TRILOGY VENTILATOR MANUAL

children's health®

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WHAT IS A VENTILATOR?

A ventilator is a small, portable machine that moves air in and out of the lungs of children who have trouble breathing on their own. Ventilators connect to your child through plastic tubing, called the ventilator circuit. This ventilator circuit then connects to their trach or mask.

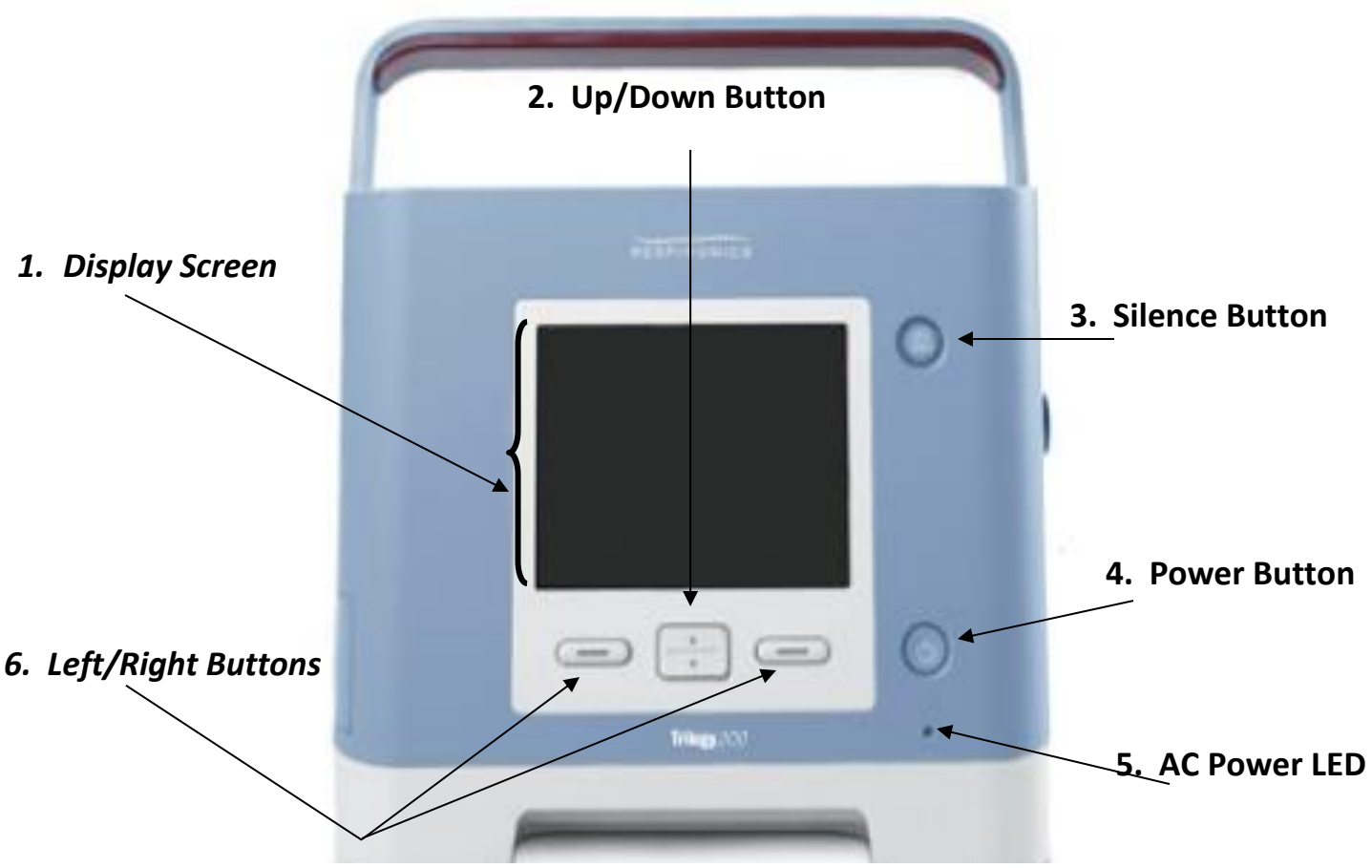
The ventilator is used to help your child with breathing. The length of time your child stays on the ventilator will depend on their condition; some children need support for only a few hours of the day, some children need support only during the night, and some children need the ventilator for 24 hours a day.

NOTE PAGE

THE FRONT SCREEN OF THE TRILOGY

It is important to know where key buttons are located on your child's ventilator. See below for the front panel display.

1. ***Display Screen****- Here you will find clinical data and settings for your child as well as alarm notifications and event logs. We will discuss this screen in more detail later in this manual.*
2. ***Up/Down Button****- This button allows you to scroll through the different menu options.*
3. ***Silence Button****-This button temporarily silences the trilogy ventilator for 1 minute. If the cause of the alarm is not corrected, the alarm will sound again after 1 minute. The LED light will also let you know the priority of the alarm.*
4. ***Power Button****- This button will start and stop the ventilator.*
5. ***AC Power LED****- A green light will indicate when you are connected to AC power.*
6. ***Left/Right Buttons****- These buttons allow you to make changes or choose options on the screen.*



