3026
3036

CHECKWEIGHING SCALE

Technical Manual
and
Parts Catalog

This manual describes the operation of the Models 3026 and 3036 Checkweighing Scales with revision software. The software revision level is determined by viewing the power up display sequence when power is first applied to the unit. All eights, **[888888]** are first displayed briefly, then the display will blank except for the cursors along the bottom of the display. The software program number **[xxxxxx]** will then be displayed. If the number displayed as the software revision does not match the number listed above, then this technical manual will contain certain features and setup parameters which your unit will not have. In the event you have an earlier versions of these units, refer to their respective technical manuals, TM 003026 I00, TM 003026 I01, or TM 003036 I00.

IMPORTANT PRECAUTIONS
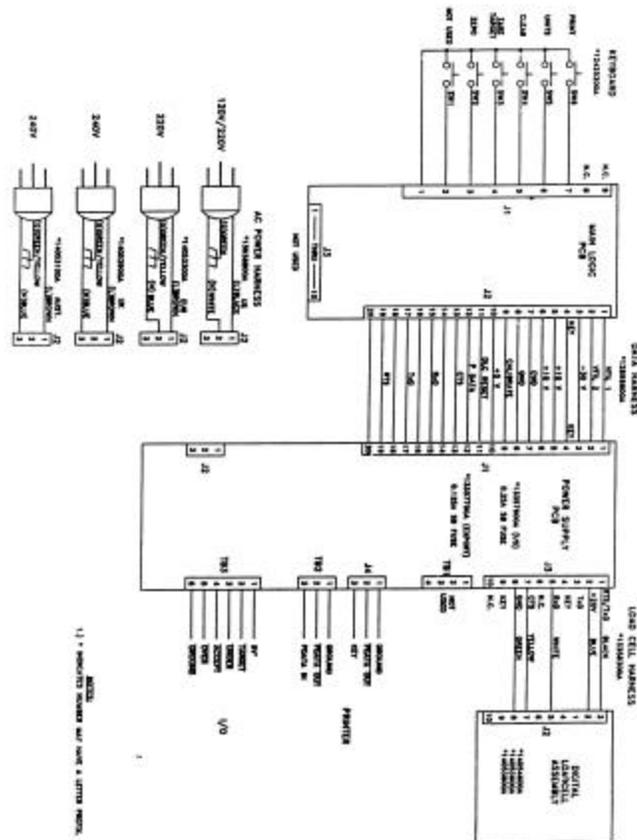
! **READ** this manual in its entirety before operating or servicing this equipment.

! **ALWAYS REMOVE POWER** and wait at least 30 seconds **BEFORE** CONNECTING OR DISCONNECTING ANY INTERNAL HARNESS. FAILURE TO OBSERVE THESE PRECAUTIONS MAY RESULT IN DAMAGE TO, OR DESTRUCTION OF THE EQUIPMENT.

! **ALWAYS** take proper precautions when handling static sensitive devices.

! **DO NOT** connect or disconnect a load cell scale base to this equipment with power connected or damage will result.

! **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 servicing.

! **CALL** your local **AUTHORIZED METTLER TOLEDO SERVICE** office for service or parts information.

⚠ **WARNING**

WHEN THIS EQUIPMENT IS INCLUDED
AS A COMPONENT PART OF A SYSTEM,
THE RESULTING DESIGN MUST BE
REVIEWED BY QUALIFIED PERSONNEL.
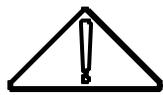
⚠ **WARNING**

THIS MODULE AND ITS ASSOCIATED
EQUIPMENT MUST BE INSTALLED,
ADJUSTED, AND MAINTAINED BY
QUALIFIED PERSONNEL WHO ARE

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1. GENERAL DESCRIPTION

Mettler Toledo Models 3026 and 3036 combine fast, accurate checkweighing performance with reliable stainless steel industrial construction. Both units feature the same highly readable six-digit, 7-segment fluorescent display with a five LED analog display for basic over/under indication. Operator input is via a 5-position membrane keyboard.

RS-232 serial output is provided for Mettler Toledo Industrial printers, Models 8806, 8855 (RS-232 version only), 8856, 8843, 8844, 8845, 8860, and 8865. Both the 3026 and 3036 can accept remote ASCII print, tare, clear, and zero commands via the RS232C serial port.

TTL level outputs for external LEDs display over, under, and accept status. A TTL level input is also provided for a remote switch which may be programmed for either Print, Tare/Target, Zero, or unit Selection. All TTL input and outputs are low true logic. The status outputs float high at +5 VDC when turned off and are pulled to ground when turned on.

Both Units can be configured with five zones to designate under, low, accept, high, and over status. Zone tolerances are programmed through the keyboard to provide maximum flexibility in establishing acceptable target weights.

THE MODEL 3026 CHECKWEIGHER scale is NTEP approved for commercial (Legal-for-Trade) applications up to 3,000 maximum displayed increments in the United States and Canada. This over/under scale that consists of a display indicator that is housed in a stainless steel enclosure, and a 9 in. by 9 in. platter mounted on an integral 15 kg DigiTOL7 load cell. Selectable units of measure include lb, kg, lb-oz, oz, and g. The display is updated approximately 10 times per second. A softswitch selectable digital filter is available to provide a more stable reading in the presence of vibration. It is suitable for use in light washdown applications

THE MODEL 3036 CHECKWEIGHER scale is approved for commercial (Legal-for-Trade) applications up to 5,000 displayed increments in the United States and Canada. A maximum of 10,000 displayed increments may be used in non-commercial applications. It is suitable for use in light washdown applications and provides a 12 in. x 12 in. (305 mm x 305 mm), stainless steel, weigh platform. Selectable units of measure include lb, kg, oz, or g. The weight display reacts to weight changes in one second or less. A softswitch selectable digital filter is available to provide a more stable reading in the presence of vibration.

WARNING
THE TTL STATUS OUTPUTS ARE DESIGNED FOR USE WITH EXTERIOR LED DISPLAYS ONLY. USE OF THE TTL OUTPUTS FOR ANY OTHER PURPOSE CAN RESULT IN A HAZARDOUS CONDITION.

2.   SYSTEM DESCRIPTION
The 3026 and 3036 consist of three system components, they are:

2.1   DISPLAY PCB

Receives weight data or error codes from the load cell.

Displays the weight and classification (or error code).

Transmits information for an optional printer to the Power Supply PCB.

Interprets and reacts to keyboard entries or serial ASCII input.

Includes the EPROM

2.2   POWER SUPPLY PCB

Provides:
+10 VDC for the regulated +5 VDC supply on the Display PCB.
3.2 VAC filament voltage for the fluorescent display.
-30 VDC supply for the fluorescent display.
+20 VDC supply for the Digital Load Cell.

Converts serial TTL data to RS232C for the optional printer or serial device.

Buffers the TTL status outputs and TTL target input for external LED display and remote target selection.

2.3   DIGITOL LOAD CELL

The load cell converts the analog weight into a digital message that is transmitted to the Display PCB approximately 10 times per second.

The load cell can also transmit error messages to the Display PCB to indicate malfunctions.

3. SPECIFICATIONS

3.1 ELECTRICAL AND PHYSICAL SPECIFICATIONS

3.1.1 Environment

The operating temperature range of the 3026 and 3036 is -10 (14□ F) to 40 □ C (104□ F) and non-commercial functionality to 45□ C (113□ F) at 10% to 95% relative humidity, non-condensing.

Storage temperature for both units is from -40 □ to 70 □C (-40 □ to 158 □F) at 10% to 95% relative humidity, non-condensing.

> **DO NOT USE THE MODELS 3026 OR 3036 IN LOCATIONS CLASSIFIED AS HAZARDOUS BY THE NATIONAL ELECTRICAL CODE (NEC) BECAUSE OF COMBUSTIBLE OR EXPLOSIVE ATMOSPHERES.**

3.1.2 Power Requirements

The power requirements are 10 watts (10 VA) of power. No ON/OFF power switch is provided. Plug the power cord into the appropriate power source as described next.

FACTORY NUMBER	VOLTAGE REQUIREMENTS
3026-0001	120 VAC AT 60 Hz
3026-0011	220/240 VAC AT 50 Hz

Table 1 - 3026 VOLTAGE REQUIREMENTS

Factory Number	Voltage Requirements	Plug Pattern
3036-0025-000	120 VAC at 60 Hz	North America
3036-0050-000	120 VAC at 60 Hz	"
3036-0100-000	120 VAC at 60 Hz	"
3036-0025-001	230 VAC at 50 Hz	"
3036-0050-001	230 VAC at 50 Hz	European
3036-0100-001	230 VAC at 50 Hz	"
3036-0025-002	240 VAC at 50 Hz	"
3036-0050-002	240 VAC at 50 Hz	United Kingdom
3036-0100-002	240 VAC at 50 Hz	"
3036-0025-003	240 VAC at 50 Hz	"
3036-0050-003	240 VAC at 50 Hz	Australia
3036-0100-003	240 VAC at 50 Hz	"
		"

Table 2 - 3036 VOLTAGE REQUIREMENTS

Clean AC power with a true earth ground is required for reliable operation. The power line must not be shared with equipment that generates line noise (such as motors, relays, heaters, etc.). If adverse power conditions exist, a power line conditioner may be required.

These units meet the NIST H-44 and the Canadian Gazette, part I line voltage variation specifications.

Line Voltage Variation Specification	AC Line Voltage			Line Frequency in Hz		
	Minimum	Nominal	Maximum	Minimum	Nominal	Maximum
NIST H-44	100	120	130	59.5	60	60.5

Canadian	108	120	132	58.8	60	61.2
* EN45501	195	230	253	49	50	51
* EN45501	204	240	264	49	50	51

Table 3 - VOLTAGE/FREQUENCY VARIATION SPECIFICATION

* 3036 ONLY

3.1.3   Standards Compliance

The Models 3026 and 3036 are:

Listed with UL to meet specifications 114, Office appliances and Equipment and 746, Polymeric materials.

USDA accepted.

Certified by CSA to meet standard C22.2 No. 143-1975, Office Machines certification.

THE 3026 ONLY:

Has received NTEP (National Type Evaluation Program) certification as a Class III (3,000e) scale and may be used in legal-for-trade applications in the U.S. (COC number 92-215).

THE 3036 ONLY:

Has received NTEP (National Type Evaluation Program) certification as a Class III (5,000e) scale and may be used in legal-for-trade applications in the U.S. (COC number 92-215).

Certification in Canada for use as a Class III (5000e) scale is pending.

Certification in Australia for use as a Class III (3000e) scale is pending.

3.1.4   Conducted and Radiated Emissions

The 3026 and 3036 meet or exceed the following radiated emissions requirements:

The FCC docket 80-284 for conducted and radiated emissions requirements.

The VDE 0871 class B specification for conducted and radiated emissions.

3.1.5   Dimensions and Construction

THE 3026 BASE is 9 in. wide by 9 in. long by 4 in. high. The display column stands approximately 17 in. high (height varies one inch with adjustable feet). The 3026 is fabricated of 304 stainless steel. The weight display can tilt backward up to 20 degrees maximum.

THE 3036 BASE is 12 in. (305 mm) wide by 12 in. (305 mm) long by 5 in. (127 mm) high. The display column stands approximately 23 in. (584 mm) high (height varies 3/4 in. (19 mm) with adjustable feet). The 3036 is fabricated of 304 stainless steel. The weight display can tilt backward up to a maximum of 30 degrees.

INDICATOR DIMENSIONS FOR BOTH MODELS is 7 in. (178 mm) wide by 6 in. (152 mm) high (not including bottom bracket and connectors) by 3 in. (76 mm) deep and is mounted to the display column.

3.1.6   Water Penetration

The 3026 and 3036 are suitable for use in light washdown applications.

3.1.7 Shift Specification for 3026

A load of 1/2 scale capacity applied 1/2 the distance from center to edge, (positions 1, 2, 3 and 4) must not cause a change greater than one display increment when the indicator is programmed for 3000 d (Refer to Figure 1).

3.1.8 Shift Specification for 3036

A load of 1/2 scale capacity applied 1/2 the distance from center of the platform to the edge, (positions 1, 2, 3 and 4) must not cause a change greater than 0.02% of scale capacity when compared to the weight reading in the center of the base.

4   2

3
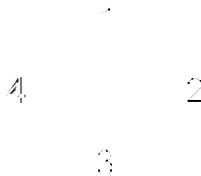
Figure 1 - Scale Platter (Top View)

3.2   PRINTER INTERFACE

The 3026 and 3036 are capable of transmitting and receiving RS-232 ASCII data. When a print command is received from the PRINT key, the RS232C input, the TTL input (program selectable) or due to the auto print feature, the scale indicator will output a message according to the printer output setup. Scale motion will disable the print until motion has ceased. Printer output is disabled if the 3026 is under gross zero, in the expanded weight display mode, or if zero has not been captured after powerup. The baud rate is selectable between 300, 1200, 2400, 4800, and 9600 baud in the printer setup.

Data is output in a 10 bit ASCII format (1 start bit, 7 data bits, selectable parity bit, and 1 stop bit). Data can be output in demand format or Toledo continuous format.

Printer output is through connector J-4. Terminal strip TB-2 has both input and output connections. Both J-4 and TB-2 are located on the Power Supply PCB. Refer to Section 6. for data format, connector pinout, and interfacing information.

The 3026 and 3036 can respond to single character ASCII characters input to the serial port. Zero, print, clear, and tare or target functions can be initiated by means of a single upper case ASCII character transmitted into the RS-232 input from a remote keyboard or host computer.

3.3   WEIGHT CAPACITY AND INCREMENT SIZE SELECTION

Refer to Table 1 for valid weight capacity and increment size selections.

If 10 kg capacity is selected, SETUP step [C1], then no units switching is available, SETUP step
[F3 0], the overload stops must be reset to reflect the 10 kg capacity. Refer to Section 7.3.

Mode	Valid Capacities		
lb	6 lb X 0.002 lb	15 lb X 0.005 lb	
lb-oz		18.75 lb X 0.1 oz	
oz	150 oz X 0.05 oz	300 oz X 0.1 oz	
kg	3 kg X 0.001 kg	6 kg X 0.002 kg	10 kg X 0.005 kg
g	3000 g X 1 g	6000 g X 2 g	

Table 4 - MODEL 3026 CAPACITY SELECTIONS

NOTE: IF LB-OZ IS SELECTED, SETUP STEP [F2 2], THEN THE OVERLOAD STOPS MUST BE RESET TO REFLECT THE 18.75 LB CAPACITY. REFER TO SECTION 7.3.

Model-Ram	Country	Calibrated Units	Calibrated Capacity	Full Scale Increment
3036-0025-000 3036-0025-001 3036-0025-002 3036-0025-003	U.S./Canada Europe U.K. Australia	LB	20 x 0.002 25 x 0.005	10,000* 5,000
		OZ	500 x 0.05 500 x 0.1	10,000* 5,000
		LB-OZ	25 lb x .1 oz	*
		KG	10 x 0.001 10 x 0.002 15 x 0.005	10,000* 5,000 3,000
		G	10,000 x 1 10,000 x 2 15,000 x 5	10,000* 5,000 3,000
3036-0050-000 3036-0050-001 3036-0050-002 3036-0050-003	U.S./Canada Europe U.K. Australia	LB	50 x 0.005 50 x 0.01	10,000* 5,000
		OZ	1,000 x 0.1 1,000 x 0.2	10,000* 5,000
		LB-OZ	50 lb x .1 oz 50 lb x .2 oz	*
		KG	20 x 0.002 25 x 0.005 30 x 0.01	10,000* 5,000 3,000
		G	20,000 x 2 25,000 x 5 30,000 x 10	10,000* 5,000 3,000
3036-0100-000 3036-0100-001 3036-0100-002 3036-0100-003	U.S./Canada Europe U.K. Australia	LB	100 x 0.01 100 x 0.02	10,000* 5,000
		OZ	1,000 x 0.1 1,000 x 0.2	10,000* 5,000
		LB-OZ	100 lb x .2 oz 100 lb x .5 oz	*
		KG	50 x 0.005 50 x 0.01 60 x 0.02	10,000* 5,000 3,000
		G	50,000 x 5 50,000 x 10 60,000 x 20	10,000* 5,000 3,000

Table 5 - 3036 Capacity Selections

* Indicates Non NTEP Approved

4.   INSTALLATION INSTRUCTIONS

4.1   PRELIMINARY INSPECTION

Inspect the shipping container and scale for loose or damaged parts. If any damage is found, immediately notify the freight carrier.

Install any optional equipment or cables. Verify that all internal harnesses are firmly seated in the correct connector.

