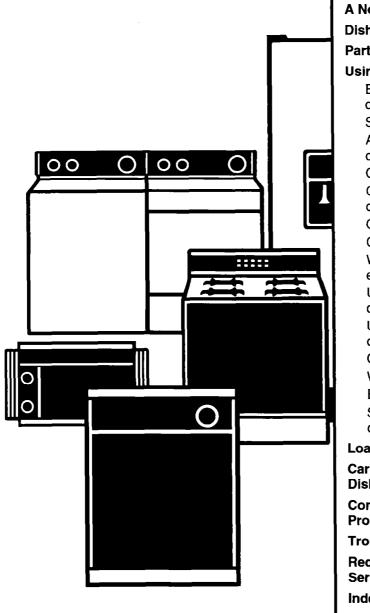


# Use And Care



UNDERCOUNTER DISHWASHER

A Note to You ...... 2 Dishwasher Safety ...... 3 Parts and Features ..... 4 Using Your Dishwasher ...... 5 Before starting your dishwasher..... 5 Starting your dishwasher .... 5 Adding a dish during a cycle......6 Changing a cycle setting ..... 6 Changing the Dry Select option ..... 6 Canceling a cycle......7 Cycle selection chart ...... 7 What happens in each option ...... 8 Using the detergent dispenser ..... 8 Using the rinse agent dispenser ..... 9 Quiet operating tips ...... 10 Water temperature tips ..... 11 Energy saving tips ......11 Special tips on dishwasher use ...... 12 Loading Your Dishwasher ... 13 Caring for Your Dishwasher ..... 16 Common Dishwashing Problems ...... 18 Troubleshooting ...... 21 **Requesting Assistance or** Service ..... 22 Index ...... 23 Warranty ...... 24

10/95

**MODEL SERIES TUD4000** 

# A Note To You

#### Thank you for buying an ESTATE® appliance.

You have purchased a quality, *world-class* home appliance. Years of engineering experience have gone into its manufacturing. To ensure that you will enjoy many years of trouble-free operation, we have developed this Use and Care Guide. It is full of valuable information on how to operate and maintain your appliance properly and safely. Please read it carefully. Also, please complete and mail the Ownership Registration Card provided with your appliance. This will help us notify you about any new information on your appliance.

#### Please record your model's information.

Whenever you call to request service for your appliance, you need to know your complete model number and serial number. You can find this information on the model and serial number label (see diagram on page 4 for location of label).

Please also record the purchase date of your appliance and your dealer's name, address, and telephone number.

Keep this book and the sales slip together in a safe place for future reference.

Our Consumer Assistance Center number is toll-free 24 hours a day.

1-800-253-1301

#### Help us help you

Please:

- Have your dishwasher installed by a qualified installer.
- Install where dishwasher is protected from the elements.
- Install and level dishwasher on a floor that will hold the weight, and in an area suitable for its size and use.
- Properly connect dishwasher to electricity, water, and drain.\*
- \*See Installation Instructions for complete information.

- Remove all shipping plugs from hoses and connectors (such as the cap on the drain outlet) before installing.\*
- Remove all hang tags and temporary labels.
- Make sure dishwasher is not used by anyone unable to operate it properly.
- Properly maintain dishwasher. See page 16.

# **Dishwasher Safety**

#### Your safety is important to us.

This guide contains safety statements under warning symbols. Please pay special attention to these symbols and follow any instructions given. Here is a brief explanation of the use of the warning symbol.

#### AWARNING

This symbol alerts you to such dangers as fire, electrical shock, burns, and injury.

#### IMPORTANT SAFETY INSTRUCTIONS

# AWARNING

To reduce the risk of fire, electrical shock, or injury when using your dishwasher, follow basic precautions including the following:

