

BIRO®

VACUUM TUMBLER OPERATION MANUAL & PARTS LIST MODEL VTS-48C WITH INTERNAL PUMP



The BIRO VTS-48C VACUUM TUMBLER is a versatile machine used for vacuum tumbling all types of meats. The BIRO VTS-48C will produce equally impressive results with beef, pork, poultry and fish.

The unit is both easy to clean and maintain as well as sanitary in design and construction. The entire machine is built to give many years of trouble free service while providing a unique line of marinated products for your customers.

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NOTICE TO OWNERS AND OPERATORS

BIRO's products are designed to process food products safely and efficiently. Unless the operator is properly trained and supervised, however, there is the possibility of a serious injury. It is the responsibility of the owner to assure that this machine is used properly and safely, strictly following the instructions contained in this Manual and any requirements of local law.

No one should use or service this machine without proper training and supervision. All operators should be thoroughly familiar with the procedures contained in this Manual. Even so BIRO cannot anticipate every circumstance or environment in which its products will be used. You, the owner and operator, must remain alert to the hazards posed by the function of this equipment. No one under eighteen (18) years of age should operate this equipment. If you are uncertain about a particular task, ask your supervisor.

This Manual contains a number of safe practices in the SAFETY TIP section. Additional warnings are placed throughout the Manual. Warnings related to your personal safety are indicated by:



OR



Warnings related to possible damage are indicated by:



BIRO also has provided warning labels on the equipment. If any warning label, instruction label or Manual becomes misplaced, damaged, or illegible, please contact your nearest Distributor or BIRO directly for a replacement.

Remember, however, this Manual or the warning labels do not replace the need to be alert and to use your common sense when using this equipment.

SAFETY TIPS



ROTATING DRUM TO AVOID SERIOUS PERSONAL INJURY

- NEVER Touch This Machine Without Training and Authorization By Your Supervisor.*
- ALWAYS Read Operation and Service Manual **BEFORE** Operating, Cleaning or Servicing.*
- ALWAYS Keep Hands Clear of the Rotating Drum and Other Moving Parts.*
- NEVER Attempt to Remove the Drum Lid Unless Vacuum Has Been Released and the Drum is Positioned Vertically with the Lid at the Top.*
- NEVER Operate Vacuum Pump Unless Properly Connected to Tumbler Drum.*
- ONLY Operate Vacuum Pump in Recommended Vacuum Range (15-24 Inches of Mercury)
NEVER TO EXCEED 24 INCHES Hg.*
- ONLY Use a Qualified Electrician to Install According to Local Building Codes: Machine **MUST** Be Properly Grounded.*
- ONLY Install on Level, Non-Skid Surface in a Clean, Well-Lighted Work Area Away From Children and Visitors.*
- DO NOT Store or Operate Machine in Meat Cooler.*
- DO NOT Allow Food Particles, Liquids or Any Other Foreign Material to Enter the Vacuum Pump or Vacuum Hose.*
- ALWAYS Turn Off, Unplug From Power Source and Perform Lockout/Tagout Procedure to This Machine **BEFORE** Attempting to Unjam or Unclog, Cleaning or Servicing.*
- NEVER Leave Machine Unattended While Operating.*
- PROMPTLY REPLACE** Any Worn or Illegible Warning and/or Instruction Labels.*
- USE ONLY BIRO** Parts and Accessories Properly Installed.*
- NEVER Use the Motor Box Cover for Preparing the Product.*

OPERATION



ROTATING DRUM TO AVOID SERIOUS PERSONAL INJURY

***ONLY** Properly Trained Personnel Should Use This Equipment.*

***ALWAYS** Keep Hands Clear of the Rotating Drum and Other Moving Parts.*

***DO NOT** Tamper With, Bypass, Alter, or Modify This Equipment in Any Way From Its Original Condition.*

***ALWAYS** Turn Off, Unplug From Power Source and Perform Lockout/Tagout Procedure to This Machine Before Cleaning, Servicing, or When Not In Use.*

***NEVER** Leave Unattended While Operating.*

***DO NOT** Store or Operate Machine in Meat Cooler.*

***NEVER** Operate Without All Warning or Instruction Labels Attached.*

***NEVER** Use the Motor Box Cover for Preparing the Product.*

A. FOOD HANDLING TO PREVENT CONTAMINATION

1. **ALWAYS** wash hands thoroughly with warm soap and water before and after handling raw fish, poultry or meats.
2. **ALWAYS** clean and sanitize all utensils and surfaces that have been in contact with raw products.
3. **ALWAYS** store cold foods at or below 45 deg. F (7.2 deg. C).

