



EverClean System User Manual

Congratulations on your purchase of the Highland Park Lapidary EverClean Advanced Centrifuge Oil Cleaning System. The EverClean Oil Cleaning System is made up of three main components:

1. The Pickup - The oil pickup has a magnetic base so it can be placed in proximity to the blade where it can easily collect the dirt particles as soon as they are being generated.
2. The Pump - The pump is mounted with a bulkhead fitting which has an O-ring for making a leak tight seal. The pump is connected to the pickup with a short section of hose and then delivers the oil at approximately 3 gallons per minute to the EverClean separator.
3. The EverClean Separator - The separator has an integrated O-ring bulkhead manifold designed to easily mount to any conventional slab saw with four bolts providing a simple, leak-free installation. The centrifuge separates dirt particles from the oil and sludge-free oil is then returned back to the saw. Inside the unit, there is a removable canister, which collects and compacts the sludge.

Safety:

When plugging in the EverClean unit, make sure that you are using a grounded power outlet and cord. The EverClean is provided with a standard 3 prong grounded plug.

Never remove the top lid of the EverClean while the unit is running. Turn off the unit, unplug the power cord, and then wait until the drum has stopped turning before removing the lid.

Never put fingers or any objects into the outlet port of the EverClean while the unit is running, serious injury could result.

Never tilt the EverClean unit when the pump is running or if the centrifuge drum is full of oil, this can result in oil getting into the motor. If this does happen, the unit must be serviced before being used.

Installation Supplies:

Before installing your EverClean unit you will need the following tools and supplies:

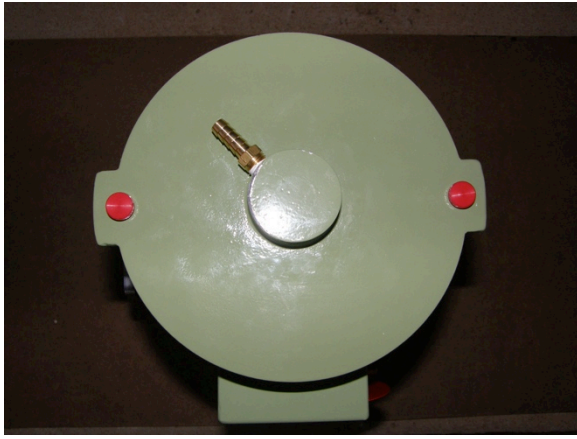
1. Safety Glasses
2. Electric drill
3. 3/8" drill bit
4. Large C-clamp
5. 2-3/8" hole saw
6. 1-1/4" hole saw
7. File or burr knife for removing sharp edges after drilling holes
8. Nipper pliers or crimping tool
9. Teflon tape
10. Allen wrenches
11. Wrench or channel locks for tightening 2" bulkhead fitting
12. Razor blade
13. Marking pencil or Sharpie



Installation:

Step 1: Unpack and Inspection

1. Your EverClean will come in two boxes – one for the main centrifuge and one for the sludge pump, bulkhead fitting, pickup, canister and fittings. Open the large box and remove the two red thumb screws holding the lid on the EverClean and remove the foam spacers that support the centrifuge drum inside the unit. Note, your lid may not have the barb fitting installed yet as shown in the picture. If it doesn't, open the second box and locate the barb fitting and install as shown using Teflon tape. Do not over tighten.



Next inspect to make sure the centrifuge access port plug is in place. It is located through the outlet of the EverClean. You should see a plug installed as show. If it is not installed, open the second box and locate the plug fitting and install as show using Teflon tape. Do not over tighten.



Step 2: Main Separator Installation:

1. Drain the oil from the saw and clean out the sludge.
2. Clean the side of the saw where you want to mount the unit and make sure that the unit can be mounted without interfering with the operation of the saw.
 - On Highland Park saws the unit mounts the best on the right hand side about 8 inches back from the front edge of the tank and 2.5" down from the top edge of the tank.

- Before drilling holes, hold the mounting flange inside the saw and make sure that the release handle will not hit the flange in the engaged or disengaged position when the carriage is moved front to back.

Important! The EverClean must be mounted *above* the saw oil level.

