

The words "test box" in the following procedure are in reference to the CET-12/06 Test Box. Refer to the diagram on the last page of this bulletin for connection information.

**WARNING: Parameter modifications are ONLY to be carried out by those individuals specifically trained on the function and operation of the CEB. Unjustified or random parameter modifications could result in injury or equipment damage.**

1. Attach the "test box 25-pin connector" to the CEB-14/15. (Do NOT connect the machine wire-harness 25-pin connector to the test box cable)
2. Attach one end of the RS232 serial cable to your PC and the other end to the test box.
3. With the power to the test box **OFF**, flip the switch on the test box to "normal".
4. Turn your PC ON.
5. Use a small jumper wire on the test box to make the same diesel selection that is on the machine's wire harness.
6. Close all programs operating on the PC. Execute the Panel program by typing "p" at an MS-DOS prompt.

**IMPORTANT:** Each Panel program is uniquely addressed to the specific EPROM program within the CEB. You should not run Panel unless it has been specifically written for the EPROM program in the CEB you are connected to.

7. To change the CEB parameters, you must hold down the "learn-in" button for 2 seconds when applying power to the CEB.

To apply power to the CEB, use either the special power cable with the cigarette-lighter adapter or a power cable connected directly to the positive and negative leads of the battery.

- Hold the "learn-in" button down
- Connect the positive battery lead to pin 1 on the test box.
- Connect the negative battery lead to pin 13 on the test box.
- After two seconds, release the "learn-in" button

8. To change a parameter, select a data-field (Wert) with the cursor UP or DOWN button. Enter the new value then hit the RETURN button to send the new value to the CEB.
9. Press the F4 button and then the space bar. The display should show the new value.
10. Follow steps #7 and #8 until all parameter changes are finished. For specific information on allowable ranges for each parameter, consult Engineering or Service. For suggestions on optimizing parameters and machine performance, consult Engineering or Service.

**WARNING:** If power is removed from the CEB prior to the following step, then all changes made to the parameters up to this point will be lost. The CEB will automatically resort back to the original EPROM program.

11. To secure all parameter changes, the "checksum" function must be completed:
  - a. In Panel, scroll to the page with the label "Set\_Par\_Checksum" by hitting either the "<" or ">" buttons.
  - b. In the data-field (Wert) for "Set\_Par\_Checksum", change the value to "1".
  - c. The value "1" will disappear immediately, but the label for "e\_Par\_Checksum" will be changed on the display.
12. All parameter modification made previously will now be stored in the EPROM of the CEB. At this point, removing power to the CEB will NOT have any impact on the new parameters.

The following are some important Notes to consider when making parameter modifications:

- A. Each "Panel" folder is unique to a specific customer's CEB program. For example, the "Panel" program in folder "B1403" is unique to Customer TH's CEB program.
- B. All parameters illustrated in Panel with the designation "e\_XXX" are secured in the EPROM. For example, "e\_RATED\_SPEED" is the parameter that tells the CEB to become active when the diesel speed drops below this value. These parameters can only be changed by following this procedure and by using the CET-12/06 test box.
- C. "Reglerparameter Baggern" and "Reglerparameter Fahren" are also parameters which are secured in the EPROM. "Reglerparameter Baggern" are the parameters used for "working" mode with an open pressure switch for the propel function. "Reglerparameter Fahren" are the parameters used while propelling. For those customers NOT using a pressure switch in their propel circuit, the "Fahren" parameters automatically become the "Baggern" parameters. Therefore, without a pressure switch in the propel circuit, it is NOT necessary to modify the "Reglerparameter Fahren" parameters.
- D. "Reglerparameter AKTIV" are parameters in the active memory. These parameters can be changed by following this procedure. However, there is no way to secure these parameters. Hence, by removing power to the CEB, all "AKTIV" parameter changes are lost. DO NOT modify any "AKTIV" parameters on those machines that have a pressure switch in the propel circuit. Whenever the pressure switch opens or closes, all parameter modifications are lost.
- E. This note is especially important. As indicated in step #11 above, once the checksum function is performed, all parameter modifications made will be made permanent in the EPROM - But the changes are not 100% secured.

The parameter modifications will remain permanent unless there is a change made to the diesel selection in the wiring harness. If the diesel selection is modified in the wiring harness, power is supplied to the CEB, and power is removed from the CEB, then the next time power is supplied to the CEB, the original EPROM program (prior to the parameter modifications) will become active again and ALL parameter modifications are permanently lost. This is a safety feature to allow Service personnel to return to the original programming in case the parameter changes cause a problem in the operation of the machine.

With this in mind, once parameter changes are made and the checksum function is completed, one should record all parameter modifications made. This information should be forwarded to LFH along with the Customer Name and CEB serial number. LFH can implement these new parameters into a new CEB program, and the EPROM can be reprogrammed. This will secure all changes 100%.

