

Multiple Animal Scale Portable

MAS-P

Installation Manual



RICE LAKE[®]
WEIGHING SYSTEMS
To be the best by every measure[®]



Jamieson Equipment Company
www.jamiesonequipment.com
toll free 800.875.0280

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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 through before attempting to use the system. Although the *MAS-P* has been designed for easy set up and use, a thorough understanding of this manual will ensure that the user will receive the maximum benefit from the system.

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

1.1 Overview

The *MAS-P* shown below, 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 7% grade (4-degree slope) and has a low deck height (6") for easy step in.



Figure 1-1. MAS-P Animal Scale

1.2 Safety

Safety Symbol Definitions:



Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury.



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



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



Important

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 you have read and understand the instructions and warnings in this manual. Failure to follow the instructions or heed the warnings could result in injury or death. Contact any Rice Lake Weighing System dealer for replacement manuals. Proper care is your responsibility.



Failure to heed may 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.

Always be certain when lowering the scale 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.



Important

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 build-up of manure on the scale may reduce traction. It is recommended that you take any necessary precautions to maintain an acceptable level of animal footing.

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 (3750 lbs or 1,700 kg max for the MAS-P 8 x 13, 5000 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.

1.2.1 Safety Decals



1



2



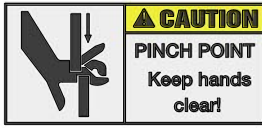
3



4



5



6



7



8

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

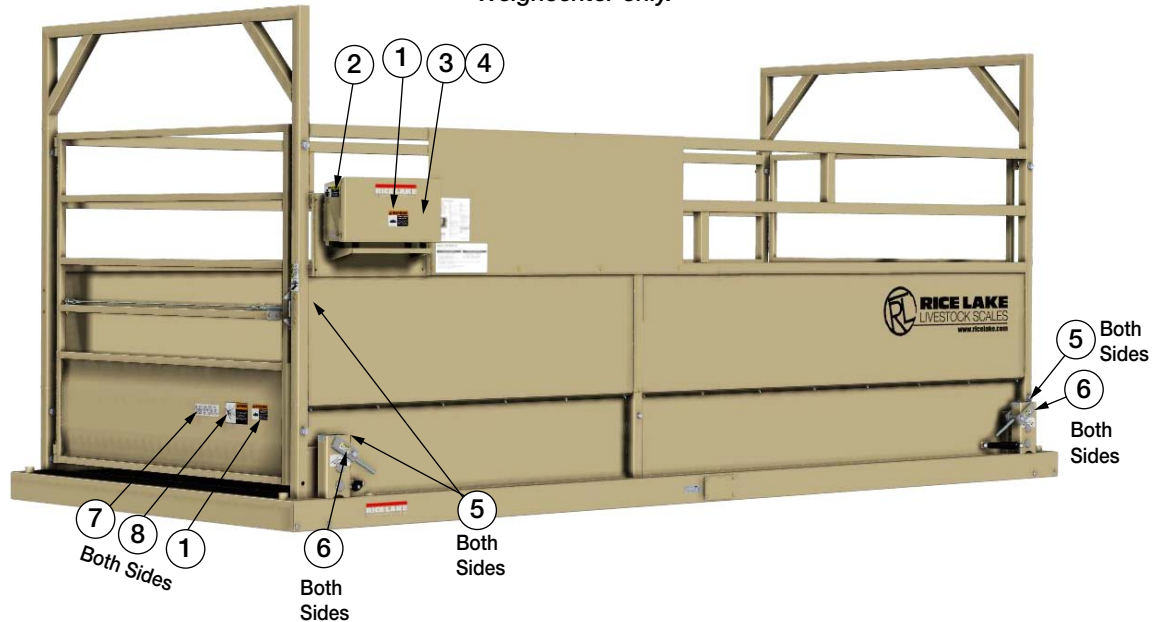


Figure 1-2. Safety Decal Locations

Item #	Part #	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 Decal Parts List

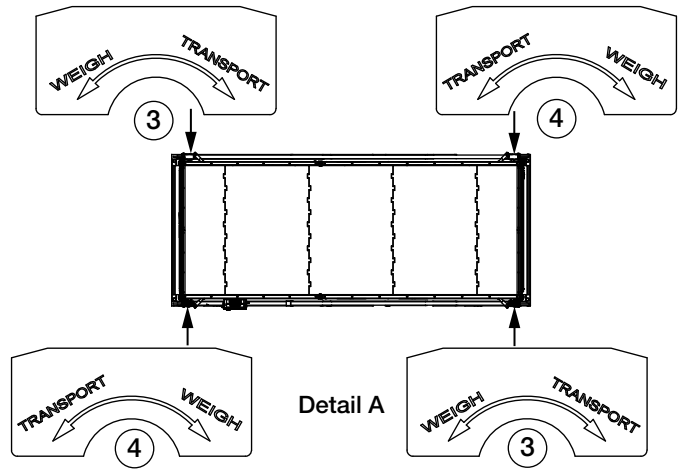
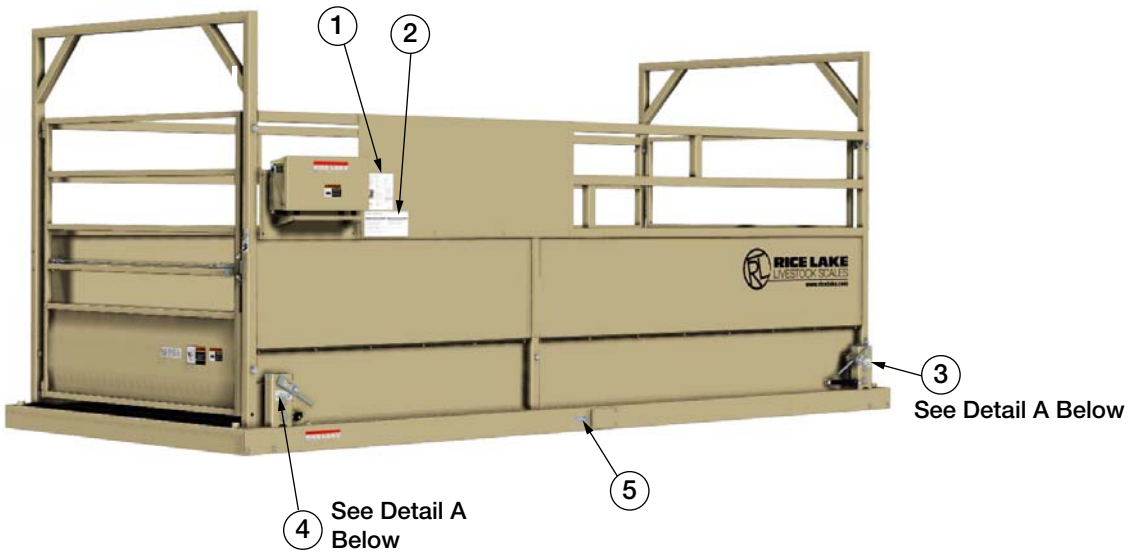


Figure 1-3. Non-Safety Decals

Item #	Part #	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 ft minimum
- Strap length 8 x 18 = 10 ft minimum

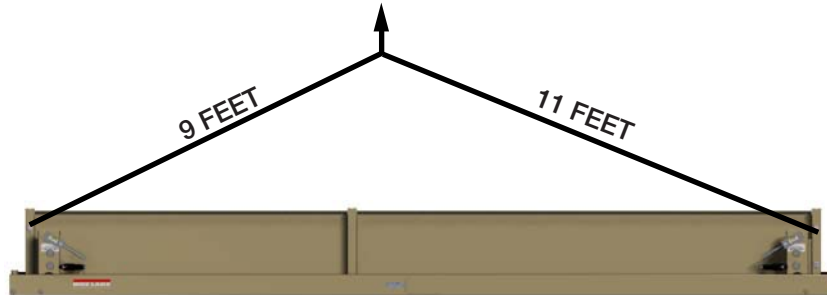


Figure 1-4. Slinging the Scale

1.3.2 Lift the Scale

1. 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.
2. Once the upper scale of the stack is removed the stubs can be discarded.

