1. Introduction

Metal machinery equipment and parts used in all industrial processes must be cleaned and lubricated on a regular basis to prevent long term damage and to reduce the risk of high costs associated with repairs or replacement equipment.

Without regular cleaning and maintenance your equipment, your production lines or operations can lose efficiency, result in unplanned down time, subsequent loss in production or, at worse, missed deliveries on ordered goods.

This is why it is so important to have a regular planned maintenance routine to replace worn parts and to clean degrease and lubricate machinery or moving parts.

You should always use effective cleaners and degreasers for high end metal finishing or component processing. What’s more, it’s very important to ensure that the metal processing plant cleaning fluids and surrounding areas are kept clean to prevent contaminants entering the manufacturing process.

2. Types of Cleaners and Degreasing fluid

There are a number of different ways to maintain, clean and degrease machinery, plant equipment, metal surfaces or component processing as each of these processes requires a different approach based on several key factors influenced by your cleaning and degreasing prerequisites.

Product should always be selected based on the specific application taking into account the following factors:

- The desired outcome or finish
- The application being manual or automated
- The environmental impact and current regulations
- The control of chemical waste collection and disposal
- The health and safety factors including the safe use of chemicals for manual or automated cleaning
- The storage or handling of chemicals.

Here is an explanation of some of the different degreasing agents that are available and their corresponding uses:
3. Solvent Degreasers

Degreasers are specially developed chemicals used to clean or remove substances that are hard to clean such as oil and grease based residues. These products are sometimes referred to as solvent degreasers and come in a variety of different forms and are often used in industrial processes of automated ultrasonic cleaning, metal parts washer cleaner, rotary spray washers, vapour degreasers, dunk and dip tank cleaning, manual cleaning including surface panel cleaning of large scale metal surfaces.

Each type of solvent degreaser has its own specific purpose and should be carefully selected for different applications. When choosing a solvent degreaser for your own industrial manufacturing or service re-manufacturing environment you should ensure that they meet the relevant UK environmental standards prior to purchase. You should also take into account in your costs the expense associated with any waste disposal as this is sometimes over looked but can add substantial costs to any process or procedure.

3.1 Industrial solvent degreasers tend to be used in businesses such as industrial manufacturing, re-manufacturing or servicing within production and maintenance environments to clean and degrease unwanted contaminants of oil, grease and adhesive based debris generated through the manufacturing process.

3.2 Solvent degreasers are one of the most effective types of degreasers often used in metal cleaning and component chemical process cleaning. These are often more highly refined and fast drying solvent degreasers which makes them ideal for metal cleaning and finishing. These cleaning solvents and more costly to purchase, store and dispose of.

There are more cost effective solvent degreaser fluids used to degrease heavy plant and machinery found in re-manufacturing and servicing industries such as engines, bearings and other types of machinery, plant and equipment that tend to produce a lot of lubricating grease, dirt and debris. In some instances, where the build up of grease is so bad, the individual parts need to be soaked or processed using ultrasonic cleaning fluids or parts washer cleaners and degreasers.

3.3 Vapour solvent degreasers use a process of vaporising the degreasing solvents to degrease objects. These solvents are very highly refined often toxic and require special management to control their use and eventual disposal. There has been a great surge in recent years to replace and remove the use of the solvent degreaser fluids as they can cause damage to health and to the environment. (See vapour washing below).

APT can play a key role in finding new innovative products and processes to help companies reduce or replace the old harmful or toxic cleaning solvents by using this new breed of solvent and non-solvent, safe non-toxic degreasers and solvent degreaser fluids. Where possible we can even help you to change your process to a detergent water based degreaser to reduce health and safety issues and the long term environmental impact of these processes as well as a reduction in costs over the long term.

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3.4 Ultrasonic degreaser cleaning uses ultrasonic sound waves (unheard by humans) sent through cleaning liquid to degrease objects. The dirty pieces of equipment or parts are put into an ultrasonic tank usually made from stainless steel which is filled with either solvent or detergent suitable based degreaser fluid. The sonic cleaner waves then target the object to quickly and safely break down the unwanted contaminant residues. These ultrasonic parts cleaners can be used to clean highly contaminated plant parts and equipment as well as medical components, tools or even jewellery.

