

**STAR MANUFACTURING COMPANY**  
Division of Peabody International Corporation  
9325 Olive Blvd., P.O. Box 8492  
St. Louis, MO 63132

**STAR-MITE MODEL 110-HL DEEP FAT FRYER**

**INSTALLATION INSTRUCTIONS**

**CAUTION:** This equipment is designed and sold for commercial use only by personnel trained and experienced in its operation and is not sold for consumer use in and around the home nor for use directly by the general public in food service locations. For equipment to be used by the general public, please contact the factory.

The STAR-MITE Model 110-HL Deep Fat Fryer is equipped for use on 240 volts or 208 volts. The connected load is 4800 Watts (4.8KW) at 240 volts or 3900 Watts (3.9KW) at 208 volts. The fryers are designed for use on Alternating Current (AC) two-wire single phase service only and are equipped with an approved lead-in cord with a three-prong grounding type cap. **DO NOT CONNECT TO DIRECT CURRENT (DC).**

**INSTALLATION:**

The supply circuit to the electric fryers should conform to the:

**NATIONAL ELECTRIC CODE AND ALL**

**LOCAL ELECTRICAL CODES AND ORDINANCES AND THE**

**LOCAL ELECTRIC COMPANY RULES AND REGULATIONS.**

For your protection we recommend that a qualified electrician install the supply circuit. He should be familiar with electrical installations, and all electrical codes. Proper connections and power supply are essential for efficient performance. The supply circuit should be properly fused as required by the local electrical code.

**CAUTION:** Hot fat is potentially dangerous. Do not come in direct contact with hot fat.

**CLEANING SUGGESTIONS:**

If the kettle is not cleaned daily and an accumulation forms in the bottom of the kettle, it is advisable to fill the kettle to the fat line with water, add detergent, turn the thermostat to 250<sup>o</sup> and boil for about two hours. Flush kettle thoroughly with clear water, dry and return to service.

**OPERATING INSTRUCTIONS:**

1. Clean the kettle thoroughly before using. Daily cleaning is recommended. The interior of the kettle may be cleaned in the same manner as any pot or pan after the fat has been drained. The fat should also be strained daily to remove food particles. Keep your fryer clean and it will operate more efficiently. **DO NOT IMMERSIVE UNIT IN WATER OR USE ABRASIVE TYPE CLEANING AGENTS.** The exterior surfaces can be kept clean and attractive by regularly wiping it with a clean soft cloth. Any discoloration can be removed with a nonabrasive cleaner, such as Bon-Ami, etc.
2. **ADD FAT** - Place 8 to 15 lbs. of fat into the fryer kettle. A fat level line on the rear of the kettle will guide you in determining the 15 lb. maximum fat level. If solid fat is used, pack the solid fat carefully around the heating element before turning the temperature control knob to an "ON" position.
3. **TEMPERATURE CONTROL** - The thermostat is a combination switch and heat control. The "OFF" position will turn off the electric current. With fat in the kettle, turn the thermostat knob to 300<sup>o</sup>.

4. **HIGH LIMIT THERMOSTAT** - Model 110HL Fryers are equipped with a high limit control that will shut it down at 450° in the event that the controlling thermostat fails. If this should happen, after correcting the problem, the high limit control may be reset by pushing the reset button located on the bottom of the unit.
5. **SIGNAL LIGHT** - A signal light is provided near the thermostat knob to indicate when the thermostat is providing heat. When the fat reaches the temperature set on the thermostat knob, the signal light will go out.
6. **FRY** - When the fat has melted, turn the thermostat knob to the desired frying temperature. See the Handy Frying Chart attached for recommended temperature and time required to properly fry various foods, as well as procedures and coating suggestions. **DO NOT FRY MORE FOOD PER BATCH THAN YOU CAN FRY EFFICIENTLY.** Too much per batch causes excessive temperature drop, wastes fat, and nothing is gained in capacity.
7. **LOWERING BASKET** - When the fat has reached the proper temperature, the signal light will go out. After this has occurred, lower the basket and food slowly into fat. When moist food is lowered too quickly into hot fat, the fat will foam and spatter excessively.
8. **DRAIN** - After the food has finished frying, raise the baskets and hang them on the handles of the kettle, which are located on the sides. Allow the excess fat to drain back into the kettle.
9. **IDLING** - During idle periods, lower the temperature setting of the thermostat to approximately 200°. It is not necessary to maintain full cooking temperature during idle periods, for the fat can be reheated quickly to the desired temperature. This procedure will result in longer fat life and less power consumption.
10. **TO TURN FRYER OFF** - Turn the thermostat dial knob counterclockwise to the "OFF" position. **CAUTION:** Never turn the fryer on unless the heating element is covered with fat.
11. **TO DRAIN KETTLE** - Turn the thermostat dial knob counterclockwise to "OFF" position. Remove electrical plug from outlet receptacle. **DO NOT ATTEMPT TO LIFT FRYER FILLED WITH HOT OIL.** Siphon the oil out of the kettle. If you do not have a siphon, order one from your dealer or dip the oil out and strain into a container. After oil has been removed clean the kettle.

