



Instruction Manual

1100 Series Portable Utility Scale with Rechargeable battery-powered FB1100 ABS Instrument





Amendment Record

1100 Series Portable Utility Scale with Rechargeable battery-powered FB1100 ABS instrument Document 51260

Manufactured by Fairbanks Scales, Inc.

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Kansas City, Missouri 64106

Created	02/2011	
Revision 1	02/2011	Released Manual
Revision 2	11/2016	Updated parts list/diagrams, mounting bracket kit
Revision 3	04/2019	Updated parts list



Disclaimer

Every effort has been made to provide complete and accurate information in this manual. However, although this manual may include a specifically identified warranty notice for the product, Fairbanks Scales makes no representations or warranties with respect to the contents of this manual, and reserves the right to make changes to this manual without notice when and as improvements are made.

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Table of Contents

SECTION 1: INTRODUCTION	5
SECTION 2: SERVICE POLICY INFORMATION	6
2.1. General Service Policy	6
2.2. Conferring with Our Client.....	7
2.2.1. <i>Service Technician’s Responsibilities</i>	7
2.2.2. <i>Users’ Responsibility</i>	7
SECTION 3: DESCRIPTION	8
3.1. Tools Needed for Assembly	8
SECTION 4: ASSEMBLY	9
4.1. Wheel and Pillar Assembly	9
4.2. Mounting Bracket Kit Assembly	10
4.3. Installing the Instrument	11
4.4. Powering Up the Instrument.....	13
SECTION 5: TROUBLESHOOTING GUIDE	14
SECTION 6: RECHARGEABLE BATTERY	15
SECTION 7: REPLACEMENT PARTS AND DIAGRAM	16
7.1. 1100 Series Replacement Parts	16
7.2. Platform Parts Diagram	17
7.3. 1100 Series Parts List	18
7.4. 1100 Series Parts Diagrams	19
APPENDIX I: WIRING	21

Section 1: Introduction

The 1100 Series scale is a combination of a roll-around cast-iron base and a Battery*/AC-powered digital indicator. The resulting scale is durable, movable, and provides an easy-to-read, accurate weight display. This manual provides information on assembly and setup for the 1100 Series Scale.

NOTE: Please read this manual carefully before assembling the scale.

A. The scale is factory calibrated and supplied ready to be assembled and used.

Adjustments to the weighing accuracy should only be made by trained scale personnel. No modifications are to be made to this equipment.

B. Upon receipt, ensure that no shipping damage has occurred. If damage has occurred please follow the procedures below:

- Damage to the shipping carton must be noted by the receiving party.
- Damage must be made known to the shipper.
- Claims for shipping damage are made by the receiving party to the shipper.

C. It is the customer or owner's responsibility to maintain the scale in good operating condition, and to protect the scale from accidental damage.

D. Specifications:

Capacity	1000 lbs. x 0.2 lbs.
Display	2.0" tall, 7-segment, 5½" digit LCD display with selectable green backlight
Enclosure	NEMA 12 ABS
Push-button keys	On/Print, Off, Units, Zero, B/G Net, Over/Under, Tare
Units	pounds, kilograms (lbs, kgs)
Serial interface	RS-232C
Power	9 VDC @500 mA (AC Adapter included)
Battery life	100 hours continuous; 14 hour recharge time
Platform construction	Rugged cast iron
NTEP (CC) number	92-110
MC number	AM 5745

* Valve-regulated, sealed, lead-acid type rechargeable battery, 6VDC, 3AH.

Section 2: Service Policy Information

2.1. General Service Policy

Prior to installation, ***always*** verify that the equipment satisfies the customer's requirements as supplied, and as described in this manual.



If the equipment cannot satisfy the application and the application cannot be modified to meet the design parameters of the equipment, **the installation should NOT be attempted.**

It is **the customer/operator's responsibility** to ensure the equipment provided by Fairbanks is operated within the parameters of the equipment's specifications and protected from accidental or malicious damage.

WARNING!

Absolutely NO physical, electrical or program **modifications** other than selection of standard options and accessories can be made by customers to this equipment

Repairs are performed by Fairbanks Scales Service Technicians and Authorized Distributor Personnel ONLY!