APT has a full range of solvent and non solvent aqueous degreaser fluids suitable for all parts washer and ultrasonic cleaning tank and automated machine applications.

4. Aqueous degreaser fluid

Water based cleaners are very effective not only to remove oils and greases but they also act quickly to remove carbon deposits from metals and other hard surfaces. These are formulated to suit a wide range of different degreasing or de-scaling tasks using low foaming or rust inhibited cold and hot treatments manufactured from high grade alkali based surfactants and detergents, caustics and acids.

Aqueous water based degreasers can also contain antibacterial formulas which kill bacteria. These can be used in applications such as medical components cleaning, to clean and degrease in food processing plants and CIP (ie pipework) cleaning for all types of equipment, degreasing kitchens and decarbonising cooking equipment and hard surfaces. Most of these degreasers are non fragrant and food safe for all food preparation areas and so are ideal for the removal of oils and to degrease and sanitise surfaces. Acid based cleaner are used to descale unwanted build up in water or heat treatment equipment.

APT has developed a wide range of highly concentrated aqueous degreaser fluids suitable or all industrial cleaning and greasing de-scaling, in the processing of cleaning metal parts or components found in the aerospace, medical, transport and engineering industries.

APT’s specialised degreasers are suitable for food processing and plant cleaning processes including our new meta soak - a safe aluminium degreaser for alloy metal cleaning.

4.1 Advantage of using Aqueous Degreasers

Tighter environmental and Health and Safety regulations mean that many industries are required to replace harmful solvent based cleaning and degreasing fluids and processes with aqueous based systems.

In general, these aqueous degreasers are non-toxic, non-flammable as well as being biodegradable and sewer disposable (i.e. with little or no effluent treatment required). They can be heated or used cold, contain rust inhibitors and so can be used on many types of metal cleaning processes; they are also easy to rinse off and tend to be low foaming to suit spray washer or ultrasonic cleaning tasks.

Aqueous degreasers are a very cost effective and an environmentally friendly alternative to solvent based degreasers.
5. New breed of safe citrus degreaser fluids.

APT plays a major part in developing and manufacturing new products to help companies reduce or even replace some harmful or toxic cleaning solvents. This development uses a new breed of citrus degreaser cleaners, including safe citrus solvent and non solvent formulas, together with a safe, non toxic aqueous citrus degreaser. These are highly efficient degreasers which are very effective for both the cleaning and degreasing of a wide variety of metals, parts and components. They can also be used for most cleaning or degreasing applications where quick drying is not required. Therefore the APT range of citrus degreaser agents are a suitable alternative to replace the harmful solvent degreasers with a safe citrus solvent cleaner or aqueous water based citrus degreaser. These citrus cleaners are also very cost effective.

6. Why APT?

APT is one of the UK’s leading manufacturers of degreasing cleaning fluids for ultrasonic cleaning, parts cleaners or component cleaning fluids for equipment and process systems. We offer a full range of specialist aqueous degreasing fluids and solvent cleaners suitable for all industrial and medical sectors systems including spray washing, parts degreasing and cleaning as well as immersion dunk tank cleaning. Our range of degreaser and cleaner fluids can be used effectively in single or multi stage parts washer cleaners, inline flat bed conveyor cleaning, rotary spray wash or new alternatives to costly vapour degreasing.

In fact, we manufacture and supply a comprehensive range of standard and bespoke degreasing fluids to suit the individual customer’s cleaning and degreaser requirements.

Using our extensive industry knowledge and technical expertise we can advise on the best cleaning products to suit your individual degreaser or cleaning systems process, even if you are using specially designed degreasing methods and bespoke machinery for more complex applications.

7. Reducing your carbon foot print

In some instances, we may recommend changing your current solvent cleaning process including vapour degreaser solvents over to new alternative aqueous base cleaning fluids, citrus solvent degreaser or safe non toxic cost effective solvent degreaser fluids to help to meet new UN guidelines and reduced environmental impact.

We also work with and supply many ultrasonic cleaning and parts washer machine manufacturers and service providers with both product development and direct supplies of degreasing and cleaning solutions to support their clients’ and services.

This tailor made service delivers a full turn-key cleaning and degreasing solution starting at the design stage or, in the case of safe ecological solvent replacement, for new effective ecologically acceptable alternatives to degreaser solvents.

