

Configuration and Mastering Instructions for the TP 107 to the LMI 585 Plus & LMI 595



This instruction will outline:

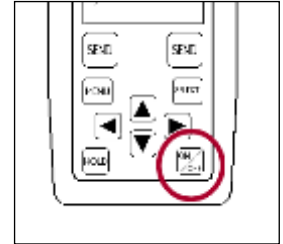
I GAGE CONFIGURATION	2
II. MASTERING INSTRUCTIONS	9
III VERIFICATION OF THE MASTERING	15

NOTE: This process will walk through the calibration of a TP-107 using the LMI 585 Plus. The functions and steps to calibrate the TP-107 with the LMI 595 are exactly the same.

I GAGE CONFIGURATION

Section I is a one-time setup. After a successful gage configuration is finished there should be no need to repeat section I.

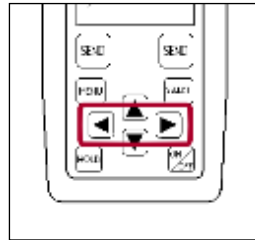
1. Turn on the 595/585 Plus by pressing <ON/OFF> on the keypad.



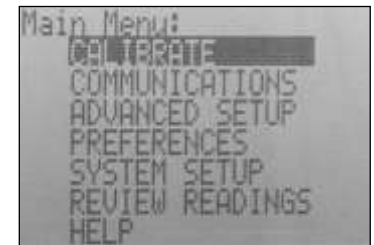
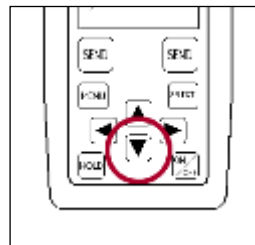
2. If the 595/585 Plus “Set Date” appears on refer to 585 Plus or the 595 manuals “Powering on for the First Time” section 2.5, then proceed to the next step.



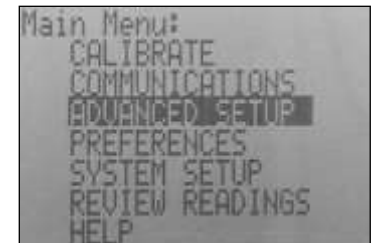
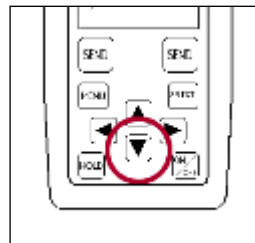
3. After the power up process the 595/585 Plus will default to one of 3 gage screens. Press the ◀ or ▶ on the keypad to move to the dual analog gage display, it will be the only screen to display two readings simultaneously.



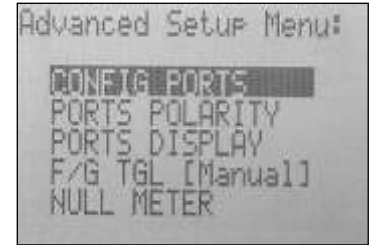
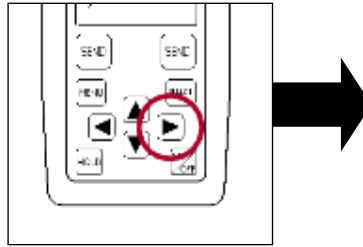
4. From the gage display screen press ▼ to advance to the “Main Menu”. Press the <Menu> button on the 595.



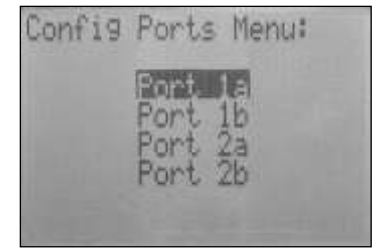
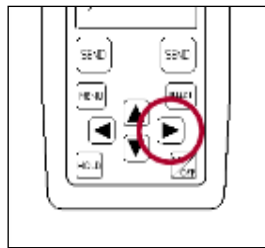
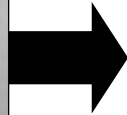
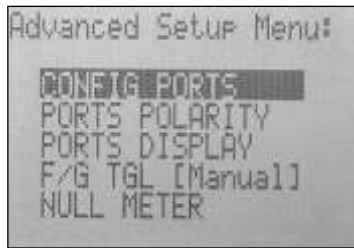
5. Press ▼ to highlight “ADVANCE SETUP”.



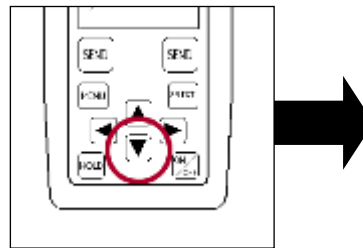
6. With “ADVANCE SETUP” highlighted press ► “ADVANCE SETUP MENU”.



