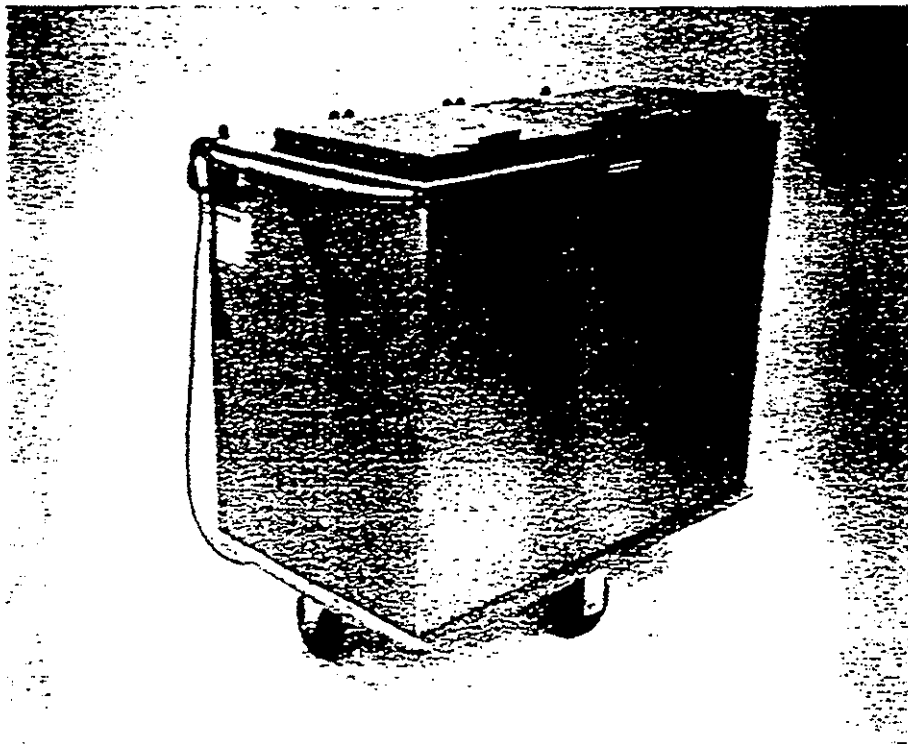


Aladdin®

SYNERGETICS, INC.

SERVICE & INSTALLATION MANUAL

*Please read this manual completely before attempting to install or operate this equipment!
Notify carrier of damage! Inspect all components immediately. See page 3.*



DH05/DH06

DH05A/DH06A

DH05E/DH06E

Insul Plus™ base heaters

Effective January 1995

Manufactured for Aladdin Synergetics by **E. Delfield**

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INDEPENDENT TESTING

This equipment has met the requirements to be listed by the following organizations:

- Underwriters' Laboratories — File #E64923
- Canadian Standards Association — File #LR344184-4
- National Sanitation Foundation — standard pending

SPECIFICATIONS

MODEL NUMBER	LENGTH	WIDTH	HEIGHT	VOLTAGE/ HERTZ/ PHASE	AMPS	NEMA PLUG	SHIP WEIGHT
DH05	40.37 in 102.6 cm	24.00 in 61.0 cm	40.37 in 102.6 cm	208/60/1	16.3	6-20P	213 lbs 95.9 kg
DH06	30.75 in 78.1 cm	24.00 in 61.0 cm	40.37 in 102.6 cm	208/60/1	13.0	6-20P	183 lbs 82.4 kg
DH05A	40.37 in 102.6 cm	24.00 in 61.0 cm	40.37 in 102.6 cm	240/60/1	14.0	6-20P	213 lbs 95.9 kg
DH06A	30.75 in 78.1 cm	24.00 in 61.0 cm	40.37 in 102.6 cm	240/60/1	12.0	6-20P	183 lbs 82.4 kg
DH05E	40.37 in 102.6 cm	24.00 in 61.0 cm	40.37 in 102.6 cm	240/50/1	16.3		213 lbs 95.9 kg
DH06E	30.75 in 78.1 cm	24.00 in 61.0 cm	40.37 in 102.6 cm	240/50/1	13.0		183 lbs 82.4 kg



INTRODUCTION

The Aladdin® DHO base heaters discussed in this manual are mobile, thermostatically controlled, forced air convection heated dispensers suitable for use with Aladdin Insul-Plus™ wax-filled bases.

