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How to Create Multiple Equipment Profit Centers

Profitability & Equipment Management

Does your construction equipment generate revenue or simply cipher profit from your bottom line? Are specific pieces of equipment compromising the profitability of your entire fleet? When a piece of equipment breaks down, is it better to repair it, replace it, or rent a replacement?

If you're not treating each piece of equipment as an individual profit center, you probably don't have clear answers to these and other vital equipment management questions.

Since equipment management is a complex process, many contractors don't track equipment costs and associated revenue with precision. Too often, I talk with CFMs who lump all of their equipment costs into one big "bucket" and use the aggregate total to determine the financial status of their equipment operations.

At a glance, this might seem like an adequate approach, especially if the running total shows a profit. But, this method can't provide an effective way to influence how much profit is earned or enough information to take corrective action when the bucket total shows a loss.

What's worse, some companies charge equipment expenses to overhead, theorizing that the cost of owning and operating equipment is just another cost of doing business (similar to office rent, telephone expenses, or a copier).

But, you can't logically evaluate the profitability of your fleet when you bury equipment costs in overhead. And, from a job costing perspective, this method is inherently flawed because jobs that use multiple pieces of equipment carry a similar burden to jobs that don't use any equipment at all.

Jobs & Equipment Parallels

Both the bucket and overhead approaches obscure the critical decision-making details that make owning and operating equipment profitable. Imagine what would happen if you applied the bucket approach to managing your jobs. If all associated costs

were lumped together, could you figure out why your company was making or losing money? Not likely. Instead, you'd be hard-pressed to pinpoint problems or identify the types of jobs that made the most money.

Successful contractors make job costing a top priority: Each job's costs are tracked against its schedule and budget, with necessary action steps taken daily to ensure a positive outcome. Luckily, tracking equipment costs isn't much different than tracking job costs.

In fact, CFMs who understand job costing can easily apply the same fundamentals to equipment management and establish best practices for creating multiple equipment profit centers.

Equipment Defined

Within the construction industry, equipment means different things to different trades. In general, construction equipment can be classified into four types: 1) heavy equipment, 2) vehicles, 3) portable equipment, and 4) small tools.

While some of the principles discussed here can be applied to all equipment types, this article focuses on heavy equipment (e.g., backhoes, excavators, front-end loaders, etc.), with an emphasis on the heavy equipment that your company owns or might purchase.

To create multiple equipment profit centers, it's important to recognize that, like individual jobs, each piece of equipment in your fleet must be evaluated separately. There are three factors that determine a piece of equipment's profitability: 1) costs, 2) revenue, and 3) utilization.

So, before you can decide whether a piece of equipment is profitable or not, you must first determine its current financial status by documenting these three factors.

Equipment Costs

Equipment costs should be separated into two distinct categories (costs to own and costs to operate), and then further broken down by cost type.



Costs to own are generally depreciation and insurance. (Whether the equipment is sitting in the yard or being used on a jobsite, your company will incur these costs.)

Costs to operate will vary depending on how much a piece of equipment is used, and will include maintenance, major and minor repairs, and fuel.

Equipment Revenue

To create multiple equipment profit centers, you must view equipment and jobs as two separate divisions within your company. Equipment revenue is generated when you charge an internal rental rate to your jobs. To set your equipment rate, you'll need to know your costs to own and operate that equipment, and what rate the market will bear.

To illustrate these points, consider the nuances of construction estimating. You must understand your costs before you can bid a job, but you can't bid twice as much as your competitors and expect to win that job. What's more, you don't want to bid a job at a loss just to get the work.

Setting equipment rental rates is no different than bidding a construction project. If your costs indicate that a profitable backhoe rental rate is \$150 per day (and that rate is within the industry standard), then you don't want to charge your jobs \$300 per day just to show a greater profit on that backhoe.

On the other hand, renting your equipment at a loss won't produce a profitable equipment operation either. If your equipment costs exceed the competitive rental rate, you need to figure out why – and determine whether continued ownership is profitable.

