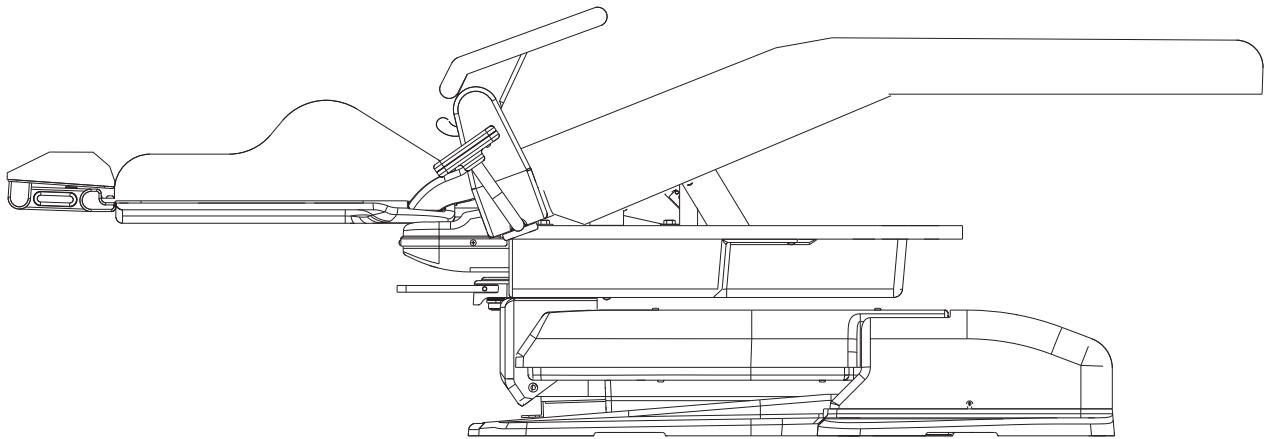


**INSTALLATION, OPERATION & SERVICE
MANUAL**

**ZAKTON Z2
DENTAL CHAIR**

Model:
96-540



! IMPORTANT

The instructions contained in this manual should be thoroughly read and understood before installing or operating the equipment. Keep this manual with the equipment, so it can be referred to for future use.

! IMPORTANT

When installation is complete. Make sure to check all bolts, screws, and fasteners. Confirm that they are properly fastened.

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Warranty

All products except stools, sold to and installed by authorized Zakton LLC dealers are guaranteed against defects in materials and workmanship for a period of five (5) years after date of purchase. Upholstery is guaranteed for one (1) year after date of purchase. All handpiece illumination systems are guaranteed for six (6) months after date of purchase.

This warranty does not cover light bulbs of any kind. Faulty parts are determined by a dealer service representative, will be repaired or replaced; no claim for a labor or consequential damages will be allowed. Invoices for replacement parts may be subject to adjustment after the manufacturer has inspected the alleged defective parts.

The warranty does not cover normal wear, stains, cuts, or scratches of upholstery surface finishes, or parts sold to O.E.M. customers. This warranty does not cover damage resulting from the use of cleaning, disinfecting, or sterilization chemicals and processes. The warranty does not cover damage from improper installation or maintenance, accident, misuse, or accidents incurred in shipping and handling.

In the event of shipping damage, the purchaser must initiate all claims against the freight carrier in writing twenty-four (24) hours after the damaged items are received. The claim is the responsibility of the customer.

PRODUCT MODIFICATION

Zakton LLC continually works to offer better products. We reserve the right to make modifications without notice or obligation to modify previously manufactured products.

DOCUMENT INFORMATION

Zakton LLC does not warrant that this document is completely error free. Zakton LLC shall not be held liable for errors contained in this manual, for any consequential or other damages concerning the furnishings, performance or use of this material. Zakton LLC does not warrant the content of any kind in this document, including but not limited to, the implied warranties of merchantability and fitness for a particular purpose. The information of this document is subject to change without notice. If you find any problems with this document, please report them to us in writing.

OTHER PRODUCTS & TRADEMARKS

All products or services mentioned in this document that are not Zakton LLC, are covered by the trademarks, service marks, or product names designated by the companies marketing those products. Refer to these respective manuals and instructions for all information regarding these products.

Intended Use of the Product:

This product is solely used for diagnoses, treatment and relative procedures in dentistry. This equipment must be handled and/or operated by the qualified dentists or by the dental staff directly under the supervision of the dentist.

Patients are not allowed to handle and/or operate this equipment unless he or she is instructed to do so directly under the supervision of the dentist. The dentist and staff for which this equipment is for should instruct and/or assist each patient in the way of approach and leaving from this equipment.


Operating Environmental Requirements:

Ambient Temperature: 50°F~ 104°F (10°C ~40°C)

Humidity: 30% ~75%

Atmospheric Pressure: 10.2psi ~ 15.4psi (700hpa ~1060hpa)

Classification:

- ◆ Classification of Equipment: Conforms to U.L. Std. 60601-1
- ◆ Protection against electric shock: Class 1 Equipment, Type B Applied Parts 
- ◆ Protection against water ingress: Ordinary equipment (IPX0)
- ◆ Built for continuous operation with intermittent loading.
- ◆ Equipment not suitable for use in the presence of a flammable anesthetic mixture with air, oxygen, or nitrous oxide.

Flammable Gasses:

- ◆ Equipment not suitable for use in the presence of a flammable anesthetic mixture with air, oxygen, or nitrous oxide.

CLEANING INFORMATION

TERMS AND CONDITIONS OF SALE

TERMS

50% upon agreement
50% before delivery.

PRICES

All prices are subject to change without notice.

FREIGHT

Products are shipped F.O.B. Sheridan, Colorado, U.S.A.

RETURNED GOODS

No goods may be returned without prior factory Returned Merchandise Authorization number.

The Returned Merchandise Authorization number must be visible on outside of returned merchandise shipping box.

Shipping boxes received without a Returned Merchandise Authorization number will be refused.

Returned merchandise must be received within 30 days after issuance of Returned Merchandise Authorization number.

Copy of original invoice must be sent along with returned merchandise.

All returned merchandise are subject to a 15% restocking charge.

DAMAGED MERCHANDISE

Zakton LLC responsibility for safe delivery ends upon the delivery of the shipment in good condition to the carrier. At the point of pick up by the carrier, the merchandise become the property of the consignee, and the carrier becomes the agent of the consignee. Shipments that arrive with external damage or obvious rough handling should be noted on the delivery receipt as "Received in Damaged Condition". If damage is revealed when merchandise are unpacked, inspection by the carrier should be demanded immediately.

ALL CLAIMS FOR DAMAGE CAUSED IN SHIPMENT MUST BE MADE TO THE CARRIER.

BARRIER TECHNIQUE

The best way to preserve the finish of your Zakton LLC Equipment is to use the barrier technique whenever possible. The barrier technique will ensure maximum longterm durability of the surfaces and finishes of the equipment.

CHEMICAL DISINFECTION

It is imperative that the equipment be thoroughly washed with a mild soap and warm water solution at least once a day regardless of the chemical disinfectant used. This will minimize the harmful effects of chemical disinfectant residue being allowed to build up on the equipment. Always follow the disinfectant manufacturer's directions for use. Disinfectant solutions that are relatively harmless to surfaces at their recommended strengths can be corrosive at higher than recommended dilution ratios. Consult your dental dealer regarding specific chemical disinfecting and cleaning products.

UNACCEPTABLE DISINFECTANTS

The following disinfectants will harm the surface finish of Zakton LLC equipment and are NOT RECOMMENDED. Use of these products will void your warranty.

Chemical Composition: Household Bleach at 5.25%, Ethyl Alcohol, Alcohol-Based Phenols/PH3NOL, Household Cleaners, Strong Phenols, Phenol-Alcohol Combinations, and Household Cleaners

Iodine-based products have been known to stain upholstered and painted surfaces.

CONDITIONALLY ACCEPTABLE DISINFECTANTS

These disinfectants have been found to be LEAST HARMFUL to the equipment surfaces. None of these products are recommended for chair upholstery. Use the barrier technique.

Chemical Composition: Enhanced Quaternary Ammonia, Mild Phenols, Glutaraldehyde/Phenol Sprays, Synergized Super Quat, Phenol/Water Sprays

HP CONTROL WATER LINES AND BOTTLED WATER SYSTEM FLUSH

Use care when flushing HP Control water lines and bottled water systems. If using a powdered flushing product with water, be sure that powder is thoroughly dissolved. Improper mixing will cause residual debris in the HP Control water lines and may cause damage and/or malfunction.

ZAKTON Dental Chair Labels - Explanation of Labels and Symbols

CONTACT Information.
See Technical Support section at
The beginning of this manual for
More contact information.

zakton
Sheridan, Colorado USA
www.zaktons.com

Zakton Z2 Dental Chair
Zakton P/N: 96-540
115V ~ 50/60Hz
5.8A/4.5A Class 1

Model Number

This Indicates the POWER SOURCE for this chair.

This Indicates the chair is a TYPE B device.

GREEN Light Indicates Power to Chair

Built for continuous operation with intermittent loading.
CAUTION: For service refer to qualified personnel only.
MISE EN GARDE: Pour le service se référer à un personnel qualifié.

This chair contains dangerous electrical and mechanical elements. It should be serviced by a QUALIFIED PERSON ONLY.

If the Dental Chair's Green Power Switch is illuminated, there is ELECTRICAL POWER to the chair. (115V chair only)
NOTE: If the switch does not illuminate, but there is power to the Dental Chair call your authorized dealer immediately for service.

