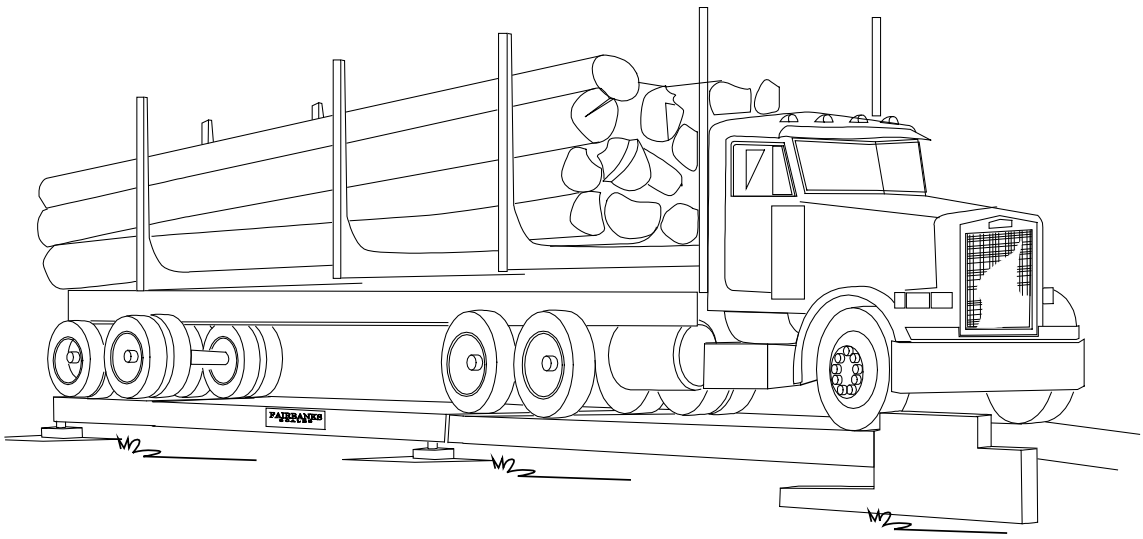
Installation Manual

Titan Series Truck Scale

6020 Series



51351
Revision 8 04/2021

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 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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AMENDMENT RECORD

Titan Series Motor Truck Scale

6020 Series

Installation Manual
Document 51351

Manufactured by

Fairbanks Scales

Created	10/14	
Revision 1	11/14	New product documentation release.
Revision 2	03/15	Updated Parts
Revision 3	01/16	Updated Parts > Load Cells & Associated Hardware
Revision 4	10/16	Maintenance > Scale maintenance updates, Parts
Revision 5	09/18	Updated Parts
Revision 6	10/18	Updated Scale Installation section; Added Spare Parts Lists
Revision 7	10/19	Updated: Hydraulic Jack details
Revision 8	04/21	Updated: Tool Checklist

TABLE OF CONTENTS

SECTION 1: GENERAL INFORMATION

1.1. Introduction

This Instruction manual provides installation instructions for the Fairbanks Titan Modular Steel Deck Truck Scales.

For correct Titan Scale installation, use these tools.

- *See* **Appendix I** *in* **Methods and Procedures FF-2267 / 101732**.
- The Certified Prints and Setting Plans supplied with the scale.
- This Instruction Manual, **51351.**

The concrete foundation work must be performed according to the Certified Prints issued for the specific customer and order number.

– The name and order number for the particular customer will be on the prints.

1.1.1. Specifications

Load Cell Specifications

Height	4 -$^{11}/_{16}$”
Capacity	110K lbs (50t)
Type	Rocker Column
Sealing	Complete hermetic sealing; cable entry sealed by glass to metal header
Material	Stainless Steel 17-4 PH (1.3448)
Rating	IP68 (NEMA 6P)
Resistance	1,000 Ohms
Operating Temperature	-40 to +80°C (-40 to 176°F)
Output	2.0 mv/v
Combined Error	≤0.02%
Zero Balance (FSO)	1.0%
Excitation	5 to 15 VDC
Ultimate Overload	300%
Cable Length	15’
Cable Protection	Stainless Steel Sheathing
Approvals	NTEP COC# 14-024 Factory Mutual Approved

1.1.1. Specifications, continued

Scale Specifications

Deck Dimensions	Lengths: 27’, 30’, 35’, 60’, 70’, 80’, 90’, 105’ Widths: 10’, 11’, 12’, 14’
CLC/DTAC	120K lbs
Gross Capacities	150K to 300K lbs
Sections	2 to 4
Modules	1 to 3
Module Design	Orthotropic
Module Construction	USA Structural Steel
Module Under Structure	Open Bottom
Deck Plate Thickness	3/8”
Approval	NTEP COC**#: 96-089** MC# **AM-4949**

1.1.2. Scale Description

The **TITAN Modular Steel Deck Truck Scales** are available in various lengths from twenty-seven to one hundred and five feet (27’ – 105’), and widths from ten to fourteen feet (10’ – 14’).

- The scale is made up of modules of **27, 30,** and **35 feet** lengths**.**
- All modules are assembled and welded at the factory.

Locate the scale so that trucks can approach and exit easily.

- Smooth and level approaches are required at each end of the platform to reduce loading shock and facilitate scale testing.
- Approaches must conform to the requirements of the law in the state in which the scale is being installed.
  - *In the absence of such laws, the approaches must conform to* ***P*****aragraph UR.2.6 National Institute of Standards and Technology Handbook 44***.*
  - *The first ten feet (10’) must be level and on the same plane as the scale platform.*
- The platform should be visible from the instrument location.
- It must be built so surface water will drain easily, and not collect under the scale.

1.2. Users' Responsibility

- ✓ **All electronic and mechanical calibrations and/or adjustments required for making this equipment perform to accuracy and operational specifications should be performed by trained service personnel.**
- ✓ **Absolutely no physical, electrical or program modifications other than selection of standard options and accessories are to be made to this equipment.**
- ✓ **Electrical connections other than those specified may not be performed, and physical alterations (holes, etc.) are not allowed.**

Please call your local

FAIRBANKS SCALES REPRESENTATIVE

for any question or problems.

SECTION 2: SCALE INSTALLATION

2.1. Introduction

Standard installation consists of these steps.

A. Foundation check, layout, and base plate setting.

B. Tools, materials, documentation, and a crane.

C. Setting the modules.

D. Setting the modules on load cells.

2.2. Checklist of Tools, Equipment, and Materials

☐ Certified Prints.

☐ Mobile Crane of sufficient capacity to safely lift and place the weigh bridge modules.*

☐ Four (4) equal length lifting chains/cables with hooks.*

☐ Listed below are the approximate maximum weights of scale modules.

- Steel Deck Modules – 8 tons.
- Field Pour Modules – 22.5 tons.
  - *With Concrete – 12.5 to 15 tons (+/- 5%).*

☐ Machinists Levels (Starrett # 134 & 132-6).

☐ Hand Tools.

