




tips for reducing equipment costs

By Preston Ingalls



One thing I learned long ago was the bottom-line impact of reducing costs. I don't mean cutting costs – I mean reducing costs. There is a significant difference. One brings immediate relief to the bottom-line while the other brings more sustainable results.

Having worked with hundreds of organizations across the world, one thing has become evident...money covers all sins. The general philosophy with many organizations is as long as they're making money, they must be doing something right. There is a thread of logic to that. However, what has sustained the growth of many businesses was sheer volume of work -- not necessarily the efficiency of that work. What kept many construction companies in a state of prosperity in the past was sheer demand.

Here are 74 cost saving tips to help small and large fleet managers or owners to reduce costs:

1: Know the impact of why you should reduce costs.

The average heavy highway construction firm has 25 to 30 percent waste in their maintenance or shop costs. Most shops are far from models of excellence and efficiency. Remember: the money you save goes straight to the bottom line.

2: Get a robust Computerized Maintenance Management System.

Key to managing costs is tracking and analyzing them. You can't improve costs until you track them. Many software programs are geared toward accounting, and the fleet management module is not as strong. Some programs are better than others, and one size does not fit all. If you *contact me*, I'll be happy to give you some recommendations. Get an affordable program and learn it. The cost of buying and installing a program that works for you is less than the loss of money not being tightly managed.

3: Use the CMMS.

What you get out of your CMMS depends on the accuracy of what you put into it. If your company's CMMS is weak, resolve the issue by giving more training, and practicing. You can't learn a system through osmosis you need to practice with it to gain competency. Stop with the paper – this is the 21st Century!

4: Set a goal.

Develop a series of objectives to improve your costs. For example, your overall goal might be "reduce our maintenance costs as a percent of revenue by 10 percent by January." Then establish sub-goals, such as "reduce overtime by 10 percent" or "increase inventory turns by 20 percent." You may have to adjust the goals as you go along. If you focus on the right areas, improvement will come.

5: Where are your costs relative to others?

Find out where you are compared to others through benchmarking. (To find out more about benchmarking, click [here](#).) You may be overspending compared to others with similar businesses and fleet sizes. For a full discussion of this point, plus industry, best-in-class and world class averages, go to the benchmarking section at the end of this paper.

6: Hold a cap on overtime.

Ten percent is a reasonable expectation for a busy fleet. But be careful: taking overhead away may be best done slowly. You may want to reduce it in increments. Explain why it is being cut.

7: Provide incentives for proactive activities.

Too often we reward people for the wrong performance (overtime for breakdowns, recognition and praise for fixing emergencies, etc.). Consider bonuses or incentives tied to cost reductions, improvements in preventive maintenance percentages, increased uptime, etc. Reward the right behavior to keep it coming.

8: Ask the team for their ideas.

Hold meetings with your shop and field mechanics and stress the need to lower costs. Challenge them to come up with savings ideas.

9: Use the cost reduction ideas.

Make cost reduction a priority. Show it is an important strategy. Track your goals on charts in the shop. Discuss shortcomings and praise progress. And if an idea doesn't pan out, just try another.

10: Training is critical.