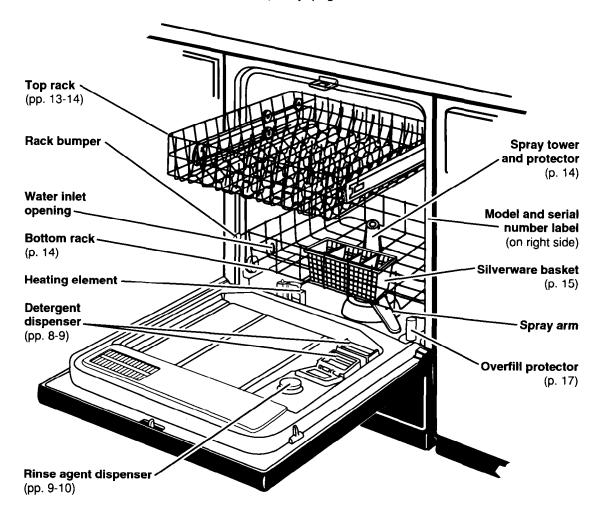
- Read all instructions before using the dishwasher.
- Use the dishwasher only for its intended function
- DISHWASHER MUST BE ELECTRI-CALLY GROUNDED. Read the Installation Instructions for details.
- Use only detergents or rinse agents recommended for use in a dishwasher, and keep them out of the reach of children.
- When loading items to be washed:
- Locate sharp items so that they are not likely to damage the door seal.
- Load sharp knives with the handles up to reduce the risk of cut-type injuries.
- Do not wash plastic items unless they are marked "dishwasher safe" or the equivalent. For plastic items not so marked, check the manufacturer's recommendations.
- Do not touch the heating element during or immediately after use. Do not reach into the area below the bottom rack until the heating element has cooled for at least 20 minutes.
- Do not operate your dishwasher unless all enclosure panels are properly in place.

- Do not tamper with controls.
- Do not abuse, sit on, or stand on the door or dish racks of the dishwasher.
- To reduce the risk of injury, do not allow children to play in or on a dishwasher.
- Under certain conditions, hydrogen gas may be produced in a hot water system that has not been used for two weeks or more. HYDROGEN GAS IS EXPLO-SIVE. If the hot water system has not been used for such a period, before using the dishwasher turn on all hot water faucets and let the water flow from each for several minutes. This will release any accumulated hydrogen gas. As the gas is flammable, do not smoke or use an open flame during this time.
- Remove the door to the washing compartment when removing an old dishwasher from service or discarding it.
- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
   The fumes can create a fire hazard or explosion.
- Disconnect electrical power to the dishwasher before attempting to service.

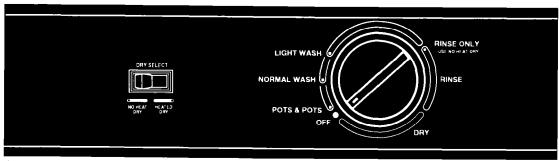
- SAVE THESE INSTRUCTIONS -

# **Parts and Features**

Your dishwasher is illustrated below with the parts and features called out. To help you find information on specific parts or features quickly, page references are included.



#### **Control Panel**



# **Using Your Dishwasher**

Operating your dishwasher properly enables you to obtain the best possible results. This section explains proper dishwasher operation.

# Before starting your dishwasher

1. Properly load the top rack, bottom rack,



and the silverware basket. See pages 13-15.

4. Check the rinse agent dispenser.

See pages 9-10.



2. Spin the lower spray arm with lower rack



in place to make sure nothing prevents arm from turning freely.

5. Push door firmly when closing and it will automatically latch.



3. Add detergent. See pages 8-9.



6. Run hot water at sink nearest dishwasher until water is hot. Turn off water.

# Starting your dishwasher

The dishwasher will wash and dry dishes according to the selections you make on the control panel.

 Select a drying option. See page 8.
 NOTE: For the Rinse Only cycle, use No Heat Dry.



continued on next page

#### **USING YOUR DISHWASHER**

Turn the cycle control knob clockwise to point to the desired cycle. See page 7 for cycle descriptions.

You will feel a definite stop at each cycle mark. The dishwasher will automatically start the cycle you selected.

**NOTE:** If the door is latched, you will hear cycles start and stop as the knob passes each cycle mark. This is normal and will not hurt the dishwasher. If you prefer, you can set cycles with the door unlatched.



# Adding a dish during a cycle

You can add an additional item to the dishwasher anytime before the knob reaches Light Wash. See page 7.

- Lift up on the door latch to unlatch the door and stop the cycle. Wait a moment for the spray action to stop before opening the door.
- 2. Open the door and add the dish.
- 3. Close the door. Do not latch it. Wait 30 seconds for air in the dishwasher to warm up. This helps reduce the amount of moisture that can come from the vent when restarting the cycle.
- **4.** Press door in to latch it. The dishwasher will start where it stopped.

# Changing a cycle setting

You can change a setting anytime during any cycle.

- 1. Lift up on the door latch to unlatch the door and stop the cycle.
- 2. Turn the cycle control knob clockwise to the cycle you want.
- Check the detergent dispenser to be sure it is properly filled for the new cycle. See pages 8-9.

