

**Agi-Drive**



## ***Agi-Drive Digital Load Scale***

***Model AD-S01***

***Installation and Operators Manual***

***Please read carefully before installation or calibration***



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## **1.0    Product Specifications**

### **CCU and Expansion Module**

Operating Temperature: -40 deg C to +85 deg C

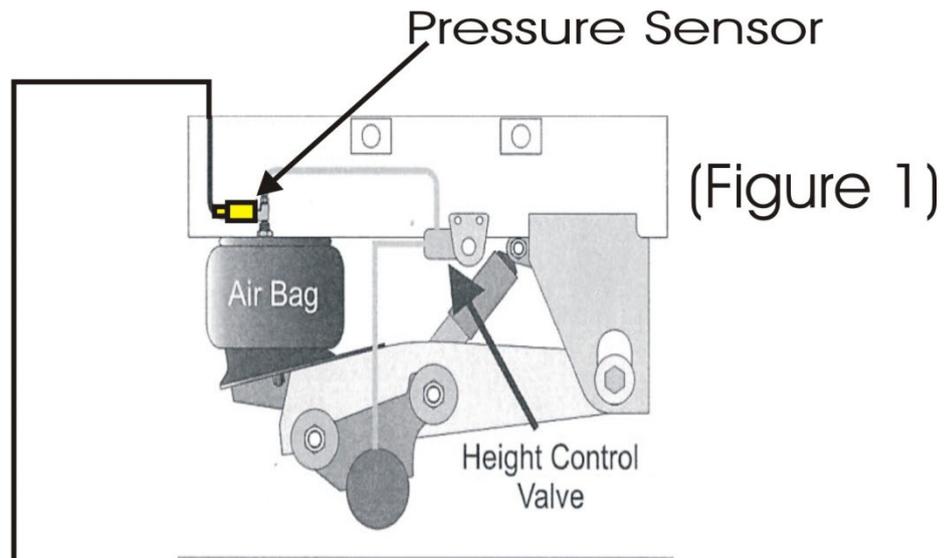
Power Supply: 12v DC to 32v DC

Units: Kilograms and Cubic meters

#### **Sensor Specifications**

G ¼ NPT thread female

## **2.0    Components**



Agi-Drive  
Expansion Module



(Figure 2)



(Figure 3)

### **3.0 Installation Instructions:**

Step 1: Mount the Agi-Drive expansion module to a rear chassis cross member under mixer spill tray of vehicle near the air bags.

Step 2: Dump the air from the suspension system.

Step 3: Locate and remove the suspension airline fitting from the top of one of the air bags connected to the height control valve. (Fig. 1)

Step 4: Insert a tee fitting into the top of the air bag. The tee fitting should match the thread size and type of the vehicle suspension.

Step 5: Insert the pressure sensor into the remaining port of tee fitting.

Step 6: Reinflate the suspension system and check all fitting connections for air leaks.

Step 7: Connect the provided sensor cables from the expansion module (fig 2) to the pressure sensor/s depending on truck. Please note: different trucks may use up to three separate pressure sensors, when ordering kit please specify which truck the kit will be fitted too.

Step 8: Run the remaining twisted pair cabling to the antenna box mounted under the mixers oil reservoir tank and insert the provided y connector harness.

#### **4.0 Calibration Instructions:**

Agi-Drive has been developed to either be calibrated from a certified in-ground scale system or from a batch plants delivery docket. **Using a batch plant delivery docket loaded cubic meters (M3) makes calibration a very straight forward easy method of calibrating scales.**

1) **Enter Empty Weight** Menu #1

Step 1: While the vehicle is still empty, park on a level surface, shift: the Transmission to neutral, and set the parking brakes.

Step 2: Chock the wheels to prevent unexpected vehicle movement, and then release the parking and service brakes.

Step 3: Make sure the Height Control Valve (HCV) has fully inflated the air bags. If needed, briefly dump the air from the suspension and allow the HCV to refill the system. (This may take several minutes depending on the type of HCV)

Step 4: Press and hold the shift button followed by the Revs Up button on the Cab Control Unit (CCU Figure 3) then release. This now places you into the calibration menu screen which will be displayed on CCU screen.