B. TO PROCESS PRODUCT

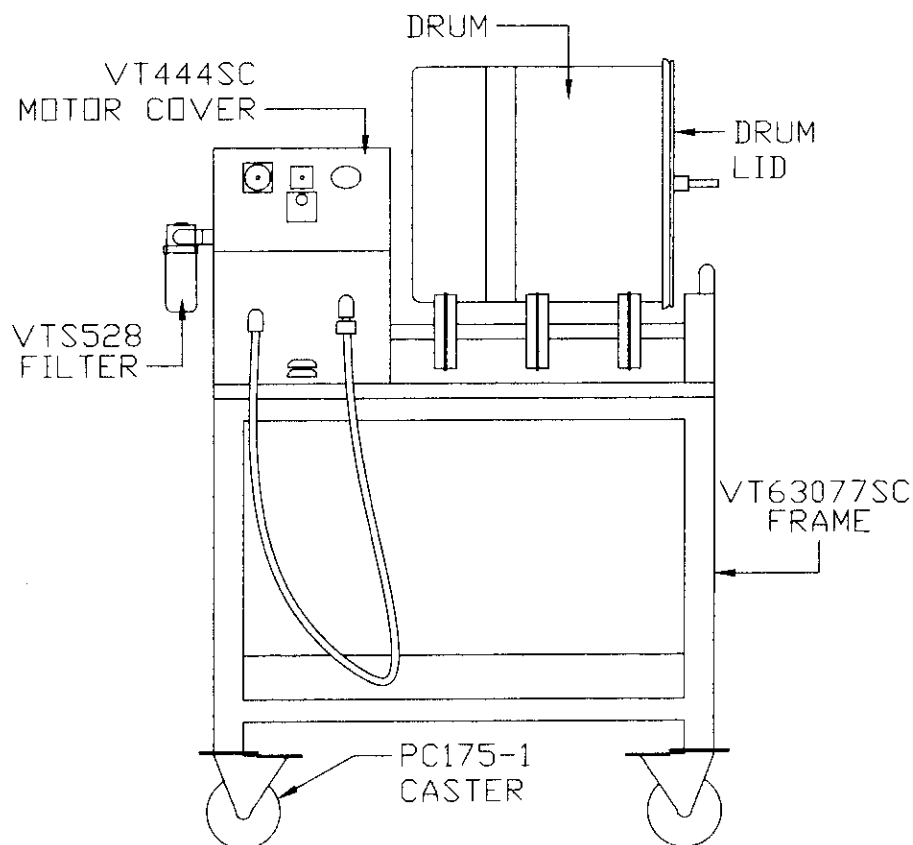
1. Insert baffles into Stainless Steel drum. Be sure that baffles are fully engaged on the mounting buttons.
2. Weigh product to be vacuum tumbled.
3. Place product with the desired amount of marinades and water into the tumbler drum.
4. Install the gasket on the drum lid and place the lid on the drum. Latches are not necessary as the vacuum will hold the lid in place during tumbling.
5. Connect the vacuum hose to the valve on the drum lid. Be sure the valve is in the open position (parallel with the valve body).
6. If not already done, plug the tumbler power cord into a grounded 60HZ, 115 volt outlet. Actuate the toggle switch to "VACUUM PUMP". (Vacuum gauge should start to indicate a vacuum is being drawn in the drum. If it does not, a slight pressure on the center of the lid with a hand will assist in getting the seal started.)
7. Allow the vacuum pump to continue pulling a vacuum until the desired vacuum is reached. Anywhere from 15 to 24 Hg. The maximum the pump can draw is 24 Hg.

8. Close the valve on the drum lid, perpendicular to the valve body. Actuate the toggle switch to the center "OFF" position. Remove the vacuum hose from the valve and attach it to the storage plug. Contents are now sealed in a vacuum.
9. Lay the drum horizontally on the rollers with the lid facing away from the control panel.
10. Turn the timer to the desired tumbling time. The time is set up to run from 0 to 5 hours.
11. Turn the speed control knob to the desired DRUM ROTATION SPEED.

