

The Importance of Preventative Maintenance for Centrifuges and Rotors

Why is routine inspection of Centrifuge Rotors important?

- Rotors and buckets may encounter physical wear or be damaged as a result of regular use and this damage may be exacerbated under centrifugal forces. Wear and tear, or damage may include:
 - Corrosion in the rotor cavities or exterior surfaces
 - Scratches or gouges to the base metal
 - Missing or worn anodizing
 - Damage to contact points, such as thread, hubs and screws
- As a result, even a small flaw in a critical part of the rotor may generate stresses greater than the rotor was designed to withstand
- Rotors are subject to high levels of stress due to the centrifugal force created by high rotational speeds, and repeated cycles can cause metal rotors to stretch and change in size
- Stress observed in a typical fixed angle rotor will cause metal fatigue over time. Heavy corrosion can result in premature rotor failure
- Scratches can affect the chemical resistance and accelerate the corrosion process as chemicals can collect in the damaged areas
- High use can cause microscopic cracks and even the smallest scratches and cracks can result in severe internal damage

Why is routine preventative maintenance (PM) service important?

- Physical wear and damage can be detected during a PM allowing for the rotor to be changed before creating any considerable damage.
- Metal corrosion can be avoided by following a routine maintenance program
- Proper maintenance and regular inspection prolongs the life of rotors and protects your equipment and samples
- Routine preventive maintenance service is targeted at the prevention of unexpected downtimes through thorough inspection and cleaning of the equipment
- Annual preventative maintenance service is recommended by Marathon and the Manufacturers