

**Installation**  
**Operation**  
**Maintenance**  
**Troubleshooting**  
Version Dec/17



**8000DY / Daytona**

# Congratulations!

All of us at Summit Dental Systems want you to know that your Daytona Chair has been built with the finest materials available.

The assembly and testing were completed by technicians devoted to making SDS products perform to all prescribed specifications.

Our five-year limited warranty is just one of the ways we express our confidence that you will be completely satisfied with your purchase.

We appreciate your support and look forward to meeting your future professional needs through our expanding product line.

*Cesar Coral*

President

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## Important Information

### Technical Specifications

Power Inlet:	115VAC, 60 Hz or 220 VAC, 50 Hz
Fuse:	115V – 12Amp MDA Time Delay 220V/230V – 8Amp MDL Time Delay Inlet
PC Board:	115VAC or 220 VAC Outlet 15VDC
Motor Pump:	115 VAC, 60 Hz or 220 VAC, 50 Hz A duty cycle operation ON/OFF 1/13
Hydraulic Piston Base:	Working pressure 25 Kg/cm <sup>2</sup>
Hydraulic Piston Back:	Working pressure 15 Kg/cm <sup>2</sup>

### Unpacking the Chair

Pay careful attention when unpacking the chair and its accessories. Damage caused by mishandling the equipment during unpacking or installation is not covered under warranty.

### New Owner

Please read, sign and submit the warranty registration form that is located at the end of this manual. Failure to return this form may void the warranty.

### Serial Number

The product label can be located by raising the base of the chair all the way up and looking underneath the Lower Elevation Cover.

### Storage and Transportation

Storage/Transportation	Temperature: -20°F to 122°F (-29°C to 50°C) Relative humidity: 10 – 95%
Operating Temperature	Temperature: 50°F to 104°F (10°C to 40°C) Relative humidity: 10 – 95%
Indoor Use	Altitude up to 2,000 m (6,563') Installation category II Pollution degree 2

### Classifications

- According to the type of protection against electric shock: CLASS I.
- According to the mode of operation: ON/OFF 1/13.
- According to the degree of protection against electric shock: NO APPLIED PARTS.
- According to the degree of protection against ingress of water: ORDINARY (IPX0) PROTECTION.

According to the degree of safety of application in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide: - EQUIPMENT NOT SUITABLE FOR USE IN THE PRESENCE OF A FLAMABLE ANAESTHETIC MIXTURE WITH AIR OR WITH OXIGEN OR NITROUS OXIDE.

## ADVISORY NOTICES

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This equipment should only be installed by a specialized technician authorized by Summit Dental Systems, and not doing so could result in loss of warranty.

To guarantee the safe functioning of your equipment, use only the Summit Dental Systems assembly configurations (Dental Chair, Delivery Units, Assistant's Instrumentation, and Dental Light) supplied by Summit Dental Systems authorized Dealers/Technical Assistance.

Medical Devices is for professional use only. It must be operated and utilized by specialized professional (certified professional, according to the legislation of the country) and following the instructions of the manual.

No modification of this equipment is allowed, unless authorized by the manufacturer.

No parts of this device can be serviced when it is in use with a patient.

When placing the chair in its final position, check to insure the protective vinyl strip is properly in place on the base plate riser. Adequate space should be provided for its normal operation for the configuration in which the chair will be used.

## WARNINGS



### **CAUTION! HEAVY EQUIPMENT!**

Two (2) or more persons should be involved in removing the chair from the pallet and setting it gently on the ground to its final position.

Handle only from the steel base, metal seat frame, and the armrest brackets. Do not handle by any plastic part as they may crack! Plastics damaged in this manner are not covered under warranty.

To avoid risk of electric shock, this equipment must be connected to a supply mains with protective earth.

The mains plug should remain accessible when the chair is installed. DO NOT position the chair making it difficult to disconnect the power plug from the mains.

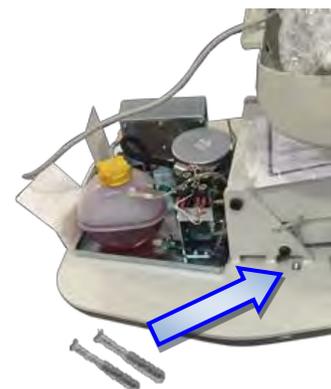
Turn power off before servicing. To completely power off the chair you must unplug the equipment from the power source. All electrical work replacement should be done with equipment unplugged from outlet.

The use of Accessories, transducers, and cables other than those specified by the manufacturer, may result in increased Emissions or decreased Immunity of the Chairs.

Medical Electrical Equipment needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided in this manual.

Portable/Mobile RF communications equipment can affect Medical Electrical Equipment.

**SDS recommend having the dental chair fixed to the floor:** Base is pierced for fastening it with 2 holes located on the side of the bearings “outside” covered by the finishing cover of the motor.



Guidance and manufacturer's declaration – electromagnetic emissions		
The Daytona Chair is intended for use in the electromagnetic environment specified below. The customer or the user of the Daytona Chair should assure that it is used in such an environment.		
EMISSION TEST	COMPLIANCE	ELECTROMAGNETIC ENVIRONMENT GUIDANCE
RF Emissions CISPR 11	Group 1	The Daytona Chair uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.  The Daytona Chair is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
RF Emissions CISPR 11	Class B	
Harmonic Emissions IEC 61000-3-2	Class A	
Voltage Fluctuations/ flicker emissions IEC 61000-3-3	Complies	

Guidance and manufacturer's declaration – electromagnetic immunity			
The Daytona Chair is intended for use in the electromagnetic environment specified below. The customer or the user of the Daytona Chair should assure that it is used in such an environment.			
IMMUNITY TEST	IEC 60601 TEST LEVEL	COMPLIANCE LEVEL	ELECTROMAGNETIC ENVIRONMENT GUIDANCE
Electrostatic Discharge (ESD) IEC 61000-4-2	± 6 kV contact ± 8 kV air	± 6 kV contact ± 8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast transient/burst IEC 61000-4-4	± 2 kV for power supply lines ± 1 kV for input/output lines	± 2 kV for power supply lines ± 1 kV for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1 kV differential mode ± 2 kV common mode	± 1 kV differential mode ± 2 kV common mode	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	< 5% $U_T$ (> 95% dip in $U_T$ ) for 0,5 cycle 40% $U_T$ (60% dip in $U_T$ ) for 5 cycles 70% $U_T$ (30% dip in $U_T$ ) for 25 cycles < 5% $U_T$ (> 95% dip in $U_T$ ) for 5 sec	< 5% $U_T$ (> 95% dip in $U_T$ ) for 0,5 cycle 40% $U_T$ (60% dip in $U_T$ ) for 5 cycles 70% $U_T$ (30% dip in $U_T$ ) for 25 cycles < 5% $U_T$ (> 95% dip in $U_T$ ) for 5 sec	Mains power quality should be that of a typical commercial or hospital environment.  If the user of the Daytona Chair requires continued operation during power mains interruptions, it is recommended that the Daytona Chair be powered from an uninterrupted power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE: $U_T$ is the a.c. mains voltage prior to application of that test level.			

**Guidance and manufacturer’s declaration – electromagnetic immunity**

The Daytona Chair is intended for use in the electromagnetic environment specified below. The customer or the user of the Daytona Chair should assure that it is used in such an environment.

IMMUNITY TEST	IEC 60601 TEST LEVEL	COMPLIANCE LEVEL	ELECTROMAGNETIC ENVIRONMENT GUIDANCE
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 Vrms	Portable and mobile RF communications equipment should be used no closer to any part of the Daytona Chair, including cables, than the recommended separation distance calculated from equation applicable to the frequency of the transmitter.  Recommended separation distance $d = 1.2 \sqrt{P}$ $d = 1.2 \sqrt{P}$ 80 MHz to 800 MHz
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2,5 GHz	3 V/m	$d = 2.3 \sqrt{P}$ 800 MHz to 2,5 GHz  where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m).  Field strengths from fixed RF transmitters as determined by an electromagnetic site survey <sup>a</sup> should be less than the compliance level in each frequency range <sup>b</sup> .  Interference may occur in the vicinity of equipment marked with the following symbol  

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and peoples.

<sup>a</sup> Fields strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateurs radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To access the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the Daytona Chair is used exceeds the applicable RF compliance level above, the Daytona Chair should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the Daytona Chair.

<sup>b</sup> Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

**Recommended separation distance between  
portable and mobile RF communications equipment and the Daytona Chair**

The Daytona Chair is intended for use in the electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the Daytona Chair can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Daytona Chair as recommended below, according to the maximum output power of the communications equipment.

RATED MAXIMUM OUTPUT POWER OF TRANSMITTER W	SEPARATION DISTANCE ACCORDING TO FREQUENCY OF TRANSMITTER m		
	150 kHz to 80 MHz $d = 1.2 \sqrt{P}$	80 MHz to 800 MHz $d = 1.2 \sqrt{P}$	800 MHz to 2,5 GHz $d = 2.3 \sqrt{P}$
0,01	0,12	0,12	0,23
0,1	0,38	0,38	0,73
1	1,2	1,2	2,3
10	3,8	3,8	7,3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance  $d$  in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where  $P$  is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer. NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

## Sample Cautionary Labels

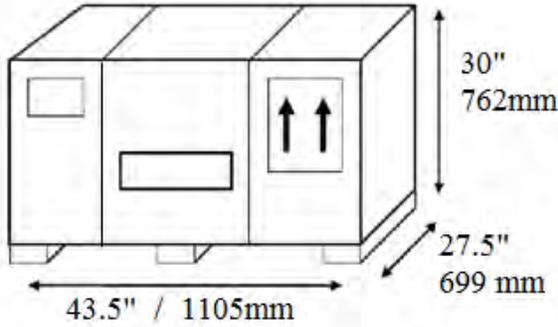
Symbol	Description	Symbol	Description
	European Authorized Representative		Caution. Failure to follow instructions could result in damage to product or minor injury.
	Manufacturer of equipment.		Type B applied part.
	Date of manufacture.		Electrical and electronic waste. Do not dispose of with domestic waste.
	Serial Number.		Protective earth (ground).
	Model Number (Catalog Number).		Functional earth (ground).
	CE Mark - Conforms to applicable European Directives (refer to Declaration of Conformity).		

### Questions?

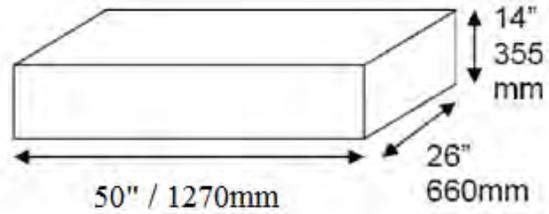
Read this manual carefully. If you have any questions, please call Summit Dental Systems Technical Service at 1-800.275.3368 (USA) or (954) 730-3636 (outside USA).

# Weight & Dimensions

## Shipping Information

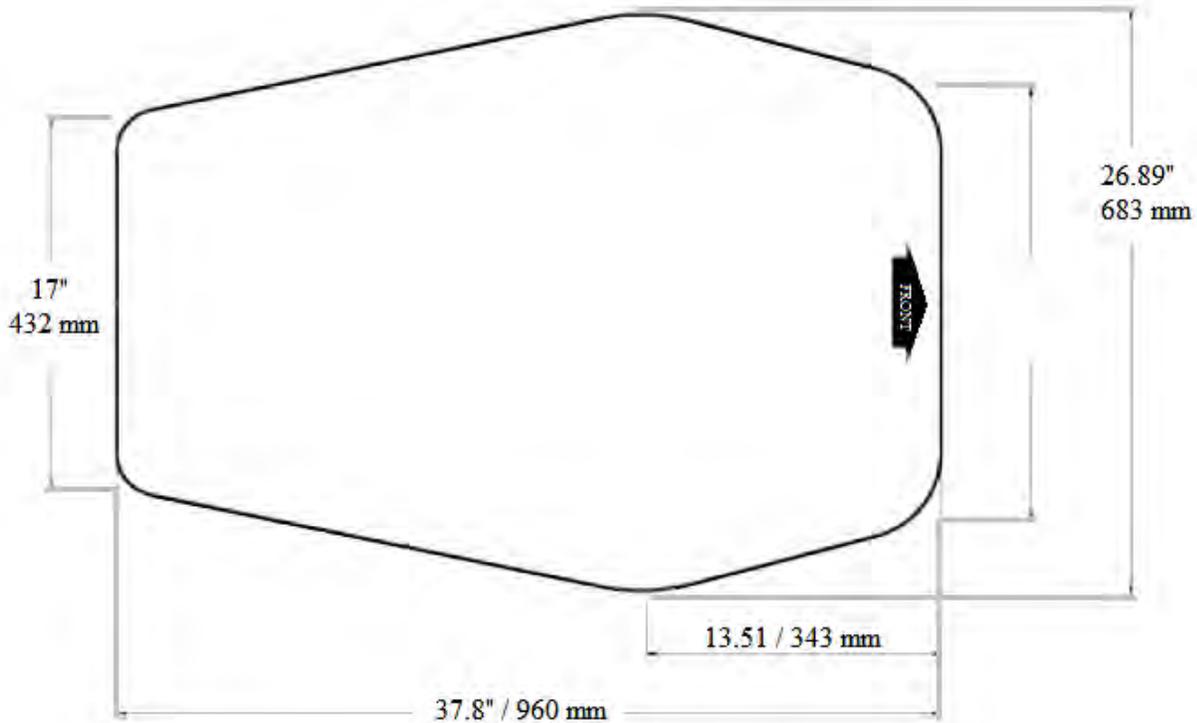


**DAYTONA CHAIR**  
 Weight 358 Lb / 162 Kg

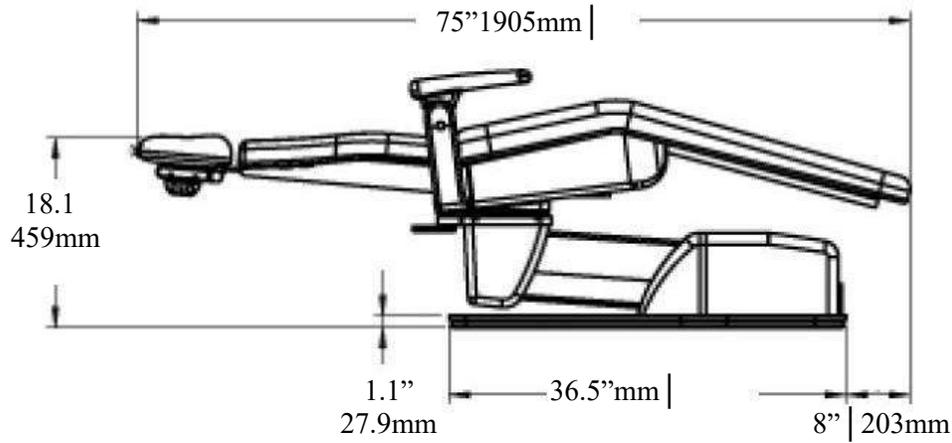


**Upholstery Set**  
**DAYTONA CHAIR**  
 Shipping Weight 45 Lbs / 20.45 Kg

## Footprint

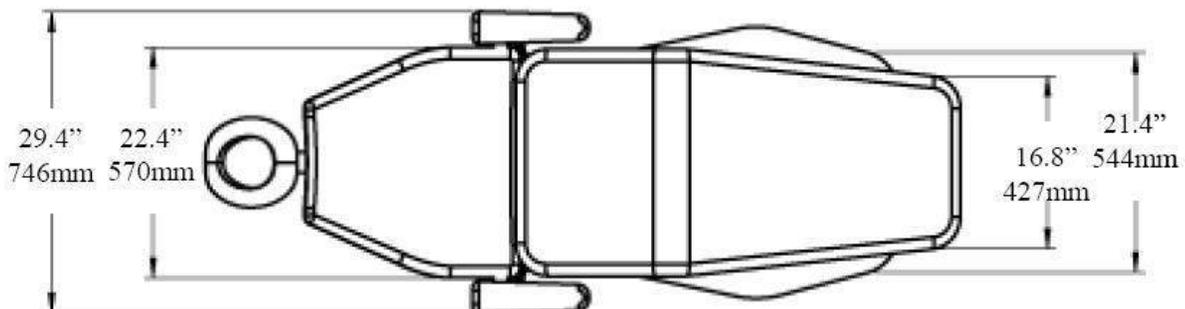
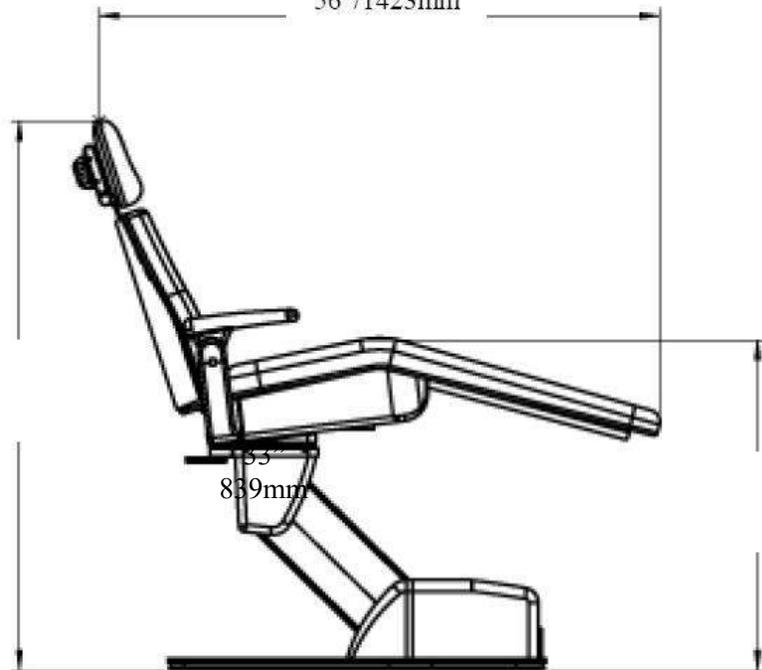


**General Dimension**



Max Load Capacity  
**600 Lbs | 272Kg**  
56" | 1423mm

55" | 1396mm



## Operator's Instructions

### Headrest Operation – Knob Type

Refer to Figure 1a & 2

1. The height of the headrest is adjusted by pulling upward or pushing downward on the headrest. When the desired position is obtained, the headrest will remain in place until repositioning is required.
2. Articulation of the headrest is adjusted by turning the knob clockwise (1) located behind the headrest. When headrest is in the desired position, tighten the knob by turning is counter clockwise.

