ProSeal II™
Portable Sealant Unit
ProQuest I and II™
Portable Delivery Units

OPERATION MANUAL

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Contents

Introduction

Thank you for purchasing the ProSeal II™ or ProQuest I or II™ Portable Delivery Unit from DNTLworks Equipment Corporation. The information contained in the manual should answer any questions regarding service and operation of your ProSeal II™ or ProQuest I or II™ unit.

All authorized personnel who operate, maintain, or service your ProSeal II™ or ProQuest I or II™ unit should carefully review this manual before attempting to operate, perform maintenance on or service the unit. Your ProSeal II™ or ProQuest I or II™ unit should be operated and maintained by trained personnel only. Should questions or problems arise, contact our Customer Service Department.

Although your ProSeal II™ or ProQuest I or II™ unit has been designed and tested for maximum safety and optimum performance, it is sold with the express understanding that DNTLworks, its subsidiaries, agents and representatives will not accept any responsibility for the following, including, but not limited to:

1) Operator's lack of knowledge, negligence or carelessness in the operation of this equipment.
2) Equipment not properly maintained or serviced.
3) Injury to personnel or patients from improper use.
4) Modification or tampering of any kind.

Customer Service

In the event you require assistance with your unit, please call 1-800-847-0694 or 303-693-1410 and speak with one of our customer service representatives. Our service hours are from 8:00 a.m. to 5:00 p.m., Mountain Standard Time, Monday through Friday.

In most instances, service problems may be solved over the telephone. If service is required, you may ship the unit to our manufacturing facility for repair. Warranty service will be performed in accordance with the DNTLworks' Limited Warranty. Non-warranty service will be provided at reasonable parts and labor costs.

DNTLworks Limited Warranty

DNTLworks warrants to the purchaser that these products are free of defects in materials and/or workmanship for three (3) full years from date of delivery, on a "parts only" basis. In addition, DNTLworks extends a ninety (90) day labor warranty from the date of delivery for all products we manufacture. Shipping charges incurred to the factory under warranty purposes will be the responsibility of the owner.

During the warranty period, all parts which, upon inspection and examination by DNTLworks, are proven to be defective, will be replaced free of charge. All decisions concerning whether a part will be repaired or replaced and the manner, method, and extent of such repair or replacement will be at the sole

discretion of DNTLworks. The responsibility of DNTLworks does not include repair and replacement cost resulting from misuse, abuse, improper maintenance, or normal wear and tear.

DNTLworks will pay for labor costs for warranty service for a period of 90 days from the date of purchase. DNTLworks sole obligation under said warranty is to repair, or, at its option, replace the defective part. The buyer will have no options.

Warranties for products not manufactured by DNTLworks, but sold in combination with DNTLworks products, will be honored by DNTLworks for the entire duration of the original manufacturer's warranty period.

The warranty will be voided by alterations, tampering with, improper installation or maintenance, accident or modification of the equipment, with the exception of work performed by DNTLworks or one of its authorized service agents. This warranty expressly excludes all damage to the products resulting from careless or neglectful transportation. DNTLworks will in no event be responsible for any work done without first obtaining DNTLworks' written consent.

This warranty is made expressly in lieu of all other warranties, expressed or implied, including any implied warranties of merchantability or fitness for a particular purpose. No employee, agent, franchise, dealer or other person is authorized to give any warranties of any nature on behalf of DNTLworks. Except as provided herein, DNTLworks will have no liability or responsibility to the customer or any other person or entity with respect to any liability, loss or damage caused or alleged to be caused directly or indirectly by equipment sold, leased, or furnished by DNTLworks, including, but not limited to, any interruption of services, loss of business or anticipatory profits or consequential damage arising out of or connected with the sale, lease, use, or anticipated use of equipment. Notwithstanding the above limitations and warranties, DNTLworks liability hereunder for damages incurred by customer or other will not exceed the amount paid by customer for the particular equipment involved.

Returns

Purchased goods may not be returned without the express written consent of DNTLworks and a Return Goods Authorization Number (RGA#). All items must be returned within 14 days of initial delivery and are subject to a 15% restocking charge. Special order items cannot be returned for credit consideration. Freight charges on approved return items shall be borne by the customer.

Description of Unit

The ProSeal II™ is a lightweight, powerful sealant, prophy, and vacuum unit which allows the operator to irrigate and dry prepared surfaces, perform prophy treatments, and quickly aspirate liquid dental waste. This unit includes a non-water-capable lowspeed handpiece.

While visually similar to the ProSeal II™, the ProQuest I or II™ is equipped with a highspeed electric handpiece with water adjustment, enabling the operator to perform most dental procedures. The ProQuest II™ features fiber-optic capability. ProSeal II™ or ProQuest I or II™ units may be upgraded with a piezo-electric scaler.

The diagrams in this manual are of a ProQuest I™, and you will see notes of differences between the units.

Air System

The internal air compressor will activate when main power switch is turned on, filling the water container. The compressor will deactivate when air pressure reaches 65psi and will recycle at 58psi.

Water System

Water container should be filled 1/2 full. Water to handpieces is controlled by the foot control and the valves on the side of the unit (ProQuest I or II™ only). The water for the air/water syringe is controlled by depressing the water button on the syringe.

Vacuum System

The internal vacuum system is activated by removing saliva ejector valve or HVE from the holder. You may use either the saliva ejector or HVE as needed. Inside the vacuum container is an automatic shut down system to prevent spillage.

Electrical System

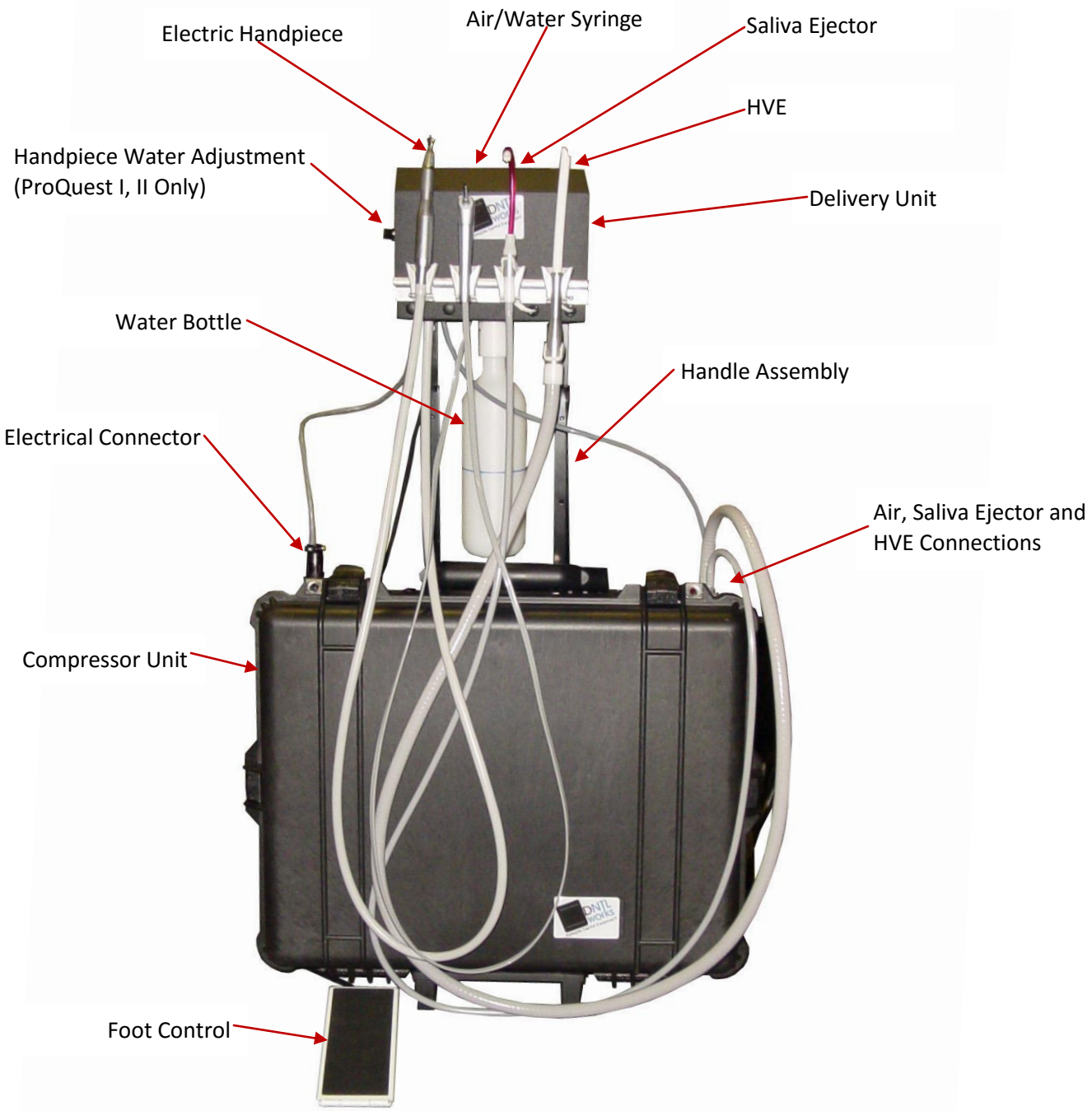
You may use a maximum of 3 amps on the optional external outlet. The unit is protected by a 15 amp circuit breaker.

