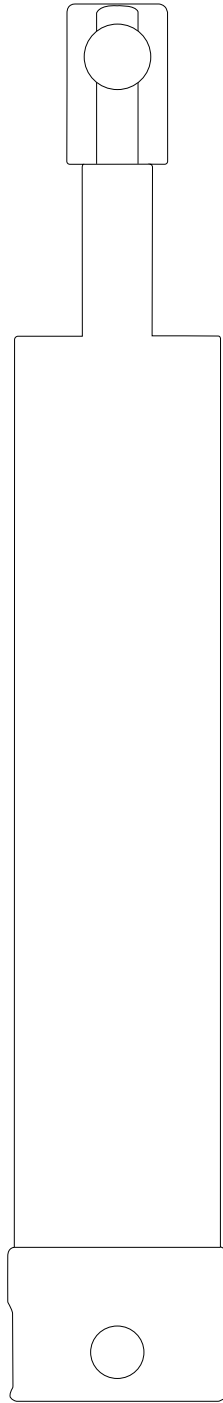


**S5 UPPER CYLINDER REPLACEMENT**

## OVERVIEW



# INTRODUCTION

## BEFORE YOU BEGIN

Study the unit overview in this booklet and layout dimensions from the owner’s manual. Make sure the planned location will have the necessary space available for installation, including room for travel of the chair’s base and backrest.

Open all containers and review the contents. It may be helpful to locate all kits containing accessories. (Smaller parts are often packaged together to avoid being lost.)

Locate all documentation supplied with the package. Manuals and installation sheets may be found in one or more boxes accompanying their respective components. Set aside the owner’s manual for the end user to review.

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## SYMBOLS USED IN THIS MANUAL

The following symbols may be used throughout this product manual:



**WARNING:** Failure to carefully follow the described procedure may result in damage to the equipment or the operator.



**CAUTION:** Failure to carefully follow the described procedure may result in damage to the equipment.



**NOTE:** Take note of additional important information. Not a warning or caution.



**ELECTRICAL HAZARD:** Risk of electrical shock present. Ensure that power is disconnected before attempting procedure.

## REGULATORY INFORMATION

Regulatory information is delivered with DCI Edge dental equipment as mandated by agency requirements and can be found in the accompanying Instructions for Use for this device.

## UPPER CYLINDER REPLACEMENT INSTRUCTIONS

### TOOLS NEEDED FOR INSTALLATION

- Small flat head screwdriver/E-Ring Removal Tool
- Large head screwdriver
- Soft mallet
- 9/16" Combo wrench

### INCLUDED HARDWARE

- 1 x 51047 -- Cylinder, Hydraulic, Upper with 51056 Elbow Fitting installed.
- 1 x 0070-1 Clamp Sleeve (Extra provided)
- 6 x 59227 E-Ring (Extra provided)
- 1 x 12647 Zip Tie (Extra provided)

### PREPARATION

- 1 Remove the chair upholstery (see Figure 1).

