



National Standards Commission
Cancellation
Certificate of Approval No 6/9C/231

This is to certify that the approval for use for trade granted in respect of the

Mettler Toledo Model 1938 Weighing Instrument

submitted by Mettler Toledo Limited
525 Graham Street
Port Melbourne VIC 3207

has been cancelled in respect of new instruments as from 1 May 2000.

Instruments which were verified/certified before that date may, with the concurrence of the relevant verifying authority, be submitted for reverification.

Signed and sealed by a person authorised under Regulation 63 of the National Measurement Regulations 1999 to exercise the powers and functions of the Commission under this Regulation.

A handwritten signature in black ink, appearing to read 'J. Burch'. The signature is written in a cursive style with a large initial 'J' and a long, sweeping underline.

National Standards Commission



Certificate of Approval

No 6/9C/231

Issued under Regulation 9
of the
National Measurement (Patterns of Measuring Instruments) Regulations

This is to certify that an approval for use for trade has been granted in respect of the

Mettler Toledo Model 1938 Weighing Instrument

submitted by Mettler Toledo Limited
(formerly Toledo Scale (Australia) Ltd
525 Graham Street
Port Melbourne VIC 3207.

NOTE: This Certificate relates to the suitability of the pattern of the instrument for use for trade only in respect of its metrological characteristics. This Certificate does not constitute or imply any guarantee of compliance by the manufacturer or any other person with any requirements regarding safety.

CONDITIONS OF APPROVAL

This approval is subject to review on or after 1/4/95.
This approval expires in respect of new instruments on 1/4/96.

Instruments purporting to comply with this approval shall be marked NSC No 6/9C/231 and only by persons authorised by the submittor.

It is the submitter's responsibility to ensure that all instruments marked with this approval number are constructed as described in the documentation lodged with the Commission and with the relevant Certificate of Approval and Technical Schedule. Failure to comply with this Condition may attract penalties under Section 19B of the National Measurement Act and may result in cancellation or withdrawal of the approval, in accordance with the Commission's Document 106.

Auxiliary devices used with this instrument shall comply with the requirements of General Supplementary Certificate No S1/0/A.

The values of the performance criteria (maximum number of scale intervals etc.) applicable to the instrument shall be within the limits specified herein and in any approval documentation for the components where they are approved separately.

The Commission reserves the right to examine any instrument or component of an instrument purporting to comply with this approval.

DESCRIPTIVE ADVICE

Pattern: approved 15/3/90

- A Mettler Toledo model 1938 self-indicating weighing instrument of 60 kg maximum capacity. (Instruments may be known as Toledo or Mettler or Mettler Toledo.)

Technical Schedule No 6/9C/231 describes the pattern.

Variant: approved 23/5/91

1. Model 2097 of 60 kg capacity.

Technical Schedule No 6/9C/231 Variation No 1 describes variant 1.

Variant: approved 23/10/91

2. Model 2138/2196 of 150 kg or 300 kg capacity.

Technical Schedule No 6/9C/231 Variation No 2 describes variant 2.

Variant: approved 4/2/92

3. Model 2038/2096 of 60 kg capacity.

Technical Schedule No 6/9C/231 Variation No 3 describes variant 3.

Variants: approved 23/7/92

4. Model 1997 of 30 kg capacity.

Technical Schedule No 6/9C/231 Variation No 4 describes variant 4.

Variants: approved 5/11/92

5. Model 2038/2096 of 150 kg capacity.

Variants: approved 27/2/93

6. Model 1997 of 15 kg capacity.

7. Model 1938/1996 of 30 kg capacity.

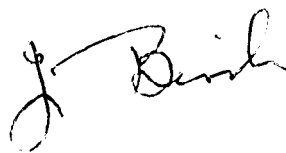
Technical Schedule No 6/9C/231 Variation No 5 describes variants 5 to 7.

FILING ADVICE

Certificate of Approval No 6/9C/231 dated 21/9/92 is superseded by this Certificate and may be destroyed. The documentation for this approval now comprises:

Certificate of Approval No 6/9C/231 dated 24/5/93
Technical Schedule No 6/9C/231 dated 7/5/90 (incl. Test Procedure)
Technical Schedule No 6/9C/231 Variation No 1 dated 3/7/91 (incl.
Notification of Change)
Technical Schedule No 6/9C/231 Variation No 2 dated 28/11/91
Technical Schedule No 6/9C/231 Variation No 3 dated 1/6/92
Technical Schedule No 6/9C/231 Variation No 4 dated 21/9/92
Technical Schedule No 6/9C/231 Variation No 5 dated 24/5/93 (incl.
Notification of Change)
Figure 1 dated 7/5/90
Figures 2 to 4 dated 3/7/91
Figure 5 dated 28/11/91

Signed and sealed by a person authorised under Regulation 9 of the National Measurement (Patterns of Measuring Instruments) Regulations to exercise the powers and functions of the Commission under this Regulation.





