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# DIRT ROWED

BY EMILY BEERS

Filthy, under-maintained rowing machines cost affiliates money and add seconds to workouts.





Courtesy of James Lister

Rows and rows: Regular maintenance and cleaning are required to keep fleets in top shape.

You're finishing the 1,000-m row during Jackie and can't afford to waste time before moving to the thrusters. In a rush to unstrap your feet, you complete your last stroke, release the handle and let it smash into the monitor.

Your affiliate owner might admire your intensity but loathe your carelessness, and if you dismantled the rowing machine with such abandon at Syracuse University in New York, you'd find yourself in the doghouse with the crew.

"If a novice rower let go of the handle like that, everyone around would stop, and eyes would look over with a 'who did that?' look. It's an unacceptable norm in rowing to let the handle snap back against the cage," explained James Lister, assistant rowing coach of the Syracuse women's crew.

Worst-case scenario: "Throwing the handle" can damage or break the monitor, the most expensive part of the machine, explained Greg Hammond, a member of the marketing team with Concept2 Inc., manufacturer of rowing products since 1976.

"Usually it just breaks the glass screen, but if it gets slammed hard enough the whole monitor can break," he said.

Throwing the handle can also ruin the slotted chain swivel—the brass ring—that attaches to the handle and protects the chain.

"The chain and the bungee cord are the most vulnerable things on the machine. If you don't take care of the chain, you'll have to replace it," Hammond said.

Releasing the handle recklessly is just one ergometer faux pas Hammond said athletes should avoid. Proper rowing-machine etiquette and maintenance go a long way in saving affiliate owners time and money replacing parts or even entire machines, he added.

"The rowers are probably the most expensive machines you buy as an affiliate owner. It's important to learn how to take care of them."

## Cleaning Crew

Keeping ergometers free of dirt is a great way to prolong the lifespans of the machines. That might seem obvious, but few people take the time to run a cloth over a machine that usually sits in a somewhat gritty warehouse space full of dust and chalk.

“I sit down on some (rowing machines) at CrossFit affiliates and I’m like, ‘How do you even know if these are running right? They feel so bumpy,’” said Hammond, who trains at Champlain Valley CrossFit in Williston, Vermont. “Owners need to mandate at their box that wiping a machine is the same as putting your plates away.”

## Keeping ergometers free of dirt is a great way to prolong the lifespans of the machines.

When machines aren’t wiped down, dirt builds up on the monorail and seat rollers, preventing the seat from tracking smoothly. Eventually, seat rollers become dented and must be replaced. A bumpy ride also means athletes are forced to work harder by using their hamstrings more than they should to pull themselves up the slide, Hammond added.

Keeping machines dirt-free is simple: Handles, seats and monorails should be wiped with a cloth and disinfectant or soap after every use. To promote compliance, Hammond suggested keeping cloths and spray bottles—as well as posting a list of cleaning duties—near the ergometers. Included on that list should be a reminder to athletes not to store the handles in the holsters.

Using the holster stretches out the bungee cord and ruins the recoil feature of the bungee, Hammond explained.

“When the bungee doesn’t return the handle properly, the chain doesn’t get retracted fast enough between strokes.”

The only time the holster should be used is when an athlete is taking a break between intervals, Hammond added. The rest of the time, handles should be kept against the cage.

When Lister coached at Duke University in North Carolina, he said he removed the holsters from all the ergometers, which immediately solved the problem.

Finally, educating clients to speak up when they notice problems—such as a low battery or a loose screw—goes a long way in keeping ergometers running well.



When dirt builds up on the rails, athletes are in for a bumpy ride.

Emily Beers/CrossFit Journal



Wiping sweat off the machine after every use will prevent dirt and grime from accumulating.

Emily Beers/CrossFit Journal

“When screws are loose, they cause the frame to wobble. That puts extra stress on the machine and can damage it over time,” Hammond said. Numbering the machines makes reporting problems easier, he added.

“Then when someone gets finished with class, they can say to the coach, ‘Rowing machine Number 13 feels bumpy,’” Hammond said. “This will help the affiliate owner save time figuring out which machine needs maintenance.”

## Annual Maintenance

Oiling the chain, cleaning the flywheel and updating the monitor are three other maintenance concerns.

Determining how often you need to oil your machine and clean your flywheel largely comes down to climate. Ergometers in cold-weather gyms don’t need to be cleaned as often as those in dry, dusty, hot locales, Hammond explained.