4.2   LEVEL THE BASE

Level the base by removing the scale platter and adjusting the feet until the leveling bubble is entirely inside the circle with the base resting firmly on all four feet.

Incorrect   Correct

Bubble not centered   Bubble centered

Figure 2 - Level Indicator

NOTE: ADJUST THE FIFTH FOOT UNDER THE DISPLAY COLUMN UPWARD TO ALLOW LEVELING OF THE SCALE WITH JUST THE FOUR FEET UNDER THE SCALE PLATFORM. AFTER THE SCALE IS LEVELED LOWER THE FIFTH FOOT TO FIRMLY SUPPORT THE WEIGHT DISPLAY COLUMN WHEN THE KEYBOARD IS PRESSED.

4.3   INSTALLING PERCENT (%) OVERLAY STICKER

Included with every unit is a Percent (%) Sticker which is to be placed directly over the word **ZERO** on the display lens if the unit is to display weight in percent (%) of target (i.e. target = 100%) instead of weight. The ZERO cursor now becomes the percent (%) of target cursor and will be lit any time there is a target weight programmed. Setup parameter [F1.5] must be set to a 1, putting the scale in the Over/Under Mode. Setup Parameter [F5] must also be set to a 1 enabling the percent (%) of target display.
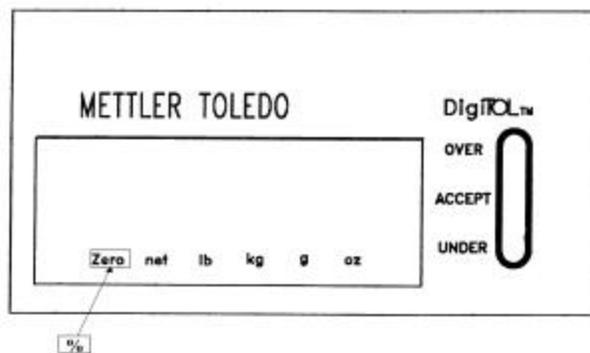
An example of Percent (%) Mode operation is: A 2 lb target weight is programmed and 1 lb of weight is on the platform. The display will read **50.0** indicating the weight is at only 50% of the target weight.

In many cases weighing in the percent (%) mode is not an approved application. Check with your local Weights and Measures Agency or authorized Mettler Toledo representative before enabling this feature.

NOTE: **IF YOU ARE USING THIS PRODUCT IN A WET OR STEAMY ENVIRONMENT, THIS STICKER MAY WASH OR WEAR OFF. FOR THESE APPLICATIONS WE RECOMMEND THE INDICATOR SHIELD KIT, FACTORY NUMBER 0901-0366. THIS KIT WILL INCLUDE A PLASTIC COVER WHICH COVERS THE ENTIRE FRONT PANEL, INCLUDING THE NEWLY APPLIED PERCENT (%) STICKER.**

4.4   JUMPER SELECTIONS

4.4.1   Display PCB Jumper Programming.

Default settings are shown in parenthesis. Refer to Figure 3 for Display PCB jumper locations.

W1 (OUT)   IN for comma as decimal point in weight display. OUT for decimal point in weight display.
W2 (1-2)   Rom Select, must be shorting pin 1 to 2.
W3 (IN)   Rom Enable, must be in.

Figure 4 - Display PCB
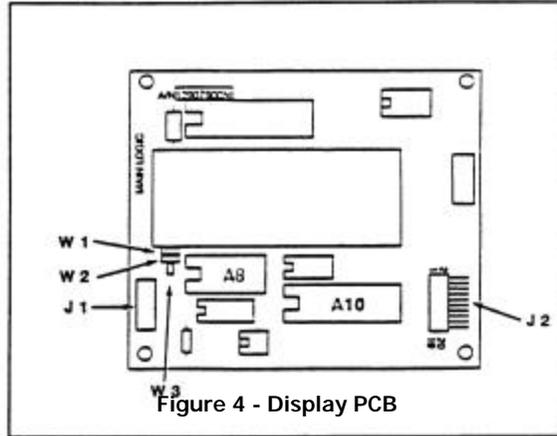
4.4.2   Power Supply PCB Jumper Programming.

Default settings are shown in parenthesis. Refer to Figure 4 for Display PCB jumper locations.

W1 (IN)   IN to enable calibration and setup. OUT to disable calibration and setup.
W2 (OUT)   For use with Status TTL outputs. IN connect internal suppressor. OUT disconnect internal suppressor.

Figure 5 - Power Supply PCB

10
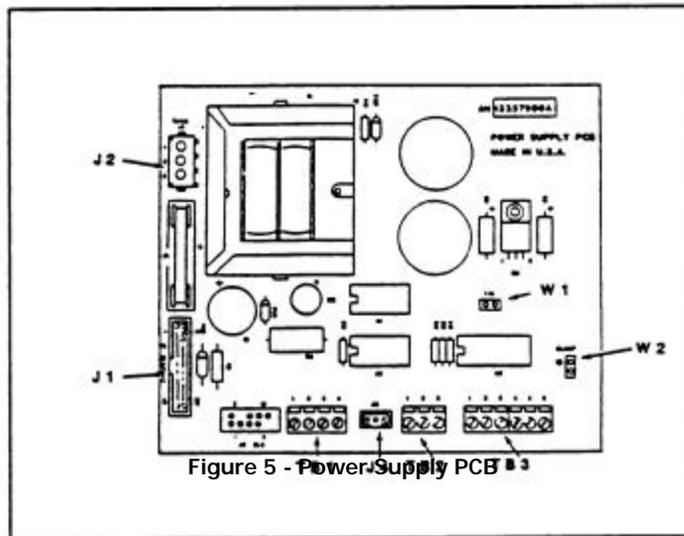
4.5   INITIAL POWER UP

Plug the line cord into a 3 prong grounded outlet of the appropriate AC voltage. The power up display sequence is as follows: All eights (8's) and decimal points will illuminate first, followed by only the status cursors, then the software part number **[133598]** and then the number 011194.

4.6   PROGRAMMING AND CALIBRATION
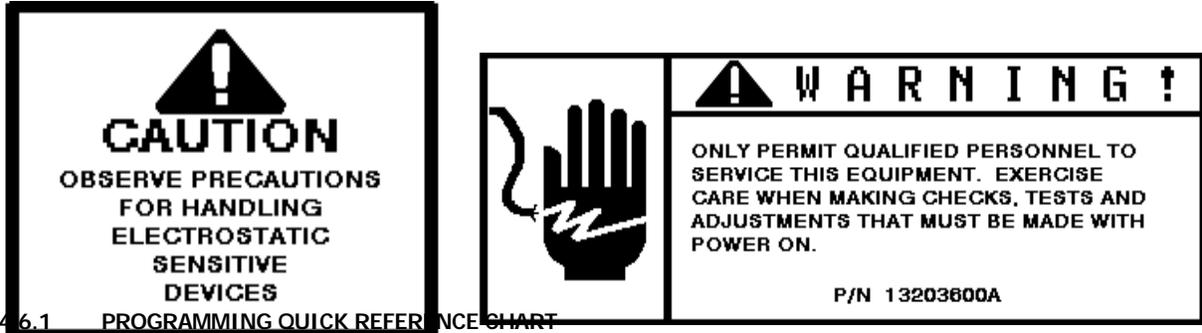
4.6.1   PROGRAMMING QUICK REFERENCE CHART

The following program selections are those included in the "133598" revision software. The software revision level is the third prompt displayed at power up. Review the revision of the software and if the revision is different than 133598, refer to the earlier version Technical Manual, TM 003206 I01 or TM 003036 I00, of the model being used.

[F0 0]	Span Adjust Feature	
[F1 1]	Indicator Model Select	
[F1.5 0]	Select Indicator or Over/Under Mode	
[F2 0]	Calibration Weight Units	
[F3 1]	UNITS Key Programming	
[F4 1]	Display Enable	
[F4.1 0]	Zone Width Edge Mode Selection	
[F5 0]	Zero cursor/% of Target Wt.	
[F6 2]	AutoZero Maintenance	
[F6.1 0]	AZM in Net Mode Select	
[F7 1]	ZERO KEY Enable	
[F8 0]	Motion Sensitivity Window	
[F9 1]	Filter Sensitivity Select	
[9.1 1]	DigiTOL7 Load Cell Filter Disable	
[F10 0]	Expanded Weight Display	
[F11 1]	Net Weight Display	
[F12]	Zone Programming Group	
[F12.1 1]	SETUP Entry Point	
[F12.2 15]	High Zone Edge	

[F12.3   5]   Accept High Zone Edge
[F12.4   5]   Accept Low Zone Edge
[F12.5   15]   Low Zone Edge
[F12.6   0]   Stored Target Weights
[F13   1]   Tare Mode
[F14   1]   Auto Clear Tare
[F15   ]   Serial Port Programming
[F15.1   1]   Demand / Continuous Format
[F15.2 9600]   Baud Rate
[F15.3   2]   Parity
[F15.4   0]   Checksum and (SAX) Enable
[F15.5   1]   Demand Format
[F15.6   0]   Double Wide Print Enable
[F15.7   0]   Auto Print Enable
[F15.8   1]   Print Weight Classification
[F15.9   0]   Stop Bit Select
[F16   0]   ASCII Input Enable
[F18   0]   Tare Interlock Enable
[F19   0]   Motion Blanking Enable
[F20   1]   Remote TTL Input Select
[C1]   [15]   Capacity
[C2]   [0.005]   Increment Size

[F99   ]   Reset Default Parameters

4.6.2   PROGRAMMING PROCEDURE AND SELECTIONS.

Press and hold the ZERO key and then press and hold the PRINT key simultaneously until the display shows [F0 0].

NOTE: IF THE DISPLAY DOES NOT SHOW [F0 0] REMOVE THE REAR COVER OF THE DISPLAY ENCLOSURE AND CONFIRM THAT THE CAL JUMPER W1, ON THE POWER SUPPLY PCB, IS SHORTING THE TWO GOLD PINS TOGETHER. IF W1 IS NOT IN, INSERT JUMPER W1 AND REPEAT THE STEP DESCRIBED ABOVE. IF THE DISPLAY DOES NOT RESPOND WITH THE [F0 0] PROMPT, REFER TO THE TROUBLESHOOTING SECTION OF THIS MANUAL.

NOTE: IF THE DISPLAY SHOWS [F12], INSTALL THE CALIBRATE ENABLE JUMPER, W1 ON THE POWER SUPPLY PCB, AND REPROGRAM STEP [F12.1] TO A "0", EXIT SETUP THEN REENTER SETUP.

KEYBOARD FUNCTIONS DURING SETUP.

The following front panel keys perform the specified functions when in the programming mode.

PRINT -   Pressing this key will accept the displayed selection for a particular step and proceed to the next prompt.

ZERO   - Pressing this key will allow the programmer to back-up to the previous step.

TARE - Pressing this key will display the next TARGET selection of a menu or toggle 0 and 1 if choice is on or off.

CLEAR -   Pressing this key will advance to end of the setup sequence, [CALOFF].

From this point forward [FX   X] will show the displayed prompt and the indented paragraphs will explain the SETUP function and selections.

[F0 0]   SPAN ADJUST FEATURE

This feature allows fine trimming of the calibration. Span adjust is allowed only AFTER calibration has been performed, and only in the units in which the scale was calibrated. Enter a zero for this prompt if calibration has yet to be performed, or span adjust is not desired. Enter a one if span adjust is desired.

Example: A 5 lb weight is placed on a calibrated scale and results in a display of 5.004 lb. Rather than repeat an entire calibration procedure the operator may "adjust" the 5.004 lb reading to the correct 5.000 lb reading via the following procedure:

Press the ZERO key to zero the scale, then place a known test weight on the scale. The amount of weight used MUST be less than or equal to the programmed scale capacity.

Enter the SETUP mode by pushing then releasing the ZERO and PRINT keys simultaneously.

Press the TARE key until the display shows [F0   1], then press the PRINT key to enter the selection. If [F0   0] is selected, the display will advance to step F1 and the span adjust step will be bypassed.

[000.000]

If [F0   1] is selected, the display will show all 0's. A decimal point will be displayed unless the 3026 is programmed for gram calibration units, [F2 4]. The left most 0 will be blinking. At this point the operator must enter the actual amount of test weight that is on the scale. The weight display will adjust calibration and display this weight correctly.

Press the TARE key to move the blinking cursor one digit to the right.
Press the ZERO key to increment the blinking digit by one, if desired.
Press the CLEAR key if it is necessary to re-enter the test weight.

[005.000]

Press the PRINT key to accept the test weight entered. The display then counts down from 15 to 0 while scale readings are being taken. Pressing the CLEAR key at any time during the countdown aborts the span adjust. When the countdown reaches 0 an attempt is made to calculate the span calibration.

If the weight is negative, overcapacity, or the display is in the expand mode [F10 1] then an E35 error code is displayed to show that span adjustment was not performed. If a span adjust is attempted that results in a corrected weight reading that is less than 50% or more than 200% of the original weight reading then an E35 error code is displayed to show that the span adjust was not performed. Press any key to clear the E35 display and proceed to the end of SETUP.

The display will jump to [CALOFF] if span adjust is successfully completed.

If the PRINT key is pressed with the display showing [000.000] then span adjust is aborted and the display will advance to the first SETUP step F1.

NOTE: THE SPAN ADJUST FEATURE IS NOT AVAILABLE WHEN USING LB-OZ DISPLAY FORMAT, [F2   2]

[F1   1]   SELECT OPERATING MODE, SCALE MODEL NUMBER

This programming step selects the model number of the unit in use. Refer to the data plate affixed to each unit to verify correct programming.

Press:
   TARE key - Display the next selection, if desired.
   PRINT key - Accept the displayed selection.

Number	Model Selection
0	Not Applicable
1	3026
2	Not Applicable
3	3036
4	Not Applicable

[F1.5 0]   **SELECT INDICATOR OR OVER/UNDER MODE**

Selection of the Indicator Mode is used for straight weighing with tare. If indicator mode is programmed, [F1.5 0], the status LED display and status printout are disabled. The Over/Under Mode uses the status LEDs, stored tare/target weight, and status message printing.

Press:
   TARE key - Toggle 0 / 1, if desired.
   PRINT key to accept the displayed selection and advance to the next parameter

Number	Mode Selection
0	Indicator
1	Over/Under

NOTE: **IF STEP [F1.5] IS SET TO A ZERO (0) THE STEPS [F4], [F11], [F12], AND [F15.8] WILL BE SKIPPED.**

NOTE: **IF STEP [F1.5] IS SET TO A ONE (1) THE STEPS [F13] AND [F14] WILL BE SKIPPED.**

[F2 0]   **CALIBRATION UNITS**

This step selects the power up weight units to be used for the default weight display as well as the weight units to be used during calibration. Step [F1] determines which weight units are available.

Press:
   TARE key - Display the next selection, if desired.
   PRINT key - Accept the displayed selection.

Number	3026 **[F1]** = 1 or 2	3036 **[F1]** = 3
0	lb	lb
1	kg	kg
2	lb-oz	lb-oz
3	oz	oz
4	g	g

[F3 0]   **"UNITS" KEY PROGRAMMING**

An alternate unit of measure can be selected via the keyboard during normal operation. The UNITS key is used to switch from the default calibration units to an alternate selected at this point in the setup program. Example: If [F3 1] then each time the UNITS key is pressed the display toggle between lb and kg. The effect of this programming is conditional on how F2 is programmed. Only certain combinations of F2 and F3 are approved for legal for trade applications.

Press:
   TARE key - Display the next selection, if desired.
   PRINT key - Accept the displayed selection.

Number	Units Key Function	F2 Programming
0	Units Key disabled	All
1	lb/kg switching	F2 = 0 or 1
3	lb/oz/g switching	F2 = 2,3,4

NOTE: **UNIT SWITCHING IS RESTRICTED TO COMPLY WITH AGENCY APPROVAL WHEN THE CALIBRATION ENABLE JUMPER, W1 ON THE POWER SUPPLY PCB, IS REMOVED. BE ADVISED THAT IF THE JUMPER IS LEFT IN (SHORTING THE PINS), UNIT SWITCHING IS UNRESTRICTED.**

NOTE: **UNITS KEY SWITCHING MUST BE DISABLED, STEP [F3 0], WHEN USING STORED TARGET WEIGHTS, STEP [F12.6 1].**

[F4   1]   **DISPLAY ENABLE/DISABLE**

NOTE: IF STEP [F1.5] IS SET TO A ZERO (0), STEP [F4] WILL BE SKIPPED.

Press:
   TARE key - Toggle 0 / 1, if desired.
   PRINT key - Accept displayed selection.