Failure to comply with this policy voids all implied and/or written warranties.

2.2. Conferring with Our Client

- The technician must be prepared to recommend the arrangement of components which provides the most efficient layout, utilizing the equipment to the best possible advantage.
- Explain and review the warranty policy with the customer.

The installing technician is responsible that all personnel are fully trained and familiar with the equipment's capabilities and limitations before the installation is considered complete.

- All electrical assemblies must be returned intact for replacement credit using the standard procedures.
- At the time of installation, all electronic and mechanical adjustments are considered to be part of the installation and are included in the installation charge(s).
- The AC receptacle/outlet shall be located near the Indicator and easily accessible.
- Electrical connections other than those specified may not be performed.

2.2.1. Service Technician's Responsibilities

- All electronic and mechanical calibrations and/or adjustments required for making this equipment perform to accuracy and operational specifications are part of the installation.
 - They are included in the installation charge.
 - Only those charges which are incurred as a result of the equipment's inability to be adjusted or calibrated to performance specifications may be charged to warranty.
- The equipment consists of printed circuit assemblies which must be handled using ESD handling procedures, and must be replaced as units.
 - Replacement of individual components is not allowed.
 - The assemblies must be properly packaged in ESD protective material and returned intact for replacement credit per normal procedures.



2.2.2. Users' Responsibility

- ✓ **Absolutely no physical, electrical or program modifications other than selection of standard options and accessories are to be made to this equipment.**

Section 3: Description

CAUTION

The shipping weight of the 1100 is approximately 185 pounds. Use caution to prevent personal injury or damage to the product.

The portable platform scale base is constructed of cast iron with cast iron levers. The weight display is a battery-or AC-powered FB1100 Series instrument. It is equipped with a communication port for connecting printers, displays, and/or computers.

The scale is rated at 1000 lbs. capacity with an interval or graduation size of .2 lb.

3.1. Tools Needed for Assembly

1. #1 (or small) slotted screwdriver
2. #2 Phillips screwdriver
3. 10" adjustable wrench
4. Common pliers

NOTE: For commercial weighing applications, the scale must be “placed in service” by a licensed scale technician. For a service facility near you, please call Fairbanks Scales at 800-451-4107.

Section 4: Assembly

CAUTION

The scale base assembly, as shipped, weighs 185 pounds.
USE CAUTION WHEN LIFTING.

NOTE: The descriptions below refer to the item numbers used in the parts list in Section 7. Use the parts list and item numbers to identify the parts below.

4.1. Wheel and Pillar Assembly

- A. Set the scale base assembly (#4) upright on the floor.
- B. Starting with an axle (#19), insert a cotter pin (#17) in one end, then place a washer (#18) and a wheel (#16) over the open end.
- C. Insert the axle's other end through BOTH holes in the base.
- D. Place a wheel (#16), then a washer, over the other end and insert a cotter pin.
- E. Repeat steps B, C, and D for the second axle.
- F. "Center" the axles in the base, then insert the locking screws (#15) into the tapped holes in the bottom of the base directly under the axle holes.
- G. Tighten the locking screws, then secure the lock nuts (#14).
- H. Screw the two (2) pillar rods (#1) into the base in the two (2) tapped holes provided.
- I. Place the pillar (#2) over the pillar rods with the cutouts facing to the left and right of the platform.
- J. Insert the steelyard rod (#35) down through the pillar with the bent hook on top and the loose swivel hook on the bottom.

4.2. Mounting Bracket Kit Assembly

The adapter will be partially assembled and packed with bubble wrap. The adapter bracket (#77), stiffener plate (#78), and load cell mounting plate (#72) will be in correct orientation in the box. See figure 4-1.

- A. Lift the entire mounting bracket kit out of the box and remove the bubble wrap placed between the stiffener plate (#78) and load cell plate (#72), allowing the load cell linkage assembly to go through the hole and the load cell plate (#72) to set flush on top of the stiffener plate (#78).
- B. With the slot in the back (as viewed from the platform), place the assembly with the handle facing away from the platform deck OVER the two pillar rods so it rests on top of the pillar.
- C. Ensure that the mounting bracket is setting flush and aligned with the pillar. Looking up from the bottom, you should see two (2) small studs in opposite corners on the INSIDE of the pillar. Use the two pillar rod washers and nuts to secure the mounting bracket to the top of the pillar. Use a wrench to tighten the pillar rod nuts but be careful not to touch the load cell while tightening.

