

**COMPULOAD CL2000MKII Static  
INSTALLATION, CALIBRATION and OPERATING INSTRUCTIONS**

*For forklift or small loader application v1.1*



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## **Introduction**

The CL2000MKII Weighing Indicator IP65 rated digital indicator designed for use on forklifts and small wheel loaders.

Operating Voltage is 12-24Volts DC

The CL2000MKII will generally be installed with a Hydraulic pressure transducer mounted in the Lift Circuit of the machine hydraulics. The hydraulic transducer should be mounted in an area that is not affected by high pressure cleaning.

## **INSTALLATION INSTRUCTIONS**

**NOTE: - These basic installation instructions are given based on the installer having previous experience in the servicing and maintenance of machinery. General safety precautions should be undertaken similar to carrying out maintenance on this type of machinery. Inexperienced personnel should not undertake this task if they are unsure of the safety precautions necessary.**

### **\*FITTING THE COMPULOAD TO THE OPERATORS CABIN**

Select a suitable location and using the mounting bracket as a template, drill two holes and mount the bracket into position. Allow room for the cable at the rear of the instrument

⇒ **DO NOT DRILL OR WELD ONTO ANY PORTION OF A R.O.P.S. or F.O.P.S**

A bracket however can be bolted onto a lock striker plate, window frame aperture or turret support. Consider wiring and cabling when choosing a mounting position. Consideration should also be given so the instrument does not impede operator vision. Vibration should also be taken into account so as not to damage the machine

## FITTING THE PRESSURE TRANSDUCER

### PRECAUTIONS

⇒ Lower load carriage completely to the ground and stop the engine.

⇒ Operate the tilt and lift levers to ensure no residual pressure is present in the hydraulic system.

⇒ Remove the hydraulic tank filler cap to remove any pressure from the oil reservoir tank.

⇒ Slightly loosen any “easy to get at” fitting in the lifting circuit to ensure no pressure is present. The transducer is to be fitted into the lifting circuit of the hydraulic system between the control valve and the lifting cylinders. If possible, use a hydraulic adaptor fitting that can be installed into the system allowing a “take off” point. Failing this, the system will have to be entered by direct drilling and tapping into a suitable hydraulic connection. Ensure the suitable hydraulic connection (tee piece, elbow or similar) is removed from the forklift before drilling and tapping. Enter the system by drilling (8.2mm) and tapping (1/8 BSPT). Ensure all swarf is removed and refit to machine. Connect appropriate fitting and hose to allow transducer to be mounted in a safe position. Avoid areas that are subject to oil and water. Do not run cable through articulated or moving areas of the machine. Ensure the hose does not foul when machine is operated. Connect the transducer to the hydraulic line. Tighten the fittings. Start the motor and lift the forklift carriage approx 10mm from the ground. **Bleed the air from the line**, then using spanners, retighten the transducer.

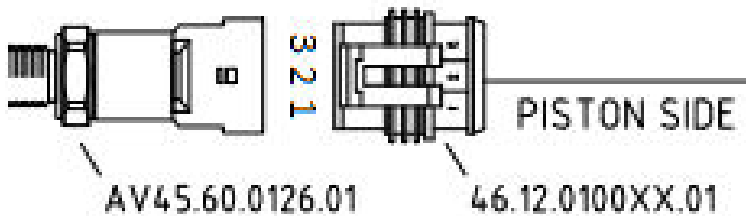


Transducer connector instructional video.

<https://www.youtube.com/watch?v=adSI73Qjwok&t=460s>

### Transducer Connector Diagram

Pin	Function	Wire
1	Signal	Green
2	-VB	White
3	+VB	Brown



Transducer

WIRING THE CL2000MKII to the Forklift or Loader –  
The CL2000MKII fits machines that have 12-24Vdc power supply.  
Voltages other than this may require a voltage reducer.