#### THERMOSTAT RECALIBRATION:

1. Pull knob forward and remove from shaft.
2. Turn screw in center of shaft to decrease or to increase temperature. **NOTE:** ¼ turn of this screw will result in a change of approximately 30°F.
3. Replace knob.

#### REPAIRS AND SERVICE

This appliance should only be repaired or serviced by the factory or factory authorized personnel.

# CAUTIONS FOR ALL DEEP FAT FRYERS

NEVER LEAVE AN OPERATING FRYER UNATTENDED

REMEMBER HOT OIL IS DANGEROUS – **RESPECT IT!**



## WARNING – INSTALLATION

- Locate your fryer in a protected place so that it cannot be tipped over or knocked off its support. A mechanical restraint should be installed to prohibit the fryer from tipping or moving. Consult your local codes for allowable methods of restraint.
- Install an automatic fire extinguisher over the fryer and in the exhaust duct.
- Be sure your power supply is installed properly and in accordance with the local and national codes.
- Install a shut-off switch or gas valve close to the fryer. It must turn off the fryer immediately.
- Failure to add a mechanical restraint can result in oil splashing out and contacting the skin, leading to serious injury or death!



## WARNING – HOT OIL

- Hot oil is dangerous – Severe burns can result when hot oil contacts the skin.
- Hot oil is flammable – Keep open flames away from hot oil and its vapors.
- Never allow water or ice to get in hot oil.  
**IT CAN EXPLODE!**



## WARNING - ENVIRONMENT

- Keep your floors clean and free of grease and all other substances so no one slips accidentally and contacts the hot fryer.
- Keep areas and filters clean above your fryers – Oil soiled lint or dust can ignite easily and flames will spread rapidly.



## WARNING – MAINTENANCE

- Have your equipment checked regularly to insure its safe and properly functioning.
- If your fryer starts to smoke or boil abnormally, cut off the power supply immediately and determine the reason for the smoking or boiling before attempting to use it again.



## WARNING – TRAINING

- Train all personnel to understand the hazards of hot oil. Instruct them on the proper action to take if something does not seem to be acting properly.
- Instruct your personnel on what to do if there is an oil fire. Do not use water on an oil fire! Use only fire extinguishers of the approved type and never direct such extinguishers so as to blow the oil out of the oil container.

## CARE OF FAT

In three to six months you may spend as much for fat as you paid for your kettle. So fat is an item you want to know all about; how to select it; how to manage it. The more production you can get from each pound of fat, the more profitable your frying operation will be.

To get a high rate of production per pound of fat you have to avoid two things. One is early breakdown and spoilage of the compound so that you have to throw it away before it does enough work to "earn its keep." The other is excessive sponging up of fat by the food being fried.

The main cause of fat breakdown is excessive heat. On the other hand abnormal absorption is caused by frying too long at too low temperatures. One answer to both problems is exact control of heat — so that fat neither smokes up nor soaks up.

Of course, no fat "keeps" forever. Not only heat, but air and moisture, salt particles and crumbs of food work to break it down. But you can slow up fat deterioration by maintaining proper temperatures and by draining your kettle, filtering or straining the fat once or twice a day and by keeping the kettle itself absolutely clean.

A number of commercial devices and materials are available to aid in eliminating fat impurities. There are several excellent models of pressure filters as well as strainer-type filters, which, if used regularly, will prolong life of fat.

However, no purification device will renew broken down or rancid fat or put new life into it. Once you have allowed fat to break down it becomes unsuitable for frying — in fact browning is impossible.

In addition to filtration, you can prolong the usefulness of fat by sweetening it with fresh compound every day - replacing about 15% of the bulk you started with. If you do enough frying so that normal absorption of fat in food amounts to 15% to 20% of the capacity of your kettle every day - then you can call that your turn-over food. It means you can add the recommended 15% of fresh fat without discarding any of the old.

