



Step One

Oil Soluble Cleaner

Description

Step One oil-soluble cleaner is a clear, amber-colored liquid formulated to remove varnish, carbon, sludge and small amounts of water from oil systems. The Step One product contains a blend of powerful carbon and varnish removers, dispersants, emulsifiers and rust inhibitors.

It does not contain solvents.

Key Properties

- no downtime : cleans while your equipment works
- completely oil-soluble cleaner : works with existing oil
- cost effective at only 5 to 10% usage
- contains no solvents
- prolongs oil life because equipment is cleaner

DuBois • 800 438 2647 • 3630 East Kemper Road • Sharonville, OH 45241-2011

In Canada • 866 861 3603 • 3450 Ridgeway Drive, Unit 2 • Mississauga, ON L5L 0A2

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Step One

Technical Data

<i>Characteristics</i>	<i>ASTM</i>	<i>TYPICAL RESULTS</i>
ISO Grade		100
SAE Grade		30
AGMA Grade		3
Viscosity	D-445	
40° C, cSt		118
100° C, cSt		10.2
100° F, SUS		547
210° F, SUS		60
Viscosity Index	D-2270	52
Flash Point	D-92	315
Pounds per Gallon	D-287	7.87
Specific Gravity	D-287	0.92
API Gravity	D-1298	18.2
Odor		Mild

Use Instructions

The Step One cleaner is designed for use as an additive at 5% to 10% concentration in oil, to clean: Hydraulic Systems, Gearboxes, Automatic and Manual Transmissions, Air Compressors, Bowser Sumps in Paper Mills, Vacuum Pumps, Chains, Bearings, Reservoirs, Air Lines Valves, Heat Transfer Systems. Not for Ammonia Compressors.

General Cleaning Procedure

1. Use 5% to 10%, generally 5%, of the Step One product with 90% to 95% of the fluid in the system. Step One can be used with petroleum oils and synthetic hydrocarbon.
2. Temperature - time - concentration relationships for industrial equipment: (Oil should be circulating.)

<i>Concentration</i>	<i>5%</i>	<i>10%</i>
Temperature	Room Temp.	Room Temp.
Time	3-4 Days	1-2 Days
Temperature (Ideal)	160°F	160°F
Time	1-2 Days	24 Hours
Temperature (Max.)	300°F	300°F
Time	4 Hours	2 Hours

3. Run equipment at normal operating conditions. Do not exceed 300°F.
4. Change the oil filter before and after cleaning. Inspect during cleaning if equipment is very dirty. Some filters are equipped with pressure drop gauges. Normally, 10 psi drop indicates the filter should be changed.
5. For safety reasons allow oil to cool (130° F max) before draining.

6. After draining, it is recommended that the oil system be flushed with a clean, thin oil (100 second paraffin oil) or MPO-10. To flush, fill to minimum or normal oil level. Start equipment to circulate or splash oil around system. In gearboxes or other applications where a heavy oil is normally used, stop equipment almost immediately after starting, to prevent wear. For screw-type air compressors, flushing oil can be circulated for about 1 hour.

Dispensing

Step One is a liquid product. It can be withdrawn from the container by gravity with a drum cradle and spigot, or pumped by hand or air-operated equipment.

Product Compatibility

Step One cleaner is safe for use on ferrous and nonferrous metals used in industrial equipment. It is safe on most seals used in industrial equipment at 10% maximum concentrations.

Test Method

Titration of Step One or oil blends of Step One for TAN can be done by conventional methods or ASTM D-974.

Safe Handling and Storage Instructions

Keep container closed when not in use. Store drums on their side to prevent water contamination. Store pails upright and covered. Store inside above 32°F.

Precautions

KEEP OUT OF THE REACH OF CHILDREN.

Please refer to the label and Material Safety Data information for all warnings, recommendations for safety equipment, and other regulatory information. Copies of the Material Safety Data information can be ordered by calling 800 438 2647.

Disposal

Please refer to the Material Safety Data Sheet (MSDS) for instructions regarding proper disposal of this product. Step-One, like all industrial solutions, may require some treatment before discharge. In addition to waste treatment chemicals, DuBois offers full service disposal and compliance consultation. Information is available from your DuBois representative.

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