**NOTE:** Turning the cycle control knob may cause the covered section of the detergent dispenser to open. Be sure to fill the covered section, and close the cover, if the cycle uses detergent in both sections.

**4.** Close and latch the door. The dishwasher will automatically start the new cycle.

# **Changing the Dry Select option**

You can change the Dry Select option anytime during a cycle.

To change the option, select the other drying option.



# Canceling a cycle

You can cancel a setting anytime during any cycle.

- Turn the cycle control knob slowly clockwise to the drain portion of the wash or rinse. You will hear water draining when you have advanced to the proper location.
- 2. Let the dishwasher drain completely.
- **3.** Lift up on the door latch to unlatch the door.
- **4.** Turn the cycle control knob clockwise to point to Off.

# **Cycle selection chart**

<del></del>	A " <b>✓</b>	" show	s what	steps_a	are in e	ach cy	cle	Cycle
Cycle	Wash	Rinse	Rinse	Main Wash	Rinse	Rinse	Dry	<b>Time</b> (Minutes)
Pots & Pans  A double wash for maximum cleaning of cooked-on or baked-on foods.	1	1	1	<b>✓</b>	<b>&gt;</b>	1	1	98*
A double wash for moderately to heavily soiled loads. (The Energy Guide Label is based on this cycle.)	1		1	1	1	1	1	90*
A single wash for light to moderately soiled loads.			1	1	1	1	1	85*
For rinsing a few items to be washed one or more days later. Do not use detergent. Use Energy Saver Dry option only. Heat Dry option may cause food to bake on dishes.					1	1		20*

<sup>\*</sup>Cycle time includes heated dry time.

#### **USING YOUR DISHWASHER**

# What happens in each option

#### **Heated Dry option**

If the Heated Dry option is selected, air in the dishwasher is heated during the "dry" part of the cycle. For best results, use a liquid rinse agent.

#### No Heat Dry option

If the No Heat Dry option is selected, air in the dishwasher is not heated during the "dry" part of the cycle. Using this option helps save energy, but dishes take longer to dry (overnight) and some water spotting may result. Some items (such as plastics) may need towel drying. For best drying results, use a liquid rinse agent.

#### SELECT



#### **SELECT**



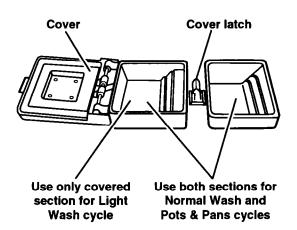
# Using the detergent dispenser

- Use automatic dishwashing detergent only. Other detergents are too mild and much too sudsy.
- Add detergent just before starting cycle.
- Store tightly-closed detergent in a cool, dry place. Fresh automatic dishwasher detergent results in better cleaning.

#### Filling the detergent dispenser

The detergent dispenser has one section with a cover and one without. Push the cover down firmly until it latches. Detergent in the open section falls into the dishwasher when closing the door. The covered section opens automatically for the main wash.

**NOTE:** It is normal for the cover to open partially when dispensing detergent.



#### How much detergent to use

- The amount of detergent to use depends on the hardness of your water and the type of detergent. If you use too little, dishes won't be clean. If you use too much in soft water, glassware will etch.
- Different brands of dishwasher detergent have different amounts of phosphorus for softening water. If you have hard water and use a detergent with a phosphorous content of less than 8.7%, you may need to use more detergent, or use a detergent with a phosphorous content higher than 8.7%.
- Find out your water's hardness by asking your local water department or water softener company.

**NOTE:** Fill amounts shown are for standard powdered detergent. Amounts may vary if you use liquid or concentrated powdered detergent. Follow manufacturer's directions when using liquid dishwasher detergent or concentrated powdered detergent.

WATER TYPE	WHERE	TO FILL
Hard 8+ grains per gallon 136+ parts per million	Top of 3rd step (3 tbs.)	
Medium 5-7 grains per gallon 85-119 parts per million	Top of 2nd step (2 tbs.)	
Soft 0-4 grains per gallon 0-68 parts per million	Top of 1st step (1 tbs.)	

# Using the rinse agent dispenser

#### Rinse agent dispenser

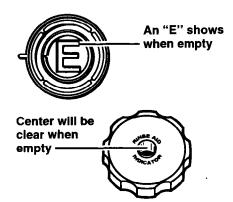
Keep the rinse agent dispenser filled with a liquid rinse agent. A rinse agent greatly improves the drying of dishes by helping water flow off them during the last rinse. A rinse agent also keeps water from forming droplets and drying as spots.

