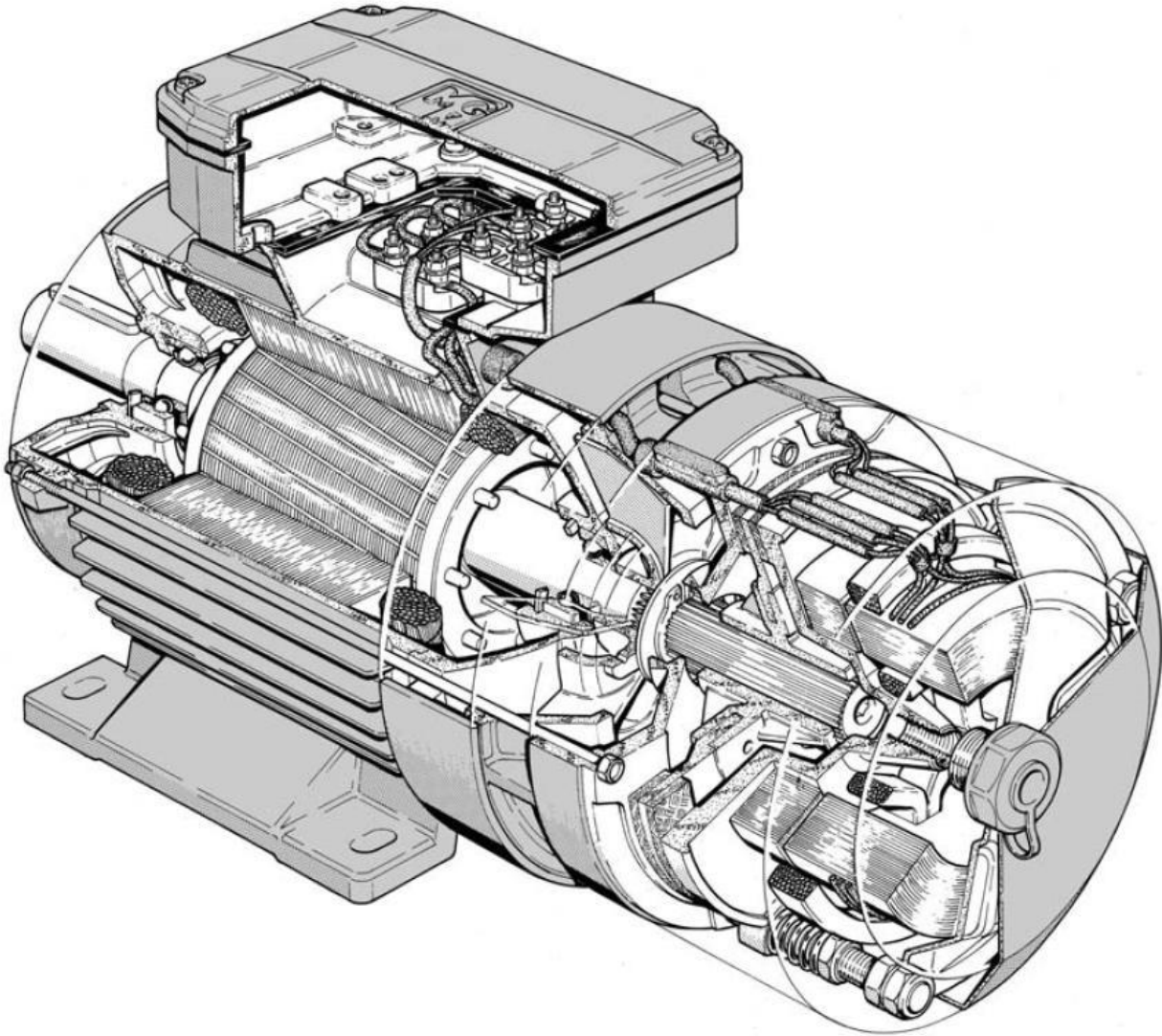


MGM Brake Motor

Brake Air Gap Adjustment (BA)