LARGE DRUM										
SETTING	1	2	3	4	5	6	7	8	9	10
DRUM SPEED (RPM)	4	8	10	11.7	14.8	18.7	21.6	25.5	28	31

OPTIONAL SMALL DRUM										
SETTING	1	2	3	4	5	6	7	8	9	10
DRUM SPEED (RPM)	3.5	5.8	9.2	13	17.2	21.5	24.8	28	31.5	35

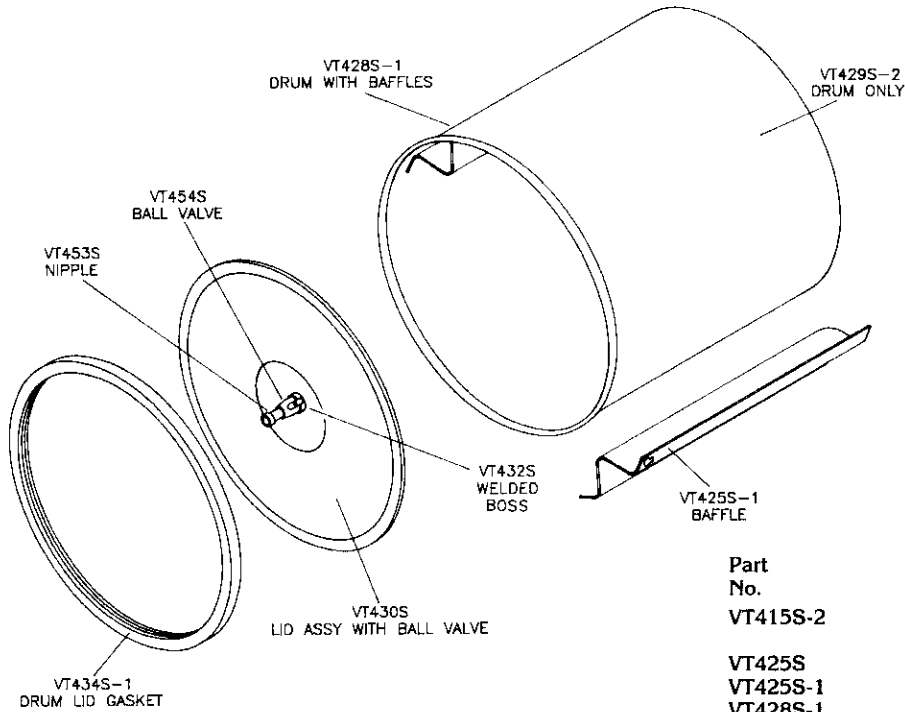
12. Actuate the toggle switch to the "TIMER" position
13. The drum will stop turning when the timer times out. Actuate the toggle switch to the center "OFF" position.
14. Remove the drum and place on a table, upright. Turn valve handle to the open position parallel with valve body to release vacuum. Remove the drum lid.
15. Remove product from the drum.



VTS-48C

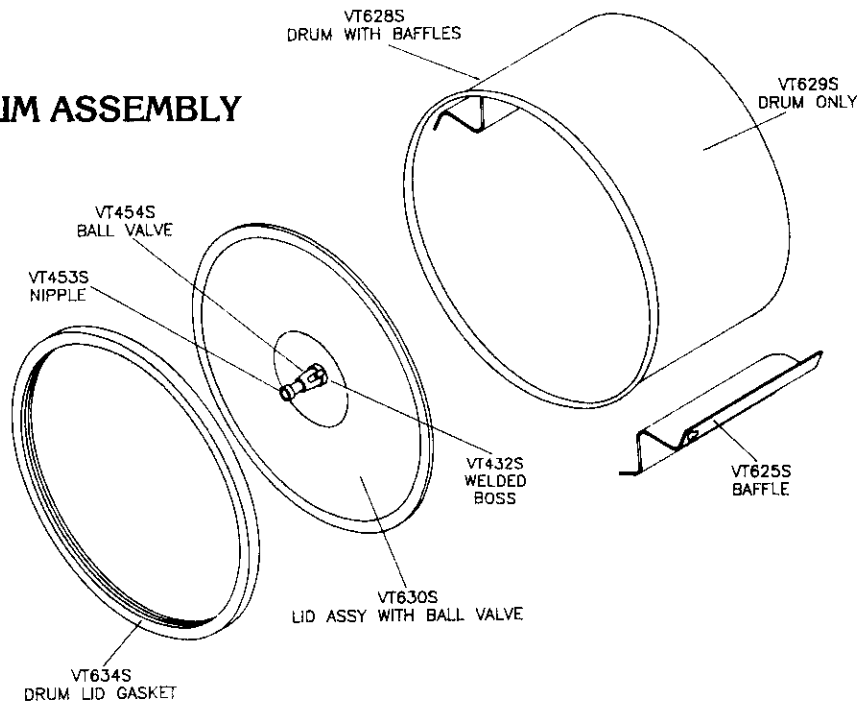
IMPORTANT: Always Advise Model & Serial Number When Ordering Parts