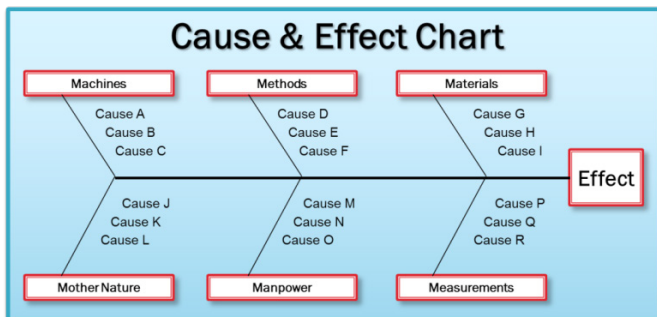
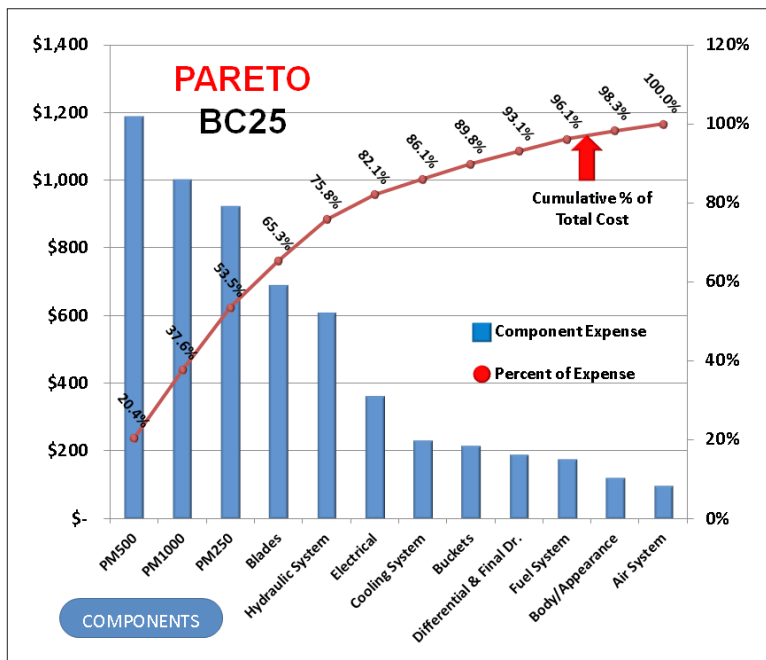
Make sure your people have the necessary skill sets. Poorly trained technicians take longer to perform their jobs and produce more call-backs. A good rule of thumb is to spend about 5 percent of your payroll in training.

11: Eliminate “buddy jobs.”

I have seen unnecessary use of two-man jobs many times while analyzing maintenance operations. If they aren't really needed for safety – do you really need to send two? If you need a second person, could it be a lower compensated helper?

12: Master the use of a Pareto chart.

Run a Pareto chart of your highest costs. This is a chart that shows costs in a descending order from highest to lowest with the emphasis on identifying the vital few from the trivial many. Use it to focus on your highest costs. For example, this chart shows a great opportunity to reduce the costs on a backhoe's preventive maintenance service intervals, since the PMs add up to 53.3 percent of the total costs. Strategies to attack these costs could include outsourcing, reducing non-valued PMs or/and extending frequencies. [Use this Excel template](#) to assist with this.



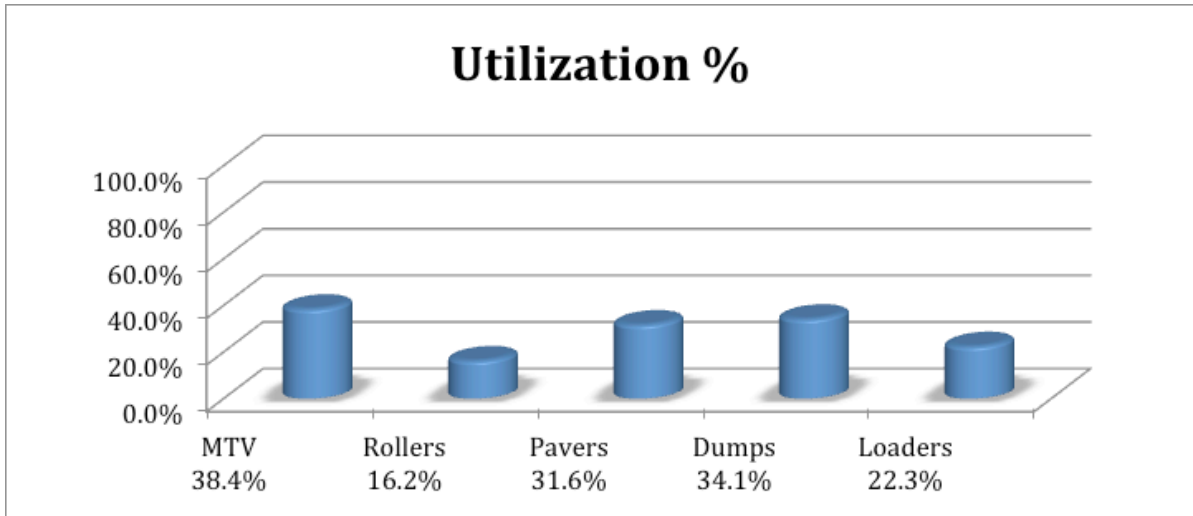
13: Use a Cause and Effect Diagram.

Charter a team to tackle one of the higher costs identified by the Pareto chart. Using this diagram, pin-point the potential causes to the high costs and identify the most probable ones. Apply another Cause and Effect analysis to the most probable ones and gather facts and data on each of those. Learn more about Cause and Effect Diagrams [by viewing this YouTube video](#).

