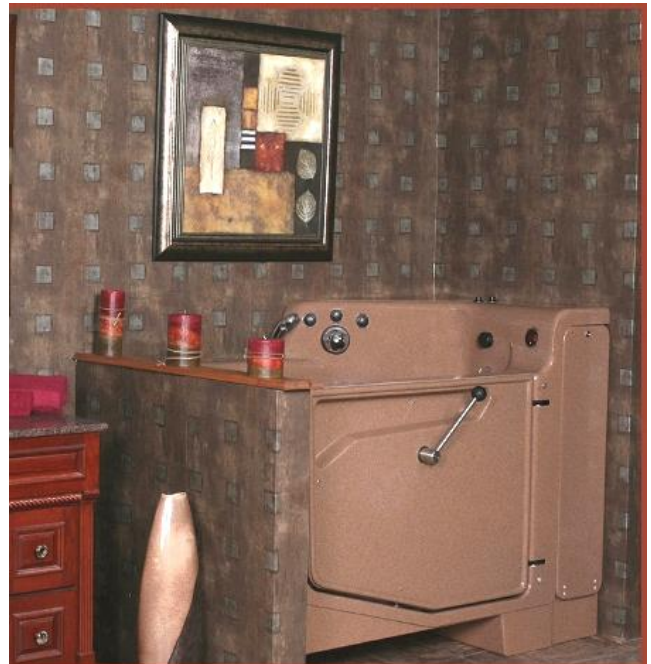




Parts Breakdown & Assemblies



TUBS-361910-1A, 361910-1I, 361910-XA, 361910-XI

360748A Revision "C" Date 02/15/10

**Penner Patient Care
101 Grant Street
Aurora. NE 68818**

Service Call 1-800-732-0717 or 1-866-736-6377

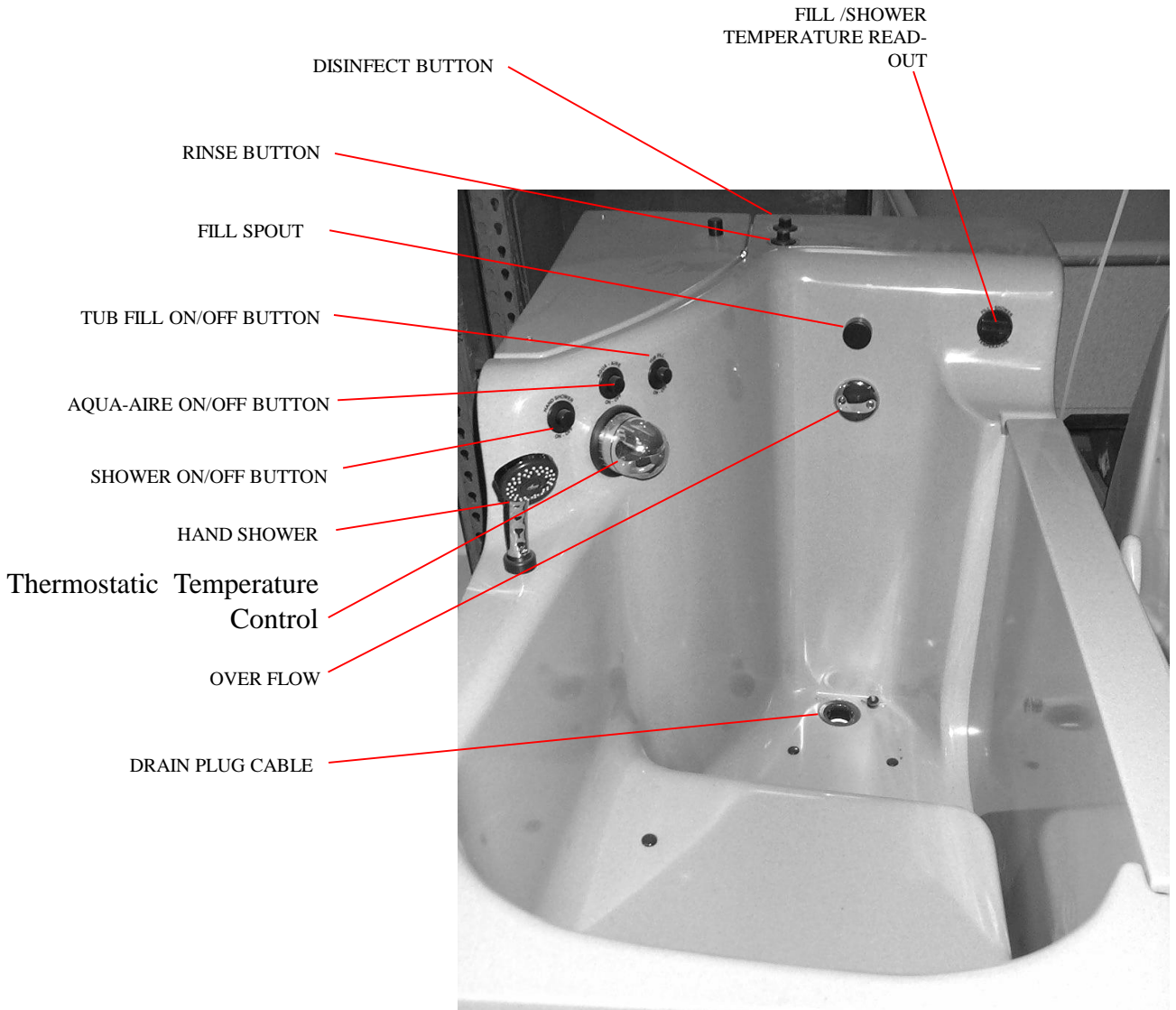
Visit Our Web Site www.pennerbathingspas.com