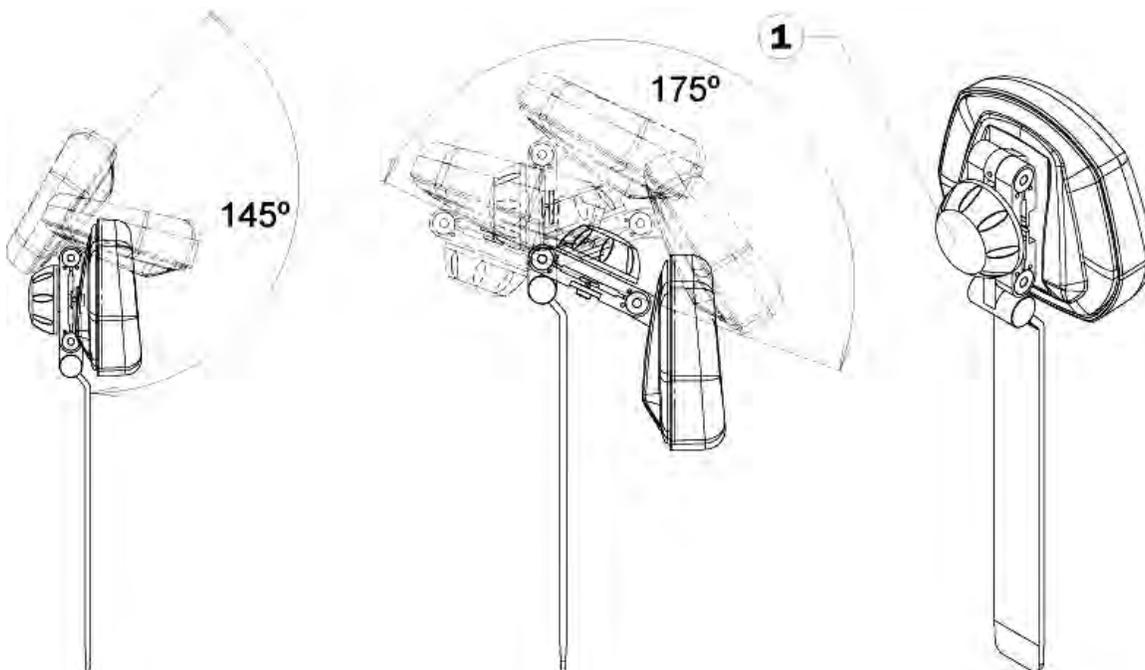


Figure 1a

Figure to illustrate movement, may not show actual/right model.

## Headrest Operation – Pinch Type

Refer to Figure 1b & 2

1. Press the top of pinch button to rotate the pillow only
2. Press the bottom of pinch button to rotate the base only
3. Press the middle of pinch button to rotate the base and pillow at same time
4. Release the pinch button to lock the position

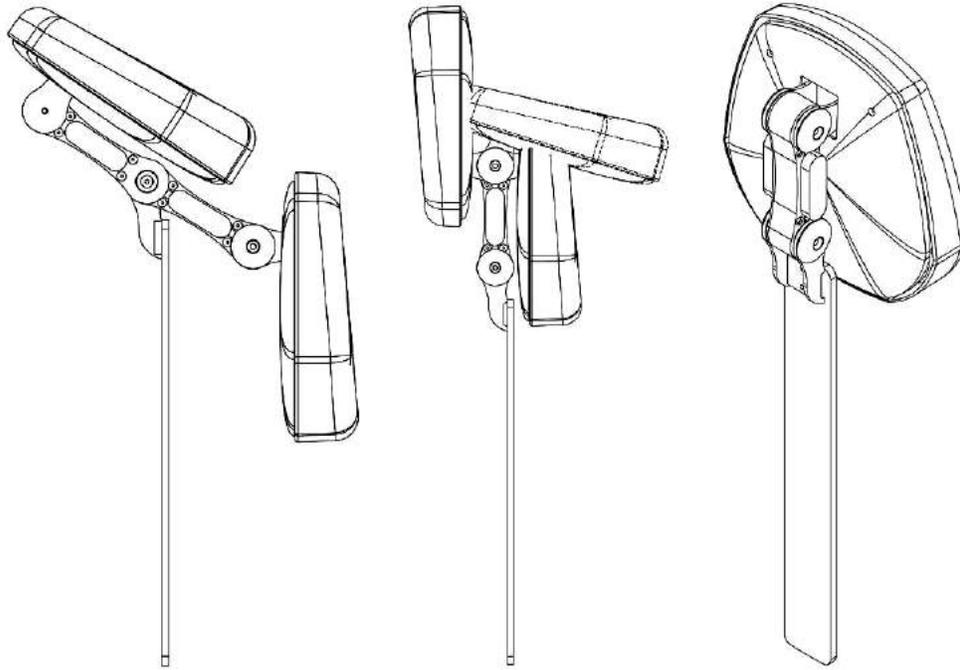


Figure 1b

Figure to illustrate movement, may not show actual/right model.

To regulate the height of the support headrest, move upward or downward (A friction brake will hold the Headrest assembly securely in place).

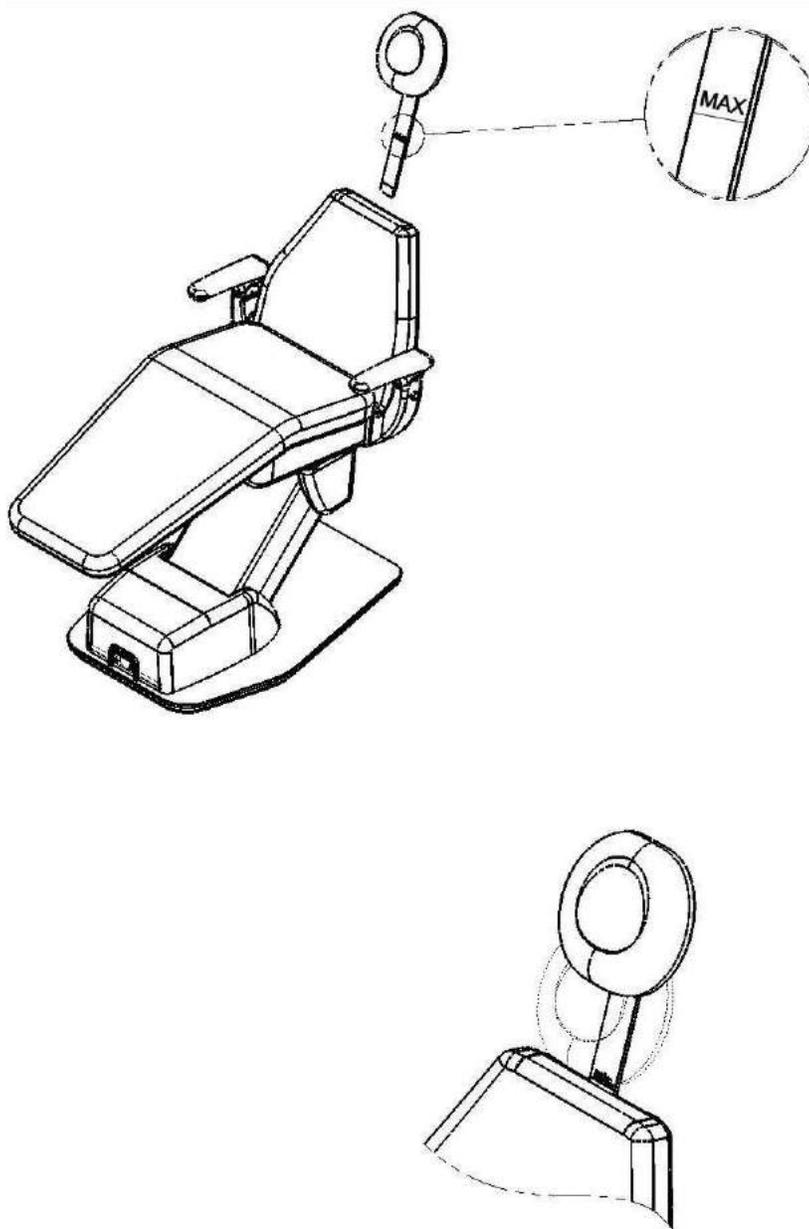


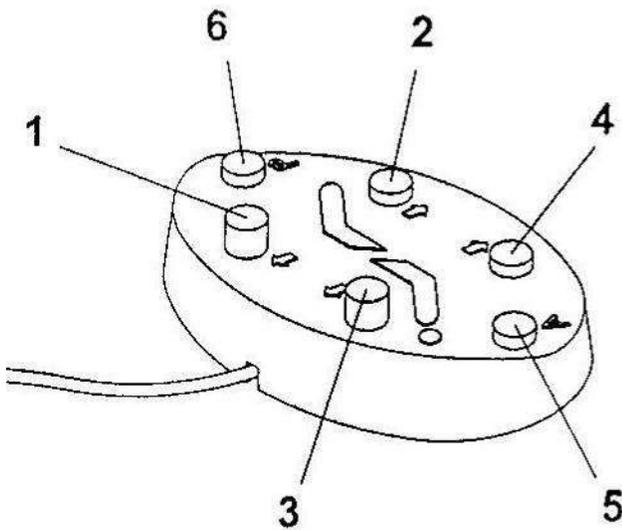
Figure 2

## Foot Control & Membrane Control Pad

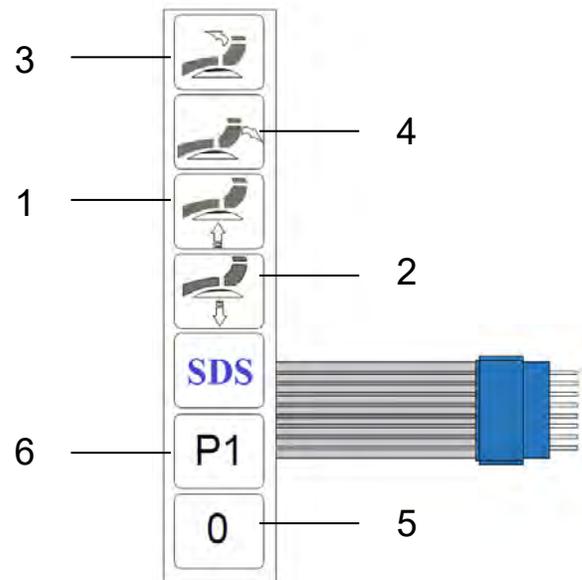
Refer to Figure 3 & 4

1. Base Up – depress foot control button and hold until desired position is reached.
2. Base Down – depress foot control button and hold until desired position is reached.
3. Back Up – depress foot control button and hold until desired position is reached.
4. Back Down – depress foot control button and hold until desired position is reached.
5. Automatic Return – depress and release the button once and the base down and back up movements will continue until the exit position is reached.
6. Pre-position – depress and release the button once and the base up and back down movements will continue until the pre-position is reached.

NOTE: To interrupt the Automatic Return or the Pre-Position, press any manual-positioning button on the foot control (1, 2, 3, or 4). To resume Automatic Return or Pre-position, repress the Automatic Return or Pre-position buttons.



Foot Control  
Figure 3



Membrane Control Pad  
Figure 4

## Electronic Pre-positioning

Refer to Figure 5 & 6

Your Daytona Dental Chair is equipped with automatic electronic pre-positioning. This feature is designed to provide the operator with the convenience of pre-positioning the patient at the touch of a button. You can preset the base and backrest positions with one easy action.

Your chair will arrive with factory set pre-positioning. This is so that it can be checked for all quality control aspects prior to packaging and shipping. To find what pre-positioning the factory has set, simply depress and release the Pre-position Button located to the right of the foot control.

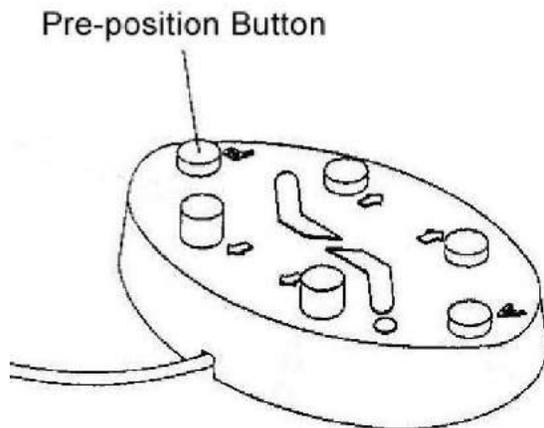


Figure 5

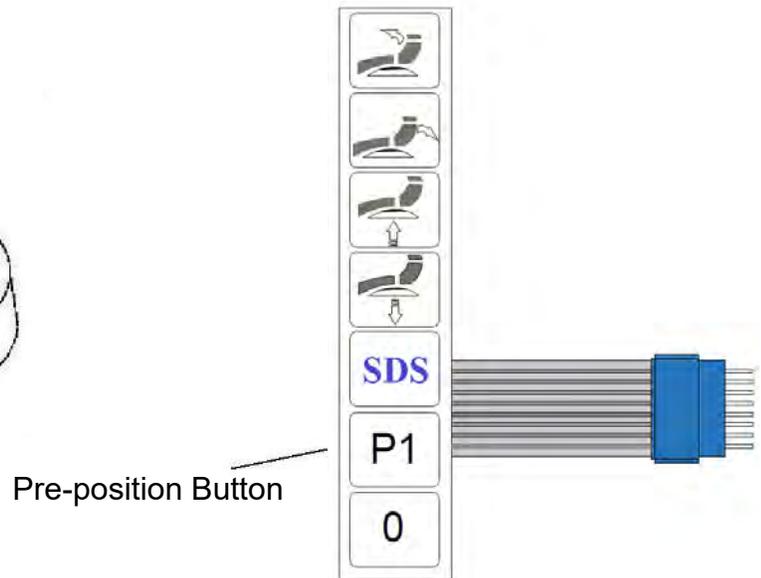


Figure 6

To set your personalized entry position, proceed as follows:

1. Using the foot control or membrane control pad (located on the back of assembly), position the backrest and base of the chair in the desired position.
2. BEFORE DEC-2008 \*\* Depress and hold the “P1”, located on the right side of the foot control or on the membrane control pad, for 3 seconds. Releasing the Pre-position Memory Button and the new base and backrest positions to be stored in memory.
3. AFTER DEC-2008 \*\* Depress and hold the “P1”, located on the right side of the foot control or on the membrane control pad, push and hold until the chair beeps. Releasing the Pre-position Memory Button and the new base and backrest positions to be stored in memory.

