

Instructions for Servicing Vintage Sunbeam Mixmasters



Models 10, 11, and 12

Original Factory Service Manual & Parts Lists

Compiled by
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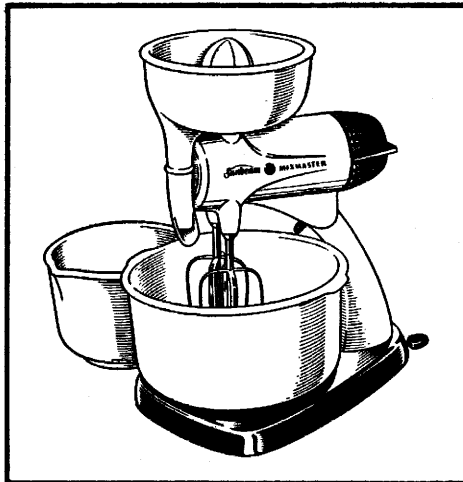
Sunbeam

Service Bulletin

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No. 41-8, July 29, 1950
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No. 59-17, February 5, 1951
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INSTRUCTIONS FOR SERVICING THE SUNBEAM MIXMASTER MODEL 10, 11 AND 12



GENERAL

The Model 12 Mixmaster although somewhat similar in construction to the Model 10 and 11 Mixmaster, has a redesigned Armature and Field Coil giving this model additional power. Within the motor the centrifugal governor is attached to the armature shaft and actuates the speed governing points by means of a movable shaft. A spring loaded thrust Bearing at the front of the Mixmaster eliminates armature end play by loading the armature against a powered iron washer at the rear.

A convenient bowl set knob at the rear of the base allows the motor to be shifted to either large or small bowl depending on the size of bowl being used.

One beater is shaped to fit closely to the side of the bowl whereas the other is square shaped. These large bowl fit beaters give greater aeration and a more thorough mixing action.

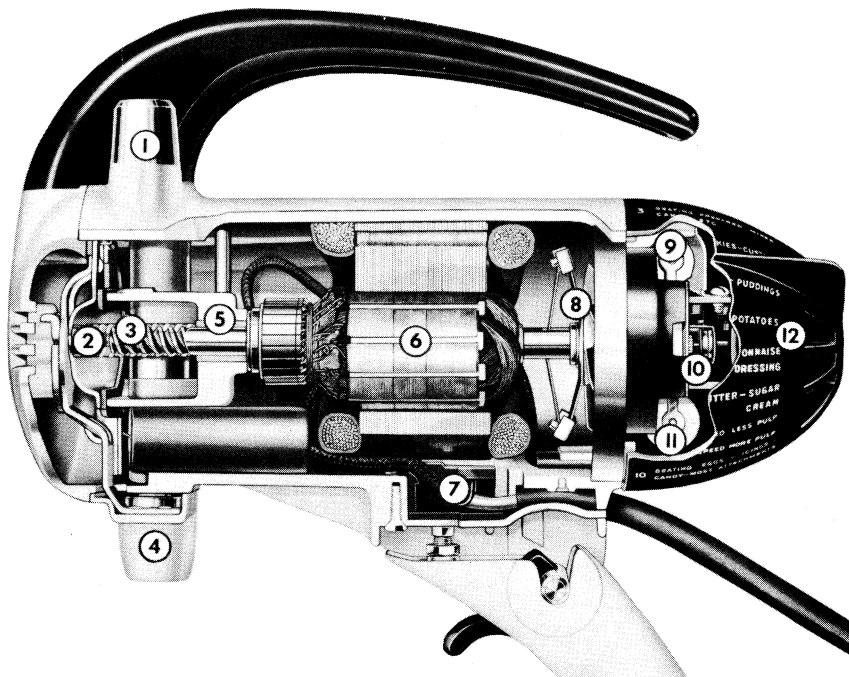
At the end of the Bulletin there is a complete list of all the parts with an exploded view showing the parts in their proper location. Tools necessary to make the repairs mentioned in this Bulletin are also shown.

OPERATING PRINCIPLES

Plug the cord into a wall receptacle. When you turn the Switch Dial, this will close Contacts "A" (Diagram 1) permitting the current to pass through the circuit, allowing Points "C" and "D" to make and break intermittently.

As the Switch Dial is turned to different speed settings, the Control Point "C" is moved in or out between the positions "High" and "Low". When the Motor increases in speed, the governor member causes the Pin "E" to move outward. This Pin "E" pushes the Control Spring with its Contact "D" outward breaking the current at a speed corresponding to the setting of Contact "C".

The Spindle Sleeves are rotated by the meshing of the Worm Gear on the Armature Shaft and the Gears on the Spindle Sleeve.



