



# SHOP TALK

Establish a foundation for equipment health and maintenance



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In snow and ice management operations, an integral success factor is the healthy operation and utilization of vehicles and equipment. Keeping equipment maintained, cleaned and functional contributes massively to your ability to provide an exceptional level of service (LOS) to client properties and the community. Also, consider how proper maintenance can positively affect employee productivity, morale and company profitability throughout the snow season. Let's talk shop management and identify best practices for year-over-year success.

## The shop's role in snow

The shop is an internal service component of most organizations and provides a variety of support services depending on operational needs. Key responsibilities of a shop include:

- Performing preventive maintenance in the off-season (or during landscaping season)
- Maintaining a reliable parts inventory and supplier relationships
- Determining proper personnel needs (count and quantity of hours)
- On-call schedules for working through the winter season
- Performing quality repairs and not cutting corners

Not all organizations have a dedicated shop manager, but most will at least have an employee who is responsible for overseeing mechanics and yard personnel. A shop manager must be diligent in proactively planning to be sure that company operations

staff have the vehicles, equipment and tools to perform their jobs.

The shop manager must also be a strong and professional communicator with their staff, as well as the rest of the organization.

## Preventive maintenance

In the fleet and shop environment, preventive maintenance is a must! A shop should develop a preventive maintenance plan for all its assets, and also communicate the importance to the organization of staying on schedule with preventive maintenance services.

As you can see in the sample graphic on page 41, preventive maintenance schedules can vary drastically, depending on the asset. Vehicles and equipment that must be used during the offseason receive regular maintenance throughout the entire year, whereas assets primarily designated to snow will see much



## PREVENTIVE MAINTENANCE PLAN

Set up a preventive maintenance plan for your winter assets to avoid unnecessary downtime. Each asset will have a unique plan depending on its type and use.

	Type of Asset				
	Light-Duty Truck	Heavy-Duty Truck	Snowblower	Snow Plow	Skid Steer
<b>PM Frequency (PM Level 1)</b>	5,000 miles	250 hours	100 hours	Every month In-season	250 hours
<b>Services Included</b>	Engine Oil and Filter Tire Rotation Tire Balance Safety Inspection Check Air Filter	Engine Oil and Filter Safety Inspection Fuel Filter Fuel/Water Separator Check Air Filter Hydraulic Filter	Engine Oil and Filter Check Belt or Drive Check Paddles Check Throttle	Hydraulic Fluid Safety Inspection Inspect Edge or Blade Inspect Trip Springs Inspect Frame	Engine Oil and Filter Safety Inspection Fuel Filter Fuel/Water Separator Check Air Filter Hydraulic Filter
<b>PM Frequency (PM Level 2)</b>	30,000 miles	1,000 hours	500 hours	Summer Inspection	1,000 hours
<b>Services Included</b>	All of PM Level 1 Transmission Service Replace Air Filter Check Alignment	All of PM Level 1 Transmission Filter Differential Filter Coolant Filter Drain and Fill Coolant Drain and Fill Hydraulic	All of PM Level 1 Replace Belt Replace Paddles	All of PM Level 1 Fabricate to Repair Change Latch Springs Pivot Pins Bushings	All of PM Level 1 Gear Case Oil Chain Tension Boom Pins Boom Bushings

more robust preventive maintenance during the offseason.

The reason it is done this way is because it focuses on reducing the downtime of assets, which is time the assets cannot be used and are “out-of-service.” The effects of a solid preventive maintenance plan are realized when you reduce overall downtime of assets. When you perform timely preventive maintenance and stay on schedule, you reduce the possibility of unexpected breakdowns that place constraints on your operations.

In the snow and ice industry, what we do can be considered an emergency operations service. One of the worst things that can happen is untimely equipment breakdowns in the middle of a storm when the issue could’ve been prevented by properly maintaining assets.

### Parts and inventory management

Managing your parts and inventory is vital to the success of a shop and fleet. Not every organization has the resources to house a large inventory of parts, so here are a few tips on how you

can reduce your inventory costs and speed up repair times.

