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1.1 GENERAL

1.1 INTRODUCTION : The WDU 2001 digital indicator is STATE OF THE ART in weighing technology. The unit features a HIGH-SPEED microprocessor to deliver an unambiguous weight reading.

The WDU 2001 has been designed specifically to give reliable and stable readings, the digi-lock feature allows the operator not to see any unwanted weight readings as the display is only activated when the weigh button is pressed the display locks and holds the weight reading for 8 seconds and then the display goes blank.

Features include:

- All electronic workings
- Stainless Steel enclosure
- Hoseproof construction
- Large LED display
- Digi-lock holds and locks correct weight readings
- Zero maintenance key trims small deviations at zero
- Tare key
- Print key
- Totalling key

1.2 INSTALLATION SUMMARY

| | Refer to: |
|-----------------------------------|-----------|
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CALIBRATION:

| | |
|---|------|
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OPERATE:

| | |
|---------------------------|-----|
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|---------------------------|-----|

WDU SYSTEM OPERATION

2.1 General: The WDU weighing system works on the principle that the liftruck hoisting hydraulic pressure is directly proportional to the applied load on the forks.

This hydraulic pressure is converted to an electronic signal by the transducer, and after the set-up and calibration procedures, is displayed on the WDU monitor directly as load from the forks or bucket.

It is important that all weighing be carried out in a repeatable fashion. There are stickers on the mast and carriage to assist the operator in weighing at the same location each time a weigh cycle is used.

2.2 OPERATION OF THE SYSTEM:

There are two (2) phases for correct operation of the WDU weighing system These are-

- ZERO cycle. A weighing operation designed to check and reset any minor variations with no load on the tynes or bucket.
- WEIGHING cycle. An operation designed to acquire the weight of the load and lock it on the WDU display.

A description of each cycle is detailed in section 2.3 "weighing" and section 2.4 "zeroing".

Typical operation of the system is as follows:

1. Turn power switch on to power up the display (preferably with the motor running)
2. Perform zero cycle (no load on tynes or bucket)
3. Weigh loads as required following correct procedure (2.3) "weighing"
4. Periodically re-check system zero (0)

This instruction should appear on a sticker affixed to the vehicle as a guide to the operator.

2.3 FORKTRUCK STANDARD WEIGHING cycle:

The following procedure should be adopted for each weighing cycle performed.

1. Raise the forktruck carriage until the **ARROW** sticker located on the carriage aligns with the 1 on the sticker.
2. Now lower the carriage so that the **ARROW** roughly lines up with 2 on the mast.

At this point press the **WEIGH** key on the indicator, A beep will be heard followed by the weight displayed on the WDU indicator.

The weight will be displayed for 8 seconds then the display will go blank.

REMEMBER!!!

- Raise to 1
- Lower to 2
- Press weigh button
- The weight is displayed for 8 seconds
- The display will then go blank until the weigh button is activated

2.4 BOBCAT STANDARD WEIGHING cycle.. The following procedure should be adopted for each weighing.....

1. Raise the bucket about 100mm (4") above the sight mark . The bucket should be crowded fully back.
2. Lower the bucket to the sight mark, PRESS the WEIGH key on the indicator The display will lock and hold the weight for 8 seconds.
3. The display will then go blank until the weigh button is activated.

REMEMBER!!!

- Raise above sight mark
- Lower to sight mark
- Press Weigh button
- The weight is displayed for 8 seconds
- The display will then go blank until the weigh button is activated

2.5 **AUTOMATIC WEIGHING cycle.** When a remote weigh switch is installed on your system you may weigh automatically. An automatic weigh cycle is completed as the Tynes or (Bucket) is raised passed a trigger point the display will show the weight for a period of 8 seconds and then go blank until the weigh button is activated.

REMEMBER!!!

- Maintain constant engine revs
- Raise load smoothly past trigger point
- On Bobcats crowd bucket fully back

2.6 **ZERO cycle:** The zero or " no load " reading of the monitor should be checked periodically, especially if the power to the monitor has been interrupted . If the monitor does not read zero with no load on the tynes or bucket, then a zero weigh cycle must be performed.

NB The forks or bucket should not be on the ground, as this will cause errors.