– Wrenches and Sockets:

- 15/16”
- 1 1/8”
- 1 ½”
- 1 11/16”

☐ Hammer Drill with 5/8" Bit, 16" long.

☐ Low profile hydraulic jacks (2)

- Hydraulic Jacks that have sufficient capacity plus (+) a safety factor for the model of scale you are installing.
- Recommended Jacks:
  - Enterpac model CUSP50 cylinder
  - Enterpac model P141 pump
  - Enterpac model HB9206Q hose
  - Enterpac model A360 coupler

- Enterpac model FZ1630 reducer
- Available at www.enerpac.com

☐ 100' Steel Tape Measure.

☐ String-line and chalk-line.

☐ Pry-bars.

☐ High quality grease and anti-seize. (***see note below)***

NOTE: **Grease** for load cell cups: equal to *Super Lube White Grease* (food grade)

☐ Load Cell Locating Tools – **157069** for **4 11/16" cells** (one per load cell).

*** IMPORTANT NOTE**: ***Request the*** Mobile Crane ***and*** Chains ***in advance from the crane vendor.***

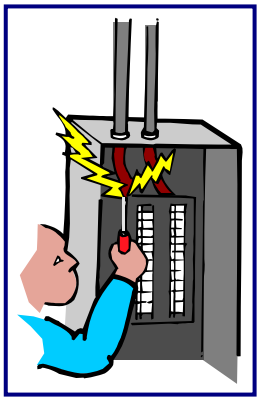
2.3. Installation Safety Policy

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.**
- Instructions within this manual apply to the instrument and its specific accessories. Installation procedures for printers and other peripherals are given in manuals specifically provided for those units. The instructions include a pre-installation checkout which must be performed either at the service center before the technician goes to the site, or at the site before he places the equipment in service.
- All electronic and mechanical calibrations and/or adjustments required to make this equipment perform to accuracy and operational specifications are considered to be part of the installation, and 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. Electrical connections other than those specified may not be performed, and no physical alterations (mounting holes, etc.) are allowed and will immediately void warranty

All load cells, load cell cables, and all interconnecting cables used for the scale components must be located a minimum of thirty-six inches (36") away from all single and multiple phase high energy circuits and electric current-carrying conductors.

- This includes, but is not limited to **digital weight instruments, junction boxes, sectional controllers**, and **power supplies**.
- This includes any peripheral devices, such as **printers, remote displays, relay boxes, remote terminals, card readers**, and **auxiliary data entry devices**.
- Scale components themselves must also be at least **thirty-six inches (36") away** from other high energy components, including the following devices.
- Any machinery with outputs of **120, 240**, or **480 VAC**.
- High voltage wiring runs and stations, AC power transformers, overhead or buried cables, electric distribution panels, electric motors, florescent and high intensity lighting which utilize ballast assemblies, electric heating equipment, traffic light wiring and power, and all relay boxes.
- Scale components are not designed to operate on internal combustion engine driven electric generators and other similar equipment.
  - This includes all digital weight Instruments and peripheral devices.

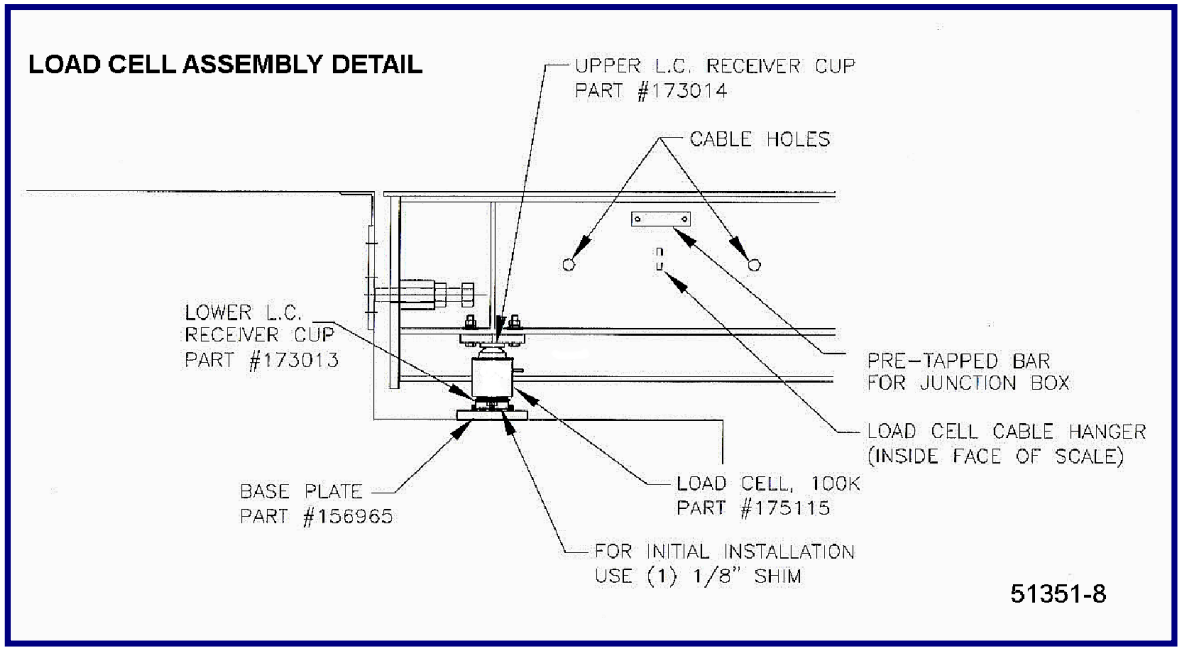


- Electric arc welding can severely damage scale components, such as digital weight Instruments, junction boxes, sectional controllers, power supplies, and load cells.
- The Service Technician's responsibility that all personnel are fully trained and familiar with the equipment's capabilities and limitations before the installation is considered complete.

2.4. Standard Foundation Installation

*Noted below are the steps to a **standard foundation installation.***

1. Before installing any part of the scale, check the foundation for accuracy using Foundation Inspection.
   - **Field Check List, FF-2267 / 101732.**
   - *See* **Appendix I: Foundation Checklist**.
2. Layout and position the base plates in the proper locations using the Methods & Procedures and Certified prints.
   - Each base plate must be level and in full contact with the top of the pier.
   - Adjustments can be made by chipping the concrete or grouting under the base plates.
3. Re-check the locations of each base plate against the Certified prints.
4. Insert four (4) $^{3}/_{8}$" roll pins into each baseplate to retain the cup.
5. Put a $^{3}/_{16}$" shim on the Baseplate between the Retaining Pins and under the Lower Cup.
   a. The Lower Cups for the load cells have a pin which should be aligned inward, towards the center line of the scale.
      - *This leaves the load cell cable exiting the load cell to the inside.*
      - *It is not necessary to install base plate anchors at this time.*
6. Place the upper cup on the edge of the upper foundation next to each base plate.
7. Place the Load Cell Locating Tool next to each Base Plate.