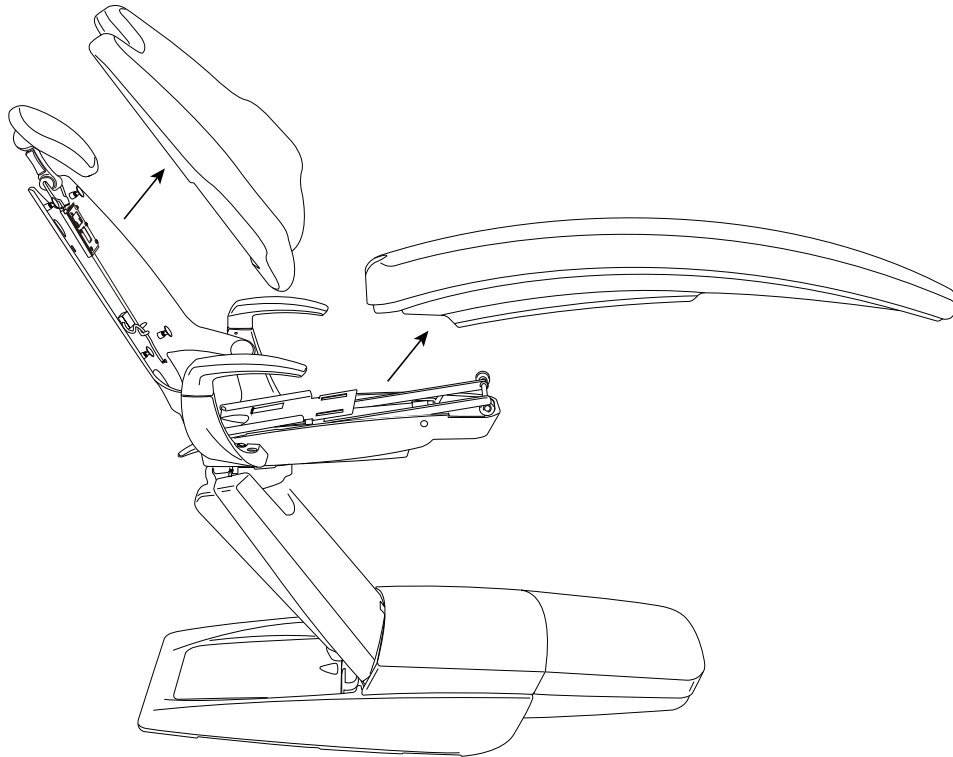


Figure 1. Removing the chair upholstery

# UPPER CYLINDER REPLACEMENT INSTRUCTIONS

- 2 Place the chair into soft limits mode by pressing and holding the “1” and “RETURN” buttons simultaneously, on either a keypad or Foot Switch (see Figure 2), until three beeps are heard.

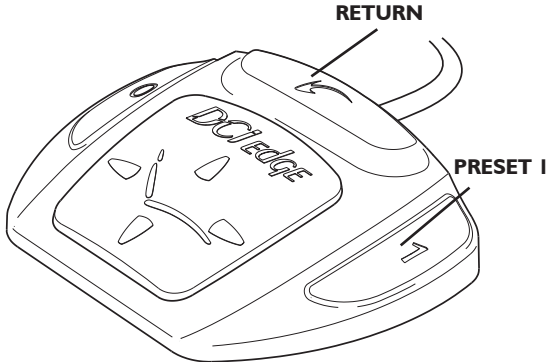


Figure 2. Setting soft limits

- 3 Drop the chair back into the lowest possible position (see Figure 3).

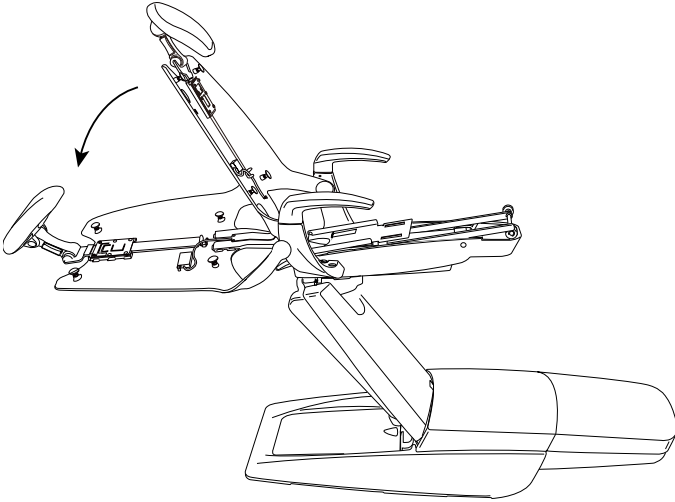


Figure 3. Dropping the chair back into the lowest position

- 4 Move the metal plate (see Figure 4, item 1) and bars (item 2) out of the way as shown.

