



## Everything You May Not Realise You Need to Know About Vacuum Pads

Here at GGR Group, we get a lot of questions about why a vacuum cup or below-the-hook vacuum lifter isn't working as well as it used to. In fact, the most common cause of poor performance, whether for a hand-held vacuum cup or below-the-hook lifter, is the condition of the vacuum pad itself!

The vacuum pad, sometimes called a suction cup, is the rubber part of the lifter that comes in contact with the load surface. Three primary factors that lead to decreased lifter performance are damage to a vacuum pad's sealing edges, chemical contamination and exposure to the environment. Although these may seem like daunting problems, maintaining the condition of the pad is really just a matter of common sense and a little TLC.

At GGR Group, we take care to ensure that durability, reliability and safety are built into every product we supply. However, once a product leaves the factory, it's up to the owner to properly use and maintain it, ensuring years of trouble-free service. Taking time to learn and care for your particular vacuum lifting device helps extend the useful life of your lifter, reduces fatigue and injuries, and at the same time increases speed, efficiency and safety!

### Sealing Edge Damage

Vacuum pads most often become damaged by cuts or abrasions on the sealing edges, caused by sharp corners, rough surfaces and contaminants. Paying close attention when attaching the lifter to the load helps you avoid situations that can cause irreparable damage to the pad, such as drawing the pad across sharp edges or rough surfaces and setting the pad in caulk, adhesives or sealants.

Inspect the pad prior to use and remove any debris (glass chips, metal shavings, dust, etc.) that could compromise the sealing edge or damage the load surface. When not in use, avoid laying pads face down, and when practical keep pads in their case or with their pad cover in place, to help keep pads clean and out of harm's way.



When releasing a load from the lifter, allow air to flow into the system as designed. Torn sealing edges not only increase the time it takes to attach a lifter or prevent it from reaching full vacuum, but also pose a danger for unexpected release of the load.

### Chemical Contamination

Vacuum cups are usually comprised of different compounds which have specific advantages. A variety of synthetic and natural rubber compounds are available for handling loads that may contact various chemicals, oils or coatings.

Choosing the correct compound for your lifter's pads can help improve handling and reduce load damage. Depending on a vacuum pad's properties, different chemicals pose different concerns. Furthermore, the

interaction of some chemicals with other vacuum system components (whether from fumes or through direct contact) can result in premature wear or failure of these parts.

Strangely, most chemicals that damage vacuum pads are intentionally applied as cleaners or rubber restorers! Except in very special circumstances, vacuum pads should only be cleaned with soapy water or other mild cleansers. Never use petroleum based solvents, petrol, diesel fuel or paraffin as these will eventually dissolve the rubber compound. Neither must chlorinated solvents such as white spirits or mastic cleaner be used; these leach the plasticisers from the rubber leaving it hard, which will lead to cracking of the face and seals making it unusable.

Additionally, using the wrong cleaner will affect the lifter's ability to resist load slippage. If the contact surfaces of either the load or the vacuum pads are not clean, dry and in good condition, slippage is more likely to occur.



### **Environmental Exposure**

To various degrees, heat, cold, ultraviolet rays (UV) and ozone are present in our everyday environment. Over time, these normal environmental conditions affect rubber vacuum pads, causing them to harden, glaze or leach chemicals, reducing their lifting capacity and making them harder to attach.

Due to this inevitable aging, all vacuum pads (whether on vacuum cups or below-the-hook lifters) that exhibit stiffness, glaze or chemical leaching need to be replaced immediately.



To ensure your vacuum pads perform to their full potential, do not store or leave vacuum products outside longer than necessary, and replace vacuum pads as indicated in the product's instructions.

### **Inspection and Maintenance**

Routine testing and inspection should take place before using any vacuum lifter. Inspect the vacuum cup's rubber vacuum pad for stiffness, films, glaze, oils, dust or other contaminants that may reduce the pad's performance. Immediately clean or replace vacuum pads that exhibit any of these problems. In addition to pre-use inspections it is a legal requirement (Lifting Operations and Lifting Equipment Regulations) for below-the-hook vacuum lifters to be thoroughly examined by a competent person at least every 6 months

Vacuum lifters are used day-in and day-out to put a handle wherever it's needed or to get a grip on many different materials. When used and maintained properly, GGR Group supplied products are tremendously safe, versatile and cost-effective tools. If you have questions or concerns about your vacuum attaching hand cup or below-the-hook lifter, please contact GGR Group for recommendations.