

# Lift Chair Service Guide Models Included:



This Service Guide contains:
Troubleshooting
Replacement Instructions
Illustrated Parts Diagrams

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## About the Lift Chair Service Guide

This service guide provides you with the information necessary to repair Golden Technologies 3-position, 2-position, and 500-lb. lift chairs. The troubleshooting scenarios in this manual consist of procedures that enable you to systematically trace and correct faults in the system, replacement procedures, and exploded views of available parts. Most replacement instructions apply to all three lift chairs in this service manual. Some of them are specific to individual chairs. Drawing references are for assembly illustrations.

Before troubleshooting, check the following:

- Make sure that the lift chair is plugged into a working wall outlet.
- Check the wall outlet circuit breaker.
- Visually check terminals for corrosion.
- Check wires for missing insulation.
- Check connectors for unseated pins.

## **Lift Chair Components**

Lift chairs are powered by 24v transformers that plug into standard wall outlets and operate on standard 120v electricity. The lift chair control system is made up of the following components:

- Motor(s)
- Hand Control
- Battery Backup Wire
- Transformer
- Intermediate Cables
- Heat Unit\*
- Massage Unit\*
- Control Unit\*
- Junction Box\*

**Component:** Motor

**Location:** Between the lift frame and the seat.

Function: Provides lift and recline.

**Connections:** Each motor is physically connected to the chair through the lift frame and the motor straps. Each motor is electrically connected to either a control unit or directly to the hand control. **Failure Signs:** Chair will not lift and/or recline. Motor may become noisy just before failure.

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**Tests:** See Motor Test.

**Expected Readings:** See Motor Test. **Serviceable:** Shaft and tip may be replaced.

**Component:** Hand Control (Lift/Recline or Heat/Massage)

**Location:** On the arm of the chair.

Function: Provides user interface for lift/recline or heat/massage.

Connections: Connected to either the control unit or the motor. Heat/Massage hand control is

connected to the junction box.

**Failure Signs:** Chair will not lift and/or recline. Heat/Massage will not work.

**Tests:** See Hand Control Plug Test.

**Expected Readings:** See Hand Control Plug Test.

Serviceable: Must be replaced.

<sup>\*</sup>Only on Selected Models

**Component:** Extension Wire

**Location:** Between the lift frame and the chair frame. **Function:** Provides power during power failure.

**Connections:** Connected to the control box and the transformer. **Failure Signs:** Chair will not lift/recline during power failure.

**Tests:** Test continuity. **Expected Readings:** Open **Serviceable:** Must be replaced.

Component: Transformer Location: Next to chair. Function: Converts AC to DC.

**Connections:** Wall outlet and either control box, junction box, or motor.

Failure Signs: Chair will not operate.

**Tests:** Test for voltage at connection to chair. **Expected Readings:** Approximately 27VDC.

Serviceable: Must be replaced.

**Component:** Control Box (500-lb. chair only)

**Location:** On the lift frame.

Function: Provides connectivity for motors, hand control, and

transformer.

Connections: Connected to the motor(s), hand control, and

transformer.

**Failure Signs:** Chair will not lift and/or recline. Clicking noise.

Motors out of sync. **Tests:** AC Voltage

**Expected Readings: 27 - 32 VAC. See figure 1.** 

Serviceable? Must be replaced.

Component: Heat Pad Location: On the chair seat. Function: Provides heat.

**Connections:** Connected to the junction box.

Failure Signs: No heat.

Tests: Resistance.

**Expected Readings:** 1 - 6 ohms across the two connector pins.

Serviceable: Must be replaced.

**Component:** Massage Unit

Location: On the seatback or the seat.Function: Vibrates to provide massage.Connections: Connected to the junction box.

Failure Signs: Massage will not work when selected.

**Tests:** Check for AC voltage **Expected Readings:** 3 - 13VAC **Serviceable:** Must be replaced.

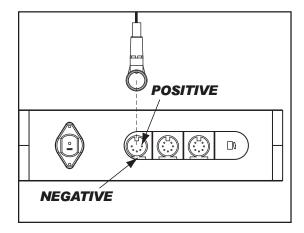


Figure 1. Control Box

## **Replacement Instructions**

#### **Smart Tek Hand Control Replacement**

Tools Needed: None

**Drawing References:** 500-lb. (D1), 3-position (D11), 2-position (D20), and PR-120 (D28.)

- 1) Unplug the transformer from the wall outlet.
- 2) Unclip the Smart Tek hand control cable from the black plastic hook on the side of the chair arm.
- 3) Reach down into the pocket until you feel the disconnect latch on the extension cable.
- 4) Pull back on the disconnect latch.
- 5) Put one hand on the back of the extension wire plug base and one on the hand control plug base and pull the two pieces apart.
- 6) Plug in the new Smart Tek hand control to the extension cable.
- 7) Push forward on the disconnect latch. Make sure it engages fully with the hand control plug base.
- 8) Clip the Smart Tek hand control to the black plastic hook on the side of the chair arm.
- 9) Plug the transformer into the wall outlet and test the hand control.

#### **Hand Control Extension Wire Replacement**

Tools Needed: Phillips head screwdriver, wire cutter, staple remover, stapler, zip ties, and a chair stand.

**Drawing References:** 500-lb. (D1 and D3), 3-position (D11 and D13), 2-position (D20 and D22), and PR-120 (D28 and D30.)

- 1) Unplug the transformer from the wall outlet.
- 2) Unplug the transformer from the battery backup cable.
- 3) Reach down into the chair's side pocket until you feel the disconnect latch on the hand control extension.
- 4) Pull back on the disconnecting latch.
- 5) Put one hand on the back of the extension wire plug base and one on the hand control plug base and pull the two pieces apart.
- 6) Either gently push the chair over onto the footrest, turn it upside down or, gently push it over onto it's side, opposite of the hand control.
- 7) Use a Phillips screwdriver to remove the wire clamp used to secure the extension cable to the bottom of the armrests. Make sure you save the clamp and screw.
- 8) Remove a few staples on the arm assembly to allow the extension wire to be pulled out through the fabric pocket.
- 9) Pull the extension cable through the fabric pocket.
- 10) Locate the zip ties that hold the extension wire to the lift frame. Note their location.
- 11) Cut these ties.
- 12) Unplug the extension cable from the control unit.
- 13) Plug the new extension cable into the control box.
- 14) Secure it to the lift frame with zip ties. Use the same locations as the old extension cable.
- 15) Insert the extension cable into the fabric pocket.
- 16) Reinstall the staples that were removed in step 8.
- 17) Reinstall the wire clamp.
- 18) Turn the chair back over onto its legs.
- 19) Plug in the Smart Tek hand control to the extension cable.
- 20) Push forward on the disconnecting latch. Make sure it engages fully with the hand control plug base.
- 21) Clip the Smart Tek hand control to the black plastic hook on the side of the chair arm.
- 22) Plug the battery backup back into the transformer.
- 23) Plug the transformer back into the wall outlet and test.

#### Back Assembly Replacement (500-lb. and 3-position)

**Tools needed:** 7/16 in. socket wrench

**Drawing References:** 500-lb. (D4), and 3-position (D14)

- 1) Press the Up Button on the hand control until the footrest is about parallel to the floor.
- 2) Unplug the transformer from the wall outlet.
- 3) Using the 7/16 in. socket wrench, remove the (2) flange lock nuts located on both sides of the back.
- 4) Pull the back flap away from the velcro.
- 5) Work the back assembly out one side at a time pulling the threaded studs out of the scissor mechanisms.
- 6) Install new back.

#### Control Box Replacement (500-lb. only)

**Tools needed:** wire cutters, replacement zip ties, a chair stand.

**Drawing References:** D1

- 1) Unplug the transformer from the wall outlet.
- 2) Unplug the battery backup cable from the transformer.
- 3) Either gently push the chair over onto the footrest, turn it upside down or, gently push it over onto it's side, opposite of the hand control.
- 4) Unplug the motor(s), hand control extension, and battery backup from the control box.
- 5) Cut the wire ties that fasten the control box and the motor(s) to the lift frame and remove it.
- 6) Use wire ties to fasten a new control box onto the lift frame.
- 7) Plug the motor(s), hand control extension, and battery backup into the new control box.
- 8) Gently turn the chair back over.
- 9) Plug the battery backup cable into the transformer.
- 10) Plug the transformer into the wall outlet and test.

#### **Lift Motor Replacement**

**Tools needed:** needle nose pliers, zip ties, and a chair stand.

**Drawing References:** 500-lb. (D1 and D7), 3-position (D11 and D16), 2-position (D20 and D24), and PR-120 (D28 and D33.)

- 1) Unplug the transformer from the wall outlet.
- 2) Unplug the battery backup cable from the transformer.
- 3) Either gently push the chair over onto the footrest, turn it upside down or, gently push it over onto it's side, opposite of the hand control.
- 4) Unplug the motor(s) from the control unit (501M26) or from the hand control extension and the transformer.
- 5) Remove the hitch pin and the clevis pin that fastens the bottom of the motor(s) to the lift frame.
- 6) Remove the hitch pin, the clevis pin, washers, and spacers that fastens the top of the motor(s) to the motor straps.
- 7) Use the hitch pin and clevis pin to fasten the bottom of the new motor to the lift frame.
- 8) Use the hitch pin, clevis pin, washers, and spacers to fasten the top of the lift motor to the motor straps.
- 9) Connect the new motor(s) to the control unit.
- 10) Turn the chair over onto the lift frame.
- 11) Plug the battery backup cable into the transformer.
- 12) Plug the transformer into the wall outlet and test.

#### **Lift Frame Replacement**

**Tools needed:** needle nose pliers, T30 Torx screw bit, wire cutters, replacement zip ties, a chair stand. **Drawing References:**500-lb. (D1, D2, and D5), 3-position (D11, D12, and D15), 2-position (D20, D21, and D23), and PR-120 (D28, 29, and 32.)

- 1) Unplug the transformer from the wall outlet.
- 2) Unplug the battery backup cable from the transformer.
- 3) Either gently push the chair over onto the footrest, turn it upside down or, gently push it over onto it's side, opposite of the hand control.
- 4) Unplug the motor(s), hand control extension, and battery backup from the control box.
- 5) Cut the wire ties that fasten the control box to the lift frame and remove it (500-lb. only.)
- 6) Remove the eight (8) T30 lag screws that hold the lift frame to the arm assembly.
- 7) Cut the wire ties that hold the hand control extension wire to the frame and place the wire to the side.
- 8) Remove the hitch pin(s), the clevis pin(s), and the washers that fasten the motor strap(s) to the recline bar.
- 9) Lift the lift frame out of the chair shell.

**Note:** When installing the new lift frame the footboard must be completely closed when you fasten the lift frame to the armrest assembly or the footboard will not close properly.

- 10) Cut the wire ties that fasten the motor cables to the lift frame.
- 11) Remove the hitch pin(s) and the clevis pin(s) that fasten the bottom of the motor(s) to the lift frame.
- 12) Remove the hitch pin(s), the clevis pin(s), spacers, and washers that fasten the motor straps(s) to the lift frame.
- 13) Use the hitch pin(s), the clevis pin(s), spacers, and washers to fasten the motor strap(s) to the new lift frame.
- 14) Use the hitch pin(s) and the clevis pin(s) to fasten the bottom of the motor(s) to the new lift frame.
- 15) Place the new lift frame onto the chair shell.
- 16) Use the hitch pin(s), the clevis pin(s), and the washers to fasten the motor strap(s) to the recline bar.
- 17) Use the eight (8) T30 lag screws to fasten the lift frame to the arm assembly.
- 18) Use two wire ties to fasten the hand control extension to the lift frame.
- 19) Use wire ties to fasten the control box to the lift frame.
- 20) Plug the motor(s), hand control extension, and battery backup into the control box.
- 21) Gently push the chair back over.
- 22) Plug the battery backup cable into the transformer.
- 23) Plug the transformer into a wall outlet and test.

