

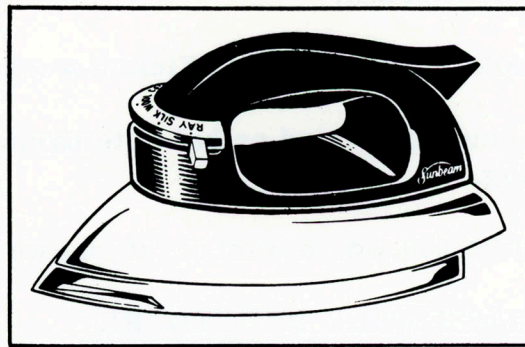
Sunbeam

Service Bulletin

Supersedes Service Bulletin
No. 175-29, February 18, 1957

No. 185-31 IRONMASTER
September 16, 1957

INSTRUCTIONS FOR SERVICING THE SUNBEAM IRONMASTER - MODELS A-11 AND A-12



GENERAL

The Models A-11 and A-12 Sunbeam Ironmaster are 1250 watt appliances with tubular type heating elements cast into aluminum soleplates. They are intended for use on Alternating Current only.

The only difference between these two models is the weight. The Model A-11 weighs only two pounds for easy handling. The Model A-12 has a weight riveted to the underside of the soleplate cover bringing the total weight to 3-3/4 pounds for those who like the feel of a heavier iron.

Both models have a horizontal finger-tip heat regulator knob which can be set at the proper temperature for ironing any type of fabric. The fast heating soleplate contains button nooks on both sides for ease in ironing around and under buttons.

OPERATING PRINCIPLES

Both models are thermostatically controlled. The heat regulator knob is attached to a circular cam which transmits the position of the knob into an up or down movement of a cam follower shaft. The lower end of the shaft in turn positions the silver contact points in relation to the thermostat blade, thereby controlling the heat setting. The thermostat blade reacts to the temperature of the soleplate thus opening and closing the contact points to maintain the proper soleplate temperature. Regardless of the heat control setting, the iron consumes its full wattage at all times when the contact points are closed.

RULES OF GOOD REPAIR PRACTICE

The success of the repair depends upon the Repairman's ability in following 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 PROCEDURE

The following section outlines the disassembly and reassembly procedure step by step.

1. Unscrew Name Plate Screw (24) and remove Name Plate Cover (23). Unscrew two Screws (12). Tap front end of Handle (4) to disengage it from Shell (14). Tip Handle back until Terminal Screws (20) are exposed. Unscrew Terminal Screws.
2. To replace Handle (4) unscrew Screw (12) and remove Handle Bracket Assembly (11). Unscrew Control Cam Screw (10) and remove Spring Washer (9), Control Cam (8) and Control Cam Lever (6) with Control Knob (7) attached. The control knob is simply pressed on to the control cam lever and may be pulled off with pliers if necessary. Using slip joint pliers press top and bottom sections of Strain Relief (3) together so that it can be slipped out from hole in handle. Then remove Cord (1) and Cord Spring (2). Handle can now be replaced and reassembled by reversing above procedure.
3. Temperature Dial Plate (5) can be replaced if necessary. Peel off the old plate. Wash the handle surface with alcohol. Peel off the paper backing from the dial plate. Wipe the adhesive side of the plate with trichlorethylene or carbon tetrachloride until the ad-

hesive becomes tacky. Carefully assemble the plate to the handle making sure it is properly positioned. Apply pressure over the entire surface to insure good adhesion.

4. To replace Soleplate (22), first remove Shell (14) by unscrewing and removing two Screw (13). Remove Control Rod (15) with Control Rod End (16) attached. Unscrew two Terminal Screws (20). Snip off flattened end of Pin (18) and remove Pin and Switch Lever Assembly (17). Unscrew two Switch Screws (19) and remove the Switch Assembly (21). Switch or soleplate can now be replaced.
5. The Bus Bars (22A) and (22B) can be replaced at this point if necessary. A replacement bus bar can be attached to the heating element terminals using silver solder.

CAUTION: When silver soldering the bus bar to the heating element terminal, use only a small amount of flux. Excess flux may collect at the base of the heating element and contaminate the heating element insulating material. This could cause a high leakage current.

