



# SPEC'ING FOR VEHICLE WEIGHT REDUCTION & MAXIMIZING PAYLOAD EFFICIENCIES

Lightweighting of both vehicles and equipment can significantly cut fuel costs and improve total cost of ownership, and begins by properly spec'ing the vehicle and all of its components. To reap the benefits of lightweighting requires properly spec'ing the vehicle from head-to-toe, including all upfit components.





There's little argument among fleet managers and upfitters — spec'ing a truck or van is a complicated process involving numerous decisions and considerations that take time and careful planning.

Among the dozens of decisions that need to be made are those involving the type and capacities of the vehicle, including:

- Powertrain
- Body type
- Load and towing capacity
- Vehicle weight

This last consideration — vehicle weight — is among the crucial decisions that aren't always fully evaluated before a vehicle order is made. A truck or van spec may give special attention on lightweight body materials to save weight, but less lightweighting attention to upfit components, e.g., bins, racks, or a crane, that will also impact weight. The vehicle body and upfit components must be part of the lightweighting equation to achieve overall efficiency.

That being said, underlying all spec'ing considerations is that the spec be defined by the application and not the other way around.<sup>1</sup>

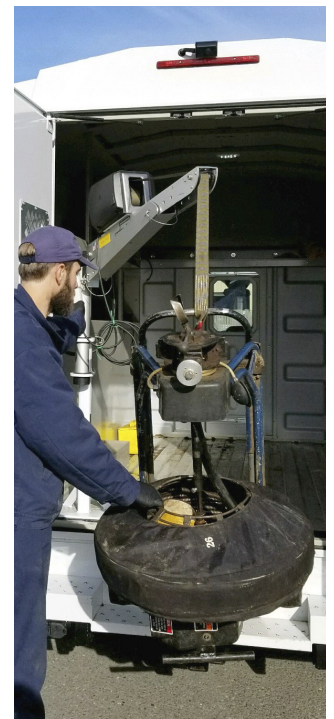
### **Spec'ing to the Application**

With the emphasis on efficiency in all aspects of business operations, it makes it critically important that fleet personnel not only spec the vehicle to the application, but the equipment to the application as well. This is the only way to achieve maximum efficiency for the vehicle and the technician using it.

In order to correctly spec vehicle equipment and tools, fleet personnel and company leadership need to look at every aspect of fleet operating parameters, including:

- Where does the vehicle travel?
- What are its working conditions?
- What type of work does the technician do when he or she gets to a job site?
- What tools and upfit components does he or she need to get the job done with maximum efficiency?

Directly involving field technicians in the spec'ing process will help fit the vehicle and its equipment to the application — since the technician has firsthand experience to know what tools and equipment are best suited to the working conditions. A technician that is part of the decision-making process will be motivated to give valuable information to help the fleet improve its efficiency, and subsequent buy in to using the tools and equipment will be greater.

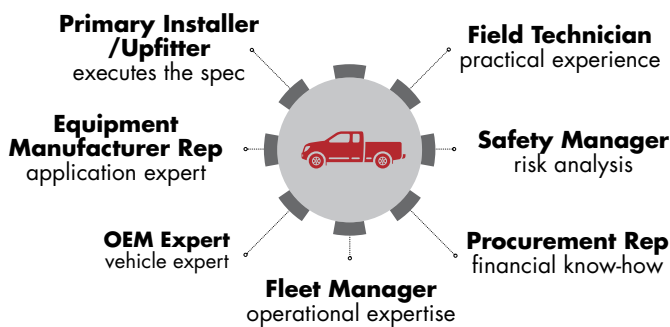






It is highly recommended that equipment providers be included in the spec'ing process to ensure the optimal solution for the application and that the upfit process is glitch free. Equipment providers are experts in finding solutions that meet the specific needs of their clients based on comprehensive knowledge of their product and years of experience meeting specific applications.

### THE PERFECT SPEC'ING TEAM



When evaluating specific upfit components, including equipment and tools, fleet personnel need to consider:

- How will the technician be using the equipment? (On vehicle only, off vehicle, will they be driving in garages?)
- How much does the equipment weigh?
- Is the equipment used every day?
- How will it be secured?
- Will the equipment need to be off-loaded from the vehicle?
- Is the equipment safe and easy to use?

