

Heavy Capacity

Quick Reference Guide

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METTLER TOLEDO

Publication Revision History

An overview of this manuals revision history is compiled below.

Publication Name: Heavy Capacity Quick Reference Guide

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Part Number	Date	Revisions

INTRODUCTION

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

METTLER TOLEDO

350 W. Wilson Bridge Road

Worthington, Ohio 43085

ph: (614) 438-4400

fax: (614) 438-4444



WARNING

This publication is provided solely as a guide for individuals who have received technical training and is familiar with the technical manuals of the Mettler Toledo products.

This guide is not meant to replace the technical manual for various products.

Please review the specific technical manuals for detailed instructions and safety precautions before operating or servicing the various Mettler Toledo products.

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

PRECAUTIONS

READ this manual BEFORE operating or servicing this equipment.

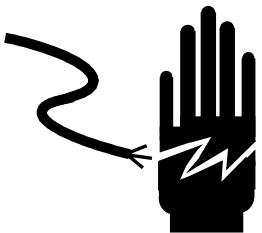
FOLLOW these instructions carefully.

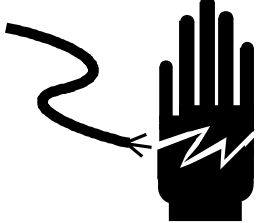
SAVE this manual for future reference.

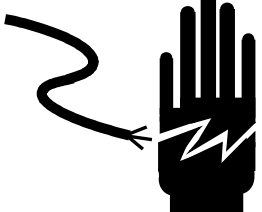
DO NOT allow untrained personnel to operate, clean, inspect, maintain, service, or tamper with this equipment.

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

CALL METTLER TOLEDO for parts, information, and service.

	 WARNING
	ONLY PERMIT 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.	

METTLER TOLEDO

Publication Problem Report

If you find a problem with our documentation, please complete and fax this form to (614) 438-4783

Publication Name: Heavy Capacity Quick Reference Guide

Publication Part Number: 15398000A Publication Date: 1/98

PROBLEM(S) TYPE:	DESCRIBE PROBLEM(S):	INTERNAL USE ONLY
☐ Technical Accuracy	☐ Text ☐ Illustration	
☐ Completeness What information is missing?	☐ Procedure/step ☐ Illustration ☐ Definition ☐ Example ☐ Guideline ☐ Feature ☐ Explanation ☐ Other (please explain below)	☐ Info. in manual ☐ Info. not in manual
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Your Name: _____ Location: _____

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METTLER TOLEDO
Scales & Systems

350 West Wilson Bridge Road
Worthington, Ohio 43085-2273

P/N: 15398000A

(1/98).00

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15398000A

CONTENTS

1 760 DigiTOL Conversion For Vehicle Scales	1-1
Model 760.....	1-1
Buyer Responsibilities.....	1-1
Seller Responsibilities	1-2
Dimensional Data	1-3
PowerCell Addressing.....	1-4
PowerCell Specifications	1-4
Service Parts.....	1-5
 2 0990 Monorail Overhead Track Scale.....	 2-1
Model 0990.....	2-1
Analog Mode	2-3
DLC Mode	2-4
Smart Mode	2-5
Service Parts.....	2-6
 3 0991 Monorail HC Overhead Track Scale	 3-1
Model 0991.....	3-1
Analog Mode	3-3
DLC Mode	3-4
Smart Mode	3-5
Service Parts.....	3-6
 4 2254 Predator Low Profile Floor Scales	 4-1
Model 2254.....	4-1
Standard Features	4-1
Options and Accessories	4-1
Load Cell Data	4-2
Analog Mode	4-3
Service Parts.....	4-4
 5 2256 Weigh-Plate Low Profile Floor Scales.....	 5-1
Standard Features	5-1
Options and Accessories	5-1
Load Cell Data	5-2
Analog Mode	5-4
Service Parts.....	5-5

6 2888 Deckmate® Lower Profile Floor Scales.....	6-1
Model 2888.....	6-1
Standard Features	6-1
Options and Accessories	6-1
Load Cell Data	6-2
Analog Mode	6-3
Service Parts.....	6-4
7 7260 DigiTOL Railroad Track Scale	7-1
Model 7260.....	7-1
Foundations.....	7-1
Module Weights	7-2
PowerCell Addressing.....	7-2
Raw Count Range	7-3
PowerCell Specifications	7-3
Service Parts.....	7-4
8 7360 DigiTOL Combination Rail/Truck Scale	8-1
Model 7360.....	8-1
Foundations.....	8-1
Module Weights	8-2
PowerCell Addressing.....	8-2
Raw Count Range	8-3
PowerCell Specifications	8-3
Service Parts.....	8-4
9 7531 DigiTOL Truckmaster Truck Scale.....	9-1
Model 7531.....	9-1
Foundations.....	9-1
Module Weights	9-2
PowerCell Addressing.....	9-2
Raw Count Range	9-3
PowerCell Specifications	9-3
Service Parts.....	9-4
10 7541 DigiTOL Truckmaster Truck Scale	10-1
Model 7541.....	10-1
Foundations.....	10-1
Module Weights	10-2
PowerCell Addressing.....	10-2
Raw Count Range	10-3
PowerCell Specifications	10-3
Service Parts.....	10-4
11 7560 DigiTOL Truckmate SCALE.....	11-1

Model 7560.....	11-1
Foundations.....	11-1
Module Weights	11-2
PowerCell Addressing.....	11-3
Raw Count Range	11-4
PowerCell Specifications	11-4
Service Parts.....	11-5

12 7562 DigiTOL Truckmate Scale	12-1
Model 7562.....	12-1
Foundations.....	12-1
Module Weights	12-2
PowerCell Addressing.....	12-2
Raw Count Range	12-3
PowerCell Specifications	12-3
Service Parts.....	12-4

13 7563 DigiTOL Truckmate Scale	13-1
Model 7563.....	13-1
Foundations.....	13-1
Module Weights	13-2
PowerCell Addressing.....	13-2
Raw Count Range	13-3
PowerCell Specifications	13-33
Service Parts.....	13-4

14 7565 DigiTOL HD Heavy Duty Truckmate Scale.....	14-1
Model 7565.....	14-1
Foundations.....	14-1
Module Weights	14-2
PowerCell Addressing.....	14-2
Raw Count Range	14-3
PowerCell.....	14-3
Specifications	14-3
Service Parts.....	14-4

15 EZ-Clean Vertex Pit Type Floor Scales	15-1
Model 2158 & 2160 EZ-Clean	15-1
Standard Features	15-1
Load Cell Data	15-2
2158 Analog Vertex®	15-3
2160 DigiTOL Vertex DLC mode	15-4
2160 DigiTOL Vertex Smart Mode	15-5
Service Parts.....	15-6

16 Flexmount®/Centerlign® Weigh Modules	16-1
Model 0957 and 0958	16-1
Accuracy	16-2
Load Cells	16-2
Flexmount	16-4
Centerlign.....	16-8
Installation (Flexmount)	16-10
Installation (Centerlign).....	16-14
Modes of Operation	16-17
DigiTOL Smart Mode	16-19
Model 0958 Flexmount+ 250 to 10k Cells	16-20
Model 0957 Flexmount 20k Cell	16-23
Model 957 Flexmount 45k Cell.....	16-25
Model 957 Flexmount 75k Cell.....	16-27
Model 0957 Flexmount 100k & 200k Cell	16-28
Model 0958 Centerlign+ 250 to 10k Cells	16-30
Model 0957 Centerlign 20k Cell	16-32
Model 0957 Centerlign 45k Cell	16-33
 17 MG4500 Liftmate® HD Floor Scales	 17-1
Model MG4500.....	17-1
Standard Features	17-1
Options and Accessories.....	17-2
Load Cell Data	17-2
MG4500 Liftmate HD	17-3
Service Parts.....	17-4
 18 Vertex® Floor Scales.....	 18-1
Model 2158, 2160, 2162.....	18-1
Options and Accessories	18-2
Load Cell Data	18-2
2158 Analog Vertex	18-3
2160 DigiTOL Vertex DLC Mode	18-4
2160 DigiTOL Vertex Smart Mode	18-5
2162 IDNet	18-6
Shift Adjustment for Model 2162	18-7
Service Parts.....	18-8

1

760 DigiTOL Conversion For Vehicle Scales

Model 760

Service Manual No. *14963100A

(*May have a letter prefix)

The Model 760 DigiTOL Conversion is a system of DigiTOL® PowerCell assemblies designed to be installed under an existing scale weighbridge. Easily installed, in place of costly conventional load cells or high maintenance lever systems, the 760DC PowerCell conversion provide all the benefits of modern Mettler Toledo DigiTOL technology. The same field proven weighing principles used in all Mettler Toledo DigiTOL vehicle scales.

Buyer Responsibilities

Note: For lever scale conversions, the main beam centerline may not correspond to the centerline of the pier. The centerline of the PowerCells must correspond to the main beam centerline. (See Figure 1-a)

Contact local weights and measures official to approve scale modification.

Contract a local engineer to determine the following:

- Existing weighbridge and foundation structural integrity
- Type of scale checking system needed, existing or Mettler Toledo recommended system (see Mettler Toledo drawing TC600234 or TC600263)
- Modified or altered weighbridge and foundation to meet user requirements
- If foundation piers are of sufficient quality and size
- Ensure that a proper DigiTOL compatible indicator be interfaced to system.
- Review the following drawings before attempting to install a 760DC Conversion: (See drawing pocket in back of service manual)

TC600424 Installation (22.5 t and 45 t PowerCell)

TC600425 Installation (Cap-Check Conversion)

TC600527 Installation (200,000 lb PowerCell)

TC600234 Bumper Checking System

TC600263 Check Rod

TC100442 CMOS Wiring Diagram Hazardous Area

TC100460 CMOS Wiring Diagram Non-Hazardous Area

TC600653 Lever Conversion Layout (22.5 t PowerCell)

Seller Responsibilities

Provide required quantity of DigiTOL PowerCell Modules and related hardware and wiring components per installation drawing TC600424, TC600425, or TC600527.

Provide product support as set forth in the standard new equipment Product Warranty Statement.

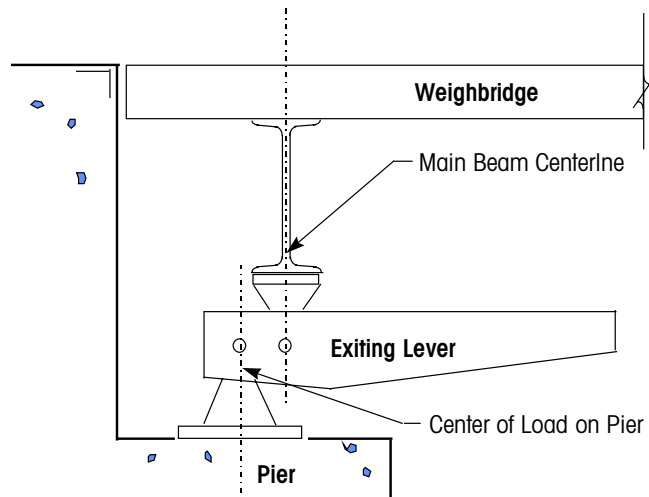


Figure 1-a: Typical Lever Corner Assembly

Dimensional Data

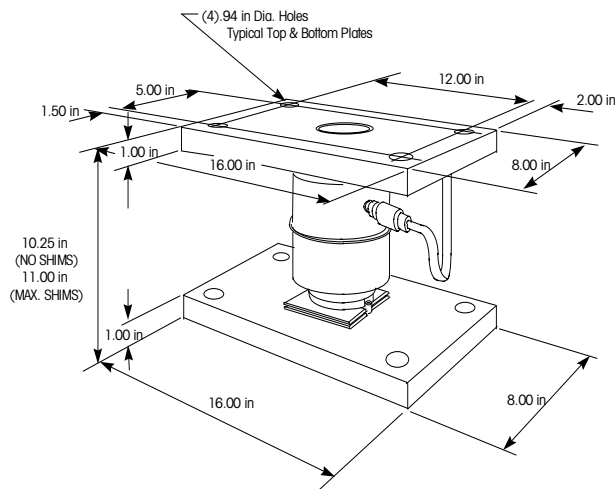


Figure 1-b: 22.5 t and 45 t PowerCell Conversion

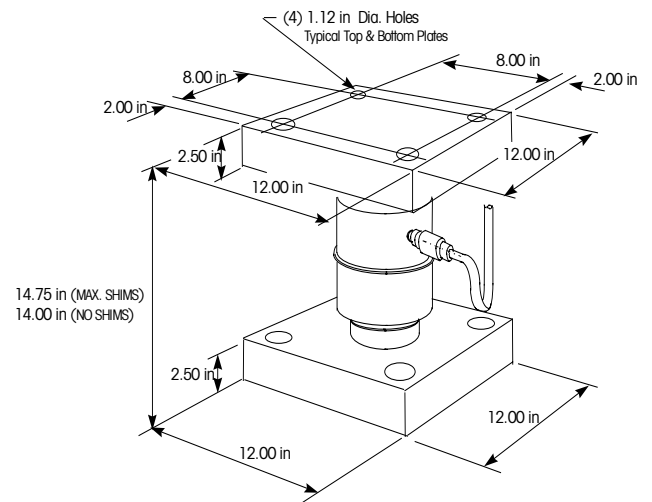


Figure 1-c: 200,000 lb PowerCell Conversion Assembly

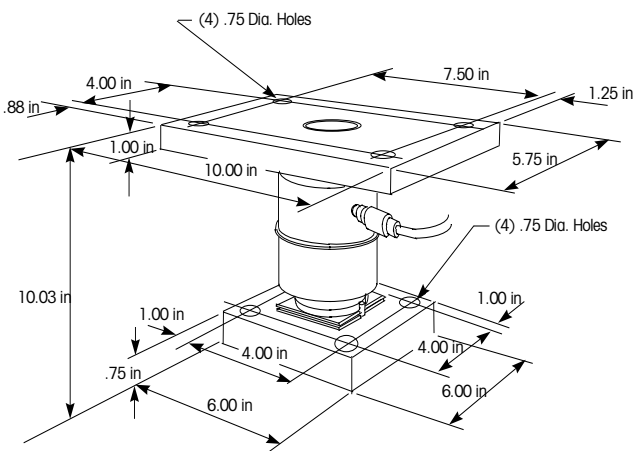


Figure 1-d: 50k Cap-Check DigiTOL Conversion

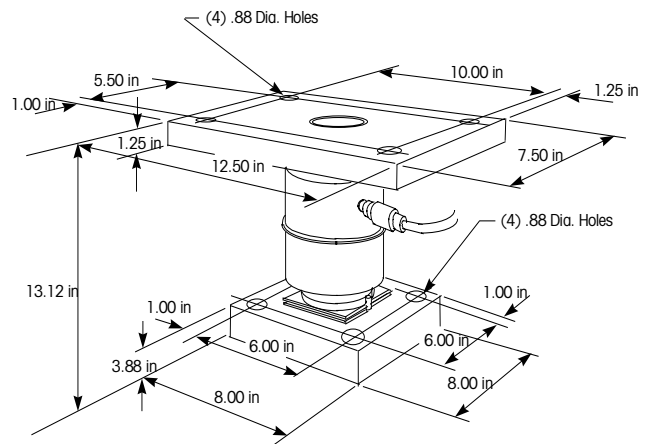


Figure 1-e: 100K Cap-Check DigiTOL Conversion

PowerCell Addressing

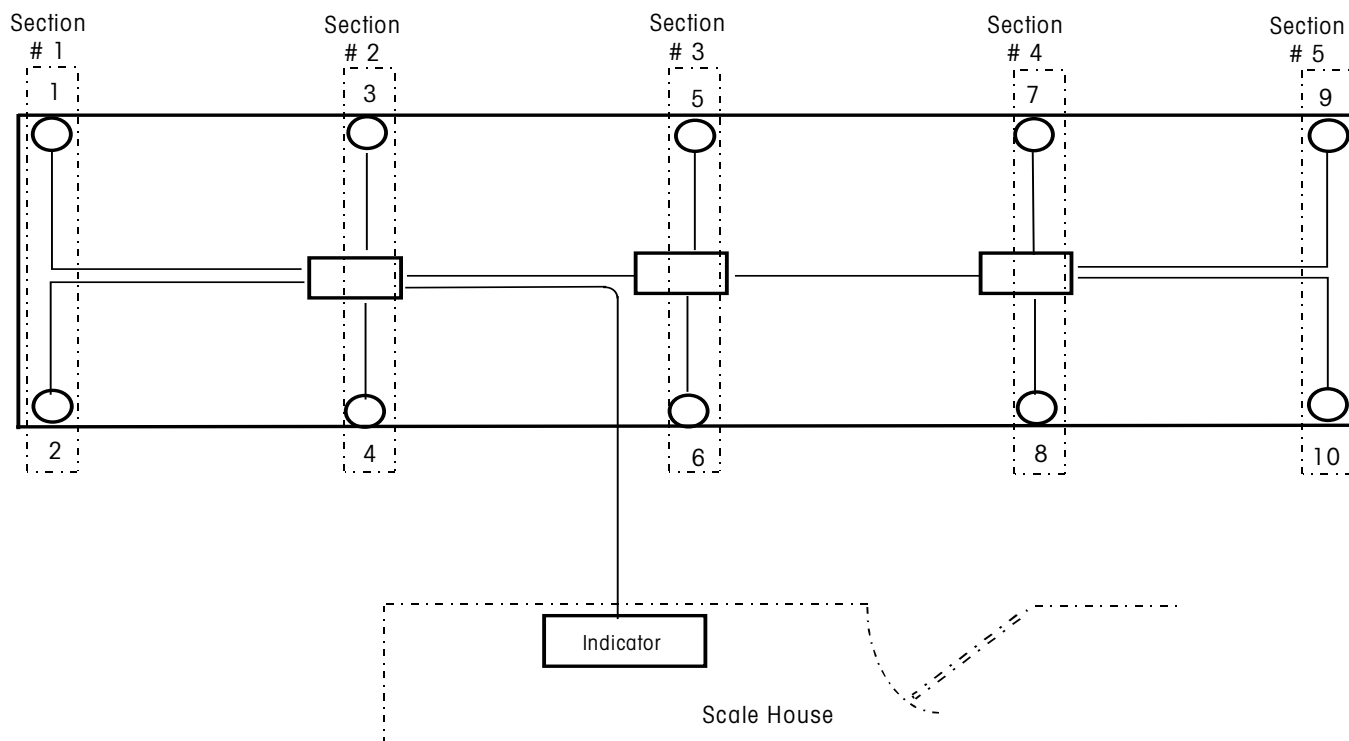


Figure 1-f: PowerCell Addressing

PowerCell Specifications

Model 0760

- NTEP (National Type Evaluation Program) Certificate of Conformance Number: 88-091 A3 for Class III, 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

Service Parts

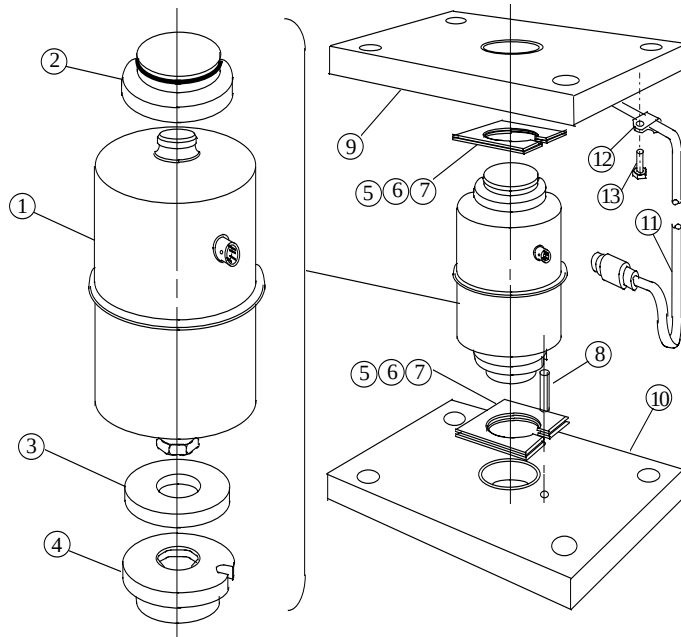


Figure 1-g: 50K and 100K DigiTOL PowerCell Conversion

Ref. No.	Part Number	Description	Qty.
1	*14002500A *14002900A	22.5t (50 K) CMOS PowerCell 45t (100 K) CMOS PowerCell	1
2	TA200835	45t (100 K) Upper Receiver	1
3	TN203173	Gasket	1
4	TA200830	45t (100 K) Lower Receiver	1
5	TA200833-1	Receiver Shim, .12 inch	Var.
6	TA200833-2	Receiver Shim, .06 inch	Var.
7	TA200833-3	Receiver Shim, .19 inch	Var.
8	MZ0904000063	.50 inch Roll Pin x 1.50 Lg.	1
9	TA201541	Upper Receiver Plate, 1 x 8 x 16	1
10	TB200836-1	Lower Receiver Plate, 1 x 8 x 16	1
11	TA000088-035	PowerCell Cable x35 Foot Lg.	1
12	MZ0907000022	Cable Clamp	1
13	MZ0901010356	10-32 Hex. Hd. Screw x .50 Lg.	1
Ref.	TA000110-030	CMOS Interconnect Cable x 30 Foot Lg.	
Ref.	TB100474 -*X	CMOS Junction Box consist of : 13635300A CMOS PCB	
Ref.	MZ0602000096	Teflon Grease	
Ref.	TA2009831	Locating Tool	
Ref.	TN203056	Connector Grease	
Ref.	TB202627	Connector Cleaner	

*May have an alpha prefix.

*X = Number of Connectors on Junction Box (4, 5, 6, or 7 connector boxes available)

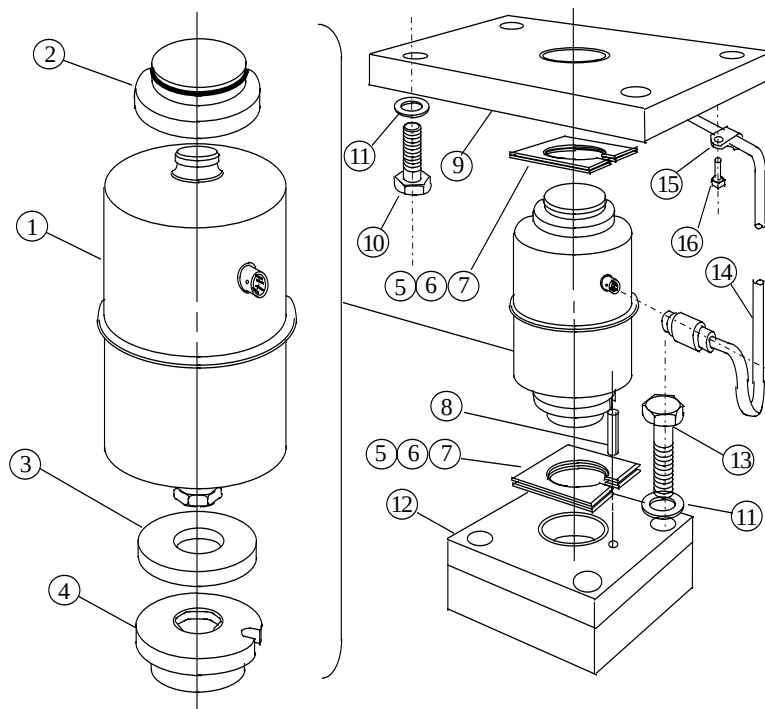


Figure 1-h: 50K PowerCell Cap-Check Conversion

Ref. No.	Part Number	Description	Qty.
1	*14002500A	22.5t (50K) CMOS PowerCell	1
2	TA200764	22.5t (50K) Upper Receiver	1
3	TN203173	Gasket	1
4	TA200814	22.5t (50K) Lower Receiver	1
5	TA200712-1	22.5t (50K) Receiver Shim, .12 inch	Var.
6	TA200712-2	22.5t (50K) Receiver Shim, .06 inch	Var.
7	TA200712-3	22.5t (50K) Receiver Shim, .19 inch	Var.
8	MZ0904000063	.50 inch Roll Pin x 1.50 Lg.	1
9	TA201948	22.5t (50K) Upper Receiver Plate	1
10	MZ0901010125	5/8-11 Hex. Hd. Bolt x 3.00 Lg.	4
11	MZ0901030062	5/8 Washer	8
12	TA201947	22.5t (50K) Lower Receiver Plate	1
13	MZ0901010252	5/8-11 Hex. Hd. Bolt x 2.00 Lg.	4
14	TA000088-035	PowerCell Cable x 35 Foot Lg.	1
15	MZ0907000022	Cable Clamp	1
16	MZ0901010356	10-32 Hex. Hd. Screw x .50 Lg.	1
Ref.	TA000110-030	CMOS Interconnect Cable x 30 Foot Lg.	
Ref.	TB100474 -*X	CMOS Junction Box consist of : (1) *13635300A CMOS PCB	
Ref.	MZ0602000096	Teflon Grease	
Ref.	TA2009831	Locating Tool	
Ref.	TN203056	Connector Grease	
Ref.	TB202627	Connector Cleaner	

*May have an alpha prefix.

*X = Number of Connectors on Junction Box (4, 5, 6, or 7 connector boxes available)

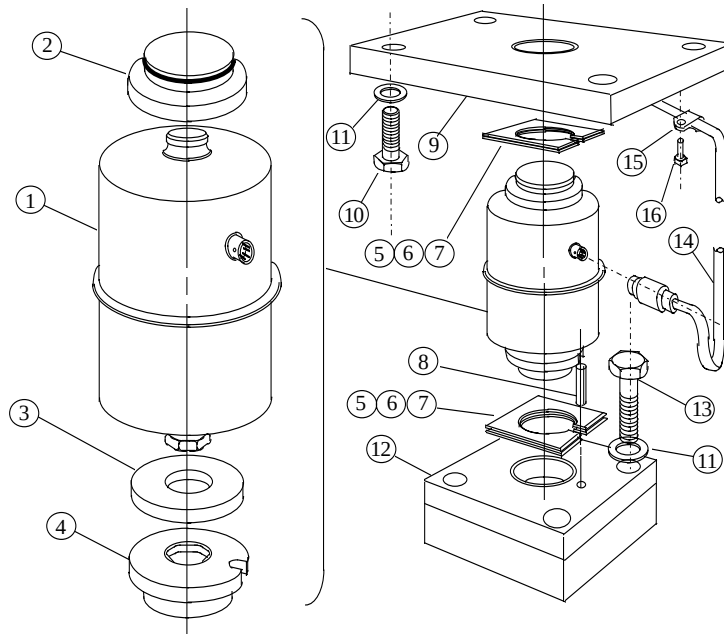


Figure 1-i: 100K PowerCell Cap-Check Conversion

Ref. No.	Part Number	Description	Qty.
1	*14002900A	45t (100K) CMOS PowerCell	1
2	TA200835	45t (100K) Upper Receiver	1
3	TN203173	Gasket	1
4	TA200830	45t (100K) Lower Receiver	1
5	TA200833-1	45t (100K) Receiver Shim, .12 inch	Var.
6	TA200833-2	45t (100K) Receiver Shim, .06 inch	Var.
7	TA200833-3	45t (100K) Receiver Shim, .19 inch	Var.
8	MZ0904000063	.50 inch Roll Pin x 1.50 Lg.	1
9	TA201946-10	45t (100K) Upper Receiver Plate	1
10	MZ0901010362	3/4-10 Hex. Hd. Bolt x 3.50 Lg.	4
11	MZ0901030052	3/4 Washer	8
12	TA302834	45t (100K) Lower Receiver Plate	1
13	MZ0901010359	3/4-10 Hex. Hd. Bolt x 5.00 Lg.	8
14	TA000088-035	PowerCell Cable x35 Foot Lg.	1
15	MZ0907000022	Cable Clamp	1
16	MZ0901010356	10-32 Hex. Hd. Screw x .50 Lg.	1
Ref.	TA000110-030	CMOS Interconnect Cable x 30 Foot Lg.	
Ref.	TB100474 -*X	CMOS Junction Box consist of : (1) *13635300A CMOS PCB	
Ref.	MZ0602000096	Teflon Grease	
Ref.	TA2009831	Locating Tool	
Ref.	TN203056	Connector Grease	
Ref.	TB202627	Connector Cleaner	

* May have an alpha prefix.

*X = Number of Connectors on Junction Box (4, 5, 6, or 7 connector boxes available)

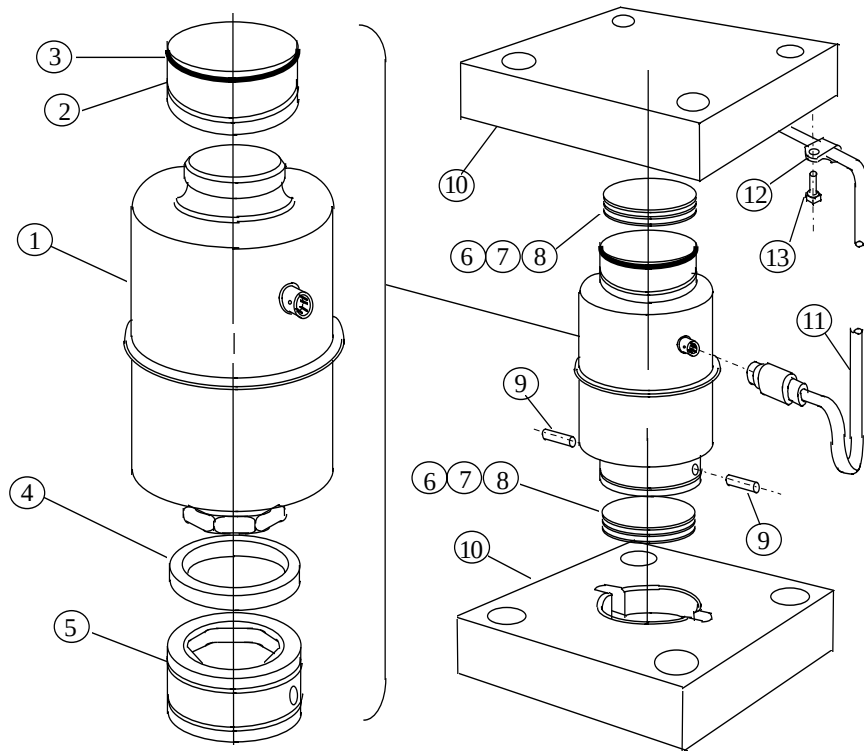


Figure 1-j: 200,000 lb PowerCell Conversion

Ref. No.	Part Number	Description	Qty.
1	*14713000A	200,000 lb CMOS PowerCell	1
2	TA202992	Upper Receiver	1
3	MZ0909000058	O-Ring	1
4	TN203071	Gasket	1
5	TA202991	Lower Receiver	1
6	TA203069-1	Receiver Shim, .06 inch	Var.
7	TA203069-2	Receiver Shim, .12 inch	Var.
8	TA203069-3	Receiver Shim, .19 inch	Var.
9	MZ0904000070	.50 inch Roll Pin x 1.25 Lg.	2
10	TB203070-10	Receiver Plate	2
11	TA000088-035	PowerCell Cable x 35 Foot Lg.	1
12	MZ0907000022	Cable Clamp	1
13	MZ0901010356	10-32 Hex. Hd. Screw x .50 Lg.	1
Ref.	TA000110-030	CMOS Interconnect Cable x 30 Foot Lg.	
Ref.	TB100474 -*X	CMOS Junction Box consist of : (1) *13635300A CMOS PCB	
Ref.	MZ0602000096	Teflon Grease	
Ref.	TA203072	Locating Tool	
Ref.	TN203056	Connector Grease	
Ref.	TB202627	Connector Cleaner	

* May have an alpha prefix.

*X = Number of Connectors on Junction Box (4, 5, 6, or 7 connector boxes available)

2

0990 Monorail Overhead Track Scale

Model 0990

Service Manual No. *14859600A

(* May have a letter prefix)

The Model 0990 is NTEP Certified to Class III 2500 divisions for static weighing applications, COC No. 95 -144.

Scale Rail Capacity	Capacity of Each Load Cell	Minimum Approved Graduation Size
1250 lb	1250 lb	0.5 lb
2500 lb	2500 lb	1.0 lb

Model 0990 Configuration Table						
0990	X	X	X	X	X	XX
Model	Rail Length	Cell Material	Junction Box	Cell Type	Cell Cable Length	Cell Capacity
0990	0 = 24 in. 1 = 48 in.	0 = Mild Steel 1 = Stainless Steel	0 = None 1 = Standard Analog 2 = Enhanced DigiTOL 3 = ID Net 4 = Large Analog 5 = Large Enhanced DigiTOL 6 = Large ID Net	0 = TLC H44 1 = THC H44 2 = Future 3 = Future	0 = 15 ft 1 = 30 ft	01 = Future 02 = 1250 lb 03 = 2500 lb 11 = Future 12 = Future 13 = Future



WARNING!

A secondary support system with a capacity exceeding the rated capacity of the 0990 **MUST BE** installed.
All welding **MUST BE** performed by a certified welder per AWS guidelines

Load Cells

Stainless steel cantilever beam load cells are provided in all 0990 Monorail scales with integral 4-conductor, shielded, color coded cable.

Model 757 load cells:

- COC No. 96 - 006
- Rated Output: 2 mV/V
- Output Resistance: 350 Ohm (± 2)
- Input Resistance: 385 Ohm (min)
- Wiring Color Code: – Excitation—Black
+ Excitation—Green
– Signal—Red
+ Signal—White
Shield—Yellow
- Excitation Voltage: 15 VDC Maximum
- Accuracy: (Avoirdupois Capacities) NIST H-44/Class III/2500d
(Metric Capacities) N/A
- Features: Hermetically Sealed Gauge Capacity—1/4 in. -18 NPT conduit fitting at rear cable entry
- Environment: The compensated operating temperature range is –10 to +40 °C (14 to 104 °F).

Analog Mode

Analog 0990 uses an analog junction box for summing the load cell outputs and provides for trimming of the cell outputs. Only analog compatible indicators will work with the Analog Junction Box.

Note: Turn all potentiometers fully clockwise prior to calibration.

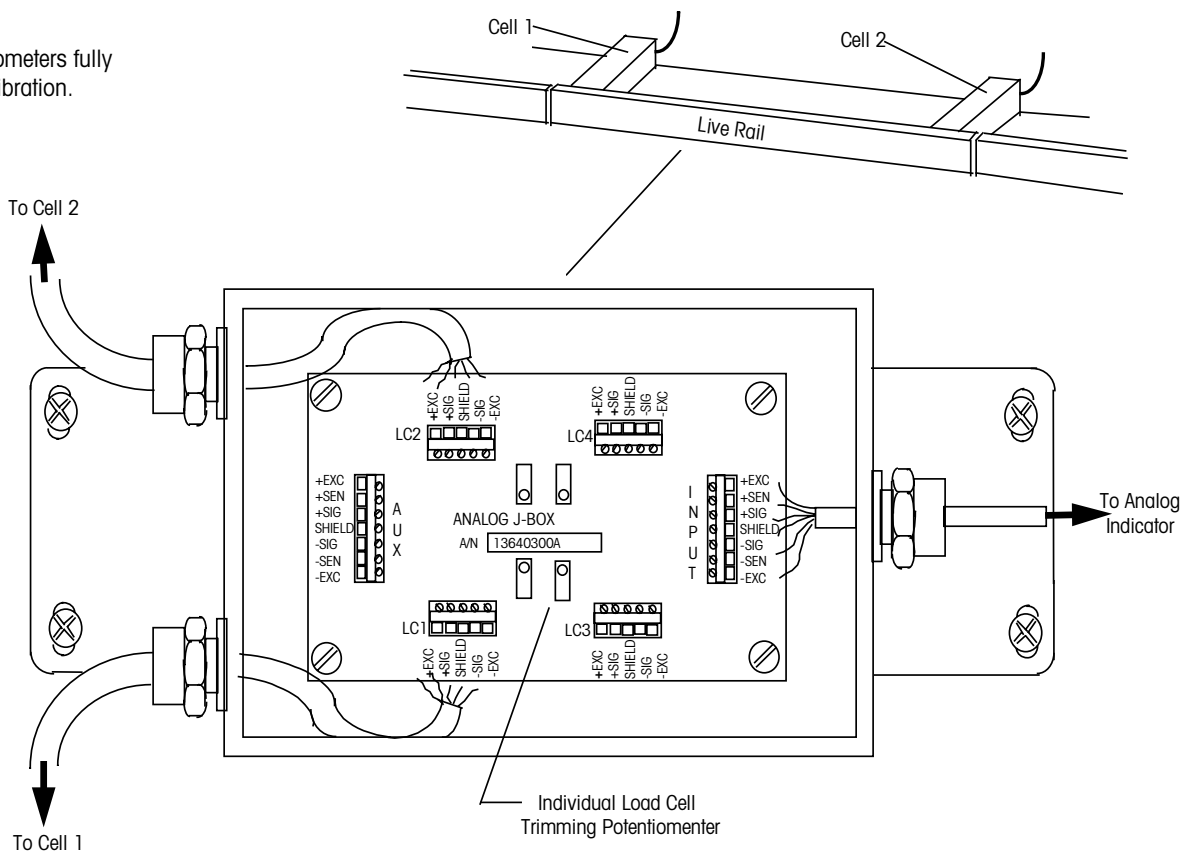
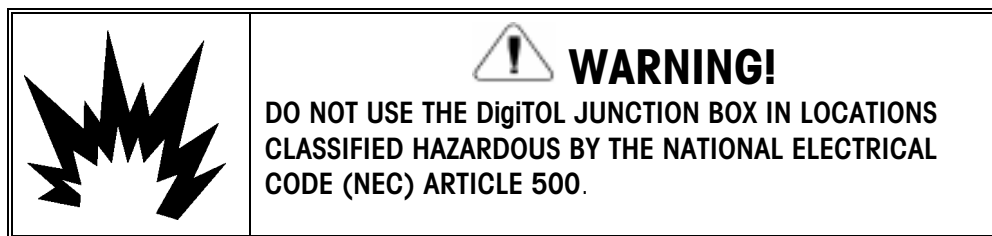


Figure 2-a: Analog Junction Box Wiring Code

Note:
Use P/N 510624370 24 Ga. Instrument cable for 50 ft. or less.
Use P/N 510620370 20 Ga. Instrument cable for distances longer than 50 ft.

Load Cell Wiring		Instrument Cable Wiring	
Function	Color	Function	Color
+ Excitation	Green	+ Excitation	White
		+ Sense	Yellow
+ Signal	White	+ Signal	Green
Shield	Yellow	Shield	Orange
- Signal	Red	- Signal	Black
		- Sense	Red
- Excitation	Black	- Excitation	Blue
(Based on Mettler Toledo cable number 510624370)			

DLC Mode



Note: Jumpers W1, W2, W3, and W4 must be "IN" shorting pins (for 2 mV/V load cells).

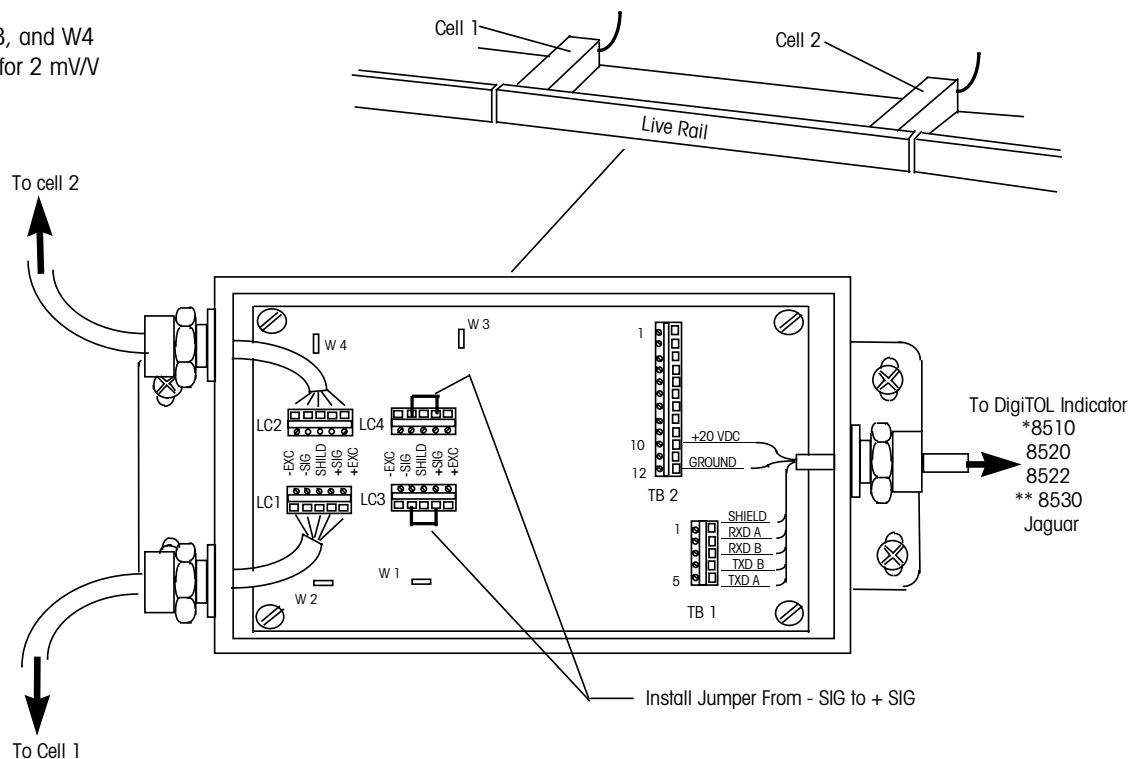


Figure 2-b: DigiTOL Junction Box Wiring—DLC Mode

Note:

*Not compatible with Model 8510 Panel Mount DigiTOL Indicator or Model 8572 and 8582 Counting Scales.

** Not compatible with Model 8530VS.

The DigiTOL 0990 uses an Enhanced DigiTOL Junction Box for converting each load cell output into a digital signal. Only DigiTOL indicators will work with the Enhanced DigiTOL Junction Box. **In the DLC mode the indicator acts as the host for the DigiTOL junction box**, allowing the scale parameters to be adjusted via the indicator keypad. Cable connections can be seen below.

Terminal	Position	Function	Wire Color
TB2	10	+20 VDC	Green
TB2	12	Ground	Blue
TB1	1	Shield	Orange
TB1	2	RXD A	Red
TB1	3	RXD B	White
TB1	4	TXD B	Yellow
TB1	5	TXD A	Black

Smart Mode

When the DigiTOL 0990 is used with the 8505 weight display, the junction box provides the “brains” for operation and becomes the host for the indicator. For detailed information regarding indicator capabilities and operating instructions consult the appropriate Mettler Toledo technical manual. Cable connections can be seen below.

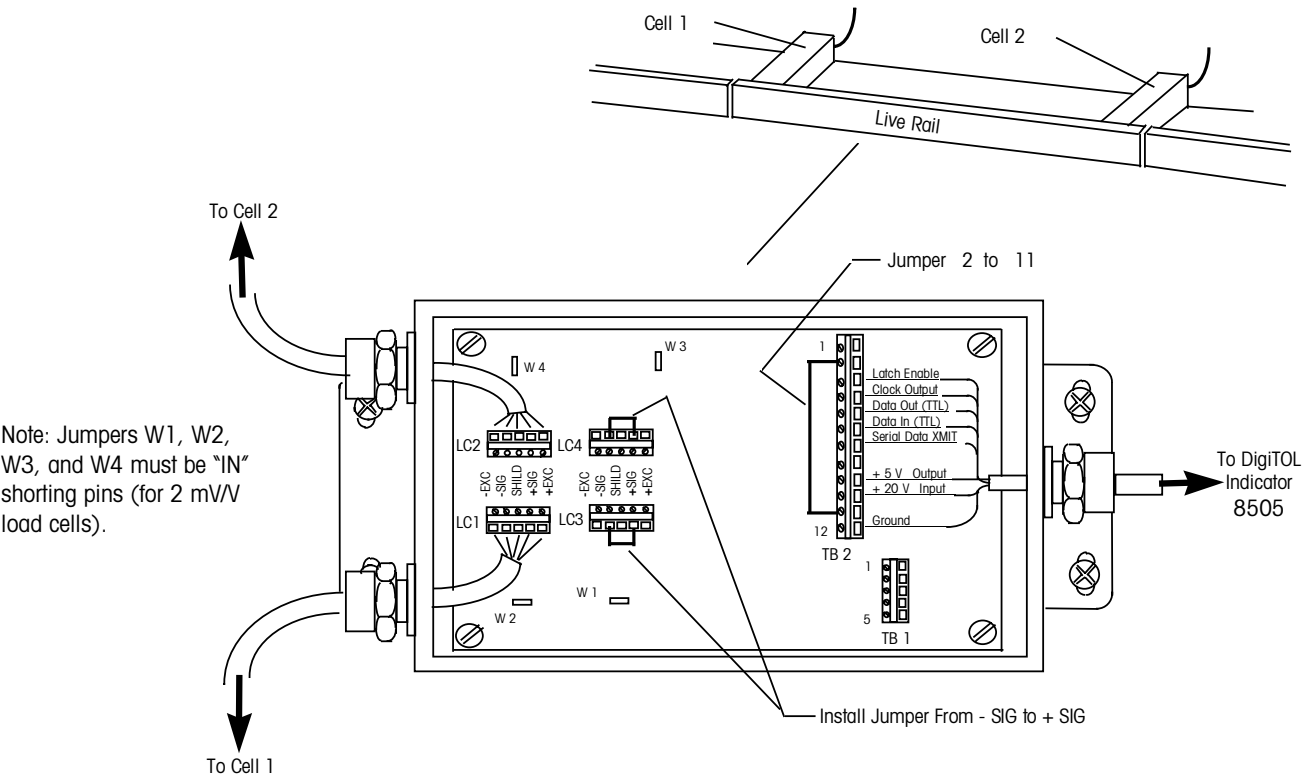


Figure 2-c: DigiTOL Junction Box Wiring—Smart Mode

Smart Mode (TB 2)		
Position	Function	Wire Color
1	Not Used	
2	Jumper to 11	
3	Latch Enable	Orange
4	Clock Output	Blue
5	Data Out (TTL)	Brown
6	Data In (TTL)	Violet
7	Serial Data Transmit	Red
8	Not Used	
9	+5 VDC Output	Yellow
10	+20 VDC Input	Black
11	Jumper to 2	
12	Ground	Green

Service Parts

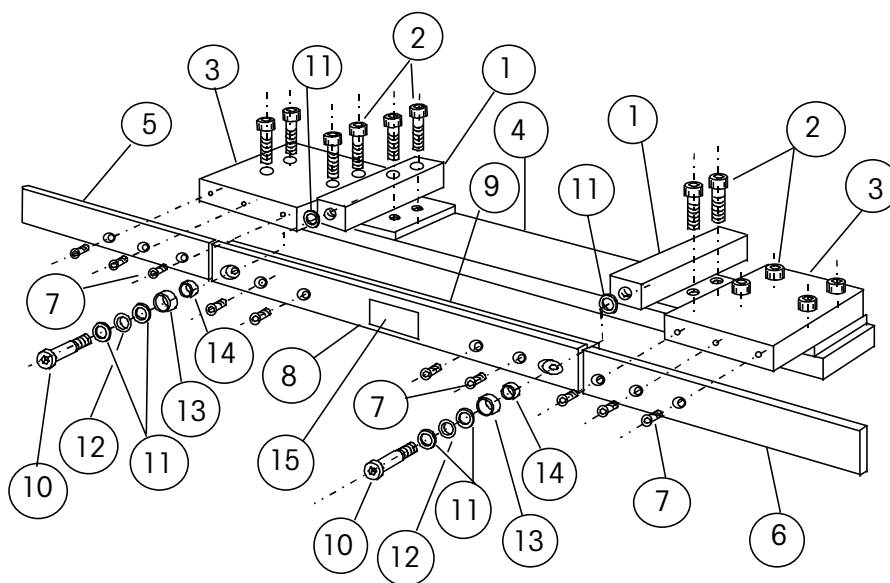


Figure 2-d: Overhead Truck Scale Assembly

Ref. No.	Part Number	Description	Qty
1	TB600489-2	1,250 lb Load Cell (30 ft cable)	2
	TB600490-2	2,500 lb Load Cell (30 ft cable)	2
2	MZ0901010333	1/2 -13 Socket Head Cap Screw x 1.75 in. Lg.	12
	MZ0901010308	1/2 -13 Socket Head Cap Screw S.S. x 1.75 in. Lg.	12
3	TN400056-10	Support Block (Mild Steel)	2
	TN400057-10	Support Block (Stainless Steel)	2
4	TA400048-10	Base Weldment Mild Steel (2 ft rail)	1
	TA400041-10	Base Weldment Stainless Steel (2 ft rail)	1
	TA400053-10	Base Weldment Mild Steel (4 ft rail)	1
	TA400058-10	Base Weldment Stainless Steel (4 ft rail)	1
5	TN400046-10	Departure Rail Mild Steel x 2 ft Lg.	1
	TN400039-10	Departure Rail Stainless Steel x 2 ft Lg.	1
6	TN400045-10	Approach Rail Mild Steel x 2 ft Lg.	1
	TN400038-10	Approach Rail Stainless Steel x 2 ft Lg.	1
7	MZ0901010464	1/2-13 Flat Head Socket Screw x 1 in. Lg. 2 ft live rail requires 4 ft live rail requires	11 15
8	TA400047-10	Live Rail Mild Steel (2 ft)	1
	TA400040-10	Live Rail Stainless Steel (2 ft)	1
	TA400055-10	Live Rail Mild Steel (4 ft)	1

Ref. No.	Part Number	Description	Qty
	TA400042-10	Live Rail Stainless Steel (4 ft)	1
9	TA400043-10	Backing Bar Mild Steel (2 ft rail)	1
	TA400036-10	Backing Bar Stainless Steel (2 ft rail)	1
	TA400054-10	Backing Bar Mild Steel (4 ft rail)	1
	TA400035-10	Backing Bar Stainless Steel (4 ft rail)	1
10	TN400034	Load Support Pin	2
11	TN400052	Neoprene Spacer	6
12	TN400050	Load Pin Ring Bearing	2
13	TN400049	Sleeve Bearing	2
14	TN400051	Sleeve Bushing	2
15	TN800595	Capacity Sticker	2

Junction Box			
Ref. #	Part Number	Description	Qty
1	TB100391	Analog Junction Box Assembly Ref.: *13640300A Analog PCB TA800218 Desiccant Bag	1
	TB100515-3	DigiTOL Junction Box Assembly Ref.: *13839900A DigiTOL PCB TA800218 Desiccant Bag	

* May have a letter prefix

Reference Drawings

Scale	Layout/Assembly Drawing
0990 Mild Steel	TB400060
0990 Stainless Steel	TB400059

3

0991 Monorail HC Overhead Track Scale

Model 0991

Service Manual No. *14615200A
(* May have a letter prefix)

The Model 0991 has not been submitted to the National Type Evaluation Program. The load cells used in the Model 0990 have been NTEP Certified for Class III 5000 divisions.

Scale Rail Capacity	Capacity of Each Load Cell	Shipping Weight (lb)
1250 lb/ 550 kg	1,250 lb/ 550 kg	50
2500 lb/ 1,100 kg	2,500 lb/ 1,100 kg	50
5000 lb/ 2,200 kg	5,000 lb/ 2,200 kg	50
10000 lb/ 4,400 kg	10,000 lb/ 4,400 kg	70

Model 0991 Configuration Table						
0991	0	X	X	X	X	XX
Model	Rail Length	Cell Material	Junction Box	Cell Type	Cell Cable Length	Cell Capacity
0991		0 = Mild Steel 1 = Stainless Steel	0 = None 1 = Standard Analog 2 = Enhanced DigiTOL 3 = ID Net 4 = Large Analog 5 = Large DigiTOL 6 = Large ID Net	0 = H44 3d 745 1 = H44 5d 745 2 = R60 C3 745	0 = 7.5 ft 1 = 15 ft 2 = 30 ft	04 = 1250 lb 05 = 2500 lb 06 = 5000 lb 07 = 10000 lb 14 = 550 kg 15 = 1100 kg 16 = 2200 kg 17 = 4400 kg



WARNING!

A secondary support system with a capacity exceeding the rated capacity of the 0991 HC MUST BE installed.
All welding MUST BE performed by a certified welder per AWS guidelines

Load Cell (Model 745)

Stainless steel cantilever beam load cells are provided in all 0991 Monorail HC scales with integral 4-conductor, shielded, color coded cable.

Model 745

- C.O.C. No. 92 - 108
- Rated Output: 2 mV/V
- Output Resistance: 350 Ohm (± 2)
- Input Resistance: 385 Ohm (min)
- Wiring Color Code: – Excitation—Black
+ Excitation—Green
– Signal—Red
+ Signal—White
Shield—Yellow
- Excitation Voltage: 15 VDC Maximum
- Accuracy: (Avoirdupois Capacities) NIST H-44/Class III/5000d/NTEP Certified
(Metric Capacities) OIML C3 R60/3000d
- Features: Hermetically Sealed Gauge Capacity—1/4 in. - 18 NPT conduit fitting at rear cable entry
- Environment: The compensated operating temperature range is –10 to +40 °C (14 to 104 °F).

Analog Mode

Analog 0991 uses an analog junction box for summing the load cell outputs and provides for trimming of the cell outputs. Only analog compatible indicators will work with the Analog Junction Box.