3. After determining the best position to mount the unit on your saw, use a black sharpie or marking pencil to mark the outside of the saw for drilling the main port hole.



4. Put the 2-3/8" hole saw in the drill and position the bit so it is matching the curve on the top side of the marking you just made.



5. Wearing safety glasses, drill the hole, then use the file or burr knife to remove all sharp edges and burrs.
 6. Position the mounting flange plate on the outside of the saw so that the outlet port hole is centered as closely as possible. The center port hole should be unobstructed.
 7. Clamp the mounting flange onto the tank making sure it is level. Then use the 3/8" drill bit to drill the 4 mounting holes. **Make sure that the mounting flange does not shift during drilling, as this will cause misalignment in the mounting holes.**
- HINT: After drilling each mounting hole, put a bolt in it to keep the plate from shifting.



8. Use the file or burr knife to remove all sharp edges and burrs, and then check the surface to make sure there are no pits or deep scratches. If you do find some, this can cause the O-ring seals to leak, but can be remedied by applying a small amount of automotive silicon gasket sealant when installing the unit.
9. Place the mounting flange on the inside of the tank and match up the EverClean main housing with O-rings on the outside of the tank. Use the four 3/8" diameter bolts to securely mount the unit. Make sure that all 5 O-rings are in their grooves before bolting the unit on. Tighten the bolts with an Allen wrench until the flange face is seated fully against the side of the saw.



Step 3: Bulkhead fitting installation

1. The Bulkhead fitting allows the pickup to be easily connected to the pump. To determine the best location place the pickup inside the saw near the back of the blade.



2. Select a location for the bulkhead fitting; generally 3-4" forward of the arbor shaft on the right hand side is good on most saws.
 - Hint: It is best to keep the pickup line length as short as possible for best flow.
3. On the outside of the tank, mark the location for where the bulkhead fitting hole will be drilled. **IMPORTANT! The hole must be 1-1/2" to 2" up from the bottom edge of the tank so the nut can be turned without hitting the bottom of the tank. Also, be sure the hole is BELOW the saw oil level in order to have the pickup, pickup tube and pump below the oil level. Otherwise the pump will NOT work.**
 - Make sure to place the fitting is high enough that there is enough room to turn the bulkhead nut inside the tank for tightening it.
4. Using the 1-1/4" hole saw, drill the hole. Use a file or burr knife to remove all sharp edges and burrs. Check the surface for any pits or deep scratches and use silicon gasket sealant where necessary before installing the bulkhead fitting.



Note: Don't install the bulkhead yet....this happens in step three.

Step 4: Installing the pump and hoses:

1. Wrap Teflon tape on the threads of the pump input and output ports.
 - a. Make sure to wrap the tape clockwise when looking at the end of the port, this prevents the tape from unwrapping when the fitting is screwed in. Three wraps should make a good seal.



- b. Screw the pump into the bulkhead fitting. In most cases tightening the bulkhead fitting to the pump by hand will be enough to make a good seal. **Do not over-tighten as this can damage the pump housing.**



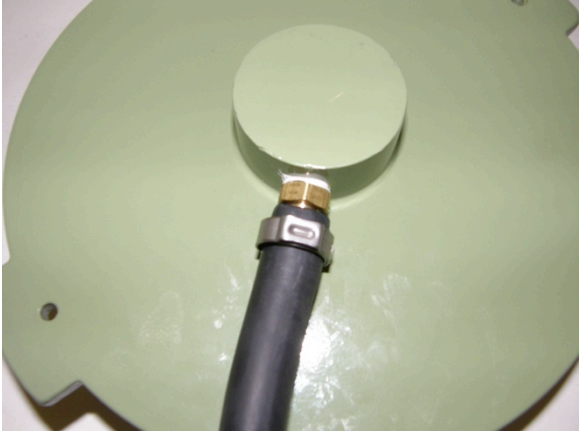
2. Screw the brass fitting (1/4" female npt to 3/8" hose) onto the pump output port. **Do not over-tighten as this can damage the pump.**



3. Check to see that the O-ring is properly seated in the inside face of the bulkhead fitting. Then install the bulkhead fitting with the nut on the inside of the tank. Position the pump so

the outlet port is pointing at the EverClean separator unit, then tighten the nut on the inside of the tank.