While having a set spec can make that process more efficient, consider adopting a "clean sheet" spec'ing process<sup>1</sup> during acquisition periods as a best practice. This may add an additional step, but a clean-sheet approach will aid in spec'ing a vehicle that is the best fit for the operation. Crucially, it will help companies avoid perpetuating inefficiencies associated with the vehicle and its equipment that would be inevitable if specs were carried over year-to-year. In effect, every spec becomes fair game to be altered or eliminated, giving the fleet the opportunity to improve efficiency and evolve as its mission, function, or scope may change. Fleets will thus avoid being trapped in legacy behavior.



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## Spec'ing for Lightweight Efficiency

Spec'ing to the application is the first step that fleets should take when choosing a vehicle. In today's business arena, with its emphasis on cost cutting, lightweighting is perhaps one of the most important considerations for fleets looking to maximize overall operational efficiency and save money.

Lightweighting, in the context of spec'ing a van or truck, consists of removing weight by:

- Utilizing lightweight materials in the body of the vehicle
- Cutting upfit component weight
- Both using lightweight materials and cutting upfit component weight

Original equipment manufacturers (OEMs) have increasingly been adding lightweight materials into their vans and trucks, and upfitters have followed suit with lightweight truck and van bodies to cut weight and improve efficiency.

While lightweight bodies promise to make fleets more fuel and operationally efficient, if you do not factor in the weight of the upfit components, these gains could be lost, and your lightweighting goals not met.

For this reason, the spec'ing process needs to be three dimensional, reviewing every aspect of the spec from the vehicle to the upfit components — which includes tools and equipment — to ensure that lightweighting goals are met.

## Fitting the Foot into the Shoe

A lightweight crane, such as a SpitzLift, illustrates the benefits of fitting the "foot into the shoe," i.e. the equipment to the application.

Selecting the right lightweight tool can help improve payload capacity, and take further advantage of vehicle lightweighting. A SpitzLift crane weighs between 30 and 48 pounds — depending on the model — and has a load capacity of up to 900 pounds, with a total payload cost to the vehicle when fully installed of less than 100 pounds.

A lightweight crane does more than eliminate weight; specifically, SpitzLift cranes — and the various mounting options — can be configured to optimally meet the application. If needed, custom lifting solutions can be designed by working with the company's equipment handling experts to meet the specific goals of the application. There is no need for the operation to attempt to make changes to conform to the crane.

## FUEL EFFICIENCY BENEFITS OF LIGHTWEIGHTING

Consider, for every 100 pounds removed from a vehicle, there is a 1-2% improvement in fuel efficiency<sup>2</sup> — so a fleet that buys a truck or van with a lightweight upfit that trims 300 pounds out of the weight of the vehicle will see a 3-6% improvement in fuel efficiency.







And, since SpitzLift cranes are lightweight, they can be used by one person, which helps improve efficiencies, save time and money, and allow for better deployment of manpower. SpitzLift cranes are also portable and can be used in another vehicle, on a trailer, on a cart system, or in a variety of off-vehicle applications.

Today, safety is a top-of-mind concern; a lightweight crane can greatly reduce the risk of job-site injuries. SpitzLift cranes are user-friendly and designed to help technicians work more efficiently and safely. Because of this, they are more readily adopted by the technician.

Providing an easy-to-use lifting solution for technicians reinforces the company's safety message and helps reduce the potential for worker's comp claims due to a lifting-related injuries.

### **Long-Term Use, Long-Term Benefits**

Although lightweight upfits or equipment are made of lighter material, it doesn't mean that they are less robust. In fact, because an upfit is made of "lighter" material, it needs to be even more robust to be of value to working fleets. For example, because of its durability, it's not uncommon for lightweight truck bodies to be reused over the life of several trucks.

Lightweight equipment, too, has to be just as durable as an upfit truck. SpitzLift cranes are an example of durable lightweight equipment with lifespans that exceed more than a decade.

Anecdotal evidence shows that some of the first SpitzLift cranes are still in service, and have only needed routine component repairs to keep on lifting. This is an example of how good the ROI can be on lightweight equipment.