#### **Arm Assembly Replacement**

**Tools needed:** needle nose pliers, P2 Phillips screwdriver, T30 screw bit, wire cutters, zip ties, 3/8 in. socket, a stool or stand for placing the chair upside down.

**Drawing References:** 500-lb. (D1, D2, D3, and D5), 3-position (D11, D12, D13, and D15), 2-position (D20, D21, D22, and D23), and PR-120 (D28, D29, 30, and 32.)

- 1) Unplug the transformer from the wall outlet.
- 2) Unplug the battery backup cable from the control box.
- 3) Reach down into the chair's side pocket until you feel the disconnect latch on the hand control extension.
- 4) Pull back on the disconnecting latch.
- 5) Put one hand on the back of the extension wire plug base and one on the hand control plug base and pull the two pieces apart.
- 6) Either gently push the chair over onto the footrest, turn it upside down or, gently push it over onto it's side, opposite of the hand control.
- 7) Use a Phillips screwdriver to remove the wire clamp used to secure the extension cable to the bottom of the armrests. Make sure you save the clamp and screw.
- 8) Remove a few staples on the arm assembly to allow the extension wire to be pulled out through the fabric pocket.

- 9) Pull the extension cable through the fabric pocket.
- 10) Remove the eight (8) T30 lag screws that hold the lift frame to the arm assembly.
- 11) Remove the hitch pin(s), the clevis pin(s), and the washers that fasten the motor strap(s) to the recline bar.
- 12) Lift the lift frame out of the chair shell and place it off to the side.
- 13) Use the 3/8 in. socket to remove the four (4) bolts that fasten each scissor mechanism to the arm assembly.

**Warning!** While this next step can be done alone, it does require extra attention. You must remove the arm assembly without twisting the frame. Excessive twisting will cause the board holding the arms together to snap.

- 14) Stand behind the chair and pull the arms away from the chair being careful not to get the material snagged in the scissor mechanisms.
- 15) Place the arm assembly to the side.
- 16) Place the new arm assembly in place so that the bolt holes in the scissor mechanisms line up with the bolt holes in the armrest.
- 17) Install the four (4) bolts that fasten each scissor mechanisms to the new arm assembly.
- 18) Make sure the footboard is completely closed.

**Note:** When installing the lift frame the footboard must be completely closed when you fasten the lift frame to the armrest assembly or the footboard will not close properly.

- 19) Place the lift frame onto the chair shell.
- 20) Use the hitch pin(s), the clevis pin(s), and the washers to fasten the motor strap(s) to the recline bar.
- 21) Use the eight (8) T30 lag screws to fasten the lift frame to the arm assembly.
- 22) Reinstall the staples that were removed in step 8.
- 23) Reinstall the wire clamp.
- 24) Gently turn the chair back over onto its legs.
- 25) Plug in the Smart Tek hand control to the extension cable.
- 26) Push forward on the disconnecting latch. Make sure it engages fully with the hand control plug base.
- 27) Clip the Smart Tek hand control to the black plastic hook on the side of the chair arm.
- 28) Plug the battery backup back into the control box.
- 29) Plug the transformer back into the wall outlet and test.

#### **Scissor Mechanism Replacement**

**Tools needed:** needle nose pliers, P2 Phillips screwdriver, T30 screw bit, wire cutters, zip ties, 3/8 in. socket, a stool or stand for placing the chair upside down.

**Drawing References:** 500-lb. (D1, D2, D3, D5, and D9), 3-position (D11, D12, D13, D15, and D18), 2-position (D20, D21, D22, D23, and D26), PR-120 (D28, D29, 30, 32, and 35.)

- 1) Unplug the transformer from the wall outlet.
- 2) Unplug the battery backup cable from the transformer.
- 3) Reach down into the chair's side pocket until you feel the disconnect latch on the hand control extension.
- 4) Pull back on the disconnecting latch.
- 5) Put one hand on the back of the extension wire plug base and one on the hand control plug base and pull the two pieces apart.
- 6) Either gently push the chair over onto the footrest, turn it upside down or, gently push it over onto it's side, opposite of the hand control.
- 7) Unplug the transformer and the hand control extension from the motor (or control box.)
- 8) Remove the eight (8) T30 lag screws that hold the lift frame to the arm assembly.
- 9) Remove the hitch pin(s), the clevis pin(s), and the washers that fasten the motor strap(s) to the recline bar.
- 10) Remove the hand control extension wire clamp.
- 11) Lift the lift frame out of the chair shell and place it off to the side.
- 12) Use the 3/8 in. socket to remove the four (4) bolts that fasten each scissor mechanism to the arm assembly.

**Warning!** While this next step can be done alone, it does require extra attention. You must remove the arm assembly without twisting the frame. Excessive twisting will cause the board holding the arms together to snap.

- 13) Stand behind the chair and pull the arms away from the chair being careful not to get the material snagged in the scissor mechanisms.
- 14) Place the arm assembly to the side.
- 15) Use the phillips screwdriver to remove the screws that fasten the scissor mechanism to the footboard.
- 16) Use the 3/8 in. socket to remove the bolts that fasten the scissor mechanism to the seat and to the footboard.
- 17) Use the 3/8 in. socket to install the bolts that fasten the new scissor mechanism to the seat and the footboard.
- 18) Use the phillips screwdriver to install the screws that fasten the new scissor mechanism to the footboard.
- 19) Place the arm assembly in place so that the bolt holes in the scissor mechanisms line up with the bolt holes in the armrest.
- 20) Install the four (4) bolts that fasten each scissor mechanisms to the arm assembly.
- 21) Make sure the footboard is completely closed.

**Note:** When installing the lift frame the footboard must be completely closed when you fasten the lift frame to the armrest assembly or the footboard will not close properly.

- 22) Place the lift frame onto the chair shell.
- 23) Use the hitch pin(s), the clevis pin(s), and the washers to fasten the motor strap(s) to the recline bar.
- 24) Use the eight (8) T30 lag screws to fasten the lift frame to the arm assembly.
- 25) Reinstall the hand control extension wire clamp.
- 26) Plug the transformer and hand control extension into the motor (or control box.)
- 27) Plug the battery backup back into the transformer.
- 28) Plug the transformer back into the wall outlet and test.
- 29) Reinstall the seatback (if removed.)

#### **Recline Bar Replacement**

**Tools needed:** needle nose pliers, P2 Phillips screwdriver, T30 screw bit, wire cutters, zip ties, 3/8 in. socket, a stool or stand for placing the chair upside down.

**Drawing References:** 500-lb. (D1, D2, D3, D5, D9, D10), 3-position (D11, D12, D13, D15, and D19), 2-position (D20, D21, D22, D23, and D27), and PR-120 (D28, D29, 30, 32, and 36.)

- 1) Unplug the transformer from the wall outlet.
- 2) Unplug the battery backup cable from the transformer.
- 3) Reach down into the chair's side pocket until you feel the disconnect latch on the hand control extension.
- 4) Pull back on the disconnecting latch.
- 5) Put one hand on the back of the extension wire plug base and one on the hand control plug base and pull the two pieces apart.
- 6) Either gently push the chair over onto the footrest, turn it upside down or, gently push it over onto it's side, opposite of the hand control.
- 7) Remove the eight (8) T30 lag screws that hold the lift frame to the arm assembly.
- 8) Remove the hitch pin(s), the clevis pin(s), and the washers that fasten the motor strap(s) to the recline bar.
- 9) Remove the hand control extension wire clamp.
- 10) Lift the lift frame out of the chair shell and place it off to the side.
- 11) Use the 3/8 in. socket to remove the four (4) bolts that fasten each scissor mechanism to the arm assembly.

**Warning!** While this next step can be done alone, it does require extra attention. You must remove the arm assembly without twisting the frame. Excessive twisting will cause the board holding the arms together to snap.

- 12) Stand behind the chair and pull the arms away from the chair being careful not to get the material snagged in the scissor mechanisms.
- 13) Place the arm assembly to the side.
- 14) Use the 1/2 in. socket to remove the bolts that fasten the recline bar to the seat.
- 15) Use the 1/2 in. socket to install the bolts that fasten the new recline bar to the seat.
- 16) Place the arm assembly in place so that the bolt holes in the scissor mechanisms line up with the bolt holes in the armrest.
- 17) Install the four (4) bolts that fasten each scissor mechanisms to the arm assembly.
- 18) Make sure the footboard is completely closed.

**Note:** When installing the lift frame the footboard must be completely closed when you fasten the lift frame to the armrest assembly or the footboard will not close properly.

- 19) Place the lift frame onto the chair shell.
- 20) Use the hitch pin(s), the clevis pin(s), and the washers to fasten the motor strap(s) to the recline bar.
- 21) Use the eight (8) T30 lag screws to fasten the lift frame to the arm assembly.
- 22) Reinstall the hand control extension wire clamp.
- 23) Plug the battery backup back into the transformer.
- 24) Plug the transformer back into the wall outlet and test.

#### **Seat Assembly Replacement**

**Tools needed:** needle nose pliers, P2 Phillips screwdriver, T30 screw bit, wire cutters, zip ties, 3/8 in. socket, a stool or stand for placing the chair upside down.

**Drawing References:** 500-lb. (D1, D2, D3, D5, D9, D10), 3-position (D11, D12, D13, D15, D18, and D19), 2-position (D20, D21, D22, D23, D26, and D27), and PR-120 (D28, D29, 30, 32, 35, and 36.)

- 1) Unplug the transformer from the wall outlet.
- 2) Unplug the battery backup cable from the transformer.
- 3) Reach down into the chair's side pocket until you feel the disconnect latch on the hand control extension.
- 4) Pull back on the disconnecting latch.
- 5) Put one hand on the back of the extension wire plug base and one on the hand control plug base and pull the two pieces apart.
- 6) Either gently push the chair over onto the footrest, turn it upside down or, gently push it over onto it's side, opposite of the hand control. You can also remove the seat back.
- 7) Remove the eight (8) T30 lag screws that hold the lift frame to the arm assembly.
- 8) Remove the hitch pin(s), the clevis pin(s), and the washers that fasten the motor strap(s) to the recline bar.
- 9) Remove the hand control extension wire clamp.
- 10) Lift the lift frame out of the chair shell and place it off to the side.
- 11) Use the 3/8 in. socket to remove the four (4) bolts that fasten each scissor mechanism to the arm assembly.

**Warning!** While this next step can be done alone, it does require extra attention. You must remove the arm assembly without twisting the frame. Excessive twisting will cause the board holding the arms together to snap.

- 12) Stand behind the chair and pull the arms away from the chair being careful not to get the material snagged in the scissor mechanisms.
- 13) Place the arm assembly to the side.
- 14) Use the phillips screwdriver to remove the screws that fasten the scissor mechanism to the footboard.
- 15) Use the 3/8 in. socket to remove the bolts that fasten the scissor mechanism to the seat and to the footboard.
- 16) Use the 1/2 in. socket to remove the bolts that fasten the recline bar to the seat.
- 17) Use the 1/2 in. socket to install the bolts that fasten the recline bar to the new seat.
- 18) Use the 3/8 in. socket to install the bolts that fasten the scissor mechanism to the new seat and the footboard.