Specifications

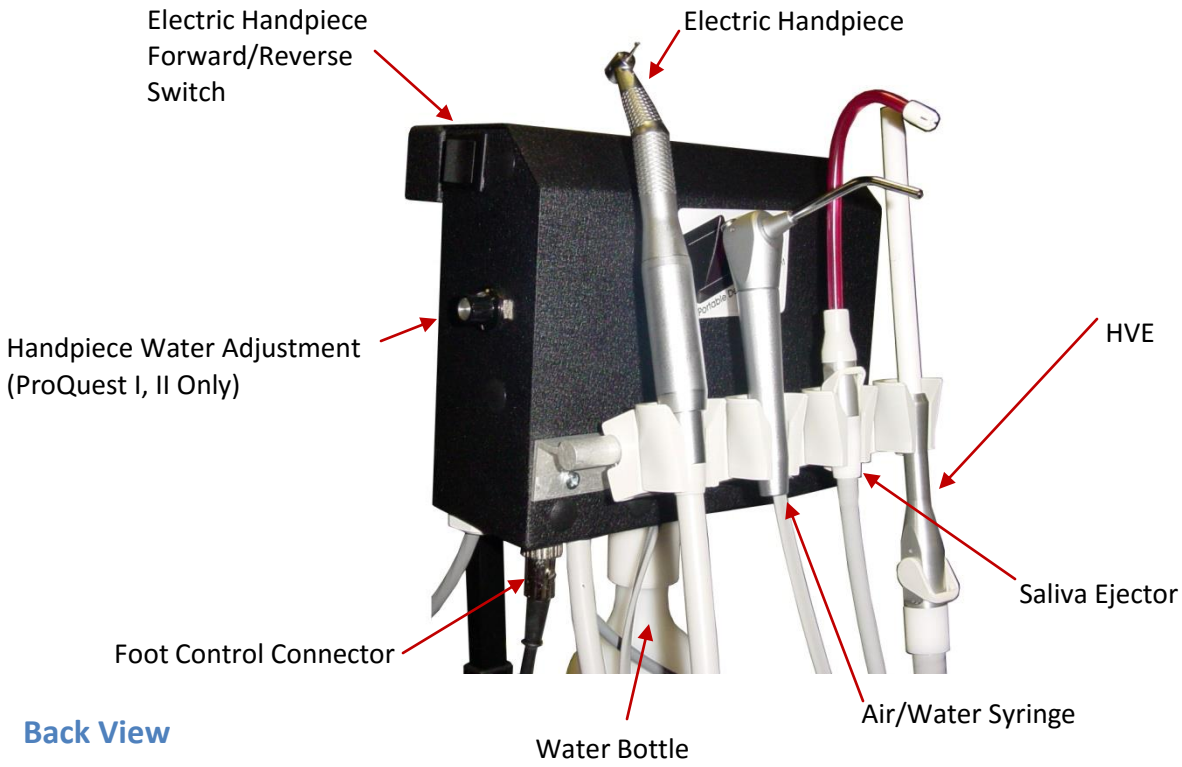
Description	ProSeal II	ProQuest I, II
Length	21.9” (55.6cm)	21.9” (55.6cm)
Width	8.4” (21.3cm)	8.4” (21.3cm)
Height	18” (45.7cm)	18” (45.7cm)
Total Weight	58lbs (26.3kg)	60lbs (27.2kg)
Voltage	115 or 220Vac	115 or 220Vac
Frequency	60 or 50 Hz	60 or 50 Hz
Wattage	1100 to 1440 W	1100 to 1440 W
Water Container	34oz (1liter)	34oz (1liter)
Sound Level Full Load	46dB @ 3’	46dB @ 3’
Case Type	Polypropylene	Polypropylene
Electric Handpiece	0-40,000rpm	0-160,000rpm
Compressor		
Horsepower	1/16 Hp	1/16 Hp
Working Pressure	58 to 65psi	58 to 65psi
Vacuum Pump		
Horsepower	1/3 Hp	1/3 Hp
Pressure	10 inHg	10 inHg
Flow Rate	4.6 scfm	4.6 scfm