Hoobijisi Qullu to Hoobijisi Garqee su edhniyameit, Ilecobijisqee ushkeq edhniyameit, Iie comectiq to pe sciveved muvur tujie Qlonuquud leiqisipiitla csu ouja

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This sticker indicates that this equipment should only be used on HOSPITAL GRADE electrical circuits. Circuits of lesser Grade may not be able to handle the electrical load of this equipment and may cause PROPERTY DAMAGE, INJURY, OR DEATH.



This sticker indicates that this is a protective GROUND Location.

Fuse Rating
115V ~ 6A
or
220V ~ 3A

DANGER

These stickers indicate that HIGH VOLTAGE electrical current is present in this area. DANGER: EXTREME CAUTION should be taken when this area is exposed. It also indicates the ratings of fuses to be used.

A - Top Cylinder DOWN (Speed Adjust)
B - Top Cylinder UP (Speed adjust)
C - Base Cylinder DOWN (Speed adjust)
D - Base Cylinder UP (Speed adjust)
E - Check Valves (DO NOT ADJUST)
F - Load Regulator (CLOCKWISE to INCREASE)

This sticker indicates Adjustments for Chair Speed and Load Capacity .

ZAKTON DENTAL SYSTEMS
SHERIDAN, CO 80110 * MADE IN THE U.S.A.

PRODUCT	
MODEL	
SERIAL	

This sticker indicates equipment IDENTIFICATION: PRODUCT#, MODEL#, and SERIAL#. NOTE: This sticker is located below the seat at your left side when you sit on the chair.

E.T.L. CLASSIFIED
Conforms to U.L. Std. 60601-1
Certified to CAN/CSA Std. C22.2
No. 601.1-MS0 R2005

85435

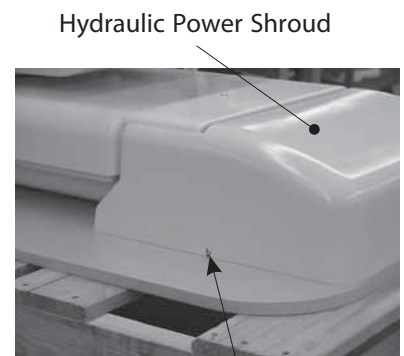
This sticker indicates that this equipment has been Certified by a Third Party organization.

Zakton Z2 Series Dental Chair - Installation Instructions

- ① A. Remove the Shrink Wrap and individual boxes from the top of the large Dental Chair Box.
B. Open the Dental Chair Box from the top.
C. Remove the Dental Chair Box only from the Shipping Pallet



- ② Remove the Hydraulic Power Shroud. To do this, loosen the "2" Power Shroud Screws, one at each side of the shroud, and slowly pull the Power Shroud away from the chair.



Hydraulic Power Shroud

Power Shroud Screw

- ③ A. Detach the Dental Chair from the Shipping Pallet by removing the "2" Pallet Shipping Bolts, (at the Ø5/8" thru holes), one at each side of the Dental Chair Baseplate.
NOTE: Use the same "2" Ø5/8" thru holes on the Base Plate for "2" hardened bolts that can properly secure the Dental Chair to the floor.

B. With help, carefully remove the Dental Chair from the Shipping Pallet and move it to its service location.

C. **IMPORTANT** : With "2" hardened bolts (not included) properly secure the chair to the floor using the "2" 5/8" diameter thru holes in the Base Plate.

- ④ A. Release the Chair Brake located behind the Seat, and rotate the toe/seat to the right.

B. Lift up the front left side corner of the Upper Elevator Shroud to access the Dental Chair Shipping Bolt.

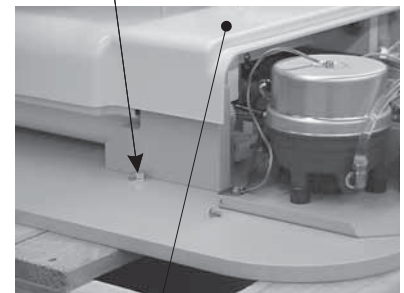
C. Remove and Discard/Recycle "1" Dental Chair Shipping Bolt under the corner of the Upper Elevator Shroud.

CAUTION: Do not operate the chair before removing this Dental Chair Shipping Bolt. Doing so can damage the Dental Chair.

D. Using the "1" provided screw taped to the Upper Elevator Shroud, secure the Upper Elevator Shroud.

E. Re-install the Hydraulic Power Shroud.

Pallet Shipping Bolt



Upper Elevator Shroud



Dental Chair Shipping Bolt

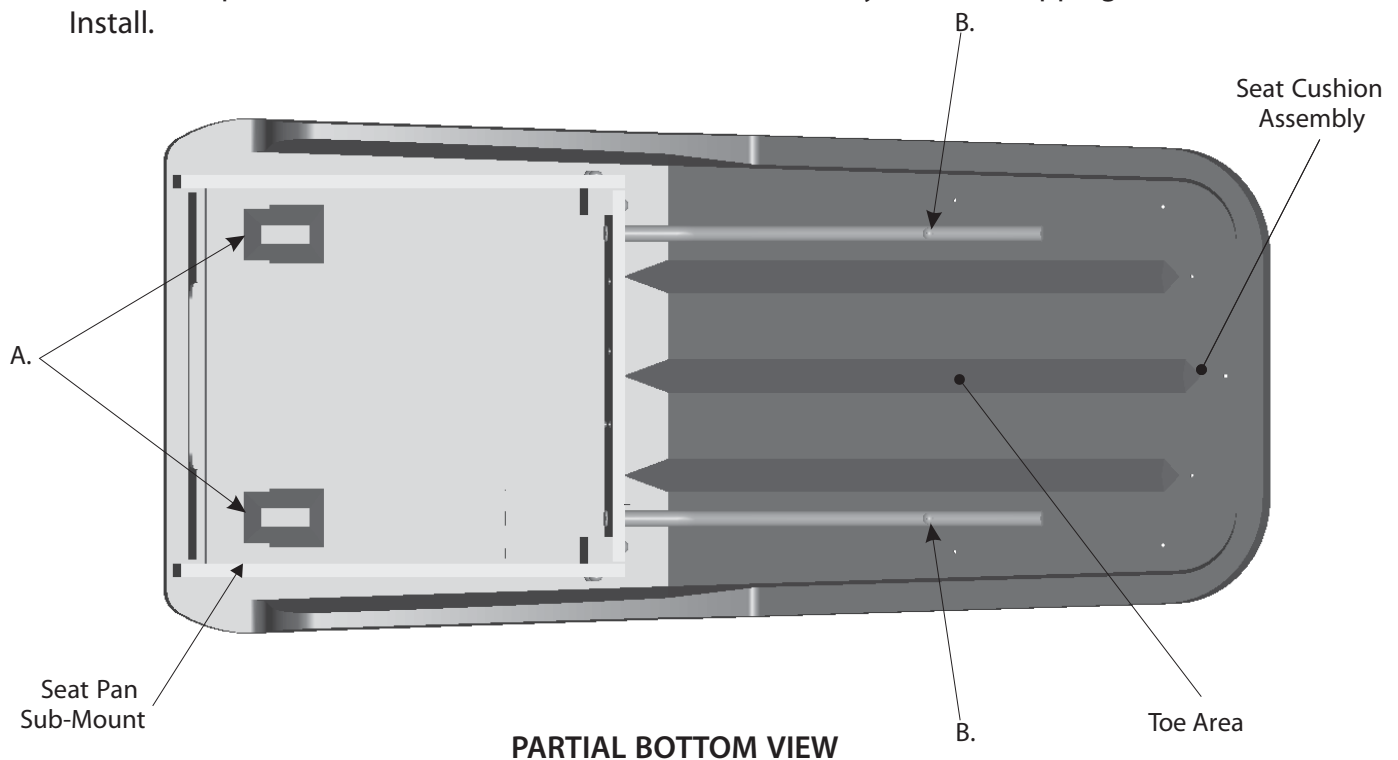
Zakton Z2 Series Dental Chair - Installation Instructions

- 5 A. Connect any touch pad controls at this time.
NOTE: For Touch-pad operation, refer to "Touch Pad - Description of Functions" in this manual.

B. You may now connect the Dental Chair's Power Cord to a "HOSPITAL GRADE" power source. CAUTION: Grounding reliability can only be achieved with this equipment when it is connected to an equivalent receptacle marked HOSPITAL ONLY or HOSPITAL GRADE. WARNING: To avoid risk of electric shock, this equipment must only be connected to a supply mains with protective earth.

- 6 If your Zakton Z2 Series chair is equipped with a Delivery System, stop this installation and proceed with step one of the "Installation and Operations Manual" of the respective delivery system before proceeding with this step.

If not then proceed and remove the Seat Cushion Assembly from its shipping box and Install.



