760DC

DigiTOL® Conversion Scale

Service Manual

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(5/98).01

METTLER TOLEDO

Publication Revision History

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

Publication Name: METTLER TOLEDO 760DC DigiTOL® Conversion Scale Service Manual

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Part Number	Date	Revisions
A14963100A	**5/98**	Added information and drawing for 22.5t (50K) DigiTOL POWERCELL Type S Lever Mechanical Truck Scale Conversion Kit.

Declaration of conformity
Konformitätserklärung
Déclaration de conformité
Declaración de Conformidad
Verklaring de overeenstemming
Dichiarazione di conformitá

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1150 Dearborn Drive
Worthington, Ohio 43085
USA

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CE Conformity / CE-Konformität / Conformité CE

90/384/EU Nonautomatic Balances and Scales / Nichteselbsttätige Waagen / Balances à Functionnement non automatique
Article 1.2.a.
89/336/EU EMC Directive / EMU-Richtlinie / Directive concernant la CEM
EN55022, B 01.04.87 Emissions / Funkstörungen

Other Directives and Standards / Andere Richtlinien und Normen / Autres documents
corresponding to local requirements / entsprechend lokalen Anforderungen / correspondant aux exigences locales

FCC, Part 15, class A	Emissions / Funkstörungen
FM3600, 3610 and 3810	el. Safety / el. Sicherheit / sécurité el. (class, group & division as labeled)
EEx ia IIB T4	el. Safety / el. Sicherheit / sécurité el.

Office of Weights and Measures
Worthington, Ohio USA
June, 1995

according to EN45014

Mettler Toledo PN 14743400A

INTRODUCTION

This publication is provided as a guide for the trained technician for installing, calibrating, and servicing the Model 760DC DigiTOL POWERCELL Conversion. Repair or adjustment by unauthorized persons voids the METTLER TOLEDO warranty.

For information regarding your METTLER TOLEDO distributor, Sales, and Service location, please contact:

METTLER TOLEDO
1150 Dearborn Drive
Worthington, Ohio 43085-6712
(614) 438-4400

PROPRIETARY NOTICE

APPLICATION GUIDES

The only warranty of METTLER TOLEDO is for the product it supplies under Standard Product Warranty Statement. Weighing application guidelines pertain to METTLER TOLEDO products.

ORDERING INFORMATION

It is very important that the correct part number is used when ordering parts. Parts orders are machine processed, using only the part number and quantity as shown on the order. Orders are not edited to determine if the part number and description agree.

WARNING!

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

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

Precautions

READ this manual BEFORE operating or servicing this equipment.

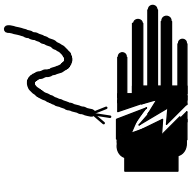
FOLLOW these instructions carefully.

SAVE this manual for future reference.

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

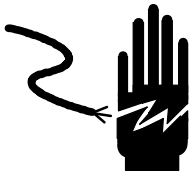
ALWAYS DISCONNECT this equipment from the power source before cleaning or performing maintenance.

CALL METTLER TOLEDO for parts, information, and service.



⚠ WARNING

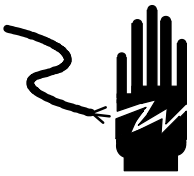
PERMIT ONLY QUALIFIED PERSONNEL TO SERVICE THIS EQUIPMENT. EXERCISE CARE WHEN MAKING CHECKS, TESTS, AND ADJUSTMENTS THAT MUST BE MADE WITH POWER ON. FAILING TO OBSERVE THESE PRECAUTIONS CAN RESULT IN BODILY HARM.



⚠ WARNING

FOR CONTINUED PROTECTION AGAINST SHOCK HAZARD CONNECT TO PROPERLY GROUNDED OUTLET ONLY.

DO NOT REMOVE THE GROUND PRONG.



⚠ WARNING

DISCONNECT ALL POWER TO THIS UNIT BEFORE REMOVING THE FUSE OR SERVICING.

⚠ CAUTION

BEFORE CONNECTING/DISCONNECTING ANY INTERNAL ELECTRONIC COMPONENTS OR INTERCONNECTING WIRING BETWEEN ELECTRONIC EQUIPMENT ALWAYS REMOVE POWER AND WAIT AT LEAST THIRTY (30) SECONDS BEFORE ANY CONNECTIONS OR DISCONNECTIONS ARE MADE. FAILURE TO OBSERVE THESE PRECAUTIONS COULD RESULT IN DAMAGE TO OR DESTRUCTION OF THE EQUIPMENT OR BODILY HARM.

⚠ CAUTION

OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES.

Contents

1 Introduction

The Model 760DC is a system of DigiTOL® POWERCELL® assemblies designed to be installed under an existing scale weighbridge. It is an easy-to-install replacement for costly conventional load cells or high-maintenance lever systems. A 760DC POWERCELL conversion provides all the benefits of modern METTLER TOLEDO DigiTOL technology, with the same field-proven weighing principles used in all METTLER TOLEDO DigiTOL vehicle scales.

The 760DC conversion offers many features and benefits. At the heart of the system is the hermetically sealed, stainless steel DigiTOL POWERCELL load cell, which offers digital diagnostics and simple compression mounting. POWERCELL load cells can be individually monitored and adjusted via the digital indicator, greatly simplifying calibration and troubleshooting. In addition, all system components are protected against adverse environmental conditions. Junction boxes are stainless steel and all mounting plates are epoxy painted to provide corrosion resistance. POWERCELL cables are stainless steel jacketed and all connections are covered by a sealed rubber boot to ensure operation in harsh environments.

An additional offering in the 760DC product line is the 760DC “S” conversion kit. This kit has been designed specifically to make it easier to convert Type S lever mechanical truck scales to fully electronic truck scales. It provides a crossbeam for every section, so there is no need to modify any sound, existing piers. Base plates are provided with mounting holes that will match many of the existing anchor bolt locations. Plus, METTLER TOLEDO has obtained NTEP approval so that the converted scale will maintain its existing NTEP approval.

