SERVICE MANUAL

C36CB-SR

GAS COUNTER SERIES CHAR-BROILER

C24CB-SR
C36CB-SR
C48CB-SR

- NOTICE -

This Manual is prepared for the use of trained Vesta Service Technicians and should not be used by those not properly qualified.

This manual is not intended to be all encompassing. If you have not attended a Vesta Service School for this product, you should read, in its entirety, the repair procedure you wish to perform to determine if you have the necessary tools, instruments and skills required to perform the procedure. Procedures for which you do not have the necessary tools, instruments and skills should be performed by a trained Vesta Service Technician.

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SERVICE UPDATES

May, 2024
- New compile

TIS DOCUMENT LIST - CXXCB-SR SERIES

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Document Title	**Document Type**
CXXCB-SR Gas Char-boiler Service Manual	Service Manual

SERVICE TAB (Multimedia)	
Document Title	**Document Type**
CXXCB-SR Gas Char-broiler Operation & Installation Manual	Operator

PARTS TAB	
Document Title	**Document Type**
CXXCB-SR Gas Char-broiler Parts Catalog	Parts Catalog

GENERAL

⚠ WARNING

The Char-broiler and its parts are hot. Use care when operating, cleaning or servicing the char-broiler.

INTRODUCTION

Procedures in this manual will apply to all CXXCB-SR models unless specified. No procedure in this manual will require the removal or raising of the cooking racks. Pictures and illustrations can be of any model unless the picture or illustration needs to be model specific.

The CXXCB-SR utilizes manual ignition system.

INSTALLATION

Generally, installations are made by the dealer or contracted by the dealer or owner. Detailed installation instructions are included in the Installation and Operation Manual that is sent with each unit. All models must be installed with an externally mounted regulator.

OPERATION

Detailed operation instructions are included in the Installation & Operation Manual sent with each unit. The CXXCB-SR utilizes manual ignition system. If the pilot goes out, the safety valve will shut-off the gas supply to the pilot and main burners. You will have to reach under the front of the unit and through the pilot cutout to ignite the pilots.

CLEANING

Detailed cleaning procedures are included in the Installation & Operation manual sent with each unit.

SPECIFICATIONS

Stainless steel front and front top ledge. Fully welded stainless and aluminized steel body frame. 11" low profile cooking height on 4" legs. heavy-Duty cast iron cooking racks, stainless steel back and tapered side splashes. Grease chute is fully welded to stop grease migration.

One 35,000 BTU/hr. “U” shaped Stainless steel SUS409 and mechanical snap action thermostat for each 12" of Char-broiler width. Chrome thermostat knob guards.

Manifold pressure should be:

Natural Gas 4.0" W.C.

Propane Gas 10.0" W.C.

Incoming pressure should be 4-7" W.C. for Natural Gas and 10.0" W.C. for Propane Gas.

Incoming pressure should not exceed 13.0" W.C.

TOOLS

- Standard set of hand tools.
- VOM with A/C current tester (any quality VOM with a sensitivity of at least 20,000 ohms per volt can be used).
- Temperature tester (thermocouple type).
- U-Tube or Digital Manometer.
- Thread sealant suitable for use with natural or propane gas.
- Aluminum Foil Tape - McMaster Carr Part No. 7631421 or equivalent.
- Adapter to test thermocouple, Johnstone Supply Part No. H23-226 or equivalent.
- 8mm socket
- Flat screwdriver
- 8mm、11mm、17mm、19mm wrench
- Teflon tape
- HA40 food grade rust proof oil
- Handheld leak detector