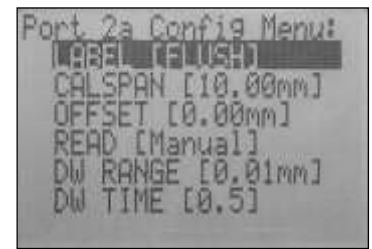
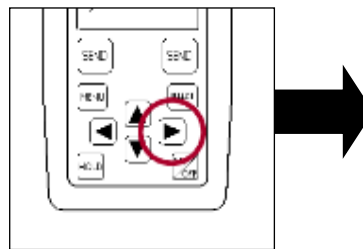
7. Verify “CONFIG PORTS” is highlighted and press ► to “CONFIG PORTS MENU”.



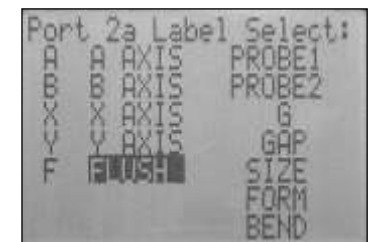
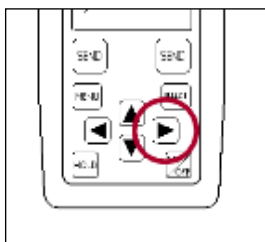
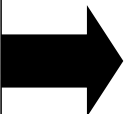
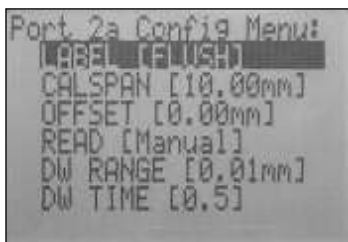
8. Press ▼ to highlight “Port 2a”. Port 2a is the configuration for the horizontal axis of the TP 107.



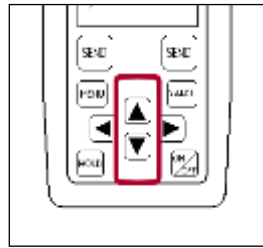
9. Press the ► to “Port 2a Config Menu”.



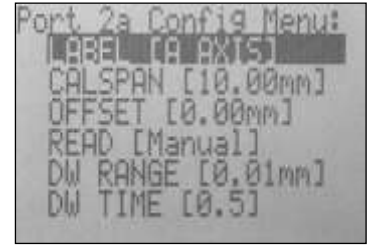
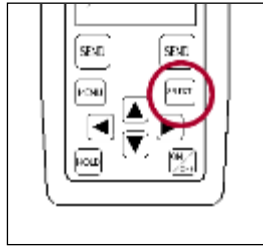
10. Verify “LABEL” is highlighted and press ► to “Port 2a Label Select”.



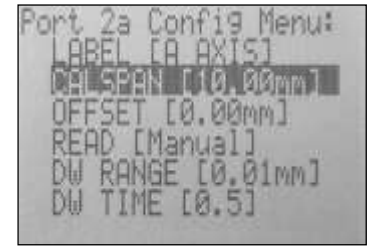
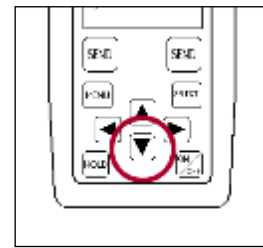
11. Press the ▲ or ▼ to highlight the desired label; suggested labels are “A AXIS” or “X AXIS”.



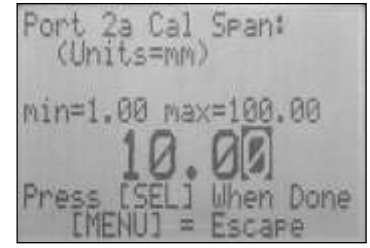
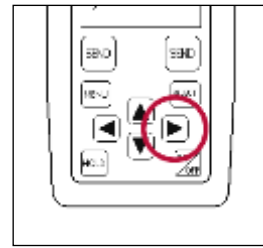
12. Press <SELECT> on the keypad and the 585 Plus returns to “Port 2a Config Menu” with the new “LABEL” defined.



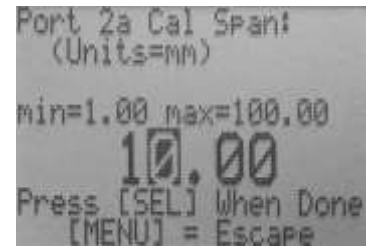
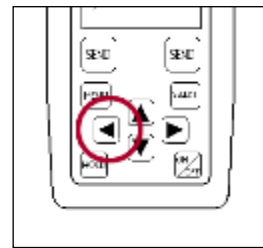
13. Press ▼ to highlight “CALSPAN”.