Number	Weight Display	LED Display
0	OFF	ON
1	ON	ON

[F4.1 0]   **ENTER ZONE WIDTH EDGES AS INCREMENTS OR PERCENT (%) OF TARGET**

NOTE: IF STEP [F1.5] IS SET TO A ZERO (0), STEP [F4.1] WILL BE SKIPPED.

The over/under mode permits zone width edge values to be entered as either a fixed number of increments or as a percentage of the target weight. This step selects the zone width edge entry mode which is to be used in the **[F12]** zone width edge setup steps.

Press:
   TARE key - Toggle 0 / 1, if desired.
   PRINT key to accept the displayed selection and advance to the next parameter

Number	Zone Width Entry Mode
0	Increments (0 to 15 d)
1	Percent (%) of Target (0 to 4%)

[F5   0]   **ZERO CURSOR OR PERCENT (%) OF TARGET WEIGHT DISPLAY MODE**

   NOTE: IF [F4   0] THEN AND F5 WILL BE SKIPPED.

   This step has two different definitions depending on the selection of step [F1.5].

   ZERO CURSOR

   In the Indicator Mode, [F1.5 0], this step controls the Zero Cursor on the display.

   Press:
      TARE key - Toggle 0 / 1, if desired.
      PRINT key to accept the displayed selection and advance to the next parameter

Number	Zero Cursor
0	Disabled
1	Enabled

   PERCENT (%) OF TARGET WEIGHT DISPLAY MODE

   In the Over/Under Mode, step [1.5 1], this step controls how weight will be displayed if a target weight has been entered. The percentage of target weight display is limited to a value of from - 999.9% to + 999.9%. If no target is entered then weight will display in units calibrated (lb, kg, oz, g, lb-oz).

   Press:
      TARE key - Toggle 0 / 1, if desired.
      PRINT key - Accept displayed selection.

Number	Weight Display Mode
0	Weight Units Only
1	Percent (%) of Target Weight

[F6   2]   **AUTOZERO MAINTENANCE (AZM)**

   The AZM window options, 0.5 d and 1.0 d (if selected) determine the active window (the difference between the current reading and the last captured zero), over which AZM will correct for small changes in gross zero. Weight variations that do not exceed the AZM window will be compensated for at the rate of 0.2 d per second, unless the resultant captured zero is higher or lower by more than the pushbutton zero range (±2% or ±20% as programmed in step F7) from the initial zero captured during calibration.

   Press:
      TARE key - Display next selection, if desired.
      PRINT key - Accept displayed selection.

Selection	AZM Window	Legal For Trade Applications
0	AZM Disabled	Not Applicable
1	±0.5 Increment	Animal, Food and Retail
2	±1 Increment	All other Industrial Scales
3	±3 Increment	Vehicle Scales

[F6.1 0]   **AZM IN NET MODE**

AZM is normally disabled when a tare has been taken. This selection permits AZM to operate in the net weight mode as well as in the gross mode whenever the weight on the scale is within the AZM range selected in step **[F6]**.

Press:

    TARE key - Toggle 0 / 1, if desired.
    PRINT key - Accept displayed selection.

Number	AZM Mode
0	Gross Only
1	Gross and Net

[F7   1]   **ZERO KEY ENABLE**

The pushbutton zero function provides re-zeroing of the scale over a selectable range of either ±2% or ±20% of programmed scale capacity when the scale is in range and in a "no motion" condition. Selection number 3 [F7 3] permits pushbutton zero when the scale is in the net mode and the weight on the scale is within +20 of full capacity of gross zero.

Press:
    TARE key - Display next selection, if desired.
    PRINT key - Accept displayed selection.

Number	Pushbutton Zero Range	Weight Mode
0	Zero Disabled	Gross Only
1	± 2% of Scale Capacity	Gross Only
2	±20% of Scale Capacity	Gross Only
3	±20% of Scale Capacity	Gross and Net

[F8 0]   **MOTION SENSITIVITY WINDOW**

This step sets up a zone within which the weight reading can change without tripping the "weight in motion" detector.

The "weight in motion" detector requires either three (3) successive weight readings (with digital filter disabled, [F9 0]) or five (5) successive weight readings (with digital filter enabled, [F9 1, 2, or 3]) within the motion sensitivity window for a "no motion" signal. When motion is detected the 3026 inhibits the zero, tare, and print functions.

Press:
   TARE key - Toggle 0 / 1, if desired.
   PRINT key - Accept displayed selection.

Number	Motion Sensitivity Window
0	±1 d
1	±3 d

[9 1]   **FILTER SENSITIVITY SELECTION**

This selection is made available to filter out vibration and create a more stable (non-fluctuating) display. The heavier the filtering used, the slower the weight display will update. This function effects the weight in motion detector as described preceding SETUP step [F8 X].

Press:
   TARE key - Display next selection, if desired.
   PRINT key - Accept displayed selection.

Number	Filter Mode
0	Filtering Disabled
1	Light Filtering
2	Medium Filtering
3	Heavy Filtering

[F9.1 1] **DigiTOL7 LOAD CELL FILTER**

This step allows disabling of the built in digital filter which every DigiTOL7 load cell base includes.
NOTE: THE BUILT IN DIGITAL FEATURE MAY INTERFERE WITH SLOW SPEED FILLING OPERATIONS. TO ACHIEVE A SMOOTH RESPONSE TO SLOW CONTINUAL CHANGES IN WEIGHT ON THE SCALE, DISABLE THE DIGITOL7 LOAD CELL FILTER.

Press:
   TARE key - Toggle 0 / 1, if desired.
   PRINT key - Accept displayed selection.

Number	Load Cell Filter
0	Disable
1	Enable

[F10 0] **EXPANDED WEIGHT DISPLAY**

For calibration or troubleshooting purposes, expanded weight display can be selected. Once SETUP has been exited, the weight display will show between 0 and 30000 depending on the capacity and amount of weight on the scale. All keys on the keyboard are disabled except for the ZERO and TARE combination required to enter SETUP.

Press:
   TARE key - Toggle 0 / 1, if desired.
   PRINT key - Accept displayed selection.

Number	Weight Display Mode
0	Normal
1	Expanded Weight

[F11 1] **NET WEIGHT DISPLAY**

NOTE: IF STEP [F1.5] IS SET TO A ZERO (0), STEP [F11] WILL BE SKIPPED.
NOTE: IF [F5 1] THEN F11 WILL BE SKIPPED.

When in the Over/Under Mode, this step allows you to select whether the target weight will be displayed as a gross weight or a Net weight. In the Gross Mode, when the target weight is entered and nothing is on the scale, the display will show zero and the red under light will be illuminated. In the Net Weight Mode, when the target weight is entered and nothing is on the scale, the display will show the negative target weight with the Net Cursor and red under light will be lit.

Press:
   TARE key - Toggle 0 / 1, if desired.
   PRINT key - Accept displayed selection.

Number	Weight Display Mode when Target Weight is entered
0	Gross Weight
1	Net Weight difference from Target Weight

[F12]   **ZONE PROGRAMMING GROUP**

>   **NOTE: IF STEP [F1.5] IS SET TO A ZERO (0) THEN STEP [F12] WILL BE SKIPPED.**

>   Press:
>   TARE key - To skip SETUP group F12.
>   PRINT key - To enter the Zone Programming Group.

>   The zone edge widths are determined either by a fixed number of increments or as a percentage of target weight, (as selected in setup step **[F4.1]**. If fixed increment zone mode is selected, step **[F4.1 0]**, then each zone edge can be programmed for from 0 to 15 d (increments). If percentage of target weight zone entry mode is selected, step **[F4.1 1]**, then the valid zone edge tolerances are: 0.0%, 0.1%, 0.2%, 0.3%, 0.4%, 0.5%, 0.75%, 1.0%, 1.25%, 1.5%, 1.75%, 2.0 %, 2.5%, 3.0%, 3.5% and 4.0%.

UNDER WEIGHT	LOW WEIGHT	TARGET WEIGHT	HIGH WEIGHT	OVER WEIGHT
	[F12.5] 0-15 d 0-4%	[F12.4] 0-15 d 0-4%	[F12.3] 0-15 d 0-4%	[F12.2] 0-15 d 0-4%	
UNDER ZONE	LOW ZONE	ACCEPT LOW ZONE	ACCEPT HIGH ZONE	HIGH ZONE	OVER ZONE
RED LED	AMBER LED	GREEN LED		AMBER RED	RED LED

Table 6 - LED Display Zone Edges

[12.1 1]   **SETUP ENTRY POINT**

>   Selectable setup entry point is provided to allow the operator to change zone widths easily without having to step through the rest of SETUP. This also protects the operator from inadvertent programming changes to the setup parameters. If setup entry point F12 is selected, F12.1 = 1. The operator will not be able to access any other setup steps except the F12 group. In order to calibrate or program the scale, select setup entry point F0, F12.1 = 0.
>   **CALIBRATION AND SETUP JUMPER W1 ON THE POWER SUPPLY PCB MUST BE REMOVED AFTER PROGRAMMING IN ORDER FOR THIS FEATURE TO OPERATE.**

>   Press:
>   TARE key - Toggle 0 / 1, if desired.
>   PRINT key - Accept the displayed selection.

Number	Setup Entry Point
0	Step F0
1	Step F12 (Zone Programming only)

[12.2 15]   **HIGH ZONE WIDTH**

>   Press:
>   TARE key - Display the next High zone width (0 d to 15 d), if desired.
>   PRINT key - Accept the displayed value.

[12.3 5]   **HIGH ACCEPT ZONE WIDTH**

>   Press:
>   TARE key - Display the next High Accept zone width (0 d to 15 d), if desired.
>   PRINT key - Accept the displayed value.

[12.4 5]   **LOW ACCEPT ZONE WIDTH**

>   Press:
>   TARE key - Display the next Low Accept zone width (0 d to 15 d), if desired.

PRINT key - Accept the displayed value.

[12.5 15]   LOW ZONE WIDTH

Press:
TARE key - Display the next Low zone width (0 d to 15 d), if desired.
PRINT key - Accept the displayed value.

NOTE: IF IN OVER/UNDER MODE [F1 3], STEPS F13 AND F14 WILL BE SKIPPED.

[F12.6 0] STORED TARGET WEIGHTS

The 3026/3036 indicator can store up to four target weights in memory.

Press:
TARE key - to change displayed selection
PRINT   key - to accept the displayed selection and advance to the next parameter.

Number	Stored Target Weights
0	Disabled
1	Enabled

NOTE: IF STORED TARGET WEIGHTS ARE ENABLED, SETUP STEP [F12.6 1], THEN THE INDICATOR WILL PROMPT FOR ENTRY OF THE EACH OF THE STORED TARGET WEIGHTS.

NOTE: UNITS KEY SWITCHING MUST BE DISABLED, STEP [F3 0], WHEN USING STORED TARGET WEIGHTS, STEP [F12.6 1].

[P1] [000.000]   ENTER STORED TARGET WEIGHT #1

- Press **TARE** key to move the blinking digit one place to the right.
- Press **ZERO** key to increment the blinking digit by one.
- Press **PRINT** key to accept displayed value and advance to **[P2]**.

[P2] [000.000]   ENTER STORED TARGET WEIGHT #2

- Press **TARE** key to move the blinking digit one place to the right.
- Press **ZERO** key to increment the blinking digit by one.
- Press **PRINT** key to accept displayed value and advance to **[P3]**.

[P3] [000.000]   **ENTER STORED TARGET WEIGHT #3**

- Press **TARE** key to move the blinking digit one place to the right.
- Press **ZERO** key to increment the blinking digit by one.
- Press **PRINT** key to accept displayed value and advance to **[P4]**.

[P4] [000.000]   **ENTER STORED TARGET WEIGHT #4**

- Press **TARE** key to move the blinking digit one place to the right.
- Press **ZERO** key to increment the blinking digit by one.
- Press **PRINT** key to accept displayed value and advance to **[P3]**.

To recall stored target weights from memory, press the **TARE/TARGET** key with the scale at gross zero. **[P1]** is displayed for a few seconds then the value stored in **[P1]** is displayed. If you want a different stored value, then press the **TARE/TARGET** key again. **[P2]** is displayed for a few seconds then the value stored in **[P2]** is displayed. Each time the **TARE/TARGET** key is pressed the scale will display the next available stored target weight. When the desired target weight is displayed, press the **PRINT** key to accept the displayed target value.

[F13 1]   **TARE ENABLE**

NOTE: IF STEP [F1.5] IS SET TO A ONE (1), STEP [F13] WILL BE SKIPPED.

Press:
    TARE key - Display the next selection, if desired.
    PRINT key - Accept the displayed selection.

Number	Tare Mode
0	Tare Disabled
1	Tare Enabled
2	Auto Tare Mode Only

NOTE: When the Auto Tare Mode is selected, a tare will be taken whenever the scale is in the gross weight mode and the scale settles on a weight greater than 5 increments above gross zero.

[F14 1]   **AUTO CLEAR TARE**

NOTE: IF STEP [F1.5] IS SET TO A ONE (1), STEP [F14] WILL BE SKIPPED.

If auto clear tare is enabled, tare will be cleared when the scale returns to gross zero.

Press:
    TARE key - Toggle 0 / 1, if desired.
    PRINT key - Accept the displayed selection.

Number	Auto Clear Tare
0	Disabled
1	Enabled

[F15   ]   **SERIAL PORT PROGRAMMING**

    Press:
      TARE key - To skip SETUP group F15.
      PRINT key - To enter the Serial Port Programming Group.

[F15.1 1]   **DEMAND OR CONTINUOUS FORMAT MODE SELECTION**

Toledo Scale continuous format mode is a specialized data output used to communicate with remote displays or for real time computer interfacing applications. The Toledo scale continuous format data packet is transmitted every time a scale update occurs.

The demand mode is used for interfacing to Toledo printers or for simple computer interfacing.

    Press:
      TARE key - Toggle 0 / 1, if desired.
      PRINT key - Accept the displayed selection.

Number	Data Format Mode
0	Continuous
1	Demand

    NOTE: THE CONTINUOUS FORMAT MODE IS FOR USE WITH LB OR KG UNITS ONLY. IF LB-OZ, OZ, OR G UNITS ARE SELECTED (SETUP STEP [F3   3, 4, OR 5] OR IF PERCENTAGE OF TARGET WEIGHT IS TO BE DISPLAYED (SETUP STEP [F5   1]), THEN THE CONTINUOUS MODE MUST NOT BE SELECTED.

    NOTE: IF TOLEDO CONTINUOUS FORMAT MODE IS SELECTED, PRINT SETUP STEPS F15.5, F15.6, F15.8, ARE SKIPPED.

[F15.2]   **BAUD RATE SELECTION [9600]**

Baud rate selections for the serial data output are: **300, 1200, 2400, 4800, and 9600 baud.** If continuous output format is selected (F15.1 = 1) then baud rate selections are limited to 2400, 4800, and 9600 baud.

    Press:
      TARE key - Display the next selection, if desired.
      PRINT key - Accept the displayed selection.

[F15.3 2]   **PARITY BIT SELECTION**

A parity bit can be selected to detect errors associated with the transmission of ASCII data. Select a parity bit to match what the receiving device requires. Normally Mettler Toledo products use even parity, [F15.3 2].

Press:
   TARE key - Display the next selection, if desired.
   PRINT key - Accept the displayed selection.

Number	Parity Format Mode
0	Parity Bit always a 0
1	Odd Parity Bit
2	Even Parity Bit

[F15.4 0]   **CHECKSUM AND SAX SELECTION**

Checksum is an error detection scheme that checks the integrity of the entire string of data that is transmitted. Checksum is defined as the 2's complement of the sum of the seven (7) low order bits of all characters transmitted, beginning with the SAX character to the last character before the checksum.

SAX is an ASCII start of text character that normally precedes a transmission. If the continuous format mode is selected, [F15.1 0] then the SAX character will always be transmitted even if checksum is disabled.

Press:
   TARE key - Toggle 0 / 1, if desired.
   PRINT key - Accept the displayed selection.

Number	SAX in Continuous	Checksum in Continuous or Demand
0	Disabled	Disabled
1	Enabled	Enabled

[F15.5 1]   **LINE FORMAT SELECTION**

This step controls what weight data will be printed, if it will be printed all on one line, or if each field will be printed on it's own line.

Press:
   TARE key - Display the next selection, if desired.
   PRINT key - Accept the displayed selection.

Number	Data Printed	Line Format
0	Displayed Weight Only	Single Line
1	Gross, tare, net	Single Line
2	Gross, tare, net	Multiple Line

NOTE: IF OVER/UNDER MODE IS SELECTED [F1   3], AND NET WEIGHT DISPLAY IS DISABLED, DISPLAYED WEIGHT ONLY, SINGLE LINE IS ASSUMED, [F15.5 0] |

[F15.6 0]   DOUBLE WIDTH PRINT ENABLE

This step controls if an ASCII (SO), shift-out, and an ASCII (SI), shift-in, characters are to be inserted in the data transmission to produce double width printout.

