



Installation Manual

Aegis Laundry Cart Scale



(Shown with optional ramp)

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1.0 GENERAL INFORMATION

1.1 INTRODUCTION

The **Aegis Laundry Cart Scale** has a one and a half inch (1 ½") profile for easy on-and-off loading.

By weighing laundry carts before processing, the scale helps prevent overloading of washers, dryers, and material-handling systems. This reduces wear and tear, extending equipment life, and minimizing costly downtime.



Constructed from durable, powder-coated mild steel, the Aegis scale is built to withstand heavy, daily use in any laundry facility. Live side rails and an integrated backstop help keep carts securely positioned during weighing. The laundry cart scale features a 0.5° sloped platform, and wheel stops for improved cart control, helping prevent unintended roll-offs. The Aegis Laundry Cart Scale may be used with the optional FB1200 or other analog instrument.



1.1.1 APPLICATIONS

- Commercial and Industrial Laundry Facilities
 - Hospitals, clinics and nursing homes
 - Hotels and resorts
 - Garment rental and uniform services
 - Correctional institutions and military bases
 - Food service laundry and Textile Processing facilities

1.1.2 SPECIFICATIONS

Feature	Description
Platform	
Platform Size	26" x 42"
Overall Dimensions	32" x 42"
Scale Height (with siderails)	3"
Platform Height	1.5"
Scale Capacity	2000 lbs.
Endloading	100%
Cable	30', PVC, jacketed
Finish	Black Powder Coating
Approvals	NTEP: CC# 08-044
Load Cells	
Resolution	5000d
Protection Rating	IP67
Load Cell Construction	17-4 PH Stainless Steel
Rated Output	2 mV/V +/- 0.002 FS
Bridge Resistance	1000 +/- 1 ohm
Ultimate Overload (FSO)	300% of FS
Side Load (FSO)	100% of FS
Approvals	Load Cell – NTEP: CC# 06-065
Optional Ramp	
Size	26" x 4" (Includes integrated bolt-down plates)
Construction	Mild Steel
Finish	Safety Yellow Powder Coating

1.1.3 ACCESSORIES

Available modifications and accessories include the following:

- Loading Ramp with integrated bolt down plates (bolts included)



- Checkweighing Light and Instrument Kit



Safety & Certification Notice

The instrument in the Checkweighing Light and Instrument kit is ETL listed based on the factory-configured design. Installation of accessories requiring internal AC power—such as stacklight assemblies and associated power supplies—may alter the safety evaluation and is not covered under the existing ETL listing unless explicitly approved by the certification body.

1.2 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

1.3 USERS' RESPONSIBILITY

- 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 because of the equipment's inability to be adjusted or calibrated to performance specifications may be charged to warranty.

It is the owner's responsibility to document, notify, and follow-up regarding shipping damage with the carrier.

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



2.0 SCALE INSTALLATION

2.1 OVERVIEW

2.1.1 PHYSICAL INSTALLATION NOTES

- Only those charges which are incurred as a result of the equipment's inability to be adjusted to performance specifications may be charged to warranty.
- No physical alterations (mounting holes, etc.) are permitted during installation.

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 replaced as assemblies or units.
- Replacement of individual components is not permitted.
- These components must be returned intact for replacement credit using the standard procedures.
- At the time of installation, all electronic and mechanical adjustments are part of the installation and are included in the installation charge(s).
- The AC receptacle/outlet shall be located near the instrument and easily accessible.
- Electrical connections other than those specified may not be performed.

2.1.2 PRE-INSTALLATION CHECKLIST

The following points should be checked and discussed with the Area Sales Manager and/or customer, if necessary, before the technician goes to the site and installs the equipment.

- ✓ Check the customer's application to make certain it is within the capabilities and design parameters of the equipment.
- ✓ Be sure that the equipment operator(s) are available for training.



2.1.3 UNPACKING

Follow these guidelines when unpacking all equipment:

- ✓ Check in all components and accessories according to the customer's order.
- ✓ Remove all components from their packing material, checking against the invoice that they are accounted for and not damaged.
 - Advise the shipper immediately, if damage has occurred.
 - Order any parts necessary to replace those which have been damaged.
 - Keep the shipping container and packing material for future use.
 - Check the packing list.
- ✓ Collect all necessary installation manuals for the equipment and accessories.



The Aegis Laundry Cart Scale is securely packaged in a wooden shipping crate to protect the unit during transportation and delivery.

