PCS-414
PORTABLE COMPRESSOR SYSTEM
OPERATION/SERVICE MANUAL

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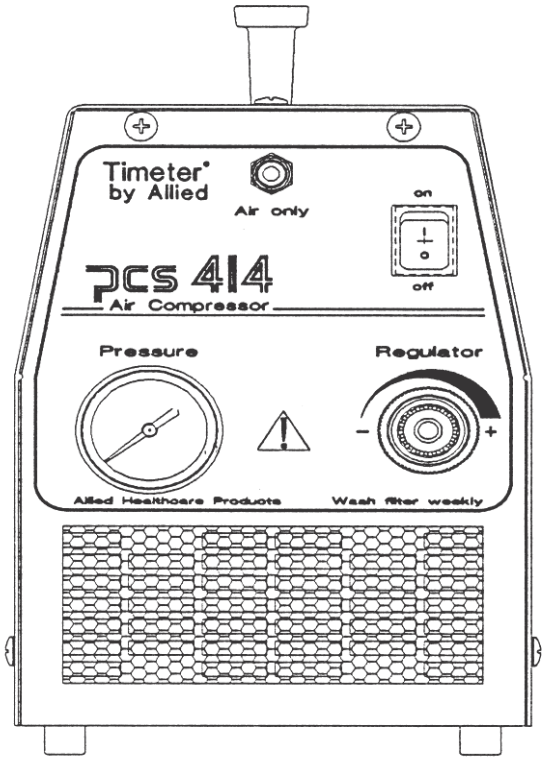
MODELS:

T14614 PCS-414, 115 Volt, 60 Hz



INTRODUCTION

The PCS-414 is a portable medical air compressor. The PCS-414 has an acoustically lined cabinet for unusually quiet operation. Heavy duty pump bearings and system design make the PCS-414 Air Compressor durable enough to stand up to day-in and day-out use.

I. SPECIFICATIONS:

Output:	14 LPM at 50 PSIG **28 LPM at 20 PSIG**
Dew Point Depression:	Ambient Air
Power:	115 Volt 60 Hz 5 Amps (nominal)
Power Cord:	#18-3 X 6ft. 7in.
Plug:	Molded Hospital Grade
Electrical Protection:	8.0 Amp Fuses (2)
Ground Impedance:	0.1 Ohms Maximum
Dimensions:	8-1/4in. W X 18in. D X 13-1/2in. H
Weight:	26.5 lbs
Outlet:	Male Oxygen DISS (provides air only)

SPECIFICATIONS

CLASS I , TYPE B EQUIPMENT

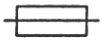
FUSE 8 AMPS TIME DELAY
WARNING: TO HELP PREVENT FIRE / SHOCK HAZARD, REPLACE ONLY WITH FUSE OF EQUAL SIZE AND RATING.

OPERATING CONDITIONS:
TEMPERATURE: 50 F TO 100 F
RELATIVE HUMIDITY: 10% TO 90% (NON CONDENSING)

SHIPPING CONDITIONS:
TEMPERATURE: -40 F TO 140 F
RELATIVE HUMIDITY: 10% TO 99% (NON CONDENSING)
SHOCK AND VIBRATION LOADING: LESS THAN 10 Gs.

STORAGE CONDITIONS:
TEMPERATURE: -20 F TO 140 F
RELATIVE HUMIDITY: 35% TO 99% (NON CONDENSING)
SHELF LIFE: 5 YEARS

SYMBOLS:

SYMBOL	DESCRIPTION
	"CAUTION", SEE OPERATION INSTRUCTIONS
	"OFF" (ON-OFF SWITCH)
	"ON" (ON-OFF SWITCH)
	TYPE B EQUIPMENT
	ALTERNATING CURRENT
	PROTECTIVE EARTH (GROUND)
	FUSE

WARNING !

- **DO NOT USE THIS COMPRESSOR IN THE PRESENCE OF FLAMMABLE ANESTHETICS.**
- **NEVER TRY TO PUT OXYGEN INTO THE COMPRESSOR. THE COMPONENTS ARE NOT APPROVED FOR OXYGEN SERVICE.**
- **REFER ALL REPAIRS TO QUALIFIED SERVICE PERSONNEL.**

CAUTION !

