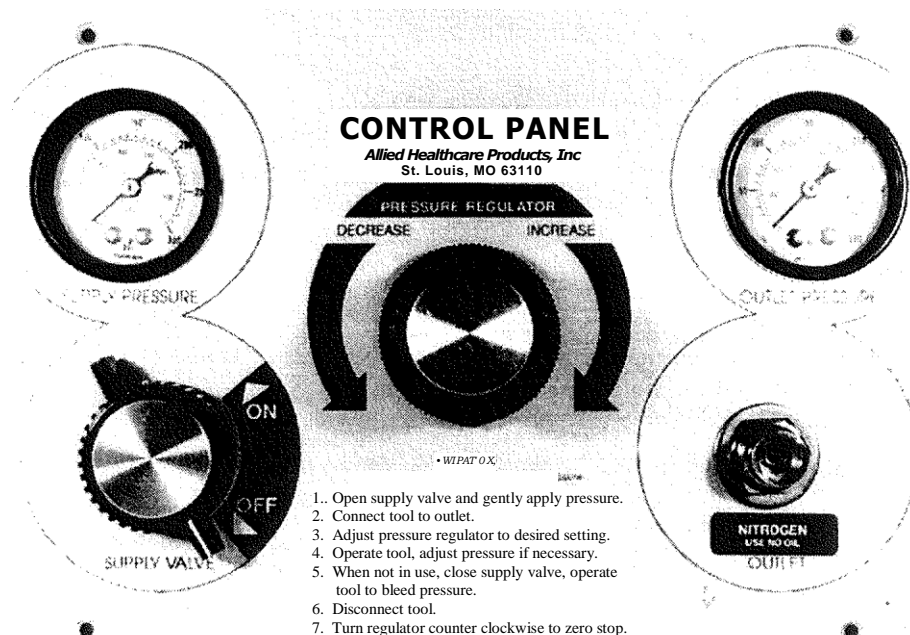


CONTROL PANEL

OPERATION, MAINTENANCE, AND REPAIR MANUAL



INTRODUCTION

Control Panels are designed to provide a source of variable pressure, up to 200 psig, for pneumatic surgical tools or instruments. Observe the following instructions prior to operating or performing maintenance on the Control Panel.

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OPERATION

1. Refer to Figure 1. The installed piping system supplying the Control Panel should be pressurized up to 200 psig maximum.
2. With the Pressure Regulator knob turned fully counterclockwise, slowly open the Supply Valve and verify supply pressure. If necessary, have the supply pressure adjusted at its source.
3. Connect the assembled surgical tool, with hose attached, to the Outlet on the Control Panel or to a Remote Outlet if installed. Note: Remote Outlet(s) are controlled by the regulator within the Control Panel.
4. Adjust the Pressure Regulator, turn clockwise, to desired setting which will be shown on the Outlet Pressure gauge. Refer to the surgical tool manufacturer's instructions for proper operating pressure and setting procedure; e.g., certain tools require pressures to be set while the tool is running.
5. Operate the tool and adjust pressure if necessary. Slight pressure fall-off on the Outlet Pressure gauge is a normal occurrence when tool pressure is set under static conditions.
6. To decrease pressure, turn the Pressure Regulator knob counterclockwise. A hissing

noise may be heard as the relieving-type regulator adjusts to the lower pressure. This is normal.

7. When not in use, close the Supply Valve, and operate the tool to bleed pressure.
8. Turn the Pressure Regulator knob counterclockwise to zero stop.
9. Disconnect tool hose from the Outlet.