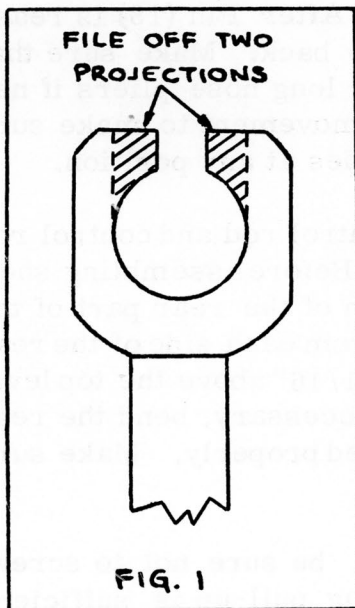
6. Reverse above procedure to reassemble. After Pin (18) is reassembled, flatten end so that it cannot slip back. Make sure that switch lever arm is straight. Adjust with long nose pliers if necessary. Check the lever arm for free movement to make sure that it does not stick between the frame sides at any position.
7. Adjust the combined overall length of the control rod and control rod end to 1-15/16" measured from tip to tip. Before assembling shell and handle to soleplate, check the position of the rear part of the switch. The two terminal lugs projecting from each side of the rear part of the switch should be approximately 1/16" above the top level of the rear projection on the soleplate. If necessary, bend the rear part of the switch up or down until positioned properly. Make sure that the switch lever is straight.
8. When assembling the shell to the soleplate, be sure not to screw the two Screws (13) down too tight. A snug pull-up is sufficient since the shell may be collapsed under too much pressure.
9. After mounting the shell on the soleplate, check for sufficient clearance between the shell and switch terminal arms. If terminal arms are bent, straighten so that they are in the middle of the opening in the shell.

10. When the Iron is completely reassembled, check to make sure that the control rod moves up and down freely when the control knob is rotated. This movement can be observed through the opening between the handle and shell.

B. HEAT TEST

1. Place Iron on test stand (Tool No. 2 - see tool list at end of bulletin) and plug test stand prongs into combination testmeter (Tool No. 1). Plug the Iron into testmeter and connect testmeter to 110-120 Volt AC source. Set control knob on "linen" position and allow Iron to heat up. If adjustments in Section A7 have been accurately made, the final temperature test should show a maximum cycle point between 500° and 525° after several cycles with the control knob set at "Linen". The maximum cycle point referred to here is the point at which the temperature indicating needle has reached its maximum upward travel, including overshoot after the contact points have opened.

If average temperature is above or below these limits, readjust by inserting a slotted bar through opening between handle and shell to engage the flat portion of the control rod. Turn the slotted bar clockwise to reduce the temperature or counterclockwise to increase the temperature.



A tool for this purpose can easily be made from Part No. 18-6110 Cam Follower (used on the Model S4A Iron). The hooked end of this part can be filed as shown in Figure 1 so that it will engage the flat portion of the control rod.

After the Iron has been heat tested, allow it to cool to room temperature. Then check to make sure that the Iron is off at the "off" position. The "on" point should fall approximately halfway between "off" and "rayon" but will vary with room temperature.

C. ADJUSTMENTS

1. Iron does not heat

- (a) If the Iron does not heat, check for a blown fuse or defective wall receptacle. If these are found to be in good condition, check for defects in the cord, cord plug, terminals or soleplate element. Replace defective part using Section A as a guide for disassembly and assembly. A check for shorts and element continuity should be made using the test lamp prongs.
- (b) Control Rod (15) may not be riding on cam surface. If control rod is bent or Handle Bracket (11) is bent forward, the control rod may slide off the cam surface and lodge in the upper surface of the control cam. Straighten or replace the bent or damaged part.

2. Iron does not maintain steady heat

- (a) If Screws (19) are loose, proper conduction of heat from the soleplate to the thermostat will not be obtained. Check and tighten if necessary.
- (b) The cord may be loose at the cord plug or terminals. Check the Terminal Screws (20) for tightness. Also check cord plug prongs. It may be necessary to bend the prongs to make them fit tightly into the wall socket.
- (c) Control Rod (15) may not move freely. Check for bent control rod and replace if necessary. See Section A.
- (d) Contact points may be dirty or pitted. Check and dress points with distributor point file if necessary.
- (e) Excessive downward pressure or a heavy blow on the handle may cause small dents at the points where the handle hooks attach to the shell. The handle will then be loosened and the heat setting will become unstable. Check and replace shell if necessary.

3. Iron Overheats

- (a) The contact points may be stuck or welded together from being used on direct current.
- (b) The heat control may be out of adjustment. See Section B for re-adjusting heat setting.
- (c) Switch Assembly (21) may be defective. Check and replace if necessary.

4. Customer reports electrical shock

- (a) Check circuit for electrical grounds at the bus bars, switch terminal arms or the heating element terminal ends.

THE SPECIAL TOOLS REFERRED TO IN THIS BULLETIN ARE:

<u>REFERENCE NUMBER</u>	<u>TOOL NUMBER</u>	<u>DESCRIPTION</u>
Tool No. 1	T-35219	Combination Testmeter
Tool No. 2	T-35221	Ironmaster Test Stand

THE STANDARD TOOLS RECOMMENDED ARE:

Spintite Wrench - 1/4" Hex Socket
Screwdriver - Blade Length 3", Blade width 3/16"
Long Nose Pliers - Length 6"
Quickwedge Screwdriver - Length 6", Blade width 5/16"
Cutting Pliers - Length 6"
Yankee Ratchet Screwdriver - No. 135A for 7/32" Shank
Smooth Cut File - Length 6"
Rawhide Mallet
Felt Pad - to be used on work bench for Soleplate protection

Order Special Tools from the factory. Standard Tools may be purchased locally or ordered from:

Chicago Supply and Tool Co.
901 N. Western Ave.
Chicago, Illinois

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

Supersedes Service Bulletins

266-36 Oct., 1962

278-38 July, 1963

293-41 Jan., 1964

No. 356-45 Irons
September 26, 1969

*INSTRUCTIONS FOR SERVICING THE
SUNBEAM SPRAY-STEAM OR DRY IRONS*



GENERAL

Sunbeam Spray-Steam, Shot of Steam, or Dry Irons, are 1200 watt appliances, weighing approximately 3 1/2 lbs. The high wattage tubular-type heating element is molded into the aluminum sole plate for fast, even heating. A mechanical pump provides the fine, cold spray for extra dampening effect.

