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## 2" Wash Diverter



**PURPOSE**

A diverter valve is used in conjunction with an automatic pipeline washer to divert the wash solution to the drain versus returning it to the wash sink. A typical wash cycle has 3 or 4 components - pre-rinse, detergent wash and acid rinse and sometimes a sanitizing rinse. During the pre-rinse, the warm wash water is only circulated once through the pipeline and then diverted to the drain. During the detergent wash, acid rinse and sanitizing rinse the wash solution is circulated for some period of time before being diverted to drain.

***Components***

2" Diverter Valve	1
4 Way 120 VAC Valve	1
1/4" MNPT x 1/4" Brass Elbow Barb	2
1/4" NPT x 1/4" Brass Barb	2
1/4" NPT Brass Filter	1
1/4" ID x 3/8" OD PVC Tubing	15 ft.

***Locally Sourced Items***

2" rubber coupling or M 10346—2" rubber elbow  
 2" Tri-clover clamps & gaskets  
 1/4" ID x 1/2" OD single pulsation hose  
 Pipeline support clamps

***Special Tools***

1/4" NPT Tap & 27/64" or 7/16" drill bits  
 3/16", 3/8" & 1/2" drill bits



### **INSTALLATION**

#### **WARNING**

Turn off and lockout electrical power to Automatic Washer before starting installation.

#### ***Diverter Valve***

The diverter valve must be mounted in a vertical position with the diaphragm on top. It will normally be mounted above the sink, refer to Figure 1 for a typical installation. If the discharge line from the milk pump is 1.5" tubing, adapters will be needed in order to clamp to the 2" fittings on the diverter valve. The discharge line from the milk pump is clamped to the 2" center port, the 2" clamp fitting at the bottom will discharge to the drain and the top slip fitting will need to be plumbed to the sink with a rubber slip coupling (dealer supplied). The pipes that are connected to the Diverter Valve must be supported so that no stress or torque is placed on the valve.

#### **WARNING**

Do not switch the connections to the diverter valve ports. The current recommendations make the valve operation fail safe and prevents the chance of mixing cleaners and acids, which is dangerous to human and animal health, should the solenoid valve fail to actuate. In the event that the diverter valve fails to actuate, the cleaners will circulate once and be diverted to the drain.

#### ***Notice***

An air gap needs to be left between the drain pipe and the discharge pipe to drain from the diverter valve. If the diverter valve is discharging onto the floor, the end of the pipe must be a minimum of 4" above the floor. Check your local plumbing codes for requirements.

## Solenoid Valve

The 4 way solenoid valve that controls the diverter valve must be mounted in an enclosure. Typically, there is enough room in the washer control cabinet to mount the solenoid valve. If there is not ample room, a separate enclosure will need to be sourced locally.

Install the two 1/4" NPT x 1/4" barb straight brass fittings into the solenoid valve ports labeled 1 and 2. Install the 1/4" NPT x 1/4" barb elbow into the "EXH" port and the brass filter into the remaining port labeled "IN". Use Teflon plumber's tape on all threads. Use the screws supplied to attach the solenoid valve to the enclosure. Two 7/16" holes will be needed for two 1/4" ID x 3/8" OD tubing being routed to the diverter valve and a 9/16" hole for the 1/4" tubing running to a vacuum supply. Care must be taken to ensure that the tubing is not pinched or kinked and all burrs are removed from the holes to prevent the tubing from being cut. Drill and tap a 1/4" NPT hole in a vacuum line and thread the remaining 1/4" adapter elbow into the hole. Connect the 1/4" tubing as shown in Figure 2. Use single pulsation tubing (1/4" ID x 1/2" OD) to go from the solenoid valve to the vacuum supply (dealer supplied).

