CEE-BEE® J-88L

Cee-Bee®
Innovative Aviation Chemistry
Chimie innovante pour l'aviation

ALKALINE PERMANGANATE SCALE CONDITIONER

CEE-BEE® Scale Conditioner J-88L is an alkaline permanganate liquid, used in combination with alkaline descalers, rust removers and acid pickling solutions. Excellent for removing rusts, heat scales, hot rolling scales, carbon and organic coatings.

BENEFITS

- Used with alkaline rust and scale removers such as J-84A and J-84AL; or acid pickling solutions such as J-19 or J-3 Excellent at conditioning and removing surface heat scales and hot rolling scales
- Removes carbon deposits and many chemically resistant coatings without degrading the underlying metal substrate
- Safe on steels, nickel alloys, chromium alloys and super alloys

PHYSICAL PROPERTIES

Appearance	Liquid	Solubility	Water soluble	Flammability	Non-flammable
Colour	Purple	pH	>12	Density	1.2 g/ml
Odor	Odourless	Flash Point	N/A		

AVAILABLE FORMATS

20L	20CB88LP	208L	20CB88LD	1000L	20CB88LT

APPROBATIONS

- AMS 1383A (INCLUDES ARP 1755B)
- CFM CP2008
- GENERAL ELECTRIC CO4-055
- INTERNATIONAL AERO ENGINES OMAT 01-165A
- PRATT & WHITNEY SPMC 16 (SPOP 211, 213 AND 222)
- ROLLS ROYCE OMAT 198C
- SNECMA

LEGISLATION

- WHMIS Regulated

SAFETY & HANDLING

- Refer to Safety Data Sheet (SDS) for additional information
- Dispose of container and its contents in compliance with all applicable regulations.

WARNING!
Can cause severe burning. Highly caustic and corrosive! Avoid contact with eyes, skin or clothing. Do not ingest. Avoid breathing fumes, mist or vapour. Use adequate ventilation. Wash personal protective equipment thoroughly after handling. Must wear Canadian Centre of Occupational Health and Safety (CCOHS) approved personal protective equipment; including oxidizer/caustic resistant gloves, boots, full face shield, fitted respirator equipped with recommended filter cartridges. Wear sufficient personal protective equipment to prevent any skin contact. PROPER EYE PROTECTION MUST BE WORN AT ALL TIMES. AVOID SPLASHING NEARBY PERSONNEL DURING SPRAY RINSES. ● In case of chemical contact with eyes or skin, flush affected areas with water for at least 15 minutes and obtain prompt medical attention! If irritation persists, seek prompt medical attention. ● If inhaled, seek fresh air and medical attention. If ingested, do not induce vomiting, instead administer large quantities of water and immediately obtain medical attention. ● Wash clothing before reuse.

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USE PROCEDURES

EQUIPEMENT: Use stainless steel tanks and heaters with this product. For optimal performance use mechanical agitation.

APPLICATION:
1. Pre-clean parts with SUPER BEE™ 300LF to remove oils, greases, carbon and light rusts. Rinse thoroughly by dipping in an air agitated, overflowing water rinse tank. 2. Immerse parts in undiluted J-88L conditioner heated at 88 °C (190 °F) to boiling, for 30 to 60 minutes. 3. Remove and suspend parts, while allowing dragged out bath solution to drain back into tank. To reduce drag out volume losses, rinse with a light mist of water over the bath's tank. Immerse in an air agitated, overflowing water rinse tank. If necessary, rinse with high pressure water. Remove conditioned scale and/or permanganate stains with rust remover or acid pickler. 4. Rinse well. To protect ferrous parts from flash rusting, force-dry with hot air or apply CEE-BEE® Nortex 3025 rust inhibitor.

SOLUTION CONTROL

1. Daily additions of water are recommended to compensate for bath volume loss from evaporation. In hard water (scale)
areas, soft water is recommended. Also, routine bath additions of CEE-BEE® J-88 or J-88L and/or J-88 Additive P or J-88 Additive PL, are recommended to replace dragout losses and the chemical contents consumed during bath operations. To determine bath concentrations use the following procedures.

REAGENTS & EQUIPMENT
● Distilled or deIonized (DI) water, 500 mL volumetric flask. ● 1.0 N sulfuric acid, 250 mL beaker.
● 50 % sulfuric acid, 50 mL burette. ● 0.1 N potassium permanganate, 25 mL pipette. ● 0.1 N sodium oxalate, 10 mL pipette. ● pH meter.

PROCEDURE
Step 1: Concentration Based On Alkalinity
1. Pipette a 5 mL bath solution sample, heated to 88 °C (190 °F) into a 100 mL volumetric flask.
2. Dilute with DI water to 100 mL.
3. Pipette 25 mL of diluted J-88L solution into a 250 mL beaker, and dilute to 100 mL with DI water.
4. Titrate with 1 N acid to pH 6.0, using a calibrated pH meter. Save solution for Step 2.
Calculations: mL 1 N acid X 19.08 = % volume concentration of J-88L, based on alkalinity. If J-88L concentrate based on alkalinity is less than 65 % volume, raise to 65 % with additions of J-88L.

Step II. Concentration Based On Permanganate
1. Add 10 mL of 50 % sulfuric acid to the previously titrated sample from Step I.
2. Heat to approximately 82 °C (180 °F) and then add exactly 25 mL of standardized 0.1N
sodium oxalate solution.
3. If the solution does not decolourize after a few seconds, add 5 mLs of standardized 0.1N sodium oxalate solution until solution decolourizes.
4. Once decolourized, immediately back titrate with 0.1N potassium permanganate until
faint pink colour remains for approximately 30 seconds.

Calculations: (mL 0.1 N sodium oxalate - mL 0.1 N potassium permanganate) x 3.52 = % (volume)
J-88L based on potassium permanganate. (% J-88L based on alkalinity - % J-88L based on permanganate) X 0.6 = grams (lbs) J-88 Additive P required for 100 gals. of tank solution. If J-88 Additive PL is used, calculate addition as follows: (% J-88L based on alkalinity - % J-88L based on permanganate) X 0.116 = litres (gals) J-88 Additive PL required for 100 gals. of tank solution. Maintain alkalinity and permanganate concentration at volume concentrations of 65–100 %.

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