Note: Turn all potentiometers fully clockwise prior to calibration

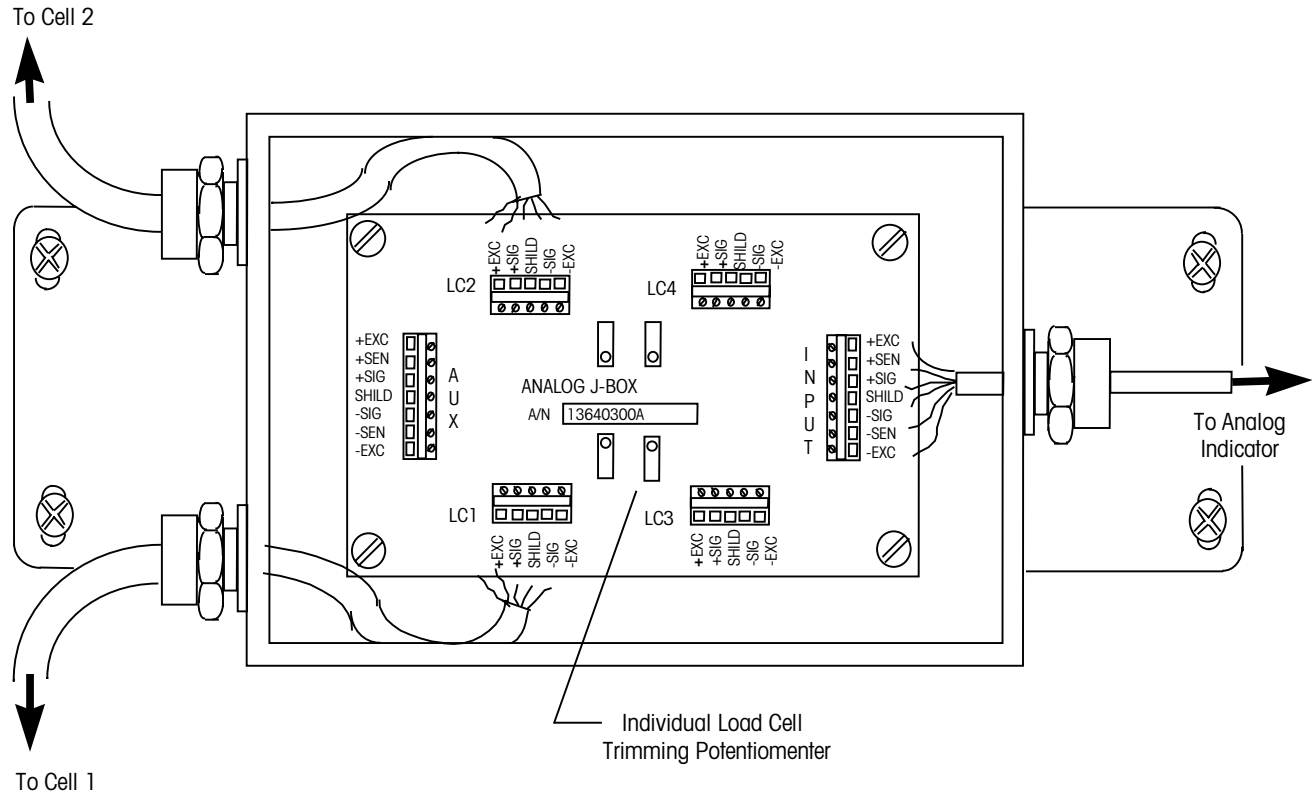


Figure 3-a: Analog Junction Box Wiring Code

Note: Use P/N 510624370 24 Ga. instrument cable for 50 ft. or less .
Use P/N 510620370 20 Ga. instrument cable for distances longer than 50 ft.

Load Cell Wiring		Instrument Cable Wiring	
Function	Color	Function	Color
+ Excitation	Green	+ Excitation	White
		+ Sense	Yellow
+ Signal	White	+ Signal	Green
Shield	Yellow	Shield	Orange
- Signal	Red	- Signal	Black
		- Sense	Red
- Excitation	Black	- Excitation	Blue
(Based on Mettler Toledo cable number 510624370)			

DLC Mode

Note: Enhanced DigiTOL J-Box is NOT compatible with Model 8510 Panel Mount DigiTOL Indicator, 8572 and 8582 Counting Scales, or 8530 VS indicator.

WARNING!

DO NOT USE THE DigiTOL JUNCTION BOX IN LOCATIONS CLASSIFIED HAZARDOUS BY THE NATIONAL ELECTRICAL CODE (NEC) ARTICLE 500.

The DigiTOL 0991 uses an Enhanced DigiTOL Junction Box for converting each load cell output into a digital signal. Only DigiTOL indicators will work with the Enhanced DigiTOL Junction Box. **In the DLC mode the indicator acts as the host for the DigiTOL junction box**, allowing the scale parameters to be adjusted via the indicator keypad. Cable connections can be seen below.

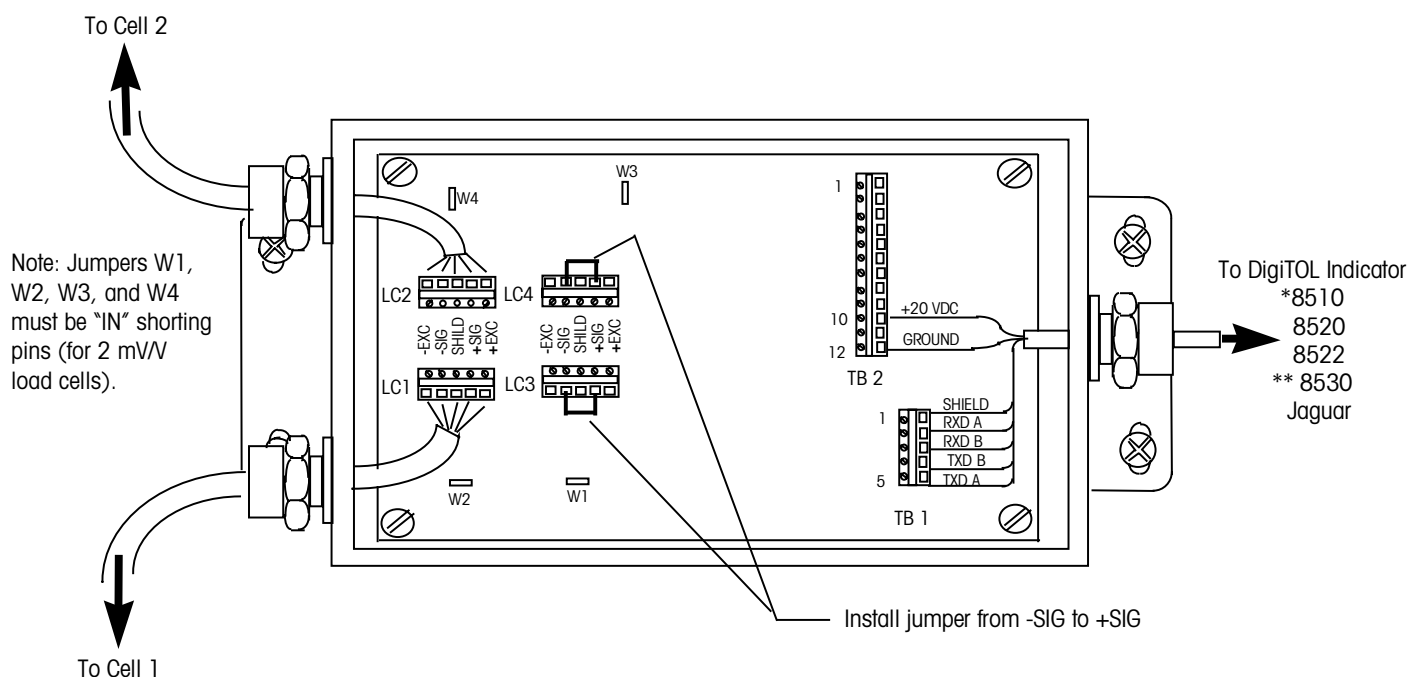


Figure 3-b: DigiTOL Junction Box Wiring—DLC Mode

Terminal No.	Position	Function	Wire Color
TB2	10	+20 VDC	Green
TB2	12	Ground	Blue
TB1	1	Shield	Orange
TB1	2	RXD A	Red
TB1	3	RXD B	White
TB1	4	TXD B	Yellow
TB1	5	TXD A	Black

Note:

*Not compatible with Model 8510 Panel Mount DigiTOL Indicator or Model 8572 and 8582 Counting Scales.

**Not compatible with Model 8530VS.

Smart Mode

When the Model 0991 DigiTOL is used with the 8505 weight display, **the junction box provides the “brains” for operation and becomes the host for the indicator.** For detailed information regarding indicator capabilities and operating instructions consult the appropriate Mettler Toledo technical manual. Cable connections can be seen below .

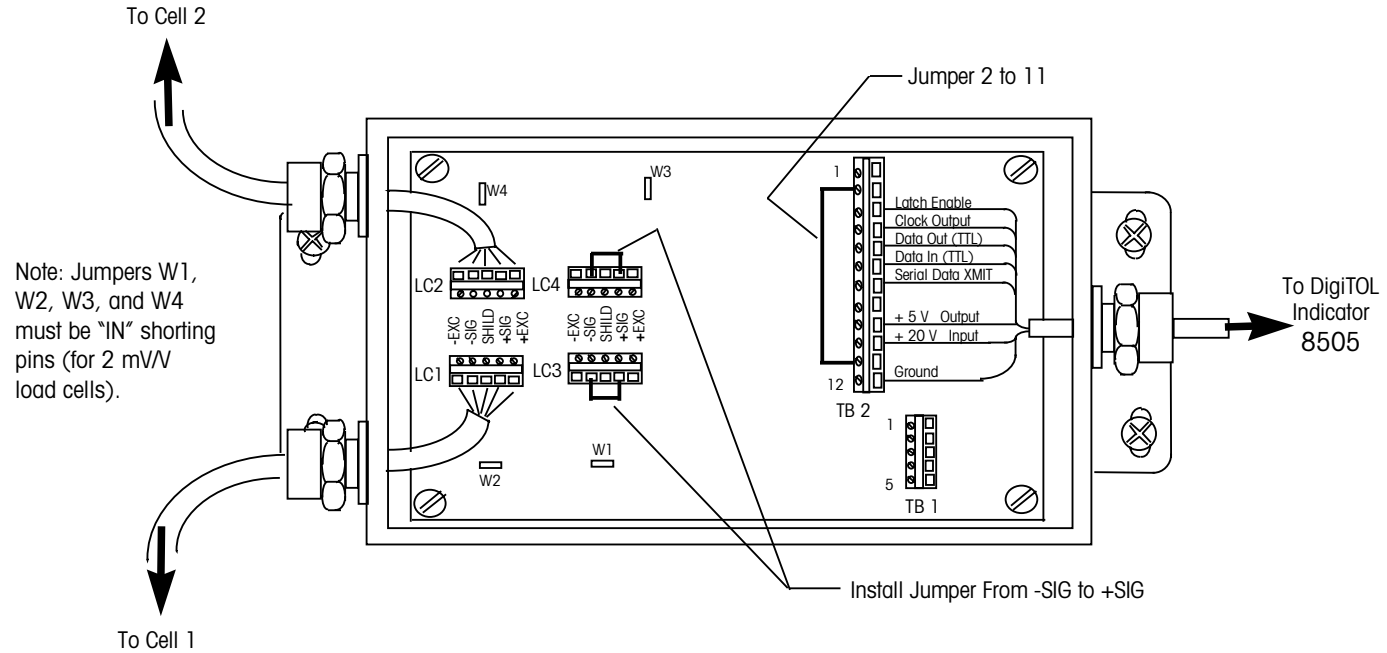


Figure 3-c: Smart Mode (TB 2)

Position	Function	Wire Color
1	Not Used	
2	Jumper to 11	
3	Latch Enable	Orange
4	Clock Output	Blue
5	Data Out (TTL)	Brown
6	Data In (TTL)	Violet
7	Serial Data Transmit	Red
8	Not Used	
9	+5 VDC Output	Yellow
10	+20 VDC Input	Black
11	Jumper to 2	
12	Ground	Green

Service Parts

Note:

1. Torque Load Cell bolts to:
100 ft-lb (1.25K - 5K cells) or
200 ft-lb (10K cells)
2. Torque Support Tube Bolts to:
100 ft-lb
3. Torque Check Bracket Bolt to:
40 ft-lb

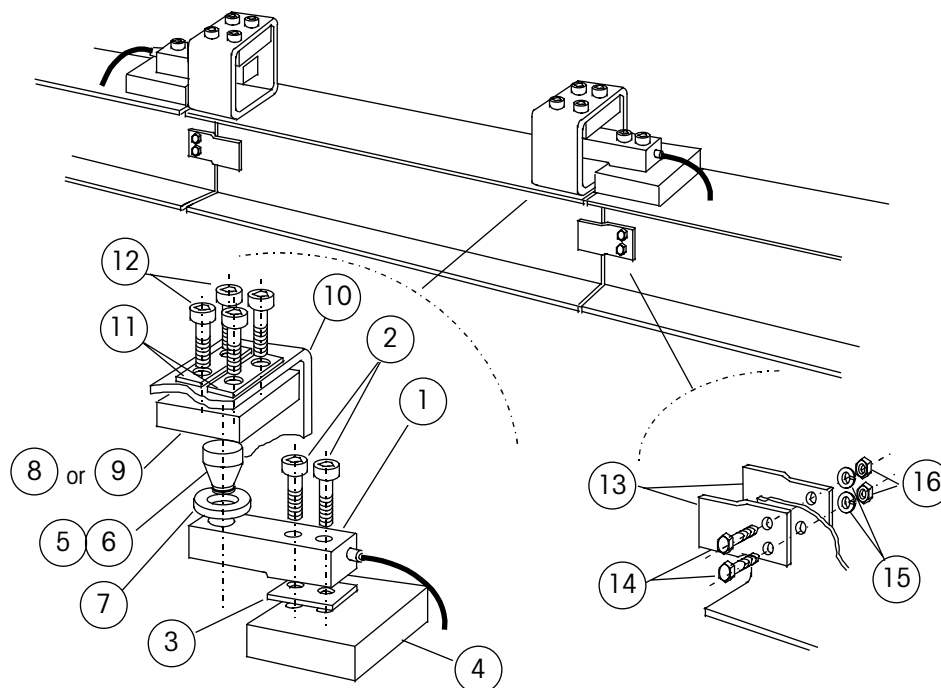


Figure 3-d: Overhead Track Scale Assembly

Ref. No.	Part Number	Description	Qty
1	TB600363	1,250 lb Load Cell 5kd H44 THC	2
	TB600342	2,500 lb Load Cell 5kd H44 THC	
	TB600343	5,000 lb Load Cell 5kd H44 THC	
	TB600364	10,000 lb Load Cell 5kd H44 THC	
	TB600454	550 kg 3kd OIML THC	
	TB600455	1100 kg 3kd OIML THC	
	TB600456	2200 kg 3kd OIML THC	
	TB600457	4400 kg 3kd OIML THC	
2	MZ0901010409	1/2 - 13 Soc. Hd. Cap Screw x 2.00 Lg.	4
	MZ0901010430	3/4 - 10 Hex. Hd. Bolt x 2.50 Lg. (10,000 lb & 4400 kg cells)	
3	TN600462	Load Cell Spacer Plate (1,250 lb, 2,500 lb, 550 kg, & 1100 kg cells)	2
4	TN600459-10	Load Cell Mounting Block	2
	TN600460-10	Load Cell Mounting Block (10,000 lb & 4400 kg cells)	
5	TN600321	Load Pin	2
	TN600337	Load Pin (10,000 lb & 4400 kg cells)	
6	MZ0909000005	O-Ring	2
	MZ0909000050	O-Ring (10,000 lb & 4400 kg cells)	

Ref. No.	Part Number	Description	Qty
7	TN600463-1	Load Pin Gasket	2
	TN600463-2	Load Pin Gasket (5,000 lb & 2200 kg)	
	TN600463-3	Load Pin Gasket (10,000 lb & 4400 kg cells)	
8	TN600467-10	Fixed Upper Block	1
	TN600466-10	Fixed Upper Block (10,000 lb & 4400 kg cells)	
9	TN600469-10	Semi-Floating Upper Block	1
	TN600468-10	Semi-Floating Upper Block (10,000 lb & 4400 kg cells)	
10	TN600464-10	Support Tube	2
	TN600465-10	Support Tube (10,000 lb & 4400 kg cells)	
11	TN600461	Receiver Block Clamp Plate	4
12	MZ0901010409	1/2 - 13 Soc. Hd. Cap Screw x 2.00 Lg.	8
13	TN600470-10	Live Beam Checking Bracket	4
14	MZ0901010076	3/8 - 16 Hex. Hd. Bolt x 1.25 Lg.	4
15	MZ0901030047	3/8 Lock Washer	4
16	MZ0901020016	3/8 Hex Nut	4

Junction Box

Ref. No.	Part Number	Description	Qty
1	TB100391	Analog Junction Box Assembly Ref.: *13640300A Analog PCB TA800218 Desiccant Bag	1
	TB100515-3	DigiTOL Junction Box Assembly Ref.: *13839900A DigiTOL PCB TA800218 Desiccant Bag	

* May have a letter prefix

4

2254 Predator Low Profile Floor Scales

Model 2254

Service Manual No. *14859500A
(* May have a letter prefix)

Model 2254 is an analog scale platform which meets Class III 1000 division accuracy. (NTEP COC 96-001)

Capacity		Standard Platform Size	Scale Height
5,000 x 1 lb or 5,000 x 5 lb (Legal-for-Trade)	2,500 x 0.5 kg	4 ft x 4 ft (1219 mm x 1219 mm)	3.62" (92 mm)

Standard Features

Adjustable foot assemblies
Hermetically sealed, stainless steel 2,500 lb load cells
Mild steel epoxy painted tread plate platform

Options and Accessories

End covers (set of two)

Load Cell Data

Model 759

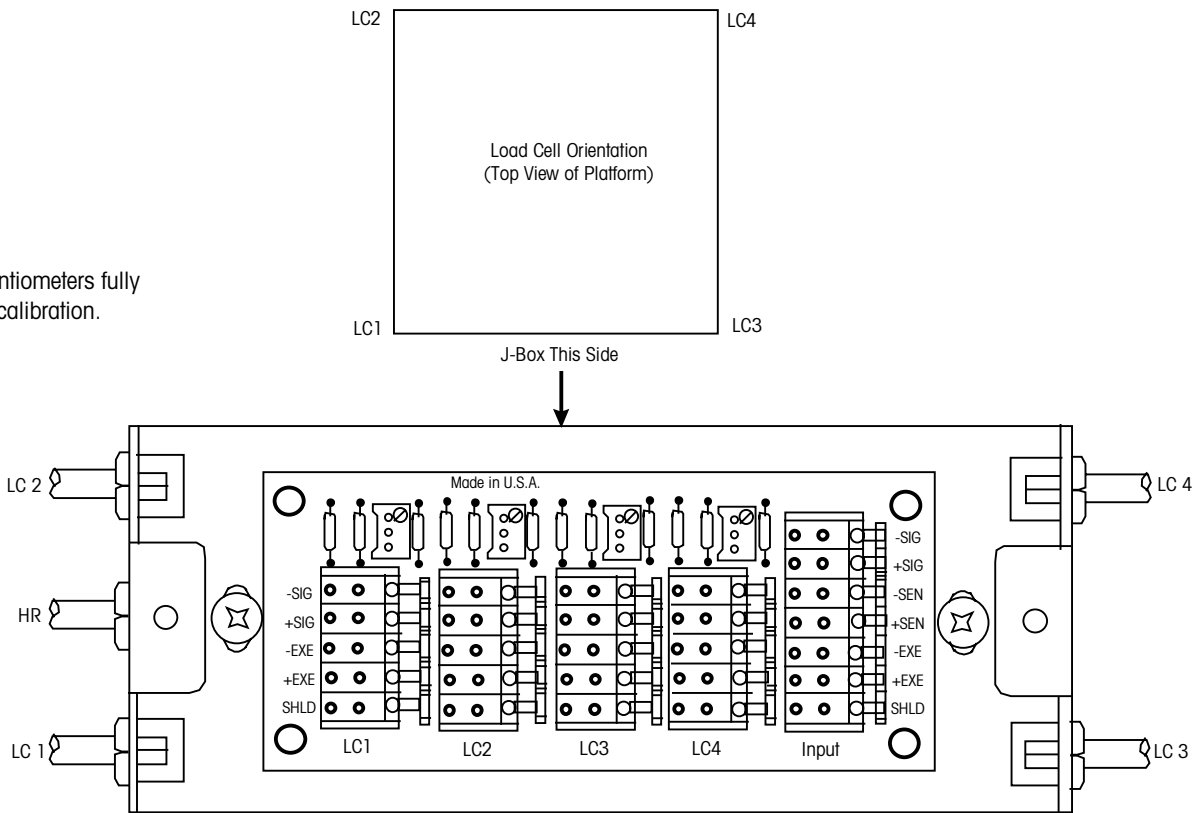
- NTEP Certificate of Conformance Number: 96-007
- Rated Capacity: 2,500 lb
- Maximum excitation voltage: 15 VDC or VAC rms
- Full scale output: 2 mV/V
- Input terminal resistance: 350 Ohm minimum
- Output terminal resistance: 350 ± 2 Ohms
- Temperature range compensation: -10°C to $+45^{\circ}\text{C}$ ($+15^{\circ}\text{F}$ to $+115^{\circ}\text{F}$)
- Safe side load: 100% of full load cell rating
- Safe overload: 150% of full load cell rating

Model	Standard Platform	Shipping Weight (lb)
	48 in x 48 in (121.9 cm x 121.9 cm), 5,000 Capacity	
2254005023	Mild Steel Tread Plate Deck.	200
2254105023	Mild Steel Tread Plate Deck w/ end covers	205

Analog Mode

The 2254 Predator uses an analog junction box for summing the load cell outputs. Only analog compatible indicators will work with Predator. The correct cable connection is shown below.

Note: Turn all potentiometers fully clockwise prior to calibration.



Load Cell Wiring		Instrument Cable Wiring	
Function	Color	Function	Color
+ Excitation	Green	+ Excitation	White
		+ Sense	Yellow
+ Signal	White	+ Signal	Green
Shield	Yellow	Shield	Orange
- Signal	Red	- Signal	Black
		- Sense	Red
- Excitation	Black	- Excitation	Blue
(Based on Mettler Toledo cable number 510624370)			

Figure 4-a: Predator Analog Junction Box Details and Wiring Codes `

Service Parts

*Note: Torque Load Cell Bolts to
100 ft-lb.

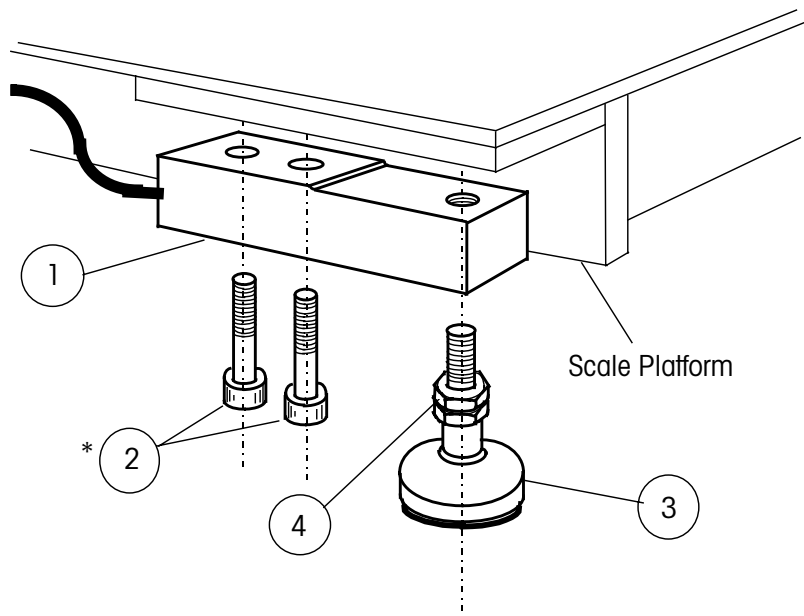


Figure 4-b: Load Cell and Foot

Ref. No.	Part Number	Description	Qty
1	TB600531	2,500 lb Analog Load Cell	4
2	MZ0901010333	1/2-13 Soc. Hd. Screw x 1 3/4 in. Lg.	8
3	TA201509	Leveling Foot	4
4	MZ0901020092	Nut, 1/2 -20 Hex	4

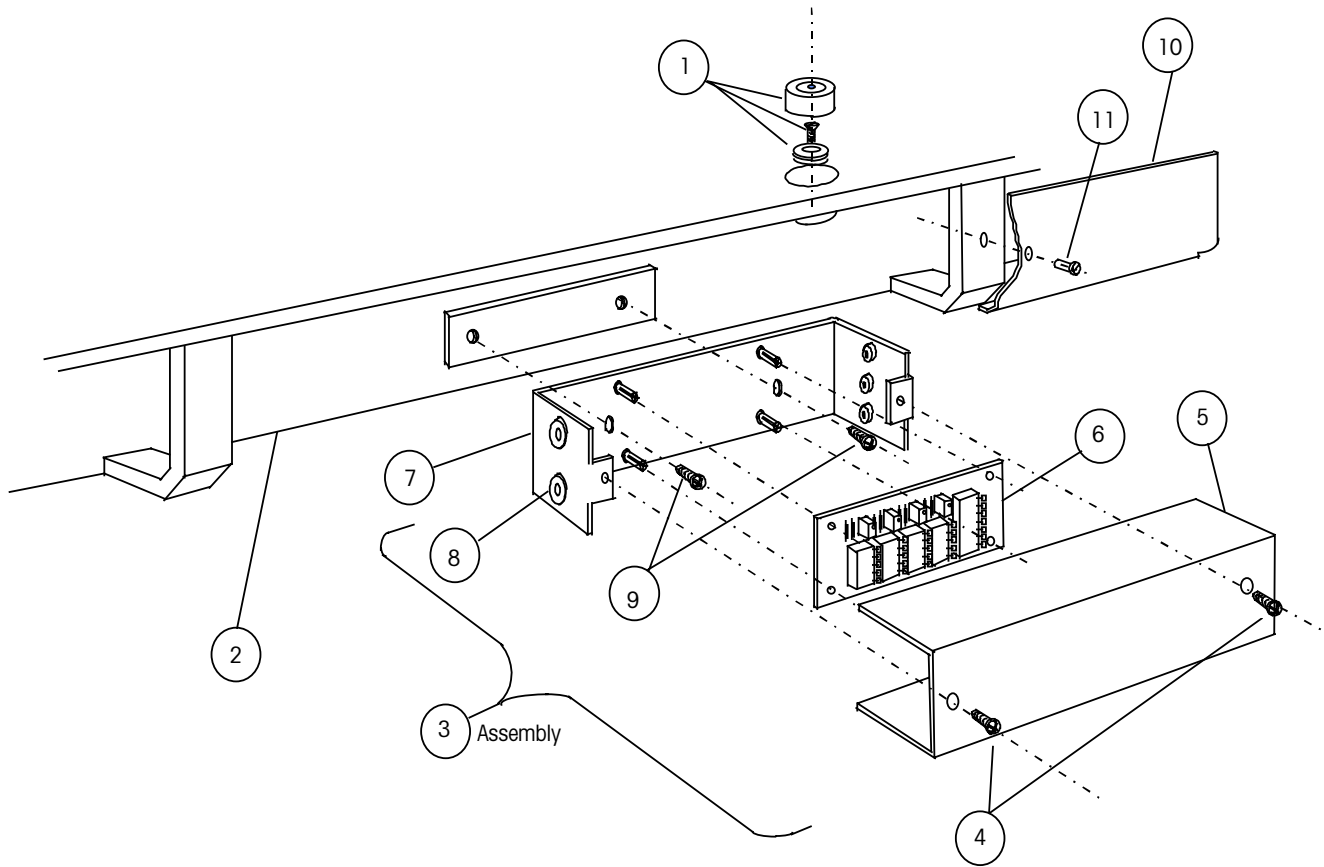


Figure 4-c: Junction Box and Bubble Level

Ref. No.	Part Number	Description	Qty
1	TN201817	Circular Bubble Level	1
2	TB203048	2254 Platform, 4x4, 5K	1
3	TA100562	Analog Junction Box Assembly (Complete)	1
4	TN203092	10-32 Filibuster Hd. Screw x 3/16 in. Lg.	1
5	TA100560	Cover, Junction Box	1
6	*14378800A	Analog Junction Box PCB	1
7	TA100561	Junction Box Base	1
8	MZ1405000153	Cable Bushing	5
9	MZ0901010407	10-32 Ph. Hd. Screw x 3/16 in. Lg.	2
Optional End Covers			
10	TA203221	End Cover	2
11	MZ0901010376	1/4-20 Screw x 3/8 in. Lg.	4

* May have a letter prefix

5

2256 Weigh-Plate Low Profile Floor Scales

Model 2256

Service Manual No. A14914100A

Note: 2000d for the 10,000 lb capacity

Model 2256 is an analog scale platform which meets Class III 3000 division accuracy. (2000d for the 10,000 lb capacity) NTEP COC 95-111A1

Capacity		Standard Platform Size	Scale Height
3000 x 1 lb	1500 x .5 kg	**3 ft x 3 ft (91.4 cm x 91.4 cm)	***4.00" (10.1 mm)
*6000 x 2 lb	3000 x 1 kg	4 ft x 4 ft (121.9 cm x 121.9 cm)	
10000 x 5 lb	5000 x 2 kg	4 ft x 5 ft (121.9 cm x 152.4 cm)	
		5 ft x 5 ft (152.4 cm x 152.4 cm)	

* Prior to September 1997 6000 x 2 lb/ 3,000 x 1 kg was the only capacity manufactured.

** Prior to September 1997 3 ft x 3 ft (91.4 cm x 91.4 cm) Platforms were not manufactured.

*** Prior to September 1997 Scale Height was 3.38 in (86 mm) .

Standard Features

Adjustable foot assemblies

Hermetically sealed, stainless steel load cells

Mild steel epoxy painted tread plate deck platform or smooth bead blasted stainless steel plate deck platform

Options and Accessories

3, 4, and 5 ft ramps x 3 ft long in mild steel tread plate or stainless steel smooth plate

Locating Plates

Load Cell Data

Model 745

- NTEP Certificate of Conformance Number: 92-108
- Rated Capacity: 1250 lb, 2500 lb, and 5000 lb
- Maximum excitation voltage: 15 VDC or VAC rms
- Full scale output: 2 mV/V
- Input terminal resistance: 385 Ohm minimum
- Output terminal resistance: 350 ± 2 Ohms
- Temperature range compensation: $-10\text{ }^{\circ}\text{C}$ to $+40\text{ }^{\circ}\text{C}$ ($+14\text{ }^{\circ}\text{F}$ to $+104\text{ }^{\circ}\text{F}$)
- Safe side load: 100% of full load cell rating
- Safe overload: 150% of full load cell rating

Mild Steel

Model	Capacity	Platform and Load Cell Capacity	Shipping Weight
2256102012	3,000 lb	3 x 3 Tread Plate Deck 1,250 lb load cells	
2256102013	6,000 lb	3 x 3 Tread Plate Deck 2,500 lb load cells	
2256102022	3,000 lb	4 x 4 Tread Plate Deck 1,250 lb load cells	
2256102023	6,000 lb	4 x 4 Tread Plate Deck 2,500 lb load cells	
2256102024	10,000 lb	4 x 4 Tread Plate Deck 5,000 lb load cells	
2256102032	3,000 lb	4 x 5 Tread Plate Deck 1,250 lb load cells	
2256102033	6,000 lb	4 x 5 Tread Plate Deck 2,500 lb load cells	
2256102034	10,000 lb	4 x 5 Tread Plate Deck 5,000 lb load cells	
2256102042	3,000 lb	5 x 5 Tread Plate Deck 1,250 lb load cells	
2256102043	6,000 lb	5 x 5 Tread Plate Deck 2,500 lb load cells	
2256102044	10,000 lb	5 x 5 Tread Plate Deck 5,000 lb load cells	

Stainless Steel

Model	Capacity	Platform and Load Cell Capacity	Shipping Weight
2256132012	3,000 lb	3 x 3 Tread Plate Deck 1,250 lb load cells	
2256132013	6,000 lb	3 x 3 Tread Plate Deck 2,500 lb load cells	
2256132022	3,000 lb	4 x 4 Tread Plate Deck 1,250 lb load cells	
2256132023	6,000 lb	4 x 4 Tread Plate Deck 2,500 lb load cells	
2256132024	10,000 lb	4 x 4 Tread Plate Deck 5,000 lb load cells	
2256132032	3,000 lb	4 x 5 Tread Plate Deck 1,250 lb load cells	
2256132033	6,000 lb	4 x 5 Tread Plate Deck 2,500 lb load cells	
2256132034	10,000 lb	4 x 5 Tread Plate Deck 5,000 lb load cells	
2256132042	3,000 lb	5 x 5 Tread Plate Deck 1,250 lb load cells	
2256132043	6,000 lb	5 x 5 Tread Plate Deck 2,500 lb load cells	
2256132044	10,000 lb	5 x 5 Tread Plate Deck 5,000 lb load cells	

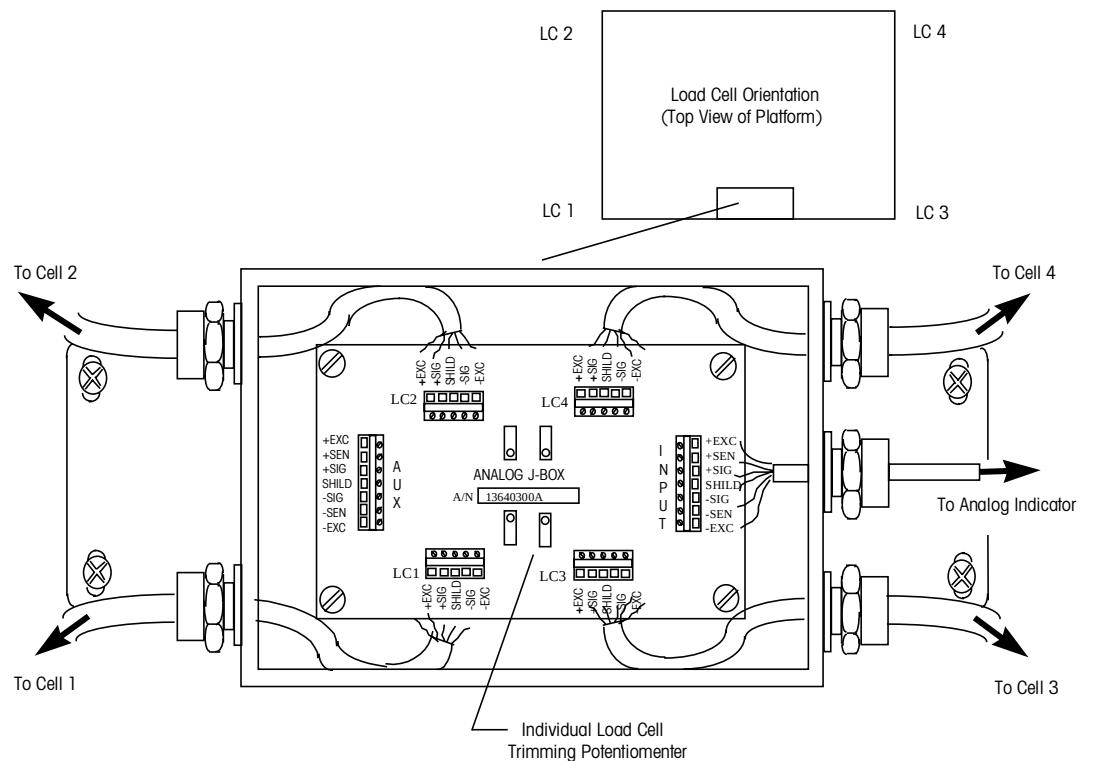
Reference

Model (Prior to Sept. 1997)	Platform Class III 3000 D (NTEP COC 95-111)	Shipping Weight
2256002023-A	4 x 4 Mild Steel Tread Plate Deck 2,500 lb load cells	400 lb
2256002033-A	4 x 5 Mild Steel Tread Plate Deck 2,500 lb load cells	475 lb
2256002043-A	5 x 5 Mild Steel Tread Plate Deck 2,500 lb load cells	550 lb
2256032023-A	4 x 4 Stainless Steel Smooth Plate Deck 2,500 lb load cells	400 lb
2256032023-A	4 x 5 Stainless Steel Smooth Plate Deck 2,500 lb load cells	475 lb
2256032023-A	5 x 5 Stainless Steel Smooth Plate Deck 2,500 lb load cells	550 lb

Analog Mode

Note: Turn all potentiometers fully clockwise prior to calibration.

The 2256 Weigh-Plate uses an analog junction box for summing the load cell outputs. Only analog compatible indicators will work with the Weigh-Plate. The correct cable connection is shown below.



Load Cell Wiring		Instrument Cable Wiring	
Function	Color	Function	Color
+ Excitation	Green	+ Excitation	White
		+ Sense	Yellow
+ Signal	White	+ Signal	Green
Shield	Yellow	Shield	Orange
– Signal	Red	– Signal	Black
		– Sense	Red
– Excitation	Black	– Excitation	Blue
(Based on Mettler Toledo cable number 510624370)			

Figure 5-a: Weight-Plate Analog Junction Box Details and Wiring Codes

Service Parts

Torque load cell bolts to:
75 ft-lb for Stainless Steel Bolts
100 ft-lb for Grade # 8 Socket Hd
Cap Screws.

Proper Overload Gap:
1,250 lb cell .012" min. .018" max.
2,500 lb cell .021" min. .027" max.
5,000 lb cell N/A

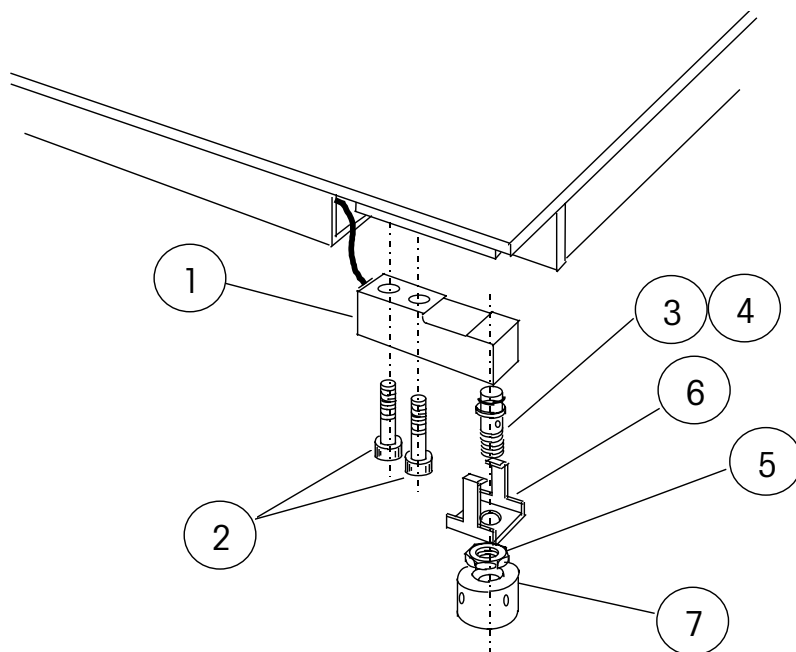


Figure 5-b: Load Cell and Foot

Ref. No.	Part Number	Description	Qty.
1	TB600363-1	1,250 lb S.S. Hermetically Sealed Analog Load Cell	4
	TB600342-1	2,500 lb S.S. Hermetically Sealed Analog Load Cell	
	TB600343-1	5,000 lb S.S. Hermetically Sealed Analog Load Cell	
2	MZ0901010333	1/2-13 Soc. Hd. Screw x 1 3/4 " Lg. (1.25 K and 2.5 K load cell)	8
	MZ0901010384	1/2-13 Soc. Hd. Screw S.S. x 1 3/4" Lg. (1.25 K and 2.5 K load cell)	
	MZ0901010409	1/2-13 Soc. Hd. Screw x 2" Lg. (5K load cell)	
	MZ0901010441	1/2-13 Hex. Hd. Bolt S. S. x 2" Lg. (5K load cell)	
3	TA203345	Mounting Foot Load Pin (1.25 K and 2.5 K load cell)	4
	TA203346	Mounting Foot Load Pin (5 K load cell)	
4	MZ0909000005	O-Ring	4
5	MZ0901020087	7/16 - 20 Hex. Jam Nut S./S.	4
6	TA203104	Mounting Foot Retainer Clip(1.25 K and 2.5 K load cell)	4
	TA203347	Mounting Foot Retainer Clip(5 K load cell)	
7	TN203103	Mounting Foot Base	4

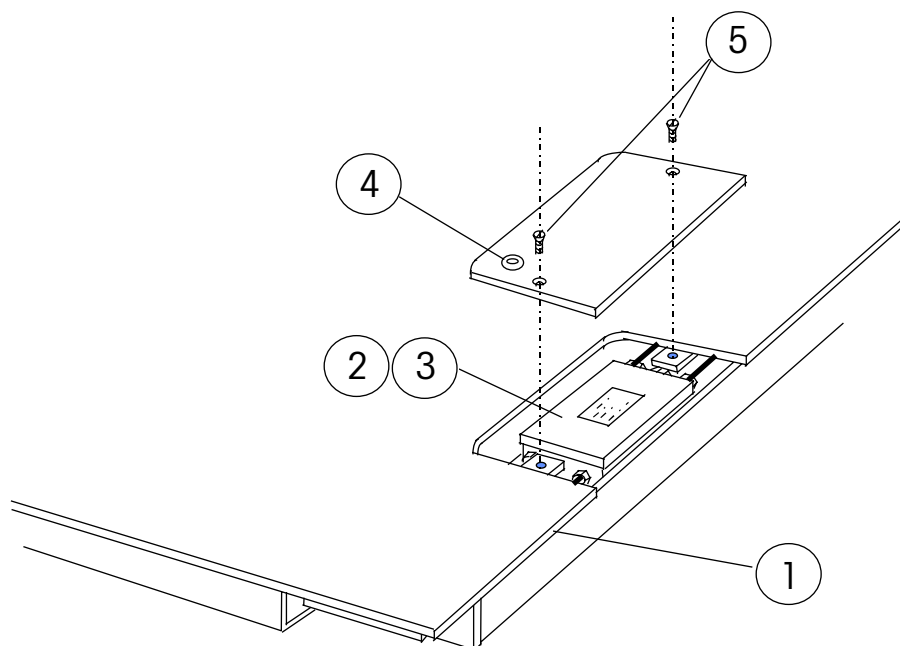


Figure 5-c: Junction Box and Bubble Level

Ref. No.	Part Number	Description	Qty
1	TB203359-1 TB203095 TB203417-1 TB203096 TB203418-1 TB203097 TB203331-1 TB203419-1 TB203098 TB203420-1 TB203099 TB203421-1 TB203100 TB203422-1	36 in x 36 in Platform Mild Steel 3K and 6K 48 in x 48 in Platform Mild Steel 3K and 6K 48 in x 48 in Platform Mild Steel 10K 48 in x 60 in Platform Mild Steel 3K and 6K 48 in x 60 in Platform Mild Steel 10K 60 in x 60 in Platform Mild Steel 3K and 6K 60 in x 60 in Platform Mild Steel 10K 36 in x 36 in Platform Stainless Steel 3K and 6K 48 in x 48 in Platform Stainless Steel 3K and 6K 48 in x 48 in Platform Stainless Steel 10K 48 in x 60 in Platform Stainless Steel 3K and 6K 48 in x 60 in Platform Stainless Steel 10K 60 in x 60 in Platform Stainless Steel 3K and 6K 60 in x 60 in Platform Stainless Steel 10K	1
2	TB100395	Analog Junction Box Assembly Ref.: *13640300A Analog PCB TA 800218 Desiccant Bag	1
3	MZ0901010379	1/4 - 20 Ph. Hd. Screw S.S. x 1/4" lg.	4
4	TN201817	Circular Bubble Level	1
5	MZ0901010035	3/8 - 16 Fl. Hd. Screw S.S. x 3/4" lg.	2

* May have a letter prefix

Options

Ref. No.	Part Number	Description
	TN203125	Locating Plate, Mild Steel
	TN203126	Locating Plate, Stainless Steel 304
	TC203425-1	Ramp, 3 ft wide, Mild Steel, Tread Plate
	TC203428-2	Ramp, 3 ft wide Stainless Steel, Smooth Plate
	TC203426-1	Ramp, 4 ft wide Mild Steel, Tread Plate
	TC203429-2	Ramp, 4 ft wide Stainless Steel, Smooth Plate
	TC203427-1	Ramp, 5 ft wide Mild Steel, Tread Plate
	TC203430-2	Ramp, 5 ft wide Stainless Steel, Smooth Plate

Reference

Ref. No.	Part Number	Description 3 3/8 in (86 mm) Scale Height
	TC201547	Ramp, 4 ft wide Mild Steel, Tread Plate
	TC203002	Ramp, 4 ft wide Stainless Steel, Smooth Plate
	TC201548	Ramp, 5 ft wide Mild Steel, Tread Plate
	TC203003	Ramp, 5 ft wide Stainless Steel, Smooth Plate

6

2888 Deckmate® Lower Profile Floor Scales

Model 2888

Service Manual No. *14859700A
(*May have alpha prefix)

Model 2888 is an analog scale platform, which meets Class III 5000 division accuracy. (NTEP COC 96-106)

Capacity		Standard Platform Size	Scale Height inch (mm)	Static Ramp Length		Portable Ramp	
lb	kg			Std.	Low Angle	Std.	Low Angle
1,000 x 0.2	500 x 0.1	30" x 30" (762 mm x 762 mm)	1.25" (32)	6"	12"	12"	18"

Standard Features

- Platform available in smooth or tread plate
- Static and portable model available
- Platform available in mild steel or stainless steel

Options and Accessories

Portability Frames available in mild steel or stainless steel
Kit of Parts anchors and shims

Load Cell Data

Model 745

- NTEP certificate of conformance number: 92 -108
- Rated Capacity: 500 lb
- Maximum excitation voltage: 15 VDC or VAC rms
- Full scale output: 2 mV/V
- Input terminal resistance: 350 Ohm minimum
- Output terminal resistance: 350 ± 2 Ohms
- Temperature range compensation: -10°C to $+40^{\circ}\text{C}$ ($+14^{\circ}\text{F}$ to $+104^{\circ}\text{F}$)
- Safe side load: 100% of full load cell rating
- Safe overload: 150% of full load cell rating

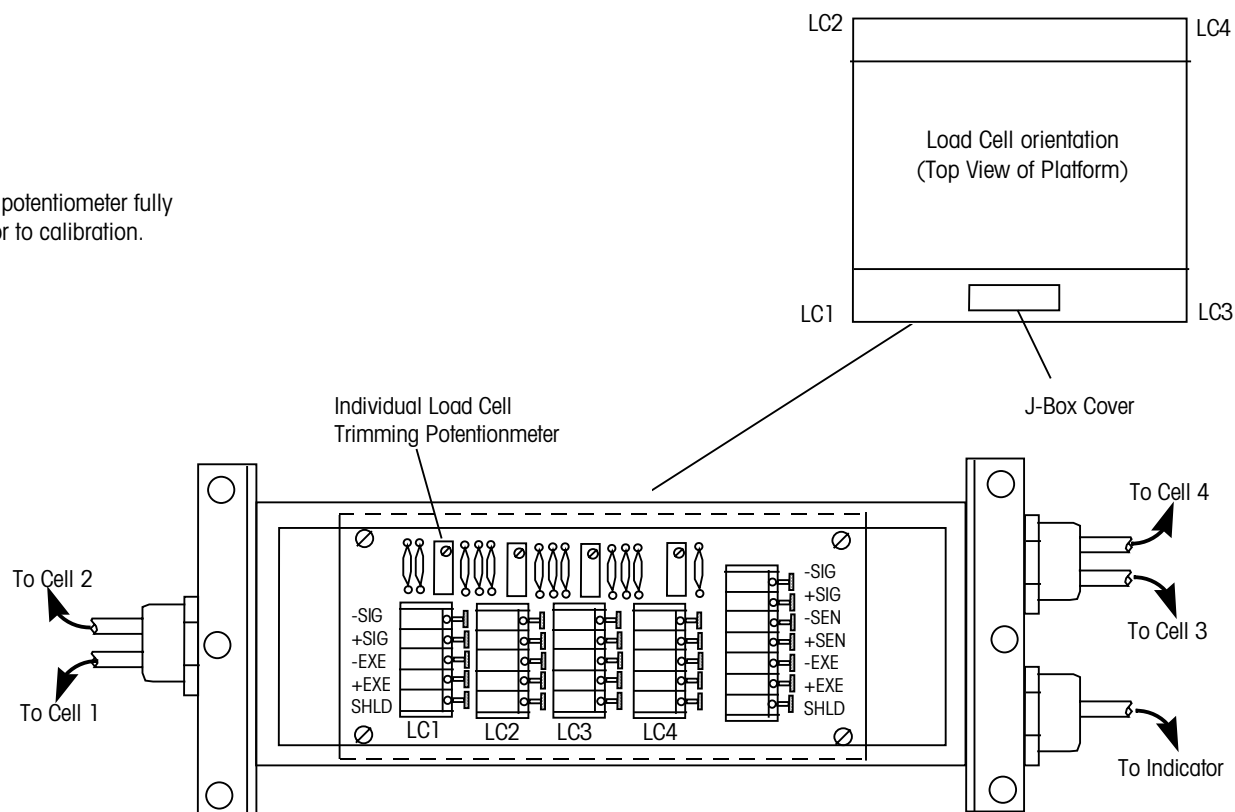
Model	Standard Platform 30 in X 30 in (76.2 cm X 76.2 cm), 1,000 Capacity	Shipping Weight (lb)
2888002001	Mild Steel Tread Plate Deck.	125
2888012001	Mild Steel Smooth Plate Deck	125
2888022001	Stainless Steel Tread Plate Deck	125
2888032001	Stainless Steel Smooth Plate Deck	125

Model	Portable Assembly 30 in X 30 in (76.2 cm X 76.2 cm), 1,000 Capacity	Shipping Weight (lb)
2888 P02001	Mild Steel Tread Plate Deck.	325
2888 P12001	Mild Steel Smooth Plate Deck	325
2888 P22001	Stainless Steel Tread Plate Deck	325
2888 P32001	Stainless Steel Smooth Plate Deck	325

Analog Mode

The 2888 Deckmate uses an analog junction box for summing the load cell outputs. Only analog compatible indicators will work with the 2888 Deckmate. The correct cable connection can be seen below.

Note: Turn all potentiometer fully clockwise prior to calibration.



Load Cell Wiring		Instrument Cable Wiring	
Function	Color	Function	Color
+ Excitation	Green	+ Excitation	White
		+ Sense	Yellow
+ Signal	White	+ Signal	Green
Shield	Yellow	Shield	Orange
- Signal	Red	- Signal	Black
		- Sense	Red
- Excitation	Black	- Excitation	Blue
(Based on Mettler Toledo cable number 510624370)			

Figure 6-a: Analog Junction Box Details and Wiring Codes

Service Parts

Notes: Proper Overload Gap
0.009 in - 0.014 in
(.228 mm - .356 mm)

*Note: Torque Load Cell bolts to:
100 ft-lb (Mild Steel Scale)
75 ft-lb (Stainless Steel Scale)

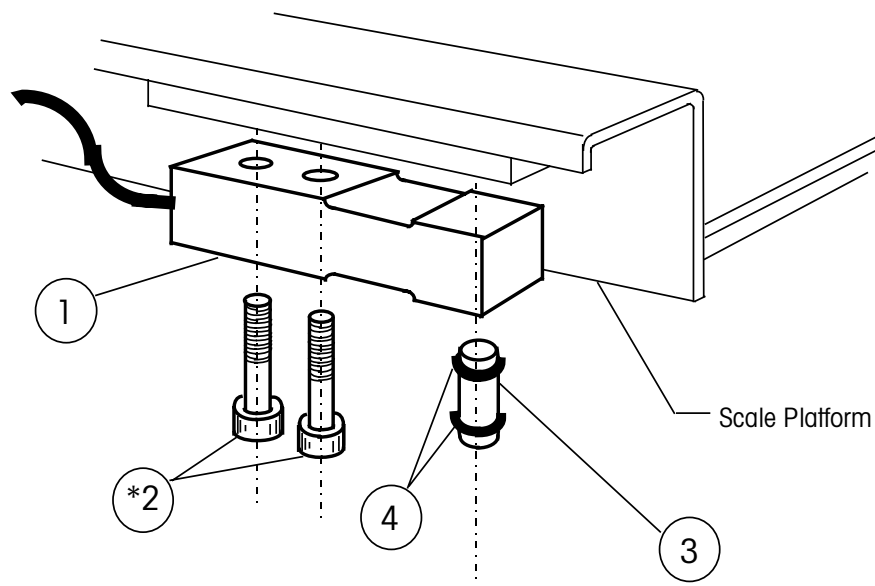


Figure 6-b: Load Cell and Suspension Parts

Ref. No.	Part Number	Description	Qty.
1	TB600529-1	500 lb load cell (5000d) with 4 ft. cable	4
2	MZ0901010333	1/2-13 Soc. Hd. Screw x 1 3/4" Lg. (Mild Steel Scale)	8
	MZ0901010384	1/2-13 Hex. Hd. Screw S.S. x 1 3/4" Lg. (Stainless Steel Scale)	
3	TN200050	Rocker pin	4
4	MZ0909000005	O-ring, 70 Dura BUTA "N"	8

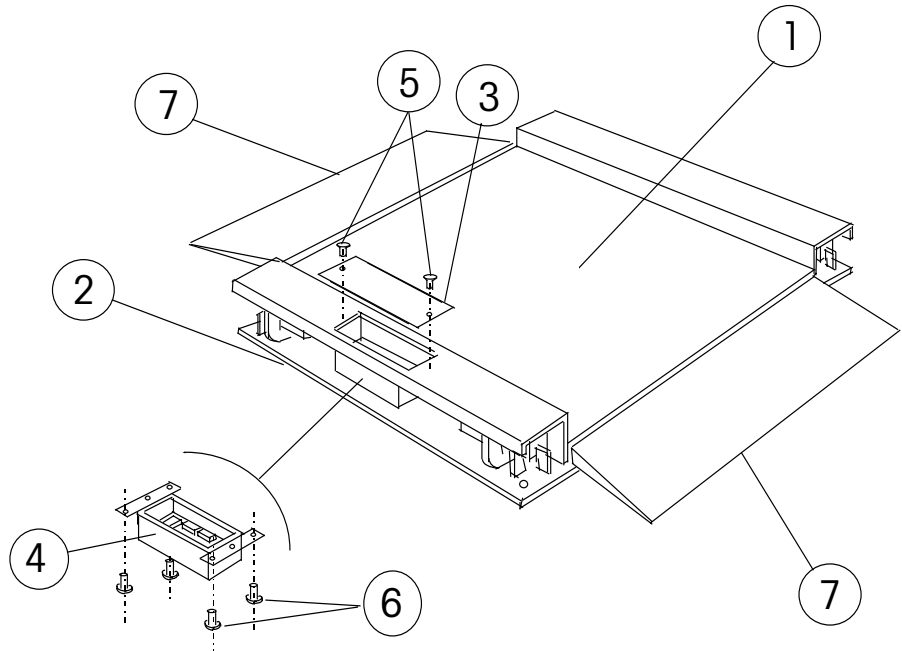


Figure 6-c: Static Platform Parts

Ref. No.	Part Number	Description	Qty.
1	TC202770-1 TC202770-2 TC202780-1 TC202780-2	Platform, Mild Steel Tread Plate Platform, Mild Steel Smooth Plate Platform, Stainless Steel Tread Plate Platform, Stainless Steel Smooth Plate	1
2	TB202771 TB202781	Frame, Mild Steel Frame, Stainless Steel	1
3	TN203054 TN203055	Junction Box Lid, Mild Steel Scale Junction Box Lid, Stainless Steel Scale	1
4	TB100520	Junction Box Assembly Consists of: *14378800A Analog PCB TA800218 Desiccant Pack	1
5	TN100524	10-32 Fl. Hd. Screw S.S. x 5/8" Lg.	2
6	MZ0901010407	10-32 Ph. Hd. Screw S.S. x 3/16" Lg.	4
7	TA202775-1 TA202775-2 TA202785-1 TA202785-2 TA202776-1 TA202776-2 TA202786-1 TA202786-2	Ramp x 6" Lg. (Optional) Mild Steel Tread Plate Ramp x 6" Lg. (Optional) Mild Steel Smooth Plate Ramp x 6" Lg. (Optional) Stainless Steel Tread Plate Ramp x 6" Lg. (Optional) Stainless Steel Smooth Plate Ramp x 12" Lg. (Optional) Mild Steel Tread Plate Ramp x 12" Lg. (Optional) Mild Steel Smooth Plate Ramp x 12" Lg. (Optional) Stainless Steel Tread Plate Ramp x 12" Lg. (Optional) Stainless Steel Smooth Plate	varies

*May have an alpha prefix.

