RIGHT WEIGH PP-003-0061 Onboard Load Scale User Manual

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RIGHT WEIGH™

RIGHT WEIGH PP-003-0061 Onboard Load Scale

WELCOME

Thank you for choosing to drive more and scale less! Here at Right Weigh, we are committed to making our products simple to install and easy to use. We understand that installation can vary between vehicles and yours may not be described in this manual. In any event, our technical support team is ready to answer your questions

+61 418 622840 **leigh@rwls.com.au** **rightweight.com.au**

IMPORTANT

Please read instructions COMPLETELY and thoroughly before installation. Right Weigh, Inc. is not responsible or liable for any negative consequences as a result of improper installation or operation including, but not limited to, product failure or damage that could affect the integrity of the vehicle. The installation steps in this manual are for the sole use of trained installers. Right Weigh, Inc. accepts no responsibility or liability for issues involving, but not limited to, incorrect installation that occur from misinterpretation of the steps outlined in this document. It is the end user's responsibility to be aware of vehicle manufacturer policies before making modifications to the vehicle. Right Weigh, Inc. is not liable or responsible for issues regarding, but not limited to, warranties with other manufacturers. This is the responsibility of the end user. For a more detailed explanation of the the warranty and liability of Right Weigh, Inc. please refer to the "Warranty Statement" and "Return Policy & Repairs" section of this document and **www.rwls.com/warranty**

