Back Tilt Sensor Spacer Repair Kit *[002-11131-00]*

midmark®

Step 1:   Position chair.
A) Press chair up control button to raise chair seat approximately 26-28 inches above floor.
B) Press back down control button to lower back approximately 10-15°.
C) Disconnect chair from power source.

Note: Upper lift arm cover cannot be removed if chair is raised higher than 28 inches above floor.
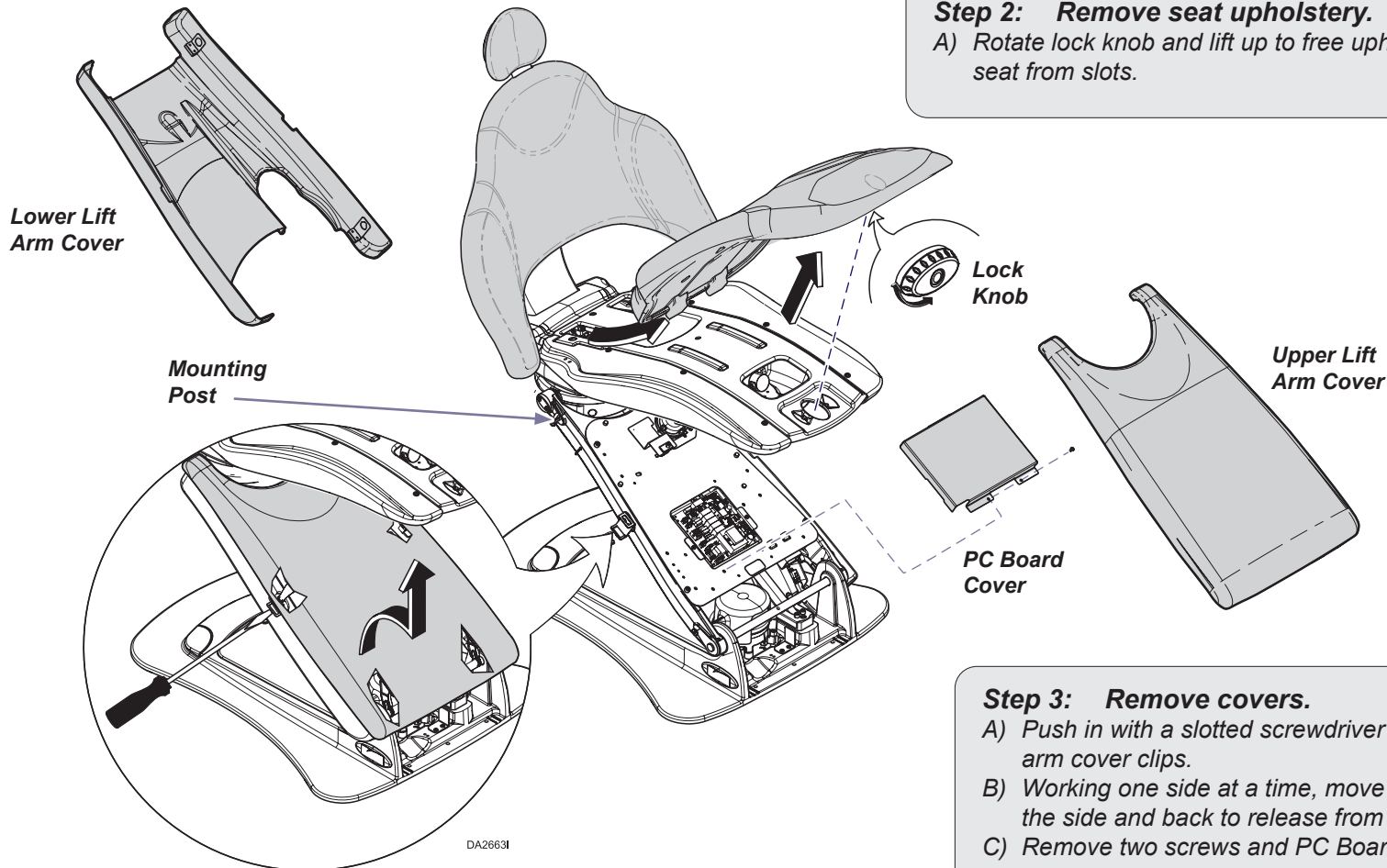
⚠️ **WARNING**
Always disconnect power to the chair before removing covers.

