



KOHLER®

SERVICE INSTRUCTIONS

SIPHON VORTEX LOW PROFILE ONE-PIECE TOILETS

INTRODUCTION

This service instruction will help you understand the operation and repair of Kohler low profile one-piece toilets.

The following models are included in these instructions:

K-3378-EB PILLOW TALK K-3383-EB PALARRE
K-3385-EB ROCHELLE K-3397-EB SAN RAPHAEL
K-3402-EB RIALTO K-3408-EB CABERNET

THEORY OF OPERATION

Consider how a low profile, one-piece toilet differs from the close-coupled toilet. All the water in a close coupled toilet is held in a tank that is above the rim of the bowl. Water to the rim and jet is supplied by gravity.

On the other hand, a one-piece toilet holds all the tank water below the rim of the bowl **as shown in Fig. #1.**

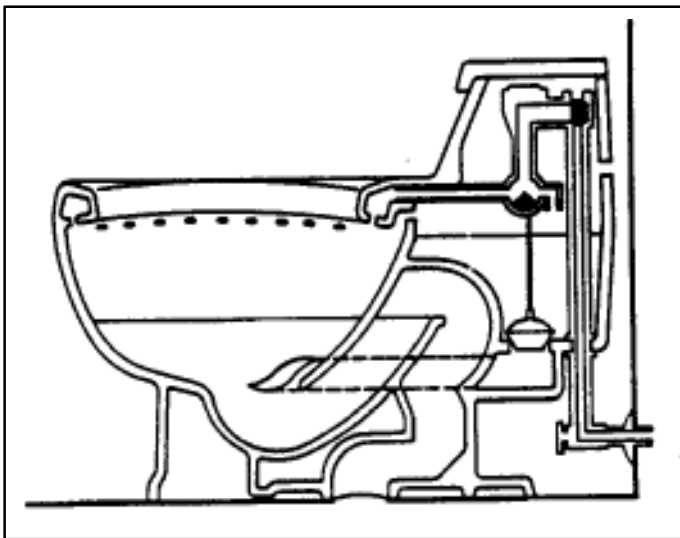


Fig. #1

When the trip lever is actuated, water enters the supply valve and flows to the diverter valve. At this point all line water is diverted to the rim. The tank water is only used to start the water action in the bowl, and to direct water to the upleg of the trapway to start the siphonic action **as illustrated in Fig. #2.**

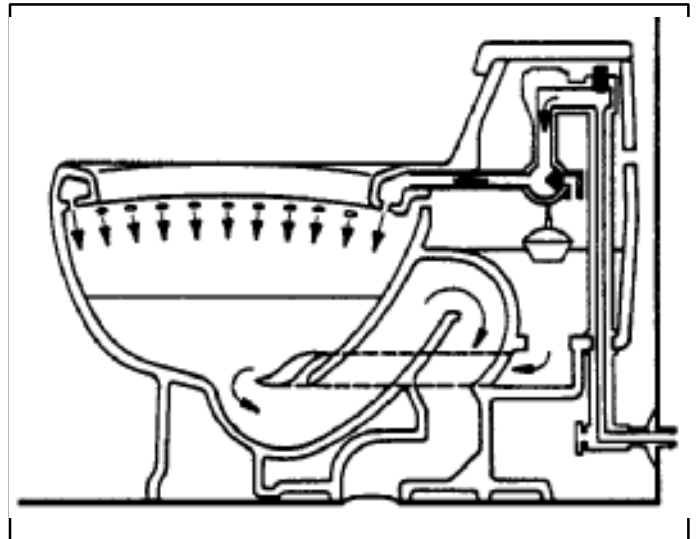


Fig. #2

After the flush is completed, the diverter valve directs water to the rim for bowl refill, and to the tank for tank refill.

Since water which only will be directed to the jet is stored in the tank, sufficient water to the rim must be supplied by the supply valve **as shown in Fig. #3.**

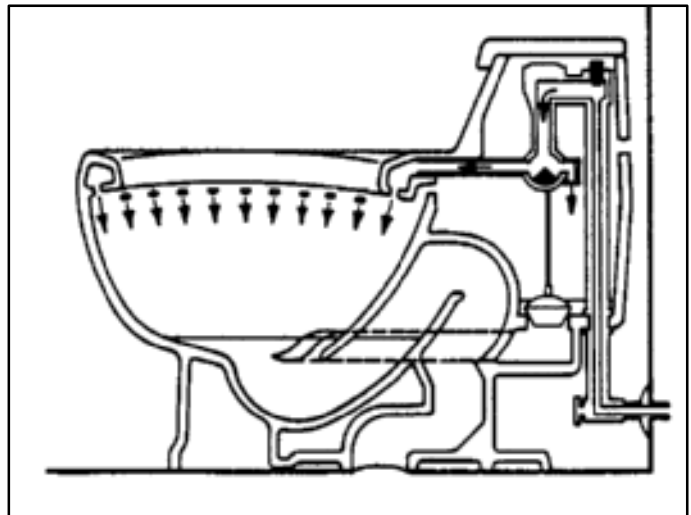
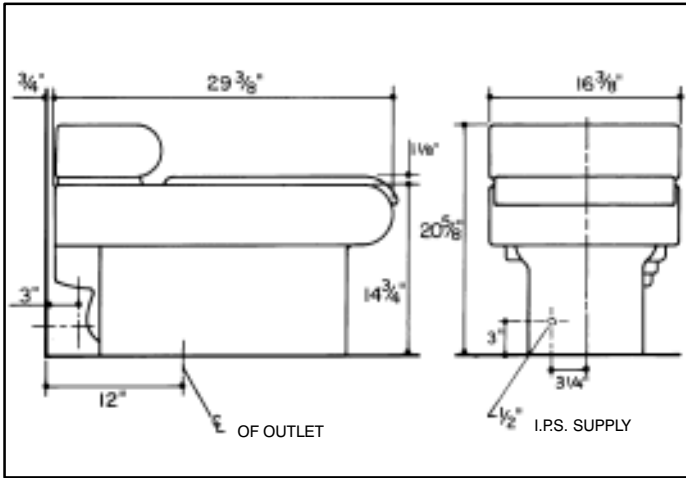
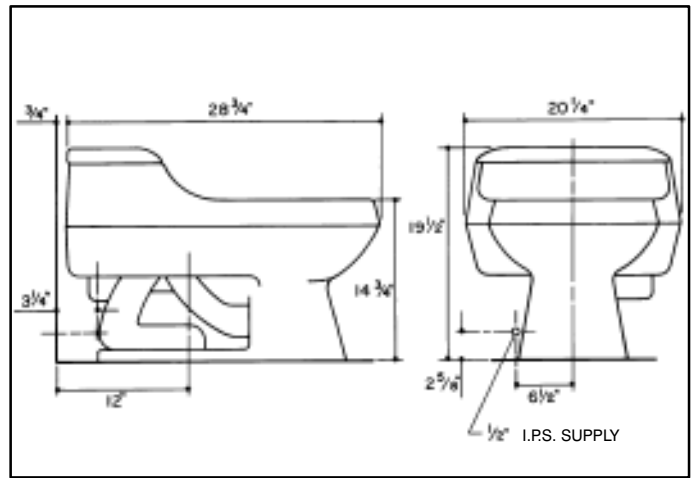