**BROWN = Power either battery or ignition**

**WHITE = Earth**

Wiring the Compuload CL4070 Printer (if fitted) –  
The Compuload CL4070 Printer can be wired to the CL2000MKII by  
the 3-core wire coming from the rear of the CL2000MKII plug. This  
wire should be marked “printer”.

**Brown = Power**

**White = Earth**

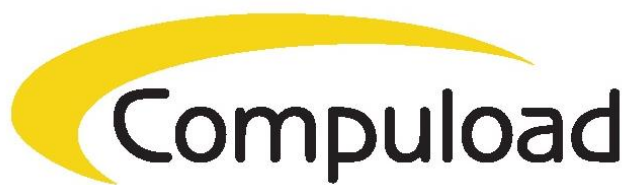
**Green = TXD**

## ESTABLISHING A WEIGHING POINT (Static mode)

When weighing in the static method a predetermined weighing point  
must be established. The weighing point on a standard forklift is  
usually about one meter from ground. For a Loader is when the loader  
arms are approx horizontal.

The weighing point is identified by either -

- a). Applying stickers to the mast or loader arms (stickers usually  
supplied in kit)
- b) Welding a pointer to the mast or loader arms identifying the position.



## *On Board Weighing Systems*

All reference to “Weighing Position” in any instructions means lifting the forks or bucket to position 1 and lowering slowly to position 2. When lowering to position 2, this must be done smoothly and slowly to allow the hydraulic pressure to be consistent. Lowering abruptly will cause a pressure spike within the lift circuit and readings will be erratic.



## Calibration

The calibration instructions below are given, based on the instrument being set up prior to being shipped to you. The instrument will have been set up based on the information supplied regarding the model, capacity and application the forklift is being used.

This instrument can be used in a large variety of applications and changing the parameters that are set will greatly affect the performance of this instrument in the application you have indicated.

NOTE- To exit the calibration mode without saving, turn the power off to the indicator.

**Step 1.** – Ensure you have an accurate test weight of approx  $1/3 - 1/2$  of the machine capacity. The more accurate the test weight, the more accurate the scale

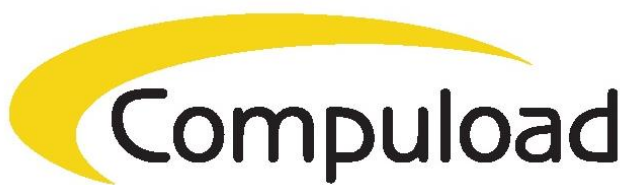
**Step 2** – Start the forklift or loader, and the CL2000MKII should also turn on. The indicator should power up and go through a short power up cycle. Once the power up cycle finishes, the indicator will show a random reading in the “Current Load” screen. To ensure you have the hydraulic pressure transducer fitted correctly, raising of the forks or bucket should result in the figure on the screen rising.

**Step 3-** Press the “Menu” button on the bottom right-hand corner of the screen to enter the Menu screen.

**Step 4** – Press the “Calibration” to enter the setup code. Enter the code 4482 using the up, down, left, right arrows. Then Press the “Exit” button. You will now be in the Calibration Page. Press “Weighing Calibration” to enter the Weighing Calibration page.

**Step 5** – Raise the empty Forks or Bucket to your weighing height. (Raise to 1, Lower to 2) Allow approx 2-3 seconds for the weight to settle, Press “Set Empty Calibration” on the screen to set the Zero Calibration

**Step6** – Place your test weight onto the forks or bucket. Don’t lift to weighing height at this stage. Enter the test weight amount to “Known Load” using the Up, Down keys.



## *On Board Weighing Systems*

**Step7-** It is now time to pick up the test weight and raise to the weighing height , (Raise to 1 , Lower to 2) . Allow approx 2-3 seconds for the weight to settle, and then press the “Set Laden Calibration” key once.

**Step8-** Check the “Calculated Current Weight” screen to see if the weight displays the test weight figure. If not, you may need to reset the Zero, Step 5, and the Test Weight again.

