

50 Tips for Ford N Owners

Ford 9N, 2N and 8N Tractors

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I'd like to say that the reason I have an 8N Ford tractor is because that's the tractor my grandfather used on the farm. Well, my grandfather was a farmer in Caroline County, Virginia, but he worked the farm with mules. The only tractor I ever operated was an 8N owned by my close friend, Lewis Mills, of Ashland, Virginia, so it was only natural to look for an N when I moved out to the country six years ago. That, and the fact that Ashland still had a Ford tractor dealership. My first N was a 1950, followed by a 1951 with a Freeman loader, followed by another 1950. Because my pole barn has three bays & I don't own horses, my theory is that I'm supposed to have one tractor per bay! Over the years of owning these three tractors, I have managed to refresh what little mechanical knowledge I had and add a little more, thanks to the wisdom and helpfulness of many fellow N owners. So, now it's my turn to share a few of the tips I've picked up.

Listed below are a few things I have learned about N tractors thanks to many folks on the [YT Board](#), including Dell (WA), souNdguy, Eddie8N, Jeb2N, AdamP and many others.

1. The governor has a long bolt & a short bolt; make sure that you put the short bolt on the top. If you put the long bolt on top, your next project will be to replace the timing gear.
2. Front wheel grease seals are installed with the rubber toward the spindle and the metal toward the bearings.
3. The N tractors have a common sump for the rear end, hydraulic pump and transmission. There are three drain plugs under the tractor and one filler cap behind the gear shift. To change the fluid, start by removing the pipe plug under the rear end and move forward to the hydraulic pump and then the transmission. Use only Ford MC-134D hydraulic oil or 90w mineral oil. The modern equivalent of 90w mineral oil is TSC Traveller brand GL-1 or NAPA part number 65-205.
4. To add just the right amount of hydraulic fluid, remove the bottom bolt from the inspection plate; unless you just cleaned out the sludge in the pump base, it will only take about 4 $\frac{3}{4}$ gallons (not 5) of hydraulic oil. When the oil leaks out of the bolt hole, it has enough in it. Any more fluid will leak past the seals and onto the brakes. Mark your dipstick accordingly.
5. It is not necessary to add .lead. to the gas or use hi-test gas. This is a low compression (6.5:1), low hp (23hp) engine with hardend valve seats.
6. The general . but not universal - consensus of N owners is to use multi-vis detergent oil, with the weight of the oil being determined by engine wear and outside temps; worn engines will require a heavier weight and colder temps lightweight oil.
7. Use Champion H-12 or Autolite AL437 plugs as they run hotter than the original spec Champion H-10s.
8. The muffler clamp has a big side and a small side; the big side goes to the bottom. Putting some tin foil under the clamp helps reduce exhaust leaks and coating the bolts/nuts on the clamp with a never-seize compound will allow you to replace the tin foil without buying a new clamp.
9. Henry Ford was a frugal man and would never install anything on a tractor or

car that was not essential to its operation. The fuel shut-off valve on the sediment bowl is there for a reason; shut the gas off when you turn off the ignition key . every time! If you forget and leave it on, and the needle valve or float in your carb is bad, and the intake hose from the air filter is secured tightly to the carb, gas will flow from the carb into the intake manifold and into the engine, filling your oil pan with gasoline.

10. The Napa part number for the sediment bowl gasket is 730-9506; they are .50 cents each. Stock up. The Napa oil filter number is 1010.
11. If your tractor is sitting on frozen ground, BACK UP before trying to go forward. If the wheels are frozen to the ground and you let the clutch out in a forward gear, the tractor can flip over.
12. When removing the hood from the 8N, first drain all the gas out of the tank and, second, ask the neighbor for help.
13. Always back up on to a trailer, so you don't flip over.
14. Have a trailer .fence. at the front of the trailer so you don't roll off.
15. Carry (mount) a fire extinguisher and make sure you shake or tap the powder loose about every two months. A fire extinguisher can be easily mounted with radiator clamps to the left side lift arm (the one without the leveling box).
16. Don't wear loose clothing that could get caught up in the PTO.
17. There is a right and a wrong way to putting the brake shoes back on. Take pains not to get the springs reversed or the cross shaft facing 180 degrees off.
18. Always use an Over Running Coupler (ORC). An ORC is a ratchet-like device that fits over the PTO shaft. It prevents the centrifugal force in a heavy piece of turning equipment, like a bush hog, from pushing the tractor forward when you put the clutch in.
19. Avoid pulling stumps if possible. If you must pull stumps or snake logs, hitch to the drawbar as low as possible or you are asking for a flip over. Better still, pull in reverse, using the front bumper or axle as the anchor point.
20. Adjust 3rd brush generators to produce no more than 15-16 amps MAX when starting, and 0-2 amps charge with lights on and running.
21. Open the fuel two full turns for normal operation, all the way out for the one-gallon reserve.
22. Have you adjusted your brake .widget. lately on your 9N/2N? The 9N and 2N (but not 8Ns) brakes have an adjustment wedge; by turning the wedge with a wrench, you can adjust the breaks.
23. If you ever do any work on the charging system (remove the battery, disconnect the generator, etc.), you should re-polarize the generator just in case the generator loses its residual magnetism when the battery is removed from the circuit. On the 9N/2N, with the engine off, use a set of metal pliers to momentarily jump across the cutout; when it sparks, it's polarized. On the 8N, use a flat-blade screwdriver to momentarily touch the BAT and ARM terminals on the voltage regulator, again with the engine off.
24. Don't overfill the radiator; fill just over the core, leaving room for expansion.
25. Do use a thermostat. If you don't, the engine heats unevenly, which means it wears unevenly. A cool running engine does not heat the oil sufficiently; you will get sludge build-up in the pan as a result. The tractor came from the factory with a 160-degree thermostat; 50 years ago, most anti-freeze was alcohol based and would evaporate at temps above 160 degrees. Some folks like to use a 180 degree thermostat because a hotter running engine is better on the oil. When installing the thermostat in the upper radiator hose, the .pointy. end goes toward the radiator. Don't worry if you put it in backwards; as soon as the coolant gets