2 Buyer / Seller Responsibilities

Buyer Responsibilities

Note: For lever scale conversions, the main beam centerline may not correspond to the centerline of the pier. The centerline of the POWERCELL load cells must correspond to the main beam centerline. (See Figure 2-a)

1. Contact local weights and measures official to approve scale modification.
2. Contract a local engineer to determine:
   - The structural integrity of the existing weighbridge and foundation.
   - The type of scale-checking system needed: existing system or system recommended by METTLER TOLEDO (see METTLER TOLEDO drawing TC600234 or TC600263).
   - If weighbridge and foundation need to be modified to meet user's requirements. (It is not necessary to modify the foundation for a Type S lever scale conversion made with a 760DC "S" kit.)
   - If foundation piers are of sufficient quality and size.
1. Make sure that the indicator to be used with the system is compatible with the DigiTOL load cells.
2. Review the following drawings before attempting to install a 760DC conversion:

   TC600424 Installation: 22.5t (50K) and 45t (100K) POWERCELL load cell

   TC600425 Installation: CapCheck conversion

   TC600527 Installation: 200K POWERCELL load cell

   TC600653 Installation: Type S Lever Mechanical Truck Scale

   TC600234 Bumper checking system

   TC600263 Check rod

   TC100442 Wiring Diagram Hazardous Area

   TC100460 Wiring Diagram Nonhazardous Area

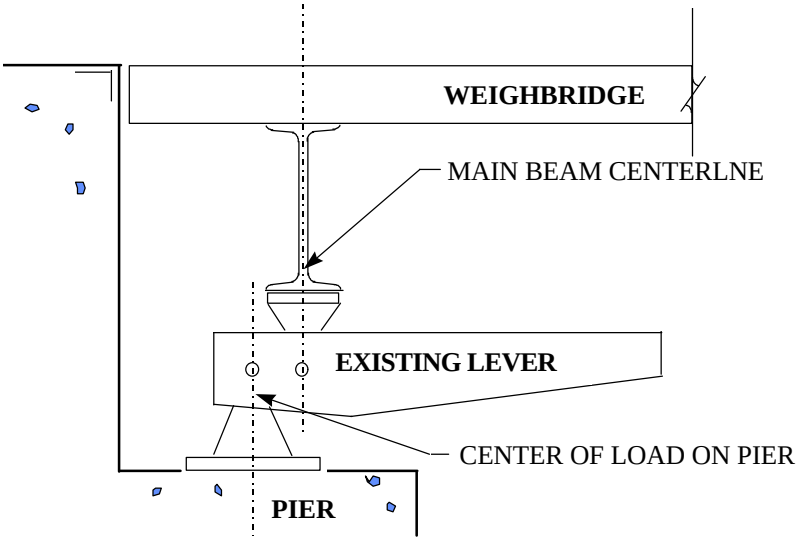


Figure 2-a: Typical Lever Corner Assembly

Seller Responsibilities

1. Provide the required number of DigiTOL POWERCELL modules, with related hardware and wiring components per installation drawing TC600424, TC600425, TC600527, or TC600653.
2. Provide product support as set forth in the standard new equipment Product Warranty Statement.

3 Receiving and Inspection

Check off all items received against the shipping document. If any items are missing or damaged, notify the carrier immediately in order to collect damages.

The 760DC DigiTOL Conversion is shipped as follows:

- DigiTOL POWERCELL load cells in individual boxes.
- Top and bottom mounting plates.
- Installation kit with the following parts:
  - Anchor bolts
  - Upper and lower receivers
  - Receiver shims
  - Junction boxes
  - POWERCELL cables
  - Miscellaneous mounting hardware
  - Gaskets
  - Solvents and lubricants
  - Locating tools
  - Lightning Protection System components
  - Crossbeams (supplied only with 760DC “S” kits)

Note: See drawing TC600424, TC600425, TC600527, or TC600653 for parts list and assembly.

4 Installation Supplies and Checklist

Installation Supplies

The following equipment is required to properly install a 760DC POWERCELL conversion kit. The checklist does not include equipment required to prepare existing weighbridge or foundation for conversion. Buyer is responsible for providing equipment capable of safely lifting and setting the weighbridge.

MATERIALS

- Miscellaneous cribbing (4 x 4 inches, etc.)
- High-quality, nonshrink epoxy grout (may not be required for 760DC “S” kit)

TOOLS

- *TA200831 locating tools, one for each POWERCELL load cell used (can be purchased from METTLER TOLEDO)
- Transit, tripod, and rod
- 6-inch spirit level
- 100-foot measuring tape
- Standard installation tools (wrenches, etc.)
- 6-foot pry bar
- 100-foot extension cord (3/14 gauge wire)
- 3/4-inch carbide drill bit x 18 inches long if base plate anchor bolts are required. Four 3/4-inch expansion anchors per base plate are recommended (if anchors are to be purchased from METTLER TOLEDO, use part number TN203216).
- Hammer drill, 1-inch or greater capacity (anchor bolts)
- Compressed air source for blowing out drilled anchor bolt holes

Installation Checklist

See METTLER TOLEDO drawing TC600424 for standard conversions, TC600425 for conversion of CapCheck load cell scales, TC600527 for 200K DigiTOL conversion, and TC600653 for "Type S" lever mechanical truck scale conversions.

- Secure local weights and measures approval when using 760DC kit. Although the 760DC "S" kit has NTEP approval, you should still inform the local weights and measures office of your intent to convert a Type S lever mechanical scale (COC #98-031).
- Ensure integrity of existing weighbridge and foundation.

Note: 200K conversion requires check rods. Bumper checking is not to be used.

- Make sure piers are of sufficient size, quantity, and structural integrity.
- Determine method of checking weighbridge movement; existing checking, bumper checking, or check rods (see METTLER TOLEDO drawing).
- Determine spacer requirements (if any) between DigiTOL POWERCELL assembly top plate and weighbridge.
- Lift and block weighbridge.
- Remove existing load-sensing elements.
- Mount crossbeams at each section (if installing 760DC "S" kit).
- Weld spacer block (if required) to weighbridge.