1-CONE FOR JUICER
2-ARMATURE SHAFT BEARING
3-WORM GEAR
4-BEATER EJECTOR
5-MOTOR BEARING
6-ARMATURE

7-JUNCTION BOX
8-GOVERNOR AND FAN ASSEMBLY
9-RESISTOR
10-SWITCH ASSEMBLY
11-CONDENSER
12-SWITCH DIAL

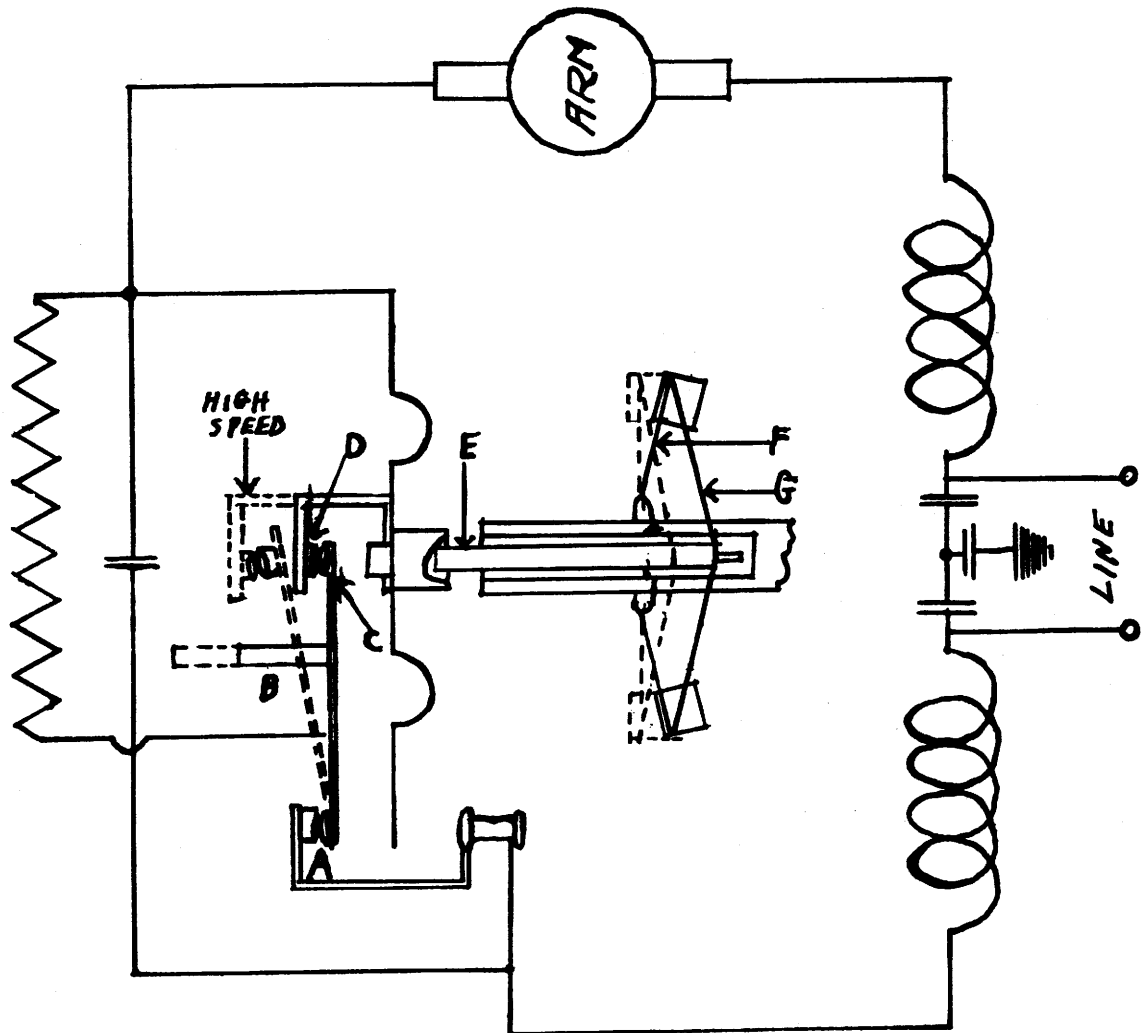


DIAGRAM 1

RULES OF GOOD REPAIR PRACTICES

The success of the repair depends upon the repairman's ability in following the rules of good repair practices. These rules can be summed up as follows:

1. Read the Service Bulletin thoroughly.
2. Know what you are looking for. Never guess. Always investigate the source of trouble. Ask, if you do not know.
3. Determine troubles by the process of elimination.
4. Every part, no matter how small, has a job to perform. Do not overlook the smallest detail.
5. Use the proper tool. Keep tools in efficient working order.
6. Carefully handle smooth, plated, or bakelite parts to prevent damaging or scratching.
7. Make the repair like you would want it, if you were the customer.

A. DISASSEMBLY

1. Remove Cap, Key No. (6), then remove Screw (7) with Spring (8) and Washer (9) separating Motor Cover (10) from the Motor Assembly. Remove Screws (12) with Washers (11) separating Handle (5) from Motor Cover. Then remove Spring (13) and slide off Ejector (85). Remove Screws (14), Spring (15) separating Gear Case Cover (16) and Cover Gasket (17) from Gear Case. When removing Gear Case Cover (16) be careful not to lose Bearing (15A).
2. Loosen Screws (18), slide out Spindles (88) and (58) with Flat Washers (91) freeing Gears (19). Remove Spring (20) and Catch Pin (21), also, Plug (23) and Oil Wick (22). Do not remove Key Nos. (20), (21), (22), (23), and (24) unless they need to be replaced.
3. Remove Cap (86), Spring (87), and Brush (89). Then remove Cap (52), Screw (51), Flat Washer (50), Spring Washer (49) separating Switch Dial (48) from Motor Housing. Slide out Push Pin (47) and remove Screw (44), Shield (43), Resistor (46) and Condenser (53). Also, remove Screws (45) separating Bracket (42) from Bearing Bracket (33).
4. Remove Screws (41) separating Field Leads from Switch Assembly (39). Remove Screws (40) separating Switch Assembly (39) from Bearing Bracket (33). Remove Screws (38). Bearing Bracket (33) and pull out

Armature (32). Whenever it is necessary to replace Packing (35), Thrust (36), and Thrust Cap (37), use a Wrench and turn the Thrust Cap (37) clockwise to remove because of left handed threads.

5. Remove Screw (61), Terminal Box Cover (60), Cover Insulation (59) then disconnect Cord, Condenser, and Field Coil Leads. Then slide out Motor Condenser (92) and separate Cord (56) from Motor Housing. Remove Insulation Box (57). Remove Clips (29) from Brush Holders (90), then use Field Coil Puller to remove Field Coil (30) from Motor Housing (26). Remove Screws (28) and pull out Brush Holders (90). Push out Hinge Pin (55).
6. Remove Screw (62) and Nut (63). Push out Pin (65) and remove Trigger (64). Remove Screws (76) with Washers (75) separating Brackets (74) and (77) from Base Assembly (69). Remove Nut (71), Washer (70), separating Upright (66) with Plate (67) and Screws (68) from Base Assembly. Then remove Screws (68) separating Plate (67) from Upright (66). Remove Base Pads (78), Bearing (80), and Knob (73). To remove Lever (72), drill out Rivet (79).

B. REASSEMBLY

1. Install Feet (78) onto Base (69). Push Knob (73) onto Lever (72), then fit Lever (72) in place and rivet to Base (69) with Rivet (79). Fit Brackets (74) and (77) in place and secure to Base with Washers (75) and Screws (76). Press Bearing (80) into center hole of Base. Fit Screw (62) with Nut (63) into Upright (66). Fit Trigger (64) in place and secure to Upright (66) with Pin (65). Fit Plate (67) into place and secure to Upright (66) with Screw (68). Secure Upright (66) with Plate (67) to Base (69) with Washer (70) and Nut (71).
2. Insert Brush Holders (90) into Motor Housing and secure with Screws (28). Press Field Coil (30) into Motor Housing and clip Brush Holder Clips (29) onto Brush Holders (90). Insert Armature (32) and fit Bearing Bracket (33) into place sliding Field Leads through Sleeve (54) inserted in hole provided in bottom of Bearing Bracket. Secure Bearing Bracket (33) to Motor Housing with Screws (38). Secure Switch Assembly (39) to Bearing Bracket with Screws (40). Connect Field Lead Terminals (31) to Switch Assembly with Screws (41).
3. Fit Bracket Assembly (42) in place and secure with Screws (45). Clip in Resistor (46) and Condenser (53). Also fasten Shield (43) to Bracket (42) with Screw (44). Insert Adjustment Pin (47) and secure Switch Dial (48) to Motor Housing with Spring Washer (49), Flat Washer (50), and Screw (51). Insert Cap (52) into Switch Dial.

4. Insert Block (57), Motor Condenser (92), and Cord (56) into place. Then connect and solder Condenser, Field Coil, and Cord Leads. Set Cover Insulation (59) and Cover (60) into place and secure with Screw (61). Push Pin (55) into Motor Housing. Attach Spring (87) to Brush (89) and secure into Brush Holder (90) with Cap (86).
5. Set Gear (19) into place and insert Sleeve (88) with Packing Washer (91). Now tighten Screw (18). Follow the same procedure for the other Gear and Sleeve (58) with Packing Washer (91). Pack Gear Case with grease, fit Gasket (17) and Gear Case Cover (16) into place and fasten to Housing with Screws (14).
6. Slide Ejector (85) into place and secure with Spring (13). Insert Bearing (15A) and Spring (15) into hole provided in Gear Case Cover. Secure Handle (5) to Cover (10) with Washers (11) and Screws (12). Fasten Motor Cover (10) with Handle (5) to Motor Housing with Washer (9), Spring (8), and Screw (7). Insert Cap (6) into place.

C. REPLACEMENT OF PARTS

1. Motor Handle

Remove Cap (6), Screw (7), Spring (8), Washer (9), separating Cover Assembly (10) from Motor Housing (26). Then remove Screw (12) with Washer (11) separating Handle (5) from Motor Cover. Reverse above procedure to reassemble.

2. Gears and Spindles

(a) After removing the Motor Cover, remove Spring (13) and slide off Ejector (85). Remove Spring (15), Screws (14) separating Gear Case Cover (16) and Gasket (17) from Motor Housing. When removing Gear Case Cover be careful not to lose Bearing (15A). Loosen Screws (18) with Tool No. 1, then slide out Spindle (58) and (88).