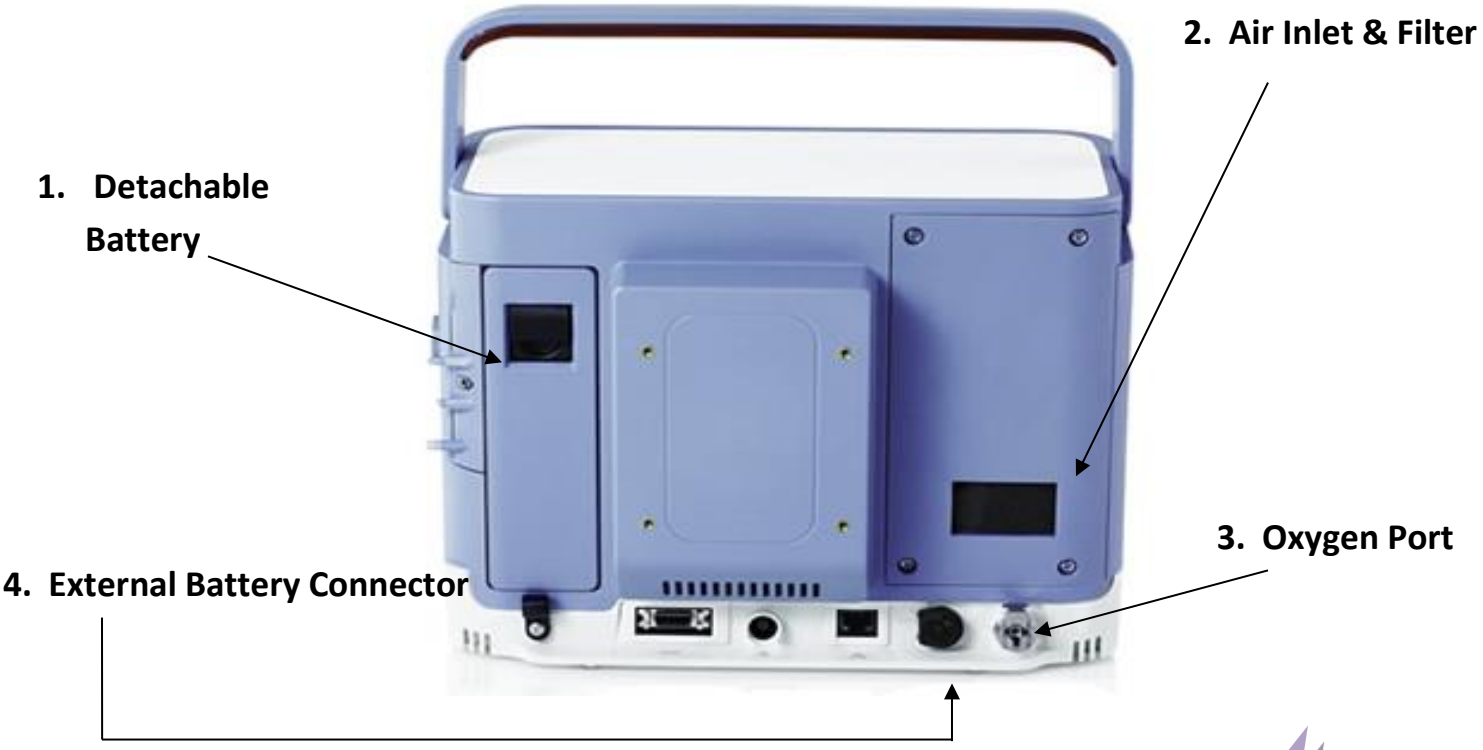
THE BACK SIDE OF THE TRILOGY

1. ***Detachable Battery****- This battery pack allows you to travel with your child while not being connected to an electrical outlet. You may use this type of battery for up to 3 hours.*

2. ***Air Inlet & Filter-*** *The filter must be in place while the Trilogy is on.*

3. ***Oxygen Port****- If your child needs oxygen; this is where you will connect it. We will discuss how to give oxygen in more detail later in this manual.*

4. ***External Battery Connector****-The location where you can connect a standalone battery, such as your car battery, for use during longer periods of travel.*



<u>How To Clean The Air Filter</u>:

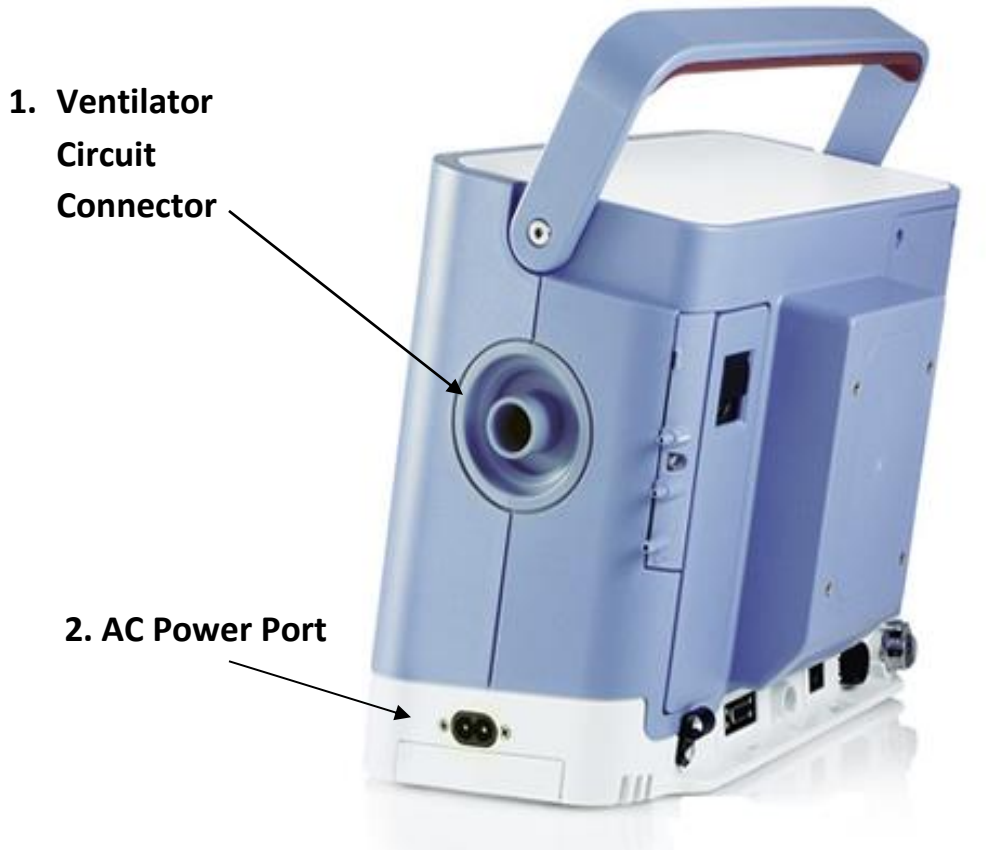
1. *Remove the filter from the ventilator.*
2. *Wash the filter in warm water and mild soap.*
3. *Rinse thoroughly.*
4. *Allow to air dry.*
5. *Replace back into the ventilator.*
6. *If you notice your filters are beginning to break down, contact your DME Company for a replacement.*

Remove & Clean your filters at least once every week. Replace your entire filter once every 6 months.

THE RIGHT SIDE OF THE TRILOGY

It is important to know where to connect the ventilator circuit and power cord. See below for connections.