- 19) Use the phillips screwdriver to install the screws that fasten the new scissor mechanism to the footboard.
- 20) Place the arm assembly in place so that the bolt holes in the scissor mechanisms line up with the bolt holes in the armrest.
- 21) Install the four (4) bolts that fasten each scissor mechanisms to the arm assembly.
- 22) Make sure the footboard is completely closed.

**Note:** When installing the lift frame the footboard must be completely closed when you fasten the lift frame to the armrest assembly or the footboard will not close properly.

- 23) Place the lift frame onto the chair shell.
- 24) Use the hitch pin(s), the clevis pin(s), and the washers to fasten the motor strap(s) to the lift frame.
- 25) Use the eight (8) T30 lag screws to fasten the lift frame to the arm assembly.
- 26) Reinstall the hand control wire clamp.
- 27) Plug the motor(s), hand control extension, and battery backup into the control box.
- 28) Plug the battery backup back into the transformer.
- 29) Plug the transformer back into the wall outlet and test.

#### **Motor Straps**

**Tools needed:** needle nose pliers, zip ties, and a chair stand.

Drawing References: 500-lb. (D8), 3-position (D17), 2-position (D25), and PR-120 (D34.)

- 1) Unplug the transformer from the wall outlet.
- 2) Unplug the battery backup cable from the transformer.
- 3) Either gently push the chair over onto the footrest, turn it upside down or, gently push it over onto it's side, opposite of the hand control.
- 4) Unplug the motor from the control box.
- 5) Remove the hitch pin, clevis pin(s), and washers that fastens the motor straps to the lift frame.
- 6) Remove the hitch pin(s), clevis pin(s), and washers that fasten the motor straps to the recline bar.
- 7) Use the hitch pin(s), clevis pin(s), and washers to fasten the new motor straps to the recline bar.
- 8) Use the hitch pin(s), clevis pin(s), and washers to fasten the new motor straps to the lift frame.
- 9) Use hitch pin(s), clevis pin(s), washers, and spacers to fasten the top of the motor to the new motor straps.
- 10) Turn the chair over onto the lift frame.
- 11) Plug the battery backup cable into the transformer from .
- 12) Plug the transformer into the wall outlet and test.
- 13) Reinstall the seatback (if removed.)

#### **Hand Controller Tests**

These procedures can be used to test the standard ZKOKI-DL hand controller. Figure 2 is the DIN plug at the end of the hand controller. The triangle at the base represents the indentation in the metal shell which is ground (0v.) The pins are numbered 1 to 5 from left to right. Set your multimeter to the lowest resistance (ohms) setting or the continuity beeper. If the Hand Controller fails any of these tests, replace the hand control.

#### Test 1

Place one lead against the outer shell and the other lead against each of the other pins. Pins 1, 2, 3, and 4 should read 0 ohms (or beep) for continuity. Pin 5 should indicate an open.

#### Test 2

Place one lead on the outer shell. Place the other lead on either pin 1 or pin 3. You should have continuity until you press the Up or Raise Button on the controller. Then you should lose continuity.

#### Test 3

Place one lead on the outer shell. Place the other lead on either pin 2 or pin 4. You should have continuity until you press the Down or Recline Button. Then you should lose continuity.

#### Test 4

Place one lead on pin 5 and the other lead on pin 1 or pin 3. You should have no continuity until the Up or Raise Button is pressed. Place the other lead on pin 2 and 4. You should have no continuity until the Lower or Recline Button is pressed.

#### **Motor Tests**

You can test the motor by jumping a set of motor connector leads. Figure 3 is the motor connector. The shell is ground or negative (0v). Pin 1 is positive (24v). Pins 2 and 3 connect to the motor. Pin 4 and 5 are used to connect to an auxiliary motor. If the motor fails either of these tests, replace the motor.

#### **Test 1 - Motor Extension (Up)**

Insert a jumper between pin 2 and the shell and then between pin 1 and pin 3. The motor should extend.

#### **Test 2 - Motor Retraction (Down)**

Insert a jumper between pin 3 and the shell and then between pin 1 and pin 2. The motor should retract.

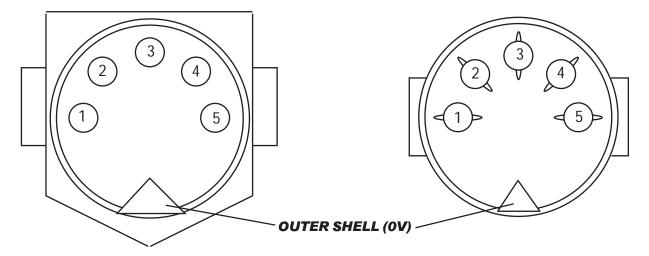
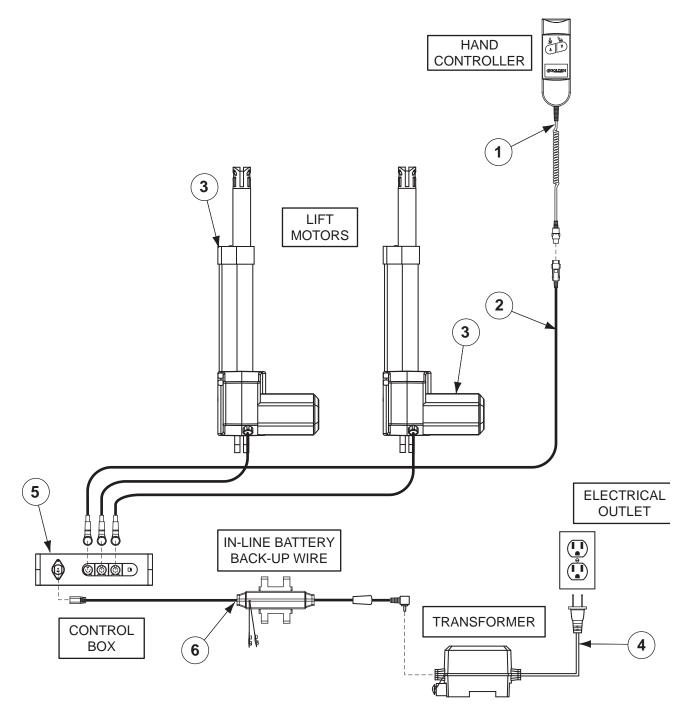


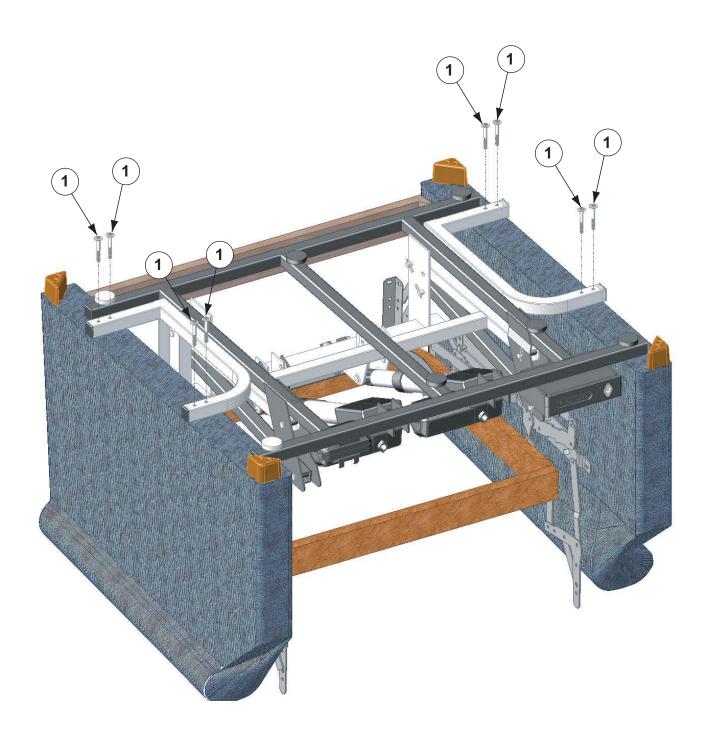
Figure 2. Hand Control Connector

Figure 2. Motor Connector

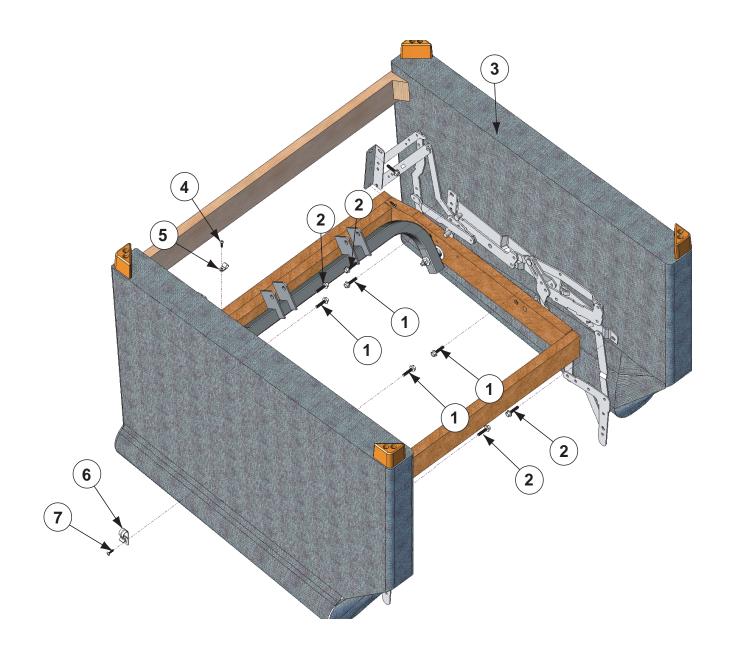
## D1 - 501M26 Electrical Diagram



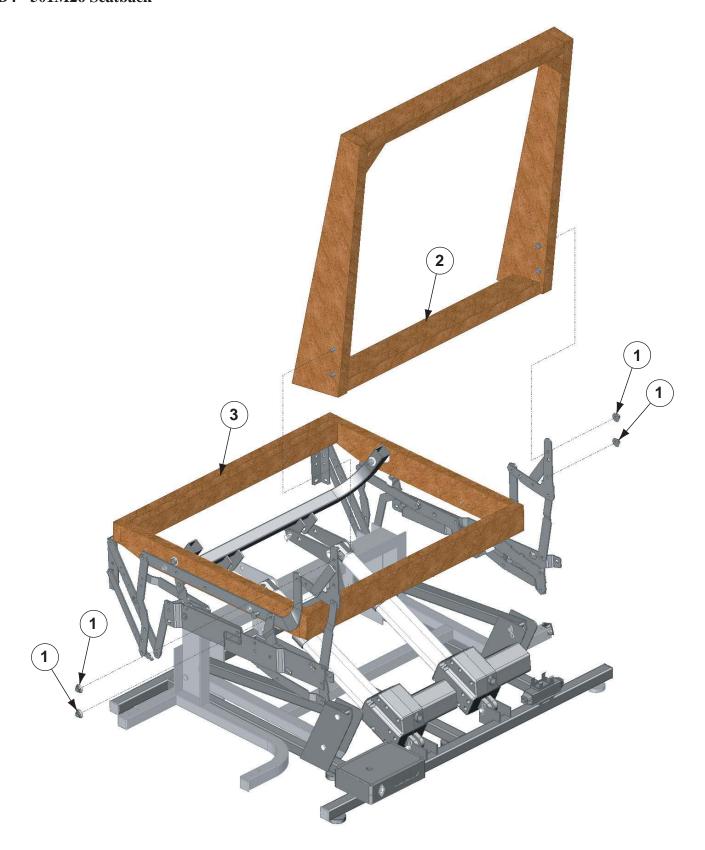
REF#	PART NUMBER	DESCRIPTION
1	ZKOKI-DL	Hand Wand Led Golden Logo
2	EXT100-DQ	Hand Control Extension
3	GMOKI-26W	Okin 26-28 Wide Motor
4	GM1501	Okin Transformer
5	GMOKI-CB	Okin Control Box
6	GM1502	Back-up Wire