Press:
   TARE key - Toggle 0 / 1, if desired.
   PRINT key - Accept the displayed selection.

Number	Double Wide Print
0	Disabled
1	Enabled

[F15.7 0]   AUTO PRINT ENABLE

This step enables the auto print function. The sequence of operation for auto print is as follows. A weight of five (5) or more increments is placed on the scale. After the scale reading is stable, (no motion), a print will be initiated. The weight must then return to a stable zero, (net or gross), before the auto print sequence will repeat.

Press:
   TARE key - Toggle 0 / 1, if desired.
   PRINT key - Accept the displayed selection.

Number	Auto Print
0	Disabled
1	Enabled

[F15.8 1]   PRINT WEIGHT CLASSIFICATIONS

NOTE: IF STEP [F1.5] IS SET TO A ZERO (0), STEP [F15.8] WILL BE SKIPPED.

This step controls if the status of the LED's will be printed after the weight field. The messages printed will be "Under", "Low", "Accept", "High", and "Over". Weight classifications will be printed only if the 3026 is in the over/under mode, [F1 3].

Press:
   TARE key - Toggle 0 / 1, if desired.
   PRINT key - Accept the displayed selection.

Number	Weight Classification
0	No weight classification printed
1	Print weight classifications

[F15.9 0]   **STOP BIT SELECTION**

This step allows selection of either one or two stop bits at the end of each character during transmission.

Press:
   TARE key - Toggle 0 / 1, if desired.
   PRINT key - Accept the displayed selection.

Number	Stop Bit Selection
0 1	One Stop Bit Two Stop Bits

[F16   0]   **ASCII INPUT ENABLE**

The printer port can accept ASCII character inputs to remotely control the functions of the scale. These commands are received into the printer port TB-2, pin 3. Refer to Table 3 for commands that are supported by the 3026:

Press:
   TARE key - Toggle 0 / 1, if desired.
   PRINT key - Accept the displayed selection.

Number	ASCII Input
0 1	Disabled Enabled

ASCII Character	Operator Key Equivalent
P<CR> T<CR> C<CR> Z<CR>	PRINT key TARE/TARGET key CLEAR key ZERO key

Table 7 - ASCII Input Commands

NOTE: **THE <CR> CHARACTER IS OPTIONAL WITH THE 3026 ASCII INPUT COMMANDS**.

[F18 0]   **TARE INTERLOCKS**

Tare interlocks are enabled the following restrictions apply.
Tare can only be cleared at Gross Zero.
Tare can only be entered in the Gross weighing mode.

The Units cursor will not blink when the scale is "in motion".

Upon power-up the display will show **[E E E]** for weights above zero and will display **[-E E E]** for weights below zero. Off zero weights must be manually captured by pressing the ZERO key before weights will be displayed.

Press:
   TARE key - Toggle 0 / 1, if desired.
   PRINT key - Accept the displayed selection.

Number	Tare Interlocks
0	Disabled
1	Enabled

[F19 0]   **ENABLE MOTION BLANKING**

This step is provided to allow the 3026 to blank the weight display anytime the scale is in a "motion" condition.

Press:
   TARE key - Toggle 0 / 1, if desired.
   PRINT key - Accept the displayed selection.

Number	Motion Blanking
0	Disabled
1	Enabled

[F20 1]   **TTL INPUT SELECTION (REMOTE SWITCH)**

Selects the function of the remote external input switch input at TB3. Reference section ..... for wiring information.

Press:
   TARE key - Display the next selection, if desired.
   PRINT key - Accept the displayed selection

Number	Switch Function
0	PRINT key
1	TARE/TARGET key
2	ZERO key
3	UNIT SELECTION key

[CAL]   **SCALE CONFIGURATION AND CALIBRATION**

Press:
   TARE key   - To skip the Calibration Group and advance to [CALOFF], if desired.
   PRINT key   - To enter the Calibration Group.

[C1]   **SCALE CAPACITY [15]**

The display shows the stored value or defaults to the first legal value. Refer to Table 4 for a list of valid capacities.

Press;
   TARE key   - To select the next valid scale capacity, if desired.
   PRINT key   - To accept the displayed value and advance to the beginning of the calibration sequence.

Mode	Valid Capacities for the 3026	
lb	6 lb X 0.002 lb	15 lb X 0.005 lb
lb-oz		18.75 lb X 0.1 oz
oz	150 oz X 0.05 oz	300 oz X 0.1 oz
kg	3 kg X 0.001 kg	6 kg X 0.002 kg
g	3000 g X 1 g	6000 g X 2 g

Table 8 - Model 3026 Capacity Selections

Model-Ram	Country	Calibrated Units	Calibrated Capacity	Full Scale Increment
3036-0025-000 3036-0025-001 3036-0025-002 3036-0025-003	U.S./Canada Europe U.K. Australia	LB	20 x 0.002 25 x 0.005	10,000* 5,000
		OZ	500 x 0.05 500 x 0.1	10,000* 5,000
		LB-OZ	25 lb x .1 oz	*
		KG	10 x 0.001 10 x 0.002 15 x 0.005	10,000* 5,000 3,000
		G	10,000 x 1 10,000 x 2 15,000 x 5	10,000* 5,000 3,000
3036-0050-000 3036-0050-001 3036-0050-002 3036-0050-003	U.S./Canada Europe U.K. Australia	LB	50 x 0.005 50 x 0.01	10,000* 5,000
		OZ	1,000 x 0.1 1,000 x 0.2	10,000* 5,000
		LB-OZ	50 lb x .1 oz 50 lb x .2 oz	*
		KG	20 x 0.002 25 x 0.005 30 x 0.01	10,000* 5,000 3,000
		G	20,000 x 2 25,000 x 5 30,000 x 10	10,000* 5,000 3,000
3036-0100-000 3036-0100-001 3036-0100-002 3036-0100-003	U.S./Canada Europe U.K. Australia	LB	100 x 0.01 100 x 0.02	10,000* 5,000
		OZ	1,000 x 0.1 1,000 x 0.2	10,000* 5,000
		LB-OZ	100 lb x .2 oz 100 lb x .5 oz	*
		KG	50 x 0.005 50 x 0.01 60 x 0.02	10,000* 5,000 3,000
		G	50,000 x 5 50,000 x 10 60,000 x 20	10,000* 5,000 3,000

Table 9 - MODEL 3036 CAPACITY SELECTIONS

* Indicates Non NTEP Approved

[C2   ]   INCREMENT SIZE [0.005]

The display shows the correct increment size for the capacity selected in the preceding SETUP step C1. The increment size is not selectable. After a short pause the display will advance to the calibration sequence.

CALIBRATION SEQUENCE

Once the scale capacity has been selected the 3026 enters the calibration sequence. The 3026 will prompt you to add and remove test weights in order to adjust the scale calibration.

[E SCL]   EMPTY SCALE

First the scale will ask you to [E SCL] or empty the scale. Make sure there is nothing on the scale platter and press the PRINT key to continue.

[15 CAL]   COUNT DOWN DELAY

The display will count down from 15 to 0 while the initial zero weight is recorded.

[Add Ld]   ADD LOAD

Place the test weight on the scale platform. Ideally, the test weight used should be as close as possible to full scale capacity. At a minimum, **the weight must be at least 50% of full scale capacity**. The test weight used cannot exceed the programmed full scale capacity or else an error code E34 will be displayed.

NOTE: WHEN CALIBRATING IN THE lb - oz MODE, STEP [F2   2], THE TEST WEIGHT SHOULD BE ENTERED IN POUNDS.

Press the PRINT key to continue.

[000.000]

The display will show all 0's with a decimal point if used. The left most 0 will be blinking. At this point the operator must enter the actual amount of test weight that is on the scale. The test weight value is entered one digit at a time using the TARE and ZERO keys as described below.

Press the TARE key to move the blinking cursor one digit to the right, if needed.

Press the ZERO key to increment the blinking digit by one, if needed.

IF YOU MAKE AN ENTRY MISTAKE:

Press the **CLEAR key** to reset all digits to a zero if it is necessary to reenter the test weight.

Continue to enter the test weight value until the display shows the correct value for the test weight used, including a decimal point if used.

Press the PRINT key to accept the test weight entered and advance to the next step. If a test weight value of zero is entered an error code E32 will be displayed.

[15 CAL]   COUNT DOWN DELAY

The display will count down from 15 to 0 while the span value is recorded.

[F99 0]   RESET SETUP TO DEFAULT SELECTIONS

0 -   Skip setting setup parameters to default settings, advance to **[CALOFF].**
1 -   Reset listed setup parameters to the default settings.

NOTE: DEFAULT SELECTIONS OF EACH SETUP PARAMETER ARE SHOWN IN THE BRACKETS (ON THE RIGHT)OF EACH SETUP SELECTION.

NOTE: DEFAULT SELECTIONS WILL NOT EFFECT CALIBRATION

[CALOFF]   PROGRAMMING AND CALIBRATION COMPLETE

Press and hold the PRINT key, then press and release the ZERO key and PRINT key Simultaneously to exit SETUP.

Pressing the ZERO key first will cause the program to back-up to the previous step. If you find that the unit has stepped back to [F99], Press the CLEAR to advance back to [CALOFF]

NOTE: IF THE END USER NEEDS ACCESS TO THE ZONE PROGRAMMING GROUP, IT IS RECOMMENDED THAT THE 3026 or 3036 ENTERS SETUP AT F12. THIS IS ACCOMPLISHED BY SELECTING SETUP STEP [F12.1   1] AND REMOVING THE CALIBRATION ENABLE JUMPER, W1 ON THE POWER SUPPLY PCB, AFTER PROGRAMMING IS COMPLETE. THIS WILL HELP PROTECT THE END USER FROM INADVERTENT CHANGE AND MAKE THE SETUP PARAMETERS NON-ACCESSIBLE FROM THE KEYBOARD.

Replace the back cover and gasket of the display enclosure. Make certain that ALL 12 grommet screws are firmly in place to ensure a water tight seal. Placing a bead of Silicon around the gasket will assist in the seal.

5.   OPERATING INSTRUCTIONS

5.1   DISPLAY

The 3026 And 3036 utilize a highly readable vacuum fluorescent display. It consists of six 0.5 in. high digits with decimal points or commas. Over capacity is indicated by blanking of the display. To the right of the weight display are five LEDs that are used to indicate the status of the weight on the scale as compared to a stored target weight. These LEDs are used in the Over/Under mode only [F1 1].

Figure 6 - Display
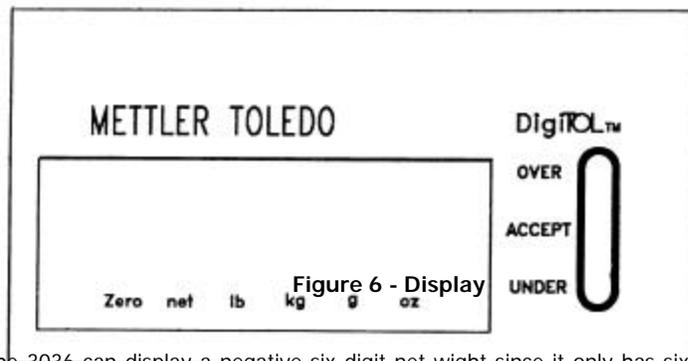
Neither the 3026 or the 3036 can display a negative six digit net wight since it only has six display digits. If a negative six digit weight occurs, the display will alternately show the weight value then a minus in the left most display digit. The correct weight will be transmitted by the printer port.

The 3026 and 3036 provide five status LEDs in the Over/Under mode. The status LEDs display the difference between the current weight on the scale and a stored target weight.

Legend	Description
lb	Shows the weight displayed is in pound units
kg	Shows the weight displayed is in kilogram units.
lb oz	Both the lb and the oz legends are illuminated to show the weight displayed is in pounds and ounces units.
Zero ------------------------ %	The zero legend will illuminate when the scale is either at gross zero or net zero (if programmed). --- Shows the value displayed is a percentage of the stored target weight (if programmed)
net	Shows the value displayed is a net weight.

**Table 10 - Display Legend Functions**

5.2 KEYBOARD FUNCTIONS
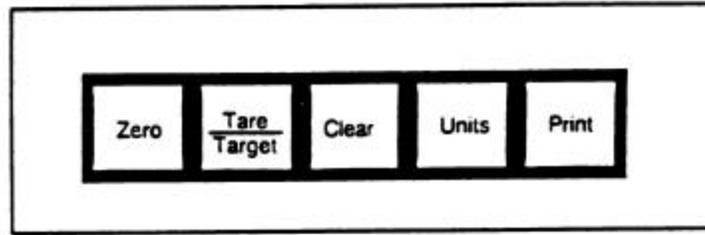
Figure 7 - Keyboard

5.2.1 Zero Key

The ZERO key provides re-zeroing of the scale over a range of either ±2% or ±20% of programmed scale capacity in either the gross or net modes (selected in SETUP step F7). The ZERO key will only be effective while the scale is in a "no motion" state.

5.2.2 Tare/Target Key

5.2.2.1 Over/Under Mode

If configured as over/under mode, SETUP step [F1.5 1], the TARE/TARGET key serves to enter the target weight. Pressing the TARE/TARGET key when the indicated weight is not at zero and with "no motion" will store the weight value in the scale as a target weight and the accept LED will be illuminated.

If Stored Target Weight feature is enabled, [F12.6 1], and the scale is at gross weight zero, the TARE/TARGET Key may be used to recall stored tare weights.

When the item is removed the under LED will then be illuminated. The scale will light the proper LED to indicate the classification of the current weight as compared to the stored weight.

If net weight display is selected, SETUP step [F11 1], then the weight difference from the stored target weight will be displayed. If net weight display is disabled, SETUP step [F11 0], then gross weight will be displayed.

5.2.2.2 Indicator Mode

If configured as indicator mode SETUP step [F1.5 0], the TARE/TARGET key functions as a TARE key. Pressing the TARE/TARGET key when the indicated weight is not a zero and with "no motion" will store the weight as a tare weight.

The stored tare weight is subtracted from the gross weight value and displayed as a net weight. The NET cursor is also turned on.

If the current weight is less than the stored tare weight, the net weight will be displayed as a negative weight.

If the tare operation results in a six digit negative weight, the display will alternately display the weight (with no minus sign) and a single minus sign followed by five blanks.

Pressing TARE/TARGET key at gross zero has the same effect as pressing the CLEAR key.

5.2.3 Clear Key

The CLEAR key is used to remove tare or target weights that have been entered on the scale.

Pressing the CLEAR key in the over/under mode SETUP step [F1.5 1], will clear the stored target weight and disable the LED display.

Pressing the CLEAR key in indicator mode SETUP step [F1.5 0], will clear the stored tare weight.

Auto clear tare enabled SETUP step [F14 1], will clear the stored tare weight when the scale returns to gross zero with "no motion".

5.2.4 Units Key

The UNITS key will switch from the calibration units selected to the valid alternate units mode, (i.e. if lb is selected as calibration units, [F2 0], and the UNITS key is configured to lb/kg switching, [F3 1], then pressing the UNITS key will switch the display between lb weighing and kg weighing.

NOTE: **IF OVER/UNDER MODE IS SELECTED, [F1.5 1], THE UNITS KEY WILL ONLY SWITCH UNITS IF THERE IS NO TARGET WEIGHT STORED. IF A TARGET WEIGHT IS STORED AND UNITS ARE TO BE SWITCHED, PRESS THE CLEAR KEY TO CLEAR THE TARGET WEIGHT BEFORE PRESSING THE UNITS KEY.**

NOTE: **WHEN SWITCHING BETWEEN CAPACITIES WHERE THE CAPACITY CAN ACTUALLY BECOME LARGER THAN THE CAPACITY THE 3036 WAS CALIBRATED AT, AGENCY APPROVALS WILL NOT APPLY TO THE UNIT. TO INSURE AGENCY APPROVALS WILL BE RETAINED, REMOVE THE W-I JUMPER (SETUP JUMPER) FROM THE POWER SUPPLY PCB AFTER EXITING SETUP.**

5.2.5 Print Key

The PRINT key will initiate a data transmission of the selected format and baud rate (SETUP Group F15) if the following conditions are met:

Scale must not be under gross zero.
Scale must not be in the expanded weight mode [F10 1].
Scale must have had zero captured after powerup.
Scale must be in a "no motion" condition.