### 10 POINT PROGRAM TO PRESERVE FAT AND PRODUCE THE FINEST FRIED FOODS

1. Choose a fat that does not break down quickly. Hydrogenated shortening, corn, and peanut oils are less likely to break down under high temperatures.
2. Do not fry foods at temperatures above those recommended. The higher the fat temperature, the more rapid the rate of fat deterioration. Above 400°F fats quickly deteriorate.
3. During short intervals between frying, turn the heat down. Do not keep heat on for long periods between batches.
4. Keep fat clean. Strain or filter daily or at end of each shift. Add at least 15% fresh fat to your kettle daily.
5. At least once a day, cool a small amount of fat and taste it to see if it has picked up foreign flavors.
6. Discard fat that tends to bubble excessively before food is added.
7. Do not overload baskets-pieces should not touch when frying. Shake baskets to prevent food from sticking together. Fry similar sizes together.
8. Never salt foods directly over fat, salt in fat reduces its life.
9. Raw, wet foods, such as potatoes and oysters, should be drained or wiped dry before frying to extend the life of the frying fat. Have foods to be fried at room temperature.
10. Keep fat temperatures below smoking point to minimize frying odors.

## HANDY FRYING CHART

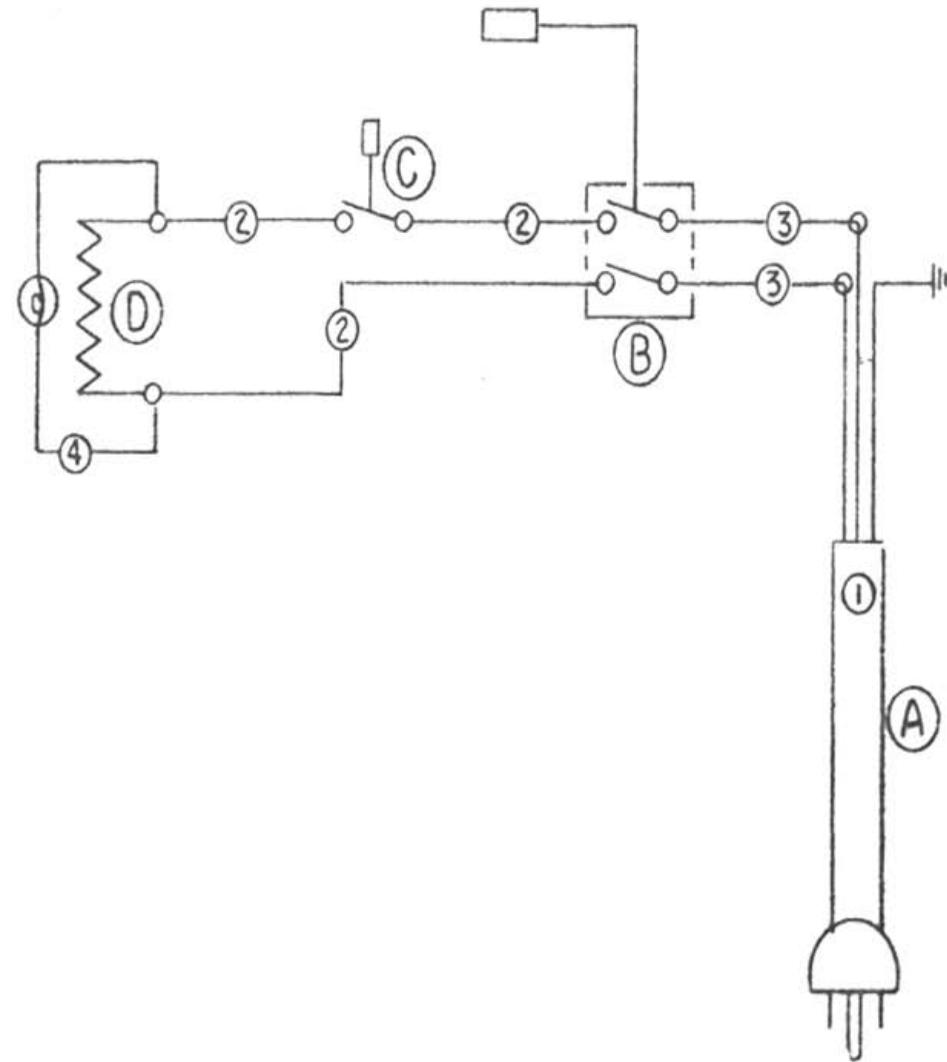
FOOD	COATING	PROCEDURE	TEMP	TIME IN MINUTES
<b>POTATOES</b>				
Standard French Fries		Cut in uniform pieces 1/2"	350°	5-7
Blanch Only		square the long way	350°	3-1/2
Brown Only			350°	3-1/2
Long Branch		Cut in uniform pieces 3/4"		
		square the long way	350°	7-10
Julienne (shoe string)		Cut in uniform pieces 1/8"		