Additional Instruction



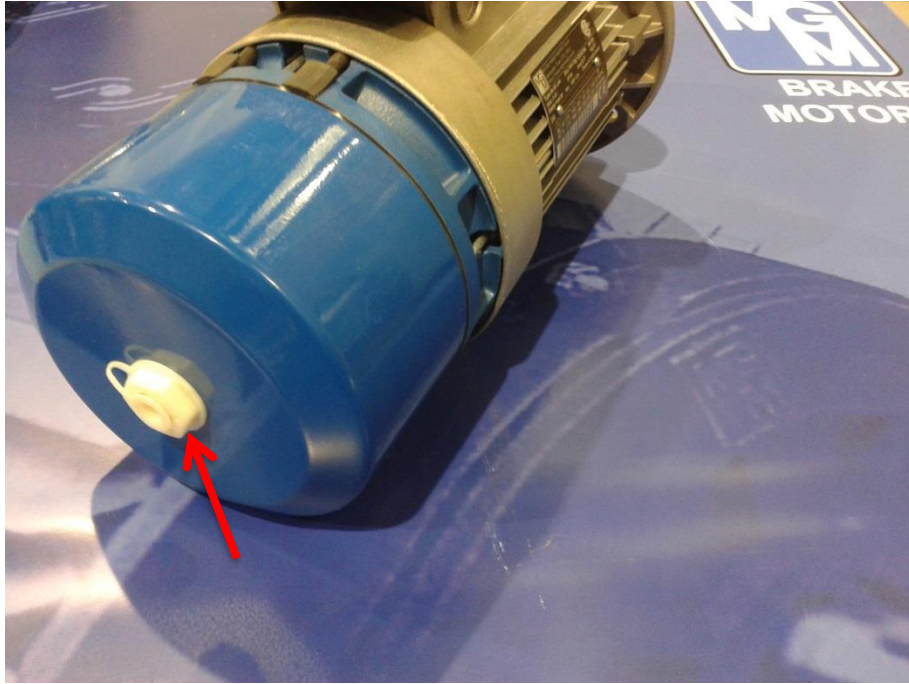
Maintenance operations must be carried out only by qualified personnel and only after having disconnected the plant or the motors from the electrical supply. Inadequate inspections and maintenance can produce personal injury or property damage.

Please carefully read all the safety precautions and warnings in the standard MGM wiring and maintenance manuals before proceeding with this instruction.

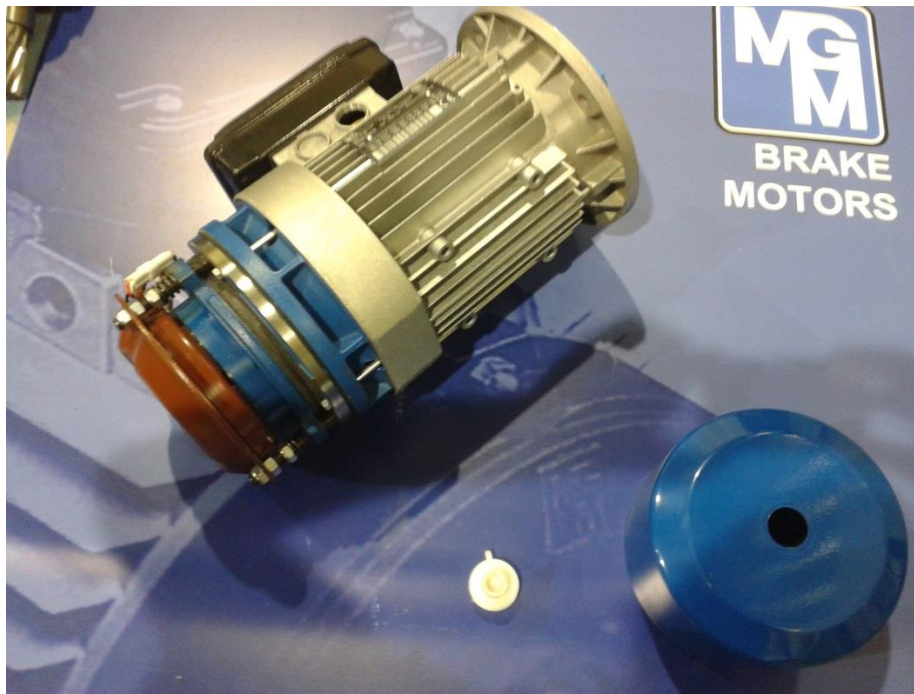
Standard wiring and maintenance manual can be found on the MGM website
www.mgmelectricmotors.com.

Step 1.1: Remove Rear Cover

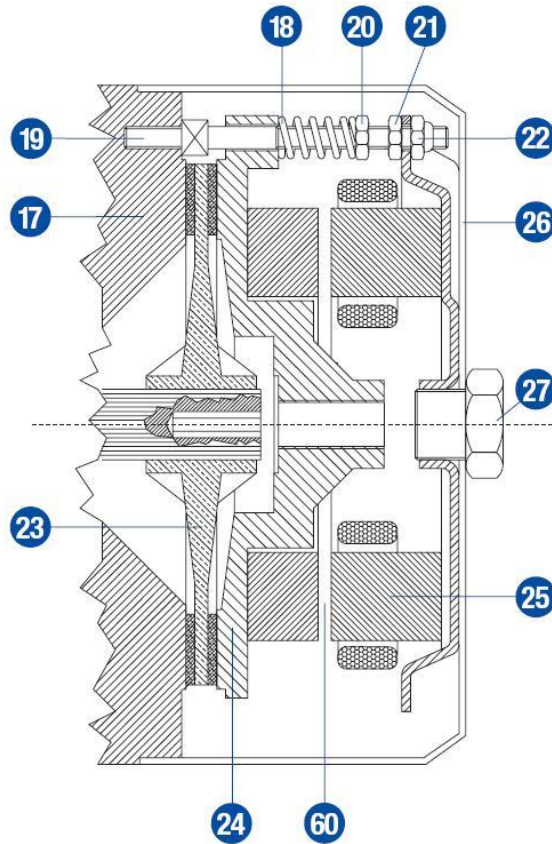
Using a large Crescent Wrench remove the white plastic nut retaining the rear cover on the motor.