⚠ CAUTION

WELDING AND GROUND PRECAUTIONS: DO NOT PASS ELECTRICAL CURRENT THROUGH POWERCELLS.

- Weld receiver base plates to pier base plates, or bolt them to pier using expansion anchors.
- Insert lower receivers and roll pins into lower receiver plates.
- Insert locating tools (part number TA200831 or TA203072) into lower receivers.
- Insert upper receivers with O-ring into upper receiver plates.
- Place upper receiver plates onto locating tools (align plates with weighbridge).
- Lower weighbridge onto upper receiver plate and locating tools.
- Weld upper receiver plate to weighbridge or spacer block if applicable.
- Install checking system (see drawing TC600234 for bumpers or TC600263 for check rods).
- Adjust weighbridge checking system: ±1/8 inch maximum end-to-end movement and ±1/16 inch maximum side-to-side movement.

*Note: Do not mount junction boxes to a railroad scale weighbridge!

- *Mount junction boxes to weighbridge.
- Lift weighbridge, remove locating tools, and install POWERCELL load cells.
- Lower weighbridge onto POWERCELL load cells.
- Wire POWERCELL load cells to J-boxes (drawing TC100442 and TC100460)
- Calibrate scale.

5 Installation

Installation of POWERCELL Load Cells

1. Roughly locate the base plates on the foundation.
2. Grease (Never-Seez) the lower receivers and insert them in each of the base plates, aligning the slot with the roll pin or pins. 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 each other.
3. 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 maximum. 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, longer anchor bolts will be required to ensure a minimum depth of 4 inches into the foundation slab.
4. Grease (Never-Seez) the upper receivers with O-ring and insert the receivers into each load cell receiver block.
5. Insert a locating tool in each of the receiver base plates.

Do not place anything under the scale module that could be damaged if the crane or carrying vehicle loses its hold on the module.

6. Slowly lower the weighbridge onto the DigiTOL assemblies.
7. Check the module alignment with the foundation.
8. Square the base plates and check all the locating tools carefully. In order to move the base plates, it may be necessary to lift the weighbridge while tapping on the base plate with a hammer. There should be no clearance between the shoulders on the locating tools and the top of the base plate receivers. This ensures the proper relationship between upper and lower receivers.

IMPORTANT! Failure to use locating tools or failure to check that the locating tools are aligned correctly will cause excessive wear on the edges of the POWERCELL load buttons.

9. Using a hammer drill, drill through holes in the base plates. Insert the 3/4-inch-diameter anchor bolts and secure.
10. Check elevation of deck near each POWERCELL load cell with a transit to determine if shimming is required.

Note: Final shimming to be determined by raw count reading of the DigiTOL POWERCELL load cell. Final shimming should be done after addressing the load cells and before calibrating the scale.

11. Remove all locating tools and install POWERCELL load cells.
12. Before installing a POWERCELL load cell, apply Magnalube "G" to the load surface of the cell buttons and fill the lower hex receiver with a multipurpose grease. Shims can be added under the top and bottom receivers to adjust the height of the scale up to 3/4 inch.
13. Do not place more than 3/8 inch of shims under the top or 3/8 inch of shims under the bottom, as the receiver could become dislodged.
14. Be sure that the hex end of the POWERCELL load cell is down and that the cable connectors point toward the inside of the pit.

Load Cell Cabling

At this point, connect the POWERCELL cables to the junction boxes. See METTLER TOLEDO drawing for terminating load cell cables.

Do not connect the load cell cables to the load cells at this time. This will be done as the load cells are being addressed.

All electrical parts must be kept absolutely dry on the inside and as dry as possible on the outside. Exposure will cause corrosion, eventually breaking down the seal so that moisture can reach sensitive parts. Moisture penetration can cause drifting, zero change, and general degradation of scale accuracy.

To help ensure satisfactory operation:

- Dress the load cell cables to form a drip loop to a point before the cable connects to the load cell or to the junction box. Normally, water will drip onto the cable and follow it to its lowest point before dripping off. If a drip loop is provided, water will run off before reaching a moisture-sensitive component.
- Since cables are not integrally attached to the load cells, you must make sure that the cable connectors are correctly and completely seated when you connect them to the load cells. Correct seating ensures that the gasket will seal out all moisture and that the pins will not be bent. Do not use wrenches or pliers on this fitting. If the fit is correct and free of foreign material, it can be assembled by hand.

IMPORTANT! Do not use tools to tighten. Make sure the connection is free of any foreign material before applying grease to the connection (use grease supplied with conversion kit).

See Wiring Diagram for maximum home run cable length.

Junction Box

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

6 Maintenance

Frequency

The calibration of the scale should be checked every six months. Bumper bolt adjustment should be checked and adjusted if required, and the junction-box desiccant bags should be checked and replaced if required.

POWERCELL Replacement

If a POWERCELL load cell needs to be replaced, proceed as follows:

1. Raise the weighbridge using a hydraulic jack, test truck, boom, or forklift. The scale should be raised only when it is unloaded. To remove a DigiTOL POWERCELL load cell, lift the weighbridge approximately 1 1/2 inches.

> **⚠ CAUTION**
>
> NEVER PLACE YOUR HANDS OR OTHER ITEMS BETWEEN THE WEIGHBRIDGE AND ANY OTHER SURFACE WHEN THE WEIGHBRIDGE IS BEING LIFTED TO REPLACE A CELL. IF IT IS NECESSARY TO PLACE YOUR HANDS UNDER THE WEIGHBRIDGE DURING CELL REPLACEMENT, MAKE SURE THAT THE WEIGHBRIDGE IS PROPERLY BLOCKED SO THAT IT CANNOT MOVE. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN PHYSICAL HARM AND/OR PROPERTY DAMAGE.

2. After the scale is raised up and blocked, enter the setup mode on the indicator and access cell replacement parameters.
3. Check the calibration of the scale and recalibrate if required.