Unit Features

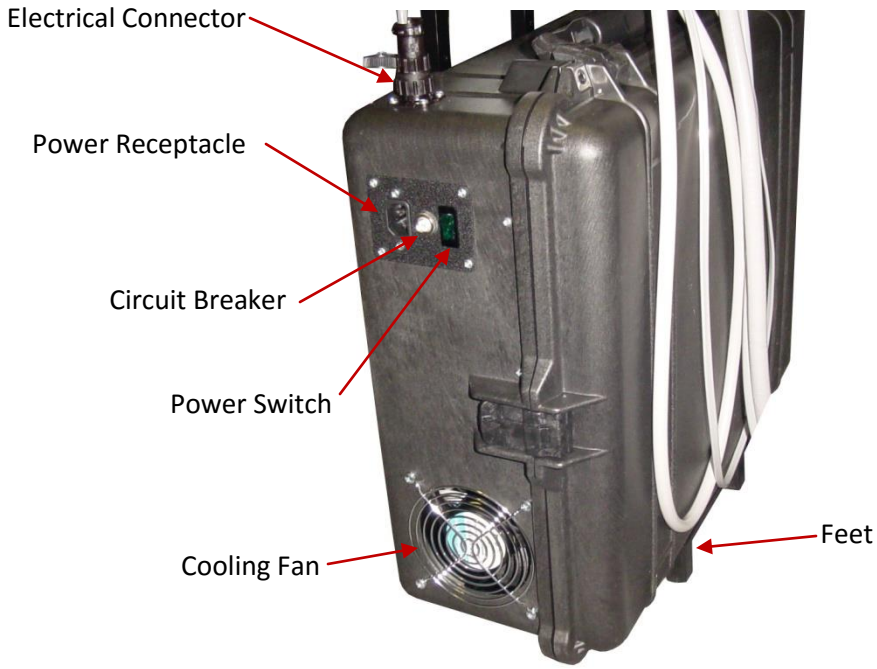
Front View



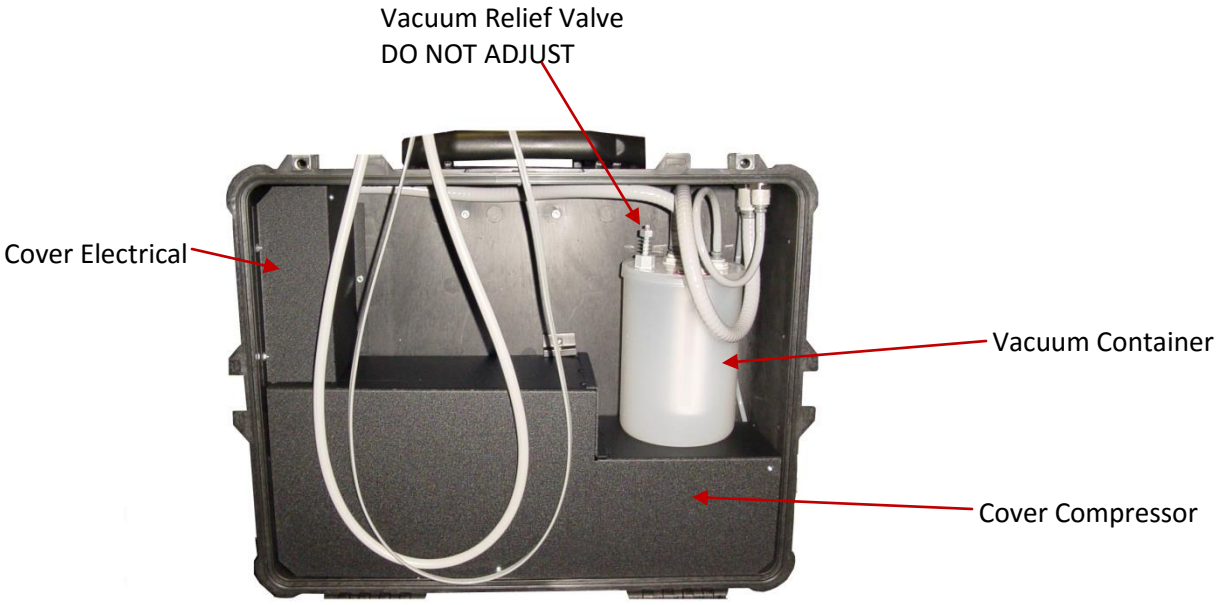
Front View



Back View

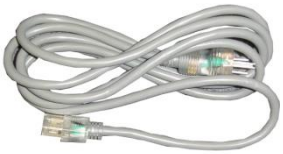


Inside View

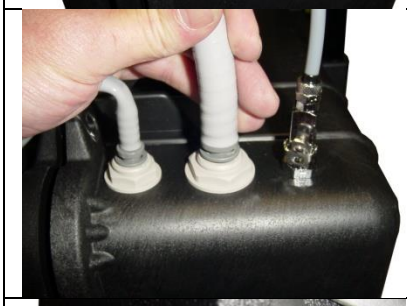


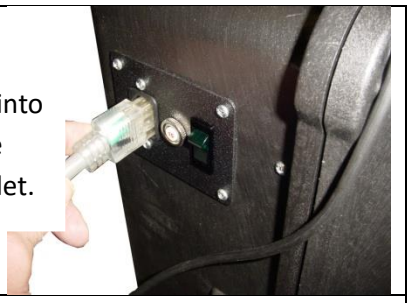
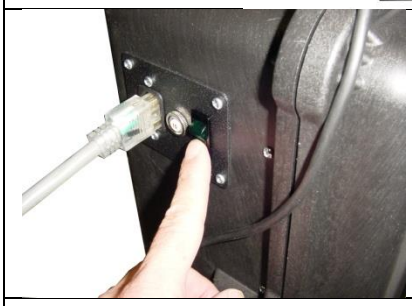
Operation

Setup

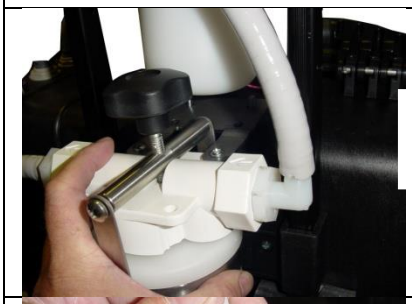
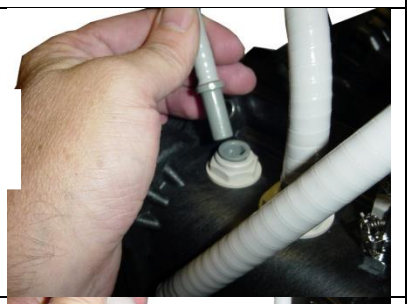
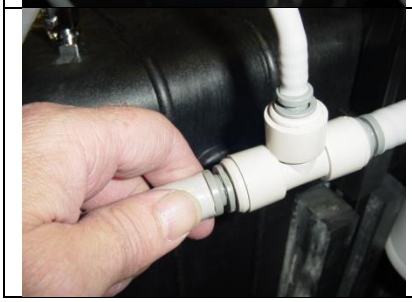
 Unpack delivery unit.	Unpack water bottle. 
 Unpack foot control.	 Unpack power cord.

Unpack HVE and saliva ejector lines. 	Unpack handpieces. 
 Connect tubing with red washer to vacuum container.	Connect small vacuum line. 
 Connect large vacuum line.	Close lid and extend handle. 
Install delivery unit. 	Connect electrical connector. 
 Connect air line.	 Place handpiece tubing and syringe in handpiece holders.

	Connect saliva ejector tubing.		Place saliva ejector in holder.
	Connect HVE line.		Place HVE in holder.
	Connect foot control.		Place foot control near the operator.
	Fill water bottle to the blue line. We recommend distilled water.		Install water bottle.
	Connect handpiece motor to handpiece tubing. Be careful not to cross thread handpiece tubing too handpiece motor.		Connect handpiece attachment to handpiece motor.

Place handpiece in handpiece holder.		Plug power cord into power receptacle and into wall outlet.	
	Turn on power switch.		

Optional Amalgam Separator

	Place separator on the unit.	Disconnect saliva ejector line.	
	Connect saliva ejector to tee.	Disconnect HVE line.	
	Connect HVE line.	Connect line from separator to unit.	

Install plug to bulkhead.

Changing Cartridge

Loosen knob.

Move bracket to side and remove cartridge.

Remove caps from new cartridge.

Make sure o-rings are installed on new cartridge.

Install new cartridge. The IN port of the cartridge should be on the side with arrow pointing in.

Slide bracket that supports the cartridge.

Tighten knob.

Replace caps on old cartridge.

Dispose of old cartridge according to your state or local regulations. Or call the number provided on the separator cartridge.

Handpiece Operation

Remove handpiece from holder.

Depress foot control.

For handpiece coolant water, adjust water valve while depressing foot control. (ProQuest I,II Only)

You can change rotation of handpiece motor

Always clean handpieces between patients.
See Dental Office Infection Controls Guidelines CDC, below.

Three-way Syringe

Water only.

Air only.

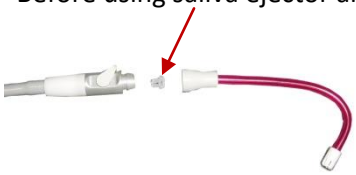
Air and water (mist).
You can use disposable syringe tip kits. (A-dec type disposable tip kit)
Always clean syringe between patients.
See Dental Office Infection Controls Guidelines CDC, below.

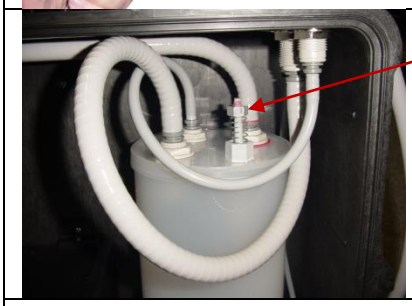
Vacuum System

When using either saliva ejector or HVE, make sure the other valve is closed.
Always clean vacuum system between patients.
See Dental Office Infection Controls Guidelines CDC, below.

Open valve.

Before using saliva ejector always check screen.





Never adjust vacuum relief valve.
When using saliva ejector, vacuum relief valve will have an air leak sound.

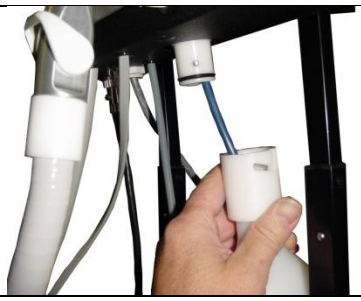
Cleaning Between Patients and End of Day

1) Remove any waste in vacuum container by purging and disposing of contents in a CDC-approved manner. See Dental Office Infection Control Guidelines CDC, below.
2) Mix one quart of evacuation cleaner, turn on evacuation system and suction cleaner into waste bottle using the HVE valve, and the saliva ejector.
3) Dispose of cleaner waste in CDC-approved manner.
4) Wipe down outside of the bottle and tubings with a surface cleaner.
5) Clean tubings and handpieces in CDC-approved manner.
6) Clean unit surfaces CDC-approved manner.

Water Bottle

Disconnect air line.
Push plunger down to remove pressure from water bottle.

Remove water bottle.
Place o-ring lube or petroleum jelly on o-rind as needed.

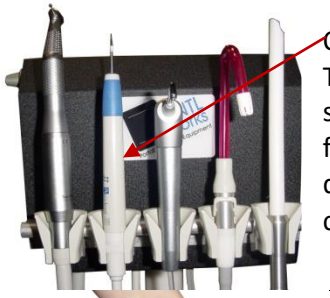


Fill water bottle to the blue line.
We recommend distilled water.

Install water bottle.

Connect air line. Compressor will start to fill water bottle at which time the air pressure will move water bottle into locked position.

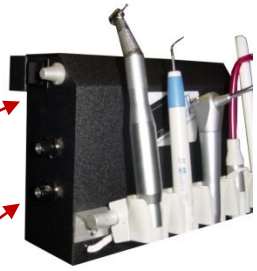
Accessories



Optional Scaler: To operate scaler, remove from holder and depress foot control.