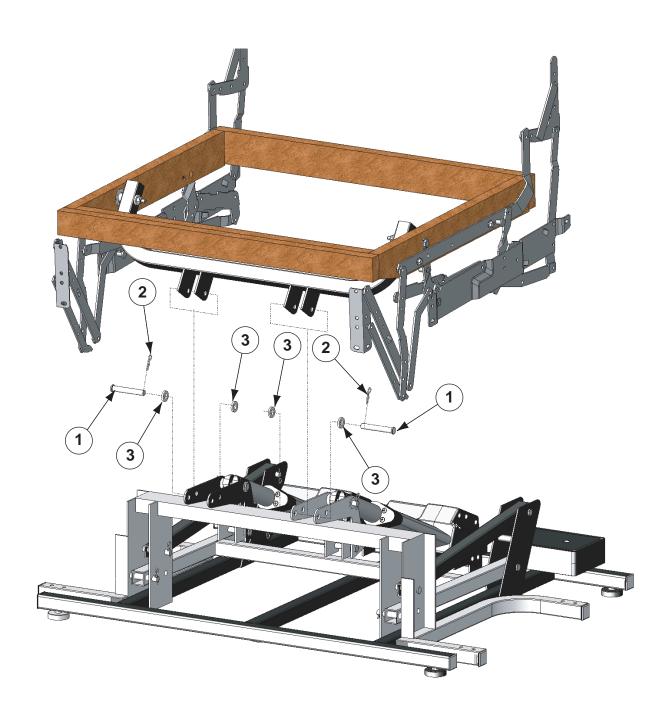
REF#	PART NUMBER	DESCRIPTION
1	BB5520	Screw Torque 5 Lift Frames



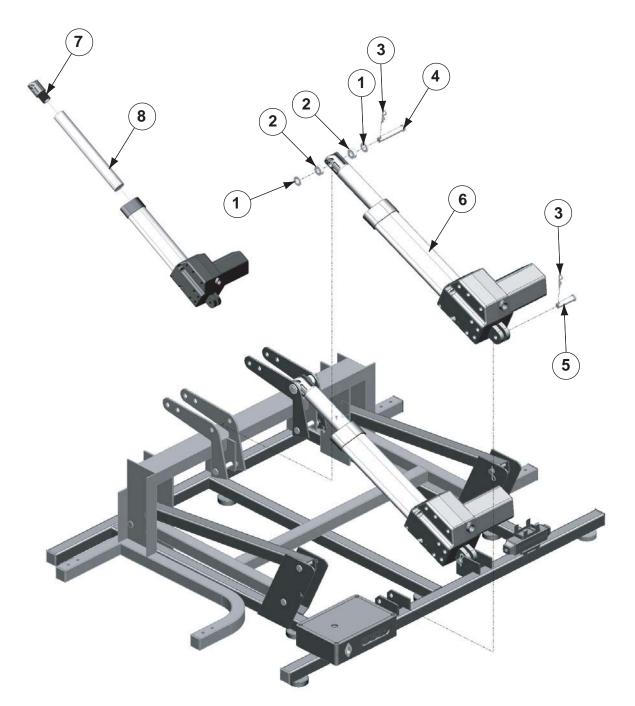
REF#	PART NUMBER	DESCRIPTION
1	BB5602	1/4X20X1.5 Hex Head Flang Bolt
2	BB5576	3/8"X 5/8" Sholuder Bolt
3	MSARM-501M-26	Armrest Assembly 501M26
4		
5		
6		
7		



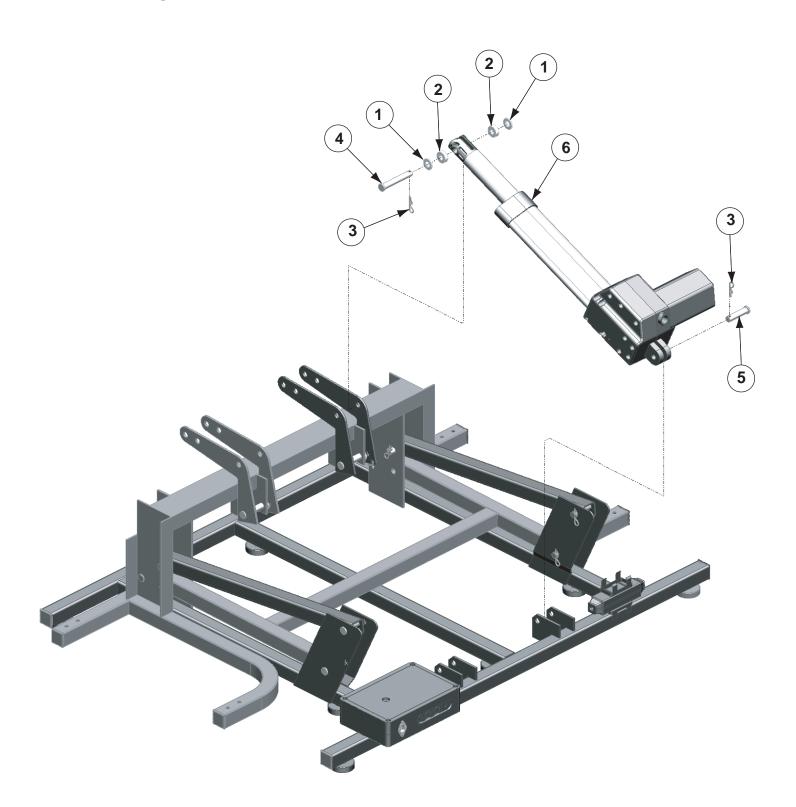
REF#	PART NUMBER	DESCRIPTION
1	BB5603	1/4-20 Nylon Lock Nut Flange
2	BK-501M26	Seatback 501M26
3	ST-501M26	Seat 501M26



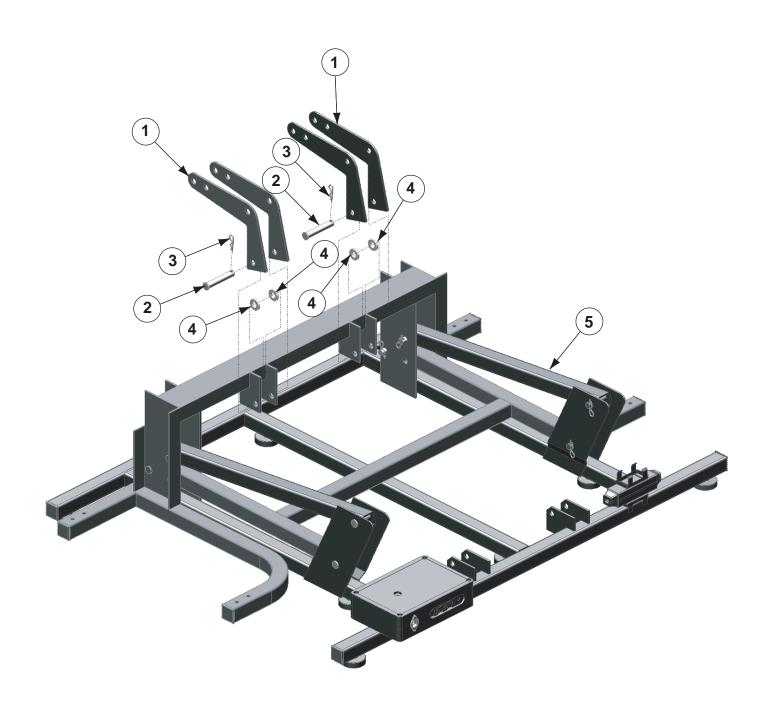
REF#	PART NUMBER	DESCRIPTION
1	BB5512	Clevis Pin 3/8 x 1 5/8 Zinc
2	BB5514	Pin Hitch
3	BB5535	Washer Nylon 750X394X125



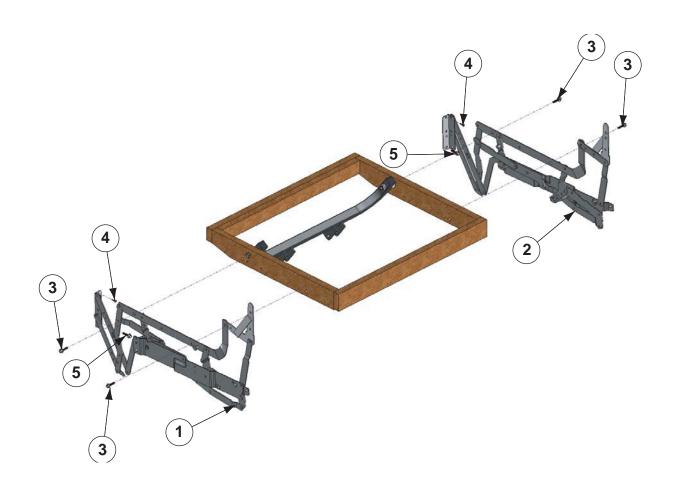
REF#	PART NUMBER	DESCRIPTION
1	BB5549	Washer
2	BB5003	Nylon Washer Spacers 560X379X3
3	BB5514	Pin Hitch
4	BB5531	Clevis Pin 3/8 x 2 Zinc
5	BB5512	Clevis Pin 3/8 x 1 5/8 Zinc
6	GMOKI-28W	Motor Chair Okin-Lift Motor 1.30
7	GMOKI-12	Motor Shaft
8	GMOKI-13	Motor Shaft Tip



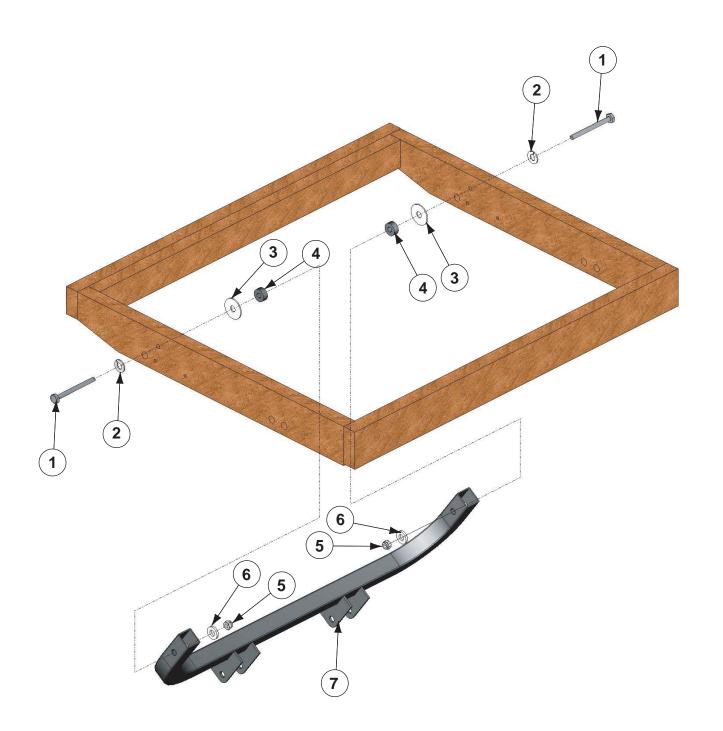
REF#	PART NUMBER	DESCRIPTION
1	BB5549	Washer
2	BB5003	Nylon Washer Spacers 560X379X3
3	BB5514	Pin Hitch
4	BB5531	Clevis Pin 3/8 x 2 Zinc
5	BB5512	Clevis Pin 3/8 x 1 5/8 Zinc
6	GMOKI-28W	Motor Chair Okin-Lift Motor 1.30