You can return the chair to your personalized position at any time by simply depressing and releasing the Pre-position Buttons. The personalized entry position may be reprogrammed as often as needed.

Should you want to interrupt the automatic movements of your Palm Beach Dental Chair, press any manual function (Buttons 1-4) on the foot control or the membrane control pad? To resume the function, press the appropriate automatic function button.

## Cleaning and Disinfection

Equipment surfaces and upholstery discoloration, cracking, sloughing and drying from the use of surface disinfectants is probably the most discussed area of equipment problems today. The very nature of equipment surfaces and upholstery materials is contrary to the application of harsh chemicals.

### **Barrier Technique**

The first choice in the protection of dental equipment should be the use of disposable barrier products. The repeat use of disinfectant on equipment surfaces without the constant removal of the solution residue will eventually cause some damage to equipment surfaces.

### **Chemical Disinfecting**

Because there are hundreds of cleaners, conditioners and disinfectants available, it is impossible for manufacturers to test them all. The manufacturer of the cleaner or disinfectant to be used should be contacted for them to state whether or not the disinfectant will damage equipment surfaces including upholstery.

A solution of mild non-ionic detergent and water is recommended for routine surface cleaning. Never use abrasives.

### **Unacceptable Disinfectants**

The following chemicals may damage equipment and upholstery:

- Alcohol based solutions Acetone
- Bleach Phenol
- Foam spray products

**The Summit Dental Systems warranty does not cover damage to equipment and upholstery caused by cleaning and disinfectant solutions.**

# Installation Instructions

## Backrest Assembly

Refer to Figure 7

Loosen allen screw (4) located on the backrest-positioning lever (1). Raise the backrest positioning lever (1) to the support bracket (2) on the underside of the backrest frame. Align the hole in the piston rod with the hole in the support bracket and insert the clevis pin (3). Center the clevis pin and tighten down the allen screw into the groove in the center of the clevis pin.

NOTE: To avoid damaging the backrest-positioning lever, do not force or pound the clevis pin into place.

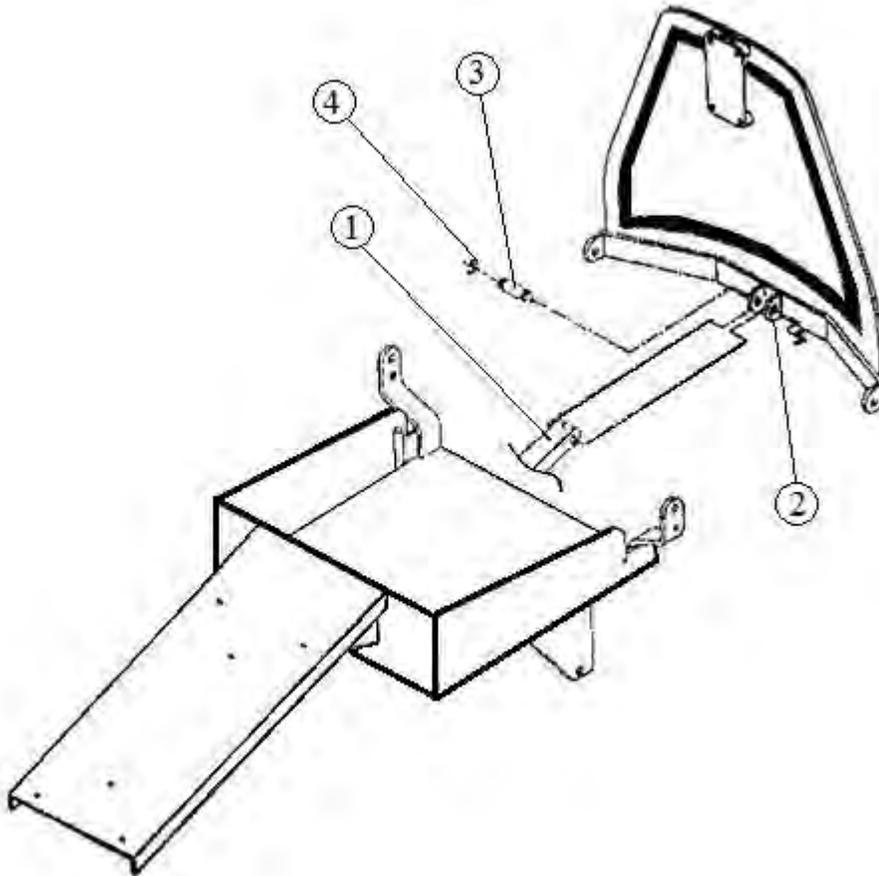


Figure 7

## Post Mount Installation

Refer to Figure 8,

1. Align the three Mounting Screws of the post mount with the corresponding holes of the seat pan.

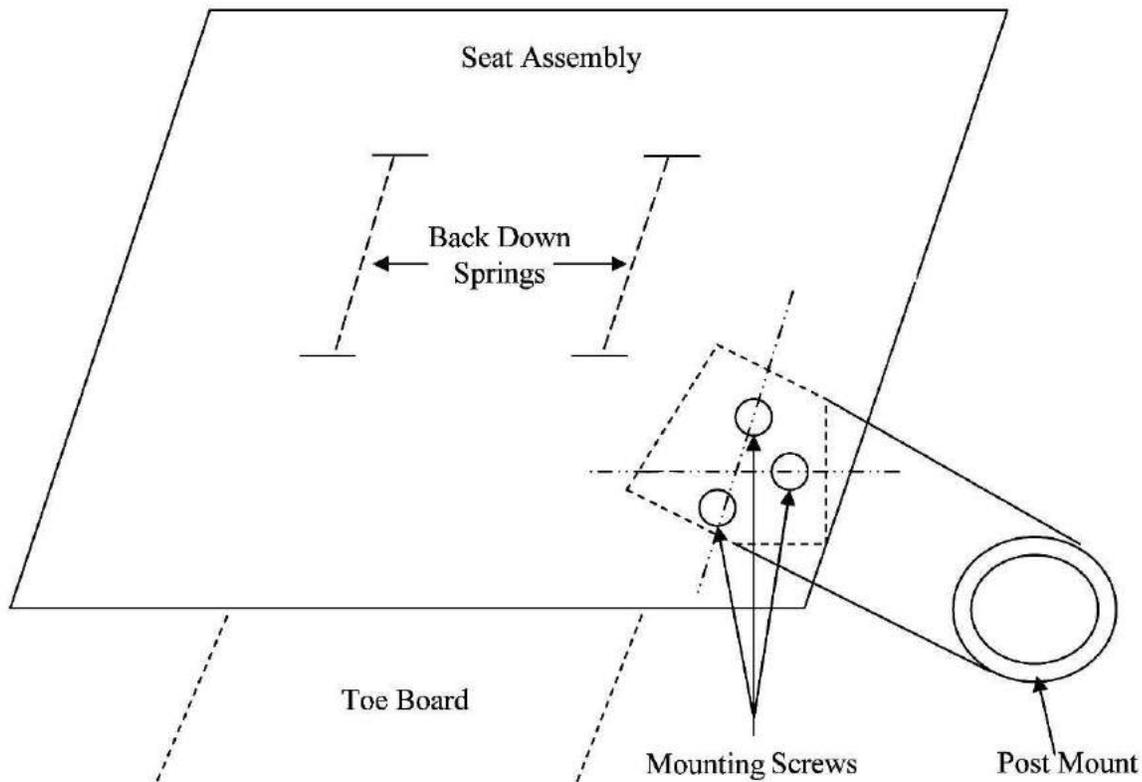


Figure 8

### Left Handed Installation:

For left handed installation of the post mount, it is necessary to move the mount and leveling screws to the corresponding holes on the right side of the seat assembly. Turn the post mount bracket over (180°) and install using the mounting bolts. Remove the post mount adapter and reinstall on top of the post mount bracket. The post mount adapter must be turned over 180°. The post-set crews will face the toe board.

## Armrest Installation

Refer to Figure 9

Remove back piston cover (See page 42 for item #7). Place Armrest (01) against the articulation assembly of the seat frame (02). Loosely attach screw (03) and Allen screw (04) when arm is aligned tighten both screws securely. Repeat for second Armrest.

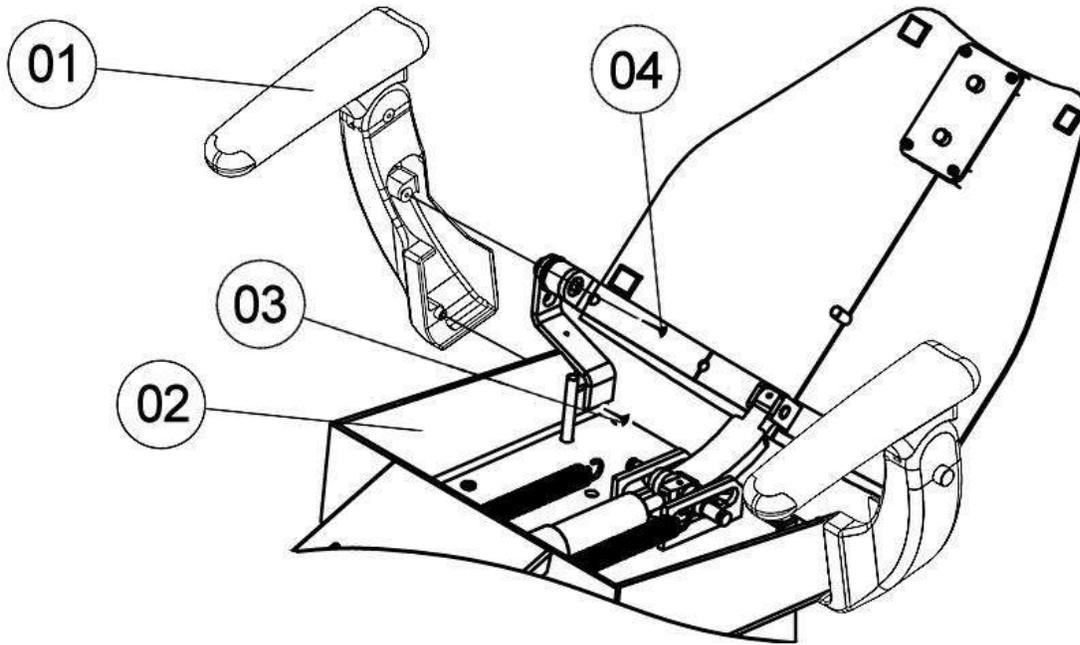


Figure 9

## Backrest Cushion Installation

Refer to Figure 10

Both the backrest cushion and backrest frame are equipped with corresponding Velcro strips.

1. Position the backrest frame (2) in the full back down position.
2. Align corresponding Velcro strips located on the backrest cushion (1) and backrest frame (2) and push down to securely fasten the backrest cushion.

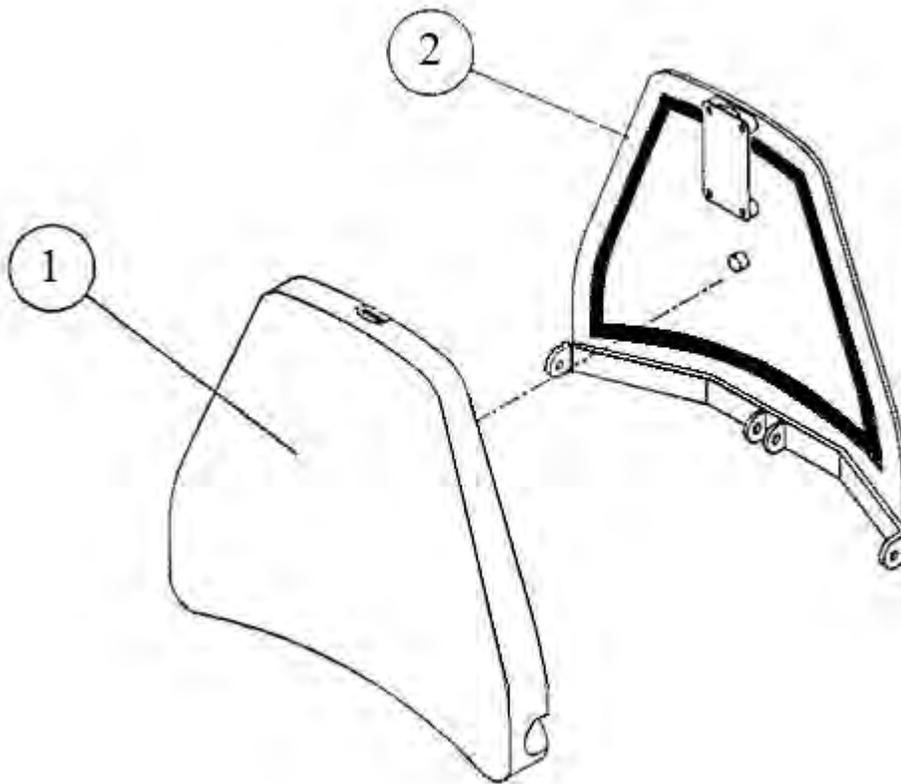


Figure 10

## Seat Cushion Installation

Refer to Figure 11

Tighten double-nut screws (1) on the upholstered seat cushion (2), then align with the corresponding holes of the seat pan (3). Fasten the seat cushion with the screws, nuts and washers (4) and (5).

NOTE: Do not over tighten the nuts on the seat cushion posts.

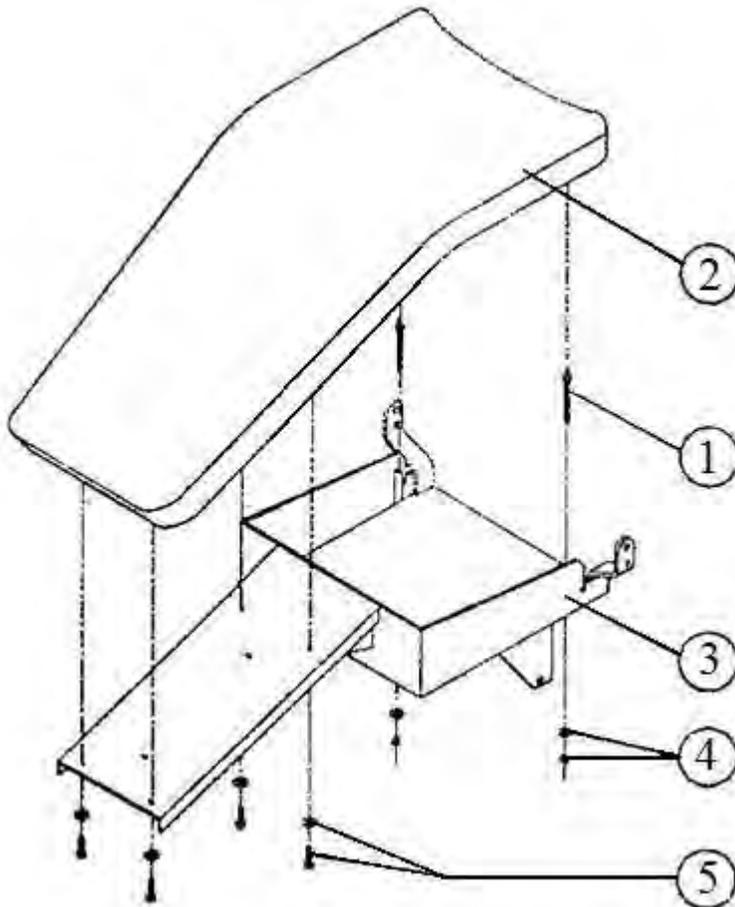


Figure 11

## Solenoid Manifold Assembly

Refer to Figure 13

NOTE: When servicing the hydraulic block of the solenoid manifold assembly, the base and back must be in their full down position to prevent unwanted down movements and ensure there is the least amount of hydraulic fluid in either piston.

