

VOLKSWAGEN

GROUP OF AMERICA

# Using VAS6078 To measure bore diameter

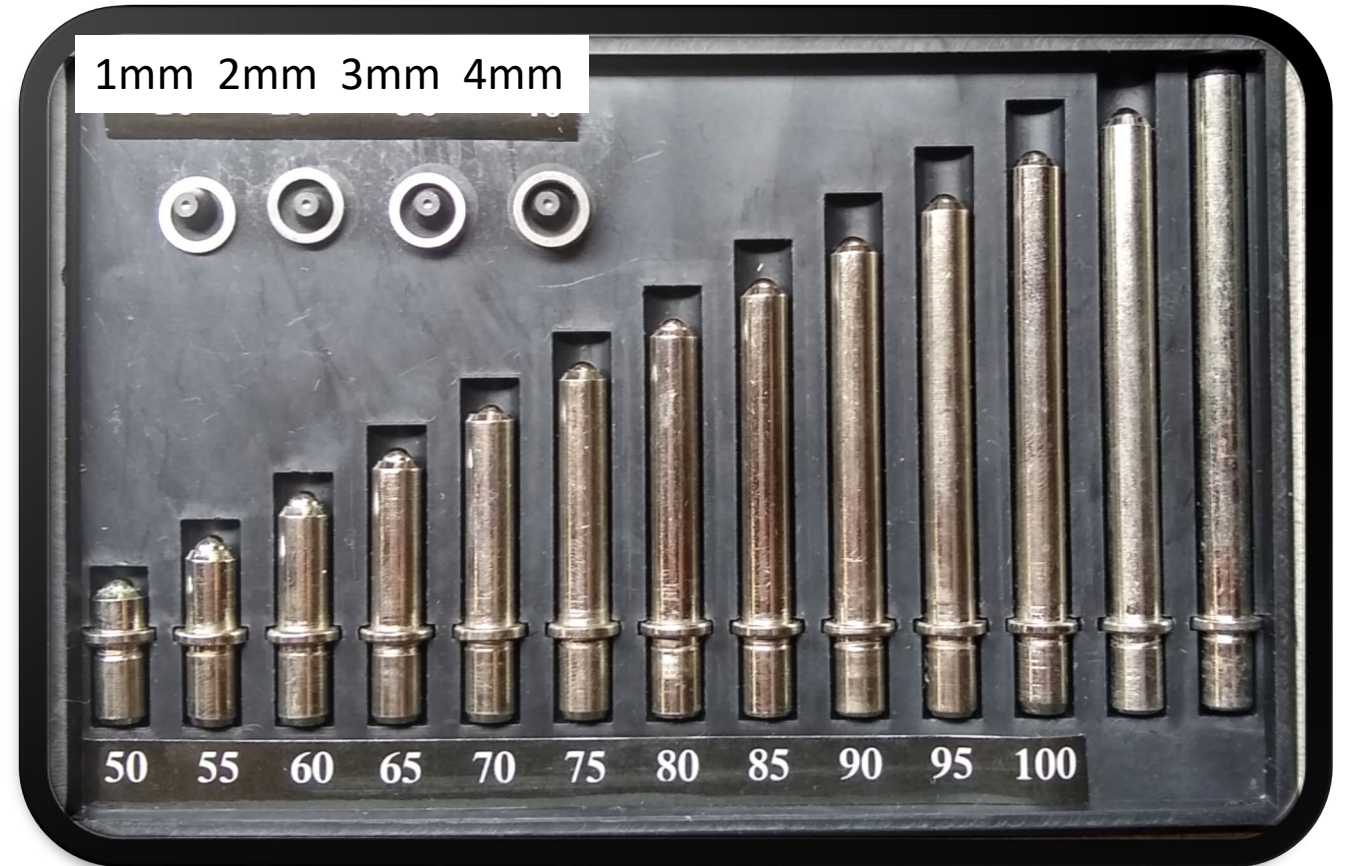


# Choosing the correct anvil & shim

- Choose the correct anvil & shim according to the dimension of the bore being measured.
- Labels do not show exact measurements of anvil and shim. Only use as a reference.
- Choose a set that is close to the bore size that you want to measure.
- Example –
  - Bore spec 82.45mm
  - Anvil 80mm
  - Shim 3mm

