

PURPOSE

This technical guideline provides information on how to upgrade the master air regulator, by uninstalling it from between the two air tanks and moving it closer to the back panel for easier access and serviceability.

CONTENTS

PARTS INCLUDED.....1

TOOLS REQUIRED1

INSTRUCTIONS.....1

WARNINGS & CAUTIONS7

PARTS INCLUDED

- Master air regulator (95-0178C)
- Regulator mounting bracket kit
- Brass tee assembly
- 10-32 plugs with nylon washers, Qty 2
- Fitting, 10-32 x 1/4" push-to connect
- Nylon tubing:
 - 1/4" x 18", Qty 2
 - 1/4" x 12", Qty 1
- 1/4" x 12" air tubing with coupler, Qty 1
- Tubing sleeves:
 - Small, Qty 1
 - Large, Qty 3

TOOLS REQUIRED

- Screwdriver, PH#2 Stubby
- Screwdriver, Flat head, small and medium
- Wrench; 1/4", 7/16", 3/4"
- 1/4" Nut driver (deep)

INSTRUCTIONS

1. Unplug the power cord to the unit, and depressurize the system.
2. Follow removal instructions described in *TG-95-0343, Technical Guideline: Suction Canister Removal*, to remove the suction canister.

3. To gain access to the screws holding the air tank, remove the bowl and filter from the master regulator.



Fig. 1

Removing bowl and filter from master regulator.

4. Using a short, stubby Phillips screwdriver, remove the three (3) screws from underneath the left air tank.



Fig. 2

Using Phillips screwdriver, remove screws.

- Once screws have been removed, firmly grasp the regulator and pull to the left until it slides out of the air tanks.



Fig. 3
Grasp regulator and pull out of air tanks.

- Install new brass tee assembly
 - Apply provided silicon grease to each side of brass tee assembly.
 - Slide the brass fitting on the tee assembly into the left air tank until it completely seats.
 - Repeat on the right side until it completely seats.
 - Hand start all three (3) screws that go into the bottom of the left air tank. Then firmly tighten with Phillips screwdriver.
- Remove the tubing and sleeves on the right air tank connected to the three (3) barbs. Then remove the three (3) barbs on the right air tank using 1/4" nut driver.

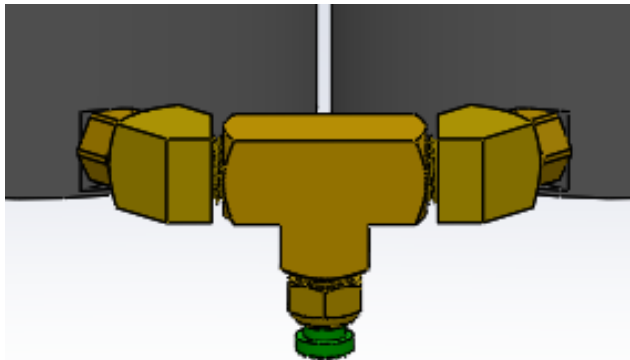


Fig. 4
Inserting new brass tee assembly



Fig. 5
Remove barbs on air tank

8. Install the 10-32 plugs into the top two holes with the nylon washers, tighten with a 1/4" nut driver.
9. Install the 10-32 x 1/4" push-to-connect fitting in the bottom hole, tightening with a 7/16" wrench.

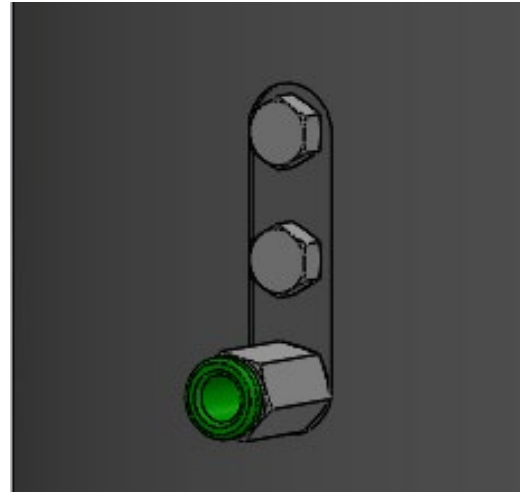


Fig. 6

Right air tank with plugs and 1/4" PTC fitting

10. Install the regulator mounting bracket by adhering it to the back of the water bottle housing near the ground stud; see Fig. 7.