### **Measuring the Bottom Line**

Taken together, lightweighting has benefits across the enterprise and beyond. Using lightweight upfits and equipment results in:

- Less need for fuel
- Less strain on the vehicle, improving total cost of ownership
- Less wear and tear on the roads
- Safer operation of equipment
- Less need to regularly replace equipment
- Better use of manpower and other resources
- More money going to the bottom line

The key to spec'ing in general, and lightweighting in particular, is making sure to match the application to the operation and not the other way around. For example, SpitzLift cranes bring the advantages of lightweighting and durability with the versatility of being customizable to the application.



### **THE TIME-SAVING BENEFIT OF A VIRTUAL PILOT**

Before a fleet adds a new service or piece of equipment into its operation, it is advisable and not uncommon to run it through a pilot program.

A pilot typically involves placing the equipment on a handful of the fleet's vehicles for a pre-determined period of time. This gives the fleet real-world experience with the equipment and/or allows it to compare similar solutions apples-to-apples to make the right decision for the fleet, before committing to a large capital outlay.

The piloting period also allows the provider to make adjustments to the solution or equipment to better fit the fleet's needs.





Looking at the spec three-dimensionally and spec'ing for a lightweight crane that weighs no more than 100 pounds fully installed and is safer to operate will gain the fleet both improved fuel economy and maximize the efficiency of the technician, the vehicle, and payload capacity.

The bottom line is that lightweighting across the spec has operational, safety, and financial benefits for the entire enterprise.

## ABOUT SPITZLIFT

SpitzLift Manufacturing, founded in 1999, is recognized as a leader in the small crane and lifting industry. SpitzLift is a robust, lightweight, aluminum crane that is manufactured in the U.S.A. Our user-friendly lifting solutions are perfect for most applications. SpitzLift cranes are payload efficient, cost effective, and mitigate workplace injuries.

SpitzLift uses state-of-the-art research and development to maintain its progressive position in the marketplace. Our focus on continuous product improvement and innovation allows us to continue to deliver cutting-edge lifting solutions. Our design and engineering team are continually engaged in meeting custom applications to meet customer needs.

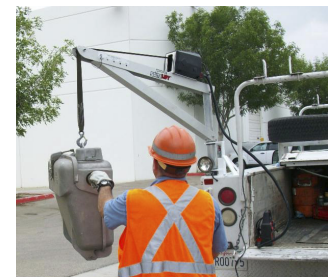
SpitzLift Manufacturing is proud of our growing global presence and our reputation for delivering high quality products for over 18 years. We welcome the opportunity to work with you in addressing your lifting needs, safeguarding your employees from injury, and helping meet your lightweighting goals. Contact SpitzLift at: 619-713-5061 or visit the company website at [www.spitzlift.com](http://www.spitzlift.com)

## References

1. "Optimized Truck TCO Starts with the Right Specs." Antich, Mike. Automotive-Fleet.com. January 22, 2018. <http://www.automotive-fleet.com/blog/market-trends/story/2018/01/optimized-truck-tco-starts-with-the-right-specs.aspx>. Accessed Feb. 2, 2018.
2. "Altering Upfit Specs to Reduce Fuel Costs." Lyden, Sean. Green Fleet. March 2014. <http://www.greenfleetmagazine.com/channel/green-operations/article/story/2014/02/cover-story-altering-altering-upfit-specs-to-reduce-fuel-costs-grn.aspx>. Accessed Feb. 2, 2018.

## THE TIME-SAVING BENEFIT OF A VIRTUAL PILOT CONT.

While there are benefits to this try-out period, the downside of a pilot is that it can take an excessive amount of time to complete. This is because fleets often want or need to have a data set or experience in a host of conditions, including inclement weather — which may require running a pilot over several seasons and/or months. The delay in implementing a service or piece of equipment may mean the fleet is operating in a less-than-optimal way for months or even a year.



To answer this and give fleets the opportunity to test its equipment, SpitzLift has streamlined the process with its virtual pilot program. Instead of running a pilot for months (or even a year), it can be completed in a matter of days. This allows the fleet to see the advantages of the SpitzLift crane, make any adjustments, and come to a decision about its suitability more quickly — leading to improved efficiency and safety in a shorter period of time.