Release of a small amount of rinse agent into the rinse water is automatic in the final rinse of each cycle. For best drying results, check the dispenser periodically to see if it needs refilling.

#### To check dispenser

Remove dispenser cap. If dispenser is empty, an "E" will be clearly visible inside the dispenser.

The center of the fill indicator cap will be clear when dispenser needs refilling.



#### **USING YOUR DISHWASHER**

#### To fill dispenser

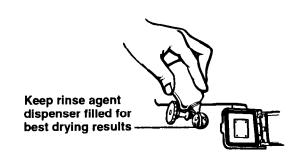
You do not have to wait until the dispenser is empty to refill it, but do not overfill it. The dispenser will hold 6 ounces of rinse agent. Under normal conditions, this will last about three months.

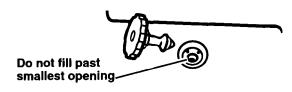
- 1. Make sure the dishwasher door is fully open.
- 2. Remove the fill indicator cap.
- Add rinse agent to the dispenser. Do not fill past the smallest opening in the lower part of the dispenser.

If you overfill, excess rinse agent can come out. This will not harm the dishwasher, but could cause over-sudsing.

- Clean up any spilled rinse agent with a damp cloth.
- Replace the fill indicator cap and keep it tightly closed.

**NOTE:** Your dishwasher is designed to use a liquid rinse agent. Do not use a solid or bar-type rinse agent.





# **Quiet operating tips**

To avoid thumping and clattering noises during operation:

- Make sure lightweight load items are secured in the racks.
- Make sure pot lids and handles, pizza pans, cookie sheets, etc., do not touch interior walls or interfere with the spray arm's rotation, or cover the spray tower.
- Load dishes so they do not touch one another.

**NOTE:** Keep sink drain plugs inserted during dishwasher operation to prevent noise transfer through drains.

### Water temperature tips

Hot water dissolves and activates the dishwashing detergent. Hot water also dissolves grease on dishes and helps dry glasses spot-free.

For best dishwashing results, water must be at least 120°F as it enters the dishwasher. The dishwasher will automatically heat the water to help washing performance.

#### To check water temperature

- Run hot water at the faucet closest to your dishwasher. Set a cup under the faucet, and place a candy or meat thermometer in it.
- 2. Run hot water for at least one minute into



the cup, allowing the water to overflow. Then check the temperature. If the water temperature is below 120°F, have a qualified person

raise the thermostat setting on your water heater.

# **Energy saving tips**

You can help save energy if you:

- Wash full loads. Running a half-filled dishwasher uses the same amount of electricity and hot water as a fully loaded machine.
- Use the Light Wash cycle whenever possible. The cycle uses less hot water and energy than the Normal Wash cycle.
   NOTE: Loads may not wash as well if the water temperature is too low.
- Load correctly for best washing results.
   Incorrect loading may cause poor washing and the need to rewash all or part of the load.
- Do not prerinse normally soiled dishes.
   Select the correct cycle for the load and use the recommended amount of detergent for good washing results without hand rinsing.
- Use your dishwasher during off-peak hours. Local utilities recommend this to avoid heavy usage of energy at certain times of day.
- Use the No Heat Dry option whenever possible. Allow longer drying times (overnight). Use a rinse agent to improve drying.

Special tips on dishwasher use
If you have any doubts about a particular dish, check with the manufacturer to see if it is dishwasher safe.

NOTE: It is the user's responsibility to determine if dishes should be washed in a dishwasher.

Material	Dishwasher Safe?	Exceptions/Special Information
Aluminum	Yes	High water temperature and detergents may affect finish of anodized aluminum.
Bottles and Cans	No	Wash bottles and cans by hand. Labels attached with glue can loosen in your dishwasher. Loose labels and glue can clog spray arm(s) or the pump and will reduce washing performance.
Cast Iron	No	Seasoning will be removed and iron will rust.
China/ Stoneware	Yes	Always check manufacturer's recommendations before washing. Antique, hand-painted or over-the-glaze patterns may fade. Gold leaf may discolor or fade.
Crystal	Yes	Always check manufacturer's recommendations before washing. Some types of leaded crystal may etch with repeated washings.
Gold	No	Gold-colored flatware will discolor.
Glass	Yes	Milk glass will yellow with repeated dishwasher washing.
Hollow- Handle Knives	No	Handles of some knives are attached to the blade with adhesives which may loosen if washed in the dishwasher.
Pewter	No	High water temperatures and detergent may discolor or pit finish.
Disposable Plastics	No	Cannot withstand high water temperatures and detergents.
Plastics	Yes	Always check manufacturer's recommendations before washing. Plastics vary in their capacity to withstand high water temperatures and detergents.
Stainless Steel	Yes	Run a Rinse Only cycle (if available) if not washing immediately. Prolonged contact with food containing salt, vinegar, milk products, or fruit juice could damage finish.
Sterling Silver or Silver Plate	Yes	Run a Rinse Only cycle (if available) if not washing immediately. Prolonged contact with food containing salt, acid, or sulfide (eggs, mayonnaise and seafood) could damage finish.
Tin	No	May rust.
Wooden Ware	No	Wash by hand. Always check manufacturer's recommendations before washing. Untreated wood may warp, crack, or lose its finish.