SPECIFICATIONS & OVERVIEW

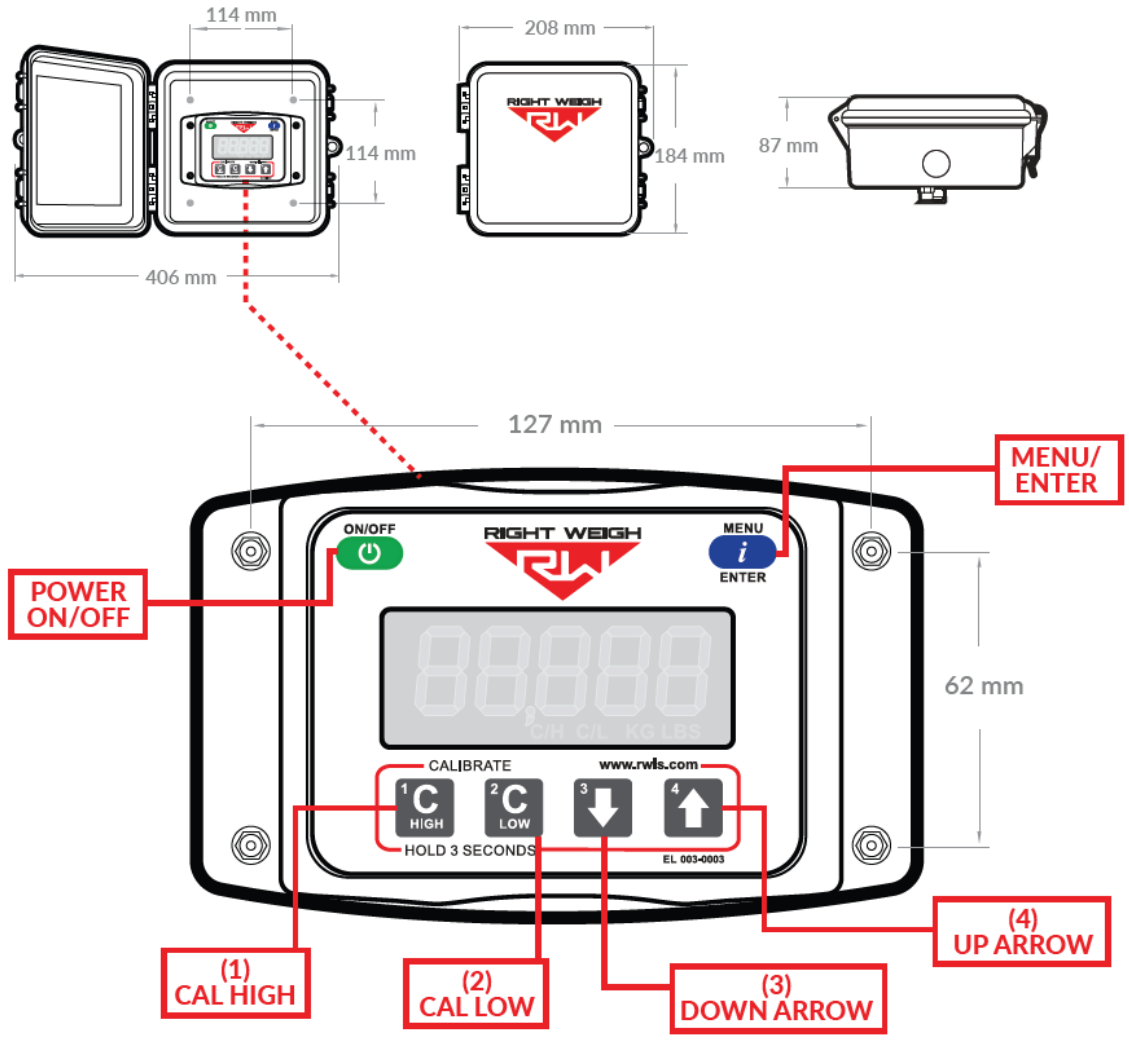
Right Weigh Load Scales App

- Scan here to download the "Right Weigh Load Scales" App directly from the App store

- Scan here for instructions about how to connect to your scale(s) and use the app along with a video tutorial

Technical Specifications

Operating Temperature: -30° C to +85° C Storage Temperature: -40° C to +85° C Power Requirement: 9 VDC to 32 VDC (Switched) Units: Pounds (LBS) or Kilograms (KG) Housing: High impact polycarbonate blend Display: 0.8” LCD sunlight readable



SCALE INSTALLATION & ELECTRICAL CONNECTIONS

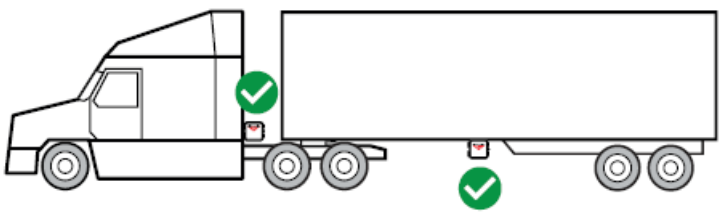
INSTALL STRAIN SENSOR

Follow the steps on the included 218-SK or 221-SK installation kit manual to install all strain sensors onto the vehicle

CHOOSE LOCATION

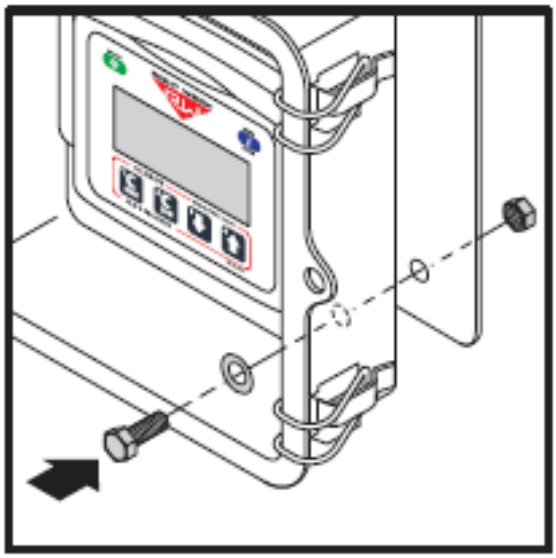
The 201 series scale is designed to be mounted on the outside of a truck or trailer, however it must still be mounted in a protective
enclosure. A protective box and mounting bracket are included with the 201 series scale

Be sure to choose a location that is easily accessible and safe from potential damage (forklift posts, tire caps, etc



DO NOT mount the scale directly to the chassis or any other main beam unless it is approved by the vehicle

manufacturer. Doing so may void the warranty with the vehicle manufacturer



INSTALL CONNECTION HARNESS

Follow the steps on the included 226-SK, 228-SK, or 229-SK installation kit manual to install the connection harness

SET NUMBER OF CONNECTED STRAIN SENSORS

Once the gauge is connected to power, it will automatically turn on and display “bAr -” on the screen. Set the gauge to the
number of strain sensors that are connected to the gauge using the UP arrow button