TO CHECK ZERO..... Simply perform a standard weigh cycle without any load on the forklift tynes or in the bucket.

HOW TO ZERO THE WDU WEIGHING SYSTEM

REMEMBER!!!

- Raise to 1
- Lower to 2
- Press the **Weigh** button
- The display will now show zero weight if not on zero with no load
- Press the zero key this will zero out minor deviations at zero

N.B. ZERO SHOULD BE CHECKED PERIODICALLY TO MAINTAIN SYSTEM ACCURACY



2.7 TARE cycle: This feature is designed to enable the operator to tare out a pallet or container weight to give a nett weight of articles loaded on the pallet or in the container.

**HOW TO TARE:
A PALLET OR CONTAINER ON THE WDU WEIGHING SYSTEM**

Place a pallet or container on the forks perform a standard weigh cycle with the article to be tared.

REMEMBER!!!

- Raise to 1
- Lower to 2
- Press the weigh button
- The display will now show the weight of the article to be Tared
- Press the Tare button
- The display will now go blank
- The Tare cycle is complete

TO RELEASE TARE:

Remove the pallet or container from the forks perform a standard weighing cycle.

REMEMBER!!!

- Raise to 1
- Lower to 2
- Press the weigh button
- The display will show a negative weight
- Press the zero button to cancel the Tared weight
- The display will then go blank
- The Tared weight has now been cleared

2.8 TOTALISER FUNCTION:

The WDU system is fitted with an intelligent totalising system. The system will not allow the same weight to be added twice. The system does this by looking to see if the forks or bucket are unloaded before allowing further adds.

USING THE TOTALISING FUNCTION.

The TOTAL is the addition of successive loads stored as a total. This total will continue to accumulate when the ADD button is pressed.

REMEMBER!!!

- Raise to 1
- Lower to 2
- Press the weigh button
- The weight will be displayed for 8 seconds
- To ADD weight to Total press the ADD key
- The display will now go blank
- The weight has now been added to a progressive total

IF YOU DO NOT WANT THE WEIGHT ADDED TO THE TOTAL DO NOT PRESS THE ADD BUTTON

TO SEE TOTAL:

Press the Total button, the current Total will be displayed flashing

RETURN TO WEIGHING MODE:

Press the Total button to return to normal operation
(this will not clear the current Total.)

TO CLEAR TOTAL:

Press the Total button, the current Total will be displayed flashing
Press the Zero button. The display will now go blank and the current Total cleared.

N.B. This function can be performed without doing a standard weighing cycle.

3.1 LIFTRUCK (BOBCAT) CONDITION:

To achieve an accuracy of approximately + or – 1% of the capacity of the vehicle, the machine should be in the best possible mechanical hydraulic condition.

Whilst most liftrucks or bobcats are not in prime condition can give satisfactory results the following may be checked before commencing the installation.

- The lift ram(s) has no leaks. A creep of 25mm of the mast with a load of at 25% of the forktrucks lift capacity over 1 hour period constitutes a leaky mast or control valve and fitting the WDU system could result in erratic weight readings.
- The mast slides and channels are not bent or tight, or otherwise damaged
- The mast rollers or bearings are not missing or damaged

NOTE: Due to the potential safety hazards to personnel, it is strongly recommended that only qualified mechanics work on the machine.

3.2 INSTALLATION KIT:

To facilitate installation a kit containing all necessary hardware has been included. The contents of this kit is marked on the side of the monitor packing carton. Typically this includes the following components.

- WDU Monitor
- Transducer assembly
- Monitor mounting bracket
- Operation stickers (3)
- Hydraulic hose and fittings
- Power cable includes inline fuse

INSTALLATION OF CONTROL UNIT

(1) CAUTION!

The WDU control unit has been designed to operate under adverse conditions of dust, water and temperature.

However, locating the control unit directly in sunlight, particularly behind the window in a cab, may cause the unit to be subject to extremely high temperatures which may damage the electronic system.

Accordingly it is recommended that the unit be mounted in a sun-shaded location or if this is not possible, a sun shade be erected over the unit to block direct sunlight.

