# Training guide – basic

## Flow anesthesia system

The following steps are based on the primary operating functions for anesthesia machines (ISO 80601-2-13). By following this training guide the trainer will assure that all users get the same introduction to the basic and essential functions of the Flow anesthesia machines.

| 1 | **Start the anesthesia system from power off** | Draw attention to the ON/OFF switch. Allow user to engage and power device "ON" from an off-state. |
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| 2 | **Connecting the patient breathing circuit to the anesthesia system** | Review all of the individual connection points (insp., exp., manual bag, etc.) on the casette, and allow the trainee to connect the complete patient circuit. |
| | | Demonstrate where the water trap is located, and show how to interact with it. |
| | | Attach the sampling line. |
| | | Instruct the trainee to disconnect and replace the CO2 absorber and vaporizers. |
| | | If an Additional Fresh Gas Outlet is a selectable option, elaborate on utilization into great detail, while emphasizing the fact that Emergency Ventilation does not support the AFGO function. |
| 3 | **Perform SCO (system checkout)** | Ask user to navigate through schematic overview, making evident that they understand each and every required interaction during SCO. |
| 4 | **Suction and aux O$_2$** | Activate/Deactivate suction and Auxillary O2. Show how to increase/decrease the suction's pressure. |
| 5 | **Standby view** | Stress that gas or ventilation is not delivered until you press "Start case". |
| | | Display the Standby screen, showing how to initiate the different checks from this screen. |
| | | Ask the user how they normally perform manual/automatic leakage checks, imitating the differences by applying both the same and differing basic procedures with Flow. |
| | | Discuss the potentials to pre-set ventilation mode and gas settings. |
| | | Demonstrate the selection of Flows two Patient Categories, and the associated ramifications on alarm limits within each category. |
| 6 | **Setting fresh gas flow and concentration** | Go through membrane buttons, while also increasing/decreasing/confirming settings with the rotary knob. |
| | | Clarify why you can't deliver 100% O$_2$ and agent on a Flow. |

| 7 | **Manually ventilating the patient** | Exhibit main APL-valve function – making certain to point out that it is electronically controlled, and WILL NOT be functional in the very rare circumstances of a machine failure. |
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| 8 | **Setting ventilation control parameters** | Show direct access buttons and ventilation settings tab. |
| 9 | **Switching between ventilation modes** | Have user choose or change to preferred ventilation mode. |
| 10 | **Setting agent concentration** | Explain how the vaporizer is activated.<br>Explain how to toggle between channeled anesthetic volatiles.<br>Demonstrate how to fill the vaporizer. |
| 11 | **Gas concentrations measurements** | Highlight where the gas analyzer measurements are revealed on screen, and how to distinguish from inspiratory (VTi) and expiratory (VTe), etc. |
| 12 | **Ventilation parameter measurements** | Explain where the ventilation parameter measurements are shown on screen and what they represent. |
| 13 | **Alarm limits** | Simulate an alarm event, and show how the active alarms are presented on screen. Discuss priority system and stacking.<br>Demonstrate the variety of ways to access the Alarm Profile window.<br>Show how to change alarm limits.<br>Explain the differences in alarm limits due to patient category selection. |
| 14 | **End case** | Guide user to end a patient case, and review the implications of choices displayed within the "End case window". |
| 15 | **Emergency ventilation** | Describe and showcase the function in detail, providing special attention to:<br>a. NO anesthetic agent delivery possible during emergency ventilation feature.<br>b. The difference between Emergency Ventilation APL-valve (mechanical, stand-alone) and the electronic (normal) APL. Once more, if AFGO outlet is available, reemphasize that it is not a usable outlet during emergency ventilation. |
| 16 | **Battery Back-up** | If power main is interrupted, approximately 90 minutes (fully charged) of internal battery backup and normal operation will prevail. Demonstrate indicator light transformation on front of device by disconnecting/reconnecting power plug. During this, point out countdown and associated alarm notification located on the interface. Be sure to note the 18 minute alarm, medium priority alarm, and the 3 minute alarm. With regard to the 3 minute alarm, show that it increases severity to a high priority alarm notification. |