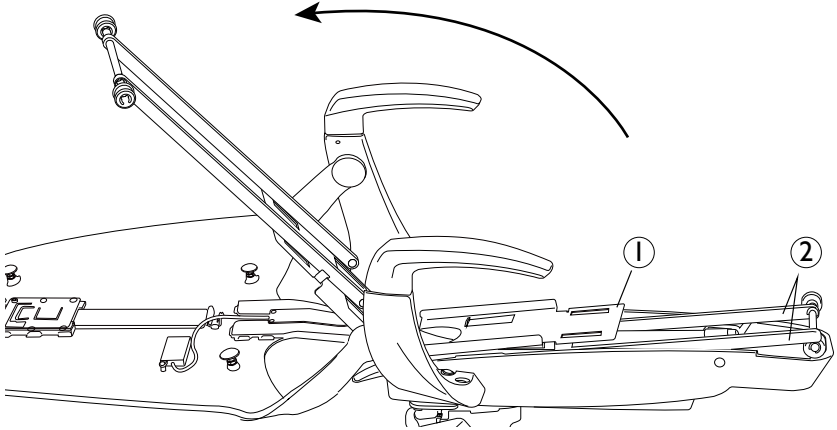


Figure 4. Moving the seat plate and bars

## UPPER CYLINDER REPLACEMENT INSTRUCTIONS

### REMOVING THE OLD UPPER CYLINDER

**1** Remove the backrest sensor strain relief (see Figure 5) and push the harness to the side of the cylinder.

**NOTE:**

- If the strain relief is the plastic wire clamp (Gen. 1 strain relief) or the two zip tie strain relief, upgrade the backrest sensor and harness assembly at the same time as the cylinder replacement (see 51902/51903 replacement kits).
- If the strain relief is a new style wire clamp (Gen. 2, made of black rubber), the harness does not need to be disconnected from the main PCB, although the zip tie holding it to the cylinder will need to be clipped.

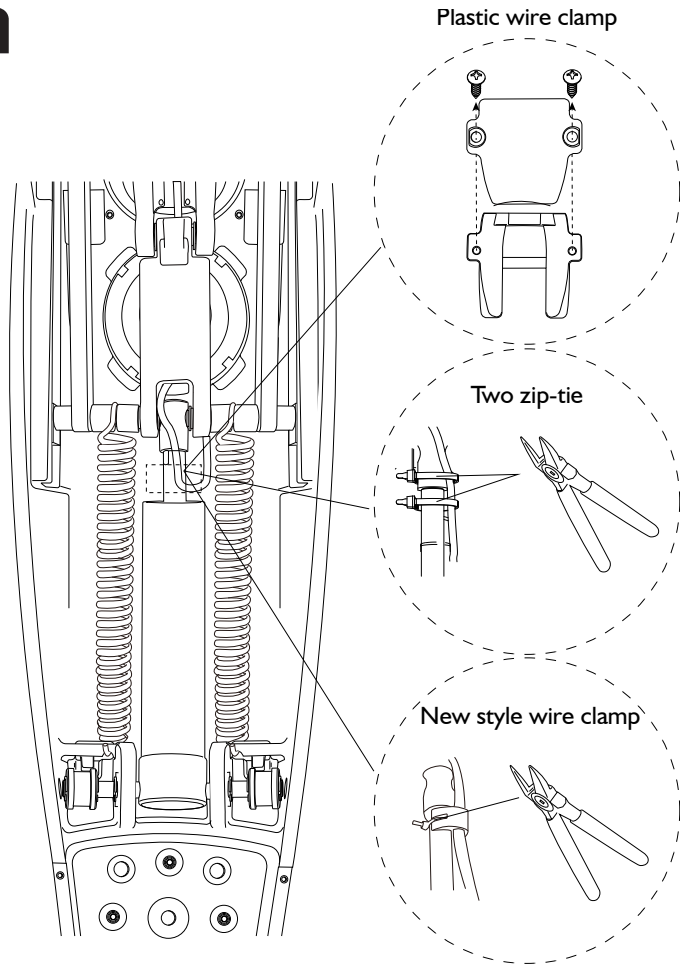


Figure 5. Removing the backrest sensor strain relief

**2** Using a small flathead screwdriver or E-ring removal tool, pry off all six E-rings from the front roller bar (see Figure 6).