National Standards Commission

TECHNICAL SCHEDULE No 6/9C/231

Pattern: Toledo Model 1938 Weighing Instrument.

Submittor: Toledo Scale (Australia) Ltd
525 Graham Street
Port Melbourne VIC 3207.

1. Description of Pattern

A Toledo model 1938 self-indicating weighing instrument of 60 kg maximum capacity and approved for use with a maximum of 3000 verification scale intervals (Figure 1). The instrument may be fitted with an output socket for the connection of auxiliary or peripheral devices, and may have the indicator remote from the basework.

1.1 Zero

Zero is automatically corrected to within $\pm 0.25e$ whenever the instrument comes to rest within $0.5e$ of zero. If the instrument comes to rest outside that range but within the zero reset range, zero is reset by use of the zero button.

1.2 Display Check

A display check is initiated whenever the instrument is switched on.

1.3 Tare

A semi-automatic subtractive taring device of up to maximum capacity may be fitted. Pressing the button marked C will clear an entered tare value.

1.4 Basework

The basework has an integral Toledo model DigiTOL load cell of 140 kg capacity mounted directly between the main frame and the weighing platform frame.

1.5 Markings

Instruments are marked with the following data, together in one location:

Manufacturer's name or mark	
Serial number	
NSC approval number	NSC No 6/9C/231
Accuracy class	III
Maximum capacity	Max ... kg *
Minimum capacity	Min ... kg *
Verification scale interval	e = d = ... kg *
Maximum subtractive tare	T = - ... kg

* Repeated adjacent to each reading face.

1.6 Levelling

The instrument is provided with adjustable feet and adjacent to the level indicator is a notice advising that the instrument must be level when in use.

1.7 Verification Provision

Provision is made for a verification mark to be applied.

TEST PROCEDURE

Instruments should be tested in accordance with any relevant tests specified in the Inspector's Handbook.

Maximum Permissible Errors at Verification/Certification

The maximum permissible errors for increasing and decreasing loads, expressed in terms of verification scale interval (e), with the instrument adjusted to zero within $\pm 0.25e$ at no load, are:

- $\pm 0.5e$ for loads from 0 to $500e$;
- $\pm 1.0e$ for loads over $500e$ up to $2\ 000e$; and
- $\pm 1.5e$ for loads over $2\ 000e$.



National Standards Commission

TECHNICAL SCHEDULE No 6/9C/231

VARIATION No 1

Pattern: Toledo Model 1938 Weighing Instrument.

Submitter: Toledo Scale (Australia) Ltd
525 Graham Street
Port Melbourne VIC 3207.

1. Description of Variant 1

A Toledo model 2097 self-indicating weighing instrument of 60 kg maximum capacity and approved for use with a maximum of 3000 verification scale intervals.

The basework is of different construction to the pattern, including the load cell and mounting, and is designed for "washdown" environments. It has an integral Toledo model 0756 DigiTOL load cell of 100 kg capacity mounted directly between the main frame and the weighing platform frame (Figures 3 and 4).

The model 2097 uses a basework that is nominally 450 mm x 600 mm; when used with a smaller basework (nominally 315 mm x 350 mm) the instrument is known as a model 1997.

NOTIFICATION OF CHANGE

The following changes are made to Technical Schedule No 6/9C/231 dated 7/5/90:

1. Clause 1. Description of Pattern

- (a) The reference to Figure 1 should be changed to read "Figures 1 and 2". (Note: Figure 2 is attached herein.)
- (b) The following paragraphs should be added:
 - (i) "When not fitted with an integral column-mounted indicator as shown in Figure 1, the instrument is known as a model 1996."
 - (ii) "Instruments may be fitted with the model 8505 indicator (Figure 1) or with any other Toledo indicator which is Commission-approved for use with Toledo DigiTOL load cells."

2. **Clause 1.4 Basework**

- (a) The text should be amended to include the load cell model number, and should now read, in part;

"... Toledo model 0754 DigiTOL load cell ..."

- (b) The following paragraph should be added:

"The model 1938 (and model 1996) use a basework that is nominally 315 mm x 350 mm."



National Standards Commission

TECHNICAL SCHEDULE No 6/9C/231

VARIATION No 2

Pattern: Toledo Model 1938 Weighing Instrument.

Submitter: Toledo Scale (Australia) Ltd
525 Graham Street
Port Melbourne VIC 3207.

1. Description of Variant 2

A Toledo model 2138 self-indicating weighing instrument of 150 kg or 300 kg maximum capacity and approved for use with a maximum of 3000 verification scale intervals.

The basework (Figure 5) is of similar construction to variant 1 (model 2097), including the load cell mounting, but is not designed for "washdown" environments. It has an integral Toledo model 0755 DigiTOL load cell of 500 kg capacity mounted directly between the main frame and the weighing platform frame.

The basework is nominally 600 mm x 800 mm.