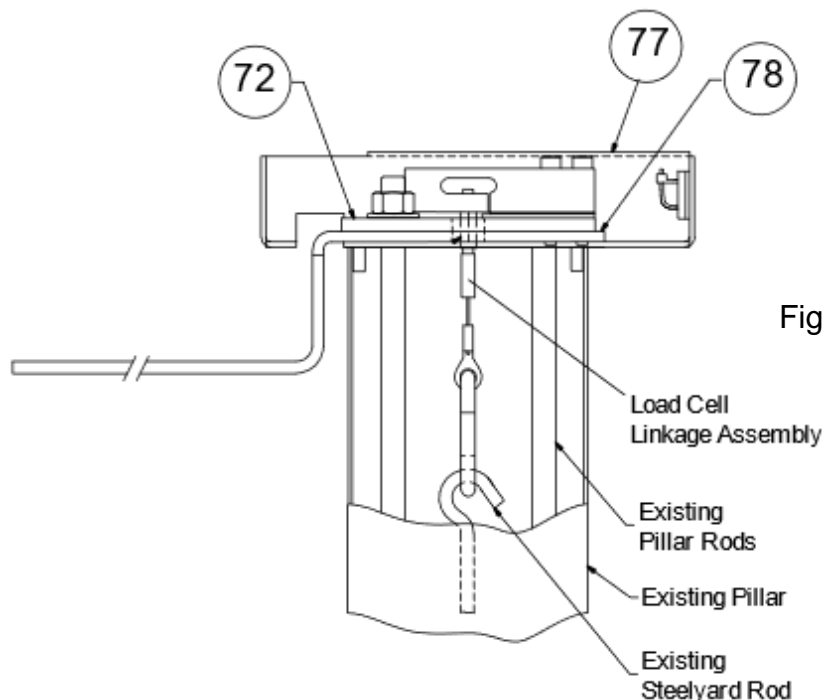
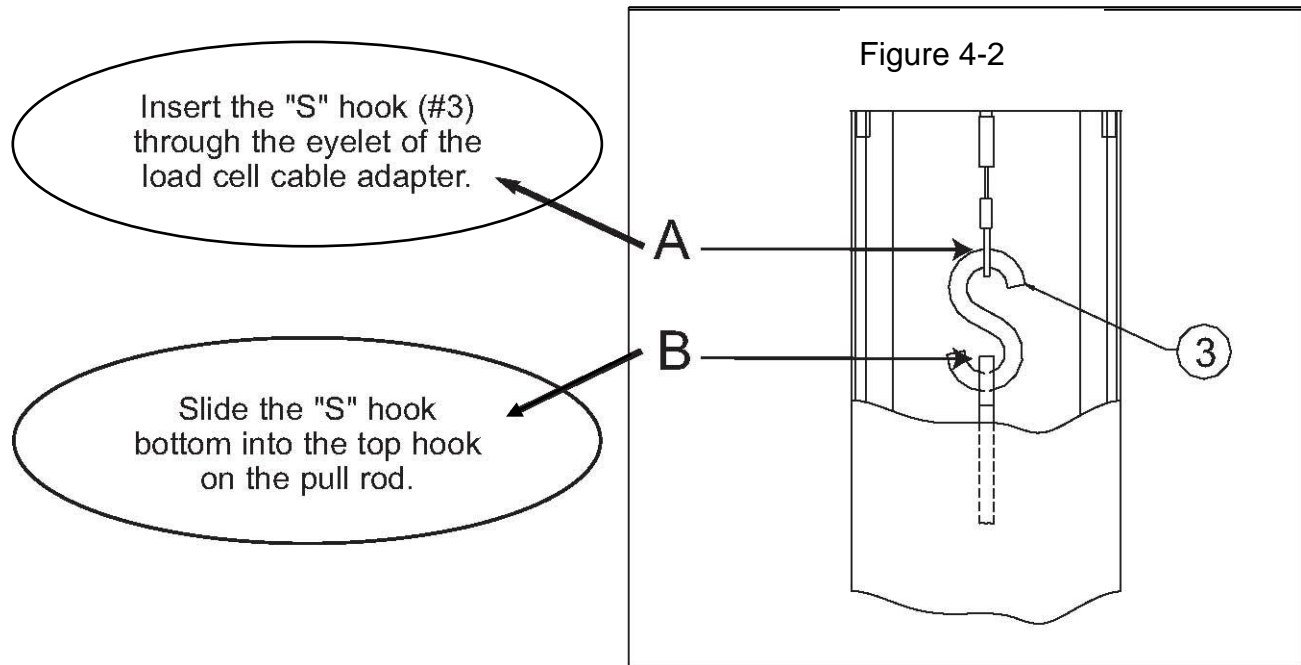


