

Multiple Animal Scale – Portable

MAS-P

Installation Manual



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1.0 Introduction

The Multiple Animal Scale – Portable (MAS-P) system is manufactured with top quality components. It is engineered using the latest technology to provide operating features and reliability unmatched for years to come.

Please take the time to read this manual completely before attempting to use the system. Although the MAS-P has been designed for easy setup and use, a thorough understanding of this manual will ensure that the user receives the maximum benefit from the system.

Please contact Rice Lake Weighing Systems at 800-472-6703 with any questions or concerns.



Manuals are available for viewing and/or downloading from the Rice Lake Weighing Systems website at www.ricelake.com/manuals

Warranty information can be found on the website at www.ricelake.com/warranties

1.1 Overview

The MAS-P consists of a sheeted animal cage suspended by four S-type load cells through a cam style on-board lift system that sits on top of a portable base frame. In transport mode, the scale system is locked down, protecting the load cells from damage during transport. The scale is raised to the weigh mode using a lever and cam system. A digital indicator is connected to the scale to display the weight.

The MAS-P can be used on any firm surface up to a 6% grade (3° slope) and has a low deck height (6") for easy step in.



Figure 1-1. MAS-P Animal Scale

1.2 Safety

Safety Signal Definitions:



Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. Includes hazards that are exposed when guards are removed.



Indicates a potentially hazardous situation that, if not avoided, could result in serious injury or death. Includes hazards that are exposed when guards are removed.



Indicates a potentially hazardous situation that, if not avoided, could result in minor or moderate injury.



Indicates information about procedures that, if not observed, could result in damage to equipment or corruption to and loss of data.

General Safety



Do not operate or work on this equipment unless this manual has been read and all instructions are understood. Failure to follow the instructions or heed the warnings could result in injury or death. Contact any Rice Lake Weighing Systems dealer for replacement manuals.



Failure to heed could result in serious injury or death.

Do not allow minors (children) or inexperienced persons to operate this unit.

Do not operate without all shields and guards in place.

Do not use for purposes other than weighing.

Do not place fingers into slots or possible pinch points.

Do not place hands, feet or any body part underneath the scale at any time. The scale could be lowered, crushing body parts.

Do not use any load bearing component that is worn beyond 5% of the original dimension.

Do not use this product if any of the components are cracked.

Do not exceed the rated load limit of the unit.

Do not make alterations or modifications to the unit.

Do not remove or obscure warning labels.

Keep hands, feet and loose clothing away from moving parts.

Some procedures described in this manual require work inside the indicator enclosure. These procedures are to be performed by qualified service personnel only.

When lowering the scale, ensure that everyone is clear of the scale and any moving parts.

Use two hands when gripping the lift handle to raise or lower the scale.

Be sure the gates are latched or tied inward before transporting the scale.

Ensure all three hitch lock pins are installed and the suspension stops are in the transport position before moving the scale.

1.2.1 Animal Safety



Animal safety is a very serious issue and must be observed when handling any type of animal.

The scale surface may become slippery during use; a buildup of manure on the scale may reduce traction. It is recommended that necessary precautions are taken to maintain an acceptable level of animal footing.

1.2.2 Calibration

Do not calibrate this scale with a weight cart having a gross weight in excess of 25% of the total capacity of the scale (3,750 lb or 1,700 kg max for the MAS-P 8 x 13, 5,000 lb or 2,268 kg max for MAS-P 8 x 18). This device is designed to be calibrated with single block weights spread evenly throughout the floor of the scale. Shift tests should not be done with more than 4,000 lb or 1,815 kg in a 4' x 4' area.



Failure to comply with this warning will result in damage to the scale and void the warranty.

1.2.3 Safety Decals



1



2



3



4



5



6



7



8

NOTE: Items 2-4 are on units equipped with the 920i Weighcenter only.

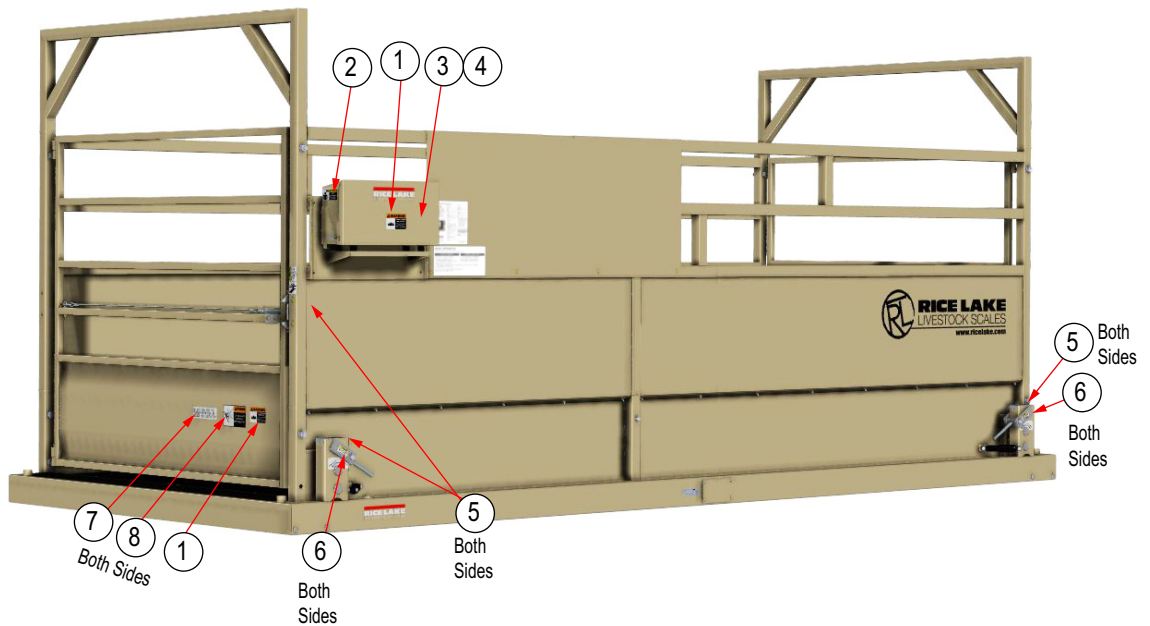


Figure 1-2. Safety Decal Locations

| Item No. | Part No. | Description | Qty |
|----------|----------|---|-----|
| 1 | 151908 | Read Manual | 3 |
| 2 | 151904 | Caution, Low Clearance (Weighcenter) | 1 |
| 3 | 151906 | Warning, Do Not Open (Weighcenter) | 1 |
| 4 | 151907 | Warning, Do Not Leave Tray Down (Weighcenter) | 2 |
| 5 | 151909 | Caution, Pinch Point | 14 |
| 6 | 151910 | Caution, Always Grip With Two Hands | 4 |
| 7 | 128266 | Do Not Use For Transportation of Goods | 2 |
| 8 | 151902 | Warning, Opens Quickly | 2 |

Table 1-1. Safety Decals Parts List

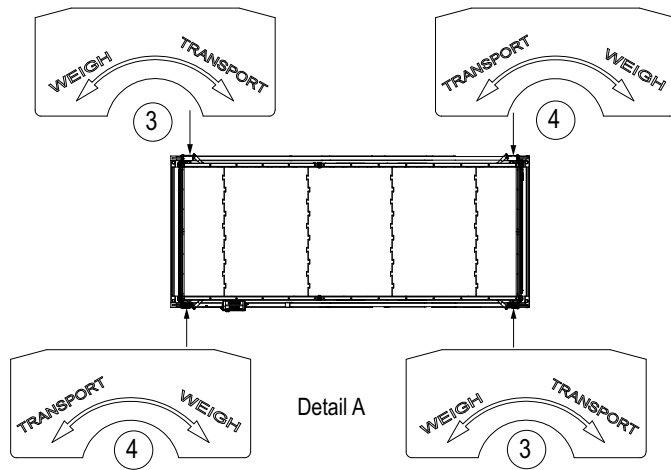
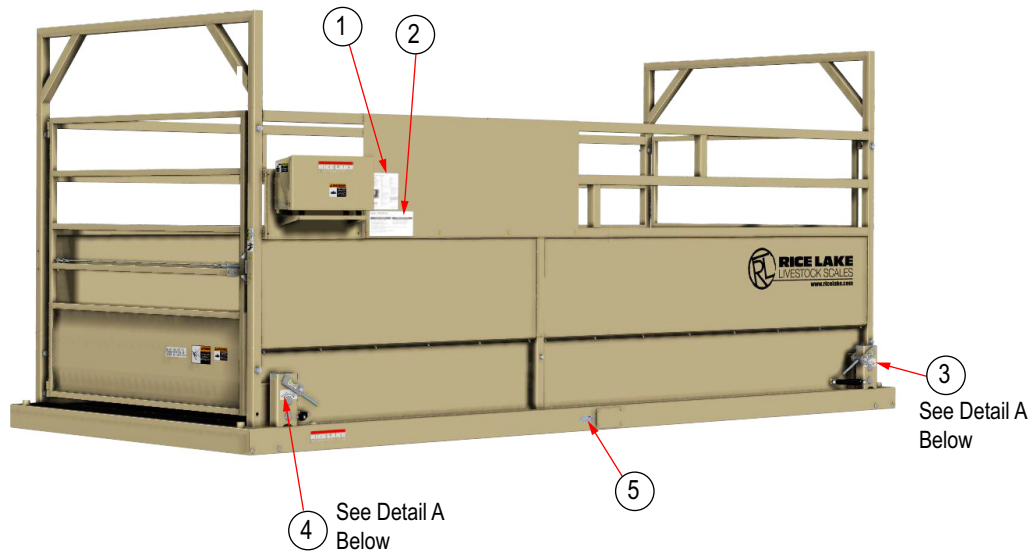


Figure 1-3. Non-Safety Decals

| Item No. | Part No. | Description | Qty |
|----------|----------|-----------------------------------|-----|
| 1 | 164911 | Label, 920i Weighcenter Operation | 1 |
| 2 | 127091 | Label, Basic Operation | 1 |
| 3 | 132692 | Label, Weigh/Transport | 2 |
| 4 | 127094 | Label, Weigh/Transport | 2 |
| 5 | 16863 | Serial Number Label | 1 |

Table 1-2. Non-Safety Decals Parts List

1.3 Unloading

Follow instructions below to unload the scale.