VT415S-2 40 lbs. DRUM ASSEMBLY



Part No.	Description
VT415S-2	40 lbs. drum & lid assembly, SS with guide - VT414-2
VT425S	Baffle only for 15" high drum
VT425S-1	Baffle only for 16" high drum
VT428S-1	Drum with baffles
VT429S-2	Drum only, without baffles
VT430S	Lid assembly with ball valve
VT432S	Welded boss, SS
VT434S-1	Lid gasket
VT453S	Nipple only
VT454S	Ball valve only

VT635S 20 lbs. DRUM ASSEMBLY



Part No.	Description
VT432S	Welded boss, SS
VT453S	Nipple only
VT454S	Ball valve, only
VT625S	Baffle, double drum
VT628S	Drum with baffles
VT629S	Drum only, w/o baffles
VT630S	Lid assembly with ball valve
VT634S	Drum lid gasket, double drum, white
VT634SB	Drum lid gasket, black sponge

VTS7162C VACUUM PUMP ASSEMBLY

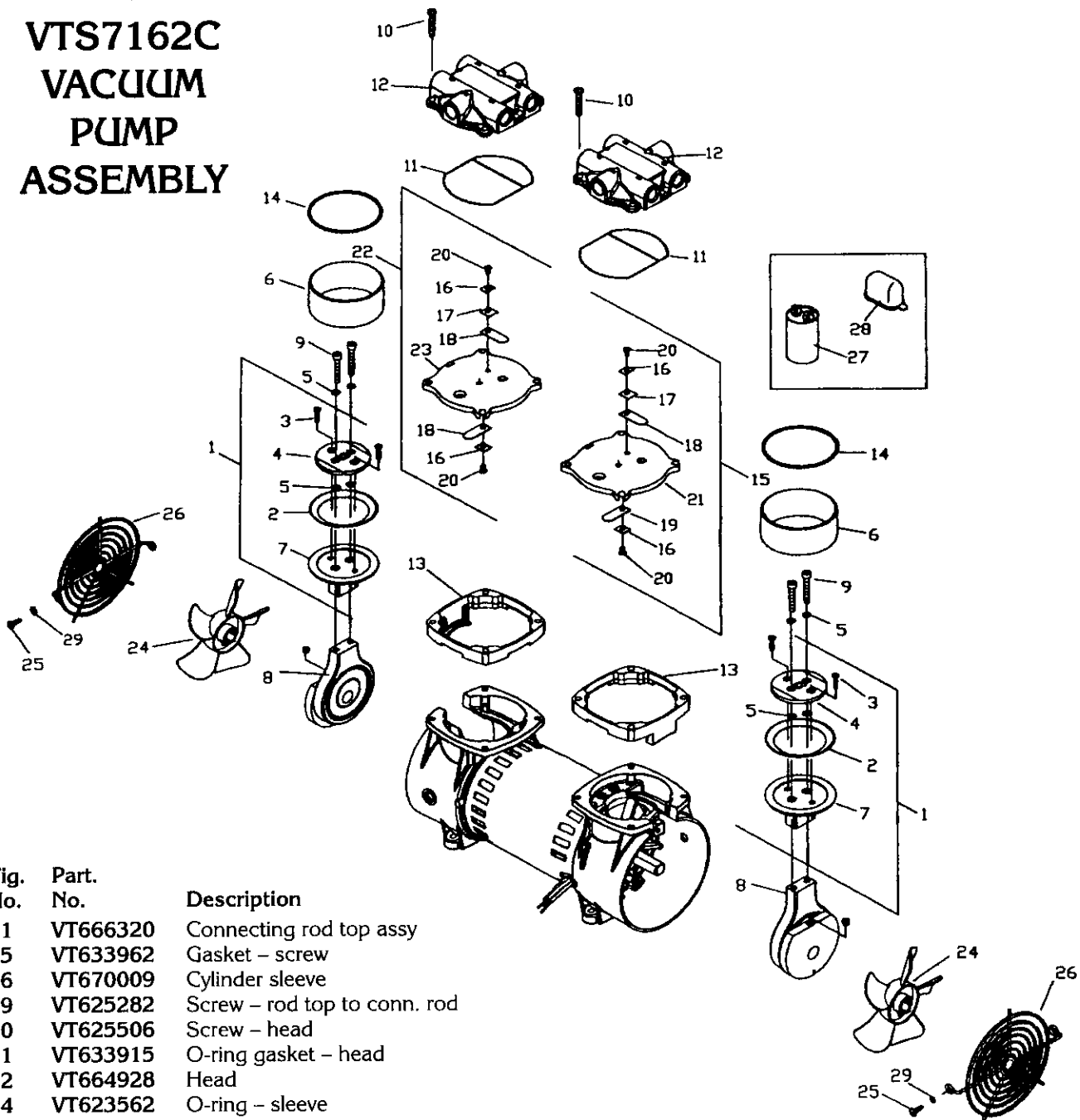


Fig. No.	Part. No.	Description
1	VT666320	Connecting rod top assy
5	VT633962	Gasket - screw
6	VT670009	Cylinder sleeve
9	VT625282	Screw - rod top to conn. rod
10	VT625506	Screw - head
11	VT633915	O-ring gasket - head
12	VT664928	Head
14	VT623562	O-ring - sleeve
15	VT662351	Valve plate assy. - vacuum
22	VT662978	Valve plate assy. - pressure
24	VT638369	Fan
27	VT603145	Capacitor - 30 mfd/370 vac

OPERATING AND MAINTENANCE INSTRUCTIONS

Do not at any time lubricate any of the parts with oil, grease, or petroleum products nor clean with acids, caustics or chlorinated solvents. Be very careful to keep the valve flapper from contacting any petroleum product or hydro carbons. It can affect the service life of the pump.

