



CANCELLED

Cert No 2

COMMONWEALTH OF AUSTRALIA

NATIONAL STANDARDS COMMISSION

Weights and Measures
(National Standards)
Act 1960-1966

Weights and Measures
(Patterns of Instruments)
Regulations

Certificate of Approval

CERTIFICATE NUMBER 6/10B/13

In respect of the pattern of

Toledo Self-indicating Combination Weighbridge and Variants.

Submitted and
manufactured by: Toledo-Berkel Pty. Ltd. ,
525 Graham Street,
Port Melbourne,
Victoria. 3207.

This is to certify that the pattern and variants of the instrument illustrated and described in this Certificate have been examined by the National Standards Commission under the provisions of the abovementioned Regulations and have been approved as being suitable for use for trade.

Approval was granted for the pattern and variants 1 to 8 on 24th February, 1969.

Approval was granted for variants 9 to 11 on 4th November, 1970.

Approval was granted on condition that all instruments made in conformity with the pattern and variants:

1. are appropriately marked NSC No 6/10B/13; and
2. comply with the General Specifications for Weighing and Measuring Instruments to be Used for Trade.

11/11/70

Cont'd over

This Certificate comprises:

Pages 1 to 6 dated 11th November, 1970.

Figures 6/10B/13 - 1 to 7 dated 11th November, 1970.

Date of issue 11th November, 1970.

Signed

A handwritten signature in cursive script, appearing to read "Philip A. Drummond". The signature is written in dark ink and is positioned below the word "Signed".

A person authorised by the Commission
to sign Certificates under the
abovementioned Regulations.

11/11/70

DESCRIPTION OF PATTERN

The pattern is of a self-indicating combination weighbridge with a total capacity of 50 tons 10 cwt or of 30 tons for each platform used separately.

Each platform is supported on a torsion tube lever system described in Certificate No 6/10B/12. The platforms are connected through a series of transfer levers (see Figure 1) to a single headwork (see Figure 2).

The two pullrods (see Figure 3) enter the headwork and connect with their respective balancing levers (see Figure 4). Each balancing lever can be connected to or disconnected from a frame suspended from the main headwork pullrod. Motor-driven cams achieve this by raising or lowering each balancing lever through a system of levers and hangers.

Each balancing lever is adjusted so that, with no load on the platform, a definite force is applied to the main pullrod. When the lever is disengaged from the main pullrod, a small weight is added to the pullrod to compensate for the removal of the balancing lever force. This is done by the same cam and lever system which disconnects the lever.

To balance the system at zero, the following sequence occurs:

1. With both platforms "off", both balancing levers are disengaged from the main pullrod and both compensating weights are added. The balance weight on the main headwork lever is then adjusted through access hole marked "A" until the indicator reads zero.
2. With platform 1 "on" and platform 2 "off", platform balancing lever 1 is connected to the main pullrod and its compensating weight is disengaged while platform balancing lever 2 is disengaged from the main pullrod and its compensating weight added. The balance weight on the platform balancing lever 1 is then adjusted through access hole marked "B" until the indicator reads zero.
3. With platform 1 "off" and platform 2 "on", platform 2 is balanced in a similar manner through access hole marked "C".
4. With both platforms 1 and 2 "on", both platform balancing

11/11/70

levers are engaged and both compensating weights are disengaged. The indicator should read zero.

The following instructions for zero adjustment are marked on a plate attached to the front panel of the cabinet (see Figure 5):

Zero Adjustment Instructions

With both platforms "off", adjust "A" until indicator is at zero.

With platform 1 "on" and platform 2 "off", adjust "B" until indicator is at zero.

With platform 1 "off" and platform 2 "on", adjust "C" until indicator is at zero.

The platforms engaged are selected by a four-position switch mounted on a remote control panel (see Figure 6), which operates the motor driving the cams. Microswitches actuated by the balance lever pick-up arms stop the motor when the selected position has been reached. The switch legend plate is marked with "platform engaged" and the positions 1, 2, 1 & 2, 0. The position of each platform whether "on" or "off" is also shown by an indicator attached to the cam shaft of the selector mechanism and which shows through a window in the cabinet front panel (see Figure 5).