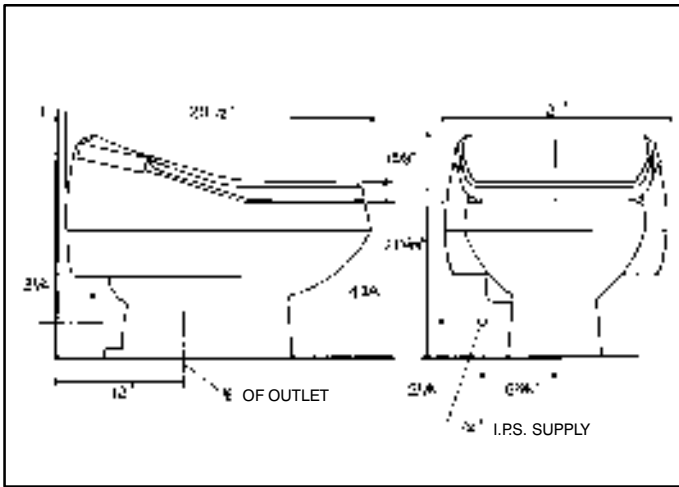
Fig. #3



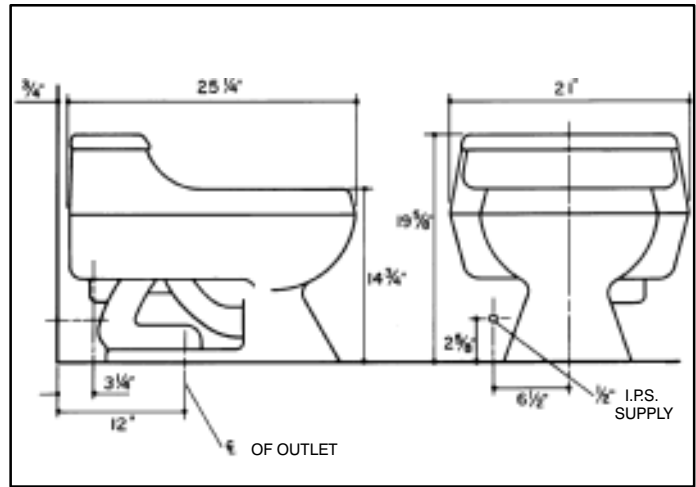
K-3378-EB Pillow Talk
Fig. #4



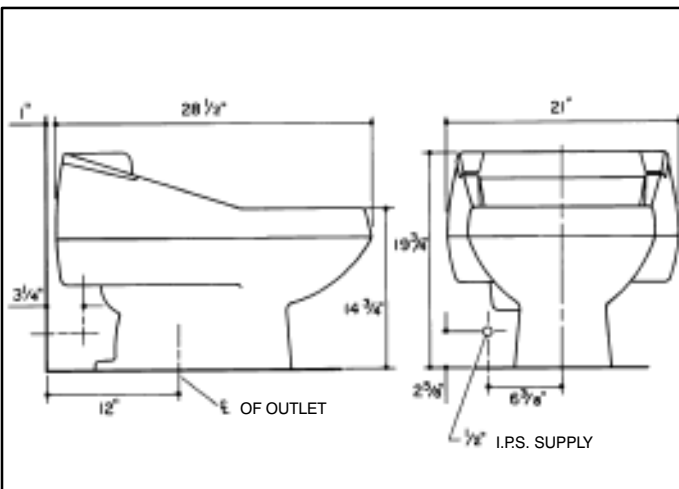
K-3397-EB San Raphael
Fig. #7



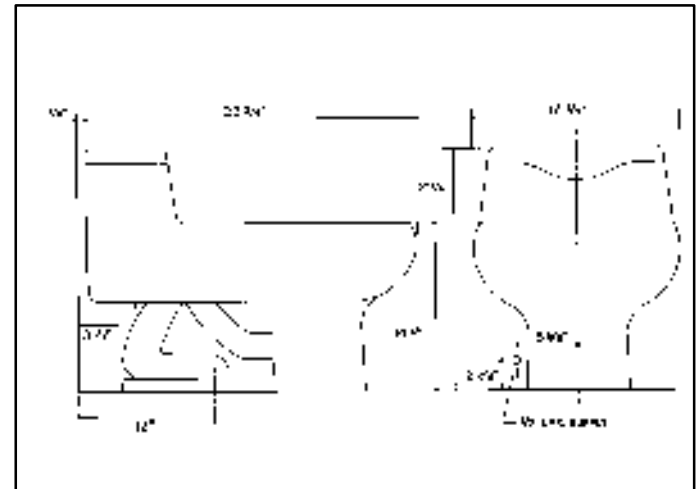
K-3383-EB Palarre
Fig. #5



K-3402-PB Rialto
Fig. #8



K-3385-EB Rochelle
Fig. #6



K-3408-EB Cabernet
Fig. #9

ROUGHING-IN AND INSTALLATION CONSIDERATIONS

Kohler low profile, one-piece toilets are perfect for remodeling and new installations. **Refer to the roughing-in drawings Figs. #4 – #9.**

Always refer to your local codes and the installation instructions packed with the toilet.

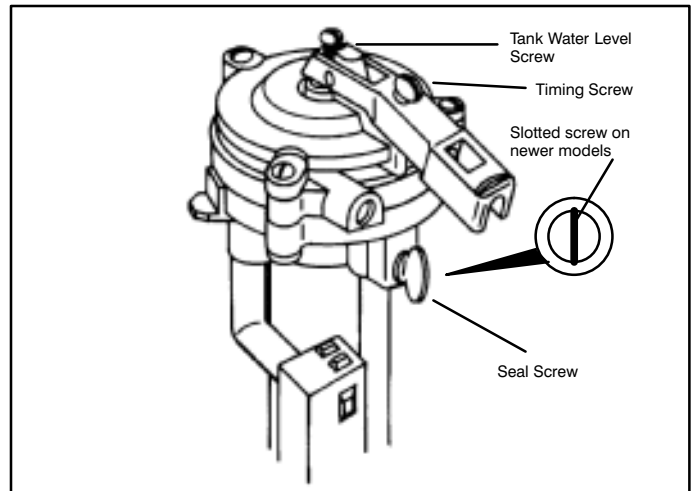
KOHLER LOW PROFILE ONE-PIECE TOILET FEATURES

- One-piece design offers contemporary styling.
- Elongated bowl offers a large water area for efficient waste removal.
- Non-overflow design prevents the bowl from overflowing if the toilet becomes clogged.
- Rialto, San Raphael, Cabernet, and Pillow Talk toilets flush with 3.5 gallons of water for greater economy.
- Twist-Lock flush valves on new Rialto, San Raphael, Cabernet, and Pillow Talk toilets offer ease of replacement with no tools.
- Siphon vortex action provides excellent flush and quiet operation.
- Large water area in bowl aids in effective waste removal.