WARNING: To prevent explosive hazard, Do NOT pump combustible liquids or vapors with these units. Personal Injury and/or Property Damage would result.

To clean or replace the valve flappers, rubber gaskets or valve plate assemblies, remove the 8 screws on the two valve heads. The Valve Flappers and Rubber Gaskets are located beneath the Valve Heads. Remove the Valve Plates and Valve Flappers and wash and clean them in solvent or

replace them with the Valve Plate Assemblies. **(Do not intermix the parts.)** Remove the O-Ring Head Gaskets and O-Ring Sleeves and wash and clean them in solvent or replace them as needed. Also wash and clean the Cylinder Sleeves as needed. Replace the parts in reverse order taking care to ensure the Cylinder Sleeve is seated in the Valve Plate O-Ring Groove and the O-Ring is not pinched. This procedure pertains to the O-Ring Head Gaskets as well.

Insert the head screws and tighten each screw until it is snug in an X order sequence. Do not completely tighten the screws yet. Using a torque wrench, tighten each head screw to 30 inch-pounds, in an X order sequence.

WARNING: The motor may be thermally protected and can automatically restart when the overload resets. *Always* disconnect power source before servicing. **Personal Injury and/or Property Damage could result.**

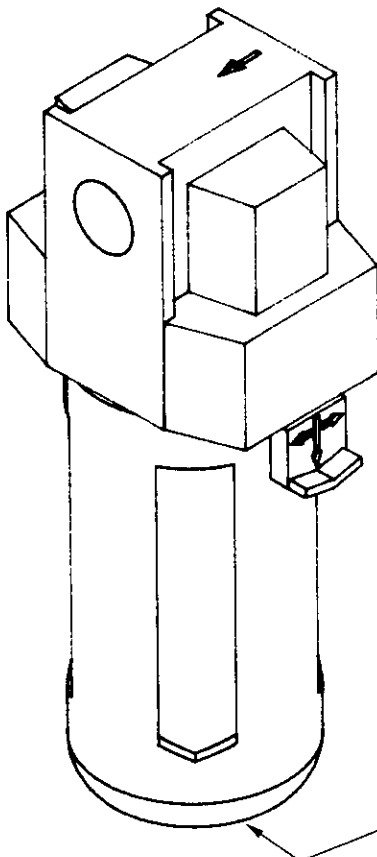
Do not attempt to replace the connecting rods or motor bearings. If after cleaning the unit and/or installing a new Service Kit, the unit still does not operate properly, contact your representative, the factory, or return the pump to one of our authorized Service Centers.