To service a solenoid valve:

1. Use a 9/16" wrench to remove the retaining nut (1).
2. Remove the solenoid coil (2) from the valve assembly.
3. Using a 9/16" wrench, remove the poppet sleeve (3)
4. The valve assembly is now ready to be serviced as required.

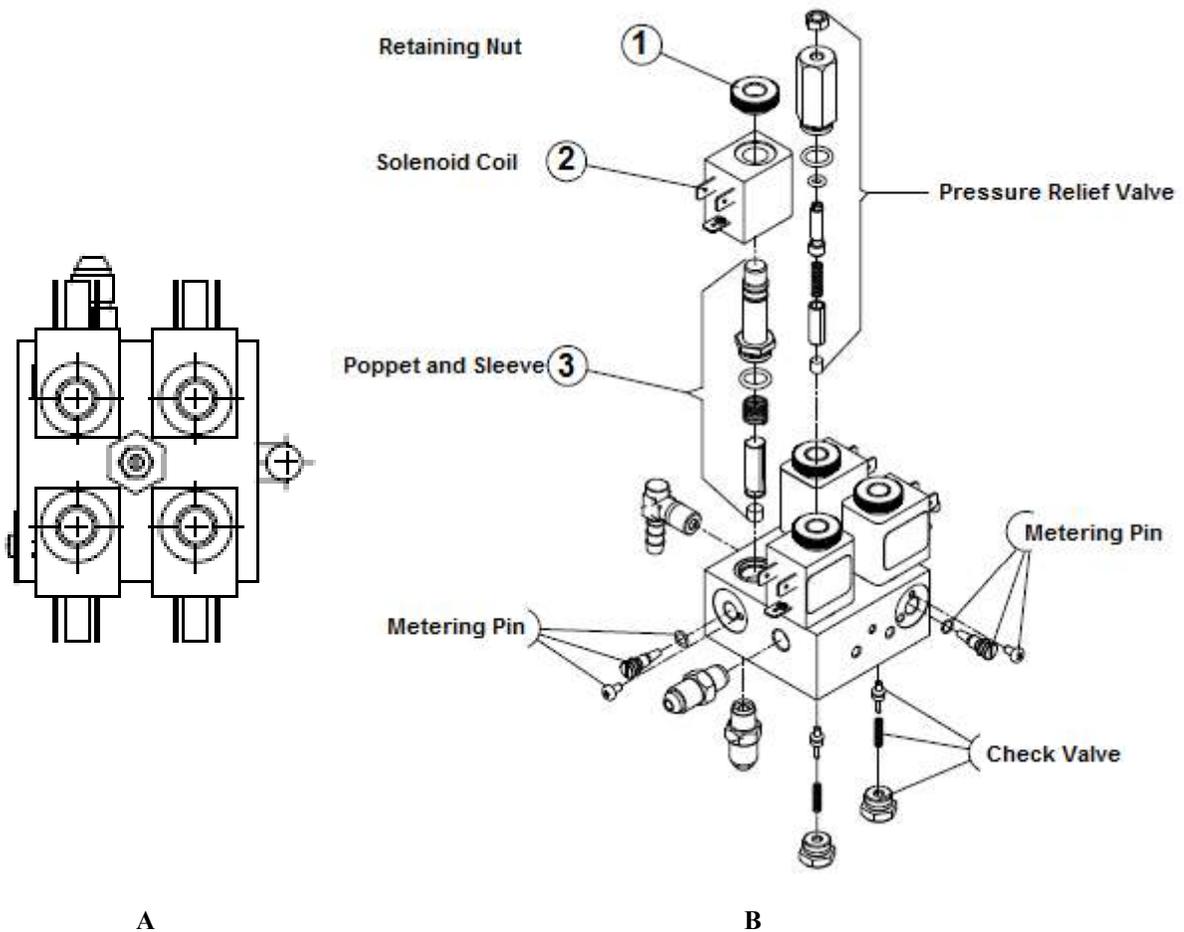


Figure 13

## Speed Adjustment

Refer to Figure 14a and 14b

Should a change in the back down speed be required?

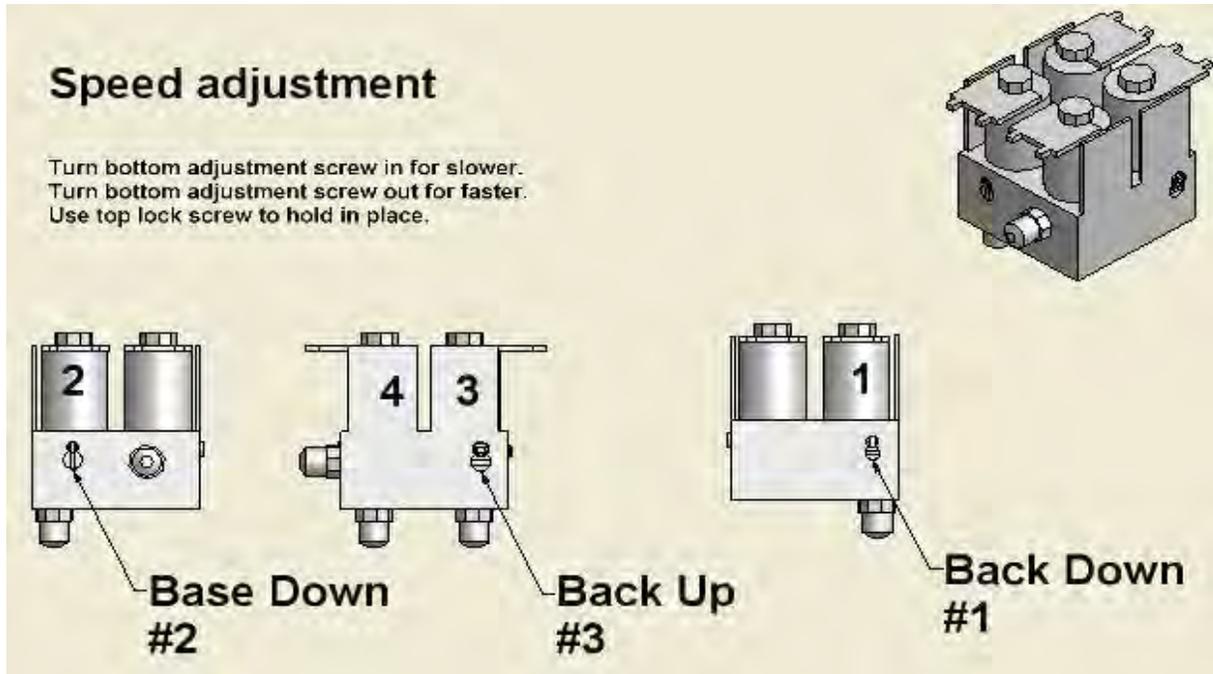


Figure 14a

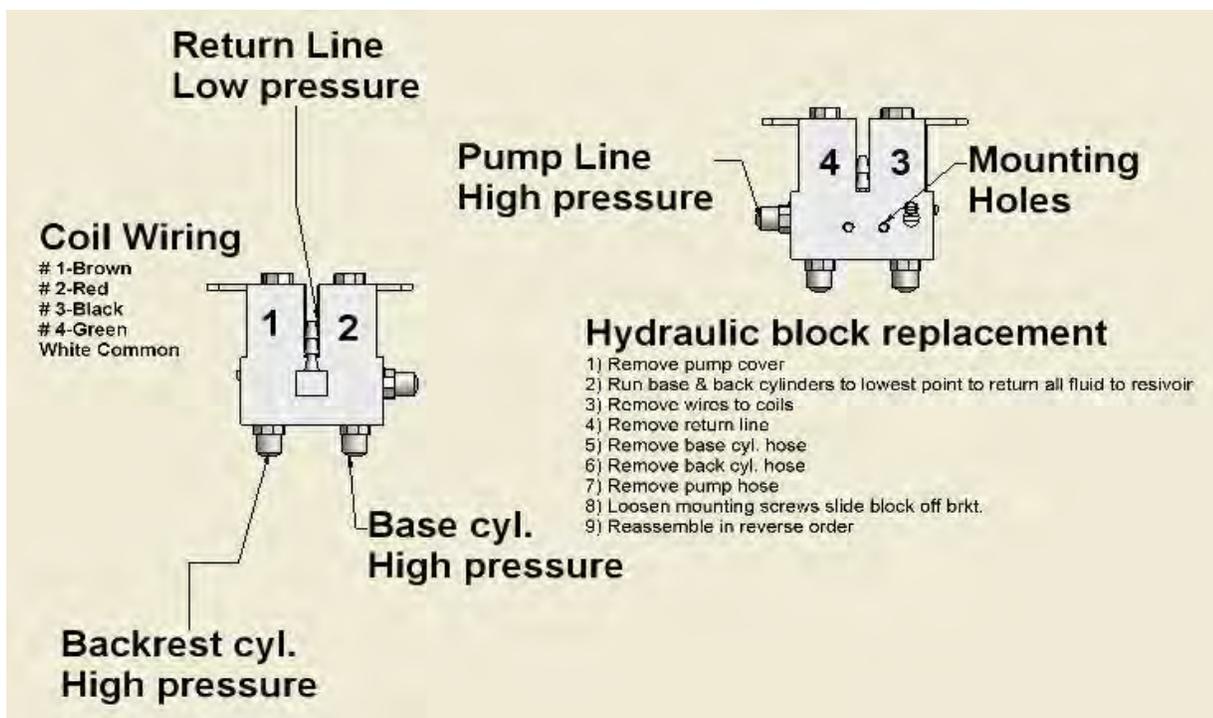


Figure 14b

## Lower Piston Replacement

Refer to Figure 15

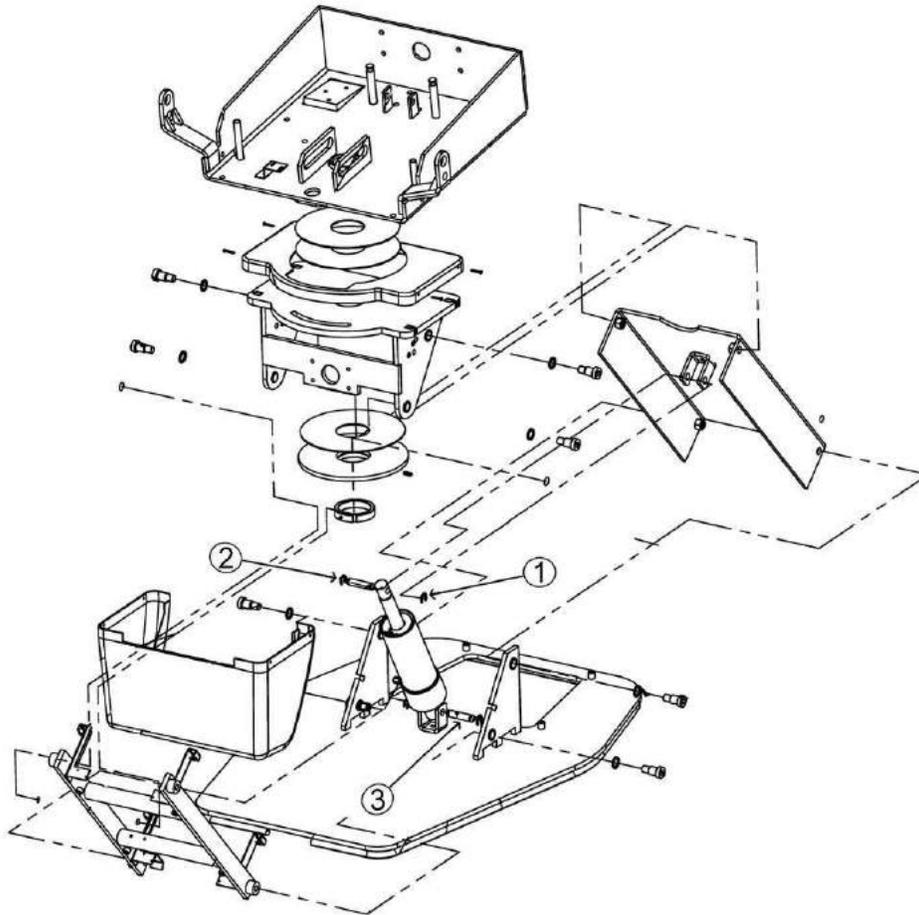


Figure 15

1. Run chair to highest point.
2. Remove cantilever cover.
3. Remove chair safety plate (depress sides and remove from hooks).
4. Remove pump cover.
5. Lower chair to lowest point (new board put in soft limit jumper).
6. Remove high pressure hose from fitting.
7. Plug end of hose for any fluid leakage.
8. Lift base and block up for easier access.
9. Remove E-Clip on one side of top pin of piston. See figure 15, item 1.
10. Holding base piston. Remove upper pin. See figure 15, item 2.
11. Remove vent line from top of piston (clear poly tube).
12. Remove E-Slip on one side of lower piston pin.
13. Remove lower piston pin. See figure 15, item 3.
14. Replace lower piston.
15. Reassemble in reverse order.

## Upper Piston Replacement

Refer to Figure 16

1. Remove seat cushion. See figure 11.
2. Move upper piston to lowest position (new board put in soft limit jumper).
3. Remove the 2 return springs.
4. Remove high pressure hose from fitting.
5. Plug hose end.
6. Remove 1 (one) E-clip only from retaining pin at back of piston. See figure
7. Remove retaining pin. See figure
8. Using wrench flats on piston shaft unscrew from piston end pin support. See figure
9. Remove piston shaft from pin support (do not remove pin).
10. Replace upper piston.
11. Reassemble piston in reverse order.

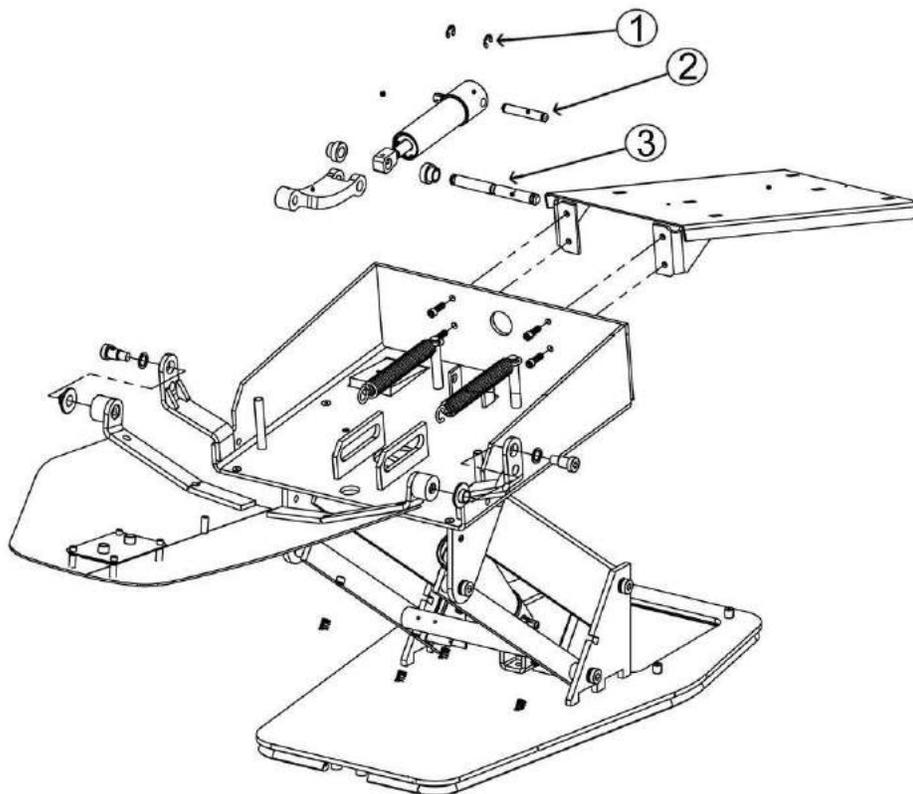


Figure 16

## Potentiometer Adjustment

Refer to Figure 17

The potentiometer is a synchronized toothed belt and pulley that does not normally require adjustments or maintenance. If necessary to reset the Potentiometer Belt, refer to the figure below and is to be preformed from the patient's left side of the chair only:

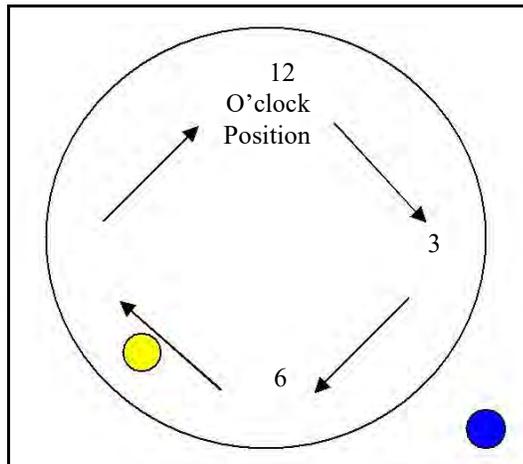


Illustration #1

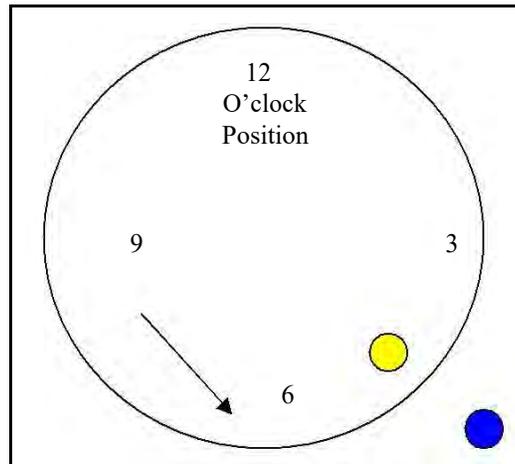


Illustration #2

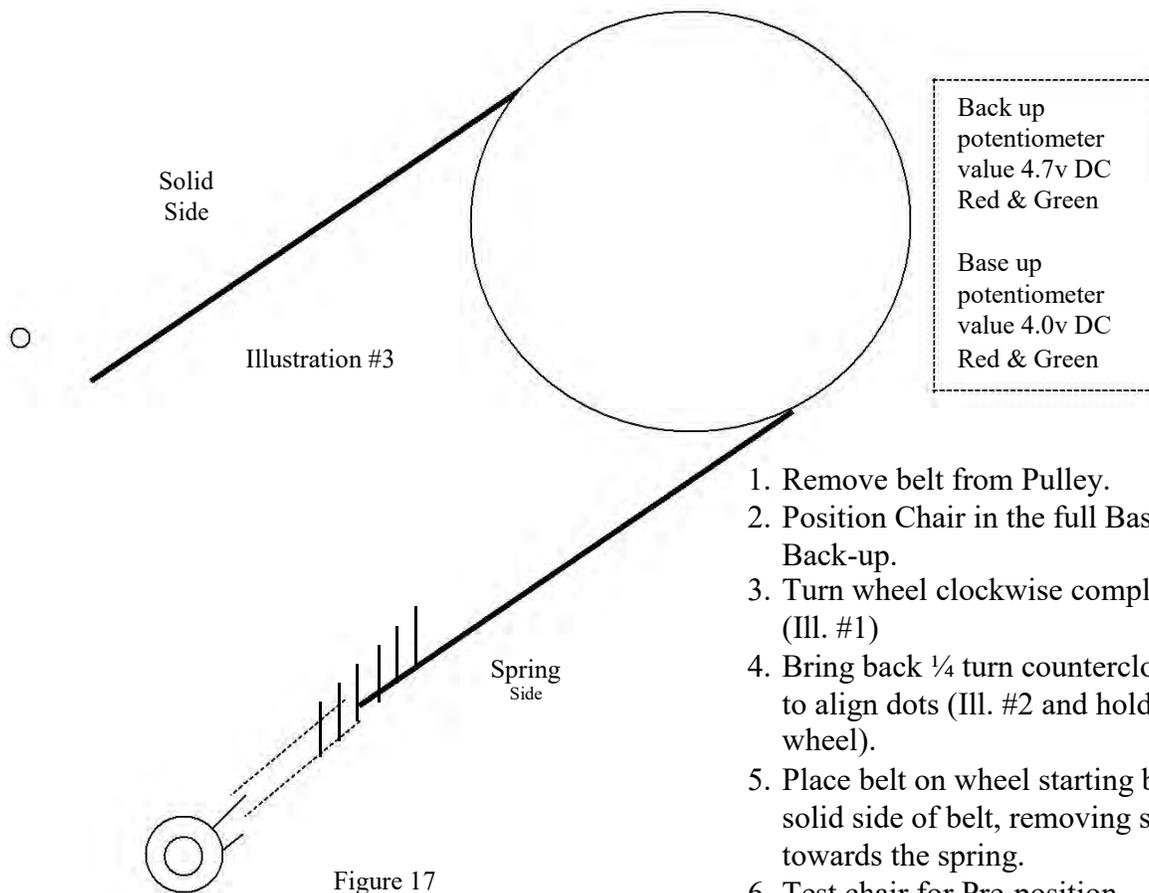


Figure 17

1. Remove belt from Pulley.
2. Position Chair in the full Base-up & Back-up.
3. Turn wheel clockwise completely (Ill. #1)
4. Bring back ¼ turn counterclockwise to align dots (Ill. #2 and hold wheel).
5. Place belt on wheel starting by the solid side of belt, removing slack towards the spring.
6. Test chair for Pre-position.

# Daytona Chair Wiring Diagram

Refer to Figure 18

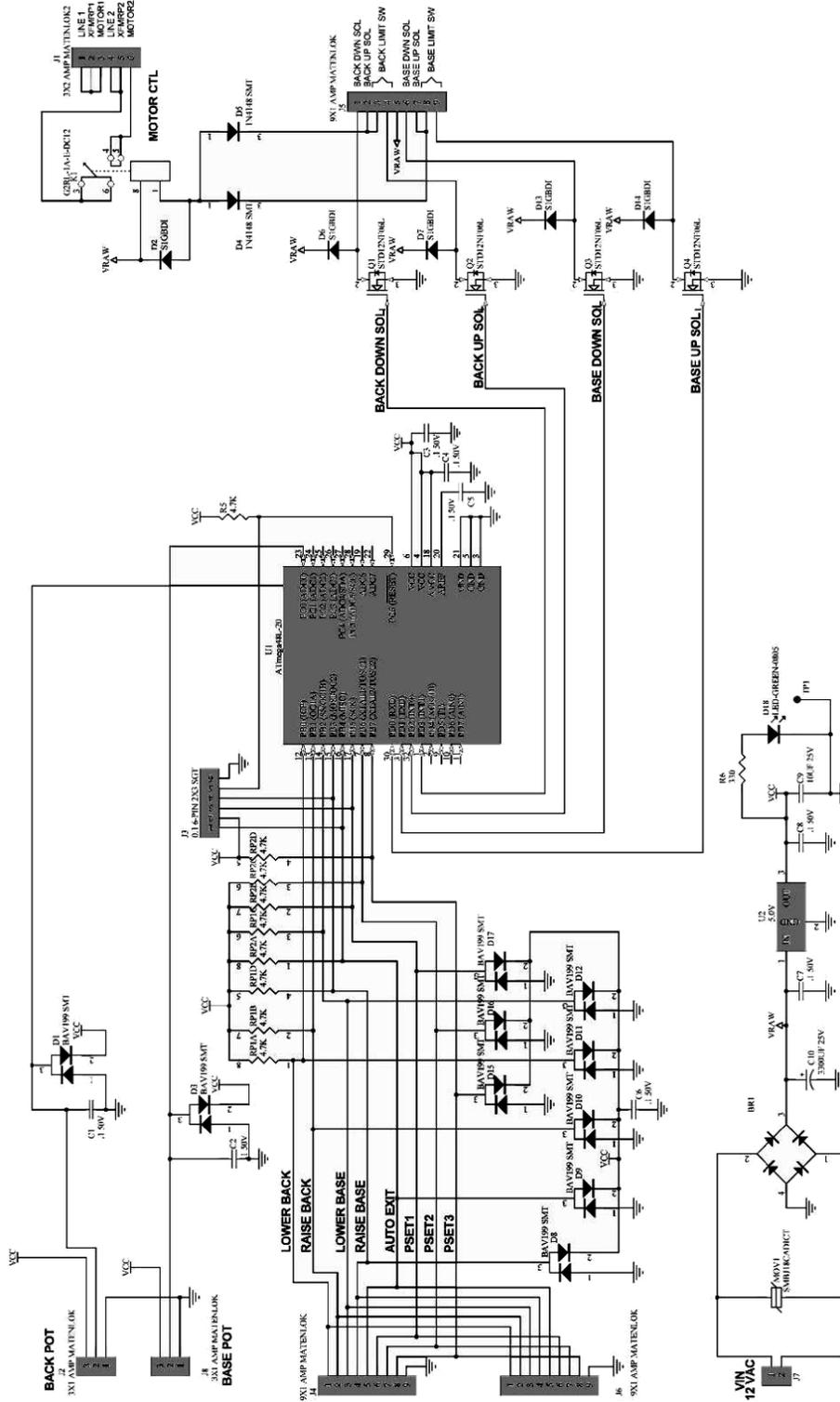


Figure 18

## Main PC Board Replacement

Refer to Figure 19



Figure 19 – see Legend chart on next page

1. Unplug chair from power source.
2. Remove pump cover.
3. Remove 2 screws on PC Board cover.
4. Unplug all connection on board. See figure
5. Remove 4 nuts holding board to back panel.
6. Replace with new board.
7. Test all chair movements.
8. Reassemble in reverse order.

## Legend

Refer to Figure 19

J1	– L.E.D. (5v)
J3	– Foot Control or Switches
J2	– Soft Limit Jumper
J4	– Touch Pad
J5	– Foot Control or Switches
J6	– Back Potentiometer
J7	– Base Potentiometer
J8	Solenoid
	Pin 1 Back Down (BRW)
	Pin 2 Back Up (BLK)
	Pin 5 Common (WHT)
	Pin 6 Base Down (RED)
	Pin 7 Base Up (GRN)
J11	Safety Switch (trip pan)
J12	Pump Capacitor
J13	Motor Pump
J14	Dental Light

COM	Common
PP1	Pre-Position 1
PP2	Pre-Position 2 (Palm Beach only)
EXT	Exit
BSU	Base UP
BSD	Base Down
BKU	Back Up
BKD	Back Down
BKL	Back Limit Switch
BSL	Base Limit Switch

BRW	Brown
ORG	Orange
GRY	Gray
BLU	Blue
RED	Red
GRN	Green
WHT	White
BLK	Black

## To Program Soft Limits

Refer to Figure 19

1. Put soft limit jumper on PCB in lower position (Pin 1 to 2). This causes all soft limits to be ignored and allows the “arm” switch to work.
2. Move chair to desired position.
3. Arm chair to learn limit by pressing arm switch on PCB (DS2 will light).
4. Press appropriate motion button (base/back/down/up) to set that limit.
5. Speaker will beep briefly and DS2 will go out.
6. Go to step II to set the next limit. Repeat this process 4 times.
7. If you change your mind, when chair is “armed” to learn a soft limit, pressing the arm switch on PCB will remove “armed” state so that direction switches operate to move chair again.

NOTE: Back up is set from the factory as it’s maximum, moving back to a higher position may damage chair. Contact technical service.

### Flow Chair

Base UP
Switch
Input Light
Potentiometer
Soft Limit
Pump Light
Solenoid Circuit
Solenoid Open
Pump On
Movement

## Brake Handle Position Adjustment

Refer to Figure 20

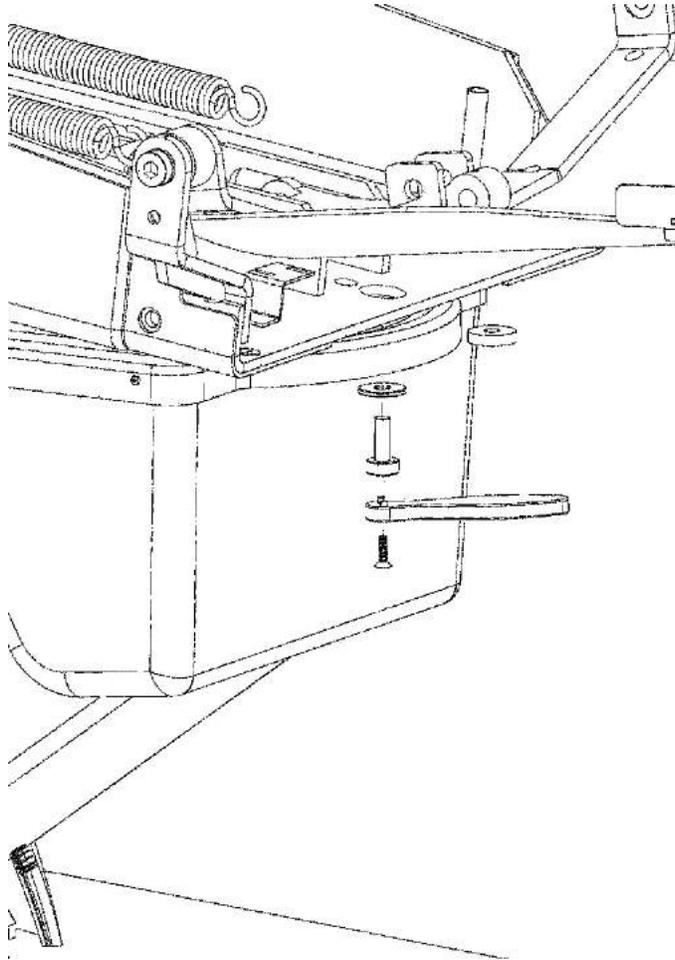


Figure 20

1. Loosen set screw on end of brake handle.
2. Lift handle until pin are clear of holes in lock pin.
3. Rotate to next set of holes.
4. Tighten brake with handle.
5. Check position of handle.
6. If position is right retighten set screw.