RECEIVING AND INSPECTING THE EQUIPMENT

Even though most equipment is shipped crated, care should be taken during unloading so the equipment is not damaged while being moved into the building.

Carefully check for any visible signs of damage to the cartons or containers. If evidence of damage exists, the package should be opened immediately and a joint inventory and examination of the contents should be made by you and the driver.

Concealed damage

If a concealed loss or damage is discovered after you have given the carrier a clear delivery receipt, notify the carrier in writing immediately or within 10 days from the delivery date. If you phone the carrier, you must follow up the call in writing to protect

your rights. You can only improve your position as a claimant by promptly reporting such loss or damage. You should also retain all cartons or containers, including packing material, until an inspection has been made or waived.

Filing a claim

Notation of loss or damage does not constitute the filing of a claim. You should file your claim in writing with the carrier immediately!

Carriers will furnish the necessary form upon request. You should also request an inspection. If a claim is filed by phone, always follow up immediately in writing.

INSTALLATION

Electrical connection

Refer to the specifications data on page 2, the serial tag, your local code or the National Electrical Code to be sure the unit is connected to the proper power source. A protected circuit of the correct voltage and amperage must be run for connection of the line cord.



Every unit is fitted with a grounded power cord and must be connected to a properly ground receptacle. Each receptacle must be wired to a dedicated circuit protected by a fuse or circuit breaker rated at not more than 20 amps.

The units have an ON/OFF switch on the end of the unit near the push handle. Read the following sections of the manual regarding set-up and operation before turning the unit on.



The power switch should be turned to *OFF* and the unit disconnected from the power source whenever performing service or maintenance functions.

Setting up the equipment

All models are equipped with a self-leveling mechanism, consisting of two or three stainless steel dispenser tubes. Each tube is equipped with a properly calibrated stainless steel compression spring which supports the adjustable stainless steel carrier head. The entire mechanism is removable through the top to facilitate cleaning and service.

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OPERATION

Brief overview

These units are designed to operate in a defined temperature range providing added safety for the operator and to the bases. The thermostat is not adjustable.

Once the unit has been turned on, the small round red light, the fan motor and the heater will come on. Units will be provided with a rectangular 'service' light located next to the ON/OFF switch indicating any thermostatic failure.

The fan motor will begin to circulate the heated air in and around the bases in a convection process that promotes a quick and even heat absorption.

Once the air inside the cabinet has reached the desired temperature, the thermostat will continue to maintain this temperature by regulating the power to the heater. The fan will run as long as the unit is on.

Loading

Load each tube by carefully stacking the bases on the carrier head. Always keep the load centered on the carrier head. Do not exceed the recommended base capacities. Model DHO5 can hold up to 90 bases; model DHO6 can hold up to 60 bases.

Power

Set the power switch to the ON position. Make sure the covers are closed completely to insure proper heating operation.

Allow a minimum of 75 minutes to properly heat the bases.

Dispensing



Operators should always wear gloves or plate lifters when handling heated bases.

Bases can be dispensed one stack at a time, thus ensuring optimal heat at all times.

These units are furnished with a red "service" light located near the ON/OFF switch. If at any time during the operation of the heater, this light comes on, it means there has been a thermostat failure and power to the heating element has been cut off. The fan may remain in operation but the unit will not heat. Notify your maintenance supervisor before attempting to operate unit again.

MAINTENANCE

The following maintenance procedures should be performed regularly, in order to keep your DHO unit working efficiently.