No. VTS528 INLET FILTER DRAINING INSTRUCTIONS



DRAIN FILTER BOWL DAILY CHANGE FILTER ELEMENT MONTHLY FOLLOW DRAINING INSTRUCTIONS BELOW

Vacuum Pump Filter VTS528



OPERATION & SERVICE

Filter must be drained daily before the separated moisture and oil reaches the bottom of the lower black baffle. Part No. VTS528-1 filter element must be replaced once a month for proper vacuum pump operation.

Six (6) replacement filter elements have been included with your tumbler. Order replacement elements, Part No. VTS528-1 from the agency from whom you purchased the machine or BIRO Mfg. Co. as required.

Review next page for maintenance instructions.

FILTER DRAIN

VTS528 FILTER MAINTENANCE

DAILY: Drain all separated moisture and oil from the filter enclosure. Depress the orange button at the bottom of the sight bowl.

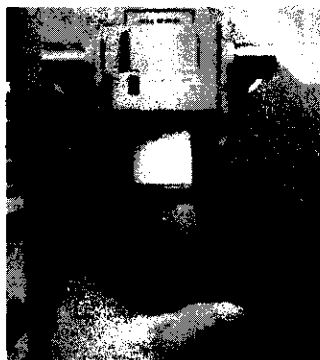


MONTHLY: The Part No. VTS528-1 filter element must be replaced once a month for proper vacuum and pump operation. Six (6) replacement filters have been included with your machine.



1. Release the site bowl lock by pulling down with your thumb.

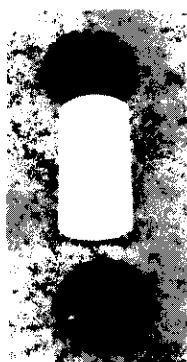
2. With the lock released, turn the bowl 45 degrees.



3. Slide the bowl straight down. A slight force may be required. Use no tools to pry. Clean bowl with mild soap and water only. Do not use detergents, cleansing agents, such as acetone, alcohol, benzene or gasoline, which are damaging to plastic.