COMPONENT LOCATION

C36CB-SR

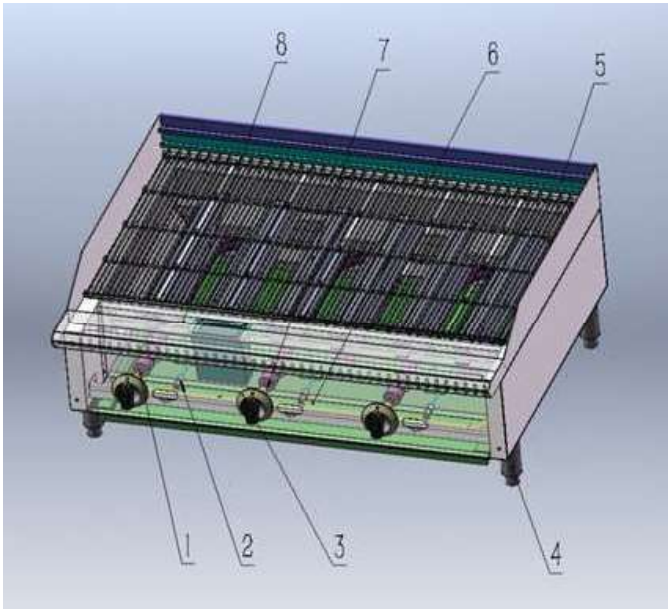

Fig.1

1. Gas control valve
2. Gas conversion control valve
3. Knob
4. Steel feet
5. Pressure regulator
6. Gas manifold pipe
7. Nozzles
8. Pilot

REMOVAL AND REPLACEMENT OF PARTS

KNOB AND PANELS

⚠ WARNING

Shut off the gas before servicing the unit and follow lockout /tagout procedures.

1. Grasp the knob with your hand and pull it out slightly harder, knob can be removed. (fig.2)
   (Installation process reversed)

Fig. 2

ADJUSTABLE LEG

⚠ WARNING

Shut off the gas before servicing the unit and follow lockout /tagout procedures.

1. Uplift the product and unscrew out the adjustable feet by hand (installation process reversed) (fig.3).

Fig. 3

REGULATOR

⚠ WARNING

Shut off the gas before servicing the unit and follow lockout /tagout procedures.

Regulator Installation:

Fig. 4

1. On the back of the product, wrap the manifold pipe in a clockwise reverse direction with **teflon** tape, it is recommended to wrap 15-20 turns (fig.5).

Fig.5

2. Assemble regulator into manifold pipe and tighten it (fig.6)

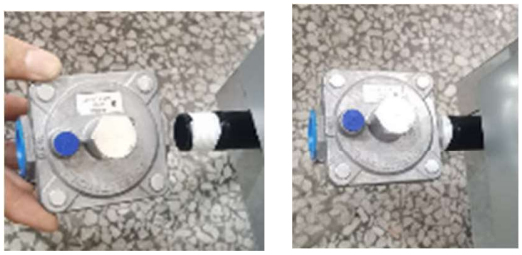

Fig.6

3. Turn on the air source and use a handheld leak detector to check whether the regulator valve is leaking (Fig.7) (The disassembly process reversed).

Fig.7

PILOT GAS PIPE

⚠ WARNING

Shut off the gas before servicing the unit and follow lockout /tagout procedures.

1. Take out the Char-boiler grill
2. Use the 8mm sleeve to remove the 4 screws shown in the picture and take out the control panel; See (fig.8)

Fig.8

3. Lift out the Char-boiler coaming assembly (see fig.9).

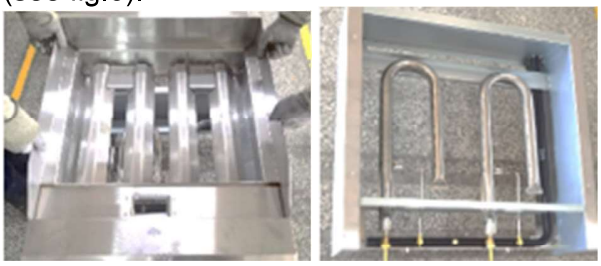

Fig.9

4. Use an 11mm wrench to remove the nut of the adjustment valve. (See fig.10)

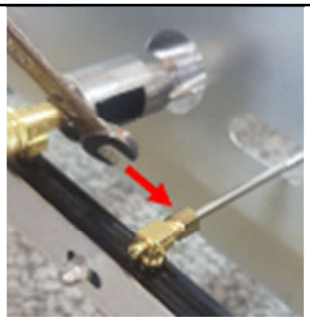

Fig.10

5. Open the fixing plate with a slotted screwdriver, release the pilot cap, and then remove the pilot gas pipe (fig.11).

Fig.11

6. Continue to install in reverse order.
7. Turn on the air source and use a handheld leak detector to check whether the pilot gas pipe is leaking

PILOT VALVE

⚠ WARNING

Shut off the gas before servicing the unit and follow lockout /tagout procedures.

