

Plurasafe® EnBio TC®S Change-Over Procedure



When changing over a hydraulic system from a mineral, petroleum, vegetable, WGF or synthetic hydraulic fluid to the PLURASAFE® EnBio TC®S, the following procedure is mandated:

Note: Fluid = Oil

1. Run equipment for 15 to 20 minutes. Rotate the wheels, move the mower blades. Shut off engine and remove the key from the ignition.
Note: Oil must be at operating temperature. It is easier to drain the system when the oil is hot because it is thinner and drains faster through the lines.
2. Drain the hydraulic fluid from the system completely at the lowest point while the oil is warm.
3. Begin the Drain portion of the change out:
 - 3A. Remove all connections on the main hydraulic supply pump. Allow the lines to drain. Remove plugs and allow to drain, if applicable.
 - 3B. Remove a hydraulic hose from each of the cutting units. While the hydraulic fluid is draining from the hoses, manually rotate the cutting blade until the fluid stops draining. Use an assist tool to rotate the blades. Do not use fingers or hands.
 - 3C. Jack up unit and remove a hydraulic hose from each wheel motor and drain. Rotate the wheels in both directions until fluid no longer drains from lines. See below for additional instructions depending on the type of drive pump:
For gear pump drive: Jack up the 2 front wheels and remove a hydraulic hose from one of the wheel motors and drain. Rotate the wheels until no more oil comes out. Pour 1-2 quarts of PLURASAFE® EnBio TC®S into a clean small container. While rotating the wheels check which side of the line on the wheel circuit is sucking and put that hose into the PLURASAFE® EnBio TC®S fluid and continue rotating the wheels until bright blue PLURASAFE® EnBio TC®S comes out the other side. Reinstall and tighten the hose.
For Hydrostatic pump drive: Jack up the 2 front wheels and remove the 2 hydraulic hoses at the pump and drain. Rotate the wheels until no more oil comes out. Pour 1-2 quarts of PLURASAFE® EnBio TC®S into a clean small container. While rotating the wheels check which side of the line on the wheel circuit is sucking and put that hose into the PLURASAFE® EnBio TC®S fluid and continue rotating the wheels until bright blue PLURASAFE® EnBio TC®S comes out the other side. Reinstall and tighten all the hoses.
 - 3D. If the system contains an oil cooler and/or power steering, the oil must be drained from each. Disconnect lines to steer cylinder. Turn the steering wheel 360° to the right, then 360° to the left and repeat until the lines are drained. Also, turn the back wheel in both directions until no more fluid drains from the cylinder (you may need to lower the unit from the Jack in order to move the wheel).
 - 3E. Remove hydraulic hoses from lift cylinders and drain lines and cylinders. Raise and lower each of the cylinders to purge the fluid.
4. Once all the oil has drained, reinstall and tighten all hydraulic hoses and drain plugs disconnected in steps 3 A-E above.
Note: Do not run the equipment to purge the lines. Permanent damage to the hydraulic system could occur.
5. Remove the filter / filters and allow oil to drain. Do not install new filters.
6. Thoroughly evacuate the reservoir tank of the old oil utilizing a vacuum assist. Evacuate the suction of the main pump.

For Equipment with return filters:

7. With the filter/s off, if the filter is below the tank, plug the center hole of the filter head assembly with a rubber stopper (to prevent oil draining from tank). If the filter is located above the tank, a plug is not necessary. Fill the hydraulic system reservoir tank with PLURASAFE® EnBio TC®S. Start machine and allow to run for +/- 15 seconds

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with reels and wheels operating (until only PLURASAFE® EnBio TC S purges through), watch for a color change in the purging fluid. Once it changes to the royal blue purge 5 more seconds then switch off unit. The old oil will be purged through the filter head assembly. Check to ensure that you have sufficient PLURASAFE EnBio TCS in the reservoir tank. Allow to stand for 2 minutes and repeat.

8. Install a new filter and top off the hydraulic system with PLURASAFE® EnBio TC®S.
NOTE: Filter must be a Donaldson Synteq® filter or exact equivalent.

For Equipment with suction filters:

Install a new filter; remove hydraulic return line to tank and plug up tank. Fill the hydraulic system reservoir tank with PLURASAFE® EnBio TC®S. Start machine and allow to run for +/- 15 seconds with reels and wheels operating (until only the royal blue PLURASAFE® EnBio TC®S purges through), watch for a color change in the purging fluid. Once it changes to the royal blue purge 5 more seconds then switch off unit. The old oil will be purged through the return line. Allow to stand for 10 minutes and repeat. Please ensure that you have sufficient PLURASAFE® EnBio TC®S in the reservoir tank.

9. Fill reservoir tank to the manufacture's recommended level. Operate system at no load to ensure proper lubrication of the hydraulic pump, check fluid level and top off if necessary, and then bring up to normal operating conditions. Please note that for the first week, before starting the machine in the morning, check the hydraulic fluid tank for "tramp oil" (old hydraulic oil). If there is old oil floating on top, skim off. This check needs to be done until no more "tramp oil" is found.
10. Failure to follow the above procedure can lead to blockages which will cause pump starvation and cavitation which in turn can lead to high pump wear, noise, faulty operation and possible hydraulic failure.
11. Due to the cleaning characteristics of PLURASAFE® EnBio TC®S, it is good practice and in most cases necessary to change the filter after approximately 100 –200 hours or when it becomes blocked.
12. It is good practice to wash off the machine with water and a degreaser to remove the oil residue from the old fluids on machine parts.

Note: Please ensure that manufacturers recommendations on filter and oil changes are adhered to.

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