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I hope everyone had a Blessed Christmas and a safe New Year.

It seems as if it was only a couple months ago when we were at CONEXPO-CON/AGG in Las Vegas, and I was writing my spring edition chairman’s letter on the flight home. At that time, I was shocked with the realization that I had just spent an exhausting 11 days rushing around. Now I sit here in the winter, writing my last chairman’s letter. What happened? Where did the time go? If time flies when you are having fun, then I’m having a ball.

I mentioned in the Spring issue of Equipment Manager I was humbled to follow the previous leaders. While writing this, my last Chairman’s Corner, I am more aware than ever of the contributions made by previous presidents to our organization. When I look back over my past year, it seems to have gone very smoothly, with no earth-shaking changes, aside from the growing maturity of our organization on the cusp of its third decade. This is due in large part to the efforts made by previous boards and individuals. Mine was the year that we’ve see many of the initiatives and improvements take effect. Now, as AEMP enters its 30th year, I am astounded at how far this organization has come.

In an industry that is continually raising the bar, the board of directors, committees and AEMP staff have consistently stayed ahead of the curve. It has been a pleasure to have the opportunity to work with such talented individuals and I issue this forewarning—you won’t get rid of me that easily!

I am grateful to have had the opportunity to serve as your chairman; I remember my first AEMP meeting in 1999, when I wondered if I would ever be in a position to contribute very much. I would encourage all of you to consider participating at any level that feels comfortable. All members are invited to join committees and work into leadership positions, and I feel that everyone has something unique to contribute. Please let AEMP headquarters know if you’d like to make a difference. AEMP really is a pronounced and supportive organization, and we should all be proud to help out.

At this point, I will wish president-elect Guy Gordon “good luck” during his term; but I really don’t have to wish him luck because I know he has what it takes to be a great leader.

I hope to see you as outgoing chairman at the AEMP Annual Meeting in Scottsdale, March 18-20.

Dave Gorski, CEM
Chairman of the Board and CEO

“We cannot all be great, but we can always attach ourselves to something that is great..” — Harry Emerson Fosdick
AEMP University is an online-based education program that provides participants with the same high-quality learning opportunities found in traditional schools, yet in a format that’s convenient, flexible and financially viable. Since its official launch at AEMP’s 2011 Management Conference and Annual Meeting, AEMPU continues to grow, expand and provide more continued education opportunities for those practicing the art and science of fleet asset management.

The University’s online courses cover the 17 core competencies identified by AEMP as necessary to be an effective equipment professional. Each competency has distinct learning objectives and is spread out in four learning levels: from entry-level “boot camp” to the executive, more strategic level. The tiered-level offering opens up AEMPU to all equipment professionals, from those just entering a career in the equipment management industry, all the way up to the most seasoned asset management specialist.

AEMPU’s four levels of Learning Objectives relate directly to the certification, recertification and continuing education requirements of the Certified Equipment Manager (CEM), Equipment Manager Specialist (EMS) and Certified Equipment Support Professional (CESP). The level of learning begins with an understanding of the knowledge contained in the Career Equipment Fleet Manager Manual and continues through other learning resources and the industry experiences of the asset manager.

Each student’s individual progress is recorded and tracked based on all courses taken and completed. At any time, students are able to access this information and compile a record of proof showing successful course completion. This up-to-date progress tracking offers participants a resume of learning for current and prospective employers, as well as their own personal achievement record.

Tuition fees for AEMPU courses vary depending on the class complexity. Select classes are priced a bit higher; conversely, there are some online classes offered free of charge. For more information on AEMPU or to enroll, contact Jim Phillips, vice-president of education, at 970.384.0510, ext. 202, or email jim@aemp.org, or visit the website at www.aemp.org.

AEMP University recently introduced two new features to the program, designed to aid those looking to obtain professional certification at next month’s Management Conference and Annual Meeting.

Launched in January, AEMP’s Webinar Series was the first program of its kind in AEMP history. The 9-week, 17-session series was developed to offer an alternate way for interested fleet professionals to prepare for a professional certification, or simply expand knowledge on fleet asset management. AEMP plans to continue the Webinar Series, with another series launching later this year.

To further encourage and aid in professional certification preparation, AEMP’s Professional Development Institute (PDI) is now being offered through AEMPU. Interested professionals have the opportunity to prepare for a certification exam well in advance of the test date, held in conjunction with either AEMP’s Management Conference and Annual Meeting, or Asset Management Symposium.

Those interested in learning more about AEMP’s Webinar Series can visit AEMP’s website at www.aemp.org. For more information on the PDI or certifications, contact Jim Phillips or visit the website.

AEMP NEWS
Looking for an edge? Look to Stellar.
Our Mechanic Trucks offer the most innovative features in the industry. The Stellar® CDT™ control system and the TMAX™ Series service bodies provide the operator with complete two-way communication and feedback, a crane boosting feature and enhanced safety monitoring. And as an employee owned company, we work for you. This means each of us is committed to our products, committed to the industry and most importantly, committed to giving you the edge you need to get the job done right.
AEMP’s Management Conference and Annual Meeting will take place March 18-21 at the Doubletree Paradise Valley resort in Scottsdale, Ariz. This year marks the 30th Anniversary of the event, which features seminars from AEMP members and other industry experts based on the theme of “Fleet Optimization: 30 Years of Making the Wheels Go ‘Round.”

The Conference is AEMP’s largest event and is an annual gathering of industry professionals to network, share ideas, attend seminars and visit the extensive exhibit hall to gain practical knowledge on the latest trends in fleet management. Seminars are offered each day and available for AEMP’s Essential, Executive and Professional Development tracks. The exhibit hall is open March 18-20 and features industry exhibits, demonstrations and events.

New this year, the Conference is featuring three keynote speakers. Sunday kicks off with the opening keynote from Barry Mahar, an expert on maximizing productivity and job satisfaction. Delivering Monday’s keynote is Paul Ballew, senior vice-president and chief economist at Nationwide Insurance. The closing keynote on Tuesday afternoon features John Dolce, Fleet Specialist with Wendel Companies, an experienced veteran in management and operation of vehicle and equipment fleets.

The Conference’s Essential seminars cover a diverse range of topics including fueling and idling issues, highway safety/CSA rules, proactive maintenance planning, and Tier 4 filtration. Executive-level seminars include business plan development, fuel hedging, outsourcing, succession planning and warranty issues. In addition to separate seminars specific to each track, several combined seminars are being offered on topics including green fleet, safety task force and state of the economy. Highlighting the combined seminars, keynoter John Dolce will present “World Class Maintenance Management.” This session overviews the four levels of PM programs: Reactive, Planned/Scheduled, Condition-Based and World Class. Attendees will learn how to take a PM program from its current level to operation at the World Class level.

Attendees also have the opportunity to attend the Professional Development Institute (PDI) to aid in preparation for one of AEMP’s three professional certifications: Certified Equipment Manager (CEM), Equipment Manager Specialist (EMS) or Certified Equipment Support Professional (CESP). PDI classes are offered March 18-20, with certification exams held on March 21 from 8:00 a.m. to noon.

Beyond seminars and the PDI, the Conference features several annual events. Opening day highlights include the CEM, EMS and CESP certification recognition ceremony, followed by Technician of the Year Awards luncheon, sponsored by John Deere and the AEMP Foundation, and closes with the evening gala. Day two features a special celebration marking the 30th anniversary of AEMP, and the Fleet Masters Awards ceremony, with the dinner reception sponsored by AEMP and Construction Equipment magazine. The new board and president will be sworn in at the inauguration breakfast on the third and final day.

Those looking for more information on registration may contact Cindy Challis Orr, CAE at 970.384.0510, ext. 203 or cindy@aemp.org, or visit the website. For more information on certifications and the PDI, contact Jim Phillips, vice-president of educational services, at 970.384.0510, ext. 202 or jim@aemp.org, or visit the website.
The Power of Knowledge Awaits

From biannual meetings and the Professional Development Institute to AEMP University and our new Webinar Series, there have never been more educational and career advancement opportunities for U. Why wait any longer?

Find out more about events and opportunities, and registration details at aemp.org.