Scaler Adjustment Control

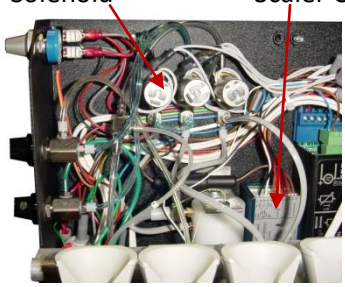
Scaler water adjustment



Make sure scaler tip is screwed on

Scaler Water Solenoid

Scaler Control



Dental Office Infection Control Guidelines (CDC)

DENTAL OFFICE INFECTION CONTROL GUIDELINES FOR THE PROTECTION OF PATIENTS AND DENTAL CARE PERSONNEL AS RECOMMENDED BY THE UNITED STATES CENTERS FOR DISEASE CONTROL (CDC)

NOTE: A medical history should be taken at the initial patient visit and on recall, updated with notations made on the chart.

Barrier Techniques

1) Dentists, hygienists and assistants should wear new gloves for each patient treated. Hands should always be washed with liquid soap before and after treatment, contact with patients or after touching inanimate objects likely contaminated by blood or saliva, and before leaving the operatory. Remove torn, cut or punctured gloves immediately, wash hands, and re-glove before completion of dental procedures.
2) During all treatment procedures, dentists, hygienists and assistants should wear face masks and protective eyewear, or in lieu of both of these, a chin-length plastic face shield.
3) Reusable and/or disposable gowns, laboratory coats or uniforms should be worn when street clothing may be soiled with blood or other body fluids. Gowns should be changed at least daily or when visibly soiled with blood.

Cleaning and Disinfection of Dental Unit and Environmental Surfaces

1) After treatment of each patient and at the completion of daily work activities, countertops and dental unit surfaces that may have become contaminated with patient material should be cleaned with disposable toweling, using an appropriate cleaning agent and water as necessary. Surfaces then should be disinfected with a suitable chemical germicide.
2) A chemical germicide registered with the EPA as a "hospital disinfectant" and labeled for "tuberculocidal" (i.e., mycobactericidal) activity is recommended for disinfecting surfaces that have been soiled with patient material. These intermediate level disinfectants include phenolics, iodophors, and chlorine-containing compounds. Because mycobacteria are among the most resistant groups of microorganisms, germicides effective against mycobacteria should be effective against many other bacterial and viral pathogens. A fresh solution of sodium hypochlorite (household bleach) prepared daily is an inexpensive and effective intermediate-level germicide. Concentrations ranging from 500 to 800 ppm of chlorine (a 1:100 dilution of bleach and tap water or 1/4 cup of bleach to 1 gallon water) are effective on environmental surfaces that have been cleaned of visible contamination. Caution should be exercised, since chlorine solutions are corrosive to metals, especially aluminum.
3) Low-level disinfectants - EPA registered "hospital disinfectants" that are not labeled for "tuberculocidal" activity (e.g., quatemary ammonium compounds) - are appropriate for general housekeeping purposes such as cleaning floors, walls and other housekeeping surfaces. Intermediate and low level disinfectants are not recommended for reprocessing critical or semi-critical dental instruments.
4) Before high-level disinfection or sterilization, and while wearing heavy duty rubber (household) gloves, ultrasonically clean (preferably) or scrub instruments in order to remove debris.

Use and Care of Handpieces and Other Intra-oral Dental Devices

1) Routine between-patient use of a heating process capable of sterilization (i.e., steam under pressure (autoclaving), dry heat, or heat/chemical vapor) is recommended for all highspeed dental handpieces, lowspeed handpiece components used intra-orally, and reusable prophylaxis angles. Manufacturers' instructions for cleaning, lubrication, and sterilization procedures should be followed

closely to ensure both the effectiveness of the sterilization process and the longevity of these instruments. According to manufacturers, virtually all highspeed and lowspeed handpieces in production today are heat tolerant and most heat-sensitive models manufactured earlier can be retrofitted with heat-stable components.

2) Internal surfaces of highspeed handpieces, lowspeed handpiece components, and prophylaxis angles may become contaminated with patient material during use. This retained patient material then may be expelled intra-orally during subsequent uses. Restricted physical access - particularly to internal surfaces of these instruments - limits cleaning and disinfection or sterilization with liquid chemical germicides. Surface disinfection by wiping or soaking in liquid chemical germicides is not an acceptable method for reprocessing highspeed handpieces, lowspeed handpiece components used intra-orally, or reusable prophylaxis angles.

3) Highspeed handpieces should be run to discharge water and air for a minimum or 20-30 seconds after use on each patient. Handpieces, in addition, should be heat sterilized between uses on patients. This procedure is intended to aid in physically flushing out patient material that may have entered the turbine and air or water lines. Use of an enclosed container or high-velocity evacuation should be considered to minimize the spread of spray, splatter, and aerosols generated during discharge procedures. Additionally, there is evidence that overnight or weekend microbial accumulation in water lines can be reduced substantially by removing the handpiece and allowing water lines to run and to discharge water for several minutes at the beginning of each clinic day. Sterile saline or sterile water should be used as a coolant/irrigation when surgical procedures involving the cutting of bone are performed.

Other Important Issues

1) A "no-touch" technique (e.g., hemostats or needle holders), should be utilized when using "sharps" (needles, scalpels, blades, etc.).

2) In the operatory, sterilized and decontaminated instruments, charts, and other objects should be protected from patient contact.

3) "Sharps" should be disposed of in puncture proof containers; hazardous and/or infectious waste materials, which include "sharps," should be disposed of in a manner consistent with prevailing local laws.

4) All dental personnel should be encouraged to receive immunization protection whenever possible, e.g., hepatitis B immunization.

5) All impressions, models and devises should be disinfected before submission and upon receipt from the dental laboratory.

Shut Down Instructions

Depressurize and remove water bottle.

Remove water bottle.

Empty water bottle.

Install water bottle.

Connect air line.

Turn on handpiece coolant water. (ProQuest I, II Only)

Place handpiece over container and depress foot control until all water is purged. (ProQuest I, II Only) Purge Scaler (Optional)

Depress syringe water button until all water is purged.

Mix non-foaming vacuum system cleaning solution and run solution through HVE valve.

Run cleaning solution through saliva ejector valve.

Remove any waste in vacuum container and disposing of contents in a CDC-approved manner. See Dental Office Infection Control Guidelines CDC, above.

Packing Instructions

	Disconnect vacuum container and remove from unit.		Wrap tubing around handpiece holders.
	Pack delivery unit into case.		Pack foot control.
	Pack water bottle.		Pack vacuum container.
	Pack power cord.		Pack manual.
	Pack saliva ejector and HVE lines.		Pack handpiece motor an attachment.

Maintenance

The following visual checks should be performed before operating the unit:

1) Look for mechanical damage that could affect safe operation, including, but not limited to, the following:

a. Cracks in power cord.
b. Splits or kinks in air or water lines.
c. Check for cracks in water container.
d. Cracks, kinks or splits in handpiece tubing, syringe tubing and vacuum tubings.

2) Look for loose or missing items, including, but not limited to, the following:
   a. Loose or missing screws, nuts and/or bolts.
   b. Loose handles.

Should mechanical or other damage be noted that would affect safety or operation, the unit should not be used until repair or replacement of defective items is completed. You may call Customer Service for help.

!!CAUTION!!

Handpieces:

Follow manufacturers' instructions for maintenance.

