



John Deere 870 Oil Change

John Deere 870 tractor engine oil and filter change.

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INTRODUCTION

Change your tractor's engine oil and filter every 100 hours of use to keep your crops coming season after season.

TOOLS:

- [17 mm Box End Wrench \(1\)](#)

Alternatively, you may use a 17 mm socket wrench.

- [Drain Pan \(1\)](#)
- [Funnel \(1\)](#)
- [Oil Filter Wrench \(1\)](#)

PARTS:

- [Engine Oil - Quart \(1\) \(5.1\), 15W-40](#)

- [Oil Filter \(1\)](#)

Check an online database or the parts counter at your local farm supply store for the correct part number.

- [Oil Drain Plug Gasket \(1\)](#)

Step 1 — John Deere 870 Oil Change



 Let the engine run for a few minutes to warm up the oil before beginning.

- Pull the hood release latch at the front right of the tractor and lift the hood up.

Step 2



- Lift the hood prop bar from its seat and place it in the hooks on the underside of the hood.

Step 3



- ⓘ The right side engine panel is held in place by two rotating tabs (highlighted in red).
 - Pull each tab straight away from the panel and twist them 90° so that they fit through the slots in the panel.
 - Pull the top of the engine panel straight out until it is free from the tabs.
 - Lift the engine panel up to remove it and set it aside.

Step 4 — Draining the old oil



- The drain plug is a 17 mm hex bolt located on the underside of the tractor.
- ⓘ Place an oil drain pan underneath the drain plug to catch the oil when it begins to drain.
- Use a 17 mm box end wrench to loosen the drain plug 3/4 of a turn.

Step 5



- Loosen the drain plug by hand until it comes out and oil begins to drain from the oil pan.
- You may consider using a bucket first to catch the oil, as it may not drain into the oil drain pan quickly, potentially leading to a spill.
- Watch the draining oil for shiny specks. Small flakes of metal could indicate a problem with your tractor's engine internals.

Step 6



- While the oil is draining, wipe off the drain plug with a clean rag or towel.
- Remove the old drain plug gasket and replace it, making sure that the new gasket fits over the threads of the drain plug.

Step 7



- Wipe down the area around the drain plug with a clean rag or towel.
- Reinstall the drain plug and tighten it as much as you can by hand.
- Use a 17 mm box end wrench to tighten the drain plug until it is snug.

⚠ Do not over-tighten the drain plug. Doing so may strip the threads or crack the oil pan. You can always come back later and tighten the drain plug more if needed.

Step 8 — Removing the oil filter



- Move the oil drain pan so that it is directly under the oil filter.
- Remove the oil filter by turning it counterclockwise until it comes free.
- *(i)* If the filter is on too tightly to remove by hand, use an oil filter wrench to loosen it first, then continue to remove it by hand.
- Place the oil filter with the open end facing down onto the oil drain pan to allow the old oil to drain out.

Step 9



- Dip a clean, gloved finger into a fresh bottle of oil and spread a thin layer of oil on the new oil filter's gasket.
 - ⓘ This layer of oil will help provide a good seal and make removing the filter at the next oil change easier.
- Wipe off the oil filter threads and contact area on the engine with a clean rag or towel.
- Place the new oil filter over the threads and turn it clockwise until it is snug.

Step 10 — Adding new oil



- ⓘ The oil filler cap is located on top of the engine at the front of the valve cover (highlighted in red).
- Twist the oil filler cap counterclockwise and remove it from the valve cover.

Step 11



- Place a funnel in the oil filler hole.
- Hold the funnel with one hand to steady it and pour 5.1 quarts of 15W-40 oil into the funnel.
- Reinstall the oil filler cap and turn it clockwise until it is snug.

Step 12



- The engine oil dipstick is located on the right side of the engine and has a yellow handle.
- Remove the dipstick, wipe it off with a clean rag or towel, reinsert it, and remove it again.
- Read the initial oil level. It should be somewhere in the crosshatched region. It is acceptable for the level to be slightly high, since it hasn't filled the oil filter and other nooks and crannies of the engine yet.
- Reinsert the dipstick and add or remove any oil, if necessary.

Step 13



- Place the engine panel back in its original location, making sure the two retaining tabs go through their respective slots in the panel.
- Secure the engine panel by pulling the retaining tabs straight out, turning them 90°, and laying them down flat.

Step 14



- Hold the hood up with one hand and use the other hand to return the hood prop to its original location
- Close the hood firmly and make sure that the hood latch engages.

Step 15



- Allow 12-24 hours for all of the oil to drain out of the old oil filter.
- Take your old oil and filter to a recycling facility. Most auto parts stores and repair shops accept these at no charge to you. In addition, some cities and/or counties have a service where they will collect used oil and filters from your home. For more information, see the American Petroleum Institute's web page on [used motor oil collection and recycling](#).

If you're lucky, maybe she'll think your tractor is sexy.