

of the elements. In like manner, check the other parts of the electrical circuit, following diagram on Page 1 of this bulletin. Replace burned out elements as in Section 2-G.

4-A1. Closing of switch contact points (36B & 2). - The switch arm (36A) is held in closed position by locking lever (33). Examine flat spring holding contact points (36B) and make sure there is sufficient tension on points to keep them closed during operation.

4-B. If toast is too light or too dark at Medium setting of control knob: - When the toaster leaves the factory it is set to give medium toast when using fresh white bread with an average voltage of 115, for operation on 110-120 volts and with the control knob (24) adjusted about at middle between "Light" and "Dark". While this model toaster is very efficient in voltage compensation; that is, a minimum variation of the degree of "brownness" for different voltages at a given setting of the adjustment knob; for large voltage variations, adjustments must be made on the thermostat. Instructions for voltage adjustment are cast on the bottom of the thermostat bracket with arrows pointing to the direction which the spanner nut (49A) should be turned. This should be done without removing the bottom cover and thermostat (50) from the toaster. A nail or small screw-driver may be inserted in the opening to turn the spanner nut (49A). The nut should not be turned by more than one complete turn, or the color of successive slices will change. A red dot is painted on edge of nut as a guide for turning. The table below indicates the voltage possibilities and changes that should be made:

Current Voltage

Alterations

115 volts (110-120V)..No changes should be necessary other than a small movement on outside control knob (24).

Below 110 Volts.....Toast will tend to be dark and tension on thermostat blade must be relieved by loosening spanner nut (49A) by not more than one turn in direction of arrow pointing towards inside of toaster and crumb plate.

Above 120 volts.....Toast will tend to be light and tension on thermostat blade must be increased by tightening spanner nut by not more than one turn in direction of arrow pointing towards outside edge of toaster.

If the current voltage at the outlet where toaster is attached differs from the rated toaster voltage (as marked on toaster name plate) so much as to require turning the spanner nut (49A) more than one turn, measure the current voltage on the line with the toaster in operation. Make a record of this voltage and return it with the toaster to the factory for servicing. At the factory, special adjustments for low or high voltage within reasonable limits will be made. If the slices of toast are too dark in spite of above adjustment, examine thermostat blade (47) and adjust as in Section 3-N1 and 3-N2.

4-B1. If toaster operates normally when tested in repair shop, but user reports that toast burns or gets too dark even with control turned all the way to "LIGHT", or that toaster does not shut off automatically (see also Section 4-E), test

should be made to determine whether the voltage is low at the electric outlet where toaster is used in the home, with the toaster in operation. House wiring (including any extension cords in use) may be incapable of carrying 1100 watts and maintaining the rated voltage. In such cases, a different electric outlet should be used or correction of the house wiring arranged with electric power company. In some homes if other appliances are used on the same circuit at the same time as the toaster, the electric circuit will be overloaded and a temporary drop in voltage will result. Under these conditions no adjustment on the toaster will be required - user should avoid use of other appliances on same circuit while toaster is in use or should present the problem to his electric power company for solution.