Recommended Spare Parts

Refer to Chapter 8 for part numbers.

Qty.	Description
1	POWERCELL Load Cell
1	Upper Receiver With O-Ring
1	Receiver, Lower Hex
1	Gasket
1	Load Cell Cable
1	J-Box PCB

POWERCELL Specification

Model
0760

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

Vmin = 3.1 lb (22,500 kg)
5.0 lb (45,000 kg)
7.0 lb (200,000 lb)

Capacity
22,500 kg / 49,604 lb (50k)
45,000 kg / 99,207 lb (100k)
200,000 lb

Material
Stainless Steel

Environmental Protection
Hermetically Sealed (NEMA 6P)

Output
METTLER TOLEDO DigiTOL Protocol

7 Troubleshooting

Consult the appropriate DigiTOL indicator manual for explanations of any error codes that may appear on the indicator display. Use the indicator manual in conjunction with an updated wiring drawing for your system to correctly diagnose electronic problems.

Isolate the problem. Attach the indicator to a DigiTOL POWERCELL simulator (available from METTLER TOLEDO). If the problem still exists, consult the indicator manual for troubleshooting assistance. If the indicator operates properly with the simulator attached, check for a problem in the scale itself.

If the weight indication is incorrect or the scale will not repeat, try the following:

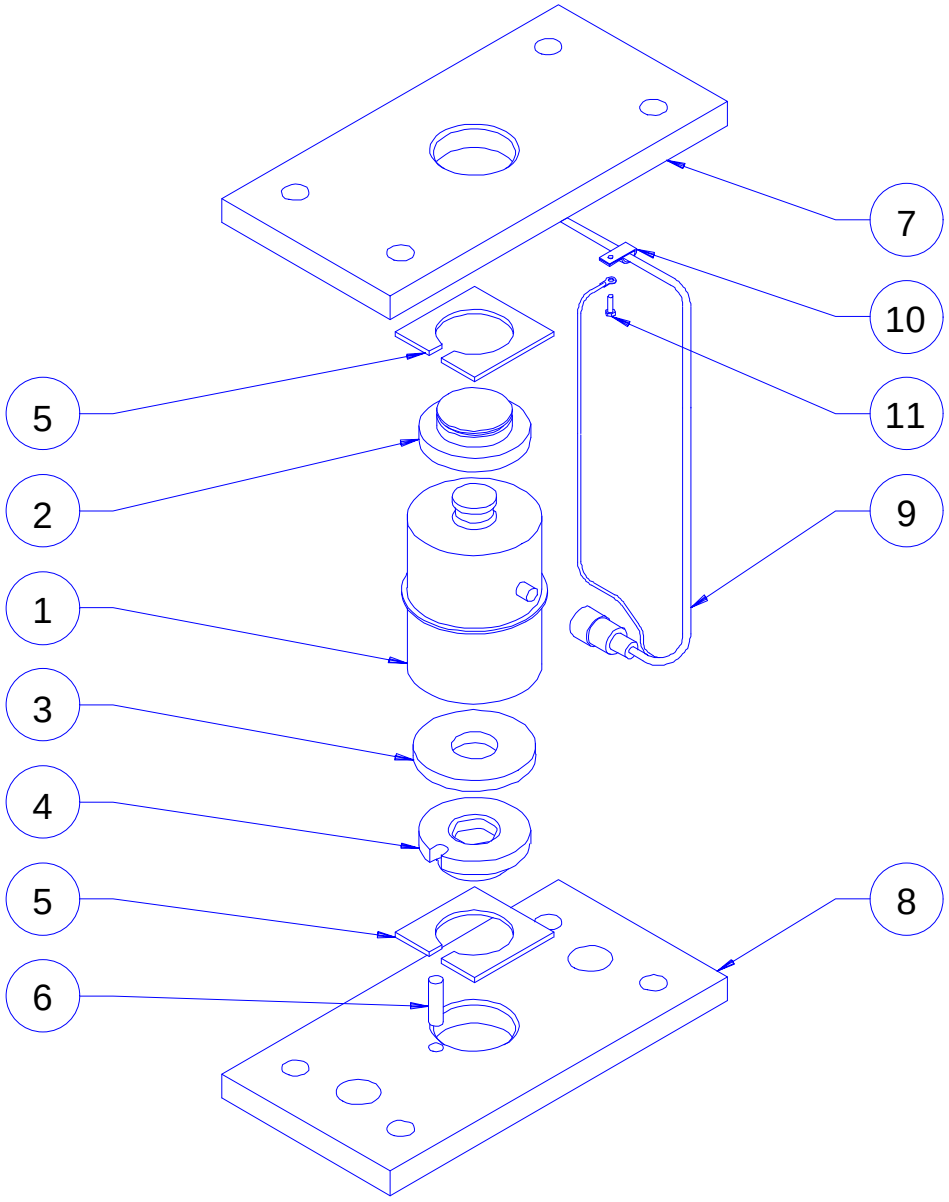
- Inspect all clearances around and under the scale for obstructions. Remove any material or debris that may cause interference between “live” and “dead” portions of the installation.
- For bumpered checking systems, make sure that the scale oscillates normally and that bumper bolts (both sides and ends) are not binding.
- Place weight over each section of the scale, one section at a time. If you find a defective section, place a known test weight directly over each POWERCELL load cell in the section. Compare the response of each load cell to determine which one is defective. Once the defective load cell is isolated, inspect all mounting hardware to make sure that nothing is damaged or loose. If the hardware appears correct, replace the load cell.

If error codes appear on the indicator, but the indicator operates properly on a simulator, try the following:

- Compare the previously recorded raw count values of each POWERCELL load cell to the current ones. If any load cell has changed its initial output (zero balance) or appears unstable, that load cell is suspect. Place a DigiTOL simulator at that load cell position to see if the error still exists. If the scale operates properly with the simulator, replace the load cell at that position.
- Verify that all system voltages are at proper levels. Start at the back of the DigiTOL indicator and verify that it is providing the proper supply and communication line voltages. Continue by checking at the end of the home run cable. Advance to the junction box PCBs and check each terminal position. By proceeding in this manner, you can isolate a problem in a PCB, interconnect cable, POWERCELL cable, or POWERCELL load cell. Consult your DigiTOL indicator manual for proper voltage levels.