START-UP AND OPERATION FOR RIALTO, SAN RAPHAEL, CABERNET, AND PILLOW TALK TOILETS

For most satisfactory operation of this toilet, 25 to 90 psi working pressure is required at the fixture. **A full 1/2" supply stop (K-7653) is recommended.** A plastic nut is provided with the toilet and must be used to make the supply connection to the toilet.

1. **Water Level Adjustment: Refer to Fig. #10.** Turn on the water supply to the toilet and adjust the water level in the tank to the Water Line mark on flush valve. To raise the water level, turn the tank water level on float valve counterclockwise. To lower the water level, turn the screw clockwise.
2. **Bowl Water Level Adjustment:** Use the trip chain to lift the flush ball in the tank slightly, to allow water to trickle into the bowl until the water level in the bowl stops rising. This is the "seal height" and should be noted for subsequent adjustment. Flush the toilet and observe the water level in the bowl after refill. If the water level is



Adjusting the Float Valve
Fig. #10

below seal height, turn the seal screw clockwise, reflush the toilet and recheck the water level. Continue adjustment until water stops entering the bowl just as the seal height is reached.

If water continues to flow (in bowl) after water level reaches seal height, turn seal screw counterclockwise and reflush toilet. Continue adjustment until water stops entering the bowl just as the seal height is reached.

3. **High Water Pressure Timing:** Note: If toilet is installed in an area with high water pressure (above 50 psi working pressure), the float valve should be timed. To time the float valve hold the float rod and flush the toilet. After the toilet has completed the flush, time the refill from release of rod to valve shut-off.

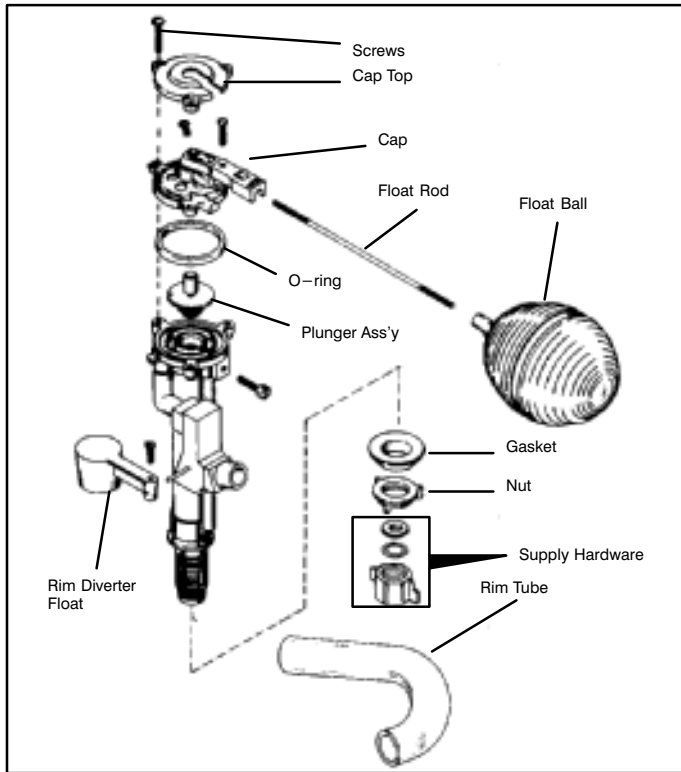
For K-3397-EB San Raphael, K-3378-EB Pillow Talk, and K-3408-EB Cabernet. If the time is longer than 34 seconds, no adjustment is required. If time is under 34 seconds, turn timing screw clockwise and recheck timing. Adjust timing screw until time is between 34 and 36 seconds. After timing the valve, recheck the bowl water level as in step #2, to ensure that seal is maintained.

For K-3402-PB Rialto. If the time is longer than 26 seconds, no adjustment is required. If time is under 26 seconds, turn timing screw clockwise and recheck timing. Adjust timing screw until time is between 26 and 28 seconds. After timing the valve, recheck the bowl water level as in step #2, to ensure that seal is maintained.

HOW TO REPAIR THE RIALTO, SAN RAPHAEL, CABERNET, AND PILLOW TALK FLOAT AND FLUSH VALVE.

INTRODUCTION

The following instructions are used to replace the plunger assembly on the flush valve for the San Raphael, Rialto, Cabernet, and Pillow Talk toilets. **Refer to Fig. #11.**