- 4-B2. The upper surface of the main thermostat blade (47) is coated with a special dull black paint to prevent reflection and aid absorption of heat. If this paint is found scaled off, the thermostat action will be delayed and toast will burn. Remove blade (47) as in Section 2-A1 and replace. Reset thermostat as in Sections 3-N1, 3-N2 and 3-N3.
- 4-B3. Occasionally, users misunderstand our instructions on setting control knob (24) and believe that it has only two positions, Light and Dark. Actually an infinite number of settings are available between these extremes. A normal toaster used with normal voltage will scarcely color the bread when turned all the way to Light and will burn it when all the way to Dark. The complete range between Light and Dark is provided to take care of variations in voltage, kind and condition of bread, etc. Instruct users how to find correct setting between these two extremes. Correct position will usually be half way between extremes (arrow on knob straight up) and a very slight movement on the knob will have a noticeable effect on the toast.
- 4-C. If too much time elapses between the two thermostat "clicks" at end of toasting operation: - When the toaster is operating normally, the time between thermostat "clicks" is 2 to 3 seconds for cold toaster and about 10 seconds for a very hot toaster after it has toasted many slices. If more than 10 seconds elapse between clicks the thermostat should be removed as in Section 2-A and examined for crumbs under thermostat blade (47). This is not likely to happen as the thermostat is mounted off to one side of the toasting chamber. Depress thermostat blade by pressing at its center and look through between blade and casting. It should touch only at center. If it touches all along its length, replace blade (47). Examine the auxiliary spring (45) of the thermostat assembly for clearance with the side of the thermostat bracket. Any parts tending to bind or restrict motion of thermostat should be corrected.
- 4-D. If successive slices of toast differ in degree of brownness. -When the toaster leaves the factory the thermostatic control is adjusted so that for fresh white bread the successive slices of bread will all be toasted uniformly for a given setting of the control knob (24). There will, however, be a difference between dry and fresh bread and rye, whole wheat or white bread for the same setting on the toaster.
- 4-D1. If successive slices become lighter, the set screw (55) at the end of auxiliary thermostat (46) is adjusted in too far. Loosen set screw (55) 1/2 turn, and to compensate for this, tighten up on spanner nut (49A), increasing thermostat spring tension. Examine reflector (3) and see that it is moving in a proper arc on turning the control knob (24). If the inside of the

reflector appears dirty or stained in any way, it may have to be replaced as in Section 2-J.

- 4-D2. If successive slices become darker: - The set screw (55) at the end of the auxiliary thermostat (46) is adjusted to give greater tension by turning it about 1/2 a turn. Remove thermostat as in Section 2-A and make sure that the set screw (55) contacts the lower lip of the main thermostat (47). It is important that the set screw bear against main thermostat blade and is adjusted as in Section 3-N1.
- 4-D3. Check of Operation: - The one positive check of operation is to toast 3 or 4 slices of bread in succession, observing changes in color or degree of brownness, if any. Slices of bread of same size, color and degree of freshness should be used.
- 4-D4. If very slight variations in position of thermostat control knob (24) produce radical changes in toast, look for a bent or damaged reflector (3). If badly bent, replace. A slight bend may be straightened. Opening between bottom edges of reflector should be one-half of an inch.
- 4-E. If toaster does not shut off: - The switch locking lever (33) is not operated by the thermostat blade (47) if there is insufficient projection of the lever (33) above base on which thermostat snaps down and hence insufficient travel to operate switch. Remove bottom cover and thermostat assembly as in Section 2-A, and using gauge Tool No. 5, check the height of the switch locking lever (see Section 3-1).
- 4-F. If toast does not "pop-up": - When the control knob (24D) is turned to the "pop-up" position, the toast should be lifted up through the top of the toaster automatically at the end of the toasting period. The rack assembly (56) will start rising rapidly and will then slow down and come to a gentle stop. If the toaster fails to "pop-up", lower the crumb plate (53) and examine the ejector spring (21) and its adjustment nut (21A) to make certain that they are operating satisfactorily. Move the handle (15) up and down several times to ascertain whether there is freedom of movement on the shoulder screws (10A) of the parallel bars and rack assembly (56). If friction limits the movement of these parts, eliminate cause of friction and apply the special graphite oil listed on parts list. In no case should the rack assembly (56) rise rapidly and slap against the top of the element frame (1), as the motion is dampened by the cylinder (56A) and piston (63).

The operation of the automatic "Pop-up" may be checked by lowering the crumb plate and depressing the switch locking lever (33) by hand. The switch arm (36) and ejector lever (35) will be released and the rack moved upwards by the ejector spring (see Section 3-K).

- 4-G. If toaster is noisy in operation: - The toaster should be perfectly quiet during operation and at the end of its toasting cycle, a click will be heard as the thermostat blade (47) snaps down on the thermostat bracket. This is normal and should be expected. However, if it is accompanied by a "ringing" noise, remove the two Gulmite screws (60A) holding cover for the thermostat bracket (60) and take off cover. A short piece of asbestos string (62) should be found wrapped around spring (48) to dampen the sound.