(b) If the Spindles are frozen, squirt penetrating oil between the Spindles and Bearing side of Motor Housing. Then drive out Spindles with a punch. Do not attempt to drive out Spindles without first loosening Screws (18). If Spindle (58) is frozen in Housing (26) loosen Screw (18) and drive spindle upward until Spindle Cap (23) is loosened enough to be removed. Then drive Spindle (58) downward out of the housing with a punch

(c) If the Spindles are frozen so that Set Screws (18) cannot be seen from the front of the Motor, then it may be necessary to force the Spindles and Gears around so that Screws can be loosened with Tool No. 1.
NOTE: A convenient tool for this purpose can be made by bending the lower half of an old beater to form a right angle. Insert the slotted end of the tool into the frozen Spindle and turn the Switch Dial to operate the Motor, then use the tool as a wrench and apply pressure

in an inward direction until Set Screws can be reached from the front of Motor Housing. DO NOT CONNECT THE MOTOR TO VOLTAGE HIGHER THAN SPECIFIED ON THE NAME PLATE TO LOOSEN FROZEN SPINDLE SLEEVES.

- (d) After removing Spindles use a straight adjustable reamer (Size 7/16" to 1/2") adjusted to size of the Spindle Holes in Motor Housing to clean out all rust, grit and grease. DO NOT ADJUST REAMER TO CUT INTO THE WALLS OF THE SPINDLE HOLES.
- (e) Clean out Gear Case and Spindle Holes with solvent. Inspect Gears for worn or broken teeth and remove scars or roughness of Spindles with fine emery cloth. If badly scared replace the Spindle.
- (f) If, due to wear, the Spindles do not fit snugly, replace them with the proper oversized Spindles. Do not install Spindles that fit too tightly, because they may seize in the Bearing later. In reassembling it may be necessary to enlarge the hole in hub of Gears when using over-size Spindles.
- (g) To reassemble, place a film of oil on the Spindles before inserting into Spindle Holes. While holding Gear in position, with Set Screw (18) facing front, turn Spindle (88) so that the depression in the Spindle is in line with Set Screw (18). When in this position, push Spindle up into Bearing and through Gear (19). Secure Gear to Spindle with Screw (18), use Tool No. 1. Because of the depression in the Spindle you can feel the Gear or Spindle move while tightening Screw (18). Follow the same procedure for the other Spindle and Gear. Be sure both Set Screws are exactly in front in order to have the Beaters properly lined up, so they do not hit each other while turning.

3. Greasing Worm Gears

- (a) Notice if there is sufficient lubricant in the Gear Case, also, determine if the lubricant has been thinned out due to over-oiling or carelessness in extracting fruit juices or in cleaning the Juicer Bowl. If water or other liquids have been allowed to overflow the Juice Extractor Bowl and get down into the Gear Compartment, all of the old lubricant should be cleaned out and the Gear Compartment repacked with Mixmaster Lubricant.
- (b) Put about one tablespoonful only of Special Mixmaster Lubricant in the Gear Compartment, placing it into the worm portion of the Armature and Gear Teeth as much as possible. This grease is used because it adheres properly to the surfaces that must be lubricated and does not thin out under high temperatures. If leakage takes place at the

Spindle Sleeve, it is due to using the wrong type of lubricant, or because of reasons given in preceding paragraph. To reassemble front end of Motor Housing reverse procedure in Sections C-1 and C-2.

4. Motor Brushes

- (a) Remove Brush Screws (86), Springs (87), and Brushes (89). If the Brushes stick in Brush Holders (90), squirt a little Carbon-Tetrachloride into Brush Holder. Turn Motor so that opening in Brush Holder will be downward. Tap lightly to force out Brush, or if you have an air hose force a little air into the Brush Holder. The Brushes should fall out.
- (b) Reverse above procedure to reassemble. The Armature (32) should be in place before inserting Brushes (89) with Spring (87). When installing the Brushes see that the curved end of the Brush conforms to the curved surface of the Commutator. (This is important because it minimizes sparking at the Commutator.) The Brushes should be free from oil and grease, and if they are worn short they should be replaced with new ones. The Springs (87) should have as good a tension as when new. If the tension is weak, the Spring should be replaced. After inserting Brushes and Springs; tighten Brush Cap (86) securely so the Screws will not loosen while the Motor is running.

5. Switch Dial

Remove Cap (52) with an Awl, Screw (51), Flat Washer (50), Spring Washer (49), separating Switch Dial (48) from Motor Housing. Reverse above procedure to reassemble, but first examine Switch Dial (48) for cracks or breaks. When reassembling, if the Switch Dial turns all the way around the "Stop" is broken off and Switch Dial should be replaced. Also, be sure Adjustable Cam Pin (47) is in place before Switch Dial is connected to the Motor Housing.

6. Adjustable Cam Push Pin

- (a) After removing Switch Dial as given above, remove Adjustable Cam Push Pin (47) from Bracket Assembly (42). Reverse procedure to reassemble, but first examine the Push Pin. This Assembly consists of two parts and can be made longer or shorter as needed to increase or decrease the speed of the Motor. If the two parts of the Push Pin Assembly fit together loosely the speed adjustment may change later while the Motor is in use. Be sure these parts are screwed together tightly so that they will not turn of their own accord and get out of adjustment. If the parts fit loosely, unscrew them and pinch the split portion with a pair of pliers and screw the parts together again.

- (b) If the Adjustable Cam Pin is not put in place before attaching Switch Dial, the Motor will run at high speed only regardless of dial setting because the tension on Spring "C" (Diagram 1) is released automatically closing Contacts "C" and "D" and allowing the current to pass through the Motor circuit.
- (c) **SPEED ADJUSTMENT:** The Motor can be made to run slower or faster by adjusting Cam Push Pin (47). With the Switch Dial (48), set at the No. 1 position, Cam Push Pin can be adjusted with an Allen Head Wrench, size 1/16", through the small opening near the center of the Switch Dial. To make this adjustment the Switch Dial must be set at the No. 1 position, because the opening in the Dial lines up with the Cam Push Pin only when the Dial is in that position. To increase the speed, turn the Allen Head Wrench clockwise. To decrease the speed, turn the Wrench counter-clockwise. The Spindles should revolve at about 230 to 260 R. P. M. when the Switch Dial is set at the No. 1 position. With the correct adjustment of the No. 1 position the Motor will turn the Spindles at the correct speed on the High position, which is approximately 710 to 865 R. P. M.

7. Resistor and Condenser

- (a) Remove Screw (44) and Shield (43), then remove Resistor (46) and Condenser (53) by springing open upper and lower end of Brackets with a pair of pliers. Reverse above procedure to reassemble.
- (b) The Resistor (46) and Condenser (53) can be tested by touching Test Leads to the Terminals on each end of the Resistor.
- (c) If the Resistor is good the Test Lamp will light. If the Resistor is open the Test Lamp will not light and the Resistor should be replaced even though the Motor runs. However, there will be excessive arching at Switch Points.
- (d) The Condenser (53) is tested in a similar manner, but the Test Lamp should not light. If the Lamp lights, Condenser is short circuited and should be replaced. A shorted Condenser will allow the current to go directly through the Motor circuit cutting the Switch out of the circuit and allowing the motor to operate continuously on high speed only. Under these conditions the Motor will run even with the Switch Dial (48) turned to the "OFF" position.

