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PURPOSE / OVERVIEW

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.

PARTS INCLUDED

Part Number	Description	Qty
95-0178C	Master air regulator	1
15-0290	Air tank drain valve	1
15-0150	Regulator mounting bracket	1
23-0003	Brass tee assembly	1
15-0080	12mm Nickel hex nut	1
20-0033 & 20-0028	10-32 plugs with nylon washers	2
23-0082	Fitting, 10-32 x 1/4" push-to connect	2
22-0117	Nylon tubing, 1/4" x 22"	2
22-0117	Nylon tubing, 1/4" x 20" air tubing with coupler	1
22-0117	Nylon tubing, 1/4" x 8"	1
20-0029	Tubing Sleeve, Small	1
20-0030	Tubing Sleeve, Large	3

TOOLS REQUIRED

- Phillips #2 Stubby
- Flat head, small and medium
- Wrenches: 1/4", 7/16", 3/4"
- 1/4" nut driver (deep)
- Drill with 1/2" drill bit*

*if applicable, refer to step 7

INSTRUCTIONS

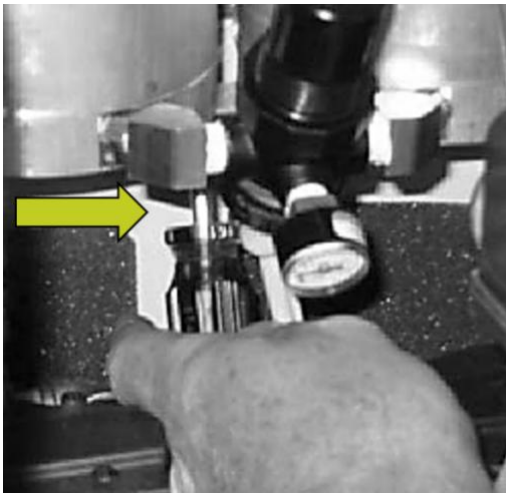
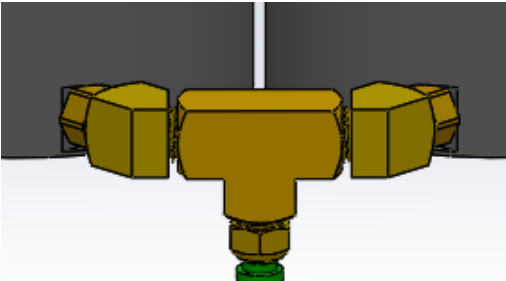
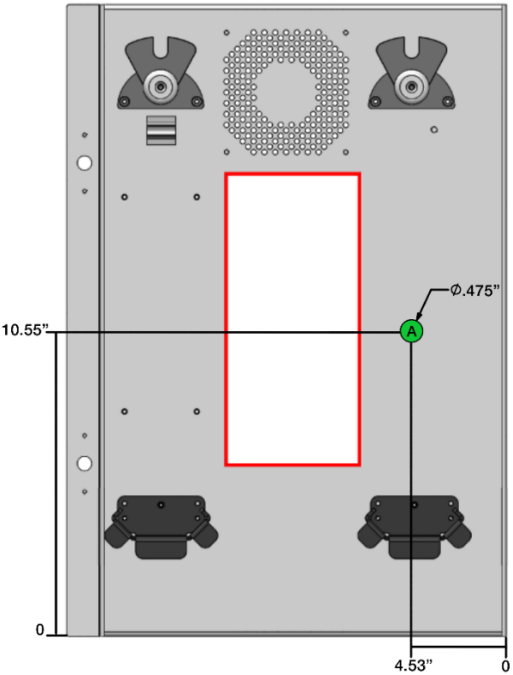
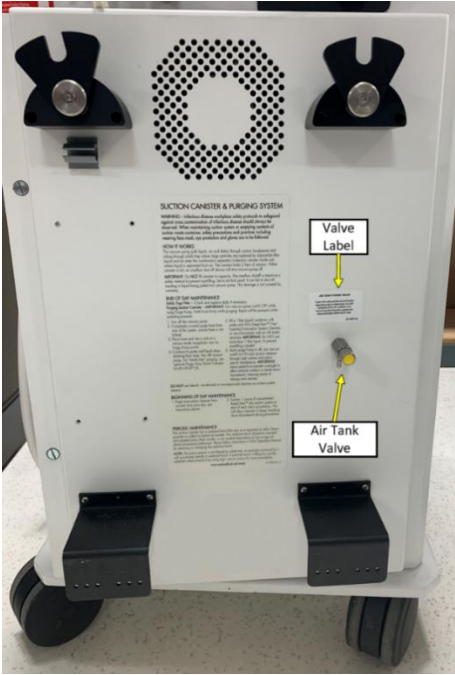
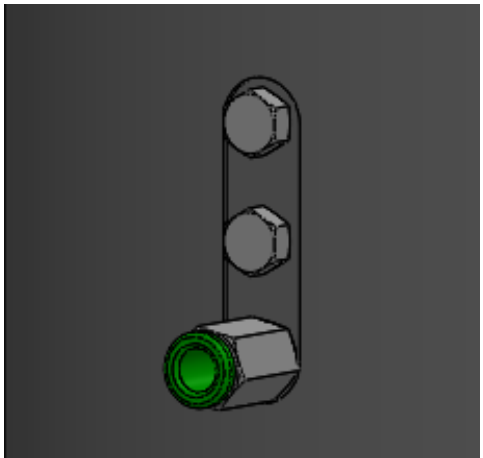
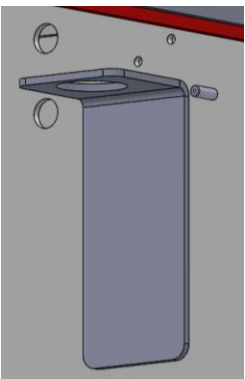
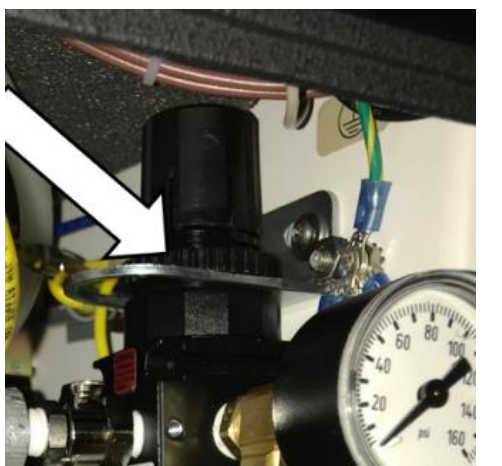
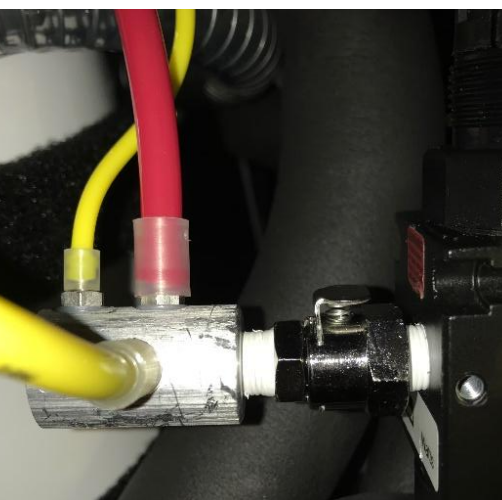
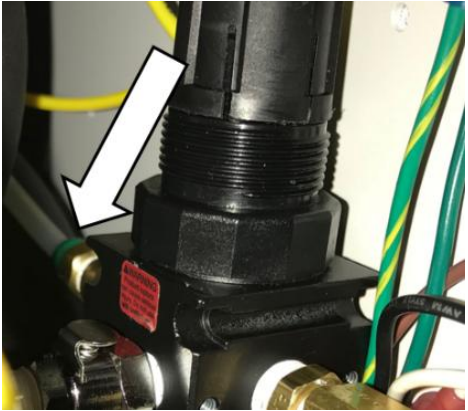
1	Unplug the power cord to the unit and depressurize the system.	
2	Follow removal instructions described in technical guideline, <i>"Suction Waste Canister"</i> (65-0109), to remove the suction canister.	
3	To gain access to the screws holding the air tank, remove the bowl and filter from the master regulator.	