The remote control panel is also provided with a two-position switch with a legend plate marked "unit weights", "hold" and "run" (see Figure 6). When the switch is in the "run" position, the appropriate unit weight to suit the load is selected automatically. When the switch is in the "hold" position, the last unit weight selected is held until the switch is placed in the "run" position.

The headwork is fitted with the Toledo Autorange automatic range selector described in Certificate No 6/9C/2. There are four unit weights each equivalent to 10 tons.

The indicating device is a Toledo Verilux Model 711 projected weight indicator described in Certificate No 6/9C/2. The chart is graduated by 1 qr increments and denominated in tons, hundredweights and quarters up to a capacity of 10 tons 10 cwt.

11/11/70

DESCRIPTION OF VARIANTS

1. In other capacities up to the maximum approved for each basework pattern.
2. Having the basework of the pattern replaced by the weighbridge basework with beam-type lever system described in Certificate No 6/10A/3.
3. Having the basework of the pattern replaced by the platform basework described in Certificate No 6/9C/2, provided that the headwork is modified so that the platforms cannot be used in combination, and provided further that the basework is immovable.
4. Having the weighbridge basework of the pattern and variant 2 fitted with rails for weighing railway rolling stock.
5. Having the headwork located in any reasonable position in relation to the platform, in which case one or more transfer levers may be used, provided they are fully protected.
6. Having the self-indicating headwork fitted with other forms of indication described in Certificate No 6/9C/2.
7. Having the headwork without the Autorange or with manually operated unit weights (see Figure 7).
8. Having the headwork fitted with tare bars.
9. Having the self-indicating headwork fitted with any of the Printweigh 400 series ticket printers as described in Certificate No 6/9C/2.
10. Having the self-indicating headwork fitted with a photo-electric switch as described in Certificate No 6/9C/2.
11. Having the headwork of the pattern with the changeover mechanism operated manually (see Figure 7). Each rotation

11/11/70

of the operating handle changes the platform configuration to one of the four available conditions of operation, platform 1 "on" platform 2 "off", platform 1 "off" platform 2 "on", platforms 1 and 2 "on", platforms 1 and 2 "off".

GENERAL NOTES

Notice of approval of the pattern and variants 1 to 8 described in this Certificate was given in Memorandum of Approval No 148 dated 5th March, 1969.

