SMS Equipment
Experts Corner

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CONSTRUCTION NEWSLETTER

Getting winter-ready - 5 rules from our experts

With Canada and Alaska's cold climate, keeping equipment operating smoothly and safely year around calls for extra measures.

In this edition of Experts' Corner, we picked the brains of two SMS Equipment service supervisors responsible for keeping hundreds of pieces of equipment operational during the winter months. Service Supervisor Stephen Stanley manages a team of service technicians who maintain equipment in their shop, and Field Service Supervisor Terry Penner's team handles the calls from the field.

Here, from Stephen and Terry, are five rules for keeping your equipment operating smoothly and keeping your workers safe.

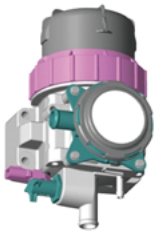
Did You Know? In February of this year, Winnipeg set a new record of -38.8 Celsius, with its old record of -37.8 C set in 1879.

Rule One - Cover all bases.

Here, from Stephen and Terry, are five rules for keeping your equipment operating smoothly and keeping your workers safe.

Winter readiness begins with a thorough tune-up in the fall. Bringing a machine into the shop for preventive purposes may seem like a distraction from an already busy schedule. Still, it's the only way of reducing the risks of expensive downtime and, even more critical, threats to operator safety. Changing to winter grease and oil, adding fuel conditioner, swapping KCCV filters, and giving all electrical systems a thorough check should all be part of the program.

Stephen: We're never sure where equipment will wind up, so we always prepare equipment for the worst-case scenario. So, for us, it makes no difference if it's minus ten outside or minus 45. When the machine's been through our shop, I will send it anywhere in the world.



Komatsu Closed Crankcase Fuel Injection System Ventilation (KCCV)

Crankcase emissions (Blowby gas) are passed through a KCCV filter. The KCCV filter traps oil mist that is returned through the crankcase, while the gas, almost oil mist free, is fed back to the air intake.

Rule Two - Equipment issues may be health and safety issues.

Inadequately maintained equipment can fail unexpectedly, creating potentially dangerous situations for people in the field. This is especially true in remote regions where it may take days for help to arrive.

Terry: A lot of the incidents we see are related to the tier-4 emission control systems. If a system isn't properly maintained and calibrated, it can shut down a machine or limit it to an idle. So, an operator can be stuck in the middle of nowhere in a machine that won't move with no heat in the cab.

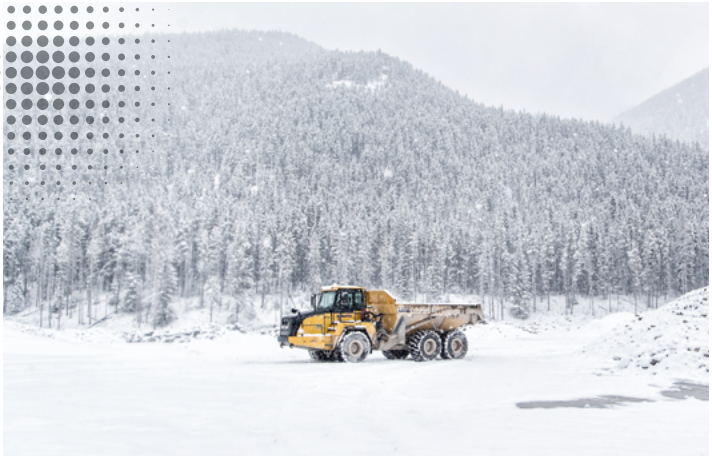
Stephen: One point that people don't always think about is that if a piece of equipment dies on an ice road, you could be blocking access for an entire community.

Rule Three - Routines are essential.

Taking extra time to start up a machine in cold weather might seem inconvenient when the pressure is on to complete a job. However, established routines ensure that the proper steps are taken every time and that the equipment will continue to run reliably.