On Service No. SD-S, this pump provides a "Shot of Steam" through the sole plate. The water tank holds approximately eight ounces of liquid. On some models, this tank is equipped with a level gauge.

OPERATING PRINCIPLES

Plug the cord into a 110-120 Volt, AC electrical source. Turn the heat regulator knob to the desired position. The heat regulator knob is attached to a cam mechanism which locates the silver contact points relative to the thermostat blade, thereby controlling the heat setting. The thermostat blade reacts to the temperature of the sole plate to open and close the contact points and maintain correct ironing temperature. Regardless of the heat control setting, the iron consumes its full wattage until the thermostat automatically opens the contact points, shutting off the current.

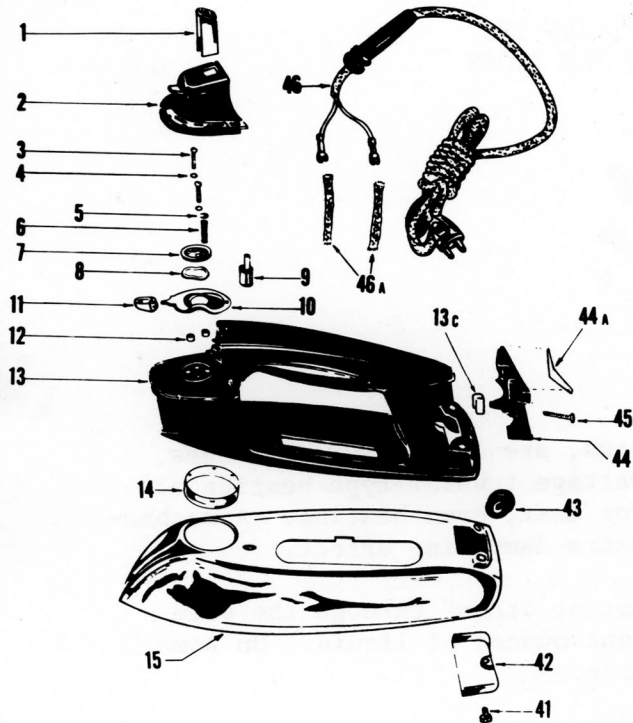
To use the pump assembly for most spray irons, set the regulator knob to any position on the dial and depress the spray button. The spray button is connected to a mechanical pump which will force the water upward from the water tank and out through the nozzle opening as a fine, cold spray.

For the "shot of steam" (on Service No. SD-S), set the regulator knob in "Steam to Linen" position (Red area) on temperature dial and depress the spray button. This action will direct the spray through the vents of the sole plate for the "shot of steam" effect.

For regular steam ironing, set the heat regulator knob to "Steam" position and push the steam button "on". The steam lever raises a valve in the water tank which allows the water to flow into the steam chamber where it vaporizes and comes out through the steam holes in the sole plate. To stop the flow of steam, return the lever to the "Dry" position.

DISCONNECT CORD BEFORE SERVICING

ASSEMBLY AND DISASSEMBLY



1. CORD Take out the Rear Plate or Heel Rest Screw (45); remove the Rear Plate or Heel Rest and Circular Cap (43) and peel off Decal (44A) The Cord (46) can now be removed by pulling the solderless connectors off the Switch Terminals. Reverse procedure to reassemble.

NOTE: When installing the cord, be sure the indicating rib on the end of the Strain Relief is up. The circular cap should be inserted with the flat surface up.

2. HANDLE AND SHELL ASSEMBLY - Use a 1/16" Allen Wrench (See Tool Listing) to tap the drive pin through the Cap River (9). Remove the cap rivet by prying upward with a thin blade. Set the Adjusting Knob (11) to the "Off" position and slide the Steam Lever Assembly (2) forward until it is clear of the control rods. Use a thin bladed knife or screwdriver to peel the Temperature Decal (2A) off. Insert a 5/16" Spintite wrench