Step 9 – Press the “Exit” button one press at a time to return to the main weighing page and to save the calibration.

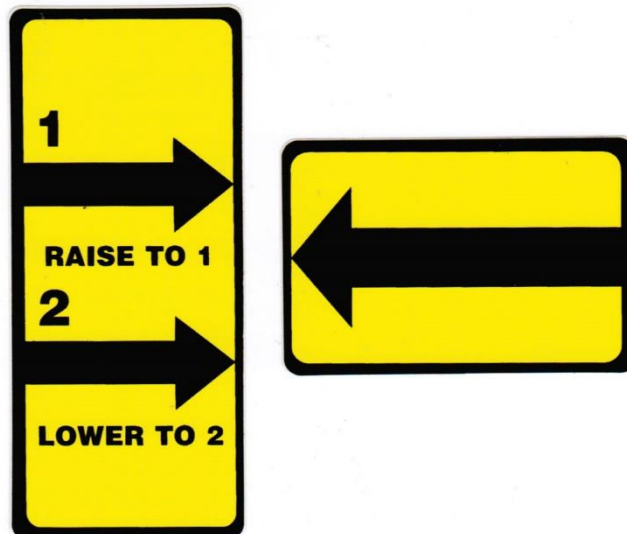
Perform as many test weighings until you are satisfied the system is working correctly.

If at any time the indicator indicates an error message during the calibration process, call your supplier for assistance. Before calling check that the hydraulics have been installed into the correct ‘LIFT’ circuit of the machine, and also check that your test weight is at least  $1/3$  -  $1/2$  machine capacity.

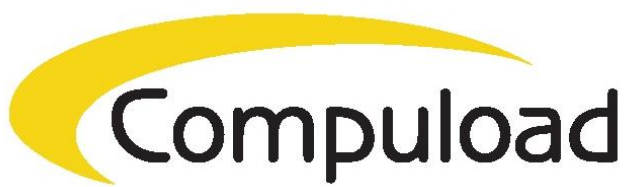
## Operating Instructions

NOTE 1: All reference to weighing position refers to raising the forks or bucket up to a pre-determined position and lowering slightly and slowly.

The pre-determined position is determined by the installer and is generally indicated by stickers on the mast for a forklift (Raise to 1, Lower to 2) and on the carriage (Arrow) or other markings on a loader.



1. With the forks empty and mast upright, raise forks up to the weighing position.  
(If other than 0.00 (zero) is displayed press ZERO key and hold for 3 seconds)
2. Apply the load and raise up to the weighing position. The weight will vary as the load is raised and then lowered but should stabilise after 2-3 seconds.
3. To Accumulate the weight once the weight has been obtained, Push the "ADD" Key once. The Bucket Count and the



## *On Board Weighing Systems*

Accumulated weight will be displayed in the “Total Load” screen. Repeat Step 2. To accumulate further buckets.

4. To CLEAR the TOTAL, press the “CLEAR” button and HOLD for 3 seconds. The TOTAL will return to zero to allow the next Load to be completed.
5. NOTE: - pushing the “CLEAR” button once, will delete the last accumulated weight only. Holding for 3 seconds will delete the TOTAL entirely.

## Printer

If a printer is fitted in conjunction with the Compuload CL2000 MKII weighing system, a docket can be produced whilst loading. To get the printer to print, before loading press the “PRINTER” button once.

There will be 3 x buttons available –

1. PRINTER ON- Whilst loading, the printer will print out the Time and Date, each bucket load and bucket number. When the “CLEAR” button is pressed for 3 seconds at the end of a load, the docket will finalise and print out a Total.
2. PRINTER OFF – Whilst loading, the printer will not print out.
3. PRINTER COPY - Whilst loading, the printer will print out the Time and Date, each bucket load and bucket number. When the “CLEAR” button is pressed for 3 seconds at the end of a load, the docket will finalise and print out a Total. After this the CL2000MKII will then ask if a COPY is required. Press “YES” for a copy.