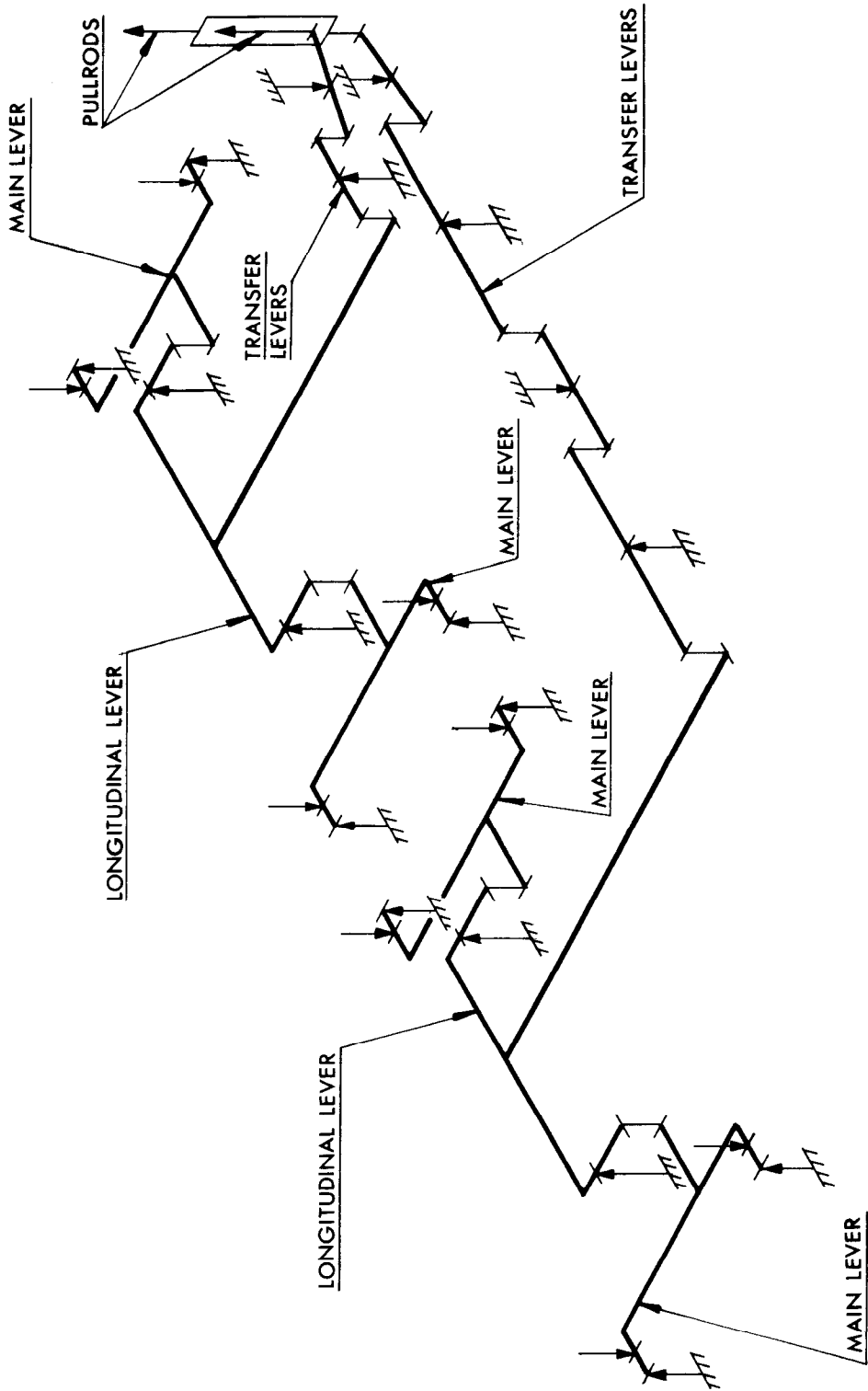
No previous notice of approval has been given for variants 9 to 11.

Notice of approval of the torsion tube lever system approved in Certificate No 6/10B/12 was given in Memorandum of Approval No 130 dated 16th August, 1968.