		to 1/4" square the long way	350°	3-6
Chips		Soak in cold running water until water does not run milky	350°	2-3
<b>CHICKEN</b>				
Large Pieces	Batter or	Some prefer rolling in	325°	9-11
Small Pieces	Breading	seasoned flour, dipping in egg	340°	7-10
Pre-cooked		wash, and frying	350°	3-4
<b>FISH</b>				
Fillets (Large)	Breading	Select fillets of uniform	350°	4
Fillets (Small)	or Batter	size, skin out and dry.	350°	3
Oysters	Breading	Use Oyster liquor in batter		
	or Batter	or breading	350°	5
Clams	Batter		350°	1
Scallops	Breading		350°	4
Shrimp	Batter	Some prefer soaking 1/2 hour		
		in cold seasoned milk	350°	3
Smelts	Breading	Cut spinal cord several	350°	4
		places to prevent curling		
<b>MEATS</b>				
Chicken Fried Steak	Breading	Sever all connecting membranes		
		at one inch intervals to prevent		
		curling	360°	3-4
Cutlets	Breading		350°	3-4
Chops	Breading		340°	3-4
Meat Balls	Breading or			
	rolled in flour		340°	4-6
Brains	Breading		340°	3-5
<b>VEGETABLES</b>				
Asparagus	Batter or crumbs	Pre-cook in salted water	350°	3
Cauliflower	Batter or crumbs	Pre-cook and separate flowers	350°	3
Egg Plant	Crumb Breading	Peel, cut cross-wise into 1/4"		
		slices	350°	3
Onions	Light batter	Slice thin, soak in milk for		
		two hours	350°	3
<b>FRITTERS</b>				
Fruit (bananas, pineapples, apricots, berries)		Serve with fruit juice	350°	3-5
Corn	Batter	Serve with syrup or jelly	350°	3-5
Vegetable (peas, green beans)		Serve with tomato cheese sauce	350°	5-8
<b>MISCELLANEOUS</b>				
Croquettes	Breading		360°	3
Chinese Noodles			375°	1-2
French Toast			375°	1
<b>DOUGHNUTS</b>				
Cake			375°	1-1/2 - 2
Yeast, raised			375°	1