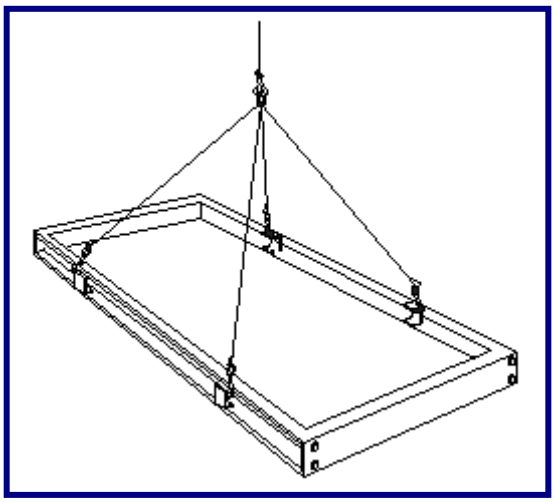


2.4.1. Preparing the Modules

Prepare the modules for lifting.

– The modules are complete with lifting channels welded to the sides for attaching lifting hooks.

– No lifting bolts are required.



2.4.2. Setting the Center Module

1. Always set the center module into place first.
   – The center module has four (4) load cells to install, all other modules will have two (2) load cells.
   – The modules must be placed in the proper order and aligned in the foundation so that all modules fit correctly.
2. Place blocks that will set the modules at a height slightly less than the finished height as safety blocks, or for setting the modules on.
3. Lift the center module to a location above the four center load cell base plates.

OPTION 1

a. Set the module directly on the locating tools and the blocks will act as safety stands.

b. Install a Load Cell Bearing Cup into the upper receiver of each corner, grease will help hold the cup in place.

c. Insert the upper end of the locating tool over the upper cup on the module.

d. Lower the module while holding the locating tool upright and guiding the bottom of the tool into the lower cup.

e. When the center module is set on all four locating tools, keep tension on the cables until the module is centered and straight.

f. Use hydraulic jacks to lift the unit slightly and shift the base plates to get the locating tools plumb and the bottom flange **FLUSH** with the side of the cup.

2.4.2. Setting the Center Module, Continued

OPTION 2

a. Set the modules on the blocks first, then onto the locating tools.
   - *When the module is set on the blocks, keep tension on the cables until the module is properly aligned.*
   - *Use hydraulic jacks to lift the unit slightly then install the locating tools.*

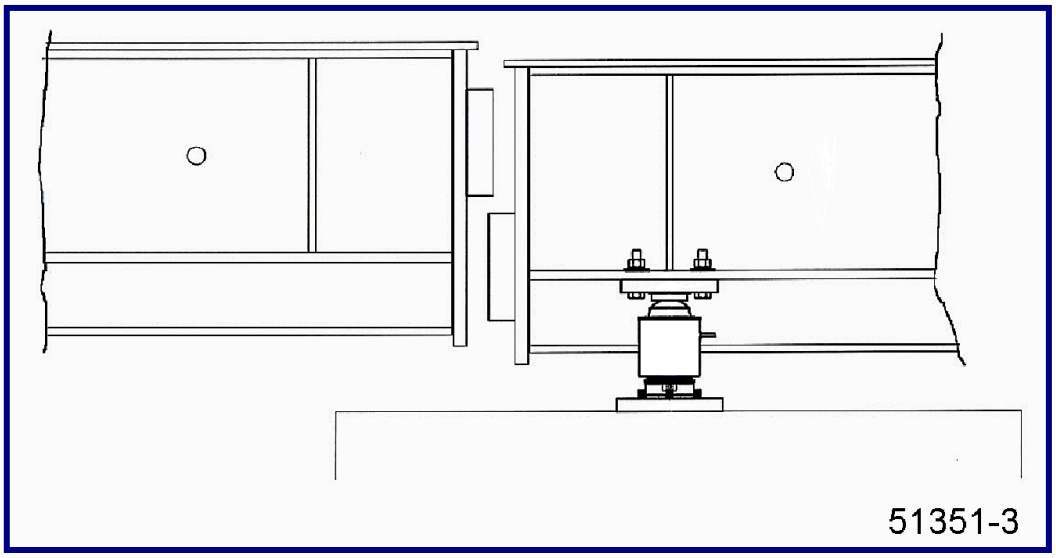
b. Shift the base plates to get the tools plumb.

c. Measure from each side of each end of the module, to the end walls, to be certain the module is plumb and square before removing tension.

d. Once the tension on the lift cables is released, remove the lift cables.

2.4.3. Setting End Modules

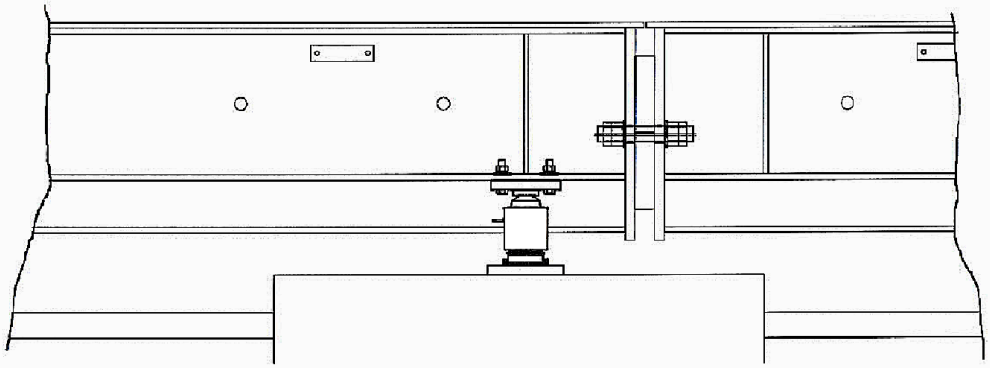
1. Guide the modules into place with the supporting blocks on the end of the module coming to rest on the supporting blocks of the center module.
2. Lower the other end of the module onto the load cell locating tools or blocks (see below).



3. ***Before releasing tension on the cables***, check the alignment of the end modules to the center module and to the end wall.
4. Use the shims provided to set height and fill any gaps on the supporting blocks to get the modules aligned.

2.4.4. Connecting the Modules

1. Bolt the modules together using the 1-1/8" x 8" full-thread rod, lock washers, flat washers and nuts provided.
2. Shim the supporting blocks, as needed to align modules.
3. Snug the nuts, but do not fully tighten them yet.



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PANEL CONNECTION DETAIL

WARNING!

Module-to-module bolts MUST be installed correctly and torqued properly after all steps are completed.

