



OIL CLEANING CENTRIFUGE



HUEGLITECH AND FLUID POWER ENERGY

Fluid Power Energy (FPE) have been in business for over 40 years, supplying a variety of key components to prolong the life of machines. Their 3 main products are thermostatic valves, 'SpinClean' centrifugal filters and 'AirStop' emergency shut-down valves.

Be Green. Run Spin-Clean

Spin-Clean is Fluid Power Energy's lube oil cleaning centrifuge, today's most cost effective solution for extending oil change intervals and reducing hazardous waste. Be environmentally conscious and reduce overheads at the same time.

HUEGLI TECH have been supplying control and regulation components for more than 50 years. Our core business is internal combustion engine control and whilst the range of products we supply is chosen to suit this application, many of our components are also ideal for use in other fields. We are constantly on the outlook for new specialist applications and have the staff and experience to support a wide range of projects.

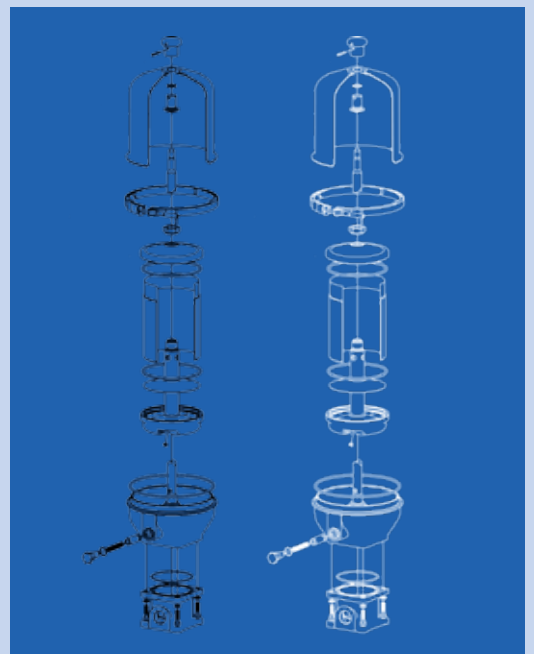
Together HUEGLI TECH and FPE offer well-engineered, yet cost-effective solutions to ensure that a wide variety of machines run at optimum efficiency, last longer and cost less.



Fluid Power Energy Inc

Additional Benefits

- Reduction in maintenance costs
- Cleaner oil
- Centrifuge can be cleaned while engine is running
- Will not remove oil additives or conditioners
- Extends the life of the turbo charger
- Aids in the detection of wear problems

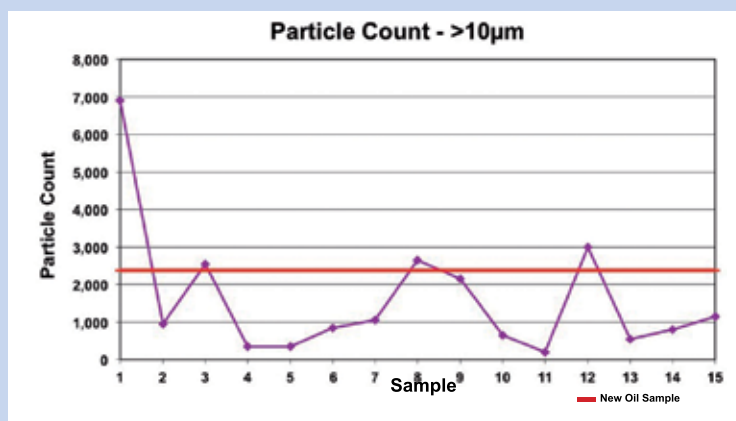




FEATURES AND BENEFITS

- Extends Oil & Filter Life
- Reduces Hazardous Waste
- Reduces Engine Wear
- Removes Solids Below One Micron
- Durable Construction
- Easy Installation
- For all Combustion Engines

Spin-Clean removes solids particles to almost clean oil levels or better



FUNCTION OF OIL CLEANING CENTRIFUGE

What is Spin-Clean?