NOTE: It is the owner's responsibility to document, notify, and follow-up regarding shipping damage with the carrier.

2.1.4 POSITIONING THE EQUIPMENT

Position the equipment with these points in mind:

- ✓ The scale is to be placed on a flat, solid, level surface, one that fully supports the weight of the platform plus a full capacity load.
- ✓ The smooth surface must be within 1/8", and on a level plane, within 1/4" across both the length and width of the platform.
- ✓ The four corners of the Platform must rest solidly on the surface, and not rock. Irregular bumps and foreign material under the Platform can cause an "out-of-level" condition, which will affect the weight accuracy.

- ✓ Platform vibrations may also affect the weighing accuracy. Wherever possible, locate the platform as far away from heavy, low frequency vibrations as much as possible.
- ✓ Do not load the platform if there is any evidence of damage to the platform or supporting structure.
- ✓ Ease of access is very important. Allow plenty of room for maneuvering a box truck.
- ✓ Reading the instrument is also important to workers, so place it in a very visible position.

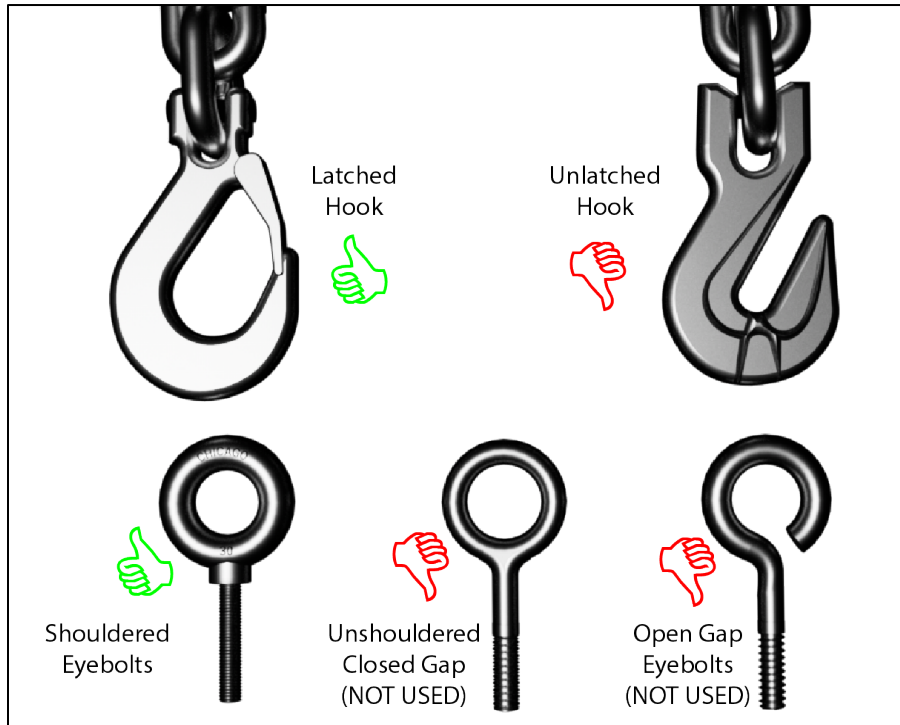
2.2 LIFTING AND INSTALLATION SAFETY

1. Regulatory Compliance and Standards

When lifting this floor scale, all personnel must adhere to all applicable regulations such as OSHA 29 CFR 1910.184 (Slings) and ASME B30.26 (Rigging Hardware). If a forklift is utilized, operators must be certified under OSHA 29 CFR 1910.178.

2. Equipment Requirements

- Hardware Type: Use only Forged Shoulder Machinery Eye Bolts.
- No Open Hardware: Use only closed-loop eye bolts. The use of open-gap eye bolts, "S-hooks," or any lifting hooks without a functional safety latch is strictly prohibited.



- Rating: All lifting components (slings, chains, eye bolts) must have a visible Working Load Limit (WLL) that exceeds the weight of the scale.
- Condition: Inspect all hardware for nicks, gouges, stretching, or thread wear. Any component showing more than 10% wear must be removed from service.

3. Pre-Lift Preparation

- **Seating the Bolts:** Screw the eye bolts into the threaded adapters on the scale platform. Use a tool (such as a screwdriver or pry bar through the eye) to ensure the shoulder is seated flush and tight against the scale surface.