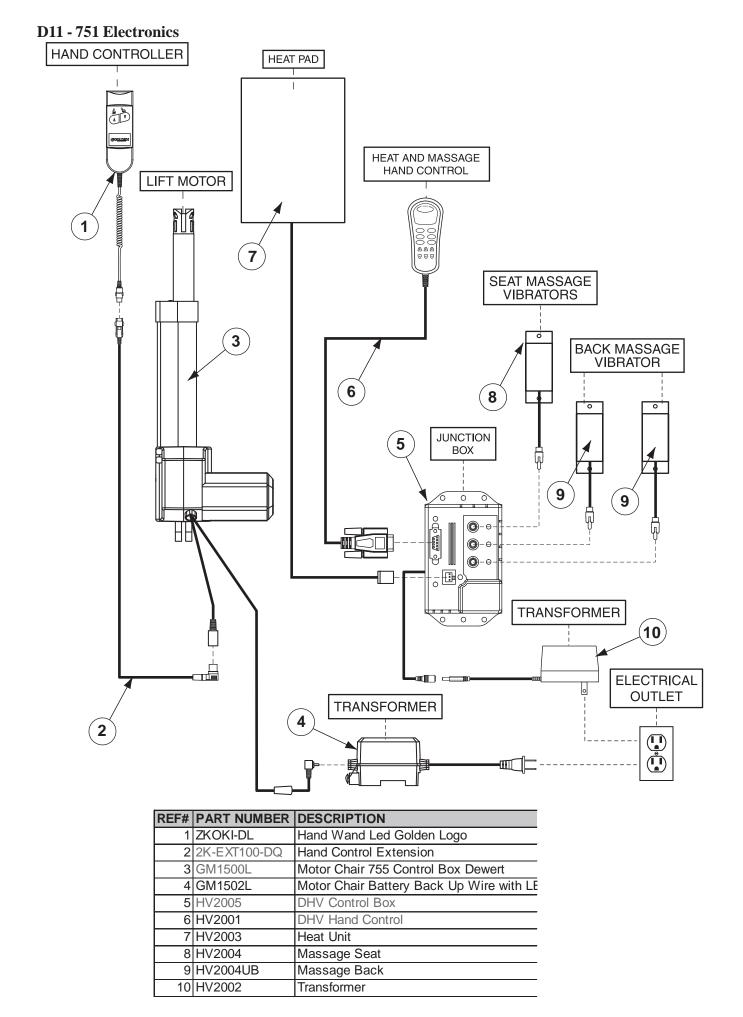
REF#	PART NUMBER	DESCRIPTION
1	RS5100	Motor Straps
2	BB5514	Pin Hitch
3	BB5513	Clevis Pin 3/8 x 2 Zinc
4	BB5535	Washer Nylon 750X394X125
5	LM6111	Lift Frame

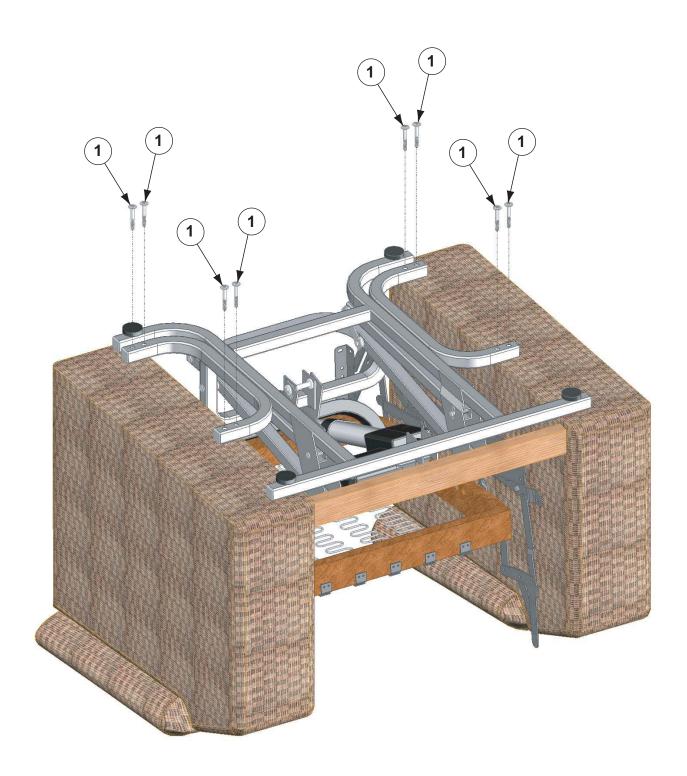


REF#	PART NUMBER	DESCRIPTION
1	RM621L-SHD	Scissor Mech Left
2	RM621R-SHD	Scissor Mech Right
3	BB5602	1/4X20X1.5 Hex Head Flang Bolt
4		
5		

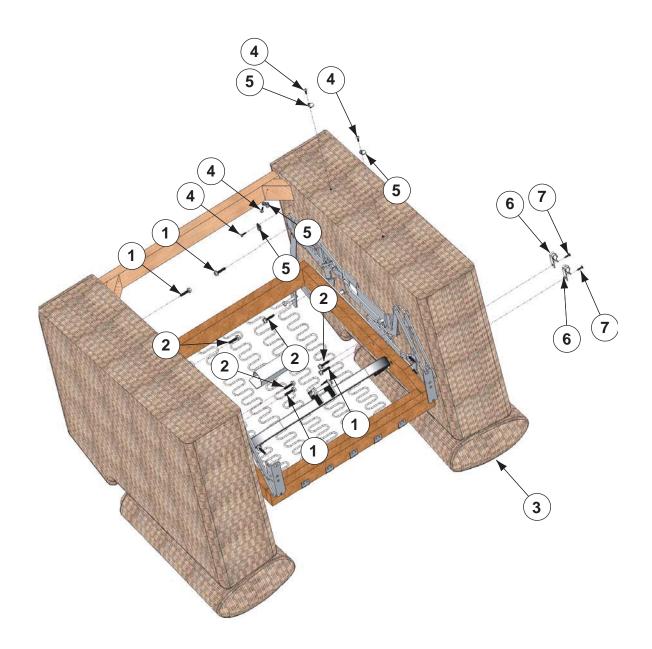


REF#	PART NUMBER	DESCRIPTION
1	*	Bolt
2	*	Washer
3	*	Washer
4	*	Spacer
5	BB5603*	1/4-20 Nylon Lock Nut Flange
6	*	Washer
7	RB6111	Recline Bar
	*Sold with RBHK-5009 Recline Bar Hardware	

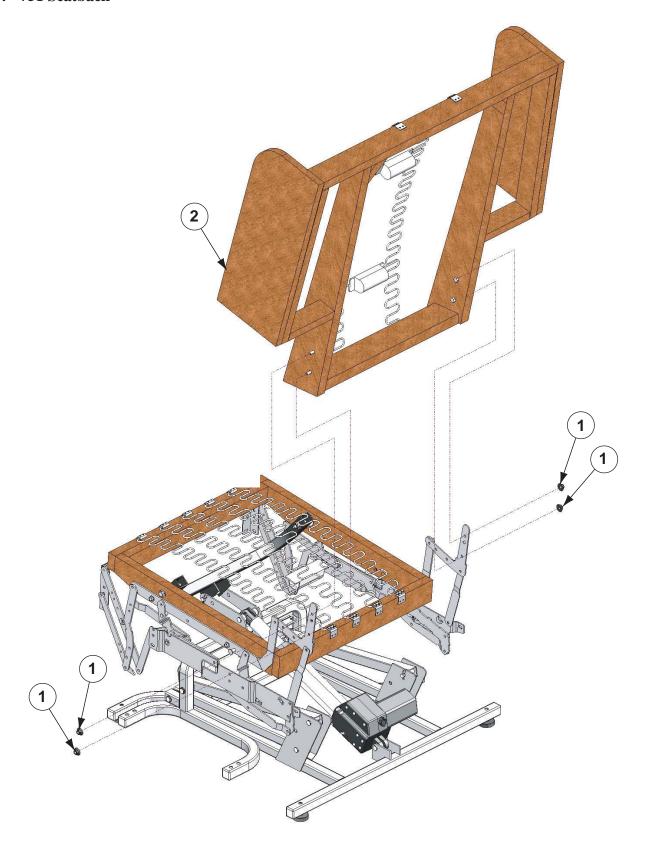




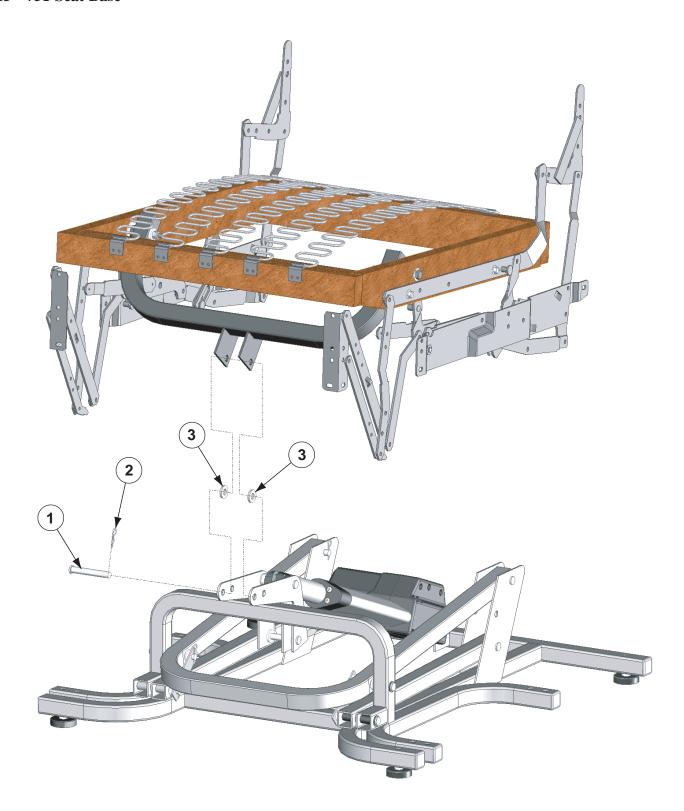
REF#	PART NUMBER	DESCRIPTION
1	BB5520	Screw Torque 5 Lift Frames



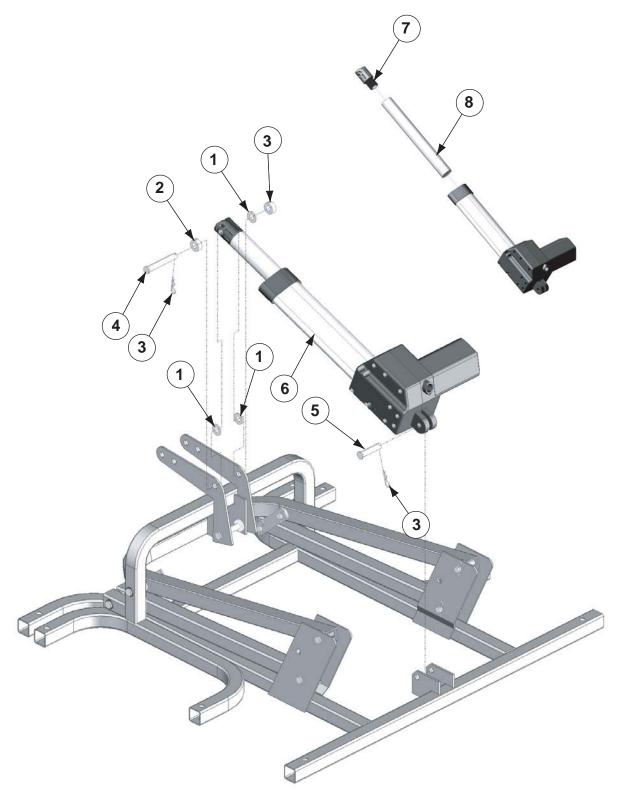
REF#	PART NUMBER	DESCRIPTION
1	BB5602	1/4X20X1.5 Hex Head Flang Bolt
2	BB5576	3/8"X 5/8" Sholuder Bolt
3	MS-ARM-751	Armrest Assembly 751
4		
5		
6		
7		