1. Take out the Char-boiler grill
2. Use the 8mm sleeve to remove the 4 screws shown in the picture and take out the control panel (see fig.8)
3. Lift out the Char-boiler coaming assembly (see fig.9)
4. Use an 11mmd wrench to remove the nut of the adjustment valve (see Fig.10)

5. Use an 11mm wrench to remove the adjusting valve AP7-1 (see fig.12)

Fig.12

6. Continue to install in reversed order.
7. Evenly applied with 542 pipe thread sealant on first three turns of the thread, and then tighten it.
8. Turn on the air source and use a handheld leak detector to check whether the gas pipe is leaking.

BURNER

⚠WARNING
Shut off the gas before servicing the unit and follow lockout /tagout procedures;

1. Take out the Char-boiler grill
2. Use the 8mm sleeve to remove the 4 screws shown in the picture and take out the control panel (see fig.8)
3. Lift out the Char-boiler coaming assembly (see fig.9)
4. Open the fixing plate with a slotted screwdriver, release the pilot cap, and then remove the pilot gas pipe (see fig.11)
5. Place the product vertically, remove the M8 nut from bottom plate with an 8mm wrench, and take out the burner (fig.13).
6. Continue to install in reverse order.
7. Turn on the air source and use a handheld leak detector to check whether the gas pipe is leaking.

Fig.13

GAS VALVE AND ORIFICT

⚠WARNING
Shut off the gas before servicing the unit and follow lockout /tagout procedures.;

1. Take out the Char-boiler grill
2. Use the 8mm sleeve to remove the 4 screws shown in the picture and take out the control panel (see fig.8)
3. Lift out the Char-boiler coaming assembly (see fig.9)
4. Open the fixing plate with a slotted screwdriver, release the pilot cap, and then remove the pilot gas pipe (see fig.11)
5. Place the product vertically, remove the M8 nut from bottom plate with an 8mm wrench, and take out the burner (fig.13).
6. Use 3mm wrench removes the nozzle of the gas valve (fig.14).

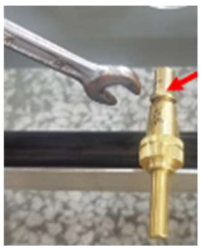

Fig.14

7. Disassemble gas valve (fig.15).

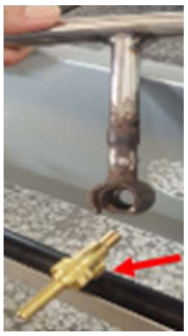

Fig.15

8. Continue to install in reverse order.
9. When assemble the nozzle back, HA40 food-grade anti-rust oil should be applied between the nozzle and the gas valve (see fig.16).
10. When assemble the gas valve back, evenly applied with 542 pipe thread sealant on first three turns of the thread, and then tighten it (see fig.17).

Fig.16 **Fig.17**

11. Turn on the air source and use a handheld leak detector to check whether the gas pipe is leaking.

GAS MANIFOLD

⚠ WARNING
Shut off the gas before servicing the unit and follow lockout /tagout procedures.;

1. Take out the Char-boiler grill
2. Use the 8mm sleeve to remove the 4 screws shown in the picture and take out the control panel (see fig.8)
3. Lift out the Char-boiler coaming assembly (see fig.9)
4. Open the fixing plate with a slotted screwdriver, release the pilot cap, and then remove the pilot gas pipe (see fig.11)
5. Place the product vertically, remove the M8 nut from bottom plate with an 8mm wrench, and take out the burner (fig.13)
6. Use an 11mmd wrench to remove the nut of the adjustment valve. (see fig.10).
7. Use a 10mm wrench to remove the 2 nuts shown in the diagram and take out the gas manifold pipe (see Fig.18).
8. Continue to install in reverse order.
9. Turn on the air source and use a handheld leak detector to check whether the gas pipe is leaking.

Fig.18

SERVICE PROCEDURES AND ADJUSTMENTS

PILOT ADJUSTMENT

Using a flathead screwdriver, turn the slotted pilot adjustment screw clockwise to decrease the flame, and counterclockwise to increase the flame.