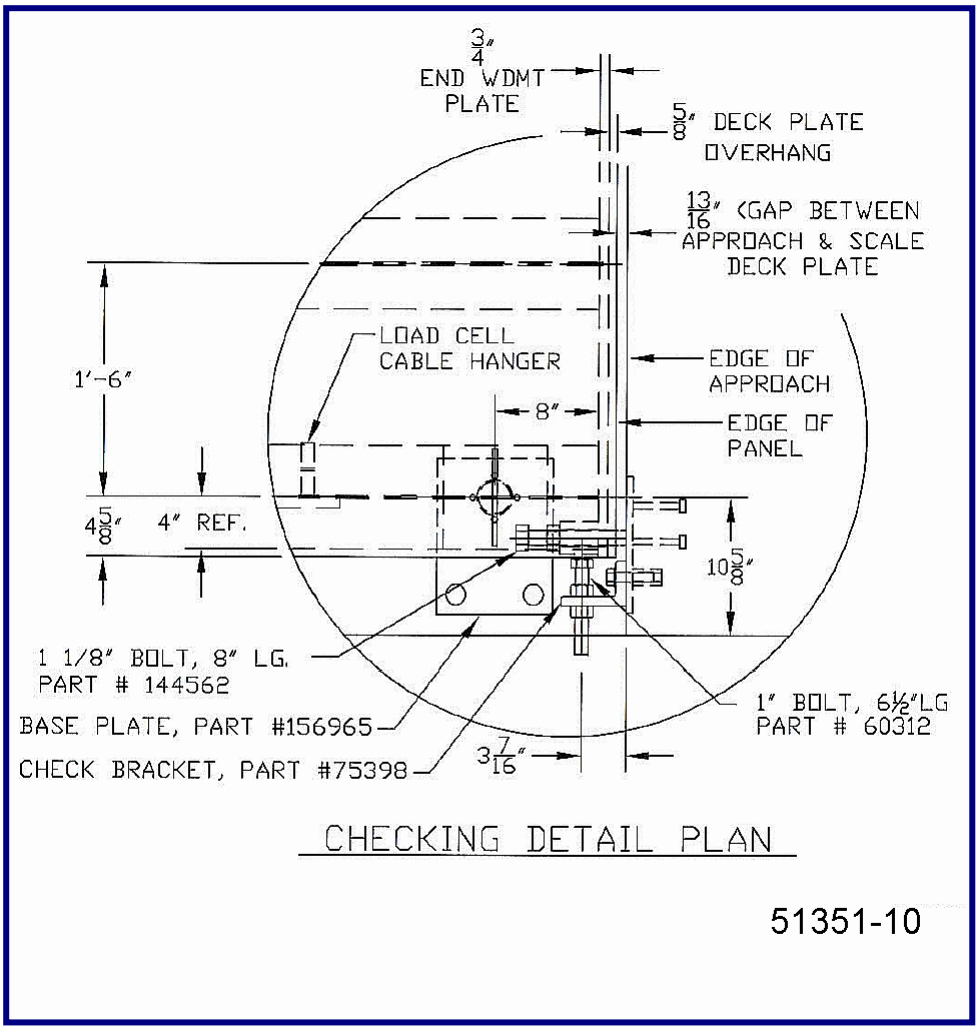
Do NOT substitute or omit any bolts.

2.4.5. Checking Adjustment

1. Adjust the **End Checking**.
   – Set the **End Checking Bolts** so that they touch and prevent movement, then tighten them down.
2. Install the Side Checking Brackets.
3. Bolt the brackets to the end checking plates embedded in the end walls according to the Certified Prints.
   – Set the bolts so that they touch the blocks they bump against.

2.4.6. Base Plate Completion

1. Check that all locating tools are properly aligned.
2. Drill the holes for the outside base plate anchors using a hammer drill and the **5/8" drill bit.**
3. Tap the anchors into clean holes and tighten the nuts securely.



DANGER

USE EYE PROTECTION!!!

Grease can squirt out of the cup at an extremely HIGH VELOCITY!!!

2.4.7. Installing Load Cells

1. Unpack the load cells and mark each calibration certificate with the load cell location and position.
2. Bolt the Anti-Rotation Clip onto the side of the Load Cell.
3. Starting at one end of the assembled platform, place hydraulic jacks at the corners so the section can be lifted off the locating tool.

   –Two (2) hydraulic jacks may be required.

4. Lift the platform so the load cell locating tool can be removed from the upper and lower bearing cups.
5. Once removed, coat both cups with grease (provided in the box with each load cell).
6. Place the rubber gasket around the upper lip of the bottom cup.
7. The Anti-Rotation Clip will be bolted to the side of the load cell. Align this with the pin extended from the lower cup (*shown to the right*).
8. Carefully lower the scale (hydraulic jacks) while seating the bottom of the cell into the lower cup.

NOTE: Anti rotation must be positioned to the inside of the scale.

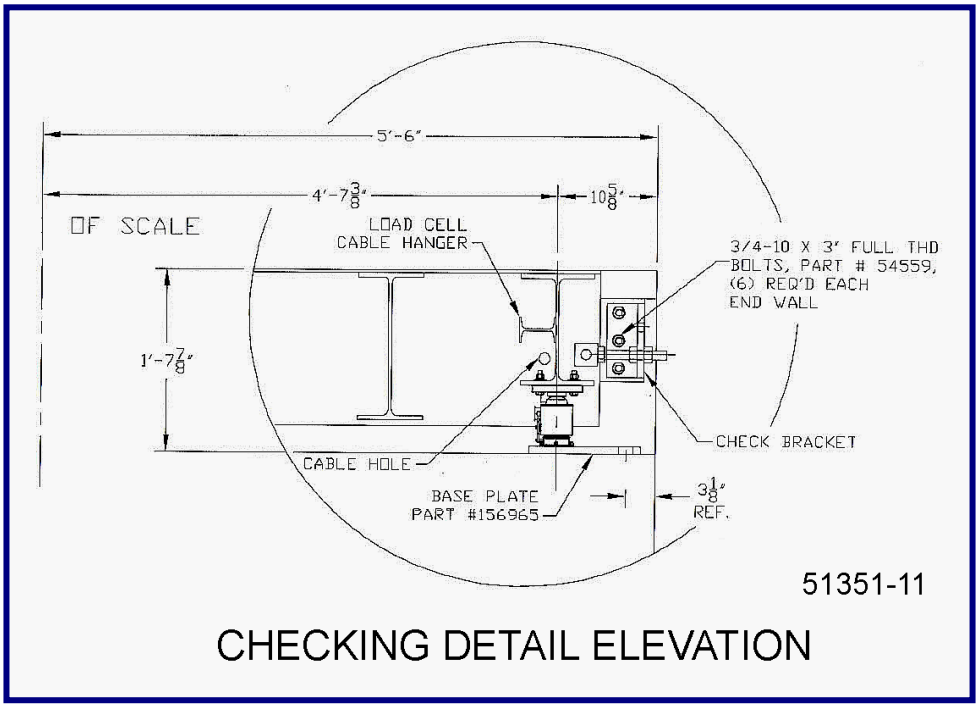
9. Check the scale's level and height, particularly at the approaches.
10. Use the load cell shims provided to adjust load cell cups for correct height and to ensure that all cells share an equal amount of the load.
11. Center section cells will have up to twice the dead-load of end section cells.
12. When the height and level are correct, tighten the module-to-module bolts.