14: Cut idling.

Idling an engine causes twice the wear on internal parts compared to driving at regular speeds. An idling engine is not operating at its peak temperature, which means that fuel does not undergo complete combustion. This leaves a fuel deposit that can condense on cylinder walls, which can contaminate the oil and damage parts of the engine. Idling equipment consumes, on average, 40 to 50 percent

of equipment run hours and 20 to 30 percent of your fuel cost. By reducing idling, you will increase your equipment life and save on fuel and preventive maintenance costs. It also reduces pollutants from emissions. Several ways to reduce idling include: installing GPS monitors, educating employees, auditing equipment in the field and using auto-idle shutdowns on vehicles and equipment.



15: Improve utilization.

Utilization is affected by many things, but excessive spare equipment lowers it. Don't have more equipment on the books than you actually need – increase the reliability of existing equipment to minimize the need for spares. Spares conceal our inefficiencies. For an example, above is an actual utilization report, which showed a client his key equipment wasn't getting enough hours.

16: Shorten the work week.

By reducing from five to four days during slower times, like the off-season, you can still cover off-season work but at a lower labor cost.

17: Cut emergency work.

Make sure your emergency work is real emergency work. Because emergency work can cost as much as four to five times as much as non-emergency work, challenging the sense of urgency can help reduce it. Have a clear system to classify your equipment by its impact to your operation, such as A Class, B Class, C Class, etc. Not all equipment is equal in priority. A paver without a backup is more important than one with a backup. Look at the impact and probability of equipment failing and classify them accordingly. Then use a priority system (e.g. P1=Must be done within 24 hours, P2=Must be done within 3 days, P3=Must be done within 7 days, P4=Must be done within 30 days, P5=Perform during winter shutdown or during an overhaul). By matching the correct classification of equipment to the correct priority, you can cut back on some of the costly emergencies.

18: All workers are not of equal value, so act accordingly.

Ask the shop supervisors who the most productive mechanics are and reduce the hours (overtime, etc.) on those

that are not, or weed them out. We often accept too much inefficiency because we simply don't want to address it.

19: Implement planning and scheduling.

Planning and scheduling work will improve maintenance wrench time or productivity by an average of 50 to 80 percent. You can cost justify a full-time maintenance planner if you have at least six to eight mechanics or techs. A prepped job goes faster than an un-prepped job. Dedicate and train one technician as a planner and you can actually double the amount of work you perform or let you operate with fewer people. [Contact me](#) for sources and seminars for these planners.

20: Provide oversight.

Make sure there is adequate oversight, since work can take longer if it is not being sufficiently supervised. "Inspect what you expect." Audit to ensure quality and minimize errors. Just knowing someone will be potentially inspecting or viewing work can keep many on their toes and a little conscious of their level of activity. Too many supervisors get enslaved to their offices and don't spend enough time supervising. Supervisors need to:

- Ensure tools/equipment are available
- Reduce interruptions and distractions from multiple assignments
- Focus on housekeeping and tool control

- Manage fatigue, work schedules
- Manage boredom by task assignments (rotation)
- Ensure appropriate rules/procedures are followed
- Use job aids and checklists to minimize recall

Tip 21: Manage omissions.

Omissions can create common failures that affect numerous downstream components. Omissions can lie concealed or dormant until they trigger events that cause an accident or major failure. A variety of surveys by the nuclear industry, the aircraft industry, and the National Safety Council point to consistent results:

- About 80 percent of all events are caused by human error. Twenty percent are the result of equipment failures. In reality, these statistics are conservative. In some industries, the numbers are closer to 90 percent human error and 10 percent equipment failures.
- When we break down human errors, we find that 70 percent of all human error is the result of latent organizational weaknesses or errors within the organization, whereas about 30 percent are individual errors.

One of the studies found the following from technician work:

- Fasteners left loose or incomplete, 22 percent
- Items left locked or pins not removed, 13 percent
- Caps loose or missing, 11 percent
- Items left loose or disconnected, 10 percent
- Items missing, 10 percent
- Tools or spare fasteners not removed, 10 percent
- Lack of lubrication or over lubrication, 8 percent
- Panels or covers left off, 3 percent

Having someone inspect finished work ensures a better level of quality and stresses its importance to employees.

Tip 22: Provide resources.