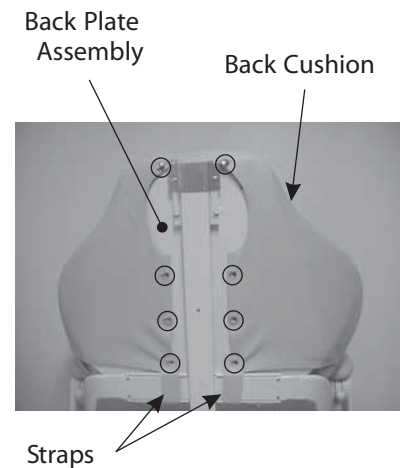
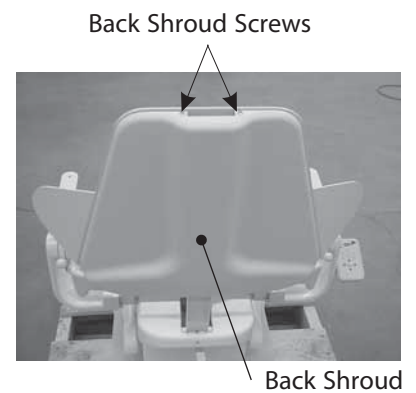
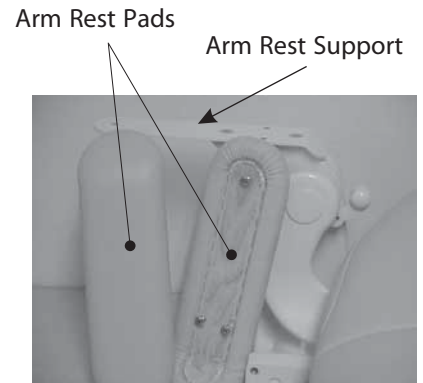
A. Insert "2" Seat Cushion Tabs into the notched section of the Seat Pan Sub-Mount.

B. Secure the Seat Cushion Assembly by using the "2" Pan Head Phillip Screws pre-attached to the Seat Cushion Assembly.

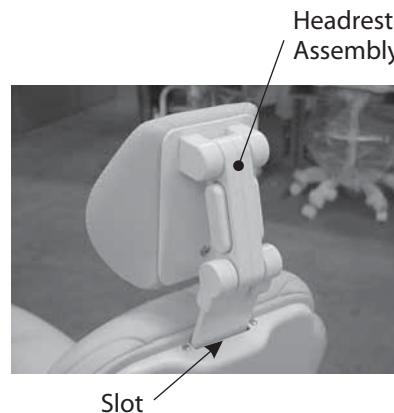
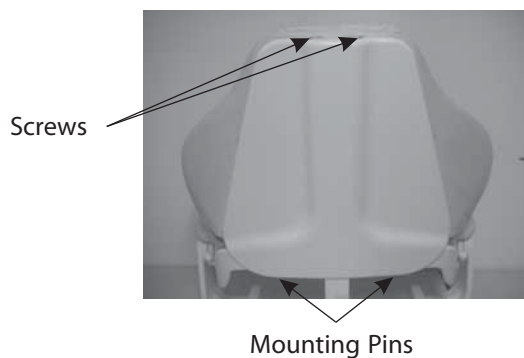
CAUTION: Do not lean or sit on Toe Area. It could damage the Toe Area or could cause an injury.

Zakton Z2 Series Dental Chair - Installation Instructions

- 7 Remove the "2" Arm Rest Pads from their shipping box, and install the Arm Rest Pads using the attached screws, to the Arm Rest Supports.
- 8 Remove the Back Shroud. To do this, while securing the Back Shroud, remove the "2" Attachment Screws and slowly slide the shroud down and away from the chair.
- 9 Remove the Back Cushion from its shipping box and install. Holding the rear flaps open, attach the Back Lumbar Pad to the Back Plate Assembly.
- 10 From top to bottom, attach the Snaps on the "2" Rear Side Flaps and "2" Bottom Straps of the Back Cushion to the Back Plate Assembly, "8" places.
Tip: To easily attach the "2" Bottom Strap's snaps. One Bottom Strap at a time, with one hand simultaneously place the hole located on the corner of the Rear Side Flap over the bottom Male Snap of the Back Plate Assembly and compress the cushion at the base of the Strap with Female Snap, and attach Female Snap to bottom Male Snap.
- 11 Reinstall the Back Shroud, to do this guide the "2" Mounting Pins on the bottom of the Back Plate Assembly through the "2" holes at the bottom of the Back Shroud and secure, then reinstall the "2" previously removed Mounting Screws at the top of the Back Shroud.
- 12 Remove the Headrest Assembly from its shipping box and insert it into the top slot of the chair back assembly as shown.



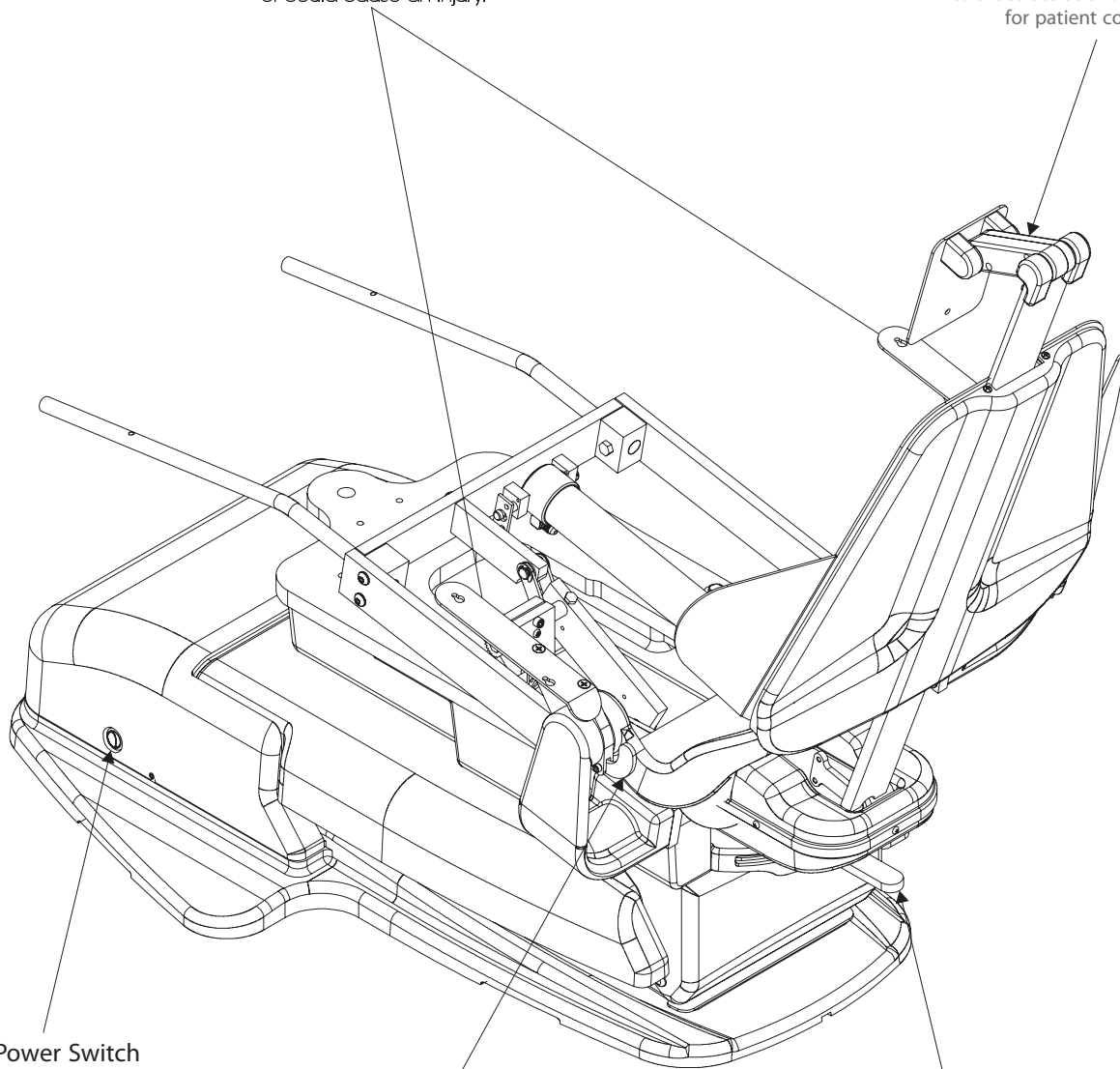
NOTE: The Zakton Dental chair is now ready for use. For Touch-pad operation, refer to "Touch Pad - Description of Functions" in this manual.



Zakton Z2 Series Dental Chair - Description of Functions

CAUTION: With or without upholstery,
Do not lean or sit on Armrest.
It could damage the Armrest
or could cause an injury.

Push Button
Allows the Headrest
to articulate at two pivot points
for patient comfort.



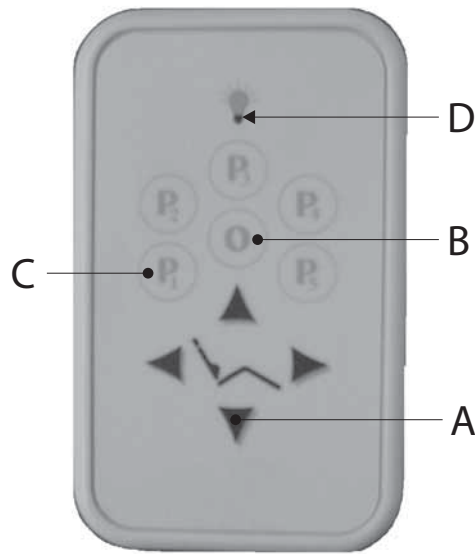
Main Power Switch
Chair Function On and Off.
CAUTION: Operate this Main
Power Switch by hand only
and turn this main switch to the
OFF position after daily operations.

Arm Pad Latch
Press Latch Forward to
Pivot Arm Pad Down for
easy patient Entry/Exit.
Lift Arm Pad UP to
Lock in place.