1. ***Ventilator circuit connector****- This is where the ventilator circuit tubing will connect with the bacterial filter.*
2. ***AC Power port****- This is where you will connect your ventilator to AC power.*

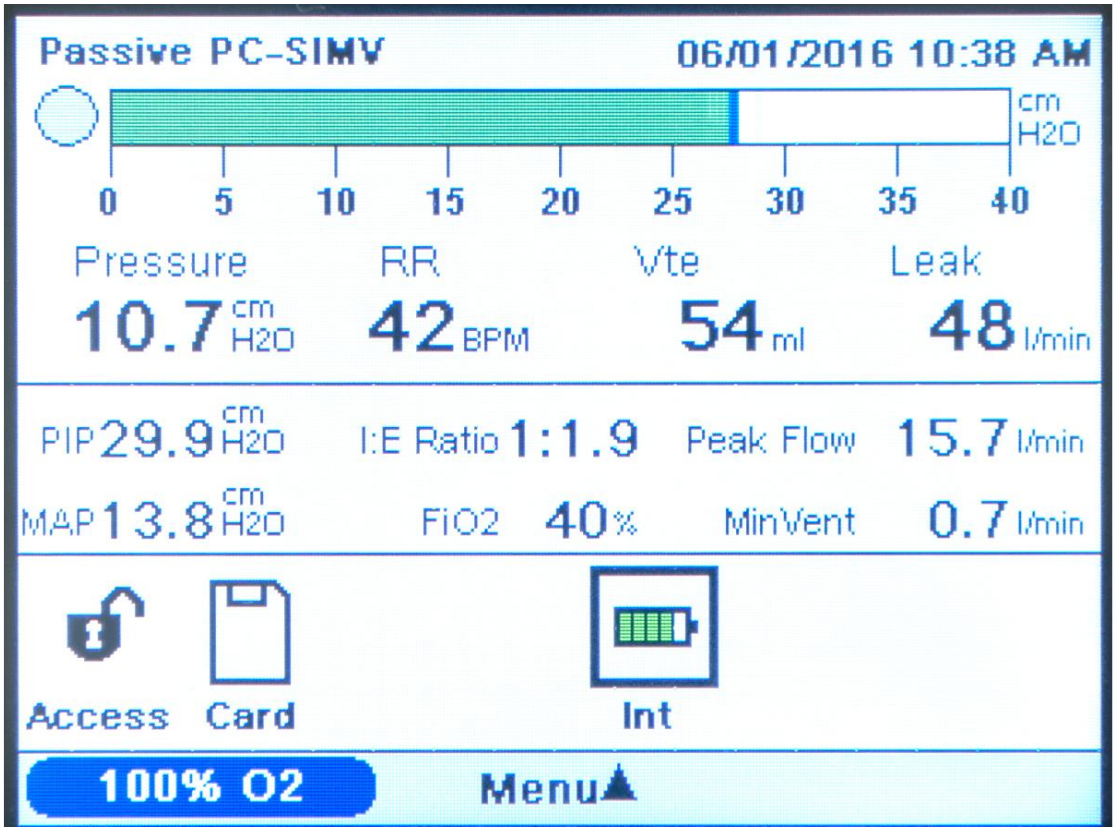


THE TRILOGY DISPLAY SCREEN-VENTILATOR SETTINGS

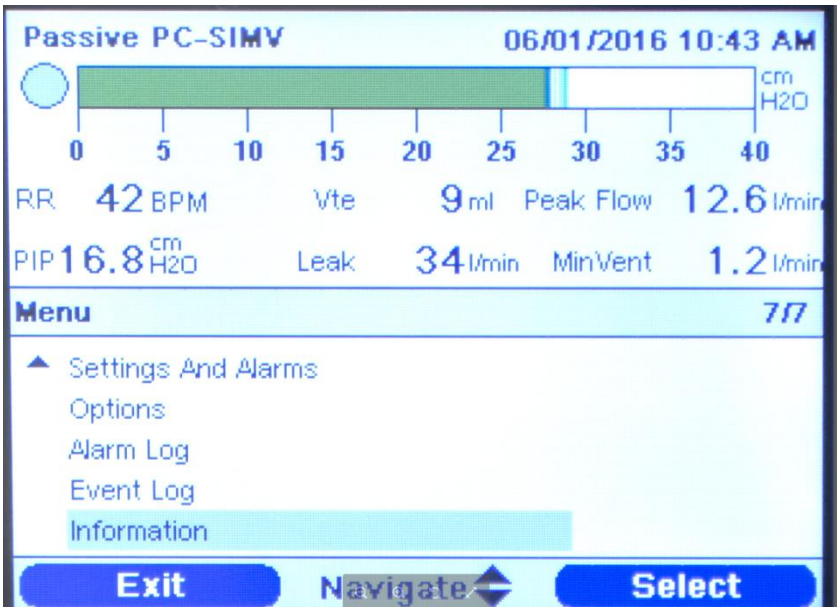
Your child's doctor will order the ventilator settings. They are ordered based on your child needs. We will teach you the settings you will need to know for your child's ventilator. Don't feel like you need to memorize these definitions this page is for your reference

***Respiratory Rate (RR)**: the number of breaths per minute your child will receive.*
***Tidal Volume (Vte)**: the amount of volume given to your child per breath.*
***Inspiratory Pressure**: the amount of pressure that is applied to the lungs during a ventilator assisted breath.*
***Inspiratory Time**: this is the amount of time the pressure is applied to the lung.*
***Pressure Support**: the amount of pressure that is applied to the lungs during a breath your child takes on their own.*
***PEEP**: this is a constant pressure that is present during exhalation.*
***Alarm Limits**: these are limits that protect your child from too much and/or too little pressure from the ventilator.*

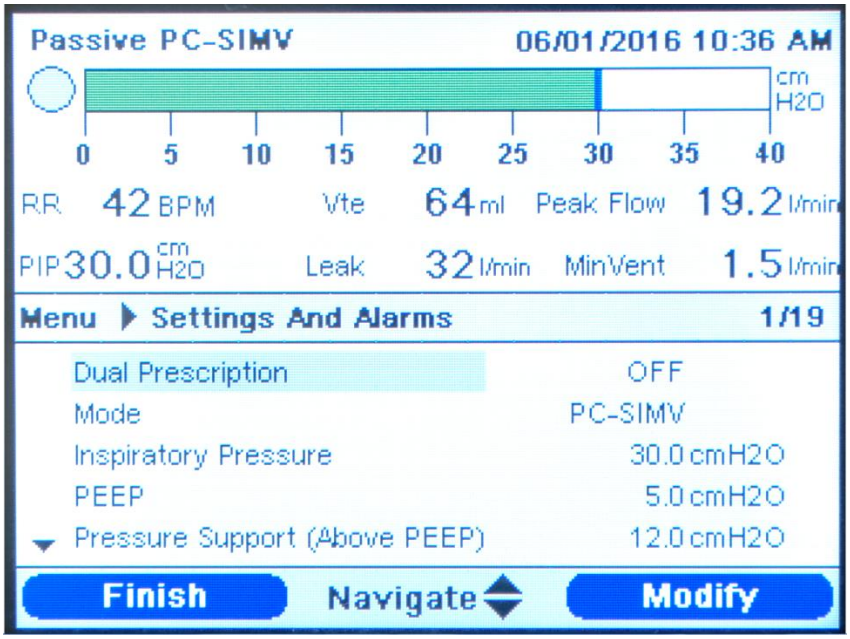
1. *Press the **up** arrow button to access the menu.*



2. *Once the menu is open, press the **down** arrow button until you reach the title "Information".*



3. *Press the select button on the **right**.*
4. *While on this screen, you can use the up and down arrow button to view your child's settings.*



Your child's doctor will order any changes made to the settings on the ventilator.