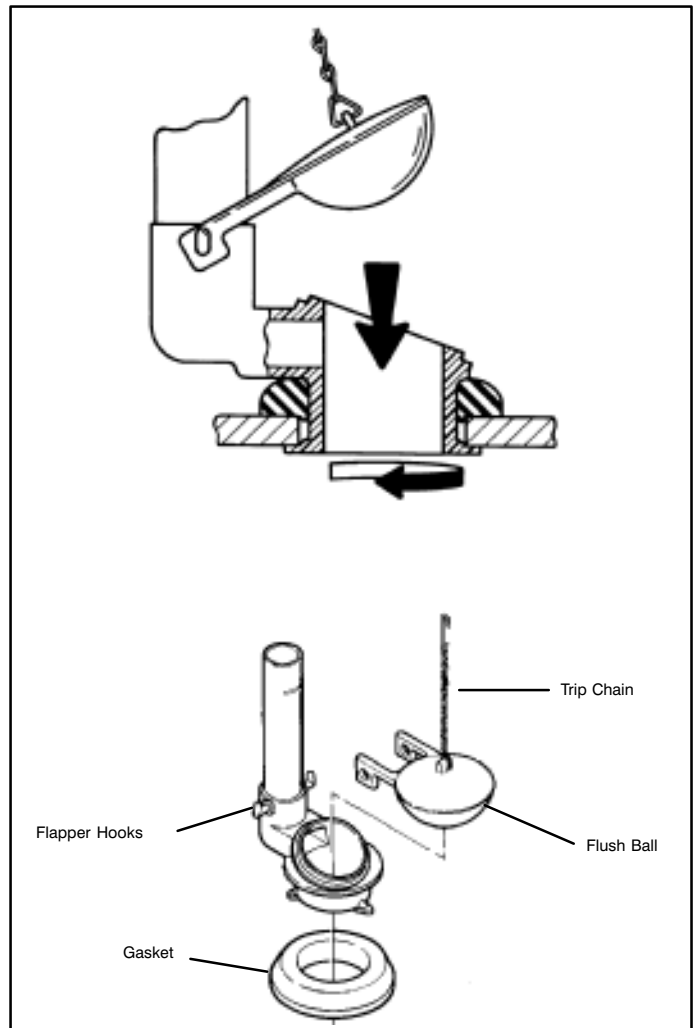


**Float Valve Assembly
Fig. #11**

1. Loosen the screws and remove the cap top and cap.
2. Replace the O-ring and plunger assembly.
3. Place the cap and cap top back on valve. Tighten with screws.

REPLACING THE TWIST-LOCK FLUSH VALVE

1. **Refer to Fig. #12.** Turn valve counterclockwise and remove.
2. To install new valve, apply a bead of silicone to the base of the gasket. Insert into hole inside tank. Press down and turn clockwise until valve is in proper position.



**Twist Lock Flush Valve
Fig. #12**

REPLACING THE OLD STYLE FLUSH VALVE (RIALTO AND SAN RAPHAEL ONLY)

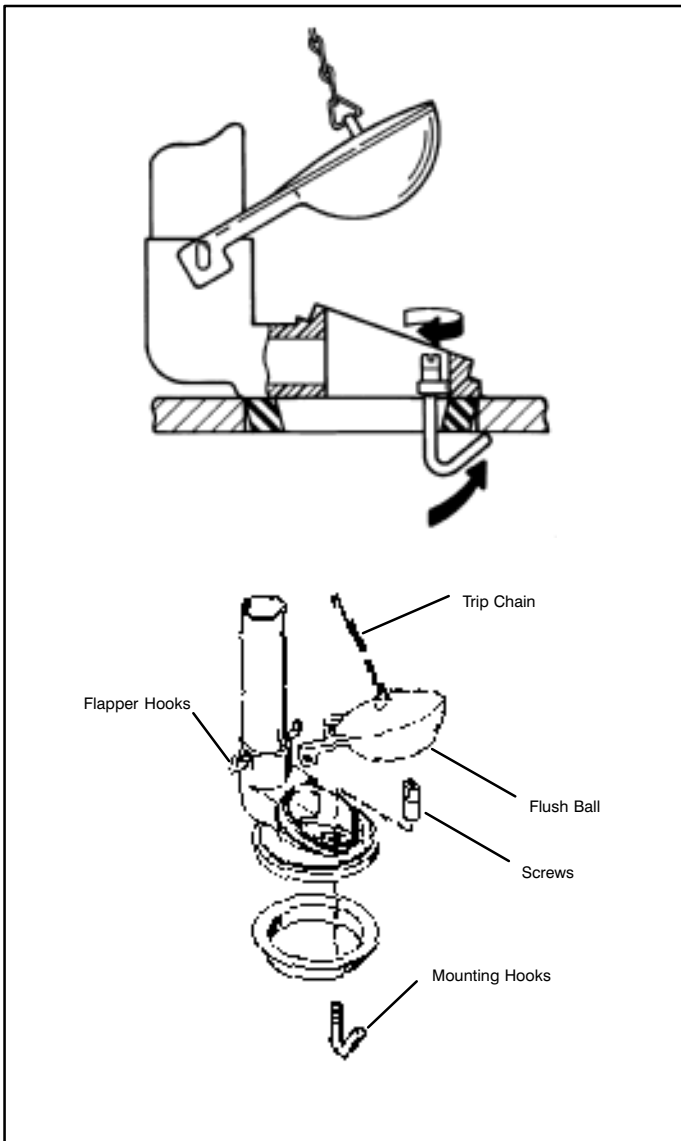
1. **Refer to Fig. #13.** Loosen three screws and turn mounting hooks inward. Remove flush valve.
2. Assemble gasket to new flush valve. Position new flush valve with three screws and mounting hooks into hole in tank. Make sure mounting hooks are turned inward. Turn mounting hooks outward and tighten screws.

NOTE: TOILETS WITH OLD STYLE FLUSH VALVES CAN NOT BE FITTED WITH THE NEW TWIST-LOCK VALVE.

START-UP AND OPERATION FOR ROCHELLE & PALARRE TOILETS

The trip lever assembly actuates the rotor and flush ball to begin flush.

The float valve assembly controls the flow of water through the rotor to the rim holes and tank. The adjusting screw



**Old Style Flush Valve
Fig. #13**

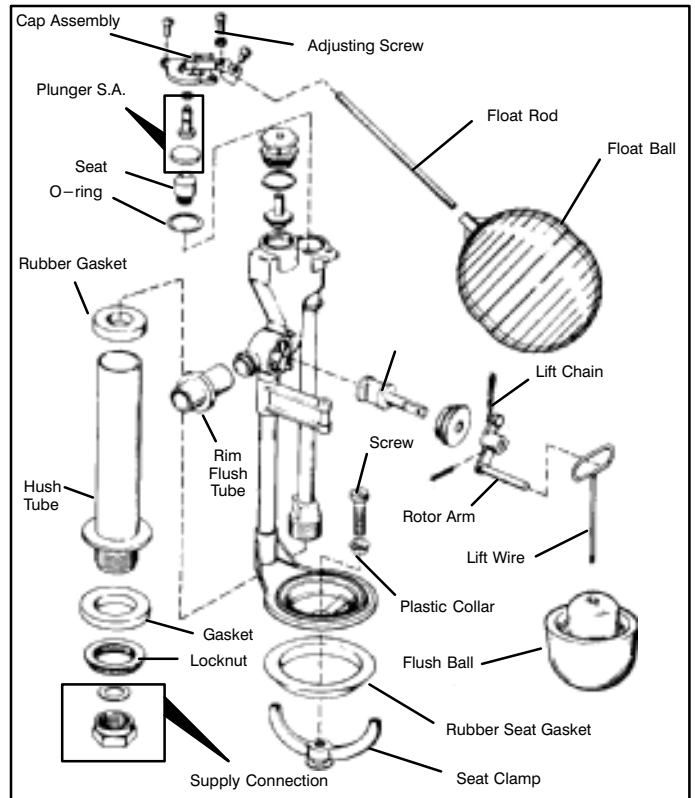
controls flow at various water pressures. An anti-siphon valve prevents backflow.