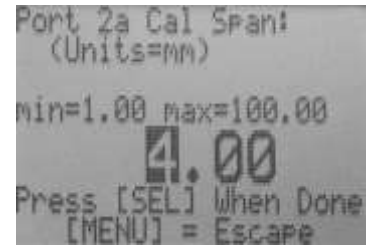
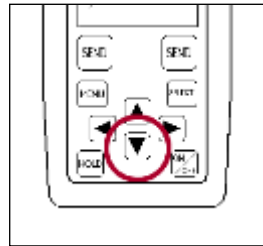
14. Press ► to “Port 2a Cal Span”.



15. Press ◀ to highlight the ones value.



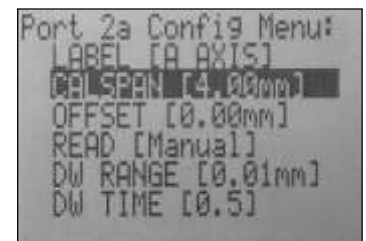
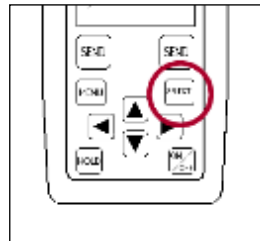
16. Press ▼ to adjust the setting to 4.00*.



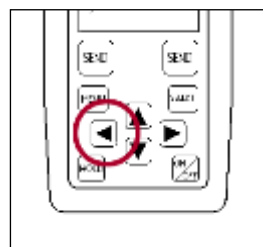
*** If using the OSM-1.25-5 master block instead of the OSM-1.25-2 master block, the setting needs to be 5.00**



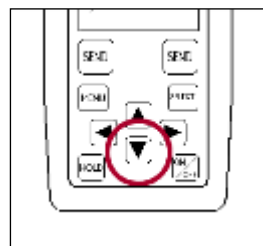
17. Press <SELECT> on the keypad and the 585 Plus returns to "Port 2a Config Menu" with the new "CALSPAN" defined.



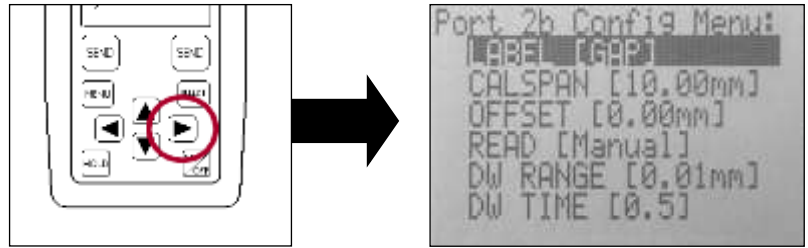
18. Press ◀ to "Config Ports Menu".



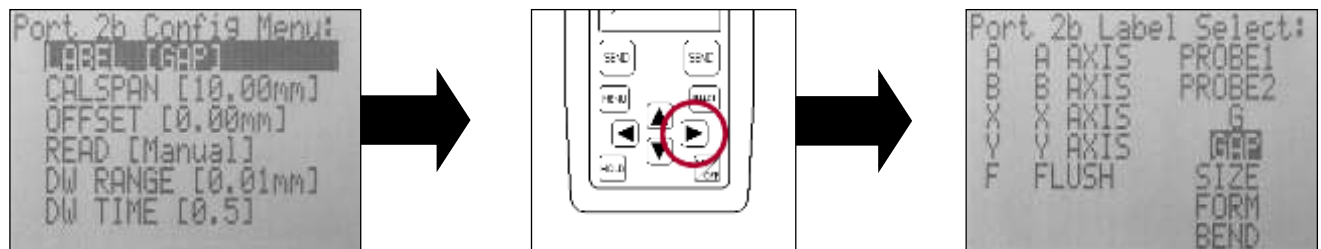
19. Press ▼ to highlight "Port 2b". Port 2b is the configuration for the vertical axis of the TP 107.



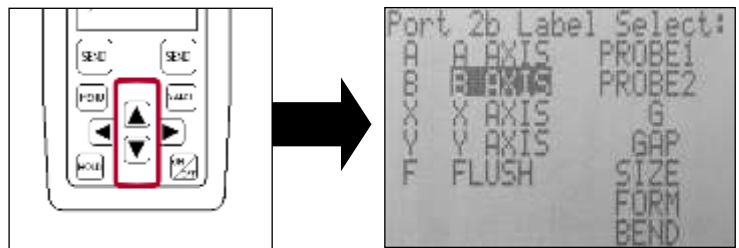
20. Press the ► to “Port 2b Config Menu”.



