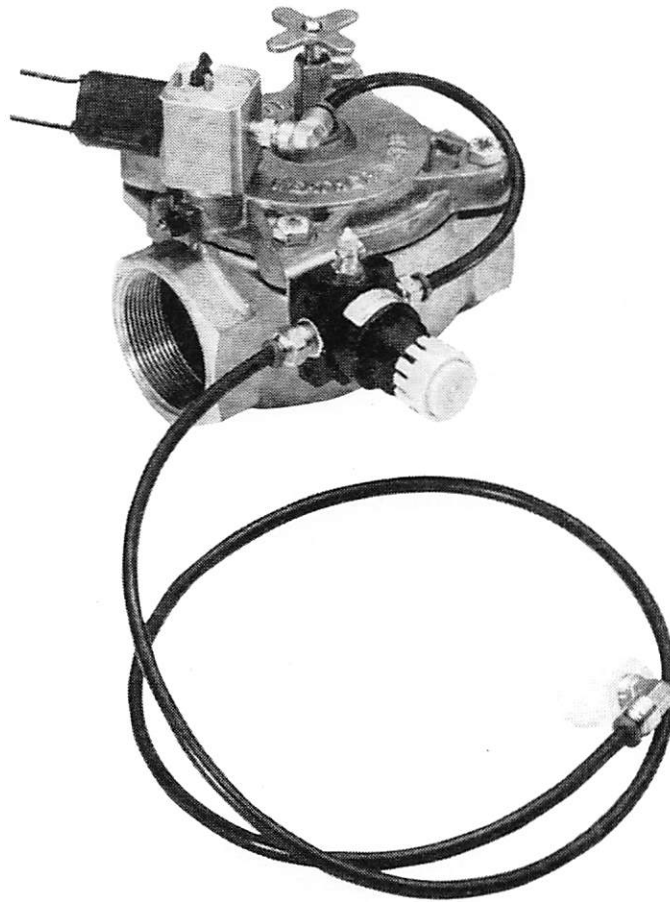


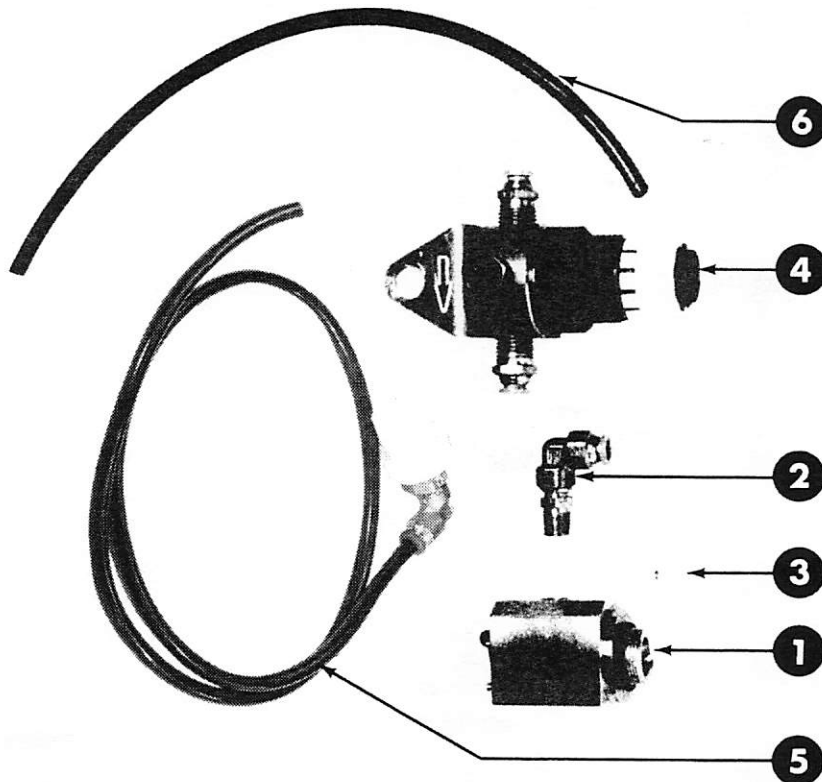
Weather  **matic**[®]

INSTALLATION & OPERATING INSTRUCTIONS



**PRK-24/XPR
PRESSURE REGULATING ACCESSORY
FOR WEATHER-MATIC VALVE**

Installation



A. Pressure Regulating Kit (PRK-24)

PRK-24 PARTS LIST

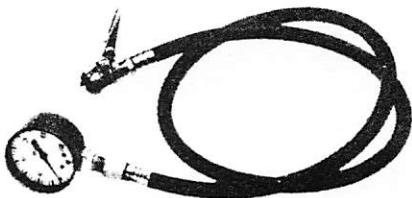
1. Regulator Adapter
2. Regulator Adapter threaded elbow with compression fitting
3. #2-56 × 3/8L self-tapping screw
4. Pilot Control Valve Assembly
5. Tube with fitting for installation in downstream fitting
6. Tube to install between Pilot Control Valve and Regulator Adapter elbow
1/2 MIPT × 1/4 NPT reducer bushing (not shown)

Other Parts Required for Installation

1. T + 2 teflon paste or teflon tape.
2. Pressure gauge (Weather-matic Part # PRG-24)
3. S × S × 1/2 FIPT tee fitting or saddle

The Weather-matic Pressure Regulating Valves are designed to provide a constant, pre-determined outlet pressure regardless of fluctuations in inlet pressures. The valves may be operated either manually, using the manual bleed lever installed in the regulator adapter, or electrically from the controller.

