Optimizing Resources to Improve the Productivity of Your Diesel Repair Shop

A Highway & Heavy Parts White Paper

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PART I: Implementing Strategic Productivity to Maximize the Value of Your Diesel Repair Shop

Productivity is the practice of getting the highest and best use from your resources. It means utilizing resources where they'll do the most good, and doing so in the most effective and efficient manner to obtain the best possible results.

Quantification of productivity is always "some amount of output per some amount of input." It follows this general formula:

$$\text{PRODUCTIVITY} = \frac{\text{UNITS of OUTPUT}}{\text{UNITS of INPUT}}$$

In other words, productivity is the result obtained from a specific amount of a critical resource used to obtain the result. Every system, operation, task, benchmark, or any other activity you're managing, including your entire business, has inputs and outputs. The amount of output you get per unit of input is the productivity of the input.

Productivity is always expressed as something per something – repairs per labor hour, units per machine per hour, pounds per day, miles per gallon, or any other units of output per units of input.

Input is always some kind of resource, such as staff/labor, space/facilities, equipment, supplies, information, time, and money.

Staff/Labor Productivity is the amount of output you get per worker or per labor hour. For instance, how many diesel engines did your repair technician rebuild in one month?

Supplies Productivity is the amount of output you get per pound, ton, ounce, or other measure of material used in the activity. For example, how many trucks can you lubricate with one drum of lubricant?

Space/Facilities Productivity is the amount of product you get from the entire shop (or other facility) in a period of time. For instance, how many trucks can you service in a month, given the size and configuration of your repair shop?

Sales Productivity is pretty obvious - it's the number of sales made by your sales staff in a given time. The input of the sales system is the number of sales leads, or prospective customers who called your shop for a repair estimate in a given time period. The output is the number of those prospects that were converted to a sale in that same time period.

Financial Productivity is getting the optimum dollar output for each dollar of input. In other words, it means getting "more bang for your buck". For instance, how much revenue did you generate from your last internet advertising investment?

Operational Productivity is getting the optimum operational output (or result) for each unit of the resource used to produce that result. For instance, what is the optimal number of turbo chargers one technician can install in a single day. Operational productivity is the true measure of the productivity of your entire diesel repair shop and all its resources.

Productivity Indicators:

You could say that all productivity is resource productivity, because all productivity indicators measure the productivity of utilizing a specific resource, or the contribution that resource makes to the productivity of a system.

For instance, the fuel efficiency of a diesel truck (miles per gallon) is the productivity of the engine in its use of fuel. This is a narrowly focused view of the productivity of the entire truck. So, you might also measure the accelerating power of the truck (the time it takes to go from 0 to 60 miles per hour), the mechanical reliability of the truck (number of breakdowns per year), or any number of other measures that focus on specific characteristics of the vehicle.

The list of all possible productivity measures can be so numerous that they would be meaningless to most people. For instance, an independent truck owner/operator might be interested in only a few measures that are important to him/her, such as how many miles per gallon does the truck get, and how many miles can he/she travel on a new set of tires. But a diesel truck fleet manager might be interested in a totally different set of measures that determine the productivity of his/her trucks.

The point being, that there is no one set of productivity measures appropriate in all cases. Even two diesel repair shops of comparable size, and in the same geographic market, may have a different set of productivity measures because they have different strategies, different business models, different management structures, and different informational requirements.

The key to improving productivity is to identify, track, and measure the productivity indicators that have the most impact on your repair shop, and to educate your staff on what those indicators tell them about the role they play in running an efficient diesel repair shop. As you measure your productivity indicators, and establish baselines, you will begin to see where improvement needs to be made, providing you with the knowledge you need to innovate your systems and processes to be more productive.

For more information on optimizing the productivity of your diesel repair shop, please read Part II of this blog series, "Managing the Productivity of Your Diesel Repair Shop."

PART II: Managing the Productivity of Your Diesel Repair Shop

Principles apply to productivity management like they do anything else you manage in your diesel repair shop. They apply to all levels of your business from the lowest level employees, to middle management, all the way up to the owner.

The 5 Principles of Productivity Management:

1. **Acquire the most productive resources.** Resources include staff/labor, space/facilities, equipment, supplies, information, time, and money.

   Technology investments can increase the productivity of many business functions. And with the advancements in mobile and cloud technologies, it seems to be the preferred method nowadays. But implementing new technology isn't the only way to increase productivity.

   The recruiting and promoting of employees with the best qualifications and right personalities for their positions; the utilization of office space, production space, and other facilities that are the optimal

size and configuration for the tasks being performed within them; the machinery and tools that are right for the tasks they are being used for; and numerous other resources can have a dramatic impact on the productivity of your repair shop.

2. **Make the "highest and best" use of your resources through systems.** As well as being the most cost-effective way to run a business, systems are also a primary means to increase productivity. When innovating your repair shop systems, be sure to include productivity measures to evaluate new systems and to track existing ones. Make sure your systems are being operated by employees with the proper qualifications, skills, and training.

   Not everyone is fortunate enough to have unlimited resources in their business. If your resources are limited, then you must assign them to areas of the business where they'll do the most good, in other words, assign them to systems where they'll be the most productive.