Index

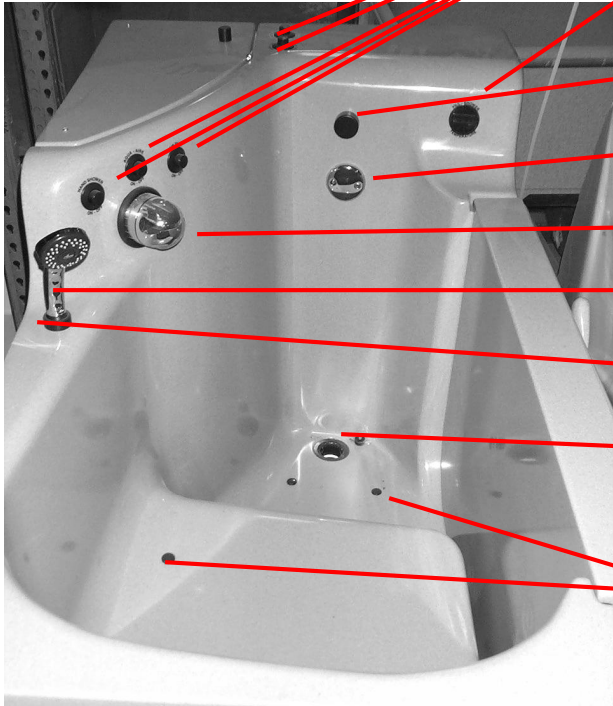
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Cascade Alcove Controls

The Cascade Alcove Tub is a specialized tub with jets (Aqua-Aire). It has been designed for assisted living patients and to help bathe your patients automatically. The tub has a built-in control panel, which provides controls for all the functions of the tub, as shown below.

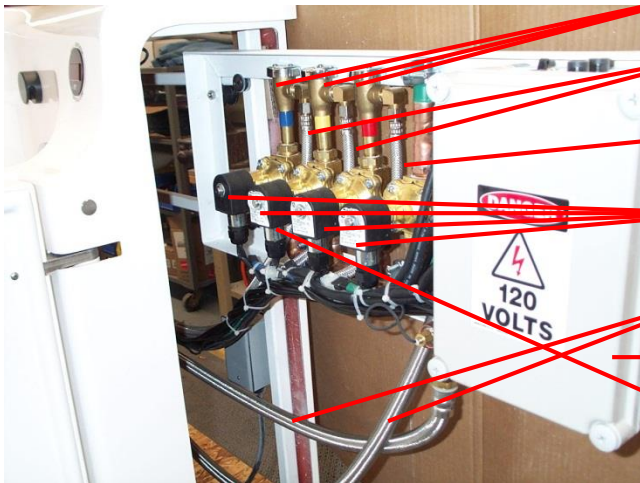


Cascade Alcove Internal Tub Front



- 350495
AIR TRANSMITTER - BLACK RAISED
- 350535M-SER
THERMOMETER 40/199F (New thermometer started at Serial Number 01081456001)
- 360522
OUTLET SPOUT
- 350172
OVERFLOW ESCUTCHEON
- 350151
CARTRIDGE ASSY COMP.
- 140106CH
HANDSHOWER
- 350190CH
HOSE SPIRAL 71" DOUBLE - SS
- 350177
DRAIN PLUG REPLACEMENT KIT
(SEE PAGE 8 FOR DRAIN COMPONENTS)
- 350133
WITE BRASS JETS
- 350132
BLACK BRASS JETS