    –Torque the nuts to **five hundred (500) ft./lbs**.

2.4.8. Load Cell Cables

The cable protection on truck scales is extremely important to the reliability of the scale.

1. Route the load cell cables to the conduits that go across the bottom of the scale laterally. Route the junction box interface cables through the conduits that run longitudinally along the inside web of the side beams.
2. Coil the excess cables on the cable hanger on the interior of the I-Beams
   - **Cable Hangers** are located behind every SSC or PPS mounting block for all excess load call and interconnecting wire.
3. Once all wiring is complete, fasten all the cables together and hang them safely out of sight on the cable.
   - In a correct installation, the only cables visible are those coming out of the holes in the side beam to the SSC or PPS.



CHECKING DETAIL ELEVATION

2.4.9. Final Checking Adjustment

1. Adjust the **End Checking Bolts** to allow **1/16" to 1/8"** clearance.
2. Adjust the **Side Checking Bolts** to allow **1/16"** clearance from Bumper Block.

SECTION 3: ELECTRICAL INSTALLATION

3.1. Installation

The Titan scale was designed to be used with Intalogix™ systems. Intalogix™ systems utilize smart sectional controllers (SSC) and pit power supplies (PPS) for load cell excitation and signal processing.

Analog instruments cannot be used with this platform.

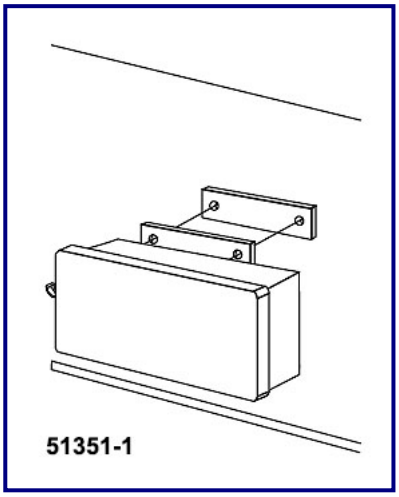
- The sensitivity using an analog indicator would be approximately a half microvolt (0.5mV).
- Most analog instruments have a minimum sensitivity of one microvolt (1mV).

There is one (1) SSC (Smart Sectional Controller) per section and one (1) PPS (Pit Power Supply) for the entire platform.

- This applies to all scale installations unless the number and resistance of the cells require a second PPS.
- SSC Boxes have four (4) terminals.
  - *Two (2) are for load cells, and two (2) are for interfacing to other SSC boxes or terminating to a pit power supply.*
  - *All cell/section/scale adjustments are made using the Intalogix™ system instrument.*

3.1.1. Boxes

Mount the box with the brackets to the side of the Titan Modules.



3.1.2. Wiring

- Cable used in all wiring must be a minimum of **18 AWG**.
- Use Cable **17204** or **17246**.
- Use appropriate service manual for the indicator being installed
- *For more information, see* **Appendix II: Four Section Intalogix Scale**.

3.1.3. Smart Sectional Controller (SSC)

- Wire cells into each SSC according to the appropriate service manual.
- *For more information, see* **Appendix II: Four Section Intalogix Scale**.

LOAD CELL WIRING

COLOR	DESCRIPTION
Blue	**– Excitation**
Red	**+ Excitation**
Grey	**– Signal**
Green	**+ Signal**
Yellow	**Shield**

3.1.4. Preventing Moisture Entry

The Titan Scale is designed to provide protection from the effects of moisture.

– Load cells are calibrated with the cable attached. ***DO NOT EVER cut the cable***.

– The cable is connected directly to the SSC through a sealed bushing, which ***MUST*** be tightened properly to keep water/moisture out of the box.

– All cabling should have a ***drip loop*** at the cell or box entry location to help prevent water entry.

– On all boxes, particularly stainless steel, the black plastic fittings have "O" rings that can be forced out of position if the bushing itself is not tight.

- *To prevent this, first tighten the inner nut securing the bushing in the hole, then insert cable and carefully tighten the gland until it is very snug.*
- *Do not over-tighten where bushing turns.*
- *Secure the cover with* **10 in/lbs.** *for protection against moisture.*

3.1.5. SCC Wiring

Wire the cells into each section's SSC according to the appropriate manual.

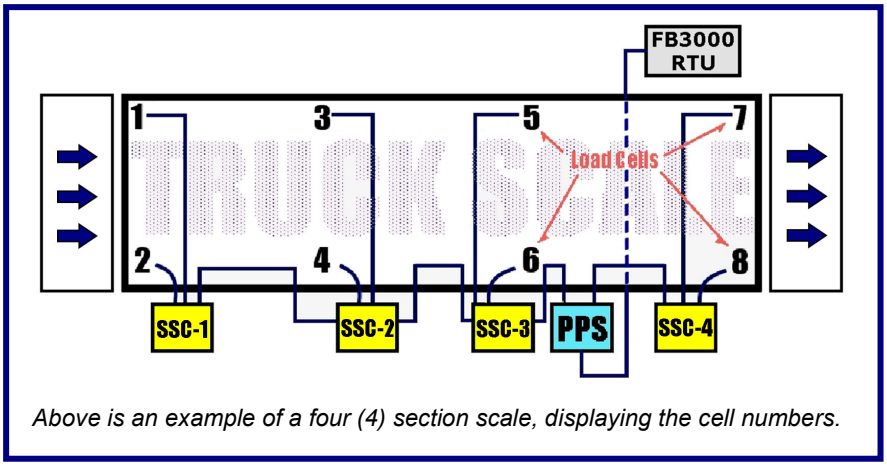
Each SSC has connections for two (2) incoming load cells, labeled **TB1** and **TB2**.

- The **odd** numbered cell goes to **TB1**.
- The **even** numbered cell goes to **TB2**.
- **Load cell drain wires** connect to ground lug on the sectional controller box exterior.

3.2. Wiring SSCs and PPSs for Intalogix Systems

3.2.1. Cell Numbering

- Intalogix™ Technology installations use a specific numbering system for load cells because of digital addressing of the SSCs.
- With respect to the following starting position, face the platform where the indicator is located.
- The cell at the **upper-left** (far side) of the platform is **Cell One (1).**
- The cell positions along the **far side** have **odd cell numbers.**
- The **near side locations** have **even cell numbers.**



Above is an example of a four (4) section scale, displaying the cell numbers.

C A U T I O N

Proper grounding is REQUIRED!
so the Surge Voltage Protection (SVP) adequately shields the scale from lightning and other electrical interferences.

3.2.2. Grounding

Intalogix™ Technology systems must have **two (2) ground rods** in the pit for proper connection.

- Pit power supplies use a ground separate from the weighbridge ground rod.

3.2.3. Indicator-to-PPS Cable Connection

1. Prepare the cable ends in the standard manner.
   – Use the appropriate manual for wiring instructions for the SSCs and PPSs.
2. Connect the indicator interface cable to the instrument in the scale house according to the instructions in the appropriate indicator service manual.