Figure 4-1

- D. At the bottom of the scale base, in the back, lift the lever end (#34) UP while placing the hook under the lever's pivot while holding the hook on top of the pull rod.

- E. Insert the “S” hook (#73) (Figure 4-2) through the eyelet of the load cell linkage cable adapter.
- F. Slide the “S” hook bottom into the top hook on the pull rod.



4.3. Installing the Instrument

- A. The load cell cable has a 4-pin molex connector attached.
- B. If necessary, wire the 24" ribbon cable (p/n 22706) to the instrument –opposite end of this cable has a mating 4-pin Molex connector. Gently slide connectors together until they snap in place.
- C. Locate the cable tie mount (#75) in the bracket approximately as shown. Secure the load cell cable in place with wire tie (#76). Insure cables *do not touch live portion of the load cell*. See figure 4-3 (below).

- D. When installing instrument assembly to plate and bracket, use acorn nuts. Remove feet from instrument. See figure 4-4.
- E. Loop the load cell cable through the cable clip (#79) one time.
- F. Place the instrument on top of the mounting bracket with the keypad/display facing the scale platform with mounting bracket cutout facing scale platform. Use the screws, washers, lock washers, and nuts to secure the instrument to the mounting bracket as shown in figure 4-4.

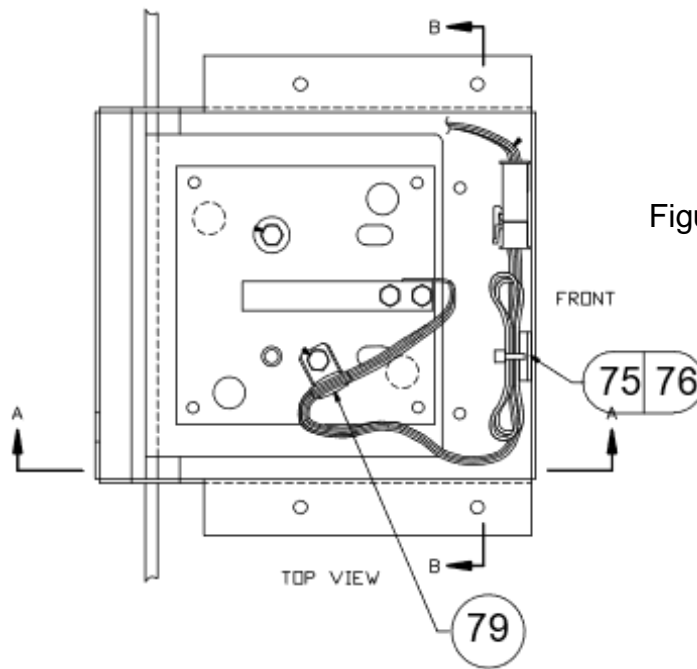
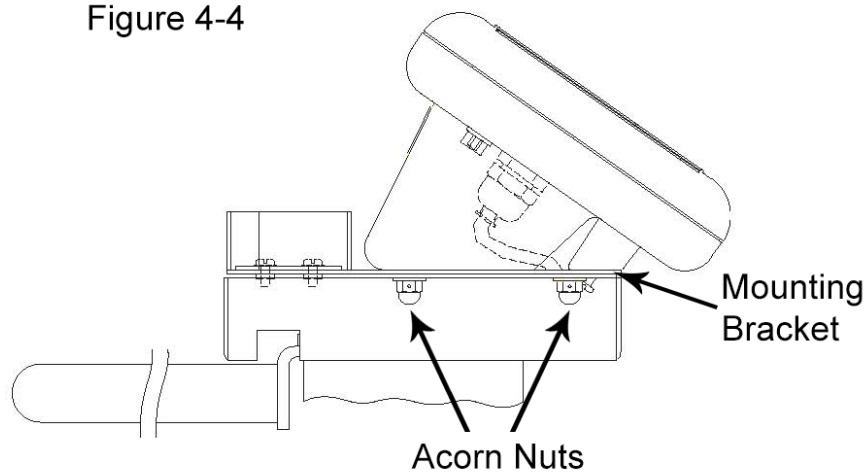