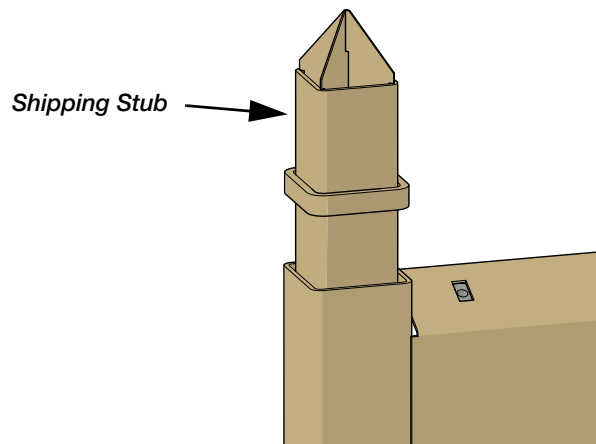


Figure 1-5. Shipping Stub

3. The scale can now be stored as is, 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.

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

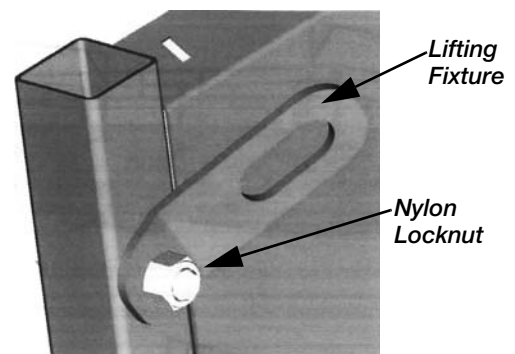


Figure 1-6. Lifting Fixture

1.4 Lifting Assembled Scale

Lift the scale only in designated locations (see Figure 1-7). The scale can be lifted by four straps and a crane or loader. **Ensure the scale is in the transport mode** (locked down – see Section 2.3 on page 8) when loading and transporting the scale.

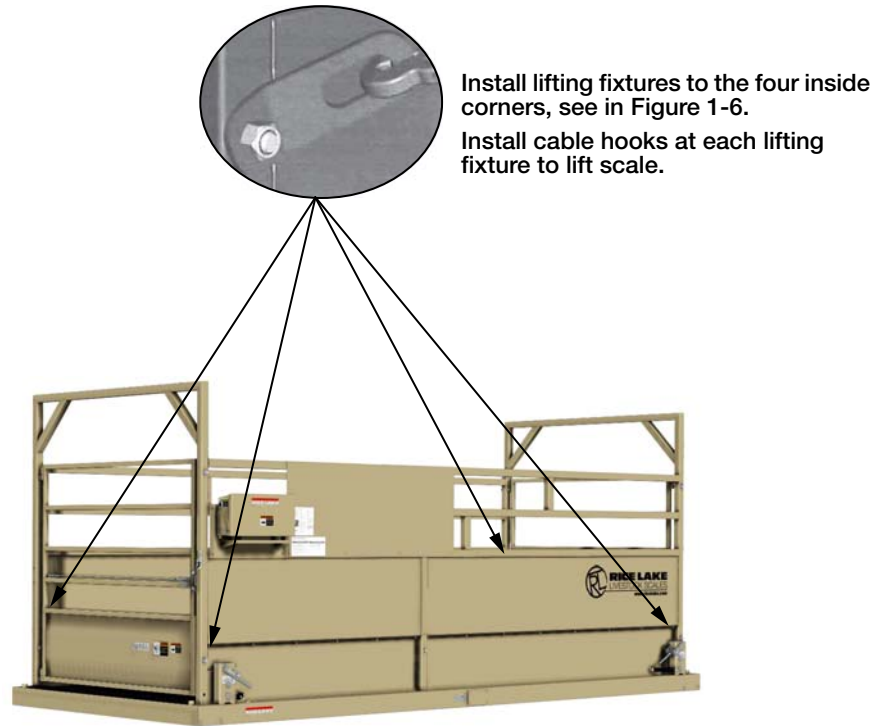


Figure 1-7. Lift Points

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 the base frame – see Figure 2-1). 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 (see shimming location in Figure 2-1). 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. Simply load and unload the scale as described in the Section 1.4 on page 6. Place the scale in as level a location as possible, and shim (with wood or metal shims) under the load cell stands to ensure the scale is level as described above. Please contact the local Weights and Measures office regarding the moving of the scale to ensure the validity of the certification.

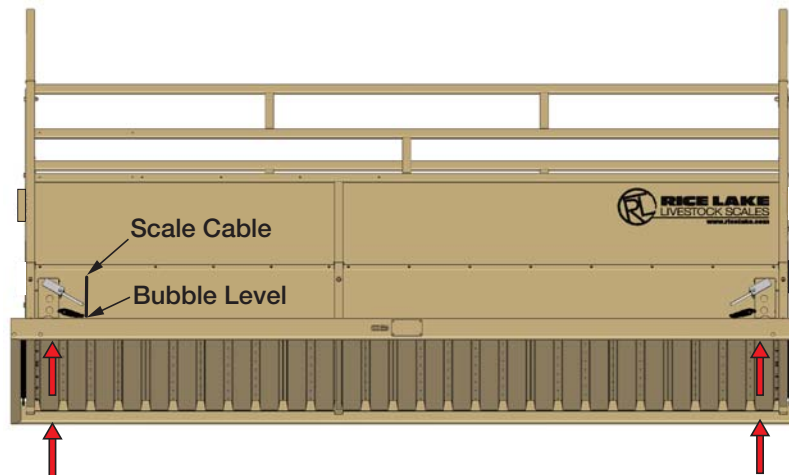


Figure 2-1. Shim/Load Cell Stand Locations

2.3 Switching Modes

2.3.1 Convert to Weigh Mode

1. Place the scale in as level a location as possible. Ensure there are no obstructions under the deck that would affect weighing accuracy. Check the bubble level. Use shims or timbers to ensure the scale is as close to level as possible.



Note *The scale will weigh properly on any firm surface up to 7% grade (4-degree slope).*

2. Inspect all four corners of the scale. Although the scale will weigh properly up to four degrees 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 (see Figure 2-1).
3. Plug the indicator into the scale cable. The scale cable runs from the junction box (inside the base frame) to the indicator (see Figure 2-1).
4. Connect power to the indicator and switch ON.
5. **USING BOTH HANDS**, raise the platform to enable the scale (see Figure 2-2).



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.*

6. The scale is now ready to weigh.

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.

1. **USING BOTH HANDS** disengage and lock the scale in transport mode by rotating all four cam levers counter clockwise into the fully locked position.