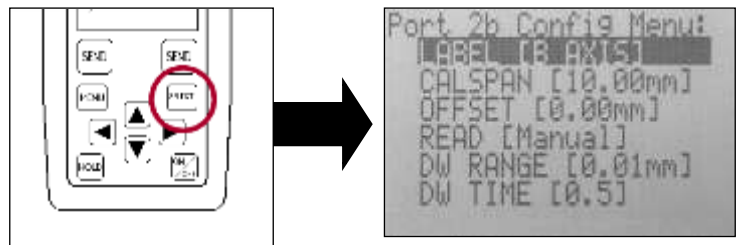
21. Verify “LABEL” is highlighted and press ► to “Port 2b Label Select”.



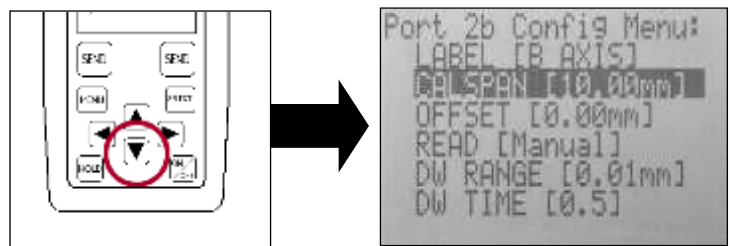
22. Press the ▲ or ▼ to highlight the desired label; suggested labels are “B AXIS” or “Y AXIS”.



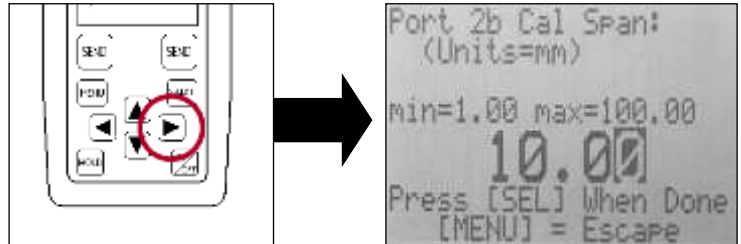
23. Press <SELECT> on the keypad and the 585 Plus returns to “Port 2b Config Menu” with the new “LABEL” defined.



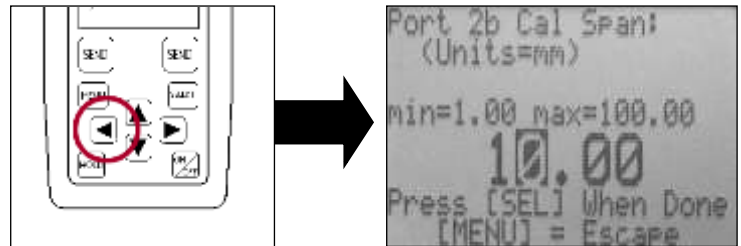
24. Press ▼ to highlight “CALSPAN”.



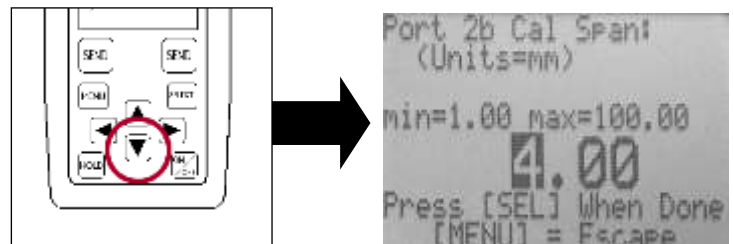
25. Press **▶** to “Port 2b Cal Span”.



26. Press **◀** to highlight the ones value.



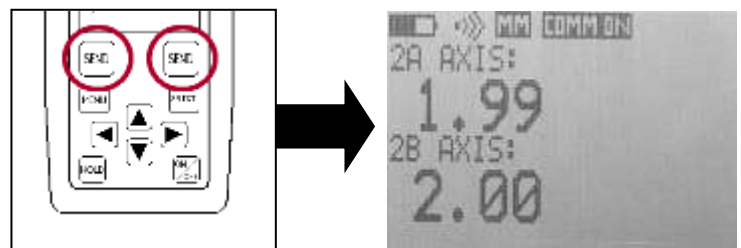
27. Press **▼** to adjust the setting to blank 4.00*.