1.3.1 Slinging the Scale

The MAS-P can be slung with four equal length straps connected from the lifting lugs to a single point in the center.

- Strap length 8 x 13 = 7' minimum
- Strap length 8 x 18 = 10' minimum

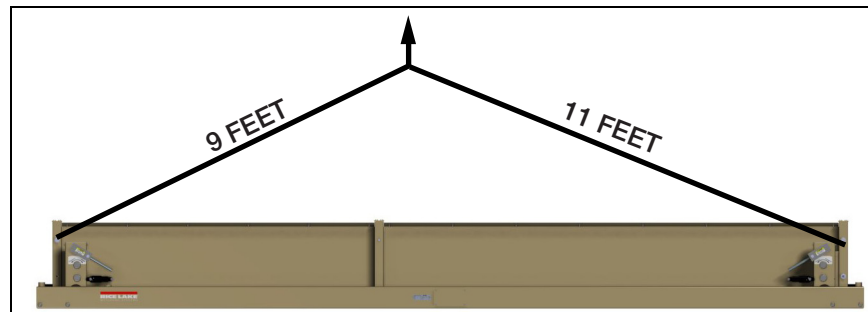


Figure 1-4. Sling Scale

1.3.2 Lift the Scale

If stacked, monitor the four corners directly below the lifting fixtures. Each corner has a shipping stub inserted, these stubs are not bolted in place, ensure they remain with the lower scale.

1. Discard the shipping stub once the upper scale of the stack is removed.

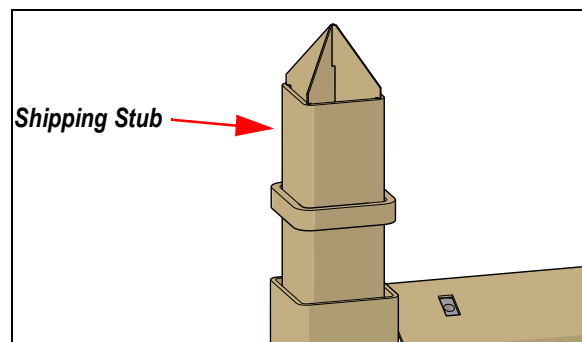


Figure 1-5. Shipping Stub

2. The scale can now be stored or placed on a relatively flat location to be assembled.

1.3.3 Remove Lifting Fixture

Remove the lifting fixture after the scale has been placed in position.

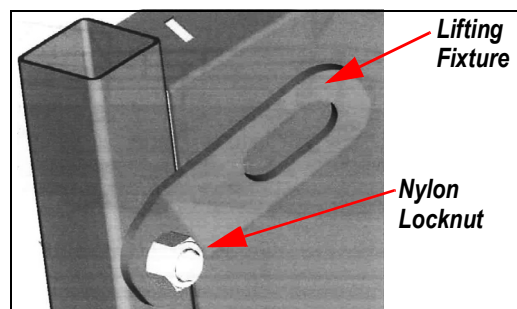


Figure 1-6. Lifting Fixture

1. Remove nylon locknut from the bolt installed for shipping.
2. Remove lifting fixture from bolt.
3. Reinstall nut, retain lifting fixture for future moves.

1.4 Lifting Assembled Scale

Lift the scale only in designated locations. The scale can be lifted by four straps and a crane or loader. Ensure the scale is in transport mode when loading and transporting the scale ([Section 2.3 on page 7](#)).

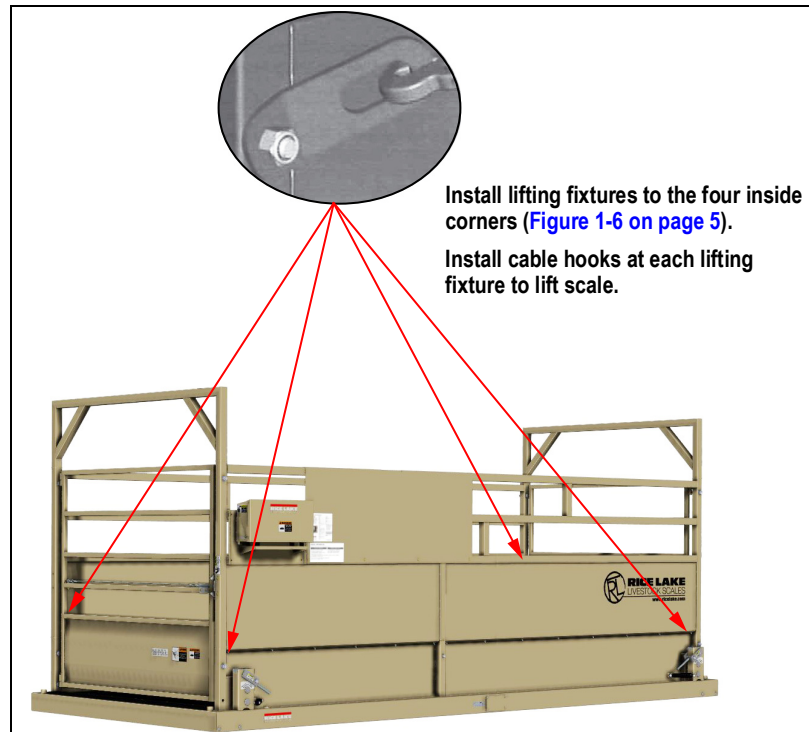


Figure 1-7. Lift Points

1.5 Indicator Package Removal

The indicator is shrink-wrapped for transportation. Be careful when removing to avoid damaging the indicator. Remove the indicator, then re-strap the walls if the scale is to be transported while packaged.

2.0 Installation

As with any weighing equipment, the accuracy of the scale is dependent on the installation. The following points must be adhered to when installing the MAS-P Animal Scale.

In all installations, the scale must be level to ensure proper operation. All MAS-P Animal Scales are equipped with a bubble level (located on top of the base frame). Ensure the bubble is fully inside the circle marked on the top of the level.

2.1 Permanent Installation

Rice Lake Weighing Systems recommends a concrete foundation (piles or piers) for permanent installations. The foundation must be able to support the gross weight of the scale (scale dead weight plus scale capacity), and the piles or piers must be situated directly under the load cell stands (shimming location). The foundation must not be subject to distortion or motion due to frost action. A qualified local professional should be consulted to recommend the proper size of foundation for the location. Foundation dimensional requirements are available from the dealer or Rice Lake Weighing Systems. Requirements may vary from one Weights and Measures jurisdiction to another, please contact the local office.

2.2 Portable Installation

The MAS-P is ideal for use in many locations. Load and unload the scale as described in the [Section 1.4 on page 6](#). Place the scale in a level location, then shim (with wood or metal shims) under the load cell stands to ensure scale is level. Please contact the local Weights and Measures office regarding the moving of the scale to ensure the validity of the certification.

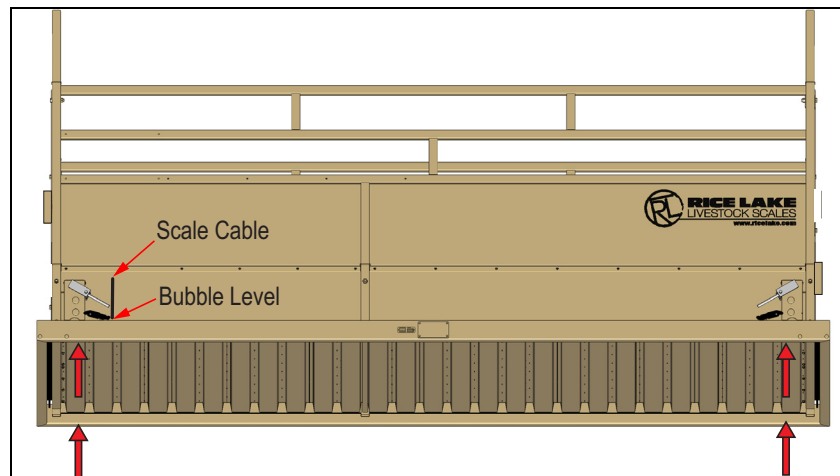


Figure 2-1. Shim/Load Cell Stand Locations

2.3 Switching Modes

The MAS-P has two modes, Weigh and Transport.

2.3.1 Convert to Weigh Mode

1. Place the scale in as level a location as possible.
2. Ensure there are no obstructions under the deck that would affect weighing accuracy.
3. Check the bubble level. Use shims or timbers to ensure the scale is as close to level as possible. The scale weighs properly on any firm surface up to 6% grade (3° slope).
4. Inspect all corners of the scale. Although the scale weighs properly up to 3° off level, individual corners of the scale should not be allowed to teeter. If any of the corners are not contacting the ground, place shims directly under the base frame under the load cell stands, to prevent teetering.
5. Plug the indicator into the scale cable. The scale cable runs from the junction box (inside the base frame) to the indicator.
6. Connect power to the indicator and switch **ON**.
7. Using both hands, raise the platform to enable the scale ([Figure 2-2 on page 8](#)). The scale is now ready to weigh.



WARNING

The lift mechanism is an over center cam style lift and lock. If not disturbed, the scale will remain locked in the up position. Always grip lift handle with two hands when raising and lowering the scale.



Note

Cam levers point toward each other in weigh mode and away from each other in transport. See decals for direction of levers in each mode.

