

## CLEANING OF METAL ELEMENTS

This technical data sheet provides information on several methods of cleaning the reusable type metal elements made by Schroeder Industries. It also references a method of checking the fabrication integrity of the element after being cleaned.

The cleaning methods listed in this technical data sheet are a guide to selecting a method of cleaning. The economical aspect of cleaning is not considered. We have endeavored to come up with the best cleaning methods; however, we realize that no cleaning method can remove all types of contaminants completely.

### Method #1

Using Oakite® Rust Stripper or equivalent.

**CAUTION:** Oakite rust stripper is a highly alkaline product. Wear rubber gloves, safety goggles and protective clothing when handling dry product or the solution. Harmful if swallowed or inhaled. Avoid contact with eyes, skin and clothing. Read carefully the warning issued on the container by the manufacturer.

### Material Required:

1. Oakite rust stripper or equivalent
2. Water
3. Pan to soak element(s). Pan should be made of steel or stainless steel. DO NOT USE an aluminum pan.
4. Heating device such as heater or stove.

### Procedure:

- a. Mix Oakite or equal with water per manufacturer's instructions on the package.
- b. Make sure you have enough volume of water to submerge the element(s) completely.

- c. Bring the temperature of solution to 180°F.
- d. Soak element(s) in solution for two hours after temperature of solution has reached 180°F.
- e. Remove element(s) and place on rack to drip dry.
- f. Rinse the element(s) in clean running water.
- g. Remove the trapped water by directing low pressure air over the element(s) from inside out or place element(s) in oven at 180°F until dry.

**NOTE:** Oakite® is registered trademark Oakite Products Inc., 50 Valley Road Berkley Heights, New Jersey 07922

### Method #2

Using Kleerflow Hi-T Degreasol solvent or equivalent.

### Material Required:

1. Kleerflow Hi-T Degreasol solvent or equivalent.
2. Soft Bristle Brush (No steel bristles, please!).
3. Pan to soak element(s).

### Procedure:

- a. Pour enough Kleerflow Hi-T Degreasol solvent in a pan so that element(s) can be completely submerged.
- b. Place element(s) in the solvent for 30 minutes.
- c. Rinse element(s) in clean solvent.
- d. Remove the element(s) from the solvent and place on a rack to drip dry.
- e. Air dry element(s) using low pressure air from inside to outside of element(s)

**CAUTION:** Sometimes when using metal element(s) they can become clogged with gums and varnishes that are not soluble in solvent. In

these cases a better cleaning job can be done when the Oakite rust stripper solution is used. See Method #1.

### Method #3

Ultrasonic Agitation

#### Material Required:

1. Sparkleen® Biodegradable soap or equivalent.
2. Water
3. Ultrasonic Agitator

#### Procedure:

- a. Use one (1) tablespoon of Sparkleen per gallon of normal water. For harder water follow the recommendation on the container.
- b. Warm the solution to 105° -115°F.
- c. Make sure you have enough volume of solution to submerge the element(s) completely.
- d. Turn on Ultrasonic agitator with the frequency output between 50 -55 KI-LZ. The power should be about 100 watts for 5" x 9" x 4" deep tank.
- e. Let the agitator run for about ten (10) minutes.

- f. Remove element(s) and rinse in warm water.
- g. Prepare new solution of Sparkleen in enough quantity and agitate element(s) once again for ten minutes as described in step (d).
- h. Remove the element(s) and rinse in warm water.
- i. Let drip dry on a rack.
- j. Air dry element(s) using low pressure air from inside to outside of element(s) or oven dry at 180°F.

NOTE: Sparkleen® is a registered trademark of Fisher-Scientific Company.

After cleaning element(s) by any of the above methods check for integrity of the element(s) by using NFPA recommended standard T3.10.8.4-1972 or ANSI B93.22-1972 titled "Methods For Verifying The Fabrication Integrity Of A Hydraulic Fluid Power Filter Element(s)".

Also refer to SAE-ALR-787 for further discussion on filter element cleaning methods.

An element can be cleaned and recycled many times. However, the reuse of element(s) depends on the system in which it is used, type of contaminants that exist in the system, pressure drop after cleaning and economical aspect of cleaning.



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