8. Switch Assembly

- (a) Remove Screws (45) separating Bracket (42) from Switch Assembly (39). Remove Screws (40) separating Switch Assembly (39) from Bearing Bracket (33).

- (b) Reverse above procedure to reassemble, but first inspect Contacts for pits and burrs. Use a Flexstone File to clean Contacts. Remove loose particles off Contacts.

9. Bearing Bracket

Remove Screws (38) separating Bearing Bracket (33) from Motor Housing (26). If Bearing (34), Felt (35), Thrust (36), and Thrust Cap (37) have to be replaced be sure to turn Thrust Cap counter-clockwise because of left handed threads. See Section C-11 before replacing Bearing (34). Reverse above procedure to reassemble the Bearing Bracket to Motor Housing.

10. Armature

- (a) After Bearing Bracket (33) has been removed, then pull Armature (32) from Motor Housing. Reverse above procedure to reassemble, but first examine the Armature to see that the Fan Blades are not damaged or bent, that the Pin "E" (Diagram 1) is not loose and Governor Arm "F" and Spring "G" (Diagram 1) are not bent or damaged. The Armature should be handled with care in order to protect the Governor Assembly. Clean Armature Shaft with fine emery cloth to assure smooth Bearing operation.
- (b) TEST ARMATURE: Check the Armature for grounds by touching one Test Lead to the Shaft and the other to the Commutator Bars, and if Test Lamp lights, a short is present between Commutator Bar and Shaft.
- (c) Examine Commutator Bars to see if there are burned marks along the edges of any of the Commutator Bars. Such marks indicate short circuited or open winding, also examine Commutator for grooves or scratches. If the grooves are too deep to be removed by turning down on a lathe, then Armature should be replaced.
- (d) Observe if any wires leading from winding to the Commutator are broken or damaged from rubbing on the Brush Leads. If any wires are broken, then replace Armature.

11. Motor Bearings

- (a) Thoroughly clean Bearing holes by wiping with a clean cloth. Flush out oil holes and Bearings (27) and (34) with kerosene fed from the spout of an oil can. Wipe until thoroughly dry. The same Bearing (27) or (34) is used for either front or rear Motor Bearing. The only difference in size takes place when the Bearing is burnished at the factory. The Rear Bearing is then made slightly larger than the front one.

- (b) The Bearings can be removed very easily by pushing out old Bearing and pressing in new one. Before replacing Bearing (34) in Bearing Bracket (33), remove Thrust (37) by turning clockwise because of left hand threads.
- (c) After pressing in new Bearings (27) and (34), fasten Bearing Bracket (33) to Motor Housing (26) with Screws (38). Do not insert Armature into the Motor Housing (26). Then insert Tool No. 2 through Bearing (34) in Bearing Bracket (33) and Bearing (27) in Motor Housing, turning Reamer slowly in a clockwise direction, applying a little pressure until it turns freely in both front and rear Bearings. When removing Reamer continue to turn clockwise while slowly pulling it from the Bearings. Blow or brush out any metal shavings that remain inside the Bearings.

12. Field Coil

- (a) Remove Clips (29) from Brush Holders (90). See Section C14a for removing Field Coil Leads. Then use Field Coil Puller and remove the Field Coil. To install Field Coil, press in with an Arbor Press or drive in with a punch. Do not remove the field coil unless it has been found to be defective.
- (b) To install a new coil, pass current (8 to 10 volts) through the coil for approximately 45 seconds. This current will heat the coil enough to soften the tape and make the coil more pliable for easy installation onto the laminations. Then fasten the coils to the laminations with the braid. Some coils are fastened to the laminations with a metal and fibre strip. When you run across one of these, use the metal and fibre strip if possible; otherwise, use the braid.

13. Brush Holders

After removing Field Coil (30) as above, remove Screws (28) and push out Brush Holders (90) separating them from Motor Housing (26). Reverse procedure to reassemble.

14. Cord Set and Condenser

- (a) Remove Screw (61), Cover (60), Cover Insulation (59), and pull out connections from Terminal Insulating Box (57). With a hot soldering iron and pliers, untwist the Terminal Leads and detach the cord. You will notice that each cord wire is connected to one each of the Field Coil Leads. Place Tester tip on one of the Cord connections and the other Tester tip on first one prong of the appliance plug and then the other. Through one of these wires the Test Lamp should light; if it does, then remove Test tips over to other connection in Terminal Box and to the other prong of the plug. A light should be obtained there also if the Cord is in good order. If either one of these wires is found open, cord should be replaced.

- (b) Before attaching a new Cord, the Condenser (92) of Models 10 and 11 should be tested and a new one fitted if necessary. The Test Lamp should not light when the Tester tips are touching any two of the three Condenser wires. This part practically never requires attention.
- (c) To remove Condenser (92), unsolder the Leads and push the Condenser through the opening at the front of the Motor, after first removing the Handle and Front Cover as directed in Section A-1. Insert new Condenser into from the front of the Motor and attach Lead wires to one each of the Field Coil Leads and Cord wires. Hook the ground wire (uninsulated) underneath the head of one of the Gear Case Cover Screws (14).
- (d) When attaching a new Cord (56) or replacing the Condenser (92) and Field Coil (30), the Lead wires need not be taped, but they should be folded carefully into the Insulation Box (57) so they do not touch the Motor Case. Replace Insulation (59), Terminal Cover (60), and Screw (61), and test the Motor for grounds by touching first one Terminal prong of the plug with one Test tip while the other tip is touching the Motor Case. Then move over to the other prong of the plug. The Lamp should not light; if it does, go back and check the wiring again.

15. Testing Motor

- (a) Insert the plug of the Cord of the Motor into a receptacle attached to a Test Lamp (50 watts). Turn the Switch Dial (48) to any position other than "OFF": if the Lamp lights to nearly normal brightness, it indicates that the electric circuit is complete and the Motor should run, otherwise the Bearings may be tight. See Section C-11.
- (b) If the Lamp does not light, the circuit is open and a complete test should be made of the electric Cord as explained in Section C-14.
- (c) If the Test Lamp is illuminated to approximately half its normal brightness, that indicates the Motor circuit proper is open and the current is flowing through the Resistor (46) only - proceed to take the Motor down and test the Armature (32) and Field Coils (30) for an open circuit, also inspect Brushes (89) and Spring (87). See tions C-4, C-7, C-10 and C-12.

16. Adjusting Motor Height

- (a) The Upright Adjustment Screw (62) is provided at the top of the Upright (66) to set the position of the Beaters permanently for the bowls, and to allow a free engagement of the Power Unit Attachment and other attachments, between the two holes in the Mixmaster Base and the Motor.
- (b) To adjust Screw (62), put the Motor on the stand and loosen Lock Nut (63), then turn Screw (62) up or down until the bottom of the Spindle Sleeves are 5-3/4" from the Base. When the Screw has been properly adjusted, lock it in place by tightening Nut (63). The outside Beater (83) with the nylon button must rest on the mixing bowl.

17. Replacing Armature Governor

To replace any part of the governor assembly first remove the control thrust rod by pulling it out from the end of the armature shaft. Then file or drill off the rivet heads at the ends of the governor arm, and remove rivets, counterweights, and the governor spring. When the armature counterweight is being removed, care should be taken not to distort the governor arm.

Replace governor spring by threading it through the slot in the side of the armature shaft, and hook the ends over the governor arm.

Place the new rivet into the hole at the top of T40435, and then place the armature into the tool with the holes of the governor arm and governor spring onto the rivet. Position a new counterweight onto the rivet making certain that all parts line up properly, hold counterweight down flat, and stake the rivet with a flat punch.