Mechanics or technicians are less productive when they spend time looking for the items or tools to complete the job. A front-end assessment of the job can help identify most of the tools and parts that need to be available to improve wrench-time.

Tip 23: Plan materials in advance for non-emergency jobs.

Use planning and scheduling to have materials available on time without having to spend the extra money on such services as FedEx. Wasted labor waiting on parts can be minimized with good planning and preparation.

Tip 24: Improve parts inventory storage.

Ensure there is an inventory of all items along with their locations and that they have assigned bins. So much time

is wasted searching and retrieving parts. A designated place using a simple coordinate shelf-bin location method can reduce the time spent looking with the old “I know one is here somewhere” mindset.

Tip 25: Secure the stockroom.

Inventory accuracy goes down dramatically when store-rooms are left unsecured with open access. A cage with lock and key or swipe card can reduce those losses.

Tip 26: Consider manning your stockroom.

If you have at least 2,000 to 2,500 line items (individual part numbers or SKUs) you can cost justify one attendant. Having an attendant reduces the time wasted having techs searching for parts. It also provides better cost control over the inventory.

Tip 27: Establish clear spending levels.

Make sure there are spending approval levels to avoid excessive spending and buying. It should be clear when someone needs to seek approval for a purchase – for example, on an item costing more than \$1,000.

Tip 28: Use runners.

Use lower cost labor to pick-up and deliver parts. You are wasting time and money having mechanics and technicians doing this. More importantly is the lost opportunity as to what they could be doing instead.

Tip 29: Eliminate obsolete items.

Use “less applied labor” to purge unnecessary parts and materials after a skilled and knowledgeable person has identified the practical use of the part(s). From my experiences in the field, many mechanics or technicians are packrats and will hoard everything they can because they are convinced they will eventually use it. The problem is that eventually we can’t find anything because we have everything. The cost to sit there, especially if the parts room is manned, averages a carrying cost of 25 to 35 percent of the inventory value. Verify that the supported equipment is still in service. Scrap it or resell it – but purge it.

Tip 30: Use barcoding.

Barcoding can be quicker and more accurate than writing. Most inventory programs support barcoding.

Tip 31: Track turn rates.

Turn rates (how often items and inventory value are replaced) are important indicators to show what is and is not moving. Slow and no movers can be removed but

you need to have a sense of their usage. Tracking turns improves efficiency and costs. Industry turn averages are one turn a year – World Class is two to five turns a year. This is calculated as Cost of Inventory Sold over Average Inventory.

Tip 32: Keep the storeroom clean.

Clean the stores or parts room on a routine basis. Clutter and trash make it unsafe and difficult to search and retrieve items.

Tip 33: Stage jobs.

Stage or kit jobs for upcoming work in a designated place. This reduces the cycle time to complete work. An example would be to produce standard kits for PMs (filters, belts, etc.) to shorten prep time. A separate area needs to be marked off to place these jobs so the parts aren't used for other work and to expedite finding them when the job comes due.

Tip 34: Implement a reliability program.

A good reliability program identifies and corrects defects through a root cause analysis process, thus reducing the need to perform certain activities. If I can eliminate the need, I can reduce my costs. This is proactive maintenance. It reduces the needs for parts, labor and downtime. Here is a link that describes the process:

http://en.wikipedia.org/wiki/Root_cause_analysis

Tip 35: Use consignment parts.

Use consignment parts as much as possible – you only pay for it when it is used.

Tip 36: Examine vending machines.

There are many vendors now with vending machines that can distribute parts and keep a record of their use. This controls access and provides better tracking than other methods.

Tip 37: Eliminate uncontrolled parts storage areas.

Collect all the uncontrolled satellite stores (pigeon-holed and rat-holed parts) to eliminate ordering parts already on-hand. Another advantage is having a record of those to prevent redundant ordering.

Tip 38: Watch parts usage in the Computerized Maintenance Management System.

Use a CMMS system to manage parts – unmanaged parts usually will cost three to four times their value. Also, by tracking parts usage, you can identify culprits or bad actors, e.g. “Why are we having problems with this particular bearing?”

Tip 39: Label and mark.

Label everything to make it easier to find – time is money. Use overhead banners, placards, labeling, floor tape, to easily identify locations, tools, special storage, etc.

Tip 40: Shop around.

Look for bulk deals (grease, oil, etc.). You can sometimes get in a rut and buy from the same vendors without comparing prices. It is good to shop around to keep your regular suppliers competitive.