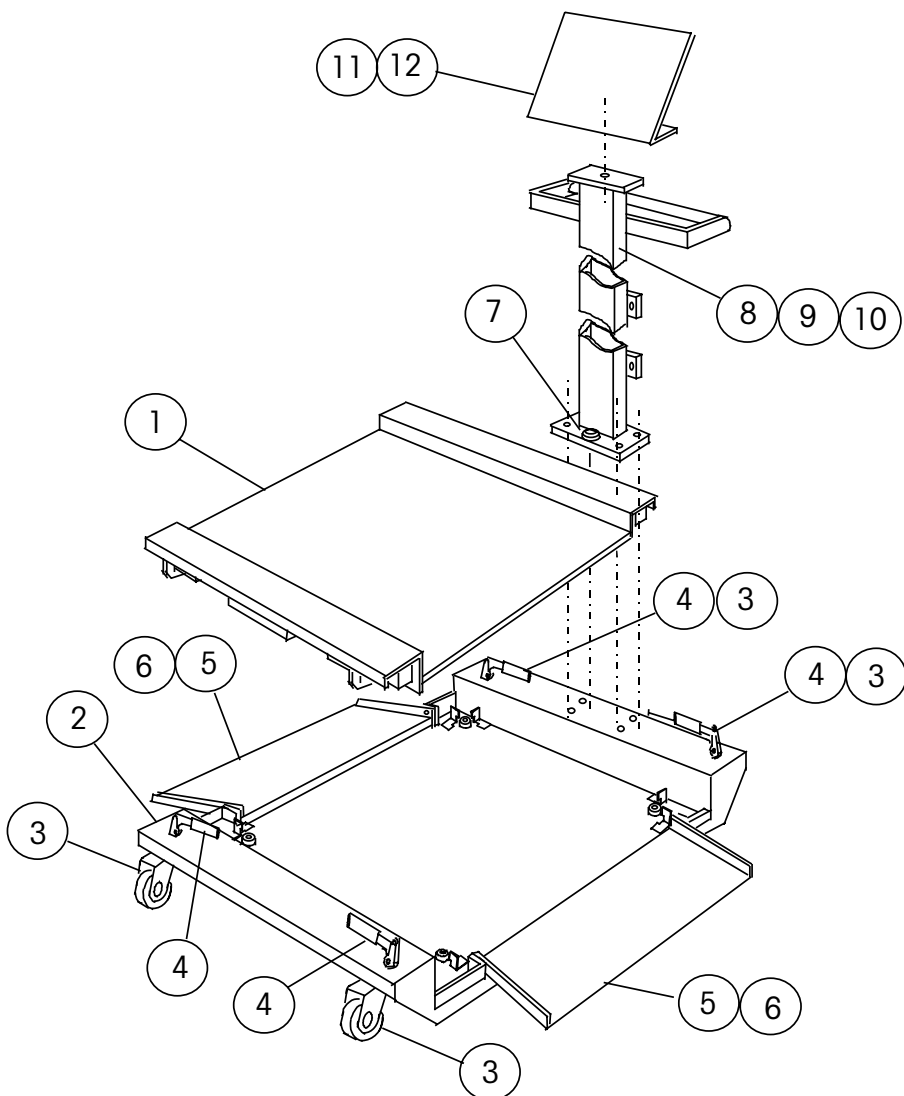


Figure 6-d: Portable Scale Parts

Ref. No.	Part Number	Description	Qty.
1	TC202770-1	Platform, Mild Steel Tread Plate	1
	TC202770-2	Platform, Mild Steel Smooth Plate	
	TC202780-1	Platform, Stainless Steel Tread Plate	
	TC202780-2	Platform, Stainless Steel Smooth Plate	
2	*TC202772	Portable Frame, Mild Steel	1
	*TC202782	Portable Frame, Stainless Steel	
3	TN202939	Swivel Caster	4
4	TN202579	Straight - Line Action Clamp	4
5	TA202778-1	Ramp x 12" Lg. (Optional) Mild Steel Tread Plate	Varies
	TA202778-2	Ramp x 12" Lg. (Optional) Mild Steel Smooth Plate	

	TA202788-1 TA202788-2 TA202779-1 TA202779-2 TA202789-1 TA202789-2	Ramp x 12" Lg. (Optional) Stainless Steel Tread Plate Ramp x 12" Lg. (Optional) Stainless Steel Smooth Plate Ramp x 18" Lg. (Optional) Mild Steel Tread Plate Ramp x 18" Lg. (Optional) Mild Steel Smooth Plate Ramp x 18" Lg. (Optional) Stainless Steel Tread Plate Ramp x 18" Lg. (Optional) Stainless Steel Smooth Plate	
6	TA202918-1	Ramp Mounting Kit (per Ramp)	1
7	TN201817	Bubble Level	1
8	TB202616 TB202618	Instrument Column, Mild Steel Instrument Column, Stainless Steel	1
9	Column Mounting Hardware:		
	MZ0901010076	3/8-16 Hex. Hd. Screw S.S. x 1.25" Lg.	4
	MZ0901030060	3/8 Flat Washer, S. S.	8
	MZ0901030076	3/8 Lock Washer, S.S.	4
	MZ0901020016	3/8 -16 Hex. Nut, S.S.	4
10	Battery Pack Mounting Hardware		
	MZ0901010250	1/4-20 Hex. Hd. Screw S.S. x .38" Lg.	4
	MZ0901030069	1/4 Lock Washer, S.S.	4
11	-----	Instrument Bracket	
12	TN202610	Black Thermoplastic Knob	1

*TN800569 Safety Label is required to be attached to Portable Frame

7

7260 DigiTOL Railroad Track Scale

Model 7260

Service Manual No. IS 007260 I00

The Model 7260 DigiTOL Railroad Track Scale is a prefabricated, modular railroad track scale design to be installed in a shallow pit. The Model 7260 design and performance are strictly regulated by A.A.R. (Association of American Railroads), A.R.E.A. (American Railroad Engineering Association), and NIST (National Institute of Standards and Technology). The Model 7260 meets or exceeds these criteria. The weighbridge is designed for Cooper E-80 loading. Two scale lengths are available: a single weighbridge for a 12 ft- 6 in weighing rail (rated at 85 tons/section, 85 ton gross), and a double weighbridge for a 25 ft live rail (rated at 85 ton / section, 170 tons gross. The model 7260 meets or exceeds Class III, accuracy requirements in accordance with the National Institute of Standards and Technology (NIST) Handbook 44. A Certificate of Conformance, Number 90-001, was issued under the National Type Evaluation Program (NTEP) of the National Conference on Weights and Measures.

Total Capacity	Scale Length	Number of Cells	Programmed Capacity	Increment Size
*85 Ton	12.5 ft	4	170,000	50
*170 Ton	25 ft	6	340,000	50

* Check serial plate on scale for total capacity

Foundations

Foundations for the Model 7260 railroad track scale require 2,500 lb per sq. ft min. soil bearing pressure per Mettler Toledo design. In an A.R.E.A. applications the minimum soil bearing requirement is 4,000 lb per sq. ft.

A.A.R./A.R.E.A. requires a minimum of 25 ft straight and level approach on both ends of the scale for single draft system and 50 ft straight and level approach on both ends of the scale for multiple draft system.

Module Weights

Approximate Module Weight	
Module Type	Weighbridge Weight (lb)
12 ft - 6 in	5,000
25 ft (2 modules)	4,950 each module

PowerCell Addressing

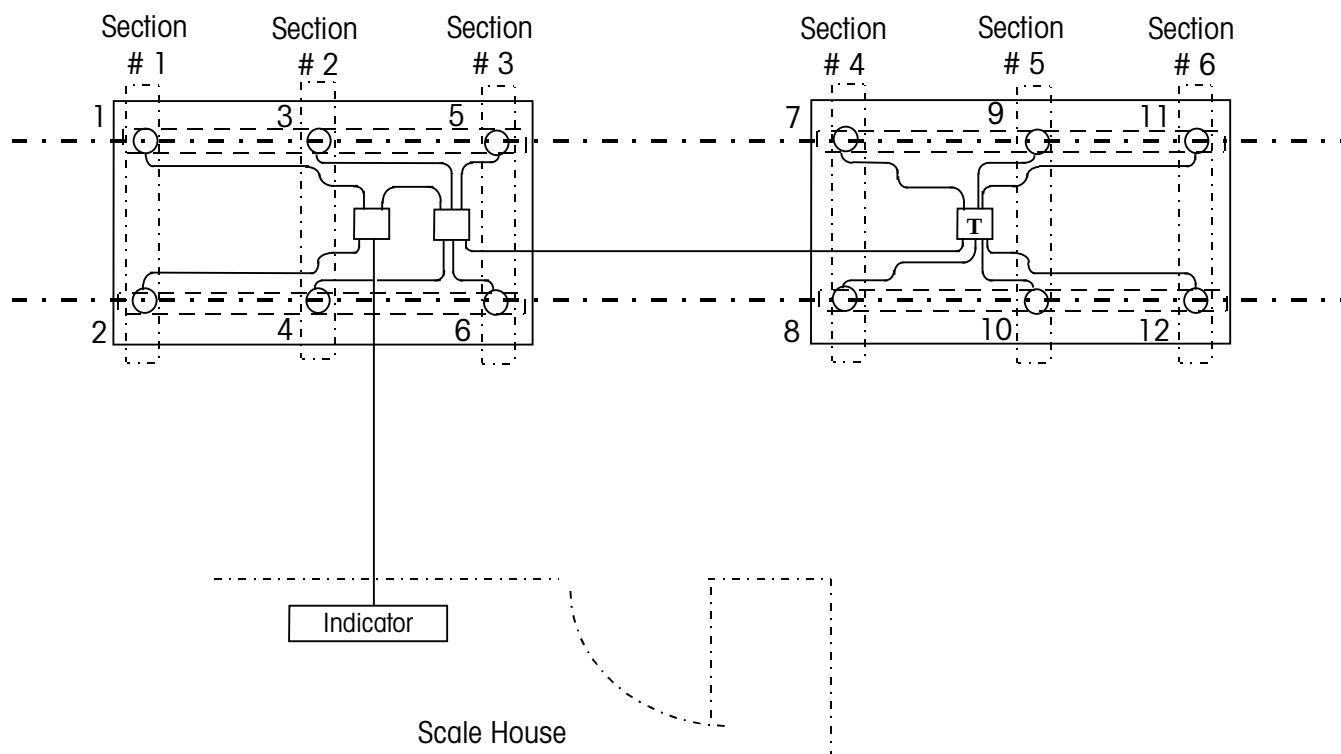


Figure 7-a: PowerCell Addressing

Raw Count Range

PowerCell Position	Raw Counts
End	1000 - 1500
Middle	1980 - 2970

PowerCell Specifications

Model 0760

- NTEP (National Type Evaluation Program) Certificate of Conformance Number: 88-091 A3 for Class IIIL, n MAX: 10,000 devices.
- Vmin = 3.5 lb (1.6 kg)
- Capacity: 45,000 kg/99,208 lb (100k)
- Material: Stainless Steel
- Environmental Protection: Hermetically Sealed (NEMA 6P)
- Output: Mettler Toledo DigiTOL Protocol

Service Parts

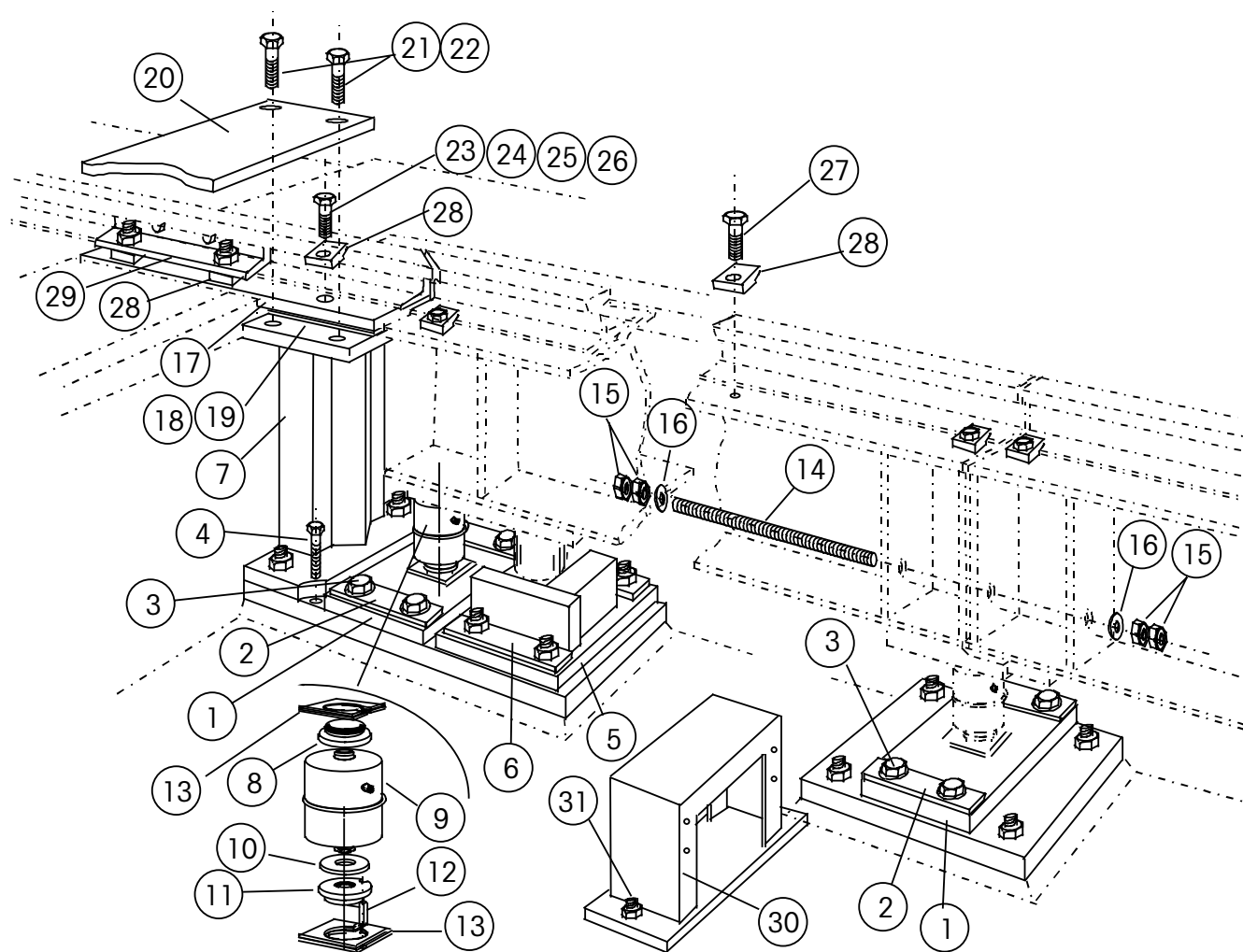


Figure 7-b: Model 7260 DigiTOL Railroad Track Scale (115 # Rail Standard)

Ref. No.	Part Number	Description	Qty
1	TB200834	PowerCell Receiver Plate (Complete with (1) MZO904000063 1/2" Roll Pin)	varies
2	12752400F	Clamp Bar, Receiver Plate (per Receiver Plate)	2
3	MZO901010354	3/4-10 Hex. Hd. Bolt x 2.25" Lg. (per Clamp Bar)	2
4	MZO901010355	5/8-11 Hex. Hd. Bolt x 5.00" Lg.	8
5	TB200610 TB200609	Checking Bracket, Right (shown) Checking Bracket, Left	2 2
6	TB200601-4	Clamp Bar, Check Bracket (per Check Bracket)	2
7	TB200602	Rail Stand	4
8	TA200835-1	Upper Receiver	varies

Ref. No.	Part Number	Description	Qty
9	*14002900A	45t CMOS PowerCell	varies
10	TN203173	Gasket	varies
11	TA200830-1	Lower Receiver	varies
12	MZ0904000063	Ref. 1/2" Roll Pin	
13	TA200833-1	Receiver Shim (.125)	varies
	TA200833-2	Receiver Shim (.062)	varies
14	MZ0901050005	1 1/2 - 6 All Thread Rod x 3'- 0" L g. (Double Platform Only)	2
15	MZ0901020064	1 1/2 - 6 Hex Nut (Double Platform Only)	8
16	MZ0901030002	1 5/8" Flat Washer (Double Platform Only)	4
17	TA200608-1	Rail Plate	4
18	TA200608-2	Shim Plate 11 ga.	varies
19	TA200608-3	Shim Plate 16 ga.	varies
20	TA200603	Deck Plate	2
21	MZ0901010383	3/8-16 Hex. Hd. Bolt x 2.00 Lg.	8
22	MZ0901030019	3/8" Washer, S. S.	8
23	MZ0901010038	1-8 Hex. Hd. Bolt x 5.00 Lg. GR5	8
24	MZ0901020021	1-8 Hex. Nut, GR5	8
25	MZ0901030059	1" Flat Washer	8
26	MZ0901030026	1" Lock Washer	8
27	MZ0901010148	1-8 Hex. Hd. Bolt x 3.00 Lg. A325	varies
28	TN300995	Rail Clip (#62 or K-26)	varies
29	TA203222-2	Approach Anti-Creep Angle, 115# Rail	8
30	TA203473	Junction Box Stand	1
31	TN203216	3/4 WEJ-IT Anchor x 6.00 Lg.	2

* May have a letter prefix

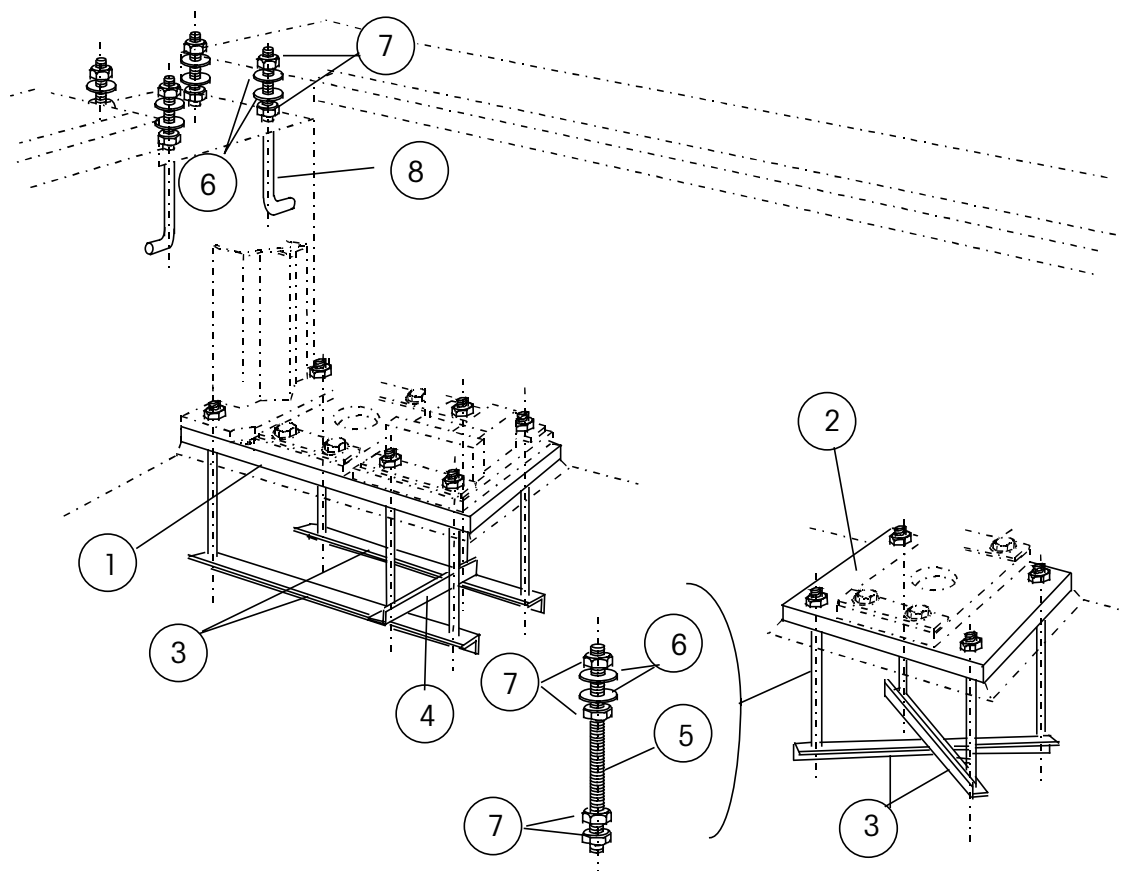


Figure 7-c: Foundation Steel

Ref. No.	Part Number	Description	Qty.
1	TB200601-1	Base Plate, Corner	4
2	TB200601-2	Base Plate, Center (7260 Double Scale only)	2
3	TC301512-5	Angle 7260 Single Scale 7260 Double Scale	8 12
4	TB200601-3	Angle	4
5	TC300927-25	1-8 UNC Rod x 2'- 0" Lg. 7260 Single Scale 7260 Double Scale	24 32
6	MZ0901030059	1" Flat Washer 7260 Single Scale 7260 Double Scale	80 96
7	MZ0901020021	1-8 Hex. Nut 7260 Single Scale 7260 Double Scale	128 150
8	TC300927-26	1-8 UNC Bent Anchor x 1'- 6" Lg.	16

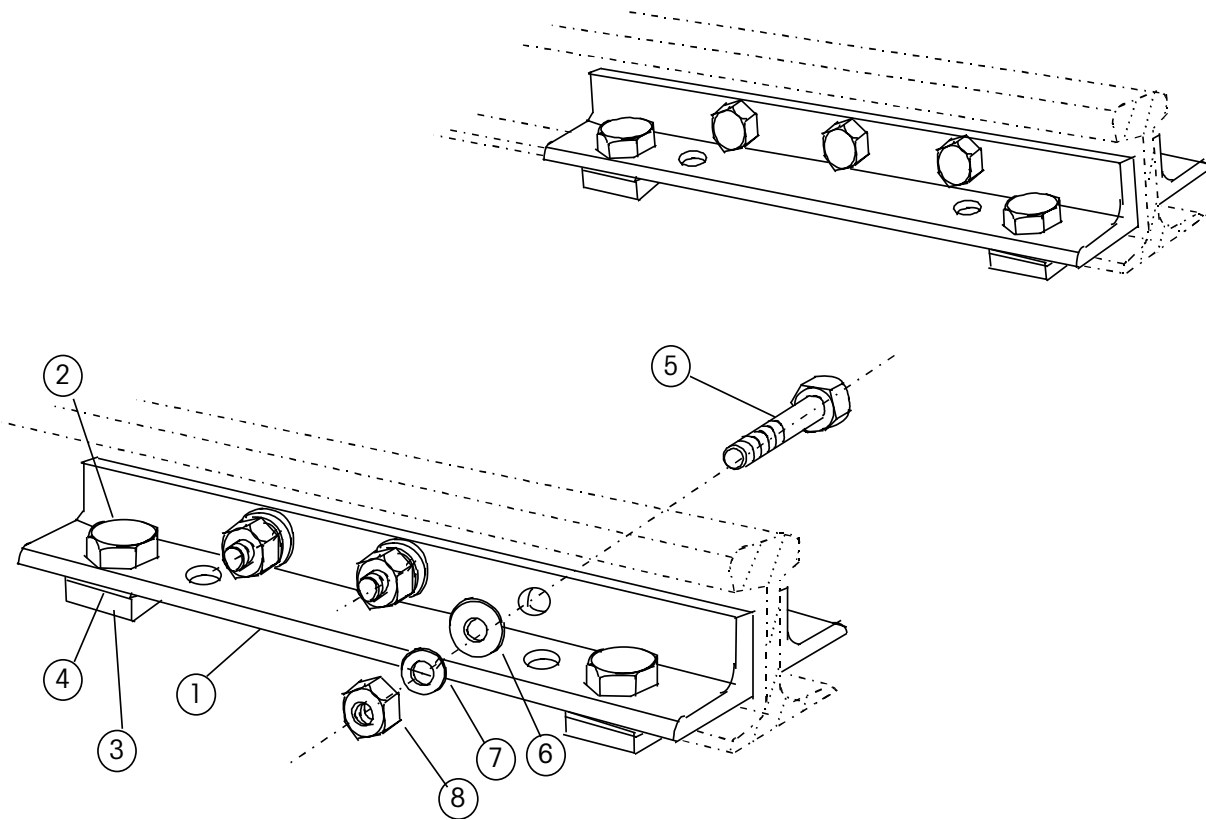


Figure 7-d: Anti-Creep Assembly (115 lb Rail Standard)

Ref. No.	Part Number	Description	Qty.
1	TA203222-1	Anti-Creep Angle (112/115/130 lb PS Rail)	4
2	MZ0901010038	1-8 Hex. Hd. Bolt x 5.00" Lg. GR5	8
3	TN3009953-5	Rail Clip (A&K #62 or K-25) (112/115/130 lb PS Rail)	8
4	TN200670	Anti-Creep Rail Clip Spacer (112/115/130 lb PS Rail)	8
5	MZ0901010245	7/8-9 Hex. Hd. Bolt x 3.50" Lg. A490	6
6	MZ0901030061	7/8 Plain Washer	6
7	MZ0901030087	7/8 Lock Washer	6
8	MZ0901020052	7/8-9 Hex. Nut A490	6

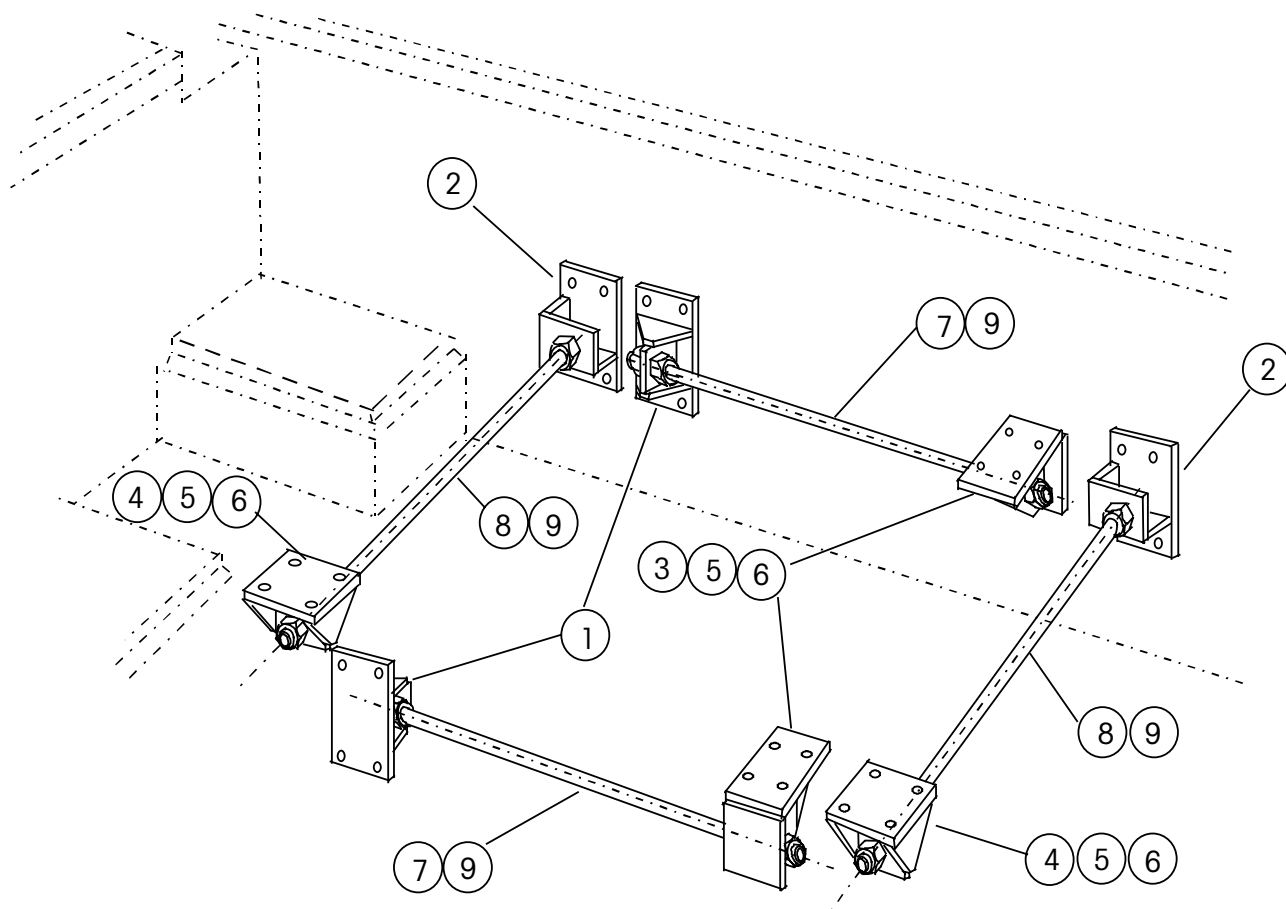


Figure 7-e: Weighing In-Motion Checking

Ref. No.	Part Number	Description	Qty.
1	TB301065	Longitudinal Check Wall Bracket	2
2	TB301064	Lateral Check Wall Bracket	2
3	TB201254	Longitudinal Check Beam Bracket	2
4	TB301066	Lateral Check Beam Bracket	2
5	MZ0901010128	3/4 -10 Hex. Hd. Bolt x 1.50" Lg.	16
6	MZ0901020056	3/4 -10 Hex. Nut	16
7	TN201603	1 1/2 - 6 Check Rod x 6' - 9" Lg.	2
8	TN201255	1 1/2 - 6 Check Rod x 5' - 7.25" Lg.	2
9	MZ0901020064	1 1/2 - 6 Hex. Nut	16

Reference Parts

Ref. No.	Part Number	Description
1	TA200831	Locating Tool
2	TB202627	Connector Cleaner
3	TN203056	Connector Dielectric Compound
4	MZ0602000117	Loctite #242
5	TN203218	Touchup Paint
6	TN203217	PowerCell/ Receiver Lubrication
7	TB100474-4	Junction Box Assembly CMOS (4 Hole)
8	TB100474-5	Junction Box Assembly CMOS (5 Hole)
9	TB100474-6	Junction Box Assembly CMOS (6 Hole)
10	TB100474-7	Junction Box Assembly CMOS (7 Hole)
11	13635300A	Junction Box PCB CMOS
12	TA000110-006	Interconnection Cable x 6 ft Lg.
13	TA000110-022	Interconnection Cable x 22 ft Lg.
14	TA000110-080	Interconnection Cable x 80 ft Lg.
15	TA000088-008	PowerCell Cable x 8 ft Lg.
16	TA000088-026	PowerCell Cable x 26 ft Lg.
17	TA000088-035	PowerCell Cable x 35 ft Lg.
18	TB100439	Surge Protector, 120 VAC
19	TA100532	Surge Protector, 240 VAC
20	09170198	Dual Barrier Box
21	TA000123-006	Barrier to Indicator Cable x 6 ft Lg.
22	09170168	Auxiliary Power Supply, 120 VAC
23	09170169	Auxiliary Power Supply, 240 VAC

8

7360 DigiTOL Combination Rail/Truck Scale

Model 7360

Service Manual # IS 007360 I00

The Model 7360 DigiTOL Combination Rail/ Truck Scale is designed for applications where traffic flow or space limitations exist. The Model 7360 design and performance are strictly regulated by A.A.R. (Association of American Railroads), A.R.E.A. (American Railroad Engineering Association), and NIST (National Institute of Standards and Technology). The Model 7360 meets or exceeds these criteria. The weighbridge is designed for Cooper E-80 loading (rated at 85 tons/section, 170 tons gross, 60,000 lb tandem axle, and 120,000 CLC). The model 7360 meets or exceeds Class III, accuracy requirements in accordance with the National Institute of Standards and Technology (NIST) Handbook 44. A Certificate of Conformance, Number 94-013, was issued under the National Type Evaluation Program (NTEP) of the National Conference on Weights and Measures.

Total Capacity	Scale Length	Scale Width	Number of Cells	Programmed Capacity	Increment Size
*170 Ton	35 to 112.5 ft	10 ft	6 or more	340,000	50

* Check serial plate on scale for total capacity

Foundations

Foundations for the Model 7360 requires 3,000 lb per sq. ft min. soil bearing pressure per Mettler Toledo design. In an A.R.E.A. applications the minimum soil bearing requirement is 4,000 lb per sq. ft. A.A.R./A.R.E.A. requires at least 75 ft straight track at each approach end of the scale and a minimum of 25 ft straight and level concrete approach on both ends of the scale.

Module Weights

Approximate Module Weight		
Module Type	Weighbridge (lb)	Assembled Weighbridge with Concrete and Rail
End Weighbridge 25 ft	10,368	48,803
Center Weighbridge 20 ft	9,857	48,292

PowerCell Addressing

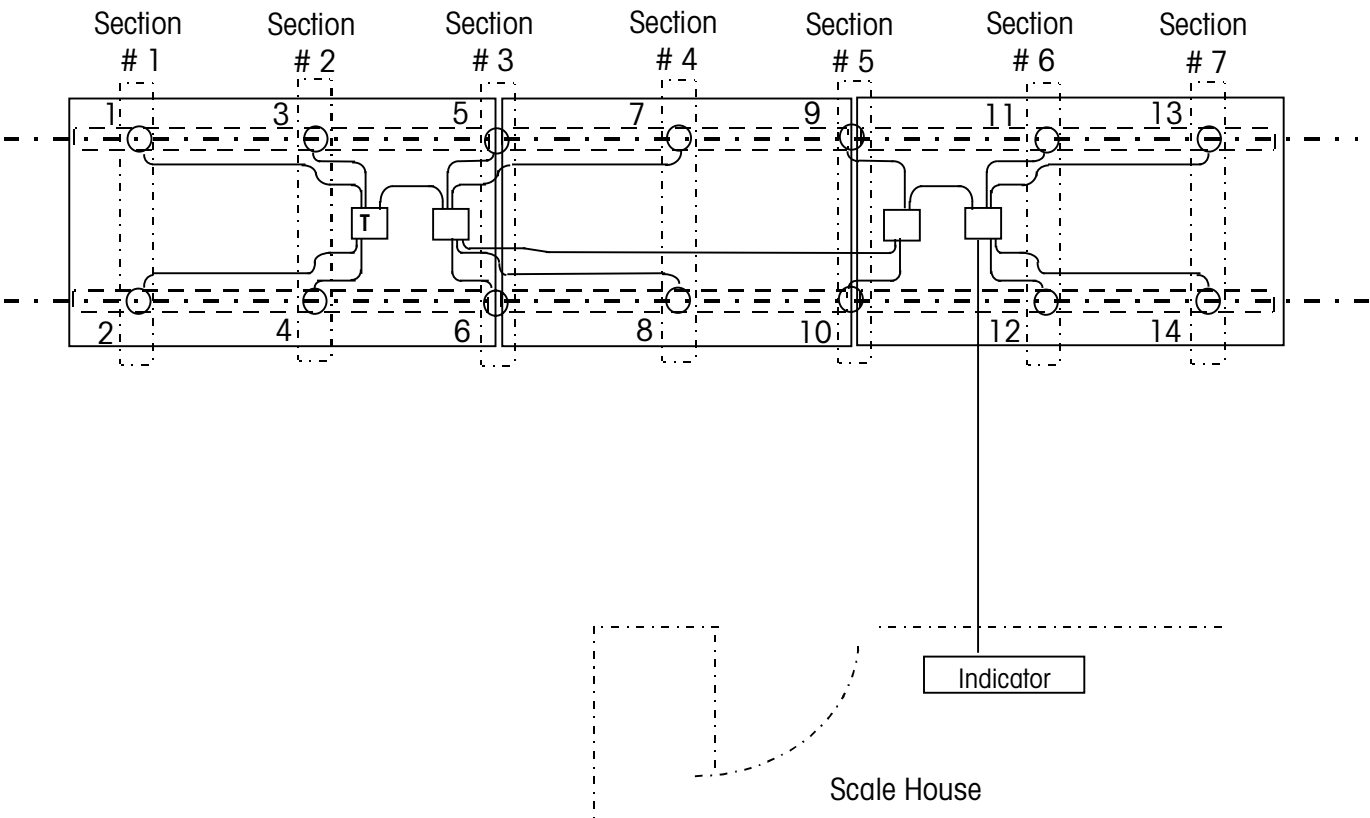


Figure 8-a: PowerCell Addressing

Raw Count Range

PowerCell Position	Raw Counts	
	Without Concrete	With Concrete
End (25 ft)	1117 - 1675	5256 - 7884
Middle (25 ft)	1992 - 2990	9522 - 14283

PowerCell Specifications

Model 0760

- NTEP (National Type Evaluation Program) Certificate of Conformance Number: 88-091 A3 for Class IIIL, n MAX: 10,000 devices.
- Vmin = 3.5 lb (1.6 kg)
- Capacity: 45,000 kg/99,208 lb (100k)
- Material: Stainless Steel
- Environmental Protection: Hermetically Sealed (NEMA 6P)
- Output: Mettler Toledo DigiTOL Protocol

Service Parts

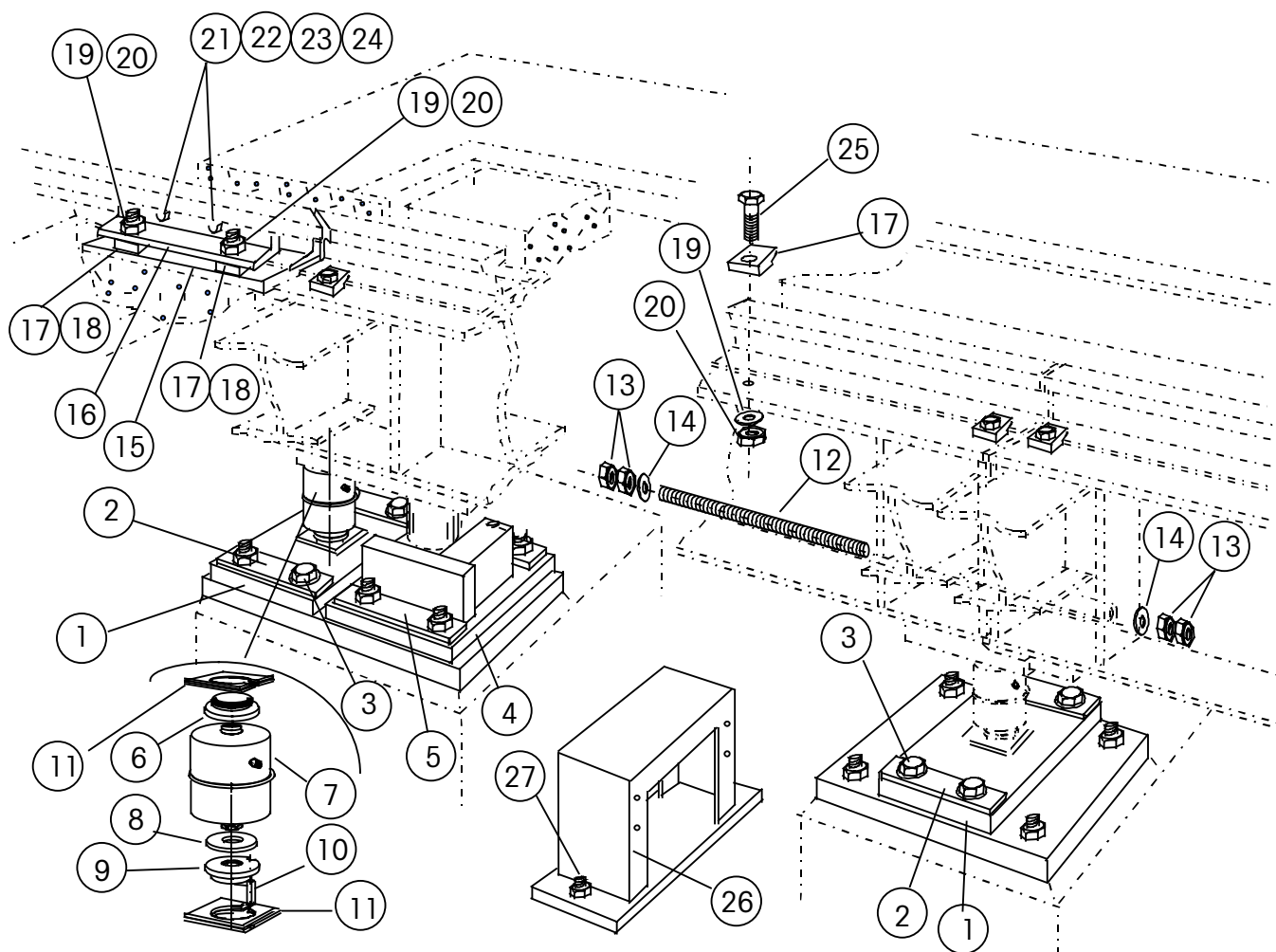


Figure 8-b: DigiTOL Combination Rail/Truck Scale (115 # Rail Standard)

Ref. No.	Part Number	Description	Qty
1	TB200834	PowerCell Receiver Plate (Complete with (1) MZ0904000063 1/2" Roll Pin)	varies
2	12752400F	Clamp Bar, Receiver Plate (per Receiver Plate)	2
3	MZ0901010354	3/4-10 Hex. Hd. Bolt x 2.25" Lg. (per Clamp Bar)	varies
4	TB200610 TB200609	Checking Bracket, Right (shown) Checking Bracket, Left	varies varies
5	TB200601- 4	Clamp Bar, Check Bracket (per Check Bracket)	2
6	TA200835-1	Upper Receiver	varies
7	*14002900A	45t CMOS PowerCell	varies
8	TN203173	Gasket	varies

Ref. No.	Part Number	Description	Qty
9	TA200830-1	Lower Receiver	varies
10	MZ0904000063	1/2" Roll Pin (Ref.)	
11	TA200833-1 TA200833-2	Receiver Shim (.125) Receiver Shim (.062)	varies
12	MZ0901050008	1 1/2 - 6 All Thread Rod x 3'- 6" Lg.	4
13	MZ0901020064	1 1/2 - 6 Hex Nut	16
14	MZ0901030002	1 5/8" Flat Washer	8
15	TB301150-4	Pit Wall Rail Plate	4
16	TA203222-2	Approach Anti-Creep Angle, 115# Rail	8
17	TN300995	Rail Clip (#62 or K-26)	varies
18	TA203222-3	Anti-Creep Spacer, 115# Rail	16
19	MZ0901030026	1" Lock Washer	8
20	MZ0901020021	1-8 Hex. Nut, GR5	8
21	MZ0901010245	7/8 - 9 Hex. Hd. Bolt x 3.5" Lg. A490	8
22	MZ0901030061	7/8 Flat Washer	8
23	MZ0901030087	7/8 Lock Washer	8
24	MZ090102052	7/8 - 9 Hex. Nut	8
25	MZ0901010073	1-8 Hex. Hd. Bolt x 4.00" Lg. GR5	8
26	TA203473	Junction Box Stand Plate (Ref. TA200606 Channel Stand, Original)	1
27	TN203216	3/4 -10 Expansion Anchor x 5.50" Lg.	4

* May have a letter prefix

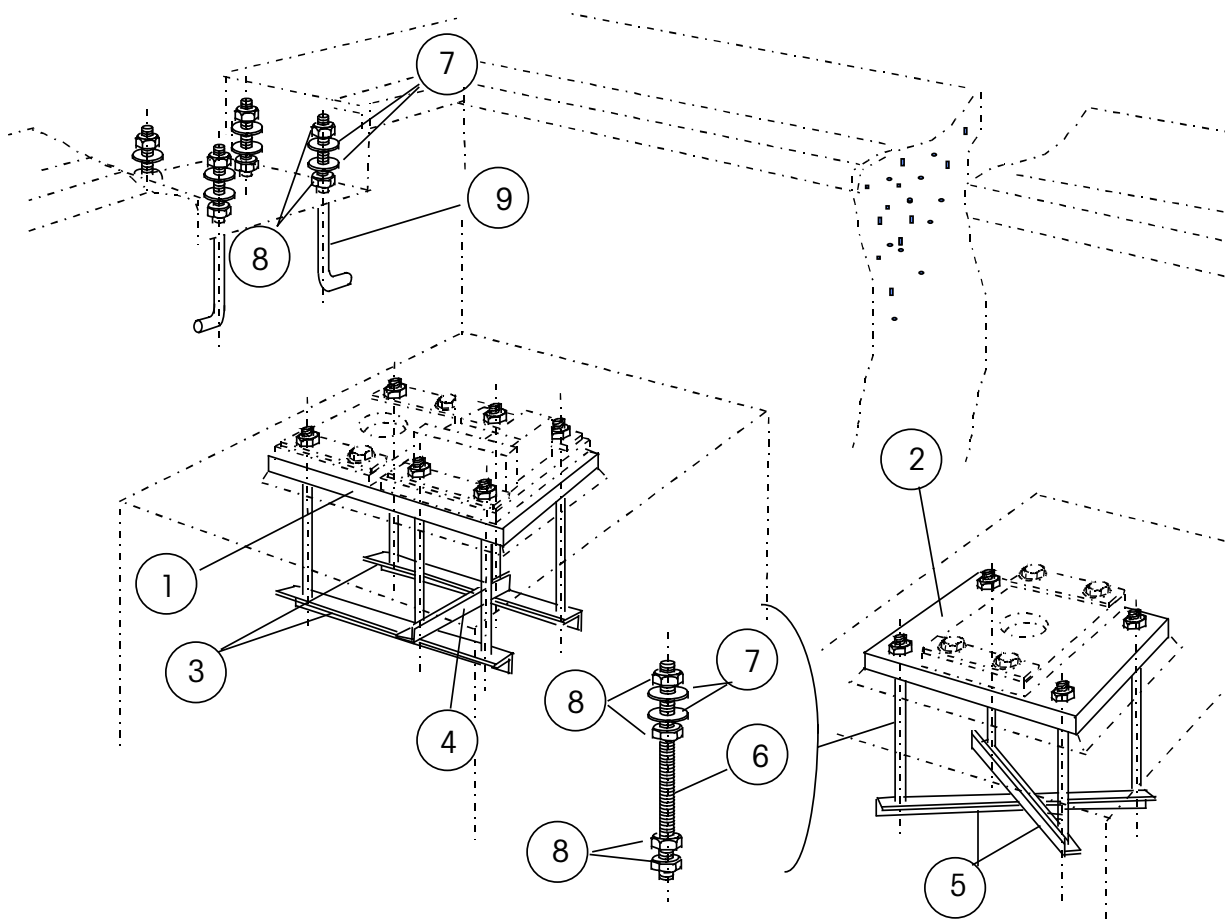


Figure 8-c: Typical Rod Assembly

Ref. No.	Part Number	Description	Qty.
1	TN302239	Base Plate, Bumper	8
2	TB200601-2	Base Plate	6
3	TN201375	Angle	16
4	TB200601-3	Angle	8
5	TN301512-5	Angle	12
6	TC300927-25	1-8 UNC Rod x 2'- 0" Lg.	72
7	MZ0901030059	1" Flat Washer	320
8	MZ0901020021	1-8 Hex. Nut	176
9	TC300927-26	1-8 UNC Bent Anchor x 2'- 0" Lg.	16

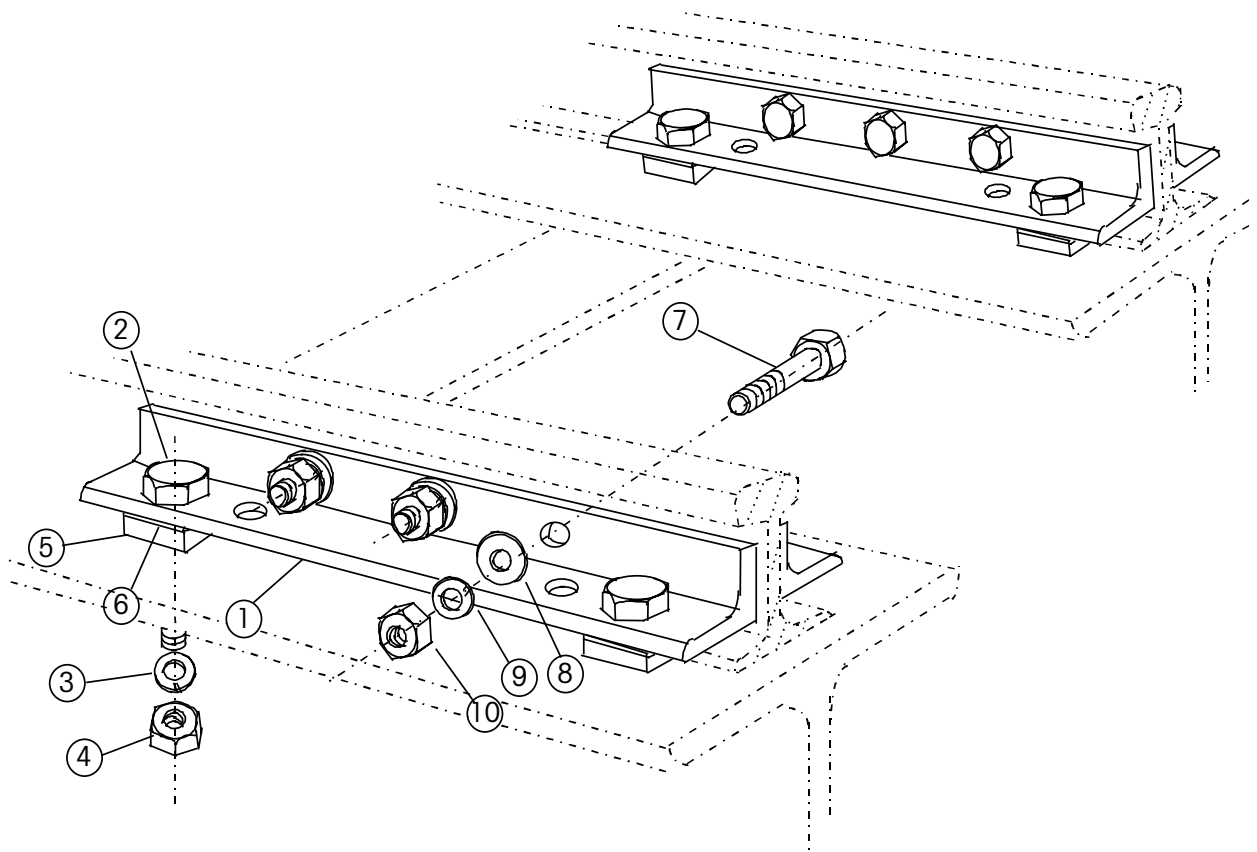


Figure 8-d: Anti-Creep Assembly (115 lb Rail Standard)

METTLER TOLEDO Heavy Capacity Reference Guide

Ref. No.	Part Number	Description	Qty.
1	TA203222-1	Anti-Creep Angle (112/115/130 lb PS Rail)	4
2	MZ0901010073	1-8 Hex. Hd. Bolt x 4.00" Lg. GR5	8
3	MZ0901030026	1" Lock Washer	8
4	MZ0901020021	1-8 Hex. Nut	8
5	TN300995	Rail Clip (A&K #62 or K-25) (112/115/130 lb PS Rail)	8
6	TA203222-3	Anti-Creep Rail Clip Spacer (112/115/130 lb PS Rail)	8
7	MZ0901010245	7/8-9 Hex. Hd. Bolt x 3.50" Lg. A490	6
8	MZ0901030061	7/8 Plain Washer	6
9	MZ0901030087	7/8 Lock Washer	6
10	MZ0901020052	7/8-9 Hex. Nut A490	6

Reference Parts

Ref. No.	Part Number	Description
1	TA200831	Locating Tool
2	TB202627	Connector Cleaner
3	TN203056	Connector Dielectric Compound
4	MZ0602000117	Loctite #242
5	TN203218	Touchup Paint
6	TN203217	PowerCell/ Receiver Lubrication
7	TB100474-4	Junction Box Assembly CMOS (4 Hole)
8	TB100474-5	Junction Box Assembly CMOS (5 Hole)
9	TB100474-6	Junction Box Assembly CMOS (6 Hole)
10	13635300A	Junction Box PCB CMOS
11	TA000110-006	Interconnection Cable x 6 ft Lg.
12	TA000110-080	Interconnection Cable x 80 ft Lg.
13	TA000088-008	PowerCell Cable x 8 ft Lg.
14	TA000088-026	PowerCell Cable x 26 ft Lg.
15	TA000088-035	PowerCell Cable x 35 ft Lg.
16	TB100439	Surge Protector, 120 VAC
17	TA100532	Surge Protector, 240 VAC
18	09170198	Dual Barrier Box
19	TA000123-006	Barrier to Indicator Cable x 6 ft Lg.
20	09170168	Auxiliary Power Supply, 120 VAC
21	09170169	Auxiliary Power Supply, 240 VAC

9

7531 DigiTOL Truckmaster Truck Scale

Model 7531

Service Manual No. IS 007531 I01

The Model 7531 DigiTOL TRUCKMASTER is a pitless heavy capacity truck scale with concrete deck and side rails. The Model 7531 is designed to meet or exceed the Class III, 10,000 division accuracy requirements in accordance with the National Institute of Standards and Technology (NIST) Handbook 44. A Certificate of Conformance, Number 92-204A1, was issued under the National Type Evaluation Program (NTEP) of the National Conference on Weights and Measures.

The Model 7531 is assembled from modules that measure 10' between the side rails and are 20' or 25' long. The gross capacity is up to 200,000 lb and CLC of 40,000 to 70,000 lb.

Total Capacity	Number of Cells	Programmed Capacity	Increment Size
*35 Ton	Equal to or Less than 25 ft	70,000	20
*60 Ton	Greater than 25 ft Equal to or Less than 60 ft	120,000	20
*100 Ton	Equal to or Greater than 60 ft	200,000	20

* Check serial plate on scale for total capacity

Foundations

Foundations for the Model 7531 truck scale requires a minimum soil bearing pressure of 2,500 lb per sq. ft, concrete to contain 5-7% air entrainment and concrete to reach a minimum of 3,000 PSI compressive strength at 28 days.

