Installation Manual

Series 5

Bench Scales

51362
Revision 2 02/2016

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Amendment Record

Series 5
Bench Scales

Document 51362

Manufactured by Fairbanks Scales Inc.

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Kansas City, Missouri 64106

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Revision 1	11/2015	Released Manual
Revision 2	02/2016	Updated wiring for 18” x 24” platform

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, Thurman Scale 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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Section 1: General Information

1.1. INTRODUCTION

The Series 5 is a bench scale that can be used with a variety of Fairbanks' instruments. The platform is constructed from a rugged, tubular and cast aluminum design with a stainless steel platform (shroud). This scale is designed to be used in a variety of weighing applications, including inventory, material handling, and general manufacturing.

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

1.2. SPECIFICATIONS

Series 5	
Size / Capacities	14" x 18" / 60 lbs – 200 lbs 18" x 24" / 300 lbs – 600 lbs
Cover / Platter	304 Stainless Steel Shroud
Base Construction	Welded tubular and cast aluminum design
Platform Rating	IP66
Overload	200% FS
Bridge Resistance	350 ohms nominal

1.3. ENVIRONMENTAL

Operating Temperature	-14 to 104 F (-10 to 40 C)

1.4. APPROVALS

NTEP	**COC#** 15-036
MC	**MC#** AM-5991

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Section 2: Company Service 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 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 Service Technicians and Authorized Distributor personnel only!
Failure to comply with this policy voids all implied and/or written warranties.

2.2. OVERVIEW

Physical Installation Notes

- Check all devices for proper operation. If any error messages occur, refer to Troubleshooting or the proper manual of that device.
- 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 allowed during installation.

NOTE: *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 allowed.
- These components must be returned intact for replacement credit per normal procedures.
- All electronic and mechanical adjustments are considered to be part of the installation, and are included in the installation charge(s).
- Included is any required computer programming or upgrades.
- Included are any accuracy and/or operational specification changes.
- The AC receptacle / outlet shall be located near the Indicator and easily accessible.
- Electrical connections other than those specified may not be performed.

Conferring with Our Client

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

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.
- If the installation process might disrupt normal business operations, tell the customer and ask that they make ample arrangements.
- Be sure that the equipment operator(s) are available for training.

- The service technician reviews the recommended setup with the Area Sales Manager or Area Service Manager, and together they identify all necessary variations to satisfy the customer's particular application.

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.
- Open the equipment and perform an inspection, making certain that all hardware, electrical connections and printed circuit assemblies are secure.
- Do not reinstall the cover if the final installation is to be performed after the pre-installation checkout.

Equipment Checkout

Position the equipment with these points in mind:

- Intense direct sunlight can harm the display.
- Do not locate near magnetic material or equipment/Indicators which use magnets in their design.
- Avoid areas which have extreme variations in room temperatures. Temperatures outside the Indicator’s specifications will affect the weighing accuracy of this product.

- Do not load the platform if there is any evidence of damage to the platform or supporting structure.

Users' Responsibility

- All electronic and mechanical calibrations and/or adjustments required for making this equipment perform to accuracy and operational specifications are considered to be 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.
- 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.

Section 3: Standard Installation

This section covers the site selection, installation, scale wiring and recommended instruments to use with this model.

3.1. SITE SELECTION

When choosing a location for the scale, it is not only important to choose a flat and level surface but to choose a location that provides for convenient loading and unloading.

Avoiding vibration at the platform is also important when choosing a location. Low-frequency, heavy vibrations can affect weighing accuracy. Choose a location where this will not be a factor.

3.2. LEVELING THE PLATFORM

The platform is equipped with adjustable feet to compensate for variations in height of the supporting scale surface. To determine if the platform is level, view the bubble level located on the pillar support.

If adjustments are required, turn the feet clockwise or in a counter- clockwise direction until the bubble level confirms the platform is level.

The platform should now rest solidly on its surface without rocking.

3.3. CONNECTING THE PLATFORM

The weigh platform connects to an instrument via the 10’ interface cable that is pre-wired to the load cell. Depending on the scale model ordered, either 14” x 18” or 18” x 24”, the wiring instructions will differ. See the following charts:

14” x 18” Platform - Load Cells (P/N 34351 and 34352)

LOAD CELL WIRING	COLOR CODE
Ex +	Green
Ex -	Black
Sense +	Orange
Sense -	Blue
Sig +	White
Sig -	Red
Shield	Yellow (floating)

18” x 24” Platform – Load Cells (P/N 34353 & 34354)

LOAD CELL WIRING	COLOR CODE
Ex +	Red
Ex -	Black
Sig +	Green
Sig -	White

Load Cell Specifications

DESCRIPTION	SPECIFICATION
Material	Aluminum
Bridge Resistance	350 Ohms
Rated Output	2 mV/V
Safe Overload	150% FS

3.4. ADDING A PILLAR TO THE PLATFORM

Adding a pillar to the Series 5 scale provides a convenient location for mounting a Fairbanks instrument. Pillars are available in **12”** (p/n 34349) or **30”** (p/n 34350) sizes and constructed of stainless steel. The pillars are made to fit onto either size platform.