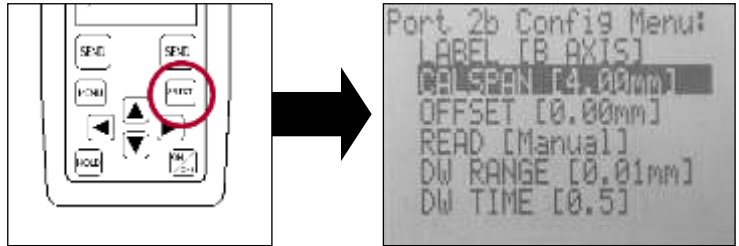
*** If using the OSM-1.25-5 master block instead of the OSM-1.25-2 master block, the setting needs to be 5.00**



28. Press **<SELECT>** on the keypad and the 585 Plus returns to “Port 2b Config Menu” with the new “CALSPAN” defined.



29. Press <SEND> on the key pad to return to the gage display screen.

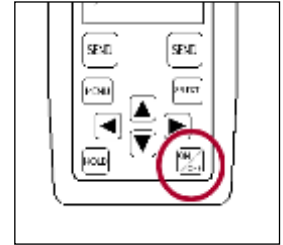


Configuration complete

II. MASTERING INSTRUCTIONS

This process will master the A and B axis independently. LMI suggests re-mastering the TP-107 prior to each shift.

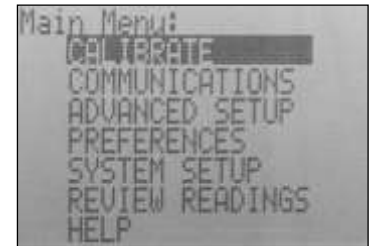
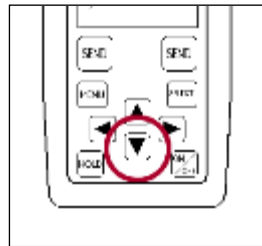
1. Turn on the 595/585 Plus by pressing <ON/OFF> on the keypad.



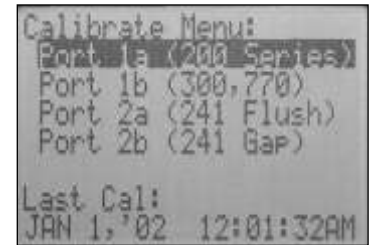
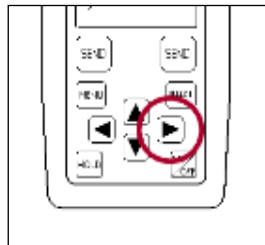
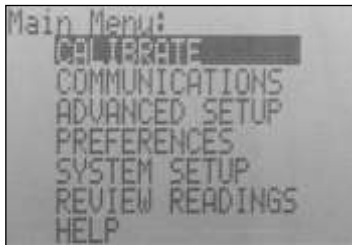
2. Connect the TP107 to the 6 pin port on the 595/585 Plus using a 6025 6 pin to 6pin cable.



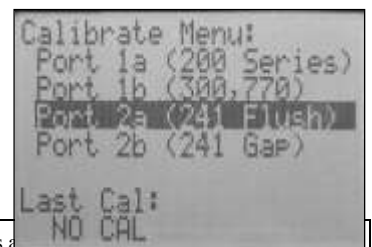
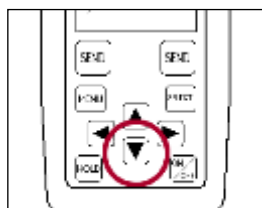
3. From the gage display press ▼ on the keypad to “Main Menu”.



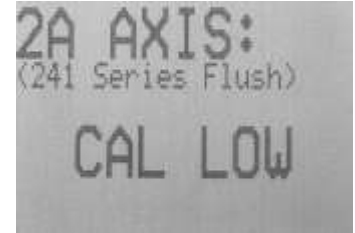
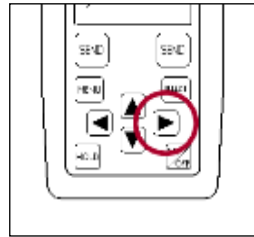
4. Verify “Calibrate” is highlighted and press ► to “Calibrate Menu”.



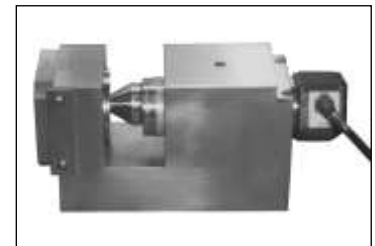
5. Press ▼ to highlight “Port 2a”.



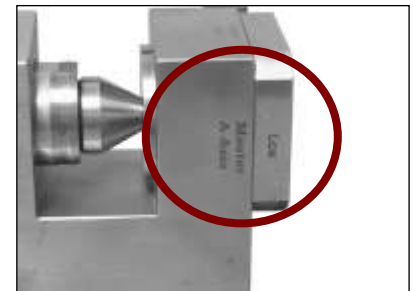
6. Press **▶** to “2A Axis” CAL LOW.