The motor looks as shown below after cover has been removed.



Step 2.1: Identify Components



17: Motor Housing

18: Brake spring

19: Brake stud

20: Brake spring adjusting nut

21: Brake coil adjusting nut

22: Brake coil adjusting nut

23: Brake disc

24: Brake moving element

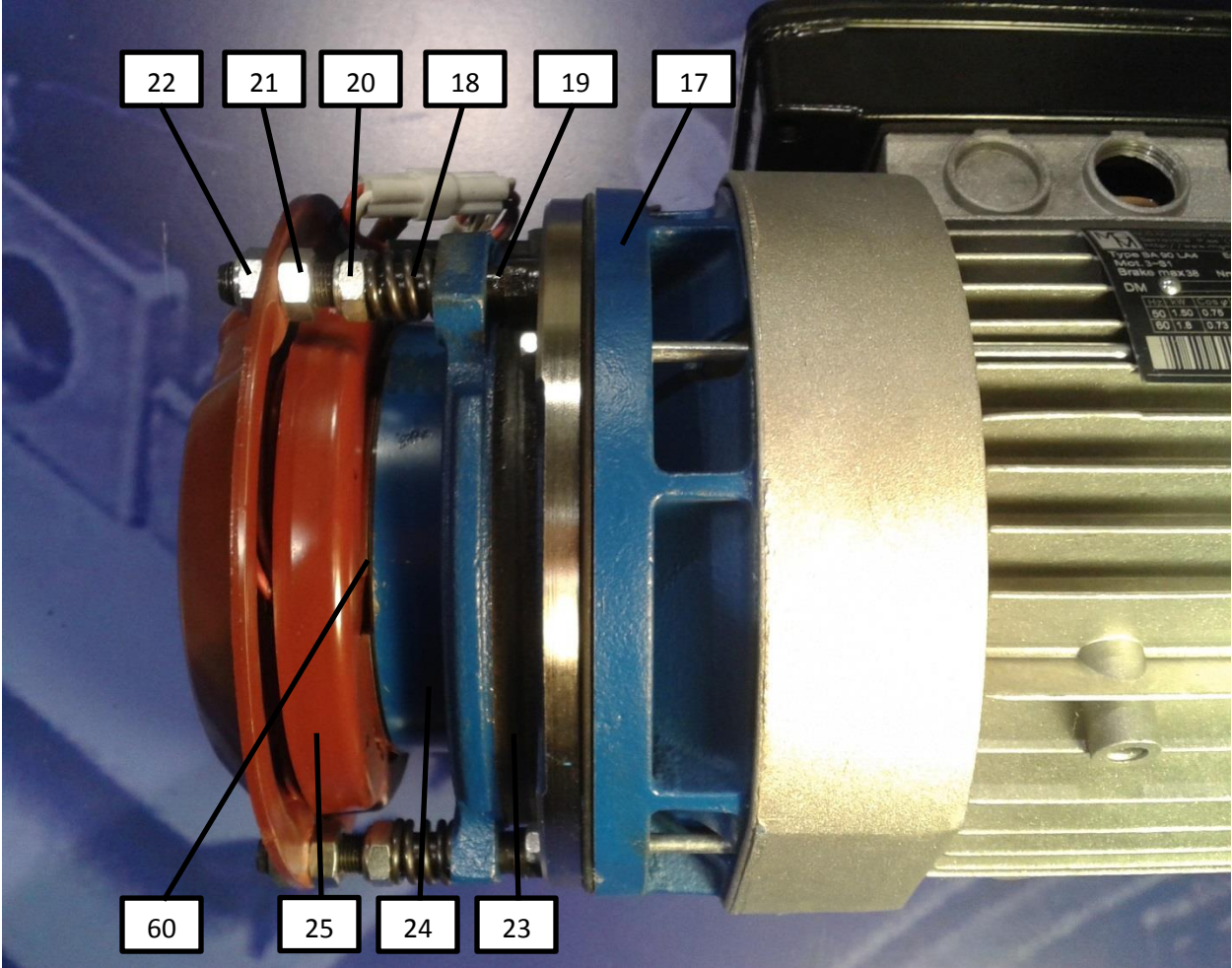
25: Brake coil

26: Rear housing cover

27: Cover attaching nut

60: Air gap

Step 2.2: Identify components on motor



*Items 26 and 27 not shown for clarity