ROLL OUT SERVICE RACK



- 144105
VACUUM BREAKER
 - 360491
HOSE - 3/8" X 48" SS
 - 360492
HOSE - 3/8" X 60" SS
 - 140124
SOLENOID VALVE
 - 360490
HOSE - 3/4"X60" SS
 - 360599A ELECTRICAL KIT
- COLOR CODE OF SOLENOID VALVES

TUB FILL GREEN	
TUB SHOWER RED	
TUB DISINFECT YELLOW	
TUN RINSE BLUE	

FIGURE 13

Cascade Mixing Valve Adjustment

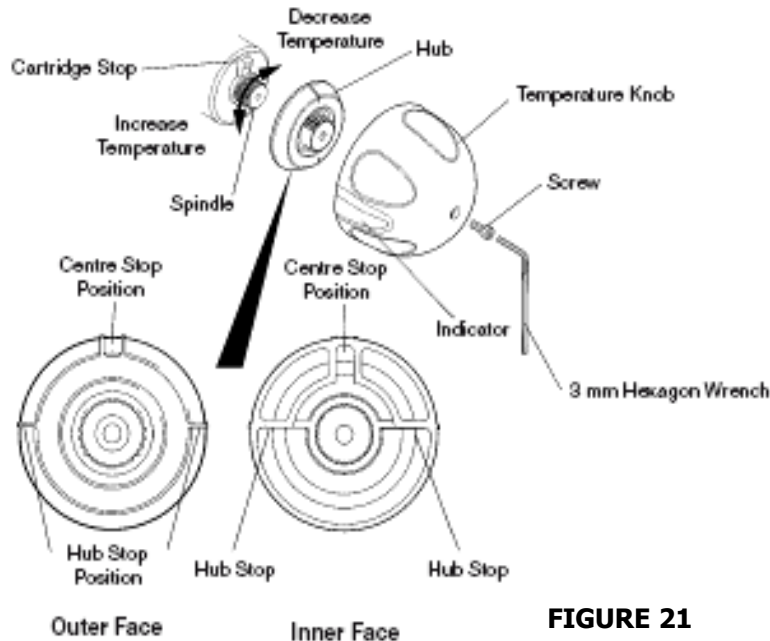


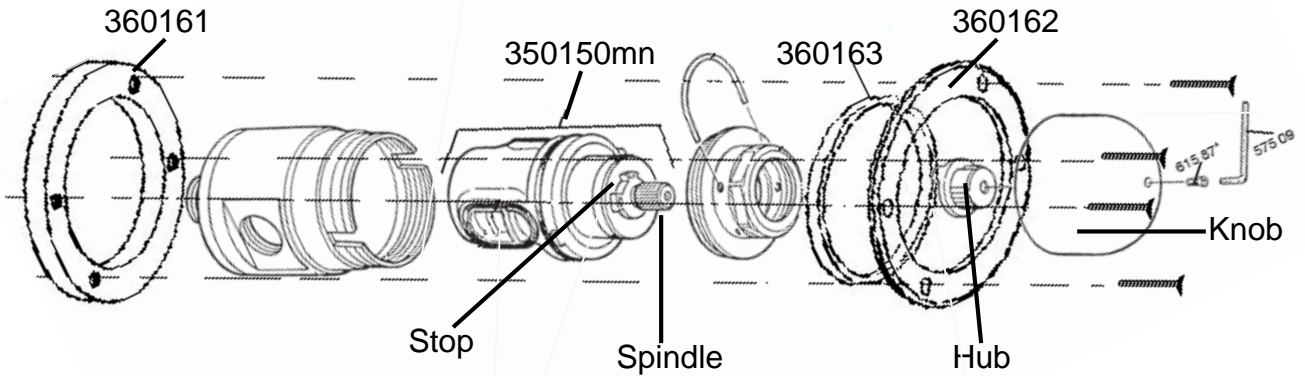
FIGURE 21

For Adjustable Temperature

1. Remove the temperature knob screw using a 3 mm hexagonal wrench (supplied). Remove the temperature knob.
2. Pull off the black polymer hub assembly which may inadvertently remain attached to the inside of the temperature control handle. This is a "push fit" and can be "levered" out using a thin blade screwdriver or pliers.
3. Rotate the spindle until required maximum blend temperature is obtained at outlet point (clockwise = decrease temperature, counterclockwise = increase temperature). When resistance is felt do not use force to turn any further, as this can damage the internal parts.
4. Once the desired maximum blend temperature is achieved, re-fit the hub without disturbing the spindle: Position the hub so that the hub stop comes up against the cartridge stop (refer to Figure 7-1) preventing any further rotation in a counterclockwise direction. Check that blend temperature has not altered.
5. Refit the temperature knob. Make sure that the indicator points to 9 o'clock.