Equipment Utilization

How much you use a piece of equipment also helps determine its profitability. Many companies fall into the trap of thinking, "If we own it, it's not costing much – even if we're not using it." But, if your company buys a piece of equipment and doesn't use it, it still has to pay the costs of ownership. In addition, it has spent money that would otherwise be categorized as profit.

When evaluating utilization, it's important to have a clear understanding of annual usage, as well as life-span usage. Let's say you need to use a piece of equipment 50 hours a year to break even. In year one, that equipment accrues 120 hours of use, but in year two, it only accrues 20 hours.

Evaluating each year individually leads to one set of conclusions. When the years are combined, however, the law of aver-

ages kicks in and a more realistic utilization picture emerges. Over time, historical utilization data can be used in a variety of ways to make important decisions that affect the profitability of your fleet. Here are a few examples:

"Our business focus has changed and we no longer need two front-end loaders. From a profit perspective, we should sell one of them."

"The use of Backhoe A has declined by 25% over the past three years, but we're still ahead over its entire life. We need to monitor repairs against this declining usage to determine when it's time to retire this backhoe."

"Job 100 is using a rental excavator, even though we have three of our own. Why? Is there an excavator sitting idle on another job that could be moved to this one? Do we have an excavator out for maintenance or major repairs? Or, do we have an unusually high workload right now that is creating a temporary demand for another excavator?"

Even if you rent heavy equipment, tracking utilization is important. By establishing usage statistics, you'll be able to determine whether you should continue renting or if it makes more sense to buy your own equipment.

Data Tracking Technology

Now that you have an idea of the information that must be tracked in order to create your company's multiple equipment

Exhibit 1: Equipment Profitability Factors		
FACTORS TO TRACK	EXPLANATION	BREAKDOWN
Costs to Own	Costs incurred, whether or not equipment is used.	<ul style="list-style-type: none"> • Depreciation • Insurance
Costs to Operate	Costs that vary depending on how much equipment is used.	<ul style="list-style-type: none"> • Maintenance • Major repairs • Minor repairs • Fuel
Revenue	Internal rate charged to jobs as equipment rental.	<ul style="list-style-type: none"> • Annual revenue • Lifetime revenue
Utilization	Usage defined by the number of accrued internal rental hours.	<ul style="list-style-type: none"> • Annual usage • Lifetime usage

profit centers, it's time to talk about the technology options available for managing all of this data. When discussing equipment management technology, I think in terms of "good, better, and best."

A Good Solution

A spreadsheet program (such as Microsoft Excel) is a good equipment management solution compared to the bucket and overhead options discussed earlier. Many CFMs are expert Excel users and could easily design a spreadsheet for tracking equipment details. (In fact, I am often amazed by the complex Excel spreadsheets and Microsoft Access databases that companies have developed to manage large equipment fleets.)

Yet, even if a company is doing a great job of managing its equipment using spreadsheets, the manual data entry required to keep the spreadsheets up-to-date takes countless hours of valuable time. And, since there is no way to automate the collection of information, real-time reporting is not available. In addition, formula issues and human error can sabotage your data's integrity.

A Better Solution

A better option is to use your accounting program's job cost functionality. Depending on the complexity of your accounting software, you have three choices when using these features to manage equipment:

- 1) *Set up a single job for equipment, using phases to designate different pieces of equipment and multiple cost categories under each phase to track different costs.*

If your job cost software supports a multi-level job, phase, and cost type structure, set up a single job for equipment.

Then, each phase within the job becomes a separate piece of equipment and multiple cost codes can be used to track different types of costs.

This setup will give you the highest level of reporting flexibility in the better solution category.

- 2) *Set up each piece of equipment as a separate job, using multiple cost codes to track different costs.*

If you have more than a few pieces of equipment, but your software doesn't support multi-level job costing, your best approach would be to treat each piece of equipment as a separate job.

Multiple cost codes could be used within each equipment job to designate different types of cost. This setup would still allow you to run a variety of useful reports, such as the cost for major repairs across all equipment jobs.