Seat Rotation Brake Lever
Pivot Left to Engage Brake
Pivot Right to Release Brake
Allows the seat of the chair
to be rotated from center.
(15° or 30° max. Per side)
(Depending on Light or Monitor Delivery)

Touch Pad - Description of Functions

Emergency Stop
 At anytime during an automatic chair movement. All buttons except the Light ON/OFF can be pressed on the Touch Pad and cancel the automatic movement immediately.



ARROW Buttons (Manual Positioning Buttons) These arrow buttons manually operate the chair in the direction indicated. **A**

"O" Button (Programable EXIT position) This button is generally used to automatically and consistently return the chair to a desired preset " Patient Exit " position.

 Programming an exit position:
 Manually position the chair using the arrows. Once you have finished positioning the chair, press and hold the "O" button. Once the chair beeps, release the button. The chair will now return to that exit position any time that button is briefly pressed and released. **B**

" P1" thru "P5 " Buttons (Programable POSITION buttons) These buttons are used to automatically and consistently position the chair to its pre-programmed position. One pre-programmed position is allowed per button.

 Programming a position:
 Manually position the chair using the green arrows. Once you have finished positioning the chair, press and hold the "P" button of your choice. Once the chair beeps, release the button. The chair will now return to that programmed position any time that button is briefly pressed and released. **C**

LIGHT BULB Button (Dental Light ON/OFF) With the Dental Light Toggle Switch in the High or Low **ON** setting, this button controls the Dental Light ON and OFF by controlling the Zakton Dental Chair's #8 Female Power Cord located at the Hydraulic Power Pack. **D**

"O" and " P1" thru "P5 " (Programmed Buttons) Returning to a preset position:
 After you have programmed a position into "O" or a "P" button, you can automatically and consistently return to that position at any time by briefly pressing and releasing the designated button. The chair will remember your programmed positions even after loss of power and/or unplugging the chair from its electrical source.

Zakton Z2 Dental Chair Swivel Brake - Adjustment Instructions

- ① Raise the chair base all the way up and its backrest all the way up for easy access, then toggle the dental chair Power Switch to the OFF position for safety.
- ② Remove the Seat Upholstery by first removing the "2" Phillips Head Mounting Screws from the underside of the Seat Upholstery located towards the toe of the seat.
- ③ Remove the Top Mount Shroud Assembly, to do this first remove the "2" Phillips Head Mounting Screws with Nylon Washers from the top (one each side). Then slowly slide the Top Mount Shroud Assembly away from the chair as shown, See Figure 1.
- ④ Loosen the Brake Lever Bolt with a 3/16" Allen Wrench until the Brake Lever releases its grip on the large Brake Bolt, See Figure 2.
- ⑤ Use a 3/8" Allen Wrench to tighten the Brake Bolt until the desired amount of braking resistance is achieved, See Figure 3.
- ⑥ With the braking resistance achieved, position the Brake Lever so that it is in-line with the front and back of the chair Base Plate, and has full gripping contact with the Brake Bolt head. Now tighten the smaller Brake Lever Bolt firmly with the 3/16" Allen Wrench. Be sure that the Brake Lever has a full surface grip on the head of the Brake Bolt, and does not slip when the Brake is re-applied to the chair, See Figure 2 & Figure 3.
- ⑦ Reinstall the Top Mount Shroud Assembly & Seat Upholstery

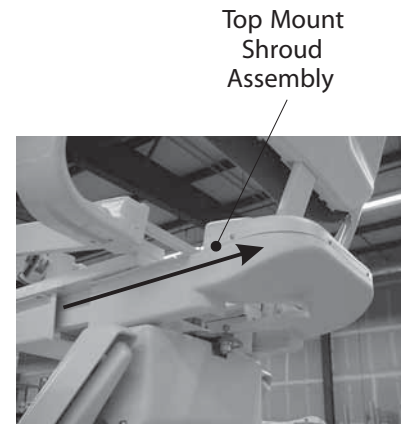


Figure 1.

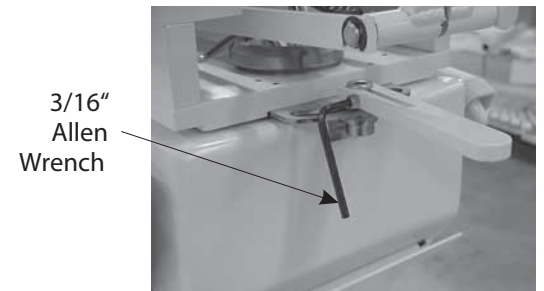


Figure 2.

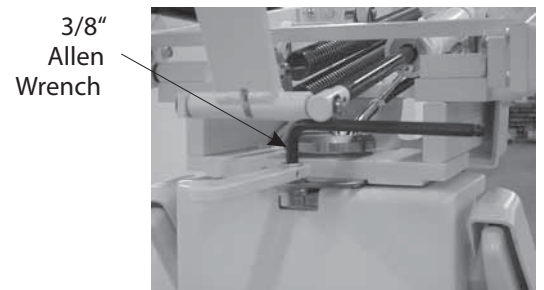


Figure 3.



The Chair Top Brake is engaged, when the Brake Lever handle is shifted to the left as shown.



The Chair Top Brake is disengaged, when the Brake Lever handle is shifted to the right as shown.

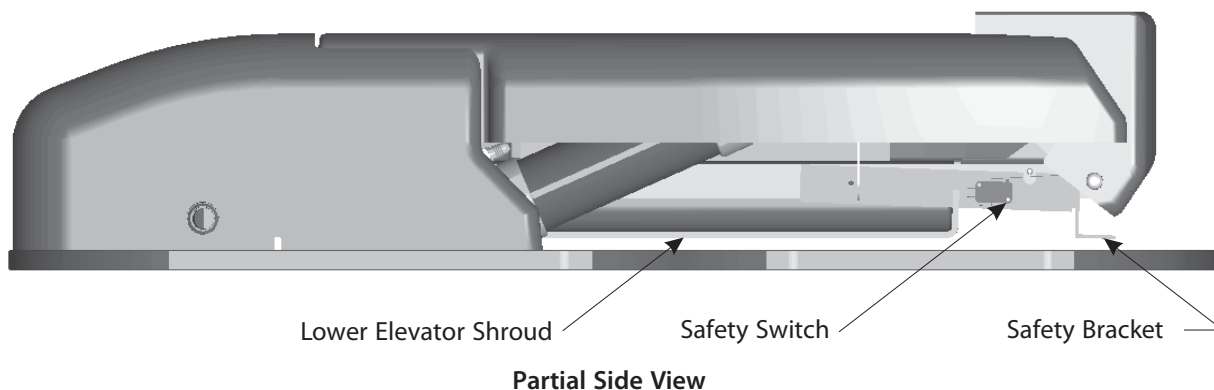
Zakton Z2 series Dental Chair - Safety Protection System

This page explains the many safety devices used to protect the patient, doctor, and chair from injury and or damage. Do not tamper with any safety devices unless specified for the installation of an optional accessory. Zakton Dental Systems will not be held responsible for any damage or injury resulting from the adjustment of a safety device. All chairs are tested for correct safety device settings prior to shipment.

LOWER ELEVATOR SHROUD & BRACKET ASSEMBLY SAFETY

When triggered, the Safety Switch automatically stops downward movement of the chair base and initiates slight upward movement. If continuously triggered the chair base can only be moved upward. This switch is meant to prevent the chair from crushing anything beneath it such as a foot.

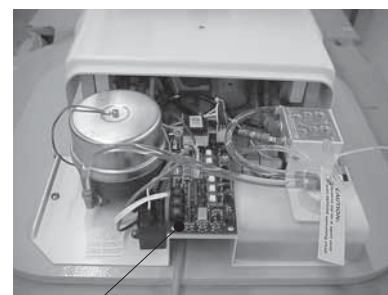
DANGER: DO NOT BYPASS THIS SAFETY ASSEMBLY! PERIODICALLY CHECK FOR ITS COMPLETE FUNCTION. IF FAULTY, REPLACE WITH ORIGINAL PARTS IMMEDIATELY!



HYDRAULIC SYSTEM MAIN P.C.B.

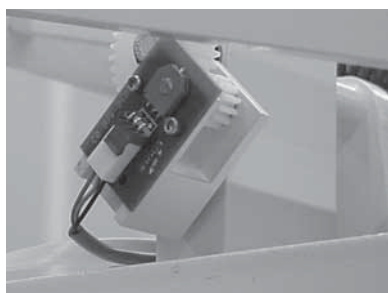
This advanced Printed Circuit Board continuously monitors and processes all incoming and outgoing signals from the Safety Switch, Touch Pads, Foot Control, and Sensor Positioning Systems. Then controls the chair movements accordingly. If the PCB senses a problem with the chair positioning or safety systems, it has the ability to communicate by showing a code on its PCB Status Component screen that pin points the cause. The PCB will then stop full or partial chair function until the problem is resolved.

Note: In exception of a Safety Switch malfunction which will not allow the chair base to go down, the manual positioning arrow buttons will still work for emergency patient care.