Now press & release once the Resume button  to high light **(Empty weight screen)**, now press the discharge button  once to enter empty weight menu. A pressure read out will display empty weight pressure, once this read out steadies press the mix button  to store empty weight of vehicle.

To return at any time to the main calibration screen menu #0, press once the Escape Key (**ESC**)

## 2) Enter Loaded Weight Menu #2 (**Kilograms Weigh Station**)

Step 1: Using a certified in-ground scale, obtain a LOADED weight for the axle group of mixer. For best results, weigh a load that is near the legal weight limit for the axle group.

Step 2: While the vehicle is still loaded with the same load, park on a level surface, shift the transmission to neutral, and set the parking brakes.

Step 3: Chock the wheels to prevent unexpected vehicle movement, and then release the parking and service brakes.

Step 4: Make sure the Height Control Valve (HCV) has fully inflated the air bags. If needed, briefly dump the air from the suspension and allow the HCV to refill the system. (This may take several minutes depending on the type of HCV)

Step 5: while still in the calibration menu, by pressing either the stop button  or resume button  to high light “loaded kilogram menu”,

Once highlighted press once the discharge button  to enter the kilogram menu. Now enter the certified in-ground scale amount.

The numerical number is entered by using the **+** or **-** keys to enter the digits e.g. 19545 kilograms starting at the left most digit.

To enter the next highest digit use the discharge key  to shift one digit space to the right and again use **+** or **-** keys to enter the digit number.

Once the loaded kilogram weight number has been entered

Use the mix key  to store that number to memory.

If the empty weight has been entered previously the Agi-Drive digital weigh system is now calibrated and ready to use.

Please note: the zero weight must be entered first before the scale system will be calibrated.

To return at any time to the main calibration screen menu #0, press once the Escape Key (**ESC**)

3) **Enter loaded cubic meters Weight** Menu #3 (Cubic Meters Weight from Docket)

Please Note: - If calibrating scales from Plants loaded cubic meter docket instead of certified weigh station in kilograms, a density weight per 1 cubic m<sup>3</sup> has to be entered first in the above menu 4. Industry standard stands at 2350 kilograms per 1 cubic meter (m<sup>3</sup>) of concrete.

This factor can change from plant to plant depending on materials used.

Step 1: Using batch plant docket, obtain a loaded cubic meter weight. For best results, weigh a load that is near the legal cubic meter weight limit for the Mixer.

Step 2: While the vehicle is still loaded with the same load, park on a level surface, shift the transmission to neutral, and set the parking brakes.

Step 3: Chock the wheels to prevent unexpected vehicle movement, and then release the parking and service brakes.

Step 4: Make sure the Height Control Valve (HCV) has fully inflated the air bags. If needed, briefly dump the air from the suspension and allow the HCV to refill the system. (This may take several minutes depending on the type of HCV)

Step 5: while still in the calibration menu, by pressing either the stop button  or resume button  to high light "loaded M3 menu".

Once highlighted press the discharge button  once to enter the "Load M3 menu". Now enter the cubic meters indicated on customer's docket.

The numerical number is entered by using the **+** or **-** keys to enter the digits (e.g. 5.4 m<sup>3</sup>) starting at the left most digit.

To enter the next highest digit use the discharge key  to shift one digit space to the right and again use the **+** or **-** keys to enter the digit number.

Once the loaded cubic meters number has been entered Use the mix key  to store that number to memory.

If the empty weight has been entered previously, the menu will now calculate the algorithm to use as well as display the calculated algorithm constants that will be used.

When calibrating scales from plant docket (**cubic meters**) there is no need to use the kilogram menu to enter loaded entered automatically.