Certifications
- Certified Equipment Manager (CEM)
- Equipment Manager Specialist (EMS)
- Certified Equipment Support Professional (CESP)

Our Strategic Alliance Partners:
In early 2010, AEMP discovered mixed fleets across the nation were in need of a way to demonstrate and gain benefit for their commitment to a cleaner America. In response to the need, AEMP launched its Green Fleet Initiative in March of 2011. The program offers four levels of recognition to fleets and fleet managers who actively pursue a greener fleet. In its initial nine months of existence, the program has awarded Green Fleet Certification to five fleets, including its first Platinum-level Certification, the highest level of certification that can be achieved in the program.

AUSTIN ROAD & BRIDGE
AEMP proudly awarded its first Green Fleet Certification to Austin Bridge and Road, a division of Austin Industries, in March of 2011. In demonstrating its commitment to a cleaner environment, ABR showed 88 percent of its off-road fleet met a condition of being Tier 2 or better, qualifying the company for Bronze Certification, the first level in the four-tiered Green Fleet Certification program. Equipment Director Mike Munson says the certification carries several benefits, but most important to him is the chance for the company to stand out to customers in its design-build and federal pursuits.

FLATIRON CONSTRUCTION
In September of 2011, AEMP awarded its first Platinum-level Green Fleet Certification to Flatiron Construction, a national provider of transportation construction and civil engineering services. Flatiron’s Corporate Equipment Manager, Warren Schmidt, CEM, says his crew is honored to be the first company to obtain AEMP’s platinum-level certification. “Flatiron is a progressive company and one that has always been committed to environmental responsibility,” he says. “It’s such a great accomplishment for our fleet and team to have achieved Platinum Green Fleet status. From a business standpoint, this certification will help us qualify for more jobs in the future.”

WASTE MANAGEMENT
Waste Management’s Heavy Equipment Operations Fleet of California was awarded AEMP’s Silver-level Green Fleet Certification in September of 2011. As the company’s Heavy Equipment Manager, Gary Beerbower, CEM, is in charge of everything related to its fleet of heavy equipment. In his 30-plus years with the company, a core component of his job has always centered on reducing costs, minimizing downtime and trying to be more efficient in an effort to reduce environmental impact.

“Everything we do at Waste Management is in the thought of recycling and being green, but we wanted to take it even further,” Beerbower says. “AEMP’s green fleet certification process was an ideal step for us, and the recognition we’ll receive is beneficial from both an ethical and business standpoint.”

ECCO EQUIPMENT CORPORATION
ECCO Equipment Corporation, a heavy equipment rental and sales company, became AEMP’s fourth Green Fleet-certified company, achieving Bronze-level Certification. When company President Dave Schmid learned of the opportunity to achieve certification for his efforts towards a greener fleet, he took advantage.

“It’s great to have a program available that companies can use to promote themselves as being environmentally responsible,” he says. “Our Green Fleet certification is something we’re very proud of, and I really appreciate AEMP’s commitment to the industry, to fleet managers and to encouraging the implementation of greener practices.”

CITY OF EULESS, TEXAS
AEMP’s Green Fleet Certification Initiative achieved another significant milestone in the final month of 2011 when it certified its first public fleet, Euless Fleet and Facility Operations, a department of the City of Euless in Texas. Euless Fleet Services is one of the most innovative and highly certified divisions in Tarrant County, and the Facility Maintenance employees are always seeking innovative ways to improve city services, while ensuring the city is operating properly at all times: 24 hours a day, 7 days a week. The Fleet and Facility Operations department’s Green Fleet status is further testament to its tireless commitment to serve the city—and the citizens—of Euless.

Those looking for more information on AEMP’s Green Fleet Initiative may contact Sara Sanderman, vice-president of program development, at 970.384.0510, ext. 205 or sara@aemp.org. To learn more about the program and current Green Fleet-certified companies, visit www.aemp.org.
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Small Steps to Big Green

How written idle policy improves the green bottom line

BY STAN ORR, CAE
PRESIDENT & CSO, AEMP

These days, it seems impossible to go very long without hearing a mention of “green.” From green energy to simply “going green,” the topic seems to be everywhere. In the equipment industry, green fleet is a term that’s creating plenty of buzz and leading a new trend for fleet managers and their crews.

While fleet managers have the same incentives to go green as anyone else, they also have additional factors driving their efforts. One key factor is the negative, unfair perception by many outside the industry that construction fleets are a major contributor to pollution problems. While those close to the industry realize this isn’t true, it doesn’t eliminate the problem—which is why it’s crucial for equipment managers to take an active role in “greening” their fleets.

With all the benefits and other factors pushing them, one might wonder why all fleets don’t go green. One challenge fleet managers face is simply knowing where to start. Though no step is too small, green practices are uncharted territory for many. Another hurdle that comes into play is the other important “green”: money. Certain green practices require substantial investment and securing these funds isn’t always possible.

Recognizing the challenges faced by the industry and fleet managers, AEMP developed its Green Fleet Initiative. The initiative helps, encourages and recognizes equipment managers in their mission toward a cleaner fleet. Voluntary green fleet investment allows companies to take advantage of federal funds to relieve costs. In addition, companies that achieve Green Fleet status will have a distinct advantage over competitors when bidding jobs.

AEMP’s program focuses on two main areas: idle policies and Tier requirements. While upgrading engines to be at a higher level of Tier compliance can be challenging (again, going back to the issue of funding), an idle policy is a perfect first step towards Green Fleet certification.

There are several benefits to implementing an idle policy. Reducing emissions is at the top of the list, but lessening fuel consumption is a major advantage as well. With the price of diesel well into the $3-plus arena, every little savings goes a long way.

So the big question for those looking to implement an idle policy: How do I start? It’s actually quite simple. AEMP provides example policies for companies to use as a guideline, and most state Air Resources Boards also offer sample documents. Three main steps go into creating a policy:

1. ESTABLISH A TIME
An idle policy designates the amount of time a vehicle may idle before it must be turned off. While every state has its own set number, the generally accepted rule of thumb is no more than five minutes.

2. KNOW THE EXCEPTIONS
Some pieces of equipment are exempt from idle policies, primarily for safety reasons (for example, cranes) or when it’s performing necessary functions on the jobsite (such as providing hydraulic power to other pieces of equipment). Know these exceptions and include an explanatory section in the policy to avert confusion and errors.

3. HAVE A PLAN AND FOLLOW THROUGH
Upon implementing an idle policy, it may seem the hard work is over—but that’s not the case. It’s imperative to have a plan, and a commitment from the entire crew, to ensure the policy is enforced. With just a bit of research, a few simple steps and a good-faith commitment to following through, fleet managers can implement a written idle policy and take the all-important first step towards their green goals.
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IT’S MORE THAN JUST OIL. IT’S LIQUID ENGINEERING.
For more than 15 years, AEMP has been offering equipment professionals the opportunity for continued education and industry-recognized certification through its Professional Development Institute (PDI). The PDI and certification exams will be offered at this year’s Management Conference and Annual Meeting in Scottsdale, Ariz. Classes will be held March 18-20, with certification testing on March 21 from 8:00 a.m. to noon.

Through the PDI, industry professionals have the opportunity to obtain certification as a Certified Equipment Manager (CEM), Equipment Manager Specialist (EMS), or Certified Equipment Support Professional (CESP). PDI participants can attend classes that pertain to each of the 17 core competencies outlined by AEMP as necessary to be an effective equipment professional. Each offering is led by an industry expert, and the PDI platform features a strong emphasis on peer-to-peer learning.

Recognized as the industry standard, AEMP’s CEM program has been in existence since 1996 and is geared toward equipment management professionals with a minimum of five years experience managing fleet assets. The EMS credential is designed as an entry-level certification for those seeking to expand their skills and plan for a career in fleet asset management. Offered new in 2011, the CESP certification targets OEM/supplier representatives, and is aimed at strengthening the cornerstone philosophy of the association: The Equipment Triangle.

For a full listing of all current certified CEMs, EMSs and CESP, visit www.aemp.org/people. Those interested in learning more about certification opportunities should contact Jim Phillips, vice president of education, at 970.384.0510, ext. 202, or email jim@aemp.org, or visit AEMP’s website at www.aemp.org.

