

VULCAN

INSTALLATION & OPERATION MANUAL

VSX7 & VSX10 SERIES ELECTRIC CONVECTION STEAMERS

MODELS

VSX7EC ML-114822

VSX7EO ML-114821

VSX10EC ML-114824

VSX10EO ML-114823



For additional information on Vulcan-Hart Company or to locate an authorized parts and service provider in your area, visit our website at www.vulcanhart.com

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Installation, Operation and Care of VSX7 & VSX10 SERIES ELECTRIC CONVECTION STEAMERS

SAVE THESE INSTRUCTIONS

GENERAL

Models VSX7EC and VSX10EC are mounted on a cabinet base. Models VSX7EO and VSX10EO are mounted on an open base. Models VSX7EC and VSX7EO have a capacity for seven 12" x 20" x 2½" pans. Models VSX10EC and VSX10EO have capacity for ten 12" x 20" x 2½" pans. Accessory stainless steel steamer pans with solid or perforated bottoms are available in 1", 2½" and 4" depths.

Vulcan steamers are produced with quality workmanship and material. Proper installation, usage and maintenance of your steamer will result in many years of satisfactory performance.

It is suggested that you thoroughly read this entire manual and carefully follow all of the instructions provided.

INSTALLATION

UNPACKING

This steamer was inspected before leaving the factory. The transportation company assumes full responsibility for safe delivery upon acceptance of the shipment. Immediately after unpacking, check for possible shipping damage. If the steamer is found to be damaged, save the packaging material and contact the carrier within 15 days of delivery.

LOCATION

Before installing, verify that the electrical service agrees with the specifications on the rating plate located on the right side panel. If the supply and equipment requirements do not agree, do not proceed with the installation. Contact your dealer or Vulcan-Hart Company immediately.

Allow space for plumbing and electrical connections.

When installed, minimum clearances are 3" (7.6 cm) at the sides and 0" at the rear for proper air circulation.

INSTALLATION CODES AND STANDARDS

In the United States, the steamer must be installed in accordance with the following: (1) State and local codes and (2) National Electrical Code, ANSI/NFPA-70 (latest edition), available from National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

In Canada, the steamer must be installed in accordance with the following: (1) Local codes and (2) Canadian Electrical Code, Part 2, CSA Standard C22.1 (latest edition), available from Canadian Standard Association, 178 Rexdale Boulevard, Rexdale, Ontario, Canada M9W1R3.

LEVELING

Using a spirit level or pan of water in the bottom of the steamer, adjust the leveling feet to level the steamer front to back and side to side.

Mark hole locations on the floor through the anchoring holes provided in the flanged adjustable feet. Remove the steamer and drill holes at marked locations on the floor. Insert proper anchoring devices.

Set steamer back in proper position.

Install bolts through anchoring holes and into anchors to secure the steamer to the floor. Seal bolts and flanged feet with Silastic.

After the drain is connected, check for level by pouring water onto the floor of the compartment. All water should drain through the opening at the back of the compartment cavity.

ELECTRICAL CONNECTION

WARNING: ELECTRICAL AND GROUNDING CONNECTIONS MUST COMPLY WITH APPLICABLE PORTIONS OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER LOCAL ELECTRICAL CODES.

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

Make electrical connection through the 1^{1/8}" (2.9 cm) diameter hole, provided, using ^{3/4}" (1.9 cm) trade-size conduit. Refer to the wiring diagram located inside the right side panel. Use 90°C minimum insulated wire.

ELECTRICAL DATA

Model	kW	Volts/Hertz/Phase	Minimum Circuit Ampacity Maximum Protective Device Amps
VSX7EC VSX7EO	17.5	208/60/3 240/60/3 480/60/3	60 50 30
VSX10EC VSX10EO	30	208/60/3 240/60/3 480/60/3	90 80 45

PLUMBING CONNECTIONS

WARNING: PLUMBING CONNECTIONS MUST COMPLY WITH APPLICABLE SANITARY, SAFETY AND PLUMBING CODES.

Water Supply Connection

The water filter, provided, must be installed in the water supply line going to the filtered water inlet or your steamer warranty may be voided. For incoming water supply line pressures, refer to the water filter manual shipped with the water filter. Follow the recommendations contained in it. Water pressure to the steamer should be 20 to 60 psi.