To return at any time to the main calibration screen menu #0, press once the Escape Key (**ESC**)

4) **Enter Density Weight** menu #4 (**Kilograms per cubic meter concrete**)

Step 1: obtain from plant manager the density factor for plant.  
E.G. 2350 kg/m<sup>3</sup>

Step 2: while still in the calibration menu, by pressing either the stop button  or resume button  to high light "**Density Weight**",

Once highlighted press once the discharge button  to enter the Density Weight menu. Now enter the certified plants Density Weight

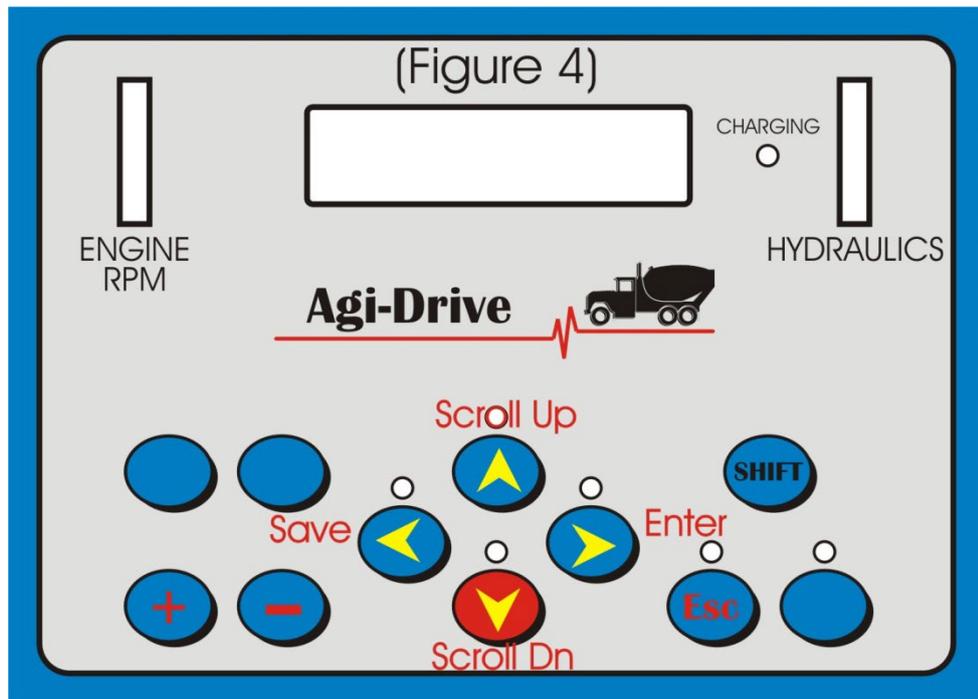
The numerical number is entered by using the **+** or **-** keys to enter the digits e.g. 2350 kilograms starting at the left most digit. To enter the next highest digit use the discharge key  to shift one digit space to the right and again use **+** or **-** keys to enter the digit number.

Once the Density kilogram weight number has been entered Use the mix key  to store that number to memory. Now proceed to the previous menus to either enter cubic meters or kilograms. Press (**ESC**) key once then use the   scroll up/down keys to select desired menu.