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

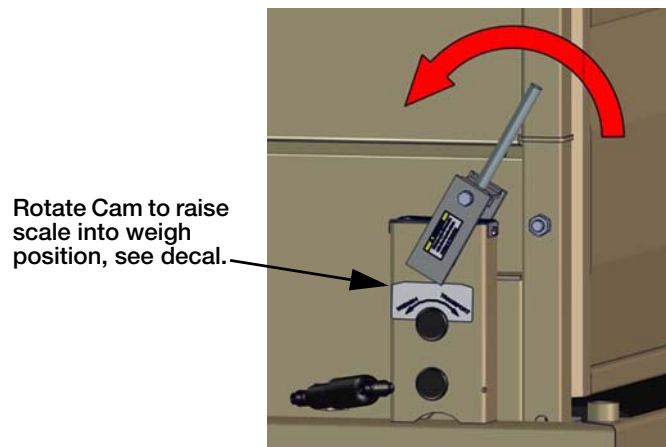


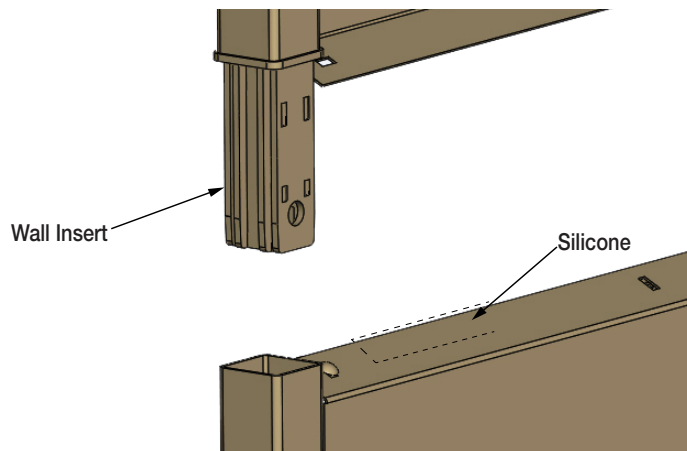
Figure 2-2. Scale Lift

2.4 Cage Wall Assembly

2.4.1 Apply the Silicone Bead

Before installing the walls, a silicone bead must be added.

1. Clean the upper flange of the floor and the lower wall flange with mineral spirits.
2. Apply a 1/8" bead of silicone along the upper edge of the floor panel along the entire length as shown in Figure 2-3.



2.4.2 Install Walls



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

1. Lift the first wall by using one sling in the center.



Note *The wall with the holes for the indicator is mounted on the left side.*

2. Stand the wall vertical 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 the opposite wall.
4. Install the top cross members.
5. Place the 3/4 x 3 1/2" bolts through the cage wall and insert on the indicator side of the 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 that they are perfectly square. Straps may need to be used to pull for squareness.

2.4.3 Install the Gate



Note

Install the gate with the hinge bolts on the opposite side of the scale.

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

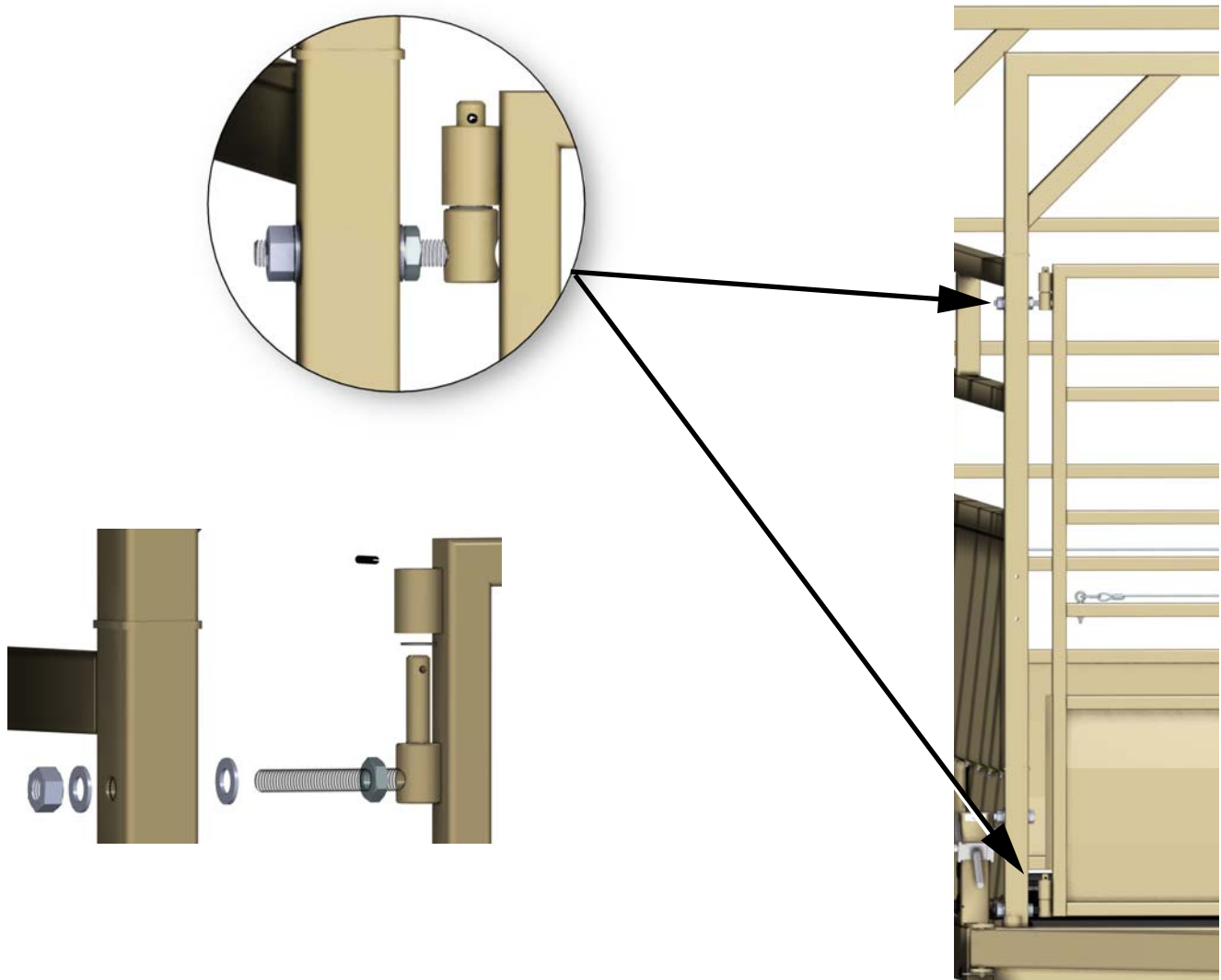


Figure 2-4. Assemble Gate to Scale

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

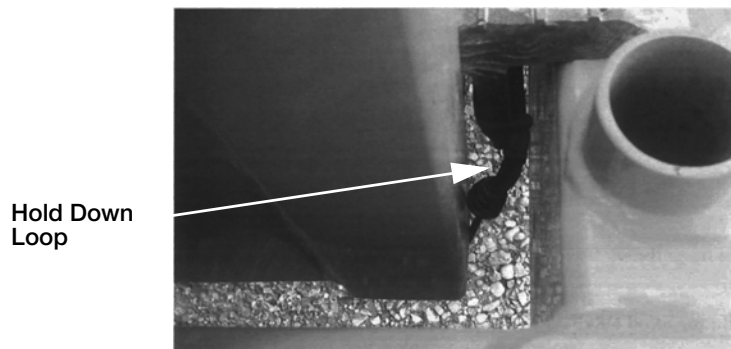


Figure 2-5. T-Belt

2.7 Optional 920i Weighcenter Mounting



Note 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.

1. Before installing the bracket, a bead of silicone must be added. See figure at right.
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 onto 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 as shown in the photo at right.
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.