When not fitted with an integral column-mounted indicator (refer Figure 1) the instrument is known as a model 2196.

Instruments may be fitted with the model 8505 indicator (Figure 1) or with any other Toledo indicator which is Commission-approved for use with Toledo DigiTOL load cells.



National Standards Commission

TECHNICAL SCHEDULE No 6/9C/231

VARIATION No 3

Pattern: Toledo Model 1938 Weighing Instrument.

Submitter: Toledo Scale (Australia) Ltd
525 Graham Street
Port Melbourne VIC 3207.

1. Description of Variant 3

A Toledo model 2038 self-indicating weighing instrument of 60 kg maximum capacity and approved for use with a maximum of 3000 verification scale intervals.

The basework is of similar construction to variant 2 (model 2138) as shown in Figure 5, including the load cell mounting; it is not designed for "washdown" environments. It has an integral Toledo model 0754 DigiTOL load cell of 140 kg capacity mounted directly between the main frame and the weighing platform frame.

The basework is nominally 450 mm x 600 mm.

When not fitted with an integral column-mounted indicator (refer Figure 1) the instrument is known as a model 2096.

Instruments may be fitted with the model 8505 indicator (Figure 1) or with any other Toledo indicator which is Commission-approved for use with Toledo DigiTOL load cells.



National Standards Commission

TECHNICAL SCHEDULE No 6/9C/231

VARIATION No 4

Pattern: Toledo Model 1938 Weighing Instrument.

Submitter: Toledo Scale (Australia) Ltd
525 Graham Street
Port Melbourne VIC 3207.

1. Description of Variant 4

A Toledo model 1997 self-indicating weighing instrument of 30 kg maximum capacity and approved for use with a maximum of 3000 verification scale intervals.

The basework is of the same construction as variant 1 (model 2097) as shown in Figures 3 and 4, including the load cell mounting, and is designed for "washdown" environments. It has an integral Toledo model 0756 DigiTOL load cell of 100 kg capacity mounted directly between the main frame and the weighing platform frame.

The basework is nominally 315 mm x 350 mm.

Instruments may be fitted with the model 8505 indicator (Figure 1), or with the model 8520 indicator (as described in the documentation of NSC approval No S266), or with any other Toledo indicator which is Commission-approved for use with Toledo DigiTOL load cells.



National Standards Commission

TECHNICAL SCHEDULE No 6/9C/231

VARIATION No 5

Pattern: Mettler Toledo Model 1938 Weighing Instrument.

Submitter: Mettler Toledo Limited
525 Graham Street
Port Melbourne VIC 3207.

1. Description of Variants

1.1 Variant 5

A Mettler Toledo model 2038 (or DT150J) self-indicating weighing instrument of 150 kg maximum capacity and approved for use with a maximum of 3000 verification scale intervals.

The basework is of similar construction to variant 2 (model 2138 or DT300J) as shown in Figure 5, including the load cell mounting; it is not designed for 'washdown' environments. It has an integral Mettler Toledo model 0755 DigiTOL load cell of 300 kg capacity mounted directly between the main frame and the weighing platform frame. The basework is nominally 450 mm x 600 mm.

When not fitted with an integral column-mounted indicator (refer Figure 1) the instrument may also be known as a model 2096.

Instruments may be fitted with the model 8505 indicator (Figure 1) or with any other Mettler Toledo indicator which is Commission-approved for use with Mettler Toledo DigiTOL load cells.

1.2 Variant 6

A Mettler Toledo model 1997 self-indicating weighing instrument of 15 kg maximum capacity and approved for use with a maximum of 3000 verification scale intervals.

The basework is of the same construction as variant 1 (model 2097) as shown in Figures 3 and 4, including the load cell mounting, and is designed for 'washdown' environments. It has an integral Mettler Toledo model 0756 DigiTOL load cell of 30 kg capacity mounted directly between the main frame and the weighing platform frame. The basework is nominally 315 mm x 350 mm.

Instruments may be fitted with the model 8505 indicator (Figure 1) or with any other Mettler Toledo indicator which is Commission-approved for use with Mettler Toledo DigiTOL load cells.

1.3 Variant 7

A Mettler Toledo model 1938 (or DT30J) self-indicating weighing instrument of 30 kg maximum capacity and approved for use with a maximum of 3000 verification scale intervals.

The basework is of the same construction as the pattern (Figure 1) including the load cell mounting; it is not designed for 'washdown' environments. It has an integral Mettler Toledo model 0754 DigiTOL load cell of 30 kg capacity mounted directly between the main frame and the weighing platform frame.

The basework is nominally 315 mm x 350 mm.

When not fitted with an integral column-mounted indicator (refer Figure 1) the instrument may also be known as a model 1996.

Instruments may be fitted with the model 8505 indicator (Figure 1) or with any other Mettler Toledo indicator which is Commission-approved for use with Mettler Toledo DigiTOL load cells.