## Daytona Chair Hydraulic Diagram

Refer to Figure 21

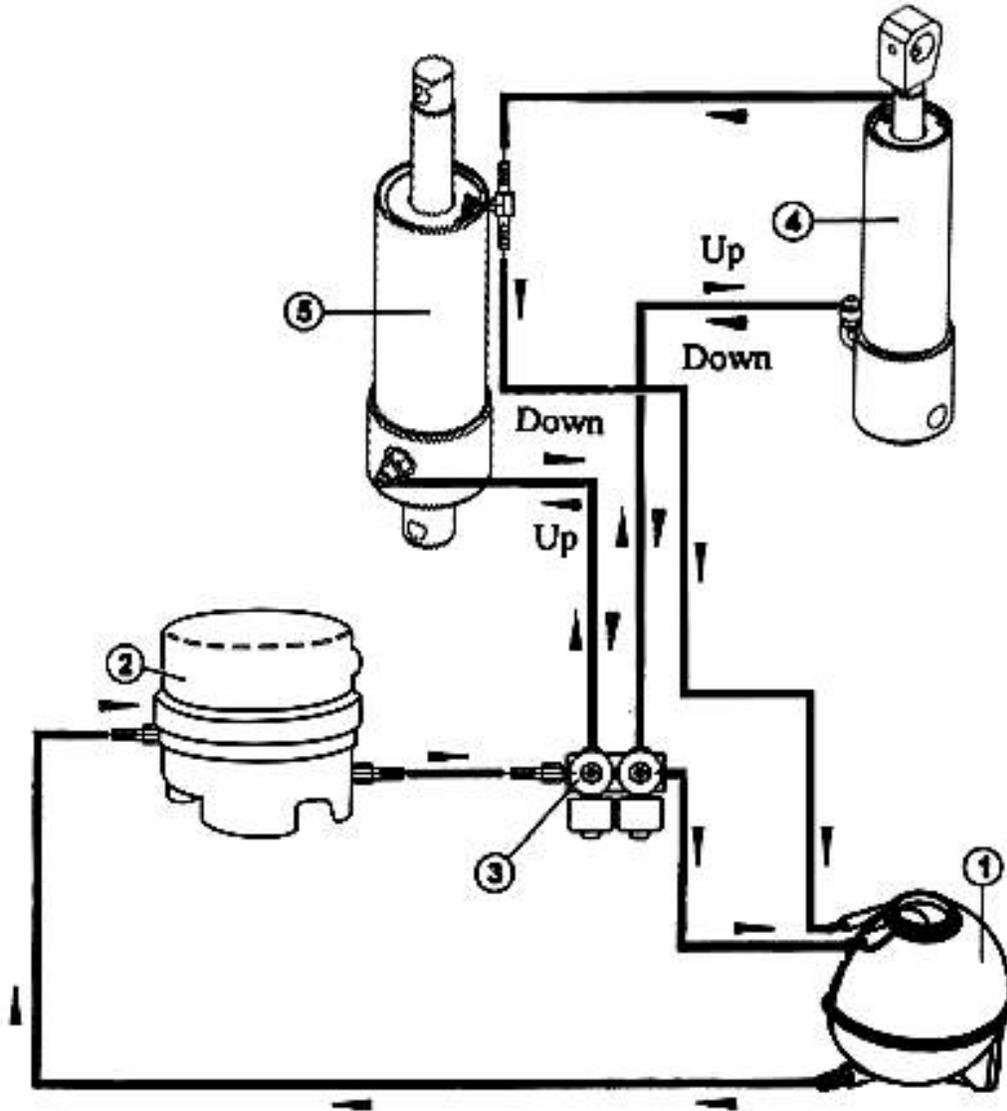


Figure 21

- 1 Oil Reservoir
- 2 Motor Pump
- 3 Hydraulic Block
- 4 Backrest Piston
- 5 Base Piston

## Trouble Shooting Guide

### No Movement

Possible Cause	Corrective Action
1 - Chair unplugged	Plug chair into receptacle
2 - No power from source	Reset circuit breaker
3 - Blown fuse or disconnected power cord	On the motor terminal strip, measure the AC voltage between terminals 2 & 5; reading should be 115V or 220V. If it is, then the power cord, fuse holder and fuse(s) are o.k. If reading between 2 & 5 is zero, then measure the voltage between 2 & 4; if reading is the line voltage, then the fuse is probably interrupted. Replace fuse. If reading between 2 & 4 is zero, check the power cord. Check L.E.D. light on PC Board.
4 - Disconnected fuse holder terminals	Check fuse holder(s) two-wire connections at the holder and terminal strip.
5 - Loose cables on motor terminal strip or PC Board cable connectors	Check all of the chair's cables (power cord, PC board, motor, foot control and solenoid) for tightness and metal contact.
6 - Defective Board Cable or Component on PC Board	Check voltage between motor terminal strip 1 & 2 and press back or base up, if reading 0VAC check Board Cable for continuity. If not getting continuity from cable, replace cable or if there is continuity, replace control unit.
7 - Defective Control Unit Transformer	Check transformer's primary (black-white) and secondary (blue) wires for correct voltage. The primary should read 115VAC/220VAC and secondary 10.5VAC ( $\pm 10\%$ ).

## No Base Down Movement

Possible Cause	Corrective Action
1- Base down solenoid coil disconnected	Check cable connection at solenoid and PC Board.
2 - Open electrical leads of cable between board and solenoid coil	Check electrical leads of the cable for continuity; if open replace cable. Check membrane switch, membrane cable, foot control and valve cable.
3 - Defective component of PC Board	Check power at solenoid coil; activate base down switch; if reading 0VDC replace Control Unit. Normal reading is 12VDC (+ 10%).
4 - Base down solenoid coil not magnetizing	Check coil for resistance, should read 22 ohms (+ 10%).

## No Backrest Down Movement

Possible Cause	Corrective Action
1 - Backrest down solenoid coil disconnected	Check cable connection at solenoid and PC Board.
2 - Open electrical leads of cable between board and solenoid coil	Check electrical leads of the cable for continuity; if open replace cable. Check membrane switch, membrane cable, foot control and valve cable.
3 - Defective component of PC Board	Check power at solenoid coil; activate back down switch; if reading 0VDC replace Control Unit. Normal reading is 12VDC ( $\pm$ 10%).
4 - Backrest down solenoid coil not magnetizing	Check coil for resistance, should read 22 ohms ( $\pm$ 10%).

## No Backrest Up Movement Only

Possible Cause	Corrective Action
1 - Backrest up solenoid coil disconnected	Check connections at solenoid and PC Board.
2 - Open electrical leads of cable between board and solenoid coil	Check electrical leads of the cable for continuity; if open replace cable. Check membrane switch, membrane cable, foot control and valve cable.
3 - If motor is not running, limit switch for back (LS2) may be disconnected	Check limit switch connections at switch and corresponding terminals on PC Board; check LS2 leads for continuity.
4 - Jumper wire on PC Board may be disconnected	Check that jumper wire on PC Board is in place and making proper electrical contact.
5 - Defective limit switch (LS2)	Check switch with multimeter; if defective, replace limit switch.
6 - Defective component of PC Board	Check power at solenoid coil; active back up switch; if reading 0VDC replace Control Unit. Normal reading is 12VDC ( $\pm 10\%$ ).
7 - Backrest up solenoid is not magnetizing or Is burnt out	Check coil for resistance, should read 22 ohms ( $\pm 10\%$ ).

## No Base Up Movement Only

Possible Cause	Corrective Action
1 - Base up solenoid coil disconnected	Check connections at solenoid and PC Board.
2 - Open electrical leads of cable between board and solenoid coil	Check electrical leads of the cable for continuity; if open replace cable. Check membrane switch, membrane cable, foot control and valve cable.
3 - If motor is not running, limit switch for base (LS1) may be disconnected	Check limit switch connections at switch and corresponding terminals on PC Board; check LS1 leads for continuity.
4 - Defective limit switch (LS1)	Check switch with multimeter; if defective, replace limit switch. Check power at solenoid coil; active base up switch; if reading 0VDC replace Control Unit. Normal reading is 12VDC ( $\pm 10\%$ ).
5 - Defective component of PC Board	
6 - Base up solenoid is not magnetizing	Check coil for resistance, should read 22 ohms ( $\pm 10\%$ ).

## No Base And Backrest Up Movements

Possible Cause	Corrective Action
1 - Defective motor relay	Check voltage between 1 & 2 on the motor terminal strip, should be 115VAC or 220VAC while up movements are activated. If voltage is zero, check connections of the cables at the motor and at the Control Unit

## Downward Movement Of Base Without Switch Activation

Possible Cause	Corrective Action
1 - Defective base check valve (retention) assembly	Remove check valve (retention) assembly; inspect spring and O-ring, replace all defective parts.
2 - Debris in base down solenoid valve seat or seals	Remove base down solenoid valve seat and clean solenoid manifold assembly.

## Downward movement of back without switch activation

Possible Cause	Corrective Action
1 - Defective back check valve (retention) assembly	Remove check valve (retention) assembly; inspect spring and O-ring, replace all defective parts.
2 - Debris in back down solenoid valve seat or Seals	Remove back down solenoid valve seat and <i>clean solenoid manifold assembly.</i>

## Slow Or Sluggish Movement

### Possible Cause

1 - Debris on one of the filter screens

### Corrective Action

Check and clean filter screens (there are filter screens at both the inlet and outlet sides of the block).

## No Base Up Movement Only

### Possible Cause

1 - Base up solenoid coil disconnected

### Corrective Action

Check connections at solenoid and PC Board.

2 - Open electrical leads of cable between board and solenoid coil

Check electrical leads of the cable for continuity; if open replace cable. Check membrane switch, membrane cable, foot control and valve cable.

3 - If motor is not running, limit switch for base (LS1) may be disconnected

Check limit switch connections at switch and corresponding terminals on PC Board; check LS1 leads for continuity.

4 - Defective limit switch (LS1)

Check switch with multimeter; if defective, replace limit switch. Check power at solenoid coil; active base up switch; if reading 0VDC replace Control Unit. Normal reading is 12VDC ( $\pm 10\%$ ).

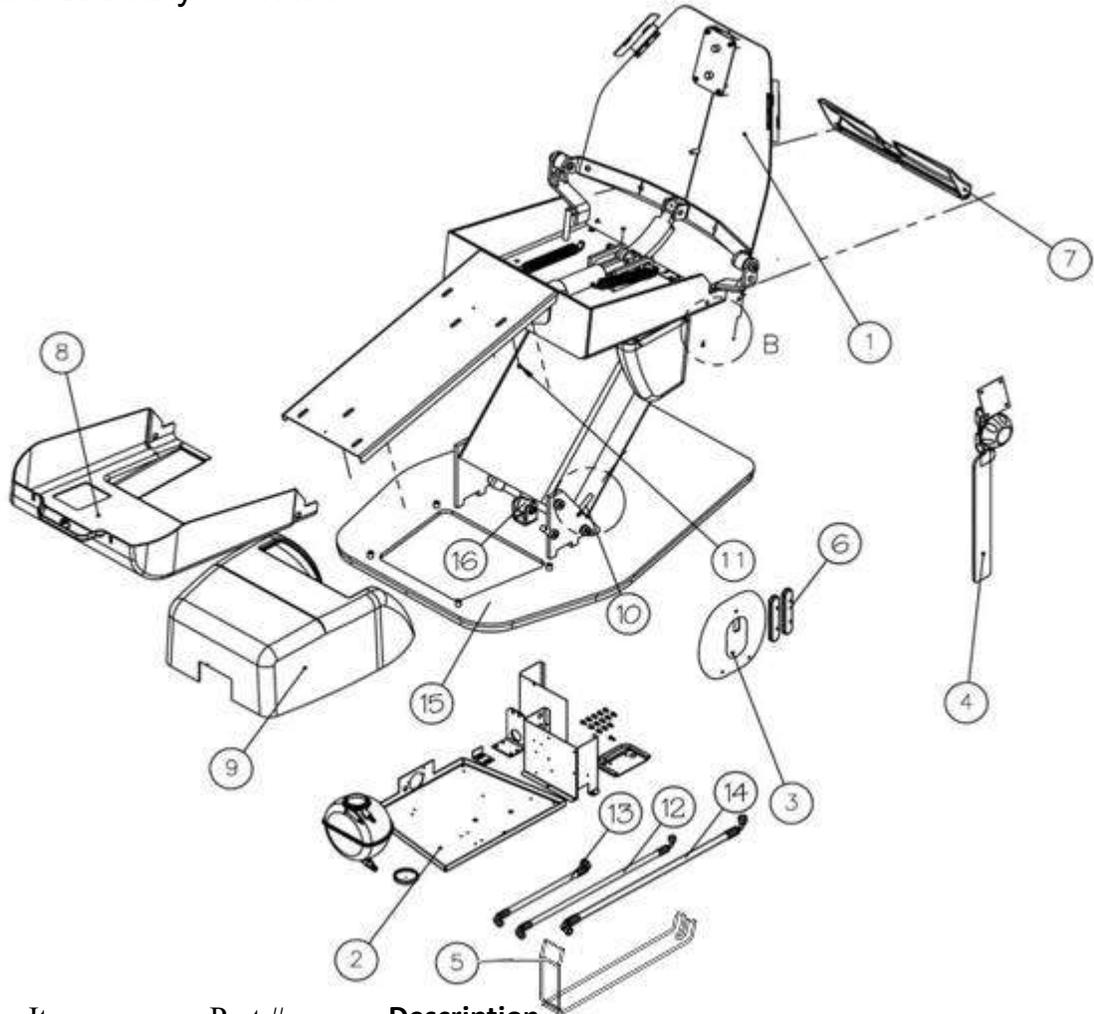
5 - Defective component of PC Board

6 - Base up solenoid is not magnetizing

Check coil for resistance, should read 22 ohms ( $\pm 10\%$ ).

# Parts List

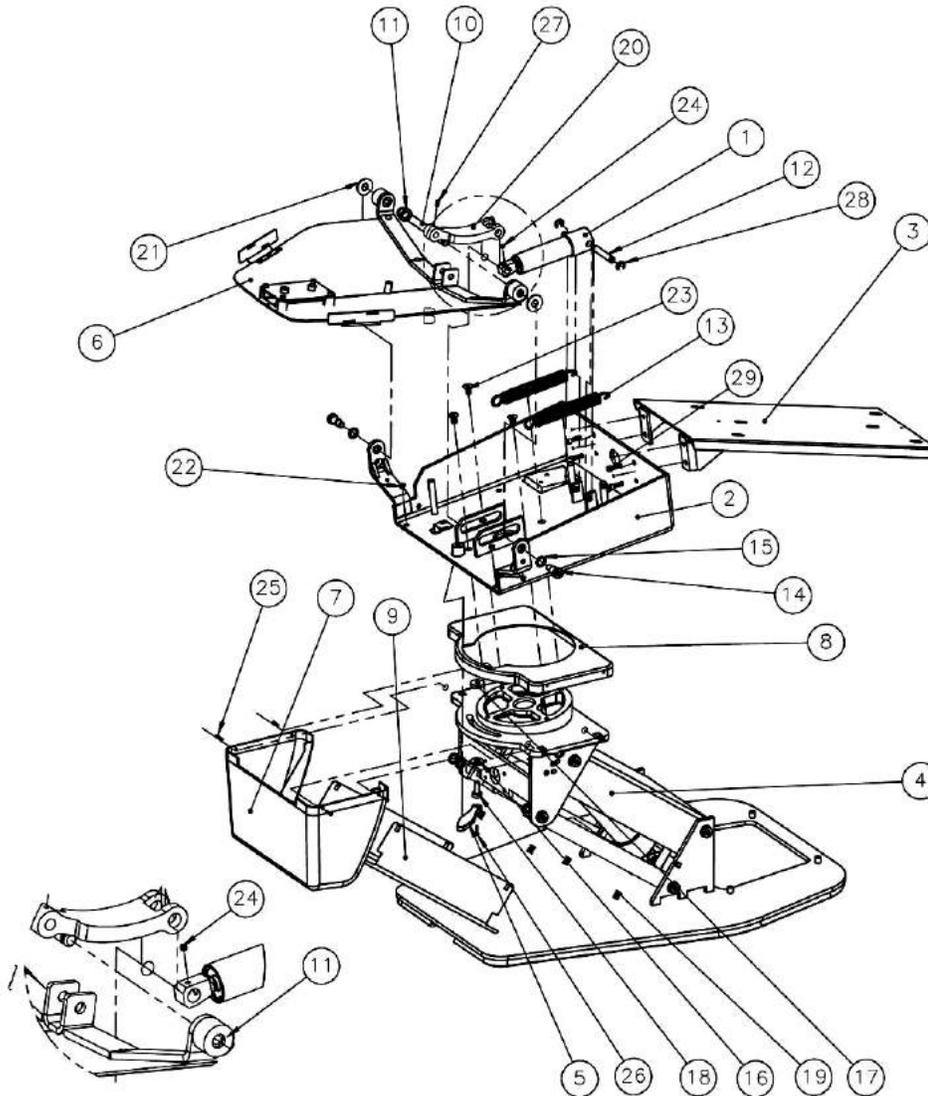
## Daytona Chair Assembly – View I



Item	Part #	Description
1	2-010-0085	Backrest Frame
2	2-010-1078	Tray Assembly
3	2-010-1084	Headrest Back Cover
4	2-010-1016	Headrest Assembly
5	2-010-0092	Seat Cushion Bracket
6	2-010-0073	Headrest Side Cover
7	2-010-0093	Back Piston Assy Cover
8	2-010-1007	Seat Cover
9	2-010-1090	Motor Pump Cover
10	5-010-0014	Security Bracket
11	4-010-0094	Screw 10-24x¼ (Uph)
12	2-010-0031	Base HP Hose
13	2-010-0027	Manifold HP Hose
14	2-010-0029	Backrest HP Hose
15	2-010-1003	Base Frame
16	2-010-1075	Base Piston

