

# **KitchenAid**<sup>®</sup>

**BUILT-IN DISHWASHER**

*MODEL KDS-20A*

## **INSTALLATION INSTRUCTIONS**

### **INSTALLER: FINAL CHECK LIST**

#### **PLACEMENT OF DISHWASHER**

- 1. Properly positioned—level, aligned and square with cabinet opening.
- 2. Anchored securely, either to cabinet or floor.
- 3. Installation debris removed from under dishwasher.

#### **ELECTRICAL CONNECTION**

- 1. Separate 115 volt, 60 hertz, 1 phase branch with a 15 ampere capacity protected by a maximum of 15 ampere fuse size.
- 2. Dishwasher properly grounded.
- 3. All connections in conformance with local electrical code.

#### **PLUMBING**

- 1. Water supply at dishwasher: 20 to 120 P.S.I. pressure, temperature of 120° F. or higher and 1/2" O.D. (min.) copper tube.
- 2. Drain lines at least 5/8" O.D. copper tubing or suitable 9/16" I.D. flexible tubing with no tight bends (kinks) or other restrictions to prevent complete draining.
- 3. Compliance with all aspects of local plumbing code.
- 4. Make sure drain hose does not touch any electrical components or terminals.

#### **OPERATIONAL**

- 1. All internal packing material and labels and door pads removed.  
Place detergent in both compartments of detergent dispenser, close covers and operate dishwasher through complete LOW ENERGY cycle.

Check: Proper Fill—Water level approximately 1-1/2" below center line of 4 Way Hydro Sweep tubes. Complete Drain.  
Detergent Dispenser—must operate automatically and completely dispense detergent.

### **THANK YOU INSTALLER:**

1. Complete Installation Check List.
2. Leave all literature (including Check List) for customer.
3. Notify dealer that electrical work and plumbing are completed.

1-93

**FOR DETAILED INSTRUCTIONS, FOLLOW METHODS DESCRIBED IN THIS FOLDER**

# IMPORTANT: Read Before Installing to Save Time, Work, assure proper performance, and owner's warranty protection.

## CABINETRY

Opening for dishwasher should be 24" wide by approximately 34-1/2" high. Remove all obstructions at the upper rear of the opening—see Step 1 below.

## ELECTRICAL SPECIFICATIONS

|                     |                    |
|---------------------|--------------------|
| Voltage & Frequency | 115 volts—60 hertz |
| Operating load      | 13.5 amperes       |
| Maximum Fuse Size   | 15 amperes         |

Wiring must conform to local code and/or National Electrical Code.

## PLUMBING SPECIFICATIONS

Plumbing must conform to local code. Use 1/2" O.D.

copper tube for water line. Dishwasher has 3/8" N.P.T.F. internal thread at valve. A 90° compression ell (not furnished) should be used to connect tubing to valve. Water flow pressure at dishwasher to be 20 P.S.I. to 120 P.S.I. Water temperature at dishwasher should be 120° F. or higher. Drain size requires minimum 5/8" O.D. copper tubing without air gap. Drain line requires min. 9/16" I.D. tubing with air gap, not furnished.

**CAUTION:** Avoid getting joint compound inside new joints. Hot water fill line must be flushed of foreign matter before connection to dishwasher fill valve. A hand shut off valve (not furnished) should be located in an easily accessible area adjacent to the dishwasher.

# INSTALLATION INSTRUCTIONS

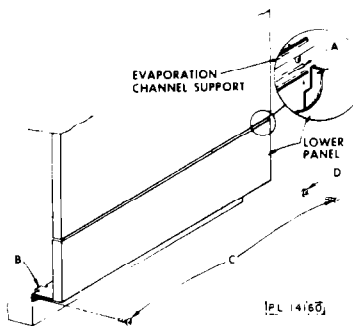


FIG. 1

KDS-20A dishwasher is equipped with reversible front panels in order to accommodate a variety of colors. Custom wood panels may also be used. Consult the Use and Care Guide for instructions on changing front panels.

The lower front panel must be removed to enable plumbing and electrical connections to be made. To remove lower panel, take out two screws (C) and lock washer (D). With index fingers, push support tabs (B) up, and pull bottom of lower panel outward to clear tabs of kickboard. Slide lower panel down until side flanges are clear of evaporation channel support (A). Reverse procedure when replacing lower panel.

