

CLEANING AND REGULATING PIANO

It is a well-known fact that any pneumatic player must be pumped out occasionally to get the best results. This player is provided with an automatic clean-out pump, which is located in the lower part of the instrument and attaches to main pump. This eliminates having to pump by hand as in other instruments. The process of cleaning out instrument is as follows:—

First: Push leather friction wheel off small end of cone so that pump can run without driving music sheet.

Second: Attach arm from clean-cut bellows to pump with small pin provided for same.

Third: Remove all rubber buttons from dust rail and insert tube in each hole until all dust is thoroughly removed, and remove the four brass dust arrestors connecting tubes leading to expression box on top of pump (one at a time so as not to cross tubes) and use suction tube on them as well as the tubes they connect. Do the same to the dust arrestors in tubes leading to shifter, which operates pipes and mandolin.

Fourth: If motor flashes and jerks and does not run steady when cleaning out, it is because trip slot is over tracker bar. Turn leather friction wheel until this passes off bar.

All pneumatics in this instrument are equipped with a screw vent or bleed hole so if keys or notes do not work properly, they can be easily adjusted without removing the chest or any other part of action. Should any of the keys act sluggish or not speak at all after a thorough pumping out, remove the music roll and put on the test roll. This strikes every key in repetition so that you may adjust these regulating screws in each pneumatic as they play until they all speak alike. It is best to run test roll around once or twice to be sure it is tracking correctly before adjusting screws. If key does not strike at all or is weak, turn screw in to the right; if it stays down and does not repeat, turn to left. This is a close adjustment and a quarter of a turn either way is usually ample. By keeping the pneumatics clean and using the test roll and regulating when it is needed, your instrument will play properly and always be in condition.

TO TAKE OUT MUSIC ROLL

Remove drag casting which lies on top of paper, lift out the metal guide plate. The top wood roller and metal gravity roller lift out. Lower wood roller is taken out by loosening thumb screw and removing through large hole in front plate. Thread paper on rewind and place same in slots provided, and wind up paper. Turn rewind to left.

TO PUT IN MUSIC ROLL

Hang roll on rod with numbers printed on the roll to back of piano, place rod through hole in bracket in bass end of top case, and into hole in back. Thread paper over tracker bar, then place lower wood roller, upper wood roller, metal

gravity roller, metal guide plate, and drag casting in order named. Be sure that the music is straight on roller which iron roller rests upon before starting, let music play until it has run off rod and remove rod before closing case.

TRACKING OF MUSIC

The aluminum plate which rests upon top of head and serves to guide the music is called the guide plate. The paper should have about 1/64" clearance when passing between the brass guides. These brass guides are adjustable and should be aligned to edge of paper by turning out the screws that hold same in position; then move brass guides very close to edge of paper and tighten screws.

If paper is running straight between guides but music discords, the tracker bar needs regulating. This is accomplished by turning the nickel-plated thumb screw which connects with tracker bar and is located directly back of half-moon in music head. Turn this to the right or left whichever the case may be until music sounds right and expression works properly and instrument stops at end of selection. There is a small indicator which is screwed to tracker bar and is directly back of top wood roll. When music is tracking correctly, this indicator will be directly in line with loud pedal slots in music (usually long slots and appear very frequently and 3/4" from back edge of paper).

You will find in lower left hand corner of piano the loud pedal bellows. This loud pedal bellows should continually keep moving up and down when music is properly tracking. The piano may sound all right and still the music may be a half note off. If this be the case, the loud and soft pedal will not work properly and the piano is liable to cut off in the middle of piece or not stop at end.

When putting in a new roll, always lift up heavy iron roll two or three times when starting the roll. This lets the paper adjust itself without wrinkling.

TO TUNE PIANO

Remove music roll, and then take out screws which hold strip to which lights and wires are fastened.

No electric wires need be disconnected.

When screws are out, this light stick with wires attached can hang in front of pipes and is not in the way when tuning piano. After light stick has been detached from carrier, remove carrier by taking out two wood screws which goes through carrier into block in bass end of case and one machine screw which goes through carrier board into cross-bar of head.

TO TUNE PIPES

Push friction wheel to small end of cone so pump can run without driving music.

Do this in between pieces so there are no perforations over tracker bar.

Then push over middle slide valve on shifter. This puts the air on the pipes. You can then strike the key and the pipe will sound with it.