Hydraulic System Main PCB

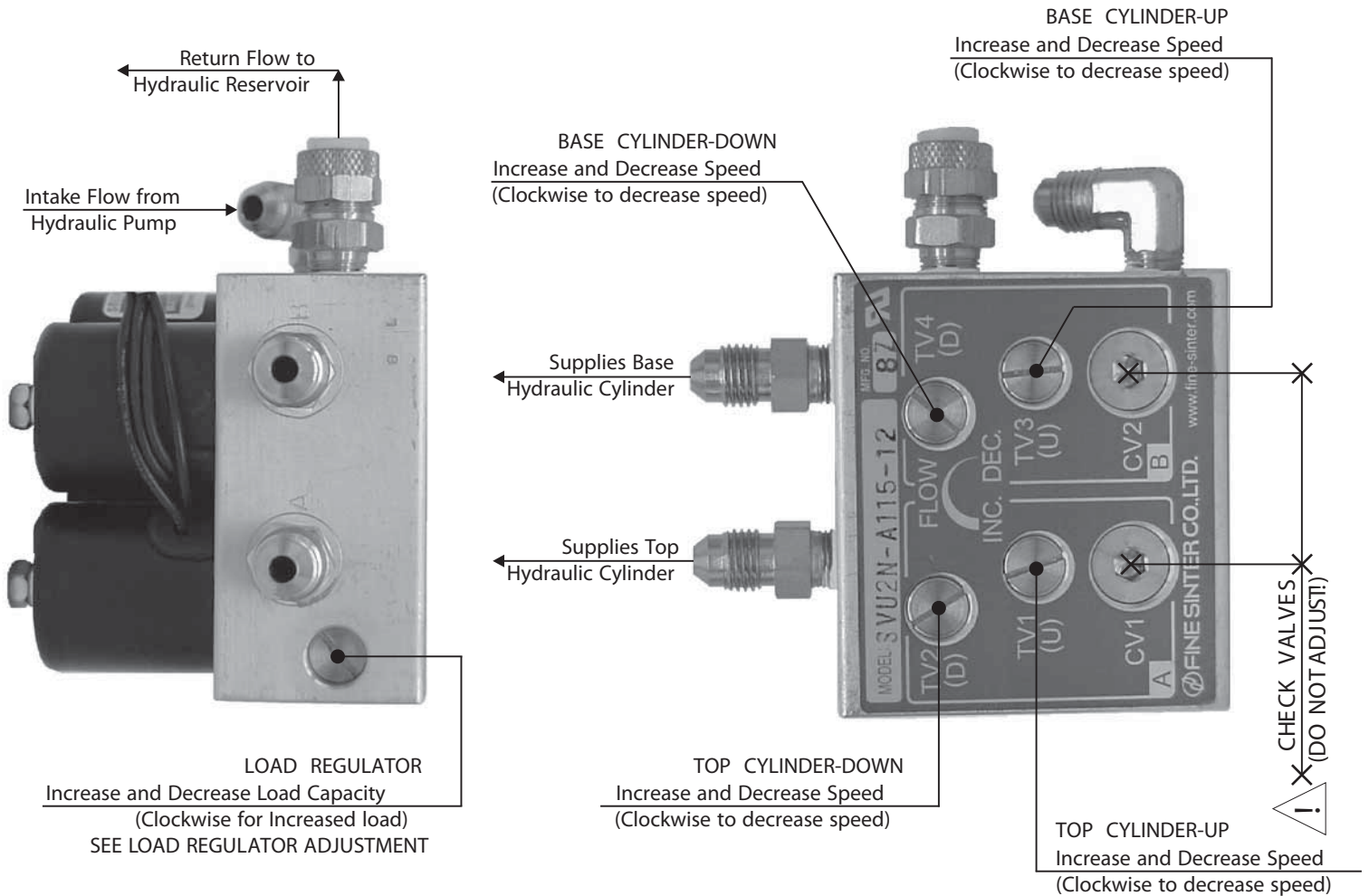
BACK SENSOR POSITIONING SYSTEM



BACK & BASE SENSOR POSITIONING SYSTEM

These assemblies constantly monitor the chair's position and allows the Hydraulic System Main PCB to precisely and repeatedly return the chair to any pre-programmed position. Also, the Sensor Positioning Systems allows the Hydraulic System Main PCB to accurately know the end limits of the chair's movement.

Solenoid Valve - Speed & Lad Adjustment



CYLINDER SPEED ADJUSTMENT

To INCREASE SPEED, turn COUNTER-CLOCKWISE .

To DECREASE SPEED, turn CLOCKWISE .

NOTE: Top and Base Hydraulic Cylinder Maximum speed is reached when its adjustable Slotted Valve Head is located at "4-1/4" revolutions counter-clockwise from its full clockwise seated position (Do not over tighten) or when the top surface of the Slotted Valve Head is flush with the outside surface of the valve body.

LOAD REGULATOR ADJUSTMENT

To INCREASE LOAD CAPACITY, turn CLOCKWISE .

To DECREASE LOAD CAPACITY, turn COUNTER-CLOCKWISE .

* AT FACTORY PRE-SET (RECOMMENDED) A ZAKTON Z2 DENTAL CHAIR WILL ACCOMMODATE PATIENTS: 525 lbs. MAX.
 * 1 FULL REVOLUTION = 135 LBS.

NOTE: To return the regulated setting back to its Factory Pre-set , do so by turning the Slotted Valve clockwise (IN) until it stops. (Do not over tighten.)
 Then turn the Slotted Valve counter-clockwise (OUT) "one" full revolution.

Zakton Z2 Series Dental Chair - Scheduled Maintenance

Zakton Z2 Series Dental Chairs requires very little regular maintenance. The following sections outline which functions should be performed and how often.

Regular Maintenance

Check cleanliness of Hydraulic Oil - 1 time per year

Check for Hydraulic Oil leaks from all fittings - 1 time per year

How to visually check the Hydraulic Fluid

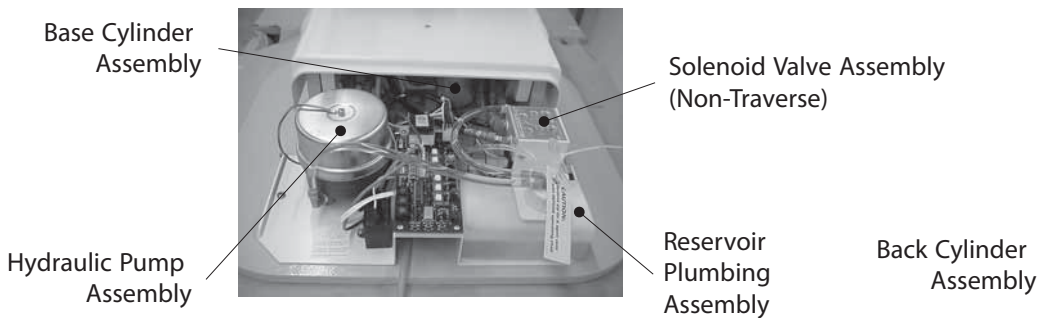
Remove the Hydraulic Access Shroud by loosening the "2" Attachment Screws on two sides of the shroud. See step 2. of "Zakton Z2 Series Dental Chair- Installation Instructions" in this manual for a detailed version of removing the Hydraulic Access Shroud.

Visibly inspect the clear low-pressure Hydraulic Return Fluid Line between the Hydraulic Pump & Hydraulic Reservoir. Looking thru the tube, you should be able to see an object such as your finger. If you can not see your finger looking thru the tube, have a service technician replace the Hydraulic Fluid .

How to check for a Hydraulic Fluid leak from fittings

Remove the Hydraulic Access Shroud by loosening the "two" attachment screws on the sides of the shroud. See step 2. of "Zakton Z2 Series Dental Chair- Installation Instructions" in this manual for a detailed version of removing the Hydraulic Access Shroud.

Visibly inspect all Fittings (A Fitting is a device that connects a hose to a component) attached to the Top Cylinder Assembly, Base Cylinder Assembly, Hydraulic Pump Assembly, Solenoid Valve Assembly, Reservoir Plumbing Assembly, and Traverse Cylinder (if-equipped). If a Hydraulic Fluid leak is found from any fitting, contact your local service technician immediately. **DANGER:** The Hydraulic Fluid can be under pressure. Thus, any leak could potentially create injury, a mess, and damage.



Zakton Z2 shown



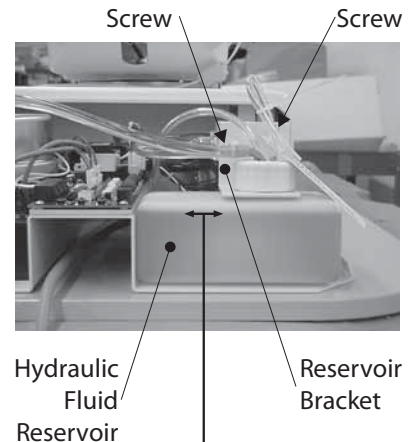
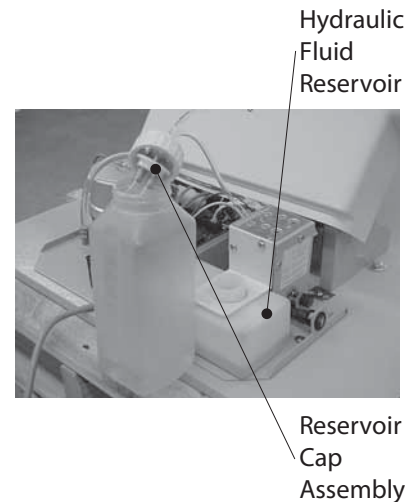
Zakton Z2 shown

Zakton Z2 Series Dental Chair - Scheduled Maintenance

Caution: Follow safety precautions from the Hydraulic Fluid Mfg.
When handling used and unused hydraulic fluid.