For most satisfactory operation of this toilet, 25 to 80 psi working pressure is required at the fixture. **A full 1/2" supply stop (K-7653) is recommended.** A pressure regulator is recommend when pressure exceeds 125 psi.

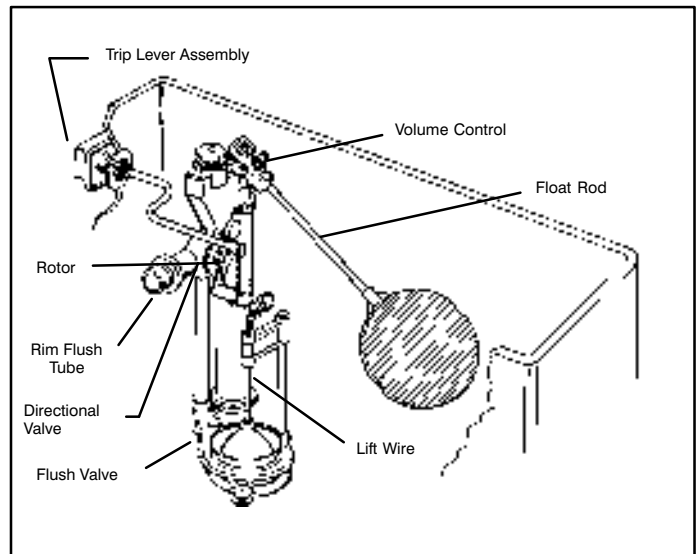
The flush valve controls the flow of water from tank to bowl. The flush ball and lift wire control valve operation at the end of the flush. The lift wire provides for the accurate seating of the flush ball.

BEFORE YOU BEGIN ADJUSTMENTS:

Refer to exploded view illustration (Fig. #14) and Fig. #15. Make sure you understand the following before you refer to the Troubleshooting Chart.



**Rochelle/Palarre Tank Fitting
Fig. #14**



**Trip Lever Tank Fitting Assembly
Fig. #15**

- **WATER LEVEL.** The water level must be at the waterline indicated at the back of the tank for proper flushing of bowl. Bend float rod if necessary to obtain the proper water level. The flush valve will not shut off if the water is above the overflow. If any pressure variation occurs in the supply line, adjust the water level when the water pressure is at its highest point.

- **VOLUME CONTROL.** If necessary, you can adjust the flow of water with adjusting screw. Decrease the flow by turning the screw downward or increase the flow by turning the screw upward. The screw must be locked after adjustment with the locknut.
- **TRIP LEVER ASSEMBLY.** When the trip lever arm is at rest, rotor arm should not contact bottom of lift chain. If necessary, bend trip lever arm downward to maintain clearance.
- **ROTOR ASSEMBLY.** The rotor arm should rest on the bottom of lift wire loop.

HOW TO SERVICE THE ROCHELLE AND PALARRE TOILETS

The following instructions are used to replace the valve assembly of the K-4859-EB Palarre and K-3385-EB Rochelle.

Before beginning replacement procedures, turn off water supply. Flush the toilet to drain water from tank.

REPLACING THE PLUNGER AND SEAT ASSEMBLY ON EXISTING VALVE.

1. Turn off water supply. Remove cap assembly by unscrewing the two cap screws. Remove plunger assembly and old O-ring.
2. From inside the valve, remove old seat with a seat wrench.
3. Thread in new seat. Insert new plunger sub-assembly in order shown in **Fig. #14**. Assemble new O-ring to cap and reassemble valve. Turn on water.

REMOVING OLD FLUSH VALVE

1. Turn off water supply. Disconnect float ball from float rod.
2. Loosen locknut securing supply tube to tank.
3. Remove trip lever chain from trip lever.
4. Loosen screw in valve seat until seat clamp falls off.
5. Remove flush valve assembly.

INSTALLATION OF NEW FLUSH VALVE

1. **Refer to Figs. #14 and #15.** Insert lift wire through hole in guide. Insert rotor arm into lift wire. Thread rotor assembly into valve body.

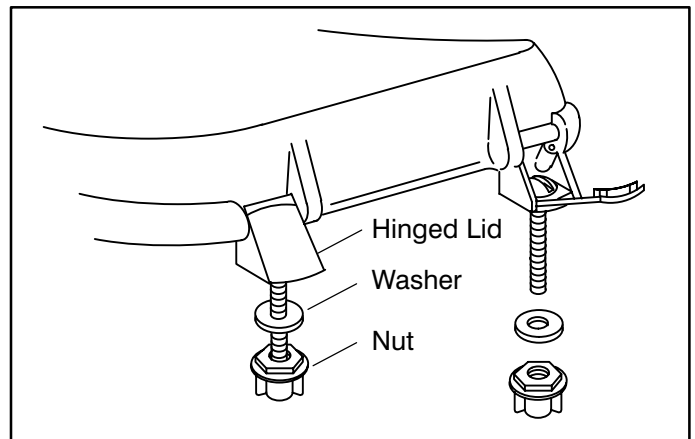
2. Place long end of rim flush tube over rim flush opening on valve.
3. Assemble rubber seat gasket onto seat.
4. Thread rubber gasket onto hush tube. Slide hush tube over supply tube.
5. Set the seat clamp into center of tank outlet hole.
6. **Refer to Fig. #15.** Place valve into tank, making sure that the rim flush tube is inserted into the rim flush supply; supply tube is through open supply hole in bottom of tank; and the clamp screw hole aligns with the opening in the seat clamp.
7. With plastic collar on screw insert, thread in seat clamp and tighten.
8. Attach flush ball to lift wire.
9. Assemble locknut to hush tube. Tighten locknut.
10. Insert float rod into float guide. Insert float ball.

NOTE: Adjust float rod to obtain the correct water level. For proper timing, turn the timing screw downward to decrease flow or upward to increase flow.

