According to this scenario, a full anesthesia gas machine checkout procedure is already completed at the beginning of the day. In our centre we use the Aisys CS2 machine in all operating rooms. As per my understanding, when AAs come to check the gas machine, a Full Test takes almost 5-6 minutes to be completed, which is not necessary between cases. Also, I know that the whole circuit is getting changed after each case. Regarding the gas machine check, a Circuit leak check must be done by using Checkout button in the monitor between cases. However, if it is up to me, I will also observe all the pipes and tanks connections, check oxygen pressure and a functional suction.

According to the Anesthesia Apparatus Checkout Recommendation(AACR) 2008, whenever a machine is moved, maintained, or the vaporizers are replaced, or at the start of each day, 15 distinct items should be examined or confirmed (Table 1). Also,eight of these items should be examined before beginning any surgery (#2-4-7-11-12-13-14-15). On many machines, some of these processes might be a part of the automated checkout process. Following these procedures will provide the anesthesia team the assurance that the machine will be able to perform all necessary life support activities before they start a case. In addition, it will usually take less than five minutes at the start of the day and less than two minutes in between cases (Feldman et al, 2008)

Table 1

To be completed daily, or after a machine is moved or vaporizers changed;

#1: Verify Auxiliary Oxygen Cylinder and manual ventilation device (Ambu Bag) are available & functioning(Feldman et al, 2008).

#2: Verify patient suction is adequate to clear the airway(Feldman et al, 2008).

#3: Turn on the anesthesia delivery system and confirm that AC power is available(Feldman et al, 2008).

#4: Verify availability of required monitors, including alarms(Feldman et al, 2008).

#5: Verify that pressure is adequate on the spare oxygen cylinder mounted on the anesthesia machine(Feldman et al, 2008).

#6: Verify that the piped gas pressures are ≥ 50 psig(Feldman et al, 2008).

#7: Verify that vaporizers are adequately filled and, if applicable, that the filler ports are tightly closed(Feldman et al, 2008).
#8:Verify that there are no leaks in the gas supply lines between the flowmeters and the common gas outlet(Feldman et al, 2008).
#9: Test scavenging system function(Feldman et al, 2008).
#10: Calibrate or verify calibration of the oxygen monitor and check the low oxygen alarm(Feldman et al, 2008).
#11: Verify carbon dioxide absorbent is fresh and not exhausted(Feldman et al, 2008).
#12: Perform breathing system pressure and leak testing(Feldman et al, 2008).
#13: Verify that gas flows properly through the breathing circuit during both inspiration and exhalation(Feldman et al, 2008).
#14: Document completion of checkout procedures(Feldman et al, 2008).
#15: Confirm ventilator setting and evaluate readiness to deliver anesthesia care.(Anesthesia time out)(Feldman et al, 2008).

In addition, we must always ensure the waste gas scavenging system is operational and properly connected and after each case machine should be wiped and decontaminated, supplies should be replenished or refilled if necessary.
By performing these steps before each case, you ensure the anesthesia machine is safe and ready for the next patient.

1. American Society of Anesthesiologists (ASA). (2023). Recommendations for Pre-Anesthesia Checkout Procedures. Retrieved from www.asahq.org

2. ECRI Institute. (2021). Anesthesia Machine Checklist for Daily Use. Retrieved from www.ecri.org