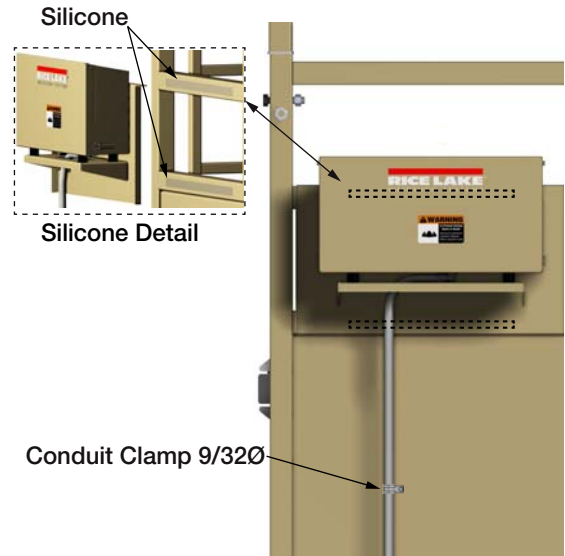


Figure 0-1. Weighcenter Mounting

2.8 Optional AC/DC Power Supply Adapter Box Kit

The following are instructions to install the AC/DC Power Supply Adapter Box on a portable animal scale.



Figure 2-6. AC/DC Power Supply Adapter Box Kit

2.8.1 Mounting to Scale

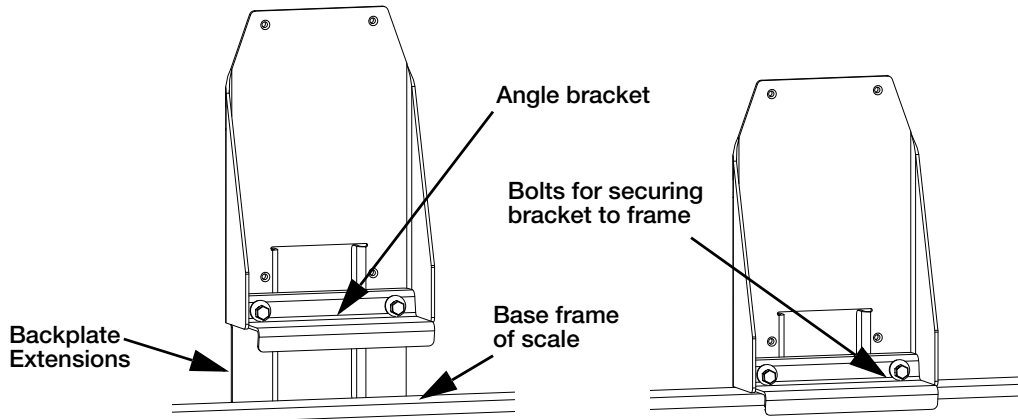


Figure 2-7. Mounting Power Box Assembly to Frame



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

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 will be assembled to the mounting bracket. Skip to Step 4.