8. Vapour washing systems

With ever increasing Health and Safety regulations when it comes to cleaning solvent degreasing products and technique, developments in new vapour washing systems machinery is becoming a real alternative to solvent cleaning. With the additional agitation facilities and ultrasonic stages, vapour rinsing abilities and an air drying stage components can be easily degreased, washed and dried to an exceptional standard.

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Suitable for both manufacturing and service remanufacturing components, crevices with blind holes, sheet metals, tubular products and weighted parts, these machines provide exceptional vapour cleaning and degreasing technology, safely removing hazardous and ecologically unacceptable practices to benefit the future of the environment.

9. Industry Sector Applications

Our products and services have been designed specifically to meet our customers' continuous high volume component cleaning and degreasing requirements including:

- Aqueous and solvent manual parts washers
- Inline flat bed mesh cleaning
- Automated spray washers - rotary
- Dunk tank and dip tank agitation systems
- Ultrasonic cleaning
- Multi stage front or top loading parts washers.
- Manual cleaning and degreasing

We have a proven track record in delivering guidance, planning, advice, training, products and related systems across a wide range of industries:

- Aerospace ~ Automotive ~ Recycling ~ Railway ~ General Engineering ~ Remanufacturing ~ Commercial Vehicle Repair ~ OEM's
- Metal Casting and Pressing Industry ~ Metal Working ~ Printing Industry
- Heavy Industrial applications in transport ~ Engineering and Shipping
- Surface Preparation and Applied Coatings ~ Medical Sector
- All commercial Component Parts

10. Metal Cleaning & Lubrication

At APT we can also help with all your metal cleaning and lubrication requirements.

We have been manufacturing and supplying high quality industrial maintenance chemicals to the food processing, industrial manufacturing industries, aerospace transport, shipping and medical for over 20 years. So we understand the pressures in both cleaning and maintaining industrial machinery to maintain consistent output of production whilst meeting the budgetary challenges.

We pride ourselves on being able to provide you with the right lubricating oils, greases and lubricating products to maintain your machinery to the highest possible standards at all times. We stock a range of unique high quality formulated complemeny chemical cleaning agents, solvent degreaser and aqueous cleaning fluids which will cover a variety of tasks across all manufacturing and processing sectors.

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Our chemical cleaners include automated and manual processing products including spray applications, dunk tanks, ultrasonic cleaning, spray washing, parts washer cleaners and rotary spray wash mechanical cleaning chemicals. We can supply a selection of solvent degreaser, citrus degreaser, aqueous alkali and acid metal cleaners to remove and degrease equipment and machinery or simply to help prepare metal surfaces ready for future coating applications.

Whether you are cleaning or preparing your metal, we have the application to suit any industrial scenario, all designed to help make your operation run smoothly. The correct lubrication used on moving machinery equipment can prolong the life of the part, thus relieving the pressures of downtime.

APT can help you achieve the best metal cleaning and lubricating performance by working with you to find the most effective and safe metal cleaning and lubricating solution. Our goal is to maintain your equipment to the highest standard by ensuring that we match the correct lubricating oil or grease to the individual parts, ensuring your equipment is not vulnerable to any form of corrosion.

Our wide range of surface preparation metal cleaners, designed to suit your individual cleaning processes include:

10.1 Metal cleaning and degreasing fluids

We stock degreasing solvents and citrus solvent degreasers, aqueous alkali and acid based degreasing fluids to remove all organic and inorganic substances as well as unwanted deposits.

10.2 Lubricating oils and greases

We also offer a wide range of specialist lubricating fluids to maintain and keep your equipment running efficiently and effectively throughout your operations.
11. Making the Right Choice

No matter what manufacturing or production industry sector you are operating in, at some time or another your equipment and machinery will require cleaning, degreasing or lubricating.

We’ve already highlighted the range of different products and their applications and we know making the right choice can be daunting.

At APT we offer a FREE advisory service which will help us to understand your specific requirements and ensure that we respond with the most appropriate solution for your specific needs.

To find out more about how APT can help improve your operation and ensure your equipment is performing to its optimum capability, just call us on

00 44 1495 308048

Or visit our website at:

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