7562

Steel Deck DigiTOL® Truckmate® Weighbridge

Installation and Service Manual

15632800A
(1/99).00

METTLER TOLEDO

Publication Revision History

An overview of this manual's revision history is compiled below.

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Publication Part Number: IS007562I01 Publication Date: 10/93

Part Number	Date	Revisions
15632800A	**1/99**	Reformatted manual and changed part number to TEDS number. Added information about 20-foot modules and portable scale options. Added reference drawing numbers.

INTRODUCTION

This publication is provided solely as a guide for individuals who have received Technical Training in servicing the METTLER TOLEDO product.

Information about METTLER TOLEDO Technical Training may be obtained by writing, calling, or faxing:

METTLER TOLEDO
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Columbus, Ohio 43240 USA
phone: (614) 438-4511
fax: (614) 438-4958
www.mt.com

FCC Notice

This device complies with Part 15 of the FCC Rules and the Radio Interference Requirements of the Canadian Department of Communications. Operation is subject to the following conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

METTLER TOLEDO RESERVES THE RIGHT TO MAKE REFINEMENTS OR CHANGES WITHOUT NOTICE.

PRECAUTIONS

READ this manual BEFORE operating or servicing this equipment.

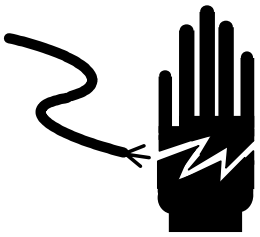
FOLLOW these instructions carefully.

SAVE this manual for future reference.

DO NOT allow untrained personnel to operate, clean, inspect, maintain, service, or tamper with this equipment.

ALWAYS DISCONNECT this equipment from the power source before cleaning or performing maintenance.

CALL METTLER TOLEDO for parts, information, and service.



⚠ WARNING

PERMIT ONLY QUALIFIED PERSONNEL TO SERVICE THIS EQUIPMENT. EXERCISE CARE WHEN MAKING CHECKS, TESTS AND, ADJUSTMENTS THAT MUST BE MADE WITH POWER ON. FAILING TO OBSERVE THESE PRECAUTIONS CAN RESULT IN BODILY HARM.

⚠ CAUTION

THE TOP REBAR MUST BE PLACED TO CLEAR THE ANCHOR BOLTS. REFER TO THE FOUNDATION DRAWINGS FOR ANCHOR BOLT LOCATIONS.

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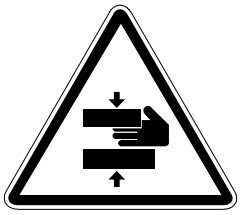

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CONTENTS

1 Introduction

The Model 7562 DigiTOL® TRUCKMATE® truck scale has an all-steel deck and can be installed above ground or in a pit. It has a 55K tandem-axle capacity and is designed for weighing highway vehicles, not for weighing concentrated-load vehicles such as heavy-capacity forklifts.

Model 7562 consists of steel deck modules (11 feet wide standard) that can be connected to form a single scale with a platform 10 to 122.5 feet long. The 7562 weighbridge is a nominal 11.5 inches high and maintains approximately 3 inches of clearance between the bottom of the weighbridge and the foundation, making the overall height approximately 14.5 inches. The nominal capacity varies with the number of modules (number of load cells) used in the scale (see Table 6-1).

Model 7562 is also available as a full-frame portable scale with a platform that is 10 feet wide and 35 feet or 70 feet long.

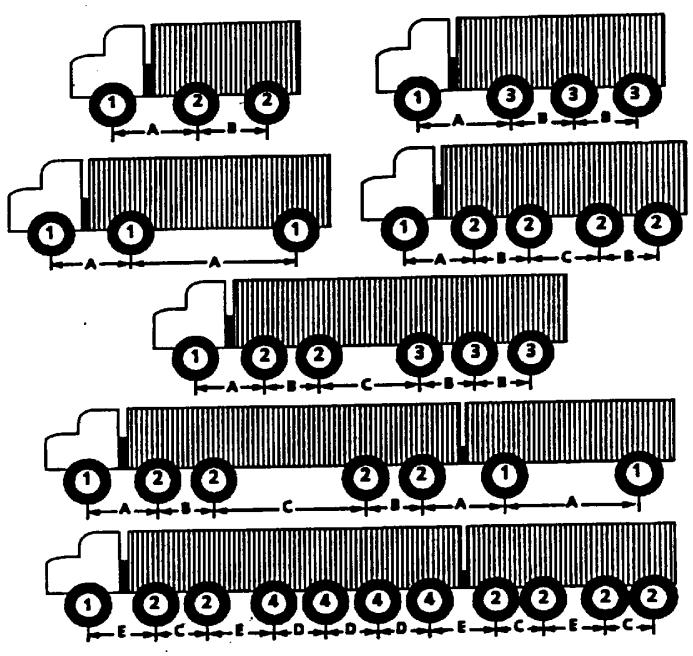
Due to the unique construction of these scales and the number of weighbridge support points (a four-module scale uses ten DigiTOL® POWERCELL load cells), the force exerted on the foundation is only slightly more than the force that a truck would exert on the highway.

Maximum Loading

Use the information in Figure 1-1 to determine the maximum allowable weight loading for different types of axle arrangements.

Axle Number	Load Specifications	Axle Number	Load Specifications
1	Single	3	Tri-Axle
2	Tandem	4	Multiple

Spacing Between Axles		
A = More than 120 inches	C = More than 128 inches	E = More than 110 inches
B = 48 to 96 inches	D = 42 to 110 inches	F = More than 128 inches



Platform Size	Maximum Gross Weight	Maximum Axle Load			
		Single	Tandem per Axle	Tri-Axle per Axle	Multiple per Axle
60 feet x 10 feet	200,000 lb	45,000 lb	55,000 lb	21,000 lb	17,000 lb
70 feet x 10 feet	200,000 lb	45,000 lb	55,000 lb	21,000 lb	17,000 lb

Figure 1-1: Maximum Loading for Low-Profile Truck Scales

Federal Bridge Formula

The Federal Bridge Formula (enacted January 4, 1975) is used to determine the gross weight allowed to be carried on any group of two or more consecutive axles:

$$W = 500 [LN/(N-1) + 12N + 36]$$

where:

W = Maximum weight in pounds carried on any group of two or more consecutive axles computed to the nearest 500 lb.

L = Distance in feet between the extremes of any group of two or more consecutive axles.

N = Number of axles in group under consideration.

7562 DigiTOL Truckmate Rating

The Federal Bridge Formula provides a 34K tandem-axle rating. This rating specifies a 34,000-lb weight limit for tandem axles spaced between 40 and 96 inches. Since the 7562 truck scale has a 55K rating, you must multiply the results of the Federal Bridge Formula by a factor (r) of 1.62 to determine the maximum weight that can be carried on any group of two or more consecutive axles.

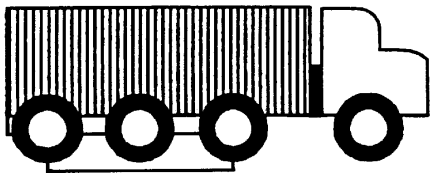
$$W1 = W \times 1.62$$

where:

W1 = Maximum weight to be carried on any group of two or more consecutive axles for vehicles to be on a 7562 truck scale.