8 Service Parts

22.5t (50K) and 45t (100K) DigiTOL POWERCELL Conversion

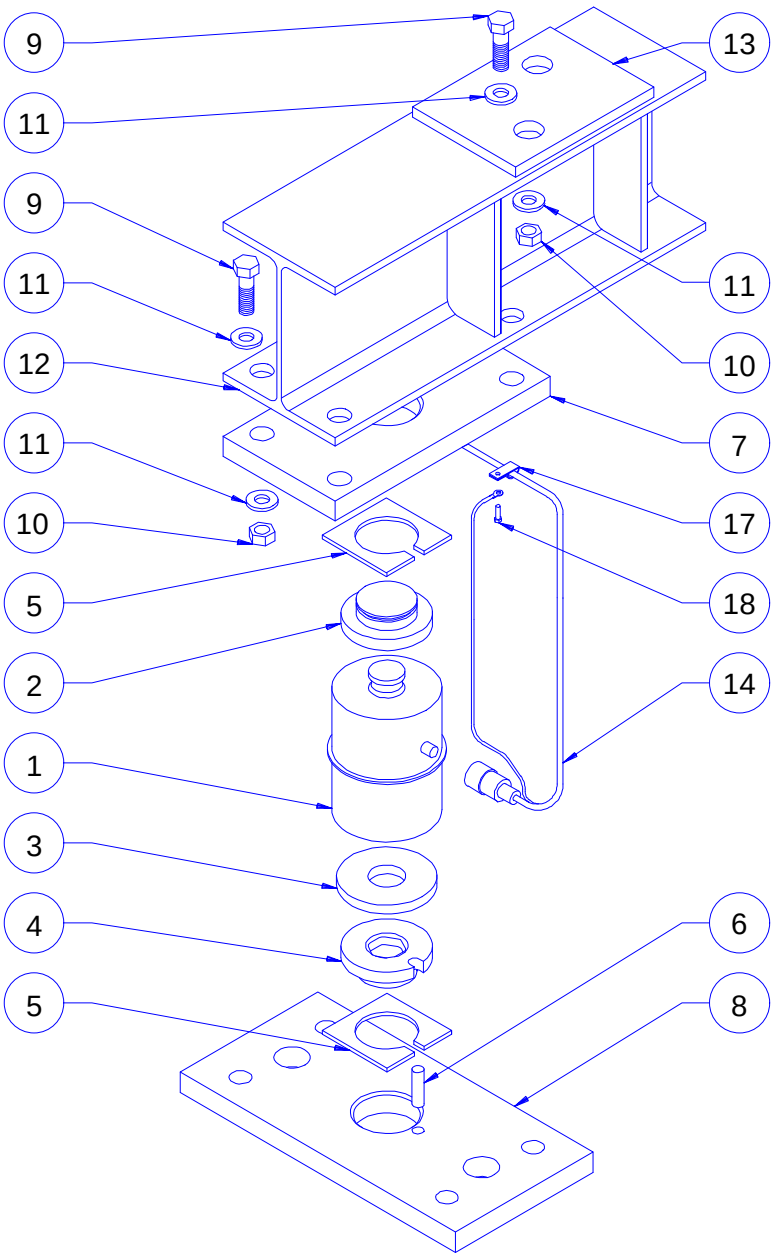


22.5t (50K) and 45t (100K) DigiTOL POWERCELL Conversion		
Item No.	Part Number	Description
1	*14002500A *14002900A	22.5t (50K) POWERCELL Load Cell 45t (100K) POWERCELL Load Cell
2	TA200835	45t (100K) Upper Receiver
3	TN203173	Gasket
4	TA200830	45t (100K) Lower Receiver
5	TA200833-1 TA200833-2 TA200833-3	45t (100K) Receiver Shim, 0.12 inch 45t (100K) Receiver Shim, 0.06 inch 45t (100K) Receiver Shim, 0.19 inch
6	MZ0904000063	Roll Pin, 0.5 inch diameter x 1.5 inches long
7	TA201541	45t (100K) Upper Receiver Plate
8	TB200836-1	45t (100K) Lower Receiver Plate
9	TA0000088-035	POWERCELL Cable, 35 feet long
10	MZ0907000022	Cable Clamp
11	MZ0901010356	Hex Head Screw, 10-32 x 0.5 inch long
12	TA000110-030	Interconnect Cable, 30 feet long
13	TB100474-4 TB100474-5 TB100474-6 TB100474-7	Junction Box, 4 Hole** Junction Box, 5 Hole** Junction Box, 6 Hole** Junction Box, 7 Hole**
Reference	TN203217	Lubricant, Load Cell Receiver
Reference	TA200831	22.5t/45t Locating Tool
Reference	TN203056	Connector Dielectric Compound
Reference	TB202627	Connector Cleaner

* May have an alpha prefix.