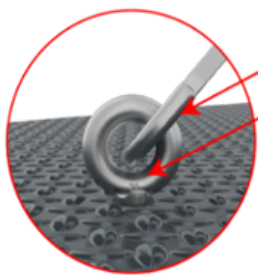
NOTE: *Gaps between the shoulder and the surface significantly increase the risk of bolt failure.*

- **Thread Engagement:** After shoulder of the eyebolt is seated flush and tight, ensure the bolt is engaged to a depth of at least 1.5 times the bolt diameter (i.e., for a ½" bolt a depth of at least ¾" is required).
- **Attachment:** Securely attach chains or slings to the closed eye bolts using rated shackles or safety-latched hooks. Ensure slings are not twisted or kinked.

4. Managing Lift Angles and Stability

To prevent the scale from swinging or spinning, a two-point lift connected to a single hoist hook is recommended. However, you must manage the "Horizontal Sling Angle":

- **The 45° Limit:** Keep the pull on each eye bolt as vertical as possible. While a slight angle provides stability, do not exceed 45° from the vertical axis.
- **Capacity Derating:** Be aware that as the angle increases, the effective strength of the eye bolt decreases. At a 45° angle, an eye bolt retains only approximately 25%–30% of its rated vertical capacity.
- **Sling Length:** Use longer chains or slings to keep the angle narrow (closer to vertical). This reduces the stress on the eye bolts while providing enough tension to stabilize the load and prevent excessive swaying.



Latched Hook
Shouldered Eye Bolt

5. Installation Procedure

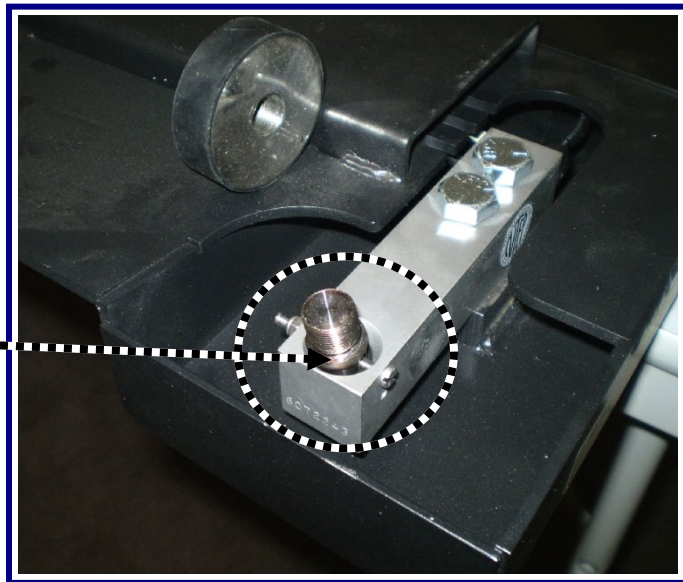
- **Site Selection:** Choose a flat, solid, level location capable of supporting the scale's weight plus its maximum rated capacity.
- **Unboxing:** Remove the crate top and all packing materials before attempting the lift.
- **The Lift:** Using a forklift or hoist, lift the scale slowly. Keep the load as low to the ground as possible during transport.

- Personnel: Only trained personnel should perform rigging and lifting. If the load appears unbalanced or the hardware shows signs of stress, stop the lift immediately and consult a qualified rigger.

2.3 INSTALLATION STEPS

2.3.1 ASSEMBLING THE SCALE PLATFORM

1. Remove the top of the crate and all packing material.
2. Screw the **two (2) eyebolts** (optional) into the threaded adapters in the platform top.
3. *It is recommended that two (2) adults* remove the scale from the crate bottom.
4. Set the scale so the interface cable exits in a direction where it can be protected.
 - If possible, use a cable protector to reduce 'trip' hazards and to protect the interface cable from being damaged.
 - The thirty-foot (30') cable can be shortened as needed.
5. Level the scale.
 - Turn the Load Cell Foot clockwise or counter-clockwise to level the scale.
 - Be careful not to unthread the foot from the loading pin.



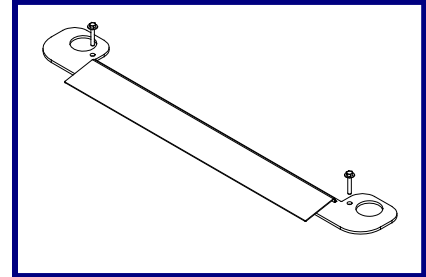
6. Wire the scale cable to the proper type instrument, as shown in the chart.
7. Calibrate the unit according to the appropriate instrument service manual.