- (2) When the control unit has been mounted and orientated for convenient operation and display viewing, check that the cables and connectors are not under any mechanical stress and the cables are neatly secured away from accidental mechanical abuse.
- (3) The control unit is suspended within a U bracket frame. Ensure that the actual WDU case is not touching any part of the machine such that its movement within the bracket is restricted.

INSTALLATION OF PRESSURE TRANSDUCER

GENERAL

- (1) **CAUTION** The electronic pressure transducer provided is an industrial grade device designed to be installed in an arduous environment. However, it must be remembered that it is still essentially a delicate electronic sensor, and accordingly to ensure maximum life, reliability and accuracy, it must be treated with due care.
 - (a) **DO NOT** Apply a spanner or similar tool to any part of the transducer except the 'flats' provided expressly for the purpose of tightening the hydraulic coupling.
 - (b) **DO NOT** Mount the transducer in any location where it is liable to be stood on or be subject to physical abuse of any kind.
 - (c) **DO NOT** Mount the transducer where it will be repeatedly immersed or sprayed with water or oil.
 - (d) **DO NOT** Mount the transducer where the cable entry and cable will be subject to physical abuse, liable to be stressed or subject to excessive movement.
- (2) It is important that the pressure transducer be tapped into the hydraulic line which supplies oil to the lift cylinder.
- (3) Tapping any other line will result in the incorrect operation of the **W**DU system. The line should be tapped between the control valve and the lift cylinder. The tap can be carried out satisfactorily in a number of ways but probably the simplest is to use the '1/8 BSPT fitting' supplied with the kit.



TRANSDUCER INSTALLATION cont'd

- (3)
 - (a) Lower the forks to the ground and stop the engine.
 - (b) Remove the cap from the hydraulic oil reservoir to release the pressure.
 - (c) Operate the 'lift' levers to ensure all pressure is relieved from the system.
 - (d) Remove the hydraulic hose where it (or some other (convenient joint) is mounted to the lift cylinder. Drill and tap side down, between end of hose fitting with 1/8 BSPT Adaptor supplied.
 - (e) Refit hose and connect 7/16 JIC hose to new fitting and feed line to transducer.

NOTE - CARE SHOULD BE TAKEN ON PIVOT STEER MACHINES TO TO SEE THAT CABLES AND HYDRAULIC LINES DO NOT FOUL ON ANY PART OF MACHINES WHEN TURNED FROM LOCK TO LOCK.

ELECTRICAL INSTALLATION

- (1) The **WDU** system is designed to operate on 12v D.C. (optional 24v) automotive battery systems, positive or negative earth.
- (2) The control unit may be wired into the main electrical loom if there is a provision for additional connections or wired via the ignition key circuit.
- (3) However, it is advisable in many cases to connect the **WDU** unit directly to the battery system (including 1 AMP in-line fuse) to possibility of electrical interference from other apparatus connected to the electrical system.
- (4) The **WDU** unit comes equipped with pre-terminated cables as shown in the diagram opposite. The battery connection end is supplied with free leads.

COLOUR CODE: RED_ Battery + (Positive)
BLACK_ Battery - (Negative)

For negative earth vehicles it is preferable to bond the -ve (BLACK) lead securely and directly to the machine chassis. Vice Versa for +ve earth vehicles.

- (5) An in-line fuse holder and 1 AMP fuse is supplied with the Kit and MUST be fitted in series with the non-earthed cable lead to the **WDU** unit.

CAUTION - WELDING!

TO AVOID DAMAGE TO THE SENSITIVE ELECTRONIC COMPONENTS IN THE SYSTEM, THE POWER SUPPLY CONNECTOR SHOULD BE UNPLUGGED FROM THE WDU UNIT WHILST ANY ELECTRIC WELDING IS BEING CARRIED OUT!

CABLE LOOMS AND CONNECTORS

- (1) The power/aux functions are connected to the WDU unit via a multicore cable which is split into separate 2-way connectors as follows:

CABLE COLOURS

- | | |
|---------------------------------|-----------|
| (a) Power Supply: 12 volts D.C. | RED/BLACK |
| (b) Transducer | |
| Excitation + | RED |
| Excitation - | BLACK |
| Signal + | GREEN |
| Signal - | WHITE |
| Shield | BARE |

Termination of Connectors

Remove rear cover on monitor unit.
Connect cables to required marked positions and refit rear cover.