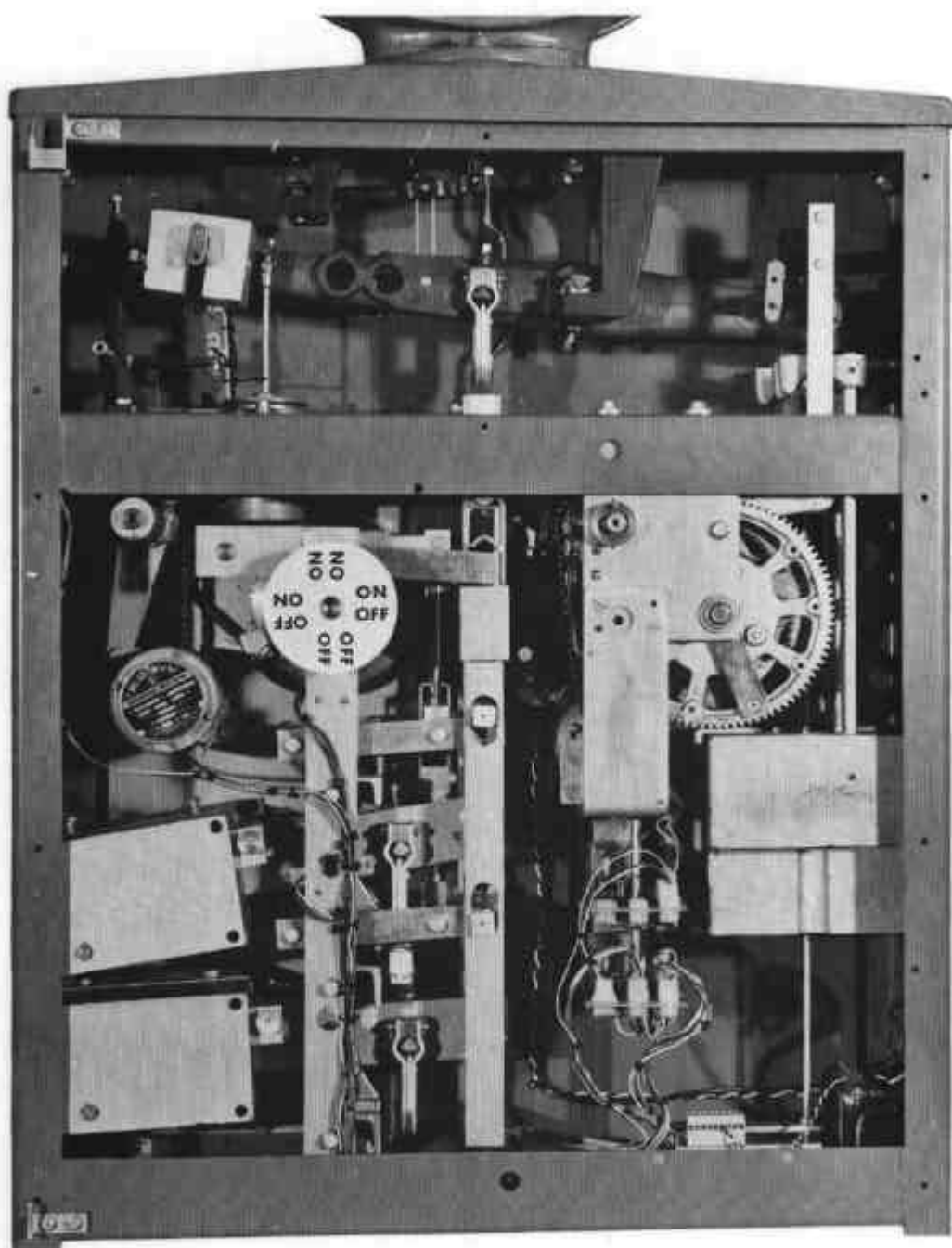
Notice of approval of the Toledo Autorange automatic range selector and the Verilux 711 indicator, referred to in the description of the pattern, the platform basework referred to in variant 3, the other forms of indication referred to in variant 6, the Printweigh Recorder referred to in variant 9, and the photo-electric switch referred to in variant 10, which are approved in Certificate No 6/9C/2, was given in Memoranda of Approval No 48 dated 8th December, 1966, and No 110 dated 3rd April, 1968.

Notice of approval of the beam-type lever system approved in Certificate No 6/10A/3 was given in Memorandum of Approval No 129 dated 1st August, 1968.