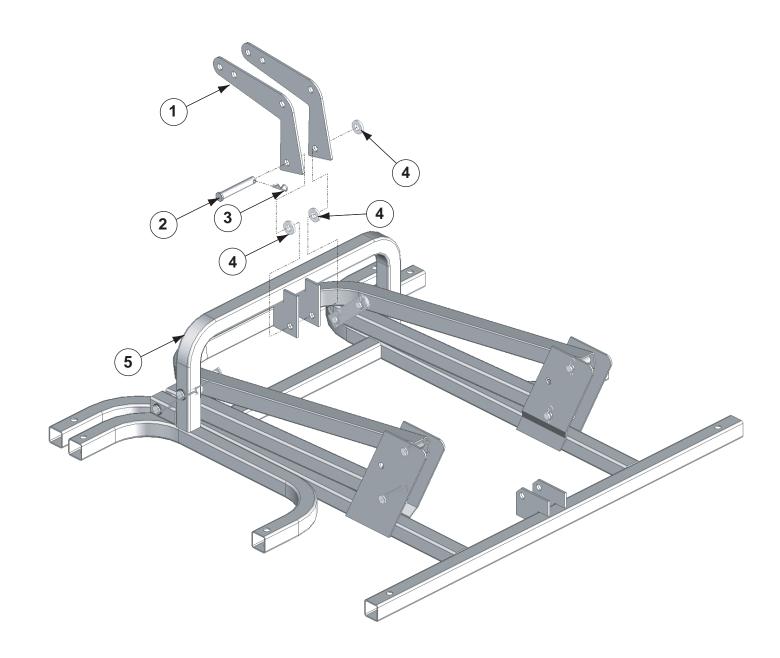
REF#	PART NUMBER	DESCRIPTION
1	BB5603	1/4-20 Nylon Lock Nut Flange
2	BK-751	Seatback 751
2	BK-751A	Seatback 751



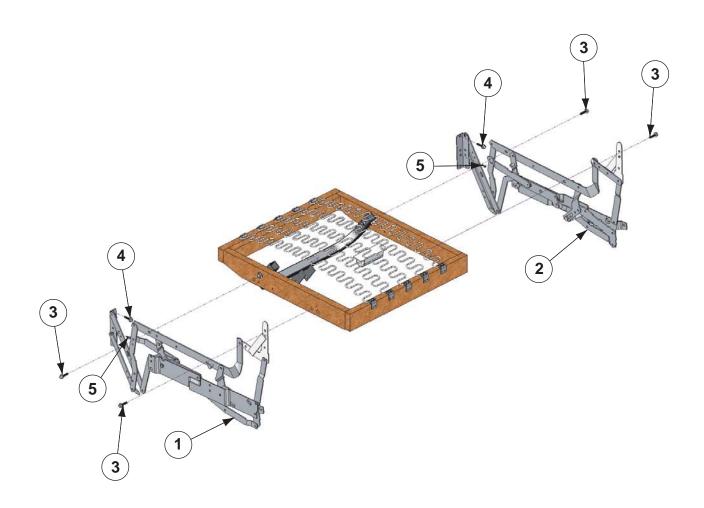
REF#	PART NUMBER	DESCRIPTION
1	BB5512	Clevis Pin 3/8 x 1 5/8 Zinc
2	BB5514	Pin Hitch
3	BB5535	Washer Nylon 750X394X125



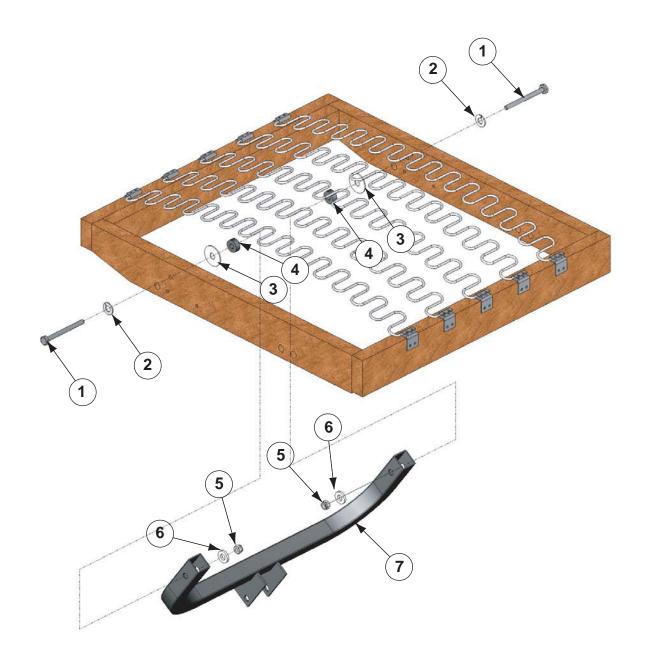
REF#	PART NUMBER	DESCRIPTION
1	BB5549	Washer
2	BB5003	Nylon Washer Spacers 560X379X3
3	BB5514	Pin Hitch
4	BB5513	Clevis Pin 3/8 x 2 Zinc
5	BB5512	Clevis Pin 3/8 x 1 5/8 Zinc
6	GM1500L	Motor Chair Okin-Lift Motor 1.30
7	GMOKI-13	Fork Head
8	GMOKI-12	Motor Shaft



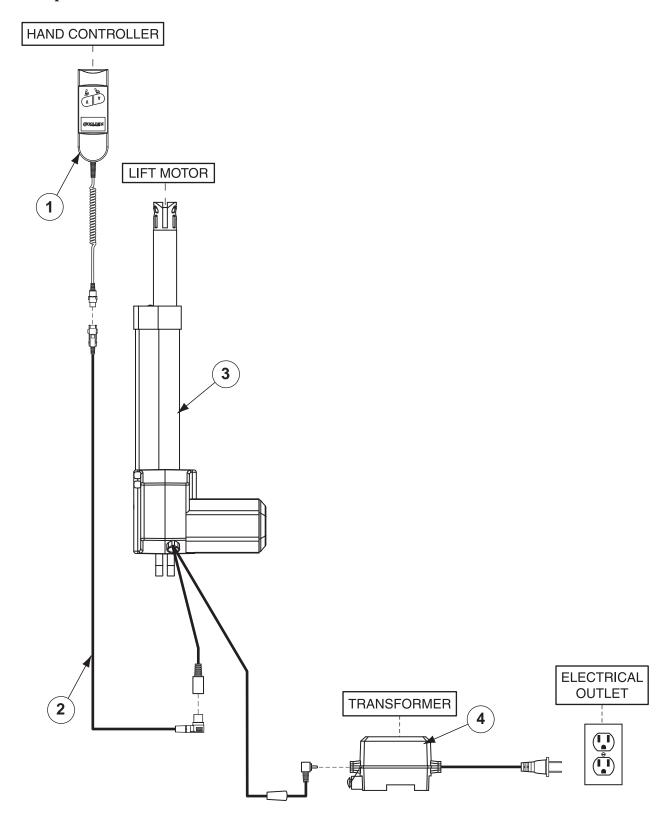
REF#	PART NUMBER	DESCRIPTION
1	RS5100	Motor Straps
2	BB5514	Pin Hitch
3	BB5513	Clevis Pin 3/8 x 2 Zinc
4	BB5535	Washer Nylon 750X394X125
5	LM5120	Lift Frame



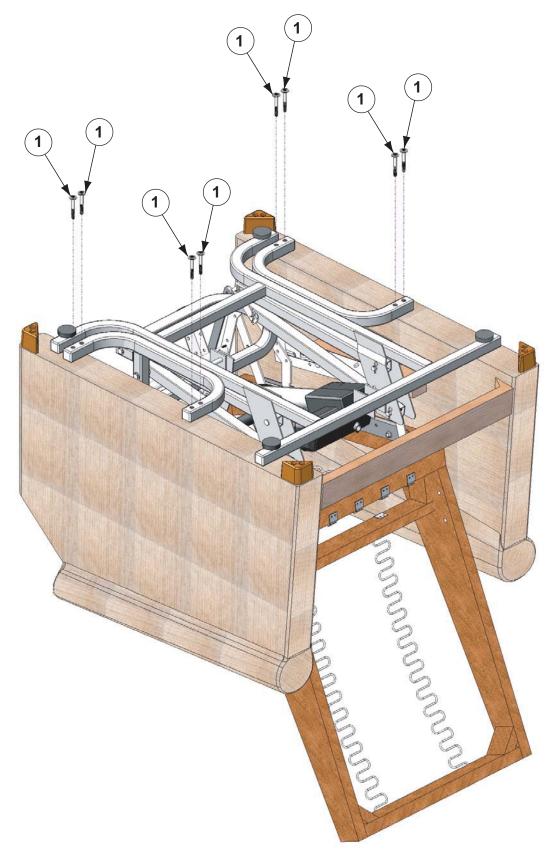
REF#	PART NUMBER	DESCRIPTION
1	RM621L	Scissor Mech Left
2	RM621R	Scissor Mech Right
3	BB5602	1/4X20X1.5 Hex Head Flang Bolt
4	ST-751	Seatbase 751



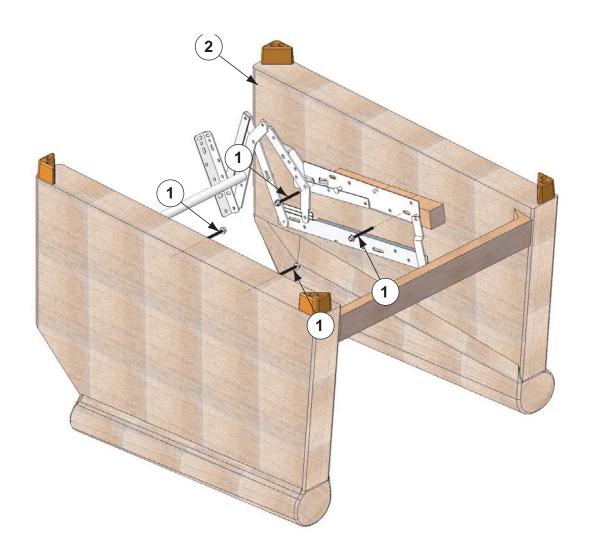
REF#	PART NUMBER	DESCRIPTION
1	*	Bolt
2	*	Washer
3	*	Washer
4	*	Spacer
5	*BB5603	1/4-20 Nylon Lock Nut Flange
6	*	Washer
7	RB5100	Recline Bar
	*Sold with RBHK	-5009 Recline Bar Hardware Kit