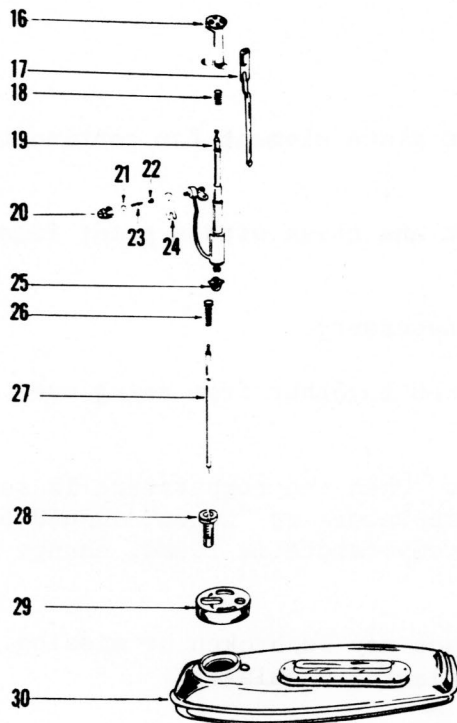
through the filler opening and remove Spray Nozzle (20) from Nozzle Assembly (19).

The Spray Plug (21), Valve Spring (23) and Check Valve (22) can now be removed. Pull the Spring Retainer (5) off the spray rod, releasing the Piston Spring (6). Take out the two Cam Retainer Screws (3) and remove the Cam Retainer (7), Spring Washer (8) and Temperature Cam (10). The Adjusting Knob (11) is pressed onto the temperature cam and can be pulled off with a pair of pliers. Push the nozzle assembly backward slightly until it is clear of the handle. Remove the Handle Screws (32). Remove the Handle (13) by lifting straight up until free of the spray and steam control rods. Remove Ring (14) from the water tank gasket and lift off the Shell (15). Reverse the above procedure to assemble.

ASSEMBLY NOTE: Before tightening the handle screws, check the location to be sure the groove on the underside of the handle is properly seated on the shell ring. Always tighten the two screws at the rear of the handle before tightening the two retaining screws at the front.

Replace washers (4), as old washers may be deformed which will cause leaking. Tighten screws (3), gradually applying a few turns to one and then the other, so the tension on both screws will remain the same until both screws are secured. Set the spray nozzle so that the spray strikes the board approximately 1-1/2" in front of the toe of the iron sole plate. Set the Check Valve (22) and spring (23) into the nozzle assembly and place the spray plug (21) into the spring before assembling the spray nozzle (20).

3. STAINLESS STEEL TANK, VALVES AND PUMP ASSEMBLY



Remove Clamp (16) from the tank assembly by squeezing the two clamp arms together until the projections are free. Lift off the Valve Stem Assembly (27) and Spring (26). Remove the complete Pump Assembly (19) and Gasket (29). Insert a large screwdriver into the Valve (28) and remove by turning counter-clockwise. Slide the stainless steel tank forward until it is free of the rear bracket. Reverse the above to assemble.

ASSEMBLY NOTICE: Be sure the flange at the rear of the tank is inserted into the slots on the mounting bracket. Check tank gasket (29) to be sure it is completely seated between tank and shell ring with the web side up. The indicating notch on Shell Ring (14) must be up and toward the rear of the iron. The clamp (16) is installed with the triangle facing toward the rear of the iron; the pump arm extends through the rear hole (hole nearest the point of triangle) of the clamp. **NOTE:** SERVICE NO. SD-S USES A SPACER GASKET BETWEEN THE TANK (30) AND THE STEAM CHEST COVER ASSEMBLY.

Remove switch (38) by taking out the two screws (39) and clipping the bus bars about 1/2" from the point where they are welded to the element. The steam chest cover (31A) can be removed from the sole plate (31) by taking out the screws (35). Reverse the procedure to assemble.

NOTE: WHEN REPLACING SWITCH, SILVER SOLDER THE BUS BARS TO THE ELEMENT ASSEMBLY.

COLD SETTING

The cold setting is made with the iron completely assembled, except for the plastic drive pin in the cap rivet. Be sure the iron is at room temperature when performing the cold setting.

Plug the cord into a test lamp circuit and move the temperature knob to the "T" in the "Steam" setting. Insert a 1/16" hex head Allen wrench through the hole in the cap rivet into adjusting nut follower. Turn the wrench clockwise or counter-clockwise until the light just comes on at a point 1/4" from the "Off" position.

HEAT SETTING

Rotate the temperature knob to the "T" in "Steam" position. Plug the cord into a Combination Test Meter, Tool #1, and place the iron on a Thermocouple Test Stand, Tool #2. Allow the iron to heat through three cycles and then record the temperature where the iron cuts in and cuts off.

The average of the "on" and "off" temperatures should be between 325° and 350°. If the average temperature is not within the specific limits, make the necessary adjustment by turning the adjusting nut with an Allen wrench. Clockwise lowers the temperature, and counter-clockwise raises the temperature. After the iron has cooled to room temperature, check to be sure there is an "off" position.

TROUBLE SHOOTING

1. IRON DOES NOT HEAT

- a. Check the cord, cord plug, terminals and sole plate element for continuity. Replace if no continuity is shown.
- b. Contact points may be dirty or pitted. Check and clean with a point file.

