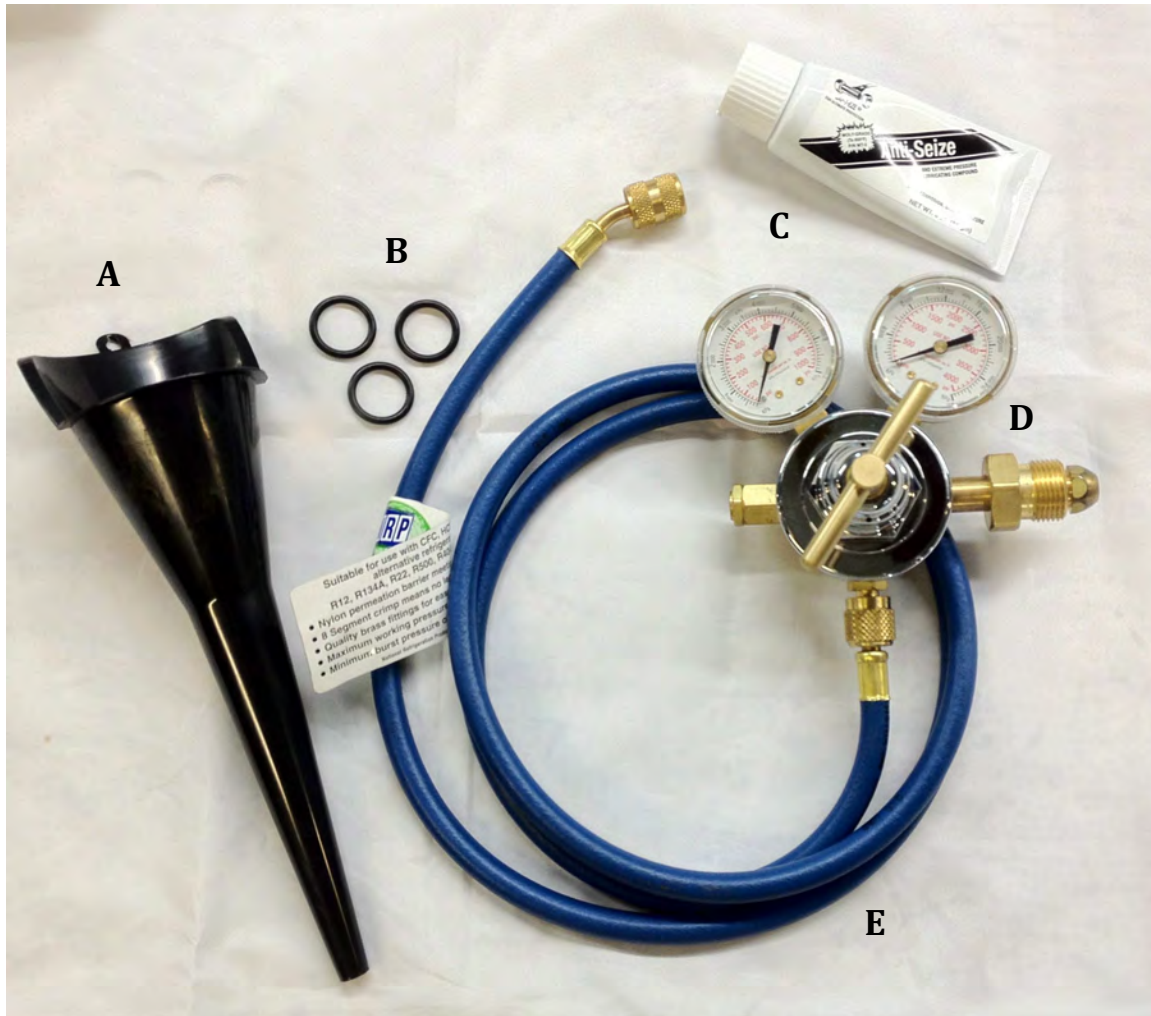


# Model 1203A

## MK-21 / MK-46 Recharging Set



- A. Funnel
- B. Replacement O-Rings
- C. Anti-Seize
- D. Hose & Regulator

### Refilling MK-46/MK-21 DOT-3AL 1000 Cylinder With the Model 1203A Recharge Set

**Read First:** The MK-46 & MK-21 are shipped unpressurized for transport. If you are unsure about the process of filling and charging these units, please contact

Combined Systems or seek a professional who has experience with cylinder refilling, such as a fire department or welding shop.

### Refilling Procedure

1. Safety goggles and rubber gloves must be worn during the refilling and pressurization procedures. A protective apron or other type of protective clothing such as a rain suit is also suggested.

2. Prior to beginning the procedure, make sure the unit is fully discharged and pressure indicator on the MK-46 is at zero. **Caution:** If there is any pressure left in the tank, serious injury could result from removing the nozzle/actuator head.

3. Once you are certain no pressure remains in the unit, carefully unscrew the firing head while holding the unit in an upright position. Hold the in its vertical position, base on the floor or a table with the nozzle/actuator head pointing up.



4. Remove the nozzle/actuator head with the attached dip tube and place it on a flat surface. The surface should be covered with paper or plastic to prevent the table surface from being contaminated and also prevent dirt and dust from getting into the container or nozzle/actuator head.

5. Remove the “O” ring (B) from the threaded end of the nozzle/actuator head and replace with the new “O” ring provided with the refill solution.

6. Pour any remaining solution from the tank into a container to be later discarded in accordance with federal, state, and local waste disposal regulations.

7. Using the funnel (A), pour the measured refill solution in the tank. Use the entire amount provided.

8. Apply Anti-Seize (C) to threads.

9. Carefully screw the nozzle/actuator head back into the neck of the tank being sure not to cross thread it. The nozzle/actuator head should screw firmly hand tight. Be careful not to over tighten.

## Pressurizing Procedure w/ 1203A Recharge Set

1. The Hose (E) is attached to charging station regulator (D) (check to be sure that the smaller fitting without the bend is attached to the regulator).



2. Before opening the valve on the Nitrogen tank, back off any pressure on downstream gauge (gauge on left), by loosening the T Handle-adjustment.

T-Adjustment



3. Attach the hose with the larger fitting (anti-blow back fitting) to Schrader type valve on the side of the nozzle/actuator head.



4. Open the valve on the nitrogen tank. Adjust output gauges to 200 psi by turning the T-adjustment handle. Shake during the refill process for several minutes. This will ensure that the nitrogen is absorbed by the liquid. Unscrew the charging valve from the unit. Make sure the safety pin is inserted before transport.

**Warning:** There are other means of refilling a MK-46 and MK-21. However, we provide the equipment and instructions to ensure safe and reliable refill process. The use of other equipment and procedures may cause damage to the unit, serious injury or death to the operator.