

SCHIEDMAYER CELESTA

Seit 1890

Service Manual

Periodic adjustment will be required to get the most out of your Schiedmayer Celesta. Routine regulation service should be considered annually for general use, and more often for an instrument in a heavily used environment.

The following steps are written so that an experienced piano technician can maintain the playability and sound quality of a Schiedmayer Celesta. If a technician is not able to perform these steps, or experiences difficulty in the process, please call Schiedmayer Celesta USA at 866/849-4387 for further assistance or the contact information of a Certified Technician.

As with any instrument, it is important to involve the keyboardist or player(s) that use the instrument to fully assess the service needs of the celesta.

Preparing To Regulate

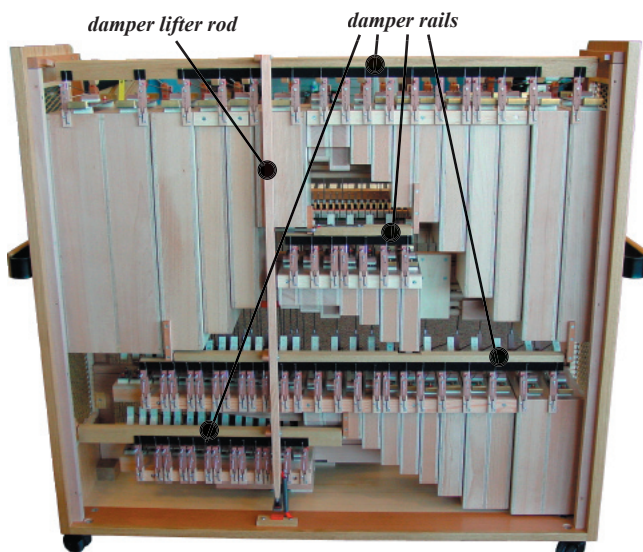


photo 1

Before action regulation begins, begin by removing all exterior case parts. This will include the top, music desk, front panel (above the pedal), and the rear panel. When performing a complete action regulation, it will be necessary to remove the series of damper lifter rails located at the back of the instrument (see photo 1). The horizontal damper lifter rails are attached to the vertical damper lifter rod (this vertical rod is attached to the back of the pedal) and individually pinned to flanges at their opposite end. Simply unscrew the various flanges located at the outer end of each rail and lift out the entire damper lifter assembly in one piece. (It is advisable to have a second person available when re-installing these damper rails).

Before action regulation can begin, a thorough cleaning of the interior is necessary. Begin by cleaning out the insides of the resonators where dust collects. The debris can easily be removed by using a compressor to blow it out. Continue to clean the entire interior by thorough vacuuming aided by the use of small brushes to reach into confined areas.

The next step would be to tighten all the screws that hold the cabinet together as well as those that hold the various rails and resonators in position. Do not however tighten the screws at the base of the hammer return springs and the screws at the base of the damper return springs. These 2 sets of screws are adjustment screws and will be mentioned later. When these two steps are completed, examine the front and balance rail key bushings. Evaluate these bushings in the same manner you would for piano keyboards. At this point, action regulation can begin.

Action Regulation Sequence

1. Level keys, sharps and naturals.
2. Adjust white key dip.
3. Adjust the hammer blow distance.
4. Adjust the black key dip.
5. Adjust the damper timing (damper lift) using key.
6. Adjust the hammer return spring tension.
7. Adjust the damper spring tension.
8. Adjust the damper lift using the pedal.
9. Adjust the damper pedal.



Action Regulation Steps

1. Level the keys, sharps and naturals. Sharps should be 1/2 inch above the naturals. The front rail cloth punchings should be made of very firm felt; soft felt can affect the performance of the action. The white key height should be set high enough allow 3/8 inches key dip (plus) and low enough to not interfere with the key strip (strip of wood at the back of the key tops)

2. Adjust the white key dip. Adjust the white key dip using a standard piano key dip block, setting dip at 3/8 inches (about 10 mm).