NOTE: **IF THE SCALE WAS UNABLE TO PRINT BECAUSE OF "MOTION", THEN AS SOON AS THE SCALE HAS SETTLED TO A "NO MOTION" CONDITION THE UNIT WILL TRANSMIT THE DATA.**

5.3 INITIAL POWER-UP SEQUENCE

When power is first applied, the following sequence will be displayed on the display:

All eights, [888888], and decimal points will illuminate first for verification that all weight display segments are working.

The sequence displayed are the status cursors only.

The program part number is displayed next, [144245]. While the program part number is being displayed the unit attempts to establish communication with the load cell.

Next the revision level of the software is shown in the right most display digit. The letter "L" is displayed in the left most display digit. A sample display would be [L 00] which indicates the first level of the software. This number will increase as enhancements and modifications are made to the program.

After the display test and software part number and revision level displays, the 3026 performs a ROM test, RAM test, and NOVRAM test. Error codes for each will be displayed if any of these tests fail or if problems with the load cell are detected.

If all the internal tests are passed the scale will display weight in the gross mode. Remove all items from the scale and verify that the scale is at gross zero. If the unit is not at gross zero then press the ZERO key. If zero cannot be captured the scale may need to be recalibrated.

NOTE: DEMAND MODE PRINTER OUTPUT WILL BE DISABLED ON POWERUP UNTIL GROSS ZERO IS CAPTURED BY MEANS OF THE AZM FUNCTION OR BY PRESSING THE ZERO KEY. CONTINUOUS FORMAT OUTPUT IS NOT EFFECTED BY ZERO CAPTURE AND WILL RESUME IMMEDIATELY AFTER THE POWERUP SEQUENCE IS COMPLETED.

5.4 ZONE WIDTH PROGRAMMING

If the scale is used in the Over/Under mode, SETUP step [F1.5   1], the zone width edge values may be entered as either a fixed number of increments or as a percentage of the target weight [F4.1]. The zone width edges must be determined and programmed into memory before the status LED display will be usable.

5.4.1 Zone Width as Fixed Number of Increments

To calculate the parameters entered into the zone width programming group, SETUP steps F12.2, F12.3, F12.4 and F12.5), divide the desired zone width by the increment size programmed in calibration step C2. The High Accept zone width must be subtracted from the Over zone width and the Low Accept zone must be subtracted from the Under zone width for the calculation to be correct.

Example Zone Width Programming.

The unit is programmed for a scale capacity of 15 lb by 0.005 lb increment size. The end user requests the following zone edges.

Over weight = 0.130 lb or more above the target weight.
Highest High Accept weight = 0.125 lb above the target Weight.
Highest Accept weight = 0.075 lb above the target weight.
Lowest Accept weight = 0.050 lb below the target weight.
Lowest Low accept weight = 0.100 lb below the target weight.
Under weight = 0.105 lb or more below the target weight.

Over zone edge is equal to 10 divisions, (0.125 lb - 0.075 lb) ÷ 0.005 lb = 10 d

High Accept zone edge is equal to 15 divisions, 0.075 ÷ 0.005 lb = 15 d

Low Accept zone edge is equal to 10 divisions, 0.050 lb ÷ 0.005 lb = 10 d

Under zone edge is equal to 10 divisions, (0.100 lb - 0.050 lb) ÷ 0.005 lb = 10 d

5.4.2   Zone Width as a Percentage of Target

To calculate the parameters to be entered in [F12.2], [F12.3], [F12.4] and [F12.5], when using percentage of target weight, remember that up to 4% of the programmed weight can be selected for each of the setup selections. This means weight of up to 4% of the target weight can be put on the platter before the yellow over light on the front display panel will turn on. Add up to another 4% of the target weight, or 8% total before the red over light will turn on. It is the same for the under lights.

Example of Zone Width Programming using percentages:

The Target Weight Equals 2 lbs. Each setup parameter is set for the full 4% of target weight. To calculate, start with [F12.3]

PUT 2 LBS ON THE PLATTER AND PRESS THE "TARGET" KEY

The Display Now Reads Zero. (00.000)

[F12.2]   (2 lb x 8% or 4%+4% or .16)   0.165 will turn on Red over light.

[F12.3]   (2 lb x 4% or.04 =.08)   Display will shows .08 and the Green Accept light will still be on. The yellow over light will turn on at .085.

00.000 on Display, Green Accept Light on.

[F12.4]   (Display at - 4% or 0.00 - .08)   The yellow under light will be on until enough weight has been added to the platter to display - 0.08, then the Green Accept Light will turn on.

[F12.5]   (Display at - 8% or 0.00 - .16)   Red under light will be on until enough weight has been added to display - 0.16, then the yellow light will turn on.

5.5   PROGRAMMING STORED TARGET WEIGHTS

The 3026 and 3036 have the capability to store up to four programmed target weights in memory. To store the target weights it will be necessary to enable setup selection [F12.6   1].

After pressing the enter key at the **[F12.6 1]** prompt, **[P1]** will flash on the display for approximately 2 seconds, then   **[000.000]** will be displayed with the first digit blinking. The unit is prompting you to enter stored target weight #1

-          Press **ZERO** key to increment the blinking digit by one.
-          Press **TARE** key to move the blinking digit one place to the right.
-          Press **PRINT** key to accept displayed value and advance to **[P2]**.

An example of stored target entry: You want a target weight of 10.50 lbs. X could be any number and is also the blinking digit.

[X00.000] the left most digit is blinking with a number in it. Press the ZERO key to advance the display to read 0. Press the TARE key to increment one place to the right.
The display now reads **[0X0.000]**. Press the ZERO key until a 1 is displayed, then press TARE to move the blinking digit to the next place to the right.

The display now reads **[01X.000]**. Press the ZERO key again until the display reads 0 and then Tare to increment to the right one more space.

The display reads **[010.X00]**. Press the Zero key until 5 is on the display, then TARE. The display will read **[010.5X0]** which is 10.5 lbs.

Press PRINT to advance to **[P2]** and repeat the process.

Press the Print key to advance through step [F15] if desired.

To recall stored target weights from memory, press the **TARE/TARGET** key with the scale at gross zero. **[P1]** is displayed for a few seconds then the value stored in **[P1]** is displayed. If you want a different stored value, then press the **TARE/TARGET** key again. **[P2]** is displayed for a few seconds then the value stored in **[P2]** is displayed. Each time the **TARE/TARGET** key is pressed the scale will display the next available stored target weight. When the desired target weight is displayed, press the **PRINT** key to accept the displayed target value.

5.6   PERCENT (%) OF TARGET WEIGHT DISPLAY MODE OPERATION

In the Over/Under Mode, step [1.5 1], target weight may be displayed as a percentage of weight. The Percentage of target weight display is limited to a value of from - 999.9% to + 999.9%. If no target is entered then weight will display in units calibrated (lb, kg, oz, g, lb-oz).

An Example of PERCENT (%) MODE operation is:

A 2 lb target weight is programmed and 1 lb of weight is on the platform.

The display will read **50.0** indicating the weight is at 50% of the target weight. Add a half pound and the display will show **75.0** indicating the weight on the platter is at 75% of target weight.

In many cases weighing in the percent (%) mode is not an approved application. Check with your local Weights and Measures Agency or authorized Mettler Toledo representative before enabling this feature.

6. INPUT AND OUTPUT CONNECTORS AND INTERFACING

6.1 PRINTER INTERFACE SPECIFICATIONS

The 3026 and 3036 Checkweighers are capable of transmitting and receiving RS-232 ASCII data. When a print command is received from the PRINT key, the RS232C input, a remote switch, or due to the auto print feature, a message will be output according to the printer output setup. Scale motion will disable the print until motion has ceased. Printer output is disabled when the unit is under gross zero, in the expanded weight display mode, or if zero has not been captured after powerup.

The data is output in a 10 bit ASCII format. 1 start bit, 7 data bits, 1 parity bit (selectable to even, odd, or always a 0 by SETUP step F15.3), and 1 stop bit.

The baud rate is selectable between 300, 1200, 2400, 4800, or 9600 by SETUP step F15.2

A checksum character is selectable by SETUP step F15.4. This parameter also determines if the SAX (Start of Text) character is transmitted in the demand mode.

Auto Print can be enabled in either the demand or continuous modes (selected by SETUP step [F15.7 1]. The displayed weight must return to within ±0.5 d of zero (gross or net), before another autoprint will be performed. The first "no motion" weight greater than or equal to 5 d will initiate a print as though the PRINT key had been pressed.

6.2 PRINTER INTERCONNECT

The 3026 and 3036 require a printer interface cable kit of parts, Part numbers *132067 00A (6 feet) or *137696 00A (20 feet), to connect to the Mettler Toledo Models 8806, 8843, 8844, 8855 (RS232C version only), 8856, 8860, and 8865 printers. Refer to technical manuals TM008806 I02, TM008843 I01, TM008844 I00, TM008855 I02, TM008856 I01, TM008860 I01, TM008865 I00 and the 8845 Interface Guide for information about printer setup and programming. Refer to Table 5 for connector pinout.

Models 3026/3036			8806 8860	8843,8844,8845,8856	8855 ***	8865
Function	J-4	TB-2**	J-7	SERIAL PORT	J-1	J-2
Ground	1	1	7	7	7	7
Transmit	2	2	3	3	3	3
Receive	NC	3	NC	NC	NC	NC

Table 11 - Printer Interconnect

*   May have revision level.
**   The TB-2 connector is provided for use with bidirectional serial communication.
***   The 8855 strip printer requires the installation of a special interface cable. This cable has an interface PCB attached to the printer end. The existing Interface PCB must be replaced with the new RS232C Interface PCB. Reference section 9.0, Accessories, for the KIT part numbers.

8855 RS232C Interface Kit
Part Number A129618-00A
Factory Number 0900-0244

NOTE: THE 3026 AND 3036 MUST BE PROGRAMMED FOR 300 BAUD TO OPERATE WITH THE 8855.
NOTE: THE 8860 PRINTER REQUIRES A DIRECT CONNECTION WHEN USED WITH THE 3026 AND 3036. DO NOT USE THE ADAPTER PLUG, PART NUMBER 12801900A, THAT IS SUPPLIED WITH THE 8860 PRINTER.

6.2.1 Printer Cable Installation

CAUTION
OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES

⚠ WARNING !
ONLY PERMIT QUALIFIED PERSONNEL TO SERVICE THIS EQUIPMENT. EXERCISE CARE WHEN MAKING CHECKS, TESTS AND ADJUSTMENTS THAT MUST BE MADE WITH POWER ON.

P/N 13203600A

6.2.1   Remove the twelve (12) screws from the rear cover of the indicator housing.

6.2.2   Remove the four (4) screws holding tower cover plate and remove the cover plate.

6.2.3   Remove the grip bushing retaining nut located in the middle of the bottom of the display enclosure, this grip bushing will contain a nylon plug to seal the bushing. Remove and discard the existing cable grip bushing assembly.

6.2.4   Remove the grip bushing nut, (see note below), from the end of the printer cable assembly and insert the three position connector end of the printer cable, from the bottom, into the hole which contained the grip bushing in step 6.2.2., replacing the grip bushing assembly just discarded.

NOTE: **THIS NUT MUST FIT OVER THE FERRITE CORE USED IN THIS ASSEMBLY. THE TOLERANCE IS VERY TIGHT WHEN REMOVING THE NUT. BE CAREFUL NOT TO STRIP OFF OR BREAK THE INSULATION ON THE WIRES IN THE PRINTER CABLE WHEN REMOVING THIS NUT. SAVE THE NUT FOR USE IN STEP 6.2.4.**

6.2.5   Insert the three position connector end of the printer cable through the grip bushing nut and screw the nut onto the grip bushing. Tighten the nut securely.

6.2.6   Place the printer cable ground ring terminal on the ground stud containing the orange wire and secure into place with the existing #8 X 32 nut. Tighten the nut securely.

6.2.7   Plug the three position connector end of the printer cable into J-4 on the Power Supply PCB.

6.2.8   Re-attach the indicator cover with the twelve (12) screws and tighten screws to 9.6 in-lb.

6.2.9   Install front tower cover plate with the four (4) screws insuring the cable is threaded inside the column.

6.2.10   Attach other end of printer cable to the printer and re-apply power.

6.3 DEMAND FORMAT DATA OUTPUT

When a print command is received from the PRINT key, the ASCII remote input, remote switch, or due to the auto print feature, the unit will output a message according to display and print setup. Scale motion will disable the print until motion has ceased. Printing is disabled when the scale is below gross zero or if expanded display is enabled.

The status of the LED's will be printed after the weight field if over/under mode and print weight classifications are selected (SETUP steps [F1.5 1] and [F18 1]).

Explanations of the symbols and abbreviations used in the data format charts are listed as follows.

DEMAND FORMAT NOTES:

1:        <SAX> ASCII Start of Text Character, Hex value 02, Selected by SETUP step [F15.4 1], Checksum-SAX enable.

2:        <SO>/<SI> ASCII Shift Out and Shift In characters, Hex value 0E / 0F, Selected by SETUP step [F15.6 1], for expanded print).

3:        <Display> This field contains the displayed weight or percentage of target as programmed in SETUP. The field is right justified and is padded with spaces to 7 places, or 8 places if a decimal point is used. MSD (Most Significant Digit) is either a space for positive weights, or a minus for negative weights.

4:        <SP> ASCII space, Hex value 20.

5:        <Units> Display units (LB, kg, OZ, g, or %) as programmed in SETUP step F2, F5 and selected by UNITS key

6:        <Status> Represents the status of the LED display UNDER, LOW, ACCEPT, HIGH, and OVER. Enabled by SETUP step [F15.7 1], this field is printed only if a target weight has been stored.

7:        <CR> ASCII carriage return, Hex value 0D

8:        <CKS> Checksum character, 2's complement of the 7 low order bits of the binary sum of all characters on a line, preceding the checksum. Enabled by SETUP step [F15.4 1].

9:        <LF> ASCII Line Feed, Hex value 0A.

A   <Pounds> This field is used with lb-oz units weighing. The pound field is right justified and is padded with spaces to 2 or 3 places, depending on programmed scale capacity. The MSD (Most Significant Digit) is either a space for positive weights, or a minus for negative weights.

B: <Ounces> This field is used with lb-oz units weighing. The ounce field is right justified and is padded with spaces to 2 or 4 places plus a decimal point, depending on programmed scale capacity.

6.3.1 Single Line, Displayed Weight Only (SETUP step [F15.5 0]

6.3.1.1 Single Line Gross Weight (LB, kg, OZ, or g)

DATA	STX	SO	MSD	-	-	-	-	-	LSD	SP	UNITS	SP	STATUS	SI	CR	CKS	LF
NOTES	1	2	3							4	5	4	6	2	7	8	9

6.3.1.2 Single Line Net Weight (LB, kg, OZ, or g)

DATA	STX	SO	MSD	-	-	-	-	-	LSD	SP	UNITS	SP	NET	SP	STATUS	SI	CR	CKS	LF
NOTES	1	2	3							4	5	4		4	6	2	7	8	9

6.3.1.3 Single Line Gross Weight (LB-OZ)

DATA	STX	SO	MSD	LSD	SP	L	B	SP	MSD	-	-	LSD	SP	O	Z	SP	STATUS	SI	CR	CKS	LF
NOTES	1	2	A		4			4	B				4			4	6	2	7	8	9

6.3.1.4 Single Line Net Weight (LB-OZ)

DATA	STX	SO	MSD	LSD	SP	L	B	SP	MSD	-	-	LSD	SP	O	Z	SP	NET	SP	STATUS	SI	CR	CKS	LF
NOTES	1	2	A		4			4	B				4			4		4	6	2	7	8	9

Table 12 - Single Line, Displayed Weight Format

6.3.2 Single Line, Gross, Tare, Net (SETUP step [F15.5 1]

Gross, tare, and net data is output in sequence when a print is initiated and the display shows net weight. This format is available only in the indicator mode (SETUP step [F1 2]).

If a tare weight has not been entered then the data output will use the same format as single line gross weight (refer to Section 6.3.1.1.).