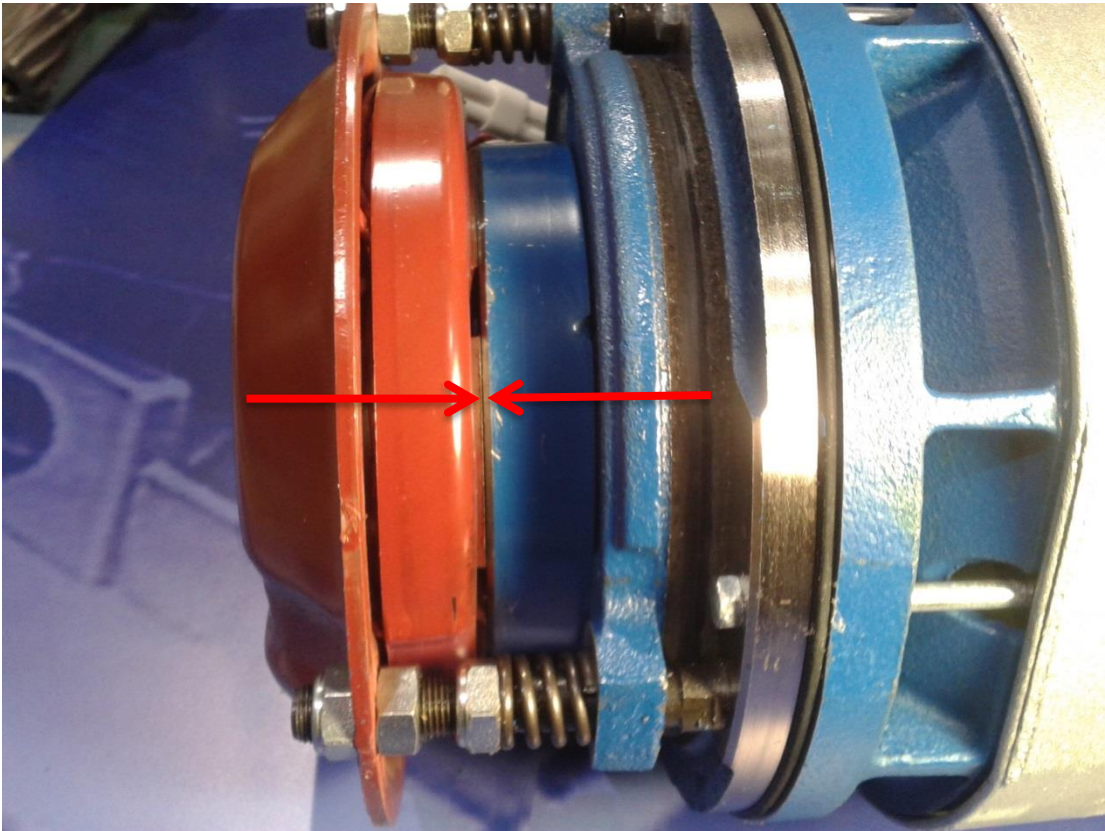
Step 3.1: Selecting feeler gauge for air gap check

First refer to the chart below to select the correct feeler gauge based on the frame size of the motor. The frame size of the motor can be found on the motor id tag.

| Frame Size | Air Gap (in) | Air Gap (mm) |
|------------|--------------|--------------|
| 71-80 | .013 | 0.35 |
| 90-100 | .013 | 0.35 |
| 112-132 | .016 | 0.4 |
| 160-200 | .020 | 0.5 |
| 225 | .031 | 0.8 |