Example:

Determine the maximum weight that can be carried on the back three axles of the truck shown below in order for it to be weighed on the 7562 weighbridge.



L = 14 feet

According to the Federal Bridge Formula, W = 46,500 lb (for N = 3 and L = 14 feet)

$W1 = 46{,}500 \times 1.62$
= 74,500 lb (rounded to the nearest 500 lb)

The maximum weight that can be carried across the scale by this three-axle grouping (which loads the scale over a 14-foot distance) is 74,500 lb.

2 Site Selection and Preparation

Site Requirements

The site selected for the scale must meet state and local requirements. The following is taken directly from Handbook 44 (H-44) 1994 edition issued by the National Institute of Standards and Technology:

> "UR.2.6. Approaches.
>
> UR.2.6.1. Vehicle Scales - On the entrance and exit ends of a vehicle scale installed in any one location for a period of 6 months or more, there shall be a straight approach as follows:
>
> (a) The width at least the width of the platform.
>
> (b) The length at least one half the length of the platform but not required to be more than 12 m (40 ft) and
>
> (c) Not less than 3 m (10 ft) of any approach adjacent to the platform shall be constructed of concrete or similar durable material to insure that this portion remains smooth and level and in the same plane as the platform. However, grating of sufficient strength to withstand all loads equal to the concentrated load capacity of the scale may be installed in this portion. Any slope in the remaining portion of the approach shall insure, 1) ease of vehicle access, 2) ease for testing purposes, and 3) drainage away from the scale."
>
> Note: The scale drawings provided meet subparagraph (a) of this requirement. The site must be located to meet subparagraphs (b) and (c).

Other requirements or considerations:

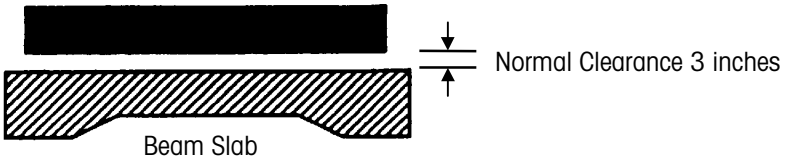
- The site should have good drainage. Surrounding areas should not drain through the site. The ideal scale site is on ground that is higher than the surrounding area.
- Make sure there are no buried pipes, sewer lines, wires, or foundations that would interfere with footing construction.
- The scale should be located away from high-power electrical transmission lines or substations.
- The site should have enough room to align trucks with the scale platform before pulling them onto the platform. This is especially important if trucks must turn before pulling onto the scale. There should also be enough room for trucks to pull off the scale.
- Trucks should not be left on the scale for longer than is necessary to take a vehicle weight reading.
- Some jurisdictions require that the scale platform be visible from the location of the scale instrument. Others allow the use of a closed-circuit TV or a voice intercom. Obtain official approval before starting construction.
- Provide clearance on at least one side of the scale for the full length of the platform to allow for testing and calibration.

Foundation Designs

A 7562 truck scale should be installed on one of the following types of foundations:

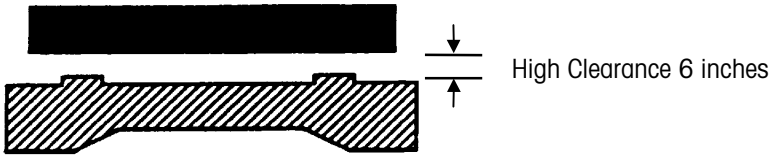
1. Floating Beam Slab (with normal or high clearance)
2. Variable Footer
3. Pit (2-foot or 4-foot clearance options)

Select the type of foundation that meets a site's installation requirements. The foundations are designed to support a 7562 truck scale rated 100 tons, assuming the ground has a bearing surface of at least 1,500 lb per square foot for a beam slab, 2,000 lb per square foot for a pit, and 2,500 lb per square foot for a variable footer design.



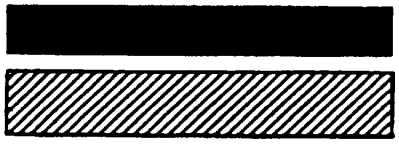
Beam Slab

A beam slab is designed to "float" and does not require a deep footer.



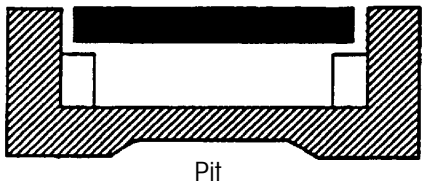
Beam Slab with High Clearance

A beam slab with high clearance is required in some states.



Variable Footer

A variable footer design uses separate footers with depths of 2 feet to 6 feet. Connecting "washout" slab is mandatory in some areas.



Pit

A pit design provides 2 feet or 4 feet of clearance under the scale. It requires manholes for access. A deep pit is mandatory in some states.

Figure 2-1: Foundation Designs

Foundation Drawing

Install the foundation according to the correct drawing (see the list of drawings on page 10-4). Make sure that the end walls are parallel and measure the same distance diagonally within 1/2 inch. The instrument cable conduit should be in place before the slab is poured.

Base Plates

At the locations of the base plates, the concrete should be level and in the same plane (within ± 1/8 inch). The rest of the foundation should be graded slightly for drainage.

⚠ CAUTION

THE TOP REBAR MUST BE PLACED TO CLEAR THE ANCHOR BOLTS. REFER TO THE FOUNDATION DRAWINGS FOR ANCHOR BOLT LOCATIONS.

Curing

Let the concrete foundation cure for 7 to 10 days before installing the scale. Expanding anchor bolts should be installed after the foundation has cured, so that the anchors will seat correctly. Do not allow traffic or loading on scale until concrete reaches full strength, normally in 28 days.

3 Receiving and Inspection

Inspection

Check off all items received against the shipping bill of lading. If any items are missing, notify the carrier immediately in order to collect damages.

Inspect all items received. If there is any physical damage, please notify your carrier immediately in order to collect damages.

⚠ CAUTION

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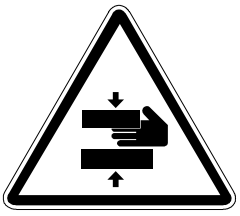

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Unloading Procedure

If the 7562 truck scale is being delivered by a METTLER TOLEDO truck, unloading will be handled and supervised by the METTLER TOLEDO driver. Unloading a 7562 portable scale will require a separate crane. Otherwise, unload the modules by lifting them as shown in Figure 3-1. Remove the gap and load cell covers before lifting, so that the covers are not damaged. Lift the modules by the gap covers via quadlift chain. Approximate module weights are listed in Table 3-1.

