



Number 3
Revision 1

THE IMPELLER

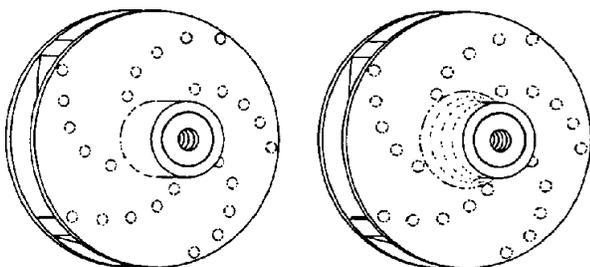
The impeller is the heart of the centrifugal pump; it gives energy to the fluid being pumped. Fluid enters the impeller eye and is slung outward by the vanes. Pressure is determined by the speed of the fluid as it leaves the impeller. This pressure depends on how fast the impeller is turning and on the impeller diameter.

Ace Pump offers impellers in two materials, Valox® plastic and cast iron. The Valox plastic impeller is standard for most pump applications. While cast iron is the stronger of the two materials, Valox is lighter in weight, less expensive, and more corrosion resistant. In addition, Valox has less tendency to absorb water than nylon and is not affected by solvents or mild acids.

IMPROVED VALOX IMPELLER

Standard pumps that were delivered beginning in 1990 had improved Valox impellers. There were no failures of the improved impeller during this last spraying season. Three changes have been made to strengthen impellers to allow operation at higher pressures.

The first and most observable change was to increase the amount of material where the back side of the impeller blends into the insert hub. As illustrated, this eliminates the sharp radius that existed on the old style impeller.



The second change was to increase the diameter of the pins that hold the two impeller halves together. The larger pins have greater strength and more surface for bonding.

The third change was to make the insert out of stainless steel rather than carbon steel. This change will reduce corrosion on the pump shaft and will facilitate impeller removal.

To facilitate the removal of an old style impeller in which the insert has corroded and stuck to the shaft of any FMC-HYD hydraulically driven pump, here's a handy service hint. First, remove the hydraulic motor from the pump. Then remove the BAC-33 internal snap ring which is closest to the motor. Remove the nut and lock washer which hold the impeller to the shaft. Finally, press the shaft assembly through the pump.

HYDRAULIC SELECTION GUIDES AVAILABLE

Ace Pump publishes a Tractor Hydraulic System Pump Selection Guide (HSG) annually. This handy guide includes information on the latest tractors on the market and how to properly select pumps for them. An electronic version of the guide for Windows can be downloaded from the Ace website, www.acepumps.com. To receive your printed copy, just ask your regular Ace supplier or give your local Ace Pump representative a call.

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