Tip 41: Use a BOM.

Develop Bill of Materials for each piece of equipment, or at least crucial equipment. Having a list of parts reduces valuable time researching. It also helps with the purging of obsolete parts when equipment is sold or salvaged.

Tip 42: Cycle count.

Use cycle counting to provide an ongoing count. This improves accuracy over the traditional annual inventory count process. Use an ABC system (see below) to identify parts value. Usage and counts are randomly generated each day so that everything gets counted, with the most valuable parts counted more frequently. Cycle counting reduces the costs and labor burden of an annual inventory count and improves accuracy. It also allows you to examine reasons for anomalies easier because the cycle count is done daily and therefore discrepancies can be found quicker than waiting until the end of the year.

ABC analysis

Inventories are classified on the basis of their consumption value:

A: High value, so low volume

B: Medium value, so larger inventory level


C: Low value, so highest inventory level

Tip 43: Eliminate redundancy.

Eliminate redundant parts and material from different suppliers. Many times we will have the exact same item but it appears to be different because we have several vendors for the item.

Tip 44: Identify critical or insurance spares.

They are handled separately from the other parts and should be listed. A good process to identify them is to



look at the lead time, cost to carry, impact or downtime, etc. Use this [source](#) to help identify whether they should be considered critical spares or not.

Tip 45: Review safety stock.

Improve safety stock calculation—review and refine. It is a level of extra stock that is maintained to mitigate risk of [stock-outs](#) (shortfall) due to uncertainties in supply and demand. Adequate safety stock levels permit operations to proceed according to their plans. Safety stock is held when there is uncertainty in the demand level or [lead time](#) for the product; it serves as an insurance against stock-outs. They need to be reviewed periodically and adjusted.

Tip 46: Learn more about MRO.

Maintenance, Repair and Overhaul is the science of inventory control applied to maintenance spares. Rigorous adherence to inventory control process is a science... not an art. There are [some excellent classes on this topic](#) to increase knowledge and improve cost management of inventory control.

Tip 47: Manage fuel tightly.

Minimize human touch as much as possible – the more automated, the more accurate.

Tip 48: Use technology to track fuel.

Fuel management technology can take many forms, including electronics that help reduce fuel consumption through direct injection, variable valve timing and other technologies. Fuel telematics include GPS monitoring, fuel usage and burn rates, drivers' driving behavior and equipment usage. Controlling your costs through fuel telematics utilization should be a must for all companies. Typical installation is \$300 to \$500 per vehicle and \$30 to \$50 a month monitoring, and it is worth it. A GPS/telematics system will:

- Lower your job response time
 - Increase planning/scheduling effectiveness by telling you the exact location of your equipment
 - Tell you how long your equipment is sitting idle
 - Lower gas consumption through accurate monitoring
 - Identify improvements with the gathered data
- If you don't use telematics, do a sample burn rate to determine your fuel consumption.

Tip 49: Understand the impact of fuel management.

By using telematics you can:

- Reduce fuel costs by monitoring inappropriate routes taken by drivers, private mileage/unauthorized use,

excessive speeds, idling, etc.

- Verify time/job sheets by journey reports
- Monitor load-out time
- Determine how long a truck is in front of a paver
- Find out how many cubic yards were excavated today
- Provide satellite navigation to aid your drivers in their daily tasks
- Provide wireless communications to improve communications between your mobile workforce and office
- Remotely monitor mileage for service schedules (PM)

Tip 50: Increase utilization through alternative use.

Look for alternative uses of equipment – any other function it could serve to generate revenue. Examples would be using your truck fleet to contract haul during the off-season. If it is sitting, it's not paying for itself.

Tip 51: Charge for idle time.

Charge for idle time (ownership cost) for non-use time when the equipment is on site but not being used. This discourages operations from hoarding equipment that could be used elsewhere. By eliminating spared equipment and putting pressure on improving reliability of primary equipment, costs goes down as utilization increases.

Tip 52: Develop an equipment optimization team.

By chartering a team to conduct the analyses and make recommendations on elimination and acquisition of equipment, better decisions will be made. Set targets for purging equipment each year. Our experiences show that most fleets have 20 to 25 percent opportunity for reduction. Our clients typically are able to eliminate 7 to 10 percent in the first year.

53: Review and shed non-value-added PMs.