WIRE COLOR	
Red	(-) Signal
White	(+) Signal
Black	(-) Excitation
Green	(+) Excitation
Yellow	Ground

2.3.2 INSTALLING THE RAMP(S)

Each **Ramp Accessory** comes with Integral Bolt-down Plates and two (2) Anchors.

1. Place the Ramp in position.
2. Drill Two (2) 7/16" holes.
 - Use a standard drill on a wood floor, and a hammer drill on cement.
3. Screw the Ramp into the floor, using the appropriate fastener.
4. Tighten the bolts securely.
5. Lift and set the platform feet into the Bolt-down Plate Holes.



3.0 SERVICE & MAINTENANCE

3.1 GENERAL TROUBLESHOOTING

From the following chart, identify the symptom(s) and cause(s) of each malfunction, solving each issue with an appropriate solution.

SYMPTOM	CAUSE	SOLUTION
Displays stay at zero	1. Load Cell connections faulty. 2. Instrument faulty. 3. Faulty/bad Load Cell	1. Cable replacement. 2. Service Instrument. 3. Test and replace according to Subsection 3.2.2 and 3.2.3
Erratic Weights	1. Foreign object around load cells, ramps, or under platform. 2. Excessive vibration near platform. 3. Instrument faulty. 4. Platform not level within ¼" (3.0°). 5. Surface not smooth enough (within 1/8"). 6. Faulty/bad Load Cell.	1. Clear the area. 2. Remove the vibration source. 3. Service Instrument. 4. Level the platform surface. 5. Find a smoother surface for the platform. 6. Test and replace according to Subsection 3.2.2 and 3.2.3
Inaccurate Weights	1. Instrument out of span. 2. Instrument not properly adjusted to zero. 3. Faulty/bad Load Cell.	1. Check and alter per the Instrument Service Manual. 2. Zero the instrument according to normal operation procedures. 3. Test and replace according to Subsection 3.2.2 and 3.2.3

3.2 SCALE PLATFORM TROUBLESHOOTING

Except for severe structural damages, most Platform Assembly problems can be traced to the following causes.

- Material under or around the Platform.
- Broken Load Cell Feet.
- Faulty Load Cells.
- Incorrect, loose or damaged Load Cells.

3.2.1 SCALE PLATFORM TESTING

1. Inspect the Interface Cable from the Platform to the Instrument for visible breaks or cracks.
2. **ZERO** the Instrument Display.
3. Apply a test load of **25% of the Load Cell capacity** to one corner.
 - The Instrument should display a weight reading within 0.1% of the applied weight, or One Instrument Division, whichever is greater.
4. Repeat Step 3 for all the corners, placing the same Test Load on each corner.

3.2.2 LOAD CELL TESTING

When corners do not match the correct tolerances, unsolder each Load Cell Cable, and then test each Load Cell for the settings on the following chart.

TEST	READING	REMARKS
Green to Black (Input)	1106 Ohms (+5 / -2 Ohms)	Input Resistance
Red to White (Output)	1000 Ohms (+5 / -2 Ohms)	Output / Bridge Resistance
Yellow (Shield) to Load Cell Case	More than 1,000 megohms	Insulation Resistance
Input and Output Leads to Shield		
Input and Output Leads to Case		

If any Load Cell fails, it should be replaced according to **Section 4.2.3 Load Cell Replacement Steps**

NOTE: Torque the two (2) Load Cell Fastening Bolts to **90 ft/lbs** when replacing them.

★ IMPORTANT PRECAUTION ★

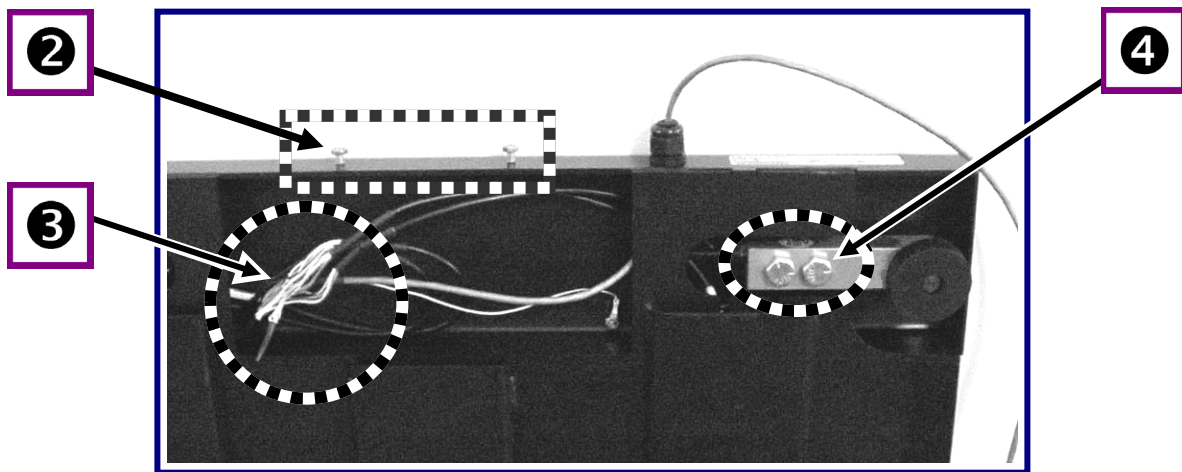
DO NOT CUT OR SHORTEN ANY
LOAD CELL CABLES!