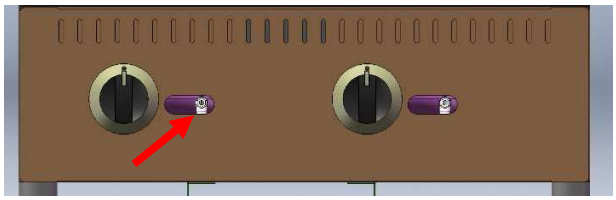

Fig. 19

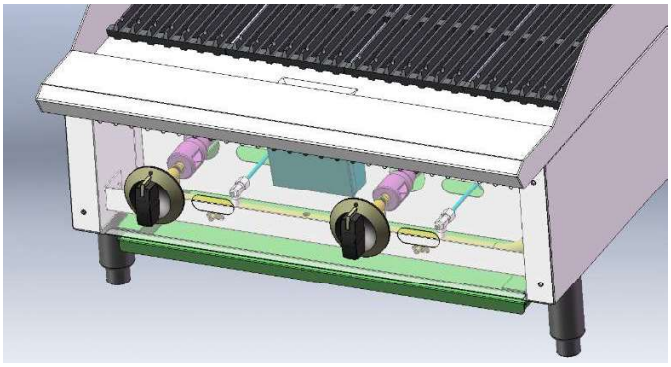

Fig. 20

GAS PRESSURE MEASUREMENT

⚠ WARNING

All gas joints disturbed during servicing must be checked for leaks. Check with a soap and water solution (bubbles). Do not use an open flame.

1. Turn the gas supply off at a manual shutoff valve.
2. Remove the control panel.
3. Remove the pressure tap plug and attach manometer.
4. Turn gas back on.
5. Light pilot(s).
6. Turn all A18 Gas VALVE on to the maximum setting so that all burners are on.
7. Turn all the equipment on the same supply line on.
8. Check gas pressure.
9. Gas pressure should read 4" W.C. for natural and 10" W.C. for propane gas. If not correct, refer to GAS PRESSURE REGULATOR ADJUSTMENT.
10. Turn gas supply off, disconnect manometer and reinstall pressure tap plug.

GAS PRESSURE REGULATOR ADJUSTMENT

A gas pressure regulator is supplied with the char-broiler and must be installed as close to the char-broiler on the gas supply line as possible. Make sure that the arrow on the underside of the regulator is oriented in the direction of gas flow to the char-broiler and the regulator is positioned with the vent plug and adjustment screw upright. Check that vent plug is not clogged by grease and debris.

Check and set the gas pressure after the regulator is installed. The pressure should be set for 4" water column (W.C.) for natural gas and 10" W.C. for propane gas while all burners are on.

The supply pressure (upstream of the regulator) should be 4-7" W.C. for natural gas and 10-13" W.C. for propane gas. At no time should the char-broiler be connected to supply pressure greater than ½ psig (3.45 kPa) or 13" W.C.

Graphic shows pressure plug location.