\* All item numbers for Light Gray color chair

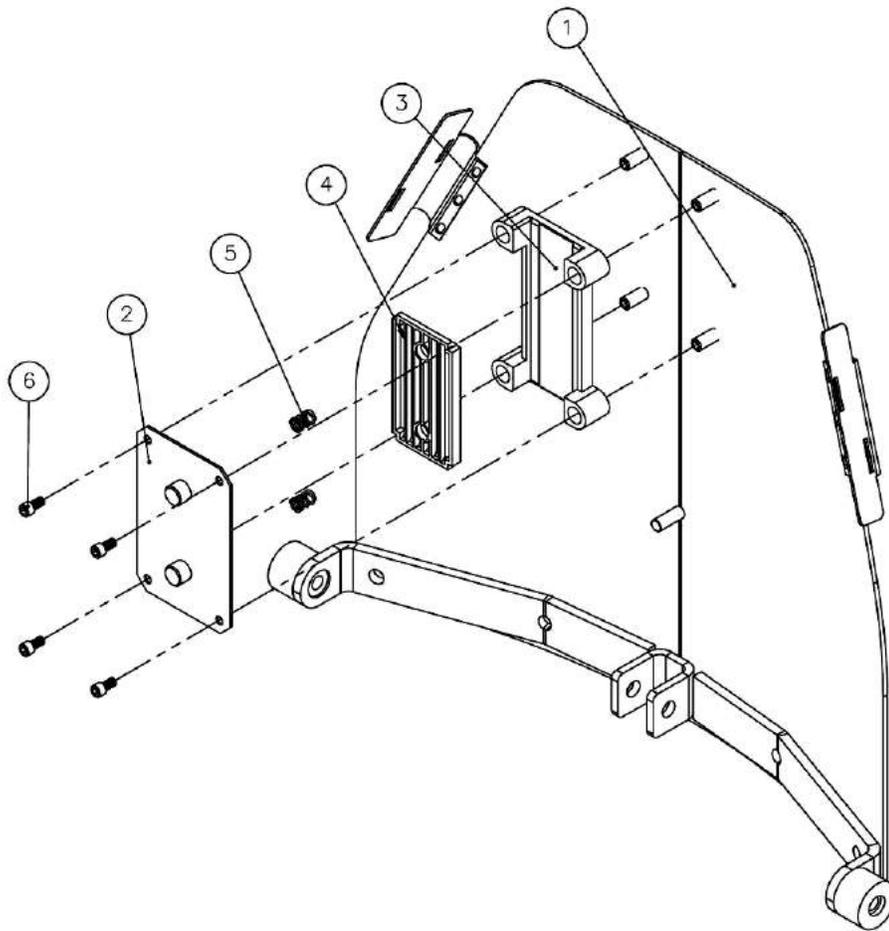
## Daytona Chair Assembly – View II



Item	Part #	Description	Item	Part #	Description
1	3-010-1000	Back Piston	16	4-010-1025	Washer
2	2-010-0102	Seat Frame	17	4-010-0017	Washer
3	2-010-1019	Toe Pan	18	4-010-0019	Screw
4	2-010-0076	Upper Elevation Cover	19	5-010-0021	Spring
5	2-010-0078	Swivel Handle	20	2-010-0095	Back to Piston Support
6	2-010-1098	Backrest Frame	21	4-010-0018	Washer
7	2-010-0192	Rear Cantilever Cover	22	4-010-0082	Nylon Insert
8	2-010-0083	Swivel Cover	23	4-010-1021	Screw 3/8-16 x 3/4
9	2-010-0008	Lower Elevation Cover	24	4-010-0020	Screw 1/4-20 x 1/4 CP
10	4-010-1030	Long Pin	25	4-010-0028	Screw #6 x 1"
11	4-010-0015	Nut	26	4-010-1044	Screw 10-24 x 3/4
12	4-010-1029	Short Pin	27	4-070-0031	Screw 1/4-20 x 1/2 CP
13	2-010-0063	Spring	28	5-010-0015	E-Clip 5/16
14	4-010-0031	Bolt, Armrest Support	29	4-010-0035	Screw 5/16-18 x 1
15	4-010-0016	Washer			

# Backrest Assembly

2-010-0085

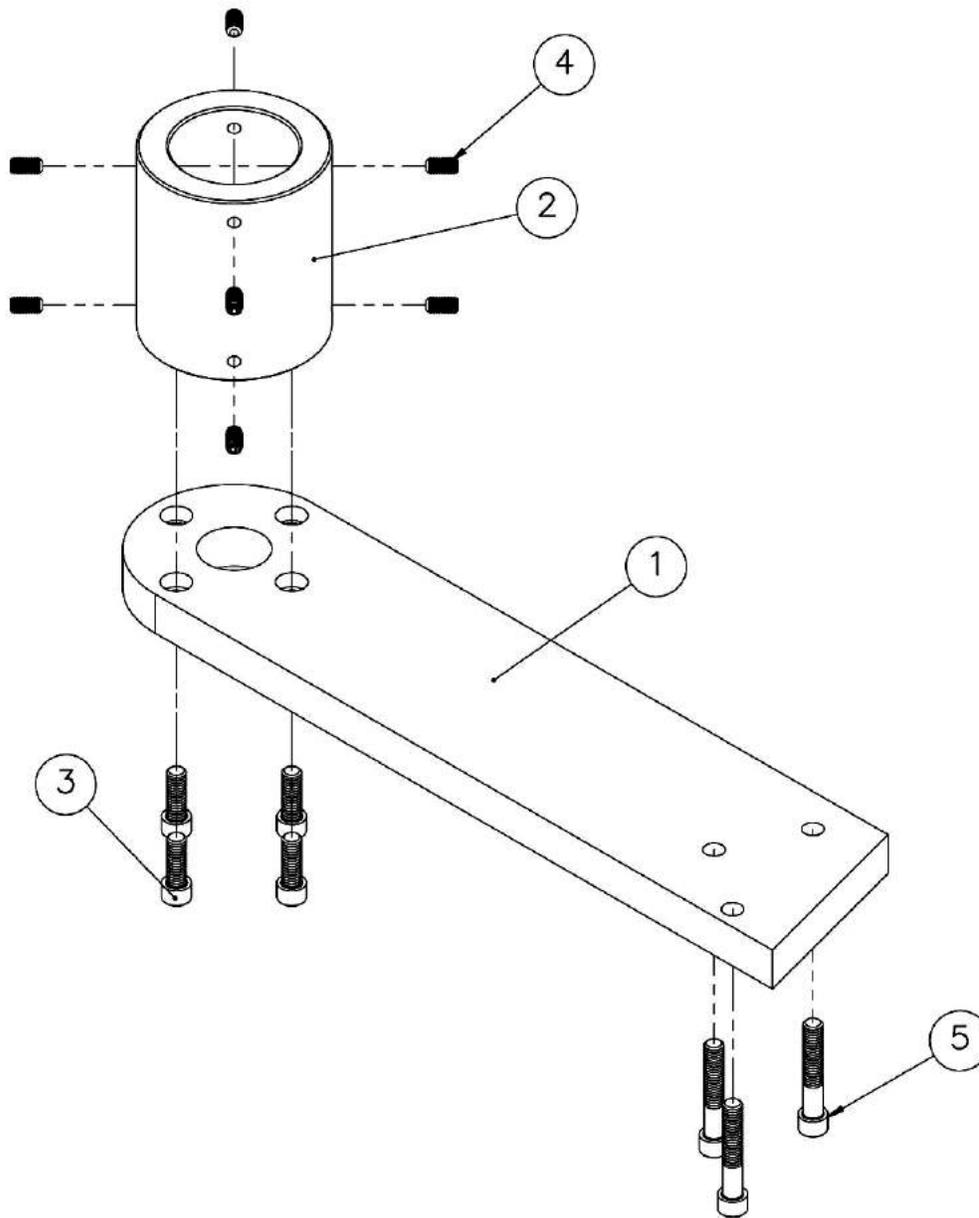


Item	Part #	Description
1	2-010-1098	Backrest Frame
2	2-010-0047	Pressure Plate
3	2-010-0051	Pressure Frame
4	2-010-0058	Pressure Support
5	2-010-0053	Spring
6	5-010-0026	Screw 1/4-20 x 1/2

\* All item numbers for Light Gray color chair

Post Mount Assembly

3-010-0013

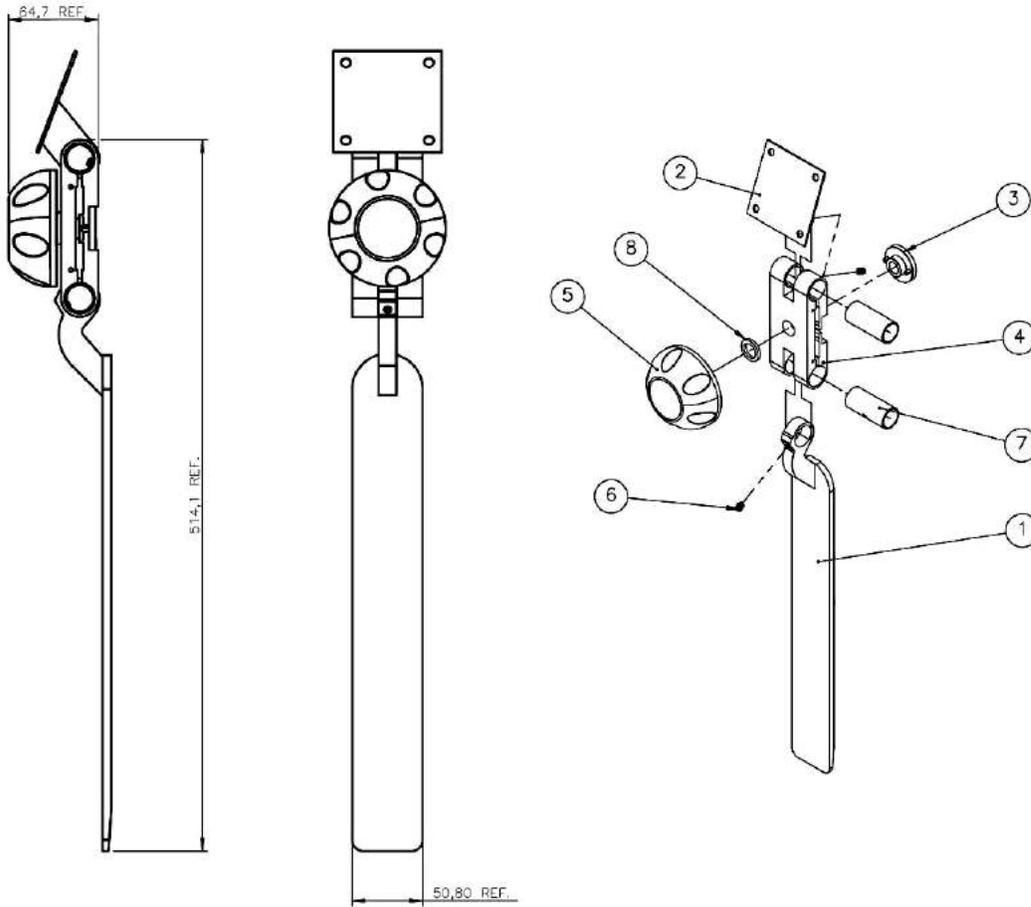


Item	Part #	Description
1	2-010-0037	Base
2	2-010-0038	Cup
3	4-070-0016	Screw 5/16-18 x 7/8
4	4-070-0031	Cup Point Screw
5	4-010-0052	Screw 5/16-18 x 1-3/4

\* All item numbers for Light Gray color chair

# Headrest Assembly With Knob

2-010-1016

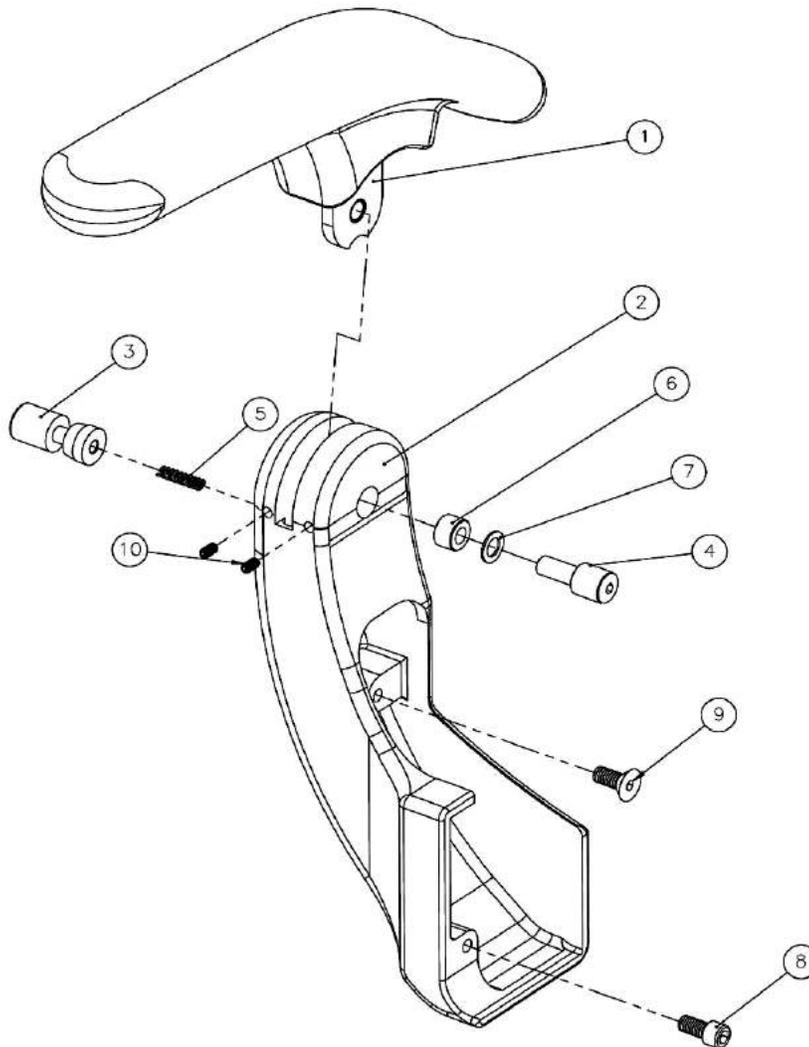


Item	Part #	Description
1	2-010-0060	Post
2	2-010-0061	Base for Cushion
3	4-010-0012	Locking Nut
4	2-010-0066	Double Articulation
5	4-010-0014	Knob
6	4-010-0041	Screw Cup Point
7	4-010-0061	Rod
8	4-010-1047	Nylon Washer

\* All item numbers for Light Gray color chair

## Armrest Assembly – Right Side

2-010-1087

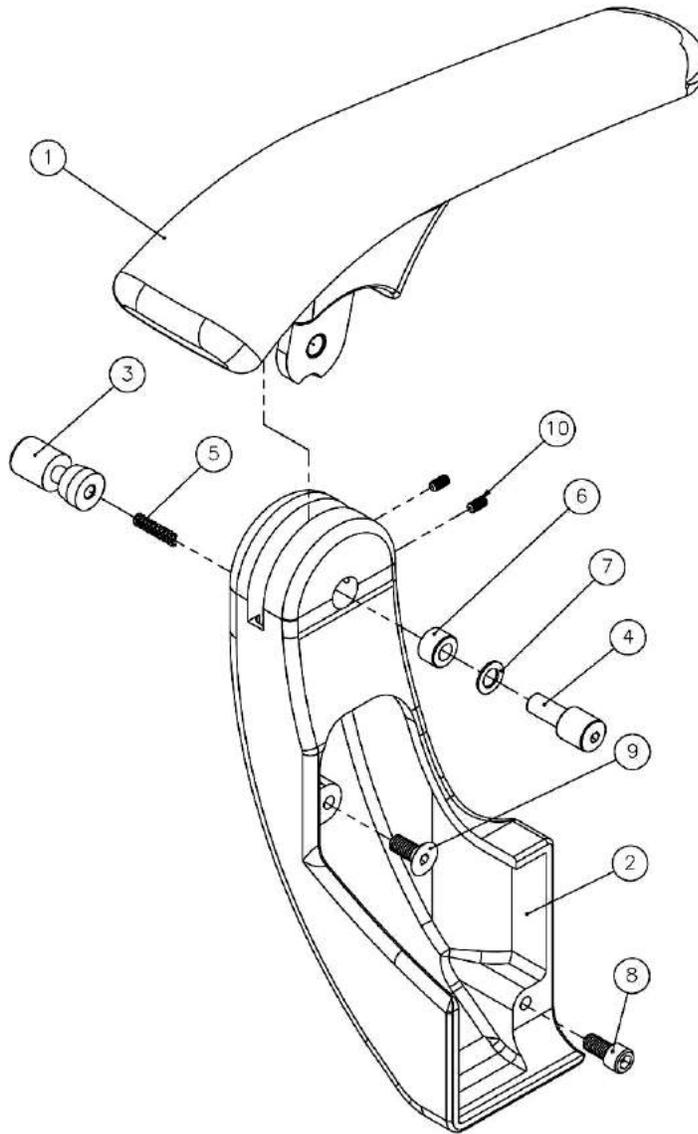


Item	Part #	Description
1	2-010-0139	Armrest with washer, Right Side
2	2-010-0140	Support, Right Side
3	5-010-0045	Button
4	4-010-1031	Bolt
5	4-010-0039	Spring
6	2-010-0081	Spacer (Arm)
7	4-010-1057	Washer
8	5-020-0246	Screw 5/16 x 5/8
9	4-010-0051	Screw 5/16 x 3/4
10	4-010-0036	Screw 10-24 x 3/8