4	Using a short, stubby Phillips screwdriver, remove the three (3) screws from underneath the left air tank. (Fig. 1)	
5	Once screws have been removed, firmly grasp the regulator and pull to the left until it slides out of the air tanks.	
6	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.	

Fig. 3 – Inserting new brass tee assy.

	Hand start all three (3) screws that go into the bottom of the left air tank, then firmly tighten with Phillips screwdriver. (fig. 3)
7	Installing an air tank drain valve • Locate the rear door of the cart and check to see if there is a plug installed, then refer to the following instructions accordingly • On the rear door of the cart, locate a plug $\sim 1/2$" in diameter (refer to A in Fig. 2) and remove it. If the cart does not have a plug/hole, perform the following: ○ Make note of the new hole's location, which should be $\sim 4 1/2$" from the left of the right corner and $\sim 10 1/2$" from the bottom of the plate (shown as A in Fig. 2). ○ Using a power drill and a $1/2$" drill bit, create a new hole that is $\sim 1/2$" in diameter • Install the air tank drain valve at the hole where the previous plug was located ○ Ensure the valve is on the outside of the panel pointing down (Fig. 1) • Secure the valve with the 12mm Nickel hex nut • Install one (1) 10-32 $1/4$" push-to-connect fitting into the back side of the valve • Apply one (1) Purge Valve Label (61-0247) to the outside of the door directly above the purge valve (fig. 7)  Fig. 4
	 Fig. 2 Locate and remove the plug from the back panel
	 Fig. 3 Install the air tank drain valve from the outside