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*AEMP Member*
How day-to-day decisions and planning have a big impact on a company’s financial health

BY STAN ORR, CAE
PRESIDENT & CSO, AEMP

An equipment manager wears a lot of hats. From monitoring multiple staff members and tracking telematics data to preventative maintenance and budget planning, day-to-day responsibilities are countless. One of the most important hats has to be financial analyst. Every decision a fleet manager makes affects the company’s bottom line, making financial knowledge and decision making crucial. This high level of fiscal responsibility can seem overwhelming, but there are resources out there to help fleet managers make sound decisions.

AEMP has resources such as conference education, its Professional Development Institute, member networking and AEMP University classes that can assist. AEMP’s approach to fleet management education is based on 17 core competencies it has identified as necessary to be an effective equipment professional – and it’s no coincidence all of them touch on financial issues.

Simply attaining this knowledge isn’t enough. Equipment managers must be able to apply it to their day-to-day work environments, and just starting with the basics will provide a solid foundation for building a healthy financial plan. Here are the key components of three major areas every equipment manager must know:

1. COSTS
Costs – the “s” at the end of this key word is an important designation. Cost effectiveness is more than just analyzing the lump sum of a fleet’s operating costs. It’s about knowing all of the individual numbers that go into that grand total. One of the most basic ways to review and analyze costs is the company’s Income Statement, which summarizes revenue and expenses over a period of time.

The major area for analysis on an Income Statement is the Cost of Goods Sold. This figure shows what it cost the company to generate the Income Statement’s reported Revenue. Everything from fuel to replacement parts falls here. Proper analysis of the Costs of Goods Sold can shed light on strategies or adjustments that can be implemented to improve efficiency in small but significant areas. For example, a fleet manager may identify fuel costs as an area that could and should be reduced, and implementing a written idle policy might emerge as the best practice to reduce total usage.

2. PMI – PREVENTATIVE MAINTENANCE INSPECTION
In addition to a firm grasp on costs, financially-healthy fleets typically have a world-class preventative maintenance (PM) program. The purpose of a PM program is to ensure routine maintenance and replacements are done at the appropriate time to prevent bigger problems – and additional, unexpected costs – from popping up.

The most successful PM programs are built on a proactive approach, identifying areas to address before they become a major problem. A proactive approach means setting planned inspection intervals, based on a combination of manufacturer’s recommendations and the fleet manager’s intuition and experience, and following through in a timely, efficient manner. These intervals are often identified in terms of fuel consumption, hours of operation or mileage – or a combination of factors – and include every task from changing engine oil to scheduling major replacements.

A proactive PM program requires a significant time and effort investment from the equipment manager and the team of technicians. But it costs far more to not have a proactive program. Consider a general example:

Based on average wear characteristics, let’s say a haul truck’s brake pads have 1,000 miles of expected use. Through standard telematics tracking methods as part of the proactive PM program, the equipment manager will know when a vehicle hits the 1,000-mile mark and the brake pads should be replaced. To replace at this time can be done for a cost of $155. If the brake pads are not replaced at this time, the rotor will likely be damaged, and cost skyrocket to $230 – that’s in addition to the original cost to simply replace the worn pads. This is a 48 percent increase in the cost of maintenance that could have been avoided with simple attention to detail and a proactive program. Added to that is perhaps the greatest cost of all – downtime. Significant repairs result in significantly increased downtime. Over time, multiple instances, such as this, increase operating costs.
Green Fleet Certification is easier and more important than you think. Learn how sustainability can increase profitability at AEMP’s Management Conference & Annual Meeting, and Professional Development Institute.

**March 18-21, 2012 – Scottsdale, AZ.**
Conference & PDI - March 18-20
Certification Exams - March 21

Visit [aemp.org](http://aemp.org) to register online and find out more about our **Green Fleet Initiative**.

Helping manage a green fleet through:
- Idle policy implementation
- Early engine emission compliance
- Education of personal and economic advantages

Our Strategic Alliance Partners:
3. UTILIZATION

The final, major financial element to consider is utilization. What makes this concept so crucial for a fleet manager to understand is that he or she is often the only person at an organization who can provide this valuable analysis. It comes into play during a company’s annual budgeting phase – a major component of every organization’s overall financial plan.

Equipment is only bringing revenue and value when it’s working at full potential. An underutilized vehicle is more of a drain than simply leaving missed revenue on the table. Every piece of equipment costs money just to own; every one is budgeted into the PM plan, and requires costs that show up on the income statement like routine maintenance, fuel, cleaning and various other items.

Through a chosen strategy of telematics tracking, the equipment manager has access to the numbers that determine real time utilization on a machine. For example, if an excavator was used for 1,200 hours in a year, then based on a 40 hour work week, that equals an average of only 23 hours a week – or just 57 percent of the available work hours. Not only is that wasteful, it raises the question: Is this machine bringing enough value to justify the cost of ownership? In the estimating process of budgeting, an equipment manager can offer suggestions that can increase time utilization for the upcoming year; in this case, reducing the number of total excavators to allow for maximized utilization of the remaining fleet.

On the other hand is the concept of overutilization, which can also result in missed revenue opportunity. Imagine a small contractor with a fleet only consisting of two excavators. Those two excavators could be constantly busy on various jobsites, going from one to the next, and achieving 100 percent utilization – but this might be telling the fleet manager there’s a big problem and the company needs additional equipment. What if the owner has to turn down a job because those 2 excavators are already committed to projects? That’s a major missed opportunity. A balance must be struck to achieve maximum utilization.

To sum up, Costs, PM and Utilization are three of the major and most impactful areas to financial health. Though the tips given here are just scratching the surface, these three areas will give equipment managers solid building blocks to begin improving their fleet’s – and company’s – financial bottom line.

AEMP Establishes Position On Proposed Clean Construction Act

AEMP has announced its stance on the proposed Clean Construction Act. Upon request to establish a viewpoint on the bill, AEMP’s Emissions Committee held a meeting with the board of directors to review in detail and discuss. The board of directors made a decision to take a neutral stance on the bill based on AEMP’s mission and its own established initiatives aimed at emissions reductions. Stan Orr, CAE, AEMP president and CSO, released a statement on behalf of the association and its board.

“We feel the responsible course of action is to adhere to what’s in the best interest of our members,” he said.

“AEMP’s own green initiatives are dedicated to emissions reductions and supporting education for equipment professionals to better manage and control this at their discretion. Our members are educated, highly-skilled and ethical professionals that understand the environmental issues inherent to our industry. We provide them with the tools to make the best decisions, and thus feel they are qualified and able to effectively manage their fleets.”

Orr pointed out AEMP’s Green Fleet Certification as an initiative that provides for the industry to police itself, saying, “Our industry-wide program was created in an effort to increase public awareness of the industry’s efforts in the way of environmental care, and offer assistance to those taking the steps towards emissions reduction and a greener fleet. The program educates, incentivizes and recognizes individual fleets for their efforts.”

Additionally, AEMP offers a professional, industry-accepted certification program, the Certified Equipment Manager (CEM). A core element of the CEM program is environmental training and education. Members are educated on the various methods available to reduce their fleet’s emissions, as well as the cost/benefit analysis of each method.

Orr made one final statement, saying “Although we certainly support efforts to reduce air pollution, we believe in giving our members the tools and the right to choose the best method to do so. There is no one, single way to best manage a fleet, but there is a strategy that best fits each unique fleet. With the programs and level of education we offer, our members are able to choose the method that will best fit their fleet and be the most effective.”
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Terminology and timing help determine which financial instrument to choose

BY G. C. SKIPPER

HOW TO NAVIGATE RENTAL/LEASE AGREEMENTS

For the uninitiated fleet manager, rental and lease agreements may look about as different as Tweedle Dee and Tweedle Dum. But they are not the same.

Without a basic understanding of those differences, equipment managers run the risk of being set adrift in unfamiliar waters. Knowing the pros and cons of each type of agreement, and knowing what to watch out for, can go a long way in safely running the rental/lease rapids.

That’s the opinion of Andy Agoos, principal at Orlando-based Agoos Consultants and former fleet executive with Neff Rentals and Hubbard Construction. In comparing rental and lease agreements, he says, end users have to step lightly through the tangle of terminology.

Rental agreements, for example, are usually based on monthly rates. What the end user may not know, however, is that a rental company’s idea of “monthly” isn’t necessarily 30 days. Many times, “monthly” is considered 28 days.