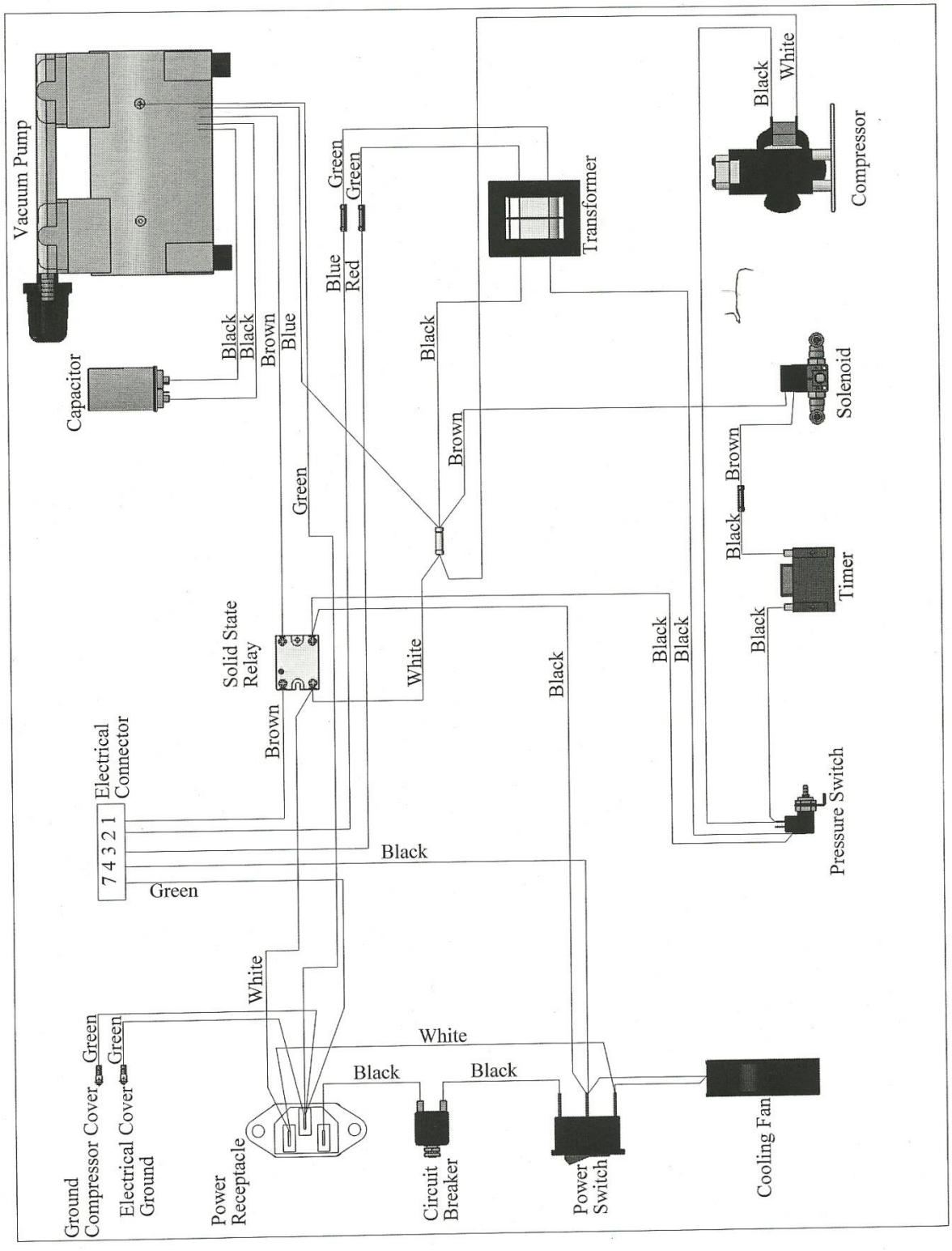
Syringe:

Follow manufacturer's instructions for maintenance.

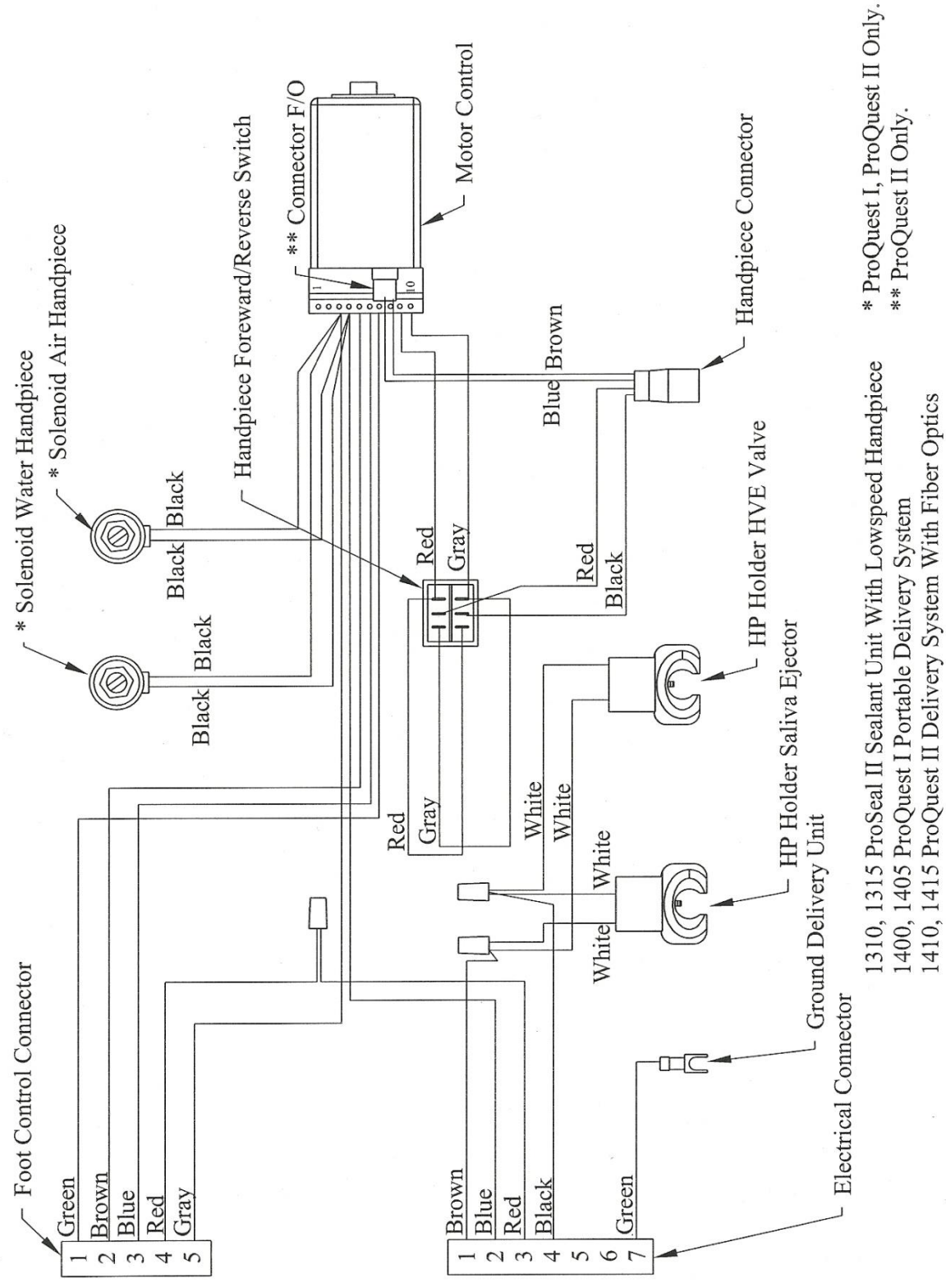
Air Pressure Source:

Do not exceed 125 psi.