INSTALLATION OF CONTROL UNIT

(1) CAUTION!


The **WDU control unit** has been designed to operate under adverse conditions of dust, water and temperature.

However, locating the control unit directly in sunlight, particularly behind the window in a cab, may cause the unit to be subject to extremely high temperatures which may damage the electronic system.

Accordingly it is recommended that the unit be mounted in a sun-shaded location or if this is not possible, a sun shade be erected over the unit to block direct sunlight.

(2) When the control unit has been mounted and orientated for convenient operation and display viewing, check that the cables and connectors are not under any mechanical stress and the cables are neatly secured away from accidental mechanical abuse.

(3) The control unit is suspended within a U bracket frame. Ensure that the actual **WDU** case is not touching any part of the machine such that its movement within the bracket is restricted.



3.7 FITTING INSTRUCTION STICKERS: The kit includes three (3) to assist the operator in normal operation. It is important that all the calibration and weighing be carried out in a repeatable fashion. The stickers assist the operator to weigh in the same position each lift.

A. Forktrucks

- **Operator instruction sticker:** Mount this on the dash of the Forktruck
- **Arrow Sticker:** This acts as a pointer for the operator and is located on the MOVING CARRIAGE, often on the load guard.
- **Position Sticker (marked 1 2) :** This sticker is affixed to the STATIONARY MAST in a position such that when the tynes or bucket of the liftruck or bobcat are in the desired weighing position, the two(2) on the sticker is aligned with the ARROW previously fixed to the carriage. Generally the tynes or bucket are about 300mm to 400mm off the ground for pallet weighing work.

B. Bobcats

- **Operator Instruction Sticker:** Mount this on the dash of the bobcat
- **Pointers:** The pointers are welded on the body (stationery) and the arm (moving) sections of the bobcat so that they align when in the weighing position is chosen for convenience and is often when the arms are in a level position.

C. FORKTRUCKS AND BOBCATS (autoweigh)

- **Operator Instruction Sticker:** Mount these on the dash of the vehicle.
- **Limit Switch:** Mount the limit switch using the bracket provided on the body of the vehicle . The magnet should be attached to the moving section so that it passes the switch in a vertical action and triggers the weight at the required weighing position. The limit switch cable should be run directly to the monitor ensuring it is mechanically protected.

3.8 REMOTE ADD: The remote add button option may be installed on the operator lift lever or on the console of the vehicle. The flex should be secured to the shaft of the lift lever using cable ties. Connect to the monitor through the rear case and terminate in connectors marked remote add.

N.B. The operation of this remote button is identical to the button on the monitor.

3.9 DESCRIPTION OF KEYS USED FOR SETUPS AND CALIBRATION The following keys are used to enter and select data:

- The **WEIGH KEY** is used mainly as the enter key (this accepts the data to be entered)
- The **ADD KEY** is used to scroll down (this allows you to go down to the number selected and also allows you to scroll down the function menu)
- The **TOTAL KEY** is used to scroll up (this allows you to go up with the number selected and also allows you to scroll up the function menu)
- The **TARE KEY** is used to move the required data across to the required position
- The **ZERO KEY** is used to also move the required data across to the required position

DESCRIPTION OF INDICATOR LAMPS:

- **Zero Lamp** This lamp indicates the system is on Zero- no load on the forks
- **Tare Lamp** This lamp indicates that a tare is in use in the system- refer 2.7
- **Stable Lamp** This lamp indicates that the weight reading has no motion and is in a stable condition.
- **Power Lamp** This lamp indicates there is power to the monitor unit
- **Gross Lamp** This lamp indicates there is no tare weight in the system
- **Nett Lamp** This lamp indicates there is a tare weight in the system

4.1 CONFIGURATION (Setting up Functions)

To enter setup and calibration mode, proceed as follows:

1. Whilst turning the power ON on the monitor, at the same time Press and Hold the **WEIGH KEY**.
3. The display will show a figure (This is the current capacity displayed)
4. The display will now show **SET**

REMEMBER!!

