



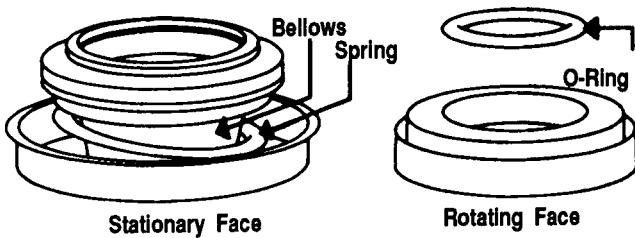
# PRODUCT UPDATE

Number 2  
Revision 1

## ACE BAC-7 MECHANICAL SEALS

The majority of centrifugal pumps sold by ACE Pump are equipped with mechanical seals. The following information should help you in selecting the proper seal materials for each customer's spraying requirements and also help you to determine the causes of mechanical seal wear.

ACE BAC-7 mechanical seals consist of two basic parts: a spring-loaded stationary face that is pressed into the pump frame, and a rotating face that goes behind the impeller.



ACE Pump Corporation offers a choice of two materials for the mechanical seal faces:

The standard BAC-7V mechanical seal has a stationary face made out of carbon and a rotating face made from ceramic material. A chemically resistant Viton® elastomer is used for the flexible bellows. This combination of carbon and ceramic materials is suitable for most ag spray applications.

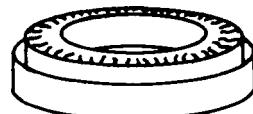
The optional BAC-7SC mechanical seal is the second choice offered by ACE Pump. Both the stationary and rotating seal faces are made from silicon carbide, a very hard material which is ideal for pumping abrasive materials such as fungicide. The bellows of this seal is also made from Viton elastomer.

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## MECHANICAL SEAL TIPS

Two common causes of seal failure are excessive heat and abrasion.

Excessive heat occurs when the pump is run dry or when air is trapped in the pump housing. Some indications of excess heat are melted, deformed bellows, or radial cracks in the ceramic seal face as shown below. It usually occurs during the initial start-up with new equipment or after emptying the sprayer tank during operation.



Before running the pump, make sure the valve on the supply line from the tank is open. Then remove the top-most drain plug to expel trapped air in the pump housing. This will verify that the pump is properly primed. Replace the plug and start the pump.

When spraying, be sure to shut the pump off before the tank runs dry.

Abrasion and/or corrosion is another common cause of mechanical seal failure. Suspended solids in the spray solution can get between the seal faces and erode the surface. Good seal faces should have reflective, polished surfaces. Even slight scratches indicate a seal failure due to abrasion. If your customer is pumping a very abrasive solution, you may wish to suggest a silicon carbide seal for longer life.

Mechanical seal failure due to corrosion usually occurs over winter or when the inside of the pump is exposed to oxygen for long periods without having been properly flushed. When your customers are finished spraying for the season, suggest that they fill their pumps with recreational vehicle anti-freeze or water soluble oil. Diesel fuel is not recommended as it can attack some elastomers over time.