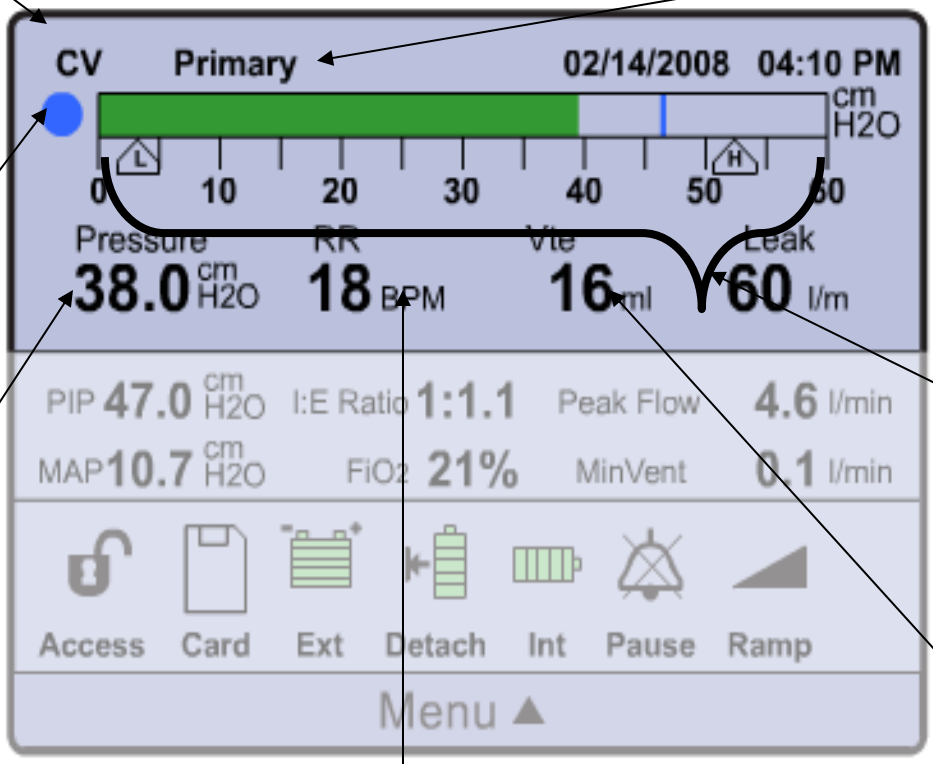
THE TRILOGY DISPLAY SCREEN-MONITORING

Information about your child's breathing can be found on the display screen on the ventilator. See below on where this information can be seen.

Mode- This is the location where you can identify which ventilator mode your child is currently in.

Patient Breath- This symbol will flash to indicate your child initiated a breath.

Pressure- This number is the amount of pressure delivered to your child's lungs.



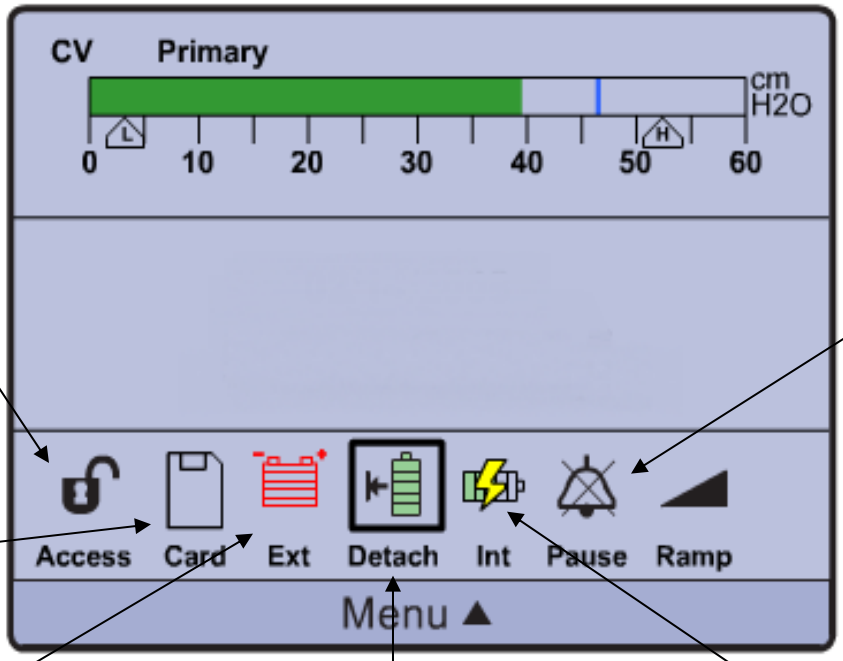
Prescription- This will indicate either the primary or secondary prescription **<u>if</u>** your child has an order for two different ventilator modes.

Pressure graph- This will show a green bar move up and down as air goes in and out of your child.

Respiratory Rate-This will indicate how many breaths your child is taking in a minute.

Tidal Volume- The amount of volume returning to the ventilator from your child's lungs.

THE TRILOGY DISPLAY SCREEN- ICONS



Access Icon- If present, this icon will indicate all menu settings are accessible to you.

Card Icon- If present, this icon will indicate the SD card is currently in the machine.

EXT Battery Icon- If present, this icon will indicate you are connected to your external battery source. If the symbol is **RED**, this indicates there is approximately 10 minutes of charge left.

Detach Battery Icon- If present, this icon will indicate you are connected to your detachable battery. If a square is around this icon, it indicates you are currently using this type of battery.

Pause Icon- If present, this icon will indicate you have silenced an alarm. The alarm is silenced for 60 seconds.