## PRELIMINARY ROUGH-IN

### 1 CABINET OPENING

For dishwasher to be flush with adjacent cabinets, there must be a minimum of 24-1/4" under counter cabinet depth available for installation. To establish a reference line for purposes of providing plumbing and electrical connections to the dishwasher, measure 21" from the wall. (This is the front edge of dishwasher kick panel. There is a 3" toe space from the front of the kick panel to the front edge of the dishwasher with a standard metal front panel.) Cabinets 23-1/2" to 23-5/8" deep from wall to front of cabinet may be accommodated by removing dry or plaster wall, baseboard and quarter round directly behind the dishwasher.

**NOTE:** For corner installation, allow 2" clearance for adjacent cabinet. **CAUTION:** Make sure dishwasher is not installed under a surface burner or warming plate where the heat would damage the water supply tubing. If the rear cross channel interferes with the plumbing and/or electrical connections, it may be relocated as shown in Fig. 3 to create more clearance between the cross channel and the floor.

SHADED AREA SHOULD BE FREE OF ALL PLUMBING AND ELECTRICAL CONNECTIONS

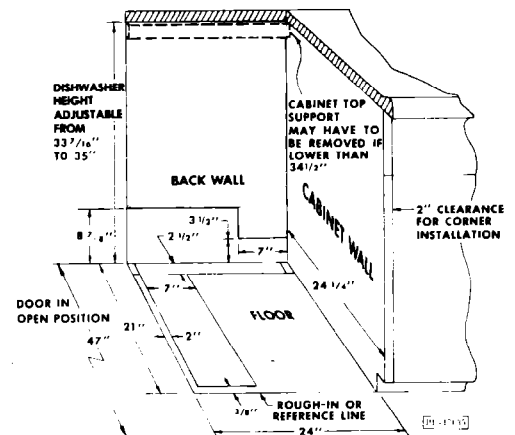


FIG. 2

# ① CABINET OPENING (Cont.)

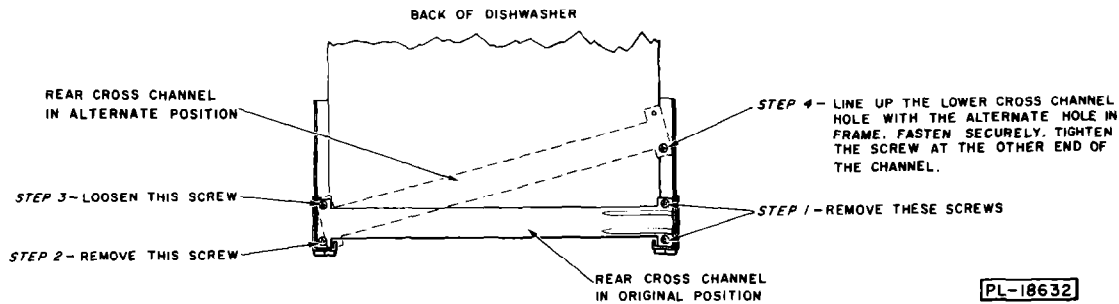


FIG. 3

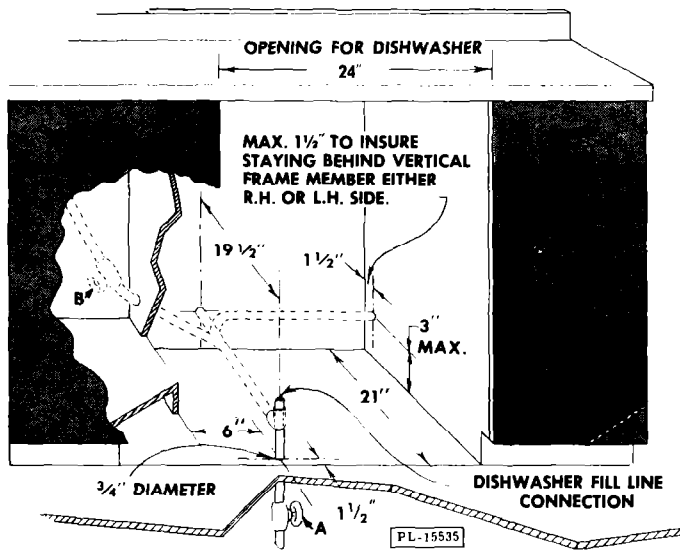


FIG. 4

# ② HOT WATER SUPPLY LINE

If the fill line comes from either right or left, it must be installed behind the vertical frame members which are 2-9/16" from the wall. Locate fill line according to Fig. 4. For roughing-in purposes, locate 3/4" hole 19-1/2" from back wall and 6" from left edge of cabinet. For other typical fill line installations such as water line from back, see alternate (dotted line) suggestions.