** Consists of one enclosure and one *13635300A PCB.

22.5t (50K) DigiTOL POWERCELL Type S Lever Mechanical Truck Scale Conversion

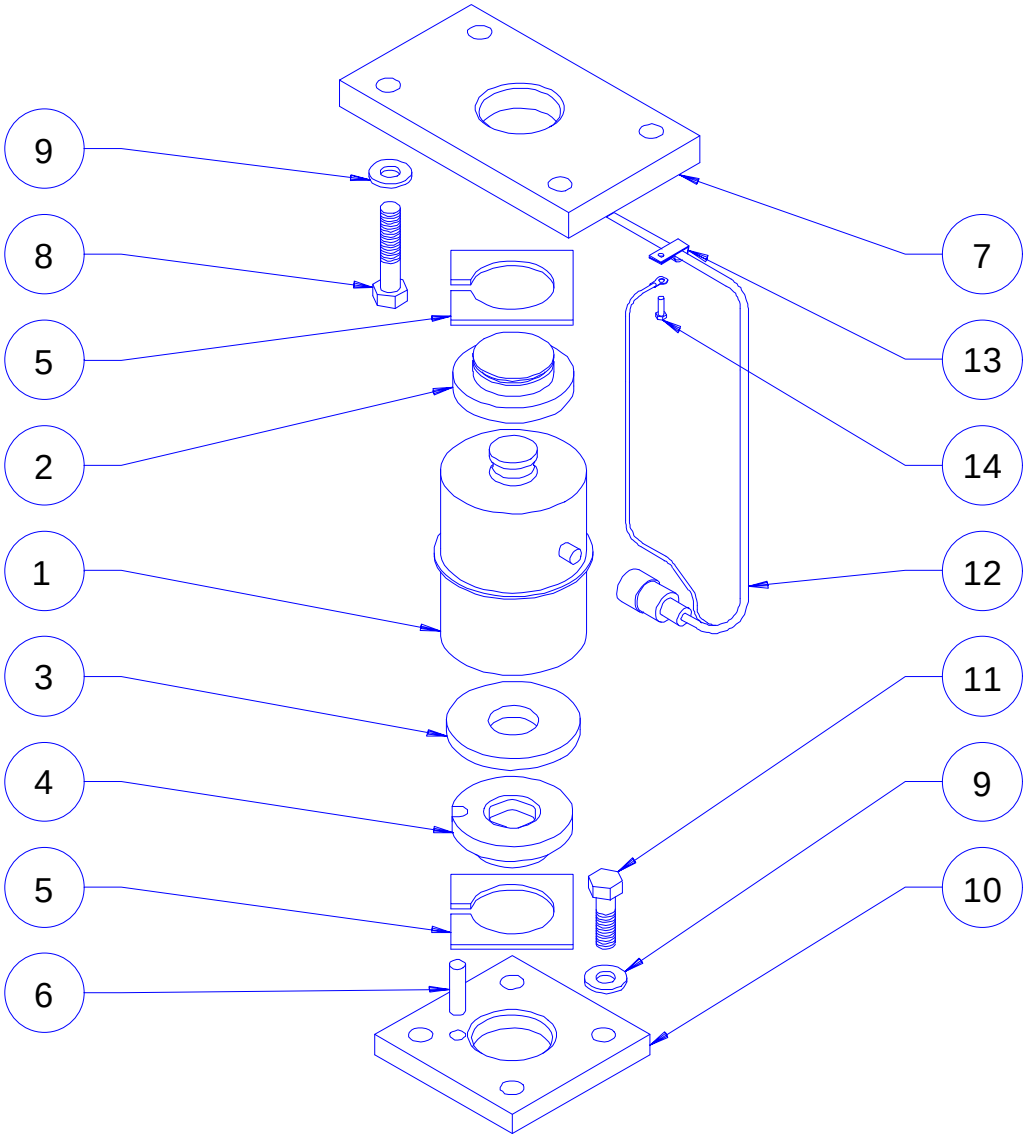


22.5t (50K) DigiTOL POWERCELL Type S Lever Mechanical Truck Scale Conversion		
Item No.	Part Number	Description
1	*14002500A	22.5t (50K) POWERCELL Load Cell
2	TA200835	45t (100K) Upper Receiver
3	TN203173	Gasket
4	TA200830	45t (100K) Lower Receiver
5	TA200833-1 TA200833-2 TA200833-3	45t (100K) Receiver Shim, 0.12 inch 45t (100K) Receiver Shim, 0.06 inch 45t (100K) Receiver Shim, 0.19 inch
6	MZ0904000063	Roll Pin, 0.5 inch diameter x 1.5 inches long
7	TA203484	760DC "S" Upper Receiver Plate
8	TB200836-1	45t (100K) Lower Receiver Plate
9	MZ0901010362	Hex Head Bolt, 3/4-10 x 3.5 inches long, Grade 5
10	MZ0901020056	Hex Head Nut, 3/4-10, Grade C
11	MZ0901030072	Plain Washer, 3/4 ID
12	TA203483	Lateral Beam
13	TN203570	Lateral Beam Shim
14	TA0000088-035	POWERCELL Cable, 35 feet long
15	TA000110-030	Interconnect Cable, 30 feet long
16	TB100474-4 TB100474-5 TB100474-6 TB100474-7	Junction Box, 4 Hole** Junction Box, 5 Hole** Junction Box, 6 Hole** Junction Box, 7 Hole**
17	MZ0907000022	Cable Clamp
18	MZ0901010356	Hex Head Screw, 10-32 x 0.5 inch long
Reference	TN203217	Lubricant, Load Cell Receiver
Reference	TA200831	22.5t/45t Locating Tool
Reference	TN203056	Connector Dielectric Compound
Reference	TB202627	Connector Cleaner

* May have an alpha prefix.