Step 2:   Remove seat upholstery.
A) Rotate lock knob and lift up to free upholstery seat from slots.

Lower Lift Arm Cover

Lock Knob

Mounting Post

Upper Lift Arm Cover
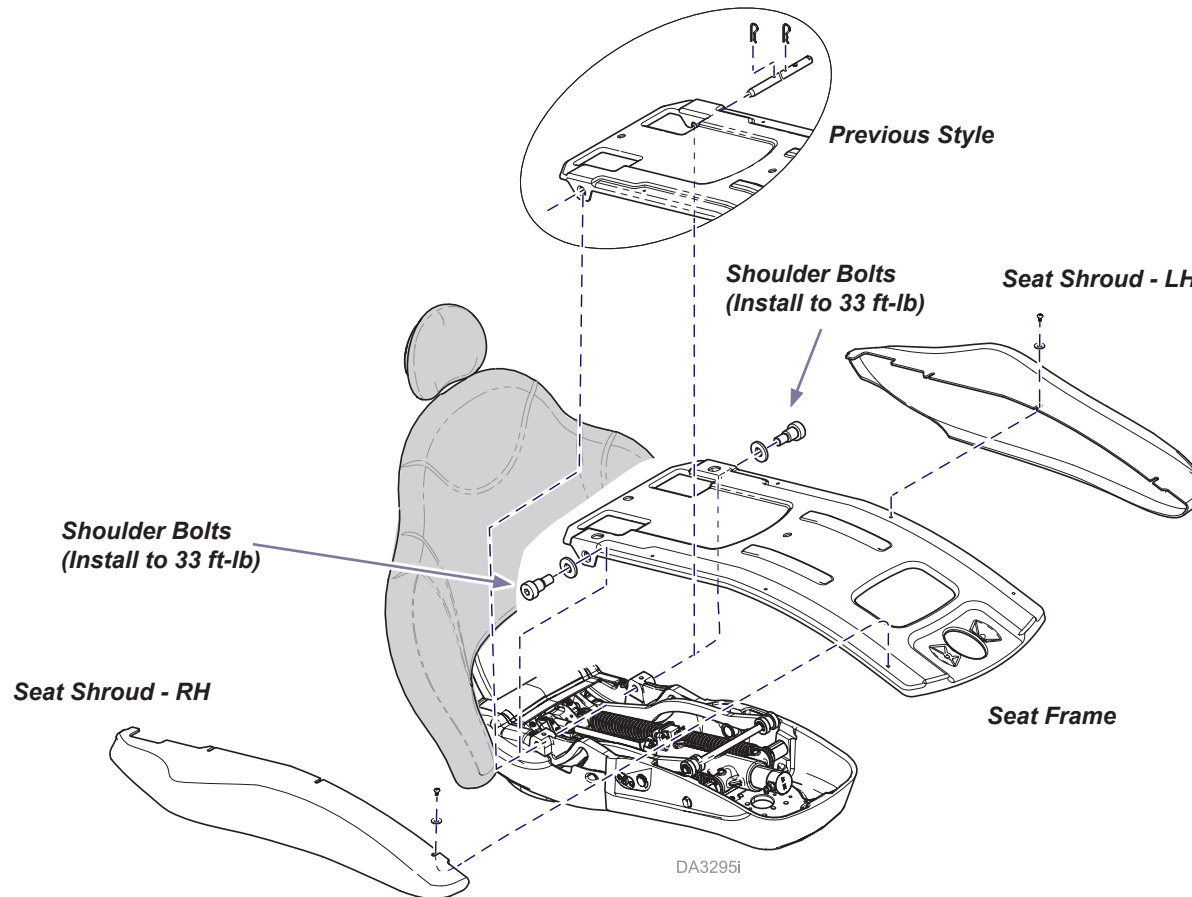
PC Board Cover

DA2663

Step 3:   Remove covers.