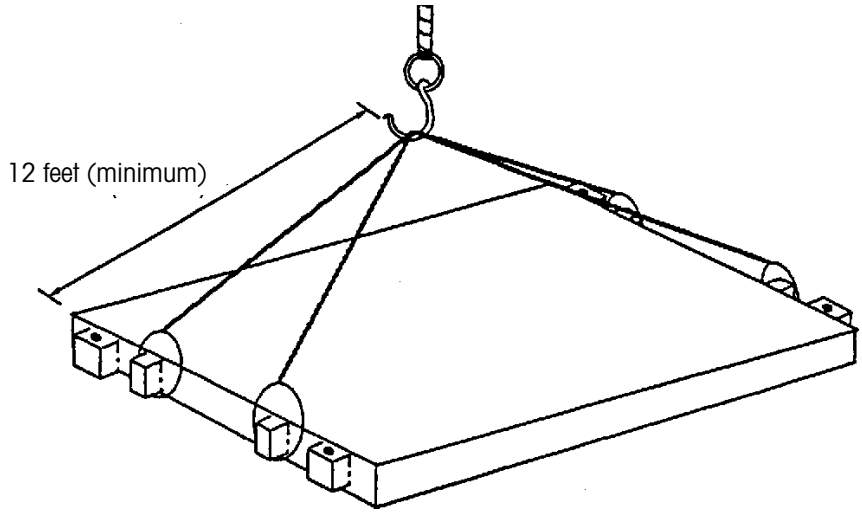


Figure 3-1: 7562 Module Lifting Procedure

Module Type	15-foot Module	17.5-foot Module	20-foot Module
Steel	5,500 lb	6,300 lb	7,100 lb

Module Type	35-foot Scale	70-foot Scale*
Portable (Deck and Frame)	17,000 lb	33,500 lb

* The 70-foot scale will be lifted in two 35-foot scale sections.

Table 3-1: Approximate Module Weights

Storing Platforms

The scale will be installed by placing the First Module on the foundation first, followed by the Middle Module(s), and then the Terminal Module. If you are going to store the platforms, stack them one on top of the other in the following order:

Bottom = Terminal Module
Center = Middle Module(s)
Top = First Module

Figure 3-2 shows illustrations of the three types of modules. Make sure that the bottom module is stored off the ground. We recommend placing lengths of 4 x 4 lumber under the module to support it. Place additional 4 x 4's between each pair of modules. Store all other mechanical accessories in a clean, dry area. Store electrical instrumentation and load cells in a clean, dry area. If the modules will be stored for more than one month, the cable connectors should be filled with connector dielectric compound (TN203056).

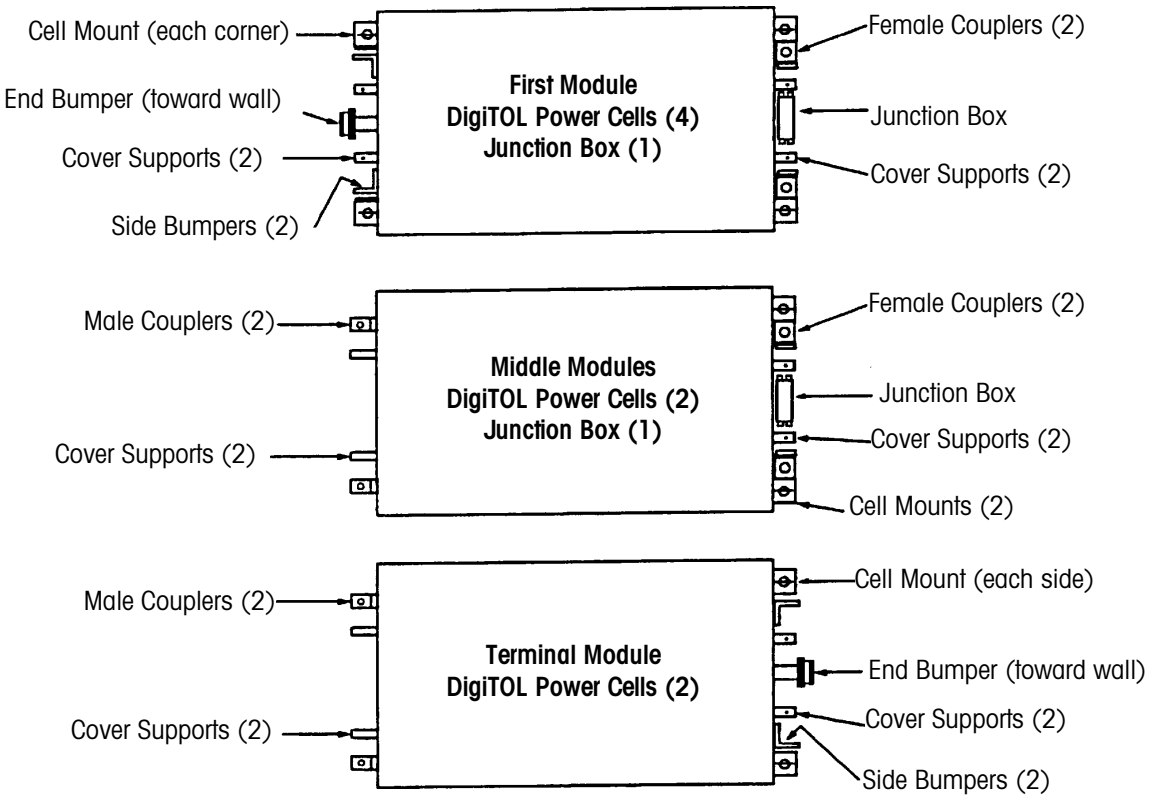


Figure 3-2: Types of Modules

4 Installation Supplies Checklist

The following material and tools are needed to properly install a 7562 truck scale. They are not supplied by METTLER TOLEDO.

Material

- A small supply of Never-Seez bearing compound or a quality grease.
- Non-shrink, high-quality grout and mixing tools (not normally used, but might be required).

Tools

- Transit, tripod, rod
- 6-inch spirit level
- 100-foot measuring tape
- 100-foot chalk line
- 100-foot extension cords, 3/#14 wire
- Hammer drill, 1-inch or greater capacity
- 3/4-inch carbide drill bit at least 18 inches long for anchor bolts
- 6-foot crowbar to align modules
- FET Meter or Simpson Voltmeter, 100+ meg ohm for insulation and ground check
- Socket set, with sockets for the following bolt sizes:
  - 3/4 inch - Access plate bolts
  - 15/16 inch - End bumper bolts
  - 9/16 inch - Coupler pin retainer bolts
  - 1-1/16 inches - Open end wrench - side bumper bolt
- Air compressor or air pressure tank (cleaning nozzle to blow out anchor bolt holes)
- Normal installation tools
- Locating tools, 10 (supplied only if scale is delivered by METTLER TOLEDO delivery system; otherwise, they must be purchased—Part No. TA200831)
- Welding apparatus (not normally used, but might be required)

Weighbridge Installation Checklist

This list summarizes the basic sequence of events required for proper installation of a 7562 truck scale on a dimensionally correct foundation.

		Check (✓) When Completed
1.	Snap Chalk Lines and Position Base Plates	_____
2.	Set Receivers into Base Plates and Check with Transit	_____
3.	Set Modules on Locating Tools	_____
4.	Make Sure Scale is Centered on Foundation and Level	_____
5.	Check Base Plate Alignment (Verify that Locating Tools are Vertical)	_____
6.	Drill Anchor Holes and Insert Anchors (Five Holes in Corner Plate / Three Holes in Center Plate)	_____
7.	Replace Locating Tools with Load Cells	_____
8.	Connect Cables according to the Wiring Diagram	_____

5 Installation

Installing Modules and Load Cells

Stub off the instrument cable conduit where it extends from the foundation, and complete conduit installation, if necessary.