“You want to negotiate the full 30-day duration,” Agoos says. “You also want to almost always build in a rental-purchase option for any length rental. You may think you need the machine for only three months, but in the meantime, if your company lands another contract, you may find out you need the machine for a year. If you don’t include that rental-purchase option (RPO) up front, your purchase price and terms may worsen once you’re into the rental period.”

Obtaining an RPO from a rental house is tough, he says, because they’re not used to option-to-buy contracts and all of their rental fleet is used.

“They don’t routinely know the fair market value of each machine,” Agoos says. “When they give you a quote, they don’t even know the brand of machine they’re giving you. They don’t know what specific machine will be available that month, so how do they know what it costs? Also, during up-front agreement discussions, be sure you negotiate 200 hours of use per month, or at least the industry average of 175 use hours a month (22 days at eight hours per day). Otherwise, the rental company could place monthly use hours at 150, for instance. That will help avoid an excess hour fee at the end of the rental.”

Another factor fleet managers should consider with rental agreements, Agoos says, is what happens when you return the machine. Unlike leased equipment, which is
almost always new, lots of rental equipment basically is made up of used machines. Frequently, for example, an agreement will require that tires of the undercarriage must be 50 percent or better at the end of the rental.

“A lot of people sign those documents not knowing that they really are signing a contract, not a receiving document,” Agoos says. “There’s nothing wrong with that tire requirement—if the equipment is new. Suppose the tires are already 45 percent worn when you get the machine? Then one month later, you may have exceeded the 5 percent left on the tires.”

He explained that the trend depths are measured in thirty-seconds of an inch—20/32,” for instance; so 10/32” would be 50 percent. “If that happens, now you’ve got yourself in a tough situation,” he says. “Pay attention to that.”

Also pay attention to indemnification; that is, who is responsible for damage to the equipment.

“This is a huge bone of contention,” says Agoos. “Bear in mind that if you are renting a machine from an OEM dealer or a rental house, they are in the business of renting and do it every day. But you don’t do that every day, so guess where all the liability lies?”

“Remember that their agreement is prepared by their attorneys,” he says. “The liability lies on the contractor who is renting the machine. The end user should only accept responsibility or liability for issues that he causes. For instance, if an operator runs the machine into a pole or damages a blade, or if two machines hit each other, then, of course, that liability rests with the end user. His operator created the damage so he can expect to pay.”

But what happens if there is a latent defect on the machine? What happens if the machine has an undetected damaged tire that blows out? “That’s not the end user’s fault,” Agoos says. “He didn’t overheat the tire, didn’t puncture it. The tire just blew out. And, worse, suppose the blow-out hurts someone right next to the machine. Now, we have a $1 million loss. Who is responsible for that?

“I promise you that 99 percent of rental agreements contain an indemnification clause, or a ‘hold harmless’ clause,” he says. “That part of the contract usually states that the end user is responsible for everything—including acts of God, such as lightning strikes or floods. End users need to know that these terms are negotiable and should be negotiated fairly. The end user should accept only those liabilities he causes.”

Managers should take a similar look at lease agreements, Agoos says. For example, what happens if an OEM builds a machine that is defective when it comes from the factory?

“I know of one real case where the seat on a piece of OEM equipment was defective,” Agoos says. “It collapsed under a 300-pound operator, causing him to drop about a foot, seriously injuring his back. Whose fault is that? Who should the operator sue—and he is going to sue.”

Unless the end user negotiates this detail up front, the leasing company is going to expect the end user to indemnify its loss. “If they have to pay $200,000, they are going to send a bill for $200,000 to the end user,” Agoos says. “If the end user doesn’t negotiate the indemnification in advance, he’ll likely wind up paying some of the claim.

“Never sign a hold harmless agreement without reviewing it carefully.”

There are other differences between rental and leased equipment. The biggest, according to Agoos, is the length of the commitment for the machine use. Although there are exceptions to the rule, rentals basically tend to be identified with short-term projects, and leasing or owning the machines are more suited for long-term use. Short-term can mean one month, three months or even 11 months, but typically few rentals go more than a year, he says.

One exception to that generality, however, is specialty equipment.

“Specialty equipment is another reason for renting,” says Greg Kittle, CEM, vice president of corporate purchasing at William Charles. “The type of specialty equipment depends on what kind of contactor you are. A crane might be such a machine if you are a highway contractor. Demolition equipment is another. It all depends on the job scope.”

Kittle considers rental as a primary mechanism for acquisitions.

“As you establish what your core fleet size looks like, added equipment comes in,” he says. “Your mix is based on whatever your utilization history is and what your marketing plan is for the upcoming year. I always like to have a varying percentage of the fleet that is owned, rented and leased so the fleet size can grow or decrease in relationship to utilization and work load without affecting fleet equity.”

Agoos says, “Typically on general construction equipment, if your expected utilization rate is below 40 percent, you don’t own those machines. You rent them. If your utilization rate gets as high as 40 to 60 percent, you could rent or lease. If it gets over 60 percent, you typically will own or lease the machine.”

The primary considerations in making a decision on whether to rent, lease or purchase are the expected utilization and the rent or lease rates.

Determining the expected utilization rate can be done in numerous ways, Agoos says, but a simplified way to do it is to use the industry standard calculation of operating equipment 22 days or 176 hours per month.

“Thus, equipment operated for 14 out of 22 days has a utilization rate of 64 percent,” he says. Once you have an ongoing need, the driver for most contractors is money. If
you have the cash, you buy. That usually gives you the lowest cost per hour. If you don't have the money, or don't want to spend the money, you lease.”

Robert Andrade, CEM and heavy-equipment consultant, also cites fleet mix.

“You need to have the right mix, and that mix is always changing,” he says. “What’s right for you this year may not be right for you next year. Business models and contracts are in constant flux. You have to have an equipment manager monitoring and managing that for you. If you don’t, you’ll be top heavy one way or another, the wrong equipment asset base at the wrong time.”

Other differences between rented and leased units are:

**RENTALS:** They are usually more expensive than a lease. For instance, if you rent a 4-yard wheel loader for three months, the rental house more than likely is going to get that equipment back in 90 days or less. Then the rental company will have to find somebody else to take that machine, operating costs that will be folded into rates.

Rental rates depend on local market conditions. Backhoe loaders generally rent between $1,500 and $1,800 a month in good times, Agoos says, “but I’ve seen them rent for $500 a month because of a depressed market. If $500 recovers the amount of the decrease in the machine’s use value, then anything the owner gets above that contributes to the base cost of the machine. Rental rates are almost entirely dependent on what’s happening in the marketplace.”

Maintenance on rental machines is generally the responsibility of the rental company. “They don’t know how many hours you are putting on the equipment every day, although some of the technology on newer machines will report meter hours,” Agoos says. “So the rental company has to maintain it. They can’t depend on the end user to do it.” Most rental companies require the salesman to visit the machine once a month just to make sure the machine is okay and is being used as it was intended to be used, and to record the meter hours. If an end user knows he will be running the unit on a double shift, he can usually negotiate a reduced excess hour charge up front. But that must be done during the original negotiation.

Another positive point for rental agreements is that they usually include maintenance. Rentals also allow the end user to test and evaluate equipment. If a contractor prefers, he can request a different OEM brand or model machine each time he rents. That helps determine which brand unit operates better than others or which ones cost less to operate than others, Agoos says.

Another advantage of rental is that the agreement is month-to-month. “You can walk away from the machine,” Andrade says. “Rentals are not meant to be more than that—just a rental.”

On the negative side, rentals mostly do not offer purchase options at the end of the rental agreement. Also, if the end-user requests a specific brand machine and it’s not available, he has to take whatever brand the rental company has.

**LEASES:** Leases tend to be less expensive than rentals because the end-user commits for multiple years, which lowers the rate. In determining the lease rate, leasing companies, like rental firms, have to buy the machines, so they tend to charge for depreciation and some return on what they have invested. There is also an administration charge and an interest charge.

Maintenance of leased units is the responsibility of the end-user since a lease commitment is for a longer period of time. When deciding what type of equipment should be leased, Kittle considers the asset class that has high residual risks, “meaning that they have a lower residual value related to purchase price. They do not retain as much of their value,” he says. “In certain classes of excavators, for instance, I have a much higher percentage in lease than owned.”