Place control thrust rod into the end of the armature shaft, and line up the flats of the rod parallel to the length of the governor spring. Then hold the armature in your hand and with the thumb and forefinger force upward on the ends of the governor assembly while forcing the rod through the governor spring.

The following parts will be needed for each repair:

- | | |
|---|----------------------------|
| 1 | 10-1019 Governor Spring |
| 2 | 10-1020 Counterweight |
| 2 | 10-1021 Rivet |
| 1 | 10-1022 Control Thrust Rod |

D. ADJUSTMENTS

1. Motor runs on High Speed only

(a) Governor Condenser (53) may be shorted. Replace Condenser as in Section C-7.

(b) Points on Switch Assembly (39) may be fused together. Replace Switch Assembly as in Section C-8.

2. Motor jerks when running

(a) Governor Condenser (53) shunted across Switch Assembly Contact Points is open. This is also accompanied by excessive sparking at the Contact Points. Replace Condenser as in Section C-7.

(b) Open circuit in Resistor (46). Replace Resistor as in Section C-7.

(c) Speed Control set too low. Adjust Cam Push Pin (47) as explained in Section C-6.

3. Fast Speed too slow

Speed Control set too slow. Adjust Cam Push Pin (47) as in Section C-6.

4. Motor does not run at all

(a) Switch Assembly (39) and Contacts "A", (Diagram 1), may be open. Repair as in Section C-8. Examine silver Contacts "A" and Spring that these Contacts are attached to. The Spring should be bent so the stop on Switch Dial (48) will make proper contact with the Spring.

(b) Motor Brushes (89) may need replacement. See Section C-4.

(c) Motor Bearings (27) and (34) may be frozen. See Section C-11.

(d) Spindle Sleeves (58) and (88) may be frozen in Gear Case Bearings. See Section C-2.

(e) Cord (56) may be broken. Test and repair Cord as in Section C-14.

(f) Field Coil may be open. See Section C-12.

(g) Armature may be shorted or defective. See Section C-10.

5. Shock from Motor Case

Ground, or short circuit, through insulation. See Section C-14-d.

6. Motor loss of power (Temperature rise excessive)
 - (a) Partially frozen Bearings. See Sections C-2 and C-11.
 - (b) Armature (32) may require replacement. Possibly Motor Brushes (89) are sparking badly. See Section C-4 and C 10.
 - (c) Field Coils (30) may be partially shorted. See Section C-12.
7. Motor runs but beaters do not turn

Worm Gears (19) may be stripped or loose from Gear Hub. See Sections C-2 and C-3.
8. Motor speed does not change when Switch Dial is moved from 1st to 3rd speed
 - (a) Cam Push Pin (47) may be adjusted too long. Adjust Push Pin as in Section C-6.
 - (b) Bend Armature Arm F (Diagram 1) slightly toward Commutator.
9. Motor speed does not change when Switch Dial is moved from 7th to 10th position
 - (a) Cam Push Pin (47) may be too short. Adjust Pin as in Section C-6.
 - (b) Motor may have too much friction in Bearings (27) and (34) and Spindle Sleeves (58) and (88). If speed is 800 R.P.M. or over, the foregoing is not the cause of difficulty. If speed is under 800 R.P.M., let the Motor run for one hour and check speeds.
 - (c) Motor may be cold. A cold Motor might not show speed variations at the high dial positions. Check speeds after Motor has run several minutes.
 - (d) Voltage may be low. At low voltages the maximum speed of the Motor is lower, consequently, no speed change can take place after maximum speed has been reached. If maximum speed is obtained with Switch Dial set at position 8, there will be no change from the 8th to 10th speed.
 - (e) Motor may be operating under heavy load. When Motor is doing heavy work, mixing heavy batters, etc., no speed change may take place when the Switch Dial is turned to the higher speed positions.
 - (f) Armature Arm "F" (Diagram 1) may be weak. Replace Armature.

10. Noisy Motor

- (a) Bearing (15A) may be worn or missing. Examine and replace as explained in Sections A1, B6 and C-2-a.
- (b) Rear Motor Bearing (34) may be oversize. See Section C-11.
- (c) Armature (32) may be off balance. Replace Armature. See Section C-10.
- (d) A metal chip or some other foreign material may have gotten into the teeth of Worm Gear (19). Examine Gears as in Section C-2 and remove chip or replace Worm Gears if worn or damaged.

11. If Spindle Sleeves have seized in Bearings

- (a) These parts may not have been oiled according to directions. See Section C-3.
- (b) There may be a burr in Spindle Sleeve Bearing hole. Smooth Bearing surfaces in Gear Case, or replace Gear Case, and replace seized Spindle Sleeve if necessary. See Section C-2.
- (c) Batter or other ingredients may have gotten into Spindle Sleeve Oil Retainer Cups and worked up into Sleeve Bearings. Remove Spindle Sleeves and clean out Bearings and Spindles as described in Section C-2.
- (d) The user may have allowed fruit juice, water or other liquids to get into the Gear Case through the hole in the center of the Juicer Bowl (and through Juicer Bowl cone on the front of the Motor) causing Sleeves to seize in Bearings. Clean Spindle Sleeves or replace, also clean and repack Worm Gear Compartment with new supply of special Mixmaster Lubricant. See Sections C-2 and C-3.

12. If leakage takes place at Spindle Sleeves

- (a) Too much oil has been placed into the oil holes, (see oiling of instructions) or liquids were allowed to overflow hole in center of Juice Extractor Bowl, or Motor has been repacked with the wrong type of grease. Clean and repack Worm Gear Compartment with new Mixmaster Lubricant. See Section C-3. Explain cause of leakage to the user when returning Motor.
- (b) Spindle Sleeves (58) and (88) may fit loosely in Gear Case. Remove

Sleeves and replace with oversized Sleeves as needed. See Section C-2.

13. Beater hitting Bowls

Beater (83) may be hitting bowl while Mixmaster is in operation. If this condition exists, adjust Lever Locking Brackets (74) and (77). In both cases the Lever Locking Bracket (74) and (77) will have to be moved slightly inward in order to stop the Lever before the Beaters get too close to the bowl. It is also possible that either bowl may be slightly out of round .

THE SPECIAL TOOL REFERRED TO IN THIS BULLETIN IS:
(See illustration of Tools on Page 18)

<u>REFERENCE NUMBER</u>	<u>TOOL NUMBER</u>	<u>DESCRIPTION</u>
Tool 1	T-16023	Wrench for Set Screw (P9922) Key No. 18
Tool 2	T-31315	Reamer for Bearings (6CD) Key Nos. 27 & 34
Tool 3	T-40435	Governor Tool

THE STANDARD TOOLS RECOMMENDED ARE:

Field Coil Puller - Model MO955 Pilot Bearing Puller, with MO955-14 Jaws

File Smooth Cut - Length 10"

Commutator Cutting Tool - Rite Commutator Tool Model B, with 3 collets .311, .312 and .342 for Sunbeam Mixmaster Armatures.

Cutting Pliers - Length 6"

Long Nose Pliers - Length 6"

Reamer Expanding Type - Size 7/16" to 1/2" for Spindle Hole

Drive Punch - Length 6", Diameter 5/16"

Wrench Open End - Size 7/16" for Nut (Key No. 71)

Point File for dressing Contact Points

Spatula or narrow Putty Knife

Leather Mallet

Hammer - Ball Pein - Weight 1/2 lb.