- ① Turn the unit off and disconnect the plug from the outlet, and allow the cabinet to cool. If your unit is equipped with a "twist lock" plug, turn the plug to the left (counter-clockwise) to unlock it before pulling it out. Never pull on the cord. To reconnect the plug to the "twist lock" outlet, match the hooked blade to the corresponding slot, push the plug straight in until it is seated, and turn to the right (clockwise) to lock.
- ② Loosen the cap screws on the deck holding clips. Pull elevator assembly up and out and set it on a work surface. Two persons should perform this operation. Wipe it down with a damp cloth.
- ③ Clean out any debris inside the cabinet and wipe it down with a damp cloth. If necessary, loosen the screws holding the

perforated guard panel and lift it out of the cabinet. Wipe down the area around the fan and heater carefully to avoid damage, then reassemble panel.

- ④ Place each mechanism back inside the cabinet. Tighten the cap screws on the deck holding clip, making sure the unit is centered in the cabinet. Clean the outside of the cabinet with a mild, non-abrasive soap or detergent and warm water. A commercial stainless steel cleaner can also be used.

To avoid scratching the finish, do not use abrasive powders or scouring pads.

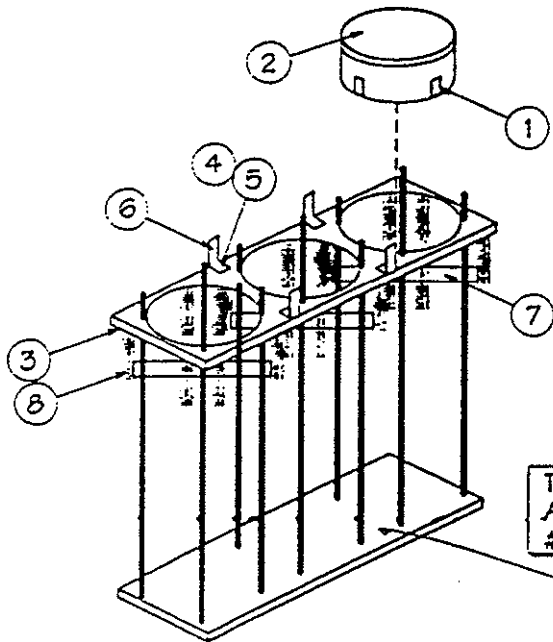


Do not steam or pressure clean or hose down the cabinet. This could damage the equipment and possibly cause an electrical shock to the operator.

TROUBLESHOOTING REFERENCE CHART

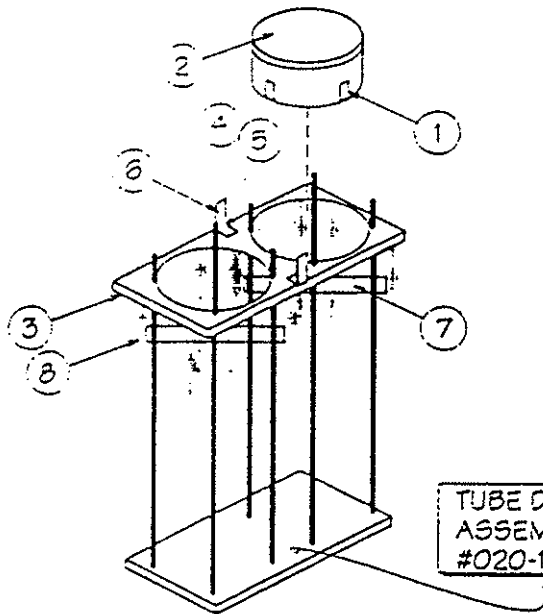
SYMPTOMS	PROBABLE CAUSES	SOLUTIONS
Unit does not operate, and no lights are on	<ol style="list-style-type: none"> 1. No power 2. Bad power switch 3. Loose wiring 	<ol style="list-style-type: none"> 1. Make sure plug is connected and switch is ON. Check for power to the receptacle. 2. Replace power switch 3. Check and secure wiring
Unit heats, but fan does not operate	<ol style="list-style-type: none"> 1. Defective motor 2. Jammed or loose fan blade 3. Loose wiring 	<ol style="list-style-type: none"> 1. Replace motor 2. Replace or tighten blade 3. Check and secure wiring
Unit does not heat, but fan operates and service light is on	<ol style="list-style-type: none"> 1. Defective heating element 2. Open high limit switch 3. Loose wiring 	<ol style="list-style-type: none"> 1. Replace heating element 2. Replace switch. Check for causes before restarting equipment. 3. Check and secure wiring
Base temperature is too low, fan operating	<ol style="list-style-type: none"> 1. Jammed or loose fan blade 2. Cover is open 	<ol style="list-style-type: none"> 1. Replace or tighten blade 2. Close cover
Base temperature is too high, fan operating	<ol style="list-style-type: none"> 1. Closed thermostat 2. Closed high limit switch 	<ol style="list-style-type: none"> 1. Replace thermostat 2. Replace high limit switch
Cover is loose	Hinge screws are missing or loose	Replace or tighten screws
Cabinet does not roll easily	<ol style="list-style-type: none"> 1. Debris on wheel or axle 2. No lubrication 	<ol style="list-style-type: none"> 1. Clean out debris 2. Lubricate axles with load-bearing grease. Lubricate swivel bearings with 30-weight oil.