4. Select the two crimp clamps and 3/8" hose and slide a clamp onto the end of the hose. Check the fitting on the lid of the main separator to make sure that there are no pieces of packing material obscuring the opening and then push the hose onto the fitting. **NOTE: Be sure to get the clamp pushed fully over the fitting as there is a limited space between the fitting and the top of the lid.**



5. Using a crimping tool or nipper, position the crimp clamp about 3/8" from the end of the hose and crimp the fitting for a good squeeze on the rubber tubing.



6. Hold the other end of the hose up to the pump and determine a good length to allow the lid to be removed and replaced easily.
7. Cut the hose to length and slide the second clamp onto the end of the hose, position it about 3/8" from the end of the hose and then crimp it as well.



8. Push the 1/2" hose onto the fitting on the oil pickup. Because this is a suction line, it is not necessary to use any clamps.
9. Position the pickup behind the blade inside the tank, and determine desired length to connect it to the bulkhead fitting. Cut the hose to length and slip it onto the bulkhead fitting.
10. Unwrap the power cord from the pump, and plug it into the power connection on the main separator unit. You can use a Ty-wrap or twist tie to secure the extra cord.
11. Begin filling the tank with clean cutting oil. Check for leaks and correct any before completely filling the tank.

Your installation is now complete!

Operation:

1. Switch on the unit and you will hear the centrifuge drum spin up. The pump will begin filling the drum and after 30 seconds or so, oil will begin to flow out of the main outlet port into the saw.
Caution: Never put your fingers or any foreign object into the main outlet port of the separator while the unit is running, this could result in serious injury.
2. You can now begin cutting and the EverClean will be removing the sludge from your oil. Remember to run the EverClean continuously as you cut so sludge is removed as soon as it is created.

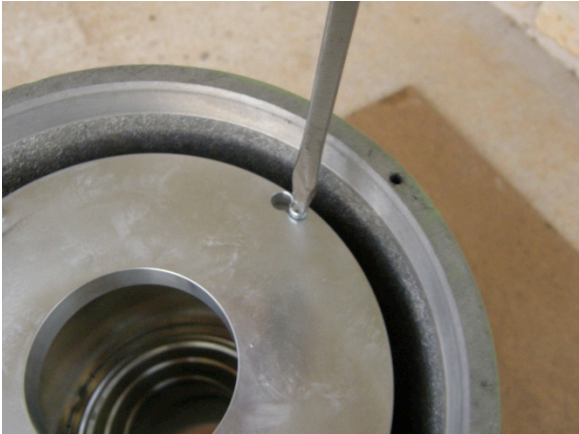
Checking the Canister:

1. As you are cutting, the removed sludge will begin being collected in the canister. After your first day of cutting, turn off the EverClean unit let it spin down.

2. Remove the lid by unscrewing the two red thumbscrews in the top of the lid.
3. Lift the lid off and place it inside the saw.
Important! - Do not place the lid on the floor or below the tank. This can cause a siphoning action resulting in draining the oil onto your floor.
4. Look into the canister and feel to see how much sludge has been collected.
 - It is not necessary to change the can until the sludge is built up to the inside diameter of the drum lid.

Changing the Can:

1. Loosen the four screws on the drum lid. It is not necessary to remove them completely because the lid can be rotated and removed once the screws are loose.



2. Pull the can up out of the main drum and then replace it with an empty can. Replace the drum lid and retighten the four screws carefully to insure that the drum lid is seated properly. You can rotate the drum by hand to make sure the drum lid is rotating evenly.
 - NOTE: Replacement cans may be purchased from the Highland Park Lapidary Company website or by calling 512-348-8528.



3. Place the main lid back onto the unit and start the two red thumbscrews before trying to seat the lid. Once the screws are started, you can bump the lid down with the palm of your hand to get it seated.

4. Tighten the two thumbscrews until there is no gap between the lid and the main housing and then you are ready to resume normal operation.

We hope you enjoy your new EverClean!