FORTÉ OSCILLATOR FREQUENCY TESTS - with and without electrode

Before removing the electrode from the press and cleaning it, please check the following areas:

- 1. The press platen/ram should be at rest at its highest position.
- 2. There should be no movement in or around the press.
- 3. The FORTÉ oscillator enclosure should be tightly secured to the press.
- 4. The board inside the oscillator enclosure should be secured to the standoffs.
- 5. Disconnect the coaxial cable from the oscillator OJ1 BNC connector and from the right-angle BNC connector on the electrode.
- Use an ohmmeter and measure the resistance from the press platen/ram/oscillator enclosure to the base of the press or to one of the earth-grounded legs of the press superstructure.
- Measure resistance from the FORTÉ oscillator enclosure to bare metal on the FORTÉ photocontrol unit.
- Open the oscillator enclosure and measure resistance from the center conductor of the BNC connector OJ1 to the solder terminal J6 on the internal board where OJ1 is connected.
- In all cases resistance should measure approximately 0.00 ohms.
- 6. Make sure that the two leads from the BLEEDER RESISTOR are tightly secured to the steel coverplate and to the press platen. You should not be able to move the leads under the screws. There should be no dirt or paint under the leads for the bleeder resistor. Use an ohmmeter and measure across the two leads from the ~470K ohm bleeder resistor from the bale press platen/ram to the steel coverplate. You should measure approximately 470K ohms.
- 7. Measure the resistance between the center-conductors in the two right angle BNC connectors on the electrode. You should measure a direct short = 0.00 ohms.
- 8. Move one of the ohmmeter leads to an electrode mounting bolt. Leave the second ohmmeter lead on the steel coverplate. Remove one of the bleeder resistor leads from either the coverplate or the platen/ram. The ohmmeter should now read an open line "OL", no connection.
- Lower the press platen onto a bale and compress the bale fully. Stop the press with
 the electrode and coverplate on top of the compressed bale. Measure the resistance
 from a mounting bolt to the coverplate. You should still measure an open line, "OL".
- 10. <u>IF YOU ARE NOT MEASURING</u> an "OL" open line with the ohmmeter, it means that one of the mounting bolt assemblies is not isolated from the coverplate due to a defective insulating bushing. Remove and then replace the mounting bolts and

bushings one at a time and measure the resistance until you are again measuring an open line. When the "OL" condition re-appears it means you have located the defective bushing. Replace the bushing and hardware if required.

- 11. With the electrode assembly still on the compressed bale, again measure the resistance between the center-conductors in the two right angle BNC connectors on the electrode. You still should measure a direct short = 0.00 ohms. If you do not measure a direct short, or if you measure an open line "OL", it means there is a defective internal connection within the electrode to one or both of the BNC coaxial connectors.
- 12. Lift the press and electrode assembly off of the compressed bale and move the bale out of the press. The press platen/ram should be at rest at its highest position. There should be no movement in or around the press. Do <u>not</u> re-connect the coaxial cable to the BNC connectors on the electrode or oscillator enclosure.
- 13. Go to the FORTÉ DIAGNOSTICS MENU on the DOS 8790 program or the DEVICES menu on the Windows 8760 program
- 14. Select the OSCILLATOR to be tested and use the TEST command by pressing the <ENTER> key on the DOS System keyboard or the TEST button on the Windows DEVICE menu screen. Perform a TEST every thirty (30) seconds for three minutes.
- 15. RECORD THE FREQUENCY AND DIFFERENCE RESULTS THAT ARE DISPLAYED ON THE BOTTOM PART OF THE SCREEN FOR ALL SIX TESTS.
- 16. Connect the coaxial cable to the BNC coaxial connectors on the electrode and oscillator enclosure.
- 17. Repeat the oscillator TEST commands as described in Steps 12 through 15.
- 18. RECORD THE FREQUENCY AND DIFFERENCE RESULTS THAT ARE DISPLAYED ON THE BOTTOM PART OF THE SCREEN.
- 19. Allow a bale to enter the press and compress the bale.
- 20. Stop the press when the bale is fully compressed. There should be no movement in or around the press.
- 21. Repeat the oscillator TEST commands as described in Steps 12 through 15.
- 22. RECORD THE FREQUENCY AND DIFFERENCE RESULTS THAT ARE DISPLAYED ON THE BOTTOM PART OF THE SCREEN.
- 23. E-mail the results of the tests to FORTÉ for analysis.