Figure 4-3

Figure 4-4



4.4. Powering Up the Instrument

- A. Using the AC adapter: Plug the AC adapter into the connector on the back of the instrument, then plug the AC adapter into a 110-volt outlet.
- B. The instrument will perform a warm-up cycle.
 - Display test—countdown from 9 to 0 with all legends tested
 - PROM revision briefly displayed
 - Display then goes to zero, provided the weight on the scale is at zero or within 10 divisions of zero. If outside the 10-division window, the scale will show the current weight on the scale.
- C. Place an item on the scale platform, read the weight, then remove the item. The instrument should return to a “0.0” display. Place the item on the platform again. The reading should be the same for both weighments. If the instrument indicates different weights or does not return to “0.0” refer to the Troubleshooting Guide, Section 5.
- D. Please use publication 51219 (FB1100 Series Owner’s Manual) enclosed with your scale for the detailed instructions regarding instrument features and operation.

NOTES: Battery Power: The battery is not fully charged when shipped. For optimum battery life, **fully charge the unit for 14 to 16 hours prior to placing the scale in service.**

If the instrument continues to display “-----” press the ZERO key to begin weighing. If motion exists, display will show “-----” until motion stops.

If the instrument continues to display “ErrOr” this indicates an uncalibrated instrument. Press the ZERO key or the internal “Cal” switch and begin set-up and calibration.

Section 5: Troubleshooting Guide

Error code on LCD display	Description
Error	Error in calibration procedure.
Err	Weighing function disabled. Scale is unstable or error in application.
Err.OL	Overload or Underload condition
L.bAtt	Low battery.
SLEEP	Instrument is in the sleep mode.
"-----"	Zero key pressed and instrument is unstable and unable to weigh.

Section 6: Rechargeable Battery

Battery life continuous	Recharge time
100	8 to 12 hours

NOTE: There are four (4) basic tests for a battery using a digital volt meter and the front panel indications.

1. Any battery not connected to an instrument or charger and having a reading less than 4.5 VDC should be disposed of properly and replaced.
 2. A fully-charged battery not connected to an instrument or charger should have a reading of 6.4 VDC.
 3. A fully-charged battery plugged into and loaded by an instrument (AC adapter unplugged) should have a reading of 6.25 to 6.60 VDC as seen from the front panel.
 4. A fully-charged battery plugged into and loaded by an instrument (AC adapter plugged in) should have a reading of 9.60 VDC as seen from the front panel.
-

Section 7: Replacement Parts and Diagrams

7.1. 1100 Series Replacement Parts

See figure 7-1.

Item no.	Part no	Description
1	95850	Pillar rod, long (short)
2	58933	Pillar
3	95847	Platform cover
4	95848	Frame
5	95855	Cotter pin
6	58937	Bearing, platform
7	95856	Screw, Phillips head
8	95857	Screw, Allen
9	95858	Bubble level
10	95859	Pin, corner loop
11	71623	Loop, corner
12	71624	Bearing, corner loop
13	71625	Cotter pin
10, 11, 12, 13	58938	Loop, corner assembly
14	95867	Hex nut
15	95868	Hex head bolt
16	95869	Wheel, 5" diameter
17	71628	Cotter pin
18	71629	Washer, flat
19	71630	Axle
24	95861	Pivot, load and fulcrum
25	72948	Short lever assembly
26	58939	Center connection assembly
31	95863	Center pivot, long lever
33	72947	Long lever assembly
34	95864	Long lever tip pivot
35	168302	Steelyard rod assembly (short)
44	71592	Acorn nuts (2)
61	95865	Platform locking pin
62	95866	Cotter pin, platform locking pin

