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White-Rodgers 36J22-214

White-Rodgers 36J22-214 Combination Gas Valve User Manual

Model: 36J22-214

1. INTRODUCTION

This manual provides comprehensive instructions for the safe and efficient installation, operation, and maintenance of the White-Rodgers 36J22-214 Combination Gas Valve. This valve is designed for use in various heating applications, controlling the flow of natural or LP gas to the main burner.

Please read this manual thoroughly before attempting any installation, service, or operation of the gas valve. Retain this manual for future reference.

2. SAFETY INFORMATION

WARNING: Improper installation, adjustment, alteration, service, or maintenance can cause property damage, personal injury, or loss of life. Installation and service must be performed by a qualified installer, service agency, or gas supplier.

- Always disconnect electrical power before servicing.
- Ensure all gas connections are properly sealed and leak-tested after installation or service.
- Do not use this valve with fuels other than those specified (Natural Gas or LP Gas).
- Never attempt to repair a damaged valve. Replace it with a new, approved valve.
- In case of a gas leak, immediately shut off the main gas supply, ventilate the area, and contact a qualified service technician. Do not operate electrical switches or phones.

3. PRODUCT DESCRIPTION

The White-Rodgers 36J22-214 is a 24-volt, fast-opening, single-stage combination gas control valve. It is designed to regulate gas flow to the main burner in heating systems. This valve features 1/2-inch NPT inlet and outlet connections and is rated for up to 226,800 BTU. Its robust construction includes a stainless steel exterior finish.



Figure 1: White-Rodgers 36J22-214 Combination Gas Valve. This image shows the general appearance of the gas valve with its inlet and outlet connections.

4. SETUP AND INSTALLATION

Installation must be performed by a qualified technician in accordance with all local codes and regulations.

4.1 Pre-Installation Checks

- Verify that the gas type (Natural Gas or LP Gas) matches the valve's specifications and the appliance requirements.
- Ensure the incoming gas pressure is within the valve's operating range.
- Confirm that the electrical supply is 24 Volts AC.

4.2 Mounting the Valve

Mount the valve securely in the appliance's gas train, ensuring it is level and accessible for service. The valve can be mounted in any position except upside down (with the control knob pointing downwards).

4.3 Piping Connections

1. Apply pipe sealant suitable for gas to all male pipe threads. Do not apply sealant to the first two threads to prevent contamination of the valve.
2. Connect the gas supply line to the 1/2-inch NPT inlet connection.
3. Connect the appliance's manifold pipe to the 1/2-inch NPT outlet connection.
4. Tighten all connections firmly but do not overtighten.

4.4 Electrical Wiring

Wire the valve according to the appliance manufacturer's instructions and local electrical codes. Ensure the 24-volt AC power supply is correctly connected to the valve's terminals.

4.5 Leak Testing

After all gas connections are made, perform a leak test using a soap solution. Apply the solution to all joints and connections. The appearance of bubbles indicates a leak. Tighten connections or reapply sealant as necessary until no leaks are detected.

5. OPERATING INSTRUCTIONS

5.1 Initial Startup

1. Ensure all safety checks and installation procedures are complete.
2. Turn on the main gas supply to the appliance.
3. Restore electrical power to the appliance.
4. Follow the appliance manufacturer's instructions for lighting the pilot and main burner. The gas valve will open to allow gas flow when the thermostat calls for heat and the ignition sequence is initiated.

5.2 Normal Operation

During normal operation, the gas valve will cycle open and closed in response to the thermostat's call for heat. The fast-opening feature ensures quick and efficient ignition of the main burner.

5.3 Shutdown Procedures

- **Temporary Shutdown:** Set the thermostat to its lowest setting or "OFF". The gas valve will close, shutting off gas to the main burner.
- **Extended Shutdown/Service:** Turn off the main gas supply to the appliance and disconnect electrical power.

6. MAINTENANCE

The White-Rodgers 36J22-214 gas valve is designed for reliable operation and typically requires minimal maintenance. However, periodic inspection by a qualified service technician is recommended to ensure continued safe and efficient performance.

- **Annual Inspection:** Have a qualified technician inspect the gas valve and entire heating system annually. This includes checking for gas leaks, proper ignition, and burner operation.
- **Cleaning:** Do not attempt to clean the internal components of the gas valve. External cleaning should be done with a soft, dry cloth. Avoid using harsh chemicals or abrasive cleaners.
- **Replacement:** If the valve shows signs of malfunction, damage, or excessive wear, it must be replaced by a qualified technician. Do not attempt to repair.

7. TROUBLESHOOTING

Before attempting any troubleshooting, ensure electrical power and gas supply are OFF. Only qualified personnel should perform troubleshooting and repairs.

Problem	Possible Cause	Solution
No gas flow to main burner	<ul style="list-style-type: none">◦ Main gas supply off◦ Thermostat not calling for heat◦ Ignition system failure◦ Faulty gas valve	<ul style="list-style-type: none">◦ Check main gas shut-off valve◦ Verify thermostat setting◦ Inspect ignition components (pilot, igniter)◦ Consult a qualified technician for valve inspection/replacement

Problem	Possible Cause	Solution
Pilot light extinguishes	<ul style="list-style-type: none"> ◦ Low gas pressure ◦ Dirty pilot orifice ◦ Faulty thermocouple/thermopile 	<ul style="list-style-type: none"> ◦ Check gas pressure ◦ Clean pilot orifice (by qualified technician) ◦ Replace thermocouple/thermopile (by qualified technician)
Gas odor detected	<ul style="list-style-type: none"> ◦ Gas leak 	<ul style="list-style-type: none"> ◦ IMMEDIATELY shut off main gas supply. Ventilate area. Do not operate electrical switches. Contact gas supplier or qualified technician.

8. SPECIFICATIONS

Feature	Detail
Model Number	36J22-214
Voltage	24 Volts AC
Gas Type	Natural Gas (NAT) / Liquid Propane (LP)
Inlet Connection	1/2 inch NPT
Outlet Connection	1/2 inch NPT
BTU Rating	Up to 226,800 BTU
Valve Type	Fast Opening, 1 Stage Combination Gas Control
Exterior Finish	Stainless Steel
Number of Ports	2