

HYDRAULIC FLUID PARTICLE CONTAMINATION COUNT**Application**

This method is used to determine the particle type and distribution of contaminants in hydraulic systems.

Apparatus Required**Projection Microscope**

Cross slide and lenses of the required magnifications.

Millipore Fluid Sampling Kit*

Catalogue No. XX 6403730

Millipore Filter Syringe*

Catalogue No. XX 62 000 01, with 2-way valve, Catalogue No. XX 62 000 02.

Solvent Filtering Dispenser*

With filter. Catalogue No. XX 66 025 00.

Forceps*

Catalogue No. XX 62 000 06.

Microscope Slides

1. 50 x 50 mm; 1.7 g
2. 50 x 70 mm; 12.65 g

Bulldog Clips

For microscope slides.

Counting Graticule (see sketch)**Hand Counter**

*Source: Millipore House
Abbey Road
London NW10 7SP

Millipore Filter GmbH
6078 Neu-Isenburg
Siemensstrasse 20

Date	Action	Revisions
2000 08 31	Revised	Editorial – no technical change A. Cockman
1994 02 28		

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Materials Required

Petroleum Ether (A.R.)

Immersion Oil*

Catalogue No. XX 70 000 50

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Conditioning and Test Conditions

All test values indicated herein are based on material conditioned in a controlled atmosphere of 23 +/- 2 °C and 50 +/- 5 % relative humidity for not less than 24 h prior to testing and tested under the same conditions unless otherwise specified.

Procedure

Sampling Method Using Monitor

After installation of the quick release valves to draw off the fluid, the following procedure shall be used:

1. The pressure on the hydraulic fluid to be filtered through the monitor shall not exceed 800 kN/m²
2. The sampler is screwed off and the cover caps removed from the monitor and kept for later refitting. Then, the monitor is fitted to the lower part of the sampler with the surface where the filter is applied.
3. Sampler is tightly rescrewed and connection is made between bypass tube from the 3-way valve to one of the openings located on the side of the sampler.
4. Direct coupling is made from sampler to a 200 mL measuring bottle graduated at 100 mL and 200 mL.
5. Remove caps from quick release valve and sampling tubing, with the 3-way valve in the "shut off" position. The quick release device is pressed and the sampling tube tightly inserted into the valve. Then release the quick release device.
6. Turn the 3-way valve to "flush" position; allow 100 mL fluid to flush the bypass tube, the sampling cock, the tube and the 3-way valve.
7. Fill the measuring bottle up to the 100 mL mark with hydraulic fluid, turn 3-way valve to "test" position. Allow 100 mL fluid to pass the filter and to flow into the measuring bottle. Then turn 3-way valve to the "off" position.