Another plus in leasing, says Andrade, is that “you are building equity in the machine and you can capture that cash back.” Although you might not have a scheduled need

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**HISTORICAL FOOTNOTE**

About 25 years ago the United States trailed Europe significantly when it came to equipment rentals. There was virtually no U.S. market until an early pioneer—an executive at Hertz Rentals—came up with a new company called HERC (Hertz Equipment Rental Company). “That became the Daddy Rabbit of the U.S. rental business,” says Andy Agoos, Agoos Consultants. Today the biggest player in the U.S. market is United Rentals with approximately $4 billion invested in the business. HERC and Sunbelt Rentals have about $2 billion each invested in the market, Agoos says.

The reason Europe got the jump on the U.S. is that its economy is more mature, according to Agoos.

“The U.S. infrastructure wasn’t developed until 50 or 60 years ago,” he says. Yet he suggests the United States is closing that gap, citing evidence of the shrinking duration of major.

“It used to be that many jobs were $20 million jobs,” he says. “Today, they are more likely to be $5 to $10 million jobs. We are going to see more rentals because we have more short-term needs in the market.”
AEMP’s publication, *The Career Equipment Fleet Manager*, includes a financial management section that provides fleet professionals with terminology commonly used in contractual agreements. Although the complete AEMP glossary includes a number of financial-related terms, the following list taken from that glossary focuses on specific terms related to rental/leased equipment. It is not meant to be all inclusive.

**Purchase option** - An option for the lessee to purchase leased property at the end of the lease term. In order to protect the tax characteristics of a tax lease, the purchase option cannot be at a price less than fair market value at the time of the purchase. The option on a finance lease (non-tax) must be a bargain option.

**Renewal option** - An option to renew the lease at the end of the initial lease term. Here, too, care must be used in granting a renewal option for a fair rental value. If this is not done properly, it may later be ruled that the lease is not a true lease. Tax advantages could be lost and tax indemnity clauses activated.

**Rent** - The money paid to lease another’s property. There is no legal difference between “rent” and “lease.”

**Rental agreement** - An agreement to pay for use of another’s equipment. Similar to a lease, except with rentals, maintenance is usually performed by the lessor and the cost of the maintenance is included in the payment.

**Rental** - Rental of equipment, usually fully maintained by the owner, for temporary requirements on a daily, weekly or monthly basis. Agreement is cancelable upon relatively short notice by either party.

**Residual or residual value** - The value of equipment at the conclusion of the lease term. Also may be used to refer to that portion of the delivered value of equipment not paid for during the term of the agreement.

**Return on investment (ROI)** - The interest rate earned by the financing source; measured by the rate at which excess cash flows permit recovery of investment.

**Right of first refusal** - If a lease contains a right of first refusal, the lessor retains the right to continue ownership of the equipment at the end of the lease term. Lessor is not obligated to sell the equipment, but, if the lessor offers the equipment for sale at a stated price, the lessee then has the right to purchase the equipment or refuse the offer.

**Sublease** - A transaction in which leased property is re-leased by the original lessee to a third party, and the lease agreement between the two original parties’ remains in effect.

**Term** - The fixed, non-cancelable period of time for the contract.

**Termination schedule** - Leases sometimes contain provisions permitting a lessee to terminate the lease during the lease term if the leased equipment becomes obsolete or surplus to its needs. Liability of the lessee is set forth in a termination schedule that values the equipment at various times during the lease term. If the equipment is sold at a price lower than set forth in the schedule, the lessee pays the difference. If the resale is a higher price, the excess belongs to the lessor.
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Online education portal presents asset-management techniques and strategies.

BY G. C. SKIPPER

Just because you are a fleet manager,” Jim Phillips, vice president of educational services for AEMP, says recently, “doesn’t mean education stops.”

Fleet professionals who have worked for five years just to reach the point of becoming a Certified Equipment Manager (CEM) know that only too well. But in the swamp of an economy where sluggish is an understatement, a number of public and private sector companies have taken the ax to travel budgets. That has thrown the switch on the industry’s educational track and threatened to delay, if not derail, the speed of professional development.

In response to this possibility, Phillips and others in the organization were quick to recognize the opportunity that so often hides in a negative environment. If you can’t bring members to the training, the association reasoned, then take the training to the members. An AEMP committee was formed to continue—and advance—AEMP’s educational efforts with as little interruption as possible.

Accomplishing that enormous undertaking turned out to be the creation of a top-shelf online educational site aptly christened AEMP University.

“We turned the switch on in March 2011,” says committee chair Carl Porter, corporate business manager, John Deere Corporate Business Division. “We took the four levels of AEMP’s 17 core competencies and started filling in the blanks. Our goal at the present time is to have all the Level 1 and Level 2 classes for all 17 competencies online by this spring.”

To create an online university required an unrelenting steadfastness of effort on the part of a number of experts drawn from each point of the Equipment Triangle as well as from the world of academia. AEMP University’s curricula structure was, and is, being developed by Dr. John Jamison, CEO of ImagiLearning, Inc., in Springfield, Ill.

The association’s AEMPU committee is responsible for setting process, Porter says. “We wrestle with questions such as what do we do that should be done? We lay down the process and then forward it to the board for approval.”

The development of the online classes themselves is the responsibility of Phillips and Jamison. Phillips establishes the objectives for each class module, and Jamison designs the online classes and installs them into a learning management system (LMS) that he designed specifically for AEMP. Phillips is in charge of that system.

AEMP wanted to take the training they were already offering—CEM certification, conference seminars, OEM presentations, plus the just-completed Certified Equipment Support Professional (CESP) course—and make all the information more accessible.

Jamison says that a main concern of AEMP was how to reach the growing number of new hires who needed to be certified. Dealing with that number has been difficult, he says, since training was only available once or twice a year. “That posed a problem for some members. Other fleet professionals simply couldn’t get to the conferences because of budget cuts, so AEMP wanted to look at alternatives,” Jamison says.

Thanks to existing connections between AEMP executives and higher education sources, Jamison says, the association was already familiar with current developments taking place in distance learning.

“Online learning can be so many different things—everything from the traditional watch-this-video-and-answer-the-questions to a fully three-dimensional online involvement, where you get into a piece of equipment and find out what component isn’t working, or figure out how to park 30 buses in one place—and then physically do it online,” he says.

AEMP envisioned a phase-in approach, Jamison says. “They wanted to get courses out there for the first critical levels of CEM. They saw distance delivery as a solution to the problem. That was phase one. Although creating online courses isn’t all that difficult, knowing how to create them so that the courses really do what you want is something else again.”

It was at that point that Jamison entered the picture. His first major task was to convert AEMP’s 17 core competencies into online courses.
Jamison first had to find a technology that not only would enable the courses to be put online, but would also track registration, payments and certification progress made by each individual taking the course.

“Management system companies will sell you everything, but you really don’t need everything,” he says. “We focused first on what AEMP’s goals were, what the challenges were, and then came up with a system that could do all those things, a system that was designed functionally for organizations such as AEMP.”

“Finding the right learning system many times can take a minimum of 18 or even 36 months,” Jamison says. Yet his team completed the search in two months. “We were able to take all the membership data in AEMP’s database and put it into the AEMP University system.”

In approaching the online version of the Career Equipment Fleet Manager manual, Jamison wanted to avoid it being an online book. “Instead, we turned it into an interactive course with visuals for every chapter of the book.” He has completed about half a dozen of the courses, which are available online. He hopes to finish the rest of the courses so they are functional by the end of 2012.

The normal time for developing a course is 120 days, Jamison says. “In AEMP’s case, we have put 40 courses on since January (2011). It’s a good partnership. They are the subject experts and we aren’t, so we used their subject manual with questions and they looked to us for instruction and technology design.”

Jamison says one of the key factors in design was to make certain if anyone took the certification exam and didn’t pass, the participant wouldn’t have to go back and take the entire test again. To avoid this Jamison set up the tests in four modules.

“You can login and purchase the entire exam then go through and take the whole exam at one time, if you want to do it that way,” he says. “If you don’t pass, the system knows which of those modules you have to retake. When you have completed everything and you do pass, a button will appear on the screen that lets you print out your certificate and hang it on the wall.