A) Push in with a slotted screwdriver to release upper lift arm cover clips.
B) Working one side at a time, move lower lift arm cover to the side and back to release from mounting pins.
C) Remove two screws and PC Board cover.
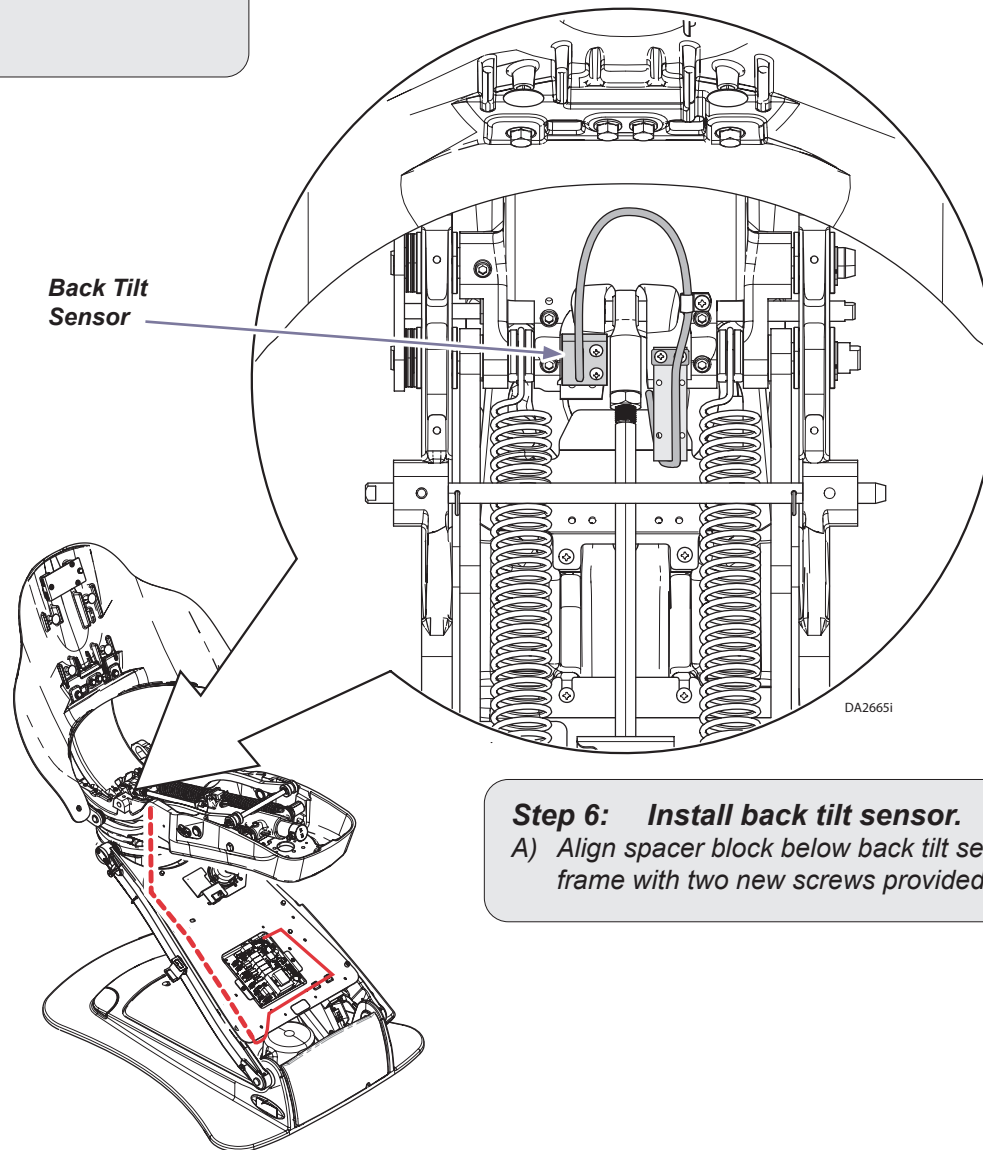
Step 4:   Remove seat shrouds and frame.