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

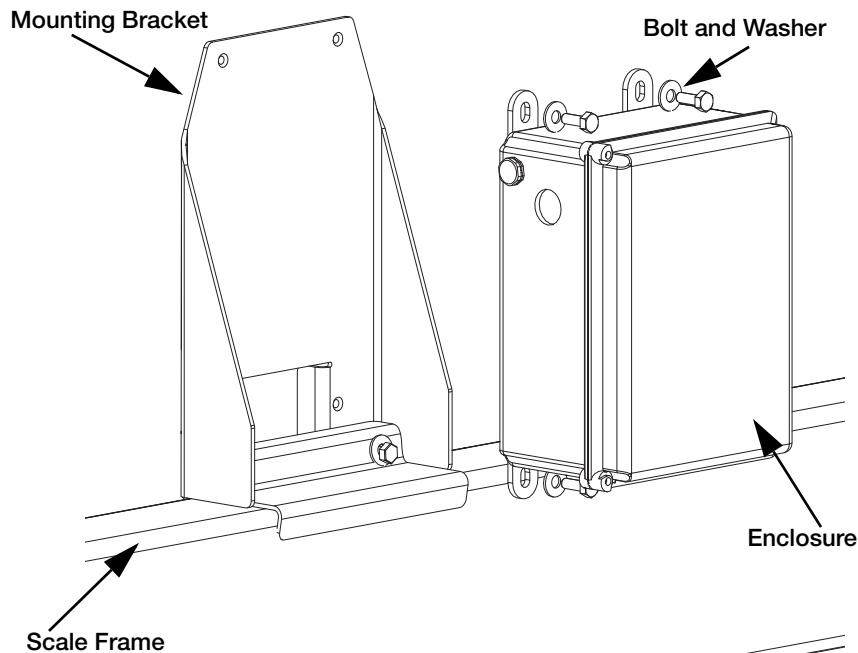


Figure 2-8. Mount Enclosure Box

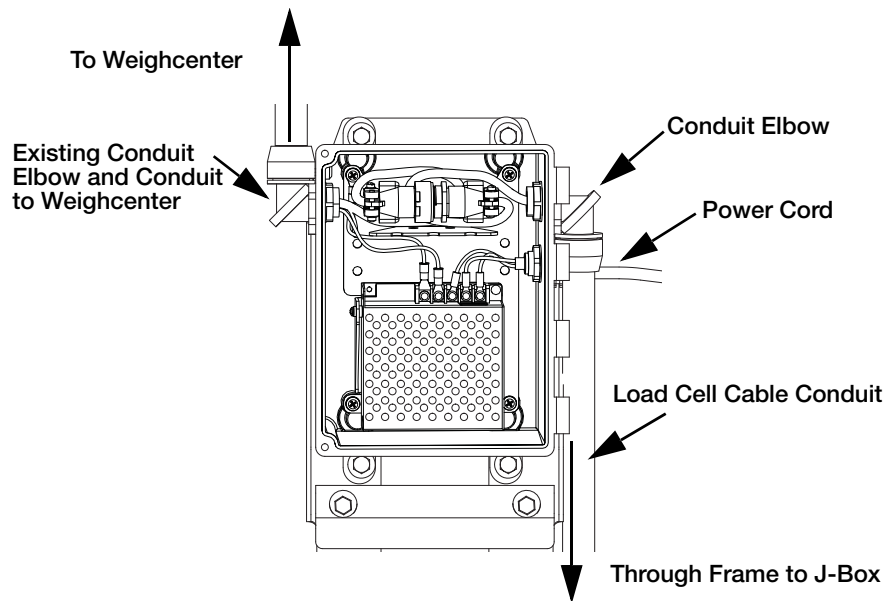


Figure 2-9. Wiring Diagram

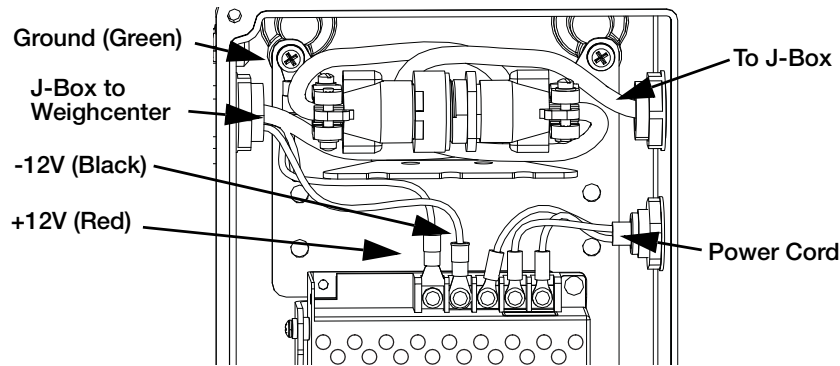


Figure 1. Power Supply Connections

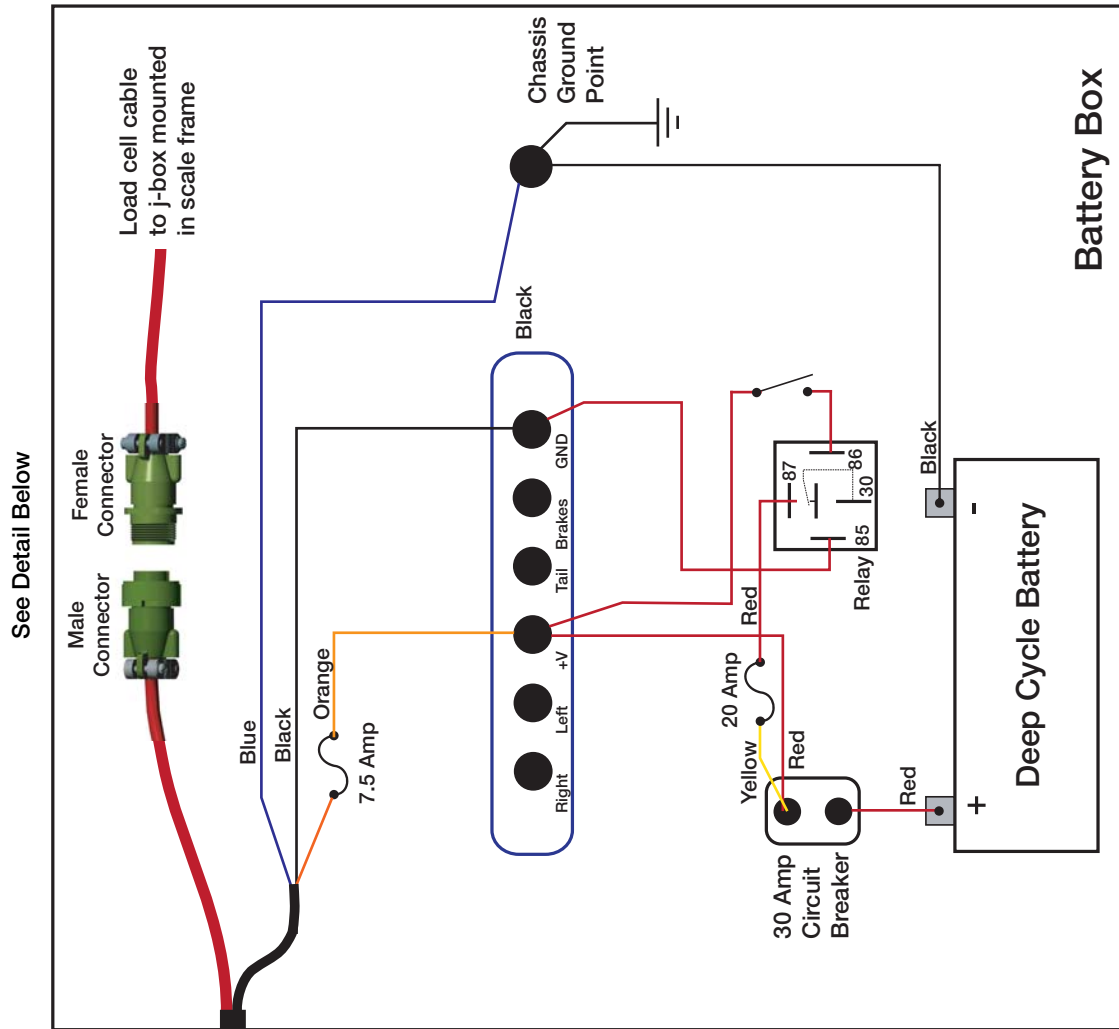
4. Disconnect the homerun cable from the weighcenter (see the weighcenter manual PN 159192) and pull it out of the conduit and conduit elbow.
5. Insert the conduit elbow into the designated hole in the enclosure. Secure with nut.
6. Pass the weighcenter cable from the inside of the enclosure through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

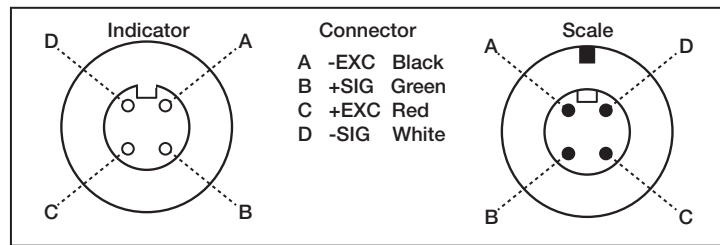
8. Disconnect the cable from the junction box.
9. Connect the conduit elbow to the enclosure at designated hole and secure with nut.
10. Connect the other conduit elbow to the frame near the junction box.
11. Pass the junction box cable through the conduit elbow, supplied conduit and conduit elbow on the frame.
12. Reconnect the junction box cable to the j-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



See Detail Below

Weigh Center



Scale/Indicator System Connection Detail

Conn PN	Description	Used With	Cap PN	Cap Description
127259	Conn, MS, Male Complete Kit	127260 or 127261	15731	Dust Plug, MS External THD
127260	Conn, MS, Female Pins w/ clamp	127259	15730	Dust Cap, MS INTL THD

Table 2-1. Weighcenter Connector and Plug Configurations

Figure 2-10. Scale Wiring Diagram

2.10 Battery Box Connections

For use with the optional battery box, PN 153765.

1. Connect the scale cable and secure with a cable tie.
2. Connect the power wires as shown in Figure 2-7.
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.