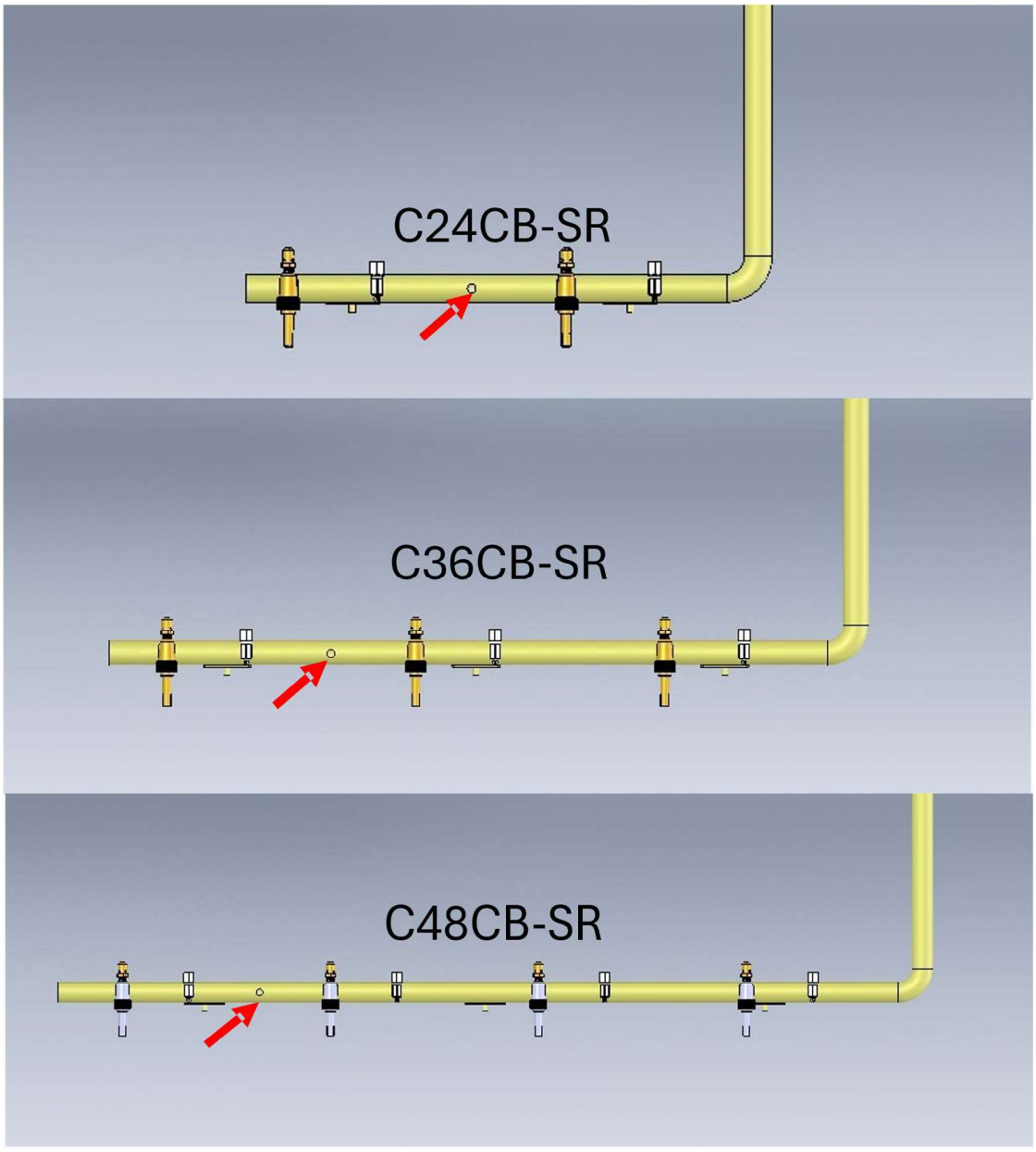

Fig. 21

BURNER ADJUSTMENT

For efficient burner operation, it is important that a proper balance of gas volume and primary air supply is maintained to give complete combustion. Insufficient air supply results in a yellow streaming flame. Primary air supply is controlled by the air shutter on the front of the burner venturi. Loosen the screw on the venturi and adjust the air shutter to just eliminate yellow tips on the burner flames. Lock the air shutter in place in place by tightening the screw. Repeat this procedure as necessary with all burners.

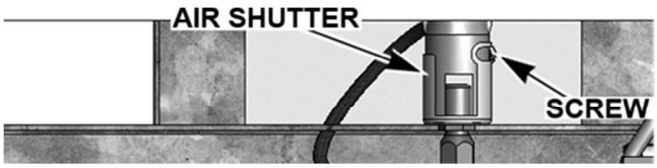

Fig. 22

TROUBLESHOOTING

TROUBLESHOOTING

SYMPTOMS	POSSIBLE CAUSES
Gas pilot no ignites.	1. Gas supply off or insufficient gas pressure. 2. Adjust pilot valve to allow more gas flow. 3. Obstructed pilot orifice. 4. valve malfunction.
Gas pilot ignites but will not maintain flame.	1. Air blowing pilot out. Prevent air flow from affecting unit. 2. Gas supply not purged of air 3. Adjust pilot valve to allow more gas flow. 4. Obstructed pilot orifice. 5. Insufficient gas pressure. 6. valve malfunction.
Gas burners ignite but will not maintain flame.	1. Gas pressure incorrect or fluctuating. 2. Obstructed flue. 3. Gas orifice obstructed, improperly aligned / spaced, or incorrect. 4. Burner malfunction.
One or more burners have lower flame level than the others.	1. Check gas pressure. 2. External air flow or vent hood problems may agitate affected burners. 3. Gas orifice obstructed, improperly aligned / spaced, or incorrect. 4. Adjust burner air shutter.

SYMPTOMS	POSSIBLE CAUSES
One burner has a delayed ignition; a several second lapse when the burner actually lights.	1. Check gas pressure. 2. Check that burner is properly seated. 3. Check that burner ignition ports, pilot flash tube and pilot burner are all aligned. 4. Gas orifice obstructed, improperly aligned / spaced, or incorrect. 5. Check burner shutter adjustment. 6. Check pilot flame adjustment.
Excessive or low heat.	1. Gas shut off valve not completely open. 2. Gas pressure incorrect. 3. Unit's gas regulator not installed or malfunctioning. 4. Incorrect gas type. 5. Gas orifice obstructed or incorrect.