Should the rack assembly (56) move up violently after the toasting, so that it strikes the element frame (1), the piston (63) and cushioning cylinder (56) may be broken or badly worn and require replacement.

- 4-H. If toast rack (56) is found bent downward, it should be replaced and should not be repaired or bent back into its original position (it cannot be properly straightened). The rack is stiffened by a U-Shaped depression which on some of the first toasters manufactured was 1/16" deep. Since March, 1940, this part has a U-shaped depression 5/32" deep at one end and tapers to 1/16" at the other. When replacing a bent rack, be sure that a new one with the 5/32" deep tapered depression is used (it is most unlikely that these latter racks will be found bent). To remove bent rack (56), see Section 2-D, --to fit new rack and reassemble, see Section 3-G.

\* \* \* \* \*

- 4-J. If switch arm (36A) will not engage in step on switch locking lever (33) when movable handle (15) is depressed, examine all parts for possible binding, especially the sides of slot in switch arm (36A) and the pivoting pin at center of lever (33). Test tension in torsion spring (33A) by depressing lever (33) by hand. If it appears weak, it may be removed and stretched to restore tension, or replaced. Do not try to compensate for incorrect adjustment of parts by increasing tension of spring unduly, or an overload will be put on the thermostat blade. If step near end of lever (33) at point where 36A engages is worn or out of shape, replace lever (33) - see Section 3-1.

If arm (36A) does not move far enough to pass step in 33 when handle is depressed, it may be bent slightly toward the center of Toaster by grasping with long-nose pliers beyond slotted end. Do not attempt to bend slotted part of this arm as it is hardened and may break. Contact points (36B & 2) should touch just as front edge of arm (36A) reaches step and arm should then continue over step in lever (33) until step is cleared. Clearance between slot and step at moment of extreme movement of arm should be about 1/32". If more than this, bend arm (36A) as explained above, but in opposite directions, for if arm (36A) moves too far over step in lever (33), it returns so rapidly that it may over-ride edge of step. Position of switch points may be adjusted by bending slightly with the fingertips springs on which they are mounted (see Section 4-A1.) If there is too much tension on switch point mounting springs, they may force arm (36A) back over step.

\* \* \* \* \*

THE SPECIAL & STANDARD TOOLS REFERRED TO IN THIS BULLETIN ARE:

- No. 1 T20963 Wrench for Gulmite Screws (212)
- No. 2 T21293-2 Adjusting weight 2 pounds for main Thermostat adjustment
- No. 3 T21293-1 Adjusting weight 1.8 pounds for auxiliary Thermostat adjustment
- No. 4 Wrench Allen Head size 5/64"
- No. 5 T20491-1 Gauge for switch locking lever

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# SUNBEAM APPLIANCE PARTS LIST

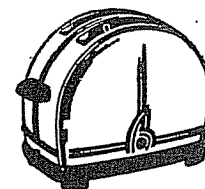
F-7

Date of Manufacture  
July, 1939

November 1, 1952

## SUNBEAM TOASTER

Model T9



**IMPORTANT NOTICE:** Our part numbering system is being changed. For quick, accurate service, please order by STOCK NUMBER shown in second column. For cross reference, parts that have been assigned new numbers will have the old number in parentheses behind the Description of Part.