2.3.2 Convert to Transport Mode

When the scale is not in use, the scale should be locked down in transport mode to prevent any accidental overload of the weigh system.

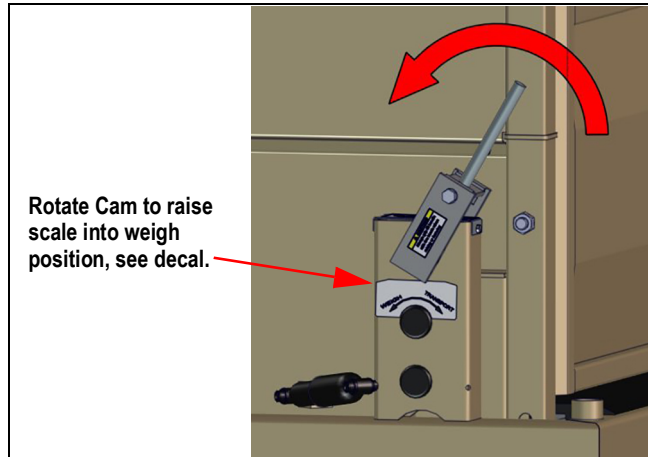


Figure 2-2. Scale Lift

1. Using both hands, disengage and lock the scale in transport mode by rotating all four cam levers counterclockwise into the fully locked position.



WARNING

The lift mechanism is an over center cam style lift and lock. If not disturbed, the scale remains locked in the up position. Always grip lift handle with two hands when raising and lowering the scale.



Note

Cam levers point toward each other in weigh mode and away from each other in transport. See decals for direction of levers in each mode.

2. Turn off indicator.

A stand alone indicator should be stored indoors when the scale is not in use. The weighcenter should be closed and latched to prevent damage.

2.4 Cage Wall Assembly

2.4.1 Apply the Silicone Bead

Add a silicone bead before installing the walls.

1. Use mineral spirits to clean the upper flange of the floor and the lower wall flange.
2. Apply a 1/8" bead of silicone along the upper edge of the floor panel along the entire length.

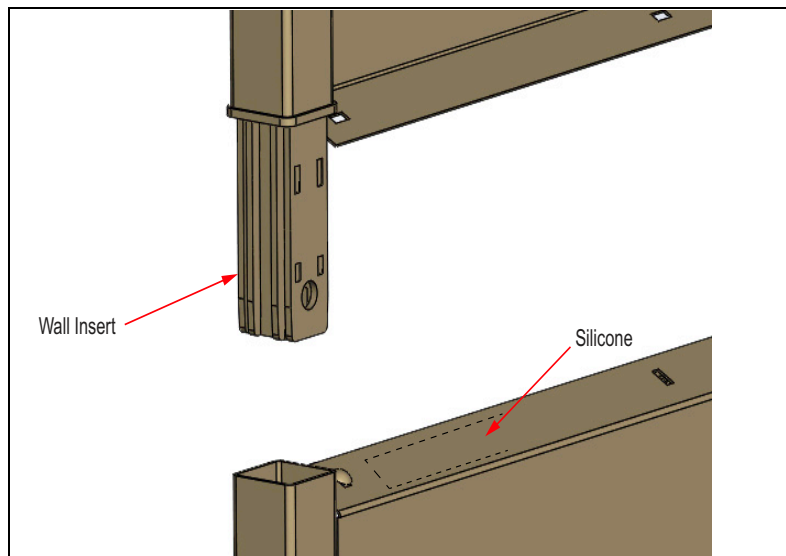


Figure 2-3. Silicone Bead

2.4.2 Install Walls

WARNING Wall installation should be done with two people or an overhead crane.

1. Lift the first wall using one sling in the center. The wall with holes for the indicator is mounted on the left side.
2. Stand the wall vertically and place the inserts from the wall into the tubes of the cage floor. The more vertical the wall, the easier assembly will be.
3. Repeat for opposite wall.
4. Install the top cross-members.
5. Place the 3/4" x 3 1/2" bolts through cage wall and insert on indicator side of cage, head of bolt to the inside.



Note

A come-along from the top of the cross member to bottom of the cage corner post may be required. A ratchet strap is provided in hardware kit.

When both walls are in place, ensure they are perfectly square. Straps may need to be used to pull for squareness.

2.4.3 Install the Gate



Note

Install gate with hinge bolts on opposite side of scale.

Hinge bolts must be assembled with lock washer on the inside of gate and jam nut on the outside.

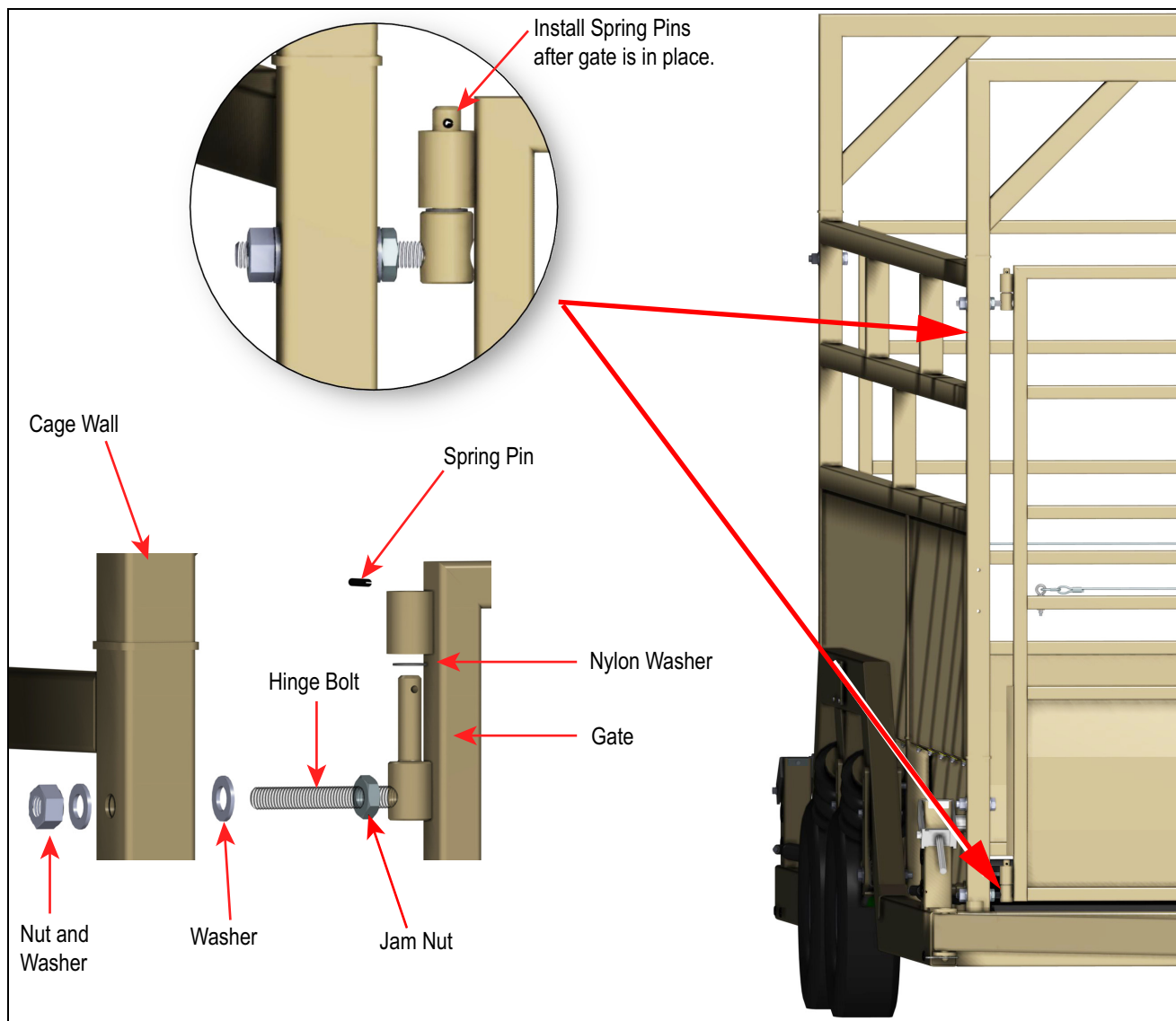


Figure 2-4. Assemble Gate to Scale

1. Install jam nut and lock washer onto hinge bolts. Screw the nut on about 2".

2. Insert one hinge bolt into the lower and upper holes of cage wall with hook portion pointing upward.
3. Install nut and washer onto hinge bolts, securing them to cage wall.
4. Place nylon washer onto hook portion of the upper and lower hinge bolts then install gate onto the hooks.
5. Insert the roll pin through hinge bolts.
6. Repeat steps 2-4 for second gate.
7. Adjust hinge side gap between gate and cage wall to about 3" and snug hinge bolts.

2.5 Gate and Latch Adjustment Procedure



Note

Assemble gates according to the following criteria:

Hinge Bolts - Assemble with lock washer on inside of gate and jam nut on the outside.

Hinge Side Gap - Approximately 3" between the gate and the corner post.

Gate Latch Pin - Install rubber tubing on the latch pin (Mobile units only).

Adjust gates as follows:

1. Adjust the hinge bolts to align the top of the gate on the latch side with the top of the cage wall.
2. Adjust the hinge bolts so the latch side gap is about 1 1/2".
3. Install and adjust the latch so the gate latch pin does not rub on the top or bottom of the latch. Adjust the hinge bolts only if necessary.
4. Ratchet straps can be used diagonally to help square up gates to walls.

2.6 T-Belt

Ensure the T-Belt hold down loops are installed and hooked into the corner posts of the cage.