\* All item numbers for Light Gray color chair

## Armrest Assembly – Left Side

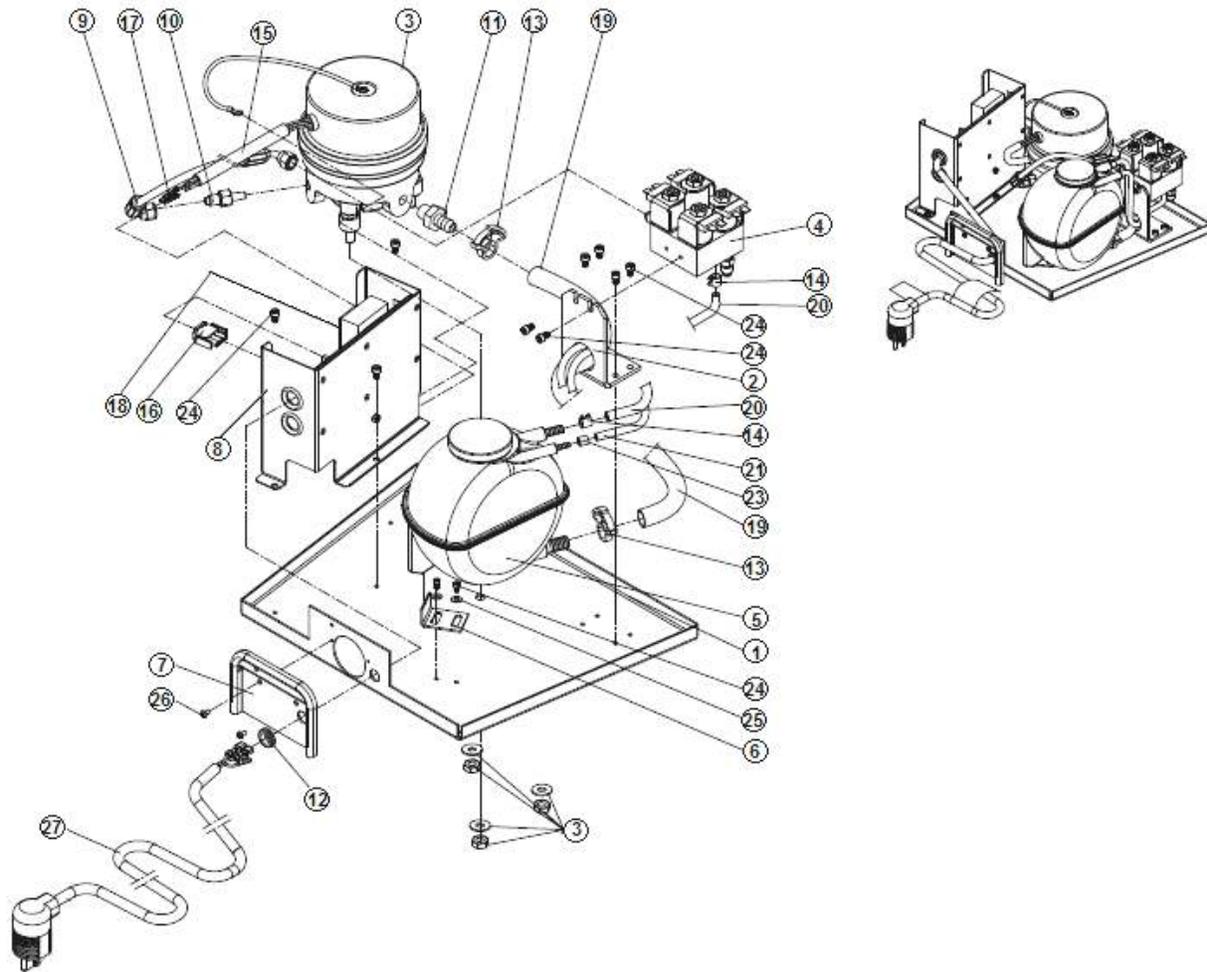
2-010-1088



Item	Part #	Description
1	2-010-0160	Armrest with washer, Left Side
2	2-010-0161	Support, Left Side
3	5-010-0045	Button
4	4-010-1031	Bolt
5	4-010-0039	Spring
6	2-010-0081	Spacer (Arm)
7	4-010-1057	Washer
8	5-020-0246	Screw 5/16 x 5/8
9	4-010-0051	Screw 5/16 x 3/4
10	4-010-0036	Screw 10-24 x 3/8

\* All item numbers for Light Gray color chair

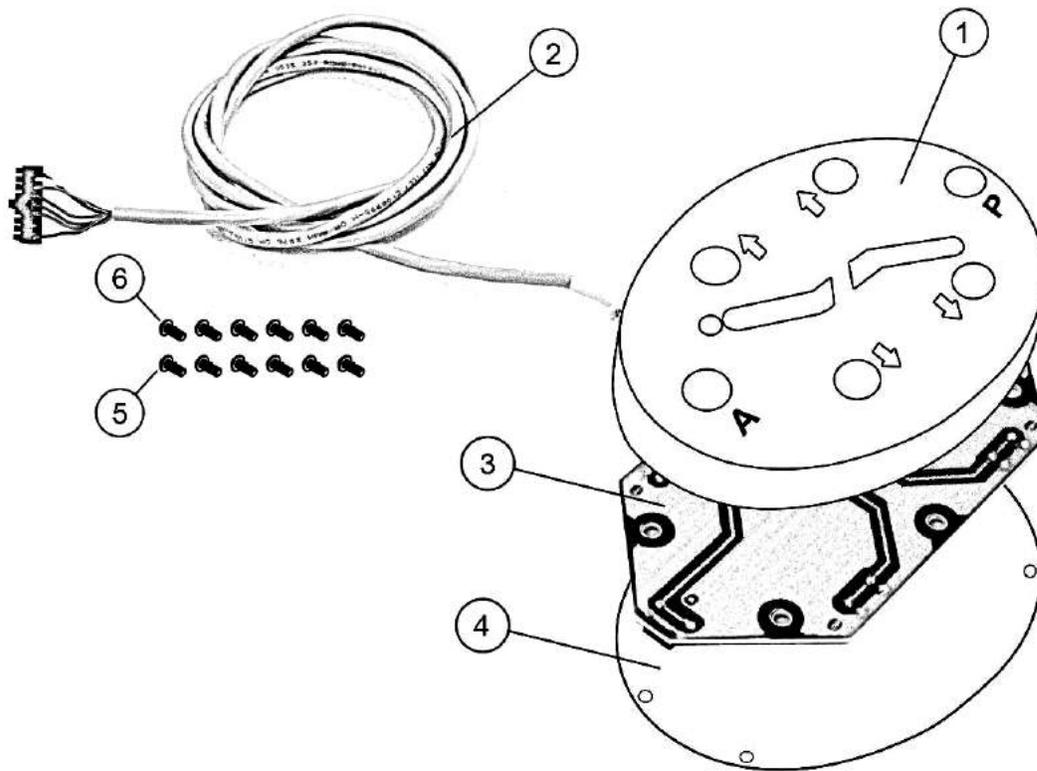
## Tray Assembly



Item	Part #	Description	Item	Part #	Description
1	2-010-1076	Tray	14	5-010-0048	Clamp 44 OD Return Hose
2	5-030-0039	Support Hydraulic	15	5-010-0038	Clear Heat Shrink Tubing
3	2-010-0025	Motor Pump 115v w/capacitor	16	7-010-0038	Plug Connector 3 pin
4	2-010-0231	Hydraulic Block	17	7-010-0057	Pin Contact
5	2-010-0006	Oil Tank	18	2-010-0219	PC. Board w/ Transformer
6	2-010-1077	Oil Tank Support	19	2-010-0013	Green Hose 7/16 x 9/16
7	2-010-0114	Face Plate	20	2-010-0012	Green Hose 1/4 x 3/8
8	7-010-0052	PC. Board Chassis	21	5-010-0011	Clear Tubing 1/4"
9	2-010-0027	High pressure (Manifold)	23	4-070-0046	Plastic Sleeve 1/4"
10	5-010-1001	Fitting (Pump Outlet)	24	4-010-1001	Screw Socket cap #10-24 x 38
11	5-010-1002	Fitting (Pump Inlet)	25	4-020-0022	Flat Washer #10
12	7-010-0016	Strain Relief (Power Cord)	26	4-010-0075	Screw 5/32 x 3/8
13	7-010-0006	Clamp Metal 7/16 - 7/8 #5	27	3-010-0011	Power Cord Assy.

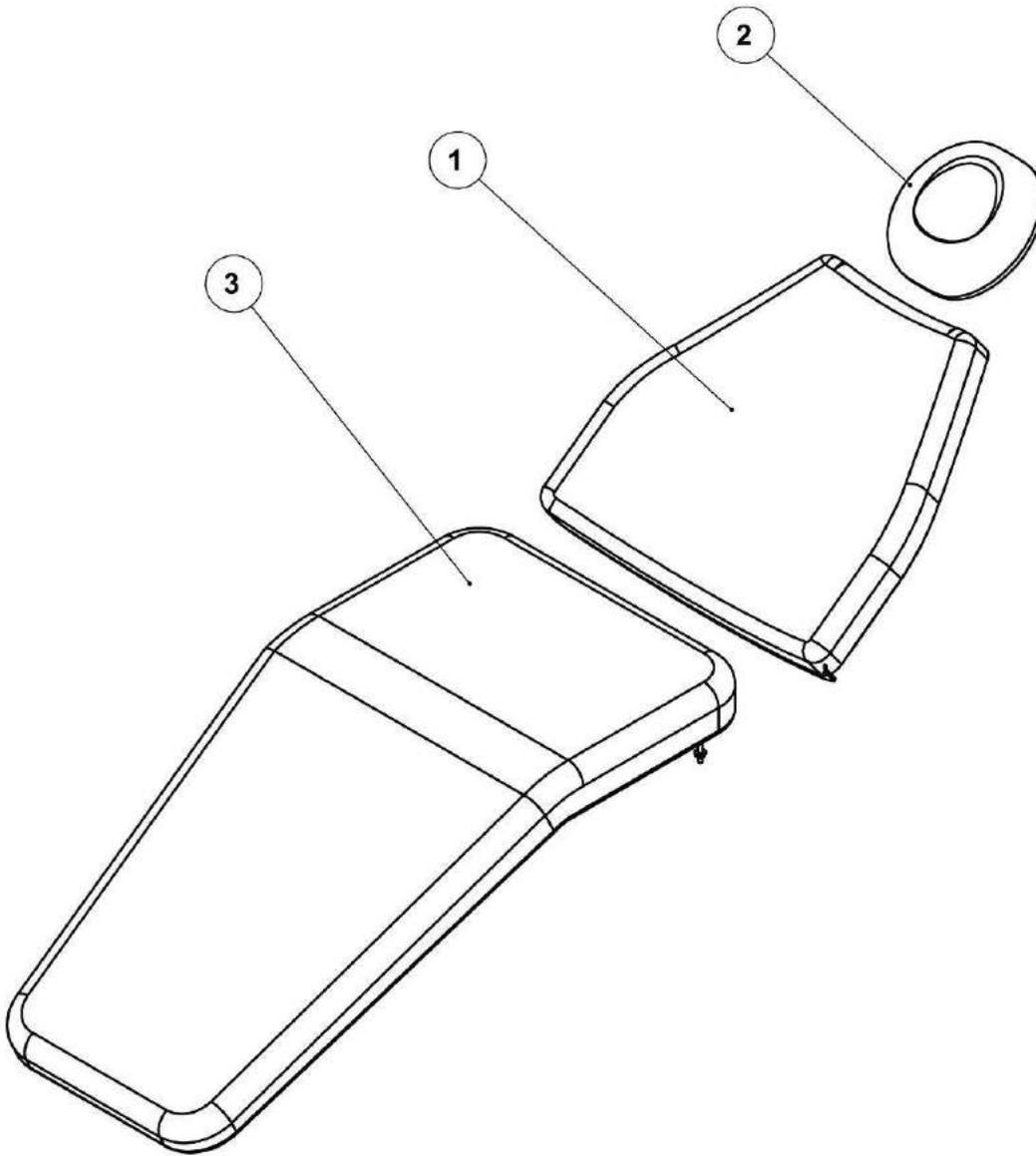
# Foot Control and Cable Assembly

3-010-1018



Item	Part #	Description
1	2-010-0502	Chassis
2	7-010-1033	Wire Assembly
3	2-010-0505	PC Board
4	2-010-0507	Cover
5	4-010-0078	Screw, Flat (Cover)
6	4-010-0079	Screw, Pan Head (PC Board)

## Upholstery Set



Item	Part #	Description
1	Vary by Color	Backrest Upholstery
2	Vary by Color	Headrest Upholstery
3	Vary by Color	Seat Upholstery
*	3-010-1045	Scuff Guard
*	2-010-0127	Headrest Plastic Guide

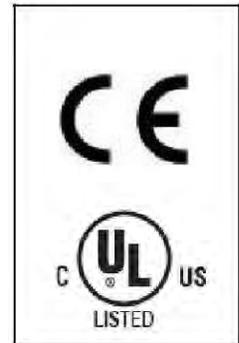
# WARRANTY

Summit Dental Systems (SDS) warrants its products against defects in materials or workmanship from the date of shipment to the Buyer as follows:

<b>Summit Dental Systems (SDS) Equipment:</b>	<b>Warranty Period:</b>
Chairs, Delivery Units, Cuspidors, Lights	5 Years
Control Block Diaphragm (part of Delivery Unit)	Lifetime
All Upholstery, Stools, all Plastic Covers, and Cabinets	1 Year

Summit Dental Systems' sole obligation under the warranty is to provide parts for repair, or at its option a replacement product (excluding all labor and shipping fees). "In any action, BUYER'S remedies are limited to warranty described above. BUYER shall not be permitted to claim lost profits, reliance, special, incidental, or consequential damages in any proceedings."The warranty does not cover damage from improper installation or maintenance, accident or misuse. The warranty does not cover damage resulting from the use of cleaning disinfecting or sterilization chemicals and processes. Failure to follow instructions provided in Summit Dental Systems' Operation and Installations Manuals (Owner's Guides) may void the warranty service must be performed to correct any defect, only an authorized Summit Dental System dealer may perform any and all warranty repairs. Any repairs by unauthorized dealers, technicians, or repairmen may void the warranty.

- In the case of a defective warranty item, a copy of the replacement invoice, model and serial number of the product under which it was replaced, and a description of symptoms of the defect must be returned with the part within 30 days of the replacement invoice date to Summit Dental Systems, 1280 SW 27<sup>th</sup> Avenue, Pompano Beach, FL 33069, USA, in order to receive credit. Any and all expenses for freight, labor to perform warranty service, and purchase of spare parts are the responsibility of the buyer. Any fraudulent claims made may void the warranty. Any additional warranty that may be provided by an authorized Summit Dental Systems dealer is the sole responsibility of said dealer.



- SDS reserves the right to make changes or improvements on any products without being required to modify existing equipment in a like manner.

**Please complete and retain for your records the following Information:**

In case of warranty part replacement/repair or when ordering a part, please call your authorized Summit Dental Systems dealer and have the following information available:

<b>Owners' Name:</b>	<b>Phone #:</b>
<b>Model #:</b>	<b>SDS Serial #:</b>
<b>Dealer:</b>	<b>Phone:</b>
	<b>Purchase Date:</b>



1280 SW 27<sup>th</sup> Ave - Pompano Beach - FL 33069

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