FIGURE 6/10B/13 - 1



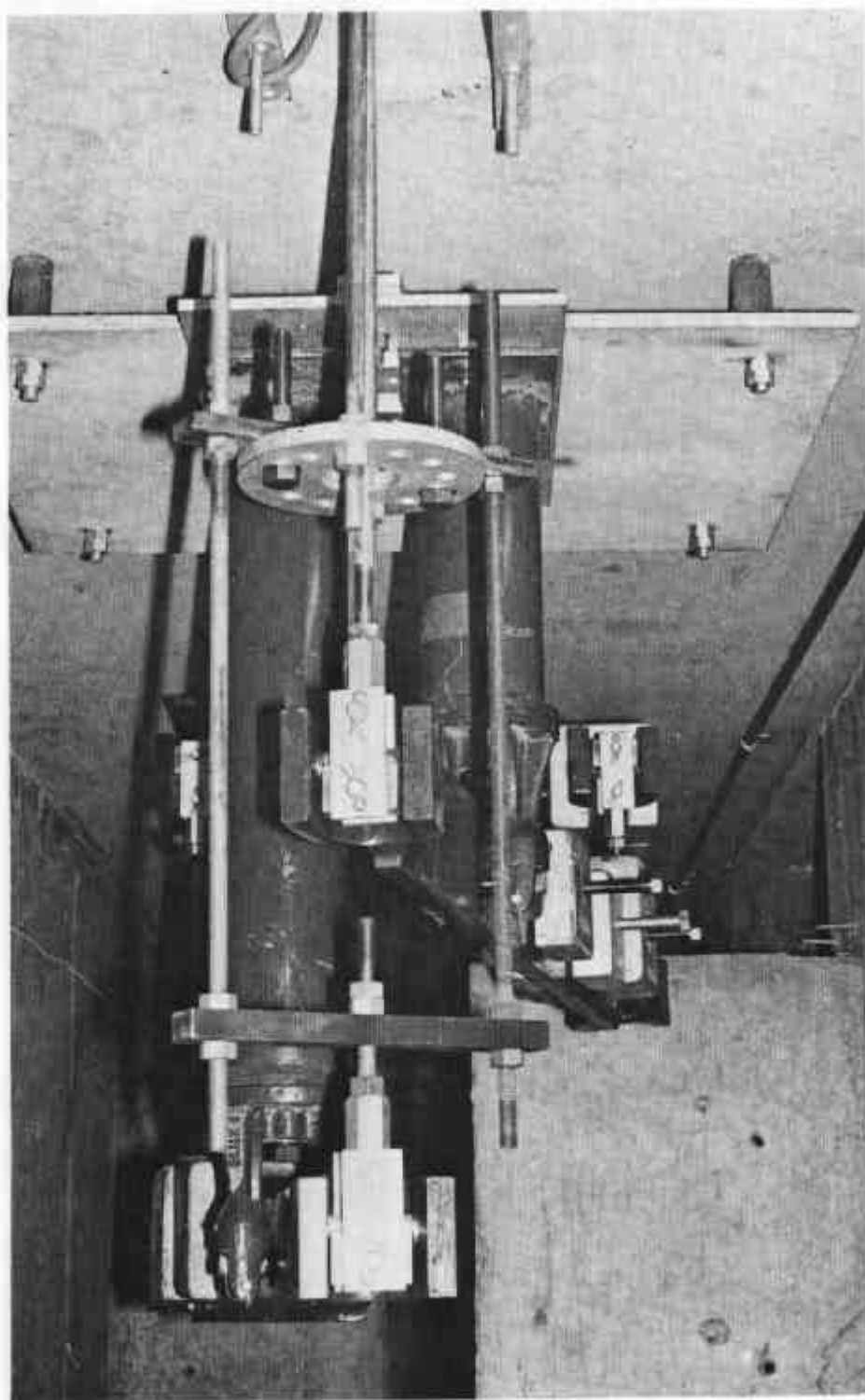
Lever System



Combination Weighbridge Headwork Cabinet

11/11/70

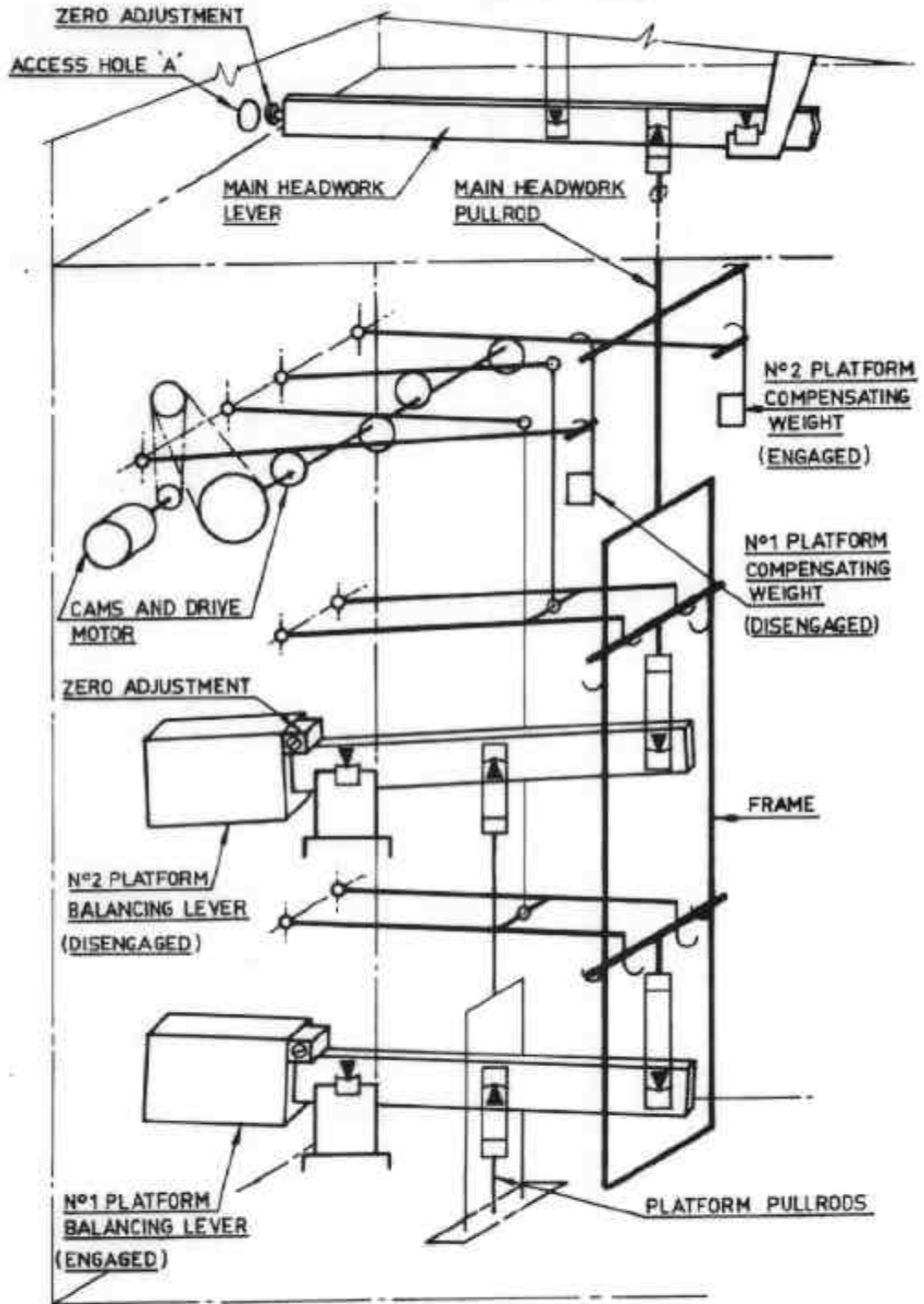