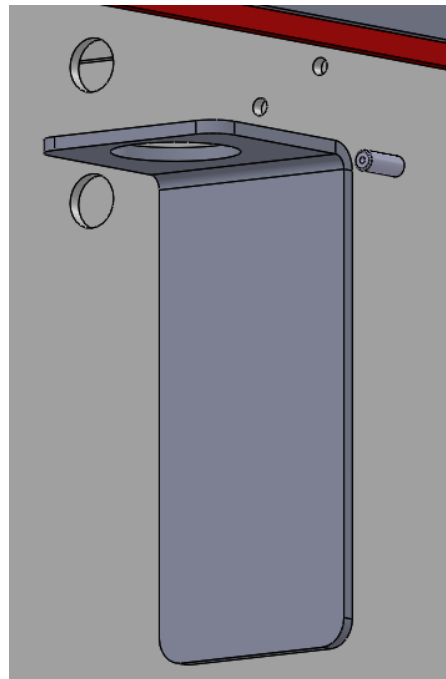


Fig. 7

Regulator mounting bracket

11. Mount the regulator onto the bracket, securing it with the nut provided.

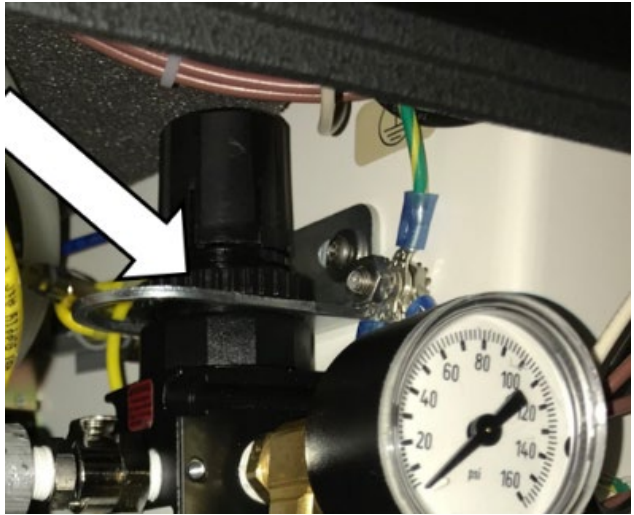


Fig. 8
Mounting regulator with manifold

12. Connect the air line from the closed water system (previously connected to air tank small barb) to the small barb on the regulator manifold and secure with a small sleeve.
13. Take the ribbed foot control tube (previously connected to large barb on air tanks) and attach tubing extension, securing it with a large sleeve.
14. Connect the other end to a large barb on the manifold using one (1) large sleeve.
15. Attach the air supply tube (previously connected to large barb on air tanks) and connect to a large barb on the manifold using one (1) large sleeve.

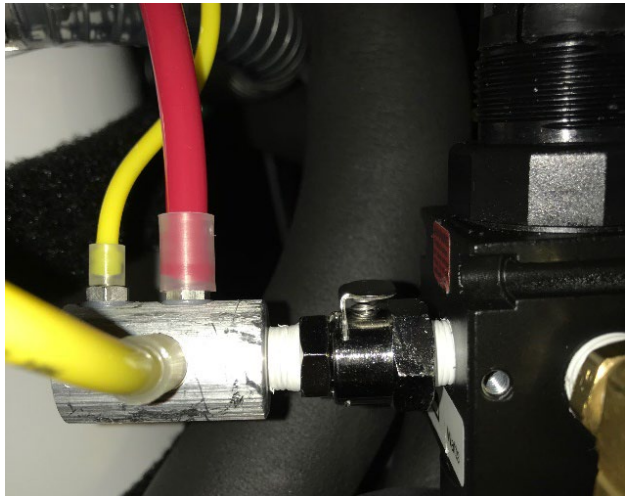


Fig. 9
Connecting air tank tubing to new regulator manifold

16. Take the 12" piece of nylon tubing. Connect to the right air tank push-to-connect fitting and the regulator input push-to-connect fitting (facing the air tanks).