INT Battery Icon- This icon will indicate the internal battery charge level. If a lightening bold is present the battery is being recharged.

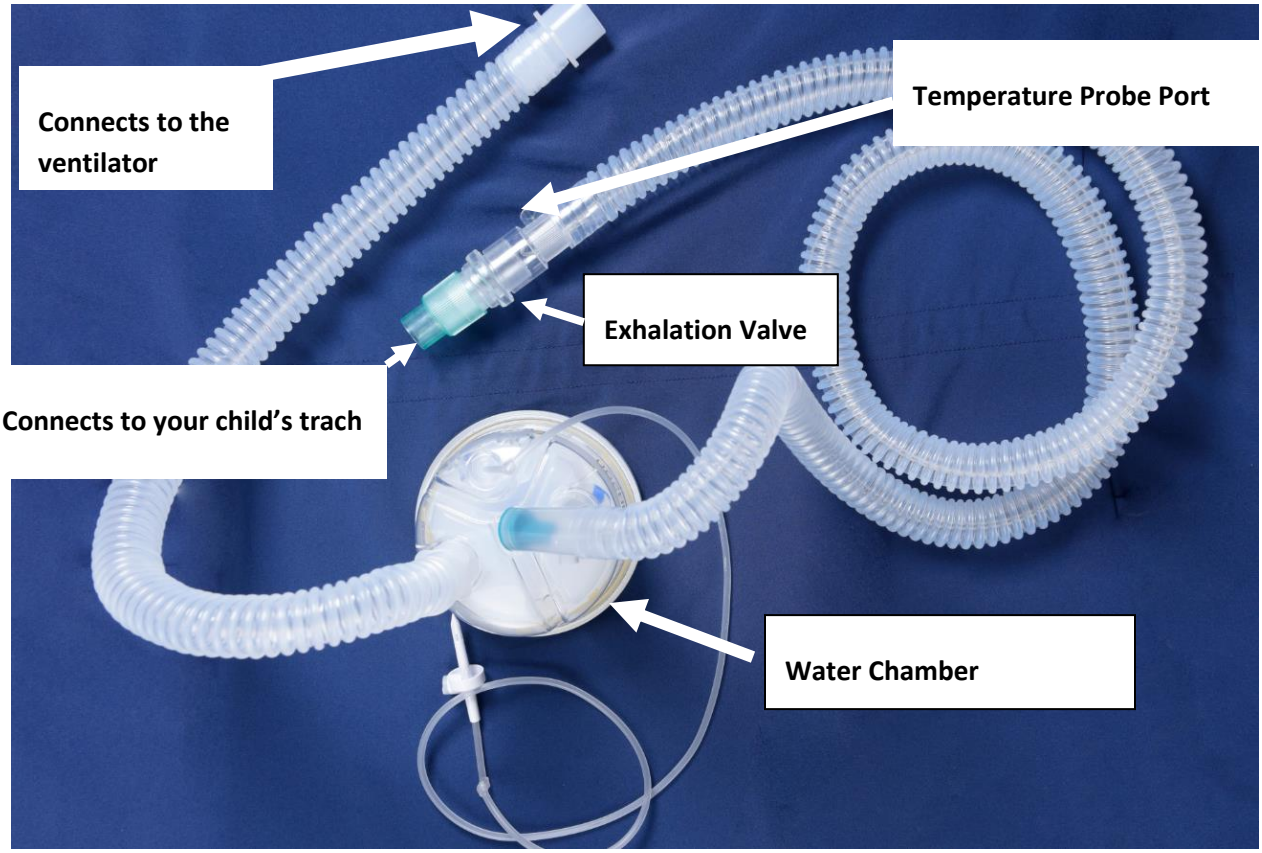
THE VENTILATOR CIRCUIT

The ventilator circuit connects the ventilator to your child's trach or mask. This lets air travel from the ventilator to your child's lungs.

The Trilogy ventilator circuit has 2 pieces of tubing. The first is a short piece of tubing that connects from the ventilator to your water chamber. The second piece of tubing is longer and connects from the water chamber to your child's trach or mask.

Near the end of the tube is the exhalation valve. The exhalation valve is part of ventilator circuit where air enters the room. It is normal to hear and feel air exiting from this valve.

Passive Circuit with Heated Wire Tubing



CLEARING CONDENSATION FROM THE CIRCUIT

Water in the tubing is normal. It is usually seen in the longer tubing. If you notice water in the tubing, it is important to empty the water. You do not want the water to enter your child's trach or mask. You can empty the water by quickly disconnecting the tube from your child's trach tube or mask and drain the extra water out onto a towel or wastebasket. Be careful not to touch the tubing to any surfaces that can get it dirty. Then, reconnect the tubing to your child.

CHANGING THE VENTILATOR CIRCUIT

The ventilator circuit will be supplied by the Durable Medical Equipment (DME) Company that you choose prior to discharge home. The DME Company will instruct you on how often to change the circuit after you discharge home. The circuit may need to be changed more often if you notice a hole in the circuit, the circuit tears or it is dirty. We will practice connecting the ventilator circuit to the ventilator here in the hospital before you go home.

If you have a backup/travel ventilator, place your child on the backup ventilator while you change the circuit on the ventilator that needs a clean circuit. If you do not have a backup ventilator, one person will give breaths to your child using the self-inflating bag while you change the circuit. If your child is only on the ventilator while sleeping then change the circuit while your child is awake and not on the ventilator.

SUPPLIES NEEDED

- *Clean ventilator circuit*
- *Bacterial filter*
- *New or clean water chamber*
- *Self-inflating bag*

STEPS FOR ASSEMBLING & CHANGING THE CIRCUIT

1. *Wash and dry your hands.*
2. *Gather your supplies.*
3. *Open the new circuit and lay it out on a clean surface.*
4. *Check the new circuit to make sure all of the circuit pieces needed.*
5. *Remove the existing circuit from the trach or mask and ventilator.*
6. *Remove the heater wire from the dirty circuit.*
7. *Place your child on the backup ventilator or ask a second caregiver to begin giving breaths to your child using the self-inflating bag.*
8. *Turn ventilator off.*
9. *Attach the clean bacterial filter to the ventilator.*
10. *Connect one end of the short tubing to the bacterial filter that connects to the ventilator.*
11. *Connect the opposite end of the short tubing to the water chamber.*
12. *Connect the angled end of the long tubing to the water chamber.*
13. *Insert the heater wire probes into the appropriate temperature probe ports on the circuit.*
14. *Turn the ventilator on and reconnect your child to the circuit.*
15. *Briefly check your child for chest rise to make sure the ventilator is working correctly.*