Module Weights

Approximate Module Weight		
Module Type	Module 20 ft	Module 25 ft
Steel (Before Pour)	3,100 lb	4,000 lb
Module with concrete	23,900 lb	30,000 lb
Concrete per Module	*5.2 Cubic Yard	*6.5 Cubic Yard

* Deck Concrete to reach a minimum 4,000 PSI compressive strength at 28 days

PowerCell Addressing

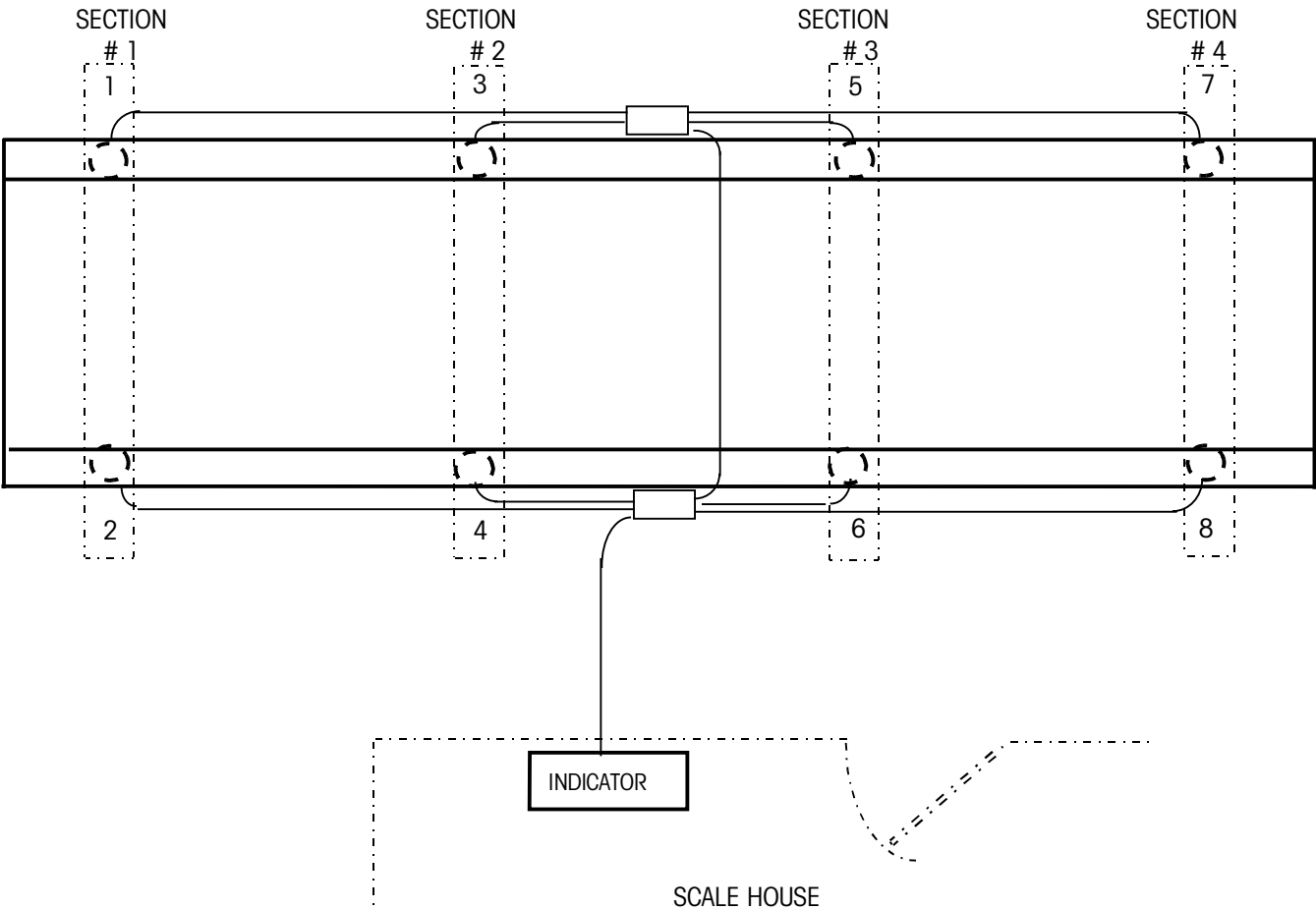


Figure 9-a: PowerCell Addressing

Raw Count Range

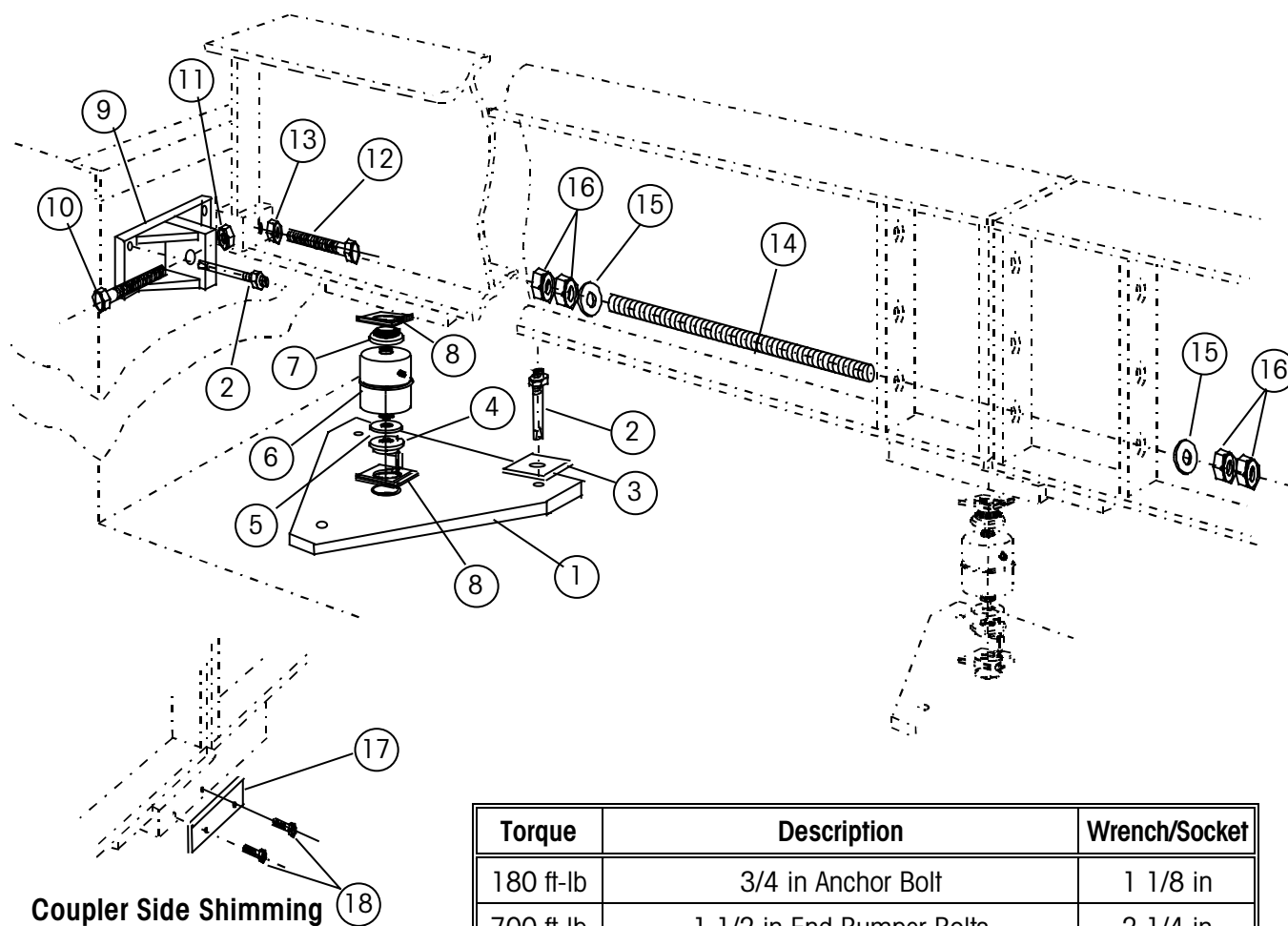
PowerCell Module	Module Size	Raw Counts	
		Without Concrete	With Concrete
SINGLE	10 ft	800 - 1250	4900 - 7150
SINGLE	12 ft	830 - 1530	6060 - 8460
SINGLE	20 ft	1500 - 2400	10550 - 13550
SINGLE	25 ft	2000 - 2900	13500 - 16500
END	20 ft	1850 - 2750	12500 - 15500
END	25 ft	2650 - 3550	17200 - 20200
MIDDLE	20 ft end to 20 ft end	2800 - 3700	17800 - 20800
MIDDLE	25 ft end to 25 ft end	3250 - 4150	20600 - 23600
MIDDLE	20 ft end to 20 ft middle	3150 - 4050	20200 - 23200
MIDDLE	25 ft end to 20 ft middle	3370 - 4270	21600 - 24600
MIDDLE	20 ft middle to 20 ft middle	3450 - 4350	22600 - 25600

PowerCell Specifications

Model 0760

- NTEP (National Type Evaluation Program) Certificate of Conformance Number: 88-091 A2 for Class IIIL, n MAX: 10,000 devices
- Capacity: 22,500 kg/ 49,604 lb (50k)
- Material: Stainless Steel
- Environmental Protection: Hermetically Sealed (NEMA 6P)
- Output: Mettler Toledo DigiTOL Protocol

Service Parts



Torque	Description	Wrench/Socket
180 ft-lb	3/4 in Anchor Bolt	1 1/8 in
700 ft-lb	1 1/2 in End Bumper Bolts	2 1/4 in
400 ft-lb	1 1/4 in Side Bumper Bolt & Tie Rod Nut	1 7/8 in

Figure 9-b: Model 7531 DigiTOL Truckmaster

Ref. No.	Part Number	Description	Qty
1	TB201885	Base Plate (complete with MZ0904000063 Roll Pin)	varies
2	TN203216	3/4 - 10 Anchor Bolt x 6" Lg. (per Base Plate)	3
		(per Side Bumper Bracket)	4
3	TN201244	Clamp Bar (per Base Plate)	3
4	TA200814	Lower Hex. Receiver	varies
5	TN203173	Gasket	varies
6	*14002500A	22.5 † DigiTOL PowerCell (CMOS)	varies
7	TA200764	Upper Receiver w/ O-ring	varies

Ref. No.	Part Number	Description	Qty
8	TA200712-1 TA200712-2 TA200712-3	Receiver Shim, .125" Receiver Shim, .062" Receiver Shim, .180"	varies
9	TB201498	Side Bumper Bracket	4
10	TA200923	1 1/4 - 7 Side Bumper Bolt x 10" Lg. Gr. 8	4
11	MZ0901020068	1 1/4 - 7 Nut	4
12	TA201606	1 1/2 - 6 End Bumper Bolt x 10" Lg. Gr. 8	4
13	MZ0901020064	1 1/2 - 6 Jam Nut	4
14	MZ0901020068	1 1/4 - 7 Tie Rod x 2'-0" Lg.	varies
15	MZ0901030015	1 1/4" Washer (per Tie Rod)	2
16	MZ0901020068	1 1/4 Jam Nut (per Tie Rod)	4
17	TA200801-1 TA200801-2 TA200801-3	Coupler Side Shim, .250" Coupler Side Shim, .125" Coupler Side Shim, .062"	varies
18	MZ0901010356	10 - 32 Screw x 1/2 "Lg. (per Coupler)	2

* May have a letter prefix

Reference Parts

Ref. No.	Part Number	Description
1	TA200831	Locating Tool
2	TN202627	Connector Cleaner
3	TN203056	Connector Dielectric Compound
4	MZ0602000117	Loctite #242
5	TN203218	Touchup Paint Gray
6	TN203217	PowerCell/ Receiver Lubrication
7	TB100474-4	Junction Box Assembly CMOS Bottom Mount (4 Hole)
8	TB100474-5	Junction Box Assembly CMOS Bottom Mount (5 Hole)
9	TB100474-6	Junction Box Assembly CMOS Bottom Mount (6 Hole)
10	TB100474-7	Junction Box Assembly CMOS Bottom Mount (7 Hole)
11	13635300A	Junction Box PCB CMOS
12	TA000110-022	Interconnection Cable x 22 ft Lg.
13	TA000110-030	Interconnection Cable x 30 ft Lg.
14	TA000088-015	PowerCell Cable x 15 ft Lg.
15	TA000088-030	PowerCell Cable x 30 ft Lg.

METTLER TOLEDO Heavy Capacity Reference Guide

Ref. No.	Part Number	Description
16	TA000088-035	PowerCell Cable x 35 ft Lg.
17	TA000088-050	PowerCell Cable x 50 ft Lg.
18	TB100439	Surge Protector, 120 VAC
19	TA100532	Surge Protector, 240 VAC
20	09170198	Dual Barrier Box
21	TA000123-006	Barrier to Indicator Cable x 6 ft Lg.
22	09170168	Auxiliary Power Supply, 120 VAC
23	09170169	Auxiliary Power Supply, 240 VAC

10

7541 DigiTOL Truckmaster Truck Scale

Model 7541

Service Manual No. IS 007541 I02

The Model 7541 DigiTOL TRUCKMASTER is a pit type/ 45K Tandem Axle truck scale. The Model 7541 is designed to meet or exceed the Class III, 10,000 division accuracy requirements in accordance with the National Institute of Standards and Technology (NIST) Handbook 44. A Certificate of Conformance, No. 90-046A1, was issued under the National Type Evaluation Program (NTEP) of the National Conference on Weights and Measures.

The Model 7541 is modular (I-beam construction), consisting of 8 ft wide modules. The deck coping is welded to the modules in the field to give the scale a final width of 10 ft. The gross capacity is 200,000 lb and CLC is 60,000 lb.

Total Capacity	Number of Cells	No. of Cells	Programmed Capacity	Increment Size
*35 Ton	Less than or Equal to 25 ft	4	70,000	20
*60 Ton	Greater than 25 ft or Less than 60 ft	6	120,000	20
*100 Ton	Equal to or Greater than 60 ft	≥8	200,000	20

* Check serial plate on scale for total capacity

Foundations

Foundations for the Model 7541 truck scale requires a minimum soil bearing pressure of 1,500 lb per sq. ft, concrete to contain 5-7% air entrainment and concrete to reach a minimum of 3,000 PSI compressive strength at 28 days

Module Weights

Approximate Module Weight		
Module Type	Module 20 ft	Module 25 ft
Steel (Before Pour)	2,800 lb	3,500 lb
Module with concrete	18,000 lb	21,500 lb
Concrete per Module	3.7 Cubic Yards	4.6 Cubic Yards

* Deck Concrete to reach a minimum 4,000 PSI compressive strength at 28 days

PowerCell Addressing

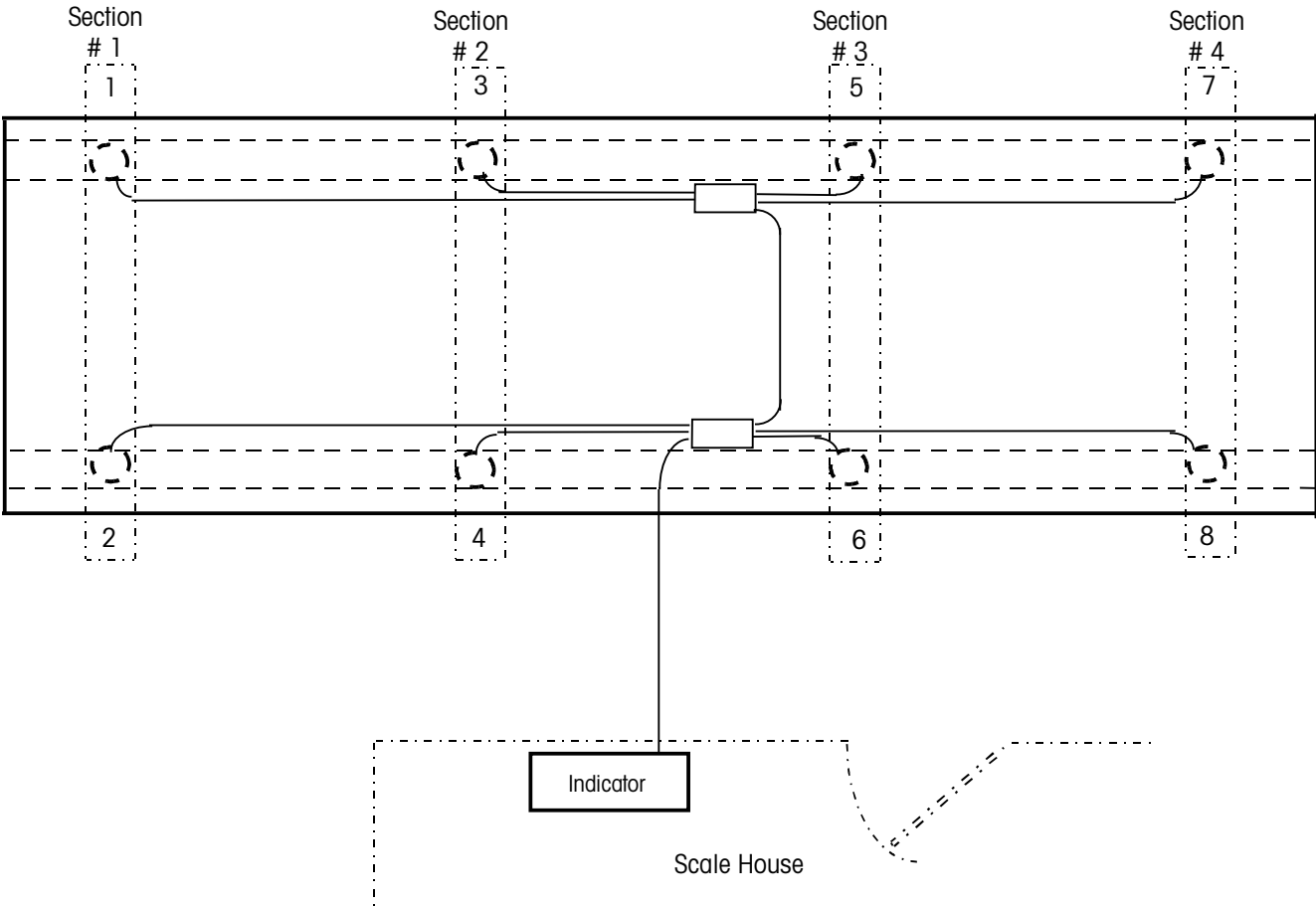


Figure 10-a: PowerCell Addressing

Raw Count Range

PowerCell Module	Module Size	Raw Counts	
		Without Concrete	With Concrete
End	20 ft	1200 - 1800	7200 - 10800
End	25 ft	1360 - 2040	8600 - 12900
Middle	20 ft	2400 - 3600	14400 - 21600
Middle	25 ft	2560 - 3840	15800 - 23700

PowerCell Specifications

Model 0760

- NTEP (National Type Evaluation Program) Certificate of Conformance
Number: 88-091 A2 for Class IIIL, n MAX: 10,000 devices
- Capacity: 22,500 kg/ 49,604 lb (50k)
- Material: Stainless Steel
- Environmental Protection: Hermetically Sealed (NEMA 6P)
- Output: Mettler Toledo DigiTOL Protocol

Service Parts

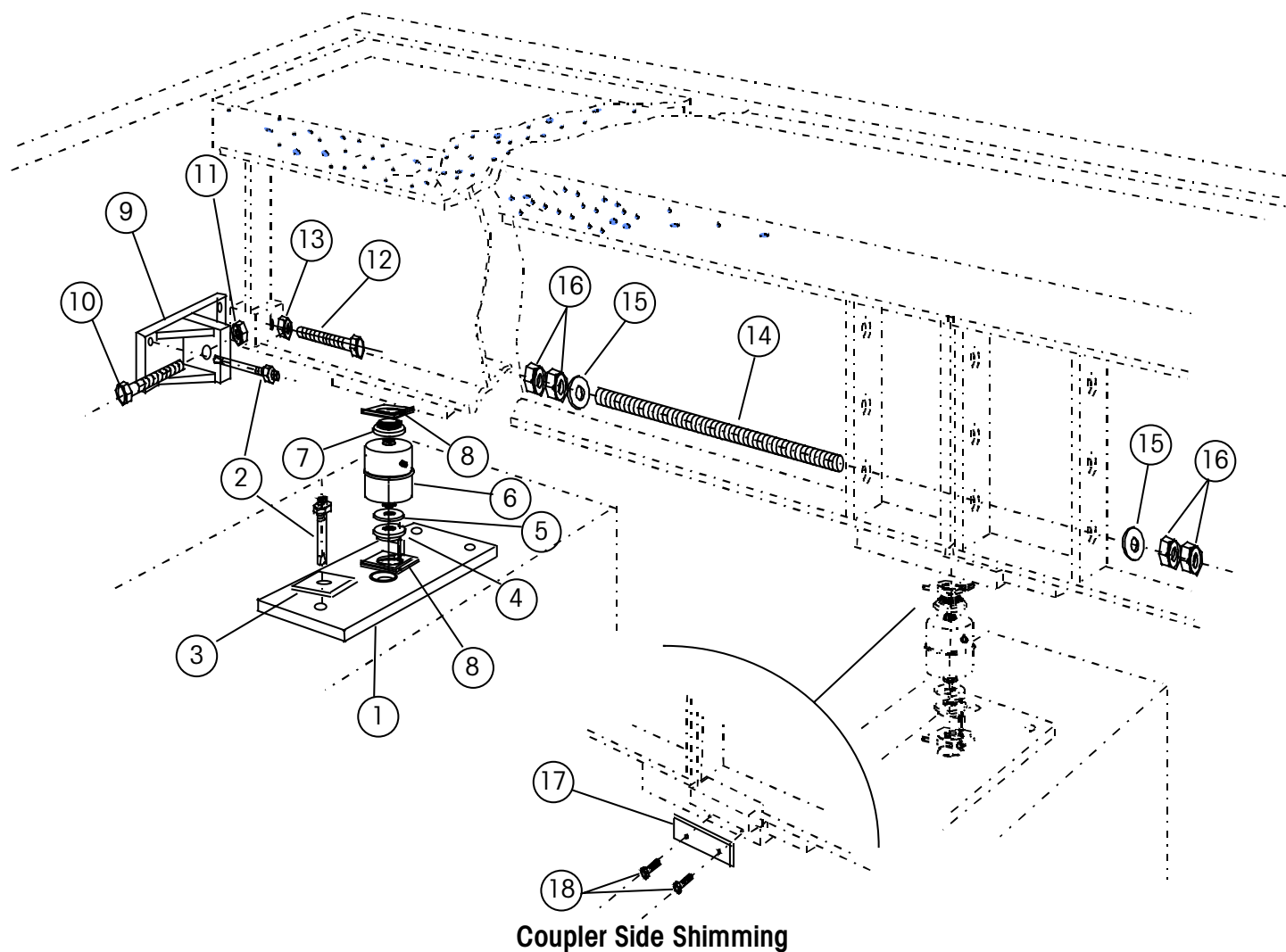


Figure 10-b: Model 7541 DigiTOL Truckmaster

Torque	Description	Wrench/Socket
180 ft- 1 1/8 in-lb	3/4 in Anchor Bolt	1 1/8 in
700 ft-lb	1 1/2 in End Bumper Bolts	2 1/4 in
400 ft-lb	1 1/4 in Side Bumper Bolt & Tie Rod Nuts	1 7/8 in

Ref. No.	Part Number	Description	Qty
1	TB200797	Base Plate (complete with MZ0904000063 Roll Pin)	varies
2	TN203216	3/4 - 10 Anchor Bolt x 6" Lg. (per Base Plate) (per Side Bumper Bracket)	3 4
3	TN201244	Clamp Bar (per Base Plate)	3
4	TA200814	Lower Hex. Receiver	varies
5	TN203173	Gasket	varies
6	*14002500A	22.5 † DigiTOL PowerCell (CMOS)	varies
7	TA200764	Upper Receiver w/ O-ring	varies
8	TA200712-1 TA200712-2 TA200712-3	Receiver Shim, .125" Receiver Shim, .062" Receiver Shim, .180"	varies
9	TB201498	Side Bumper Bracket	4
10	TA200923	1 1/4 - 7 Side Bumper Bolt x 10" Lg. Gr. 8	4
11	MZ0901020068	1 1/4 - 7 Nut	4
12	TA201606	1 1/2 - 6 End Bumper Bolt x 10" Lg. Gr. 8	4
13	MZ0901020064	1 1/2 - 6 Jam Nut	4
14	MZ0901050006	1 1/4 - 7 Tie Rod x 2'-0" Lg.	varies
15	MZ0901030015	1 1/4" Washer (per Tie Rod)	2
16	MZ0901020068	1 1/4 Jam Nut (per Tie Rod)	4
17	TA200801-1 TA200801-2 TA200801-3	Coupler Side Shim, .250" Coupler Side Shim, .125" Coupler Side Shim, .062"	varies
18	MZ0901010356	10 - 32 Screw x 1/2 "Lg. (per Coupler)	2

* May have a letter prefix

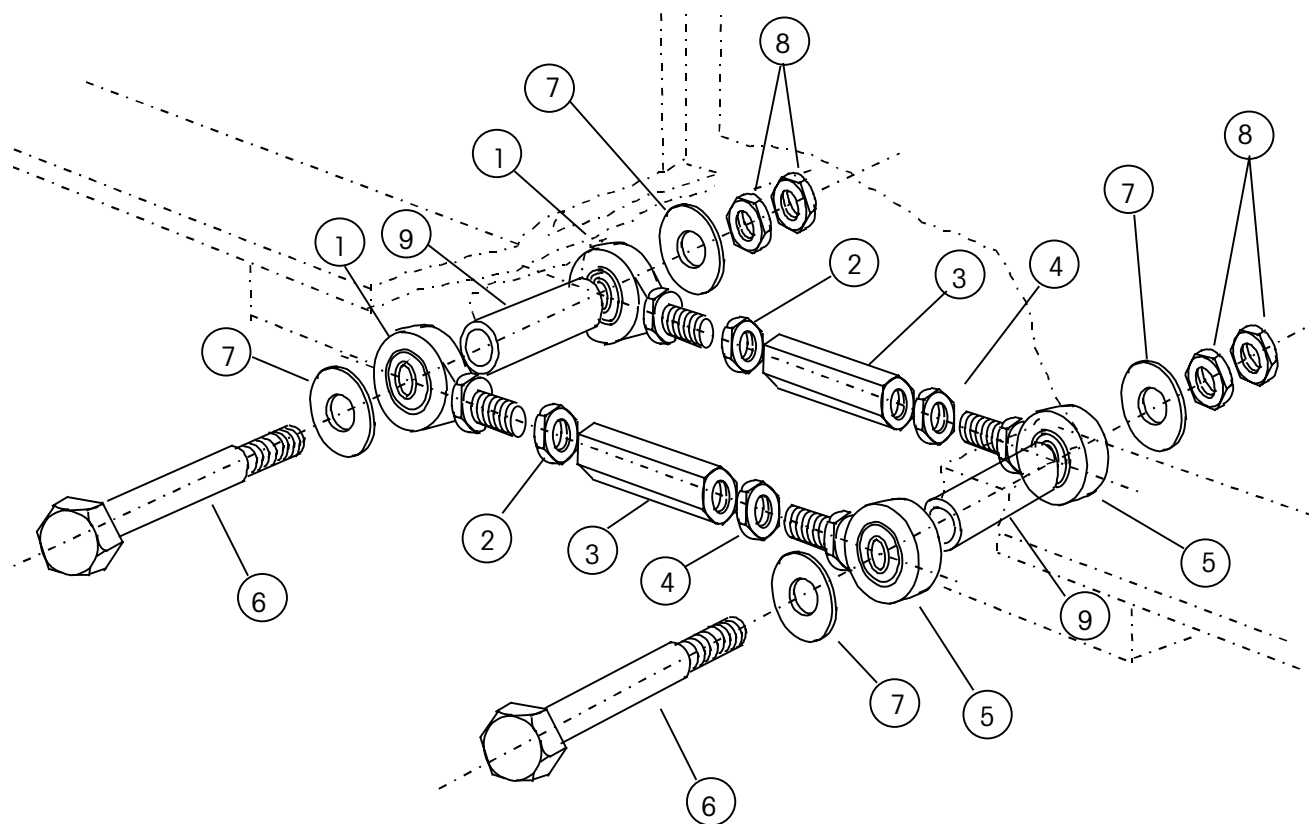


Figure 10-c: Model 7541 Multiple Platform Scale Link Assembly

Ref. No.	Part Number	Description	Qty
TN303344 - Multi Axle Rod End Assembly			
1	MZ0901040010	3/4-16 UNF Rod End Bearing, L.H.	2
2	MZ0901020069	3/4-16 Jam Nut, L.H.	2
3	TN200502	Coupling Block	2
4	MZ901020038	3/4-16 Jam Nut, R.H.	2
5	MZ0901040009	3/4-16 UNF Rod End Bearing, R.H.	2
6	MZ0901010390	3/4-10 UNC Hex. Hd. Bolt x 7.00" Lg.	2
7	MZ0901030090	3/4 Pl. Washer	4
8	MZ0901020070	3/4-10 UNC Heavy Hex. Jam Nut	4
9	MZ1405000134	Bushing	2

Reference Parts

Ref. No.	Part Number	Description
1	TA200831	Locating Tool
2	TB202627	Connector Cleaner
3	TN203056	Connector Dielectric Compound
4	MZ0602000117	Loctite #242
5	TN203218	Touchup Paint Gray
6	TN203217	PowerCell/ Receiver Lubrication
7	TB100474-4	Junction Box Assembly CMOS Bottom Mount (4 Hole)
8	TB100474-5	Junction Box Assembly CMOS Bottom Mount (5- Hole)
9	TB100474-6	Junction Box Assembly CMOS Bottom Mount (6 Hole)
10	TB100474-7	Junction Box Assembly CMOS Bottom Mount (7 Hole)
11	13635300A	Junction Box PCB CMOS
12	TA000110-022	Interconnection Cable x 22 ft Lg.
13	TA000110-030	Interconnection Cable x 30 ft Lg.
14	TA000088-008	PowerCell Cable x 8 ft Lg.
15	TA000088-015	PowerCell Cable x15 ft Lg.
16	TA000088-026	PowerCell Cable x 26 ft Lg.
17	TA000088-040	PowerCell Cable x 40 ft Lg.
18	TB100439	Surge Protector, 120 VAC
19	TA100532	Surge Protector, 240 VAC
20	09170198	Dual Barrier Box
21	TA000123-006	Barrier to Indicator Cable x 6 ft Lg.
22	09170168	Auxiliary Power Supply, 120 VAC
23	09170169	Auxiliary Power Supply, 240 VAC

11

7560 DigiTOL Truckmate Scale

Model 7560

Service Manual No. IS 007560 I03

The Model 7560 DigiTOL TRUCKMATE is a 55K tandem axle capacity concrete deck truck scale. The Model 7560 is designed to meet or exceed the Class III, 10,000 division accuracy requirements in accordance with the National Institute of Standards and Technology (NIST) Handbook 44. A Certificate of Conformance, Number 88-243A2, was issued under the National Type Evaluation Program (NTEP) of the National Conference on Weights and Measures.

The Model 7560 is assembled from 11' wide modules that are 15' or 17'-6" long. The gross capacity is up to 200,000 lb and the dual tandem axle capacity is 55,000 lb.

Total Capacity	Scale Length	Number of Cells	Programmed Capacity	Increment Size
*35 Ton	Less Than or Equal to 17.5 ft	4	70,000	20
*60 Ton	Larger or Equal to 17.5 ft But Less Than 60 ft	6	120,000	20
*100 Ton	Larger Than or Equal to 60 ft	≥ 8	200,000	20

* Check serial plate on scale for total capacity

Foundations

Note: Foundation concrete to contain 5-7% air entrainment and to reach a minimum of 3,000 PSI compressive strength at 28 days

Foundations for the Model 7560 truck scale are available in three (3) types of designs:

1. Floating Beam Slab (1,500 lb per sq. ft min. soil bearing pressure)
2. Separate/Adjustable Depth Footer (2,500 lb/ sq. ft min. soil bearing pressure)
3. Pit, 2 ft or 4 ft clearance options (2,000 lb/ sq. ft min. soil bearing pressure)

Module Weights

Approximate Module Weight		
Module Type	Module 15 ft	Module 17.5 ft
W/O Concrete	2,800 lb	3,500 lb
*W/ Concrete	18,000 lb	21,500 lb
**Concrete per Module	4.1 Cubic Yards	4.75 Cubic Yards

* Always lift a module with concrete at the ends of the module by straps taken under the module.

** Deck Concrete to reach a minimum 4,000 PSI compressive strength at 28 days

PowerCell Addressing

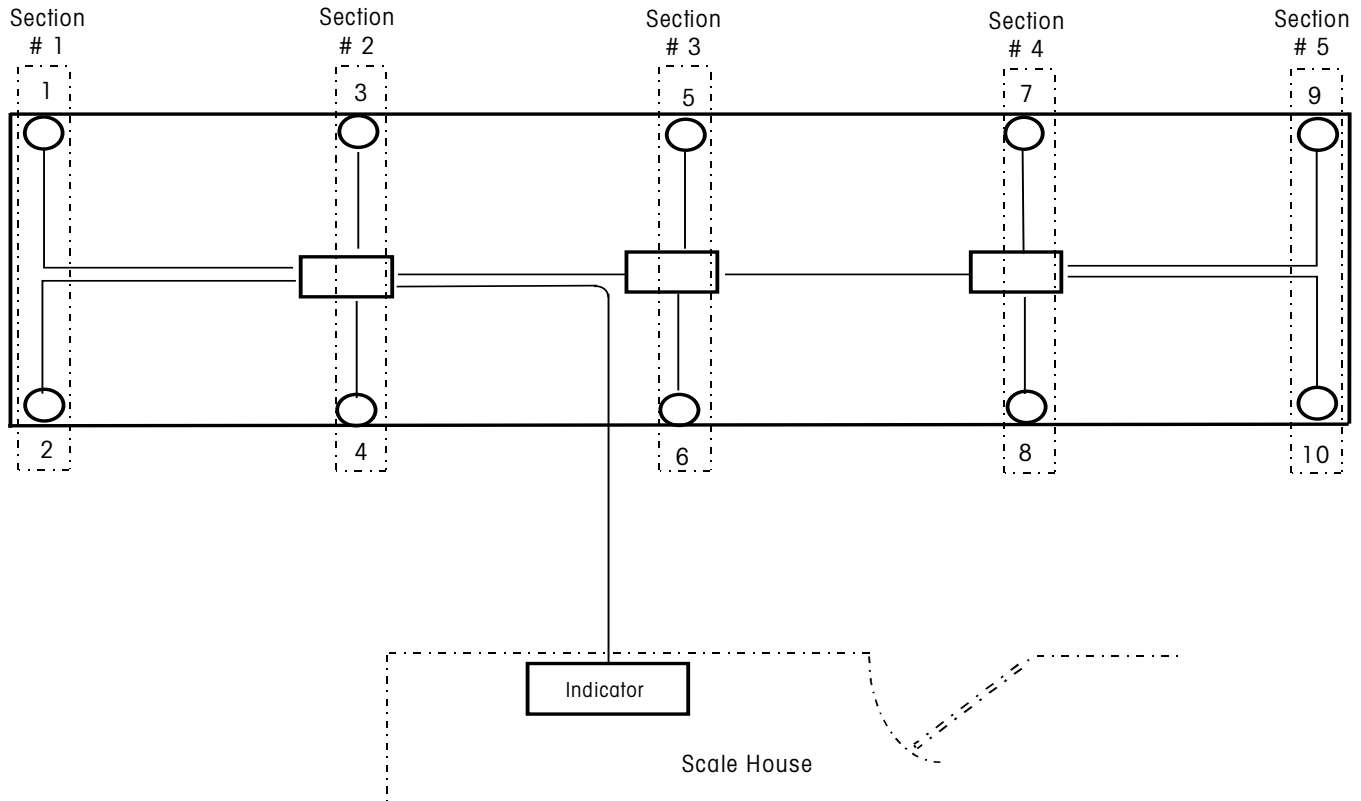


Figure 11-a: PowerCell Addressing

Raw Count Range

PowerCell Module	Module Size	Raw Counts / Concrete Deck Modules	
		Without Concrete	With Concrete
End	15 ft	1200 - 1800	7200 - 10800
End	17.5 ft	1360 - 2040	8600 - 12900
Middle	15 ft - 15 ft	2400 - 3600	14400 - 21600
Middle	15 ft - 17.5 ft	2560 - 3840	15800 - 23700
Middle	17.5 ft - 17.5 ft	2720 - 4080	17200 - 25800

PowerCell Specifications

Model 0760

- NTEP (National Type Evaluation Program) Certificate of Conformance Number: 88-091 A3 for Class IIIL, n MAX: 10,000 devices.
- Vmin = 3.1 lb (22,500 kg)
- Capacity: 22,500 kg/49,604 lb (50k)
- Material: Stainless Steel
- Environmental Protection: Hermetically Sealed (NEMA 6P)
- Output: Mettler Toledo DigiTOL Protocol

Service Parts

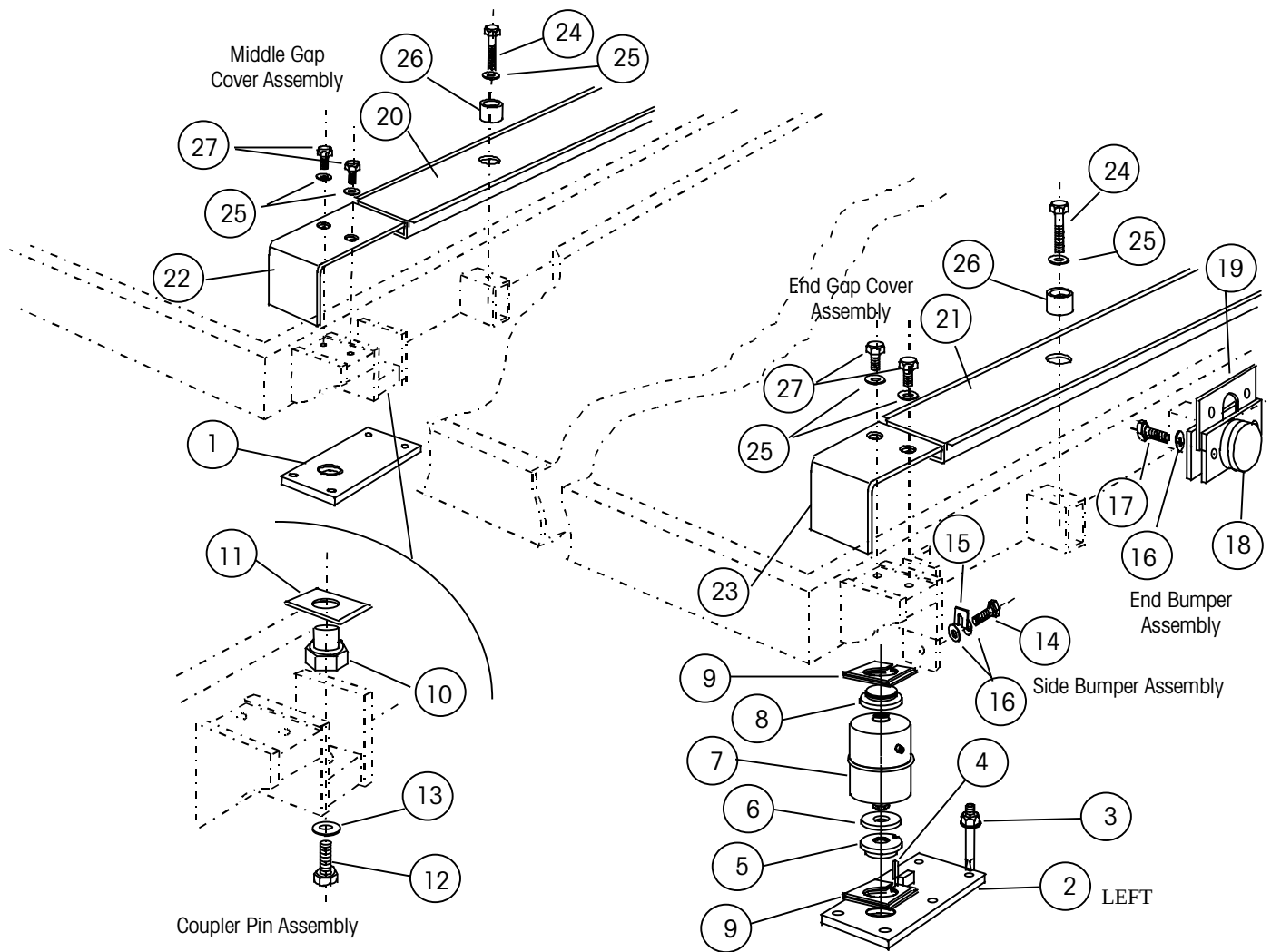


Figure 11-b: Model 7560 DigiTOL Truckmate

Ref. No.	Part Number	Description	Qty
1	TA200937-2	Base Plate	varies
Ref.	TA200937-3	Left Bumper Base Plate (Shown)	2
	TA200937-4	Right Bumper Base Plate	2
	TB200930-2	Dual Base Plate (Ref. Multiple Platform Scale)	
3	TN203216	3/4 - 10 Anchor Bolt x 6" Lg. Ref.: (5) per TA200937-3 or (3) per TA200937-2	varies
4	MZ0904000063	1/2" Roll Pin	varies
5	TA200814	Lower Hex. Receiver	varies

METTLER TOLEDO Heavy Capacity Reference Guide

Ref. No.	Part Number	Description	Qty
6	TN203173	Gasket	varies
7	*14002500A	22.5 † DigiTOL PowerCell (CMOS)	varies
8	TA200764	Upper Receiver	varies
9	TA200712-1 TA200712-2 TA200712-3	Receiver Shim, .125" Receiver Shim, .062" Receiver Shim, .180"	varies
10	TA200865-2 TA200865-1	Octagonal Coupling Pin (per Module) Round Coupling Pin (per Module)	1 1
11	TA200864-1 TA200864-2	Coupler Shim, .125" Coupler Shim, .062"	varies
12	MZ0901010030	3/8 -16 Hex. Hd. Screw x .75" Lg. (per Module)	2
13	MZ0901030019	3/8" Washer (per Module)	2
14	MZ0901010375	5/8 -11 Side Bumper Bolt x 1.25" Lg.	4
15	TA200357-1 TA200357-2 TA200357-3	Side Bumper Shim, .125" Side Bumper Shim, .062" Side Bumper Shim, .031"	varies
16	MZ0901030062	5/8" Washer, Plain	varies
17	TN202012	5/8 -11 Hex. Hd. Bolt x 2.50" Lg.	4
18	TA200887	End Bumper Assembly	2
19	TA200856-1 TA200856-2 TA200856-3	End Bumper Shim, .250" End Bumper Shim, .125" End Bumper Shim, .062"	varies
20	TB202312-2 TB202313-2	Center Gap Cover (Concrete Deck, Middle) 11 ft wide only Center Gap Cover (Steel Deck, Middle) 11 ft wide only	varies
21	TB202312-1 TB202313-1	Center Gap Cover (Concrete Deck, End) 11 ft wide only Center Gap Cover (Steel Deck, End) 11 ft wide only	
22	TA202072-2 TA201427-2	Side Cover Concrete Deck, Middle (per Section) Side Cover Steel Deck, Middle (per Section)	2
23	TA202072-1 TA201427-1 TA201427-3	Side Cover Concrete Deck, End (per Section) Side Cover Steel Deck, End Left (per Section) Side Cover Steel Deck, End Right (per Section)	2
24	MZ0901010227	1/2-13 Bolt x 2.5" Lg. (per Center Gap Cover)	2
25	MZ0901030098	1/2" Washer (per Section)	6
26	TN202310	Sleeve (per Center Gap Cover)	2
27	MZ0901010215	1/2-13 Bolt x 1.50" Lg. (per Side Cover)	2

* May have a letter prefix

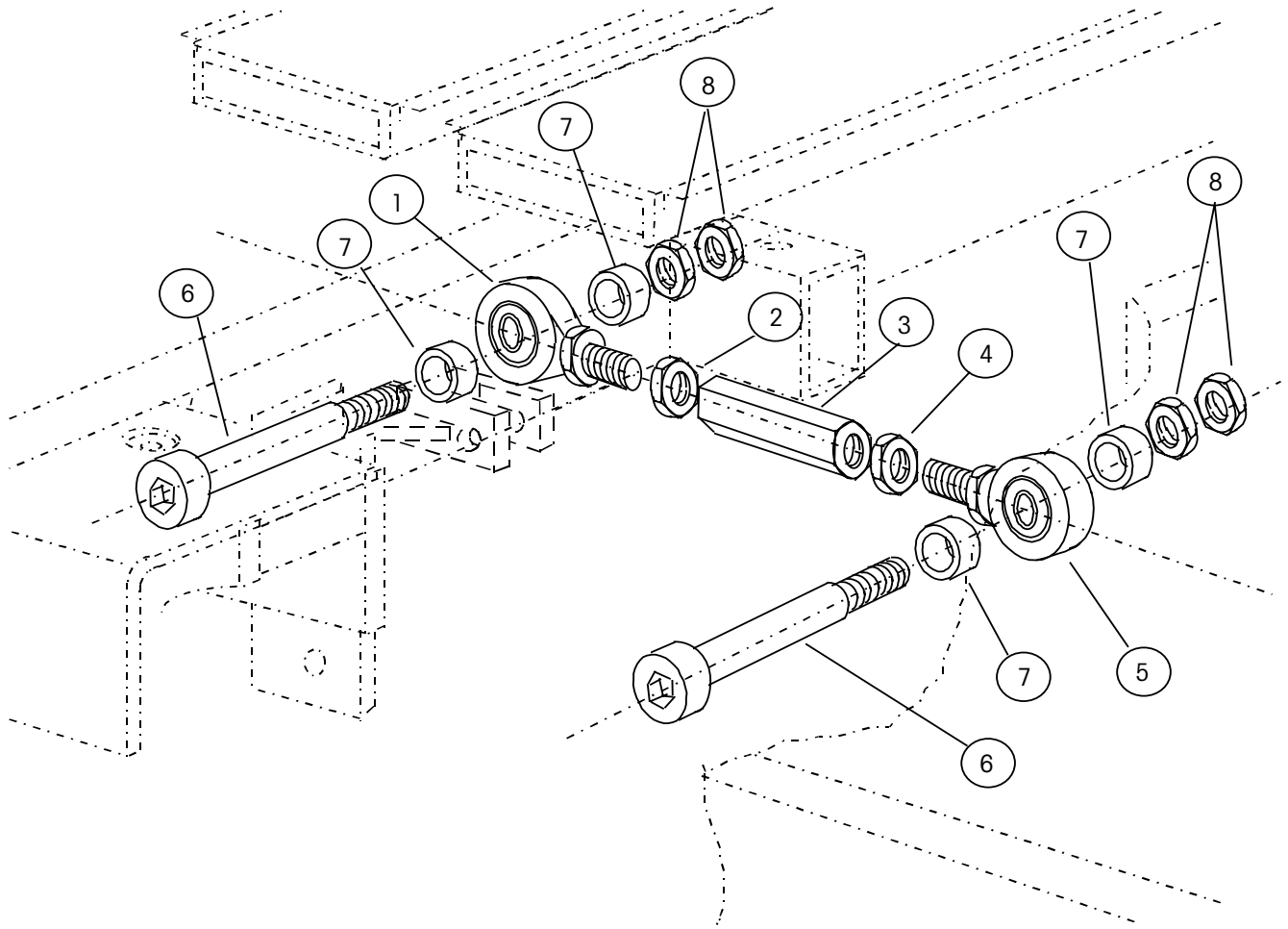


Figure 11-c: Multiple Platform Connecting Link Assembly

Ref. No.	Part Number	Description	Qty
1	MZ0901040010	Rod End Bearing, L.H.	1
2	MZ0901020069	Jam Nut, L.H.	1
3	TA200502	Coupling Block	1
4	MZ0901020038	Jam Nut, R. H.	1
5	MZ0901040009	Rod End Bearing, R. H.	1
6	MZ0901010398	Shoulder Bolt	2
7	MZ1606000002	Bushing	4
8	MZ0901020014	Jam Nut	

Reference Parts

Ref. No.	Part Number	Description
1	TA200831	Locating Tool
2	TB202627	Connector Cleaner
3	TN203056	Connector Dielectric Compound
4	MZ0602000117	Loctite #242
5	TN203218	Touchup Paint Gray
6	TN203217	PowerCell/ Receiver Lubrication
7	TB100445	Junction Box Assembly CMOS (5 Hole)
8	TB100446	Junction Box Assembly CMOS (6 Hole)
9	TB100447	Junction Box Assembly CMOS (7 Hole)
10	13635300A	Junction Box PCB CMOS
11	TA000110-022	Interconnection Cable x 22 ft Lg.
12	TA000088-008	PowerCell Cable x 8 ft Lg.
13	TA000088-026	PowerCell Cable x 26 ft Lg.
14	TB100439	Surge Protector, 120 VAC
15	TA100532	Surge Protector, 240 VAC
16	09170198	Dual Barrier Box
17	TA000123-006	Barrier to Indicator Cable x 6 ft Lg.
18	09170168	Auxiliary Power Supply, 120 VAC
19	09170169	Auxiliary Power Supply, 240 VAC

12

7562 DigiTOL Truckmate Scale

Model 7562

Service Manual No. IS 007562 I01

The Model 7562 DigiTOL TRUCKMATE is a 55K tandem axle capacity steel deck truck scale. The Model 7562 is designed to meet or exceed the Class III, 10,000 division accuracy requirements in accordance with the National Institute of Standards and Technology (NIST) Handbook 44. A Certificate of Conformance, Number 93-108, was issued under the National Type Evaluation Program (NTEP) of the National Conference on Weights and Measures.

The Model 7562 is assembled from 11' wide modules that are 15' or 17'-6" long. The gross capacity is up to 200,000 lb and the dual tandem axle capacity is 55,000 lb.

Total Capacity	Scale Length	Number of Cells	Programmed Capacity	Increment Size
*60 Ton	Less Than 60 ft	4 or 6	120,000	20
*100 Ton	Larger Than or Equal to 60 ft	≥ 8	200,000	20

* Check serial plate on scale for total capacity

Foundations

Note: Foundation concrete to contain 5-7% air entrainment and concrete to reach a minimum of 3,000 PSI compressive strength at 28 days.