Hydraulic Fluid Replacement

- ① Raise the CHAIR BASE to the FULL UP position.
Raise the CHAIR BACK to the FULL UP position.
(This will evacuate most of the Hydraulic Fluid from the Hydraulic Fluid Reservoir to both Back Cylinder Assembly and Base Cylinder Assembly)
- ② CAUTION: This step has the potential to spill fluid. You will need a drip rag, and a deep pan or bucket that will accommodate at least 32 ounces of Hydraulic Fluid.
 - A. Remove the Hydraulic Access Shroud (See Step 2 of "Zakton Z2 Series Dental Chair-Installation Instructions" in this manual for a detailed version of removing the Hydraulic Access Shroud.).
 - B. Now have your drip rag and pan or bucket ready. Unscrew the Reservoir Cap from the Hydraulic Fluid Reservoir. Slowly remove the Reservoir Cap Assembly with tubes attached, out of the Hydraulic Fluid Reservoir and while it's not dripping, position it into your pan or bucket.
- ③ CAUTION: Step A. and Step B. will discharge the Hydraulic Fluid, make sure the "2" open large tube ends of the Reservoir Cap Assembly is aimed inside your pan or bucket, specifically the inner wall.
 - A. Lower the CHAIR BASE to the FULL DOWN position.
 - B. Lower the CHAIR BACK to the FULL DOWN position.
- ④ Now uninstall the Reservoir Bracket by removing the "2" screws which secures it; carefully remove the Hydraulic Fluid Reservoir and pour the remaining Hydraulic Fluid from the reservoir into your pan or bucket.
- ⑤ Reinstall the Hydraulic Fluid Reservoir and Reservoir Bracket by securing them using the "2" screws you previously removed. With both the chair base and chair back down full, and with new Mobil DTE Light Hydraulic Fluid, fill the Hydraulic Fluid Reservoir until the fluid level is approximately 1/8" below the reservoir ceiling.
IMPORTANT: DO NOT OVER FILL. USE ONLY Mobil DTE Light.
- ⑥ Carefully return the Reservoir Cap Assembly to the secured Hydraulic Fluid Reservoir, then install and hand tighten the Reservoir Cap. Using the drip rag, wipe of any Hydraulic Fluid drips (Hydraulic Fluid will stain). Re-install the Hydraulic Access Shroud.
- ⑦ Finally, you must cycle the chair base "full" UP and "full" DOWN, a minimum of "3" cycles, and the chair back "full" UP and "full" DOWN a minimum of "3" cycles. This will "purge" the air bubbles that may have gotten into the hydraulic system and retain smooth quiet function. Due to some fluid remaining in the system, specifically the traverse cylinder. Once Cycled the Hydraulic Fluid will not be perfectly clear. If unsatisfied, cycle all Hydraulic Cylinders, specially the Traverse Cylinder & repeat Step 1 thru 7 .



NOTE:
Chair Base
DOWN FULL
Chair Back
DOWN FULL
Fluid level 1/8"
below Reservoir
ceiling.

Zakton Z2 Series Dental Chair 115V & 220V - Specifications

Dental Chair - 115V

Hydraulic Motor Pump

115 V \sim 50/60Hz

3.9A

50 μ F Capacitor

Maximum Cycle Time - 1 min.

Thermally Protected

Hydraulic Solenoid Valve

115 V \sim 50/60Hz

19/13W

Maximum Cycle Time - 10 min.

853 psi. Maximum Operating Pressure

853 psi. Relief Valve Setting

Hydraulic Cylinders

800 psi. Maximum Operating Pressure

(Both Cylinders)

Fuses

6A - 250V in-line fuses

Dental Chair - 220V

Hydraulic Motor Pump

220 V \sim 50/60Hz

1.8/2.0A

50 μ F Capacitor

Maximum Cycle Time - 1 min.

Thermally Protected

Hydraulic Solenoid Valve

220 V \sim 50/60Hz

19/13W

Maximum Cycle Time - 10 min.

853 psi. Maximum Operating Pressure

853 psi. Relief Valve Setting

Hydraulic Cylinders

800 psi Maximum Operating Pressure

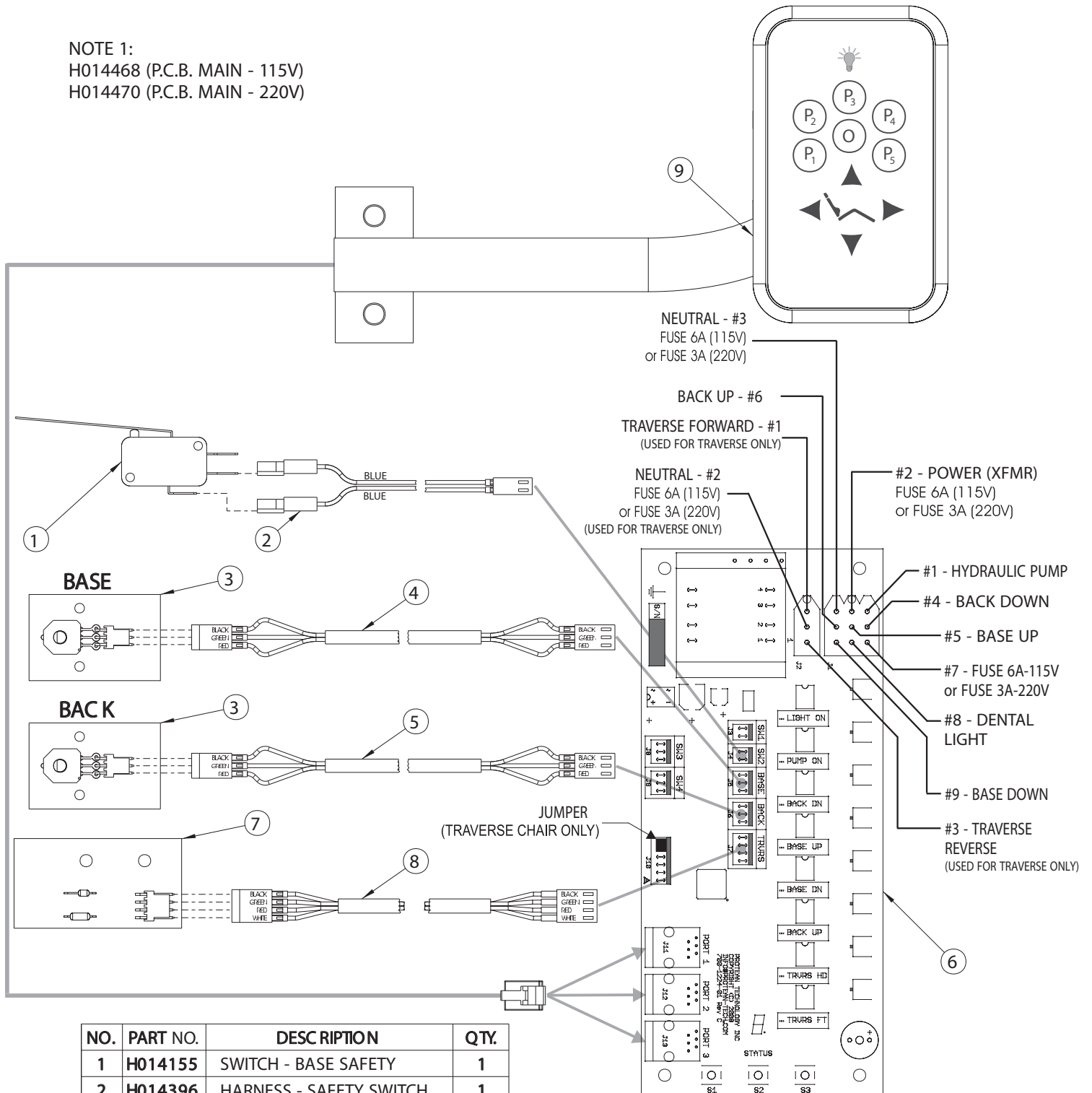
(Both Cylinders)

