

Product Maintenance

FinePointe RC Station



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Product Maintenance

FinePointe RC Station

Overview

As you use your FinePointe RC station, some parts will wear out and may need to be replaced. Proper care and maintenance will help ensure consistent results and that your equipment investment will last for years.

Consider replacing/servicing the following components on a scheduled basis:

Tubing:

- Inspiration, Expiration, and Exhaust Tubing
- Calibrator Tubing
- Tracheal Blocking Tube

Screens:

- Pneumotach Screens

O-Rings:

- Chamber O-Ring
- Manifold O-Rings
- Pneumotach O-Ring
- Aerosol Block O-Ring

Miscellaneous:

- ECG leads
- Nebulizer

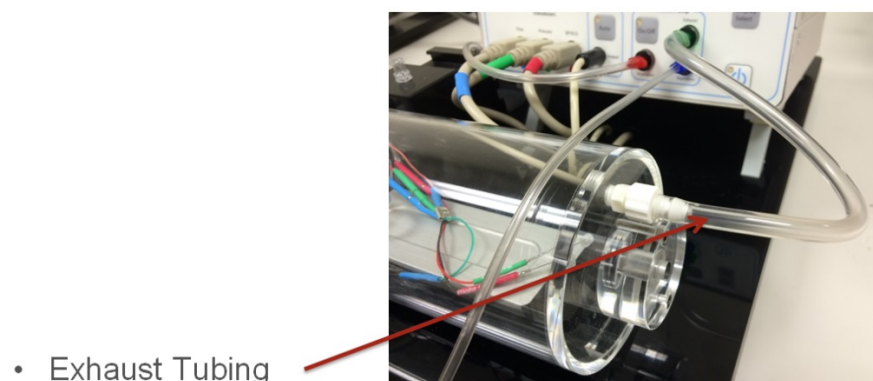
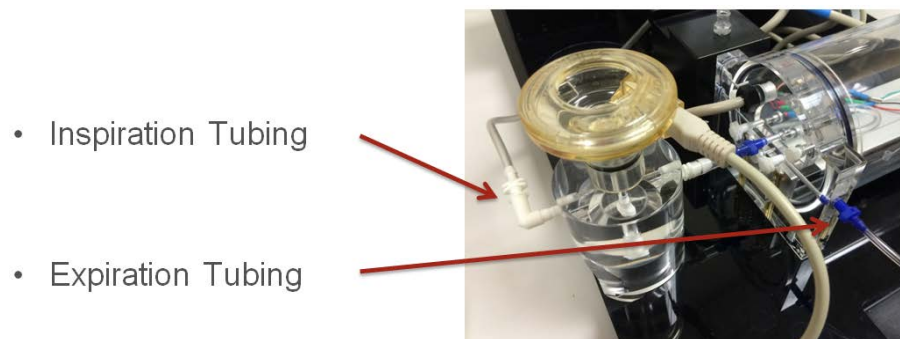
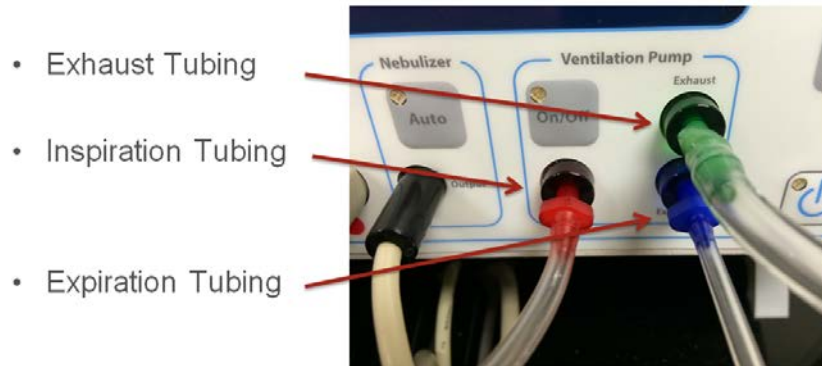
The frequency of replacement will depend on a variety of factors that may include: testing environment, frequency of use, aerosol exposure, and proper care of equipment throughout. Good Laboratory Practices (GLP) and routine equipment maintenance/servicing are recommended. At a minimum, tubing and screens should be replaced annually. See FPRC Application Manual for proper care and cleaning of the FinePointe RC station.

Tubing

This section will depict the various tubing that may need to be replaced on your FinePointe RC Station. Tubing should be free from cracks, moisture, and deposits.