2. IRON OVERHEATS

- a. Check the temperature setting. Readjust if necessary.
- b. The switch contact points may be stuck or fused together from being used on direct current.
- c. Thermoblade may not be functioning correctly. When the temperature is set correctly on "Steam" setting, the average temperature on "Linen" should be between 475° and 500°. If a higher "Linen" temperature is found, change the switch assembly.
- d. The porcelain insulator on the thermostat blade may be broken or missing. Use a good grade of porcelain cement when replacing insulator.
- e. Check switch for short and replace if necessary.

3. IRON LEAKS WATER AROUND THE SHELL

- a. Check and replace the Gaskets (4) used to seal the Cam Retainer Screws (3).
- b. Check and tighten the Steam Chest Cover Screws (33 & 35). Slight leaks around the cover may be patched with silicone rubber (RTV112) or equivalent.
- c. Check the stainless steel water tank for leaks, especially around the seams. Replace if leaking.
- d. Check gasket (29) for misalignment or wear.

4. IRON STEAMS WHEN LEVER IS "OFF"

- a. Check the pin on the bottom of the valve body and the valve spring. If the pin is bent or damaged, or if the spring is weak, the valve body will not seat properly into the valve allowing water to pass, even though the steam lever is set to "Off".
- b. Check the valve assembly for binding in the handle or washer.

5. IRON WON'T STEAM

- a. The steam chamber or valve may be clogged with water deposits. To remove the deposits, fill the tank with distilled white vinegar, set the temperature control knob on "2" of "Wash and Wear" and plug the cord into 110-120V, AC electrical source. Put the steam lever in the "Steam" position and allow the vinegar to pass through the partially heated steam changer. One tankful of vinegar is generally sufficient to clean out the water deposits which clog the steam flow.

6. IRON SPITS WATER

- a. Check and reset the heat adjustment if necessary. If the temperature is not within the specific limits of 325° and 350°, excessive water will be obtained with the steam.
- b. Check the steam chamber for tap water deposits. If the customer has not used distilled water a calcium deposit will coat and insulate the steam chamber from the heat. Eliminate the deposits by running vinegar through the steam chamber. SEE INSTRUCTIONS IN SECTION #5.
- c. Check and replace the valve if the pin hole in the bottom is oversized or corroded.

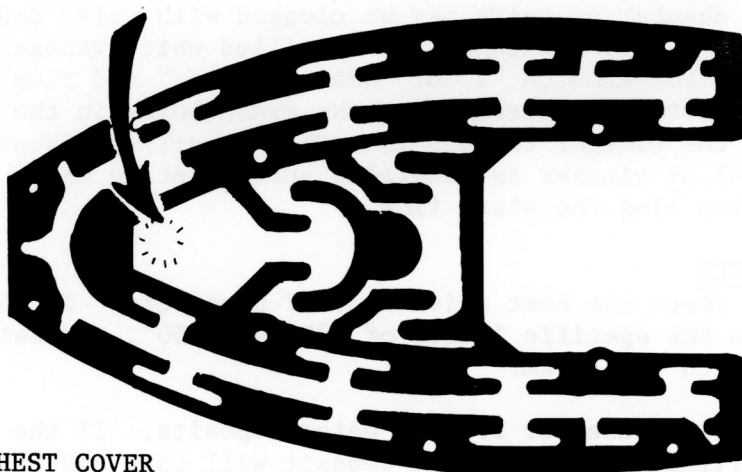
7. SPRAYS INTERMITTENTLY, SPUTTERS AND SPITS, DOES NOT SPRAY

- a. Check the pump inlet at the water tank for a restriction; replace if plunger is worn or ripped.
- b. Inspect the check valve (27A) and check valve spring (27B) to be sure it is clean and free of dirt or chips.
- c. Check the nozzle and tube assembly (24) for a restriction. If tap water has been used the small jets in the nozzle will become clogged.
- d. Shake the iron to be sure the ball-type check valve is free in the pump assembly. This valve can be "freed up" by tapping the sole plate under the steam chamber.

STEAM CHEST COVER

All tools, test equipment and repair procedures outlined in Service Bulletin #278-38, may be applied to these irons with the following information supplementing the instructions contained in this bulletin. On steam irons the steam chest cover is sealed at the factory with silicone rubber. In order to service the sole plate area, silicone rubber should be used for the following operation:

1. Remove Steam Chest Cover screw (35) and remove Steam Chest Cover (15). Apply a small quantity of RTV112 Silicone Rubber to a clean piece of paper.
2. Roll rubber roller over a silicone (like that of a wallpaper roller, approximately 2" wide) by pressing roller on paper with short back and forward motions. Continue until roller is evenly covered with silicone.
3. Roll coated roller over the bottom surface of steam chest cover until entire area is coated around steam chamber. (See darkened area of steam chest cover drawing).



STEAM CHEST COVER

CAUTION: Be careful and do not allow silicone to enter steam valve area (see arrow on drawing) or vents of chamber on sole plate when mating steam chest cover and sole plate for reassembly.

Once an even coating of silicone has been applied, the steam chest cover may be placed on sole plate and screwed down to secure.