The water supply inlets are provided with $\frac{3}{8}$ " (1.0 cm) compression fittings for $\frac{3}{8}$ " O.D. copper tubing. The water supply to the generator tank (filtered water) is separate from the water supply to the cooling system (unfiltered water) where steam is condensed before entering the drain line. Filtered water may be used for the generator; unfiltered water, for the cooling system.

Install line strainers (not provided). A manual shutoff valve for each supply line must be provided convenient to the steamer.

We recommend treated water feeding the boiler inlet supply and untreated water feeding the cooling system inlet. Hook-ups are labeled on the back of the steamer.

Water Requirements

Proper water quality can improve the taste of the food prepared in the steamer, reduce liming in the steam generator and extend equipment life. Local water conditions vary from one location to another. Ask your municipal water supplier for details about your local water supply before installation.

Recommended water parameters are included in the water filter manual shipped with the steamer; follow the recommendations contained in it.

Presence of sediment, silica, excess chlorides or other dissolved solids may lead to a recommendation for alternate form(s) of water treatment. Be sure to test the water with the test strip and register the results using the registration card or by visiting vulcanhart.com.

Drain Connection(s)

Drain must be minimum $1\frac{1}{2}$ " (3.8 cm) IPS down, preferably with one or two elbows only, maximum length 6 feet and piped to an open-gap type of drain (Fig. 1). Drain pipe should be either iron or copper. DO NOT use PVC pipe; PVC pipe may lose its rigidity, or its glue may fail.

CAUTION: In order to avoid any back pressure in the steamer, do not connect solidly to any drain connection.

Draining Requirements

Temperatures in the boiler can reach as high as 240°F (116°C). Local codes will require that the temperature of the drain water be 140°F (60°C) or lower. At the end of the day when purging the boilers, some provision for lowering the water temperature must be provided by the user or installer to meet this code requirement.

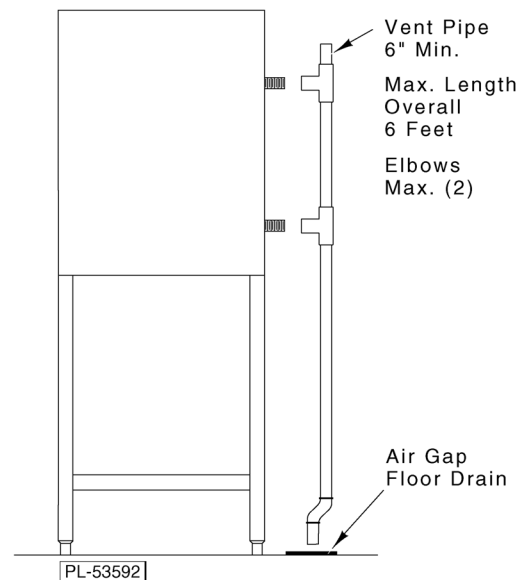


Fig. 1

VENT HOOD

Some local codes may require the steamer to be located under an exhaust hood. Information on the construction and installation of ventilating hoods may be obtained from NFPA Standard No. 96, *Vapor Removal from Cooking Equipment* (latest edition).

STARTUP TEST

WARNING: THE STEAMER AND ITS PARTS ARE HOT. USE CARE WHEN OPERATING, CLEANING OR SERVICING THE STEAMER. THE COOKING COMPARTMENT CONTAINS LIVE STEAM. STAY CLEAR WHILE OPENING THE DOOR.

Once the steamer is installed and all mechanical connections have been made, thoroughly test the steamer before operation.

