

**“THE FLUSH KIT”
THE PERFECT COMPANION
TO HARVEST RIGHTS HOME FREEZE
DRYER**



The Flush Kit Installation & Users Guide

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Included Parts

EXHAUST VALVE KIT



VACUUM LINE KIT



DRAIN LINE KIT



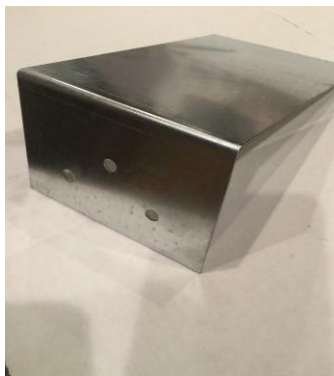
FILTER HOUSING KIT



FILTER



OPTIONAL
COUNTERTOOP BRACKET



OPTIONAL
CART BRACKET





INSTALLATION GUIDE

CONGRATULATION WITH THE PURCHASE AND OWNERSHIP OF A HARVEST RIGHT FREEZE DRYER AND OUR VACUUM PUMP FLUSH KIT. WE RECOMMEND YOU READ THIS GUIDE SIMULTAINOUSLY WITH THE ATTACHED EXHIBIT PAGES WITH Pictures.

1. REMOVE FOOD TRAYS FROM THE FREEZE DRYER.
(DOES NOT APPLY TO NEW PUMPS)
2. REMOVE WHITE PVC CAP FROM THE EXHAUST PIPE **(SEE EXHIBIT 1)**
(DOES NOT APPLY TO NEW PUMPS)
3. INSTALL THE EXHAUST VALVE KIT ON EXHAUST PIPE AND RE-INSTALL (OR INSTALL IF NEW) THE WHITE PVC CAP ON THE END OF THE EXHAUST VALVE KIT. **(SEE EXHIBIT 2)**
4. CLOSE THE EXHAUST VALVE KIT VALVE. (TURN RED HANDLE CROSS WISE OF THE KIT) **(SEE EXHIBIT 2)** OR **OIL FROM THE BACK CHAMBER WILL RUN OUT ON YOUR COUNTERTOP.** (DOES NOT APPLY TO NEW PUMPS)
5. DRAIN THE OIL FROM THE VACUUM PUMP BY OPENING THE DRAIN VALVE, IF FREEZE DRYER IS NOT NEW. IF NEW SKIP THIS STEP.
6. TIP THE VACUUM PUMP UP ON ITS BACK SO THE DRAIN VALVE IS EASILY ACCESSABLE. **(SEE EXHIBIT 3).**
7. TAKE A ½" WRENCH AND UNSCREW AND REMOVE THE DRAIN VALVE. **(SEE EXHIBIT 4).**
8. TAKE THE DRAIN VALVE KIT (SEE EXHIBIT 5) AND INSTALL IT IN PLACE OF THE DRAIN VALVE. **(SEE EXHIBIT 6 & 7)** USING A 9/16 WRENCH.
9. TAKE THE FILTER HOUSING KIT (SEE EXHIBIT 8) AND INSTALL IT ON THE SIDE OF THE FRONT VALVE (SEE EXHIBIT 9) (THE SMALLER FITTING) OF THE VACUUM PUMP USING A 9/16 WRENCH **(SEE EXHIBIT 10).**
10. TAKE THE VACUUM LINE KIT (SEE EXHIBIT 11), AND INSTALL IT ON TOP OF THE VACUUM PUMP ON THE LARGE FITTING (SEE EXHIBIT 9) USING A ¾" WRENCH **(SEE EXHIBIT 12).**

INSTALLATION GUIDE CONT.

11. ATTACH THE FREEZE DRYER HOSE TO THE TOP OF THE VACUUM LINE KIT USING A $\frac{3}{4}$ " WRENCH TO HOLD THE VACUUM PUMP KIT IN PLACE WHILE TIGHTENING THE FREEZE DRYER HOSE TIGHTLY USING A $\frac{7}{8}$ " WRENCH. **(SEE EXHIBIT 13)**

11. INSTALL THE OPTIONAL BRACKET

CART BRACKET.