C A U T I O N

ALWAYS remove power from the Instrument before servicing.

3.2.3 LOAD CELL REPLACEMENT STEPS

1. Lift the scale on its end.
2. Unscrew the two (2) 7/16" bolts and open the Load Cell Wiring Panel.
3. Locate and cut the defective Load Cell Interfacing Cable connection.
4. Remove the two bolts securing the damaged Load Cell to its mounting block.
5. Remove the Load Cell from the Platform.
6. Make a note of the cable routing design and the wiring connections.



7. Carefully remove the new replacement Load Cell from its packing.
8. Inspect it thoroughly for any obvious shipping or handling damages.
9. Remove the Load Cell Foot Assembly from the defective Load Cell, then place it onto the new replacement Load Cell.
10. Replace the new Load Cell onto its Mounting Block, then secure it with the Mounting Bolts.
11. Torque each Mounting Bolt to 90 ft/lbs.
12. Secure the Load Cell Cable into place.
13. Strip away the insulation from the four (4) Load Cell to a minimum of $\frac{3}{4}$ ".
14. Using **Crimp Connectors**, fasten all five (5) green wires together, all five (5) black wires together, all five (5) white wires together, all five (5) red wires together, and all five (5) yellow wires together.

15. Replace the Wiring Panel Cover, then screw in the two (2) 7/16" bolts.

16. Level the scale.

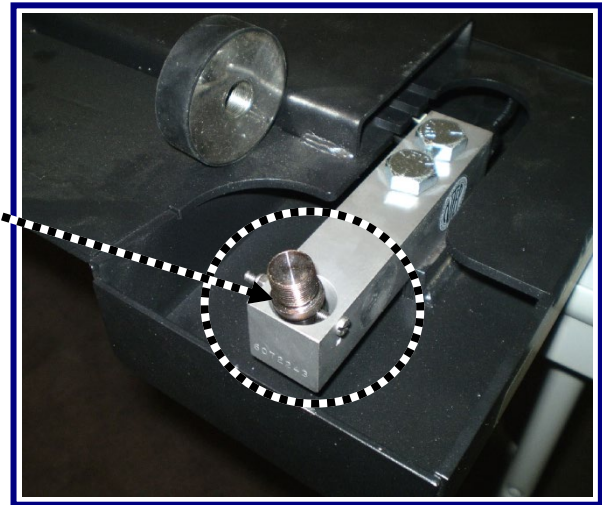
WIRE COLOR	
Red	(-) Signal
White	(+) Signal
Black	(-) Excitation
Green	(+) Excitation
Yellow	Ground

- Turn the Load Cell Foot clockwise or counter-clockwise to level the scale.
- Be careful not to unthread the foot from the loading pin.