** Consists of one enclosure and one *13635300A PCB.

22.5t (50K) DigiTOL
POWERCELL
CapCheck
Conversion

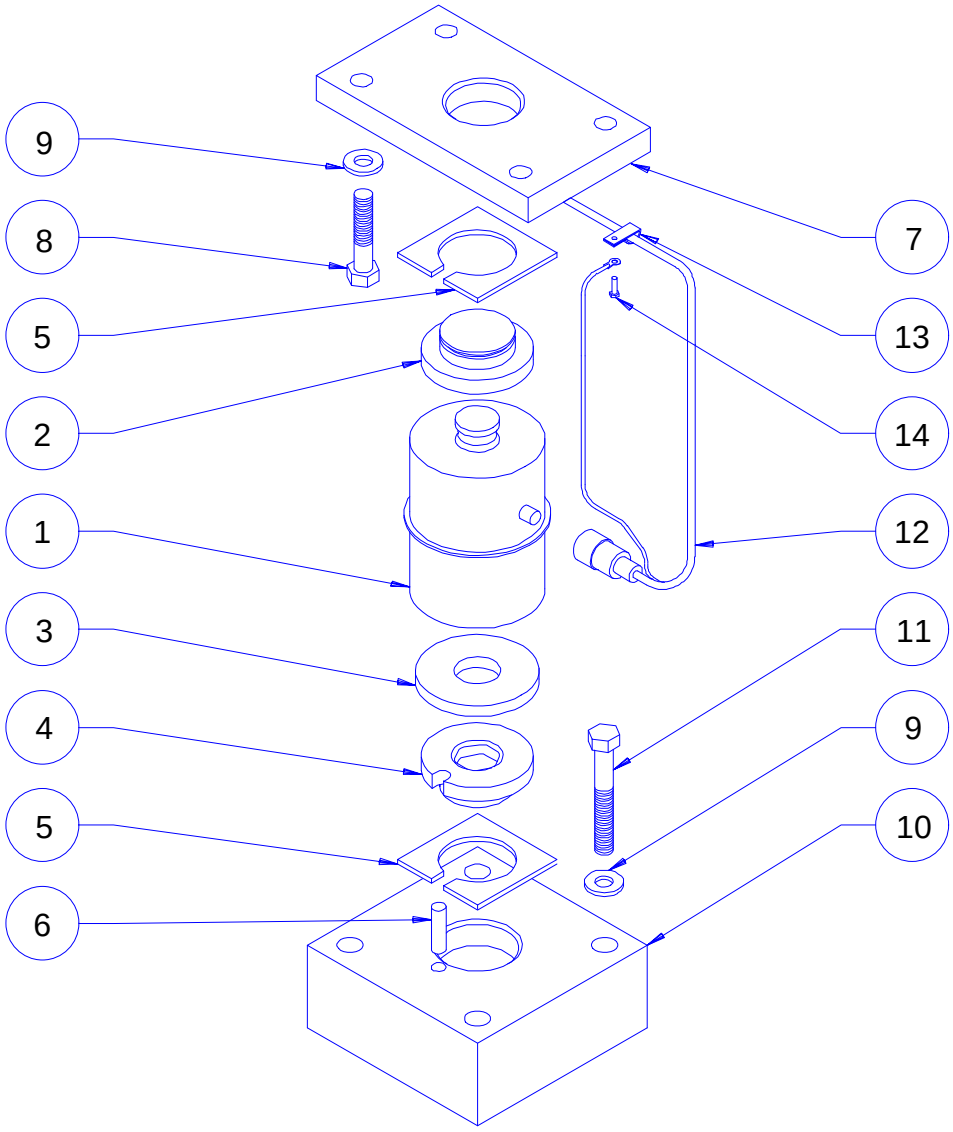


22.5t (50K) DigiTOL POWERCELL CapCheck Conversion		
Item No.	Part Number	Description
1	*14002500A	22.5t (50K) POWERCELL Load Cell
2	TA200764	22.5t (50K) Upper Receiver
3	TN203173	Gasket
4	TA200814	22.5t (50K) Lower Receiver
5	TA200712-1 TA200712-2 TA200712-3	22.5t (50K) Receiver Shim, 0.12 inch 22.5t (50K) Receiver Shim, 0.06 inch 22.5t (50K) Receiver Shim, 0.19 inch
6	MZ0904000063	Roll Pin, 0.5 inch diameter x 1.5 inches long
7	TA201948	22.5t (50K) Upper Receiver Plate
8	MZ0901010125	Hex Head Bolt, 5/8-11 x 3 inches long, Grade 5
9	MZ0901030062	Plain Washer, 5/8 inch ID
10	TA201947	22.5t (50K) Lower Receiver Plate
11	MZ0901010252	Hex Head Bolt, 5/8-11 x 2 inches long, Grade 5
12	TA0000088-035	POWERCELL Cable, 35 feet long
13	MZ0907000022	Cable Clamp
14	MZ0901010356	Hex Head Screw, 10-32 x 0.5 inch long
15	TA000110-030	Interconnect Cable, 30 feet long
16	TB100474-4 TB100474-5 TB100474-6 TB100474-7	Junction Box, 4 Hole** Junction Box, 5 Hole** Junction Box, 6 Hole** Junction Box, 7 Hole**
Reference	TN203217	Lubricant, Load Cell Receiver
Reference	TA200831	22.5t/45t Locating Tool
Reference	TN203056	Connector Dielectric Compound
Reference	TB202627	Connector Cleaner

* May have an alpha prefix.