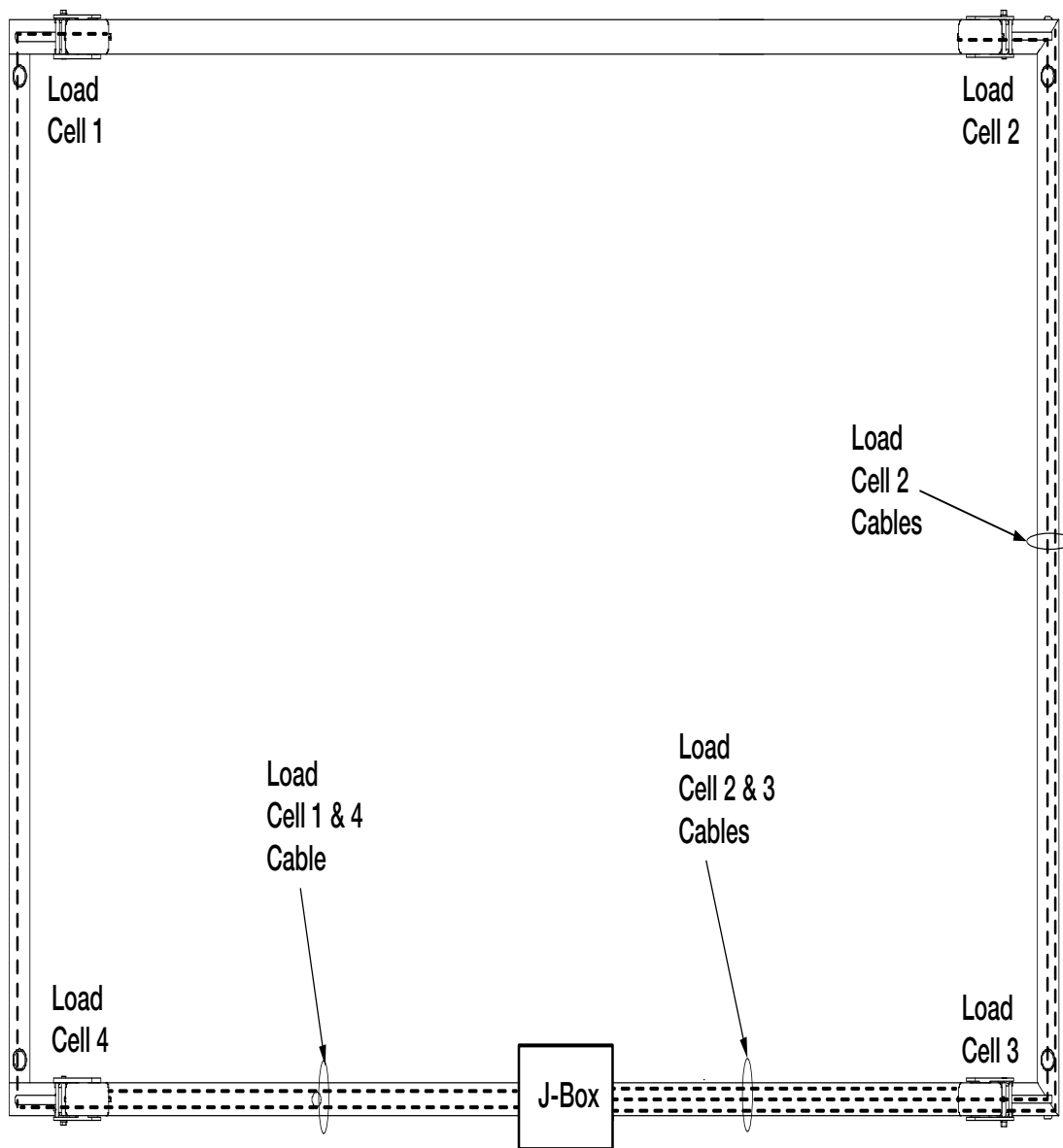
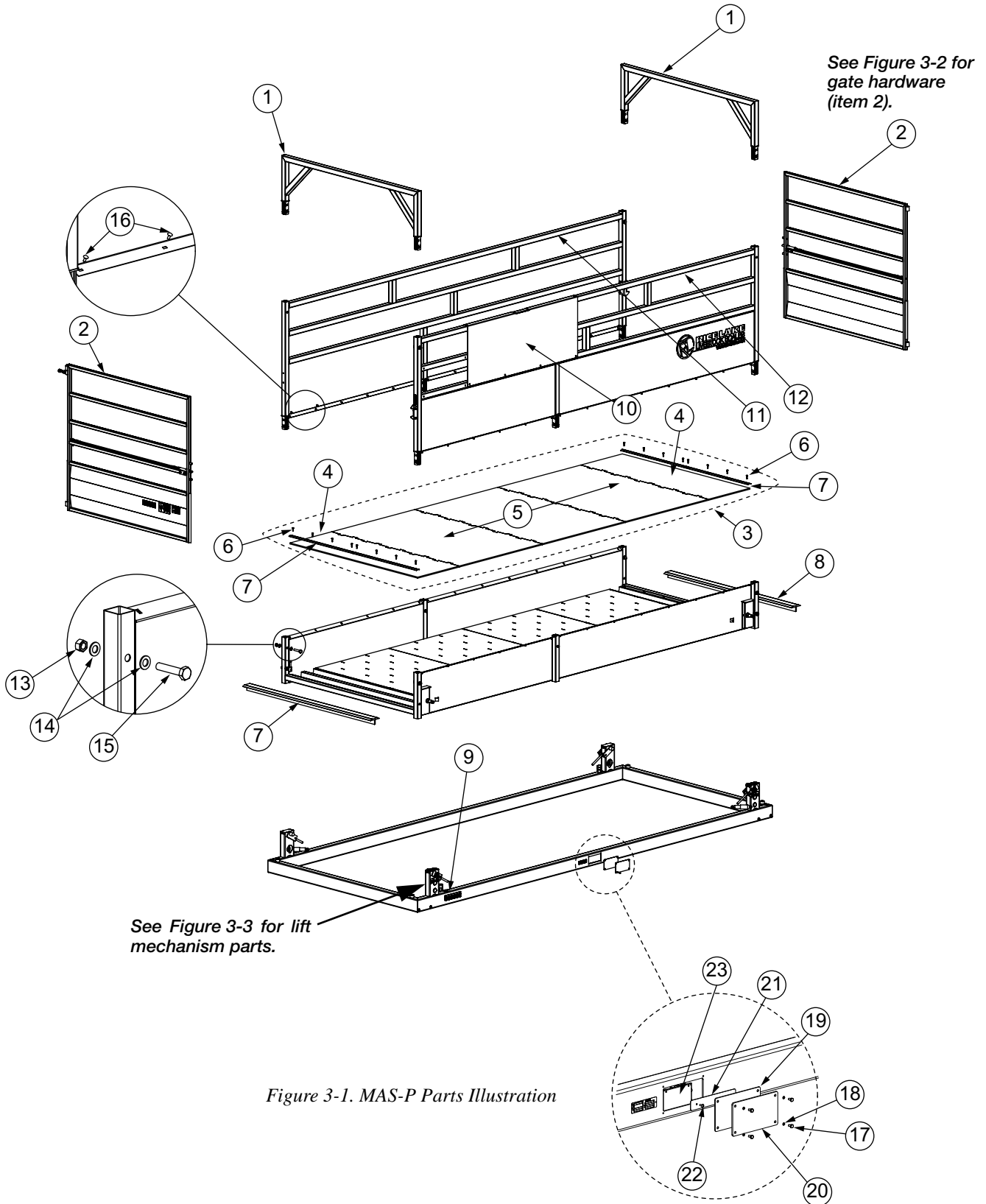


Figure 2-11. Load Cell Wiring Diagram

3.0 Repair Parts



Item No.	Part No.	Description
1	130931	Cage Crossmember
2	131782	Gate, MAS, see Figure 3-2
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 J-box
20	127740	Cover Plate Scale Frame/J-Box
21	131885	Mount Plate for J-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, Touchup