Fuses

3A - 250V in-line fuses

Zakton Z2 Series Dental Chair 115V or 220V - Electronic Positioning Components

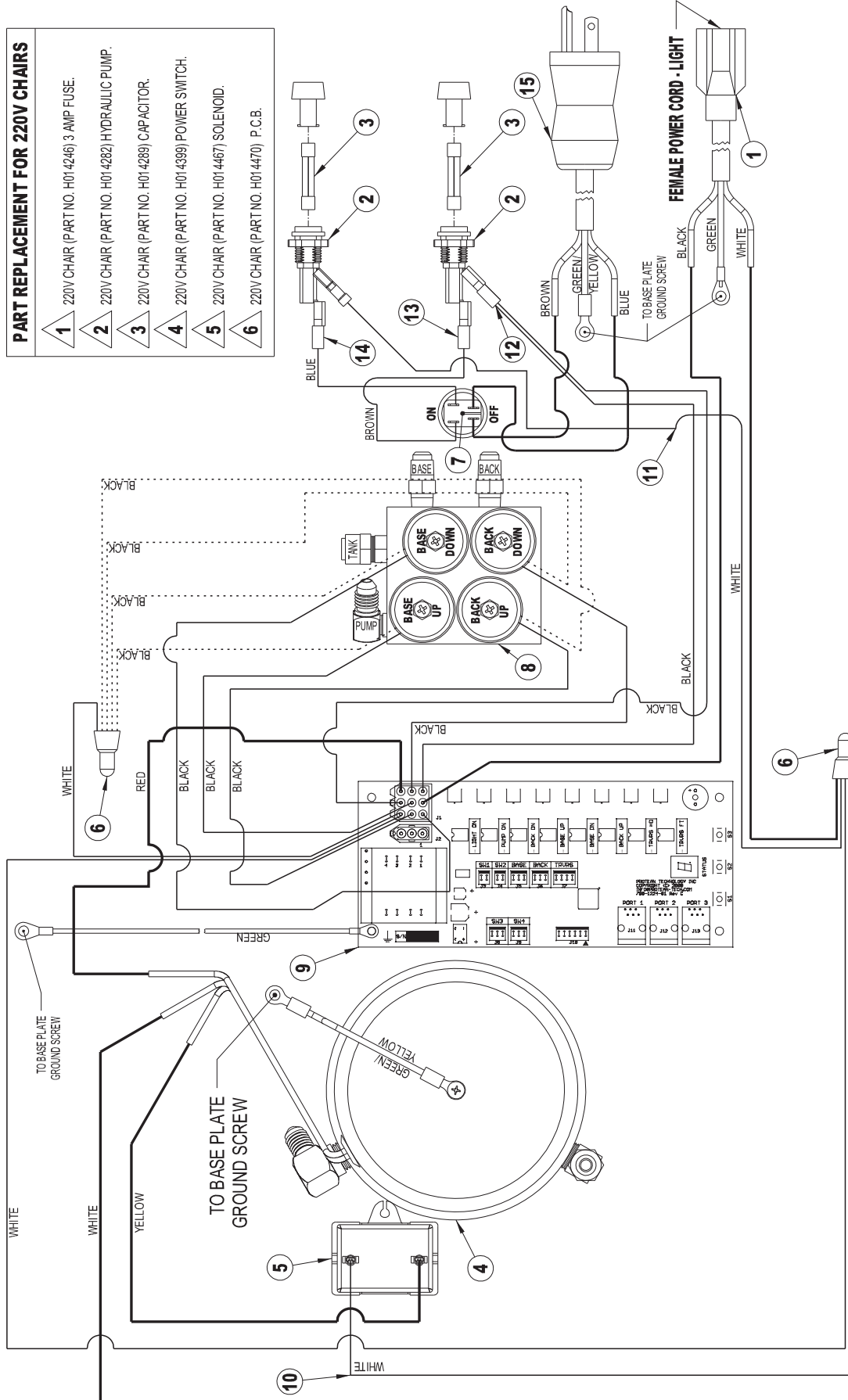
NOTE 1:
 H014468 (P.C.B. MAIN - 115V)
 H014470 (P.C.B. MAIN - 220V)



NO.	PART NO.	DESCRIPTION	QTY.
1	H014155	SWITCH - BASE SAFETY	1
2	H014396	HARNESS - SAFETY SWITCH	1
3	H014460	POTENTIOMETER	2
4	H014464	HARNESS - BASE POTENTIOMETER	1
5	H014465	HARNESS - BACK POTENTIOMETER	1
6	SEE NOTE 1	P.C.B. MAIN Z 2 DENTAL CHAIR	1
7	H014497	ENCODER (TRAVERSE CHAIR ONLY)	1
8	H014505	ENCODER HARNESS (TRAVERSE CHAIR ONLY)	1
9	SEE NOTE 2	TOUCHPAD - CHAIR MOUNT	1

NOTE 2:
 P096660 (TOUCHPAD - LEFT SIDE)
 P096662 (TOUCHPAD - RIGHT SIDE) SHOWN

Zakton Z2 Dental Chair 115V or 220V - Hydraulic High Voltage System



PART REPLACEMENT FOR 220V CHAIRS

1	220V CHAIR (PART NO. H014246) 3 AMP FUSE.
2	220V CHAIR (PART NO. H014282) HYDRAULIC PUMP.
3	220V CHAIR (PART NO. H014289) CAPACITOR.
4	220V CHAIR (PART NO. H014399) POWER SWITCH.
5	220V CHAIR (PART NO. H014467) SOLENOID.
6	220V CHAIR (PART NO. H014470) P.C.B.

10	P096442	WIRE ASSEMBLY - CAPACITOR	1
11	P096443	WIRE ASSEMBLY - NEUTRAL	1
12	P096457	WIRE ASSEMBLY - POWER/FUSE	1
13	P096648	BROWN POWER LEAD	1
14	P096649	BLUE POWER LEAD	1
15	P096650	POWER CORD	1

5	H014284	CAPACITOR (115V CHAIR)	1
6	H014328	CLOSED END CONNECTOR	1
7	H014397	POWER SWITCH (115V CHAIR)	1
8	H014466	SOLENOID (115V CHAIR)	1
9	H014468	P C B (115V CHAIR)	1

NO.	PART NO.	DESCRIPTION	QTY.
1	H014033	FEMALE POWER CORD - LIGHT	1
2	H014101	FUSE HOLDER	2
3	H014250	6 AMP FUSE (115V CHAIR)	2
4	H014280	HYDRAULIC PUMP (115V CHAIR)	1

Zakton Z2 Series Dental Chair 115V or 220V - Troubleshooting & Calibration

DANGER : Zakton Dental Systems recommends all service & repairs to be done by a qualified technician. Make sure to UNPLUG the Dental Chair's Power Cord from its POWER SOURCE any time the Hydraulic Power Shroud is uninstalled unless otherwise specified. See Step 2. of "Zakton Z2 Series Dental Chair-Installation Instructions" for a detailed version of removing the Hydraulic Power Shroud.

DENTAL CHAIR DOES NOT FUNCTION:

Power Switch at "ON Position" & GREEN Power Light (115V chair only) "Off"

- Is the chair plugged into a working outlet? Make sure to check the circuit breaker.
- Are the fuses blown? (DANGER: Make sure chair Power Cord is unplugged) "The fuses are located inside the Hydraulic Power Shroud, near the Power Switch". If so, replace them with the correct fuses for your chair:

115V Chair - 6A, 250V fuses (H014250)

220V Chair - 3A, 250V fuses (H014246)

- Has the Power Cord been damaged? (DANGER: Make sure chair Power Cord is unplugged.) Visibly inspect the cord and its connections to the chair base.

DENTAL CHAIR DOES NOT FUNCTION:

Power Switch at "ON Position" & GREEN Power Light (115V chair only) "ON "

- Was there a momentary office power source failure? If so, go thru and follow the chairs calibration instructions using Page 2 of 2 of this section: "BASE & BACK CALIBRATION (Zakton Z2 SERIES DENTAL CHAIR) "
- Verify all Touch Pad and/or Foot Control Cable connections are continuous and firm.
- Check Main P.C.B. Calibration Status Screen for an error code, and trouble shoot accordingly using Page 2 of 2 of this section:
- "BACK & BASE ENCODER CALIBRATION (ZAKTON Z2 SERIES DENTAL CHAIR)"

THE CHAIR MAKES A SQUEALING SOUND WHEN MOVING:

- There is air in your hydraulic system. Cycle the chair base all the way up and down "3" times and cycle the chair back all the way up and down "3" times. If this doesn't correct the problem, check your Hydraulic Fluid level. (The Hydraulic Fluid Reservoir is located inside the Hydraulic Power Shroud)

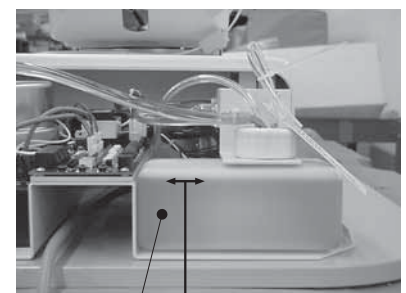
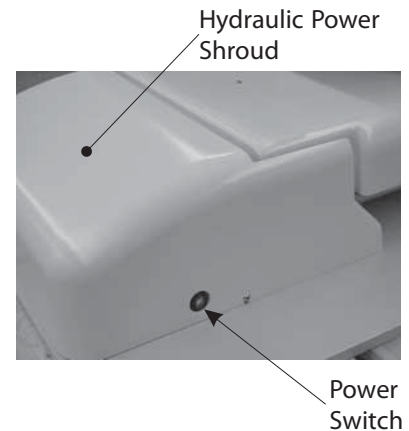
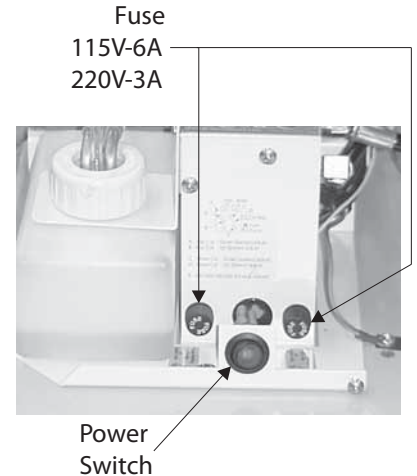
How to check and retain correct fluid level:

- Step 1. IMPORTANT: Lower the Chair Base DOWN completely.
- Step 2. IMPORTANT: Recline the Chair Back DOWN completely.

Step 3. The fluid level in the Hydraulic Fluid Reservoir needs to be 1/8" below the reservoir ceiling or where the radius corner starts .

- Step 4. If the fluid level is low; add Hydraulic Fluid to the Hydraulic Fluid Reservoir until the fluid level is full as described in Step 3.

CAUTION: DO NOT OVER FILL!



Hydraulic Fluid Reservoir

NOTE:
Chair Base DOWN FULL
Chair Back DOWN FULL
Fluid level 1/8" below Reservoir ceiling.

If the problem persist, please contact the Zakton Technical Support Team for help in diagnosing the problem.