- bAr 0 = 0 strain sensors
- bAr 1 = 1 strain sensor
- bAr 2 = 2 strain sensors
- bAr 3 = 3 strain sensors (not applicable – will result in set up error)

If you need to change the number of strain sensors at any point, follow these steps

1. Turn off the scale
2. Press and hold the C HIGH button and the MENU button, press the POWER button, then release all 3
3. Use the UP arrow button to change the number of strain sensors to the number desired
4. Turn off the scale to save setting

OPERATING MODES

Each vehicle configuration requires a specific operating mode. The modes available on this gauge are

AVG – Straight Truck, Tractor, or Trailer (One Axle Group)
IdP – Straight Truck, Tractor, or Trailer (Separate Axle Weights)
F1b2 – Trailer with One Front Axle and Two Rear Axles or Straight Truck with Spring Steer and Walking Beam Drive Suspension
See the tables on the following pages to find your vehicle configuration and set the gauge to the corresponding

operating mode

The load scale can only be setup in one operating mode at a time. If the mode is changed, the calibration data will be reset to factory defaults, requiring re-calibration

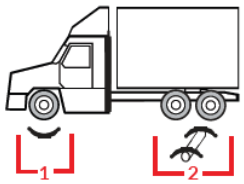
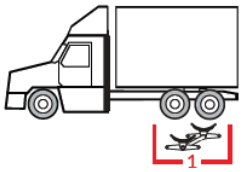
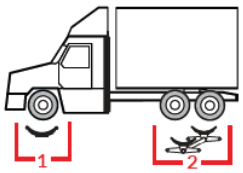
CHANGING OPERATING MODES

- With the scale OFF, press and hold both the UP and DOWN arrow buttons, and then press the ON/OFF button. Release all 3 buttons. The scale will display the current mode

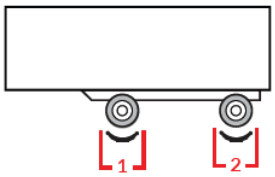
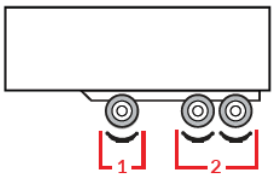
- Press the UP arrow button to cycle through the operating modes. To 1 2 3 4 C/H C/L KG LBS confirm your selection, turn the scale off by pressing the ON/OFF button.

- The numbers on the images indicate the axle groups that will be displayed on the gauge. To cycle through the axle group on the gauge, press the MENU button

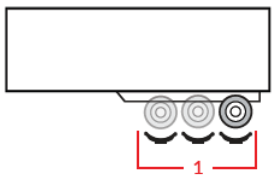
STRAIGHT TRUCK

VEHICLE CONFIGURATION	OPERATING MODE
 **Axle Group 1 -** Spring Suspension Steer Axle **Axle Group 2 -** Mack Camelback Spring Suspension Rear Tandem Axles	
 *DRIVE AXLE GROUP ONLY* **Axle Group 1 -** Walking Beam Spring Suspension Rear Tandem Axles	
 **Axle Group 1 -** Spring Suspension Steer Axle **Axle Group 2 -** Walking Beam Spring Suspension Rear Tandem Axles	

WAGON TRAILER

VEHICLE CONFIGURATION	OPERATING MODE
 **Axle Group 1 -** Spring Suspension Front Axle **Axle Group 2 -** Spring Suspension Rear Axle	
 **Axle Group 1 -** Spring Suspension Front Single Axle **Axle Group 2 -** Spring Suspension Rear Tandem Axles	

TRAILER / DOLLY

VEHICLE CONFIGURATION	OPERATING MODE
 **Axle Group 1 -** Spring Suspension Single, Tandem, or Tri Axle Group	