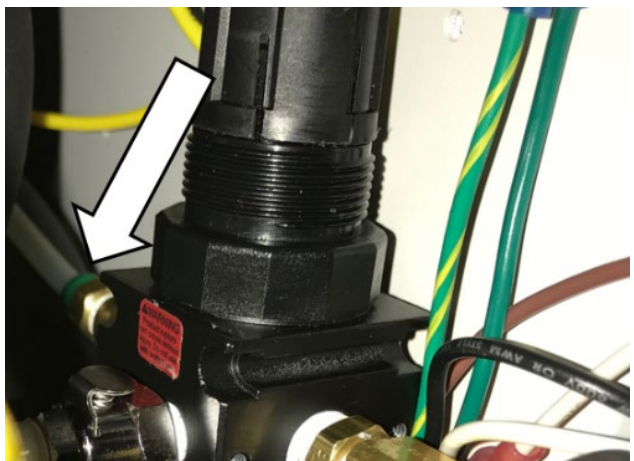


Fig. 10
Connecting tubing to the regulator input

17. Take the two (2) 18" pieces of nylon tubing and connect to the push connect fittings on the regulator bowl.

- Connect one to the brass tee push-to-connect fitting on the air tanks (installed in step 6).
- Connect the other to the push-to-connect fitting on the drain valve on the back panel.



Fig. 11
Connecting tubing to regulator drain



Fig. 12
Connecting drain tube to drain valve on back panel

18. Replace the suction canister following replacement instructions described in TG-95-0343.

19. Ensure the absence of all air leaks, turn on system and power up the air compressor.

20. If necessary, adjust to 75-80 psi by lifting the cap on the regulator and turning clockwise to increase or turning counterclockwise to decrease

WARNINGS & CAUTIONS



WARNING! Only qualified personnel should service or repair this device. This device should only be serviced/repaired by a qualified service technician who is proficient in the repair of electromechanical dental equipment and who understands the complexities and risks of working within the device and observes proper safety precautions.



WARNING – Compressed Air. The compressed air system that operates this unit is under pressure. Compressed air can propel dust or loose particles and can cause bodily injury or damage. Always turn the system off and bleed off air pressure before attaching or removing air lines or accessories or servicing this unit. All air lines should be periodically inspected and replaced if worn or damaged. If an outside compressed air supply is used to power this unit, the air supply must be regulated to 80 psi or below. Excessive air pressure could cause certain components to rupture.



WARNING – Electrical Voltage. This system is powered by high voltage electricity. Like any other electrically powered device, if it is not used properly, it can cause electrical shock. Always plug the power cord into an electrical outlet with adequate fuse protection and proper grounding. In the event of a short circuit, grounding reduces the risk of shock by providing an escape wire for the electric current. Improper grounding of the unit can result in a risk of electric shock. Always unplug the unit before doing any service or repair to the unit.



WARNING – Presence of Heavy Metals/Amalgam. This cart may be equipped with optional suction instruments. As part of dental procedures, particles of amalgam may be suctioned into the dental suction handpieces and collected within the system and trap filter.



WARNING – Infectious Materials. Infectious disease workplace safety protocols to safeguard against cross contamination of infectious disease should always be observed. When maintaining the suction system or emptying the contents of the suction waste container, safe precautions and practices including the wearing of face mask, eye protection and gloves are to be followed.



CAUTION! The irrigation system may contain chemicals that are caustic or corrosive. Always verify with the operator of the system to determine which chemicals they are using within the system. Always follow workplace safety protocols when doing maintenance or service of the system including the wearing of face mask, eye protection and gloves for proper protection of exposed skin, breathing and eyes.