

DEEP  
KNOWLEDGE



# ODIM OFS™

Oil Flushing System Hydraulic oil ▶ Motor oil ▶ Gear oil

**ODIM**

## A B C to reduce expensive downtime on hydraulic systems

- A** Clean your hydraulic system properly
- B** Keep your system clean
- C** Monitor your hydraulic fluid

### Benefits

- » Increase equipment life
- » Reduce expensive downtime
- » Optimize maintenance intervals
- » Reduce maintenance costs
- » Improve productivity and performance
- » Conduct failure analysis



### A Flushing units - Clean your hydraulic system properly

- » Always flush a new or a rebuilt hydraulic system, filter the oil up to the equipments required NAS level or ISO code.
- » Get a third party verification of the hydraulic piping:
  - » Hydraulic storage tanks
  - » Filling routines
- » ODIM can provide all these services with highly skilled engineers

ODIM's high performance flushing units are available today. ODIM rents out the units together with a trained technician. Our philosophy is;

**"A machine is only as good as the man operating it"**



#### All units built on the same principle:

- » Fixed displacement pump
- » Stepless regulation of the pumps
- » Frequency converter controlling electric motor for hydraulic pump
- » Heating for right viscosity to loose build-up in the system
- » Huge filter capacity
- » Easy change of flow direction
- » Level/Pressure monitoring with automatic shutdown on adjustable set values.
- » Inline laser particle counter & oil sampler
- » Offline water separator

### B Keep your system clean

- » Always fill the tank with oil, filtered to manufactures standards
- » Never install new equipment / hoses / pipes without checking that they have been properly cleaned.
  - » ODIM can provide a variety of filter units, custom made or in stock filter trolleys
  - » Filters for our units in stock
  - » High pressure hydraulic work

- » ODIM can provide all these products, and services with highly skilled engineers.

### C Monitor your hydraulic fluid

- » Hydraulic equipment not in regular use should always be checked for bacteria growth before connecting to a hydraulic circuit.
  - » ODIM can monitor your hydraulic fluid for you
  - » And optimize your maintenance intervals

- » Periodic oil sampling for Early Discovery of:
  - » Water contents
  - » Lubricant quality
  - » Contamination level
  - » Component wear

## Do you know to what standard of cleanness you have on your system?

As a doctor can see signs of illness in a patient by the analysis of body fluids, a trained hydraulic technician can find signs of component wear by oil analysis.

### Proactive

An effective, preventive maintenance program requires time, effort and some expense to implement. But it is cost-effective. The investment is quickly recovered through savings as a result of improved machine performance, increased component life, increased fluid life, reduced downtime and fewer repairs.



CLEANLINESS LEVEL CORRECTION TABLE

ISO Code	Particles/Millilitre			NAS 1638	Disavowed SAE
	≥2 Micrometers	≥5 Micrometers	≥15 Micrometers	(1964)	Level (1963)
23/21/18	80,000	20,000	2,500	12	-
22/20/18	40,000	10,000	2,500	-	-
22/20/17	40,000	10,000	1,300	11	-
22/20/16	40,000	10,000	640	-	-
21/19/16	20,000	5,000	640	10	-
20/18/15	10,000	2,500	320	9	6
19/17/14	5,000	1,300	160	8	5
18/16/13	2,500	640	80	7	4
17/15/12	1,300	320	40	6	3
16/14/12	640	160	40	-	-
16/14/11	640	160	20	5	2
15/13/10	320	80	10	4	1
14/12/9	160	40	5	3	0
13/11/8	80	20	2,5	2	-
12/10/8	40	10	2,5	-	-
12/10/7	40	10	1,3	1	-
12/10/6	40	10	,64	-	-



All these vendors have the same standard NAS/ISO to for oil cleanliness:  
ISO code 17/15/12 or better. (NAS1638 6 or better.)

### » FACTS

Over the past 30 years, the performance, sophistication and operating pressures of hydraulic equipment have increased significantly. As a result, modern hydraulic equipment is not only more expensive to fix when it breaks, proactive maintenance is imperative to maximize service life and minimize operating costs.

The single most important preventive maintenance procedure is regular oil sampling and analysis.

Over 96% of all hydraulic failures can be traced directly to oil that has been improperly cared for. The only way to tell for sure if the hydraulic oil needs attention is to have it analyzed.

But even when an oil analysis is returned with unsatisfactory results, it is not always necessary - or even desirable - to replace the oil. As long as the oil has not lost viscosity and has not been damaged by overheating, it can be reclaimed by flushing the system.

When the oil in the reservoir is merely replaced, several gallons of bad oil and residue are left in the lines and components - as much as half of the oil in some machines. As the new clean oil passes through the machine, it mixes with the old oil and absorbs contaminants and varnishes left on the surfaces of the components returning them to the reservoir and circulating them through the machine to cause even further damage.

Do you know the typical cleanness level of hydraulic oil from a new barrel?



Typically we see:  
ISO code 22/20/17> or NAS 1638 11>

# RANGE

## ODIM flushing units:

1200 Flushing unit:			2400 Flushing unit: (NEW)			3600 Flushing unit:		
Size	10'	ISO container	Size	10'	ISO container	Size	20'	ISO container
Weight	5	Ton n/o	Weight	6	Ton n/o	Weight	10	Ton n/o
Flow	0-370	g.p.m	Flow	0-630	g.p.m	Flow	0-954	g.p.m
	1200	lpm		2400	lpm		3600	lpm
Pressure	0-20	BAR	Pressure	0-20	BAR	Pressure	0-20	BAR
Heating	18-30-45	kW	Heating	18-30-45	kW	Heating	18-30-45	kW
Tank	ca.528	gallon	Tank	ca.634	gallon	Tank	ca.2100	gallon
	ca.2000	liter		ca.2400	liter		ca.8000	liter
Return filter	1-2 (2microns)		Return filter	1-3 (2microns)		Return filter	1-4 (2microns)	
2 pc 2" lines/directions simultaneously			4 pc 2" lines/directions simultaneously			4 pc 2" lines/directions simultaneously		



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Contact ODIM about your system and needs

- ▶▶ ODIM provide flushing report, full documentation according to customers specification

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