Yankee Ratchet Screwdriver No. 135A for 7/32" Shank

Quick Wedge Screwdriver - Length 6", Blade Width 5/16"

Screwdriver - Length 5", Blade Width 1/4"

Screwdriver - Length 5", Blade Width 3/16"

Wrench Allen Head - Size 1/16" for Cam Push Pin (Key No. 47)

Order the above locally or from:

**Chicago Supply and Tool Company
901 N. Western Ave.
Chicago, Illinois**

**Tool for measuring Mixmaster speeds: Model JPS Tachometer.
Speed Range 100 to 1200 R. P. M.**

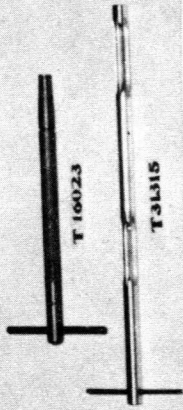
Order locally or from:

**Meters and Control Inc.
444 N. La Salle St.
Chicago 10, Illinois**

**SUNBEAM CORPORATION
5600 W. ROOSEVELT RD.
CHICAGO 50, ILLINOIS**

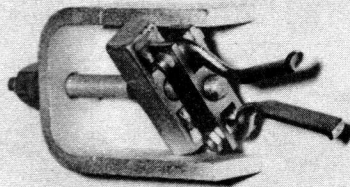
SPECIAL TOOLS

Purchase from Factory

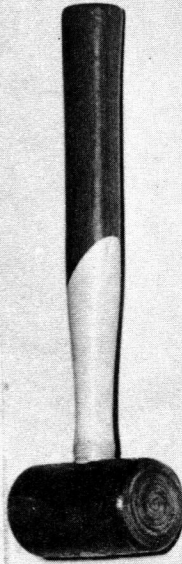


STANDARD TOOLS

Make or Purchase Locally



**FIELD COIL
PULLER**



LEATHER MALLET



HAMMER



FILE



PLIERS



PUNCH



FLEXSTONE



PLIERS



REAMER



WRENCH



SPATULA



YANKEE SCREWDRIVER



SCREWDRIVER



SCREWDRIVER



SCREWDRIVER



ALLEN WRENCH

SUNBEAM APPLIANCE PARTS LIST

10-27

January 1, 1968

Date of Manufacture
Model 10 - September 1950
Model 11 - February 1955
Model 11C - May 1955
Model 12 - October 1957
Model 12C - October 1957

SUNBEAM MIXMASTER MIXER

IMPORTANT NOTICE: Order parts by STOCK NUMBER in second column below.
That will help us supply the correct part and give you quick accurate service.



Key No.	Stock No.	Description	Models					Retail Price
1	10-1188	Reamer with Spindle	10	11	11C	12	12C	\$ 1.50
1	10-1189	Reamer less Spindle (Not Shown)	10	11	11C	12	12C	.45
2	10-1185	Strainer	10	11	11C	12	12C	1.20
3	10-15BS	Juice Bowl -(White).....	10					2.75
3	10-1184	Juicer Bowl (White) (Use plastic Spout)	10	11		12		3.40
3	10-5284	Juicer Bowl (Clear Glass).....			11C		12C	3.40
4	10-87BA	Spout - metal	10					1.00
4	10-1194	Spout - plastic		11		12		1.00
4	10-5346	Spout - plastic (Clear)			11C		12C	1.00
5	10-1123	Motor Handle	10					1.40
5	10-5148	Motor Handle		11	11C			1.05
5	10-7658	Motor Handle				12	12C	.08
6	10-1132	Front Motor Cap	10					.40
6	10-5147	Front Motor Cap		11				.50
6	10-6061	Front Motor Cap			11C			.20
6	10-7667	Front Motor Cap				12	12C	.13
7	10-1131	Motor Cover Screw	10	11	11C	12	12C	.13
8	10-1130	Cover Screw Spring	10	11	11C	12	12C	.06
9	10-1129	Cover Screw Washer	10	11	11C	12	12C	1.40
10	10-1036	Front Motor Cover	10					1.40
10	10-5151	Front Motor Cover (State Color Desired)		11				1.45
10	10-7688	Front Motor Cover (State Color Desired)				12		2.05
10	10-5764	Front Motor Cover			11C			2.20
10	10-7688B	Front Motor Cover					12C	.06 ea.
11	10-1125	Washer (2 Used)	10	11	11C	12	12C	.05 ea.
12	10-1126	Handle Screw (2 Used)	10	11	11C	12	12C	.13
13	10-1121	Ejector Spring	10	11	11C	12	12C	.05 ea.
14	10-19415	Cover Screw (4 Used).....	10	11	11C	12	12C	.06
15	10-1128	Armature Tension Spring	10	11	11C	12	12C	.10
15A	10-1127	Armature Tension Spring Bearing	10	11	11C	12	12C	.50
16	10-1027	Gear Case Cover	10	11	11C	12	12C	.10
17	10-1119	Cover Gasket	10	11	11C	12	12C	.15 ea.
18	10-1110	Set Screw (2 Used)	10	11	11C	12	12C	.70 ea.
19	10-1108	Worm Gear (2 Used)	10	11	11C	12	12C	.13
20	10-1043	Catch Pin Spring	10	11	11C	12	12C	.30
21	10-1042	Handle Catch Pin	10	11	11C	12	12C	.13
22	10-1238	Spindle Oil Wick	10	11	11C	12	12C	.13
23	10-1009	Spindle Hole Plug	10	11	11C	12	12C	.13
24	10-1010	Oil Tube	10	11	11C	12	12C	.06
25	10-1823	Transfer Label	10	11	11C	12	12C	9.55
26	10-2472	Motor Case and Bearing Assembly	10					
		Note: Motor Case includes Key Nos. 23, 24, 25, 27, 28, 33, 34, 38 & 90						
26	10-2472	Motor Case and Bearing Bracket Assembly		11				9.55
		Note: State Color Desired - Motor Case includes Key Nos. 23, 24, 25, 27, 28, 33, 34, 38 & 90.						
26	10-7825	Motor Case and Bearing Bracket Assembly				12		9.55
		Note: State Color Desired - Motor Case includes Key Nos. 23, 24, 25, 27, 28, 33, 34, 38 & 90.						
26	10-6173	Motor Case and Bearing Bracket Assembly (Chrome).			11C			16.50
		Note: Motor Case includes Key Nos. 23, 24, 25, 27, 28, 33, 34, 38 & 90.						
26	10-7826	Motor Case and Bearing Bracket Assembly (Chrome).				12C		16.50
		Note: Motor Case includes Key Nos. 23, 24, 25, 27, 28, 33, 34, 38 & 90.						

All prices subject to change without notice.