Table 3-1. MAS-P Parts List

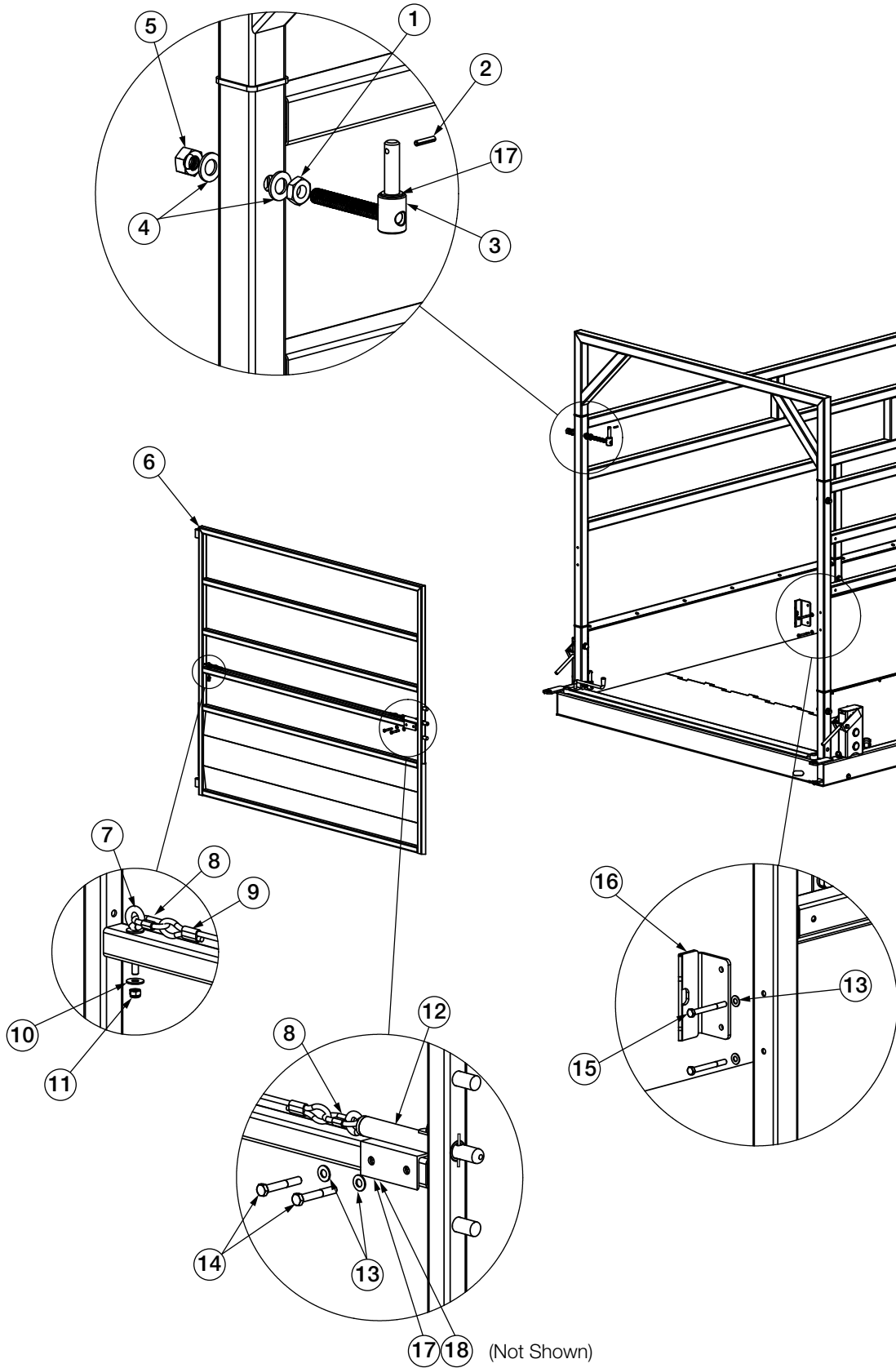


Figure 3-2. Gate Component Details

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 in
9	131886	Cable, 1/4" OD x 6 ft
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 strikeplate)
14	151559	Cap Screw, 3/8-16NCx
15	151560	Cap Screw, 3/8-16 x 3/4
16	155916	Strike Plate
17	151807	Washer, Plain 3/4in Nylon
18	22072	Nut, 3/8-16 Grade5
19	132684	Nut, (Used with Latches)



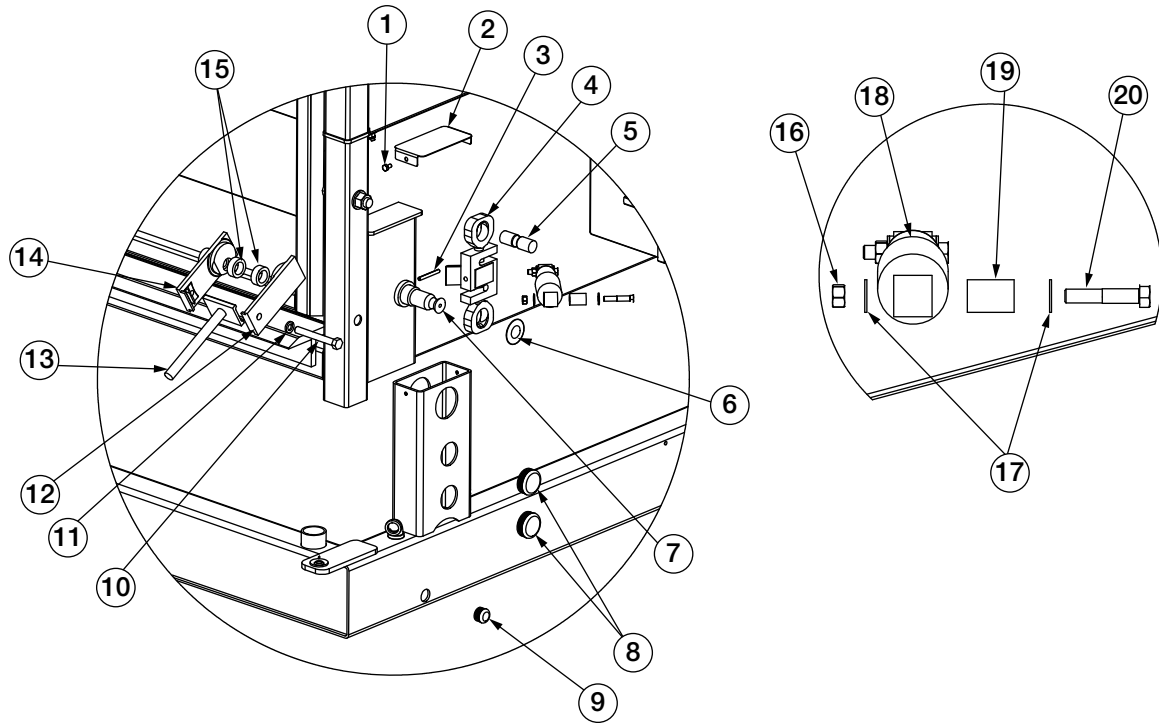


Figure 3-3. MAS-P Detail Parts Illustration

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	127163	Load Cell S-Type 10K
5	128184	Upper Notched Load Cell Pin
6	127668	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	Lockwasher 1/2
12	131785	Cam Lever Without Lockdown - Right Rear
	127676	Cam Lever with Lockdown - Left Rear
13	127732	Cam Handle Mask
14	131787	Cam Lever with Lockdown - Front Left
	127675	Cam Lever Without Lockdown - 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"