7. Insert the TP 107 into the OSM 125-2.



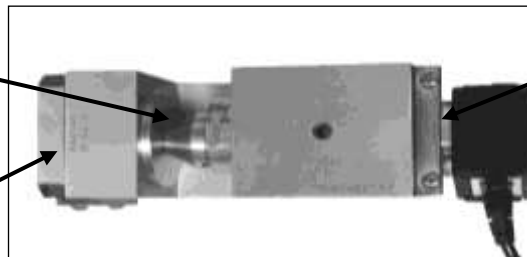
8. Insert the master insert of the OSM 125-2 so the word “Low” on the insert is aligned with A-Axis on the master block.



9. Verify the TP 107 is seated in the master block.

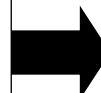
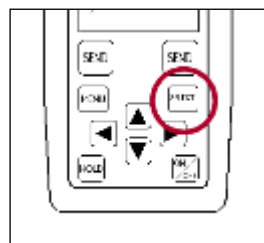
TP 107 cone fully inserted into the master insert hole

Master insert is flush to the master block

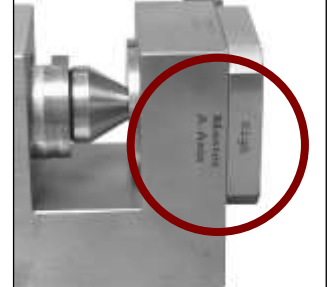


Flat on the TP 107 barrel is aligned with the flat in the master block

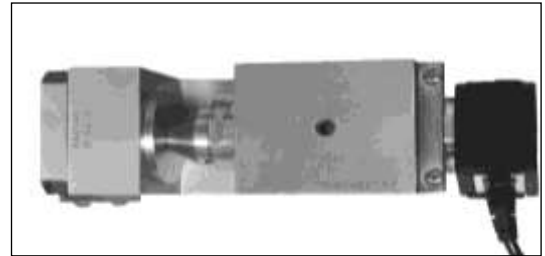
10. Press **<SELECT>** on the 585 Plus keypad, the screen will advance to CAL HIGH.



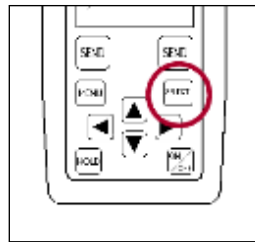
11. Rotate the insert on the master block so the word “High” on the insert is aligned with A-Axis on the master block.



12. Verify the TP 107 is seated in the master block.



13. Press <SELECT> on the 585 Plus keypad, the screen will advance to CAL MASTER.

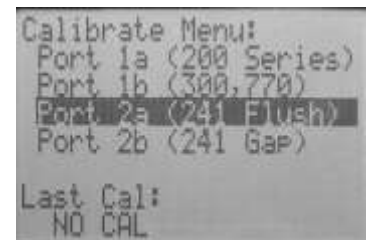
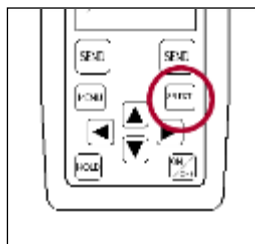


14. Remove the TP 107 from the OSM 125-2 and insert it into the zero bushing. Verify the TP 107 is seated in the zero bushing.

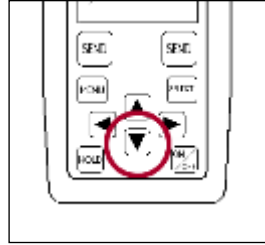


Verify the cone is seated into the hole of the zero bushing

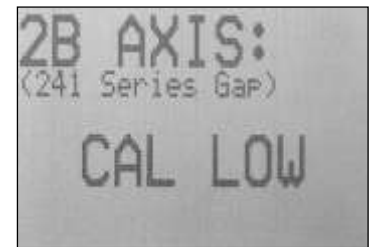
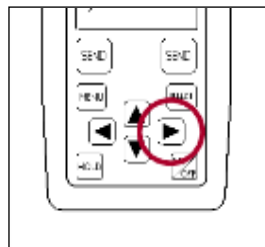
15. Press <SELECT> on the 585 Plus keypad, the screen will revert to the “Calibrate Menu”.



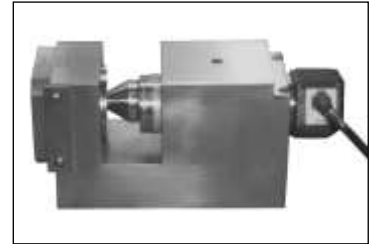
16. Press ▼ on the keypad to highlight “Port 2b”.