11. Reconnect flush valve to the water supply. Turn on supply.

SERVICING THE FRENCH CURVE TOILET SEAT (NEW STYLE, K-4653)

1. Locate and snap open the two hinged lids that cover the bolt holes **as shown in Fig. #16**.

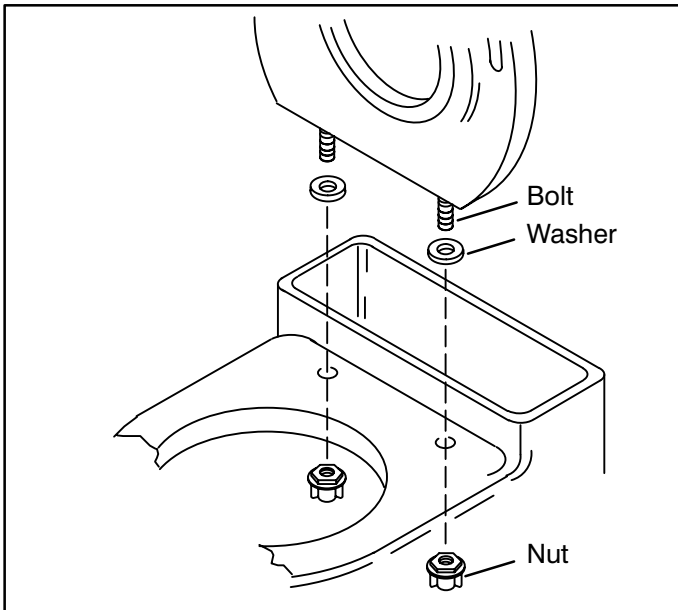


French Curve Seat Removal

Fig. #16

2. **TO REMOVE SEAT.** Unscrew the bolts and catch the nuts from below. Pull seat and bolts away from toilet. Remove the washers from the toilet.
3. **TO REATTACH SEAT.** Locate and snap open the two hinged lids that cover the bolt holes. Slip bolts through hinge from above. Slide washers onto mounting bolts.

- Place seat on toilet, centering the seat/cover bolts in bolt holes **as shown in Fig. #17.**

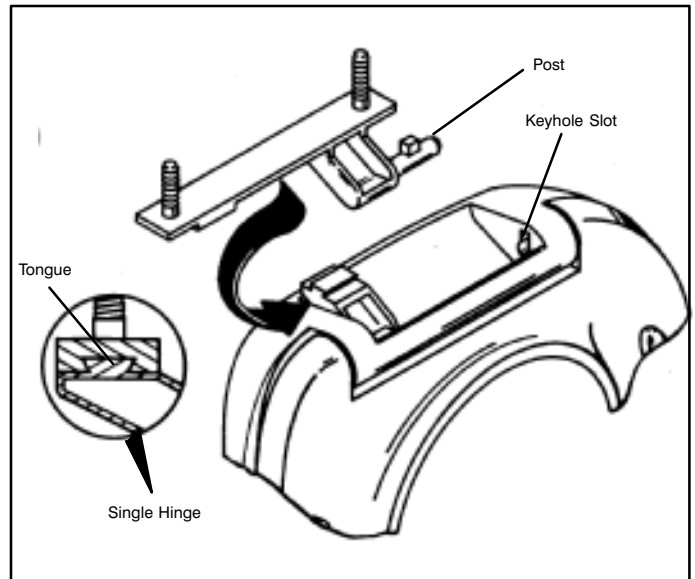


**French Curve Seat Installation
Fig. #17**

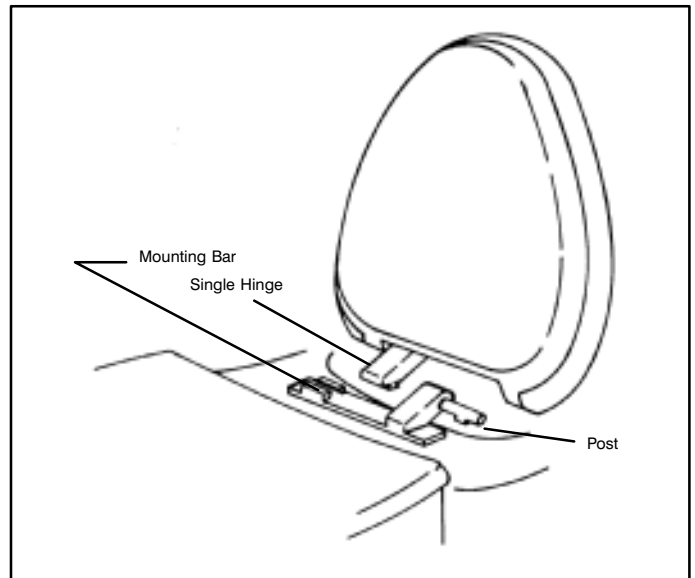
- Align the nut on the seat/cover bolt.
- After nut has been started on bolt, hold the nut in place and drive the bolt from the top with a screwdriver until tight.
- Snap the hinged lids closed.

SERVICING THE FRENCH CURVE TOILET SEAT (OLD STYLE)

- Locate the single hinge. Align the post with the keyhole in the seat and cover **as shown in Fig. #18.**
- TO REMOVE FOR CLEANING.** Lift seat and cover. Slide to the left and remove.
- TO REATTACH SEAT.** Hold seat and cover in vertical position. Align tongue of the single hinge with groove in the mounting bar. Slide assembly sideways so tongue enters groove and post enters keyhole at the same time, **as shown in Fig. #19.**



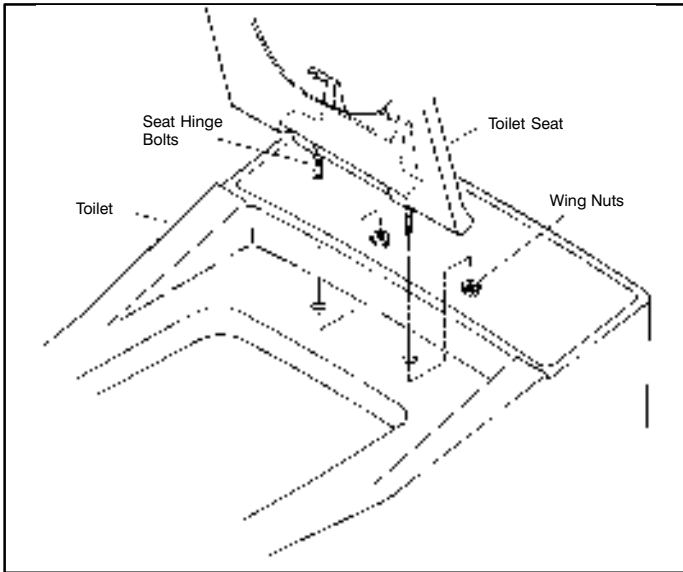
**French Curve Seat Removal
Fig. #18**



**Reattaching the French Curve Seat
Fig. #19**

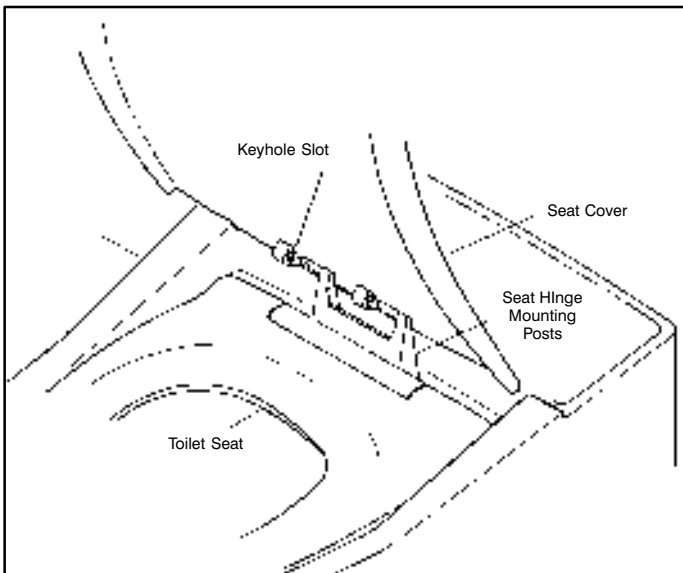
SERVICING THE PALARRE TOILET SEAT

1. Insert the seat hinge bolts through the holes in the toilet bowl ledge and secure with two wing nuts **as shown in Fig. #20**.