# **Loading Your Dishwasher**

This section tells you how to properly load your dishwasher for the best washing and rinsing results.

# Preparing to load the dishwasher

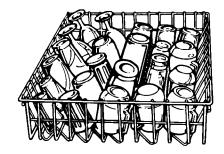
- Scrape leftover food, bones, toothpicks and other hard items from dishes.
- To save water and energy, do not rinse dishes before putting them into the dishwasher.
- Foods like eggs, rice, pasta, and cooked cereals may be hard to remove if they are left to dry over a period of time.
  - Run a Rinse Only cycle to keep dishes moist if you do not plan to wash them soon.
- Load dishes so soiled surfaces face the rotating spray arms.
- Load dishes so they are not stacked or overlapping. It is important for the water spray to reach all soiled surfaces for best washing. For best drying, water must be able to drain from all surfaces.

# Loading the top rack

The top rack is designed for cups, glasses, and other small items.

#### **Cup and glass load**

- Place so open ends face down for cleaning and draining.
- Load glasses in top rack only. The bottom rack is not designed for glasses. Damage may occur to glasses in bottom rack.
- Place items in the rows between prongs.
   Placing them over the prongs can lead to breakage.
- · Secure lightweight items.
- China, crystal, and other delicate items must not touch each other during dishwasher operation. Damage may occur.



Cup and glass load

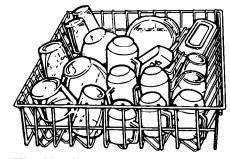
#### LOADING YOUR DISHWASHER

#### **Mixed load**

- Load plastic items in the top rack only.
   Only plastic items marked "dishwasher safe" are recommended.
- Load plastic items so the force of the spray does not move them during the cycle.
- Plastic items might melt in the bottom rack.

#### **Utensil** load

 Small bowls, pans and other dishes can be placed in the top rack.



Mixed load

### Loading the bottom rack

Items with cooked-on or dried-on food should be loaded in the bottom rack, with soiled surfaces facing inward to the spray.

#### Mixed load

- Make sure pot handles and other items do not stop rotation of the lower spray arm.
   Spray arm must move freely.
- Load items so they do not block or cover the spray tower.
- Securely place heavily soiled cookware face down in rack.

#### Dish load

- Place plates, soup bowls, etc., between prongs and facing inward to the spray.
- Do not place items directly over spray tower.

# Mixed load

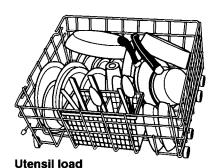
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#### **Utensil** load

 Load cookie sheets, cake pans and other large items at sides and back. Loading such items in front may keep water spray from reaching detergent dispenser.

#### NOTE:

- Do not load glasses, cups or plastic items in the bottom rack.
- When lower rack is removed, replace with bumpers in front.
- Do not load items between the bottom rack and the side of the dishwasher tub. This can block the water inlet opening.



# Loading the silverware basket

#### AWARNING



#### **Cut Hazard**

Load sharp items (knives, forks, skewers, etc.) with the point down. Failure to do so can cause serious cuts.

 Load the silverware basket while in the bottom rack or take the basket out for loading on a counter or table.

**NOTE:** The loaded basket must be placed in the center front of the bottom rack for proper washing.

Some of the load may not be completely washed if the loaded silverware basket is placed in a different location.

- The basket can also be removed for easy unloading. Always unload or remove the basket before unloading the racks to avoid spilling water droplets on the silverware.
- Mix items in each section of the basket with some pointing up and some down to avoid nesting. Spray cannot reach nested items. However, always load sharp items (knives, skewers, forks, etc.) pointing down.
- Small items (baby bottle caps, jar lids, etc.) can be put in any section.