INSTALL THE CART BRACKET TO THE CART WITH THE ENCLOSED 4 SELF TAPPING SCREWS. **(SEE EXHIBIT 15)**. THEN ATTACHE THE FILTER HOUSING TO THE BRACKET WITH THE 3 BOLTS AND NUTS THAT ARE ATTACHED TO THE HOUSING USING TWO $\frac{1}{2}$ " WRENCHES **(SEE EXHIBIT 16)**, THEN **INSURE THAT THEY DRAIN LINE FROM THE BOTTOM OF THE PUMP IS SLOPING DOWNWARD TOWARDS THE FILTER HOUSING.** **(SEE EXHIBIT 19).**

COUNTERTOP BRACKET.

INSTALL THE FILTER HOUSING TO THE COUNTERTOP BRACKET, WITH THE 3 BOLTS AND NUTS THAT ATTACHED TO THE HOUSING. **(SEE EXHIBIT 18)** THEN PLACE THE VACUUM PUMP ON TOP OF THE BRACKET AND **INSURE THAT THEY DRAIN LINE FROM THE BOTTOM OF THE PUMP IS SLOPING DOWNWARD TOWARDS THE FILTER HOUSING.** **(SEE EXHIBIT 20)**

12. CONNECT THE QUICK DISCONNECT HOSE TO THE FILTER HOUSING BY PULLING BACK ON THE FEMALE QUICK DISCONNECT PART ATTACHED TO THE FILTER HOUSING. **(SEE EXHIBIT 21)**

THE FLUSH KIT IS NOW INSTALLED AND IS READY FOR YOU TO INSTALL THE OIL INTO THE VACUUM PUMP AND FLUSH KIT FILTER AND HOSES.

OIL AND FILTER INSTALLATION

NEW OIL AND FILTER INSTALLATION

1. SET THE OIL FILTER ON A CUP OR OTHER PLACE WHERE IT WILL STAY IN PLACE STANDING UPRIGHT. FILL THE OIL FILTER TO THE TOP WITH VACUUM PUMP OIL. NOTICE IT WILL KEEP DRAINING DOWN UNTIL IT IS COMPLETELY FILLED WITH OIL. **(SEE EXHIBIT 22).**
2. DIP YOUR FINGER IN OIL AND APPLY A LAYER OF OIL TO THE BLACK GASKET ON THE OIL FILTER, SO IT HAS A THIN LAYER OF OIL ALL OVER THE GASKET.
3. SCREW THE FILTER ON TO THE FILTER HOUSING AND TIGHTEN WITH YOUR HANDS ONLY, UNTIL IT'S TIGHTLY ON. **(SEE EXHIBIT 23)**
4. FILL THE VACUUM PUMP WITH OIL UNTIL YOU CAN SEE THE OIL LEVEL JUST ABOVE THE ROUND HOLE IN THE WINDOW OF THE VACUUM PUMP. **(SEE EXHIBIT 24). MAKE SURE THE VALVE ON THE DRAIN HOSE IS OPEN WHEN YOU DO THIS SO THE HOSE IS BEING FILLED ALL THE WAY TOO (SEE EXHIBIT 27).**
5. **IMPORTANT !!! INSURE THAT THE VACUUM PUMP IS INSTALLED HIGHER THAN THE OIL FILTER SO WATER CAN GRAVITY FEED TO THE DRAIN ON THE FILTER.**
6. CLOSE THE VALVE ON THE VACUUM LINE. **(SEE EXHIBIT 13). THIS IS VERY, VERY IMPORTANT TO DO BECAUSE IF YOU FORGET TO DO THIS AND TURN THE VACUUM PUMP ON TO DO A POWER FLUSH, YOU WILL BLOW THE OIL INTO THE CHAMBER OF THE FREEZE DRYER. IT DOES NOT HARM ANYTHING, BUT IT'S A REAL MESS TO CLEAN UP (SPEAKING FROM EXPERIENCE ☺)**

OIL AND FILTER INSTALLATION CONT.