DEPRESS AND HOLD THE WEIGH KEY WHILE POWERING UP THE MONITOR

Hold down the **WEIGH KEY** until **SET** is displayed

4.1 CONFIGURATION OF THE FUNCTIONS:

- The display now shows FOO. Now press the **WEIGH KEY** to **calibrate** the system and **configure** the capacity and divisions.

With the monitor display on FOO press the **WEIGH** key. The display will show 00000"s
The last digit should be **flashing**. At this point you will enter the required security code.
This is done by using the following keys:

- **Zero** to move across to required position
- **Total** to select value
- **Tare** to move back

These keys are used to enter the security code.

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SECURITY CODE

Press the **WEIGH** key to enter security code number. The display will now show:Dp

Dp-
decimal point selectable- 0, 0.0, 0.00, 0.000 Press the **WEIGH** key to access the function.
The display will show (0) Enter the required value using the **TOTAL** key to select the value. Then press the **WEIGH** key to enter setting.

The display will now show CAP.

CAP-
This is the capacity of the weighing range required eg- 3000 Press the **WEIGH** key to access function. The display will show all 00000"s With the last 0 **flashing** use the **ZERO** key to move across and the **TOTAL** key to scroll up enter the required value. Then press the **WEIGH** key to enter setting.

The display will now show DI

DI-
the division size selectable: 1,2,5,10,20,50 eg-1 Press the **WEIGH** key to access function
The display will show (1) Use the **TOTAL** key to increase to the required value. Then press the **WEIGH** key to enter setting.

The display will now show END

To exit this function press the **PRINT** key.

4.1 CONFIGURATION OF THE FUNCTIONS (Setting up functions)

To enter function mode, proceed as follows:

1. Whilst turning the Power ON on the monitor, Press and Hold the WEIGH key
2. The display will show a figure (This is the current capacity displayed)
3. The display will now show SET

• Then press the WEIGH KEY to set up required functions.

With the monitor display on FOO press the WEIGH key The display will show 00000"s With the last digit flashing at this point you will enter the required security code this is done by using the following keys:

- Zero to move across to required position
- Total to select value
- Tare to move back

ENTER THE PASSCODE REQUIRED AND THEN PRESS THE WEIGH KEY

Press the PRINT KEY to exit the function setup.

N.B.

These keys are used to enter the required security code for each function.

The system is factory set and the functions listed may be changed if required. This is generally not needed.

The listed passcodes are to access the following options:

| Function: | Passcode: |
|---|-----------|
| F01 Primary base unit of measurement (lb or kg) | 110 |
| F03 Automatic zero tracking | 310 |
| FO4 Digital filtering | 410 |
| F09 Digi-lock, (display hold time) | 910 |

4.1 FUNCTION DEFINITIONS:

- **F01** (Select primary base unit 0= kg, 1 = lb)
Press the **WEIGH** key the display will now show 1 Use the **TOTAL KEY** to change to the required value and press the **WEIGH KEY**.

To exit the function setup Press the **PRINT KEY**.

- **F03** (Automatic zero tracking 1 division to 5 divisions)
Press the **WEIGH** key The display will now show 1 Use the **TOTAL KEY** to change the figure Then press the **WEIGH KEY** to enter the new value.

To exit the function setup press the **PRINT KEY**.

- **F04** (digital filtering 1 to 9= maximum filter)
Adjust according to conditions Press the **WEIGH** key The display will show 5 Set this figure to suit the working environment using the **TOTAL KEY** Then press the **WEIGH KEY** to enter the new value.

To exit the function setup press the **PRINT KEY**.

- **F09** (Digi-lock, locks and holds the displayed weight for a selected time)
Press the **WEIGH** key The display will show 6 To set this value to the required time, hold from 1 to 9 seconds. Then press the **WEIGH KEY** to enter the new value.

To exit the function setup press the **PRINT KEY**.

N.B If more than one function has to be changed this can be done during the function setup.
Other functions can be accessed by:

- **Pressing the WEIGH KEY.**
With the monitor display on **FOO** press the **WEIGH** key the display will show 00000's with the Last digit flashing at this point you will enter the required security code this is done by using the following keys.
- **Zero** to move across to required position
- **Total** to select value
- **Tare** to move back

ENTER THE PASSCODE REQUIRED AND THEN PRESS THE WEIGH KEY

4.2 CALIBRATION PROCEDURE:

With the monitor display on FOO press the WEIGH key The display will show 00000"s with the last digit flashing.