DH05 DISPENSER ASSEMBLY AND PARTS LIST



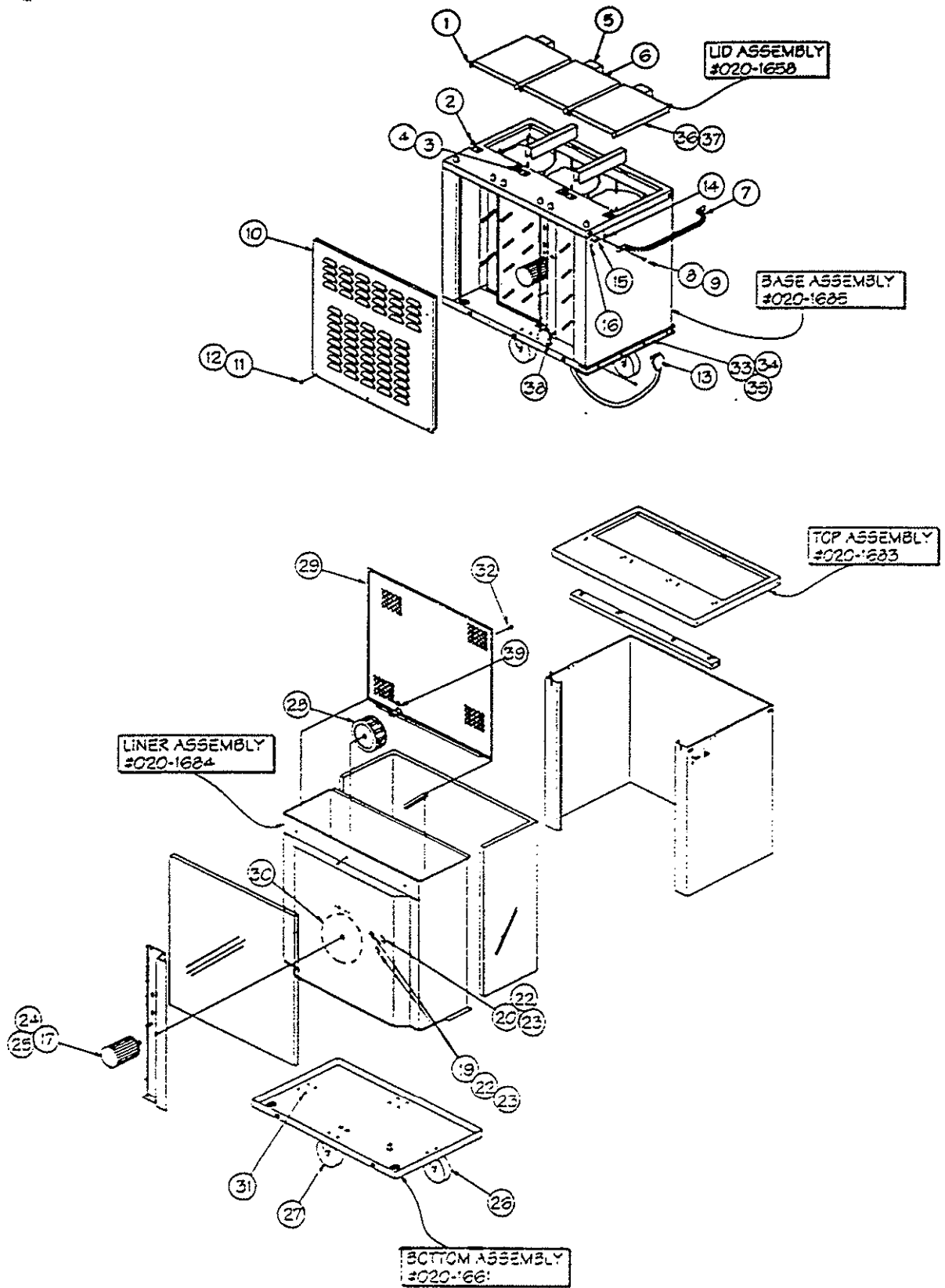
#	DESCRIPTION	DELFIELD #	ALADDIN #	QTY.
1	Dispensing head guides			12
2	Head assembly	020-1152		3
3	Spring retainer clip	004-8861	39699	12
4	Cap screw, 1/4-20 x 1/2, hex	632-0017		16
5	Cap nut, 1/4-20	932-1003		16
6	Deck holding clip	004-8862	39700	4
7	Carrier bar	004-0017	39698	6
8	Spring, P062-0090-4540-73-SR	615-0008	39701	24

