SV300/350 Ventilator

Service Manual

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Revision History

This manual has a revision number. This revision number changes whenever the manual is updated due to software or technical specification change. Contents of this manual are subject to change without prior notice. Revision 1.0 is the initial release of the document.

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3.3 O2 Pipeline Test

1. Connect the O2 pipeline supply.
2. Connect the test lungs.
3. Depress the system switch to turn on the ventilator.
4. Select [**New Adult**] in standby mode. Set ventilation type to [**Non-invasive**] and O2% to 40%. Then select [**Start Ventilation**] to allow the ventilator to enter ventilation status.
5. Make sure that the ventilator ventilates normally.
6. Disconnect the O2 pipeline supply.
7. As O2 pressure decreases, the high level alarm [**O2 Supply Failure**] is triggered.

3.4 System Test

1. Enter system check:
   - Enter system check screen after power-on. Connect O2 supply and block the Y piece as prompted. Then select [**Continue**] to start system check item by item.
   - Push the [**Standby**] key. Standby screen appears after your confirmation. The standby screen displays last system check time and result. Select [**System Check**]. Connect O2 supply and block the Y piece as prompted. Select [**Continue**] to start system check item by item.
2. System check items include:
   - Blower test: test the rotation speed of the blower ;
   - O2 flow sensor test: test the flow sensor in O2 limb ;
   - Insp. flow sensor test : test the inspiratory valve and flow sensor ;
   - Exp. flow sensor test : test the expiratory flow sensor ;
   - Pressure sensor test: test the pressure sensors at the inspiratory and expiratory ports;
   - Expiratory valve test ;
   - Safety valve test;
   - Leakage (mL/min) ;
   - Compliance (mL/cmH2O) ;
   - Circuit resistance (cmH2O/L/s) ;
   - O2 sensor test.
3. System check result can be:
   - Pass: indicates that check of this item is completed and is passed.
   - Fail: indicates that check of this item is not completed and is failed.
   - Cancel: indicates that check of this item is not completed;
   - O2 Supply Failure : indicates that O2 supply is insufficient when O2 flow sensor test and O2 sensor test are being carried out;
   - Monitoring Off : indicates that O2 concentration monitoring function may not be switched on when O2 sensor test is being carried out.
4. When system check is being performed, the system prompts [**Running**] on the right side of the current check item. In this case, if you select [**Skip**], the system stops check of this item immediately and displays [**Cancel**]. Check of the next item begins at the same time. If you select [**Stop**], the system stops check of the current item and also check of the remaining items, and displays [**Cancel**].

Alarm	Level	Possible cause	Recommended action
Pinsp not achieved	L	Ppeak fails to reach the set value.	Check if the tube is leaky. If yes, re-connect. Refer to ***5.2.5Check the Accuracy of Pressure Sensor*** to check the pressure sensor. If it is inaccurate, perform calibration again. Check parameter settings.
TV not achieved	L	TV fails to reach the set value.	Check if the tube is leaky. If yes, re-connect. Refer to ***5.2.4Check the Accuracy of Flow Sensor*** to check the flow sensor. If it is inaccurate, perform calibration again. Check if parameter settings are reasonable.
Pressure limited in sigh cycle	L	After sigh function is activated, the pressure in sigh cycle reaches pressure high alarm limit-5cmH2O.	Check parameter settings, including pressure alarm high limit setting. Check if there is pressure sensor failure alarm (corresponding to strings “Device Failure 09” and “Device Failure 21”). If it is faulty, replace it. If the failure persists, replace the VCM.
O2 supply failure	H	O2 supply is insufficient.	Check if high pressure is connected and is sufficient. Diagnose if the O2 proportional valve is abnormal on the valve diagnostic screen (refer to ***6.6.3.3 Insp. Valve and O2 Proportional Valve Satus Error***). If yes, replace the O2 proportional valve. Replace the VCM.
Tinsp too long	L	Spontaneous breathing in PSV mode fails to satisfy the exp. sensitivity all the time so that expiration is unable to end.	Check parameter settings. Check and replace pressure and flow sensors.
Please check exp. flow sensor	H	Exp. flow sensor is faulty.	Perform zeroing. Refer to ***5.3.9Pressure and Flow Zeroing (Factory)***. Calibrate the exp. flow sensor. Refer to ***5.3.2Flow Calibration (Factory)***. Replace the exp. flow sensor.