# The real costs of your maintenance equipment from a bidding perspective 

## by J. Paul Lamarche

- More important than any other criteria you might use to purchase equipment, the machine must match the job for which it is intended.

You can simplify the selection process by talking to your equipment dealer, who should be highly trained, service oriented and backed by the manufacturer.

Many contractors are confused by the wide variety of equipment available. Indeed, many walk into a dealership and ask, "Which is the cheapest machine available?" when they should be asking, "Which machine best suits my needs?"

Let's focus on choosing the right machine from a job bidding perspective. When examining the different types of mowing equipment, the first question you should ask is "Can I afford it?" On the other hand, you should be taking into account any potential increase in productivity that could result from buying a more expensive machine. This is especially important when the machine lowers the per-hour cost to your customers.

So then ask yourself if you can charge for the equipment, get a return on investment, still be competitive, and also actually increase your productivity.

To answer these questions, you will have to obtain the following information from your dealer for each piece of equipment you're considering:

1) cost of machine,
2) the machine's life expectancy in hours, and
3) operating capacity of the machine.

You also need to look at certain figures pertaining to your own company:

1) overhead as a percentage of sales,
2) hourly rate of pay for the equipment operator, and
3) hours you use the machine per year.

From this information, you can figure out how much you need to charge per hour. Is this rate competitive? Can you actually afford the machine?

Brass tacks-Let's compare the operating costs between a 48 -inch walk-behind mower that mows and mulches and a 48inch riding tractor that mows, mulches, vacuums and dethatches. The walk-behind
might cost $\$ 3000$ while the tractor might cost $\$ 9000$. Which is the better bargain?

Contractors trying to reduce their debt load might be inclined to choose the first machine and save the second for "maybe next time." But there is more to it.

For a company that might use the machine 750 hours per year ( 25 hours a week for 30 weeks), either machine would have a lifespan of approximately four years.

According to the JPL Equipment Costing Formula, the hourly cost of any machine is obtained by dividing the lifespan (in years) by two, multiplying it by the annual usage (in hours), and dividing the result into the cost of the product in question.

In other words, the $\$ 9000$ machine costs $\$ 6$ per hour to use and the $\$ 3000$ machine costs $\$ 2$ to use. With the $\$ 9000$ machine, you would earn $\$ 18,000$ over its lifespan ( 4 years multiplied by 750 hours multiplied by $\$ 6$ per hour). With the $\$ 3000$ machine, you would earn $\$ 6000$. So you can see that you're actually earning "return on investment" with both machines.

The cost of the operator must also be considered. For a worker making $\$ 7.50$ an hour, the total payroll burden (taxes, insurance, worker's comp) might be $\$ 10.50$ per hour. Downtime (travel time, coffee breaks, sharpening blades, etc.) usually amounts to 2.5 hours per 10-hour day, so you'll have to compensate yourself for this time: add 25 percent for a total charge to your business of about $\$ 14$ per hour for operator costs.

For the $\$ 9000$ machine, to figure out the hourly break-even charge using the JPL Estimating Formula, add the cost of the operator (per hour) to the cost of the equipment (per hour) and divide by $100 \%$ minus your overhead. In our example, the break-even price is $\$ 33.34$ per hour for the
$\$ 9000$ machine. To get $10 \%$ profit, you have to charge the customer $\$ 40$ per hour.

For the $\$ 3000$ machine, the break-even charge would be $\$ 26.67$, and to get $10 \%$ profit, you have to charge the customer $\$ 32$ per hour.

However, since the $\$ 9000$ machine also picks up cuttings and debris, it eliminates the extra labor you would need for raking up and passing the leaf and grass blower.

If you have a three-acre maintenance job that requires cutting and raking, the $\$ 9000$ machine will do the work in two hours maximum. The $\$ 3000$ machine would take four hours maximum.

Therefore, you would have to charge the customer $\$ 80$ using the large machine, but you'd have to charge $\$ 128$ using the smaller machine.

Figuring costs of the machine on the job, and considering the typical jobs they will be required to do, will help you decide which type of machine to buy, and whether-in fact-you should initially buy a more or less expensive machine.
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