# **Caring for Your Dishwasher**

Your new dishwasher is designed to give you many years of dependable service. There are a few things you can do to maintain your dishwasher properly. This section tells you how to clean and care for your dishwasher. Refer to "Common Dishwashing Problems" on pages 18-20 for special cleaning problems.



#### **Burn Hazard**

Before cleaning interior or filter screen, wait at least 20 minutes after a cycle for the heating element to cool down.

Failure to do so can result in burns.

# Cleaning the exterior

In most cases, regular use of a soft, damp cloth or sponge and a mild detergent is all that is necessary to keep the outside of your dishwasher nice looking and clean.

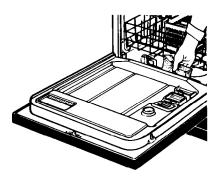


# **Cleaning the interior**

Hard water minerals may cause a white film to build up on the inside surfaces, especially just beneath the door area. To clean interior:

- Apply powdered dishwasher detergent to a damp sponge to make a paste.
  - OR
- Use liquid automatic dishwasher detergent and clean with damp sponge.

Wear rubber gloves. **Do not** use any type of cleanser other than dishwasher detergent because it may cause foaming or sudsing.



# **Overfill protector**

The overfill protector (in the front right corner of the dishwasher tub) keeps the dishwasher from overfilling. It must be in place for the dishwasher to operate.

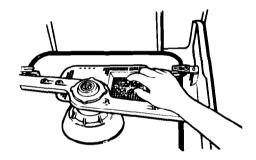
Check under the float for objects that may keep the protector from moving up or down.



# Cleaning the filter screen

Clean the filter screen when needed.

- Unload and slide the bottom rack forward. (Remove bottom rack if necessary to reach filter screen.)
- 2. Remove collected particles from the screen with your fingers or paper towel.
- **3.** Return the bottom rack to original position.



# **Common Dishwashing Problems**

#### **Solution chart**

A convenient checklist for handling minor performance problems. Go over this list before calling for service. If you are unable to solve your dishwasher's problem, turn to page 21 for "Troubleshooting." If you still need help, see page 22 for service information.

PROBLEM	CAUSE	SOLUTION
Food Soil Left on Dishes	Improper loading	Follow loading instructions on pages 13-15.
	Water temperature is too low	If needed, turn home water heater up to ensure water entering dishwasher is 120°F minimum. See recommended procedure on page 11.
	Use of incorrect, too little, or ineffective detergent	Use recommended dishwasher detergents only. Follow recommendations on pages 8 and 9 for amounts; never use less than one tablespoon per load. Detergent must be fresh to be effective. Always store detergent in a cool, dry area, preferably in an airtight container.
	Detergent cakes in dispenser	Use fresh detergent only. Do not allow detergent to sit for several hours in a wet dispenser. Check dispenser for caked detergent. Clean dispenser when caked detergent is present.
	Pump or spray arm clogged by labels from bottles and cans	Wash bottles and cans by hand. See page 12. Clean filter screen. See page 17.
	Low water pressure caused by insufficient fill	Home water pressure should be 20 to 120 psi for proper dishwasher fill. A booster pump on the water supply may be necessary if pressure is too low.
	Slowdown of wash arm due to high suds	Never use soap or laundry detergents. Use recommended dishwasher detergents only.
Spotting and Filming	Hard water or high mineral content in water	Conditioning the final rinse water with a liquid rinse agent helps eliminate spotting and filming. Keep the dispenser filled with a rinse agent at all times.
	Water temperature is too low	If needed, turn home water heater up to ensure water entering dishwasher is 120°F minimum. See recommended procedure on page 11.
	Use of incorrect detergents	Use recommended dishwasher detergents only.