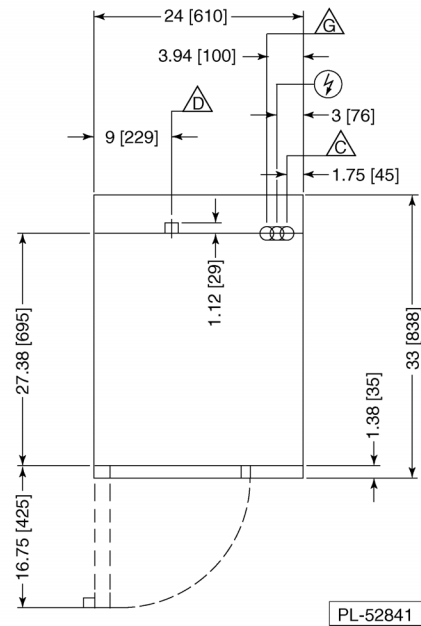
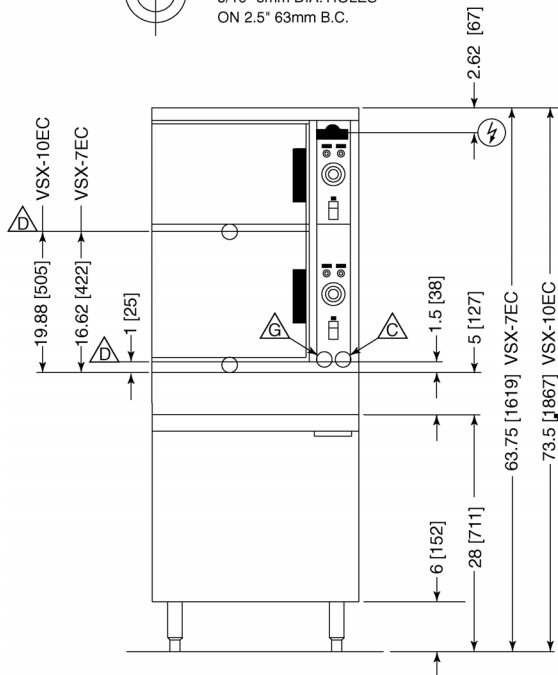
1. Check that proper water, drain and electrical connections have been made.
2. Turn main power switch on. After approximately 15 minutes, the Ready Light should come on, indicating that the water temperature is 205°F (96°C).
3. When the Ready Light comes on, set the timer at 5 minutes. With door open, observe that no steam is entering the compartment and the Cooking Light is off.
4. Close compartment door. The Cooking Light should now be lit, and steam should be heard entering the compartment after about 45 seconds (5 minutes if boiler is empty).
5. Check drain line to make sure that water from the cold water condenser is flowing through the drain line.
6. Open compartment door and observe that steam supply to the chamber is cut off. (Ready Light should again come on, and Cooking Light goes off.)
7. Close compartment door and let cooking cycle finish. When the timer returns to the "0" position, a buzzer will sound, signalling the end of the cooking cycle. To silence the buzzer, turn the dial timer to off.
8. Complete the above steps for each cooking compartment.
9. To shut the steamer down, turn the main power switch off and leave the compartment doors slightly open to allow the inside to dry out.

INSTALLATION DRAWINGS

Cabinet Base

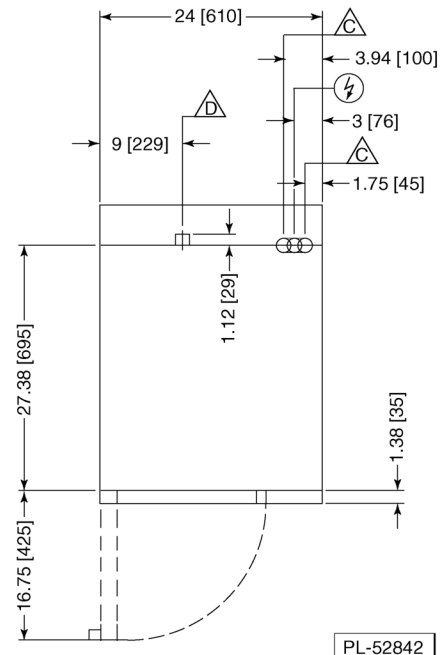
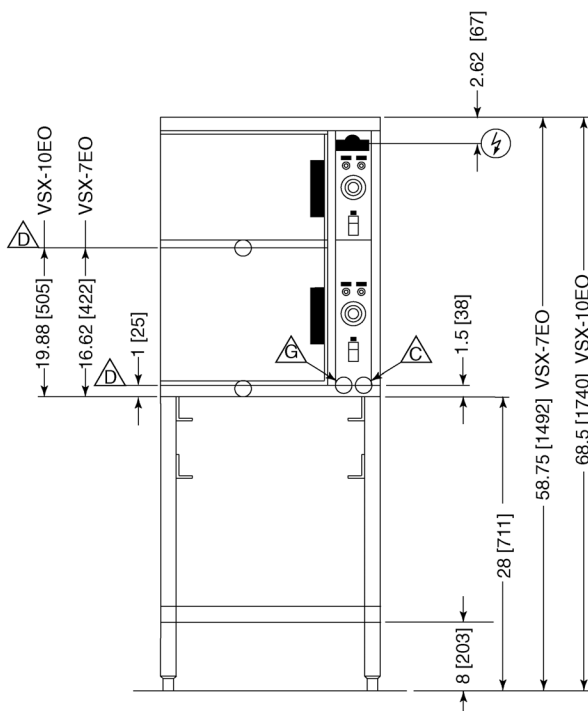