Curing of silicone will take place in heat test of finished iron and no leaks should be in evidence at that time of water test.

SPECIAL TOOLS

Tool 1	T35219	Combination Test Meter
Tool 2	T35221	Ironmaster Iron Test Stand
Tool 3	1/16"	Allen Wrench
Tool 4	RTV112	Silicone Rubber

The Sunbeam logo is a blue oval shape with a white outline. Inside the oval, the word "Sunbeam" is written in a white, cursive script font.

SERVICE BULLETIN

Supersedes Service Bulletins

No. 158-26 May 1, 1956
No. 164-27 August 6, 1956
No. 174-28 February 1, 1957
No. 181-30 July 20, 1957
No. 223-32 October 15, 1959
No. 227-33 April 1, 1960
No. 256-34 February 1, 1962

No. 360-46 Irons
May 30, 1970

INSTRUCTIONS FOR SERVICING THE SUNBEAM STEAM OR DRY IRONS



GENERAL

The Sunbeam Steam or Dry Irons have a thermostat for accurate temperature control. A tubular type heating element molded into an aluminum sole plate provides fast, even heat. Sunbeam Steam or Dry Irons are 1200 watt appliances with the exception of Catalog Nos. S4, S4L, S4A, S4AL, S4D, and S5 which are rated at 1,000 watts. The stainless steel tank holds approximately 7 1/2 oz. of water. A fingertip regulator knob can be set to the recommended temperature for the fabric to be ironed.

OPERATING PRINCIPLES

Plug the cord into a 110-120 volt, AC electrical source. Turn the heat regulator knob to the desired position. The regulator knob is attached to a cam mechanism which locates the silver contact points relative to the thermostat blade, thereby controlling the heat setting. The thermostat blade reacts to the temperature of the sole plate to open and close the contact points and maintain correct ironing temperature. Regardless of the heat control setting, the Iron consumes its full wattage until the thermostat automatically opens the contact points, shutting off the current. To steam iron, fill water tank through the opening in the front of the handle. Set the heat regulator knob to the steam area and set the steam control lever to the steam or on position.

DISCONNECT CORD BEFORE SERVICING

SECTION A DISASSEMBLY

(Refer to Parts List 3158)

1. Handle and Cord Assembly

Using a small punch, tap the drive pin through the Cap Rivet (4). Remove the cap rivet by prying upward with a thin blade. Set the Adjusting Knob (6) to "Linen" position and Steam Lever Assembly (2) at "On" position. Lift the steam lever assembly straight upward and pull the Temperature Dial (1) outward until it clears the handle. Remove the steam lever assembly from the Valve Assembly (16). Remove Steam Lever Assembly (2) from the Cap Assembly (1). Unscrew and remove the Cam Pivot (3), using a 13/32" box end wrench. Remove the Tension Washer (5) and Temperature Cam (7). The Knob (6) is pressed on the temperature cam and can be removed with a pair of pliers. Remove the Screw (32) which holds the Nameplate (33) in place. Take out the two Handle Screws (27) and tilt the Handle (8) backward, exposing the cord terminal connections. The Clip ends of the cord can now be pulled off the bus bars, freeing the handle and cord assembly from the Iron. The cord assembly has a rubber boot and strain relief molded to the lower portion. To remove the cord from the handle, twist the rubber boot and pull it outward from the handle. On models which have a door or heel rest (35), remove screw (36), then lift off door or heel rest. If iron is equipped with a cord strain relief bracket (34), remove screw (34A) then clip will release from handle. Clip end of cord can now be pulled off bus bars.

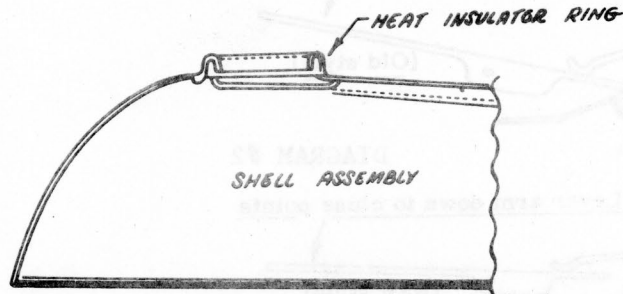
NOTE: On some early models, the cord was attached to the switch terminal by screws and eyelets. Take out the cord screws to release the handle and cord from the iron. These models also had a cord spring and strain relief clamp instead of a rubber boot. To replace this type cord, turn the cord spring counterclockwise to disengage the hook in the cord spring from the cord clamp. Use long nosed pliers and bend the catch on the cord clamp out from the handle so the hook on the cord spring will pass between the catch and the handle. Turn the cord spring clockwise to remove it from the clamp. Always replace this type cord with the new style cord with the molded on boot and strain relief.

When reassembling the handle to the shell, loosely fasten rear of the handle with Screws (27). Then, assemble the temperature cam, tension washer and cam pivot. While tightening the cam pivot, move the temperature cam back and forth to relieve any binding. Tighten the cam pivot until its lower end can be seen on the underside of the threaded hole in the clamp. The valve assembly must move freely in the cam pivot. Also, check to see that the cam follower follows the rotating cam.