Inspiration, Expiration, and Exhaust Tubing

- Inspiration, expiration, and exhaust tubing are used (in part) to complete the respiratory circuit and properly calibrate the apparatus



- Replacement kit part number: 601-2510-022 (mouse)
- Replacement kit part number: 601-2510-031 (rat/guinea pig)

Calibrator Tubing

- Calibrator tubing connects the Calibrator to the Aerosol block and is used to properly calibrate the apparatus

- Calibrator tubing

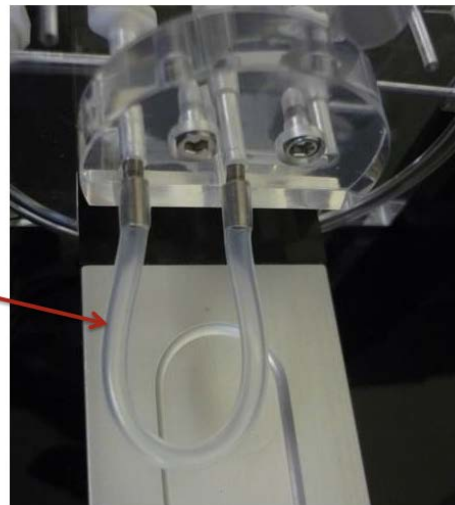


- Replacement part number: 601-2524-061

Tracheal Blocking Tube

- Tubing should be free from cracks, moisture, and deposits
- Metal tips should fit snug into manifold

- Tracheal Blocking Tube



- Replacement part number: 010536-001

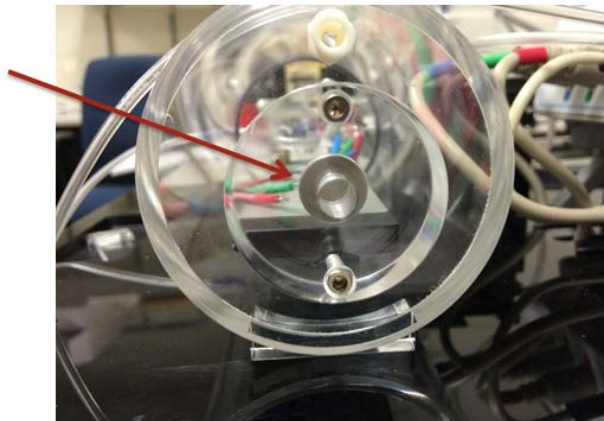
Screens

This section of the product maintenance guide depicts how to replace pneumotach screens. These fine mesh screens mounted on the end of the animal chamber provide the stable resistance elements necessary to accurately monitor the breathing waveform of the animal. The resistance element is part of the transducer/preamplifier circuit that when calibrated, provides a waveform that the software analyzes during the course of the experiment. When these screens become contaminated due to environmental dust and ordinary usage over an extended period, the resistance provided by the screens can change. As the resistance of the screens changes, the effective range obtained during calibration will change. When the effective range begins to shrink, this is a good indication that the pneumotach screens are dirty and should be replaced.

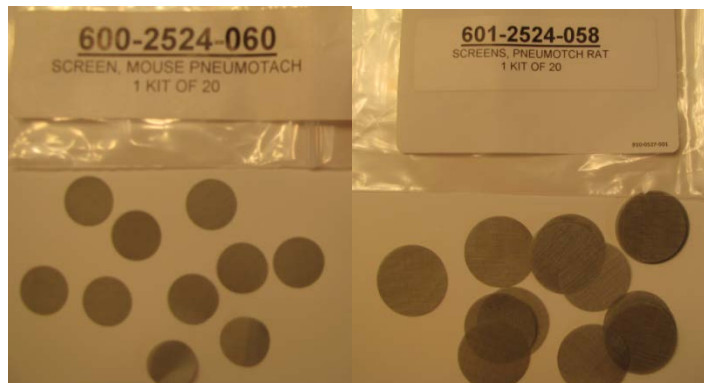
Pneumotach Screen Replacement

- Using a hex wrench, remove the two stainless steel screws on the end of the plethysmograph chamber
- Using tweezers, carefully remove pneumotach O-ring and Screens
- **STOP!! IMPORTANT!!** Note the number of screens removed and insert an identical number of new screens. Be careful not to crimp or bend the screens
- Replace pneumotach O-ring
- Replace rear, acrylic component using stainless steel screws and hex wrench