Cascade Mixing Valve Adjustment Rada 222 Currently applicable only in Minnesota

Figure 1



Rada 222 Breakdown

For Adjustable Temperature:

1. Remove the temperature knob assembly or locking cap using 3mm wrench (see Figure 1).
2. Pull off the temperature hub.
3. Rotate the spindle until required maximum blend temperature is obtained at discharge point (clockwise = decrease temperature). When resistance is felt do not use force to turn any further, as this can damage the internal parts.
4. Once the desired maximum blend temperature has been achieved, refit the hub without disturbing the spindle, positioning the hub such that the lug is against the side of the stop on the cartridge face, thus preventing anticlockwise rotation which could damage the internal mechanism (see Figure 1). Check that blend temperature has not altered.
5. Refit temperature knob so that the indicator on the metal knob is aligned to the left of the red markings (approximately in the 9 O'clock position). Figure 1 - Locked Temperature Setting Maximum Temperature Setting 3 mm.

**CHECKING FOR THE CORRECT
DILUTION OF DISINFECTION
ON SUPERIORS, CASCADES, AND PACIFICS**

1. Check to see if a container of disinfectant has been installed. Assure that the disinfectant tube is inserted into the container and connected to the Injector with black metering tip. See the drawing of the square injector (204C) below for location of the metering tip.
2. Visually check if disinfectant is in the hose all the way to the injector. If not, the disinfectant can be brought to the injector pushing the disinfect button on the tub until disinfectant fills the hose all the way to the injector.
3. With the drain open, push the fill button on the tub to check the water temperature. Adjust the temperature control to read 60 degrees to 65 degrees (F). When the temperature remains in the above range, turn off the fill button.
4. Allow the water to drain from the tub.
5. Close the tub drain, push and hold the disinfect button long enough to bring the disinfectant mixture into the tub then release the disinfect button.
6. Test the solution in the foot-well of the tub with the Dilution Check Kit (140481). A dispenser of test paper (part number 219201) is included in this kit.
7. Tear off a strip of test paper from the dispenser and immerse in the solution for at least (10) seconds. Compare the color that the test paper turns with the chart on the dispenser. If the test paper matches the green in the range of 600-800, the disinfecting solution is the correct strength.
8. If the color of the test paper matches a color on the dispenser chart in the 800-1000 range, install the next smaller metering tip. See metering tip chart for color reference. The injector is furnished with a black metering tip installed (part number 1404824). The Metering tips listed below are included in the Dilution check kit, (Part number 140481).
9. If the color of the test paper matches a color on the dispenser chart in the 0-400 range, install a metering of the next larger size and re-test.

METERING TIP CHART APPLICABLE TO THE AQUA-AIR JET DISINFECTION INJECTOR

<u>Color</u>	<u>Part Number</u>	<u>Metering Tip Size</u>	<u>Solution Strength</u>
Black	404824	Large	Preferred Strength
Blue	1404822	Medium	Less Strength

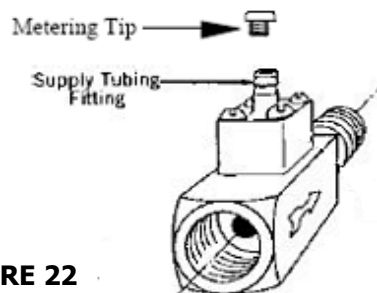
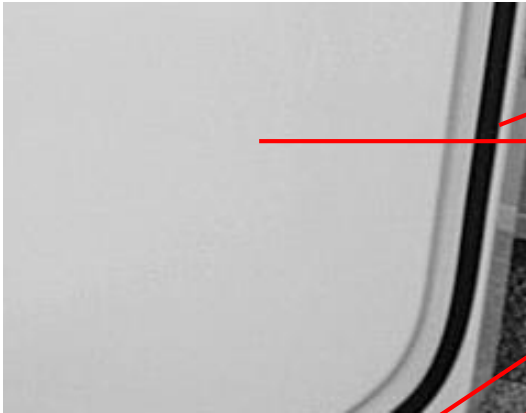