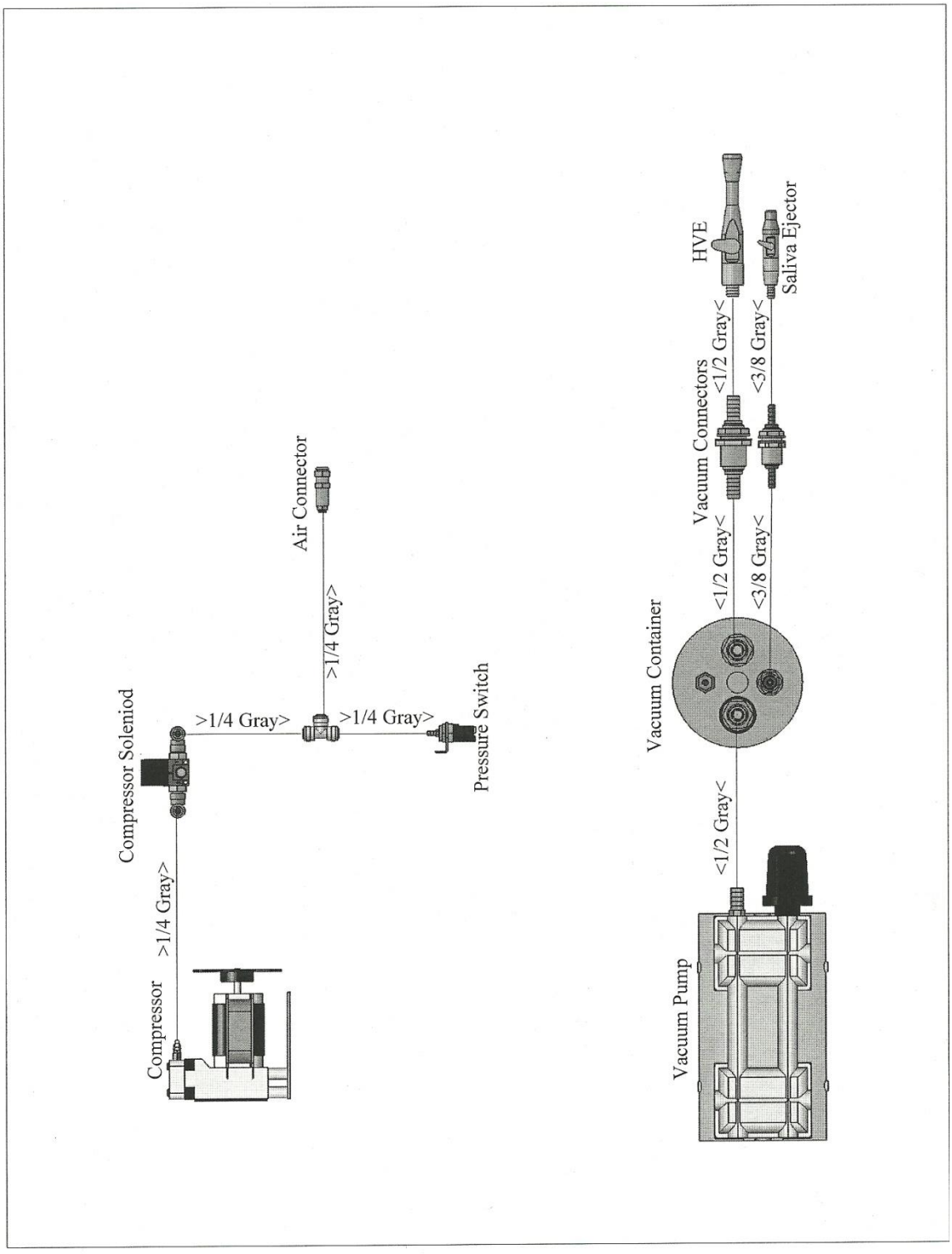
Electrical Diagram Compressor Unit



Electrical Diagram Delivery Unit

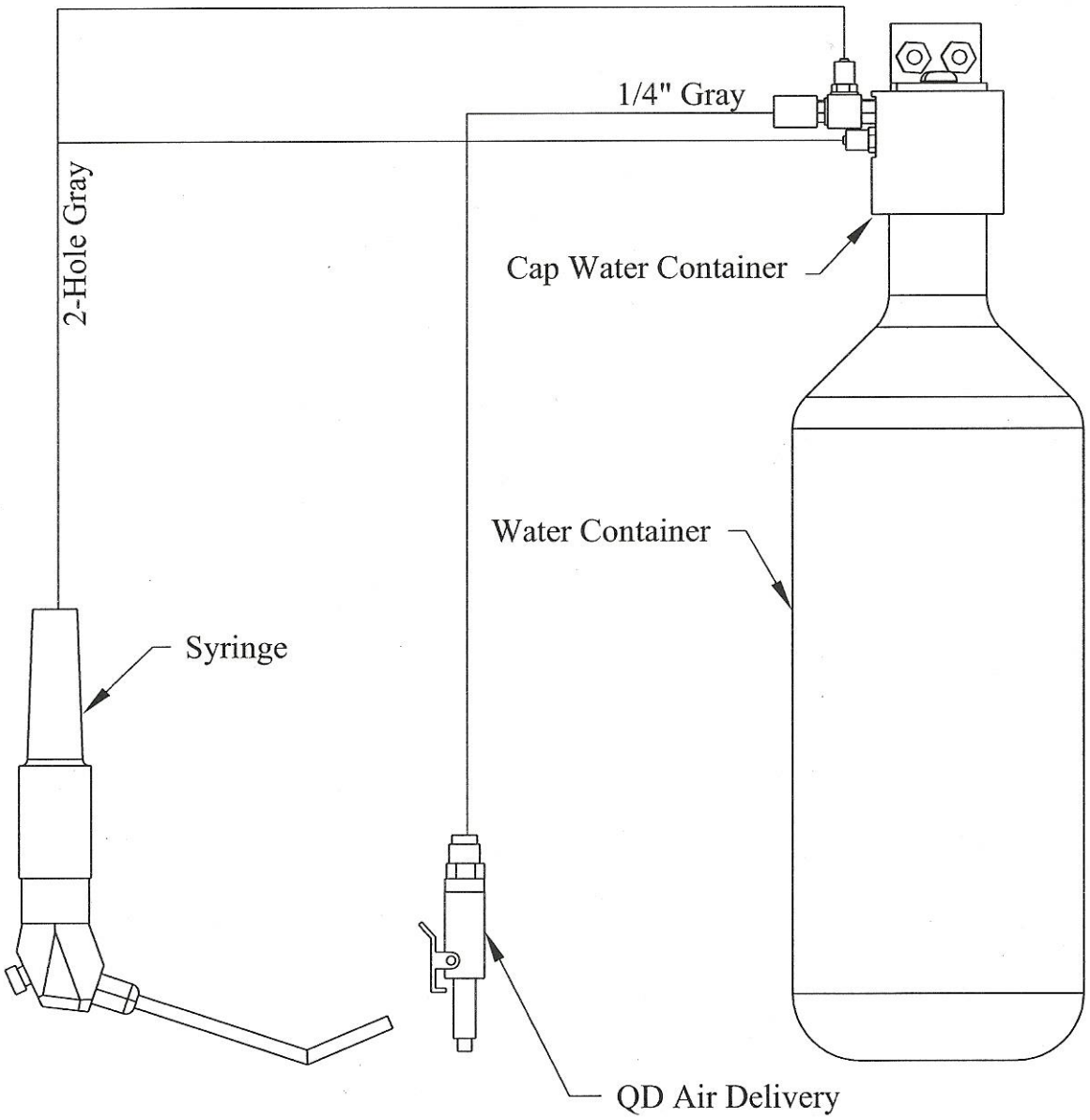


Tubing Diagram Compressor Unit



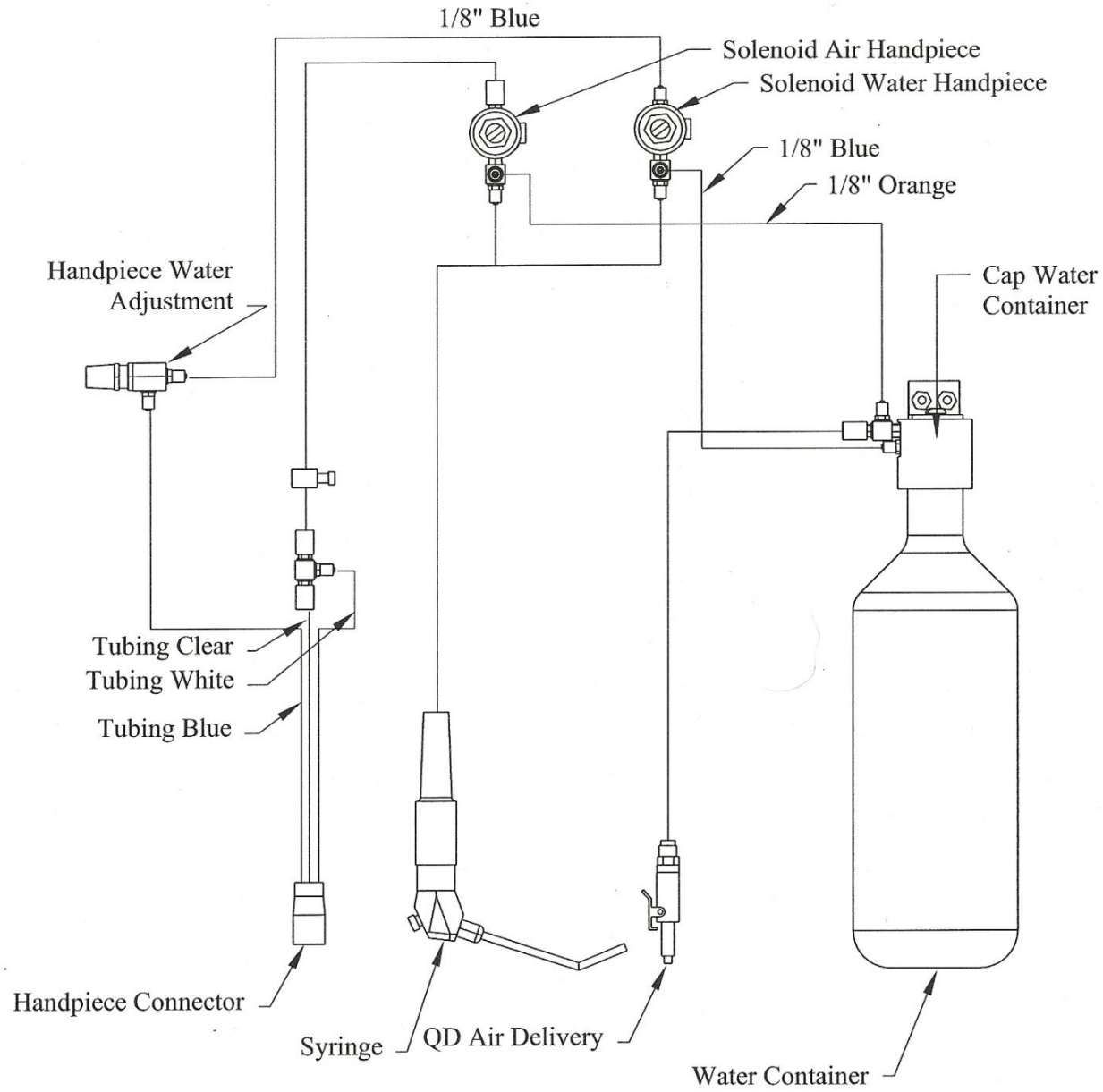
Tubing Diagram Delivery Unit ProSeal II