1. Snap a chalk line on the foundation to mark the location of each side of the scale from approach coping to approach coping. These chalk lines will be used to align the modules as they are set in place. Check the distance between the approach copings and the diagonal measurements.
2. Roughly position the base plates on the foundation (see Figure 5-1).
3. Grease (with Never-Seez) the lower receivers and insert one in each of the base plates, aligning the notch with the roll pin. Use a transit to check the elevation of the receiver at each base plate location, relative to the top of the approach coping and to the other receivers. To check this accurately, rest the measuring rod on the top surface of the receiver at each base plate location. The nominal height of the scale from the top (flat) surface of the receiver to the top of the weighbridge is as follows:

   Height Without Shims = 13 inches

   The total, nominal height of the scale is 14.5 inches when shimmed 1/8 inch at the top and 1/8 inch at the bottom. The scale should be shimmed to fit the installation, with a maximum of 3/8 inch shims on top and 3/8 inch shims on bottom for a total of 3/4 inch. Never exceed either of these numbers. If more than 3/4 inch of shimming is required, shim under the base plate and grout under the entire base plate after accurately locating the scale and securing the anchor bolts. If 1 inch or more shimming is used, you will need anchor bolts that are long enough to extend to a depth of at least 4 inches into the foundation slab (longer anchor bolts are not supplied by METTLER TOLEDO).
4. Insert a locating tool in each of the receiver base plates, aligning the notch with the roll pin.
5. Prepare modules for installation.
   - Remove all access covers.
   - Grease (with Never-Seez) the upper receivers with O-Ring and insert the receivers into each load cell receiver block on the undersides of the modules.
   - Loosen the bumper bolts on the side brackets so that adjustments can be made after the modules are in position.

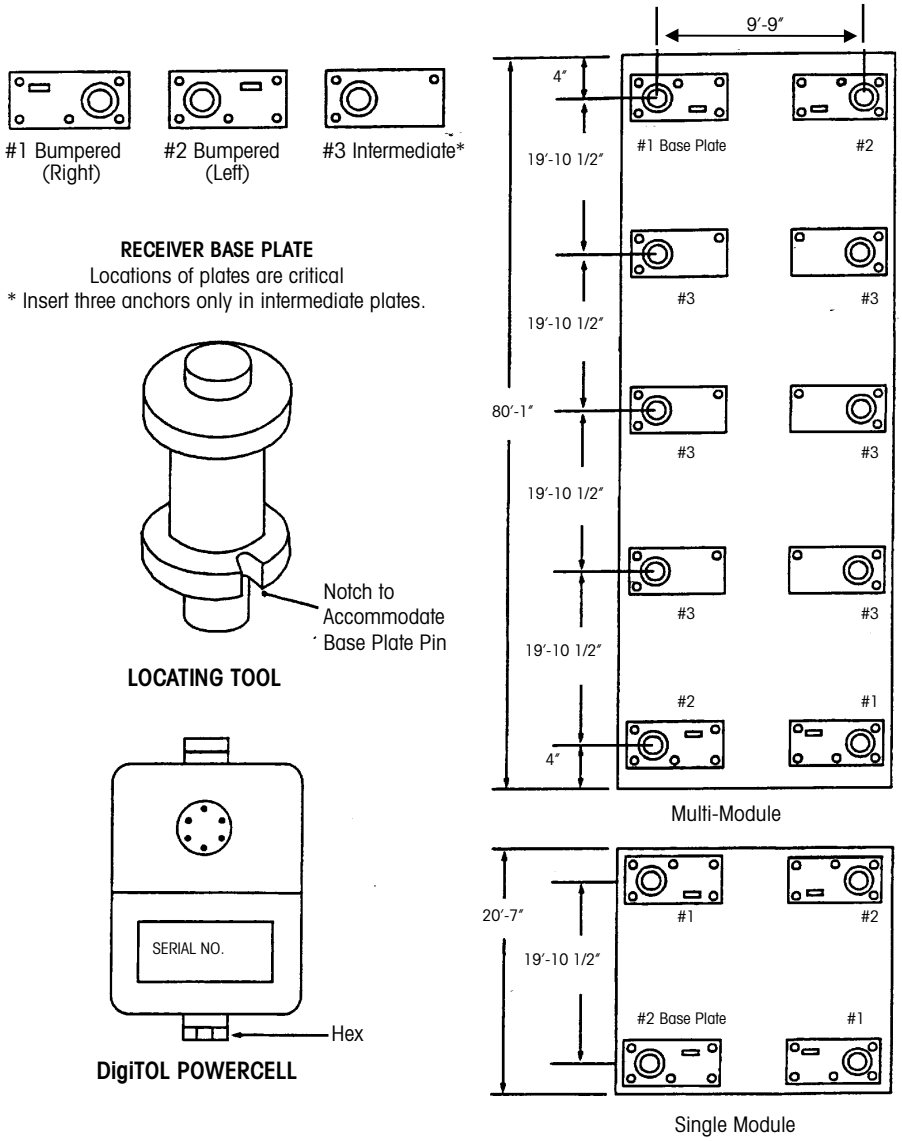


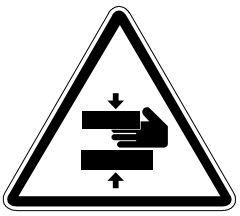
Figure 5-1: Base Plate Location

IMPORTANT! Be sure to have blocks under the modules any time the checking is not engaged (all modules are not set, or multi-scale platforms have not been coupled.) This is especially true if the truck crane is driving on a previous module to set the next one.

6. Set the scale modules in place using the following sequence:

a. The First Module to be set in place is the module that requires four DigiTOL POWERCELL load cells (see Figure 3.2). Lift the module as shown in Figure 3-1. Before setting this module in place, make sure that the end bumper assembly and side bumper bolts have been installed. Position the module so that the end with the end bumper and side bumpers faces the approach wall. The first module should be reasonably square with the end wall and spaced away from the end wall as shown in the assembly drawing.

Slowly lower the module onto the locating tools, lowering the approach end first. Check the module's alignment with the chalk line snapped on the foundation.



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b. Set the first Middle Module in place by slowly lowering it and fitting the male coupler brackets into the female couplers on the First Module. Verify correct seating by noting engagement of coupler pins and male gusset level below female gusset level. Module will seat best if it is lowered almost level. Lower the other end onto the locating tools.

c. Set the next Middle Module in place. It is important to note alignment of scale with chalk line as you install the modules. If the scale starts to drift beyond a satisfactory point, check to make sure the base plates are in line. If the base plates are not in line, use the following procedure to correct misalignment.

- Note whether drift is to the right or left while facing the approach end of the first module.
- Remove the last module that you installed and set it aside.
- Remove the retaining bolt from the octagonal coupler pin of the adjoining module and lift it from the socket (see Figure 5-2). Rotate the pin one position counterclockwise for left drift or clockwise for right drift, and then drop it back into socket. Replace retaining bolt.
- Reset the module and check alignment.
- If the module is still not aligned satisfactorily, rotate the pin once more in the same direction. Any remaining misalignment can be corrected by adjusting the next module(s) to be set in place.

d. Set the Terminal Module in place. The gap between this module and the end approach wall should be approximately the same as the gap at the other end of the scale (the gap should not be larger than 1 inch). If the foundation diagonals are out of square, then the clearance will vary across the approach wall. This clearance should not be less than 3/8 inch at any point.