4. Unscrew the filter holder. Lower the filter carefully from the mounting stud. **NOTE:** the order of the parts.

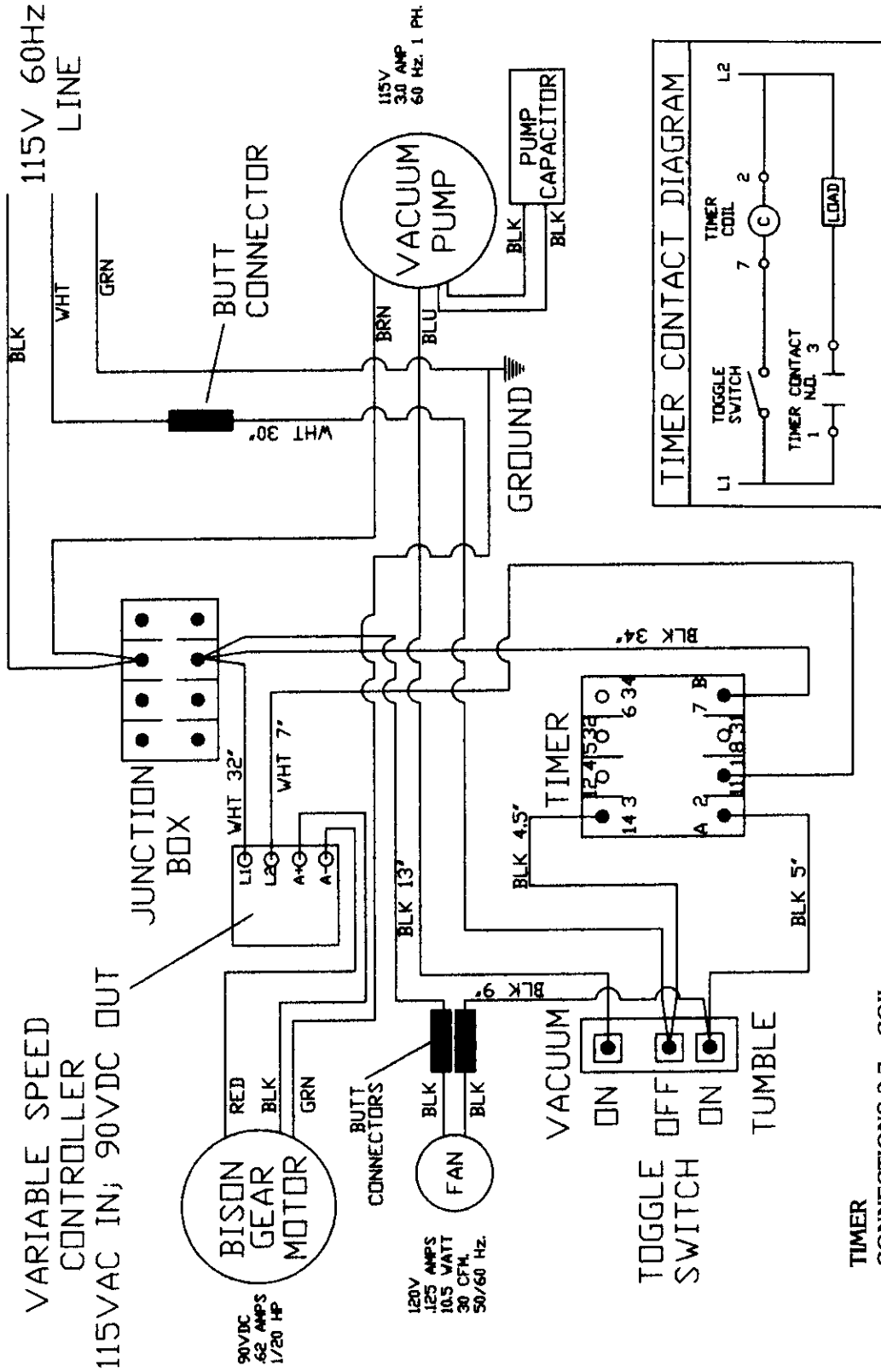


5. Separate the filter from the filter holders. Replace with a new filter.

6. Reassemble the filter in the reverse order. Lubricate bowl gasket to assist initial sealing. Use only mineral based oils or grease. Do not use synthetic oils or silicones. **Take special care that the sight bowl is fully seated and locked.**

VTS-48C WIRING DIAGRAM FOR VARIABLE SPEED

IMPORTANT: Always Advise Model & Serial Number



MAINTENANCE



ROTATING DRUM TO AVOID SERIOUS PERSONAL INJURY

ALWAYS Turn Off, Unplug From Power Source and Perform Lockout/Tagout Procedure to This Machine **BEFORE** Servicing.

NEVER Touch This Machine Without Training and Authorization By Your Supervisor.

NEVER Bypass, Alter, or Modify This Equipment in Any Way From Its Original Condition.

PROMPTLY REPLACE Any Worn or Illegible Labels.

USE ONLY GENUINE BIRO Parts and Accessories Properly Installed.

A. PUMP FILTER

1. Check filter daily. Filter must be drained before the separated moisture and oil reaches the bottom of the lower white baffle. Drain by depressing the orange button on bottom of sight bowl.
2. The filter element must be replaced monthly.

B. VACUUM PUMP

WARNING: THE MOTOR IS THERMALLY PROTECTED AND CAN AUTOMATICALLY RESTART WHEN THE OVERLOAD RESETS. ALWAYS DISCONNECT FROM POWER SOURCE BEFORE SERVICING. PERSONAL INJURY COULD BE THE RESULT.

1. Do not at any time lubricate any parts of the vacuum pump with oil, grease or petroleum products or clean with acids, caustics or chlorinated solvents. Never allow the diaphragm to contact any petroleum products. This can reduce greatly the service life of the vacuum pump.