1310, 1315 ProSeal II Sealant Unit With Lowspeed Handpiece

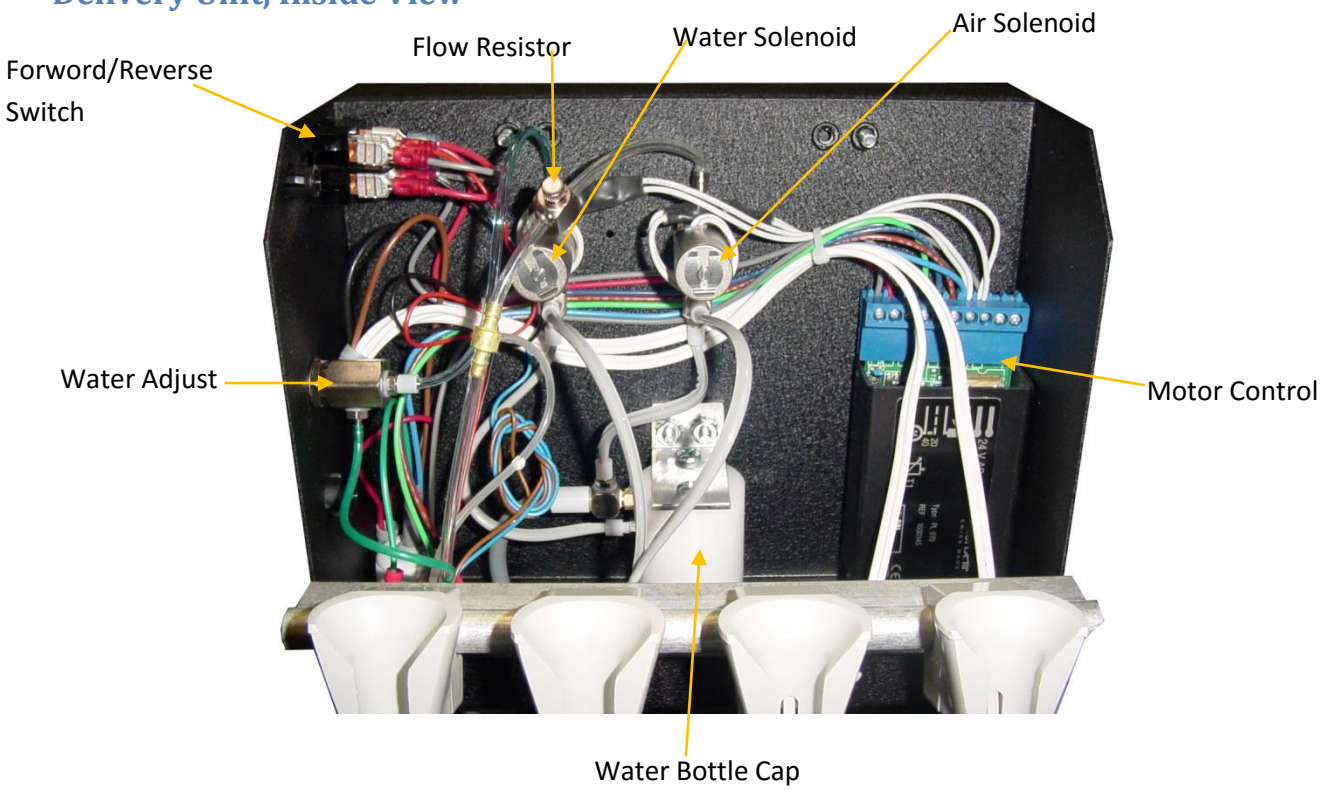


Tubing Diagram Delivery Unit ProQuest I, II

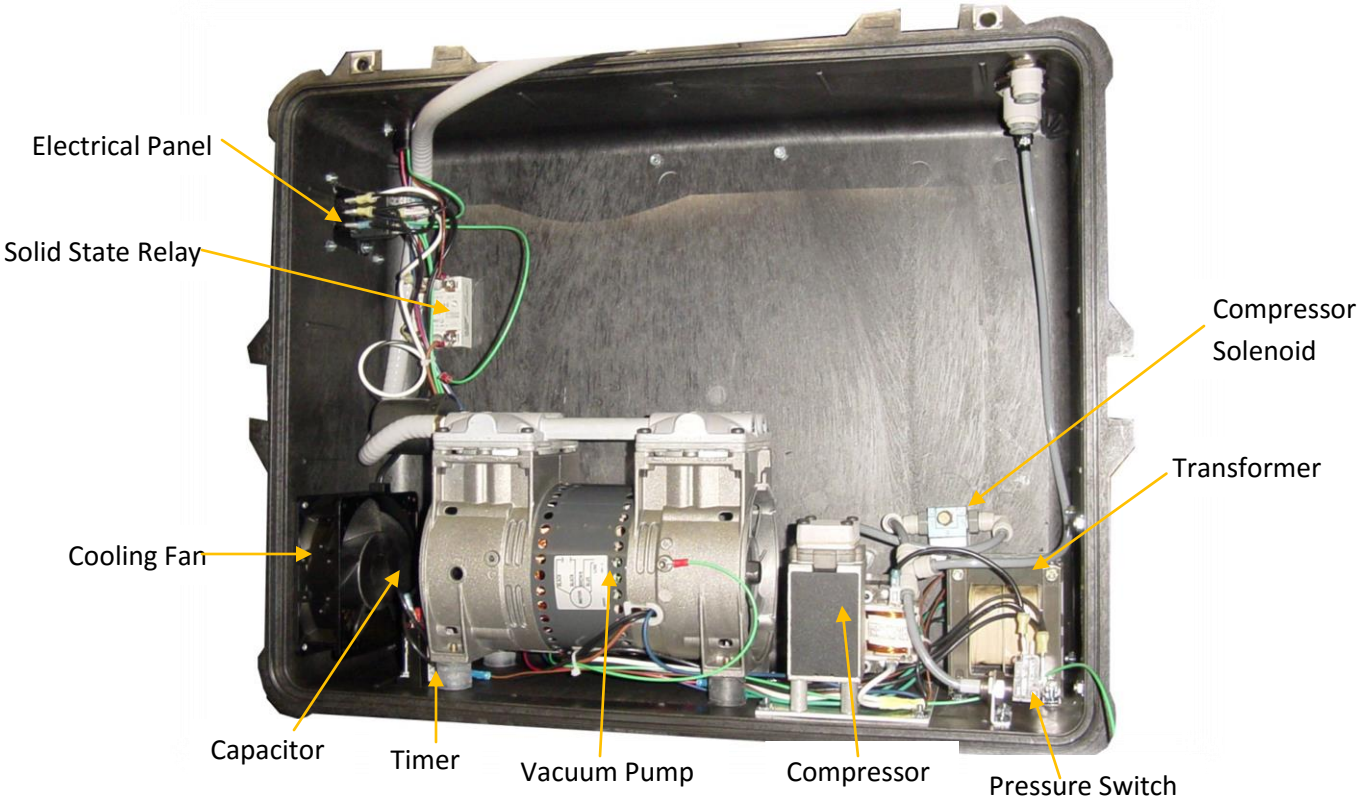
1400, 1405 ProQuest I Portable Delivery System
1410, 1415 ProQuest II Delivery System With Fiber Optics