At this point you will enter a security code This is done by using the following keys:

- Zero to move across to required position
- Total to select value
- Tare to move back

These keys are used to enter the security code.

| |
|----------------------|
| 220 SECURITY CODE |
|----------------------|

Enter the 3 digit passcode then press the WEIGH key.

| |
|---|
| AT THIS POINT A STANDARD WEIGH CYCLE MUST BE PERFORMED |
|---|

Perform a standard weigh cycle:

REMEMBER!!!

- Raise to 1
- Lower to 2

Press the WEIGH key.

The display will now show CAL.

Press the WEIGH key the display will now show ZERO.

ZERO-used to zero out the offset of the transducer

The display will now show a number (this is the AD counts on the transducer eg- 2145)
Press the WEIGH key to accept the ZERO calibration.

4.3 AVAILABLE FUNCTIONS

FO0

Password for calibration 123

Select the Primary base unit

| | | |
|-----|---|--------------------|
| FO1 | 0 | Primary unit is kg |
| | 1 | Primary unit is lb |

Serial Port Usage

| | | |
|-----|---|--|
| FO2 | 0 | Connection with computer and sub-display |
| | 1 | Not used (kept for serial printer) |

Automatic Zero Tracking

| | | |
|-----|---|--|
| FO3 | 0 | No Automatic Zero Tracking |
| | 1 | 1:1 Digit Automatic Zero Tracking will Zero out when there are small deviations at Zero |
| | 5 | 5:5 Digit Automatic Zero Tracking will Zero out when there are small deviations at Zero |

Digital Filter

| | | | |
|-----|---|---------------------|---|
| FO4 | 1 | 1:Minimum Filtering | Adjust the set value according to the condition |
| | 9 | 9:Maximum Filtering | Adjust the set value according to the condition |

Operation Mode

| | | |
|-----|---|----------------------|
| FO5 | 1 | Special Mode for WDU |
|-----|---|----------------------|

KEYBOARD FUNCTION cont'd

Keyboard Layout Select

| | | |
|-----|---|--------------------------------|
| FO6 | 1 | Keyboard Layout for Totalising |
|-----|---|--------------------------------|

4.3 AVAILABLE FUNCTIONS

Weigh Back-up Mode Select

| | | |
|-----|---|---|
| F07 | 0 | Weigh Back-up is OFF (Power on Zero) |
| | 1 | Weigh Back-up is on |

ENTER" Key used

| | | |
|-----|---|-------------------------|
| F08 | 0 | Not used |
| | 1 | Not used |
| | 2 | Not used |
| | 3 | "WEIGH" for WDU Special |

Lock & Hold (Display)

| | | | |
|-----|---|---------------------|--|
| F09 | 1 | Minimum Lock & Hold | Lock's and Holds the Diplayed Weight for a selected time |
| | 9 | Maximum Lock & Hold | |

Device ID

| | | | |
|-----|----|-----------------|--|
| F10 | 00 | 00: DEVICE "00" | ID of Indicator for Printer Application |
| | 1 | 99: DEVICE "99" | |

Baud Rate

| | |
|-----|---------|
| F11 | 1200bps |
| | 2400bps |
| | 4800bps |
| | 9600bps |

Output Mode

| | | |
|-----|---|--------------------------------------|
| F12 | 0 | No data output |
| | 1 | Stream Mode |
| | 2 | Transmit only is stable condition |
| | 3 | Press Print Key |

Select HOLD type

| | | |
|-----|---|---------------|
| F13 | 0 | Average Hold |
| | 1 | Peak Hold |
| | 2 | Sampling Hold |

4.3 MAINTENANCE OF CALIBRATION

Periodical Calibration checks are recommended, to do this perform a zero weigh cycle (sect 2.4) and a weigh cycle (sect 2.3) with a known weight. If the WDU system requires calibration follow the calibration procedure in section 4.3 (calibration procedure) generally the function setups do not require changing when only the calibration is required.