2. Stainless Steel Tank and Valve Assembly

Lift off the Gasket (9), and remove the Shell (10). Remove the Clamp (11) from the Tank Assembly (19) by squeezing the two clamp arms together until the projections are free from the hole in the tank assembly. Lift out the Valve Assembly (16). At this point, Valve Washers (12, 13, 15) and Spring (14) are free to slide off the valve assembly. Remove the Mica Washer (31) from around the terminal bus bars. If equipped with insulating sleeves (30A), slide off bus bars. Use a large screwdriver to unscrew the valve body (18). Move the tank (19) slightly forward, then lift up while feeding

the cam follower (17) through the hole in the tank. The cam follower can now be unhooked from the switch lever. NOTE: A modification in the Handle (18-4380) completely eliminates the heat insulator ring on the Shell Assembly (18-4548). In order to fit this new type handle to the old style Iron, the heat insulator ring (See Diagram) must be removed. The easiest way to remove the heat insulator ring is to grasp it with a diagonal cutting pliers and twist until the locking tabs come loose from the shell assembly. The Gasket (18-4421) will then be held in place by the three notches on the new handle.

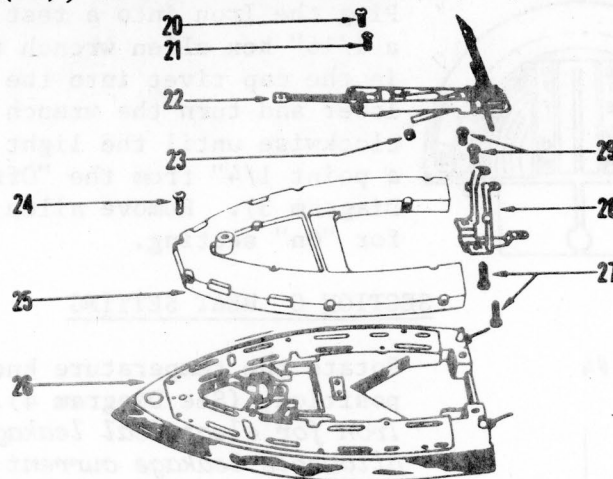


NOTE: The model S4 Iron was equipped with a square cam follower staked into the tank. To remove it, grind off the staked portions at the lower end of the cam follower. The cam follower must be restaked for reassembly.

3. Switch Assembly and Sole Plate

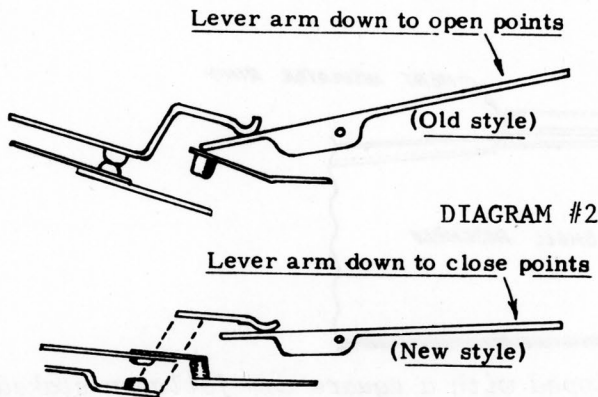
The Switch Assembly (22) can be removed by taking out the Switch Screws (20 & 21) and clipping the bus bars loose about 1/2" from the point where they are welded to the element. Lift off the Shell Mounting Bracket (28) after removing Screws (29). To remove the Steam Chest Cover Assembly (25) from the Sole Plate (26), take out the Screws (24). (See Diagram #1)

DIAGRAM #1



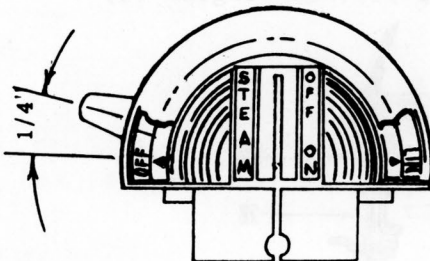
NOTE: The switch assembly on the older model Irons was connected to the element with two screws. When replacing the switch on this type Iron, cut the bus bars off 1/2" from the element and silver solder the switch in place on the new sole plate.

CAUTION: The thermo blade used in the latest model Irons deflects in the opposite direction from the early model switch. Because of this change, the profile on the temperature cam was also changed. (See Diagram 2) Only the new style switch (Key No. 22) is available. When installing this switch on the earlier model Irons, a new style temperature cam (18-21762) must also be installed.