On average:

- 80 percent of PM costs are spent on activities with a frequency of 30 days or less
- 30 to 40 percent of PM costs are spent on assets with negligible failure impact
- 25 percent of all PM tasks are considered unnecessary
- 25 percent have the wrong frequencies
- 20 percent or less components fail within the prescribed periods
- 60 to 70 percent of all PMs are never revised from their original development
- 15 percent or less of components on a scheduled component replacement actually need the replacement at that prescribed time

**Tip 54: Extend PM frequencies.**

It may surprise you how long you can stretch them. Keep a record to see if there is any degradation or increase in failures. Conditions of use could alter the patterns for scheduled PMs, such as filters.

Tip 55: Remember what PM is designed to do.

Although PM can include cleaning, lubrication, testing and scheduled replacements, the most important task in PM is inspection. This means ensuring the equipment components are in a specified condition. Specify what condition you want to find or not find versus the traditional “check belt... check radiator” list. Having a clear set of equipment specs as a checklist is more robust and ensures the likelihood the inspecting technician is examining those conditions rather than relying on recall or memory. It is important that the PMs have clear pass/fail criteria to set a standard of acceptance.

Tip 56: Use Failure Mode and Effects Analysis (FMEA).

Inspection helps to detect early signs of changes in condition – a warning of impending failure. But when to examine and what to examine is not always easy. Many inspection tasks and intervals were determined by OEMs who wanted to protect their equipment during warranties; they offer best guesses based on “let’s be cautious and check this often.” By using an [FMEA study](#) of the equipment, you can identify which parts are most problematic and impactful when they fail and identify the best way to mitigate or prevent their failure or detect early enough to take correct action.

Tip 57: Look for every opportunity to outsource maintenance services.

You cannot retain core competencies in every area, nor should you try. Look for those services that make sense due to the degree of specialization, uniqueness of facilities or equipment support, and frequency of use, such as tires, painting, transmission work, welding, engine overhauls, small vehicle services, etc.

Tip 58: Look at the possibility of outsourcing your parts room.

There are companies that will do it if the inventory value and purchases per year warrant it. They are called integrated suppliers. You sell them the inventory and they sell it back. It is less hassle if done right. They should have better buying power since their size and inventory control is their core competency, where it may not be yours.

Tip 59: If you outsource inventory control—manage it.

Maintain strong relationships with your partner and manage them just as you would your own folks. Have routine planning meetings and periodic (quarterly progress review) meetings. Set turn, accuracy rates and service level goals for them. Manage it! Remember, their objective is to turn over parts, which means selling parts. That may not always be in your best interest.

Tip 60: Manage your vendors.

Measure all key vendors using Key Performance Indicators – hold them accountable for performance and costs. Set specific goals and measures with them and periodically monitor them to ensure compliance. Make the expectations clear. Evaluate their performance using a rating system of cost, service, delivery, quality, etc.

Tip 61: Help your major suppliers/vendors to improve.

They may not know how and you are only as strong as your weakest link. You may have to spend time with them to set clear expectations and provide advice on how to meet your expectations.

Tip 62: Have a work order system.

Work orders should cover 100 percent of all work in order to have accurate costing. This is essential in managing your costs. You need a process to request work, get work prioritized, get it approved, get it activated for execution and – most important – something to charge costs to as well as establishing a history of those activities.

Tip 63: Charge all maintenance costs (labor and material) to equipment.

You can’t improve it if you don’t have a record of it.

Tip 64: Capture history carefully.

Maintaining good equipment histories on all equipment helps to identify problem prone and costly equipment. Focus on 80/20 rule: 80 percent of your problems will come from 20 percent of your components, and 20 percent of your equipment will produce 80 percent of your costs.

Tip 65: Examine your shop location configuration.

Analyze the value of a centralized versus decentralized shop arrangement if you have multiple shops. In many cases, you can maintain higher quality shop in a central location rather than trying to spread them out. The costs of field maintenance versus shop maintenance may be cheaper in the long run.

Tip 66: Look at keeping your equipment longer.

This can help reduce your capital expenditures and help with depreciation. If you couple this with increasing utilization, your ROI improves significantly.

Tip 67: Consolidate lube types.

Consolidate lube types to minimize duplication. Make sure you are following the manufacturers' recommendations for the type because type of lubrication is based on speed, loads and temperature requirements. All lubes are not the same.

Tip 68: Improve lube storage and handling.