- 3) *Set up a single job for equipment, using a separate cost code for each item in your fleet.*

If your fleet is small, you could set up a single job for equipment and assign a separate cost code to each piece of equipment.

Although this approach won't give you the same level of detail as the other two options, it will still allow you to collect equipment costs in a centralized location for reporting purposes.

Remember: When you use your job cost module as an equipment management system, manual data entry is still required to evaluate profitability for each piece of equipment.

The Best Solution

The best solution for creating multiple equipment profit centers is to use equipment management software that

Exhibit 2: Equipment Tracking Options		
GOOD	BETTER	BEST
Spreadsheet Program	Accounting Software Job Costing Functions	Integrated Accounting & Equipment Software
<p>Pros:</p> <ul style="list-style-type: none"> • Minimal learning curve • Easy to customize 	<p>Pros:</p> <ul style="list-style-type: none"> • Available within your current software • Multiple setup options 	<p>Pros:</p> <ul style="list-style-type: none"> • Built-in tracking tools • Real-time reporting • Supports single data entry • Automates equipment management
<p>Cons:</p> <ul style="list-style-type: none"> • Requires redundant, manual data entry • No real-time reporting • Formula issues and human error can corrupt data 	<p>Cons:</p> <ul style="list-style-type: none"> • Requires some manual data entry • Requires work-around reporting processes 	<p>Cons:</p> <ul style="list-style-type: none"> • Not available in all software systems • May require additional staff training



is an integrated component or module of your construction accounting program.

In this case, when you set up a piece of equipment using your software, you'll have a variety of built-in tools for managing everything associated with your equipment. Examples include creating preventative maintenance alerts and generating work orders for scheduled maintenance or unscheduled repairs.

Reporting is simplified, too. Typical equipment management reports allow you to analyze a variety of data, including costs, utilization, profitability, and service history. This data can be analyzed for individual pieces of equipment, all equipment, or equipment within a specific category (such as backhoes, bobcats, or front-end loaders).

An integrated equipment management module also automates such tasks as assigning equipment to jobs and generating recurrent billings that post to the job cost module in designated intervals (daily, weekly, monthly). Not only is this a more efficient way to apply equipment costs to jobs, but it also gives you a more accurate snapshot of your job costs to-date.

To illustrate how this works within a fully integrated software system, let's look at a simplified example:

Equipment A is assigned to Job B at a rate of \$100 per day. If Equipment A stays on the jobsite for five days, then \$500 is automatically debited to Job B as a cost in the job cost module. In addition, \$500 is automatically credited to Equipment A in the equipment module as revenue.

As this basic example helps illustrate, by using the features within a robust equipment management module, each piece of equipment automatically becomes a profit center!

Questions & Answers

Once you're tracking individual equipment costs, revenue, and utilization, you can begin to use this information in profitable ways. If we revisit the questions asked at the beginning of this article (when clear answers were not available), you will now have concrete answers at your fingertips.

It will be easy to identify which pieces of equipment generate revenue and which ones operate at a loss, thereby lowering the overall profitability of your fleet. And, by analyzing service history, along with lifetime utilization and costs, it becomes easier to determine when a piece of equipment should be

repaired or replaced. Over time, the accumulation of historical data will paint an even clearer picture of your equipment operations.

Once you have answers to basic questions, you can begin to make strategic decisions that improve the profitability of your equipment centers. Scheduling regular maintenance to lessen the impact on jobs, performing small repairs early to avoid breakdowns later, and improving utilization – and subsequent revenue – through proactive scheduling are just a few ways to significantly impact your equipment profits.

Best Practices = Bigger Profits

To create multiple equipment profit centers, it's important to establish standardized best practices for gathering and analyzing data. In addition to putting a solid technology solution in place, surround yourself with experts who contribute value to your process.

Whether you need help establishing a depreciation schedule or writing custom dashboard reports, experts (like an outside CPA with equipment expertise or a construction management consulting firm) can help.

In addition, don't overlook the experts employed by your software vendor. These inside advisors often have a wealth of hands-on knowledge and experience to share, and can make a valuable contribution to your new and more profitable equipment management program. **BP**

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