4.5 FUNCTION CHECKLIST

After completing the setup and calibration, we recommend you record the functions and calibration data you have selected.

| Parameter | Typicacal Value | Your Value |
|-----------|-----------------|------------|
| Capacity | 2500 | |
| Dp | 0 | |
| Di | 10 | |
| F01 | 0 | |
| F02 | 0 | |
| F03 | 1 | |
| F04 | 5 | |
| F05 | 1 | |
| F06 | 1 | |
| F07 | 1 | |
| F08 | 3 | |
| F09 | 7-8 seconds | |
| F10 | 00 | |
| F11 | 2400 | |
| F12 | 3 | |
| F13 | 0 | |

Specifications

The Down Under Series of on-board weighing systems are designed to give high accuracy at a budget price. They are a microprocessor based weighing system to be connected to the hydraulic lifting system on Fork-trucks or similar machines.

The load can be placed on the forks and can be accurately weighed by measuring the hydraulic pressure required to raise the load. This pressure is measured by an electronic transducer, the output is converted to an electronic signal and displayed in a weight format on the WDU Indicator.

Stainless Case (IP65 rated)
Easy to read/user friendly
External on/off switch
Selectable capacity and division sizes
Standard Rs 232 output
Kg or lb unit is selectable
5000psi Transducer.

Clear and stable LED or LCD display
Full digital calibration and function setting method
Automatic zero tracking
Selectable digital filter
Zero, Tare and print function keys
Totalling function
12 Volt dc operation

Options

Stainless steel weather hood
24 volt dc to 12 volt dc inverter
In line voltage suppressor
Remote add button assembly

Specifications

Construction Material Enclosure:

304 Stainless Steel

H44 operating range:

-10 c to 50 c

Communication:

Rs 232 (Tx1, Tx2, Rx, Busy)

for optional printer

Display Digits:

5 digit 25mm segmented red LED or

5 digit 23.5mm liquid crystal

Power \ Voltage

12 volts dc exceeds automotive power supply transient suppression specifications

Dimensions Enclosure:

WDU 2001 (20L x 5W X 13H cm)

excludes mounting bracket dimensions

- Construction 17 - 4 Stainless Steel
- Operating temp range -10°C to 60°C
- Cable length 2 metres

The WDU 2001 System contains the following components
WDU Indicator with mounting u bracket, 5000psi transducer including p clamp assembly Power cable with inline fuse protection 1.5 metre in length.

Hydraulic fittings including 9/16 uno to 7/16jic and 1/8 bsp to 7/16 jic fittings are standard

Hydraulic hose 1 metre in length fitted with 7/16 jic fittings
Operating stickers and fitting information

Weight:

WDU 2001 system (5kg) shipping weight

Warranty:

12 Months limited warranty on components

Your authorized Weigh Down Under distributor is:

Specifications and features subject to change without notice.

4.2 CALIBRATION PROCEDURE contd:

The display will then flash all 00000's (you now enter the test weight value eg- 500)
Use the ZERO key to move across and the TOTAL key to increase to the required value.

You will then perform a standard weigh cycle with the known test weight loaded on the tynes or in the bucket.

REMEMBER!!!

- Raise to 1
- Lower to 2

Then press the WEIGH key to accept the value The display will now show LOAD followed by a number (this is the AD counts on the transducer with a load applied eg- 4350)

Press the WEIGH key to accept the weight calibration.

The test weight value will be displayed for 6 seconds.

The display will then go blank This signifies the calibration is now completed and the system is ready to weigh.

- N.B On some machines there may be a necessity to raise only to 1 and NOT lower to 2
- This is primarily due to the hydraulics of the machine
- If inaccurate weights are being shown, recalibrate the system Only Raise the forks or the bucket to 1. Do Not lower to

SYSTEM ZERO: (The system can be zeroed if the forks or bucket have been changed)

The weighing system can be zeroed out by using a passcode this will only zero the forks or bucket and will not affect the calibration of the system.

Repeat the calibration procedure enter Passcode: 210

The display will show Zero perform a standard lift cycle (with no load on forks or bucket)

REMEMBER!!!

- Raise to 1
- Lower to 2

Press the WEIGH key to accept the new Zero setting The display will then show the new Zero. The Zero value will be displayed for 6 seconds.
The display will then go blank. This signifies the calibration is now completed and that the system is ready to weigh.