FIGURE 6/10B/13 - 3



Dual Pullrods

11/11/70

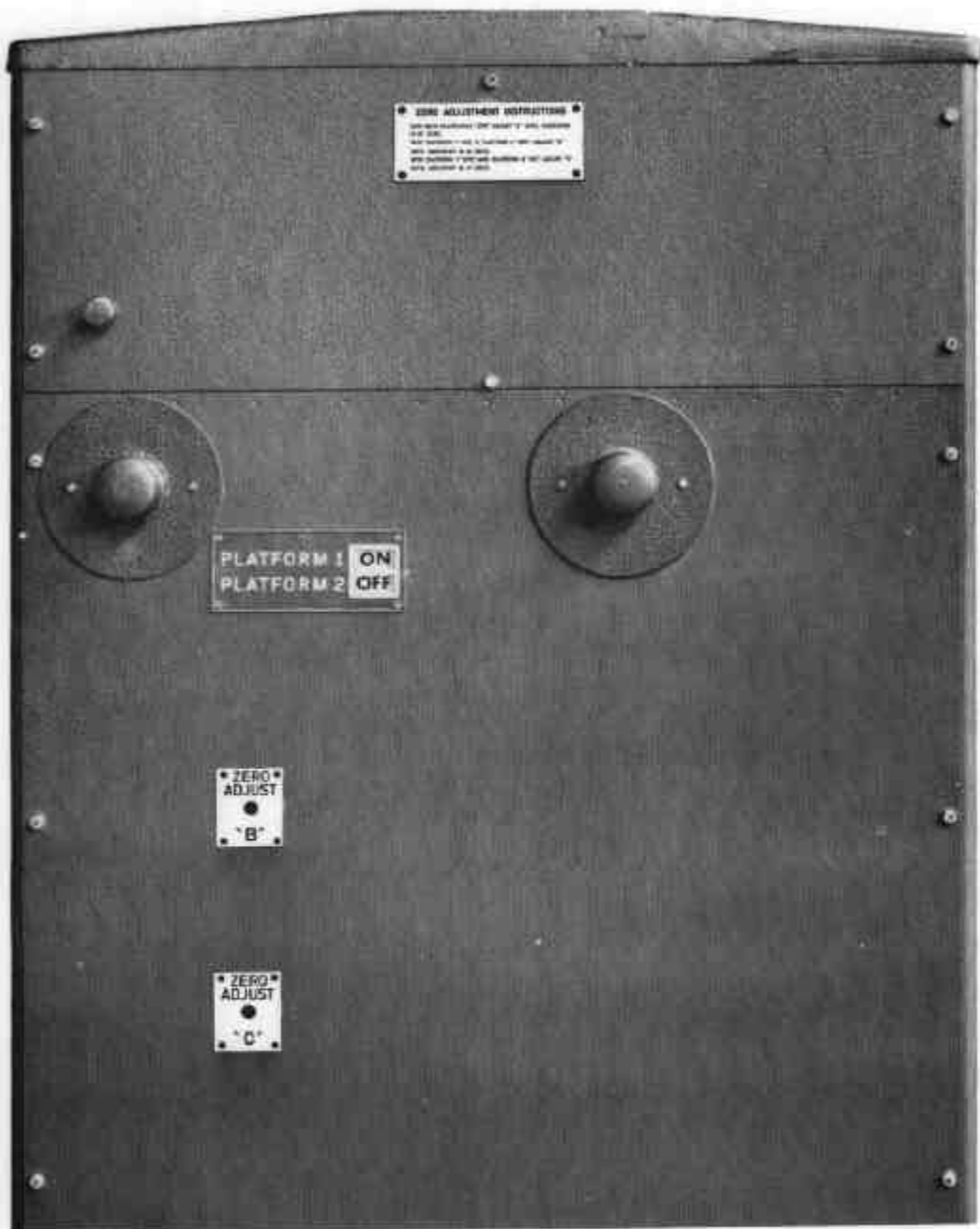
FIGURE 6/10B/13 - 4



Platform Changeover Mechanism