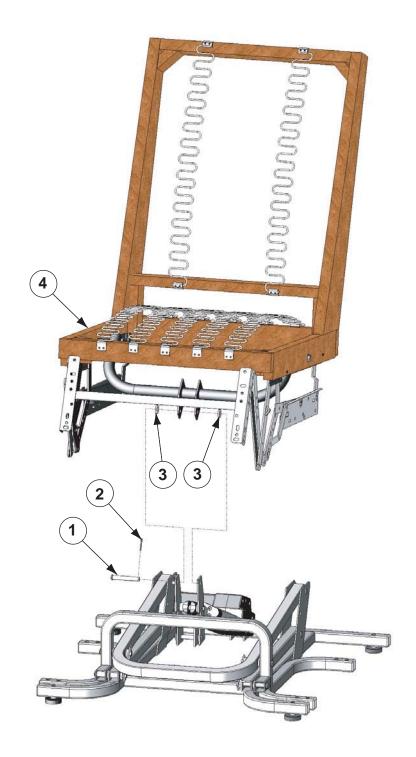
REF#	PART NUMBER	DESCRIPTION
1	ZKOKI-DL	Hand Wand Led Golden Logo
2	2K-EXT100-DQ	Hand Control Extension
3	GM1500L	Motor Chair 755 Control Box Dewert
4	GM1501	Motor Chair Okin Transformer



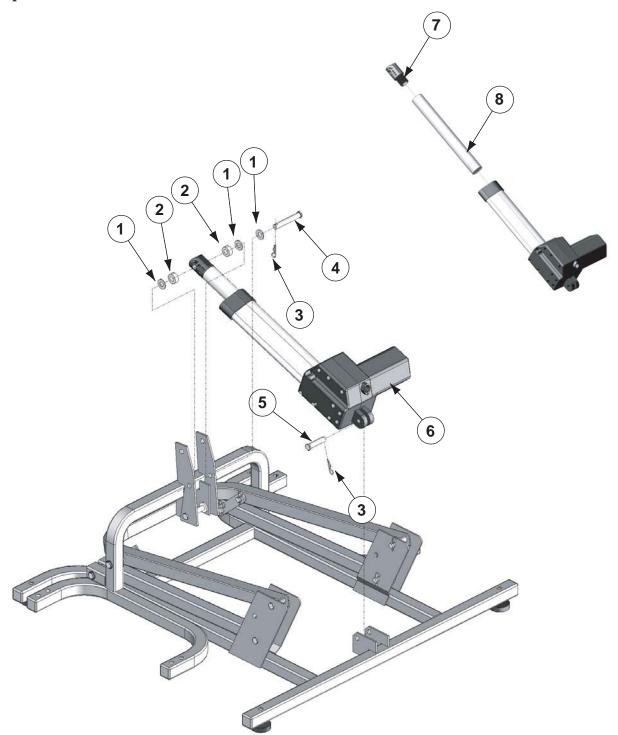
REF#	PART NUMBER	DESCRIPTION
1	BB5520	Screw Torque 5 Lift Frames



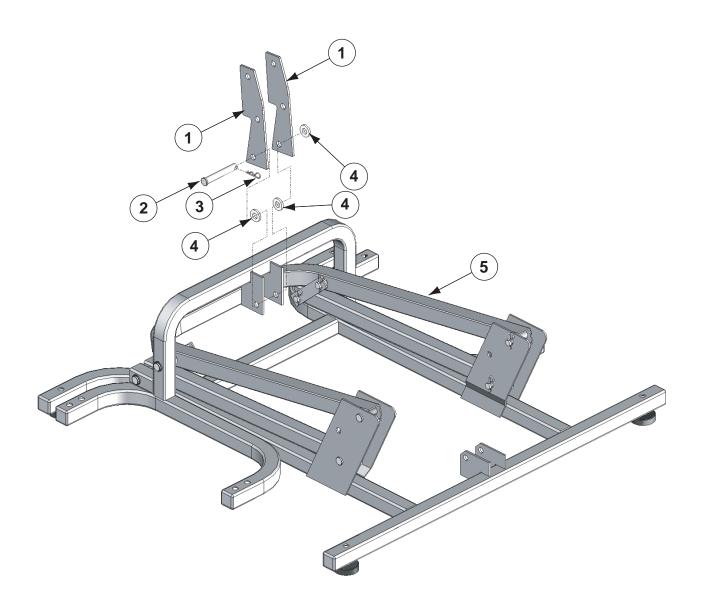
REF#	PART NUMBER	DESCRIPTION
1	BB5602	1/4X20X1.5 Hex Head Flang Bolt
2	MSARM-200M	Armrest Assembly



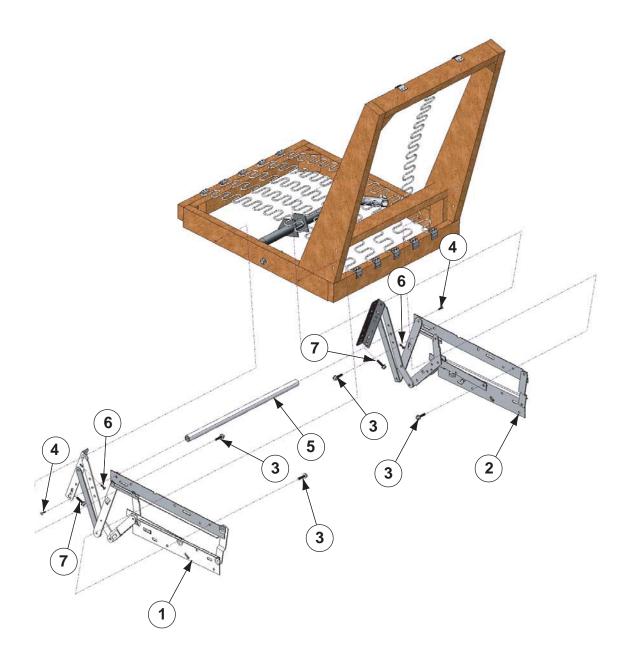
REF#	PART NUMBER	DESCRIPTION
1	BB5512	Clevis Pin 3/8 x 1 5/8 Zinc
2	BB5514	Pin Hitch
3	BB5535	Washer Nylon 750X394X125
4	ST-200	Seat Assembly



REF#	PART NUMBER	DESCRIPTION
1	BB5549	Washer
2	BB5003	Nylon Washer Spacers 560X379X3
3	BB5514	Pin Hitch
4	BB5531	Clevis Pin 3/8 x 2 Zinc
5	BB5512	Clevis Pin 3/8 x 1 5/8 Zinc
6	GM1500L	Lift Motor
7	GMOKI-13	Fork Head
8	GMOKI-12	Motor Shaft

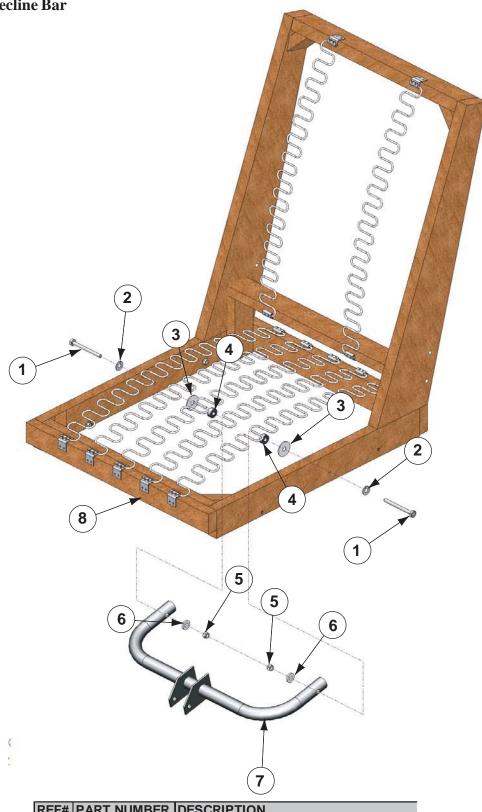


REF#	PART NUMBER	DESCRIPTION
1	LM-RS5000	Motor Straps
2	BB5514	Pin Hitch
3	BB5513	Clevis Pin 3/8 x 2 Zinc
4	BB5535	Washer Nylon 750X394X125
5	LM-5000C	Lift Frame

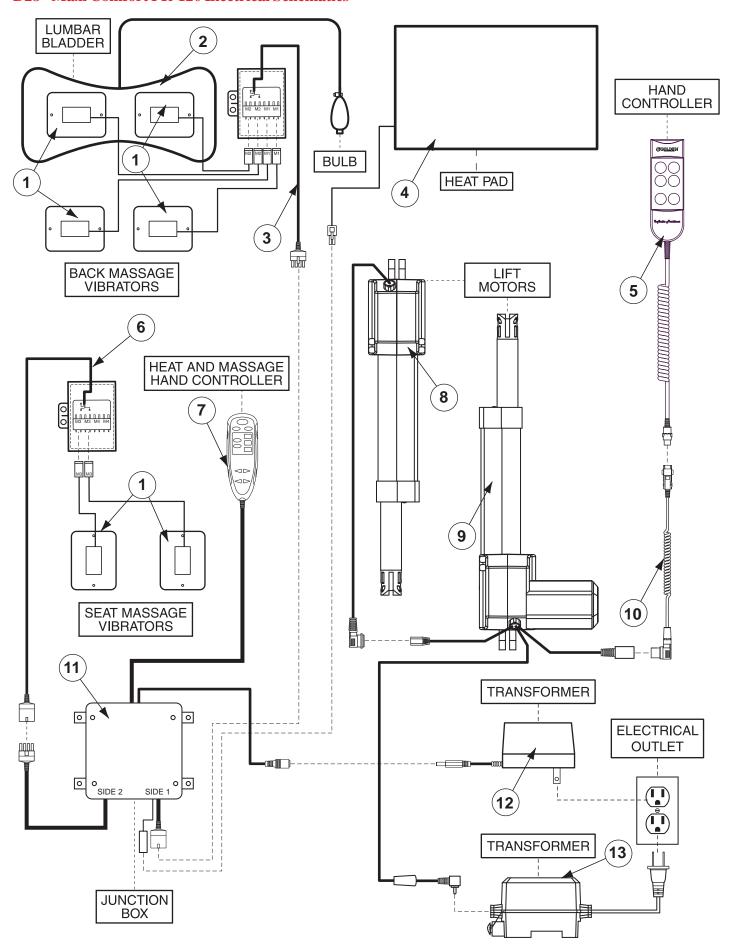


REF#	PART NUMBER	DESCRIPTION
1	RM-8300L	Scissor Mech Left
2	RM-8300R	Scissor Mech Right
3	BB5602	1/4X20X1.5 Hex Head Flang Bolt
4		Bolts
5	Mid-Ottoman	Mid-Ottoman
6		
7		