Spin-Clean is a true centrifuge that, when sized properly, will remove the wear abrasives from the oil down to less than one micron. This will reduce engine wear by a minimum of 40 - 50%. The properly sized centrifuge recommended for your engine will not use more than 10% of the engine oil pump output. (10% is the acceptable measure by engine manufacturers for by-pass (side stream) oil cleaning.) The 10% taken to supply the Centrifuge does not negatively impact the oil demanded by the engine.

The lube oil cleaning Centrifuge removes the solids from the engine oil using centrifugal force, a force of 1000 "G's", or 1000 times the force of gravity. These solids are stored inside the rotating turbine bowl, which will hold more than 10 times the solids of your engines full-flow filters.

The act of exposing the oil to 1000 "G's" is what results in to removal less than one micron. Once the particles have been removed the clean oil is then returned to the oil pan.

Why run Spin-Clean?

Engine Manufacturers typically install full-flow filters that only remove particles from oil down to 20 - 25 micron. With the addition of Spin-Clean, particles below 1 micron are removed, thus significantly increasing engine life. Time between oil change intervals is also increased saving the user time & money. Equally as important, the addition of Spin-Clean to an engine/ package will significantly reduce hazardous waste, which positively impacts our environment.

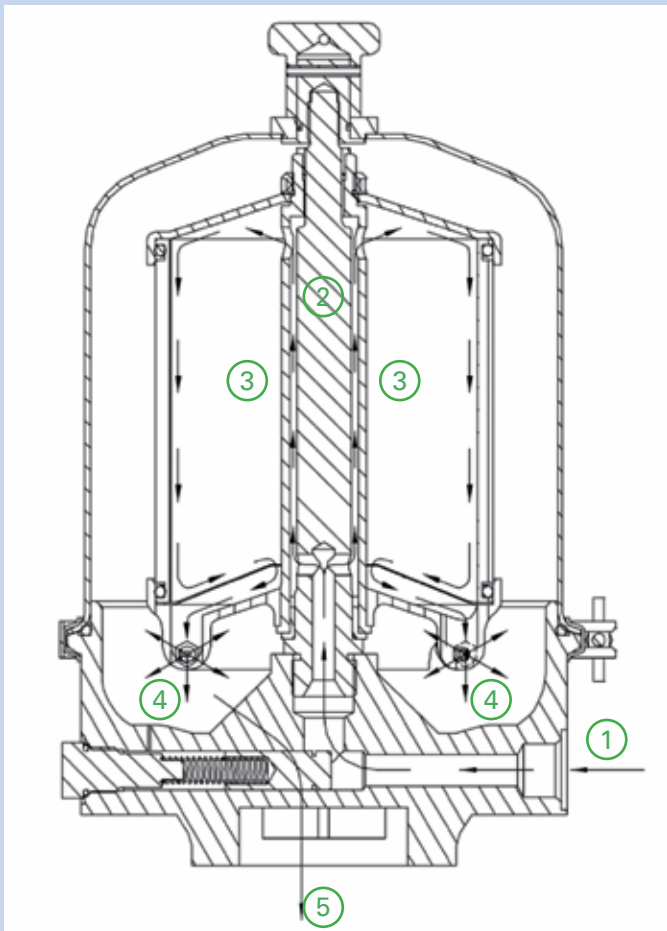
Importance of Clean Oil

Oil is the life-blood of an engine and the cleanliness of that oil can directly impact the efficiency of the engine, life of the engine, and environment.

When properly sized, Spin-Clean cycles the engine oil 4 times per hour ensuring proper solid particle extraction. With proper maintenance, Spin- Clean will increase engine life & oil change interval up to, but not limited to, 40 – 50%. Another Spin-Clean benefit, often overlooked, is its use as a diagnostic tool. The waste material extracted from the oil can be analyzed for several engine related problems, (ie. coolant leaks, bearing wear).