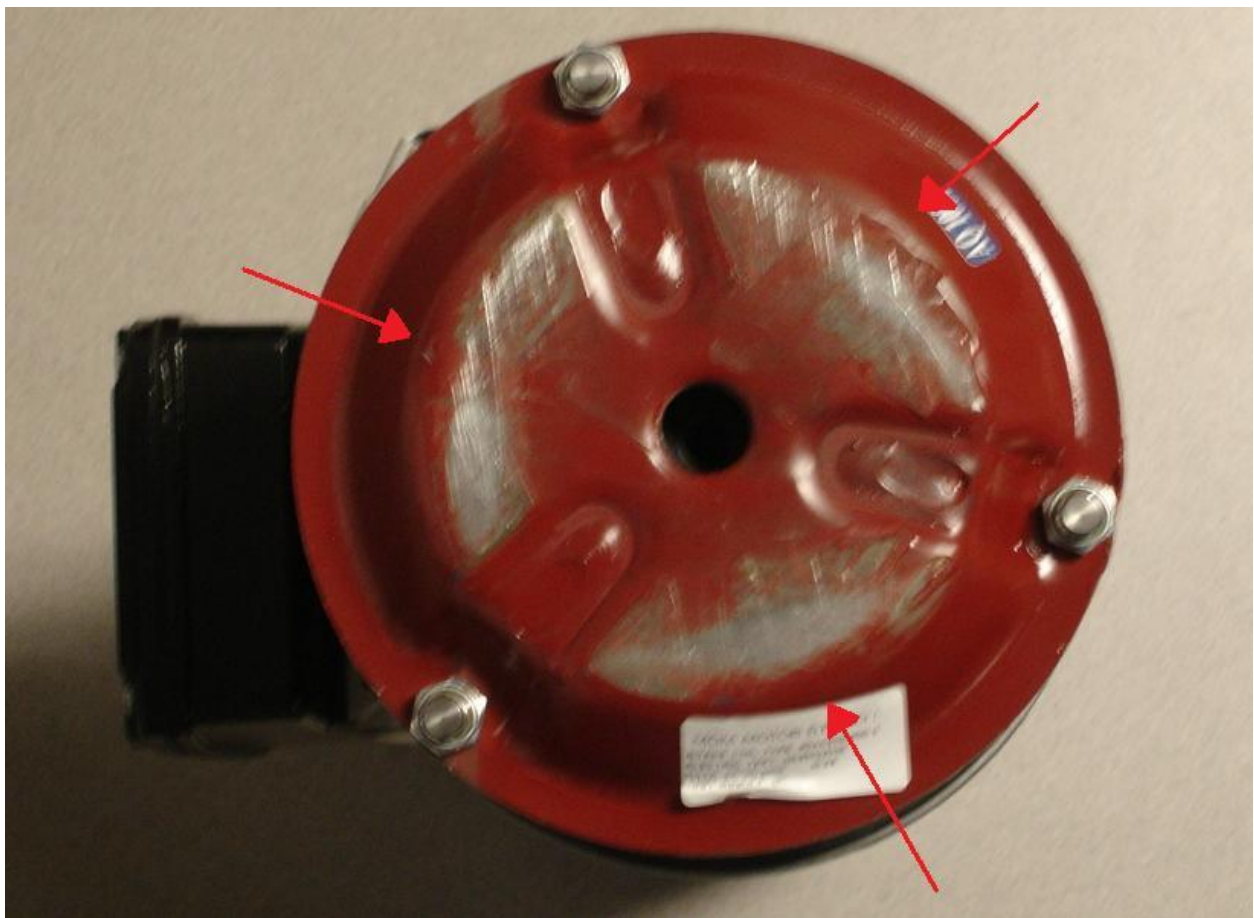
Step 3.2: Checking air gap

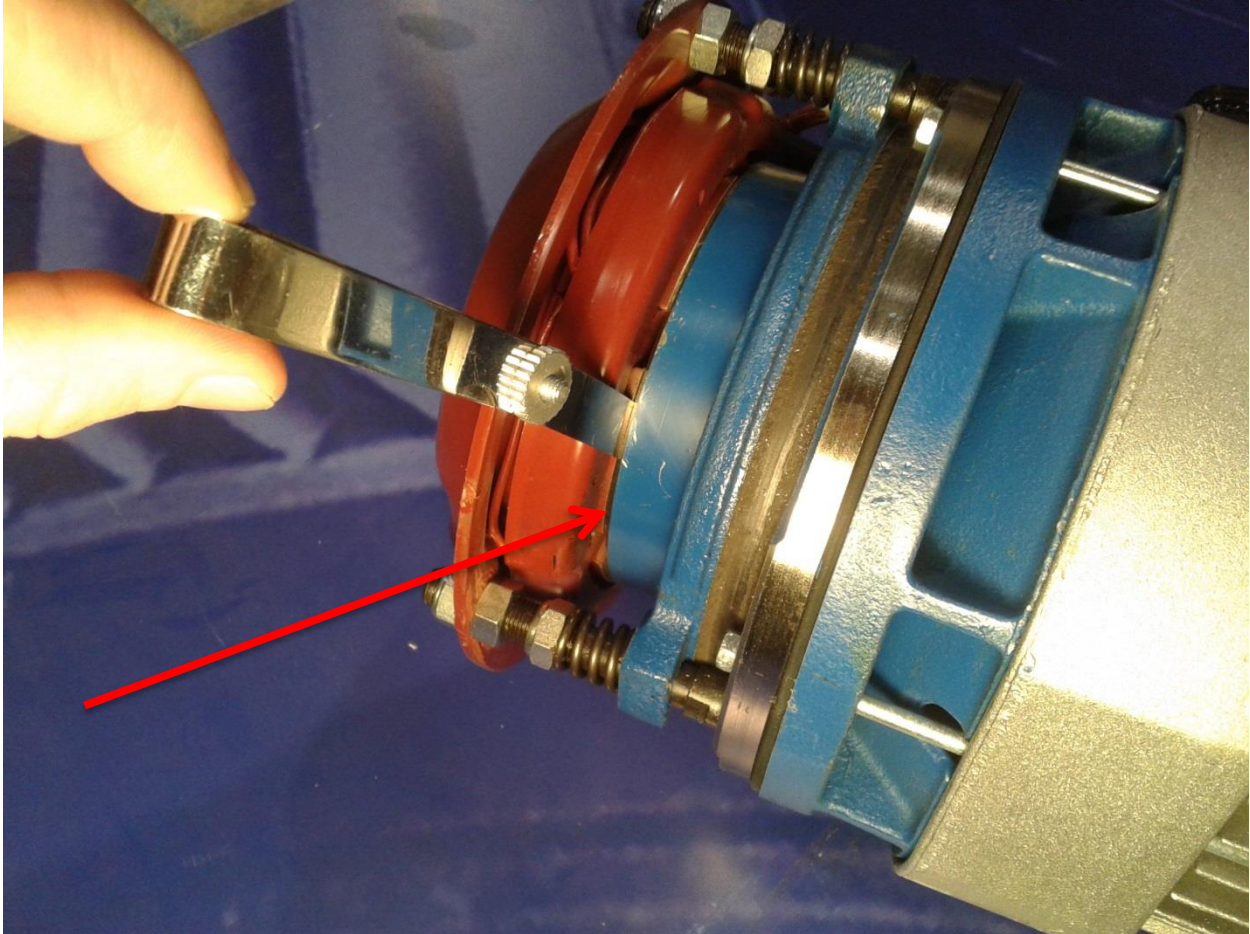
The air gap on MGM motors needs to be checked in the area indicated by the red arrows below.