All sweat fittings for 1/2" O.D. copper tubing must be sweat into place before attaching to dishwasher to prevent excess heat on fill valve. Make certain that there is a hand shut off valve (A or B, Fig. 4) in the hot water supply line.

To conveniently service dishwasher, it is recommended a union be connected in the fill line.

# ③ DRAIN SYSTEM

The dishwasher is equipped with a pump type drain. Dishwasher can be connected to a drain line through the back wall, to a sink or disposer, to either right or left side, or to an air gap. Note Fig. 5 for dimensions for locations of drain line. Note Fig. 2 for area to be kept free of all plumbing connections. Connect a 9/16" I.D. minimum drain line to the high loop drain tube with a 5/8" O.D. x 2" long copper connector and two clamps (furnished by installer). When flexible hose is used, it must be resistant to heat and detergent water. When copper tubing is used, connect it to the high loop drain tube with a clamp. Drain connections must be in compliance with local codes. Do not install check valve in drain line. When connecting dishwasher drain to a food waste disposer, be sure to remove the knockout (or threaded) plug in the disposer to ensure proper drainage.

**NOTE:** Drain Hose #B-242167 may be used to connect dishwasher with disposer unit, or to sink drain using Tee P-83095 or elbow M-66093 (available as accessories).

**CAUTION:** Make sure drain hose does not touch the blower housing or any electrical components or terminals.

Drain hose must withstand hot water and detergent and can be obtained from a plumbing hardware or automotive supply outlet.

### ③ DRAIN SYSTEM (Cont.)

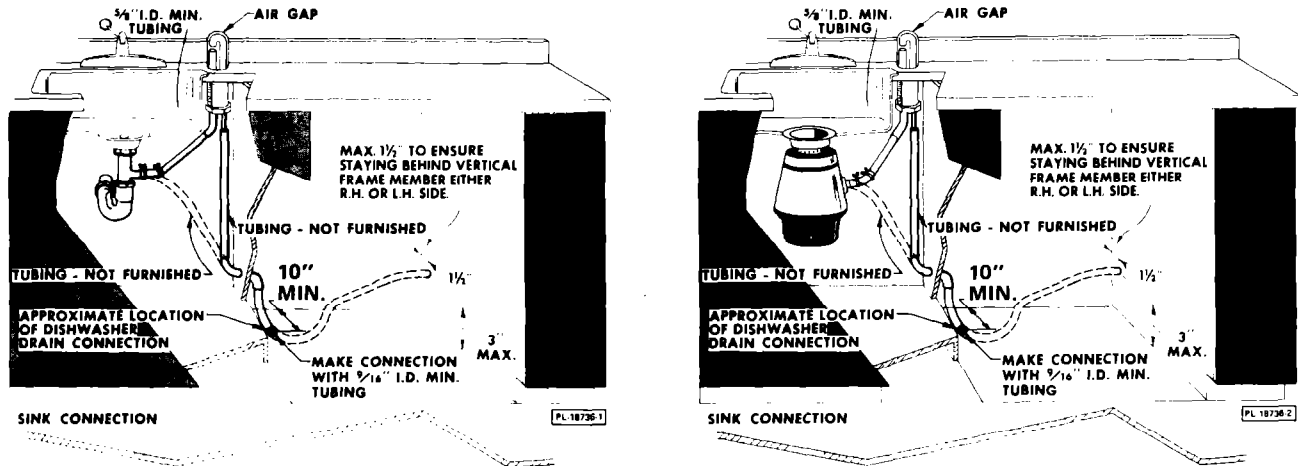


FIG. 5

**NOTE: Do Not Kink Drain Hose.**  
**Minimum Size For All Dishwasher Drains Is 9/16" I.D.**  
**A Drain Gap May Be Required. Consult Your Local Codes.**

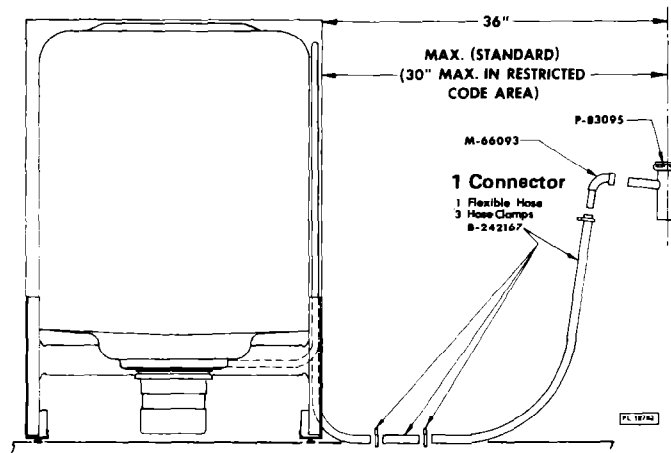


FIG. 6

### ④ ELECTRICAL SUPPLY LINE

Before setting dishwasher in place, run individual 15 amp. minimum branch circuit with grounded electrical cable. Item A, Fig. 7, shows routing methods for the electrical supply line hook-up to the KitchenAid dishwasher. **CAUTION: No other outlets or appliances should be on this circuit.**