for Combination Weighbridge

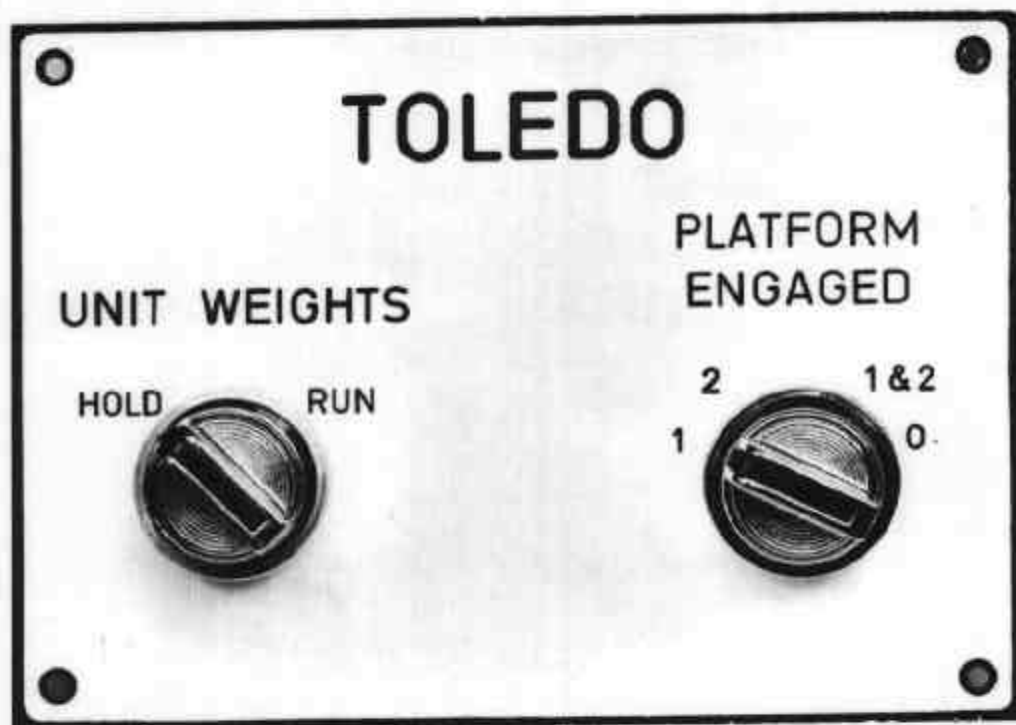
11/11/70

FIGURE 6/10B/13 - 5



Headwork Cabinet Front Panel
for Combination Weighbridge