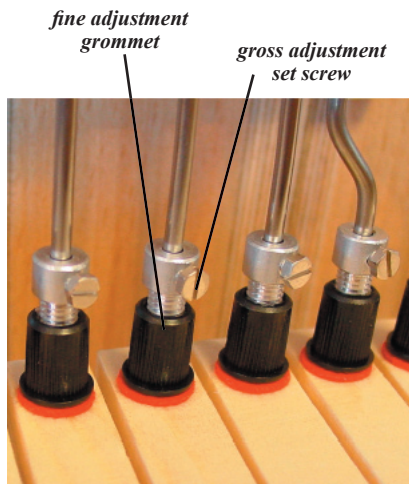


photo 2

3. Adjust the hammer blow distance. This is a very important regulation step, particularly affecting evenness of touch on soft playing. Play each key with uniform light pressure. While holding the key down, (the hammer has struck the tone plate), increase finger pressure applying moderately forceful pressure on the key. The hammer should lightly touch the tone plate, damping the sound. Consistent pressure from key to key produces the best results.

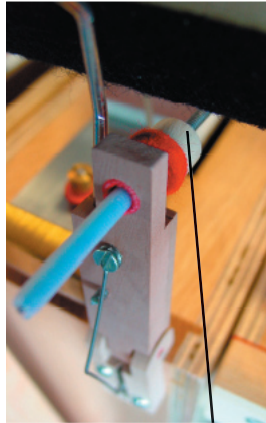
If the blow distance is too short, the hammer will touch the tone plate with little additional pressure. If the blow distance is too long, the hammer will not touch the tone plate at all. (In the lowest octave, it is desirable to adjust the blow distance so the hammer does not touch the tone plate at all when increasing finger pressure, unless extreme force is used). Uniformity of sound on soft and firm playing is the goal of this adjustment.

To perform gross adjustments in the blow distance, loosen the set screw on the grommet and lengthen or shorten the abstract (wire connected to the back of the key) as required. Retighten the set screw. For fine adjustments, it is not necessary to loosen the set screw. Simply turn the grommet or the threaded wire as desired (*see photo 2*). Repeat the finger pressure test, refining the blow distance until the above criteria is met.

Please note: when performing this regulation step, it is important to place the finger on each key at the same location from the front edge of the key. It is recommended that the finger be placed directly over the front rail pin. Changes in finger placement can affect the leverage of the key, leading to unevenness in the touch.

4. Adjust the black key dip. Black key dip is accomplished by adding or subtracting front rail punchings. To check for correct black key dip after adding or removing punchings, step 3 may need to be re-regulated. After step 3 is checked and adjusted as necessary, the hammers for the sharps will be in a straight, horizontal line between the natural hammers.

photo 3



damper adjustment nut



damper spoon

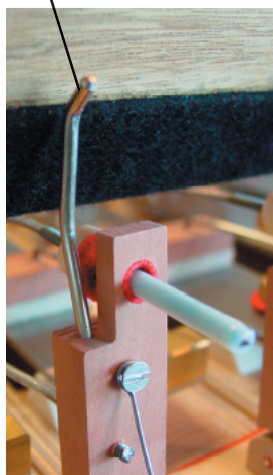


photo 6

5. Adjust the damper timing (using the key). Using normal pressure, depress each key and observe the distance the damper head and felt is lifted above the tone plate. The distance should be equal to the distance the hammer is being held above the tone plate. This adjustment is done from the back of the instrument by turning the wooden adjustment nut on the damper connector wire (see photo 3). If the damper is lifting too high, the timing of the damper lift is too early and will increase the resistance felt in the key. If the damper is not lifting high enough, the timing of the damper is too late and may not provide sufficient clearance above the tone plate on soft playing.