#### COMMON DISHWASHING PROBLEMS

PROBLEM	CAUSE	SOLUTION
Spotting and Filming (continued)	Incorrect amount of detergent	Follow recommendations on pages 8 and 9 for amount. Heavy soil and/or hard water generally require extra detergent.
	Use of ineffective detergents	Detergent should be fresh. Store in a cool, dry place, preferably in an airtight container. Discard lumpy detergent.
	Insufficient fill caused by low water pressure	Home water pressure should be 20 to 120 psi for proper dishwasher fill. A booster pump on the water supply may be necessary if pressure is too low.
Dishes Do Not Dry Completely	Dishes do not drain properly  Plastics	Dishes must have proper water drainage. Do not overload. Follow instructions for loading dishwasher on pages 13-15. Use a liquid rinse agent to speed draining. Some plastics, due to material, may need to be towel dried.
Silica Film or Etching (Silica Film is a White Irides- cent Deposit; Etching is a Cloudy Film)	A water chemical reaction with certain types of glassware. Usually caused by some combination of soft or softened water, alkaline washing solutions, insufficient rinsing, over-loading the dishwasher, and heat of drying.	It may not be possible to prevent problem, except by hand-washing. To retard this process, use a minimum amount of detergent but not less than one tablespoon per load. Use a liquid rinse agent and underload the dishwasher to allow thorough rinsing. Silica film and etching are permanent and can not be removed. Use the No Heat Dry option.
Black or Gray Marks on Dishes	Aluminum items	Aluminum items should be loaded so that they will not rub against dishes during washing. Throw-away aluminum items should not be washed in the dishwasher because they may break down and cause marking. Aluminum markings can be removed by using a mild abrasive cleanser.
Brown Stains on Dishes and Dish- washer Interior	High iron content in water supply	Remove by washing dishes (after food soil has been removed) with 1 teaspoon to 1 tablespoon of citric acid crystals added to covered section of detergent dispenser. Do not use detergent, use the Normal Wash cycle. Follow with a Light Wash cycle with detergent. If treatment is needed more than every other month, the installation of an iron removal unit is recommended.

#### **COMMON DISHWASHING PROBLEMS**

PROBLEM	CAUSE	SOLUTION
Orange Stains on Dishwasher Interior	Large amounts of tomato-based foods on dishes placed in the dishwasher	Stains may gradually fade over time. Regular use of Heated Dry option may cause stains to fade slower. Stains will not affect dishwasher performance. Regular use of the Rinse Only cycle, with No Heat Dry option for partial loads, will reduce the likelihood of staining.
White Spots on Cookware with Non-Stick Finish	Seasoning removed by dishwasher detergents	Reseason cookware after dishwasher washing.
Odor in the Dish- washer	Dishes only washed every two to three days	Run a Rinse Only cycle at least once or twice a day until a full load is accumulated.
Chipping of Dishes	Improper loading	Load dishes and glasses so that they are stable and do not strike together from washing action. Moving racks in and out smoothly will also minimize chipping.
		NOTE: Some types of china and glass- ware are too delicate for automatic dishwashing and should be hand- washed; for example: antiques, feather-edged crystal and similar types.

# Removing spots and film

Keep the rinse agent dispenser filled with a

liquid rinse agent. A rinse agent prevents water from forming droplets and drying as spots or streaks.

To remove spots and film on dishes and glasses, or hard water film/ lime buildup on the interior of the dishwasher, you may use white vinegar with the following procedure:

 Load clean dishes and glasses in dishwasher (see pages 13-15). Do not load silverware or other metals in the dishwasher.

- 2. Put two cups of household vinegar (in a glass or dishwasher safe measuring cup) standing upright in the bottom rack.
- 3. Close and latch the door.
- 4. Select the Normal Wash cycle and No Heat Dry option. Do not use detergent. Allow the dishwasher to complete the entire cycle.

**NOTE:** This cleaning procedure is intended for occasional use only. Vinegar is an acid. Excessive use may damage your dishwasher.

# **Troubleshooting**

**Before calling for assistance** please check the chart below for problems you can fix. It could save you the cost of a service call.

# **Dishwasher problems**

PROBLEM	CHECK THE FOLLOWING
Dishwasher does	Is the door tightly closed and securely latched?
not run or stops during a cycle	Has the cycle been set correctly? See page 5.
3 ,	Has a household fuse blown or circuit breaker tripped?
	If the motor stopped because of an overload, it will automatically reset itself within a few minutes. If it does not start, call for service.
	Is the water supply turned on?
	Is the dishwasher wired into a live circuit with the proper voltage?
Dishwasher will not fill	Is the overfill protector stuck in "up" position? Overfill protector should move up and down freely. Press down to release. See page 17.
Water remains	Allow cycle to finish. A small amount of water remaining is normal.
in dishwasher	Check the drain air gap (if installed). If it is clogged, follow the manufacturer's cleaning instructions.
Detergent remains	Has the cycle completed?
in covered section of dispenser	Is the detergent fresh and dry without lumps? See pages 8 and 9.
	Is the bottom rack in backwards? The rack bumpers must face the dishwasher door.
Dishes not as dry as you expected	Is the rinse agent dispenser empty? Using a rinse agent greatly improves drying. See pages 9 and 10.
	Do not use No Heat Dry option on the next load. See page 8.
White residue appears on front	Is too much detergent being used? See pages 8 and 9 for recommended amounts of detergent.
of access panel	Some liquid detergents develop excess foam and residue on panel. Try a different brand to reduce foaming and eliminate buildup.
Dishwasher will not close	Is the bottom rack in backwards? The rack bumpers must face the dishwasher door.