**\*\*NOTE\*\***

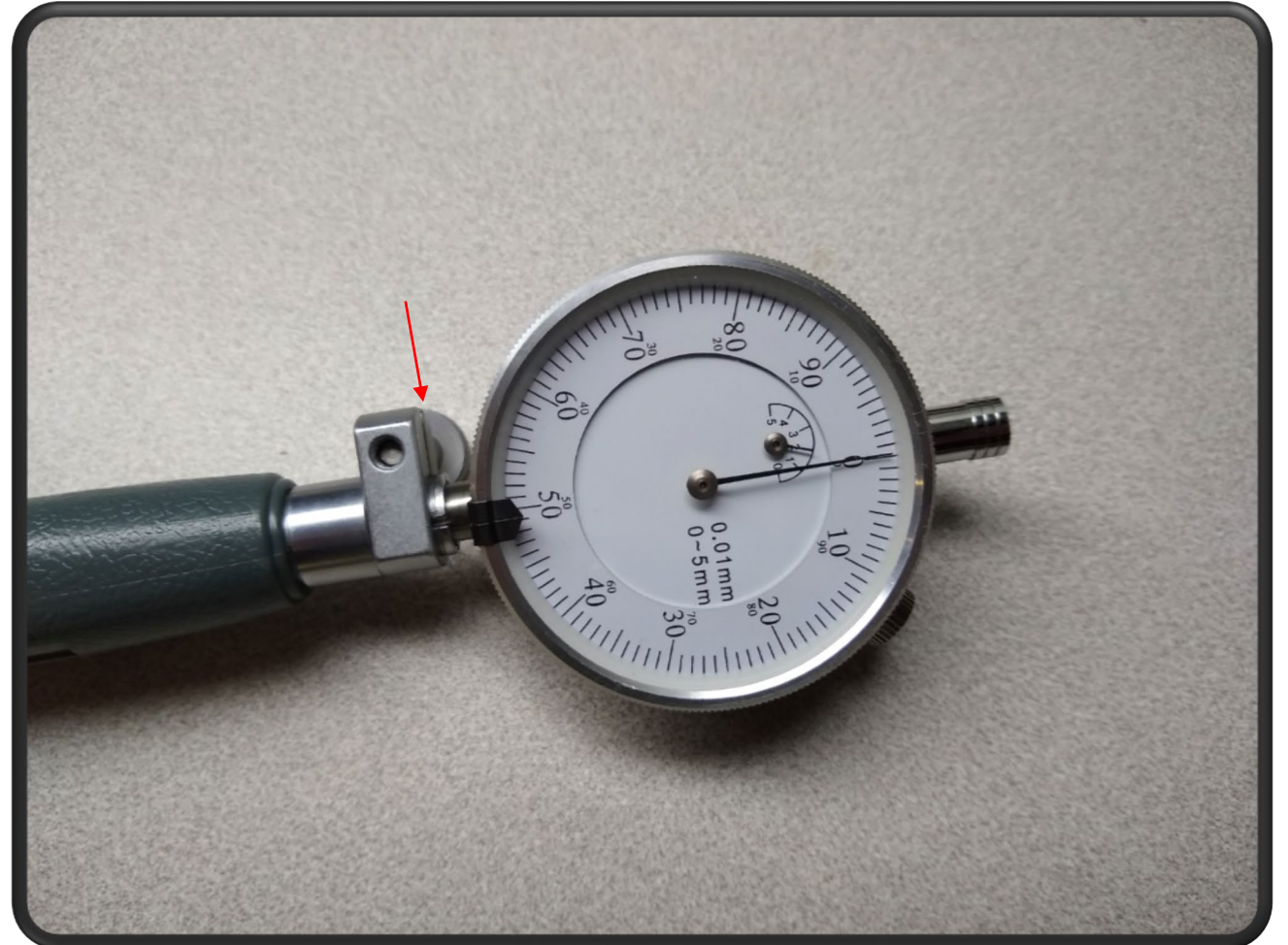
The bore gauge only has about 2.0mm of travel and measurement range.