Once in operation, the outlet pressure will remain constant with a maximum possible variation of ± 5 PSI of the preset outlet pressure. The adjustment range for the regulator is 15 to 110 PSI. *There MUST be a minimum pressure differential of 10 PSI between the inlet pressure and the desired outlet pressure.*



**PRG-24
PRESSURE HOSE GAUGE ASSEMBLY**

INSTALLATION

This section presents the methods of installation for both new Weather-matic valves purchased with the XPR option installed at the factory and retrofitting Weather-matic valves in the field with Pressure Regulating Kit (PRK-24).

WEATHER-MATIC VALVE WITH XPR INSTALLED: Installation of the Weather-matic valve with the XPR option is accomplished in two steps:

Step 1 —

Since the Schrader valve used for pressure gauge hook-up and the yellow adjusting lock sleeve used in setting the desired outlet pressure are located on the Pilot Control Valve Assembly, it is *MOST* important to allow for accessibility *after* installation. For that reason, valves with the XPR option should be installed in a valve box large enough to provide the necessary accessibility. Direct burial without a valve box only makes setting and/or adjusting outlet pressure more difficult.

Step 2 —

To connect the downstream pressure line, first install the tee fitting or saddle (as described in the "other parts required for installation") into the line **downstream** from the valve. Install the connection approximately 10 pipe diameters from where the male adapter ties into the outlet side of the valve.

Example:

2" pipe = connection is approximately 20" from outlet side of valve.

The method used to determine the distance is to allow pressure sensing to occur in a smooth flow area of the pipe away from the valve. If necessary, however, the connection can be made at a point closer to the valve outlet.

After completing the installation of the connection, install the 1/2 MIPT × 1/4 NPT reducer bushing into the tee fitting or saddle.

Installation

NOTE:

To prevent possible leakage around the threads, apply T + 2 paste or teflon tape to the reducer bushing threads before making it up into the tee or saddle.

The last connection is the downstream pressure line fitting into the reducer bushing.

NOTE:

As with the reducer bushing, apply T + 2 paste or teflon tape to the fitting threads before threading into the reducer bushing.

After completing Steps 1 and 2, refer to the section entitled "Setting Desired Outlet Pressure".

RETROFITTING WEATHER-MATIC VALVES:

Step 1 —

Shut off water supply to the irrigation system, expose and bleed off those valves that will be modified. During the process of exposing the valve(s) being modified, it will also be necessary to expose the pipe downstream in order to install the downstream pressure line and tee fitting or saddle.

NOTE:

Before proceeding with any valve disassembly required for modification, while exposing the valve, take precautions to reduce the possibility of dirt entering areas in the Valve or Pressure Regulating Kit during the operations.

Step 2 —

The same consideration for accessibility to the Pilot Control shown in the section entitled "Weather-matic valves with Factory Installed XPR" must be given to retrofit applications. It is still important to consider the installation of a valve box large enough to give unrestricted accessibility after the modification.

Step 3 —**Regulator Adapter Installation**

- A. Remove the solenoid assembly including the actuator and spring from the cover in order to expose the exhaust fitting (brass valve) or port (plastic valve).
- B. Insert the #2 self-tapping screw into the exhaust hole and thread it down in order to seal off the discharge that occurs when the valve opens. This will force the discharge up through the Regulator Adapter.

NOTE:

Some Weather-matic brass valves have an exhaust fitting that is pressed into the cover assembly. There is the possibility that the fitting will become loose or begin to rotate while installing the self tapping screw. Should this condition occur, remove the cover assembly and remove the exhaust fitting. Before reinstalling the cover, rotate the diaphragm assembly 180 degrees. The diaphragm will now seal off the exhaust area.

- C. Thread the Regulator Adapter into the solenoid area until it becomes tight.