OPERATING MODES

STRAIGHT TRUCK

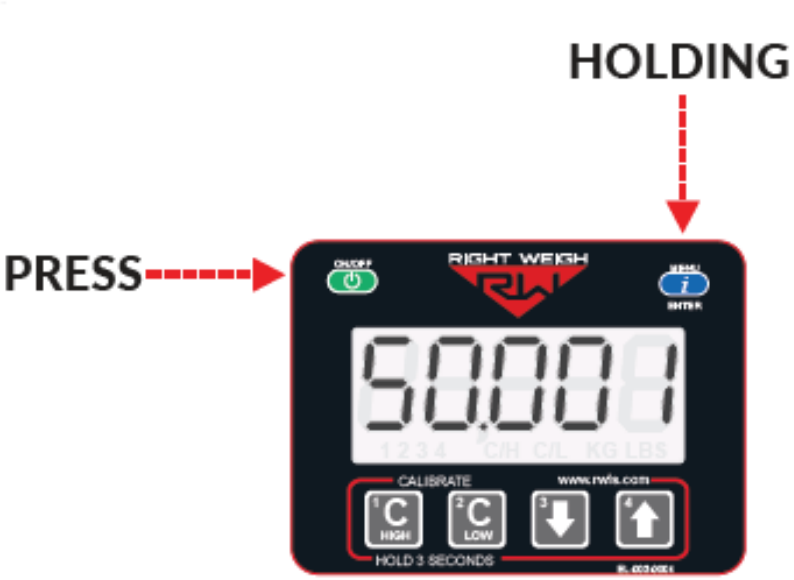
TRAILER / DOLLY

SENSOR CHECK & ADJUSTMENT

At this time, you should have the scale and all strain sensors installed onto the vehicle. Once this is complete, it is time to adjust the strain sensor(s).

ENTER DIAGNOSTICS MENU

With the scale turned off, hold down the MENU button and then press the ON/OFF button – release both at the same time. This will display the software version on the scale



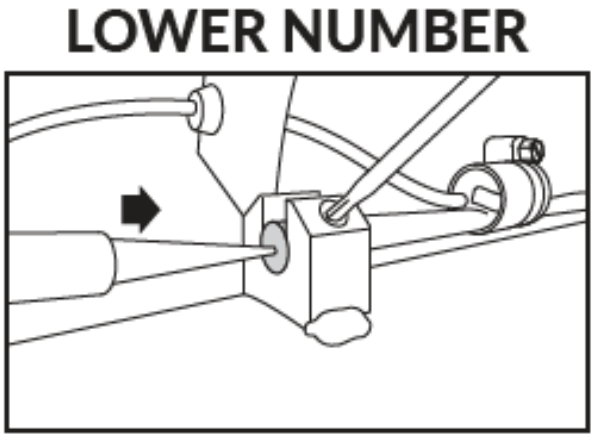
CHECK SENSOR VALUES

Press the MENU button three times; a four digit number will appear representing the raw output from sensor A. For applications with multiple sensors, hit the UP ARROW to see the values for sensors B and C

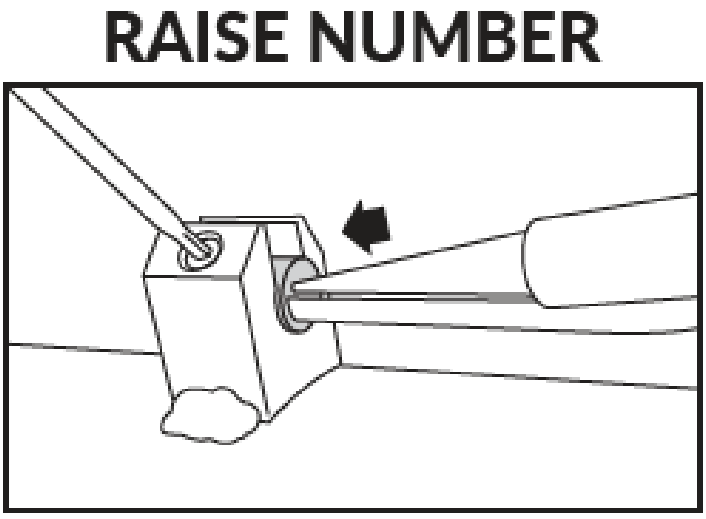
ADJUST STRAIN SENSOR

- In this example, strain sensor A is out of range and needs to be manually adjusted until it is between 6.500 and 7.500.

- With the gauge displaying the sensor value that needs adjusted, remove the sheet metal cover of the corresponding strain sensor
- Find the mounting block with TWO set screws and loosen one set screw. GENTLY push the end of the sensor bar with an appropriate tool



- Pushing inward will lower the number and pushing outward will raise the number



NOTE: It takes a very small amount of force to adjust the sensor

- While holding the sensor bar in place, tighten both set screws and re-check the display. It may take a moment for the scale to settle on a number. Repeat process until range is within 6.500 and 7.500.