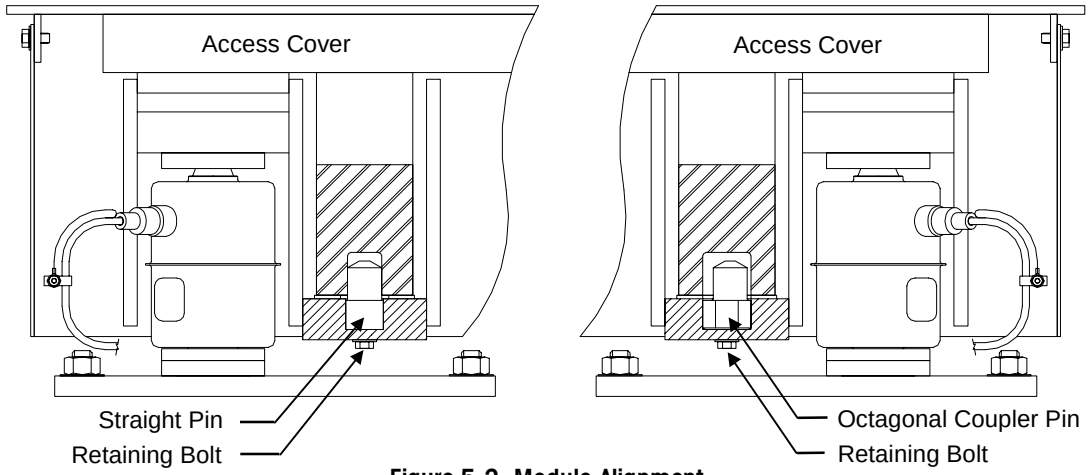


Figure 5-2: Module Alignment

7. Square the base plates (in order to move the base plates, it may be necessary to use a pry bar to lift the module slightly while another person taps the base plate with a hammer). Check all the locating tools carefully. **There should be no clearance between the shoulders on the locating tools and the upper or lower receivers.**

8. Open each access cover. Using a hammer drill, drill through the holes in the base plates into the foundation. Note that only the end sections require five bolts; the middle sections require three bolts. Insert 3/4-inch diameter anchor bolts and secure.

POWERCELL Installation

Use a transit to check the elevation of the deck near each POWERCELL load cell to determine if shimming is required.

Remove all locating tools and install POWERCELL load cells in their place (see Figure 5-3). Before installing load cells, apply Magnalube-G to the load surface of the load cell buttons and fill the lower hex receiver with a multi-purpose grease. Shims can be added under the bottom receivers and above the top receivers in order to adjust the height of the scale up to 3/4 inch. DO NOT PLACE more than 3/8 inch of shims at the top or bottom, as the receiver could become dislodged. Be sure the hex end of the load cell is down and that the cable connector points toward the outside of the scale. For best cable routing, the connector should be oriented 30° out and away from the pocket where the load cell is located.

Note: Final shimming should be determined by the raw-count reading of the load cells (See Table 6-2). Final shimming should be done after addressing the load cells and before calibration of the scale (the shimming sequence is described in Chapter 9).

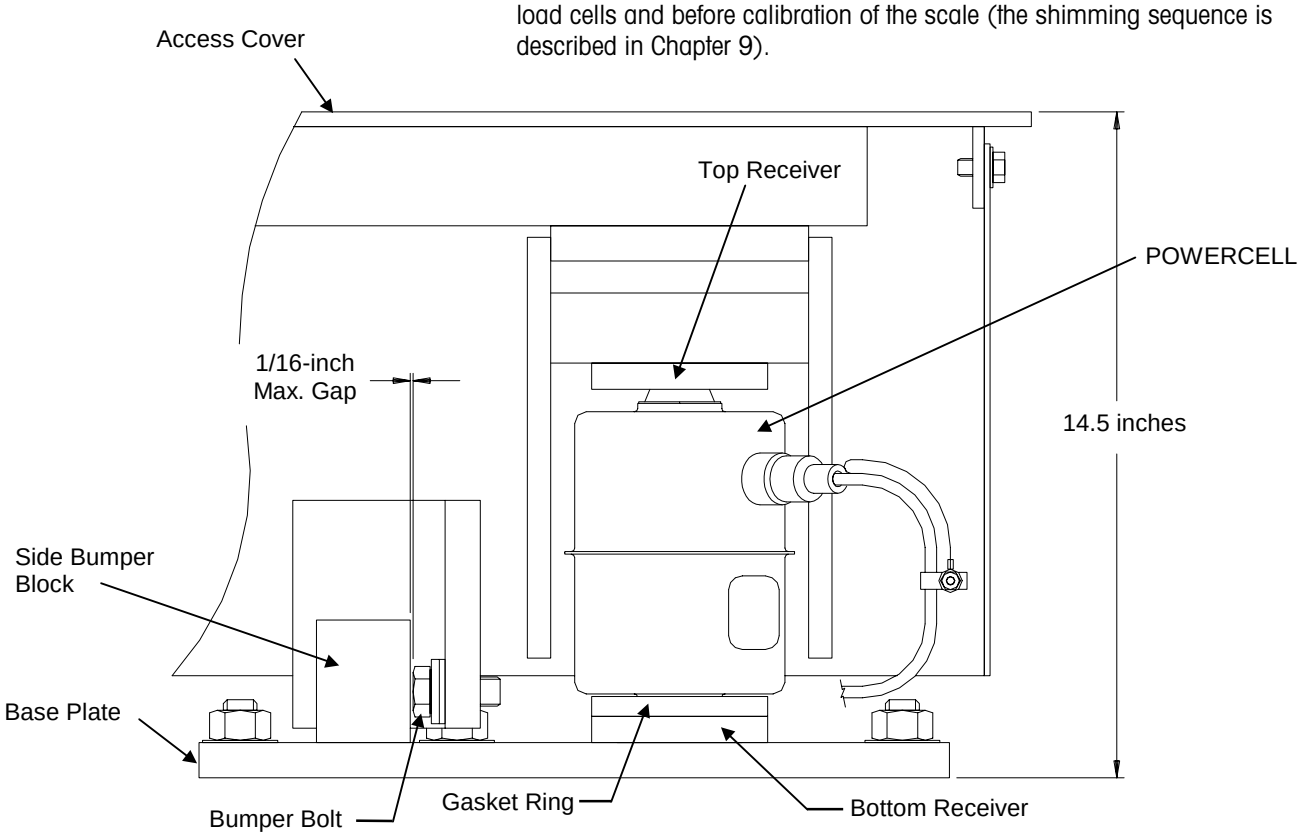


Figure 5-3: Power Cell Installation

Load Cell Cabling

At this point, connect the load cell cables to the junction boxes. See the 7562 wiring diagram for routing and terminating load cell cables.

Do not connect the load cell cables to the load cells at this time. They should be connected as the load cells are being addressed.

It is important that all the electrical parts are kept absolutely dry on the inside and as dry as possible on the outside. Continuous exposure can cause corrosion, which will eventually break down the seal and ultimately allow moisture to reach sensitive parts. Penetration of moisture can cause drifting, zero change, and in general degrade the accuracy of the scale.