7.2. Platform Parts Diagram

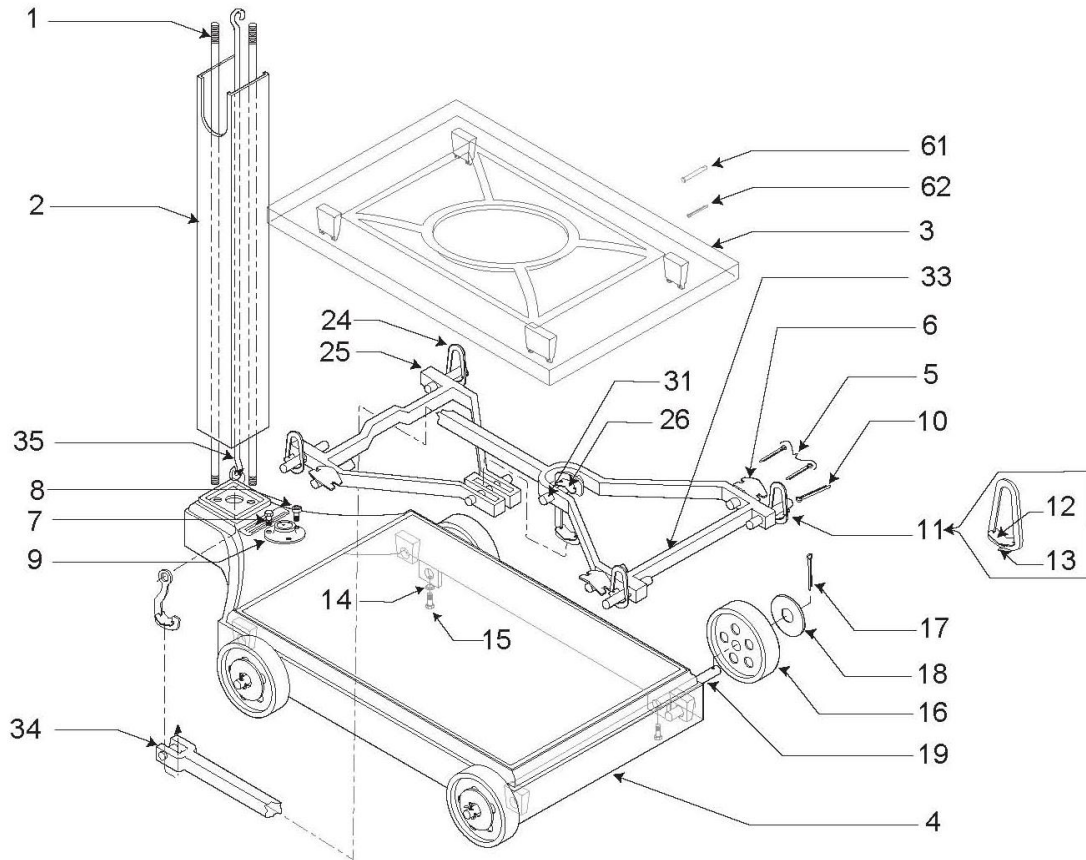


Figure 7-1

7.3. 1100 Series Parts List

(See figures 7-2, 7-3, 7-4, 7-5 and 7-6)

Item no.	Part no	Description
71	35341	Load cell assembly
72	14237	Plate, mounting
73	12643	"S" hook
75	17617	Mount, cable tie
76	17613	Tie, wire
77	20176	Bracket
78	26299	Handle assembly
79	11263	Clip, cable
80	13182	Screw, cap, socket head M4 x .25
81	11119	Washer, plain-flat #10
82	11189	Washer, lock extension tooth spring #10
83	11003	Nut-hex 10-32
84	11076	Screw, cap, hex head, 10-32 x .75
85	15716	Nut, threadlock acorn, 10-32
88	35145	Plate, Mount, universal instrument to line scale
89	30047	Instrument assembly with battery not installed FB1100 ABS
90	34971	Manual card (26461)
91	13584	Shim
92	14342	Spacer, load cell
93	13099	Linkage, cable
94	17579	Spacer, 8-32 threads x .38 lg
95	22706	Cable assembly, W1
98	17626	Clip, plastic
	50801	Label
	12083	Label, nominal capacity