** Consists of one enclosure and one *13635300A PCB.

45t (100K) DigiTOL
POWERCELL
CapCheck
Conversion

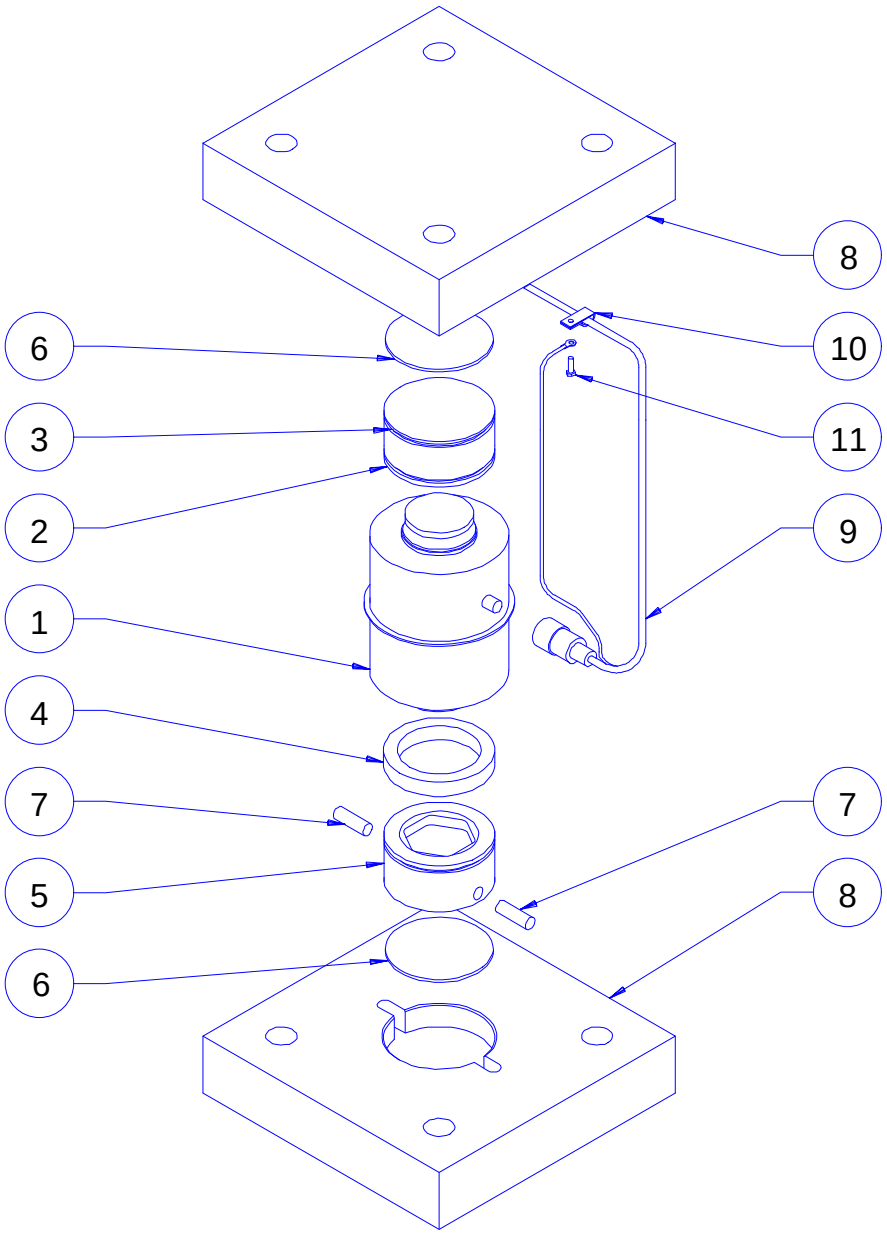


45t (100K) DigiTOL POWERCELL CapCheck Conversion		
Item No.	Part Number	Description
1	*14002900A	45t (100K) POWERCELL Load Cell
2	TA200835	45t (100K) Upper Receiver
3	TN203173	Gasket
4	TA200830	45t (100K) Lower Receiver
5	TA200833-1 TA200833-2 TA200833-3	45t (100K) Receiver Shim, 0.12 inch 45t (100K) Receiver Shim, 0.06 inch 45t (100K) Receiver Shim, 0.19 inch
6	MZ0904000063	Roll Pin, 0.5 inch diameter x 1.5 inches long
7	TA201946-10	45t (100K) Upper Receiver Plate
8	MZ0901010362	Hex Head Bolt, 3/4-10 x 3.5 inches long, Grade 5
9	MZ0901030052	Plain Washer, 3/4 inch ID
10	TA302834	45t (100K) Lower Receiver Plate
11	MZ0901010359	Hex Head Bolt, 3/4-10 x 5 inches long, Grade 5
12	TA0000088-035	POWERCELL Cable, 35 feet long
13	MZ0907000022	Cable Clamp
14	MZ0901010356	Hex Head Screw, 10-32 x 0.5 inch long
15	TA000110-030	Interconnect Cable, 30 feet long
16	TB100474-4 TB100474-5 TB100474-6 TB100474-7	Junction Box, 4 Hole** Junction Box, 5 Hole** Junction Box, 6 Hole** Junction Box, 7 Hole**
Reference	TN203217	Lubricant, Load Cell Receiver
Reference	TA200831	22.5t/45t Locating Tool
Reference	TN203056	Connector Dielectric Compound
Reference	TB202627	Connector Cleaner

* May have an alpha prefix.

** Consists of one enclosure and one *13635300A PCB.

200K DigiTOL POWERCELL Conversion



200K DigiTOL POWERCELL Conversion		
Item No.	Part Number	Description
1	*14713000A	200K POWERCELL Load Cell
2	TA202992	200K Upper Receiver
3	MZ0909000058	O-Ring
4	TN203173	Gasket
5	TA202991	200K Lower Receiver
6	TA203069-1 TA203069-2 TA203069-3	200K Receiver Shim, 0.06 inch 200K Receiver Shim, 0.12 inch 200K Receiver Shim, 0.19 inch
7	MZ0904000070	Roll Pin, 0.5 inch diameter x 1.25 inches long
8	TB203070-10	200K Receiver Plate
9	TA0000088-035	POWERCELL Cable, 35 feet long
10	MZ0907000022	Cable Clamp
11	MZ0901010356	Hex Head Screw, 10-32 x 0.5 inch long
12	TA000110-030	Interconnect Cable, 30 feet long
13	TB100474-4 TB100474-5 TB100474-6 TB100474-7	Junction Box, 4 Hole** Junction Box, 5 Hole** Junction Box, 6 Hole** Junction Box, 7 Hole**
Reference	TN203217	Lubricant, Load Cell Receiver
Reference	TA203072	200K Locating Tool
Reference	TN203056	Connector Dielectric Compound
Reference	TB202627	Connector Cleaner

* May have an alpha prefix.

** Consists of one enclosure and one *13635300A PCB.

9 Reference Material

Reference Drawings

DigiTOL POWERCELL Conversion Kit	General Dimensions and Assembly	Recommended Checking System		Wiring Diagram	
		Bumper	Check Rod	Standard (Nonhazardous)	Hazardous Area
22.5t (50K) and 45t (100K)	TC600424	TC600234	TC600263	TC100460	TC100442
22.5t (50K) Type S Lever	TC600653	----------	----------	TC100460	TC100442
22.5t (50K) CapCheck	TC600425	TC600234	TC600263	TC100460	TC100442
45t (100K) CapCheck	TC600425	----------	TC600263	TC100460	TC100442
200K	TC600527	----------	TC600263	TC100460	TC100442

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