



aerospace  
climate control  
electromechanical  
filtration  
fluid & gas handling  
hydraulics  
pneumatics  
process control  
sealing & shielding



## icount Mini-Lab

The portable solution to fluid contamination  
bottle sampling



ENGINEERING YOUR SUCCESS.

# How clean is your hydraulic system?

Contamination Control is only an oil sample away with our easy, 3-Step fluid analysis service.

## Step 1

Obtain your sample of hydraulic oil

## Step 2

Take the 3 minute off-line oil sample test in-store.

## Step 3

View your results and run a report immediately.



Unit comprises: • Icount Bottler Sampler • Industrial flat pack trolley • Laptop and software • Printer and cables • 30 sample bottles

## A fluid analysis service now available in-store

**A three minute test is typically all it takes to confirm just how contaminated your hydraulic oil is.**

The Icount Bottle Sampler (IBS) provides on-board, laser based, particle counting technology and a three minute max. test and oil contamination report programme all in one. The IBS features an interactive touchscreen, pressurized bottle chamber via an internal compressor pump, bottle cavity aperture design with automated door mechanism, sample tube cleaning sleeve minimizing contamination cross over, and an internal printer.

### Introducing in-store Mini-Lab

Anyone actively involved with oil in hydraulic systems will be interested in and can benefit from this ParkerStore oil analysis service.

- A while-you-wait oil sampling service that gives repeatable and reproducible results performance to ISO4409:1999 or NAS1638 particle count distributions.
- Knowing how much particulate is contaminating a hydraulic system is the first big step in cleaning and maintaining a reliable and dependable system.
- It's the cost-effective, alternative solution to external laboratory services.

### The Mini-Lab Procedure

It really couldn't be simpler. First draw off 200ml of oil from your hydraulic system. To reduce the risk of additional particle contamination entering the sample, we recommend using a Parker oil sample bottle. This can be obtained from this store. Bring the sample into this store and stand back and watch as the sample monitoring procedure is carried out using the IBS. Minutes later and the report on your system oil is ready to print out.

### The Parker team are here to help

Store personnel have been trained to use the IBS, carry out a sample test procedure and help you understand the results shown on the IBS screen and printout and the 2-page report that you can take away. It's as simple as one, two, three!



# Analysing the test results

## Once the automatic oil sample test has been completed, what next?

Solid contaminants in fluid power systems vary in size, shape, form and quantity. The most harmful contaminants are normally between 6 microns and 14 microns. The ISO code is the preferred method of reporting quantity of contaminants.

The ISO code number corresponds to contamination levels relating to three sizes. The first scale number represents the number of particles larger than 4µm(c) per 100 milliliters of fluid, the second number for particles larger than 6 µm(c) per 100 milliliters of fluid and the third number for particles larger than 14 µm(c) per 100 milliliters of fluid.

**For example:** Code 21/18/15 indicates that there are between 500,000 and 1,000,000 particles larger than 4µm(c), and between 130,000 and 250,000 particles larger than 6 µm(c), and between 16,000 and 32,000 particles larger than 14µm(c) per 100ml.

## The 2-page report provides ISO and NAS individual counts and average contamination results.

In addition to the 2-page printed report, a 'raw-data' printout of ISO compliant data from the IBS on-board printer is supplied following the sample test. The printout and report provide accurate and repeatable data on the sampled

hydraulic system. The chart below, showing various hydraulic systems, is included as a guide to typically acceptable levels of particulate contamination.



# Component Cleanliness Guide

Suggested acceptable contamination levels for various hydraulic systems

Target contamination class to ISO 4406: 1999			Sensitivity	Type of system	Typical components
4 µm(c)	6 µm(c)	14 µm(c)			
15	13	9	Super critical	Slit-sensitive control systems with very high reliability. Laboratory or aerospace.	Servo control valves
18	15	11	Critical	High performance servo and high pressure long life systems, e.g. aircraft, machine tools etc.	Proportional valves
18	16	13	Very important	High quality reliable systems. General machine requirements.	Valves and piston pumps. Directional and pressure control valves.
21	18	15	Important	General machinery and mobile systems. Medium pressure, medium capacity.	Gear pumps and motors
22	19	15	Average	Low pressure heavy industrial systems, or applications where long life is not critical	Flow control valves, cylinders and new (unused) fluid
24	21	17	Main protection	Low pressure systems with large clearances.	Ram pumps

## Notes:

Tables have been generated by organisations in various industries.

Some of the tables are defined in cumulative counts, e.g. '>6µm' and others are represented as differential counts e.g. '6-14µm'.

All µm references will refer to ACFTD distributions. All µm(c) refer to MTD distributions.

All standards are in counts per 100ml and provide easy methods for converting particle counts into limits that are simple to interpret. By noting the requirements of the standard, particle counts can be accurately converted to contamination levels.