NOTIFICATION OF CHANGE

The following changes are made to the descriptions given in Technical Schedules No 6/9C/231 Variations Nos 1 to 4:

1. All references to "Toledo Scale (Australia) Ltd" to be changed to read "Mettler Toledo Limited".
2. All references to "Toledo" instruments or components to be changed to read "Toledo or Mettler or Mettler Toledo".
3. References to various models to be amended by adding the alternative model listed below, e.g. the **Description of Pattern**, clause 1. of Technical Schedule No 6/9C/231 dated 7/5/90, to now read, in part, "A Toledo or Mettler or Mettler Toledo model 1938 (or DT60J) self-indicating weighing instrument of 60 kg maximum capacity ..."

1938, 60 kg (DT60J); 2038, 60 kg (DTL60J); 2038, 150 kg (DT150J);
and 2138, 300 KG (DT300J).

NOTE: Any of the 'D****J' model numbers may carry an additional 'S' suffix, indicating stainless steel construction.

National Standards Commission



NOTIFICATION OF CHANGE

VARIOUS CERTIFICATES OF APPROVAL

The following changes are made to the approval documentation for various approvals

submitted by Toledo Scale (Australia) Ltd
525 Graham Street
Port Melbourne VIC 3207.

In the Certificates and Technical Schedules listed overleaf, the following changes should be made: (Note: Only current approvals are listed.)

1. The submitter should be changed to read;

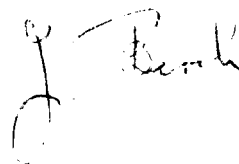
Mettler Toledo Limited

(the address remains unchanged)
2. All references to 'Toledo' instruments or components should be amended to read 'Toledo (or Mettler or Mettler Toledo)'.

NOTE: Any 'Toledo' instrument or component described in the approval documentation may now also be known as 'Mettler or Mettler Toledo'.

APPROVAL NUMBER	PATTERN
6/4C/65	8214 Weighing Instrument
6/4C/68	8215 Weighing Instrument
6/4D/242	8421 Weighing Instrument
6/9C/2A	2191 Weighing Instrument
6/9C/24A	2503 Weighing Instrument
6/9C/28	2020 Weighing Instrument
6/9C/24A 44A	2985 Weighing Instrument
6/9C/76	2295 Weighing Instrument
6/9C/87	2375 Weighing Instrument
6/9C/97	2155 Weighing Instrument
6/9C/98	9118 Weighing Instrument
6/9C/206	6303 Weighing Instrument
6/9C/231	1938 Weighing Instrument
6/10B/46A	7560 Weighing Instrument
6/14B/9A	2352 Hopper Weighing Instrument
6/18/21	2299 Overhead Weighing Instrument
S253	8530 Digital Indicator
S266	8520 Digital Indicator
S283	8510 Digital Indicator
S111A	0721 Load Cell
S112A	0723 Load Cell
S143	0752 Load Cell
S172	0725 Load Cell
S211	0742 Load Cell
S252	0760 Load Cell
S264	0752 Load Cell
S268	RLC 5000 Load Cell

Signed and sealed by a person authorised under Regulation 9 of the National Measurement (Patterns of Measuring Instruments) Regulations to exercise the powers and functions of the Commission under this Regulation.



6/9C/231
29 March 1996

National Standards Commission



NOTIFICATION OF CHANGE

CERTIFICATE OF APPROVAL No 6/9C/231

CHANGE No 1

The following change is made to the approval documentation for the

Mettler Toledo Model 1938 Weighing Instrument

submitted by Mettler Toledo Limited
525 Graham Street
Port Melbourne VIC 3207.

In Certificate of Approval No 6/9C/231 dated 24 May 1993, the Condition of Approval referring to the expiry of the approval should be amended to now read as shown below:

"This approval expires in respect of new instruments on 1 October 1996."

Signed and sealed by a person authorised under Regulation 9 of the National Measurement (Patterns of Measuring Instruments) Regulations to exercise the powers and functions of the Commission under this Regulation.

National Standards Commission



Notification of Change Certificate of Approval No 6/9C/231 Change No 2

The following changes are made to the approval documentation for the

Mettler Toledo Model 1938 Weighing Instrument

submitted by Mettler Toledo Limited
 525 Graham Street
 Port Melbourne VIC 3207.

In Certificate of Approval No 6/9C/231 dated 24 May 1993;

1. The Condition of Approval referring to the review of the approval should be amended to read:

This approval becomes subject to review on 1 March 1997, and then every 5 years thereafter.
2. The Condition of Approval referring to the expiry of the approval should be deleted.

Signed and sealed by a person authorised under Regulation 9 of the National Measurement (Patterns of Instruments) Regulations to exercise the powers and functions of the Commission under this Regulation.