DH06 DISPENSER ASSEMBLY AND PARTS LIST



#	DESCRIPTION	DELFIELD #	ALADDIN #	QTY.
1	Dispensing head guides			3
2	Head assembly	020-1152		2
3	Spring retainer clip	004-8861	39699	3
4	Cap screw, 1/4-20 x 1/2, hex	632-0017		10
5	Cap nut, 1/4-20	932-1003		10
6	Deck holding clip	004-8863	39697	2
7	Carrier bar	004-0017	39698	4
8	Spring, P062-1190-4540-73-SR	615-0008	39701	16

ASSEMBLY DIAGRAM—DH05/DH05A/DH05E



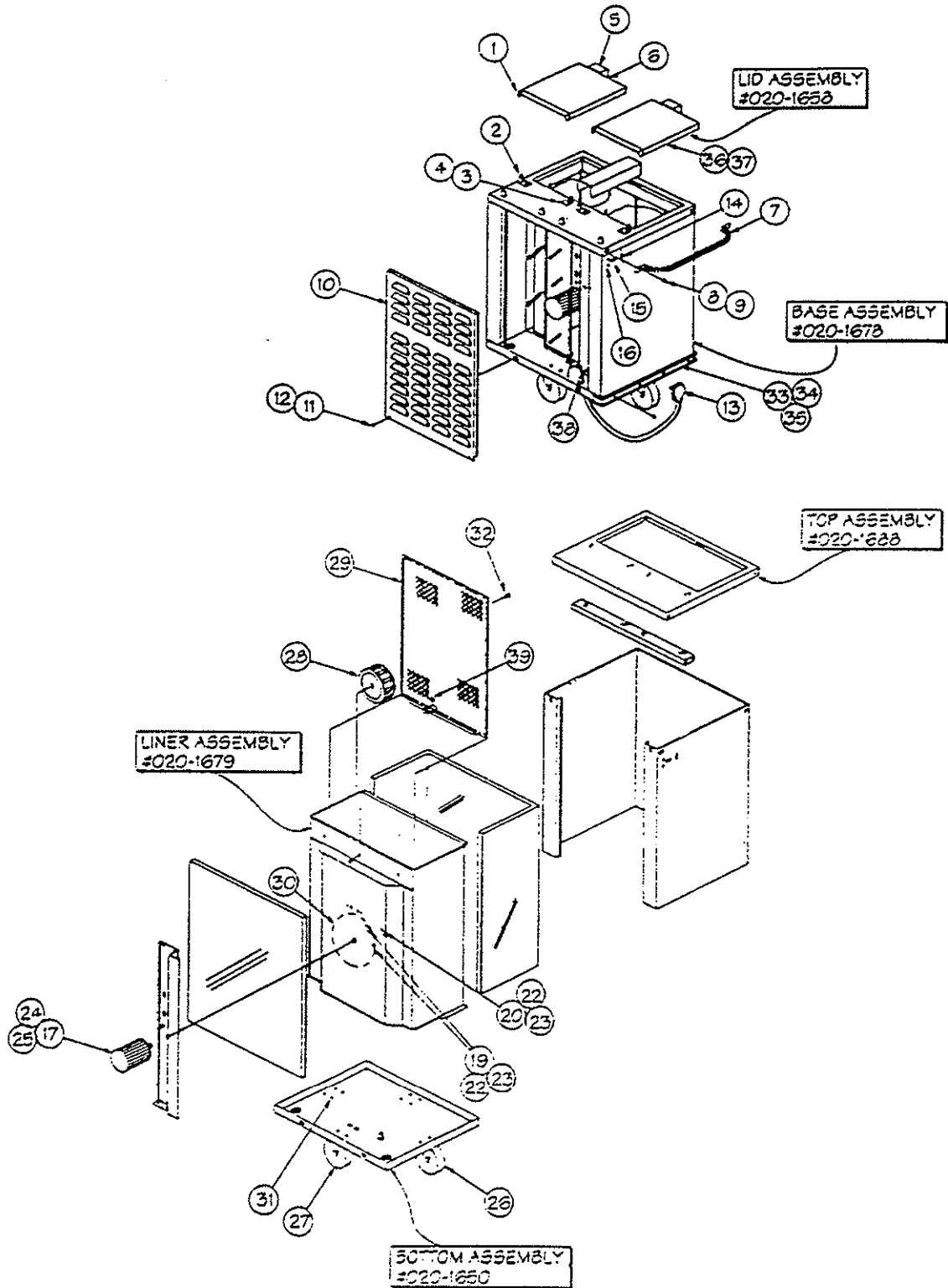
REPLACEMENT PARTS LIST—DHO5/DHO5A/DHO5E

ITEM #	DESCRIPTION	DELFIELD PART #	ALADDIN PART #	QTY.
	Lid assembly	020-1658	28761	1
1	Bushing, nylon hinge pin	932-1107	29821	6
2	Hinge, left-hand	004-8543	29418	3
3	Hinge, right-hand	004-8544	29417	3
4	Screw, 1/4-20 x .50	632-0017		12
5	Handle, lid	004-7378		3
6	Screw, 1/4"-20 x .75	932-1022		6
7	Handle, push/pull	020-1613	24639	1
8	Screw, 1/4"-20 x 1.00	632-0005		2
9	Washer, 1/4", external lock	632-0207		2
10	Louvered panel, rear	004-7270	39636	1
11	Screw, #10-24 x .62	632-0037		3
12	Washer, #10, lock, inside star	932-1061		3
13	Cord w/plug, NEMA 6-20P, 240V, 6'	619-0079	29820	1
14	Switch, 30A, double pole	219-4212	29262	1
