

Z-01: Calibrate Dyno

SAFETY FIRST

- Follow all Caterpillar facility safety standards when performing this task.
- Wear hearing protection due to the amount of noise in the area.

EQUIPMENT

- Electrician hand tools
- calibrated load cell
- BB Test Cell Calibration Sheet

RESOURCES

- none

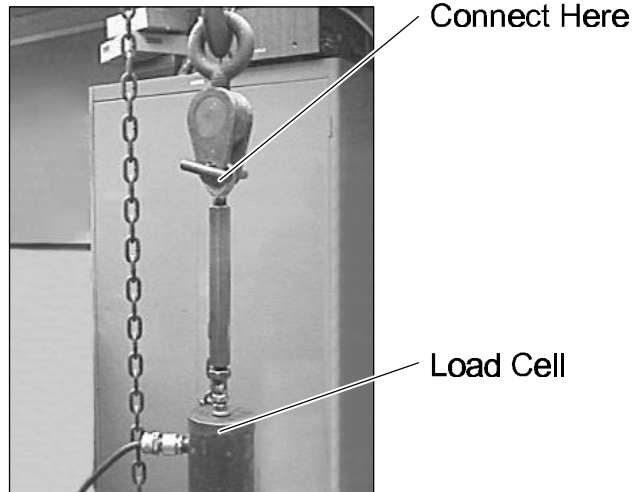
Calibrate Dyno

1. Ask the Maintenance Mechanic to rotate the bearings.
2. Calibrate the load cell.
 - Connect the lower end of the load cell to the certified weights located in Test Cell 6.

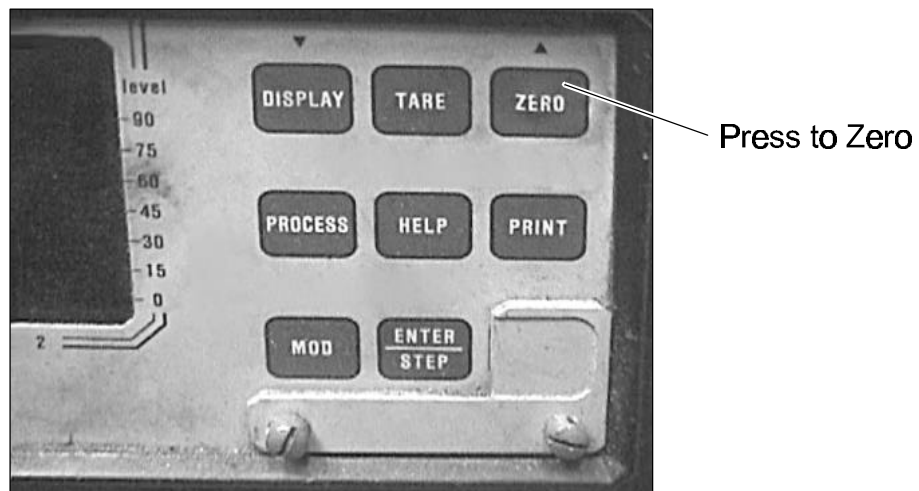
Certified Weights



- Connect the upper end of the load cell to the overhead hoist.

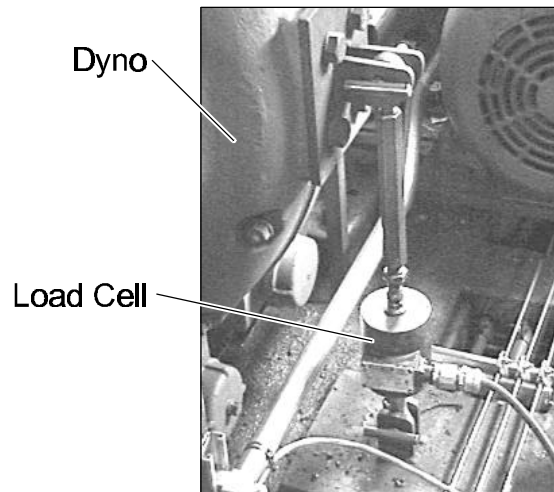


- Plug the LPC 10 Weight Processor into an electrical outlet.
- Zero the weight processor.

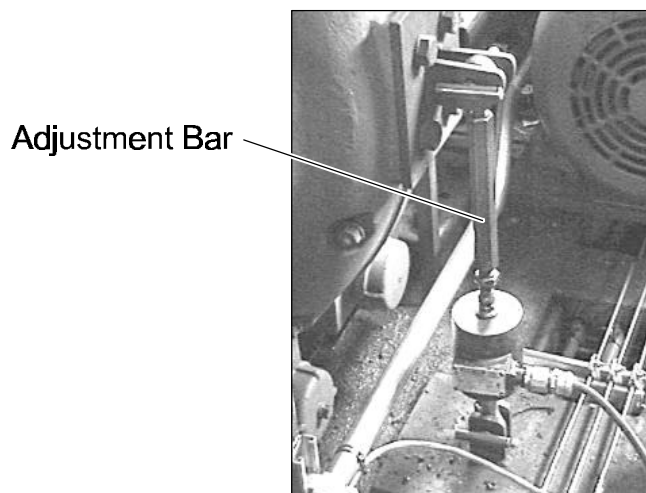


- Insert the weight pin in the first weight increment indicated on the BB Test Cell Calibration sheet.
- Raise the weights and observe the display on the LPC 10.
- Lower the weights.
- Repeat this process for the rest of the weight increments, as indicated on the BB Test Cell Calibration sheet.
- When the load cell calibration process is complete, lower the weights and disconnect the load cell from the hoist and weights.

- Unplug the LPC 10 Weight Processor.
3. Calibrate the load cell in the engine test cell.
- Connect the calibrated load cell to the dyno.



- Plug the LPC 10 Weight Processor into an electrical outlet.
- Using an adjustable wrench, turn the adjusting bar until the display on the LPC 10 reads 500 pounds.



- Observe the PC monitor just outside the engine test cell. The reading should be 1186.9 NM (Newton Meters).
- Turn the adjusting bar until the display reads 1000 pounds. The reading on the PC monitor should be 2373.8 NM.

- Repeat the process for 1500 pounds. The reading should be 3560.7 NM.
- Disconnect the calibrated load cell and unplug the LPC 10 Weight Processor.

4. Correct any reading that is not in accordance with the BB Test Cell Calibration sheet.

Note: If any reading is not within the specification indicated on the BB Test Cell Calibration sheet, perform the following procedures.

- At the PC, input the reading for the first point into the program.
- Select calibrating screen Dyno feedback on the PC, and observe the readings.
- Select the area 'Collect Data'.
- Repeat the above process for each point.
- Select 'Solve' when all readings are entered.
- Print and sign the report after the computer solves the computation.