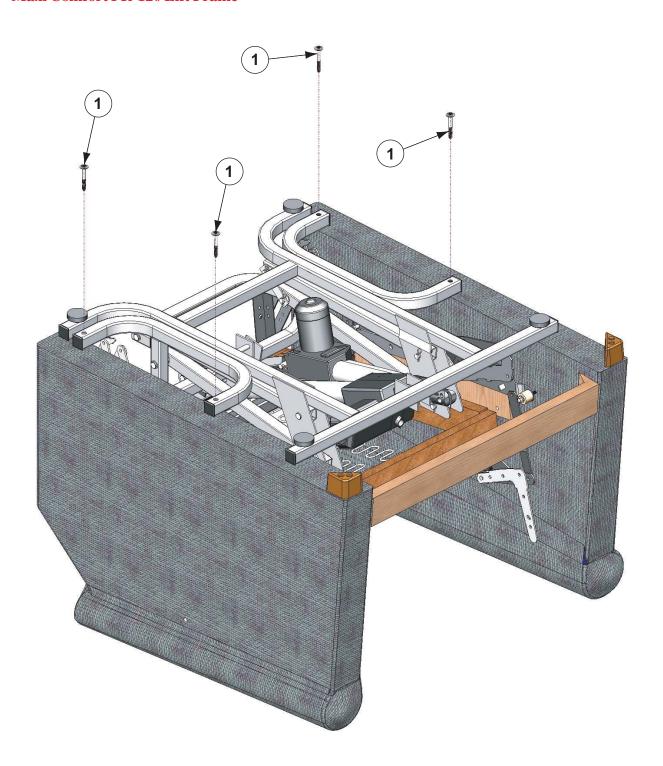




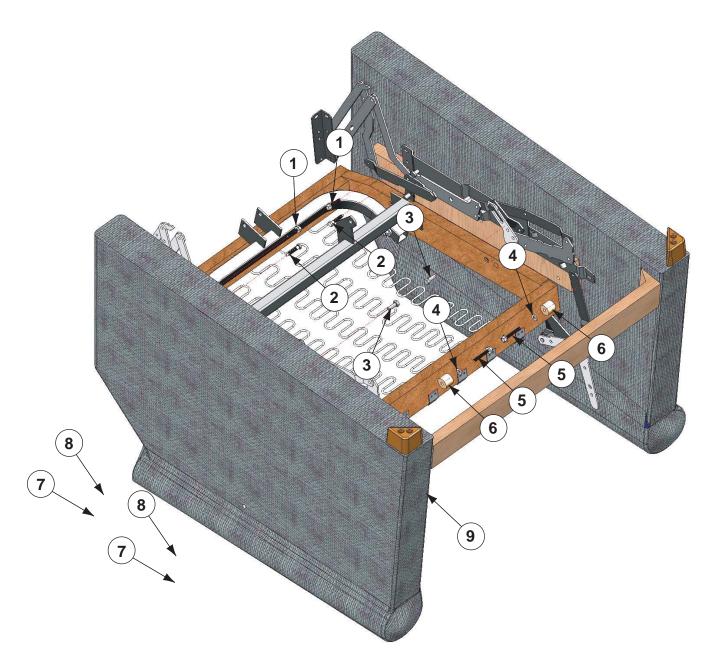
REF#	PART NUMBER	DESCRIPTION
1	*	Bolt
2	*	Washer
3	*	Washer
4	*	Spacer
5	*BB5603	1/4-20 Nylon Lock Nut Flange
6	*	Washer
7	RB5100M	Recline Bar
8	ST-200	Seat Assembly
	*Sold with RBHK	-5009 Recline Bar Hardware Kit



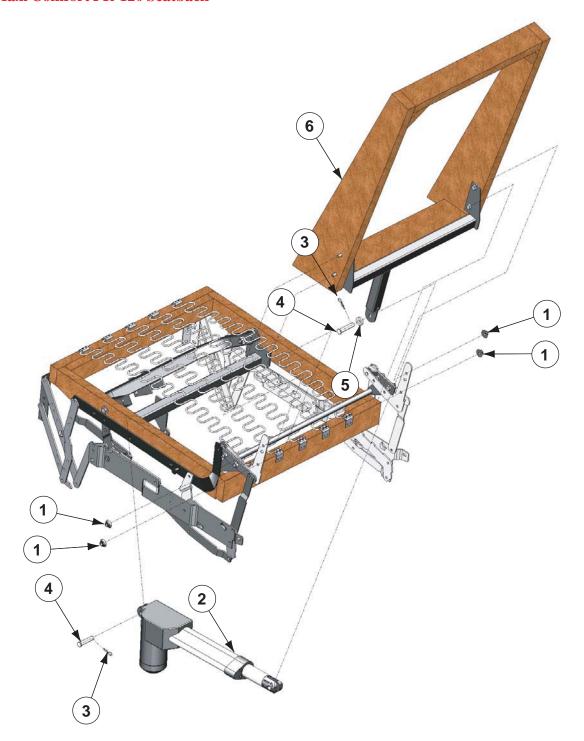
REF#	PART NUMBER	DESCRIPTION
1		Massage Units
2		?
3		?
4		Heat Pad
5		Hand Control
6		?
7		Hand Control Heat/Massage
8		Recline Motor
9		Lift Motor
10		Hand Control Extension
11		Junction Box
12		Transformer
13		Transformer



REF#	PART NUMBER	DESCRIPTION
1	BB5520	Screw Torque 5 Lift Frames



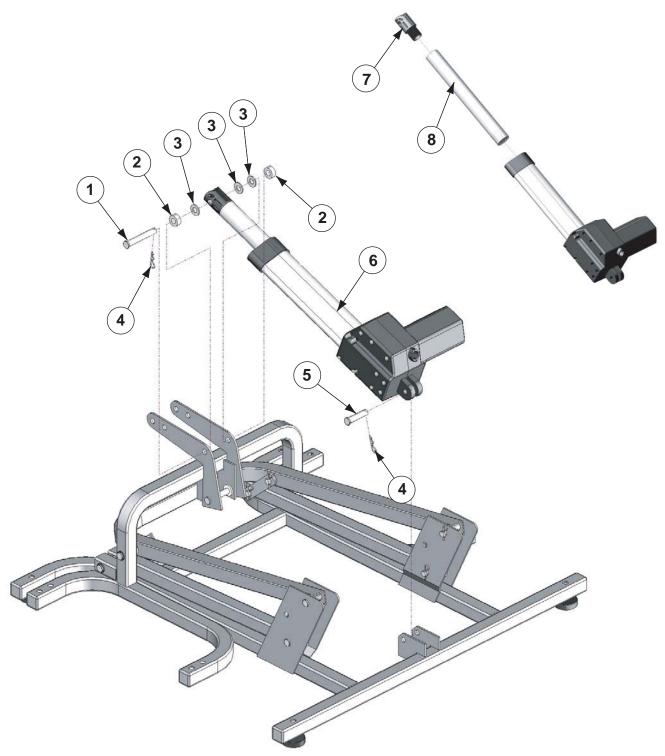
REF#	PART NUMBER	DESCRIPTION
1	BB5602	1/4X20X1.5 Hex Head Flang Bolt
2	BB5576	3/8"X 5/8" Sholuder Bolt
3		
4		
5		
6		
7		Clip Screw
8		Clip
9		Armrest Assembly 120



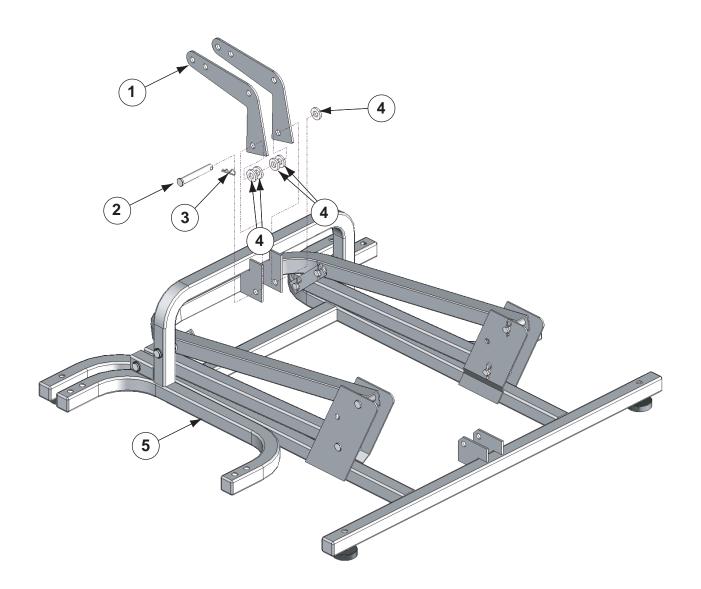
REF#	PART NUMBER	DESCRIPTION
1		
2		
3		
4		
5		
6		Seatback PR120



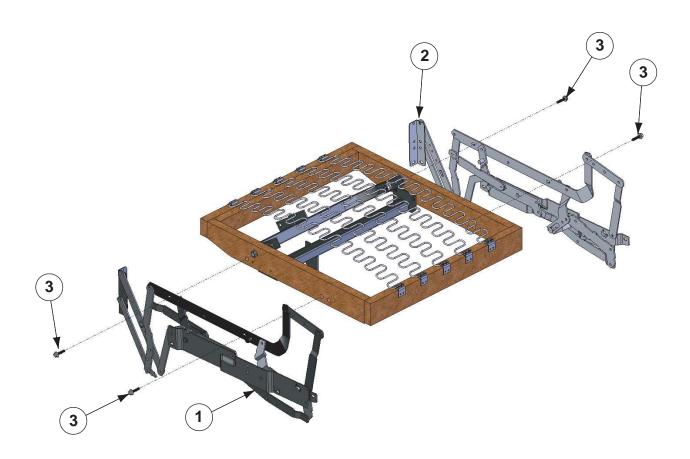
REF#	PART NUMBER	DESCRIPTION
1	BB5512	Clevis Pin 3/8 x 1 5/8 Zinc
2	BB5514	Pin Hitch
3	BB5535	Washer Nylon 750X394X125



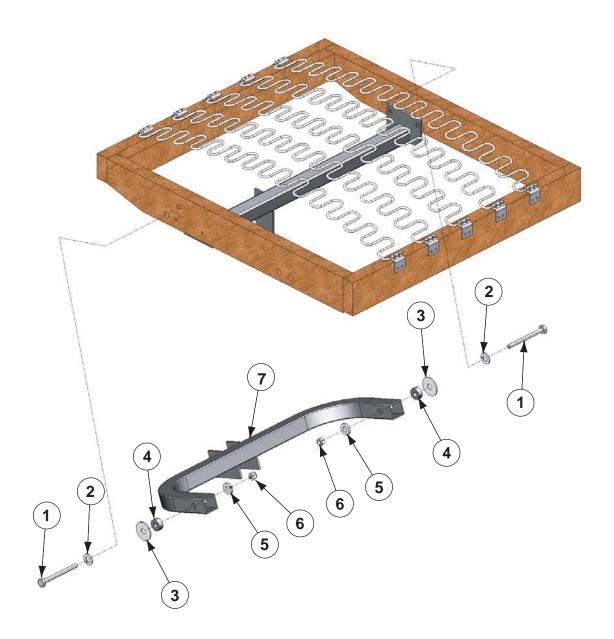
REF#	PART NUMBER	DESCRIPTION
1	BB5549	Washer
2	BB5003	Nylon Washer Spacers 560X379X3
3	BB5514	Pin Hitch
4	BB5513	Clevis Pin 3/8 x 2 Zinc
5	BB5512	Clevis Pin 3/8 x 1 5/8 Zinc
6	GM1500L	Motor Chair Okin-Lift Motor 1.30
7	GMOKI-13	Fork Head
8	GMOKI-12	Motor Shaft



REF#	PART NUMBER	DESCRIPTION
1	RS5100	Motor Straps
2	BB5514	Pin Hitch
3	BB5513	Clevis Pin 3/8 x 2 Zinc
4	BB5535	Washer Nylon 750X394X125
5	LM5120	Lift Frame



REF#	PART NUMBER	DESCRIPTION
1	RM621L	Scissor Mech Left
2	RM621R	Scissor Mech Right
3	BB5602	1/4X20X1.5 Hex Head Flang Bolt
4		



REF#	PART NUMBER	DESCRIPTION
1	*	Bolt
2	*	Washer
3	*	Washer
4	*	Spacer
5	*BB5603	1/4-20 Nylon Lock Nut Flange
6	*	Washer
7	RB5100	Recline Bar
	*Sold with RBHK-5009 Recline Bar Hardware Kit	