FIGURE 22

Cascade Water Door

SECONDARY LOCK ASSEMBLY IS AN OPTION



360125
SEAL- self adhesive

360891-1
WATER DOOR – WHITE

360302
DOOR LOCK BOLT – SHORT

360101
LINEAR BEARING

360300
DOOR LOCK BOLT – LONG

360335
HINGE ASSEMBLY

360310
PIN - 2ND LOCK

360315
SECONDARY LOCK ASSEMBLY

360280
DOOR LOCK SPINDLE

360320
HUB ASSEMBLY

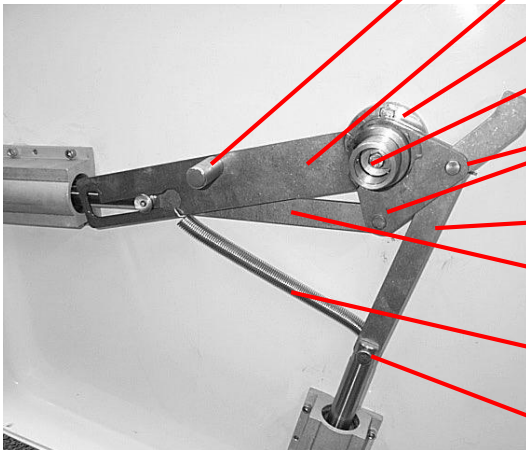
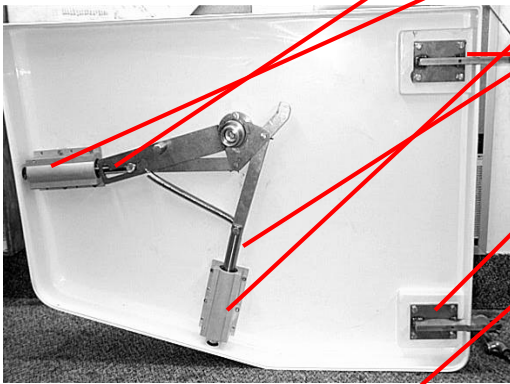
360425
CLEVIS PIN - 3/8 X 1" SS