DO NOT INSTALL THE BRAKE RELEASE TOOL WHILE CHECKING THE AIR GAP.

The air gap must be checked at a minimum of three locations that are equiangular around the circumference of the checking area. Preferably these locations would be in between each of the brake studs.





Exercise caution when checking the gap as there are recesses around the circumference of the brake that will give false readings on air gap. Red arrow indicates recessed area

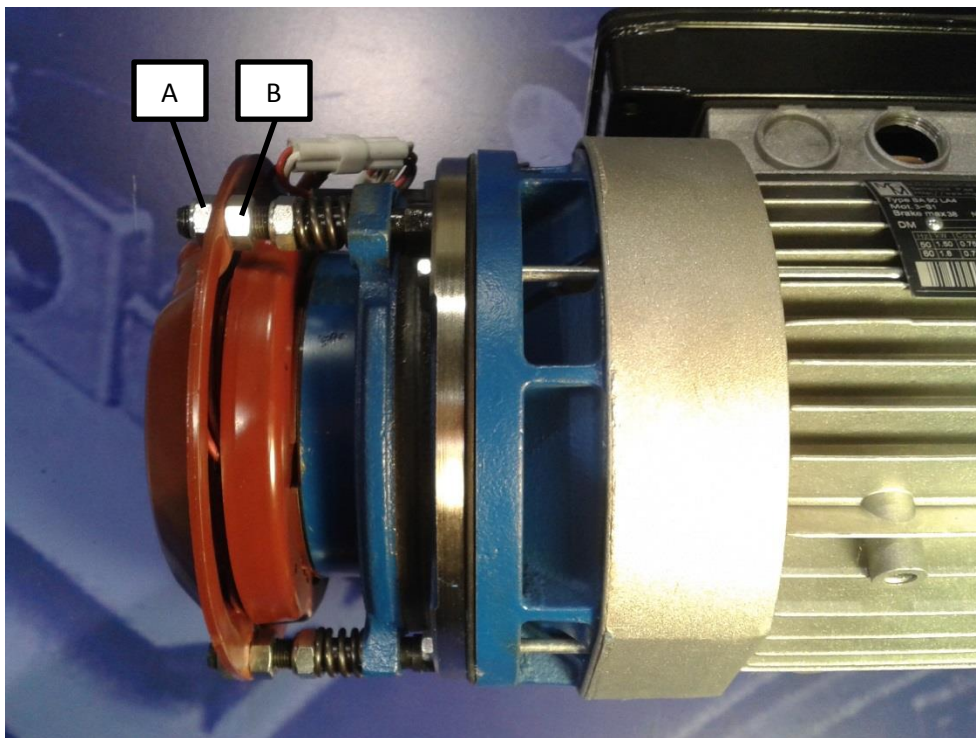
Check the gap by inserting the feeler gauge between the Brake Coil (Item 25 on parts diagram) and the Brake moving element (Item 24 on the parts diagram). There should be slight drag on the feeler gauge as it is inserted and extracted from between the two components. If the drag is severe or the feeler gauge will not fit then the brake gap is too small. If the feeler has no drag or is very loose then the air gap is too large.

Step 3: Adjusting air gap

If the brake air gap checked in step 3.2 was even around the circumference **ONLY ADJUST EACH STUD IN EQUAL AMOUNTS**. Failure to do so will require additional set up procedure and time.