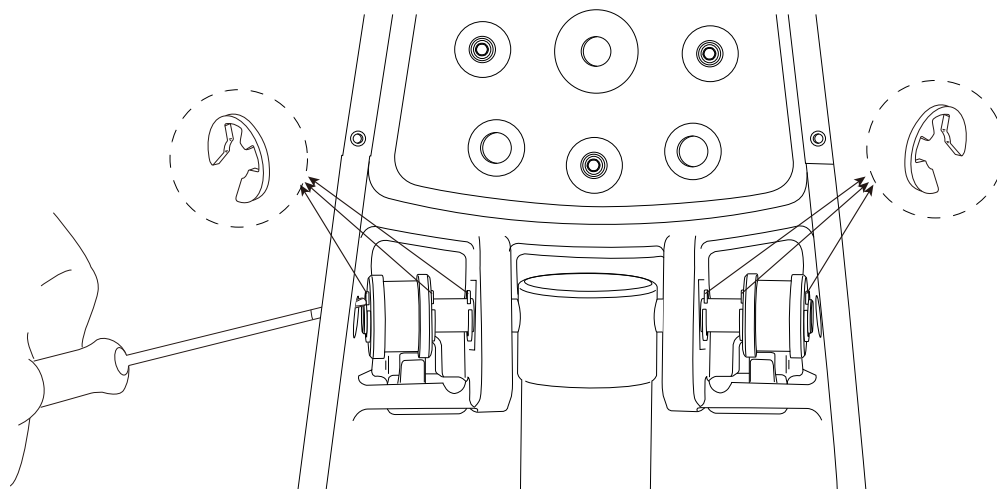


Figure 6. Removing six E-rings

# UPPER CYLINDER REPLACEMENT INSTRUCTIONS

**3** Use a screwdriver or similar tool to drive out the rolling bar (see Figure 7).

**NOTE:** It may be helpful to lightly tap the bar out using the screwdriver with a soft mallet.

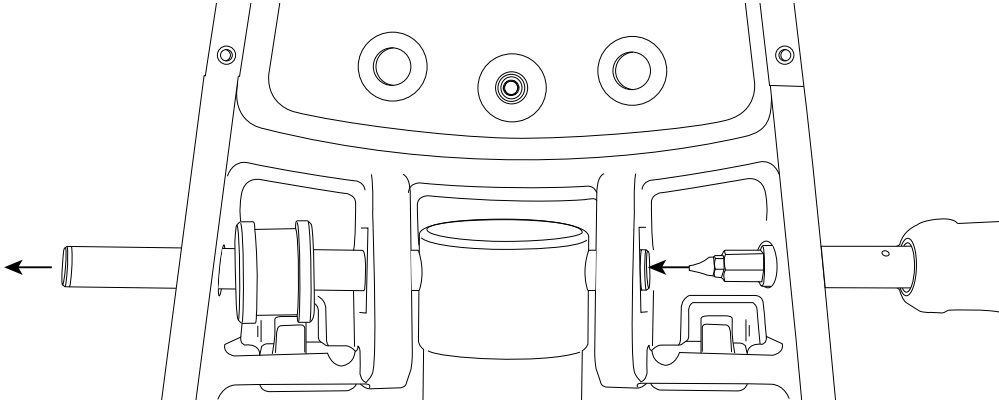


Figure 7. Driving out the rolling bar

**4** Detach the hydraulic line from the upper cylinder (see Figure 8).

**NOTE:**

- Place a towel (item 1) down to catch any hydraulic fluid.
- It may be helpful to use a large screwdriver (item 2) to brace the cylinder.

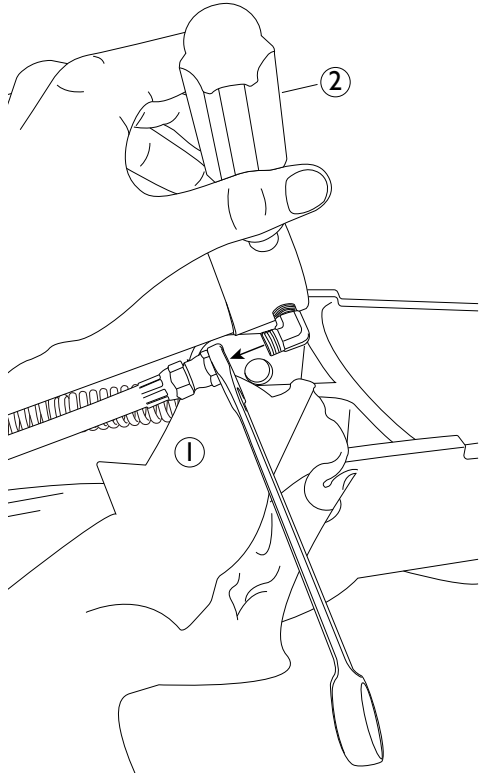


Figure 8. Detaching the hydraulic line from the upper cylinder

## UPPER CYLINDER REPLACEMENT INSTRUCTIONS

- 5** Detach the vent line (see Figure 9).