- **DO NOT** use the PCS-414 with blenders, respirators or other respiratory equipment that requires dry air without optional air cooler.
- When making attachments to the outlet **DO NOT** use wrenches or excessive force. This can cause damage to internal fittings and tubing.
- **DO NOT** lubricate any part of the compressor with oil, grease or petroleum products. If these substances come in contact with the diaphragm, they can adversely affect the service life of the compressor.
- **DO NOT** substitute parts. Such substitutions can cause premature product failure and may void warranty.

II. UNPACKING INSTRUCTIONS

A. Unpack and inspect for shipping damage.

B. Before operating the compressor, remove the (4) shipping bolts from the bottom of the unit. This will allow the compressor to hang freely inside the cabinet. Retain the (4) shipping bolts for future shipping of the PCS-414.

C. Uncoil the power cord and plug the appliance connector into the back of the PCS-414 compressor. You can now plug it into a receptacle marked “Hospital Grade”.

D. Turn the power switch on and verify that the unit functions properly.

III. CONTROLS AND FEATURES

1. 0 - 100 pressure gauge displays outlet pressure.
2. Power switch turns the compressor on and off.

NOTE: THE UNIT WILL NOT START UNTIL THE INTERNAL PRESSURE HAS BEEN RELIEVED.

3. Oxygen DISS outlet fitting to facilitate attachment of equipment. (provides air only)
4. Pressure regulator to adjust outlet pressure from 0 to 50 PSI.
5. Inlet filter.

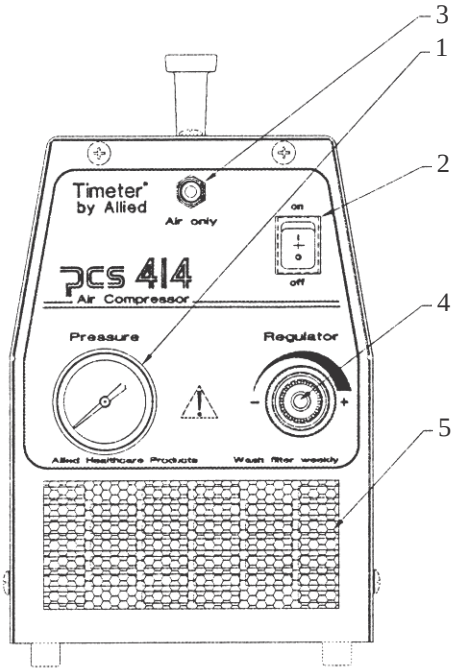


FIG. 1

IV. OPERATION

A. Position the PCS-414 so that there is at least three inches of open space on all sides. This ensures proper ventilation, which is vital for overheat prevention.

B. Plug the power cord in and turn the unit on.

C. Block the flow from the outlet and adjust pressure to manufacturer's recommended pressure.

D. Turn the power off and attach the desired respiratory equipment to the outlet.

NOTE: UNDER LOW FLOW OR NO-FLOW CONDITIONS, THE COMPRESSOR WILL NOT START. DISCONNECT OR LOOSEN LOAD TO ALLOW AIR TO FLOW AND COMPRESSOR TO START. CONNECT THE LOAD AFTER THE COMPRESSOR STARTS.

V. ROUTINE MAINTENANCE

A. Performed as needed

Clean the exterior of the PCS-414 with a damp cloth.

B. Weekly Maintenance

Clean the cabinet inlet filter with warm soapy water. Rinse and dry thoroughly before reinstalling filter.

C. Semi-Annual Maintenance

Remove the cover and replace the pump intake filter element.

D. Yearly Maintenance

Install a pump service kit, see replacement parts list for part number. The kit includes gasket o-ring, connecting rod assembly, (2) flapper valves and sleeve o-ring.