- to 212 degrees, it will boil over, because installing the thermostat backwards blocks the upper hose!
26. A \$5 shifter boot is cheaper than five gallons of hydraulic oil or a frozen hydraulic pump.
 27. Copper core spark plug wires make a lot of difference in spark quality as compared to automotive resistor wires.
 28. A properly functioning OEM starter interlock is worth the time and money to fix, even though it is easier and cheaper to simply bypass with a new automotive starter switch.
 29. Depressing the clutch when starting DOES reduce starter drag especially when using thick tranny oil or in cold weather.
 30. True 12v coils on 12v conversions provide hotter sparks than OEM 6v coils and dropping resistors combinations.
 31. Periodic lubrication of your 8N steering box is much, much easier than disassembling your steering box to replace the top unlubed bearing. Look on the right side of the steering box, just above the proofmeter. Remove the bolt and stick a piece of wire with a .J. hook on the end in the bolt hole. You will find hole going into the steering box. Get some plastic tubing, stick it on the end of your bottle of 90W gear oil (or, 140W outboard motor oil) and fill it up. No, you just can't take the acorn nut off the top of the steering column and fill it from the top.
 32. More lube tips: Service your air cleaner when you service your oil. Water does collect in there and can block airflow if it freezes. Also, the side mount distributors and the genny have an oil cup that needs a drop or two now and then.
 33. If you have a new round can coil for your 8N and it does not say BAT and DIST on the top of it, just remember, for a POSITIVE GROUND tractor, it's Positive Plus to Points, (PPP) the .+ wire goes to the distributor. Hooking it up backwards reverses the polarity & costs you about 25% of spark efficiency.
 34. The top hole on the three-point rocker was intended ONLY for light draft tillage equipment. DO NOT use it for plowing, mowing, discing, etc.
 35. Always use the fan shroud. It allows the air to flow over the entire radiator.
 36. If you need to remove the starter, always remember to have two nuts to place on the two long starter bolts as soon as you loosen them from the block. If you forget and the armature comes out of the starter housing, you will learn how to hold the spring-loaded brushes back with toothpicks while you put the armature back in the housing.
 37. The screws holding the points to the plate in the distributor often wear out, causing the points to slip. Replace them with #8-32 x 3/16 screws, available at your local Ford dealer as part number 355047.
 38. If you forget and leave the ignition key on and the points just happen to be closed when the engine stopped turning, the chances are about 99% that the points are burned up. If you are very unlucky, so is the ignition switch and perhaps the coil. Turn the key off.
 39. At a minimum, you need to have an operator's manual for your N, as well as the I&T FO-4 shop manual. A parts catalog is a nice addition.
 40. The operating to maintenance ratio of these tractors is about 10:1, i.e., for every 10 hours of operation, you can expect to spend about an hour on maintenance.
 41. A small gauge 12v battery cable will not work properly on a 6v tractor. Use a 2 or 1 gauge cable to go to the starter (negative) and the OEM strap for the positive cable.

42. One of the least expensive and best projects you can perform on an N tractor is to replace the wiring harness. You can also clean all of the grounds properly as you install the harness.
43. Never jump a 6v tractor battery with a 12v battery. To jumpstart a 6v tractor with a 12v battery, put the tractor in neutral, block the wheels and turn the key on. Place one jumper cable on the stud on the starter. Make sure the tractor is in neutral, because when you place the other jumper cable on the frame of the tractor, the starter will engage and turn the engine over. This bypasses the neutral safety switch and the solenoid. The 12-volt battery will not harm the 6-volt starter unless you crank it for three to five minutes. However, if you jump the 12-volt battery directly to the 6-volt battery with the ignition key on, you will put 12 volts into your 6-volt voltage regulator. Then you will learn how to replace a voltage regulator.
44. The hydraulic pump safety valve is set at about 1300 pounds. However, the front wheels of the N will come off the ground at about 800 pounds.
45. The OEM fuel system had three fuel screens: one inside the gas tank as part of the sediment bowl stem, one in the top of the sediment bowl, and one in the brass elbow going into the carburetor. The screen in the top of the sediment bowl and the one in the carburetor elbow should be cleaned when you change the oil.
46. Getting a compression gauge screwed into the spark plug hole underneath the gas tank is a tight fit. To make this job easier, get a brass elbow from the local plumbing supply store, screw the elbow into the spark plug hole and the gauge into the elbow.
47. A digital multi-meter is a handy and usually inexpensive tool to have around the shop. But, most inexpensive digital multi-meters do not like the electrical noise produced by the N's generator; the test leads act as antennas and the meter gives some erratic readings as a result. Stick with the old analog meter for your old N!
48. Parking brakes are an inexpensive and wise investment for your N. If you do not have parking brakes on your N, get in the habit of turning the engine off when you get off the tractor. Under no circumstances should you get off the tractor with the engine running AND the PTO engaged.
49. The cheapest and easiest way to test your battery is with a battery hydrometer; they are usually available at most auto parts stores for under \$10. They work by measuring the specific gravity of the electrolyte in each cell of the battery.
50. Some items you will find handy to have in your N's toolbox for troubleshooting are an old spark plug to test for spark, a 7/16 box end wrench to remove the bolt in the bottom of carb to check for fuel flow and a short piece of wire with alligator clips on both ends to jump the easy-to-fail ignition switch.