7.4. 1100 Series Parts Diagrams

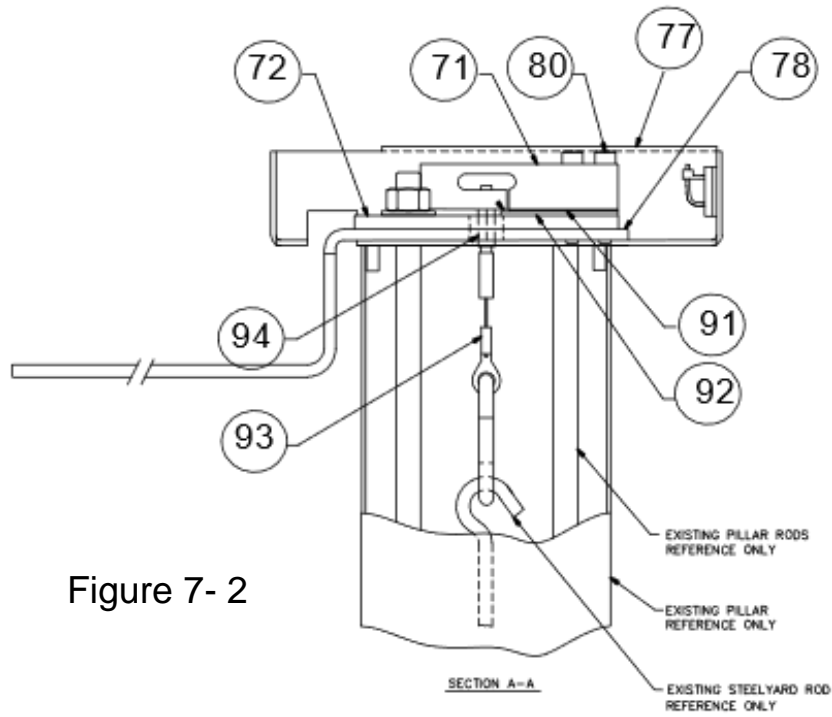


Figure 7- 2

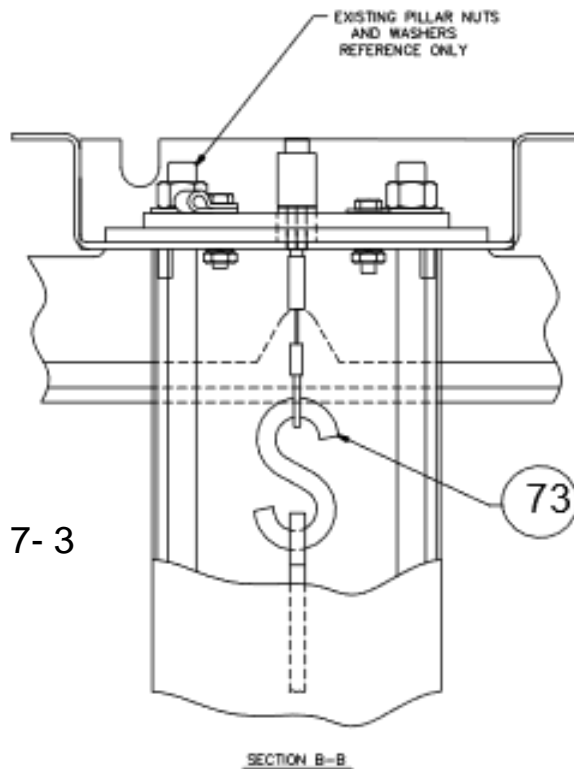


Figure 7- 3

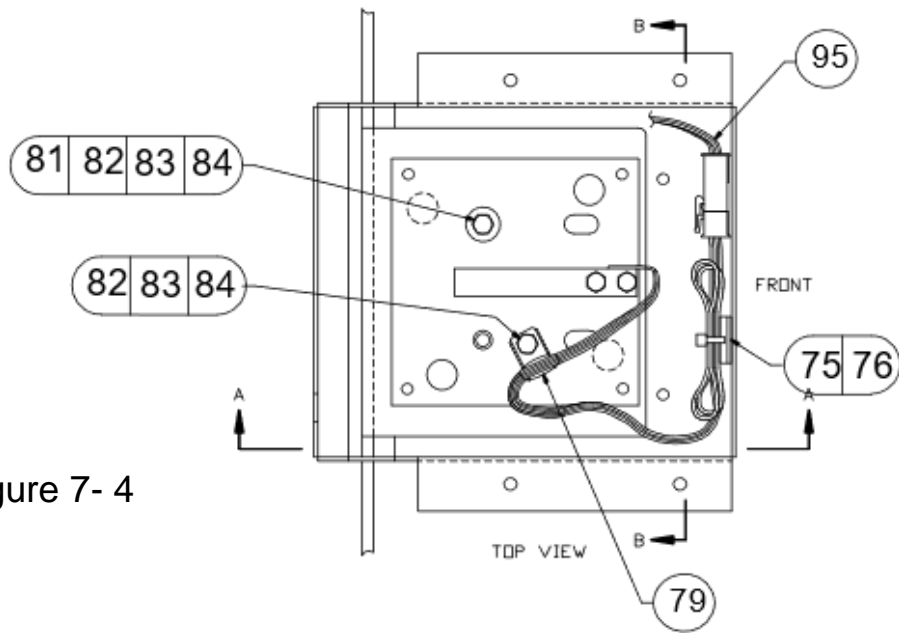


Figure 7- 4