360331
LINKAGE - OFF-SET

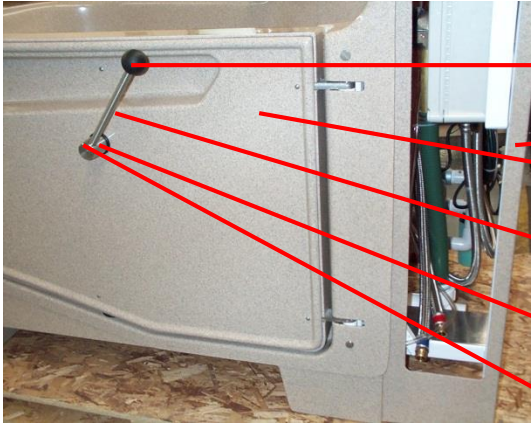
360326
LINKAGE – STRAIGHT

360435
SPRING - ZINC PLATED

360430
CLEVIS PIN - 1/2 X 1 1/4" SS



Cascade Water Door Internal & Exterior



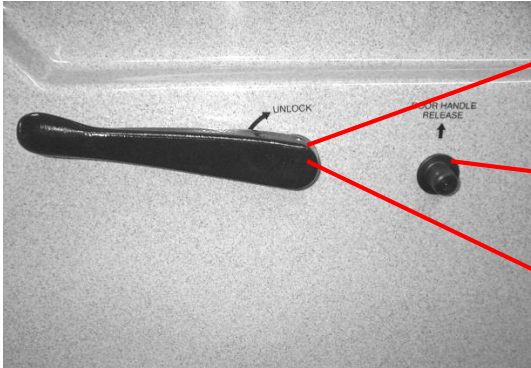
360291
BALL KNOB
SIDE ACCESS PANEL

360896-1
DOOR COVER

360295
HANDLE BAR

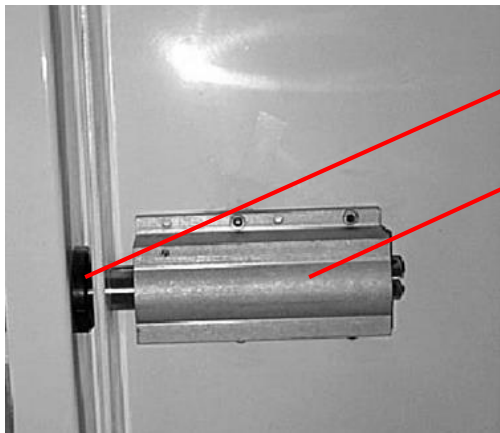
360290
HUB – HANDLE

360440
ROLL PIN - 1/4 X 1 3/4" SS



360309
SECONDARY LOCK KNOB

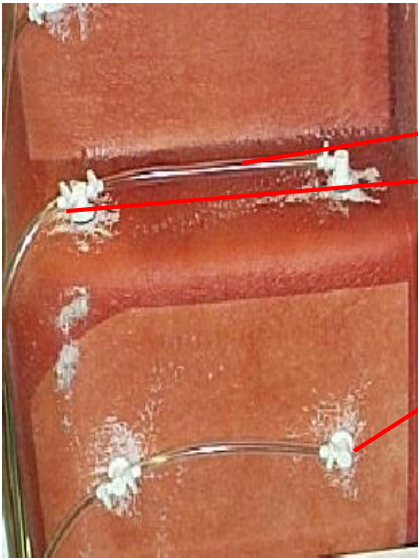
360297
HANDLE (BLACK)
(AFTER S/N 09091987102)



360250
LOCK BUSHING

360101
LINEAR BEARING

Cascade Bottom view of Jets and Connection



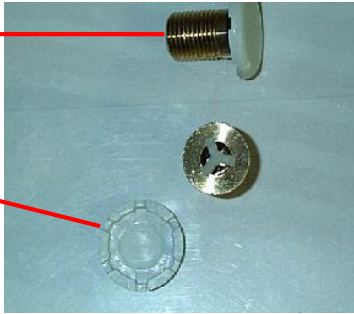
- 350276
CLEAR TUBING 9/16" OD X 3/8"ID

- 360650
TEE - AIR JET (WASHER INCLUDED)

- 360655
ELBOW - AIR JET (WASHER INCLUDED)

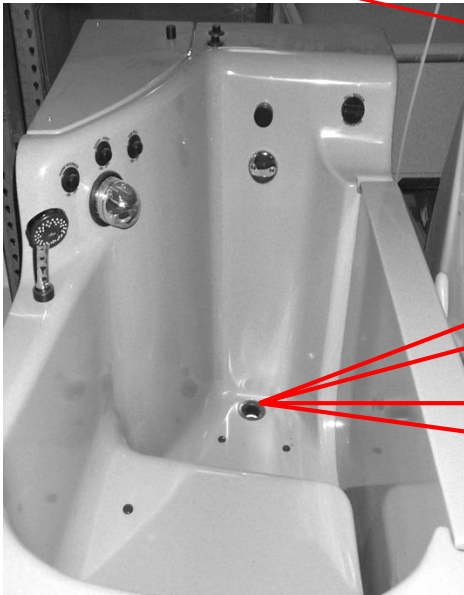
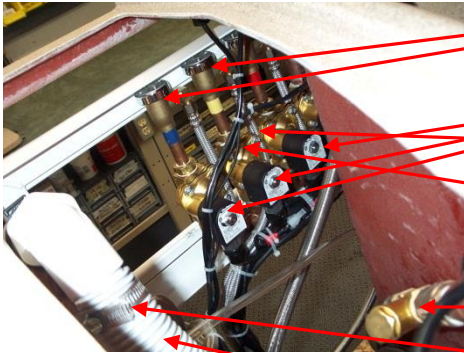
- 350133
JET
(COMPLETE ASSEMBLY)
 - SHOWN WITH CAP REMOVED. INSIDE SPRING CAN BE EASILY REMOVED AND CLEANED.

- 360646
CAP FOR JET. (WHITE OR COLORED)



Cascade Alcove Plumbing View

Looking down into the compartment towards the wall side of the tub from top. **THE BLOWER IS RELACABLE THROUGH THIS ACCESS. CALL FOR TECHNICAL ASSISTANCE.**