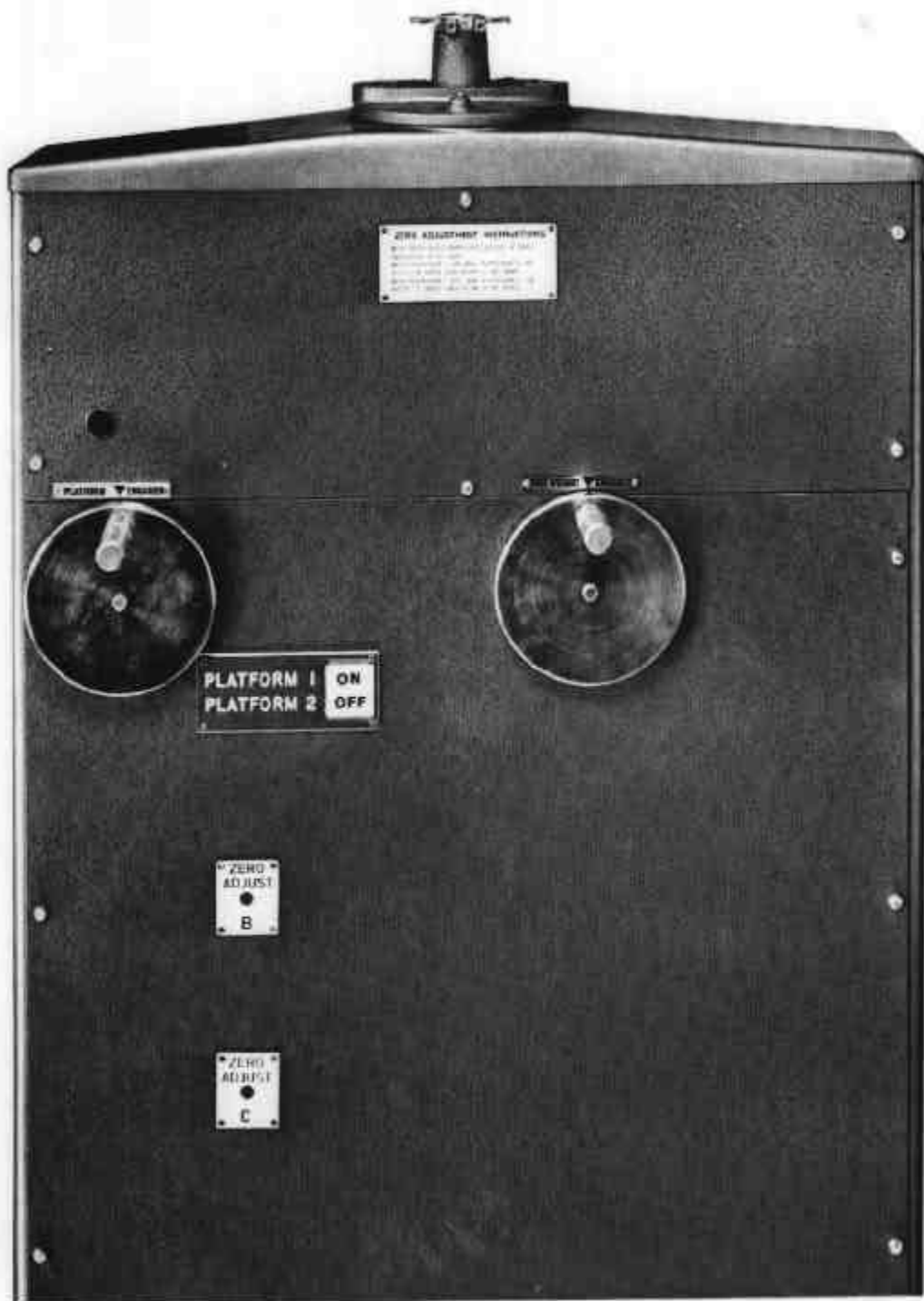
11/11/70



Remote Control Panel
for Combination Weighbridge

11/11/70

FIGURE 6/10B/13 - 7



Headwork Cabinet - Manual Changeover

11/11/70