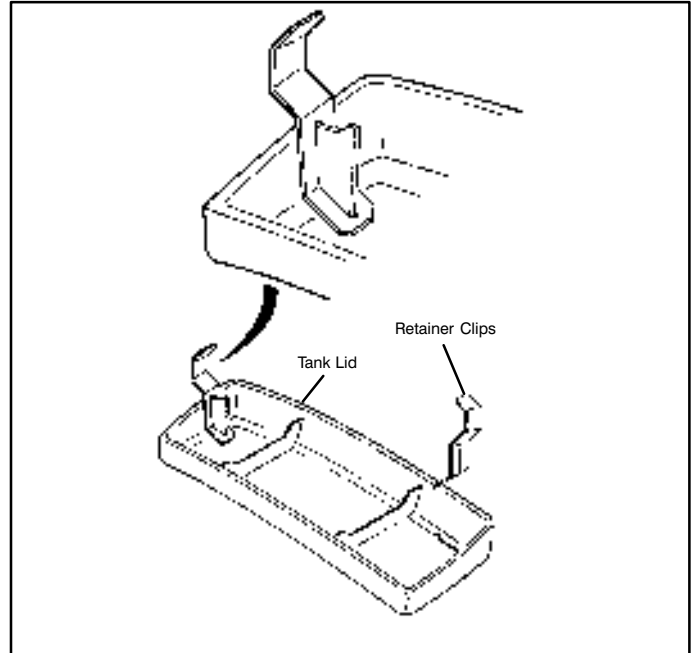
Assembling the Palarre Seat
Fig. #20

2. **Refer to Fig. #21.** Hold the cover at approximately a 45 degree angle and align the keyhole slot in the seat cover with the key in the seat hinge mounting posts. Slide the posts all the way through the mounting holes. The seat should move up and down freely.



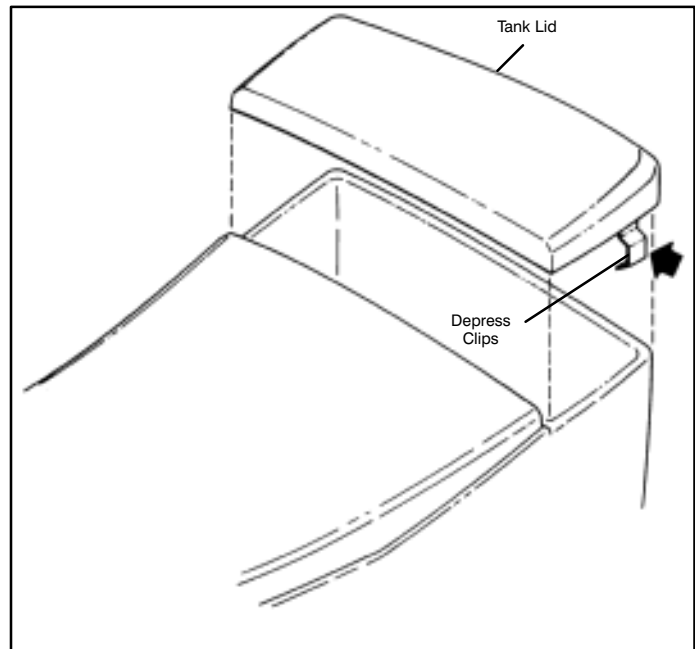
Assembling the Palarre Seat Cover
Fig. #21

3. For old style tank lids, install tank lid retainer clips to the tank lid **as shown in Fig. #22**.



Tank Retainer Clip Assembly (old style)
Fig. #22

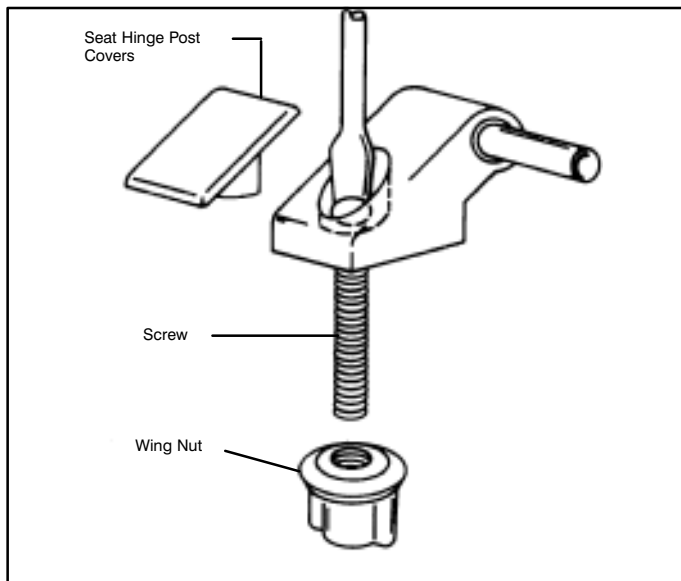
4. **Refer to Fig. #23.** Install the tank lid assembly to the toilet while depressing the tank lid retainer clips.