CONTINUED

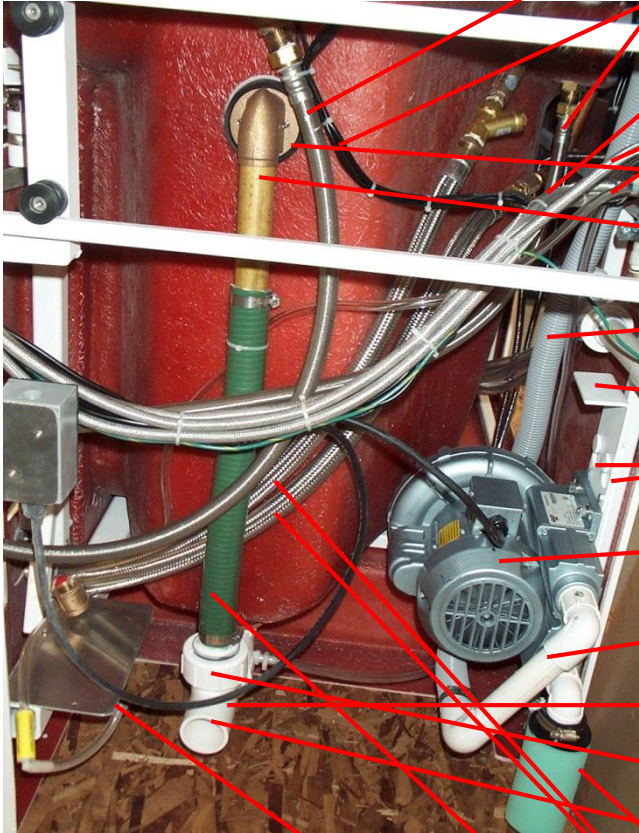
- 144105
VACUUM BREAKER
- 140124
SOLENOID VALVE
- 360492
HOSE - 3/8" X 60" SS
- 360491
HOSE - 3/8" X 48" SS
- 350315
SCREEN MESH IN-LINE
- 390112
CLAMP HOSE SS
- 390409
HOSE VAC 1-1/4 ID

(DRAIN PARTS)

- 1050401
BASE SHOE BASKET
- 360402
BASE SHOE ASSY
(INCLUDES SHOE AND PLST
ADAPT)
- 1050345
WASHER RUBBER
- 350391
DRAIN SCREEN
- 360628A
CHK VALVE 1 1/2" BLK SER
REPLA
- 350602
BLOWER
- 350320
BRONZE CHECK VALVE
- 350315
SCREEN MESH IN-LINE
- 140261
HOSE 1/4" CLEAR
- 390111
SNAP CLAMP SIZE
- 390112
CLAMP HOSE SS

Cascade Plumbing View

VIEW FROM BACK ON TUB, WHEN NOT AGAINST WALL, TO SHOW ORIENTATION OF COMPONENTS



- 360490
HOSE - 3/4"X60" SS
- 040955
AIR TUBE 1/8" ID
- 360492
HOSE - 3/8" X 60" SS
- 360491
HOSE - 3/8" X 48" SS
- 350173
BEVELED WASHER
- 350174
OVERFLOW & TUBE
- 390409
HOSE VAC 1-1/4 ID
- LIFT HANDLE WHEN REPLACING BLOWER.
- 201700
MOUNT BOLTS TO REMOVE BLOWER
- 350602
BLOWER AIR
- 360404A
WATER TRAP ASSY - ALCOVE
- 1050461
TEE - DRAIN NEW PLASTIC
- 1050481
NUT 2 IN SLIP JOINT (PLASTIC)
- 1050501
WASHER 2 IN. RUBBER SLIP JOINT
- 350601
FILTER AIR
- 350185
HOSE ASSEMBLY - 36"
- 350187
GREEN PIPE 1 1/2" ID FLEX 18"
- DISINFECT BOTTLE TRAY