Routing the Load Cell Cable

An important step in adding a pillar to the platform is to position the load cell cable to run through the pillar. The load cell cable comes pre-wired to the load cell and is routed between the stainless steel shroud (scale cover) and platform base.

To position the load cell cable:

1. Remove the stainless steel platform (shroud) by lifting slightly on each corner until it is detached from the base.
2. Turn the base over and position so the bottom of the scale is facing up.

Figure 3-1: Underside of the Scale Platform

3. Remove all four screws from the silver cover plate and remove.

Figure 3-2: Underside of platform with cover plate removed

4. Turn the scale back over and position back on feet. Remove the pillar cup, route the load cell cable into the opening closest to the load cell and then up through the pillar hole.

Figure 3-3: Top of platform with cup removed

5. Turn the scale back over and replace the cover plate and screws.

Attaching the Pillar to the Platform

After the load cell cable is in place, the pillar and instrument can be installed. Each pillar comes with a set of mounting hardware (screws, washers and nuts) to attach the instrument. Fairbanks instruments **FB1100SS**, **FB2250**, **FB2255**, and **NexWeigh** can be used as instruments on the Series 5 scale.

To add the pillar and instrument:

1. Position the scale on the feet and slide the load cell cable wire through the pillar.
2. Insert the pillar into the mounting bracket pole and tighten the Allen screws on the back of the bracket.
3. Align the instrument's tilt desk bracket with the thru-holes in the pillar's instrument stand.
4. Using the mounting hardware, secure the instrument tilt desk bracket in place.

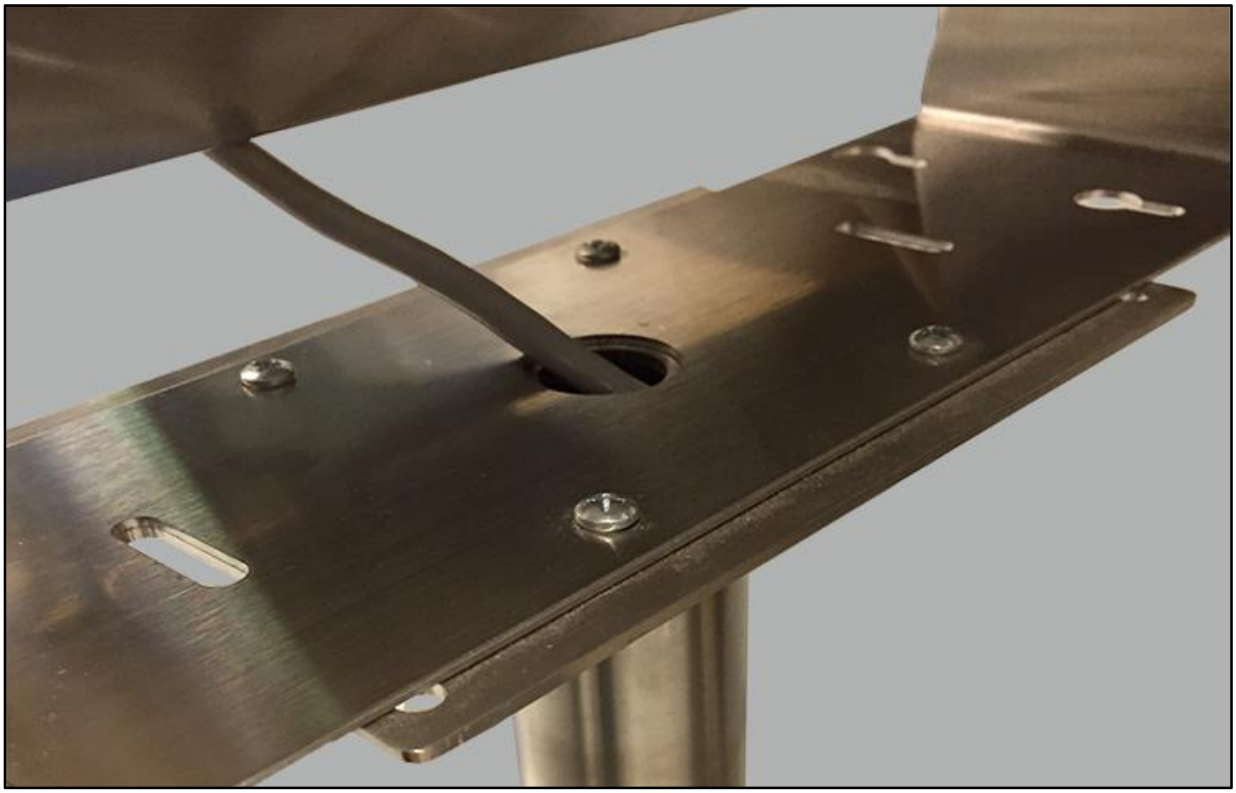

Figure 3-4: Instrument securely mounted on the pillar

5. Reference the appropriate instrument's service manual for wiring and calibration instructions.

Section 4: Parts

Load Cell Specifications

DESCRIPTION	SPECIFICATION
Material	Aluminum
Bridge Resistance	350 Ohms
Rated Output	2 mV/V
Safe Overload	150% FS