CONTROL PANEL

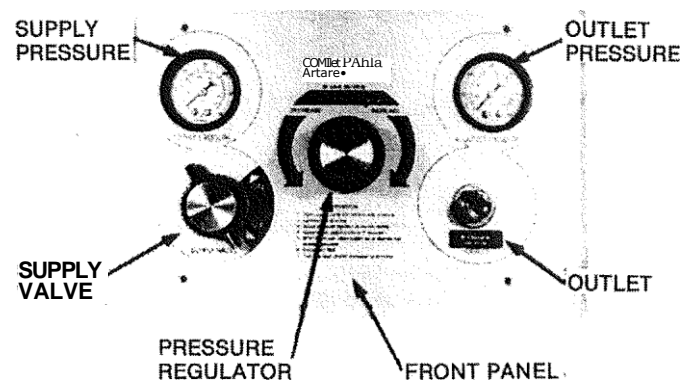


FIGURE 1

MAINTENANCE/SERVICE PROCEDURE

FLOW DIAGRAM AND PIPING ARRANGEMENT

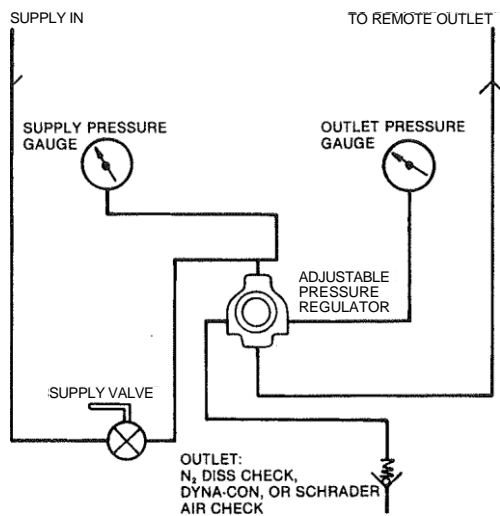


FIGURE 2

10. Refer to the Piping Diagram, Figure 2. All components Downstream of the Supply Valve may be serviced without disconnecting the Control Panel from the piping system. It is not necessary to remove the aluminum frame to service the Control Panel.
11. For servicing, turn the Supply Valve "OFF". Turn the Pressure Regulator knob fully counterclockwise. Remove four (4) Phillips-head screws from the panel and gently pull the front panel away, extending the internal tubing.
12. Disconnect the flexible tube marked "OUT". Note that if there is no remote outlet, the tube

marked "OUT" must still be reconnected. Swing the panel away from the wall and support it while servicing internal parts.

13. CAUTIONS

- a. To service the Supply Valve or to disconnect the line marked "IN", turn off the nearest zone or lateral valve and bleed pressure from the line.
- b. DO NOT attempt to service the Outlet or other components without **first** shutting off inlet pressure. Place an appropriate wrench on the outlet fitting behind the front panel before removing the part from the front panel.
- c. Most leaks can be stopped by tightening the tubing fittings. Exercise care not to distort the brass insert or ferrule. Hold end flanges of ball valves to prevent turning when tightening tubing fittings and compression nuts.

14. To repair a tube or fitting leak other than by tightening, install new assembly. Tapered pipe fittings should have Teflon® tape applied to the male threads before installation.
15. After completing service work, reassemble panel in the reverse order. Reinstate pressure to the system.

