Did you know that new clean air regulations are now mandatory for all practices?
Dentists cannot ignore the importance of maintaining their air compressor systems. With higher standard levels, HTM 2022/1 and EN737-3 now mean that more is expected out of your compressed air system.

If you are still using an oil-based unit, a lack of correct servicing could lead to potential illness or even a fatality through infection. It is a dentist’s responsibility to keep abreast of all required standards for their practice, and it is even relevant to your Continuous Professional Development (CPD). It can be easy to forget about your compressor, after all, it is relatively out of sight and possibly out of mind.

Knowing the risks of a badly maintained system is the first step to identifying how you can alter it for the better. With all oil based units there is a possibility of up to 1% of the oil entering the pressure chamber, combining with moisture creating the perfect breeding ground for micro organisms. If you are not regularly having your compressor serviced, can you be sure that this isn’t happening in your system? NHS and COSHH guidelines recommend that compressors must produce clean dry air, thus minimising risk of contamination by micro organisms. By neglecting services, you are also running the risk not only of infection but possible corrosion within your instruments. Moisture within your hand-pieces can cause untold damage and high costs to your practice.

Being aware of any new patient safety legislation...
is vital to your CPD development, and also your responsibility. All dentists need to be aware of the new compressed air system standards and the regularity in which they need to be checked. Your system should only be checked by specialist engineers, and it is your obligation to understand NHS HTM2022/1, HSE(COSHH 1994) and the European Pharmacopia Directive to make sure that you are fulfilling your legal responsibility.

Only certified professionals may inspect, install and service compressed air systems meant for clinical environments. By law, the compressors and air quality needs to be serviced and tested annually as an absolute minimum. All records of this testing must be recorded and kept safe. Their service history must be maintained also, with regular services and maintenance records kept. Your specialist company will be able to discuss the options for your practice, the range of compressors available and their maintenance patterns. They should be able to answer any uncertainties or problems you may have with regards to your equipment. You need to see the service as an opportunity to upgrade any components that have been superceded, or replacing the unit altogether. Although this might cause initial apprehension, especially with the possibility of an impact on cash flow, dentists need to view it as a positive experience.

Entering into a working relationship with a company such as DentalAir offers dentists that positive experience, providing them with the reassurance that they are protecting their patients and their practice by upholding NHS and COSHH guidelines.
Beneath the veneer of your practice’s surface could lay a very real danger. Your much relied upon and most likely under serviced air compressor system could be harbouring potential health hazards. Although it may seem to work without a hitch, you need to ask how safe your compressor is.

The Majority of UK practices utilise oil lubricated compressors, which rely on mineral oil to function. The combination of heat, moisture and mineral oil creates a welcoming environment for pathogens within the pressure chamber. Does this sound like a device you can rely on to provide clean, dry air to your practice? Using instruments with air such as this puts patients at unnecessary risk, and once in the atmosphere, this air creates a risk to all in the practice environment.

Children and the elderly are particularly at risk from air borne infection, and all patients if being treated with air from a poorly maintained compressor could come into contact with E-coli and Legionella. E Coli can be fatal in children, the elderly and the immunocompromised, with symptoms ranging from urinary tract infection to severe cases of diarrhoea. The Legionella bacterium causes flu like symptoms and gastrointestinal problems, more commonly known as Legionnaires’ Disease.

The introduction of numerous health risks is not the only problem that can be caused by under serviced compressors. By keeping an inadequately maintained system dentists run the risk of moist air creating havoc with their instruments. Your state-of-the-art hand pieces that take pride of place in your surgery could soon
be rendered unusable, even by the smallest amount of water damage. Droplets of moisture can slowly reduce the efficiency of your instruments, decreasing their performance and precision.