***Note: See Page 12 for Metering Selection and Dilution Instructions**

Cascade Electrical Box

350532

FUSE – AG 6/10 AMP SLOBLO

350526

CIRCUIT BREAKER 15 AMP

350530

FUSE HOLDER

140951

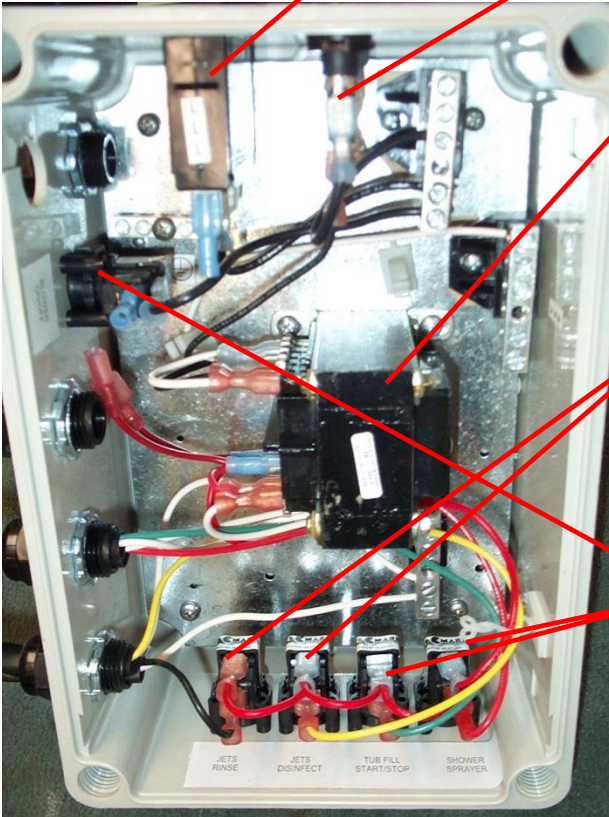
TRANSFORMER 120V TO 24 VOLT

350505

AIR SWITCH TBS 304
(JET RINSE AND JETS DISINFECT)

350510

*AIR SWITCH TBS 310
*(THREE EACH)
BLOWER, FILL, AND SHOWER



Mixing Valve Service Component Breakdown

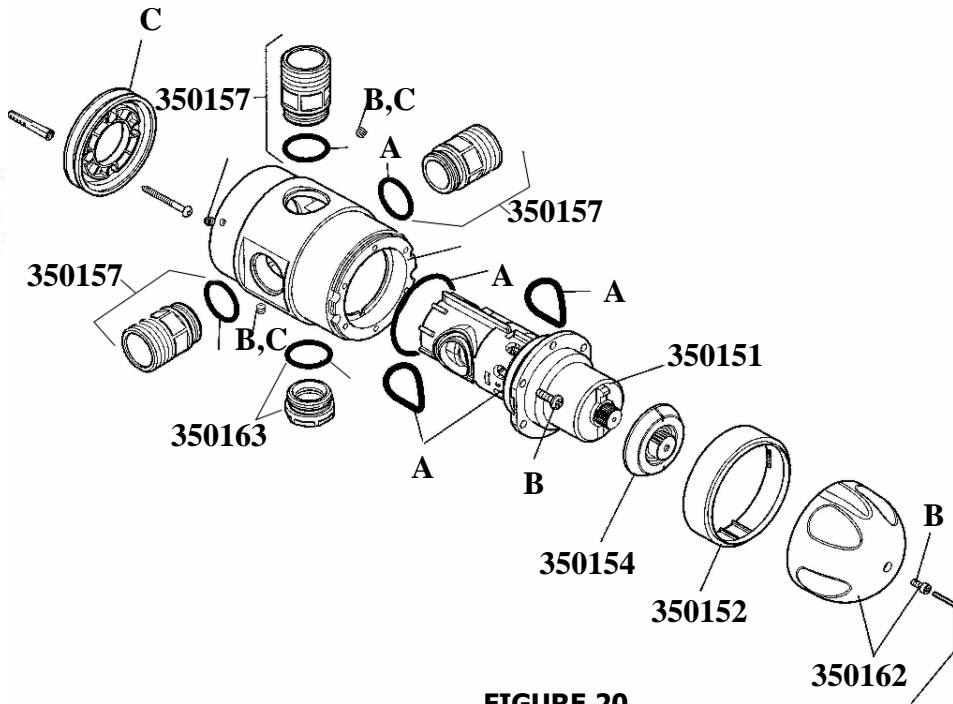


FIGURE 20

Part No.	Description
350149	Body, Rada 320 (less connector)
350150	Temperature Indicating Ring
350151	Cartridge Assembly
350154	Hub Pack
350157	Inlet/Outlet Adapter, 3/4 Female "
350158	Seal Pack -Includes A" Components "
350159	Screw Pack -Includes B" Components "
350161	Backplate Kit -Includes C" Components "
350162	Knob Pack
350163	Blanking Cap

Rada Valve Website

<http://www.armstrong-intl.com/products/lynnwood/pdf/installation/ALIB-320.pdf>

CASCADE Aqua-Aire/ Alcove

Your Penner Distributor and his personnel are trained to provide in-service instruction and maintenance on your Cascade Bath System. If you have any questions about the operation or maintenance of your Cascade Bath System, please contact your Penner Distributor. For your nearest Penner distributor, contact

Penner Patient Care, Inc.

at

1-866-736-6377

OR

1-800-732-0717