

# CEE-BEE DESCALER J-3

by Cee-Bee®



## data sheet

**CEE-BEE DESCALER J-3** is a mildly acidic liquid scale remover for use in hot section turbine engine overhaul cleaning processes.

### BENEFITS

- Rapid scale removal.
- Long useful tank life.

### CONFORMS TO

- **AMS 1382A**
- **ARP 1755B**
- **CFM CP2669**
- **GENERAL ELECTRIC CO4-239**
- **INTERNATIONAL AERO ENGINES OMAT 01-426**
- **PRATT & WHITNEY SPMC 8 (SPOP 211 AND SPOP 213)**
- **ROLLS ROYCE OMAT 1/152A**
- **SNECMA**

**NOTE: To place an order call, FAX or email Customer Service at  
800-932-7006 / FAX 1-216-441-1377/orders@mcgean.com  
Cee-Bee Descaler J-3 Product Code # 26020**



## NOTES PRIOR TO HANDLING

**Before using any Cee-Bee Aviation product, all safety and operating instructions should be read and understood. If you have any questions, please contact your Cee-Bee representative before proceeding.**

## USE PROCEDURES

**USE 316 STAINLESS STEEL TANKS AND HEATERS WITH THIS PRODUCT. ALSO USE MECHANICAL AGITATION.**

Prepare a 20% v/v solution. Add to the water slowly and carefully with continuous agitation. Adjust pH to 3.0 - 3.5 with nitric acid. Operating range 15 - 20%.

The Cee-Bee J-3 Descaler bath is usually used in conjunction with an alkaline rust and scale remover, such as Cee-Bee J-84A/J84AL, and Cee-Bee J-88/J-88L Alkaline Permanganate Scale Conditioner as follows:

1. Degrease parts in Cee-Bee Pre-cleaner A-7X7 or Super Bee 300 LF.
2. Process parts in an alkaline rust remover bath for 15 to 30 minutes.
3. Dip rinse in an air-agitated, overflowing clear water bath.
4. Immerse parts in the Cee-Bee J-3 Bath for 15 to 30 min. at 175-185°F (79-85°C).
5. Dip rinse in an air-agitated, overflowing clear water bath.
6. Immerse parts in a Cee-Bee J-88 bath for 15 to 30 min. at 185-200°F (85-95°C).
7. Dip rinse in an air-agitated, overflowing clear water bath.
8. Immerse parts in the Cee-Bee J-3 Bath for 15 to 30 min. at 175-185°F (79-85°C).
9. Dip rinse in an air-agitated, overflowing clear water bath.
10. Force dry with hot air or apply a rust inhibitor, such as Cee-Bee Nortex 3025 to protect parts from flash rusting.

NOTE: After removing the parts from each process tank and before the dip rinse, allow the excess solution to drain back into the tank. Then rinse the parts with a light mist of water over the tank. This procedure will help reduce drag out loss.

## CONTROL

Maintain pH between 3.0 - 3.5. If pH goes above 3.5, adjust with nitric acid.

Daily additions of water are required to make up evaporation loss. Periodic additions of undiluted Cee-Bee J-3 are required to replace drag out loss using the following procedure.

### REAGENTS

1. Ammonium Oxalate, 3.0% solution - Dissolve approx. 30 g. of calcium-free ammonium oxalate in one (1) liter of water.
2. Calcium Chloride, standard solution - Dissolve 50.05 g. of primary std. Calcium carbonate in 300 ml of distilled water by slowly adding 140 ml of conc. Hydrochloric acid to completely dissolve the carbonate. Heat to boiling to remove carbon dioxide and completely dissolve the sample. Cool to room temperature; neutralize excess acid with ammonium hydroxide until slightly alkaline to litmus. Dilute the solution to exactly one (1) liter. One (1) ml of this solution contains the equivalent of 50 mg of calcium carbonate.
3. Ammonium Hydroxide, concentrated reagent

### PROCEDURE

1. Pipette 25 ml of a J-3 sample into a clean 150 ml beaker. (If a smaller sample size is necessary, dilute the amount of J-3 sample used to 25 ml and use the correlating calculation formula.)
2. Add 2.5 ml of 3.0% ammonium oxalate solution.
3. Back-light the sample using a high-intensity light. Using a pH meter, add ammonium hydroxide to raise the pH of the solution to at least 11.5.
4. Using the pH probe as visual reference, titrate the sample to the first permanent turbidity (turbidity must remain at least 30 seconds) with standard calcium chloride.

Note: A demonstration of this procedure can be found on the McGean website at [www.mcgean.com](http://www.mcgean.com)

### CALCULATIONS

**25mL J-3 sample:** ml calcium chloride solution X 2.6 = % Cee-Bee J-3 v/v

**20mL J-3 sample:** ml calcium chloride solution X 3.25 = % Cee-Bee J-3 v/v

**15mL J-3 sample:** ml calcium chloride solution X 4.3 = % Cee-Bee J-3 v/v

**10mL J-3 sample:** ml calcium chloride solution X 6.5 = % Cee-Bee J-3 v/v