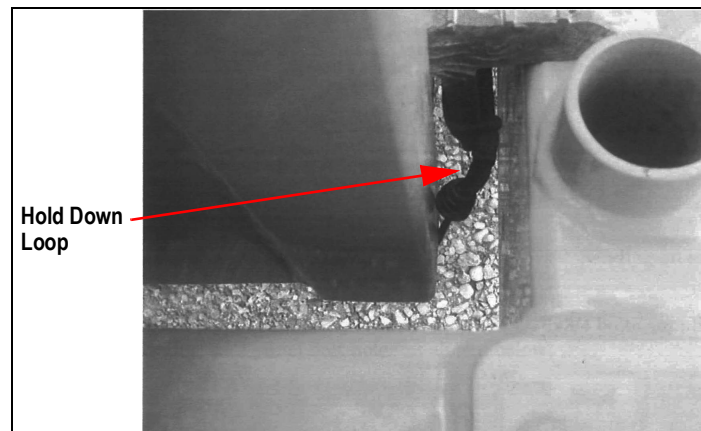


Figure 2-5. T-Belt

2.7 Optional 920i Weighcenter Mounting

The MAS-P is NTEP approved only when purchased with 920i Weighcenter. When using other indicators, it must be re-calibrated each time it's moved.

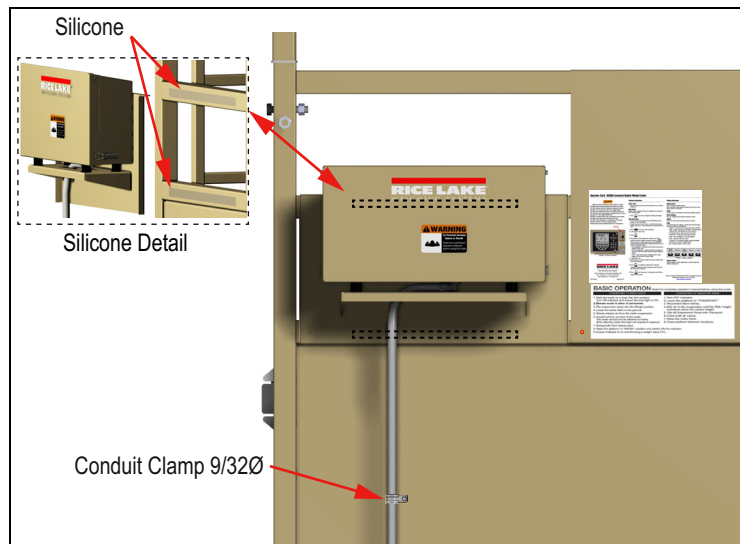


Figure 2-6. Mount Weighcenter

1. Before installing the bracket, a bead of silicone must be added.
2. Clean the wall tubes where the bracket will mount and the space between the holes on the mount bracket with mineral spirits.
3. Place the mounting bracket on the cage wall by pressing the adhesive tightly to the cage.
4. Secure with four bolts.
5. Mount the weighcenter onto the mounting bracket and route the cable.
6. Install the clamps to secure the conduit.
 - Mount the upper conduit clamp using the lower left mounting bracket bolt.
 - Secure the lower end of the conduit by drilling a hole through the cage sheeting and installing the clamp with the bolt provided.

2.8 Optional AC/DC Power Supply Adapter Box Kit

To install the AC/DC Power Supply Adapter Box on a portable animal scale, see the following sections.

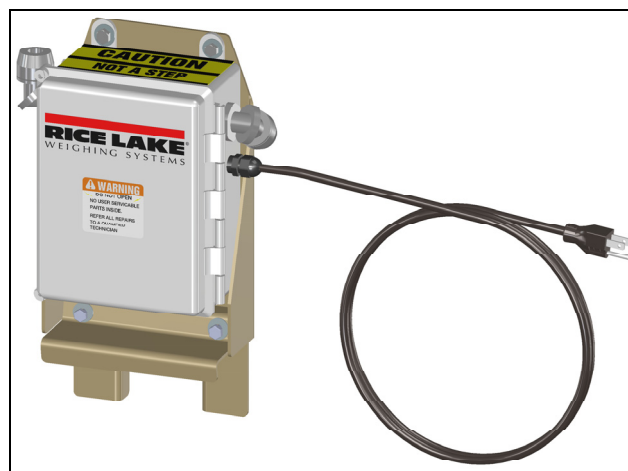


Figure 2-7. AC/DC Power Supply Adapter Box Kit

2.8.1 Mounting to Scale

The mounting bracket can be positioned anywhere along the frame within the limits of the conduit.

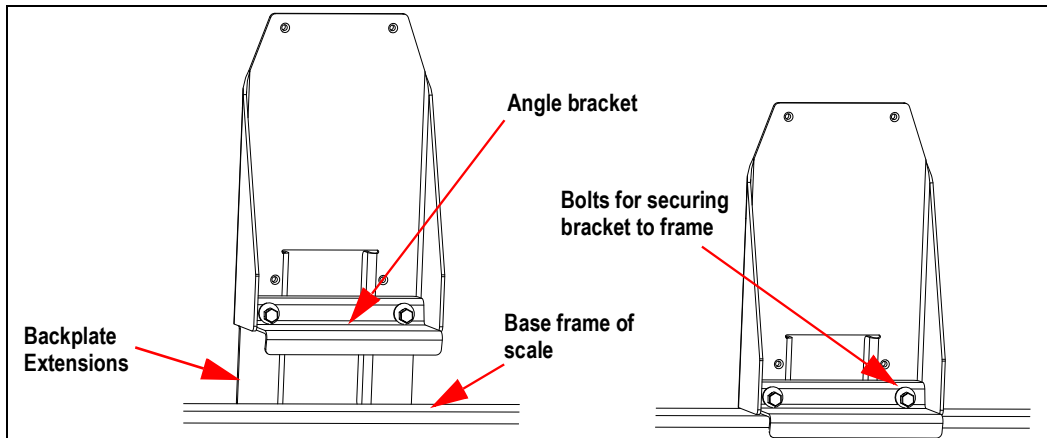


Figure 2-8. Mounting Power Box Assembly to Frame

1. Place the mounting bracket assembly on the outer beam of the bottom frame on the scale in desired location. The angle bracket should extend past the front of the beam, and backplate extensions should be flush with the back of the beam.
2. Tighten bolts to secure to frame. Ensure they are tight enough to resist movement when scale is in use.



Note When ordering a complete package, the enclosure box is assembled to the mounting bracket. Skip to [Step 4](#).