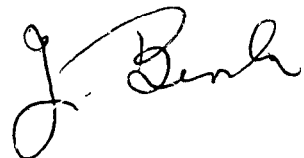
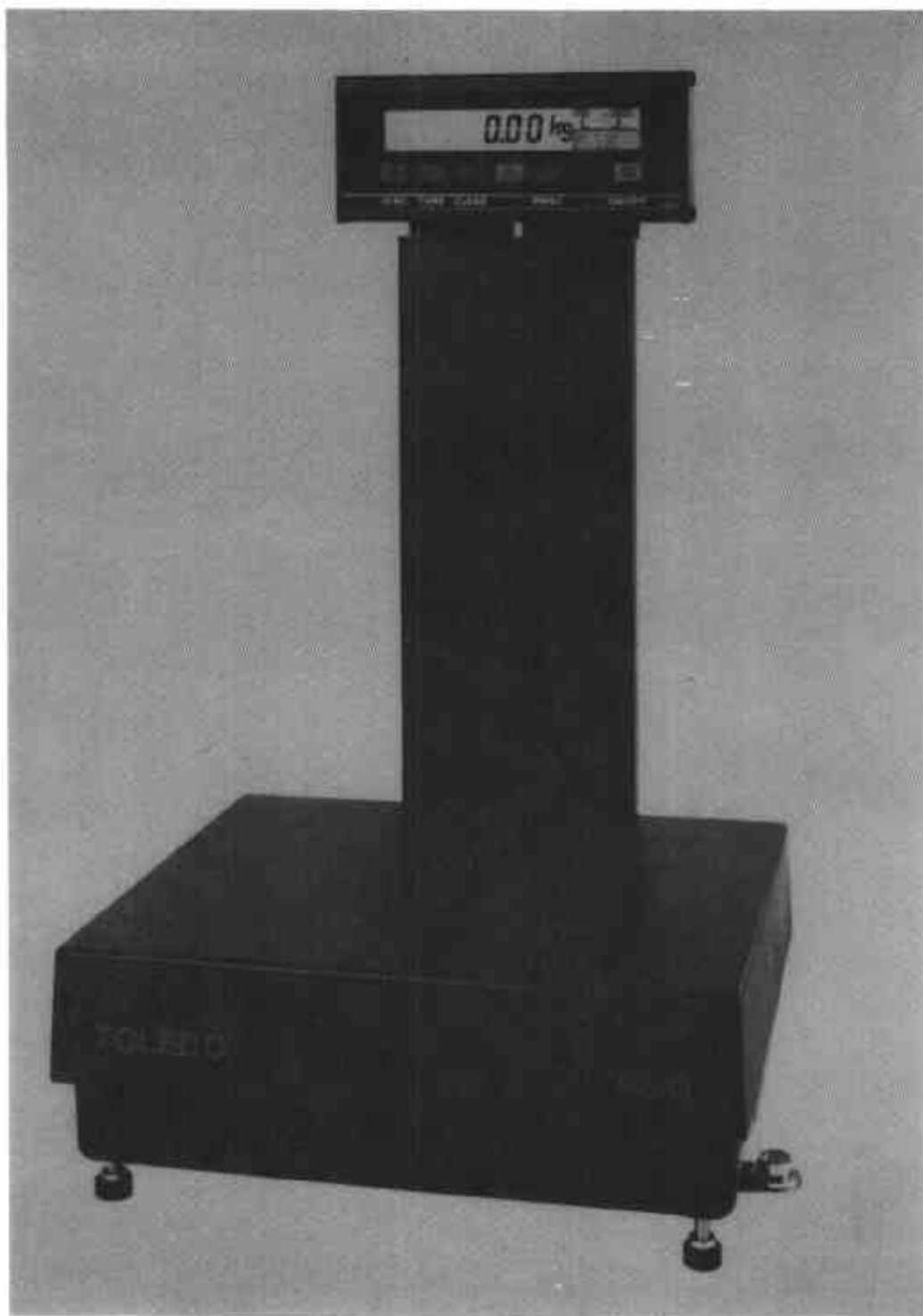
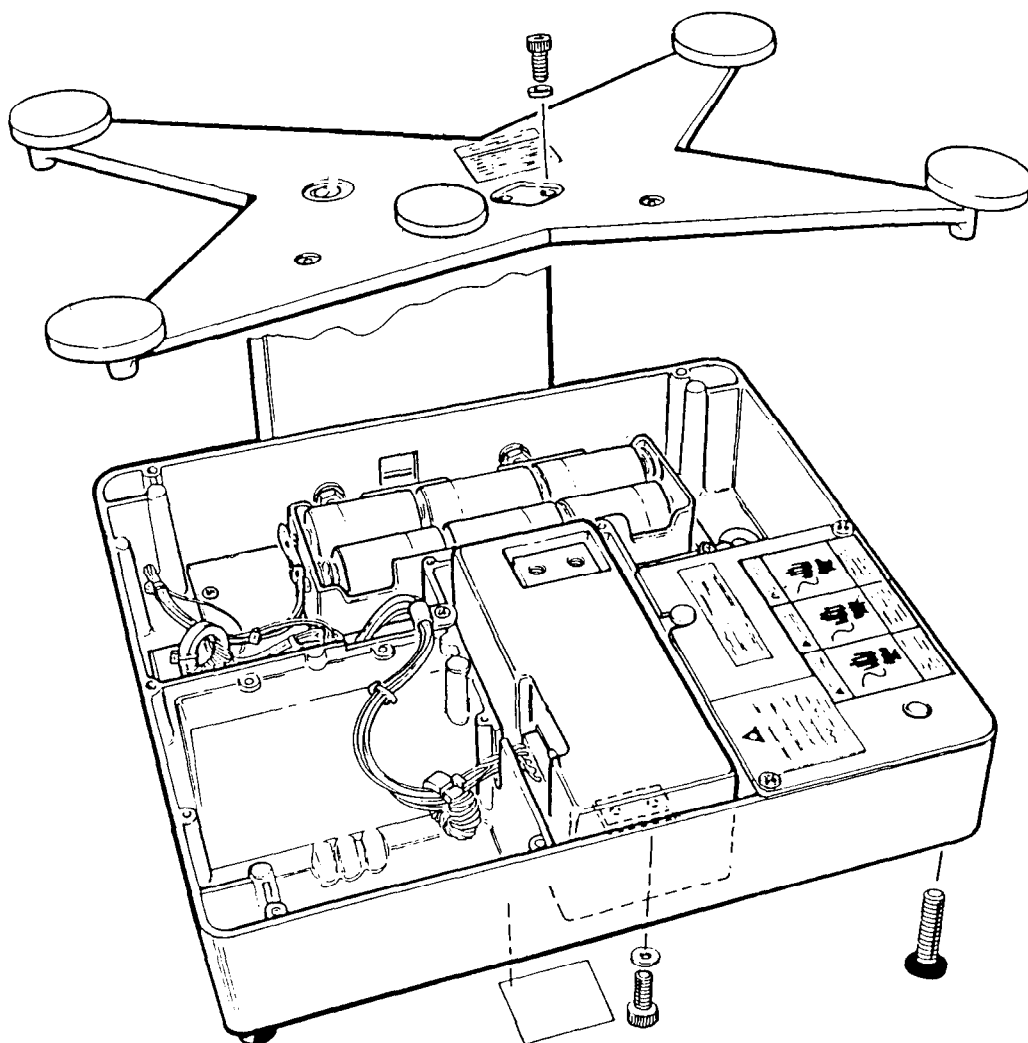