A) *Remove three screws and washers, then seat shrouds from RH and LH sides.*

B) *Remove two bolts/washers and lift seat frame to remove.*

Note: During reinstall, torque shoulder bolts to 33 ft-lb.

Previous Style

Shoulder Bolts
(Install to 33 ft-lb)

Seat Shroud - LH

Shoulder Bolts
(Install to 33 ft-lb)

Seat Shroud - RH

Seat Frame

DA3295i

Step 5:   Remove back tilt sensor.

A) Remove two screws and back tilt sensor.

**Back Tilt
Sensor**

DA2665i

Step 6:   Install back tilt sensor.

A) Align spacer block below back tilt sensor and secure both to chair frame with two new screws provided in kit.

Step 7:   Install all covers and calibrate chair.

A) Install seat shrouds and frame covers, see Step 4.

B) Connect chair to power source.

C) Calibrate the chair and test all control buttons.

D) Install PC Board and lift arm covers and seat upholstery, see Steps 2 and 3.

E) Program chair positions and test.

Chair Calibration Procedure

Movement of the chair is monitored by sensory devices that keep the chair within the range of motion accommodated by the drive mechanisms controlling the chair. **The Calibration Mode** is a programmed routine of chair movements that locates the end of travel points, calculates working values for these points, stores these values in memory and then tests the results of the routine. Follow these steps to calibrate a chair.

Step 1: Unplug the chair from the power supply.

Step 2: Remove the Upper Lift Arm Cover and PC Board cover (2 screws). Locate S1 and S2 switch components on the Chair PC board.

Push in with a screw driver to release clips and lift Upper Arm Lift Cover up to free front clips from shaft. Lift Cover must be removed to access Chair PC Board and cover.

Release clips (2)

Chair PC Board

DA2551i
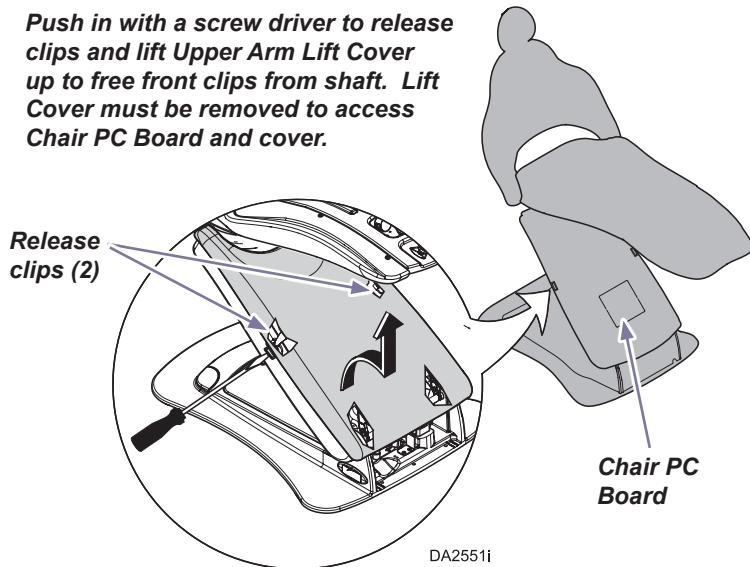
Step 3: Move the #4 dipswitch on the S2 program switch to the Calibration Mode position (ON).
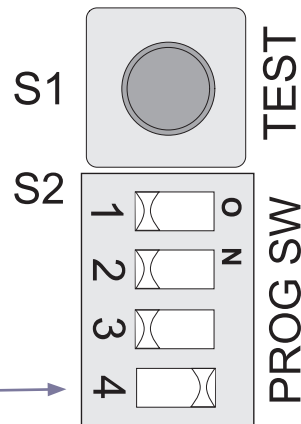
Step 6: Install PC Board Cover and Upper Lift Arm Cover. Plug chair back into to power supply. Activate control buttons to test chair operation.

Step 5: Unplug the Chair and move dipswitch #4 on S2 program switch out of Calibration Mode (OFF position).

Equipment Alert

Control buttons do not work normally during a Calibration Mode. Pressing any button (including the S1 Test pushbutton) will stop the chair movement and end the Calibration Mode.