# Requesting Assistance or Service

Before calling for assistance or service, please check "Troubleshooting" on page 21. It may save you the cost of a service call. If you still need help, follow the instructions below.

#### 1. If you need assistance\* ...

Call the Whirlpool Consumer Assistance
Center telephone number.
Dial toll-free from anywhere
In the U.S.A.:

1-800-253-1301

and talk with one of our trained consultants. The consultant can instruct you in how to obtain satisfactory operation from your appliance or, if service is necessary, recommend a qualified service company in your area.

If you prefer, write to:

Mr. William Clark Consumer Assistance Representative Whirlpool Corporation 2000 North M-63 Benton Harbor, MI 49022-2692

Please include a daytime phone number in your correspondence.

#### 2. If you need service\* ...

Whirlpool has a nationwide network of



authorized service companies. Whirlpool service technicians are trained to fulfill the product warranty and provide afterwarranty service, anywhere in the United States. To locate

the authorized Whirlpool service company in your area, call our Consumer Assistance Center telephone number (see Step 1) or look in your telephone directory Yellow Pages under:

- •APPLIANCE-HOUSEHOLD-MAJOR, SERVICE & REPAIR
- See: Whirlpool Appliances or Authorized Whirlpool Service (Example: XYZ Service Co.)
- WASHING MACHINES & DRYERS, SERVICE & REPAIR
- See: Whirlpool Appliances or Authorized Whirlpool Service (Example: XYZ Service Co.)

# 3. If you need FSP® replacement parts ...

FSP is a registered trademark of Whirlpool Corporation for quality parts. Look for this symbol of quality whenever you need a replacement part for your ESTATE® appliance. FSP replacement parts will fit right and work right, because they are made to the same exacting specifications used to build every new ESTATE appliance.

To locate FSP replacement parts in your area, refer to Step 2 or call the Whirlpool Consumer Assistance Center number in Step 1.

# 4. If you are not satisfied with how the problem was solved ...

- Contact the Major Appliance Consumer Action Program (MACAP). MACAP is a group of independent consumer experts that voices consumer views at the highest levels of the major appliance industry.
- Contact MACAP only when the dealer, authorized servicer, and Whirlpool have failed to resolve your problem.

Major Appliance Consumer Action Program 20 North Wacker Drive Chicago, IL 60606

MACAP will in turn inform us of your action.

#### \* When asking for help or service:

Please provide a detailed description of the problem, your appliance's complete model and serial numbers, and the purchase date. (See page 2.) This information will help us respond properly to your request.

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# ESTATE® Dishwasher Warranty

LENGTH OF WARRANTY	WHIRLPOOL WILL PAY FOR
FULL ONE-YEAR WARRANTY From Date of Purchase	FSP® replacement parts and repair labor to correct defects in materials or workmanship. Service must be provided by an authorized Whirlpool service company.
FULL TEN-YEAR WARRANTY From Date of Purchase	FSP replacement parts and repair labor for the DURAPERM™ tub and/or inner door should they fail to contain water due to defective materials or workmanship. Service must be provided by an authorized Whirlpool service company.

#### WHIRLPOOL WILL NOT PAY FOR

#### A. Service calls to:

- 1. Correct the installation of your dishwasher.
- 2. Instruct you how to use your dishwasher.
- 3. Replace house fuses or correct house wiring or plumbing.
- **B.** Repairs when your dishwasher is used in other than normal, single-family household use.
- **C.** Pickup and delivery. Your dishwasher is designed to be repaired in the home.
- **D.** Damage to your dishwasher caused by accident, misuse, fire, flood, acts of God, or use of products not approved by Whirlpool.
- **E.** Repairs to parts or systems caused by unauthorized modifications made to the appliance.

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WHIRLPOOL CORPORATION SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSE-QUENTIAL DAMAGES. Some states do not allow the exclusion or limitation of incidental or consequential damages, so this exclusion or limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Outside the United States, a different warranty may apply. For details, please contact your authorized Whirlpool dealer.

If you need service, first see the "Troubleshooting" section of this book. After checking "Troubleshooting," additional help can be found by checking the "Requesting Assistance or Service" section, or by calling our Consumer Assistance Center telephone number, 1-800-253-1301, from anywhere in the U.S.A.