- 6** Use a 9/16" wrench to disconnect the hydraulic piston (Figure 10, item 1) from the pivot cap (item 2).



**NOTE:** It may be helpful to brace the cylinder using a large screwdriver (item 3).

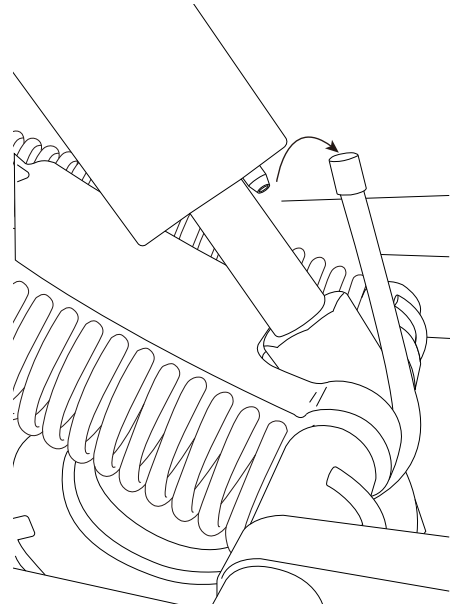


Figure 9. Detaching the vent line

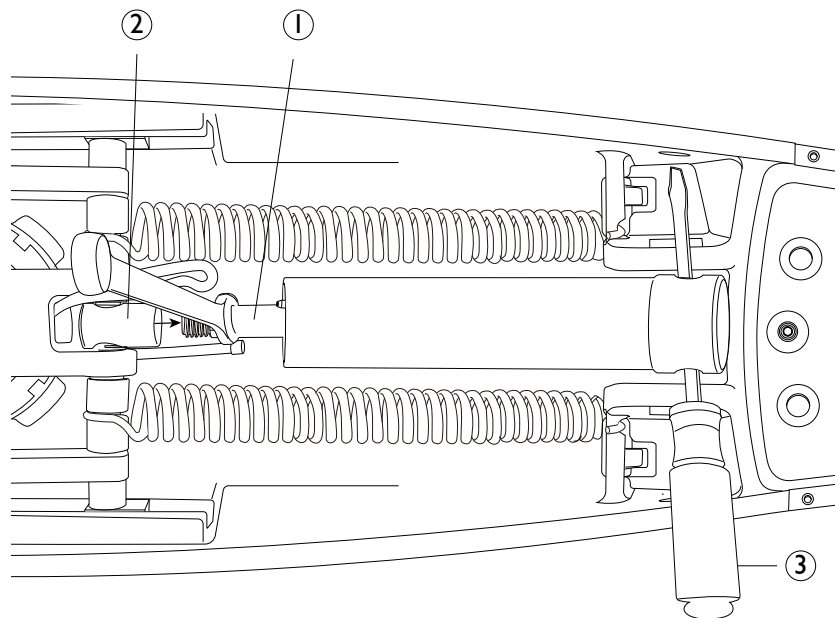


Figure 10. Disconnecting the hydraulic piston from the pivot cap

- 7** Remove the cylinder.



## UPPER CYLINDER REPLACEMENT INSTRUCTIONS

### INSTALLING THE NEW UPPER CYLINDER

**1** Using a large screwdriver and a 9/16" wrench (Figure 11, item 1), detach the pivot cap (item 2) from the replacement upper cylinder.