OXYGEN ADMINISTRATION

SUPPLIES NEEDED

- *Oxygen concentrator*
- *Oxygen tanks*
- *Oxygen tubing*
- *Oxygen Inlet Quick Connector (this should be attached to your home ventilator)*

STEPS FOR ADMINISTERING OXYGEN

1. *Make sure the oxygen inlet quick connector is inserted into the back of the Trilogy.*

2. *Attach oxygen tubing to the oxygen concentrator.*

3. *Attach oxygen tubing to the oxygen inlet quick connector.*

4. *Turn the oxygen concentrator on and adjust to the prescribed oxygen liter flow.*

5. *If your child needs more oxygen you can turn up the liter flow on the concentrator.*

6. *If your child needs more oxygen than the oxygen concentrator can provide switch the oxygen tubing to the oxygen tank and adjust the liter flow.*

VENTILATOR ALARMS

Ventilators have many alarms that sound for different reasons. The ventilator will alarm to let the caregiver(s) know there is a problem. Most of the time the problem is easy to fix and an emergency can be stopped from happening. We will help you with learning what to do when ventilator alarms.

The following table lists the alarm, alarm priority, ventilator action and what to do. ***Each time the ventilator alarms you must look at your child to be sure they are ok. If your child is having trouble breathing, begin giving your child breaths using the self-inflating bag. You may need to call 911 for help if your child is not doing well.*** *If your child is breathing ok on the ventilator while it is alarming use the table below to try and figure out what to do to stop the alarm. If you are not able to find out why the ventilator is alarming contact your DME Company immediately.*

Alarm	***Priority***	***Ventilator Action***	***What to do***
Circuit Disconnect	*High*	*Operates*	*Check the circuit for a piece of tubing that has been disconnected. Begin with your child and trace the circuit back to the ventilator to attach the disconnected piece of tubing.*
Low Circuit Leak	*High*	*Operates*	*Check the exhalation valve to be sure it is clean/clear and functioning properly. If unable to correct the problem with cleaning/clearing the exhalation valve change the ventilator circuit.*
Apnea	*High*	*Operates*	*Check your child to determine why the Apnea alarm is alarming (i.e. sedation medication). The alarm will shut off when your child starts to breath on their own higher than the Apnea alarm setting otherwise it will continue to operate with the apnea rate set on the Apnea Rate alarm.*
High Vte	*High*	*Operates*	*Your child's tidal volumes are greater than the High Vte alarm setting. Identify the cause for the increased tidal volumes. The alarm will shut off when your child's tidal volumes are less than the High Vte alarm setting.*
Low Vte	*High*	*Operates*	*Your child's tidal volumes are less that the Low Vte alarm setting. Identify the cause for the decreased tidal volumes. The alarm will shut off when your child's tidal volumes are greater than the Low Vte alarm setting.*

Alarm	*Priority*	*Ventilator Action*	*What to do*
High Minute Ventilation	*High*	*Operates*	*Your child's minute ventilation is higher than the High Minute Ventilation alarm setting. Identify the cause for the increased minute ventilation. The alarm will shut off when the minute ventilation is lower than the High Minute Ventilation alarm setting.*
Low Minute Ventilation	*High*	*Operates*	*Your child's minute ventilation is lower than the Low Minute Ventilation alarm setting. Identify the cause for the decreased minute ventilation. The alarm will shut off when the minute ventilation is higher than the Low Minute Ventilation alarm setting.*
High Respiratory Rate	*High*	*Operates*	*Your child's respiratory rate is greater than the High Respiratory Rate alarm setting. Identify the cause for the increased respiratory rate. Does my child need repositioning, suctioning, increased oxygen? The alarm will shut off when your child's respiratory rate is less than the High Respiratory Rate alarm setting.*
Low Respiratory Rate	*High*	*Operates*	*Your child's respiratory rate is lower than the Low Respiratory Rate alarm setting. Identify the cause for the decreased respiratory rate. Did your child receive sedation medication? The alarm will shut off when your child's respiratory rate is greater than the Low Respiratory Rate alarm setting.*
High Inspiratory Pressure	*Escalates from Medium to High*	*Operates*	*Check your child they may be coughing, sneezing or crying or they may have secretions or a mucus plug in the trach. Check the circuit as it may be kinked or there may be a lot of water in the tubing.* ***Volume Modes**: Your child's inspiratory pressure is higher than the High Inspiratory Pressure alarm setting. The alarm will shut off when the peak inspiratory pressure is less than or equal to the High Inspiratory Pressure alarm setting.* ***Pressure Modes**: Your child's inspiratory pressure exceeds the target patient pressure by 5 cmH2O or more during the inspiratory phase. The device will automatically cycle to the expiratory phase and continue to operate. The alarm will automatically terminate when the delivered pressure falls within 5 cmH2O of the target patient pressure during the inspiratory phase.*

Alarm	*Priority*	*Ventilator Action*	*What to do*
Low Inspiratory Pressure	*Escalates from Medium to High*	*Operates*	*Check your child the trach may have come out or they may have an air leak if the cuff has lost water/air. Check the circuit as it may have a hole or tear in the tubing or the tubing is loose or disconnected.* ***Volume Modes**: Your child's inspiratory pressure is lower than the Low Inspiratory Pressure alarm setting. The alarm will shut off when the peak inspiratory pressure is less than or equal to the Low Inspiratory Pressure alarm setting.* ***Pressure Modes**: Your child's inspiratory pressure is 5 cmH2O or more below the target patient pressure during the inspiratory phase. The alarm will automatically terminate when the delivered pressure comes within 5 cmH2O of the target patient pressure during the inspiratory phase.*
High Expiratory Pressure	*High*	*Operates*	*Check your child they may be coughing, sneezing or crying or they may have secretion or a mucus plug in the trach. Check the circuit to be sure the circuit is not kinked or pinched. The alarm will shut off when the delivered pressure comes within 5 cmH2o of the target patient pressure during the expiratory phase.*
Low Expiratory Pressure	*High*	*Operates*	*Check your child the trach may have come out or they may have an air leak if the cuff has lost water/air. Check the circuit as it may have a hole or tear in the tubing or the tubing is loose or disconnected. The alarm will shut off when the delivered pressure comes within 5 cmH2o of the target patient pressure during the expiratory phase.*