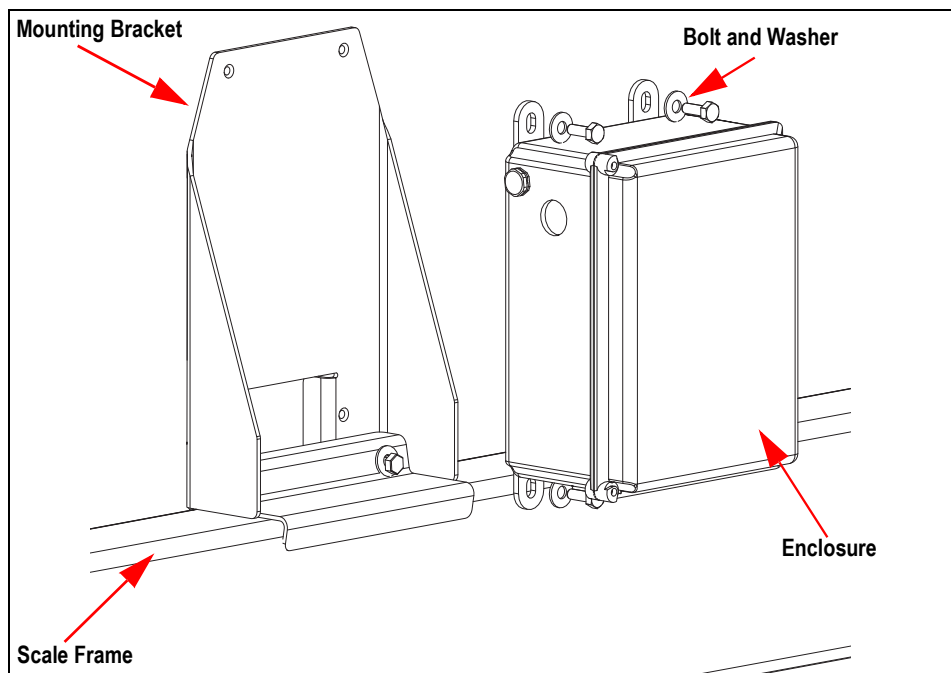


Figure 2-9. Mount Enclosure Box

3. Mount the enclosure box to the mounting bracket using the bolts and washer supplied.

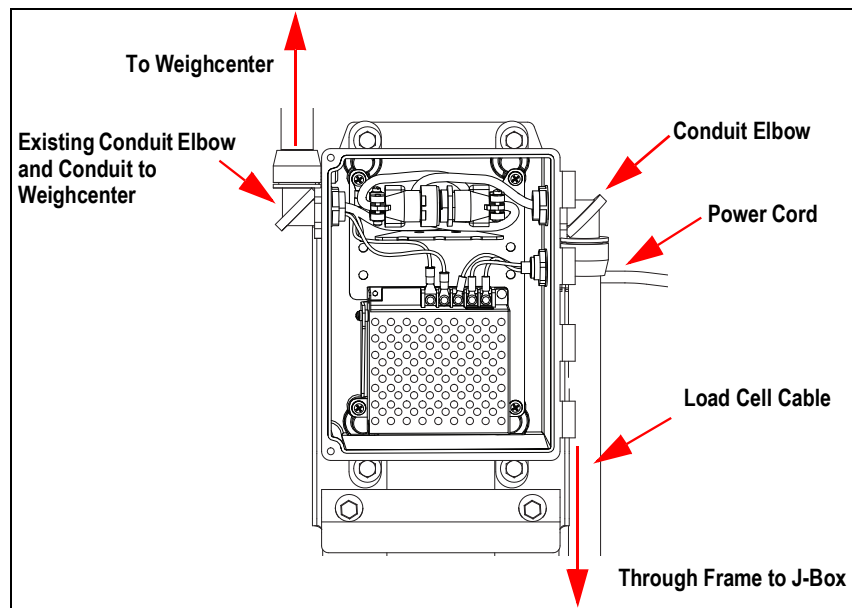


Figure 2-10. Wiring Diagram

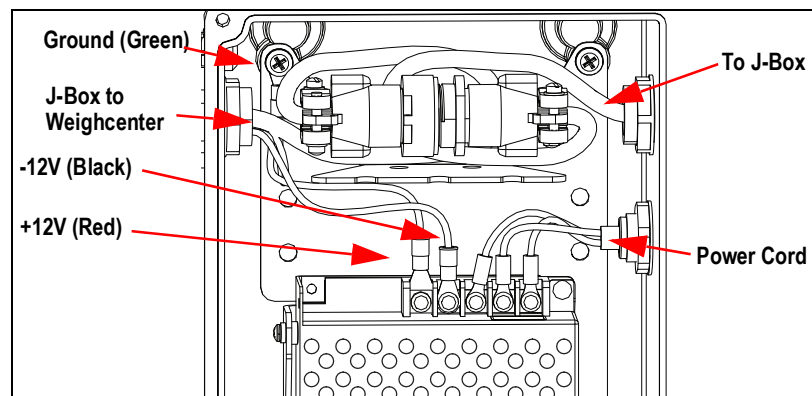


Figure 2-11. Power Supply Connections

4. Disconnect the homerun cable from the weighcenter and pull it out of the conduit and conduit elbow. See the weighcenter manual (PN 159192).
5. Insert the conduit elbow into the designated hole in the enclosure. Secure with nut.
6. Pass the weighcenter cable from the inside of the enclosure through the conduit elbow and conduit to the weighcenter.
7. Reconnect the cable to the weighcenter.

**Note**

The cable to the weighcenter is part of existing assembly and runs through existing conduit retrofitted to power supply box.

8. Disconnect the cable from the junction box.
9. Connect the conduit elbow to the enclosure at designated hole and secure with nut.
10. Connect the other conduit elbow to the frame near the junction box.
11. Pass the junction box cable through the conduit elbow, supplied conduit and conduit elbow on the frame.
12. Reconnect the junction box cable to the junction box.
13. Connect the junction box cable connector and the weighcenter cable connector inside enclosure.
14. Secure connectors and excess cable with zip-ties inside the enclosure.

2.9 Wiring the Scale

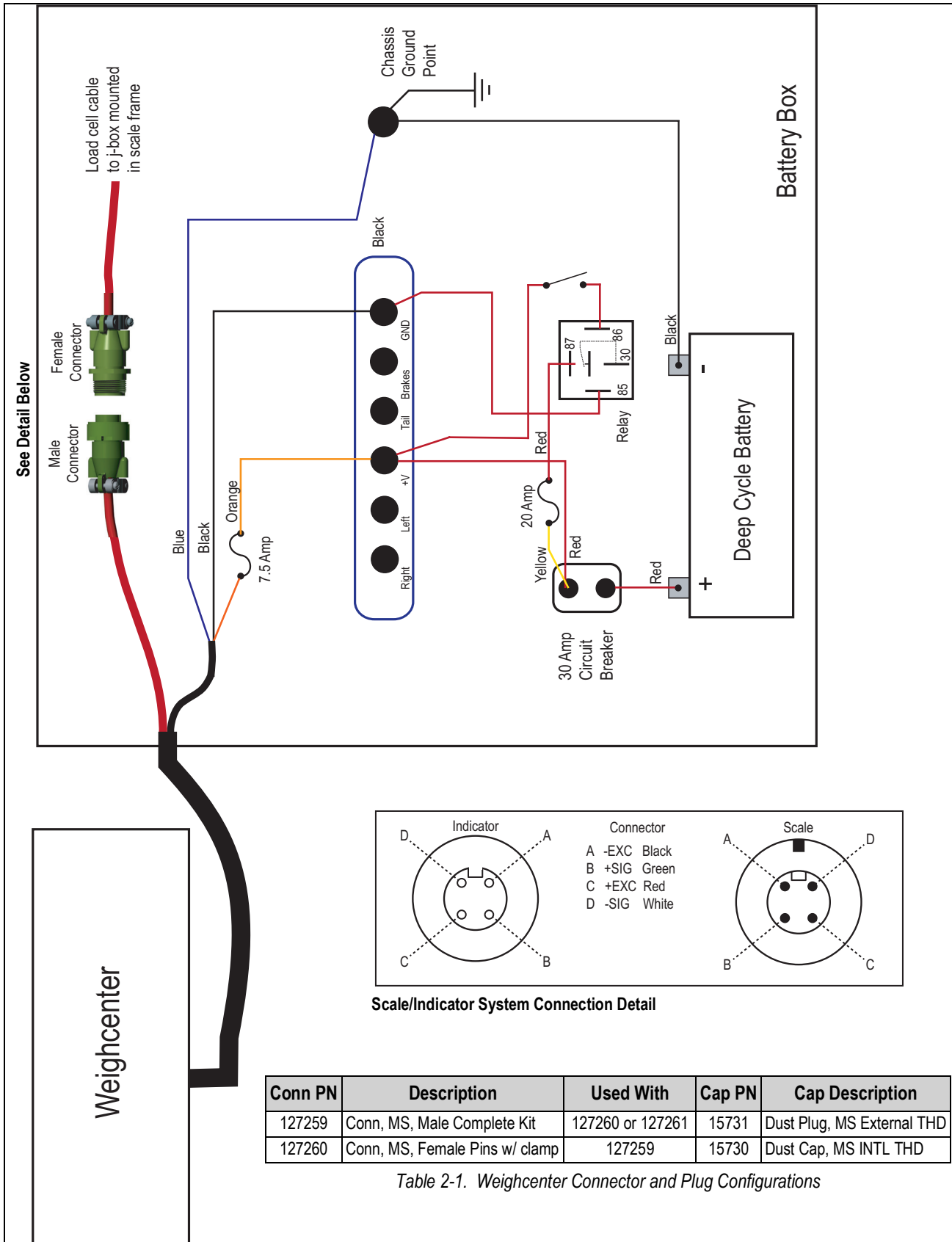


Figure 2-12. Scale Wiring Diagram

2.10 Battery Box Connections

To use with the optional battery box (PN 153765):

1. Connect the scale cable and secure with a cable tie.
2. Connect the power wires (Figure 2-12 on page 14).
3. Replace the battery cover.

2.11 Load Cell Wiring Diagrams



Note Load cell wiring shown is effective for all models built after 09/17/2013. Models built prior to this date should rewire the scale to the updated configuration. For information on rewire, download Technical Bulletin (PN 159193) from www.ricelake.com