SUNBEAM APPLIANCE PARTS LIST

Key No.	Stock No.	Description	Models					Retail Price
27	10-1008	Front Armature Bearing	10	11	11C	12	12C	\$.10
		Note: Use Special Tool T-31315 Line Reamer						
		. 3424 - . 3427 Front Bearing Size						
		. 3444 - . 3447 Rear Bearing Size						
28	10-1007	Brush Holder Screw (2 Used)	10	11	11C	12	12C	.06 ea.
29	10-1587	Brush Holder Clips (2 Used)	10	11	11C	12	12C	.06 ea.
30	*10-7701	Field Assembly (110-120 Volts) (Inc. Key Nos. 29 thru 31)	10	11	11C	12	12C	5.45
30A	10-7703	Upper Field Coil (110-120 Volts)	10	11	11C	12	12C	1.25
30B	10-7702	Lower Field Coil (110-120 Volts)	10	11	11C	12	12C	1.60
30C	10-1214	Braid	10	11	11C	12	12C	.07
31	10-1207	Field Coil Terminal (2 Used)	10	11	11C	12	12C	.09 ea.
32	10-1012	Armature (85-130 Volts)	10					9.25
32	*10-7705	Armature (85-130 Volts)		11	11C	12	12C	9.25
33	10-1023	Rear Bearing Bracket Assembly & Bearing	10	11		12		1.15
33	10-5132	Rear Bearing Bracket Assembly & Bearing			11C		12C	1.40
34	10-1008	Rear Armature Bearing (See Note, Key No. 27)	10	11	11C	12	12C	.10
35	10-1055	Thrust Cap Packing	10	11	11C	12	12C	.09
36	10-1054	Thrust	10	11	11C	12	12C	.13
37	10-1056	Thrust Cap	10	11	11C	12	12C	.45
38	10-1026	Screw (2 Used)	10	11	11C	12	12C	.13 ea.
39	10-1057	Switch Assembly	10	11	11C	12	12C	2.50
39A	10-1073	Switch Bearing (nylon)	10	11	11C	12	12C	.10
40	10-1086	Switch Assembly (4 Used)	10	11	11C	12	12C	.06 ea.
41	10-1093	Field Coil Lead Screw (2 Used)	10	11	11C	12	12C	.05 ea.
42	10-1087	Bracket Assembly	10	11	11C	12	12C	.60
43	10-1098	Resistor Shield	10	11	11C	12	12C	.09
44	10-1099	Resistor Shield Screw	10	11	11C	12	12C	.05
45	10-19416	Bracket Assembly Screw (3 Used)	10	11	11C	12	12C	.05 ea.
46	*10-18390	Resistor (85-160 Volts)	10	11	11C	12	12C	.60
47	10-1100	Adjusting Cam Push Pin	10	11	11C	12	12C	.50
48	10-1103	Switch Dial	10	11	11C			1.20
48	10-7691	Dial Assembly				12	12C	1.20
49	10-1104	Spring Washer	10	11	11C	12	12C	.09
50	10-1105	Flat Washer	10	11	11C	12	12C	.13
51	10-1106	Switch Dial Fastening Screw	10	11	11C	12	12C	.03
52	10-5307	Rear Cap		11				.08
52	10-1133	Rear Cap	10		11C			.08
52	10-7667	Rear Cap				12	12C	.20
53	*10-2065	Governor Condenser (85-160 Volts)	10	11	11C	12	12C	1.05
54	10-1053	Sleeve for Field Coil Leads	10	11	11C	12	12C	.06
55	10-1107	Hinge Pin	10	11		12		.35
55	10-5767	Hinge Pin			11C		12C	.40
56	10-20742	Cord Set	10	11	11C	12	12C	1.40
57	10-1049	Insulation Box	10	11	11C	12	12C	.50
58	10-C62CJ	Spindle Sleeve (with oil grooves)	10					1.05
58	10-1111	Spindle Sleeve (less grooves)	10	11	11C	12	12C	.70
59	10-1051	Cover Insulation	10	11	11C	12	12C	.13
60	10-1585	Terminal Box Cover (110-120 Volts)	10					.10
60	10-5207	Terminal Box Cover (110-120 Volts) (State Color)		11				.10
60	10-7690	Terminal Box Cover (110-120 Volts) (State Color)				12		.10
60	*10-5766	Terminal Box Cover (110-120 Volts)			11C			.30
60	10-7689	Terminal Box Cover (110-120 Volts)					12C	.30
61	10-1052	Cover Screw	10	11	11C	12	12C	.06
62	10-1171	Adjusting Screw	10	11	11C	12	12C	.06
63	10-1170	Lock Nut	10	11	11C	12	12C	.06
64	10-1172	Trigger with Spring Assembled	10	11	11C	12	12C	.55
65	10-1176	Trigger Pin	10	11	11C	12	12C	.13
66	10-1154	Upright Only (State Color Desired)	10	11				2.60
66	10-7661	Upright Only (State Color Desired)				12		2.60
66	10-5141	Upright Only (Chrome)			11C			3.80
66	10-7661B	Upright Only (Chrome)					12C	3.80
67	10-1155	Upright Plate Assembly	10	11	11C			.60
68	10-1158	Upright Plate Screw (3 Used)	10	11	11C			.06 ea.
69	10-2314	Steel Base Assem. (Black) (Inc. Key Nos. 15-70A thru 80)	10					4.80
69	10-2477	Plastic Base Assem. (Black) (Inc. Key Nos. 78, 80 & 80A)	10	11	11C			4.80
69	10-18782	Plastic Base Assem. (Inc. Key Nos. 78, 80 & 80A)				12	12C	3.70
		(State Color Desired)						
69	10-2314	Steel Base Assembly (Inc. Key Nos. 70A, 72, 73, 78, 79, 79A & 80) (State Color Desired)		11				4.80

All prices subject to change without notice.