Installing the Palarre Tank Cover (old style)
Fig. #23

LUSTRA SEAT REMOVAL

1. Refer to Fig. #24. Pry up seat hinge post covers and loosen screws. Remove wing nuts.

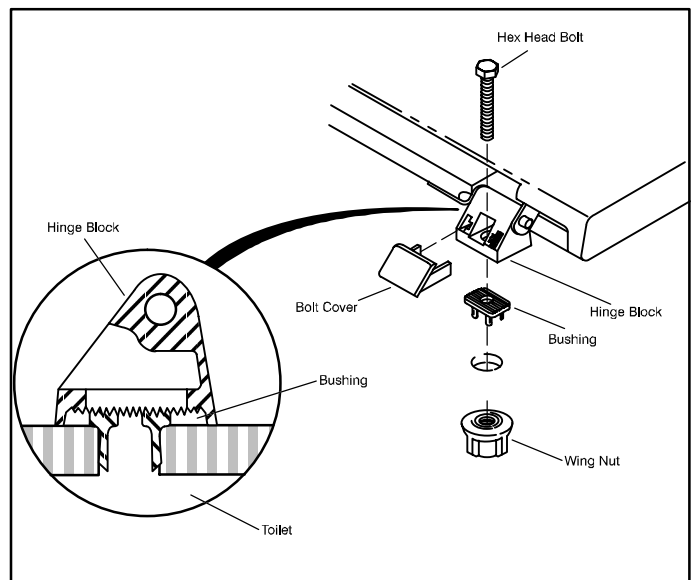


Lustra Seat Removal
Fig. #24

2. Remove seat from toilet.

PILLOW TALK SEAT REPLACEMENT

1. Refer to Fig. #25. To install Pillow Talk toilet seat, slide hex head bolts through holes in the two hinge blocks. Slide bushings onto bolts.
2. Notice that the bushing and hinge block are serrated. This allows you to adjust the toilet seat to the correct position before tightening. Place toilet seat onto toilet by inserting the hinge block/bushing assemblies through the two holes on the toilet. Once the bushings are inserted into the holes the toilet seat can be adjusted. Adjust hinge block/bushing forward or backward until seat position is correct. Make sure the seat is placed squarely on the toilet.
3. Thread wing nuts onto hex head bolts from underside of toilet. An indentation on the hinge block will prevent the hex head bolt from turning when the wing nut is tightened.
4. Attach bolt covers as shown.



Pillow Talk Seat Replacement
Fig. #25

GENERAL TOILET TROUBLESHOOTING (ALL MODELS)

If toilet won't shut off or is leaking, perform the following procedure for initial troubleshooting, then refer to the appropriate chart on the following pages.

1. Shut off water supply. Note the water line inside the tank.
2. Wait at least an hour and recheck the water level.
3. If the water level is at the top of the toilet's overflow tube or has not dropped, the water level may be too high, or

the float valve may not be shutting off. Refer to the appropriate chart on the following pages.

the base of the flush valve, or within the china water closet. Refer to the appropriate chart on the following pages.

4. If the water level has dropped below the water line, check for leaks. Sources of leaks may be at the flapper,

5. Turn on water supply after performing repairs.

TROUBLESHOOTING GUIDE FOR RIALTO, SAN RAPHAEL, PILLOW TALK AND CABERNET

SYMPTOMS	PROBABLE CAUSE	CORRECTIVE ACTION
Poor flush.	<ul style="list-style-type: none"> A. Low tank water level. B. Supply stop not fully open. C. Low bowl water level. D. Water pressure below 30 psi. 	<ul style="list-style-type: none"> A. Check water level in tank, adjust per start-up instructions. B. Fully open supply stop. C. Adjust per start-up instructions. D. Increase running water pressure.
Poor rim wash.	<ul style="list-style-type: none"> A. Same as A, B, C, D for poor flush. 	<ul style="list-style-type: none"> A. Same as A, B, C, D for poor flush.
Toilet does not shut off but water is not flowing into the overflow.	<ul style="list-style-type: none"> A. Defective flush ball. B. Defective or dirty flush valve gasket. C. Leaky float valve seat. 	<ul style="list-style-type: none"> A. Replace flush ball. B. Clean or replace flush valve gasket . C. Replace seat washer.
Toilet does not shut off and water is flowing into the flush valve overflow.	<ul style="list-style-type: none"> A. High water level in tank. B. Leaky float ball. 	<ul style="list-style-type: none"> A. Adjust water level. (See start-up instructions.) B. Replace float ball.
Bowl seal does not recover.	<ul style="list-style-type: none"> A. Seal screw needs adjusting. 	<ul style="list-style-type: none"> A. Adjust seal screw per start-up instructions. <p>NOTE: May be caused by temporary reduced water pressure.</p>
Toilet leaves an odor.	<ul style="list-style-type: none"> A. Toilet is dirty. B. Crack in bowl allows sewer gas into the room. 	<ul style="list-style-type: none"> A. Clean rim holes, bowl, and trapway with disinfecting bowl cleaner. B. Replace toilet.
Toilet overflows.	<ul style="list-style-type: none"> A. Toilet is clogged. 	<ul style="list-style-type: none"> A. Use plunger to unclog toilet.
Excessive noise.	<ul style="list-style-type: none"> A. High pressure/high flow rate B. Seal screw not correctly adjusted. C. Plunger needs lubrication. D. Plunger needs replacing. 	<ul style="list-style-type: none"> A. Partially close supply stop. B. Check water seal, readjust per start-up instructions. C. Lubricate plunger with silicone lube. D. Replace plunger.

TROUBLESHOOTING GUIDE FOR ROCHELLE AND PALARRE

SYMPTOMS	PROBABLE CAUSE	CORRECTIVE ACTION
Poor flush.	<ul style="list-style-type: none"> A. Water pressure is below 25 psi. B. Water level in tank is too low. C. Volume control is not adjusted properly. D. Supply stop is not open. E. Full 1/2" supply NOT installed. F. Rim flush tube is disconnected. G. Trapway or rim holes are clogged. 	<ul style="list-style-type: none"> A. Increase running water pressure. B. Bend float rod up slightly. C. Increase flow by turning adjusting screw counterclockwise. D. Fully open supply stop. E. Install full 1/2" supply. F. Reconnect rim flush tube. G. Unclog trapway or clean out rim holes.
Valve does not shut off.	<ul style="list-style-type: none"> A. Water pressure is over 125 psi. B. Foreign matter has adhered to seat or seat washer. C. Worn seat or seat washer. D. Water level in tank is above concealed overflow in bowl. E. Water leaking past flush ball. F. Foreign matter on plunger. G. Bore for plunger in cap assembly is corroded or pitted. H. Crack in tank or bowl is allowing leakage. 	<ul style="list-style-type: none"> A. Install pressure regulator. B. Clean seat/seat washer or replace seat following instructions with repair kit. C. Replace as per B. D. Slightly bend float rod downward. E. Replace flush ball. F. Replace plunger. G. Replace cap. H. Replace toilet.
Toilet leaves an odor.	<ul style="list-style-type: none"> A. Toilet is dirty. B. Crack in bowl allows sewer gas into the room. 	<ul style="list-style-type: none"> A. Clean rim holes, bowl, and trapway with disinfecting bowl cleaner. B. Replace toilet.
Toilet overflows.	<ul style="list-style-type: none"> A. Toilet is clogged. 	<ul style="list-style-type: none"> A. Use plunger to unclog toilet.