August Forster Pianos

Classical Grands, Seattle
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PTG

Bert and Frank made a special visit for this presentation. The company was founded 150 years ago in Germany, and is now in its fifth generation. These pianos are shown at NAMM and the show in Frankfurt, Germany. All these pianos are totally hand-made in Germany, while most pianos are 50% German, with the rest of the parts from China and other countries. The yearly global production is about 100-150 pianos.

Frank's father worked with August Forster, and went to the training in Eastern Germany. It was 40 years when Germany was divided. Frank went to school and had no chance to study at the university politically. He learned to tune and work on Forster pianos more than thirty years ago, when he was 16. His first job was to build an entire piano. Frank is now in charge of regulation, tuning and all details for the pianos as they come out of the factory. Forty people work in production at August Forster. Even the current president worked on the pianos. The family is 100% behind it. August was first, then Caesar, third was Gerhard, Wolfgang just retired at 75, and now the daughter is president.

Only small changes have been made over the years, such as the curve on the side. The scale is still the same. The wire is bought in Germany and the Forster people wind their own. The action is Renner. Renner took over the Fleming action factory. When the pianos are completely finished, regulated and tuned, they sit in the factory for another ten days and are tuned again before being sent out. Once the pianos are delivered, they are very easy and quick to tune.

Many technicians often do not spend enough time on voicing. Start with three needles. Frank made a special jig support for supporting the hammers before needling. Needling can take from five to twelve hours when done carefully and correctly. Renner hammers from the factory can be ordered harder or softer. August Forster gives the specific action specifications to Renner; then Renner assembles the action. Forster then fits the action to the keys. Laukopf in Germany makes the keys in Stutgart. Although ivories can be ordered, the keys are now plastic.

There are three sizes of grands: models 170, 190, 250. In uprights there is a 48" model #125 and the 46" Model #116 that nobody wants. It takes two years from the start of bare wood to the finished product. The cabinet must be dried and takes a year. The wooden parts are still kept in storage for another six months. The parts must be naturally dried. The difference in humidity between summer and winter in Germany is not as extreme as it is here in the US, from Florida to Arizona. In Germany the average temperature is between 40 and 60 C. The finishes come in polyester, satin, and wrapped. The base coat is polyester, with a lacquer on top. There are up to four layers on the flat parts, and about six layers of polyester on the legs; they have to dry between each coating.

Each string is individually tied. The same people have been doing these same jobs for years.

When voicing, listen to the intonation with the same two fingers and the same force, so the weight is the same on all keys when pushed down. Start in the bass and with the white keys. Then go to the black keys. Adjust the black keys later.

Check the phasing: make sure all three strings are struck at the same time. You can also listen to the voicing by listing to one string at a time. Listen just the left string of each note and you can hear the difference. Make the intonation using the pedal both down and up. Place softly and loudly. Press the shift pedal and make sure the hammers are striking the strings evenly. There are two philosophies for adjusting the shift pedal, depending on the instrument. Some instruments sound better keeping all three strings vibrating, whereas others sound better with only two strings vibrating when the shift pedal is pressed. (The bigger the number is, the smaller the needle.)

There is a blind tuner who tunes all the instruments from the beginning to the end. This man is very important to the factory.

For tight pins, use alcohol and water. Follow up with ProTech. If the center pin is really tight, it must be repined.

When spacing hammers and regulating, sometimes it helps to removed the regulating button rail.

Regulation of
AUGUST FORSTER
Grand Pianos with Renner Actions

1. Clean the key frame and action. Tighten all screws.

2. Check the rotation of the action pins, especially the hammer and center pins.

3. Check the striking of the hammers. The striking of the hammers can be changed by changing the guide for the shifter in the treble key block.

4. Align the hammers to the strings.

5. Align hammer felt to strings. The hammer must strike the center of the corresponding string or unison equally and at the same time. Adjust the intonation.

6. Adjust the repetition spring. First put talc on the rolls. Make the adjustment with a spring regulating hook or if available, an adjusting screw. The hammer should life slowly – the bass will be somewhat slower than the treble.

7. Align the jacks under the rollers. The rear edge of the roller and jack should be aligned precisely on center. Make the adjustment by using the jack regulating screw.

8. Adjust the jacks. Align the top surface of the jack to be 0.1 mm below the repetition lever by turning the rail screw.

9. Adjust the key frame and regulating screw: The key frame should rfest evenly on the slide rail and regulating screws. Test by knocking.

10. Check the thin space and align the keys. Prepare the keys (balance rail and pressure pins). Align the keys with a good straightedge to approximately 67-68 mm between the upper edge of the key bed and the keyboard. Ivory keys should be approximately 2 mm lower. Black keys should be 11.5-12 mm higher than the white keys.

11. Align the levers. The levers should be aligned evenly to the capstan screw and hammer shank roller.

12. Set the key-dip for the naturals. The difference between a touched and resting key should be 10.3 mm at the front edge.

13. Set the hammer set-off: adjust hammer se-off for grand pianos.

14. Set hammer-blow distance to approximately 45 mm. The hammer blow distance influences the after-touch. Adjustment possibility – if pressure cardbaoard that is 0.75 mm thick is added, the after-touch should be eliminated. The hammer-blow distance can be favorably adjusted to the after-touch by 1-2 mm.

15. Set key-dip of the sharps. The after-touch of the black keys should be adjusted to the after-touch of the white keys.

16. Drop. The drop is adjusted by turning the drop screws that the hammers fall back 2 mm from the dropping point.

17. Set hammer-checks. The check should be adjusted so that the hammers firmly and uniformly check 16 mm below the strings. Their position should be parallel to the hammer heads in both directions.

18. Fine adjustment of the repetition springs.

19. Regulate dampers. Check the working of the dampers on each single tone for absence of noises, for valves and good placement of all wedges. Insure uniform lifting of the dampers.

20. Adjust damper lever. The space between a resting damper rod and the damper lever should be 1 mm. Make the adjustment by turning the brass head of the right brass lever. First loosen the counter-nut and tight it after adjustment.

21. Adjust the spoons. The hammer should begin to lift approximately 18-20 mm before the string. Make the adjustment by cram the damper spoon.

22. Adjust the damper guide rail. Check different areas to insure that the lifted camper with depressed keys has a motion of 2 mm.

23. Adjust the 3rd pedal. Check the jack line. Height of the rail (edge of the brass rail moves over the jack by a minimal distance). When a pedal is depressed, no dampers should "break through." (Adjustments can be made with felt on the underside of the key bed.)

24. Lubricate the frame, key-bed, and springs.

25. Adjust the action shift. By depressing the left pedal, shift the action so far to the right that the hammer does not touch the left string when the key id depressed. Make the adjustment by turning the regulating screw to the right side of the key-frame. The left pedal should not have any play; adjust the rod to avoid rattling.

26. Screw on the hammer and the key rest rail. The space between the hammer rail and the hammer shanks should be 2 mm. The space between the key rest rail and key should be 1 mm.

27. Check the bearings and glide areas (lyre and keyboard). Lubricate the adjustment sheets in the trimming, as well as the screw behind the keyboard frame and lyre.

28. Tune the instrument.

29. Check and adjust the voicing.