6.3.2.1 Single Line Gross, Tare, Net (LB, kg, OZ, or g)

DATA	STX	MSD	-	-	-	-	-	LSD	SP	MSD	-	-	-	-	LSD	SP	UNITS	SP	T	R	SP
NOTES	1			3				4				3			4	5	4			4

Single Line Gross, Tare, Net (LB, kg, OZ, or g) continued

DATA	SO	MSD	-	-	-	-	LSD	SP	UNITS	SP	N	E	T	SI	CR	CKS	LF
NOTES	2			3			4	5	4					2	7	8	9

6.3.2.2 Single Line Gross, Tare, Net (LB-OZ)

DATA	STX	MSD	LSD	SP	L	B	SP	MSD	-	-	LSD	SP	O	Z	SP	SP	MSD	LSD	SP	L	B	SP	MSD	-	-	LSD	SP	O	Z
NOTES	1	A		4			4		B			4				4	A		4			4		B			4		

Single Line Gross, Tare, Net (LB-OZ) continued

DATA	SP	T	R	SP	SO	MSD	LSD	SP	L	B	SP	MSD	-	-	LSD	SP	O	Z	SP	N	E	T	SI	CR	CKS	LF
NOTES	4			4	2	A		4			4		B			4			4				2	7	8	9

Table 13 - Single Line Gross, Tare, Net Format

6.3.3 MultiLine Gross, Tare, Net (SETUP step [F15.5 2])

Gross, tare, and net data is output in sequence when a print is initiated and the display shows net weight. If a tare weight has not been entered then the data output will use the same format as single line gross weight (refer to Section 6.3.1.1).

6.3.3.1 MultiLine Gross, Tare, Net (LB, kg, OZ, or g)

DATA	STX	MSD	-	-	-	-	-	LSD	SP	UNITS	CR	CKS	LF
NOTES	1			3					4	5	7	8	9

DATA	MSD	-	-	-	-	-	LSD	SP	UNITS	SP	T	R	CR	CKS	LF
NOTES				3				4	5	4			7	8	9

DATA	SO	MSD	-	-	-	-	-	LSD	SP	UNITS	SP	N	E	T	SI	CR	CKS	LF
NOTES	2				3				4	5	4				2	7	8	9

6.3.3.2 MultiLine Gross, Tare, Net (LB-OZ)

DATA	STX	MSD	LSD	SP	L	B	SP	MSD	-	-	LSD	SP	O	Z	CR	CKS	LF
NOTES	1	A		4			4		B			4			7	8	9

DATA	MSD	LSD	SP	L	B	SP	MSD	-	-	LSD	SP	O	Z	SP	T	R	CR	CKS	LF
NOTES	A		4			4		B			4			4			7	8	9

DATA	SO	MSD	LSD	SP	L	B	SP	MSD	-	-	LSD	SP	O	Z	SP	N	E	T	SI	CR	CKS	LF
NOTES	2	A		4			4		B			4			4				2	7	8	9

Table 14 - MultiLine Gross, Tare, Net Format

6.4 CONTINUOUS DATA FORMAT

The continuous data format is available only when LB or kg units are being displayed. The baud rate selections are limited to 2400, 4800, and 9600. The data is formatted as a 17 or 18 byte packet, transmitted in a 10-bit ASCII format (1 start bit, 7 data bits, 1 parity bit, and 1 stop bit), after every A/D update. Format is as follows.

DATA	S T X	S W A	S W B	S W C	M S D	-	-	-	-	L S D	M S D	-	-	-	-	L S D	C R	C K S
NOTES	1	2			3						4						5	6

Table 15 - Continuous Data Format

CONTINUOUS DATA FORMAT NOTES:

1: <SAX>: ASCII Start of Text Character, Hex value 02.
2: <SWA>, <SWB>, <SWC> Status Word A, B, C. Refer to Status Word A, B, C definitions in Tables 6, 7, and 8.
3: Displayed weight. Six digits, no decimal point or sign.
4: Tare weight. Six digits, no decimal point or sign.
5: <CR> ASCII Carriage Return, Hex value 0D
6: <CKS> Checksum Character, 2's complement of the 7 low order bits of the binary sum of all characters on a line, preceding the checksum. Enabled by SETUP step [F15.4 1]

Bit Functions	Selection	Bit Numbers							
		7	6	5	4	3	2	1	0
DECIMAL POINT OR DUMMY ZERO	XOO XO X .X .XX .XXX .XXXX .XXXXX	P A R I T Y B I T	A L W A Y S A 1	A L W A Y S A 1			0 0 0 0 1 1 1	0 0 1 1 0 0 1	0 1 0 1 0 1 1
INCREMENT SIZE	X1 X2 X5				0 1 1	1 0 1			

Table 16 - Status Word A Bit Definition

FUNCTION	BIT
GROSS/NET NET = 1	0
NEGATIVE = 1	1
OVERCAPACITY = 1	2
MOTION = 1	3
LB/kg kg = 1	4
ALWAYS A 1	5
POWER UP = 1	6
PARITY BIT	7

Table 17 - Status Word B Bit Definition

FUNCTION	BIT
REFER TO TABLE 19	0
REFER TO TABLE 19	1
REFER TO TABLE 19	2
PRINT REQUEST = 1	3
EXPANDED MODE = 1	4
ALWAYS A 1	5
kg MANUAL TARE = 1	6
PARITY BIT	7

Table 18 - Status Word C Bit Definition

WEIGH MODE	BIT 0	BIT 1	BIT 2
LB	0	0	0
KG	1	0	0
LB - OZ	0	1	0
OZ	1	1	0
G	0	0	1

Table 19 - Status Word C Weigh Mode Bits

6.5   STATUS TTL INPUT AND OUTPUT

A low true TTL input is provided to permit external operation of the target function. Three low true TTL outputs are provided to drive external lamps or LED's for indicating Over, Accept, and Under status. The outputs are capable of sinking up to 20 mA of current. If driving external LEDs with the built in +5 VDC supply, use 330 ohm resistors in series with the external LEDs to limit current to less than 20 mA. Refer to Figure 12 for example.

The TTL input and output wiring must be limited to 10 feet or less in length for proper operation.

WARNING!

THE TTL STATUS OUTPUTS ARE DESIGNED FOR USE WITH EXTERIOR LED DISPLAYS ONLY. USE OF THE TTL OUTPUTS FOR ANY OTHER PURPOSE CAN RESULT IN A HAZARDOUS CONDITION.

The TTL status outputs are provided with clamping diodes to protect the output circuitry when driving inductive loads with the supplied +5 VDC. These clamping diodes are enabled by placing jumper W-2 on the Power Supply in.

The TTL status outputs are open collector in design, which means they can be used with either the +5 VDC supplied on pin 1 of connector TB-3 or with an external DC power supply of up to +28 VDC.If an external DC supply is used with the Status LED outputs, any inductive loads MUST be externally suppressed by means of reverse biased diodes connected across the load and jumper W-2 must be removed.

CAUTION!

IF AN EXTERNAL DC SUPPLY IS UTILIZED WITH THE TTL STATUS OUTPUTS THE CLAMPING JUMPER W-2 MUST BE REMOVED FROM THE POWER SUPPLY PCB. IF JUMPER W-2 IS NOT REMOVED, DAMAGE TO PCB'S COULD RESULT.

FUNCTION	3026 TB-3
+5 VDC	1
REMOTE INPUT SWITCH	2
UNDER (OUTPUT)	3
ACCEPT (OUTPUT)	4
OVER (OUTPUT)	5
GROUND	6

Table 20 - TTL Status Outputs

If driving external LEDs with the built in +5 VDC supply, use 330 ohm resistors in series with the external LEDs to limit current to less than 20 mA. Refer to Figure 12 below for an example of how to use the status TTL input and outputs with a remote TARGET key and an external status LED display.
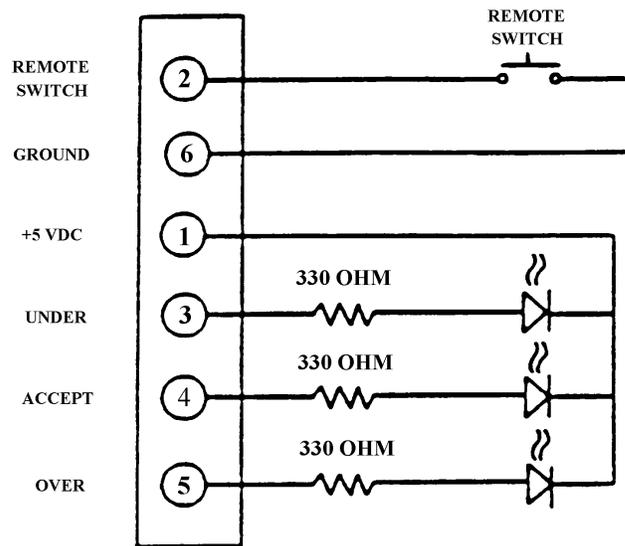

Figure 8 - Status TTL Input and Output Example
TB-3

6.6   LOAD CELL CONNECTION

CAUTION!
NEVER CONNECT OR DISCONNECT THE CABLE ASSEMBLY BETWEEN THE POWER SUPPLY PCB AND THE DIGITAL LOAD CELL WITHOUT WAITING AT LEAST 30 SECONDS AFTER REMOVING AC POWER FROM THE 3026 OR 3036.

J3	FUNCTION	COLOR
1	Transmit Data	Black
2	+20 VDC	Blue
3	No Connection	
4	Key	
5	Receive Data	White
6	No Connection	
7	CTS	Yellow
8	Ground	Green
9	Key	
10	No Connection	

Table 21 - J3 Load Cell Connector

7.   TROUBLESHOOTING AND ADJUSTMENTS

In the unlikely event the 3026 or 3036 malfunctions, first cycle the AC power off then back on. If the problem persists verify that scale has been properly programmed in setup. Next verify that all DC voltages listed in section 7.1 are present and correct. If the problem persists, use substitution of known good parts to correct the malfunction.

CAUTION!

REMOVE POWER FROM THE SCALE AND WAIT A MINIMUM OF 30 SECONDS BEFORE CONNECTING OR DISCONNECTING ANY HARNESS FROM PCB OR LOAD CELL AS DAMAGE MAY RESULT.
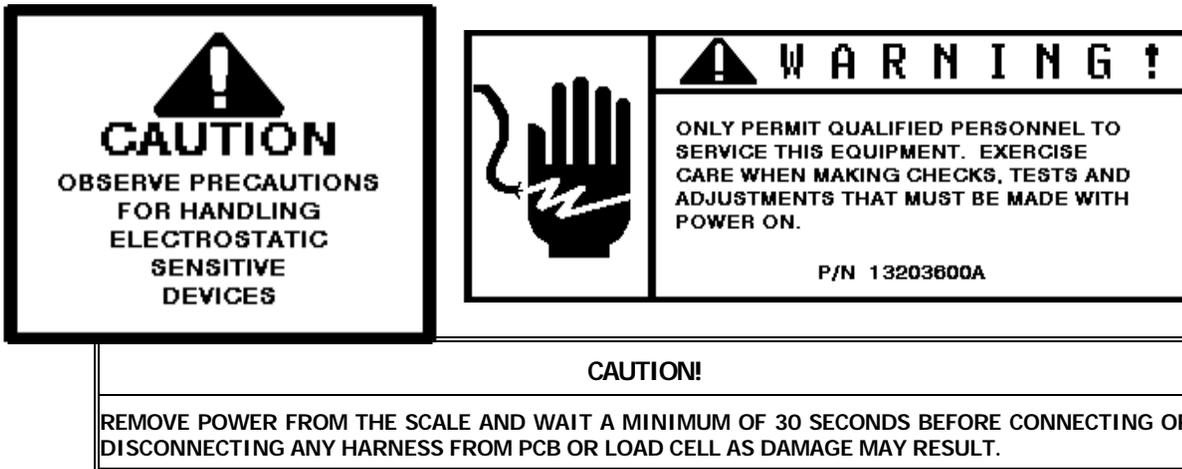
7.1   POWER SUPPLY CHECKS

DC voltage checks, MUST be made before any PCB's are replaced. Refer to Table 15 for test points and voltage readings. All power supply voltages listed in Table 15 originate on the Power Supply PCB.

VOLTAGE	FUNCTION	ACCEPTABLE VOLTAGE RANGE	MAXIMUM RIPPLE	TEST POINT	
				+LEAD	-LEAD
+20 VDC	DLC SUPPLY	+17.2 TO +23.6	0.1 VAC	TB1-1	TB1-4
+5 VDC	DC LOGIC	+4.9 TO +5.2	0.05 VAC	TB3-1	TB3-6
-30 VDC	DISPLAY	-25.4 TO -30.6	1 VAC	J1-2	J1-7
+10 VDC	RAW +5 VDC	+7.6 TO +10.4	0.125 VAC	J1-5	J1-7
3.2 VAC	FILAMENT	2.3 TO 3.4		J1-1	J1-3

Table 22 - Power Supply Voltages

7.2 ERROR CODES

If an error code occurs during operation, cycle the AC power off, wait 30 seconds, and then turn the power back on. If the error persists then refer to Table 16 for descriptions of error codes and suggested methods of correcting the error condition.

ERROR CODE	DESCRIPTION	SUGGESTED CORRECTIVE ACTION
E1	PROGRAM MEMORY FATAL	1. CHECK DC SUPPLY VOLTAGES 2. REPLACE DISPLAY PCB
E2	INTERNAL RAM MEMORY FATAL ERROR	1. CHECK DC SUPPLY VOLTAGES 2. REPLACE DISPLAY PCB
E3	NOVRAM MEMORY ERROR	1. CHECK DC SUPPLY VOLTAGES 2. REPROGRAM, RECALIBRATE 3. REPLACE DISPLAY PCB
E8	COMMUNICATION LOSS WITH DLC	1. CHECK DC SUPPLY VOLTAGES 2. CHECK INTERCONNECT HARNESSES FOR LOAD CELL AND PCB'S 3. REPLACE LOAD CELL 4. REPLACE DISPLAY PCB
E9	DLC OUT OF RANGE, UNDER CAPACITY	1. CHECK FOR MECHANICAL BIND 2. CHECK DC SUPPLY VOLTAGES 3. REPLACE LOAD CELL 4. REPLACE DISPLAY PCB
E10	DLC MEMORY VERIFY FATAL ERROR	1. CHECK DC SUPPLY VOLTAGES 2. REPLACE LOAD CELL
E11	DLC ROM ERROR	1. CHECK DC SUPPLY VOLTAGES 2. REPLACE LOAD CELL
E13	DLC EPROM ERROR	1. CHECK DC SUPPLY VOLTAGES 2. RECALIBRATE SCALE 3. REPLACE LOAD CELL
E16	MATH ERROR	1. PRESS CLEAR KEY TO CLEAR ERROR, CHECK PROGRAM AND RECALIBRATE
E32	INSUFFICIENT TEST USED FOR CALIBRATION	1. RECALIBRATE WITH AT LEAST 50% OF PROGRAMMED SCALE CAPACITY
E34	TEST WEIGHT OVER CAP	1. CHECK CAPACITY PROGRAMMING, USE TEST WEIGHT LESS THAN CAPACITY
E35	CALIBRATION ERROR	1. RECALIBRATE, SHIFT ADJUST CAN'T COMPENSATE MORE THAN 100%

Table 23 - Error Codes

7.3 ADJUSTING THE CORNER OVERLOAD STOPS

7.3.1 Adjusting the 3026 Corner Overload Stops

The 3026 load cell 15 lb capacity 17 lb is placed in subplatter is capacity such as (18.75 lb be adjusted.

Refer to Figure 8. typical of all four bolt threaded into bottom out on this capacity.

overload stops are factory adjusted for a scale. The overload stops engage when any one corner. If the load cell or scale replaced on the 3026, or if a higher 20 kg or the lb-oz units mode is desired capacity), then the overload stops MUST

Item 1 is a corner overload stop which is corners. The overload stop consists of a a standoff. The sub-platter should bolt at approximately 110% of rated

Figure 9 - Corner Overload Stop

7.3.1.1 Place the scale into the expanded weight display mode, SETUP step [F10 1].

7.3.1.2 Place test weights approximately equal to 110% of programmed scale capacity at one corner of the platter.

7.3.1.3 Adjust the overload stop for that corner downward until the overload stop is no longer making contact with the bottom of the subplatter. Adjust the overload stops back upward until it just makes contact with the bottom of the subplatter.

7.3.1.4 Repeat steps 7.3.1.2. and 7.3.1.3. above for all four corners.

7.3.2 Adjusting the 3036 Corner Overload Stops

The 3036 load cell overload stops are factory adjusted for the capacity of the scale. The load cell is protected from overload by six overload stops. The overload stops are set by adjusting the overload stop screws so that the stops engage at a load above the scale capacity but below the load cell capacity.
Refer to Figure 10. Item 1 is a corner overload stop which is typical of all four corners. The overload stop consists of a bolt threaded into a standoff. The bottom of the sub-platter should touch on this bolt at approximately 110% of rated capacity.

Figure 10 - Corner Overload Stop

7.3.2.1   Place the scale into the expanded weight display mode, SETUP step [F10 1]. Invert the platter and place it on the sub-platter.