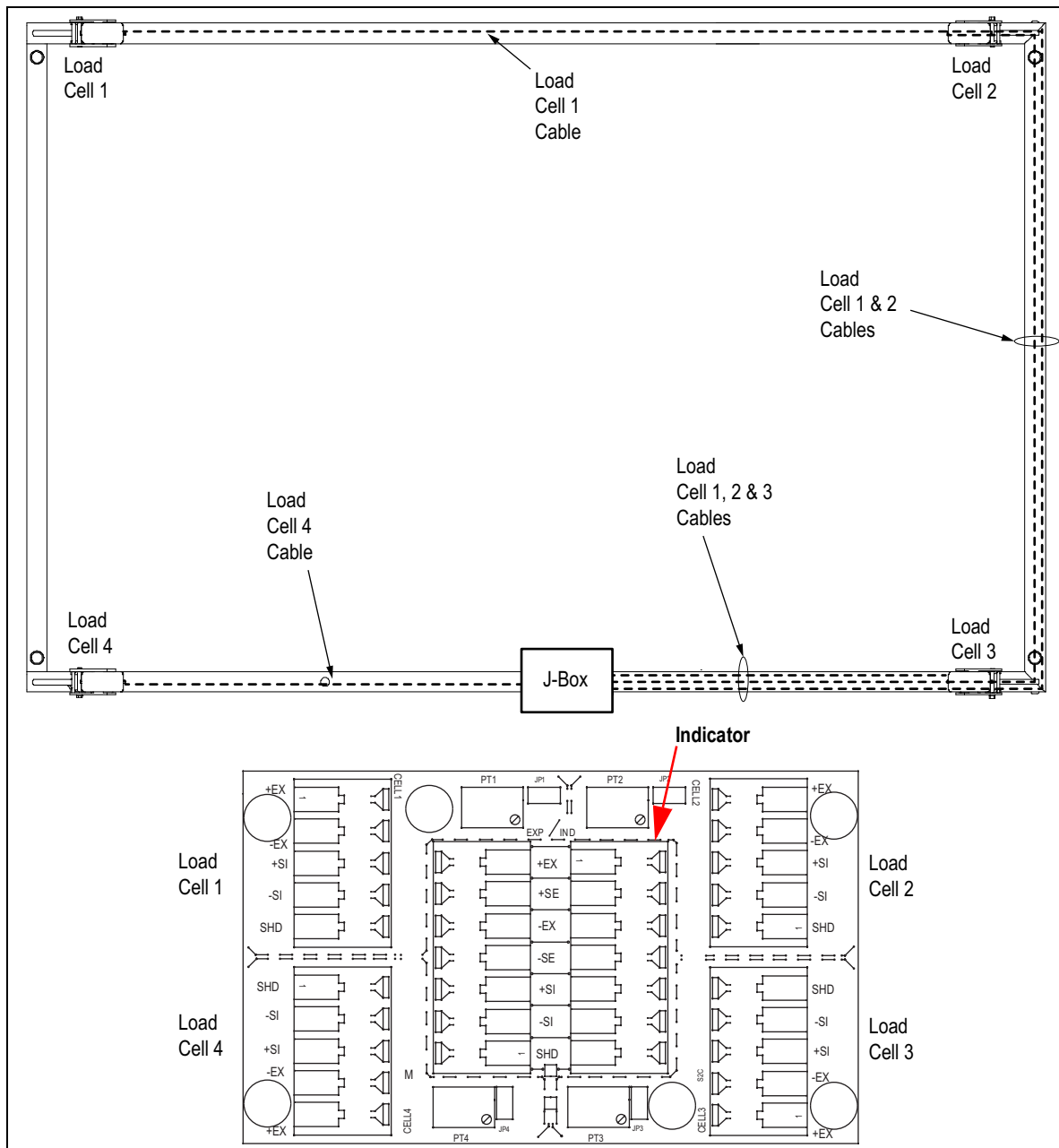


Figure 2-13. Load Cell Wiring Diagram

3.0 Repair Parts

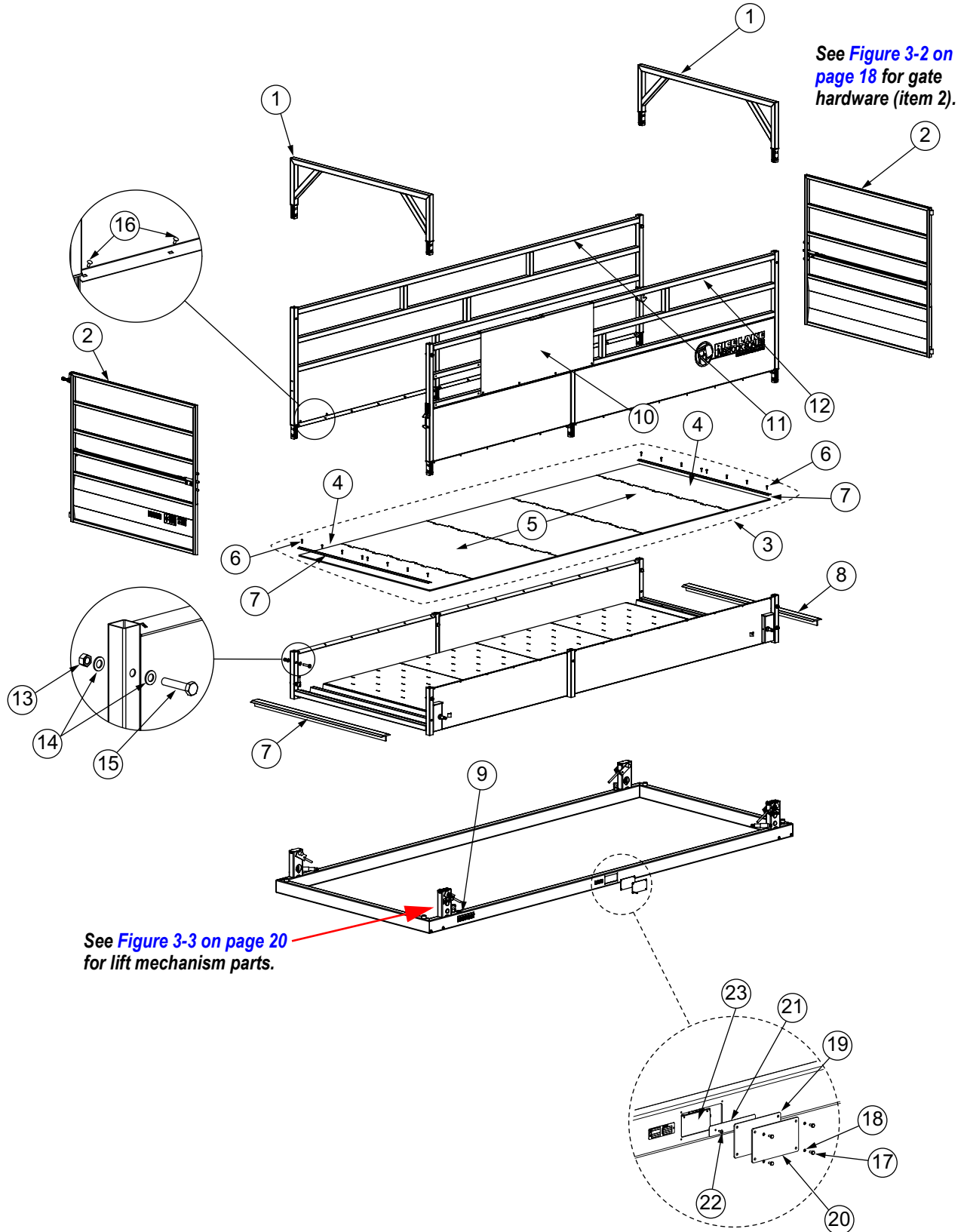


Figure 3-1. MAS-P Parts Illustration

| Item No. | Part No. | Description |
|----------|----------|--|
| 1 | 130931 | Cage Cross-member |
| 2 | 131782 | Gate, MAS, see Figure 3-2 on page 18 |
| 3 | 131992 | Mat Installation Kit - 13' (Includes items 4-7) |
| | 131993 | Mat Installation Kit - 18' (Includes items 4-7) |
| | 128280 | Adhesive, Insta-Cure + (13' Qty 1 / 18' Qty 2) |
| | 126775 | Sealant, Silicone II Black (13' Qty 2 / 18' Qty 3) |
| 4 | 127234 | Matting, MAS End Section - 13' (Qty 2) |
| | 127236 | Matting, MAS End Section - 18' (Qty 2) |
| 5 | 127235 | Matting, MAS Center - 13' (Qty 1) |
| | 127235 | Matting, MAS Center - 18' (Qty 3) |
| 6 | 127053 | Bolt, Carriage 5/16-18 |
| | 21939 | Washer, Plain 5/16 Type A |
| | 35170 | Nut, Lock 5/16-18NC Hex |
| 7 | 131855 | Mounting Strip, Rubber |
| 8 | 126787 | Belting, Scale T Profile (83" width) |
| | 127271 | Hold Down Loops |
| 9 | 127081 | Bubble Level Circular |
| 10 | 130022 | Operator Shield |
| | 128169 | Screw, Self Drilling 12-24 x 7/8 |
| 11 | 131708 | Cage Wall 13' |
| | 131946 | Cage Wall 18' Right |
| 12 | 131708 | Cage Wall 13' |
| | 131947 | Cage Wall 18' Left |
| 13 | 14697 | Nut, Lock 3/4-10 Hex, Nylon Insert Zinc |
| 14 | 15179 | Washer, Plain 3/4 Type A |
| 15 | 15097 | Cap Screw, 3/4-10NC x 3-1/2 (18' center only) |
| | 15099 | Cap Screw, 3/4-10NC x 3-3/4 HEX head Grade 5 Steel |
| 16 | 72083 | Bolt Carriage 5/16 x 1/2 Round Head Grade A Zinc |
| | 14646 | Nut 5/16 Flanged Serrated |
| | 21939 | Washer, Plain 5/16 Type A |
| 17 | 127007 | Screw, Cap 1/4-20 x 1/2 |
| 18 | 15147 | Washer, Lock 1/4 Regular |
| 19 | 126819 | Foam Gasket Junction Box |
| 20 | 127740 | Cover Plate Scale Frame/Junction Box |
| 21 | 131885 | Mount Plate for Junction Box |
| 22 | 121129 | Screw 10-32 x 0.5 |
| | 14633 | Nut, 10-32 |
| 23 | 88956 | Junction Box |
| NS | 127561 | Scale Cable Female MS Conn 132" |
| NS | 131374 | Paint, Touch-up |