15	Light, service, 250v	619-0238	29261	1
16	Light, pilot, red, 1/2", 250v	619-0237	29260	1
17	Motor, 208-230V/60Hz/single phase	616-0017	24635	1
19	Switch, high limit, 265°F	619-0188	29183	2
20	Thermostat, 230°F.	619-0189	29184	1
22	Screw, #6-32 x 3/7	932-1001		6
23	Nut, #6-32, hex lock	932-1010		6
24	Nut, hex, #8-32, S/S	632-0121		4
25	Washer, #10, shake proof	932-1061		4
26	Caster, 5", swivel w/brake, polyolefin	623-0210	29264	2
27	Caster, 5", rigid, polyolefin	623-0211	29263	2
28	Fan wheel	616-0005	24636	1
29	Heater guard, perforated	004-0010	39392	1
30	Heating element, 208V/2600W (std. & "E" models)	619-0218	24833	1
30	Heating element, 240V/2600W ("A" models)	619-0272	24832	1
31	Screw, 5/16"-18 x .75	632-0019		16
32	Screw, #10-32 x .62	932-1091		3
33	Bumper, wrap-around	623-0166	29647	10.5'
34	Bumper insert, aluminum	605-0004	28736	10.5'
35	Screw, #10-32 x 1.25	632-0006		24
36	Gasket, lid, magnetic	670-0062	29561	3
37	Screw, #8-32 x .50	932-1155		42
38	Harness, wiring	618-0001	29797	1
39	Pin hinge, brass	323-4360		2
	Resistor (50 Hertz models only)	619-0271	29977	1