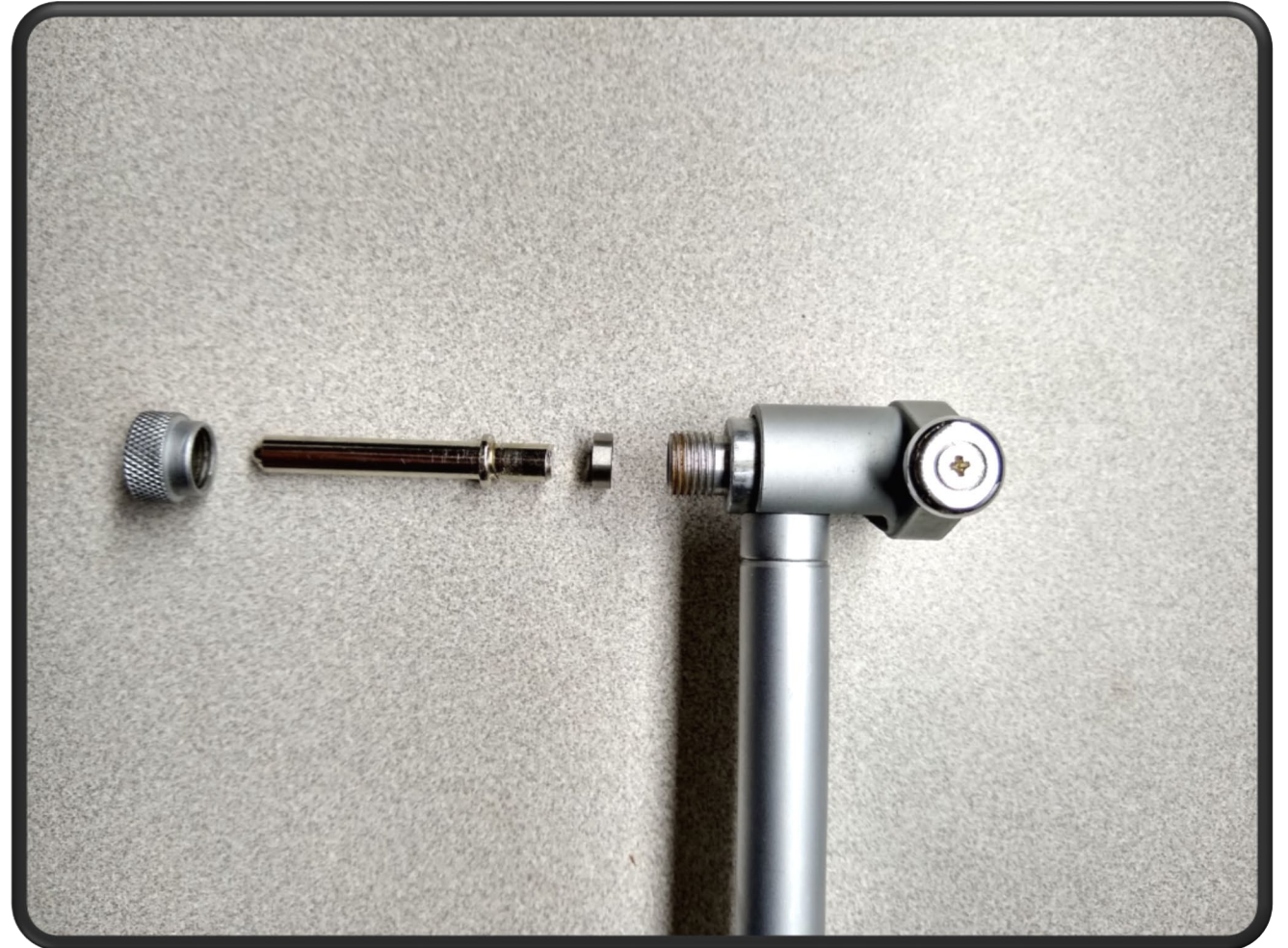
# Assembly of the bore gauge - Step 1

- Insert the dial gauge into the top of the bore gauge.
- Compress the dial gauge 2 full revolution of the needle on the dial.
- Tighten the **set screw**.