17. Reapply power to the Instrument.

18. Recalibrate the scale with the Instrument Service Manual.

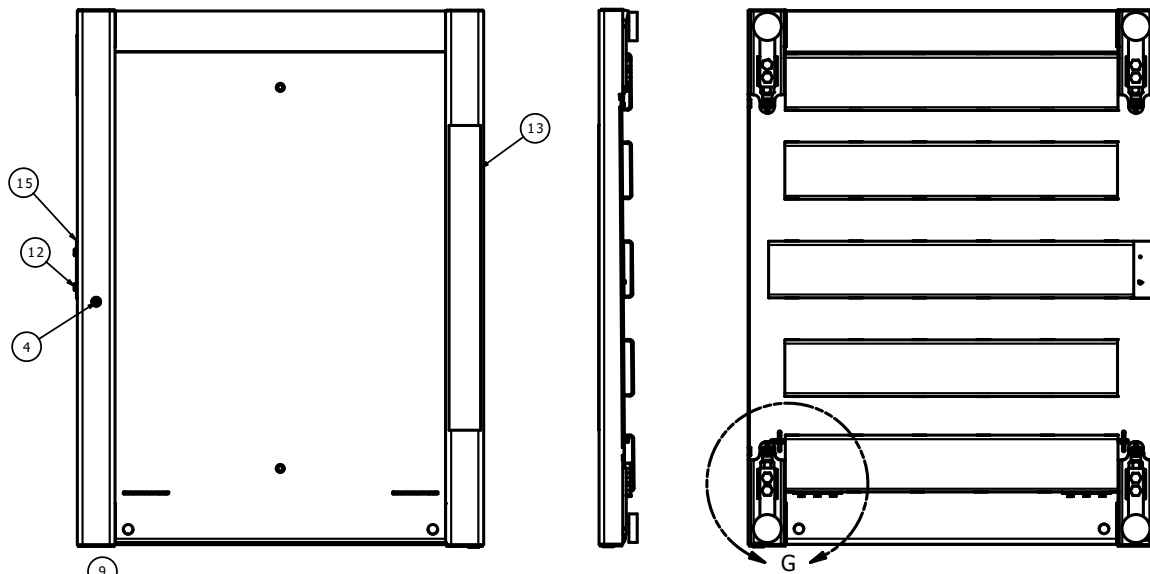
19. Test the Platform for proper operations.



4.0 PARTS

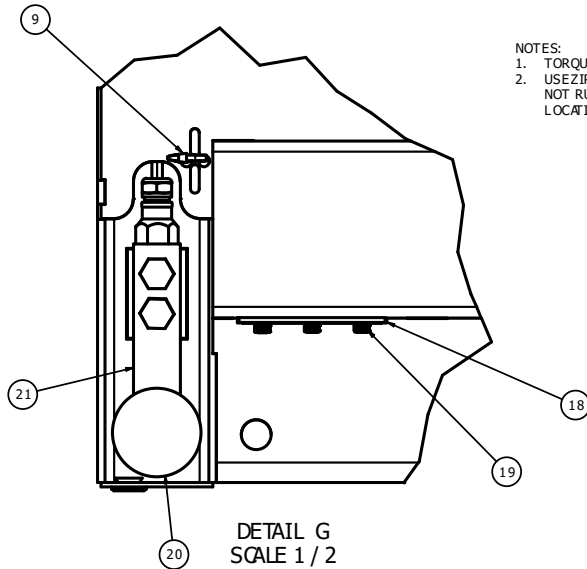
4.1 LAUNDRY CART SCALE (P/N 40991)

ITEM	QTY	PART NO.	DESCRIPTION
	1	40991	Aegis Laundry Cart Scale
1	2	10103	Nut, Hex, 6-32 Ms
2	1	10896	Screw, Machine, Ph, Phil, 6-32 X .50
3	1	11020	Bushing, Strain Relief, Heyco .625 X .55 Mount
4	1	11039	Bubble Level-11039
5	8	11080	HH-50-20x175-S11080
6	2	12189	Seal, Heavy Meter
7	1	13223	Adhesive Sealant, Rtv
8	1	15656	Serial Tag See Top Of Sheet For Data
9	2	17614	Zip Tie, 7.25"
10	5	24988	Wire Nut, Crimp On Style
11	1	25254	Cable Assy, Quick Disconnect, Platform End
12	2	28599	Sealing Screw, 1/4-20 X .50 Ss
13	1	28896	Label, Fairbanks 2.5 X 24 Inch
14	1	34791	Manual Card, Fairbanks
	1	40353Q	Access Cover, Ms, Narrow Drum Scale
16	1	40656Q	Hole Plug, For D Shaped Hole In .188" Panel, Tpu
17	1	40669Q	Weldment, Drum Scale, Ms 26x42 Backstop Angled With Bump
18	2	40673Q	Bracket, Wheelstop, Ss 3.5" Wide
19	6	40674Q	Screw, 1/4-20 X 0.5 Socket Head Black Oxide
20	4	63899	Foot, Blind Hole, Floor Scale
21	4	83634	Load Cell, 1k, Blind, Shear Beam