<u>Key</u> <u>No.</u>	<u>Stock No.</u>	<u>Description of Part</u>	<u>Retail</u> <u>Price</u>
1	*20-C94AP	Element Frame Complete .....	1.95
1A	20-43AQ	Bus-BAR .....	.10
1B	20-44AQ	Bus-BAR .....	.10
2	-----	Contact Points (not furnished separately).....	---
3	20-C95AP	Reflector Assembly for Thermostat Heater .....	.35
4	20-36AQ	Reflector Pin .....	.04
5	-----	*Thermostat Heater Element, 110-130 Volts	
		Grade 3 C96AP-3 .....	.50
		Grade 4 C96AP-4 .....	.50
		<b>NOTE:</b> Toasters were made with elements graded 1 thru 5. Only grades 3 & 4 are available for replacement. Use grade 3 for elements graded 1 thru 3, and grade 4 for elements graded 4 and 5.	
5A	20-34AQ	Mica Washer (2 Used) .....	.04 ea.
5B	20-35AQ	Mica Washer (4 Used) .....	.04 ea.
6	-----	*Front Toasting Element Complete with Signal Element, 110-130 Volts See note Key No. 5	
		Grade 3 C97AP-3.....	2.05
		Grade 4 C97AP-4.....	2.05

\*See Schedule of parts for other voltage Toasters shown at end of list.

All prices subject to change without notice

## SUNBEAM APPLIANCE PARTS LIST

Key No.	Stock No.	Description of Part	Retail Price
	-----	*Center Toasting Element Assembly, 110-130 volts See Note Key No. 5	
		Grade 3 C98AP-3 .....	2.55
		Grade 4 C98AP-4 .....	2.55
	-----	*Rear Toasting Element Assembly 110-130 volts See Note Key No. 5	
		Grade 3 C99AP-3 .....	1.95
		Grade 4 C99AP-4 .....	1.95
	20-C1AQ	Upper Shaft Assembly with Switch Roller	
		Bracket and Ejector lever .....	1.70
	20-C2AQ	Lower Shaft and Switch Assembled .....	1.70
0	20-18AQ	Shoulder Screw for Rack Assembly (4 Used) .....	.10 ea.
0A	20-26AT	Lock Washer for Shoulder Screw (4 Used) .....	.04 ea.
0B	20-50T	Pawl Spring .....	.10
0C	20-C4AQ	Bottom Mounting Plate Assembly .....	.95
1	20-C4AQ	Bottom Cover and Thermostat Bracket	
2	*20-C6AQ-1	110-120 volts .....	1.70
		Heat Adjustment Cam .....	.20
3	20-C7AQ	Cord Set (C19BY) .....	1.20
4	20-1364	Wall Plug .....	.20
	20-G23Q	Movable Handle .....	.45
	20-10AQ	Set Screw for Movable Handle .....	.10
5A	20-61AQ	Molded Plastic Base .....	1.60
6	20-11AQ-1	Base Fastening Stud (4 Used) .....	.20 ea.
6A	20-12AQ	Base Fastening Screw (2 Used)(P1466) .....	.04 ea.
6B	20-1796	Cut Out Rod .....	.10
7	20-13AQ	Top for Element Frame .....	.50
8	20-14AQ	NOTE: If lugs should be broken in removing this part, it may be reassembled by using 20-1316 Screws and 20-1896 Nuts. See Key Nos. 39A and 67.	
9	20-15AQ	Guide Wire, long (Length 7 1/8")(8 Used) .....	.20 ea.
0	20-16AQ	Guide Wire, short (Length 5 3/4")(8 Used) .....	.20 ea.
1	20-17AQ	Extension Spring for Ejector .....	.35
1A	20-28T-1	Adjustment Nut .....	.10
2	20-19AQ	Ejector Cam .....	.10
3	20-21AQ	Switch Spring .....	.20
4	20-C22AQ	Thermostat Control Knob .....	.35

See schedule of parts for other voltage Toasters shown at end of list.