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ASSEMBLY DIAGRAM—DHO6/DHO6A/DHO6E



REPLACEMENT PARTS LIST—DHO6/DHO6A/DHO6E

ITEM #	DESCRIPTION	DELFIELD	ALADDIN	QTY.
		PART #	PART #	
	Lid assembly	020/1658	28761	1
1	Bushing, nylon hinge pin	932-1107	29821	4
2	Hinge, left-hand	004-8543	29418	2
3	Hinge, right-hand	004-8544	29417	2
4	Screw, 1/4-20 x .50	632-0017		8
5	Handle, lid	004-7378		2
6	Screw, 1/4"-20 x .75	932-1022		4
7	Handle, push/pull	020-1613	24639	1
8	Screw, 1/4"-20 x 1.00	632-0005		2
9	Washer, 1/4", external lock	632-0207		2
10	Louvered panel, rear	004-7317		1
11	Screw, #10-24 x .62	632-0037		2
12	Washer, #10, lock, inside star	932-1061		2
13	Cord w/plug, NEMA 6-20P, 240V, 6'	619-0079	29820	1
14	Switch, 30A, double pole	219-4212	29262	1
15	Light, service, 250v	619-0238	29261	1
16	Light, pilot, red, 1/2", 250v	619-0237	29260	1
17	Motor, 208-230V/60Hz/single phase	616-0017	24635	1
19	Switch, high limit, 265°F	619-0188	29183	2
20	Thermostat, 230°F	619-0189	29184	1
22	Screw, #6-32 x 3/7	932-1001		6
23	Nut, #6-32, hex lock	932-1010		6
24	Nut, hex, #8-32, S/S	632-0121		4
25	Washer, #10, shake proof	932-1061		4
26	Caster, 5", swivel w/brake, polyolefin	623-0210	29264	2
27	Caster, 5", rigid, polyolefin	623-0211	29263	2
28	Fan wheel	616-0005	24636	1
29	Heater guard, perforated	004-0016	39394	1
30	Heating element, 208V/2600W (std. & "E" models)	619-0219	29266	1
30	Heating element, 240V/2600W ("A" models)	619-0273	28740	1
31	Screw, 5/16"-18 x .75	632-0019		16
32	Screw, #10-32 x .62	932-1091		3
33	Bumper, wrap-around	623-0166	29647	8.75'
34	Bumper insert, aluminum	605-0004	28736	8.75'
35	Screw, #10-32 x 1.25	632-0006		20
36	Gasket, lid, magnetic	670-0062	29561	2
37	Screw, #8-32 x .50	932-1155		28
38	Harness, wiring	618-0001	29797	1
39	Pin hinge, brass	323-4360		2
	Resistor (50 Hertz models only)	619-0271	29977	1

NOTES

NOTES



For parts and service, call (800) 888-5426

NOTES

EQUIPMENT WARRANTY

For a period of 90 days (labor) and one year (parts), Aladdin Synergetics warrants this equipment to the original buyer to be free from defects in material and workmanship. If within the warranty period, a part is acknowledged by Aladdin to be defective, all obligations will have been fully complied with by one of the following methods:

1. Furnishing replacement part F.O.B. factory in even exchange for the returned part, freight prepaid.
2. Furnishing a free replacement part, F.O.B. factory.
3. Receiving the defective part, freight prepaid, repairing it and returning it F.O.B. factory.

This warranty does not apply to any damage in transit or resulting from installation, nor does it apply to damage or failure resulting from normal wear and tear, misuse, abuse, tampering or alteration. It becomes void if damage or failure occurs as a result of unauthorized service or installation of any part not supplied by the manufacturer or Aladdin. This warranty shall further not apply to any expenses, losses or consequential damages to any other property occurring as a result of unauthorized service or parts. Alteration, defacing or removal of the serial numbers voids this warranty.

This warranty is only effective within the United States and Canada.

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