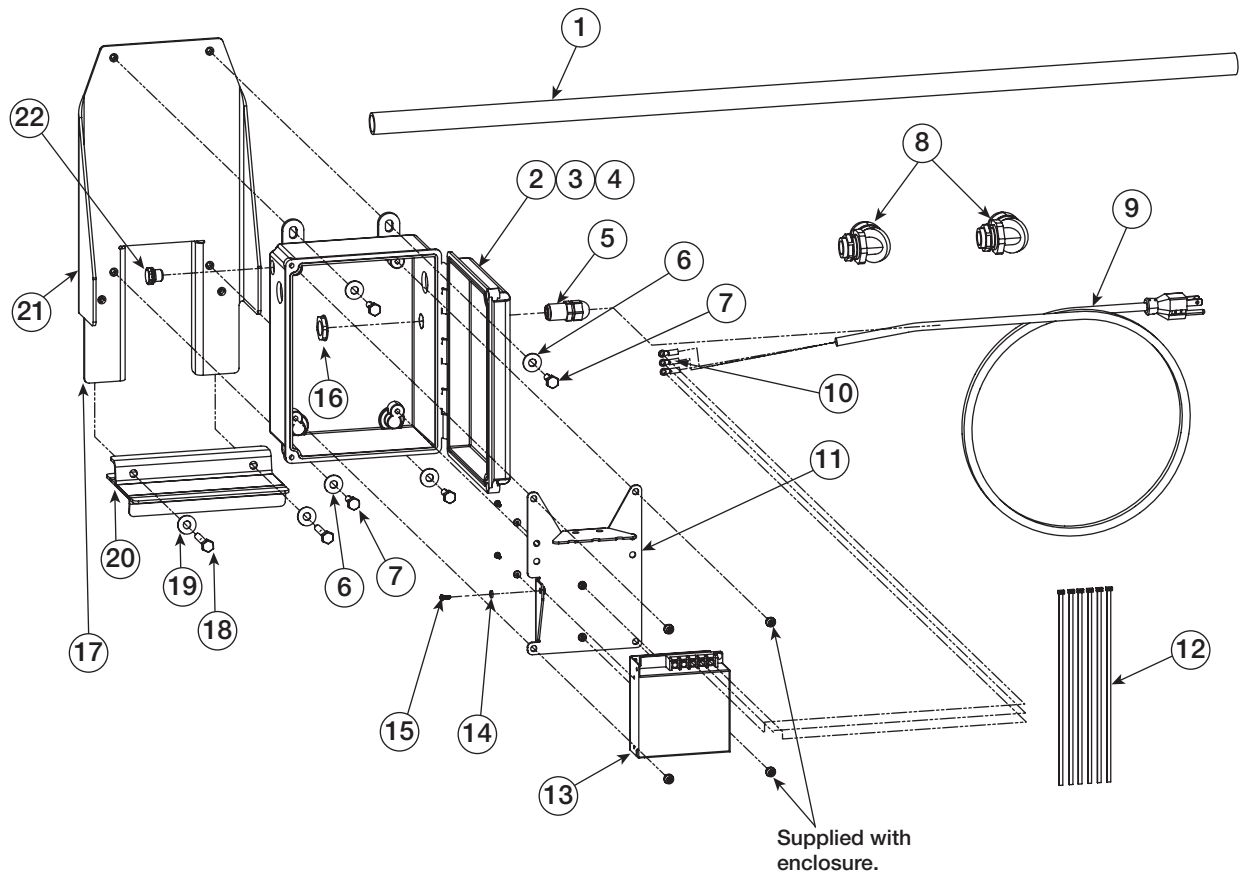


Figure 3-4. AC/DC Power Box Parts Illustration

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	127008	Screw, Cap 1/4-20 x 3/4
7	81427	Washer, Flat 1/4 Steel
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, 8in Nylon
13	156761	Power Supply, Switching
14	127028	Washer, Flat No 4 18-8 SST
15	41757	Screw, Cap M3-0.5x8
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

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 your unit. Use the parts list drawings for item numbers.



Note

Use quality high-pressure grease.

Avoid bending or twisting the load cell wires.

1. Remove the cell stand cover.
2. Remove the 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 the load cell pin and spacers. The load cell assembly will be free on top and rest against the inside of the cell stand.
6. Remove the inner cam.
7. Remove the 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.

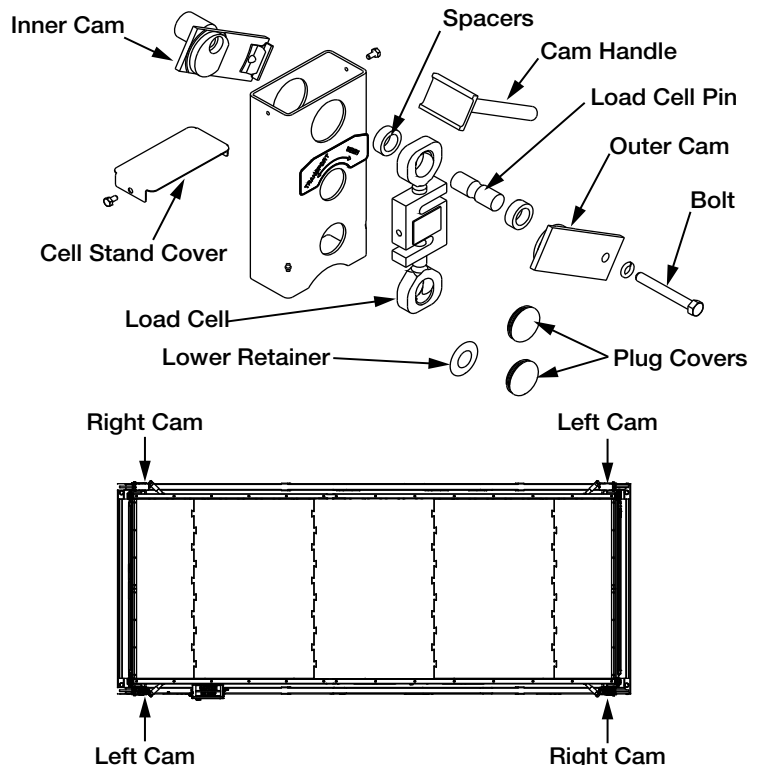


Figure 4-1. Disassembly and Greasing

4.3 Troubleshooting


Symptom	Probable Cause	Action
The scale indicator will not power up.	Blown in-line fuse	Replace in-line fuse, RLWS part # 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 RLWS 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 RLWS system requires at least 11 volts to operate properly. Is the truck running? Your 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 RLWS, 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, RLWS part # 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.



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 ft - 6 in	19'-3"
Length Deck	12 ft - 9 in	18 ft - 6 in
Width Overall	8 ft - 4.13 in	8 ft - 4.13 in
Width Deck	6 ft - 11.5 in	6 ft - 11.5 in
Deck Height	6 in	6 in
Height	100.2 in	100.2 in
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 # _____

MAS-P Limited Warranty

Rice Lake Weighing Systems (RLWS) warrants that all RLWS equipment and systems properly installed by a Distributor or Original Equipment Manufacturer (OEM) will operate per written specifications as confirmed by the Distributor/OEM and accepted by RLWS. All systems and components are warranted against defects in materials and workmanship for two years.

RLWS warrants that the equipment sold hereunder will conform to the current written specifications authorized by RLWS. RLWS warrants the equipment against faulty workmanship and defective materials. If any equipment fails to conform to these warranties, RLWS will, at its option, repair or replace such goods returned within the warranty period subject to the following conditions:

- Upon discovery by Buyer of such nonconformity, RLWS will be given prompt written notice with a detailed explanation of the alleged deficiencies.
- Individual electronic components returned to RLWS for warranty purposes must be packaged to prevent electrostatic discharge (ESD) damage in shipment. Packaging requirements are listed in a publication, *Protecting Your Components From Static Damage in Shipment*, available from RLWS Equipment Return Department.
- Examination of such equipment by RLWS confirms that the nonconformity actually exists, and was not caused by accident, misuse, neglect, alteration, improper installation, improper repair or improper testing; RLWS shall be the sole judge of all alleged non-conformities.
- Such equipment has not been modified, altered, or changed by any person other than RLWS or its duly authorized repair agents.
- RLWS will have a reasonable time to repair or replace the defective equipment. Buyer is responsible for shipping charges both ways.
- In no event will RLWS be responsible for travel time or on-location repairs, including assembly or disassembly of equipment, nor will RLWS be liable for the cost of any repairs made by others.

THESE WARRANTIES EXCLUDE ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NEITHER RLWS NOR DISTRIBUTOR WILL, IN ANY EVENT, BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

RLWS AND BUYER AGREE THAT RLWS' SOLE AND EXCLUSIVE LIABILITY HEREUNDER IS LIMITED TO REPAIR OR REPLACEMENT OF SUCH GOODS. IN ACCEPTING THIS WARRANTY, THE BUYER WAIVES ANY AND ALL OTHER CLAIMS TO WARRANTY.

SHOULD THE SELLER BE OTHER THAN RLWS, THE BUYER AGREES TO LOOK ONLY TO THE SELLER FOR WARRANTY CLAIMS.

NO TERMS, CONDITIONS, UNDERSTANDING, OR AGREEMENTS PURPORTING TO MODIFY THE TERMS OF THIS WARRANTY SHALL HAVE ANY LEGAL EFFECT UNLESS MADE IN WRITING AND SIGNED BY A CORPORATE OFFICER OF RLWS AND THE BUYER.

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RICE LAKE, WISCONSIN 54868 • USA