About 50 percent of all lube related failures are due to poor handling and storage practices. Improving storage by covering containers, using filters, eliminating open containers, avoiding storing drums on their end, taking periodic samples of bulk storage and using smaller, more frequent turnover of storage can help improve performance and costs.

Tip 69: Train in Tribology.

Train mechanics or techs in tribology, or the science of lubrication. Most have never had any formal training in lubrication and that results in poor decisions, poor execution practice, and more costs. [Here is an example of the training and certification.](#)

Tip 70: Use the Economic Order Quantity (EOQ) formula. When purchasing, use the EOQ to ensure you don't purchase too much of a "good deal." A 20 percent savings on items that will sit on the shelf for the next five years may not have been the best use of the company's money. Here is a [link showing the formula.](#)

Tip 71: Implement operator care.

A formal process to enroll operators in the basic care of their equipment is a great savings strategy. By having the folks closest to the equipment taking better care of it and reporting problems while they are small you can eliminate 70 to 75 percent of potential large-scale failures later. More ownership of the equipment leads to stewardship and better performance. This lowers your maintenance costs.

Tip 72: Avoid spending over 50 percent of residual value a year.

The rule of thumb is to avoid spending more than 50 percent of the residual or resale value per year on maintaining the asset. The following chart shows what happened when a company did this for several years. The far right hand column shows the maintenance cost per hour to keep the equipment serviceable. This is putting good money after bad.

Equip. #	Year	Description	Replacement Value	2010 Hrs	2010 MT Cost	2011 Hrs	2011 MT Cost	2012 Hrs	2012 MT Cost	3 Yr Hrs	3yr Mt Cost	3-Yr Repair Cost/Hour
Total					\$ -		\$ -		\$ -		\$ -	
MTV332	2003	ROADTEC SHUTTLE BUGGY	\$ 350,500	345	88224	626	142241	573	\$35,528	1,543	\$ 265,994	\$172
LDR198	1993	1992 CAT 950F WHEEL LOADER	\$ 40,000	102	19214	336	50467	227	\$61,577	665	\$ 131,257	\$198
LDR205	1993	KAWASAKI 90ZIII RT LOADER	\$ 41,000	205	1794	231	67738	716	\$35,049	1,152	\$ 104,581	\$91
SCP177	1988	613 C SCRAPER	\$ 60,000	0	268	196	5057	125	\$79,443	321	\$ 84,769	\$264
DZR422	1974	CAT D9G DOZER	\$ 30,000	6	49	60	16016	56	\$45,403	122	\$ 61,468	\$504
LDR036	1990	KAWASAKI 60ZII LOADER	\$ 17,000	204	5202	304	11160	123	\$42,232	631	\$ 58,594	\$93
LDR311	1997	KAWASAKI 90ZIV2 RT LOADER	\$ 60,000	25	903	72	11630	221	\$43,810	318	\$ 56,342	\$177
BKH734	1997	CAT 416C 4WD BACKHOE	\$ 20,500	202	14818	327	4931	250	\$34,338	779	\$ 54,087	\$69
DZR499	1975	1975 CAT D9 TRACTOR	\$ 30,000	12	4171	23	4118	0	\$38,871	35	\$ 47,160	\$1,347
RDW118	1989	BLAW-KNOX ROAD WIDENER	\$ 50,000	9	5182	5	23464	117	\$16,571	131	\$ 45,217	\$345
LDR240	2005	CAT 953C TRACK LOADER	\$ 90,000	29	11630	87	299	172	\$24,637	288	\$ 36,566	\$127
MTG868	1986	CAT 120G MOTOR GRADER	\$ 42,000	0	0	0	0	22	\$20,454	22	\$ 20,454	\$930
BTR622	1999	LAYMOR BROOM TRACTOR	\$ 15,000	48	14832	40	2930	4	\$1,582	92	\$ 19,345	\$210

Tip 73: Use a dispatching program.

Serious waste is made on mobilization moves due to poor communications and coordination. Managers and staff spend hours each year trying to locate equipment. "Do I have a spare roller backup?" or "Where is the 342 skid steer?" Rental equipment will sit unused for days or weeks because no one was tracking it. Using a dispatching program is great way to minimize idle time of equipment sitting and not generating revenue.

Tip 74: Ensure you are using good maintenance practices.

Maintenance systems are like accounting systems. There are some minimal expectations as to how they should work, but many folks have been promoted up from the ranks without a thorough knowledge as to what that looks like. You may need some outside help if you don't think your system is running as efficiently as it should be. Consider using a third party assessment to see where you are and what the opportunities and value to improve.