8	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 $\frac{1}{4}$" nut driver.	 Fig. 4 Remove barbs on air tank
9	Install the two (2) 10-32 plugs into the top two holes with the nylon washers, tighten with a $\frac{1}{4}$" nut driver.	
10	Install one (1) 10-32 x $\frac{1}{4}$" push-to-connect fitting in the bottom hole, tightening with a $\frac{7}{16}$" wrench.	 Fig. 5 Right air tank with plugs and $\frac{1}{4}$" PTC fitting
11	Install the regulator mounting bracket by adhering it to the back of the water bottle housing near the ground stud; see Fig. 6.	 Fig. 6 Regulator mounting bracket

12	Mount the regulator onto the bracket, securing it with one (1) mounting nut provided. (fig. 11)	 Fig. 7 Mounting regulator with manifold
13	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.	
14	Take the ribbed foot control tube (previously connected to the large barb on air tanks) and attach tubing extension, securing it with a large sleeve.	
15	Connect the other end to a large barb on the manifold using one (1) large sleeve.	
16	Attach the air supply tube (previously connected to large barb on air tanks) and connect to the top large barb on the manifold using one (1) large sleeve. (fig. 12)	 Fig. 8 Connecting air tank tubing to new regulator manifold

17	Take the 8" piece of nylon tubing. Connect to the right air tank output push-to-connect fitting and the regulator input push-to-connect fitting (facing the air tanks). (Fig. 13)	 Fig. 9 Connecting tubing to the regulator input
18	Take the two (2) 22" pieces of nylon tubing and connect to the push connect fittings on the regulator bowl. (Fig. 14) 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 (installed in step 7). (Fig. 15)	 Fig. 10 Connecting tubing to regulator bowl
19	Connect the other to the push-to-connect fitting on the drain valve on the back panel (installed in step 7). (Fig. 15)	 Fig. 11 Connecting drain tube to drain valve on back panel

20	Replace the suction canister following replacement instructions described in technical guideline, 'Suction Waste Canister' (65-0109).
21	Ensure the absence of all air leaks, turn on system and power up the air compressor.
22	If necessary, adjust to 75-80 psi by lifting the cap on the regulator and turning clockwise to increase or turning counterclockwise to decrease

CAUTIONS / WARNINGS

In addition to observing the normal precautions associated with standard dental practices and procedures, the following additional precautions should be strictly noted and observed during the set-up, operation, and maintenance of this system.

 WARNING	 WARNING
QUALIFIED PERSONNEL ONLY The product should only be operated by qualified personnel. The operator bears responsibility for the correct settings and proper use of the system. ASI Dental (ASI) cannot be held liable for any malfunction of this product, or performance failure and/or its designed or desired utility, nor can ASI be held liable for injuries to persons or animals, in any case when the device is misused or not operated, applied or maintained in strict accordance with user/owner instructions set out in the operation manual. In the event of any doubt or question, the user is to contact ASI for clarification or assistance. Improperly maintained or operated systems or instruments may void the associated warranties.	PERSONNEL QUALIFIÉ UNIQUEMENT Le produit ne doit être utilisé que par du personnel qualifié. L'exploitant est responsable des réglages corrects et de l'utilisation correcte du système. ASI Dental (ASI) ne peut être tenu responsable de tout dysfonctionnement de ce produit, ou d'une défaillance de performance et/ou de son utilité conçue ou souhaitée, et ASI ne peut être tenu responsable des blessures aux personnes ou aux animaux, en tout cas lorsque l'appareil est mal utilisé ou pas utilisé, appliqué ou entretenu en stricte conformité avec les instructions de l'utilisateur/propriétaire énoncées dans le manuel d'utilisation. En cas de doute ou de question, l'utilisateur doit contacter ASI pour obtenir des éclaircissements ou de l'aide. Des systèmes ou instruments mal entretenus ou mal exploités peuvent annuler les garanties associées.
 WARNING	 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.	TENSION ELECTRIQUE Ce système est alimenté par de l'électricité à haute tension. Comme tout autre appareil électrique, s'il n'est pas utilisé correctement, il peut provoquer un choc électrique. Branchez toujours le cordon d'alimentation dans une prise électrique avec une protection par fusible adéquate et une mise à la terre appropriée. En cas de court-circuit, la mise à la terre réduit le risque d'électrocution en fournissant un fil d'échappement pour le courant électrique. Une mauvaise mise à la terre de l'appareil peut entraîner un risque d'électrocution. Débranchez toujours l'appareil avant d'effectuer tout entretien ou réparation sur l'appareil.
 WARNING	 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.	AIR COMPRIMÉ Le système d'air comprimé qui fait fonctionner cet appareil est sous pression. L'air comprimé peut propulser de la poussière ou des particules libres et peut causer des blessures ou des dommages corporels. Éteignez toujours le système et purgez la pression d'air avant de fixer ou de retirer les conduites d'air ou les accessoires ou de procéder à l'entretien de cet appareil. Toutes les conduites d'air doivent être inspectées périodiquement et remplacées si elles sont usées ou endommagées.