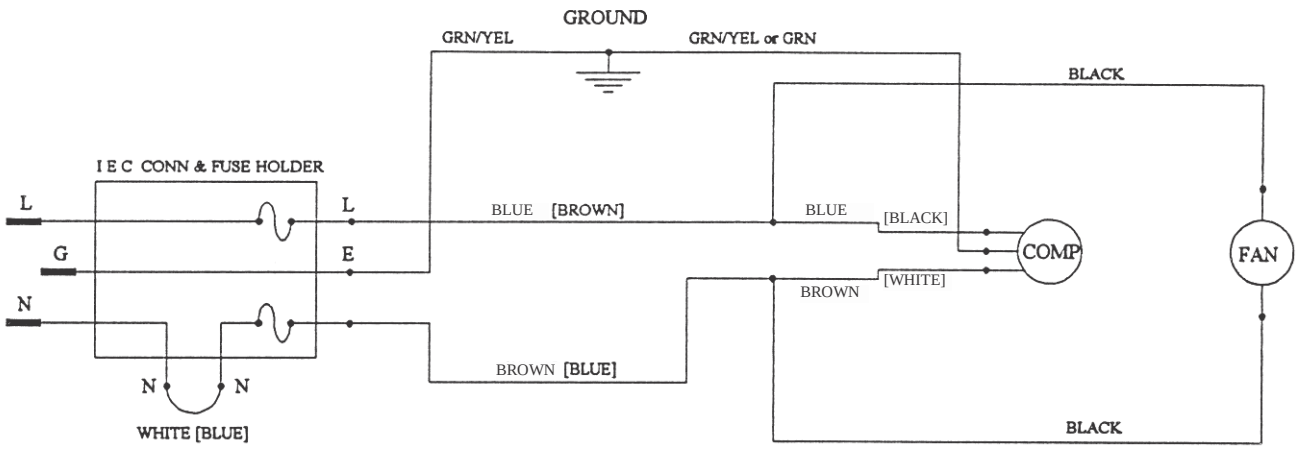
VI. TROUBLESHOOTING

PROBLEM:	SOLUTION:
Overheating	• Move unit to a better ventilated area. • Clean the cabinet inlet filter. • Replace the cooling fan.
Low Pressure (motor running)	• Reset the pressure regulator. • Check outlet for leaks. • Check internal fittings for leaks. • Install pump service kit.
Low Pressure (motor not running)	• Plug unit in. • Replace compressor fuses. Relieve output pressure before starting. • Wall outlet's fuse/breaker blown. • Thermal overload has shut down the pump, see overheating. The pump will restart in 10-15 minutes. • Internal system failure. Refer to qualified service personnel

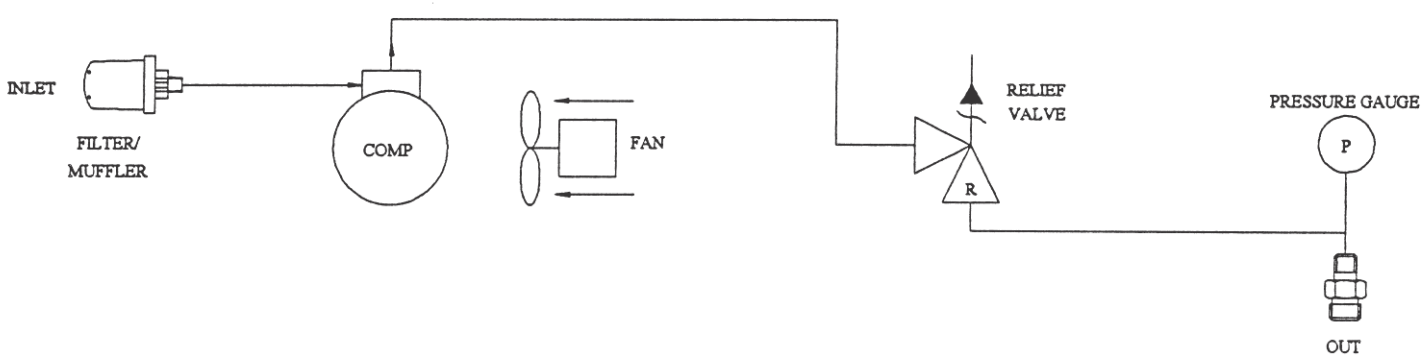
VII. REPLACEMENT PARTS

PART NUMBER	DESCRIPTION
T16771	115 Volt, 60 Hz Compressor Assembly
TZ70	Cooling Coil and Condensation Trap
01-90-3669	Handle
T16751	Pump Seal Kit
T15729	Pressure Gauge
T15730	Power Switch
T14622	115 Volt Replacement Fan Assembly (2014)
T14626	115 Volt Replacement Fan Assembly
T15731	Rubber Foot For Cabinet
T611-308	Suspension Spring
T14780	Cabinet Inlet Filter
T15732	Pressure Regulator
T16314	Repair kit for Pressure Regulator (Norgren #V06-121-NNKA)
T16313	Repair kit for Pressure Regulator (Monnier #91-196)
T16315	Replacement internal felt filter, package of 4
T911-004	Plastic Tubing ¼ in O.D.
T16778	Pop-off Valve
T16484	Fuse, 8.0 amp, 250 VAC (10 pieces)
T16752	Pump Bearing Kit

VIII. ELECTRICAL SCHEMATIC:



IX. PNEUMATIC SCHEMATIC:



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