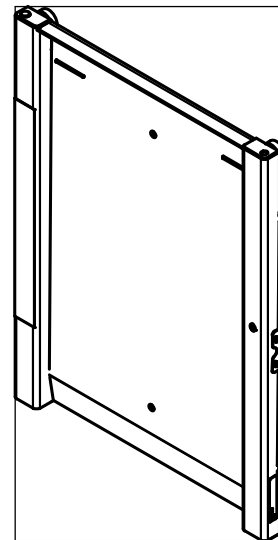


NOTES:

1. TORQUE LOAD CELL BOLTS TO 90 FT-LBS
2. USE ZIP TIE TO SECURE THE HOMERUN CABLE, BUT DO NOT RUN THROUGH THE FRAME OF THE SCALE SO THAT THE LOCATION CAN BE CHANGED ON SITE WITHOUT RE-WIRING.



4

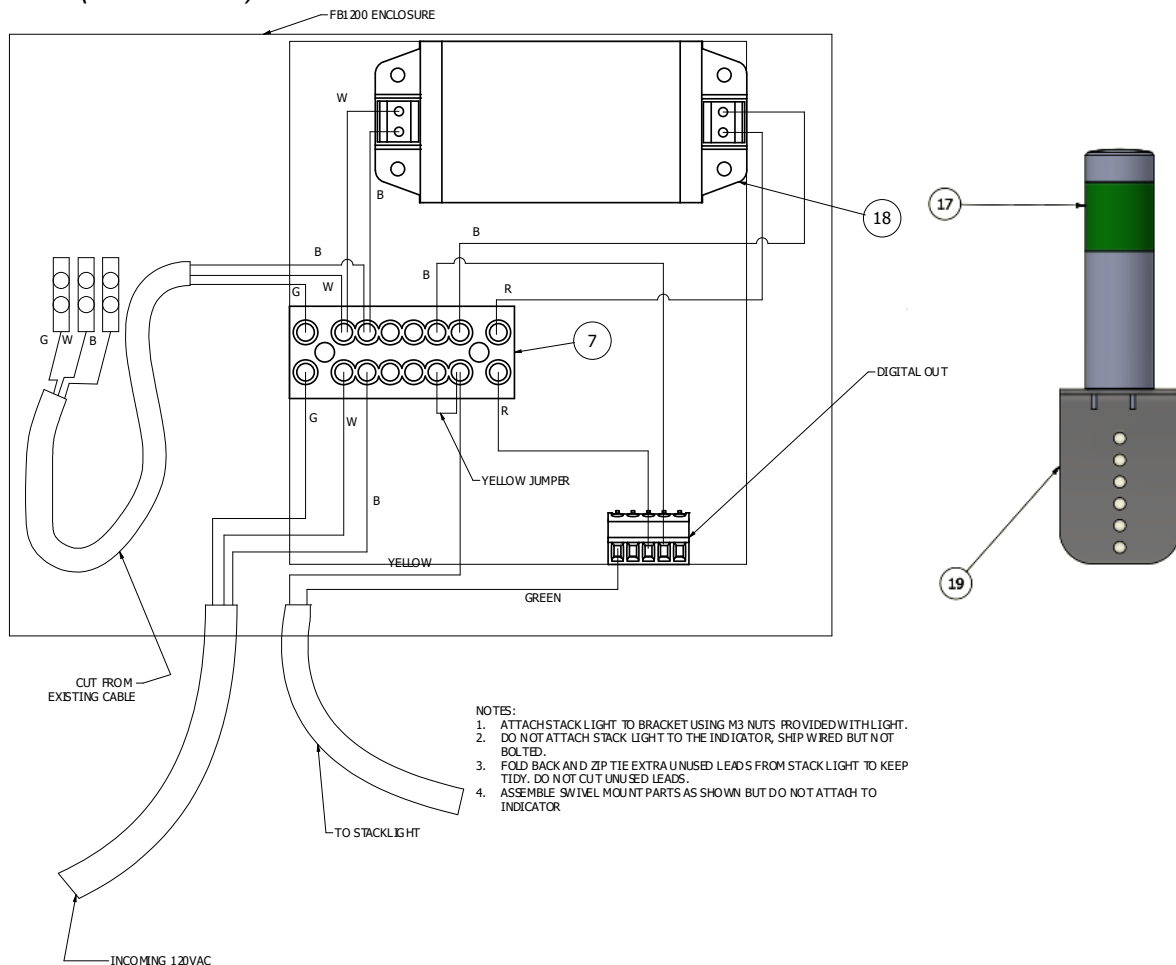


4.2 OPTIONAL ACCESSORIES

4.2.1 CHECKWEIGHING LIGHT AND INSTRUMENT KIT (P/N 40992)

ITEM	QTY	PART NO.	DESCRIPTION
NS	1	40992	Indicator with Stack Light
NS	12IN	11350	Wire, Hook Up, 18AWG Red
NS	1IN	11352	Wire, Hook Up, 18AWG Yellow
NS	12IN	11358	Wire, Hook Up, 18AWG Black
NS	2IN	14721	Velcro, Loop, Adhesive backed
NS	2IN	14722	Velcro, Loop, Adhesive backed
7	1	17515	Block, Terminal, White 8 POS
NS	1	25253	Cable, Quick Disconnect, Instrument End
11	1	38041	FB1200 Instrument, ABS, AC Power
16	1	40516Q	Stack Light Element 40mm, Green, 24VDC
17	1	40517Q	Stack Light Base, 40mm, White 24VDC
18	1	40520Q	Power Supply, 85-305AC to 24VDC
19	1	40526Q	Mount, 40mm Stacklight to ABS FB1200

**NS (Not Shown)*





Quick disconnect included (as shown above) with the optional FB1200 and Checklight kit allows for quick and easy installation.

4.2.2 LOADING RAMP (P/N 40993)

Item	Qty	Part No.	Description
NS	1	40993	Ramp Kit

APPENDIX I: CHANGING THE CHECKING WEIGHT FOR THE FB1200 CHECKWEIGH LIGHT KIT

A. INTRODUCTION

When purchased as part of the optional Checkweigh Light Kit, the Fairbanks FB1200 indicator comes configured from the factory with a default high threshold of 240 lbs. Under this factory configuration, the green checkweigh light will automatically illuminate the moment the scale detects a weight of 240 lbs or greater.

If this factory setting fits your application, no further configuration is required. If you need to modify this target weight or verify the setup, use the following guide.

Step 1: Try the F1 Key First

With the scale in normal weighing mode, press and hold the **F1** key for two seconds.

- If the screen flashes CW HI, the function key is already programmed for checkweighing. You can skip the setup menus entirely. Proceed directly to Step 3 (Setting the High Weight).
- If the scale just beeps or does nothing, the shortcut is currently disabled (OFF). You must manually enter the settings menu to map the key to the target function by following Step 2.