SENSOR CHECK & ADJUSTMENT

REPEAT FOR ADDITIONAL SENSORS

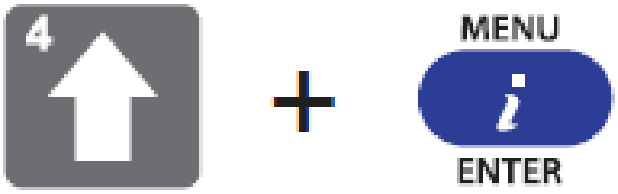
For applications with multiple sensors, hit the UP ARROW and adjust values until all sensors are within the range of 6.500 to 7.500. For sensors that are out of range, repeat step 3.

EXIT DIAGNOSTICS MENU

To exit the diagnostics menu, turn the scale off by pressing the ON/OFF button

CALIBRATION & UNITS

CHANGING UNITS



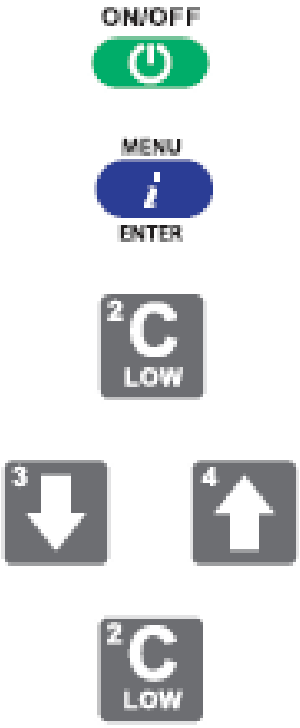
With the gauge on, press and hold the UP ARROW and then press the MENU button. This will toggle the settings between pounds and kilograms

CALIBRATION

The 201 series load scale must be calibrated both empty and loaded to work properly. The scale associates the weight you enter with the air pressure in the suspension system at the time of calibration. You will need to calibrate once while the vehicle is empty, and again while the vehicle is loaded for each axle group being monitored.

EMPTY CALIBRATION POINT

1. While the vehicle is empty, obtain axle group weights from a certified in-ground scale.



2. Park on a level surface. Shift the transmission to neutral and set the parking brakes. Chock the wheels to prevent unexpected vehicle movement, then release the parking and service brakes
3. Press the ON/OFF button to turn on the Right Weigh load scale.
4. Press the blue MENU button to select the proper axle group or calibration set.
5. Press and hold the C LOW button until the “C/L” symbol appears.
6. Adjust the value using the UP and DOWN arrows so that it matches your scale ticket for the axle group.
7. To save, press and hold the C LOW button until the “C/L” symbol disappears

LOADED CALIBRATION POINT

Repeat “empty calibration point” steps 1-2 with the vehicle fully loaded.

3: Press the ON/OFF button to turn on the Right Weigh load scale.

4: Press the blue MENU button to select the proper axle group or calibration set.
5: Press and hold the C HIGH button until the “C/H” symbol appears.
6: Adjust the value using the UP and DOWN arrows so that it matches your scale ticket for the axle group.
7: To save, press and hold the C HIGH button until the “C/H” symbol disappears

9: Repeat steps 4-7 for all axle groups or calibration sets

SET/CHANGE PIN CODE

It is optional to set a security PIN code on the scale. Once a PIN code is set, the feature is enabled and the 5 digit number will be required to gain
access to the calibration and operating mode settings.
Once the PIN code feature is enabled, it can be changed but the feature cannot be disabled without resetting the calibration values. If you
would like to disable the PIN code feature, please call Right Weigh Technical Support listed on page 2.

SET PIN CODE

With the gauge off, press and hold both the C LOW and C HIGH buttons, then press the ON/OFF button. Release all three buttons. The gauge will display “CodE”.

Press the MENU button and “00000” will display on the screen. Enter a 5 digit PIN code using the 1, 2, 3, and 4 buttons. Press the MENU button again to save the code. **If the display shows “——”, then there is already a code set

CHANGE PIN CODE

With the gauge off, press and hold both the C LOW and C HIGH buttons, then press the ON/OFF button. Release all three buttons. The gauge will display “CodE

Press the MENU button and “——” will display on the screen. Enter the previous PIN code. If the code entered is correct, the display will show “Good

Press the MENU button and enter the new 5-digit PIN code using the 1, 2, 3, and 4 buttons. Press the MENU button again to save the code.