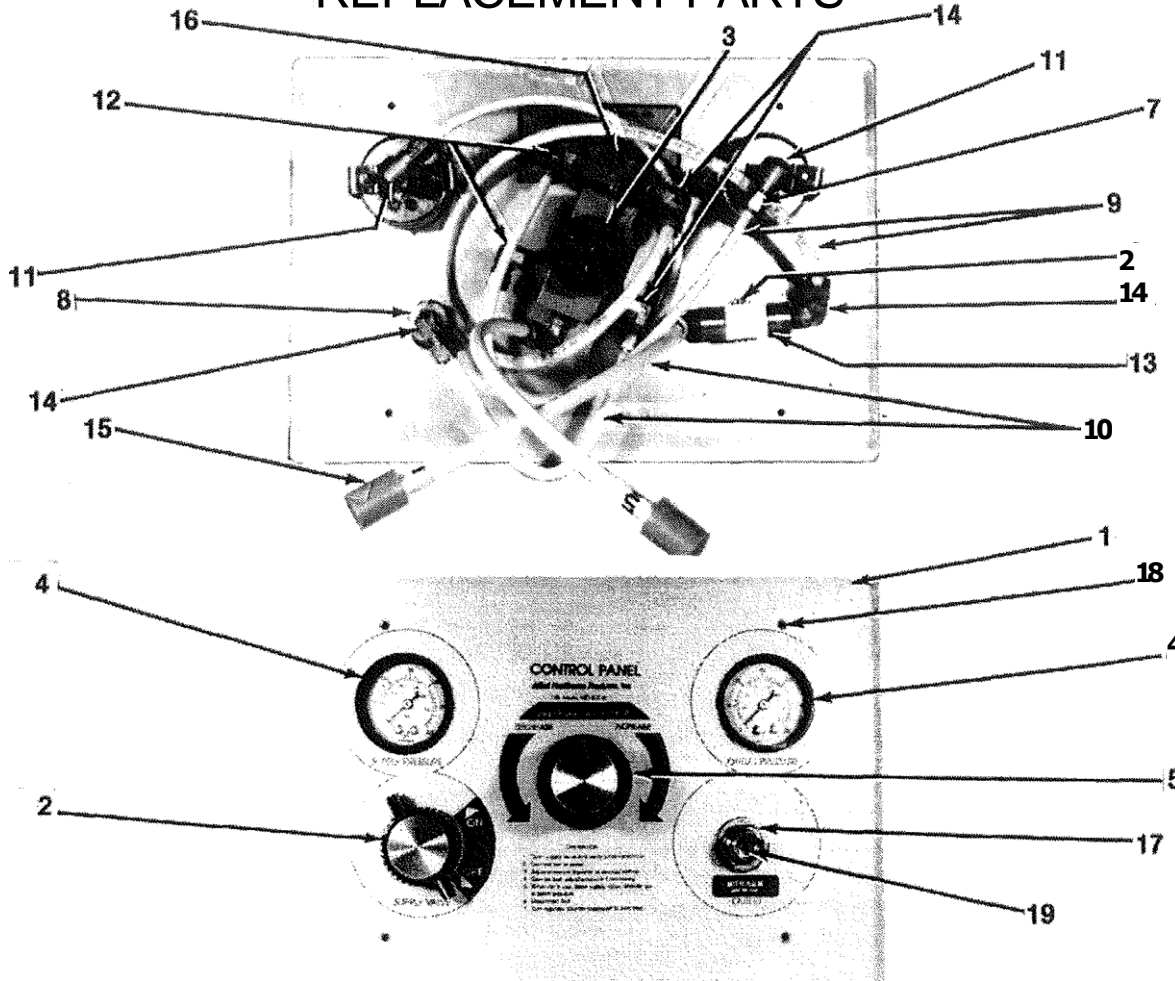
REPLACEMENT PARTS

16. Refer to the Repair Parts List on the back page.
17. Malfunctioning regulators or control panels can be returned to the factory service center for repair or replacement.

TROUBLE SHOOTING CHART

SYMPTOM	POSSIBLE CAUSE	POSSIBLE CORRECTIVE ACTION
1. Operating pressure low.	Supply system pressure set too low. Internal leaks. Regulator failure	Increase delivery pressure at supply source. Do not exceed 200 psig. Pressurize system and leak test. Reseal, tighten or replace fittings as necessary. Replace or repair as required.
2. Pressure difficult to adjust and maintain.	Internal leaks. Regulator defective.	Pressurize system and leak test. Reseal, tighten or replace fittings as necessary. Repair or replace regulator.
3. Supply Valve difficult to operate or will not shut-off.	Faulty Supply Valve.	Replace Supply Valve.
4. Pressure Regulator control knob difficult to operate.	Threads on regulator adjustment stem are binding or are damaged.	Lubricate with O-Ring Lubricant, Cat. No. 64-90-2111, or replace as necessary.
5. Gas Outlet leaks.	Faulty outlet or seals.	Replace valve seals. Repair or replace outlet valve.
6. Hissing noise heard as Regulator is adjusted.	Regulator relieves when delivery pressure is lowered.	None. This is normal for relieving-type regulators.

REPLACEMENT PARTS



ITEM NO.	CATALOG NUMBER	ITEM NO.	CATALOG NUMBER
1	Frame	14	Elbow, 1/4" MPT x 5/16" Tube
2	Supply Valve	15	5/16" Tube Insert and Nut Kit, 12 each
3	Regulator with panel nut	16	Branch Tee, 1/4" x 1/4" NPT
4	Gauge, 0-300 psi	17	Decorative Trim Washer for Outlet
5	Regulator Control Knob	18	Front Panel Screws, Kit of 12, 5/8" x 6-32
7	Insert/Nut Kit for 1/4" Tube, 12 each	19	Outlet Fitting, DISS Nitrogen Check
8	Panel Adapter for Outlet, 1/4" FPT	19	Outlet Fitting, DISS Air Check
9	Gauge Tubing Kit, 1/4", with Inserts and Nuts	19	Outlet Fitting, Female Schrader Air Check
10	Regulator/Supply Tubing Kit, 5/16" with Inserts and Nuts	19	Outlet Fitting, Female Dyna-Con® Check
11	Elbow, 1/4" FPTx1/4" Tube	20	Regulator Repair Kit (Not Shown)
12	Elbow, 1/4" MPTx1/4" Tube	21	Panel Nut for Regulator (Not Shown)
13	Connector, 1/4" MPTx5/16" Tube (Also used in mounting box for "IN", "OUT" Fittings)		

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