

Want clean parts?

Here's the more efficient, economical and environmental answer to all your parts cleaning problems!

Bioremediation is becoming a popular option and alternative to cleaning parts with solvents. It is a completely natural way to remove mineral oil based contaminants from parts, without posing any health threat to the user. This method is also less expensive than the traditional methods of vacuuming, absorbing, burning, dispersing, or moving the material.

Bioremediation

What is it?

Bioremediation is a simple, natural process that is present in our lives every-day. It is nature's use of live microbes to remove undesirable compounds such as oil and grease from soil or surface water so that these sources will be returned to their "clean and natural" state. Microbes are single-celled microorganisms found

everywhere in the world, in soil, on water, plants, animals, rocks, and people.

These microorganisms thrive and reproduce by "eating" oil and grease particles thus converting complex organic molecules into harmless substances such as carbon dioxide and water. This process is used to clean everything including oil spills and contaminated soil.

How does it work?

Simply stated, greasy fluid waste drains into a reservoir tank where living microorganisms "eat" the dispersed oils. The solution cleans the part and the microbes clean the solution.

1) The detergent/cleaning agent in the fluid breaks the bond between the contaminants (mineral oil) and the part

itself. This step is key to cleaning the parts since the success of the whole system depends on the cleaning agent. If the oil remains on the part, it won't work. This step might also include mechanical cleaning (i.e. use of a parts brush or adjustable faucet) to aid in the removal of oil.

2) The oil is then carried by the cleaning fluid through a filtering device, or mat, where particulate matter, such as common dirt and other items larger than 50 microns, are withheld.

3) The action of the fluid flowing through the mat releases a combination of microbes and nutrients into a holding tank positioned below the mat. There, the microorganisms come to life and "eat" the oil. The microorganisms work best when they can completely surround the oil particles so it is best that these particles be in

a free-floating environment than attached to a part.

4) By products of this process are water and carbon dioxide. The CO₂ is released into the air, and the water is eliminated through evaporation. Clean fluid is recirculated from the bottom of the parts cleaner tank so that there is no interruption in the cleaning process.

For the system to work effectively, the microbes need to be added to the solution in order to remediate it. Being living organisms, the microorganisms will grow in number as long as the contaminant (food) and nutrients are present. If properly implemented, bioremediation can quickly destroy or immobilize environmental contaminants in such a way that is safe for human health and the environment.

Why is the Bio-Circle system the answer to your parts cleaning problems?

The Bio-Circle system uses Bio-Circle Liquid, an easy to use cleaning solution that continually renews itself so it's like always using a brand new cleaner

- Consistent high level of cleanliness
- No disposal problems
- Free of VOCs (volatile organic compounds)
- Cleans effectively and securely
- Hassle-free



Why use Bio-Circle instead of a solvent?

Bio-Circle

- Safe to use
- Natural, environmental product
- No waste disposal problems
- More economical
- Continuously remains clean
- Reduces use of hazardous solvents
- Pleasant to use (solution is body temperature)
- Long life span
- Conforms with ISO 14000 & 18000
- Non-flammable
- Non-toxic
- No storage problems

Solvents

- Hazardous to health
- Chemically created product
- Must be carefully disposed
- Expensive over long term
- Cleaner must be replaced frequently
- Releases volatile organic compounds
- Fire hazard
- Detrimental to environment
- Flammable
- Toxic substance
- Need safety box for storage



No more worries! Find out for yourself how well Bio-Circle can work for you to get excellent cleaning results thanks to this totally revolutionary biological process!

Millions of years of evolution...

Bio-Circle L is composed of millions of microorganisms that have existed much longer than humankind. They have been present in nature for millions of years and now are helping people get rid of oil and grease. The Bio-Circle microorganisms (BCMO) are completely natural and harmless to any user. These living microorganisms will revolutionize the parts cleaning industry and are already commonly used to eliminate oil spills.

How does Bio-Circle work?



Soiled part before Bio-Circle use

The soiled parts are placed inside the basin.



Clean part after Bio-Circle was used



Bio-Circle L uses a specially developed water-based cleaning agent that breaks the bond between oil and the part itself.



BIO-CIRCLE TAKES OVER THE REST OF THE WORK SO YOU CAN BE FREE OF HASSLES!

The contaminants are then carried by the cleaning fluid through a filter where coarse particles are held. The oil is released into the tank containing **Bio-Circle L**.



The BCMO rise to the top to eat the oil and digest the contaminants.



Oil is continuously and biologically changed by the BCMO so that the cleaning agent is kept clean.