7.3.2.2   Place test weights approximately equal to 110% of programmed scale capacity at one corner of the platter.

7.3.2.3   Adjust the overload stop for that corner until it just touches the bottom of the subplatter.

7.3.2.4   Repeat steps 7.3.1.2 and 7.3.1.3 above for all four corners.

7.4   ADJUSTING THE LOAD CELL OVERLOAD STOP

Adjust the load cell overload stop to bottom out at 110% of calibrated scale capacity. Refer to Figure 9.

Figure 10 - Load Cell Overload Stop
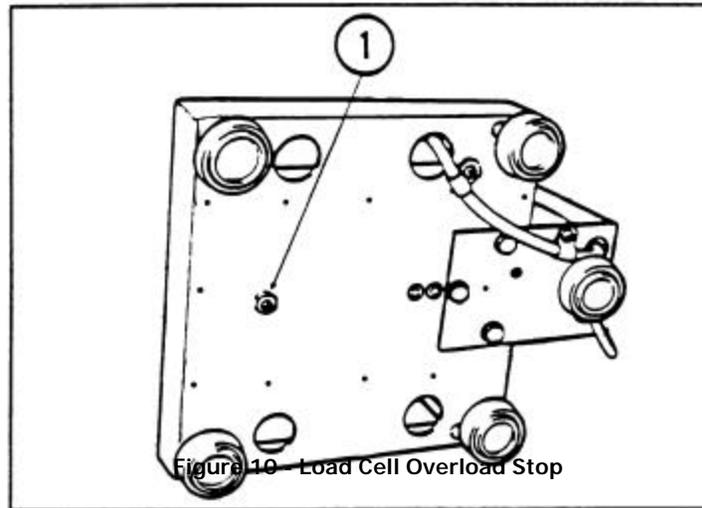
7.4.1 Place the unit on four supports to elevate the scale and expose the load cell overload stop.

7.4.2 Place approximately 110% of calibrated scale capacity half way between the center of the platform and the front edge of the platform, centered left to right.

7.4.3 To make sure that the overload stop is not bottomed out at this point, loosen the jam nut and adjust the load cell stop downward until the weight display is not changing and responds to additional weight on the platform.

7.4.4 Tighten the jam nut enough to hold the load cell overload stop in place and still allow adjustment of the overload stop.

7.4.5 CAREFULLY, A LITTLE AT A TIME, adjust the overload stop upward until the weight display just begins to decrease. Tighten the jam nut to secure the adjustment.

7.5 TESTING THE PRINTER OUTPUT

The Models 3026 and 3036 transmit RS232C out the printer port . To verify the unit is transmitting data, remove the interconnect cable from the printer. Put the red lead of your voltmeter directly into pin 3 of the 25 pin DB serial printer connector and your black lead in pin 7 of the printer connector. Set your meter to the 20 DC volt range.

7.5.1 Testing the output in the Demand mode

When in the demand mode, setup step **[F15.1 1]**, your meter should display between -5 and -15 volts DC. Press the print pushbutton and the meter display should fluctuate between +5 and -5 volts DC and then return to your original reading. This indicates the unit is transmitting data out the printer port. The amount of time the meter display will fluctuate is proportional to the amount of data being transmitted and the baud rate the data is being transmitted at. EX: For longer fluctuation, set the baud rate to 300 baud and transmit gross, tare, and net multi-line.
If there is no fluctuation on the meter display, the problem could be the harness, print button on the keypad, or the power supply PCB. Ohm out the harness per the interconnect diagram in section 10.1 of this manual and verify voltages as described in section 8.1.2 of this manual.

7.5.2 Testing the output in Continuous mode

Performing the output test in the continuous mode **[F15.1   0]**, is the same as in the demand mode described above except there will be constant fluctuation on the meter display. This test will tell you if the indicator is transmitting data, but will not tell you if your voltage levels are correct. To insure you have completely checked the printer output, it is a good idea to write down the serial port programming switch settings, **[F15]**, and change the indicator to the demand mode.

7.6 TESTING WITH THE SIMULATOR

To test the 3026 and 3036 with the digitol Load Cell simulator, follow the steps as described.

7.6.1 Remove power from the scale by unplugging the unit from the power source.

7.6.2 Remove the platter and sub-platter assembly.

7.6.3 Remove the twelve (12) Phillips Head screws from the load cell cover and carefully lift the load cell cover up over the two right overload studs. It may be necessary to remove the two (2) Phillips Head Screws holding the Load Cell Cable Clamps in place.

NOTE: **THE LOAD CELL GASKET MUST BE REPLACED AFTER THE LOAD CELL COVER HAS BEEN REMOVED.**

7.6.4   Remove the Load Cell Cable connector from the Load Cell.

7.6.5   Insert the Load cell harness connector into the DLC connector located in the back of the Digital Load Cell Simulator.

7.6.6   Set the front Weight Selector Switch of the simulator to read 1 and apply power to the unit. The Display should have a reading (possibly zero).

NOTE: **IF THE DISPLAY READS E-8, THIS DOES NOT AUTOMATICALLY MEAN THERE IS A DEFECTIVE PCB. FIRST TRY TO CALIBRATE THE SCALE USING THE SIMULATOR. LEAVING THE SIMULATOR SET AT 1, ENTER SETUP AND CALIBRATE USING 1 AS THE ZERO SELECTION AND 6 AS THE SPAN SELECTION.**

7.6.7   If the unit is operational with the load cell simulator, the Load cell is suspect and should be replaced. If the unit still will not respond with the simulator then there may be a defective PCB or simulator.

WARNING: WAIT 30 SECONDS AFTER REMOVING POWER BEFORE UNPLUGGING THE LOAD CELL HARNESS FROM THE SIMULATOR.

7.6.8   After replacing the defective part, re-assemble the unit and recalibrate.

8. SPARE PARTS AND ACCESSORIES

Item	Description of Part	Part Number
Spare Parts	Power Supply PCB (See Note 1) Main Logic PCB With out EPROM Display Logic PCB for 3026 (w/Eprom) Display Logic PCB for 3036 (w/ Eprom) Keyboard Assembly for 3026 Keyboard Assembly for 3036 Fuse, 0.25 A S.B. (See Note 2) Load Cell 15 kg for 3026 Load Cell 30 kg for 3036 Load Cell 60 kg for 3036 Load Cell 140 kg for 3036	*133579 00A *129079 00A *136040 00A *142791 00A *134022 00A *B124252 00A 095920 00A *129055 00A *140546 00A *140536 00A *140538 00A
Accessories	Printer Output KOP (6 feet) Printer Output KOP (20 feet) Sealing Screw KOP Indicator Shield Kit RS232 to 20 mA converter	0900-0236 0900-0237 0900-0170 141813 00A 900936 00A

Table 24 - Accessories and Spare Parts

(*) Part number listed may be preceded by a letter prefix.

Note 1: **Use Power Supply PCB part number *133577 00A for General Export and 230 to 240 VAC applications.**

Note 2: **Use fuse part number 095919 00A, 1/8A 250V S.B. for General Export and 230 to 240 VAC applications.**

9. RAM AND CAPACITY CHART

| FACTORY	CAPACITY	DESCRIPTION NUMBER
3026-0001 3026-0011	3 kg x 0.001kg 3000 x 1g 6 kg x 0.002 kg 6000 x 2 g 6 lb x 0.002 lb 15 lb x 0.005 lb 150 oz x 0.05 oz 300 oz x 0.1 oz	Model 3026
3026-0101	3 kg x 0.001kg 3000 x 1g 6 kg x 0.002 kg 6000 x 2 g 6 lb x 0.002 lb 15 lb x 0.005 lb 150 oz x 0.05 oz 300 oz x 0.1 oz 18.75 lb x 0.1 oz	Model 3026 with extended stainless steel column

Table 25 - MODEL 3026 Ram and Capacity

FACTORY	CAPACITY	DESCRIPTION NUMBER
3036-0025	25 x 0.0005 lb 10 x 0.002 kg 25 x .1 oz 10,000 x 2 g 500 x 0.2 oz 25 lb x 0.1 oz	3036
3036-0050	50 x 0.01 lb 25 x 0.005 kg 50 x .1 oz or .2 oz (Selectable) 25,000 x 5 g 1000 x 0.2 oz 50 lb x 0.1 oz	3036
3036-0100	100 x 0.02 lb 50 x 0.01 kg 100 x .2 oz or .5 oz (Selectable) 50,000 x 10 g 1000 oz x 0.2 oz 100 lb x 0.2 oz 100 lb x 0.5 oz	3036

Table 26 - MODEL 3036 Ram and Capacity

10. PARTS CATALOG

DISPLAY - REAR VIEW
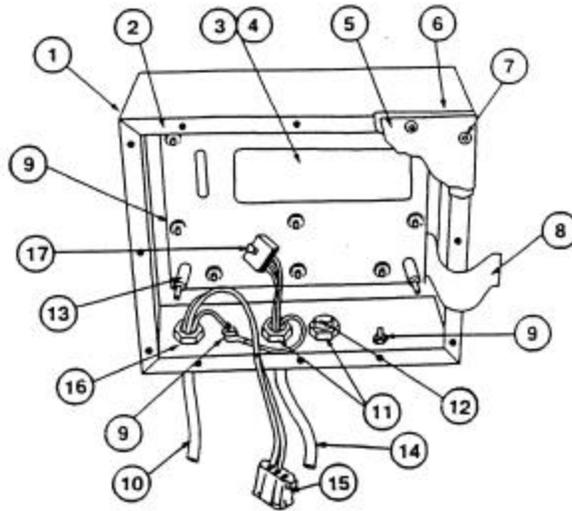
| ITEM	PART NUMBER	DESCRIPTION	NOTES	QTY
1	133572 00D	Indicator Enclosure		1
2	129023 00A	Clamp Plate,		1
3	136046 00A	Lens, Display		1
4	140557 00A	Gasket, Lens/Keyboard	1	1
5	129021 00A	Cover, Indicator Enclosure		1
6	129022 00A	Gasket, Indicator Cover		1
7	R03777 00A	Screw, #6-21 x 1/4 in. Seal		12
8	B124252 00A	Switch Membrane Assy		1
9	R03298 00A	Nut, #8-32 w/Lockwasher		12
10	139388 00A	Line Cord Assy (U.S.)	2	1
	140533 00A	Line Cord Assy (Europe)		1
	140529 00A	Line Cord Assy (U.K.)		1
	140531 00A	Line Cord Assy (Australia)		1
11	129018 00A	Grip Bushing, .265 in. I.D.		2
12	129038 00A	Plug		1
13	129031 00A	Spacer, #8 x .50 in. Long		4
14	133583 00A	Load Cell Cable Assy	3	1
15	09751800A	Plug, 3 pin white		1
16	14054000A	Grip Bushing Assy		1
17	12906900A	Plug, Sub Assy		1

NOTE 1: The lens/keyboard gasket MUST be replaced if the Display lens is replaced.

NOTE 2: The assembly does not include the 3 pin female plug (P5): order P/N 097518 00A if this plug is required.

NOTE 3: This assembly does not include plugs P1 (terminating at J1 of the Load Cell) and P2 (terminating at J2 of the Power Supply PCB). If these plugs are required order P/N 119485 00A for P1 and 129069 00A for P2.
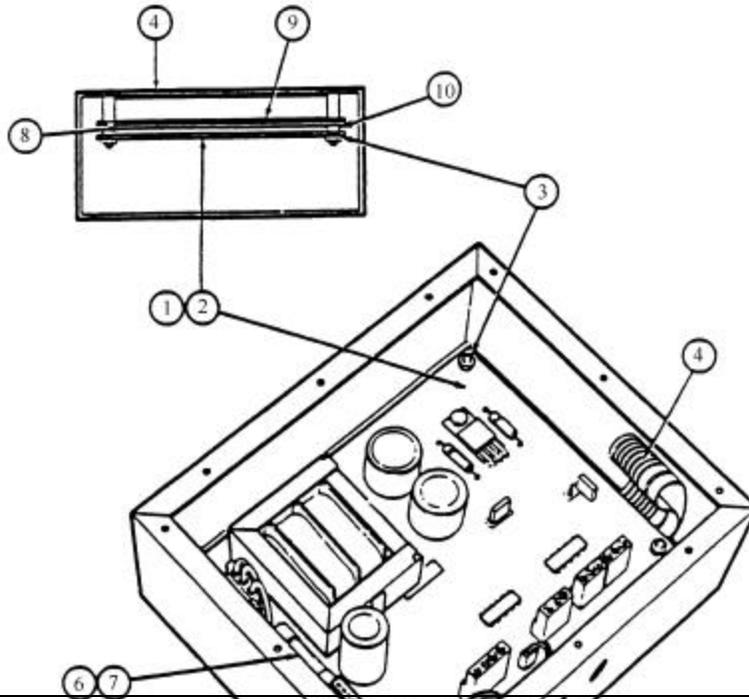
ITEM	PART NUMBER	DESCRIPTION	NOTES	QTY.
1	*133579 00A	PCB Ass'y., Power Supply, U.S.		1
2	*133577 00A	PCB Ass'y., Power Supply, Export		1
NS	*122373 00A	Label, Warning - Power		1
NS	*116033 00A	Label, Static Caution		1
3	R03298 00A	Nut, Hex #8-32		4
4	*129054 00A	Keyboard Ass'y.	1	1
5	*128986 00A	Harness, Interconnect		1
6	095920 00A	Fuse, .25A, S.B.	2	1
	095919 00A	Fuse, 1/8A, S.B. Export 220 VAC,240 VAC		1
7	118589 00A	Fuse Cover N.S.		1
8	129047 00A	Insulator Sheet		1
9	*129079 00A	Display/Logic PCB Ass'y.(Without EPROM)		1
	*136040 00A	Display/Logic PCB Ass'y. With Eprom, 3026		1
	*142791 00A	Display/Logic PCB Ass'y. With Eprom, 3036		1
NS	*144246 00A	Programmed EPROM		1
10	108750 00A	Spacer #8 X 3/16 in.	3	4