If the brake gap is insufficient turn each of the **Brake Adjusting Nut (Item 22 from parts diagram, "A" shown below)** $\frac{1}{4}$ of a turn away from the brake disc (Counterclockwise if looking at the motor from the brake end). Relock the **Brake Lock Nut (Item 21 from parts diagram, "B" shown below)** by tightening it against the brake coil housing. This is a very critical step – failure to complete this will result in inaccurate readings and brake adjustment. When brake adjustment has been complete repeat Step 2 to recheck the brake.

If the brake gap is too large turn each of the **Brake Lock Nuts (Item 21 from the parts diagram, "B" shown below)** $\frac{1}{4}$ turn towards the brake disc (Clockwise if looking at the motor from the brake end). Relock the **Brake Adjusting Nut (Item 22 from the parts diagram, "A" shown below)** by tightening it against the brake coil. This is a very critical step – failure to complete this will result in inaccurate readings and brake adjustment. When brake adjustment has been complete repeat Step 2 to recheck the brake.

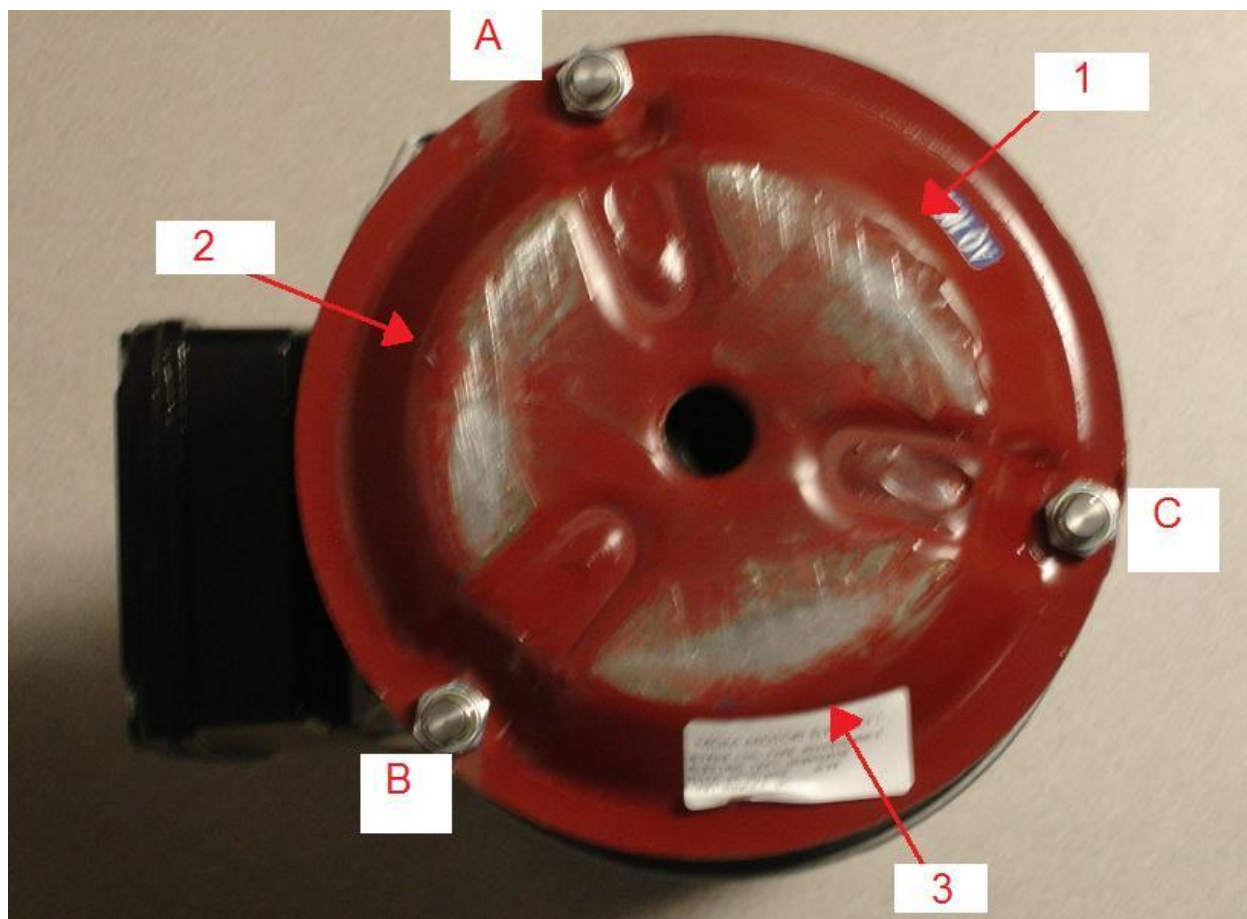


To increase brake air gap turn "A" away from brake disc (counterclockwise when looking at motor from brake end)

To decrease brake air gap turn "B" towards brake disc (clockwise when looking at motor from brake end)

Step 4: Equaling the air gap

The air gap must be equal around the entire circumference of the brake area. If the gap is uneven it can be corrected using the following steps below.