Benchmarking:

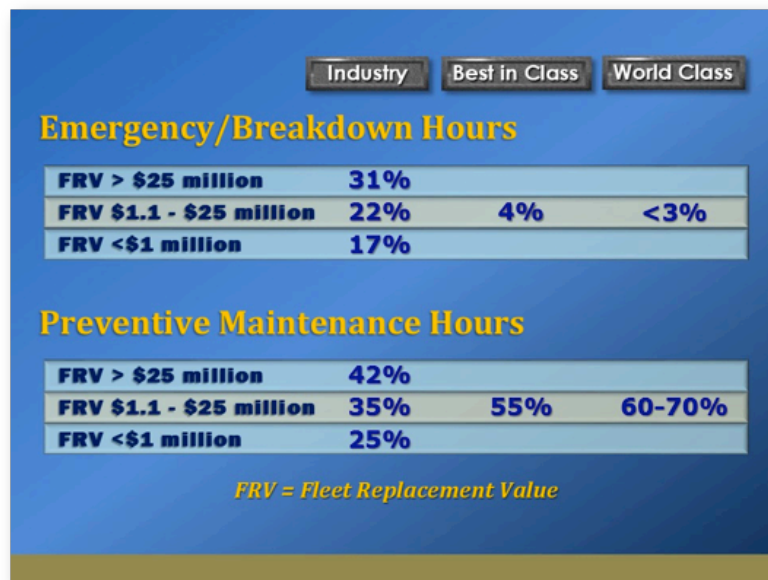
Where are your equipment costs relative to others?

You need to find out where your equipment costs are compared with others in your industry. One key way to do this is through benchmarking. Do not discount someone else's success. I have heard many client employees say, "Well, sure they can do that. They're bigger than us... they don't have the seasonal restrictions we do... or we have a older workforce." And the caper: "Yeah, but their wages must be higher."

And so it's key to not only know where others are in your industry, but also know the best in class and world class averages. The construction industry has fairly inefficient maintenance practices, so just comparing yourself to other contractors may make you feel like the tallest person in the crowd, when all you are is the tallest pigmy in the tribe.

There is far more merit in looking at what we could achieve versus just looking at a relative point and saying, "Hey, we're not doing too badly." For example, as the accompanying chart points out, the average breakdown rate for construction companies with more than \$25 million fleet replacement value is 31 percent. But I have several clients who have achieved a 1.5 to 5 percent breakdown rate. So if you have a 32 percent breakdown rate, and you're just comparing it to the industry average of 31 percent, you think you're doing fine. It's much like observing the other swimmers in the water after the sinking of the Titanic and reassuring yourself you are doing relatively well in comparison. Instead of admiring your treading action, you should be swimming toward a boat.

The following charts on cost and performance metrics represents a combination of data from the Association for Equipment Management Professionals (AEMP), Construction Financial Management Association (CFMA) and our own extensive database as fleet management consultants. Compare your costs and performance against others not only in your industry, but who are best in class and world class.





Industry Best in Class World Class

Maintenance Cost % FRV

FRV > \$25 million	15%		
FRV \$1.1 - \$25 million	14%	4%	<2.5%
FRV <\$1 million	12%		

Maintenance Cost % of Revenue

FRV > \$25 million	11%		
FRV \$1.1 - \$25 million	8%	1.5%	<3.0%
FRV <\$1 million	8%		

FRV = Fleet Replacement Value

Industry Best in Class World Class

Maintenance Labor % of Revenue

FRV > \$25 million	2.1%		
FRV \$1.1 - \$25 million	2%	1%	1.1%
FRV <\$1 million	1.8%		

Maintenance Inventory % of FRV

FRV > \$25 million	2.9%		
FRV \$1.1 - \$25 million	1.6%	1.5%	.25%
FRV <\$1 million	1.1%		

FRV = Fleet Replacement Value



About the author:

Preston Ingalls has more than 41 years of maintenance experience and is president/CEO of *TBR Strategies*, a Raleigh, North Carolina-based maintenance and reliability consulting firm. He has consulted with firms that have won the Association of Equipment Management Professionals' Fleet Masters Award for fleet maintenance excellence in 2004 and 2009. In addition, he assisted two other organizations in winning the North American Maintenance Excellence Award. Contact Preston at (919) 341-1387 or pingalls@tbr-strategies.com.