3. **Optimize (rather than maximize) the productivity of your resources and systems.** Common sense tells you that you should maximize a good thing, and most people would agree that productivity is a good thing? So why don't you maximize productivity? Because there are situations when productivity gains can hamper quality and customer satisfaction. Because quality and customer satisfaction are also very important goals for your diesel repair shop, productivity must be kept in balance with them.

   Another word for balance is "optimize." You need to optimize productivity.

   For instance, if your repair shop service advisor merely hands an estimate to a customer and moves on to servicing the next person in line, without explaining the estimate to the customer, they will feel uncertain about the necessity and scope of the repairs, and lose confidence in the professionalism of your repair shop. This will cause the customer to take their future business elsewhere. The service advisor will have high productivity, in terms of servicing many customers in a day, but your repair shop will go out of business, due to the lack of return customers. In this case, high productivity comes at the cost of not retaining customers. The solution to this is to find the balance point between productivity and customer retention.

4. **Quantify and monitor key productivity indicators for every system, business unit, and important resource.** Productivity is one of the best indicators of performance, and is almost always quantifiable. It's a key indicator to add to your system, business, and strategic indicators.

   You most likely already have key performance indicators for your repair shop. It's a good idea, however, for you and your managers to review their quantification and add productivity measures, if they are not already covered.

   And, of course, quantification isn't a one-time thing. You need to track and evaluate productivity over time, just as you would any other quantification, so you can monitor the pulse of your repair shop. Downward trends of productivity indicators are early warning signs that you are having problems, and helpful in discovering the cause of those problems. Before and after measures of productivity indicate if a system innovation is helping or hindering the system. The key strategic indicators of productivity help you measure your progress toward your strategic objectives.

5. **Use strategic systemization as the tool for managing productivity at all levels of your repair shop.** If you are using systems to run your repair shop, then you already have productivity improvement processes in place, because most of your management systems have productivity

improvement as an objective. Productivity doesn't mean adding systems. It means making your existing systems as productive as they can be – getting the best possible results (outputs) for the resources (inputs) you use to get those results.

Now, all you need to do is to design and manage your systems with productivity in mind. To do that, you'll need to add productivity measures to the key indicators for each system, and each employee and management positions, and monitor them through your existing management information, financial control, quantification, and employee evaluation systems.

Your existing systems will operate much as they do now, but with additional focus and emphasis on productivity. This will automatically establish higher priorities for the improvement of low-productivity systems, and result in allocation of more resources to productivity improvement. The result will be a rapid improvement in productivity at all levels, not to mention an upward trend in the market value of your repair shop. The more productive your resources, systems, organizational units, and your entire business are, the more value you build into your products and services, and the more value you build into the repair shop itself.

PART III: Performing a Productivity Review

Putting the principles of productivity into practice in your diesel repair shop is simply a matter of selecting a system, function, organizational unit, or an activity, then performing the productivity review, and creating a productivity improvement plan.

Following are the 6 steps for performing a productivity review:

1. **Select a system, business function, organizational unit, or activity** of importance to your repair shop that you want to review and improve.

2. **Determine the critical outputs (or results)** of the system and how they are measured. Deciding on the most useful measure of the result depends on what kind of productivity you're interested in. If you're operationally-driven, you'd focus on quality, quantity, speed, and the like. If you're financially-driven, you'd focus on costs and revenues. However, to conduct a thorough productivity review, you would want to measure both financial and operating indicators of output.

3. **Determine the critical inputs (or resources)** of the system and how they are measured. What are "critical" inputs? That depends on the system. For instance, in a steel factory, the amount of electrical power and the content of the iron ore are critical. In a transportation company, fuel, maintenance, and equipment are critical. In a diesel repair shop, labor hours, labor costs, parts, and time are critical inputs.

   As we mentioned in Part I of this blog series, inputs are resources of seven different kinds: labor/staff, space/facilities, equipment, supplies, information, time, and money. Critical inputs are the resources that have the greatest impact on the output (or results) of the system, function, or activity. The critical resources should be the focus of your attention. The less of a critical resource you use, or the more effectively you use it, the more productive your system will be.

4. **Define key productivity indicators.** Combining critical output measures with critical input measures gives you the critical, or "key" indicators of productivity.

5. **Evaluate productivity.** In order to evaluate productivity, the first thing you need is to know your desired productivity, so you can compare it with your actual productivity. If you don't know what the desired productivity should be, then the actual productivity serves as a baseline from which future improvements can be measured and analyzed. The productivity number is the starting point. The rest of the evaluation relies on the rules of the productivity principles, specifically:

   - Do you have the best, most productive resources?
   - Are you making the "highest and best" use of the resources used in the system?
   - Have you optimized the productivity of the system, including balancing productivity with quality and customer satisfaction?
   - Do you have a process for tracking and evaluating the system on an ongoing basis?

6. **Planning productivity improvement.** As you would with any other plan, establish the necessary activities, assign staff accountabilities, and set a time schedule and calendar dates for completing them.

   While you're planning productivity improvements, be sure to remember that if you focus solely on productivity, you run the risk of diminishing the importance of customer service. It's not that you're likely to forget your customers, but focusing only on productivity can divert your attention away from them. Making performance evaluations based primarily on productivity could even cause your employees to lose sight of the customer. That's why the third principle of productivity is to optimize productivity, keeping it in balance with customer satisfaction and quality.

   As important as productivity is, it still takes second place to the customer.