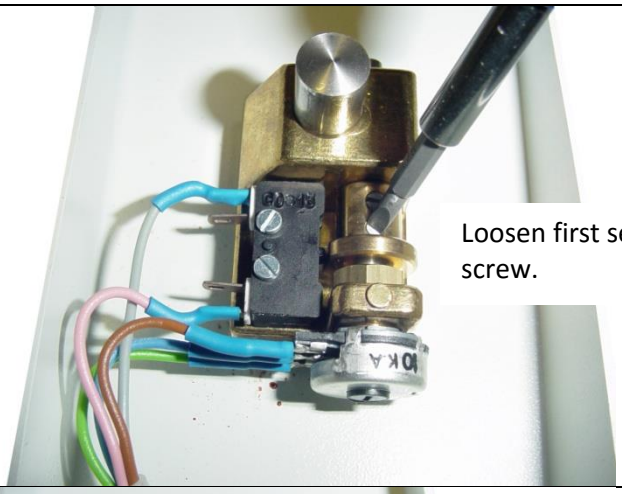
Delivery Unit, Inside View



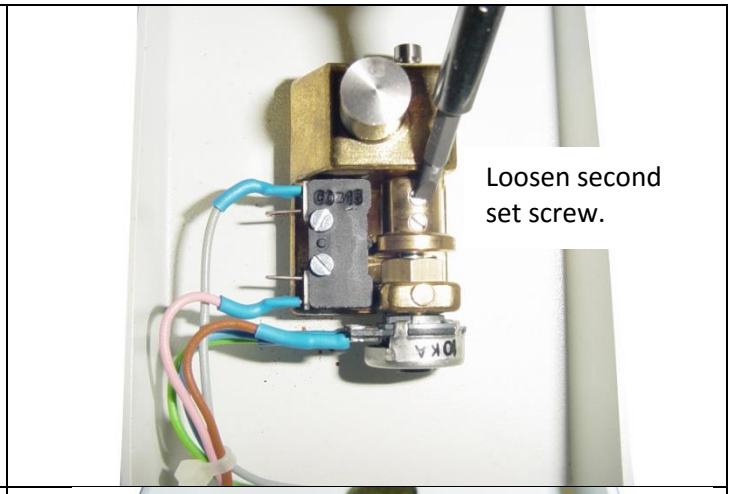
Compressor Unit, Inside View



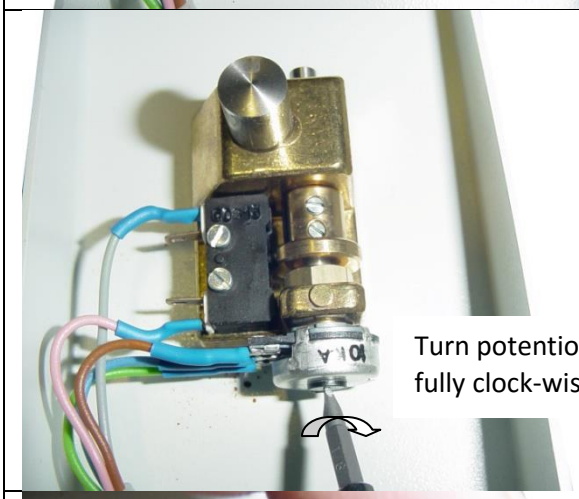
Foot Control Adjustment



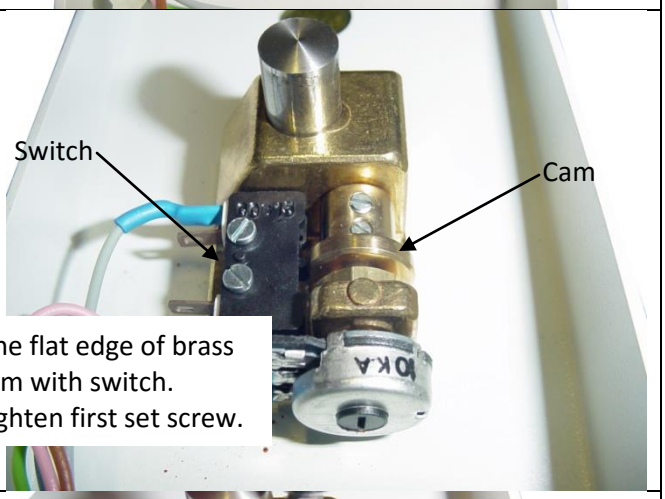
Loosen first set screw.



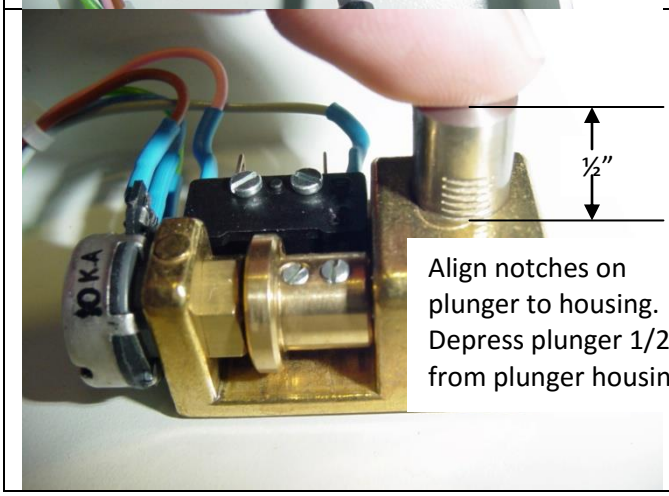
Loosen second set screw.



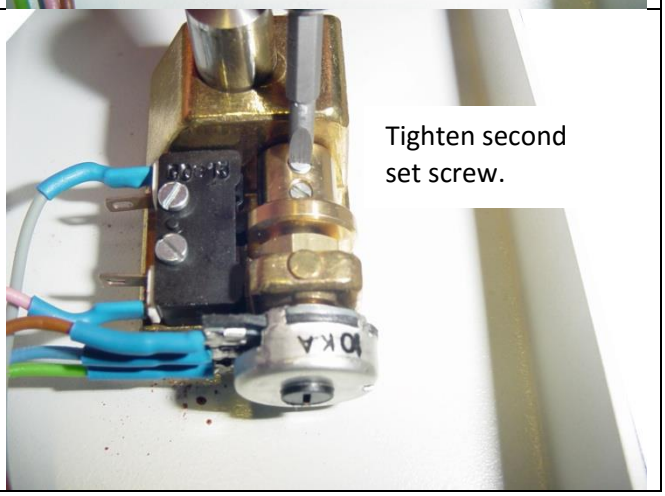
Turn potentiometer fully clock-wise.



Line flat edge of brass cam with switch. Tighten first set screw.



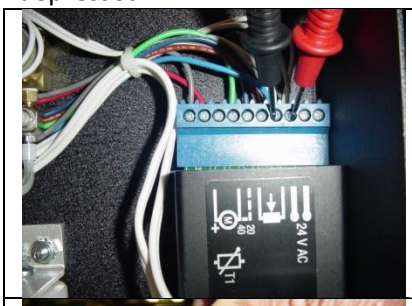
Align notches on plunger to housing. Depress plunger 1/2” from plunger housing.



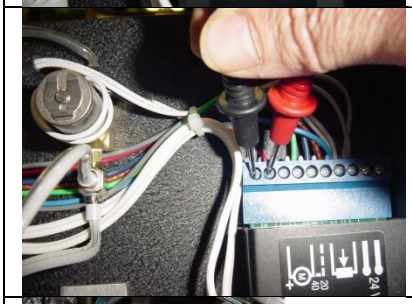
Tighten second set screw.

Handpiece Not Working

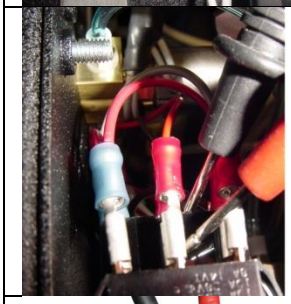
If at all possible, try handpiece on another unit. All tests are with the power on and foot control fully depressed.



Voltage should be between 24 to 27Vac.
If voltage is around 0Vac then contact Customer Service.



Voltage should be between 22 to 24Vdc.
If voltage is around 0Vdc then replace motor control.
If voltage is between 5Vdc to 22Vdc then adjust foot control.



Voltage should be between 22 to 24Vdc.
If voltage is around 0Vdc then check wires from motor control to foreword/reverse switch.

ProQuest I, II
Voltage should be between 22 to 24Vdc.
If voltage is between 22 to 24Vdc. Handpiece motor is bad.
If voltage is around 0Vdc replace handpiece tubing.

ProSeal II
Voltage should be between 22 to 24Vdc.
If voltage is between 22 to 24Vdc. Handpiece motor is bad.
If voltage is around 0Vdc replace handpiece tubing.