	Si une alimentation extérieure en air comprimé est utilisée pour alimenter cet appareil, l'alimentation en air doit être régulée à 80 psi ou moins. Une pression d'air excessive peut entraîner la rupture de certains composants.
⚠ WARNING	⚠ WARNING
PRESENCE OF HEAVY METALS/AMALGAM This system 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.	PRÉSENCE DE MÉTAUX LOURDS/AMALGAME Ce système peut être équipé d'instruments d'aspiration en option. Dans le cadre de procédures dentaires, des particules d'amalgame peuvent être aspirées dans les pièces à main d'aspiration dentaire et collectées dans le système et le filtre piège.
⚠ WARNING	⚠ WARNING
INFECTIOUS MATERIALS Infectious disease workplace safety protocols to safeguard against cross contamination of infectious disease should always 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.	MATIERES INFECTIEUSES Les protocoles de sécurité sur le lieu de travail contre les maladies infectieuses pour se prémunir contre la contamination croisée des maladies infectieuses doivent toujours être observés. Lors de l'entretien du système d'aspiration ou de la vidange du contenu du conteneur de déchets d'aspiration, des précautions et des pratiques de sécurité, notamment le port d'un masque facial, d'une protection oculaire et de gants, doivent être suivies.
⚠ CAUTION	⚠ MISE EN GARDE
CAUSTIC OR CORROSIVE CHEMICALS 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.	PRODUITS CHIMIQUES CAUSTIQUES OU CORROSIFS Le système d'irrigation peut contenir des produits chimiques caustiques ou corrosifs. Vérifiez toujours auprès de l'opérateur du système pour déterminer quels produits chimiques ils utilisent dans le système. Suivez toujours les protocoles de sécurité sur le lieu de travail lors de la maintenance ou de l'entretien du système, y compris le port d'un masque facial, d'une protection oculaire et de gants pour une protection adéquate de la peau, de la respiration et des yeux exposés.
⚠ CAUTION	⚠ MISE EN GARDE
CORRECT OPERATING VOLTAGE Check the correct operating voltage on the rating plate and ensure that the product is correctly configured for the voltage before plugging in and energizing.	TENSION DE FONCTIONNEMENT CORRECTE Vérifiez la tension de fonctionnement correcte sur la plaque signalétique et assurez-vous que le produit est correctement configuré pour la tension avant de le brancher et de le mettre sous tension.
⚠ CAUTION	⚠ MISE EN GARDE
DAMAGE FROM UNSUITABLE ACCESSORIES Responsibility for the use of accessories, parts or assemblies from other manufacturers rest solely with the user.	DOMMAGES PROVENANT D'ACCESSOIRES INADAPTÉS La responsabilité de l'utilisation d'accessoires, de pièces ou d'ensembles d'autres fabricants incombe uniquement à l'utilisateur.

QUESTIONS OR ASSISTANCE

For technical support, contact ASI Dental Specialties:

Web: [ASIsupport.com](https://www.asisupport.com) | Email: ASIservice@ASIsupport.com | Phone: **303.407.6072** | Parts: [ASIparts](https://www.asiparts.com)

REVISION HISTORY (For Internal Master Part File Only)

CO #	Rev	Description of Change	Author	Approval Date
TG-950397				
CO-19-106	A	Initial Release	K. Vogel	07/15/19
CO-19-171	B	Revised regulator mounting bracket to new part that is installed with double sided adhesive tape, for easier installation in the field, instead of having to drill holes.	K. Vogel	10/01/19
65-0219				
AC-23-010	B1	Renumbered and reformatted into current tech guide style.	C. Hoganson	06/30/23
CO-24-250	C	Revised to update tubing lengths cited in steps 16 and 17.	M. Idabdellah	11/01/24
CO-26-108	D	Revised "Parts Included" listing: updated tubing lengths based on the 95-0397 rev D WI, added the air tank purge valve, added the hex nut. Corrected tubing length in step 17 (formerly step 16). Added a step for the air tank valve installation (step 7).	E. Fomin	07/28/26