Parts List

ITEM	PART NO.	DESCRIPTION	MODELS
	34343	SERIES 5 60 LB 14” x 18”	
-	34346	SERIES 5 100 LB 14” x 18”	
-	34404	SERIES 5 200 LB 14” x 18”	
-	34347	SERIES 5 300 LB 18” x 24”	
-	34348	SERIES 5 600 LB 18” x 24”	
2	26213	RUBBER FOOT, 3/8 x 1 ½ THREADED STEM	14” x 18”
3	26214	RUBBER FOOT, 1/2 x 2 ½ THREADED STEM	18” x 24”
4	34351	LOAD CELL, 50 KG, SERIES 5	34343
5	34352	LOAD CELL, 100 KG, SERIES 5	34346, 34404
6	34353	LOAD CELL, 200 KG, SERIES 5	34347
7	34354	LOAD CELL, 300 KG, SERIES 5	34348
8	34355	PILLAR CUP, INCLUDES SET SCREWS	All
9	34356	HARDWARE KIT, INSTRUMENT MOUNTING	
10	34357	PLATFORM (SHROUD) 14” x 18”	14” x 18”
11	34358	PLATFORM (SHROUD) 18” x 24”	18” x 24”
12	34349	PILLAR 12”, SERIES 5, SS	All
13	34350	PILLAR 30”, SERIES 5, SS	All
N/A	25253	Cable Assy, Instrument End, Female	
N/A	34464	Connector, 5 Pin Male, QD	

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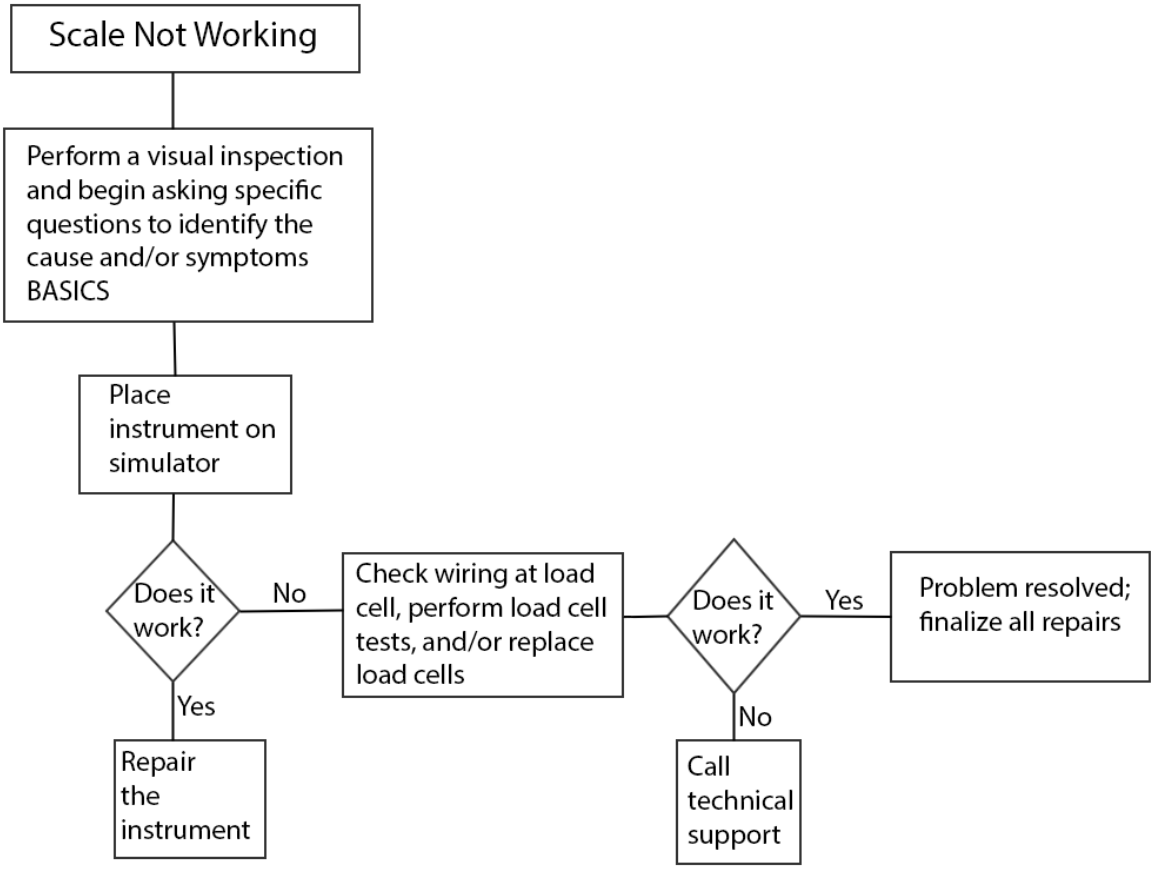
Section 5: Troubleshooting Flow Chart



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