

Perform A CO₂ Recovery

Video instructions available at: <https://youtu.be/6Tz26jclhr0>

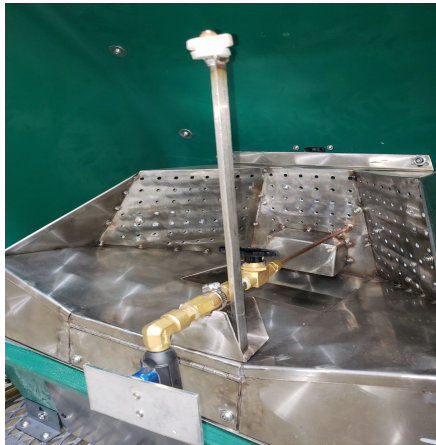
1. Perform a zero and span gas calibration before doing a CO₂ Recovery Test. (See Maintenance - Calibrate The Concentration Sensors for instructions)
2. Ensure a clean air filter is installed in the system.
 - During this entire recovery test, DO NOT breathe into the GreenFeed unit and DO NOT let any animals near the unit. When breathing, stand at least 2 meters (6 ft) away from the unit.
3. Ensure the fan is on, the pump is on, and no animals have been in the unit for at least 5 minutes.
4. Attach a CO₂ cylinder to the recovery release system. Once the cylinder is attached and the seal is broken, do not detach the cylinder until all recovery releases have been performed. Also, do not turn the canister upside down while it is attached to the release device.
5. Use a known calibration weight to ensure that the scale is properly measuring mass. Ensure the scale shows the same mass every time you weigh this calibration weight.
6. Measure and record the mass of the CO₂ release system to the nearest 0.1 gram. A table is provided at the end of this tutorial for recording the masses.



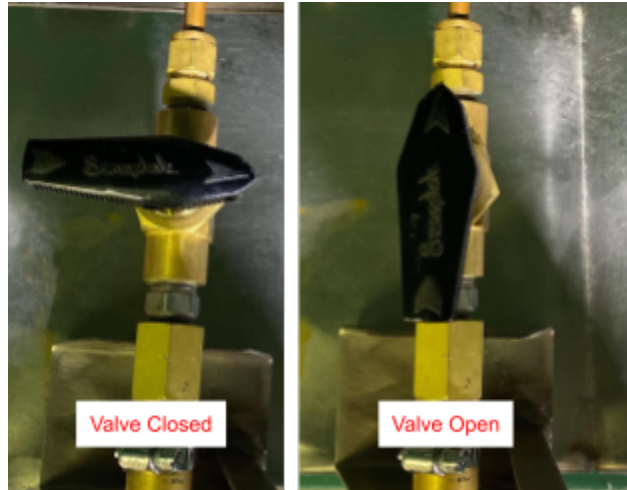
7. Record the current time displayed on the GreenFeed screen immediately before proceeding to the next step.
8. Place the CO₂ cylinder + release system in the GreenFeed unit. There is a specific opening in the dish manifold (see photo below). Ensure the release nozzle is fully inserted into that opening.



- Once GreenFeed detects the release system, you will hear the chime sound.
9. Once the nozzle is fully inserted, rest the release system on the dish. See photo below.
 - The fan and pump should both be on for the entire duration of every CO₂ release. If the fan is off before starting a release, hold the RFID tag (on the top of the release system) closer to the RFID antenna until you hear the fan start to turn on, then wait 15 seconds before proceeding.



10. After ensuring the fan has been on for at least 15 seconds, begin releasing the CO₂ by rotating the release valve to the "open" position. Ensure you hear a "whoosh" sound.

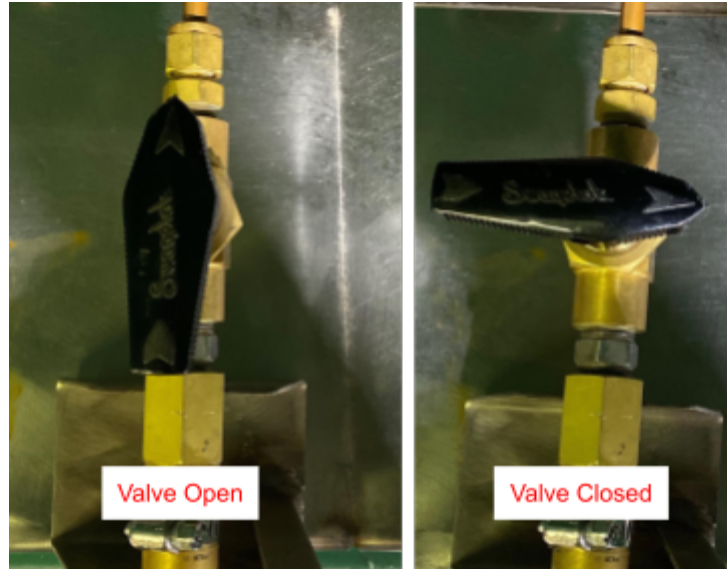


11. Wait ~3 minutes, then record the time - again, using the GreenFeed screen - then immediately proceed to the next step.

- The GreenFeed screen will give you a status of the current release. In addition, it will display how much time is left in the release.
- The chime will sound when the release is finished.



12. Turn the release valve closed. Then remove the CO₂ cylinder + release system. Warm up the CO₂ cylinder to remove any frost that has formed around the cylinder and then dry off the CO₂ cylinder.



13. Measure the mass of the CO₂ cylinder + release system again and record this value as the end mass. Over 3 minutes, the system should release 20~30 grams.
14. Wait ~3 minutes for the system to reach a baseline. Ensure no animals or people go near the unit during this time. When the time is finished, the chime will sound, and the screen will show:



15. Repeat steps 5 through 14. You need to do at least three releases total.

(The screen and chime will guide you through each release at the end of steps 7, 10, and 13. If you would rather perform the steps without the guided assistance, it is safe to ignore the cues.)

GreenFeed Unit: _____ Date: _____

Release Start Time	Release End Time	Cal Mass	Start Mass	End Mass	Difference