- Pneumotach Screens



- Replacement kit part number: 601-2524-060 (mouse – quantity 20)
- Replacement kit part number: 601-2524-058 (rat/guinea pig - quantity 20)



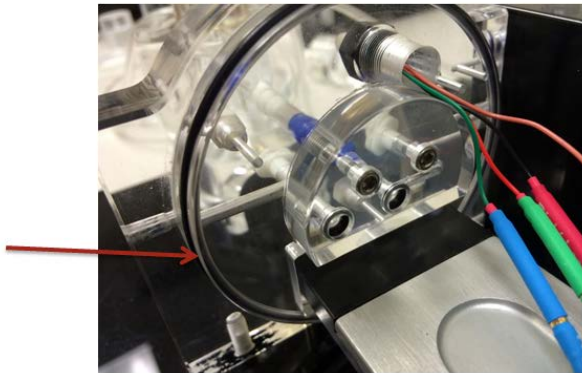
O-Rings

O-rings provide a seal between two removable components. O-rings should be free from cracks, debris, and excessive wear.

Chamber O-Ring

- This O-ring can be lubricated using silicone grease to make it easier to insert/remove components. Place a small dab on your fingertip and run your finger around the entire O-ring. Do not leave a lot of greasy residue on the O-ring. A little grease goes a long way

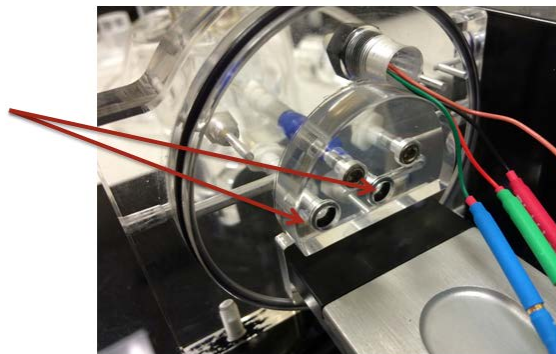
- Chamber O-ring



Manifold O-Rings

- This O-ring ensures a tight seal for either the Tracheal Blocking Tube or the Tracheal Y Coupling

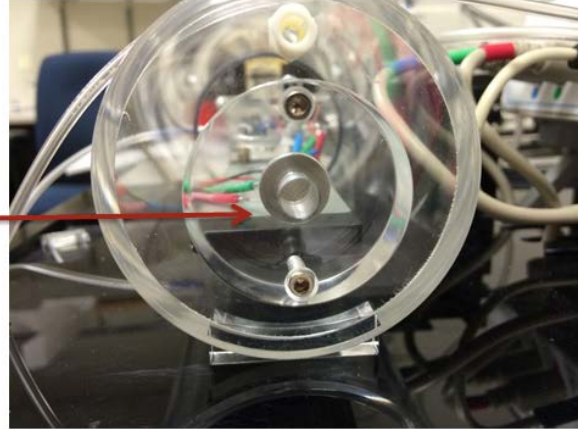
- Manifold O-rings



Pneumotach O-Ring

- This O-ring ensures a tight seal around the pneumotach screens and is often replaced when changing pneumotach screens (see Screen section)

- Pneumotach O-ring (behind screens)

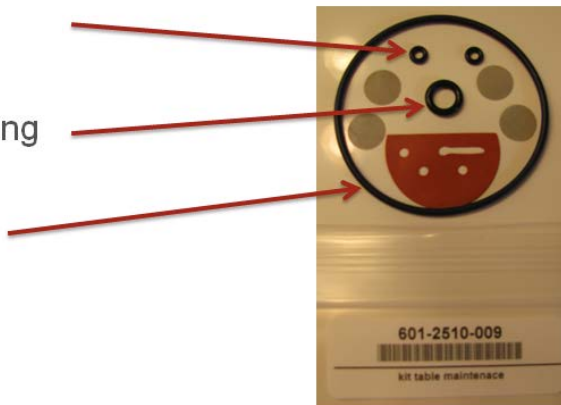


- Replacement kit part number: 601-2510-009 (mouse maintenance kit)
 - Includes O-rings discussed in this section
 - Note: Kit contains additional components that are not discussed in this section

- Manifold O-rings

- Pneumotach O-ring

- Chamber O-ring



- Replacement kit part number: 601-2510-030 (rat/guinea maintenance kit)
 - Includes O-rings discussed in this section
 - Note: Kit contains additional components that are not discussed in this section