OPERATE & WEIGH

Follow these steps while weighing your vehicle

1. Park on a level surface. Shift the transmission to neutral and set the parking brakes.
2. Chock the wheels to prevent unexpected vehicle movement, then release the parking and service brakes.
3. Press the ON/OFF button to turn on the Right Weigh load scale

4. Adjust the suspension or the load itself until the Right Weigh load scale displays a weight value below your legal limit.
5. Press the blue MENU button to display other axle groups or calibration sets.

6. Press the ON/OFF button to turn off the Right Weigh load scale

TROUBLESHOOTING

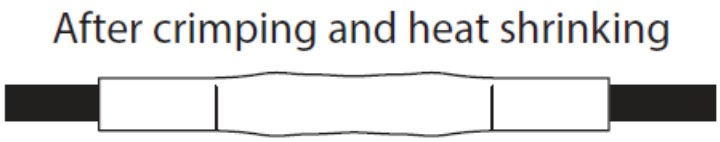
PROBLEM	CAUSE	SOLUTION
Erratic / Inaccurate Weight Readings	The vehicle is not parked on a level surface	Park on level concrete ground. Parking on sloped or banked surfaces will cause the vehicle weight distribution to shift between the axle groups. Additionally, if one or more of the vehicle's wheels are in a pothole, that could result in additional pressure or torque on the suspension.
	The vehicle's brakes are on	Release the parking brakes when weighing and/or calibrating. When the vehicle brakes are set, they could apply additional pressure or torque on the suspension air bags. This will cause the suspension to have a different air pressure than what is normally needed to hold up the given weight.
App Won't Connect to the Gauge	Scale is connected to a constant power source	Connect the scale to a switched power source between 9 and 32 VDC (typically either the vehicle marker lights or the AUX/ABS wire). If the gauge is powered too long it can stop transmitting a Bluetooth signal and may need to be disconnected and reconnected to work again.
	Scale is connected to another device	Disconnect the scale from the other device before connecting through your device.
	Phone requires re-set	To reset your phone – close the app, turn off Bluetooth, and wait 10 seconds. Then open the app and turn the Bluetooth back on. Try rescanning for the scale. If this still doesn't work, in some cases it is necessary to restart the phone completely.

Scale Does Not Power On	**Scale is not connected to a switched power source of between 9 and 32 VDC**	**Connect the scale to a switched power source between 9 and 32 VDC (typically either the vehicle marker lights or the AUX/ABS wire). If there is a bad connection in the circuit which causes voltage to drop below 9 volts, the scale will not power on. Test the power source with a voltmeter.**
	Scale is connected directly to the battery	**Connect the scale to a switched power source between 9 and 32 VDC (typically either the vehicle marker lights or the AUX/ABS wire). The scale is active anytime it is connected to power, even if the display is off. To reset it, disconnect and reconnect to the power source, wait 10 seconds, then try again to turn the display on.**
	Polarity is incorrect	**Correct the polarity. The red wire must be connected to positive and the black to negative.**
Cannot Change Calibration Data	**The scale has an active user-defined security PIN code**	**If the scale is protected with a PIN code, the PIN must be entered before calibration data can be changed. To understand how to reset the PIN code, see page 16. If the PIN code has been forgotten, please call Right Weigh technical support listed on page 2 for further assistance.**
Gauge reading "no Air"	**One or more air inputs are not receiving air (If 2 air sensors are set to Average mode and one isn't receiving air, gauge will read noAir message)**	**Check that all air inputs are receiving air. Pull airline out of air fitting(s) on the back of the gauge. Follow the airline along the vehicle to the airbags to check that it hasn't been pinched or damaged. Dump suspension and refill to ensure air bags are full.**
	Lift Axle being measured is in the up position	**If an air input is measuring a lift axle on the vehicle and the lift axle is in the up position, the air bags will be deflated of air and the gauge will read the noAir message.**