Foundations for the Model 7562 truck scale are available in three (3) types of designs:

1. Floating Beam Slab (1,500 lb per sq. ft min. soil bearing pressure)
2. Separate, Adjustable Depth Footer (2,500 lb per sq. ft min. soil bearing pressure)
3. Pit, 2 ft or 4 ft clearance options (2,000 lb per sq. ft min. soil bearing pressure)

Module Weights

Approximate Module Weight		
Module Type	Module 15 ft	Module 17.5 ft
Steel	5,300 lb	6,200 lb

PowerCell Addressing

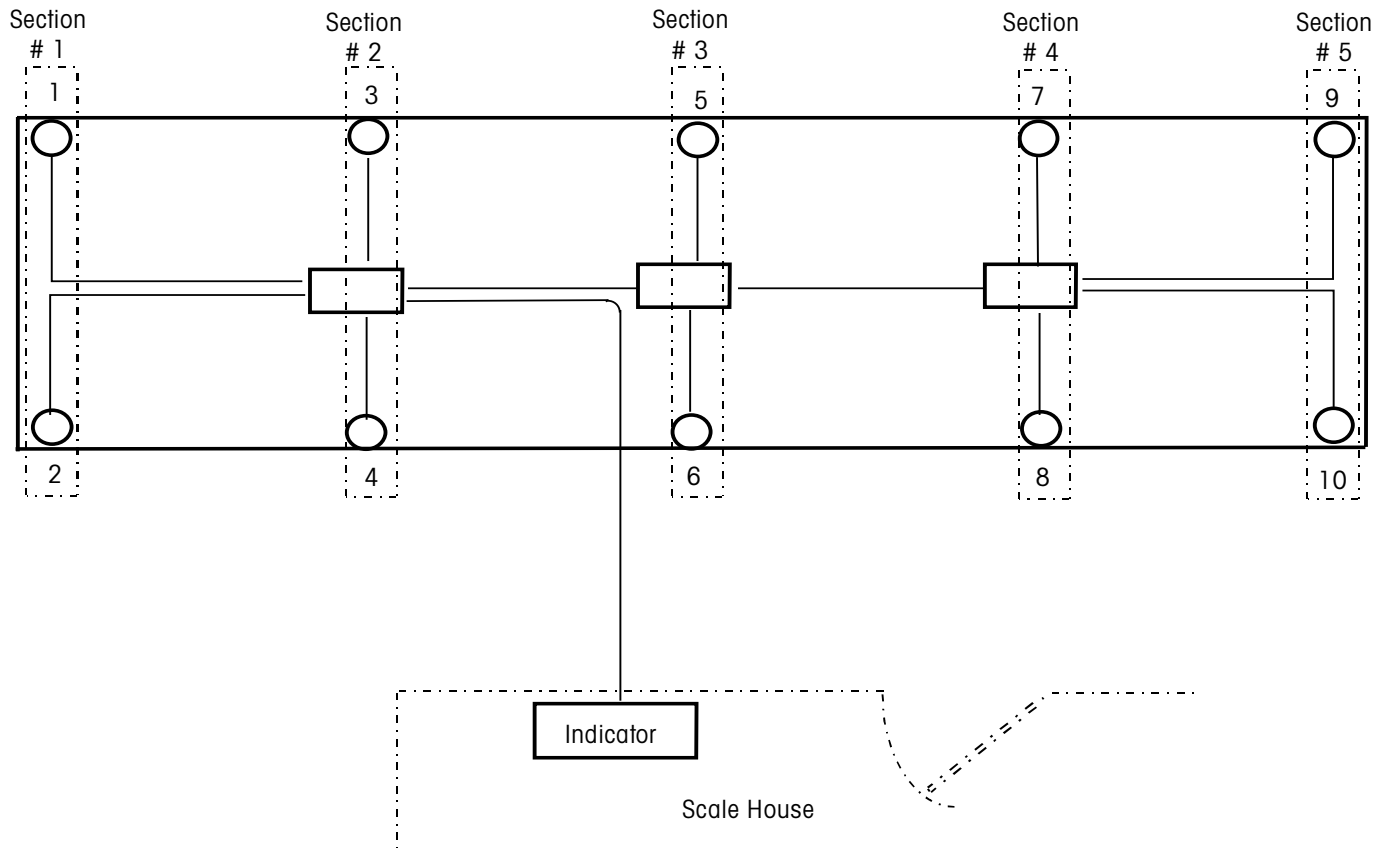


Figure 12-a: PowerCell Locations

Raw Count Range

PowerCell	Module Size	Raw Counts
End	15 ft	2400 - 2900
End	17.5 ft	2900 - 3600
Middle	15 ft - 15 ft	4800 - 5800
Middle	15 ft - 17.5 ft	5300 - 6500
Middle	17.5 ft - 17.5 ft	5800 - 7200

PowerCell Specifications

Model 0760

- NTEP (National Type Evaluation Program) Certificate of Conformance Number: 88-091 A3 for Class IIIL, n MAX: 10,000 devices.
- Vmin = 3.1 lb (22,500 kg)
- Capacity: 22,500 kg/49,604 lb (50k)
- Material: Stainless Steel
- Environmental Protection: Hermetically Sealed (NEMA 6P)
- Output: Mettler Toledo DigiTOL Protocol

Service Parts

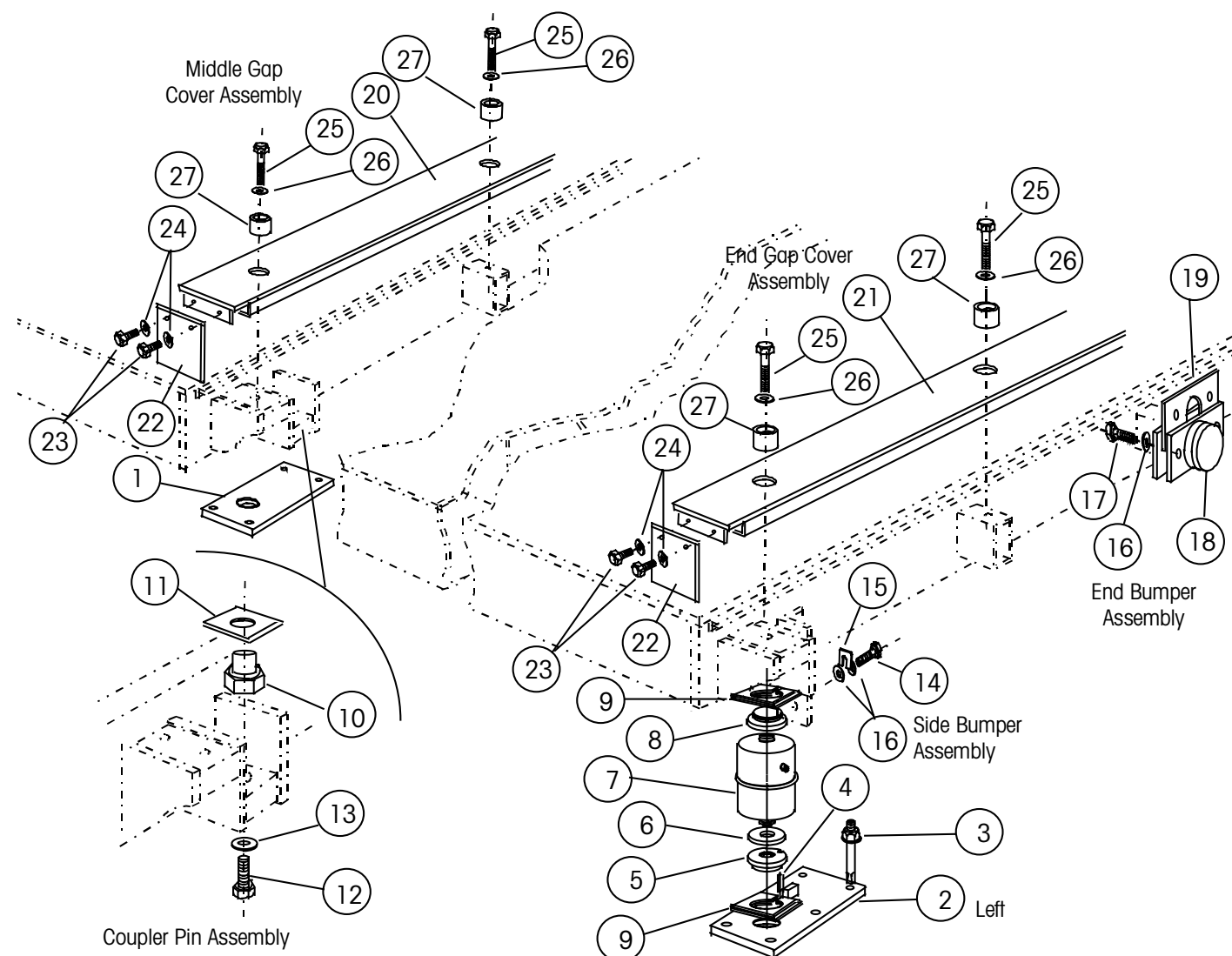


Figure 12-b: Model 7562 DigiTOL Truckmate

Ref. No.	Part Number	Description	Qty
1	TA200937-2	Base Plate	varies
2	TA200937-3	Left Bumper Base Plate (Shown)	2
	TA200937-4	Right Bumper Base Plate	2
3	TN203216	3/4 -10 Anchor Bolt x 6" Lg. Ref.: (5) per TA200937-3 or (3) per TA200937-2	varies
4	MZ0904000063	1/2" Roll Pin	varies
5	TA200814	Lower Hex. Receiver	varies

METTLER TOLEDO Heavy Capacity Reference Guide

Ref. No.	Part Number	Description	Qty
6	TN203173	Gasket	varies
7	*14002500A	22.5 † DigiTOL PowerCell (CMOS)	varies
8	TA200764	Upper Receiver	varies
9	TA200712-1 TA200712-2 TA200712-3	Receiver Shim, .125" Receiver Shim, .062" Receiver Shim, .180"	varies
10	TA200865-2 TA200865-1	Octagonal Coupling Pin (per Module) Round Coupling Pin (per Module)	1 1
11	TA200864-1 TA200864-2	Coupler Shim, .125" Coupler Shim, .062"	varies
12	MZ0901010030	3/8 -16 Hex. Hd. Screw x .75" Lg. (per Module)	2
13	MZ0901030019	3/8" Washer (per Module)	2
14	MZ0901010375	5/8 -11 Side Bumper Bolt x 1.25" Lg.	4
15	TA200357-1 TA200357-2 TA200357-3	Side Bumper Shim, .125" Side Bumper Shim, .062" Side Bumper Shim, .031"	varies
16	MZ0901030062	5/8" Washer, Plain	varies
17	TN202012	5/8 - 11 Hex. Hd. Bolt x 2.50" Lg.	4
18	TA200887	End Bumper Assembly	2
19	TA200856-1 TA200856-2 TA200856-3	End Bumper Shim, .250" End Bumper Shim, .125" End Bumper Shim, .062"	varies
20	TA202173	Center Gap Cover, 11 ft wide only	varies
21	TA202174	End Gap Cover, 11 ft wide only	2
22	TA202172	Side Cover (per Section)	2
23	MZ0901010030	3/8-16 Hex. Hd. Screw x .75" Lg. (per Side Cover)	2
24	MZ0901030019	3/8" Washer (per Side Cover)	2
25	MZ0901010330	1/2 -13 Bolt x 3.00" Lg. (per Section)	4
26	MZ0901030098	1/2" Washer (per Section)	4
27	TN202399	Sleeve (per Section)	4

* May have a letter prefix

Reference Parts

Item	Part Number	Description
1	TA200831	Locating Tool
2	TB202627	Connector Cleaner
3	TN203056	Connector Dielectric Compound
4	MZ0602000117	Loctite #242
5	TN203218	Touchup Paint Gray
6	TN203217	PowerCell / Receiver Lubrication
7	TB100445	Junction Box Assembly CMOS (5 Hole)
8	TB100446	Junction Box Assembly CMOS (6 Hole)
9	TB100447	Junction Box Assembly CMOS (7 Hole)
10	13635300A	Junction Box PCB CMOS
11	TA000110-022	Interconnection Cable x 22 ft Lg.
12	TA000088-008	PowerCell Cable x 8 ft Lg.
13	TA000088-026	PowerCell Cable x 26 ft Lg.
14	TB100439	Surge Protector, 120 VAC
15	TA100532	Surge Protector, 240 VAC
16	09170198	Dual Barrier Box
17	TA000123-006	Barrier to Indicator Cable x 6 ft Lg.
18	09170168	Auxiliary Power Supply, 120 VAC
19	09170169	Auxiliary Power Supply, 240 VAC

13

7563 DigiTOL Truckmate Scale

Model 7563

Service Manual No. *14852000A
(* May have letter prefix)

The Model 7563 DigiTOL TRUCKMATE is a 80K tandem axle capacity steel deck truck scale. The Model 7563 is designed to meet or exceed the Class III, 10,000 division accuracy requirements in accordance with the National Institute of Standards and Technology (NIST) Handbook 44. A Certificate of Conformance, Number 96-092, was issued under the National Type Evaluation Program (NTEP) of the National Conference on Weights and Measures.

The Model 7563 is assembled from 10' wide modules that are 15' or 17'-6" long. The gross capacity is up to 200,000 lb and the dual tandem axle capacity is 80,000 lb.

Total Capacity	Scale Length	Number of Cells	Programmed Capacity	Increment Size
*60 Ton	< 60 ft	4 or 6	120,000	20
*100 Ton	≥60 ft, ≤ 122 ft - 6 in	≥ 8, ≤ 16	200,000	20
	> 122 ft - 6 in	>16		50

* Check serial plate on scale for total capacity

Foundations

Note: Foundation concrete to contain 5-7% air entrainment and concrete to reach a minimum of 3,000 PSI compressive strength at 28 days.

Foundations for the Model 7563 truck scale are available in two (2) types of designs:

1. Floating Beam Slab (1,500 lb per sq. ft min. soil bearing pressure)
2. Separate, Adjustable Depth Footer (2,500 lb per sq. ft min. soil bearing pressure)

Module Weights

Approximate Module Weight		
Module Type	Module 15 ft	Module 17.5 ft
Steel	5,700 lb	6,600 lb

PowerCell Addressing

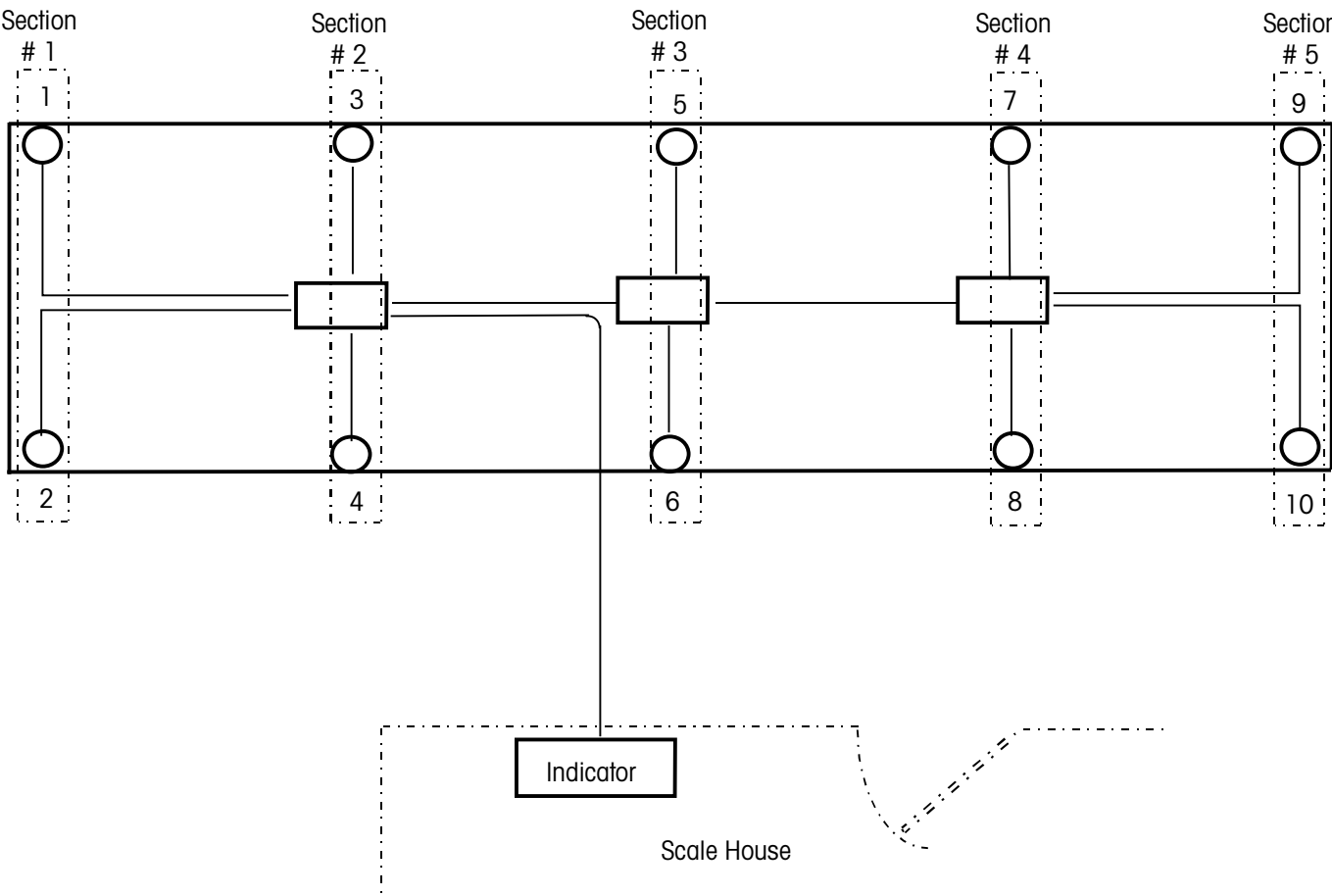


Figure 13-a: PowerCell Locations

Raw Count Range

PowerCell	Module Size	Raw Counts
End	15 ft	2400 - 2900
End	17.5 ft	2900 - 3600
Middle	15 ft - 15 ft	5600 - 6600
Middle	15 ft - 17.5 ft	6100 - 7300
Middle	17.5 ft - 17.5 ft	6400 - 8000

PowerCell Specifications

Model 0760

- NTEP (National Type Evaluation Program) Certificate of Conformance Number: 88-091 A2 for Class IIIL, n MAX: 10,000 devices.
- Capacity: 45,000 kg/ 99,202 lb (100k)
- Material: Stainless Steel
- Environmental Protection: Hermetically Sealed (NEMA 6P)
- Output: Mettler Toledo DigiTOL Protocol

Service Parts

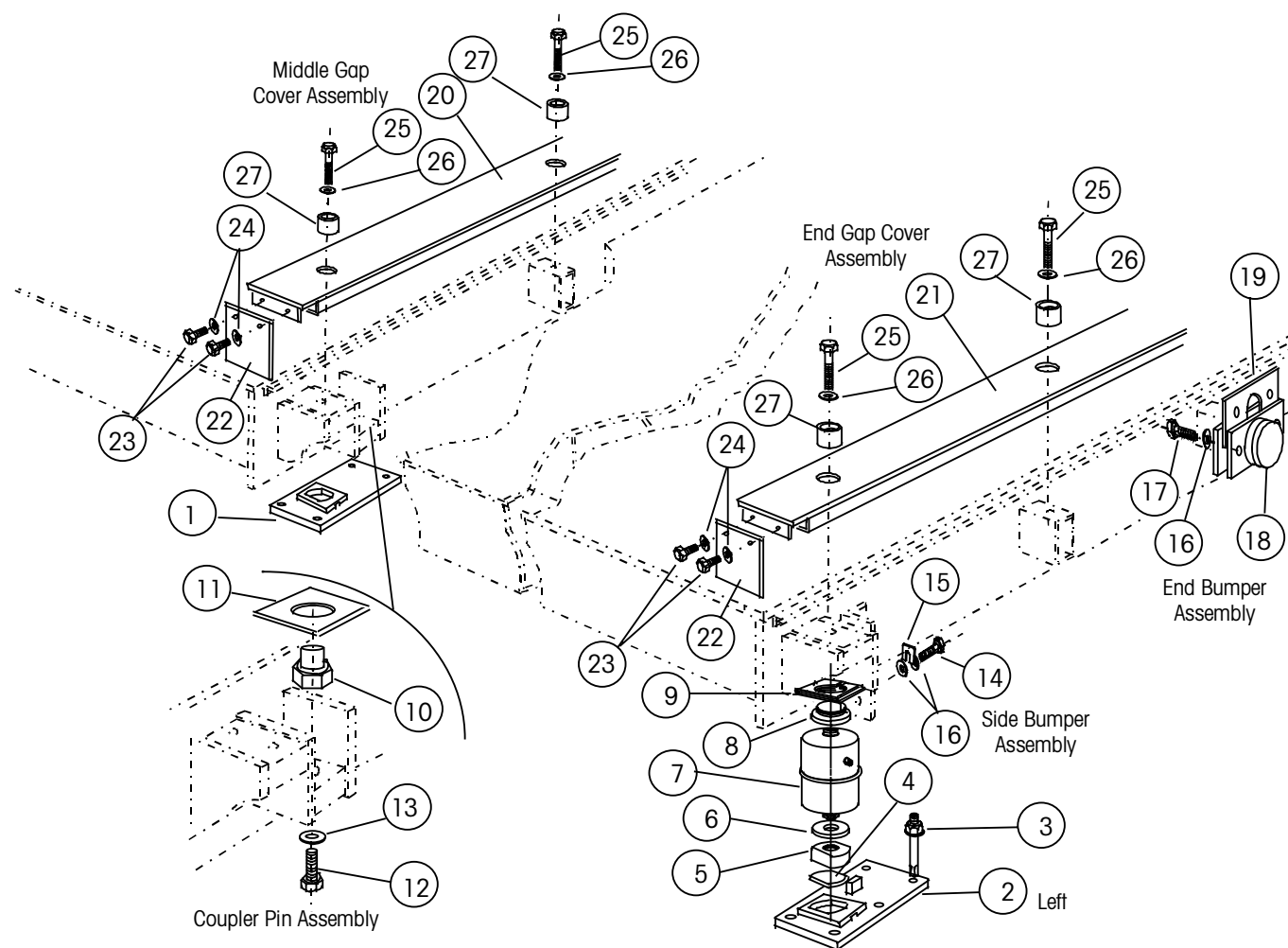


Figure 13-b: Model 7563 DigiTOL Truckmate

Ref. No.	Part Number	Description	Qty
1	TA203076-2	Base Plate	varies
2	TA203076-3	Left Bumper Base Plate (Shown)	2
	TA203076-4	Right Bumper Base Plate	2
3	TN203216	3/4-10 Anchor Bolt x 6" Lg. Ref.: (5) per TA200937-3 or 4 (3) per TA200937-2	varies
4	TN202993-2	Bottom Receiver Shim, 11 Ga.	varies
	TN202993-3	Bottom Receiver Shim, 16 Ga.	varies
5	TA202695	Lower Hex. Receiver	varies
6	TN203173	Gasket	varies
7	*14002900A	45 † DigiTOL PowerCell (CMOS)	varies

Ref. No.	Part Number	Description	Qty
8	TA200835	Upper Receiver w/ O-ring	varies
9	TA200833-1 TA200833-2 TA200833-3	Receiver Shim, .125" Receiver Shim, .062" Receiver Shim, .180"	varies
10	TA202743-2 TA202743-1	Octagonal Coupling Pin (per Module) Round Coupling Pin (per Module)	1 1
11	TA202990-2	Coupler Shim, 0.062 in.	varies
12	MZ0901010441	1/2-13 Hex. Hd. Screw x 2.00" Lg. (per Module)	2
13	MZ0901030098	1/2" Washer (per Module)	2
14	MZ0901010375	5/8 -11 Side Bumper Bolt x 1.25" Lg.	4
15	TA200357-1 TA200357-2 TA200357-3	Side Bumper Shim, .125" Side Bumper Shim, .062" Side Bumper Shim, .031"	varies
16	MZ0901030062	5/8" Washer, Plain	varies
17	TN202012	5/8 -11 Hex. Hd. Bolt x 2.50" Lg.	4
18	TA200887	End Bumper Assembly	2
19	TA200856-1 TA200856-2 TA200856-3	End Bumper Shim, .250" End Bumper Shim, .125" End Bumper Shim, .062"	varies
20	TA202689	Middle Gap Cover, 10 ft wide scales	varies
21	TA202690	End Gap Cover, 10 ft wide scale	2
22	TA202688	Side Cover, (per Section)	2
23	MZ0901010030	3/8-16 Hex. Hd. Screw x .75" Lg. (per Side Cover)	2
24	MZ0901030019	3/8" Washer (per Side Cover)	2
25	MZ0901010362	3/4 -10 Bolt x 3.00" Lg. (per Section)	4
26	MZ0901030096	3/4" Washer (per Section)	4
27	TN202699	Sleeve (per Section)	4

* May have a letter prefix

Reference Parts

Item	Part Number	Description
1	TA200831	Locating Tool
2	TB202627	Connector Cleaner
3	TN203056	Connector Dielectric Compound
4	MZ0602000117	Loctite #242
5	TN203218	Touchup Paint
6	TN203217	Powercell / Receiver Lubrication
7	TB100445	Junction Box Assembly CMOS (5 Hole)
8	TB100446	Junction Box Assembly CMOS (6 Hole)
	TB100447	Junction Box Assembly CMOS (7 Hole)
	13635300A	Junction Box PCB CMOS
	TA000110-022	Interconnection Cable x 22 ft Lg.
	TA000088-008	Powercell Cable x 8 ft Lg.
	TA000088-026	Powercell Cable x 26 ft Lg.
	TB100439	Surge Protector, 120 VAC
	TA100532	Surge Protector, 240 VAC
	09170198	Dual Barrier Box
	TA000123-006	Barrier to Indicator Cable x 6 ft Lg.
	09170168	Auxiliary Power Supply, 120 VAC
	09170169	Auxiliary Power Supply, 240 VAC

14

7565 DigiTOL HD Heavy Duty Truckmate Scale

Model 7565

Service Manual No.
IS 007565HD I01

The Model 7565 DigiTOL TRUCKMATE HD is a heavy capacity steel deck truck scale. The Model 7565 is designed to meet or exceed the Class IIIIL, 10,000 division accuracy requirements in accordance with the National Institute of Standards and Technology (NIST) Handbook 44. A Certificate of Conformance, Number 96-036, was issued under the National Type Evaluation Program (NTEP) of the National Conference on Weights and Measures.

The Model 7565 is assembled from 10' wide modules that are 10', 15' or 17'-6" long. The gross capacity is up to 200,000 lb and CLC of 100,000 and 120,000 lb.

Total Capacity	Number of Cells	Programmed Capacity	Increment Size
*100 Ton	10 or less	200,000	20

* Check serial plate on scale for total capacity

Foundations

Note: Foundation concrete to contain 5-7% air entrainment and concrete to reach a minimum of 3,000 PSI compressive strength at 28 days.

Foundations for the Model 7565 truck scale are available in two (2) types of designs:

1. Floating Beam Slab (2,500 lb per sq. ft min. soil bearing pressure)
2. High Clearance Beam Slab (2,500 lb per sq. ft min. soil bearing pressure)

Module Weights

Approximate Module Weight		
Module Type	Module 15 ft	Module 17.5 ft
Steel	6,600 lb	7,500 lb

PowerCell Addressing

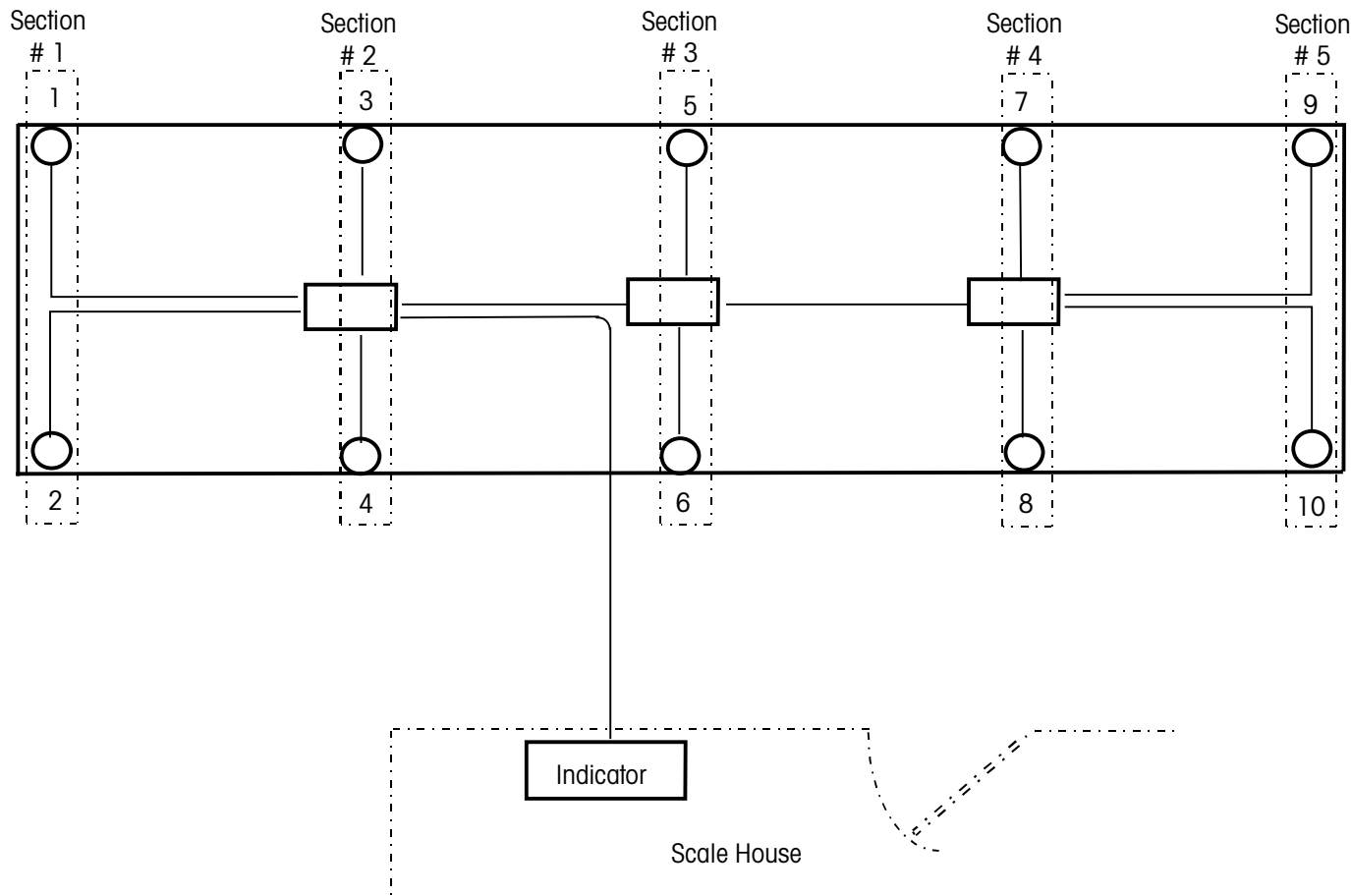


Figure 14-a: PowerCell Locations

Raw Count Range

PowerCell	Module Size	Raw Counts
End	15 ft	1320 - 1980
End	17.5 ft	1500 - 2250
Middle	15 ft - 15 ft	2640 - 3960
Middle	15 ft - 17.5 ft	2825 - 4225
Middle	17.5 ft - 17.5 ft	3000 - 4500

PowerCell Specifications

Model 0760

- NTEP (National Type Evaluation Program) Certificate of Conformance Number: 88-091 A2 for Class IIIL, n MAX: 10,000 devices.
- Capacity: 45,000 kg/ 99,202 lb (100k)
- Material: Stainless Steel
- Environmental Protection: Hermetically Sealed (NEMA 6P)
- Output: Mettler Toledo DigiTOL Protocol

Service Parts

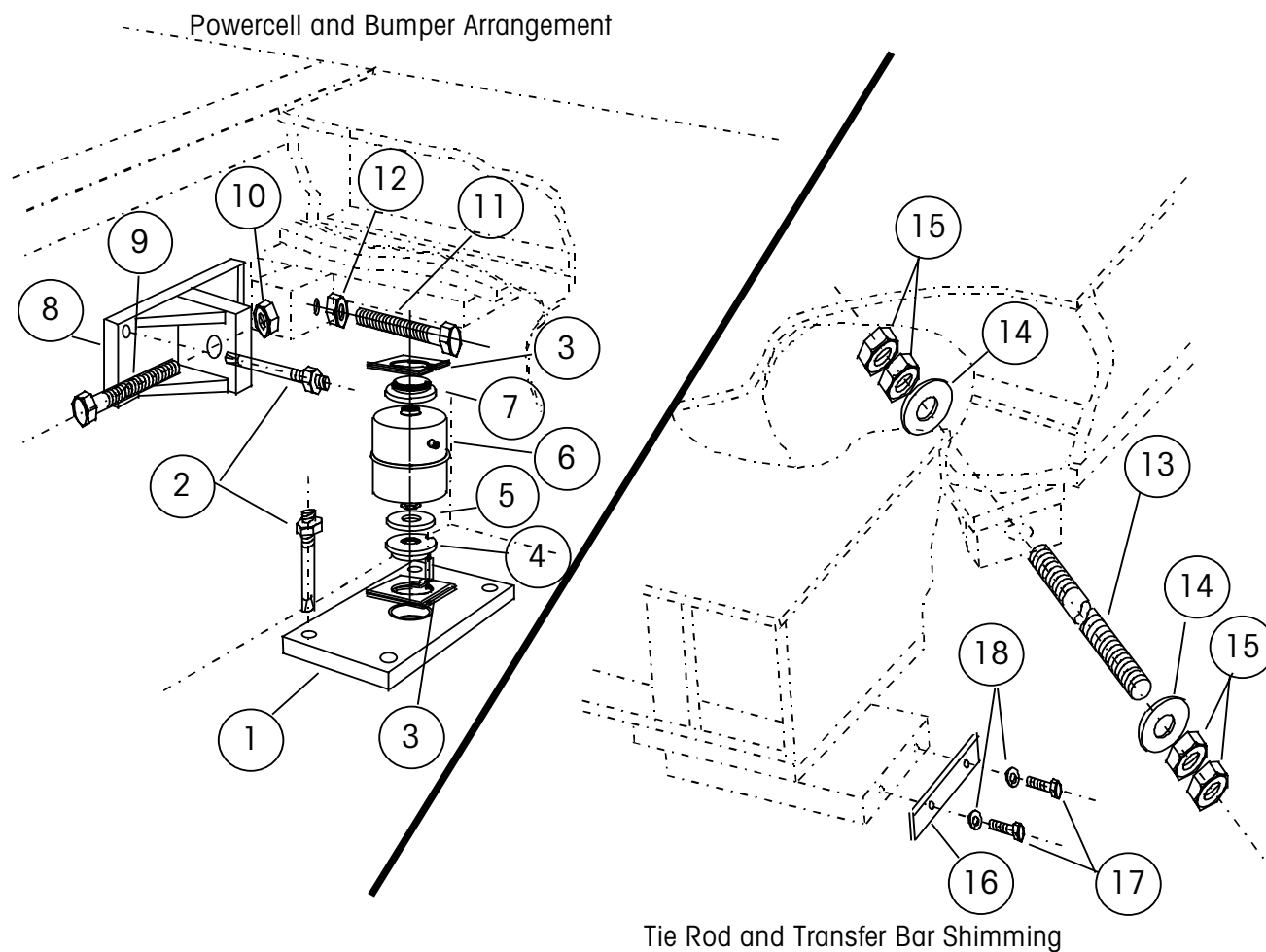


Figure 14-b: Model 7565 DigiTOL Truckmate

Ref. No.	Part Number	Description	Qty
1	TA200836	Base Plate	varies
2	MZ0901010349	7/8" - 9 Anchor Bolt x 8" Lg. (per Base Plate)	4
		(per Side Bumper Bracket)	4
3	TA200833-1	Receiver Shim, .180"	varies
	TA200833-2	Receiver Shim, .060"	
	TA200833-3	Receiver Shim, .120"	
4	TA200830	Lower Hex. Receiver	varies
5	TN203216	Gasket	varies
6	*14002900A	45 † DigiTOL PowerCell (CMOS)	varies

Ref. No.	Part Number	Description	Qty
7	TA200835	Upper Receiver w/ O-ring	varies
8	TB201498-10	Side Bumper Bracket	4
9	TA200923	1 ¼" - 7 Side Bumper Bolt x 10" Lg. Gr. 8	4
10	MZ0901020068	1 ¼" - 7 Nut	4
11	TA201606	1 ½" - 6 End Bumper Bolt x 10" Lg. Gr. 8	4
12	MZ0901020064	1 ½" - 6 Jam Nut	4
13	MZ0901050005	1 ½" - 6 Tie Rod x 3'-0" Lg.	varies
14	MZ0901030002	1 ½" Washer (per Tie Rod)	2
15	MZ0901020064	1 ½" Jam Nut (per Tie Rod)	4
16	TA200719-1 TA200719-2 TA200719-3 TA200719-4	Coupler Side Shim, .250" Coupler Side Shim, .180" Coupler Side Shim, .125" Coupler Side Shim, .062"	varies
17	MZ0901030047	3/8" Lock Washer (per Coupler)	2
18	MZ0901010032	3/8" - 16 Hex. Hd. Bolt x 1 "Lg. (per Coupler)	2

* May have a letter prefix

Reference Parts

Ref. No.	Part Number	Description
1	TA200831	Locating Tool
2	TB202627	Connector Cleaner
3	TN203056	Connector Dielectric Compound
4	MZ0602000117	Loctite #242
5	TN203217	PowerCell/ Receiver Lubrication
6	TB100445	Junction Box Assembly CMOS (5 Hole)
7	TB100446	Junction Box Assembly CMOS (6 Hole)
8	TB100447	Junction Box Assembly CMOS (7 Hole)
9	13635300A	Junction Box PCB CMOS
10	TA000110-022	Interconnection Cable x 22 ft Lg.
11	TA000088-008	PowerCell Cable x 8 ft Lg.
12	TA000088-026	PowerCell Cable x 26 ft Lg.
13	TA000088-035	PowerCell Cable x 35 ft Lg.
14	TB100439	Surge Protector, 120 VAC
15	TA100532	Surge Protector, 240 VAC
16	09170198	Dual Barrier Box
17	TA000123-006	Barrier to Indicator Cable x 6 ft Lg.
18	09170168	Auxiliary Power Supply. 120 VAC
19	09170169	Auxiliary Power Supply. 240 VAC

15

EZ-Clean Vertex Pit Type Floor Scales

Model 2158 and 2160 EZ-Clean

Service Manual No. A14604400A

Model 2158 EZ-Clean is an 2158 analog scale platform which meets Class III 5000 division accuracy (NTEP COC 91-097A2). Scale platform is mounted in a pit frame with a pneumatic cylinder to raise one side of the platform for complete washdown of the scale and pit.

Model 2160 EZ-Clean is an 2160 DigiTOL scale platform which meets Class III 5000 division accuracy (NTEP COC 94-010). Scale platform is mounted in a pit frame with a pneumatic cylinder to raise one side of the platform for complete washdown of the scale and pit.

Standard Sizes and Capacities		
Capacity		Standard Platform Size
lb	kg	
1,000 x 0.2	500 x 0.1*	3' x 3', 4' x 4'
2,500 x 0.5	1,000 x 0.2*	4' x 5', 4' x 6'
5,000 x 1	2,500 x 0.5	5' x 5'
10,000 x 2	5,000 x 1	4' x 4', 4' x 5', 4' x 6', 5' x 5', 5' x 7'

Standard Features

Glass bead blasted smooth Stainless Steel Deck Plate
Pneumatic cylinder with self deploying safety feature
Stainless Steel Pneumatic Control Package

Load Cell Data

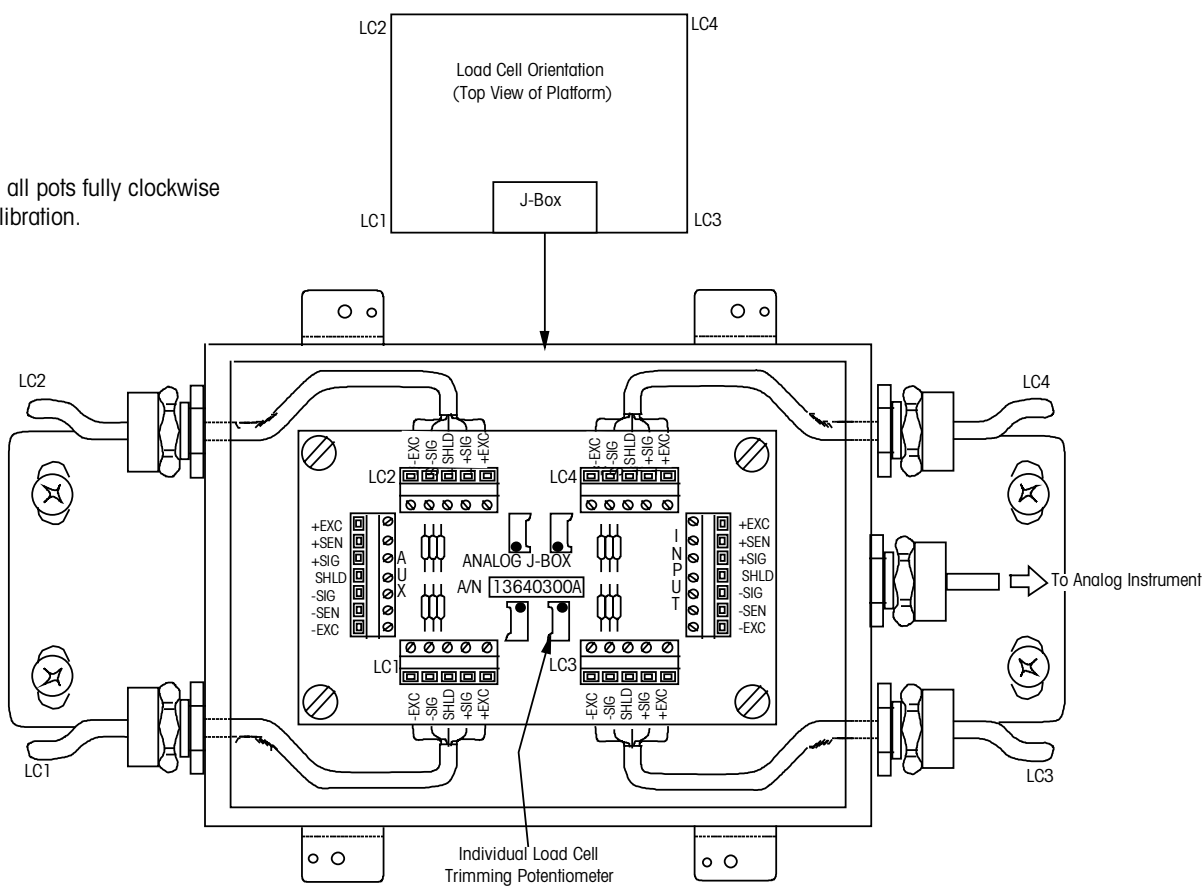
Model 745

- NTEP Certificate of Conformance number: 92-108
- Maximum excitation voltage: 15 VDC or VAC rms
- Full scale output: 2 mV/V
- Input terminal resistance: 350 Ohm minimum
- Output terminal resistance: 350 ± 2 Ohms
- Temperature range compensation: $-10\text{ }^{\circ}\text{C}$ to $+40\text{ }^{\circ}\text{C}$ ($+14\text{ }^{\circ}\text{F}$ to $+104\text{ }^{\circ}\text{F}$)
- Safe side load: 100% of full load cell rating
- Safe overload: 150% of full load cell rating

2158 Analog Vertex®

The 2158 Vertex uses an analog junction box for summing the load cell outputs. Only analog compatible indicators will work with the 2158 Vertex. The correct cable connection can be seen below.

Note: Turn all pots fully clockwise prior to calibration.



Load Cell Wiring		Instrument Cable Wiring	
Function	Color	Function	Color
+ Excitation	Green	+Excitation	White
+ Sense	Not Used	+ Sense	Yellow
+ Signal	White	+ Signal	Green
Shield	Yellow	Shield	Orange
-Signal	Red	-Signal	Black
-Sense	Not Used	-Sense	Red
-Excitation	Black	-Excitation	Blue

(Based On Mettler Toledo Cable Number 510624370)

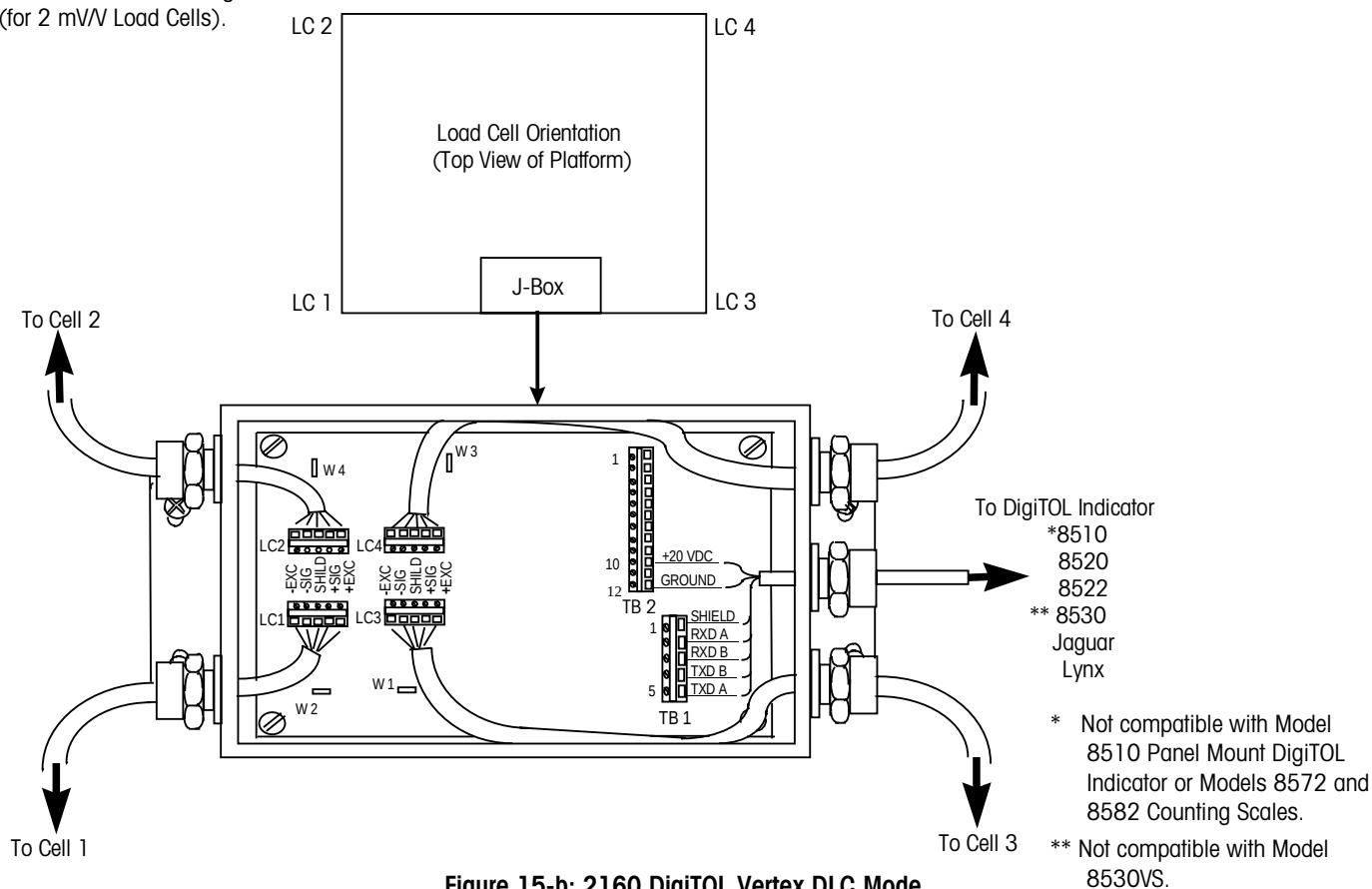
Figure 15-a: 2158 Vertex Analog Junction Box and Load Cell Connections

2160 DigiTOL Vertex DLC mode

Note: Model 2160 is not compatible with the model 8510 panel mount indicator or models 8572 or 8582 counting scales.

Note: Jumpers W1, W2, W3 and W4 must be "IN" shorting pins (for 2 mV/V Load Cells).

The 2160 uses a DigiTOL junction box for summing the load cell outputs. Only DigiTOL indicators will work with the 2160. In the DLC mode the indicator acts as the host for the DigiTOL junction box allowing the scale parameters to be adjusted via the indicator keypad. Cable connections can be seen below.



Terminal	Position	Function	Wire Color
TB2	10	+20 VDC	Green
TB2	12	Ground	Blue
TB1	1	Shield	Orange
TB1	2	RXD A	Red
TB1	3	RXD B	White
TB1	4	TXD B	Yellow
TB1	5	TXD A	Black

2160 DigiTOL Vertex Smart Mode

Note: Jumpers W1, W2, W3 and W4 must be "IN" shorting pins (for 2 mV/V Load Cells).

When the 2160 is used with the 8505 weight display the junction box provides the "brains" for operation and become the host for the indicator. Cable connections can be seen below.

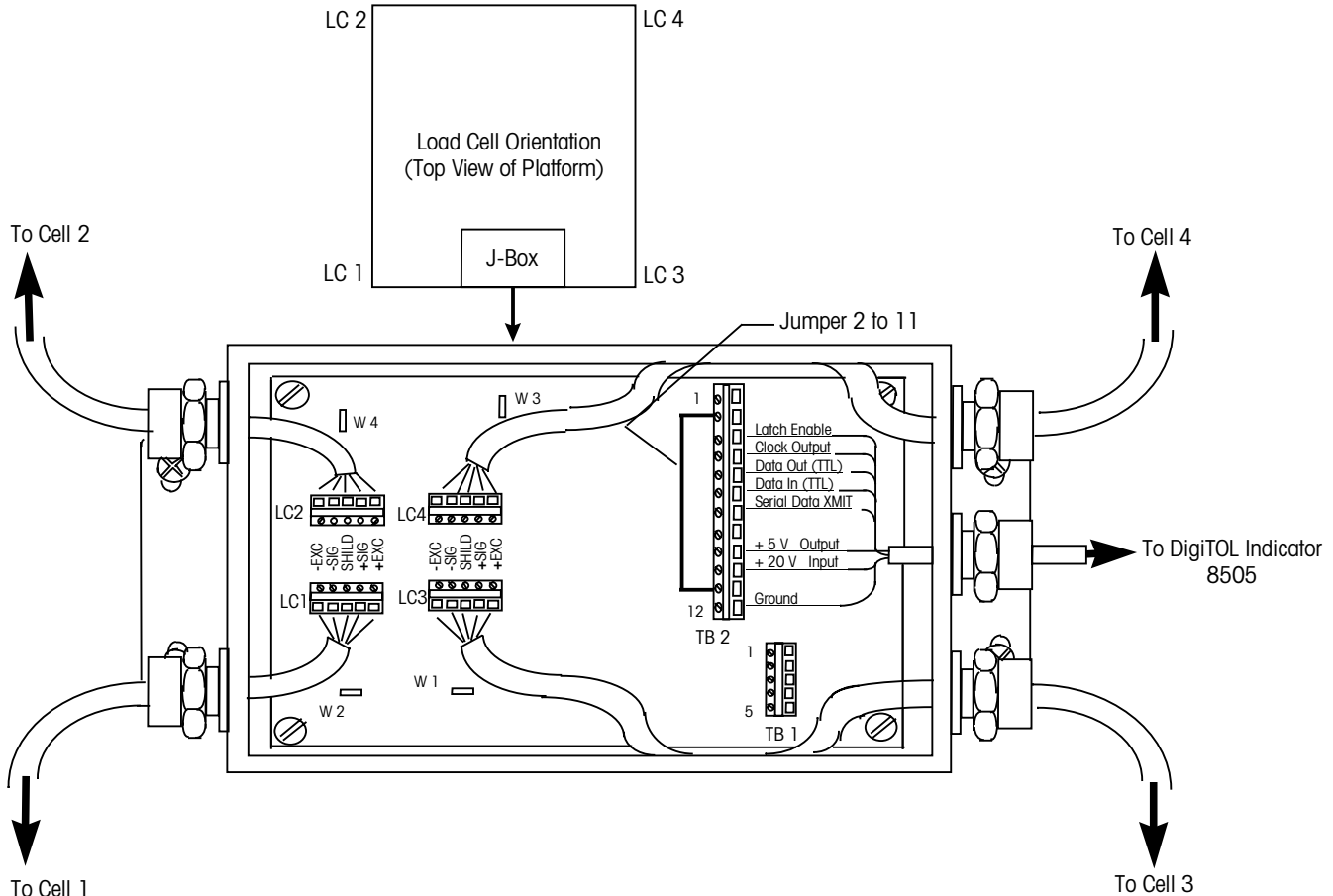


Figure 15-c: Model 2160 DigiTOL Vertex Smart Mode

Terminal No	Position	Function	Wire Color
TB2	2	Jumper to 11	
TB2	3	Latch Enable	Orange
TB2	4	Clock Output	Blue
TB2	5	Data Out (TTL)	Brown
TB2	6	Data In (TTL)	Violet
TB2	7	Serial Data XMIT	Red
TB2	8		
TB2	9	+5V Output	Yellow
TB2	10	+20 VDC	Black
TB2	11	Jumper to 2	
TB2	12	Ground	Green

Service Parts

Note: Proper overload gap:
 500 lb cell - .009" to .015"
 1250 lb cell - .012" to .018"
 2500 lb cell - .017" to .023"

*Note: Torque load cell bolts to
 100 ft-lb (1-5 K cell)

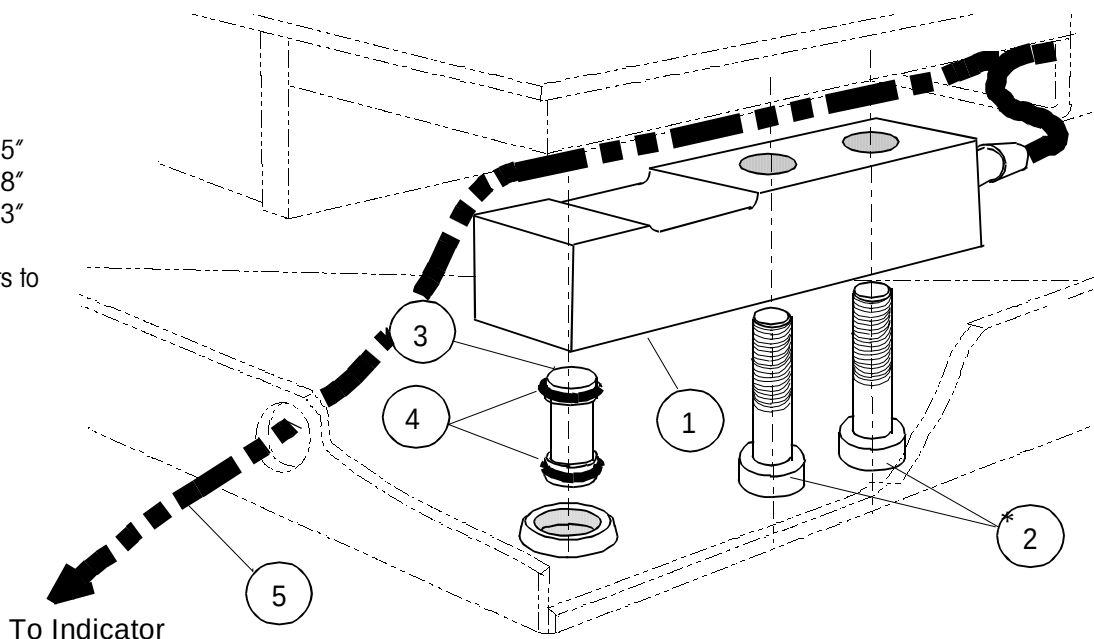


Figure 15-d: Load Cell and Rocket Pin Assembly

Ref. No.	Part Number	Description	Qty.
1	TB600529-2	500 lb load cell (5000d) with 7.5 ft. cable	4
	TB600529-3	500 lb load cell (5000d) with 15 ft. cable 5 x 7 platform ONLY	
	TB600363-1	1250 lb hermetic load cell (5000d) with 7.5 ft. cable	
	TB600363	1250 lb hermetic load cell (5000d) with 15 ft. cable 5 x 7 platform ONLY	
	TB600342	2500 lb load cell (5000d) with 15 ft. cable 5 x 7 platform ONLY	
	TB600342-1	2500 lb hermetic load cell (5000d) with 7.5 ft. cable	
	TB600343	5000 lb load cell (5000d) with 15 ft. cable 5 x 7 platform ONLY	
	TB600343-1	5000 lb hermetic load cell (5000d) with 7.5 ft. cable	
	TB600454-2	550 kg C3 R60 OIML with 7.5 ft. cable	
	TB600454	550 kg C3 R60 OIML with 15 ft. cable 5 x 7 platform ONLY	
	TB600455-2	1100 kg C3 R60 OIML with 7.5 ft. cable	
	TB600455	1100 kg C3 R60 OIML with 15 ft. cable 5 x 7 platform ONLY	
	TB600456-2	2200 kg C3 R60 OIML with 7.5 ft. cable	
	TB600456	2200 kg C3 R60 OIML with 15 ft. cable 5 x 7 platform ONLY	
2	MZ0901010333	1/2-13 bolt x 1 3/4" Lg. (.5 - 2.5k load cell)	8
	MZ0901010409	1/2-13 bolt x 2" Lg. (5k load cell)	
3	TN200050	Rocker pin (.5 - 5k load cell)	4
	MN21018	Rocker pin (5k load cell)	
4	MZ0909000005	O-ring (.5 - 5k load cell)	8
5	510624370	24 ga., 6 conductor, shielded home run cable	Varies

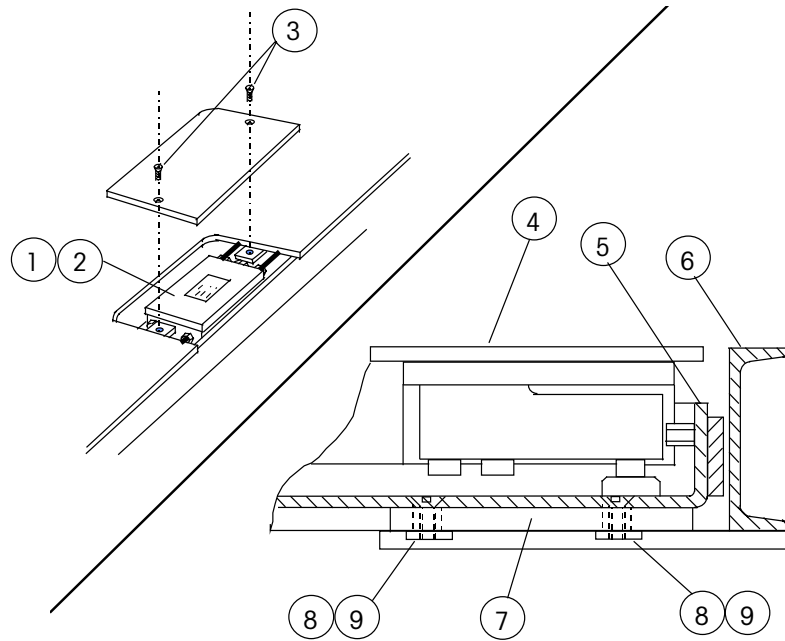


Figure 15-e: Junction Box, Mounting Hardware, and Weldments

Ref. No.	Part Number	Description	Qty.
1	TB100395 TB100515-5	Analog junction box assembly (model 2158) Ref.: *13640300A Analog PCB TA800218 Desiccant Bag DigiTOL junction box assembly (model 2160) Ref.: *13839900A DigiTOL PCB TA800218 Desiccant Bag	1
2	MZ0901010379	1/4-20 phillips head screw x 1/4" lg.	4
3	MZ0901010035	3/8 flat head screw x 3/4" lg.	2