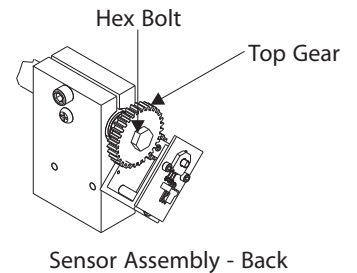
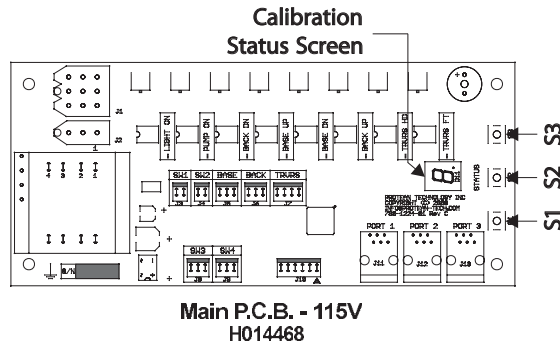
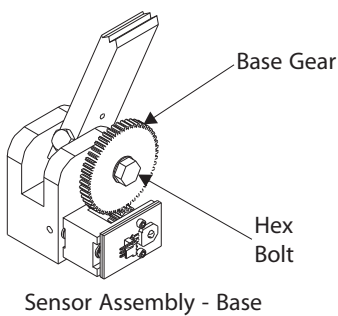
Zakton Z2 Series Dental Chair - Troubleshooting & Calibration

DANGER :Zakton Dental Systems recommends all service & repairs to be done by a qualified technician. Make sure to UNPLUG the Dental Chair's Power Cord from its POWER SOURCE any time the Hydraulic Power Shroud is uninstalled unless otherwise specified. See Step 2. of "Zakton Z2 Series Dental Chair-Installation Instructions" for a detailed version of removing the Hydraulic Power Shroud.

TROUBLE SHOOTING GUIDE

ZAKTON Z2 SERIES POWER PACK MAIN P.C.B. H014468

CODE	DESCRIPTION	ACTION	LOCATION
_	Operating Mode (Circular running dash)	Note: If the chair is malfunctioning refer to Base & Back Calibration.	N/A
C	In Status and Calibration Mode	Press S1 then S2 then S3 & cycle the chair's Power Switch OFF/ON to exit and return to operating mode. Also refer to Base & Back Encoder Calibration sticker.	Above Base Plate at Power Pack.
F	Safety switch engaged	Make sure the Safety Switch assembly is functioning properly.	Below seat level at back of chair.
7	Base Sensor connection fault	Make sure Base Sensor wiring harness is installed properly in its designated ports. Check for broken connections in harness assembly.	Harness location is from the Power Pack PCB to Base Sensor assembly PCB on Base Plate.
8	Back Sensor connection fault	Make sure Back Sensor wiring harness is installed properly in its designated ports. Check for broken connections in harness assembly.	Harness location is from the Power Pack PCB to Back Sensor assembly PCB under seat.
9	Base & Back Sensor connection fault	Make sure Base & Back Sensor wiring harness are installed properly in there designated ports. Check for broken connections in harness assembly.	See Code 7 Base assembly location. See Code 8 Back assembly location.



CALIBRATION

ZAKTON Z2 SERIES DENTAL CHAIR BACK & BASE POTENTIOMETERS (FOR MAIN P.C.B. H014468)

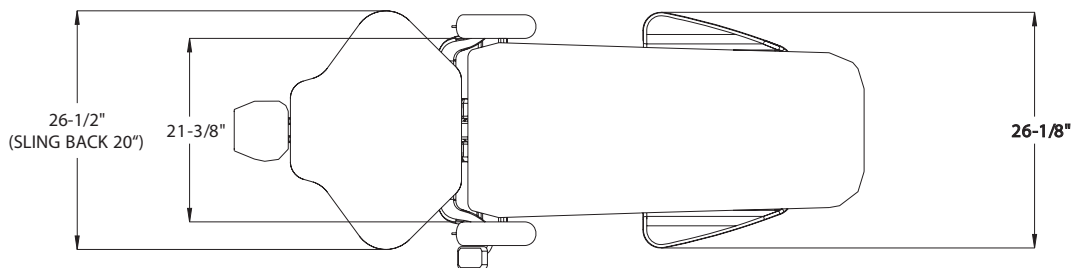
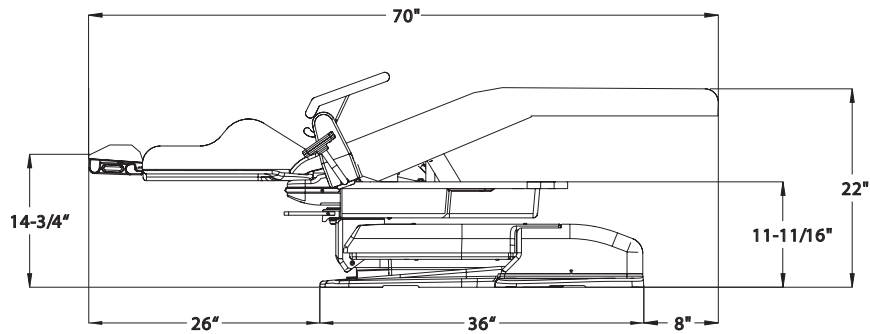
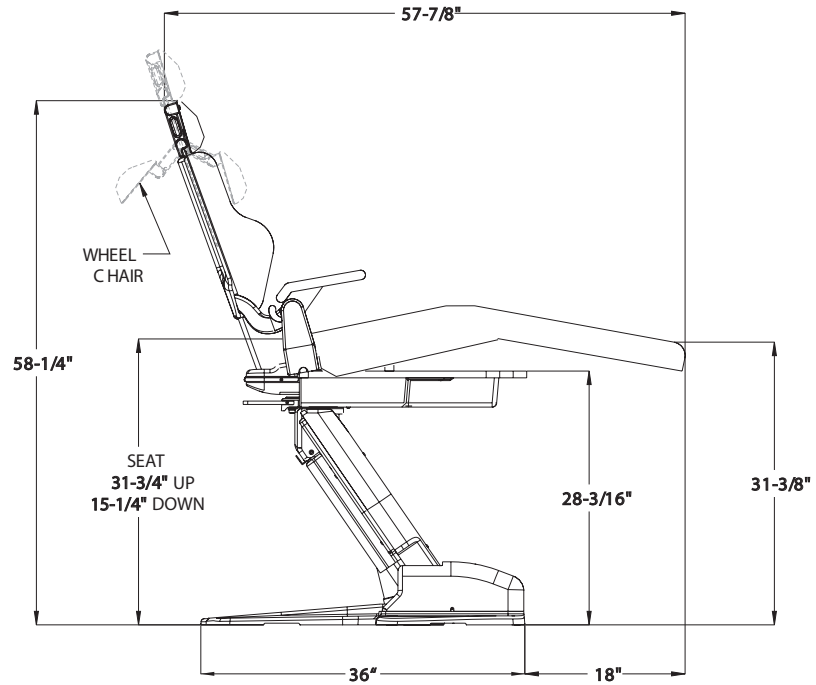
P229228 R4

- Step 1. Locate the P.C.B. under the Power Shroud on the Base Plate.
- Step 2. **IMPORTANT** - Press buttons S3 & S1 on the P.C.B. simultaneously and manually position the chair until its BASE IS COMPLETELY DOWN FULL, then Press button S2 on the P.C.B. until the chair BACK IS COMPLETELY UP FULL.
- Step 3. Enter calibration mode by simultaneously pressing S1, S2, & S3 located at the front of the PCB until an audible beep is heard, then release. The Status component will indicate the letter 'C'.
- Step 4. Press and release S1 on the PCB to check calibration of the Base Sensor assembly located on the Base Plate and S2 to check calibration of the Back Sensor assembly located under the seat.
NOTE: IF THE DASH APPEARS AT ITS CENTER LOCATION ON THE PCB STATUS COMPONENT FOR S1 & S2, SKIP STEP 5 AND PROCEED TO STEP 6. CHAIR DOES NOT NEED CALIBRATION.
- Step 5. For this step, remove the Seat Pan assembly and/or the Upper Elevator Shroud, depending on which Sensor assembly needs calibration. After choosing a Sensor assembly as noted in Step 4, Loosen the Hex Bolt for the Large Gear of the respective Sensor Assembly to be calibrated. Rotate the large gear until the dash symbol appears in its center location on the PCB Status component. Adjust it such so that it is located in the middle of that center dash segment. Precisely maintain that calibrated Large Gear position and tighten the Hex Bolt. That Sensor is now calibrated, repeat for the other Sensor assembly.
IMPORTANT: DO NOT RE-POSITION THE CHAIR FROM ITS FULL BASE DOWN & FULL BACK UP CALIBRATION POSITION BEFORE STEP 6.
- Step 6. Press S3 on the P.C.B. then cycle the chair Power Switch OFF/ON to exit and return to Operating Mode. The Status component on the PCB will show a P series number, then a circle running dash (Operating mode). Re-install the Seat Pan and/or Upper Elevator Shroud, and Power Shroud.

CLEARING ALL PRE-PROGRAMMED POSITIONS:

- Step 1.** Push the Power Switch to the OFF position for a minimum of 2 seconds.
 - Step 2.** Press and hold down the S3 Button on the PCB While pushing the Power Switch to the ON position.
 - Step 3.** The letter "L" will appear on the PCB Calibration Status Screen to confirm deletion, then release the button.
- All pre-programmed positions have been deleted.**

General Dimensions - Zakton Z2 Series Dental Chair



Manufacturer / Distributor



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