On average, he recommends oiling the chain twice a year. The most effective way to do this is to pour a teaspoon of lightweight oil, mineral oil or [3-in-One oil](#) onto a cloth, pull the chain out as far as it will go and gently rub it down, Hammond said.

“Don’t drip oil directly onto the machine,” he warned. “If you drip oil, it just goes everywhere and makes a mess.”

Cleaning the flywheel is also simple and should usually be done about once a year, Hammond said. Open the cage and [wipe or vacuum](#) the flywheel until all the dust and debris have been removed. A dust-free flywheel is important to ensure an accurate drag-factor reading, he explained.

“Air goes in and out (of the flywheel), and when it is clogged the air doesn’t leave as fast as it should, so the flywheel spins longer between strokes. This is essentially the drag factor,” Hammond said. When air doesn’t leave the flywheel as fast as it should, the drag decreases, meaning an athlete has to increase the drag by raising the damper on the side of the cage to generate the proper tension.

A higher number on the damper—numbers range from one to 10—increases the drag, but the only way to know the exact drag on an ergometer is to test the machine’s drag factor. This can be done by selecting “display drag factor” on the monitor and then taking a few hard strokes until the monitor spits out a number between 90 and 150.



Courtesy of Greg Hammond

Greg Hammond of Concept2 said recent upgrades to monitor firmware were designed to make life easier for CrossFit athletes.

Lightweight rowers usually keep their drag at around 110—which corresponds to about three or four on the damper of a well-maintained machine—while heavyweight rowers often prefer to row in the 130-range with a damper set at about five or six.

“One-third of our company is doing CrossFit now. It’s a huge part of our culture, too. And our updates reflect this.”  
—Greg Hammond

The last piece of the maintenance puzzle is updating your monitors whenever Concept2 releases new firmware—the computer program embedded into the monitor. This requires going to the Concept2 website and following the updating instructions.

“Just like your iPhone, these updates fix little things in the monitor that you might not even know are happening,” Hammond said.

On the new [Performance Monitor 5 \(PM5\) models](#), this can be done with a USB flash drive, while the slightly older [PM4](#) and [PM3](#) models must be linked directly to a computer with a printer cable. It only takes five to 10 minutes to update the monitor, Hammond explained.

Concept2 updates firmware if it finds a bug in the system or if it introduces a new feature to the monitor, Hammond explained. The most recent PM5 update—Version 20—was released in October 2015, so if you haven’t updated your firmware since then, your rowers are out of date.

One recent addition Concept2 added to the monitors is the undefined-rest feature, a monitor update for PM3, PM4 and PM5 models.

“The only exception would be the very first run of PM3s, but those (machines) are over 10 years old,” Hammond said.

Undefined rest was introduced specifically for the CrossFit community—yet another reason for affiliate owners to stay on top of what’s new, Hammond added.

While rowers tend to know exactly how long they plan to rest during an interval workout, CrossFit athletes usually don’t. For example, athletes often won’t be sure how long the deadlifts and box jumps will take them after each 500-m rowing interval in a workout such as Christine—3 rounds of a 500-m row, 12 deadlifts and 21 box jumps.

Older firmware caused the monitor to shut off after two minutes of inactivity, but now athletes can plug in an undefined rest period, ensuring the machine doesn’t go blank in the middle of the workout.

“One-third of our company is doing CrossFit now. It’s a huge part of our culture, too. And our updates reflect this,” Hammond said.

## Better Performance, Longer Life

Natalie Mastracci rowed for Syracuse University from 2007 to 2013. Her erg performances suffered when she rowed on improperly maintained, bumpy machines, she said. The handful of times she rowed at globo gyms, she was struck by the disrepair of the machines.

“Oh my goodness. The chains are always so rickety (at globo gyms). They don’t coil back into the machine the way they should,” Mastracci said. “I think it would make at least five to 10 seconds’ difference on a 2-km row, depending on how poorly the machine is maintained and how inaccurate the drag factor is. If the cord is totally stretched out, I don’t even think you could get the right split if you tried.”

Like competitive rowers, CrossFit athletes are also committed to their numbers. So knowing a poorly maintained machine will negatively affect a score should be incentive enough to make sure machines are kept in tip-top shape, Hammond said.

A properly maintained machine is a win for the athlete, but it’s also a cost-saving win for the affiliate owner, he added.

“If you take good care of the machine, it can last 20 years.” ■

## About the Author

Emily Beers is a CrossFit Journal contributor and coach at [CrossFit Vancouver](#). She finished 37th at the 2014 Reebok CrossFit Games.