If the air gap at 1 is too small or too large change the gap by adjusting at A and C

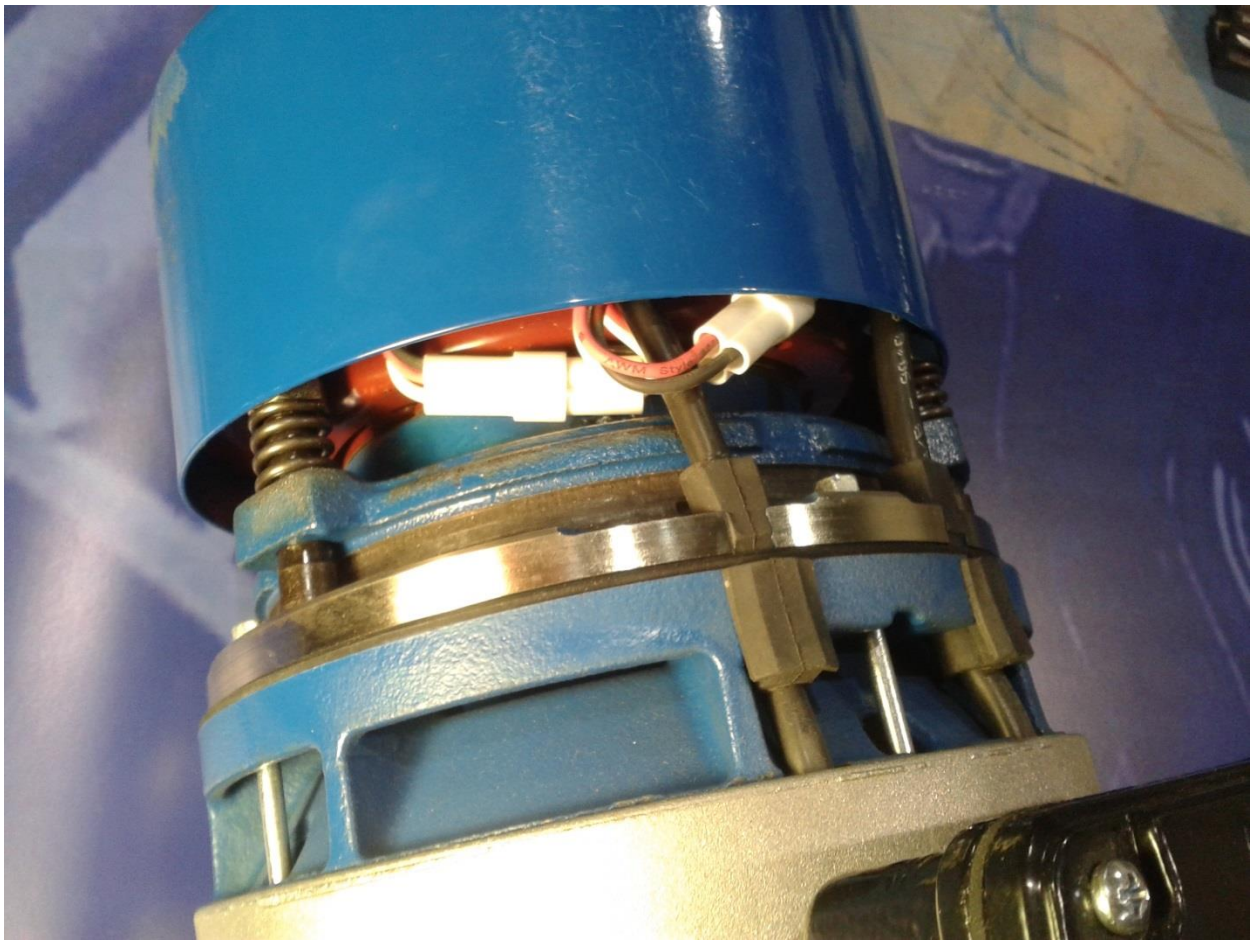
If the air gap at 2 is too small or too large change the gap by adjusting at A and B

If the air gap at 3 is too small or too large change the gap by adjusting at B and C

When the air gap checks out evenly around the entire circumference refer to **Step 3** to adjust the air gap to the correct setting. Remember to only use equal changes on the studs to keep the air gap even around the circumference.

Step 5: Reassembling rear cover

Use caution when reassembling rear cover. Ensure that wires are in the correct location when fastening the rear cover. The connectors should be in the location and orientation shown below. Check to make sure that the wires are not and cannot contact the brake disc with the cover in place. If caution is not exercised the wires may contact the brake disc causing immediate motor failure



The connectors need to be tucked down between the brake moving element and the brake coil. Most importantly insure that the wires cannot contact the brake disc.