6. Adjust the hammer return spring tension. Spring tension is increased by turning the return spring mounting screw clockwise and decreased by turning the screw counter clockwise (see photo 4). Upon slow release of the key, the hammer should return fully to the rest position. If the spring is set too tightly, unnecessary resistance will be felt in the key. It is helpful to locate a few keys with the correct spring tension, preferably in the middle of the keyboard, and use them as samples. After completing this regulation step, repeat step number 3.

7. Adjust the damper spring tension. To increase spring tension, turn the damper mounting screw clockwise; to decrease the spring tension, turn the mounting screw counter clockwise (see photo 5). To determine the correct spring tension, using the tip of one finger, pull gently on the tip of the damper spoons (see photo 6). This spring tension should be as uniform as possible from damper to damper and strong enough to effect complete damping but no more than necessary. Excessively tight springs will increase the resistance felt in the key.

8. Adjust the damper lift with the pedal. Slowly depress the damper pedal and observe the dampers lifting off the tone plates. All dampers should lift approximately at the same moment. If a damper is lifting too early, bend the damper spoon away from the lifter rail slightly, using a spoon bending tool. If a damper is lifting too late, bend the spoon slightly in the opposite direction.

9. Adjust damper pedal. Be sure that the front panel (above the pedal) is in place when determining if the pedal requires adjustment. Turn the adjusting screw located on the bottom of the damper lifter rod as needed to achieve 1/8 to 1/4-inch free play in the pedal (see photo 7). Be certain that all the dampers dampen completely upon full release of the pedal.

photo 4



return spring adjustment



GENERAL SERVICE

Cleaning

Routine maintenance should also include annual cleaning of the interior. Use a soft bristled brush to clean all horizontal surfaces. Use an air compressor or reverse shop vacuum to blow out the interior of the resonators.

Screws

When performing routine maintenance, tighten all case screws and all action screws. Do not tighten hammer and damper screws.

Points of Contact

The lateral placement points of contact between the tone plates and rest felts should not be changed. The felts are contacting the plates at specific nodes for that particular pitch. If the resting felts are flattened, or become hard with age, replacement is recommended

Hammer and Damper Flanges

Hammer and damper flanges should be pinned loose enough that the flange will fall under its own weight.

Center Pin

Factory installed center pin size is 22-1/2. The center pinning of the abstracts is done in reverse of the flanges. That is, the center pin is held firmly in the flange and loose in the birdseye.

Voicing

When evaluating the voicing of the instrument, it is best done listening from the back as well as the front of the instrument, remembering that the back always faces the audience. The placement of the tone plates within the cabinet can sometimes give a false voicing perspective to the player. It is important to listen to the voicing tone of the instrument from at least 20 feet away from the back so to avoid this placement phenomenon. Standard voicing techniques apply, with hammer replacement sets available upon request for some models.

Action

The action of the celesta is appropriate to perform the music written for the instrument, while producing the correct response from the tone plates. While similar to a piano action, it is not the same, and requires only a small adjustment by the pianist to play successfully. Newer instruments offer much more adjustment than older ones, but all will have an appropriate touch.

Damper Post

To perform complete service on the celesta, it is necessary to remove the vertical damper lifter post and the attached horizontal lifter rails. To remove the horizontal lifter rails, it is necessary to remove only one mounting flange on each rail. The entire damper assembly can then be removed as one unit. It is recommended to have two people to re-install the damper rails.

Free Play Adjustment Screw

Newer Celesta models (after 1996) have an adjustment screw located at the bottom of the damper lifter port. This screw is used to adjust the free play on the damper pedal. If no adjusting screw can be found, use the appropriate thickness of cloth to adjust the free play in the pedal. To observe the free play in the pedal, the front panel above the pedal has to be in place.

Damper Abstract Silicone Sleeve

Newer models of celestas have a silicone sleeve around the damper abstract wire to prevent the wire from wearing through the cloth. If the cloth is worn through, rebush the hole, allowing for easy movement of the wire. This should not be a snug fit.