SUNBEAM APPLIANCE PARTS LIST

10-29

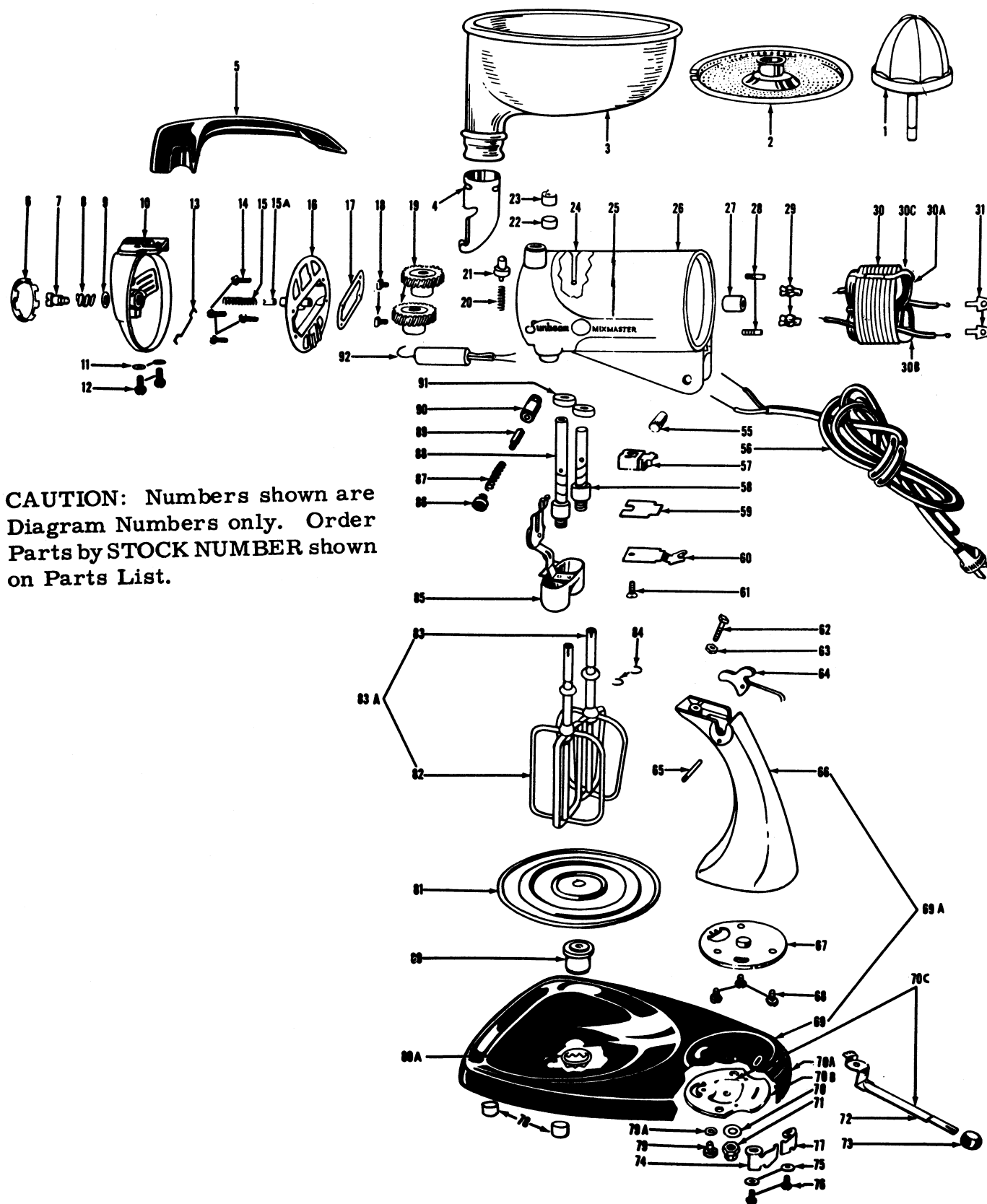
Key No.	Stock No.	Description	Models				Retail Price
69A	10-1144	Plastic Base with Upright Assembled (White) Inc. Key Nos. 62 through 80A.	10	11			\$ 8.15
69A	10-7693	Plastic Base with Upright Assembled (Inc. Key Nos. 62 through 80A.) (State color desired)			12		7.15
69A	10-2315	Steel Base with Upright Assembled (Inc. Key Nos. 62 through 80. Does not include Key Nos. 70B & 80A) (State color desired)	10	11			8.15
69A	10-5140	Plastic Base with Upright Assembled (Chrome)(Inc. Key Nos. 62 through 80A. Does not include Key No. 70A)			11C		9.30
69A	10-7693B	Plastic Base with Upright Assembled (Chrome)(Inc. Key Nos. 62 through 80A. Does not include Key No. 70A)				12C	7.55
70	10-1168	Fiber Washer	10	11	11C	12 12C	.06
70A	10-2308	Bezel - Use on 10-2314 Steel Base	10	11	11C		.35
70B	10-1163	Bottom Plate	10	11	11C	12 12C	.35
70C	10-1159	Bottom Plate and Lever Assembly (Inc. Key Nos. 70B, 72, 79 & 79A) Use with 10-2477 Base	10	11	11C		1.00
70C	10-7695	Bottom Plate and Lever Assembly (Inc. Key Nos. 70B, 72, 79 & 79A) Use with 10-18782 Base				12 12C	1.00
71	10-1169	Jam Nut	10	11	11C	12 12C	.10
72	10-1161	Lever - Use with 10-2477 Base	10	11	11C		.45
72	10-2307	Lever - Use with 10-2314 Base	10	11	11C		.45
72	10-7665	Lever				12 12C	.35
73	10-1164	Lever Knob	10	11	11C		.30
73	10-7664	Lever Knob				12 12C	.11
74	10-1166	Lever Lock Bracket - L. H.	10	11	11C	12 12C	.30
75	-----	Washer (2 Used) (Included with Key No. 76)	10	11	11C	12 12C	.05 ea.
76	10-1167	Screw (2 Used)	10	11	11C	12 12C	.07 ea.
77	10-1165	Lever Lock Bracket - R. H.	10	11	11C	12 12C	.30
78	10-1152	Base Pad (5 Used)	10	11	11C	12 12C	.09 ea.
79	10-1160	Lever Pivot Stud	10	11	11C	12 12C	.13
79A	10-1162	Washer	10	11	11C	12 12C	.05
80	10-1146	Disc Bearing - Use with 10-2477 Base	10	11	11C	12 12C	.70
80	10-2311	Disc Bearing - Use with 10-2314 Base	10	11	11C		.70
80A	10-1151	Self-locking Washer		11	11C	12 12C	.08
81	10-1959	Disc (State color desired)	10	11	11C	12 12C	1.15
82	10-1134	Beater (without button)	10	11	11C	12 12C	1.85
83	10-1141	Beater (with nylon button)	10	11	11C	12 12C	2.05
83A	10-2078	Beater Set (Inc. one each 10-1134 & 10-1141 Beaters)	10	11	11C	12 12C	3.60
84	10-1140	Clutch Spring (2 Used)	10	11	11C	12 12C	.02 ea.
85	10-1030	Ejector (State color desired)	10	11	11C	12 12C	.85
86	10-1047	Brush Screw (2 Used)	10	11	11C	12 12C	.30
87	10-1046	Brush Spring (2 Used)	10	11	11C	12 12C	.10
88	10-C63CJ	Juicer Spindle Sleeve (with oil holes)	10				.90
88	10-1116	Juicer Spindle Sleeve	10	11	11C	12 12C	.90
89	10-1045	Carbon Brush(2 Used)	10	11	11C	12 12C	.40 ea.
90	10-1582	Brush Holder	10	11	11C	12 12C	.85 ea.
91	10-1055	Packing Washer (2 Used)	10	11	11C	12 12C	.09 ea.
92	*10-1044	Motor Condenser for 85-160 Volts(for two wire cord)	10	11	11C		1.85
93	10-1183W	Bowl Small (white)	10	11		12	2.10
93	10-1183	Bowl Small (State color desired)	10	11		12	2.60
93	10-5283	Bowl Small (clear glassbake)			11C	12C	2.30
94	10-1182W	Bowl Large (white) (19CJ)	10	11			3.40
94	10-1182	Bowl Large (State color desired)	10	11			3.40
94	10-5282	Bowl Large (clear glassbake)			11C	12C	2.90
95	10-2474	Mixmaster Lubricant (2 oz. tube)	10	11	11C	12 12C	.60
95	10-4887	Mixmaster Lubricant (1 lb. jar)	10		11C	12C	1.65
96	10-2476	Touchup Paint (white)	10	11		12	3.50
*PARTS FOR OTHER VOLTAGE MISMASTERS							
30	10-18125	Field Coil Assembly (220-250 Volts)				12 12C	6.40
30	10-18126	Field Coil Assembly (190-210 Volts)				12 12C	6.40
30	10-5245	Field Coil Assembly (210-250 Volts)	10	11	11C		6.40
30	10-18127	Field Coil Assembly (190-210 Volts)	10	11	11C		6.40
32	10-5293	Armature (190-250 Volts)	10	11	11C		11.00
32	10-18545	Armature (190-250 Volts)				12 12C	10.20
46	10-4103	Resistor (190-250 Volts)	10	11	11C	12 12C	1.25
53	10-2066	Governor Condenser (190-250 Volts)	10	11	11C	12 12C	1.05
60	10-6214	Terminal Box Cover (220 Volts)		11			.10
60	10-6213	Terminal Box Cover (230-250 Volts)		11			.10
60	10-18562	Terminal Box Cover (210-250 Volts) (state color)				12	.10
60	10-18561	Terminal Box Cover (210-250 Volts)				12C	.30
92	10-4101	Motor Condenser (190-250 Volts)(for 2 wire cord)	10	11	11C		1.85

All prices subject to change without notice.

SUNBEAM APPLIANCE SERVICE COMPANY
5430 W. ROOSEVELT ROAD
CHICAGO, ILLINOIS 60650

1042

PARTS DIAGRAM
Sunbeam Mixmaster Mixer
 Models 10, 11, 11C, 12 and 12C



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