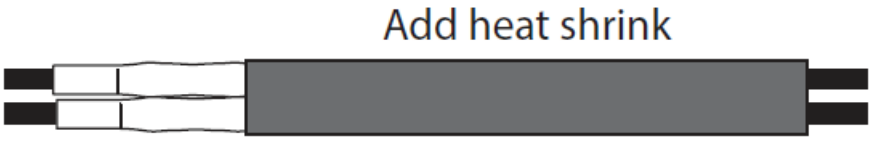
APPENDIX A

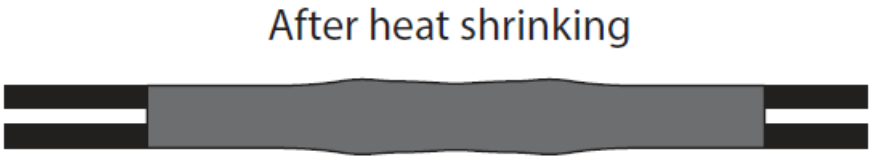
- It is very important that all wiring connections be made watertight. Connections which are not watertight can allow moisture to travel through the individual strands of the wires and make it's way into the scale, causing permanent damage to the electronics
- Heat shrinkable splices are included in the 226-SK, 228-SK, or 229-SK Installation Kit.

- Crimp each end of the wire into the connector with a wire crimp tool (tool not provided).
- With a heat gun or heat torch, heat the connector until it shrinks completely around each wire end. Make sure you do not burn the wire jacket



- After all connections have been made, heat shrink the entire group of splices so that it seals on the outer jacket of both cables.





WARRANTY & RETURN POLICY

Warranty Statement

Right Weigh is committed to providing quality products that function as intended, and we always stand behind our workmanship. Our industry leading warranty is our best effort to express this commitment. Products manufactured or sold by Right Weigh, Inc. are warrantied to be free from significant defects in material and workmanship 3 years from date of purchase. During this time, and within the boundaries set forth in this warranty statement, Right Weigh, 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. Right Weigh, Inc. assumes no responsibility or liability for any loss or damages resulting from use of Right Weigh, Inc. products. In no event shall Right Weigh, Inc. be liable for direct, indirect, special, incidental or consequential damages (including loss of profits or loss of time) resulting from the performance of a Right Weigh, Inc. product. In all cases, Right Weigh, Inc. liability will be limited to the original cost of the product in question. Right Weigh, Inc. reserves the right to make improvements in design, construction, and appearance of products without notice.

Return Policy and Authorization Before returning any product, please obtain a Return Merchandise Authorization number (RMA#) by calling Customer Service at +61 418 622840 or e-mailing **leigh@rwls.com.au.** Include the RMA# 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. Right Weigh, Inc. will not be responsible for damage resulting from careless or insufficient packing or loss in transit. An RMA# 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 can not be returned for credit. Credit will be issued to the original

purchaser after evaluation by Right Weigh, Inc

Repairs/Replacements

An RMA# must be obtained before any product can be returned. Right Weigh, Inc. will evaluate returned products at no charge. If Right Weigh, 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. Right Weigh, Inc. will return the product at its expense via a shipping method (carrier to be at sole discretion of Right Weigh, 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. Right Weigh, Inc. will return the repaired product at customer expense via a shipping method (carrier to be at sole discretion of Right Weigh, Inc.) equal to or faster than the method used by the customer

THANK YOU FOR YOUR BUSINESS

Thank you for choosing to drive more and scale less! Here at Right Weigh, we are committed to making our products simple to install and easy to use. We understand that installation can vary between vehicles and yours may not be described in this manual. In any event, our technical support team is ready to answer your questions

SCAN FOR ADDITIONAL RESOURCES

rightweigh.com.au/manuals-resources/

Documents / Resources

	**RIGHT WEIGH PP-003-0061 Onboard Load Scale** [pdf] User Manual PP-003-0061 Onboard Load Scale, PP-003-0061, Onboard Load Scale, Load Scale, Scale
	**RIGHT WEIGH PP-003-0061 Onboard Load Scale** [pdf] User Manual PP-003-0061 Onboard Load Scale, PP-003-0061, Onboard Load Scale, Load Scale, Scale

References

- Manuals & Resources - Right Weigh
- Manuals & Resources - Right Weigh
- Home - Right Weigh
- Setting up your scale - Right Weigh
- Warranty & Return Policy - Right Weigh