17. Press ► to “2Y Axis” CAL LOW.



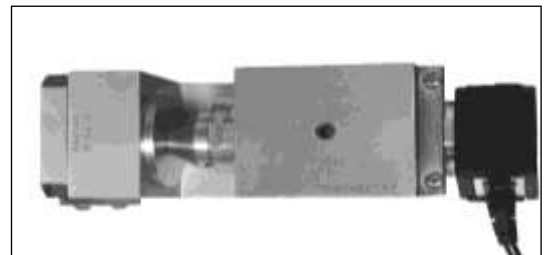
18. Insert the TP 107 into the OSM 125-2.



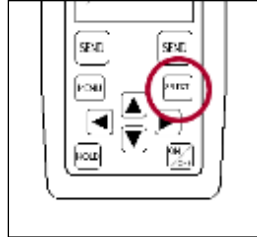
19. Insert the master insert of the OSM 125-2 so the word “Low” on the insert is aligned with B-Axis on the master block.



20. Verify the TP 107 is seated in the master block.



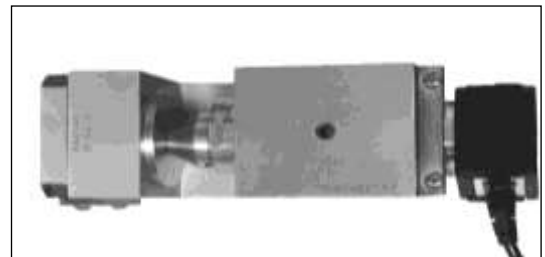
21. Press <SELECT> on the 585 Plus keypad, the screen will advance to CAL HIGH.



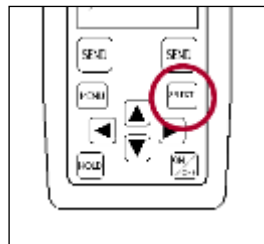
22. Rotate the insert on the master block so the word "High" on the insert is aligned with B-Axis on the master block.



23. Verify the TP 107 is seated in the master block. Press <SELECT> on the 585 Plus keypad.



24. Press <SELECT> on the 585 Plus keypad, the screen will advance to CAL MASTER

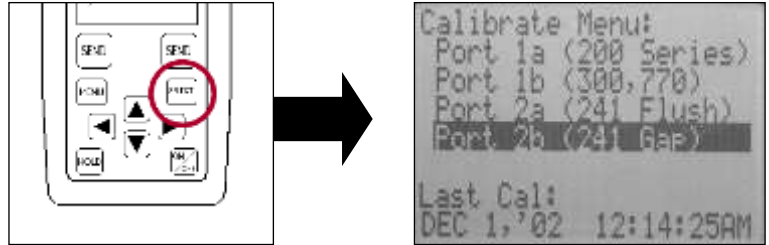


25. Remove the TP 107 from the OSM 125-2 and insert it into the zero bushing. Verify the TP 107 is seated in the zero bushing.

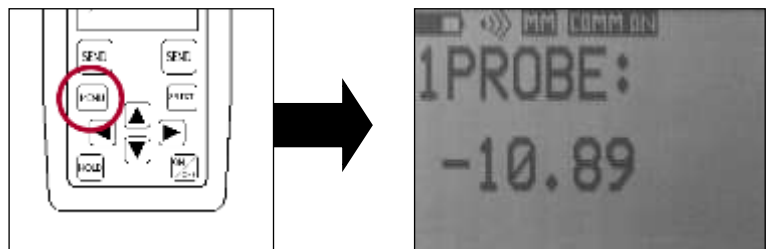


Verify the cone is seated into the hole of the zero bushing

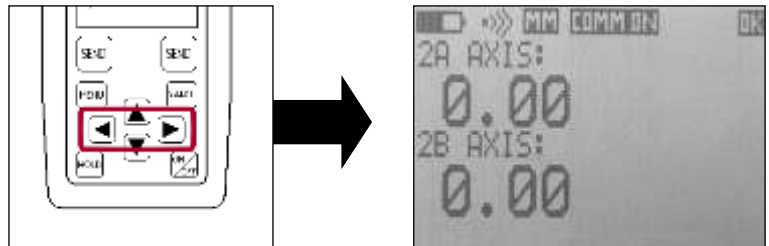
26. The 595/585 Plus screen will revert to the “Calibrate Menu”.