7. CLOSE THE VALVE ON THE EXHAUST PIPE. **SEE EXHIBIT 2.**

8. OPEN THE VALVE ON THE DRAIN LINE BY THE FILTER. **SEE EXHIBIT 27**

9. OPEN THE VALVE ON TOP OF THE PUMP THAT IS ATTACHED TO THE FILTER HOUSING HOSE. **SEE EXHIBIT 28.**

NOTICE. VALVES ARE CLOSED WHEN THE HANDLE ARE LEFT OR RIGHT OF THE HOSE OR FITTING. THEY ARE OPEN WHEN THE HANDLE ARE THE SAME WAY AS THE HOSE OR FITTING (SEE POWER FLUSH GUIDE FOR SETTINGS).

10. NOW START THE VACUUM PUMP BY STARTING THE FREEZE DRYER, LIKE YOU WERE GOING TO DO A NEW BATCH, BUT TURN THE FREEZING TIME DIAL ON THE NON-TOUCH PAD MODELS TO ZERO (0), AND DO THE SAME ON THE TOUCH PAD MODELS BY SETTING THE FREEZING TIME TO ZERO (0) SO THE VACUUM PUMP STARTS. LET THE PUMP RUN FOR 30 SECONDS AND TURN THE FREEZE DRYER OFF AGAIN.

11. YOU WILL NOW SEE THAT THE OIL LEVEL IN THE VACUUM PUMP IS LOWER THAN WHEN YOU FILLED IT. THIS IS BECAUSE IT HAS NOW FILLED THE REST OF THE HOSES WITH OIL.

12. TOP THE VACUUM PUMP OFF WITH ENOUGH OIL SO IT IS BACK TO JUST ABOVE THE HOLE IN THE WINDOW OF THE VACUUM PUMP.

13. NOW TURN THE VALVES IN THE OPPOSITE DIRECTION OF WHAT YOU DID TO START THE POWER FLUSH. IN OTHER WORDS, CLOSE THE VALVES YOU OPENED AND OPEN THE VALVES YOU CLOSED. (SEE POWER FLUSH GUIDE FOR PICTURES OF CORRECT SETTINGS).

14. YOU ARE NOW READY TO START A FREEZE DRYING LOAD.

HOW TO DRAIN WATER OUT AND DO A OIL AND FILTER CHANGE

HOW DRAIN WATER OUT OF PUMP. (BEFORE YOU START A POWER FLUSH)

1. TO DRAIN WATER OUT SIMPLY PUT A CONTAINER BY THE FILTER AND INSURE THE VALVE TO THE LEFT OF THE FILTER IS CLOSED, **(SEE EXHIBIT 21)**. THEN DISCONNECT THE DRAIN HOSE FROM THE FILTER HOUSING **(SEE EXHIBIT 25)**. WATER OR OIL SHOULD NOT RUN OUT AS THE VALVE ON THE DRAIN HOSE IS CLOSED. (YOU MAY GET A FEW DROPS, SO PUT A CUP UNDER THE FITTINGS).
2. OPEN THE DRAIN VALVE ON THE DRAIN LINE SLOWLY AND A SMALL AMOUNT OF WATER SHOULD DRAIN OUT INTO THE CONTAINER **(SEE EXHIBIT 25)**. CLOSE THE VALVE AGAIN AS SOON AS OIL STARTS COMING OUT AND RE-CONNECT THE DRAIN HOSE TO THE FILTER HOUSING AGAIN. TOP OIL OF IF NEEDED.

TO CHANGE OLD OIL OUT (ONCE A MONTH).