FLANGED FOOT DETAIL
 2 EQUALLY SPACED
 5/16" 8mm DIA. HOLES
 ON 2.5" 63mm B.C.



PL-52841

Open Base



PL-52842

OPERATION

WARNING: THE STEAMER AND ITS PARTS ARE HOT. USE CARE WHEN OPERATING, CLEANING OR SERVICING THE STEAMER. THE COOKING COMPARTMENT CONTAINS LIVE STEAM. STAY CLEAR WHILE OPENING THE DOOR.

CONTROLS

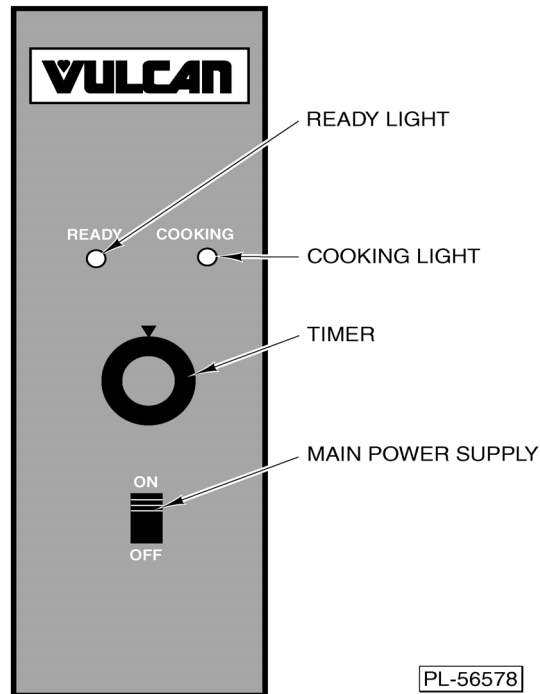


Fig. 2

MAIN POWER SWITCH

ON - The boiler will automatically fill and begin heating to the preset temperature.

OFF - The boiler will drain.

READY LIGHT - Indicates the temperature has reached 205°F (96°C) and that the steamer is ready to begin cooking.

COOKING LIGHT - Indicates that a cooking cycle is in progress.

TIMER - Set the cooking time (0 to 60 minutes). Steam cooking will begin when the door is closed. The cooking cycle will be interrupted if the door is opened during the cooking cycle; resume cooking by closing the door.

When done, a buzzer sounds and steam supply to the cooking chamber will cease. Turn the timer off to stop the buzzer.

BEFORE FIRST USE

Clean the protective oils from all surfaces of the steamer. Use a noncorrosive, grease-dissolving commercial cleaner, following manufacturer's directions. Rinse thoroughly and wipe dry with a soft clean cloth.

PREHEAT

Turn the main power switch to the ON position. When the Ready Light comes on, set the timer to 1 minute to preheat the compartment. This should be done when the steamer is first used for the day or whenever the chamber is cold. The door should be closed during the preheat cycle. The Cooking light will be lit. When the buzzer sounds, set the timer to the OFF position. The steamer is now ready to cook.

COOK

With the compartment preheated and the Ready Light on, place pans of food into the compartment and close the door. Set the timer to the desired cooking time. (The cooking cycle may be interrupted at any time by opening the door. To resume operation, close the door.) Steam will flow into the compartment, and the cooking light will be lit.