27. Press <MENU> on the keypad to return to the gage display screen.



28. The 585 Plus has the ability to read multiple styles of gages, to set the 585 Plus to the gage display for TP 107 readings press ► or ◀ until the screen shows a set of 2 readings with the labels of A AXIS and B AXIS

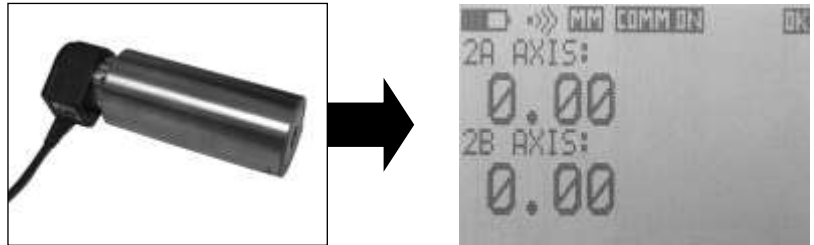


Mastering complete

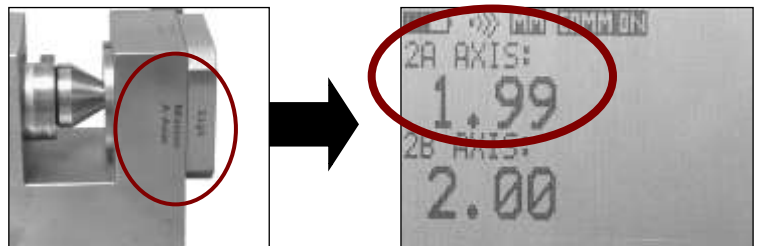
III VERIFICATION OF THE MASTERING

This process can be performed to verify the mastering of the TP-107 before or after being mastered. If any of the checks fail, the gage needs to be re-mastered.

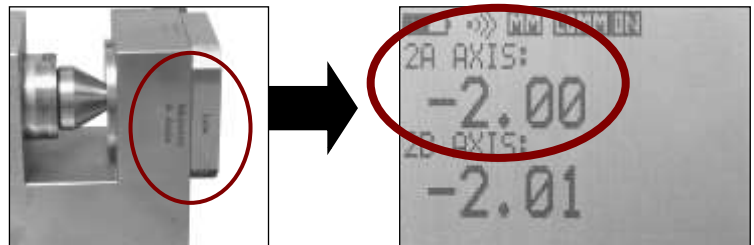
1. Insert the TP-107 into the zero bushing; both readings need to read 0.00 +/- 0.03.



2. Insert the TP-107 into the OSM 1.25-2. Orientate the insert to the “Master A-Axis” “High”. Observe the reading on screen for 2A Axis.

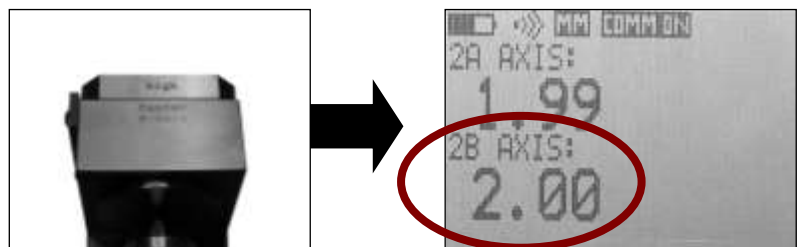


3. Rotate the insert “Master A-Axis” “Low”. Observe the reading on screen for 2A-Axis

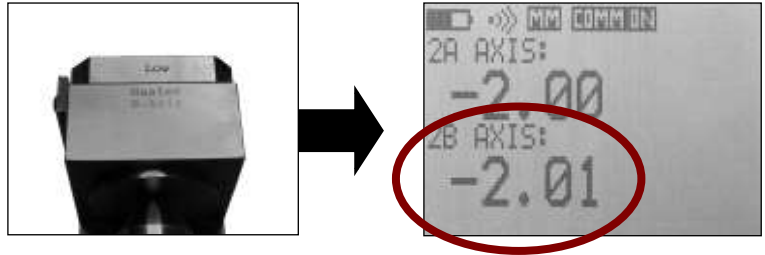


4. Subtract the value of step 3 from step 2; the result needs to be 4.00 +/- 0.03. In this example, the value of step 3 is -2.00 and the value of step 2 is 1.99, the result is 3.99; $1.99 - (-2.00) = 3.99$. Remember, when subtracting a negative number from a value you are actually adding the value to the first number.

5. Rotate the insert to the “Master B-Axis” “High”. The reading on screen for 2B Axis needs to read 2.00 +/- 0.03.



6. Rotate the insert “Master B-Axis” “Low”. The reading on screen for 2B Axis needs to read -2.00 +/- 0.03.



7. Subtract the value of step 6 from step 5; the result needs to be 4.00 +/- 0.03. In this example, the value of step 6 is -2.01 and the value of step 5 is 2.00, the result is 4.01; $2.00 - (-2.01) = 4.01$. Remember when subtracting a negative number from a value you are actually adding the value to the first number.

Verification is complete