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# SUNBEAM APPLIANCE PARTS LIST

F-9

Key No.	Stock No.	Description of Part	Retail Price
24A	20-1896	Hexagon Nut for Control Knobs(2 Used)(P9560)...	.03ea.
24B	20-98V	Lock Washer for Control Knobs (2 Used).....	.04ea.
24C	20-20AQ	Spring Washer for Control Knobs (2 Used) .....	.04ea.
24D	20-C22AQ	Ejector Control Knob .....	.35
25	20-24AQ	Bus-Bar, 110 volts .....	.20
26	20-25AQ	Bus-Bar, 110 volts .....	.10
27	20-26AQ	Bus-Bar, all voltages (Connects rear and center element) .....	.10
28	*20-27AQ	Bus-Bar, 110 volts.....	.10
28A	20-56AV	Attachment Screw (4 Used).....	.04ea.
29	20-28AQ	Torsion Spring.....	.10
30	20-30AQ	Terminal Stud (2 Used).....	.20ea.
30A	20-31AQ	Mica Washer for Terminal Studs (4 Used) .....	.04ea.
30B	20-32AQ	Mica Washer for Terminal Studs (2 Used) .....	.04ea.
30C	20-26AR	Mica Insulator for Terminal Studs.....	.10
30D	20-1896	Hexagon Nut for Terminal Studs (4 Used)(P9560) .	.03ea.
30E	20-98P	Brass Terminal Washer (2 Used).....	.04ea.
32	20-45AQ	Adjusting Screw for Extension Spring. ....	.10
33	20-C54AQ	Switch Locking Lever Assembly.....	.45
33A	20-38AQ	Torsion Spring for Locking Lever.....	.10
34	-----	Switch Roller Bracket Assembly (not furnished separately - See Key No. 9).....	---
35	-----	Ejector Lever Assembly (Not furnished separately - See Key No. 9).....	---
36	-----	Switch Assembly (not furnished separately- See Key No. 10).....	---
36A	-----	Switch Arm (not furnished separately - See Key No. 10).....	---
36B	-----	Contact Point Assembly (not furnished separately - See Key No. 10).....	---
37	20-86AQ	Shoulder Stud (4 Used).....	.10ea.
38	-----	Cut Out Lever (not furnished separately - See Key No. 11).....	---
39	20-97AQ	Stationary Handle.....	.50
39A	20-1316	Screw for Stationary Handle (2 Used)(P9381).....	.04ea.
40	20-98AQ	Body, Center Section.....	4.45
41	20-2AR	Body Mounting Screw (8 Used).....	.10ea.
42	20-C4AR	Knob for Bottom Cover.....	.20
42A	20-3AR	Bottom Cover Spring.....	.10
43	20-6AR	Thermostat Stop.....	.10
43A	20-21V	Gulmite Screw for Thermostat Stop.....	.04
44	20-7AR	Shoulder Screw for Auxiliary Thermostat.....	.10

\*See schedule of parts for other voltage Toasters shown at end of list.

All prices subject to change without notice

## SUNBEAM APPLIANCE PARTS LIST

Key No.	Stock No.	Description of Part	Retail Price
	20-1318	Hexagon Nut for Shoulder Screw (P26) .....	.03
	20-8AR	Auxiliary Spring .....	.20
45	20-9AR	Auxiliary Thermostat Blade .....	.65
46	20-10AR	Main Thermostat Blade .....	1.10
47	20-11AR	Adjusting Spring for Thermostat .....	.20
48	20-12AR	Screw for Adjusting Thermostat Spring .....	.10
49	20-12AR	Screw for Adjusting Thermostat Spring .....	.10
49A	20-28T-1	Spanner Nut for Adjusting Screw .....	.10
51	20-19AR	Body, Rear Section .....	2.85
52	20-C20AR	Body, Front Section with Signal Disc .....	3.45
52A	20-79S	Glass Signal Disc .....	.20
54	20-25AR	Cord Clamp (2 Used) .....	.10 ea.
55	20-30AR	Allen Set Screw .....	.20
56	20-C34AR	Rack Assembly Complete with Cushioning Cylinder .....	1.95
56A	-----	Cushioning Cylinder (not furnished separately - See Key No. 56) .....	---
56B	-----	Upper Parallel Bar Assembly (not furnished separately - See key No. 56) .....	---
57	*20-35AR	Signal Element, 110-220 volts .....	.20
58	-----	Pawl Assembly (not furnished separately - See Key No. 1) .....	---
59	20-99AS	Element Insulator, upper (2 Used) .....	.10 ea.
	20-1AT	Cover for Thermostat Bracket .....	.10
60A	20-21V	Gulmite Screw (4 Used) .....	.04 ea.
61	20-92AU	Molded Terminal Insulator (2 Used) .....	.20 ea.
62	20-3AV	Asbestos Damper for Thermostat Spring .....	.04
63	20-G4AV	Piston Assembly for Cushioning Cylinder .....	.65
64	20-5AV	Shield for Auxiliary Thermostat .....	.20
65	20-14V	Element Insulator, lower (4 Used) .....	.10 ea.
66	20-1796	Cord Clamp Screw (2 Used)(P1466) .....	.04 ea.
67	20-1896	Nut for Cord Clamp Screw (2 Used)(P9560) ...	.03 ea.
68	20-1355	Split Washer for Piston (90P) .....	.04
69	20-1106	Signal Element Screw (2 Used)(P1724) .....	.02 ea.
70	20-P9342	Lock Washer for Signal Element Screw (2 Used)	.04 ea.
71	20-1896	Nut for Signal Element Screw (2 Used)(P9560)	.03 ea.
72	20-1360	Element Connection Screw (4 Used)(P9381)	.04 ea.
73	20-1360	Thermostat Heater Element Connection Screw (2 Used)(P9381) .....	.04 ea.
	20-78BA	Special Graphite Oil, 4 oz. can (not illustrated)	.65