S1   TEST

S2   1 2 3 4   ON   PROG SW

DA2319

Step 4: Plug chair into power supply and press the TEST button on switch S1.

As soon as the TEST button is pressed, Calibration begins. Step back and allow the chair to complete all 3 up/down cycles of the calibration routine.

Note: The chair emits a short beep every 2 seconds while calibrating. When finished calibrating the chair emits 3 long, confirmation beeps.

The Calibration Mode has failed if the chair emits 1 long beep at the end of the calibration mode.

Manual Calibration - use to set your own high and low extents for base and back travel.

Note
Manual Calibration is only required to modify one or more of the limit of travel extents the base and back are set to originally.
Power to the chair must be cycled after dipswitch #4 is returned to OFF position to complete the procedure.

Base and back movements are monitored by sensory devices that keep them within a controlled range of extents. **Manual Calibration** is a modified calibration routine that allows you to set your own end of travel points, stores these values and then tests the results of the routine. Below is the Manual Chair Calibration procedure.

Manual Calibration...

A) Unplug chair from power supply.

B) Remove uper lift arm cover and PC Board cover (two screws). Locate S1 and S2 switches on the PC board.

C) Move dipswitch #4 on the S2 Prog SW to ON position.

D) Plug chair into power supply, press and hold the TEST button on S1 switch (for five seconds). Listen for a beep to indicate it is in Manual Calibration mode. Beeps continue, one every 5 seconds, as long as you are in manual calibration.

E) Extents can be manually set or skipped for each of these base and back travel points using the same keypad selections.
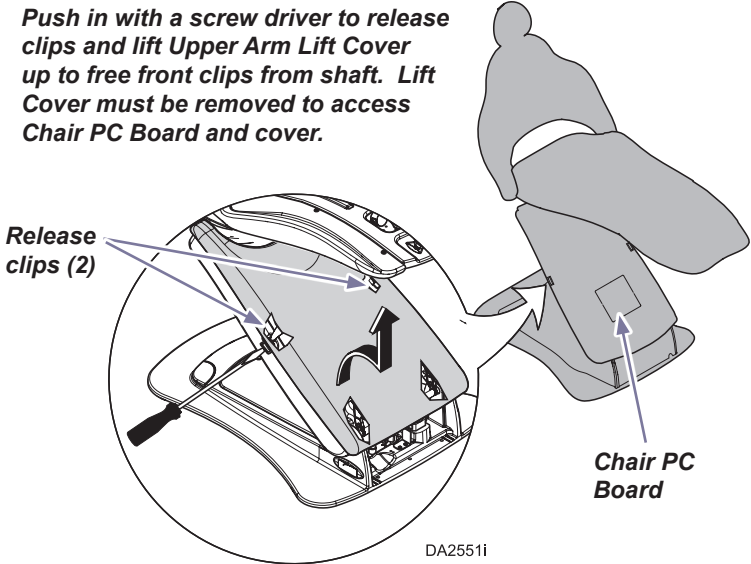
Extents must always be set in this order:	To set an extent:	
Base Low **Back High** **Base High** **Back Low**	Move base or back to desired extent, then press and hold button 1 for two seconds to set the extent.	Two beeps indicate extent is set.
	OR, to skip setting current extent:	
	Press and hold button 4 for two seconds.	Two beeps indicate extent remains at chair limit.

Note: You can abort the manual calibration procedure any time by pressing the TEST button on S1 switch.

F) As soon as the final (Back High) extent is set the calibration routine begins. Step back and allow the chair to complete the necessary number of up/down cycles, which takes a few minutes.

Note: The chair emits a short beep every 2 seconds while calibrating. When calibration is successful, the chair emits three long, confirmation beeps.

If calibration failed, the chair emits one long beep at the end of the routine. Repeat entire Manual Calibration.

Push in with a screw driver to release clips and lift Upper Arm Lift Cover up to free front clips from shaft. Lift Cover must be removed to access Chair PC Board and cover.

Release clips (2)

Chair PC Board

DA2551i

Note
Manual Calibration can only be preformed on units with software version 1.1.1 or later. Version can be found labled on PC board.