# Assembly of the bore gauge - Step 2

- Install the anvil & shim to the bore gauge





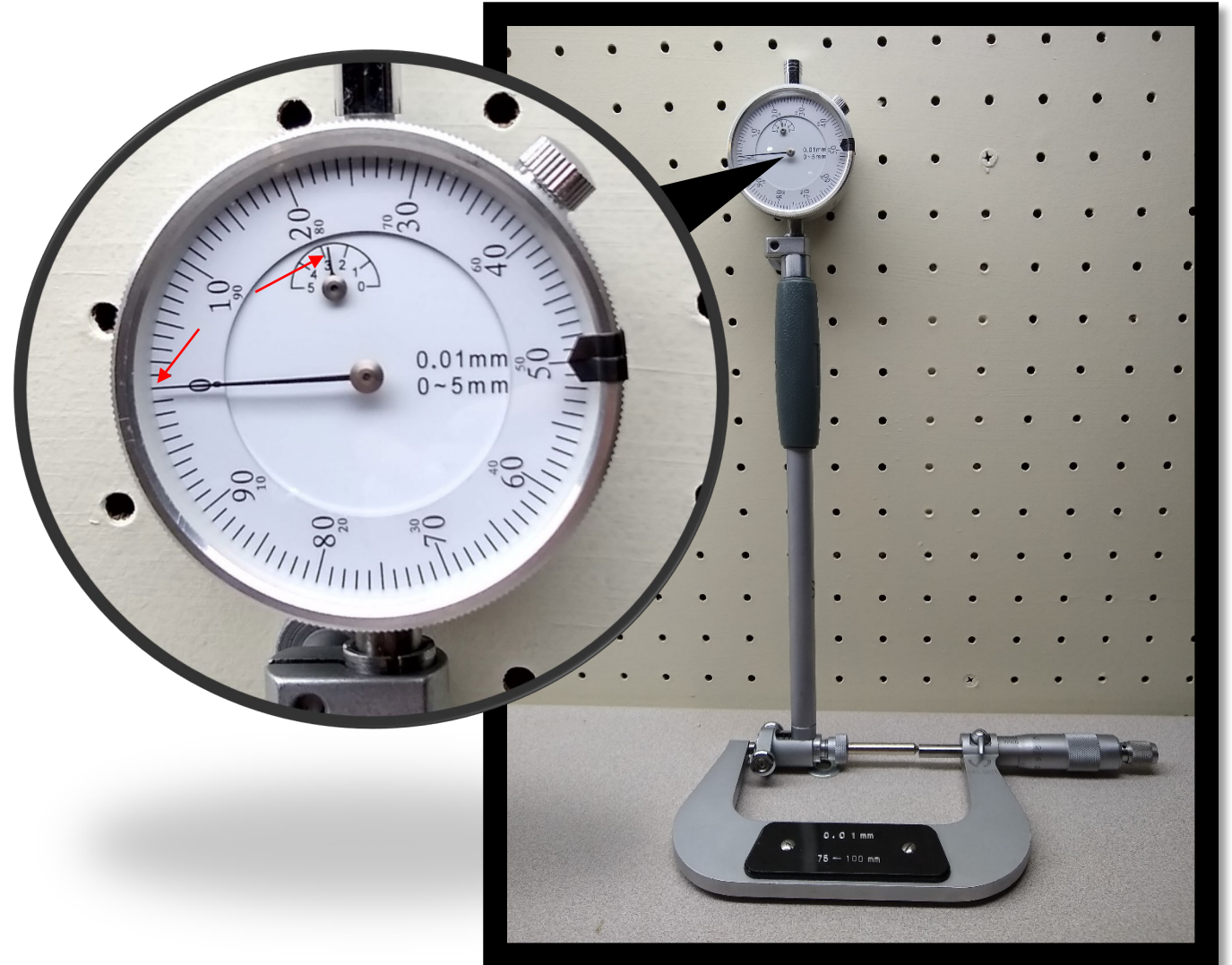
# Calibration of the dial bore gauge - Step 1

- Set a micrometer to the dimension of the bore to be measured
- In the example it is 82.45mm



# Calibration of the dial bore gauge - Step 2

- Place the bore gauge in the micrometer
- Adjust the dial gauge ring to have the needle point to **Zero -0-**
- Take note of the pointer position on the **small gauge**. this will be crucial for accurate measurement in the next step.



# Taking a dial measurement

- Insert the assembled and calibrated tool into the bore to be measured.
- Make sure that the pointer position on the **small gauge** is in the same position as noted on the previous step.
- Slowly rock the tool in axial direction (Left & Right) while watching the dial.
- The point at which the needle reverses is the reading.





# Calculating bore size with dial measurement

## Clockwise

- If the dial moved clockwise from zero –  
Subtract the **Dial reading** from the micrometer measurement
- Example shown –  
Micrometer 82.45mm minus .05mm Dial equals bore diameter 82.40mm
- $82.45 - .05 = 82.40$





# Calculating bore size with dial measurement

## Counterclockwise

- If the dial moved counterclockwise from zero –  
Add the **Dial reading** from the micrometer measurement
- Example shown –  
Micrometer 82.45mm plus .05mm Dial equals bore diameter 82.50mm
- $82.45 + .05 = 82.50$