\*See schedule of parts for other voltage Toasters shown at end of list.

All prices subject to change without notice

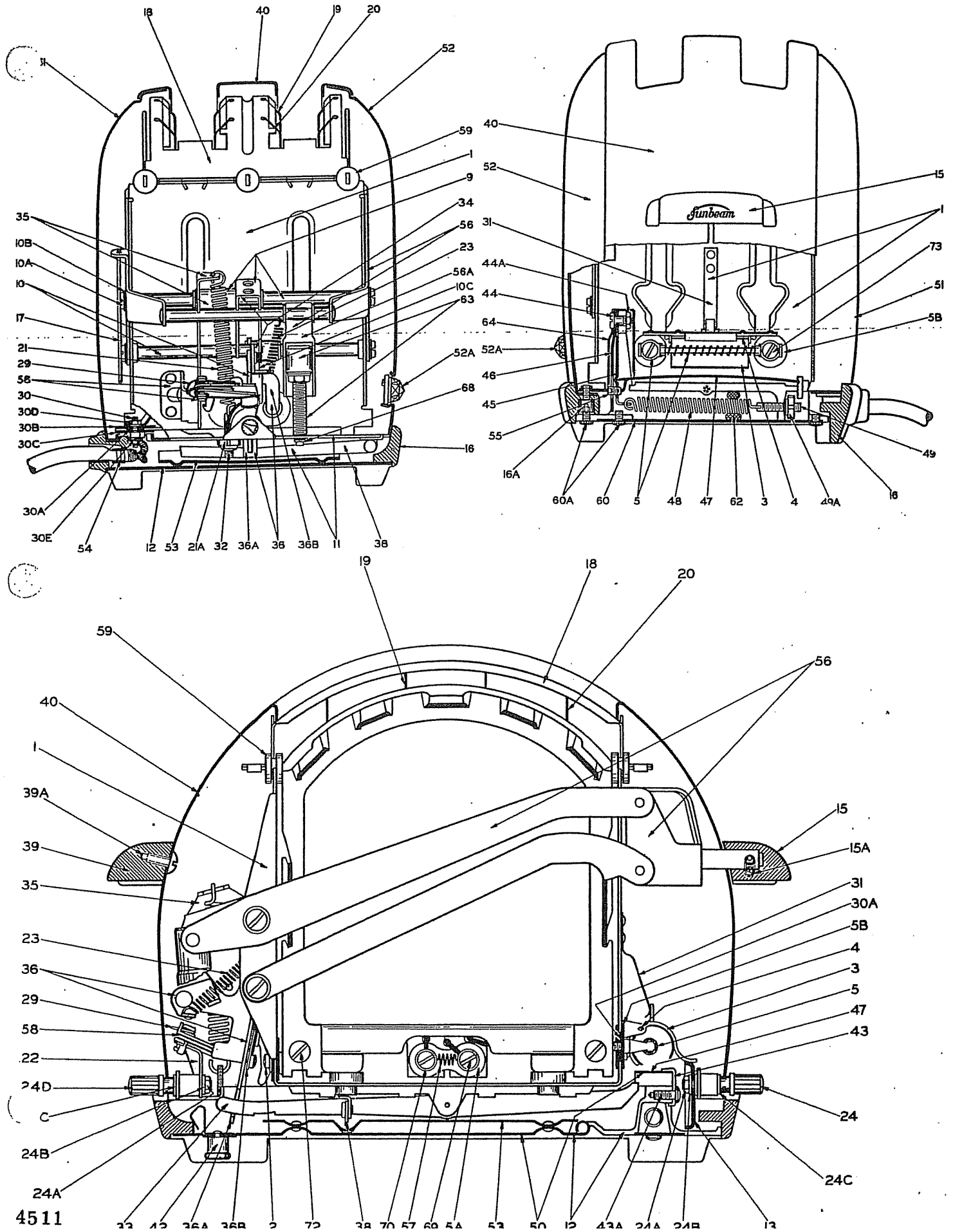


		<u>Description of Part</u>		<u>Retail Price</u>
<u>Key</u>	<u>No. Stock No.</u>	<u>PARTS FOR OTHER VOLTAGE TOASTERS</u>		
1	20-C80AT	Element Frame Complete, 220 volts and ..		
		230-250 volts .....		1.95
5	-----	Thermostat Heater Element		
		<u>220 Volts</u>	<u>230-250 Volts</u>	
		Grade 3 C83AT-3	Grade 3 C 89AV-3 ..	1.25
		Grade 4 C83AT-4	Grade 4 C 89AV-4 ..	1.25
		NOTE: See Note Key No. 5 Page F-7		
6	-----	Front Toasting Element Complete with		
		Signal Element		
		<u>220 Volts</u>	<u>230-250 Volts</u>	
		Grade 3 C87AT-3	Grade 3 C91AV-3	2.35
		Grade 4 C87AT-4	Grade 4 C91AV-4	2.35
		NOTE: See Note Key No. 5 Page F-7		
7	-----	Center Toasting Element Assembly		
		<u>220 Volts</u>	<u>230-250 Volts</u>	
		Grade 3 C89AT-3	Grade 3 C93AV-3	2.85
		Grade 4 C89AT-4	Grade 4 C93AV-4	2.85