NOTE: *For complete platform wiring details, see* **Load Cell-to-Interface Connections Service Manual (51326)**

SECTION 4: MAINTENANCE

4.1. Scale Maintenance

- ☐ Check for accumulations of solid material under the scale, which may affect the accuracy (ice, frozen mud, debris).
- ☐ Check to see that the customer has cleaned under the platform regularly.
- ☐ Inspect load cells for damage to the ends/cables; check cups for damage and/or excessive or uneven wear.
- ☐ The load cell bearing cups should be inspected, cleaned, and greased at least TWICE per year.
- ☐ Inspect and adjust all check bolts using anti-seize on the threads.
- ☐ Inspect and tighten all connecting and coverplate hardware for proper tightness.

4.2. Mechanical Faults

- ☐ Check all clearances around the scale for any obstructions of movement.
- ☐ Check all check bolt clearances both with and without a concentrated load over each section, one at a time.
- ☐ Check to be certain all load cells are plumb and level.
- ☐ Inspect the boxes for leaks, the interior should be clean and dry.
  - – If there is moisture inside, clean then dry it out thoroughly.
  - – Check all connections at the terminal blocks to ensure they are tight.

4.3. RC Load Cell Replacement

1. Remove all power from the instrument.
2. Lift the scale using a proper sized and rated hydraulic jack(s) at the corner(s) closet to the defective load cell location.
3. Check upper and lower receiving cups, and the rubber gaskets for damage.
   - – Replace as necessary and reapply grease.
4. Insert the new cell into the upper receiving cup and position the anti-rotation clip to the inside of the scale.
5. Carefully lower the hydraulic jack(s) until the cell is set into the lower cup.
6. Remove the cover of the SSC/Balance box.

7. Loosen the gland bushing to free the cable.
8. Remove the old cell wires and connect new cell wires in the balance Box/SSC.
9. Secure the cover, tightening all gland nuts.
10. Power-up, test and adjust the scale, as necessary.

SECTION 5: PARTS

5.1. Load Cells and Associated Hardware

All these parts are necessary for installing the Titan HV Truck Scale.

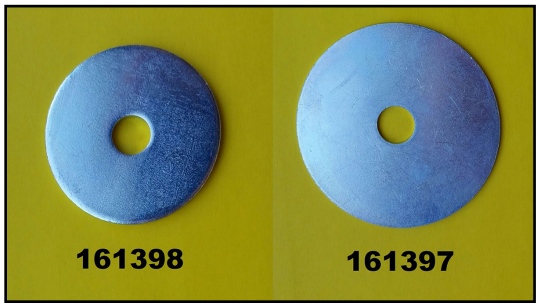
PART NO.	DESCRIPTION
175115 *	**Load Cell, 4 11/16" RC, 50t, 100 Ohm, 2mV/V (PR6221)**
157277	Shim, Lower Cup, 1/16"
64338	Shim, Upper Cup, 1/8"
64334	Shim, Lower Cup, 3/16"
161197	UPPER & LOWER Cup (w/anti-rotation pin) Kit with Gasket
157278	Roll Pin, 3/8" x 1-1/4, Cup Retainer Baseplate
156264	Anti-Rotation Clip
107118	Locating Tool, 4 3/4"
157982	Rubber Gasket for Lower Cup

* Includes Upper & Lower Cups

5.2. Other Scale Hardware

PART NO.	DESCRIPTION
76708	1 1/8" -7 x 8" Threaded Rod, Zinc (module-module)
54788	1 1/8" Lock Washer (module-module)
54306	1 1/8" SAE Flat Washer (module-module)
156965	Load Cell Base Plate
61743	Clamp Bar Washer (base plates)
62857	5/8" x 6" Anchor Bolts (*wedge type*)
55010	Ground Rod Kit
161398 *	Shim, Upper Cup, 1/8" (2.25 OD)
161397 *	Shim, Lower Cup, 1/16" (2.75 OD)
75398	Side check bracket w/bumper bolts (1" x 6½")
79747	Rub Rail PVC End Caps
105297	Rub Rail Plugs

* See Image (below)



5.3. Spare Parts Lists

5.3.1. Recommended Spare Parts

Part No.	Qty	Description
175115	1	Load Cell, 411/16” RC, **50t** (or 110k)
161197	1	Upper & Lower Cup (with anti-rotation pin) kit

5.3.2. Startup / Commissioning Spart Parts

Part No.	Qty	Description
175115	1	Load Cell, 411/16” RC, **50t** (or 110k)

5.3.3. 2-Year Spare Parts List

Part No.	Qty	Description
175115	1	Load Cell, 411/16” RC, **50t** (or 110k)
161197	1	Upper & Lower Cup (with anti-rotation pin) kit
79747	1	Rub Rail PVC End Caps
105297	1	Rub Rail Plugs

Capital Spare Parts – Not Applicable

SECTION 6: ACCESSORIES

6.1. Accessories

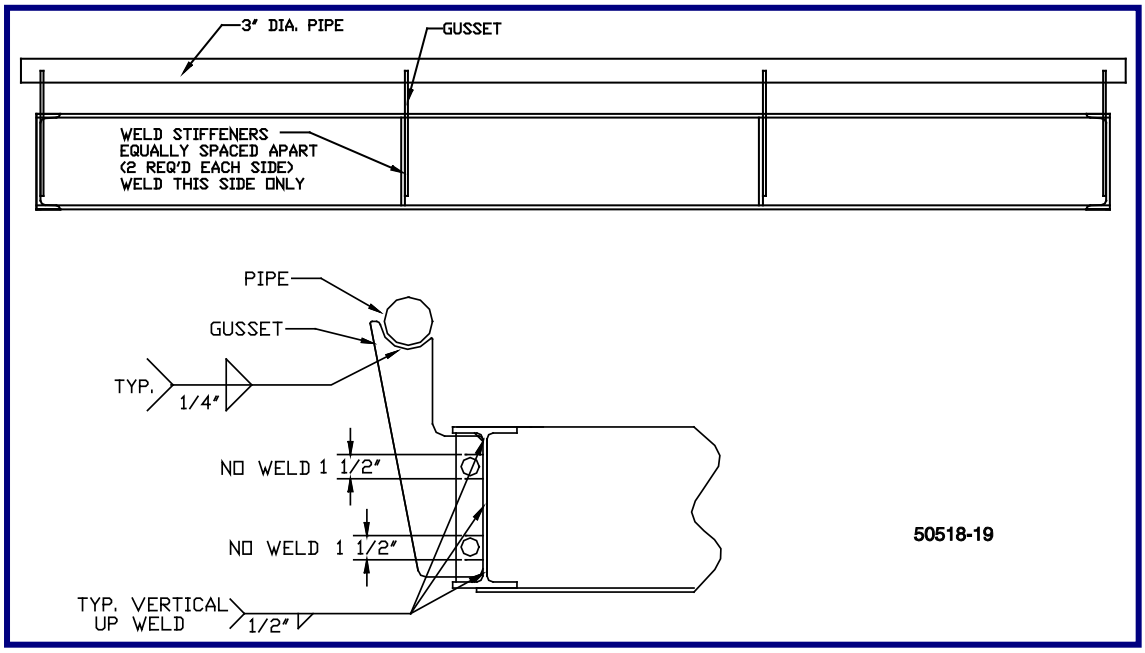
Noted below are some of the available accessories for the **Talon Truck Scale**.