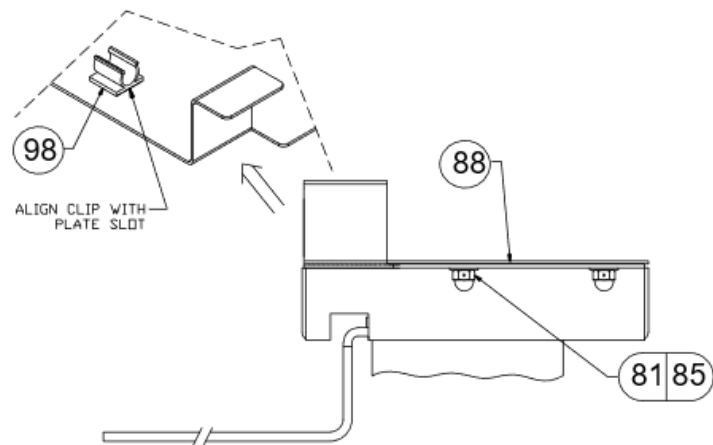


Figure 7- 5

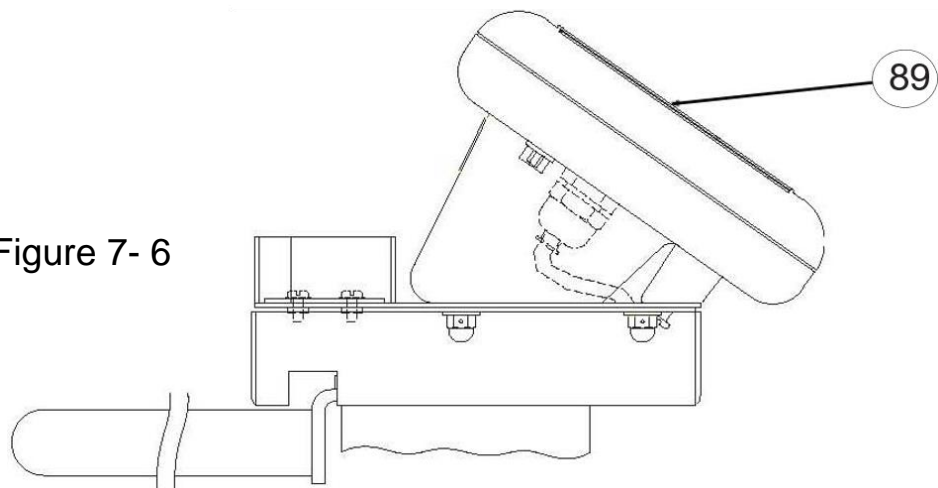


Figure 7- 6

Appendix I: Wiring

1. - EXC
2. + EXC
3. Shield
4. + SIG
5. - SIG



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