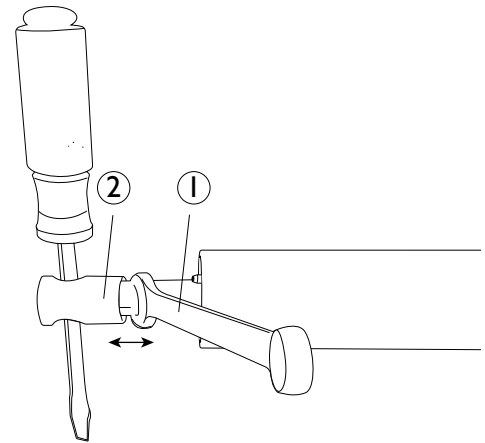


Figure 11. Detaching the pivot cap from the replacement upper cylinder

**2** Thread the replacement cylinder into the pivot cap still in the chair (see Figure 12). Tighten down fully.

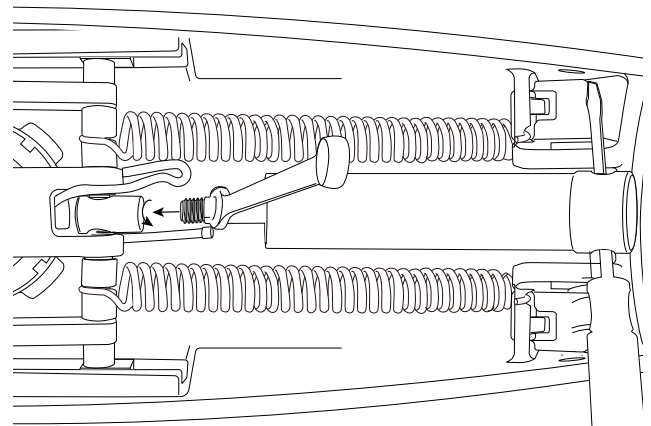


Figure 12. Threading the replacement cylinder

**3** Follow steps 2-5 in the section **Removing the Old Upper Cylinder** in reverse to install the replacement cylinder. When installing the vent sleeve (Step 5), point the semi-transparent side towards the barb.

#### NOTE:



- Ensure that the hydraulic line fitting is fully tightened.
- When replacing the six E-clips removed in step 2, ensure the clips are fully seated and that the rollers spin freely when fully installed.

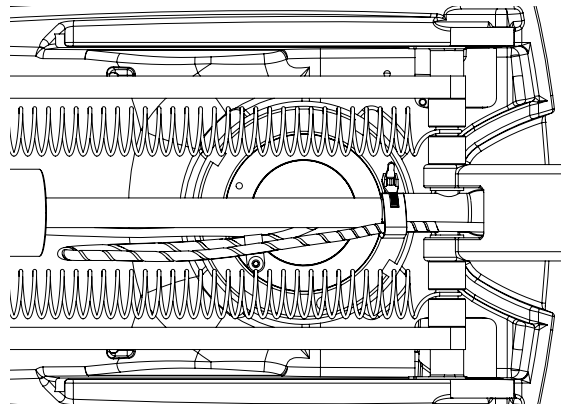
## UPPER CYLINDER REPLACEMENT INSTRUCTIONS

**4** Run the chair back fully up and down three times to ensure the system has purged all air.

**5** Check for leaks and wipe away dirt/hydraulic fluid/grease.

**6** Reinstall the backrest sensor strain relief. For a Gen. 2 strain relief, ensure the zip tie passes under the cable and not above. Ensure that 1 inch of the plastic spiral sheathing on the harness extends past the strain relief. Tuck the spiral wrap under the spring the right side of the cylinder (when facing the front of the chair) to ensure that no pinching occurs during operation (not shown). Run the chair back fully up and down an additional time, checking that the harness is not pulled tight at any point.

**NOTE:** If replacing the strain relief and/or the backrest sensor, it is recommended to replace the harness before threading the replacement cylinder into the old pivot cap.



**NOTE:** If the chair is running low on hydraulic fluid, follow the steps below to add the appropriate amount of fluid without overfilling:

1. Put the chair into Soft Limits mode. Drop the chair base and back fully down.
2. Fill the reservoir to the marked line.
3. Exit Soft Limits mode and raise the chair base and back to the full up position to bleed all air from the system.

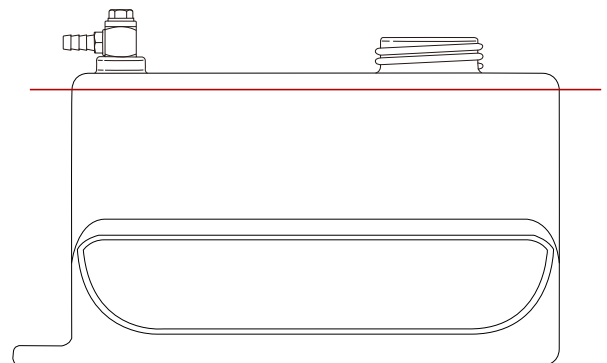


Figure 17. Filling the reservoir to the mark line