PART NO.	DESCRIPTION
107587	Dress Plate Cover Kit [**one (1)** *per order*]
108302	2” Load Cell Riser Plate
108304	4” Load Cell Riser Plate
108307	7” Load Cell Riser Plate
153720	Safety Stairs (*for installation information, see manual* **51337**)
144411	Guide Post Kit
17246	50’ Home Run Cable

NOTE: *For additional information on* **Rub Rails, Deck Runners** *and other accessories, see the* **Heavy Duty Parts Catalog.**

6.2. Field Installed Rub Rails

1. Disconnect all load cells.
   – Electrically isolate the load cells from the platform.
2. Use the print with the accessory for actual measurements.
3. Thoroughly clean and remove any primer around the areas to be welded.
   – This allows for good welding penetration.
4. Weld the stiffeners to the side weldments.
5. Bolt the gussets to the stiffeners and end weldments.
6. Weld the pipe to the gussets.
7. Clean and paint all welded sections of the Rub Rails.
   – This paint is normally provided.



WARNING!

Fairbanks does NOT recommend using foundation-mounted Rub Rails along the sides of this truck scale platform.

Damage may occur to the scale if a truck hits the Rub Rail, transferring damaging force to the platform and the checking system.

Using the wrong Rub Rail type will
VOID THE PRODUCT WARRANTY.

APPENDIX I: FOUNDATION CHECK LIST

Foundation Inspection

FOUNDATION FIELD CHECK LIST
(Field Form)

A Foundation Inspection **should ALWAYS** be performed prior to scale installation and to **confirm** correct foundation construction. If possible this should be done prior to scale shipment.

Tools required:
- ☐ Certified drawings and site plan
- ☐ 100' and 25' steel tapes
- ☐ Laser or builders level if possible
- ☐ Straight edge for pit foundations (2 x 4, very straight and 4" wider than pit walls
- ☐ Construction paint (up-side-down type, for marking concrete).
- ☐ 2' to 4' level
- ☐ Hammer and concrete nails
- ☐ String line (construction string)

Perform the following Foundation Checks. Refer to Methods and Procedures for complete description of each step. Recommended to copy check list and keep in job file. ALWAYS familiarize yourself with the **CERTIFIED** foundation prints for the job you are working on as model numbers and specifications are subject to change.

☐ 1. **Site Plan and Certified Prints** should be thoroughly reviewed to confirm accurate locations to the scale and all extra items (scoreboards, lights, poles, etc.) that are included in the bid or contract.

☐ 2. **Check for truck and crane access**, overhead wires, fences, green concrete, etc.

☐ 3. **Dimensional length and width check**; check all 4 sides and record on chart (other side).

☐ 4. **Diagonal measurements** check to verify that the foundation is square and record on chart (other side).These measurements should be equal, or within 1/2". Greater error could result in the scale not fitting in the foundation.

☐ 5. **Check ALL pier heights** to make sure they are the proper elevation and record on chart (other side). To high and the scale will not fit correctly, to low could result in excessive shimming..

☐ 6. **In pit foundations check walls to verify they are straight.** Straight walls are very important, but are even more critical for modular scales like the Rodan series.

☐ 7. **Verify conduit locations** and pull strings (if needed).

☐ 8. **Verify ground rod locations.**

☐ 9. **Verify that drains and sump openings** are piped correctly and are clear of debris.

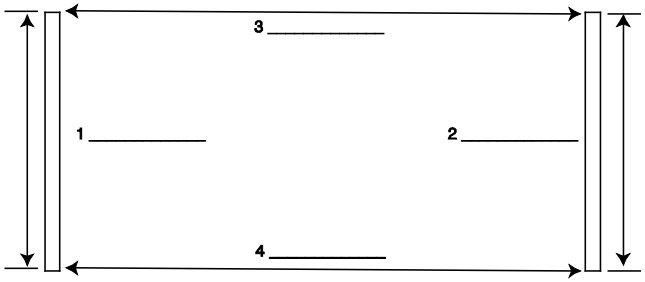
☐10.**Check the end coping** to ensure they are centerline and that the coping is correct for the scale being installed (10',11' or 12' width, etc). Check all coping, side and end, for hollow areas.

☐11. **Verify location of any and all required embeds or pre-installed baseplates** (i.e., Hwy System, RR scales, etc). All of these dimensions will be located on the Certified foundation prints.

☐12.**Layout** - To help in locating pre-installed baseplates, embeds, load-cell centerlines, etc., refer to Methods and Procedures section on Layout. **See other side for foundation & Layout charts.**

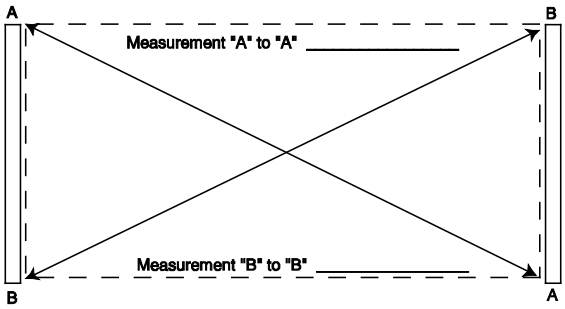
FF-2267 **Issue #1**

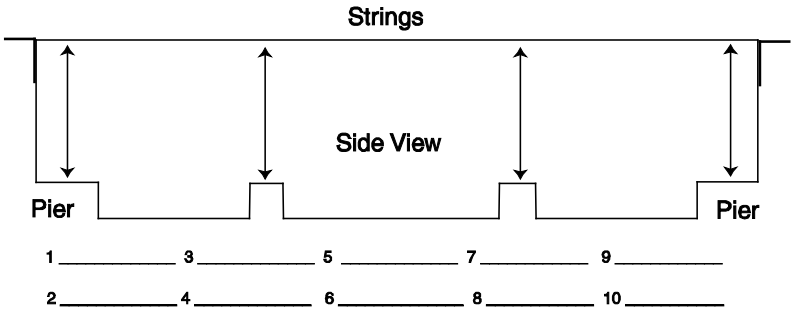
Appendix I: Foundation Check List, Continued