**WARNING: BE SURE ELECTRICAL POWER IS TURNED OFF AT CIRCUIT BREAKER.**

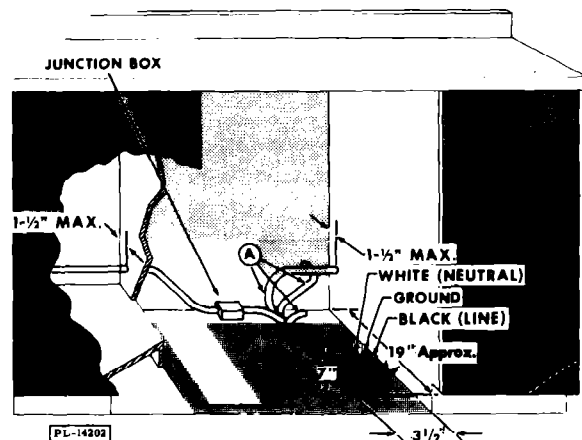


FIG. 7

# FINAL INSTALLATION

## ① POSITIONING AND ANCHORING DISHWASHER

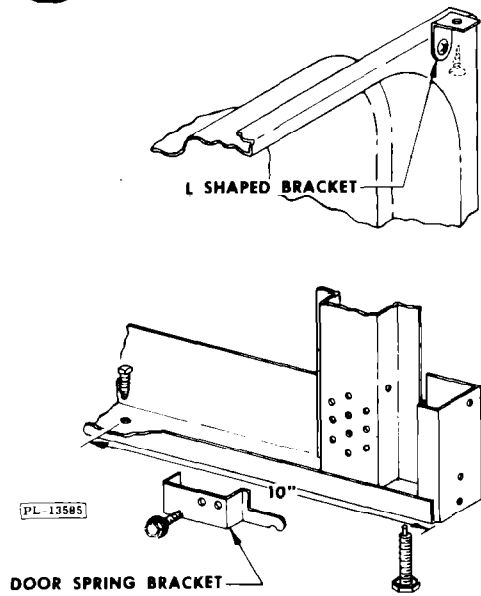


FIG. 8

Check the upper rear portion of the cabinet opening to make certain that area is cleared of cabinet or top support framing members. Set the dishwasher adjacent to cabinet and adjust the four leveling feet to the desired height. The four leveling feet can be used to raise the dishwasher to 35" or lower to 33-11/16" (33-7/16" if leveling screws are removed). Adjust kickplate. Kickplate can be adjusted by moving up or down. After the dishwasher is in position, make sure it is level from side to side and front to rear. If possible, dishwasher front should be parallel to counter top and flush with cabinets. To maintain alignment of dishwasher with adjacent cabinets, position the L shaped adjustable brackets (furnished at the upper left and right corners of the dishwasher) per Fig. 8 and fasten the dishwasher to the counter top with two #10 flat head wood screws (not furnished). When dishwasher is not installed beneath a continuous counter top it may be necessary to anchor dishwasher to floor using 1/4" lag bolt or screw, in hole provided. If door tension adjustment is required, adjust door spring so the door is counterbalanced and will remain in open position. Adjust tension by changing bracket (Fig. 8) to alternate holes and/or moving spring hooks to alternate position.

## ② CONNECTING HOT WATER SUPPLY LINE

Make certain fill line has been flushed clear of foreign materials. Use compression ell (not furnished) to connect 1/2" O.D. copper fill line to dishwasher fill valve. Make sure fill line has no sharp bends (5" minimum bend radius suggested) that may produce kinks which might restrict water flow. Connect fill line to meet local plumbing codes.

## ③ CONNECTING DRAIN LINE

Connect dishwasher drain to meet local plumbing code. See suggested installations Fig. 5. See note for available drain accessories.

## ④ CONNECTING ELECTRICAL POWER SOURCE

**WARNING: BE SURE ELECTRICAL POWER IS TURNED OFF AT CIRCUIT BREAKER.**

### — GROUNDING INSTRUCTIONS —

This appliance must be connected to a grounded metal, permanent, wiring system; or an equipment-grounding conductor must be run with the circuit conductors and connected to the equipment-grounding terminal or lead of the appliance.