Table 3-1. MAS-P Parts List

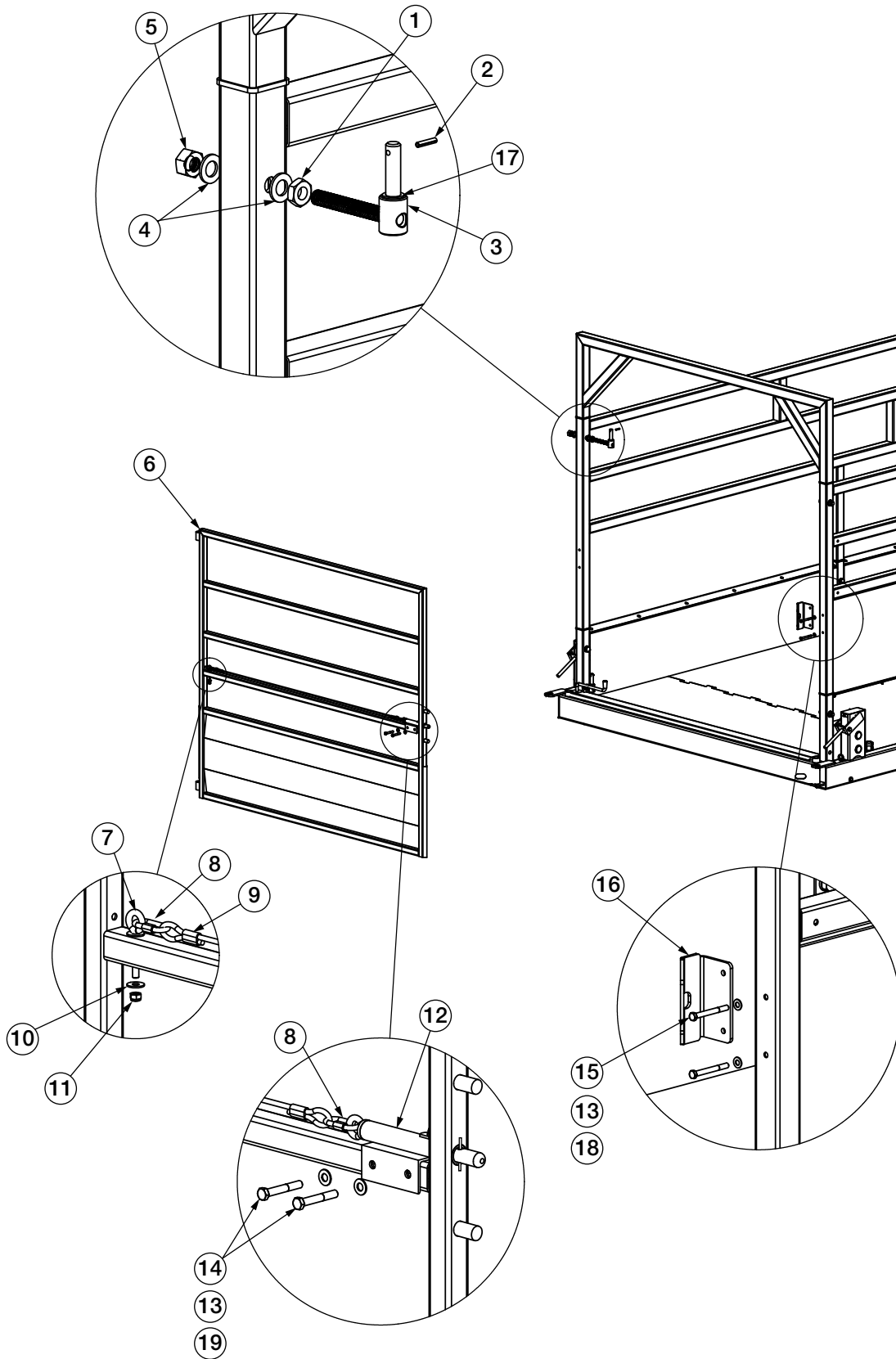


Figure 3-2. Gate Component Details

| Item No. | Part No. | Description |
|----------|----------|---------------------------------------|
| 1 | 132217 | Jam Nut, 3/4-10NC |
| 2 | 110950 | Pin, Spring 1/4 x 1 1/4" |
| 3 | 165944 | Hinge Bolt |
| 4 | 14697 | Washer, 3/4" |
| 5 | 111074 | Nut, 3/4-10NC |
| 6 | 131782 | Gate, MAS |
| 7 | 131701 | Eye Bolt, 5/16-18 x 2 1/2" |
| 8 | 131887 | Quick Link 1/4" |
| 9 | 131886 | Cable, 1/4" OD x 6' |
| 10 | 21939 | Washer, 5/16" |
| 11 | 14646 | Nut, Lock 5/16-18NC |
| 12 | 131784 | Gate Latch Assembly |
| | 131702 | Spring |
| | 160302 | Hairpin |
| 13 | 21938 | Washer, 3/8 Lock (4 per strike plate) |
| 14 | 151559 | Cap Screw, 3/8-16NC |
| 15 | 151560 | Cap Screw, 3/8-16 x 3/4 |
| 16 | 155916 | Strike Plate |
| 17 | 151807 | Washer, Plain 3/4" Nylon |
| 18 | 22072 | Nut, 3/8-16 Grade 5 |
| 19 | 132684 | Nut, (Used with Latches) |

Table 3-2. MAS-P Gate Parts List

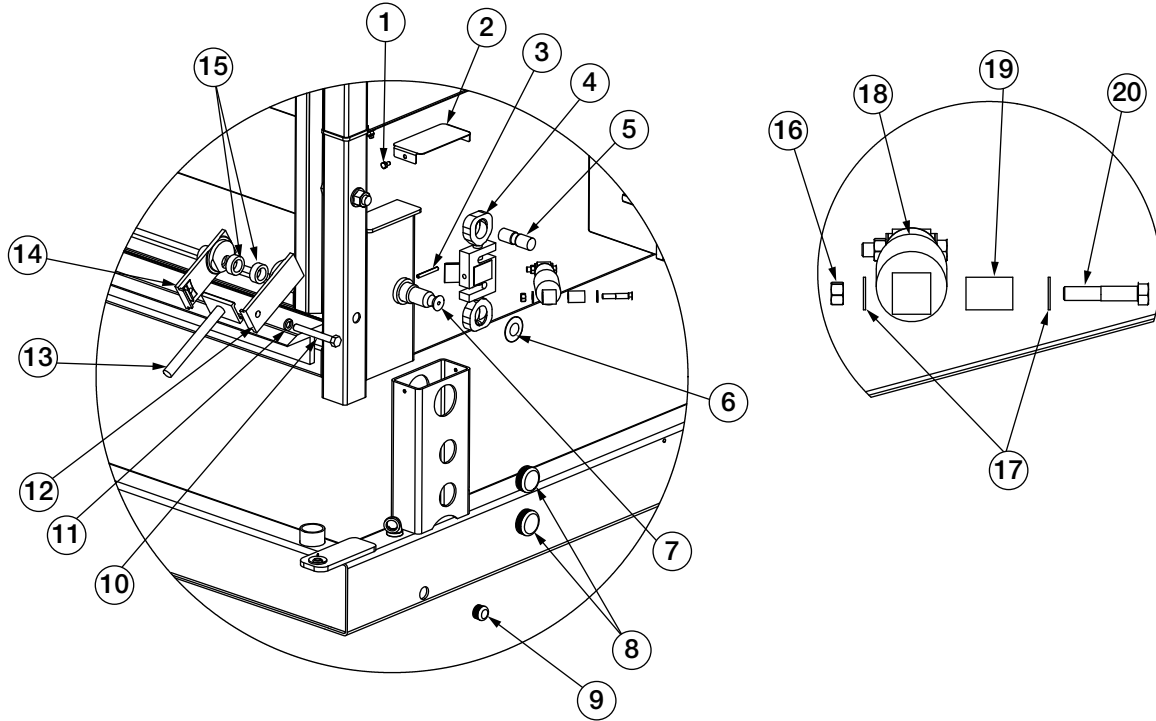


Figure 3-3. MAS-P Lift Mechanism Detail Parts Illustration.

| Item No. | Part No. | Description |
|----------|----------|---|
| 1 | 127007 | Cap Screw, 1/4-20 x 1/2" |
| 2 | 127200 | Load Cell Cam Stand Cover SS |
| 3 | 126926 | Pin Spring Slotted 1/4 x 2-1/4" |
| 4 | 127673 | Load Cell S-Type 10K |
| 5 | 128184 | Upper Notched Load Cell Pin |
| 6 | 174640 | Lower Load Cell Retainer |
| 7 | 127177 | Lower Notched Load Cell Pin |
| 8 | 126789 | Plug Plastic Round 2" |
| 9 | 126788 | Plug Plastic Round 1-1/8" |
| 10 | 14765 | Bolt 1/2-13NC x 4 |
| 11 | 15167 | Lock Washer 1/2" |
| 12 | 131785 | Cam Lever Without Lock-down - Right Rear |
| | 127676 | Cam Lever with Lock-down - Left Rear |
| 13 | 127732 | Cam Handle Mask |
| 14 | 131787 | Cam Lever with Lock-down - Front Left |
| | 127675 | Cam Lever Without Lock-down - Right Left |
| 15 | 127165 | Spacer Upper Notched Pin |
| 16 | 14656 | Nut 3/8" SS |
| 17 | 15161 | Flat washer 3/8" SS SAE |
| 18 | 128626 | Scale Damper Assembly w/Bushings |
| 19 | 126815 | Bushing, Rubber 7/8 OD x 3/8 ID x 1.25 Long |
| 20 | 22093 | Cap Screw, 3/8-16NC x 2 Hex |
| NS | 127561 | Scale Cable Female MS Conn 132" |

