price of \$1, (\$12, in today's dollar) they were priced to sell.