A — Remove junction box from dishwasher. B — Install approved strain relief bushing (not furnished). C — Connect power cable white lead to white lead and black lead to black lead with adequate insulation or wire nuts and ground wire under green ground screw or lug. Reinstall junction box.

When house wiring is aluminum, use UL listed aluminum to copper connectors.



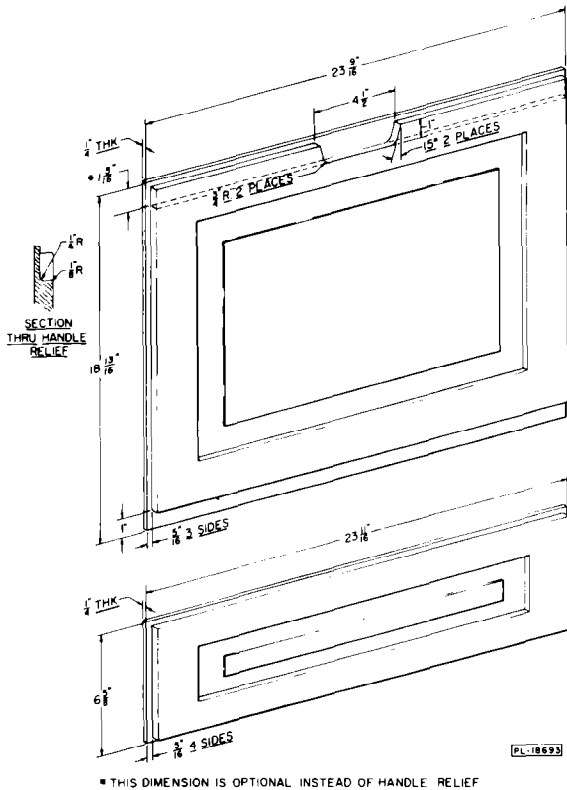
FIG. 9

## 5 TESTING INSTALLATION

Remove installation debris from under dishwasher, foam door pads on each side and near top of tank, and all internal packing material and labels. **NOTE:** Do not remove white plastic glides on sides of door or white plastic bumpers on front corners of lower rack.

Close door and latch handle. Press "Cancel Cycle" button; timer will automatically advance to off. Lift door handle and wait for timer to reset itself. Latch door handle and press "Heavy Wash" button. Run dishwasher through the complete cycle to make certain it is operating properly. Turn off electrical power, remove lower panel and check for leaks. Reinstall lower panel and turn on electrical power.

### CUSTOM WOOD PANELS



THIS DIMENSION IS OPTIONAL INSTEAD OF HANDLE RELIEF

FIG. 10

If custom wood panels are to be used, they should be 1/4" thick. Length and width dimensions should be the same as front panel inserts. If wood panels are less than 1/4" thick they must be shimmed up to the required 1/4" with proper size back up board (corrugated, masonite, etc.). If panels are thicker than 1/4", the panel edges will have to be trimmed down on all four sides.

Refer to Fig. 10 for dimensions of custom panels greater than 1/4" thick. For custom panels 1/4" thick and less, use outside dimensions only.

When wood panels are used, heavier door springs, #C-240418, should be ordered (2 required).

**CAUTION:** The finish applied to the wooden front panels should be applied to both the front and back sides and all edges, and must be waterproof since a certain amount of moist air does discharge from the machine.

## CAUTION

To protect against possible rupture of the fill valve, BE SURE water lines leading to the dishwasher, as well as water lines in the dishwasher, are protected against freezing. Such ruptures are not covered by the warranty.

If the dishwasher is to be left unused and subjected to freezing temperatures, it must be prepared as follows to avoid fill valve damage: Turn off electrical power and shut off water supply at the hand valve. Remove lower panel. Disconnect outlet line at the check valve. This permits water to drain from the dishwasher tank, pump and drain line. Disconnect both the inlet and outlet lines at the FILL valve. Make provisions to control water drained from unit. Reinstall lower panel. Turn on electrical power.

Close door and latch handle. Push "Rinse & Hold" button. Allow machine to run four or five minutes. Push "Cancel Cycle" button and wait for machine to turn off. Turn off electricity.

To complete installation later:

Remove lower panel.

Connect drain outlet line and fill valve (both inlet and outlet).

Reinstall lower panel.

Turn on water and electrical supplies.

KITCHENAID DIVISION

**HOBART**

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