Alarm	Priority	Ventilator Action	What to do
Check Circuit	*High*	*Operates*	*Check your child's ventilator circuit and if unable to fix then replace the circuit. Check the type of circuit (Passive or Active) set up on the main menu.*
AC Power Disconnected	*Medium*	*Switches to alternate power source to operate*	*The ventilator will continue to operate on either the detachable, external or internal battery; however the ventilator needs to be plugged into a power source as soon as possible.*
Loss of Power	*High*	*Shuts down*	*Plug the ventilator into a power source and allow the batteries to charge before unplugging.*
Low Battery	*Escalates from Medium to High*	*Medium alarm operates for 20 minutes.* *High alarm operates for 10 minutes.*	*Plug the ventilator into a power source and allow the batteries to charge before unplugging.*
Replace Detachable Battery	*Low or High*	*Low alarm if battery is nearing end of useful life.* *High alarm if battery fails.*	*Switch the ventilator to a different power source and contact your DME Company to replace the detachable battery.*
High Internal Oxygen	*High*	*Operates*	*Disconnect oxygen tubing from ventilator. Switch your child's ventilator to the backup ventilator and contact your DME Company. If your child does not have a backup ventilator begin giving breaths to your child with a self-inflating bag and call 911.*
High Temperature	*Escalates from Medium to High*	*Operates*	*If the ventilator is in direct heat (i.e.; outside on a hot day, sitting in a window with sun shining on it, near a heating element) move ventilator to a cooler location. Check the temperature of the flow from the circuit to determine if it is too hot.*
Keypad Stuck	*Low*	*Operates*	*Switch your child's ventilator to the backup ventilator and contact your DME Company immediately. If your child does not have a backup ventilator begin giving breaths to your child with a self-inflating bag and call 911.*
Ventilator Inoperative	*High*	*Shuts down if can't provide therapy safely. Or continues to operate at a limited level.*	*Switch your child's ventilator to the backup ventilator and contact your DME Company. If your child does not have a backup ventilator begin giving breaths to your child with a self-inflating bag and call 911.*
Ventilator Service Required	*High*	*Operates*	*Switch your child's ventilator to the backup ventilator and contact your DME Company. If your child does not have a backup ventilator begin giving breaths to your child with a self-inflating bag and call 911.*

VENTILATOR BATTERIES

Your ventilator will be plugged into an electrical outlet once you are home. During car trips and outings your child's ventilator will use a detachable (battery that comes off and on) or external battery. You will need to know the amount of time the battery will last. Some ventilators have car adapters so they can be plugged in during a car trip. When you are planning to leave the home, always make sure your battery is fully charged. Always have your back-up battery with you as well.

AC POWER/INTERNAL BATTERY

- *AC Power charges the internal and detachable battery*
- *It does not charge the external battery*
- *The internal battery lasts for 3 hours.*
- *Once the battery is depleted, it takes approximately 8 hours for the battery to re-charge.*

DETACHABLE BATTERY

- *If the Trilogy is not connected to a power source or external battery, it will function on the detachable battery.*
- *The detachable battery will operate the Trilogy for 3 hours.*
- *When the Trilogy is connected to an electrical outlet, it automatically charges the detachable battery.*

EXTERNAL BATTERY

- *The Trilogy can function from a 12V DC Free Standing car battery using the external battery cable connector or using a DC car adaptor.*
- *The external battery will not charge the internal or detachable batteries.*

Emergency Preparedness

PACKING YOUR EMERGENCY BAG

When you are traveling or simply just at home with your child, an emergency bag of equipment should always be ready for you to use. Accidents can happen. We want you to be ready. Your emergency bag should be large enough to have all the contents in 1 bag. As you get close to going home, we want you to bring a bag to the hospital.

TRAVEL SUPPLIES/EQUIPMENT

- *Same size trach and obturator*
- *Smaller size trach and obturator*
- *Suction catheters*
- *Self- inflating bag WITH face mask*
- *Normal saline*
- *Extra trach ties*
- *Lubricating jelly*
- *Scissors*
- *Syringe if your child has a cuffed trach*
- *HME'S*
- *Phone list of emergency contacts and physicians*

- *Ventilator*
- *Feeding Pump*
- *Portable Suction Machine*
- *Pulse Oximeter Machine*
- *Oxygen Tank*
- *Nebulizer (if necessary)*

- *Fully charged back-up battery*
- *Car adapter for your battery*

Be sure to take all electrical cords for equipment in case you need to plug equipment into an electrical outlet when you reach your destination.

NOTIFYING COMMUNITY RESOURCES

It is also important to notify your community services before your child's discharge. This will let them be better prepared in case of an emergency or should there be an interruption of electrical services. These community services include:

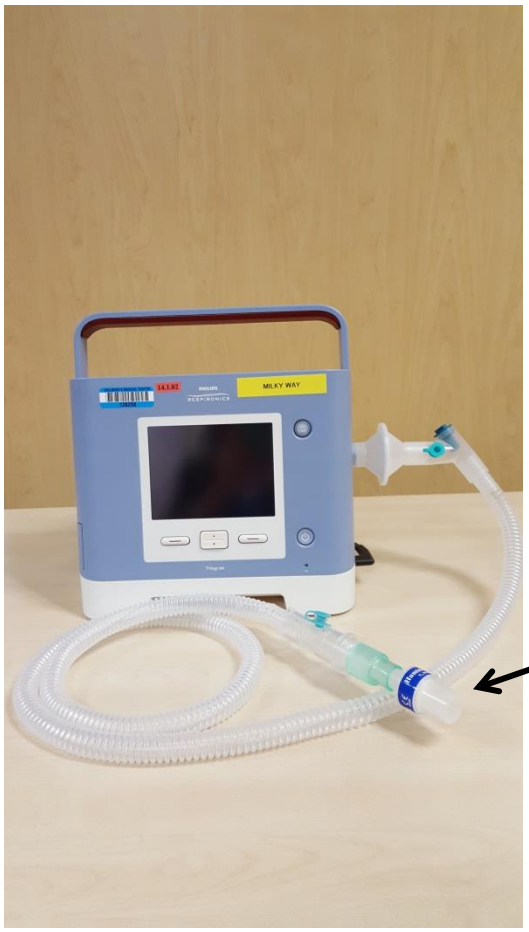
- *Ambulance*
- *Local Police*
- *Electric & Gas Company*

Be sure that your home address is visible from the street. This will make it easier for EMS to locate your home in case of an emergency.