Guidelines for installing cables:

- Dress the load cell cables to form a drip loop at a point before the cable connects to the load cell or to the junction box. Water will drip onto the cable and follow the cable to its lowest point before dripping off. If a drip loop is provided, the water will run off before reaching moisture-sensitive components such as connectors or seals.
- Cables are not integrally attached to the load cells. When you connect the cable connector to the load cells, the connector must be correctly and completely seated so the gasket will seal out all moisture and so the pins are not bent. Do not use wrenches or pliers on this fitting. If the fit is correct and free of foreign material, you should be able to assemble it by hand. IMPORTANT! Do not use tools to tighten. Make sure the connection is free of any foreign material before applying grease to connection. Use grease supplied with scale.
- See 7562 Wiring Diagram for maximum home run cable length.

Junction Box

After calibrating the scale, place the desiccant pack in the junction box and carefully seal the junction box against moisture. Make sure the desiccant is in an active (dry) condition. Tighten the junction box cover securely. Be careful that the bolts are not over-tightened, as this could warp the cover or force the gasket out of place. The optimum screw torque is 20 in-lb.

Scale Finishing

Scale modules are often scratched and bumped in transit or during installation. To prevent rust, paint is provided in the installation kit to touch up any scratched or damaged areas. If a scratched area has started to rust, clean it with mineral spirits of lacquer thinner before applying the paint. Do not paint the scale platform when the temperature is below 60° F (15° C).

6 Scale Indicator Setup for 7562

Instructions for programming and calibrating the scale indicator can be found in the indicator's manual. The following 7562 setup information will be needed.

Total Capacity	Scale Length	No. of Load Cells	Programmed Capacity	Increment Size
60 Tons*	Less than 60 feet	4 or 6	120,000 lb	20 lb
100 Tons*	Greater than or equal to 60 feet	8 or more	200,000 lb	20 lb

*Check serial plate on scale for total capacity.

Table 6-1: Scale Capacity and Increment Size

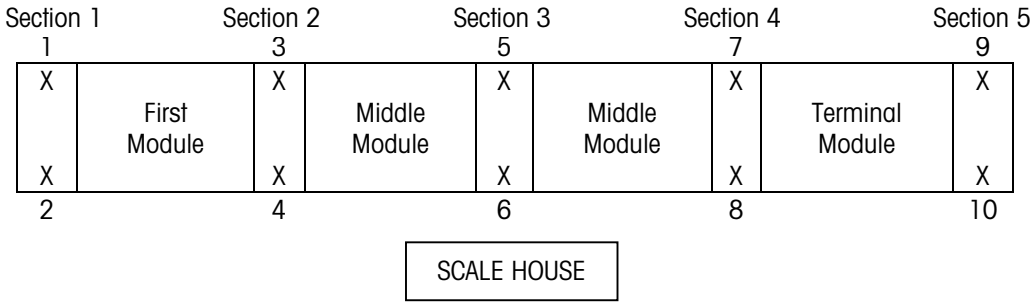


Figure 6-1: Recommended Power Cell Addressing

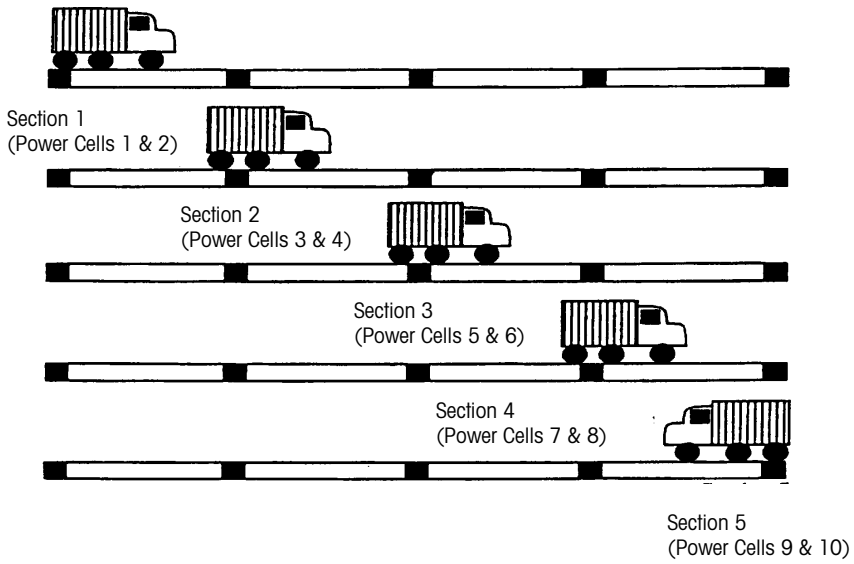


Figure 6-2: Test Truck Positions for Shift Compensation

End Cell Raw Count Range	
Module Size	**Raw Count**
15 feet	2,400 - 2,900
17.5 feet	2,900 - 3,600
20 feet	3,600 - 4,500

Middle Cell Raw Count Range	
Module Size	**Raw Count**
15 feet - 15 feet	4,800 - 5,800
15 feet - 17.5 feet	5,300 - 6,500
17.5 feet - 17.5 feet	5,800 - 7,200
15 feet - 20 feet	6,000 - 7,400
17.5 feet - 20 feet	6,500 - 8,100
20 feet - 20 feet	7,200 - 9,000

Table 6-2: Expected "Raw Count" Readings for Model 7562

IMPORTANT!

If raw counts do not fall into the ranges listed in these tables, re-shim scale using the shimming procedure covered in Section 9 of this manual.

7 Maintenance

Frequency

Since the scale has no moving parts, it requires only minimum maintenance. But normal service inspection schedules are recommended.

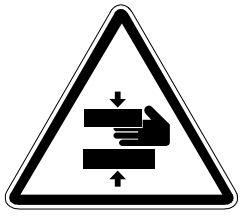
The underside and sides of the scale platform are painted with an epoxy paint. You will need to repaint these areas occasionally with an epoxy paint. Before repainting, clean the metal surfaces and remove all rust. The easiest method for painting the platform is with paint rollers. The temperature must be 60°F (15°C) or higher.

Check the calibration of the scale every six months. Check the bumper bolts and adjust them if necessary. Check the junction box desiccant bags and replace them as required.

Load Cell Replacement

If a POWERCELL load cell needs to be replaced, use the following procedure:

1. Raise the platform, using a hydraulic jack, test truck, boom, or forklift. The scale should be raised only when it is unloaded. The force required to lift a module at either end of the scale is at least one half of the module weight shown in Table 3-1. If you are going to lift a middle module, lift the module that bears on the coupler bracket first and block it up before attempting to lift the adjoining module off the load cell. Refer to the lifting procedures in Chapter 3. Decks with concrete must be lifted from the bottom of the deck. To remove a DigiTOL load cell, a scale needs to be lifted only 1 1/2 inches (approximate).



⚠ WARNING

WHEN A MODULE IS BEING MOVED, DO NOT PLACE YOUR HANDS OR OTHER ITEMS BETWEEN THE MODULE AND ANY OTHER SURFACE. IF IT IS NECESSARY TO PLACE YOUR HANDS UNDER A MODULE DURING INSTALLATION, MAKE SURE THAT THE MODULE IS PROPERLY BLOCKED SO THAT IT CANNOT MOVE. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN BODILY HARM OR PROPERTY DAMAGE.

2. After the scale is raised up and blocked, enter the setup mode on the indicator and access the load cell replacement parameter. Follow the indicator manual's instructions for replacing a load cell.
3. Check the calibration of the scale and recalibrate if required.