“CEM candidates can chart out an individualized learning plan,” Jamison says. “We’re finding out that this is really a good thing in any industry. We have a wealth of directions to go: ongoing professional development, certification, learning more about a given subject are some of them. The system tracks what you do, and when you complete a section you get a certification of completion, which many employers like.” Also, just as an example, he says, an employer can set up a program so that his employee gets a salary bump when he finishes three courses a quarter.

Such added value for employees goes a long way in reducing turnover, Jamison says. “In effect, the employer is saying if you work for us, we will pay for two courses for your own professional development. I’ve seen a lot of that.”

Eventually the university will have four levels: entry level, certification, continuing education and recertification. “AEMP University represents an investment on the association’s part to provide continuing education and meet the needs of the Equipment Triangle,” Phillips says.

At the present time, candidates can prepare for the CEM or CESP online, but the certification test itself must be taken in a proctored face-to-face testing environment. The certifica-
tion test may be available within the next year, Phillips says. He also envisions an increasing use of the site throughout a fleet professional’s career. “Fleet managers can get involved in forums and, if they can’t make a conference, they will be able to get those presentations through the university,” he says. In fact, it was Porter and other committee members who discovered that some of the most valuable educational material was being discarded.

“To prevent that from happening, we decided to record the sessions, keep the Powerpoints, and put all the information into a class,” Porter says. “Those presentations will be a real gold mine of information that was being lost in the past.” Although not every presentation is being captured, he says, most will be recorded and kept online for use later.

What makes AEMP University different is that it is not just for members. It is open to all industry professions, Phillips says.

Here’s how to access the content. Go to AEMP.org and click the AEMP University icon. If you do not already have an account in the system, click the link to “Register Now!”. Enter the information market as “required,” and your account will be created, allowing you to login.

“We want the university to become ‘The Place To Go’ for training for the industry as well as for members,” Jamison says. “AEMP University could act as a location where best practices can be shared. It is a place where people can see that there are better ways of doing things and apply those best practices to their own organizations. Suppose, for instance, Bob’s Construction (a fictitious name) has come up with a best practice that should be shared with others. Bob’s Construction could make that practice available on the AEMP University site so others could also benefit.”

Porter says that AEMPU can guide professional equipment management in terms of what type of education they need, how to get it, where to find it and what to expect next. Another benefit, he says, especially for associate members such as John Deere, is that individuals can design their own criteria.

“For example, if they are interested in only three of the 17 core competencies, they can design a program based at whatever level they desire based only on those competencies and keep track of that,” he says.

The AEMP University site also can be a place for industry fleet professionals to come in search of information on particular topics, whether it be the most recent environmental regulations or telematics, Porter says. The website could function as a reference guide, providing quick access to published magazine articles, industry news and white papers, keynote speeches, new legislative issues and trends, and relevant mass media coverage of subjects that impact the industry. “We plan to have that database initiated and functional in 2012,” Porter says.

But AEMP University was created to reach far beyond North American borders, Phillips says, and he has begun to explore international opportunities for the new website.

“Although economic conditions in the United States have caused some companies to experience a decrease in work, a number of bigger corporations have busy jobsites in other countries,” he says. “Bechtel, for instance, has jobs in Australia, New Zealand and other countries, and they would like to use the CEM training as core competency development for their equipment managers. If the CEM were available online, it certainly would facilitate that.”

Phillips has also contacted Ferris State University in Michigan, where they are developing a university program that includes fleet management. “The program will include the 17 core competencies and the CEFM fleet manual,” Phillips says. “That means our fleet managers will be able to get college credit as well as certification.”

Phillips has also been in touch with a university site in Argentina that has expressed an interest in developing a fleet manager program similar to the Ferris State University program. He also received a phone call from a fleet manager with the U.S. Air Force based in Germany. Nine USAF fleet managers completed their Equipment Management Specialist certification online. In addition to these international possibilities, Phillips says 20 or 30 individuals in the U.S. already have completed the EMS.

As rich a mother lode as the university concept is and the opportunities it promises, Phillips emphasizes that AEMP will continue to conduct its educational conferences. “That’s a whole different level of learning and networking with people coming together with common interests,” he says. EM

“[Users] can design a program based at whatever level they desire based only on those competencies and keep track of that. The system maintains a record of what the person has taken and what he wants to take.” —CARL PORTER, AEMPU COMMITTEE CHAIR
Although still a work-in-progress, the online university now offers courses for most of AEMP's 17 core competencies in Level 1 and all of them for Level 2 curriculum. Level 1 courses are recommended for the Equipment Management Specialist (EMS) designation, and both Level 1 and 2 are required for certification as a Certified Equipment Manager (CEM) or a Certified Equipment Support Professional (CESP). Here are five Level 1 and Level 2 classes taken from the AEMP University course catalog:

Level 1

• **Benchmarking:** This best practice can be used by any business. It measures where a business is relative to its competition in the industry. It can be used by any business that incorporates productivity improvements and the development of new technology to embark on continuous quality improvement of its products or services. This session shows how improvements and technologies in turn are used to maintain and increase the business customer base. This improves the flow of money and information through the business entity, which is essential to its life and growth.

• **Financial Management:** This session will develop an understanding that a budget is the central expression of how a firm’s finite resources will be spent. Fundamentally, budgeting is a method to improve operations through a continuous effort to specify what should be done to get the job completed in the best possible way. Budgeting should not be thought of as a device for limiting expenditures; instead it should be seen as a tool for obtaining the most productive and profitable use of the company’s resources.

• **Risk Management:** Managing risk is an essential aspect of any company’s future. This section will discuss the core of risk management for the equipment and fleet manager. Participants will learn about the scope of risk management and how best to minimize it through property coverage, general liability, auto liability and cargo coverage. Other areas discussed include pollution incidents, worker’s compensation, and handling claims efficiently.

Level 2

• **Parts Management:** Inventory management is the practice of planning, directing and controlling inventory so that it contributes to the profitability of the business. The parts in your inventory support your equipment fleet to reduce downtime and therefore increase profit for your company. In reality, however, inventory also exists to improve your level of service. In this session, you learn that the right amount of the right parts will provide you with what you need when you need it, without enormous stress on your operating capital.

• **Shop and Facilities Management:** In order to use a vehicle effectively it must be available for use. The vehicle’s reliability is measured in availability needed to support utilization expectations. Scheduled maintenance supports targeted availability levels. The proper administration of a scheduled maintenance program includes an effective preventive maintenance inspection and repair program through an in-house and/or outside support network. Maintenance programs support the safe, reliable and economical vehicle operations and its objectives and must be measured and managed. We can outsource the work but not the responsibility and accountability. In this section you will hear how a well managed shop or facility can increase efficiency and safety.

Here is the complete list of courses now online:

**Level 1**
- Financial Management Level 1
- Procurement Level 1
- Risk Management Level 1
- Warranty and Performance Guarantee Level 1
- Benchmarking Level 1
- Life Cycle Cost Level 1
- Specifications Level 1
- Environmental Level 1
- Technology Level 1

**Level 2**
- Financial Management Level 2
- Procurement Level 2
- Risk Management Level 2
- Warranty and Performance Guarantee Level 2
- Benchmarking Level 2
- Life Cycle Cost Level 2
- Specifications Level 2
- Technology Level 2
- Employee Training Level 2
- Environmental Level 2
- Human Resources Level 2
- Safety Level 2
- Outsourcing 2
- Parts Management 2
- Preventive Maintenance 2
- Shop and Facilities 2
- Level 2 All Course Package

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Profiles of Change

Long-time members recount the early days of the Association.

BY G. C. SKIPPER

Plants, humans and animals are not the only earthly entities that are alive. Associations also come of age, grow and evolve.

Such has been the case with the Association of Equipment Management Professionals. Thirty years ago, the association began as the Equipment Maintenance Council (EMC), which was primarily maintenance oriented. In 2001, EMC changed to AEMP, a body of equipment executives that now reaches beyond just maintenance issues. AEMP currently addresses asset management development as a whole, delving into risk management, financial management, benchmarking and other skills critical to professional education and career growth.

The change reflected a dramatic shift in the basic nature of a professional management professional’s job. Although maintenance remains essential to fleet management, the association made the decision not to box itself in, but to expand its reach to coincide with issues that were reshaping the industry’s landscape. In doing this, AEMP has strengthened its impact on that landscape, not only in North America, but globally as well.

