

## Ford N-Series Tractor Tools - Recipe for Restoration, by Tim "PloughNman" Daley (MI)

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I have my own method to restore Ford tools that preserves the natural patina of the metal that wire brushing and/or sandblasting destroy. The latter two methods are probably the quickest way to get the rust, crud, and paint off of the tools however not the best in my opinion. They also may be the cheapest if you already have those tools in your shop. But, my method is a slower one that involves a trip to the local grocery store and a quick stop at the local AG dealer or hardware/paint store. Check your own kitchen and garage or shop first as you may have these items already on hand. Items you'll need are:

1. Gallon of White Vinegar
2. Gallon of Mineral Spirits
3. Gallon of Denatured Alcohol
4. 3 Old Dishpans
5. Old toothbrushes
6. Small Brass Wire Brushes
7. Pair of Rubber Gloves
8. Pair of Eye Goggles -personal protection option
9. Face Dust Mask -personal protection option
10. Old Apron or shop coat -personal protection option
11. Roll Of HD Shop Paper towels
12. Small shop Air Compressor w/blow gun attachment

### **DISCLAIMER-CAUTION:**

The mineral spirits and alcohol are extremely **FLAMMABLE** and thus this procedure should be performed in a well ventilated area away from open flames, direct heat sources, etc. Smoking is not recommended.

Begin by lying the tools to be restored in the bottom of one of the dishpans and covering completely in a layer of the white vinegar. Set dishpan in a place out of the way of children and animals inside your shop or garage. Outside works best as long as it is out of the elements-rain, snow, etc. You will let stand for several days and do a daily check for progress. The vinegar is acidic and will start to dissolve the rust, crud, and paint right away.

Next, you can check on progress after 24 hours and should see results taking place. From this point on it is recommended that you use the apron/shop coat; eye protection (optional); and rubber gloves whenever you handle the tools and cleaning instruments. The vinegar is caustic and may cause skin irritation to sensitive skin. A dust mask can be used to control fumes from being inhaled, but a well ventilated area will probably suffice. I don't want to get too OSHA concerned here, but its all your call as far as personal protection and safety goes.

Using the toothbrush, lightly rub areas that might be tight like the inside of the 12-point box end wrench; Adjustable Wrench slider; all lettering and numerals; and the pliers jaws. From experience I can testify that these will be the hardest areas to get completely free of paint and rust. Extra tough spots may require the use of the brass wire brush. After a few days of soaking and scrubbing with the toothbrush, your tools will be free of all the paint, rust, and crud that once covered them. You may want to change the bath of vinegar every few days as the elements are removed. Actual soak time will vary depending on the severity of the rust,crud, and paint. Daily inspections once every 24 hours will be a good gage to start by.

Once you are satisfied that the tool is free of all debris, your final vinegar bath will be a rinse then a quick air blow to dry. Directly from there you will place the tools into another dishpan and cover with a layer of mineral spirits. Using another toothbrush and/or brass wire brush again, scrub remaining tough spots and entire tool to remove the film left over from the vinegar.

Prepare the third dishpan by pouring some denatured alcohol into the bottom. Using the blow gun again, spray off the tools of excess mineral spirits and lie tools in bottom of alcohol bath. The denatured alcohol will remove the oily film from the mineral spirits. From there take each tool and blow off with compressed air again and lie tool on a paper towel on your bench to air dry. Be aware that if you don't use a moisture trap (condenser) on your compressor, moisture will collect inside and may be applied to your tools and will start the rusting process all over again. From this point I allow a few minutes to air dry then I apply a rust inhibitor ( I.e. Permatex Extend; POR-15 ) bath over the entire tool and let hang for 24 hours like in a paint shop. Old wire hangers or bailing wire work just fine. You do not need the rust inhibitor, it is just my personal choice, and can proceed to the final painting step if you choose.

All of the original FORD tools were a baked-on semi-gloss black enamel. Some tool "restorers" use flat black paint and that is incorrect. Some have tried to cad or nickel plate them and those are also incorrect. Still others I have seen try to paint the lettering and logo with a silver or white paint and besides looking hokey, is also incorrect. Just this week I saw on eBay a seller who had painted a FORD 9N17014 Plow Wrench 8N grey and did the numerals and lettering in 8N Red. He claimed that is how the original tools were...Amazing. I use an Agricultural Implement Paint I get at my local CNH dealer and apply several coats over several days. Recently I tried a Hi-Temp Engine paint made by Ford and tried a slow infra-red drying period. So far, I like it better. It is still experimental but I will see if the paint holds up even longer using this method. If you want specific brands, email me for their names.

A word of caution: I do not use this method on the wood-handled FORD screwdrivers simply because I don't want the wood to absorb the vinegar; mineral spirits; and alcohol and cause premature splitting of the wood. I will resort to the wire wheel to clean up the steel shaft; ferrule; and end on the handle, very diligently and only enough to remove surface rust, then hand polish with a fine steel wool and a Scotch Brite pad. The wood handles were also painted the same semi-gloss black enamel.

Occasionally I find in my tool searches a hardly-used Ford tool with the original paint mostly still intact. I use these tools as my sample prototypes and visual aids for my restoration projects. I plan to soon try the electrolysis method or a variation of it and will report back with my success and/or comparisons. I also plan to try a Powder Coat Process for the final paint job and see how that fares too. My process works well not only for the Ford tools but for any rusty old parts you may want to restore. Some other methods involve harsher chemicals like Oven Cleaner and Engine Brite engine cleaner so for larger parts (like blocks and heads) you may want to try those. Any acidic solution will work, try taking an old dirty penny and place it a small container of plain old Coca-Cola soda pop. After a few days observe how you now have a nice, shiny old penny!!!

Be safe!

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