Platform Size	Scale Capacity	Ref. No.		
		4 - Platform	5 - Pivoting Frame	6 - Outer Frame
3 x 3	1 - 5 K	TC202046-1	TB202277	TB202279
4 x 4	1 - 5 K	TC202047-1	TB202153	TB202156
4 x 5	1 - 5 K	TC202048-1	TB202281	TB202283
4 x 6	1 - 5 K	TC202049-1	TB202284	TB202286
5 x 5	1 - 5 K	TC202050-1	TB202287	TB202288
4 x 4	10 K	TC202215-1	TB202290	TB202291
4 x 5	10 K	TC202214-1	TB202292	TB202293
4 x 6	10 K	TC202213-1	TB202294	TB202295
5 x 5	10 K	TC202212-1	TB202296	TB202297
5 x 7	10 K	TC202211-1	TB202298	TB202299

10 K Scale Capacity Only			
Ref. No.	Part Number	Description	Qty.
7	TN202420	10 K Frame Spacer Plate	4
8	TN202548	Threaded Insert	8
9	MZ0901010449	1/2-13 flat head screw x 3/4" lg.	8

Ref. TN202559 S.S. Shim (Shipped loose)

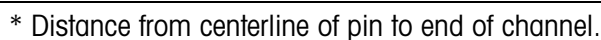


Figure 15-f: Lifting Cylinder Assembly

Ref. No.	Part Number	Description	Qty.
1	TN202398 TN202397 TN202305	3" Bore Air Cylinder SS x 12" Stroke (3 ft long platforms) 3" Bore Air Cylinder SS x 16" Stroke (4 ft long platforms) 3" Bore Air Cylinder SS x 20" Stroke (5 ft long platforms)	1
2	TA202382	Clevis, Rod End	1
3	TA202380	Cylinder Mounting Bracket	1
4	TA202388	Safety Cylinder Mounting Bracket	1
5	MZ0901010127	1/4-20 Hex. Hd. Screw SS x 1/2 "Lg.	2
6	TA202389	Clamping Collar	1
7	TN202663	5/8" Bore Air Cylinder SS x 2" Stroke	1
8	MZ0901020088	10-32 Acorn Nut SS	1
9	MZ0901020033	10-32 Nut SS	1
10	TN202381	Pin, Clevis	2
11	MZ0904000065	Pin, Hitch	4
12	TB202280 TB202386 TB202387	Support Channel (3 ft long platforms)* 14.25" Support Channel (4 ft long platforms)* 18.25" Support Channel (5 ft long platforms)* 22.25"	1
13	MZ1003000016	3/8 NTP Flow Control Valve	1
14	MZ1405000152	3/8 to 1/4 Bushing	1
15	MZ1405000151	1/4" Tube to 1/4 NPT Male Run Tee	1
16	MZ1003000015	Speed Control Muffler 3/8 NPT	1
17	MZ1405000147	Fitting, 10-32 Adjustable "L"	2
18	MZ1405000140	Fitting, 1/4" tubing to 10-32	2
19	MZ0901010447	5/8-11 Stpi;der Bp;t S/ S/ x 2 3/4: L.G.	2
20	MZ0901020025	5/8-11 Hex. Nut, S. S.	4

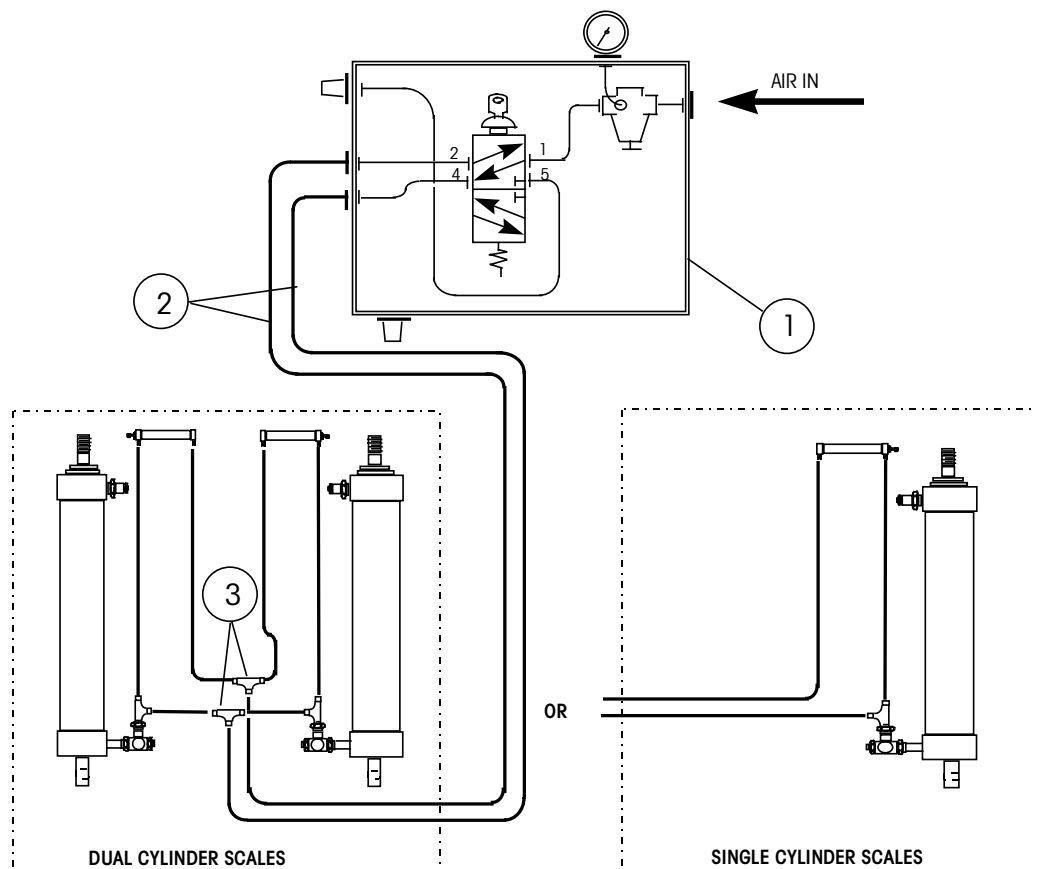


Figure 15-g: Pneumatic Control System

Ref. No.	Part Number	Description	Qty.
TC202375 - Pneumatic Control Package			
1	Control Enclosure consisting of:		
	TB202385	Enclosure	1
	MZ1405000145	Close Pipe Nipple	1
	MZ1405000144	Bulkhead Fitting	6
	MZ1405000143	Male Swivel Elbow	1
	MZ1405000142	1/4 Tube to 1/4 NPT Male Connector	7
	MZ1405000141	1/4 Tube to 1/8 NPT Male Connector	4
	MZ1003000014	Exhaust Silencer	2
	MZ1003000013	Legend plate (not shown)	1
	MZ1003000012	4-way Valve	1
	MZ1003000011	Valve Adaptor	1
	MZ1003000010	Key Twist Valve Switch	1
	MZ1003000009	0-160 PSI Gauge	1
	MZ1003000008	Regulator	1
2	MZ1206000008	1/4" Tubing (Tubing Temperature Spec. -40 °F to +225 °F)	56 ft
3	MZ1405000146	1/4" Tube Union Tee	2

16

Flexmount®/Centerlign® Weigh Modules

Model 0957 and 0958

Service Manual No. *15175600A

* May have letter prefix

Model Number Configuration Table					
XXXX	X	X	X	XX	-X
Model	Weigh Module Type	Cell Type	Cell Number	Cell Capacity	Junction Box
0958	0 = Flexmount + 1 = Centerlign +	1 = M.S. H44 745 Hermetic 2 = S.S. H44 745 Hermetic 3 = M.S. H44 744 Potted 4 = S.S. H44 744 Potted 5 = M.S. OIML 744 Potted 6 = S.S. OIML 744 Potted 7 = M.S. OIML 745 Hermetic 8 = S.S. OIML 745 Hermetic	3 or 4 *(1 or 2)	X2 = 250 lb X5 = 500 lb/220 kg 01 = 1250 lb/550 kg 02 = 2500 lb/1100 kg 05 = 5000 lb/2200 kg 10 = 10000 lb/4400 kg	1 = Standard Analog 2 = No Junction Box**
0957	0 = Flexmount 1 = Centerlign	Material 1 = Mild .Steel 2 = Stainless .Steel	3 or 4 *(1 or 2)	20 = 20,000 lb 45 = 45,000 lb 75 = 75,000 lb 1X = 100,000 lb 2X = 200,000 lb	1 = Standard Analog 2 = No Junction Box**

* Indicates number of "active" load cells. In low accuracy weighing applications: one or two load cells used with two dead blocks. In applications where loading is distributed equally over each of the three or four supports. An example would be weighing of liquids or gases.

**For optional junction boxes, order a base model having a (-2) suffix. Order optional junction boxes as a line item: DigiTOL junction box, IDNet junction box, and enlarged Analog junction box with conduit fittings.

Accuracy

Model 744 and 745 Flexmount/Centerlign Load Cells meet or exceed the Institute of Standards and Technology (NIST) Handbook 44 requirements for Class III 3000 divisions/multiple cell (minimum). Model 743 Load Cells meet or exceed NIST Handbook 44 requirements for Class III 2500 divisions.

Certificates of conformance (COC #92-108,91-089, & 88-008), were issued under the National Type Evaluation Program (NTEP) of the National Conference of Weights and Measures for these cells.

Model 745 Flexmount/ Centerlign metric capacity Load Cells meet or exceed OIML requirements for R60 C3 3000 divisions (TC2154). Model 743 metric capacity Load Cells meet or exceed OIML requirements for R60 C2 2000 divisions (TC 2977).

The accuracy of a scale is dependent on the following items. These items must be addressed before an accuracy can be determined for a scale.

- The design of the support steel for the weigh module, and of the weight receiving structure (tank, hopper, conveyor, ..etc.) mounted to the weigh modules.
 - The design and number of the dead to live connections attached to the scale.
 - The total load cell capacity.
 - Environmental factors: Wind, Vibration, Temperature variations,...etc..
-

Load Cells

Stainless steel cantilever beam load cells are provided in all model 0958 and 45K weigh module model 0957 Flexmount/Centerlign Module. The load cells are complete with integral 4-conductor, shielded, color coded cable.

Model 743—20K/ 45K/ 75K/ 9,072 kg/ 20,412 kg

NTEP certificate of conformance number: 88-008

EC test certificate: TC2977

- Maximum excitation voltage: 20 VDC or VAC rms
- Recommended excitation voltage: 15 VDC
- Full scale output: 2 mV/V
- Input terminal resistance: 20K cells—350 Ohms minimum
45K cells—2,200 $\pm$ 100 Ohms
75K cells—385 Ohms minimum
- Output terminal resistance: 20K cells—350 $\pm$ 2 Ohms
45K cells—2,000 $\pm$ 20 Ohms
75K cells—350 $\pm$ 1.5 Ohms

- Temperature range compensation: -10°C to $+40^{\circ}\text{C}$ ($+14^{\circ}\text{F}$ to $+104^{\circ}\text{F}$)
- Safe side load: 100% of full load cell rating
- Safe overload: 150% of full load cell rating

Model 744—250 lb

- Maximum excitation voltage: 15 VDC or VAC rms
- Recommended excitation voltage: 15 VDC
- Full scale output: 2 mV/V
- Input terminal resistance: 350 Ohm minimum
- Output terminal resistance: 350 ± 2 Ohms
- Temperature range compensation: -10°C to $+40^{\circ}\text{C}$ ($+14^{\circ}\text{F}$ to $+104^{\circ}\text{F}$)
- Safe side load: 100% of full load cell rating
- Safe overload: 150% of full load cell rating

Model 745—500 to 10K lb/ 2200 TO 4,400 kg

NTEP certificate of conformance number: 92-108

EC test certificate: T2154/ 2

EC Type Approval: T2206

- Maximum excitation voltage: 15 VDC or VAC rms
- Recommended excitation voltage: 15 VDC
- Full scale output: 2 mV/V
- Input terminal resistance: 350 Ohm minimum
- Output terminal resistance: 350 ± 2 Ohms
- Temperature range compensation: -10°C to $+40^{\circ}\text{C}$ ($+14^{\circ}\text{F}$ to $+104^{\circ}\text{F}$)
- Safe side load: 100% of full load cell rating
- Safe overload: 150% of full load cell rating

Model ML85XX Load Cells, 100K/ 200K lb

- Maximum excitation voltage: 20 VDC or VAC rms
- Recommended excitation voltage: 15 VDC
- Full scale output: 2 mV/V
- Input terminal resistance: 1,100 Ohms minimum
- Output terminal resistance: $1,000 \pm 2$ Ohms
- Temperature range compensation: -10°C to $+40^{\circ}\text{C}$ ($+14^{\circ}\text{F}$ to $+104^{\circ}\text{F}$)
- Safe side load: 100% of full load cell rating
- Safe overload: 150% of full load cell rating

Flexmount

Flexmount weigh modules give tanks, hoppers, vessels, blenders, bins, and mixers scale-like qualities. Flexmount weigh modules provide horizontal checking, versatility in mounting, and an anti-tip feature while still allowing for thermal expansion. The Flexmount design consists of three different weigh modules... (1) one Fixed Pin Module, (1) one Semi-Floating Pin Module, and (1) one or more Full-Floating Pin Module depending on the application.

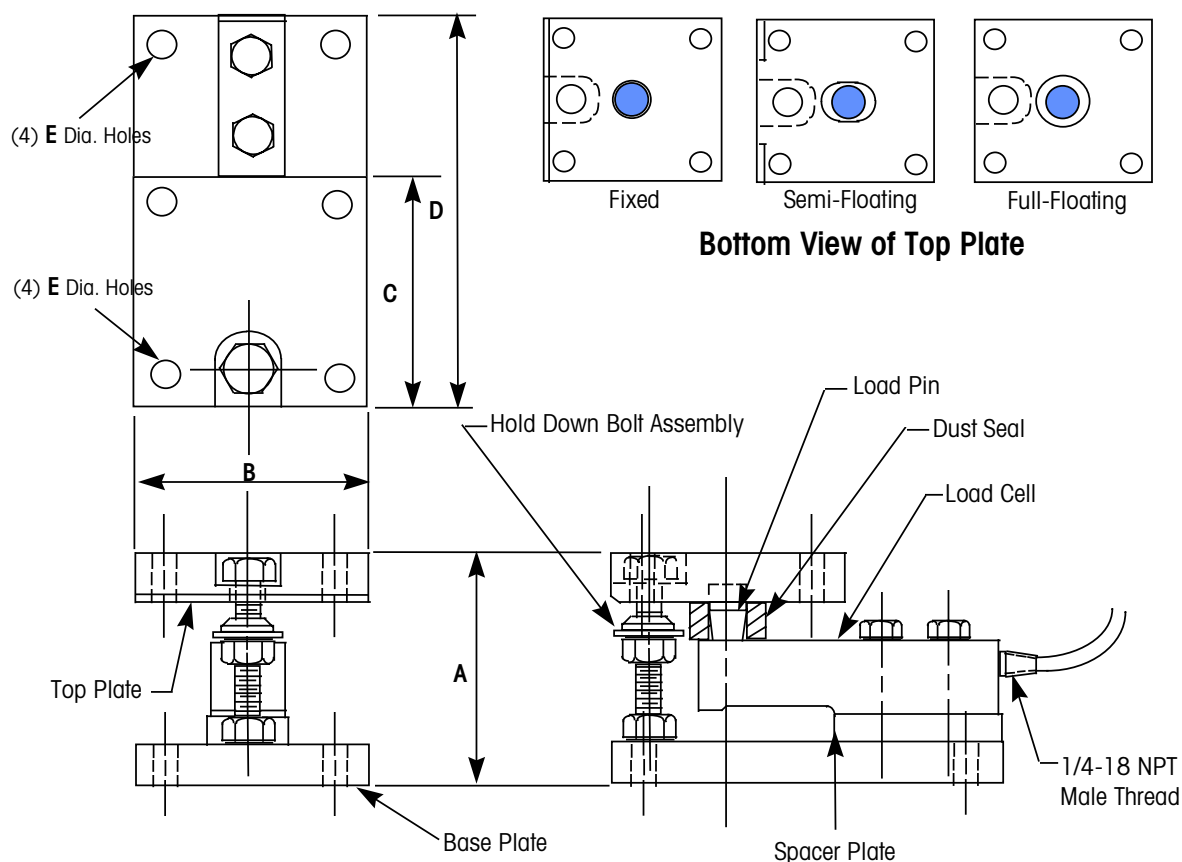


Figure 16-a: Model 0958 Flexmount+

Cell Capacity	A	B	C	D	E Dia.
250 - 5K lb	4.12 in	4.50 in	4.5 in	7.00 in	.44 in
10K lb	5.38 in	6.00 in	6.00 in	9.25 in	.69 in
220 - 2200 kg	104.8 mm	114.3 mm	114.3 mm	177.8 mm	11.1 mm
4400 kg	136.5 mm	152.4 mm	152.4 mm	235.0 mm	17.5 mm

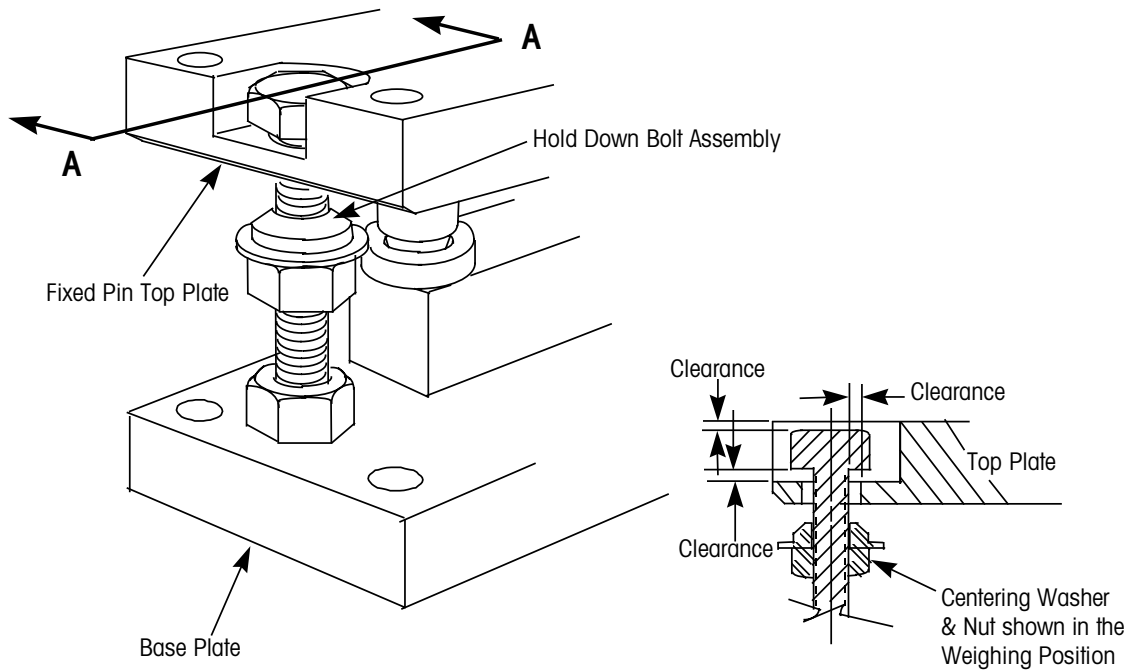


Figure 16-b: Model 0958 Flexmount+ Hold Down Assembly

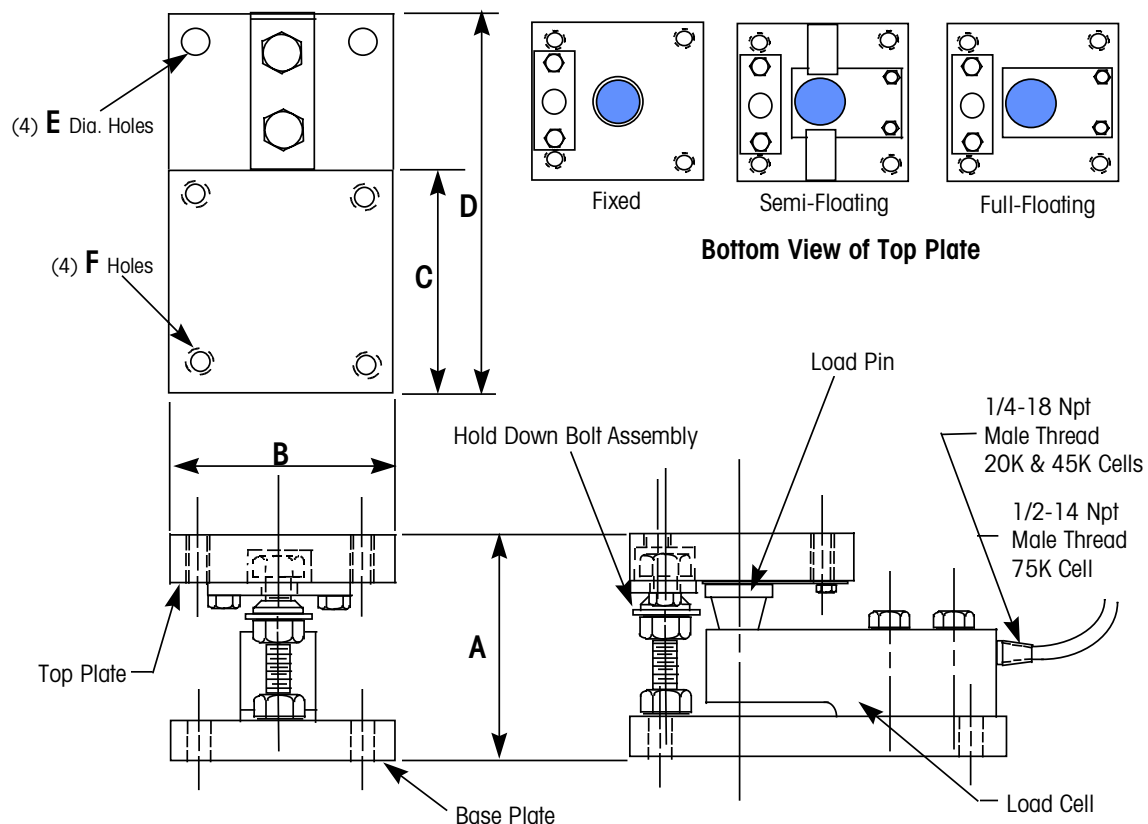


Figure 16-c: 0957 Flexmount

Cell Capacity	A	B	C	D	E Dia.	F Thread
20K lb	6.75 in	* 6.00 in	7.00 in	14.00 in	.81 in	3/4-10
45K lb	8.22 in	8.00 in	8.50 in	15.50 in	1.12 in	1-8
75K lb	9.56 in	**8.00 in	8.50 in	17.75 in	1.06 in	1-8

* 6.50 in for Semi-Floating Module

** 12.00 in for Semi-Floating Module

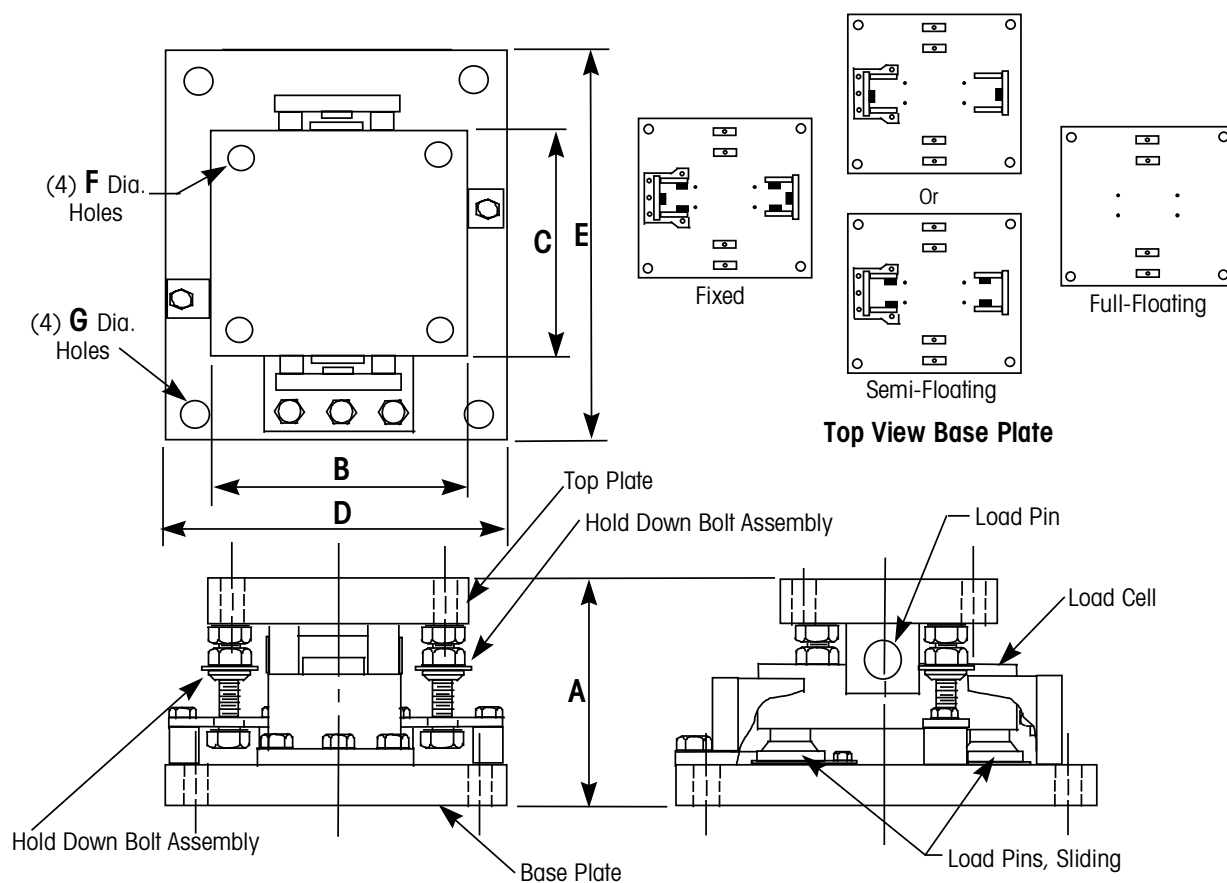


Figure 16-d: Model 0957 100k & 200k Flexmount

Cell Capacity	A	B	C	D	E	F Dia.	G Dia.
100K lb	10.00 in	12.00 in	12.00 in	15.00 in	23.00 in	1.12 in	1.38 in
200K lb	11.25 in	13.00 in	12.00 in	16.00 in	23.00 in	1.12 in	1.38 in

Centerlign

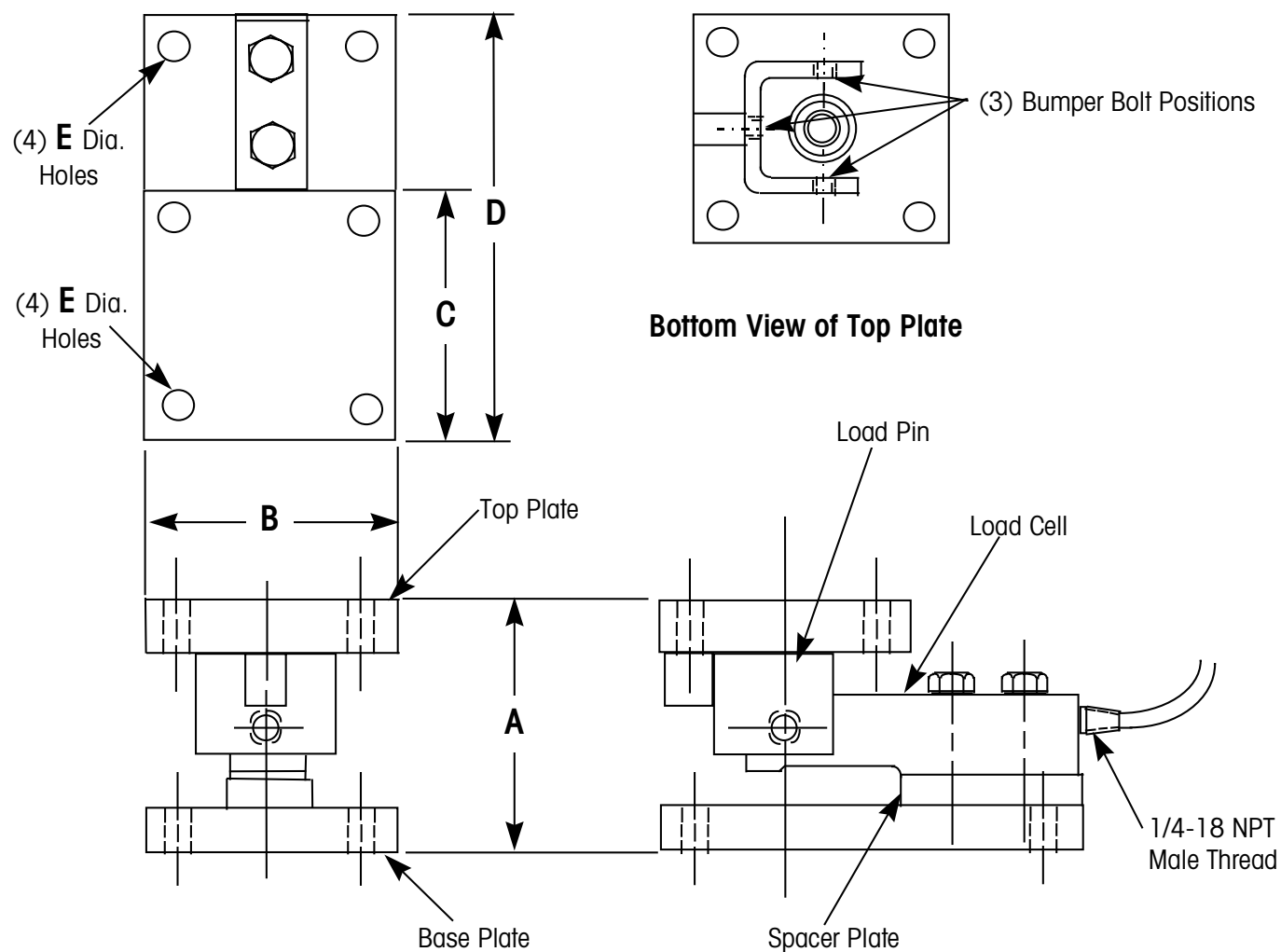


Figure 16-e: Model 0958 Centerlign+

Cell Capacity	A	B	C	D	E Dia.
250 - 5K lb	4.12 in	4.50 in	4.5 in	7.00 in	.44 in
10K lb	5.38 in	6.00 in	6.00 in	9.25 in	.69 in
220 - 2200 kg	104.8 mm	114.3 mm	114.3 mm	177.8 mm	11.1 mm
4400 kg	136.5 mm	152.4 mm	152.4 mm	235.0 mm	17.5 mm

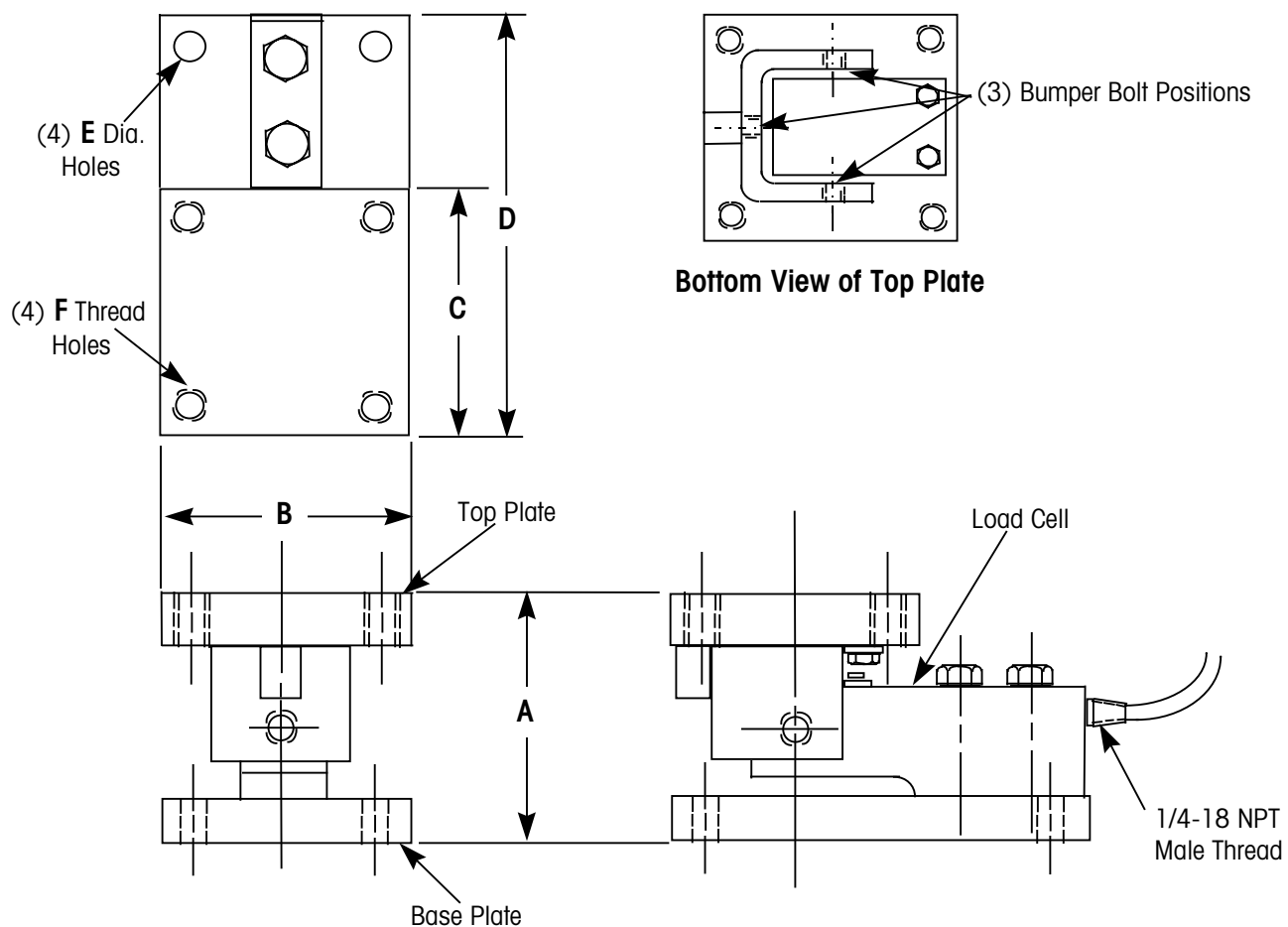


Figure 16-f: Model 0957 Centerlign

Cell Capacity	A	B	C	D	E Dia.	F Thread
20K lb	8.00 in	6.00 in	7.00 in	14.00 in	.81 in	3/4-10
45K lb	9.78 in	8.00 in	8.50 in	15.50 in	1.06 in	1-8
75K lb	11.25 in	8.00 in	8.50 in	17.75 in	1.06 in	1-8

Installation (Flexmount)

Note: Model 0958 top plates are marked for easy identification once installed. The 'fixed' top plate has a chamfer along the entire front-bottom edge. The semi-floating top plate has 1" long chamfer on each side of the front bottom edge. The full-floating unit has no chamfer.

Flexmount weigh modules give tanks, hoppers, ...etc. scale-like qualities. Flexmount consist of three different types: 1.) one Fixed, 2.) one Semi-Floating, and 3.) one or more Full-Floating, depending on the application.

Model 0958 Flexmount+ Assemblies (250 through 10,000 lb load cells) have top plates that can be turned 90° to handle tangential or radial mounting arrangements. See below for recommended mounting arrangements.

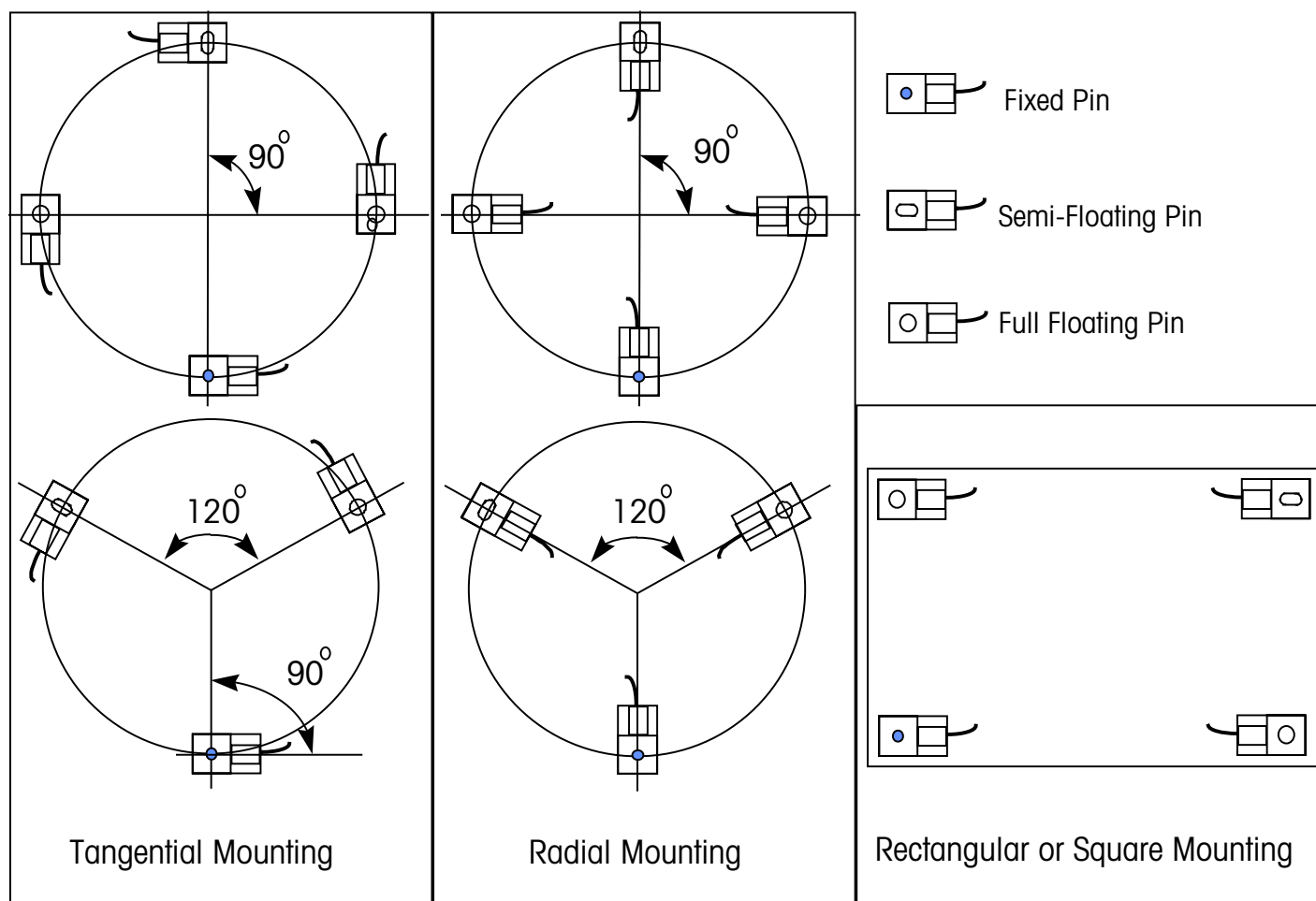
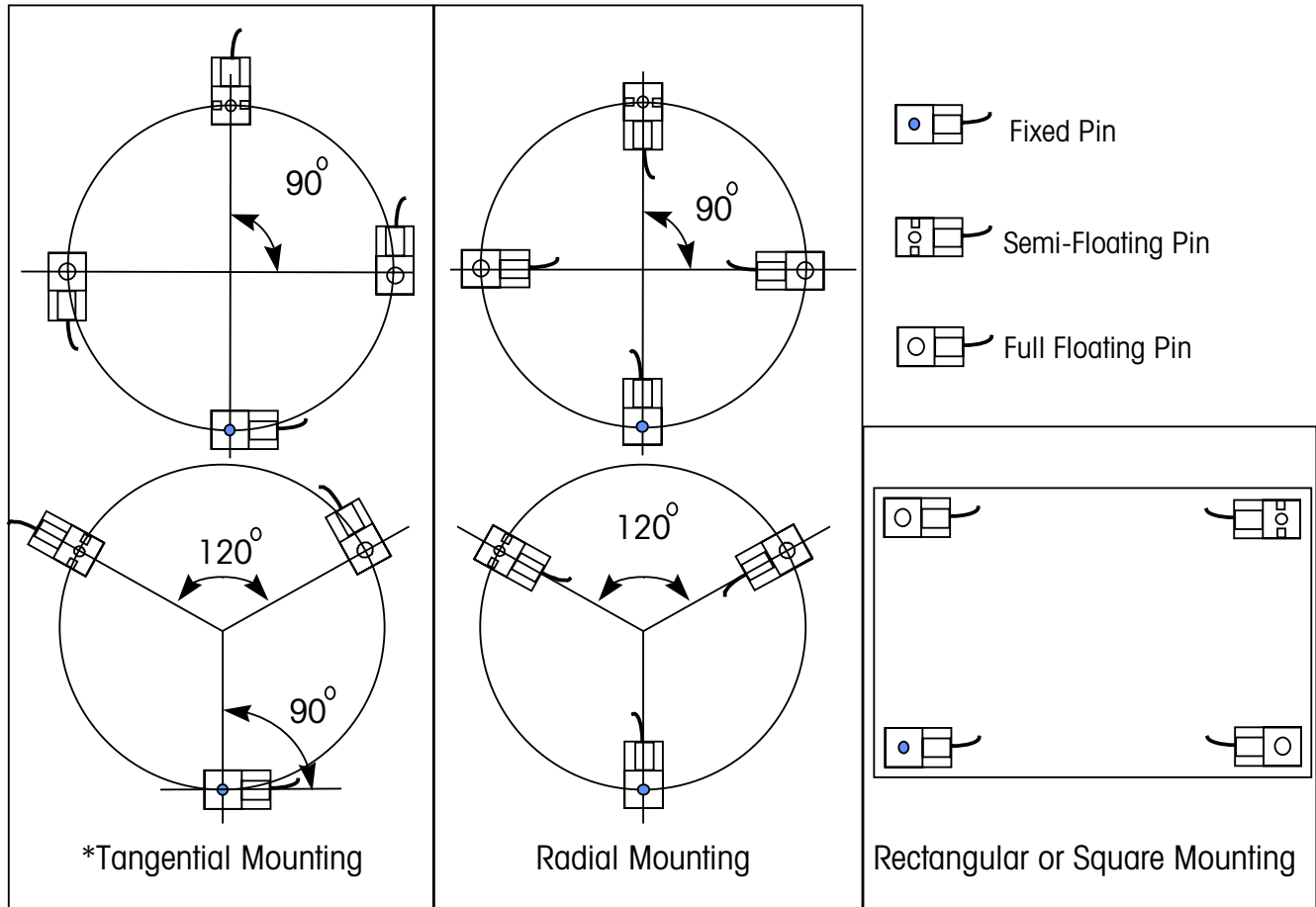


Figure 16-g: Plan View of Mounting Arrangements for Model 0958

Model 0957 Flexmount 20K through 75K weigh modules differ slightly from the model 0958 modules. The semi-floating top plate bumps checks against the sides of the load cell. Unlike the model 0958 module, no provision exists to turn the top mounting plates 90 degrees. Therefore, the Model 0957 module's semi-floating top plate can only be oriented radially. See below for recommended mounting arrangements.



* Semi-Floating Module can not be mounted Tangentially

Figure 16-h: Plan View of Mounting Arrangements for Model 0957

Model 0957 Flexmount 100K and 200K weigh modules incorporate Mettler Toledo's dual shear beam load cells. All the features and benefits are maintained including the fixed, float, and semi-floating pin principals. See below for recommended mounting arrangements.

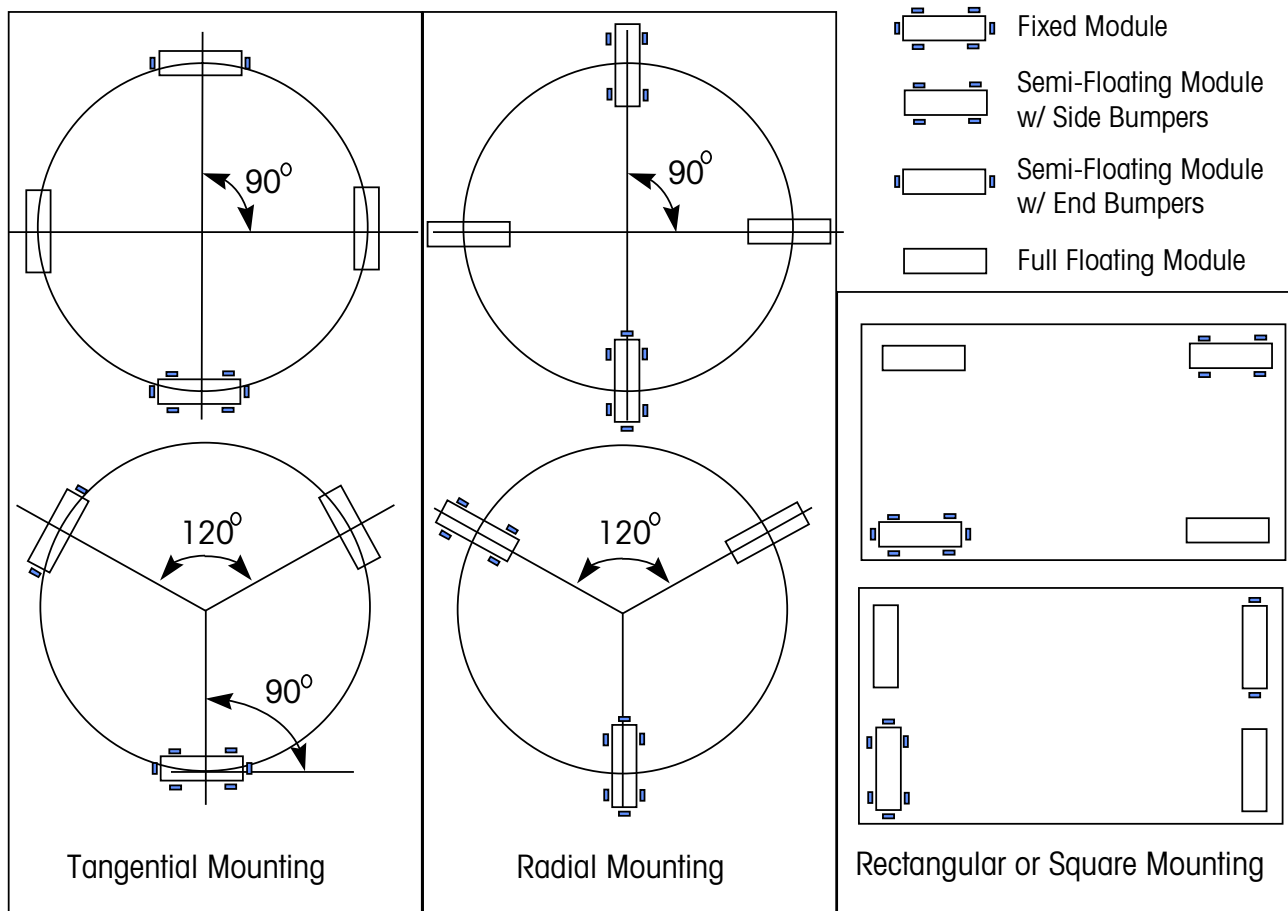
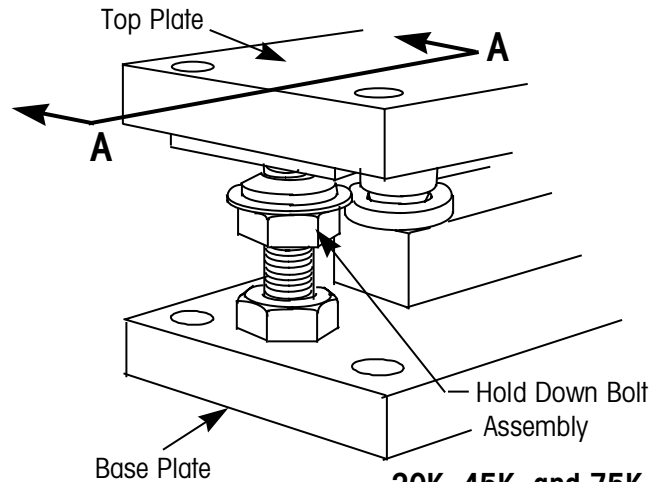
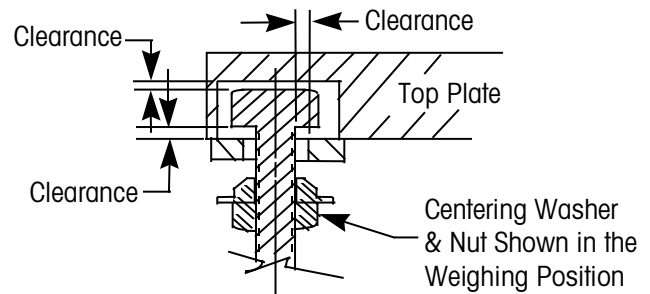


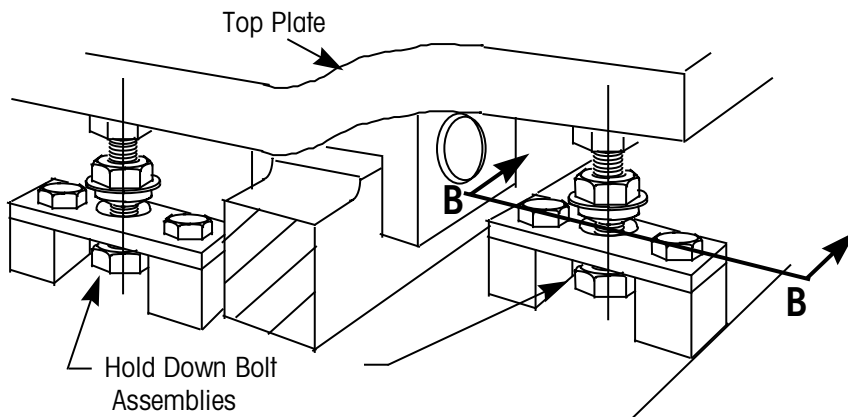
Figure 16-i: Plan View of Mounting Arrangements for Model 0957



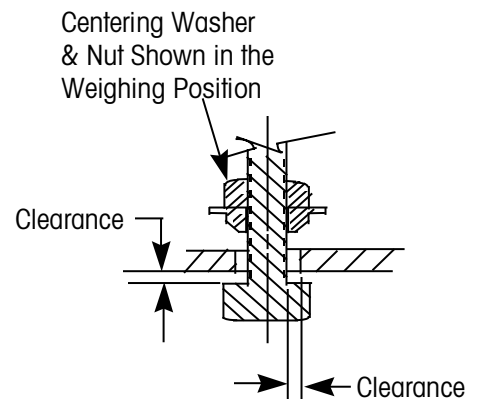
20K, 45K, and 75K Weigh Modules



Section A-A



100K, and 200K Weigh Modules



Section B-B

Model 0957

Figure 16-j: Flexmount Hold Down Assembly

ATTENTION!

Rules For Installation:

1. Always use one (1) fixed, one (1) semi-floating, and all others full floating weigh modules
2. Always install the semi-floating weigh module to limit the movement of the scale about the fixed weigh module and as far as possible from the fixed weigh module.
3. Tank legs or structural support lugs must be rigid enough to maintain the relationship of its' support points through the entire weighing capacity.

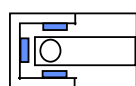
Installation (Centerlign)

The Centerlign Weigh Modules are arranged to handle the major horizontal forces by bumping on the end of the load cells and capture the structure by opposing the end bumping. As shown in below.

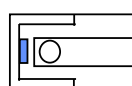
ATTENTION!

Rules For Installation:

1. Centerlign Weigh Modules Do Not provide overturn protection. If any uplifting forces are generated, anti-uplift/overturn protection must be added separately.
2. Structures such tanks or conveyors must be properly design to maintain the relationship of the support points through the entire weighing range. Centerlign weigh modules Do Not provide this type of restrain.



Three Bumper Module



Single Bumper Module

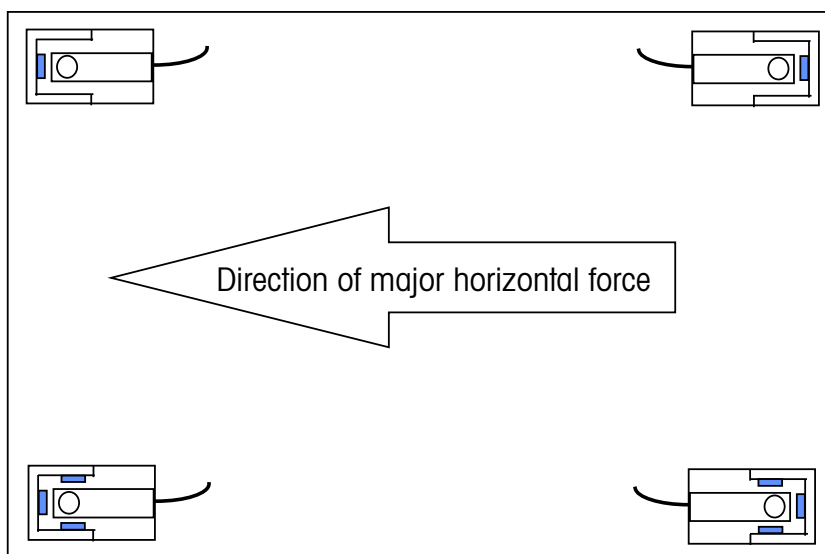


Figure 16-k: Plan View of Mounting Arrangements for Model 0957/0958 Centerlign

Install an alignment tool in each of the Centerlign weigh module. As shown below.