SECTION B COLD SETTING

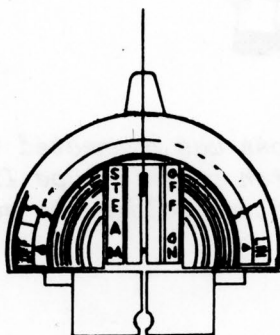
DIAGRAM #3



The cold setting should be made with the Iron completely assembled, except for the plastic drive pin, in the Cap Rivet (4). The Iron should be at room temperature for this test. Plug the Iron into a test lamp circuit. Insert a 1/16" hex allen wrench through the hole in the cap rivet into the adjusting nut follower and turn the wrench clockwise or counter-clockwise until the light just comes on at a point 1/4" from the "Off" position. (See Diagram 3). Remove allen wrench when testing for "On" setting.

SECTION C HEAT SETTING

DIAGRAM #4



Rotate the temperature knob to the center position, (See Diagram 4). *NOTE: Check the Iron for electrical leakage. The maximum allowable leakage current between live electric parts and exposed metal parts is 0.2 milliamperes at 115 volts, A.C.* Plug the Iron into Combination Test Meter, (Tool #1), and place the Iron on the Test Stand, (Tool #2). The average temperature should be between 325° and 350° F. after at least three cycles. If the average temperature is too high or too low, make the necessary adjustment to the adjusting nut follower with the Allen Wrench.

SECTION D ADJUSTMENTS

1. Iron does not Heat or Heats Erratically

- A. Check for continuity in the cord, cord plug, terminals or sole plate element. Replace any defective parts.
- B. Cam Follower (17) may not move freely. Replace if it is bent or damaged.
- C. Cam Follower (17) may be binding due to burrs in handle hole. Remove handle and ream out adjusting nut hole in handle to 3/16".
- D. Check the section of the handle directly in front of the cam follower. If this portion is cracked, the whole partition may bulge outward and bear against the cam follower, restricting its movement or jamming it altogether. Replace the handle.
- E. If the switch is not tightened down correctly, proper conduction of heat from the sole plate to the thermostat will not be obtained. Check and tighten if necessary.
- F. Contact points may be dirty or pitted. Check and dress points with distributor point file if necessary.

2. Iron Overheats

- A. The contact points may be stuck or welded together from being used on direct current.
- B. The heat control may be out of adjustment. Readjust heat setting.
- C. Thermo blade may not function correctly. Check and replace switch if necessary.
- D. The Porcelain Insulator (23) on the primary thermostat blade, may be broken or missing. Replace insulator using porcelain cement.
- E. Switch may be shorted. Replace if necessary.

3. Iron Leaks Water

- A. Check the plastic handle for cracks, particularly by water hole in front. The handle should be replaced if any cracks are evident.
- B. If Iron leaks around handle, check condition of gaskets and replace if necessary.
- C. If Iron leaks between the Shell Assembly (10) and the sole plate, check tank assembly for leaks. If the tank leaks, it should be replaced.
- D. If water has leaked out around edge of Steam Chest Cover (25), tighten Steam Chest Cover Screws (24). A Slight leak may be patched with silicone rubber.

4. Iron Steams When Lever is "Off"

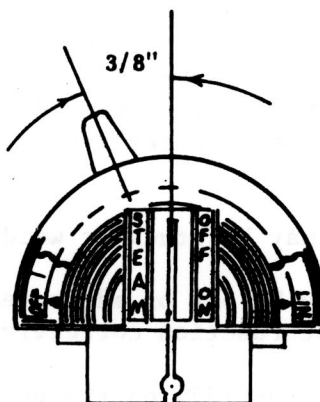
- A. Check pin on the bottom of the Valve Assembly (16). If this pin is bent or damaged in any way, or if the valve seat is rough, the valve may not seat properly, allowing water to pass even though the Steam Lever (2) is set on "Off."
- B. Check Valve Stem to Determine if stem is bent and causing a binding condition. Check washers for binding on valve assembly.

5. No Steam Obtained

- A. If no steam is obtained when the steam lever is set on the "On" position, the steam chamber may be clogged or the valve hole in the Valve

Body (18) may be plugged. With the control knob set $\frac{3}{8}$ " below the center point, (See Diagram 5), fill the tank with white vinegar and allow the vinegar to pass through the partially heated steam chamber. One or two tankfuls of vinegar should be sufficient to clean out most deposits which block steam flow.

DIAGRAM #5



- B. Make certain Steam Lever (2) lifts Valve Assembly (16) far enough to allow water to flow into steam chamber. Replace the lever if necessary.

6. Iron Spits Water

- A. Check and reset the heat adjustment if necessary. If the heat adjustment is too high or too low, excessive water will be obtained with the steam.
- B. The pin hole in the Valve Body (18) may be oversize, allowing too much water in the steam chamber.
- C. The inside of the steam chamber is coated with a special wetting agent. If this coating is missing or damaged in any way, the Iron will spit. Run through a tank of tap water to season the chamber and recheck with distilled water.

THE SPECIAL TOOLS REFERRED TO IN THIS BULLETIN ARE:

<u>Reference No.</u>	<u>Tool No.</u>	<u>Description</u>
Tool No. 1	T-35219	Combination Testmeter
Tool No. 2	T-35221	Ironmaster Test Stand