Tune pipes in unison with piano by rolling the metal tuner on top of pipe front or back. By rolling it back or uncovering more of the hole raises the tone or makes it sharper, and by rolling it front or covering hole you lower the tone or flatten it.

EXPRESSION BOX ON TOP OF PUMP

Facing the piano the first regulating screw at left (No. 1) regulates loud or damper pedal, second screw (No. 2) soft pedal, third screw (No. 3) soft pedal release, fourth screw (No. 4) cut-off or slot.

You will notice four small tubes leading to the expression box. Each of these tubes is connected with a small brass dust arrestor about a foot from the expression box. Remove these dust arrestors from the tubing (one at a time so as not to cross tubes); blow out all the dust in these dust arrestors; suck out rubber tube that leads to expression box to remove any dust that may be caught there; blow through tubes leading to tracker bar. If after doing all this, the pedals do not work, close vent by turning screw to right. If pedal stays on all the time, open vent by turning to left.

Do not change regulating screws until you are positive that tubes are not split, kinked or have any leak in them and that all dirt and dust have been thoroughly removed from all tubes and dust arrestors as dirt in the tubes has same effect as screws being in too far.

If piano continues to run and not shut off at end of each selection, regulating screw No. 4 should be turned in (or to right) about a quarter of turn at a time until it cuts off properly. If piano stops in middle of piece or if motor starts and stops and lights flash on and off, either the music is not tight over tracker bar or regulating screw No. 4 should be turned out (to left) a trifle.

If there is trouble with the starting or stopping of instrument, we would suggest that before turning the regulating screws, you remove the cover of the iron switch box which rests on the motor board in the lower left hand corner of instrument. This iron box encloses knife switch, magnet and bellows for operating same. It is possible that the knife switch does not catch and lock when the bellows pulls it out of contact at end of selection. You can readily determine this by watching same operate when the end of selection arrives at tracker bar. The knife should lock out of contact when bellows pulls it out at end of piece and remain so until a coin rests on binding posts at bottom of magazine slot which closes magnet circuit, and magnet will again trip knife into contact. If knife does not catch behind loop, bend loop downward a trifle until it does.

If magnet hums when nickel is dropped and piano does not play, it is quite probable that hook is bent too low or magnet arm not close enough to hook to trip same. These may be bent either way until knife just catches behind hook and magnet arm raises hook high enough to let knife go in contact.

SHIFTER BOX

This controls the flute and mandolin attachments. There are two regulating screws on front and two on back of shifter, the one at left as you are facing instrument is No. 1 and governs mandolin, the one to right is No. 2 and governs solo pipes, the screw directly back of No. 1 is No. 3 and this controls release of pipes and mandolin, the screw directly back of No. 2 is No. 4 and this controls the pipes.

Each tube leading to this box is connected with a small brass dust arrestor. Remove these dust arrestors from the tubing (one at a time so as not to cross tubes), blow out all the dust in these dust arrestors, suck out the rubber tubing leading to the shifter box so as to remove any dust that may possibly be caught there and blow through the tubes leading to the tracker bar. After cleaning these dust arrestors and tubes, if bellows stay collapsed, it is on account of the screw being in too far. Turn the screw to the left until the bellows work properly. If they do not work at all, it is on account of the screw being out too far so turn the screw to the right until the bellows work properly.

FRICTION WHEEL OR TEMPO REGULATOR

This is located in lower right hand corner of piano and desired tempo of music is obtained by sliding leather wheel to speed desired and tighten thumb screw so it will remain in that position, otherwise it would be apt to slide to small end of cone which would stop music sheet from running. There is clearance between cone and leather wheel when leather wheel is pushed to the extreme back (or small end of cone). This is so arranged for letting pump run without driving music sheet in cleaning out instrument, tuning pipes, etc.

DO NOT LET ANY GREASE OR OIL GET ON SURFACE OF CONE OR LEATHER WHEEL

Oil bearings only. The bearings in the friction wheel require more oil than other parts of instrument as they are under spring tension at all times.

If friction wheel slips and does not drive music sheet:

First: See that leather wheel is slid far enough up the cone to engage with it.

Second: Is there any grease or foreign substance on surface of cone or wheel? If so, clean with gasoline and sprinkle a little powdered resin on cone.

Third: Hold knife on leather wheel while it is running and scrape off polished surface.

Fourth: See that coil springs are stiff enough to hold cone and wheel together.

BELT

If belt slips, tighten tension spring on idler pulley. If this does not remedy trouble, sprinkle a little powdered resin on belt.