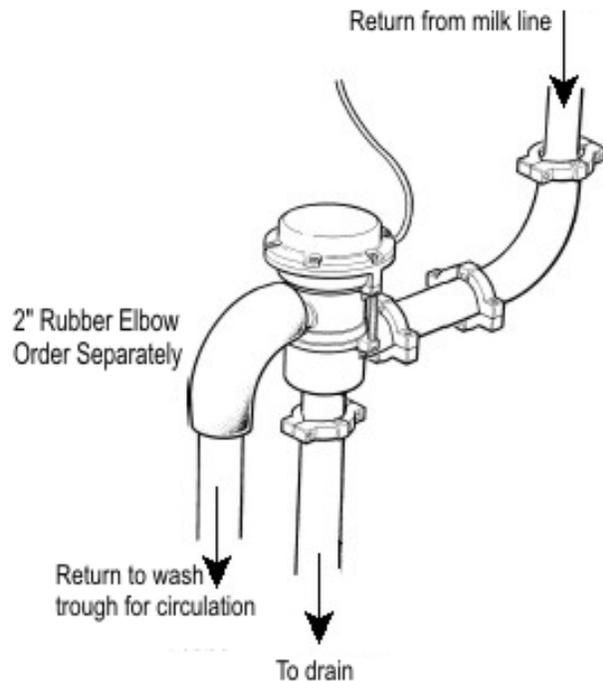


Figure 1

## Wiring Solenoid Valve

Refer to the wiring diagram for the washer controller being used. The washer control should have a terminal for the connection of a diverter valve; the solenoid wires will be connected between this terminal and a neutral terminal. The solenoid valve requires a 120 VAC input. If the washer control does not have the correct voltage output, a relay will be needed to provide the correct voltage.



## **MAINTENANCE**

### ***Daily***

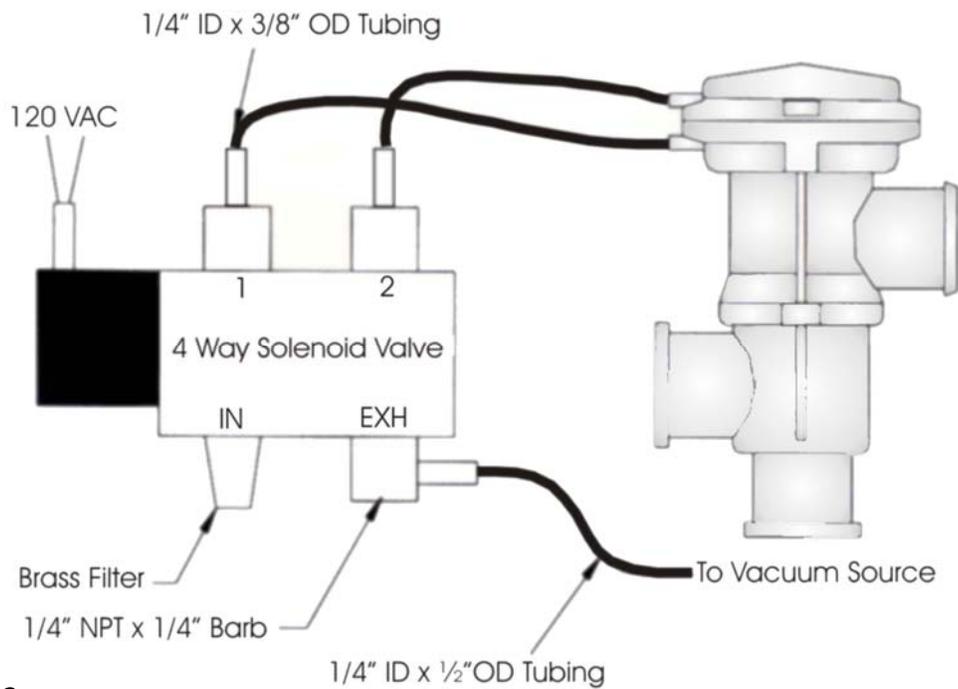
Observe the operation of the diverter valve to ensure it is working properly.

### ***Monthly***

Check hoses and fittings for leaks and restriction (kinked lines).

### ***Yearly***

Disassemble and replace seals and the diaphragm in diverter valve.



**Figure 2**





## 2" Wash Diverter