- Manifold O-rings

- Pneumotach O-ring

- Chamber O-ring



- Replacement kit part number: 601-2524-023 (rat/guinea pig)
 - Rat/guinea pig pneumotach O-rings only (quantity 20)

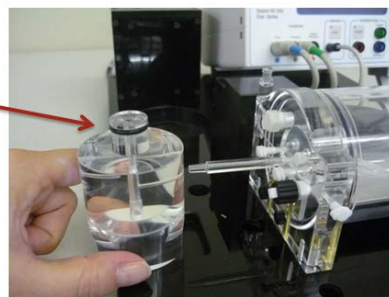


- Silicone Lubricant part number: 601-2524-052

Aerosol Block O-Ring

- This O-ring ensures a tight seal when connecting either the Calibration cap or a nebulizer to the aerosol block

- Aerosol Block O-ring



- Replacement kit part number: 601-2524-034 (mouse, rat/guinea pig – quantity 25)

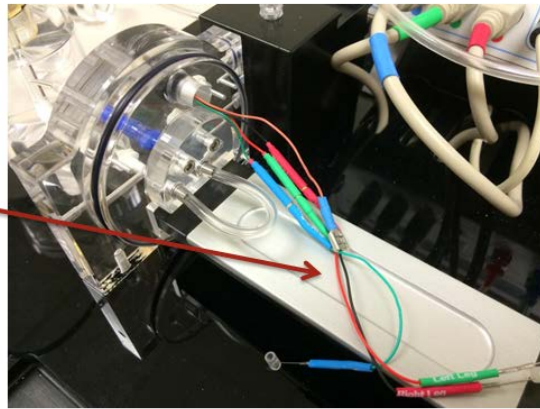
Miscellaneous

This section of the product maintenance guide depicts various components that may need to be replaced.

ECG Leads

- ECG needles may become dull after repeated use causing irritation or harm to the animal

- ECG leads



- Replacement kit part number: 601-2510-021 (mouse)
- Replacement kit part number: 601-2510-027 (rat/guinea pig)

Nebulizer Heads

- Over time, nebulizer heads lose their efficiency and need to be replaced
 - **IMPORTANT!!** Once replaced, be certain to perform an efficiency test prior to starting your next experiment
- Proper cleaning, drying, and storage will help extend the life of a nebulizer head
- See FPRC Application Manual for proper nebulizing equipment care and how to determine efficiency of the nebulizer head



- Replacement parts:
 - 601-2306-001 (2.5 - 4 μm particle size)
 - 601-2307-001 (4 - 6 μm particle size)

Calibration

It is good practice to frequently calibrate the apparatus. Calibration is one of the most important steps prior to an experiment and after replacing components. Without a system check and good calibration, your data is in danger of being slightly off or completely meaningless.

See the FPRC Application Manual for proper calibration procedures.

Replacement Kit Summary

Tubing:

- Inspiration, expiration, and exhaust tubing:
 - Replacement kit part number: 601-2510-022 (mouse)
 - Replacement kit part number: 601-2510-031 (rat/guinea pig)
- Tracheal Blocking Tube (mouse)
 - Replacement part number: 010536-001

Screens:

- Pneumotach Screens:
 - Replacement kit part number: 601-2524-060 (mouse – quantity 20)
 - Replacement kit part number: 601-2524-058 (rat/guinea pig - quantity 20)

O-Rings:

- Chamber, Manifold, and Pneumotach O-rings:
 - Replacement kit part number: 601-2510-009 (mouse maintenance kit)
 - Maintenance kit includes chamber, manifold, and pneumotach O-rings
 - Note: Kit contains additional components that are not discussed in this section
 - Replacement kit part number: 601-2510-030 (rat/guinea maintenance kit)
 - Maintenance kit includes chamber, manifold, and pneumotach O-rings
 - Note: Kit contains additional components that are not discussed in this section
 - Replacement kit part number: 601-2524-023 (rat/guinea pig)
 - Contains 20 O-rings for pneumotach
- Silicone Lubricant part number: 601-2524-052
- Aerosol Block O-Ring:
 - Replacement kit part number: 601-2524-034 (mouse, rat/guinea pig – quantity 25)

Miscellaneous:

- ECG Leads:
 - Replacement kit part number: 601-2510-021 (mouse)
 - Replacement kit part number: 601-2510-027 (rat/guinea pig)
- Nebulizer Heads:
 - 601-2306-001 (2.5 - 4 μ m particle size)
 - 601-2307-001 (4 – 6 μ m particle size)