Winters are very unpredictable. Sometimes we are hit with icy mornings or wake up to a blanket of snow, and sometimes we manage to escape arctic conditions completely. One inevitable thing is the temperatures are dropping, and just like you would with your car and other outdoor equipment, your Komatsu Equipment needs some special maintenance and care for the winter.

Download our winter checklist guide



Stephen: Equipment is hydraulically driven, and there's a lot of oil to heat up, so warm-up procedures are critical. But Tier-4 emission control systems don't let you idle for very long. So, you have to let the machine warm up for ten or twenty minutes and then start working immediately, or the emission system will shut you down.

Terry: One of the leading causes of equipment not starting is battery failure, and other than inadequate preventive maintenance, a significant cause of that is too many cold starts. If it's minus 30 and you fire up a piece of equipment that hasn't been running for a few days, and there's no block heater or other source of heat, such as an auxiliary diesel heater, that puts a lot of strain on the starting system. If you don't respect the equipment, it will punish you.

Download our battery care guide

Rule Four - Make education a priority.

Equipment has evolved in the past decade, and part of staying operational and safe in the winter is ensuring that operators are up to date on procedures and understand the early warning signs of equipment malfunction.

Stephen: Many people think equipment is like our cars and that you just turn the key and drive away, which is not the case. Others in the industry were taught to do things a certain way ten or fifteen years ago, but that's changed because technology and machines have changed. But not everybody's been updated on that.

Terry: I think the most extensive knowledge gap out there is the emission system because that's new to many people. So, operators need to know how it works and understand the notifications.

Rule Five - Compare the costs of maintenance with the costs of no maintenance.

Let's face it - preventive maintenance might seem like an expensive distraction when your equipment is booked solid and you're struggling to meet multiple deadlines. However, when the costs of downtime are factored in, the financial benefits of preventive maintenance are well established. This is especially true with equipment operating in cold regions, where the odds of failure and its consequences are amplified. So, whether it's bringing in equipment for scheduled maintenance, conducting safety checks, or ensuring that operators follow proper cold weather start-up procedures, it's essential to keep equipment maintenance and uptime management on the front burner.

SMS EQUIPMENT

Safety Tip: Remember that the weather also affects your working environment. Deep frost can make digging very difficult and can put a lot of strain on the components of your machine. Wheels and tracks can also slip much more quickly on frozen or icy grounds causing damage to other equipment, structures, and people.

Terry: Having equipment down for a couple of days is a big deal for our customers. It will cost a lot of money, and it will affect other aspects of the job site such as other machines, crews, scheduling delays, etc. There can also be time pressures. For example, if you're using an ice road, you might have limited days to get the job done and more of your equipment out.

Stephen: If a machine won't start and the nearest service location is 900 kilometres away, it might cost thousands of dollars to get there. And then you're in the middle of nowhere trying to get something heated, or oil changed when it doesn't want to flow. Whereas if you brought it into the shop, you could drain and change the oils, add fuel conditioner, and all that stuff at a fraction of the cost.

Safety Tip: In average working temperatures, hoses can flex, but there is potential for hydraulic hoses to crack in cold weather climates. Exposed and uninsulated electrical wiring can become brittle and break. You can avoid these issues by giving the machine plenty of time to warm up before putting it to work.

The Bottom Line: Preventive measures often get put on the back burner during a busy construction season. The challenge is that these actions have a visible cost and inconvenience. Yet, the benefits are typically unseen because they accrue over time—the benefits of being winter-ready include less downtime, fewer service incidents, and longer equipment life. However, the most important benefits are the trust operators can place in well-maintained, properly-operated equipment and the peace of mind and higher productivity that are a direct result. Winter, more than any other time of year, puts these into perspective.

Are you interested in chatting with our service groups to help make sure your equipment is ready for winter?

GET IN TOUCH WITH AN EXPERT

Our equipment is currently working in the most northern locations that experience some of the harshest cold climates, from Alaska, Yukon, Northwest Territories, Nunavut, and more. Find out how we can help keep your machines running in optimal condition through the winter season.