Measuring a tree’s age is simply a matter of counting the rings in its trunk. As associations grow, however, that won’t work. In fact, Wayne Baumgartner, CEM, and vice president, Johnson Bros. was an EMC member from the beginning, and he makes a totally opposite observation.

“When you’ve been around as long as I have,” he says, “you’ll find the circles are smaller. You know a lot of people and develop a lot of relationships. But as time goes on, older members either retire, or for various reasons, no longer attend meetings. You begin to see more new people, who we absolutely need. As more and more people get involved, however, they don’t seem to be as long-term as they used to.”

Recalling the early days, Baumgartner says equipment manufacturers typically would come in and conduct technician training on their specific products.

“Manufacturers are still involved in training, but now the training has broadened into other categories, such as parts and technician certification,” he says. “Education has changed from being a more person-to-person type of environment to more of a classroom-type education. You get quite a bit during the process, and you gain quite a bit after the process.”

The association’s new name came about during the tenure of Dale Warner, CEM, and fleet director at Fort Myer Construction. Warner was serving as the EMC national president at the time. “Industry trends back then were beginning to move toward asset management and away from maintenance management,” he says. “The association wanted to be recognized in a different light, that is, not just as a maintenance group, but as an association of equipment management professionals.”

When the name changed, so did the basic core of the organization, he says. Prior to the focus on asset management there was an abundance of hands-on seminars covering such topics as fittings, hydraulics and repairs. Now they target overall fleet management and financial practices.

“The whole association has really shifted into more of an educational organization,” Warner says.

That’s obvious in the development of the CEM program, he says. That started in the mid-1990s and currently has expanded to programs that act as stepping stones to the CEM. Other CEM-related new developments include the certification of product support people and creation of the online AEMP University, both of which came about this year.

“We also are working on telematics and emissions and other good stuff we use day to day,” Warner says. “It’s really a class act compared to what it was years ago.”

As for relationships with fellow professionals, about the only change Warner has seen is, “I don’t know as many people as I use to. At the last meeting I saw a lot of new faces—and that’s good. It shows that the industry is bringing in fresh blood. However, some of the guys I knew have stopped going to meetings and have dropped out.”

John Deere product support advisor Leo Holland, James River Equipment, doesn’t remember the exact date EMC changed its name to AEMP, but he does remember the reason. The association, he says, wanted to elevate the position of equipment manager “from being a technical wrench-type person to a professional manager. We wanted fleet managers to be truly managers and not just hybrid technicians.”

Around the same time these discussions were going on, says Holland, serious discussions about the CEM program got underway.

“In my opinion, that really changed the image of the organization to what it is today,” he says. “I was a member of the original group, but we didn’t have the OEM support that we have today. We didn’t have any funds except what
little the members donated.” Today, of course, OEMs are very much involved and funding has increased.

One challenge the old organization had to overcome, says Holland, was that it was so focused on the maintenance side of a fleet manager’s job that it gave the impression it wanted only technicians as members.

Another challenge had to do with OEM presentations. OEMs did participate, he emphasizes, but after the presentation was open to questions, “you never knew what the questions were going to be and that could be challenging to the presenter. It all depended on what the hot button was at the time,” he says. And hot buttons there were—changes in refrigerant, introduction of low sulfur fuel, and new crane regulations, to mention a few.

Today AEMP’s life is much more manageable, says Holland, because it has been organized to run on two tracks—the CEM, which now dominates the technical side, and the managerial track. “One time we tried three tracks, but that was too large to manage.”

When the group started to tackle topics like how to manage people, how to manage your shop more efficiently, how to recover your costs, it triggered a shift among end users. “The shop, or the dealer’s service department, became more of a profit center than a cost center,” Holland says.

“I have seen the equipment manager position change from being the super knowledgeable guy—the super technician—to a manager who sits at the budget discussion table with financial people.”

Another significant change, says Holland, is that today’s fleet managers often are involved in equipment acquisitions. “Fifteen years ago,” he says, “that was unthinkable.” Just this year Holland witnessed the positive impacts these changes have had within his own dealership. “About two-thirds of our net profit comes from the product support area,” he says. “I think that is what is happening everywhere. You have to manage your equipment instead of hiding an extra machine behind the hill in case something happens. We don’t have that luxury anymore.”

AEMP continues to meet Holland’s needs, he says. “The association has given me information and knowledge of what’s happening with the end user, how they buy equipment, and the challenges they face every day. Knowing this, as an OEM dealer, we can provide solutions to help them solve whatever problems they encounter.”

Since he became part of the organization, Holland has missed only two meetings. “AEMP has been very good for John Deere,” he says. “The biggest challenge members face today, as I see it, is to get more OEMs and their dealerships involved.” Given AEMP’s evolution that may not be a challenge at all, but an inevitability.

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What is the Equipment Triangle?

AEMP coined the phrase Equipment Triangle in 1995 under the leadership of President Dave Markey, CEM. It has become the cornerstone of the association’s philosophy toward the continuing relationship between the End User, Distributor, and OEM/Supplier in the life cycle of a piece of heavy equipment or product. The Equipment Triangle Philosophy serves to remind us that in this multi-tiered relationship, everyone is entitled to receive the respect they deserve, and all transactions are to be win-win for all concerned. This means:

**For end users**, the Equipment Triangle represents the OEM/distributor product support programs that enable the end user to achieve the highest possible availability at the lowest life cycle cost.

**For distributors**, the Equipment Triangle represents the opportunity for a sustained business relationship, differentiating themselves through problem-solving and value-added product support services, ensuring that customers achieve the highest possible availability at the lowest life cycle cost.

**For OEMs and suppliers**, the Equipment Triangle relationship rests upon a foundation of trust and mutual respect for each party’s proprietary information. Open, honest communication between the parties gives the OEM an opportunity to understand the end user’s needs and thus develop products and support programs that are best suited to meet those needs, thereby gaining or strengthening competitive advantage for all three sides of the triangle.
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A Better way to sell your equipment.

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Telematics Brings Intelligence to Machine Management

BY RENAAT VER EECKE

GPS fleet-tracking systems increase control over equipment productivity, costs and profits

A New York-based contractor, who had equipped his fleet’s 400 heavy construction machines with telematics, trimmed his operating expenses by more than $800,000 in the first year. That included a fuel savings of $80,000 a month at one site where the system’s reports revealed that seven heavy excavators were left running all day during the winter. Without the ability of telematics to monitor idling patterns, that fuel—and money—would have continued to go up in smoke.

That, in a nutshell, is the value of using telematics to weed out waste and keep your equipment performing at peak levels. Armed with data that was previously either unreliable or unavailable, you have a roadmap to conserve fuel, minimize equipment downtime, reduce cycle times, right-size your fleet, recover stolen machines and save money overall.

“Telematics is all about having visibility into what your equipment is doing so you can do a better job of managing it,” says Jeff Mingus, equipment manager for Illinois-based J F Edwards Construction Co. “If you know that you’re only using a bulldozer or excavator 500 hours a year, you can try to move it to other job-sites to get more work out of it, determine if you’re wasting money on equipment rentals you don’t need and make better decisions about what new equipment you need to buy. But it all starts with having accurate data, and you can’t count on that if you’re reading your hour meters manually.”

Maintenance optimization

For Mingus, as for others, many of the benefits of telematics flow directly from the ability to capture engine hours electronically by connecting the alternator or equipment computer to the GPS tracking unit installed in each machine. Automating the data recording process eliminates error-prone manual readings, data entry mistakes, deliberate misreporting and other impediments to accuracy that can affect preventive maintenance scheduling, equipment utilization analysis, and job costing and bidding.

In the area of scheduled maintenance, for example, eliminating human error in reporting engine hours helps avoid having a machine slip through the service cracks.

“When we were using pencil and paper to document machine use, the numbers might be transposed, turned in late, mis-entered into the spreadsheet, or never reported at all for some reason. As a result, a machine might be serviced late or not serviced for a year. That doesn’t happen any more,” says Warren Schmidt, CEM and corporate equipment manager for Colorado-based Flatiron Construction, who uses telematics to track more than 500 highway construction units and support equipment.

With the improved accuracy and near-real-time availability of engine hours, telematics has
also enabled Schmidt to successfully fine-tune servicing intervals to suit the specific machinery or even the job. In some cases, such as projects with multiple shifts, machines may be serviced more frequently. In other cases, service intervals may be extended by taking oil samples at 250 hours and delaying oil changes and associated expenses for another 100 hours if the oil is clean enough to last.