### Compuload CL4070 Printer-

The paper required for this printer is THERMAL Paper. Size = 57mm x 45mm. Most normal EFTPOS paper will fit. If you change the paper and it does not print, most likely you have the paper upside down. Thermal Paper only prints on one side.

***DO NOT PULL THE PAPER THROUGH THE PRINTER. THIS WILL STRIP THE GEARS OF THE PRINTER AND CAUSE DAMAGE THAT CANNOT BE REPAIRED. THIS IS NOT COVERED UNDER WARRANTY.***

Press the Paper Feed key and hold it into feed paper through the printer.

Press the Paper Key once will turn the printer OFF

## Parts Supplied List

- C2000MK2 indicator with RAM mount  PREPD  BOXED
- Pressure Transducer x 1 with Superseal connector and ¼" BSP adapter  
 PREPD  BOXED
- C2000MKII Display Cable  PREPD  BOXED
- Hydraulic fitting pack with sealing tape  PREPD  BOXED
- Power supply pack  PREPD  BOXED
- Cable Tie Pack  PREPD  BOXED
- Sticker Pack  PREPD  BOXED
- Installation Manual  PREPD  BOXED

## **Contents of Packs**

### **Hydraulic Fitting Pack**

- 1x 7/16 JIC Male - 1/8 BSPT Male Fitting
- 1x 7/16 JIC Female Swivel – ¼ BSPP Female Swivel Fitting
- 1x 7/16 JIC Male 90 degree Elbow Fitting
- NB: Apply thread tape to all fittings that require it.

### **Power Supply Pack**

- 1x Large (10mm) Blue Ring Crimp Terminal
- 1x Small (6mm) Blue Ring Crimp Terminal
- 2x Blue Connector Crimp Terminal
- 1x Fuse Holder and 5Amp Fuse

### **Sticker Pack**

- 1x Arrow
- 1 x Raise to / Lower to
- 1 x Operating Instruction

### **Cable Tie Pack**

- 1x 250mm x 4.8mm pack

## **Warranty**

**THE COMPULOAD HAS NO USER SERVICEABLE COMPONENTS INSIDE. DO NOT ATTEMPT TO DISMANTLE THE UNIT AS THIS WILL CAUSE YOUR WARRANTY TO BECOME NULL AND VOID.**

INSTANT WEIGHING Pty. Ltd. warrants the COMPULOAD Series load weighing gauge and any optional equipment to be free of defects in workmanship and material for a period of twelve (12) months from date of dispatch or installation, (whichever is applicable).

This Warranty only applies provided the COMPULOAD and accessories are used in accordance with the recommendations of INSTANT WEIGHING Pty. Ltd. under normal use and reasonable care.

The warranty does not cover damage in any way whatsoever including transit damage. The warranty does not cover malfunction or failure resulting from misuse, neglect or abuse.

The warranty immediately becomes void should any repairs, alterations or modifications are carried out or attempted to be carried out by other than INSTANT WEIGHING Pty. Ltd.

The warranty is not transferable and applies only to the original purchaser unless authorised by INSTANT WEIGHING Pty. Ltd.

The warranty does not include travel expenses should a factory engineer or representative be required to perform repairs on site.

At the option of INSTANT WEIGHING Pty. Ltd. any faulty units or components will be repaired or replaced free of charge whilst within the warranty period providing the unit or component is returned to our premises with freight pre-paid.

Our factory engineers will offer all possible assistance to rectify any difficulties experienced in the field. The large majority of problems can be overcome by telephone. Please contact our office prior to forwarding any units or components for attention.

NOTE: Our carrier does not accept responsibility for loss or damage in transit. Should transit or freight loss or damage insurance be required it must be indicated on your order and the cost of such insurance will be charged accordingly.