# MODEL 110 HL

# WIRING DIAGRAM

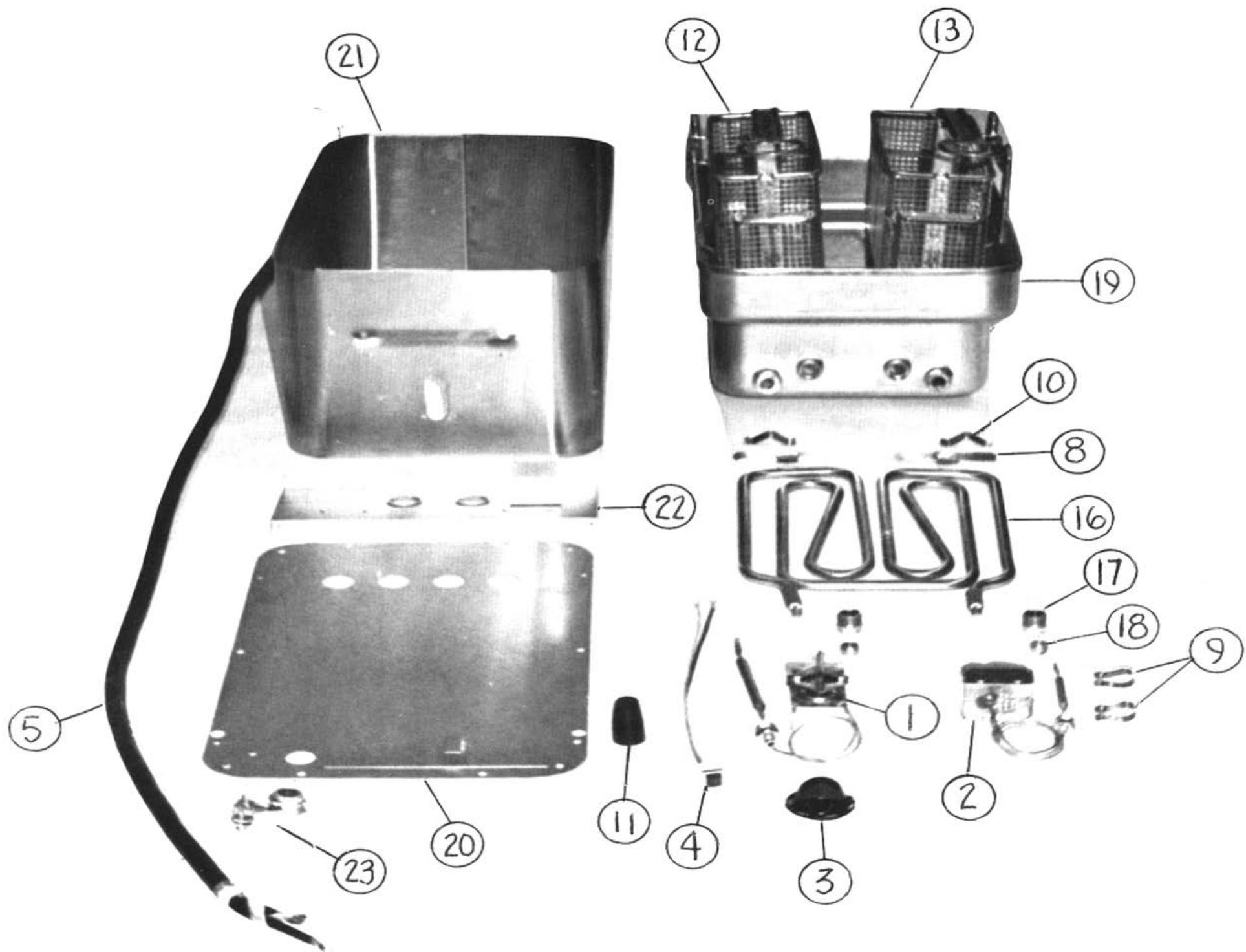
REVISIONS

A



- (A) LEAD IN CORD
- (B) THERMOSTAT WITH AUXILARY SWITCH
- (C) SAFETY THERMOSTAT (MANUAL RESET)
- (D) HEATING ELEMENT

NOTE: ALL WIRING IS #12 GA.



# PARTS LIST

EFFECTIVE— JANUARY 15, 1982

MODEL 110HL  
 STAR-MITE COUNTER FRYER  
 SERIAL #1105453 AND UP

KEY NUMBER	PART NUMBER	NUMBER PER UNIT	DESCRIPTION
1 *	<del>2T-Y2202</del>	1	THERMOSTAT
2 *	2T-Y1860	1	SAFETY THERMOSTAT
3	<del>2R-6700</del>	1	KNOB, THERMOSTAT
4 *	E1-110003	1	PILOT LIGHT ASSEMBLY
5	<del>E1-110004</del>	1	LEAD-IN CORD ASSEMBLY
6	E1-110005	3	WIRE ASSEMBLY (NOT SHOWN)
7	E1-110007	2	WIRE ASSEMBLY (NOT SHOWN)
8	E1-115012	1	HANGER BRACKET ASSEMBLY
9	E1-7363	4	THERMOSTAT BULB CLAMP
10	5809	2	ELEMENT LIFT CLAMP
11	2A-6904	4	FOOT
12	2B-115774	1	BASKET, LEFT (4" WIDE) STD. EQUIP.
13	2B-115775	1	BASKET, RIGHT (4" WIDE) STD. EQUIP.
14	2B-Y8847	1	BASKET, LEFT HANGER (8" WIDE)
15	2B-Y8846	1	BASKET, RIGHT HANGER (8" WIDE)
16 *	E1-110006	1	ELEMENT W/FITTINGS
17	E1-6908	2	FITTING
18	2K-6909	2	SLEEVE
19	E1-110001	1	KETTLE ASSEMBLY
20	E1-110010	1	BOTTOM ASSEMBLY
21	E1-110002	1	BODY ASSEMBLY
22	E1-110013	1	BAFFLE ASSEMBLY
23	2E-1177	1	CONNECTOR

\*SUGGESTED PARTS STOCKING—

IMPORTANT: WHEN ORDERING SPECIFY VOLTAGE OR TYPE GAS DESIRED  
 INCLUDE MODEL AND SERIAL NUMBER—(1) MINIMUM PARTS ORDER—\$5.00

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## STAR MANUFACTURING COMPANY

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