For Schmidt, this increased control over PM cycles and adherence to PM schedules is not only delivering expected benefits such as longer machine life and reduced downtime, but also keeping repair costs in check. That in turn provides a competitive business advantage by helping Flatiron hold the line on hourly rates.

Bill Jones, equipment manager at Thoutt Bros. Concrete in Denver, is realizing similar benefits with the added twist of using the same telematics system to track both off-road equipment (based on engine hours) and on-road vehicles (based on mileage).

“All the maintenance status information we need is in our telematics software, whether it’s for backhoes, scrapers, pickup trucks or equipment repair vehicles,” Jones says. “It’s a lot more efficient than using separate systems for different kinds of assets.”

Engine alerts
Telematics can also be used to detect engine trouble before it happens, potentially saving tens of thousands of dollars in engine replacement. This is achieved by connecting the system’s GPS fleet-tracking devices to sensors that monitor air filter restriction and/or engine, coolant or transmission temperatures, and alerting designated personnel when pre-defined thresholds are breached.

One contractor taking advantage of this capability is Rogers Group, a provider of aggregate products and road building services in seven southeastern states. Rogers has configured its telematics platform to email designated managers’ BlackBerrys immediately in the event of a sensor-spotted emergency. The affected machine is quickly shut down and the problem addressed before catastrophe strikes.

Last summer, this strategy averted three engine disasters in Arkansas alone. “In all three cases, the radiators were blocked with dust,” says Phil Gosnell, Rogers’ equipment manager. “A simple 10-minute hosedown solved the problem and prevented the engines from being destroyed. We can find out there’s a problem even before the dashlights go off or if the operator doesn’t notice the temperature gauge rising. One alert like that can save us $60,000.”

Fuel management
Additional savings can be achieved by using telematics to rein in wasteful fuel practices. One top target is equipment idling, which can be measured by lack of movement and ignition on/off information as well as by adding sensors that can differentiate between a machine’s “idle” and “working” time. Contractors who have used telematics idling reports to crack down on excessive idling have reduced idle time and associated fuel costs as much as 75 percent.

Other telematics-enabled sources of fuel savings include detection of unauthorized equipment usage via electronic geofences that indicate when a machine strays outside its assigned boundaries, better routing of heavy haul transport trucks that deliver equipment to jobsites and better decision making about when and when not to send refueling trucks.

“We can sit down with our telematics system, see how many hours the machines at a given job site have run since the last time we refueled, and avoid sending our fuel guy out until it’s really necessary,” Jones says. “That yields fuel savings on the fuel truck itself.”

Gunter Karg, equipment improvement coordinator at Las Vegas Paving, has discovered another fuel-related
benefit. By installing GPS tracking units in his fuel trucks, he is able to monitor how much diesel is dispensed at each location for greater accountability and control.

**Productivity improvements**
Moving beyond maintaining, protecting and fueling the equipment itself, fleets are also using telematics insights into equipment utilization and operator behavior to help boost productivity and profits.

At the simplest level, consider a telematics report showing that a given machine is running at only 25 percent of capacity. That data can spur efforts to transport the machine to other sites, eliminate excess rental equipment and otherwise get more bang for your equipment buck.

Equipment utilization can also be compared by job. If there is a disparity, managers can analyze what makes one site more productive than another. Mingus has used this technique in previous positions to identify best practices and spread them throughout the company. He plans to duplicate the approach at J F Edwards to drive incremental improvements at any lagging locations and raise productivity levels across the board.

Other telematics tools can help move the productivity needle as well. In its quarry operations, for example, Rogers uses its telematics software to draw geofences around the load-out area in each pit as well as the dump hopper at the primary crusher. With the help of those virtual perimeters, system reports can track the time that elapses between loading the rock and delivering it to the crusher, zero in on unproductive activity, and use that information to identify opportunities for reducing cycle times as well as optimizing equipment use.

“We may find we have 10-minute cycle times, but our trucks are sitting at the load site or the dump site for longer than they need to,” Gosnell says. “That probably means we have too many trucks at that location. Removing a front end loader or an off-highway haul truck from the site and reassigning it elsewhere may be a better use of our assets.”

**Equipment visibility**
The ability to see where all equipment is located in real time on a single map—based on GPS signals from the tracking devices installed on each machine—is another boon to asset management. If you’re looking for a stolen trencher, a crippled crane or a grader that you haven’t seen for a while, the precise location can be just a click away.

The value for theft prevention and recovery in particular is high. Schmidt has recovered a $100,000 skid steer that was stolen in California, several machines that were filched by joyriders, and $30,000 worth of GPS-equipped light towers that went missing in Canada. Others report similar experiences, including being able to lead law enforcement officials directly to a stolen machine by reporting the GPS coordinates as it’s being driven away.

One engine alert from our telematics system can save us $60,000.

— PHIL GOSNELL, EQUIPMENT MANAGER, ROGERS GROUP

Data flows from the GPS tracking device to back-end software for map display and in-depth analysis.
Thefts can also be nipped in the bud by geofencing a jobsite and configuring the system to trigger alerts when equipment leaves the area; and/or by choosing GPS tracking devices that can notify managers when equipment is moving without ignition, suggesting that it is being loaded onto a flatbed. Some insurers offer discounts for these protections.

Everyday equipment location needs are simplified by GPS mapping, too. “Being able to pinpoint the location of a machine that needs to be serviced in the middle of a cornfield means we don’t have to find someone on the jobsite who knows where the machine is,” Mingus says. “And if we’re shutting down a job, we can make sure we’ve got all of our equipment pulled out just by looking at the map.”

**Job costing**

From a bottom line perspective, telematics can play an important role beyond the maintenance optimization and productivity improvements mentioned earlier. One of the key benefits involves the ability to improve job costing and sharpen future job bids, based on system reports that track actual machine and attachment usage by jobsite rather than relying on guesstimates from the field.

If equipment utilization information is collected manually, for example, an operator may say that he used a dozer or a breaker for 50 hours when he actually used it for 100. Telematics eliminates those inaccuracies and enables contractors to charge accordingly, whether billing a third-party customer or applying internal chargebacks from the firm’s leasing unit to its operations division.

“Having a telematics system makes it possible to capture hours we wouldn’t have captured before,” says Schmidt. “If a machine worked on four different jobs or was used for four extra hours after we were informed that it was available for pickup, we now have accurate documentation. No one can say the operator made a mistake or fudged the numbers, so there can’t be any argument about getting paid.”

The same documentation also helps develop accurate job bids, he says. “You don’t want to bid 1,000 hours for a job that’s only going to take 700. Knowing the actual hours it takes to do a particular job helps us bid competitively.”

**Fleet sizing**

Another bottom-line benefit comes from using telematics data to forecast future equipment needs and justify the capital expense for fleet expansion or upgrades. Here again, the equipment utilization reports generated by the telematics system are key.

“If you have more work lined up for the next year, are wondering whether you need to buy more equipment, and see that your utilization rates are low, you may not need to buy another machine,” Mingus says. “Instead, you may need a transport truck to get the equipment you have from Point A to Point B. Telematics reports that show exactly how many hours you’re putting on your equipment provide the information you need to make that decision.”

Depending on the kind of work you’re doing, the analysis can also become more complex. At Rogers Group, for example, quarrying progress is factored into the equation.

“If we know we’re digging aggregate at a capacity of 1,500 tons an hour and we also know that the mining operation at a particular quarry is moving further away from the dump hopper, we can start to project how long it will take before we need to add equipment,” Gosnell says. “But we need current equipment utilization rates to make these calculations.”

**Beyond GPS**

With these and other management benefits, telematics has proven to be much more than the sum of its GPS parts. The ability to map the real-time location of an entire fleet is a core telematics feature, but what the system does with the GPS information is really where the rubber meets the road.

Whether it’s improving equipment productivity, optimizing PM schedules, or any of the other duties on a manager’s plate, telematics reports can deliver insights that lead to tangible savings as well as better fleet management overall. The equipment manager is responsible for delivering the best performance at the lowest price. Telematics is a tool to get there.

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> Real-time equipment location is displayed on the desktop with asset type identified by icon, on/off status indicated by color, and more.
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