At the end of the cooking cycle, the buzzer will sound, the Cooking Light will go off and the steam supply to the compartment will cease. Turn the timer to the OFF position to silence the buzzer.

SHUTDOWN

Turn the main power switch to OFF. The boiler will automatically blow down. Leave the compartment door open to allow the inside to dry out. For an extended shutdown, turn the main power switch off; turn power and water supply off.

COOKING HINTS

Your steamer efficiently cooks vegetables or other foods for immediate serving. Steam cooking should be carefully time controlled. Keep hot food holding time to a minimum to produce the most appetizing results. Prepare small batches; cook only enough to start serving and then cook additional amounts to meet demand.

PREPARATION

Prepare vegetables, fruits, meats, seafood and poultry normally by cleaning, separating, cutting, removing stems, etc. Cook root vegetables in a perforated pan. Other vegetables may be cooked in a perforated pan unless juices are being saved. Liquids can be collected in a solid pan placed under a perforated pan.

Perforated pans are used for frankfurters, weiners and similar items when juices do not need to be preserved. Solid pans are good for cooking puddings, rice and hot breakfast cereals. Vegetables and fruits are cooked in solid pans in their own juice. Meats and poultry are cooked in solid pans to preserve their juice or retain broth.

Canned foods can be heated in their opened cans (cans placed in solid pans), or the contents may be poured into solid pans. DO NOT place unopened cans in the steamer.

FROZEN FOOD ITEMS

Separate frozen foods into smaller pieces to allow more efficient cooking.

Use a pan cover for precooked frozen dishes that cannot be cooked in the covered containers in which they are packed if they require more than 15 minutes of cooking time. When a cover is used, approximately one-third additional cooking time is necessary. Cooking time for frozen foods depends on the amount of defrosting required. If time permits, allow frozen foods to partially thaw overnight in a refrigerator. This will reduce their cooking time.

Suggested Cooking Guidelines

PRODUCT	TIMER SETTING (minutes)	WEIGHT PER PAN
Eggs		
Scrambled	10 to 12	8 doz.
Hard cooked	15	4 doz.
Rice, long grain (cover with 4 cups of water/lb.)	25	2 lb.
Pasta (place perforated pan inside solid pan; cover with cold water)		
Spaghetti, regular/vermicelli	12 to 15	
Macaroni, shells/elbows	15 to 18	
Lasagna noodles	15 to 18	
Frozen Casseroles, Lasagna	35	Full pan
Meat Loaf, 3-5 lb. each	40	15 lb.
Beef		
Ground Chuck	20 to 25	10 lb.
Beans		
Baked/Refried	9	10 lb. can
Chicken - Breasts, Legs, Thighs	20	15 lb.
Turkey, Frozen		
Breasts (2)	90	6 to 7 lb. each
Hot Dogs	3	80 to 100 count
SEAFOOD		
Clams		
Frozen	10 to 12	3 doz.
Fresh, Cherrystone	5 to 6	3 doz.
King Crab, frozen		
Claws	4	2½ lb.
Legs	4 to 6	4½ lb.
Shrimp, frozen, 10 per lb.	5	4 lb.
Lobster Tail, frozen	6	10 lb.
Lobster, Live, 10" to 12"	5	4 per pan
Scallops, fresh	4	3 lb.
Scrod Fillets, fresh	3-5	4 lb.
VEGETABLES		
Asparagus Spears		
Frozen	10 to 12	3 doz.
Fresh	5	5 lb.
Beans		
Green, 2" cut, frozen/fresh	6	5 lb.
Lima, frozen	8	5 lb.
Broccoli		
Spears, frozen	8	4 lb.
Spears, fresh	6	5 lb.
Flowerettes, frozen	6	5 lb.
Carrots		
Baby whole, frozen	8	7 lb.
Crinkle cut, frozen	7 to 8	4 lb.
Sliced, fresh	11	9 lb.
Cauliflower, Flowerettes		
Frozen	6	4 lb.
Fresh	7 to 8	5 lb.
Corn		
Yellow whole kernel, frozen	5	5 lb.
Cobbettes, frozen	8	27 ears
Corn-on-the-Cob, fresh	10 to 12	18 ears
Peas, Green	6	5 lb.
Potatoes, whole russet	55	40 lb.
Zucchini, slices	8	10 lb.
Canned Vegetables	6	10 lb. can
Frozen Mixed Vegetables	6 to 7	5 lb.

