Omni 85® & 105®
EXTINGUISHER
REASSEMBLY
PROCEDURE
prepared by
Fuel and Technical Services

Kero-Sun, Inc.
for
Authorized Kero-Sun® Distributors
DISASSEMBLY PROCEDURE

If the Extinguisher has been partially disassembled, complete this disassembly procedure to insure that all parts are accounted for and are in good condition.

1. Remove the Pendulum Assembly which is held in place by two (2) screws and nuts (Fig. 1). Removal is required to avoid damage to the Pendulum and to make it easier to handle the Extinguisher during the assembly procedure.  
   **Note:** Tools required for reassembly are a Phillips Head Screwdriver and a 7mm or adjustable wrench. A container for holding small parts can be used to help prevent their loss during reassembly.

(Fig. 1)

2. Position the Extinguisher as shown (Fig. 2). Remove the three (3) sheet metal screws which attach the Bottom Flange to the Middle Housing.  
   **Caution:** Springs are attached to connect the two components. A slight (1/4) turn counterclockwise movement may occur as the sheet metal screws are being removed.

(Fig. 2)

3. Unhook the two (2) springs connecting the Bottom Flange and the Middle Housing (Figs. 3 & 4).

(Fig. 3)

4. Place the Extinguisher in the position shown (Fig. 5). Remove the two (2) guide screws. Remove only two of the three screws which are used to attach the Top Flange.  
   **Note:** The guide screws (see illustration) have a threaded portion and a machined pin section. The guide screw pin projects through slots of the Middle Housing.

(Fig. 4)

(Fig. 5)

5. Lift the Top Flange up and away from the Middle Housing (Fig. 6).
6. Remove the three (3) guide screws from the Middle Housing (Fig. 7). The Inner Flange and the Extinguisher Leaves will then be released by this procedure. **Note:** The Omni 85 Extinguisher has twelve (12) leaves. The Omni 105 Extinguisher has ten (10) leaves.

7. Examine each part. Use only components that are in perfect condition. The leaves and other parts are not to be used if damaged. The only replacement parts that are presently available from Kero-Sun, Inc., are the guide screws and the Pendulum Assembly.

**ASSEMBLY PROCEDURE**

1. The following components are required for complete extinguisher assembly (Figs. 8 through 14).

- **PENDULUM ASSEMBLY**

- **BOTTOM FLANGE**

- **MIDDLE HOUSING**
2. Insert the Middle Housing into the Bottom Flange (Fig. 15).

Note: The Middle Housing is only temporarily placed in the Bottom Flange. This provides clearance for the leaf pins, as the leaves are installed.

3. Place a leaf into the Middle Housing. Insert the leaf pin down and through one of the \( \frac{3}{8} \)" holes in the bottom of the Middle Housing (Fig. 16).

4. Insert the leaves in a clockwise direction. Lay each leaf on top of the previously installed one and insert the leaf pin into the next opening (Fig. 17).
5. Continue installing leaves until all the exposed openings in the Middle Housing are filled (Fig. 17).

6. To expose additional openings, gently lift up the group of leaves that have been installed (Fig. 18).

7. Apply slight pressure to the installed leaves after lifting. This will maintain their position during installation of remaining leaves (Fig. 18). **Note:** Continue to insert leaves in a clockwise direction, by placing a leaf pin into the next opening.

8. Position the Inner Flange so that one of the three brackets is opposite the lever on the Middle Housing (Fig. 19). **Note:** Any one of the three (3) brackets on the Omni 85 can be used. However, on the Omni 105, use the bracket that is identified by the dimple (Fig. 19).

9. Gently lower the Inner Flange down over the projecting pins of the leaves. Make certain that the pins come up through the slots of the Inner Flange (Fig. 20). It may be necessary to position the leaf pin with a stiff piece of wire. A large, straightened, paper clip works well.

10. The assembled leaves are to be placed up against the wall of the Middle Housing. This will place the leaves in the fully open position. The leaf pins will then be in the correct position for installing the Inner Flange.

11. Install the three (3) guide screws into the Middle Housing. The guide screw pin will project through and into the Inner Flange (Fig. 20).

12. Close and open the Extinguisher a few times by rotating the Inner Flange back and forth. Observe the operation of the Extinguisher to make certain all the leaves overlap. The leaves should move easily without binding.

13. Some openings between the leaves will be noticed when the Extinguisher is completely closed (Fig. 21).
14. Once the Extinguisher is installed on the heater, the leaves will seat against the Primary Air Tube. The leaves will position themselves evenly and the small openings will be eliminated (Fig. 22).

TROUBLESHOOTING
If the Extinguisher does not operate smoothly, check for the following.

1. Are all pins on the leaves straight?
2. Are all the leaves flat?
3. Are all the leaves resting one on top of the other in a clockwise direction?
4. Are all pins inserted into the openings of the Middle Housing?
5. Are all pins projecting up through the slots of the Inner Flange?

*Important:* It is necessary to ensure that the unit, at this stage, is functioning properly before proceeding with further assembly.

Assembly of the Top and Bottom Flange to the Middle Housing.

1. Remove the Middle Housing from the Bottom Flange (temporarily placed for assembly purposes).
2. Rotate the Inner Flange counterclockwise to close the Extinguisher Leaves.
3. Place the Middle Housing Assembly into the Top Flange. Insert the guide screw through the slot of the Middle Housing (Fig. 23).

*Note:* One of the guide screws was left attached to the Top Flange during the disassembly procedure.

4. Install the two (2) remaining guide screws by threading them into the captive nuts of the Top Flange and through the slots of the Middle Housing (Fig. 23).

5. Attach the two (2) springs to the inside of the Middle Housing. Insert the hook through the larger opening and then pass it back through the small opening (Fig. 24).

Assembly procedure completed.

(Fig. 21)

(Fig. 22)

(Fig. 23)

(Fig. 24)

(Fig. 25)
6. Place the Middle Housing so the handle and the notch are positioned exactly as shown (Fig. 25).

7. Attach the free end of the two (2) springs to the outside of the Bottom Flange using the same assembly method as Step 5 (Fig. 26).

8. Rotate the Bottom Flange clockwise and carefully place it into the Middle Housing (Fig. 27).

9. Position the two (2) springs in the space between the Bottom Flange and the Middle Housing (Fig. 28).

10. Rotate the Bottom Flange clockwise and align holes for inserting the three (3) sheet metal screws. 
**Caution:** Securely hold components to maintain alignment of mounting holes. The tension on the springs may cause movement.

11. Install the three (3) sheet metal screws to attach the Bottom Flange to the Middle Housing (Fig. 29).

12. Attach the Pendulum Assembly using the two (2) machine screws and nuts (Fig. 30). 
**Important:** The Pendulum must be securely fastened to assure proper action.

**Extinguisher Assembly Procedure is now completed.**

**Final Check:**

1. Hold the outside of the assembled Extinguisher.
2. Move the lever back and forth.
3. Observe operation of the Extinguisher Leaves to determine that they close properly.
4. Install Extinguisher on the heater and check for smooth operation.