Labels on PC board

VER 1.1.1

1.1.1

DA3304

Dipswitch #4

S1 TEST

S2

PROG SW

DA2319

Manual Calibration continued...

G) Unplug chair from power supply and move dipswitch #4 on S2 program switch out to OFF position.

H) Install covers (see B).

I) Plug chair back into to power supply.

J) Activate keypad and remote buttons to test operation.

Programming Chair Positions

To program a button to a specified chair position....
A) Use the arrow buttons to move the chair to desired position.
B) Press the Program Button. You will hear a single beep to indicate you are in the program mode*.
C) Press the desired Position Button (1, 2, 3, or 4) to set the programmed position to that button. You will hear three beeps to indicate the button is programmed.

Alternate/Foot Control Programming Method: With the chair in the desired position, you can just press and hold a position button 2 seconds. The chair will beep three times to indicate the button is programmed.

* The Control device gives you 3 seconds to press (program) a Position button after you are in the Program mode. After 3 seconds the control returns to the normal operating mode.
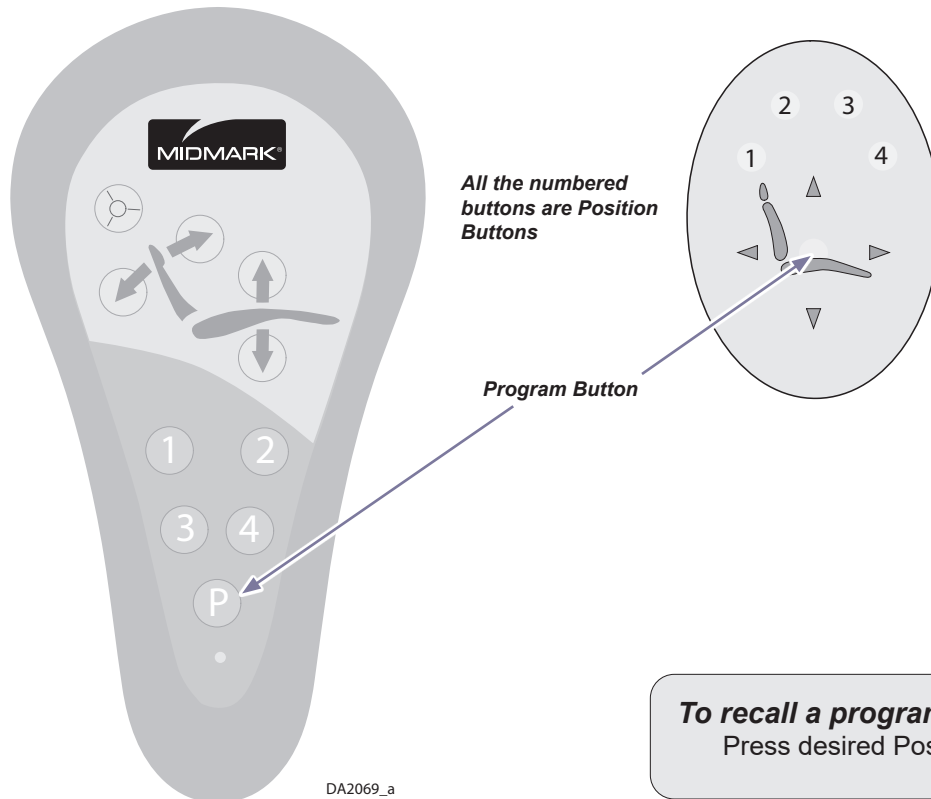
Note
The chair can be stopped any time during a programmed positioning sequence by pressing any other button on the control device.

DA2070

All the numbered buttons are Position Buttons

Program Button

Special Programming Features
The number 4 Position Button is capable of being programmed to invoke any one of these three different functions.
A) The Cuspidor Return Function.
B) The Return to the Last Position Function.
C) Function the same as any other Position button.

Which of these functions the 4 button invokes is dependant on a dipswitch setting on the PC Board and should only be changed by a service technician.

DA2069_a

To recall a programmed position....
Press desired Position Button (1, 2, 3, or 4).