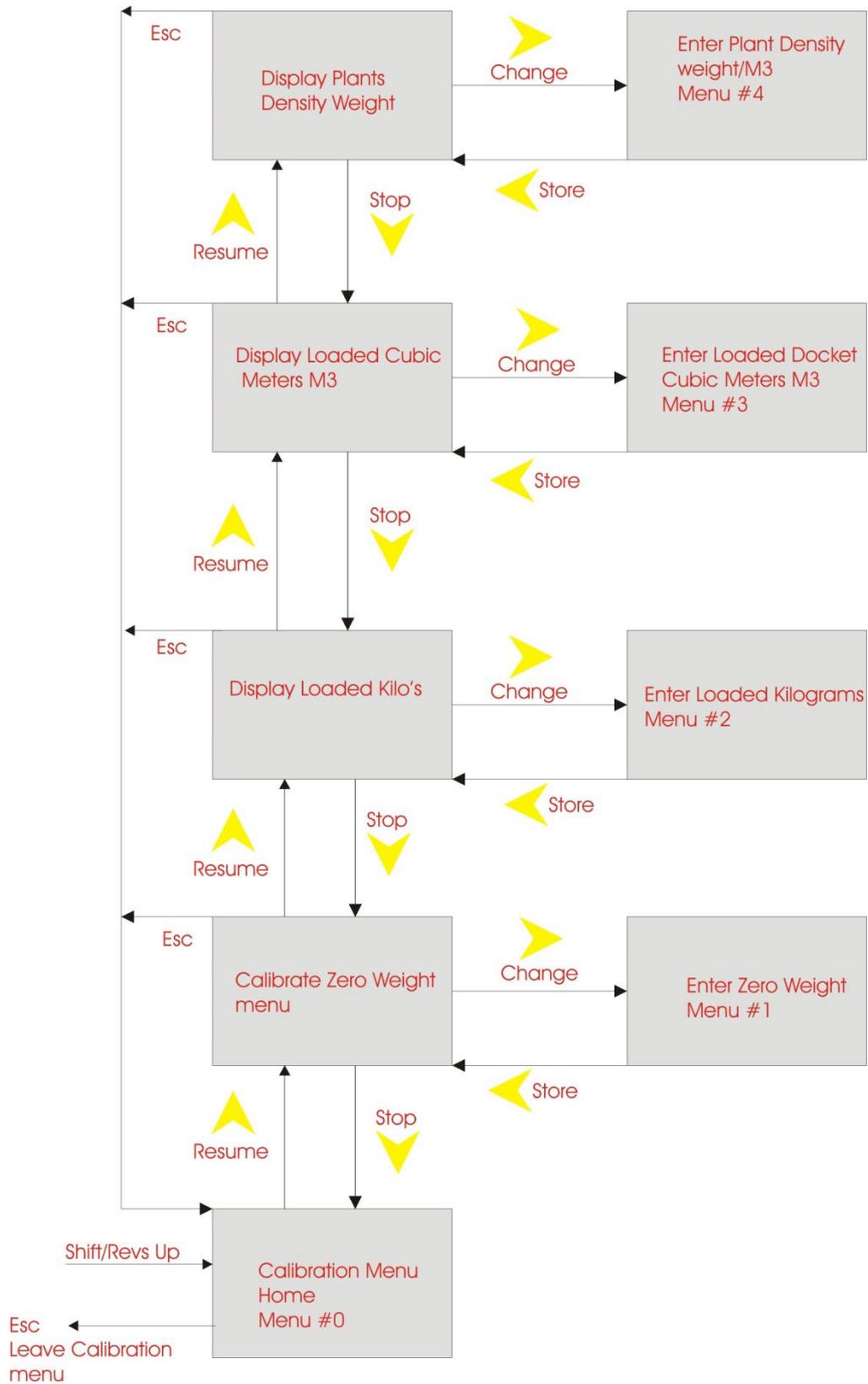
Please note: the zero weight must be entered first before the scale system will be calibrated.

To return at any time to the main calibration screen menu #0, press once the Escape Key (**ESC**)

Please refer to the following Fig 4 and flow charts to assist in entering calibration information.



**Pressing the (ESC) key twice from anywhere inside the calibration menu returns you to normal mixers operation**



## 5.0 Operating Instructions:

Step 1: Park on a level surface, shift the transmission to neutral, and set the parking brakes.

Step 2: Make sure the Height Control Valve (HCV) has fully inflated the air bags to the factory ride height. If needed, briefly dump the air from the suspension and allow the HCV to refill the system. (This may take several minutes depending on the type of HCV.)

Step 3: Release the parking and service brakes, **MAKING SURE VEHICLE IS STATIONARY AND DRIVER REMAINS IN CAB.**

Step 4: To Display Load

Press and hold the shift button followed by the Revs Dn button on the Cab Control Unit (CCU Figure 3) then release. This now displays the weight of the load in both kilograms & cubic meters (m3).

Step 5: To Turn off displayed load

Repeat step 4

## 6.0 Troubleshooting:

Erratic or inaccurate readings could result from the following:

- The vehicle is NOT parked on a level surface; parking on a sloped or banked surface will cause the vehicle weight distribution to shift between the axle groups.
- The vehicle's brakes are on; when the vehicle's brakes are set, they could potentially apply additional pressure or torque on the suspension air bags.