#### Track your common parts failures.

This can be done in shop software, Excel spreadsheets or even a notebook. You want to find out what parts fail most often and carry a manageable stock in the shop. Typically, these are tires, hoses, filters, lights or common wear items like plow edges, hardware, brakes, belts, etc. Many of these parts aren’t your most expensive inventory, so sometimes you can have larger supplies of them on-hand.

**Review expensive parts.** Next, look at your more expensive parts that are prone to fail and may cost you moderate downtime if you don’t have spares readily available. These could be electrical sensors, controllers, joysticks, sprayer nozzles and systems, chains, augers and more. Look at your inventory and your previous parts usage. A good rule of thumb is that if you use a particular type of part three times or

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more in a year, you should carry an inventory of that part. Make your best judgment of how many you think you need on your shelf going into the winter season. If you used 10 last season, you may want to stock at least three or four at all times. If you only used three during the whole season, it may be sufficient to keep one on the shelf.

**Identify your least common failures.** Typically, these will be more expensive parts. Without them, you run the risk of severe downtime or putting an asset out of commission for an extended period. While you may not necessarily stock these parts, you should work closely with vendors to determine who can supply the part as quickly as possible. Don't wait until the part fails to start looking for a supplier. Be proactive so you know who you can get it from, an estimated cost, and a general estimated time of arrival. In some cases, if you have a strong relationship with vendors, they may be willing to stock parts for you and keep it in their inventory since they know there's a possibility you or their other customers may need it.

To recap this section, consider the options for parts and inventory management; and really focus on building those strong vendor relationships for dependability and predictability.

## Shop organization

Setting up a shop for efficiency and consistent workflow is important. Consider your shop facility design, number



**INVENTORY AND ORGANIZATION:** Having parts on hand can reduce unnecessary downtime during winter operations. Depending on your organization, use summer/fall to begin preparing equipment for the winter season.

of mechanics, number of assets, parts inventory, and how you want equipment to flow in and out of the shop. Most importantly, you want mechanics to be able to repair assets as quickly as possible while keeping quality at the forefront of their mind to reduce comebacks (repeat failures due to lack of workmanship).

Work with the mechanics to lay out the shop plan. The most important components within the shop include:

- Toolboxes
- Lifts and racks

- Parts and inventory shelves
- Lubrication tanks, pumps and reels
- Nuts, bolts, and all other expendables
- Drains, vents, hose reels and all other fixtures

Ensure that the most used components are the closest and most accessible to their workstations and that the shop and all supplies stay clean and organized to reduce safety hazards and improve mechanic workflow through the shop.

It is helpful to draft a design/layout of the shop that designates where all items go, as well as a plan to keep everything organized. All shop personnel must keep an orderly operation, so make sure everyone understands their responsibilities and the benefits of keeping the shop organized.

## Shop personnel

Another consideration in the shop is the mechanics and how equipped they are to successfully perform their jobs. You must think of the resources they have at their disposal and what they might need, as well as their level of proficiency with different assets.





**TRAINED TO MAINTAIN:** Make sure the shop team is trained to service and maintain assets and that they have the equipment and tools needed to efficiently repair or maintain the fleet.

Following is a list of the most important considerations for shop personnel when it comes to preparing your organization for snow and ice operations.

- Do you have enough mechanics to service and maintain all assets?
- What is their level of experience with different assets?
- Do they have the hand or power tools to perform their job?
- Are there specialty tools that should be purchased?
- Do they have the proper training to work on specific equipment?
- Are they willing to work extended shifts in extreme conditions?
- How well do they communicate with the staff?

All of these are equally important and provide a solid foundation for a successful shop. Ensure mechanics are trained and prepared to work on

all company assets; and if there are gaps in their abilities or performance, address them through continuing education, training or certification opportunities.

**Summary**

We've just begun to tip the iceberg! While this certainly isn't an exhaustive list of everything that goes into setting up and managing a successful shop operation, it begins to show what you will need to consider when building the shop environment.

Dive deep into these areas and prepare the team for any possibility, and to be able to troubleshoot, repair and maintain all company assets with proficiency and quality. **SB**

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