Step 2: Enabling the Target Function (Service Menu)

If the **F1** key did not respond, use this keypad sequence to route it to the checkweigh application:

1. **Open the Menu:** Press the **POWER** and **B/G NET** keys simultaneously.
2. **Select Service Level:** Use the **UNITS** key to scroll past **SUPER** until the screen reads **SERV**. Press **ZERO** to select it.
3. **Enter the Passcode:** When 000000 appears with the first digit flashing:
 - Press **UNITS** once to change the first digit to 1.
 - Press **ZERO** to move to the next digit.
 - Press **UNITS** twice to change the second digit to 2.
 - Press **ZERO** repeatedly to accept the remaining zeros (120000) and enter the system.
4. **Navigate to F.KEY:** Use **UNITS** to scroll to the APP menu and press **ZERO**. Scroll until you see F.KEY and press **ZERO**. The screen will display **OFF**.
5. **Open the Option List:** Press the **ZERO** key once while looking at **OFF** to open up the hidden selection loop.
6. **Select Target:** Use the **UNITS** or **B/G NET** keys to scroll through the options until you highlight **TARGET**. Press **ZERO** to lock it in.

7. **Exit and Auto-Save:** Press **UNITS** repeatedly to advance forward through the remaining setup screens. The scale will automatically save your choice and exit completely back to the main weighing screen.

Step 3: Setting the High Weight

Now that F1 is successfully mapped to TARGET, you can change the default 240 lbs threshold at any time from the main screen:

1. Press and hold **F1** for two seconds until **CW HI** flashes.
2. Press **ZERO** once to stop the flashing and enter **Edit Mode** (the far-left digit will begin flashing).
3. Use **UNITS** to change the number (0-9) and **ZERO** to move the cursor to the right until your new desired High weight is typed out.
4. Press **UNITS** to save the High Limit and advance.
5. The screen will immediately flash **CW LO**. Since a low limit is not needed for this light setup, simply press **UNITS** one final time to leave it at zero, save, and exit back to normal weighing.





Aegis Laundry Cart Scale

Installation Manual Document 51714

Manufactured by Fairbanks Scales, Inc.

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