

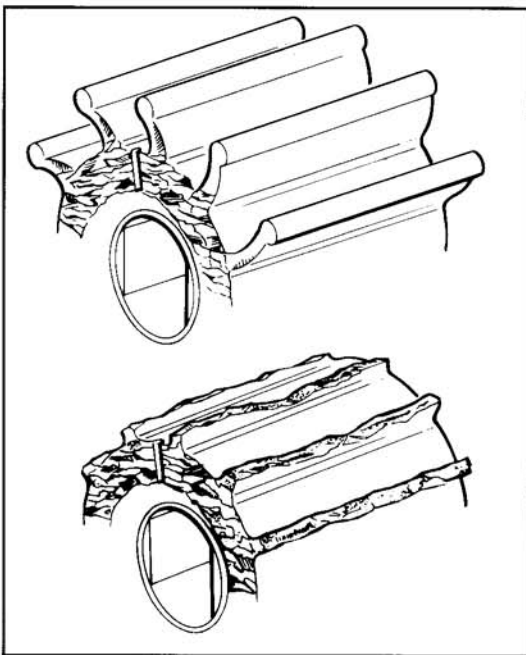


# Flexible Impeller Pumps

## JABSCO IMPELLERS - BRAND LEADERS

'Always carry a spare' has been Jabsco's message to mariners for many years, however, this important, yet simple advice is not followed by all.

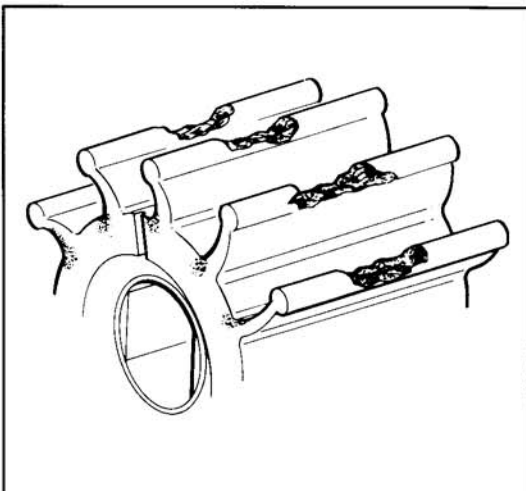
A flexible impeller may not seem a significant or important part of larger systems, but an impeller can be responsible for marine engine cooling, ballast transfer, or for the pumping of bilges in commercial craft. In any of these applications impeller failure can endanger the lives of the crew on board and therefore discovering the reason for the damage is imperative for safety at sea. Keep close-to-hand this simple 'step-by-step' guide for use in identifying problems and what remedies are required to avoid future failures.



**Symptoms:** End faces hard and either polished or cracked. Some or all blades missing.

**Cause:** Dry running, lack of water in pump. Temporary suction blockage. Leaking suction pipework.

**Remedy:** Do not run pump for more than 20 seconds without liquid. Install a liquid sensor / temperature alarm. Check suction pipework, strainers, and skin fittings for blockages & leakages.

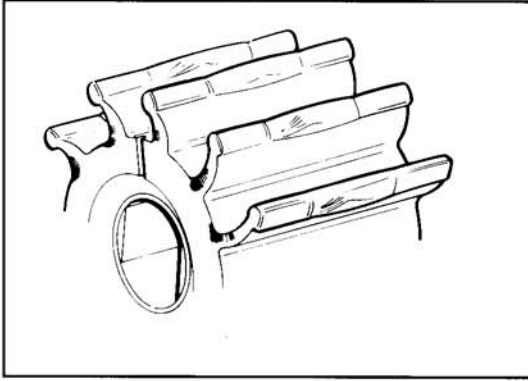


**Symptoms:** Pieces missing from the middle of blade tips. Pitting is evident on cam and the inside of pump ports.

**Cause:** Cavitation, water is effectively boiling within the pump.

**Remedy:** Reduce pump speed. Increase inlet pipe diameter. Reduce inlet pipe length and remove unnecessary restrictions. Reduce cam thickness.

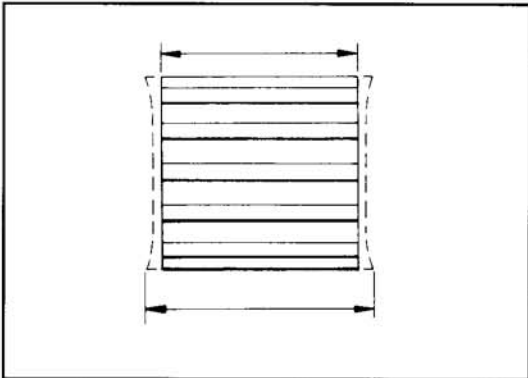
# Trouble Shooting Guide



**Symptoms:** Worn blade tips, cam imprint on edges.  
Worn end faces.  
Worn impeller drive and shaft wear.

**Cause:** High discharge pressure.  
Heat exchanger/cooler blockage.

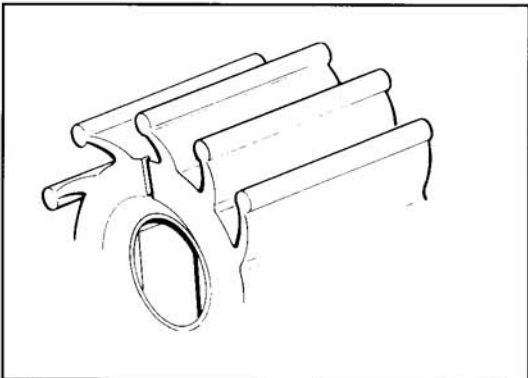
**Remedy:** Check discharge piping for partial blockages.  
Increase discharge pipe diameter.



**Symptoms:** Impeller appears to have swollen.  
Blades appear wider than impeller hub.  
Rubber may feel sticky.

**Cause:** Chemical attack, more common with bilge/transfer applications.

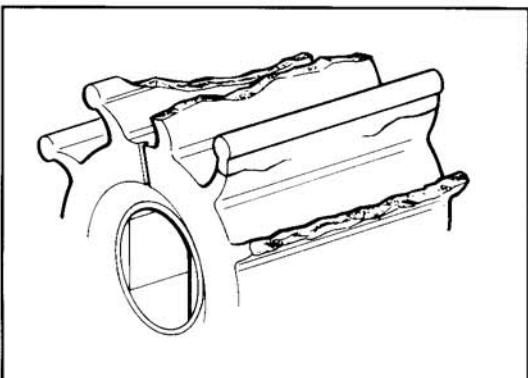
**Remedy:** Ensure impeller is rinsed after use.  
Remove impeller when not in use.  
Remove impeller for long term storage.



**Symptoms:** Blades have permanent set.

**Cause:** Normal use of impeller.  
Long term storage in pump.

**Remedy:** Reverse impeller in pump.  
Remove impeller for long term storage.



**Symptoms:** Blades cracked about half way up the length.  
Some of blades missing.  
Reduced flow.

**Cause:** Normal end of impeller life.

**Remedy:** Replace impeller, check for impeller pieces in discharge pipework.

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