Spare Parts List

Part Number	Description
14002500A	Power Cell, 22,500 kg CMOS
TA200764	Receiver, Upper
TA200814	Receiver, Lower Hex
TA203173	Gasket
TA200712-1	Receiver Shim, 0.125 inch
TA200712-2	Receiver Shim, 0.062 inch
TA200712-3	Receiver Shim, 0.180 inch
TA200865-1	Round Coupler Pin
TA200865-2	Octagonal Coupler Pin
TA200856-1	End Bumper Shims, 0.250 inch
TA200856-2	End Bumper Shims, 0.125 inch
TA200856-3	End Bumper Shims, 0.062 inch
TA200357-1	Side Bumper Shim, 0.125 inch
TA200357-2	Side Bumper Shim, 0.062 inch
TA200357-3	Side Bumper Shim, 0.031 inch
TA200864-1	Coupler Pin Shim, 0.125 inch
TA200864-2	Coupler Pin Shim, 0.062 inch
*	Load Cell Cable
13635300A	CMOS Junction Box PCB
TA200831	Locating Tool

* See 7562 Wiring Kit Drawing for Load Cell Cables.

Load Cell Specification

Model: 0760, National Type Evaluation Program (NTEP) Certificate of Conformance Number 88-091 for Class IIIL, n MAX: 10,000 devices.

Capacity: 22,500 kg / 49,604 lb

Material: Stainless Steel

Environmental Protection: Hermetically Sealed

Output: METTLER TOLEDO DigiTOL Protocol

Scale Certification

National Type Evaluation Program (NTEP) Certificate of Conformance Number 93-108 for Class IIIL, n MAX: 10,000 devices.

8 Cast-in-Place Concrete Recommendations

General

Work including: Providing all cast-in-place concrete work, including reinforcing, placing, curing, and cleanup.

Submit, on request only, product literature for admixtures and curing compounds proposed for use.

Materials

Cement: Portland Cement, ASTM C150-82, Type 1
Water: Potable
Aggregates: ASTM C33, size number 57
Admixtures:

- Water-reducing: ASTM C494-79, Type A or D
- Air-entraining: ASTM C260-77
- High-range, water-reducing admixture (superplasticizer): ASTM C494, Type F or G
- Nonchloride, noncorrosive accelerator: ASTM C494, Type C or E
- Calcium Chloride is **NOT** permitted.
- Use of mixtures other than those listed will not be permitted.

Reinforcing

Deformed bars: ASTM A615, A616, or A617. Yield strength to be 60 ksi. Welded wire fabric (if required): ASTM A185-79. Provide in sheet form.

Curing Compound and Sealer: Federal Specification TT-C-800A. The compound shall be a styrene butadiene type, 30% solids content minimum. The following are acceptable:

- Super Floor Coat, by Euclid
- Super Pliocure, by Euclid
- Masterseal 66, by Master Builders

Mixes

Use the following for exterior slabs on grade:

- Compressive strength to be 4,000 psi (or as specified on foundation drawing), 28-day strength.
- Air content shall be 5 to 7 percent.
- Maximum water to cement ratio shall be 0.45.
- Maximum slump as placed shall be 4 inches.

Finish

Finish on flatwork shall be medium broom finish.

Curing and Protection

When air temperature during placement is less than 40°F, or will be within 24 hours, temperature of concrete as placed is to be between 50°F and 90°F (55°F and 90°F for section less than 12 inches thick). Maintain concrete temperature within these limits for the full curing period of 7 days.

Slab areas may be either moist-cured or receive an application of curing compound, except that when concrete above grade is placed in the open, and the air temperature exceeds 75°F, the concrete is to be moist-cured for the first 24 hours.

Whichever curing method is used, it shall begin immediately after the water sheen disappears and continue for at least 7 days. Do not allow curing to be delayed overnight.

9 Shimming Sequence

1. Complete the initial installation work. Connect the scale to a DigiTOL indicator and apply power. Let the load cells warm up for approximately 1/2 hour.
2. Access the setup mode of the indicator and observe the raw counts displayed for each load cell in the scale. Refer to the 10-cell layout in Figure 9-1 for the recommended load cell numbering scheme. Note that load cells 1 and 2 make up Section 1, cells 3 and 4 make up Section 2, and so on. Make sure that you know the proper location of each cell in your scale and that cells 1, 2, 3, and 4 are supporting the first or starting module of the scale.
3. Adjust the deck at Section 1 so that it is level with the approach ramp (assuming that the approach coping at each end of the scale is in the same level plane) to ensure a smooth transition onto the weighbridge. Shim load cells 1 and 2 as required (do not exceed 3/8 inch of shims at the top or bottom load cell receivers, 3/4 inch total shims maximum).
4. Shim under Section 2 cells until Section 1 cells are within raw count tolerance and equal side-to-side within 20% or less.
5. Shim under Section 3 cells to bring Section 2 cells into tolerance. Bring Section 3 cells into tolerance by shimming under Section 4 cells.
6. Make sure that Section 5 is level with the approach ramp. Shim Section 5 cells as necessary. Next, check Section 4 and 5 cell counts to determine if additional shimming is required. If so, shims must be placed at the coupler connections of Section 4. Shim as required to bring Sections 4 and 5 into tolerance.
7. Scale is now ready for shift adjust and calibration.