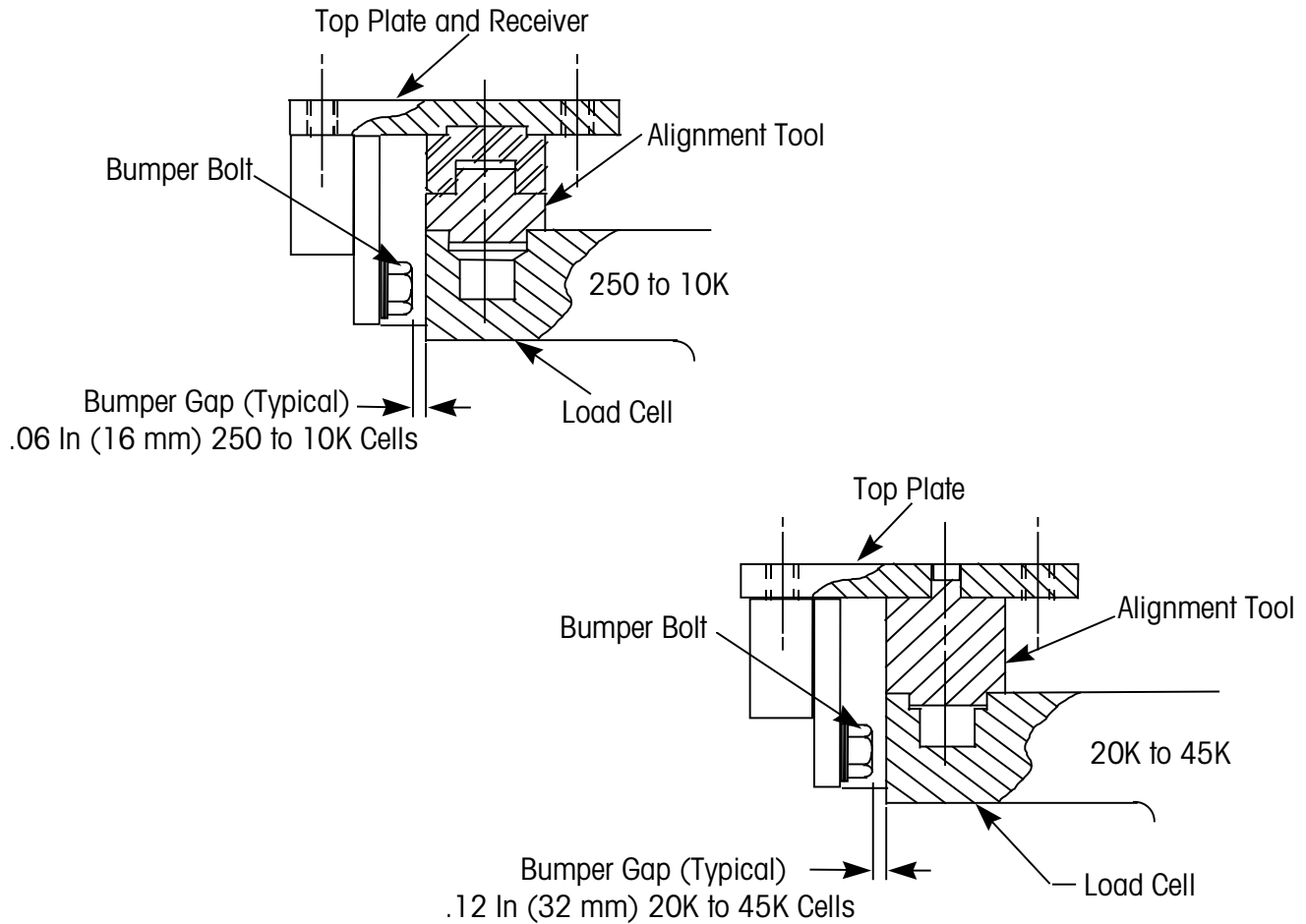


Figure 16-I: Centerlign Top Plate Alignment

Install a Rocker Pin in each of the Centerlign weigh module. As shown below.

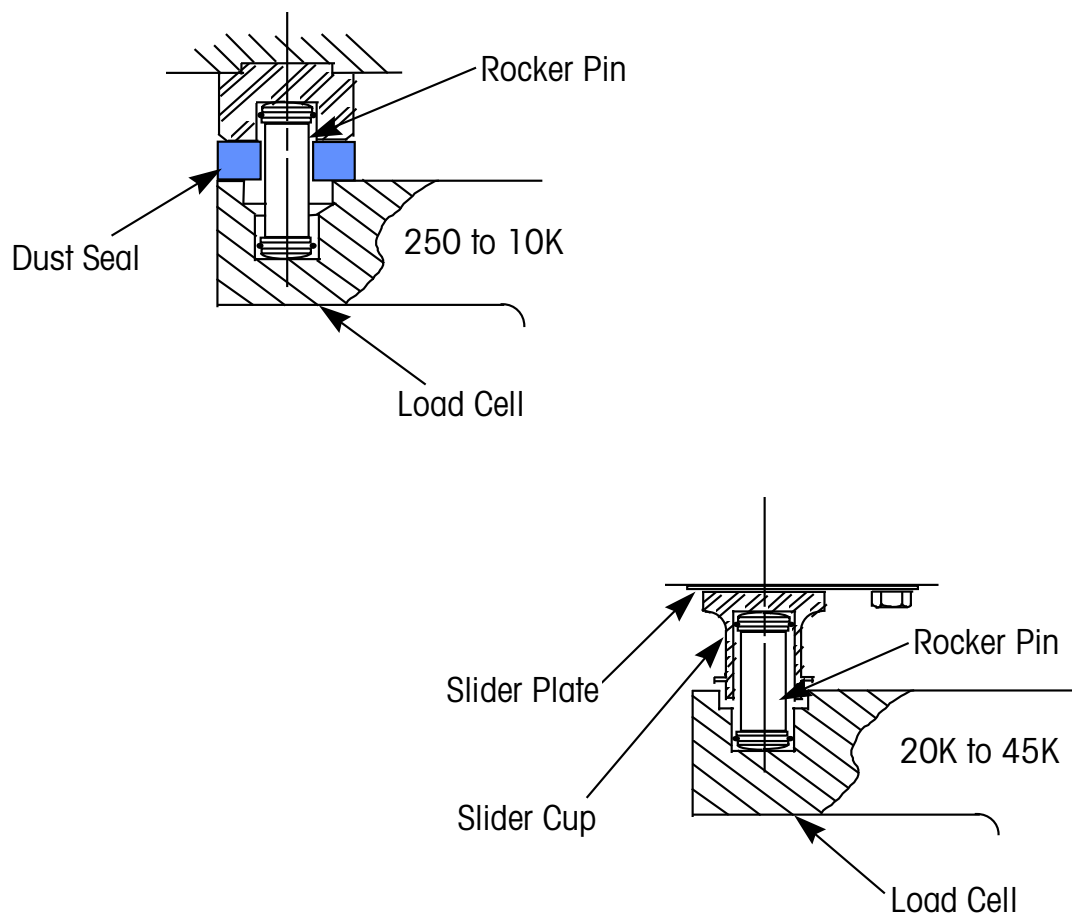


Figure 16-m: Centerlign Rocker Pin Arrangement

ATTENTION!

Rules For Installation:

1. Always handle the major horizontal forces by bumping on the end of the load cells.
2. Structures such as long legged tanks or conveyors must be rigid enough to maintain the relationship of the support points through the entire weighing capacity. Centerlign weigh modules do not provide this type of restrain.
3. When only two weigh modules are used for bumping, both weigh modules should be on the same side of the scale.

Modes of Operation

Analog Module

Note: Turn all pots fully clockwise prior to calibration.

The Flexmount /Centerlign can be used with an analog junction box for summing the load cell outputs. Only analog compatible indicators will work with the Analog Junction Box. The correct cable connection can be seen below.

Service Parts

P/N TB100393 - Analog Junction Box 4-Hole

TB100395 - Analog Junction Box 5-Hole

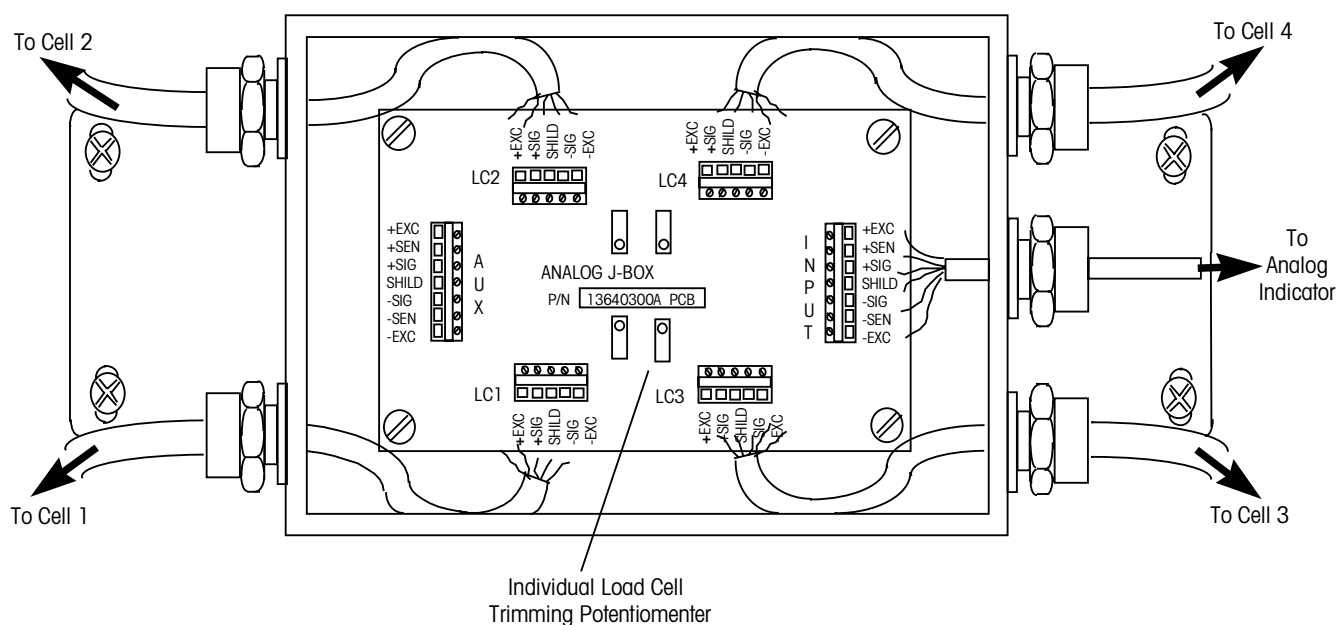


Figure 16-n: Analog Junction Box Details and Wiring Codes

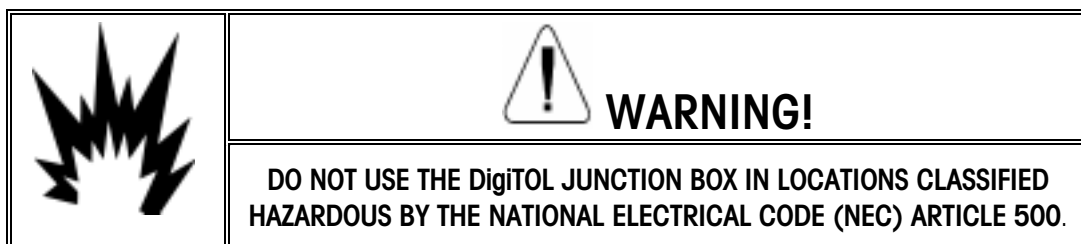
Load Cell Wiring		Instrument Cable Wiring	
Function	Color	Function	Color
+ Excitation	Green	+Excitation	White
+ Sense	Not Used	+ Sense	Yellow
+ Signal	White	+ Signal	Green
Shield	Yellow	Shield	Orange
–Signal	Red	–Signal	Black
–Sense	Not Used	–Sense	Red
–Excitation	Black	–Excitation	Blue
(Based on Mettler Toledo Cable Number 510624370)			

DigiTOL DLC Mode

Note: The DigiTOL Junction Box is not compatible with the model 8510 panel mount indicator or models 8572 or 8582 counting scales.

Note: Jumpers W1, W2, W3 and W4 must be "IN" shorting pins (for 2 mV/V Load Cells).

The Flexmount and Centerlign can be used with a DigiTOL Junction Box for summing the load cell outputs. Only DigiTOL indicators will work with the DigiTOL Junction Box. In the DLC mode the indicator serves as the host for the DigiTOL junction box allowing the scale parameters to be adjusted via the indicator keypad. Cable connections can be seen in below.



Service Parts

P/N TB100515-X DigiTOL Junction Box
(X = number of connectors required on J-Box 3, 4, or 5)

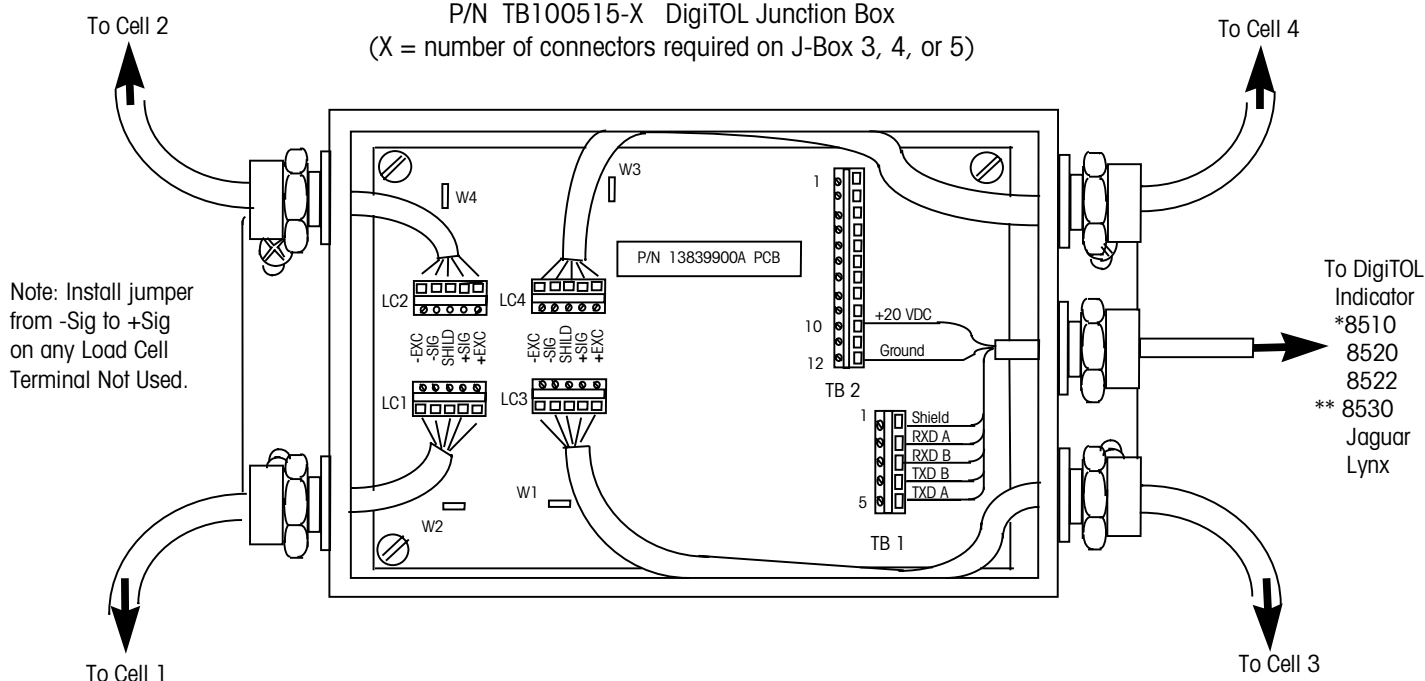


Figure 16-o: DigiTOL Junction Box Wiring DLC Mode

Terminal No.	Position	Function	Wire Color
TB2	10	+20 VDC	Green
TB2	12	Ground	Blue
TB1	1	Shield	Orange
TB1	2	RXD A	Red
TB1	3	RXD B	White
TB1	4	TXD B	Yellow
TB1	5	TXD A	Black

* Not compatible with Model 8510 Panel Mount DigiTOL Indicator or Models 8572 and 8582 Counting Scales.

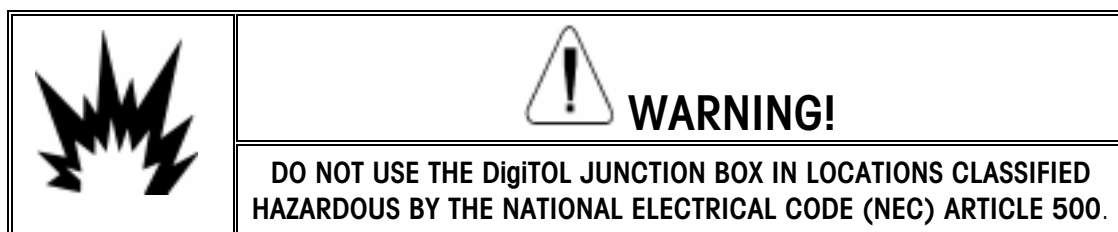
** Not compatible with Model 8530VS.

DigiTOL Smart Mode

Note: Jumpers W1, W2, W3, and W4 must be "IN" shorting pins (for 2 mV/V Load Cells).

When used with the 8505 weight display, the DigiTOL Junction Box serves as the "brains" for operation and become the host for the indicator. Cable connections can be seen in next page.

* For detailed information regarding indicator capabilities and operating instructions consult the appropriate Mettler Toledo technical manual.



Service Parts

P/N TB100515-X DigiTOL Junction Box

(X = number of connectors required on J-Box 3, 4, or 5)

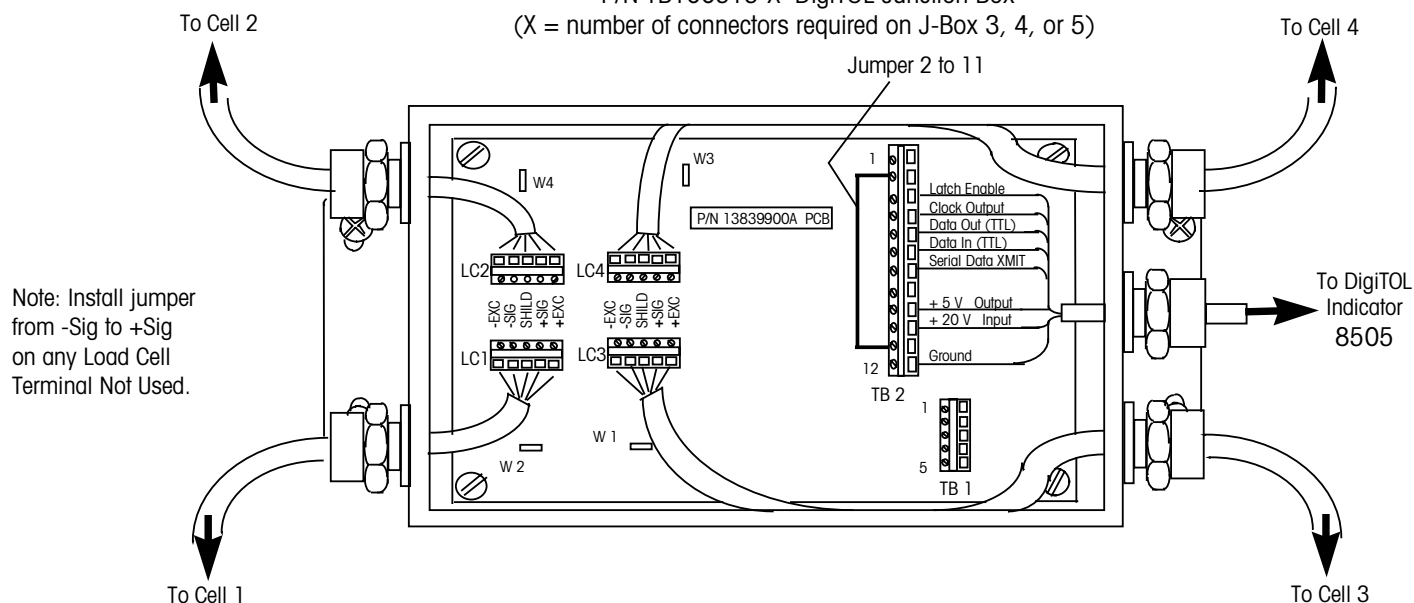


Figure 16-p: DigiTOL Junction Box Wiring for Smart Mode with Model 8505 DigiTOL Indicator

Smart Mode (TB 2)		
Position	Function	Wire Color
1	Not Used	
2	Jumper to 11	
3	Latch Enable	Orange
4	Clock Output	Blue
5	Data Out (TTL)	Brown
6	Data In (TTL)	Violet
7	Serial Data Transmit	Red
8	Not Used	
9	+5 VDC Output	Yellow
10	+20 VDC Input	Black
11	Jumper to 2	
12	Ground	Green

Model 0958

Flexmount+ 250 to 10k Cells

Torque Load Cell Bolts to:

1. Mild Steel Assembly
75 ft-lb/102 Nm (250 to 5K cells) &
200 ft-lb/271 Nm (10K cells)
2. Stainless Steel Assembly
100 ft-lb/136 Nm (250 to 5K cells) &
250 ft-lb/339 Nm (10K cells)

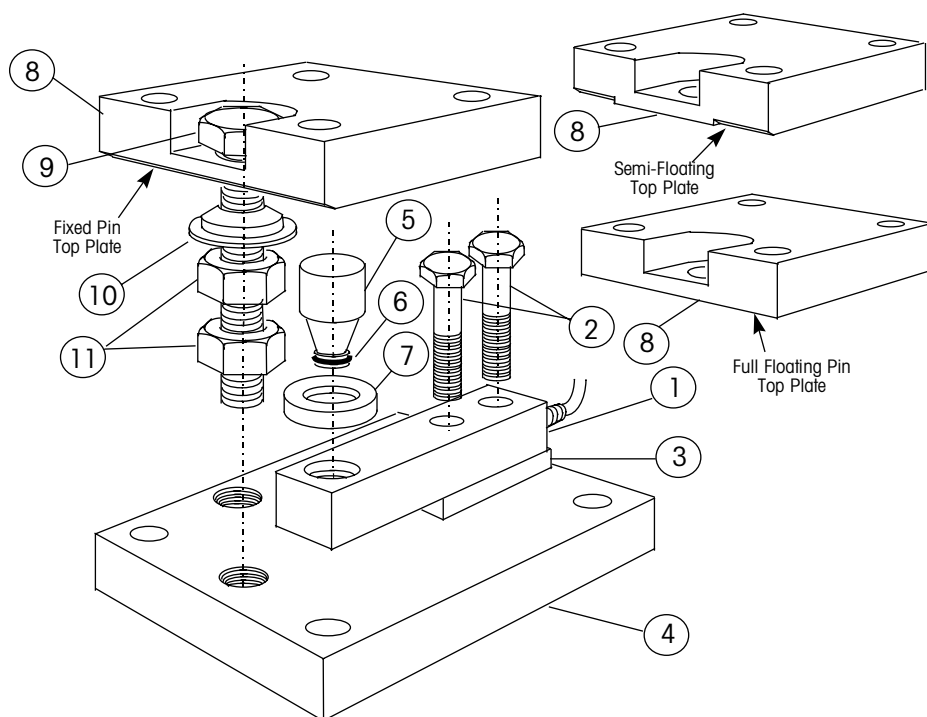


Figure 16-q: 250 to 2,500 lb Flexmount+ Assembly

Ref. No.	Part Number	Description	Qty
1	TB600488-1	250 lb Load Cell 350 Ohm (15 ft. cable)	1
	TB600529-3	500 lb Load Cell S.S. 350 Ohm Model 745 (15 ft. cable)	
	TB600451	220 kg Load Cell 350 Ohm Model 744 (15 ft. cable)	
	TB600454	550 kg C3 R60 OIML Load Cell S.S. 350 Ohm (15 ft. cable)	
	TB600363	1,500 lb Load Cell S.S. 350 Ohm (15 ft. cable)	
	TB600342	2,500 lb Load Cell S.S. 350 Ohm (15 ft. cable)	
	TB600455	1100 kg C3 R60 OIML Load Cell S.S. 350 Ohm (15 ft. cable)	
2	MZ0901010433	1/2-13 Hex. Hd. Bolt x 2.25" Lg. (Mild Steel Assb.)	2
	MZ0901010122	1/2-13 Hex. Hd. Bolt x 2.25" Lg. (Stainless Steel Assb.)	
3	TN600366	Spacer Plate	1
4	TA600316-11	Base Plate, (Mild Steel Assembly)	1
	TA600316-2	Base Plate, (Stainless Steel Assembly)	
5	TN600321	Load Pin	1
6	MZ0909000005	"O" Ring, Load Pin	1

Ref. No.	Part Number	Description	Qty
7	TN600322-1	Dust Seal, Load Pin	1
8	TA600320-11 TA600320-2 TA600319-11 TA600319-2 TA600318-11 TA600318-2	Top Plate Full Floating Pin (Mild Steel Assb.) Top Plate Full Floating Pin (Stainless Steel Assb.) Top Plate Semi-Floating Pin (Mild Steel Assb.) Top Plate Semi-Floating Pin (Stainless Steel Assb.) Top Plate, Fixed Pin (Mild Steel Assb.) Top Plate, Fixed Pin (Stainless Steel Assb.)	1
9	MZ0901010462 MZ0901010423	5/8-11 Hold Down Bolt x 3.5" Lg. (Mild Steel Assb.) 5/8-11 Hold Down Bolt x 3.5" Lg. (Stainless Steel Assb.)	1
10	TN600507	Centering Washer, S.S.	1
11	MZ0901020025	5/8-11 Hex. Nut, S.S.	2

* May have a letter prefix

5000 lb Flexmount+ Assembly

Ref. No.	Part Number	Description	Qty
1	TB600343 TB600456	5,000 lb Load Cell S.S. 350 Ohm (15 ft. cable) 2,200 kg C3 R60 OIML Load Cell S.S. 350 Ohm (30 ft cable)	1
2	MZ0901010434 MZ0901010227	1/2-13 Hex. Hd. Bolt x 2.50" Lg. (Mild Steel Assb.) 1/2-13 Hex. Hd. Bolt x 2.50" Lg. (Stainless Steel Assb.)	2
3	TN600366	Spacer Plate	1
4	TA600316-11 TA600316-2	Base Plate, (Mild Steel Assembly) Base Plate, (Stainless Steel Assembly)	1
5	TN600321	Load Pin	1
6	MZ0909000005	"O" Ring, Load Pin	1
7	TN600322-2	Dust Seal, Load Pin	1
8	TA600320-11 TA600320-2 TA600319-11 TA600319-2 TA600318-11 TA600318-2	Top Plate Full Floating Pin (Mild Steel Assb.) Top Plate Full Floating Pin (Stainless Steel Assb.) Top Plate Semi-Floating Pin (Mild Steel Assb.) Top Plate Semi-Floating Pin (Stainless Steel Assb.) Top Plate, Fixed Pin (Mild Steel Assb.) Top Plate, Fixed Pin (Stainless Steel Assb.)	1
9	MZ0901010462 MZ0901010423	5/8-11 Hold Down Bolt x 3.5" Lg. (Mild Steel Assb.) 5/8-11 Hold Down Bolt x 3.5" Lg. (Stainless Steel Assb.)	1
10	TN600507	Centering Washer, S.S.	1
11	MZ0901020025	5/8-11 Hex. Nut, S.S.	2

* May have a letter prefix

10,000 lb FLEXMOUNT+ Assembly

Ref. No.	Part Number	Description	Qty
1	TB600364 TB600457-1	10,000 lb Load Cell S.S. 350 Ohm (30 ft. cable) 4400 kg C3 R60 OIML Load Cell S.S. 350 Ohm (30 ft cable)	1
2	MZ0901010420 MZ0901010421	3/4-10 Hex. Hd. Bolt x 3.25" Lg. (Mild Steel Assb.) 3/4-10 Hex. Hd. Bolt x 3.25" Lg. (Stainless Steel Assb.)	2
3	TN600367	Spacer Plate	1
4	TA600333-11 TA600333-2	Base Plate, (Mild Steel Assembly) Base Plate, (Stainless Steel Assembly)	1
5	TN600337	Load Pin	1
6	MZ090900050	"O" Ring, Load Pin	1
7	TN600322-3	Dust Seal, Load Pin	1
8	TA600336-11 TA600336-2 TA600335-11 TA600335-2 TA600334-11 TA600334-2	Top Plate Full Floating Pin (Mild Steel Assb.) Top Plate Full Floating Pin (Stainless Steel Assb.) Top Plate Semi-Floating Pin (Mild Steel Assb.) Top Plate Semi-Floating Pin (Stainless Steel Assb.) Top Plate, Fixed Pin (Mild Steel Assb.) Top Plate, Fixed Pin (Stainless Steel Assb.)	1
9	MZ0901010461 MZ0901010425	3/4-10 Hold Down Bolt x 4.5" Lg. (Mild Steel Assb.) 3/4-10 Hold Down Bolt x 4.5" Lg. (Stainless Steel Assb.)	1
10	TN600511	Centering Washer, S.S.	1
11	MZ0901020046	3/4-10 Hex. Nut, S.S.	2

* May have a letter prefix

Model 0957 Flexmount 20k Cell

Torque Load Cell Bolts to:

1. Mild Steel Assembly
475 ft-lb/644 Nm
2. Stainless Steel Assembly
280 ft-lb/380 Nm

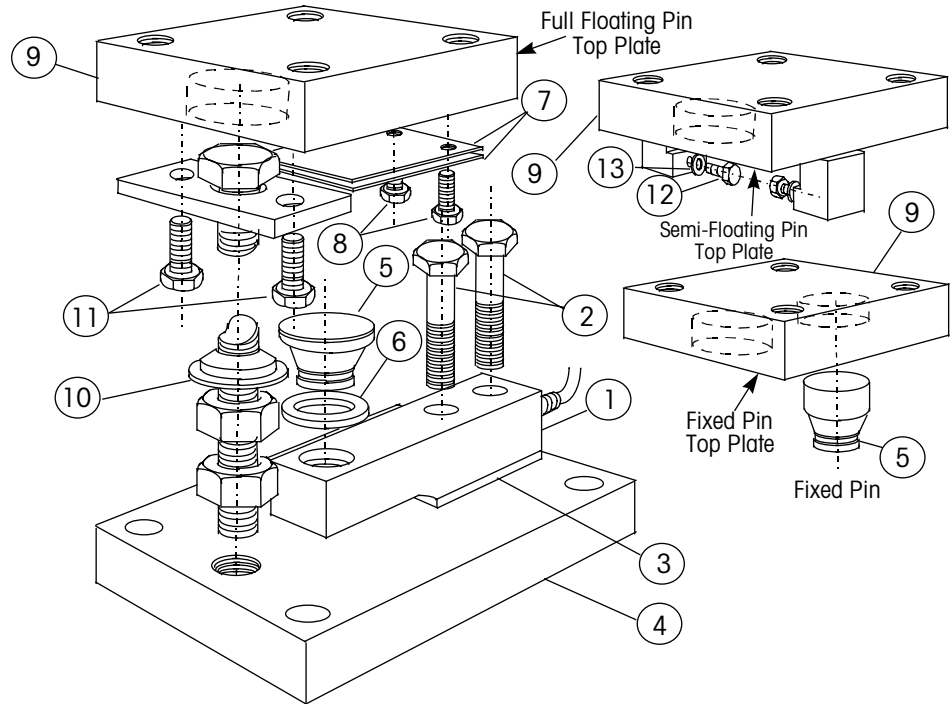


Figure 16-r: 20,000 lb Flexmount Assembly

Ref. No.	Part Number	Description	Qty
1	A13077500B *15237800A	20,000 lb Load Cell S.S. 350 Ohm (30 ft. cable) 9,072 KG C2 R60 OIML Load Cell S.S. 350 Ohm (30-ft cable)	1
2	MZ0901010072 MZ0901010316	1-8 Hex. Hd. Bolt x 4.00" Lg. (Mild Steel Assb.) 1-8 Hex. Hd. Bolt x 4.00" Lg. (Stainless Steel Assb.)	2
3	TN300578	Spacer Plate	1
4	MA61226-10 TA600037	Base Plate, Mild Steel Base Plate, Stainless Steel	1
5	MN61186 MA61005-3	Load Pin, floating Load Pin, fixed	1
6	MN61016-11	Dust Seal, Load Pin	1
7	MN61222-2	Shim, Stainless Steel .075" x 2.75" x 4.12" (used with the Semi and Full Floating Assemblies)	2
8	MZ0901010064	3/8-16 Hex. Hd. Screw x .50" Lg. (used with the Semi and Full Floating Assemblies)	4

METTLER TOLEDO Heavy Capacity Reference Guide

Ref. No.	Part Number	Description	Qty
9	MA61229-10	Top Plate Full Floating Pin (Mild Steel Assb.)	1
	TA600040	Top Plate Full Floating Pin (Stainless Steel Assb.)	
	MA61227-10	Top Plate Semi-Floating Pin (Mild Steel Assb.)	
	TA600038	Top Plate Semi-Floating Pin (Stainless Steel Assb.)	
	MA61228-10	Top Plate, Fixed Pin (Mild Steel Assb.)	
	TA600039	Top Plate, Fixed Pin (Stainless Steel Assb.)	
10	TN600497	Hold Down Bolt Assembly (Mild Steel Assb.)	1
	TN600041	Hold Down Bolt Assembly (Stainless Steel Assb.)	
11	MZ0901010459	5/8-11 Hex. Hd. Bolt x 1.25" Lg. (Mild Steel Assb.)	2
	MZ0901010083	5/8-11 Hex. Hd. Bolt x 1.25" Lg. (Stainless Steel Assb.)	
12	MZ0901010228	1/2-13 Hex. Hd. Screw S.S. x 1.00" Lg.	2
13	MZ0901030016	1/2 Plain Washer S.S.	4

* May have a letter prefix

Model 957 Flexmount 45k Cell

Torque Load Cell Bolts to:

1. Mild Steel Assembly
1000 ft-lb/1356 Nm
2. Stainless Steel Assembly
520 ft-lb/705 Nm

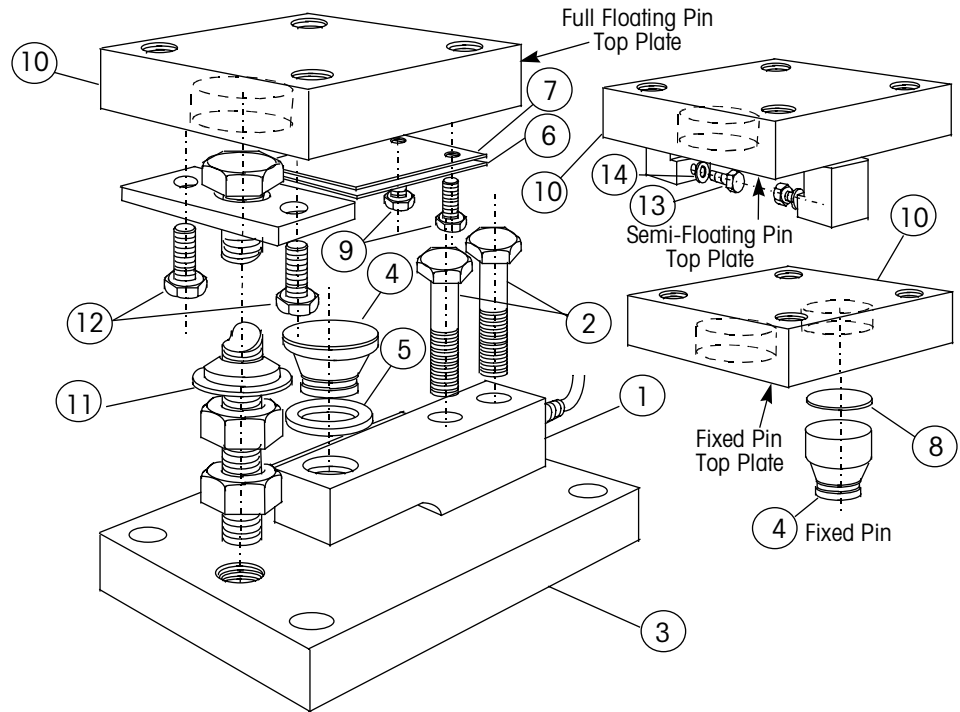


Figure 16-s: 45,000 lb Flexmount Assembly

Ref. No.	Part Number	Description	Qty
1	*13929400A *15238200A	45,000 lb Load Cell S.S. 2,000 Ohm (30 ft. cable) 20,412 kg Load Cell S.S. C2 R60 OIML 2K Ohm (30-ft cable)	1
2	MZ0901010201 MZ0901010216	1 1/4 -7 Hex. Hd. Bolt x 5.00" Lg. (Mild Steel Assb..) 1 1/4 -7 Hex. Hd. Bolt x 5.00" Lg. (Stainless Steel Assb..)	2
3	MA61198-11 MA611198-2	Base Plate , Mild Steel Base Plate , Stainless Steel	1
4	MN61187 MA61005-4	Load Pin, floating Load Pin, fixed	1
5	MN61016-5	Dust Seal, Load Pin	1
6	MN61002-4 MN61002-6	Thick Shim, Stainless Steel .125" x 4.00" x 5.75" (used with the Full Floating Assembly) Thick Shim, Stainless Steel .125" x 3.00" x 5.75" (used with the Semi-Floating Assembly)	1
7	MN61004-4 MN61004-6	Thin Shim, Stainless Steel .075" x 4.00" x 5.75" (used with the Full Floating Assembly) Thin Shim, Stainless Steel .075" x 3.00" x 5.75 (used with the Semi-Floating Assembly)	1

METTLER TOLEDO Heavy Capacity Reference Guide

Ref. No.	Part Number	Description	Qty
8	MN61003-15	Shim, Fixed Pin	
9	MZ0901010064	3/8-16 Hex. Hd. Screw x .50" Lg. (used with the Semi and Full Floating Assemblies)	4
10	MA61012-14 MA61175-4 TB600058-2 TB600440 MA61013-14 MA61174-4	Top Plate Full Floating Pin (Mild Steel Assb.) Top Plate Full Floating Pin (Stainless Steel Assb.) Top Plate Semi-Floating Pin (Mild Steel Assb.) Top Plate Semi-Floating Pin (Stainless Steel Assb.) Top Plate, Fixed Pin (Mild Steel Assb.) Top Plate, Fixed Pin (Stainless Steel Assb.)	1
11	TN600494 TN600509	Hold Down Bolt Assembly (Mild Steel Assb.) Hold Down Bolt Assembly (Stainless Steel Assb.)	1
12	MZ0901010459 MZ0901010083	5/8-11 Hex. Hd. Bolt x 1.25" Lg. (Mild Steel Assb.) 5/8-11 Hex. Hd. Bolt x 1.25" Lg. (Stainless Steel Assb.)	2
13	MZ0901010223	3/4-10 Hex. Hd. Screw x 1.25" Lg.	2
14	MN32367	3/4 Plain Washer S.S.	4

* May have a letter prefix

Model 957 Flexmount 75k Cell

Torque Load Cell Bolts to:

1. Mild Steel Assembly
200 ft-lb/ 271 Nm

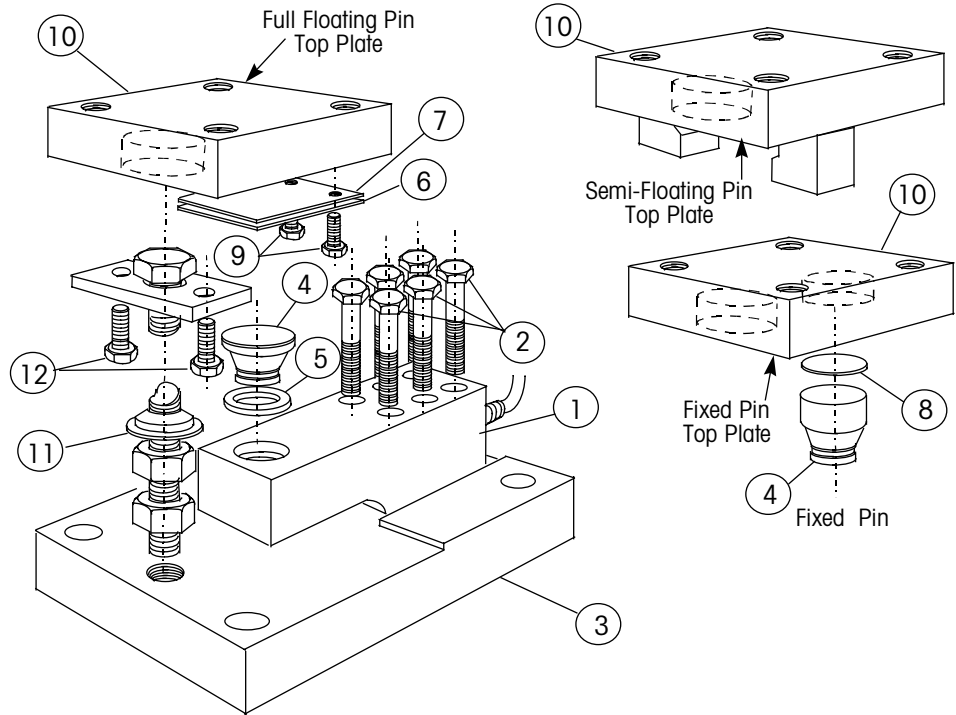


Figure 16-t: 75,000 lb Flexmount Assembly

Ref. No.	Part Number	Description	Qty
1	TB600510	75,000 lb Load Cell 350 Ohm (35 ft. cable)	1
2	MZ0901010039	3/4 -10 Hex. Hd. Bolt x 6.50" Lg.	6
3	MA61010-12	Base Plate, Mild Steel	1
4	MN61291 MA61289	Load Pin, floating Load Pin, fixed	1
5	MN61016-4	Dust Seal, Load Pin	1
6	MN61002-4	Thick Shim, Stainless Steel .075" x 4.00" x 5.75" (used with Full & Semi-Floating Assemblies)	1
7	MN61004-4	Thin Shim, Stainless Steel .075" x 4.00" x 5.75" (used with Full & Semi-Floating Assemblies)	1
8	MN61003-15	Shim, Fixed Pin	
9	MZ0901010064	3/8-16 Hex. Hd. Screw x .50" Lg. (used with the Semi and Full Floating Assemblies)	4
10	MA61012-4 MB61011-4 MA61013-4	Top Plate, Full Floating Pin (Mild Steel Assb.) Top Plate, Semi-Floating Pin (Mild Steel Assb.) Top Plate, Fixed Pin (Mild Steel Assb.)	1
11	TN600498	Hold Down Bolt Assembly	1
12	MZ0901010459	5/8-11 Hex. Hd. Bolt x 1.50" Lg.	2

* May have a letter prefix

Model 0957 Flexmount 100k & 200k Cell

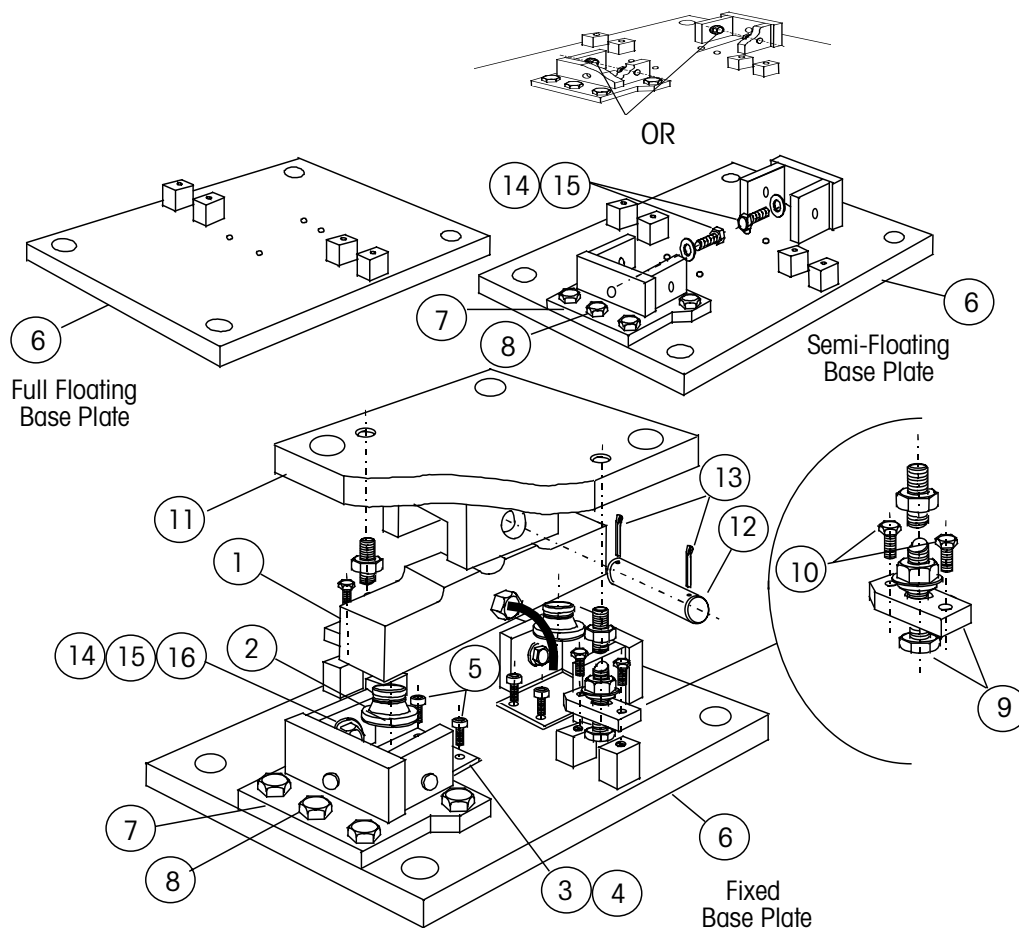


Figure 16-u: 100,000 and 200,00 lb Flexmount Assemblies

Ref. No.	Part Number	Description	Qty
1	ML8511 ML8521	100,000 lb Load Cell 1,000 Ohm (35 ft. cable) 200,000 lb Load Cell 1,000 Ohm (35 ft. cable)	1
2	MN61206-1 MN61206-2	Load Pin, Sliding (100k cell) Load Pin, Sliding (200k cell)	2
3	MN61205-1 MN61204-1	Slider Plate, Thick, 11 Ga. (100k cell) Slider Plate, Thick, 11 Ga. (200k cell)	2
4	MN61205-2 MN61204-2	Slider Plate, Thin, 14 Ga. (100k cell) Slider Plate, Thin, 14 Ga. (200k cell)	2

Ref. No.	Part Number	Description	Qty
5	MZ0901010207	5/16 -18 Soc. Hd. Screw x .75" Lg.	4
6	MB61210-10	Base Plate, Fixed and Semi-Floating (100K cell)	1

Chapter 16: Flexmount®/Centerlign® Weigh Modules
Model 0957 Flexmount 100k & 200k Cell

	MB61208-10	Base Plate, Full Floating (100K cell)	
	MB61202-10	Base Plate, Fixed and Semi-Floating (200K cell)	
	MB61200-10	Base Plate, Full Floating (200K cell)	
7	MB61211-10 MB61203-10	Bumper Bracket (Fixed and Semi-Floating assemblies) 100K Bumper Bracket (Fixed and Semi-Floating assemblies) 200K	1
8	MZ0901010354	3/4-10 Hex. Hd. Bolt x 2.25" Lg. (Fixed and Semi-Floating assemblies) 100K	5
9	MA61212-1 MA61212-2 MA61212-4	Hold Down Bolt Assembly (100K cell) Hold Down Bolt Assembly (30K up lift assembly) (200K cell) Hold Down Bolt Assembly (90K up lift assembly) (200K cell)	2
10	MZ0901010208 MZ0901010208 MZ0901010429	3/4-10 Hex. Hd. Screw x 3.75" Lg. (100K cell) 3/4-10 Hex. Hd. Bolt x 3.75" Lg. Gr. 5 (30K up lift Assb.) (200K cell) 3/4-10 Hex. Hd. Bolt x 3.75" Lg. Gr. 8 (90K up lift Assb.) (200K cell)	4
11	MA61209-10 MA61201-10	Top Plate (100K cell) Top Plate	1
12	MN31681 MN32258	Load Pin (100K cell) Load Pin (200K cell)	1
13	MZ0904000010	Cotter Pin, .25 in.	2
14	MZ0901010210	3/4-10 Hex. Hd. Screw x 1.50" Lg. (Semi-Floating, End Bumping) (Semi-Floating, Side Bumping) (Fixed)	2 4 6
15	MZ0901030052	3/4 Plain Washer (Semi-Floating, End Bumping) (Semi-Floating, Side Bumping) (Fixed)	8 16 24
16	MN32367	3/4 Plain Washer, .06" Thick (Semi-Floating) (Fixed)	24 24

* May have a letter prefix

Model 0958 Centerlign+ 250 to 10k Cells

Torque Load Cell Bolts to:

1. Mild Steel Assembly
75 ft-lb/102 Nm (250 to 5K cells) &
200 ft-lb/271 Nm (10K cells)
2. Stainless Steel Assembly
100 ft/136 Nm (250 to 5K cells) &
250 ft-lb/339 Nm (10K cells)

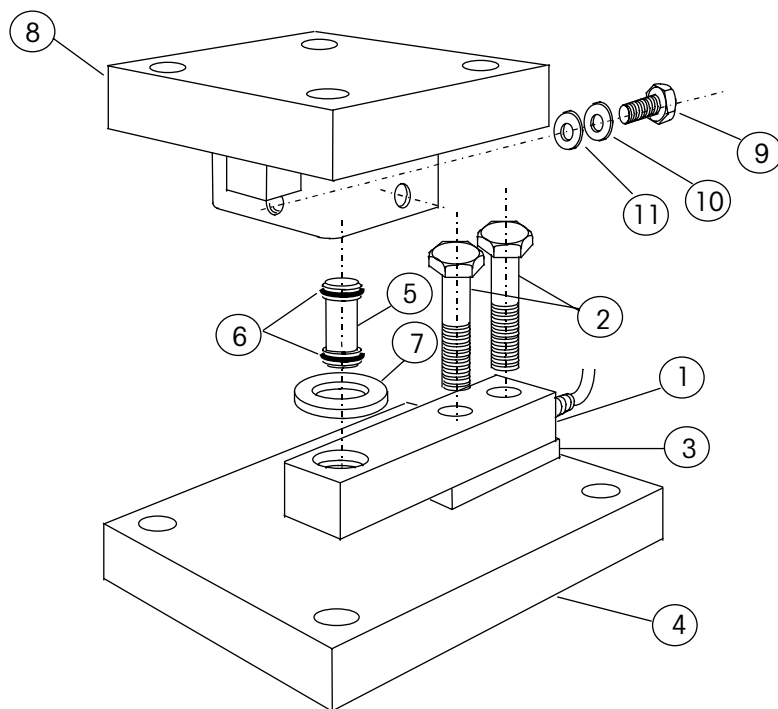


Figure 16-v: 250 to 2,500 lb Centerlign+ Assembly

Ref. No.	Part Number	Description	Qty
1	TB600488-1 TB600529-3 TB600451 TB600454 TB600363 TB600342 TB600455	250 lb Load Cell 350 Ohm (15 ft. cable) 500 lb Load Cell S.S. 350 Ohm Model 745 (15 ft. cable) 220 kg Load Cell 350 Ohm Model 744 (15 ft. cable) 550 kg C3 R60 OIML Load Cell S.S. 350 Ohm (15 ft.) 1,500 lb Load Cell S.S. 350 Ohm (15 ft. cable) 2,500 lb Load Cell S.S. 350 Ohm (15 ft. cable) 1100 kg C3 R60 OIML Load Cell S.S. 350 Ohm (15 ft.)	1
2	MZ0901010433 MZ0901010122	1/2-13 Hex. Hd. Bolt x 2.25" Lg. (Mild Steel Assb.) 1/2-13 Hex. Hd. Bolt x 2.25" Lg. (Stainless Steel Assb.)	2
3	TN600366	Spacer Plate	1
4	TA600346-11 TA600346-2	Base Plate, (Mild Steel Assembly) Base Plate, (Stainless Steel Assembly)	1
5	MN21018	Load Pin	1
6	MZ0909000005	"O" Ring, Load Pin	1
7	TN600322-4	Dust Seal, Load Pin	2
8	TA600362-11 TA600348	Top Plate (Mild Steel Assb.) Top Plate (Stainless Steel Assb.)	1

Ref. No.	Part Number	Description	Qty
9	MZ0901010064	3/8-16 Hex. Hd. Screw S.S. x .50" Lg.	Varies
10	MZ0901030019	3/8 Plain Washer, S.S.	Varies
11	TN201034	3/8 Plain Washer, S.S. x .03" Thick	Varies
Ref.	TN600387	Alignment Tool	

* May have a letter prefix

5000 lb Centerlign+ Assembly

Ref. No.	Part Number	Description	Qty
1	TB600343 TB600456-1	5,000 lb Load Cell S.S. 350 Ohm (15 ft. cable) 2200 kg C3 R60 OIML Load Cell S.S. 350 Ohm (15 ft cable)	1
2	MZ0901010434 MZ0901010227	1/2-13 Hex. Hd. Bolt x 2.50" Lg. (Mild Steel Assb.) 1/2-13 Hex. Hd. Bolt x 2.50" Lg. (Stainless Steel Assb.)	2
3	TN600366	Spacer Plate	1
4	TA600346-11 TA600346-2	Base Plate, (Mild Steel Assembly) Base Plate, (Stainless Steel Assembly)	1
5	MN21018	Load Pin	1
6	MZ0909000005	"O" Ring, Load Pin	1
7	TN600322-4	Dust Seal, Load Pin	1
8	TA600362-11 TA600348	Top Plate (Mild Steel Assb.) Top Plate (Stainless Steel Assb.)	1
9	MZ0901010064	3/8-16 Hex. Hd. Screw S.S. x .50" Lg.	Varies
10	MZ0901030019	3/8 Plain Washer, S.S.	Varies
11	TN201034	3/8 Plain Washer, S.S. x .03" Thick	Varies
Ref.	TN600360	Alignment Tool	

* May have a letter prefix

10,000 lb Centerlign+ Assembly

Ref. No.	Part Number	Description	Qty
1	TB600364 TB600457-1	10,000 lb Load Cell S.S. 350 Ohm (30 ft. cable) 4400 kg C3 R60 OIML Load Cell S.S. 350 Ohm (30 ft)	1
2	MZ0901010420 MZ0901010421	3/4-10 Hex. Hd. Bolt x 3.25" Lg. (Mild Steel Assb.) 3/4-10 Hex. Hd. Bolt x 3.25" Lg. (Stainless Steel Assb.)	2
3	TN600367	Spacer Plate	1
4	TA600357-11 TA600357-2	Base Plate, (Mild Steel Assembly) Base Plate, (Stainless Steel Assembly)	1
5	TN201975	Load Pin	1
6	MZ0909000050	"O" Ring, Load Pin	1
7	TN600322-5	Dust Seal, Load Pin	1
8	TA600368-11 TA600359	Top Plate (Mild Steel Assb.) Top Plate (Stainless Steel Assb.)	1
9	MZ0901010064	3/8-16 Hex. Hd. Screw S.S. x .50" Lg.	Varies
10	MZ0901030019	3/8 Plain Washer, S.S.	Varies
11	TN201034	3/8 Plain Washer, S.S. x .03" Thick	Varies
Ref.	TN600361	Alignment Tool	

* May have a letter prefix

Model 0957 Centerlign 20k Cell

Torque Load Cell Bolts to:

1. Mild Steel Assembly
475 ft-lb/ 644 Nm
2. Stainless Steel Assembly
280 ft-lb/ 380 Nm

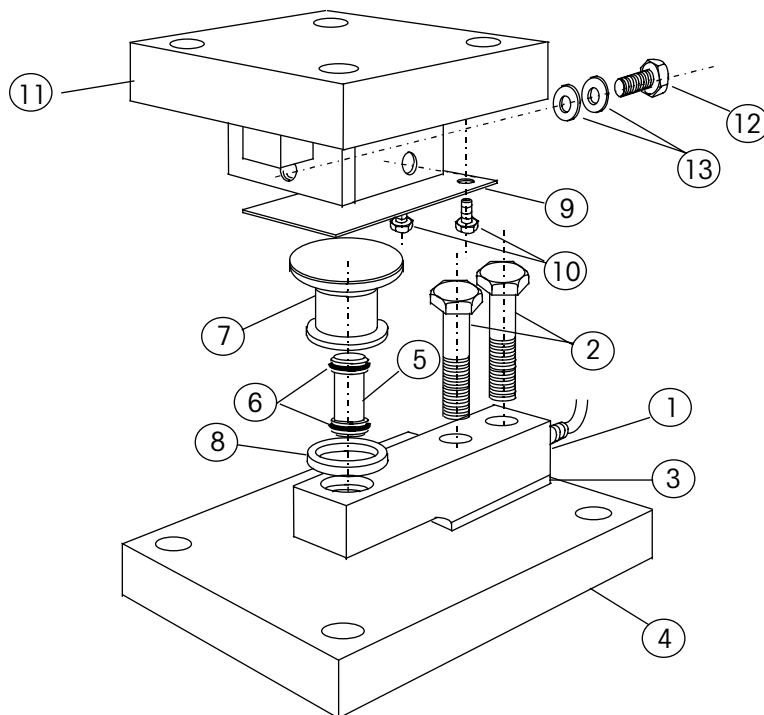


Figure 16-w: 20,000 lb Centerlign Assembly

Ref. No.	Part Number	Description	Qty
1	*13077500B *15237800A	20,000 lb Load Cell S.S. 350 Ohm (30 ft. cable) 5,072 kg Load Cell S.S. 350 Ohm (30 ft cable)	1
2	MZ0901010072 MZ0901010316	1-8 Hex. Hd. Bolt x 4.00" Lg. (Mild Steel Assb.) 1-8 Hex. Hd. Bolt x 4.00" Lg. (Stainless Steel Assb.)	2
3	TN300578	Spacer Plate	1
4	MA61226-10 TA600037	Base Plate , Mild Steel Base Plate , Stainless Steel	1
5	MN21036	Rocker Pin	1
6	MZ0909000013	"O" Ring	
7	MN21035	Slider Cup	1
8	MN61016-11	Dust Seal	1
9	MN61222-2	Shim, Stainless Steel .075" x 2.75" x 4.12"	2
10	MZ0901010064	3/8-16 Hex. Hd. Screw x .50" Lg.	2
11	MA61283-10 TA600443	Top Plate (Mild Steel Assb.) Top Plate (Stainless Steel Assb.)	1
12	MZ0901010228	1/2-13 Hex. Hd. Screw x 1.00" Lg.	Varies
13	MZ0901030033	1/2 Plain Washer	Varies
Ref.	MN61284	Alignment Tool	

* May have a letter prefix

Model 0957 Centerlign 45k Cell

Torque Load Cell Bolts to:

1. Mild Steel Assembly
1000 ft-lb/1,356 Nm
2. Stainless Steel Assembly
520 ft-lb/705 Nm

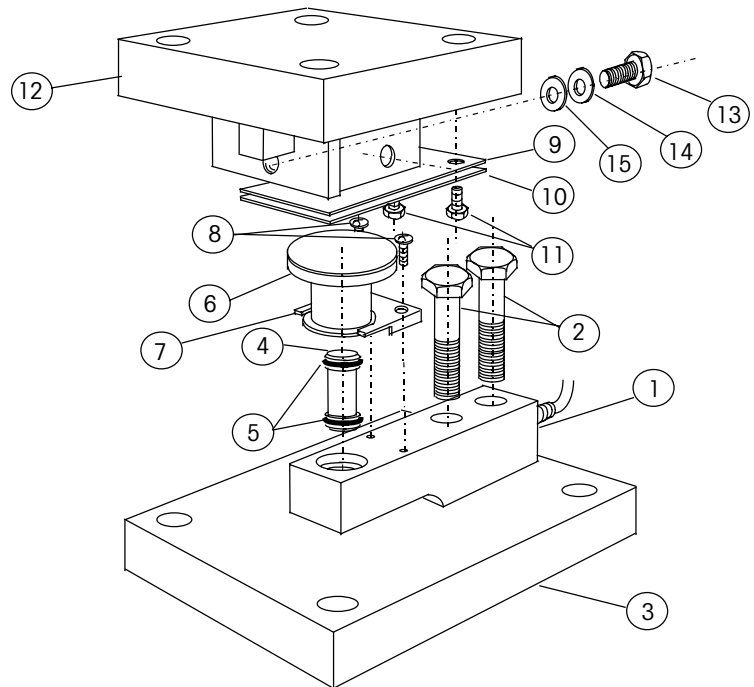


Figure 16-x: 45,000 lb Centerlign Assembly

Ref. No.	Part Number	Description	Qty
1	*13929400A *15238200A	45,000 lb Load Cell S.S. 2,000 Ohm (30 ft. cable) 20,412 kg Load Cell S.S. 2,000 Ohm (30 ft. cable)	1
2	MZ0901010201 MZ0901010216	1 1/4-7 Hex. Hd. Bolt x 5.00" Lg. (Mild Steel Assembly) 1 1/4-7 Hex. Hd. Bolt x 5.00" Lg. (Stainless Steel Assembly)	2
3	TA600111-10 TA600111-20	Base Plate (Mild Steel Assembly) Base Plate (Stainless Steel Assembly)	1
4	MN31797	Rocker Pin	1
5	MZ0909000004	"O" Ring	2
6	MN32058	Slider Cup	1
7	MN31790	Retainer	1
8	MZ0901010165	10-32 Thread Cutting Screw	2
9	TN203171- 1	Thin Shim, 14 gauge	1
10	TN203171- 2	Thick Shim, 10 gauge	1
11	MZ0901010064	3/8-16 Hex. Hd. Screw x .50" Lg.	2
12	TA600109-10 TB306096-10	Top Plate (Mild Steel Assb.) Top Plate (Stainless Steel Assb.)	1
13	MN31650 MZ0901010083	5/8-11 Hex. Hd. Screw x .62" Lg. (Mild Steel Assembly) 5/8-11 Hex. Hd. Screw x 1.25" Lg. (Stainless Steel Assembly)	Varies
14	MZ0901030023	5/8 Plain Washer	Varies
Ref.	MN31801-1	Alignment Tool	

* May have a letter prefix

17

MG4500 Liftmate® HD Floor Scales

Model MG4500

Service Manual No. *14803300A
(*May have alpha prefix)

Model MG4500 Liftmate HD is an analog scale platform suitable for pit or top of floor applications.