(*) Part numbers listed may have letter prefix.   NS = Not Shown

NOTE 1:   **INCLUDES GASKET, COLOR OVERLAY AND SWITCH MEMBRANE.**
NOTE 2:   **FOR GENERAL EXPORT, 220 AND 240 VAC UNITS, USE FUSE P/N 095919 00A (1/8 250V S.B.)**
NOTE 3:   **POSITIONED BETWEEN INSULATOR SHEET AND POWER SUPPLY PCB.**
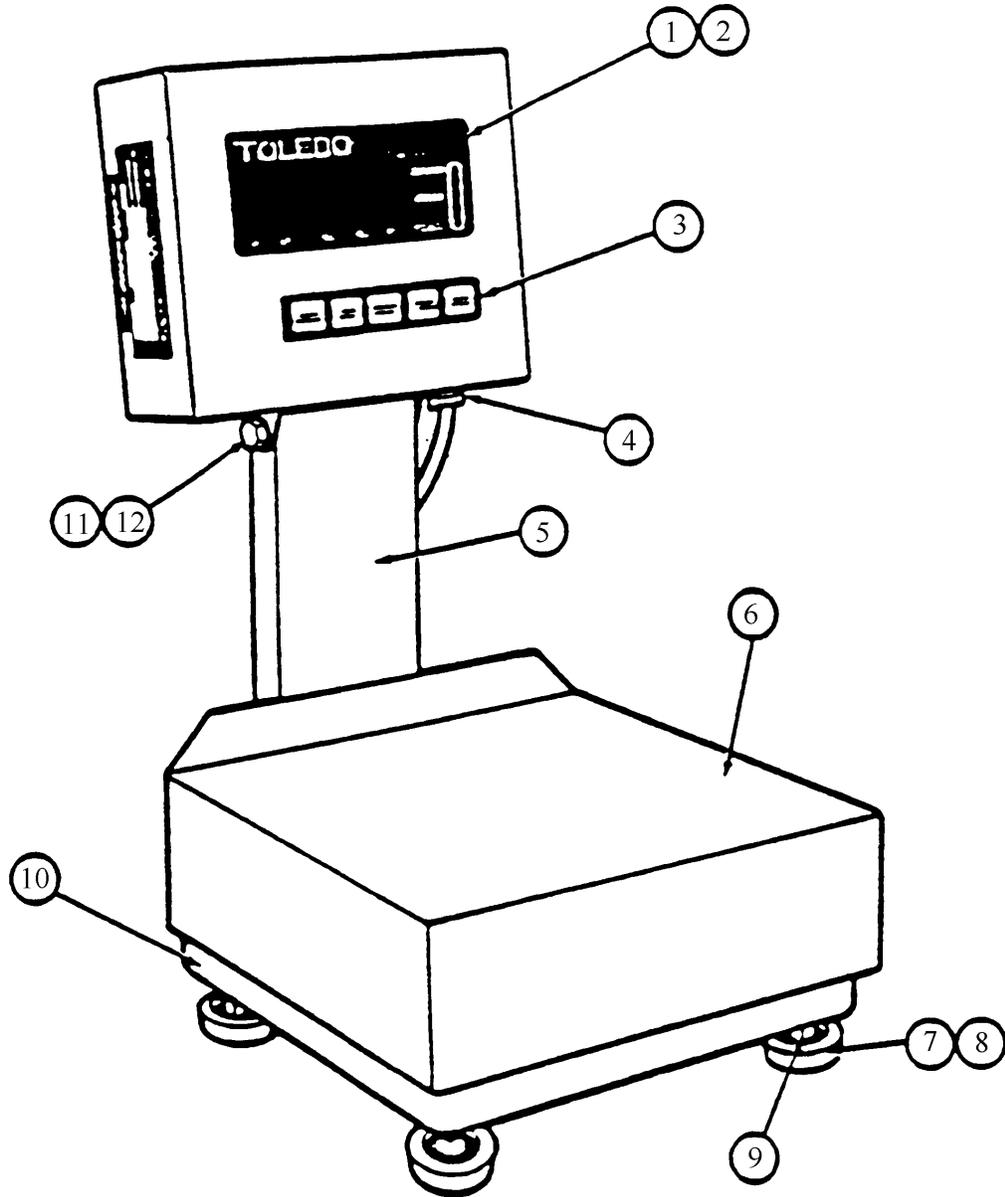
| ITEM	PART NUMBER	DESCRIPTION	NOTES	QTY
1	136046 00A	Lens Display	1	1
2	140557 00A	Gasket, Lens/Keyboard		1
3	A134022 00A	Keyboard Assy		1
4	140540 00A	Grip Bushing	2	1
5	A134010 00A	Extended Tower Weldment, 3026		1
	134011 00A	Extended Tower Cover, 3026		1
	132061 00A	Extended Tower Weldment, 3036		1
	132063 00A	Extended Tower Cover, 3036		1
NS	R03779 00A	Screw. 8/32 X 1/4, For Tower Cover		4
6	129012 00A	Platter, 3026		1
	124009 00A	Platter, 3036		1
7	A129004 00A	Foot		5
8	R03656 00A	Nut, #5/16-Hex jam		5
9	129005 00A	Base, Weldment, 3026		1
	A124008 00A	Base, Weldment (25 lb/15 kg base),3036		1
	A124008 00C	Base, Weldment (50 lb/30 kg base), 3036		1
10	A124008 00E	Base Weldment (100 lb/60 kg base), 3036		1
11	R02072 020	Screw, #1/4-20 x .375 in.		2
12	R03727 00A	Lockwasher, #1/4 TI SS		2
NS	R03779 00A	Screw, 8-32 x 1/4 PHD SS		4
NS	A123633 00A	Label, Security Seal		4
NS	139890 00A	Label, Capacity 25 lb/15 kg		1
NS	140541 00A	Label, Capacity 50 lb/30 kg		1
	140542 00A	Label, Capacity 100 lb/60 kg		1

(*) Part numbers listed may have a letter prefix.

NS = Not Shown

NOTE 1: **THE LENS/KEYBOARD GASKET MUST BE REPLACED IF REPLACING THE DISPLAY LENS.**

NOTE 2: **ASSEMBLY INCLUDES SWITCH MEMBRANE, LENS/KEYBOARD GASKET AND COLOR OVERLAY.**
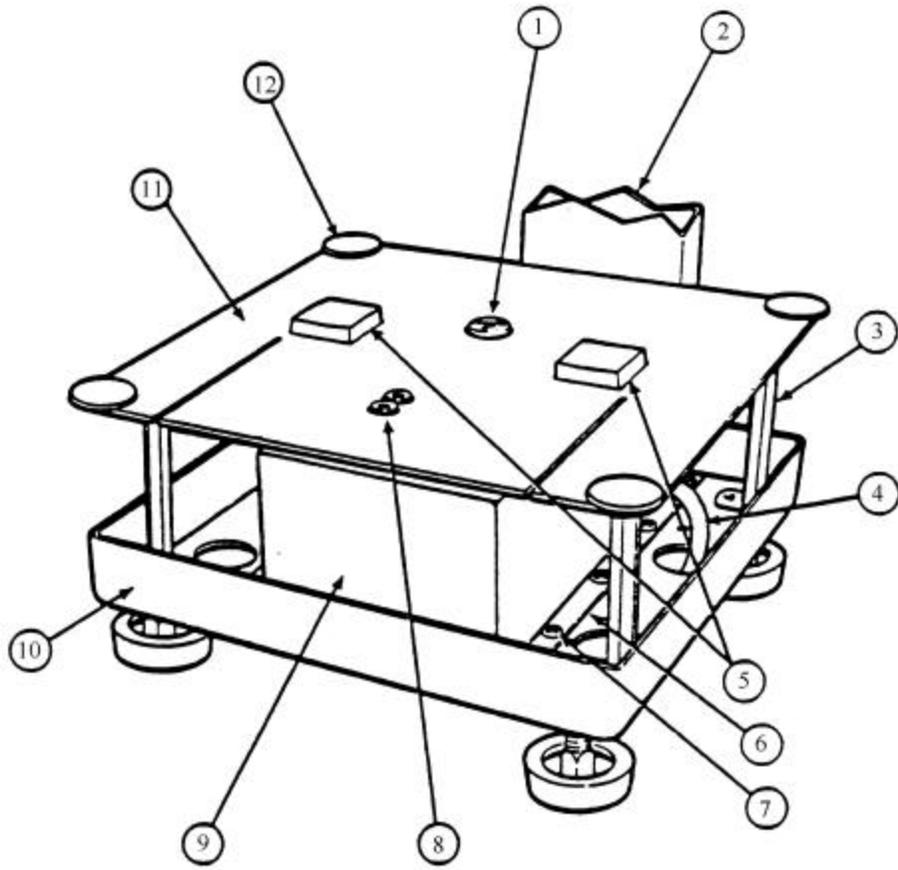
| ITEM	PART NUMBER	DESCRIPTION	NOTES	QTY.
1	102689 00A	Level		1
2	A134010 00A	Tower Weldment , 3026		1
	134011 00A	Tower Cover, Front, 3026		1
	132061 00A	Extended Tower Weldment, 3036		1
	132063 00A	Extended Tower Cover, 3036		1
3	129014 00A	Standoff, #10-32,3026 and 3036 (100 lb / 60 kg base only) Standoff, #10-32, Remaining 3036		4
	139384 00A	Load Cell Cable Assembly		4
4	*133583 00A	Pad, Damper	1	1
5	129003 00A	Gasket, Load Cell Enclosure,3026		2
6	*129017 00A	Gasket, Load Cell Enclosure,3036	2	1
	*139385 00A	Screw, #6-32 X .25 in. PHD SS,3026 Screw, #1/4-28 X	2	1
7	R03724 00A	1.25 in. HSH,3026/36		12
8	R03729 00A	Screw, #1/4-28 X 1 HSH, SS,50 lb/30 kg		2
	R03938 00A	Screw. 5/16-18 x 1.5 FHSH, SS,100 lb/60 kg	3	2
	R05107 00A	Load Cell Enclosure,3026	3	2
9	129016 00A	Load Cell Enclosure,3036		1
	124012 00A	Base Weldment, 3026		1
10	129005 00A	Base Weldment, 3036,25 lb/15 kg Base		1
	12400800A	Base Weldment, 3026,50 lb/30 kg Base		1
	12400800C	Base Weldment, 3026,100 lb/60 kg Base		1
	12400800E	Subplatter Ass'y, 3026		1
11	129007 00A	Subplatter Ass'y, 3036,25 lb/15 kg		1
	124010 00A	Subplatter Ass'y, 3036,50 lb/30 kg		1
	124010 00B	Subplatter Ass'y, 3036,100 lb/60 kg		1
	141770 00A	Platter Bumper		1
12	129015 00A			4

(*) Part numbers listed may have letter prefix.

NOTE 1: **THIS ASSEMBLY DOES NOT INCLUDE PLUGS P1 (TERMINATING AT J1 OF THE LOAD CELL) AND P2 (TERMINATING AT J2 OF THE POWER SUPPLY PCB). IF THESE PLUGS ARE REQUIRED ORDER P/N 129068 00A FOR P1 AND 129069 00A FOR P2.**

NOTE 2: **THIS GASKET MUST BE REPLACED AFTER OPENING THE LOAD CELL ENCLOSURE.**

NOTE 3: **USED IN THE 3036 EXCLUSIVELY**

LOAD CELL - FRONT VIEW
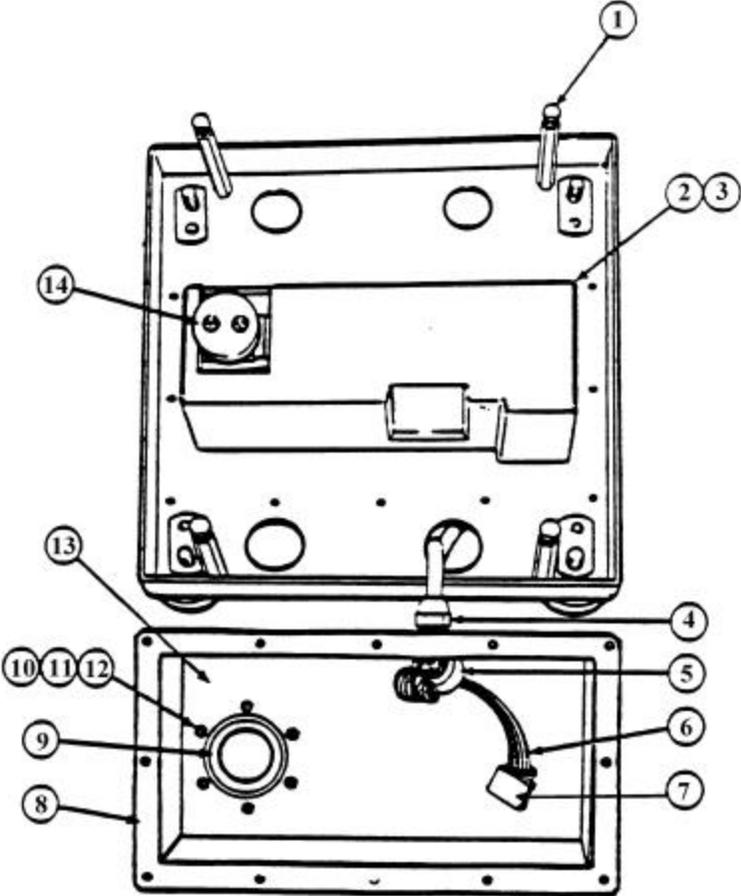
| ITEM	PART NUMBER	DESCRIPTION	NOTES	QTY.
1	R03778 00A	Screw, #10-32 X 5/8 in. HX SS		4
2	*129055 00A	L/C Ass'y., 15 kg, 3026	1	1
	*140546 00A	L/C Ass'y., 30 kg, 3036	1	1
	*140536 00A	L/C Ass'y., 60 kg, 3036	1	1
	*140538 00A	L/C Ass'y., 140 kg, 3036	1	1
3	R03728 00A	Screw, #1/4-28 x .75 in. HSH, 3026		2
	R03938 00A	Screw,#1/4-28 x 1 in., 3036 25 lb/15 kg		2
	R05079 00A	Screw,#1/4-28 x 7/8, 3036 50 lb/30 kg		2
	R05081 00A	Screw,#1/4-28 x 7/8 3036 25 lb/15 kg		2
4	129018 00A	Grip Bushing .265 I.D.		1
5	126357 00A	Core, Ferrite		1
6	133583 00A	Load Cell Cable Assembly	2	1
7	129068 00A	Plug		1
8	129017 00A	Gasket, L/C Enclosure, 3026	1	1
	139385 00A	Gasket, L/C Enclosure, 3036		1
9	*129010 00A	Boot, Load Cell , 3026		1
	139376 00A	Boot, Load Cell , 3036		1
10	R01678 050	Nut, #4-40 Hex		6
11	R03776 00A	Screw, #4-40 x 1/4 in. Seal Hd.		6
12	129011 00A	Clamp Ring, Boot		1
13	129016 00A	Load Cell Enclosure		1
14	129009 00A	Boot Adaptor Block, 3026		1
	139383 00A	Boot Adaptor Block, 25 lb		1
	139381 00A	Boot Adaptor Block, 3036, 50 lb		1
	139382 00A	Boot Adaptor Block, 3036,100 lb		1
NS	139378 00A	Spacer Block, 25 lb/15 kg Base		
NS	139379 00A	Spacer Block, 50 lb/30 kg Base		
NS	139380 00A	Spacer Block, 100 lb/60 kg Base		

NS = Not Shown
(*) Part numbers listed may have letter prefix.

NOTE 1: LOAD CELL ENCLOSURE GASKET MUST BE REPLACED AFTER OPENING THE LOAD CELL ENCLOSURE. LOAD CELL P/N 129055 00A INCLUDES THIS GASKET.

NOTE 2: THIS ASSEMBLY DOES NOT INCLUDE PLUGS P1 (TERMINATING AT J1 OF THE LOAD CELL) AND P2 (TERMINATING AT J2 OF THE POWER SUPPLY PCB). IF THESE PLUGS ARE REQUIRED ORDER P/N 129068 00A FOR P1 AND 129069 00A FOR P2.

BASE - BOTTOM VIEW
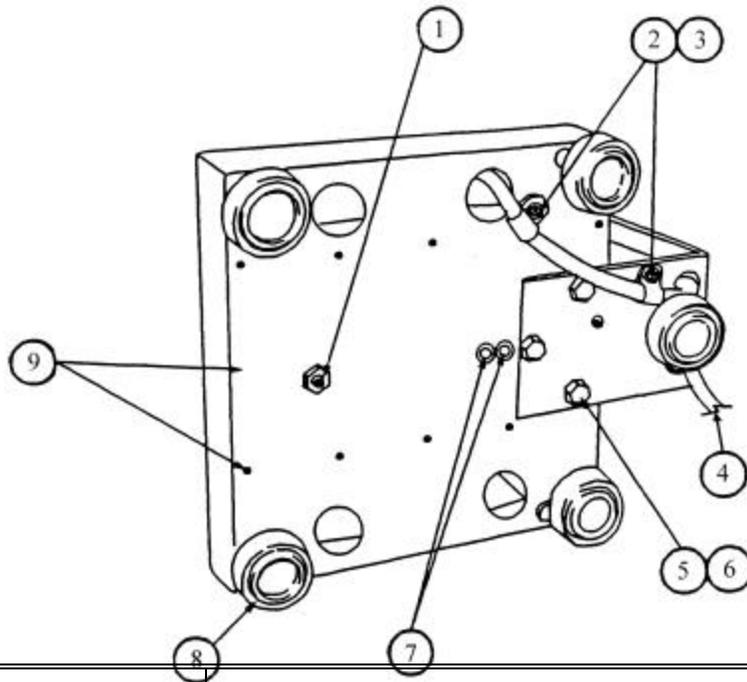
ITEM	PART NUMBER	DESCRIPTION	NOTES	QTY.
1	R02340 00A	Nut, #1/4-28 Hex Jam		1
	R03736 00A	Set Screw, #1/4-28 X .75 in.		1
2	24764 00A	Cable Clamp, 1/4 in.		1
3	R03779 00A	Screw, #8-32 X 1/4 in. PHD SS		1
4	133202 00A	Line Cord Assembly	1	2
5	R02072 02	Screw, #1/4-20 X .375 in.		2
6	R03727 00A	Lockwasher, #1/4 IT SS		1
7	R03728 00A	Screw, #1/4-28 X .75 in., 3026		1
	R03938 00A	Screw, #1/4-28 X 1 in. , 3036 (25 lb/15 kg)		3
	R05079 00A	Screw, #1/4-28 X 7/8 in. , 3036 (50 lb/30 kg)		3
	R05081 00A	Screw, #5/16-18 X 1 in., 3036 (100 lb/60 kg)		2
8	120138 00A	Foot Pad		5
	129004 00A	Foot		5
9	R03724 00A	Screw, #6-32 X .25 in. PHD SS		5
				12

(*) Part number listed may have letter prefix.

NOTE 1:   **LINE CORD LISTED IS FOR 110 VAC OPERATION ONLY. THE ASSEMBLY DOES NOT INCLUDE THE 3 PIN FEMALE PLUG (P5) THAT PLUGS INTO J5 OF THE POWER SUPPLY PCB. IF P5 PLUG IS REQUIRED ORDER P/N 097518 00A.**

11. INDEX

12. INTERCONNECT DIAGRAM

14452300A