		NOTE: See Note Key No. 5 Page F-7		
8	-----	Rear Toasting Element Assembly		
		<u>220 Volts</u>	<u>230-250 Volts</u>	
		Grade 3 C90AT-3	Grade 3 C94AV-3	2.20
		Grade 4 C90AT-4	Grade 4 C94AV-4	2.20
		NOTE: See Note Key No. 5 Page F-7		
12	20-C43AT	Bottom Cover and Thermostat Bracket,		
		220 Volts .....		1.70
12	20-C96AV	Bottom Cover and Thermostat Bracket,		
		230-250 Volts .....		1.70
28	20-81AT	Bus-Bar (not illustrated) for 220 and		
		230-250 volts .....		.10
	20-77AT	Bus-Bar (not illustrated) for 220 and		
		230-250 Volts .....		.10
	20-79AT	Bus-Bar (not illustrated) for 220 and		
		230-250 Volts .....		.10
	20-78AT	Bus-Bar (not illustrated) for 220 and		
		230-250 Volts .....		.10
57	20-C92AV	Signal Element, 230-250 Volts .....		.20

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**CAUTION:** Numbers shown are Diagram Numbers only. Order Parts by **STOCK NUMBER** shown on Parts List.



**PARTS DIAGRAM****Sunbeam Toaster****Model T9**