1. TO DO A OIL CHANGE SIMPLY PUT A CONTAINER THAT WILL HOLD AT LEAST ONE QUART OF OIL BY THE FILTER AND INSURE THAT THE VALVE TO THE LEFT OF THE FILTER IS CLOSED, THEN DISCONNECT THE DRAIN HOSE FROM THE FILTER HOUSING. OIL SHOULD NOT RUN OUT AS THE VALVE ON THE DRAIN HOSE IS CLOSED.
2. OPEN THE VALVE ON THE DRAIN HOSE AND LET ALL THE OIL DRAIN OUT INTO THE CONTAINER. CLOSE THE VALVE AGAIN.
3. FILL NEW OIL IN AT THE TOP OF THE PUMP, UNTIL OIL LEVER IS JUST ABOVE THE HOLE IN THE WINDOW ON THE VACUUM PUMP. **(SEE EXH. 24)**

TO CHANGE THE OIL FILTER. (ONCE EVERY THREE (3) MONTHS.

1. DRAIN THE OIL OUT OF THE PUMP AS DESCRIBED ABOVE.
2. UNSCREW THE OIL FILTER INTO A CAN OR BOWL. **(SEE EXHIBIT 26)**
3. FILL NEW FILTER WITH OIL ALL THE WAY TO THE TOP. **(SEE EXHIBIT 24)**.
4. PUT A SMALL AMOUNT OF OIL ON THE GASKET AT THE TOP OF THE FILTER.
5. SCREW FILTER BACK ON AND FILL THE VACUUM PUMP WITH OIL AS DESCRIBED ABOVE UNDER HOW TO CHANGE THE OIL.

EXHIBITS

EXHIBIT 1

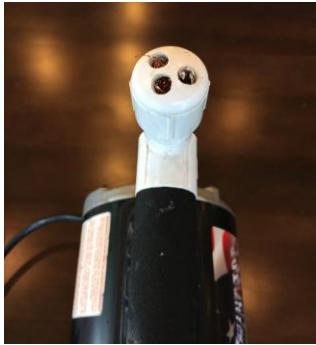


EXHIBIT 2



EXHIBIT 3



EXHIBIT 4



EXHIBIT 5



EXHIBIT 6



EXHIBIT 7



EXHIBIT 8



EXHIBIT 9



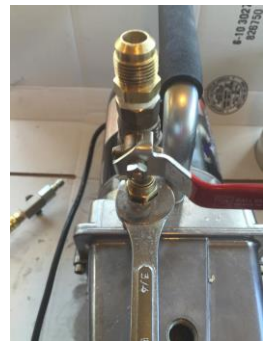
EXHIBIT 10



EXHIBIT 11



EXHIBIT 12



EXHIBITS CONTINUED

EXHIBIT 13



EXHIBIT 14



EXHIBIT 15



EXHIBIT 16



EXHIBIT 17

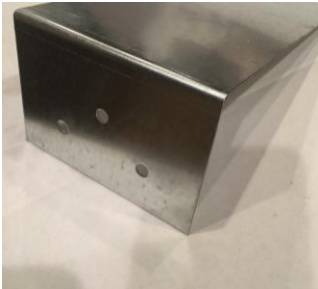


EXHIBIT 18



EXHIBIT 19



EXHIBIT 20



EXHIBIT 21



EXHIBIT 22



EXHIBIT 23



EXHIBIT 24



EXHIBIT 25



EXHIBIT 26



EXHIBIT 27



EXHIBIT 28



POWER FLUSH GUIDE

WHEN YOU ARE READY TO DO A POWER FLUSH WITH THE FLUSH KIT INSTALLED, SET ALL VALVES AS OUTLINED BELOW, THEN START THE VACUUM PUMP BY TURNING THE FREEZE DRYER ON AND SETTING THE FREEZING TIME TO ZERO (0). LET IT RUN AND DO THE POWER FLUSH FOR 4-5 MINUTES, THEN RETURN THE VALVES TO THE FREEZE DRYING SETTINGS OUTLINED BELOW.

VALVE SETTING

VALVE SETTINGS

DOING POWER FLUSH

FREEZE DRYING

VACUUM VALVE

WARNING

IF YOU DO THIS VALVE WRONG YOU WILL GET OIL IN THE FREEZE DRYER CHAMBER. MESSY TO CLEAN UP ☹



DRAIN VALVE



EXHAUST VALVE



RETURN VALVE