Length & Width Check

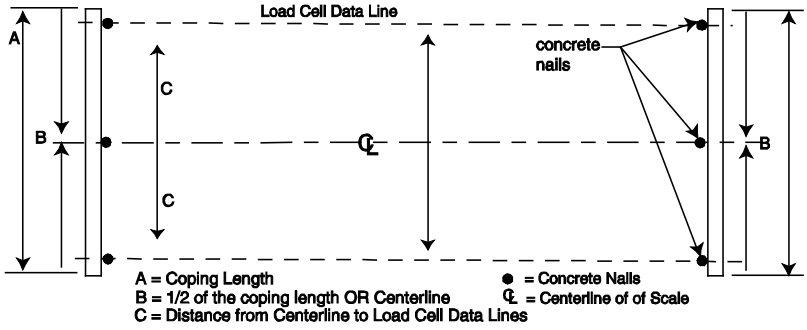
Diagonial Measurements Check

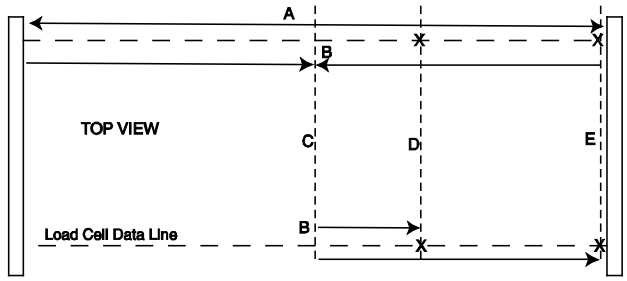




Pier Height Check

Longitudinal Layout





Lateral Layout

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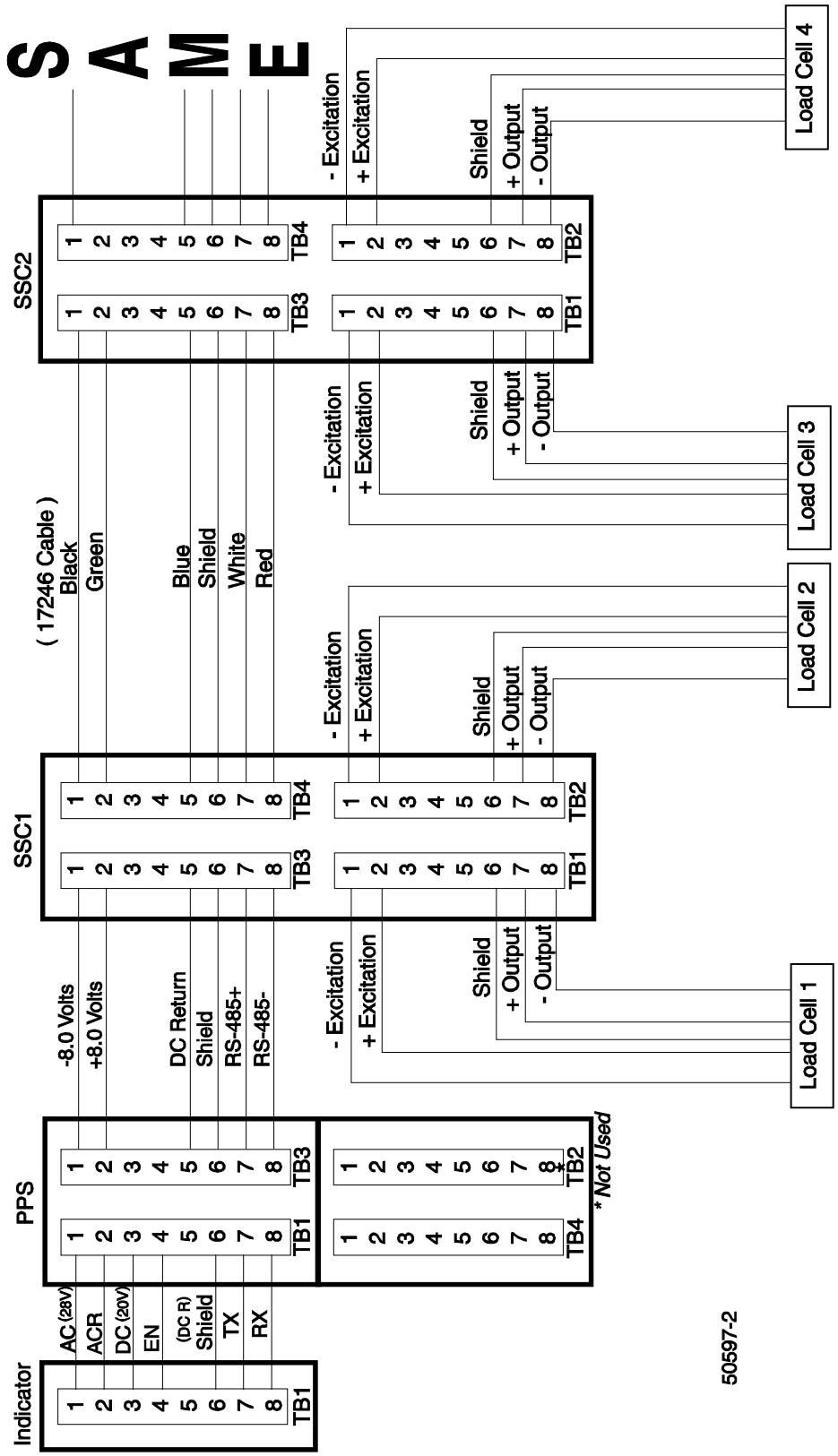
Issue #1

APPENDIX II: SCALE CONNECTIONS



APPENDIX III: SCALE DIMENSIONS

	Titan Steel Deck 6020 Series						
	Product Number	Model	L feet	W feet	CLC K lbs	Capacity tons	No. of Sections
10 ft.	165027	6020	27	10	120	75	2
	165030	6020	30	10	120	75	2
	165035	6020	35	10	120	75	2
	165060	6020	60	10	120	125	3
	165070	6020	70	10	120	125	3
	165080	6020	80	10	120	150	4
	165090	6020	90	10	120	150	4
	165006	6020	105	10	120	150	4
11 ft.	165127	6020	27	11	120	75	2
	165130	6020	30	11	120	75	2
	165135	6020	35	11	120	75	2
	165160	6020	60	11	120	125	3
	165170	6020	70	11	120	125	3
	165180	6020	80	11	120	150	4
	165190	6020	90	11	120	150	4
	165106	6020	105	11	120	150	4
12 ft.	165227	6020	27	12	120	75	2
	165230	6020	30	12	120	75	2
	165235	6020	35	12	120	75	2
	165260	6020	60	12	120	125	3
	165270	6020	70	12	120	125	3
	165280	6020	80	12	120	150	4
	165290	6020	90	12	120	150	4
	165206	6020	105	12	120	150	4
14 ft.	165427	6020	27	14	120	75	2
	165430	6020	30	14	120	75	2
	165435	6020	35	14	120	75	2
	165460	6020	60	14	120	125	3
	165470	6020	70	14	120	125	3
	165480	6020	80	14	120	150	4
	165490	6020	90	14	120	150	4
	165406	6020	105	14	120	150	4

Titan Series Truck Scale

Installation Manual

Document 51351

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