DRAINING THE BOILER

Drain the boiler after each day's use to flush out minerals and minimize scale build-up. The boiler drains automatically for approximately 4 to 6 minutes after the main power switch is turned OFF.

ADJUSTMENT FOR HIGH ALTITUDE LOCATIONS

The steamer has been factory set so that when it is on, and during the Ready phase, it will maintain water temperature in the steam generator tank at approximately 205°F (96°C) (just below water boiling point). However, for high altitude locations, a Vulcan-authorized servicer must adjust the steamer to achieve this temperature.

CLEANING

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

At the end of each day, or between cooking cycles if necessary:

- Turn main power switch off.
- Remove pans and racks from compartment and wash in sink.
- Wash compartment interior with clean water. Never use steel wool or abrasive scouring pads as they will scratch and ruin the general surface appearance of the steamer.
- Use warm soapy water with a cloth or sponge to clean the exposed bead of the door gasket. Rinse with warm clear water and wipe dry with a dry cloth.
- Wipe surfaces which touch the door gasket with a cloth or sponge and warm soapy water. Rinse with warm clear water and wipe with a dry cloth.

CAUTION: Do not allow the door gasket to come in contact with food oils, petroleum solvents or lubricants. Wipe all solids away from the drain openings in the compartments to prevent clogging.

Keep the cooking compartment drain working freely. After cooking grease-producing foods, operate steamer with compartments empty for 30 minutes at the end of the day; or pour 1/2 gallon (2 liters) of warm soapy water down the drain, followed by 1/2 gallon of warm clear water.

Leave the door slightly open when the steamer is not in use to allow the inside to dry out.

Weekly (or as needed)

- Clean exterior with a damp cloth and polish with a soft dry cloth.
- Use a nonabrasive cleaner to remove discolorations.

GUIDELINES FOR MAINTAINING STAINLESS STEEL SURFACES

There are three things that can break down stainless steel and allow corrosion to develop:

(1) Abrasion, (2) Deposits and water and (3) Chlorides.

Avoid rubbing with steel pads, wire brushes or scrapers that can leave iron deposits on stainless steel. Instead, use plastic scouring pads or soft cloths. For stubborn stains, use products such as Cameo, Talc or Zud First Impression. Always rub parallel to the polish lines or with the grain.

Hard water can leave deposits that promote rust on stainless steel. Treated water from softeners or certain filters can eliminate these mineral deposits. Other deposits from food or lubrication must be properly removed by cleaning. Use mild detergent and non-chloride cleaners. Rinse thoroughly. Wipe dry. If using chloride-containing cleaners or sanitizers, *rinse repeatedly* to avoid stainless steel corrosion. Where appropriate, apply a polish recommended for stainless steel (such as Benefit or Super Sheen) for extra protection and lustre.

MAINTENANCE

WARNING: THE STEAMER AND ITS PARTS ARE HOT. USE CARE WHEN OPERATING, CLEANING OR SERVICING THE STEAMER. COMPARTMENTS CONTAIN LIVE STEAM. STAY CLEAR WHEN OPENING DOOR(S).

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

DELIMITING

Refer to the water filter manual shipped in the box with your steamer.

STEAM PRESSURE SWITCH

Your steamer is equipped with a 5 psi steam pressure switch. If steam pressure reaches 5 psi or more, the control circuit of the steamer will be disabled and the steamer will turn off until the pressure is relieved. The pressure may be caused by clogged cooking cavity steam ports, clogged steam tubing from the boiler to the cooking cavity, clogged drain plumbing or a blocked cooking cavity drain. Clean the cooking cavity drain. If the steamer continues to turn off, contact your local Vulcan-authorized servicer.

SERVICE

Contact your local Vulcan-authorized service office for any repairs or adjustments needed on this equipment.

TROUBLESHOOTING

When the steamer is shut down and cold water is running continuously into the open drain, either or both solenoid valves did not close when the steamer was turned off. Contact your local Vulcan-authorized servicer.

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