CLEANING



ROTATING DRUM TO AVOID SERIOUS PERSONAL INJURY

ALWAYS Turn Off, Unplug From Power Source and Perform Lockout/Tagout Procedure to This Machine **BEFORE** Cleaning or Servicing.

ONLY Use Recommended Cleaning Equipment, Materials and Procedures.

NEVER Spray Water or Other Liquid Substances Directly at Motor, Power Switch or any Other Electrical Components.

ALWAYS Thoroughly Clean Equipment at Least Daily.



DO NOT Use Harsh Chemicals, Scouring Pads or Cleansers. Ordinary Liquid Detergent for Manual Dish or Pot/Pan Washing Will Not Harm the Machine. Harsh Chemicals Will Cause Brown "Rusty" Stains, as will Chlorine Bleach and Similar Products if Allowed to Stand in or on the Machine for any length of time.

CLEANING THE BIRO VACUUM TUMBLER:

1. Turn "OFF", unplug machine from power source, and perform lockout/tagout procedures.
2. The drum, drum lid, baffles in Stainless Steel drum and gasket can be removed and washed in utensil sink. Be sure to flush the vacuum valve with warm soapy water and rinse with clean water thoroughly. The drum, drum lid, baffles from Stainless Steel drum and gasket should be sanitized with an appropriate sanitizer solution approved by your local Health Dept. All parts should be air dried before reassembly and storage.
3. The exterior of the tumbler base can be wiped down with the same type soap solution followed by a rinse water wiping.
4. If food stains are not removed, use a product such as "Bon Ami" or "Soft Scrub". Be sure to wipe with the grain of the Stainless Steel with a soft cloth or sponge.
5. Streaks or water spots can usually be removed with a solution of vinegar and water.

LIMITED WARRANTY

WARRANTY: The BIRO Manufacturing Company warrants that the BIRO Vacuum Tumbler will be free from defects in material and workmanship under normal use and with recommended service. BIRO will replace defective parts, which are covered by this limited warranty, provided that the defective parts are authorized for return, shipping charges prepaid, to a designated factory for inspection and/or testing.

DURATION OF WARRANTY: The warranty period for all parts covered by this limited warranty is one (1) year from inspection/demonstration advised on returned warranty registration card, or eighteen (18) months from original factory shipping date, whichever occurs first, except as noted below.

PARTS NOT COVERED BY WARRANTY: The following are **not** covered by this limited warranty: VTS528 vacuum pump inlet filter, VT434S-1 and VT634S drum lid gasket, and VT454S ball valve on drum lid. This limited warranty does not apply to machines sold as used, rebuilt, modified, or altered from the original construction in which the machine was shipped from the factory. Water contaminated electrical systems and VTS7162C vacuum pump are not covered under this limited warranty. BIRO is not responsible for electrical connection of equipment, adjustments to switch components or any other electrical requirements, which must be performed only by a certified electrician. BIRO is not responsible for service charges or labor required to replace any part covered by this limited warranty or for any damages resulting from misuse, abuse, lack of proper or recommended service.

EXCLUSION OF WARRANTIES AND LIMITATION OF REMEDIES: BIRO gives no warranties other than those expressly stated in this limited warranty. THE IMPLIED WARRANTY OF MERCHANTABILITY, THE IMPLIED WARRANTY OF FITNESS FOR PROCESSING OF FOOD PRODUCTS, AND ALL OTHER IMPLIED WARRANTIES ARE SPECIFICALLY EXCLUDED. BIRO IS NOT LIABLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, EXPENSES, OR LOSSES. THE REMEDIES PROVIDED IN THIS BIRO LIMITED WARRANTY ARE PURCHASER'S SOLE AND EXCLUSIVE REMEDIES AGAINST BIRO.

REGISTRATION CARDS: You must sign, date and complete the warranty registration card supplied with each machine. The warranty card must be returned to The Biro Manufacturing Company for proper registration. If no warranty card is returned to BIRO, the warranty period will begin from the date the machine was originally shipped from the factory.

HOW TO GET SERVICE:

1. Contact the agency from whom you purchased the machine; or
2. Consult the yellow pages of the phone directory for the nearest authorized dealer; or
3. Contact BIRO Mfg. Co. for the authorized service entity (250 plus worldwide) in your area.

THE BIRO MANUFACTURING COMPANY

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