PREPARING FOR TRANSPORT

STEPS FOR ASSEMBLING THE CIRCUIT FOR TRANSPORT

1. *Wash and dry your hands with soap and water for 15 seconds and dry your hands with a clean towel.*
2. *Gather your supplies.*
3. *Turn heater off.*
4. *Remove the heater wires from the temperature probe ports on the circuit.*
5. *Remove the short tubing from the bacterial filter that connects to the ventilator.*
6. *Remove the angled end of the long tubing from the water chamber and connect to the bacterial filter.*
7. *Briefly check your child for chest rise to make sure the ventilator is functioning correctly.*



Be sure to attach a HME in line with the ventilator circuit for transport.

SAFETY

SAFETY PRECAUTIONS

- *Be sure to organize your child's equipment (ventilator, suction machine, etc.) so it is easily available to you or your home health nurse.*
- *Never put the ventilator in water.*
- *Never plug the ventilator in if it is wet.*
- *Do not store any liquid on or near the ventilator.*
- *Do not store your child's ventilator near any fire hazards (stoves, fireplaces, open flames) where it could catch on fire.*
- *Never plug the ventilator into an electrical outlet that is being used to power to another appliance. Plug the vent into an electrical outlet that has no other appliance attached to it.*
- *Always plug your ventilator directly into an electrical outlet or use a power strip provided by your DME Company.*
- *Never try to fix the ventilator. Contact your DME Company to schedule any repairs needed for your child's ventilator.*
- *Take extra care to see that younger children do not play with the ventilator screen and accidentally change your child's ventilator settings.*
- *Always have a working phone with you in case an emergency should happen.*

OXYGEN SAFETY

- *Oxygen tanks should be secured so that they will not tip over.*
- *Oxygen tanks should be stored away from things that can cause fires like a fireplace, space heater or kitchen stove.*
- *Do not use aerosol sprays around your child.*
- *Always plug your oxygen concentrator directly into an electrical outlet or use a power strip provided by your DME Company.*
- *You should never smoke around your child or oxygen.*

TRILOGY VENTILATOR & SAFETY CHECKLIST

Physician Ordered Settings	Patient summary window read out data
Dual Prescription	Low Pressure
Mode	High Pressure
Inspiratory Pressure/IPAP	Total Respiratory Rate
Tidal Volume	Exhaled Tidal Volume (Vte)
PEEP/EPAP/CPAP	Leak
Pressure Support	
Set Breath Rate	
Inspiratory Time	
Trigger Type	
Trigger Sensitivity	
Flow Trigger Sensitivity	
Flow Cycle Sensitivity	
Rise Time	
Ventilator Settings	
Mode	
Inspiratory Pressure/IPAP	
Tidal Volume	
PEEP/EPAP/CPAP	
Pressure Support	
Set Breath Rate	
Inspiratory Time	
Trigger Type	
Trigger Sensitivity	
Flow Trigger Sensitivity	
Flow Cycle Sensitivity	
Rise Time	
Alarms	
Disconnect Alarm	
Apnea Alarm	
Apnea Rate Alarm	
Low Tidal Volume	
High Tidal Volume	
Low Minute Volume	
High Minute Volume	
Low Respiratory Rate	
High Respiratory Rate	
Equipment Safety Check	Patient Safety Check
☐ Spare trachs readily available ☐ Same size w/obturator ☐ Smaller size w/obturator ☐ Self-inflating bag w/mask attached to oxygen tank ☐ 15-liter flow regulator attached to oxygen tank ☐ Oxygen tank fill level ☐ Suction machine readily available ☐ Detachable battery fully charged	☐ Trach tie one finger tight ☐ Connected to Pulse Oximeter as ordered ☐ Ventilator set as ordered

EQUIPMENT CLEANING/MAINTENANCE GUIDELINES

Equipment/Supply/Filter	***Clean***	***Replace***
Suction Machine	*Daily* • *damp cloth with hot water and mild detergent*	*NA*
Suction Machine Canister	*Daily* • *hot water and mild detergent*	*Per DME*
Suction Machine Filter	*NA*	*As needed*
Oxygen Concentrator	*Daily* • *damp cloth with hot water and mild detergent*	*NA*
Oxygen Concentrator Filter	*As Needed* • *remove dust from filter/vent*	*Per DME*
Pulse Oximeter Machine	*Daily* • *damp cloth with hot water and mild detergent*	*NA*
Ventilator	*Daily* • *damp cloth with hot water and mild detergent*	*NA*
Ventilator Circuit	*NA*	*Per DME*
Green Circuit Adapter – Trilogy vents only	*NA*	*Each circuit change*
Heater Chamber (reusable vs. disposable)	*Each circuit change* • *hot water and mild detergent*	*Each circuit change clean or change*
Heater Wires	*Each circuit change* • *damp cloth with hot water and mild detergent*	*NA*
Bacterial Filter	*NA*	*Each circuit change*
Ventilator Foam Filter	*As Needed* • *hot water and mild detergent*	*Every 6 months*
Cough Assist Machine	*Daily* • *damp cloth with hot water and mild detergent*	*NA*
Cough Assist Foam Filter	*As Needed* • *hot water and mild detergent*	*Every 6 months*
IPV Machine	*Daily* • *damp cloth with hot water and mild detergent*	*NA*
IPV Foam Filter	*As Needed* • *hot water and mild detergent*	*Every 6 months*
Enteral Feeding Pump	*Daily* • *damp cloth with hot water and mild detergent*	*NA*

General Guidelines:

- *Do not use harsh cleaners/disinfectants as this may cause damage to equipment.*
- *Keep all equipment in a well-ventilated area.*
- *Keep all equipment out of direct sunlight.*

GLOSSARY

Carbon Dioxide: *waste gas exhaled from the lungs*

Condensation*: when water vapor is changed into liquid water*

Cuff*: a small balloon on the inside of the trach that is either filled with air or water*

Exhalation*: breathing air out*

Exhalation Valve*: part of the expiratory limb; where air exits into the room*

Face mask*: a soft piece that fits over the nose and the mouth and attaches to the self-inflating bag*

Inhalation*: breathing air in*

Mucous Plug: *a collection of mucous in the trach tube making it difficult for your child to breathe*

Normal saline*: sterile salt water*

Oxygen*: a gas we breathe in*

Self-inflating bag*: a breathing bag that fills with room air and does not need any oxygen to fill; also known as an Ambu Bag*

Trachea*: the windpipe or airway*

Ventilator*: a small, portable machine that moves air in and out of the lungs*

Ventilator Circuit*: plastic tubing that connects the ventilator to your child's trach*

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