

CLEANING OF CARS IN A WORKSHOP: BRAKES, ENGINES, ENGINE COMPARTMENT, CLUTCH, GEARBOX...

REQUIREMENTS

When repairing cars, individual parts are increasingly being replaced instead of repaired. In many cases, however, such as with vintage cars, expensive models or expensive elements, individual parts are still repaired today and then normally cleaned beforehand.

The usual road dirt has to be cleaned off, as well as, depending on the individual part, abrasion, oil residues and used oil, as well as grease and fat residues.

In view of the high personnel costs, there is only one really relevant requirement in practice: it must be done quickly in order to keep costs low.



Parts cleaning, here the cylinder head of a Smart.
Cleaned in a few seconds on the left, uncleaned on the right.

PREVIOUS TECHNIQUE

Depending on the specific application, high-pressure cleaners, cold or bio-wash tables, or brake cleaner spray (A1 spray) are normally used. In most cases, the respective parts have to be disassembled and transported from the lifting platform to the bio- or cold-wash table or directly to a cleaning room and cleaned there.

These methods all have their challenges:

- A1 sprays release VOCs (volatile organic compounds) resp. aerosols, which ultimately enter the atmosphere unprotected and unfiltered. Although the dirt is dissolved quickly and efficiently, it ends up 1 to 1 on the workshop floor. And while a single can of A1 spray may well be inexpensive, the costs quickly add up when entire pallets are used in large workshops.
- Cold washstands also release VOCs resp. aerosols that not only enter the atmosphere, but are also inhaled by the employees working at the cold wash table - which is anything but healthy. Moreover, the cost of refilling or replacing the solvents every few months is much higher than one might think.

- Even bio-washtables are ultimately chemical baths in which the bacteria are bred, with corresponding costs for procurement and disposal. Add to this a considerable power consumption as the bath has to be kept at 36°C day and night, 365 days a year.
- Finally, high-pressure cleaners require large amounts of water and possibly chemicals, with corresponding disposal costs, as well as energy. In addition, expensive and capital-intensive washrooms are needed, and employees have to put on special protective suits.

With the exception of A1 sprays, considerable removal and (re)installation times are added in all cases, as well as transport and travel times for transport to the washroom or wash table and back. Ultimately, all methods remain labour-intensive, resource-intensive and thus expensive.

In addition, they are harmful to the environment and entail considerable health risks for the employees and the company.



Car brake cleaning directly on the lifting platform saves dismantling and reassembly time, as well as travel time. Dirt water is collected in the unit and recycled.

OUR SOLUTION

In contrast to the methods described above, the hot cleaning devices from ph-cleantec consume very few resources. Parts such as engines and pistons, gearboxes, shafts and axles, brakes or hydraulic parts can often be cleaned directly on the lifting platform - and thus without expensive dismantling and in any case without expensive travel times.

Above all, only a fraction of the time is needed that is needed with other methods - our customers regularly speak of 80-90% saved working time, in addition to travelling and dismantling time saved.

With 7.5 or 14 bar and 95°C, small and large parts - from pistons to entire gear boxes - can be cleaned quickly and efficiently.

Especially greasy and oily contaminations are immediately dissolved by the high temperatures, and the 7.5 or 14 bar are sufficient to remove the contaminations.

With the help of appropriate nozzles, every blind hole and every crevice, and with the help of our lances, every large part can be reached without any problems and cleaned quickly and efficiently.

With the units of our SR series, the contamination is collected in the parts cleaning level of the units, and any cleaning agent can be reused multiple times. Alternatively, process water can also be collected in our dirt water collectors and then reused. This saves resources - i.e. water, waste water and electricity - and reduces procurement and disposal costs.



Cleaning the engine compartment of a passenger car with a low-pressure hot cleaning process - easy, fast and efficient even without removing individual parts. Dirt water can be collected and recycled in a separate dirt water KW-collector.

In addition, no or at most very little chemicals are needed: In the case of particularly stubborn dirt, small quantities of an alkaline cleaner - usually between 1 and 3% - can be added, which can then also be reused multiple times because of the recycling. If necessary, this cleaner can also contain a temporary corrosion protection.

All in all, only a fraction of the chemicals that would otherwise be required are needed. This not only protects the environment, but also the health of the employees, and thus increases occupational safety during operation.

Since the devices are mobile, work can be carried out directly on the vehicle - this eliminates the need for travel time and often even the removal of parts. Similarly, our dirt water collectors can be ideally adapted to any pit size.

However, the versatility of the equipment means that not only parts cleaning can be carried out on site: If necessary, the underbody or the chassis can be cleaned quickly and without damaging the paint or sensitive chrome parts.

YOUR ADVANTAGES

- High temperature - up to 95°C - allows complete and thorough cleaning in a short time, especially of oily and greasy parts.
- Low pressure - from 3 to 7.5 bar or from 3 to 14 bar - is completely sufficient to loosen impurities, but does not cause any damage.
- Significant time saving due to quick and easy cleaning; with various lances and nozzles also in places that are otherwise difficult to access.
- Cleaning is often possible without dismantling the parts - this saves significant working time and money.
- Resource-saving: Considerably less water and chemicals than comparable methods; therefore lower procurement, storage and disposal costs.
- At the same time, the method is environmentally friendly and protects health in accordance with the requirements of the (German) Employer's Liability Insurance Association (BGR 157).
- Especially in brake cleaning, collection of harmful brake dusts, and fulfilment of wet cleaning requirements.
- Economics: Low investment for hot cleaning equipment and low operating costs - usually significantly lower than those of competitors after 2 years; plus significant savings on working time for cleaning and dismantling, as well as on chemicals
- Further advantages:
 - Universally applicable - from parts cleaning to underbody cleaning to cleaning the chassis
 - Low space requirement, no expensive installations
 - Mobile - hot cleaning unit and hot water tanks are mobile, therefore no travelling time; hot water tanks can be adapted to any pit size.
- In summary: Considerably less working time, hardly any running costs, low investment, more work safety, and better environmental compatibility.