# Parker Worldwide

**AE – UAE, Dubai**  
Tel: +971 4 8127100  
parker.me@parker.com

**AR – Argentina, Buenos Aires**  
Tel: +54 3327 44 4129

**AT – Austria, Wiener Neustadt**  
Tel: +43 (0)2622 23501-0  
parker.austria@parker.com

**AT – Eastern Europe, Wiener Neustadt**  
Tel: +43 (0)2622 23501 900  
parker.easteurope@parker.com

**AU – Australia, Castle Hill**  
Tel: +61 (0)2-9634 7777

**AZ – Azerbaijan, Baku**  
Tel: +994 50 2233 458  
parker.azerbaijan@parker.com

**BE/LU – Belgium, Nivelles**  
Tel: +32 (0)67 280 900  
parker.belgium@parker.com

**BR – Brazil, Cachoeirinha RS**  
Tel: +55 51 3470 9144

**BY – Belarus, Minsk**  
Tel: +375 17 209 9399  
parker.belarus@parker.com

**CA – Canada, Milton, Ontario**  
Tel: +1 905 693 3000

**CH – Switzerland, Etoy**  
Tel: +41 (0) 21 821 02 30  
parker.switzerland@parker.com

**CL – Chile, Santiago**  
Tel: +56 2 623 1216

**CN – China, Shanghai**  
Tel: +86 21 5031 2525

**CZ – Czech Republic, Klecany**  
Tel: +420 284 083 111  
parker.czechrepublic@parker.com

**DE – Germany, Kaarst**  
Tel: +49 (0)2131 4016 0  
parker.germany@parker.com

**DK – Denmark, Ballerup**  
Tel: +45 43 56 04 00  
parker.denmark@parker.com

**ES – Spain, Madrid**  
Tel: +34 902 33 00 01  
parker.spain@parker.com

**FI – Finland, Vantaa**  
Tel: +358 (0)20 753 2500  
parker.finland@parker.com

**FR – France, Contamine s/Arve**  
Tel: +33 (0)4 50 25 80 25  
parker.france@parker.com

**GR – Greece, Athens**  
Tel: +30 210 933 6450  
parker.greece@parker.com

**HK – Hong Kong**  
Tel: +852 2428 8008

**HU – Hungary, Budapest**  
Tel: +36 1 220 4155  
parker.hungary@parker.com

**IE – Ireland, Dublin**  
Tel: +353 (0)1 466 6370  
parker.ireland@parker.com

**IN – India, Mumbai**  
Tel: +91 22 6513 7081-85

**IT – Italy, Corsico (MI)**  
Tel: +39 02 45 19 21  
parker.italy@parker.com

**JP – Japan, Tokyo**  
Tel: +(81) 3 6408 3901

**KR – South Korea, Seoul**  
Tel: +82 2 559 0400

**KZ – Kazakhstan, Almaty**  
Tel: +7 7272 505 800  
parker.easteurope@parker.com

**LV – Latvia, Riga**  
Tel: +371 6 745 2601  
parker.latvia@parker.com

**MX – Mexico, Apodaca**  
Tel: +52 81 8156 6000

**MY – Malaysia, Shah Alam**  
Tel: +60 3 7849 0800

**NL – The Netherlands, Oldenzaal**  
Tel: +31 (0)541 585 000  
parker.nl@parker.com

**NO – Norway, Ski**  
Tel: +47 64 91 10 00  
parker.norway@parker.com

**NZ – New Zealand, Mt Wellington**  
Tel: +64 9 574 1744

**PL – Poland, Warsaw**  
Tel: +48 (0)22 573 24 00  
parker.poland@parker.com

**PT – Portugal, Leca da Palmeira**  
Tel: +351 22 999 7360  
parker.portugal@parker.com

**RO – Romania, Bucharest**  
Tel: +40 21 252 1382  
parker.romania@parker.com

**RU – Russia, Moscow**  
Tel: +7 495 645-2156  
parker.russia@parker.com

**SE – Sweden, Spånga**  
Tel: +46 (0)8 59 79 50 00  
parker.sweden@parker.com

**SG – Singapore**  
Tel: +65 6887 6300

**SK – Slovakia, Banská Bystrica**  
Tel: +421 484 162 252  
parker.slovakia@parker.com

**SL – Slovenia, Novo Mesto**  
Tel: +386 7 337 6650  
parker.slovenia@parker.com

**TH – Thailand, Bangkok**  
Tel: +662 717 8140

**TR – Turkey, Istanbul**  
Tel: +90 216 4997081  
parker.turkey@parker.com

**TW – Taiwan, Taipei**  
Tel: +886 2 2298 8987

**UA – Ukraine, Kiev**  
Tel: +380 44 494 2731  
parker.ukraine@parker.com

**UK – United Kingdom, Warwick**  
Tel: +44 (0)1926 317 878  
parker.uk@parker.com

**US – USA, Cleveland**  
Tel: +1 216 896 3000

**VE – Venezuela, Caracas**  
Tel: +58 212 238 5422

**ZA – South Africa, Kempton Park**  
Tel: +27 (0)11 961 0700  
parker.southafrica@parker.com

European Product Information Centre

Free phone: 00 800 27 27 5374

(from AT, BE, CH, CZ, DE, DK, ES, FI, FR, IE, IT, NL, NO, PL, PT, RU, SE, UK, ZA)

Condition Monitoring website:

[www.parkerhfde.com](http://www.parkerhfde.com)

Condition Monitoring email:

[conmoninfo@parker.com](mailto:conmoninfo@parker.com)

For information on other Parker products,  
call EPIC free on 00800 27 27 53 74

