5.2.3 Filtration

A filter must be incorporated in the spray liquid supply. This should have a 0.5 mm (50 mesh/inch) or finer mesh filter.

The filter may be installed either in the suction or pressure line of the pump, but the filter must always be before any flow restrictors and should preferably be before the pressure regulator. It is most common to fit the filter to the suction line of the pump to protect the pump itself (see Figure 11 'Typical spray liquid feed system' on page 14).

Secondary filtration is strongly recommended to catch any smaller particles missed by the main filter, as well as any particles that may already be present in the spray lines, or rust particles etc.

Secondary filters (i.e. nozzle filters) should be fitted just before the DCV and flow restrictor for each MICROMAX atomiser. A finer mesh 0.25 mm (100 mesh/inch) filter is recommended.

The main purpose of filtration in a MICROMAX system is to protect the pump and valves, and to prevent partial or total blockage of the flow restrictors. The MICROMAX is itself very difficult to block, due to the nature of the rotary disc atomiser.

5.2.4 Pumps

If a new sprayer is being designed or an original pump is to be replaced, it is recommended that a diaphragm or centrifugal type is chosen. This should be able to provide a pressure of about 3 bar (45 psi), and should be capable of delivering the maximum flow rate required of the sprayer plus the flow required for tank agitation (if a mechanical agitator is not used).

Each MICROMAX atomiser takes a maximum of 3 l/min (6.5 US pt/min). Consult the specifications of your base sprayer (or tank manufacturer) for the required flow for tank agitation.

5.2.5 Materials

All liquid feed system components should be rated for the system pressure to be used, and manufactured from materials that will not be degraded by weathering or agrochemicals. It is best to source components from Micron or other specialist agricultural sprayer component suppliers.