Model	Standard Platform	Shipping Weight
MG4500105565	5' x 5' x8.38" smooth plate platform 40,000 lb Capacity	1,394 lb
MG4500105765	5' x 7' x8.38" smooth plate platform 40,000 lb Capacity	1,799 lb
MG4500106665	6' x 6' x8.38" smooth plate platform 40,000 lb Capacity	1,866 lb
MG4500106865	6' x 8' x8.38" smooth plate platform 40,000 lb Capacity	2,382 lb
MG4500107965	7' x 9' x8.38" smooth plate platform 40,000 lb Capacity	2,768 lb
MG4500108065	8' x 10' x8.38" smooth plate platform 40,000 lb Capacity	2,233 lb
MG4500105575	5' x 5' smooth plate platform 60,000 lb Capacity	2,390 lb
MG4500106675	6' x 6' smooth plate platform 60,000 lb Capacity	2,925 lb
MG4500105775	5' x 7' smooth plate platform 60,000 lb Capacity	3,065 lb
MG4500105875	5' x 8' smooth plate platform 60,000 lb Capacity	3,365 lb
MG4500106875	6' x 8' smooth plate platform 60,000 lb Capacity	3,755 lb
MG4500107775	7' x 7' smooth plate platform 60,000 lb Capacity	3,790 lb
MG4500108875	8' x 8' smooth plate platform 60,000 lb Capacity	4,545 lb

Standard Features

3/8" deck plate on the 40,000 lb platforms and 1/2" deck plate on the 60,000 lb platforms.

Options and Accessories

Coil Cradle (a "V" trough saddle constructed of 1/2" plate with a 3/8" rubber pad where coil contact is made).

Load Cell Data

Model 743

- NTEP Certificate of Conformance Number : 88-008A2
- Maximum excitation voltage: 15 VDC or VAC rms
- Full scale output: 2 mV/V
- Input terminal resistance: 385 ± 20 Ohms (20K) or 2200 ± 100 Ohms (45K)
- Output terminal resistance: 350 ± 2 Ohms (20K) or 2000 ± 20 Ohms (45K)
- Temperature range compensation: -10°C to $+40^{\circ}\text{C}$ ($+14^{\circ}\text{F}$ to $+104^{\circ}\text{F}$)
- Safe side load: 100% of full load cell rating
- Safe overload: 150% of full load cell rating

MG4500 Liftmate HD

The MG 4500 Liftmate HD uses an analog junction box for summing the load cell outputs. Only analog compatible indicators will work with the Liftmate HD. The correct cable connection is shown below.

Note: Turn all potentiometers fully clockwise prior to calibration.

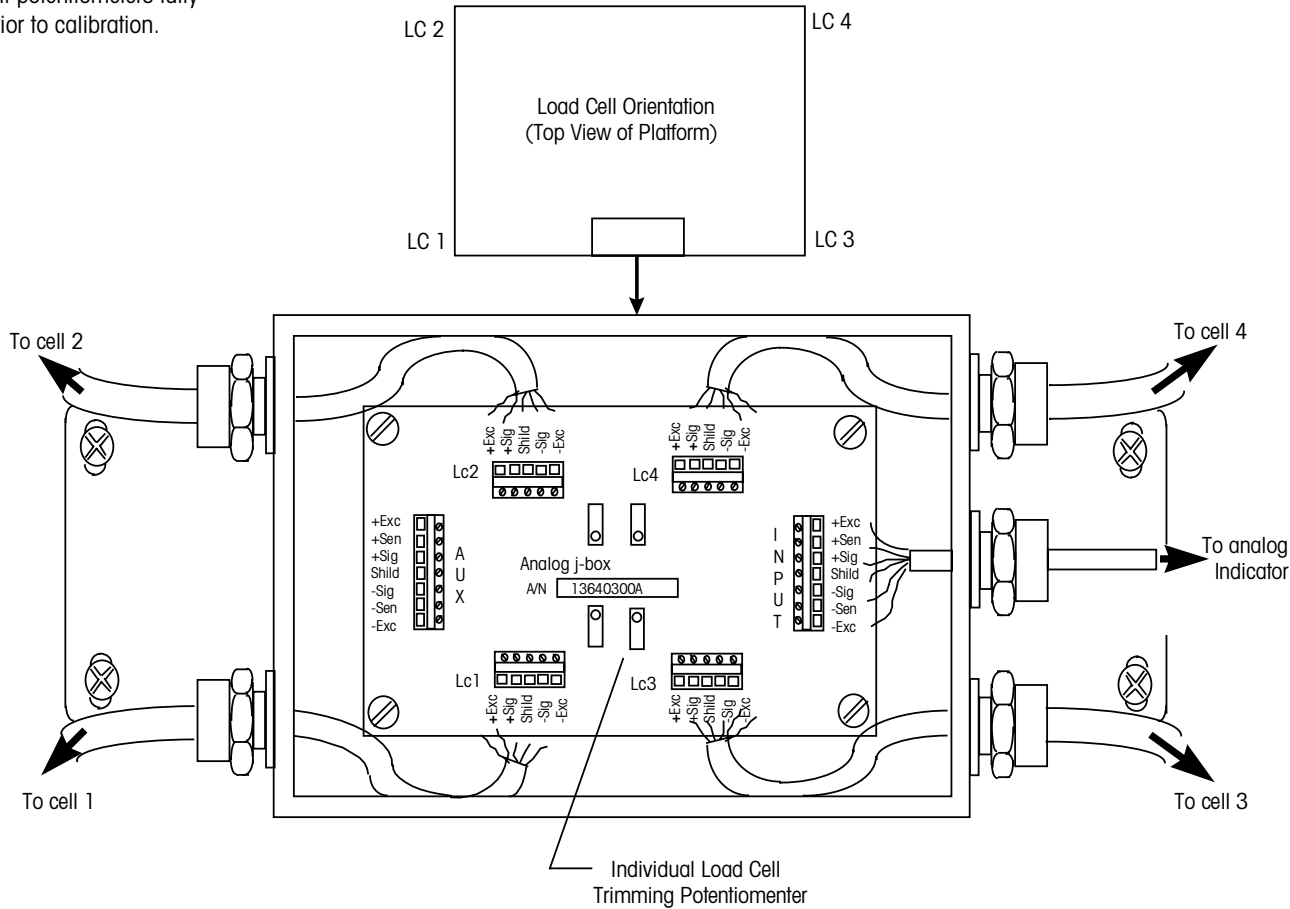


Figure 17-a: Liftmate HD Analog Junction Box Details and Wiring Codes

Load Cell Wiring		Instrument Cable Wiring	
Function	Color	Function	Color
+ Excitation	Green	+ Excitation	White
		+ Sense	Yellow
+ Signal	White	+ Signal	Green
Shield	Yellow	Shield	Orange
- Signal	Red	- Signal	Black
		- Sense	Red
- Excitation	Black	- Excitation	Blue
(Based on Mettler Toledo cable number 510624370)			

Service Parts

Torque load cell bolts to:

1. 475 ft-lb (1-8 Bolts, 20K cell) or
2. 1,000 ft-lb (1 1/4-7 Bolt ,45K cell)

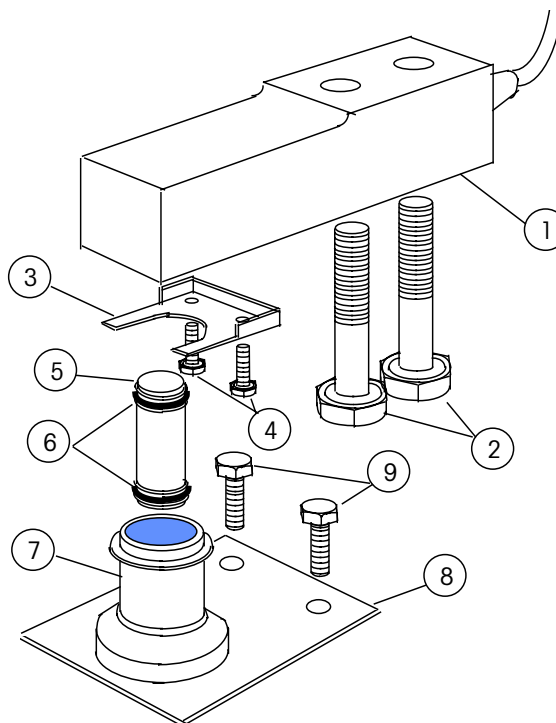


Figure 17-b: Load Cell and Rocker/Slider Assembly

Ref. No.	Part Number	Description	Qty.
40,000 lb Capacity			
1	*13077500A	20,000 lb Shear Beam Load Cell	4
2	MZ0901010073	1-8 Hex. Hd. Bolt x 4.00" Lg.	8
3	MN21033	Slider Cup Retainer	4
4	MZ0901010165	10-32 Screw x .75" Lg.	8
5	MN21036	Rocker Pin	4
6	MZ0909000013	O - Ring	8
7	MN21035	Slider Cup	4
8	TN202941	Slider Plate	4
9	MZ0901010064	3/8-16 Hex. Hd. Screw x .50" Lg.	8
60,000 lb Capacity			
1	*13029400A *14841200A	45,000 lb Shear Beam Load Cell (S. S. Shield Cable) 45,000 lb Load Cell (no S. S. Shield cable)	4
2	MZ0901010238	1-8 Hex. Hd. Bolt x 4.00" Lg.	8
3	MN31790	Slider Cup Retainer	4
4	MZ0901010165	10-32 Screw x .75" Lg.	8
5	MN31797	Rocker Pin	4
6	MZ0909000004	O - Ring	8
7	MN32058	Slider Cup	4
8	TN202941	Slider Plate	4
9	MZ0901010030	3/8-16 Hex. Hd. Screw x .50" Lg.	8

* May have letter prefix

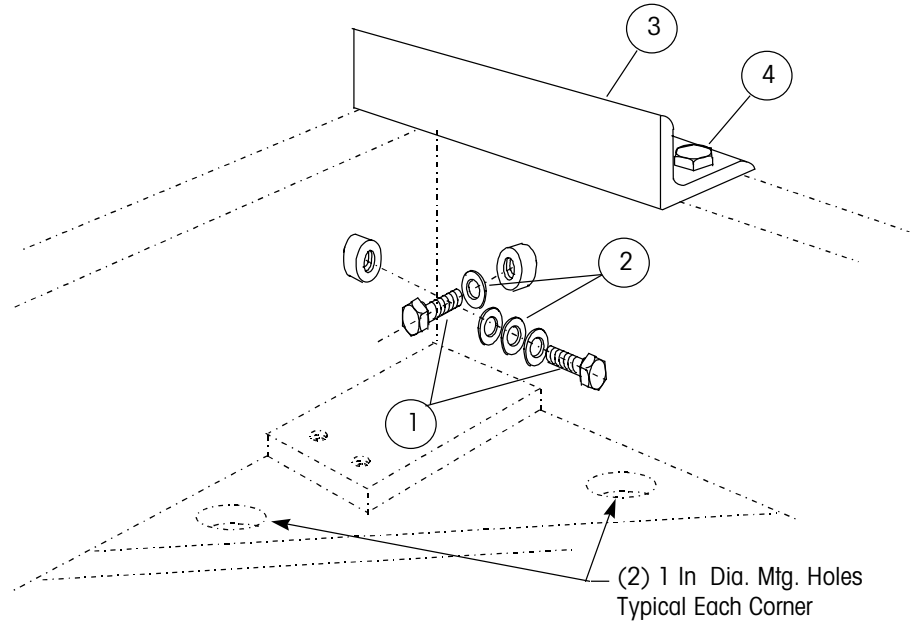


Figure 17-c: Bumper Bolt Arrangement

Ref. No.	Part Number	Description	Qty.
1	MZ0901010030	3/8-16 Hex. Hd. Screw x .75" Lg. (40,000 lb Capacity)	8
	MZ0901010083	5/8-11 Hex. Hd. Screw x 1.25" Lg. (60,000 lb Capacity)	8
2	MZ0901030019	3/8" Flat Washer (40,000 lb Capacity)	32
	MZ0901030023	5/8" Flat Washer (60,000 lb Capacity)	32
3	TN202623	Shipping Angle	4
4	MZ0901010030	3/8 - 16 Hex. Hd. Screw x .75" Lg.	8

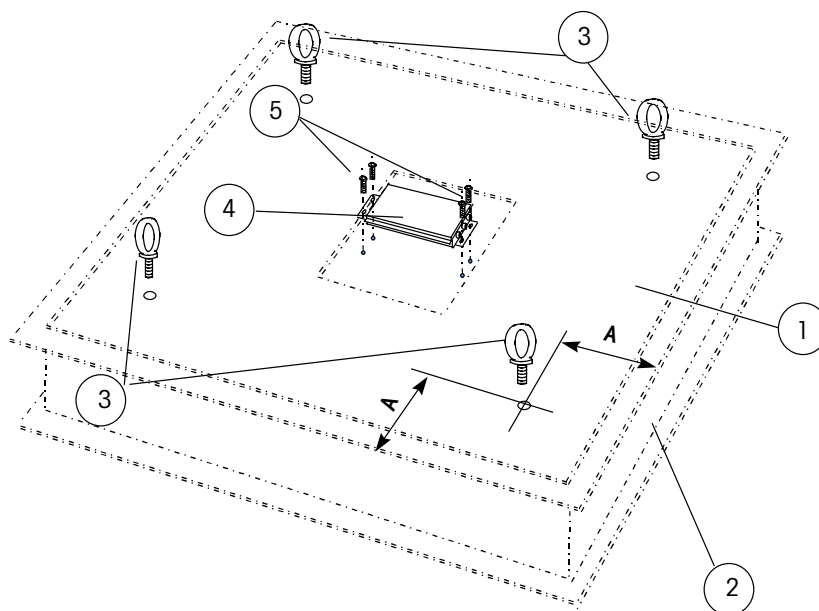


Figure 17-d: Scale Platform and Junction Box

Scale Capacity	Dia. A
40,000 Capacity	1' - 7/8"
60,000 Capacity	1' - 1 1/2"

Ref. No.	Part Number	Description	Qty.
1	Varies	Scale Platform	1
2	Varies	Scale Frame	1
3	MZ0905000003	3/4-10 Lifting Eye Bolt	4
4	TB100395	Analog Junction Box Assembly, Ref.: (1) *13640300A Analog PCB (1) TA800218 Desiccant Bag (5) TN100430 3/8 Cord Grip (5) TN100432 Lock-nut	1
5	MZ0901010379	1/4-20 PHD Screw S.S. x 1/4" Lg.	4

*May have letter prefix

18

Vertex® Floor Scales

Model 2158, 2160, 2162

Service Manual No. A14691400A

Model 2158 is an analog scale platform which meets Class III 5000 division accuracy. (NTEP COC 91-097A2)

Model 2160 is a DigiTOL scale platform which meets Class III 5000 division accuracy. (NTEP COC 94-010)

Model 2162 is an IDNet scale platform which has not been submitted to NTEP.

Standard Sizes and Capacities

Capacity		Standard Platform Size	Scale Height inch (cm)	Standard Ramp		Low Angle Ramp	
lb	kg			Length	Angle	Length	Angle
1,000 x 0.2	500 x 0.1*	3' x 3', 4' x 4'	3.00 (7.62)	36"	4.4°	60"	2.6°
2,500 x 0.5	1,000 x 0.2*	4' x 5', 4' x 6'					
5,000 x 1	2,500 x 0.5	5' x 5', 5' x 7'					
10,000 x 2	5,000 x 1	4' x 4', 4' x 5' 4' x 6', 5' x 5', 5' x 7'	3.38 (8.58)	36"	4.9°	60"	3.5°
20,000 x 5	10,000 x 2	4' x 4', 4' x 5' 4' x 6', 5' x 5', 5' x 7'	4.00 (10.16)	36"	5.9°		

* Not available in 5' x 7'

Options and Accessories

- Quick-Pit Frame - allows the scale to be mounted in a pit flush with the floor
 - Forklift Channels - allows easy moving of the scale by forklift
 - Scale Guard Frame Protectors - Protect scales from accidental forklift hits
 - Tread Plate Surface (Stainless Steel) - Standard is Smooth Plate for stainless steel scales
 - Smooth Plate Surface (Mild Steel) - Standard is Tread Plate for mild steel scales
 - Ramps - allows access from any side Smooth or Tread Plate
 - EZ-Clean Option - Pneumatic lift system for pit washdown and sanitation
 - High Accuracy Option - 10,000 division accuracy (not legal-for-trade)
-

Load Cell Data

Model Number 745

NTEP certificate of conformance number: 92 -108

Maximum excitation voltage: 15 VDC or VAC rms

Full scale output: 2 mV/V

Input terminal resistance: 350 Ohm minimum

Output terminal resistance: 350 ± 2 Ohms

Temperature range compensation: $-10\text{ }^{\circ}\text{C}$ to $+40\text{ }^{\circ}\text{C}$ ($+14\text{ }^{\circ}\text{F}$ to $+104\text{ }^{\circ}\text{F}$)

Safe side load: 100% of full load cell rating

Safe overload: 150% of full load cell rating

2158 Analog Vertex

Note: Turn all pots fully clockwise prior to calibration.

The 2158 Vertex uses an analog junction box for summing the load cell outputs. Only analog compatible indicators will work with the 2158 Vertex. The correct cable connection can be seen below.

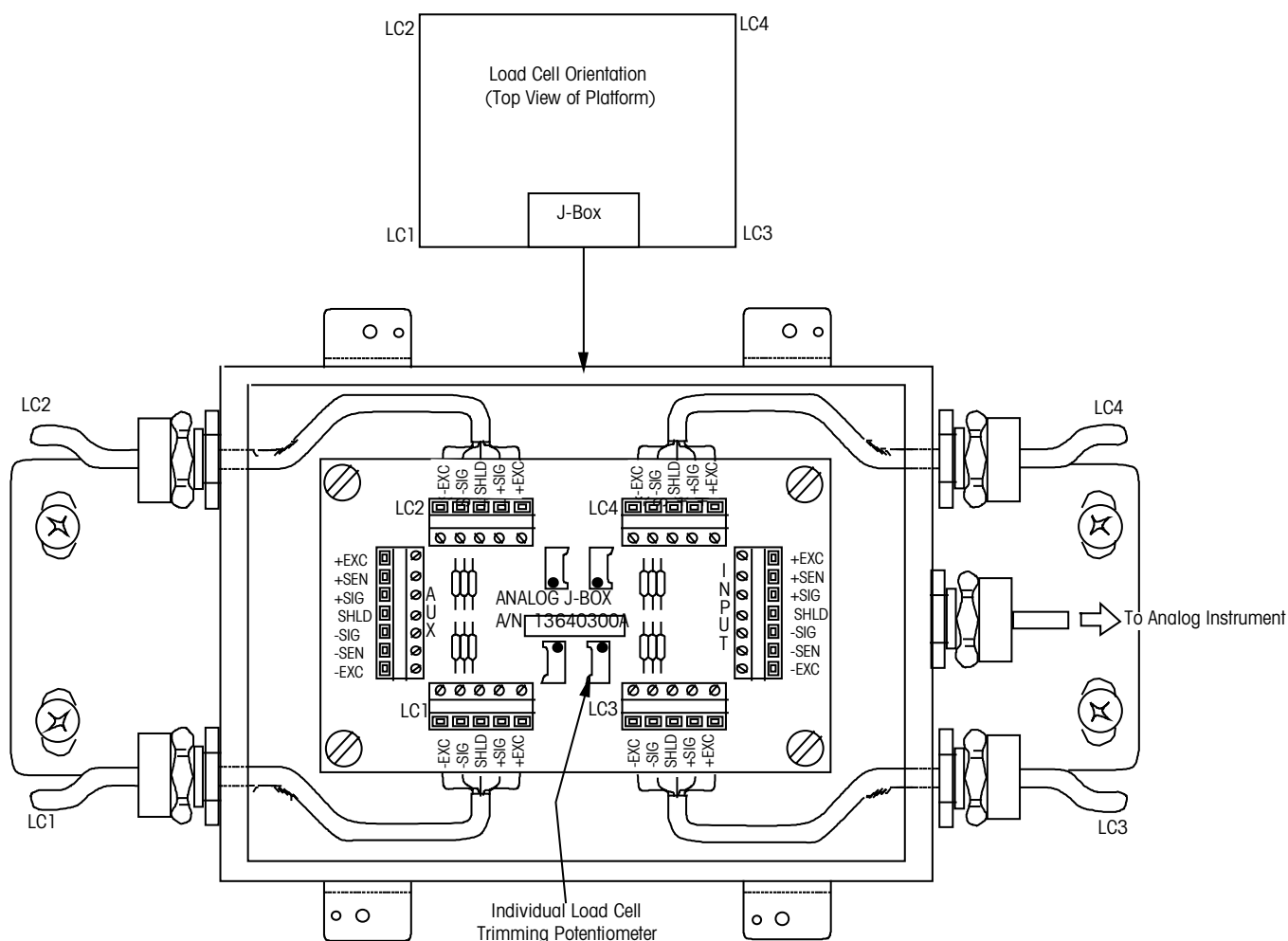


Figure 18-a: Vertex Junction Box Details and Wiring Codes

Load Cell Wiring		Instrument Cable Wiring	
Function	Color	Function	Color
+ EXCITATION	GREEN	+EXCITATION	WHITE
+ SENSE	NOT USED	+ SENSE	YELLOW
+ SIGNAL	WHITE	+ SIGNAL	GREEN
SHIELD	YELLOW	SHIELD	ORANGE
-SIGNAL	RED	-SIGNAL	BLACK
-SENSE	NOT USED	-SENSE	RED
-EXCITATION	BLACK	-EXCITATION	BLUE

(Based on Mettler Toledo Cable Number 510624370)

2160 DigiTOL Vertex DLC Mode

Note: Model 2160 is not compatible with the model 8510 panel mount indicator or models 8572 or 8582 counting scales.

The 2160 uses a DigiTOL junction box for summing the load cell outputs. Only DigiTOL indicators will work with the 2160. In the DLC mode the indicator acts as the host for the DigiTOL junction box allowing the scale parameters to be adjusted via the indicator keypad. Cable connections can be seen below.

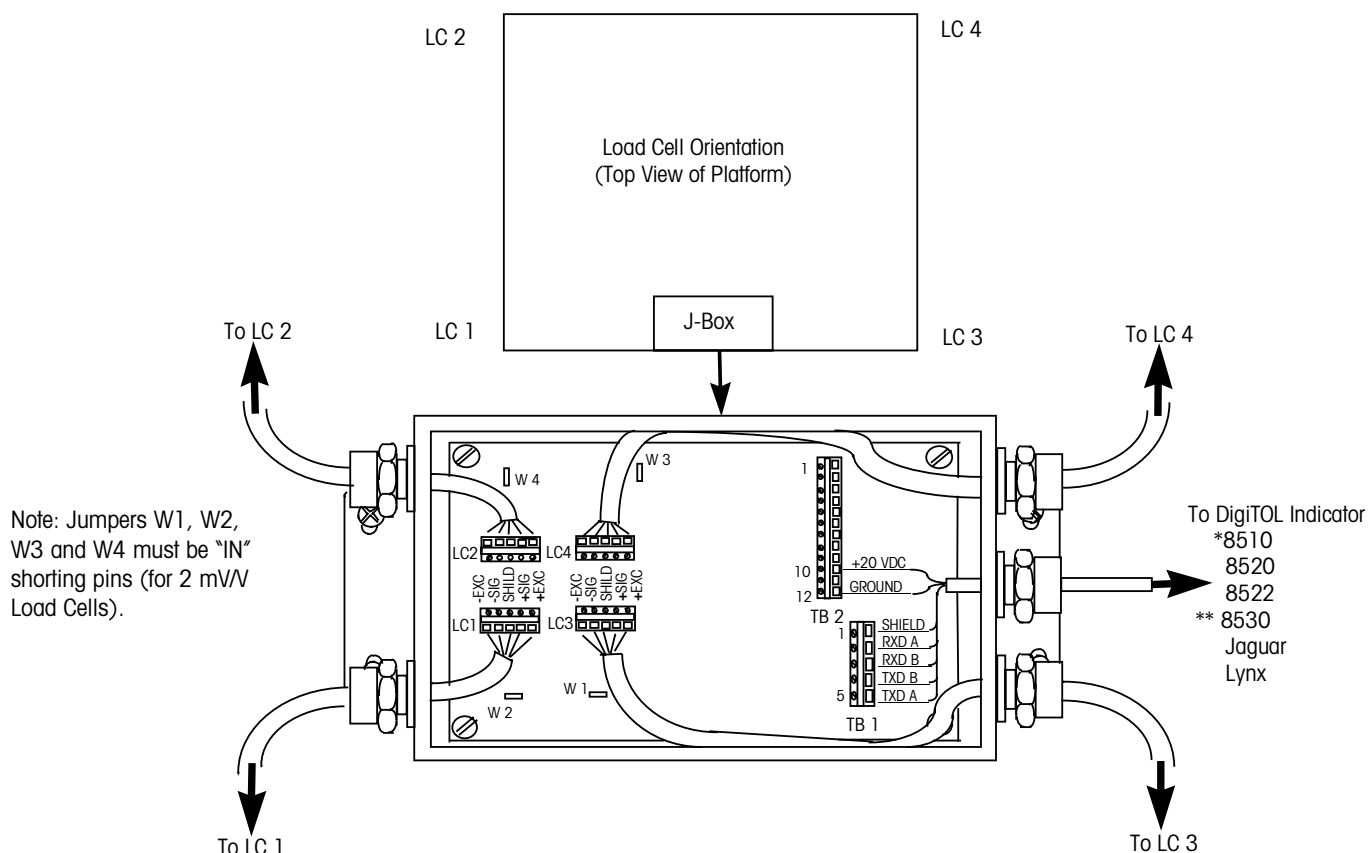


Figure 18-b: 2160 DigiTOL Vertex Details and Color Codes

Terminal	Position	Function	Wire Color
TB2	10	+20 VDC	GREEN
TB2	12	GROUND	BLUE
TB1	1	SHIELD	ORANGE
TB1	2	RXD A	RED
TB1	3	RXD B	WHITE
TB1	4	TXD B	YELLOW
TB1	5	TXD A	BLACK

*(Not compatible with Model 8510 Panel Mount DigiTOL Indicator or Models 8572 and 8582 Counting Scales.)

** (Not compatible with Model 8530VS)

2160 DigiTOL Vertex Smart Mode

When the 2160 is used with the 8505 weight display the junction box provides the “brains” for operation and become the host for the indicator. Cable connections can be seen below.

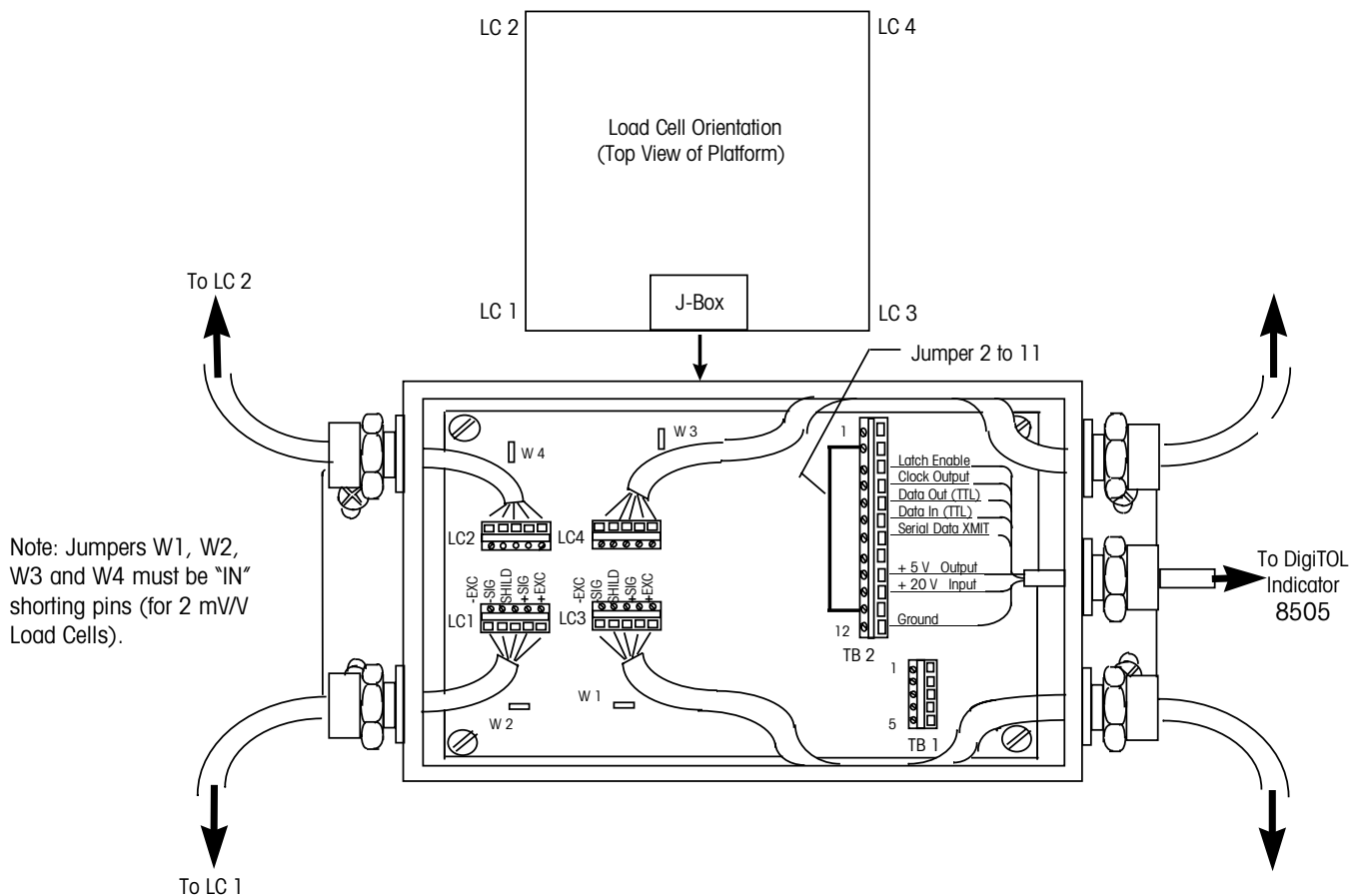


Figure 18-c: 2160 DigiTOL Vertex Smart Mode Junction Box Details and Color Codes

Terminal	Position	Function	Wire Color
TB2	2	Jumper to 11	
TB2	3	LATCH ENABLE	ORANGE
TB2	4	CLOCK OUTPUT	BLUE
TB2	5	DATA OUT (TTL)	BROWN
TB2	6	DATA IN (TTL)	VIOLET
TB2	7	SERIAL DATA XMIT	RED
TB2	8		
TB2	9	+5V OUTPUT	YELLOW
TB2	10	+20 VDC	BLACK
TB2	11	Jumper to 2	
TB2	12	GROUND	GREEN

2162 IDNet

The 2162 Vertex uses an ID Net junction box to output an IDNet Data Format compatible with Mettler Toledo ID1 and ID5 weigh display or Jaguar Industrial Terminal. Cable connection can be seen below.

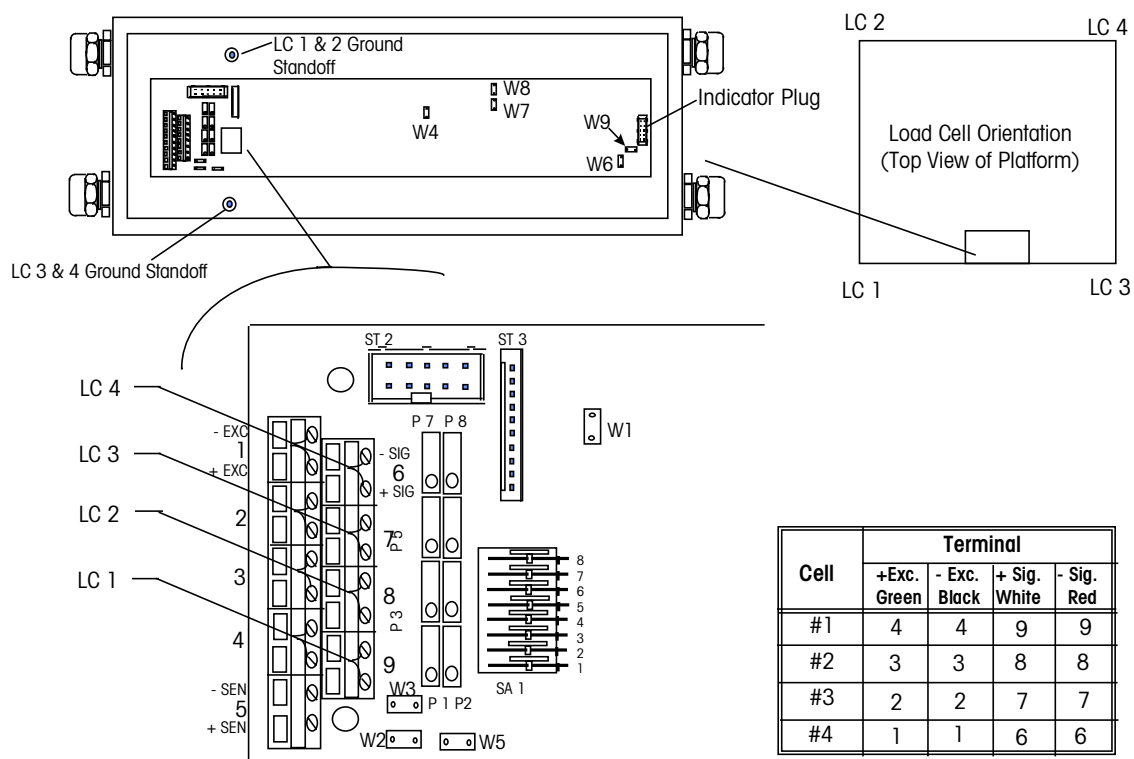


Figure 18-d: 2162 IDNet Default Factory setting

Jumper	Status	Description
W1	Closed	Matching the gain at 2 mV/V load cells
W2	Closed	No external sensing (– SEN)
W3	Closed	No external sensing (+ SEN)
W4	Closed	Internal reference voltage = 3.5 V
W5	Open	Excitation voltage for load cells = 4.0 Volts
W6	Closed	Internal supply voltage = 7.1 Volts
W7	2-3	Protocol ID Net
W8	1-2	Interface 20 mA
W9	Open	Supply voltage ID Net
SA1	Closed	Trim Potentiometers Circuit Disabled

Shift Adjustment for Model 2162

The shift adjustment is made by adjusting load cell trim potentiometers mounted on the ID Net junction box PCB.

1. Successively place the test weight(s) at the designated locations and record each reading. If the readings are within the tolerances desired, shift adjustment will not be required. However if the readings are not within the desired tolerances continue with the Steps 2 - 8.
2. Activate the trim potentiometers by opening all eight (8) of the hook switches (if they are not already open) located on the PCB (see figure below), once activated they will remain open, DO NOT close the latches, even after the shift adjustment procedure is complete.
3. Start the adjustment at the load cell with the highest positive reading, this process will trim the load cells to match the value of the lowest value recorded.
4. For minor adjustments the trim potentiometers (each load cell has two) may be turned clockwise which will result in a positive increase, or counter-clockwise for negative results. Should the scale require more adjustment turn all potentiometers counter-clockwise, you will know when to stop when the indication on the instrument or meter stabilizes.
5. Reapply the test weight(s) to the location with the highest recorded reading, adjust that load cell pair of potentiometers to match the reading of the location with the lowest recorded value.
6. Repeat the procedure until all location readings are the same, or within the scale tolerances specified.
7. Repeat Step 1, to verify shift tolerances.

1. Leaving all hook latches open, reinstall junction box lid and access cover plate.

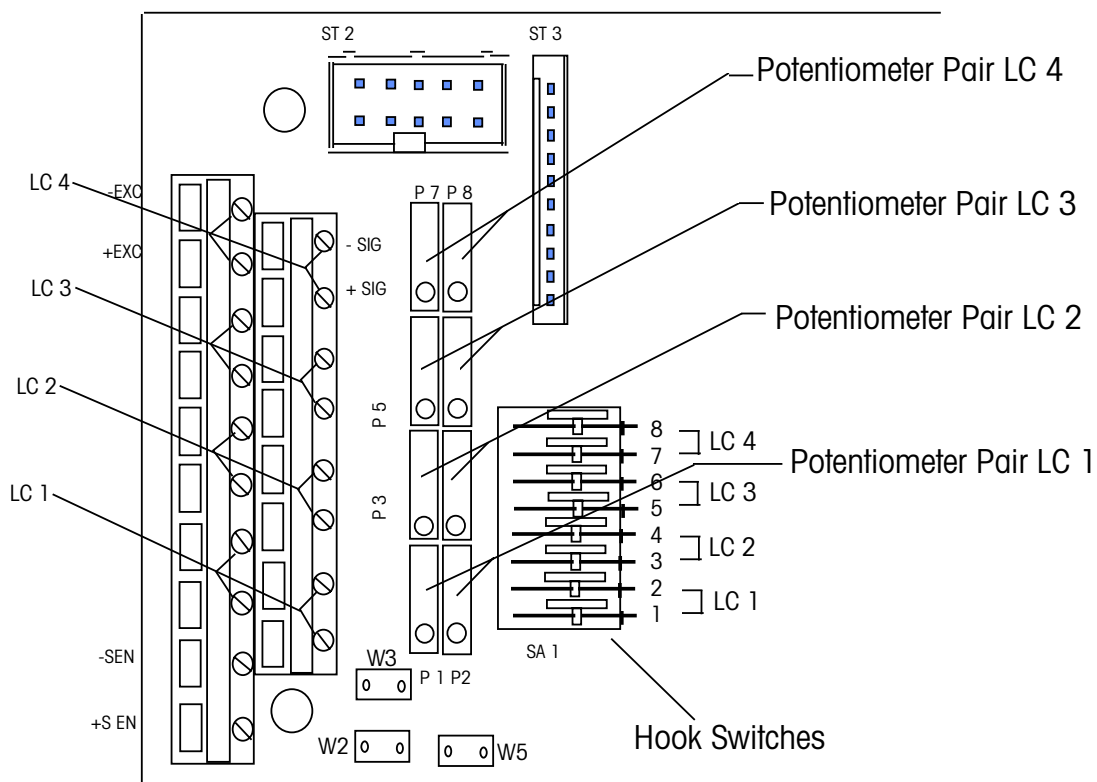


Figure 18-e: IDNet Potentiometer Adjust

Service Parts

Note: Proper overload gap:
500 lb cell - .009" to .015"
1250 lb cell - .012" to .018"
2500 lb cell - .017" to .023"

***Torque load cell bolts to:**

1. 100 ft-lb (1-5 cell) or
2. 250 ft-lb (10k cell)

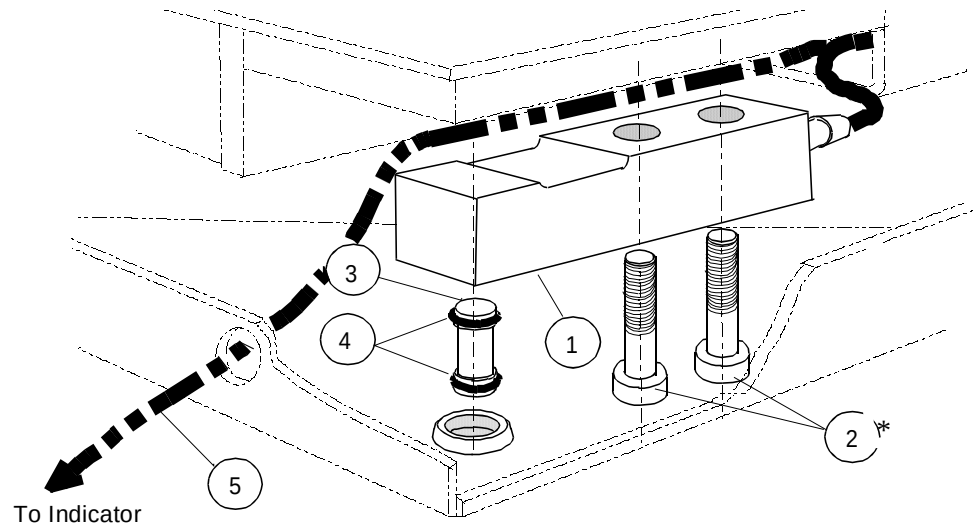


Figure 18-f: Load Cell and Rocker Pin Assembly

Ref. No.	Part Number	Description	Qty.
1	TB600529-2 TB600529-3 TB600363-1 TB600363 TB600342 TB600342-1 TB600343 TB600343-1 TB600364-1 TB600454-2 TB600454 TB600455-2 TB600455 TB600456-2 TB600456 TB600457-2 TB600457	500 lb load cell (5000d) with 7.5 ft. cable 500 lb load cell (5000d) with 15 ft. cable 5 x 7 platform ONLY 1250 lb hermetic load cell (5000d) with 7.5 ft. cable 1250 lb hermetic load cell (5000d) with 15 ft. cable 5 x 7 platform ONLY 2500 lb load cell (5000d) with 15 ft. cable 5 x 7 platform ONLY 2500 lb hermetic load cell (5000d) with 7.5 ft. cable 5000 lb load cell (5000d) with 15 ft. cable 5 x 7 platform ONLY 5000 lb hermetic load cell (5000d) with 7.5 ft. cable 10000 lb hermetic load cell (5000d) with 15 ft. cable 550 kg C3 R60 OIML with 7.5 ft. cable 550 kg C3 R60 OIML with 15 ft. cable 5 x 7 platform ONLY 1100 kg C3 R60 OIML with 7.5 ft. cable 1100 kg C3 R60 OIML with 15 ft. cable 5 x 7 platform ONLY 2200 kg C3 R60 OIML with 7.5 ft. cable 2200 kg C3 R60 OIML with 15 ft. cable 5 x 7 platform ONLY 4400 kg C3 R60 OIML with 7.5 ft. cable 4400 kg C3 R60 OIML with 15 ft. cable 5 x 7 platform ONLY	4
2	MZ0901010333 MZ0901010409 MZ0901010430	1/2-13 bolt x 1 3/4" Lg. (.5 - 2.5k load cell) 1/2-13 bolt x 2" Lg. (5k load cell) 3/4-10 bolt x 2 1/2" Lg. (10k load cell)	8
3	TN200050 MN21018 TN201975	Rocker pin (.5 - 5k load cell) Rocker pin (5k load cell) Rocker pin (10k load cell)	4
4	MZ0909000005 MZ0909000050	O-ring (.5 - 5k load cell) O-ring (10k load cell)	8
5	510624370	24 ga., 6 conductor, shielded home run cable	Varies

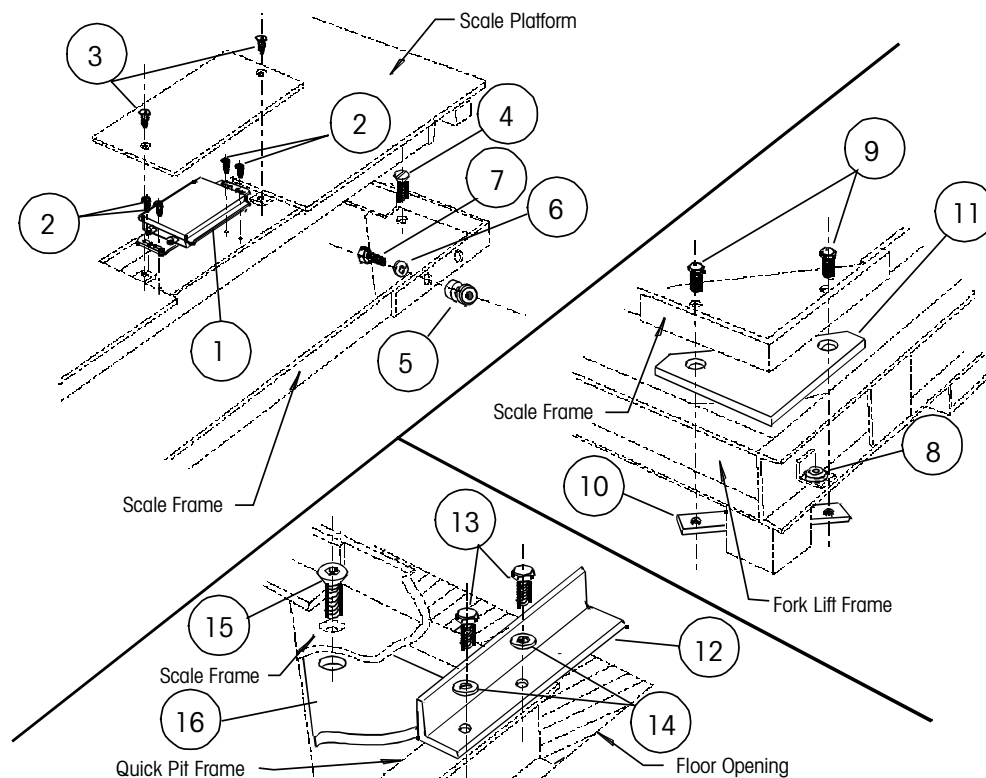


Figure 18-g: Junction Box, Bumper Bolts, and Frame Mounting

Ref. No.	Part Number	Description	Qty.
1	TB100395	Analog junction box assembly (model 2158) Ref.: *13640300A Analog PCB TA800218 Desiccant Bag	1
	TB100515-5	DigiTOL junction box assembly (model 2160) Ref.: *13839900A DigiTOL PCB TA800218 Desiccant Bag	
	TB100569-4	ID Net junction box assembly (model 2162) Ref.: ME209351 IDNet PCB TA800218 Desiccant Bag IDNet Ref.: ME200308 Lock Nut ME209911 Washer ME504235 Cable, IDNet x 5 m Lg.	
2	MZ0901010379	1/4-20 Phillips head screw x 1/4" lg.	4
3	MZ0901010035	3/8 Flat Head Screw x 3/4" lg.	2
4	MZ0901010298	1/2-13 Flat Head Screw x 1 1/2" lg.	**8
Ref	MZ0901010413	1/2-13 Female Anchor	**8

* May have an alpha prefix.

** (1) one additional screw and anchor is required for each side of the frame 7 ft or over.

Ramp Option Hardware

5	TA201611	Lug, ramp (per ramp)	2
6	MZ0901030076	3/8 lock washer (per ramp)	2
7	MZ0901010124	3/8-16 hex head bolt x 1" lg. (per ramp)	2

Fork Lift Frame Option Hardware

8	TN201817	Level bubble	1
9	MZ0901010298 MZ0901010451	1/2-13 flat head screw, hex socket x 1 1/2" lg. 1/2-13 flat head screw, hex socket x 1 1/2" lg. S.S.	8
10	TN201631 TN202231	Hold down strap M.S. Hold down strap S.S.	4
11	TN201705	*5/8" spacer plate (UHMW poly)	4

* Parts for 10k capacity ONLY.

Quick Pit Option Hardware

12	TN202623	Shipping angle	4
13	MZ0901010033	3/8-16 hex head screw x 3/4" lg.	8
14	MZ09011030011	3/8" zinc washer	8
15	MZ0901010249	*1/2-13 flat head screw, hex socket x 2 1/4" lg.	8
16	TN201705	*5/8" spacer plate (UHMW poly)	4

* Parts for 10k capacity ONLY.