The release of water damage within your instruments is not the only side effect of a poorly maintained compressor. The threat to dentist’s instruments can also come from the release of carbon particles within the tubing. An oil based compressed air system is put under stress when working especially at high temperatures, and it is this stress that creates particulates. These are carried through the air stream within the instruments and through a precise system that is reliant on all components revolving at high rpms. The introduction of these unfamiliar bodies to the sensitive structure of your hand-pieces could be disastrous. Although they are manufactured to be hard-wearing and accurate for long periods of time, they are still susceptible to the microscopic enemies within.

Relying on the latest innovation of oil free piston and scroll compressors means that you will not be susceptible to the same dangers as an oil-fuelled machine. By ignoring the possible problems with your current system, you might be allowing some uninvited guests to visit you and your patients. Reduce the risk of cross contamination and particulate damage by investing in an oil free air compressor system, and trust that you are keeping your instruments, your patients and your practice safe.
Providing contaminant free, dry air that either satisfies or exceeds compressed air safety regulations is the responsibility of both the dentist and the practice manager. It is imperative that you have a written scheme of examination by a regulator before you are legally allowed to operate a pressure system – be it portable or fixed. All clinical compressed air must meet these standards, as poorly maintained and located systems can be the ideal breeding ground for pathogens such as E Coli.

Assessing the usage of your compressed air system is vital to choosing the correct one for your needs. It is also essential if you are deliberating an upgrade, as the machine you purchased initially might not be up to the challenge of supplying air for all of your patients. Whether or not your equipment is ‘fit for purpose’ is a factor that will be assessed by the leading provider of compressed air systems before presenting you with an accreditation. If your patient list has grown since you first acquired your system, the likelihood is that it is being overworked. Being overworked could lead to over heating of the equipment, leading to an increase in both carbon dioxide production and particulates within the pipe work.

The presence of Carbon Dioxide is potentially harmful,
especially if the location of the system is not correct. Many compressed air systems have been fixed in a place due to convenience rather than the relevant safety factors. Poor ventilation can be dangerous, especially with an overworked machine. If the compressor is placed within the proximity of a vacuum system without correct ventilation, it will ingest the carbon dioxide from the vacuum system and potentially recycle patient waste.

To ensure that you are providing the best quality air to your patients, and you are complying with Compressed Air Safety Regulations, a safety check is the best way forward. Every aspect of your system will be assessed, from water in air content to odour. To pass an inspection your system must be free from particulates in a 75 litre sample, have an oil content of less than 0.1mg/m3, and emit no odour. Your chosen supplier should be able to give you accreditation once you have passed, and assure you that your system meets the statutory requirements. The latest in air compressors include desiccant systems that following the compression process eliminate water from the air supply.

Taking pride in your practice is something that all dentists do but neglecting your compressed air system is something that happens all too often. You have a legal responsibility to make sure you are providing contaminant free, accredited safe air to all of your patients and your practice. With the help of Dental Air, you can rely on in depth regulation advice and excellent aftercare. With a range of service packages brought to you by expert engineers, what are you waiting for?
DENTAL AIR CPD QUESTIONS

01: The combination of which three factors provides a good environment for pathogens within the pressure chamber?
   Answer: 

02: Which bacterium causes flu like symptoms and gastrointestinal problems?
   Answer: 

03: Name three criteria that have to be met in order for your system to pass an inspection.
   Answer: 

04: With oil based units, what is the possible amount of oil entering the pressure chamber?
   Answer: 

05: To make sure you are fulfilling your legal responsibility, it is your obligation to understand which three pieces of official documentation?
   Answer: 

06: By Law, how often as an absolute minimum should dental air compressors be serviced and and air qualities tested?
   Answer: 

07: What kind of compressors do the majority of UK practices utilise?
   Answer: 

Your details
Name: 
GDC registration number: 
Address: 
Postcode: 
Daytime telephone number: 
Email address: 

To obtain your verifiable CPD Certificate, please send your completed form to:
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Tel: 0800 542 7575 Fax: 0161 877 8820
Email: info@dentalair.co.uk