HOW IT WORKS



1. Pressurized oil enters Spin-Clean on bottom right, (inlet).
2. Oil travels up the stationary shaft and enters turbine bowl.
3. The turbine bowl begins to fill with oil and pressurizes.
4. As a result of this pressure, oil is forced out of two nozzles at the bottom of the turbine bowl. This action results in the high rate of speed in which the turbine bowl spins. When the turbine bowl reaches desired RPM levels, dirty particles down to one micron levels are forced on to the paper insert, (creating a cake-like substance) which lines the inner wall of the turbine bowl.
5. Clean oil flows out of the turbine bowl, through the two nozzles, and out the bottom of the Spin Clean, back to the oil pan.

PRODUCT RANGE

Model 75 & 75-1



- 75-1 model – Cut out valve assembly
- Rated at 3.7 L/min (1 gal/ min)
- Oil sump capacity – Up to 56.8 L (15 Gal)
- Dirt holding capacity – 278 cm³ (18 in³)

Model 150



- Rated at 7.6 L/min (2 Gal/min)
- Oil sump capacity – Up to 113.5 L (30 Gal)
- Dirt holding capacity – 828 cm³ (53 in³)

Model 300



- Oil Control Base option available (OCB)
- Bottom drain
- Rated at 15 L/min (4 Gal/min)
- Oil sump capacity – Up to 227 L (60 Gal)
- Dirt holding capacity – 2340 cm³ (150 in³)

Model M300



- Side drain
- Rated at 15 L/min (4 Gal/min)
- Oil sump capacity – Up to 227 L (60 Gal)
- Dirt holding capacity – 2340 cm³ (150 in³)

Model 1000



- Oil Control Base option available (OCB)
- Bottom drain
- Available in 30, 45, 60 L/min (8, 12, & 16 Gal/min)
- Oil sump capacity – Up to 454, 681, 908 L (120, 180, or 240 Gal)
- Dirt holding capacity – 5462 cm³ (350 in³)



HOWTO SELECT A SPIN-CLEANER

Engine Size

Usually the size of the engine affects the amount of contaminants. It is therefore necessary to select a centrifuge (or number of centrifuges) with an adequate dirt-holding capacity to accommodate the volume of dirt likely to be generated during an oil change interval.

Oil Pump Outlet

Since a bypass centrifuge of this type is taking oil from the engine pressure lubrication system, it is necessary to estimate the quantity of oil that is surplus to the oil requirements of the engine and is flowing back to the sump via the pressure relief valve. The surplus would usually be approximately 30% of the total lube oil pump output under normal running conditions. The objective would be to use about one third of this, i.e. approximately 10% of the oil pump total output to drive the centrifuge. By relating this 10% to the appropriate oil flow charts of each centrifuge, it will be possible to select the optimum centrifuge relative to the surplus oil flow available. There are very few large engines with lube oil pumps that have relatively little surplus lube oil capacity. In these cases, a separate pump and motor are necessary to supply the centrifuge.

Oil System Capacity

The volume of oil in the system may be used to determine the type and number of centrifuges to be fitted. A centrifuge should be specified to ensure that the total crankcase oil capacity passes through the centrifuge(s), no less than four times an hour.

Other Considerations

The optimum oil inlet pressure for a centrifuge ranges from 60 to 80 psi, but units can be operated at a maximum of 100 psi or a minimum of 40 psi. Lower pressure reduces centrifugal force efficiency.

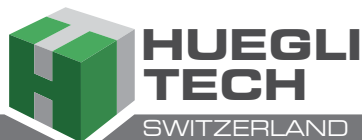
NOTE: The dirt holding capacity of the turbine bowl in our centrifuge is approximately 10 times the dirt capacity of a conventional filter. If an engine user experiences large dirt build-ups in the centrifuge(s) applied due to special fuel conditions or unusual airborne contaminants, or has a limited full-flow filter element time-to-service interval, an increase in size or numbers of centrifuges should be considered. Please contact us for assistance.

The products described in this publication are subject to be revised or improved at any moment. Catalogue descriptions and details, such as technical and operational data, drawings, diagrams and instructions, etc., do not have any contractual value. In addition, products should be installed and used by qualified personnel and in compliance with the applicable regulations in force in order to avoid damages and safety hazards.

*due to preexisting agreements not all products are available in every country



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