Table 3-3. MAS-P Lift Mechanism Parts List

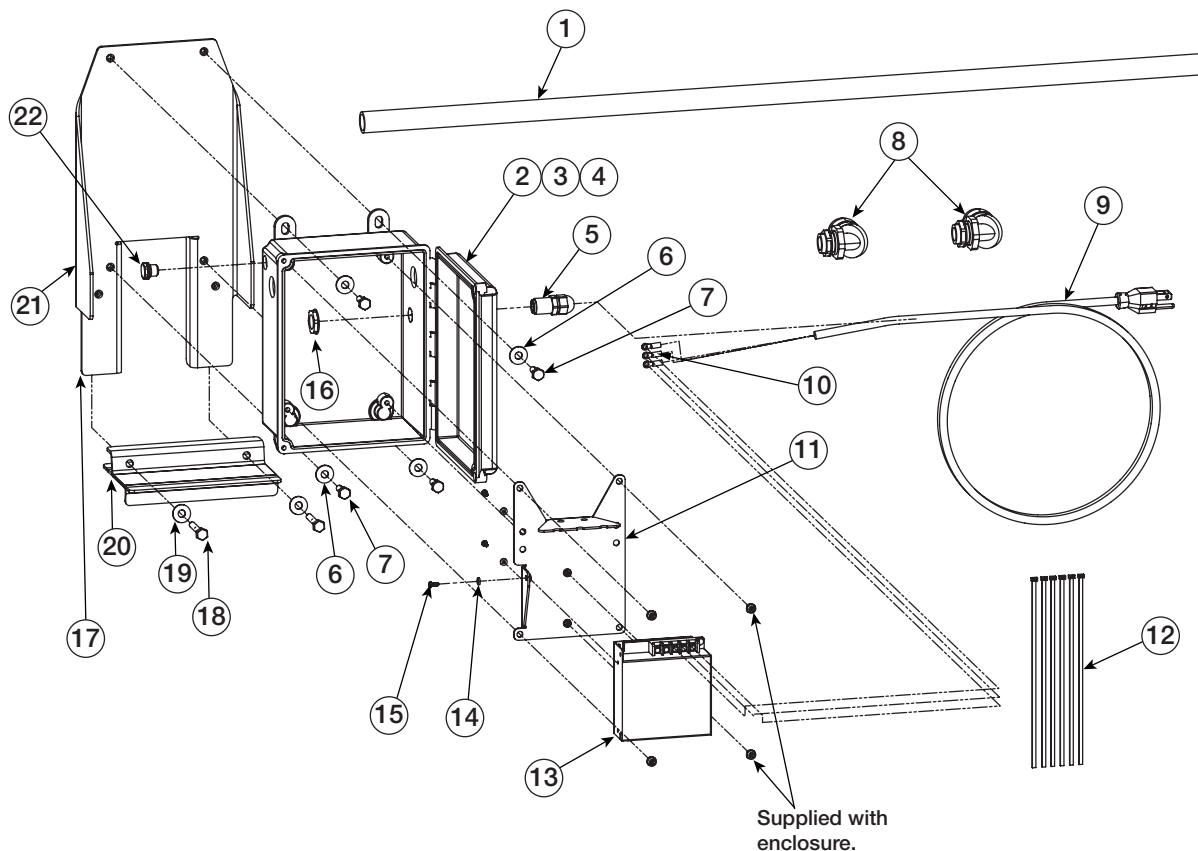


Figure 3-4. AC/DC Power Box Parts Illustration

| Item No. | Part No. | Description |
|----------|----------|---|
| 1 | 128123 | Conduit, Non Metallic |
| 2 | 156759 | AC/DC Adapter Box |
| 3 | 151901 | Decal, Caution Not a Step |
| 4 | 151906 | Decal, Warning Do Not Open |
| 5 | 15656 | Locknut, 3/8 NPT |
| 6 | 81427 | Washer, Flat 1/4 Steel Screw, Cap 1/4-20 x 3/4" |
| 7 | 127008 | Screw, Cap 1/4-20 x 3/4" |
| 8 | 127135 | Conn, Non Metallic Liquid |
| 9 | 105380 | Power Cord, Pigtail |
| 10 | 15694 | Conn, Eye Crimp No 8 |
| 11 | 156795 | AC/DC Power Supply, Mount |
| 12 | 16141 | Cable Tie, 8" Nylon |
| 13 | 156761 | Power Supply, Switching |
| 14 | 127028 | Washer, Flat No 4 18-8 SST |
| 15 | 41757 | Screw, Cap M3-0.5 x 8 |
| 16 | 15655 | Cable, Grip 3/8NPT |
| 17 | 156760 | AC/DC Mounting Assembly (Includes Items 18-21) |
| 18 | 106462 | Screw, Cap, 1/4-20NC x 1 1/2" |
| 19 | 81427 | Washer, Flat, 1/4" Steel |
| 20 | 156764 | Mounting Bracket, Angle |
| 21 | 156829 | Mounting Bracket |
| 22 | 128022 | Vent, Integrated Screw |

Table 3-4. AC/DC Power Box Parts List

4.0 Maintenance

4.1 Maintenance Schedule

Weekly

1. Check entire scale for buildup of debris. Remove any debris found on, under or around the scale.
2. Check for dirt and debris in the load cell stands and clean accordingly.
3. Check all external cables and conduit for damage.

Yearly (in addition to weekly and monthly maintenance)

Disassemble each load cell location and grease all pins and eye bolts.

4.2 Scale Maintenance Procedures

Cleaning Load Cell Stands

It is very important to keep any excess debris from building up in the load cell stand. Lift scale and block it up, clean any dirt out of the load cell stands through the drain holes located at the bottom of the stand.

Disassembly and Greasing

This is very important to ensure the long life of the unit. Use the parts list drawings for item numbers.



Use quality high-pressure grease.

Avoid bending or twisting the load cell wires.

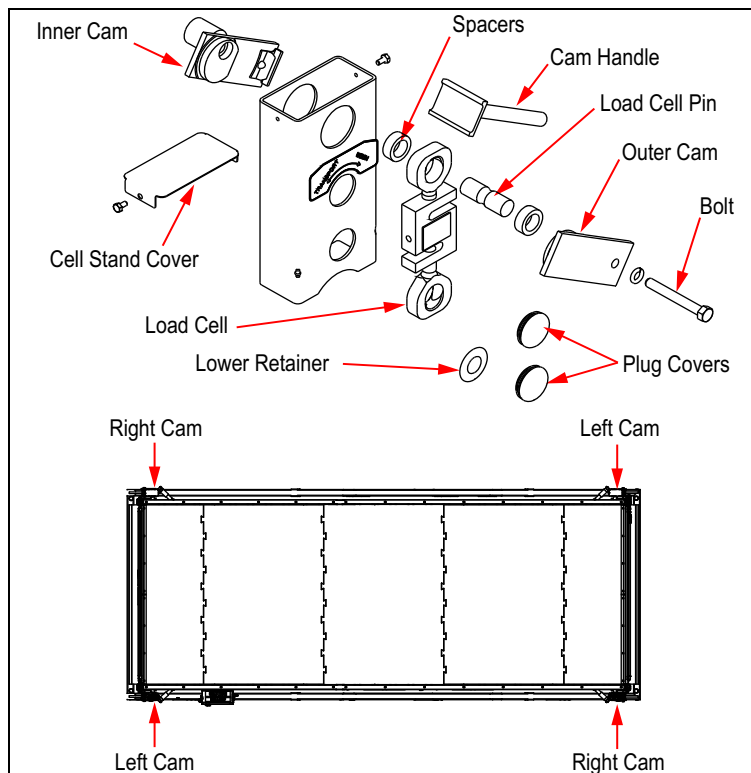


Figure 4-1. Disassembly and Greasing

1. Remove cell stand cover.
2. Remove plug covers.
3. Remove the bolt which holds together the outer cam, load cell pin and inner cam.
4. While holding the cam handle, remove the outer cam.

5. Remove load cell pin and spacers. The load cell assembly is free on top and rests against the inside of the cell stand.
6. Remove inner cam.
7. Remove lower retainer.
8. Grease all bearing surfaces except where the eye bolt contacts the pin (upper and lower pins, cams, upper and lower eye bolts).
9. Reassemble in reverse order as described above.

4.3 Troubleshooting


| Symptom | Probable Cause | Action |
|---|---|---|
| The scale indicator will not power up. | Blown in-line fuse . | Replace in-line fuse, PN 126870. The fuse holder is located near the battery or the indicator. |
| | Voltage is less than 11 volts. | Repair faulty electrical system. The RLWS panel requires at least 11 volts to operate properly. |
| Indicator turns off or resets in the middle of a transaction. | Low voltage to control panel. | Check other electrical equipment that may be operating. Check for corrosion or damaged wiring. Measure voltage. |
| The weight reading on the indicator is unstable. | The circuit board in the control panel may be wet or the junction box for the load cells may have moisture. | Dry any areas that are contaminated with moisture. Check for leaks and reseal. |
| | A load cell cable may be pinched or damaged. | Contact Rice Lake Weighing Systems or a qualified dealer for support. Cutting the load cell cable will void the warranty. Special repair techniques are required. |
| The scale has a positive error when loading or a negative error when unloading. | Mechanical binding problem on scale. | Check for debris around or under the scale. Check each load cell location for foreign material. Check all items that run from on the scale to off the scale. Check all gates or gathering panels for contact. |
| The scale has a negative error when loading or a positive error when unloading. | Moisture is present somewhere in the electrical system. | Dry any areas that are contaminated with moisture. Check for leaks and reseal. |
| Printer is not functioning – nothing is being printed at all. | Is the release light on the printer flashing? This could indicate a low voltage to the printer. | The system requires at least 11 volts to operate properly. The truck may need to be running to supply enough power, or the truck may have a faulty electrical system. |
| | The print head may be jammed with paper. | Remove the print head cover and ribbon. Check for bits of paper stuck in the paper feed mechanism. |
| | The print head may be packed with dirt from operating in dusty conditions | Remove the print head cover and ribbon. Blow out with air. If the printer is very dirty it may require service by a qualified technician. |
| The printer is printing unrecognizable characters. | The power supply is excessively noisy. | Contact Rice Lake Weighing Systems, an in-line power filter may be necessary. |
| | Incorrect dip switch settings. | Settings are 1,7,8 ON rest OFF. |
| The printing on the ticket is faint or hard to read. | The printer's ink ribbon may need to be replaced. | Replace ribbon, PN 29583. |
| | The printer head may be damaged. | Requires service by a qualified technician. |
| Scale will not ZERO. | Weight on scale larger than the allowable ZERO window. | Clean the scale deck of debris, then ZERO the scale. |

Table 4-1. Troubleshooting

IMPORTANT

If a problem with the scale is suspected, contact Rice Lake Weighing Systems or a qualified local scale dealer.

4.4 Specifications

| | MAS-P 8-13 | MAS-P 8-18 |
|---------------------------------------|--|---|
| Length Overall | 13'- 6" | 19'- 3" |
| Length Deck | 12'- 9" | 18'- 6" |
| Width Overall | 8'- 4.13" | 8'- 4.13" |
| Width Deck | 6'- 11.5" | 6'-11.5" |
| Deck Height | 6" | 6" |
| Height | 100.2" | 100.2" |
| Deck Covering | 5/8 in Recycled Rubber Flooring System | |
| Weight | 3230 lb | 3940 lb |
| Capacity | 15000 lb | 20000 lb |
| Section Cap | 10000 lb | 20000 lb |
| Approval Class | IIIL (IIHHD) | IIIL (IIHHD) |
| Approvals |  99-091 | Measurement Canada Approved AM4847 |
| Grad Size | 5 lb (2 kg) | 5 lb (2 kg) |
| **Paint | Powder Coated Galvanized Steel | |
| **Structural Steel is not galvanized. | | |

Notes:

Size / Model # _____

Serial # _____

Date Purchased _____

Unit ID # _____



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