Figure 6/9C/231 - 1



Toledo Model 1938 Weighing Instrument

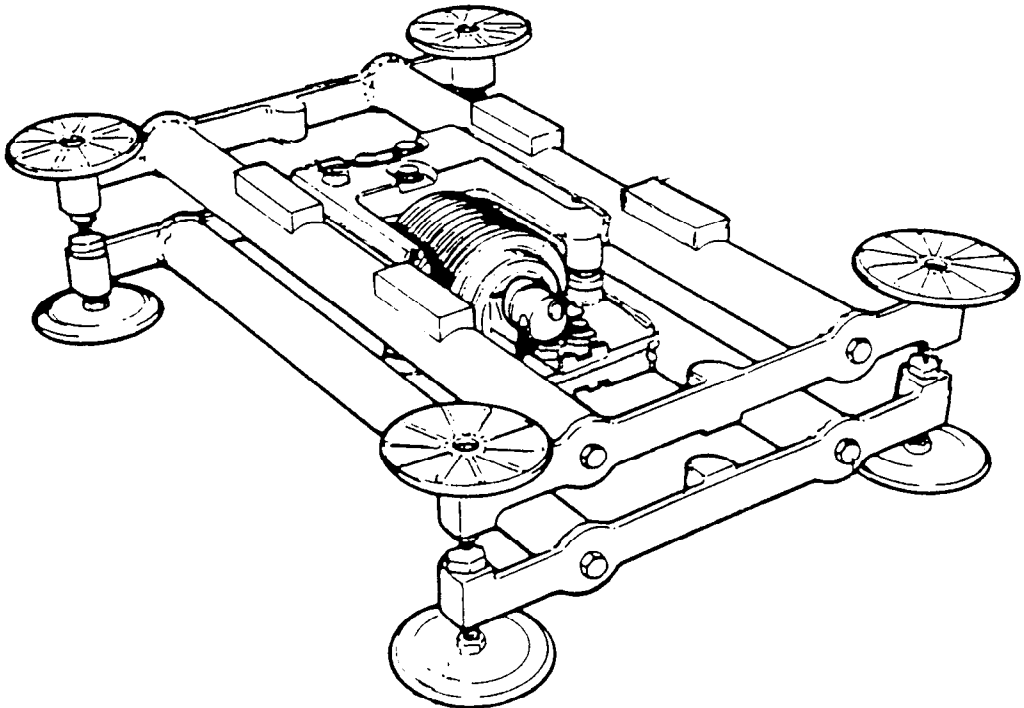
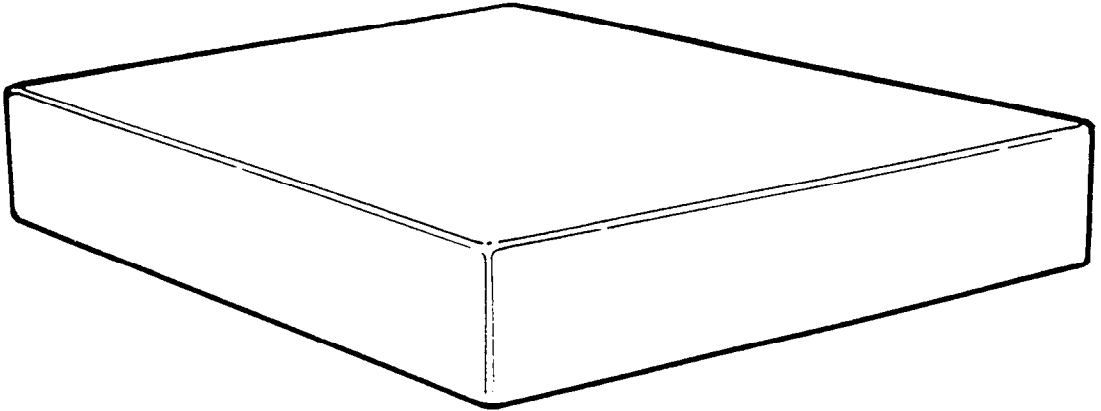
FIGURE 6/9C/231 - 2