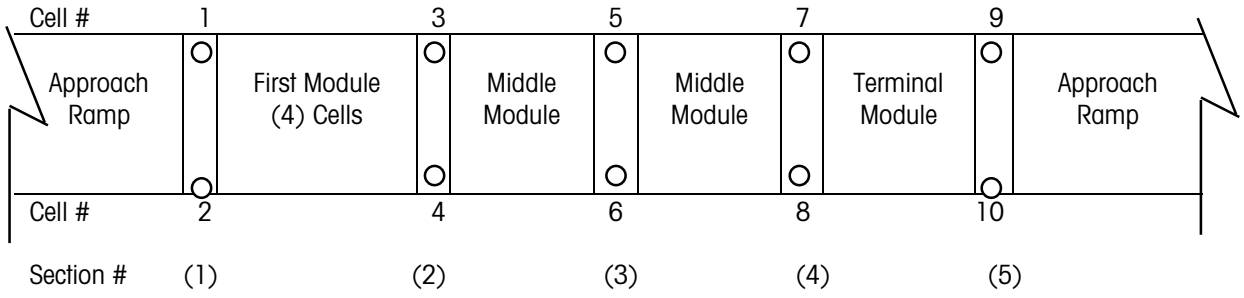


Figure 9-1: Recommended Load Cell Numbering

10 Service Parts

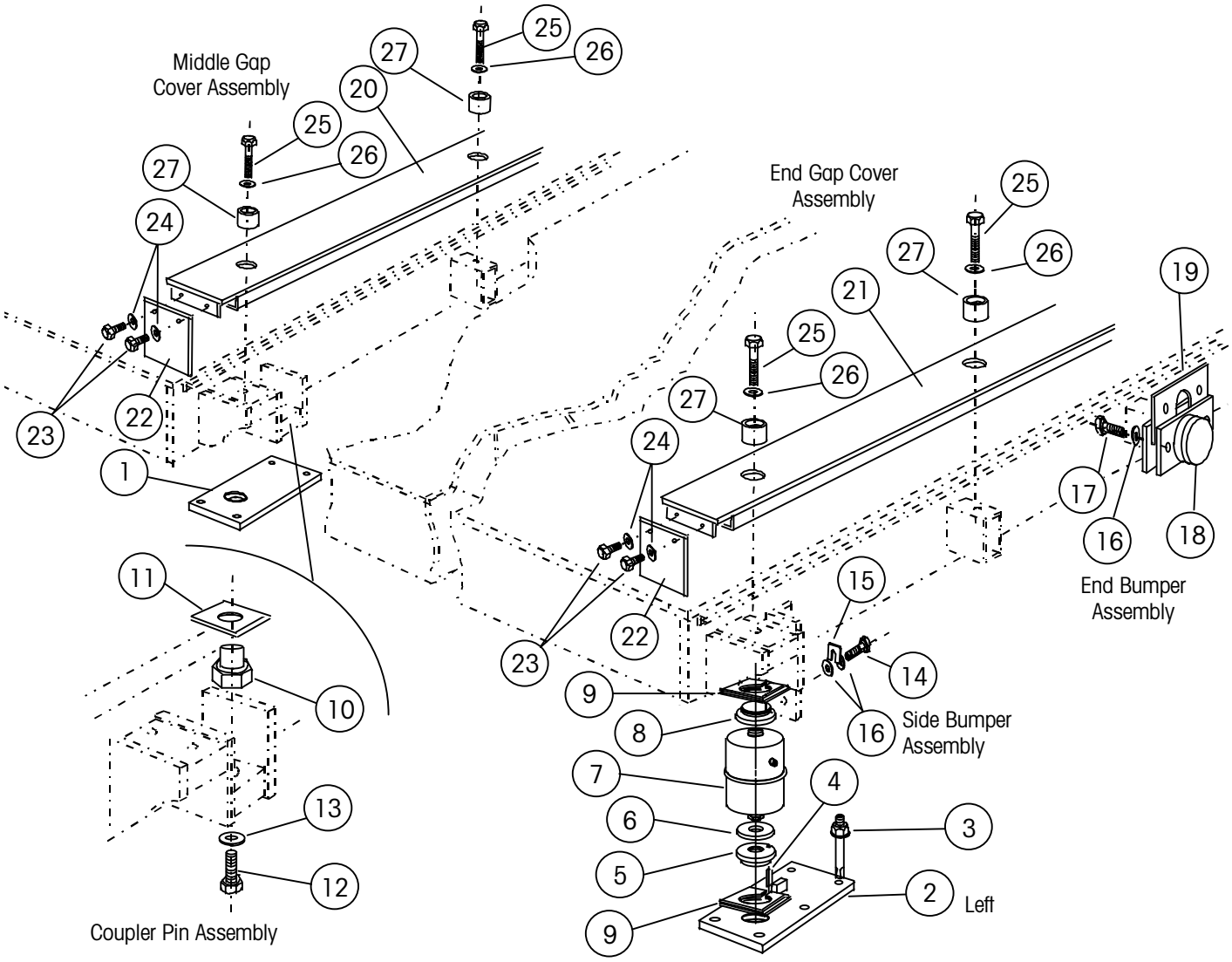


Figure 10-1: Model 7562 Parts

Ref No.	Part Number	Description
1	TA200937-2	Base Plate
2	TA200937-3 TA200937-4	Left Bumper Base Plate Right Bumper Base Plate (not shown)
3	TN203216	3/4-10 Anchor Bolt x 6 inches long
4	MZ0904000063	Roll Pin
5	TA200814	Lower Hex. Receiver
6	TN203173	Gasket
7	E12995400A* 14002500A	22.5 t DigiTOL Load Cell (NMOS) 22.5 t DigiTOL Load Cell (CMOS) (After April 1, 1993) *Replace with 140022500A Load Cell (CMOS)
8	TA200764	Upper Receiver
9	TA200712-1 TA200712-2 TA200712-3	Receiver Shim, 0.125 inch Receiver Shim, 0.062 inch Receiver Shim, 0.180 inch
10	TA200865-2 TA200865-1	Octagonal Coupling Pin (per module) Round Coupling Pin (per module)
11	TA200864-1 TA200864-2	Coupler Shim, 0.125 inch Coupler Shim, 0.062 inch
12	MZ0901010030	3/8-16 Hex. Head Screw x 3/4 inch long (per module)
13	MZ0901030019	3/8-inch Washer (per module)
14	MZ0901010375	5/8-11 Side Bumper Bolt x 1 1/4 inches long
15	TA200357-1 TA200357-2 TA200357-3	Side Bumper Shim, 0.125 inch Side Bumper Shim, 0.062 inch Side Bumper Shim, 0.031 inch
16	MZ0901030062	5/8-inch Washer, Plain
17	TN202012	5/8-11 Bolt, Hex. Head x 2 1/2 inches long w/ 2-inch thread
18	TA200887	End Bumper Assembly
19	TA200856-1 TA200856-2 TA200856-3	End Bumper Shims, 0.250 inch End Bumper Shims, 0.125 inch End Bumper Shims, 0.062 inch
20	TA202173	Middle Gap Cover, 11 feet wide only
21	TA202174	End Gap Cover, 11 feet wide only
22	TA202172	Side Cover (per section)
23	MZ0901010030	3/8-16 Hex. Head Screw x 3/4 inch long (per side cover)
24	MZ0901030019	3/8-inch Washer (per side cover)
25	MZ0901010330	1/2-13 Bolt x 3 inches long (per center gap cover)
26	MZ0901030098	1/2-inch Washer (per section)
27	TN202399	Sleeve (per section)
Not Shown	TN203217	Magnalube-G
Not Shown	MZ0602000117	Loctite #242 Threadlocker
Not Shown	TA800582	METTLER TOLEDO Sign
Not Shown	TA200831	Locating Tool
Not Shown	TA800085	DigiTOL TRUCKMATE Sign
Not Shown	TN800345	Bumper Gap Label

Reference Drawings

Part Number*	General Layout		Foundation			Wiring Diagram
	CMOS Standard	CMOS Hazardous	Beam Slab	Variable Footer	Pit	
7562S X 1011	TC203531	—	TC202446	TC202445	TC202447	TC100460
7562S X 1511	(1 Module)		TC202449	TC202448	TC202450	(CMOS Standard)
7562S X 2011			TC203585	TC203584	TC203586	
7562S X 3511	TC203532	—	TC202458	TC202457	TC202459	TC100442
7562S X 4011	(2 Modules)		TC203505	TC203504	TC203506	(CMOS Hazardous)
7562S X 4511	TC203533	—	TC202461	TC202460	TC202462	
7562S X 6011	(3 Modules)		TC203508	TC203507	TC203509	TC100340
7562S X 7011	TC203534	TC203544	TC202259	TC202258	TC202260	(NMOS for scales shipped before April 1, 1993)
7562S X 8011	(4 Modules)		TC203514	TC203513	TC203515	
7562S X 9011	TC203535	TC203545	TC203514	TC203513	TC203515	
7562S X 1001	(5 Modules)					

* X = D Standard
  X = H Hazardous
  X = C Canadian (with debris guards)

Table 10-1: Reference Drawings for Model 7562 Truck Scales

Part Number	General Layout
7562S D 3511-P	TC203283
7562S D 7011-P	TC203285

Table 10-2: Reference Drawings for Portable Scales

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Publication Part Number: 15632800A **Publication Date: 1/99**

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