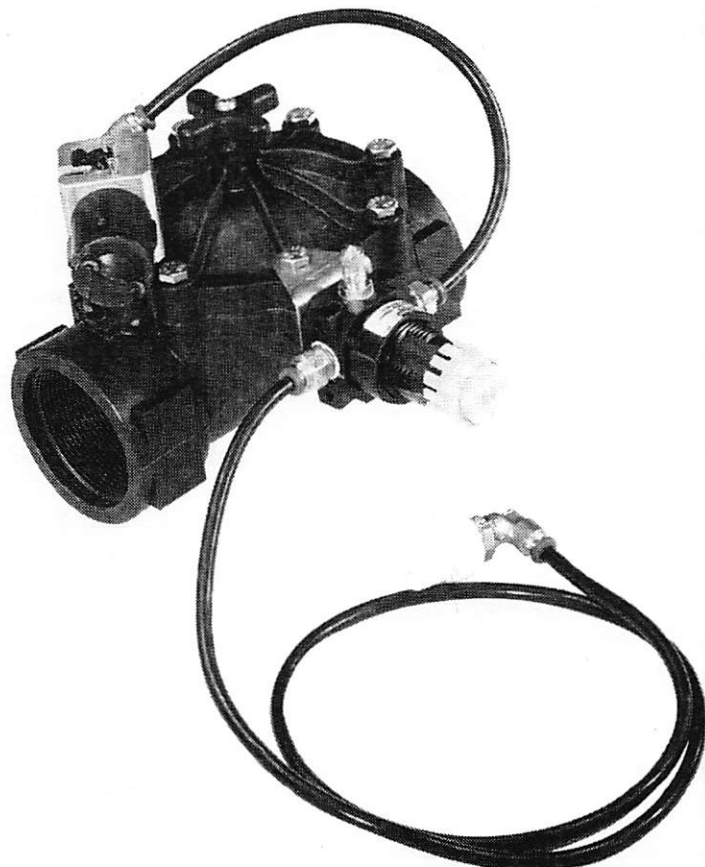
NOTE:

It is not necessary to use wrenches as overtightening could cause thread or cover damage.

There are two ports located on opposite sides of the Regulator Adapter. For ease in installation of the elbow fitting and solenoid, do not tighten the adapter down leaving either adapter port facing towards the Flow Adjust Assembly. It will make the installation of the fitting or solenoid very difficult, if not impossible. If the adapter ends up in that position, unscrew the adapter a maximum of ¼ turn to place the ports in a proper position.

NOTE:

Photograph B is for reference only. The way the lead threads are cut on the adapter and cover may reverse the final position of the regulator adapter 180° from the example shown. If so, the adapter will still function properly.



B. 11024FCR-20 with XPR Installed

Operation

D. Once installation of the Regulator Adapter is completed, make up the elbow fitting into the Adapter. Use a 7/16 open end wrench to snug the elbow. **DO NOT OVERTIGHTEN.**

NOTE:

Prior to installation, apply T + 2 paste or teflon tape to the elbow threads in order to reduce the possibility of leaking around the threads.

E. Thread the solenoid assembly, actuator and spring originally removed from the cover in Step A, into the port opposite the elbow fitting.

Step 4 —

Pilot Control Valve Installation (including tubes) The most important step in the installation of the PRK-24 involves the Pilot Control Valve. Refer to Photograph B for typical installation positioning.

NOTE:

Prior to installation, note the arrow on the mounting bracket. When installing the Pilot Control Valve on the cover, mount the bracket so that the arrow points in the direction of the solenoid or downstream side of the valve.

Remove one of the cover bolts, insert bolt through the mounting bracket hole, and reinstall the cover bolt to secure the Pilot Control Valve.

To install the tubing from the Regulator Adapter and Pilot Control Valve, locate the short section of tubing (12"). Insert one end into the compression fitting of the elbow. Push the tube in until it stops. To check the fit, pull out on the tube.

The other end of the tube is inserted into the inlet fitting on the Pilot Control Valve. The inlet fitting points toward the inlet side of the valve. (Refer to photograph B) Insert the hose into the compression fitting and press until it stops. Pull out on the tube to check fit.

Step 5 —

Downstream Pressure Line Connection — Locate the downstream tube assembly. Install the end without the

adapter into the compression fitting on the downstream side of the Pilot Control Valve. Press it in until it stops. Pull out on the tube to check fit. To complete installation of the downstream end of the tube into the tee fitting or saddle, refer to Installation. — *Weathermatic Valve with XPR Installed — Step 2.*

OPERATION

Setting Desired Outlet Pressure:

Once the valve equipped with the pressure regulation device is installed, use the following steps to set the outlet pressure:

1. Be sure flow adjust assembly is open all the way.
2. Remove cap on "Schrader" valve located at base of pilot control valve.
3. Connect pressure hose gauge assembly (WM #PRG-24) to "Schrader" valve.
4. Open valve (either manually or electrically).
5. Allow valve to remain open for a few moments in order for pressure reading to stabilize.
6. When the pressure reading on the gauge stabilizes, pull the yellow lock sleeve on the pilot control valve out until it "clicks".
To increase the outlet pressure, turn the lock sleeve *clockwise*.
To decrease the outlet pressure, turn the lock sleeve *counterclockwise*.
8. When the desired outlet pressure is shown on the pressure gauge, push the yellow lock sleeve in until it "clicks".
9. Check the reading on the gauge. If further pressure adjustment is required, repeat steps 6 through 9. If the reading is the desired pressure, disconnect the pressure gauge hose from the "schrader" valve and replace cap.

Troubleshooting

TROUBLESHOOTING

CONDITION	PROBABLE CAUSE
	pressure hose does not have a good connection on schrader valve
unable to obtain accurate reading on pressure gauge	#2 self-tapping screw not installed in exhaust hole.
unable to obtain desired downstream pressure	contamination blocking tubes. defective gauge difference between desired downstream pressure and inlet pressure is not equal to or greater than 10 psi.
unable to get needle on gauge to settle on a reading	flow adjust not fully open. flow rate through valve too low.