Model 1938/1996 Basework

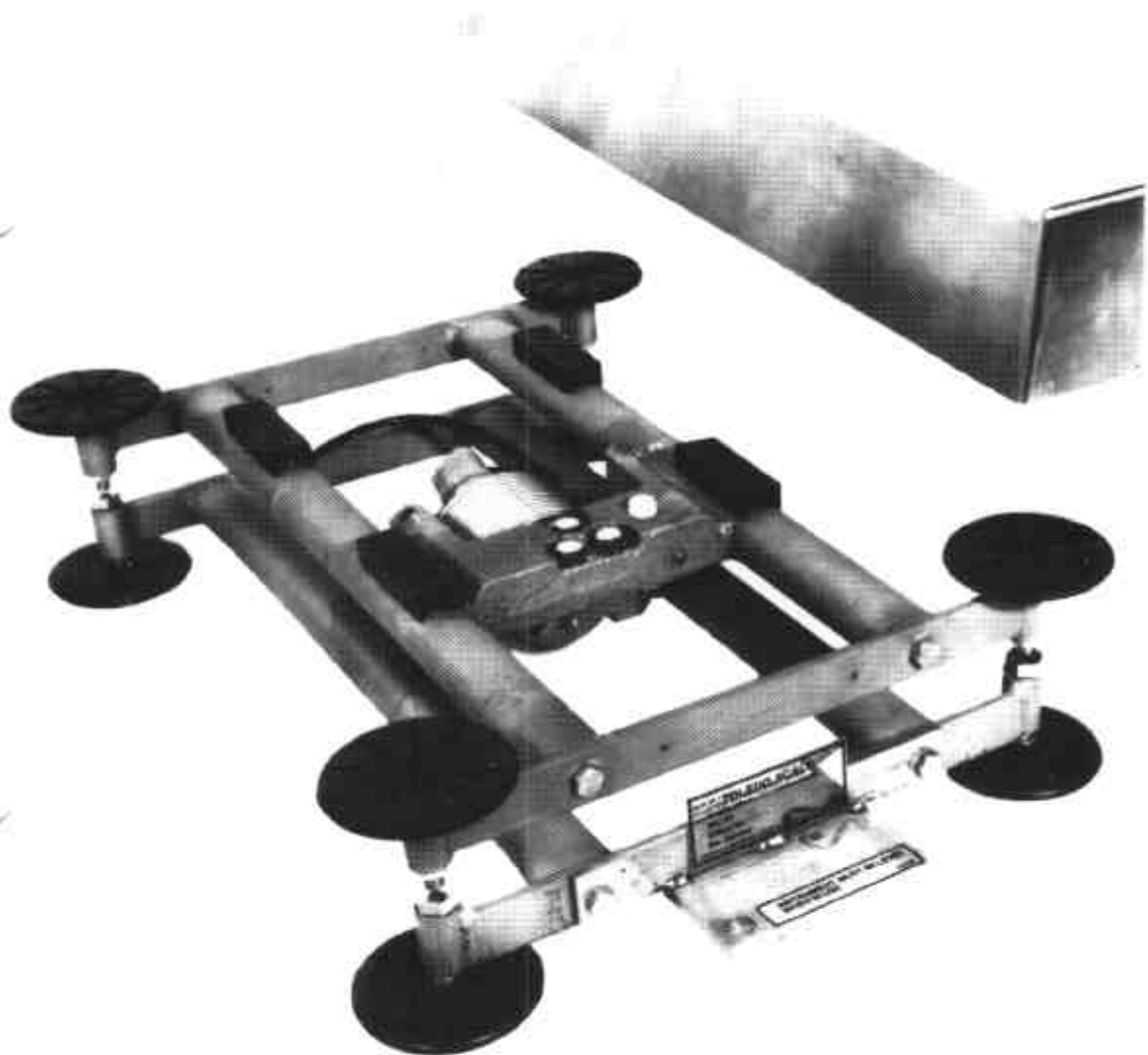
6/9C/231
3/7/91

FIGURE 6/9C/231 - 3



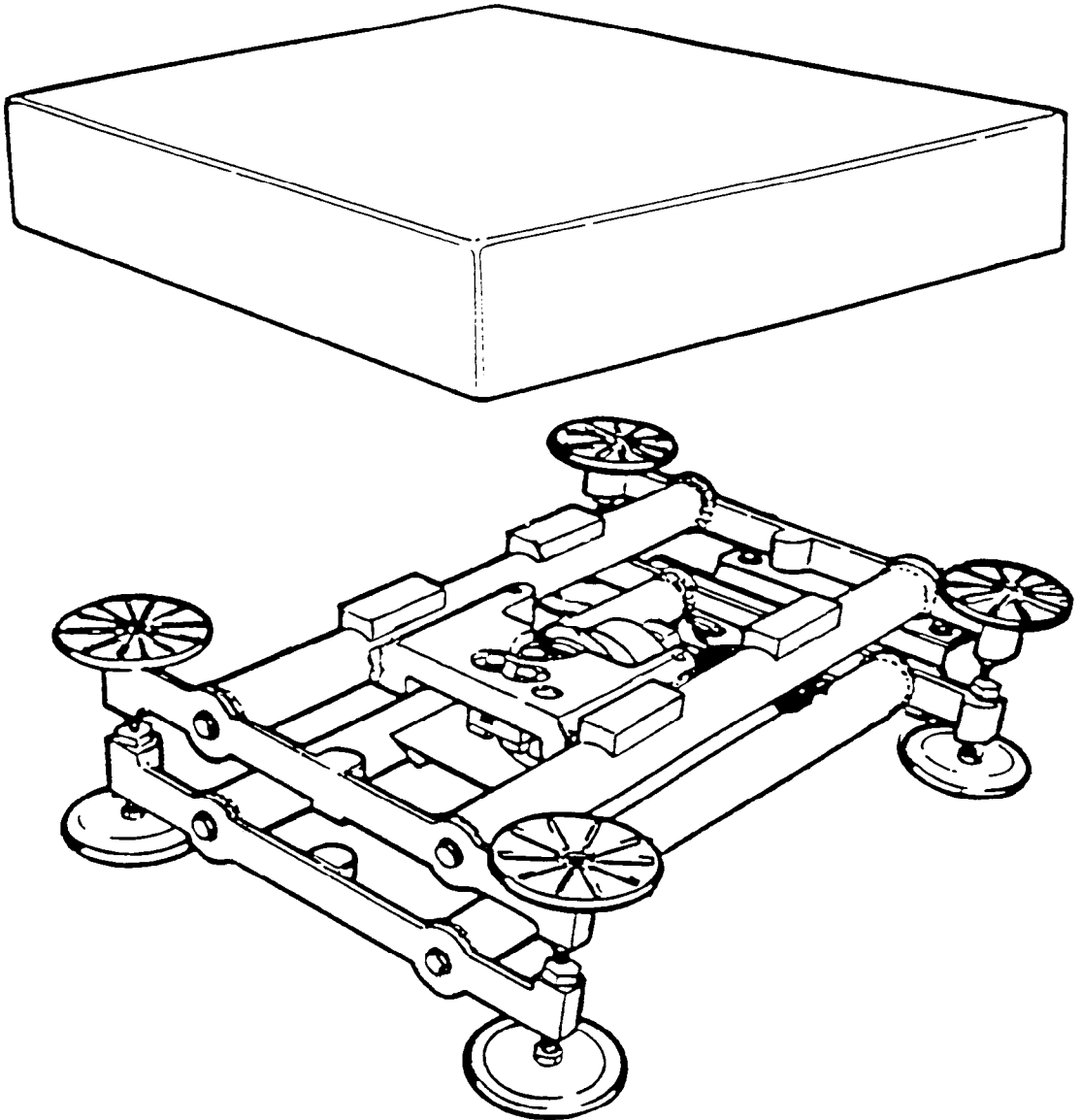
Model 2097/1997 Basework

FIGURE 6/9C/231 - 4



Model 2097/1997 Basework

FIGURE 6/9C/231 - 5



Model 2138 Basework