- The vehicle is parked on an uneven or rough surface; if one or more of the vehicle's wheels is offset from the others, this could result in additional pressure or torque on the suspension air bags.
- The Height Control Valve (HCV) is malfunctioning and/or broken; to test for a problem with the HCV, follow steps 1 through 5 of the operating instructions (the truck should be loaded). Write down the weight reading from the CCU display. Drive the vehicle around the block and return to the same location. Follow steps 1 through 5 of the operating instructions again to get a second reading for the same load. If the two readings are significantly different then the HCV might be malfunctioning and/or broken.

For additional support:

Agi-Drive Pty Ltd  
Tel: 0408 611 447

## **7.0 Warranty and Returns**

Agi-Drive is committed to providing quality products that function as intended, and we always stand behind our workmanship.

Products manufactured or sold by

Agi-Drive Pty Ltd. are free from significant deviations in material and workmanship for 1 years from the date of purchase. During this time, and within the boundaries set forth in this warranty statement, Agi-Drive, Inc. will, at its sole discretion, correct the product problem or replace the product.

This warranty shall not apply to product problems resulting from:

- (1) Improper application, installation, incorrect wiring, or operation outside of the approved Specifications of the product.
- (2) Accidents, faulty suspension parts or power surges.
- (3) Inadequate maintenance or preparation by the buyer or user.

(4) Abuse, misuse, or unauthorized modification.

(5) Acts of God; lightning strike, floods, fire, Earthquake, etc.

Agi-Drive Pty Ltd assumes no responsibility or liability for any loss or damages resulting from use of Agi-Drive Weigh Scales.

In no event shall Agi-Drive Pty Ltd. be liable for direct, indirect, special, incidental or consequential damages (including loss of profits or loss of time) resulting from the Performance of a Agi-Drive Pty Ltd weigh scale product. In all cases, Agi-Drive Pty Ltd, Inc. liability will be limited to the original cost of the product in question.

Agi-Drive Pty Ltd, Inc. Reserves the right to make improvements in design, construction, and appearance of products without notice. Agi-Drive Pty Ltd, Inc. may at its sole discretion discontinue support, warranty, or repair of products which it deems are obsolete or for which repair parts are no longer available. No employee or agent of Agi-Drive Pty Ltd, Inc. Has the authority to modify the terms of this warranty in any manner whatsoever without the express written permission of Agi-Drive Pty Ltd, Inc.

### **8 House Keeping**

1:- After 12 months or if significant wear in (HCV value) or air bag system, recalibrate both empty weight & full loaded weight.

2:- after De dag, recalibrate zero weight

Please note between De dag scales will indicate concrete build up between De Dag's, when sufficient build is indicated carry out De dag & re zero empty weight.

## **9 Return Policy and Authorization**

Before returning any product, please obtain a Return Product Authorization number (RPA#) by calling Customer Service at 0408 611 447 or e-mailing Gbritten1@bigpond.com. Include the RPA# and information regarding the reason for the return with the returned product. Shipping costs for returns must be prepaid by the Customer.

For your protection, items must be carefully packed to prevent damage in shipment and insured against possible damage or loss. Agi-Drive Pty Ltd, Inc. will not be Responsible for damage resulting from careless or insufficient packing or loss in transit.

RPA # must be obtained by the original purchaser before any product can be returned. Only new, unused products may be returned. Installed, used, damaged, modified or customized products cannot be returned for credit. Credit will be issued to the original purchaser after evaluation by Agi-Drive Pty Ltd, Inc.

### **Repairs/Replacements**

RPA # must be obtained before any product can be returned. Agi-Drive Pty Ltd, Inc. will evaluate returned products at no charge.

If Agi-Drive Pty Ltd, Inc. determines that the returned product is under warranty it will repair the product or parts thereof at no charge, or if unrepairable, replace it with the same or functionally equivalent product whenever possible. Agi-Drive Pty Ltd, Inc. will return the product at its expense via a shipping method (carrier to be at sole discretion of Agi-Drive Pty Ltd, Inc.) equal to or faster than the method used by the customer. Products or parts thereof not Covered by warranty will be repaired or replaced at customer expense upon authorization by the customer. Agi-Drive Pty Ltd,

Inc. will return the repaired product at customer expense via a shipping method (carrier to be at sole discretion of Agi-Drive Pty Ltd, Inc.) equal to or faster than the method used by the customer.